

MAUNT

M10000743 / M10000668

Installation document OTDR TB-720, OPM/OLS/VFL, Maunt



Description

Handheld OTDR with a 3.5 inch touchscreen for testing fibre optic and network connections. In addition to OTDR measurements, the TB-720 offers an OLA SE view, optical power meter, light source, loss test, VFL, LED lamp and an RJ-45 cable test for length and wiring sequence. This document applies to both the multimode and the singlemode version.

Brand

Maunt

Versions

M10000743

OTDR TB-720, MM, 850/1300nm,
20/24dB, SC/PC, OPM/OLS/VFL, Maunt

M10000668

OTDR TB-720, SM, 1310/1550nm
(32/30dB), SC/PC, OPM/OLS/VFL, Maunt



Safety

Laser: never look directly into the laser output or into a connected fibre. The OTDR/OLS port emits invisible laser light (800-1700 nm), the VFL emits visible red laser light (635-650 nm).

No active signal: before every measurement, check that there is no signal on the fibre. An active fibre can damage the device; this is not covered by the warranty.

Housing: do not open the housing and have repairs carried out by qualified personnel. Do not expose the device to rain or moisture.

Battery: use only the supplied battery and do not combine batteries of a different type or capacity. Remove the battery if the device will not be used for a long time.

Condensation: do not use the device immediately after moving it from a cold to a warm environment. After a sudden change in temperature, remove the battery and wait at least one hour before switching on.

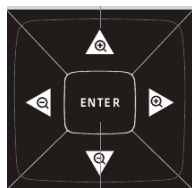
Connections and components

Component	Position	Description
OTDR/OLS port	Top	Connection for OTDR measurements and the light source (OLS).
OPM port	Top	Connection for the optical power meter.
VFL	Top	Output of the visual fault locator (red laser light).
LED lamp	Top	Work light.
Touchscreen	Front	3.5 inch touchscreen.
Status bar	Top of screen	Date and time, and the status of the LED lamp, VFL, USB connection and battery (charging status).
RJ-45 test port	Side	Connection for the network cable test.
USB-C	Side	Charging the battery.
Power bank	Side	USB port that lets the battery act as a power bank to charge other devices.
RJ-45 test module	Separate	Counterpart for the network cable test, at the other end of the cable.

Keys



Press and hold: switch on or off. When switching off, the device asks for confirmation.



Select in menus and lists.

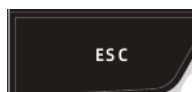
Arrow up / down: scroll through the events in the event list.

Arrow left: change the wavelength in OLS.

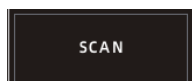
Arrow right: open the event list in OLA SE.



Confirm the selection and go to the next step.



Back to the previous menu.



Start the measurement.



Open the measurement settings of the active function.



Save the current measurement or open the file list.



Switch or hide the cursor in the OTDR screen.



Short press: switch the VFL between on, flashing and off.

2 seconds: LED lamp on or off.



Zoom in or out on the OTDR trace, together with the navigation keys.

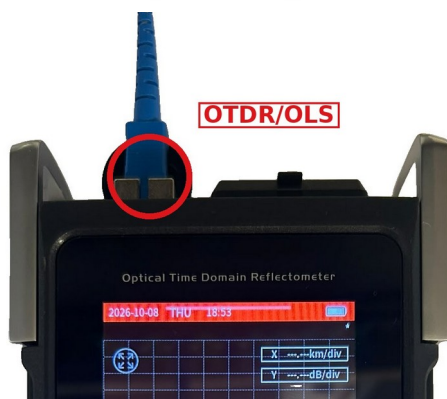
Zoom key + ESC: full view.



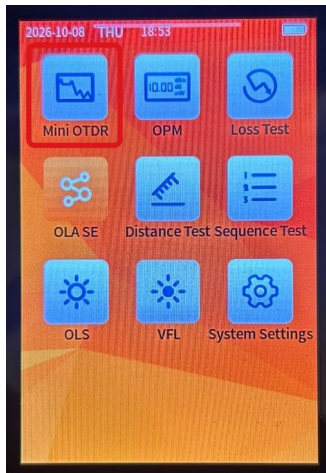
1. Press and hold the on/off key to switch on the OTDR.



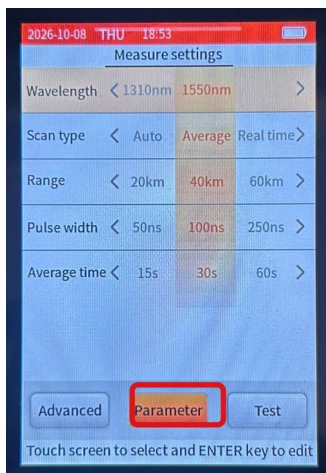
2. The main menu appears. Tap a function to open it, or select it with the arrow keys and confirm with ENTER. ESC always takes you back one screen.



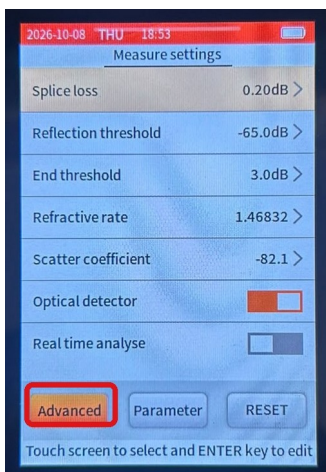
3. Check that there is no signal on the fibre. Remove the dust cap from the OTDR/OLS port and connect the fibre to be measured.



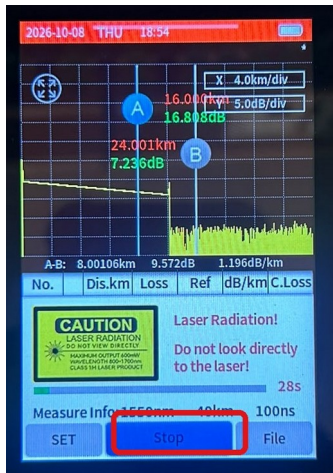
4. In the main menu, tap Mini OTDR. The measurement screen opens with an empty trace.



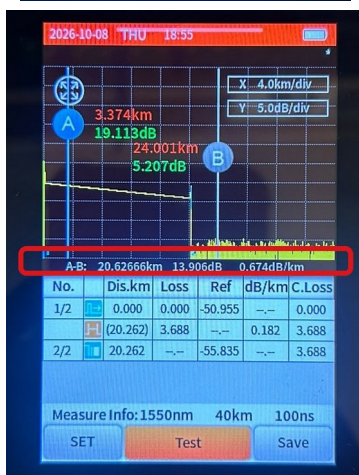
5. Tap SET at the bottom to open the measurement settings; the Parameter tab is active. Select a value on each line by swiping left or right: wavelength, scan type (Auto, Average or Real time), range, pulse width and averaging time. The selected value is shown in the orange column.



6. Tap Advanced for the analysis settings: splice loss, reflection threshold, end threshold, refractive index (Refractive rate) and scatter coefficient. Select a line and press ENTER to change the value. Press ESC to return to the measurement screen.



- Tap Test or press SCAN to start the measurement. During the measurement, the screen shows a laser warning and a progress bar with the remaining time. Tap Stop to cancel the measurement.



- After the measurement, the trace is displayed with cursors A and B. The A-B line shows the distance, the attenuation and the attenuation per km between the two cursors. Below it is the event list with the distance, loss, reflection and cumulative loss per event.

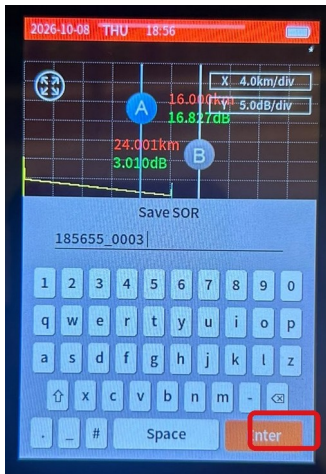


- Scroll through the events with the up and down arrow keys, or swipe through the event list. The cursor jumps to the selected event. Zoom in or out on the trace with two fingers, or with the zoom key and the arrow keys. Double-tap the trace to return to the normal view.

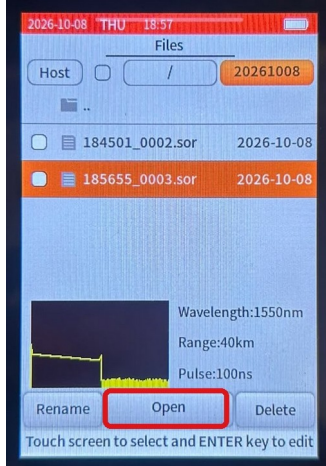
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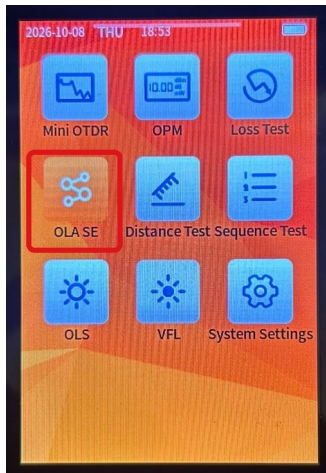
10. Press the zoom key and then ESC
(+ESC=FULL) to view the trace full screen.



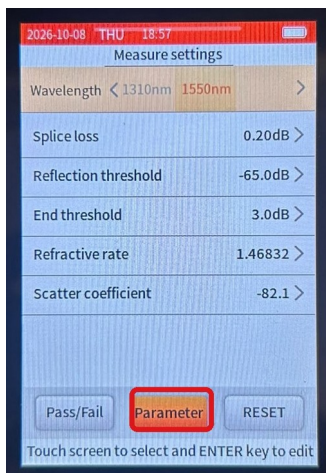
11. Tap Save to save the measurement. Type a file name and tap Enter. If Auto name is enabled in System Settings, the name is already filled in.



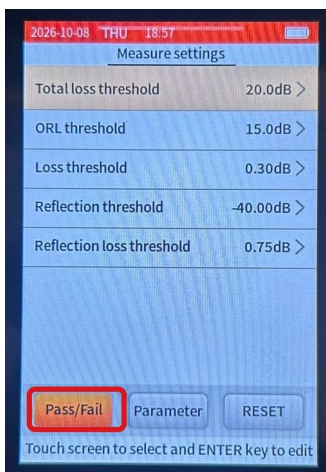
12. When no measurement is running, tap File to view the saved measurements; they are stored in a folder per date. Select a file: a preview with wavelength, range and pulse width appears at the bottom. Tap Open to open the file, or Rename or Delete to rename or delete it.



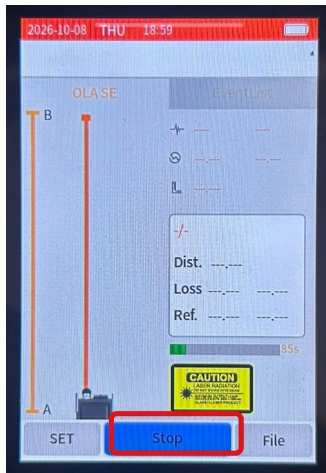
13. Connect the fibre to the OTDR/OLS port (see step 3) and tap OLA SE in the main menu.



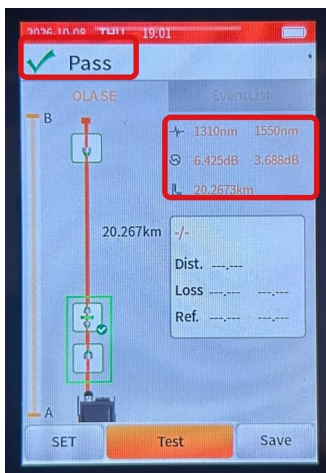
14. Tap SET. On the Parameter tab, select the wavelength and set the analysis settings: splice loss, reflection threshold, end threshold, refractive index and scatter coefficient. Select a line and press ENTER to change it.



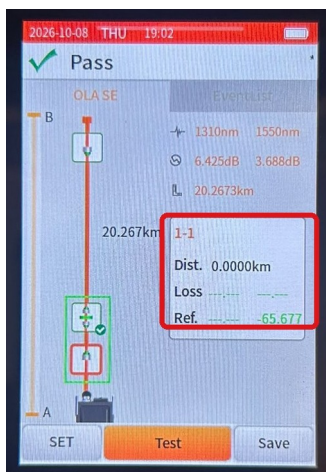
15. Tap Pass/Fail and set the limit values used to assess the measurement: total loss (Total loss threshold), ORL, loss (Loss threshold), reflection (Reflection threshold) and reflection loss (Reflection loss threshold). Press ESC to go back.



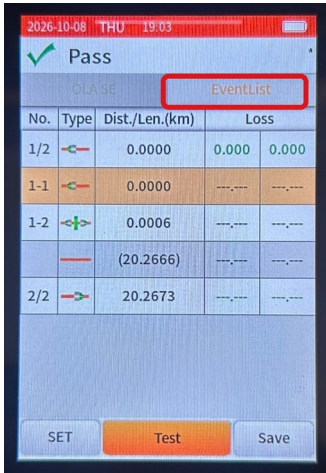
16. Tap Test to start the measurement. The screen shows a laser warning and the progress. Tap Stop to cancel the measurement.



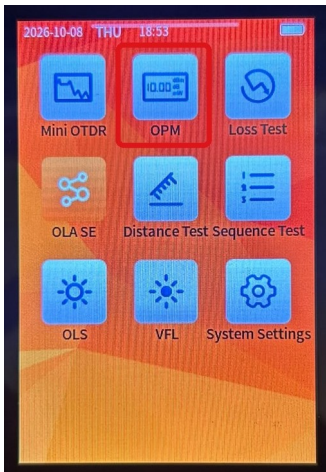
17. After the measurement, the result is shown at the top left: Pass (approved) or Fail (rejected). On the right are the total loss per wavelength and the total length of the link. On the left you see the link from A to B with all events.



18. Tap an event in the link to view its details: number, distance, loss and reflection (Ref.). The selected event gets a red frame.



19. Tap EventList or press the right arrow key to see all events in a table, with type, distance and loss. Tap Save to save the measurement. Use File to open, rename or delete saved measurements, just as in Mini OTDR.



20. In the main menu, tap OPM.



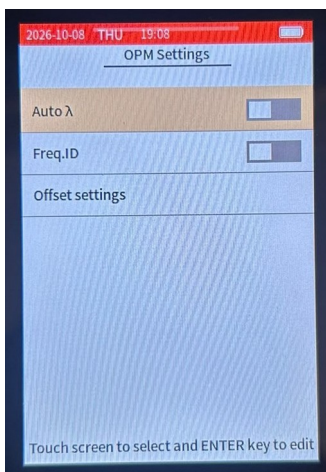
21. Open the flap of the OPM port and connect the fibre to be measured. Without light on the port, the screen shows LOW; as soon as light is received, the measured power appears.



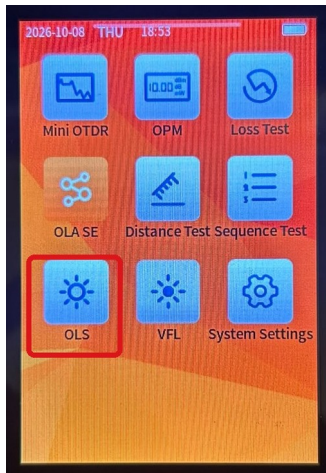
22. Tap λ to select the wavelength that matches the light source. The screen shows the received power in dB, dBm and mW.



23. Tap REF to store the current power as the reference and confirm with ENTER. The new reference value (REF) is shown at the top; the large value in dB is now the difference from this reference.



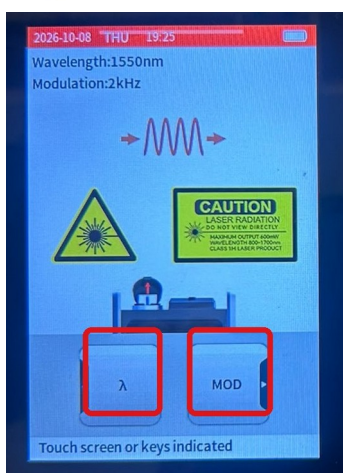
24. Tap Setting for the OPM settings. Auto λ automatically detects the wavelength in the fibre, Freq.ID detects the modulation frequency and Offset settings let you correct the measured value per wavelength. Select a line and press ENTER.



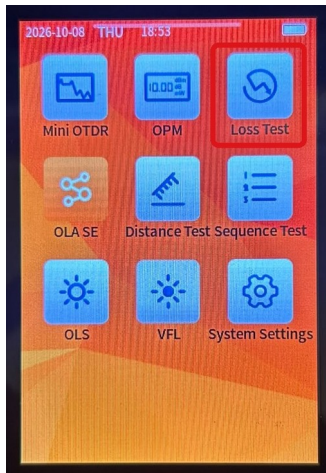
25. In the main menu, tap OLS.



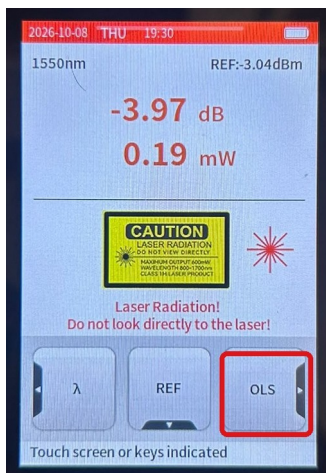
26. Connect the fibre to the OTDR/OLS port. The light source now emits light; the wavelength and modulation are shown at the top of the screen. In the photo, a power meter measures the emitted light.



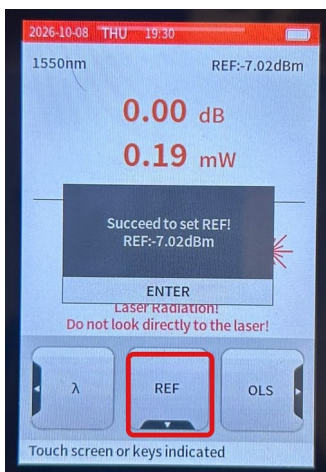
27. Tap λ to change the wavelength and MOD to select the modulation: Close (off), CW (continuous), 270Hz, 1kHz, 2kHz, 1kHz+Blink or 2kHz+Blink.



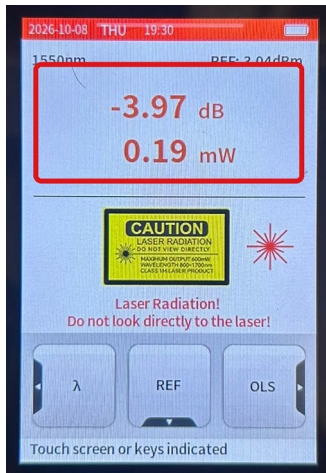
28. In the main menu, tap Loss Test. This measures the loss of a passive link using the built-in light source (OLS) and power meter (OPM).



29. Connect the OTDR/OLS port and the OPM port with a reference cable. Tap OLS to switch on the light source. The screen shows the received power.



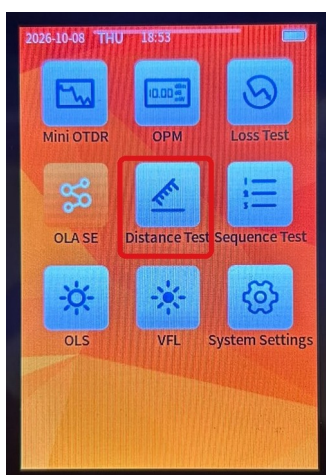
30. Tap REF to store this value as the reference and confirm with ENTER. The screen now shows 0.00 dB.



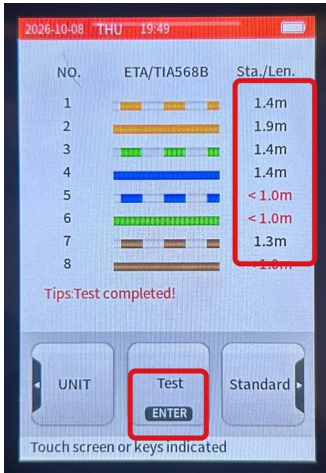
31. Replace the reference cable with the link to be tested. The value in dB is the loss of that link. Tap λ to measure at another wavelength.



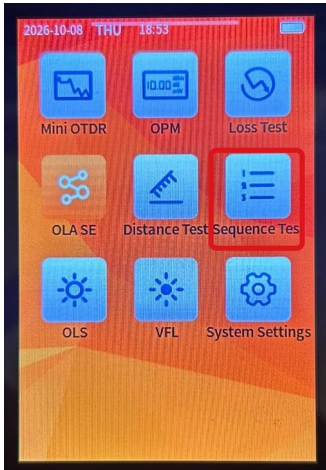
32. Connect the network cable to the RJ-45 test port on the side of the OTDR and connect the other end to the separate RJ-45 test module.



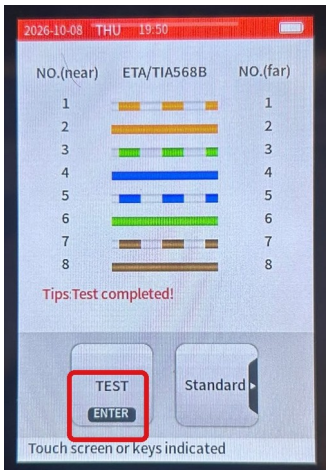
33. In the main menu, tap Distance Test to measure the length of a CAT5 or CAT6 cable.



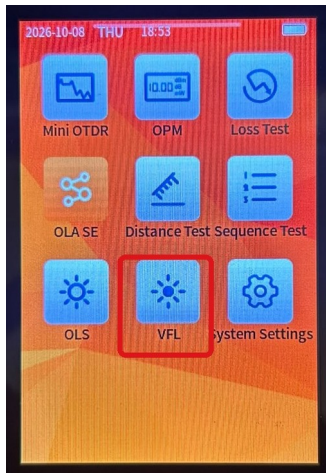
34. Tap Test or press ENTER. After the message "Test completed!", the length of each wire is shown in the Sta./Len. column. UNIT changes the unit, Standard changes the wiring standard (on screen: ETA/TIA568B).



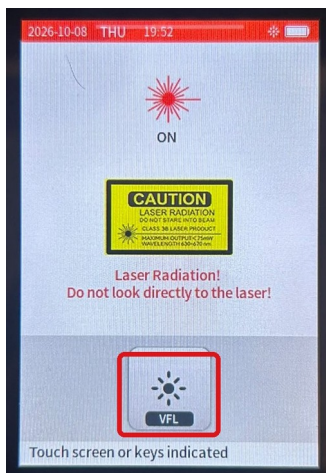
35. In the main menu, tap Sequence Test to check the wiring sequence of the wires.



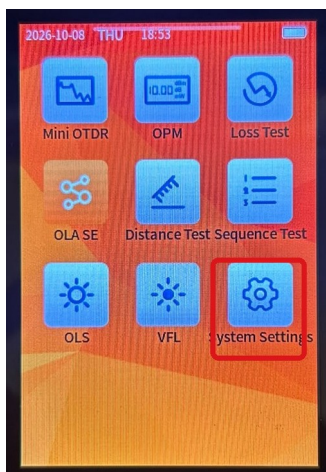
36. Tap TEST or press ENTER. For each wire, the number at the near end (near) is shown next to the number at the far end (far). If the numbers match, the wiring is in the correct sequence; a wrong, poor or broken connection is immediately visible.



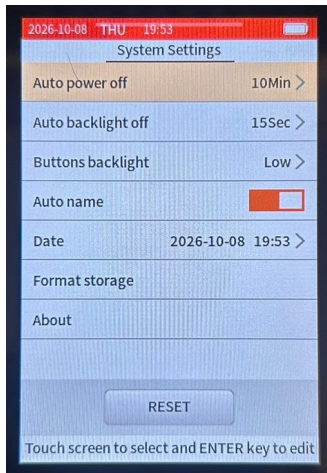
37. Connect the fibre to the VFL output and tap VFL in the main menu.



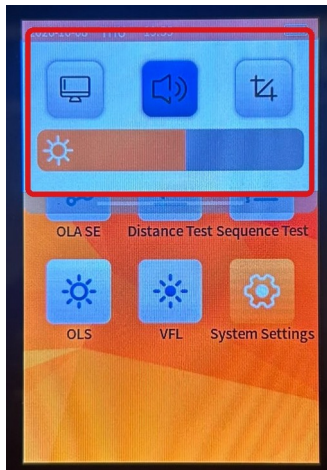
38. Tap the VFL icon or press the VFL key. Each press switches between on (ON), flashing and off (OFF). Press and hold the VFL key for 2 seconds to switch the LED lamp on or off.



39. In the main menu, tap System Settings.



40. Select a setting and press ENTER to change it: automatic power off (Auto power off: off, 10, 30 or 60 min), screen backlight off (Auto backlight off), key backlight (Buttons backlight), automatic file name (Auto name), date and time (Date) and Format storage (deletes all saved files).



41. Swipe down from the top of the screen to open the quick menu. Tap the PC icon to connect to a PC for data transfer, the speaker icon to switch the sound on or off and the icon on the right to take a screenshot. Use the slider to adjust the brightness.



42. Press and hold the on/off key to switch off the OTDR and confirm the message "Do you want to power off".