



Quick User's Guide

MT9085 Series ACCESS Master

For safety and warning information, please read this manual before attempting to use the equipment.
Keep this manual with the equipment.

MT9085 Series
ACCESS Master
Quick User's Guide

29 August 2018 (First Edition)

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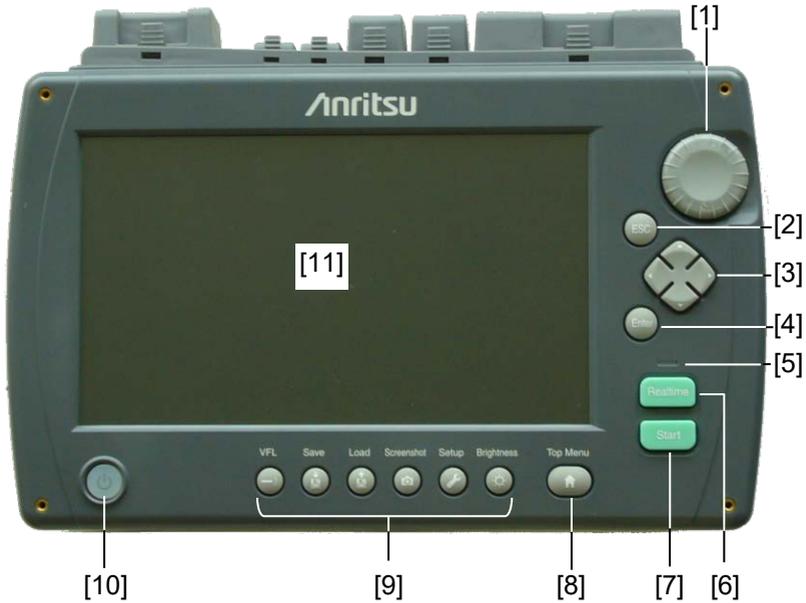
Printed in Japan

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Panel

Front Panel



- [1] Rotary knob
- [2] **ESC** key
- [3] Arrow key set
- [4] **Enter** key
- [5] LED indicator
- [6] **Realtime** key
- [7] **Start** key
- [8] Top Menu key
- [9] Shortcut keys
- [10] Power key
- [11] Touch panel

Power key indication



Off: Power off



Orange flash: Charging



Orange: Standby



Green: Power on (Active)

Top Panel

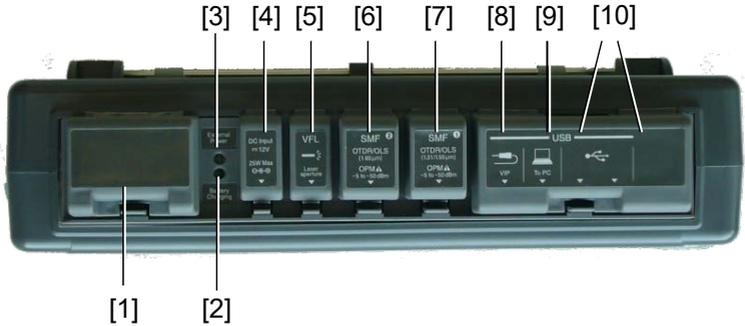


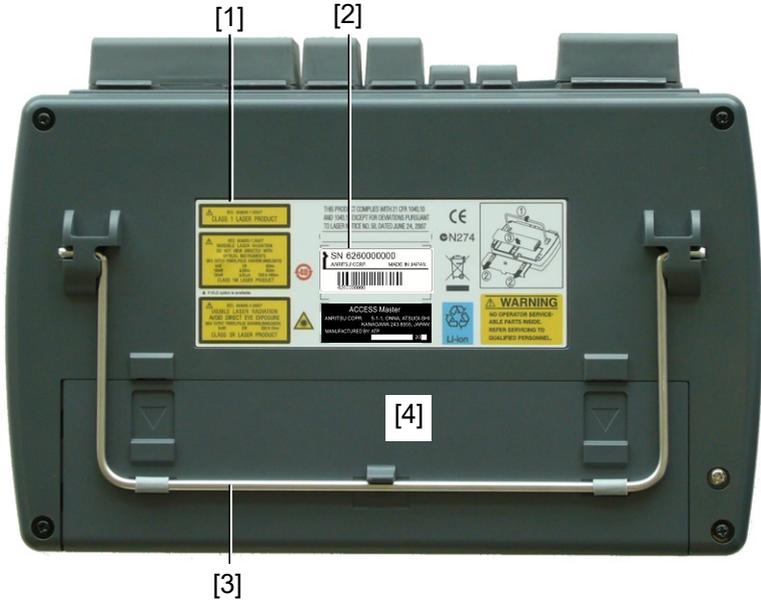
Table 1 Explanation of Top Panel

No.	Label	Explanation
[1]	Opt *1 OPM	Optical Power Meter (option)
[2]	Battery Charging	Battery Charging indicator
[3]	External Power	External Power indicator
[4]	DC Input	External power - DC Power Connection
[5]	VFL	VFL port (option)
[6]	OTDR/OLS (2)	Measurement port 2 *2
[7]	OTDR/OLS (1)	Measurement port 1
[8]	USB VIP	USB port (for VIP)
[9]	USB To PC	USB port (for PC)
[10]	USB	USB port (General)

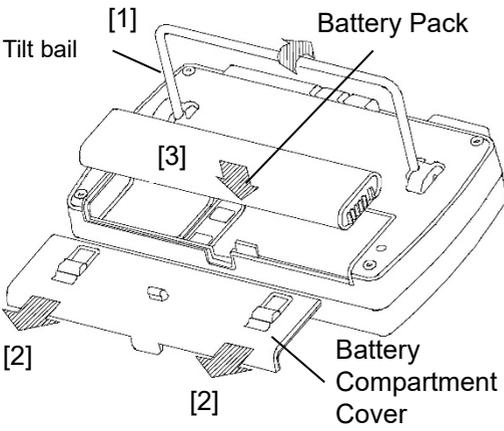
*1: Option number is printed here.

*2: Option 055 and 063 only

Back Panel



- [1] Compliance and Warning labels
- [2] Model name and Serial number labels
- [3] Tilt bail
- [4] Battery compartment



- <Installing the battery pack>
- [1] Lift the tilt bail.
 - [2] Detach the battery compartment cover.
 - [3] Insert the battery pack into the ACCESS Master with the indicator facing out.

Power On/Power Off

To Power On the ACCESS Master:

Press the **Power** key. When the boot process is complete successfully, Top Menu is displayed.

To Power Off the ACCESS Master:

Press the **Power** key, and the following message appears.

Touch **Yes** to power off the ACCESS Master.

Top Menu

Press the Power key to start the ACCESS Master, when it starts, Top Menu is displayed. Also, you can return from another screen to Top Menu by pressing **Top Menu** .



For Option 063, touching **SM / MM** highlights the wavelength of the selected port.

When an Ethernet, Wi-Fi, or Bluetooth interface is connected to the USB port, the **Remote Setup** softkey appears.

Shortcut Keys

Brightness

Pressing this key switches the brightness of the backlight. When the backlight is turned off by the **Auto Backlight Off** function, touch the screen or press any key to turn the backlight on.

Setup

Pressing this key displays a screen for system setting.

General sets date, time, language, etc.

Password Settings

 sets passwords in order to restrict operations for users other than the administrator. This screen appears when the Setup key is pressed while Top Menu is displayed.

Calibration Date Settings

 sets the calibration date and calibration period. This screen appears when the Setup key is pressed while Top Menu is displayed.

About allows users to view the system information, quickly format the internal memory, and perform other operations.

Preferences sets the parameters related to OTDR, Fiber Visualizer, or Cable Certification measurement.

AutoSave configures settings for automatically saving test results upon completion of OTDR and VIP testing.

Thresholds sets the thresholds for automatic detection and pass/fail evaluation of the OTDR (Construction) testing.

Screenshot

Pressing this key saves a screenshot to a file.

Load

Pressing this key displays the Load screen.

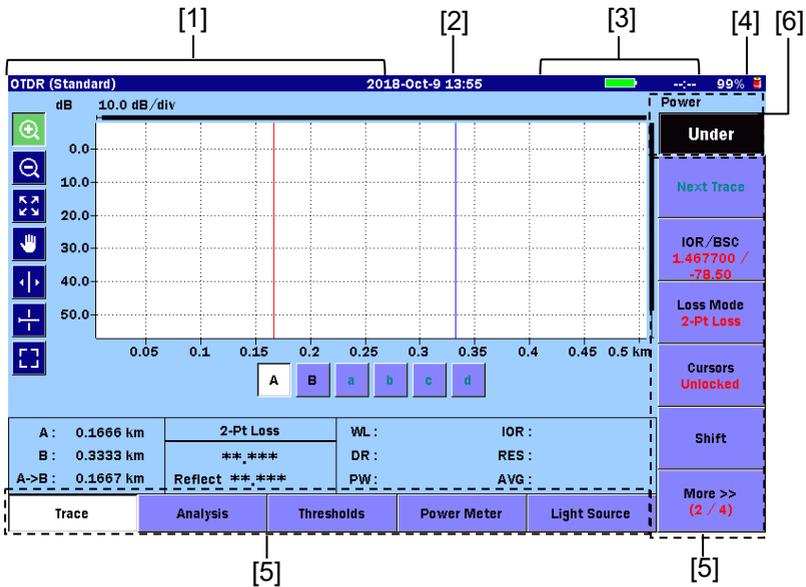
Save

Pressing this key displays the **Save** screen.

VFL

When Option 002 is installed, pressing this key displays the VFL dialog box.

Screen Elements



[1] Screen Title area:

Displays the title of the screen currently displayed and the name of the loaded file.

[2] Date/Time area:

Displays the current date and time.

The display format (yy-mm-dd, mm-dd-yy, dd-mm-yy) follows the

system settings. For details on the settings, refer to 3.3.1 “General Settings” in the *MT9085 Series ACCESS Master Operation Manual*.

[3] Status area:

Displays the battery indicator, remaining battery, and the status icon of the ACCESS Master. The remaining battery is expressed in percent (%) (100% on a full charge), and the estimated available time (h) forecast from the average power consumption over the previous 1 minute period.



Battery indicator



Connected in a network



Remaining battery (%)



Laser light is being emitted. (in yellow)



Remaining battery (h)



VFL light is being emitted. (in red)



File is being accessed

[4] Driving power indicator:

- Powered by external power supply:
- Powered by battery pack:



[5] Softkeys display area:

Displays softkeys to which functions corresponding to the current screen or required for the current operation are assigned. Softkeys are used to select a function or for confirmation.

[6] Power Meter area:

For OTDR or Fiber Visualizer, the power measurement value is displayed when a power meter is used.

Expanding and shifting the graph

Touch one of the icons on the left of the graph area, and touch or drag the graph.

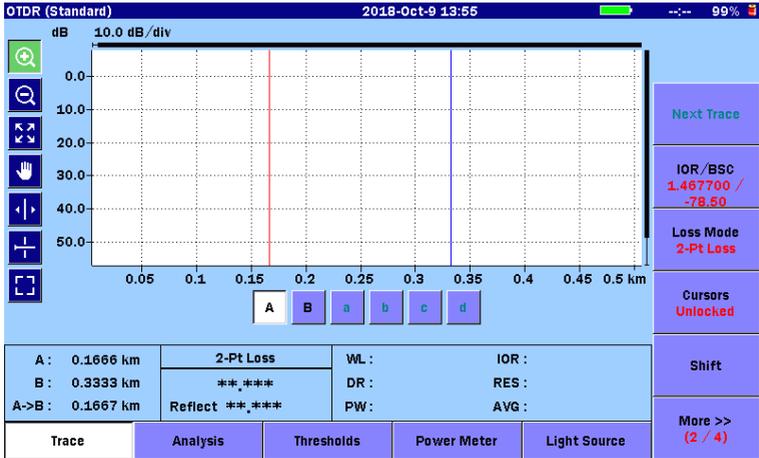
Table 2 Graph Control Icons

Icon	Explanation
	Expands the area selected by dragging.
	Contracts the view with the touched point displayed in the center.
	Displays the entire trace.
	Moves the trace by dragging.
	Moves the active cursor or marker to the touched position. The rotary knob can also move the cursor.
	Displays a horizontal line at the level of the active cursor. When Marker Mode is Movement , it switches display modes of the cursor in the following order: Hide level cursor → Show level cursor → Hide cursors.
	Enlarges the graph. This icon does not appear in the Analysis Screen.

OTDR (Standard)

OTDR (Standard) provides basic OTDR testing.

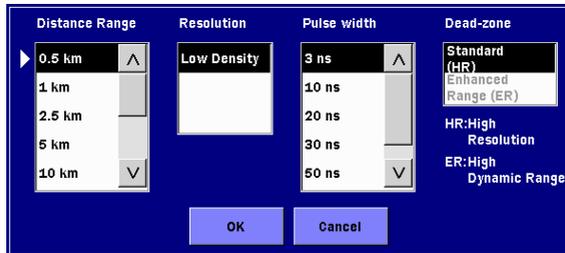
Touch **OTDR (Standard)** on Top Menu.



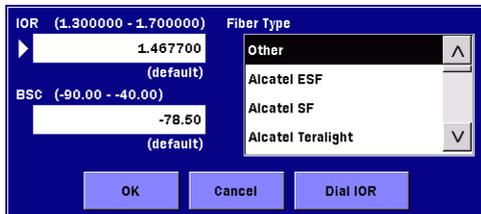
To exit OTDR (Standard), press **Top Menu** .

Measurement Condition Setup

- To set the distance range or the pulse width etc. automatically, touch **Test Mode** to set to **Auto**. To set them manually, touch **Test Mode** to set to **Manual**.
- Touch **Wavelength** to set a wavelength. If selecting **All**, the measurement is performed with multiple wavelength. When Test Mode is set to **Auto**, proceed to step 5.
- When Test Mode is set to **Manual**, touch **Range/Distance** to set test parameters. When Wavelength is **All**, touch **Settings** to set the test parameters.



- Touch **Averaging** and set the number of times or period for averaging. To set the unit of averaging, press the **Setup** key  to open the Preferences (1-2) screen.
- Touch **Next** to display the second page.
- Touch **IOR/BSC** to set the IOR (Index of Refraction) and BSC (Backscatter Coefficient). Select the fiber type, and you will see IOR and BSC suitable for the fiber.



- Press **Setup** .

8. Set items of **Preferences (1-2)**.

Preferences (1-2)		2020-Jun-17 11:14	
Distance display Units	km		
Connection Check	Off		
Active Fiber Check	Off		General
Auto Scale	Off		
Event Summary	On		Preferences (1-2)
Trace Overview	Lower Left		
Show Internal Launch Fiber	On		Preferences (2-2)
Unit of averaging	Sec		
Real Time Attenuation	Auto Attenuation		
Display Mode After Analysis	End / Break		AutoSave
Sound of test completion	Disabled		
			About

Note:

Connection Check is not available for MM port.

9. Set items of **Preferences (2-2)**.

Preferences (2-2)		2020-May-16 12:35	
Marker Mode	Movement		
Reflectance Calculation	Auto		
ORL Calculation	Full Trace		General
Auto Patch-cord Removal	None/None		
Force Total Loss	Off		Preferences (1-2)
End Event for ORL Calculation	OMIT		
OTDR (Standard)			Preferences (2-2)
Auto Analysis	On		
Bi-Directional Correlation	2.000 %		
Continuous Pulse Emission	Off		
Title	Application Name		AutoSave
			About

10. Set items of **AutoSave**.

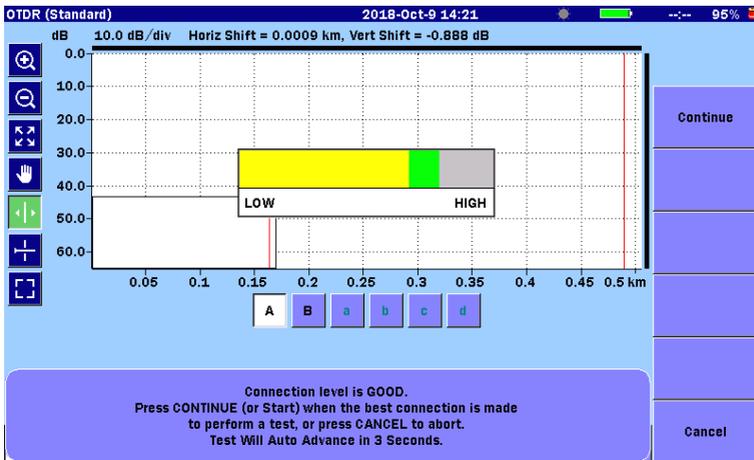
AutoSave		2018-Jul-24 18:00	
AutoSave			
Enabled	Off		
AutoSave Directory	INTMEM/	General	
Base Filename	AUTO*WLEN**NUM*	Preferences (1-2)	
Start Number (1310)	1	Preferences (2-2)	
Start Number (1550)	1	AutoSave	
		About	

11. Pressing **Setup**  or **ESC** displays OTDR (Standard) screen.

Measurement

Averaging Measurement

1. Clean the connector of an optical fiber and connect it to the measurement port.
2. Press .
3. When, in “**Preferences (1-2)**”, **Connection Check** is set to **On**, the ACCESS Master checks whether the optical fiber is correctly connected. When the connection status is good (green), the process proceeds to step 6 automatically in 3 seconds.



4. If the connection is not good (the gauge is displayed in red or yellow), disconnect the optical fiber from the measurement port and clean its connector.
5. To run the test, touch **Continue** or press .
6. While the measurement is in progress, the progress bar appears on the screen and the LED indicator on the front panel flashes.
7. When the measurement has completed, results (loss, reflectance, and others) are displayed.

Realtime Measurement

1. Clean the connector of an optical fiber and connect it to the measurement port.
2. Press .
3. If Connection Check is set to **On** in the Preferences (1-2) screen, the connection check is performed. In that case, perform steps 3 to 5 of the average measurement.
4. Pressing or stops Realtime Measurement.

Two setting methods of cursors and markers to analyze the trace are provided: **Movement** and **Placement**.

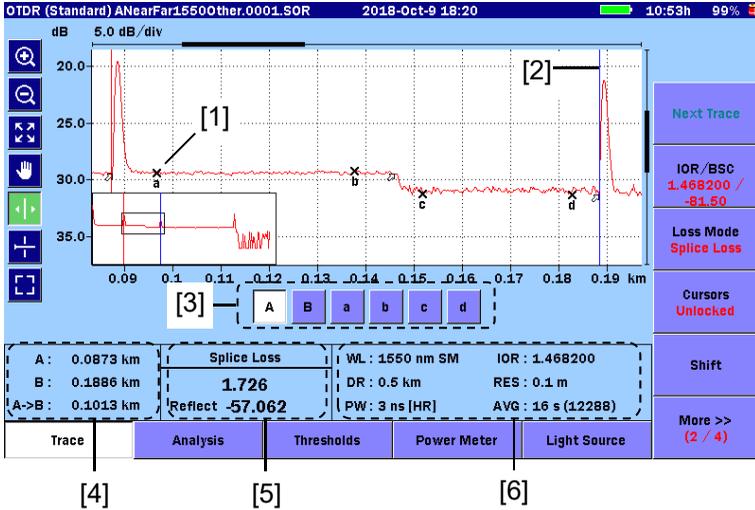
The setting method of markers can be set by **Marker Mode** of **Preferences (2-2)** (12 page).

Trace

Movement

When set to **Movement**, Cursor A, Cursor B and Markers a to d are displayed.

When set to **Movement**, you can move the selected cursor or marker by turning the rotary knob or by touching .



[1] Marker

[2] Cursor

[3] Cursor and Marker buttons

A, B: Selects an active cursor.

a to d: Selects an active marker. These are available if Loss Mode is set to Splice Loss, 2-Pt LSA or dB/km LSA.

You can also toggle the active cursor and marker by pressing .

[4] Cursor distance information

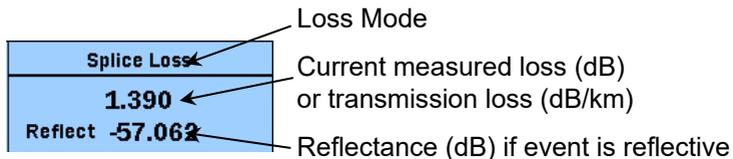
A: Distance from the origin of the trace to Cursor A

B: Distance from the origin of the trace to Cursor B

A->B: Distance between Cursor A and Cursor B

As you move the cursors, the cursor distance information updates simultaneously.

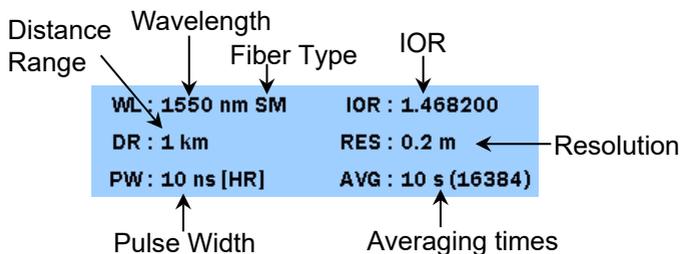
[5] Loss mode, Measurement, and Reflectance



[6] Test Parameters

Test parameters used for test are displayed.

A progress bar is displayed during measurement.



WL:	Wavelength, Fiber Type	IOR:	IOR
DR:	Distance Range	RES:	Resolution
PW:	Pulse Width	AVG:	Averaging times (Number of accumulations by hardware)

Test parameters for the primary trace are displayed for a trace recalled from a file

The Pulse width value is followed by the Dead-zone mode.

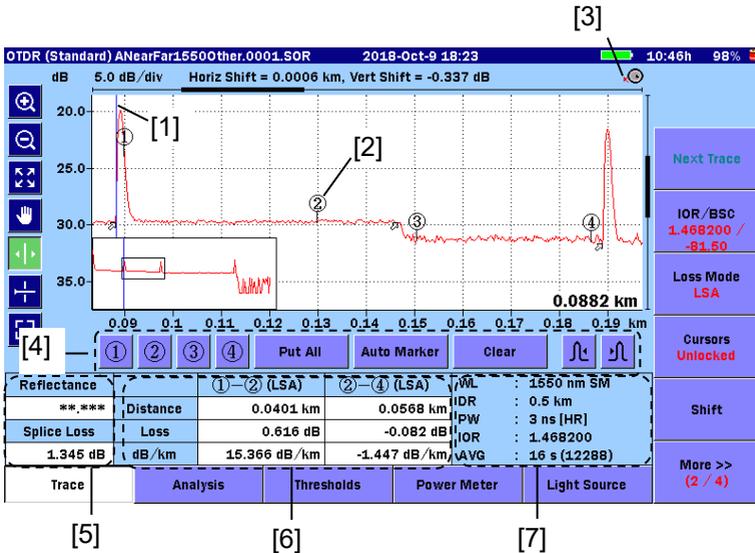
- **ER:** Enhanced Range
- **HR:** Standard

Placement

When setting **Placement (1–2,2–4)** or **Placement (1–2,3–4)**, a cursor and marker ① to ④ are displayed.

When set to **Placement**, you can move the cursor by turning the rotary knob or by touching . The marker positions cannot be changed.

Move the cursor to the precise position and touch ① to ④, and you can position the markers.



[1] Cursor

[2] Markers

[3] Rotary Knob icon

[4] Marker buttons

[5] Reflectance, Splice Loss, ORL

[6] Distance, Loss, dB/km

[7] Test parameters

[1] Cursor

[2] Markers

When touching a marker button of ① to ④, the marker moves to the cursor position.

[3] Rotary knob icon

This icon shows the speed at which the cursor moves when turning the rotary knob. The cursor movement speed is toggled by pressing the rotary knob.



The cursor moves quickly.



The cursor moves slowly.

[4] Marker buttons

① to ④: Places the marker of its number at the cursor position.

Put All: Places the markers as follows:

Marker ①—On the left side of ②

Marker ②—Cursor position

Marker ③—Falling point

Marker ④—On the right side of ③

Auto Marker: Locates the point of change near the cursor in the displayed trace and automatically places Markers ①, ②, ③ and ④. If a peak is detected between ② and ③, a triangle marker ∇ is placed at the peak. If there is no point of change, a marker is placed near the center of the graph area.

Clear: Clears all markers.



Moves the marker to the point of change in the leftward of the cursor.



Moves the marker to the point of change in the rightward of the cursor.

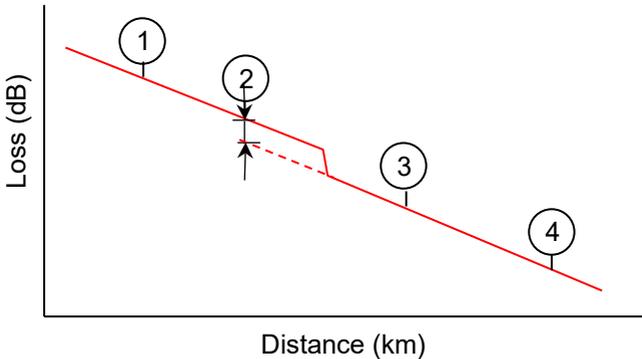
[5] Reflectance, Splice Loss, ORL

Reflectance

Displays the obtained reflectance or reflection amount (level difference). The displayed value will be followed by **(S)** if the measurement is not performed accurately due to saturation.

Splice Loss

Displays the splice loss at the position of Marker ② obtained by linear approximation between Markers ① and ② and between Markers ③ and ④. When set to **Placement (1-2, 2-4)**, the obtained splice loss is displayed.

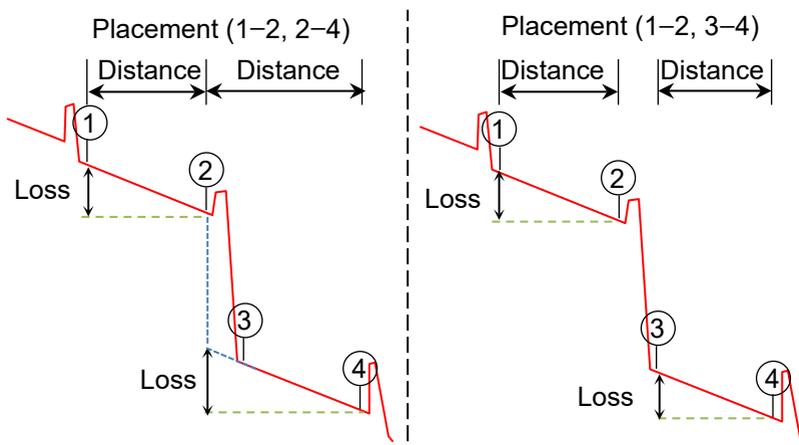


ORL:

Displays the ORL value obtained from the integral between Markers ① and ②. This is displayed when only Markers ① and ② are placed.

The displayed value will be followed by **(S)** if the measurement is not performed accurately due to saturation.

[6] Distance, Loss, dB/km



(2PA) The loss is obtained from the level difference between the two markers.

(LSA) The loss is obtained by linear approximation of the trace between the two markers, using least squares method.

[7] Test Parameters

Test parameters used for test are displayed. Test parameters for the primary trace are displayed for a trace recalled from a file.

The Pulse width value is followed by the Dead-zone mode.

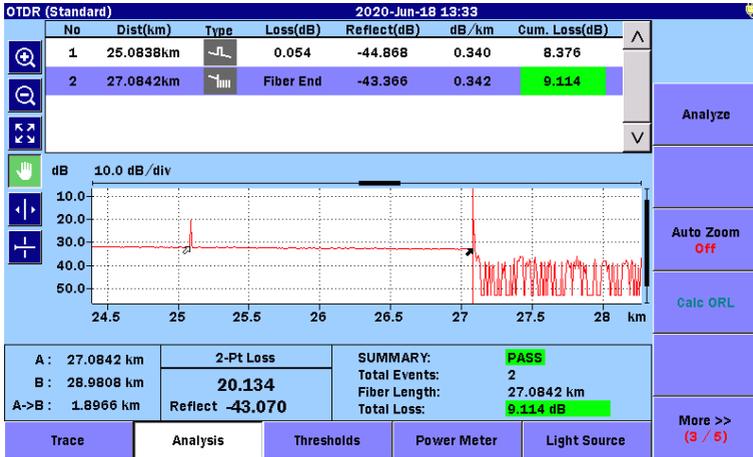
- **ER:** Enhanced Range
- **HR:** Standard

Analysis

In the Trace screen, touch **Analysis**, and you will see the Analysis screen. The Analysis screen displays the event table and the trace, which shows markers at event locations.

↖ Marker for event not selected in event table

➤ Marker for event selected in event table



Event Table

In fiber analysis, an “event” is considered to be a distinct deviation from normal fiber attenuation:

- a lossy connection (microbend, connector, or splice)
- a reflective connection (connector or fiber break)
- the end of fiber

Touch **Thresholds** at the bottom of the screen, you can set thresholds for the event detection and pass/fail judgement.

The event table displays the events that meet at least one of the Auto Detect thresholds set in “AutoDetect”. As a result of comparison with the Pass/Fail Thresholds, the values evaluated as FAIL are highlighted in red.

If values are not obtained by analysis, “**.***” is displayed instead.

No	Dist(km)	Type	Loss(dB)	Reflect(dB)	dB/km	Cum. Loss(dB)	
2	0.0910km		-0.134	-57.027	**.***	-2.655	^
3	0.1495km		1.285	**.***	4.196	-2.544	
4	0.1918km		0.361	-56.868	8.089	-0.916	
5	0.3957km		Fiber End	-51.977	-0.396	-0.636	v

No

Event number for the faults in the graph area (1 to 64, counted from the left)

Dist

Displays the distance from the ACCESS Master to the event.

Type

Displays the icons, which represent the types of events.

Table 3 Icons for Types

Icon	Explanation
	<p>Reflective Event Reflection from an splice such as a Fresnel reflection.</p>
	<p>Non-Reflective Event Non-reflective events include such low loss events as fusion splices.</p>
	<p>Grouped Event Events spaced too close to each other for Analysis to distinguish them as separate events are reported as Grouped events. In the event table, the result of the entire group is displayed at the first event of the group.</p>
	<p>Far End Event Far end of the optical fiber under test.</p>
	<p>Questionable End Event Events out of dynamic range or out of distance range.</p> <ul style="list-style-type: none"> • Out of Range The trace reaches the noise floor before a far end or break of the optical fiber cable is detected. • Out of Distance The trace reaches the end point set for Dist. Range before a far end or break of the optical fiber cable is detected.
	<p>Splitter Event Loss due to fiber splitter.</p>

Loss

Displays the event loss.

Reflect

Displays the reflectance or level difference of the reflective event. You can change this item at **Type of reflective result** shown in “Preferences (2-2)”. “**.*” is displayed for non-reflective events. The value is followed by S if it is not measured properly.

dB/km

Displays the value obtained by dividing “Loss between events” by “Distance between events”.

Cum.Loss

Displays the loss from the connection point of the ACCESS Master.

Editing Events

Touch **Next** to display the following softkeys.

Add Event

Adds a new event into the event table.

Edit Event

Edits the event selected on the event table.

Delete Event

Deletes event(s) selected on the event table.

Template

Sets template settings. For template explanation, refer to the *MT9085 Series ACCESS Master Operation Manual*.

Saving Files

1. Press **Save**  .
2. Touch the **File Name** field to enter or edit the file name.



3. Select a storage medium or a folder to which the file is saved.
4. Touch **Save Trace** to save file(s).

Deleting Files or Folders

Deleting Files or Folders is available on this screen.

1. Select files or folders and then touch **Delete**, the following dialog box appears.
2. Touch **Yes** to delete the selected files or folders.

Copying Files

1. Touch **More** to display **Copy**.
2. Touch the file name or the folder name to select it.
3. Touch **Copy**.
4. Select a storage medium or a folder to which files are copied.
5. Touch **Paste**.

Loading File

1. Press **Load**  .
2. Touch the file name to select it.



3. To display the file as primary trace, touch **Load Primary**.
To display the file as overlay, touch **Load Overlay**.
4. A dialog box is displayed. Touch the loading method to be selected, and then touch **OK**.



Without Setups

Loads the trace data only.

With Setups

Loads the settings used for measurement together with the trace data and changes the ACCESS Master settings

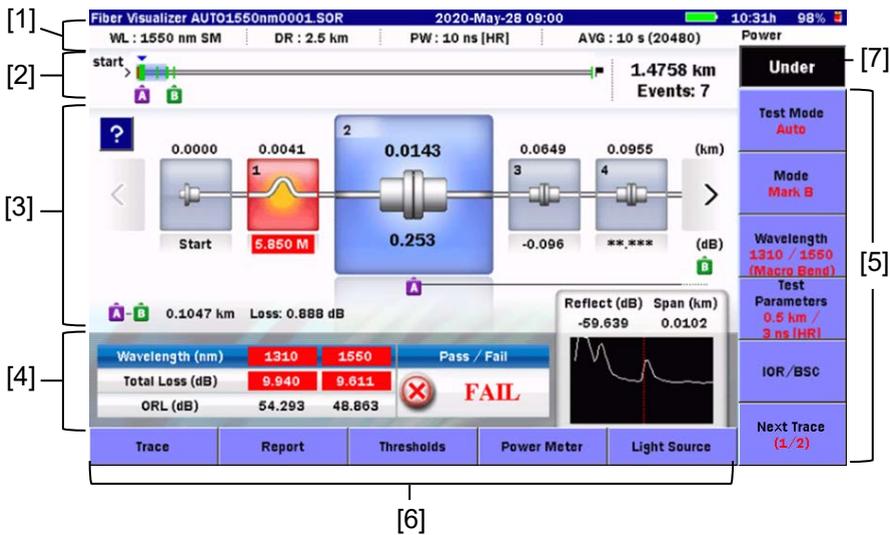
Fiber Visualizer

Fiber Visualizer mode provides easy-to understand icons for measurement results and allows you to perform pass/fail evaluation of them easily.

Touch **Fiber Visualizer** on Top Menu.

To exit Fiber Visualizer, press **Top Menu** .

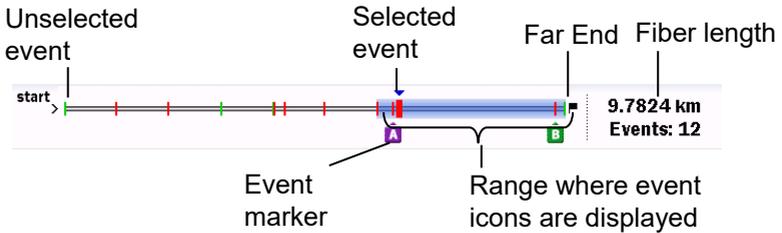
Fiber Visualizer Screen



- [1] Test parameters
- [2] Fiber Schematic
- [3] Trace events
- [4] Test results
- [5] Softkeys
- [6] Extended Softkeys
- [7] Power, Loss display

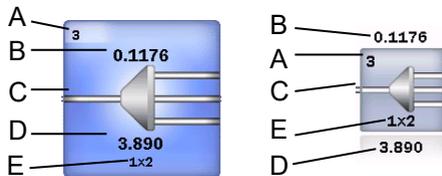
Fiber Schematic

Fiber Schematic shows event positions or event icon positions on display. The events that exceed the PASS/FAIL thresholds are displayed in red. The range where event icons are displayed is indicated by light blue bar.



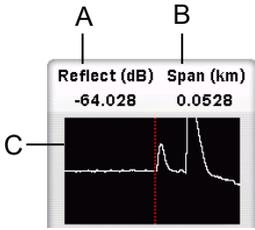
Trace Events

The automatically detected points such as connection point, splice points or splitter are indicated by the icons. The icon in red indicates the loss exceeds the threshold level.



- A. Event number:
Number assigned sequentially from the ACCESS Master side
- B. Distance: Distance from the ACCESS Master side
- C. Icon of the event type
- D. Splice loss at the event: (dB)
- E. Number of branches (only for splitter)

The trace near the selected event is displayed in the lower right.



- A. Reflection at event point
"S" appears if the reflection level is saturated.
- B. Information between events:
Span: distance from the previous event
dB/km: Average loss from the previous event
- C. Trace display around the event

To see the description on the event icon, touch . If the event exceeds the threshold for pass/fail evaluation, a possible cause is displayed.

Touch again, and you can close the description on the possible cause.

You can select an event by one of the following methods:

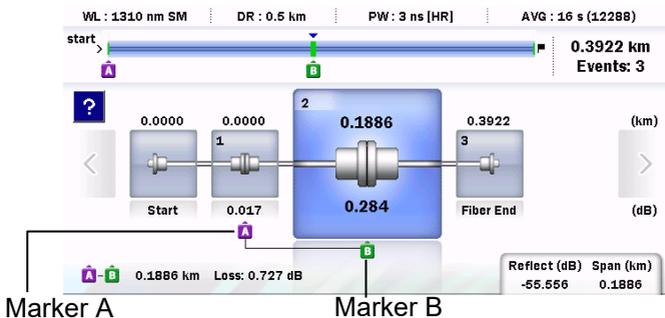
- Touching the event icon.
- Touching and .
- Turning the rotary knob.
- Pressing the arrow keys and .

Test Results

The total loss, ORL, the reflection of the selected event and the trace are displayed at each wavelength.

Pass/fail of the selected event is displayed.

In the Fiber Visualizer mode, the distance and loss between events can be measured easily by using Markers A and B.



Event Icons

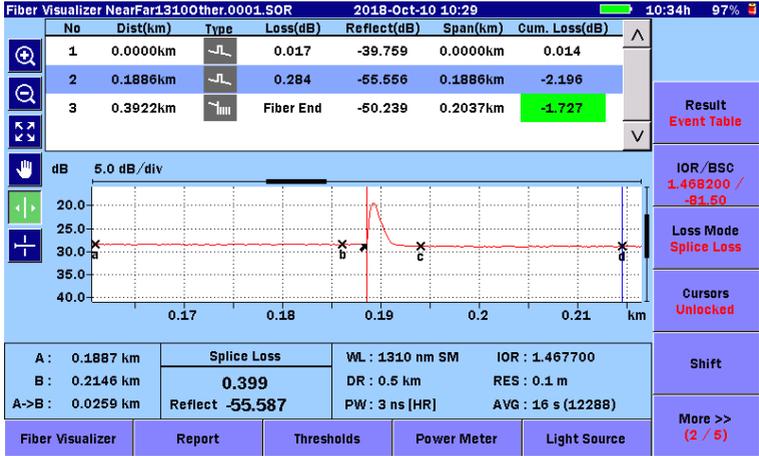
The following table shows an overview of event icon types.

Table 4 Event Icons

Icon	Explanation
	<p>Start of the fiber Location at distance of 0 km.</p>
	<p>Reflective Event Reflection from a splice, for example, Fresnel reflection.</p>
	<p>Non-Reflective Event Non-reflective events include such low loss events as fusion splices.</p>
	<p>Grouped Event Events spaced too close to each other for Analysis to distinguish them as separate events are reported as Grouped events.</p>
	<p>Far End Event Far end of the optical fiber under test.</p>
	<p>Questionable End Event Events out of dynamic range or out of distance range.</p> <ul style="list-style-type: none"> ● Out of Range The trace reaches the noise floor before a far end or break of the optical fiber cable is detected. ● Out of Distance The trace reaches the end point set for Dist. Range before a far end or break of the optical fiber cable is detected.
	<p>Splitter Event Loss due to fiber splitter.</p>
	<p>Macro Bend Event Event that causes loss difference when measuring multiple waveforms. This can occur when excessively bending the fiber.</p>
	<p>Questionable Splitter Event When no events are detected exceeding the thresholds set at Splitter on the Threshold (Auto Detect) screen, candidate(s) for Splitter event is displayed as Questionable Splitter event(s)</p>

Trace

Touch **Trace** at the bottom of Visualizer screen, and you will see the Trace screen.

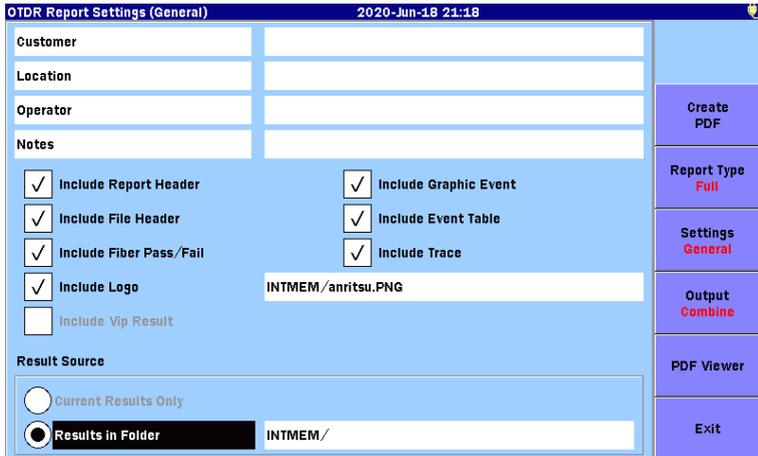


Touch the **Result** softkey (on softkey page 2) and display **Manual** on it, and you can see the enlarged view of the trace graph.

The screen operations are the same as those for OTDR (Standard). However, Fiber Visualizer has no template setting.

Report

Analysis results can be output in a report format and saved to a PDF file. Touch **Report** at the bottom of Visualizer screen, and you will see the OTDR Report Settings screen.



Create PDF

Creates a report file.

Report Type

Sets the report type.

Full Creates a multi-page report, which can include up to six VIP images.

Simple Reduces the size of the trace and creates a single-page report, which can include up to two VIP images.

Settings

Switches the OTDR Report Settings screen mode.

Output

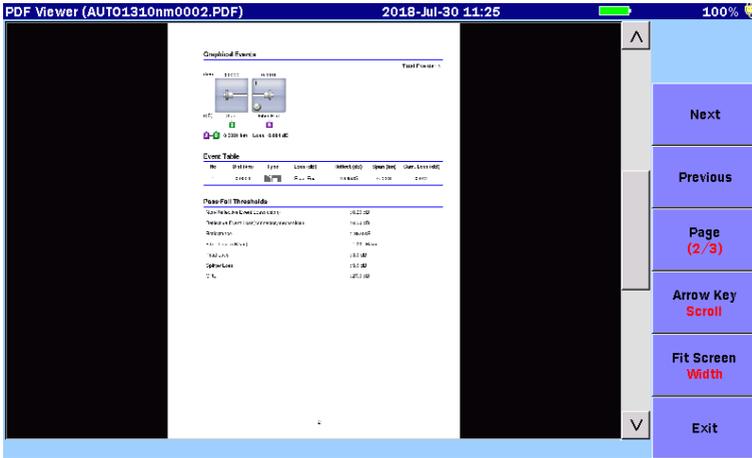
This is available when **Results in Folder** is selected for **Result Source**.

Combine Outputs measurement results of multiple tests to a report.

Separate Outputs measurement results of a test to a report.

PDF Viewer

Displays a PDF file. Touch the file name and touch **Load**.



You can change the view as you like by touching the softkeys.

Next Displays the next page.

Previous Displays the previous page.

Page Displays the specified page.

Arrow Key Sets the operation mode of the arrow keys.

Scroll Scrolls the displayed report up and down.

Zoom Enlarges or reduces the displayed report.

: Enlarges the view.

: Reduces the view.

Fit Screen Sets the page-fit mode.

Width Fits to the page width.

Height Fits to the page height.

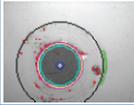
An example of output report is shown below when Report Type is set to **Simple**.

Logo — 

File Header —

Test Information			
File Name	AUTO1550nm0060_SOR		
Operator		Date/Time	2018-Jun-22 20:05
Cable ID		Fiber ID	60
Start Location		Terminal Location	
Instrument	MT9085C-053 ()	Calibration	

VIP Result —

VIP Test Summary			
Connector			
File Name	vip0001.VIPI		
Probe Model	G0306A		
Test Profile	SM UPC >45 (IEC 61300-5-35 ed2.0)		
Result	FAIL		

Pass/Fail —

Test Parameters				
WL:1550 nm SM	DR:1 km	PW:10 ns [HR]	AVG:10 Sec	Resolution:0.2 m

Test Result Summary				
Wavelength	Fiber Length	Total Loss	Total Events	ORL
1550 nm	0.5140 km	0.415 dB	2	44.425 dB
				PASS

Pass/Fail Thresholds						
Non Reflective Loss	Reflective Loss	Reflectance	Fiber Loss	Total Loss	Splitter Loss	ORL
0.20 dB	0.50 dB	-35.0 dB	1.00 dB/km	3.0 dB	3.0 dB	27.0 dB

Events

Events		
(km)	0.0000	0.5140

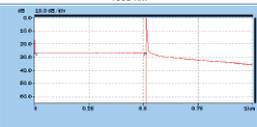
Graphic Event — 

Event Table —

1550 nm					
No	Dist (km)	Loss (dB)	RefL (dB)	Span (km)	Cum.L (dB)
1	0.0000	0.281	-56.336	0.0000	0.000
2	0.5140	End	-19.202S	0.5140	0.415

Trace —

OTDR Trace

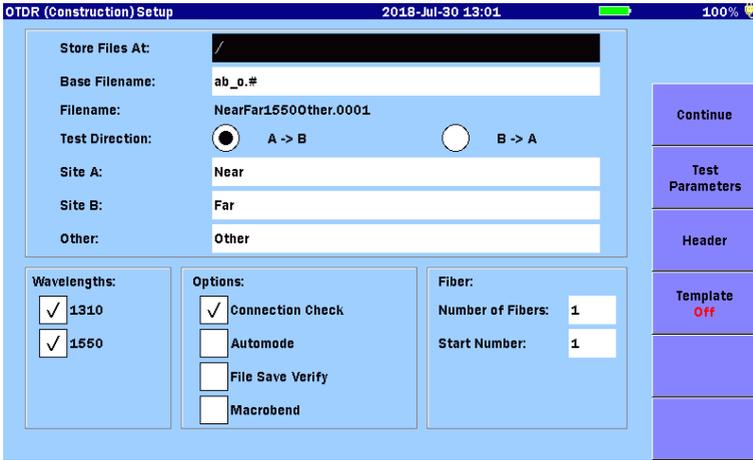


A: 0.0000 km	0.281 dB	WL: 1550 nm SM	OP: 1.00000
B: 0.0000 km	0.0000	DR: 1 km	PC: 0.2%
A-B: 0.0000 km	Refact: -56.336	FW: 1.0 km (100)	AVG: 10 Sec

OTDR (Construction)

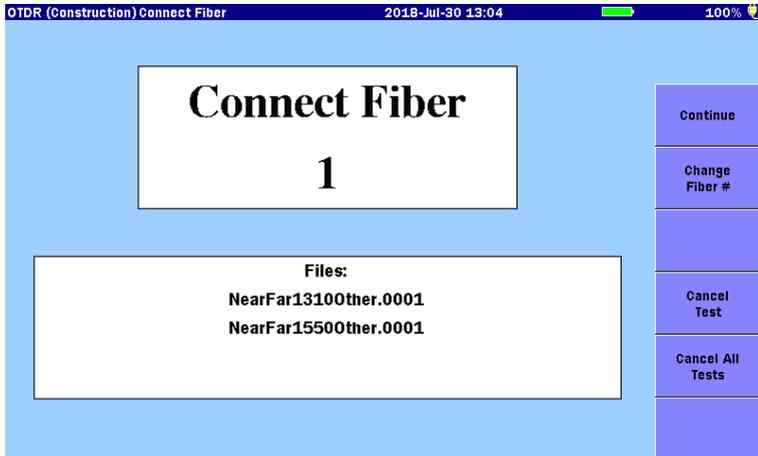
OTDR (Construction) allows users to test many fibers in series and save the measurement results to files. If specify the wavelength and number of fibers to be tested, the measurement is performed as many times as the number of fibers.

Touch **OTDR (Construction)** on Top Menu.

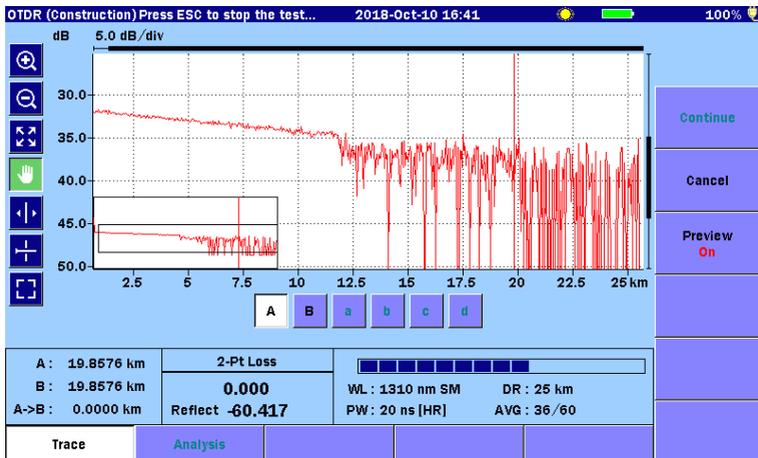


1. Set wavelengths and number of fibers. Select File Save Verify if you confirm filename(s) and a destination folder before saving measurement results.

2. Touch **Continue**. A fiber number and file names are displayed.

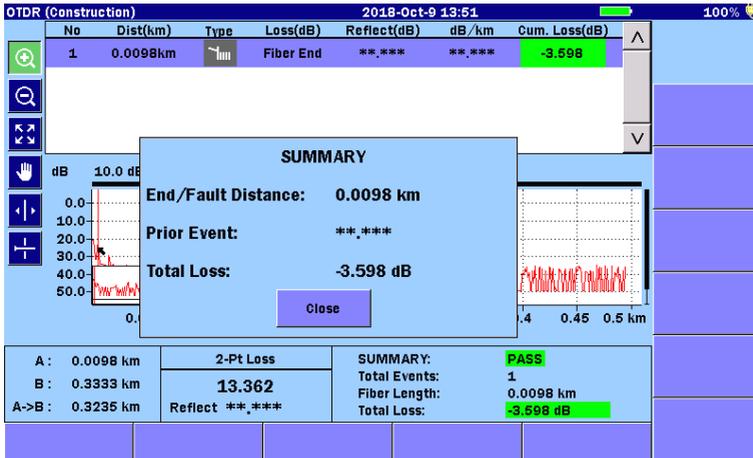


3. Connect the fiber under test to the ACCESS Master and touch **Continue** to start a measurement. To confirm test results when the measurement finishes, touch **Preview** to turn it On.



- When **Preview** is On, after the analysis after measurement is completed, the Summary dialog box is displayed. Touch **Close** to check waveform.

If test results are OK, touch **Accept**.



- When **File Save Verify** is selected on the OTDR (Construction) Setup screen, the Save screen is displayed. File names and a destination folder can be renamed.
- When there is the next fiber under test, you are prompted to connect the fiber.
- When the measurement has performed as many times as the number of fibers specified at Step 1, the screen returns to **Setup**.

Cable Certification

The cable certification testing is the function that runs automated testing for judging whether an optical fiber complies with de jure standards, ISO/IEC or JIS.

Touch **Cable Certification** on Top Menu.

The following explains the procedure for running a defined project.

Cable Certification		2020-Jun-2 14:04	
Project	ProjectChannelFG_AUTO		
Operator	Bill		
Tests performed	4/4		
OTDR			
Applicable Standards	ISO/IEC 11801-3:2017		
Fiber Category	OM3		
Cable ID			
Location A			
Location B			
Wavelength	1310 / 1550 nm		
VIP			
Applicable Standards	---		
Test Profile	---		
Probe Model	---		

- Project Create
- Project Edit
- Project Duplicate
- Project Delete
- Operator Manage
- Test/Result

1. Select the project and operator.
2. To edit the project settings, touch **Project Edit**. The following settings can be edited.

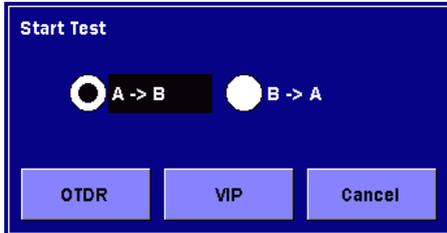
Applicable Standards, Fiber Category, Launch Fiber, Receive Fiber, Continuous Test, File Save Verify, Header, Thresholds, VIP, Test Parameters

3. Touch **Test/Result**.

Test/Result		2020-Jun-17 14:21		
Project	SAMPLE_MANUAL1			
Operator	Tom			
Untested	48	✓ Pass	0	✗ Fail
				0
Cable ID	OTDR VIP (A/B)		Result	
SM_10G_FC_1	/		/	----
SM_10G_FC_2	/		/	----
SM_10G_FC_3	/		/	----
SM_10G_FC_4	/		/	----
SM_10G_FC_5	/		/	----
SM_10G_FC_6	/		/	----
SM_10G_FC_7	/		/	----
SM_10G_FC_8	/		/	----
SM_10G_FC_9	/		/	----
SM_10G_FC_10	/		/	----
SM_10G_FC_11	/		/	----
SM_10G_FC_12	/		/	----

Start Test
Show Result
Report
Back

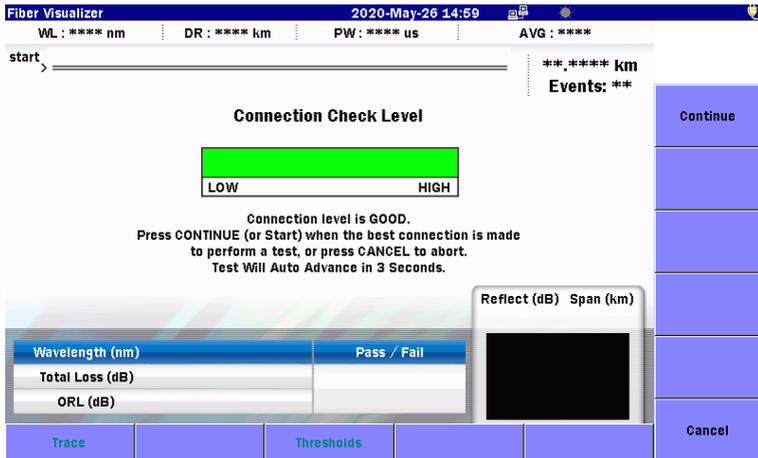
4. Touch **Start Test** or press Start. Touch **OTDR** or **VIP**.
 For how operate to the VIP, refer to page 48.



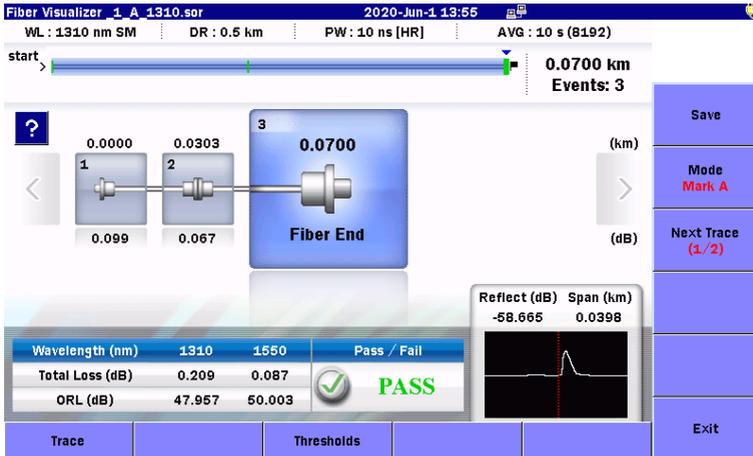
- For **OTDR**, connect the fiber to the displayed port and touch **Continue** or press **Start**.



- When, in “**Preferences (1–2)**”, **Connection Check** is set to **On**, the Connection Check Level screen appears. Touch the **Continue** softkey. When the connection status is good (green), the process proceeds to step 7 automatically in 3 seconds.



7. When the test result is Fail, or when the **File Save Verify** check box is selected in the Project Edit screen, the test result is displayed upon completion of the test. Touch **Save** when the test results have no problem.



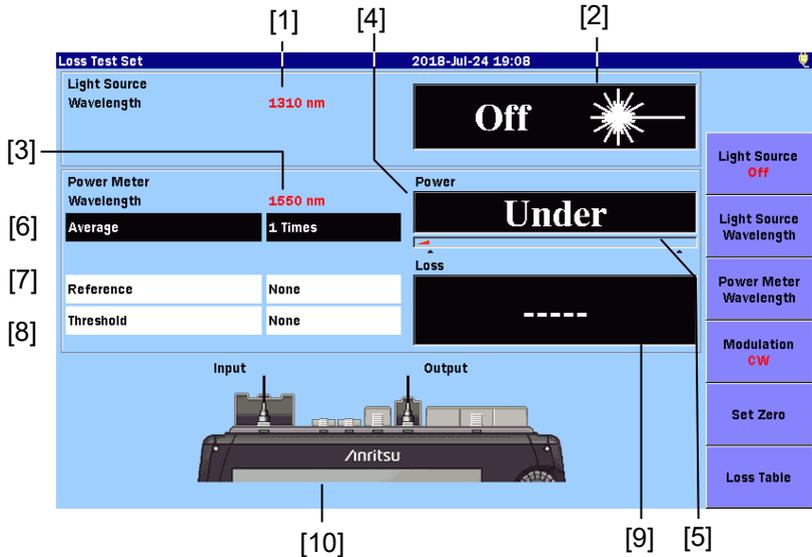
8. When you return to the Test/Result screen, the result list is displayed. To create a report, touch the **Report** softkey.

Loss Test Set

When an optical power meter (Option 004, 005, or 007) is installed to the ACCESS Master, **Loss Test Set** is displayed on Top Menu.

Loss Test Set allows users to measure a loss of a fiber under test using a light source and the power meter.

Touch **Loss Test Set** on Top Menu.



- [1] Light Source Wavelength indicator
Displays the wavelength set via **Light Source Wavelength**.
- [2] Light Source On/Off indicator
Displays the status of the light source.
- [3] Power Meter Wavelength indicator
Displays the wavelength set via **Power Meter Wavelength**.
- [4] Absolute Power reading
Displays the measured power meter value.
“Under” is displayed if the power is less than the minimum level of the measurement range.

“Over” is displayed if the power is more than the maximum level of the measurement range.

When the reference value in [7] is set to **None**, pass/fail status determined according to the threshold value in [8] is indicated.

If it is determined as fail according to the threshold, the background color will get red.

[5] Range indicator

If the power level of the light currently being measured becomes high, the display will extend to the right.

[6] Average

Displays the number of times that the current test data is averaged before the Power reading is refreshed. The higher the number of averages, the more stable the Power reading.

Touching the field allows you to change the value.

[7] Reference

Displays the power level that is basis of loss calculation.

Touching the field allows you to change the value.

[8] Threshold

Displays the value to determine pass/fail status of power or loss.

Threshold must be set for each wavelength.

- Threshold for power when the reference is set to **None**
- Threshold for loss when the reference is set to **None**

Touching the field allows you to change the value.

[9] Loss

Displays the power loss. When the reference value is set to **None**, “-----” is displayed.

The optical power loss is obtained as follows:

$$\text{Loss} = \text{Reference} - \text{power measurement (dB)}$$

When the reference value in [7] is not set to **None**, pass/fail status determined according to the threshold value in [8] is indicated. If it

is determined as fail according to the threshold, the background color will get red.

[10] Port Connection Indicator

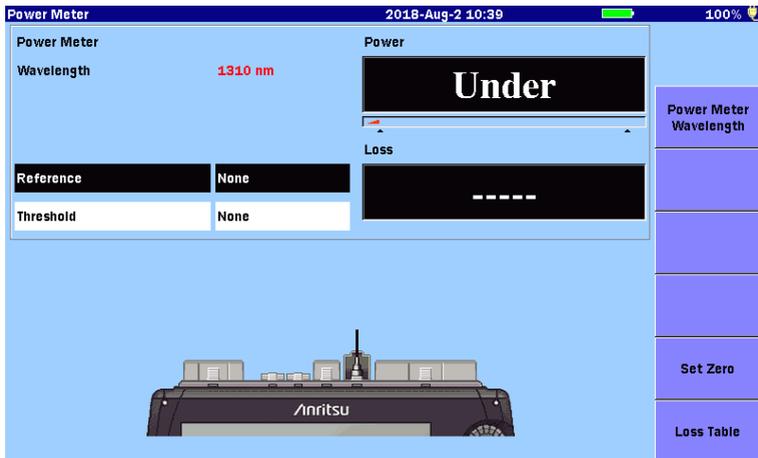
The ports used to measure loss are displayed. The output shown in the figure is the port used as a light source. The input shown in the figure is the port used as a power meter.

Power Meter

When an optical power meter (Option 004, 005, or 007) is not installed to the ACCESS Master, **Power Meter** appears on Top Menu.

Power Meter is the function to measure an optical power using a measurement port.

Touch **Power Meter** on Top Menu.



For details of the **Power Meter** screen, refer to [3] to [10] on the **Loss Test Set** screen (Page 43).

Modulated light cannot be measured by Power Meter.

Light Source

Light Source is a function to output continuous lights or modulated lights.

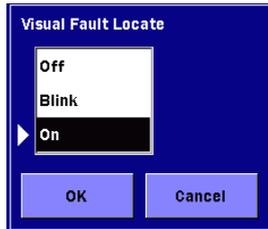
Touch **Light Source** on Top Menu.



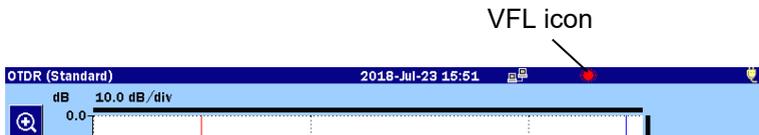
For details of the **Light Source** screen, refer to [1] and [2] on the **Loss Test Set** screen (Page 43).

VFL (Visual Fault Locate)

When a VFL optical is installed to the ACCESS Master, pressing **VFL**  displays the following dialog box.



If **Blink** or **On** is selected, a red icon appears at the top of the screen.



VIP

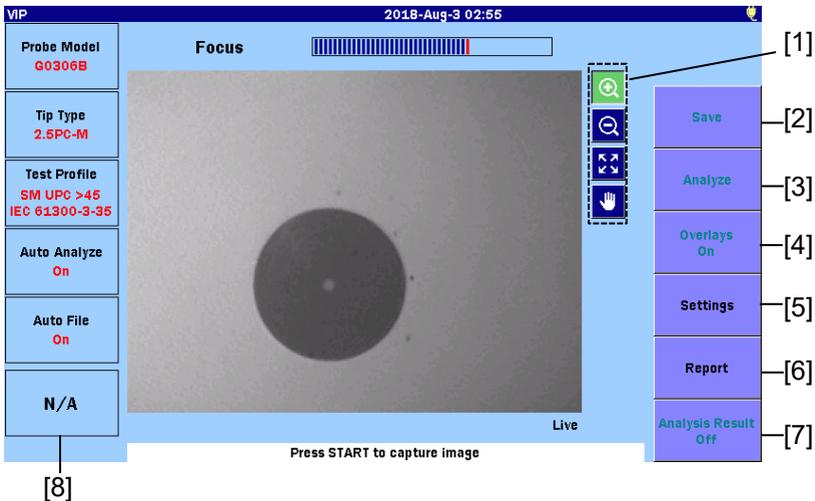
The Video Inspection Probe (VIP) option is used to inspect fiber optic terminations.

Connect a VIP to the USB port (VIP) on the ACCESS Master top panel.

USB port (VIP)



When the VIP is connected to the ACCESS Master, touching **VIP** on Top Menu displays the VIP screen.



The **Focus** bar indicates the degree of the focus adjustment.

Press **Start** to capture an image of the fiber endface.

If an image of the fiber endface has been captured, the following operations are available.

[1] Zoom, Shift

Touch an icon to zoom or shift the image by touching it or dragging it. Rotating the Rotary knob zooms in or out of the image.

Table 5 Tool Icons

Icon	Explanation
	Zooms in the image centering the touched point.
	Zooms out of the image centering the touched point.
	Displays the whole image.
	Moves the image by dragging.

[2] Save

Saves the captured endface image and the analysis results to a file in VIPI format. Or saves only the endface image in PNG format.

[3] Analyze

Performs pass/fail judgement for the captured image.

Touch **Analysis** to display details of the analysis results.

[4] Overlays

Displays borders (Core, Cladding, Adhesive, and Contact), scratches, and defects when set to **On**.

[5] Settings

Displays the VIP Test Setup screen and VIP Auto File Settings screen.

[6] Report

Displays VIP Report Settings screen

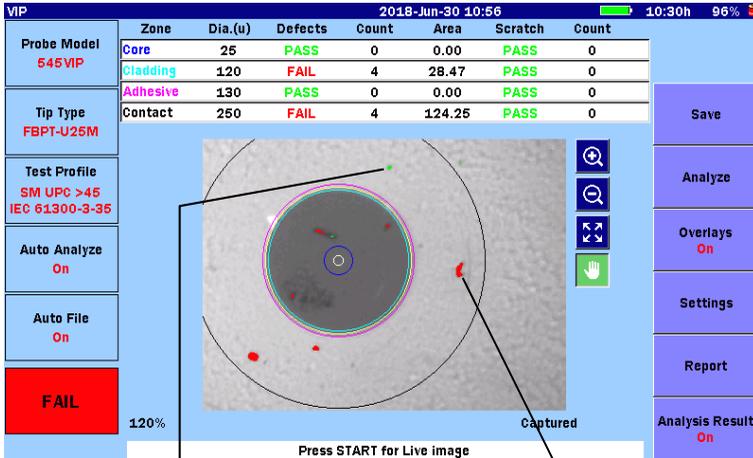
[7] Analysis Result

Displays the table of analysis results (refer to figure in page 50).

[8] Pass/Fail Result

Displays the result judged from the number of defects and scratches which are discovered from analyzing the image.

Touch **Analysis** to display PASS or FAIL. Touch **Analysis Result** to set to **On**, analysis results of each zone are displayed.



Acceptable Defect
(Green)

Unacceptable Defect
(Red)

If the size of a defect found on the fiber endface is acceptable, the defect is highlighted in green. If the size of a defect found on the fiber endface is unacceptable, the defect is highlighted in red.

The following items appear in the analysis result table.

Table 6 Items in Analysis Result

Item	Explanation
Zone	Name of the analysis area
Dia.(u)	Measurement result of the diameter (μm)
Defects	Pass/Fail result of defects
Count	Number of measured defects
Area	Total area of the detected defects (μm^2)
Scratch	Pass/Fail result of scratches
Count	Number of measured scratches

Scenario Manager Lite

Scenario Manager Lite is the application that runs the predefined program.

A scenario file can be edited by the text editor (such as Memo pad of Windows). It can be also edited by the MX100003A MT1000A/MT1100A Scenario Edit Environment Kit (version 2.0.0.51or later). For the scenario syntax, refer to the *MT9085 Series ACCESS Master Operation Manual*.

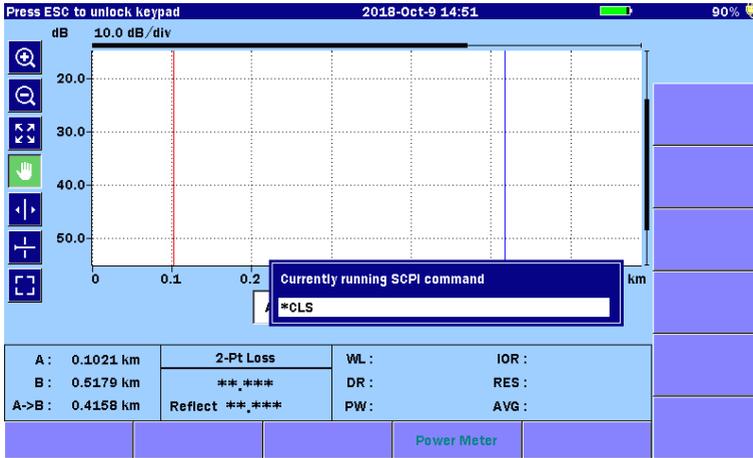
The scenario file extension is .acm.

Create a scenario file in advance.

1. Touch **Scenario Manager Lite** on Top Menu.
2. Press **Load** .
3. Touch the name of a scenario file you want to load on the Load screen. The selected file is highlighted.
4. Touch **Load Scenario**.

Scenario Manager Lite Scenario_KANSHI TEST7.acm 2018-May-19 14:11			
Command	Response	Result	Filename
*CLS			
*ESE 1			
SOURce:WAVelength 1310			
INITiate			
*OPC			
*ESR?			
SENS:TRAC:READY?			
TRAC:LOAD:SOR?			INIT_OPC1310.sor
INSTRument:NSElect 1			
INSTRument:STATe 1			
*ESE?			
*ESR?			
*IDN?			
*OPC?			
*SRE?			
*STB?			
*TST?			
INSTRument:NSElect 2			
INSTRument:STATe 1			
SUNITSM			
SOURce:WAVelength 1550			

- Press **Start** to run the scenario. The box of command currently running is displayed on the screen.



The operation of any keys other than **ESC** is locked while the scenario is running.

If you want to abort the scenario running, press **ESC**.

- When the scenario is completed, PASS or FAIL is displayed in the Result column.

Command	Response	Result	Filename
*CLS	0, "No Error"	PASS	
*ESE 1	0, "No Error"	PASS	
SOURce:WAVelength 1310	0, "No Error"	PASS	
INITiate	0, "No Error"	PASS	
*OPC	0, "No Error"	PASS	
*ESR?	1	PASS	
SENS:TRAC:READY?	1	PASS	
TRAC:LOAD:SOR?	1	PASS	INIT_OPC1310.sor
INSTRument:NSElect 1	0, "No Error"	PASS	
INSTRument:STATe 1	0, "No Error"	PASS	
*ESE?	1	PASS	
*ESR?	0	PASS	
*IDN?	ANRITSU, MT9085B-06-	PASS	
*OPC?	1	PASS	
*SRE?	0	PASS	
*STB?	0	PASS	
*TST?	0	PASS	
INSTRument:NSElect 2			
INSTRument:STATe 1			
SUNITSM			
SOURce:WAVelength 1650			

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