

# PROLITE-75

## OPTICAL ANALYSER



99 Washington Street  
Melrose, MA 02176  
Phone 781-665-1400  
Toll Free 1-800-517-8431

 Visit us at [www.TestEquipmentDepot.com](http://www.TestEquipmentDepot.com)



---

## T A B L E   O F   C O N T E N T S

---

1	GENERAL.....	1
1.1	Description .....	1
1.2	Specifications .....	2
2	SAFETY RULES.....	5
2.1	Generals.....	5
2.2	Descriptive Examples of Over-Voltage Categories .....	6
3	INSTALLATION .....	7
3.1	Power Supply .....	7
3.1.1	Charging the battery .....	7
3.1.2	Recommendations using the battery .....	8
3.2	Installation and starting up .....	8
3.2.1	Adjusting contrast .....	8
4	OPERATING INSTRUCTIONS.....	9
4.1	Description of the controls and elements .....	9
4.2	Operating Instructions .....	11
4.2.1	SETUP mode.....	14
4.2.2	GPON METER Module.....	15
4.2.2.1	LOSSES Function .....	17
4.2.2.2	ONT function .....	18
4.2.2.3	REFERENCE function.....	20
4.2.2.4	THRESHOLD function.....	21
4.2.2.5	LOGGER function.....	22
4.2.3	FAULT LOCATOR Module .....	25
4.3	Connecting Devices .....	27
5	MAINTENANCE.....	29
5.1	Instructions for returning by mail .....	29
5.2	Method of maintenance.....	29
5.2.1	Cleaning the cover.....	29
5.3	Components which user can not replace .....	29
5.3.1	Not replaceable fuses by user .....	29



USER'S MANUAL. PROLITE-75

---

# OPTICAL ANALYSER

## PROLITE-75

### 1 GENERAL

#### 1.1 Description

The **PROLITE-75** is a tool to install, maintain and analyse general fiber optic systems, and particularly **FTTx-GPON** systems. **GPON** networks use **FTTx / PON** technology, delivering speed higher than 1 Gbps. In such networks, Upstream signals are sent by the **ONT** (Optical Network Termination) in bursting mode, that is, it sends a large amount of information in short time. The **GPON METER** module of the **PROLITE-75** has a function designed specifically to analyse the behaviour of these signals over time.

In the design of the **PROLITE-75**, it was paid special attention to create a practical and accurate instrument and, at the same time, easy to use. In this way, it has been created a menu that allows accessing to the different operating modes directly, through a simple system (ambidextrous) of softkeys, cursor keys and an alphanumeric keypad. Once inside a function of the instrument, it is very easy to modify any parameter.

All this makes the **PROLITE-75** a great tool for installing and maintaining this type of installations. Results will be displayed just plugging the fibre cable from the distribution centre to the **OLT** input connector and the fibre cable from the user to the **ONT** input connector. Then, pressing a key you will see the results on the screen. When the **PROLITE-75** is taken measures it acts as a pass-through instrument and extracts a small percentage of the signal to measure, so the optic fibre service is not interrupted.

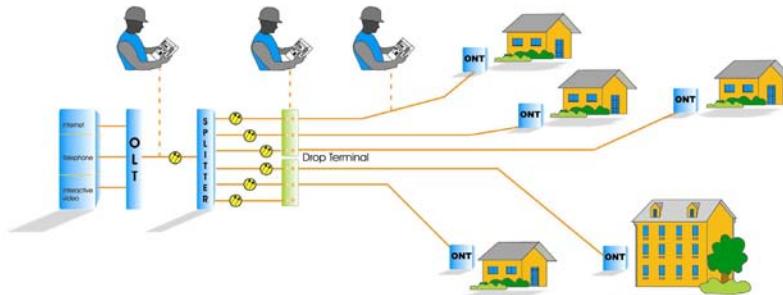


Figure 1.-

The instrument has an **USB** output connector to connect it to a computer. In this way you can obtain reports or update firmware.

Next are explained functions of the **PROLITE-75**.

The **GPON METER** performs filtered and individualized measurements for the three wavelengths used in fibre (1490, 1550 nm for Downstream and 1310 nm for Upstream) and displays them simultaneously on screen. It allows you to define and store different threshold values.

The **ONT** shows graphically the Upstream signal over time. This function is especially designed for **GPON** technology, in which the signal is transmitted in burst mode.

The **LOSSES** function allows measuring insertion losses, defining a reference value.

By the **FAULT LOCATOR** module you can generate a visible laser beam, and allows you to change it in the form of continuous laser beam or pulses. Connecting the laser output to the cable to check, you can find cuts or breaks, identify fibres, etc.

**LOGGER** function stores up to 100 measurements on the memory. In each data acquisition is stored each wavelength measure and its related data. It can be reviewed later, transferred to a PC and printed.

The **PROLITE-75** can be expanded with two more modules: an **OTDR** module and an **channel analyser** module.

The design of the **PROLITE-75** is adapted for fieldwork: is compact and resistant to adverse conditions. Backlight LCD of 5" inches and contrast dial provides an excellent visibility for reading. Sizes of arrow keys and selection keys are adequate and they are prepared for ambidextrous usage. An ergonomic silicone case, perfectly adapted, protects the instrument from hitting or accidental falling and facilitates holding it. Slider silicone covers keep input and output connectors from dust and other external agents and they are built into the instrument. The Li-Ion battery is rechargeable and it has a long operation time.

In conclusion, the **PROLITE-75** is the ideal tool for any installation of optic fibre, because is ergonomically designed, robust, easy to use and economical. It has all the functions needed to make an installation and onward maintenance.

## 1.2 Specifications



### GPON

#### Operating Wavelength Range

ONT Input	1270 nm – 1350 nm.
OLT Input	1480 nm – 1500 nm & 1535 nm – 1565 nm.

#### Insertion Loss

(ONT-OLT)	<1,2 dB.
-----------	----------

#### Polarization dependent loss

<0,2 dB.

#### Isolation

1330 nm – 1490/1550 nm	>50 dB.
1490 nm – 1550 nm	>50 dB.

<b>Connectors ONT, OLT</b>	SC/APC.
<b>Internal Fibre optic:</b>	SMF-28e
<b>Dinamic Range</b>	
<b>ONT Input</b>	From -30 dBm to 10 dBm.
<b>OLT Input</b>	From -40 dBm to 20 dBm.

## FAULT LOCATOR

<b>LASER type</b>	FP.
<b>Wavelength</b>	650 nm.
<b>Optical Power</b>	-2 dBm (monomode fibre / class 2).
<b>Modulation</b>	1 Hz / 50 %.
<b>Connector</b>	Universal Receptacle 2,5 mm.

## ALIMENTATION

<b>Li Ion Battery</b>	7.4 V – 4,8 Ah.
<b>Low Battery Indicator</b>	Graphic indicator on screen.
<b>Operating time</b>	11 h approx.
<b>Auto Power Off</b>	Disconnecting after not using for 10 minutes, configurable.
<b>Battery Charging</b>	By fast internal charger.
<b>Consumption</b>	22 W.
<b>Mains Adapter</b>	AL-103: 100 a 240 V AC / 50-60 Hz / 12 V DC.

## ENVIRONMENTAL CONDITIONS

This equipment can be used on the following environmental conditions, on these conditions the specifications could also be applied:

<b>Altitude</b>	Up to 2.000 m.
<b>Temperature range</b>	From 5 °C to 40 °C.
<b>Max. relative humidity</b>	80 % (up to 31 °C), Decreasing lineally up to 50% at 40 °C.

## MECHANICAL FEATURES

<b>Dimensions</b>	W. 160 x H. 230 x D. 50 mm.
<b>Weight</b>	1,4 kg. (battery and safety case included).

## INCLUDED ACCESORIES

1x AL-103	External DC power supply.
1x AA-103	Feeder cable car.
1x 0 FD0090	Carrying case.
1x CA-05	Mains cord.
1x CC-209	Cordless Data Transfer USB to PC.
1x RM-027	Software for PC PROLITE-75.
1x PG4332	Transport suitcase.

## RECOMMENDATIONS ABOUT THE PACKING

It is recommended to keep all the packing material in order to return the instrument, if necessary, to the Technical service.



## 2 SAFETY RULES

### 2.1 Generals

\* The safety could not be assured if the instructions for use are not closely followed.

\* The external DC charger is **Class I** equipment. For safety reasons plug it to a supply line with the corresponding **ground terminal**.

Use the mains adapter in **Over-Voltage Category II** installations and **Pollution Degree 1** environments. It is for **INDOOR USE**.

\* When using some of the following accessories **use only the specified ones** to ensure safety.

Power adapter

Car cigarette lighter adapter

Mains cord

\* Observe all **specified ratings** both of supply and measurement.

\* Use this instrument under the **specified environmental conditions**.

\* **The user is not authorised to manipulate** inside the instrument:

Any change on the equipment should be carried out by qualified personnel.

\* Follow the **cleaning instructions** described in the Maintenance paragraph.

- \* Symbols related with safety:

—	DIRECT CURRENT		ON (Supply)
~	ALTERNATING CURRENT	○	OFF (Supply)
~~	DIRECT AND ALTERNATING	□	DOUBLE INSULATION (Class II protection)
—	GROUND TERMINAL	⚡	CAUTION (Risk of electric shock)
○	PROTECTIVE CONDUCTOR	!	CAUTION REFER TO MANUAL
—	FRAME TERMINAL	—	FUSE
△	EQUIPOTENTIALITY		

## 2.2 Specific Prescriptions

- \* Use the **FAULT LOCATOR** output with caution. See description on the 4.1. section.
- \* Keep closed the cover of this output when not using it.
- \* The **FAULT LOCATOR** output emits visible laser light at 650 nm wavelength and 0 dBm power in a divergence beam of 0.15 rad.
- \* Bear in mind warning messages next to the output laser:



- \* Do not manipulate inside the instrument, it could cause a dangerous laser radiation.

## 2.3 Descriptive Examples of Over-Voltage Categories

- Cat. I** Low voltage installations isolated from the mains.
- Cat. II** Portable domestic installations.
- Cat. III** Fixed domestic installations.
- Cat. IV** Industrial installations.

## 3 INSTALLATION

### 3.1 Power Supply

The PROLITE-75 is a portable instrument powered by a Li-Ion battery. Before performing any action, you must ensure that the battery is charged.

#### 3.1.1 Charging the battery

The instrument is supplied with a mains adapter in order to power or charge the battery.

There are two situations that can arise in the battery charging process:

- 1) **Stopped Instrument:** When connecting the external power it will start a rapid charging cycle, whose duration will depend on the battery status. It will take three hours for a discharged battery. The charging indicator on the front panel (see Figure 3.- [14]) will remain lit in amber colour during this period. At the end of charging and in full charge, the indicator will be green.
- 2) **Instrument in operation:** When connecting the charger, it will start a charging process in a lower regime and therefore longer. At the end of charging and in full charge, the indicator will change from amber to green colour.

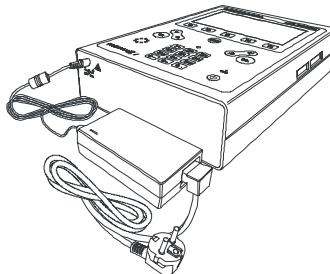


Figure 2.- Mains adapter connected to the PROLITE-75.



**PRECAUTION**

*Before using the power adapter, make sure the adapter is suitable for the mains voltage.*

### 3.1.2 Recommendations using the battery

If anticipating a long period of inactivity of the instrument, it is advisable to store it with battery fully charged and at temperatures below 25 °C.

It is advisable in these cases doing every 3 months a cycle of charging / discharging and a subsequent half charge (i.e. 50 %).

## 3.2 Installation and starting up.

The **PROLITE-75** has been designed for using as a portable equipment.

A fully charged battery can power the device for more than 11 hours. The screen shows a battery icon (████) indicating the status of the battery charge. Four vertical black lines indicate the battery is full charged. As the battery decreases, the lines disappear. When shows a single line (██) the battery should be recharged.

When starting up with a very low level battery, may be the **PROLITE-75** could start up, because of residual energy remaining at the battery, but the equipment will be disconnected automatically **BEFORE** displaying on the screen the low level battery indicator.

### 3.2.1 Adjusting contrast

LCD adjustment contrast is done via the dial ( see Figure 3.- [10] ) located at the right side panel of the instrument.

By turning the dial is possible to adjust the screen contrast to get the best display in any environmental condition. By turning anti-clockwise, the contrast decreases. By turning clockwise, it increases. The new value of contrast is kept when the instrument turns off.

## 4 OPERATING INSTRUCTIONS

### 4.1 Description of the controls and elements

#### Front panel

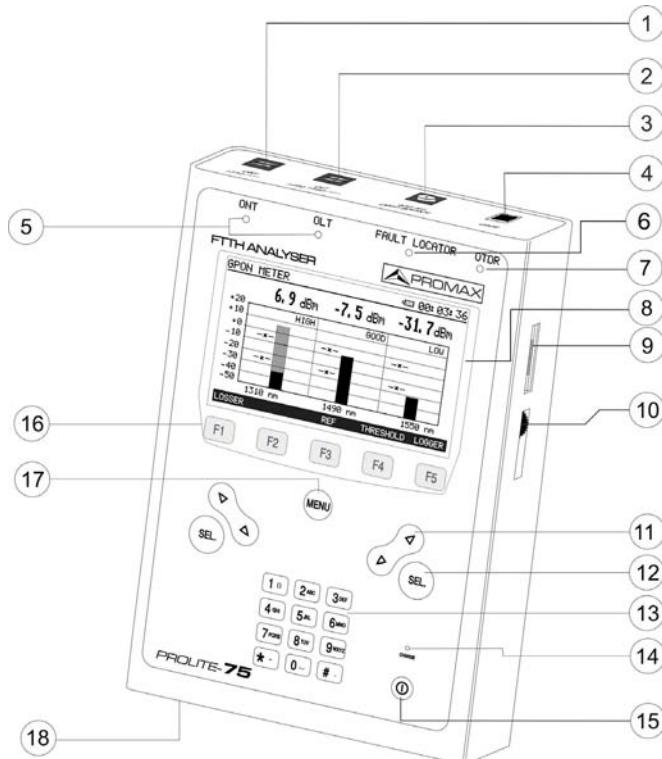


Figure 3.- Front panel.

[1] SC-APC (Female) connector for ONT input signal (1310 nm).

[2] SC-APC (Female) connector for OLT input signal (1490 / 1550 nm).

[3] Universal receptacle (2,5 mm) for laser output (650 nm).

**⚠ CAUTION: VISIBLE LASER BEAM (650 nm). DO NOT STARE INTO THE BEAM. CLASS 2 CATEGORIE LASER FOR THE VFL MODULE.**

[4] SC-APC (Female) connector for the additional OTDR module.

[5] **GPON Status LEDs:**

- LEFT LED:** ONT (Upstream).  
**RIGHT LED:** OLT (Downstream).  
**COLOURS:** **GREEN** (within threshold values), **RED** (below threshold values) and **ORANGE** (above threshold values).

[6] **FAULT LOCATOR** Status LED: **RED** (laser beam working) and **GREEN** (laser disabled).

[7] **OTDR** Status LED.

[8] Backlit LCD.

[9] **USB** connector for connecting to a computer.

[10] Contrast Dial.



[11] Arrow keys.



[12] Selection key.

[13] Alphanumeric keypad made up of 12 keys.

[14] Battery charge LED indicator.



[15] Starting up / Turning off key.



[16] SOFTKEYS, made up of 5 function keys.



[17] Shortcut key to the main menu.

[18] DC Adaptor Power Input.

## 4.2 Operating Instructions

The two main functions of the **PROLITE-75** are accessible from the main menu, after pressing the key  [17]:

- **Installed Modules**

- 1.- GPON METER:**

This option allows you to measure simultaneously the three wavelengths used in fibre optic distribution and take a more detailed analysis of the Upstream signal (for details see 4.2.2).

- 2.- FAULT LOCATOR:**

This option generates a visible laser beam, for locating problems in a fibre network (for details see 4.2.3).

- **Optional Modules** (not installed by default).

- 3.- OTDR:**

It is an expansion module for measuring length, attenuation and events along the fibre.

- 4.- CHANNEL ANALYSER:**

It is an expansion module that makes a spectral analysis of the optical signal.

To access any of these menus, press  [17] to access the main menu and then press the key  [11] until the desired option is shaded. Then press  [17] or  [12].

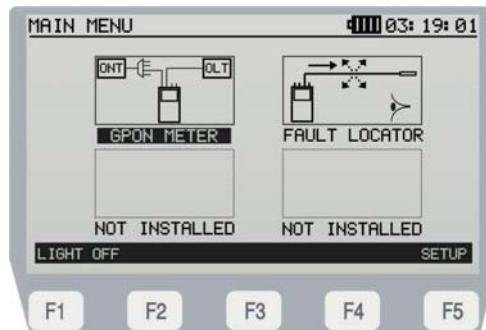


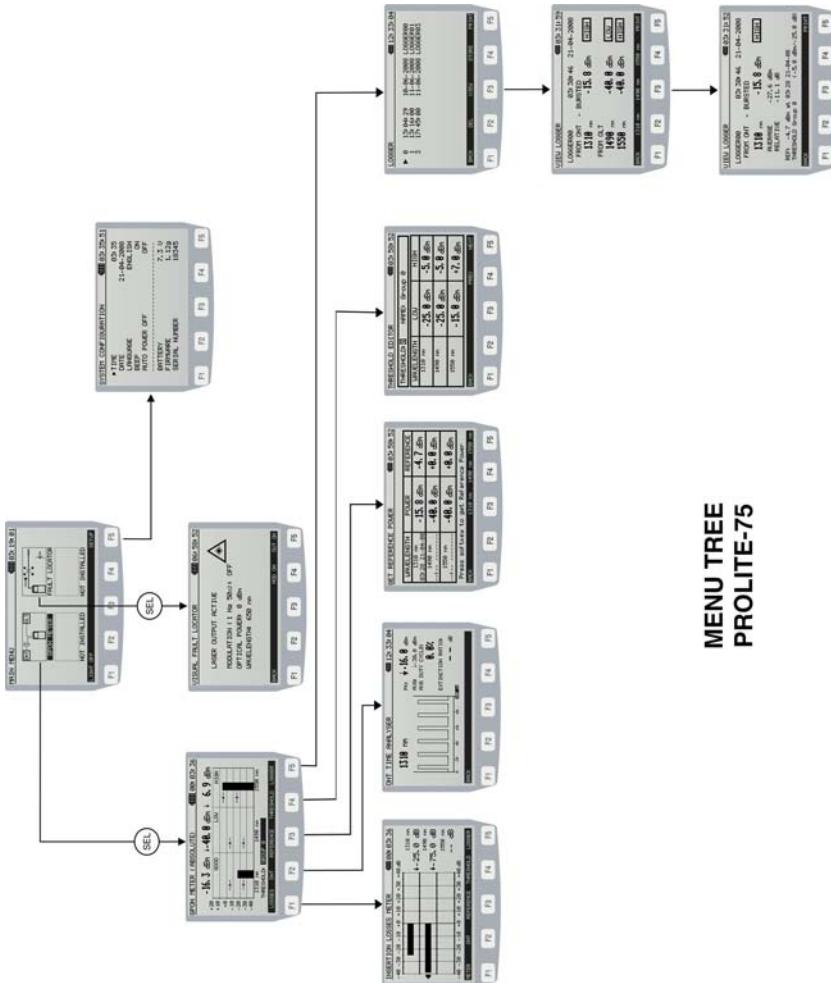
Figure 4.- Main Screen.

At the bottom of the screen appears the following options:

**LIGHT OFF / ON [F1]:** Turns ON / OFF the backlight.

**SETUP [F5]:** This menu allows you to edit basic characteristics of the instrument such as time, date and language among others (more details on 4.2.1).

After pressing the shortcut key  [17], the system comes back to the main menu, regardless the submenu where it is.



## MENU TREE PROLITE-75

Figure 5.- General view of the menu tree.

#### 4.2.1 SETUP mode

This menu allows you to edit basic parameters of the instrument such as time, date and language among others.

To access the **SETUP** mode:

- 1.- Press the key  [17].
- 2.- Press the soft key **SETUP** [F5].

It will appear a screen with parameters of the system to configure (Fig. 6).

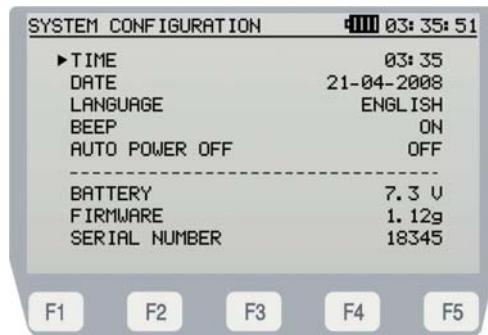


Figure 6.- SETUP screen.

To change the status or value of a parameter:

- 1.- Use the arrow keys  [11] to move the cursor along the menu.
- 2.- Go to the parameter you want to change and press the selection key  [12].
- 3.- The cursor will move next to the parameter value. Now you can change that value, using the arrow keys or the alphanumeric keypad (depending on the parameter).
- 4.- After making changes press again the selection key  [12] to save new values.
- 5.- To exit the Configuration Mode and return to the main menu, press the key  [17].

Editable parameters are next:

**a) HOUR**

It indicates the current time. Enter hours and minutes by the alphanumeric keypad. To enter the symbol ":" between hours and minutes, you should use the key , which is in the alphanumeric keypad.

**b) DATE**

It indicates the current date in European notation (dd-mm-yy). Enter the day, month and year by the alphanumeric keypad. To enter the hyphen symbol between numbers, press the key  which is in the alphanumeric keypad.

**c) LANGUAGE**

The language selected will be used on menus and screen. Use the arrow keys to move among available languages (Spanish, English, German and Portuguese).

**d) BEEP**

This parameter enables (ON) or disables (OFF) the acoustic indicator that beeps when pressing any key.

**e) AUTO POWER OFF**

This parameter allows you to activate (ON) or disable (OFF) the auto power off function. When this feature is active, the instrument will automatically disconnect from power supply after ten minutes without pressing any key.

At the bottom of the screen it appears the next information (read-only):

- **BATTERY:** Indicates the battery charge (in voltage).
- **FIRMWARE:** Indicates the firmware version of the instrument.
- **SERIAL NUMBER:** It is an unique identifier number for the instrument.

#### 4.2.2 GPON METER Module

The **GPON METER** module performs filtered and individualized measurements for the three wavelengths used in optic fibre for signal transmission (1490, 1550 nm for Downstream and 1310 nm for Upstream) and displays them simultaneously on screen.

To access the **GPON** module:

- 1.- Press the key  [17].
- 2.- Press the arrow keys until the **GPON METER** option is shaded.
- 3.- Press the key  [17] or  [12]. It appears the **GPON METER** main screen (Figure 7).

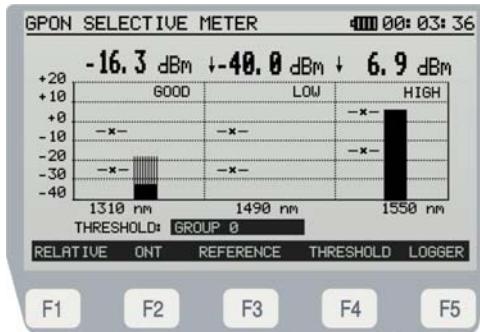


Figure 7.- GPON METER main screen in **ABSOLUTE** mode.

The screen shows a box chart divided into three equal parts. Each one shows the power level for a given wavelength, in a graphical and numerical way. At the bottom it identifies what wavelength belongs to each division. Left division corresponds to the wavelength 1310 nm of **UPSTREAM** and the other two (1490 and 1550 nm) to the **DOWNSTREAM**.

The **ABSOLUTE** measurement mode is the measurement of the absolute value of the signal strength in dBm (dB referred to 1 mW), as opposed to **LOSSES** mode representing the measure of the signal power in dB.

The **AVERAGE** power of the Upstream signal (1310 nm) is represented graphically superimposed on the peak value in opaque texture.

Two marks in each division (--- x ---) represent the maximum and minimum threshold values for each wavelength.

The screen displays status messages depending on the power level in relation to the maximum and minimum threshold values (see figure 7). They are next:

When the power is below the minimum threshold value it will appear the status message **LOW**.

When the power is within the threshold values, the status message will be **GOOD**.

When the power is above the maximum threshold value, the status message will be **HIGH**.

At the bottom of the screen it is displayed the **THRESHOLD GROUP** to which belongs the threshold values shown on screen. It shows the given name of the threshold group using currently. Threshold values can be grouped and saved in the memory of the instrument. Then, you can select the one more suited you want. If this

field is shaded, pressing the arrow keys [11] you can move among the groups of threshold values saved on the memory.

At the bottom of the screen, softkeys provide access to the next options:

- LOSSES [F1]:** Pressing this softkey you can measure the insertion losses (see section 4.2.2.1).
- ONT [F2]:** Pressing this softkey you will get into the function to measure Upstream signal over time (see section 4.2.2.2).
- REFERENCE [F3]:** This function allows you to enter the reference values for **LOSSES** measurement (see section 4.2.2.3).
- THRESHOLD [F4]:** Using this function you can define and save some threshold values in groups. Later they can be used for a measurement (see section 4.2.2.4).
- LOGGER [F5]:** Pressing this key you can save measures taken at the time (see section 4.2.2.5).

#### 4.2.2.1 LOSSES Function

The **LOSSES** function calculates the insertion loss of each wavelength with respect to some reference values acquired by the user.

The Insertion Loss of a line is the ratio of the power received at the end of the line to the power transmitted into the line. The loss of signal power is due to the different elements that are in the optical fibre system, such as connectors, splices and couplers.

To access the **LOSSES** module:

- From the **GPON METER** function press the softkey **LOSSES [F1]**.

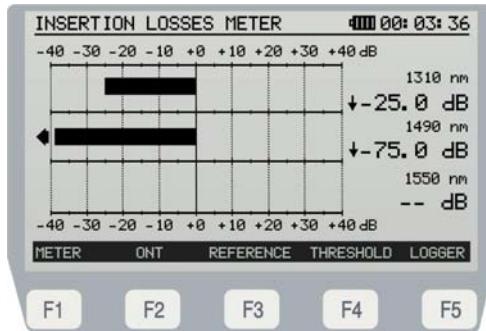


Figure 8.- LOSSES screen.

The screen shows (Figure 8.-) the loss or gain of the power in dB units, for each of the wavelengths, in the form of a horizontal bar graph and in numerical format.

The central point "0" of the graph represents the reference level acquired. From this reference level, the signal power can grow or decrease. Typically, in a signal that goes to the **OLT** (Downstream: 1490/1550) losses may grow, but when goes to the **ONT** (Upstream: 1310) may decrease as it approaches to the emission center.

The bar graph can represent gain/losses up to **± 40 dB** with regard to the reference level. The end of each bar graph will show an arrow when exceeding this value. In numeric format will show the real value.

At the bottom of the screen, softkeys provide access to the next options:

<b>METER</b> [F1]:	Pressing this softkey returns to the <b>GPON METER</b> function (see paragraph 4.2.2).
<b>ONT</b> [F2]:	Pressing this softkey you will get into the function to measure Upstream signal over time (see paragraph 4.2.2.2).
<b>REFERENCE</b> [F3]:	This function allows you to enter the reference values for measuring <b>LOSSES</b> (see paragraph 4.2.2.3).
<b>THRESHOLD</b> [F4]:	Using this function you can define and save some threshold values in groups. Later they can be used for a measurement (see paragraph 4.2.2.4).
<b>LOGGER</b> [F5]:	Pressing this key you can save measures taken at the time (see paragraph 4.2.2.5).

#### 4.2.2.2 ONT function

The function **ONT TIME ANALYSER** performs the characterization of a **ONT** signal. In this way, allows displaying the pulses activity of the Upstream signal (1310 nm) over time. Also allows time scale to be change (resolution). This analyser is specially designed to catch **BURST** signals, that is, when it is sent a lot of information in a very short time.

To access the **ONT** function:

- 1.- From the **GPON METER** function press the softkey **ONT** [F2].

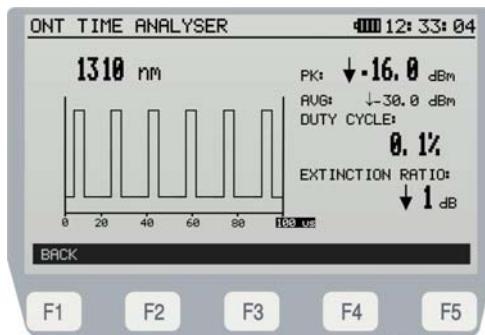


Figure 9.- ONT Analyser.

To use this function, the meter has to be connected directly to a single **ONT** terminal (see fig. 10.-). If you connect the meter to an intermediate point in the network, it can take part more than one **ONT** and then the analysis would not be correct.

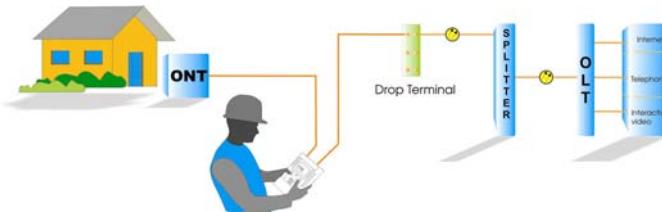


Figure 10.- Direct Connection to an ONT.

The measures shown on the screen are:

- PK:** Peak power of the Upstream signal.  
**AVG:** Average power of the Upstream signal.  
**DUTY CYCLE:** Cycle of work defined as the percentage ratio between the pulse duration and period.  
**EXTINCTION RATIO:** Ratio of two optical power levels (in dB) of a digital signal generated by an optical source, where P1 is the optical power level number 1 when the light is "on" and P2 is the optical power level number 2 when the light is "off."

To change the time scale, press the cursor keys [11]. Available values are from 50 microseconds to 100 ms.

At the bottom of the screen, softkeys provide access to the next option:

- BACK [F1]:** Returns to the **GPON METER** function (see section 4.2.2).

#### 4.2.2.3 REFERENCE function

**REFERENCE** function allows you to define the reference values that will be used for **LOSSES** measurement (see Figure 11.-).

To access the **REFERENCE** function:

- 1.- From the **GPON METER** function press the soft key **REFERENCE** [F3].

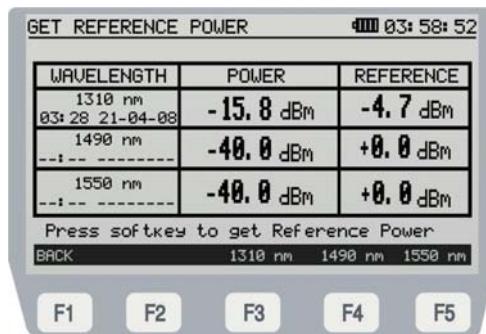


Figure 11.- REFERENCE function.

To take a reference value, press the softkey corresponding to the wavelength at which you want to capture the new value. By doing this, the system will take as a reference value the power given on the column “**POWER**”. Once you have the captured value, pressing [12] you confirm and store it on the device’s memory.

Data shown on the screen is next:

**WAVELENGTH:** It displays the wavelength and the data when the level of reference was taken.

**POWER:** Displays real-time absolute power for each wavelength.

**REFERENCE:** Displays the current reference power (in dBm). To upgrade the power reference, press the softkey corresponding to the wavelength at which you desire a new reference value.

At the bottom of the screen, soft keys provide access to the next options:

**BACK** [F1]: It returns to the **GPON METER** screen (see section 4.2.2).

**1310 nm** [F3]: It captures the reference power at 1310 nm. Once captured, confirm the value pressing the key [12].

**1490 nm [F4]:** It captures the reference power at 1490 nm. Once captured, confirm the value pressing the key  [12].

**1550 nm [F5]:** It captures the reference power at 1550 nm. Once captured, confirm the value pressing the key  [12].

#### 4.2.2.4 THRESHOLD function

The **THRESHOLD** function allows you to edit the threshold values that will be used during measurement.

To access the **THRESHOLD** function:

- 1.- From the **GPON METER** function press the soft key **THRESHOLD** [F4].

The **THRESHOLD** function allows you to define a minimum threshold value (**LOW**) and maximum (**HIGH**) of acceptability for each wavelength (Fig. 12.-).

Once defined, they appear in the graph at the **GPON METER** function, in the shape of a line with an "x" in the middle (--x--) (Fig.- 7.-).

Status level defined by the threshold values are:

- Power level above the maximum threshold value is equal to **HIGH**.
- Power level between the maximum and minimum threshold value is equal to **GOOD**.
- Power level below the minimum threshold value is equal to **LOW**.

In addition, LEDs associated with the **ONT** and **OLT** signals [5] change its colour depending on the power signal level.

- If level is **LOW**, the colour of the **LED** is **RED**.
- If the level is **MEDIUM**, the colour of the **LED** is **GREEN**.
- If the level is **HIGH**, the colour of the **LED** is **ORANGE**.

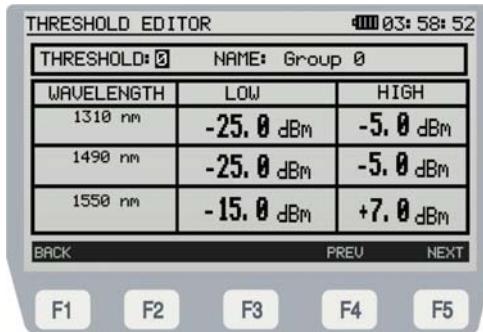


Figure 12.- THRESHOLD function.

To move between editable fields you should press the softkey **PREV** [F4] (previous field) or **NEXT** [F5] (next field).

Once on the field, to edit a value you should use arrow keys  [11] or the alphanumeric keypad [13].

Fields displayed on the screen are:

- THRESHOLD :** Its a numeric value that identifies a set of threshold values.
- NAME :** It is the name that defines a set of threshold values.
- WAVELENGHT :** It indicates the wavelength to which will be applied the threshold values shown on the screen.
- LOW :** It defines the minimum threshold for a given wavelength.
- HIGH :** It defines the maximum threshold for a given wavelength.

At the bottom of the screen, the soft keys provide access to the next options:

- BACK [F1]:** It returns to the **GPON METER** screen (see 4.2.2).
- PREV [F4]:** It goes to the previous editable field.
- NEXT [F5]:** It goes to the next editable field.

#### 4.2.2.5 LOGGER function

**LOGGER** function performs data acquisitions and stores them on the instrument. Later you can view or print those data.

To access the **LOGGER** function:

- 1.- From the **GPON METER** function press the soft key **LOGGER** [F5].

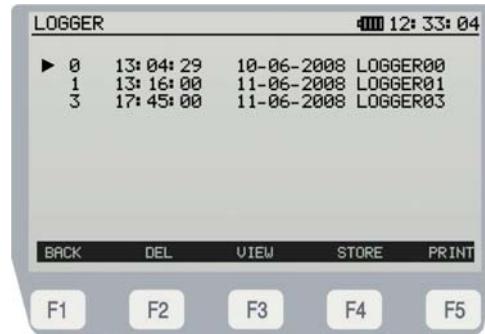
The data stored in a logger is:

- Power at 1310, 1490 and 1550 nm (dB).
- Status Message regarding power level (LOW, GOOD, HIGH).
- Date and Time of acquisition.
- Average level power for each wavelengths.
- Relative level power for each wavelengths.
- Threshold group used.

The **PROLITE-75** allows you to store up to 100 acquisitions or loggers. These measures are stored on its memory for later view, printing or transfer to a PC.

The **LOGGER** main screen shows a list with all loggers stored until now. On the left side of the logger line it indicates the logger number, followed by date and time of acquisition. When saving a logger, system assigns automatically a registration number to the new file, which is correlated to the numbering in the list of loggers. It can also reuse a number from a logger that was removed.

To select a logger, you should press the arrow keys  [11] until the cursor points at the desired logger.



**Figure 13.-** List of stored loggers.

If there are not loggers stored, it is displayed the message "**EMPTY LOGGER**".

At the bottom of the screen, the soft keys provide access to the next options:

**BACK** [F1]: Returns to the **GPON METER** screen (see section 4.2.2).

- DEL [F2]:** Removes the logger the cursor is pointing. The system requires confirmation. To confirm deleting, you should press **[F4]**. To get out without deleting you should press **[F5]**.
- VIEW [F3]:** Displays the data stored in the selected logger (Figure 14 and 15).



Figure 14.- Logger General Screen.



Figure 15.- 1310 nm Signal.

From **VIEW LOGGER**, pressing **BACK** [F1] it will return to the previous screen (**LOGGER**).

From **VIEW LOGGER**, pressing **1310 nm** [F2] it will display the measures of the wavelength 1310 nm.

From **VIEW LOGGER**, pressing **1490 nm** [F3] it will display the measures of the wavelength 1490 nm.

From **VIEW LOGGER**, pressing **1550 nm** [F4] it will display the measures of the wavelength 1550 nm.

From **VIEW LOGGER**, pressing **PRINT** [F5] the logger print directly to a printer.

**STORE** [F4]: Stores all measures in a logger file.

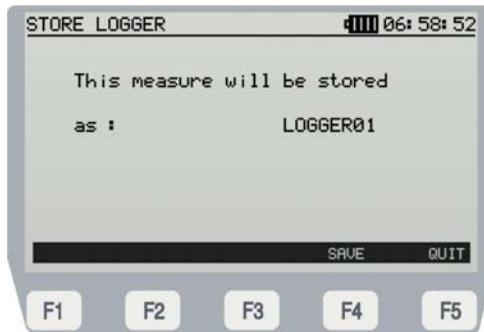


Figure 16.- Storing a Logger.

From **STORE**, pressing **SAVE** [F4] It generates a logger where data is stored.

From **STORE**, pressing **QUIT** [F5] Storage is cancelled.

**PRINT** [F5]: It prints the data from the logger selected (see section 4.3).

#### 4.2.3 VISUAL FAULT LOCATOR Module

The **FAULT LOCATOR** module emits a visible laser beam. Connecting the output of the laser instrument to the cable to check, you can find cuts or breakings, identify fibers, etc.

To access the **FAULT LOCATOR** module:

- 1.- Press the key  [17].
- 2.- Press the arrow keys  [11] until the option **FAULT LOCATOR** is shaded.
- 3.- Press  [17] or  [12]. It appears the **FAULT LOCATOR** screen (Figure 17 and 18).

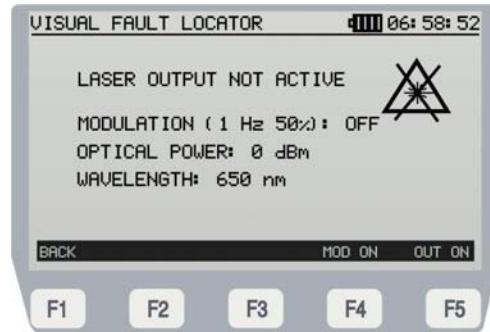


Figure 17.- FAULT LOCATOR module (NOT ACTIVE).

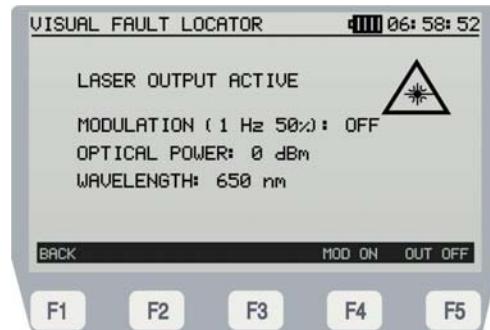


Figure 18.- FAULT LOCATOR module (ACTIVE).

On the screen appears features of the laser:

- “**Laser status**”: Active or Not Active.
- “**Modulation**”: Active (**ON**) or not (**OFF**) laser pulses.
- “**Optical Power**”: Power consumption of the laser.
- “**Wavelength**”: Wavelength of the laser.

At the bottom of the screen, softkeys provide access to the next options:

**BACK [F1]:** Returns to the main screen.

**MOD ON / OFF [F4]:** Actives / Disables the laser modulation at 1 Hz.

**OUT OFF / ON [F5]:** Actives / Disables the laser beam.

### 4.3 Connecting Devices.

The instrument allows connecting a personal computer to transfer data, via **USB** cable.

- 1) To make the connection between the instrument and the computer, first you should disconnect both from the mains.
- 2) Connect the cable end to the **USB** connector [9] at **PROLITE-75** and the other end into the **USB** port of the computer.

If there is any error during transmission, a message show up on screen to warn about the error.

The control software manages the data downloaded from the instrument:

- 1) **LOGGER**: Edits and saves on the computer loggers from the instrument.
- 2) **UPGRADE**: Upgrades to the latest firmware version.

For more details consult the software user's manual.



USER'S MANUAL. PROLITE-75

## 5 MAINTENANCE

This part of the manual describes the maintenance procedures and the location of faults.

### 5.1 Instructions for returning by mail

Instruments returned for repair or calibration, either within or outwit the guarantee period, should be forwarded with the following information: Name of the Company, name of the contact person, address, telephone number, receipt (in the case of coverage under guarantee) and a description of the problem or the service required.

### 5.2 Method of maintenance

The method of maintenance to be carried out by the user consists of cleaning the cover and changing the battery. All other operations should be carried out by authorised agents or by personnel qualified in the servicing of instruments.

#### 5.2.1 Cleaning the cover.

##### **CAUTION**

*Do not use scented hydrocarbons or chlorized solvents. Such products may attack the plastics used in the construction of the cover.*

The cover should be cleaned by means of a light solution of detergent and water applied with a soft cloth. Dry thoroughly before using the system again.

##### **CAUTION**

*To clean the contacts, use a dry cloth. Do not use a wet or damp cloth.*

##### **CAUTION**

*Do not use for the cleaning of the front panel and particularly the viewfinders, alcohol or its derivatives, these products can attack the mechanical properties of the materials and diminish their useful time of life.*

### 5.3 Components which user can not replace

#### 5.3.1 Not replaceable fuses by user

F001 y F002:

FUS 7 A T 125 V