

Operating Manual



CONTENTS

- 1.0 Introduction** 3
 - 1.1 Description 3
 - 1.2 Special Features 3
 - 1.3 Specifications 3
 - 1.4 Accessories 4
 - 1.5 Powering 4
 - 1.6 Meter Care 4

- 2.0 Getting Started** 5
 - 2.1 Explanation of Operating Keys 5
 - 2.2 Key Functions 6
 - 2.3 Measurement Mode 7
 - 2.4 Data Storage 8
 - 2.5 Relative Loss Measurements (dB/dBm) 8
 - 2.5.1 Set Relative Reference 8
 - 2.5.2 Relative/Absolute Value 8
 - 2.6 Menu Options and Settings 9
 - 2.6.1 Threshold Selection & Setup 9
 - Pass / Fail Threshold Selection 9
 - Threshold Value Setup 10
 - 2.6.2 Time / Date Setting 12
 - 2.6.3 Record 13
 - Check Record 13
 - Delete Measurement Record 14
 - Delete All Records 14

- 3.0 Software** 15

- 4.0 Maintenance** 15

1 Introduction

1.1 Description

The next generation CO-OPM-PON power Meter is used to measure E-PON, G-PON, XGS-PON, and RFoG.

1.2 Special Features

- Simultaneously measures XGS-PON, G-PON, RFoG.
- Through-mode capability allows simultaneous measurement and display of signals at 1490/1550/1577 nm 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	Rechargeable Li-Poly 1600 mAh battery
Operation Temperature	14° ~ +140° F (-10° ~ +60° C)
Storage Temperature	-13° ~ +158° F (-25° ~ +70° C)
Weight	1 lb
Dimensions h / w / d	7.6 x 3.7 x 1.7 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
110Vac Power Adapter	1 ea

1.5 Powering

Rechargeable Li-Poly 1600 mAh 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 3 sec to power ON / OFF
	Save Measurement
	Cancel Previous request; move to previous menu option
	Menu for meter settings, file delete
	Enter value move to next option
	Line-Up, previous choice
	Line down / next choice




NOTICE

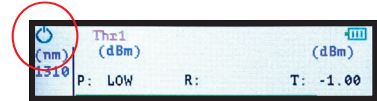
- We provide SC/APC Connector for XGPON optical connection.
Be sure to always use SC/APC Connections.
- Always connect the ONT/ONU/US to UPSTREAM signals (1270, 1310, 1610nm) and the OLT/DS video port to DOWNSTREAM signals (1577, 1490, 1550nm)





2.2 Key Functions:


Press  for 3 sec. to turn on the device.

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.

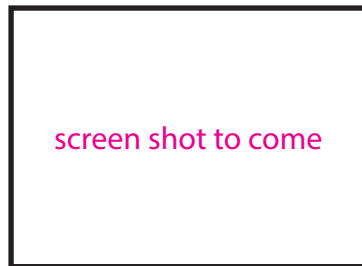
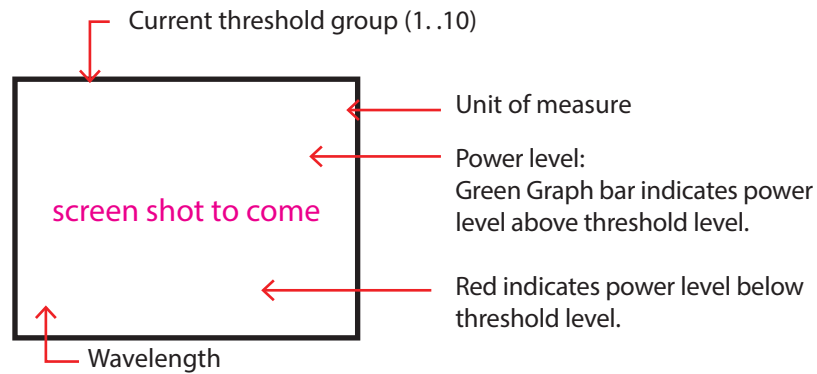
Press  to cancel the option or cancel data save.

2.3 Measurement Mode

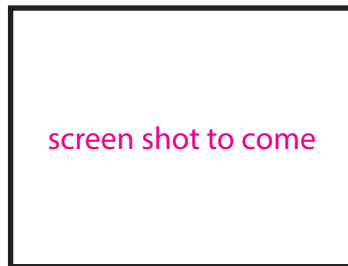
There is 1 measurement mode:

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

Measurement Display:



XGS-PON + RFoG



Standard PON

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 **SAVE**. The current data group number will be displayed (up to 500).

Press **ENTER** to confirm the save, or **ESC** to cancel the save.



The measurement will be saved.
Filename is date / time.

2.6 Menu Option and Settings

Press  to enter into Menu function.


There are 3 Options on the menu:

- Threshold
- Date & Time
- Record



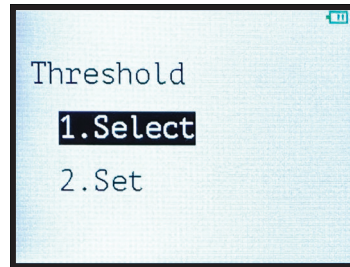
2.6.1 Threshold Selection and Setup

Pass/Fail Threshold Selection

In the main menu, highlight Threshold and press .

You have 2 options:

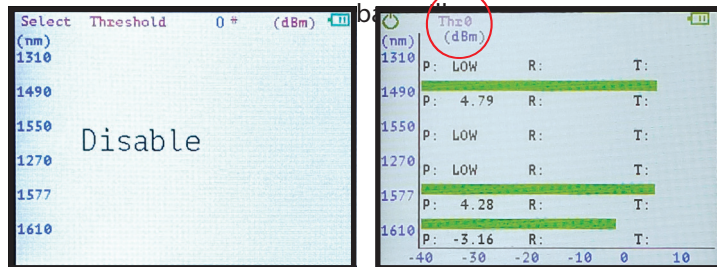
- 1 - Select previously established thresholds.
- 2 - Set new Thresholds



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


ThrØ will Disable Pass/Fail Threshold,

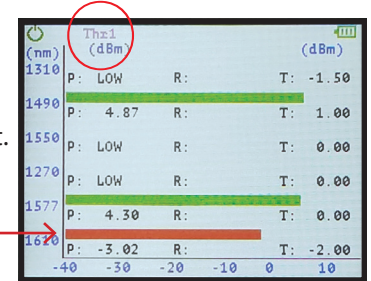
All graph be green.



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.

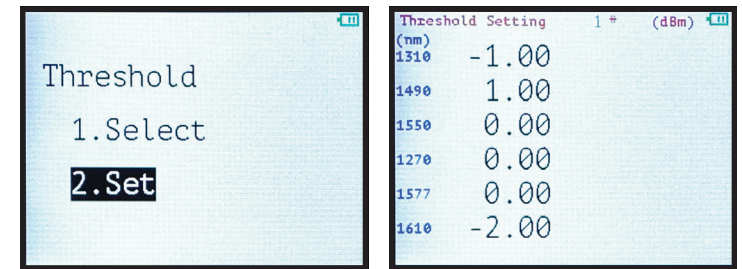
Press  to choose a Threshold group. "Threshold XX" will be displayed along the top of the measurement screen signifying that Pass/Fail Threshold group XX is in effect.



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)

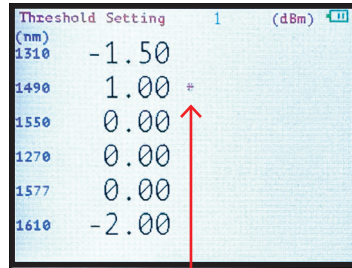
This sign means threshold Group 1 is chosen



Current Group No. _____


After choosing the threshold group, press  .


"*" will move to the 1st wavelength.

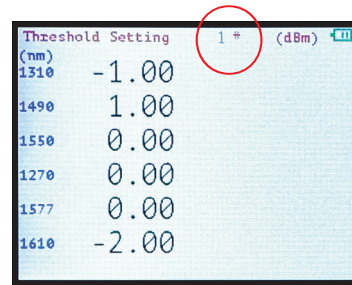


The "*" will indicate the wavelength being set up.

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


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

After the final wavelength press  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  to enter into Main Menu, using the ▲ ▼, choose Date & Time.




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

Press ▲ ▼ to adjust the date and time.

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



2.6.3 Record

Enter into Main Menu by pressing  .

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.

(nm)	ThzØ	Aug./14/2020 04:31	
1310	-40.00	dBm	
1490	5.36	dBm	2 /
1550	-40.00	dBm	2
1270	-40.00	dBm	
1577	4.49	dBm	
1610	-3.43	dBm	

Current measurement record being displayed

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


Delete Measurement Record

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 “?”

 to abort deletion.

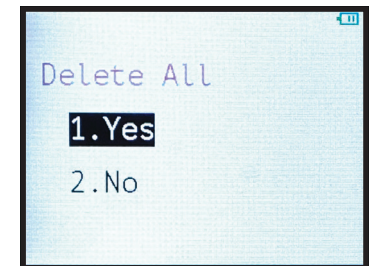
Delete/Record? Y/N

Del?	ThzØ	Aug./14/2020 04:31	
(nm)			
1310	-40.00	dBm	
1490	5.36	dBm	2 /
1550	-40.00	dBm	2
1270	-40.00	dBm	
1577	4.49	dBm	
1610	-3.43	dBm	

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.

