



Precision Rated Optics

Work with a *PRO!*

OBL-201A

Optical Break Locator



Operation Guide

1. Introduction

The OBL-201A Break Locator is a 9/125µm Singlemode Break Locator operating at 1550nm (± 20 nm) and boasting a 100mW output, capable of testing up to 100Km. Technicians can quickly locate fiber breaks and imperfections and detailed results are displayed on a large LCD screen.

At only 10 oz., this unit is extremely portable and user-friendly. The USB port and included USB cable make it easy to transfer data and perform updates. A built-in VFL port and <3 Meter Dead-Zone make the OBL-201A a true performer.

Sold, serviced and supported in the USA, the OBL-201A comes with a standard 3-year manufacturer's warranty, interchangeable connectors and a rechargeable NiMH battery and charger.

Main features:

- Short Dead Zone - Less Than 3m
- Backlit for Easy Operation in Low Light
- Data Transfer via USB Interface
- Interchangeable Connectors (SC/ST/FC)
- Built-in VFL Port

2. Specification

Fiber Type	9/125 µm Singlemode
Wavelength	1550 (± 20 nm)
Emitter Type	LD
Connector Type	FC/PC (Interchangeable SC,ST)
Pulse Width	10ns/20ns/40ns/80ns/160ns/320ns/640ns/1280ns/2560ns/5120ns/12400ns/24800ns (Auto-Switch)
Max. Output Power	100 mW
Max. Measurement Range	100 Km
Distance Accuracy	+/- (0.8 m + 0.001% x Distance)
Data Storage	999 Measurements
Event Dead Zone	<3 m
Power Supply	AC/DC Adaptor
Battery Life	Rechargeable NiMH Battery (15,000 Tests)
Communication Port	Mini USB
Operating Temperature	14° F~122° F (-10° C ~ +50° C)
Storage Temperature	-4° F ~ 140° F (20° C~ +60° C)
Environmental Conditions	0 ~ 85% (Humidity, Non-Condensing)
Weight & Dimensions (HxWxD)	7.5" x 4.1" x 2.1" / 10 oz (190 x 105 x 55mm / 286 g)

3. Warranty

Three Years Limited Warranty

PRO products are warranted against the defective components and workmanship for a period of three years from the date of delivery to the original customer. Any product found to be defective within the warranty period would be returned to the authorized service center for repair, replacement and calibration.

Exclusions

The warranty on your equipment shall not apply to defects resulting from the following:

- Unauthorized repair or modification
- Misuse, negligence, or accident

Returning Product

To return product, you may contact us to obtain additional information if necessary. To serve you better, please specify the reasons for the return. All delivery and mails should be sent to the following address:

4. Safety Information

Warnings!

- Never look directly into optical outputs or a fiber while the equipment is on, invisible laser beam may damage your eyes.
- Do not short-circuit the terminal of AC adapter/charger and the batteries. Excessive electrical current may cause personal injury due to fumes, electric shock or equipment damage.
- Connect AC power cord with the equipment and wall socket properly. While inserting the AC plug, make sure there is no dust or dirt on the terminals and both plugs are fully seated. Incomplete engagement may cause fuming, electric shock or equipment damage and may result in personal injury.
- Do not operate the equipment near hot objects, in hot environments, in dusty/ humid atmosphere or when condensation is present on the equipment. This may result in electric shock, product malfunction or poor performance.

4.1 Discharged batteries

Remarks:

- 1) When the battery power is almost out, there will be a warning of indicator keeps blinking, then please replace the batteries or plug in AC adapter to charge batteries.
- 2) Please make sure that you have turned the instrument on before charge the batteries, unplug the AC adapter when the batteries are fully charged.
- 3) Please make sure the batteries are well placed before charge them.
- 4) To eliminate the possibility of acid leakage, please take out the batteries if the unit will not be used for a long time.

4.2 AC operation

If the instrument is mainly used at one location, e.g. in a laboratory or test department, the AC adapter can be used to power it instead of batteries. There is a DC input jack on the left side of the OBL-201 A instrument casing into which the output cable of the AC adapter is plugged. And when the AC adapter is plugged in, the AC Indicator on the LCD will be displayed.

Note:

- 1) Power is supplied by the AC adapter even if battery is fitted. And the battery indicator is not displayed on the screen when AC adapter is plugged.
- 2) Make sure that the operating voltage of the AC Adapter I Charger is the same as the local AC line voltage.

5. Preparing for Operation

Unpacking the instrument

Packing material

We suggest that you keep the original packing material. Using the original packing material is your guarantee of protecting the instrument during transit.

Checking the package contents

The standard accessories of OBL-201 A are as follows:

- Main unit
- Quality Check Report
- Carrying Case
- User's Guide
- 4x Ni-MH Batteries

Optional accessories: AC Adapter

Checking for damage in transit

After unpacking the instrument, check to see whether it was damaged in transit. This is particularly likely if the outer casing is clearly damaged. If there is damage, do not attempt to operate the instrument or to repair it without authorization. Doing so can cause further damage and you may lose your warranty qualification.

6. Operation

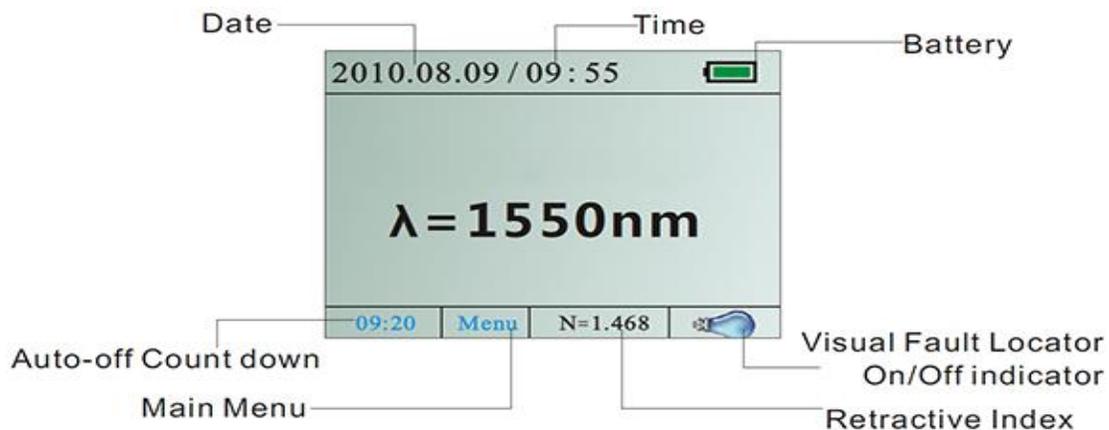
Instrument Panel can be divided into two parts:

- 1) First part is LCD display.
- 2) Second part is Operation keys.

Type of fiber connector: FC/PC, SC/PC, ST/PC.

6.1 Key's Functions

	Press the key to power on the unit. The unit will turn off automatically if no key pressing happens in 10 minutes; if pressing down the key for longer than 2 seconds, the unit will be turned on with "auto off" function deactivated; when the unit is in the state of power on, if pressing down the key for longer than 2 seconds, the unit will be shut down.
	Exit the current working states
	Start test
	Press the key to enter or quit menu
	Confirm to proceed
	<Up>, <Down> arrow key.
	<Right>, <left> arrow key.



6.2 Keypress Function

Turning the instrument on and off:

Press the "ON/OFF" key briefly, the instrument powers on.

Press the "ON/OFF" key >2second, the instrument powers off.

Note:

Auto-off function

The instrument powers off if no key press happens in 10 minutes. Press the "ON/OFF" key for about 2 seconds to power on the instrument with "Auto-off" function deactivated.

6.3 Menu Introduction

Press MENU to enter the main menu interface

- 1) Refractive Index Setting
- 2) Threshold (3&1)
- 3) Unit Set(m)
- 4) Load Data
- 5) Date/Time Set
- 6) Back Light
- 7) Pulse width set (5120 ns)
- 8) Help
- 9) Language

Refractive Index Setting:

Move the cursor to refractive index setting, press ok to enter the setting menu, press right/left to move the cursor, press up/down to change the index value, press ok to save it and quit, press c to quit directly.

Threshold Setting:

There are reflection events threshold setting and non-reflective event threshold setting. Place the cursor to threshold setting menu, press the OK key to enter the threshold settings menu, press LEFT I RIGHT to switch between reflection events threshold setting and non-reflective event threshold setting; press UP I DOWN key to edit the corresponding threshold value, press OK key to save and exit. Press the "C" key exit without saving.

Unit Setting:

Move the cursor to the unit setting menu, press ok to enter it, press up/down/right/left to choose the unit, press ok to save it and quit, press c to quit directly

Data Review:

Place the cursor to Data Review menu, press the "OK" button to enter it. The number in red is with storage of data; the number in black is without storage of data. Each number stores one sets of testing results of one testing , each set of data is up to 13 reflection events and 13 non-reflective event data.

Place the cursor to the appropriate data number; press the OK button to enter the data in list form. Press MENU button to locate the desired number fast, input the number with LEFT I RIGHT/UP I DOWN key, and then OK button to enter the data in list form.

Date/Time Setting:

Press up/down/right/left to choose the data. Press MENU to edit it, and the search can be started from anywhere by entering a starting number; press "C" to quit the submenu. Or you can set the date and time by using the simulating software on PC.

Backlight Setting:

Move the cursor to data and time setting menu, press ok to enter the submenu; press right/left to choose the term, press up/down to change the value, press ok to save it and quit, press "C" to quit directly.

Pulse width set:

Move the cursor to pulse width setting menu, press ok to enter the submenu; press right/left/up/down to choose the pulse width, press ok to save it and quit, press "C" to quit directly.

Language Setting:

Move the cursor to language setting menu, press ok to enter the submenu, choose the language between simplified Chinese and English

Data deleting:

Data can be deleted by PC through simulating software or by head piece, simply press menu key to delete data and keep press it for longer than 2 seconds. All data can be deleted

6.4 Testing Operation

Testing:

Set the appropriate threshold level and pulse width before testing, and then press "T" to start measure. (Hint: threshold level, pulse width, and measure distances are tightly related. Shorter distance should choose the smaller pulse width, while longer distance should choose the bigger pulse width. The pulse width needs to be set according to practical situation.)

Reading data from PC:

There will be a USS logo displaying in the screen when a USS device connect to the instrument. Then you may read the data by using the simulating software.

Operation of visual fault It locator: In the main interface, press and DOWN keys> 2S to switch between; On, 2Hz output, Off.

AC adapter usage:

There will be an AC adapter logo displaying in the screen and battery logo disappears when the AC adapter is connected with the instrument. In the reverse case, a battery logo will be displaying in the screen and AC adaptor logo disappears.

6.5 Maintenance:

- 1) Clean the fiber connector and connecting flange on a regular basis.
- 2) Use the standard fiber connectors to proceed the test.
- 3) Please use the dust-proof cap to secure the connector to be scratched or contaminated every time when the product is not in operation.
- 4) Make sure that the operating voltage of the AC adapter/charger is the same as the local AC line voltage.
- 5) To eliminate the possibility of acid leakage, please take out the batteries if the unit will not be used for a long time.
- 6) Do not fix the instrument in private, or it may cause permanent damage to the instrument and it will loss the warranty qualification.

6.6 Attentions:

- 1) Please make sure the fiber connector is clean before test.
- 2) The batteries and the AC adaptor can work at the same time, but it doesn't work as recharge function in that case, take out the batteries if the batteries needs to be recharge , use the exclusive recharger to recharge batteries.
- 3) Please cover the protective dust cap when it is not in use.
- 4) Do not connect laser source to this instrument directly, In case of the damage to optical sensors.
- 5) Make sure the test fiber is well connected with fiber interface before the testing starts, the fiber cannot be pulled out during the period of testing time, or the refractive effects may damage the instrument.
- 6) The light pulse generated by the testing instrument may damage the eyes so do not look into the light pulse.

6.7 Trouble shooting

Malfunction Type	Possible Cause	Recommended solution	Remarks
Failure to turn on/off	No power input	Plug in battery or AC	DIY Available
	Battery exhausted	Charge battery	DIY Available
	Reverse-installed battery	Re-install battery	DIY Available
		(Still doesn't work)	Return to factory
On/Off disorder	Low battery	Charge battery or use AC power supply	DIY Available
Inaccurate measurement	Contaminated connector	Swab the dust by using an alcohol-DIY Available impregnated thin cotton swab	DIY Available
	Connector unfitted	Re-install the connector	DIY Available
Error display	Humid environment	Try later while it is not too humid	DIY Available
	Magnetic field environment	Stay far away from magnetic field	DIY Available
	Metal dust environment	May cause damage on mainboard	Return to factory
	Humid environment	Try later while it is not too humid	DIY Available
On/Off failure	Keypad short circuit	Replace keypad	Return to factory

Warning

This test instrument is available for single-mode optical fiber measurement only.



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