MG3641A/MG3642A
Synthesized Signal Generator
Option 23: Pattern Generator
Operation Manual

Fifth Edition

- **For safety and warning information, please read this manual before attempting to use the equipment.**
- **Additional safety and warning information is provided within the MG3641A/MG3642A Synthesized Signal Generator Operation Manual. Please also refer to this document before using the equipment.**
- **Keep this manual with the equipment.**

ANRITSU CORPORATION

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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. Ensure that you clearly understand the meanings of the symbols BEFORE using the equipment. Some or all of the following symbols may be used on all Anritsu equipment. In addition, there may be other labels attached to products that 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

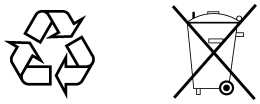
The following safety symbols are used inside or on the equipment near operation locations to provide information about safety items and operation precautions. Ensure that you clearly understand the meanings of the symbols and take the necessary precautions BEFORE using the equipment.

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 a 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.

MG3641A/MG3642A
Synthesized Signal Generator Option 23: Pattern Generator
Operation Manual

5 March 1998 (First Edition)
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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 need to be broken/shredded so as not to be unlawfully used for military purpose.

CE Conformity Marking

Anritsu affixes the CE Conformity marking on the following product(s) in accordance with the Council Directive 93/68/EEC to indicate that they conform to the EMC and LVD directive of the European Union (EU).

CE marking

1. Product Model

Option: MG3641A/MG3642A-23 Pattern Generator

2. Applied Directive and Standards

When the MG3641A/MG3642A-23 Pattern Generator is installed in the MG3641A/MG3642A, the applied directive and standards of this unit conform to those of the MG3641A/MG3642A main frame.

PS: About main frame
Please contact Anritsu for the latest information on the main frame types that MG3641A/MG3642A-23 can be used with.

C-tick Conformity Marking

Anritsu affixes the C-tick marking on the following product(s) in accordance with the regulation to indicate that they conform to the EMC framework of Australia/New Zealand.

C-tick marking

1. Product Model

Option: MG3641A/MG3642A-23 Pattern Generator

2. Applied Directive and Standards

When the MG3641A/MG3642A-23 Pattern Generator is installed in the MG3641A/MG3642A, the applied directive and standards of this unit conform to those of the MG3641A/MG3642A main frame.

PS: About main frame
Please contact Anritsu for the latest information on the main frame types that MG3641A/MG3642A-23 can be used with.

Table of Contents

II.

Section 1 Overview

1.1 Product Overview

Pattern Generator is an optional device of the MG3641A/MG3642A Synthesized Signal Generator. It has four free pattern memories into which data can be written via GPIB by using a personal computer and a fixed pattern memory that generates PN9 and PN15 pseudo-random pattern and 0101-fixed pattern. It generates data patterns synchronized with the internal clock generator frequency.
Besides, when no data pattern is delivered, the idle pattern can be delivered.
Various FSK modulated waves can be output by combining with the FSK encoder which is optionally built in MG3641A/MG3642A. In addition, this Pattern Generator can be used as a modulated signal source of the optional built-in pulse modulator.

1.2 Devices Configuration

The Pattern Generator configuration is as follows:

Table 1-1 Standard configuration

Item	Model Name/Code	Product Name	Number of Item (s)
Main Unit	MG3641A/MG3642A-23	Pattern Generator	1
Attachments	Z0351A	Label	1
	W1389AE	Operation Manual	1

1.3 Specifications

The Pattern Generator specifications are as follow:

Table 1-2 Pattern Generator specifications

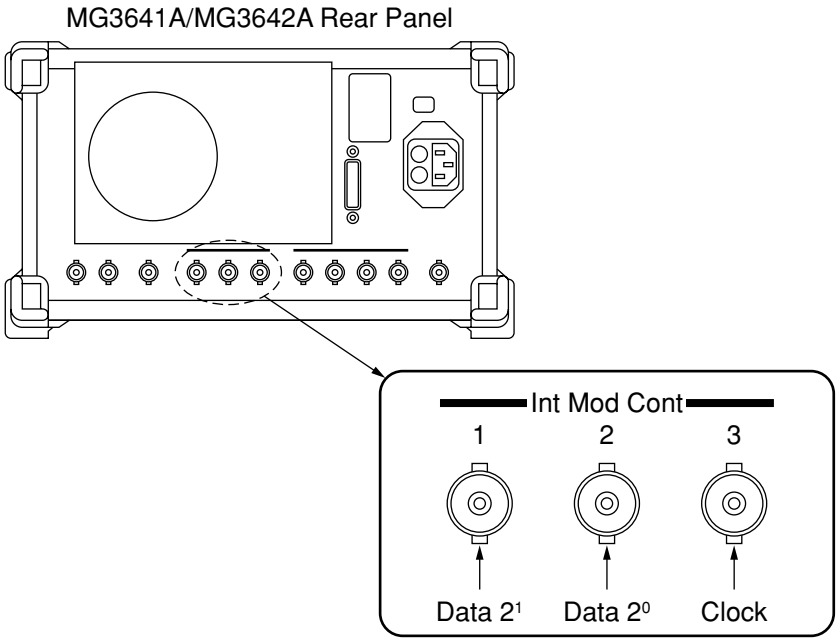
Data pattern	Free	Number of memories	4 (Defind: 1 to 4)
		Memory capacity	524288 bit/memory
		Pattern delivery range	The first delivery address and the data bit length are specified for each free pattern memory. The first delivery address setting range: 00000 to 65535 Data bit length setting range: 2 to 524288 bit (However, the last delivery address shall be 65535)
		Memory write	Write by 1 byte unit via GPIB Write enabled when the Pattern Generator output is turned OFF or the idle pattern is delivered.
	Fixed		PN9 pseudo-random pattern (complying with ITU-T V.52) PN15 pseudo-random pattern (complying with ITU-T O.151) "01010101" fixed pattern
Idle pattern	Number of memories		1 (Idle)
	Memory capacity		524288 bit
	Pattern delivery range		The first delivery address and the data bit length are specified. The first delivery address setting range: 00000 to 65535 Data bit length setting range: 2 to 524288 bit (However, the last delivery address shall be 65535)
	Memory write		Write by 1 byte unit via GPIB Write enabled when the Pattern Generator output is turned OFF.
Delivery method			Single: Specified data pattern is delivered once (either PN9 or PN15 is delivered twice). Continuous: Specified data pattern is continuously delivered. When no data pattern is delivered, the idle pattern is continuously delivered.
Send rate			Range: 1 to 99,999 bps Resolution: 1 bps Accuracy: As same as the reference generator frequency of MG3641A/MG3642A units.
Output method			1-bit NRZ output (corresponding to two values): Sequentially output by 1-bit starting from the first bit into Data 2^1 Output. The Data 2^0 Output logic is fixed to "0". 2-bit NRZ output (corresponding to four values): Sequentially output by 2-bits starting from the first bit into Data 2^1 Output and Data 2^0 Output.
Output level			Data 2^0 Output: TTL level Data 2^1 Output: TTL level Clock Output: TTL level, rise

Section 2 Preparation Before Use

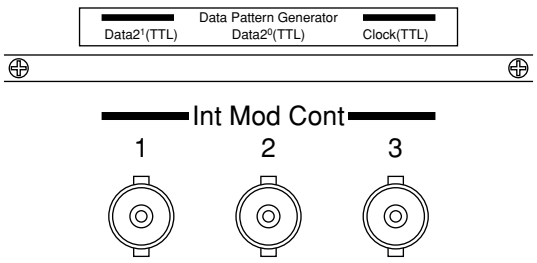
See Section 2 of the "MG3641A/MG3642A Operation Manual" for the installation environment conditions, the safety measures, and preparations before the power turning ON.
The preparations for using the Pattern Generator are described here.

2.1 Data and Clock Connectors Labeling

Pattern Generator outputs data and clock signals by using the Int Mod Cont 1, 2, and 3 connectors on the MG3641A/ MG3642A rear panel. Each connector is allocated as follows:

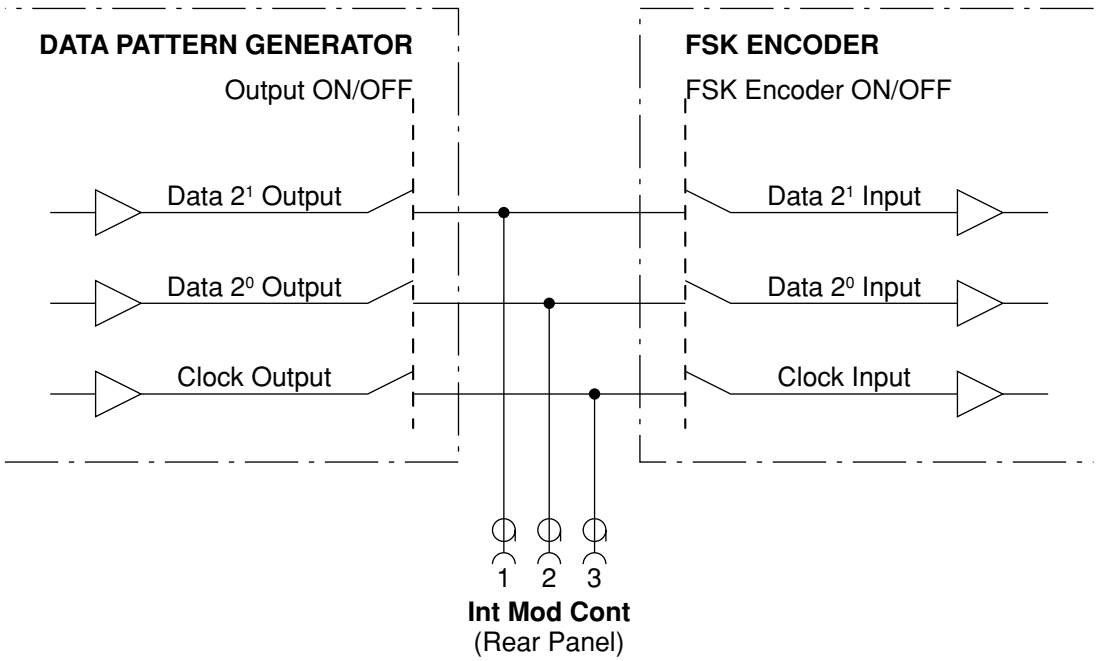


By sticking the attachment labels on near connectors, the erroneous wiring to the connectors can be prevented.
Place the labels above the Int Mod Cont connectors as follows so that they can easily be seen (when the FSK encoder is implemented, stick its label adjacent to them):



2.2 Connection

When both Pattern Generator and FSK Encoder are implemented, the Int Mod Cont connections are as follow:



• **In the case of combined use with FSK Encoder**

Since the Pattern Generator data and clock signal output connectors are commonly used for the FSK Encoder data and clock signal input connectors, the external coaxial cable connection is not necessary.

The Pattern Generator data and clock signal output connectors can be used for the monitor. However, when a long coaxial cable that is terminated with a low impedance or not correctly terminated, the signals cannot be transferred correctly.

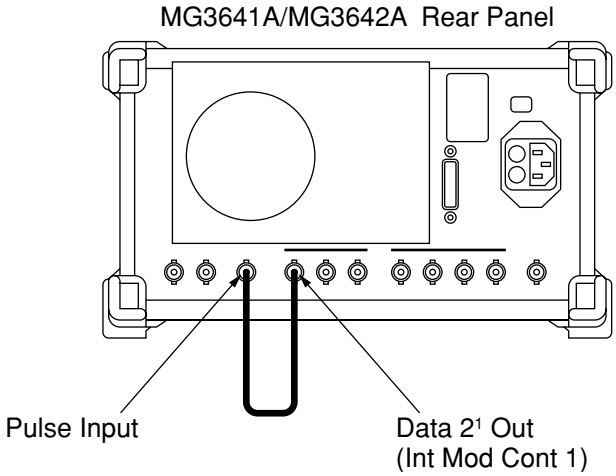
Avoid the signals collision by turning OFF the Pattern Generator output when the FSK modulation is performed by using the external data generator, etc.

Also read the FSK Encoder Operation Manual as well if FSK modulation is to be performed.

• **In case of use as modulated signal source of the pulse modulator**

Connect the Int Mod Cont 1 connector allocated as the Pattern Generator data output Data 2^1 to the Pulse Mod Input connector by using a coaxial cable. Connect them in the shortest distance by using a coaxial cable that is firmly shielded using for example a double-woven sheath.

In addition, set the pulse modulator input impedance to High (600 Ω).

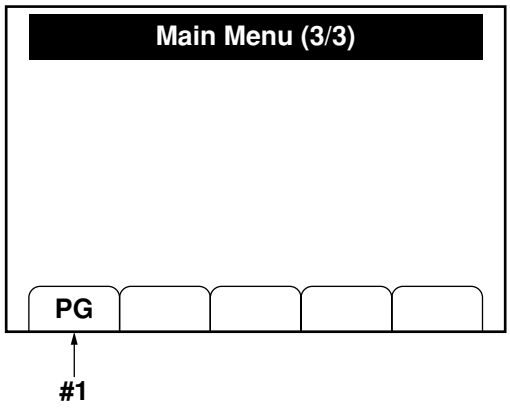


Section 2 Preparation Before Use

Section 3 Operation Overview

This chapter provides an overview of the Pattern Generator operation. For a detailed description of each function, see Section 4 “Detailed Descrption”.

#1 Press the “PG” [F1] key in “Main Menu (3/3)” to open the “Pattern Generator” menu.



#2 Move the cursor by using “↓” [F2] key to select (inversely display) the item for the parameter selection and setting.

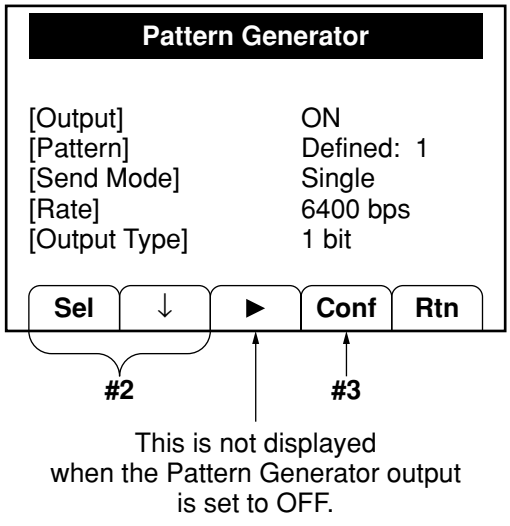
Output: The Pattern Generator output is turned ON/OFF. The “Sel” [F1] key is used for the selection.

Pattern: The delivery data pattern is selected. The free pattern (Defined: 1 to 4), the pseudo-random pattern (PN9, PN15), or the 0101 repetition is selected by using the “Sel” [F1] key.
It cannot be changed during the data pattern delivery.

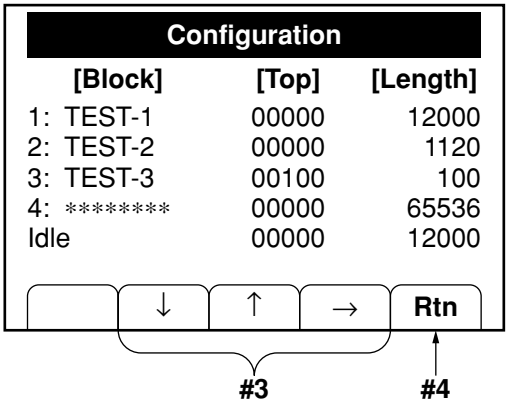
Send Mode: Send mode is selected from the one-time send (Single) or the repeating send (Continuous) by using the “Sel” [F1] key.
It cannot be changed during the data pattern delivery.

Rate: Send rate is set. It is set by using the numeric keypad, the step key in the Edit zone, or the rotary knob. In the case of setting with numeric keypad, the [Hz/uV] and [kHz/mV] unit keys are used for the bps and kbsp keys, respectively.

Output Type: Data output method is selected from 1 bit NRZ output or 2 bit NRZ output by using the “Sel” [F1] key.
It cannot be changed when the Pattern Generator output is set to ON.

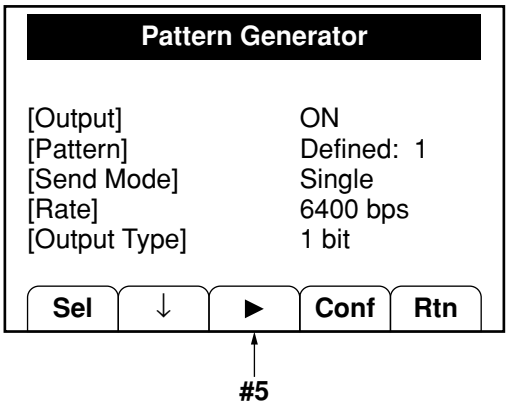


#3 Press the "Conf" [F4] key to open the "Configuration" menu and to set the first delivery address and the data bit length of the free pattern and the idle pattern.
Move the cursor by using "↓" [F2], "↑" [F3], and "→" [F4] keys to select (inversely display) the first delivery address and the data bit length of the free pattern and the idle pattern to be used. Set their values by using the numeric keypad, the step key in the Edit zone, or the rotary knob. In the case of setting with numeric keypad, the input numeric values are fixed by pressing one of the unit keys.
The first delivery address and the data bit length of the free pattern Defined: 1 to 4 cannot be set during the data pattern delivery. Besides, the first delivery address and the data bit length of the idle pattern cannot be set when the Pattern Generator output is set to ON.
And, the free pattern Defined: 1 to 4 can display each name which are consist of maximum eight letters. The name is written by the GPIB interface.



#4 Press the "Rtn" [F5] key to return to the "Pattern Generator" menu.

#5 Press the " ▶ " [F3] key to start the data pattern delivery.
It becomes the delivery stop key displayed as " ■ " during the data pattern delivery.
When the data pattern is not delivered (" ▶ " is displayed), the idle pattern is continuously delivered.
(There is a case that nothing is displayed at the [F3] key just after its operation. This is a state when the key operation is temporarily invalid because of the delivery timing of the idle pattern or the data pattern. Wait for the " ▶ " or the " ■ " to be displayed and then perform the next key operation.)



Section 4 Detailed Description

The Pattern Generator function is described in detail.

4.1 Delivery Mode

The time charts of each delivery data patterns in both the Single and Continuous delivery modes are as follow:

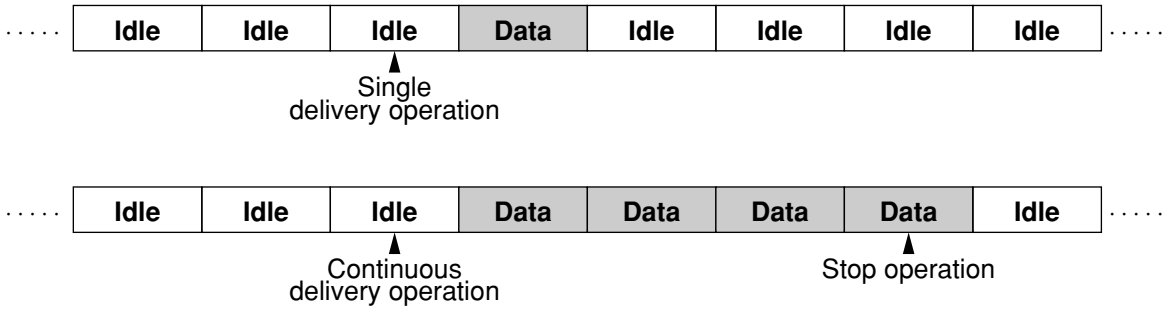
(1) In case that the free pattern Defined: 1 to 4 is used as the delivery data pattern

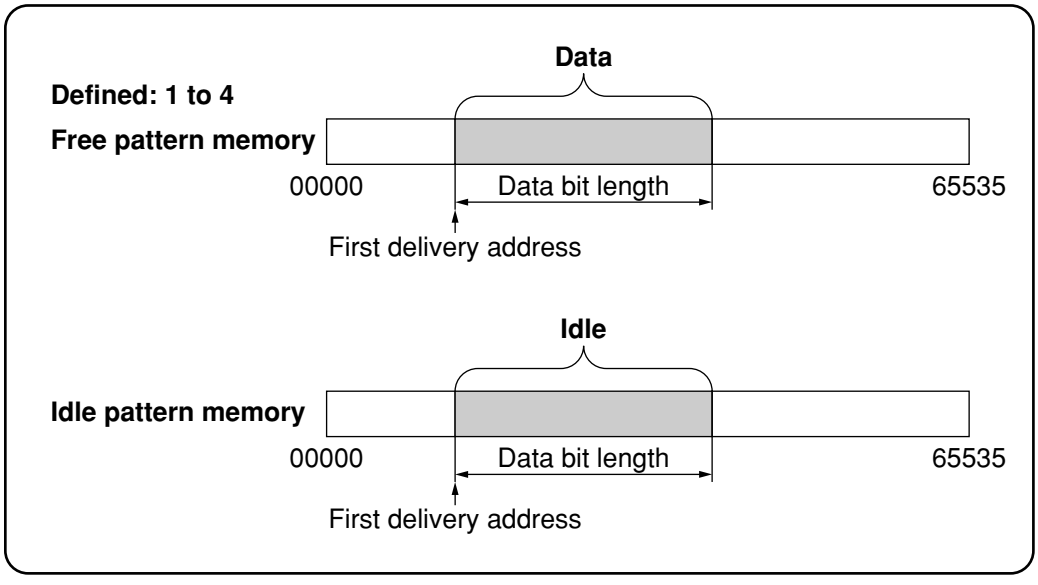
When the Pattern Generator output is turned ON, the idle pattern is continuously delivered.

When the delivery operation is performed, the free pattern delivery starts just after the current idle pattern delivery is finished.

In the Single mode, after the free pattern is delivered once, the idle pattern delivery is resumed.

In the Continuous mode, the free pattern delivery is repeated until the stop operation is performed. When the stop operation is performed, the idle pattern delivery is resumed just after the current free pattern delivery is finished.





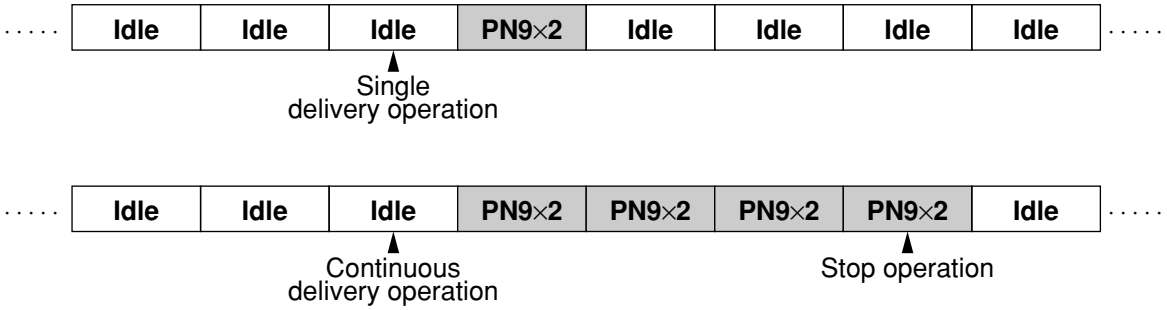
(2) In case that the PN9 pseudo-random pattern is used as the delivery data pattern

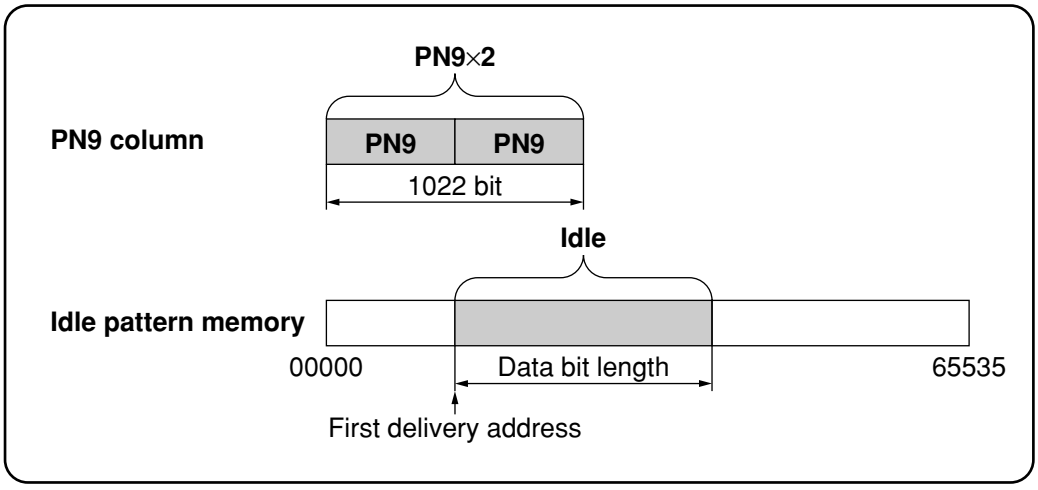
When the Pattern Generator output is turned ON, the idle pattern is continuously delivered.

When the delivery operation is performed, the PN9 pseudo-random pattern delivery starts just after the current idle pattern delivery is finished.

In the Single mode, after the PN9 pseudo-random pattern is delivered twice, the idle pattern delivery is resumed.

In the Continuous mode, the PN9 pseudo-random pattern delivery is repeated until the stop operation is performed. When the stop operation is performed, the idle pattern delivery is resumed just after the current PN9 pseudo-random pattern (a combination of twice) delivery is finished.





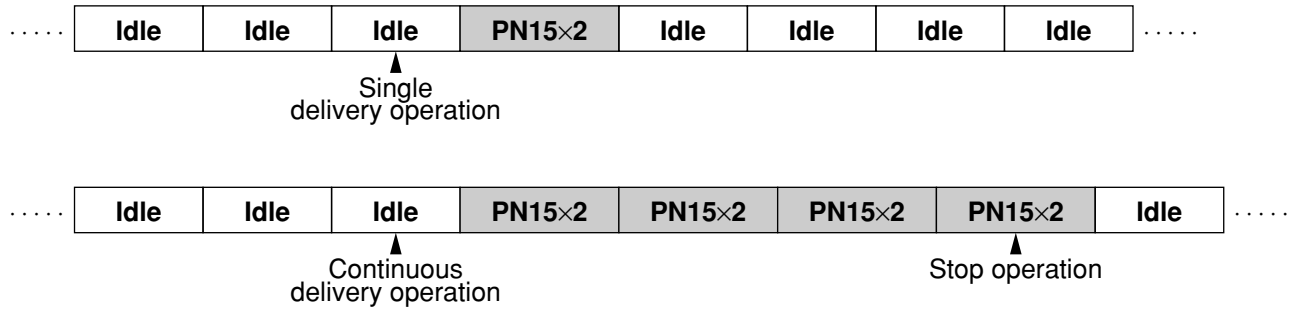
(3) In case that the PN15 pseudo-random pattern is used as the delivery data pattern

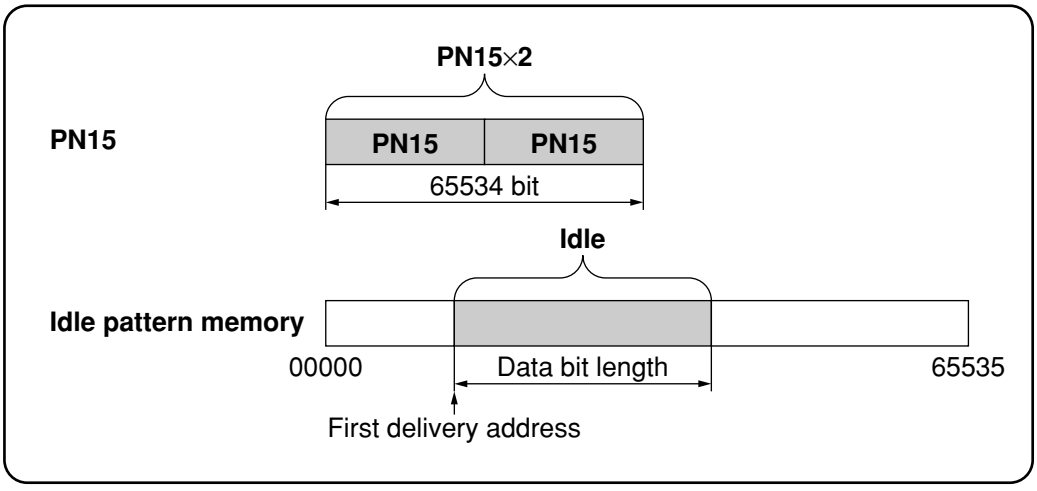
When the Pattern Generator output is turned ON, the idle pattern is continuously delivered.

When the delivery operation is performed, the PN15 pseudo-random pattern delivery starts just after the current idle pattern delivery is finished.

In the Single mode, after the PN15 pseudo-random pattern is delivered twice, the idle pattern delivery is resumed.

In the Continuous mode, the PN15 pseudo-random pattern delivery is repeated until the stop operation is performed. When the stop operation is performed, the idle pattern delivery is resumed just after the current PN15 pseudo-random pattern (a combination of twice) delivery is finished.





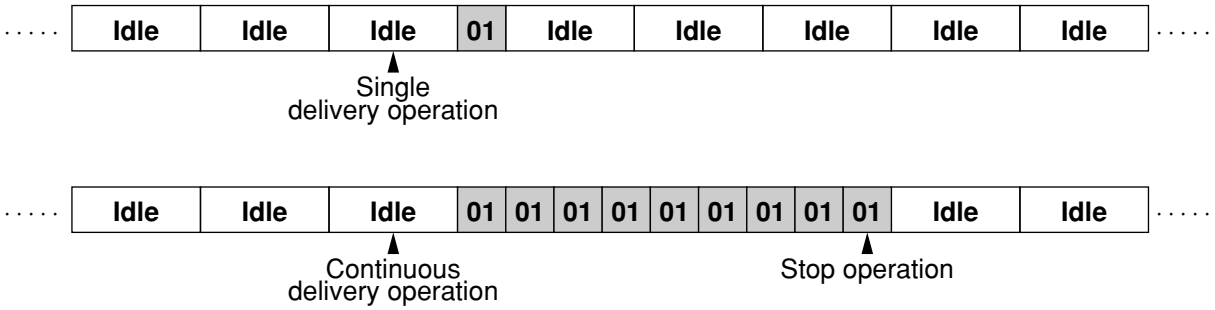
(4) In case that the 0101 fixed pattern is used as the delivery data pattern

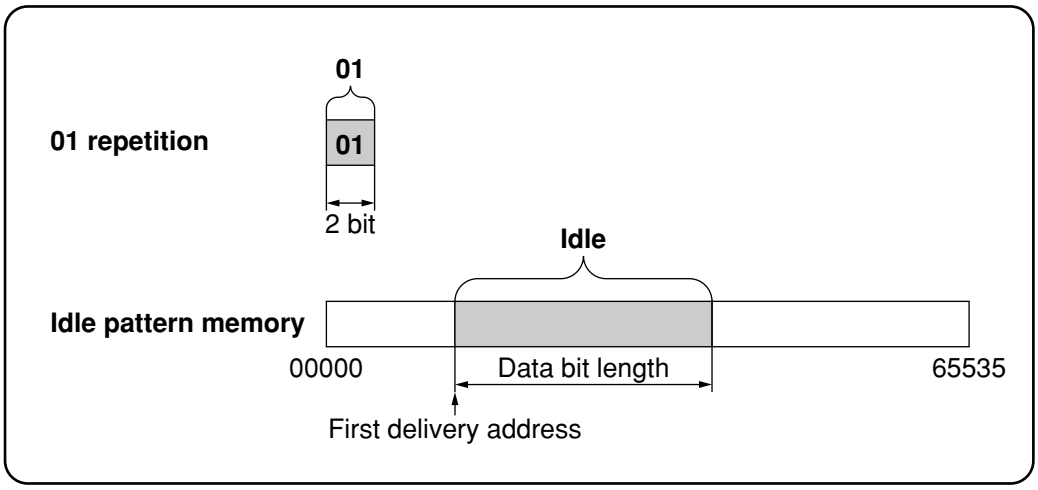
When the Pattern Generator output is turned ON, the idle pattern is continuously delivered.

When the delivery operation is performed, the 0101 repetition pattern delivery starts just after the current idle pattern delivery is finished.

In the Single mode, after the 01 pattern is delivered once, the idle pattern delivery is resumed.

In the Continuous mode, the 01 repetition pattern delivery is repeated until the stop operation is performed. When the stop operation is performed, the idle pattern delivery is resumed just after the current 01 repetition pattern delivery is finished.



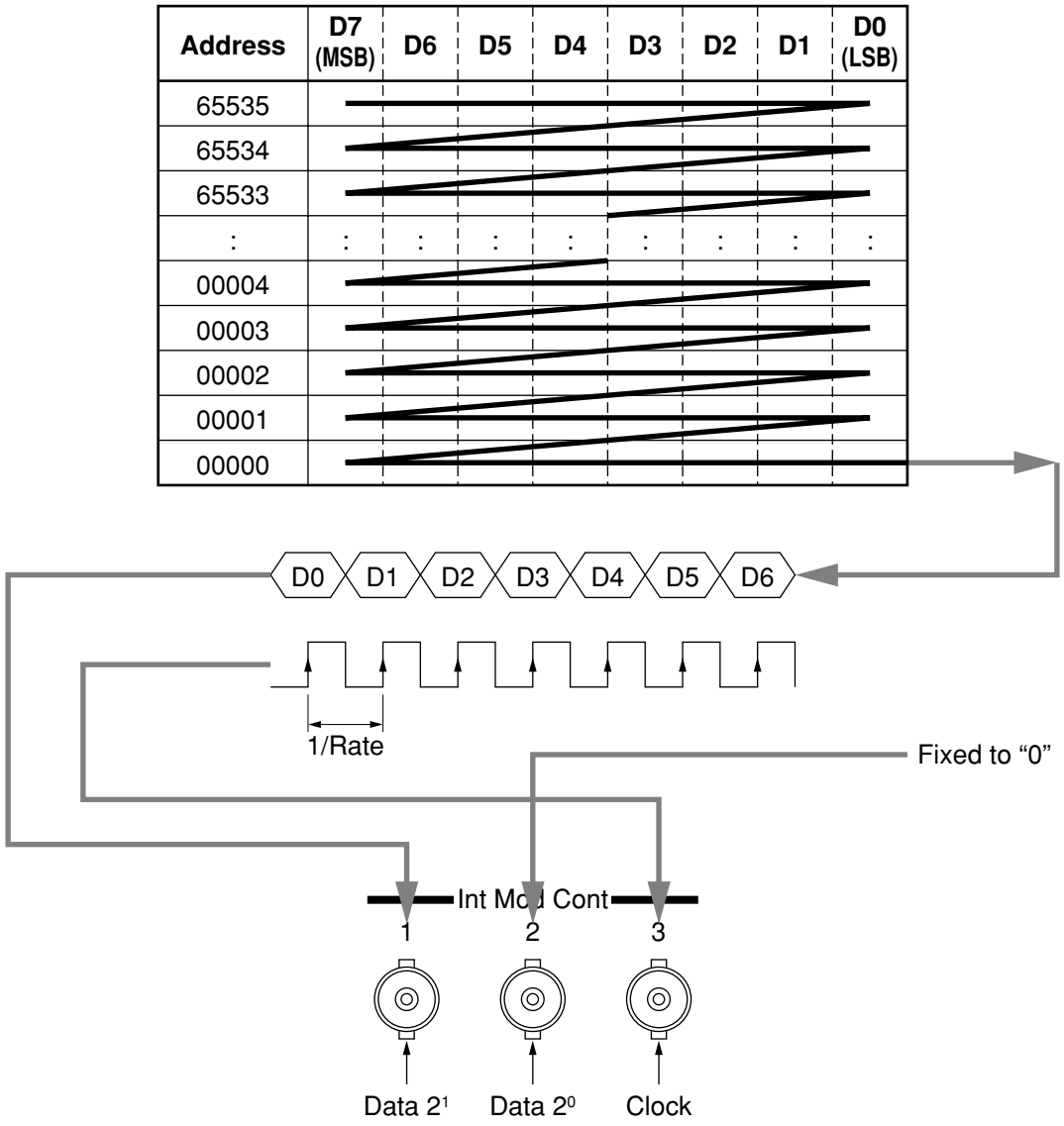


4.2 Data Output Method

Data output method is described in detail.

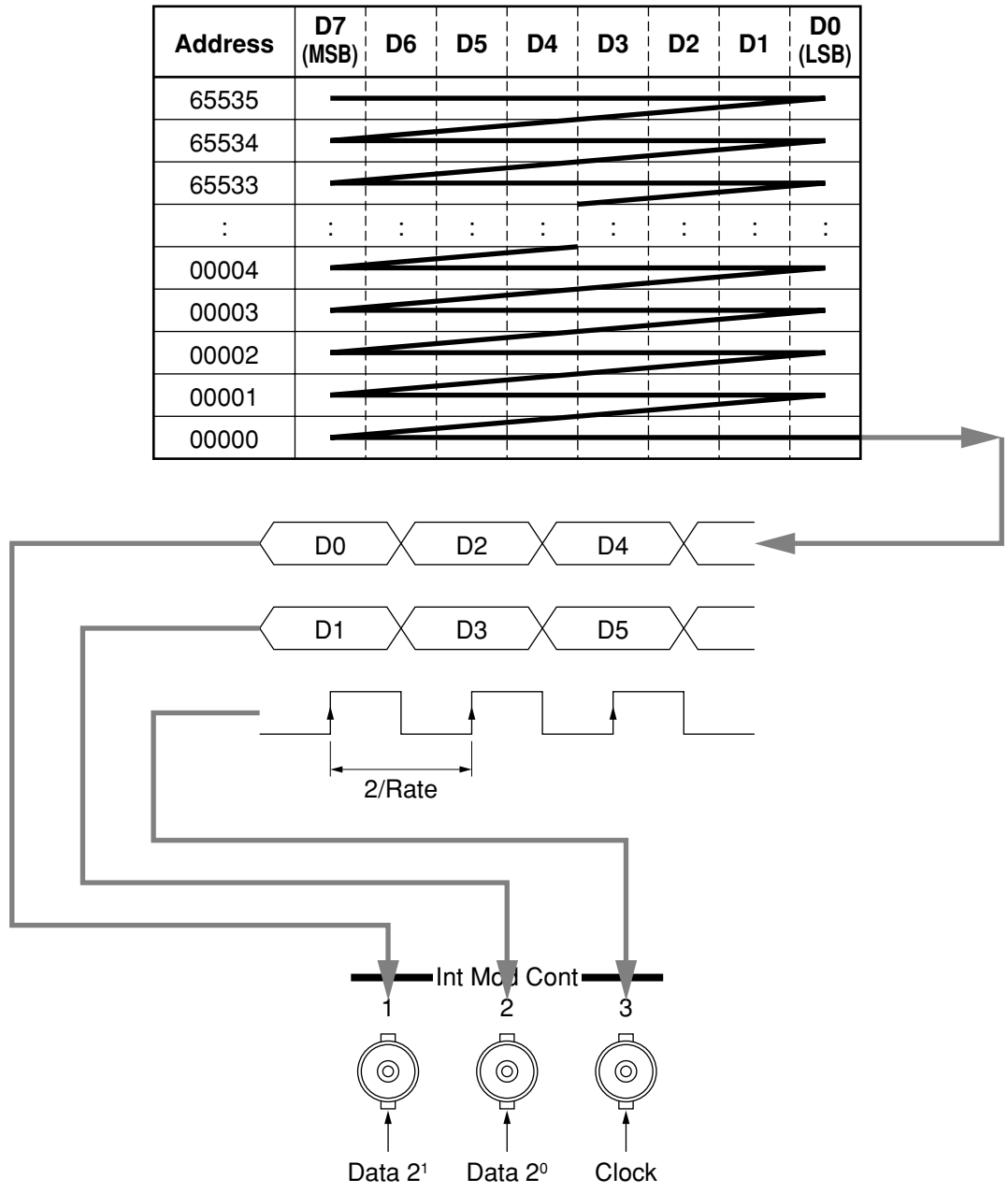
(1) 1-bit NRZ output method

Data are sequentially output starting from the specified first delivery address LSB for the specified data bit length taken out from the Data 2^1 Output.



(2) 2-bit NRZ output method

Data are sequentially output by 2-bit into the Data 2^1 Output and the Data 2^0 Output starting from the specified first delivery address LSB for the specified data bit length (an even number). This is used when the 4-value FSK modulation is performed in the combination with the FSK encoder.



Note:

When the specified data bit length is an odd number, the delivery is made of which bit length is 1-bit subtracted from the specified bit length (an even number). When you want to output an odd bit length data by 2-bit NRZ output method, continuously write the same data twice to make the total bit length to be an even number before the delivery.

Example) In the case of the seven-bit data "0100101" delivery by using the 2-bit NRZ output:
Deliver the data to be 14-bit data "01001010100101".

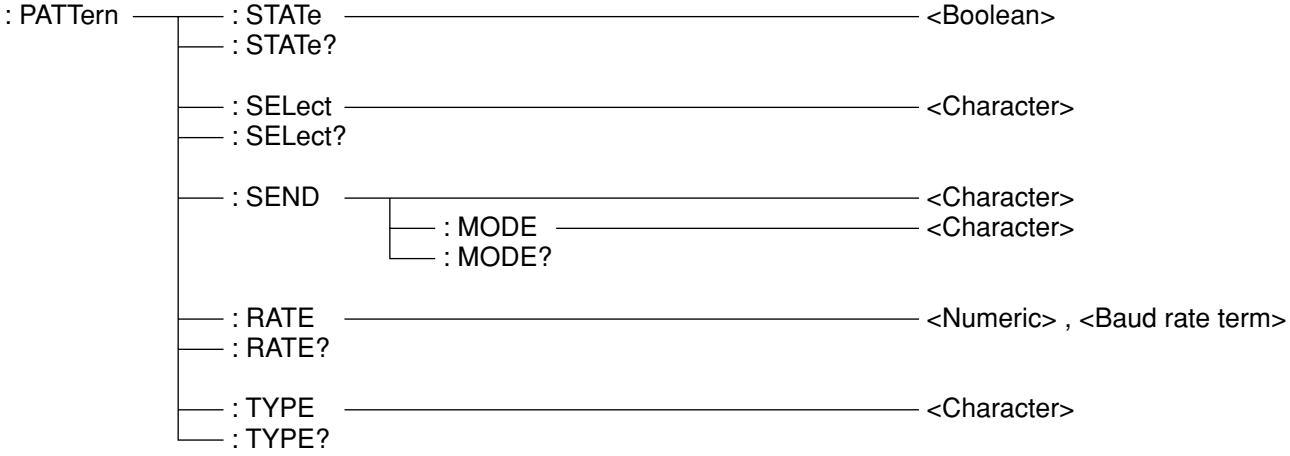
Section 5 Remote Control by GPIB

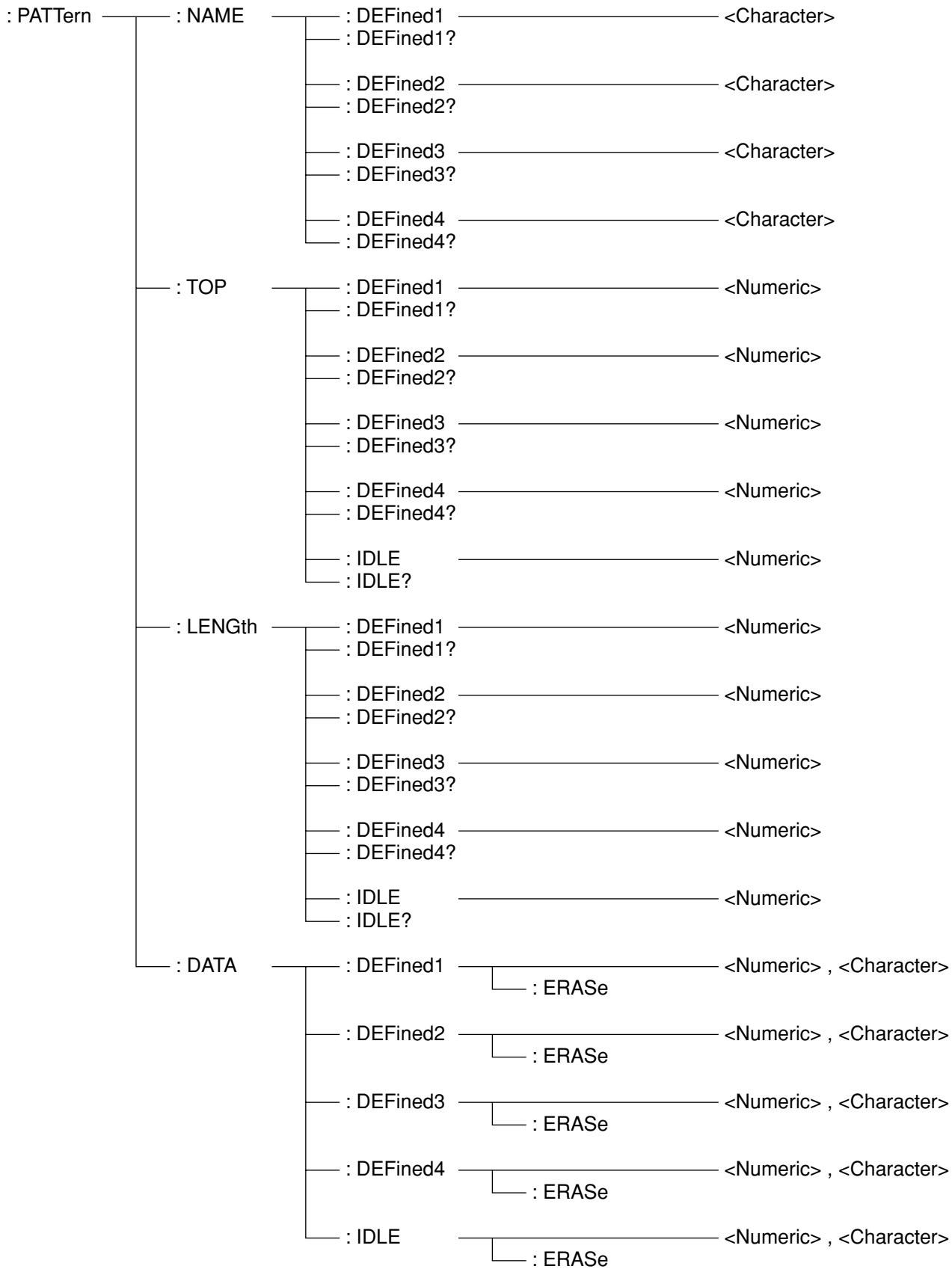
5.1 Overview

Pattern Generator is an optional device of MG3641A/MG3642A Synthesized Signal Generator to enable automatic measurement in combination with the external controller and the other measurement devices in the same way as for the other function of the main unit.
This device complies with the IEEE (Institute of Electrical and Electric Engineers) std 488.1-1987. Besides, the software specifications comply IEEE488.2 and SCPI (Standard Commands for Programmable Instruments).
GPIB command tree and the command detailed description of Pattern Generator is described in this chapter.
For additional descriptions, see Section 6 “Remote Control by GPIB” of the separate document “MG3641A/MG3642A Synthesized Signal Generator Operation Manual”

5.2 Command Tree

The device message commands tree added by the Pattern Generator implementation is as follows:




: PATTern
: NAME
: DEFined1
<Character>
: DEFined1?
: DEFined2
<Character>
: DEFined2?
: DEFined3
<Character>
: DEFined3?
: DEFined4
<Character>
: DEFined4?
: TOP
: DEFined1
<Numeric>
: DEFined1?
: DEFined2
<Numeric>
: DEFined2?
: DEFined3
<Numeric>
: DEFined3?
: DEFined4
<Numeric>
: DEFined4?
: IDLE
<Numeric>
: IDLE?
: LENGth
: DEFined1
<Numeric>
: DEFined1?
: DEFined2
<Numeric>
: DEFined2?
: DEFined3
<Numeric>
: DEFined3?
: DEFined4
<Numeric>
: DEFined4?
: IDLE
<Numeric>
: IDLE?
: DATA
: DEFined1
<Numeric> , <Character>
: ERASe
: DEFined2
<Numeric> , <Character>
: ERASe
: DEFined3
<Numeric> , <Character>
: ERASe
: DEFined4
<Numeric> , <Character>
: ERASe
: IDLE
<Numeric> , <Character>
: ERASe

5.3 Command Details

The details of the device messages added by the Pattern Generator implementation are as follow:

: PATTern: STATe <Boolean>

Function ..... The Pattern Generator output ON/OFF is set.
Parameter ..... <Booleam> = ON or 1
OFF or 0
Unit ..... <Non term>
Restriction ..... None

: PATTern: STATe?

Function ..... The Pattern Generator output ON/OFF is inquired.
Response ..... The Pattern Generator status = OFF
ON
Restriction ..... None

: PATTern: SELect <Character>

Function ..... The Pattern Generator delivery data pattern is selected.
Parameter ..... <Character> = DEF1
DEF2
DEF3
DEF4
PN9
PN15
0101
Unit ..... <Non term>
Restriction ..... This cannot be set during the data pattern delivery.

: PATTern: SELect?

Function ..... The Pattern Generator delivery data pattern is inquired.
Response ..... The Pattern Generator delivery data pattern = DEF1
DEF2
DEF3
DEF4
PN9
PN15
0101
Restriction ..... None

: PATTern: SEND: MODE <Character>

Function ..... The Pattern Generator delivery mode is set.
Parameter ..... <Character> = SINGLE
CONT
Unit ..... <Non term>
Restriction ..... This cannot be set during the data pattern delivery.

: PATTern: SEND: MODE?

Function ..... The Pattern Generator delivery mode is inquired.
Response ..... The Pattern Generator delivery mode = SINGLE
CONT
Restriction ..... None

: PATTern: RATE <Numeric> <Band rate term>

Function ..... The Pattern Generator delivery rate is set.
Parameter ..... <Numeric> = 1 bps to 99999 bps
Unit ..... <Band rate term: bps or kbps>
Restriction ..... None

: PATTern: RATE?

Function ..... The Pattern Generator delivery rate is inquired.
Response ..... The Pattern Generator delivery rate
Restriction ..... None

: PATTern: TYPE <Character>

Function ..... The Pattern Generator data output method is set.
Parameter ..... <Character> = 1bit
2bit
Unit ..... <Non term>
Restriction ..... This cannot be set in the Pattern Generator output ON status.

: PATTern: TYPE?

Function ..... The Pattern Generator data output method is inquired.
Response ..... The Pattern Generator data output method = 1bit
2bit
Restriction ..... None

: PATTern: SEND <Character>

Function ..... The Pattern Generator data pattern delivery execution/stop are performed.
Parameter ..... <Character> = RUN
STOP
Unit ..... <Non term>
Restriction ..... This cannot be executed in the Pattern Generator output OFF status.

: PATTern: NAME: DEFined1 <Character>
: PATTern: NAME: DEFined2 <Character>
: PATTern: NAME: DEFined3 <Character>
: PATTern: NAME: DEFined4 <Character>

Function ..... The Pattern Generator free pattern memory Defined: 1 to 4 name is set.
Parameter ..... <Character> = Maximum 8 alphanumeric characters
Unit ..... <Non term>
Restriction ..... None

: PATTern: NAME: DEFined1?
: PATTern: NAME: DEFined2?
: PATTern: NAME: DEFined3?
: PATTern: NAME: DEFined4?

Function ..... The Pattern Generator free pattern memory Defined: 1 to 4 name is inquired.
Response ..... The Pattern Generator free pattern memory Defined: 1 to 4 name
Restriction ..... None

: PATTern: TOP: DEFined1 <Numeric>
: PATTern: TOP: DEFined2 <Numeric>
: PATTern: TOP: DEFined3 <Numeric>
: PATTern: TOP: DEFined4 <Numeric>

Function ..... The first delivery address of the Pattern Generator free pattern memory Defined: 1 to 4 is set.
Parameter ..... <Numeric> = 00000 to 65535 (a decimal number)
Unit ..... <Non term>
Restriction ..... This cannot be set during the data pattern delivery, but can be set in the idling.

: PATTern: TOP: IDLE <Numeric>

Function ..... The first delivery address of the Pattern Generator idle pattern memory is set.
Parameter ..... <Numeric> = 00000 to 65535 (a decimal number)
Unit ..... <Non term>
Restriction ..... This cannot be set in the Pattern Generator output ON status.

: PATTern: TOP: DEFiend1?
: PATTern: TOP: DEFiend2?
: PATTern: TOP: DEFiend3?
: PATTern: TOP: DEFiend4?

Function ..... The first delivery address of the free pattern memory Defined: 1 to 4 is inquired.
Response ..... The first delivery address of the free pattern memory Defined: 1 to 4
Restriction ..... None

: PATTern: TOP: IDLE?

Function ..... The first delivery address of the idle pattern memory is inquired.
Response ..... The first delivery address of the idle pattern memory
Restriction ..... None

: PATTern: LENGth: DEFined1 <Numeric>
: PATTern: LENGth: DEFined2 <Numeric>
: PATTern: LENGth: DEFined3 <Numeric>
: PATTern: LENGth: DEFined4 <Numeric>

Function ..... The delivery bit length of the free pattern memory Defined: 1 to 4 is set.
Parameter ..... <Numeric> = 2 to 524288
Unit ..... <Non term>
Restriction ..... This cannot be set during the data pattern delivery, but can be set in the idling.

: PATTern: LENGth: IDLE <Numeric>

Function ..... The delivery bit length of the idle pattern memory is set.
Parameter ..... <Numeric> = 2 to 524288
Unit ..... <Non term>
Restriction ..... This cannot be set in the Pattern Generator output ON status.

: PATTern: LENGth: DEFiend1?
: PATTern: LENGth: DEFiend2?
: PATTern: LENGth: DEFiend3?
: PATTern: LENGth: DEFiend4?

Function ..... The delivery bit length of the Pattern Generator free pattern memory Defined: 1 to 4 is inquired.
Response ..... The delivery bit length of the Pattern Generator free pattern memory Defined: 1 to 4
Restriction ..... None

: PATTern: LENGth: IDLE?

Function ..... The delivery bit length of the Pattern Generator idle pattern memory is inquired.
Response ..... The delivery bit length of the Pattern Generator idle pattern memory
Restriction ..... None

: PATTern: DATA: DEFiend1: ERASe
: PATTern: DATA: DEFiend2: ERASe
: PATTern: DATA: DEFiend3: ERASe
: PATTern: DATA: DEFiend4: ERASe

Function ..... The Pattern Generator free pattern memory Defined: 1 to 4 data are erased.
Parameter ..... None
Unit ..... <Non term>
Restriction ..... This cannot be erased during the data pattern delivery but can be erased during idling.

: PATTern: DATA: IDLE: ERASe

Function ..... The Pattern Generator idle pattern memory data are erased.
Parameter ..... None
Unit ..... <Non term>
Restriction ..... This cannot be erased in the Pattern Generator output ON status.

: PATTern: DATA: DEFiend1: <Numeric>, <Character>
: PATTern: DATA: DEFiend2: <Numeric>, <Character>
: PATTern: DATA: DEFiend3: <Numeric>, <Character>
: PATTern: DATA: DEFiend4: <Numeric>, <Character>

Function ..... The Pattern Generator free pattern memory Defined: 1 to 4 data are written.
Parameter ..... <Numeric> = 00000 to 65535 (address)
<Character> = 00000000 to 11111111 (binary 8-bit fixed length data)
Unit ..... <Non term>
Restriction ..... This cannot be written during the data pattern delivery but can be written during idling. Write the data after the data erasure.

: PATTern: DATA: IDLE: <Numeric>, <Character>

Function ..... The Pattern Generator idle pattern memory data are written.
Parameter ..... <Numeric> = 00000 to 65535 (address, a decimal number)
<Character> = 00000000 to 11111111 (binary 8-bit fixed length data)
Unit ..... <Non term>
Restriction ..... This cannot be written in the Pattern Generator output ON status.
Write the data after the data erasure.

5.4 Data Write Details

The writing method of the data generated by Pattern Generator is described in detail.

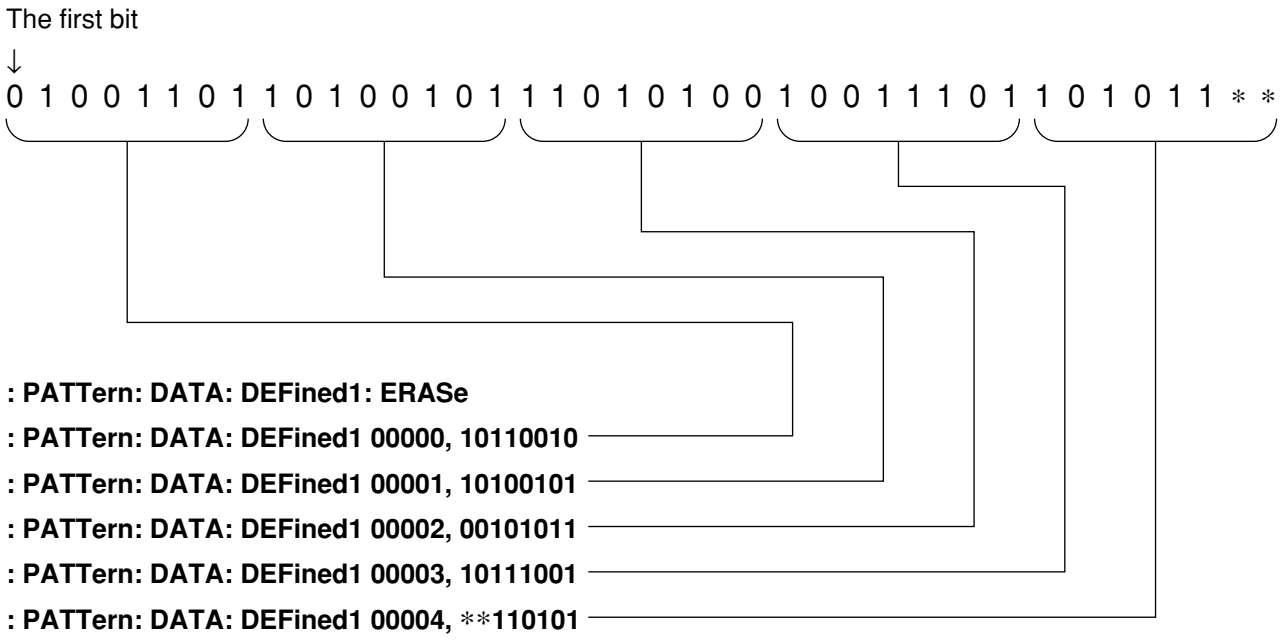
Since the data is written by the 8-bit byte unit, the dummy data is added to make the data bit length be an integral multiple of eight. Those dummy data can be 0 or 1 because they can be excluded at the delivery by specifying the data bit length. Besides, when using the 2-bit NRZ output method, the valid bit length is made to be an even number. When the data bit length to be written is odd, the bit length is made to be an even number by connecting a couple of data. In this case, however, even when the delivery mode is set to Single, the data are delivered two times.

Be sure to execute the :PATTern:DATA:DEFined*:ERASE command (* represents a memory number) to erase all the data from the free pattern memory, before writing data.
Also, when changing written address data, erase all the data from the memory by executing the ERASE command and then rewrite data from the first address.

Example 1

In case that the following 38-bit data are written into the Defined: 1 free pattern memory and delivered:
"01001101101001011101010010011101101011"

The data are delimited by 8-bit unit and arranged so that LSB becomes the first bit. Dummy data (*: either 0 or 1) are added to fill the insufficient two-bit end.



: PATTern: DATA: DEFined1: ERASe
: PATTern: DATA: DEFined1 00000, 10110010
: PATTern: DATA: DEFined1 00001, 10100101
: PATTern: DATA: DEFined1 00002, 00101011
: PATTern: DATA: DEFined1 00003, 10111001
: PATTern: DATA: DEFined1 00004, **110101

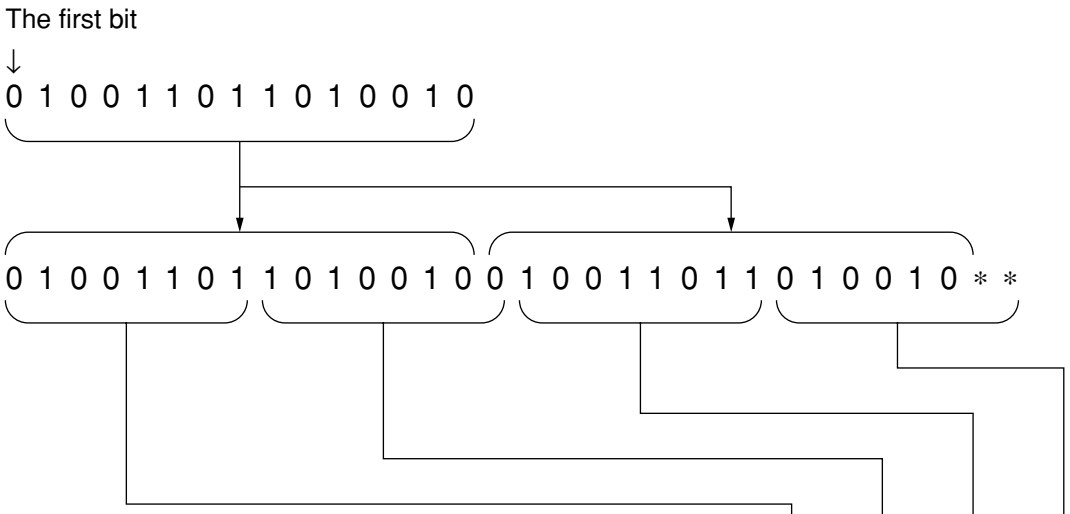
After the data are written, the first delivery address is set to "00000" and the data bit length is set to 38 bits before the delivery.

: PATTern: TOP: DEFined1 00000
: PATTern: LENGth: DEFined1 38

Example 2

In case that the following 15-bit data are written into the Defined: 1 free pattern memory and delivered by using the 2-bit NRZ output method:
"010011011010010"

The two data are connected so that the bit length is an even number, delimited by 8-bit unit, and arranged so that LSB becomes the first bit. Dummy data (*: either 0 or 1) are added to fill the insufficient two-bit end.



: PATTern: DATA: DEFined1: ERASe
: PATTern: DATA: DEFined1 00000, 10110010
: PATTern: DATA: DEFined1 00001, 00100101
: PATTern: DATA: DEFined1 00002, 11011001
: PATTern: DATA: DEFined1 00003, **010010

After the data are written, the first delivery address is set to "00000", the data bit length is set to 30-bits (15 bits×2), and the delivery method is set to 2-bit NRZ output before the delivery.

: PATTern: TOP: DEFined1 00000
: PATTern: LENGth: DEFined1 30
: PATTern: TYPE 2bit

Section 5 Remote Control by GPIB

Appendix Initialization

Item	Initial Value by the [Preset] Key	Initial Value by the [Preset] + Power ON (Setting Status at the Factory Shipment)
Pattern Generator output ON/OFF	OFF*	OFF
Data pattern	Definde: 1*	Definde: 1
Delivery mode	Single*	Single
Send rate	1200 bps*	1200 bps
Output method	1 bit NRZ*	1 bit NRZ
DEF1 pattern name	Not changed nor erased	Erased
DEF2 pattern name		
DEF3 pattern name		
DEF4 pattern name		
DEF1 First delivery address	00000*	00000
DEF2 First delivery address		
DEF3 First delivery address		
DEF4 First delivery address		
IDLE First delivery address		
DEF1 data bit length	8*	8
DEF2 data bit length		
DEF3 data bit length		
DEF4 data bit length		
IDLE data bit length		
DEF1 pattern data	Not changed nor erased	Erased
DEF2 pattern data		
DEF3 pattern data		
DEF4 pattern data		
IDLE pattern data		

NOTE:

*: According to the preset memory content as changed.

Appendix Initialization

Anritsu

MG3641A/MG3642A

Synthesized Signal Generator

Option 23: Pattern Generator

Operation Manual

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

Anritsu

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