MP1570A
SONET/SDH/PDH/ATM Analyzer
Operation Manual
Vol.3
ATM Measurement

Sixth Edition

Read this manual before using the equipment.
Keep this manual with the equipment.

ANRITSU CORPORATION

Document No.: M-W1722AE-6.0
Safety Symbols

To prevent the risk of personal injury or loss related to equipment malfunction, Anritsu Corporation uses the following safety symbols to indicate safety-related information. Insure that you clearly understand the meanings of the symbols BEFORE using the equipment. Some or all of the following five symbols may not be used on all Anritsu equipment. In addition, there may be other labels attached to products which are not shown in the diagrams in this manual.

Symbols used in manual

[DANGER] This indicates a very dangerous procedure that could result in serious injury or death if not performed properly.

[WARNING] This indicates a hazardous procedure that could result in serious injury or death if not performed properly.

[CAUTION] This indicates a hazardous procedure or danger that could result in light-to-severe injury, or loss related to equipment malfunction, if proper precautions are not taken.

Safety Symbols Used on Equipment and in Manual

The following safety symbols are used inside or on the equipment near operation locations to provide information about safety items and operation precautions. Insure that you clearly understand the meanings of the symbols and take the necessary precautions BEFORE using the equipment.

- [ ] This indicates a prohibited operation. The prohibited operation is indicated symbolically in or near the barred circle.
- [ ] This indicates an obligatory safety precaution. The obligatory operation is indicated symbolically in or near the circle.
- [ ] This indicates warning or caution. The contents are indicated symbolically in or near the triangle.
- [ ] This indicates a note. The contents are described in the box.
- [ ] These indicate that the marked part should be recycled.
WARNING

1. ALWAYS refer to the operation manual when working near locations at which the alert mark shown on the left is attached. If the operation, etc., is performed without heeding the advice in the operation manual, there is a risk of personal injury. In addition, the equipment performance may be reduced. Moreover, this alert mark is sometimes used with other marks and descriptions indicating other dangers.

2. Measurement Categories

This instrument is designed for Measurement category I (CAT I). Don’t use this instrument at the locations of measurement categories from CAT II to CAT IV.

In order to secure the safety of the user making measurements, IEC 61010 clarifies the range of use of instruments by classifying the location of measurement into measurement categories from I to IV.

The category outline is as follows:

Measurement category I (CAT I):
Secondary circuits of a device connected to an outlet via a power transformer etc.

Measurement category II (CAT II):
Primary circuits of a device with a power cord (portable tools, home appliance etc.) connected to an outlet.

Measurement category III (CAT III):
Primary circuits of a device (fixed equipment) to which power is directly supplied from the power distribution panel, and circuits from the distribution panel to outlets.

Measurement category IV (CAT IV):
All building service-line entrance circuits through the integrating wattmeter and primary circuit breaker (power distribution panel).
For Safety

WARNING

3. Laser radiation warning
   • NEVER look directly into the cable connector on the equipment nor into the end of a cable connected to the equipment. If laser radiation enters the eye, there is a risk of injury.
   • Laser Radiation Markings on a following page show the Laser Safety label attached to the equipment near the cable connector.

4. When supplying power to this equipment, connect the accessory 3-pin power cord to a grounded outlet. If a grounded outlet is not available, before supplying power to the equipment, use a conversion adapter and ground the green wire, or connect the frame ground on the rear panel of the equipment to ground. If power is supplied without grounding the equipment, there is a risk of receiving a severe or fatal electric shock.

5. This equipment cannot be repaired by the user. DO NOT attempt to open the cabinet or to disassemble internal parts. Only Anritsu-trained service personnel or staff from your sales representative with a knowledge of electrical fire and shock hazards should service this equipment. There are high-voltage parts in this equipment presenting a risk of severe injury or fatal electric shock to untrained personnel. In addition, there is a risk of damage to precision parts.

6. This equipment should be used in the correct position. If the cabinet is turned on its side, etc., it will be unstable and may be damaged if it falls over as a result of receiving a slight mechanical shock. And also DO NOT use this equipment in the position where the power switch operation is difficult.
For Safety

WARNING

7. DO NOT short the battery terminals and never attempt to disassemble it or dispose of it in a fire. If the battery is damaged by any of these actions, the battery fluid may leak.

   This fluid is poisonous.

   DO NOT touch it, ingest it, or get in your eyes. If it is accidentally ingested, spit it out immediately, rinse your mouth with water and seek medical help. If it enters your eyes accidentally, do not rub your eyes, irrigate them with clean running water and seek medical help. If the liquid gets on your skin or clothes, wash it off carefully and thoroughly.

8. This instrument uses a Liquid Crystal Display (LCD); DO NOT subject the instrument to excessive force or drop it. If the LCD is subjected to strong mechanical shock, it may break and liquid may leak.

   This liquid is very caustic and poisonous.

   DO NOT touch it, ingest it, or get in your eyes. If it is ingested accidentally, spit it out immediately, rinse your mouth with water and seek medical help. If it enters your eyes accidentally, do not rub your eyes, irrigate them with clean running water and seek medical help. If the liquid gets on your skin or clothes, wash it off carefully and thoroughly.
For Safety

**CAUTION**

1. Before Replacing the fuses, ALWAYS remove the power cord from the power outlet and replace the blown fuses. ALWAYS use new fuses of the type and rating specified on the fuse marking on the rear panel of the cabinet.

   T___A indicates a time-lag fuse.
   ___A or F___ A indicate a normal fusing type fuse.

   There is risk of receiving a fatal electric shock if the fuses are replaced with the power cord connected.

2. Keep the power supply and cooling fan free of dust.
   - Clean the power inlet regularly. If dust accumulates around the power pins, there is a risk of fire.
   - Keep the cooling fan clean so that the ventilation holes are not obstructed. If the ventilation is obstructed, the cabinet may overheat and catch fire.

3. The maximum input levels of the optical signal are 0 dBm for MU150002A 10G input, −8 dBm for MU150002A Option 01 2.5G input, and +3 dBm for MU150017A/B input. Excessive input level can damage the internal devices and circuit.

   Before performing a self loop-back test, always install 15 dB (when MP0127A/MP0128A/MP0129A or MU150008A/MU150009A/MU150010A installed), 10 dB (when MU150002A installed), or 5 dB (when MU150017A/B installed) attenuator between the output connector and the input connector.
Laser Safety

The laser safety is assured by correct operation of the warning means of the laser output. Before using the optical output, if it is not possible to check the optical emission using the warning means of the laser output at power-on or when the optical output switch is set to on, the laser output may be faulty. Do not use the equipment and call our service department or representative to request repair.

Optical units for the MP1570A SONET/SDH/PDH/ATM Analyzer have Class 1 laser emitting parts as specified in IEC 60825-1, or Class I and IIIb parts as specified in 21CFR 1040.10 (refer to Table 1). Classes are indicated on the label at the top panel of this equipment and the front panel of each unit (refer to Table 2 and Figs 1 to 5).

Do not look directly into the end of any cable connected to the optical output connector of the unit. Laser light can seriously damage the eyes. Operating this unit in a procedure other than that as described above might result in injury or damage from laser emission. Please follow the handling instructions carefully.

<table>
<thead>
<tr>
<th>Model number</th>
<th>Standard name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IEC 60825-1</td>
</tr>
<tr>
<td>MP0111A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0112A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0113A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0122B</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0127A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0128A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MP0129A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150001A/B</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150008A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150009A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150010A</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150031A/C</td>
<td>Class 1</td>
</tr>
<tr>
<td>MU150061A/B</td>
<td>Class 1</td>
</tr>
</tbody>
</table>
For Safety

Class 1 indicates the danger degree of the laser radiation specified below according to IEC 60825-1.

Class 1: Lasers that are safe under reasonably foreseeable conditions of operation, including the use of optical instruments for intra-beam viewing.

And, Class I, IIa, II, IIIa and IIIb indicates the degree of danger of the laser radiation outlined below as defined by 21CFR 1040.10.

Class I: Class I labels of laser radiation are not considered to be hazardous.

Class IIa: Class IIa labels of laser radiation are not considered to be hazardous if viewed for any period of time less than or equal to \(1 \times 10^3\) seconds but are considered to be a chronic viewing hazard for any period of time greater than \(1 \times 10^3\) seconds. The wavelength range of laser radiating is in 400 to 710 nm.

Class II: Class II labels of laser radiation are considered to be a chronic viewing hazard. The wavelength range of laser radiating is in 400 to 710 nm.

Class IIIa: Class IIIa labels of laser radiation are considered to be, depending upon the irradiance, either an acute intrabeam viewing hazard or chronic viewing hazard, and an acute viewing hazard if viewed directly with optical instruments. The wavelength range of laser radiating is in 400 to 710 nm.

Class IIIb: Class IIIb labels of laser radiation are considered to be an acute hazard to skin and eyes from direct radiation.
# For Safety

## Table 2

<table>
<thead>
<tr>
<th>No.</th>
<th>Label Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>[1]</td>
<td>AVOID EXPOSURE INVISIBLE LASER RADIATION IS EMITTED FROM THIS APERTURE</td>
<td>Aperture label (FDA 21CFR 1040.10)</td>
</tr>
<tr>
<td>[2]</td>
<td><img src="image" alt="DANGER" /></td>
<td>Explanatory label (FDA 21CFR 1040.10)</td>
</tr>
<tr>
<td>[3]</td>
<td><img src="image" alt="CLASS 1 LASER PRODUCT" /></td>
<td>Explanatory label (IEC 60825-1)</td>
</tr>
<tr>
<td>[4]</td>
<td><img src="image" alt="Warning" /></td>
<td>Warning label (IEC 60825-1)</td>
</tr>
<tr>
<td>[5]</td>
<td><img src="image" alt="CERTIFICATION LABEL" /></td>
<td>Certification label (FDA 21CFR 1040.10)</td>
</tr>
<tr>
<td>[6]</td>
<td><img src="image" alt="IDENTIFICATION LABEL" /></td>
<td>Identification label (FDA 21CFR 1040.10)</td>
</tr>
</tbody>
</table>
When only a Unit is purchased, an adhesive label is supplied with the Unit.
Please, attach it to the place, shown above.
When only a Unit is purchased, an adhesive label is supplied with the Unit. Please, attach it to the place, shown above.
CAUTION

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When only a Unit is purchased, an adhesive label is supplied with the Unit.
Please, attach it to the place, shown above.
Fig. 6  MU150001A/B, MU150031A/C, MU150061A/B
Front Panel of Unit and Top Panel of MP1570A
(Products shipping besides U.S.A.)

---

CAUTION

When only a Unit is purchased, an adhesive label is supplied with the Unit.
Please, attach it to the place, shown above.

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Fig. 7  MU150001A/B, MU150031A/C, MU150061A/B
Front Panel of Unit and Top Panel of MP1570A
(Products shipping to U.S.A.)

CAUTION

When only a Unit is purchased, an adhesive label is supplied with the Unit.
Please, attach it to the place, shown above.
Security Measure Functions
The MP0127A, MP0128A, MP0129A, MU150001A/B, MU150008A, MU150009A, MU150010A, MU150031A/C, MU150061A/B are provided with the following security measure functions to prevent the possibility of infliction bodily injury on operators.
- Laser cut-off
  When the cable is disconnected from the optical output section, the protective cover closes and the laser emission stops.
- Laser output key lock
  The laser output is mainly controlled by the key switch of the laser On/Off. When the switch is set to the OFF position, the key can be removed. In this state, the laser is locked off.
- Remote control using the remote interlock connectors
  To ensure safe control of the laser output from a remote location, the laser output can be controlled using the remote interlock connectors of the Laser Output Remote Interlock section. When both the ends of these two connectors (white and black) are connected electrically, the laser can be emitted. When both the ends are disconnected, it is not possible to emit the laser. For the voltage of the open end, the potential is +5 V at the white connector for the black connector. The laser output can be controlled by any equipment with a 0/+5 V interface.
- Laser emission indicators
  These indicators on the optical output light while laser is being emitted.
- Laser output warning
  When the laser is set to ON, the laser emission indicator lights as a warning or 3 to 4 seconds before laser is actually emitted. The laser is not emitted during this period.

Handling
The following safety precautions should be observed when handling the MP0127A, MP0128A, MP0129A, MU150001A/B, MU150008A, MU150009A, MU150010A, MU150031A/C, MU150061A/B.
- Before installing/removing this unit in/from the main frame, always make sure the main frame power switch is set to OFF.
- Before connecting/disconnecting a cable to/from the optical output section of this unit, always be sure to set the Laser On/Off key switch to OFF.
For Safety

**CAUTION**

This equipment uses a Poly-carbomonofluoride lithium battery to back-up the memory. This battery must be replaced by a service engineer when it has reached the end of its useful life; contact the Anritsu sales section or your nearest representative.

Note: The battery used in this equipment has a maximum useful life of 7 years. It should be replaced before this period has elapsed.

Make sure that the output level from the MP0111A, MP0112A, MP0113A, MP0122B, MP0127A, MP0128A, MP0129A, MU150001A, MU150001B, MU150008A, MU150009A, MU150010A, MU150031A/C or MU150061A does not exceed the maximum rated input level when connecting.

The laser output is mainly controlled by the key switch of the laser On/Off. Before turning the equipment on, be sure to set the Laser On/Off key switch to OFF.

Before making the connections, make sure that the input level does not exceed the absolute maximum rating level of the equipment. The input device may be damaged when the input level exceeds the maximum rating of MP0127A, MP0128A, MP0129A, MU150002A, MU150008A, MU150009A and MU150017A/B in particular. Before performing a self loop-back test, always insert the attached 15-dB optical attenuator between the input and output connectors for the MP0127A, MP0128A, MP0129A, MU150008A, MU150009A and MU150010A. For the MU150002A or MU150017A/B, use the 10-dB or 5-dB attenuator, respectively. The input device will be damaged if the direct output is connected by using the optical cable only.

Don't place in a dusty area.
Clean the magnetic head periodically for normal operation.
Use a cleaning kit sold at market for cleaning.
Anritsu does not recommend any specific cleaning kit. Contact with Anritsu or our sales representative if you inquire about the cleaning kit.
If the floppy disk drive malfunctions even after the cleaning, it is considered to be a fault. Ask for repair to Anritsu or our sales representative.
Equipment Certificate

Anritsu Corporation certifies that this equipment was tested before shipment using calibrated measuring instruments with direct traceability to public testing organizations recognized by national research laboratories including the National Institute of Advanced Industrial Science and Technology, and the Communications Research Laboratory, and was found to meet the published specifications.

Anritsu Warranty

Anritsu Corporation will repair this equipment free-of-charge if a malfunction occurs within 1 year after shipment due to a manufacturing fault, provided that this warranty is rendered void under any or all of the following conditions.

- The fault is outside the scope of the warranty conditions described in the operation manual.
- The fault is due to mishandling, misuse, or unauthorized modification or repair of the equipment by the customer.
- The fault is due to severe usage clearly exceeding normal usage.
- The fault is due to improper or insufficient maintenance by the customer.
- The fault is due to natural disaster including fire, flooding, earthquake, etc.
- The fault is due to use of non-specified peripheral equipment, peripheral parts, consumables, etc.
- The fault is due to use of a non-specified power supply or in a non-specified installation location.

In addition, this warranty is valid only for the original equipment purchaser. It is not transferable if the equipment is resold.

Anritsu Corporation will not accept liability for equipment faults due to unforeseen and unusual circumstances, nor for faults due to mishandling by the customer.

Anritsu Corporation Contact

If this equipment develops a fault, contact Anritsu Service and Sales offices at the address at the end of paper-edition manual or the separate file of CD-edition manual.
Notes On Export Management

This product and its manuals may require an Export License/Approval by the Government of the product's country of origin for re-export from your country.

Before re-exporting the product or manuals, please contact us to confirm whether they are export-controlled items or not.

When you dispose of export-controlled items, the products/manuals are needed to be broken/shredded so as not to be unlawfully used for military purpose.

Disposing of Product

The MP1570A employs a Lithium Battery. Also, the MP0111A, MP0112A, MP0113A, MP0122B, MP0127A, MP0128A, MP0129A, MU150001A/B, MU150002A, MU150008A, MU150009A, MU150010A, MU150017A/B, MU150031A/C, MU150061A/B use PD/LD modules including arsenic. The MP0130A use IC including arsenic. At the end of its life, the equipment should be recycled or disposed properly according to the local disposal regulations.
About MP1570A Operation Manuals

MP1570A SDH/PDH/ATM Analyzer Operation Manuals comprise of the following eight documents. Use them properly according to the usage purpose.

**Vol. 1**
Basic Operation SDH Edition
Describes the basic operation of MP1570A, PDH measurement and SDH measurements up to 622M (STM4). (The contents of this manual are basically the same as those of ‘Basic Operation SONET Edition’).

**Vol. 2**
Basic Operation SONET Edition
Describes the basic operation of MP1570A, DSn measurement and SONET measurement of up to 622M (STS12). (The contents of this manual are basically the same as those of ‘Basic Operation SDH Edition’).

**Vol. 3**
Remote Control
Describes the remote control and program examples using the GPIB and RS-232C interfaces. (MP1570A is compatible with SPCI).

**Vol. 4**
ATM Measurement (this manual)
Describes the contents of screens, operation procedures and remote control for the generation and analysis of the ATM signal.

**Vol. 5**
2.5G/10G Measurement
Describes the contents of screens, operation procedures and remote control for the generation and analysis of 2.5G (STM16) and 10G (STM64) signals.

**Vol. 6**
Add/Drop Measurement
Describes the contents of screens, operation procedures and remote control for the generation and analysis of Add/Drop.

**Vol. 7**
Jitter/Wander Measurement
Describes the contents of screens, operation procedures and remote control for the generation and analysis of Jitter (TX)/Frequency offset and Jitter (RX).

**Vol. 8**
2.5G Jitter/Wander Measurement
Describes the contents of screens, operation procedures and remote control for the generation and analysis of 2.5G Jitter (TX)/Frequency offset and Jitter (RX).
This Operation Manual describes the following.

This manual (MP1570A Operation Manual Vol.3 ATM Measurement) mainly describes the contents of screens, operation procedures and remote control for the generation and analysis of the ATM signal.

Screen Names

MP1570A has 4 major screens, namely, 'Setup', 'Test menu', 'Result', and 'Analyze', and each major screen has its own subscreens. (For details, see MP1570A Operation Manual Vol.1 'Section 4 Screens and Parameter Setting').

If 'Setup' is selected as the main screen and 'Mapping' as the subscreen, see 'Setup: Mapping' screen in the manual for the explanation.
CONTENTS

Section 1  Overview
  1.1  Product Description ...............................................................1-3
  1.2  Installation of the MP0123A ATM Unit .................................1-5
  1.3  Combination of Units ............................................................1-5

Section 2  Screen Description
  2.1  Screen Configuration ............................................................2-3
  2.2  Setup Main Screen ...............................................................2-5
  2.3  Test Menu Main Screen .......................................................2-17
  2.4  Result Main Screen ..............................................................2-31
  2.5  Analyze Main Screen ............................................................2-38

Section 3  Measurement Examples
  3.1  Error and Alarm Test ............................................................3-3
  3.2  1-point CDV Measurement ..................................................3-10

Section 4  Remote Control
  4.1  Common Commands ............................................................4-3
  4.2  MP1570A Unique States Register .........................................4-4
  4.3  Device Message Detail ........................................................4-12
  4.4  Equipment Unique Command .............................................4-13

Appendix
  Appendix A  Specifications ......................................................A-1
  Appendix B  Selftest Error Codes .............................................B-1
  Appendix C  Text File Format ..................................................C-1
  Appendix D  Initial Values of OH Preset Data ..........................D-1
  Appendix E  Correspondence Between Commands and Screens ....E-1
Section 1  Overview

Overview of MP0123A ATM unit, and specifications related to the ATM measurement with MP0123A ATM unit installed in MP1570A are described in this section.

1.1  Product Description ....................................................................1-3
1.2  Installation of the MP0123A ATM Unit .................................1-5
1.3  Combination of Units .................................................................1-5
1.1 Product Description

The MP1570A SONET/SDH/PDH/ATM analyzer can generate and analyze ATM signals between 1.5 Mbit/s and 622 Mbit/s when the MP0123A ATM unit is installed. The MP0121A 2/8/34/139/156M (CMI) unit, MP0122A/B 1.5/45/52M unit, or interface unit must be installed depending on the signal to be evaluated. Features are shown below.

ATM measurement function
The following four types of AAL protocol and 0.191 are currently supported in measurement:

- 0.191
- AAL1
- AAL2
- AAL3/4
- AAL5

Delay jitter measurement function
The jitter between received cells and cell delay jitter from cell transmission to cell reception can be measured.

- 1 point-CDV
- 2 point-CDV

Live monitoring function
The cell flow rates of up to 1,023 channels can be monitored at one time.

Traffic monitoring function
The average, maximum, and minimum values of one cell data are displayed with a bar graph and line graph.
Note:
When the MP0123A ATM unit is used, the MP0121A 2/8/34/139/156M (CMI) unit, MP0122A/B 1.5/45/52M unit or interface unit must also be used. Refer to the MP1570A operation manuals, Vol.1, for more information on the MP0121A, MP0122A/B and interface unit.
1.2 Installation of the MP0123A ATM Unit

Install the MP0123A ATM unit into slot 3 for plug-in units, located on the right-side panel of the MP1570A. The MP0123A has no input/output connectors.

1.3 Combination of Units

When the MP0123A ATM unit is used, a unit less than 622M, that is, MP0121A 2/8/34/139/156M (CMI) unit, MP0122A/B 1.5/45/52M unit or interface unit, is simultaneously used.

Note:

Note that the MP1570A does not operate if units are combined as follows.

- The MP0123A ATM unit is installed with MU15002A Optical 10G Rx(Narrow) at the same time.
- The MP0122A/B 1.5/45/52M unit is installed into the slot 1 while the MP0123A ATM unit is installed into the slot 3.
The screen configuration and functions when the MP0123A ATM unit is installed in the MP1570A are described in this section.

<table>
<thead>
<tr>
<th>Section 2  Screen Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The screen configuration and functions when the MP0123A ATM unit is installed in the MP1570A are described in this section.</td>
</tr>
</tbody>
</table>

| 2.1 Screen Configuration | .............................................................. 2-3 |
| 2.2 Setup Main Screen | .............................................................. 2-5 |
| 2.2.1 Mapping subscreen | .............................................................. 2-5 |
| 2.2.2 OH Preset subscreen | .............................................................. 2-7 |
| 2.2.3 ATM Cell edit subscreen | .............................................................. 2-10 |
| 2.2.4 Measurement condition Subscreen | .............................................................. 2-16 |
| 2.3 Test Menu Main Screen | .............................................................. 2-17 |
| 2.3.1 Manual subscreen (Tclayer) | .............................................................. 2-17 |
| 2.3.2 Manual subscreen (Tx Cell) | .............................................................. 2-18 |
| 2.3.3 Manual subscreen (Rx Cell) | .............................................................. 2-26 |
| 2.3.4 1-point CDV subscreen | .............................................................. 2-29 |
| 2.3.5 2-point CDV subscreen | .............................................................. 2-30 |
| 2.4 Result Main Screen | .............................................................. 2-31 |
| 2.4.1 Error/Alarm subscreen | .............................................................. 2-31 |
| 2.4.2 1-point CDV subscreen | .............................................................. 2-36 |
| 2.4.3 2-point CDV subscreen | .............................................................. 2-37 |
| 2.5 Analyze Main Screen | .............................................................. 2-38 |
| 2.5.1 Error/Alarm subscreen | .............................................................. 2-38 |
| 2.5.2 OH monitor subscreen | .............................................................. 2-39 |
| 2.5.3 Cell monitor subscreen | .............................................................. 2-40 |
| 2.5.4 Live Monitor subscreen | .............................................................. 2-41 |
| 2.5.5 Traffic monitor subscreen | .............................................................. 2-46 |
| 2.5.6 Cell capture subscreen | .............................................................. 2-48 |
| 2.5.7 1-point CDV subscreen | .............................................................. 2-50 |
| 2.5.8 2-point CDV subscreen | .............................................................. 2-52 |
| 2.5.9 Recall subscreen | .............................................................. 2-54 |
Section 2 Screen Description
2.1 Screen Configuration

The configuration of main screens and sub-screens when the MP0123A ATM unit is installed in the MP1570A as follows:

- In this manual, each screen is shown in "main screen:sub-screen" format.

<table>
<thead>
<tr>
<th>Main screen name</th>
<th>Sub-screen name</th>
<th>Screen function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup</td>
<td>Mapping</td>
<td>Sets interface conditions for measurement target and basic items for measurement.</td>
</tr>
<tr>
<td></td>
<td>Memory</td>
<td>Stores and reads measurement conditions and graph data on Analyze main screen.</td>
</tr>
<tr>
<td></td>
<td>Print</td>
<td>Sets items for automatic printing.</td>
</tr>
<tr>
<td></td>
<td>OH preset</td>
<td>Sets overhead initial value of the send signal.</td>
</tr>
<tr>
<td></td>
<td>ATM Cell edit</td>
<td>Sets cell pattern, and edits and checks payload.</td>
</tr>
<tr>
<td></td>
<td>Measurement condition</td>
<td>Sets the detection and removal condition of errors and alarms.</td>
</tr>
<tr>
<td></td>
<td>System</td>
<td>Sets the buzzer, clock, screen color, GPIB, RS-232C, etc.</td>
</tr>
<tr>
<td></td>
<td>Floppy disk</td>
<td>Stores/reads measurement conditions and the graph data of the Analyze main screen to/from a floppy disk.</td>
</tr>
<tr>
<td></td>
<td>Selftest</td>
<td>Conducts a self-test</td>
</tr>
<tr>
<td></td>
<td>Custom function</td>
<td>Performs settings for items that cannot be set on other Setup screens.</td>
</tr>
</tbody>
</table>

Test menu

<table>
<thead>
<tr>
<th>Test menu</th>
<th>Screen function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trouble search</td>
<td>Sets trouble search measurement conditions.</td>
</tr>
<tr>
<td>Manual</td>
<td>Sets manual measurement conditions.</td>
</tr>
<tr>
<td>Performance check</td>
<td>Sets items for measuring jitter between received cells. This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td>1-point CDV</td>
<td>Sets items for measuring cell jitter from cell transmission to cell reception.</td>
</tr>
<tr>
<td>2-point CDV</td>
<td>Sets items for measuring cell jitter from cell transmission to cell reception.</td>
</tr>
</tbody>
</table>

- This screen is displayed when the MP0123A is installed.
<table>
<thead>
<tr>
<th>Main screen name</th>
<th>Sub-screen name</th>
<th>Screen function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Result</td>
<td>Trouble search</td>
<td>Displays results of trouble search measurement.</td>
</tr>
<tr>
<td></td>
<td>Error/Alarm</td>
<td>Displays results of Error/Alarm measurement.</td>
</tr>
<tr>
<td></td>
<td>Justification</td>
<td>Displays results of justification measurement.</td>
</tr>
<tr>
<td></td>
<td>Zoom</td>
<td>Enlarges display of Error/Alarm measurement results.</td>
</tr>
<tr>
<td></td>
<td>Performance</td>
<td>Displays results of performance measurement.</td>
</tr>
<tr>
<td></td>
<td>1-point CDV</td>
<td>Displays results of measuring the jitter between received cells.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when “1-point CDV” is selected on the Test menu screen.</td>
</tr>
<tr>
<td></td>
<td>2-point CDV</td>
<td>Displays results of measuring the cell jitter from cell transmission to cell reception.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when “2-point CDV” is selected on the Test menu screen.</td>
</tr>
<tr>
<td></td>
<td>B2</td>
<td>Displays B2 error measurement results.</td>
</tr>
<tr>
<td>Analyze</td>
<td>Trouble search</td>
<td>Analyzes results of trouble search measurement.</td>
</tr>
<tr>
<td></td>
<td>Error/Alarm</td>
<td>Displays a graph of Error/Alarm measurement results.</td>
</tr>
<tr>
<td></td>
<td>OH monitor</td>
<td>Displays results of overhead monitoring. The results of path trace monitoring are also displayed on this screen.</td>
</tr>
<tr>
<td></td>
<td>Cell monitor</td>
<td>Monitors cells received or sent.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>Freq. monitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Live monitor</td>
<td>Automatically detects cells on 1,023 channels to measure each cell. And, analyzes results and displays a graph for selected 30 channels.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>Traffic monitor</td>
<td>Displays a graph of the number of cells that have passed the reception filter, and performs monitoring.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>Cell capture</td>
<td>Triggers 1 to 2,016 cells to display and analyze cell information.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>1-point CDV</td>
<td>Displays a graph for analyzing the results of measuring jitter between received cells.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>2-point CDV</td>
<td>Displays graph for analyzing results of measuring cell delay jitter from cell transmission to cell reception.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- This screen is displayed when the MP0123A is installed.</td>
</tr>
<tr>
<td></td>
<td>Opt. power meter</td>
<td>Displays the monitoring results for optical received power.</td>
</tr>
<tr>
<td></td>
<td>Recall</td>
<td>Displays a graph from data stored in memory or floppy disk.</td>
</tr>
</tbody>
</table>
2.2 Setup Main Screen

This section explains the display of each sub-screen of the Setup main screen.

2.2.1 Mapping Subscreen

This screen is used to make basic settings for measurement.
- If a setting is changed on this screen during measurement, measuring restarted.
- The setting for transmission and reception can be performed together under Tx&Rx or separately under Tx/Rx.

For **Tx&Rx**

![Diagram of Mapping Subscreen]

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) [Select sub-screen]</td>
<td>Selects a sub-screen of the Setup main screen. Select a sub-screen at this position for other screens.</td>
</tr>
</tbody>
</table>
| (b) | Selects the setting method.  
Tx&Rx .......... Makes the setting for transmission and reception at the same time.  
Tx/Rx .......... Makes separate settings for transmission and reception. |
| (c) Config. | Specifies the format of the signal to be measured. When the ATM measurement is performed, select “ATM”. |
| (d) Through | Set the through mode On/Off. |
| (e) Header Structure | Selects cell header type (UNI or NNI).  
- This item is displayed when the MP0123A is installed. |

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g)</td>
<td></td>
</tr>
</tbody>
</table>
Section 2  Screen Description

<table>
<thead>
<tr>
<th>(f)</th>
<th>OAM type</th>
<th>Selects OAM type (end-to-end or segment).</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>- This item is displayed when the MP0123A is installed.</td>
</tr>
</tbody>
</table>

| (g) | PLCP | Sets ON/OFF of PLCP at measurement with bit rate 45 M. |

For Tx/Rx

- Set transmission items on the upper of the screen and reception items on the lower of the screen. The display contents are the same as those of Tx&Rx.

When the mapping selection window is open
2.2.2 OH Preset Subscreen

This screen sets the transmission overhead value.

**When Select=E3**

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Select</td>
<td>Selects overhead.</td>
</tr>
<tr>
<td></td>
<td>E3 and E4 are displayed only when the MP0121A 2/8/34/139/156M unit is installed.</td>
</tr>
<tr>
<td></td>
<td>DS3 PLCP is displayed only when the MP0122A/B 1.5/45/52M unit is installed.</td>
</tr>
<tr>
<td>(b) Default</td>
<td>Initializes the send data.</td>
</tr>
<tr>
<td>(c) FA1</td>
<td>Sets FA1.</td>
</tr>
<tr>
<td>(d) FA2</td>
<td>Sets FA2.</td>
</tr>
<tr>
<td>(e) RDI</td>
<td>Sets RDI.</td>
</tr>
<tr>
<td>(f) REI</td>
<td>Sets REI.</td>
</tr>
<tr>
<td>(g) Payload type</td>
<td>Sets payload type in binary or plain-language.</td>
</tr>
<tr>
<td>(h) Payload dependent</td>
<td>Sets the payload.</td>
</tr>
<tr>
<td>(i) Timing marker</td>
<td>Sets Timing marker.</td>
</tr>
<tr>
<td>(j) NR</td>
<td>Sets NR.</td>
</tr>
<tr>
<td>(k) GC</td>
<td>Sets GC.</td>
</tr>
<tr>
<td>(l) Trail trace pattern</td>
<td>Sets Trail trace pattern in an ASCII character string (16 characters).</td>
</tr>
</tbody>
</table>
When Select=E4

(a) FA1 Sets FA1.
(b) FA2 Sets FA2.
(c) P1 Sets P1.
(d) P2 Sets P2.
(e) RDI Sets RDI.
(f) REI Sets REI.
(g) Payload type Sets the payload type in binary or plain-language.
(h) Payload dependent Sets the payload.
(i) Timing marker Sets Timing marker.
(j) NR Sets NR.
(k) GC Sets GC.
(l) Trail trace pattern Sets Trail trace pattern in an ASCII character string (16 characters).
2.2 Setup Main Screen

When Select=DS3 PLCP

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>Sets overhead. B1 and C1 cannot be set.</td>
</tr>
<tr>
<td>(b) Trailer sequence</td>
<td>Sets Trailer.</td>
</tr>
</tbody>
</table>
This screen sets the cell pattern and edits the payload.

When Cell type=Foreground

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Cell type</td>
<td>Selects edit cell type.</td>
</tr>
<tr>
<td>(b) Payload</td>
<td>Edits payload (38byes) for ATM:O.191</td>
</tr>
<tr>
<td>(c) TCPT</td>
<td>Edits TCPT for ATM:O.191.</td>
</tr>
<tr>
<td>(d) Payload</td>
<td>Edits payload (48 byes) for User program.</td>
</tr>
<tr>
<td>(e) P-format</td>
<td>Edits CSI P-format for AAL1.</td>
</tr>
<tr>
<td>(f) RTS</td>
<td>Edits CSI RTS for AAL1.</td>
</tr>
<tr>
<td>(g) Pointer</td>
<td>Sets Pointer for AAL1.</td>
</tr>
<tr>
<td>(h) Payload</td>
<td>Edits payload (47 bytes) for AAL1.</td>
</tr>
</tbody>
</table>

- Move the cursor to Payload and press \( \text{Set} \) to display the editing window. Move the cursor to a desired byte position using the cursor keys, then press \( \text{Set} \) to open the numeric value input window. Input a desired value in binary notation.
### Setup Main Screen

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) CID</td>
<td>Sets Primary packet CID for AAL2.</td>
</tr>
<tr>
<td>(j) LI</td>
<td>Sets Primary packet LI for AAL2.</td>
</tr>
<tr>
<td>(k) PPT</td>
<td>Sets Primary packet PPT for AAL2.</td>
</tr>
<tr>
<td>(l) UUI</td>
<td>Sets Primary packet UUI for AAL2.</td>
</tr>
<tr>
<td>(m) Payload</td>
<td>Sets Primary packet Payload (64 bytes) for AAL2.</td>
</tr>
<tr>
<td>(n) CID</td>
<td>Sets Dummy packet CID for AAL2.</td>
</tr>
<tr>
<td>(o) PPT</td>
<td>Sets Dummy packet PPT for AAL2.</td>
</tr>
<tr>
<td>(p) UUI</td>
<td>Sets Dummy packet UUI for AAL2.</td>
</tr>
<tr>
<td>(q) MID</td>
<td>Edits SAR-PDU MID for AAL3/4.</td>
</tr>
<tr>
<td>(r) CPI</td>
<td>Edits CPCS-PDU CPI for AAL3/4.</td>
</tr>
<tr>
<td>(s) BTag</td>
<td>Edits CPCS-PDU BTag and ETag for AAL3/4.</td>
</tr>
<tr>
<td>(t) BASize</td>
<td>Edits CPCS-PDU BASize for AAL3/4.</td>
</tr>
<tr>
<td>(u) Payload</td>
<td>Edits payload for AAL3/4. Perform editing on another screen. Move the cursor to Payload and press [ \text{Set} ] to display the Payload data screen.</td>
</tr>
<tr>
<td>(w) Payload</td>
<td>Edits payload for AAL5. Perform editing on another screen. Move the cursor to Payload and press [ \text{Set} ] to display the Payload data screen.</td>
</tr>
<tr>
<td>(x) CPCS-UU</td>
<td>Edits CPCS-UU for AAL5.</td>
</tr>
<tr>
<td>(y) CPI</td>
<td>Edits CPI for AAL5.</td>
</tr>
<tr>
<td>(z) Length</td>
<td>Edits Length for AAL5.</td>
</tr>
</tbody>
</table>
### Payload data display screen (AAL3/4, AAL5)

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Print</td>
<td>Sets printing range.</td>
</tr>
<tr>
<td>(b) Page</td>
<td>Selects page to be displayed.</td>
</tr>
<tr>
<td>(c) (Payload)</td>
<td>Sets 65,535 bytes. This data is commonly used for AAL3/4 and AAL5.</td>
</tr>
<tr>
<td>(d) Initial</td>
<td>Initializes data.</td>
</tr>
</tbody>
</table>
| (e) (Scroll) | Changes the data page displayed.  
  ↑ : Displays the first page.  
  ↓ : Displays the last page.  
  ↑ : Scrolls the screen to display the previous page.  
  ↓ : Scrolls the screen to display the next page. |
| (f) END | Move the cursor to this item and press Set to redisplay the Foreground Cell display screen. |
When Cell type=OAM

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Function Specific field</td>
<td>Edits the function specific fields of AIS, RDI, User program, CC, and Loopback. Move the cursor to Function Specific field and press Set to display the editing window.</td>
</tr>
<tr>
<td>(b) Reserve</td>
<td>Edits RES of AIS, RDI, User program, CC, Loopback, PM FM, and PM BR.</td>
</tr>
<tr>
<td>(c) OAM</td>
<td>Edits User program.</td>
</tr>
<tr>
<td>(d) Function</td>
<td>Edits User program Function.</td>
</tr>
<tr>
<td>(e) TSTP</td>
<td>Sets TSTP of PM FM and PM BR.</td>
</tr>
<tr>
<td>(f) (Unused)</td>
<td>Edits Unused of PM FM and PM BR. Move the cursor to Unused and press Set to display the editing window.</td>
</tr>
<tr>
<td>(g) TUO+1</td>
<td>Sets TUO+1 of PM Backward Report. Move the cursor to TUO+1 of PM BR and press the [Set] key to display the editing window.</td>
</tr>
<tr>
<td>(h) TUO</td>
<td>Sets TUO of PM Backward Report. Move the cursor to TUO of PM BR and press Set to display the editing window.</td>
</tr>
</tbody>
</table>
When Cell type=Background

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a)     | (Header) Edits header pattern. Move the cursor to the header to be edited and press Set to display a window. The setting range is as follows:  
GFC .......... 0 to f/1 (HEX)  
VPI ............ 0 to 255/1, 04 to 095/1  
VCI ............ 0 to 65535/1  
PT .............. 000 to 111/1 (BIN)  
CLP ........... 0, 1 |
| (b)     | (Payload) Edits payload pattern (48 bytes). Move the cursor to the payload to be edited and press Set to display a window. |
2.2 Setup Main Screen

When Cell type=Memorized

(a) Print
Sets printing start position and end position.

(b) Display start
Sets display start cell number (1 to 2016).

(c)-(f)
Selects a data read method.
Captured can be selected only when Capture data exists.

(d) No.
Selects line-based edit operation.
Move the cursor of the NO. item and press /C83/C101/C116 to open the edit operation selection window.

(e) (Header)
Edits the No.1 to No.2016 header patterns.
Move the cursor to the header to be edited and press /C83/C101/C116 to open a window.

(f) Payload
Edits the No.1 to No.2016 payload patterns.
Move the cursor to the payload to be edited and press /C83/C101/C116 to open a window.

(g) (Scroll)
Changes the data page displayed.

↑ ..........Displays the first page.
↓ ..........Displays the last page.
↑ ..........Scrolls the screen to display the previous page.
↓ ..........Scrolls the screen to display the next page.
2.2.4 Measurement condition Subscreen

This screen sets the detection and removal condition of errors and alarms measurement conditions.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Frame size error AAL5 Threshold</td>
<td>Sets the threshold of the frame size error when AAL5 is selected in mapping.</td>
</tr>
<tr>
<td>(b) SECB</td>
<td>Set a block size (N) and a threshold (M) when SECB is set. When either of which is changed, the other is also changed.</td>
</tr>
</tbody>
</table>
2.3 Test menu Main Screen

This section explains the display of each sub-screen of the Test Menu main screen.

2.3.1 Manual Subscreen (TC layer)

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a)     | Switches the Manual sub-screens.  
          | Tclayer .......SONET/SDH/PDH/ATM  
          | Tx cell .........ATM transmission  
          | Rx cell .........ATM reception |
| (b) Alarm/Error | Sets the error and alarm item to be added in the TC layer. |
| (c) K1/K2 | Presets K1 byte, K2 byte, and the pointer value of the TC layer. |
| (d) Mode | Sets the measurement mode of the error and alarm. |
Section 2  Screen Description

2.3.2  Manual Subscreen  (Tx Cell)

This screen sets the items for cell measurement. (Transmission)

When [Select]=Traffic, Distribution=CBR

- Background [0%]
- Fill cell [Unassigned]
<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a)     | Switches the Manual sub-screens.  
          | Tclayer .......... SDH,PDH  
          | Tx cell .......... ATM transmission  
          | Rx cell .......... ATM reception |
| (b)     | [Select] Selects Manual measurement. |
| (c)     | Type Selects the ATM cell type.  
          | When selecting Memorized, set the number of repetitions of Memorized cells on the right.  
          | Displayed when ATM selected for Mapping. |
| (d)     | Header Edits header pattern.  
          | Press \[Set\] to open the editing window. |
| (e)     | Payload Sets payload type. |
| (f)     | (Word16) Sets word pattern when Word16 or Word8 is selected for Payload. |
| (g)     | Distribution Sets cell traffic type. |
| (h)     | Selects transmission type.  
          | - When Single is selected, the cell is sent by using the one-shot button.  
          | - No parameter selection when Distribution = Poisson.  
          | - The cell sent by the one-shot button is one cell for Distribution = CBR, and are cells of one period for Distribution = Burst, CBR with CDV, and Sawtooth. One period for Distribution = CBR with CDV is 2000 cell-times. |
| (i)     | Sets the unit (kbit/s, cell/s, or %) of the Distribution setting parameter. The value is set under the unit. |
| (j)     | Background Sets background cell traffic.  
          | This can be set for each the 10 background cells. |
| (k)     | Fill cell Selects cell (Unsigned or Idle) for Fill cell. |
When [Select]=Traffic, Distribution=Burst, Mapping=AAL2

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Rmax</td>
<td>Sets Rmax. If Rmin is greater than Rmax, the same value as Rmin is set.</td>
</tr>
<tr>
<td>(b) Rmin</td>
<td>Sets Rmin. If Rmax is less than Rmin, the same value as Rmax is set.</td>
</tr>
<tr>
<td>(c) T1, T2</td>
<td>Sets parameter values.</td>
</tr>
<tr>
<td>(d) ALL2 Dummy</td>
<td>Sets the occupied ratio of Dummy packet in the AAL2 CPS packet. Displayed when AAL2 selected for Mapping.</td>
</tr>
</tbody>
</table>
When [Select] = Traffic, Distribution=CBR with CDV, and Mapping is other than ATM,AAL2

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) CBR</td>
<td>Sets CBR.</td>
</tr>
<tr>
<td>(b) CDVT</td>
<td>Sets CDVT.</td>
</tr>
</tbody>
</table>
When [Select]=Traffic, Distribution=Poisson, and Mapping is other than ATM and AAL2

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) (%)</td>
<td>Sets Poisson.</td>
</tr>
</tbody>
</table>
When [Select]=Traffic, Distribution=Sawtooth, and Mapping is other than ATM and AAL2

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a) Rmax | Sets Rmax.  
If Rmin is greater than Rmax, the same value as Rmin is set. |
| (b) Rmin | Sets Rmin.  
If Rmax is less than Rmin, the same value as Rmax is set. |
| (c) T1,T2 | Sets parameter values. |
### When [Select]=Error/Alarm

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Alarm</td>
<td>Sets alarm addition item.</td>
</tr>
<tr>
<td>(b) Timing</td>
<td>Sets alarm addition timing.</td>
</tr>
<tr>
<td>(c) Error</td>
<td>Sets error addition item.</td>
</tr>
<tr>
<td>(d) Pattern</td>
<td>Sets error addition pattern.</td>
</tr>
<tr>
<td>(e) Timing</td>
<td>Sets only when Error = User program selected.</td>
</tr>
<tr>
<td>(f) CC</td>
<td>Sets CC cell addition.</td>
</tr>
<tr>
<td>(g) Loopback</td>
<td>Sets Loopback cell type. Move the cursor here and press <code>[Set]</code> to start the Loopback test.</td>
</tr>
</tbody>
</table>

#### Note:

The results of the Loopback test are displayed as "OK/NG/-/-" to the right of "[ ]".
### Display Description

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) FM</td>
<td>Sets PM Forward Monitoring cell addition.</td>
</tr>
<tr>
<td>(b) Error</td>
<td>Sets error addition item.</td>
</tr>
<tr>
<td>(c) Timing</td>
<td>Sets error addition timing. Error is added when (\text{Err}) is pressed.</td>
</tr>
</tbody>
</table>

### Display Description (continued)

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) BR</td>
<td>Sets PM Backward Report cell addition.</td>
</tr>
<tr>
<td>(b) Interval</td>
<td>Sets interval. The interval value is restricted according to the number of send cells.</td>
</tr>
<tr>
<td>(c) Error</td>
<td>Sets error addition item.</td>
</tr>
<tr>
<td>(d) Timing</td>
<td>Sets error addition timing. Error is added when (\text{Err}) is pressed.</td>
</tr>
</tbody>
</table>
2.3.3 Manual Subscreen (Rx Cell)

This screen sets the items for cell measurement. (Reception)

When Mapping: AAL1, AAL5, ATM

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Header Pattern</td>
<td>Edits header pattern to filter. - Move the cursor and press Set to open the edit operation window.</td>
</tr>
<tr>
<td>(b) Header Mask</td>
<td>Edits the mask pattern of a header. - Move the cursor and press Set to open the edit operation window.</td>
</tr>
<tr>
<td>(c) Payload Position</td>
<td>Sets payload filter position. (AAL1, ATM)</td>
</tr>
<tr>
<td>(d) Payload Pattern</td>
<td>Sets payload filter pattern. (AAL1, ATM)</td>
</tr>
<tr>
<td>(e) Payload Mask</td>
<td>Sets payload filter mask. (AAL1, ATM)</td>
</tr>
<tr>
<td>(f) Non-conforming Parameter</td>
<td>Specifies a Non-conforming parameter.</td>
</tr>
<tr>
<td>(g) PCR</td>
<td>Sets PCR.</td>
</tr>
<tr>
<td>(h) CDVT</td>
<td>Sets CDVT.</td>
</tr>
</tbody>
</table>
2.3 Test menu Main Screen

Mapping : AAL2

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Payload CID</td>
<td>Sets CID.</td>
</tr>
</tbody>
</table>

Note:

CID cannot be set when the Payload setting is Time stamp on the Manual screen of the Tx cell.
Section 2  Screen Description

Mapping : AAL3/4

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Payload MID</td>
<td>Sets MID.</td>
</tr>
</tbody>
</table>

**Note:**

MID cannot be set when the Payload setting is Time stamp on the Manual screen of the Tx cell.
2.3.4 1-point CDV Subscreen

This screen sets the items for measuring jitter between received cells.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Ref.time **</td>
<td>Sets cell interval used as the reference in 1-point CDV measurement.</td>
</tr>
<tr>
<td>(b) Mode **</td>
<td>Sets measurement mode. When setting Single, set the measurement gating period time and unit.</td>
</tr>
</tbody>
</table>

** When any item is changed during measurement, the 1-point CDV measurement is restarted.

** Note:

When the 1-point CDV measurement is performed while setting an error insertion item on the Test menu:Manual sub-screen; the inserted error becomes invalid.
This screen sets the items for measuring cell delay jitter from cell transmission to cell reception.

**Display Description**

- **Mode**: Sets measurement mode. When setting the mode at Single or Repeat, set the gating period time and unit.

**Note:**

- This measurement can be conducted only when the Time Stamp is inserted in Payload of Manual sub-screen of Tx cell.
- When the 2-point CDV measurement is performed while setting an error insertion item on the Test menu:Manual sub-screen; the inserted error becomes invalid.
2.4 Result Main Screen

This section explains the display of each sub-screen of the Result main screen.

2.4.1 Error/Alarm Subscreen

This screen displays the results of Error/Alarm measurement.

**In single screen mode:**

(a) **Alarm**
- Sets display alarm format.

(b) **TClayer/Cell**
- Switches between TClayer and Cell.
  - TClayer goes on when STM items are displayed, Cell goes on when ATM items are displayed.
  - Move the cursor here and press `Set` to switch the displays.

**In multiple screen mode**

(a) **Alarm**
- 

(b) **TClayer/Cell**
- 

---

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Alarm</td>
<td>Sets display alarm format.</td>
</tr>
<tr>
<td>(b) TClayer/Cell</td>
<td>Switches between TClayer and Cell. TClayer goes on when STM items are displayed, Cell goes on when ATM items are displayed. Move the cursor here and press <code>Set</code> to switch the displays.</td>
</tr>
</tbody>
</table>
Note:
- Alarm and the STM/ATM switch (TClayer/Cell one-shot button) is displayed only in multiple screen mode.
- When the Alarm display format is set to Count, TClayer alarm cannot be displayed in Count format. Then, the label is not displayed.
- When the mask is set on entire VCI of Header Mask at Manual sub-screen (Rx Cell); the measurements of FM cell, BR cell, CC cell, Loop Back cell, AIS cell, and RDI cell are performed at VP.
- When the mask is not set on entire VCI of Header Mask at Manual sub-screen (Rx Cell); the measurements of FM cell and BR cell are performed at VC, and CC cell, Loop Back cell, AIS cell, and RDI cell are performed at VP and VC.

- Describes the insertion/detection of error related to AAL, below:

(1) Insertion/detection of error related to AAL1

<table>
<thead>
<tr>
<th>Item to be selected</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOST Cell</td>
<td>Skips the value at SN field.</td>
</tr>
<tr>
<td>SNP</td>
<td>Inverts one bit at SNP field.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR-PDU</td>
<td>Counts SAR-PDU.</td>
</tr>
<tr>
<td>LOST</td>
<td>Counts the lost SAR-PDU calculated from SN field.</td>
</tr>
<tr>
<td>SNP</td>
<td>Counts SAR-PDU which involves error at SNP field.</td>
</tr>
<tr>
<td>UCorSNP</td>
<td>Counts SAR-PDU which involves invalid SNP field.</td>
</tr>
<tr>
<td></td>
<td>&quot;SAR-PDU which involves invalid SNP field&quot; means the SAR-PDU which involves</td>
</tr>
<tr>
<td></td>
<td>the multiple bit errors at SNP field in correction mode of AAL1 state transition, or one or multiple bit errors at SNP field in detection mode.</td>
</tr>
</tbody>
</table>
(2) Insertion/detection of error related to AAL2

**Error addition**

<table>
<thead>
<tr>
<th>Item to be selected</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Inverts the value at P field.</td>
</tr>
<tr>
<td>OSF</td>
<td>Sets all bits of OSF field to 1.</td>
</tr>
<tr>
<td>SN</td>
<td>Skips the value at SN field.</td>
</tr>
<tr>
<td>HEC(Packet)</td>
<td>Inverts all bits of HEC field.</td>
</tr>
</tbody>
</table>

**Error detection**

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR-PDU</td>
<td>Counts SAR-PDU.</td>
</tr>
<tr>
<td>P</td>
<td>Counts SAR-PDU which involves error at P field.</td>
</tr>
<tr>
<td>OSF</td>
<td>Counts SAR-PDU which involves OSF field ≥48.</td>
</tr>
<tr>
<td>SN</td>
<td>Counts SAR-PDU which involves SN field with unexpected SN value.</td>
</tr>
<tr>
<td>CPS-PKT</td>
<td>Counts CPS-Packet with CID which is set at Manual sub-screen (Rx Cell).</td>
</tr>
<tr>
<td>CPS-HEC</td>
<td>Counts CPS-Packet which involves error at HEC field. Rate display indicates the rate to the number of all CPS-Packets.</td>
</tr>
</tbody>
</table>
(3) Insertion/detection of error related to AAL3/4

**Error addition**

<table>
<thead>
<tr>
<th>Item to be selected</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRC10</td>
<td>Inverts all the bits at CRC10 field.</td>
</tr>
<tr>
<td>Segment Type</td>
<td>Changes EOM to SSM or SSM to EOM at ST field.</td>
</tr>
<tr>
<td>Length Indicator</td>
<td>Sets LI = 48.</td>
</tr>
<tr>
<td>SN</td>
<td>Skips the value at SN field. Not inserted at SAR-PDU of ST = BOM/SSM.</td>
</tr>
<tr>
<td>Abort</td>
<td>Sets all the bits of LI field of SAR-PDU with ST = EOM to 1.</td>
</tr>
<tr>
<td>CPI</td>
<td>Sets all the bits of CPI field to 1.</td>
</tr>
<tr>
<td>B/ETag</td>
<td>Inverts all the bits at Btag field.</td>
</tr>
<tr>
<td>BASize</td>
<td>Sets all the bits of BASize field to 0.</td>
</tr>
<tr>
<td>AL</td>
<td>Sets all the bits of AL field to 1.</td>
</tr>
<tr>
<td>Length</td>
<td>Adds 1024 to the value of Length field.</td>
</tr>
</tbody>
</table>

**Error detection**

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR-PDU</td>
<td>Counts SAR-PDU.</td>
</tr>
<tr>
<td>MID</td>
<td>Counts SAR-PDU with MID which is set at Manual sub-screen (Rx Cell). For other than CRC10, SAR-PDU counted here becomes the measurement object, and the rate displays of SN/DiscPDU/ST/LI/Abort become the rates for SAR-PDU counted here.</td>
</tr>
<tr>
<td>CRC10</td>
<td>Counts SAR-PDU which involves error at CRC10 field. Rate display indicates the rate to the number of SAR-PDUs.</td>
</tr>
<tr>
<td>ST</td>
<td>Counts SAR-PDU which involves ST field with unexpected ST value.</td>
</tr>
<tr>
<td>LI</td>
<td>Counts SAR-PDU which involves error at LI field. &quot;SAR-PDU which involves error at LI field&quot; means the SAR-PDU in which LI is not 44 for ST = BOM/COM, other than 4 ≤ LI ≤ 44 for ST = EOM, and other than 8 ≤ LI ≤ 44 for ST = SSM.</td>
</tr>
<tr>
<td>SN</td>
<td>Counts SAR-PDU which involves SN field with unexpected SN value. Measures the continuity of SN value of SAR-PDU which composes CPCS-PDU. Does not measure the continuity of SN value between continuous SAR-PDUs which belong to different CPCS-PDU.</td>
</tr>
<tr>
<td>Abort</td>
<td>Counts Abort SAR-PDU. Abort SAR-PDU is the SAR-PDU with ST = EOM and LI = 63.</td>
</tr>
</tbody>
</table>
### 2.4 Result Main Screen

**DiscPDU**
Counts SAR-PDU to be discarded. 
“SAR-PDU to be discarded” means the SAR-PDU with ST error of BOM/EOM, SN error, LI error, or Abort SAR-PDU.

<table>
<thead>
<tr>
<th>Item to be selected</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPCS</strong></td>
<td>Counts CPCS-PDU.</td>
</tr>
<tr>
<td><strong>CPI</strong></td>
<td>Counts CPCS-PDU with none zero CPI.</td>
</tr>
<tr>
<td><strong>B/ETag</strong></td>
<td>Counts CPCS-PDU in which BTag field is not the same as ETag field.</td>
</tr>
<tr>
<td><strong>BASize</strong></td>
<td>Counts CPCS-PDU in which the payload length of CPCS-PDU is over the value of BASize field.</td>
</tr>
<tr>
<td><strong>AL</strong></td>
<td>Counts CPCS-PDU in which the AL field not 0.</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>Counts CPCS-PDU in which the payload length of CPCS-PDU is different from the value of Length field.</td>
</tr>
<tr>
<td><strong>UDevPDU</strong></td>
<td>Counts CPCS-PDU with CPI error, B/ETag error, BASize error, AL error, or Length error.</td>
</tr>
</tbody>
</table>

(4) Insertion/detection of error related to AAL5

<table>
<thead>
<tr>
<th>Error addition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Item to be selected</strong></td>
</tr>
<tr>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>CRC32</strong></td>
</tr>
<tr>
<td><strong>Abort</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Error detection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Display</strong></td>
</tr>
<tr>
<td><strong>CPCS</strong></td>
</tr>
<tr>
<td><strong>DiscPDU</strong></td>
</tr>
<tr>
<td><strong>FRMsize</strong></td>
</tr>
<tr>
<td><strong>Length</strong></td>
</tr>
<tr>
<td><strong>CRC32</strong></td>
</tr>
<tr>
<td><strong>Abort</strong></td>
</tr>
</tbody>
</table>
Section 2  Screen Description

2.4.2  1-point CDV Subscreen

This screen displays the results of measuring jitter between received cells.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Start</td>
<td>Indicates measurement start time.</td>
</tr>
<tr>
<td>(b) Average</td>
<td>Indicates average value.</td>
</tr>
<tr>
<td>(c) Maximum</td>
<td>Indicates maximum value.</td>
</tr>
<tr>
<td>(d) Minimum</td>
<td>Indicates minimum value.</td>
</tr>
</tbody>
</table>

Note:

- The screen display is retained until a data erasure condition (measurement restart etc.) occurs.
- When any data erasure condition is occurred, "-----" is displayed.
2.4.3 2-point CDV Subscreen

This screen displays the results of measuring cell delay jitter from cell transmission to cell reception.

Display Description

(a) Start  Indicates measurement start time.
(b) Average  Indicates average value.
(c) Maximum  Indicates maximum value.
(d) Minimum  Indicates minimum value.
(e) Offset  Indicates offset value.

Note:

- The screen display is retained until a data erasure condition (measurement restart etc.) occurs.
- When any data erasure condition is occurred, "-----" is displayed.
2.5 Analyze Main Screen

This section explains the display of each sub-screen of the Analyze main screen.

2.5.1 Error/Alarm Subscreen

This screen analyzes the results of Error/Alarm measurement.

- When the ATM error item is selected to 0.191, graphs are overlapped in order of Discarded (red), Misinserted (green), and Errored (yellow).
- Color coding is based on proportion and not on measured values.
- In remote operation, the total values can be read.
This screen displays the monitored value for overhead.

**Type = Trail trace**

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Type</td>
<td>Sets the channel to be monitored.</td>
</tr>
<tr>
<td>(b) Pause</td>
<td>Turns ON/Off the display update.</td>
</tr>
<tr>
<td>(c) Trail trace pattern</td>
<td>Displays Trail trace to be monitored.</td>
</tr>
<tr>
<td>(d) CRC-7</td>
<td>Assuming CRC-7, calculates CRC-7 to indicate the presence of error.</td>
</tr>
<tr>
<td>(e) TR mismatch</td>
<td>Displays TR error.</td>
</tr>
</tbody>
</table>
2.5.3 Cell monitor Subscreen

This screen monitors cells received or sent.

**Note:** Monitoring value can be stopped by executing Pause.
2.5.4 Live monitor Subscreen

This screen analyzes Traffic and FM Cell measurement.

When the monitor item is Traffic

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a) Title | The graph title can be input.  
| | - This button is effective only in single screen mode. |
| (b) Print | Sets printing range and print data.  
| | Display .......... Prints the current displayed data.  
| | All ................... Prints all the data from the top to the end.  
| | After Prints the data from the current displayed data to the end.  
| | Before .......... Prints the previous data from the top to the current displayed data. |
| (c) Display type | Sets display type.  
| | Individual ..... Displays the latest data.  
<p>| | Accumulate Displays the accumulated data from the measurement start. |</p>
<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) Channel Search</td>
<td>Starts channel search. Move the cursor here and press Set to start search.</td>
</tr>
<tr>
<td>(e) Pause</td>
<td>Move the cursor here and press Set to execute Pause. This button is not effective in 3-screen mode.</td>
</tr>
<tr>
<td>(f) Store</td>
<td>Stores graph data in memory. Move the cursor here and press Set to open the character string input window. Input a name to store the data in memory. This button is displayed only in single screen mode. Effective when Accumulate is selected at the item (c) Display type.</td>
</tr>
<tr>
<td>(g)</td>
<td>Selects monitor item.</td>
</tr>
<tr>
<td>(h) (Scroll)</td>
<td>Moves the displayed graph. ↓ ....... Displays top line of the graph. ↑ ....... Displays bottom line of the graph. ↑ ....... Scrolls half screen up. ↓ ....... Scrolls half screen down.</td>
</tr>
<tr>
<td>(i) VPI</td>
<td>Sets VPI. This button is effective only in single screen mode.</td>
</tr>
<tr>
<td>(j) VCI</td>
<td>Sets VCI. This button is effective only in single screen mode.</td>
</tr>
<tr>
<td>(k) Alarm</td>
<td>Displays one alarm item of the highest-rank receive alarm.</td>
</tr>
<tr>
<td>(l)</td>
<td>Displays the data of the parameter selected at the item (m).</td>
</tr>
<tr>
<td>(m)</td>
<td>Selects parameter. Effective at monitor item: Traffic.</td>
</tr>
<tr>
<td>(n) TYPE</td>
<td>Displays AAL type of cell. (May differ from the actual type.)</td>
</tr>
</tbody>
</table>

**Note:**
- When Display type is Accumulate at measurement, the successive monitor can be performed in the following monitor items:
  - →FM Misinserted cell ←→ FM Lost cell ←→ FM Mis/Lost cell ←
- When any monitor item (except the above) is changed during measurement, the measurement is restarted. Also, when Display type is changed from Individual to Accumulate; the measurement is restarted, and the acquired data is lost.
When the monitor item is Non-conforming or FM SECB
When monitor item is Non-conforming, and Threshold is pressed

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a) Threshold | Move the cursor here and press \[Set\] to display the setting screen of threshold condition.  
- Settable at Non-conforming. |
| (b) count | Displays the summed value. |
| (c) | Sets parameters. |
| (d) | Sets threshold.  
- Corresponds to SECB Size M of Setup Mapping screen.  
- Four types of threshold can be set. |
| (e) | Can specify any one of the four thresholds set at the item (d). |
When the monitor item is FM Mis/lost cell

**Note:**
- Graphs are displayed in order of Misinserted (red) and Discarded (green) from the left.
- Color coding is based on proportion, not on measured values.
2.5.5 Traffic monitor Subscreen

This screen analyzes the measurement results displayed in a graph.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a) Scroll | Scrolls the graph.  
  ↓ Displays measurement start position.  
  ← Scrolls graph to the left.  
  → Scrolls graph to the right.  
  ↑ Displays measurement end position. |
| (b) Print | Sets printing range and print data.  
  Display Prints the current displayed data.  
  All Prints all the data from the top to the end.  
  After Prints the data from the current displayed data to the end.  
  Before Prints the previous data from the top to the current displayed data. |
| (c) Title | Move the cursor here and press Set to open a window. The graph title can be input.  
  - This button is displayed only in single screen mode. |
<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(d) VPI</td>
<td>Indicates VPI filter value and mask value.</td>
</tr>
<tr>
<td>(e) VCI</td>
<td>Indicates VCI filter value and mask value.</td>
</tr>
<tr>
<td>(f) Received</td>
<td>Indicates total number of received cells.</td>
</tr>
<tr>
<td>(g) mean</td>
<td>Indicates average cell reception rate.</td>
</tr>
<tr>
<td>(h) Maximum</td>
<td>Indicates maximum number of received cells.</td>
</tr>
<tr>
<td>(i) Minimum</td>
<td>Indicates minimum number of received cells.</td>
</tr>
</tbody>
</table>
| (j) ← | Move the cursor here and press the [Set] key to move the marker to the left.  
  - This button is effective only in single screen mode. |
| (k) → | Move the cursor here and press the [Set] key to move the marker to the right.  
  - This button is effective only in single screen mode. |
| (l) | Sets vertical scale unit. |
| (m) (Graph Start) | Sets display start time. |
| (n) (interval) | Sets time axis interval of analysis graph. |
| (o) Store | Stores graph data.  
Move the cursor here and press Set to open a window.  
Input a name to store the data in memory.  
- This button is displayed only in single screen mode. |
| (p) Marker | Turns ON/OFF the marker.  
□..... Indicates that the marker is OFF. Move the cursor here and press Set to turn on the marker.  
■..... Indicates that the marker is ON. Move the cursor here and press Set to turn off the marker.  
- This button is displayed only in single screen mode. |
| (q) | Indicates detailed data of the marked graph. |
| (r) (graph) | Displays average value of each bar in a bar chart.  
Displays maximum and minimum values of each bar in a line graph. |
This screen analyzes the cell information of captured cells.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Title</td>
<td>Input the graph title. Move the cursor here and press [\text{Set}] to open a window. This button is displayed only in single screen mode.</td>
</tr>
<tr>
<td>(b) Capture</td>
<td>Sets capture timing. Move the cursor here and press [\text{Set}] to perform Capture.</td>
</tr>
<tr>
<td>(c) Trigger</td>
<td>Sets Trigger item. - Set Trigger position on the right. - When captured, the trigger select data is reverse-displayed.</td>
</tr>
<tr>
<td>(d) Jump</td>
<td>Selects display start position. When selecting Number, the 1/last No./other Nos. set the display position to top/last/center, respectively.</td>
</tr>
</tbody>
</table>
## 2.5 Analyze Main Screen

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (e) [Scroll] | Moves data in horizontal axis direction.  
| ⬇️ ................. Displays start position of horizontal axis.  
| ← .................. Scrolls horizontal axis eight bytes to the left.  
| → .................. Scrolls horizontal axis eight bytes to the right.  
| ↓ .................. Displays end position of horizontal axis. |
| (f) Print | Sets print start position and end position (1 to 2016).  
| Display .......... Prints the current displayed data.  
| All ............... Prints all the data from the top to the end.  
| After ............. Prints the data from the current displayed data to the end.  
| Before ........... Prints the previous data from the top to the current displayed data. |
| (g) Store | Stores graph data in memory.  
| Move the cursor here and press [Set] to open the character string input window.  
| Input a name to store the data in memory.  
| - This button is displayed only in single screen mode. |
| (h) [Select] | Sets the Payload data display format. |
| (i) [Scroll] | Moves data in vertical axis direction.  
| ⬆️ ................. Displays start position of vertical axis.  
| ↑ .................. Scrolls data half screen up in vertical axis direction.  
| ↓ .................. Scrolls data half screen down in vertical axis direction.  
| ↓ .................. Displays end position of the vertical axis. |
This screen analyzes the results of measuring jitter between received cells.

(a) (Scroll) Scrolls the graph.
   └ Displays measurement start position.
   ← Streams graph to the left.
   → Streams graph to the right.
   └ Displays measurement end position.

(b) Print Sets printing range and print data.
   Display ...... Prints the current displayed data.
   All .......... Prints all the data from the top to the end.
   After .......... Prints the data from the current displayed data to the end.
   Before .......... Prints the previous data from the top to the current displayed data.

(c) Title Move the cursor here and press (Set) to open a window.
    Input the graph title.
    ❧ This button is displayed only in single screen mode.
<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (d) VPI | Indicates VPI filter value and mask value.  
- This button is displayed only in single screen mode. |
| (e) VCI | Indicates VCI filter value and mask value.  
- This button is displayed only in single screen mode. |
| (f) Average | Indicates average cell reception rate. |
| (g) Maximum | Indicates maximum number of received cells. |
| (h) Minimum | Indicates minimum number of received cells. |
| (i) Display type | Sets display data type.  
Individual ........Displays the latest data.  
Accumulate .......Displays the accumulated data from the measurement start. |
| (j) ← | Move the cursor here and press \[\text{Set}\] to move the marker to the left.  
- This button is effective only in single screen mode. |
| (k) → | Move the cursor here and press \[\text{Set}\] to move the marker to the right.  
- This button is effective only in single screen mode. |
| (l) Store | Stores graph data.  
Move the cursor here and press \[\text{Set}\] to open a window.  
Input a name to store the data in memory.  
This button is displayed only in single screen mode. |
| (m) Marker | Turns ON/OFF the marker.  
□ .... Indicates that the marker is OFF.  
Move the cursor here and press the [Set] key to turn on the marker.  
■ .... Indicates that the marker is ON.  
Move the cursor here and press the [Set] key to turn off the marker.  
- This button is displayed only in single screen mode. |
| (n) Peak | Searches for peak point.  
\(<\text{□}............\text{Set}\) Moves the marker to peak point in forward direction.  
\(\text{□}............\text{Set}\) Moves the marker to peak point in reverse direction. |
| (o) Zoom | Centers data at marker point to redraw the graph.  
Move the cursor here and press \[\text{Set}\] to change the display interval.  
in ................. Zooms in on marker point.  
out ............... Zooms out on marker point. |
| (p) | Indicates detailed data of the marked graph. |
| (q) (interval) | Sets horizontal axis of analysis graph. |
### 2.5.8 2-point CDV Subscreen

This screen analyzes the results of measuring cell delay jitter from cell transmission to cell reception.

<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| (a) (Scroll) | Scrolls the graph.  
  └ Displays measurement start position.  
  ← Scrolls graph to the left.  
  → Scrolls graph to the right.  
  ├ Displays measurement end position. |
| (b) Print | Sets printing range and print data.  
  Display Prints the current displayed data.  
  All Prints all the data from the top to the end.  
  After Prints the data from the current displayed data to the end.  
  Before Prints the previous data from the top to the current displayed data. |
| (c) Title | Move the cursor here and press Set to open a window.  
  Input the graph title.  
  - This button is displayed only in single screen mode. |
<table>
<thead>
<tr>
<th>Display</th>
<th>Description</th>
</tr>
</thead>
</table>
| VPI     | Indicates VPI filter value and mask value.  
|         | - This button is displayed only in single screen mode. |
| VCI     | Indicates VCI filter value and mask value.  
|         | - This button is displayed only in single screen mode. |
| Average | Indicates average number of cells. |
| Offset  | Indicates offset value. |
| Max     | Indicates maximum number of received cells. |
| Min     | Indicates minimum number of received cells. |
| Display type | Sets display type.  
| Individual | Displays the latest data.  
| Accumulate | Displays the accumulated data from the measurement start. |
| Move left | Move the cursor here and press `Set` to move the marker to the left.  
|         | - This button is effective only in single screen mode. |
| Move right | Move the cursor here and press `Set` to move the marker to the right.  
|         | - This button is effective only in single screen mode. |
| Store   | Stores graph data.  
|         | Move the cursor here and press `Set` to open a window.  
|         | Input a name to store the data in memory.  
|         | - This button is displayed only in single screen mode. |
| Marker  | Turns ON/OFF the marker.  
|         | □ .... Indicates that the marker is OFF.  
|         | Move the cursor here and press `Set` to turn on the marker.  
|         | ■ .... Indicates that the marker is ON.  
|         | Move the cursor here and press `Set` to turn off the marker.  
|         | - This button is displayed only in single screen mode. |
| Peak    | Searches for peak point.  
|         | □ ................. Moves the marker to peak point in forward direction.  
|         | □> ................. Moves the marker to peak point in reverse direction. |
| Zoom    | Centers data at marker point to redraw the graph.  
|         | Move the cursor here and press `Set` to change the display interval.  
|         | in ................. Zooms in on marker point.  
|         | out ............... Zooms out on marker point. |
| (interval) | Sets horizontal axis of analysis graph. |
This screen displays the analysis graph data read on the Setup:Memory or Setup:Floppy disk screen.

- The operation is the same as on the Live monitor, Traffic monitor, Cell capture, 1-point CDV, and 2-point CDV sub-screens. Title input and storage are disabled, however.
Section 3  Measurement Example

This section explains measurement examples related to the ATM measurement.

3.1 Error and Alarm Test ................................................................. 3-3
   3.1.1 Connection ........................................................................ 3-3
   3.1.2 Initial Setting ...................................................................... 3-4
   3.1.3 Manual Measurement ......................................................... 3-5
      Setting and Starting Measurement ........................................ 3-5
      Displaying the Measurement Result (Error and Alarm)........ 3-6
      Analysis (1) ......................................................................... 3-7
      Analysis (2) ......................................................................... 3-8
      Analysis (3) ......................................................................... 3-9

3.2 1-point CDV Measurement ...................................................... 3-10
   3.2.1 Connection ........................................................................ 3-10
   3.2.2 Initial Setting ...................................................................... 3-11
   3.2.3 Measurement ...................................................................... 3-12
      Setting and Starting Measurement ........................................ 3-12
      Displaying the Measurement Result ..................................... 3-12
      Analysis ............................................................................... 3-13
Section 3  Measurement Example
3.1 Error and Alarm Test

The operation is explained using an example of monitoring the output of the 139M LTE (Line Terminal Equipment).

3.1.1 Connection

(1) Turn off the MP1570A and install the MP0121A 2/8/34/139/156M Unit and MP0123A ATM Unit.

(2) Connection of the receive side ..... Connect the output connector of the LTE and the CMI/HDB3 input connector of the MP0121A with a BNC (75Ω) coaxial cable.

(3) Connection of the transmit side ..... Connect the CMI/HDB3 output connector of the MP0121A and the input connector of the LTE with a BNC (75Ω) coaxial cable.

(4) After the connections shown (2) and (3), turn on the MP1570A.
Section 3  Measurement Example

3.1.2  Initial Setting

(1) Open the Setup:Mapping screen and set the parameters shown below. In case a signal is received using the monitor point as shown in the example, turn the Monitor mode on.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit rate</td>
<td>100M</td>
</tr>
<tr>
<td>Through</td>
<td>OFF</td>
</tr>
<tr>
<td>Mapping</td>
<td>AALS</td>
</tr>
<tr>
<td>Header structure</td>
<td>UNI</td>
</tr>
<tr>
<td>OAM type</td>
<td>End-to-end</td>
</tr>
<tr>
<td>Clock</td>
<td>Internal</td>
</tr>
<tr>
<td>Monitor mode</td>
<td>OFF</td>
</tr>
</tbody>
</table>

(2) Open the Setup:Measurement condition screen and set the parameters shown below.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame size error</td>
<td></td>
</tr>
<tr>
<td>AALS Threshold</td>
<td></td>
</tr>
<tr>
<td>Performance monitoring cell</td>
<td></td>
</tr>
<tr>
<td>SEOS Block size (N)</td>
<td>8192</td>
</tr>
<tr>
<td>Threshold (N)</td>
<td>256</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
</tr>
<tr>
<td>Recommendation</td>
<td>OFF</td>
</tr>
<tr>
<td>Trigger output</td>
<td>OFF</td>
</tr>
</tbody>
</table>
3.1.3 Manual Measurement

In the manual measurement, an Error/Alarm test can be carried out for one channel.

Setting and Starting Measurement

(1) Open the Test menu: Manual screen and set the parameters on the screen.

<table>
<thead>
<tr>
<th>Test menu</th>
<th>Manual</th>
<th>[Tx cell]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Error/Alarm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>High</strong></td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td>[ 0.1]s</td>
<td></td>
</tr>
<tr>
<td><strong>Error</strong></td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td><strong>Timing</strong></td>
<td>[ Single ]</td>
<td></td>
</tr>
<tr>
<td><strong>CC</strong></td>
<td>[ ]</td>
<td></td>
</tr>
<tr>
<td><strong>Loopback</strong></td>
<td>[No Loopback]</td>
<td></td>
</tr>
</tbody>
</table>

(a) Specify the cell header and cell amount using the Tx cell menu. Set the Manual measurement type to Error/Alarm, and specify the addition of Error, Alarm, timing, and CC cell.

(b) Specify the cell filter conditions to be received in the Rx cell menu.

(2) After the setting, press \[\text{Start} / \text{Stop}\] to start measurement.
Displaying Measurement Result (Error and Alarm)

Select the Result: Error/Alarm screen, then the screen shown below is displayed.

- Select the display with the error numbers or with rate express.
- For error addition/detection, see “2.4.1 Error/Alarm subscreen”.
- Set Display data to “Current” to display the halfway result of the measurement.
- Select Analyze:Cell monitor to monitor the cell during measurement.
Analysis (1)

Select the Analyze : Error/Alarm screen, then the graph shown below is displayed.
Analysis (2)

Select the Analyze : Live moniter screen to monitot VPI, VCI, Cell/s graphs.

- When O.191 is selected as an error item, the graph is displayed in the order of Lost(red), MisINS(green), and Errord(yellow). Each colored partition of the measured value is displayed by the ratio.
- When the monitor item is other than Traffic, the summed value is displayed at the Count field.
- By moving the cursor to “Cannel Search” and pressing Set, the measurement result is searched.
- Only one item of the top rank of the reception alarm is displayed.
Analysis (3)

Select the Analyze : Traffic monitor to display in graphs the number of cells that have passed the reception filter.
3.2 1-point CDV Measurement

The 1-point CDV measurement measures the totter of the received cells. This section explains a measurement example in which the output of a 156M CMI LTE (Line Terminal Equipment) is monitored.

3.2.1 Connection

(1) Turn off the MP1570A and install the MP0121A 2/8/34/139/156M Unit and MP0123A ATM Unit.

(2) Connection of the receive side..... Connect the output connector of the LTE and the CMI/HDB3 input connector of the MP0121A with a BNC (75Ω) coaxial cable.

(3) Connection of the transmit side..... Connect the CMI/HDB3 output connector of the MP0121A and the input connector of the LTE with a BNC (75Ω) coaxial cable.

(4) After the connections shown (2) and (3), turn on the MP1570A.
3.2.2 Initial Setting

(1) Open the Setup:Mapping screen and set the parameters shown below. In case a signal is received using the monitor point as shown in the example, turn the Monitor mode on.

<table>
<thead>
<tr>
<th>Config.</th>
<th>ATM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bit rate</td>
<td>ISDN ON</td>
</tr>
<tr>
<td>Through</td>
<td>OFF</td>
</tr>
<tr>
<td>Mapping</td>
<td>FAL</td>
</tr>
<tr>
<td>Header structure</td>
<td>UNI</td>
</tr>
<tr>
<td>OAM type</td>
<td>End-to-end</td>
</tr>
<tr>
<td>Clock</td>
<td>Internal</td>
</tr>
<tr>
<td>Monitor mode</td>
<td>OFF</td>
</tr>
</tbody>
</table>

![Setup:Mapping Screen](image)
3.2.3 Measurement

Setting and Starting Measurement

(1) Open the Test menu : 1-point CDV screen.

Displaying Measurement Result

Open the Result : 1-point CDV screen. (When the 1-point CDV subscreen is selected in the Test menu main screen, the 1-point CDV subscreen is displayed in the Result main screen.)

- In this screen, average cell-reception ratio, maximum number of cell receptions, and minimum number of cell receptions are displayed.
3.2  1-point CDV Measurement

Analysis

(1) Open the Analyze: 1-point CVD screen.

(2) A graph shown below is displayed, and the measured result can be analyzed.

- Marker displays the numeric data at the measuring point.
Section 3  Measurement Example
This section explains the remote control related to the ATM measurement.

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Common Commands</td>
<td>4-3</td>
</tr>
<tr>
<td>4.2</td>
<td>MP1570A Unique States Register</td>
<td>4-4</td>
</tr>
<tr>
<td>4.3</td>
<td>Device Message Detail</td>
<td>4-12</td>
</tr>
<tr>
<td>4.4</td>
<td>Equipment Unique Command</td>
<td>4-13</td>
</tr>
<tr>
<td>4.4.1</td>
<td>INSTRument subsystem</td>
<td>4-13</td>
</tr>
<tr>
<td>4.4.2</td>
<td>SOURce subsystem</td>
<td>4-15</td>
</tr>
<tr>
<td>4.4.3</td>
<td>SENSE subsystem</td>
<td>4-125</td>
</tr>
<tr>
<td>4.4.4</td>
<td>DISPay subsystem</td>
<td>4-157</td>
</tr>
<tr>
<td>4.4.5</td>
<td>CALCulate subsystem</td>
<td>4-241</td>
</tr>
<tr>
<td>4.4.6</td>
<td>SYSTem subsystem</td>
<td>4-269</td>
</tr>
<tr>
<td>4.4.7</td>
<td>STATus subsystem</td>
<td>4-273</td>
</tr>
</tbody>
</table>
4.1 Common Commands

This section explains the IEEE488.2 common commands supported by this instrument.

The common commands can be used with either GPIB interface or RS-232C interface.

This instrument only supports sequential commands.

The table below lists the IEEE4888.2 common commands supported by this instrument.

<table>
<thead>
<tr>
<th>Mnemonic</th>
<th>Command name</th>
</tr>
</thead>
<tbody>
<tr>
<td>*IDN?</td>
<td>Identification Query</td>
</tr>
<tr>
<td>*RST</td>
<td>Reset Command</td>
</tr>
<tr>
<td>*TST?</td>
<td>Self Test Query</td>
</tr>
<tr>
<td>*OPC</td>
<td>Operation Complete Command</td>
</tr>
<tr>
<td>*OPC?</td>
<td>Operation Complete Query</td>
</tr>
<tr>
<td>*WAI</td>
<td>Wait Continue Command</td>
</tr>
<tr>
<td>*CLC</td>
<td>Clear Status Command</td>
</tr>
<tr>
<td>*ESE</td>
<td>Standard Event Status Enable Command</td>
</tr>
<tr>
<td>*ESE?</td>
<td>Standard Event Status Enable Query</td>
</tr>
<tr>
<td>*ESR?</td>
<td>Standard Event Status Register Query</td>
</tr>
<tr>
<td>*SRE</td>
<td>Service Request Enable Command</td>
</tr>
<tr>
<td>*SRE?</td>
<td>Service Request Enable Query</td>
</tr>
<tr>
<td>*STB?</td>
<td>Read Status Byte Query</td>
</tr>
<tr>
<td>*TRG</td>
<td>Trigger Command</td>
</tr>
<tr>
<td>*PSC</td>
<td>Power On Status Clear Command</td>
</tr>
<tr>
<td>*PSC?</td>
<td>Power On Status Clear Query</td>
</tr>
<tr>
<td>*SAV</td>
<td>Save Command</td>
</tr>
<tr>
<td>*RCL</td>
<td>Recall Command</td>
</tr>
<tr>
<td>*OPT?</td>
<td>Option Identification Query</td>
</tr>
</tbody>
</table>

*Note:*

Refer to the MP1570A SONET/SDH/PDH/ATM Analyzer Operation manual Vol.2, for other commands.
4.2 MP1570A Unique Status Register

INSTRument Status Register Bit Definition

<table>
<thead>
<tr>
<th>Bit</th>
<th>Description</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB0</td>
<td>FMP (Freq. Monitor Period)</td>
<td>Indicates the update timing of the frequency monitor.</td>
</tr>
<tr>
<td>DB1</td>
<td>FGF (Freq. Graph Full)</td>
<td>Indicates that the Freq. Graph data became full.</td>
</tr>
<tr>
<td>DB2</td>
<td>FGE (Freq. Graph Empty)</td>
<td>Indicates that the Freq. Graph data is empty.</td>
</tr>
<tr>
<td>DB3</td>
<td>CWT (Cell Waiting for capture End)</td>
<td>Indicates that a CELL capture trigger is being waited.</td>
</tr>
<tr>
<td>DB4</td>
<td>CWE (Cell Waiting for capture End)</td>
<td>Indicates that the end of CELL capture is being waited.</td>
</tr>
<tr>
<td>DB5</td>
<td>AWT (APS Waiting for Trigger)</td>
<td>Indicates that an APS capture trigger is being waited.</td>
</tr>
<tr>
<td>DB6</td>
<td>AWE (APS Waiting for capture End)</td>
<td>Indicates that the end of APS is being waited.</td>
</tr>
<tr>
<td>DB7</td>
<td>FWT (FRAME Waiting for Trigger)</td>
<td>Indicates that a FRAME capture trigger is being waited.</td>
</tr>
<tr>
<td>DB8</td>
<td>FWE (FRAME Waiting for capture End)</td>
<td>Indicates the end of FRAME is being waited.</td>
</tr>
</tbody>
</table>
4.2 MP1570A Unique Status Register

TELcom2 Status Register

To QUESTIONable Status Register (Bit 10)

DS3 PLCP Status Register

To TELcom2 Status Register (Bit 13)
### TELcom2 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB10</th>
<th>CONS (Cell ch monitor search UNsucceeded)</th>
<th>Indicates that search failed in Live monitor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB11</td>
<td>45M (45M status register summary)</td>
<td>45M status register summary</td>
</tr>
<tr>
<td>DB12</td>
<td>1.5M (1.5M status register summary)</td>
<td>1.5M status register summary</td>
</tr>
<tr>
<td>DB13</td>
<td>DS3 PLCP (DB3 PLCP status register summary)</td>
<td>DS3 PLCP status register summary</td>
</tr>
<tr>
<td>DB14</td>
<td>ATM (ATM status register summary)</td>
<td>ATM status register summary</td>
</tr>
</tbody>
</table>

### DS3 PLCP Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>LOF (Loss Of Frame)</th>
<th>Indicates that LOF occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>RDI (Remote Alarm Indication)</td>
<td>Indicates that RAI occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>OOF (Out of Frame)</td>
<td>Indicates that AIS occurred.</td>
</tr>
<tr>
<td>DB12</td>
<td>REI (Remote Error Indication)</td>
<td>Indicates that BIP-8 was occurred.</td>
</tr>
<tr>
<td>DB13</td>
<td>BIP-8 (BIP-8 error)</td>
<td>Indicates that a frame error was detected.</td>
</tr>
<tr>
<td>DB14</td>
<td>FERR (Frame Error)</td>
<td></td>
</tr>
</tbody>
</table>
## ATM Status Register Bit Definition

<table>
<thead>
<tr>
<th>Bit</th>
<th>Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB0</td>
<td>LCD (Lost of cell sync)</td>
<td>Indicates that Lost of cell sync occurred.</td>
</tr>
<tr>
<td>DB1</td>
<td>Correct (Corrected cell count)</td>
<td>Indicates that Corrected cell error.</td>
</tr>
<tr>
<td>DB2</td>
<td>Discard (Discarded cell count)</td>
<td>Indicates that Discarded cell error.</td>
</tr>
<tr>
<td>DB3</td>
<td>Nonconf (Non conforming cell error)</td>
<td>Indicates that Non-Conforming cell error occurred.</td>
</tr>
<tr>
<td>DB6</td>
<td>VP (VP status register summary)</td>
<td>VP status summary</td>
</tr>
<tr>
<td>DB7</td>
<td>VC (VC status register summary)</td>
<td>VC status summary</td>
</tr>
<tr>
<td>DB8</td>
<td>0.191 (0.191 status register summary)</td>
<td>0.191 status summary</td>
</tr>
<tr>
<td>DB9</td>
<td>AAL1 (AAL1 status register summary)</td>
<td>AAL1 status summary</td>
</tr>
<tr>
<td>DB10</td>
<td>AAL2 (AAL2 status register summary)</td>
<td>AAL2 status summary</td>
</tr>
<tr>
<td>DB11</td>
<td>AAL34 (AAL34 status register summary)</td>
<td>AAL34 status summary</td>
</tr>
<tr>
<td>DB12</td>
<td>AAL5 (AAL5 status register summary)</td>
<td>AAL5 status summary</td>
</tr>
<tr>
<td>DB13</td>
<td>PM (PM status register summary)</td>
<td>PM status summary</td>
</tr>
</tbody>
</table>

## VP Status Register Bit Definition

<table>
<thead>
<tr>
<th>Bit</th>
<th>Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB0</td>
<td>VP-AIS (VP-SegmentAIS)</td>
<td>Indicates that VP-segment AIS occurred.</td>
</tr>
<tr>
<td>DB1</td>
<td>VP-RDI (VP-segmentRDI)</td>
<td>Indicates that VP-segment RDI occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>VP-LOC (VP-segmentLOC)</td>
<td>Indicates that VP-segment LOC occurred.</td>
</tr>
</tbody>
</table>

## VC Status Register Bit Definition

<table>
<thead>
<tr>
<th>Bit</th>
<th>Description</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB0</td>
<td>VC-AIS (VC-segmentAIS)</td>
<td>Indicates that VC-segment AIS occurred.</td>
</tr>
<tr>
<td>DB1</td>
<td>VC-RDI (VC-segmentRDI)</td>
<td>Indicates that VC-segment RDI occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>VC-LOC (VC-segmentLOC)</td>
<td>Indicates that VC-segment LOC occurred.</td>
</tr>
</tbody>
</table>
### 0.191 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>Lost (Lost cell)</th>
<th>Indicates that a lost cell occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>MISINS (Misinserted cell)</td>
<td>Indicates that a misinserted cell occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>Errored (Errored cell)</td>
<td>Indicates that an errored cell occurred.</td>
</tr>
<tr>
<td>DB3</td>
<td>SECB (SECB)</td>
<td>Indicates that an SECB error occurred.</td>
</tr>
</tbody>
</table>

### ALL1 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>LOST (Lost cell)</th>
<th>Indicates that a lost cell occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>SNP (SNP error)</td>
<td>Indicates that an SNP error occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>UCorSNP (Uncorrectable SNP error)</td>
<td>Indicates that an Uncorrectable SNP error occurred.</td>
</tr>
</tbody>
</table>

### ALL2 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>P (P error)</th>
<th>Indicates that a P error occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>OSF (OSF error)</td>
<td>Indicates that an OSF error occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>SN (SN error)</td>
<td>Indicates that an SN error occurred.</td>
</tr>
<tr>
<td>DB8</td>
<td>CPS HEC (HEC error)</td>
<td>Indicates that a HEC CPS error occurred.</td>
</tr>
<tr>
<td>DB9</td>
<td>LI (LI error)</td>
<td>Indicates that an LI error occurred.</td>
</tr>
</tbody>
</table>
### AAL3/4 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>CRC10(CRC10 error)</th>
<th>Indicates that a CRC10 occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>SN(SN error)</td>
<td>Indicates that an SN error occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>DiscPDU(Discarded PDU count)</td>
<td>Indicates that a Discarded PDU occurred.</td>
</tr>
<tr>
<td>DB3</td>
<td>ST(Segment type error)</td>
<td>Indicates that a Segment type error occurred.</td>
</tr>
<tr>
<td>DB4</td>
<td>LI(Length indicator error)</td>
<td>Indicates that a Length indicator error occurred.</td>
</tr>
<tr>
<td>DB5</td>
<td>Abort(Abort cell count)</td>
<td>Indicates that an Abort cell occurred.</td>
</tr>
<tr>
<td>DB8</td>
<td>UDvPDU(Undelivered PDU count)</td>
<td>Indicates that an Undelivered PDU occurred.</td>
</tr>
<tr>
<td>DB9</td>
<td>CPI(CPI)</td>
<td>Indicates that a CPI error occurred.</td>
</tr>
<tr>
<td>DB10</td>
<td>B/ETag(ETag/ETag)</td>
<td>Indicates that a BTag/ETag mismatch error occurred.</td>
</tr>
<tr>
<td>DB11</td>
<td>BAsize(BAsize error)</td>
<td>Indicates that a BAsize error occurred.</td>
</tr>
<tr>
<td>DB12</td>
<td>AL(AL error)</td>
<td>Indicates that an AL error occurred.</td>
</tr>
<tr>
<td>DB13</td>
<td>Length(Length error)</td>
<td>Indicates that a Length error occurred.</td>
</tr>
</tbody>
</table>

### AAL5 Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB8</th>
<th>DiscPDU(Discarded PDU count)</th>
<th>Indicates that a Discarded PDU occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB9</td>
<td>FRMsize(Frame size error)</td>
<td>Indicates that a Frame size error occurred.</td>
</tr>
<tr>
<td>DB10</td>
<td>Length(Length error)</td>
<td>Indicates that a Length error occurred.</td>
</tr>
<tr>
<td>DB11</td>
<td>CRC32(CRC32 error)</td>
<td>Indicates that a CRC32 error occurred.</td>
</tr>
<tr>
<td>DB12</td>
<td>Abort(Abort cell count)</td>
<td>Indicates that an Abort cell occurred.</td>
</tr>
</tbody>
</table>

### PM Status Register Bit Definition

<table>
<thead>
<tr>
<th>DB0</th>
<th>FM Lost(FM Lost cell)</th>
<th>Indicates that an FM Lost cell occurred.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB1</td>
<td>FM MisIN(FM Misinserted cell)</td>
<td>Indicates that an FM Misinserted cell occurred.</td>
</tr>
<tr>
<td>DB2</td>
<td>FM BIPV(FM BIPV error)</td>
<td>Indicates that an FM BIPV error occurred.</td>
</tr>
<tr>
<td>DB3</td>
<td>FM SECB(FM SECB error)</td>
<td>Indicates that an FM SECB error occurred.</td>
</tr>
<tr>
<td>DB8</td>
<td>BR Lost(BR Lost cell)</td>
<td>Indicates that a BR Lost cell occurred.</td>
</tr>
<tr>
<td>DB9</td>
<td>BR MisIN(BR Misinserted cell)</td>
<td>Indicates that a BR Misinserted cell occurred.</td>
</tr>
<tr>
<td>DB10</td>
<td>BR BIPV(BR BIPV error)</td>
<td>Indicates that a BR BIPV error occurred.</td>
</tr>
<tr>
<td>DB11</td>
<td>BR SECB(BR SECB error)</td>
<td>Indicates that a BR SECB error occurred.</td>
</tr>
</tbody>
</table>
4.2 MP1570A Unique Status Register

AAL3/4 Status Register

AAL5 Status Register

PM Status Register

Note:
Refer to the MP1570A SONET/SDH/PDH/ATM Analyzer Operation manual Vol.2, for other registers.
4.3 Device Message Detail

Refer to the MP1552B SDH/PDH/ATM Analyzer Operation Manual Vol.2, for the details of device messages.
4.4 Equipment Unique Command

This section explains details on device specific commands related to the ATM measurement. Refer to the MP1570A SONET/SDH/PDH/ATM Analyzer Operation Manual Vol.2, for other command.

4.4.1 INStrument subsystem (Transmission and Reception Mode Setting)

In the INStrument subsystem, select the same setting for transmission and reception or separate settings.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets a test item.</td>
<td>:INSTrument:CONFig</td>
<td>type</td>
</tr>
<tr>
<td>Queries the test item.</td>
<td>:INSTrument:CONFig?</td>
<td></td>
</tr>
</tbody>
</table>
Section 4  Remote Control

:INSTrument:CONFig <type>

Parameter  

<type> = <CHARACTER PROGRAM DATA>

Function  
Sets a test item.

Example use  
To set the item to ATM.

> :INSTrument:CONFig  ATM

:INSTrument:CONFig?

Response  

<type> = <CHARACTER RESPONSE DATA>

Function  
Queries the test item.

Example use  

> :INSTrument: CONFig?

< ATM
### 4.4.2 SOURce subsystem (Settings of Transmission Side)

The SOURce subsystem sets the transmission side.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-26</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets the PLCP for 45M signals.</td>
<td>:SOURce:TELecom:M45:PLCP</td>
<td>boolean</td>
</tr>
<tr>
<td>Queries PLCP of the 45M signal.</td>
<td>:SOURce:TELecom:M45:PLCP?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-26</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets the type of error to be inserted against transmission signals.</td>
<td>:SOURce:TELecom:ERRor:TYPE</td>
<td>etype</td>
</tr>
<tr>
<td>Queries the type of error inserted against transmission signals.</td>
<td>:SOURce:TELecom:ERRor:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets the rate of error insertion.</td>
<td>:SOURce:TELecom:ERRor:TIMing:TYPE</td>
<td>erate</td>
</tr>
<tr>
<td>Queries the error insertion rate.</td>
<td>:SOURce:TELecom:ERRor:TIMing:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets the bit number of the error insertion when Burst is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:BURSt:BIT</td>
<td>bit</td>
</tr>
<tr>
<td>Queries the bit number of the error insertion when Burst is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:BURSt:BIT?</td>
<td></td>
</tr>
<tr>
<td>Set the added value when programmable rate error is added.</td>
<td>:SOURce:TELecom:ERRor:TIMing:PROGrate</td>
<td>error</td>
</tr>
<tr>
<td>Queries the added value of the Prog.rate error.</td>
<td>:SOURce:TELecom:ERRor:TIMing:PROGrate?</td>
<td></td>
</tr>
<tr>
<td>Set the number of the frames with errors when the Alternate is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:ERRor</td>
<td>error</td>
</tr>
<tr>
<td>Queries the number of the frames with the errors when the Alternate is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:ERRor?</td>
<td></td>
</tr>
<tr>
<td>Sets the number of the normal frames when Alternate is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:NORMal</td>
<td>normal</td>
</tr>
<tr>
<td>Queries the number of the normal frames when Alternate is selected.</td>
<td>:SOURce:TELecom:ERRor:TIMing:NORMal?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-31</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets C2 data of POH preset data of transmission signal.</td>
<td>:SOURce:TELecom:OHPReset:SLABel</td>
<td>pohtype</td>
</tr>
<tr>
<td>Queries plain-language data of C2 of POH preset data of transmission signal.</td>
<td>:SOURce:TELecom:OHPReset:PLABel?</td>
<td></td>
</tr>
<tr>
<td>:SOURce:TELecom:OHPReset:PLABel</td>
<td>string</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-32</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets K1 (bits 1 to 4).</td>
<td>:SOURce:TELecom:MSPMessages:REQuest</td>
<td>request</td>
</tr>
<tr>
<td>Sets K1 (bits 5 to 8).</td>
<td>:SOURce:TELecom:MSPMessages:CHANnel</td>
<td>mspch</td>
</tr>
<tr>
<td>Sets K2 (bits 1 to 4).</td>
<td>:SOURce:TELecom:MSPMessages:BRIDge</td>
<td>bridge</td>
</tr>
<tr>
<td>Sets K2 (bit 5).</td>
<td>:SOURce:TELecom:MSPMessages:ARCHitect</td>
<td>arch</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-36</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets K1 (1-4bit).</td>
<td>:SOURce:TELecom:MSPBits:REQuest</td>
<td>string</td>
</tr>
<tr>
<td>Sets K1 (bits 5 to 8).</td>
<td>:SOURce:TELecom:MSPBits:CHANnel</td>
<td>string</td>
</tr>
<tr>
<td>Sets K2 (bits 1 to 4).</td>
<td>:SOURce:TELecom:MSPBits:BRIDge</td>
<td>string</td>
</tr>
<tr>
<td>Sets K2 (bit 5).</td>
<td>:SOURce:TELecom:MSPBits:ARCHitect</td>
<td>string</td>
</tr>
<tr>
<td>Sets K2 (6 to 8bit).</td>
<td>:SOURce:TELecom:MSPBits:REServed</td>
<td>string</td>
</tr>
<tr>
<td>Section 4  Remote Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Page 4-38</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets the pointer value (NDF).</td>
<td>:SOURce:TELecom:PSETting:NDFSet</td>
<td>ptype, string</td>
</tr>
<tr>
<td>To set the pointer value (SS).</td>
<td>:SOURce:TELecom:PSETting:SSSet</td>
<td>ptype, string</td>
</tr>
<tr>
<td>Sets the pointer value (ID).</td>
<td>:SOURce:TELecom:PSETting:IDSet</td>
<td>ptype numeric</td>
</tr>
<tr>
<td>Inserts +PJC one time for send signal.</td>
<td>:SOURce:TELecom:PSETting:PPJC</td>
<td>ptype</td>
</tr>
<tr>
<td>Inserts –PJC one time for send signal.</td>
<td>:SOURce:TELecom:PSETting:NPJC</td>
<td>ptype</td>
</tr>
<tr>
<td><strong>Page 4-40</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets ATM mapping of the send signal.</td>
<td>:SOURce:ATM:MAPPing</td>
<td>mtype</td>
</tr>
<tr>
<td>Queries ATM mapping of send signal.</td>
<td>:SOURce:ATM:MAPPing?</td>
<td></td>
</tr>
<tr>
<td><strong>Page 4-40</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets the header structure of a send signal.</td>
<td>:SOURce:ATM:HSTRucture</td>
<td>htype</td>
</tr>
<tr>
<td>Queries the header structure of send signal.</td>
<td>:SOURce:ATM:HSTRucture?</td>
<td></td>
</tr>
<tr>
<td><strong>Page 4-41</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets a OAM type for the transmission signals.</td>
<td>:SOURce:ATM:OAM</td>
<td>type</td>
</tr>
<tr>
<td>Queries the OAM type for transmission signals.</td>
<td>:SOURce:ATM:OAM?</td>
<td></td>
</tr>
<tr>
<td><strong>Page 4-41</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets the E3 preset data of send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:PATTern</td>
<td>ohpoint string</td>
</tr>
<tr>
<td>Sets the plain-language of the E3 preset data (Payload type) of send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:PTYPe</td>
<td>string</td>
</tr>
<tr>
<td>Queries the E3 preset data (Payload type) of send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:PTYPe?</td>
<td></td>
</tr>
<tr>
<td>Sets Trail trace pattern of E3 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:TRACe</td>
<td>string</td>
</tr>
<tr>
<td>Queries Trail trace pattern of E3 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:TRACe?</td>
<td></td>
</tr>
<tr>
<td>Initializes E3 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E3:DEFault</td>
<td></td>
</tr>
<tr>
<td><strong>Page 4-43</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sets E4 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:PATTern</td>
<td>ohpoint string</td>
</tr>
<tr>
<td>Queries E4 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:PATTern?</td>
<td>ohpoint</td>
</tr>
<tr>
<td>Sets plain-language of E4 preset data (payload type) of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:PTYPE</td>
<td>string</td>
</tr>
<tr>
<td>Queries E4 preset data (payload type) of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:PTYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets Trail trace pattern of E4 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:TRACe</td>
<td>string</td>
</tr>
<tr>
<td>Queries Trail traced pattern of E4 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:TRACe?</td>
<td></td>
</tr>
<tr>
<td>Initializes E4 preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:E4:DEFault</td>
<td></td>
</tr>
</tbody>
</table>
### 4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Description</th>
<th>Command</th>
<th>Data Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets PLCP of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:PLCP</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries PLCP of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:PLCP?</td>
<td>numeric</td>
</tr>
<tr>
<td>Sets frame of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:FRAMe</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries frame of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:FRAMe?</td>
<td>numeric</td>
</tr>
<tr>
<td>Sets PIO of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:POI</td>
<td>type</td>
</tr>
<tr>
<td>Queries PIO of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:POI?</td>
<td>type</td>
</tr>
<tr>
<td>Sets POH of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:POH</td>
<td>type</td>
</tr>
<tr>
<td>Queries POH of DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:POH?</td>
<td>type</td>
</tr>
<tr>
<td>Initializes DS3 PLCP preset data of the send signal.</td>
<td>:SOURce:ATM:OHPReset:DS3Plcp:DEFault</td>
<td></td>
</tr>
<tr>
<td>Sets ATM cell type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Queries ATM cell type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets number of Memorized cell repetitions.</td>
<td>:SOURce:ATM:MANual:TRAFFic:MEMorized:NUMB er</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries number of Memorized cell repetitions.</td>
<td>:SOURce:ATM:MANual:TRAFFic:MEMorized:NUMB er?</td>
<td></td>
</tr>
<tr>
<td>Sets header pattern.</td>
<td>:SOURce:ATM:MANual:TRAFFic:HEADer</td>
<td>gfc, vpi, vci, pt, clp</td>
</tr>
<tr>
<td>Queries header pattern.</td>
<td>:SOURce:ATM:MANual:TRAFFic:HEADer?</td>
<td></td>
</tr>
<tr>
<td>Sets payload type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:PAYLoad:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Queries payload type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:PAYLoad:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets word pattern.</td>
<td>:SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD</td>
<td>string</td>
</tr>
<tr>
<td>Queries word pattern.</td>
<td>:SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD?</td>
<td></td>
</tr>
<tr>
<td>Sets cell traffic type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:DISTRIBUTion</td>
<td>type</td>
</tr>
<tr>
<td>Queries cell traffic type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:DISTRIBUTION?</td>
<td></td>
</tr>
<tr>
<td>Sets CBR type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Queries CBR type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Sets cell traffic (kbit/s) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:BPS</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell traffic (kbit/s) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:BPS?</td>
<td></td>
</tr>
<tr>
<td>Sets cell traffic (Cells/s) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:CPS</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell traffic (Cells/s) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:CPS?</td>
<td></td>
</tr>
<tr>
<td>Sets cell traffic (%) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:PERCent</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell traffic (%) at CBR.</td>
<td>:SOURce:ATM:MANual:TRAFFic:CBR:PERCent?</td>
<td></td>
</tr>
</tbody>
</table>
### Section 4  Remote Control

**Page 4-55**

| Sets BURSt type. | :SOURce:ATM:MANual:TRAFfic:BURSt:TYPE | type |
| Queries BURSt type. | :SOURce:ATM:MANual:TRAFfic:BURSt:TYPE? | |
| Sets cell traffic (kbit/s) at BURSt:RMAX. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMAX:BPS | numeric |
| Queries cell traffic (kbit/s) at BURSt:RMAX. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMAX:BPS? | |
| Sets cell traffic (%) at BURSt:RMIN. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMIN:BPS | numeric |
| Queries cell traffic (%) at BURSt:RMIN. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMIN:BPS? | |
| Sets cell traffic (Cells/s) at BURSt:RMAX. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMAX:CPS | numeric |
| Queries cell traffic (Cells/s) at BURSt:RMAX. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMAX:CPS? | |
| Sets cell traffic (%) at BURSt:RMIN. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMIN:PERCent | numeric |
| Queries cell traffic (%) at BURSt:RMIN. | :SOURce:ATM:MANual:TRAFfic:BURSt:RMIN:PERCent? | |
| Sets cell traffic (Cell) at BURSt. | :SOURce:ATM:MANual:TRAFfic:BURSt:T1 | numeric |
| Queries cell traffic (Cell) at BURSt. | :SOURce:ATM:MANual:TRAFfic:BURSt:T1? | |

**Page 4-60**

| Sets CBR with CDV type. | :SOURce:ATM:MANual:TRAFfic:CWCDv:TYPE | type |
| Queries CBR with CDV type. | :SOURce:ATM:MANual:TRAFfic:CWCDv:TYPE? | |
| Sets the CDVT(Cell) for CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:CDVT | numeric |
| Queries the CDVT (Cell) for CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:CDVT? | |
| Sets cell traffic (kbit/s) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:BPS | numeric |
| Queries cell traffic (kbit/s) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:BPS? | |
| Sets cell traffic (Cells/s) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:CPS | numeric |
| Queries cell traffic (Cells/s) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:CPS? | |
| Sets cell traffic (%) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:PERCent | numeric |
| Queries cell traffic (%) at CBR with CDV. | :SOURce:ATM:MANual:TRAFfic:CWCDv:PERCent? | |

**Page 4-63**

| Sets cell traffic (%) at POISson. | :SOURce:ATM:MANual:TRAFfic:POISson[:PERCent] | numeric |
| Queries cell traffic (%) at POISson. | :SOURce:ATM:MANual:TRAFfic:POISson[:PERCent]? | |

**Page 4-63**

| Queries the SAWTooth type. | :SOURce:ATM:MANual:TRAFfic:SAWTooth:TYPE? | |
### Equipment Unique Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries cell traffic (kbit/s) at SAWTooth:RMAX.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMAX:BPS?</td>
</tr>
<tr>
<td>Sets cell traffic (kbit/s) at SAWTooth.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMIN:BPS</td>
</tr>
<tr>
<td>Queries cell traffic (kbit/s) at SAWTooth:RMIN.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMIN:BPS</td>
</tr>
<tr>
<td>Queries cell traffic (Cells/s) at SAWTooth:RMAX.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMAX:CPS?</td>
</tr>
<tr>
<td>Queries cell traffic (Cells/s) at SAWTooth:RMIN.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMIN:CPS?</td>
</tr>
<tr>
<td>Queries cell traffic (%) at SAWTooth:RMAX.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMAX:P ERCent?</td>
</tr>
<tr>
<td>Queries cell traffic (%) at SAWTooth:RMIN.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:RMIN:P ERCent?</td>
</tr>
<tr>
<td>Sets the cell the traffic (cell) when SAWTooth is set.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:T1 numeic</td>
</tr>
<tr>
<td>Queries the cell traffic (cell) when SAWTooth is set.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:T1?</td>
</tr>
<tr>
<td>Sets the cell traffic (cell) when SAWTooth is set.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:T2 numeric</td>
</tr>
<tr>
<td>Queries the cell traffic (cell) when SAWTooth is set.</td>
<td>:SOURce:ATM:MANual:TRAFFic:SAWTooth:T2?</td>
</tr>
</tbody>
</table>

### Page 4-68

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets transmission type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TIMing:MODE mode</td>
</tr>
<tr>
<td>Queries the transmission type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TIMing:MODE?</td>
</tr>
<tr>
<td>Starts single cell send.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TIMing:START</td>
</tr>
<tr>
<td>Requests the start of Single cell transmission.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TIMing:STOP</td>
</tr>
<tr>
<td>Queries Single cell transmission condition.</td>
<td>:SOURce:ATM:MANual:TRAFFic:TIMing:STATE?</td>
</tr>
</tbody>
</table>

### Page 4-70

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets Traffic (%) of Background cell.</td>
<td>:SOURce:ATM:MANual:TRAFFic:BACKground:PER Cent</td>
</tr>
<tr>
<td>Queries Background cell Traffic (%) (1 to 10, total).</td>
<td>:SOURce:ATM:MANual:TRAFFic:BACKground:PER Cent?</td>
</tr>
<tr>
<td>Queries Background cell Traffic (cell/s) (1 to 10, total).</td>
<td>:SOURce:ATM:MANual:TRAFFic:BACKground:CPS?</td>
</tr>
<tr>
<td>Sets traffic (type) of background cell.</td>
<td>:SOURce:ATM:MANual:TRAFFic:BACKground:TYPE type</td>
</tr>
<tr>
<td>Queries traffic (type) of background cell Traffic(type) (1 to 10)</td>
<td>:SOURce:ATM:MANual:TRAFFic:BACKground:TYPE ?</td>
</tr>
</tbody>
</table>

### Page 4-72

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets the dummy packet traffic (%) at AAL2.</td>
<td>:SOURce:ATM:MANual:TRAFFic:DAAL2:[PERCent] numeric</td>
</tr>
<tr>
<td>Queries the dummy packet traffic at AAL2.</td>
<td>:SOURce:ATM:MANual:TRAFFic:DAAL2:[PERCent]?</td>
</tr>
</tbody>
</table>

### Page 4-72

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets Fill cell type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:FCEL1 type</td>
</tr>
<tr>
<td>Queries Fill cell type.</td>
<td>:SOURce:ATM:MANual:TRAFFic:FCEL1?</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ALARm:TYPE type</td>
<td>Sets alarm type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ALARm:TYPE?</td>
<td>Queries alarm type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ALARm:TIMing numeric</td>
<td>Sets alarm addition timing.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ALARm:TIMing?</td>
<td>Queries alarm addition timing.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TYPE type</td>
<td>Sets error type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TYPE?</td>
<td>Queries error type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:BYTE numeric</td>
<td>Sets error addition byte.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:BYTE?</td>
<td>Queries error addition byte.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:PATTern string</td>
<td>Sets error addition pattern (bit format).</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:PATTern?</td>
<td>Queries error addition pattern (bit format).</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE mode</td>
<td>Sets error insertion rate.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE?</td>
<td>Queries error insertion rate.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TIMing:CO Unt numeric</td>
<td>Sets successive error addition count.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:ERRor:TIMing:CO Unt?</td>
<td>Queries successive error addition count.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:CC:SEND type</td>
<td>Sets CC cell addition.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:CC:SEND?</td>
<td>Queries CC cell addition condition.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:LOOPback:TYPE type</td>
<td>Sets Loopback cell type.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:EALarm:LOOPback:STARt</td>
<td>Sends Loopback cell.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:FM:SEND type</td>
<td>Sets PM Forward cell addition.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:FM:ERRor:TYPE character</td>
<td>Sets error type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:FM:ERRor:TYPE?</td>
<td>Queries error type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:FM:ERRor:TIMing:MODE character</td>
<td>Sets error insertion rate.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:SEND type</td>
<td>Sets PM Backward cell addition.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:ERRor:TYPE character</td>
<td>Sets error type to be inserted for the send signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:ERRor:TYPE?</td>
<td>Queries error type to be inserted for the receive signal.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:ERRor:TIMing:MODE character</td>
<td>Sets error insertion rate.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:INTerval numeric</td>
<td>Sets the insert interval for the BR cell.</td>
</tr>
<tr>
<td>:SOURce:ATM:MANual:PM:BR:INTerval?</td>
<td>Queries the insert interval for the BR cell.</td>
</tr>
<tr>
<td>Page 4-85</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Sets payload pattern for ATM:0.191.</td>
<td>:SOURce:ATM:PATTern:ATM:O191:PAYLoad string</td>
</tr>
<tr>
<td>Queries payload pattern for ATM:0.191.</td>
<td>:SOURce:ATM:PATTern:ATM:O191:PAYLoad?</td>
</tr>
<tr>
<td>Sets initial pattern as payload pattern for ATM:0.191.</td>
<td>:SOURce:ATM:PATTern:ATM:O191:DEFault</td>
</tr>
<tr>
<td>Queries TCPT for ATM:0.191 (bit format).</td>
<td>:SOURce:ATM:PATTern:ATM:O191:TCPT?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page 4-87</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Sets Pointer at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:POINter string</td>
</tr>
<tr>
<td>Queries Pointer at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:POINter?</td>
</tr>
<tr>
<td>Sets payload pattern at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:PAYLoad string</td>
</tr>
<tr>
<td>Queries payload pattern at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:PAYLoad?</td>
</tr>
<tr>
<td>Sets initial pattern as payload pattern at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:DEFault</td>
</tr>
<tr>
<td>Sets P-format at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:PFORmat boolean</td>
</tr>
<tr>
<td>Queries P-format at AAL1.</td>
<td>:SOURce:ATM:PATTern:AAL1:PFORmat?</td>
</tr>
<tr>
<td>Sets RTS at AAL1 (bit format).</td>
<td>:SOURce:ATM:PATTern:AAL1:RTS string</td>
</tr>
<tr>
<td>Queries RTS at AAL1 (bit format).</td>
<td>:SOURce:ATM:PATTern:AAL1:RTS?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page 4-89</th>
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<tbody>
<tr>
<td>Sets CID (Primary) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PCID string</td>
</tr>
<tr>
<td>Queries CID (Primary) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PCID?</td>
</tr>
<tr>
<td>Sets LI at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:LI numeric</td>
</tr>
<tr>
<td>Queries LI at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:LI?</td>
</tr>
<tr>
<td>Sets PPT (Primary) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PPPT string</td>
</tr>
<tr>
<td>Queries PPT (Primary) at AAL2</td>
<td>:SOURce:ATM:PATTern:AAL2:PPPT?</td>
</tr>
<tr>
<td>Sets UUI (Primary) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PUUI STRING</td>
</tr>
<tr>
<td>Queries UUI (Primary) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PUUI?</td>
</tr>
<tr>
<td>Sets payload at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PAYLoad string</td>
</tr>
<tr>
<td>Queries payload at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:PAYLoad?</td>
</tr>
<tr>
<td>Sets CID (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DCID string</td>
</tr>
<tr>
<td>Queries CID (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DCID?</td>
</tr>
<tr>
<td>Sets PPT (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DPPT string</td>
</tr>
<tr>
<td>Queries PPT (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DPPT?</td>
</tr>
<tr>
<td>Sets PPT (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DUUI string</td>
</tr>
<tr>
<td>Queries UUI (Dummy) at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DUUI?</td>
</tr>
<tr>
<td>Initializes PAYLoad at AAL2.</td>
<td>:SOURce:ATM:PATTern:AAL2:DEFault</td>
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<table>
<thead>
<tr>
<th>Page 4-93</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Queries MID at AAL3/4 (bit format).</td>
<td>:SOURce:ATM:PATTern:AAL34:MID?</td>
</tr>
<tr>
<td>Sets CPI at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:CPI string</td>
</tr>
<tr>
<td>Queries CPI at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:CPI?</td>
</tr>
<tr>
<td>Sets BTag and ETag at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:BTAG string</td>
</tr>
<tr>
<td>Queries BTag and ETag at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:BTAG?</td>
</tr>
<tr>
<td>Sets BASize at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:BASize numeric</td>
</tr>
<tr>
<td>Queries BASize at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:BASize?</td>
</tr>
<tr>
<td>Sets Length at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:LENGth numeric</td>
</tr>
<tr>
<td>Queries Length at AAL3/4.</td>
<td>:SOURce:ATM:PATTern:AAL34:LENGth?</td>
</tr>
</tbody>
</table>
Section 4  Remote Control

Page 4-94

Sets Length at AAL5. :SOURce:ATM:PATTern:AAL5:LENGth numeric
Queries Length at AAL5. :SOURce:ATM:PATTern:AAL5:LENGth?
Sets CPCS-UU at AAL5. :SOURce:ATM:PATTern:AAL5:UU string
Queries CPCS-UU at AAL5. :SOURce:ATM:PATTern:AAL5:UU?
Sets CPI at AAL5. :SOURce:ATM:PATTern:AAL5:CPI string
Queries CPI at AAL5. :SOURce:ATM:PATTern:AAL5:CPI ?

Page 4-96

Sets the 65,535-byte payload pattern. :SOURce:ATM:PATTern:PAYLoad:PATTern numeric
queries the 65,535-byte payload pattern. :SOURce:ATM:PATTern:PAYLoad:PATTern? numeric1 numeric2
Sets initial pattern as the 65,535-byte payload pattern. :SOURce:ATM:PATTern:PAYLoad:DEFault string

Page 4-96

Sets AIS cell Function specific field. :SOURce:ATM:PATTern:AIS:FSField string
Queries AIS cell Function specific field. :SOURce:ATM:PATTern:AIS:FSField?
Sets initial pattern as AIS cell Function specific field. :SOURce:ATM:PATTern:AIS:DEFault
Sets AIS cell Reserve (bit format). :SOURce:ATM:PATTern:AIS:REServe string
Queries AIS cell Reserve (bit format). :SOURce:ATM:PATTern:AIS:REServe?

Page 4-98

Sets RDI cell Function specific field. :SOURce:ATM:PATTern:RDI:FSField string
Queries RDI cell Function specific field. :SOURce:ATM:PATTern:RDI:FSField?
Sets initial pattern as RDI cell Function specific field. :SOURce:ATM:PATTern:RDI:DEFault
Sets RDI cell Reserve (bit format). :SOURce:ATM:PATTern:RDI:REServe string
Queries RDI cell Reserve (bit format). :SOURce:ATM:PATTern:RDI:REServe?

Page 4-99

Sets OAM type of User program cell. (bit format) :SOURce:ATM:PATTern:USER:OAM string
Queries OAM type of User program cell. (bit format) :SOURce:ATM:PATTern:USER:OAM?
Sets Function type of User program cell (bit format). :SOURce:ATM:PATTern:USER:FUNction string
Queries the Function type of User program cell (bit format). :SOURce:ATM:PATTern:USER:FUNction?
Sets User program cell Function specific field. :SOURce:ATM:PATTern:USER:FSField string
Queries User program cell Function specific field. :SOURce:ATM:PATTern:USER:FSField?
Sets initial pattern as User program cell Function specific field. :SOURce:ATM:PATTern:USER:DEFault
Queries User program cell Reserve (bit format). :SOURce:ATM:PATTern:USER:REServe?

Page 4-101

Sets CC cell Function specific field. :SOURce:ATM:PATTern:CC:FSField string
Queries CC cell Function specific field. :SOURce:ATM:PATTern:CC:FSField?
Sets initial pattern as CC cell Function specific field. :SOURce:ATM:PATTern:CC:DEFault
Sets CC cell Reserve (bit format). :SOURce:ATM:PATTern:CC:REServe string
Queries CC cell Reserve (bit format). :SOURce:ATM:PATTern:CC:REServe?
### 4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Sets Indication of the Loopback cell.</th>
<th>:SOURce:ATM:PATTern:LOOPback:FSField:INDication</th>
<th>string</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries Indication of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:INDication?</td>
<td></td>
</tr>
<tr>
<td>Sets correlation Tag of the Loopback.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:CTAG</td>
<td>string</td>
</tr>
<tr>
<td>Queries correlation Tag of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:CTAG?</td>
<td></td>
</tr>
<tr>
<td>Sets Location ID of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:LOCati on</td>
<td>string</td>
</tr>
<tr>
<td>Queries Location ID of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:LOCati on?</td>
<td></td>
</tr>
<tr>
<td>Sets Source ID of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:SOURc e</td>
<td>string</td>
</tr>
<tr>
<td>Queries Source ID of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:SOURc e?</td>
<td></td>
</tr>
<tr>
<td>Sets Unused of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:UNUSe d</td>
<td>string</td>
</tr>
<tr>
<td>Queries Unused of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:UNUSe d?</td>
<td></td>
</tr>
<tr>
<td>Sets initial pattern as Indication, Correlation tag, Location ID, Source ID, and Unused of the Loopback cell.</td>
<td>:SOURce:ATM:PATTern:LOOPback:FSField:DEFAul t</td>
<td></td>
</tr>
<tr>
<td>Sets Loopback cell Reserve (bit format).</td>
<td>:SOURce:ATM:PATTern:LOOPback:REServe</td>
<td>string</td>
</tr>
<tr>
<td>Queries Loopback cell Reserve (bit format).</td>
<td>:SOURce:ATM:PATTern:LOOPback:REServe?</td>
<td></td>
</tr>
</tbody>
</table>

| Sets initial pattern as TSTP and Unused of Forward monitoring. | :SOURce:ATM:PATTern:FM:FSField:DEFAult | |
| Queries Forward monitoring Reserve (bit format). | :SOURce:ATM:PATTern:FM:REServe? | |

| Sets Unused1 of Backward report. | :SOURce:ATM:PATTern:BR:FSField:UNUSed1 | string |
| Queries Unused1 of Backward report. | :SOURce:ATM:PATTern:BR:FSField:UNUSed1? | |
| Sets TUCO+1 of Backward report. | :SOURce:ATM:PATTern:BR:FSField:TUCO1 | character |
| Queries TUCO1 of Backward report. | :SOURce:ATM:PATTern:BR:FSField:TUCO1 ? | |
| Queries TUCO of Backward report. | :SOURce:ATM:PATTern:BR:FSField:TUCO ? | |
| Queries TSTP of Backward report. | :SOURce:ATM:PATTern:BR:FSField:TSTP? | |
| Sets initial pattern as Unused1, TSTP, and Unused2 of Backward report. | :SOURce:ATM:PATTern:BR:FSField:DEFAult | |
### Section 4  Remote Control

#### Page 4-110

<table>
<thead>
<tr>
<th>Operation</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets header pattern of Background cell.</td>
<td>:SOURCE:ATM:PATTern:BGRound:HEADer</td>
<td>numeric pattern</td>
</tr>
<tr>
<td>Queries header pattern.</td>
<td>:SOURCE:ATM:PATTern:BGRound:HEADer?</td>
<td>numeric pattern</td>
</tr>
<tr>
<td>Sets payload pattern of Background cell.</td>
<td>:SOURCE:ATM:PATTern:BGRound:PAYLoad</td>
<td>numeric string</td>
</tr>
<tr>
<td>Queries payload pattern of Background cell.</td>
<td>:SOURCE:ATM:PATTern:BGRound:PAYLoad?</td>
<td>numeric string</td>
</tr>
<tr>
<td>Requests CRC10 calculation of Background cell.</td>
<td>:SOURCE:ATM:PATTern:BGRound:CRC10</td>
<td>numeric</td>
</tr>
<tr>
<td>Sets initial pattern in Background cell.</td>
<td>:SOURCE:ATM:PATTern:BGRound:DEFault</td>
<td>type</td>
</tr>
</tbody>
</table>

#### Page 4-112

<table>
<thead>
<tr>
<th>Operation</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets header pattern of Memorized cell.</td>
<td>:SOURCE:ATM:PATTern:MEMorized:HEADer</td>
<td>numeric pattern</td>
</tr>
<tr>
<td>Sets payload pattern of Memorized cell.</td>
<td>:SOURCE:ATM:PATTern:MEMorized:PAYLoad</td>
<td>numeric string</td>
</tr>
<tr>
<td>Sets initial pattern in Memorized cell.</td>
<td>:SOURCE:ATM:PATTern:MEMorized:DEFault</td>
<td>type numeric</td>
</tr>
<tr>
<td>Edits a Memorized cell. (Cut)</td>
<td>:SOURCE:ATM:PATTern:MEMorized:EDIT:CUT</td>
<td>numeric</td>
</tr>
<tr>
<td>Copies capture result to Memorized cell.</td>
<td>:SOURCE:ATM:PATTern:MEMorized:CAPTure</td>
<td></td>
</tr>
</tbody>
</table>

#### Page 4-115

<table>
<thead>
<tr>
<th>Operation</th>
<th>Command</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects the IP type when IP is selected in the payload for the AAL5 frame to be transmitted.</td>
<td>:SOURCE:ATM:PATTern:IPPacket:PAYLoad</td>
<td>type</td>
</tr>
<tr>
<td>Queries the IP type when IP is selected in the payload for the AAL5 frame to be transmitted.</td>
<td>:SOURCE:ATM:PATTern:IPPacket:PAYLoad?</td>
<td></td>
</tr>
<tr>
<td>Sets the header pattern when the payload for the AAL5 frame to be transmitted is IP (IPv4).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V4:HEADer</td>
<td>type, adr1, adr2, adr3, adr4</td>
</tr>
<tr>
<td>Queries the setting status of the header when the payload for the AAL5 frame to be transmitted is IP (IPv4).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V4:HEADer?</td>
<td></td>
</tr>
<tr>
<td>Sets the Source address and Destination address when the payload for the AAL5 frame is IP (IPv4).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V4:ADDrEss</td>
<td>type, adr1, adr2, adr3, adr4</td>
</tr>
<tr>
<td>Queries the setting status for the Source address or Destination address when the payload for the AAL5 frame is IP (IPv4).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V4:ADDrEss?</td>
<td></td>
</tr>
<tr>
<td>Sets the header pattern when the payload for the AAL5 frame to be transmitted is IP (IPv6).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V6:HEADer</td>
<td></td>
</tr>
<tr>
<td>Queries the setting of the header when the payload for the AAL5 frame to be transmitted is IP (IPv6).</td>
<td>:SOURCE:ATM:PATTern:IPPacket:HEADer:V6:HEADer?</td>
<td></td>
</tr>
<tr>
<td>4.4 Equipment Unique Command</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Sets the Source address or Destination address when the payload for the AAL5 frame is IP (IPv6).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:HEADer:V6:ADRess</strong> type, adr adr2, adr3 adr4, adr5 adr6, adr7 adr8</td>
<td></td>
</tr>
<tr>
<td><strong>Queries the setting status of the Source address or Destination address when the payload for the AAL5 frame to be transmitted is IP (IPv6).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:HEADer:V6:ADRess?</strong> type</td>
<td></td>
</tr>
<tr>
<td><strong>Initializes the header pattern when the payload for the AAL5 frame to be transmitted is IP.</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:HEADer:DEFa ult</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Sets the value for the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFomation:V4:INITial</strong> init</td>
<td></td>
</tr>
<tr>
<td><strong>Sets the value for the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv6).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFomation:V6:INITial</strong> init</td>
<td></td>
</tr>
<tr>
<td><strong>Sets the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFormation:V4:PATTern</strong> start string</td>
<td></td>
</tr>
<tr>
<td><strong>Queries the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFormation:V4:PATTern?</strong> start stop</td>
<td></td>
</tr>
<tr>
<td><strong>Sets the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv6).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFormation:V6:PATTern</strong> start string</td>
<td></td>
</tr>
<tr>
<td><strong>Queries the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv6).</strong></td>
<td><strong>SOURce:ATM:PATTern:IPPacket:INFormation:V6:PATTern?</strong> start stop</td>
<td></td>
</tr>
</tbody>
</table>
Section 4  Remote Control

:SOURce:TELecom:M45:PLCP <boolean>
Parameter  <boolean> = <BOOLEAN PROGRAM DATA>
  OFF or 0
  ON or 1
Function   Sets the PLCP for 45M signals.
Restriction Invalid when:
  - When the 1.5/45/52M unit is not installed.
  - When the ATM unit is not installed.
  - :INSTrument:CONFig is set to other than <ATM>.
  - :SOURce:TELecom:BRATe is other than <M45>.
Example use To set 45M PLCP to OFF.
  >:SOURce:TELecom:M45:PLCP OFF

:SOURce:TELecom:M45:PLCP?
Response  <boolean> = <NR1 NUMERIC RESPONSE DATA>
  0
  1
Function   Queries PLCP of the 45M signal.
Example use  > :SOURce:TELecom:M45:PLCP?
             < 0

:SOURce:TELecom:ERRor:TYPE <etype>
Parameter  <etype> = <CHARACTER PROGRAM DATA>
  OFF       No errors are inserted
  B1        Enters a B1 error.
  B2        Enters a B2 error.
  HB3       Enters an HP-B3 error.
  LB3       Enters an LP-B3 error.
  BIP2      Enters a BIP-2 error.
  MREI      Enters an MS-REI error (for SDH).
  HREI      Enters an HP-REI error (for SDH).
  LREI      Enters an LP-REI error (for SDH).
  REIL      Enters an REI-L error
  REIP      Enters an REI-P error
  REIV      Enters an REI-V error
  FAS       Enters an (SDH) FAS error.
4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BALL</td>
<td>Bit all</td>
</tr>
<tr>
<td>BIT139</td>
<td>Enters a bit error to 139Mb/s signal.</td>
</tr>
<tr>
<td>BIT45</td>
<td>Enters a bit error to 45Mb/s signal.</td>
</tr>
<tr>
<td>BIT34</td>
<td>Enters a bit error to 34Mb/s signal.</td>
</tr>
<tr>
<td>BIT8</td>
<td>Enters a bit error to 8Mb/s signal.</td>
</tr>
<tr>
<td>BIT2</td>
<td>Enters a bit error to 2Mb/s signal.</td>
</tr>
<tr>
<td>BIT1_5</td>
<td>Enters a bit error to 1.5Mb/s signal.</td>
</tr>
<tr>
<td>BINF</td>
<td>Bit Info.</td>
</tr>
<tr>
<td>CODE</td>
<td>Enters a code error.</td>
</tr>
<tr>
<td>EBIT</td>
<td>Enters an E-bit error.</td>
</tr>
<tr>
<td>FAS139</td>
<td>Enters an FAS error to 139Mb/s signal.</td>
</tr>
<tr>
<td>FAS45</td>
<td>Enters an FAS error to 45Mb/s signal.</td>
</tr>
<tr>
<td>FAS34</td>
<td>Enters an FAS error to 34Mb/s signal.</td>
</tr>
<tr>
<td>FAS8</td>
<td>Enters an FAS error to 8Mb/s signal.</td>
</tr>
<tr>
<td>FAS2</td>
<td>Enters an FAS error to 2Mb/s signal.</td>
</tr>
<tr>
<td>FAS1_5</td>
<td>Enters an FAS error to 1.5Mb/s signal.</td>
</tr>
<tr>
<td>REI139</td>
<td>Enters an REI error to 139Mb/s signal.</td>
</tr>
<tr>
<td>REI45</td>
<td>Enters an REI error to 45Mb/s signal.</td>
</tr>
<tr>
<td>REI34</td>
<td>Enters an REI error to 34Mb/s signal.</td>
</tr>
<tr>
<td>PLCPREI</td>
<td>Enters a REI PLCP error.</td>
</tr>
<tr>
<td>PARITY</td>
<td>Enters a Parity error.</td>
</tr>
<tr>
<td>CRC6</td>
<td>Enters a CRC-6 error.</td>
</tr>
<tr>
<td>CBIT</td>
<td>Enters a CBIT error.</td>
</tr>
<tr>
<td>BIP8</td>
<td>Enters a BIP8 error.</td>
</tr>
<tr>
<td>PLCFAS</td>
<td>Enters a FAS PLCP error.</td>
</tr>
<tr>
<td>POI</td>
<td>Enters a POI error.</td>
</tr>
</tbody>
</table>

Function: Sets the type of error to be inserted against transmission signals.

Example use: To insert a FAS PLCP error.

> :SOURce:TELecom:ERRor:TYPE PLCPFAS

**:SOURce:TELecom:ERRor:TYPE?**

Response: `<etype> = <CHARACTER RESPONSE DATA>`

Function: Queries the type of error inserted against transmission signals.

Example use: > :SOURce:TELecom:ERRor:TYPE?

< PLCPFAS
Section 4 Remote Control

:SOURce:TELecom:ERRor:TIMing:TYPE <erate>

Parameter   <erate> = <CHARACTER PROGRAM DATA>

ONCE        Single error
R1E_3       1E-3
R1E_4       1E-4
R1E_5       1E-5
R1E_6       1E-6
R1E_7       1E-7
R1E_8       1E-8
R1E_9       1E-9
R1IN16      1 in 16
R2IN16      2 in 16
R3IN16      3 in 16
R4IN16      4 in 26
ALL         ALL
R5E_3       5E-3
R5E_4       5E-4
R5E_5       5E-5
R5E_6       5E-6
R5E_7       5E-7
R5E_8       5E-8
R5E_9       5E-9
BURST       Burst
ALTERNATE   Alternate
PROGRATE    Programmable rate

Function  Sets the rate of error insertion.

* The rate depends on the error inserted into the signal.

Restriction Invalid when:
- :SOURce:TELecom:BRATe <brate> is M139, M45, M34, M8, M2, or M1.5; and <BURST>, <ALTERNATE>, or <PROGRATE> is set.

Example use To insert errors at Burst intervals:
> :SOURce:TELecom:ERRor:ERATe BURST
### :SOURce:TELecom:ERRor:TIMing:TYPE?

**Response**
\[
\lt \text{erate} > = \langle \text{CHARACTER RESPONSE DATA} \rangle
\]

**Function**
Queries the error insertion rate.

**Example use**
\[
> \text{ :SOURce:TELecom:ERRor:ERATe}?
\]
\[
< \text{BURST}
\]

### :SOURce:TELecom:ERRor:TIMing:BURSt:BIT <bit>

**Parameter**
\[
\lt \text{bit} > = \langle \text{DECIMAL NUMERIC PROGRAM DATA} \rangle
\]
\[
1 \text{ to } 64000 \quad \text{Step value : 1}
\]

**Function**
Sets the bit number of the error insertion when Burst is selected.

**Restriction**
Invalid when:
- \text{ :SOURce:TELecom:BRATe <brate} is M139, M45, M34, M8, M2, or M1.5.

**Example use**
To set the bit number of the error insertion to 1000.
\[
> \text{ :SOURce:TELecom:ERRor:TIMing:BURSt:BIT 1000}
\]

### :SOURce:TELecom:ERRor:TIMing:BURSt:BIT?

**Response**
\[
\lt \text{bit} > = \langle \text{NR1 NUMERIC RESPONSE DATA} \rangle
\]

**Function**
Queries the bit number of the error insertion when Burst is selected.

**Example use**
To query the bit number of the error insertion.
\[
> \text{ :SOURce:TELecom:ERRor:TIMing:BURSt:BIT}?
\]
\[
< 1000
\]

### :SOURce:TELecom:ERRor:TIMing:PROGrate <error>

**Parameter**
\[
\lt \text{error} > = \langle \text{STRING PROGRAM DATA} \rangle
\]
\[
1.0E-2 \text{ to } 9.9E-10 \quad 1.0 \text{ to } 9.9 \quad \text{Step value : 0.1}
\]
\[
1 \text{ to } 10 \quad \text{Step value : 1}
\]
either “1.0E-2” or “1E-2” can inputted.

**Function**
Set the added value when Programable rate error is added.

**Restriction**
Invalid when:
\text{ :SOURce:TELecom:BRATe <brate} is M139, M45, M34, M8, M2, or M1.5.

**Example use**
To set the added value to 1.0E-5.
\[
> \text{ :SOURce:TELecom:ERRor:TIMing:PROGrate “1.0E-5”}
\]
Section 4  Remote Control

:SOURce:TELecom:ERRor:TIMing:PROGrate?
Response  
<error> = <STRING RESPONSE DATA>
Function  
Queries the added value of the Prog.rate error.
Example use  
To query the added value of the Prog.rate error.
> :SOURce:TELecom:ERRor:TIMing:PROGrate?
< “1.0E-5”

:SOURce:TELecom:ERRor:TIMing:ERRor <error>
Parameter  
<error> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 8000  
Step value : 1
Function  
Set the number of the frames with errors when the Alternate is selected.
Restriction  
Invalid when;
:SOURce:TELecom:BRATe <brate> is M139, M45, M34, M8, M2, or M1.5.
Example use  
To set the number of the frames with errors to 3000.
> :SOURce:TELecom:ERRor:TIMing:ERRor 3000

:SOURce:TELecom:ERRor:TIMing:ERRor?
Response  
<error> = <NR1 NUMERIC RESPONSE DATA>
Function  
Queries the number of the frames with the errors when the Alternate is selected.
Example use  
To query the number of the frames with the errors when the Alternate is selected.
> :SOURce:TELecom:ERRor:TIMing:ERRor?
< 3000

:SOURce:TELecom:ERRor:TIMing:NORMal <normal>
Parameter  
<normal> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 8000  
Step value : 1
Function  
Sets the number of the normal frames when Alternate is selected.
Restriction  
Invalid when;
- :SOURce:TELecom:BRATe <brate> is M139, M45, M34, M8, M2, or M1.5.
Example use  
To set the number of the normal frames to 1700.
> :SOURce:TELecom:ERRor:TIMing:NORMal 1700
4.4 Equipment Unique Command

:SOURce:TELecom:ERRor:TIMing:NORMal?

Response <normal> = <NR1 NUMERIC RESPONSE DATA>

Function Queries the number of the normal frames when Alternate is selected.

Example use To query the number of the normal frames when Alternate is selected.

> :SOURce:TELecom:ERRor:TIMing:NORMal?
< 1700

:SOURce:TELecom:OHPReset:SLABel <pohtype>, <string>

:SOURce:TELecom:OHPReset:PLABel <pohtype>, <string>

Parameter <pohtype> = <CHARACTER PROGRAM DATA>

(SDH) VC4 POH VC4 pattern
VC3 POH VC3 pattern

(SONET) STS3 POH STS3 pattern
STS1 POH STS1 pattern

<string> = <STRING PROGRAM DATA>

C2(b1-8) can be set in plain language.

(for SDH)

"Unequipped" "UNEQ" (0000 0000)
"Equipped-non-specific" "non-specific" (0000 0001)
"TUG structure" "TUG" (0000 0010)
"Locked TU" "Locked TU" (0000 0011)
"Async. 34M or 45M(C-3)" "34M" or "45M" (0000 0100)
"Async. 139M(C-4)" "139M" (0001 0010)
"ATM mapping" "ATM" (0001 0011)
"MAN(DQDB)mapping" "MAN" or "DQDB" (0001 0100)
"FDDI mapping" "FDDI" (0001 0101)
"O.181 mapping" "O.181" (1111 1110)
"VC-AIS" "VC-AIS" (1111 1111)

(for SONET)

"Unequipped" "UNEQ" (0000 0000)
"Equipped-non-specific" "non-specific" (0000 0001)
"VT structure" "VT" (0000 0010)
"Locked VT" "Locked VT" (0000 0011)
"Async. Mapping DS3" "DS3" (0000 0100)
"Async. Mapping DS4NA" "DS4NA" (0001 0010)
"Mapping for ATM" "ATM" (0001 0011)
"Mapping for DQDB"  "MAN" or "DQDB"  (0001 0100)
"Async. Mapping FDDI"  "FDDI"  (0001 0101)
"Unused"  "UNUSED"  (1111 1110)
"AIS-P"  "AIS-P"  (1111 1111)

Function Sets C2 data of POH preset data of transmission signal.
(Plain-language format)

Example use To set the preset data of POH VC3 C2, as follows:
> :SOURce:TELecom:OHPReset:SLABel VC3, "Unequipped"

:SOURce:TELecom:OHPReset:SLABel? <pohtype>
:SOURce:TELecom:OHPReset:PLABel? <pohtype>

Parameter <pohtype> = <CHARACTER PROGRAM DATA>
Response <string> = <STRING RESPONSE DATA>
Function Queries plain-language data of C2 of POH preset data of transmission signal.
Example use To Query plain-language preset data of C2 of POH VC3.
> :SOURce:TELecom:OHPReset:SLABel? VC3
< "Unequipped"

:SOURce:TELecom:MSPMessages:REQuest <request>

Parameter <request> = <CHARACTER PROGRAM DATA>
(G.783)
NREQ No request(0000)
DNR Do not revet(0001)
RREQ Reverse request(0010)
UUS3 Unused(0011)
EXER Exercise(0100)
UUS5 Unused(0101)
WTR Wait to restore(0110)
UUS7 Unused(0111)
MSW Manual switch(1000)
UUS9 Unused(1001)
SDLP Signal degrade low priority(1010)
SDHP Signal degrade high priority(1011)
SFLP Signal fall low priority(1100)
SFHP Signal fall high priority(1101)
4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>FSW</td>
<td>Forced switch(1110)</td>
</tr>
<tr>
<td>LOPR</td>
<td>Lockout of protection(1111)</td>
</tr>
<tr>
<td>(G.841)</td>
<td></td>
</tr>
<tr>
<td>NR</td>
<td>NR(0000)</td>
</tr>
<tr>
<td>RRR</td>
<td>RR-R(0001)</td>
</tr>
<tr>
<td>RRS</td>
<td>RR-S(0010)</td>
</tr>
<tr>
<td>EXERR</td>
<td>EXER-R(0011)</td>
</tr>
<tr>
<td>EXERS</td>
<td>EXER-S(0100)</td>
</tr>
<tr>
<td>WTR</td>
<td>WTR(0101)</td>
</tr>
<tr>
<td>MSR</td>
<td>MS-R(0110)</td>
</tr>
<tr>
<td>MSS</td>
<td>MS-S(0111)</td>
</tr>
<tr>
<td>SDR</td>
<td>SD-R(1000)</td>
</tr>
<tr>
<td>SDS</td>
<td>SD-S(1001)</td>
</tr>
<tr>
<td>SDP</td>
<td>SD-P(1010)</td>
</tr>
<tr>
<td>SFR</td>
<td>SF-R(1011)</td>
</tr>
<tr>
<td>SFS</td>
<td>SF-S(1100)</td>
</tr>
<tr>
<td>FSR</td>
<td>FS-R(1101)</td>
</tr>
<tr>
<td>FSS</td>
<td>FS-S(1110)</td>
</tr>
<tr>
<td>LPS</td>
<td>LP-S(1111)</td>
</tr>
<tr>
<td>SFP</td>
<td>SF-P(1111)</td>
</tr>
</tbody>
</table>

Function: Sets K1 (bits 1 to 4). (Plain-language format)

Restriction: Invalid when:

Example use: To set bits 1 to 4 of K1 to "1011":
> :SOURce:TELecom:MSPMessages:REQUEST SDHP
Section 4  Remote Control

:SOURce:TELecom:MSPMessages:CHANnel <mspch>
Parameter  <mspch> = <CHARACTER PROGRAM DATA>
(G.783)
NCH  Null channel(0000)
WC1  Working channel1(0001)
WC2  Working channel2(0010)
WC3  Working channel3(0011)
WC4  Working channel4(0100)
WC5  Working channel5(0101)
WC6  Working channel6(0110)
WC7  Working channel7(0111)
WC8  Working channel8(1000)
WC9  Working channel9(1001)
WC10 Working channel10(1010)
WC11 Working channel11(1011)
WC12 Working channel12(1100)
WC13 Working channel13(1101)
WC14 Working channel14(1110)
ETCH Extra traffic channel(1111)
(G.841) 0 to 15
Function Sets K1 (bits 5 to 8). (Plain-language format)
Restriction Invalid when:
- :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TECLl">, or
  <"MANual:RCELI">.
Example use To set bits 5 to 8 of K1 to "1110":
> :SOURce:TELecom:MSPMessages:CHANnel WC14

:SOURce:TELecom:MSPMessages:BRIDge <bridge>
Parameter  <bridge> = <CHARACTER PROGRAM DATA>
(G.783)
NCH  Null channel(0000)
WC1  Working channel1(0001)
WC2  Working channel2(0010)
WC3  Working channel3(0011)
WC4  Working channel4(0100)
WC5  Working channel5(0101)
WC6  Working channel6(0110)
WC7  Working channel7(0111)
WC8  Working channel8(1000)
WC9  Working channel9(1001)
WC10 Working channel10(1010)
WC11 Working channel11(1011)
WC12 Working channel12(1100)
WC13 Working channel13(1101)
WC14 Working channel14(1110)
ETCH Extra traffic channel(1111)

Function  Sets K2 (bits 1 to 4). (Plain-language format)

Restriction  Invalid when:
- :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,

Example use  To set bits 1 to 4 of K2 to "1110":
> :SOURce:TELecom:MSPMessages:BRIDge WC14

:SOURce:TELeom:MSPMessages:ARCHitect <arch>

Parameter  <arch> = <CHARCTER PROGRAM DATA>

Function  Sets K2 (bit 5). (Plain-language format)

Restriction  Invalid when:
- :DISPlay:TMENu[:NAME] is other than , <"MANual[:JOFF]">,

Example use  To set bit 5 of K2 to "1":
> :SOURce:TELeom:MSPMessages:ARCHitect OCNA
Section 4 Remote Control

**SOURce:TELecom:MSPMessages:REServed <res>**

Parameter  

<res> = \( <\text{CHARACTER PROGRAM DATA}> \)

- Idle 000
- Bridged 001
- Br&Sw 010
- Reserved011 011
- Reserved100 100
- Reserved101 101
- MS-RDI 110
- MS-AIS 111

Function Sets K2 (6 to 8bit). (Plain-language format)

Restriction Invalid when:
- :INSTrument:CONFig <type> is NON or CID.
- :SOURce:TELecom:BRATe is, <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.
- :ROUTe:THRough is, <ON>.
- :DISPlay:TMENu[:NAME] is other than, <"MANual[:JOFF]">.

Example use To set No.8 K2 (6-8bit) to MS-AIS.

> :SOURce:TELecom:MSPMessages:REServed MS-AIS

**:SOURce:TELecom:MSPBits:REQuest <string>**

Parameter  

<string> = \( <\text{STRING PROGRAM DATA}> \)

"0000" to "1111"

Function Sets K1 (1-4bit). (Bit format)

Restriction Invalid when:
- :SOURce:TELecom:BRATe is <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.
- :ROUTe:THRough is, <ON>.

Example use To K1 1-4bit to "1011".

> :SOURce:TELecom:MSPBits:REQuest "1011"

**:SOURce:TELecom:MSPBits:CHANnel <string>**

Parameter  

<string> = \( <\text{STRING PROGRAM DATA}> \)

"0000" to "1111"

Function Sets K1 (5-8bit). (Bit format)

Restriction Invalid when;

Example use
To set K1 5-8bit to "1110".
> :SOURce:TELecom:MSPBits:CHANnel "1110"

:SOURce:TELecom:MSPBits:BRIDge <string>
Parameter
<string> = <STRING PROGRAM DATA>
"0000" to "1111"
Function
Sets K2 (1-4bit). (Bit format)
Restriction
Invalid when;

Example use
To set K2 1-4bit to "1110".
> :SOURce:TELecom:MSPBits:BRIDge "1110"

:SOURce:TELecom:MSPBits:ARCHitect <string>
Parameter
<string> = <STRING PROGRAM DATA>
"0" to "1"
Function
Sets K2 (5bit). (Bit format)
Restriction
Invalid when;

Example use
To set K2 5bit to "1".
> :SOURce:TELecom:MSPBits:ARCHitect "1"

:SOURce:TELecom:MSPBits:REServed <string>
Parameter
<string> = <STRING PROGRAM DATA>
"000" to "101"
Function
Sets K2 (6-8bit). (Bit format)
Restriction
Invalid when;

Example use
To set K2 6-8bit to "101".
> :SOURce:TELecom:MSPBits:REServed "101"
Example use To set K2 6-8bit to "101".
> :SOURce:TELecom:MSPBits:REServed "101"

:SOURce:TELecom:PSETting:NDFSet <ptype>, <string>

Parameter <ptype> = <CHARACTER PROGRAM DATA>
   AU    AU-PTR, STS-PTR
   TU    TU-PTR, VT-PTR
<string> = <STRING PROGRAM DATA>
   "0000" to "1111"

Function Sets the pointer value (NDF).
Restriction Invalid when;
   - :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
     <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCELl">, and
     <"MANual:RCELl">.
   - :INSTrument:ATM is <ON>, and <TU> is set.

Example use To set AU PTR NDF to "1011".
> :SOURce:TELecom:PSETting:NDFSet AU, "1011"

:SOURce:TELecom:PSETting:SSSet <ptype>, <string>

Parameter <ptype> = <CHARACTER PROGRAM DATA>
   AU    AU-PTR, STS-PTR
   TU    TU-PTR, VT-PTR
<string> = <STRING PROGRAM DATA>
   "00" to "11"

Function To set the pointer value (SS).
Restriction Invalid when;
   - :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
     <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCELl">, and
     <"MANual:RCELl">.
   - :INSTrument:ATM is <ON>, and <TU> is set.

Example use To set AU PTR SS to "10".
> :SOURce:TELecom:PSETting:SSSet AU, "10"
**:SOURce:TELecom:PSETting:IDSet <ptype>, <numeric>**

Parameter

- `<ptype>` = `<CHARACTER PROGRAM DATA>`
  - AU: AU-PTR, STS-PTR
  - TU: TU-PTR, VT-PTR
- `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 0 to 1023

Function

Set a pointer value (ID).

Restriction

Invalid when:
- :INSTrument:ATM is `<ON>`, and `<TU>` is set.

Example use

To set AU PTR ID to “10” (decimal notation).

> :SOURce:TELecom:PSETting:IDSet AU, 10

**:SOURce:TELecom:PSETting:PPJC <ptype>**

Parameter

- `<ptype>` = `<CHARACTER PROGRAM DATA>`
  - AU: AU-PTR, STS-PTR
  - TU: TU-PTR, VT-PTR

Function

Inserts +PJC one time for send signal.

Restriction

Invalid when:
- :INSTrument:ATM is `<ON>`, and `<TU>` is set.

Example use

To insert +PJC one time to AU pointer.

> :SOURce:TELecom:PSETting:PPJC AU

**:SOURce:TELecom:PSETting:NPJC <ptype>**

Parameter

- `<ptype>` = `<CHARACTER PROGRAM DATA>`
  - AU: AU-PTR, STS-PTR
  - TU: TU-PTR, VT-PTR

Function

Inserts –PJC one time for send signal.

Restriction

Invalid when:

Example use
Chapter 4  Remote Control

"MANual:RCEL1".
- :INSTRument:CONFig is <ATM>, and <TU> is set.

Example use
To insert –PJc one time to AU pointer:
> :SOURce:TELecom:PSETting:NPJC AU

:SOURce:ATM:MAPPing <mtype>
Parameter  
- <mtype> = <CHARACTER PROGRAM DATA>
  AAL1
  AAL2
  AAL34
  AAL5
  ATM
Function  Sets ATM mapping of the send signal.
Restriction  Invalid when;
- :INSTRument:CONFig is other than <ATM>.
Example use
To set the ATM mapping of send signal to AAL1.
> :SOURce:ATM:MAPPing AAL1

:SOURce:ATM:MAPPing?
Response  
- <mtype> = <CHARACTER RESPONSE DATA>
Function  Queries ATM mapping of send signal.
Example use
> :SOURce:ATM:MAPPing?
< AAL1

:SOURce:ATM:HSTRucture <htype>
Parameter  
- <htype> = <CHARACTER PROGRAM DATA>
  UNI
  NNI
Function  Sets the Header structure of a send signal.
Restriction  Invalid when;
- :INSTRument:CONFig setting is other than <ATM>.
Example use
To set the Header structure of a send signal UNI.
> :SOURce:ATM:OHPrRes:EType "Unequipped", or
> :SOURce:ATM:HSTRucture UNI
4.4 Equipment Unique Command

:SOURce:ATM:HSTRucture?
Response <htype> = <CHARACTER RESPONSE DATA>
Function Queries the header structure of send signal.
Example use >:SOURce:ATM:HSTRucture?
< UNI

:SOURce:ATM:OAM <type>
Parameter <type> = <CHARACTER PROGRAM DATA>
   SEGMENT Segment
   END End-to-end
Function Sets a OAM type for the transmission signals.
Restriction Invalid when;
   - When the ATM unit is not installed.
   - :INSTRument:CONFig setting is other than <ATM>.
Example use To set the OAM type of a send signal to End-to-end.
   > :SOURce:ATM:OAM END

:SOURce:ATM:OAM?
Response <type> = <CHARACTER RESPONSE DATA>
   SEGMENT Segment
   END End-to-end
Function Queries the OAM type for transmission signals.
Example use > :SOURce:ATM:OAM?
< END

:SOURce:ATM:OHPReset:E3:PATTern <ohpoint>, <string>
Parameter <ohpoint> = <CHARACTER PROGRAM DATA>
   FA1, FA2, RDI, REI, PTYPE, PDEP, TMARK, NR, GC
   <string> = <STRING PROGRAM DATA>
   "00" to "FF" (HEX format) <ohpoint> is FA1, FA2, NR, or GC.
   "0" to "1" (BIN format) <ohpoint> is RDI, REI, or TMARK.
   "00" to "11" (BIN format) <ohpoint> is PDEP.
   "000" to "011" (BIN format) <ohpoint> is PTYPE.
Function Sets the E3 preset data of send signal.
Restriction Invalid when;
   - When the 2/8/34/139/156M (CMI) unit is not installed.
Section 4  Remote Control

- :INSTRument:CONFig is <ATM>.

Example use
To set E3 FA1 preset data to "FF":
> :SOURce:ATM:OHPReset:E3:PATTern FA1, "FF"

---

**:SOURce:ATM:OHPReset:E3:PATTern? <ohpoint>**

Parameter <ohpoint> = <CHARACTER PROGRAM DATA>
Response <string> = <STRING RESPONSE DATA>
Function Queries the E3 preset data of send signal.
Example use To query the FA1 preset data of E3:
> :SOURce:ATM:OHPReset:E3:PATTern? FA1
< "AB"

---

**:SOURce:ATM:OHPReset:E3:PTYPe <string>**

Parameter <string> = <STRING PROGRAM DATA>
"Unequipped" "UNEQ" (000)
"Equipped-non-specific" "non-specific" (001)
"ATM" "ATM" (010)
"SDH TU-12s" "TU12" (011)
Note: Abbreviated format is at right.
Function Sets the plain-language of the E3 preset data (Payload type) of send signal.
Restriction Invalid when:
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTRument:CONFig setting is other than <ATM>.
Example use To set the preset data of the E3 Payload type to "Unequipped".
> :SOURce:ATM:OHPReset:E3:PTYPe "Unequipped"

---

**:SOURce:ATM:OHPReset:E3:PTYPe ?**

Response <string> = <STRING RESPONSE DATA>
Function Queries Payload type of E3 preset data of the send signal.
Example use To query E3 Payload type preset data:
> :SOURce:ATM:OHPReset:E3:PTYPe ?
<"Unequipped"
### :SOURce:ATM:OHPReset:E3:TRACe <string>

**Parameter**

<string> = <STRING PROGRAM DATA>

The characterstring must consist of 0 to 16 characters. "" is allowed.

**Function**

Sets Trail trace pattern of E3 preset data of the send signal.

Data is in ASCII.

**Restriction**

Invalid when;
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.

**Example use**

To set E3 Trail trace to "*MP1550C SDH/PDH":

> :SOURce:ATM:OHPReset:E3:TRACe "MP1550C PDH/SDH"

### :SOURce:ATM:OHPReset:E3:TRACe?

**Response**

<string> = <STRING RESPONSE DATA>

**Function**

Queries Trail trace pattern of E3 preset data of the send signal.

**Example use**

To query Trail trace pattern of E3 FA1 preset data:

> :SOURce:ATM:OHPReset:E3:TRACe?

< "*MP1550C PDH/SDH"

### :SOURce:ATM:OHPReset:E3:DEFault

**Parameter**

None

**Function**

Initializes E3 preset data of the send signal.

**Restriction**

Invalid when;
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.

**Example use**

> :SOURce:ATM:OHPReset:E3:DEFault

### :SOURce:ATM:OHPReset:E4:PATTern <ohpoint>, <string>

**Parameter**

<ohpoint> = <CHARACTER PROGRAM DATA>

FA1, FA2, P1, P2, RDI, REI, PTYPE, PDEP, TMARK, NR, GC

<string> = <STRING PROGRAM DATA>

"00" to "FF" (HEX format) <ohpoint> is, FA1, FA2, P1, P2, NR, or GC

"0" to "1" (BIN format) <ohpoint> is, RDI, REI, or TMARK.

"00" to "11" (BIN format) <ohpoint> is PDEP.

"000" to "100" (BIN format) <ohpoint> is, PTYPE.

**Function**

Sets E4 preset data of the send signal.

**Restriction**

Invalid when;
- When the 2/8/34/139/156M (CMI) unit is not installed.
Section 4  Remote Control

- :INSTrument:CONFig setting is other than <ATM>.

Example use To set E4 FA1 preset data to “FF”:
> :SOURce:ATM:OHPReset:E4:PATTern FA1, "FF"

Parameter <ohpoint> = <CHARACTER PROGRAM DATA>
Response <string> = <STRING RESPONSE DATA>
Function Queries E4 preset data of the send signal.
Example use To query E4 FA1 preset data:
> :SOURce:ATM:OHPReset:E4:PATTern? FA1
< "AB"

:SOURce:ATM:OHPReset:E4:PTYPe <string>
Parameter <string> = <STRING PROGRAM DATA>
"Unequipped"  "UNEQ" (000)
"Equipped-non-specific"  "non-specific" (001)
"ATM"  "ATM" (010)
"TUG-2"  "TUG-2" (011)
"TUG-3 & TUG-2"  "TUG-3 & TUG-2" (100)
Note : Abbreviated format is at right.
Function Sets plain-language of E4 preset data (payload type) of the send signal.
Restriction Invalid when:
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.
Example use To set preset data of E4 Payload type to “Unequipped”:
> :SOURce:ATM:OHPReset:E4:PTYPe "Unequipped"

:SOURce:ATM:OHPReset:E4:PTYPe?
Response <string> = <STRING RESPONSE DATA>
Function Queries E4 preset data (Payload type) of the send signal.
Example use To query preset data of E3 Payload type:
> :SOURce:ATM:OHPReset:E4:PTYPe?
< "Unequipped"
4.4 Equipment Unique Command

:SOURce:ATM:OHPReset:E4:TRACe <string>

Parameter
$string$ = <STRING PROGRAM DATA>
  "ABCDEFG01234abcd"

Function
Sets Trail trace pattern of E4 preset data of the send signal.
Data is expressed in ASCII.

Restriction
Invalid when;
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTRument:CONFig setting is other than <ATM>.

Example use
To set E4 Trail trace to "*MP1570A SDH/PDH"
> :SOURce:ATM:OHPReset:E4:TRACe "MP1570A SDH/SDH"

:SOURce:ATM:OHPReset:E4:TRACe?

Parameter
None

Function
Queries Trail traced pattern of E4 preset data of the send signal.

Example use
To query Trail trace pattern of E4:
> :SOURce:ATM:OHPReset:E4:TRACe?
< "*MP1550C PDH/SDH"

:SOURce:ATM:OHPReset:E4:DEFault

Parameter
None

Function
Initializes E4 preset data of the send signal.

Restriction
Invalid when;
- When the 2/8/34/139/156M (CMI) unit is not installed.
- :INSTRument:CONFig setting is other than <ATM>.

Example use
> :SOURce:ATM:OHPReset:E4:DEFault

:SOURce:ATM:OHPReset:DS3Plcp:PLCP <numeric>, <string>

Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 12  Step value : 1
<string> = <STRING PROGRAM DATA>
"00" to "FF"

Function
Sets PLCP of DS3 PLCP preset data of the send signal.
Represent <string> in hexadecimal notation.

Restriction
Invalid when;
- When the 1.5/45/52M unit is not installed.
Section 4  Remote Control

Example use  To query fourth PLCP A1 of DS3 PLCP:
> :SOURce:ATM:OHPReset:DS3Plcp:PLCP 4, "FF"

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
Response   <string> = <STRING RESPONSE DATA>
Function   Queries PLCP of DS3 DS3 PLCP preset data of the send signal.
            Represent <string> in hexadecimal notation.
Example use To query fourth PLCP A1 of DS3 PLCP:
< "FF"

:SOURce:ATM:OHPReset:DS3Plcp:FRAMe <numeric>, <string>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
            1 to 12   Step value : 1
            <string> = <STRING PROGRAM DATA>
            "00" to "FF"
Function   Sets frame of DS3 PLCP preset data of the send signal.
            Represent <string> in hexadecimal notation.
Restriction Invalid when;
            - When the 1.5/45/52M unit is not installed.
            - :INSTrument:CONFig setting is other than <ATM>.
Example use To set fourth frame A2 of DS3 PLCP to “FF”:
> :SOURce:ATM:OHPReset:DS3Plcp:FRAMe 4, "FF"

:SOURce:ATM:OHPReset:DS3Plcp:FRAMe? <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
Response   <string> = <STRING RESPONSE DATA>
Function   Queries frame of DS3 PLCP preset data of the send signal.
            Represent <string> in hexadecimal notation.
Example use To query fourth frame A2 of DS3 PLCP:
> :SOURce:ATM:OHPReset:DS3Plcp:FRAMe? 4
< "FF"
**:SOURce:ATM:OHPReset:DS3Plcp:POI <type>, <string>**

Parameter

\(<\text{type}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)  
\(\text{P11, P10, P09, P08, P07, P06, P05, P04, P03, P02, P01, P00}\)

\(<\text{string}> = \langle\text{STRING PROGRAM DATA}\rangle\)  
"00" to "FF"

Function

Sets PIO of DS3 PLCP preset data of the send signal.

Represent \(<\text{string}>\) in hexadecimal notation.

Restriction

Invalid when;

- When the 1.5/45/52M unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.

Example use

To set PIO P11 of DS3 PLCP to "FF":

> :SOURce:ATM:OHPReset:DS3Plcp:POI P11, "FF"

**:SOURce:ATM:OHPReset:DS3Plcp:POI? <type>**

Parameter

\(<\text{type}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)

Response

\(<\text{string}> = \langle\text{STRING RESPONSE DATA}\rangle\)

Function

Queries PIO of DS3 PLCP preset data of the send signal.

Represent \(<\text{string}>\) in hexadecimal notation.

Example use

To query PIO P11 of DS3 PLCP:

> :SOURce:ATM:OHPReset:DS3Plcp:POI? 4

< "FF"

**:SOURce:ATM:OHPReset:DS3Plcp:POH <type>, <string>**

Parameter

\(<\text{type}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)  
\(\text{Z6, Z5, Z4, Z3, Z2, Z1, X7, G1, X10, X11}\)

\(<\text{string}> = \langle\text{STRING PROGRAM DATA}\rangle\)  
"00" to "FF"

Function

Sets POH of DS3 PLCP preset data of the send signal.

Represent \(<\text{string}>\) in hexadecimal notation.

Restriction

Invalid when;

- When the 1.5/45/52M unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.

Example use

To set POH Z6 of DS3 PLCP to "FF":

> :SOURce:ATM:OHPReset:DS3Plcp:POH Z6, "FF"
Section 4  Remote Control


Parameter  
$type$ = <CHARACTER PROGRAM DATA>

Response  
<String> = <STRING RESPONSE DATA>

Function  
Queries POH of DS3 PLCP preset data of the send signal.

Represent <String> in hexadecimal notation.

Example use  
To query POH Z6 of DS3 PLCP:

< "FF"

:SOURce:ATM:OHPReset:DS3Plcp:DEFault

Parameter  
None

Function  
Initializes DS3 PLCP preset data of the send signal.

Restriction  
Invalid when:
- When the 1.5/45/52M unit is not installed.
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
> :SOURce:ATM:OHPReset:DS3Plcp:DEFault

:SOURce:ATM:MANual:TRAFfic:TYPE <type>

Parameter  
$type$ = <CHARACTER PROGRAM DATA>

0191 0.191

USER User program

MEMorized Memorized cell

Function  
Sets ATM cell type.

Restriction  
Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELl">, and
  <"MANual:RCELl">.
- :SOURce:ATM:MAPPing is, <AAL1>, <AAL2>, <AAL34>, and
  <AAL5>.

Example use  
To set ATM cell type to 0.191:

> :SOURce:ATM:MANual:TRAFfic:TYPE 0191
4.4 Equipment Unique Command

:SOURce:ATM:MANual:TRAFFic:TYPE?
Response <type> = <CHARACTER RESPONSE DATA>
  O191      O.191
  USER      User program
  MEM       Memorized cell
Function Queries ATM cell type.
Example use > :SOURce:ATM:MANual:TRAFFic:TYPE?
  < O191

:SOURce:ATM:MANual:TRAFFic:MEMorized:NUMBer <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  1 to 2016  Step value : 1
Function Sets number of Memorized cell repetitions.
Restriction Invalid when;
  - :INStrument:CONFig setting is other than <ATM>.
  - :SOURce:ATM:MAPPing is <AAL1>, <AAL2>, <AAL34>, or <AAL5>.
  - :SOURce:ATM:MANual:TRAFFic:TYPE is <O191> or <USER>.
Example use To set number of Memorized cell repetitions to 2016:

:SOURce:ATM:MANual:TRAFFic:MEMorized:NUMBer?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries number of Memorized cell repetitions.
Example use > :SOURce:ATM:MANual:TRAFFic:MEMorized:NUMBer?
  < 2016

:SOURce:ATM:MANual:TRAFFic:HEADer "<gfc>, <vpi>, <vci>, <pt>, <clp>"
Parameter <gfc> = <STRING PROGRAM DATA>
  0 to F    (HEX format)
<vpi> = <DECIMAL NUMERIC PROGRAM DATA>
  0 to 255  at UNI
  0 to 4095  at NNI
Section 4  Remote Control

<vci> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 65535

<pt> = <STRING PROGRAM DATA>
000 to 111  (BIN format)

<clp> = <STRING PROGRAM DATA>
0 to 1     (BIN format)

Function  Sets header pattern.
Restriction Invalid when:
- When all parameters are omitted.
- :INSTRument:CONFig setting is other than <ATM>.
- :DISPlay:TMENu[:NAME] is other than "<MANual:JON>",
  "<MANual:TLayer>", "<MANual:TCELl>", "<MANual:RCELl>".

Example use  To set header pattern to GFC:F and VPI:255:
> :SOURce:ATM:MANual:TRAFfic:HEADer "F, 255, , , , ,

:SOURce:ATM:MANual:TRAFfic:HEADer?
Response  <gfc> = <STRING RESPONSE DATA>
<vpi> = <NR1 NUMERIC RESPONSE DATA>
<vci> = <NR1 NUMERIC RESPONSE DATA>
<pt> = <STRING RESPONSE DATA>
<clp> = <STRING RESPONSE DATA>

Note : <gfc> is output as "" at NNI.

Function  Queries header pattern.
Example use  > :SOURce:ATM:MANual:TRAFfic:HEADer?
< "F, 255, 4095, 001, 1"

:SOURce:ATM:MANual:TRAFfic:PAYLoad:TYPE <type>
Parameter  <type> = <CHARACTER PROGRAM DATA>
  WORD8        Word8
  WORD16       Word16
  SCPRbs7      Single cell PRBS7
  SCPRbs9      Single cell PRBS9
  CCPRbs9      Cross cell PRBS9
  CCPRbs15     Cross cell PRBS15
  CCPRbs23     Cross cell PRBS23
  EDIT         Edit pattern
### 4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Function</th>
<th>TSTamp</th>
<th>Time stamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets payload type.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Restriction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Invalid when:**
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MAPPing is <ATM>, and :SOURce:ATM:MANual:TRAFfic:TYPE is <O191> or <MEMorized>.
- :SOURce:ATM:MAPPing is <ATM>, <AAL1>, <AAL34>, or <AAL5>, and <WORD8> or <SCPRbs7> is set.
- :SOURce:ATM:MAPPing is <AAL2>, and <WORD16>, <SCPRbs9>, <CCPRbs9>, <CCPRbs15>, or <CCPRbs23> is set.
- :SOURce:ATM:MAPPing is <AAL5> or <TSTamp>.

**Example use**

To set payload type to Word16:

> :SOURce:ATM:MANual:TRAFfic:PAYLoad:TYPE WORD16

**:SOURce:ATM:MANual:TRAFfic:PAYLoad:TYPE?**

**Response**

<table>
<thead>
<tr>
<th>&lt;type&gt;</th>
<th>&lt;CHARACTER RESPONSE DATA&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORD8</td>
<td>Word8</td>
</tr>
<tr>
<td>WORD16</td>
<td>Word16</td>
</tr>
<tr>
<td>SCPR7</td>
<td>Single cell PRBS7</td>
</tr>
<tr>
<td>SCPR9</td>
<td>Single cell PRBS9</td>
</tr>
<tr>
<td>CCPR9</td>
<td>Cross cell PRBS9</td>
</tr>
<tr>
<td>CCPR15</td>
<td>Cross cell PRBS15</td>
</tr>
<tr>
<td>CCPR23</td>
<td>Cross cell PRBS23</td>
</tr>
<tr>
<td>EDIT</td>
<td>Edit pattern</td>
</tr>
<tr>
<td>TST</td>
<td>Time stamp</td>
</tr>
</tbody>
</table>

**Function**

Queries payload type.

**Example use**

> :SOURce:ATM:MANual:TRAFfic:PAYLoad:TYPE?

< WORD16
Section 4  Remote Control

:SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD <string>
Parameter  
<string> = <STRING PROGRAM DATA>
"0000000000000000" to "1111111111111111"

Function  
Sets word pattern.
Represent <string> in binary notation.

Restriction  
Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set word pattern to "01001111 00001111":
> :SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD "0100111100001111"

:SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD?
Response  
<string> = <STRING RESPONSE DATA>

Function  
Queries word pattern.

Example use  
> :SOURce:ATM:MANual:TRAFFic:PAYLoad:WORD?
< "0100011100001111"

:SOURce:ATM:MANual:TRAFFic:DISTribution <type>
Parameter  
$type = <CHARACTER PROGRAM DATA>

Function  

Restriction  
Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set cell traffic type to CBR:
> :SOURce:ATM:MANual:TRAFFic:DISTribution CBR
### :SOURce:ATM:MANual:TRAFFic:DISTribution?

**Response**  
Response type = <CHARACTER RESPONSE DATA>
- CBR
- BURST
- CWCDV
- POISSON
- SAWTOOTH

**Function**  
Queries cell traffic type.

**Example use**  
> :SOURce:ATM:MANual:TRAFFic:DISTribution?

Response type = <CHARACTER RESPONSE DATA>
- CBR
- Burst
- CBR with CDV
- Poisson
- Sawtooth

### :SOURce:ATM:MANual:TRAFFic:CBR:TYPE <type>

**Parameter**  
Parameter type = <CHARACTER PROGRAM DATA>
- BPS: kbit/s
- CPS: cells/s
- PERCent: %

**Function**  
Sets CBR type.

**Restriction**  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

**Example use**  
To set CBR type to kbit/s:

### :SOURce:ATM:MANual:TRAFFic:CBR:TYPE?

**Response**  
Response type = <CHARACTER RESPONSE DATA>
- BPS: kbit/s
- CPS: cells/s
- PERC: %

**Function**  
Queries CBR type.

**Example use**  

Response type = <CHARACTER RESPONSE DATA>
- BPS
- CPS
- PERC

-
Section 4  Remote Control

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 99999  Step value : 1
Function  
Sets cell traffic (kbit/s) at CBR.
Restriction  
Invalid when;
  - :INSTrument:CONFig setting is other than <ATM>.
Example use  
To set cell traffic (kb/s) at CBR to 100 kbit/s:
> :SOURce:ATM:MANual:TRAFFic:CBR:BPS 100, BPS

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>
Function  
Queries cell traffic (kbit/s) at CBR.
Example use  
< 100, BPS

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 1412830  Step value : 1
Function  
Sets cell traffic (Cells/s) at CBR.
Restriction  
Invalid when;
  - :INSTrument:CONFig setting is other than <ATM>.
Example use  
To set cell traffic (Cells/s) at CBR to 100:
> :SOURce:ATM:MANual:TRAFFic:CBR:CPS 100

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  
Queries cell traffic (Cells/s) at CBR
Example use  
< 100
4.4 Equipment Unique Command

**:SOURce:ATM:MANual:TRAffic:CBR:PERCent <numeric>**

Parameter

<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

0.0 to 100.0  Step value : 1

Function

Sets cell traffic (%) at CBR.

Restriction

Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use

To set cell traffic (%) at CBR to 50:

> :SOURce:ATM:MANual:TRAffic:CBR:PERCent 50

**:SOURce:ATM:MANual:TRAffic:CBR:PERCent?**

Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function

Queries cell traffic (%) at CBR.

Example use


**:SOURce:ATM:MANual:TRAffic:BURSt:TYPE <type>**

Parameter

<type> = <CHARACTER PROGRAM DATA>

BPS  kbit/s
CPS  cells/s
PERCent  %

Function

Sets BURSt type.

Restriction

Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use

To set BURSt type to kbit/s:

> :SOURce:ATM:MANual:TRAffic:BURSt:TYPE BPS

**:SOURce:ATM:MANual:TRAffic:BURSt:TYPE?**

Response

<type> = <CHARACTER RESPONSE DATA>

Function

Queries BURSt type.

Example use

> :SOURce:ATM:MANual:TRAffic:BURSt:TYPE?

< BPS
Section 4  Remote Control


Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 99999  Step value : 1

Function  
Sets cell traffic (kbit/s) at BURSt:RMAX.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set cell traffic (kb/s) at BURSt:RMAX to 100 kbit/s:
> :SOURce:ATM:MANual:TRAFFic:BURSt:RMAX:BPS 100, BPS


Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>

Function  
Queries cell traffic (kbit/s) at BURSt:RMAX.

Example use  
< 100, BPS


Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 99999  Step value : 1

Function  
Sets cell traffic (%) at BURSt:RMIN.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set cell traffic (kb/s) at BURSt:RMIN to 100 kbit/s:
> :SOURce:ATM:MANual:TRAFFic:BURSt:RMIN:BPS 100, BPS


Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>

Function  
Queries cell traffic (kbit/s) at BURSt:RMIN.

Example use  
< 100, BPS
4.4 Equipment Unique Command


Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 1412830 Step value : 1

Function   Sets cell traffic (Cells/s) at BURSt:RMAX.

Restriction Invalid when:
- :INSTRument:CONFIG setting is <ATM>.
- :DISPlay:TMENU[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELL">, and
  <"MANual:RCELL">.

Example use To set cell traffic (Cells/s) at BURSt to 100:
> :SOURce:ATM:MANual:TRAFFic:BURSt:CPS 100

:SOURce:ATM:MANual:TRAFFic:BURSt:RMAX:CPS?

Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function   Queries cell traffic (Cells/s) at BURSt:RMAX.

Example use > :SOURce:ATM:MANual:TRAFFic:BURSt:CPS?
< 100


Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 1412830 Step value : 1

Function   Sets cell traffic (cell/s) at BURSt:RMIN.

Restriction Invalid when:
- :INSTRument:CONFIG setting is <ATM>.
- :DISPlay:TMENU[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELL">, and
  <"MANual:RCELL">.

Example use To set cell traffic at BURSt to 100.
> :SOURce:ATM:MANual:TRAFFic:BURSt:CPS 100


Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function   Queries cell traffic at BURSt:RMIN (Cells/s).

Example use > :SOURce:ATM:MANual:TRAFFic:BURSt:CPS?
< 100
Section 4  Remote Control

---

:SOURce:ATM:MANual:TRAFFic:BURSt:RMAX:PERCent <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

0.0 to 100.0  Step value : 1

Function  
Sets cell traffic (%) at BURSt:RMAX.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set cell traffic (%) at BURSt:RMAX to 50:
> :SOURce:ATM:MANual:TRAFFic:BURSt:RMAX:PERCent 50

:SOURce:ATM:MANual:TRAFFic:BURSt:RMIN:PERCent <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

0.0 to 100.0  Step value : 1

Function  
Sets cell traffic (%) at BURSt:RMIN.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.

Example use  
To set cell traffic (%) at BURSt:RMIN to 50:
> :SOURce:ATM:MANual:TRAFFic:BURSt:RMIN:PERCent 50

:SOURce:ATM:MANual:TRAFFic:BURSt:RMIN:PERCent?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function  
Queries cell traffic (%) at BURSt:RMIN.

Example use  
> :SOURce:ATM:MANual:TRAFFic:BURSt:RMIN:PERCent?
< 50
**4.4 Equipment Unique Command**

**:SOURce:ATM:MANual:TRAFFic:BURSt:T1 <numeric>**

Parameter: \(<\text{numeric}> = <\text{DECIMAL NUMERIC PROGRAM DATA}>\)

- Range: 1000 to 128000
- Step value: 1000

Function: Sets cell traffic (cell) at BURSt.

Restriction: Invalid when:
- :INSTRument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFFic:DISTRIBUTion is other than <BURSt>.

Example use:
To set cell traffic (cell) at BURSt to 1000:
> :SOURce:ATM:MANual:TRAFFic:BURSt:T1 1000

**:SOURce:ATM:MANual:TRAFFic:BURSt:T1?**

Response: \(<\text{numeric}> = <\text{NR1 NUMERIC RESPONSE DATA}>\)

Function: Queries cell traffic (cell) at BURSt.

Example use:
> :SOURce:ATM:MANual:TRAFFic:BURSt:T1?
< 1000

**:SOURce:ATM:MANual:TRAFFic:BURSt:T2 <numeric>**

Parameter: \(<\text{numeric}> = <\text{DECIMAL NUMERIC PROGRAM DATA}>\)

- Range: 1000 to 128000
- Step value: 1000

Function: Sets cell traffic (cell) at BURSt.

Restriction: Invalid when:
- :INSTRument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFFic:DISTRIBUTion is other than <BURSt>.
- \(T1 \geq T2\).

Example use:
To set cell traffic (cell) at BURSt to 10000:
> :SOURce:ATM:MANual:TRAFFic:BURSt:T2 10000
Section 4  Remote Control

:SOURce:ATM:MANual:TRAffic:BURSt:T2?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries cell traffic (cell) at BURSt.
Example use  > :SOURce:ATM:MANual:TRAffic:BURSt:T2?
< 10000

:SOURce:ATM:MANual:TRAffic:CWCDv:TYPE <type>
Parameter  <type> = <CHARACTER PROGRAM DATA>
  BPS      kbit/s
  CPS      cells/s
  PERCent  %
Function  Sets CBR with CDV type.
Restriction  Invalid when;
  - :INSTRument:CONFig setting is other than <ATM>.
  - :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
    <"MANual:TCLayer">, <"MANual:TCEL1">, and
    <"MANual:RCEL1">.
  - :SOURce:ATM:MANual:TRAffic:DISTribution is other than
    <CWCDv>.
Example use  To set CBR with CDV type to bit/s:

Response  <type> = <CHARACTER RESPONSE DATA>
Function  Queries CBR with CDV type.
Example use  > :SOURce:ATM:MANual:TRAffic:CWCDv:TYPE?
< BPS

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  10 to 999  Step
Function  Sets the CDVT(Cell) for CBR with CDV.
Restriction  Invalid when;
  - INSTRument:ATM is <OFF>.
  - :DISPlay:TMENu[:NAME:] is other than <"MANual:TCLayer">,
    <"MANual:TCEL1">, and <"MANual:RCEL1">.
- :SOURce:ATM:MANual:TRAffic:DIStribution is other than <CWCDv>.
- :SOURce:ATM:MANual:TRAffuc:CWCDv:TYPE is <BPS> or <PERCent>.

Example use

To set the CDVT (Cell) for CBR with CDV to 100:

> :SOURce:ATM:MENual:TRAffic:CWCDv 100


Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function

Queries the CDVT (Cell) for CBR with CDV.

Example use

< 100


Parameter

<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

0 to 99999

Step value : 1

Function

Sets cell traffic (kbit/s) at CBR with CDV.

Restriction

Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAffic:DIStribution is other than <CWCDv>.

Example use

To set cell traffic (kbit/s) at CBR with CDV to 100 kbit/s:

> :SOURce:ATM:MANual:TRAffic:CWCDv:BPS 100, BPS

:SOURce:ATM:MANual:TRAffic:CWCDv:BPS?

Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>

<suffix> = <CHARACTER RESPONSE DATA>

Function

Queries cell traffic (kbit/s) at CBR with CDV.

Example use

> :SOURce:ATM:MANual:TRAffic:CWCDv:BPS?
< 100, BPS
Section 4  Remote Control

**:SOURce:ATM:MANual:TRAFFic:CWCDv:CPS <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>  
0 to 1412830  
Step value : 1

Function  
Sets cell traffic (Cells/s) at CBR with CDV.

Restriction  
Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFFic:DISTRIBUTion is other than <CWCDv>.

Example use  
To set cell traffic (Cells/s) at CBR with CDV to 100:
> :SOURce:ATM:MANual:TRAFFic:CWCDv:CPS 100

**:SOURce:ATM:MANual:TRAFFic:CWCDv:CPS?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function  
Queries cell traffic (Cells/s) at CBR with CDV.

Example use  
> :SOURce:ATM:MANual:TRAFFic:CWCDv:CPS?
< 100

**:SOURce:ATM:MANual:TRAFFic:CWCDv:PERCent <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>  
0.0 to 100.0  
Step value : 1

Function  
Sets cell traffic (%) at CBR with CDV.

Restriction  
Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFFic:DISTRIBUTion is other than <CWCDv>.

Example use  
To set cell traffic (%) at CBR with CDV to 50:
> :SOURce:ATM:MANual:TRAFFic:CWCDv:PERCent 50
4.4 Equipment Unique Command

:SOURce:ATM:MANual:TRAFFic:CWCDv:PERCent?

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries cell traffic (%) at CBR with CDV.

Example use > :SOURce:ATM:MANual:TRAFFic:CWCDv:PERCent?
< 50

:SOURce:ATM:MANual:TRAFFic:POISSon[:PERCent] <numeric>

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0.0 to 100.0 Step value : 1

Function Sets cell traffic (%) at POISSon.

Restriction Invalid when;
- :INSTRument:CONFig setting is other than <ATM>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELl">, and
  <"MANual:RCELl">.
- :SOURce:ATM:MANual:TRAFFic:DISTribution is other than
  <POISSon>.

Example use To set cell traffic (%) at POISSon to 50:
> :SOURce:ATM:MANual:TRAFFic:POISSon:PERCent 50

:SOURce:ATM:MANual:TRAFFic:POISSon[:PERCent]?

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries cell traffic (%) at POISSon.

Example use > :SOURce:ATM:MANual:TRAFFic:POISSon:PERCent?
< 50

:SOURce:ATM:MANual:TRAFFic:SAWTooth:TYPE <type>

Parameter <type> = <CHARACTER PROGRAM DATA>
BPS kbit/s
CPS cells/s
PERCent %

Function Sets SAWTooth type.

Restriction Invalid when;
- :INSTRument:CONFig setting is other than <ATM>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELl">, and
Example use To set SAWTooth type to bit/s.


Response <type> = <CHARACTER RESPONSE DATA>

Function Queries the SAWTooth type.

Example use > :SOURce:ATM:MANual:TRAFfic:SAWTooth:TYPE?
< BPS

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 99999 Step value : 1

Function Sets cell traffic (kbit/s) at SAWTooth:RMAX.

Restriction Invalid when:
- :INSTRument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFfic:DIStribution is other than <SAWTooth>.

Example use To set cell traffic (kbit/s) at SAWTooth:RMAX to 100 kbit/s:


Response <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries cell traffic (kbit/s) at SAWTooth:RMAX.

< 100, BPS

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 99999 Step value : 1

Function Sets cell traffic (kbit/s) at SAWTooth.

Restriction Invalid when;
4.4 Equipment Unique Command

- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFfic:DIStribution is other than <SAWTooth>.

Example use
To set cell traffic (kbit/s) at SAWTooth:RMIN to 100 kbit/s:


Response
<numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>

Function
Queries cell traffic (kbit/s) at SAWTooth:RMIN.

Example use
< 100, BPS


Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 1412830 Step value : 1

Function
Sets cell traffic:RMAX (Cells/s) at SAWTooth.

Restriction
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFfic:DIStribution is other than <SAWTooth>.

Example use
To set cell traffic (Cells/s) at SAWTooth to 100:


Response
<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function
Queries cell traffic (Cells/s) at SAWTooth:RMAX.

Example use
< 100
Section 4  Remote Control


Parameter  
\[<\text{numeric}> = <\text{DECIMAL NUMERIC PROGRAM DATA}>\]
\[0 \text{ to } 1412830\]
Step value : 1

Function  
Sets cell traffic $R_{\text{main}}$ (Cells/s) at SAWTooth.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFfic:DISTribution is other than <SAWTooth>.

Example use  
To set cell traffic (Cells/s) at SAWTooth:RMAIN to 100:
\[> \text{:SOURce:ATM:MANual:TRAFfic:SAWTooth:RMIN:CPS 100}\]


Response  
\[<\text{numeric}> = <\text{NR1 NUMERIC RESPONSE DATA}>\]

Function  
Queries cell traffic (Cells/s) at SAWTooth:RMAIN.

Example use  
\[> \text{:SOURce:ATM:MANual:TRAFfic:SAWTooth:RMIN:CPS?}\]
\[< 100\]


Parameter  
\[<\text{numeric}> = <\text{DECIMAL NUMERIC PROGRAM DATA}>\]
\[0.0 \text{ to } 100.0\]
Step value : 1

Function  
Sets cell traffic (%) at SAWTooth:RMAX.

Restriction  
Invalid when:
- :INSTrument:CONFig setting is other than <ATM>.
- :SOURce:ATM:MANual:TRAFfic:DISTribution is other than <SAWTooth>.

Example use  
To set cell traffic (%) at SAWTooth:RMAX to 50:
\[> \text{:SOURce:ATM:MANual:TRAFfic:SAWTooth:RMAX:PERCent 50}\]
4.4 Equipment Unique Command


Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries cell traffic (%) at SAWTooth:RMAX.
Example use > :SOURce:ATM:MANual:TRAFfic:SAWTooth:RMAX:PERCent?
< 50


Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0.0 to 100.0 Step value : 1
Function Sets cell traffic (%) at SAWTooth:RMIN.
Restriction Invalid when;
- :INSTrument:CONFig setting is other than <ATM>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
- :SOURce:ATM:MANual:TRAFfic:DISTribution is other than
  <SAWTooth>.
Example use To set cell traffic (%) at SAWTooth:RMIN to 50:


Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries cell traffic (%) at SAWTooth:RMIN.
Example use > :SOURce:ATM:MANual:TRAFfic:SAWTooth:RMIN:PERCent?
< 50

:SOURce:ATM:MANual:TRAFfic:SAWTooth:T1 <numeric>

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1000 to 98000 Step value : 1000
Function Sets the cell the traffic (cell) when SAWTooth is set.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
- :SOURce:ATM:MANual:TRAFfic:DISTribution is other than
  <SAWTooth>.
Example use To set the cell traffic (cell) to 1000 when SAWTooth is set.
> :SOURce:ATM:MANual:TRAFfic:SAWTooth:T1 1000
Section 4 Remote Control

:SOURce:ATM:MANual:TRAFfic:SAWTooth:T1?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function   Queries the cell traffic (cell) when SAWTooth is set.
Example use > :SOURce:ATM:MANual:TRAFfic:SAWTooth:T1?
              < 1000

:SOURce:ATM:MANual:TRAFfic:SAWTooth:T2 <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
            1000 to 128000 Step value : 1000
Function   Sets the cell traffic (cell) when SAWTooth is set.
Restriction Invalid when;
            - :The setting of INSTrument:CONFig is other than ATM..
            - :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
            - :SOURce:ATM:MANual:TRAFfic:DISTribution is other than
               SAWTooth.
            - T1>=T2.
Example use To the cell traffic to 1000 when SAWTooth is set.
            > :SOURce:ATM:MANual:TRAFfic:SAWTooth:T2 10000

:SOURce:ATM:MANual:TRAFfic:SAWTooth:T2?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function   Queries the cell traffic (cell) when SAWTooth is set.
Example use > :SOURce:ATM:MANual:TRAFfic:SAWTooth:T2?
              < 10000

:SOURce:ATM:MANual:TRAFfic:TIMing:MODE <mode>
Parameter  <mode> = <CHARACTER PROGRAM DATA>
            SINGLE
            CONTInuous
Function   Sets transmission type.
Restriction Invalid when;
            - :The setting of INSTrument:CONFig is other than ATM..
            - :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
            - :SOURce:ATM:MANual:TRAFfic:DISTribution is <CBR>,

<POISson>, and <SINGle> is set.

Example use
Sets the send type to SINGle.

> :SOURce:ATM:MANual:TRAFfic:TIMing:MODE SINGle

:SOURce:ATM:MANual:TRAFfic:TIMing:MODE?

Response

<mode> = <CHARACTER RESPONSE DATA>

SING
CONT

Function
Queries the transmission type.

Example use

> :SOURce:ATM:MANual:TRAFfic:TIMing:MODE?
< SING

:SOURce:ATM:MANual:TRAFfic:TIMing:STARt

Parameter None

Function Starts single cell send.

Restriction Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..

Example use

> :SOURce:ATM:MANual:TRAFfic:TIMing:STARt

:SOURce:ATM:MANual:TRAFfic:TIMing:STOP

Parameter None

Function Requests the start of Single cell transmission.

Restriction Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..

Example use

> :SOURce:ATM:MANual:TRAFfic:TIMing:STOP

:SOURce:ATM:MANual:TRAFfic:TIMing:STATe?

Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>

0 Transmission has stopped.
1 Transmission is in progress.
Section 4 Remote Control

Function Queries Single cell transmission condition.

Example use > SOURce:ATM:MANual:TRAffic:TIMing:STATe?
< 0

:SOURce:ATM:MANual:TRAffic:BACKground:PERCent <traffic>

Parameter <traffic> = <STRING PROGRAM DATA>
"[<numeric1>], [<numeric2>], [<numeric3>], [<numeric4>],
[<numeric5>], [<numeric6>], [<numeric7>], [<numeric8>],
[<numeric9>], [<numeric10>]
<numeric1 to 10> is 0 to 99  Step value : 1
When the part after a value is completely omitted, commas can also be
omitted.

Function Sets Traffic (%) of Background cell.

Restriction Invalid when;
- When all parameters are omitted.
- : The setting of INSTrument:CONFig is other than ATM..

Example use To set No.1 and No.3 of Background cell Traffic (%) to 30% and 20%:
> SOURce:ATM:MANual:TRAffic:BACKground:PERCent "30,,20"

:SOURce:ATM:MANual:TRAffic:BACKground:PERCent?

Response "<numeric1>, <numeric2>, <numeric3>, <numeric4>, <numeric5>,
<numeric6>, <numeric7>, <numeric8>, <numeric9>, <numeric10>,
<total>"
= <STRING RESPONSE DATA>

Function Queries Background cell Traffic (%) (1 to 10, total).

Example use > SOURce:ATM:MANual:TRAffic:BACKground:PERCent?
< "30,0,20,0,0,0,0,0,0,0,50"

:SOURce:ATM:MANual:TRAffic:BACKground:CPS <traffic>

Parameter <traffic> = <STRING PROGRAM DATA>
"[<numeric1>], [<numeric2>], [<numeric3>], [<numeric4>],
[<numeric5>], [<numeric6>], [<numeric7>], [<numeric8>],
[<numeric9>], [<numeric10>]
<numeric1 to 10> is 0 to 1398701  Step value : 1
When the part after a value is completely omitted, commas can also be omitted.

Function
Sets Traffic (Cell/s) of Background cell.

Restriction
Invalid when:
- When all parameters are omitted.
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than "MANual:JON",
  "MANual:TCLayer", "MANual:TECell", "MANual:RCell".
- When total cps of 1 to 10 exceeds (Max cps (determined by Bit rate)
  minus Test cell cps).

Example use
To set No.1 and No.3 of Background cell Traffic to 100 and 2000:
> :SOURce:ATM:MANual:TRAFfic:BACKground:CPS "100,,2000"

:SOURce:ATM:MANual:TRAFffic:BACKground:CPS?
Response
"<numeric1>, <numeric2>, <numeric3>, <numeric4>, <numeric5>,
<numeric6>, <numeric7>, <numeric8>, <numeric9>, <numeric10>,
<total>"
= <STRING RESPONSE DATA>

Function
Queries Background cell Traffic (cell/s) (1 to 10, total).

Example use
> :SOURce:ATM:MANual:TRAFffic:BACKground:CPS?
< "100,0,2000,0,0,0,0,0,0,0,2100"

:SOURce:ATM:MANual:TRAFffic:BACKground:TYPE <type>
Parameter
"[<type1>], [<type2>], [<type3>], [<type4>], [<type5>], [<type6>],
[<type7>], [<type8>], [<type9>], [<type10>]
<type1>, <type2>, <type3>, <type4>, <type5>, <type6>, <type7>,
<type8>, <type9>, <type10> = <CHARACTER PROGRAM DATA>

CONSTant
When the part after a value is completely omitted, commas can also be omitted.

Function
Sets Traffic (type) of Background cell.

Restriction
Invalid when:
- When all parameters are omitted.
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than "MANual:JON",

4 - 71
Example use To set No.2 of Background cell Traffic to Constant:

>`:SOURce:ATM:MANual:TRAFfic:BACKground:TYPE "CONStant"

**:SOURce:ATM:MANual:TRAFfic:BACKground:TYPE?**

Response "<type1>, <type2>, <type3>, <type4>, <type5>, <type6>, <type7>,<type8>, <type9>, <type10>" = <STRING RESPONSE DATA>

Function Queries Background cell Traffic (type) (1 to 10).

Example use > :SOURce:ATM:MANual:TRAFfic:BACKground:TYPE?

< "CONS,CONS,CONS,CONS,CONS,CONS,CONS,CONS,CONS,CONS"

**:SOURce:ATM:MANual:TRAFfic:DAAL2[:PERCent] <numeric>**

Parameter `<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

0 to 100  Step value : 1

Function Sets the dummy packet traffic (%) at AAL2.

Restriction Invalid when;  
- The setting of :INSTrument:CONFig is other than <ATM>.
- :SOURce:ATM:MAPPing is other than <AAL2>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:TCELl">.
- :ROUTe:THRough is <ON>.

Example use To set the dummy packet traffic (%) at AAL2 to 20%.

>`:SOURce:ATM:MANual:TRAFfic:DAAL2 20`

**:SOURce:ATM:MANual:TRAFfic:DAAL2[:PERCent]?**

Response `<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries the dummy packet traffic at AAL2.

Example use > :SOURce:ATM:MANual:TRAFfic:DAAL2? 

< 20

**:SOURce:ATM:MANual:TRAFfic:FCELl <type>**

Parameter `<type> = <CHARACTER PROGRAM DATA>

 UNASsigned
 IDLE

Function Sets Fill cell type.

Restriction Invalid when;
4.4 Equipment Unique Command

- The setting of 

  :INSTRument:CONFig is other than ATM.


Example use

To set Fill cell type to IDLE:

> :SOURce:ATM:MANual:TRAFfic:FCELl IDLE

:**SOURce:ATM:MANual:TRAFfic:FCELl?**

Response

```plaintext
$type = <CHARACTER RESPONSE DATA>
UNAS
IDLE
```

Function

Queries Fill cell type.

Example use

> :SOURce:ATM:MANual:TRAFfic:FCELl?

< IDLE

:**SOURce:ATM:MANual:EALarm:ALARm:TYPE <type>**

Parameter

```
$type = <CHARACTER PROGRAM DATA>
OFF Insert no alarm.
LCD Inserts LCD alarm.
VPAIS Inserts VP-AIS alarm.
VPRDI Inserts VP-RDI alarm.
VCAIS Inserts VC-AIS alarm.
VCRDI Inserts VC-RDI alarm.
VPUSER Inserts VP User program.
VCUSER Inserts VC User program.
```

Function

Sets alarm type to be inserted for the send signal.

Restriction

Invalid when:

- The setting of INSTRument:CONFig is other than ATM.


Example use

To insert VP-AIS:

> :SOURce:ATM:MANual:EALarm:ALARm:TYPE VPAIS

**SOURce:ATM:MANual:EALarm:ALARm:TYPE?**

Response

```
$type = <CHARACTER RESPONSE DATA>
```

Function

Queries alarm type to be inserted for the send signal.

Example use

> :SOURce:ATM:MANual:EALarm:ALARm:TYPE?

< VPAIS
Section 4  Remote Control

:SOURce:ATM:MANual:EALarm:ALARm:TIMing <numeric>

Parameter  
<numeric> = <NON-DECIMAL NUMERIC PROGRAM DATA>

0.1 to 10.0  Step value : 0.1

Function  
Sets alarm addition timing.

Restriction  
Invalid when:

- :The setting of INSTrument:CONFig is other than ATM..
- :SOURce:ATM:MANual:EALarm:ALARm:TYPE is <OFF>.

Example use  
To set alarm addition timing to 1.0:

> :SOURce:ATM:MANual:EALarm:ALARm:TIMing 1.0

:SOURce:ATM:MANual:EALarm:ALARm:TIMing?

Response  
<numeric> = <NR2 NUMERIC RESPONSE DATA>

Function  
Queries alarm addition timing.

Example use  
> :SOURce:ATM:MANual:EALarm:ALARm:TIMing?

< 1.0

:SOURce:ATM:MANual:EALarm:ERRor:TYPE <type>

Parameter  
<type> = <CHARACTER PROGRAM DATA>

OFF  Inserts no error.
HEC1  HEC error(1bit)
HEC2  HEC error(2bit)
USER  user program

(1 to 53 bytes position specification )

LOST  Lost cell
MISINS  Misinserted cell
ERRORED  Errored cell
SECB  SECB
PRBS  PRBS
WORD  Word
SNP1  SNP(1bit)
SNP2  SNP(2bit)
P  P
SN  SN
OSF  OSF
4.4 Equipment Unique Command

| Function | Sets error type to be inserted for the send signal. |
| Restriction | Invalid when: |
| - | The setting of INStrument:CONFig is other than ATM. |
| - | ROUTe:THRough is <ON>. |

The following error items can be added:

<table>
<thead>
<tr>
<th>Addition always allowed</th>
<th>HEC error(1bit)</th>
<th>HEC error(2bit)</th>
<th>User program</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATM:0.191</td>
<td>Lost cell</td>
<td>Misinseted cell</td>
<td>Errored cell</td>
</tr>
<tr>
<td>ATM:Word16</td>
<td>Word</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATM:PRBIT**</td>
<td>PRBIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAL1</td>
<td>Lost cell</td>
<td>WORD(Word16)</td>
<td>OSF SNP(1bit)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SNP(2bit)</td>
</tr>
<tr>
<td>AAL2</td>
<td>P</td>
<td>SN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>HEC(CPS-packet)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>WORD (when Word8 is set)</td>
<td>PRBIT (at Single cell)</td>
<td>PRBS7</td>
</tr>
<tr>
<td>AAL3/4</td>
<td>SN (when Length36 is set)</td>
<td>CRC10</td>
<td>Segment type</td>
</tr>
<tr>
<td></td>
<td>Length indicator</td>
<td>CPI</td>
<td>B/Etag</td>
</tr>
<tr>
<td></td>
<td>Abort</td>
<td>AL</td>
<td>WORD(when Word16 is set)</td>
</tr>
<tr>
<td></td>
<td>BASize</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Length (cannot be selected for AAL3/4:Time stamp)</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>PRBS (to PRBS**)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAL5</td>
<td>Abort</td>
<td>WORD(at Word16)PRBS( to PRBS**)</td>
<td>CRC32</td>
</tr>
</tbody>
</table>

Example use: To insert HEC error (1 bit):

> :SOURce:ATM:MANual:EALarm:ERRor:TYPE HEC1
Section 4  Remote Control

:SOURce:ATM:MANual:EALarm:ERRor:TYPE?
Response  <type> = <CHARACTER RESPONSE DATA>
Function Queries error type to be inserted for the send signal.
Example use > :SOURce:ATM:MANual:EALarm:ERRor:TYPE?
< HEC1

:SOURce:ATM:MANual:EALarm:ERRor:BYTE <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 53
Function Sets error addition byte.
Restriction Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :ROUTE:THRough is <ON>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is other than
  <HUSER>, <PUSER>.
- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is <HUSER>, and <6
  to 48> is set.
Example use To set error addition byte to 5.
> :SOURce:ATM:MANual:EALarm:ERRor:BYTE 5

:SOURce:ATM:MANual:EALarm:ERRor:BYTE?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries error addition byte.
Example use > :SOURce:ATM:MANual:EALarm:ERRor:BYTE?
< 5

:SOURce:ATM:MANual:EALarm:ERRor:PATTern <string>
Parameter <string> = <STRING PROGRAM DATA>
"00000000" to "11111111"
Function Sets error addition pattern (bit format).
Restriction Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :ROUTE:THRough is <ON>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
4.4 Equipment Unique Command

"MANual:TCLayer", "MANual:TCELl", "MANual:RCELl".

- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is other than <USER>, <WORD>.

Example use
To set error addition pattern to "00001011":
> :SOURce:ATM:MANual:EALarm:ERRor:PATTern "00001011"

:SOURce:ATM:MANual:EALarm:ERRor:PATTern?
Response <string> = <STRING RESPONSE DATA>
Function Queries error addition pattern (bit format).
Example use > :SOURce:ATM:MANual:EALarm:ERRor:PATTern?
"00001011"

:SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE <mode>
Parameter <mode> = <CHARACTER PROGRAM DATA>

<p>| | | | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>ONCE</td>
<td>Single error</td>
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<td>R1E_3</td>
<td>1E-3</td>
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<td>R1E_4</td>
<td>1E-4</td>
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<tr>
<td>R1E_5</td>
<td>1E-5</td>
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<td>R1E_6</td>
<td>1E-6</td>
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<td>1E-9</td>
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<td>SEQuence</td>
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<tr>
<td>R5E_3</td>
<td>5E-3</td>
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<td>R5E_4</td>
<td>5E-4</td>
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<td>R5E_5</td>
<td>5E-5</td>
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<tr>
<td>R5E_6</td>
<td>5E-6</td>
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<td>R5E_7</td>
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<td>R5E_8</td>
<td>5E-8</td>
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<tr>
<td>R5E_9</td>
<td>5E-9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Function Sets error insertion rate.
Restriction Invalid when:
- :The setting of INSTRument:CONFig is other than ATM..
- :ROUTe:THRough is <ON>.

4 - 77
- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is <OFF>.
- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is <LOST> or <MISINS>; and <SEQuence> is set.

Example use
To insert errors with 1E-3 rate:
> :SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE R1E_3

:SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE?
Response
<mode> = <CHARACTER RESPONSE DATA>

ONCE  Single error
R1E_3  1E-3
R1E_4  1E-4
R1E_5  1E-5
R1E_6  1E-6
R1E_7  1E-7
R1E_8  1E-8
R1E_9  1E-9
SEQ    Sequence
R5E_3  5E-3
R5E_4  5E-4
R5E_5  5E-5
R5E_6  5E-6
R5E_7  5E-7
R5E_8  5E-8
R5E_9  5E-9

Function
Queries error insertion rate.
Example use
> :SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE?
< R1E_3

:SOURce:ATM:MANual:EALarm:ERRor:TIMing:COUNt <numeric>
Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 64

Function
Sets successive error addition count.
Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..
- :ROUTe:THRough is <ON>.
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,

4 - 78
4.4 Equipment Unique Command

- :SOURce:ATM:MANual:EALarm:ERRor:TYPE is <OFF>.
- :SOURce:ATM:MANual:EALarm:ERRor:TIMing:MODE is other than <SEQuence>.

Example use To set successive error addition count to 5:
> :SOURce:ATM:MANual:EALarm:ERRor:TIMing:COUNt 5

:SOURce:ATM:MANual:EALarm:ERRor:TIMing:COUNt?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries successive error addition count.
Example use > :SOURce:ATM:MANual:EALarm:ERRor:TIMing:COUNt?
< 5

:SOURce:ATM:MANual:EALarm:CC:SEND <type>
Parameter <type> = <CHARACTER PROGRAM DATA>
   OFF    Adds no CC cell.
   VP     VP CC
   VC     VC CC
Function Sets CC cell addition.
Restriction Invalid when;
   - :The setting of INSTrument:CONFig is other than ATM..
Example use To add VP CC cell:
> :SOURce:ATM:MANual:EALarm:CC:SEND VP

:SOURce:ATM:MANual:EALarm:CC:SEND?
Response <type> = <CHARACTER RESPONSE DATA>
Function Queries CC cell addition condition.
Example use > :SOURce:ATM:MANual:EALarm:CC:SEND?
< VP
Section 4  Remote Control

:SOURce:ATM:MANual:EALarm:LOOPback:TYPE <type>
Parameter  

[type] = [CHARACTER PROGRAM DATA]
   VP          VP Loopback
   VC          VC Loopback

Function  Sets Loopback cell type.
Restriction  Invalid when:
   - :The setting of INSTrument:CONFig is other than ATM..
   - :DISPlay:TMENu[:NAME] is other than "MANual:JON",

Example use  To set Loopback cell to VP:

> :SOURce:ATM:MANual:EALarm:LOOPback:TYPE VP

:SOURce:ATM:MANual:EALarm:LOOPback:TYPE?
Response  

[type] = [CHARACTER RESPONSE DATA]

Function  Queries Loopback cell type.

Example use

> :SOURce:ATM:MANual:EALarm:LOOPback:TYPE?

< VP

:SOURce:ATM:MANual:EALarm:LOOPback:STARt
Parameter  None
Function  Sends Loopback cell.
Restriction  Invalid when:
   - :The setting of INSTrument:CONFig is other than ATM..
   - :DISPlay:TMENu[:NAME] is other than "MANual:JON",

Example use  > :SOURce:ATM:MANual:EALarm:LOOPback:STARt

:SOURce:ATM:MANual:EALarm:LOOPback:STATe?
Response  

<nemonic> = [NR1 NUMERIC RESPONSE DATA]
   0  Loopback Transmission has stopped.
   1  Loopback Transmission is in progress.

Function  Queries Loopback cell transmission condition.

Example use  > :SOURce:ATM:MANual:EALarm:LOOPback:STATe?

< 0
4.4 Equipment Unique Command

:SOURce:ATM:MANual:PM:FM:SEND <type>
Parameter: <type> = <CHARACTER PROGRAM DATA>
  OFF       Adds no PM Forward cell.
  VP        VP Forward
  VC        VC Forward
Function: Sets PM Forward cell addition.
Restriction: Invalid when:
- :The setting of INSTRument:CONFig is other than ATM.
- :DISPlay:TMENu[:NAME] is other than "MANual:JON",
  "MANual:TCLayer",
  "MANual:TCELl",
  and
  "MANual:RCELl".
Example use: To add PM Forward cell:
  > :SOURce:ATM:MANual:PM:FM:SEND VP

:SOURce:ATM:MANual:PM:FM:SEND?
Response: <type> = <CHARACTER RESPONSE DATA>
Function: Queries PM Forward cell addition condition.
  < VP

:SOURce:ATM:MANual:PM:FM:ERRor:TYPE <character>
Parameter: <type> = <CHARACTER PROGRAM DATA>
  OFF       Inserts no error.
  LOST      Lost
  MISINS    Misinserted
  BIPV      BIPV
  SBIT/SB
Function: Sets error type to be inserted for the send signal.
Restriction: Invalid when:
- :The setting of INSTRument:CONFig is other than ATM.
- :DISPlay:TMENu[:NAME] is other than "MANual:JON",
  "MANual:TCLayer",
  "MANual:TCELl",
  and
  "MANual:RCELl".
Example use: To insert LOST:
  > :SOURce:ATM:MANual:PM:FM:ERRor:TYPE LOST
Section 4  Remote Control

:SOURce:ATM:MANual:PM:FM:ERRor:TYPE?

Response  <type> = <CHARACTER RESPONSE DATA>

Function Queries error type to be inserted for the send signal.

Example use > :SOURce:ATM:MANual:PM:FM:ERRor:TYPE?
< LOST

:SOURce:ATM:MANual:PM:FM:ERRor:TIMing:MODE <character>

Parameter  <mode> = <CHARACTER PROGRAM DATA>
ONCE    Single error
R1E_3    1E-3
R1E_4    1E-4
R1E_5    1E-5
R1E_6    1E-6
R1E_7    1E-7
R1E_8    1E-8
R1E_9    1E-9
R5E_3    5E-3
R5E_4    5E-4
R5E_5    5E-5
R5E_6    5E-6
R5E_7    5E-7
R5E_8    5E-8
R5E_9    5E-9

Function Sets error insertion rate.

Restriction Invalid when:
- The setting of INStrument:CONFig is other than ATM..

Example use To insert Single errors:
> :SOURce:ATM:MANual:PM:FM:ERRor:TIMing:MODE ONCE
4.4  Equipment Unique Command

:SOURce:ATM:MANual:PM:FM:ERRor:TIMing:MODE?
Response  <mode> = <CHARACTER RESPONSE DATA>
Function   Queries error insertion rate.
Example use > :SOURce:ATM:MANual:PM:FM:ERRor:TIMing:MODE?
             < ONCE

:SOURce:ATM:MANual:PM:BR:SEND <type>
Parameter  <type> = <CHARACTER PROGRAM DATA>
          OFF    Adds no PM Backward cell.
          VP     VP Backward
          VC     VC Backward
Function   Sets PM Backward cell addition.
Restriction Invalid when:
- :The setting of INStrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
Example use To add PM Backward cell:
> :SOURce:ATM:MANual:PM:BR:SEND VP

:SOURce:ATM:MANual:PM:BR:SEND?
Response  <type> = <CHARACTER RESPONSE DATA>
Function   Queries PM Backward cell addition condition.
Example use > :SOURce:ATM:MANual:PM:BR:SEND?
             < VP

:SOURce:ATM:MANual:PM:BR:ERRor:TYPE <character>
Parameter  <character> = <CHARACTER PROGRAM DATA>
          OFF    Inserts no error.
          LOST   Lost
          MISINS Misinserted
          BIPV   BIPV
          SBIT/SB
Function   Sets error type to be inserted for the send signal.
Restriction Invalid when:
- :The setting of INStrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
Section 4  Remote Control


Example use  To add SECB:
>:SOURce:ATM:MANual:PM:BR:ERRor:TYPE  SB

:SOURce:ATM:MANual:PM:BR:ERRor:TYPE?
Response  <type> = <CHARACTER RESPONSE DATA>
Function  Queries error type to be inserted for the receive signal.
Example use  >:SOURce:ATM:MANual:PM:BR:ERRor:TYPE?
<SB

:SOURce:ATM:MANual:PM:BR:ERRor:TIMing:MODE <character>
Parameter  <character> = <CHARACTER PROGRAM DATA>
ONCE  Single error
R1E_3  1E-3
R1E_4  1E-4
R1E_5  1E-5
R1E_6  1E-6
R1E_7  1E-7
R1E_8  1E-8
R1E_9  1E-9
R5E_3  5E-3
R5E_4  5E-4
R5E_5  5E-5
R5E_6  5E-6
R5E_7  5E-7
R5E_8  5E-8
R5E_9  5E-9
Function  Sets error insertion rate.
Restriction  Invalid when:
- :The setting of INStrument:CONFig is other than ATM..
Example use  To insert Single errors:
>:SOURce:ATM:MANual:PM:BR:ERRor:TIMing:MODE ONCE
4.4 Equipment Unique Command

:SOURce:ATM:MANual:PM:BR:ERRor:TIMing:MODE?
Response <type> = <CHARACTER RESPONSE DATA>
Function Queries error insertion rate.
Example use >:SOURce:ATM:MANual:PM:BR:ERRor:TIMing:MODE?
<ONCE

Parameter <numeric> = <NON-CHARACTER PROGRAM DATA>
0.00 to 1.00 0.01(s) Step
Function Sets the insert interval for the BR cell.
Restriction Invalid when;
- When ATM unit is not installed.
- INStrument:ATM is <OFF>.
- DISPlay:TMENu[:NAME] is other than <"MANual:JON">,  
  <MANual:TClayer">, <MANual:TCEL1">, <MANual:RCEL1">.
- SOURce:ATM:MANual:PM:BR:SEND is <OFF>.
- While running the self-test.
Example use To set the insert interval for the BR cell to 0.1.
> :SOURce:ATM:MANual:PM:BR:INTerval 0.1

:SOURce:ATM:MANual:PM:BR:INTerval?
Response <numeric> = <NR2 NUMERIC RESPONSE DATA>
Function Queries the insert interval for the BR cell.
Example use > :SOURce:ATM:MANual:PM:BR:INTerval?
< 0.10

:SOURce:ATM:PATTern:ATM:O191:PAYLoad <string>
Parameter <string> = <STRING PROGRAM DATA>
"00,01,02,03, ・・・ .2F" Specify payload in 37 hexadecimal bytes.
Note: Specify <,...,...> not to change a current value.
Function Sets payload pattern for ATM:0.191.
Restriction Invalid when;
- :The setting of INStrument:CONFig is other than ATM..
Example use To set payload pattern for ATM:0.191:
> :SOURce:ATM:PATTern:ATM:O191:PAYLoad "00,01,01,00, ・・・ .01"
Section 4  Remote Control

:SOURce:ATM:PATTern:ATM:O191:PAYLoad?
Response  <string> = <STRING RESPONSE DATA>
Function   Queries payload pattern for ATM:0.191.
Example use > :SOURce:ATM:PATTern:ATM:O191:PAYLoad?
< "00,01,01,00, ・・・ .01"

Parameter   None
Function    Sets initial pattern as payload pattern for ATM:0.191.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set TCPT for ATM:0.191 to "00010111":

Parameter   <string> = <STRING PROGRAM DATA>
            "00000000" to "11111111"
Function    Sets TCPT for ATM:0.191 (bit format).
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set TCPT for ATM:0.191 to "00001011":
> :SOURce:ATM:PATTern:ATM:O191:TCPT "00001011"

Response   <string> = <STRING RESPONSE DATA>
Function    Queries TCPT for ATM:0.191 (bit format).
Example use > :SOURce:ATM:PATTern:ATM:O191:TCPT?
< "00001011"

Parameter   <string> = <STRING PROGRAM DATA>
            "00,01,02,03, ・・・ .2F" Specify payload in 48 hexadecimal bytes.
            Note: Specify <...,> not to change a current value.
Function    Sets payload pattern for ATM:User.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use:
To set payload pattern for ATM:Other:

> :SOURce:ATM:PATTern:ATM:USER:PAYLoad "00,01,00,⋯,01"

**:SOURce:ATM:PATTern:ATM:USER:PAYLoad?**

- **Response**: <string> = <STRING RESPONSE DATA>
- **Function**: Queries payload pattern for ATM:User.
- **Example use**:
  < "00,01,00,⋯,01"

**:SOURce:ATM:PATTern:ATM:USER:DEFault**

- **Parameter**: None
- **Function**: Sets initial pattern as payload pattern for ATM:User.
- **Restriction**: Invalid when:
  - :The setting of INSTrument:CONFig is other than ATM..
- **Example use**:
  To initialize payload pattern for ATM:User:

**:SOURce:ATM:PATTern:AAL1:POINter <string>**

- **Parameter**: <string> = <STRING PROGRAM DATA>
  - "00" to "FF" Specify one hexadecimal byte.
- **Function**
- **Restriction**: Invalid when:
  - :The setting of INSTrument:CONFig is other than ATM..
- **Example use**:
  To set Pointer at AAL1 to "FF":
  > :SOURce:ATM:PATTern:AAL1:POINter "FF"

**:SOURce:ATM:PATTern:AAL1:POINter?**

- **Response**: <string> = <STRING RESPONSE DATA>
- **Function**: Queries Pointer at AAL1.
- **Example use**:
  > :SOURce:ATM:PATTern:AAL1:POINter?
  < "FF"

**:SOURce:ATM:PATTern:AAL1:PAYLoad <string>**

- **Parameter**: <string> = <STRING PROGRAM DATA>
  - "00,01,02,03,⋯,2F" Specify payload in 47 hexadecimal bytes.
  - Note: Specify <......> not to change a current value.
Function Sets payload pattern at AAL1.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set payload pattern at AAL1:
> :SOURce:ATM:PATTern:AAL1:PAYLoad "00,01,01,00, ···,01"

:SOURce:ATM:PATTern:AAL1:PAYLoad?
Response <string> = <STRING RESPONSE DATA>
Function Queries payload pattern at AAL1.
Example use > :SOURce:ATM:PATTern:AAL1:PAYLoad?
< "00,01,01,00, ···,01"

:SOURce:ATM:PATTern:AAL1:DEFault
Parameter None
Function Sets initial pattern as payload pattern at AAL1.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To initialize payload pattern at AAL1:
> :SOURce:ATM:PATTern:AAL1:DEFault

:SOURce:ATM:PATTern:AAL1:PFORmat <boolean>
Parameter <boolean> = <BOOLEAN PROGRAM DATA>
  OFF or 0
  ON or 1
Function Sets P-format at AAL1.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set P-format at AAL1 to ON:
> :SOURce:ATM:PATTern:AAL1:PFORmat ON

:SOURce:ATM:PATTern:AAL1:PFORmat?
Response <boolean> = <NR1 NUMERIC RESPONSE DATA>
  0
  1
Function Queries P-format at AAL1.
Example use > :SOURce:ATM:PATTern:AAL1:PFORmat?
< 1
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:AAL1:RTS <string>
Parameter <string> = <STRING PROGRAM DATA>
   "0000" to "1111"
Function Sets RTS at AAL1 (bit format).
Restriction Invalid when;
   - .The setting of INSTrument:CONFig is other than ATM..
Example use To set RTS at AAL1 to "0011":
   > :SOURce:ATM:PATTern:AAL1:RTS "0011"

:SOURce:ATM:PATTern:AAL1:RTS?
Response <string> = <STRING RESPONSE DATA>
Function Queries RTS at AAL1 (bit format).
Example use > :SOURce:ATM:PATTern:AAL1:RTS?
   < "0011"

:SOURce:ATM:PATTern:AAL2:PCID <string>
Parameter <string> = <STRING PROGRAM DATA>
   "00" to "FF"
Function Sets CID (Primary) at AAL2.
Restriction Invalid when;
   - .The setting of INSTrument:CONFig is other than ATM..
Example use To set PCID at AAL2 to "11":
   > :SOURce:ATM:PATTern:AAL2:PCID  "11"

:SOURce:ATM:PATTern:AAL2:PCID?
Response <string> = <STRING RESPONSE DATA>
Function Queries CID (Primary) at AAL2.
Example use >:SOURce:ATM:PATTern:AAL2:PCID?
   <"11"

:SOURce:ATM:PATTern:AAL2:LI  <numeric>
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
   0 to 63
Function Sets LI at AAL2.
Restriction Invalid when;
   - .The setting of INSTrument:CONFig is other than ATM..
Example use To set LI at AAL2 to "11":
   >:SOURce:ATM:PATTern:AAL2:LI "11"
Section 4  Remote Control

:SOURce:ATM:PATTern:AAL2:LI ?
Response <numeric> = <numeric RESPONSE DATA>
Function Queries LI at AAL2.
Example use >:SOURce:ATM:PATTern:AAL2:LI ?
<>"11"

:SOURce:ATM:PATTern:AAL2:PPPT <string>
Parameter <string> = <STRING PROGRAM DATA>
  "00","01","10","11"
Function Sets PPT (Primary) at AAL2.
Restriction Invalid when;
  :The setting of INSTrument:CONFig is other than ATM..
Example use To set PPTD at AAL2 to "11":
  >:SOURce:ATM:PATTern:AAL2:PPPT "11"

:SOURce:ATM:PATTern:AAL2:PUUI <STRING>
Parameter <string> = <STRING PROGRAM DATA>
  "000" to "111"
Function Sets UUI (Primary) at AAL2.
Restriction Invalid when;
  :The setting of INSTrument:CONFig is other than ATM..
Example use To set PUUI at AAL2 to "101":
  >:SOURce:ATM:PATTern:AAL2:PUUI "101"

:SOURce:ATM:PATTern:AAL2:PUUI?
Response <string> = <STRING RESPONSE DATA>
Function Queries UUI (Primary) at AAL2.
Example use >:SOURce:ATM:PATTern:AAL2:PUUI?
<>"101"
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:AAL2:PAYLoad  <string>
Parameter  <string> = <STRING PROGRAM DATA>
  "00,01,02,・・" (64BYTE)
Function  Sets payload at AAL2.
Restriction  Invalid when;
  - :The setting of INSTrument:CONFig is other than ATM..
Example use  To set payload at AAL2 to "11,11,11":
  >:SOURce:ATM:PATTern:AAL2:PAYLoad  "11,11,11"

:SOURce:ATM:PATTern:AAL2:PAYLoad?
Response  <string> = <STRING RESPONSE DATA>
Function  Queries payload at AAL2.
Example use  >:SOURce:ATM:PATTern:AAL2:PAYLoad?
  <"11,11,11"

:SOURce:ATM:PATTern:AAL2:DCID  <string>
Parameter  <string> = <STRING PROGRAM DATA>
  "00" to "FF"
Function  Sets CID (Dummy) at AAL2.
Restriction  Invalid when;
  - :The setting of INSTrument:CONFig is other than ATM..
Example use  To set DCID at AAL2 to "11":
  >:SOURce:ATM:PATTern:AAL2:DCID

:SOURce:ATM:PATTern:AAL2:DCID ?
Response  <string> = <STRING RESPONSE DATA>
Function  Queries CID (Dummy) at AAL2.
Example use  >:SOURce:ATM:PATTern:AAL2:DCID ?
  <"11"

:SOURce:ATM:PATTern:AAL2:DPPT  <string>
Parameter  <string> = <STRING PROGRAM DATA>
  "00","01","10","11"
Function  Sets PPT (Dummy) at AAL2.
Restriction  Invalid when;
  - :The setting of INSTrument:CONFig is other than ATM..
Example use  To set PPTD at AAL2 to "11":
  >:SOURce:ATM:PATTern:AAL2:DCID
Section 4  Remote Control

**:SOURce:ATM:PA*TTern:AAL2:DPPT?**
Response <string> = <STRING RESPONSE DATA>
Function Queries PPT (Dummy) at AAL2.
Example use >:SOURce:ATM:PA*TTern:AAL2:DPPT
        "11"

**:SOURce:ATM:PA*TTern:AAL2:DUUI  <string>**
Parameter <string> = <STRING PROGRAM DATA>
    "00"","01","10","11"
Function Sets PPT (Primary) at AAL2.
Restriction Invalid when;
    - :The setting of INStrument:CONFig is other than ATM..
Example use To set DPTD at AAL2 to "11":
        >:SOURce:ATM:PA*TTern:AAL2:DUUI  "11"

**:SOURce:ATM:PA*TTern:AAL2:DUUI ?**
Response <string> = <STRING RESPONSE DATA>
Function Queries UUI (Dummy) at AAL2.
Example use >:SOURce:ATM:PA*TTern:AAL2:DUUI ?
        "11"

**:SOURce:ATM:PA*TTern:AAL2:DEFa ult**
Parameter None
Function Initializes PAyload at AAL2.
Restriction Invalid when;
    - :The setting of INStrument:CONFig is other than ATM..
Example use To initialize Payload at AAL2:
        >:SOURce:ATM:PA*TTern:AAL2:DEFa ult

**:SOURce:ATM:PA*TTern:AAL34:MI D <string>**
Parameter <string> = <STRING PROGRAM DATA>
    "0000000000" to "1111111111"
Function Sets MID at AAL3/4 (bit format).
Restriction Invalid when;
    - :The setting of INStrument:CONFig is other than ATM..
Example use To set MID at AAL3/4 to "0000000011":
        >:SOURce:ATM:PA*TTern:AAL34:MI D  "0000000011"
:SOURCE:ATM: PATTERN:AAL34:MID?
Response <string> = <STRING RESPONSE DATA>
Function Queries MID at AAL3/4 (bit format).
Example use > :SOURCE:ATM: PATTERN:AAL34:MID?
< "0000000011"

:SOURCE:ATM: PATTERN:AAL34:CPI <string>
Parameter <string> = <STRING PROGRAM DATA>
"00" to "FF" Specify one hexadecimal byte.
Function Sets CPI at AAL3/4.
Restriction Invalid when;
- : The setting of INSTRument:CONFig is other than ATM..
Example use To set CPI at AAL3/4 to "FF":
> :SOURCE:ATM: PATTERN:AAL34:CPI "FF"

:SOURCE:ATM: PATTERN:AAL34:CPI?
Response <string> = <STRING RESPONSE DATA>
Function Queries CPI at AAL3/4.
Example use > :SOURCE:ATM: PATTERN:AAL34:CPI?
< "FF"

:SOURCE:ATM: PATTERN:AAL34:BTAG <string>
Parameter <string> = <STRING PROGRAM DATA>
"00" to "FF" Specify one hexadecimal byte.
Function Sets BTag and ETag at AAL3/4.
Restriction Invalid when;
- : The setting of INSTRument:CONFig is other than ATM..
Example use To set BTag and ETag at AAL3/4 to "FF":
> :SOURCE:ATM: PATTERN:AAL34:BTAG "FF"

:SOURCE:ATM: PATTERN:AAL34:BTAG?
Response <string> = <STRING RESPONSE DATA>
Function Queries BTag and ETag at AAL3/4.
Example use > :SOURCE:ATM: PATTERN:AAL34:BTAG?
< "FF"
 Section 4  Remote Control

:SOURce:ATM:PATTern:AAL34:BASize <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
            1 to 65535
Function  Sets BASize at AAL3/4.
Restriction Invalid when;
    - :The setting of INSTrument:CONFig is other than ATM..
Example use To set BASize at AAL3/4 to 5:
    > :SOURce:ATM:PATTern:AAL34:BASize 5

:SOURce:ATM:PATTern:AAL34:BASize?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries BASize at AAL3/4.
Example use > :SOURce:ATM:PATTern:AAL34:BASize?
    < 5

:SOURce:ATM:PATTern:AAL34:LENGth <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
            1 to 65535
Function  Sets Length at AAL3/4.
Restriction Invalid when;
    - :The setting of INSTrument:CONFig is other than ATM..
Example use To set Length at AAL3/4 to 5:
    > :SOURce:ATM:PATTern:AAL34:LENGth 5

:SOURce:ATM:PATTern:AAL34:LENGth?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries Length at AAL3/4.
Example use > :SOURce:ATM:PATTern:AAL34:LENGth?
    < 5

:SOURce:ATM:PATTern:AAL5:LENGth <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
            1 to 65535
Function  Sets Length at AAL5.
Restriction Invalid when;
    - :The setting of INSTrument:CONFig is other than ATM..
Example use To set Length at AAL5 to 5:
    > :SOURce:ATM:PATTern:AAL5:LENGth 5
4.4 Equipment Unique Command

`:SOURce:ATM:PAATern:AAL5:LENGth?`
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries Length at AAL5.
Example use > :SOURce:ATM:PAATern:AAL5:LENGth?
< 5

`:SOURce:ATM:PAATern:AAL5:UU <string>`
Parameter <string> = <STRING PROGRAM DATA>
"00" to "FF"
Function Sets CPCS-UU at AAL5.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set CPCS-UU at AAL5 to "11":
>:SOURce:ATM:PAATern:AAL5:UU "11"

`:SOURce:ATM:PAATern:AAL5:UU?`
Response <string> = <NR1 STRING RESPONSE DATA>
Function Queries CPCS-UU at AAL5.
Example use >:SOURce:ATM:PAATern:AAL5:UU?
<"11"

`:SOURce:ATM:PAATern:AAL5:CPI <string>`
Parameter <string> = <STRING PROGRAM DATA>
"00" to "FF"
Function Sets CPI at AAL5.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set CPI at AAL5 to "11":
>:SOURce:ATM:PAATern:AAL5:CPI "11"

`:SOURce:ATM:PAATern:AAL5:CPI ?`
Response <string> = <NR1 STRING RESPONSE DATA>
Function Queries CPI at AAL5.
Example use >:SOURce:ATM:PAATern:AAL5:CPI?
<"11"
Remote Control

:SOURce:ATM:PATTern:PAYLoad:PATTern <numeric>, <string>

Parameter

<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 65535 Specify setting-start position (byte).
<string> = <STRING PROGRAM DATA>
"00,00,00, ⋮ ,00" Specify in hexadecimal for the number of bytes to be set.

Note: Specify <...,,...> not to change a current value.

Function Sets the 65,535-byte payload pattern.

Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..

Example use
To set four bytes (starting from third payload) to "00,01,01,00":
> :SOURce:ATM:PATTern:PAYLoad:PATTern 3,"00,01,01,00"

:SOURce:ATM:PATTern:PAYLoad:PATTern? <numeric1>, <numeric2>

Parameter

<numeric1>, <numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 65535 Output start position (byte) and output end position (byte)

Response
<string> = <STRING RESPONSE DATA>
"00,00,00,00, ⋮ ,00" The range set by <numeric> is output.

Function Queries the 65,535-byte payload pattern.

Example use
> :SOURce:ATM:PATTern:PAYLoad:PATTern? 3,10
< "00,01,02,03,04,05,06,07"

:SOURce:ATM:PATTern:PAYLoad:DEFault <string>

Parameter
<string> = <STRING PROGRAM DATA>
"00000000" to "11111111"

Function Sets initial pattern as the 65,535-byte payload pattern.

Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..

Example use
To initialize the 65,535-byte payload pattern to "00000000":
> :SOURce:ATM:PATTern:PAYLoad:DEFault "00000000"

:SOURce:ATM:PATTern:AIS:FSField <string>

Parameter
<string> = <STRING PROGRAM DATA>
"00,01,02,03, ⋮ ,2F" Specify 45 hexadecimal bytes.

Note: Specify <...,,...> not to change a current value.

Function Sets AIS cell Function specific field.
Restriction Invalid when;
- The setting of INStrument:CONFig is other than ATM..

Example use To set AIS cell Function specific field:
> SOURce:ATM:PAAtt:FSField "00,01,01,00, · · · ,01"

:SOURce:ATM:PAAtt:AIS:FSField?
Response <string> = <STRING RESPONSE DATA>
Function Queries AIS cell Function specific field.
Example use > SOURce:ATM:PAAtt:AIS:FSField?
< "00,01,01,00, · · · ,01"

:SOURce:ATM:PAAtt:AIS:DEFault
Parameter None
Function Sets initial pattern as AIS cell Function specific field.
Restriction Invalid when;
- The setting of INStrument:CONFig is other than ATM..
Example use To initialize AIS cell Function specific field:
> SOURce:ATM:PAAtt:AIS:DEFault

:SOURce:ATM:PAAtt:AIS:RESeve <string>
Parameter <string> = <STRING PROGRAM DATA>
"000000" to "111111"
Function Sets AIS cell Reserve (bit format).
Restriction Invalid when;
- The setting of INStrument:CONFig is other than ATM..
Example use To set AIS cell Reserve to "001011":
> SOURce:ATM:PAAtt:AIS:RESeve "001011"

:SOURce:ATM:PAAtt:AIS:RESeve?
Response <string> = <STRING RESPONSE DATA>
Function Queries AIS cell Reserve (bit format).
Example use > SOURce:ATM:PAAtt:AIS:RESeve?
< "001011"
**Section 4  Remote Control**

**:\SOURce:ATM:PATTern:RDI:FSField <string>**

Parameter
- `<string>` = `<STRING PROGRAM DATA>`
  - "00,01,02,03, ..., 2F" Specify 45 hexadecimal bytes.
  - Note: Specify `<....,...>` not to change a current value.

Function
Sets RDI cell Function specific field.

Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set RDI cell Function specific field:
> :SOURce:ATM:PATTern:RDI:FSField "00,01,01,00, ... ,01"

**:\SOURce:ATM:PATTern:RDI:FSField?**

Response
- `<string>` = `<STRING RESPONSE DATA>`

Function
Queries RDI cell Function specific field.

Example use
> :SOURce:ATM:PATTern:RDI:FSField?
< "00,01,01,00, ...,01"

**:\SOURce:ATM:PATTern:RDI:DEFault**

Parameter
None

Function
Sets initial pattern as RDI cell Function specific field.

Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..

Example use
To initialize RDI cell Function specific field:
> :SOURce:ATM:PATTern:RDI:DEFault

**:\SOURce:ATM:PATTern:RDI:REServe <string>**

Parameter
- `<string>` = `<STRING PROGRAM DATA>`
  - "000000" to "111111"

Function
Sets RDI cell Reserve (bit format).

Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set RDI cell Reserve to "001011":
> :SOURce:ATM:PATTern:RDI:REServe "001011"
4.4 Equipment Unique Command

`:SOURce:ATM:PATTern:RDI:REServe?`

Response <string> = <STRING RESPONSE DATA>

Function Queries RDI cell Reserve (bit format).

Example use > :SOURce:ATM:PATTern:RDI:REServe?
< "001011"

`:SOURce:ATM:PATTern:USER:OAM <string>`

Parameter <string> = <STRING PROGRAM DATA>

"0000" to "1111"

Function Sets OAM type of User program cell. (bit format)

Restriction Invalid when:
- The setting of INSTrument:CONFig is other than ATM..

Example use To set OAM type of User program cell to "0001":
> :SOURce:ATM:PATTern:USER:OAM "0001"

`:SOURce:ATM:PATTern:USER:OAM?`

Response <string> = <STRING RESPONSE DATA>

Function Queries OAM type of User program cell. (bit format)

Example use > :SOURce:ATM:PATTern:USER:OAM?
< "0001"

`:SOURce:ATM:PATTern:USER:FUNCtion <string>`

Parameter <string> = <STRING PROGRAM DATA>

"0000" to "1111"

Function Sets Function type of User program cell (bit format).

Restriction Invalid when:
- The setting of INSTrument:CONFig is other than ATM..

Example use To set Function type of User program cell to "0010":
> :SOURce:ATM:PATTern:USER:FUNCtion "0010"

`:SOURce:ATM:PATTern:USER:FUNCtion?`

Response <string> = <STRING RESPONSE DATA>

Function Queries the Function type of User program cell (bit format).

Example use > :SOURce:ATM:PATTern:USER:FUNCtion?
< "0010"
Section 4  Remote Control

:SOURce:ATM:PARTn:USER:FSField <string>
Parameter  <string> = <STRING PROGRAM DATA>
           "00,01,02,03, ・・・ ,2F" Specify 45 hexadecimal bytes.
           Note: Specify <...,,...> not to change a current value.
Function   Sets User program cell Function specific field.
Restriction Invalid when;
           - :The setting of INSTrument:CONFig is other than ATM..
Example use To set User program cell Function specific field:
           > :SOURce:ATM:PARTn:USER:FSField "00,01,01,00, ・・・ ,01"

:SOURce:ATM:PARTn:USER:FSField?
Response   <string> = <STRING RESPONSE DATA>
Function   Queries User program cell Function specific field.
Example use > :SOURce:ATM:PARTn:USER:FSField?
            < "00,01,01,00, ・・・ ,01"

:SOURce:ATM:PARTn:USER:DEFault
Parameter  None
Function   Sets initial pattern as User program cell Function specific field.
Restriction Invalid when;
           - :The setting of INSTrument:CONFig is other than ATM..
Example use To initialize User program cell Function specific field:
           > :SOURce:ATM:PARTn:USER:DEFault

:SOURce:ATM:PARTn:USER:REServe <string>
Parameter  <string> = <STRING PROGRAM DATA>
           "000000" to "111111"
Function   Sets User program cell Reserve (bit format).
Restriction Invalid when;
           - :The setting of INSTrument:CONFig is other than ATM..
Example use To set User program cell Reserve to "001011":
           > :SOURce:ATM:PARTn:USER:REServe "001011"
4.4 Equipment Unique Command

:SOURce:ATM:PA TTern:USER:REServe?

Response <string> = <STRING RESPONSE DATA>

Function Queries User program cell Reserve (bit format).

Example use > :SOURce:ATM:PA TTern:USER:REServe?
< "001011"

:SOURce:ATM:PA TTern:CC:FSField <string>

Parameter <string> = <STRING PROGRAM DATA>
00,01,02,03, ・・・,2F Specify 45 hexadecimal bytes.

Note: Specify <...,...> not to change a current value.

Function Sets CC cell Function specific field.

Restriction Invalid when;
- : The setting of INStrument:CONFig is other than ATM..

Example use To set CC cell Function specific field:
> :SOURce:ATM:PA TTern:CC:FSField "00,01,01,00, ・・・,01"

:SOURce:ATM:PA TTern:CC:FSField?

Response <string> = <STRING RESPONSE DATA>

Function Queries the CC cell Function specific field.

Example use > :SOURce:ATM:PA TTern:CC:FSField?
< "00,01,01,00, ・・・,01"

:SOURce:ATM:PA TTern:CC:DEFault

Parameter None

Function Sets initial pattern as CC cell Function specific field.

Restriction Invalid when;
- : The setting of INStrument:CONFig is other than ATM..

Example use To initialize CC cell Function specific field:
> :SOURce:ATM:PA TTern:CC:DEFault

:SOURce:ATM:PA TTern:CC:REServe <string>

Parameter <string> = <STRING PROGRAM DATA>
"000000" to "111111"

Function Sets CC cell Reserve (bit format).

Restriction Invalid when;
- : The setting of INStrument:CONFig is other than ATM..
Section 4  Remote Control

Example use  To set CC cell Reserve to "001011":
> :SOURce:ATM:PATTern:CC:REServe "001011"

:SOURce:ATM:PATTern:CC:REServe?
Response  <string> = <STRING RESPONSE DATA>
Function  Queries CC cell Reserve (bit format).
Example use  > :SOURce:ATM:PATTern:CC:REServe?
< "001011"

:SOURce:ATM:PATTern:LOOPback:FSField:INDication <string>
Parameter  <string> = <STRING PROGRAM DATA>
"00000000" to "11111111"
Function  Sets Indication of the Loopback cell.
Restriction  Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use  To set Indication of the Loopback cell to "00000001":
> :SOURce:ATM:PATTern:LOOPback:FSField:INDication "00000001"

:SOURce:ATM:PATTern:LOOPback:FSField:INDication?
Response  <string> = <STRING RESPONSE DATA>
Function  Queries Indication of the Loopback cell.
Example use  > :SOURce:ATM:PATTern:LOOPback:FSField:INDication?
< "00000001"

:SOURce:ATM:PATTern:LOOPback:FSField:CTAG <string>
Parameter  <string> = <STRING PROGRAM DATA>
"00,01,02,03" Specify four hexadecimal bytes.
Note: Specify <......> not to change a current value.
Function  Sets correlation Tag of the Loopback.
Restriction  Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use  To set correlation of the Loopback cell to "FF,FF,FF,FF".
> :SOURce:ATM:PATTern:LOOPback:FSField:CTAG "FF,FF,FF,FF"
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:LOOPback:FSField:CTAG?
Response <string> = <STRING RESPONSE DATA>
Function Queries correlation Tag of the Loopback cell.
Example use > :SOURce:ATM:PATTern:LOOPback:FSField:CTAG?
< "FF,FF,FF,FF"

:SOURce:ATM:PATTern:LOOPback:FSField:LOCation <string>
Parameter <string> = <STRING PROGRAM DATA>
"00,01,02,03, ..., 2F" specifies 16 bytes in hexadecimal
Note: Specify <......> not to change a current value.
Function Sets Location ID of the Loopback cell.
Restriction Invalid when;
- : The setting of INSTrument:CONFig is other than ATM..
Example use To set Location ID of Loopback cell.
> :SOURce:ATM:PATTern:LOOPback:FSField:LOCation "00,01,01,00,
   ...,01"

:SOURce:ATM:PATTern:LOOPback:FSField:LOCation?
Response <string> = <STRING RESPONSE DATA>
Function Queries Location ID of the Loopback cell.
Example use > :SOURce:ATM:PATTern:LOOPback:FSField:LOCation?
< "00,01,01,00, ...,01"

:SOURce:ATM:PATTern:LOOPback:FSField:SOURce <string>
Parameter <string> = <STRING PROGRAM DATA>
"00,01,02,03, ..., 2F" Specify 16 hexadecimal bytes.
Note: Specify <......> not to change a current value.
Function Sets Source ID of the Loopback cell.
Restriction Invalid when;
- : The setting of INSTrument:CONFig is other than ATM..
Example use To set Source ID of the Loopback cell:
> :SOURce:ATM:PATTern:LOOPback:FSField:SOURce "00,01,01,00,
   ...,01"
Section 4  Remote Control

**:SOURce:ATM: PATTern: LOOPback: FSField: SOURce?**

Response  
<string> = <STRING RESPONSE DATA>

Function  Queries Source ID of the Loopback cell.

Example use  
> :SOURce:ATM: PATTern: LOOPback: FSField: SOURce?
  < "00,01,01,00, ・・・ ,01"

**:SOURce:ATM: PATTern: LOOPback: FSField: UNUSed <string>**

Parameter  
<string> = <STRING PROGRAM DATA>

"00,01,02,03, ・・・ ,2F" Specify 8 hexadecimal bytes.

Note: Specify <......> not to change a current value.

Function  Sets Unused of the Loopback cell.

Restriction  Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..

Example use  
Sets Unused of the Loopback cell.

> :SOURce:ATM: PATTern: LOOPback: FSField: UNUSed "00,01,01,00, ・・・ ,01"

**:SOURce:ATM: PATTern: LOOPback: FSField: UNUSed?**

Response  
<string> = <STRING RESPONSE DATA>

Function  Queries Unused of the Loopback cell.

Example use  
  < "00,01,01,00, ・・・ ,01"

**:SOURce:ATM: PATTern: LOOPback: FSField: DEFault**

Parameter  None

Function  Sets initial pattern as Indication, Correlation tag, Location ID, Source ID, and Unused of the Loopback cell.

Restriction  Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..

Example use  
To initialize Loopback cell.

> :SOURce:ATM: PATTern: LOOPback: FSField: DEFault
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:LOOPback:REServe <string>
Parameter <string> = <STRING PROGRAM DATA>
   "000000" to "111111"
Function Sets Loopback cell Reserve (bit format).
Restriction Invalid when;
   - :The setting of INStrument:CONFig is other than ATM..
Example use To set Loopback cell Reserve to "001011":
   > :SOURce:ATM:PATTern:LOOPback:REServe "001011"

:SOURce:ATM:PATTern:LOOPback:REServe?
Response <string> = <STRING RESPONSE DATA>
Function Queries Loopback cell Reserve (bit format)
Example use > :SOURce:ATM:PATTern:LOOPback:REServe?
   < "001011"

:SOURce:ATM:PATTern:FM:FSField:TSTP <string>
Parameter <string> = <STRING PROGRAM DATA>
   “00,01,02,03” Specify four hexadecimal bytes.
   Note: Specify <......> not to change a current value.
Function Sets TSTP of Forward monitoring.
Restriction Invalid when;
   - :The setting of INStrument:CONFig is other than ATM..
Example use To set TSTP of Forward monitoring to "FF,FF,FF,FF":
   > :SOURce:ATM:PATTern:FM:FSField:TSTP "FF,FF,FF,FF"

:SOURce:ATM:PATTern:FM:FSField:TSTP?
Response <string> = <STRING RESPONSE DATA>
Function Queries TSTP of Forward monitoring.
Example use > :SOURce:ATM:PATTern:FM:FSField:TSTP?
   < "FF,FF,FF,FF"

Parameter <string> = <STRING PROGRAM DATA>
   “00,01,02,03, ..., 2F” Specify 34 hexadecimal bytes.
   Note: Specify <.........> not to change a current value.
Function Sets Unused of Forward monitoring.
Section 4  Remote Control

Restriction  Invalid when:
- :The setting of INStrument:CONFig is other than ATM..

Example use  To set Unused of Forward monitoring:
> :SOURce:ATM:PATTern:FM:FSField:UNUSed "00,01,01,00,・・・,01"

Response  <string> = <STRING RESPONSE DATA>
Function   Queries Unused of Forward monitoring.
< "00,01,01,00, ・・・,01"

Parameter  None
Function   Sets initial pattern as TSTP and Unused of Forward monitoring.
Restriction Invalid when:
- :The setting of INStrument:CONFig is other than ATM..
Example use  To initialize Forward monitoring:
Parameter  <string> = <STRING PROGRAM DATA>
          "000000" to "111111"
Function   Sets Forward monitoring Reserve (bit format).
Restriction Invalid when:
- :The setting of INStrument:CONFig is other than ATM..
Example use  To set Forward monitoring Reserve to "001011":
> :SOURce:ATM:PATTern:FM:REServe "001011"

:SOURce:ATM:PATTern:FM:REServe <string>

:SOURce:ATM:PATTern:FM:REServe?
Response  <string> = <STRING RESPONSE DATA>
Function   Queries Forward monitoring Reserve (bit format).
Example use > :SOURce:ATM:PATTern:FM:REServe?
< "001011"
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:BR:FSField:UNUSed1 <string>
Parameter <string> = <STRING PROGRAM DATA>
   “00,00” Specify two hexadecimal bytes.
   Note: Specify <....,...> not to change a current value.
Function Sets Unused1 of Backward report.
Restriction Invalid when:
   - :The setting of INStrument:CONFig is other than ATM..
Example use To set Unused1 of Backward report:
   > :SOURce:ATM:PATTern:BR:FSField:UNUSed1 "6A,6A"

:SOURce:ATM:PATTern:BR:FSField:UNUSed1?
Response <string> = <STRING RESPONSE DATA>
Function Queries Unused1 of Backward report.
Example use > :SOURce:ATM:PATTern:BR:FSField:UNUSed1?
   < "6A,6A"

:SOURce:ATM:PATTern:BR:FSField:TUCO1 <character>
Parameter <character> = <CHARACTER PROGRAM DATA>
   128,256,512,1024
Function Sets TUCO+1 of Backward report.
Restriction Invalid when:
   - :The setting of INStrument:CONFig is other than ATM..
   - When TOCO is 0, TUCO+1 is not changed.
Example use To set TUCO+1 of Backward report:
   > :SOURce:ATM:PATTern:BR:FSField:TUCO1  "128"

:SOURce:ATM:PATTern:BR:FSField:TUCO1?
Response <character> = <CHARACTER RESPONSE DATA>
Function Queries TUCO1 of Backward report.
Example use > :SOURce:ATM:PATTern:BR:FSField:TUCO1?
   <"128"
Section 4  Remote Control

:SOURce:ATM:PATTern:BR:FSField:TUCO <character>

Parameter  

<character> = <CHARACTER PROGRAM DATA>

0,128,256,512,1024

Function  Sets TU CO of Backward report.

Restriction Invalid when;

- The setting of INST rument:CONFig is other than ATM.
- When TO CO is not 0, the same value as TU CO+1 is set.

Example use  To set TU CO of Backward report:

>:SOURce:ATM:PATTern:BR:FSField:TUCO "128"

:SOURce:ATM:PATTern:BR:FSField:TUCO ?

Response  

<character> = <CHARACTER RESPONSE DATA>

Function  Queries TU CO of Backward report.

Example use  >:SOURce:ATM:PATTern:BR:FSField:TUCO ?

<"128"

:SOURce:ATM:PATTern:BR:FSField:TSTP <string>

Parameter  

<string> = <STRING PROGRAM DATA>

"00,01,02,03" Specify four hexadecimal bytes.

Note: Specify <...,,...> not to change a current value.

Function  Sets TSTP of Backward report.

Restriction Invalid when;

- The setting of INST rument:CONFig is other than ATM.

Example use  To set TSTP of Backward report to "FF,FF,FF,FF":

> :SOURce:ATM:PATTern:BR:FSField:TSTP "FF,FF,FF,FF"

:SOURce:ATM:PATTern:BR:FSField:TSTP?

Response  

<string> = <STRING RESPONSE DATA>

Function  Queries TSTP of Backward report.

Example use  > :SOURce:ATM:PATTern:BR:FSField:TSTP?

< "FF,FF,FF,FF"

:SOURce:ATM:PATTern:BR:FSField:UNUSed2 <string>

Parameter  

<string> = <STRING PROGRAM DATA>

"00,01,02,03, ・・・ 2F" Specify 29 hexadecimal bytes.

Note: Specify <...,,...> not to change a current value.

Function  Sets Unused2 of Backward report.
Restriction Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..

Example use To set Unused2 of Backward report:
> :SOURce:ATM:PATTern:BR:FSField:UNUSed2 "00,01,01,00,・・・,01"

:SOURce:ATM:PATTern:BR:FSField:UNUSed2?
Response <string> = <STRING RESPONSE DATA>
Function Queries Unused2 of Backward report.
Example use > :SOURce:ATM:PATTern:BR:FSField:UNUSed2?
< "00,01,01,00, ・・・,01"

:SOURce:ATM:PATTern:BR:FSField:DEFault
Parameter None
Function Sets initial pattern as Unused1, TSTP, and Unused2 of Backward report.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To initialize Backward report:
> :SOURce:ATM:PATTern:BR:FSField:DEFault

:SOURce:ATM:PATTern:BR:REServe <string>
Parameter <string> = <STRING PROGRAM DATA>
"000000" to "111111"
Function Sets Backward report Reserve (bit format).
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
Example use To set Backward report Reserve to "001011":
> :SOURce:ATM:PATTern:BR:REServe "001011"

:SOURce:ATM:PATTern:BR:REServe?
Response <string> = <STRING RESPONSE DATA>
Function Queries Backward report Reserve (bit format).
Example use > :SOURce:ATM:PATTern:BR:REServe?
< "001011"
**:SOURce:ATM:PATTern:BGRound:HEADer <numeric>, <pattern>**

Parameter
- `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 1 to 10 No.
- `<pattern>` = `<STRING PROGRAM DATA>`
  - `[<gfc>], [<vpi>], [<vci>], [<pt>], [<clp>]`
  - `<gfc>` = 0 to F (HEX format)
  - `<vpi>` = 0 to 255 at UNI
    - 0 to 4095 at NNI
  - `<vci>` = 0 to 65535
  - `<pt>` = 000 to 111 (BIN format)
  - `<clp>` = 0 to 1 (BIN format)
  
When the part after a value is completely omitted, comma can also be omitted.

Function
Sets header pattern of Background cell.

Restriction
Invalid when:
- When all parameters are omitted.
- :The setting of INSTrument:CONFig is other than ATM..

Example use
To set third header pattern of Background cell to GFC:F and VCI:255:
>`:SOURce:ATM:PATTern:BGRound:HEADer 3,"F,,256"`

---

**:SOURce:ATM:PATTern:BGRound:HEADer? <numeric>**

Parameter
- `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`

Response
- `<pattern>` = `<STRING PROGRAM DATA>`
  - `[<gfc>], [<vpi>], [<vci>], [<pt>], [<clp>]`
  
Note: `<gfc>` is output as "" at NNI.

Function
Queries header pattern.

Example use
>`:SOURce:ATM:PATTern:BGRound:HEADer? 3`
>`"F,32,256,001,0"`

---

**:SOURce:ATM:PATTern:BGRound:PAYLoad <numeric>, <string>**

Parameter
- `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 1 to 10
- `<string>` = `<STRING PROGRAM DATA>`
  - "00,01,02,03, ..., 2F" Specify payload in 48 hexadecimal bytes.
  
Note: Specify `<......>` not to change a current value.

Function
Sets payload pattern of Background cell.
Restriction: Invalid when;
- :The setting of INSTrument:CONFig is other than ATM.

Example use
To set third payload pattern of Background cell:

> :SOURce:ATM:PATTern:BGRound:PAYLoad 3,"00,01,00,01,01,01,00,00,01"


Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

Response
<string> = <STRING RESPONSE DATA>

Function
Queries payload pattern of Background cell.

Example use
<"00,01,01,00,01"

:SOUrce:ATM:PATTern:BGRound:CRC10 [<numeric>]

Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

Function
Requests CRC10 calculation of Background cell.

Restriction: Invalid when;
- :The setting of INSTrument:CONFig is other than ATM.

Example use
To request CRC10 calculation of 10 Background cells.

> :SOUrce:ATM:PATTern:BGRound:CRC10 10

:SOUrce:ATM:PATTern:BGRound:DEFault <type>[, <numeric>]

Parameter
<type> = <CHARACTER PROGRAM DATA>
    HEADER  Header section
    PAYLoad Payload section
    ALL     Header and payload sections
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

Function
Sets initial pattern in Background cell.

Restriction: Invalid when;
Section 4  Remote Control

- The setting of INTrument:CONFig is other than ATM.

**Example use**

To initialize third payload pattern of Background cell:

> :SOURce:ATM:PATTern:BGRound:DEFault PAYLoad,3

**:SOURce:ATM:PATTern:MEMorized:HEADer <numeric>, <pattern>**

**Parameter**

- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  - 1 to 2016 No.
- <pattern> = <STRING PROGRAM DATA>
  - "[<gfc>], [<vpi>], [<vci>], [<pt>], [<clp>] "
  - <gfc> = 0 to F (HEX format)
  - <vpi> = 0 to 255 at UNI
  - 0 to 4095 at NNI
  - <vci> = 0 to 65535
  - <pt> = 000 to 111 (BIN format)
  - <clp> = 0 to 1 (BIN format)

When the part after a value is completely omitted, commas can also be omitted.

**Function**

Sets header pattern of Memorized cell.

**Restriction**

Invalid when:
- When all parameters are omitted.
- The setting of INTrument:CONFig is other than ATM.

**Example use**

To set 2016th header pattern of Memorized cell to GFC:F,PT:001:


**:SOURce:ATM:PATTern:MEMorized:HEADer? <numeric>**

**Parameter**

- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>

**Response**

- <pattern> = <STRING PROGRAM DATA>
  - "[<gfc>], [<vpi>], [<vci>], [<pt>], [<clp>] "
  - <gfc> is space at NNI.

**Function**

Queries header pattern of Memorized cell.

**Example use**


< "F",255,4095,"001","0"
4.4 Equipment Unique Command

:SOURce:ATM:PATTern:MEMorized:PAYLoad <numeric>, <string>

Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 2016
<string> = <STRING PROGRAM DATA>
"00,01,02,03, ⋯ ,2F" Specify payload in 48 hexadecimal bytes.
Note: Specify <,...,> not to change a current value.

Function
Sets payload pattern of Memorized cell.

Restriction
Invalid when:
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set 2016th payload pattern of Memorized cell:
> :SOURce:ATM:PATTern:MEMorized:PAYLoad 2016,"00,01,01,00, ⋯ ,01"


Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

Response
<string> = <STRING RESPONSE DATA>

Function
Queries payload pattern of Memorized cell.

Example use
< "00,01,01,00, ⋯ ,01"

:SOURce:ATM:PATTern:MEMorized:CRC10 [<numeric>]

Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 2016
Note: When <numeric> is omitted, CRC is calculated for all 1 to 2016 Memorized cells.

Function
Requests CRC10 calculation of Memorized cell.

Restriction
Invalid when:
- :The setting of INStrument:CONFig is other than ATM..

Example use
To request CRC10 calculation of 2016 Memorized cells.
Section 4 Remote Control

:SOURce:ATM:PATTern:MEMorized:DEFault <type>[, <numeric>]

Parameter

- <type> = <CHARACTER PROGRAM DATA>
  - HEADER Header section
  - PAYLoad Payload section
  - ALL Initializes headers and payloads of 1 to 2016 cells.
- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  - 1 to 2016

Note: When <numeric> is not set, header and payload are set to the initial patterns for all 2016 cells.
When <numeric> is set, header and payload are set to the initial patterns for one cell.

Function Sets initial pattern in Memorized cell.
Restriction Invalid when:
- The setting of INSTrument:CONFig is other than ATM..
Example use To initialize the third payload pattern of Memorized cell:
> :SOURce:ATM:PATTern:MEMorized:DEFault PAYLoad,3

:SOURce:ATM:PATTern:MEMorized:EDIT:PASTe <numeric>

Parameter

- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  - 1 to 2016

Function Edits a Memorized cell. (Paste)
Restriction Invalid when:
- The setting of INSTrument:CONFig is other than ATM..
Example use To paste to 20th Memorized cell:


Parameter

- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  - 1 to 2016

Function Edits a Memorized cell. (Cut)
Restriction Invalid when:
- The setting of INSTrument:CONFig is other than ATM..
Example use To cut 20th Memorized cell:
4.4 Equipment Unique Command


Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

1 to 2016

Function  
Edits a Memorized cell. (Copy)

Restriction  
Invalid when:

- :The setting of INStrument:CONFig is other than ATM..

Example use  
To copy 20th Memorized cell:


:SOURce:ATM:PATTern:MEMorized:EDIT:INSert <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

1 to 2016

Function  
Edits a Memorized cell. (Insertion)

Restriction  
Invalid in the following case:

- :The setting of INStrument:CONFig is other than ATM..

Example use  
To insert at 20th Memorized cell:


:SOURce:ATM:PATTern:MEMorized:CAPTure

Parameter  
None

Function  
Copies capture result to Memorized cell.

Restriction  
Invalid when:

- :The setting of INStrument:CONFig is other than ATM..
- When no Capture data exists.

Example use  
> :SOURce:ATM:PATTern:MEMorized:CAPTure

:SOURce:ATM:PATTern:IPPacket:PAYLoad <type>

Parameter  
<type> = <CHARACTER PROGRAM DATA>

IPV4

IPV6

Function  
Selects the IP type when IP is selected in the payload for the AAL5 frame to be transmitted.

Restriction  
Invalid when:

- When INStrument:CONFig is other than <ATM>.
- When Option 15 is not installed.

Example use  
Set the IP type to IPv6.

> :SOURce:ATM:PATTern:IPPacket:PAYLoad IPV6
Section 4  Remote Control

:SOURce:ATM:PA T Tern:IPPacket:PA YLoad?
Response  <type> = <CHARACTER RESPONSE DATA>
Same as SOURce:ATM:PA T Tern:IPPacket:PA YLoad.
Function Queries the IP type when IP is selected in the payload for the 
AAL5 frame to be transmitted.
Example use Query the setting status of the IP type.
> :SOURce:ATM:PA T Tern:IPPacket:PA YLoad?
< IP V6

Parameter  <VER> = <STRING PROGRAM DATA>
  0 to 15  Step value : 1
  <IHL> = <STRING PROGRAM DATA>
  0 to 15
  <TOS> = <BINARY NUMERIC PROGRAM DATA>
  00000000 to 11111111 (BIN format)
  <TL> = <STRING PROGRAM DATA>
  20 to 65535
  <ID> = <STRING PROGRAM DATA>
  0 to 65535
  <FLAG> = <BINARY NUMERIC PROGRAM DATA>
  000 to 111 (BIN format)
  <OFFSET> = <STRING PROGRAM DATA>
  0 to 8192
  <TTL> = <STRING PROGRAM DATA>
  0 to 255
  <PROTOCOL> = <STRING PROGRAM DATA>
  0 to 255
  * Comma can also be abbreviated when all the values after a 
certain value are abbreviated.
Function Sets the header pattern when the payload for the AAL5 frame 
to be transmitted is IP (IPv4).
Restriction Invalid when;
  - When Instrument:CONFig is other than <ATM>.
  - When Option 15 is not installed.
Example use

Set Version 1, TOS 00000111 and Fragment offset 100 for header pattern when the payload for the AAL5 frame to be transmitted is IP (IPv4).

> :SOURce:ATM:PATTern:IPPacket:HEADer:V4:HEADer "1,,00000111,,,,100,,"


Response

<VER> = <STRING RESPONSE DATA>

<IHL> = <STRING RESPONSE DATA>

<TOS> = <BINARY NUMERIC PROGRAM DATA>

<TL> = <STRING RESPONSE DATA>

<ID> = <STRING RESPONSE DATA>

<FLAG> = <BINARY NUMERIC PROGRAM DATA>

<OFFSET> = <STRING RESPONSE DATA>

<TTL> = <STRING RESPONSE DATA>

<PROTOCOL> = <STRING RESPONSE DATA>

Function

Queries the setting status of the header when the payload for the AAL5 frame to be transmitted is IP (IPv4).

Example use

Query the header pattern.


< “1,5,000000111,30,0,000,100,127,6"
Section 4 Remote Control


Parameter

- `<type> = <CHARACTER PROGRAM DATA>`
- `SOURCE`
- `DESTIN`
- `<adr1> = <DECIMAL NUMERIC PROGRAM DATA>`
  0 to 255
- `<adr2> = <DECIMAL NUMERIC PROGRAM DATA>`
  0 to 255
- `<adr3> = <DECIMAL NUMERIC PROGRAM DATA>`
  0 to 255
- `<adr4> = <DECIMAL NUMERIC PROGRAM DATA>`
  0 to 255

Function
Sets the Source Address or Destination address when the payload for the AAL5 frame to be transmitted is IP (IPv4).

Restriction
Invalid when:
- When INSTRument:CONFig is other than <ATM>.
- When Option 15 is not installed.

Example use
Set the Source address for AAL5 frame (IPv4) to 123.0.123.0.
>` :SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess SOUR CE, "123,0,123,0"


Parameter

- `<type> = <CHARACTER PROGRAM DATA>`
- Same as SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess

Response

- `<adr1> = <NR1 NUMERIC RESPONSE DATA>`
  Same as SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess
- `<adr2> = <NR1 NUMERIC RESPONSE DATA>`
  Same as SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess
- `<adr3> = <NR1 NUMERIC RESPONSE DATA>`
  Same as SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess
- `<adr4> = <NR1 NUMERIC RESPONSE DATA>`
  Same as SOURce:ATM:PATTern:IPPacket:HEADer:V4:ADDRess

Function
Queries the setting status for the Source address or Destination address when the payload for the AAL5 frame is IP (IPv4).
Example use: Query the set value of the Source address for the AAL5 frame (IPv4).
< “123,0,123,0”

:SOURce:ATM:PATTern:IPPacket:HEADer:V6:HEADer "[<VER>],[<PRI>],[<FL>],[<PL>],[<NH>],[<HL>]]"

Parameter:
- `<VER>` = `<STRING PROGRAM DATA>`, 0 to 15
- `<PRI>` = `<BINARY NUMERIC PROGRAM DATA>`, 0000 to 1111 (BIN format)
- `<FL>` = `<BINARY NUMERIC PROGRAM DATA>`, 000000000000000000000000 to 111111111111111111111111 (BIN format)
- `<PL>` = `<STRING PROGRAM DATA>`, 0 to 65535
- `<NH>` = `<STRING PROGRAM DATA>`, 0 to 255
- `<HL>` = `<STRING PROGRAM DATA>`, 0 to 255

* Comma can also be abbreviated when all the values after a certain value are abbreviated.

Function: Sets the header pattern when the payload for the AAL5 frame to be transmitted is IP (IPv6).

Restriction: Invalid when:
- When INSTrument:CONFig is other than <ATM>.
- When Option 15 is not installed.

Example use: Set the header pattern to Priority 0100 and Hop Limit 120 when the payload for the AAL5 frame to be transmitted is IP (IPv6).
> :SOURce:ATM:PATTern:IPPacket:HEADer:V6:HEADer “0,010 0,...,120”
Section 4 Remote Control


Response  

<pattern> = <STRING RESPONSE DATA>


Function  

Queries the setting of the header when the payload for the AAL5 frame to be transmitted is IP (IPv6).

Example use  

Query the header pattern.


< “0,0100,,,,120”


Parameter  

$type$ = <CHARACTER PROGRAM DATA>

SOURCE

DESTIN

<adr1> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr2> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr3> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr4> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr5> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr6> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr7> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

<adr8> = <STRING PROGRAM DATA>

0000 to FFFF (HEX format)

Function  

Sets the Source address or Destination address when the payload for the AAL5 frame to be transmitted is IP (IPv6).

Restriction  

Invalid when;

- When INST rument:CONFig is other than <ATM>.
- When Option 15 is not installed.
Example use: Set the Source address for AAL5 frame (IPv6) to 0.0.0.0.0.0.0.0.


Parameter

\[ \text{Parameter } <\text{type}> = \langle \text{CHARACTER PROGRAM DATA} \rangle \]

Response

\[ \text{Same as } \text{SOURce:ATM:PATTern:IPPacket:HEADer:V6:ADDRess} \]

Function

Queries the setting status of the Source address or Destination address when the payload for the AAL5 frame is IP (IPV6).

Example use:

Query the set value of the Source address for the AAL5 frame (IPv6).

\[ > :\text{SOURce:ATM:PATTern:IPPacket:HEADer:V6:ADDRess? SOURCE} < \text{“0000,0000,0000,0000,0000,0000,0000,00001”} \]
Section 4  Remote Control

:SOURce:ATM:PA TTern:IPPacket:HEADer:DEFault

Parameter  None
Function  Initializes the header pattern when the payload for the AAL5 frame to be transmitted is IP.
Restriction  Invalid when;
- When INStrument:CONFig is other than <ATM>.
- When Option 15 is not installed.
Example use  > :SOURce:ATM:PA TTern:IPPacket:HEADer:DEFault


Parameter  <init> = <STRING PROGRAM DATA>  "00000000" to "11111111"
Function  Sets the value for the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).
Restriction  Invalid when;
- When INStrument:CONFig is other than <ATM>.
- When Option 15 is not installed.
Example use  Set "0F" for the 65535-byte payload pattern.
> :SOURce:ATM:PA TTern:IPPacket:INFormation:INITial "00001111"


Parameter  <init> = <STRING PROGRAM DATA>  "00000000" to "11111111"
Function  Sets the value for the 65535-byte payload pattern when the payload for the AAL5 frame to be transmitted is IP (IPv6).
Restriction  Invalid when;
- When INStrument:CONFig is other than <ATM>.
- When Option 15 is not installed.
Example use  Set "0F" for the 65535-byte payload pattern.
> :SOURce:ATM:PA TTern:IPPacket:INFormation:INITial "00001111"
4.4 Equipment Unique Command


Parameter
- <start> = <DECIMAL NUMERIC PROGRAM DATA>
  1 to 65507 (Setting start position (byte))
- <string> = <STRING PROGRAM DATA>
  "00, 00, ..., 00 " in the range of "00" to "FF" (specify the values for the number of bytes up to 64 in hexadecimal).

Function
Sets the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).

Restriction
Invalid when;
- When INStrument:CONFig is other than <ATM>.
- When Option 15 is not installed.

Example use
Set "10, 01, 01, 10" for the 4-byte section from the 3rd payload.
> :SOURce:ATM:PATTern:IPPacket:INFormation:V4:PATTern 3, "10, 01, 01, 10"


Parameter
- <start>, <stop>= <DECIMAL NUMERIC PROGRAM DATA>
  1 to 65507 (Output start position (byte), Output end position (byte))
- <string> = <STRING RESPONSE DATA>
  Same as SOURce:ATM:PATTern:IPPacket:INFormation:V4:PATTern

Function
Queries the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv4).

Example use
Query the set values for the pattern from the 3rd to 10th bytes of the payload.
< "10,01,01,10,00,00,00,00"
Initial value, 0x00 is set for unset bytes.
Section 4  Remote Control


Parameter
<start> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 65487 (Setting start position (byte))
<string> = <STRING PROGRAM DATA>
"00, 00, ..., 00" in the range of "00" to "FF" (specify the values for the number of bytes up to 64 in hexadecimal).

Function
Sets the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv6).

Restriction
Invalid when:
- When INSTrument:CONFig is other than <ATM>.
- When Option 15 is not installed.

Example use
Set "10, 01, 01, 10" for the 4-byte section from the 3rd payload.
> :SOURce:ATM:PATTern:IPPacket:INFormation:V6:PATTern 3, "10, 01, 01, 10"


Parameter
<start>, <stop> = <DECIMAL NUMERIC PROGRAM DATA>
1 to 65487 (Output start position (byte), Output end position (byte))

Response
<string> = <STRING RESPONSE DATA>
Same as SOURce:ATM:PATTern:IPPacket:INFormation:V6:PATTern

Function
Queries the 65535-byte payload pattern when the payload for the AAL5 frame is IP (IPv6).

Example use
Query the set values for the pattern from the 3rd to 10th bytes of the payload.
< "10,01,01,10,00,00,00,00,00,00"
Initial value, 0x00 is set for unset bytes.
### 4.4.3 SENSE subsystem (Setting of the Reception Side and Measurement Conditions)

In the SENSE subsystem, set the reception side and measurement conditions.

<table>
<thead>
<tr>
<th>Function Description</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets PLCP of the 45M signal.</td>
<td>:SENSe:TELecom:M45:PLCP</td>
<td>boolean</td>
</tr>
<tr>
<td>Queries the PLCP for 45M signals.</td>
<td>:SENSe:TELecom:M45:PLCP?</td>
<td></td>
</tr>
<tr>
<td>Sets measurement mode.</td>
<td>:SENSe:MEASure:TYPE</td>
<td>mmode</td>
</tr>
<tr>
<td>Sets measurement time.</td>
<td>:SENSe:MEASure:PERiod</td>
<td>numeric suffix</td>
</tr>
<tr>
<td>Turns on and off measurement start time setting function.</td>
<td>:SENSe:MEASure:BTIMe:SET</td>
<td>boolean</td>
</tr>
<tr>
<td>Sets measurement start time of measurement start time setting function.</td>
<td>:SENSe:MEASure:BTIMe:STARt</td>
<td>year month day hour minute second</td>
</tr>
<tr>
<td>Queries measurement state.</td>
<td>:SENSe:MEASure:STATe?</td>
<td></td>
</tr>
<tr>
<td>Sets an item to be captured.</td>
<td>:SENSe:OHCapture:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Sets a byte position to be captured when Type:SOH 1byte is [TOH 1byte].</td>
<td>:SENSe:OHCapture:POSition:SOH</td>
<td>posi</td>
</tr>
<tr>
<td></td>
<td>:SENSe:OHCapture:POSition:TOH</td>
<td>posi</td>
</tr>
<tr>
<td>Sets a channel position to be captured when Type:SOH 1byte is [TOH 1byte].</td>
<td>:SENSe:OHCapture:CHANel</td>
<td>ch</td>
</tr>
<tr>
<td>Sets a trigger item.</td>
<td>:SENSe:OHCapture:TRIGger:TYPE</td>
<td>trig</td>
</tr>
<tr>
<td>Sets the trigger pattern of OH capture.</td>
<td>:SENSe:OHCapture:TRIGger:PATTern</td>
<td>pattern</td>
</tr>
<tr>
<td>Sets the mask pattern of OH capture.</td>
<td>:SENSe:OHCapture:TRIGger:MASK</td>
<td>mask</td>
</tr>
<tr>
<td>Sets a trigger position.</td>
<td>:SENSe:OHCapture:TRIGger:POSition</td>
<td>numeric</td>
</tr>
<tr>
<td>Starts OH capture.</td>
<td>:SENSe:OHCapture:STARt</td>
<td></td>
</tr>
<tr>
<td>Stops OH capture.</td>
<td>:SENSe:OHCapture:STOP</td>
<td></td>
</tr>
</tbody>
</table>
### Section 4 Remote Control

<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
<th>Command/Query</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-137</td>
<td>Queries the OH capture state.</td>
<td>:SENSe:OHCapture:STATe?</td>
</tr>
<tr>
<td>4-137</td>
<td>Sets ATM mapping of the receive signal.</td>
<td>:SENSe:ATM:MAPPing mtype</td>
</tr>
<tr>
<td>4-137</td>
<td>Queries ATM mapping of the receive signal.</td>
<td>:SENSe:ATM:MAPPing?</td>
</tr>
<tr>
<td>4-137</td>
<td>Sets Header structure of the receive signal.</td>
<td>:SENSe:ATM:HSTRucture htype</td>
</tr>
<tr>
<td>4-137</td>
<td>Queries Header structure of the receive signal.</td>
<td>:SENSe:ATM:HSTRucture?</td>
</tr>
<tr>
<td>4-138</td>
<td>Sets OAM type of the receive signal.</td>
<td>:SENSe:ATM:OAM type</td>
</tr>
<tr>
<td>4-138</td>
<td>Queries OAM type of the receive signal.</td>
<td>:SENSe:ATM:OAM?</td>
</tr>
<tr>
<td>4-138</td>
<td>Sets header filter pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:HEADer:PATTern pattern</td>
</tr>
<tr>
<td>4-138</td>
<td>Queries header filter pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:HEADer:PATTern?</td>
</tr>
<tr>
<td>4-138</td>
<td>Sets header filter mask pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:HEADer:MASK string</td>
</tr>
<tr>
<td>4-138</td>
<td>Queries header filter mask pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:HEADer:MASK?</td>
</tr>
<tr>
<td>4-140</td>
<td>Sets payload filter pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:PATTern string</td>
</tr>
<tr>
<td>4-140</td>
<td>Queries payload filter pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:PATTern?</td>
</tr>
<tr>
<td>4-140</td>
<td>Specifies payload filter pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:MASK string</td>
</tr>
<tr>
<td>4-140</td>
<td>Queries payload filter mask pattern.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:MASK?</td>
</tr>
<tr>
<td>4-141</td>
<td>Sets payload filter position.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:POSition numeric</td>
</tr>
<tr>
<td>4-141</td>
<td>Queries payload filter position.</td>
<td>:SENSe:ATM:MANual:FILTer:PAYLoad:POSition?</td>
</tr>
<tr>
<td>4-141</td>
<td>Specifies CID at AAL2.</td>
<td>:SENSe:ATM:MANual:FILTer:CID:PATTern string</td>
</tr>
<tr>
<td>4-141</td>
<td>Queries CID.</td>
<td>:SENSe:ATM:MANual:FILTer:CID:PATTern?</td>
</tr>
</tbody>
</table>
### Equipment Unique Command

**Page 4-142**

<table>
<thead>
<tr>
<th>Specifies CID at AAL2.</th>
<th>:SENSe:ATM:MANual:FILTer:MID:PATTern</th>
<th>string</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries MID.</td>
<td>:SENSe:ATM:MANual:FILTer:MID:PATTern?</td>
<td></td>
</tr>
</tbody>
</table>

**Page 4-142**

<table>
<thead>
<tr>
<th>Sets VP/VC of measurement condition.</th>
<th>:SENSe:ATM:MANual:OAMCell</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries VP/VC of measurement condition.</td>
<td>:SENSe:ATM:MANual:OAMCell?</td>
<td></td>
</tr>
</tbody>
</table>

**Page 4-143**

<table>
<thead>
<tr>
<th>Sets the CBR type of Non-conforming.</th>
<th>:SENSe:ATM:MANual:NCONforming:CBR:TYPE</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries CBR type of Non-conforming.</td>
<td>:SENSe:ATM:MANual:NCONforming:CBR:TYPE?</td>
<td></td>
</tr>
<tr>
<td>To set Non-conforming CBR to 10.0:</td>
<td>:SENSe:ATM:MANual:NCONforming:CBR:PERCent</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries Non-conforming CBR (%).</td>
<td>:SENSe:ATM:MANual:NCONforming:CBR:PERCent?</td>
<td></td>
</tr>
</tbody>
</table>

**Page 4-146**

<table>
<thead>
<tr>
<th>Sets capture trigger item.</th>
<th>:SENSe:ATM:MANual:CAPTure:TRIGger</th>
<th>error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries capture trigger item.</td>
<td>:SENSe:ATM:MANual:CAPTure:TRIGger?</td>
<td></td>
</tr>
<tr>
<td>Sets trigger position.</td>
<td>:SENSe:ATM:MANual:CAPTure:POSition</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries trigger position.</td>
<td>:SENSe:ATM:MANual:CAPTure:POSition?</td>
<td></td>
</tr>
<tr>
<td>Starts capture.</td>
<td>:SENSe:ATM:MANual:CAPTure:STARt</td>
<td></td>
</tr>
<tr>
<td>Stops capture.</td>
<td>:SENSe:ATM:MANual:CAPTure:STOP</td>
<td></td>
</tr>
<tr>
<td>Queries capture condition.</td>
<td>:SENSe:ATM:MANual:CAPTure:STATe?</td>
<td></td>
</tr>
</tbody>
</table>

**Page 4-149**

<table>
<thead>
<tr>
<th>Sets Live monitor mode.</th>
<th>:SENSe:ATM:MANual:LMONitor:TYPE</th>
<th>type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries Live monitor mode.</td>
<td>:SENSe:ATM:MANual:LMONitor:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Searches for Live monitor CH.</td>
<td>:SENSe:ATM:MANual:LMONitor:CHSearch</td>
<td></td>
</tr>
<tr>
<td>Queries search condition of Live monitor.</td>
<td>:SENSe:ATM:MANual:LMONitor:STATe?</td>
<td></td>
</tr>
</tbody>
</table>
### Section 4 Remote Control

**Page 4-150**

<table>
<thead>
<tr>
<th>Sets PCR of 1-point CDV.</th>
<th><code>:SENSe:ATM:CDV1:PCR</code></th>
<th>numeric suffix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries PCR of 1-point CDV.</td>
<td><code>:SENSe:ATM:CDV1:PCR?</code></td>
<td></td>
</tr>
<tr>
<td>Sets measurement mode of 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:TYPE</code></td>
<td>type</td>
</tr>
<tr>
<td>Queries 1-point CDV measurement mode.</td>
<td><code>:SENSe:ATM:CDV1:TYPE?</code></td>
<td></td>
</tr>
<tr>
<td>Sets measurement time of 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:PERiod</code></td>
<td>numeric suffix</td>
</tr>
<tr>
<td>Queries measurement time of 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:PERiod?</code></td>
<td></td>
</tr>
<tr>
<td>Sets cell interval used as the reference in 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:TYPE</code></td>
<td>character</td>
</tr>
<tr>
<td>Queries cell interval used as the reference in 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:TYPE?</code></td>
<td></td>
</tr>
<tr>
<td>Sets cell interval of 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:BPS</code></td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell interval (kb/s) of 1-point CDV measurement.</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:BPS?</code></td>
<td></td>
</tr>
<tr>
<td>Sets cell interval of 1-point CDV measurement (cell/s).</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:CPS</code></td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell interval of 1-point CDV measurement (cell/s).</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:CPS?</code></td>
<td></td>
</tr>
<tr>
<td>Sets cell interval of 1-point CDV measurement (%).</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:PERCent</code></td>
<td>numeric</td>
</tr>
<tr>
<td>Queries cell interval of 1-point CDV measurement (%).</td>
<td><code>:SENSe:ATM:CDV1:RTIMe:PERCent?</code></td>
<td></td>
</tr>
</tbody>
</table>

**Page 4-154**

| Sets measurement mode of 2-point CDV measurement. | `:SENSe:ATM:CDV2:TYPE` | type          |
| Queries measurement mode of 2-point CDV measurement. | `:SENSe:ATM:CDV2:TYPE?` |              |
| Sets measurement time of 2-point CDV measurement. | `:SENSe:ATM:CDV2:PERiod` | numeric suffix |
| Queries measurement time of 2-point CDV measurement. | `:SENSe:ATM:CDV2:PERiod?` |              |
### Equipment Unique Command

#### :SENSe:TELecom:M45:PLCP <boolean>

**Parameter**

<boolean> = <BOOLEAN PROGRAM DATA>
- OFF or 0
- ON or 1

**Function**
Sets PLCP of the 45M signal.

**Restriction**
Invalid when:
- When the 1.5/45/52M unit is not installed.
- When the ATM unit is not installed.
- :The setting of INStrument:CONFig is other than ATM.
- :SOURce:TELecom:BRATe is other than <M45>.

**Example use**
To set PLCP of the 45M signal to OFF:

> :SENSe:TELecom:M45:PLCP OFF

#### :SENSe:TELecom:M45:PLCP?

**Response**
<boolean> = <NR1 NUMERIC RESPONSE DATA>
- 0
- 1

**Function**
Queries the PLCP for 45M signals.

**Example use**

> :SENSe:TELecom:M45:PLCP?

< 0

#### :SENSe:MEASure:TYPE <mmode>

**Parameter**

<mmode> = <CHARACTER PROGRAM DATA>
- MANual  Manual measurement
- SINGle  Single measurement
- REPeat  Repeated measurement

**Function**
Sets measurement mode.

**Restriction**
Invalid when:
- :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
- <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCELI">,
- "MANual:RCELI">, <"PSEQUence[:JOFF]">, and
- <"PSEQUence:JON">.

**Example use**
To set measurement mode to repeated measurement:

> :SENSe:MEASure:TYPE REPeat
Section 4  Remote Control

:SENSe:MEASure:PERiod <numeric>, <suffix>

Parameter

- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  1 to 99
- <suffix> = <CHARACTER PROGRAM DATA>
  D  day
  H  hour
  M  minute
  S  second

Function  Sets measurement time.

Restriction  Invalid when;
- :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCELl">,
  <"MANual:RCELl">, <"PSEQuence[:JOFF]">, and
  <"PSEQuence:JON">.

Example use  To set measurement time to one hour:
> :SENSe:MEASure:PERiod 1,H

:SENSe:MEASure:BTIMe:SET <boolean>

Parameter

- <boolean> = <BOOLEAN PROGRAM DATA>
  OFF or 0  Turns off measurement start time setting function.
  ON or 1  Turns on measurement start time setting function.

Function  Turns on and off measurement start time setting function.

Restriction  Invalid when;
- :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCELl">,
  and <"MANual:RCELl">.

Example use  To turn on measurement start time setting function:
> :SENSe:MEASure:BTIMe:SET ON
**SENSe:MEASure:BTIMe:STARt**

\(<year>,<month>,<day>,<hour>,<minute>,<second>\)

**Parameter**

\(<year>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

1994 to 2093

\(<month>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

1 to 12

\(<day>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

1 to 31

\(<hour>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

0 to 23

\(<minute>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

0 to 59

\(<second>\) = \(<{\text{DECIMAL NUMERIC PROGRAM DATA}}\)\)

0 to 59

**Function**

Sets measurement start time of measurement start time setting function.

**Restriction**

Invalid when:


**Example use**

To set measurement start time to 10:12:13 on April 1, 2000:

:SENSe:MEASure:BTIMe:STARt 2000,4,1,10,12,13

---

**SENSe:MEASure:STATe?**

**Response**

\(<\text{mestype}>, \langle\text{numeric}\rangle\)

\(<\text{mestype}>\) = \(<\text{CHARACTER RESPONSE DATA}\)\)

CDV1 1-point CDV measurement

CDV2 2-point CDV measurement

\(<\text{numeric}>\) = \(<\text{NR1 NUMERIC RESPONSE DATA}\)\)

0 Measurement end

1 Measuring

**Function**

Queries measurement state.

**Example use**

> :SENSe:MEASure:STATe?

< CDV1,1
:SENSe:OHCapture:TYPE <type>

Parameter  

\(<\text{type}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)

(SDH)  

H1H2 H1/H2  
K1K2 K1/K2  
SOH SOH 1byte  
POH POH 1byte  

(SONET)  

H1H2 H1/H2  
K1K2 K1/K2  
TOH TOH 1byte  
POH POH 1byte  

Function  

Sets an item to be captured.

Example use  

To set an item to be captured to SOH.

> :SENSe:OHCapture:TYPE SOH

:SENSe:OHCapture:POSition:SOH <posi>

:SENSe:OHCapture:POSition:TOH <posi>

Parameter  

\(<\text{posi}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)

<table>
<thead>
<tr>
<th></th>
<th>A11</th>
<th>A12</th>
<th>A13</th>
<th>A21</th>
<th>A22</th>
<th>A23</th>
<th>J0</th>
<th>X18</th>
<th>X19</th>
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<tbody>
<tr>
<td></td>
<td>Z01</td>
<td>Z02</td>
<td>Z03</td>
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<td>X25</td>
<td>X26</td>
<td>F1</td>
<td>X28</td>
<td>X29</td>
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<td>X27</td>
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<tr>
<td>X29</td>
<td>X32</td>
<td>X33</td>
<td>D2</td>
<td>X35</td>
<td>X36</td>
<td>D3</td>
<td>X38</td>
<td>X39</td>
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<td>M1</td>
<td>Z23</td>
<td>X97</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Function  

Sets a byte position to be captured when Type:SOH 1byte is [TOH 1byte].

Restriction  

Invalid when;

- :SENSe:OHCaptu:TYPE is set to other than <SOH> and <TOH>.

Example use  

To set the byte position to Z12.

> :SENSe:OHCaptu:POSition:SOH Z12
### :SENSe:OHCapture:CHANel <ch>

**Parameter**

- `<ch>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 1 to 64  
  
  **Step value : 1**

**Function**

Sets a channel position to be captured when Type:SOH 1byte is [TOH 1byte].

**Restriction**

Invalid when:
- `:SENSe:OHCapture:TYPE` is set to other than `<SOH>` and `<TOH>`.

**Example use**

To set the channel position to 1.

>` :SENSe:OHCapture:CHANel 1`
<table>
<thead>
<tr>
<th>Parameter</th>
<th>(SDH)</th>
<th>(SONET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;B1&quot;</td>
<td>B1</td>
<td>&quot;B1&quot;</td>
</tr>
<tr>
<td>&quot;B2&quot;</td>
<td>B2</td>
<td>&quot;B2&quot;</td>
</tr>
<tr>
<td>&quot;HB3&quot;</td>
<td>HP-B3</td>
<td>&quot;HB3&quot;</td>
</tr>
<tr>
<td>&quot;BIP2&quot;</td>
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<td>&quot;BIP2&quot;</td>
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<td>MS-REI</td>
<td>&quot;BIP2&quot;</td>
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<tr>
<td>&quot;OHBIT&quot;</td>
<td>OH Bit</td>
<td>&quot;N2BIP2&quot;</td>
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<td>BIP-2</td>
<td>&quot;OHBIT&quot;</td>
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<td>&quot;RFIV&quot;</td>
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<td>LP-TIM</td>
<td>&quot;TIVM&quot;</td>
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<td>LP-UNEQ</td>
<td>&quot;UNEQV&quot;</td>
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<td>LP-VC-AIS</td>
<td>&quot;LVAIS&quot;</td>
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<td>&quot;LFAS&quot;</td>
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<td>LP-INC-AIS</td>
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<td>&quot;LTRDI&quot;</td>
<td>LP-TC-REI</td>
<td>&quot;LTRDI&quot;</td>
</tr>
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<td>&quot;LODI&quot;</td>
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<td>&quot;OSYNC&quot;</td>
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<td>&quot;HAIS&quot;</td>
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<td>HG REC</td>
<td>&quot;HREC&quot;</td>
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<tr>
<td>&quot;BAIS15M&quot;</td>
<td>BAIS 1.5M</td>
<td>&quot;BAIS15M&quot;</td>
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<td>SigoOF</td>
<td>&quot;SIGOOF&quot;</td>
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<tr>
<td>&quot;K12Match&quot;</td>
<td>K1/K2 match</td>
<td>&quot;K12Match&quot;</td>
</tr>
<tr>
<td>&quot;K12Mismatch&quot;</td>
<td>K1/K2 mismatch</td>
<td>&quot;K12Mismatch&quot;</td>
</tr>
</tbody>
</table>
4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Command</th>
<th>AU Command</th>
<th>AU Command</th>
<th>AU Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;ANDF&quot;</td>
<td>AU-NDF</td>
<td>&quot;ANDF&quot;</td>
<td>AU-NDF</td>
</tr>
<tr>
<td>&quot;APPJC&quot;</td>
<td>AU+PJC</td>
<td>&quot;APPJC&quot;</td>
<td>AU+PJC</td>
</tr>
<tr>
<td>&quot;AMPJC&quot;</td>
<td>AU-PJC</td>
<td>&quot;AMPJC&quot;</td>
<td>AU-PJC</td>
</tr>
<tr>
<td>&quot;A3CONS&quot;</td>
<td>AU 3 cons</td>
<td>&quot;A3CONS&quot;</td>
<td>AU 3 cons</td>
</tr>
<tr>
<td>&quot;TNDF&quot;</td>
<td>TU-NDF</td>
<td>&quot;TNDF&quot;</td>
<td>TU-NDF</td>
</tr>
<tr>
<td>&quot;TPPJC&quot;</td>
<td>TU+PJC</td>
<td>&quot;TPPJC&quot;</td>
<td>TU+PJC</td>
</tr>
<tr>
<td>&quot;TMPJC&quot;</td>
<td>TU-PJC</td>
<td>&quot;TMPJC&quot;</td>
<td>TU-PJC</td>
</tr>
<tr>
<td>&quot;T3CONS&quot;</td>
<td>TU 3 cons</td>
<td>&quot;T3CONS&quot;</td>
<td>TU 3 cons</td>
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<tr>
<td>&quot;EXTternal&quot;</td>
<td>External</td>
<td>&quot;EXTernal&quot;</td>
<td>External</td>
</tr>
<tr>
<td>&quot;MANual&quot;</td>
<td>MANual</td>
<td>&quot;MANual&quot;</td>
<td>MANual</td>
</tr>
</tbody>
</table>

Function
- Set a trigger item.

Example use
- Sets the trigger item to B2.
  > :SENSe:OHCapture:TRIGger:TYPE "B2"

:SENSe:OHCapture:TRIGger:PATTern <pattern>

Parameter
- `<pattern>` = <STRING PROGRAM DATA>
  "0000000000000000" to "1111111111111111"

Function
- Sets the trigger pattern of OH capture.

Restriction
- Invalid when:
  - :DISPlay:TMENu[:NAME] is other than `<"MANual[:JOFF"]`, `<"MANual:JON"`, `<"MANual:TCLayer"`<br>
    `<"MANual:TCELl"`, `<"MANual:RCELl"`, `<"PSEQuence[:JOFF"]`, and <"PSEQuence:JON".>
  - :SENSe:OHCapture:TRIGger:TYPE is set to other than `<"K12MAtch"` and `<"K12MIsmatch".>

Example use
- To set the trigger pattern to "000110100001101".
  > :SENSe:OHCapture:TRIGger:PATTern "000110100001101"

:SENSe:OHCapture:TRIGger:MASK <mask>

Parameter
- `<mask>` = <STRING PROGRAM DATA>
  "0000000000000000" to "1111111111111111"

Function
- Sets the mask pattern of OH capture.

Restriction
- Invalid when:
  - :DISPlay:TMENu[:NAME] is other than `<"MANual[:JOFF"]`, `<"MANual:JON"`, `<"MANual:TCLayer"`<br>
    `<"MANual:TCELl"`, `<"MANual:RCELl"`, `<"PSEQuence[:JOFF"]`, and <"PSEQuence:JON".>
  - :SENSe:OHCapture:TRIGger:TYPE is set to other than `<"K12MAtch"` and `<"K12MIsmatch".>

Example use
- To set the mask pattern to "000110100001101".
  > :SENSe:OHCapture:TRIGger:MASK "000110100001101"
### :SENSe:OHCapture:TRIGger:POSition <numeric>

**Parameter**

<numeric> = <DECIMAL NUMERIC PROGRAM DATA>  
1 to 1023   Step value : 1

**Function**

Sets a trigger position.

**Restriction**

Invalid when:


**Example use**

To set the trigger position to 7.  
> :SENSe:OHCapture:TRIGger:POSition 7

### :SENSe:OHCapture:STARt

**Parameter**

None

**Function**

Starts OH capture.

**Restriction**

Invalid when:


**Example use**

To start OH capture.  
> :SENSe:OHCapture:STARt

### :SENSe:OHCapture:STOP

**Parameter**

None

**Function**

Stops OH capture.

**Restriction**

Invalid when:


**Example use**

To stop OH capture.  
> :SENSe:OHCapture:STOP
### :SENSe:OHCapture:STATe?

**Response**

<table>
<thead>
<tr>
<th>numeric</th>
<th>DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>OHCapture On</td>
</tr>
<tr>
<td>1</td>
<td>OHCapture Off</td>
</tr>
</tbody>
</table>

**Function**
Queries the OH capture state.

**Example use**

> :SENSe:OHCapture:STATe?

< 0

### :SENSe:ATM:MAPPing <mtype>

**Parameter**

<table>
<thead>
<tr>
<th>mtype</th>
<th>DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAL1</td>
<td>AAL1</td>
</tr>
<tr>
<td>AAL2</td>
<td>AAL2</td>
</tr>
<tr>
<td>AAL34</td>
<td>AAL3/4</td>
</tr>
<tr>
<td>AAL5</td>
<td>AAL5</td>
</tr>
<tr>
<td>ATM</td>
<td>ATM</td>
</tr>
</tbody>
</table>

**Function**
Sets ATM mapping of the receive signal.

**Restriction**
Invalid when:

- :The setting of INStrument:CONFig is other than ATM..

**Example use**

To set ATM mapping of the receive signal to AAL1:

> :SENSe:ATM:MAPPing AAL1

### :SENSe:ATM:MAPPing?

**Response**

<table>
<thead>
<tr>
<th>mtype</th>
<th>DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAL1</td>
<td>AAL1</td>
</tr>
</tbody>
</table>

**Function**
Queries ATM mapping of the receive signal.

**Example use**

> :SENSe:ATM:MAPPing?

< AAL1

### :SENSe:ATM:HSTRucture <htype>

**Parameter**

<table>
<thead>
<tr>
<th>htype</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNI</td>
</tr>
<tr>
<td>NNI</td>
</tr>
</tbody>
</table>

**Function**
Sets Header structure of the receive signal.

**Restriction**
Invalid when:

- :The setting of INStrument:CONFig is other than ATM..

**Example use**

To set ATM mapping of the receive signal to AAL1:

> :SENSe:ATM:HSTRucture UNI
**Section 4  Remote Control**

---

**:SENSe:ATM:HSTRucture?**

Response  
<htype> = <CHARACTER RESPONSE DATA>

Function  
Queries Header structure of the receive signal.

Example use  
> :SENSe:ATM:HSTRucture?
< UNI

---

**:SENSe:ATM:OAM <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEGment</td>
<td>Segment</td>
<td></td>
</tr>
<tr>
<td>END</td>
<td>End-to-end</td>
<td></td>
</tr>
</tbody>
</table>

Function  
Sets OAM type of the receive signal.

Restriction  
Invalid when:
- :The setting of INSTrument:CONFig is other than ATM.

Example use  
To set OAM type of the receive signal to End-to-end:

> :SENSe:ATM:OAM END

---

**:SENSe:ATM:OAM?**

Response  
<type> = <CHARACTER RESPONSE DATA>

Function  
Queries OAM type of the receive signal.

Example use  
> :SENSe:ATM:OAM?
< END

---

**:SENSe:ATM:MANual:FILTer:HEADer:PATTern <pattern>**

Parameter  
<pattern> = <STRING PROGRAM DATA>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;gfc&gt;</td>
<td>0 to F (HEX format)</td>
<td></td>
</tr>
<tr>
<td>&lt;vpi&gt;</td>
<td>0 to 255 at UNI, 0 to 4095 at NNI</td>
<td></td>
</tr>
<tr>
<td>&lt;vci&gt;</td>
<td>0 to 65535</td>
<td></td>
</tr>
<tr>
<td>&lt;pt&gt;</td>
<td>000 to 111 (BIN format)</td>
<td></td>
</tr>
<tr>
<td>&lt;clp&gt;</td>
<td>0 to 1 (BIN format)</td>
<td></td>
</tr>
</tbody>
</table>

When the part after a value is completely omitted, commas can also be omitted.

Function  
Sets header filter pattern.

Restriction  
Invalid when;
- When all parameters are omitted.
4.4 Equipment Unique Command

- :The setting of INStrument:CONFig is other than ATM..

Example use
To set header filter pattern to GFC:F, VPI:255:
> :SENSe:ATM:MANual:FILTer:HEADer:PATTern "F,255"

**:SENSe:ATM:MANual:FILTer:HEADer:PATTern?**

Response
<pattern> = <STRING RESPONSE DATA>

Note: <gfc> is crammed to be output at NNI.

Function
Queries header filter pattern.

Example use
> :SENSe:ATM:MANual:FILTer:HEADer:PATTern?
< "F,001,255,4095,1"

**:SENSe:ATM:MANual:FILTer:HEADer:MASK <string>**

Parameter
<string> = <STRING PROGRAM DATA>
"00,00,00,00" Specify header mask pattern in four hexadecimal bytes.

Note: Specify <......> not to change a current value.

Function
Sets header filter mask pattern.

Restriction
Invalid when:
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set header filter mask pattern of "00,01,10,00":
> :SENSe:ATM:MANual:FILTer:HEADer:MASK "00,01,10,00"

**:SENSe:ATM:MANual:FILTer:HEADer:MASK?**

Response
<string> = <STRING RESPONSE DATA>

Function
Queries header filter mask pattern.

Example use
> :SENSe:ATM:MANual:FILTer:HEADer:MASK?
< "00,01,01,00"
Section 4  Remote Control

:SENSe:ATM:MANual:FILTER:PAYLoad:PATTern <string>
Parameter <string> = <STRING PROGRAM DATA>
"00" Specify payload pattern in one hexadecimal byte.
Function Sets payload filter pattern.
Restriction Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELl">, and
  <"MANual:RCELl">.
Example use To set payload filter pattern of "00":
> :SENSe:ATM:MANual:FILTER:PAYLoad:PATTern "00"

:SENSe:ATM:MANual:FILTER:PAYLoad:PATTern?
Response <string> = <STRING RESPONSE DATA>
Function Queries payload filter pattern.
Example use > :SENSe:ATM:MANual:FILTER:PAYLoad:PATTern?
< "00"

:SENSe:ATM:MANual:FILTER:PAYLoad:MASK <string>
Parameter <string> = <STRING PROGRAM DATA>
"00" Specifies payload in one hexadecimal byte.
Function Specifies payload filter pattern.
Restriction Invalid when;
- :The setting of INSTRument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELl">, and
  <"MANual:RCELl">.
Example use To sets the pay load filter pattern to “00”:
> :SENSe:ATM:MANual:FILTER:PAYLoad:MASK "00"

:SENSe:ATM:MANual:FILTER:PAYLoad:MASK?
Response <string> = <STRING RESPONSE DATA>
Function Queries pay load filter mask pattern.
Example use > :SENSe:ATM:MANual:FILTER:PAYLoad:MASK?
< "00"
4.4 Equipment Unique Command

:SENSe:ATM:MANual:FILTer:PAYLoad:POSition <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
    1 to 48 Step : 1
Function Sets payload filter position.
Restriction Invalid when:
    - :The setting of INSTrument:CONFig is other than ATM.
Example use To set payload filter position to 10:
    > :SENSe:ATM:MANual:FILTer:PAYLoad:POSition 10

:SENSe:ATM:MANual:FILTer:PAYLoad:POSition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries payload filter position.
Example use > :SENSe:ATM:MANual:FILTer:PAYLoad:POSition?
    < 10

Parameter <type> = <CHARACTER PROGRAM DATA>
    "00" to "FF"
Function Specifies CID at AAL2.
Restriction Invalid when:
    - :The setting of INSTrument:CONFig is other than ATM.
Example use To set CID pattern to "00":
    > :SENSe:ATM:MANual:FILTer:CID:PATTern "00"
Section 4  Remote Control

**:SENSe:ATM:MANual:FILTer:CID:PATTern?**

Response  
<string> = <STRING RESPONSE DATA>

Function  
Queries CID.

Example use  
>:SENSe:ATM:MANual:FILTer:CID:PATTern?
<br>
"00"

**:SENSe:ATM:MANual:FILTer:MID:PATTern <string>**

Parameter  
<string>:CHARACTER PROGRAM DATA>
"0000000000" to "1111111111"

Function  
Specifies CID at AAL2.

Restriction  
Invalid when;
- :INSTrument:CONFig is other than ATM.

Example use  
To set MID pattern to "00":
> :SENSe:ATM:MANual:FILTer:MID:PATTern "0101010101"

**:SENSe:ATM:MANual:FILTer:MID:PATTern?**

Response  
<string> = <STRING RESPONSE DATA>

Function  
Queries MID.

Example use  
>:SENSe:ATM:MANual:FILTer:MID:PATTern?
<br>
"0101010101"

**:SENSe:ATM:MANual:OAMCell <type>**

Parameter  
<string>:CHARACTER PROGRAM DATA>
VP
VC

Function  
Sets VP/VC of measurement condition.

Restriction  
Invalid when;
- INSTrument:ATM is <OFF>.

Example use  
To set VP/VC of measurement condition to VP:
> :SENSe:ATM:MENual:OAMCell VP
**:SENSe:ATM:MANual:OAMCell?**

Response  
\(<type> = \langle CHARACTER RESPONSE DATA \rangle\)

Function 
Queries VP/VC of measurement condition.

Example use 
> :SENSe:ATM:MANual:OAMCell?
< VP

**:SENSe:ATM:MANual:NCONforming:CBR:TYPE <type>**

Parameter  
\(<type> = \langle CHARACTER PROGRAM DATA \rangle\)

- BPS bit/s
- CPS Cells/s
- PERCent %

Function 
Sets a Non-conforming CBR type.

Restriction 
Invalid when:
- When the ATM unit is not installed.
- :The setting of INStrument:CONFig is other than ATM..

Example use 
To set CBR type to bit/s:

**:SENSe:ATM:MANual:NCONforming:CBR:TYPE?**

Response  
\(<type> = \langle CHARACTER RESPONSE DATA \rangle\)

- BPS bit/s
- CPS cells/s
- PERC %

Function 
Queries CBR type of Non-conforming.

Example use 
< BPS
Section 4  Remote Control

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 to 999999  Step : 1kbit/s
Function Sets Non-conforming CBR (kbit/s).
  - Restriction Invalid when;
  - :The setting of INSTrument:CONFig is other than ATM.
  - :DISPlay:TMENu[:NAME] is other than "MANual:JON",
    "MANual:TCLayer", "MANual:TECLl", and
    "MANual:RCELl".
Example use To set Non-conforming CBR to 256:

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries Non-conforming CBR (kbit/s).
Example use > :SENSe:ATM:MANual:NCONforming:CBR:BPS?
< 256

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 to 1412830  Step value : Cell/s
Function Sets Non-conforming CBR (Cell/s)
  Invalid when;
  - :The setting of INSTrument:CONFig is other than ATM.
  - :DISPlay:TMENu[:NAME] is other than "MANual:JON",
    "MANual:TCLayer", "MANual:TECLl", and
    "MANual:RCELl".
Example use To set Non-conforming CBR to 256:

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries Non-conforming CBR (Cell/s).
Example use >:SENSe:ATM:MANual:NCONforming:CBR:CPS?
< 256
4.4 Equipment Unique Command

:SENSe:ATM:MANual:NCONforming:CBR:PERCent <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0.0 to 100.0 Step : 0.1 (%)
Function Sets Non-conforming CBR (%).
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELI">, and
  <"MANual:RCELI">.
Example use To set Non-conforming CBR to 10.0:
>:SENSe:ATM:MANual:NCONforming:CBR:PERCent 10.0

:SENSe:ATM:MANual:NCONforming:CBR:PERCent?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries Non-conforming CBR (%).
Example use > :SENSe:ATM:MANual:NCONforming:CBR:PERCent?
< 10.0

:SENSe:ATM:MANual:NCONforming:CDVT <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 999 Step : 1 (cell)
Function Sets Non-conforming CDVT.
Restriction Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCELI">, and
  <"MANual:RCELI">.
Example use To set Non-conforming CDVT to 256:
>:SENSe:ATM:MANual:NCONforming:CDVT 256

:SENSe:ATM:MANual:NCONforming:CDVT?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries Non-conforming CDVT.
Example use > :SENSe:ATM:MANual:NCONforming:CDVT?
< 256
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;MANual&quot;</td>
<td>Manual</td>
</tr>
<tr>
<td>&quot;AIS:VP&quot;</td>
<td>VP-AIS</td>
</tr>
<tr>
<td>&quot;RDI:VP&quot;</td>
<td>VP-RDI</td>
</tr>
<tr>
<td>&quot;LOC:VP&quot;</td>
<td>VP-LOC</td>
</tr>
<tr>
<td>&quot;AIS:VC&quot;</td>
<td>VC-AIS</td>
</tr>
<tr>
<td>&quot;RDI:VC&quot;</td>
<td>VC-RDI</td>
</tr>
<tr>
<td>&quot;LOC:VC&quot;</td>
<td>VC-LOC</td>
</tr>
<tr>
<td>&quot;LCD&quot;</td>
<td>Lost of cell sync</td>
</tr>
<tr>
<td>&quot;CORR&quot;</td>
<td>Corrected</td>
</tr>
<tr>
<td>&quot;DISC&quot;</td>
<td>Discarded</td>
</tr>
<tr>
<td>&quot;NONCONF&quot;</td>
<td>Nonconf</td>
</tr>
<tr>
<td>&quot;ERRORED&quot;</td>
<td>Errored cell</td>
</tr>
<tr>
<td>&quot;LOST&quot;</td>
<td>Lost cell</td>
</tr>
<tr>
<td>&quot;MISINS&quot;</td>
<td>Misinserted</td>
</tr>
<tr>
<td>&quot;SB&quot;</td>
<td>SB</td>
</tr>
<tr>
<td>&quot;SARPDU&quot;</td>
<td>SAR-PDU</td>
</tr>
<tr>
<td>&quot;SNP&quot;</td>
<td>SNP</td>
</tr>
<tr>
<td>&quot;UCSNP&quot;</td>
<td>Uncorrect SNP</td>
</tr>
<tr>
<td>&quot;P&quot;</td>
<td>P</td>
</tr>
<tr>
<td>&quot;OSF&quot;</td>
<td>OSF</td>
</tr>
<tr>
<td>&quot;SN&quot;</td>
<td>SN</td>
</tr>
<tr>
<td>&quot;CPSHEC&quot;</td>
<td>HEC error</td>
</tr>
<tr>
<td>&quot;LI&quot;</td>
<td>Length indicator</td>
</tr>
<tr>
<td>&quot;LENGTH&quot;</td>
<td>Length</td>
</tr>
<tr>
<td>&quot;CRC10&quot;</td>
<td>CRC10</td>
</tr>
<tr>
<td>&quot;DISCPDU&quot;</td>
<td>Discarded PDU</td>
</tr>
<tr>
<td>&quot;ST&quot;</td>
<td>Segment type</td>
</tr>
<tr>
<td>&quot;ABORT&quot;</td>
<td>Abort</td>
</tr>
<tr>
<td>&quot;UDLVPDU&quot;</td>
<td>Undelivered PDU</td>
</tr>
<tr>
<td>&quot;CPI&quot;</td>
<td>CPI</td>
</tr>
<tr>
<td>&quot;BETAG&quot;</td>
<td>B/ETag</td>
</tr>
<tr>
<td>&quot;BASIZE&quot;</td>
<td>BASize</td>
</tr>
<tr>
<td>&quot;AL&quot;</td>
<td>AL</td>
</tr>
<tr>
<td>&quot;FSIZE&quot;</td>
<td>Frame size</td>
</tr>
</tbody>
</table>
4.4 Equipment Unique Command

"CRC32"  CRC32
"FM:LOST"  FM Lost
"FM:MISINS"  FM Misinserted
"FM:BIPV"  FM BIPV
"FM:SB"  FM SB
"BR:LOST"  BR Lost
"BR:MISINS"  BR Misinserted
"BR:BIPV"  BR BIPV
"BR:SB"  BR SB

Function
Sets capture trigger item.

Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set capture trigger item to MANual:
> :SENSe:ATM:MANual:CAPTure:TRIGger MANual

:SENSe:ATM:MANual:CAPTure:TRIGger?

Response
<error>  =  <CHARACTER RESPONSE DATA>

Function
Queries capture trigger item.

Example use
> :SENSe:ATM:MANual:CAPTure:TRIGger?
< MAN

:SENSe:ATM:MANual:CAPTure:POSition <numeric>

Parameter
<numeric>  =  <DECIMAL NUMERIC PROGRAM DATA>

Function
Sets trigger position.

Restriction
Invalid when;
- :The setting of INStrument:CONFig is other than ATM..

Example use
To set trigger position to 53:
> :SENSe:ATM:MANual:CAPTure:POSition 53
Section 4  Remote Control

:SENSe:ATM:MANual:CAPTure:POsition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries trigger position.
Example use > :SENSe:ATM:MANual:CAPTure:POsition?
< 53

:SENSe:ATM:MANual:CAPTure:STARt
Parameter None
Function Starts capture.
Restriction Invalid when;
- :The setting of INStrument:CONFig is other than ATM.
Note: If this command is executed during capture, a restart occurs.
Example use > :SENSe:ATM:MANual:CAPTure:STARt

:SENSe:ATM:MANual:CAPTure:STOP
Parameter None
Function Stops capture.
Restriction Invalid when;
- :The setting of INStrument:CONFig is other than ATM.
Example use > :SENSe:ATM:MANual:CAPTure:STOP

:SENSe:ATM:MANual:CAPTure:STATe?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0  Capture ended
  1  Waiting for trigger
  2  Waiting for end
Function Queries capture condition.
Example use > :SENSe:ATM:MANual:CAPTure:STATe?
< 1
4.4 Equipment Unique Command

**:SENSe:ATM:MANual:LMONitor:TYPE <type>**

Parameter  

<type> = <CHARACTER PROGRAM DATA>

- INDividual Value from last intermediate data
- ACCumulate Accumulated value from measurement start

Function  
Sets Live monitor mode.

Restriction  
Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..

Example use  
To set Live monitor mode to ACCumulate:

> :SENSe:ATM:MANual:LMONitor:TYPE ACCumulate

**:SENSe:ATM:MANual:LMONitor:TYPE?**

Response  

<type> = <CHARACTER RESPONSE DATA>

- IND Values from last intermediate data.
- ACC Accumulated values from measurement start.

Function  
Queries Live monitor mode.

Example use  
To query Live monitor mode:

> :SENSe:ATM:MANual:LMONitor:TYPE?

< MAN

**:SENSe:ATM:MANual:LMONitor:CHSearch**

Parameter  
None

Function  
Searches for Live monitor CH.

Restriction  
Invalid when;
- :The setting of INSTrument:CONFig is other than ATM..

Example use  
To search CH:

> :SENSe:ATM:MANual:LMONitor:CHSearch
Section 4  Remote Control

:SENSe:ATM:MANual:LMONitor:STATe?

Response  

<numeric> = <NR1 NUMERIC RESPONSE DATA>

0  Search completed
1  Search in progress

Function  Queries search condition of Live monitor.

Example use  

> :SENSe:ATM:MANual:LMONitor:STATe?

< 1

:SENSe:ATM:CDV1:PCR <numeric>, <suffix>

Parameter  

<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

1 to 999  Step : 1

(suffix) = <CHARACTER PROGRAM DATA>

MBPS  Mbit/s
KBPS  kbit/s

Function  Sets PCR of 1-point CDV.

Restriction  Invalid when;

- :The setting of INSTRument:CONFig is other than ATM.
- :DISPlay:TMENu[:NAME] is other than "CDV1".

Example use  

To set PCR of 1-point CDV to 256 kbit/s:

> :SENSe:ATM:CDV1:PCR 256,KBPS

:SENSe:ATM:CDV1:PCR?

Response  

<numeric>, <suffix>

<numeric> = <NR1 NUMERIC RESPONSE DATA>

(suffix) = <CHARACTER RESPONSE DATA>

Function  Queries PCR of 1-point CDV.

Example use  

> :SENSe:ATM:CDV1:PCR?

< 256,KBPS

:SENSe:ATM:CDV1:TYPE <type>

Parameter  

$type$ = <CHARACTER PROGRAM DATA>

MANual  Manual measurement
SINGLE  Single measurement

Function  Sets measurement mode of 1-point CDV measurement.

Restriction  Invalid when;

- :The setting of INSTRument:CONFig is other than ATM.
4.4 Equipment Unique Command

Example use
To set measurement mode of 1-point CDV measurement to manual:
> :SENSe:ATM:CDV1:TYPE MANual

:SENSe:ATM:CDV1:TYPE?
Response
\(<\text{type}> = \langle\text{CHARACTER RESPONSE DATA}\rangle
\begin{align*}
\text{MAN} & \quad \text{Manual measurement} \\
\text{SING} & \quad \text{Single measurement}
\end{align*}
Function
Queries 1-point CDV measurement mode.
Example use
> :SENSe:ATM:CDV1:TYPE?
\(<\text{MAN}\)

:SENSe:ATM:CDV1:PERiod <numeric>, <suffix>
Parameter
\(<\text{numeric}> = \langle\text{DECIMAL NUMERIC PROGRAM DATA}\rangle
1 \text{ to } 99
\langle\text{suffix}> = \langle\text{CHARACTER PROGRAM DATA}\rangle
\begin{align*}
\text{D} & \quad \text{day} \\
\text{H} & \quad \text{hour} \\
\text{M} & \quad \text{minute} \\
\text{S} & \quad \text{second}
\end{align*}
Function
Sets measurement time of 1-point CDV measurement.
Restriction
Invalid when;
- :DISPlay:TMENu[:NAME] is other than <"CDV1">.
- :DISPlay:TMENu[:NAME] is other than <"CDV1">.
- :SENSe:ATM:CDV1:TYPE is <MANual>.
Example use
Sets measurement time of 1-point CDV measurement to one hour.
> :SENSe:ATM:CDV1:PERiod 1,H

:SENSe:ATM:CDV1:PERiod? 
Response
\(<\text{numeric}>, <\text{suffix}>\)
\begin{align*}
\langle\text{numeric}> & = \langle\text{NR1 NUMERIC RESPONSE DATA}\rangle \\
\langle\text{suffix}> & = \langle\text{CHARACTER RESPONSE DATA}\rangle
\end{align*}
Function
Queries measurement time of 1-point CDV measurement.
Example use
> :SENSe:ATM:CDV1:PERiod?
\(<1,H\)
Section 4  Remote Control

**:SENSe:ATM:CDV1:RTIMe:TYPE <character>**

Parameter  
= <CHARACTER PROGRAM DATA>

-  BPS  kbit/s
-  CPS  cell/s
-  PERCent  %

Function  
Sets cell interval used as the reference in 1-point CDV

Restriction  
Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"CDV1">.

Example use  
To set cell interval used as the reference in 1-point CDV measurement.

> :SENSe:ATM:CDV1:RTIMe:PTYPe CPS

**:SENSe:ATM:CDV1:RTIMe:TYPE?**

Response  
= <CHARACTER RESPONSE DATA>

Function  
Queries cell interval used as the reference in 1-point CDV measurement.

Example use  
> :SENSe:ATM:CDV1:RTIMe:PTYPe?

< CPS

**:SENSe:ATM:CDV1:RTIMe:BPS <numeric>**

Parameter  
= <DECIMAL NUMERIC PROGRAM DATA>

- 0 to 999999

Function  
Sets cell interval of 1-point CDV measurement (kbit/s).

Restriction  
Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than <"CDV1">.
- :SENSe:ATM:CDV1:RTIMe is other than <BPS>.

Example use  
To set cell interval of 1-point CDV measurement to 256 (kbit/s):

> :SENSe:ATM:CDV1:RTIMe:BPS 256

**:SENSe:ATM:CDV1:RTIMe:BPS?**

Response  
= <NR1 NUMERIC RESPONSE DATA>

Function  
Queries cell interval (kb/s) of 1-point CDV measurement.

Example use  
> :SENSe:ATM:CDV1:RTIMe:BPS?

< 256
4.4 Equipment Unique Command

:SENSe:ATM:CDV1:RTIMe:CPS <numeric>
Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 to 1412830
Function
Sets cell interval of 1-point CDV measurement (cell/s).
Restriction
Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than "CDV1".
- :SENSe:ATM:CDV1:RTIMe is other than <CPS>.
Example use
To set cell interval of 1-point CDV measurement to 256 (cell/s):
>:SENSe:ATM:CDV1:RTIMe:CPS 256

:SENSe:ATM:CDV1:RTIMe:CPS?
Response
<numeric> = <NR1 NUMERIC RESPONSE DATA>
Function
Queries cell interval of 1-point CDV measurement (cell/s).
Example use
>:SENSe:ATM:CDV1:RTIMe:CPS?
< 256

:SENSe:ATM:CDV1:RTIMe:PERCent <numeric>
Parameter
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0.0 to 100.0
Function
Sets cell interval of 1-point CDV measurement (%).
Restriction
Invalid when:
- :The setting of INSTrument:CONFig is other than ATM..
- :DISPlay:TMENu[:NAME] is other than "CDV1".
- :SENSe:ATM:CDV1:RTIMe is other than <PERCent>.
Example use
To set cell interval of 1-point CDV measurement to 10.0 (%):
:SENSe:ATM:CDV1:RTIMe:PERCent 10.0

:SENSe:ATM:CDV1:RTIMe:PERCent?
Response
<numeric> = <NR1 NUMERIC RESPONSE DATA>
Function
Queries cell interval of 1-point CDV measurement (%).
Example use
>:SENSe:ATM:CDV1:RTIMe:PERCent?
< 10.0
Section 4  Remote Control

:SENSe:ATM:CDV2:TYPE <type>
Parameter  <type> = <CHARACTER PROGRAM DATA>
  MANual  Manual measurement
  SINGle  Single measurement
Function  Sets measurement mode of 2-point CDV measurement.
Restriction  Invalid when;
  - The setting of INStrument:CONFig is other than ATM..
  - :DISPlay:TMENu[:NAME] is other than "CDV2".
Example use  To set measurement mode of 2-point CDV measurement to manual
> :SENSe:ATM:CDV2:TYPE MANual

:SENSe:ATM:CDV2:TYPE?
Response  <type> = <CHARACTER RESPONSE DATA>
  MAN  Manual measurement
  SING  Single measurement
Function  Queries measurement mode of 2-point CDV measurement.
Example use  > :SENSe:ATM:CDV2:TYPE?
< MAN

:SENSe:ATM:CDV2:PERiod <numeric>, <suffix>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  1 to 99
  <suffix> = <CHARACTER PROGRAM DATA>
  D  day
  H  hour
  M  minute
  S  second
Function  Sets measurement time of 2-point CDV measurement.
Restriction  Invalid when;
  - The setting of INStrument:CONFig is other than ATM..
  - :DISPlay:TMENu[:NAME] is other than "CDV2".
  - :SENSe:ATM:CDV2:TYPE is <MANual>.
Example use  To set measurement time of 2-point CDV measurement to one hour:
> :SENSe:ATM:CDV2:PERiod 1,H
:SENSe:ATM:CDV2:PERiod?

Response <numeric>, <suffix>

<numeric> = <NR1 NUMERIC RESPONSE DATA>

<suffix> = <CHARACTER RESPONSE DATA>

Function Queries measurement time of 2-point CDV measurement.

Example use > :SENSe:ATM:CDV2:PERiod?

< 1,H
### 4.4.4 DISPlay Subsystem (Settings on Result Screen and Analyze Screen)

In the DISPlay subsystem, settings on the Result and Analyze screens are made.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects display item on Test menu screen.</td>
<td>:DISPlay:TMENu[:NAME]</td>
<td>tdisplay</td>
</tr>
<tr>
<td>Queries display item on Test menu screen.</td>
<td>:DISPlay:TMENu[:NAME]?</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries Tx cell screen condition of Test menu:Manual.</td>
<td>:DISPlay:TMENu:MANual:SELect?</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects display item on Result screen.</td>
<td>:DISPlay:RESult[:NAME]</td>
<td>rdisplay</td>
</tr>
<tr>
<td>Queries display item on Result screen.</td>
<td>:DISPlay:RESult[:NAME]?</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects measurement result display mode.</td>
<td>:DISPlay:RESult:EALarm:MODE</td>
<td>rdmode</td>
</tr>
<tr>
<td>Selects count value or rate value display of measurement results.</td>
<td>:DISPlay:RESult:EALarm:UNIT</td>
<td>unit</td>
</tr>
<tr>
<td>Selects count value or second value display of measurement.</td>
<td>:DISPlay:RESult:EALarm:AUNit</td>
<td>unit</td>
</tr>
<tr>
<td>Queries measurement result (Alarm) display condition (count value or second value).</td>
<td>:DISPlay:RESult:EALarm:AUNit?</td>
<td></td>
</tr>
<tr>
<td>Switches between TClayer and Cell on Result screen (Error/Alarm).</td>
<td>:DISPlay:RESult:EALarm:TCLayer</td>
<td>boolean</td>
</tr>
<tr>
<td>Queries TClayer/Cell condition of Result screen (Error/Alarm).</td>
<td>:DISPlay:RESult:EALarm:TCLayer?</td>
<td></td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects measurement result display mode.</td>
<td>:DISPlay:RESult:JUSTificat:MODE</td>
<td>rdmode</td>
</tr>
<tr>
<td>Selects count value or rate value display of measurement results.</td>
<td>:DISPlay:RESult:JUSTificat:UNIT</td>
<td>unit</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects measurement result display mode.</td>
<td>:DISPlay:RESult:ZOOM:MODE</td>
<td>rdmode</td>
</tr>
<tr>
<td>Selects count value or rate value display of measurement results.</td>
<td>:DISPlay:RESult:ZOOM:UNIT</td>
<td>unit</td>
</tr>
<tr>
<td>Selects count value or second value display of measurement results (Alarm).</td>
<td>:DISPlay:RESult:ZOOM:AUNit</td>
<td>unit</td>
</tr>
<tr>
<td>Queries measurement result (Alarm) display condition (count value or second value).</td>
<td>:DISPlay:RESult:ZOOM:AUNit?</td>
<td></td>
</tr>
<tr>
<td>Selects alarm display of measurement results (ZOOM).</td>
<td>:DISPlay:RESult:ZOOM:ALARm</td>
<td>alarm</td>
</tr>
<tr>
<td>Queries the alarm display of measurement results (ZOOM).</td>
<td>:DISPlay:RESult:ZOOM:ALARm?</td>
<td></td>
</tr>
<tr>
<td>Selects error display of measurement results (ZOOM).</td>
<td>:DISPlay:RESult:ZOOM:ERRor</td>
<td>error</td>
</tr>
<tr>
<td>Queries error display of measurement results (ZOOM).</td>
<td>:DISPlay:RESult:ZOOM:ERRor?</td>
<td></td>
</tr>
</tbody>
</table>
## Section 4 Remote Control

### Page 4-178
- Selects measurement result display mode.  
  ```
  :DISPlay:RESult:PERFormance:MODE rdmode
  ```
- Selects error of measurement results (performance G.826).  
  ```
  :DISPlay:RESult:PERFormance:ERRor[:G826] error
  ```
- Queries error of measurement results (performance G.826).  
  ```
  :DISPlay:RESult:PERFormance:ERRor[:G826]?
  ```

### Page 4-179
- Selects measurement time display of Result screen.  
  ```
  :DISPlay:RESult:TIME time
  ```

### Page 4-179
- Selects display item on Analyze screen.  
  ```
  :DISPlay:ANALysis[:NAME] adisplay
  ```
- Queries display item on Analyze screen.  
  ```
  :DISPlay:ANALysis[:NAME]?
  ```

### Page 4-180
- Queries data indicated by marker on Analyze:Error:Alarm screen.  
  ```
  :DISPlay:ANALysis:TGRaph:DATA?
  ```
- Sets graduation width of time axis on Analyze:Error/Alarm screen.  
  ```
  :DISPlay:ANALysis:TGRaph:INTerval numeric suffix
  ```
- Queries the one scale width for the time axis on the Analyze:Error/Alarm screen.  
  ```
  :DISPlay:ANALysis:TGRaph:INTerval?
  ```
- Sets display start position of Error/Alarm graph.  
  ```
  :DISPlay:ANALysis:TGRaph:FROM numeric\1 numeric\2 numeric\3 numeric\4 numeric\5 numeric\6
  ```
- Queries the starting point of display for the Error/Alarm graph.  
  ```
  :DISPlay:ANALysis:TGRaph:FROM?
  ```
- Sets error item for Error/Alarm graph display.  
  ```
  :DISPlay:ANALysis:TGRaph:ERRor error1 error2
  ```
- Queries error item for Error/Alarm graph display.  
  ```
  :DISPlay:ANALysis:TGRaph:ERRor?
  ```
- Sets alarm item to be displayed as alarm 1.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm1 alarm
  ```
- Queries alarm item to be displayed as alarm 1.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm1?
  ```
- Sets alarm item to be displayed as alarm 2.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm2 alarm
  ```
- Queries alarm item to be displayed as alarm 2.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm2?
  ```
- Sets alarm item to be displayed as alarm 3.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm3 alarm
  ```
- Queries alarm item to be displayed as alarm 3.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm3?
  ```
- Sets alarm item to be displayed as alarm 4.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm4 alarm
  ```
- Queries alarm item to be displayed as alarm 4.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm4?
  ```
- Sets alarm item to be displayed as alarm 5.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm5 alarm
  ```
- Queries alarm item to be displayed as alarm 5.  
  ```
  :DISPlay:ANALysis:TGRaph:ALARm5?
  ```
### 4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specifies printing range of Analyze:Error/Alarm screen.</td>
<td>:DISPlay:ANALysis:TGRaph:PRINt type</td>
</tr>
<tr>
<td>Sets trace graph title.</td>
<td>:DISPlay:ANALysis:TGRaph:TITLe title</td>
</tr>
</tbody>
</table>

**Page 4-189**

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selects display item on OH monitor.</td>
<td>:DISPlay:ANALysis:OHMonitor:TYPE ohmonitor</td>
</tr>
<tr>
<td>Queries display item on OH monitor.</td>
<td>:DISPlay:ANALysis:OHMonitor:TYPE?</td>
</tr>
<tr>
<td>Selects SOH channel for OH monitor.</td>
<td>:DISPlay:ANALysis:OHMonitor:SOHCh numeric</td>
</tr>
<tr>
<td>Queries C2 (bits 1 to 8) monitor data of OH monitor.</td>
<td>:DISPlay:ANALysis:OHMonitor:SLAbel?</td>
</tr>
<tr>
<td>Sets Pause in OH monitor.</td>
<td>:DISPlay:ANALysis:OHMonitor:PAUSe boolean</td>
</tr>
</tbody>
</table>

**Page 4-192**

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries Cell monitor data.</td>
<td>:DISPlay:ANALysis:CMONitor:CELL?</td>
</tr>
<tr>
<td>Sets Pause in Cell monitor.</td>
<td>:DISPlay:ANALysis:CMONitor:PAUSe boolean</td>
</tr>
<tr>
<td>Queries Pause condition in Cell monitor.</td>
<td>:DISPlay:ANALysis:CMONitor:PAUSe?</td>
</tr>
</tbody>
</table>

**Page 4-192**

<table>
<thead>
<tr>
<th>Command Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests scroll on Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:SCRoll scroll</td>
</tr>
<tr>
<td>Queries type of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:GRAFH?</td>
</tr>
<tr>
<td>Sets whether to display the condition setting screen.</td>
<td>:DISPlay:ANALysis:LMONitor:THReshold boolian</td>
</tr>
<tr>
<td>Queries the display of condition setting screen.</td>
<td>:DISPlay:ANALysis:LMONitor:THReshold?</td>
</tr>
<tr>
<td>Sets Non-conforming setting display unit of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:NCONforming character</td>
</tr>
<tr>
<td>Queries Non-conforming setting display unit.</td>
<td>:DISPlay:ANALysis:LMONitor:NCONforming?</td>
</tr>
<tr>
<td>Sets Pause on Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:PAUSe boolean</td>
</tr>
<tr>
<td>Queries Pause condition on Analyze screen (Live monitor).</td>
<td>:DISPlay:ANALysis:LMONitor:PAUSe?</td>
</tr>
<tr>
<td>Queries horizontal axis width of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:INTerval?</td>
</tr>
<tr>
<td>Centers data specified by VPI and VCI on Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:VPI numeric1 numeric2</td>
</tr>
<tr>
<td>Queries VPI and VCI of center of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:VPI?</td>
</tr>
<tr>
<td>Centers the specified number on Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:NUMBer numeric</td>
</tr>
<tr>
<td>Queries screen display center position of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:NUMBer?</td>
</tr>
<tr>
<td>Specifies printing range of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:PRINt type</td>
</tr>
<tr>
<td>Queries printing range of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:PRINt?</td>
</tr>
<tr>
<td>Specifies print data of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:PTYPe type</td>
</tr>
<tr>
<td>Queries print data of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:PTYPe?</td>
</tr>
<tr>
<td>Queries title of Analyze:Live monitor screen.</td>
<td>:DISPlay:ANALysis:LMONitor:TITLe?</td>
</tr>
</tbody>
</table>
### Section 4  Remote Control

#### Page 4-198

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests marker movement on Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:MARKer</td>
</tr>
<tr>
<td>Sets graduation width of time axis on Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:INTerval</td>
</tr>
<tr>
<td>Queries graduation width of time axis of Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:INTerval?</td>
</tr>
<tr>
<td>Sets whether to display marker on Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:MDISplay</td>
</tr>
<tr>
<td>Queries marker display setting on Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:MDISplay?</td>
</tr>
<tr>
<td>Sets display start position of Traffic monitor graph.</td>
<td>:DISPlay:ANALysis:TRAFFic:FROM</td>
</tr>
<tr>
<td>Queries display start position of Traffic monitor graph.</td>
<td>:DISPlay:ANALysis:TRAFFic:FROM?</td>
</tr>
<tr>
<td>Queries graph vertical axis scale of Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:SCALe?</td>
</tr>
<tr>
<td>Specifies printing range of Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:PRINt</td>
</tr>
<tr>
<td>Queries printing range of Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:PRINt?</td>
</tr>
<tr>
<td>Queries title of Analyze:Traffic monitor screen.</td>
<td>:DISPlay:ANALysis:TRAFFic:TITLe?</td>
</tr>
</tbody>
</table>

#### Page 4-203

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets display position (Number) on Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:JUMP:LINE</td>
</tr>
<tr>
<td>Queries display position (Number) on Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:JUMP:LINE?</td>
</tr>
<tr>
<td>Requests scroll on Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:SCRoll</td>
</tr>
<tr>
<td>Sets Payload display type of Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:PTYPE</td>
</tr>
<tr>
<td>Queries Payload display type of Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:PTYPE?</td>
</tr>
<tr>
<td>Specifies printing range of Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:PRINt</td>
</tr>
<tr>
<td>Queries printing range of Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:PRINt?</td>
</tr>
<tr>
<td>Queries title of Analyze:Cell capture screen.</td>
<td>:DISPlay:ANALysis:CAPTure:TITLe?</td>
</tr>
<tr>
<td>4.4  Equipment Unique Command</td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td></td>
</tr>
<tr>
<td>Sets display data type of Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:TYPE</td>
</tr>
<tr>
<td>Requests marker movement on Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:MARKer</td>
</tr>
<tr>
<td>Requests peak search on Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:PEAK</td>
</tr>
<tr>
<td>Executes zoom function on Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:ZOOM</td>
</tr>
<tr>
<td>Queries data indicated by marker on Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:DATA?</td>
</tr>
<tr>
<td>Sets graduation width of Interval axis of Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:INTerval</td>
</tr>
<tr>
<td>Sets horizontal axis display interval of Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:INUit</td>
</tr>
<tr>
<td>Sets whether to display marker on Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:MDISplay</td>
</tr>
<tr>
<td>Specifies the printing range of the Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:PRINt</td>
</tr>
<tr>
<td>Queries the printing range of the Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:PRINt?</td>
</tr>
<tr>
<td>Sets the title of the Analyze:1-point CDV screen.</td>
<td>:DISPlay:ANALysis:CDV1:TTIte</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4.4  Equipment Unique Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requests a scroll on the Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Sets display data type of Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Queries display data type of Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Requests marker movement on Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Requests peak search on Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Executes zoom function on Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Queries the data indicated by the marker on the Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Sets the graduation width of the Interval axis of the Analyze:2-point CDV screen.</td>
</tr>
<tr>
<td>Queries the graduation width of the Interval axis of the Analyze:2-point CDV screen.</td>
</tr>
</tbody>
</table>
### Section 4 Remote Control

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Arguments</th>
</tr>
</thead>
<tbody>
<tr>
<td>:DISPlay:ANALysis:CDV2:IUNit</td>
<td>Sets the graduation width of the Interval axis of the Analyze:2-point CDV screen.</td>
<td>unit</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:CDV2:MDISplay</td>
<td>Sets whether to display the marker on the Analyze:2-point CDV screen.</td>
<td>boolean</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:CDV2:MDISplay?</td>
<td>Queries the setting on whether to display the marker on the Analyze:2-point CDV screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:CDV2:PRINt</td>
<td>Specifies the printing range of the Analyze:2-point CDV screen.</td>
<td>type</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:CDV2:TITLe</td>
<td>Sets the title of the Analyze:2-point CDV screen.</td>
<td>title</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:OHCapture:TITLe</td>
<td>Sets the title of the Analyze:OH capture screen.</td>
<td>title</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ERRor</td>
<td>Sets the error item for Error/Alarm graph display on the Analyze:Recall screen.</td>
<td>error1, error2</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ERRor?</td>
<td>Queries the error item for Error/Alarm graph display on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm1</td>
<td>Sets the alarm item to be displayed as alarm 1 on the Analyze:Recall screen.</td>
<td>alarm</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm1?</td>
<td>Queries the alarm item to be displayed as alarm 1 on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm2</td>
<td>Sets the alarm item to be displayed as alarm 2 on the Analyze:Recall screen.</td>
<td>alarm</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm2?</td>
<td>Queries the alarm item to be displayed as alarm 2 on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm3</td>
<td>Sets the alarm item to be displayed as alarm 3 on the Analyze:Recall screen.</td>
<td>alarm</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm3?</td>
<td>Queries the alarm item to be displayed as alarm 3 on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm4</td>
<td>Sets the alarm item to be displayed as alarm 4 on the Analyze:Recall screen.</td>
<td>alarm</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm4?</td>
<td>Queries the alarm item to be displayed as alarm 4 on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm5</td>
<td>Sets the alarm item to be displayed as alarm 5 on the Analyze:Recall screen.</td>
<td>alarm</td>
</tr>
<tr>
<td>:DISPlay:ANALysis:RECall:TGRaph:ALARm5?</td>
<td>Queries the alarm item to be displayed as alarm 5 on the Analyze:Recall screen.</td>
<td></td>
</tr>
<tr>
<td>Command</td>
<td>Syntax</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>--------</td>
<td>-------------</td>
</tr>
<tr>
<td>Queries the horizontal axis width of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:INTerval?</td>
<td></td>
</tr>
<tr>
<td>Centers the data specified by VPI and VCI on the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:VPI numeric1 numeric2</td>
<td></td>
</tr>
<tr>
<td>Queries the VPI and VCI of the center value on the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:VPI?</td>
<td></td>
</tr>
<tr>
<td>Centers the specified number on the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:NUMBer numeric</td>
<td></td>
</tr>
<tr>
<td>Queries the screen display center position of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:NUMBer?</td>
<td></td>
</tr>
<tr>
<td>Specifies the printing range of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:PRINt type</td>
<td></td>
</tr>
<tr>
<td>Queries the printing range of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:PRINt?</td>
<td></td>
</tr>
<tr>
<td>Specifies the print data of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:PTYPe type</td>
<td></td>
</tr>
<tr>
<td>Queries the print data of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:PTYPe?</td>
<td></td>
</tr>
<tr>
<td>Queries the title of the Analyze:Recall screen (Live monitor).</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:TITLe?</td>
<td></td>
</tr>
<tr>
<td>Set the threshold display on the Analyze:Recall (Traffic monitor) screen.</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:THReshold[:SWITch] boolean</td>
<td></td>
</tr>
<tr>
<td>Queries the threshold display of the Analyze:Recall (Traffic monitor) screen.</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:THReshold[:SWITch]? character</td>
<td></td>
</tr>
<tr>
<td>Sets the unit the threshold (Non-conforming) on the Analyze:Recall (Live monitor) screen.</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:THReshold:NCONforming numeric suffix</td>
<td></td>
</tr>
<tr>
<td>Queries the unit the threshold (Non-conforming) on the Analyze:Recall (Live monitor) screen.</td>
<td>:DISPlay:ANALysis:RECall:LMONitor:THReshold:NCONforming? boolean</td>
<td></td>
</tr>
<tr>
<td>Queries the data indicated by the marker on the Analyze:Recall screen (Traffic monitor).</td>
<td>:DISPlay:ANALysis:RECall:TRAffic:DATA?</td>
<td></td>
</tr>
<tr>
<td>Sets the graduation width of the time axis of the Analyze:Recall screen (Traffic monitor).</td>
<td>:DISPlay:ANALysis:RECall:TRAffic:INTerval</td>
<td>numeric suffix</td>
</tr>
<tr>
<td>Queries the graduation width of the time axis of the Analyze:Recall screen (Traffic monitor).</td>
<td>:DISPlay:ANALysis:RECall:TRAffic:INTerval?</td>
<td></td>
</tr>
<tr>
<td>Sets whether to display the marker on the Analyze:Recall screen (Traffic monitor).</td>
<td>:DISPlay:ANALysis:RECall:TRAffic:MDISplay</td>
<td>boolean</td>
</tr>
</tbody>
</table>
### Section 4  Remote Control

<table>
<thead>
<tr>
<th>Description</th>
<th>Command</th>
<th>Parameters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries the setting on whether to display the marker on the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:MDISplay?</code></td>
<td></td>
</tr>
<tr>
<td>Sets the display start position of the Traffic monitor graph on the Analyze:Recall screen.</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:FROM</code></td>
<td>numeric1 numeric2 numeric3 numeric4 numeric5 numeric6</td>
</tr>
<tr>
<td>Queries the display start position of the Traffic monitor graph on the Analyze:Recall screen.</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:FROM?</code></td>
<td></td>
</tr>
<tr>
<td>Sets the graph vertical axis scale of the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:SCALe</code></td>
<td>numeric1 numeric2</td>
</tr>
<tr>
<td>Queries the graph vertical axis scale of the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:SCALe?</code></td>
<td></td>
</tr>
<tr>
<td>Specifies the printing range of the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:PRINt</code></td>
<td>type</td>
</tr>
<tr>
<td>Queries the printing range of the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:PRINt?</code></td>
<td></td>
</tr>
<tr>
<td>Queries the title of the Analyze:Recall screen (Traffic monitor).</td>
<td><code>:DISPlay:ANALysis:RECall:TRAFfic:TITLe?</code></td>
<td></td>
</tr>
<tr>
<td>Sets the display position (Number) on the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:JUMP:LINE</code></td>
<td>numeric</td>
</tr>
<tr>
<td>Queries the display position (Number) on the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:JUMP:LINE?</code></td>
<td></td>
</tr>
<tr>
<td>Sets the Payload display type of the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:PTYPe</code></td>
<td>type</td>
</tr>
<tr>
<td>Queries the Payload display type of the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:PTYPe?</code></td>
<td></td>
</tr>
<tr>
<td>Specifies the printing range of the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:PRINt</code></td>
<td>numeric1 numeric2</td>
</tr>
<tr>
<td>Queries the printing range of the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:PRINt?</code></td>
<td></td>
</tr>
<tr>
<td>Queries the title of the Analyze:Recall screen (Cell capture).</td>
<td><code>:DISPlay:ANALysis:RECall:CAPTure:TITLe?</code></td>
<td></td>
</tr>
</tbody>
</table>
### 4.4 Equipment Unique Command

<table>
<thead>
<tr>
<th>Request</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets the display data type of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Queries the display data type of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Requests a peak search on the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:PEAK</td>
<td>peak</td>
</tr>
<tr>
<td>Queries the data indicated by the marker on the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:DATA?</td>
<td></td>
</tr>
<tr>
<td>Queries the graduation width of the Interval axis of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:INTerval?</td>
<td></td>
</tr>
<tr>
<td>Sets the horizontal axis display interval of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:IUNit</td>
<td>unit</td>
</tr>
<tr>
<td>Queries the horizontal axis display interval of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:IUNit?</td>
<td></td>
</tr>
<tr>
<td>Sets whether to display the marker on the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:MDISplay</td>
<td>boolean</td>
</tr>
<tr>
<td>Queries the setting on whether to display the marker on the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:MDISplay?</td>
<td></td>
</tr>
<tr>
<td>Specifies the printing range of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:PRINt</td>
<td>type</td>
</tr>
<tr>
<td>Queries the printing range of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:PRINt?</td>
<td></td>
</tr>
<tr>
<td>Queries the title of the Analyze:Recall screen (1-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV1:TITLe?</td>
<td></td>
</tr>
</tbody>
</table>

#### Page 4-228

<table>
<thead>
<tr>
<th>Request</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets the display data type of the Analyze:Recall screen (2-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV2:TYPE</td>
<td>type</td>
</tr>
<tr>
<td>Queries the display data type of the Analyze:Recall screen (2-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV2:TYPE?</td>
<td></td>
</tr>
<tr>
<td>Requests a peak search on the Analyze:Recall screen (2-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV2:PEAK</td>
<td>peak</td>
</tr>
<tr>
<td>Queries the data indicated by the marker on the Analyze:Recall screen (2-point CDV).</td>
<td>:DISPlay:ANALysis:RECall:CDV2:DATA?</td>
<td></td>
</tr>
</tbody>
</table>
**Section 4  Remote Control**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:INTerval} \text{ numeric} )</td>
<td>Sets the graduation width of the Interval axis of the Analyze:Recall screen (2-point CDV).</td>
<td>numeric</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:INTerval?} )</td>
<td>Queries the graduation width of the Interval axis of the Analyze:Recall screen (2-point CDV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:IUNit} \text{ unit} )</td>
<td>Sets the horizontal axis display interval of the Analyze:Recall screen (2-point CDV).</td>
<td>unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:IUNit?} )</td>
<td>Queries the horizontal axis display interval of the Analyze:Recall screen (2-point CDV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:MDISplay} \text{ boolean} )</td>
<td>Sets whether to display the marker on the Analyze:Recall screen (2-point CDV).</td>
<td>boolean</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:MDISplay?} )</td>
<td>Queries the setting on whether to display the marker on the Analyze:Recall screen (2-point CDV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:PRINt} \text{ type} )</td>
<td>Sets the printing range of the Analyze:Recall screen (2-point CDV).</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:PRINt?} )</td>
<td>Queries the printing range of the Analyze:Recall screen (2-point CDV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:ANALysis:RECall:CDV2:TITLe?} )</td>
<td>Queries the title of the Analyze:Recall screen (2-point CDV).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup[:NAME]} )</td>
<td>Selects the display item on the Setup screen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup[:NAME]?) )</td>
<td>Queries the display item on the Setup screen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:OHPreset[:NAME]} \text{ type} )</td>
<td>Sets OH preset data display switching on the Setup screen.</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:OHPreset[:NAME]?) )</td>
<td>Queries the OH preset data display switching on the Setup screen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL[:NAME]} \text{ type} )</td>
<td>Sets Cell edit display switching on the Setup screen.</td>
<td>type</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL[:NAME]?) )</td>
<td>Queries the Cell edit display switching on the Setup screen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL:MEMorized:SCroll} \text{ scroll} )</td>
<td>Requests a scroll on Memorized of Setup screen.</td>
<td>scroll</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL:MEMorized:DSTart} \text{ numeric} )</td>
<td>Sets Display start on Memorized cell of Setup screen.</td>
<td>numeric</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL:MEMorized:DSTart?} )</td>
<td>Queries Display start on Memorized cell of Setup screen.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL:MEMorized:PRINt} \text{ numeric1 numeric2} )</td>
<td>Specifies the printing range of Memorized of Setup screen.</td>
<td>numeric1 numeric2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( \text{:DISPlay:SETup:CELL:MEMorized:PRINt?} )</td>
<td>Queries the printing range of Memorized cell of Setup screen.</td>
<td></td>
</tr>
</tbody>
</table>
**4.4 Equipment Unique Command**

### :DISPlay:TMENu[:NAME] <tdisplay>

**Parameter**

<tdisplay> = <STRING PROGRAM DATA>

- "TSEarch" Trouble search subscreen
- "MANual" Manual(SDH/SONET) subscreen
- "MANual:JOFF" Manual(SDH/SONET) subscreen
- "MANual:JON" Manual:jitter subscreen
- "MANual:TCLayer" Manual(ATM)TClayer subscreen
- "MANual:TCEL1" Manual(ATM)Tx cell subscreen
- "MANual:RCEL1" Manual(ATM)Rx cell subscreen
- "PSEQ" Pointer sequence subscreen
- "PSEQ:JOFF" Pointer sequence subscreen
- "PSEQ:JON" Pointer sequence:jitter subscreen
- "DELY" Delay subscreen
- "CDV1" 1-point CDV subscreen
- "CDV2" 2-point CDV subscreen

**Function**

Selects display item on Test menu screen.

**Restriction**

Invalid in the following cases:

- When "TSEarch", "MANual[:JOFF]", "PSEQ:JOFF" or "DELY" is set while :INSTrument:CONFig is <ATM>.
- When "MANual:TCLayer", "MANual:TCEL1", "MANual:RCEL1", "CDV1", or "CDV2" is set while :INSTrument:CONFig is other than <ATM>.

**Example use**

To select MANual:jitter subscreen as display item on Test menu screen:

> :DISPlay:TMENu:NAME "MANual:JON", or
> :DISPlay:TMENu "MANual:JON"

### :DISPlay:TMENu[:NAME]? 

**Response**

<tdisplay> = <STRING RESPONSE DATA>

- "TSE" Trouble search subscreen
- "MAN" Manual subscreen
- "MAN:JOFF" Manual subscreen
- "MAN:JON" Manual:jitter subscreen
- "MANual:TCL" Manual(ATM)TClayer subscreen
- "MANual:TCEL" Manual(ATM)Tx cell subscreen
- "MANual:RCEL" Manual(ATM)Rx cell subscreen
- "PSEQ" Pointer sequence subscreen
- "PSEQ:JOFF" Pointer sequence subscreen
- "PSEQ:JON" Pointer sequence:jitter subscreen
Function Queries display item on Test menu screen.
Example use
> :DISPlay:TMENu:NAME?, or
> :DISPlay:TMENu?
< "MAN:JOFF"

:DISPlay:TMENu:MANual:SELect <type>
Parameter
<type> = <CHARACTER PROGRAM DATA>
TRAFfic Traffic
EALarm Error/Alarm
PM PM cell
Function Switches Tx cell screen of Test menu:Manual.
Restriction Invalid in the following cases:
・ When the setting of :INSTrument:CONFig is other than <ATM>.
・ When :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
   <"MANual:TCLayer">, <"MANual:TCEL1">, and
   <"MANual:RCEL1">.
Example use To switch Manual:Tx cell screen to Traffic:
> :DISPlay:TMENu:MANual:SELeact TRAFfic

:DISPlay:TMENu:MANual:SELect?
Response
<type> = <CHARACTER RESPONSE DATA>
TRAF Traffic
EAL Error/Alarm
PM PM cell
Function Queries Tx cell screen condition of Test menu:Manual.
Example use
> :DISPlay:TMENu:MANual:SELect?
< TRAF

:DISPlay:RESult[:NAME] <rdisplay>
Parameter
<rdisplay> = <STRING PROGRAM DATA>
"TSEarch" Trouble search subscreen
"EALarm" Error/Alarm subscreen
"JUSTificat" Justification subscreen
"ZOOM" Zoom subscreen
"PERFormance" Performance subscreen
"DELay" Delay subscreen
"CDV1" 1-point CDV subscreen
"CDV2" 2-point CDV subscreen
"B2" B2 error subscreen

Function Selects display item on Result screen.

Restriction Invalid in the following cases:
- When "<CDV1>" or "<CDV2>" is set while the ATM unit is not installed.
- When "<CDV1>" is set while :DISPlay:TMENu[:NAME] is other than "<CDV1>".
- When "<CDV2>" is set while :DISPlay:TMENu[:NAME] is other than "<CDV2>".

Example use To select "TSEarch" as display item on Result screen:
> :DISPlay:RESult:NAME "TSEarch", or
> :DISPlay:RESult "TSEarch"

**:DISPlay:RESult[:NAME]?

Response <rdisplay> = <STRING RESPONSE DATA>
"TSE" Trouble search subscreen
"EAL" Error/Alarm subscreen
"JUST" Justification subscreen
"ZOOM" Zoom subscreen
"PERF" Performance subscreen
"DEL" Delay subscreen
"CDV1" 1-point CDV subscreen
"CDV2" 2-point CDV subscreen
"B2" B2 error subscreen

Function Queries display item on Result screen.

Example use
> :DISPlay:RESult:NAME?, or
> :DISPlay:RESult?
< "TSE"

**:DISPlay:RESult:EALarm:MODE <rdmode>

Parameter <rdmode> = <CHARACTER PROGRAM DATA>
CURRent Current measurement result
LAST Last measurement result

Function Selects measurement result display mode.

Restriction Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than "<MANual[:JOFF]>",
Section 4  Remote Control

Example use To select current measurement result as measurement result display mode:
> :DISPlay:RESult:EALarm:MODE CURRent

**:DISPlay:RESult:EALarm:UNIT <unit>**

Parameter  

<unit> = <CHARACTER PROGRAM DATA>
FRAMe        Count value display
RATE         Rate value display

Function  
Selects count value or rate value display of measurement results.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENU[:NAME] is other than <"MANual:JOFF">,
  <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCEL1">,
  <"MANual:RCEL1">, <"PSEQuence[JOFF]">, and
  <"PSEQuence:JON">

Example use  
To select count value display of measurement results:
> :DISPlay:RESult:EALarm:UNIT COUNt

**:DISPlay:RESult:EALarm:AUNit <unit>**

Parameter  

<unit> = <CHARACTER PROGRAM DATA>
FRAMe        Frame value display
SECond       Second value display

Function  
Selects frame value or second value display of measurement results (Alarm).

Restriction  
Invalid in the following cases:
- When the setting of :INSTrument:CONfig is other than <ATM>.
- When :DISPlay:TMENU[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">, <"MANual:TCEL1">, and
  <"MANual:RCEL1">

Example use  
To select second value display of measurement results:
> :DISPlay:RESult:EALarm:AUNit SECond

**:DISPlay:RESult:EALarm:AUNit?**

Response  

<unit> = <CHARACTER RESPONSE DATA>
FRAMe        Frame value display
SEC          Second value display

Function  
Queries measurement result (Alarm) display condition (frame value or second value).

Example use  
> :DISPlay:RESult:EALarm:AUNit?
< SEC
4.4 Equipment Unique Command

**:DISPLAY:RESULT:EALarm:TCLayer <boolean>**

**Parameter**  
<boolean> = <BOOLEAN PROGRAM DATA>

OFF or 0  Cell
ON or 1  TCLayer

**Function**  
Switches between TCLayer and Cell on Result screen (Error/Alarm).

**Restriction**  
Invalid in the following cases:
- When the setting of :INstrum:CONfig is other than <ATM>.

**Example use**  
To switch to TCLayer screen:

> :DISPLAY:RESULT:EALarm:TCLayer ON

**:DISPLAY:RESULT:EALarm:TCLayer?**

**Response**  
<boolean> = <NR1 NUMERIC RESPONSE DATA>

0  Cell
1  TCLayer

**Function**  
Queries TCLayer/Cell condition of Result screen (Error/Alarm).

**Example use**  
To switch to TCLayer screen:

> :DISPLAY:RESULT:EALarm:TCLayer?

< 1

**:DISPLAY:RESULT:JUSTificat:MODE <rdmode>**

**Parameter**  
<rdmode> = <CHARACTER PROGRAM DATA>

CURRent  Current measurement result
LAST  Last measurement result

**Function**  
Selects measurement result display mode.

**Restriction**  
Invalid in the following cases:
- When :SENSe:TELecom:BRATe is <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.

**Example use**  
To select current measurement result as measurement result display mode:

> :DISPLAY:RESULT:JUSTificat:MODE CURRent
**Section 4  Remote Control**

**:DISPLAY:RESULT:JUSTification:UNIT <unit>**

Parameter

- `<unit>` = <CHARACTER PROGRAM DATA>
  - COUNT  Count value display
  - RATE   Rate value display
  - PPM    ppm value display

Function

Selects count value or rate value display of measurement results.

Restriction

Invalid in the following case:

- When :SENSe:TELecom:BRATe is <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.

Example use

To select count value display of measurement results:

> :DISPLAY:RESULT:JUSTification:UNIT COUNT

**:DISPLAY:RESULT:ZOOM:MODE <rdmode>**

Parameter

- `<rdmode>` = <CHARACTER PROGRAM DATA>
  - CURRent  Current measurement result
  - LAST    Last measurement result

Function

Selects measurement result display mode.

Restriction

Invalid in the following case:


Example use

To select current measurement result as measurement result display mode:

> :DISPLAY:RESULT:ZOOM:MODE CURRent
4.4 Equipment Unique Command

:DISPlay:RESult:ZOOM:UNIT <unit>
Parameter  
<unit> = <CHARACTER PROGRAM DATA>
COUNt    Count value display
RATE     Rate value display
Function  Selects count value or rate value display of measurement results.
Restriction Invalid in the following case:
Example use To select count value display of measurement results:
> :DISPlay:RESult:ZOOM:UNIT COUNt

:DISPlay:RESult:ZOOM:AUNit <unit>
Parameter  
<unit> = <CHARACTER PROGRAM DATA>
SECond    Second value display
FRAME     Frame number value display
Function  Selects count value or second value display of measurement results (Alarm).
Restriction Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
Example use To select count value display of measurement results:
> :DISPlay:RESult:ZOOM:AUNit COUNt

:DISPlay:RESult:ZOOM:AUNit?
Response  
<unit> = <CHARACTER RESPONSE DATA>
SECond    Second value dispaly
FRAME     Frame number dispaly
Function  Queries measurement result (Alarm) display condition (count value or second value).
Example use  
> :DISPlay:RESult:ZOOM:AUNit?
< COUN
**Section 4  Remote Control**

**DISPLAY:RESULT:ZOOM:ALARm <alarm>**

Parameter \(<\text{alarm}> = <\text{STRING PROGRAM DATA}>\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;POWer&quot;</td>
<td>Power fail</td>
</tr>
<tr>
<td>&quot;LOS&quot;</td>
<td>LOS</td>
</tr>
<tr>
<td>&quot;LOF&quot;</td>
<td>LOF</td>
</tr>
<tr>
<td>&quot;AIS:MS&quot;</td>
<td>MS-AIS</td>
</tr>
<tr>
<td>&quot;RDI:MS&quot;</td>
<td>MS-RDI</td>
</tr>
<tr>
<td>&quot;AIS:AU&quot;</td>
<td>AU-AIS</td>
</tr>
<tr>
<td>&quot;LOP:AU&quot;</td>
<td>AU-LOP</td>
</tr>
<tr>
<td>&quot;RDI:HP&quot;</td>
<td>HP-RDI</td>
</tr>
<tr>
<td>&quot;SLM:HP&quot;</td>
<td>HP-SLM</td>
</tr>
<tr>
<td>&quot;AIS:TU&quot;</td>
<td>TU-AIS</td>
</tr>
<tr>
<td>&quot;LOP:TU&quot;</td>
<td>TU-LOP</td>
</tr>
<tr>
<td>&quot;RDI:LP&quot;</td>
<td>LP-RDI</td>
</tr>
<tr>
<td>&quot;SLM:LP&quot;</td>
<td>LP-SLM</td>
</tr>
<tr>
<td>&quot;RFI:LP&quot;</td>
<td>LP-RFI</td>
</tr>
<tr>
<td>&quot;LOM:TU&quot;</td>
<td>TU-LOM</td>
</tr>
<tr>
<td>&quot;AIS:M139&quot;</td>
<td>139M AIS</td>
</tr>
<tr>
<td>&quot;AIS:M45&quot;</td>
<td>45M AIS</td>
</tr>
<tr>
<td>&quot;AIS:M34&quot;</td>
<td>34M AIS</td>
</tr>
<tr>
<td>&quot;AIS:M2&quot;</td>
<td>2M AIS</td>
</tr>
<tr>
<td>&quot;AIS:M1_5&quot;</td>
<td>.5M AIS</td>
</tr>
<tr>
<td>&quot;LOF:M139&quot;</td>
<td>139M LOF</td>
</tr>
<tr>
<td>&quot;LOF:M45&quot;</td>
<td>45M LOF</td>
</tr>
<tr>
<td>&quot;LOF:M34&quot;</td>
<td>34M LOF</td>
</tr>
<tr>
<td>&quot;LOF:M2&quot;</td>
<td>2M LOF</td>
</tr>
<tr>
<td>&quot;LOF:M1_5&quot;</td>
<td>1.5M LOF</td>
</tr>
<tr>
<td>&quot;LOF:PLCP&quot;</td>
<td>PLCP LOF</td>
</tr>
<tr>
<td>&quot;RDI:M139&quot;</td>
<td>139M RDI</td>
</tr>
<tr>
<td>&quot;RDI:M45&quot;</td>
<td>45M RDI</td>
</tr>
<tr>
<td>&quot;RDI:M34&quot;</td>
<td>34M RDI</td>
</tr>
<tr>
<td>&quot;RDI:M2&quot;</td>
<td>2M RDI</td>
</tr>
<tr>
<td>&quot;RDI:M1_5&quot;</td>
<td>1.5M RDI</td>
</tr>
<tr>
<td>&quot;RDI:PLCP&quot;</td>
<td>PLCP RDI</td>
</tr>
<tr>
<td>&quot;AIS:VP&quot;</td>
<td>VP-AIS</td>
</tr>
<tr>
<td>&quot;RDI:VP&quot;</td>
<td>VP-RDI</td>
</tr>
<tr>
<td>&quot;LOC:VP&quot;</td>
<td>VP-LOC</td>
</tr>
<tr>
<td>&quot;AIS:VC&quot;</td>
<td>VC-AIS</td>
</tr>
<tr>
<td>&quot;RDI:VC&quot;</td>
<td>VC-RDI</td>
</tr>
<tr>
<td>&quot;LOC:VC&quot;</td>
<td>VC-LOC</td>
</tr>
<tr>
<td>&quot;LCD&quot;</td>
<td>Lost of cell sync</td>
</tr>
</tbody>
</table>
4.4 Equipment Unique Command

"PATTern"   Sync. loss  
"OOF:PLCP"    OOF PLCP

Function  Selects alarm display of measurement results (ZOOM).
Restriction Invalid in the following case:
Example use  To select MS-RDI display of measurement results (ZOOM):
> :DISPlay:RES ult:ZOOM:ALARm "RDI:MS"

:DISPlay:RESult:ZOOM:ALARm?

Response  <alarm> = <STRING RESPONSE DATA>
Function Queries the alarm display of measurement results (ZOOM).
Example use  > :DISPlay:RESult:ZOOM:ALARm?
< "RDI:MS"
### Section 4  Remote Control

**DISPlay:RESult:ZOOM:ERRor <error>**

Parameter | <error> = <STRING PROGRAM DATA>
---|---
"B1" | B1 error
"B2" | B2 error
"B3:HP" | HP-B3 error
"B3:LP" | LP-B3 error
"BIP2" | BIP-2 error
"REI:MS" | MS-REI error
"REI:HP" | HP-REI error
"REI:LP" | LP-REI error
"CODE" | Code error
"FRAMe:M139" | 139M FAS
"FRAMe:M45" | 45M FAS
"FRAMe:M34" | 34M FAS
"FRAMe:M8" | 8M FAS
"FRAMe:M2" | 2M FAS
"FRAMe:M1_5" | 1.5M FAS
"REI:M139" | 139M REI error
"REI:M45" | 45M REI error
"REI:M34" | 34M REI error
"PLCP:REI" | PLCP REI error
"CRC4" | CRC-4 error
"EBIT" | E-Bit
"BIP8" | BIP-8 error
"PARITY" | Parity
"CBIT" | C-Bit
"CRC6" | CRC-6 error
"CELL" | Cell
"CORR" | Corrected
"DISC" | Discarded
"NONCONF" | Nonconf
"ERRORED" | Errored cell
"LOST" | Lost cell
"MISINS" | Misinserted
"SECB" | SECB
"SARPDU" | SAR-PDU
"SNP" | SNP
"UCSNP" | Uncorrect SNP
"P" | P
"OSF" | OSF
"SN" | SN
4.4 Equipment Unique Command

"CPSPKT"     CPS-Packet
"CPSHEC"     HEC error
"LI"         Length indicator
"LENGTH"     Length
"CPCS"        CPCS-PDU
"MID"         MID
"CRC10"       CRC10
"DISCPDU"     Discarded PDU
"ST"         Segment type
"ABORT"      Abort
"UDLVPDU"    Undelivered PDU
"CPI"        CPI
"BETAG"      B/ETag
"BASIZE"     BASize
"AL"         AL
"FSIZE"      Frame size
"CRC32"       CRC32
"FM:LOST"     FM Lost
"FM:MISINS"   FM Misinserted
"FM:BIPV"     FM BIPV
"FM:SECB"     FM SECB
"BR:LOST"     BR Lost
"BR:MISINS"   BR Misinserted
"BR:BIPV"     BR BIPV
"BR:SECB"     BR SECB
"BIT"         Bit error
"CIDPKT"     CID PKT

Function     Selects error display of measurement results (ZOOM).
Restriction  Invalid in the following case:
             - When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
               <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCEL1">,
               <"MANual:RCEL1">, <"PSEQuence[:JOFF]">, and <"PSEQuence:JON">.
Example use  To select E-Bit display of measurement results (ZOOM):
              > :DISPlay:RESult:ZOOM:ERRor "EBIT"
Section 4  Remote Control

:DISPlay:RESult:ZOOM:ERRor?
Response  <error> = <STRING RESPONSE DATA>
Function Queries error display of measurement results (ZOOM).
Example use > :DISPlay:RESult:ZOOM:ERRor?
< "EBIT"

:DISPlay:RESult:PERFormance:MODE <rdmode>
Parameter  <rdmode> = <CHARACTER PROGRAM DATA>
CURRent   Current measurement result
LAST      Last measurement result
Function  Selects measurement result display mode.
Restriction Invalid in the following cases:
- When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">,  <"MANual:TCLayer">,  <"MANual:TCEL1">,
  <"MANual:RCEL1">,  <"PSEquence[:JOFF]">,  and
  <"PSEquence:JON">.
- When :CALCulate:TELecom:PERFormance:TYPE is <OFF>.
Example use To select current measurement result as measurement result display
mode:
> :DISPlay:RESult:PERFormance:MODE CURRent

:DISPlay:RESult:PERFormance:ERRor:[G826] <error>
Parameter  <error> = <STRING PROGRAM DATA>
"BIP"      BIP
"REI"      REI
Function  Selects error of measurement results (performance G.826).
Restriction Invalid in the following cases:
- When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">,  <"MANual:TCLayer">,  <"MANual:TCEL1">,
  <"MANual:RCEL1">,  <"PSEquence[:JOFF]">,  and
  <"PSEquence:JON">.
- When :CALCulate:TELecom:PERFormance:TYPE is <OFF>,
  <G821>,  <M2100>,  <M2110>,  or  <M2120>.
- When <"BIP"> or <"REI"> is set while :SENSe:TELecom:BRATe is
  <M139>,  <M45>,  <M34>,  <M8>,  <M2>,  or  <M1_5>.
Example use To set error of measurement results (performance G.826) to BIP:
> :DISPlay:RESult:PERFormance:ERRor:G826 "BIP"  
("G826" statement is omittable.)
4.4 Equipment Unique Command

**:DISPlay:RESult:PERFormance:ERRor[:G826]?**

Response <error> = <STRING RESPONSE DATA>

Function Queries error of measurement results (performance G.826).

Example use > :DISPlay:RESult:PERFormance:ERRor?, or > :DISPlay:RESult:PERFormance:ERRor:G826? ("G826" statement is omittable.)

< "BIP"

**:DISPlay:RESult:TIME <time>**

Parameter <time> = <CHARACTER PROGRAM DATA>
- ELAPsed Elapsed time
- START Start time

Function Selects measurement time display of Result screen.

Restriction Invalid in the following case:
- When <ELAPsed> is set while :DISPlay:TMENu[:NAME] is "TSEarch" or "DELay".

Example use To display elapsed time:
> :DISPlay:RESult:TIME ELAPsed

**:DISPlay:ANALysis[:NAME] <adisplay>**

Parameter <adisplay> = <STRING PROGRAM DATA>
- "TSEarch" Trouble search subscreen
- "EALarm" Error/Alarm subscreen
- "OHMonitor" OH monitor subscreen
- "CMONitor" Cell monitor subscreen
- "LMONitor" Live monitor subscreen
- "TRAffic" Traffic monitor subscreen
- "CAPTure" Cell capture subscreen
- "CDV1" 1-point CDV subscreen
- "CDV2" 2-point CDV subscreen
- "RECall" Recall subscreen

Function Selects display item on Analyze screen.

Restriction Invalid in the following cases:
- When the ATM unit is not installed and "CMONitor", "LMONitor", "TRAffic", or "CAPTure" is set.
- When other than "CDV1" and "RECall" is set while :DIS Play:TMENu[:NAME] is "CDV1".
- When other than "CDV2" and "RECall" is set while :DIS Play:TMENu[:NAME] is "CDV2".
- When "CMONitor", "LMONitor", "TRAFfic" or "CAPTure" is set while ::INSTrument:CONFig is other than <ATM>.
- When "OHMonitor" is set while ::INSTrument:CONFig is other than <ATM>, :SENSe:TELecom:BRATe is <M139>, <M34>, <M8>, or <M2>, :SENSe:TELecom:DEMUX:MRATe is <OFF>, and :SENSe:TELecom:FRAMing is <OFF>.
- When "OHMonitor" is set while :INSTrument:CONFig is <ATM>, and :SENSe:TELecom:BRATe is <M2>.

Example use
To select "EALarm" as display item on Analyze screen:

> :DISPlay:ANALysis:NAME "EALarm", or
> :DISPlay:ANALysis "EALarm"

::DISPlay:ANALysis[:NAME]?

Response
<adisplay> = <STRING RESPONSE DATA>
"TSE"  Trouble search subscreen
"EAL"  Error/Alarm subscreen
"OHM"  OH monitor subscreen
"CMON"  Cell monitor subscreen
"CCM"  Live monitor subscreen
"TRAF"  Traffic monitor subscreen
"CAPT"  Cell capture subscreen
"CDV1"  1-point CDV subscreen
"CDV2"  2-point CDV subscreen
"REC"  Recall subscreen

Function
Queries display item on Analyze screen.

Example use
> :DISPlay:ANALysis:NAME?, or
> :DISPlay:ANALysis?
< "EAL"

::DISPlay:ANALysis:TGRaph:DATA?

Response
<time>,<alarm1s>,<alarm1c>,<alarm2s>,<alarm2c>,<alarm3s>,
<alarm3c>,<alarm4s>,<alarm4c>,<alarm5s>,<alarm5c>,<error1>,
<error2>
<time> = <year>,<month>,<day>,<hour>,<minute>,<second>
Time indicated by marker
<year> = <NR1 NUMERIC RESPONSE DATA>
0, 1994 - 2093  Year
4.4 Equipment Unique Command

<month> = <NR1 NUMERIC RESPONSE DATA>
0, 1 - 12 Month
<day> = <NR1 NUMERIC RESPONSE DATA>
0, 1 - 31 Day
<hour> = <NR1 NUMERIC RESPONSE DATA>
0 - 23 Hour
<minute> = <NR1 NUMERIC RESPONSE DATA>
0 - 5 Minute
<second> = <NR1 NUMERIC RESPONSE DATA>
0 - 5 Second
<alarm1s> = <STRING RESPONSE DATA>
Alarm 1 occurrence time (s) of data indicated by marker Form1
<alarm1c> = <STRING RESPONSE DATA>
Alarm 1 occurrence count of data indicated by marker Form1
<alarm2s> = <STRING RESPONSE DATA>
Alarm 2 occurrence time (s) of data indicated by marker Form1
<alarm2c> = <STRING RESPONSE DATA>
Alarm 2 occurrence count of data indicated by marker Form1
<alarm3s> = <STRING RESPONSE DATA>
Alarm 3 occurrence time (s) of data indicated by marker Form1
<alarm3c> = <STRING RESPONSE DATA>
Alarm 3 occurrence count of the data indicated by marker Form1
<alarm4s> = <STRING RESPONSE DATA>
Alarm 4 occurrence time (s) of data indicated by marker Form1
<alarm4c> = <STRING RESPONSE DATA>
Alarm 4 occurrence count of data indicated by marker Form1
<alarm5s> = <STRING RESPONSE DATA>
Alarm 5 occurrence time (s) of data indicated by marker Form1
<alarm5c> = <STRING RESPONSE DATA>
Alarm 5 occurrence count of data indicated by marker Form1
<error1> = <STRING RESPONSE DATA>
Section 4  Remote Control

Error count value of data indicated by marker
Form1
<error2> = <STRING RESPONSE DATA>
Error rate value of data indicated by marker
Form2

Function Queries data indicated by marker on Analyze:Error:Alarm screen.
Example use > :DISPlay:ANALysis:TGRaph:DATA?
< 2000,12,25,12,54,30," 1"," 1"," 0"," 0",
" 104"," 10"," 1"," 1"," 1",
" 189"," 3.3E-04"

:DISPlay:ANALysis:TGRaph:INTerval <numeric>,<suffix>
Parameter <numeric> = <CHARACTER PROGRAM DATA>
1, 15, 60
<suffix> = <CHARACTER PROGRAM DATA>
M minute
S s
Function Sets graduation width of time axis on Analyze:Error/Alarm screen.
Restriction Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">,  <"MANual:TLayer">,  <"MANual:TCEL1">,
  <"MANual:RCEL1">,  <"PSEQuence[:JOFF]">,  and
  <"PSEQuence:JON">.
Example use To set graduation width to one minute:
> :DISPlay:ANALysis:TGRaph:INTerval 1,M

:DISPlay:ANALysis:TGRaph:INTerval?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>
Function Queries the one scale width for the time axis on the
Analyze:Error/Alarm screen.
Example use > :DISPlay:ANALysis:TGRaph:INTerval?
< 1,M
4.4  Equipment Unique Command

:DISPlay:ANALysis:TGRaph:FROM
<numeric1>,<numeric2>,<numeric3>,<numeric4>,<numeric5> [,<numeric6>]

Parameter  
<DECIMAL NUMERIC PROGRAM DATA>
<numeric1> = 1994 - 2093 (year)
<numeric2> = 1 - 12 (month)
<numeric3> = 1 - 31 (day)
<numeric4> = 0 - 23 (hour)
<numeric5> = 0 - 59 (minute)
<numeric6> = 0 - 59 (second)

Note: If time specified by the parameter does not exist, the earliest time after the specified time is set.
If time before the measurement start time is specified, the measurement start time is set.
If time after the log end time is specified, the log end time is set.

Function  
Sets display start position of Error/Alarm graph.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
  <"MANual:JON">,  <"MANual:TCLayer">,  <"MANual:TCEL1">,
  <"MANual:RCEL1">,  <"PSEQuence[:JOFF]">,  and
  <"PSEQuence:JON">.

Example use  
To display from 11:30:40 on July 28, 2000:

:DISPlay:ANALysis:TGRaph:FROM?

Response  
<numeric1>, <numeric2>, <numeric3>, <numeric4>,<numeric5>,
<numeric6> = <NR1 NUMERIC RESPONSE DATA>
* When Error/Alarm analyze data do not exist, the following content is outputted.
  < -, -, -, -, -

Function  
Queries the starting point of display for the Error/Alarm graph.

Example use  
> :DISPlay:ANALysis:TGRaph:FROM?
< 2000,7,28,11,30,40
:DISPlay:ANALysis:TGRaph:ERRor <error1>,<error2>

Parameter | <error1> = <STRING PROGRAM DATA>
--- | ---
"PLCP:REI" | PLCP REI error
"CRC4" | CRC-4 error
"CRC6" | CRC-6 error
"CELL" | Cell count
"CORR" | Corrected cell
"DISC" | Discarded cell
"NONCONF" | Non-conforming cell
"ERRORED" | Errored cell
"LOST" | Lost cell
"MISINS" | Misinserted cell
"SECB" | SECB
"SARPDU" | SAR-PDU count
"SNP" | SNP error
"UCSNP" | Uncorrectable SNP error
"P" | P error
"OSF" | OSF error
"SN" | SN error
"CPSPKT" | CPS-Packet count
"CPSHEC" | HEC error
"LI" | Length indicator
"LENGTH" | Length error
"CPCS" | CPCS-PDU count
"MID" | MID count
"CRC10" | CRC10 error
"DISCPDU" | Discarded PDU error
"ST" | Segment type
"ABORT" | Abort
"UDLVPU" | Undelivered PDU
"CPI" | CPI error
"BETAG" | B/ETag mismatch
"BASIZE" | BAsize error
"AL" | AL error
"FSIZE" | Frame size error
"CRC32" | CRC32 error
"FM:LOST" | PM FM Lost cell
"FM:MISINS" | PM FM Misinserted cell
"FM:BIPV" | PM FM BIPV
"FM:SECB" | PM FM SECB
"BR:LOST" | PM BR Lost cell
"BR:MISINS"  PM BR Misinserted cell
"BR:BIPV"  PM BR BIPV
"BR:SECB"  PM BR SECB
"BIT"  Bit error
"HIT"  Hit
"O191"  O.191
"FM"  FM
"BR"  BR

<error2> = <CHARACTER PROGRAM DATA>

EC  Count
ER  Rate

* For other error items, refer to Vol. 2 of the SDH/PDH/ATM Analyzer
  Operation Manual.

Function  Sets error item for Error/Alarm graph display.
Restriction  Invalid in the following cases:
  - When :DISPlay:TMENu[:NAME] is other than <"MANual[:JOFF]">,
    <"MANual:JON">,  <"MANual:TCLayer">,  <"MANual:TCEL1">,
    <"MANual:RCEL1">,  <"PSEQquence[:JOFF]">, and
    <"PSEQquence:JON">.
  - When <ER> is set while <"HIT">, <"SAR_PDU">, <"SECB">,
    <"CPCS">, <"PMCount">, <"TUCCO1">, <"TUCCO">, <"TRCCO">, or
    <"TRCCO1"> is set.

Example use  To display error rate of bit errors:
> :DISPlay:ANALysis:TGRaph:ERRor "BIT",ER

** :DISPlay:ANALysis:TGRaph:ERRor? **

Response  <error1>,<error2>
<error1> = <STRING RESPONSE DATA>
<error2> = <CHARACTER RESPONSE DATA>

Function  Queries error item for Error/Alarm graph display.
Example use  > :DISPlay:ANALysis:TGRaph:ERRor?
< "BIT",ER
### Section 4  Remote Control

**DISPlay:ANALysis:TGRaph:ALARm1 <alarm>**

Parameter | <alarm> = <STRING PROGRAM DATA>
--- | ---
"ALL" | ALL
"POWer" | Power fail
"LOS" | LOS
"LOF" | LOF
"OOF" | OOF
"AIS:MS" | MS-AIS
"RD1:MS" | MS-RDI
"AIS:AU" | AU-AIS
"LOP:AU" | AU-LOP
"RD1:HP" | HP-RDI
"SLM:HP" | HP-SLM
"AIS:TO" | TU-AIS
"LOP:TO" | TU-LOP
"RD1:LP" | LP-RDI
"SLM:LP" | LP-SLM
"RFI:LP" | LP-RFI
"LOM:TO" | TU-LOM
"AIS:M139" | 139M AIS
"AIS:M45" | 45M AIS
"AIS:M34" | 34M AIS
"AIS:M8" | 8M AIS
"AIS:M2" | 2M AIS
"AIS:M1_5" | 1.5M AIS
"LOF:M139" | 139M LOF
"LOF:M45" | 45M LOF
"LOF:M34" | 34M LOF
"LOF:M8" | 8M LOF
"LOF:M2" | 2M LOF
"LOF:M1_5" | 1.5M LOF
"LOF:MF" | MF LOF
"LOF:PLCP" | PLCP LOF
"RD1:M139" | 139M RDI
"RD1:M45" | 45M RDI
"RD1:M34" | 34M RDI
"RD1:M8" | 8M RDI
"RD1:M2" | 2M RDI
"RD1:M1_5" | 1.5M RDI
"RD1:MF" | MF RDI
"RD1:PLCP" | PLCP RDI
"VPAIS"  VP-AIS
"VPRDI"  VP-RDI
"VPLOC"  VP-LOC
"VCAIS"  VC-AIS
"VCRDI"  VC-RDI
"VCLOC"  VC-LOC
"LCD"     Lost of cell sync
"PATTern"  Sync. loss
"OOF:PLCP"  OOF PLCP

Function  Sets alarm item to be displayed as alarm 1.
Restriction Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"MANual:JOFF">,
  <"MANual:JON">, <"MANual:TCLayer">, <"MANual:TCEL1">,

Example use  To display Power fail as alarm 1:
> :DISPlay:ANALysis:TGRaph:ALARm1 "POWer"

:DISPlay:ANALysis:TGRaph:ALARm1?
Response  <alarm> = <STRING RESPONSE DATA>
Function  Queries alarm item to be displayed as alarm 1.
Example use  > :DISPlay:ANALysis:TGRaph:ALARm1?
< "POW"

:DISPlay:ANALysis:TGRaph:ALARm2 <alarm>
Parameter  <alarm> = <STRING PROGRAM DATA>
Function  Sets alarm item to be displayed as alarm 2.
Restriction  Same as :DISPlay:ANALysis:TGRaph:ALARm1.

:DISPlay:ANALysis:TGRaph:ALARm2?
Response  <alarm> = <STRING RESPONSE DATA>
  Same as :DISPlay:ANALysis:TGRaph:ALARm1.
Function  Queries alarm item to be displayed as alarm 2.

:DISPlay:ANALysis:TGRaph:ALARm3 <alarm>
Parameter  <alarm> = <STRING PROGRAM DATA>
Function  Sets alarm item to be displayed as alarm 3.
Restriction  Same as :DISPlay:ANALysis:TGRaph:ALARm1.
Section 4  Remote Control

`:DISPlay:ANALysis:TGRaph:ALARm3?`
Response  
<alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

Function  
Queries alarm item to be displayed as alarm 3

`:DISPlay:ANALysis:TGRaph:ALARm4 <alarm>`
Parameter  
<alarm> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

Function  
Sets alarm item to be displayed as alarm 4.

Restriction  
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

`:DISPlay:ANALysis:TGRaph:ALARm4?`
Response  
<alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

Function  
Queries alarm item to be displayed as alarm 4.

`:DISPlay:ANALysis:TGRaph:ALARm5 <alarm>`
Parameter  
<alarm> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

Function  
Sets alarm item to be displayed as alarm 5.

Restriction  
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

`:DISPlay:ANALysis:TGRaph:ALARm5?`
Response  
<alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:TGRaph:ALARm1.

Function  
Queries alarm item to be displayed as alarm 5.

`:DISPlay:ANALysis:TGRaph:PRINt <type>`
Parameter  
<type> = <CHARACTER PROGRAM DATA>

Function  
Specifies printing range of Analyze:Error/Alarm screen.

Restriction  
Invalid in the following case:

Example use  
To print screen range currently on display:
>
`:DISPlay:ANALysis:TGRaph:PRINt DISPlay`
4.4 Equipment Unique Command

**:DISPlay:ANALysis:TGRaph:TITLe <title>**

Parameter

\[ <title> = <STRING PROGRAM DATA> \]

"Title character string" Title character string (up to 15 characters) "" is also allowed.

Function

Sets trace graph title.

Restriction

Invalid in the following case:

Example use

To display "TITLE-DISP" as trace graph title:

```
> :DISPlay:ANALysis:TGRaph:TITLe "TITLE-DISP"
```

**:DISPlay:ANALysis:OHMonitor:TYPE <ohmonitor>**

Parameter

\[ <ohmonitor> = <CHARACTER PROGRAM DATA> \]

OHead OH
PMSP PTR,K1/K2
PTRace Path trace
PFRame PDH frame
TTRace Trail trace
PAYLoad Payload

Function

Selects display item on OH monitor.

Restriction

Invalid in the following cases:
- When the ATM unit is not installed and <TTRace> is set.
- When <OHead>, <PMSP>, or <PTRace> is set while :SENSe:TELecom:BRATe is <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.
- When <PFRame> is set while :SENSe:TELecom:DEMUX:MRATe is <OFF> and :SENSe:TELecom:FRAMing is <OFF>.
- When <PFRame> is set while :INSTrument:CONFig is <ATM>.
- When <TTRace> is set while ::INSTrument:CONFig is other than <ATM>.
- When <TTRace> is set while :SENSe:TELecom:BRATe is other than <M139> and <M34>.

Example use

To select Path trace:

```
> :DISPlay:ANALysis:OHMonitor:TYPE PTRace
```
Section 4  Remote Control

:DISPlay:ANALysis:OHMonitor:TYPE?

Response  
<ohmonitor> = <CHARACTER RESPONSE DATA>
OH          OH
PMSP        PTR,K1/K2
PTR         Path trace
PFR         PDH frame
TTR         Trail trace
PAYL        Payload

Function  Queries display item on OH monitor.
Example use  > :DISPlay:ANALysis:OHMonitor:TYPE?
< PTR

:DISPlay:ANALysis:OHMonitor:SOHCh <numeric>

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 4  Step value : 1

Function  Selects SOH channel for OH monitor.
Restriction  Invalid in the following cases:
-  When :DISPlay:TMENU[:NAME] is other than "MANual[:JOFF]",
   "MANual:RCEL1", "PSEQUence[:JOFF]", and
   "PSEQUence:JON".
-  When :DISPlay:ANALysis:OHMonitor:TYPE is other than <OH>.
-  When :SENSe:TELecom:BRATe is <M156>, <M156CMI>,
   <M52B3ZS>, <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.

Example use  To select channel 4:
> :DISPlay:ANALysis:OHMonitor:SOHCh 4
### 4.4 Equipment Unique Command

**:DISPlay:ANALysis:OHMonitor:SLABel?**

Response: `<pohvc4>,<bitvc4>,<pohvc3>,<bitvc3>`

- `<pohvc4>` = <STRING RESPONSE DATA>
- `<bitvc4>` = <STRING RESPONSE DATA>
- `<pohvc3>` = <STRING RESPONSE DATA>
- `<bitvc3>` = <STRING RESPONSE DATA>

C2 of monitor data of POH-VC4 (plain-language display)

- "Unequipped" (0000 0000)
- "Equipped-non-specific" (0000 0001)
- "TUG structure" (0000 0010)
- "Locked TU" (0000 0011)
- "Async. 34M or 45M(C-3)" (0000 0100)
- "Async. 139M(C-4)" (0001 0010)
- "ATM mapping" (0001 0011)
- "MAN(DQDB) mapping" (0001 0100)
- "FDDI mapping" (0111 1111)
- "O.181 mapping" (0001 0101)
- "VC-AIS" (1111 1111)

C2 of monitor data of POH-VC3 (bit display)

- "00000000" - "11111111"

Function: Queries C2 (bits 1 to 8) monitor data of OH monitor.

Example use:

```
> :DISPlay:ANALysis:OHMonitor:SLABel?
< "Unequipped","00000000","VC-AIS","11111111"
```

### :DISPlay:ANALysis:OHMonitor:PAUSe <boolean>

**Parameter**

- `<boolean>` = <BOOLEAN PROGRAM DATA>
  - OFF or 0 : Pause OFF
  - ON or 1 : Pause ON

**Function**

Sets Pause in OH monitor.

**Restriction**

Invalid in the following cases:


- When :INSTrument:CONFig is other than <ATM>, :SENSe:TELecom:BRATe is <M139>, <M34>, <M8>, or <M2>, :SENSe:TELecom:DEMUX:MRATe is <OFF>, and :SENSe:TELecom:FRAMing is <OFF>.

- When :INSTrument:CONFig is <ATM> and :SENSe:TELecom:BRATe is <M2>.

**Example use**

To set Pause in OH monitor to ON:

```
> :DISPlay:ANALysis:OHMonitor:PAUSe ON
```
Section 4 Remote Control

**:DISPlay:ANALysis:CMONitor:CELL?**

**Response**

<header>,<payload>

- `<header> = <STRING RESPONSE DATA>`
  - "F,256,65535,7,1,FF" (At UNI)
  - "4096,65535,7,1,FF" (At NNI)
- `<payload> = <STRING RESPONSE DATA>`
  - "FF,FF,FF,FF,FF, …… ,FF,FF,FF" (Fixed to 48 bytes)

**Function**
Queries Cell monitor data.

**Example use**

> :DISPlay:ANALysis:CMONitor:CELL?

< "F,256,65535,7,1,FF","FF,FF,FF,FF,FF, …… ,FF,FF,FF"

**:DISPlay:ANALysis:CMONitor:PAUSe <boolean>**

**Parameter**

<boolean> = <BOOLEAN PROGRAM DATA>

- OFF or 0  Pause OFF
- ON or 1  Pause ON

**Function**
Sets Pause in Cell monitor.

**Restriction**
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

**Example use**

To set Pause in Cell monitor to ON:

> :DISPlay:ANALysis:CMONitor:PAUSe ON

**:DISPlay:ANALysis:CMONitor:PAUSe?**

**Response**

<boolean> = <NR1 NUMERIC RESPONSE DATA>

- 0  Pause OFF
- 1  Pause ON

**Function**
Queries Pause condition in Cell monitor.

**Example use**

> :DISPlay:ANALysis:CMONitor:PAUSe?

< 1

**:DISPlay:ANALysis:LMONitor:SCRoll <scroll>**

**Parameter**

<scroll> = <CHARACTER PROGRAM DATA>

- UP  Scrolls up
- DOWN  Scrolls down
- TOP  Displays the top
- BOTTOM  Displays the bottom

**Function**
Requests scroll on Analyze:Live monitor screen.

**Restriction**
Invalid in the following case:
- When no Live monitor data exists.
Example use To scroll screen up:
> :DISPlay:ANALysis:LMONitor:SCRoll UP

**:DISPlay:ANALysis:LMONitor:GRAFH <character>**
Parameter <character> = <CHARACTER PROGRAM DATA>
TRAFic Traffic
NCONforming Non-conforming
FMMisins FM Misinserted cell
FMLost FM Lost cell
FM FM Mis/Lost cell
FMSecb FM SECB
Function Selects type of Analyze:Live monitor screen.
Example use To select Traffic:
> :DISPlay:ANALysis:LMONitor:GRAFH TRAFfic

**:DISPlay:ANALysis:LMONitor:GRAFH?**
Parameter <character> = <CHARACTER PROGRAM DATA>
TRAF Traffic
NCON Non-conforming
FMM FM Misinserted cell
FML FM Lost cell
FM FM Mis/Lost cell
FMS FM SECB
Function Queries type of Analyze:Live monitor screen.
Example use > :DISPlay:ANALysis:LMONitor:GRAFH?
<TRAFF

**:DISPlay:ANALysis:LMONitor:THReshold <boolian>**
Parameter <boolean> = <BOOLEAN PROGRAM DATA>
OFF or 0 No display
ON or 1 Display
Function Sets whether to display the condition setting screen.
Example use To set the condition setting screen to display.
>:DISPlay:ANALysis:LMONitor:THReshold

**:DISPlay:ANALysis:LMONitor:THReshold?**
Response <boolean> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the display of condition setting screen.
Example use >:DISPlay:ANALysis:LMONitor:THReshold?
<1
Section 4  Remote Control

**:DISPlay:ANALysis:LMONitor:NCONforming <character>**

Parameter  

<character> = <CHARACTER PROGRAM DATA>

BPS  kb/s
CPS  Cell/s
PERCent  %

Function  
Sets Non-conforming setting display unit of Analyze:Live monitor screen.

Example use  
To set Cell/S:
>:DISPlay:ANALysis:LMONitor:NCONforming CPS

**:DISPlay:ANALysis:LMONitor:NCONforming?**

Response  

<character> = <CHARACTER RESPONSE DATA>

Function  
Queries Non-conforming setting display unit.

Example use  
>:DISPlay:ANALysis:LMONitor:NCONforming?

**:DISPlay:ANALysis:LMONitor:PAUSe <boolean>**

Parameter  

<boolean> = <BOOLEAN PROGRAM DATA>

OFF or 0  Pause OFF
ON or 1  Pause ON

Function  
Sets Pause on Analyze:Live monitor screen.

Restriction  
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
- When :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
  <"MANual:TCLayer">,
  <"MANual:TCEL1">,
  and
  <"MANual:RCEL1">

Example use  
To set Pause in Live monitor to ON:
>:DISPlay:ANALysis:LMONitor:PAUSe ON

**:DISPlay:ANALysis:LMONitor:PAUSe?**

Response  

<boolean> = <NR1 NUMERIC RESPONSE DATA>

0  Pause OFF
1  Pause ON

Function  
Queries Pause condition on Analyze screen (Live monitor).

Example use  
>:DISPlay:ANALysis:LMONitor:PAUSe?

< 1

**:DISPlay:ANALysis:LMONitor:INTerval <numeric>,<suffix>**

Parameter  

<numeric> = <CHARACTER PROGRAM DATA>

1000, 5000, 10000, 50000, 100000, 500000, 1000000

<suffix> = <CHARACTER PROGRAM DATA>
**设备专用命令**

<table>
<thead>
<tr>
<th>Function</th>
<th>Sets horizontal axis width of Analyze:Live monitor screen.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restriction</td>
<td>Invalid in the following cases:</td>
</tr>
<tr>
<td></td>
<td>- When the setting of :INSTrument:CONFig is other than &lt;ATM&gt;.</td>
</tr>
<tr>
<td>Example use</td>
<td>To set horizontal axis width to 1000:</td>
</tr>
<tr>
<td></td>
<td>&gt; :DISPlay:ANALysis:LMONitor:INTerval 1000,CPS</td>
</tr>
</tbody>
</table>

**：DISPlay:ANALysis:LMONitor:INTerval?**

<table>
<thead>
<tr>
<th>Response</th>
<th>&lt;numeric&gt; = &lt;NR1 NUMERIC RESPONSE DATA&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;suffix&gt;</td>
<td>&lt;CHARACTER RESPONSE DATA&gt;</td>
</tr>
<tr>
<td>Function</td>
<td>Queries horizontal axis width of Analyze:Live monitor screen.</td>
</tr>
<tr>
<td>Example use</td>
<td>&gt; :DISPlay:ANALysis:LMONitor:INTerval?</td>
</tr>
<tr>
<td></td>
<td>&lt; 1000,CPS</td>
</tr>
</tbody>
</table>

**：DISPlay:ANALysis:LMONitor:VPI <numeric1>[,<numeric2>]**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>&lt;numeric1&gt; = &lt;DECIMAL NUMERIC PROGRAM DATA&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 4,095</td>
<td>VPI value</td>
</tr>
<tr>
<td>&lt;numeric2&gt; = &lt;DECIMAL NUMERIC PROGRAM DATA&gt;</td>
<td></td>
</tr>
<tr>
<td>0 - 65535</td>
<td>VCI value</td>
</tr>
<tr>
<td>Function</td>
<td>Centers data specified by VPI and VCI on Analyze:Live monitor screen.</td>
</tr>
<tr>
<td>Restriction</td>
<td>Invalid in the following cases:</td>
</tr>
<tr>
<td></td>
<td>- When no Live monitor data exists.</td>
</tr>
<tr>
<td></td>
<td>- When the setting of :INSTrument:CONFig is other than &lt;ATM&gt;.</td>
</tr>
<tr>
<td>Example use</td>
<td>To set VPI value of horizontal axis center to 1000:</td>
</tr>
<tr>
<td></td>
<td>&gt; :DISPlay:ANALysis:LMONitor:VPI 1000</td>
</tr>
</tbody>
</table>

**：DISPlay:ANALysis:LMONitor:VPI?**

<table>
<thead>
<tr>
<th>Response</th>
<th>&lt;numeric1&gt; = &lt;NR1 NUMERIC RESPONSE DATA&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;numeric2&gt; = &lt;NR1 NUMERIC RESPONSE DATA&gt;</td>
<td></td>
</tr>
<tr>
<td>Function</td>
<td>Queries VPI and VCI of center of Analyze:Live monitor screen.</td>
</tr>
<tr>
<td>Example use</td>
<td>&gt; :DISPlay:ANALysis:LMONitor:VPI?</td>
</tr>
<tr>
<td></td>
<td>&lt; 100,20</td>
</tr>
</tbody>
</table>
Section 4  Remote Control

**:DISPlay:ANALysis:LMONitor:NUMBer <numeric>**

Parameter  
<br> <numeric1> = <DECIMAL NUMERIC PROGRAM DATA>
<br> 1 - 1000  No.

Function  Centers the specified number on Analyze:Live monitor screen.

Restriction  Invalid in the following cases:
- When no LIVE monitor data exists.
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use  To jump to 23rd:
<br> > :DISPlay:ANALysis:LMONitor:NUMBer 23

**:DISPlay:ANALysis:LMONitor:NUMBer?**

Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>

Function  Queries screen display center position of Analyze:Live monitor screen.

Example use  > :DISPlay:ANALysis:LMONitor:NUMBer?
<br> < 23

**:DISPlay:ANALysis:LMONitor:PRINt <type>**

Parameter  
<br> <type> = <CHARACTER PROGRAM DATA>
<br> DISPlay  Display
<br> ALL  All
<br> AFTer  After
<br> BEF ore  Before

Function  Sets printing range of Analyze:Live monitor screen.

Restriction  Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use  To set printing range of Live monitor subscreen:
<br> > :DISPlay:ANALysis:LMONitor:PRINt DISPlay
<br> Response  <type> = <CHARACTER RESPONSE DATA>
<br> DISP  Display
<br> ALL  All
<br> AFT  After
<br> BEF  Before

Function  Queries printing range of Analyze:Live monitor screen.
Example use

>:DISPlay:ANALysis:LMONitor:PRINt?
< DISP

**:DISPlay:ANALysis:LMONitor:PTYPe <type>**

Parameter  

<type> = <CHARACTER PROGRAM DATA>

NUMeric Numeric

GRAPh Graph

Function Specifies print data of Analyze:Live monitor screen.

Restriction Invalid in the following cases:

- When the setting of :INStrument:CONFig is other than <ATM>.

Example use

To set print data of Live monitor subscreen:

> :DISPlay:ANALysis:LMONitor:PTYPe GRAPh

**:DISPlay:ANALysis:LMONitor:PTYPe?**

Response  

<type> = <CHARACTER RESPONSE DATA>

NUM Numeric

GRAP Graph

Function Queries print data of Analyze:Live monitor screen.

Example use

> :DISPlay:ANALysis:LMONitor:PTYPe?
< GRAP

**:DISPlay:ANALysis:LMONitor:TITLe <title>**

Parameter  

<title> = <STRING PROGRAM DATA>

"Title character string" Title character string (up to 15 characters)

"" is also allowed.

Function Sets title of Analyze:Live monitor screen.

Restriction Invalid in the following cases:

- When the setting of :INStrument:CONFig is other than <ATM>.

Example use

To display "TITLE-DISP" as title of Live monitor subscreen:

> :DISPlay:ANALysis:LMONitor:TITLe "TITLE-DISP"
**Section 4  Remote Control**

**:DISPlay:ANALysis:LMONitor:TITLe?**

Response  
<String RESPONSE DATA>

Function  
Queries title of Analyze:Live monitor screen.

Example use  
>:DISPlay:ANALysis:LMONitor:TITLe?

Response  
"TITLE-DISP"  

**:DISPlay:ANALysis:TRAFfic:SCRoll <scroll>?**

Parameter  
<scroll> = <CHARACTER PROGRAM DATA>

LEFT  
Scrolls left

RIGHT  
Scrolls right

TOP  
Displays the top

BOTTOM  
Displays the bottom

Function  
Requests scroll on Analyze:Traffic monitor screen.

Restriction  
Invalid in the following case:
- When no Traffic monitor data exists.

Example use  
To scroll screen left:
>:DISPlay:ANALysis:TRAFfic:SCRoll LEFT

**:DISPlay:ANALysis:TRAFFic:MARKer <marker>?**

Parameter  
<marker> = <CHARACTER PROGRAM DATA>

LEFT  
Moves marker 1 Div to the left.

RIGHT  
Moves marker 1 Div to the left.

Function  
Requests marker movement on Analyze:Traffic monitor screen.

Restriction  
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
- When :DISPlay:ANALysis:TRAFfic:MDISplay is <OFF>.

Note: In multiple screen mode, the marker moves normally when set on.

Example use  
To move marker to the right:
>:DISPlay:ANALysis:TRAFFic:MARKer RIGHT

**:DISPlay:ANALysis:TRAFfic:DATA?**

<time>, <mean-bps>, <mean-cps>, <mean-%>,
<max-bps>, <max-cps>, <max-%>,
<min-bps>, <min-cps>, <min-%>
<time> = <year>,<month>,<day>,<hour>,<minute>,<second>
Time indicated by marker

<year> = <NR1 NUMERIC RESPONSE DATA>
0, 1994 - 2093  Year

<month> = <NR1 NUMERIC RESPONSE DATA>
0, 1 - 12  Month
4.4 Equipment Unique Command

<day> = <NR1 NUMERIC RESPONSE DATA>
0, 1 - 31    Day

<hour> = <NR1 NUMERIC RESPONSE DATA>
0 - 23      Hour

<minute> = <NR1 NUMERIC RESPONSE DATA>
0 - 59      Minute

<second> = <NR1 NUMERIC RESPONSE DATA>
0 - 59      Second

<mean-bps>,<max-bps>,<min-bps>=<STRING RESPONSE DATA>
Average, maximum, and minimum values (b/s) of data indicated by marker

<mean-cps>,<max-cps>,<min-cps>=<STRING RESPONSE DATA>
Average, maximum, and minimum values (cell/s) of data indicated by marker

<mean-%>,<max-%>,<min-%>=<STRING RESPONSE DATA>
Average, maximum, and minimum values (%) of data indicated by marker

Function Queries data indicated by marker on Analyze:Traffic monitor screen.

Example use > :DISPlay:ANALysis:TRAFfic:DATA?
< 2000,12,25,12,54,30,"      10","     104","       0"

:DISPlay:ANALysis:TRAFfic:INTerval <numeric>,<suffix>

Parameter  <numeric> = <CHARACTER PROGRAM DATA>
           1, 15, 60

           <suffix> = <CHARACTER PROGRAM DATA>
                   M    minute
                   S    second

Function Sets graduation width of time axis on Analyze:Traffic monitor screen.

Restriction Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
- When other than the following is set according to :SENSe:MEASure:GREsolution:
  1s: 1s, 1min,15min,60min
  1min: 1min, 15min, 60min
  15min:15min,60min
  60min:60min

Example use To set graduation width to one minute:
> :DISPlay:ANALysis:TRAFfic:INTerval 1,M
Section 4  Remote Control

**:DISPlay:ANALysis:TRAFFic:INTerval?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
<suffix> = <CHARACTER RESPONSE DATA>

Function  
Queries graduation width of time axis of Analyze:Traffic monitor screen.

Example use  
> :DISPlay:ANALysis:TRAFFic:INTerval?
< 1,M

**:DISPlay:ANALysis:TRAFFic:MDISplay <boolean>**

Parameter  
<boolean> = <BOOLEAN PROGRAM DATA>
OFF  or 0  Turns off marker.
ON  or 1  Turns on marker.

Function  
Sets whether to display marker on Analyze:Traffic monitor screen.

Restriction  
Invalid in the following case:
- When no Traffic monitor data exists.

Example use  
To set marker display in Traffic monitor to ON:
> :DISPlay:ANALysis:TRAFFic:MDISplay 1

**:DISPlay:ANALysis:TRAFFic:MDISplay?**

Response  
<boolean> = <NR1 NUMERIC RESPONSE DATA>
0  Turns off marker
1  Turns on marker

Function  
Queries marker display setting on Analyze:Traffic monitor screen.

Example use  
> :DISPlay:ANALysis:TRAFFic:MDISplay?
< 1

**:DISPlay:ANALysis:TRAFFic:FROM**

Parameter  
<DECIMAL NUMERIC PROGRAM DATA>
<numeric1> = 1994 - 2093 (year)
<numeric2> = 1 - 12 (month)
<numeric3> = 1 - 31 (day)
<numeric4> = 0 - 23 (hour)
<numeric5> = 0 - 59 (minute)
<numeric6> = 0 - 59 (second)

Note: If time specified by the parameter does not exist, the earliest time after the specified time is set.
If time before the first data time is specified, the first data time is set.
If time after the last data time is specified, the last data time is set.

Function  
Sets display start position of Traffic monitor graph.

Restriction  
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use
To display from 11:30:40 on July 28, 2000:

**:DISPlay:ANALysis:TRAFfic:FROM?**

Response
<numeric1>,<numeric2>,<numeric3>,<numeric4>,<numeric5>,
<numeric6> = <NR1 NUMERIC RESPONSE DATA>

Function
Queries display start position of Traffic monitor graph.

Example use
> :DISPlay:ANALysis:TRAFfic:FROM?
< 2000,7,28,11,30,40

**:DISPlay:ANALysis:TRAFfic:SCALe <character>**

Parameter
<character> = <CHARACTER PROGRAM DATA>
BPS b/s
CPS cell/s
PERCent %

Function
Sets graph vertical axis scale of Analyze:Traffic monitor screen.

Restriction
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use
To set graph vertical axis scale of Traffic monitor to b/s:
> :DISPlay:ANALysis:TRAFfic:SCALe BPS

**:DISPlay:ANALysis:TRAFfic:SCALe?**

Response
<character> = <CHARACTER RESPONSE DATA>

Function
Queries graph vertical axis scale of Analyze:Traffic monitor screen.

Example use
> :DISPlay:ANALysis:TRAFfic:SCALe?
< BPS

**:DISPlay:ANALysis:TRAFfic:PRINt <type>**

Parameter
<type> = <CHARACTER PROGRAM DATA>
DISPlay Display
ALL All
AFTer After
BEFOr e Before

Function
Specifies printing range of Analyze:Traffic monitor screen.
Restriction

Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use
To set Traffic monitor screen range:
> :DISPlay:ANALysis:TRAFfic:PRINt:

**:DISPlay:ANALysis:TRAFfic:PRINt?**

Response

<table>
<thead>
<tr>
<th>&lt;type&gt;</th>
<th>CHARACTER RESPONSE DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISP</td>
<td>Display</td>
</tr>
<tr>
<td>ALL</td>
<td>All</td>
</tr>
<tr>
<td>AFT</td>
<td>After</td>
</tr>
<tr>
<td>BEF</td>
<td>Before</td>
</tr>
</tbody>
</table>

Function
Queries printing range of Analyze:Traffic monitor screen.

Example use
> :DISPlay:ANALysis:TRAFfic:PRINt?
< DISP

**:DISPlay:ANALysis:TRAFfic:TITLe <title>**

Parameter

<table>
<thead>
<tr>
<th>&lt;title&gt;</th>
<th>STRING PROGRAM DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Title character string&quot;</td>
<td>Title character string (up to 15 characters) &quot;&quot; is also allowed.</td>
</tr>
</tbody>
</table>

Function
Sets title of Analyze:Traffic monitor screen.

Restriction
Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.

Example use
To display "TITLE-DISP" as title of Analyze:Traffic monitor screen:
> :DISPlay:ANALysis:TRAFfic:TITLe "TITLE-DISP"

**:DISPlay:ANALysis:TRAFfic:TITLe?**

Response

<table>
<thead>
<tr>
<th>&lt;title&gt;</th>
<th>STRING RESPONSE DATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;&quot; Title character string &quot;&quot;</td>
<td></td>
</tr>
</tbody>
</table>

Function
Queries title of Analyze:Traffic monitor screen.

Example use
> :DISPlay:ANALysis:TRAFfic:TITLe?
< "TITLE-DISP"
4.4 Equipment Unique Command

:DISPlay:ANALysis:CAPTure:JUMP:TYPE <type>

Parameter 
<type> = <CHARACTER PROGRAM DATA>
TRIGger Displays trigger positions.
NUMBer Displays Number positions.

Function Selects display position on Analyze:Cell capture screen.

Restriction Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
- When :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
- When no Capture data exists.
- When no Trigger exists and <TRIGger> is set.

Example use To move to trigger display position:

:DISPlay:ANALysis:CAPTure:JUMP:TYPE?

Response <type> = <CHARACTER RESPONSE DATA>
TRIG Displays trigger positions
NUMB Displays Number positions

Function Queries display position on Analyze:Cell capture screen.

Example use > :DISPlay:ANALysis:CAPTure:JUMP:TYPE?
< TRIG


Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 2016

Function Sets display position (Number) on Analyze:Cell capture screen.

Restriction Invalid in the following cases:
- When the setting of :INSTrument:CONFig is other than <ATM>.
- When :DISPlay:TMENu[:NAME] is other than <"MANual:JON">,
- When no Capture data exists.

Example use To set display position to 10:
Section 4  Remote Control

:DISPLAY:ANALysis:CAPTure:JUMP:LINE?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries display position (Number) on Analyze:Cell capture screen.
Example use  > :DISPLAY:ANALysis:CAPTure:JUMP:LINE?
< 10

:DISPLAY:ANALysis:CAPTure:SCRoll <scroll>
Parameter  <scroll> = <CHARACTER PROGRAM DATA>
LEFT  Scrolls left
RIGHT  Scrolls right
UP  Scrolls up
DOWN  Scrolls down
HTOP  Displays the left edge
HBOTtom  Displays the right edge
VTOP  Displays the top
VBOTtom  Displays the bottom
Function  Requests scroll on Analyze:Cell capture screen.
Restriction  Invalid in the following cases:
- When no Capture data exists.
- When <LEFT>, <RIGHT>, <HTOP>, or <HBOTtom> is set while :DISPLAY:ANALysis:CAPTure:PTYPe is <ASCii> or <TRANslate>.
Example use  To display the top:
> :DISPLAY:ANALysis:CAPTure:SCRoll VTOP

:DISPLAY:ANALysis:CAPTure:PTYPe <type>
Parameter  <type> = <CHARACTER PROGRAM DATA>
HEX  HEX
ASCii  Ascii
TRANslate  Translate
Function  Sets Payload display type of Analyze:Cell capture screen.
Restriction  Invalid in the following cases:
- When the setting of :INSTRument:CONFig is other than <ATM>.
- When :DISPLAY:TMENu[:NAME] is other than "<MANual:JON>"; "<MANual:TCLayer>"; "<MANual:TCEL1>"; and "<MANual:RCEL1>".
Example use  To set Payload display type of Cell capture subscreen to HEX:
> :DISPLAY:ANALysis:CAPTure:PTYPe HEX
4.4 Equipment Unique Command

:DISPLAY:ANALysis:CAPTure:PTYPe?
Response  
[type] = <CHARACTER RESPONSE DATA>
  HEX  HEX
  ASC  Ascii
  TRAN  Translate
Function Queries Payload display type of Analyze:Cell capture screen.
Example use  
> :DISPLAY:ANALysis:CAPTure:PTYPe?
< HEX

:DISPLAY:ANALysis:CAPTure:PRINt <numeric1>,<numeric2>
Parameter  
<numeric1>,<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 2016
Function Specifies printing range of Analyze:Cell capture screen.
Restriction Invalid in the following cases:
  - When the setting of :INSTrument:CONFig is other than <ATM>.
  - When :DISPLAY:TMENU[:NAME] is other than "MANual:JON",
    "MANual:TCLayer", "MANual:TCEL1", and "MANual:RCEL1"
  - When <numeric1> > <numeric2>
Example use  
To set printing range of Cell capture subscreen:
> :DISPLAY:ANALysis:CAPTure:PRINt 1,20

:DISPLAY:ANALysis:CAPTure:PRINt?
Response  
<numeric1>,<numeric2> = <NR1 NUMERIC RESPONSE DATA>
Function Queries printing range of Analyze:Cell capture screen.
Example use  
> :DISPLAY:ANALysis:CAPTure:PRINt?
< 1,20

:DISPLAY:ANALysis:CAPTure:TITLe <title>
Parameter  
<title> = <STRING PROGRAM DATA>
"Title character string"  Title character string (up to 15 characters)
"" is also allowed.
Function Sets title of Analyze:Cell capture screen.
Restriction Invalid in the following cases:
  - When the setting of :INSTrument:CONFig is other than <ATM>.
  - When :DISPLAY:TMENU[:NAME] is other than "MANual:JON",
    "MANual:TCLayer", "MANual:TCEL1", and "MANual:RCEL1".
Example use  
To set "Cell capture":
> :DISPLAY:ANALysis:CAPTure:TITLe "Cell capture"
Section 4  Remote Control

**:DISPlay:ANALysis:CAPTure:TITLe?**

Response  
<title> = <STRING RESPONSE DATA>

Function  
Queries title of Analyze:Cell capture screen.

Example use  
>:DISPlay:ANALysis:CAPTure:TITLe?
< "Cell capture   

**:DISPlay:ANALysis:CDV1:SCRoll <scroll>**

Parameter  
<scroll> = <CHARACTER PROGRAM DATA>

LEFT  
Scrolls left

RIGHt  
Scrolls right

TOP  
Displays the top

BOTTom  
Displays the bottom

Function  
Requests scroll on Analyze:1-point CDV screen.

Restriction  
Invalid in the following case:
- When no 1-point CDV data exists.

Example use  
To display the top:
>:DISPlay:ANALysis:CDV1:SCRoll TOP

**:DISPlay:ANALysis:CDV1:TYPE <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>

INDividual  
Individual data

ACCumulative  
Accumulated data

Function  
Sets display data type of Analyze:1-point CDV screen.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"CDV1">.

Example use  
To set display data type of 1-point CDV subscreen to Individual:
>:DISPlay:ANALysis:CDV1:TYPE INDividual

**:DISPlay:ANALysis:CDV1:TYPE?**

Response  
<type> = <CHARACTER RESPONSE DATA>

IN  
Individual data

ACC  
Accumulated data

Function  
Queries display data type of Analyze:1-point CDV screen.

Example use  
>:DISPlay:ANALysis:CDV1:TYPE?
< IN
4.4 Equipment Unique Command

:DISPlay:ANALysis:CDV1:MARKer <marker>

Parameter  
<marker> = <CHARACTER PROGRAM DATA>
  LEFT   Moves marker 1 Div to the left
  RIGHT  Moves marker 1 Div to the right

Function  Requests marker movement on Analyze:1-point CDV screen.

Restriction  Invalid in the following case:
  - When :DISPlay:ANALysis:CDV1:MDISplay is <OFF>.

* Note: In multiple screen mode, the marker moves normally when set on.

Example use  To move marker to the right:
> :DISPlay:ANALysis:CDV1:MARKer RIGHT

:DISPlay:ANALysis:CDV1:PEAK <peak>

Parameter  
<peak> = <CHARACTER PROGRAM DATA>
  BEFore   Before search
  NEXT     Next search

Function  Requests peak search on Analyze:1-point CDV screen.

Restriction  Invalid in the following cases:
  - When :DISPlay:ANALysis:CDV1:MDISplay is <OFF>.
  - When there are no peaks left of the marker and <BEFore> is set.
  - When there are no peaks right of the marker and <NEXT> is set.

* Note: In multiple screen mode, normal operation is performed when the marker is set on.

Example use  To request Before search:
> :DISPlay:ANALysis:CDV1:PEAK BEFore

:DISPlay:ANALysis:CDV1:ZOOM <type>

Parameter  
$type> = <CHARACTER PROGRAM DATA>
  IN       Zoom-in function:
  OUT      Zoom-out function:

Function  Executes zoom function on Analyze:1-point CDV screen.

Restriction  Invalid in the following cases:
  - When :DISPlay:ANALysis:CDV1:MDISplay is <OFF>.
  - When :DISPlay:ANALysis:CDV1:INTerval is <1> and <IN> is set.
  - When :DISPlay:ANALysis:CDV1:INTerval is <300> and <OUT> is set.

* Note: In multiple screen mode, normal operation is performed when the marker is set on.

Example use  To execute zoom-in function:
> :DISPlay:ANALysis:CDV1:ZOOM IN
Section 4  Remote Control

**:DISPLAY:ANALysis:CDV1:DATA?**

Response  
<time>,<cell>,<count>,<rate>

<time> = <STRING RESPONSE DATA>
Interval of cell indicated by marker (µs)
Form12

[cell] = <STRING RESPONSE DATA>
Number of intervals of cell indicated by marker (cell)
Form12

<count> = <STRING RESPONSE DATA>
Number of cells indicated by marker
Form1

<rate> = <STRING RESPONSE DATA>
Cell rate of cell indicated by marker (%)
Form3

Function  
Queries data indicated by marker on Analyze:1-point CDV screen.

Example use  
> :DISPLAY:ANALysis:CDV1:DATA?
< "4","10","100","50.0000"

**:DISPLAY:ANALysis:CDV1:INTerval <character>**

Parameter  
<character> = <CHARACTER PROGRAM DATA>
1, 10, 100, 500  cell

Function  
Sets graduation width of Interval axis of Analyze:1-point CDV screen.

Restriction  
Invalid in the following case:
- When :DISPLAY:TMENu[:NAME] is other than <"CDV1">.

Example use  
To set graduation width to one step:
> :DISPLAY:ANALysis:CDV1:INTerval 1

**:DISPLAY:ANALysis:CDV1:INTerval?**

Response  
<numer1> = <NR1 NUMERIC RESPONSE DATA>
<numer2> = <NR2 NUMERIC RESPONSE DATA>
0.7 - 276041.7  (µs)

Note: The Interval µs range varies depending on Rx Bit rate.

Function  
Queries graduation width of Interval axis of Analyze:1-point CDV screen.

Example use  
> :DISPLAY:ANALysis:CDV1:INTerval?
< 1,100
**4.4  Equipment Unique Command**

`:DISPlay:ANALysis:CDV1:IUNit <unit>`

Parameter  
- `<unit>` = `<CHARACTER PROGRAM DATA>`
  - CELL  Cell
  - US  µs

Function  
Sets horizontal axis display interval of Analyze:1-point CDV screen.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"CDV1">.

Example use  
To set horizontal axis display interval of 1-point CDV subscreen to Cell:
> :DISPlay:ANALysis:CDV1:IUNit CELL

`:DISPlay:ANALysis:CDV1:IUNit?`  

Example use  
> :DISPlay:ANALysis:CDV1:IUNit?

Response  
- `<unit>` = `<CHARACTER RESPONSE DATA>`
  - CELL  Cell
  - US  µs

Function  
Queries horizontal axis display interval of Analyze:1-point CDV screen.

Example use  
> :DISPlay:ANALysis:CDV1:IUNit?

`:DISPlay:ANALysis:CDV1:MDISplay <boolean>`

Parameter  
- `<boolean>` = `<BOOLEAN PROGRAM DATA>`
  - OFF  or 0  Turns off marker.
  - ON  or 1  Turns on marker.

Function  
Sets whether to display marker on Analyze:1-point CDV screen.

Restriction  
Invalid in the following case:
- When no 1-point CDV data exists.

Example use  
To set marker display ON:
> :DISPlay:ANALysis:CDV1:MDISplay ON

`:DISPlay:ANALysis:CDV1:MDISplay?`  

Example use  
> :DISPlay:ANALysis:CDV1:MDISplay?

Response  
- `<boolean>` = `<NR1 NUMERIC RESPONSE DATA>`
  - 0  Turns off marker.
  - 1  Turns on marker.

Function  
Queries marker display on Analyze:1-point CDV screen.

Example use  
> :DISPlay:ANALysis:CDV1:MDISplay?

< 1
Section 4  Remote Control

:DISPlay:ANALysis:CDV1:PRINt <type>
Parameter  
- <type> = <CHARACTER PROGRAM DATA>
  DISPLAY  Display
Function Specifies the printing range of the Analyze:1-point CDV screen.
Restriction Invalid in the following case:
  - When :DISPlay:TMENU[:NAME] is other than "CDV1".
Example use To print the screen range currently on display:
  > :DISPlay:ANALysis:CDV1:PRINt DISPLAY

Response <type> = <CHARACTER RESPONSE DATA>
  DISPLAY  Display
Function Queries the printing range of the Analyze:1-point CDV screen.
Example use > :DISPlay:ANALysis:CDV1:PRINt?
  < DISPLAY

:DISPlay:ANALysis:CDV1:TITLe <title>
Parameter  
- <title> = <STRING PROGRAM DATA>
  "Title character string"  Title character string (up to 15 characters)
  "" is also allowed.
Function Sets the title of the Analyze:1-point CDV screen.
Restriction Invalid in the following case:
  - When :DISPlay:TMENU[:NAME] is other than "CDV1"
Example use To set "1-point CDV":
  > :DISPlay:ANALysis:CDV1:TITLe "1-point CDV"

Response <title> = <STRING RESPONSE DATA>
Function Queries the title of the Analyze:1-point CDV screen.
Example use > :DISPlay:ANALysis:CDV1:TITLe?
  < "1-point CDV"

:DISPlay:ANALysis:CDV2:SCRoll <scroll>
Parameter  
- <scroll> = <CHARACTER PROGRAM DATA>
  LEFT  Scrolls left.
  RIGHT  Scrolls right.
  TOP  Displays the top.
  BOTTOM  Displays the bottom.
Function Requests a scroll on the Analyze:2-point CDV screen.
Restriction Invalid in the following case:
  - When no 2-point CDV data exists.
Example use To display the top:
> :DISPlay:ANALysis:CDV2:SCRoll TOP

**:DISPlay:ANALysis:CDV2:TYPE <type>**
Parameter  
\(<\text{type}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)
INDividual Individually data
ACCumulative Accumulated data
Function Sets display data type of Analyze:2-point CDV screen.
Restriction Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"CDV2">.
Example use To set display data type of 2-point CDV subscreen to Individual:
> :DISPlay:ANALysis:CDV2:TYPE INDividual

**:DISPlay:ANALysis:CDV2:TYPE?**
Response  
\(<\text{type}> = \langle\text{CHARACTER RESPONSE DATA}\rangle\)
IND Individual data
ACC Accumulated data
Function Queries display data type of Analyze:2-point CDV screen.
Example use > :DISPlay:ANALysis:CDV2:TYPE?
< IND

**:DISPlay:ANALysis:CDV2:MARKer <marker>**
Parameter  
\(<\text{marker}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)
LEFT Moves marker 1 Div to the left.
RIGHT Moves marker 1 Div to the right.
Function Requests marker movement on Analyze:2-point CDV screen.
Restriction Invalid in the following case:
- When :DISPlay:ANALysis:CDV2:MDISplay is <OFF>.
  
  * Note: In multiple screen mode, the marker moves normally when set on.
Example use To move marker to the right:
> :DISPlay:ANALysis:CDV2:MARKer RIGHt

**:DISPlay:ANALysis:CDV2:PEAK <peak>**
Parameter  
\(<\text{peak}> = \langle\text{CHARACTER PROGRAM DATA}\rangle\)
BEFore Before search
NEXT Next search
Function Requests peak search on Analyze:2-point CDV screen.
Restriction Invalid in the following cases:
- When :DISPlay:ANALysis:CDV2:MDISplay is <OFF>.
- When there are no peaks left of the marker and <BEFore> is set.
Section 4  Remote Control

- When there are no peaks right of the marker and <NEXT> is set.

* Note: In multiple screen mode, normal operation is performed when the marker is set on.

Example use

To request Before search:

> :DISPlay:ANALysis:CDV2:PEAK BEFORE

:DISPlay:ANALysis:CDV2:ZOOM <type>

Parameter

<type> = <CHARACTER PROGRAM DATA>

IN  Zoom-in function

OUT  Zoom-out function

Function

Executes zoom function on Analyze:2-point CDV screen.

Restriction

Invalid in the following cases:

- When :DISPlay:ANALysis:CDV2:MDISplay is <OFF>.
- When :DISPlay:ANALysis:CDV2:INTerval is <1>, and <IN> is set.
- When :DISPlay:ANALysis:CDV2:INTerval is <300>, and <OUT> is set.

* Note: In multiple screen mode, normal operation is performed when the marker is set on.

Example use

To execute zoom-in function:

> :DISPlay:ANALysis:CDV2:ZOOM IN

:DISPlay:ANALysis:CDV2:DATA?

Response

*time*,<cell>,<count>,<rate>

*time* = <STRING RESPONSE DATA>

Interval of cell indicated by marker (µs)

Form12

<cell> = <STRING RESPONSE DATA>

Number of intervals of cell indicated by marker (cell)

Form12

<count> = <STRING RESPONSE DATA>

Number of cells indicated by marker

Form1

<rate> = <STRING RESPONSE DATA>

Rate of cell indicated by marker (%)  

Form1

Note: The following is output when no analysis data exists:

< "--------","--------","--------","--------"  

Function

Queries the data indicated by the marker on the Analyze:2-point CDV screen.

Example use

> :DISPlay:ANALysis:CDV2:DATA?

<"7","10","100","50.0000"
4.4 Equipment Unique Command

**:DISPlay:ANALysis:CDV2:INTerval <character>**

Parameter  
<character> = <CHARACTER PROGRAM DATA>
1, 10, 100, 500

Function  
Sets the graduation width of the Interval axis of the Analyze: 2-point CDV screen.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than "CDV2".

Example use  
To set the graduation width to one step:
> :DISPlay:ANALysis:CDV2:INTerval 1

**:DISPlay:ANALysis:CDV2:INTerval?**

Response  
<numeric1> = <NR1 NUMERIC RESPONSE DATA>
<numeric2> = <NR2 NUMERIC RESPONSE DATA>
0.7 · 276041.7 (µs)

Note: The Interval µs range varies depending on the Rx Bit rate.

Function  
Queries the graduation width of the Interval axis of the Analyze: 2-point CDV screen.

Example use  
> :DISPlay:ANALysis:CDV2:INTerval?
< 1,100

**:DISPlay:ANALysis:CDV2:IUNit <unit>**

Parameter  
<unit> = <CHARACTER PROGRAM DATA>
CELL Cell
US µs

Function  
Sets the horizontal axis display interval of the Analyze: 2-point CDV screen.

Restriction  
Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than "CDV2".

Example use  
To set the horizontal axis display interval of the 2-point CDV subscreen to Cell:
> :DISPlay:ANALysis:CDV2:IUNit CELL

**:DISPlay:ANALysis:CDV2:IUNit?**

Response  
<unit> = <CHARACTER RESPONSE DATA>
CELL Cell
US µs

Function  
Queries the horizontal axis display interval of the Analyze: 2-point CDV screen.

Example use  
> :DISPlay:ANALysis:CDV2:IUNit?
< CELL
**:DISPlay:ANALysis:CDV2:MDISplay <boolean>**

Parameter \(<\text{boolean}>\) = <BOOLEAN PROGRAM DATA>

- OFF or 0  Turns marker off.
- ON or 1   Turns marker on.

Function Sets whether to display the marker on the Analyze:2-point CDV screen.

Restriction Invalid in the following case:
- When no 2-point CDV data exists.

Example use
- To set marker display to ON:
  > :DISPlay:ANALysis:CDV2:MDISplay ON

**:DISPlay:ANALysis:CDV2:MDISplay?**

Response \(<\text{boolean}>\) = <NR1 NUMERIC RESPONSE DATA>

- 0  Marker OFF
- 1  Marker ON

Function Queries the setting on whether to display the marker on the Analyze:2-point CDV screen.

Example use
- > :DISPlay:ANALysis:CDV2:MDISplay?
  < 1

**:DISPlay:ANALysis:CDV2:PRINt <type>**

Parameter \(<\text{type}>\) = <CHARACTER PROGRAM DATA>

- DISPlay  Display

Function Specifies the printing range of the Analyze:2-point CDV screen.

Restriction Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than "CDV2".

Example use
- To print the screen range currently on display:
  > :DISPlay:ANALysis:CDV2:PRINt DISPlay

**:DISPlay:ANALysis:CDV2:PRINt?**

Response \(<\text{type}>\) = <CHARACTER RESPONSE DATA>

- DISP  Display

Function Queries the printing range of the Analyze:2-point CDV screen.

Example use
- > :DISPlay:ANALysis:CDV2:PRINt?
  < DISP

**:DISPlay:ANALysis:CDV2:TITLe <title>**

Parameter \(<\text{title}>\) = <STRING PROGRAM DATA>

- "Title character string"  Title character string (up to 15 characters)
- "" is also allowed.

Function Sets the title of the Analyze:2-point CDV screen.
Restriction  Invalid in the following case:
- When :DISPlay:TMENu[:NAME] is other than <"CDV2">.

Example use  To set "2-point CDV":
> :DISPlay:ANALysis:CDV2:TITLe "2-point CDV"

:DISPlay:ANALysis:CDV2:TITLe?
Response  <title> = <STRING RESPONSE DATA>
Function  Queries the title of the Analyze:2-point CDV screen.
Example use  > :DISPlay:ANALysis:CDV2:TITLe?
< "2-point CDV"

:DISPlay:ANALysis:OHCapture:TITLe <title>
Parameter  <title> = <STRING PROGRAM DATA>
"Title character string”  Title character string (up to 15 characters)
"” is also allowed.
Function  Sets the title of the Analyze:OH capture screen.
Restriction  Invalid in the following cases:
- When :SENSe:TELecom:BRATe is <M139>, <M45>, <M34>, <M8>, <M2>, or <M1_5>.
Example use  To set the title of OH capture to "TITLE-DISP":
> :DISPlay:ANALysis:FRAMe64:TITLe "TITLE-DISP"

:DISPlay:ANALysis:RECall:TGRaph:ERRor <error1>, <error2>
Parameter  <error1> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:TGRaph:ERRor.
<error2> = <CHARACTER PROGRAM DATA>
Same as :DISPlay:ANALysis:TGRaph:ERRor.
Function  Sets the error item for Error/Alarm graph display on the Analyze:Recall screen.
Restriction  Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"EAL">.
- When the specified measurement result is not found.
- When <ER> is set while <"HIT">, <"SAR_PDU">, <"SECBl">, <"CPSC">, <"PMCount">, <"TUC01">, <"TUC0">, <"TRCC0">, or <"TRCC01"> is set.
Example use  To display the error rate of bit errors:
> :DISPlay:ANALysis:RECall:TGRaph:ERRor "BIT", ER
**Section 4  Remote Control**

`:DISPlay:ANALysis:RECall:TGRaph:ERRor?`

- **Response**
  - `<error1>,<error2>`
  - `<error1> = <STRING RESPONSE DATA>`
  - `<error2> = <CHARACTER RESPONSE DATA>`

- **Function**
  Queries the error item for Error/Alarm graph display on the Analyze: Recall screen.

- **Example use**
  > :DISPlay:ANALysis:RECall:TGRaph:ERRor?
  < "BIT",ER

`:DISPlay:ANALysis:RECall:TGRaph:ALARm1 <alarm>`

- **Parameter**
  - `<alarm> = <STRING PROGRAM DATA>`
  - Same as :DISPlay:ANALysis:TGRaph:ALARm1.

- **Function**
  Sets the alarm item to be displayed as alarm 1 on the Analyze: Recall screen.

- **Restriction**
  Invalid in the following case:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "EAL".

- **Example use**
  > :DISPlay:ANALysis:RECall:TGRaph:ALARm1 "POWer"

`:DISPlay:ANALysis:RECall:TGRaph:ALARm1?`

- **Response**
  - `<alarm> = <STRING RESPONSE DATA>`

- **Function**
  Queries the alarm item to be displayed as alarm 1 on the Analyze: Recall screen.

- **Example use**
  > :DISPlay:ANALysis:RECall:TGRaph:ALARm1?  
  < "POW"

`:DISPlay:ANALysis:RECall:TGRaph:ALARm2 <alarm>`

- **Parameter**
  - `<alarm> = <STRING PROGRAM DATA>`
  - Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.

- **Function**
  Sets the alarm item to be displayed as alarm 2 on the Analyze:Recall screen.

- **Restriction**
  Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.

`:DISPlay:ANALysis:RECall:TGRaph:ALARm2?`

- **Response**
  - `<alarm> = <STRING RESPONSE DATA>`
  - Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1?

- **Function**
  Queries the alarm item to be displayed as alarm 2 on the Analyze:Recall screen.
4.4 Equipment Unique Command

:DISPlay:ANALysis:RECall:TGRaph:ALARm3 <alarm>
Parameter  <alarm> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.
Function Sets the alarm item to be displayed as alarm 3 on the Analyze:Recall screen.
Restriction Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.

:DISPlay:ANALysis:RECall:TGRaph:ALARm3?
Response  <alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1?.
Function Queries the alarm item to be displayed as alarm 3 on the Analyze:Recall screen.

:DISPlay:ANALysis:RECall:TGRaph:ALARm4 <alarm>
Parameter  <alarm> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.
Function Sets the alarm item to be displayed as alarm 4 on the Analyze:Recall screen.
Restriction Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.

:DISPlay:ANALysis:RECall:TGRaph:ALARm4?
Response  <alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1?.
Function Queries the alarm item to be displayed as alarm 4 on the Analyze:Recall screen.

:DISPlay:ANALysis:RECall:TGRaph:ALARm5 <alarm>
Parameter  <alarm> = <STRING PROGRAM DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.
Function Sets the alarm item to be displayed as alarm 5 on the Analyze:Recall screen.
Restriction Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1.

:DISPlay:ANALysis:RECall:TGRaph:ALARm5?
Response  <alarm> = <STRING RESPONSE DATA>
Same as :DISPlay:ANALysis:RECall:TGRaph:ALARm1?.
Function Queries the alarm item to be displayed as alarm 5 on the Analyze:Recall screen.
Section 4  Remote Control

:DISPlay:ANALysis:RECall:LMONitor:SCRoll <scroll>

Parameter  
<scroll> = <CHARACTER PROGRAM DATA>

- UP  
  Scrolls upward.
- DOWN  
  Scrolls down.
- TOP  
  Displays the top.
- BOTTOM  
  Displays the bottom.

Function  
Specifies a scroll on the Analyze:Recall screen (Live monitor).

Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CCM".

Example use  
To scroll up:
> :DISPlay:ANALysis:RECall:LMONitor:SCRoll UP

:DISPlay:ANALysis:RECall:LMONitor:INTerval <numeric>,<suffix>

Parameter  
<numeric> = <CHARACTER PROGRAM DATA>
1000, 5000, 10000, 50000, 100000, 500000, 1000000

<suffix> = <CHARACTER PROGRAM DATA>
CPS  
Cell/s

Function  
Sets the horizontal axis width of the Analyze:Recall screen (Live monitor).

Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CCM".

Example use  
To set the horizontal axis width to 1000:
> :DISPlay:ANALysis:RECall:LMONitor:INTerval 1000,CPS

:DISPlay:ANALysis:RECall:LMONitor:INTerval?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>

<suffix> = <CHARACTER RESPONSE DATA>

Function  
Queries the horizontal axis width of the Analyze:Recall screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:INTerval?
< 1000,CPS

:DISPlay:ANALysis:RECall:LMONitor:VPI <numeric1>[,<numeric2>]

Parameter  
<numeric1> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 4095  
VPI value

<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 65535  
VCI value

Function  
Centers the data specified by VPI and VCI on the Analyze:Recall screen (Live monitor).

Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CCM".
Example use To set the VPI of the horizontal axis center value to 1000:
> :DISPlay:ANALysis:RECall:LMONitor:VPI 1000

**:DISPlay:ANALysis:RECall:LMONitor:VPI?**

Response  
<numeric1> = <NR1 NUMERIC RESPONSE DATA>
<numeric2> = <NR1 NUMERIC RESPONSE DATA>

Function Queries the VPI and VCI of the center value on the Analyze:Recall screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:VPI?
< 100,20

**:DISPlay:ANALysis:RECall:LMONitor:NUMBer <numeric>**

Parameter  
<numeric1> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1000 No.

Function Centers the specified number on the Analyze:Recall screen (Live monitor).

Restriction Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CCM">.

Example use  
To jump to 23:
> :DISPlay:ANALysis:RECall:LMONitor:NUMBer 23

**:DISPlay:ANALysis:RECall:LMONitor:NUMBer?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries the screen display center position of the Analyze:Recal screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:NUMBer?
< 23

**:DISPlay:ANALysis:RECall:LMONitor:PRINt <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>
DISPlay Display
ALL All
AFTer After
BEFore Before

Function Specifies the printing range of the Analyze:Recall screen (Live monitor).

Restriction Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CCM">.

Example use  
To set the printing range of the Live monitor screen:
> :DISPlay:ANALysis:RECall:LMONitor:PRINt DISPLAY
Section 4  Remote Control

**:DISPlay:ANALysis:RECall:LMONitor:PRINt?**

Response  
<type> = <CHARACTER RESPONSE DATA>

- DISP  Display
- ALL  All
- AFT  After
- BEF  Before

Function  Queries the printing range of the Analyze:Recall screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:PRINt?
< DISP

**:DISPlay:ANALysis:RECall:LMONitor:PTYPe <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>

- NUMeric  Numeric data printing
- GRAPh  Graph data printing

Function  Specifies the print data of the Analyze:Recall screen (Live monitor).

Restriction  Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CCM".

Example use  
To set the print data of the Live monitor screen:
> :DISPlay:ANALysis:RECall:LMONitor:PTYPe GRAPh

**:DISPlay:ANALysis:RECall:LMONitor:PTYPe?**

Response  
<type> = <CHARACTER RESPONSE DATA>

- NUM  Numeric data
- GRAP  Graph data

Function  Queries the print data of the Analyze:Recall screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:PTYPe?
< GRAP

**:DISPlay:ANALysis:RECall:LMONitor:TITLe?**

Response  
<title> = <STRING RESPONSE DATA>

Function  Queries the title of the Analyze:Recall screen (Live monitor).

Example use  
> :DISPlay:ANALysis:RECall:LMONitor:TITLe?
< "TITLE-DISP"

**:DISPlay:ANALysis:RECall:LMONitor:THReshold[:SWITch] <boolean>**

Parameter  
<boolean> = <BOOLEAN PROGRAM DATA>

- OFF or 0  Non—display (monitor)
- ON or 1  Display (Threshold screen)

Function  Set the threshold display on the Analyze:Recall (Live monitor) screen.
Example use  To display the threshold of the Live monitor.
>:DISPLAY:ANALysis:RECall:LMONitor:THReshold[:SWITch] ON

**:DISPLAY:ANALysis:RECall:LMONitor:THReshold[:SWITch]?**

Response  
\(<\text{boolean}> = <\text{NR1 NUMERIC RESPONSE DATA}>\)
0  Non-display
1  Display

Function  Queries the threshold display of the Analyze:RECall (Live monitor)
screen.

Example use  >:DISPLAY:ANALysis:RECall:LMONitor:THReshold[:SWITch]?
< 1

**:DISPLAY:ANALysis:RECall:LMONitor:THReshold:NCONforming <character>**

Parameter  
\(<\text{character}> = <\text{CHARACTER PROGRAM DATA}>\)
BPS  kbit/s
CPS  Cell/s
PERCent  %

Function  Sets the unit the threshold (Non-conforming) on the Analyze:RECall
(Live monitor) screen.

Example use  To set the unit of the threshold (Non-conforming) to Cell/s.
>:DISPLAY:ANALysis:RECall:LMONitor:THReshold:NCONforming
CPS

**:DISPLAY:ANALysis:RECall:LMONitor:THReshold:NCONforming?**

Response  
\(<\text{character}> = <\text{CHARACTER RESPONSE DATA}>\)
Same as
"::DISPLAY:ANALysis:RECall:LMONitor:THReshold:NCONforming"

Function  Queries the unit the threshold (Non-conforming) on the
Analyze:RECall (Live monitor) screen.

Example use  > :DISPLAY:ANALysis:RECall:LMONitor:THReshold:NCONforming?
< CPS

**:DISPLAY:ANALysis:RECall:TRAFFic:SCRoll <scroll>**

Parameter  
\(<\text{scroll}> = <\text{CHARACTER PROGRAM DATA}>\)
LEFT  Scrolls leftward.
RIGHT  Scrolls right.
TOP  Displays the top.
BOTTOM  Displays the bottom.

Function  Requests the scroll on the Analyze:Recall screen (Traffic monitor).

Restriction  Invalid in the following case:
- When :DISPLAY:ANALysis:RECall:TYPE? is other than ""TRAFF""."
Example use To scroll leftward:
> :DISPlay:ANALysis:RECall:TRAFfic:SCRoll LEFT

`:DISPlay:ANALysis:RECall:TRAFfic:MARKer <marker>`

Parameter `<marker> = <CHARACTER PROGRAM DATA>`
- LEFT Moves the marker 1 Div to the left.
- RIGHT Moves the marker 1 Div to the right.

Function Requests marker movement on the Analyze:Recall screen (Traffic monitor).

Restriction Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"TRAF">.
- When :DISPlay:ANALysis:RECall:TRAFfic:MDISplay is <OFF>.
* Note: In multiple screen mode, the marker moves normally as if on.

Example use To move the marker to the right:
> :DISPlay:ANALysis:RECall:TRAFfic:MARKer RIGHt

`:DISPlay:ANALysis:RECall:TRAFfic:DATA?`

Response `<time>,<mean>,<max>,<min>`

Function Queries the data indicated by the marker on the Analyze:Recall screen (Traffic monitor).

Example use > :DISPlay:ANALysis:RECall:TRAFfic:DATA?
< 2000,12,25,12,54,30," 1"," 0"," 104"

`:DISPlay:ANALysis:RECall:TRAFfic:INTeval <numeric>,<suffix>`

Parameter `<numeric> = <CHARACTER PROGRAM DATA>`
- 1, 15, 60
 `<suffix> = <CHARACTER PROGRAM DATA>`
- M minute
- S second

Function Sets the graduation width of the time axis of the Analyze:Recall screen (Traffic monitor).

Restriction Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"TRAF">.
- When other than one of the following values is set according to the graph resolution at saving:
  - 1s: 1s, 1min,15min,60min
  - 1min: 1min,15min,60min
  - 15min:15min,60min
  - 60min:60min

Example use To set the graduation width to one minute:
> :DISPlay:ANALysis:RECall:TRAFfic:INTeval 1,M
4.4 Equipment Unique Command

**:DISPlay:ANALysis:RECall:TRAFFic:INTerval?**

Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>  
<suffix> = <CHARACTER RESPONSE DATA>

Function

Queries the graduation width of the time axis of the Analyze:Recall screen (Traffic monitor).

Example use

> :DISPlay:ANALysis:RECall:TRAFFic:INTerval?

Response

<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function

Example use

> :DISPlay:ANALysis:RECall:TRAFFic:INTerval?

Parameter <boolean> = <BOOLEAN PROGRAM DATA>

OFF or 0  Turns marker off.
ON  or 1   Turns marker on.

Function

Sets whether to display the marker on the Analyze:Recall screen (Traffic monitor).

Restriction

Invalid in the following case:

- When :DISPlay:ANALysis:RECall:TYPE? is other than "TRAFFic".

Example use

To set the marker display on Traffic monitor to ON:

> :DISPlay:ANALysis:RECall:TRAFFic:MDISplay 1

**:DISPlay:ANALysis:RECall:TRAFFic:MDISplay <boolean>**

Parameter <boolean> = <BOOLEAN PROGRAM DATA>

OFF or 0  Turns marker off.
ON  or 1   Turns marker on.

Function

Sets whether to display the marker on the Analyze:Recall screen (Traffic monitor).

Example use

To set the marker display on Traffic monitor to ON:

> :DISPlay:ANALysis:RECall:TRAFFic:MDISplay 1

**:DISPlay:ANALysis:RECall:TRAFFic:MDISplay?**

Response  

<boolean> = <NR1 NUMERIC RESPONSE DATA>

0  Marker OFF
1  Marker ON

Function

Queries the setting on whether to display the marker on the Analyze:Recall screen (Traffic monitor).

Example use

> :DISPlay:ANALysis:RECall:TRAFFic:MDISplay?

Response

<boolean> = <NR1 NUMERIC RESPONSE DATA>

Function

Notes:

- If the time specified by the parameter does not exist, the earliest time after the specified time is set.
- If time before the first data time is specified, the first data time is set.
- If time after the last data time is specified, the last data time is set.
Section 4  Remote Control

Function Sets the display start position of the Traffic monitor graph on the Analyze:Recall screen.

Restriction Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "TRAF".

Example use To display from 11:30:40 on July 28, 2000:

:DISPlay:ANALysis:RECall:TRAFfic:FROM?
Response <numeric1>,<numeric2>,<numeric3>,<numeric4>,<numeric5>,
<numeric6>
= <NR1 NUMERIC RESPONSE DATA>

Function Queries the display start position of the Traffic monitor graph on the Analyze:Recall screen.

Example use > :DISPlay:ANALysis:RECall:TRAFfic:FROM?
< 2000,7,28,11,30,40

:DISPlay:ANALysis:RECall:TRAFfic:SCALe <character>
Parameter <character> = <CHARACTER PROGRAM DATA>
  BPS bit/s
  CPS cell/s
  PERCent %

Function Sets the graph vertical axis scale of the Analyze:Recall screen (Traffic monitor).

Restriction Invalid in the following cases.
- :INSTrument:CONFig is other than <ATM>.

Example use To set the graph vertical axis scale of the Traffic monitor graph to bit/s.
> :DISPlay:ANALysis:TRAFfic:SCALe BPS

:DISPlay:ANALysis:RECall:TRAFfic:SCALe?
Response <character> = <CHARACTER RESPONSE DATA>

Function Queries the graph vertical scale of the Analyze:Recall screen (Traffic monitor).

Example use > :DISPlay:ANALysis:TRAFfic:SCALe?
< BPS
**:DISPlay:ANALysis:RECall:TRAFfic:PRINt <type>**

Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;type&gt;</td>
<td>&lt;CHARACTER PROGRAM DATA&gt;</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Display</td>
</tr>
<tr>
<td>ALL</td>
<td>All</td>
</tr>
<tr>
<td>AFTER</td>
<td>After</td>
</tr>
<tr>
<td>BEFORE</td>
<td>Before</td>
</tr>
</tbody>
</table>

Function

Specifies the printing range of the Analyze:Recall screen (Traffic monitor).

Restriction

Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "TRAF".

Example use

To set the Traffic monitor screen range:

> :DISPlay:ANALysis:RECall:TRAFfic:PRINt DISPLAY

**:DISPlay:ANALysis:RECall:TRAFfic:PRINt?**

Response

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;type&gt;</td>
<td>&lt;CHARACTER RESPONSE DATA&gt;</td>
</tr>
<tr>
<td>DISPLAY</td>
<td>Display</td>
</tr>
<tr>
<td>ALL</td>
<td>All</td>
</tr>
<tr>
<td>AFTER</td>
<td>After</td>
</tr>
<tr>
<td>BEFORE</td>
<td>Before</td>
</tr>
</tbody>
</table>

Function

Queries the printing range of the Analyze:Recall screen (Traffic monitor).

Example use

To query the Traffic monitor screen range:

> :DISPlay:ANALysis:RECall:TRAFfic:PRINt?

Response

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISP</td>
<td>Display</td>
</tr>
</tbody>
</table>

**:DISPlay:ANALysis:RECall:CAPTure:JUMP:TYPE <type>**

Parameter

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;type&gt;</td>
<td>&lt;CHARACTER PROGRAM DATA&gt;</td>
</tr>
<tr>
<td>TRIGGER</td>
<td>Displays trigger positions.</td>
</tr>
<tr>
<td>NUMBER</td>
<td>Displays number positions.</td>
</tr>
</tbody>
</table>

Function

Sets the display position on the Analyze:Recall screen (Cell capture).

Restriction

Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CAPT".
- When no Trigger exists and <TRIGGER> is set.

Example use

To move the trigger display position:

Section 4  Remote Control

:DISPLAY:ANALysis:RECall:CAPTure:JUMP:TYPE?

Response  
<type> = <CHARACTER RESPONSE DATA>

TRIG Displays trigger positions.
NUMB Displays number positions.

Function Queries the display position on the Analyze:Recall screen (Cell capture).

Example use > :DISPLAY:ANALysis:RECall:CAPTure:JUMP:TYPE?
< TRIG

:DISPLAY:ANALysis:RECall:CAPTure:JUMP:LINE <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>

1 - 2016

Function Sets the display position (Number) on the Analyze:Recall screen (Cell capture).

Restriction Invalid in the following cases:
- When :DISPLAY:ANALysis:RECall:TYPE? is other than <"CAPT">.
- When the setting exceeds the total number of Capture data items.

Example use To set the display position to 10:

:DISPLAY:ANALysis:RECall:CAPTure:JUMP:LINE?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>

Function Queries the display position (Number) on the Analyze:Recall screen (Cell capture).

Example use > :DISPLAY:ANALysis:RECall:CAPTure:JUMP:LINE?
< 10

:DISPLAY:ANALysis:RECall:CAPTure:SCRoll <scroll>

Parameter  
<scroll> = <CHARACTER PROGRAM DATA>

LEFT Scrolls left.
RIGHT Scrolls right.
UP Scrolls up.
DOWN Scrolls down.
HTOP Displays the left edge.
HBOTTOM Displays the right edge.
VTOP Displays the top.
VBOTTOM Displays the bottom.

Function Requests a scroll on the Analyze:Recall screen (Cell capture).

Restriction Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CAPT">.
- When <LEFT>, <RIGHT>, <HTOP>, or <HBOTtom> is set while :DISPlay:ANALysis:RECall:CAPTure:PTYPe is <ASCii> or <TRANslate>.

Example use
To display the top:
> :DISPlay:ANALysis:RECall:CAPTure:SCRoll VTOP

**:DISPlay:ANALysis:RECall:CAPTure:PTYPe <type>**
Parameter
<type> = <CHARACTER PROGRAM DATA>
HEX
ASCii
TRANslate

Function
Sets the Payload display type of the Analyze:Recall screen (Cell capture).

Restriction
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CAPT">.

Example use
To set the Payload display type of the Cell capture subscreen to HEX:
> :DISPlay:ANALysis:RECall:CAPTure:PTYPe HEX

**:DISPlay:ANALysis:RECall:CAPTure:PTYPe?**
Response
<type> = <CHARACTER RESPONSE DATA>
HEX
ASC
TRAN

Function
Queries the Payload display type of the Analyze:Recall screen (Cell capture).

Example use
> :DISPlay:ANALysis:RECall:CAPTure:PTYPe?
< HEX

**:DISPlay:ANALysis:RECall:CAPTure:PRINt <numeric1>,<numeric2>**
Parameter
<numeric1>,<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 2016

Function
Specifies the printing range of the Analyze:Recall screen (Cell capture).

Restriction
Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CAPT">.
- When <numeric1> > <numeric2>.

Example use
To set the Cell capture screen range:
> :DISPlay:ANALysis:RECall:CAPTure:PRINt 1,20
Section 4  Remote Control

:DISPLAY:ANALysis:RECall:CAPTure:PRINT?
Response  <numeric1>,<numeric2> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the printing range of the Analyze:Recall screen (Cell capture).
Example use > :DISPLAY:ANALysis:RECall:CAPTure:PRINT?
< 1,20

:DISPLAY:ANALysis:RECall:CAPTure:TITLe?
Response  <title> = <STRING RESPONSE DATA>
Function Queries the title of the Analyze:Recall screen (Cell capture).
Example use > :DISPLAY:ANALysis:RECall:CAPTure:TITLe?
< "Cell capture"

:DISPLAY:ANALysis:RECall:CDV1:SCRoll <scroll>
Parameter <scroll> = <CHARACTER PROGRAM DATA>
  LEFT    Scrolls left.
  RIGHt   Scrolls right.
  TOP     Displays the top.
  BOTTom  Displays the bottom.
Function Requests a scroll on the Analyze:Recall screen (1-point CDV).
Restriction Invalid in the following case:
  - When :DISPLAY:ANALysis:RECall:TYPE? is other than "<CDV1">.
Example use To display the top:
  > :DISPLAY:ANALysis:RECall:CDV1:SCRoll TOP

:DISPLAY:ANALysis:RECall:CDV1:TYPE <type>
Parameter <type> = <CHARACTER PROGRAM DATA>
  INDividual
  ACCumulate
Function Sets the display data type of the Analyze:Recall screen (1-point CDV).
Restriction Invalid in the following case:
  - When :DISPLAY:ANALysis:RECall:TYPE? is other than "<CDV1">.
Example use To set the display data type of the 1-point CDV subscreen to Individual:
  > :DISPLAY:ANALysis:RECall:CDV1:TYPE INDividual

:DISPLAY:ANALysis:RECall:CDV1:TYPE?
Response  <type> = <CHARACTER RESPONSE DATA>
  IND
  ACC
Function Queries the display data type of the Analyze:Recall screen (1-point CDV).
Example use > :DISPLAY:ANALysis:RECall:CDV1:TYPE?
< IND
4.4  Equipment Unique Command

**:DISPlay:ANALysis:RECall:CDV1:MARKer <marker>**

Parameter  
<marker> = <CHARACTER PROGRAM DATA>
  LEFT  Moves the marker 1 Div to the left.
  RIGHT Moves the marker 1 Div to the right.

Function  
Request a marker movement on the Analyze:Recall screen (1-point CDV).

Restriction  
Invalid in the following cases:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "<CDV1>".
  - When :DISPlay:ANALysis:RECall:CDV1:MDISplay is <OFF>.
  * Note: In multiple screen mode, the marker moves normally as if on.

Example use  
To move the marker to the right:
> :DISPlay:ANALysis:RECall:CDV1:MARKer RIGHT

**:DISPlay:ANALysis:RECall:CDV1:PEAK <peak>**

Parameter  
<peak> = <CHARACTER PROGRAM DATA>
  BEFore Before search
  NEXT Next search

Function  
Requests a peak search on the Analyze:Recall screen (1-point CDV).

Restriction  
Invalid in the following cases:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "<CDV1>".
  - When :DISPlay:ANALysis:RECall:CDV1:MDISplay is <OFF>.
  - When there are no peaks on the left of the marker and <BEFore> is set.
  - When there are no peaks right of the marker and <NEXT> is set.
  * Note: In multiple screen mode, normal operation is performed as if the marker is on.

Example use  
To request a Before search:
> :DISPlay:ANALysis:RECall:CDV1:PEAK BEFore

**:DISPlay:ANALysis:RECall:CDV1:ZOOM <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>
  IN Zoom in function
  OUT Zoom out function

Function  
Executes zoom function on the Analyze:Recall screen (1-point CDV).

Restriction  
Invalid in the following cases:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "<CDV1>".
  - When :DISPlay:ANALysis:RECall:CDV1:MDISplay is <OFF>.
  - When :DISPlay:ANALysis:RECall:CDV1:INTerval is <1>, and <IN> is set.
  - When :DISPlay:ANALysis:RECall:CDV1:INTerval is <300>, and
<OUT> is set.

* Note: In multiple screen mode, normal operation is performed as if the marker is on.

Example use
To execute zoom-in function:
> :DISPlay:ANALysis:RECall:CDV1:ZOOM IN

**:DISPlay:ANALysis:RECall:CDV1:DATA?**

Response
<time>,<cell>,<count>,<rate>

<time> = <STRING RESPONSE DATA>
Interval of cell indicated by marker (µs)
Form12

[cell] = <STRING RESPONSE DATA>
Number of intervals (cell) of cell indicated by marker
Form12

<count> = <STRING RESPONSE DATA>
Number of cells indicated by marker
Form1

<rate> = <STRING RESPONSE DATA>
Rate of the cell indicated by marker (%)
Form3

Function
Queries the data indicated by the marker on the Analyze:Recall screen (1-point CDV).

Example use
> :DISPlay:ANALysis:RECall:CDV1:DATA?
< "       1 0 " , "      1 0 1 " , "        0 " , "      1 0 0 "

**:DISPlay:ANALysis:RECall:CDV1:INTerval <numeric>**

Parameter
<numeric> = <CHARACTER PROGRAM DATA>
1, 10, 100, 500

Function
Sets the graduation width of the Interval axis of the Analyze:Recall screen (1-point CDV).

Restriction
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "<CDV1>".

Example use
To set the graduation width to one step:
> :DISPlay:ANALysis:RECall:CDV1:INTerval 1
4.4 Equipment Unique Command

:DISPlay:ANALysis:RECall:CDV1:INTerval?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the graduation width of the Interval axis of the Analyze:Recall screen (1-point CDV).
Example use > :DISPlay:ANALysis:RECall:CDV1:INTerval?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>

:DISPlay:ANALysis:RECall:CDV1:IUNit <unit>
Parameter <unit> = <CHARACTER PROGRAM DATA>
CELL Cell
US μs
Function Sets the horizontal axis display interval of the Analyze:Recall screen (1-point CDV).
Restriction Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV1".
Example use To set the horizontal axis display interval of the 1-point CDV subscreen to Cell:
> :DISPlay:ANALysis:RECall:CDV1:IUNit CELL

:DISPlay:ANALysis:RECall:CDV1:IUNit?
Response <type> = <CHARACTER RESPONSE DATA>
CELL Cell
US μs
Function Queries the horizontal axis display interval of the Analyze:Recall screen (1-point CDV).
Example use > :DISPlay:ANALysis:RECall:CDV1:IUNit?
Response <type> = <CHARACTER RESPONSE DATA>

:DISPlay:ANALysis:RECall:CDV1:MDISplay <boolean>
Parameter <boolean> = <BOOLEAN PROGRAM DATA>
OFF or 0 Turns marker off.
ON or 1 Turns marker on.
Function Sets whether to display the marker on the Analyze:Recall screen (1-point CDV).
Restriction Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV1".
Example use To set marker display to ON:
> :DISPlay:ANALysis:RECall:CDV1:MDISplay ON
Section 4  Remote Control

**:DISPlay:ANALysis:RECall:CDV1:MDISplay?**
Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0  Marker OFF
1  Marker ON
Function  
Queries the setting on whether to display the marker on the Analyze:Recall screen (1-point CDV).
Example use  
> :DISPlay:ANALysis:RECall:CDV1:MDISplay?
< 1

**:DISPlay:ANALysis:RECall:CDV1:PRINt <type>**
Parameter  
<type> = <CHARACTER PROGRAM DATA>
  DISP  Display
Function  
Specifies the printing range of the Analyze:Recall screen (1-point CDV).
Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV1".
Example use  
To print the screen range currently on display:
> :DISPlay:ANALysis:RECall:CDV1:PRINt DISP

**:DISPlay:ANALysis:RECall:CDV1:TITLe?**
Response  
<title> = <STRING RESPONSE DATA>
Function  
Queries the title of the Analyze:Recall screen (1-point CDV).
Example use  
> :DISPlay:ANALysis:RECall:CDV1:TITLe?
< "1-point CDV"

**:DISPlay:ANALysis:RECall:CDV2:SCRoll <scroll>**
Parameter  
<scroll> = <CHARACTER PROGRAM DATA>
  LEFT  Scrolls left.
  RIGHt  Scrolls right.
  TOP  Displays the top.
  BOTTom  Displays the bottom.
Function  
Requests a scroll on the Analyze:Recall screen (2-point CDV).
Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV2".
Example use  
To display the top:
> :DISPlay:ANALysis:RECall:CDV2:SCRoll TOP
:DISPlay:ANALysis:RECall:CDV2:TYPE <type>
 Parameter  
  <type> = <CHARACTER PROGRAM DATA>
  INDiVidual
  ACCumulate
 Function  
  Sets the display data type of the Analyze:Recall screen (2-point CDV).
 Restriction  
  Invalid in the following case:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV2".
 Example use  
  To set the display data type of the 2-point CDV subscreen to Individual:
  > :DISPlay:ANALysis:RECall:CDV2:TYPE INDiVidual

:DISPlay:ANALysis:RECall:CDV2:TYPE?
 Response  
  <type> = <CHARACTER RESPONSE DATA>
  IND
  ACC
 Function  
  Queries the display data type of the Analyze:Recall screen (2-point CDV).
 Example use  
  > :DISPlay:ANALysis:RECall:CDV2:TYPE?
  < INDi

:DISPlay:ANALysis:RECall:CDV2:MARKer <marker>
 Parameter  
  <marker> = <CHARACTER PROGRAM DATA>
  LEFT  
  RIGHT  
 Function  
  Requests a marker movement on the Analyze:Recall screen (2-point CDV).
 Restriction  
  Invalid in the following cases:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV2".
  - When :DISPlay:ANALysis:RECall:CDV2:MDISplay is <OFF>.
 * Note: In multiple screen mode, the marker moves normally when on.
 Example use  
  To move the marker to the right:
  > :DISPlay:ANALysis:RECall:CDV2:MARKer RIGHT

:DISPlay:ANALysis:RECall:CDV2:PEAK <peak>
 Parameter  
  <peak> = <CHARACTER PROGRAM DATA>
  BEFORE  
  NEXT  
 Function  
  Requests a peak search on the Analyze:Recall screen (2-point CDV).
 Restriction  
  Invalid in the following cases:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than "CDV2".
  - When :DISPlay:ANALysis:RECall:CDV2:MDISplay is <OFF>.
Section 4 Remote Control

- When there are no peaks left of the marker, and <BEFore> is set.
- When there are no peaks right of the marker, and <NEXT> is set.

* Note: In multiple screen mode, the marker moves normally when on.

Example use

To request a Before search:

> :DISPlay:ANALysis:RECall:CDV2:PEAK BEFore

:DISPlay:ANALysis:RECall:CDV2:ZOOM <type>

Parameter

<type> = <CHARACTER PROGRAM DATA>
IN       Zoom in function
OUT      Zoom out function

Function

Executes zoom function on the Analyze:Recall screen (2-point CDV).

Restriction

Invalid in the following cases:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CDV2">.
- When :DISPlay:ANALysis:RECall:CDV2:MDIsplay is <OFF>.
- When :DISPlay:ANALysis:RECall:CDV2:INTerval is <1>, and <IN> is set.
- When :DISPlay:ANALysis:RECall:CDV2:INTerval is <300>, and <OUT> is set.

* Note: In multiple screen mode, the marker moves normally when on.

Example use

To execute zoom-in function:

> :DISPlay:ANALysis:RECall:CDV2:ZOOM IN

:DISPlay:ANALysis:RECall:CDV2:DATA?

Response

<time>,<cell>,<count>,<rate>
<time> = <STRING RESPONSE DATA>
Interval of cell indicated by marker (µs)
Form12
<cell> = <STRING RESPONSE DATA>
Number of intervals (cell) of cell indicated by marker
Form12
<count> = <STRING RESPONSE DATA>
Number of cells indicated by the marker
Form1
<rate> = <STRING RESPONSE DATA>
Rate of cell indicated by marker (%)
Form3

Function

Queries the data indicated by the marker on the Analyze:Recall screen (2-point CDV).

Example use

> :DISPlay:ANALysis:RECall:CDV2:DATA?
<"       1 0 " , "      1 0 1 " , "        0 " , "      1 0 0 "

4 - 234
:DISPlay:ANALysis:RECall:CDV2:INTerval <numeric>
Parameter <numeric> = <CHARACTER PROGRAM DATA>
  1, 10, 100, 500
Function Sets the graduation width of the Interval axis of the Analyze:Recall screen (2-point CDV).
Restriction Invalid in the following case:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than <"CDV2">.
Example use To set the graduation width to one step:
  > :DISPlay:ANALysis:RECall:CDV2:INTerval 1

:DISPlay:ANALysis:RECall:CDV2:INTerval?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the graduation width of the Interval axis of the Analyze:Recall screen (2-point CDV).
Example use > :DISPlay:ANALysis:RECall:CDV2:INTerval?
  < 1

:DISPlay:ANALysis:RECall:CDV2:IUNit <unit>
Parameter <unit> = <CHARACTER PROGRAM DATA>
  CELL Cell
  US µs
Function Sets the horizontal axis display interval of the Analyze:Recall screen (2-point CDV).
Restriction Invalid in the following case:
  - When :DISPlay:ANALysis:RECall:TYPE? is other than <"CDV2">.
Example use To set the horizontal axis display interval of the 2-point CDV sub screen to Cell:
  > :DISPlay:ANALysis:RECall:CDV2:IUNit CELL

:DISPlay:ANALysis:RECall:CDV2:IUNit?
Response <type> = <CHARACTER RESPONSE DATA>
  CELL Cell
  US µs
Function Queries the horizontal axis display interval of the Analyze:Recall screen (2-point CDV).
Example use > :DISPlay:ANALysis:RECall:CDV2:IUNit?
  < CELL
Section 4  Remote Control

**:DISPlay:ANALysis:RECall:CDV2:MDISplay <boolean>**

Parameter  
<boolean> = <BOOLEAN PROGRAM DATA>
OFF or 0  Turns marker off.
ON or 1  Turns marker on.

Function  
Sets whether to display the marker on the Analyze:Recall screen (2-point CDV).

Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CDV2">.

Example use  
To set marker display to ON:
> :DISPlay:ANALysis:RECall:CDV2:MDISplay ON

**:DISPlay:ANALysis:RECall:CDV2:MDISplay?**

Response  
<numéric> = <NR1 NUMERIC RESPONSE DATA>
0  Marker OFF
1  Marker ON

Function  
Queries the setting on whether to display the marker on the Analyze:Recall screen (2-point CDV).

Example use  
> :DISPlay:ANALysis:RECall:CDV2:MDISplay?
< 1

**:DISPlay:ANALysis:RECall:CDV2:PRINt <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>
DISPlay  Display

Function  
Sets the printing range of the Analyze:Recall screen (2-point CDV).

Restriction  
Invalid in the following case:
- When :DISPlay:ANALysis:RECall:TYPE? is other than <"CDV2">.

Example use  
To print the screen range currently on display:
> :DISPlay:ANALysis:RECall:CDV2:PRINt DISPlay

**:DISPlay:ANALysis:RECall:CDV2:PRINt?**

Response  
<type> = <CHARACTER RESPONSE DATA>
DISP  Display

Function  
Queries the printing range of the Analyze:Recall screen (2-point CDV).

Example use  
> :DISPlay:ANALysis:RECall:CDV2:PRINt?
< DISP

**:DISPlay:ANALysis:RECall:CDV2:TITLe?**

Response  
<title> = <STRING RESPONSE DATA>

Function  
Queries the title of the Analyze:Recall screen (2-point CDV).

Example use  
> :DISPlay:ANALysis:RECall:CDV2:TITLe?
< "2-point CDV    "

4 - 236
4.4 Equipment Unique Command

**:DISPlay:SETup[:NAME]**

Parameter

<sdisplay> = <STRING PROGRAM DATA>

"MAPPing" Mapping subscreen
"MEMory" Memory subscreen
"PRINt" Print subscreen
"SPPData" OH preset data subscreen
"CELL" ATM Cell edit subscreen
"MEAScond" Measurement condition subscreen
"SYSTem" System subscreen
"FDISk" Floppy disk subscreen
"STES" Self test subscreen
"CUSTomer" Custom function subscreen

Function

Selects the display item on the Setup screen.

Restriction

Invalid in the following cases:
- When the ATM unit is not installed, and "CELL" is set.
- When ::INSTrument:CONFig is other than <ATM>, and "CELL" is set.
- When the measurement (set on the Test menu main screen) is being measured, and "STES" is set.

Example use

To select "PRINt" as the display item on the Setup screen:

> :DISPlay:SETup:NAME "PRINt", or
> :DISPlay:SETup "PRINt"

**:DISPlay:SETup[:NAME]??**

Response

<sdisplay> = <STRING RESPONSE DATA>

"MAPP" Mapping subscreen
"MEM" Memory subscreen
"PRIN" Print subscreen
"SPPD" OH preset data subscreen
"CELL" ATM Cell edit subscreen
"MEAScond" Measurement condition subscreen
"SYST" System subscreen
"FDIS" Floppy disk subscreen
"STES" Self test subscreen
"CUST" Custom function subscreen

Function

Queries the display item on the Setup screen.

Example use

> :DISPlay:SETup:NAME??, or
> :DISPlay:SETup??

< "PRIN"
**:DISPlay:SETup:OHPReset[:NAME] <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>

SDH       SDH
SONET     SONET
E3        E3
E4        E4
DS3Plcp   DS3 PLCP

Function  Sets OH preset data display switching on the Setup screen.

Restriction  Invalid in the following cases:
- When the ATM unit is not installed, and <E3>, <E4>, or <DS3Plcp> is set.
- When the 2/8/34/139/156M(CMI) unit is not installed, and <E3> or <E4> is set.
- When the 1.5/45/52M(B3ZS) unit is not installed, and <DS3Plcp> is set.
- When ::INSTrument:CONFig is other than <ATM>, and <E3>, <E4>, or <DS3Plcp> is set.

Example use To display the SDH/SONET screen:
> :DISPlay:SETup:OHPReset:NAME STM, or
> :DISPlay:SETup:OHPReset STM

**:DISPlay:SETup:OHPReset[:NAME]??**

Response  <type> = <CHARACTER RESPONSE DATA>

SDH       SDH
SONET     SONET
E3        E3
E4        E4
DS3Plcp   DS3 PLCP

Function  Queries the OH preset data display switching on the Setup screen.

Example use  > :DISPlay:SETup:OHPReset:NAME?, or
> :DISPlay:SETup:OHPReset?
< STM

**:DISPlay:SETup:CELL[:NAME] <type>**

Parameter  
<type> = <CHARACTER PROGRAM DATA>

FOReground  Foreground
OAM        OAM
BACKground  Background
MEMorized  Memorized

Function  Sets Cell edit display switching on the Setup screen.

Restriction  Invalid in the following case:
4.4 Equipment Unique Command

Example use
To set Cell edit display to Foreground:
> :DISPlay:SETup:CELL:NAME FORGround, or
> :DISPlay:SETup:CELL FORGround

**:DISPlay:SETup:CELL[:NAME]??**
Response
\[ \text{<type> = <CHARACTER RESPONSE DATA>} \]
\[ \text{FOR \quad Foreground} \]
\[ \text{OAM \quad OAM} \]
\[ \text{BACK \quad Background} \]
\[ \text{MEM \quad Memorized} \]
Function
Queries the Cell edit display switching on the Setup screen.
Example use
\[ > :DISPlay:SETup:CELL:NAME?, \quad \text{or} \]
\[ > :DISPlay:SETup:CELL? \]
\[ < \text{FORG} \]

**:DISPlay:SETup:CELL:MEMorized:SCRoll <scroll>**
Parameter
\[ \text{<scroll> = <CHARACTER PROGRAM DATA>} \]
\[ \text{UP \quad Scrolls up.} \]
\[ \text{DOWN \quad Scrolls down.} \]
\[ \text{TOP \quad Displays the top.} \]
\[ \text{BOTTom \quad Displays the bottom.} \]
Function
Requests a scroll on Memorized of Setup screen.
Restriction
Invalid in the following case:
\[ - \quad \text{When the setting of :INSTrument:CONFig is other than <ATM>}. \]
Example use
To scroll up:
> :DISPlay:SETup:CELL:MEMorized:SCRoll UP

**:DISPlay:SETup:CELL:MEMorized:DSTart <numeric>**
Parameter
\[ \text{<numeric> = <DECIMAL NUMERIC PROGRAM DATA>} \]
\[ 1 \quad \text{-}\quad 1987 \quad \text{Step value:1} \]
Function
Sets Display start on Memorized cell of Setup screen.
Restriction
Invalid in the following case:
\[ - \quad \text{When the setting of :INSTrument:CONFig is other than <ATM>}. \]
Example use
To set the display start position of MEMorized cell to 1000:
> :DISPlay:SETup:CELL:MEMorized:DSTart 1000
Section 4  Remote Control

:DISPLAY:SETup:CELL:MEMorized:DSStart?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries Display start on Memorized of Setup screen.
Example use  > :DISPLAY:SETup:CELL:MEMorized:DSStart?
< 1000

:DISPLAY:SETup:CELL:MEMorized:PRInT <numeric1>,<numeric2>
Parameter  <numeric1>,<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 2016
Function  Specifies the printing range of Memorized of Setup screen.
Restriction  Invalid in the following cases:
- When the setting of :INSTRument:CONFig is other than <ATM>.
- When <numeric1> > <numeric2>.
Example use  To set the printing range of Memorized cell to 1 through 20:
> :DISPLAY:SETup:CELL:MEMorized:PRInT 1,20

:DISPLAY:SETup:CELL:MEMorized:PRInT?
Response  <numeric1>,<numeric2> = <NR1 NUMERIC RESPONSE DATA>
Function  Queries the printing range of Memorized cell of Setup screen.
Example use  > :DISPLAY:SETup:CELL:MEMorized:PRInT?
< 1,20
### 4.4.5 CALCulate subsystem

In the CALCulate subsystem, the performance measurement is set and the measurement results are displayed.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries Cell block size N.</td>
<td>:CALCulate:TELecom:ATM:THReshold:SECB?</td>
<td></td>
</tr>
<tr>
<td>Sets AAL5 frame size.</td>
<td>:CALCulate:TELecom:ATM:THReshold:FSIZe</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries AAL5 frame size.</td>
<td>:CALCulate:TELecom:ATM:THReshold:FSIZe?</td>
<td></td>
</tr>
</tbody>
</table>

Page 4-244

Queries the measurement results corresponding to the parameter. | :CALCulate:DATA? | string |

Page 4-252

Queries the Error/Alarm analysis results. | :CALCulate:TGRaph:DATA? | numeric1, numeric2, numeric3, numeric4, numeric5, numeric6 |

Page 4-253

Queries the Live monitor traffic data. | :CALCulate:LMONitor:TRAFfic:DATA? | numeric |

Page 4-254

Queries the Live monitor results. | :CALCulate:LMONitor:NCONforming:DATA? | numeric |
| Sets the threshold value position. | :CALCulate:LMONitor:NCONforming:THReshold | numeric, character |
| Queries the threshold value position. | :CALCulate:LMONitor:NCONforming:THReshold? |
| Sets the threshold value of A. | :CALCulate:LMONitor:NCONforming:THReshold:A | numeric, character |
| Queries the threshold value of A. | :CALCulate:LMONitor:NCONforming:THReshold:A? |
| Sets the threshold value of B. | :CALCulate:LMONitor:NCONforming:THReshold:B | numeric, character |
| Queries the threshold value of B. | :CALCulate:LMONitor:NCONforming:THReshold:B? |
| Sets the threshold value of C. | :CALCulate:LMONitor:NCONforming:THReshold:C | numeric, character |
| Queries the threshold value of C. | :CALCulate:LMONitor:NCONforming:THReshold:C? |
| Sets the threshold value of D. | :CALCulate:LMONitor:NCONforming:THReshold:D | numeric, character |
| Queries the threshold value of D. | :CALCulate:LMONitor:NCONforming:THReshold:D? |
| Queries the Live monitor(Traffic) result. | :CALCulate:LMONitor:NCONforming:FM:DATA? | numeric1, numeric2 |

Page 4-258

Queries the Live monitor results. | :CALCulate:LMONitor:FMSecb:DATA? | numeric |
| Sets the threshold of FM SECB of Live monitor. | :CALCulate:LMONitor:FMSecb:THReshold[:DATA] | numeric, character |
| Queries FM SECB Threshold value of Live monitor. | :CALCulate:LMONitor:FMSecb:THReshold[:DATA]? |

Page 4-260

Reads the Live monitor (Traffic) results. | :CALCulate:LMONitor:NCONforming:BR:DATA? | numeric1, numeric2 |
### Section 4  Remote Control

<table>
<thead>
<tr>
<th>Page 4-261</th>
<th>Queries the Live monitor (Traffic) results.</th>
<th>( \text{CALCulate:LMONitor:BRSecb:DATA?} )</th>
<th>numeric1 numeric2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sets the threshold of BR SECB of Live monitor.</td>
<td>( \text{CALCulate:LMONitor:BRSecb:THReshold[:DATA]} )</td>
<td>numeric character</td>
<td></td>
</tr>
<tr>
<td>Queries the Threshold value of BR SECB of Live monitor.</td>
<td>( \text{CALCulate:LMONitor:BRSecb:THReshold[:DATA]?} )</td>
<td>numeric</td>
<td></td>
</tr>
</tbody>
</table>

| Page 4-262 | Queries the measurement results. | \( \text{CALCulate:TRAFfic:RESult?} \) | |

| Page 4-264 | Queries the Traffic monitor analysis results. | \( \text{CALCulate:TRAFfic:DATA?} \) | numeric1 numeric2 numeric3 numeric4 numeric5 numeric6 |

| Page 4-265 | Queries the Capture results. | \( \text{CALCulate:CAPTure:LINE?} \) | type numeric1 numeric2 |

| Page 4-266 | Queries the number of captured lines. | \( \text{CALCulate:CAPTure:TOTal?} \) | |

| Page 4-266 | Queries the number of captured trigger lines. | \( \text{CALCulate:CAPTure:TRIGger?} \) | |

| Page 4-266 | Queries the 1-point CDV analysis results. | \( \text{CALCulate:CDV1:DATA?} \) | numeric |
| Queries the 2-point CDV analysis results. | \( \text{CALCulate:CDV2:DATA?} \) | numeric |

| Page 4-267 | Queries the Loopback measurement results. | \( \text{CALCulate:LOOPback:RESult?} \) | |
4.4 Equipment Unique Command

:CALCulate:TELecom:ATM:THReshold:SECB:N <numeric>
Parameter <numeric> = <CHARACTER PROGRAM DATA>
128, 256, 512, 1024, 2048, 4096, 8192
Function Sets Cell block size N.
Restriction Invalid in the following cases.
- :INSTrument:Config setting is other than <ATM>.
Example use To set Cell block size N to 128.
> :CALCulate:TELecom:ATM:THReshold:SECB:N 128

:CALCulate:TELecom:ATM:THReshold:SECB:N?
Response <numeric> = <CHARACTER RESPONSE DATA>
Function Queries Cell block size N.
Example use > :CALCulate:TELecom:ATM:THReshold:SECB:N?
< 128

:CALCulate:TELecom:ATM:THReshold:SECB:M <numeric>
Parameter <numeric> = <CHARACTER PROGRAM DATA>
8, 16, 32, 64, 128, 256, 512
Function Sets SECB threshold M.
Restriction Invalid in the following cases.
- :INSTrument:Config setting is other than <ATM>.
Example use To set SECB threshold M to 8:
> :CALCulate:TELecom:ATM:THReshold:SECB:M 8

:CALCulate:TELecom:ATM:THReshold:SECB:M?
Response <numeric> = <CHARACTER RESPONSE DATA>
Function Queries SECB threshold M.
Example use > :CALCulate:TELecom:ATM:THReshold:SECB:M?
< 8

:CALCulate:TELecom:ATM:THReshold:FSIZe <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 65535
Function Sets AAL5 frame size.
Restriction Invalid in the following cases.
- :INSTrument:Config setting is other than <ATM>.
Example use To set AAL5 frame size to 256.
> :CALCulate:TELecom:ATM:THReshold:FSIZe 256
Section 4  Remote Control

:CALCulate:TELecom:ATM:THReshold:FSIZE?

Response      <numeric> = <NR1 NUMERIC RESPONSE DATA>

Same as :CALCulate:TELecom:ATM:THReshold:FSIZE.

Function Queries AAL5 frame size.

Example use > :CALCulate:TELecom:ATM:THReshold:FSIZE?
             < 256

:CALCulate:DATA? <string>

Parameter <string> = <STRING PROGRAM DATA>

"[CURRent:]<result>"   Current measurement results
"LAST:<result>"      Last measurement results

See the table below for the <result> contents.

Response <string> = <STRING RESPONSE DATA>

See the table.

Function Queries the measurement results corresponding to the parameter.

Example use To query the EC current value of bit errors:
             > :CALCulate:DATA? "CURRent:EC:BIT", or
             > :CALCulate:DATA? "EC:BIT"
             < "    892"
## 4.4 Equipment Unique Command

### Error/Alarm measurement

<table>
<thead>
<tr>
<th>item</th>
<th>&lt;result&gt;</th>
<th>Response format</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PLCP REI</td>
<td>&quot;EC:REI:PLCP&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CRC-4</td>
<td>&quot;EC:CRC4&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Cell Count</td>
<td>&quot;EC:CELL&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Corrected cell</td>
<td>&quot;EC:CORR&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Discarded cell</td>
<td>&quot;EC:DISC&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Nonconf</td>
<td>&quot;EC:NONCONF&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Errored cell</td>
<td>&quot;EC:ERRORED&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Lost cell</td>
<td>&quot;EC:LOST&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Misinserted</td>
<td>&quot;EC:MISINS&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>2000</td>
<td>&quot;EC:SB&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>SAR-PDU</td>
<td>&quot;EC:SARPU&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>SNP error</td>
<td>&quot;EC:SNP&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Uncorrectable SNP error</td>
<td>&quot;EC:UCSNP&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>P error</td>
<td>&quot;EC:P&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>OSF error</td>
<td>&quot;EC:OSF&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>SN error</td>
<td>&quot;EC:SN&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CPS-Packet Count</td>
<td>&quot;EC:CPSFKT&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>HEC error</td>
<td>&quot;EC:CPHIC&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Length Indicator error</td>
<td>&quot;EC:LI&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Segment type</td>
<td>&quot;EC:ST&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Length indicator error</td>
<td>&quot;EC:LENGTH&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CPCS-PDU count</td>
<td>&quot;EC:CPCS&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>MID count</td>
<td>&quot;EC:MID&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CRC10 error</td>
<td>&quot;EC:CRC10&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Discarded type PDU</td>
<td>&quot;EC:DISPDU&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Segment type error</td>
<td>&quot;EC:ST&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Aborted</td>
<td>&quot;EC:ABORT&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Undelivered PDU</td>
<td>&quot;EC:UDLVPDU&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CPI error</td>
<td>&quot;EC:CPI&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Btag/ETag mismatch</td>
<td>&quot;EC:BETAG&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>BASize error</td>
<td>&quot;EC:BASIZE&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>AL error</td>
<td>&quot;EC:AL&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>Frame size error</td>
<td>&quot;EC:FSIZE&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CRC32 error</td>
<td>&quot;EC:CRC32&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PRBS/word bit error</td>
<td>&quot;EC:BIT&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM FM Lost Cell</td>
<td>&quot;EC:FM:LOST&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM FM Misinserted Cell</td>
<td>&quot;EC:FM:MISINS&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM FM BIPV</td>
<td>&quot;EC:FM:BIPV&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM BR Lost Cell</td>
<td>&quot;EC:BR:LOST&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM BR Misinserted Cell</td>
<td>&quot;EC:BR:MISINS&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM BR BIPV</td>
<td>&quot;EC:BR:BIPV&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>PM BR SB</td>
<td>&quot;EC:BR:SB&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>CID PKT</td>
<td>&quot;EC:CIDPKT&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>item</td>
<td>&lt;result&gt;</td>
<td>Response format</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>ER</td>
<td>&quot;ER:REI:PLCP&quot;</td>
<td>Form2</td>
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<td></td>
<td>&quot;ER:CRC4&quot;</td>
<td>Form2</td>
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<td></td>
<td>&quot;ER:CELL&quot;</td>
<td>Form2</td>
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<tr>
<td></td>
<td>&quot;ER:CORR&quot;</td>
<td>Form2</td>
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<td>&quot;ER:DISC&quot;</td>
<td>Form2</td>
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<td>&quot;ER:NONCONF&quot;</td>
<td>Form2</td>
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<td>&quot;ER:ERRORED&quot;</td>
<td>Form2</td>
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<tr>
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<td>&quot;ER:SB&quot;</td>
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<td>&quot;ER:SARPDU&quot;</td>
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<tr>
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<td>&quot;ER:SNP&quot;</td>
<td>Form2</td>
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<tr>
<td>Uncorrectable SNP</td>
<td>&quot;ER:UCSNP&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:P&quot;</td>
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<td></td>
<td>&quot;ER:OSF&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:SN&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:CPSHC&quot;</td>
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</tr>
<tr>
<td></td>
<td>&quot;ER:LI&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:ST&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:LI&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:LENGTH&quot;</td>
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</tr>
<tr>
<td></td>
<td>&quot;ER:CRC10&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td>Discarded type PDU</td>
<td>&quot;ER:DISPDU&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER : ST&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:ABORT&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td>Undelivered PDU</td>
<td>&quot;ER:UDLVPU&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:UPI&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:BETAG&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:BASIZE&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:AL&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:FSIZE&quot;</td>
<td>Form2</td>
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<td>&quot;ER:CRC32&quot;</td>
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<td>PRBS/word bit error</td>
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<td></td>
<td>&quot;ER:FM:LOSS&quot;</td>
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<tr>
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<td>&quot;ER:FM:MISINS&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>&quot;ER:FM:BIPV&quot;</td>
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<tr>
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<td>&quot;ER:FM:BIPV&quot;</td>
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<td>&quot;ER:BR:LOSS&quot;</td>
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<td>&quot;ER:BR:MISINS&quot;</td>
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<td>&quot;ER:CIDPKT&quot;</td>
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4.4 Equipment Unique Command

**Error/Alarm measurement (Second)**

<table>
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<td>&quot;ASeconds:OOF:PLCP&quot;</td>
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<tr>
<td>RAI</td>
<td>&quot;ASeconds:RAI:PLCP&quot;</td>
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<tr>
<td>VP</td>
<td>AIS</td>
<td>&quot;ASeconds:VP:AIS&quot;</td>
</tr>
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<td>RDI</td>
<td>&quot;ASeconds:VP:RDI&quot;</td>
</tr>
<tr>
<td></td>
<td>LOC</td>
<td>&quot;ASeconds:VP:LOC&quot;</td>
</tr>
<tr>
<td>VC</td>
<td>AIS</td>
<td>&quot;ASeconds:VC:AIS&quot;</td>
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<td></td>
<td>RDI</td>
<td>&quot;ASeconds:VC:RDI&quot;</td>
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<td></td>
<td>LOC</td>
<td>&quot;ASeconds:VC:LOC&quot;</td>
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**Error/Alarm measurement (Count)**

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<tr>
<td>VP</td>
<td>AIS</td>
<td>&quot;ACOunts:VP:AIS&quot;</td>
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<tr>
<td></td>
<td>RDI</td>
<td>&quot;ACOunts:VP:RDI&quot;</td>
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<tr>
<td></td>
<td>LOC</td>
<td>&quot;ACOunts:VP:LOC&quot;</td>
</tr>
<tr>
<td>VC</td>
<td>AIS</td>
<td>&quot;ACOunts:VC:AIS&quot;</td>
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<tr>
<td></td>
<td>RDI</td>
<td>&quot;ACOunts:VC:RDI&quot;</td>
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<tr>
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<td>LOC</td>
<td>&quot;ACOunts:VC:LOC&quot;</td>
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## Section 4  Remote Control

### Performance measurement

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<thead>
<tr>
<th>item</th>
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<tbody>
<tr>
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<td>&quot;M2100:ES&quot;</td>
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<tr>
<td>RxSES</td>
<td></td>
<td>&quot;M2100:SES&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>TxES</td>
<td></td>
<td>&quot;M2100:ES2&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>TxSES</td>
<td></td>
<td>&quot;M2100:SES2&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>RxUS</td>
<td></td>
<td>&quot;M2100:US&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td>RxTEST</td>
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<td>&quot;M2100:TEST&quot;</td>
<td>Form4</td>
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<tr>
<td>TxTEST</td>
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- **M.2100 Bit or FAS/CRC**

- **Parity**

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>RxUS</td>
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- **Errored cell**

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<tbody>
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<td>&quot;M2100:ES:ERRored&quot;</td>
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<tr>
<td>RxUS</td>
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- **Lost cell**

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<tbody>
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<tr>
<td>RxSES</td>
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<td>&quot;M2100:SES:LOST&quot;</td>
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</tr>
<tr>
<td>RxUS</td>
<td></td>
<td>&quot;M2100:US:LOST&quot;</td>
<td>Form1</td>
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<tr>
<td>RxTEST</td>
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<td>&quot;M2100:TEST:LOST&quot;</td>
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- **MisINS cell**

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<td>RxSES</td>
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<tr>
<td>RxUS</td>
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### Performance measurement

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<td>Form1</td>
</tr>
<tr>
<td></td>
<td>BBE: &quot;G826:BBE:REI:MS&quot;</td>
<td>Form1</td>
</tr>
<tr>
<td></td>
<td>ESR: &quot;G826:ESR:REI:MS&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>SESR: &quot;G826:SESR:REI:MS&quot;</td>
<td>Form2</td>
</tr>
<tr>
<td></td>
<td>BBER: &quot;G826:BBER:REI:MS&quot;</td>
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<tr>
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<td>SDP: &quot;G826:SDP:REI:MS&quot;</td>
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<tr>
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<td>US: &quot;G826:US:REI:MS&quot;</td>
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<td>HP-REI</td>
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<tr>
<td></td>
<td>ES: &quot;G826:ES:REI:HP&quot;</td>
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<tr>
<td></td>
<td>SES: &quot;G826:SES:REI:HP&quot;</td>
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<td>BBE: &quot;G826:BBE:REI:HP&quot;</td>
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<td>BBE: &quot;G826:BBE:LOST&quot;</td>
<td>Form1</td>
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<td>ESR: &quot;G826:ESR:LOST&quot;</td>
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<td>SESR: &quot;G826:SESR:LOST&quot;</td>
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<td>BBER: &quot;G826:BBER:LOST&quot;</td>
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<td>US: &quot;G826:US:LOST&quot;</td>
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<td>SES: &quot;G826:SES:MISINS&quot;</td>
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<td>BBE: &quot;G826:BBE:MISINS&quot;</td>
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### Section 4 Remote Control

<p>| | | |</p>
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<tbody>
<tr>
<td>ESR</td>
<td>&quot;G826:ESR:MISINS&quot;</td>
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<td>SESR</td>
<td>&quot;G826:SESR:MISINS&quot;</td>
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<tr>
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<td>SDP</td>
<td>&quot;G826:SDP:MISINS&quot;</td>
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<tr>
<td>US</td>
<td>&quot;G826:US:MISINS&quot;</td>
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### 4.4 Equipment Unique Command

#### 1-point CDV measurement

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<th>item</th>
<th>&lt;result&gt;</th>
<th>Response format</th>
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<tbody>
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<td>Average</td>
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<td>Maximum</td>
<td>&quot;CDV1:MAXimum&quot;</td>
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</tr>
<tr>
<td>Minimum</td>
<td>&quot;CDV1:MINimum&quot;</td>
<td>Form12</td>
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#### 2-point CDV measurement

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<th>item</th>
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<tr>
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<td>&quot;CDV2:AVERage&quot;</td>
<td>Form12</td>
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<tr>
<td>Maximum</td>
<td>&quot;CDV2:MAXimum&quot;</td>
<td>Form12</td>
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<tr>
<td>Minimum</td>
<td>&quot;CDV2:MINimum&quot;</td>
<td>Form12</td>
</tr>
<tr>
<td>Offset</td>
<td>&quot;CDV2:OFFSet&quot;</td>
<td>Form12</td>
</tr>
</tbody>
</table>
Section 4  Remote Control

:CALCulate:TGraph:DATA?<numeric1>,<numeric2>,<numeric3>,<numeric4>,<numeric5> [,<numeric6>]

Parameter

<DECIMAL NUMERIC PROGRAM DATA>

Date and time of the read data
<numeric1> = 1994 - 2093 (year)
<numeric2> = 1 - 12 (month)
<numeric3> = 1 - 31 (day)
<numeric4> = 0 - 23 (hour)
<numeric5> = 0 - 59 (minute)
<numeric6> = 0 - 59 (second)

Response

<time>,<alarm1s>,<alarm1c>,<alarm2s>,<alarm2c>,<alarm3s>,<alarm3c>,<alarm4s>,<alarm4c>,<alarm5s>,<alarm5c>,<error1>,<error2>
<time> = <year>,<month>,<day>,<hour>,<minute>

Date and time of the read data
<year> = <NR1 NUMERIC RESPONSE DATA>
<month> = <NR1 NUMERIC RESPONSE DATA>
<day> = <NR1 NUMERIC RESPONSE DATA>
<hour> = <NR1 NUMERIC RESPONSE DATA>
<minute> = <NR1 NUMERIC RESPONSE DATA>
<Second> = <NR1 NUMERIC RESPONSE DATA>

<alarm1s> = <STRING RESPONSE DATA>  <alarm1c> = <STRING RESPONSE DATA>
Alarm 1 occurrence time (s)       Alarm 1 occurrence count
(Form1)                             (Form1)
<alarm2s> = <STRING RESPONSE DATA>  <alarm2c> = <STRING RESPONSE DATA>
Alarm 2 occurrence time (s)       Alarm 2 occurrence count
(Form1)                             Form(1)
<alarm3s> = <STRING RESPONSE DATA>  <alarm3c> = <STRING RESPONSE DATA>
Alarm 3 occurrence time (s)       Alarm 3 occurrence count
(Form1)                             (Form1)
<alarm4s> = <STRING RESPONSE DATA>  <alarm4c> = <STRING RESPONSE DATA>
Alarm 4 occurrence time (s)       Alarm 4 occurrence count
(Form1)                             (Form1)
<alarm5s> = <STRING RESPONSE DATA>  <alarm5c> = <STRING RESPONSE DATA>

4.4 Equipment Unique Command

Alarm 5 occurrence time (s) Alarm 5 occurrence count
(Form1) (Form1)
<error1> = <STRING RESPONSE DATA>
Error count value
(Form1)
<error2> = <STRING RESPONSE DATA>
Error rate value
(Form1)

Function
Queries the Error/Alarm analysis results.

Example use
To read analysis data at 01:20:30 on October 23, 1994:

```plaintext
< 2000,10,23,1,30," 0"," 0"," 14"," 4",
 4"," 4"," 1.2E+06"," 100"," 0"," 0",
 111"," 1.3E-06
```

:CALCulate:LMONitor:TRAFFic:DATA? <numeric>

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1023 No.

Response <vpi>,<vci>,<cps>,<bps>,<percent>,<type>,<alarm>

<vpi> = <STRING RESPONSE DATA>
VPI value
(Form1)
<vci> = <STRING RESPONSE DATA>
VCI value
(Form1)
<cps> = <STRING RESPONSE DATA>
Cell/s value
(Form1)
<bps> = <STRING RESPONSE DATA>
kb/s value
(Form1)
<percent> = <STRING RESPONSE DATA>
% value
(Form3)
<type> = <STRING RESPONSE DATA>
Cell type
"ATM"
"AAL1"
"AAL2"
"AAL3/4"
"AAL5"
<alarm> = <STRING RESPONSE DATA>
Alarm
"VP_AIS"
"VP_RDI"
"VP_LOC"
"VC_AIS"
"VC_RDI"
"VC_LOC"

Note: When no data exists or when :DISPlay:ANALysis:CDV1:TYPE
is <INDividual>,
the following is output for data out of the range currently displayed on
a full screen:
< "--------","--------","--------","--------","--------","------","-------"

Function Queries the Live monitor traffic data.
Example use To read the No.100 data:
> :CALCulate:LMONitor:TRAFfic:DATA? 100
< " 300"," 100"," 10"," 10"," 000.0","AAL1","VC_AIS"

:CALCulate:LMONitor:NCONforing:DATA? <numeric>

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1023 No.

Response <vpi>,<vci>,<count>,<cps>,<alarm>
<vpi> = <STRING RESPONSE DATA>
VPI value
(Form1)
<vci> = <STRING RESPONSE DATA>
VCI value
(Form1)
<count> = <STRING RESPONSE DATA>
count value
(Form1)
<cps> = <STRING RESPONSE DATA>
Cell/s value
(Form1)
<type> = <STRING RESPONSE DATA>
Cell type
"ATM"
"AAL1"
"AAL2"
"AAL3/4"
"AAL5"

<alarm>  = <STRING RESPONSE DATA>

Alarm
"VP_AIS"
"VP_RDI"
"VP_LOC"
"VC_AIS"
"VC_RDI"
"VC_LOC"

Note: When no data exists or when :DISPlay:ANALysis:CDV1:TYPE is <INDividual>,
the following is output for data out of the range currently displayed on
a full screen:

< "--------","--------","--------","-------","------","-------"

Function Queries the Live monitor results.

Example use To read the No.100 data:

> :CALCulate:LMONitor:NCONforing:DATA? 100
< " 300"," 100"," 1000"," 3000","AAL1","VC_AIS"

:CALCulate:LMONitor:NCONforing:THReshold  <numeric>,<character>

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1023

<character> = <CHARACTER RESPONSE DATA>
A,B,C,D

Function Sets the threshold value position.

Example use :CALCulate:LMONitor:NCONforing:THReshold 100,A

:CALCulate:LMONitor:NCONforing:THReshold?

Response <numeric> = <STRING RESPONSE DATA>

<character> = <STRING RESPONSE DATA>

Function Queries the threshold value position.

Example use >:CALCulate:LMONitor:NCONforing:THReshold?
<100,A
Section 4  Remote Control

:CALCulate:LMONitor:NCONforing:THReshold:A <numeric>,<character>

Parameter
- <pcr>  = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999999  (kp/s)
- <cdvt> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999  (cell)

Function
Sets the threshold value of A.
Example use
To set the threshold value of A:
>:CALCulate:LMONitor:NCONforing:THReshold:A  100,200

:CALCulate:LMONitor:NCONforing:THReshold:A?

Response
- <pcr>  = <DECIMAL NUMERIC RESPONSE DATA>
- <cdvp> = <DECIMAL NUMERIC RESPONSE DATA>

Function
Queries the threshold value of A.
Example use
>:CALCulate:LMONitor:NCONforing:THReshold:A?
<:100,200

:CALCulate:LMONitor:NCONforing:THReshold:B <numeric>,<character>

Parameter
- <pcr>  = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999999  (kp/s)
- <cdvt> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999  (cell)

Function
Sets the threshold value of B.
Example use
To set the threshold value of B:
>:CALCulate:LMONitor:NCONforing:THReshold:B  100,200

:CALCulate:LMONitor:NCONforing:THReshold:B?

Response
- <pcr>  = <DECIMAL NUMERIC RESPONSE DATA>
- <cdvp> = <DECIMAL NUMERIC RESPONSE DATA>

Function
Queries the threshold value of B.
Example use
>:CALCulate:LMONitor:NCONforing:THReshold:B?
<:100,200

:CALCulate:LMONitor:NCONforing:THReshold:C <numeric>,<character>

Parameter
- <pcr>  = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999999  (kp/s)
- <cdvt> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 999  (cell)

Function
Sets the threshold value of C.
Example use
To set the threshold value of C:
>:CALCulate:LMONitor:NCONforing:THReshold:C  100,200
4.4 Equipment Unique Command

:CALCulate:LMONitor:NCONforming:THReshold:C?

Response
<pcr> = <DECIMAL NUMERIC RESPONSE DATA>
<cdvp> = <DECIMAL NUMERIC RESPONSE DATA>

Function
Queries the threshold value of C.

Example use
>:CALCulate:LMONitor:NCONforing:THReshold:C?
<:100,200

:CALCulate:LMONitor:NCONforing:THReshold:D <numeric>,<character>

Parameter
<pcr> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 999999 (kp/s)
<cdvt> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 999 (cell)

Function
Sets the threshold value of D.

Example use
To set the threshold value of D:
>:CALCulate:LMONitor:NCONforing:THReshold:D 100,200

:CALCulate:LMONitor:NCONforing:THReshold:D?

Response
<pcr> = <DECIMAL NUMERIC RESPONSE DATA>
<cdvp> = <DECIMAL NUMERIC RESPONSE DATA>

Function
Queries the threshold value of D.

Example use
>:CALCulate:LMONitor:NCONforing:THReshold:D?
<:100,200


Parameter
<numeric1> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1023 No.
<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 -? (Number of successive output data)

Response
<vpi>,<vci>,<count>,<mis>,<los>,<cps>,<alarm>
<vpi> = <STRING RESPONSE DATA>
VPI value
(Form1)
<vci> = <STRING RESPONSE DATA>
VCI value
(Form1)
<count> = <STRING RESPONSE DATA>
FM (Misinserted + Lost) cell count value
(Form1)
<mis> = <STRING RESPONSE DATA>
Section 4  Remote Control

FM Misinserted cell count value
(Form1)
<los>  = <STRING RESPONSE DATA>
FM Lost cell count value
(Form1)
<cps>  = <STRING RESPONSE DATA>
cell/s value
(Form1)
<alarm>  = <STRING RESPONSE DATA>
Alarm
"VP_AIS"
"VP_RDI"
"VP_LOC"
"VC_AIS"
"VC_RDI"
"VC_LOC"

Note: When no data exists or when:DISPlay:ANALysis:CDV1:TYPE is <INDividual>, the following is output for data out of the range currently displayed on a full screen:

< "--------","--------","--------","--------","--------","--------","--------"

Function  Queries the Live monitor(Traffic) result.
Example use  To Read the No. 100 data:
< " 300"," 100"," 10000"," 183"," 111"," 35",
"VC_AIS"

:CALCulate:LMONitor:FMSecb:DATA?  <numeric>

Parameter  <numeric>  =  <DECIMAL NUMERIC PROGRAM DATA>
  1   -   1023  No.
Response  <vpi>,<vci>,<count>,<mis-count>,<los-count>,<cps>,<alarm>
  <vpi>  =  <STRING RESPONSE DATA>
  VPI value
  (Form1)
  <vci>  =  <STRING RESPONSE DATA>
  VCI value
  (Form1)
  <count>  =  <STRING RESPONSE DATA>
  Count(Mis+Los) value
(Form1)
<mis-count>  =  <STRING RESPONSE DATA>
Count(Misinserted) value
(Form1)
<los-count> =  <STRING RESPONSE DATA>
Count (Lost) value
(From1)
<fps>  =  <STRING RESPONSE DATA>
Cell/s value
(From1)
<alarm>  =  <STRING RESPONSE DATA>
Alarm
"VP_AIS"
"VP_RDI"
"VP_LOC"
"VC_AIS"
"VC_RDI"
"VC_LOC"
Note: When no data exists or when :DISPlay:ANALysis:CDV1:TYPE is <INDividual>,
the following is output for data out of the range currently displayed
on a full screen:

< "--------","--------","--------","--------","--------","--------"

Function Queries the Live monitor (traffic) results.
Example use To read the No.100 data:
> :CALCulate:LMONitor:FMSecb:DATA? 100
< " 300"," 100"," 1000"," 3000","AAL1","VC_AIS"

:CALCulate:LMONitor:FMSecb:THReshold[:DATA] <numeric>,<character>
Parameter  
<numeric> =  <NUMERIC PROGRAM DATA>
  1 - 1023 No.
<character> =  <CHARACTER PROGRAM DATA>
  4, 8, 16, 32, 64, 128, 256 Threshold value
Function Sets the threshold of FM SECB of Live monitor.
Example use To set the threshold No.1 of FM SECB of Live monitor to 32.
> :CALCulate:LMONitor:FMSecb:THReshold[:DATA] 1,32
**Section 4  Remote Control**

**:CALCulate:LMONitor:FMSecb:THreshold[:DATA]? <numeric>**

Parameter: $<\text{numeric}> = \langle \text{NR1 NUMERIC RESPONSE DATA} \rangle$

same as :CALCulate:LMONitor:NCONforming:THreshold

Response: $<\text{character}> = \langle \text{CHARACTER RESPONSE DATA} \rangle$

same as :CALCulate:LMONitor:NCONforming:THreshold

Function: Queries FM SEC Threshold value of Live monitor.

Example use:

> :CALCulate:LMONitor:FMSecb:THreshold? 1

< 32

**:CALCulate:LMONitor:NCONforming:BR:DATA? <numeric1>[,<numeric2>]**

Parameter: $<\text{numeric1}> = \langle \text{DECIMAL NUMERIC PROGRAM DATA} \rangle$

1 - 1023 No.

$<\text{numeric2}> = \langle \text{DECIMAL NUMERIC PROGRAM DATA} \rangle$

1 -? (Number of successive output data)

Response: $<\text{vpi}>,<\text{vci}>,<\text{count}>,<\text{mis}>,<\text{los}>,<\text{cps}>,<\text{alarm}>$

$<\text{vpi}> = \langle \text{STRING RESPONSE DATA} \rangle$

VPI value (Form1)

$<\text{vci}> = \langle \text{STRING RESPONSE DATA} \rangle$

VCI value (Form1)

$<\text{count}> = \langle \text{STRING RESPONSE DATA} \rangle$

FM (Misinserted + Lost) cell count value (Form1)

$<\text{mis}> = \langle \text{STRING RESPONSE DATA} \rangle$

FM Misinserted cell count value (Form1)

$<\text{los}> = \langle \text{STRING RESPONSE DATA} \rangle$

FM Lost cell count value (Form1)

$<\text{cps}> = \langle \text{STRING RESPONSE DATA} \rangle$

cell/s value (Form1)

$<\text{alarm}> = \langle \text{STRING RESPONSE DATA} \rangle$

Alarm

"VP_AIS"

"VP_RDI"

"VP_LOC"

"VC_AIS"
4.4 Equipment Unique Command

"VC_RDI"
"VC_LOC"

Note: When no data exists or when:DISPlay:ANALysis:CDV1:TYPE is <INDividual>, the following is output for data out of the range currently displayed on a full screen:

< "--------","--------","--------","--------","-------","-------","-------"

Function
Reads the Live monitor(Traffic) results.

Example use
To read the No.100 data:

< " 300"," 100"," 10000"," 183","----121","----555",
"VC_AIS"

:CALCulate:LMONitor:BRSecb:DATA? <numeric1>[,<numeric2>]

Parameter
<numeric1> = <DECIMAL NUMERIC PROGRAM DATA>
1 - 1023 No.
<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>
1 - ? (Number of successive output data)

Response
<vpi>,<vci>,<count>,<cps>,<alarm>

<vpi> = <STRING RESPONSE DATA>
VPI value
(Form1)

<vci> = <STRING RESPONSE DATA>
VCI value
(Form1)

<count> = <STRING RESPONSE DATA>
BR SB count value
(Form1)

<cps> = <STRING RESPONSE DATA>
cell/s value
(Form1)

<alarm> = <STRING RESPONSE DATA>
Alarm
"VP_AIS"
"VP_RDI"
"VP_LOC"
"VC_AIS"
"VC_RDI"
"VC_LOC"
Note: when no data exists or when :DISPlay:ANALysis:CDV1:TYPE is <INDividual>, the following is output for data out of the range currently displayed in full screen:

< "--------","--------","--------","--------","-------"

Function: Queries the Live monitor (Traffic) results.

Example use: To read the No.100 data:

> :CALCulate:LMONitor:BRSecb:DATA? 100

< " 300"," 100"," 10000"," 183","VC_AIS"

:CALCulate:LMONitor:BRSecb:THReshold[:DATA] <numeric>,<character>

Parameter:
- <numeric> = <NUMERIC PROGRAM DATA>
  - 1 - 1023 No.
- <character> = <CHARACTER PROGRAM DATA>
  - 4, 8, 16, 32, 64, 128, 256 Threshold value

Function: Sets the threshold of BR SECB of Live monitor.

Example use: Sets the threshold No.1 to 32.


:CALCulate:LMONitor:BRSecb:THReshold[:DATA]? <numeric>

Parameter:
- <numeric> = <NR1 NUMERIC RESPONSE DATA>
  - same as :CALCulate:LMONitor:NCONforming:THReshold

Response:
- <character> = <CHARACTER RESPONSE DATA>
  - same as :CALCulate:LMONitor:NCONforming:THReshold

Function: Queries the Threshold value of BR SECB of Live monitor.

Example use:

> :CALCulate:LMONitor:BRSecb:THReshold? 1

< 32

:CALCulate:TRAFfic:RESult?

Response:
- <count>,<mean-bps>,<mean-cps>,<mean-%>,<max-bps>,
  - <max-cps>,<max-%>,<min-bps>,<min-bps>,<min-bps>
- <count> = <STRING RESPONSE DATA>
  - Number of captured cells (Total)
    - (Form1)
  - <mean-bps> = <STRING RESPONSE DATA>
    - Average number of captured cells (b/s)
    - (Form1)
  - <mean-cps> = <STRING RESPONSE DATA>
    - Average number of captured cells (Total)
    - (Form1)
4.4 Equipment Unique Command

<mean-%> = <STRING RESPONSE DATA>
Average number of captured cells (%)
(Form3 "100.0")

<max-bps> = <STRING RESPONSE DATA>
Maximum number of captured cells (bit/s)
(Form1)

<max-cps> = <STRING RESPONSE DATA>
Maximum number of captured cells (cell/s)
(Form1)

<max-%> = <STRING RESPONSE DATA>
Maximum number of captured cells (%)
(Form3 "100.0")

<min-bps> = <STRING RESPONSE DATA>
Minimum number of captured cells (bit/s)
(Form1)

<min-cps> = <STRING RESPONSE DATA>
Minimum number of captured cells (cell/s)
(Form1)

<min-%> = <STRING RESPONSE DATA>
Minimum number of captured cells (%)
(Form3 "100.0")

Note: When no data exists, the following is outputted.
< "--------","--------","--------","-----","--------","--------","-----","--------","--------","-----"

Function
Queries the measurement results.

Example use
To query the Traffic monitor results:
> :CALCulate:TRAFFic:RESult?
< "15892","1200","23","20.5","10000","200","88.5", \\
1","1","0.5"
Section 4  Remote Control

:CALCulate:TRAFFic:DATA? <numeric1>,<numeric2>,<numeric3>,<numeric4>, numeric5>, <numeric6>

Parameter   <DECIMAL NUMERIC PROGRAM DATA>

Date and time of the read data
<numeric1> = 1994 - 2093 (year)
<numeric2> = 1 - 12 (month)
<numeric3> = 1 - 31 (day)
<numeric4> = 0 - 23 (hour)
<numeric5> = 0 - 59 (minute)
<numeric6> = 0 - 59 (second)

Response   <time>,<mean-bps>,<mean-cps>,<mean-%>,<max-bps>,<max-cps>,<max-%>, <min-bps>,<min-bps>,<min-bps>
<time> = <year>,<month>,<day>,<hour>,<minute>,<second>
<year> = <NR1 NUMERIC RESPONSE DATA>
0,1994 - 2093 year
<month> = <NR1 NUMERIC RESPONSE DATA>
0,1 - 12 month
<day> = <NR1 NUMERIC RESPONSE DATA>
0,1 - 31 day
<hour> = <NR1 NUMERIC RESPONSE DATA>
0 - 23 hour
<minute> = <NR1 NUMERIC RESPONSE DATA>
0 - 59 minute
<second> = <NR1 NUMERIC RESPONSE DATA>
0 - 59 second
<mean-bps> = <STRING RESPONSE DATA>
The average number of captured cell (bit/s) (Form1)
<mean-cps> = <STRING RESPONSE DATA>
The average number of captured cell (cell/s) (Form1)
<mean-%> = <STRING RESPONSE DATA>
The average number of captured cell (%) (Form3"100.0")
<max-bps> = <STRING RESPONSE DATA>
Maximum average number of captured cell (bit/s) (Form1)
<max-cps> = <STRING RESPONSE DATA>
Maximum average number of captured cell (cell/s)
<max-%> = <STRING RESPONSE DATA>
Maximum average number of captured cell (%)

<min-bps> = <STRING RESPONSE DATA>
Minimum average number of captured cell (bit/s)

<min-cps> = <STRING RESPONSE DATA>
Minimum average number of captured cell (cell/s)

<min-%> = <STRING RESPONSE DATA>
Minimum average number of captured cell (%)

Note: When no data exists, the following is outputted.

< 0,0,0,0,0,0,"--------","--------","--------","-----","--------","--------","-----","--------","--------","-----"

Function
Queries the Traffic monitor analysis results.

Example use
To read the analysis data at 01:20:30 on October 23rd, 2000:


< 2000,10,23,1,20,30,"    1200","      23"," 20.5","   10000","     200"," 88.5","      1","      1","  0.5"

:CALCulate:CAPTure:LINE? <type>,<numeric1>,<numeric2>

Parameter
<type> = <CHARACTER PROGRAM DATA>
HEX               HEX
ASCII             Ascii
TRANslate         Translate

<numeric1>,<numeric2> = <DECIMAL NUMERIC PROGRAM DATA>

Response
<string> = <STRING RESPONSE DATA>
Hexadecimal character strings delimited on byte basis are returned for the specified number as the capture results.

Function
Queries the Capture results.

Example use
To query the Capture results:

> :CALCulate:CAPTure:LINE? HEX,1,2

<
"F,256,65535,0,0,00,00,00,00,00,00,00,00,00, 00","F,256,65535,0,0,,11,11,11,11,11,11,11,11,11,11,11,11,11,11,"
Section 4  Remote Control

:CALCulate:CAPTure:TOTal?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
          0  -  2016
Note: If no capture has occurred, 0 is output.
Function  Queries the number of captured lines.
Example use > :CALCulate:CAPTure:TOTal?
            < 2016

:CALCulate:CAPTure:TRIGger?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
          0  -  2016
Note: If no capture has occurred or no trigger exists, 0 is output.
Function  Queries the number of captured trigger lines.
Example use > :CALCulate:CAPTure:TRIGger?
            < 2016

:CALCulate:CDV1:DATA? <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
           -9000  -  9000
Response  <time>,<cell>,<count>,<rate>
          <time>  = <STRING RESPONSE DATA>
           Cell interval (µs)
           (Form12)
          <cell>  = <STRING RESPONSE DATA>
           Number of cell intervals (cell)
           (Form12)
          <count>  = <STRING RESPONSE DATA>
           Number of cells
           (Form1)
          <rate>  = <STRING RESPONSE DATA>
           Cell rate (%)  
           (Form3)
Function  Queries the 1-point CDV analysis results.
Example use To read the 10th cell analysis data by 1-point CDV:
               > :CALCulate:CDV1:DATA? 10
               < "        7","       10","      100","  50.0000"
4.4 Equipment Unique Command

**:CALCulate:CDV2:DATA? <numeric>**

Parameter: 
- <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
- -9000 - 9000

Response: 
- <time>,<cell>,<count>,<rate>
- <time> = <STRING RESPONSE DATA>
- Cell interval (µs)
  - (Form12)
- <cell> = <STRING RESPONSE DATA>
- Number of cell intervals (cell)
  - (Form12)
- <count> = <STRING RESPONSE DATA>
- Number of cells
  - (Form1)
- <rate> = <STRING RESPONSE DATA>
- Cell rate (%)
  - (Form3)

Function: Reads the 10th cell analysis data by 2-point CDV

Example use: 
To read the 10th cell analysis data by 2-point CDV:
> :CALCulate:CDV2:DATA? 10
< "    7","    10","   100"," 50.0000"

**:CALCulate:LOOPback:RESult?**

Response: 
- <loopback> = <STRING RESPONSE DATA>
- Form4, Form1, Form1

Function: Queries the Loopback measurement results.

Example use: 
> :CALCulate:LOOPback:RESult?
< "   Acceptable","    1","    0"
### 4.4.6 SYSTem subsystem

SYSTem subsystem sets printer, memory, buzzer, and so on.

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Page 4-270</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Queries the Analyze memory registration condition.</td>
<td>:SYSTem:MEMory:ANALysis:LABel?</td>
<td>numeric</td>
</tr>
<tr>
<td>Writes data in the analyze memory.</td>
<td>:SYSTem:MEMory:ANALysis:STORe</td>
<td>type title</td>
</tr>
<tr>
<td><strong>Page 4-270</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reads a file from the current directory of the floppy disk.</td>
<td>:SYSTem:MMEMory:RECall</td>
<td>file_name memorized</td>
</tr>
<tr>
<td><strong>Page 4-271</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writes a file in the current directory of the floppy disk.</td>
<td>:SYSTem:MMEMory:STORe</td>
<td>type file_name</td>
</tr>
</tbody>
</table>
Section 4  Remote Control

:SYSTem:MEMory:ANALysis:LABel? <numeric>

Parameter  
<numeric> = <DECIMAL PROGRAM DATA>
1 - 15  Memory No.1-No.15

Response  
<title>,<gtype>,<stime>,<use>
<title> = <STRING RESPONSE DATA>
Memory name (fixed to eight characters)
<gtype> = <CHARACTER RESPONSE DATA>
Graph type
<stime> = <STRING RESPONSE DATA>
Measurement start time (fixed to 19 characters)
<use> = <STRING RESPONSE DATA>
Memory amount used (percent)
Form 3

Function  Queries the Analyze memory registration condition.

Example use  To query the registration condition of memory No.1:
> :SYSTem:MEMory:ANALysis:LABel? 1
< "JITTER ",JTOL,,"2000.12.25 18:40:30"," 30.0000"

:SYSTem:MEMory:ANALysis:STORe <type>,<title>

Parameter  
$type> = <CHARACTER PROGRAM DATA>
<title> = <STRING PROGRAM DATA>
Memory name (up to eight characters)

Function  Restriction  Invalid in the following cases.
- When no analysis data exists.

Example use  To write analysis data (Error/Alarm) under the name of "DEMO1":
< :SYSTem:MEMory:ANALysis:STORe  EALarm,"DEMO1"

:SYSTem:MMEMory:RECall <file_name>[,<memorized>]

Parameter  
<file_name> = <STRING PROGRAM DATA>
"File name" (Case-independence, including the extension)
The character string must consist of 1 to 12 characters. "" is not allowed.
<memorized> = <CHARACTER PROGRAM DATA>

Function  CAPTure  Recalls the file to the Analyze:Recall screen.
MEMorized  Recalls the file to Cell edit screen
(Memorized cell).

Note: <memorized> is valid only when the file recalled is Cell capture data.

4 - 270
**Restriction**

Invalid in the following cases.

- When the file is not Cell capture data, and the `<memorized>` parameter is specified.
- When the file is Cell capture data, and the `<memorized>` parameter is not specified.

**Example use**

To read data into the file setting condition called "DEMO1.CND":

```
> :SYSTem:MMEMory:RECall "DEMO1.CND"
```

**:`SYSTem:MMEMory:STORe <type>,<file_name>`**

**Parameter**

<table>
<thead>
<tr>
<th><code>&lt;type&gt;</code></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;CONDition&quot;</td>
<td>Setting condition data</td>
</tr>
<tr>
<td>&quot;MEMorized:MEMorized&quot;</td>
<td>Memorized cell data</td>
</tr>
<tr>
<td>&quot;MEMorized:MTEXT&quot;</td>
<td>Memorized cell data (text format)</td>
</tr>
<tr>
<td>&quot;PAYLoad:PAYLoad&quot;</td>
<td>Payload(65535byte) data</td>
</tr>
<tr>
<td>&quot;PAYLoad:PTEXT&quot;</td>
<td>Payload(65535byte) data (text format)</td>
</tr>
<tr>
<td>&quot;TSEarch:RTEXT&quot;</td>
<td>Trouble search measurement results on the Result screen (text format)</td>
</tr>
<tr>
<td>&quot;EALarm:RTEXT&quot;</td>
<td>Error/Alarm measurement results on the Result screen (text format)</td>
</tr>
<tr>
<td>&quot;DELay:RTEXT&quot;</td>
<td>DELay measurement results on the Result screen (text format)</td>
</tr>
<tr>
<td>&quot;EALarm:EALarm&quot;</td>
<td>Analysis data on the Error/Alarm screen</td>
</tr>
<tr>
<td>&quot;EALarm:EAText&quot;</td>
<td>Analysis data on the Error/Alarm screen (text format)</td>
</tr>
<tr>
<td>&quot;LMONitor:LMONitor&quot;</td>
<td>Analysis data on the Live monitor screen</td>
</tr>
<tr>
<td>&quot;LMONitor:CTEXt&quot;</td>
<td>Analysis data on the Live monitor screen (text format)</td>
</tr>
<tr>
<td>&quot;CAPTure:CAPTure&quot;</td>
<td>Analysis data on the Cell capture screen</td>
</tr>
<tr>
<td>&quot;CAPTure:CTEXt&quot;</td>
<td>Analysis data on the Cell capture screen (text format)</td>
</tr>
<tr>
<td>&quot;CDV1:CDV1&quot;</td>
<td>Analysis data on the 1-point CDV screen</td>
</tr>
<tr>
<td>&quot;CDV1:CTEXt&quot;</td>
<td>Analysis data on the 1-point CDV screen (text format)</td>
</tr>
<tr>
<td>&quot;CDV2:CDV2&quot;</td>
<td>Analysis data on the 2-point CDV screen</td>
</tr>
<tr>
<td>&quot;CDV2:CTEXt&quot;</td>
<td>Analysis data on the 2-point CDV screen (text format)</td>
</tr>
<tr>
<td>&quot;OHCapture:OHCapture&quot;</td>
<td>Analysis data on the OH capture screen</td>
</tr>
<tr>
<td>&quot;OHCapture:OHText&quot;</td>
<td>Analysis data on the OH capture screen (text format)</td>
</tr>
</tbody>
</table>
"RECall:RECall" Analysis data on the Recall screen
"RECall:RTEXt" Analysis data on the Recall screen (text format)

<file_name> = <STRING PROGRAM DATA>
"File name" (Case-independence, including the extension)
The character string must consist of up to 12 characters. "" is not allowed.

Function Writes a file in the current directory of the floppy disk.

Restriction Invalid in the following cases.
- When there is no data to be stored, and other than "CONDition", "MEMorized:MEMorized",
  "MEMorized:MTEXt", "PAYLoad:PAYLoad", and "PAYLoad:PTEXt" is set.
- When :SENSe:ATM:MANual:LMONitor:TYPE is <INDividual>,
  and "LMONitor:LMONitor" or "LMONitor:CTEXt" is set.

Example use To write the current setting condition in the file named as "DEMO1.CND":
> :SYSTem:MMEMory:STORe "CONDition","DEMO1.CND"
### 4.4.7 STATus subsystem

In STATus subsystem, status registers are controlled (settings and display).

<table>
<thead>
<tr>
<th>Function</th>
<th>Command</th>
<th>Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries the contents of the event register of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:[EVENt]?</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the condition register of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:CONDition?</td>
<td></td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:ENABle</td>
<td>numeric</td>
</tr>
<tr>
<td>To query the event enable register of the DS3 PLCP status register:</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:ENABle?</td>
<td></td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:PTRANSition</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:PTRANSition?</td>
<td></td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:NTRANSition</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the DS3 PLCP status register.</td>
<td>:STATus:QUESTionable:TELecom2:DS3Plcp:NTRANSition?</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the event register of the ATM status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:[EVENt]?</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM status register</td>
<td>:STATus:QUESTionable:TELecom2:ATM:CONDition?</td>
<td></td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:ENABLe</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:ENABLe?</td>
<td></td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:PTRANSition</td>
<td>numeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:PTRANSition?</td>
<td></td>
</tr>
</tbody>
</table>
### Section 4  Remote Control

<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-281</td>
<td>Sets the transition filter (negative-direction transition) of the ATM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:NTRansition</td>
</tr>
<tr>
<td>4-281</td>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:NTRansition?</td>
</tr>
<tr>
<td>4-282</td>
<td>Queries the contents of the event register of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP[:EVEN]t?</td>
</tr>
<tr>
<td>4-282</td>
<td>Queries the contents of the condition register of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:CONDition?</td>
</tr>
<tr>
<td>4-282</td>
<td>Sets the mask value of the event enable register of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:ENABl e</td>
</tr>
<tr>
<td>4-282</td>
<td>Queries the contents of the event enable register of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:ENABl e?</td>
</tr>
<tr>
<td>4-282</td>
<td>Sets the transition filter (positive-direction transition) of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:PTRan sition</td>
</tr>
<tr>
<td>4-282</td>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:PTRan sition?</td>
</tr>
<tr>
<td>4-282</td>
<td>Sets the transition filter (negative-direction transition) of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:NTRan sition</td>
</tr>
<tr>
<td>4-282</td>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM VP status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VP:NTRan sition?</td>
</tr>
<tr>
<td>4-284</td>
<td>Queries the contents of the event register of the ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC[:EVEN]t?</td>
</tr>
<tr>
<td>4-284</td>
<td>Queries the contents of the condition register of ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:CONDi tion?</td>
</tr>
<tr>
<td>4-284</td>
<td>Sets the mask value of the event enable register of ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:ENABl e</td>
</tr>
<tr>
<td>4-284</td>
<td>Queries the contents of the event enable register of ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:ENABl e?</td>
</tr>
<tr>
<td>4-284</td>
<td>Sets the transition filter (positive-direction transition) of the ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:PTRan sition</td>
</tr>
<tr>
<td>4-284</td>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:PTRan sition?</td>
</tr>
<tr>
<td>4-284</td>
<td>Sets the transition filter (negative-direction transition) of the ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:NTRan sition</td>
</tr>
<tr>
<td>4-284</td>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM VC status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:VC:NTRan sition?</td>
</tr>
<tr>
<td>Page 4-286</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the event register of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191::EV ENt?</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM O191</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:CONDition?</td>
<td></td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:ENA Ble numeric</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:ENA Ble?</td>
<td></td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:PTRansition numeric</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:PTRansition?</td>
<td></td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:NTRansition numeric</td>
<td></td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM O191 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:O191:NTRansition?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Page 4-288</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries the contents of the event register of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1::EV ENt?</td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM AAL1</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:CONDition?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:ENA Ble numeric</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:ENA Ble?</td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:PTRansition numeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:PTRansition?</td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:NTRansition numeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM AAL1 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL1:NTRansition?</td>
</tr>
<tr>
<td>Queries the contents of the event register of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2[:EVENt]?</td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:CONDition?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:ENAble</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:ENAble?</td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:PTRansition</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:PTRansition?</td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:NTRansition</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM AAL2 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL2:NTRansition?</td>
</tr>
<tr>
<td>Queries the contents of the event register of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34[:EVENt]?</td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:CONDition?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:ENAble</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:ENAble?</td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:PTransition</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:PTransition?</td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM AAL3/4 status register.</td>
<td>:STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition?</td>
</tr>
<tr>
<td><strong>4.4 Equipment Unique Command</strong></td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Description</th>
<th>Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>Queries the contents of the event register of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5[:EV ENt]?</td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:CONDition?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:ENABlenumeric</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:ENABle?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:ENABle</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:ENABle?</td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansitionnumeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansition?</td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansitionnumeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM AAL5 status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansition?</td>
</tr>
<tr>
<td>Queries the contents of the event register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM[:EV ENt]?</td>
</tr>
<tr>
<td>Queries the contents of the condition register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:CONDition?</td>
</tr>
<tr>
<td>Sets the mask value of the event enable register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:ENABlenumeric</td>
</tr>
<tr>
<td>Queries the contents of the event enable register of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:ENABle?</td>
</tr>
<tr>
<td>Sets the transition filter (positive-direction transition) of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:PTRansitionnumeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (positive-direction transition) of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:PTRansition?</td>
</tr>
<tr>
<td>Sets the transition filter (negative-direction transition) of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:NTRansitionnumeric</td>
</tr>
<tr>
<td>Queries the contents of the transition filter (negative-direction transition) of the ATM PM status register.</td>
<td>:STATus:QUEStionable:TELecom2:ATM:PM:NTRansition?</td>
</tr>
</tbody>
</table>
< TELecom2 Status Register >

:STATus:QUEStionable:TELecom2:DS3Plcp:[EVENt]?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of event register bits (decimal)
Function Queries the contents of the event register of the DS3 PLCP status register.
Example use To query the event register of the DS3 PLCP status register:
> :STATus:QUEStionable:TELecom2:DS3Plcp:[EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:DS3Plcp:CONDition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of condition register bits (decimal)
Function Queries the contents of the condition register of the DS3 PLCP status register.
Example use To query the condition register of the DS3 PLCP status register:
> :STATus:QUEStionable:TELecom2:DS3Plcp:CONDition?
< 32767

:STATus:QUEStionable:TELecom2:DS3Plcp:ENABle <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767 Sum of event enable register bits (decimal)
Function Sets the mask value of the event enable register of the DS3 PLCP status register.
Example use To set 32767 in the event enable register of the DS3 PLCP status register:
> :STATus:QUEStionable:TELecom2:DS3Plcp:ENABle 32767

:STATus:QUEStionable:TELecom2:DS3Plcp:ENABle?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of event enable register bits (decimal)
Function Queries the contents of the event enable register of the DS3 PLCP status register.
Example use To query the event enable register of the DS3 PLCP status register:
> :STATus:QUEStionable:TELecom2:DS3Plcp:ENABle?
< 32767
4.4  Equipment Unique Command

:STATus:QUESTIONable:TELecom2:DS3Plcp:PTRansition <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function  Sets the transition filter (positive-direction transition) of the DS3
          PLCP status register.
Example use  To set 32767 in the transition filter (positive-direction transition)
            of the DS3 PLCP status register:
            > :STATus:QUESTIONable:TELecom2:DS3Plcp:PTRansition 32767

:STATus:QUESTIONable:TELecom2:DS3Plcp:PTRansition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function  Queries the contents of the transition filter (positive-direction
          transition) of the DS3 PLCP status register.
Example use  To query the transition filter (positive-direction transition) of the
            DS3 PLCP status register:
            > :STATus:QUESTIONable:TELecom2:DS3Plcp:PTRansition?
            < 32767

:STATus:QUESTIONable:TELecom2:DS3Plcp:NTRansition <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function  Sets the transition filter (negative-direction transition) of the DS3
          PLCP status register.
Example use  To set 32767 in the transition filter (negative-direction transition)
            of the DS3 PLCP status register:
            > :STATus:QUESTIONable:TELecom2:DS3Plcp:NTRansition 32767

:STATus:QUESTIONable:TELecom2:DS3Plcp:NTRansition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function  Queries the contents of the transition filter (negative-direction
          transition) of the DS3 PLCP status register.
Example use  To query the transition filter (negative-direction transition) of the
            DS3 PLCP status register:
            > :STATus:QUESTIONable:TELecom2:DS3Plcp:NTRansition?
            < 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM[:EVENt]?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event register bits (decimal)
Function Queries the contents of the event register of the ATM status register.
Example use To query the event register of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM[:EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:ATM:CONDition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of condition register bits (decimal)
Function Queries the contents of the condition register of the ATM status register.
Example use To query the condition register of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:CONDition?
< 32767

:STATus:QUEStionable:TELecom2:ATM:ENABle <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function Sets the mask value of the event enable register of the ATM status register.
Example use To set 32767 in the event enable register of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:ENABle?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function Queries the contents of the event enable register of the ATM status register.
Example use To query the event enable register of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:ENABle?
< 32767
4.4 Equipment Unique Command

:STATus:QUEStionable:TELecom2:ATM:PTRansition <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767   Sum of transition filter bits (decimal)
Function Sets the transition filter (positive-direction transition) of the ATM status register.
Example use To set 32767 in the transition filter (positive-direction transition) of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:PTRansition 32767

:STATus:QUEStionable:TELecom2:ATM:PTRansition <numeric>
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767   Sum of transition filter bits (decimal)
Function Queries the contents of the transition filter (positive-direction transition) of the ATM status register.
Example use To query the transition filter (positive-direction transition) of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:PTRansition?
< 32767

:STATus:QUEStionable:TELecom2:ATM:NTRansition <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767   Sum of transition filter bits (decimal)
Function Sets the transition filter (negative-direction transition) of the ATM status register.
Example use To set 32767 in the transition filter (negative-direction transition) of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:NTRansition 32767

:STATus:QUEStionable:TELecom2:ATM:NTRansition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767   Sum of transition filter bits (decimal)
Function Queries the contents of the transition filter (negative-direction transition) of the ATM status register.
Example use To query the transition filter (negative-direction transition) of the ATM status register:
> :STATus:QUEStionable:TELecom2:ATM:NTRansition?
< 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM:VP[:EVENt]?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event register bits (decimal)
Function Queries the contents of the event register of the ATM VP status register.
Example use To query the event register of the ATM VP status register:
> :STATus:QUEStionable:TELecom2:ATM:VP[:EVENt]?  
< 32767

:STATus:QUEStionable:TELecom2:ATM:VP:CONDition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of condition register bits (decimal)
Function Queries the contents of the condition register of the ATM VP status register.
Example use To query the condition register of the ATM VP status register:
> :STATus:QUEStionable:TELecom2:ATM:VP:CONDition?  
< 32767

:STATus:QUEStionable:TELecom2:ATM:VP:ENABle <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function Sets the mask value of the event enable register of the ATM VP status register.
Example use To set 32767 in the event enable register of the ATM VP status register:
> :STATus:QUEStionable:TELecom2:ATM:VP:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:VP:ENABle?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function Queries the contents of the event enable register of the ATM VP status register.
Example use To query the event enable register of the ATM VP status register:
> :STATus:QUEStionable:TELecom2:ATM:VP:ENABle?  
< 32767
4.4 Equipment Unique Command

**:STATus:QUESTionable:TELecom2:ATM:VP:PTRansition <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function  
Sets the transition filter (positive-direction transition) of the ATM VP status register.

Example use  
To set 32767 in the transition filter (positive-direction transition) of the ATM VP status register:

**:STATus:QUESTionable:TELecom2:ATM:VP:PTRansition?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (positive-direction transition) of the ATM VP status register.

Example use  
To query the transition filter (positive-direction transition) of the ATM VP status register:
< 32767

**:STATus:QUESTionable:TELecom2:ATM:VP:NTRansition <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function  
Sets the transition filter (negative-direction transition) of the ATM VP status register.

Example use  
To set 32767 in the transition filter (negative-direction transition) of the ATM VP status register:
> :STATus:QUESTionable:TELecom2:ATM:VP:NTRansition 32767

**:STATus:QUESTionable:TELecom2:ATM:VP:NTRansition?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (negative-direction transition) of the ATM VP status register.

Example use  
To query the transition filter (negative-direction transition) of the ATM VP status register:
> :STATus:QUESTionable:TELecom2:ATM:VP:NTRansition?
< 32767
Section 4 Remote Control

:STATus:QUEStionable:TELecom2:ATM:VC[:EVENt]?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767   Sum of event register bits (decimal)
Function Queries the contents of the event register of the ATM VC status register.
Example use To query the event register of the ATM VC status register:
> :STATus:QUEStionable:TELecom2:ATM:VC[:EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:ATM:VC:CONDition?
Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 -32767   Sum of condition register bits (decimal)
Function Queries the contents of the condition register of ATM VC status register.
Example use To query the contents of the condition register of ATM VC status register:
> :STATus:QUEStionable:TELecom2:ATM:VC:CONDition?
<  32767

:STATus:QUEStionable:TELecom2:ATM:VC:ENABle <numeric>
Parameter <numeric>=<DECIMAL NUMERIC PROGRAM DATA>
0 -32767   Sum of event enable register bits (decimal)
Function Sets the mask value of the event enable register of ATM VC status register.
Example use To set the event enable register of ATM VC status register to 32767.
> :STATus:QUEStionable:TELecom2:ATM:VC:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:VC:ENABle?
Parameter <numeric>=<DECIMAL NUMERIC PROGRAM DATA>
0 -32767   Sum of event enable register bits (decimal)
Function Queries the contents of the event enable register of ATM VC status register.
Example use To query the event enable register of ATM VC status register.
> :STATus:QUEStionable:TELecom2:ATM:VC:ENABle?
< 32767
4.4 Equipment Unique Command

:STATus:QUESTionable:TELecom2:ATM:VC:PTRansition <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of transition filter bits (decimal)

Function  
Sets the transition filter (positive-direction transition) of the ATM VC status register.

Example use  
To set 32767 in the transition filter (positive-direction transition) of the ATM VC status register:
> :STATus:QUESTionable:TELecom2:ATM:VC:PTRansition 32767

:STATus:QUESTionable:TELecom2:ATM:VC:PTRansition?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (positive-direction transition) of the ATM VC status register.

Example use  
To query the transition filter (positive-direction transition) of the ATM VC status register:
> :STATus:QUESTionable:TELecom2:ATM:VC:PTRansition?
< 32767

:STATus:QUESTionable:TELecom2:ATM:VC:NTRansition <numeric>

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of transition filter bits (decimal)

Function  
Sets the transition filter (negative-direction transition) of the ATM VC status register.

Example use  
To set 32767 in the transition filter (negative-direction transition) of the ATM VC status register:
> :STATus:QUESTionable:TELecom2:ATM:VC:NTRansition 32767

:STATus:QUESTionable:TELecom2:ATM:VC:NTRansition?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (negative-direction transition) of the ATM VC status register.

Example use  
To query the transition filter (negative-direction transition) of the ATM VC status register:
> :STATus:QUESTionable:TELecom2:ATM:VC:NTRansition?
< 32767
Section 4  Remote Control

:STATus:QUESTionable:TELecom2:ATM:O191?:EVENt?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767   Sum of event register bits (decimal)
Function    Queries the contents of the event register of the ATM O191 status register.
Example use To query the event register of the ATM O191 status register:
> :STATus:QUESTionable:TELecom2:ATM:O191?:EVENt?
< 32767

Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767   Sum of condition register bits (decimal)
Function    Queries the contents of the condition register of the ATM O191 status register.
Example use To query the condition register of the ATM O191 status register:
< 32767

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767   Sum of event enable register bits (decimal)
Function    Sets the mask value of the event enable register of the ATM O191 status register.
Example use To set 32767 in the event enable register of the ATM O191 status register:

Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767   Sum of event enable register bits (decimal)
Function    Queries the contents of the event enable register of the ATM O191 status register.
Example use To query the event enable register of the ATM O191 status register:
< 32767
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
- 0 - 32767 Sum of transition filter bits (decimal)
Function Sets the transition filter (positive-direction transition) of the ATM O191 status register.
Example use To set 32767 in the transition filter (positive-direction transition) of the ATM O191 status register:

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
- 0 - 32767 Sum of transition filter bits (decimal)
Function Sets the transition filter (negative-direction transition) of the ATM O191 status register.
Example use To set 32767 in the transition filter (negative-direction transition) of the ATM O191 status register:

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
- 0 - 32767 Sum of transition filter bits (decimal)
Function Queries the contents of the transition filter (positive-direction transition) of the ATM O191 status register.
Example use To query the transition filter (positive-direction transition) of the ATM O191 status register:
< 32767

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
- 0 - 32767 Sum of transition filter bits (decimal)
Function Queries the contents of the transition filter (negative-direction transition) of the ATM O191 status register.
Example use To query the transition filter (negative-direction transition) of the ATM O191 status register:
< 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM:AAL1:[EVENt]?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
          0 - 32767  Sum of event register bits (decimal)
Function Queries the contents of the event register of the ATM AAL1 status register.
Example use To query the event register of the ATM AAL1 status register:
              > :STATus:QUEStionable:TELecom2:ATM:AAL1:[EVENt]?
              < 32767

:STATus:QUEStionable:TELecom2:ATM:AAL1:CONDition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
          0 - 32767  Sum of condition register bits (decimal)
Function Queries the contents of the condition register of the ATM AAL1 status register.
Example use To query the condition register of the ATM AAL1 status register:
              > :STATus:QUEStionable:TELecom2:ATM:AAL1:CONDition?
              < 32767

:STATus:QUEStionable:TELecom2:ATM:AAL1:ENABle <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
           0 - 32767  Sum of event enable register bits (decimal)
Function Sets the mask value of the event enable register of the ATM AAL1 status register.
Example use To set 32767 in the event enable register of the ATM AAL1 status register:
              > :STATus:QUEStionable:TELecom2:ATM:AAL1:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:AAL1:ENABle?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
          0 - 32767  Sum of event enable register bits (decimal)
Function Queries the contents of the event enable register of the ATM AAL1 status register.
Example use To query the event enable register of the ATM AAL1 status register:
              > :STATus:QUEStionable:TELecom2:ATM:AAL1:ENABle?
              < 32767
4.4 Equipment Unique Command

`:STATus:QUESTionable:TELecom2:ATM:AAL1:PTRansition <numeric>`

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)

Function  
Sets the transition filter (positive-direction transition) of the ATM AAL1 status register.

Example use  
To set 32767 in the transition filter (positive-direction transition) of the ATM AAL1 status register:
>`:STATus:QUESTionable:TELecom2:ATM:AAL1:PTRansition 32767`

`:STATus:QUESTionable:TELecom2:ATM:AAL1:NTRansition <numeric>`

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)

Function  
Sets the transition filter (negative-direction transition) of the ATM AAL1 status register.

Example use  
To set 32767 in the transition filter (negative-direction transition) of the ATM AAL1 status register:
>`:STATus:QUESTionable:TELecom2:ATM:AAL1:NTRansition 32767`

`:STATus:QUESTionable:TELecom2:ATM:AAL1:PTRansition?

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (positive-direction transition) of the ATM AAL1 status register.

Example use  
To query the transition filter (positive-direction transition) of the ATM AAL1 status register:
>`:STATus:QUESTionable:TELecom2:ATM:AAL1:PTRansition?`
  < 32767

`:STATus:QUESTionable:TELecom2:ATM:AAL1:NTRansition?`

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (negative-direction transition) of the ATM AAL1 status register.

Example use  
To query the transition filter (negative-direction transition) of the ATM AAL1 status register:
>`:STATus:QUESTionable:TELecom2:ATM:AAL1:NTRansition?`
  < 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM:AAL2[:EVENt]?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event register bits (decimal)
Function   Queries the contents of the event register of the ATM AAL2 status register.
Example use To query the event register of the ATM AAL2 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL2[:EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL2:CONDition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of condition register bits (decimal)
Function   Queries the contents of the condition register of the ATM AAL2 status register.
Example use To query the condition register of the ATM AAL2 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL2:CONDition?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL2:ENABle <numeric>
Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function   Sets the mask value of the event enable register of the ATM AAL2 status register.
Example use To set 32767 in the event enable register of the ATM AAL2 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL2:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:AAL2:ENABle?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function   Queries the contents of the event enable register of the ATM AAL2 status register.
Example use To query the event enable register of the ATM AAL2 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL2:ENABle?
< 32767
4.4 Equipment Unique Command

Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function    Sets the transition filter (positive-direction transition) of the ATM
            AAL2 status register.
Example use To set 32767 in the transition filter (positive-direction transition) of
            the ATM AAL2 status register:

:STATus:QUEStionable:TELecom2:ATM:AAL2:PTRansition?
Response    <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function    Queries the contents of the transition filter (positive-direction
            transition) of the ATM AAL2 status register.
Example use To query the transition filter (positive-direction transition) of the
            ATM AAL2 status register:
            > :STATus:QUEStionable:TELecom2:ATM:AAL2:PTRansition?
            < 32767

:STATus:QUEStionable:TELecom2:ATM:AAL2:NTRansition <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function    Sets the transition filter (negative-direction transition) of the ATM
            AAL2 status register.
Example use To set 32767 in the transition filter (negative-direction transition) of
            the ATM AAL2 status register:
            > :STATus:QUEStionable:TELecom2:ATM:AAL2:NTRansition 32767

:STATus:QUEStionable:TELecom2:ATM:AAL2:NTRansition?
Response    <numeric> = <NR1 NUMERIC RESPONSE DATA>
  0 - 32767  Sum of transition filter bits (decimal)
Function    Queries the contents of the transition filter (negative-direction
            transition) of the ATM AAL2 status register.
Example use To query the transition filter (negative-direction transition) of the
            ATM AAL2 status register:
            > :STATus:QUEStionable:TELecom2:ATM:AAL2:NTRansition?
            < 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM:AAL34:[EVENt]?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event register bits (decimal)
Function   Queries the contents of the event register of the ATM AAL3/4 status register.
Example use To query the event register of the ATM AAL3/4 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL34:[EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL34:CONDition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of condition register bits (decimal)
Function   Queries the contents of the condition register of the ATM AAL3/4 status register.
Example use To query the condition register of the ATM AAL3/4 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL34:CONDition?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL34:ENABle <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function   Sets the mask value of the event enable register of the ATM AAL3/4 status register.
Example use To set 32767 in the event enable register of the ATM AAL3/4 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL34:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:AAL34:ENABle?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function   Queries the contents of the event enable register of the ATM AAL3/4 status register.
Example use To query the event enable register of the ATM AAL3/4 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL34:ENABle?
< 32767
### 4.4 Equipment Unique Command

**:STATus:QUESTionable:TELecom2:ATM:AAL34:PTRansition <numeric>**

- **Parameter**: 
  - `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 0 - 32767  Sum of transition filter bits (decimal)
- **Function**: Sets the transition filter (positive-direction transition) of the ATM AAL3/4 status register.
- **Example use**: To set 32767 in the transition filter (positive-direction transition) of the ATM AAL3/4 status register:
  > :STATus:QUESTionable:TELecom2:ATM:AAL34:PTRansition 32767

**:STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition <numeric>**

- **Parameter**: 
  - `<numeric>` = `<DECIMAL NUMERIC PROGRAM DATA>`
  - 0 - 32767  Sum of transition filter bits (decimal)
- **Function**: Sets the transition filter (negative-direction transition) of the ATM AAL3/4 status register.
- **Example use**: To set 32767 in the transition filter (negative-direction transition) of the ATM AAL3/4 status register:
  > :STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition 32767

**:STATus:QUESTionable:TELecom2:ATM:AAL34:PTRansition?**

- **Response**: 
  - `<numeric>` = `<NR1 NUMERIC RESPONSE DATA>`
  - 0 - 32767  Sum of transition filter bits (decimal)
- **Function**: Queries the contents of the transition filter (positive-direction transition) of the ATM AAL3/4 status register.
- **Example use**: To query the transition filter (positive-direction transition) of the ATM AAL3/4 status register:
  > :STATus:QUESTionable:TELecom2:ATM:AAL34:PTRansition?
  < 32767

**:STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition?**

- **Response**: 
  - `<numeric>` = `<NR1 NUMERIC RESPONSE DATA>`
  - 0 - 32767  Sum of transition filter bits (decimal)
- **Function**: Queries the contents of the transition filter (negative-direction transition) of the ATM AAL3/4 status register.
- **Example use**: To query the transition filter (negative-direction transition) of the ATM AAL3/4 status register:
  > :STATus:QUESTionable:TELecom2:ATM:AAL34:NTRansition?
  < 32767
Section 4  Remote Control

:STATus:QUEStionable:TELecom2:ATM:AAL5[:EVENt]?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the contents of the event register of the ATM AAL5 status register.
Example use To query the event register of the ATM AAL5 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL5[:EVENt]?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL5:CONDition?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the contents of the condition register of the ATM AAL5 status register.
Example use To query the condition register of the ATM AAL5 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL5:CONDition?
< 32767

:STATus:QUEStionable:TELecom2:ATM:AAL5:ENABle <numeric>
Parameter  <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
Function Sets the mask value of the event enable register of the ATM AAL5 status register.
Example use To set 32767 in the event enable register of the ATM AAL5 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL5:ENABle 32767

:STATus:QUEStionable:TELecom2:ATM:AAL5:ENABle?
Response  <numeric> = <NR1 NUMERIC RESPONSE DATA>
Function Queries the contents of the event enable register of the ATM AAL5 status register.
Example use To query the event enable register of the ATM AAL5 status register:
> :STATus:QUEStionable:TELecom2:ATM:AAL5:ENABle?
< 32767
4.4 Equipment Unique Command

**:STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansition <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  
Sum of transition filter bits (decimal)

Function  
Sets the transition filter (positive-direction transition) of the ATM AAL5 status register.

Example use  
To set 32767 in the transition filter (positive-direction transition) of the ATM AAL5 status register:

> :STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansition 32767

**:STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansition?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  
Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (positive-direction transition) of the ATM AAL5 status register.

Example use  
To query the transition filter (positive-direction transition) of the ATM AAL5 status register:

> :STATus:QUEStionable:TELecom2:ATM:AAL5:PTRansition?

< 32767

**:STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansition <numeric>**

Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  
Sum of transition filter bits (decimal)

Function  
Sets the transition filter (negative-direction transition) of the ATM AAL5 status register.

Example use  
To set 32767 in the transition filter (negative-direction transition) of the ATM AAL5 status register:

> :STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansition 32767

**:STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansition?**

Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  
Sum of transition filter bits (decimal)

Function  
Queries the contents of the transition filter (negative-direction transition) of the ATM AAL5 status register.

Example use  
To query the transition filter (negative-direction transition) of the ATM AAL5 status register:

> :STATus:QUEStionable:TELecom2:ATM:AAL5:NTRansition?

< 32767
Section 4  Remote Control

:STATus:QUESTionable:TELecom2:ATM:PM:[EVENt]?
Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event register bits (decimal)
Function  Queries the contents of the event register of the ATM PM status register.
Example use  To query the event register of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:[EVENt]?
< 32767

:STATus:QUESTionable:TELecom2:ATM:PM:CONDition?
Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of condition register bits (decimal)
Function  Queries the contents of the condition register of the ATM PM status register.
Example use  To query the condition register of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:CONDition?
< 32767

:STATus:QUESTionable:TELecom2:ATM:PM:ENABle <numeric>
Parameter  
<numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function  Sets the mask value of the event enable register of the ATM PM status register.
          Masked with 0.
Example use  To set 32767 in the event enable register of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:ENABle 32767

:STATus:QUESTionable:TELecom2:ATM:PM:ENABle?
Response  
<numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767  Sum of event enable register bits (decimal)
Function  Queries the contents of the event enable register of the ATM PM status register.
Example use  To query the event enable register of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:ENABle?
< 32767
4.4 Equipment Unique Command


Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function Sets the transition filter (positive-direction transition) of the ATM PM status register.

Example use To set 32767 in the transition filter (positive-direction transition) of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:PTRansition 32767

:STATus:QUESTionable:TELecom2:ATM:PM:PTRansition?

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function Queries the contents of the transition filter (positive-direction transition) of the ATM PM status register.

Example use To query the transition filter (positive-direction transition) of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:PTRansition?
< 32767

:STATus:QUESTionable:TELecom2:ATM:PM:NTRansition <numeric>

Parameter <numeric> = <DECIMAL NUMERIC PROGRAM DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function Sets the transition filter (negative-direction transition) of the ATM PM status register.

Example use To set 32767 in the transition filter (negative-direction transition) of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:NTRansition 32767

:STATus:QUESTionable:TELecom2:ATM:PM:NTRansition?

Response <numeric> = <NR1 NUMERIC RESPONSE DATA>
0 - 32767 Sum of transition filter bits (decimal)

Function Queries the contents of the transition filter (negative-direction transition) of the ATM PM status register.

Example use To query the transition filter (negative-direction transition) of the ATM PM status register:
> :STATus:QUESTionable:TELecom2:ATM:PM:NTRansition?
< 32767
## Appendix A Specifications

Specifications related to the ATM measurement are shown below.

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tx cell</td>
</tr>
<tr>
<td>1.1</td>
<td>STM4/1/0</td>
</tr>
<tr>
<td>1.1.1</td>
<td>Frame</td>
</tr>
<tr>
<td>1.1.2</td>
<td>Pointer</td>
</tr>
<tr>
<td>1.1.3</td>
<td>Path Trace</td>
</tr>
<tr>
<td>1.1.4</td>
<td>Error Insertion</td>
</tr>
<tr>
<td>1.1.5</td>
<td>Alarm Addition</td>
</tr>
<tr>
<td>1.2</td>
<td>139M clock</td>
</tr>
<tr>
<td>1.2.1</td>
<td>G.832</td>
</tr>
<tr>
<td>1.2.2</td>
<td>OH preset(Except Error Monitor)</td>
</tr>
<tr>
<td>1.2.3</td>
<td>Path Trace</td>
</tr>
<tr>
<td>1.2.4</td>
<td>Error Insertion</td>
</tr>
<tr>
<td>1.2.5</td>
<td>Alarm Addition</td>
</tr>
<tr>
<td>1.3</td>
<td>34M clock</td>
</tr>
<tr>
<td>1.3.1</td>
<td>G.832</td>
</tr>
<tr>
<td>1.3.2</td>
<td>OH preset(Except Error Monitor)</td>
</tr>
<tr>
<td>1.3.3</td>
<td>Path Trace</td>
</tr>
<tr>
<td>1.3.4</td>
<td>Error Insertion</td>
</tr>
<tr>
<td>1.3.5</td>
<td>Alarm Addition</td>
</tr>
<tr>
<td>1.4</td>
<td>2M clock</td>
</tr>
<tr>
<td>1.4.1</td>
<td>G.704</td>
</tr>
<tr>
<td>1.4.2</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>45M clock</td>
</tr>
<tr>
<td>1.5.1</td>
<td>G.704</td>
</tr>
<tr>
<td>1.5.2</td>
<td></td>
</tr>
<tr>
<td>1.6</td>
<td>PLCP</td>
</tr>
<tr>
<td>1.6.1</td>
<td>G.832</td>
</tr>
<tr>
<td>1.6.2</td>
<td>Error Insertion</td>
</tr>
<tr>
<td>1.6.3</td>
<td>Alarm Addition</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.1</td>
<td>SOH preset (Except B1, B2, H1, H2 and H3)</td>
</tr>
<tr>
<td>1.1.2</td>
<td>AU Pointer</td>
</tr>
<tr>
<td>1.1.3</td>
<td>J0, J1</td>
</tr>
<tr>
<td>1.1.4</td>
<td>FAS, B1, B2, B3, MS-REI, HP-REI</td>
</tr>
<tr>
<td>1.1.5</td>
<td>LOF, MS-AIS, MS-RDI, AU-AIS, AU-LOP, HP-RDI</td>
</tr>
<tr>
<td>1.2.1</td>
<td>According to MP0121A</td>
</tr>
<tr>
<td>1.2.2</td>
<td>G.832</td>
</tr>
<tr>
<td>1.2.3</td>
<td>TR</td>
</tr>
<tr>
<td>1.2.4</td>
<td>Bit All, BIP-8, REI, FAS</td>
</tr>
<tr>
<td>1.2.5</td>
<td>AIS, LOF</td>
</tr>
<tr>
<td>1.3.1</td>
<td>According to MP0121A</td>
</tr>
<tr>
<td>1.3.2</td>
<td>G.832</td>
</tr>
<tr>
<td>1.3.3</td>
<td>TR</td>
</tr>
<tr>
<td>1.3.4</td>
<td>Bit All, BIP-8, REI, FAS</td>
</tr>
<tr>
<td>1.3.5</td>
<td>AIS, LOF</td>
</tr>
<tr>
<td>1.4.1</td>
<td>According to MP0121A</td>
</tr>
<tr>
<td>1.4.2</td>
<td>G.704</td>
</tr>
<tr>
<td>1.5.1</td>
<td>According to MP0121A</td>
</tr>
<tr>
<td>1.5.2</td>
<td>G.704</td>
</tr>
<tr>
<td>1.6.1</td>
<td>G.832</td>
</tr>
<tr>
<td>1.6.2</td>
<td>B1, FEBE, FAS, POI</td>
</tr>
<tr>
<td>1.6.3</td>
<td>LOF</td>
</tr>
</tbody>
</table>
# Appendix A  Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.7 1.5M</td>
<td></td>
</tr>
<tr>
<td>1.7.1 Clock</td>
<td>According to MP0122A</td>
</tr>
<tr>
<td>1.7.2 Frame</td>
<td>G.704</td>
</tr>
<tr>
<td>1.8 Foreground Cell</td>
<td></td>
</tr>
<tr>
<td>1.8.1 Traffic Pattern</td>
<td>CBR, Burst, CBR with CDV, Poisson, Sawtooth</td>
</tr>
<tr>
<td>1.8.2 Header Pattern</td>
<td>Arbitrary</td>
</tr>
<tr>
<td>1.8.3 Test Pattern</td>
<td></td>
</tr>
<tr>
<td></td>
<td>O.191</td>
</tr>
<tr>
<td></td>
<td>- Edit Pattern</td>
</tr>
<tr>
<td></td>
<td>- USER</td>
</tr>
<tr>
<td></td>
<td>- 16bit Word Pattern, Single PRBS9, Cross PRBS9/15/23, Edit Pattern, Time Stamp</td>
</tr>
<tr>
<td></td>
<td>- AAL1</td>
</tr>
<tr>
<td></td>
<td>- 16bit Word Pattern, Single PRBS9, Cross PRBS9/15/23, Edit Pattern, Time Stamp</td>
</tr>
<tr>
<td></td>
<td>- AAL2</td>
</tr>
<tr>
<td></td>
<td>- CPS PACKET: 8 bit Word Pattern, Single PRBS7, Edit Pattern</td>
</tr>
<tr>
<td></td>
<td>- CPS-PDU : Time Stamp</td>
</tr>
<tr>
<td></td>
<td>- AAL3/4</td>
</tr>
<tr>
<td></td>
<td>- CPS-PDU : 16 bit Word Pattern, Single PRBS9, Cross PRBS9/15/23, Edit Pattern</td>
</tr>
<tr>
<td></td>
<td>- SAR-PDU : Time Stamp</td>
</tr>
<tr>
<td></td>
<td>- AAL5</td>
</tr>
<tr>
<td></td>
<td>- 16bit Word Pattern, Single PRBS9, Cross PRBS9/15/23, Edit Pattern Cell</td>
</tr>
<tr>
<td></td>
<td>- HEC Error(1bit), HEC Error(2bit), User Program</td>
</tr>
<tr>
<td></td>
<td>- O.191</td>
</tr>
<tr>
<td>1.8.4 Error Insertion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Discarded Cell, Misinserted Cell, Errored Cell, SECB</td>
</tr>
<tr>
<td></td>
<td>USER</td>
</tr>
<tr>
<td></td>
<td>- Bit Error</td>
</tr>
<tr>
<td></td>
<td>- AAL1</td>
</tr>
<tr>
<td></td>
<td>- Discarded Cell, SNP Error, PRBS/Word Error</td>
</tr>
<tr>
<td></td>
<td>- AAL2</td>
</tr>
<tr>
<td></td>
<td>- P Error, SN Error, OFS Error, HEC(CRC5) Error, PRBS/Word Error</td>
</tr>
<tr>
<td></td>
<td>- AAL3/4</td>
</tr>
<tr>
<td></td>
<td>- SN Error, CRC10 Error, Segment Type Error, LI Error, Abort, CPI Error, B/E tag mismatch, BA Size Error, AL Error, Length Error, PRBS/Word Error</td>
</tr>
<tr>
<td></td>
<td>- AAL5</td>
</tr>
<tr>
<td></td>
<td>- Frame Size, Length Error, CRC32 Error, Abort, PRBS/Word Error</td>
</tr>
<tr>
<td></td>
<td>- LCD, VP-AIS, VP-RDI, VC-AIS, VC-RDI, VP-CC, VC-CC</td>
</tr>
<tr>
<td>1.8.5 Alarm Addition</td>
<td></td>
</tr>
</tbody>
</table>
### Item Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.8.6 OAM Cell</strong> (I.610)</td>
<td></td>
</tr>
<tr>
<td>AIS Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>0.1-10s</td>
</tr>
<tr>
<td>RDI Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>0.1-10s</td>
</tr>
<tr>
<td>CC Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>0.1-10s</td>
</tr>
<tr>
<td>Loopback Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>Single</td>
</tr>
<tr>
<td>User Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>0.1-10s</td>
</tr>
<tr>
<td>Forward Monitoring Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>1 Cell Block</td>
</tr>
<tr>
<td>Error</td>
<td>Discarded Cell, Misinserted Cell, BIPV, SECB</td>
</tr>
<tr>
<td>Backward Reporting Cell</td>
<td></td>
</tr>
<tr>
<td>Timing</td>
<td>0.1-10s</td>
</tr>
<tr>
<td>Error</td>
<td>Discarded Cell, Misinserted Cell, BIPV, SECB</td>
</tr>
<tr>
<td><strong>1.8.7 Background Cell</strong> (1-10)</td>
<td></td>
</tr>
<tr>
<td>Header, Payload Pattern</td>
<td>Arbitrary</td>
</tr>
<tr>
<td>Distribution</td>
<td>0-100%</td>
</tr>
<tr>
<td><strong>1.8.8 Fill Cell</strong></td>
<td></td>
</tr>
<tr>
<td>Idle Cell/Unassigned Cell</td>
<td></td>
</tr>
<tr>
<td>Item</td>
<td>Specifications</td>
</tr>
<tr>
<td>------</td>
<td>----------------</td>
</tr>
<tr>
<td>2</td>
<td>Rx cell</td>
</tr>
<tr>
<td>2.1</td>
<td>STM4/1/0</td>
</tr>
<tr>
<td>2.1.1 Error Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.1.2 Alarm Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.2</td>
<td>139M</td>
</tr>
<tr>
<td>2.2.1 Error Detection</td>
<td>FAS, BIP-8, REI</td>
</tr>
<tr>
<td>2.2.2 Alarm Detection</td>
<td>LOF, RDI</td>
</tr>
<tr>
<td>2.2.3 Performance</td>
<td>G.826</td>
</tr>
<tr>
<td></td>
<td>Measurement</td>
</tr>
<tr>
<td>2.3</td>
<td>34M</td>
</tr>
<tr>
<td>2.3.1 Error Detection</td>
<td>FAS, BIP-8, REI</td>
</tr>
<tr>
<td>2.3.2 Alarm Detection</td>
<td>LOF, RDI</td>
</tr>
<tr>
<td>2.3.3 Performance</td>
<td>G.826</td>
</tr>
<tr>
<td></td>
<td>Measurement</td>
</tr>
<tr>
<td>2.4</td>
<td>2M</td>
</tr>
<tr>
<td>2.4.1 Error Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.4.2 Alarm Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.5</td>
<td>45M</td>
</tr>
<tr>
<td>2.5.1 Error Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.5.2 Alarm Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.6</td>
<td>PLCP</td>
</tr>
<tr>
<td>2.6.1 Error Detection</td>
<td>FAS, B1, FEBE, EB</td>
</tr>
<tr>
<td>2.6.2 Alarm Detection</td>
<td>OOF, LOF, Yellow</td>
</tr>
<tr>
<td>2.7</td>
<td>1.5M</td>
</tr>
<tr>
<td>2.7.1 Error Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.7.2 Alarm Detection</td>
<td>-</td>
</tr>
<tr>
<td>2.8</td>
<td>Foreground Cell Filter</td>
</tr>
<tr>
<td>2.8.1</td>
<td>Header 4 bytes with 4-byte Mask</td>
</tr>
<tr>
<td></td>
<td>Payload 1 byte at any Position (when AAL1 or ATM)</td>
</tr>
<tr>
<td></td>
<td>CID (when AAL2)</td>
</tr>
<tr>
<td></td>
<td>MID (when AAL3/4)</td>
</tr>
<tr>
<td>Item</td>
<td>Specifications</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2.8.2 Measurement</td>
<td>O.191</td>
</tr>
<tr>
<td></td>
<td>Cell Count, Correctable HEC Error, Uncorrectable HEC Error, Non-conforming Cell, Errored Cell, Discarded cell, Misinserted Cell, SECB USER</td>
</tr>
<tr>
<td></td>
<td>Cell Count, Correctable HEC Error, Uncorrectable HEC Error, Non-conforming Cell, Bit Error (PRBS/Word)</td>
</tr>
<tr>
<td></td>
<td>AAL1 Correctable HEC Error, Uncorrectable HEC Error, Non-conforming Cell, SAR-PDU Count, Discarded cell, SNP Error, Uncorrectable SNP Error, Bit Error (PRBS/Word)</td>
</tr>
<tr>
<td></td>
<td>AAL2 Correctable HEC Error, Uncorrectable HEC Error, Non-conforming Cell, CPS-PDU Count, P Error, OSF Error, SN Error, CPS-Packet Count, CID-Packet Count, HEC Error, Bit Error (PRBS/Word)</td>
</tr>
<tr>
<td></td>
<td>AAL3/4 Correctable HEC Error, Uncorrectable HEC Error, Non-Conforming Cell, SAR-PDU Count, CRC10 Error, MID Count, SN Error, Segment type Error, LI Error, Abort, Discarded PDU(SN Error, LI Error, Abort, COM ST Error, or EOM9S7 Error), CPCS-PDU Count, CPI Error, B/E tag mismatch, BA Size Error, AL Error, Length Error, Undelivered PDU(CPI Error, B/E tag mismatch, BA Size Error, AL Error, or Length Error), Bit Error (PRBS/Word)</td>
</tr>
<tr>
<td></td>
<td>AAL5 Correctable HEC Error, Uncorrectable HEC Error, Non-conforming Cell, CPCS-PDU Count, Frame Size Error, Length Error, CRC32 Error, Abort, Discard PDU(Frame Size Error, Length Error, CRC32 Error, or Abort), Bit Error (PRBS/Word)</td>
</tr>
<tr>
<td></td>
<td>Forward Monitoring Cell Error, Discarded cell, Misinserted Cell, BIPV, SECB</td>
</tr>
<tr>
<td></td>
<td>Backward Reporting Cell Discarded cell, Misinserted Cell, BIPV, SECB</td>
</tr>
<tr>
<td>2.8.3 Alarm Detection</td>
<td>E3-LOF, E3-RDI (Only when 34M)</td>
</tr>
<tr>
<td></td>
<td>E4-LOF, E4-RDI (Only when 139M)</td>
</tr>
<tr>
<td></td>
<td>PLCP-LOF, PLCP-RDI (Only when PLCP)</td>
</tr>
<tr>
<td></td>
<td>LCD, VP-Segment-AIS, VP-Segment-RDI, VP-Segment-LOC</td>
</tr>
<tr>
<td></td>
<td>VP-ENDtoEND-AIS, VP-ENDtoEND-RDI, VP-ENDtoEND-LOC, VC-Segment-AIS, VC-Segment-RDI, VC-Segment-LOC, VC-ENDtoEND-AIS, VC-ENDtoEND-RDI, VC-ENDtoEND-LOC</td>
</tr>
<tr>
<td></td>
<td>Pattern Sync. Loss (Only when Cross cell, Cross cell PRBS, or PRBS/Word)</td>
</tr>
<tr>
<td>2.8.4 Cell Monitor</td>
<td>Displays Header (5 bytes)</td>
</tr>
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<td>Displays Cell Data (53 bytes)</td>
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<tr>
<td>Item</td>
<td>Specifications</td>
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<td>------</td>
<td>----------------</td>
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<td>Live Monitor</td>
</tr>
<tr>
<td></td>
<td>Cell Count</td>
</tr>
<tr>
<td></td>
<td>- Data speed (cell/s, bit/s, %) of every VP/VC</td>
</tr>
<tr>
<td></td>
<td>- Non-conforming Cell Count</td>
</tr>
<tr>
<td></td>
<td>- Number of Non-conforming Cells (cell/s) of every VP/VC</td>
</tr>
<tr>
<td></td>
<td>- Forward Monitoring Cell</td>
</tr>
<tr>
<td></td>
<td>- Displays number of Misinserted/Discarded cells (cell/s) or SECB of every VP/VC</td>
</tr>
<tr>
<td></td>
<td>- Displays Alarm (AIS, RDI, LOC)</td>
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<tr>
<td>2.8.6</td>
<td>Cell Capture</td>
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<td>Capture of 1 to 2016 cells</td>
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<tr>
<td></td>
<td>Trigger: Error/Alarm of ATM Layer</td>
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<tr>
<td></td>
<td>Manual</td>
</tr>
<tr>
<td></td>
<td>Trigger Point: 1 to 2016</td>
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<tr>
<td>2.8.7</td>
<td>1 point CDV</td>
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<td>CDV Measurement: +/-15000Cell</td>
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<td>2.8.8</td>
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<td></td>
<td>CDV Measurement: +/-15000Cell</td>
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<tr>
<td>3</td>
<td>Through</td>
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<td>Loopback point</td>
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<td>3.2</td>
<td>Alarm Addition</td>
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<td>VP-AIS, VP-RDI, VC-AIS, VC-RDI</td>
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<td>General</td>
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<tr>
<td>4.1</td>
<td>Dimensions, mass</td>
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<tr>
<td></td>
<td>MP0123A: 21(H) x 255(W) x 167.6(D) mm (Excluding projections), Approx. 1kg</td>
</tr>
<tr>
<td>4.2</td>
<td>Temperature</td>
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<td></td>
<td>0 to 50 °C Operating</td>
</tr>
<tr>
<td></td>
<td>-20 to 60 °C Storage</td>
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</table>
Appendix B   Selftest Error Code List

For the self-test error codes, refer to the MP1570A SONET/SDH/PDH/ATM Analyzer Operation Manuals Vol.1.
Appendix C  Text File Format

The MP1570A can store analysis graph data in a floppy disk in text format. Data can be edited using spreadsheet software (e.g., Excel). This appendix explains the text files related to the ATM unit.

Notes:
- For measurements other than ATM measurement, refer to Vol.1 of the MP1570A SONET/SDH/PDH/ATM Analyzer Operation Manual.
- For floppy disk operation, refer to Vol.1 of the MP1570A SONET/SDH/PDH/ATM Analyzer Operation Manual.
- A data file stored in text format cannot be recalled to the Analyze:Recall screen. Store a file in binary format to recall it to the Analyze:Recall screen.
C.1 Live monitor analysis data

The "Live monitor analysis data" is the analysis graph data (including Title and Threshold) displayed on the Analyze:Live monitor sub-screen or Recall sub-screen (when Live monitor data is displayed).

C.1.1 Traffic

| [1] | "ANRITSU;MP1570A;01.00;A;A_LMTRFC","Live monitor","","","","","","","",""↓ |
| [2] | "VPI","VCI","DATA(CELL/S)","DATA(kbit/s)","DATA(%)","TYPE","ALARM"↓ |
| [3] | ""AAL3/4","sVP-AIS"↓ |
| | 0,5,120000,45000,50.0,","AAL1","eVP-AIS"↓ |
| | 0,10,4000,64,2.0,"ATM",""↓ |
| | : |
| | : |
| | 4905,65535,80000,1500,20.0,"AAL5",""↓ |

- All items are delimited by a comma.
- The symbol of "↓" indicates a line feed.

[1] ............First item: Management information, Second item: Title characters (fixed to 15 characters)
[2] ............Indicates VSI, CPI, average data count (Cell/s), (kbit/s), (%), cell type, and alarm.
[3] ............Displays analysis data in the item order shown in [2] for the number of channel searches performed. (Maximum 1,023 units)

Note:

Data cannot be stored when no measurement result exists or when the measurement mode is Individual.
C.1 Live monitor analysis data

C.1.2 Non-conforming

<p>| | | | | | |</p>
<table>
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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1]</td>
<td>&quot;ANRITSU;MP1570A;01. 99;AA_LMOONCON&quot;,&quot;Live monitor   &quot;,&quot;,&quot;&quot;,&quot;&quot;,&quot;&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| [2] | "KBIT/S","S;599000;256","B:5990;256","C;599000;256","D;599000;256",""
| [3] | "VPI","VCP","DATA(Count)","DATA(Cell/s)","Alarm","Threshold","" |
| [4] | "sVP-AIS"="A"↓
   0,5,120000,45000,"eVP-AIS,B"↓
   0,10,4000,64,"","C"↓
   :""
   :""
   4095,65535,80000,1500,"","D"↓ |

- All items are delimited by a comma.
- The symbol of "↓" indicates a line feed.

[1] ............ First item: Management information, Second item: Title characters (fixed to 15 characters)
[2] ............ First item: Threshold (PCR) unit "kbit/s", "cell/s", "%"
   Second to fifth items: AD threshold "threshold symbol;PCR;CDVT"
   Sixth item: ""
[3] ............ Indicates VPI, VCI, data (count), average number of received cells, alarm, and threshold symbol.
[4] ............ Displays analysis data in the item order shown in [3] for the number of channel searches performed.
   (Maximum 1,023 units)

Note:
Data cannot be stored when no measurement result exists or when the measurement mode is Individual.
C.1.3 FM SECB

The “FM SECB” is the analysis graph data (including Title) displayed on the Analyze:Live monitor sub-screen or Recall sub-screen (when Live monitor data is displayed).

[1] “ANRITSU;MP1570A;01.00;A:A_LMONCON”,“Live monitor”，“”
[3] 0,1,80000,1500, “sVP-AIS”
   0,5,12000,45000, “eVP_AIS”
   0,10,4000,64, “”
   :
   :
   4905,65535,80000,1500, “”

- All items are delimited by a comma.
- The symbol of “↓” indicates a line feed.

[1] .............First item: Management information, Second item: Title characters (fixed to 15 characters)
[2] .............Indicates VPI, VCI, data (Count), average number of received cells, alarm, and threshold (M).
[3] .............[Displays analysis data in the item order shown in [2] for the number of channel searches performed. (Maximum 1,023 units)

Note:

Data cannot be stored when no measurement result exists or when the measurement mode is Individual.
C.1 Live monitor analysis data

C.1.4 FM Mis/lost

[1] "ANRITSU;MP1570A;01.00:A:A_LMOTRFC","Live monitor ",","","","","\n
[2] "VPI","VCI","DATA(Count)","DATA(Mis-count)","DATA(Lost-Count)",

[3] "DATA(Cell/s)","Alarm"\n
[4] 0,1,80000,60000,20000,100000,"sVP-AIS"
  0,5,120000,100000,2000,120000,"eVP-AIS"\n  0,10,4000,1000,3000,5000,""
  :\n  :\n  :\n  4095,65535,8000,30000,50000,150000,""

- All items are delimited by a comma.
- The symbol of "\n indicates a line feed.

[1] ............ First item: Management information, Second item: Title characters (fixed to 15 characters)
[3] ............ Displays analysis data in the item order shown in [2] for the number of channel searches performed.
  (Maximum 1,023 units)

Note:

Data cannot be stored when no measurement result exists or when the measurement mode is Individual.
C.2 Traffic monitor analysis data

The "Traffic monitor analysis data" is the analysis graph data (including Title) displayed on the Traffic monitor sub-screen or Recall sub-screen (when Traffic monitor data is displayed) of the Analyze screen.

[1] "ANRITSU;MP1570A;01.00;A;A_TRAF","Traffic monitor","4095;FAB;65535;FFFF",3.6E8,"1/min","","","","","","",""↓
[2] "Date","Time","Mean(Cell/s)","Mean(bit/s)","Mean(%)","Max(Cell/s)","Max(bit/s)","Max(%)","Min(Cell/s)","Min(bit/s)","Min(%)" ↓

- All items are delimited by a comma.
- The symbol of “↓” indicates a line feed.

[1] ............First item: Management information
   Second item: Title characters (fixed to 15 characters)
   Third item: VPI filter value, VPI filter mask value,
                VCI filter value, VCI filter mask value
   Fourth item: Number of received cells
   Fifth item: Time axis setting of the analysis graph
               (numeric value, unit)
[2] ............Indicates capture start date (1), capture start time (1),
               average cell route (Cell/s, kbit/s, %), minimum cell route
               (Cell/s, kbit/s, %), and maximum cell route (Cell/s, kbit/s, %).
[3] ............Displays data in the item order shown in [2].

Note:

Data cannot be stored when no measurement result exists.
C.3 Cell capture analysis data

The "Cell capture analysis data" is the analysis graph data (including Title) displayed on the Cell capture sub-screen or Recall sub-screen (when Cell capture data is displayed) of the Analyze screen.

\[1\] "ANRITSU;MP1570A;01.00;A;A_CAPT","UNI;405","Cell capture"↓

\[2\] "No","Header","Payload"↓

\[3\] "0 000 00000 0 00 ","00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00"↓

: Repetition of \[3\]

- All items are delimited by a comma.
- The symbol of "↓" indicates a line feed.

\[1\] ............ First item: Management information, Second item: Title characters (fixed to 15 characters)
\[2\] ............ Indicates capture number, header, and payload.
\[3\] ............ Stores data for the number of captures performed in the item order shown in [2].

Note:

Data cannot be stored when no measurement result exists.
C.4 1-point CDV measurement analysis data

The "1-point CDV measurement analysis data" is the analysis graph data (including Title) displayed on the 1-point CDV sub-screen or Recall sub-screen (when 1-point CDV data is displayed) of the Analyze screen.

[1] "ANRITSU;MP1570A;01.00;A;A_1CDV","1-point CDV ",","4905;FFF;65535F0000",
   "100;Cell;100.0000;570;-345"↓

[2] "Time","Cell","Count","Rate"↓

[3] -400000,-6000,-1.4E06,100.0000↓
   ↓
   Repetition of [3]
   ↓

- All items are delimited by a comma.
- The symbol of “↓” indicates a line feed.

[1] .............First item: Management information
   Second item: Title characters (fixed to 15 characters)
   Third item: VPI filter value, VPI filter mask value, VCI filter value, VCI filter, mask value
   Fourth item: H-Interval, H-Interval unit, measurement target cell reception rate, maximum delay data position, minimum delay data position


[3] .............Displays data in the item order shown in [2].

Note:
Data cannot be stored when no measurement result exists.
C.5 2-point CDV measurement analysis data

The "2-point CDV measurement analysis data" is the analysis graph data (including Title) displayed on the 2-point CDV sub-screen or Recall sub-screen (when 2-point CDV data is displayed) of the Analyze screen.

| [1]  | "ANRITSU;MP1570A;01.00;A:A_1CDV"; "2-point CDV"; "4095;FFF;65535;0000", "100;Cell;100.000,256,570,-345"↓ |
| [2]  | "Time","Cell","Count","Rate"↓ |
| [3]  | -400000,-6000,1.4E06,100.0000↓ |

Repetition of [3]

- All items are delimited by a comma.
- The symbol of "↓" indicates a line feed.

[1] ............ First item: Management information
  Second item: Title characters (fixed to 15 characters)
  Third item: VPI filter value, VPI filter mask value, VCI filter value, VCI filter mask value
  Fourth item: H-Interval, H-Interval unit, measurement target cell reception rate, offset value, maximum delay data position, minimum delay data position


[3] ............ Displays data in the item order shown in [2].

**Note:**

Data cannot be stored when no measurement result exists.
C.6 Memorized analysis data

The "Memorized analysis data" is the analysis graph displayed on the Memorized cell sub-screen of the Setup screen.

[1] "ANRITSU;MP1570A;01.00;A;MAN_CELL","UNI","",↓
[2] "No","Header","Payload"↓
[3] "0 000 00000 0 00","00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00"
   ↓
   :
   Repetition of [3]
   :

   - All items are delimited by a comma.
   - The symbol of “↓” indicates a line feed.

[1] ..............First item: Management information
   Second item: Header structure ("UNI" or "NNI")
   Third item: Dummy
[3] ..............Displays data in the item order shown in [2].
   (The data count is fixed to 2016.)
C.7 AAL3/4 and AAL5 payload set data

The "AAL3/4 and AAL5 payload set data" is the AAL3/4 and AAL5 payload set data which can be set on the Cell edit sub-screen of the Setup screen.

[1] "ANRITSU;MP1570A;01.00;A;PAYLOAD"↓
[2] "Data"↓
[3] "00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00" ↓

: Repetition of [3]

- All items are delimited by a comma.
- The symbol of " ↓ " indicates a line feed.

[1] ............. First item: Management information
[2] ............. Indicates the first item of the cell data.
[3] ............. Displays data in the item order shown in [2].

(The data count is fixed to 4096.)
Appendix D  Initial Values of OH Preset Data

Selecting "default" in the Setup:OH Preset Data screen sets the OH Preset data to the initial values shown in the following table.

(1) E3

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<td>[28]</td>
</tr>
<tr>
<td>EM</td>
<td>--</td>
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</tr>
<tr>
<td>TR</td>
<td>--</td>
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</tr>
<tr>
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</tr>
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(2) E4

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<td>TR</td>
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<td>[20]</td>
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<td>[00]</td>
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<td>[01]</td>
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|       |      |     |     |             |

1100
Appendix E  Correspondence Between Commands and Screens

The correspondence between program commands and screen displays is shown below. For details of the program commands, see Section 4.4, "Device Specific Commands."

E.1 Command Correspondence of the Test Menu Main Screen
E.1.1 Manual sub-screen

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
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<td>(1):SOURce:TELecom:MSPMessages:REQuest</td>
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</tr>
<tr>
<td>(2):SOURce:TELecom:MSPMessages:CHANnel</td>
<td></td>
</tr>
<tr>
<td>(3):SOURce:TELecom:MSPMessages:BRIDge</td>
<td></td>
</tr>
<tr>
<td>(4):SOURce:TELecom:MSPMessages:ARCHitect</td>
<td></td>
</tr>
<tr>
<td>(5):SENSce:TELecom:MSPBits:REQuest</td>
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<td>(6):SENSce:TELecom:MSPBits:CHANnel</td>
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<td>(7):SENSce:TELecom:MSPBits:BRIDge</td>
<td></td>
</tr>
<tr>
<td>(8):SENSce:TELecom:MSPBits:ARCHitect</td>
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</tr>
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<td>(9):SENSce:TELecom:MSPBits:REServed</td>
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</tr>
<tr>
<td>(10):SOURce:TELecom:PSETting:NDFSet</td>
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<tr>
<td>(11):SOURce:TELecom:PSETting:SSSet</td>
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</tr>
<tr>
<td>(12):SOURce:TELecom:PSETting:IDSet</td>
<td></td>
</tr>
<tr>
<td>(13):SOURce:TELecom:PSETting:PPJC</td>
<td></td>
</tr>
<tr>
<td>(14):SOURce:TELecom:PSETting:NPJC</td>
<td></td>
</tr>
</tbody>
</table>

(1):SOURce:TELecom:MSPMessages:REQuest
(2):SOURce:TELecom:MSPMessages:CHANnel
(3):SOURce:TELecom:MSPMessages:BRIDge
(4):SOURce:TELecom:MSPMessages:ARCHitect
(5):SENSce:TELecom:MSPBits:REQuest
(6):SENSce:TELecom:MSPBits:CHANnel
(7):SENSce:TELecom:MSPBits:BRIDge
(8):SENSce:TELecom:MSPBits:ARCHitect
(9):SENSce:TELecom:MSPBits:REServed
(10):SOURce:TELecom:PSETting:NDFSet
(11):SOURce:TELecom:PSETting:SSSet
(12):SOURce:TELecom:PSETting:IDSet
(13):SOURce:TELecom:PSETting:PPJC
(14):SOURce:TELecom:PSETting:NPJC
Appendix E  Correspondence Between Commands and Screens

(17):SOURce:ATM:MANual:TRAFfic:HEADer
(18):SOURce:ATM:MANual:TRAFfic:PAYLoad:TYPE
(20):SOURce:ATM:MANual:TRAFfic:DISTRIBUTion
(25):SOURce:ATM:MANual:TRAFfic:BURSt
(33):SOURce:ATM:MANual:TRAFfic:BURSt:T1
(34):SOURce:ATM:MANual:TRAFfic:BURSt:T2
(38):SOURce:ATM:MANual:TRAFfic:CWCDv:PERCent
(39):SOURce:ATM:MANual:TRAFfic:CWCDv:POISSon
(46): SOURce:ATM:MANual:TRAFFic:SAWTooth:T1
(49): SOURce:ATM:MANual:TRAFFic:TIMing:STARt
(50): SOURce:ATM:MANual:TRAFFic:TIMing:STOP
(51): SOURce:ATM:MANual:TRAFFic:TIMing:STATE
(52): SOURce:ATM:MANual:TRAFFic:BACKground:PERCent
(54): SOURce:ATM:MANual:TRAFFic:BACKground:TYPE
(56): SOURce:ATM:MANual:EALarm:TYPE
(57): SOURce:ATM:MANual:EALarm:TIMing
(58): SOURce:ATM:MANual:EALarm:ERRor:TYPE
(59): SOURce:ATM:MANual:EALarm:ERRor:BYTE
(60): SOURce:ATM:MANual:EALarm:ERRor:PAATTern
(61): SOURce:ATM:MANual:EALarm:ERRor:CRCC3
(63): SOURce:ATM:MANual:EALarm:TIMing:COUNt
(64): SOURce:ATM:MANual:EALarm:CC:SEND
(65): SOURce:ATM:MANual:EALarm:LOOPback:TYPE
(66): SOURce:ATM:MANual:EALarm:LOOPback:STARt
(70): SOURce:ATM:MANual:PM:FM:ERRor:TYPE
(72): SOURce:ATM:MANual:PM:FM:ERRor:TIMing:COUNt
(73): SOURce:ATM:MANual:PM:BR:SEND
(74): SOURce:ATM:MANual:PM:BR:ERRor:TYPE
(75): SOURce:ATM:MANual:PM:BR:ERRor:MODE
(76):SENSe:MEASure:TYPE
(77):SENSe:MEASure:PERiod
(78):SENSe:MEASure:BTIMe:SET
(79):SENSe:MEASure:BTIMe:STARt
(80):SENSce:ATM:MANual:FILTER:HEADER:PATTERn
(82):SENSe:ATM:MANual:FILTER:PAYLoad:PATTERn
(83):SENSe:ATM:MANual:FILTER:PAYLoad:MASK
(84):SENSe:ATM:MANual:FILTER:PAYLoad:POSITION
(86):SENSe:ATM:MANual:FILTER:MID:PATTERn
(87):SENSe:ATM:MANual:NCONforming:PCR:TYPE
(90):SENSe:ATM:MANual:NCONforming:PCR:PERCent
(91):SENSe:ATM:MANual:NCONforming:CDVT
(92):DISPlay:TMENu[:NAME]
(93):DISPlay:TMENu:MANual:SELect
(94):SOURce:TELecom:ERRor:TYPE
(95):SOURce:TELecom:ERRor:ERATe
(96):SOURce:TELecom:ERRor:PATTERn
(100):SENSe:ATM:MANual:NCONforming:CBR:PERCent
(101)Result display
  :CALCulate:LOOPback:RESult?
E.1 Command Correspondence of the Test Menu Main Screen

E.1.2 1-point CDV sub-screen

![1-point CDV sub-screen image]

(1):DISPlay:TMENu[:NAME]
(2):SENSe:ATM:CDV1:TYPE
(3):SENSe:ATM:CDV1:PERiod
(4):SENSe:ATM:CDV1:RTIMe:TYPE
(5):SENSe:ATM:CDV1:RTIMe:BPS
(6):SENSe:ATM:CDV1:RTIMe:CPS
(7):SENSe:ATM:CDV1:RTIMe:PERCent
E.1.3 2-point CDV sub-screen

(1):DISPlay:TMENu[:NAME]
(2):SENSe:ATM:CDV2:TYPE
(3):SENSe:ATM:CDV2:PERiod
E.2  Command Correspondence of the Result Main Screen

E.2.1  Error/alarm sub-screen

(1):DISPlay:RESult[:NAME]
(2):DISPlay:RESult:EALarm:MODE
(3):DISPlay:RESult:EALarm:UNIT
(4):DISPlay:RESult:EALarm:AUNit
(5):DISPlay:RESult:EALarm:TCLayer
(6):Time display
 :DISPlay:RESult:TIME
Appendix E  Correspondence Between Commands and Screens

E.2.2  Zoom sub-screen

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1):DISPlay:RESult[:NAME]</td>
<td></td>
</tr>
<tr>
<td>(2):DISPlay:RESult:ZOOM:MODE</td>
<td></td>
</tr>
<tr>
<td>(3):DISPlay:RESult:ZOOM:UNIT</td>
<td></td>
</tr>
<tr>
<td>(4):DISPlay:RESult:ZOOM:AUNit</td>
<td></td>
</tr>
<tr>
<td>(5):DISPlay:RESult:ZOOM:ALARm</td>
<td></td>
</tr>
<tr>
<td>(6):DISPlay:RESult:ZOOM:ERRor</td>
<td></td>
</tr>
<tr>
<td>(7):Time display</td>
<td></td>
</tr>
<tr>
<td>:DISPlay:RESult:TIME</td>
<td></td>
</tr>
</tbody>
</table>
E.2.3 1-point CDV sub-screen

(1):DISPlay:RESult[:NAME]
(2)Time display
  :DISPlay:RESult:TIME
(3)Result display
  :CALCulate:DATA?

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>+ 2015 μs</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>+ 37570 μs</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>- 34625 μs</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E  Correspondence Between Commands and Screens

E.2.4  2-point CDV sub-screen

<table>
<thead>
<tr>
<th>Result</th>
<th>2-point CDV</th>
<th>Start 17:03:25 13/Mar/2000</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>0 μs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Maximum</td>
<td>0 μs</td>
</tr>
<tr>
<td></td>
<td>Minimum</td>
<td>2 μs</td>
</tr>
<tr>
<td></td>
<td>Offset</td>
<td>22 μs</td>
</tr>
</tbody>
</table>

(1):DISPlay:RESult[:NAME]
(2)Time display
   :DISPlay:RESult:TIME
(3)Result display
   :CALCulate:DATA?
E.3 Command Correspondence of the Analyze Main Screen

E.3.1 Error/Alarm sub-screen

(1):DISPlay:ANALysis[:NAME]
(2):DISPlay:ANALysis:TGRaph:INTerval
(3):DISPlay:ANALysis:TGRaph:ERRor
(4):DISPlay:ANALysis:TGRaph:ALARm1
(5):DISPlay:ANALysis:TGRaph:ALARm2
(6):DISPlay:ANALysis:TGRaph:ALARm3
(7):DISPlay:ANALysis:TGRaph:ALARm4
(8):DISPlay:ANALysis:TGRaph:ALARm5
(9):DISPlay:ANALysis:TGRaph:PRINT
(10):DISPlay:ANALysis:TGRaph:TITLE
(11):DISPlay:ANALysis:TGRaph:MDISplay
(12):SYSTem:MEMory:ANALysis:LAVel?
(13):SYSTem:MEMory:ANALysis:STORe
(14)Result display
   :DISPlay:ANALysis:TGRaph:DATA?
   :CALCulate:DATA?
   :CALCulate:TGRaph:DATA?
E.3.2 OH monitor sub-screen

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>TRACE</td>
</tr>
<tr>
<td>Pattern</td>
<td>PATTERN</td>
</tr>
<tr>
<td>TR mismatch</td>
<td>O</td>
</tr>
</tbody>
</table>

(1):DISPlay:ANALysis[:NAME]
(2):DISPlay:ANALysis:OHMonitor:TYPE
(3):DISPlay:ANALysis:OHMonitor:SOHCh
(5):DISPlay:ANALysis:OHMonitor:PAUSe
(6):DISPlay:ANALysis:OHMonitor:
(7)Result display
   :DISPlay:ANALysis:TGRaph:DATA?
   :CALCulate:DATA?
E.3.3  Cell monitor sub-screen

(1):DISPlay:ANALysis[:NAME]
(2):DISPlay:ANALysis:CMONitor:CELL?
(3):DISPlay:ANALysis:CMONitor:PAUSe
Appendix E  Correspondence Between Commands and Screens

E.3.4 Live monitor sub-screen

(2):SENSe:ATM:MANual:LMONitor:CHSearch
(3):SENSe:ATM:MANual:LMONitor:STATe?
(4):DISPlay:ANALysis[:NAME]:
(5):DISPlay:ANALysis:LMONitor:SCRoll
(6):DISPlay:ANALysis:LMONitor:GRAPH
(7):DISPlay:ANALysis:LMONitor:THReshold
(8):DISPlay:ANALysis:LMONitor:NCONforming
(9):DISPlay:ANALysis:LMONitor:PAUSe
(10):DISPlay:ANALysis:LMONitor:INTerval
(12):DISPlay:ANALysis:LMONitor:NUMBer
(13):DISPlay:ANALysis:LMONitor:PRINt
(14):DISPlay:ANALysis:LMONitor:PTYPe
(15):DISPlay:ANALysis:LMONitor:TITLe
(16):CALCulate:LMONitor:NCONforming:THReshold
(17):CALCulate:LMONitor:NCONforming:THReshold:A
(18):CALCulate:LMONitor:NCONforming:THReshold:B
(20):CALCulate:LMONitor:NCONforming:THReshold:D
(21):CALCulate:LMONitor:FMSecb:THreshold
(22):CALCulate:LMONitor:BRSecb:THreshold
(23)Result display
   :CALCulate:LMONitor:TRAffic:DATA?
   :CALCulate:LMONitor:FMSecb:DATA?
   :CALCulate:LMONitor:DATA?
   :CALCulate:LMONitor:FM:DATA?
   :CALCulate:LMONitor:BR:DATA?
   :CALCulate:LMONitor:BRSecb:DATA?
E.3.5 Traffic monitor sub-screen

(1):DISPlay:ANALysis[:NAME]
(2):DISPlay:ANALysis:TRAFfic:SCRoll
(3):DISPlay:ANALysis:TRAFfic:MARKer
(4):DISPlay:ANALysis:TRAFfic:DATA?
(5):DISPlay:ANALysis:TRAFfic:INTerval
(6):DISPlay:ANALysis:TRAFfic:MDISplay
(7):DISPlay:ANALysis:TRAFfic:FROM
(8):DISPlay:ANALysis:TRAFfic:SCALe
(9):DISPlay:ANALysis:TRAFfic:PRINT
(10):DISPlay:ANALysis:TRAFfic:TITLe
(11)Result display
   :CALCulate:TRAFfic:RESult?
   :CALCulate:TRAFfic:DATA?
E.3.6  Cell capture sub-screen

(1):SENSe:ATM:MANual:CAPTure:TRIGger
(2):SENSe:ATM:MANual:CAPTure:POSition
(3):SENSe:ATM:MANual:CAPTure:STARt
(4):SENSe:ATM:MANual:CAPTure:STOP
(5):SENSe:ATM:MANual:CAPTure:STATe?
(6):DISPlay:ANALysis[:NAME]:
(9):DISPlay:ANALysis:CAPTure:SCRoll
(10):DISPlay:ANALysis:CAPTure:PTYPe
(11):DISPlay:ANALysis:CAPTure:PRINt
(12):DISPlay:ANALysis:CAPTure:TITLe
(13)Result display
   :CALCulate:CAPTure:LINE?
   :CALCulate:CAPTure:TOTal?
   :CALCulate:CAPTure:TRIGger?
E.3.7 1-point CDV sub-screen

(1):SENSe:ATM:MANual:1CDV:PCR
(2):SENSe:ATM:MANual:1CDV:TYPE
(3):SENSe:ATM:MANual:1CDV:PERiod
(4):DISPlay:ANALysis[:NAME]
(5):DISPlay:ANALysis:CDV1:SCRoll
(6):DISPlay:ANALysis:CDV1:TYPE
(7):DISPlay:ANALysis:CDV1:MARKer
(8):DISPlay:ANALysis:CDV1:PEAK
(9):DISPlay:ANALysis:CDV1:ZOOM
(10):DISPlay:ANALysis:CDV1:DATA?
(11):DISPlay:ANALysis:CDV1:INTerval
(12):DISPlay:ANALysis:CDV1:INUit
(13):DISPlay:ANALysis:CDV1:MDISplay
(14):DISPlay:ANALysis:CDV1:SCALe
(15):DISPlay:ANALysis:CDV1:CELL
(17):DISPlay:ANALysis:CDV1:PRINt
(18):DISPlay:ANALysis:CDV1:TITLe
(19)Result display
   :CALCulate:CDV1:DATA?
E.3.8 2-point CDV sub-screen

(1):SENSe:ATM:MANual:2CDV:TYPE
(2):SENSe:ATM:MANual:2CDV:PERiod
(3):DISPlay:ANALysis[:NAME]
(5):DISPlay:ANALysis:CDV2:TYPE
(6):DISPlay:ANALysis:CDV2:MARKer
(7):DISPlay:ANALysis:CDV2:PEAK
(8):DISPlay:ANALysis:CDV2:ZOOM
(9):DISPlay:ANALysis:CDV2:DATA?
(10):DISPlay:ANALysis:CDV2:INTerval
(11):DISPlay:ANALysis:CDV2:INUIt
(12):DISPlay:ANALysis:CDV2:MDISplay
(14):DISPlay:ANALysis:CDV2:CELL
(16):DISPlay:ANALysis:CDV2:PRINt
(17):DISPlay:ANALysis:CDV2:TITLe
(18)Result display
  :CALCulate:CDV2:DATA?
E.3.9 Recall sub-screen

(1):DISPlay:ANALysis[:NAME]
(2):DISPlay:ANALysis:RECall:TGRaph:ERRor
(3):DISPlay:ANALysis:RECall:TGRaph:ALARm1
(4):DISPlay:ANALysis:RECall:TGRaph:ALARm2
(5):DISPlay:ANALysis:RECall:TGRaph:ALARm3
(6):DISPlay:ANALysis:RECall:TGRaph:ALARm4
(7):DISPlay:ANALysis:RECall:TGRaph:ALARm5
(8):DISPlay:ANALysis:RECall:TGRaph:PRINt
(9):DISPlay:ANALysis:RECall:LMOonitor:SCRoll
(10):DISPlay:ANALysis:RECall:LMOonitor:INTerval
(12):DISPlay:ANALysis:RECall:LMOonitor:NUMBer
(13):DISPlay:ANALysis:RECall:LMOonitor:PRINt
(16):DISPlay:ANALysis:RECall:TRAFfic:SCRoll
(17):DISPlay:ANALysis:RECall:TRAFfic:MARKer
(18):DISPlay:ANALysis:RECall:TRAFfic:DATA?
(20):DISPlay:ANALysis:RECall:TRAFfic:MDISplay
E.3 Command Correspondence of the Analyze Main Screen

(21):DISPlay:ANALysis:RECall:TRAFfic:FROM
(23):DISPlay:ANALysis:RECall:TRAFfic:PRINt
(24):DISPlay:ANALysis:RECall:TRAFfic:TTITLE
(27):DISPlay:ANALysis:RECall:CAPTure:SCRoll
(28):DISPlay:ANALysis:RECall:CAPTure:PTYPE
(29):DISPlay:ANALysis:RECall:CAPTure:PRINt
(30):DISPlay:ANALysis:RECall:CAPTure:TTITLE
(31):DISPlay:ANALysis:RECall:CDV1:SCRoll
(32):DISPlay:ANALysis:RECall:CDV1:TYPE
(33):DISPlay:ANALysis:RECall:CDV1:MARKer
(34):DISPlay:ANALysis:RECall:CDV1:PEAK
(35):DISPlay:ANALysis:RECall:CDV1:ZOOM
(36):DISPlay:ANALysis:RECall:CDV1:DATA?
(37):DISPlay:ANALysis:RECall:CDV1:INTerval
(38):DISPlay:ANALysis:RECall:CDV1:INUit
(39):DISPlay:ANALysis:RECall:CDV1:MDisplay
(41):DISPlay:ANALysis:RECall:CDV1:CELL
(42):DISPlay:ANALysis:RECall:CDV1:US
(43):DISPlay:ANALysis:RECall:CDV1:PRINt
(44):DISPlay:ANALysis:RECall:CDV1:TTITLE
(45):DISPlay:ANALysis:RECall:CDV2:SCRoll
(46):DISPlay:ANALysis:RECall:CDV2:TYPE
(47):DISPlay:ANALysis:RECall:CDV2:MARKer
(48):DISPlay:ANALysis:RECall:CDV2:PEAK
(49):DISPlay:ANALysis:RECall:CDV2:ZOOM
(50):DISPlay:ANALysis:RECall:CDV2:DATA?
(51):DISPlay:ANALysis:RECall:CDV2:INTerval
(52):DISPlay:ANALysis:RECall:CDV2:IUNit
(53):DISPlay:ANALysis:RECall:CDV2:MDISplay
(54):DISPlay:ANALysis:RECall:CDV2:SCALe
(55):DISPlay:ANALysis:RECall:CDV2:CELL
(56):DISPlay:ANALysis:RECall:CDV2:US
(57):DISPlay:ANALysis:RECall:CDV2:PRINt
(58):DISPlay:ANALysis:RECall:CDV2:TITLe
(59)Result display
   :DISPlay:ANALysis:RECall:TGRaph:DATA?
E.4 Command Correspondence of the Setup Main screen

E.4.1 Mapping sub-screen

(1):SOURce:ATM:MAPPing
(2):SOURce:ATM:HSTRucture
(3):SENSe:ATM:MAPPing
(4):SENSe:ATM:HSTRucture
(5):SENSe:ATM:OAM
(6):DISPlay:SETup[:NAME]
(7):CALCulate:TELecom:ATM:THReshold:SECB:N
(9):SOURce:TELecom:OAM
(10):SOURce:TELecom:M45:PLCP
(11):SENSe:TELecom:M45:PLCP
E.4.2 Measurement condition sub-screen

(1) CALCulate:TELecom:ATM:THReshold:FSIZe <numeric>
(2) CALCulate:TELecom:ATM:THReshold:SB:N <numeric>
(3) CALCulate:TELecom:ATM:THReshold:SB:M <numeric>
(4) CALCulate:TELecom:PERFormance:TYPE <perform>
(5) SYSTem:TRIGgerout <trg>
E.4  Command Correspondence of the Setup Main screen

E.4.3  OH Preset sub-screen

(7):SOURce:ATM:OHPReset:E4:TRACe
(8):SOURce:ATM:OHPReset:E4:DEFault
(9):SOURce:ATM:OHPReset:DS3Plcp:PLCP
(10):SOURce:ATM:OHPReset:DS3Plcp:FRAMe
(12):SOURce:ATM:OHPReset:DS3Plcp:POH
(15):SOURce:ATM:OHPReset:DS3Plcp:
(16):SOURce:ATM:OHPReset:DS3Plcp:
(17):SOURce:ATM:OHPReset:DS3Plcp:
(18):DISPlay:SETup[:NAME]
(19):DISPlay:SETup:OHPReset[:NAME]
E.4.4 ATM Cell edit sub-screen

(6):SOURce:ATM:PATTern:AAL1:POINter
(7):SOURce:ATM:PATTern:AAL1:PAYload
(8):SOURce:ATM:PATTern:AAL1:DEFault
(9):SOURce:ATM:PATTern:AAL1:PFORmat
(10):SOURce:ATM:PATTern:AAL1:RTS
(12):SOURce:ATM:PATTern:AAL2:LI
(14):SOURce:ATM:PATTern:AAL2:PUUi
(16):SOURce:ATM:PATTern:AAL2:DCID
(17):SOURce:ATM:PATTern:AAL2:PTT
(18):SOURce:ATM:PATTern:AAL2:DUUi
(20):SOURce:ATM:PATTern:AAL34:MID
(21): SOURce:ATM:PATTern:AAL34:CPI
(22): SOURce:ATM:PATTern:AAL34:BTAG
(23): SOURce:ATM:PATTern:AAL34:BASize
(24): SOURce:ATM:PATTern:AAL34:LENGth
(25): SOURce:ATM:PATTern:AAL5:LENGth
(26): SOURce:ATM:PATTern:AAL5:UU
(27): SOURce:ATM:PATTern:AAL5:CPI
(28): SOURce:ATM:PATTern:PAYload:PATTern
(29): SOURce:ATM:PATTern:PAYload:DEFault
(30): SOURce:ATM:PATTern:AIS:FSField
(31): SOURce:ATM:PATTern:AIS:DEFault
(32): SOURce:ATM:PATTern:AIS:REServe
(33): SOURce:ATM:PATTern:RDI:FSField
(34): SOURce:ATM:PATTern:RDI:DEFault
(35): SOURce:ATM:PATTern:RDI:REServe
(38): SOURce:ATM:PATTern:USER:FSField
(40): SOURce:ATM:PATTern:USER:REServe
(41): SOURce:ATM:PATTern:CC:FSField
(42): SOURce:ATM:PATTern:CC:REServe
(43): SOURce:ATM:PATTern:CC:DEFault
(44): SOURce:ATM:PATTern:LOOPback:FSField:INDication
(45): SOURce:ATM:PATTern:LOOPback:FSField:CTAG
(47): SOURce:ATM:PATTern:LOOPback:FSField:SOURce
(49): SOURce:ATM:PATTern:LOOPback:FSField:DEFault
(50): SOURce:ATM:PATTern:LOOPback:REServe
Appendix E  Correspondence Between Commands and Screens

(51):SOURce:ATM:PATTern:FM:FSField:TSTP
(52):SOURce:ATM:PATTern:FM:FSField:UNISed1
(54):SOURce:ATM:PATTern:FM:REServe
(55):SOURce:ATM:PATTern:BR:FSField:UNUSed1
(56):SOURce:ATM:PATTern:BR:FSField:TUCO1
(57):SOURce:ATM:PATTern:BR:FSField:TUCO
(58):SOURce:ATM:PATTern:BR:FSField:TSTP
(60):SOURce:ATM:PATTern:BR:FSField:DEFault
(61):SOURce:ATM:PATTern:BR:REServe
(62):SOURce:ATM:PATTern:BGRound:HAERDer
(63):SOURce:ATM:PATTern:BGRound:PAYLoad
(64):SOURce:ATM:PATTern:BGRound:CRC10
(65):SOURce:ATM:PATTern:BGRound:DEFault
(66):SOURce:ATM:PATTern:MEMorized:HEADer
(67):SOURce:ATM:PATTern:MEMorized:PAYLoad
(68):SOURce:ATM:PATTern:MEMorized:CRC10
(69):SOURce:ATM:PATTern:MEMorized:DEFault
(70):SOURce:ATM:PATTern:MEMorized:EDIT:PASTE
(73):SOURce:ATM:PATTern:MEMorized:EDIT:INSert
(74):SOURce:ATM:PATTern:MEMorized:CAPTure
(75):DISPlay:SETup[:NAME]
(76):DISPlay:SETup:CELL[:NAME]
(77):DISPlay:SETup:CELL:MEMorized:SCRoll
(78):DISPlay:SETup:CELL:MEMorized:DSTrt
(79):DISPlay:SETup:CELL:MEMorized:PRINt
## E.5 Command Correspondence of the Front Panel and Other Commands

<table>
<thead>
<tr>
<th>Front panel keys</th>
<th>Start/Stop key</th>
<th>Measurement</th>
<th>Self-test</th>
<th>Print key</th>
<th>Print Now key</th>
<th>Paper Feed key</th>
<th>History key</th>
<th>History Reset key</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>:TEST:STARt</td>
<td>:TEST:STOP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>:TEST:STATe?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>