

Walfront AUA800U

AUA800U Optical Time Domain Reflectometer

User Manual

Model: AUA800U

Brand: Walfront

1. INTRODUCTION

The Walfront AUA800U Optical Time Domain Reflectometer (OTDR) is a versatile and powerful instrument designed for the evaluation of FTTx and access network construction and maintenance. It integrates multiple functions including OTDR, Stable Light Source (LS), Optical Power Meter (OPM), Visual Fault Locator (VFL), and RJ45 cable testing capabilities. With its 4.3-inch touchable color display, it provides an intuitive interface for identifying fiber breaks, measuring optical cable lengths, and calculating relative optical power loss, ensuring efficient and accurate fiber optic network diagnostics.

2. SAFETY INFORMATION

Please read all safety warnings and instructions carefully before using the AUA800U OTDR. Failure to follow these instructions may result in injury or damage to the device.

- **Laser Safety:** This device contains a laser light source. Do not stare directly into the optical output port or view with optical instruments. Invisible laser radiation may be emitted.
- **Battery Safety:** Use only the specified charging cable and plug. Do not disassemble, crush, or expose the built-in Li-battery to extreme temperatures or fire.
- **Environmental Conditions:** Operate the device within the specified temperature and humidity ranges. Avoid exposure to dust, moisture, or corrosive substances.
- **Handling:** Handle the device with care. Avoid dropping or subjecting it to strong impacts.
- **Maintenance:** Refer to the maintenance section for cleaning and care instructions. Do not attempt to service the device yourself.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package. If any items are missing or damaged, please contact your supplier.

- 1 x Optical Time Domain Reflectometer (AUA800U)
- 1 x Instruction Manual
- 1 x Charging Cable
- 1 x Power Plug
- 1 x SC Adapter

- 1 x RJ45 Receiver
- 1 x Storage Bag
- 1 x Strap
- 1 x FC to LC Adapter
- 1 x Memory Card (pre-installed)



Figure 3.1: AUA800U OTDR with its complete set of accessories, including the main unit, storage bag, RJ45 receiver, charging cable, plug, and various adapters.

4. PRODUCT OVERVIEW AND INTERFACES

Familiarize yourself with the main components and interfaces of the AUA800U OTDR.



Figure 4.1: Detailed diagram of the AUA800U OTDR's interfaces and controls. Key features include the 4.3-inch color LCD, VFL interface, OTDR/LS optical fiber interface, OPM interface, RJ45 interfaces (LAN1, LAN2), USB port, TF (Micro SD) card slot, and various control buttons (OK, SET, ESC, Direction keys, Power).



Figure 4.2: Close-up view of the optical interfaces on the AUA800U OTDR. These include the VFL Red Light Source Interface (1), OTDR/Stable Light Source Interface (2), OPM Optical Power Meter Interface (3), and an LED lamp Flashlight (4). Various adapters like FC and SC are shown for compatibility.

4.1 Physical Dimensions



Figure 4.3: Dimensions of the AUA800U OTDR unit, showing approximate measurements of 173mm (6.81in) in length, 109mm (4.29in) in width, and 45mm (1.77in) in height.

5. SETUP

5.1 Charging the Device

The AUA800U OTDR has a built-in 3.7V, 4000mAh Li-battery. Before first use, ensure the device is fully charged.

1. Connect the charging cable to the Type-C USB port on the device.
2. Connect the other end of the charging cable to the provided power plug and plug it into a standard electrical outlet.
3. The charging indicator light will illuminate during charging. It will change or turn off once charging is complete.

5.2 Installing Batteries for RJ45 Receiver

The RJ45 Receiver requires 2 x AAA batteries (not included).

1. Open the battery compartment on the RJ45 Receiver.
2. Insert 2 AAA batteries, ensuring correct polarity (+/-).

3. Close the battery compartment securely.

5.3 Powering On/Off

Press and hold the power button (usually located near the bottom right of the screen) for a few seconds to turn the device on or off.

6. OPERATING INSTRUCTIONS

The AUA800U OTDR features a 4.3-inch touchable color display for easy navigation and operation. The main interface provides access to various functions.

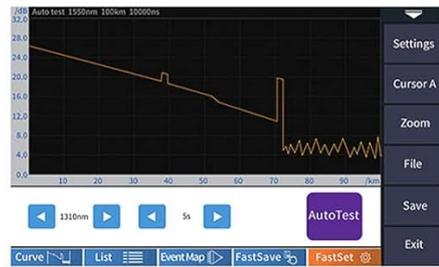


Figure 6.1: The main interface of the AUA800U OTDR, displaying icons for various functions such as Auto OTDR, Expert OTDR, Event Map, OPM, VFL, Laser Source, Loss Test, RJ45 Length, RJ45 Sequence, RJ45 Tracking, End Face Detection, File Management, and System settings.

6.1 OTDR Functions (Auto OTDR, Expert OTDR, Event Map)

The OTDR function is crucial for fiber optic cable testing, identifying breaks, and measuring lengths.

1. Auto OTDR



Auto OTDR: it only needs to set the wavelength and measurement time, and other parameters are automatically selected by the instrument to complete the test.

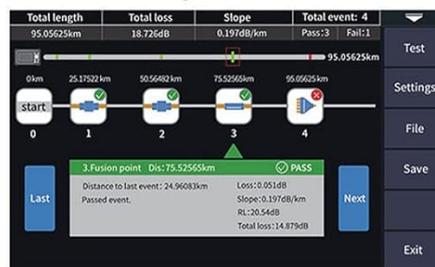
2. Expert OTDR

Expert OTDR: parameters such as wavelength, test range and pulse width shall be set.

- Curve**: The curve and event list are displayed at once.
- List**: Link results are summarized to a list.
- Event Map**: Switch to event icon display mode.
- FastSave**: Save current curve file quickly.
- FastSet**: Enter parameter setting interface.



3. Event Map



The function is fully one key automatic test, and the information such as the length of the optical fiber link to be measured, the type of the joint and the position of the breakpoint are displayed graphically, and the results are clear and easy to understand.

4. OPM

It is used for signal power test and insertion loss test of various equipment and photoelectric components. It can identify and measure the power of 270/330/1k/2kHz frequency laser.



Figure 6.2: Screenshots illustrating the interfaces for Auto OTDR, Expert OTDR, Event Map, and OPM functions. These show graphical representations of fiber attenuation, event lists, and power measurements.

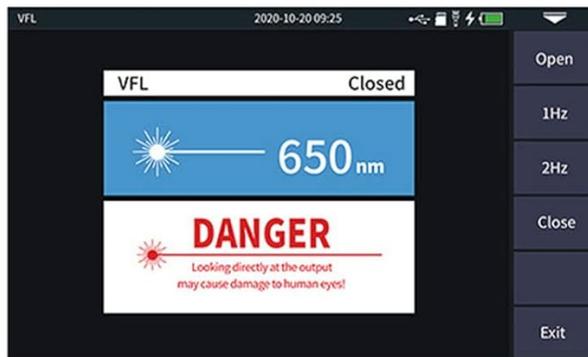
6.1.1 Auto OTDR

This mode simplifies testing by automatically setting parameters.

- From the main menu, select 'Auto OTDR'.
- Just set the wavelength and measurement time. Other parameters are automatically selected by the instrument.
- Press 'AutoTest' to begin the test.

The VFL function emits a visible red laser light to quickly locate breaks, bends, or poor connections in fiber optic cables over short distances.

5.VFL

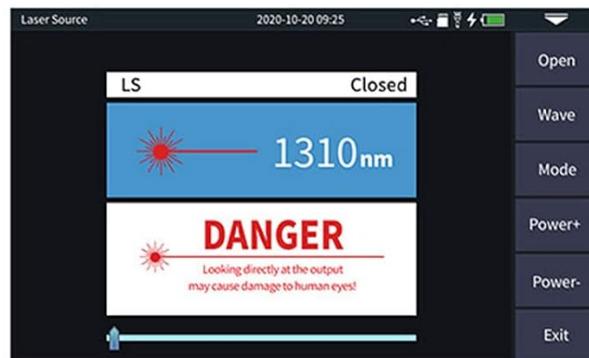


Open: turn on the VFL and output in continuous mode
1Hz: VFL flashes at 1Hz
2Hz: VFL flashes at 2Hz frequency
Close: turn off VFL

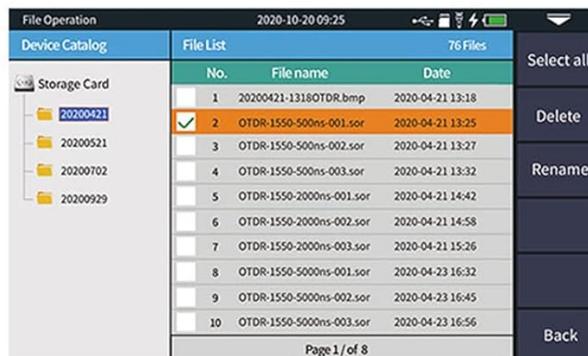
6.Laser Source

Abbreviations:LS

There are five working modes: CW、270Hz、330Hz、1kHz和2kHz



7.File Operation



File operation
All the test curves are saved in the standard SD card of the instrument. Press [File] to enter the file operation interface. You can open, delete and rename files

Figure 6.4: Screenshots showing the VFL, Laser Source, and File Operation interfaces. The VFL screen indicates open/closed status and frequency options (1Hz, 2Hz). The Laser Source screen shows wavelength and operating modes. The File Operation screen displays saved test files.

- Select 'VFL' from the main menu.
- Connect the fiber to the VFL Red Light Source Interface (2.5mm universal SC, FC, ST).
- Choose 'Open' to turn on the VFL. You can select 1Hz (flashes at 1Hz) or 2Hz (flashes at 2Hz) modes.
- Select 'Close' to turn off the VFL.

6.3 Laser Source (Stable Light Source)

The stable light source function provides a continuous optical signal for loss measurement.

- Select 'Laser Source' from the main menu.
- Connect the fiber to the OTDR or Stable Light Source Interface.
- Choose 'Open' to activate the laser source.

- Select the desired wavelength (e.g., 1310nm, 1550nm) and operating mode (CW, 270Hz, 330Hz, 1KHz, 2KHz).
- Select 'Close' to turn off the laser source.

6.4 OPM (Optical Power Meter)

The OPM function measures the optical power of a fiber optic signal.

- Select 'OPM' from the main menu.
- Connect the fiber to the OPM Optical Power Meter Interface (2.5mm universal SC, FC, ST).
- The device will display the measured optical power in dBm.
- You can adjust the wavelength and set reference values if needed.

6.5 RJ45 Cable Testing Functions

The AUA800U OTDR includes functions for testing RJ45 network cables.



Figure 6.5: The RJ45 cable testing interface, showing options for line seeking (tracking), line sequence measurement, and line length measurement. The remote RJ45 unit is also depicted.

6.5.1 RJ45 Line Seeking/Tracking

- Connect one end of the RJ45 cable to the LAN1 or LAN2 port on the OTDR.
- Use the RJ45 Receiver to trace the cable and locate it.

6.5.2 RJ45 Line Sequence Measurement

- Connect the RJ45 cable to the LAN1 or LAN2 port and the remote RJ45 unit.
- The screen will display the wiring sequence (e.g., T568A, T568B) and identify any miswires or open circuits.

6.5.3 RJ45 Line Length Measurement

- Connect the RJ45 cable to the LAN1 or LAN2 port and the remote RJ45 unit.
- The device will measure and display the length of the RJ45 cable.

6.6 File Operations

The AUA800U OTDR allows you to save, open, delete, and rename test files.

- Select 'File Management' from the main menu.
- All test curves are saved on the pre-installed memory card.
- You can browse the list of saved files, select them, and perform operations like 'Open', 'Delete', or 'Rename'.

7. MAINTENANCE

Proper maintenance ensures the longevity and accuracy of your AUA800U OTDR.

- **Cleaning:** Use a soft, dry, lint-free cloth to clean the device's exterior. For the screen, use a screen-specific cleaning solution if necessary.
- **Optical Ports:** Keep all optical ports clean and free of dust. Use specialized fiber optic cleaning tools (e.g., fiber optic cleaning pens or wipes) to clean the connector interfaces before each use. Dust and debris can significantly affect measurement accuracy.
- **Storage:** When not in use, store the device in its provided storage bag in a cool, dry place, away from direct sunlight and extreme temperatures.
- **Battery Care:** If storing for an extended period, ensure the battery is partially charged (around 50%) to prolong its lifespan. Recharge periodically if stored for very long durations.
- **Avoid Impact:** Protect the device from drops and strong vibrations.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with the AUA800U OTDR.

Problem	Possible Cause	Solution
Device does not power on.	Low battery; Power button not pressed long enough; Device malfunction.	Charge the device fully. Press and hold the power button for at least 3-5 seconds. If issue persists, contact support.
Inaccurate OTDR/OPM readings.	Dirty optical connectors; Incorrect test parameters; Damaged fiber.	Clean all optical connectors thoroughly. Verify test parameters (wavelength, range, pulse width). Inspect fiber for damage.

Problem	Possible Cause	Solution
VFL light is dim or not visible.	Dirty VFL port; Fiber not properly connected; VFL turned off.	Clean the VFL port. Ensure fiber is securely connected. Turn on VFL from the menu.
RJ45 test fails or is inaccurate.	RJ45 receiver batteries low/dead; Cable not properly connected; Faulty RJ45 cable.	Replace AAA batteries in the RJ45 receiver. Ensure both ends of the cable are securely connected. Test with a known good cable.
Screen is unresponsive.	Software glitch; Extreme temperature.	Restart the device. Ensure operating within specified temperature range.

9. SPECIFICATIONS

Detailed technical specifications for the AUA800U Optical Time Domain Reflectometer.

Feature	Specification
Item Type	Optical Time Domain Reflectometer
Model	AUA800U
Material	ABS
Connector Model	UPC
Test Wavelength	1310nm, 1550nm
Test Range	5m - 100km
Dynamic Range	26dB, 24dB
Display	4.3 inch touchable color display
Power Supply (Main Unit)	Built-in 3.7V, 4000mAh Li-battery
Power Supply (RJ45 Receiver)	2 x AAA batteries (not included)
VFL Red Light Source Interface	2.5mm universal (SC, FC, ST)
OTDR / Stable Light Source Interface	Changeable (SC, UPC, FC, UPC)
OPM Optical Power Meter Interface	2.5mm universal (SC, FC, ST)
Package Dimensions	8.66 x 5.12 x 3.94 inches
Item Model Number	WALFRONTnosqd9v84e
Manufacturer	WALFRONT
Country of Origin	China

10. WARRANTY AND SUPPORT

For warranty information and technical support, please refer to the documentation provided with your purchase or contact Walfront customer service through their official channels. Keep your purchase receipt as proof of purchase

for warranty claims.

For further assistance, you may visit the Walfront Store on Amazon: [Walfront Amazon Store](#)

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