

# ODPM-48

**Optical DWDM Power Meter**

**Operating Manual**





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# 1. Introduction

## 1.1 Special Features

- Automatic wavelength & Power detection
- Compact size and light weight for portable
- Easy for hand operating
- Storage of large data
- Auto shut off function
- Fast response
- High-quality graphics
- CE approved



## 1.2 Accessories

Description	Quantity
Body	1 EA
Body Rubber Case	1 EA
USB Data cable	1 EA
Typical 5pin charger	1 EA
User's Manual	1 EA

### 1.3 Optical Standards

– Wavelength

Parameter	Unit	Specification
Number of Channels		48
Channel Spacing	GHz	100
Measurement Ranger	THz	196.4 ~ 191.7
	nm	1526.44 ~ 1563.86

– Optical Power

Parameter	Unit	Specification
Range of Display	dBm	+10 ~ -40
Absolute Power Accuracy	dB	±1.0@ -30
Optical Power Resolution	dB	0.01
Measuring Unit		dB / dBm

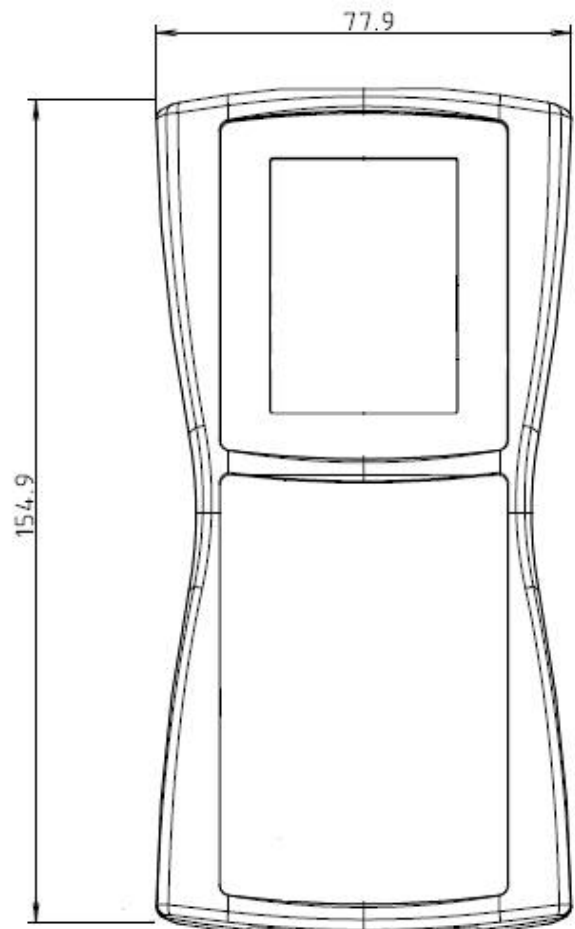
– Optical Connector

Optical connector interchangeable adapter.

FC, ST, SC, LC

## 1.4 Specifications

- Input voltage : 1800mAh 3.7v
- Current consumption : MAX 0.25A
- Electric consumption : MAX 0.925W
- Weight : 300g
- Width : 77.9mm
- Length : 154.9mm
- Display size : 2.8 inch
- Operating Temperature
  - : -20 ~ +55°C
- Guaranteed time of operating
  - : 420 mins when fully charged
- Relative Humidity
  - : 10 ~ 90% RH from 0 ~ +40°C



## 1.5 About the Charger

A rechargeable battery is installed inside the measuring instrument, and this charger module has the MOI (Ministry of Information) and Communication standard 5 pin charger phot. Connect the connecting point to the top of the ODPM-48 after the included cable is connected to the charger.



Standard 5pin charger

※This charger is subject to change

– Charging conditions :

LED Color	Action of LED	Conditions for battery charge
Red	On	Charging
Green	On	Fully charged



## 1.6 Safety Information

Be sure to read this manual, and please use your equipment. The safety of the equipment is directly affected the life and performance.

Please confirm the following safety precautions. If you didn't follow the safety precautions, you may not receive free A/S.

- Do not subject its body to strong impact or immerse in water.
- Do not disassemble or remove the equipment at random.
- Before inserting the optical connector into the equipment, be clean the connector. (with Isopropyl alcohol)
- After using the equipment, Put on the Dust Cap for dust protection.
- Be careful not to go in the water equipment.
- After using the equipment, please be sure the switch off.

## 2. Getting Started


### 2.1 Explanation of Operating Keys

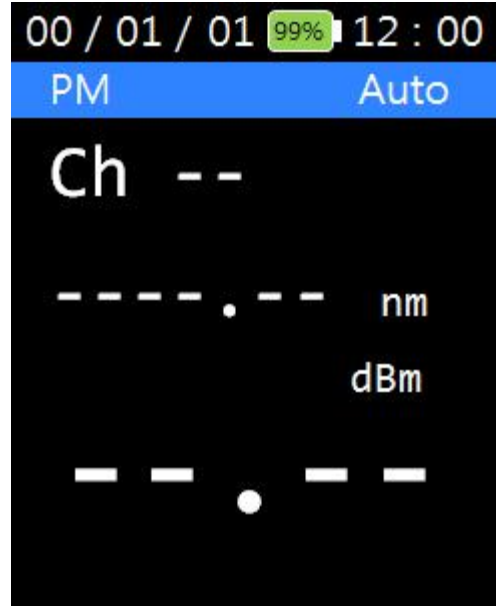
Buttons	Function
Backlight	Power On/Off
PM	Power display
DWDM	Scanned dBm value of the wavelength is represented as a data.
SCAN	Wavelength is scanned and dBm value is represented.
dB/dBm	Each time you press the key, dB and dBm are repeated.
▲	Up arrow
Graph	Scanned dBm value of the wavelength is represented as a graph.
Recall	Recall data
ENTER	Enter
SAVE	Data save
ESC	Cancel
▼	Down arrow
MENU	Set up and data delete

## 2.2 Screen Information

### 1) Power ON / OFF

– To turn on and off.

– If you press the  (Backlight) button more than 2 seconds, the logo shown below appears and it moves to 'Power Meter' page.

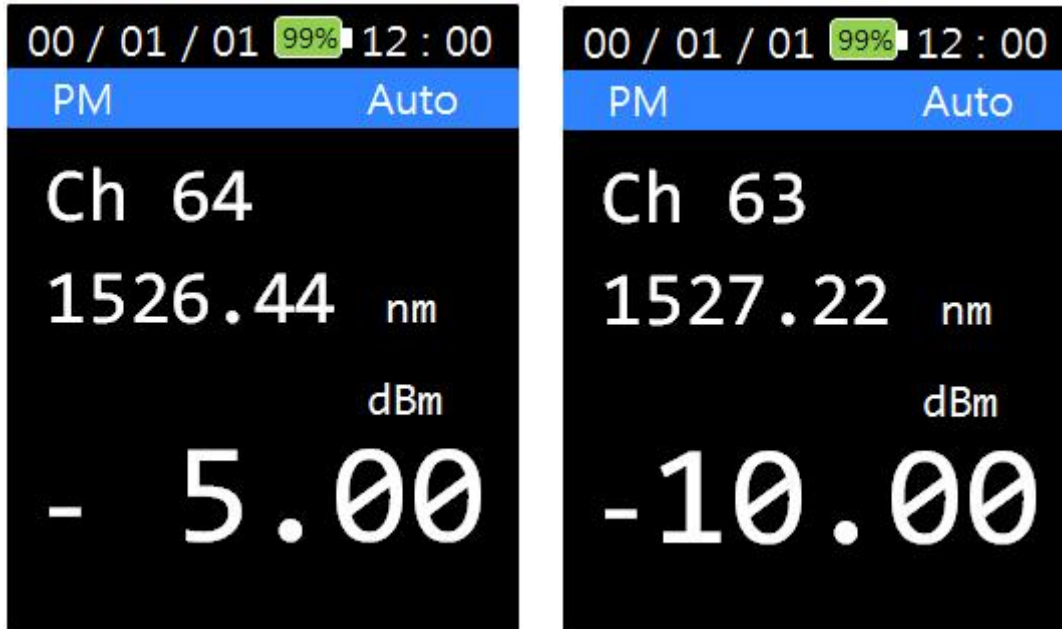


– Press the  (Backlight) button more than 2 seconds to turn the power off.







## 2) Power Meter

- Power Measurement is divided into 'Auto' and 'Manual'. If you select 'Auto', the instrument automatically scans the optical input and displays the wavelength which has been detected with the highest level of power.




- If you select 'Manual', the power of the wavelength selected by the user is displayed in real time.

- You can select the different wavelengths using , .



- Selection of Manual and Auto can be done by this button  (MENU)- 'PM Scan Mode' or Click  (PM) button.

### 3) DWDM

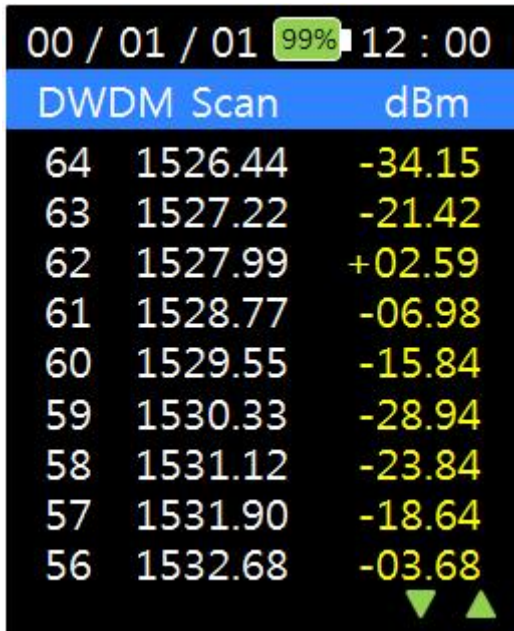
- Press the  (DWDM) button, then the display will show as the figure below.



- The moment you click on the  (DWDM) button, the light source is scanned only once in Manual mode.

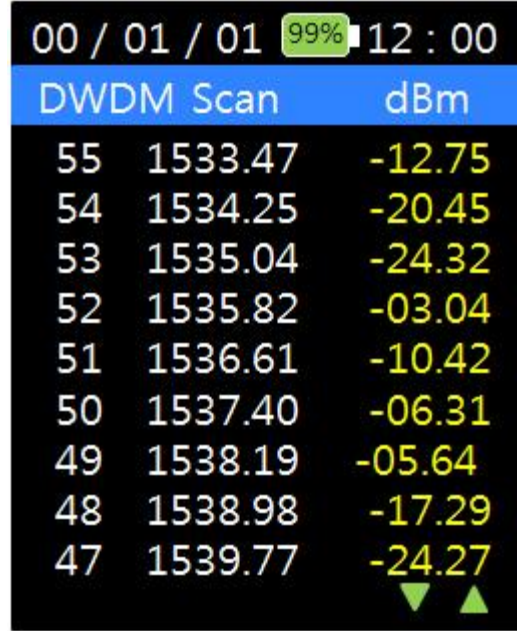
- You can select the different wavelengths using , 

#### 4) SCAN






00 / 01 / 01 99% 12 : 00

DWDM Scan		dBm
64	1526.44	-34.15
63	1527.22	-21.42
62	1527.99	+02.59
61	1528.77	-06.98
60	1529.55	-15.84
59	1530.33	-28.94
58	1531.12	-23.84
57	1531.90	-18.64
56	1532.68	-03.68




00 / 01 / 01 99% 12 : 00

DWDM Scan		dBm
55	1533.47	-12.75
54	1534.25	-20.45
53	1535.04	-24.32
52	1535.82	-03.04
51	1536.61	-10.42
50	1537.40	-06.31
49	1538.19	-05.64
48	1538.98	-17.29
47	1539.77	-24.27

- Press the  (SCAN) button, the light source is scanned and the dBm value is displayed.
- You can select the page using , .


## 5) dB/dBm

- The light source is based the moment you press the  (dB/dBm) button.


In other words, the light source is 0.00 dB.

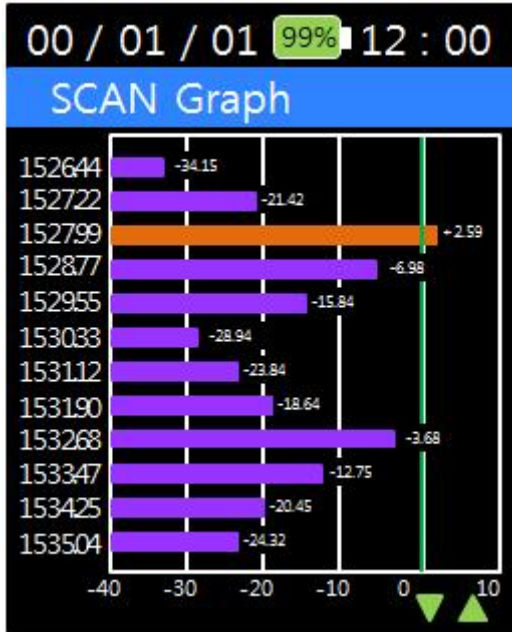


- Then it measure automatically dB of light source.

- If you want to re-select 'dBm', click  (dB/dBm) button.

## 6) Graph

- If you press the  (Graph) button after scanning, a graph shows like the below.




- If you press the  (Graph) button again it returns to text mode.

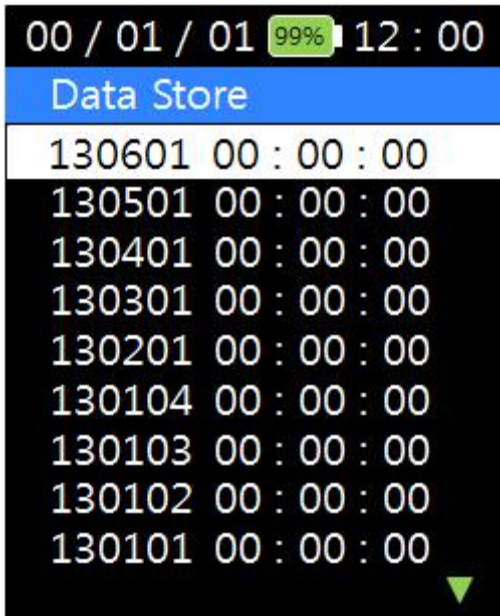
00 / 01 / 01 99% 12 : 00		
DWDM Scan		dBm
64	1526.44	-34.15
63	1527.22	-21.42
62	1527.99	+02.59
61	1528.77	-06.98
60	1529.55	-15.84
59	1530.33	-28.94
58	1531.12	-23.84
57	1531.90	-18.64
56	1532.68	-03.68

00 / 01 / 01 99% 12 : 00		
DWDM Scan		dBm
55	1533.47	-12.75
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51	1536.61	-10.42
50	1537.40	-06.31
49	1538.19	-05.64
48	1538.98	-17.29
47	1539.77	-24.27




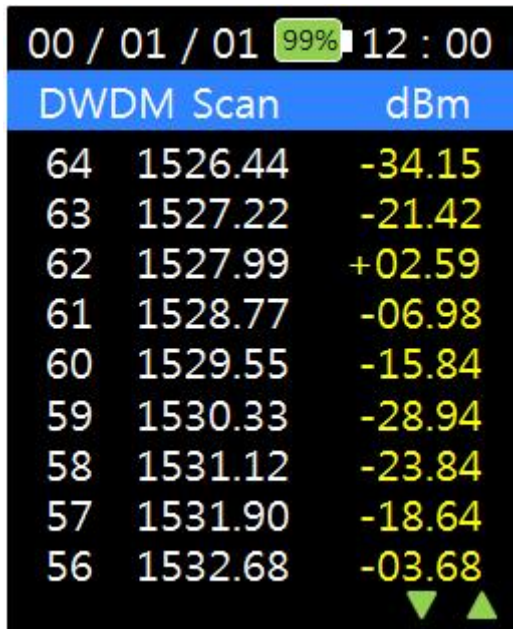
## 7) Recall

- Press the  (Recall) button, you will recall the data which you have measured and saved.

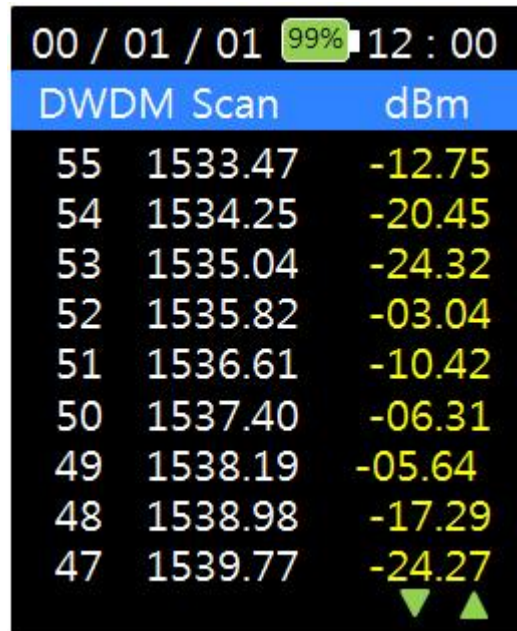


00 / 01 / 01 99% 12 : 00		
Data Store		
130601	00 : 00 : 00	
130501	00 : 00 : 00	
130401	00 : 00 : 00	
130301	00 : 00 : 00	
130201	00 : 00 : 00	
130104	00 : 00 : 00	
130103	00 : 00 : 00	
130102	00 : 00 : 00	
130101	00 : 00 : 00	

- Press the  (Enter) button to select the data you want, the screen display stored data.

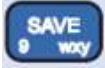



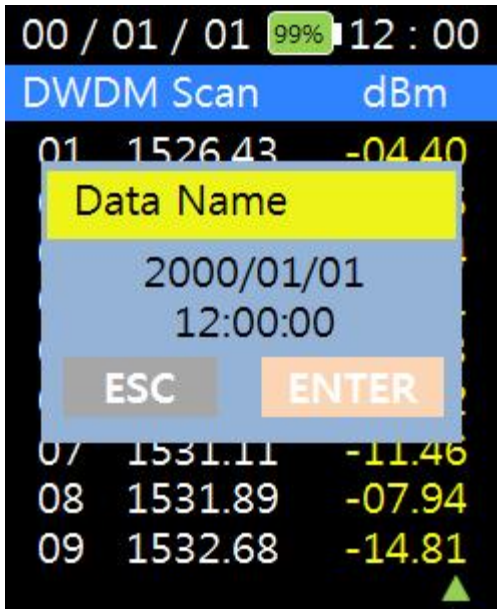
00 / 01 / 01 99% 12 : 00		
DWDM Scan		dBm
64	1526.44	-34.15
63	1527.22	-21.42
62	1527.99	+02.59
61	1528.77	-06.98
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59	1530.33	-28.94
58	1531.12	-23.84
57	1531.90	-18.64
56	1532.68	-03.68



00 / 01 / 01 99% 12 : 00		
DWDM Scan		dBm
55	1533.47	-12.75
54	1534.25	-20.45
53	1535.04	-24.32
52	1535.82	-03.04
51	1536.61	-10.42
50	1537.40	-06.31
49	1538.19	-05.64
48	1538.98	-17.29
47	1539.77	-24.27


## 8) Save

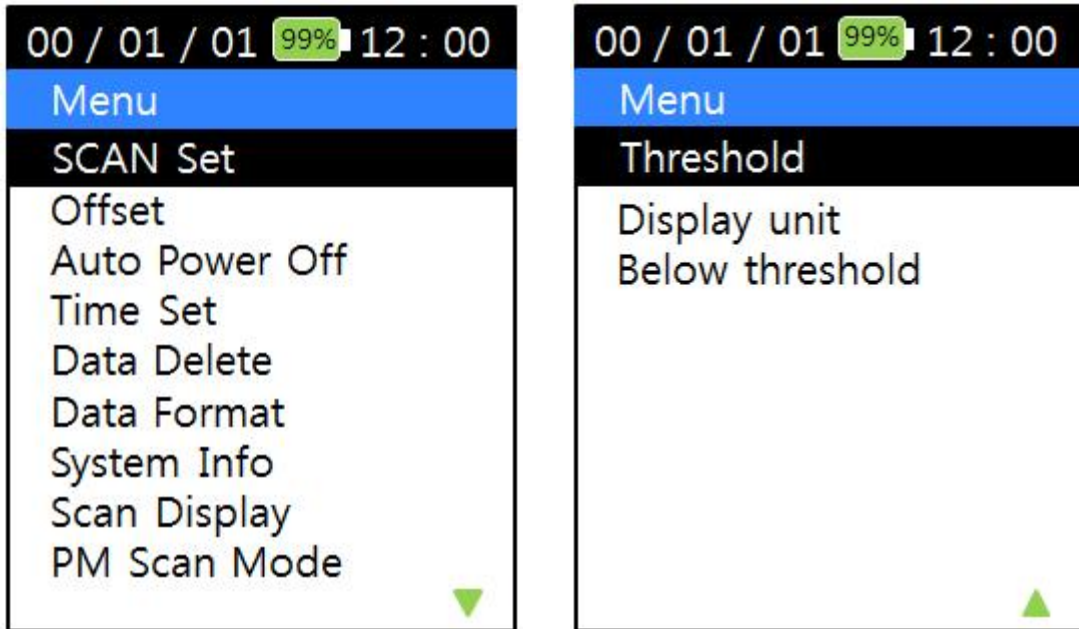
- When you press the  (save) button, the following message shows and asks the name of the data, and the data based on the current data and time is saved if you press the  (Enter) button.



- If you want to stop saving, press  (ESC).

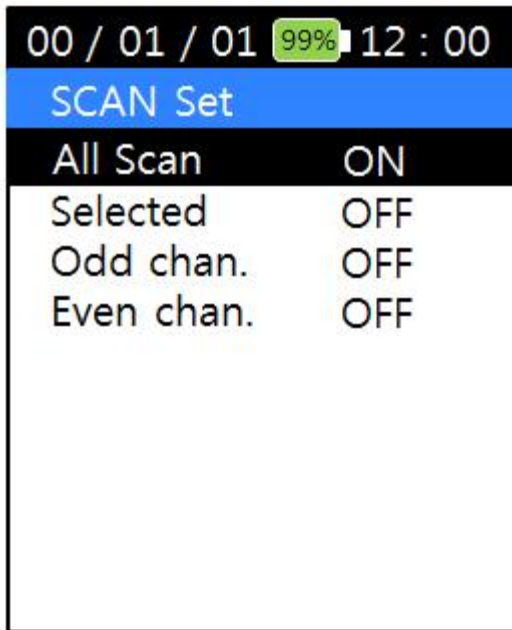
## 2.3 Menu

If you press the  (Menu) button, it changes to a screen where you can configure the operating environment of ODPM-48.

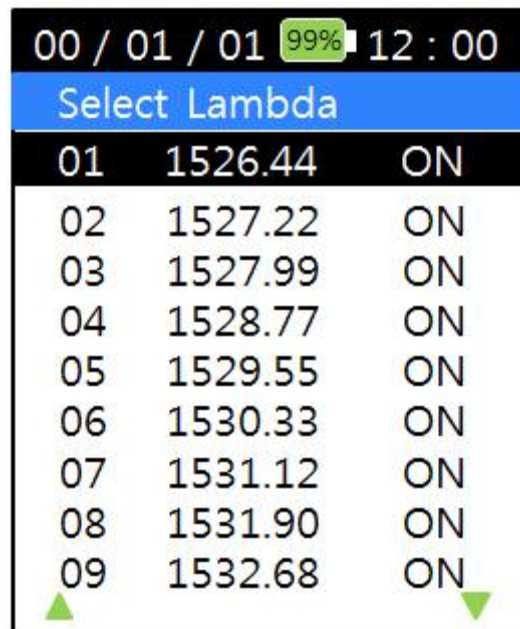
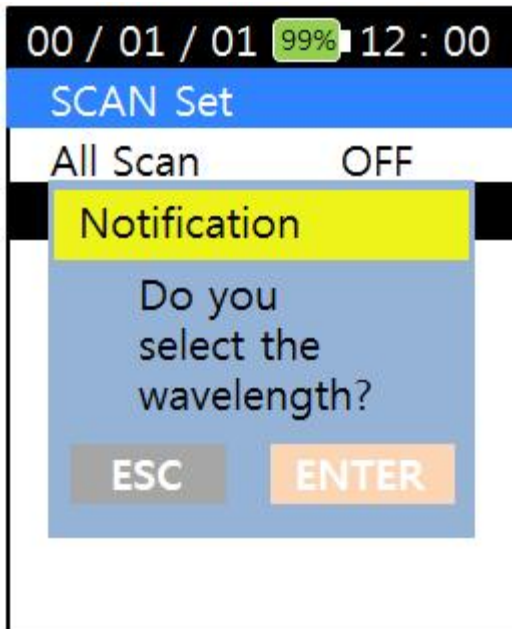


- The menu consists of 'SCAN SET', 'Off Set', 'Auto Power Off', 'Time Set', 'Data Delete', 'Data Format', 'System Info', 'Scan Display', 'PM SCAN Mode', 'Threshold', 'Display unit' and 'Below threshold'.

### 1) Scan Set

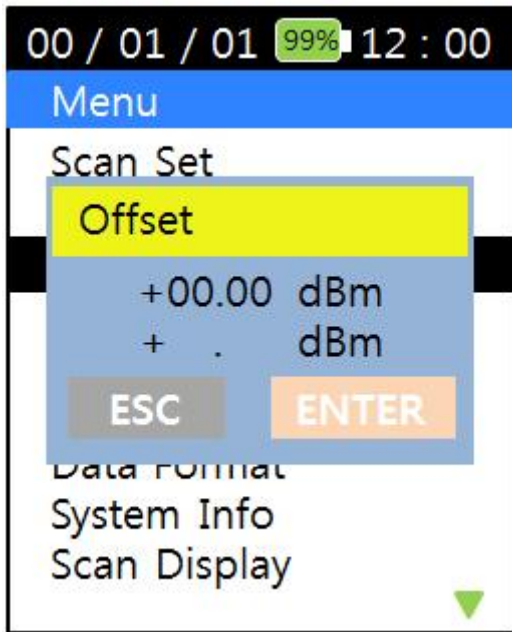



- When you choose the SCAN Set, 'All Scan', 'Selected', 'Odd chan.' and 'Even chan.' are displayed.
- 'All Scan' is registered 48 wavelength.
- 'Selected' is registered user-selected wavelength.
- If you press the 'Selected', you can see the screen below.

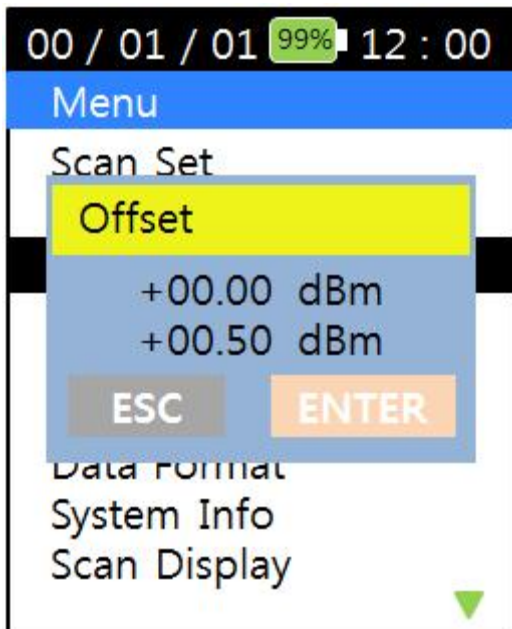




- Press the  button to toggle ON or OFF the highlighted wavelength.

## 2) Offset



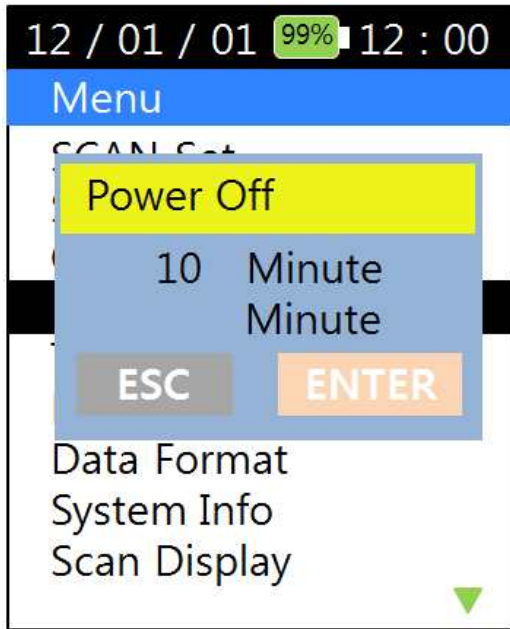
- If you press the  (Enter) button after selecting 'Off Set', you can set up dBm value and the optical power value on the screen.




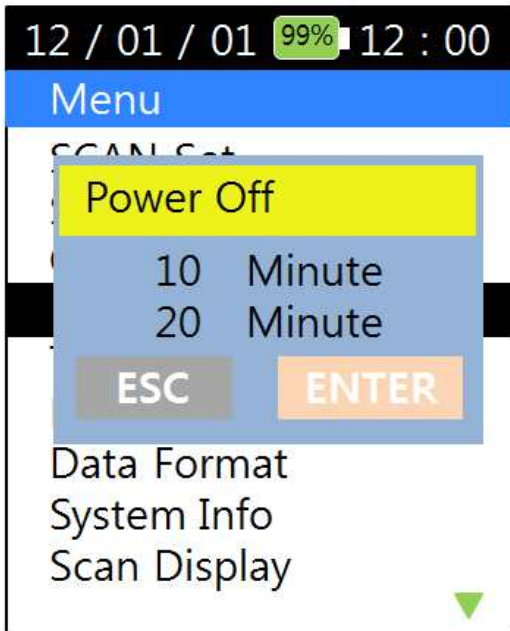
- You can set the 'Off Set' by pressing the  (ESC) key and  (Enter).
- You can set the offset between -25.99 to +25.99 dBm.
- '+' and '-' sign can be changed to number 5 and 8 key.


### 3) Auto Power Off

- The power automatically goes off if the user does not input any key in the determined time.

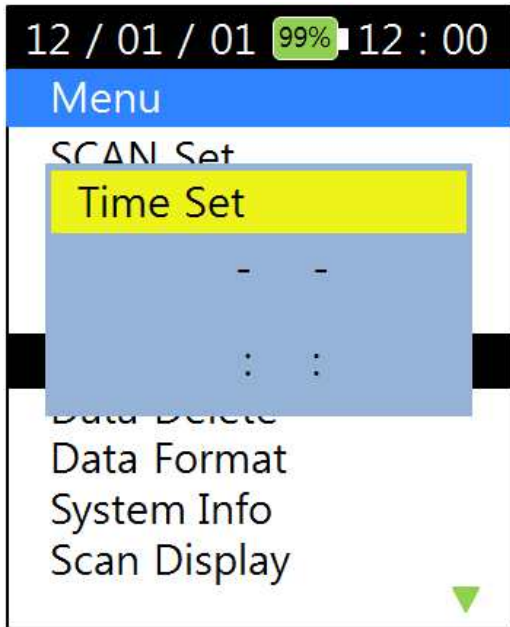



- If you press the  (Enter) button after selecting 'Auto Power OFF', you can set the Auto power off time in minutes.

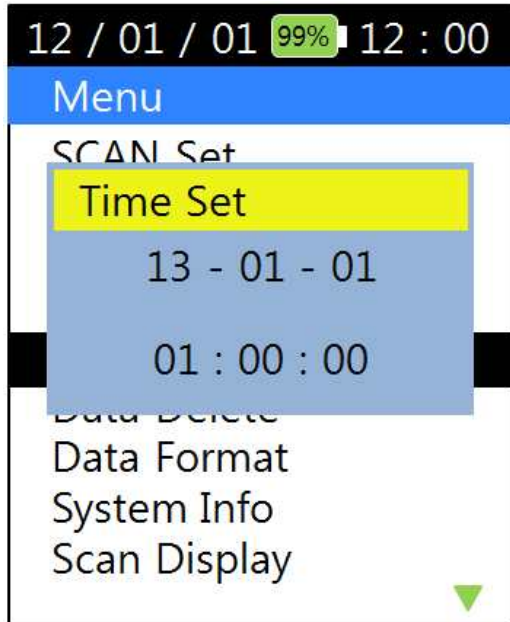


- You can set the time between 5 to 600 Min. by pressing the number key and  (Enter) button.

#### 4) Time Set

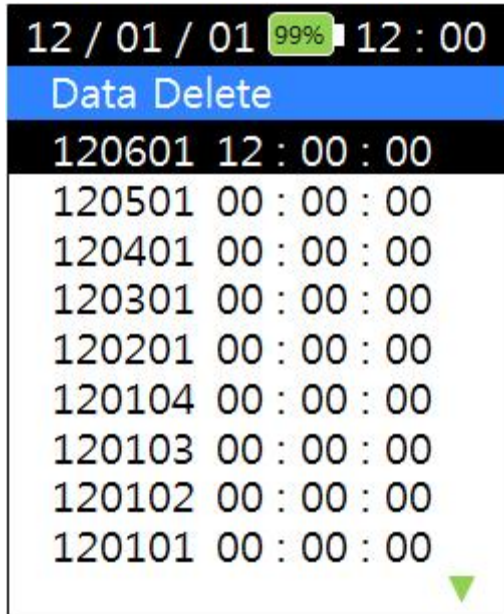



- If you press the  (Enter) button after selecting 'Time Set', you can set the today date and current time.

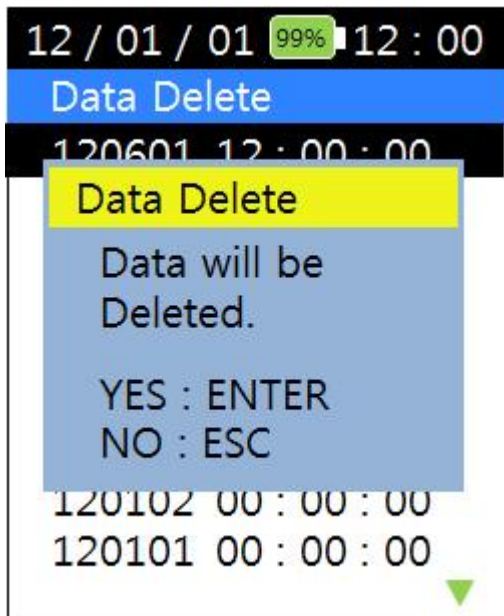




- You can set the time by pressing the number key and  (Enter) button.

## 5) Data Delete



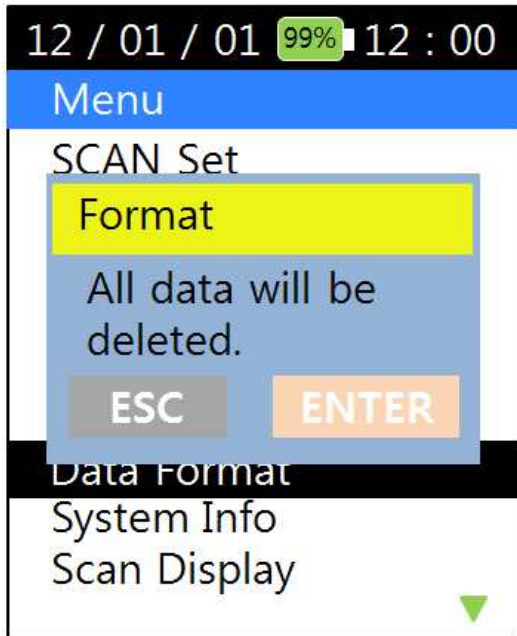
- If you press the  (Enter) button after selecting 'Delete Data', you can delete the data.





- If you press the  (Enter) key after choosing the data you want to delete, the message appears on the screen to confirm to delete or not.
- If you press the  (Enter) button, it is deleted from the memory.



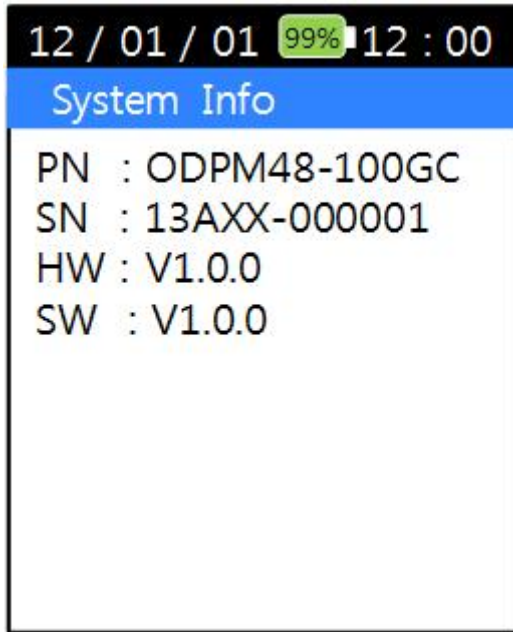
## 6) Data Format



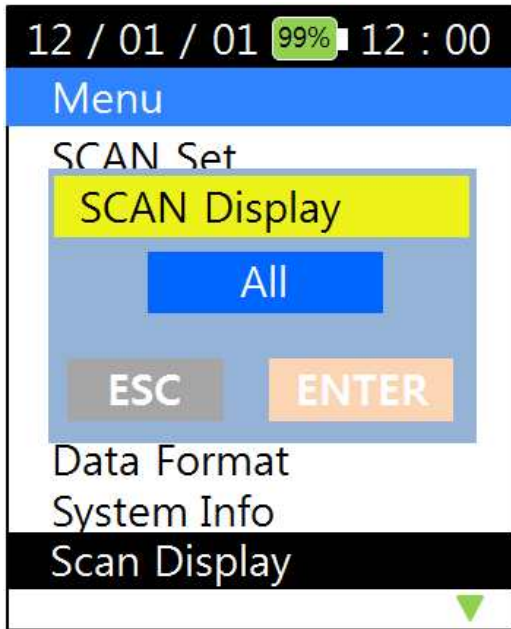
- You can delete all saved files by formatting the transportable memory.
- If you press the  (Enter) key after 'Data Format', message appears on the screen to confirm.
- If you press the  (Enter) button, all files are deleted from the memory.

## 7) System Info

General information about the equipment. PN(Product number), SN(Serial number), HW(Hardware version), FW(Firmware version).



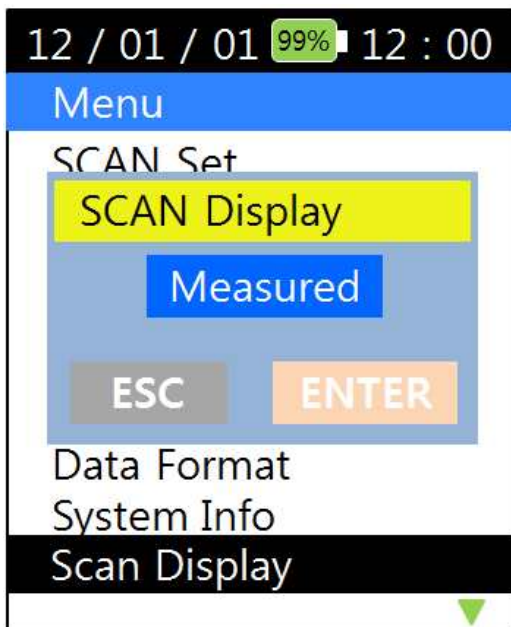
## 8) Scan Display





- 'Scan Display' consists of 'All' and 'Measured'. This can be selected using

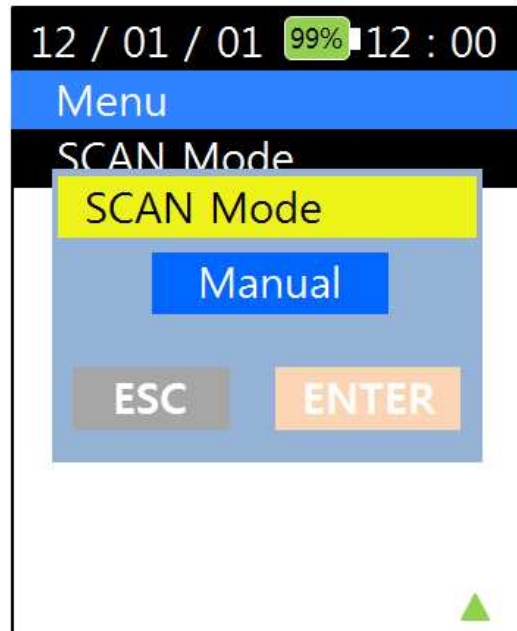
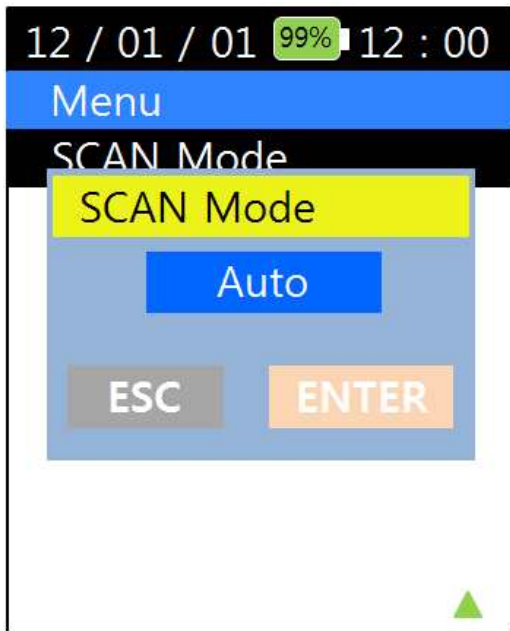


- If you choose the 'All', from 1526.43nm to 1563.86nm values of 48 wavelengths are output.
- If you choose the 'Measured', the value of the wavelength to be measured are output.



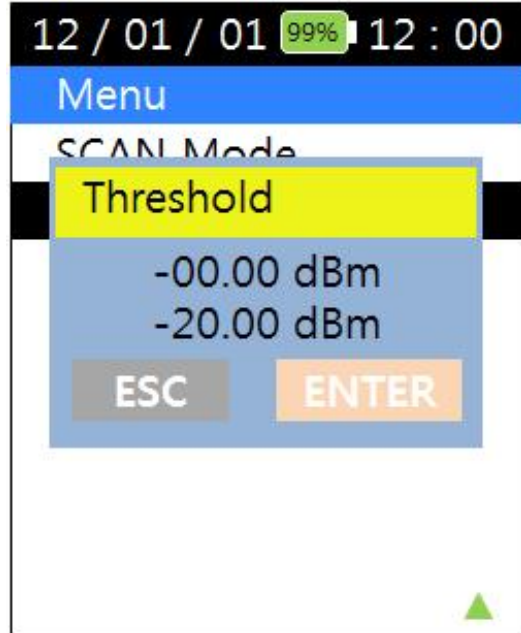
## 9) PM Scan Mode


- The 'Scan Mode' consists of the 'Auto' and 'Manual'. This can be selected using , .
- If you choose the 'Auto', when selecting 'DWDM', shows the real time changing values.

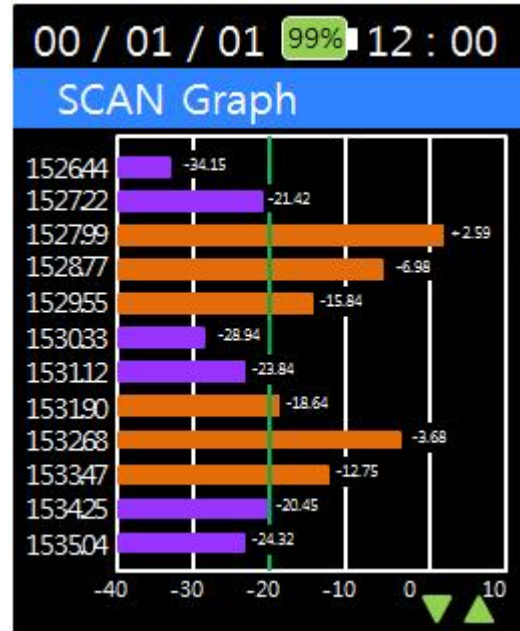
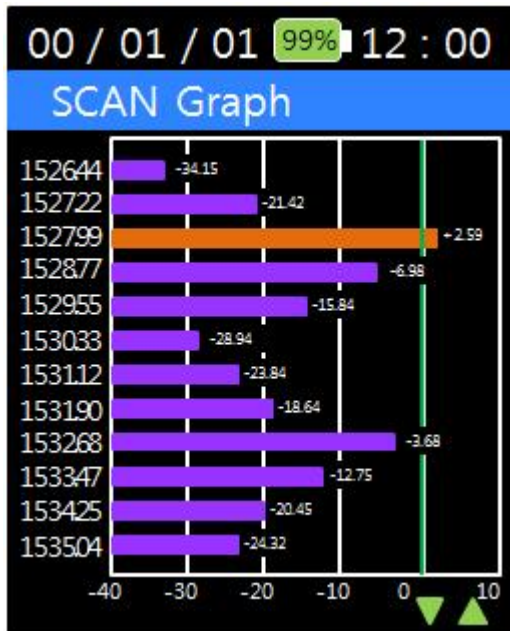


## 10) Threshold

- You can change the baseline.



- '-30.00dBm' is the default setting.
- If you press the  (Enter) button after selecting 'Threshold', you can set the baseline.

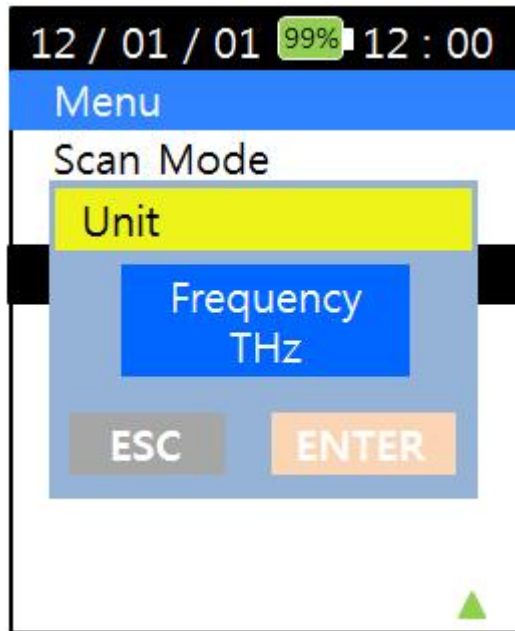
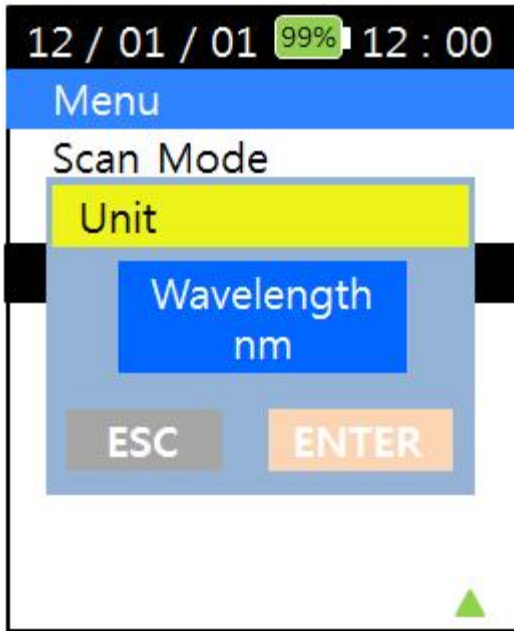


- Baseline changes can be found at the graph screen.

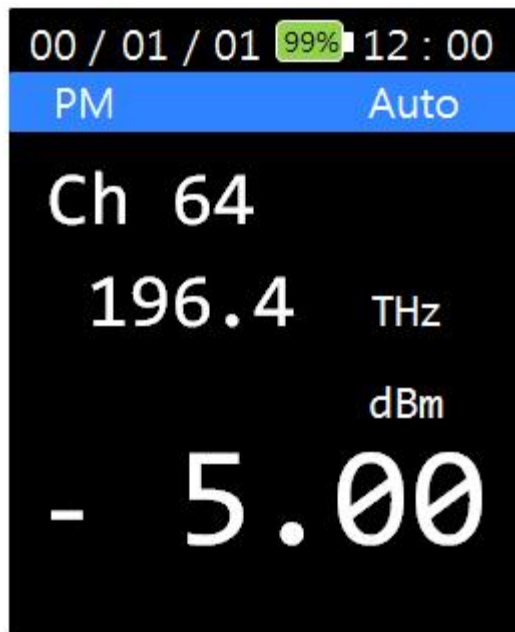
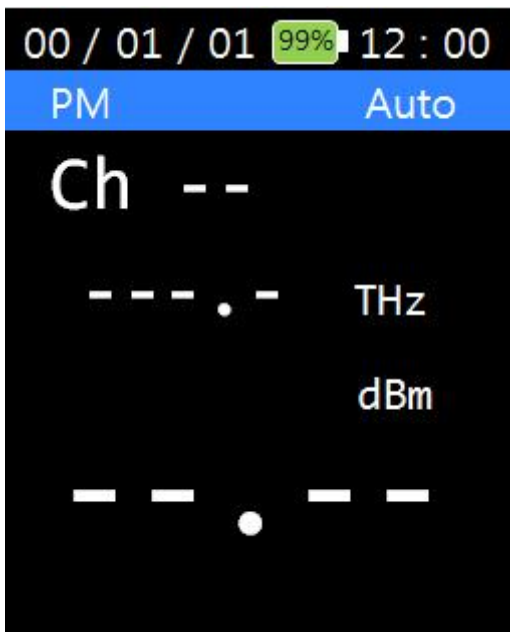
## 11) Display Unit

- You can change the unit.
- The 'Display unit' consists of the 'Wavelength' and 'Frequency'. This can be

selected using , .



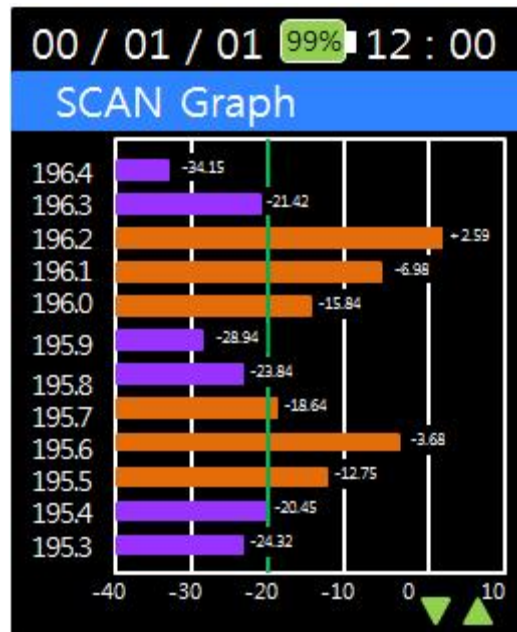
- If you choose the 'Frequency', shows the below screen.



00 / 01 / 01 99% 12 : 00

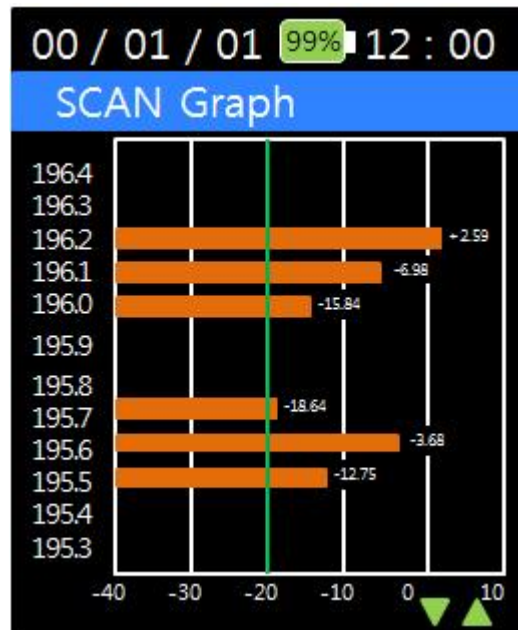
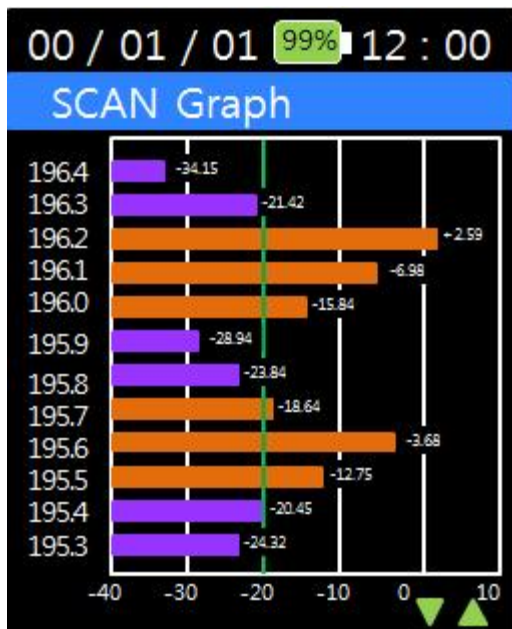
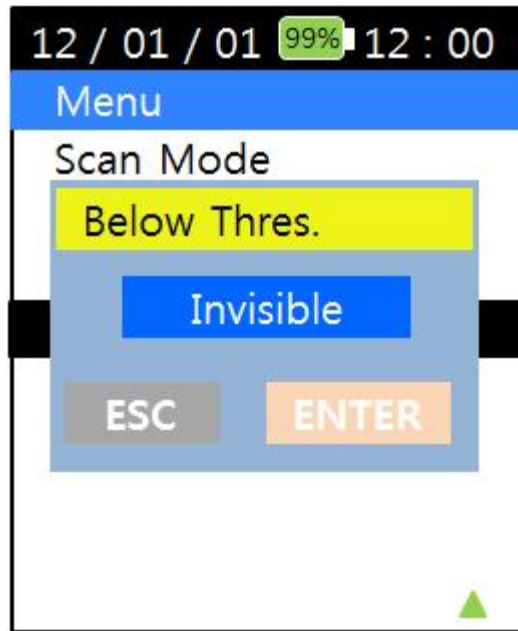
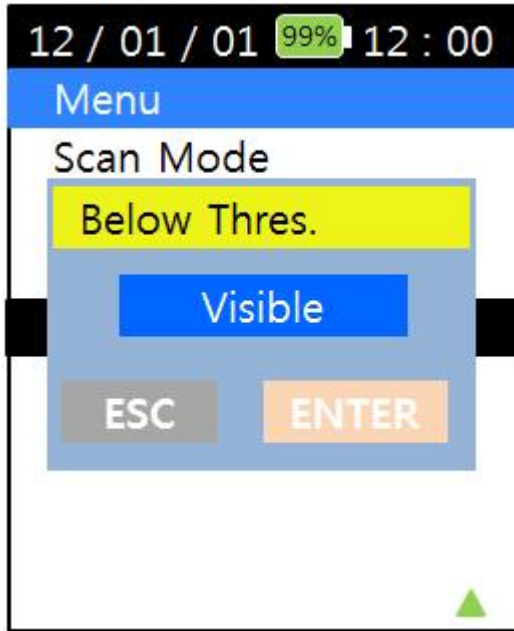
SCAN Text		dBm
64	196.4	-34.15
63	196.3	-21.42
62	196.2	+02.59
61	196.1	-06.98
60	196.0	-15.84
59	195.9	-28.94
58	195.8	-23.84
57	195.7	-18.64
56	195.6	-03.68

▼ ▲



## 12) Below Threshold

- You can make the value of the 'Below threshold' either visible or invisible by choosing 'Visible' or 'Invisible'.







## (주)피피아이

광주광역시 북구 첨단과기로 345  
(우) 500-470

전화 : +82-62-972-0116

팩스 : +82-62-972-0117

홈페이지 : <http://www.ppitek.com>.

메일주소 : sales@ppitek.com



345, Cheomdangwagi-ro, Buk-gu, Gwangju, Korea

TEL : +82-62-972-0116

FAX : +82-62-972-0117

Website : <http://www.ppitek.com>.

E-mail : sales@ppitek.com