INSTRUCTION MANUAL

OPTICAL FIBER IDENTIFIER

OFI-BIPM

Read this instruction manual carefully before operating the equipment.

Adhere to all safety instructions and warnings contained in this manual.

Keep this manual in a safe place.

NOTE

External light detecting function

When external light such as sunlight is detected, both sides of the direction indicator will turn on simultaneously. In case the external light is strong, the identifier function will not perform properly, so please cover the plunger portion by hand and this will solve the problem.

Please refer to Page 26 for details.

ONU detecting function

When you see the message "Require optimization for use in your region" or don't find appropriate settings after accessing the "ONU Setup" menu, this means the function is not activated yet in your region. After obtaining the ONU signal in your region, AFL will release a firmware upgrade to activate the function for the OFI-BIPM. Please consult your local AFL distributor for more information.

AFL

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The OFI-BIPM has been designed for discriminating signals in optical fibers. Do not attempt to use this instrument for other applications.
AFL gives much consideration and regard to personal injury. Misuse of the instrument may result in electric shock and/or serious personal injury.

- Read this instruction manual carefully before operating this instrument.
- Store this instruction manual in a safe place.
- Contents of this instruction manual may change without announcement.

The following alert symbols are used in this instruction manual and instrument to indicate warnings and cautions for safe use. Understand the meanings of these symbols.

WARNING
There is a possibility of death or serious injury resulting from improper use by ignoring this indication.

CAUTION
There is a possibility of personal injury or physical loss resulting from improper use by ignoring this indication.

Symbol means "Pay attention"	Pay attention to Explosion!
Symbol means "Must not do"	You must not disassemble!
Symbol means "Must do"	You must disconnect a plug!

⚠ **WARNINGS**

Remove the battery from the equipment immediately if user observes the following or if the Identifier exhibits the following faults:
- Fumes, bad smell, noise or if over-heating occurs.
- Liquid or foreign matter falls into the interior of the Identifier.
- The Identifier is damaged or dropped.

If this occurs, ask our service center for advice. Leaving the Identifier in a damaged state may cause equipment failure, electric shock or fire and may result in personal injury, death or fire.

When the equipment is behaving abnormally, there is a possibility of battery leakage. So do not touch the battery directly.

Do not disassemble or modify the Identifier. It can cause an electric shock and fire.

Do not touch the Identifier with wet hands. This may result in equipment failure and electric shock.

Do not heat the battery nor incinerate it. This may result in personal injury by explosion and fire.

Do not short-circuit the electrodes of the battery. Excessive electrical current may cause personal injury, electric shock, fire and equipment damage.

Confirm the polarity of the battery and place it correctly. Incorrect placement may result in battery leakage and personal injury by fire and equipment damage.

Using an improper power source may cause fuming, electric shock or equipment damage and may result in injury, death or fire.

⚠ **CAUTIONS**
🚫 Do not store the Identifier under direct sunlight. This may result in equipment failure.
🚫 Do not place heavy weight on the Identifier. This may result in equipment failure, electric shock and fire.
⚠ Remove the batteries from the equipment when not using it for a long time. Keeping the batteries in the equipment may cause the batteries to leak and damage the equipment.
⚠ Do not recharge a non-rechargeable battery, e.g. a dry-cell battery. This may cause heat, leakage or rupture of the unit and injury.
⚠ Use the appropriate battery charger specified by the battery manufacturer. Using a charger not specified by the manufacturer could cause injury or fire.
❗ The equipment must be repaired or adjusted by a qualified technician or engineer. Incorrect repair may cause fire or electric shock.   Should any problems arise, please contact your distributor.
❗ Perform fall preventive measures, such as attaching a strap, when working at height. Dropping may cause damage of the equipment and personal injury.
🚫 Do not press on the LCD panel with sharp materials. It may cause damage to the LCD.

RECYCLING AND DISPOSAL

In European Union

In accordance with the European Parliament Directive 2002/96/EC, electrical parts and materials that can be re-used and/or recycled have been identified in order that the use of new resources and the amount of waste going for landfill can be minimised.

In the European Union, do not discard this product as unsorted municipal waste. Contact your local authorities.

In other countries

[Recycling]

To recycle this product, disassemble it first, sort each part separately by material components and follow your local recycling regulations.
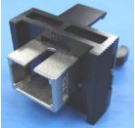
[Disposal]

This product can be disposed of in the same way as standard electric products. Follow your local disposal regulations.

1. Components

Name	Model	Qty	Appearance & Comments
Optical Fiber Identifier	OFI-BIPM-E	1pc	
Plunger	PL-06	1pc	
Optical Connector Head	OCH-02-UC	1pc	 Universal Connector Head
Case	OFI-CASE-01	1pc	
Instruction Manual	IM-BIPM/BI	1pc	
Quick Reference Guide	QR-BIPM/BI-E	1pc	—

2. Options

Name	Model	Appearance & Comments
Optical Connector Head	OCH-02-SC	for SC Connector
	OCH-02-FC	for FC Connector
	OCH-02-ST	for ST Connector
	OCH-02-LC	for LC Connector

※ Please contact your distributor for the details of the options.

3. Description and Function
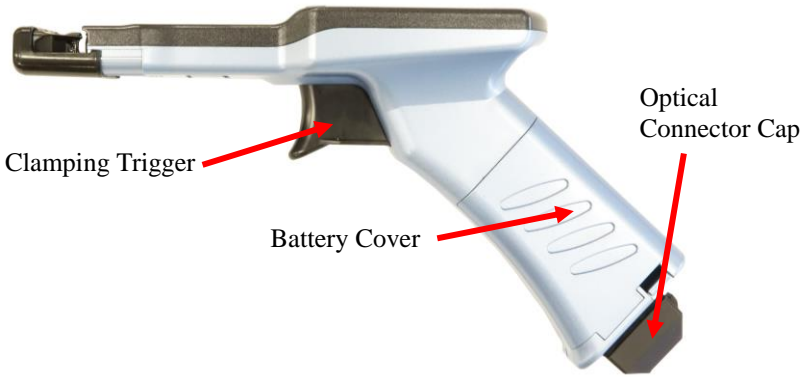
OFI-BIPM Side

OFI-BIPM Front

Trigger Hold
Function Switch

OFI-BIPM Back Side

Power Meter Unit

Strap Hook
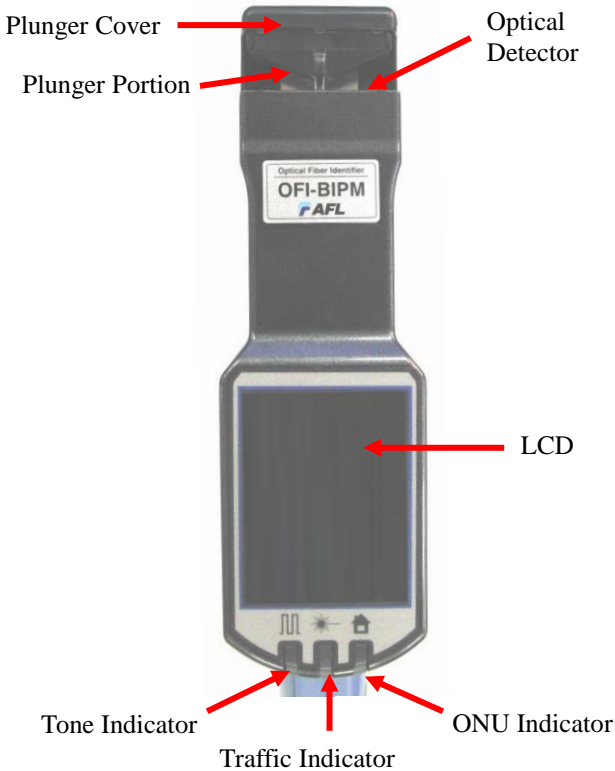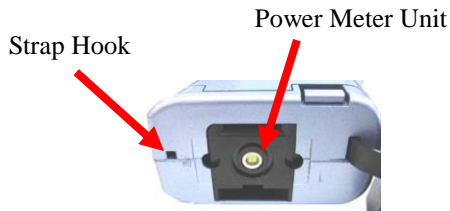
OFI-BIPM Bottom Side

Prevent dropping the OFI-BIPM by attaching a strap when working from height. Dropping the OFI-BIPM may cause personal injury.

4. Power Supply

Battery Operation

(1) Lift and remove the battery cover on the reverse side of the OFI-BIPM.
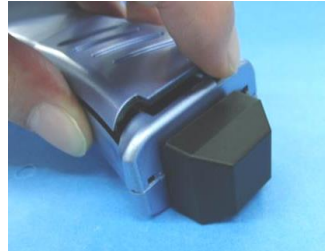
(2) Place batteries into the battery compartment on the orientation imprinted side of the compartment.

(3) Put on the battery cover.

> Use AA Batteries (Voltage: 1.2 to 1.5 V).

1. *Outline of Identifier Operation*

Optical identification is a method of detecting signals in an optical fiber without cutting the fiber.

The tone signal light source is connected to one end of an optical fiber to be monitored and incidence of the light is carried along the fiber. At the working place, the OFI-BIPM clamps the relevant optical fiber and light signals propagate from the bend and are detected by sensors within the OFI-BIPM.

Optical Transmission Device

Traffic Light

Tone Signal

Splice Closure

Optical Fiber Cable

ONU

ONU signal

Optical Identifier
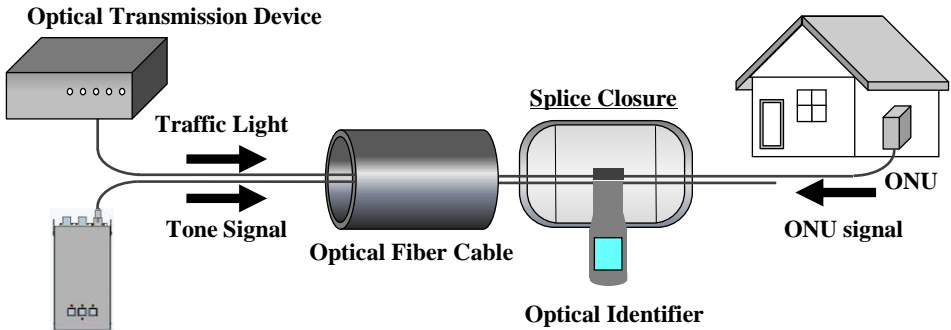
Optical Source of Tone Signal

When any signal or light is detected on the clamped optical fiber, the OFI-BIPM lets the user know by a buzzer sound and illuminate the related LED dependent on the light signal detected. When no signal and light is detected, it lets the user know by illuminating the "NO SIGNAL" LED.

In addition, when the OFI-BIPM detects the light signal, the estimated optical power in the optical fiber is displayed on the LCD panel.

Please use 1310nm / 1550nm / 1650nm and 270Hz / 1kHz / 2kHz light as a tone signal.

2. Functions of OFI-BIPM

OFI-BIPM has the following two functions.

(1) Identifier Function
- The indicator LEDs representing the type of input light when the device detects any tone signal, traffic light or ONU signal. The buzzer also sounds to inform any input is detected.
- The LCD panel also indicates the data of each light transmitting through the optical fiber.

Refer to "**Identifier Function** (Page 16)" for more details.

(2) Power Meter Function
- The OFI-BIPM can measure modulated tone signals, traffic or CW light power at the end face of an optical fiber.
- The available wavelengths are 1310/1490/1550nm.
- Various optical connectors can be connected to the OFI-BIPM by using Optical Connector Heads.

Refer to "**Power Meter Function** (Page 27)" for more details.

3. Display of OFI-BIPM

Identifier mode

*In case ONU detection is off

Battery level

Power

Change to
Power Meter mode

Direction indicator
of a tone signal

Measurement result
of a tone signal

Optical power of a tone signal
leaking at the optical head

Measurement result
of traffic light

Direction indicator
of traffic light

Detected
TONE 270Hz
-59 dBm

Detected
TRAFFIC
-56 dBm

Optical power of traffic or
CW light leaking at the
optical head

MENU   ZERO

Menu

Zeroing

Measurement result

Detected: **This indicates that the OFI-BIPM detects a tone signal or traffic light.**

No Signal: **This indicates that the OFI-BIPM detects no signal.**

Power Meter mode

Change to
Identifier mode

Measurement
wavelength

Relative value

Optical
power

Symbols of
detected
signals

Change to relative
display

Wavelength
change

Reference
value

Change to absolute
display

Absolute Display

Relative Display
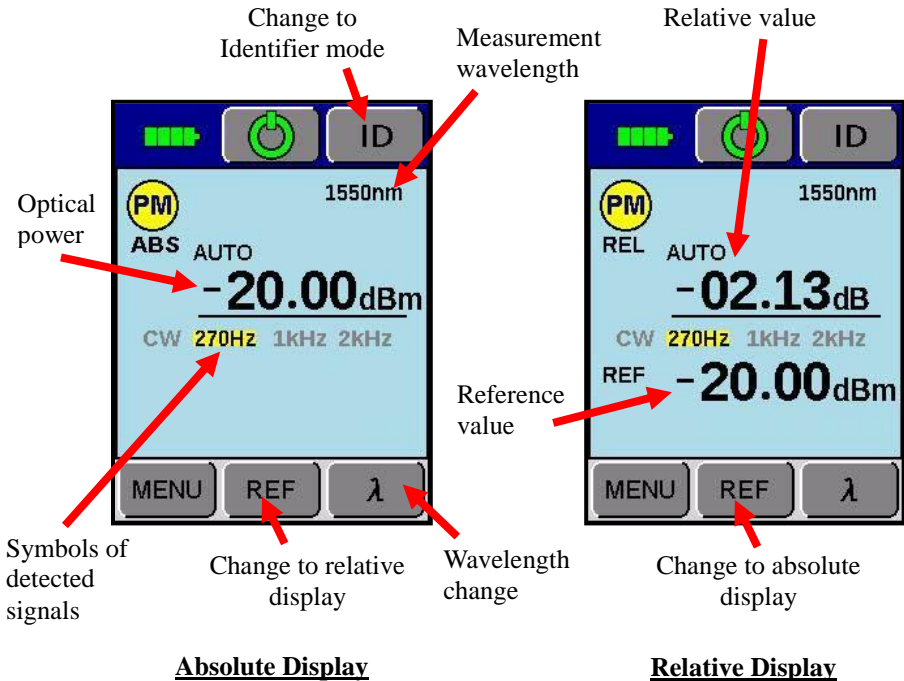
LCD may have a few points of black dot or bright dot. And seeing display may
be hard depend on viewing angle. These are not defects but characteristics of
LCDs.

1. Cleaning the Optical Detector

If the optical detectors are dirty, the OFI-BIPM
cannot detect the leaking light signals from the
bent optical fiber. so please ensure to check
that there is no dirt on the detector before using
the OFI-BIPM.

How to Clean the Detector

Clean the optical detector with an
alcohol-moistened thin cotton swab. Remove
excess alcohol from the optical detector with
a clean dry swab.

Remove the plunger if it is difficult to clean the detector since the gap between
the detectors and the plunger is narrow.

2. Attach or Remove the Plunger

How to Remove the Plunger

 (1) Hold both sides of the plunger cover and pull it out by tilting it slightly.
 (2) Pull the plunger up vertically.

How to Attach the Plunger

 (1) Put the plunger down onto the two retaining pins.
 (2) Hold both sides of the plunger cover and set its ends to the groove of the
   OFI-BIPM body. Then push it in till it clicks.

Remove the plunger

Attach the plunger

Retaining pins

Groove
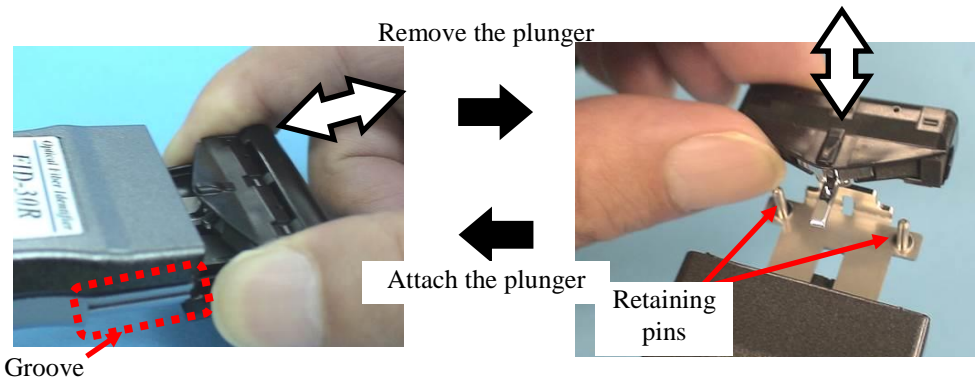
Pulling the trigger makes it easier to remove or attach the plunger cover.

3. Zeroing

It is necessary to perform the zeroing function at the following case;
1) Every day before using the OFI-BIPM
2) There is big change of ambient temperature
3) If has been changed the detection setting
4) Before measuring a faint signal using FINE mode

> Since the OFI-BIPM keeps the calibration data in the non-volatile internal memory it is not necessary to perform the zeroing function otherwise noted above.

Operation Procedure

(1) Pull the trigger without clamping any optical fiber. The identifier function starts automatically.

(2) Keep pulling the trigger and press the **ZERO** key to start the zeroing function. Do not release the trigger until "ZEROING" disappears.
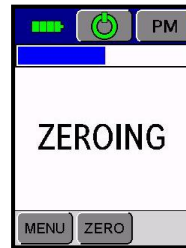
Now Zeroing (indicator blinks)

(3) The zeroing function finishes after a few seconds. If there is no error, the OFI-BIPM beeps 1 time and shows "- - -" (Under Range). If an error occurs, the OFI-BIPM beeps 3 times and shows "-E1-" that blinks intermittently. To quit from the error indication, press the **ZERO** key again.
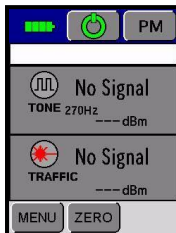
No Error (Beep 1 time)   **Error (Beep 3 times)**

If the panel shows "-E1-", confirm the following:
- If the surrounding is brightly lit, cover the optical detector and retry the zeroing function.
- If the optical detector is covered, turn the Identifier power off and retry the zeroing function.

💡 If this does not address the problem, consult with your distributor.

4. Signal Selection

Detectable signals are 270Hz, 1 kHz, 2 kHz, traffic (CW).
Different combinations of signal types can be selected in Identifier/Power Meter Setup menus.

  * Default : identifier   : 270Hz,1kHz,2kHz and Traffic
      Power meter : Auto (detect all)

4.1 How to confirm settings

  (1) Pull the trigger to turn on the OFI-BIPM.
  (2) Press the **MENU** key.
  (3) Tap the **Identifier Setup** or **Power Meter Setup** box.

Press Menu   **Select mode**   **Select view (ID)**   **Select view (PM)**
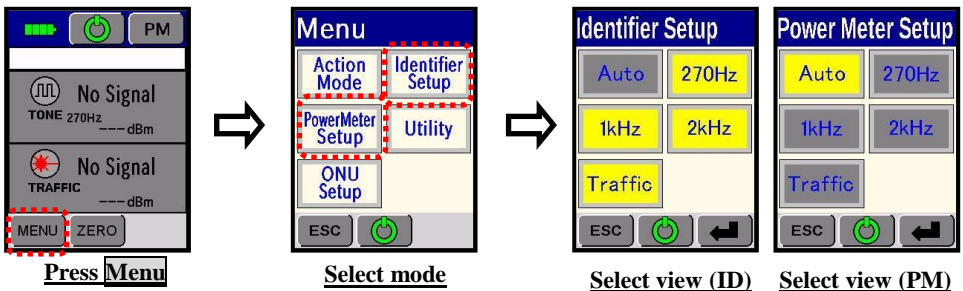
  Yellow   : Signal is selected
  Gray   : Signal is not selected

4.2 How to change settings

(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Identifier Setup** or **Power Meter Setup** box.

Press Menu **Select Setup menu** **Select light(ID)** **Select light (PM)**
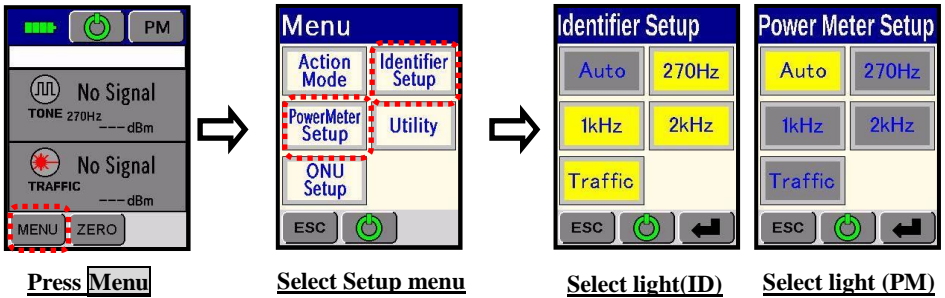
Yellow : Item is selected
Gray : Item is not selected

(4) The detection setting toggles by tapping a box labeled with corresponding light type.

Traffic selected **Tap Traffic** **Traffic not selected** **Tap Traffic** **Traffic selected**
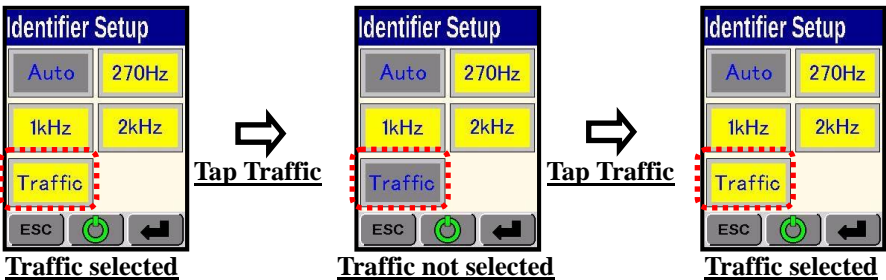
(5) Press **ENT**(⏎) key to save the changes.
 ＊**Press ESC key if you would cancel all of the changes.**

(6) Press **ESC** to close the Menu dialog.

5. *Trigger Hold*

The OFI-BIPM has the Trigger Hold function which enables fatigue free hold of the trigger. The function is active when the switch on the back of the grip is switched upwards.
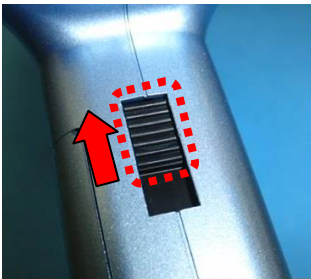
Trigger Hold Enable
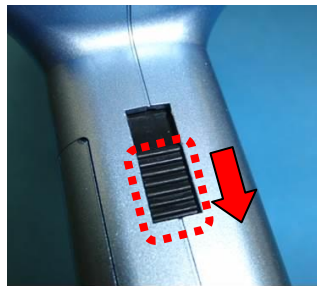
Trigger Hold Disable

In order to latch the trigger at the pulled position, enable the Trigger Hold function at first and then pull the trigger until it clicks. To release the latch of the trigger, pull the trigger again.

6. Measurement Mode

The OFI-BIPM has FAST, NORMAL and FINE mode for measurement mode which determines the detecting sensitivity for signals. Since the sensitivity on FINE mode is about 20 times as high as NORMAL mode, the OFI-BIPM can detect lesser faint signals with the FINE mode.

How to Change Settings

(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Action Mode** box.
(4) Tap the **FAST, NORMAL** or **FINE** box.
(5) Press **ENT**(⏎) key to close the message.

ID Mode　　　**PM Mode**　　　　　　　**Menu view**

Press MENU

Tap Action Mode

Select

Perform the zeroing when you change the settings

Select mode

Message view　　**Action Mode view**　　**Action Mode view**
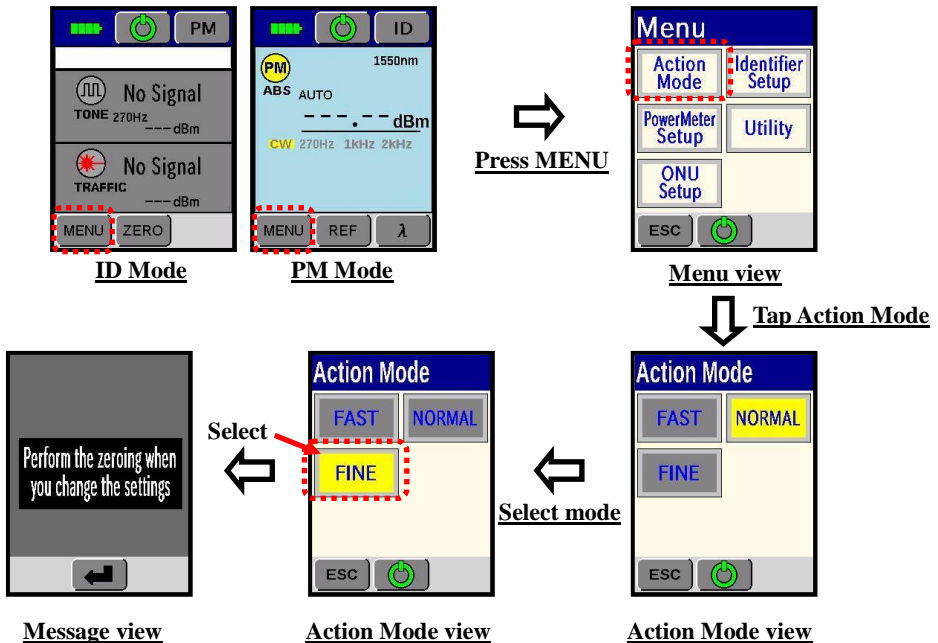
Measurement time becomes longer with the FINE mode because signal analysis time increases.

> 💡 Zeroing function also takes a long time to finish on FINE mode. The Trigger Hold function should be useful in this case.

1. Operation Procedure

(1) Clean the fiber with alcohol moistened gauze or lint-free tissue.
(2) Hold the fiber in the fiber groove correctly and pull the trigger as shown in the picture
below. The OFI-BIPM will power on and starts the optical identifier measurement
automatically.

Correct Hold   **Wrong Hold**

> Hold the fiber in the fiber groove correctly when pulling the trigger. Incorrect
> clamping may cause damage to the fiber.

(3) The OFI-BIPM estimates the power of signals transmitting through the fiber cable
by measuring leaked light from clamping point and then informs the measurement
result by LED indicators and the buzzer. The OFI-BIPM shows measured data on
the screen as well.

・The TONE indicator lights turn green, the buzzer beeps and the text symbol of
detected frequency becomes black when the OFI-BIPM detects tone signals. TONE
indicator lights red and all of the symbols of frequencies become gray in case no
tone signal is detected.
・The TRAFFIC indicator lights turn green and the buzzer beeps when the traffic
light is detected. The TRAFFIC indicator lights red in case no traffic light is
detected. Also the ONU indicator is same.
・The OFI-BIPM can detect tone signal ,traffic light and ONU signal simultaneously.
If all of them are detected, every indicator lights green, the buzzer beeps and the
symbol of the detected tone frequency becomes black.
・The screen shows the power of each light in dBm.
・The direction indicator on the screen shows the propagation direction when the
OFI-BIPM detects any light.
・Both direction indicators may turn on simultaneously when tone signals, traffic
light or ONU signal come from both left and right direction and also their strengths
are similar.

> When you judge TONE / TRAFFIC /ONU, confirm the beep for about 3 to 5
> seconds.
> Measuring a few points of optical fiber is recommended for correct
> measurement.

Buzzer Sound

The buzzer sound is different according to the type of detected signal.

Detected Signal	Buzzer Sound
Tone	"Pi-…Pi-…Pi-…"
Traffic	"Pi Pi…Pi Pi…Pi Pi…"
Tone and Traffic	"Pi Pi Pi…Pi Pi Pi…Pi Pi Pi…"
ONU	"Pi, Pi, Pi, Pi, Pi,…"
External Light	"Pi Pi…………Pi Pi…"
No Signal	No Sound

■ If the optical power for the optical detector exceeds the upper limit of the device, OFI-BIPM displays "+++" on the screen and the direction indicator turns off.

■ If foreign external light is present, the light signal in the fiber may not be detected.

■ In case strong external light such as sunlight inputs to the optical detectors through the gap of the plunger and it can cause incorrect detection of traffic light, the direction indicators will turn on simultaneously and the buzzer will beep to warn of this environmental condition.

The OFI-BIPM may not be able to detect the ONU signal in case the ONU power is off, optical intensity of the ONU signal is low by line loss and so on.

Indication

■TONE / TRAFFIC / ONU indicator

The TONE indicator, the TRAFFIC indicator and the ONU indicator on the tail of the unit show the status of each tone signal/traffic light/ONU signal by green or red light.

Signal is detected   : Indicator lights green
Signal is not detected   : Indicator lights red
Detection function is turned off : Indicator doesn't light

Example: Tone signal(s) is/are detected

Example: No signal is detected

■Simultaneous Detecting Function (different frequency of tone signals)
When the OFI-BIPM finds multiple tone signals simultaneously, you can check the optical power and propagation direction of each of the tone signals by tapping the measurement result area.

Example: in case there are 270Hz and 1kHz tone signals

Tap measurement result area

Optical power of 270Hz   **Optical power of 1kHz**
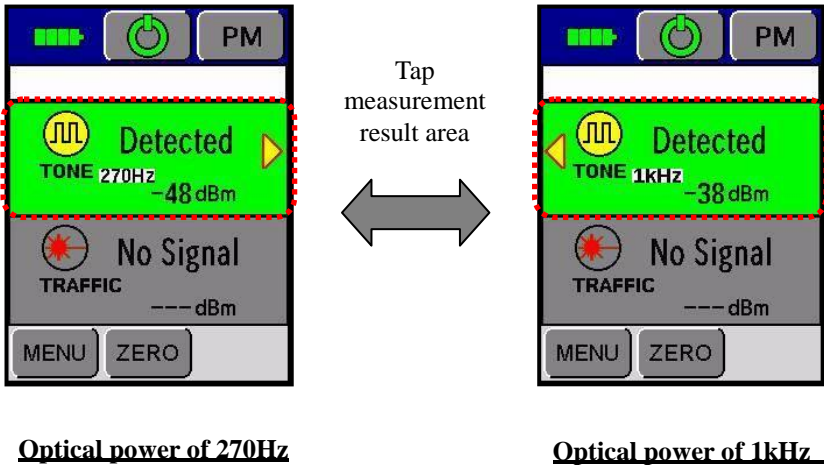
(4) Release the trigger to stop the measurement.

Select ID mode when you use the detector at the fiber groove. Select PM mode when you use the power meter unit.

2. Detecting external light

It is recommended to turn off the detection setting for the traffic (CW) light in case it is not necessary. Since the strong external light doesn't affect the measurement of tone signals very much, it is possible to avoid the bothersome steps of detecting external light → shielding shown as below. Refer to the page 18 to see how to turn off the traffic (CW) detecting function.

When strong external light such as sunlight gets into the fiber near the plunger, such external light would come into the fiber and then cause an identification error as traffic (CW) signal. In case strong external light is detected, TRAFFIC (CW) indicator will light green and both the direction indicator will also turn on at the same time. This is the status of detecting external light.

In this kind of situation, covering the plunger portion by hand to block the external light can prevent error in identification or misreading. This will turn off the direction indicator and the identification work can proceed.
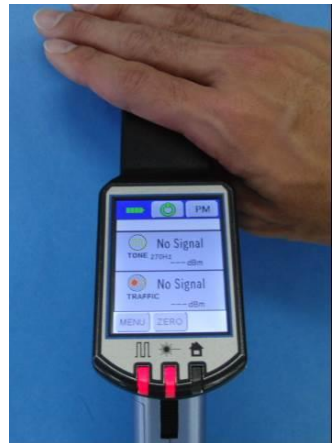
1. Outline of Power Meter Operation

In Power Meter function, the OFI-BIPM measures the strength of 270Hz / 1kHz / 2kHz modulated light power or Continuous Wave (CW) light power with 1310 / 1490 / 1550nm wavelength.
To perform power meter measurement, use the OFI-BIPM in PM mode. The ID mode is the initial mode at power-up. Press PM key on top right of the LCD panel in order to enter the PM mode from the ID mode. To go back to the ID mode, press the ID key on top right of the screen.

How to Operate Power Meter

Connect a fiber end to the Optical Connector Head attached to the Power Meter Unit. The OFI-BIPM shows the optical power on the LCD panel. Relative value display from the reference value is also available. The detector sensitivity is +10.0 to -40.0dBm for CW light and +10.0 to -60.0dBm for modulated light.

2. Cleaning Optical Detector

Ensure that there is no dirt on the detector since the detector cannot measure the optical power accurately if it is dirty.

How to Clean Detector

Clean the optical detector with an alcohol-moistened thin cotton swab. Remove excess alcohol from the optical detector with a clean dry swab.
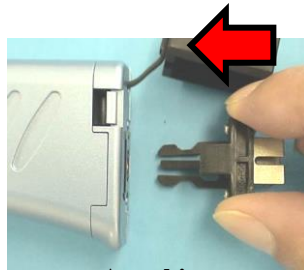
3. Attach or Remove the Optical Connector Head

It is necessary to change the optical connector head according to the connector to be used. Please refer to the following table for the available combination of optical connector head and connector.

Optical Connector Head	Connector
OCH-02-SC	SC Connector
OCH-02-FC	FC Connector
OCH-02-ST	ST Connector
OCH-02-LC	LC Connector (1.25mm ferrule)
OCH-02-UC	SC/ST/ST Connector, etc., with 2.5mm ferrule

How to attach the optical connector head

Carefully push the optical connector head into the OFI-BIPM power meter unit as shown.

Attaching

How to remove the optical connector head

Carefully pull out the optical connector head from the OFI-BIPM unit as shown.
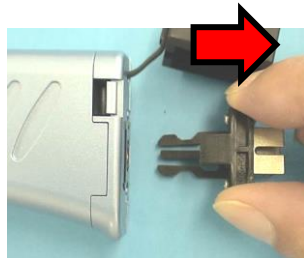
Removing

> Using or storing the OFI-BIPM without attaching an optical connector head may possibly damage or make the optical detector dirty. Keep an optical connector head attached except when exchanging the optical connector head.

4. *Operation Procedure*

(1) Pull the trigger to turn on the OFI-BIPM.
(2) In order to use the OFI-BIPM in PM mode, press the PM key.

ID Mode   **PM Mode**   **ID Mode**
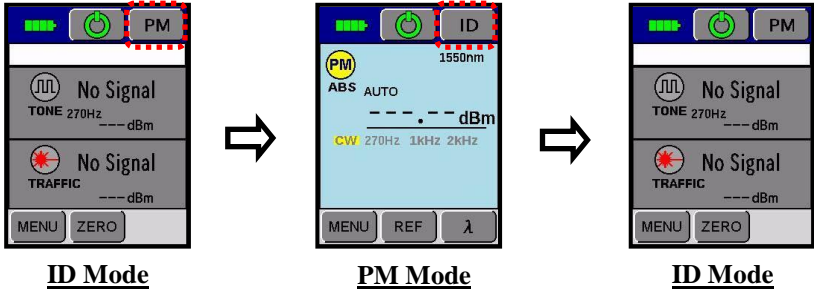
The panel shows the power of the selected input light and the symbol of it in yellow.
The light selection changes in order and the power value also switches to the
corresponding one by tapping the middle of the screen.

270Hz Measuring   **1kHz Measuring**   **Auto Measuring**

Tap Power Value   **Tap Power Value**

TRAFFIC (CW) Measuring   **2kHz Measuring**
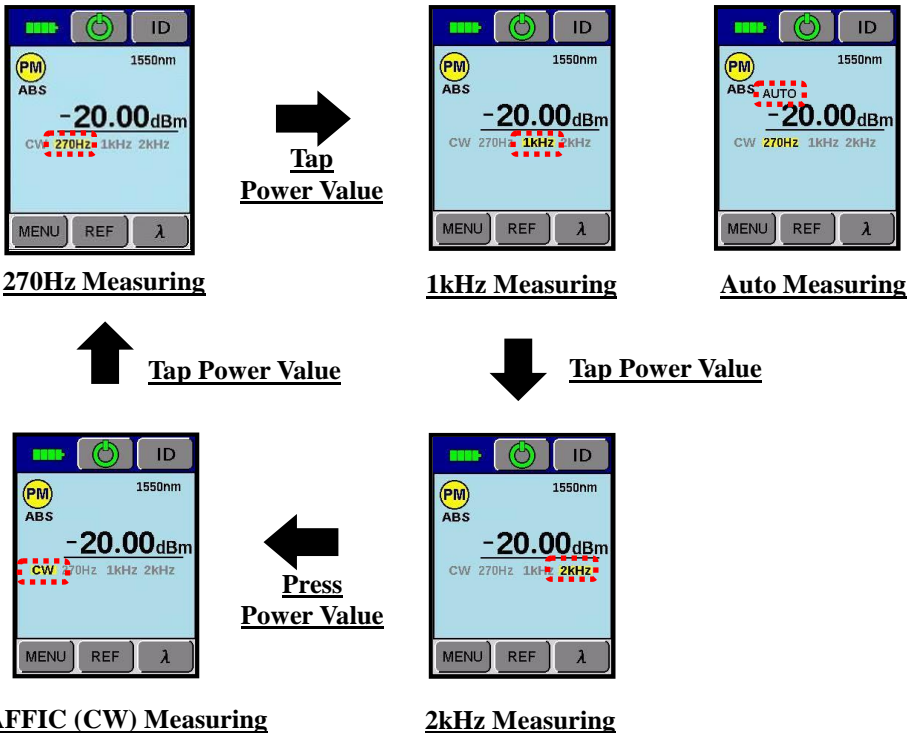
(3) Press the λ (**Wavelength**) key to select the target wavelength. The selection changes every time λ key is pressed by the following manner.

Wavelength：1310nm	**Wavelength：1490nm**	**Wavelength：1550nm**
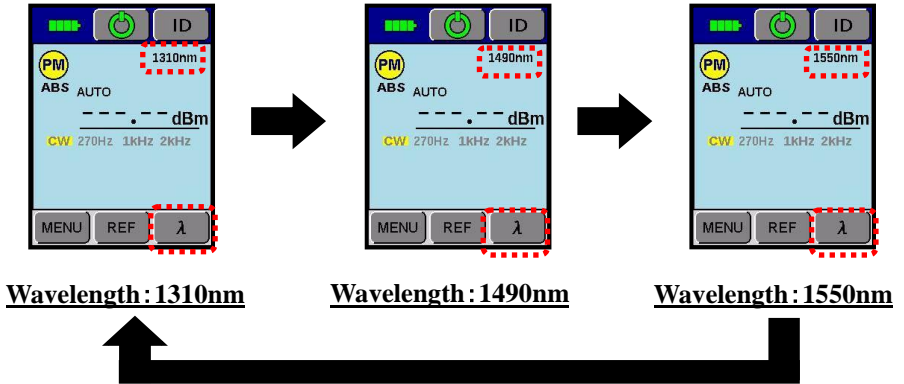
(4) Remove the protection cap of the optical connector head and insert the connectorized optical fiber into the connector head.

(5) Measurement repeats until PM mode is closed.

Under Range	**In Range**	**Over Range**

The OFI-BIPM shows all the symbols of detected lights at the middle of the panel. The OFI-BIPM also shows the symbol of the selected light in yellow and the power of the selected light. The strongest light is selected automatically when the measurement mode is Auto. The light selection changes by tapping the middle of the panel. Once the light selection changes by operation, the selection no longer changes automatically until PM mode is closed.

270Hz   **1kHz**   **2kHz**   **CW**

Example: in case there are 270Hz and 1kHz tone signals

Tap
Power Value

270Hz   **1kHz**

(6) Press the REF key on the panel during "In Range" measurement if you would change the display mode to the relative value display. The panel shows the reference value at the bottom and the relative value at the middle.
To change the display mode from relative value display to absolute value display, press the REF key again.

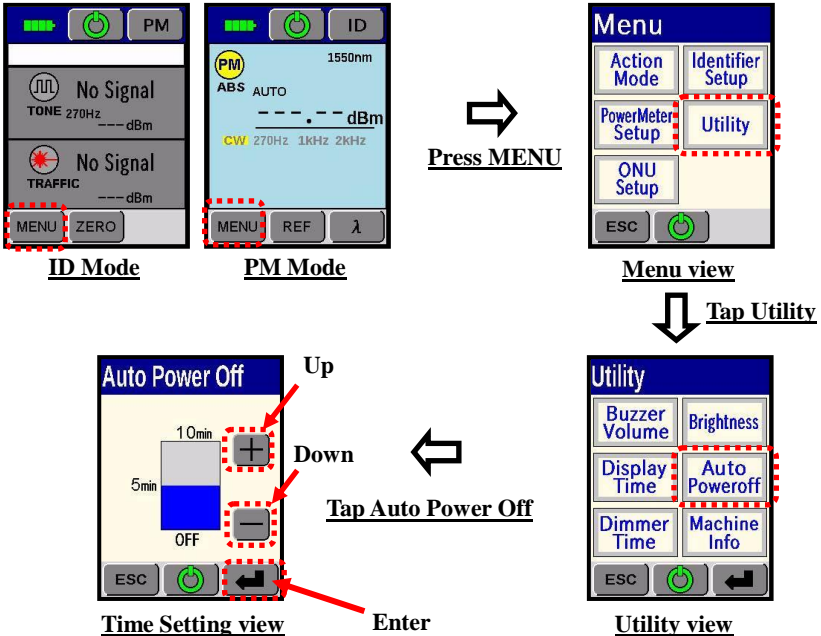**Absolute Display**   **Relative Display**

> The OFI-BIPM keeps the reference value in the internal non-volatile memory. The OFI-BIPM recalls the saved reference value at the next measurement even once the OFI-BIPM is turned off.

(7) To finish the measurement, hold the (ON/OFF) key for a second so that the OFI-BIPM turns off.

1. Auto Power Off Function

In order to save battery life, the OFI-BIPM has the Auto Power Off function that shuts down the power of the OFI-BIPM automatically in case the trigger is unlocked and released and also there is no operation for the touch panel while the time defined in the Auto Power Off menu in the Utility menu. The OFI-BIPM saves the measurement mode setting before shutting down automatically. Setting OFF means that this function is disabled.

ID Mode   **PM Mode**   **Press MENU**   **Menu view**

Tap Utility

Up   **Down**   **Tap Auto Power Off**

Time Setting view   **Enter**   **Utility view**

2. Low Battery Alarm

If the battery voltage becomes low, the "Low Battery" indicator will show up and start blinking. This means that the batteries need to be replaced. Refer to the "**Battery Operation** (Page12)" to see how to replace the batteries.

Low Battery Screen
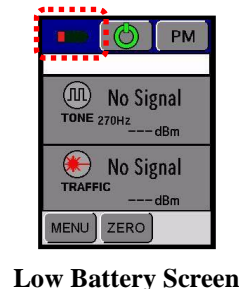
3. Buzzer Volume

The Buzzer Volume setting in the Utility menu defines the buzzer volume.
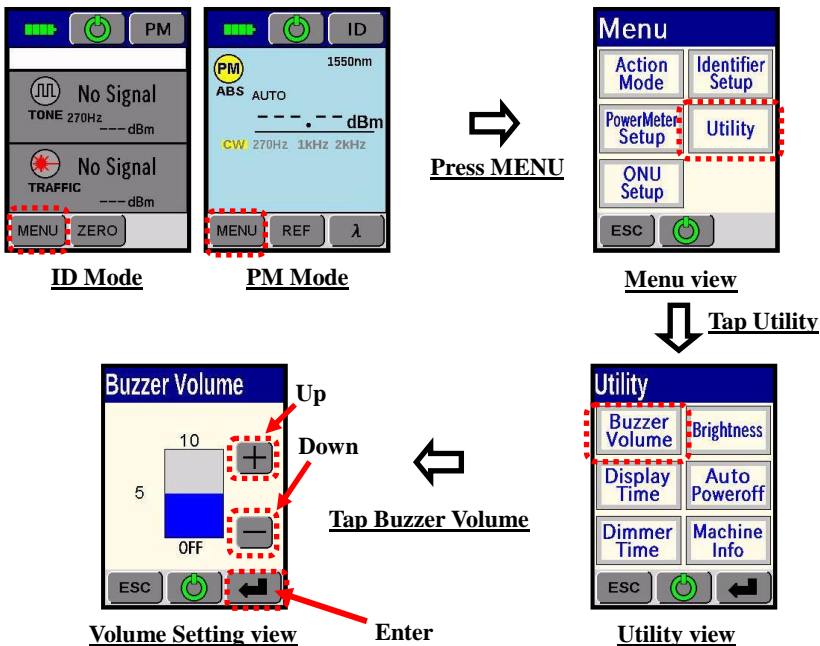Ten levels of buzzer volume are available in the OFI-BIPM.

How to Adjust Buzzer Volume

(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Utility** box.
(4) Tap the **Buzzer Volume** box.
(5) Tapping the $+$ key of the panel turns the volume up.
    Tapping the $-$ key of the panel turns the volume down.
(6) Press the **ENT**(⏎) key to update the setting and quit the menu.
    Press the **ESC** key instead of **ENT**(⏎) key if you would like to cancel the input and
    quit from the menu. The OFI-BIPM will not save the modified setting in this case.
(7) Press the **ESC** key to go back to the ID Mode/ PM Mode from the Utility Menu.

ID Mode   **PM Mode**

Press MENU

Menu view

Tap Utility

Tap Buzzer Volume

Up

Down

Enter

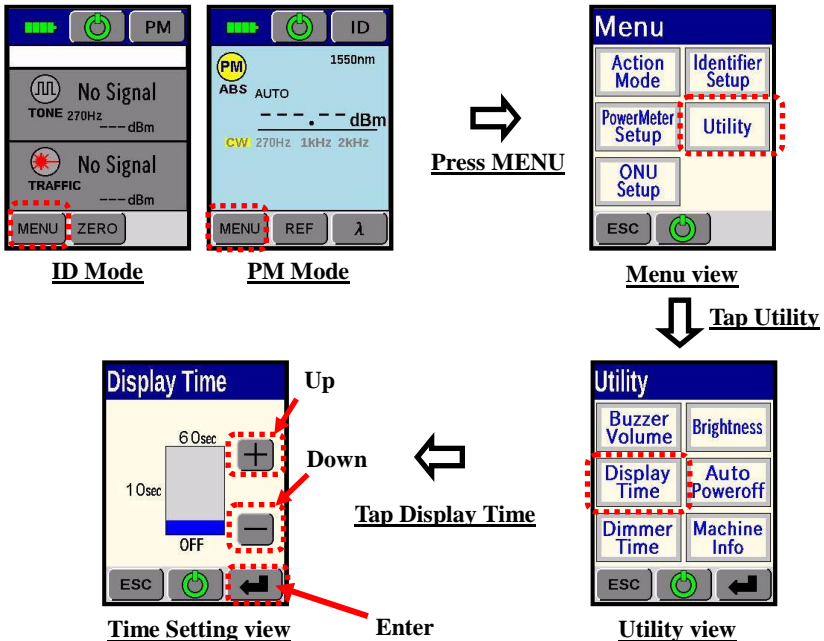**Volume Setting view**

Utility view

4. Display Time

The Display Time setting in the Utility menu defines the holding time of the measured result on the screen after the trigger is released.
This function enables operators to confirm the measurement result even if the screen is difficult to see during measurement.

How to Set Display Time
(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Utility** box.
(4) Tap the **Display Time** box.
(5) Tapping the $+$ key of the panel increases the time.
    Tapping the $-$ key of the panel decreases the time.
(6) Press the **ENT**($\dashv$) key to update the setting and quit the menu.
    Press the **ESC** key instead of **ENT**($\dashv$) key if you would like to cancel the input and quit from the menu. The OFI-BIPM will not save the modified setting in this case.
(7) Press the **ESC** key to go back to the ID Mode/ PM Mode from the Utility Menu.

ID Mode   **PM Mode**

Press MENU

Menu view

Tap Utility

Time Setting view   **Enter**   **Utility view**
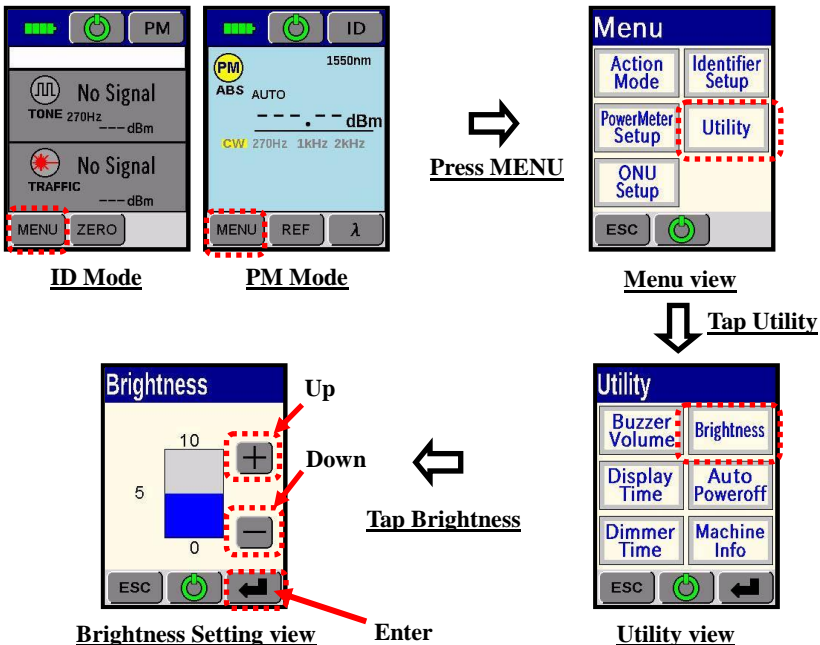
Up

Down

Tap Display Time

5. Brightness

The Brightness setting in the Utility menu defines the intensity of the backlight brightness for the LCD panel

Ten levels of brightness intensity are available at the OFI-BIPM in order to get good visibility of the LCD panel in any environmental condition.

How to Adjust Brightness

(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Utility** box.
(4) Tap the **Brightness** box.
(5) Tapping the $+$ key of the panel changes the brightness level up.
   Tapping the $-$ key of the panel changes the brightness level down.
(6) Press the **ENT**(⏎) key to update the setting and quit the menu.
   Press the **ESC** key instead of **ENT**(⏎) key if you would like to cancel the input and quit from the menu. The OFI-BIPM will not save the modified setting in this case.
(7) Press the **ESC** key to go back to the ID Mode/ PM Mode from the Utility Menu.

ID Mode   **PM Mode**   **Menu view**

Press MENU

Tap Utility

Up

Down

Tap Brightness

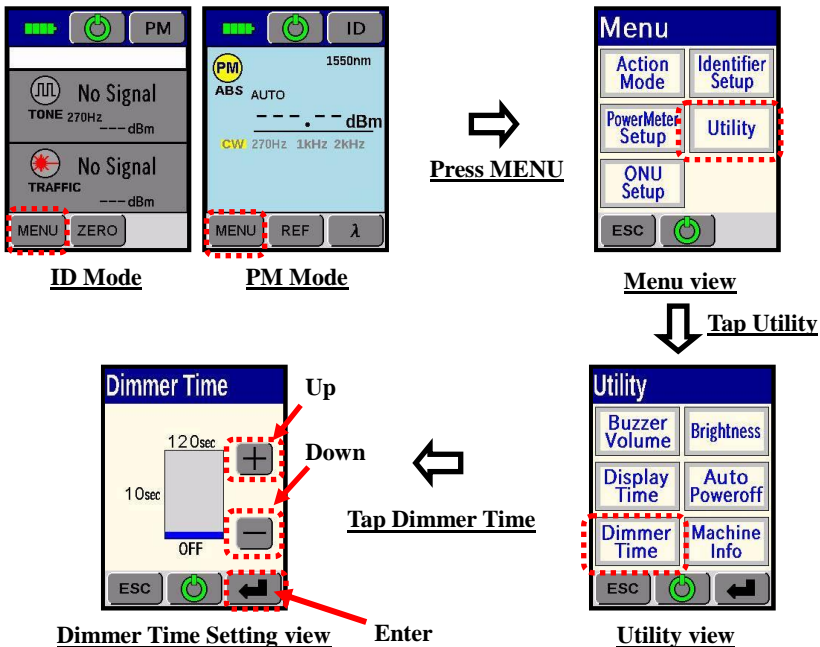**Brightness Setting view**   **Enter**   **Utility view**

6. Dimmer Time

The Dimmer Time setting in the Utility menu defines the time to dim the backlight brightness after the trigger is released. This function helps to save battery life.

How to Adjust the Dimmer Time
(1) Pull the trigger to turn on the OFI-BIPM.
(2) Press the **MENU** key.
(3) Tap the **Utility** box.
(4) Tap the **Dimmer Time** box.
(5) Tapping the $+$ key of the panel increase the time.
Tapping the $-$ key of the panel increase the time.
(6) Press the **ENT**(⏎) key to update the setting and quit the menu.
Press the **ESC** key instead of **ENT**(⏎) key if you would like to cancel the input and quit from the menu. The OFI-BIPM will not save the modified setting in this case.
(7) Press the **ESC** key to go back to the ID Mode/ PM Mode from the Utility Menu.

ID Mode   **PM Mode**

Press MENU

Menu view

Tap Utility

Up

Down

Tap Dimmer Time

Enter

Dimmer Time Setting view

Utility view

7．Error Displays

"-E1-", "-E2-" and "-E3-" are the error codes that appear on the screen when an error occurs.
The Following table shows the reasons for different errors and how to address the errors.

| Error code	Reason	Solution
E1	Failed Zeroing	・If external light is penetrating, cover the optical detector and retry Zeroing. ・If the optical detector is covered, turn the OFI-BIPM power off and retry Zeroing. If this does not address the problem, consult your distributor.
E2	Failed reading from the internal memory	The OFI-BIPM may be out of order. Consult your distributor.
E3	Failed writing to the internal memory	The OFI-BIPM may be out of order. Consult your distributor.

8．Firmware Upgrade

The latest version of the firmware is available on web server.
The Data Connection software provided in the accompanying CD uploads the firmware to the OFI-BIPM.
Tap Machine Info of Utility menu, and you can confirm the firmware version.

Refer to the instruction manual about Data Connection for details.

Tap Machine Info
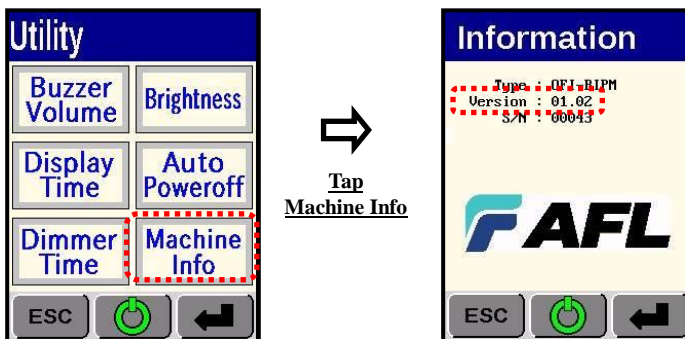
1. Storing in the Case

External materials may damage the optical detector while the trigger is released. When you put the OFI-BIPM into the storage case, make sure to turn on the Trigger Hold function and pull the trigger until it latches in order to protect the optical detector. Since pulling the trigger turns on the power, make sure to turn off the power after you pull the trigger.

How to Store OFI-BIPM

(1) To enable the Trigger Hold function, pull up the Trigger Hold switch.

(2) Pull the trigger until it clicks.
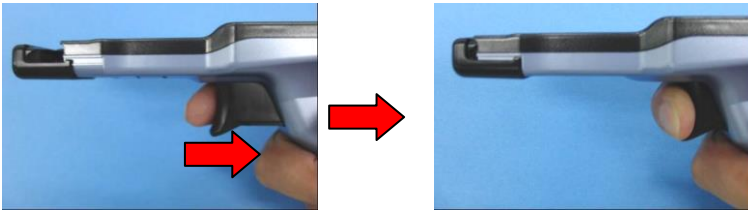
(3) Press the ⏻ key and hold, the OFI-BIPM power off.

(4) Put the OFI-BIPM to the case.

Specifications

Item	Specification		
Optical Specification (Optical Fiber Identifier)			
Applicable Fiber	・0.25mm SM Fiber and SM ribbon fiber(Up to 12 ribbon fiber) ・1.1mm/1.5mm/1.7mm/2.0mm/3.0mm SM jacketed fiber		
Optical Characteristic	Wavelength Range	850 to 1700nm	
	Detectable Light Signal	CW, Traffic or 270Hz/1kHz/2kHz Modulated (square wave 50±10% duty cycle) light (*1)	
	ONU detector Operating Range *2	・GE-PON downstream(-7.5 to +9.0dBm) ・GE-PON upstream(-25.5 to -6.2dBm) ・VCAST downstream(-12.0 to +3.3dBm) ・B-PON downstream(-5.5 to +4.0dBm) ・B-PON upstream(-20.6 to -12.2dBm)	

Item	Optical Fiber	Insertion Loss / Minimum Detect level (*3)		
		1310nm	1550nm	1650nm
Insertion Loss/ Minimum Detect Level	0.25mm Fiber (R=30mm) / Ribbon Fiber	0.2dB/-58dBm (-53/-64dBm)	1.0dB/-67dBm (-62/-73dBm)	2.5dB/-67dBm (-62/-73dBm)
	0.25mm Fiber (R=15mm)	0.1dB/-44dBm (-39/-50dBm)	0.3dB/-57dBm (-52/-63dBm)	1.0dB/-57dBm (-52/-63dBm)
	0.5mm Fiber (R=15mm)	0.2dB/-58dBm (-53/-64dBm)	1.0dB/-67dBm (-62/-73dBm)	2.5dB/-67dBm (-62/-73dBm)
	1.1mm/1.5mm Jacketed Fiber	0.3dB/-43dBm (-37/-53dBm)	1.0dB/-55dBm (-50/-61dBm)	2.5dB/-57dBm (-52/-63dBm)
	1.7mm/2.0mm Jacketed Fiber	0.5dB/-22dBm (-17/-28dBm)	2.0dB/-27dBm (-22/-33dBm)	3.0dB/-27dBm (-22/-33dBm)
	3.0mm Jacketed Fiber	1.0dB/-20dBm (-15/-25dBm)	3.0dB/-23dBm (-18/-28dBm)	3.0dB/-23dBm (-18/-28dBm)

*1: Traffic is a light signal modulated by a random data sequence
*2: The Operating Range (Core Power) varies due to coating material, color, etc.
*3: Typical value. The minimum detect level (core power) and the insertion loss varies due to coating material, color, etc.

Note that the power values in parentheses at Detectable Light Power and Minimum Detect Level are values under FAST and FINE mode.

Item	Specification		
Optical Specification (Power Meter)			
Optical Characteristic	Wavelengths	1310 / 1490 / 1550nm	
	Detectable Light Signal	CW, Traffic or 270Hz / 1kHz / 2kHz Modulated (square wave 50±10% duty cycle) light	
	Detector Sensitivity	270Hz / 1kHz / 2kHz modulated	+10.0～-60dBm
		CW or Traffic (*1)	+10.0～-40dBm
	Accuracy (*4)	Wavelength:1310 / 1550nm	±0.3dB
		Wavelength:1490nm	±0.6dB
Environmental Specification			
Operation Temperature	-10 to +50 degrees C		
Operation Humidity	0 to 95% (non-condensing)		
Storage Temperature	-20 to +60 degrees C		
Storage Humidity	0 to 95% (non-condensing)		
Others			
Battery life	Approximately 8 Hours (*5)		
Power	2pcs AA Batteries (Volatage:1.2 to 1.5 V)		
Size	50(W)×115(H) ×212(D) mm (*6)		
Weight	Approximately 230g (Including Batteries)		

*4：Under the condition of temperature 25 degrees C, -20dBm
*5：Under the condition of temperature 25 degrees C, using 2pcs Alkaline AA Batteries
*6：Except protruding part

1. Guarantee

(1) If the Identifier becomes out of order within one year from the date of delivery, we will repair it free of charge. However, repairs will be charged for the following cases regardless of the guarantee period:

- Trouble or damage due to handling in disregard of the operating procedures or instructions described in the instruction manual.
- Trouble or damage due to mishandling or unjustified remodeling and repair.
- Trouble or damage due to natural disaster or abnormal voltage supply.
- Trouble due to carelessness or misuse by the user.

(2) We do not assume responsibility regarding direct or indirect damages that may be caused by the breakdown of these products or the use of these products.

Before shipping the Identifier
Please consult with your authorized distributor first.

Necessary information needed for repair
Include documentation with the identifier informing us of the details listed below.
1) Your full name, section, division, company, address, phone number, fax number and e-mail address.
2) Model name and serial number of the identifier.
3) Problems encountered.

2. Contact Address

Inquiries concerning products should be made to the distributor, the authorized distributor or one of the following:

America Fujikura Ltd.
AFL Test & Inspection
 16 Eastgate Park Road
 Belmont, NH 03220 U.S.A.
 Tel. 800-321-5298
       603-528-7780
 Fax. 603-528-2025
 Email: AFLTestTechSupport@AFLglobal.com
 URL http://www.AFLglobal.com

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