CO-OPM-PON / Interactive Operating Manual

Best viewed with Adobe Acrobat Reader

083020

1 Introduction

1.1 Description

The next generation CO-OPM-PON power Meter is used to measure E-PON, G-PON, XGS-PON, and 10G-EPON. Also in RFoG. It also combine the function of pass/fail for network trouble shooting.

1.2 Special Features

- Simultaneously measures RFoG, XGS-PON, G-PON.
- Through-mode capability allows simultaneous measurement and display of signals at 1577 / 1490 / 1550nm downstream and 1270 / 1310 / 1610nm upstream

1.3 Specifications

Power Measurement Range	-40dBm ~ +10dBm
Linearity	±0.1dB
Pass through insertion Loss	<1.5dB
Detector Type	InGaAs
Optical Connector	SC / APC (UPC optional)
Fiber Type	9/125um
Display	LCD: 128*64
Measurement Unit	dB, dBm
Resolution	0.01dB
Power Supply	3 AA1.5V battery
Operation Temperature	14° ~ +140° F (-10° ~ +60° C)
Storage Temperature	-13° ~ +158° F (-25° ~ +70° C)
Weight	10 oz
Dimensions h / w / d	7.875 x 3.5 x 2 inches

1.4 Accessories

Description	Quantity
Body	1 ea
Rubber Boot	1 ea
USB Data cable	1 ea
USB Drive (User's Manual)	1 ea

1.5 Powering

3 AA1.5V battery

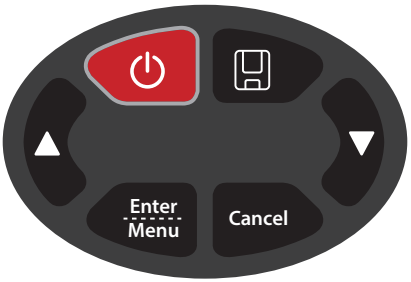
1.6 Meter Care

Do not subject the CO-OPM-PON to strong impact.
The CO-OPM-PON is not water resistant or waterproof
Do not disassemble.
Always properly clean the fiber interfaces before taking a measurement.
Always replace the Dust Cap for dust protection.

2 Getting Started

2.1 Explanation of Operating Keys

Key	Function
⏻	Power ON/OFF. Hold for 2 sec to power ON / OFF. AUTO / OFF
💾	Save Measurement Reading
Cancel	Cancel Previous request; move to previous menu option
Enter Menu	Enter Menu Mode; move to next option
▲	Line-Up, change dB / dBm (absolute/relative measurement)
▼	Line down / next screen

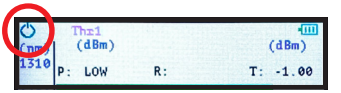


NOTICE

- We provide SC/APC Connector for XGPON optical connection.
  Be sure to always use SC/APC Connections.
- Always connect the ONT to UPSTREAM signals (1270, 1310, 1610nm)
  and the OLT/Video port to DOWNSTREAM signals (1577, 1490, 1550nm)

2.2 Key Functions:

Press  for 3 sec. to turn on the device.
Short press to enable/disable the auto-off function. Icon on left top of the screen, displays the status of auto-off capability Press/Hold for 3 sec. to power off.

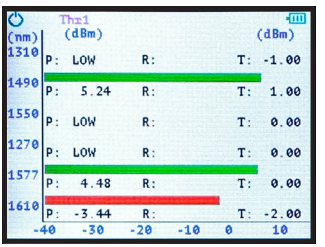


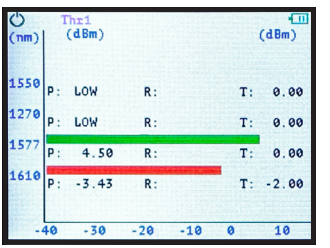
Press  to enter into the menu and confirm the menu option.

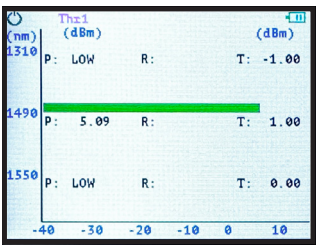
Press  to save current measurement.
The user can also upload the data to the PC via USB cable.

Press  to cancel the option or cancel data save.

Press the ▼ to choose the measurement display: XGPON, RFoG, Normal PON. When the device is in the measurement mode press and hold the ▲ to enter into REF setting, press the ▲ to shift between absolute and relative measurement







Press ▼ to move to the next display screen.

2.3 Measurement Mode

There are 3 measurement modes:

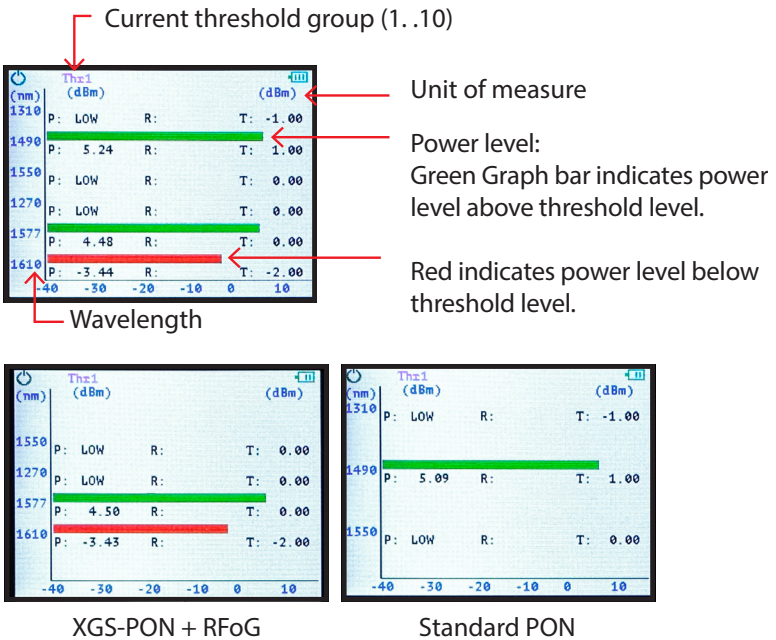
All Channels / (1270 / 1310 / 1490 / 1550 / 1577 / 1610nm)

RFoG + XGS-PON (1270 / 1577nm, 1550 / 1610)

Standard PON (1310 / 1490 / 1550)

Use the ▼ to move between the 3 display screens.

Measurement Display:



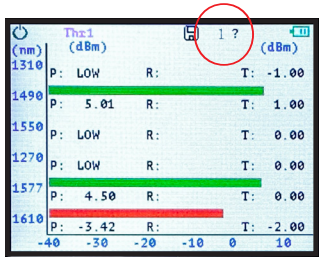
NOTICE: Before you start measurements, make sure all end-faces of patch cords and connectors are clean and correctly connected.

2.4 Data Storage

To save a measurement, press  .
The current data group number will be displayed (up to 500).

Press  to confirm the save,
or  to cancel the save.

Current data group for save (up to 500)

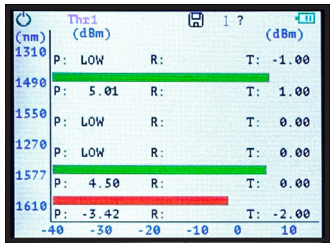


2.5 Relative Loss Measurements (dB/dBm)

2.5.1 Set Reletive Refrence

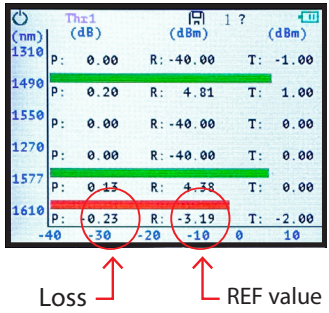
To establish the refrence, measure the power level, then press and hold the ▲ for 3 sec.

The refrence (R) power level for each wavelength will be saved. The relative power (Loss/Gain) will be displayed by "Pival" in dB. The REF value will be retained even after power cycle.



2.5.2 Relative / Absolute value

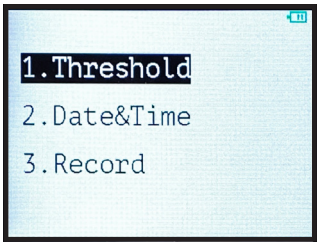
To return to absolute Power measurement press ▲. The value display will shift to absolute value (dBm).
Press ▲ again, the meter will return to Loss measurement.



2.6 Menu Option and Settings

Press Enter Menu to enter into Menu function.
There are 3 Options on the menu:

- Threshold
- Date & Time
- Record



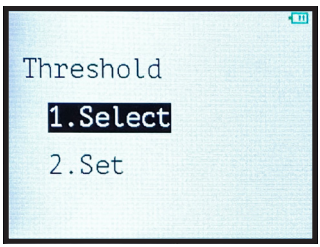
2.6.1 Threshold Selection and Setup

Pass/Fail Threshold Selection

In the main menu, highlight Threshold and press Enter Menu .

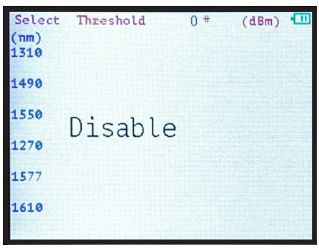
You have 2 options:

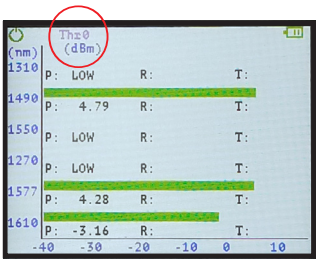
1 - Select previously established thresholds.
2 - Set new Thresholds



Choose #1 - Use the ▼ arrow to select the required Threshold group.

ThrØ will Disable Pass/Fail Threshold, All graph bars will be green.

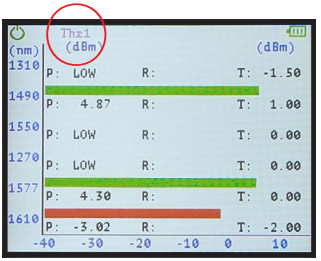




There are 10 groups of Pass/Fail Threshold settings. Each group has a minimum Threshold for each Wavelength: 1310/1490/1550/1270/1577/1610.

Use the ▼ to navigate through the 10 Threshold groups / Disable.

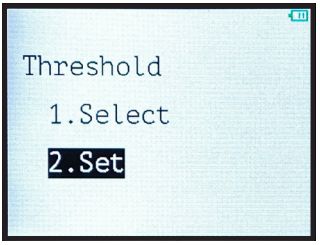
Press Enter Menu to choose a Threshold group. "Threshold XX" will be displayed along the top of the measurement screen signifying that Pass/Fail Threshold group XX is in effect.

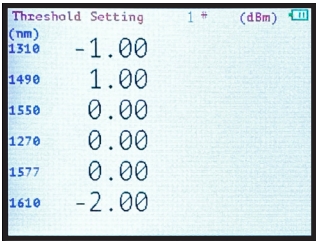


During power measurement, any wavelength with a power level LESS than the Threshold for that wavelength will be displayed on RED

Threshold Value Setup

After entering Threshold mode, Highlight and choose SET.





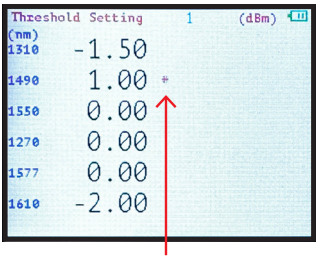
Use ▲ ▼ to choose the related Pass/Fail Threshold group to setup (10 groups)

This sign means threshold Group 1 is chosen

Current Group No.

After choosing the threshold group, press Enter Menu .

"*" will move to the 1st wavelength.



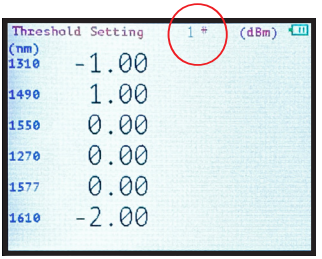
The "*" will indicate the wavelength being set up.

Use the ▲ ▼ to adjust the threshold value, in 0.5dB steps.

Press Enter Menu to save the Threshold and move to the next threshold.

After the final wavelength press Enter Menu to save the wavelength threshold setting group.

The "*" will highlight the Group No. as in following picture, then press Cancel to exit Group Threshold settings.



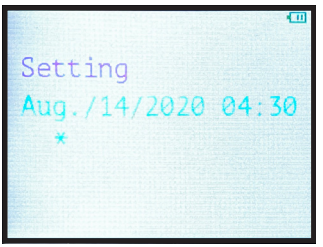
2.6.2 Time & Date Setting

Press Enter Menu to enter into Main Menu, using the ▲ ▼, choose Date & Time.

Press Enter Menu button to enter into Date & Time setting. The Blue * marks the field being adjusted.

Press ▲ ▼ to adjust the date and time.

Press Enter Menu to Save each feild. (mo/day/yr/hr/min)



2.6.3 Record

Enter into Main Menu by pressing Enter Menu .

Press ▲ ▼ to Choose the Third Option: Record.

In the Record Option,
there are 3 options:

- Check Record
- Delete View
- Delete All.

Check Record

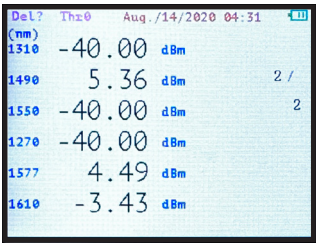
Threshold level group (Ø) for saved data being reviewed.

Current measurement record being displayed

Total No. of measurement records saved on the meter (up to 500)

Delete Measurement Record

Delete/Record? Y/N



Within the "Record" option, choose "Delete View" to delete a specific measurement record.

Use ▲▼ to select measurement record for deletion.

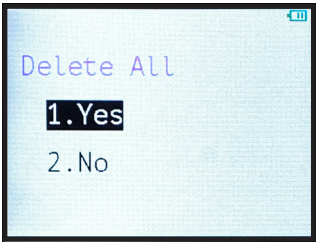
ENTER to delete.

You will be prompted again by "?"

Cancel to abort deletion.

Delete All Records

Within the "Record" Menu Choose "Delete All" to erase ALL saved measurements.
You will be prompted - "YES or NO"
YES to delete all.
NO to cancel delete.



3 Software

The CO-OPM-PON meter has a USB port with USB cable, as well as the related driver software. USB cable is used for data upload and self calibration function. For the details of the software functionality, please refer to the software instruction on the USB stick provided.

4 Maintenance

4.1 It is important to keep all optical connectors and surfaces free from oil, dirt or other contaminants to ensure proper operation.

4.2 Use test jumper to avoid damaging interface.

4.3 Use dust cap to protect connector interface from begin scratched or contaminated when Hand-held Power Meter is not in operation.

4.5 Use only appropriate fiber optic cleaning material to clean connector interface.

4.6 Remove batteries if unit will not be used for more than 1 week.