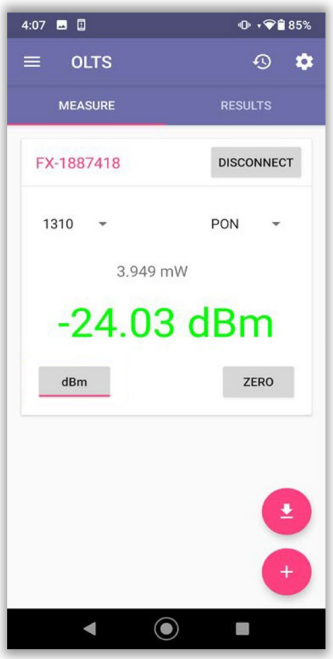
The Verification Experts

USER MANUAL



Fiberizer Mobile Optical Loss Test Set

Android™ application

Please direct all questions to your local VeEX® Sales Office, Representative, or Distributor. Or, contact VeEX technical support at www.veexinc.com.

 D07-00-158P RevA00

Contents

1.0 About This User Manual

This user manual is suitable for novice, intermediate, and experienced users and is intended to help use the features and capabilities of VeEX products successfully. It is assumed that the user has basic computer experience and skills, and is familiar with telecommunication and other concepts related to VeEX product usage, terminology, and safety.

Every effort was made to ensure that the information contained in this user manual is accurate. Information is subject to change without notice and we accept no responsibility for any errors or omissions. In case of discrepancy, the web version takes precedence over any printed literature. The content in this manual may vary from the software version installed in the unit. For condition of use and permission to use these materials for publication in other than the English language, contact VeEX, Inc.

This manual describes software and/or a device that uses software either developed by VeEX Inc. or licensed by VeEX, Inc. from third parties. The software is confidential and proprietary of VeEX, Inc. The software is protected by copyright and contains trade secrets of VeEX, Inc. or VeEX's licensors. The purchaser of this device and/or software, downloaded or embedded, agrees that it has received a license solely to use the software as embedded in the device and/or provided by VeEX Inc., and to use it solely as intended and described in this manual. The purchaser is prohibited from copying, reverse engineering, decompiling, or disassembling the software.

1.1 Customer Support

For more technical resources, visit www.veexinc.com.

For assistance or questions related to the use of this product, call or e-mail our customer care department for customer support. Before contacting our customer care department, have the product model, serial number, and software version ready. Please locate the serial number on the back of the chassis. Please provide this number when contacting VeEX, Inc. customer care. Support hours may vary depending on the product.

Product Technical Support

Support is generally available 8:00 AM to 8:00 PM, Eastern Standard Time, Monday to Friday.
Phone: +1 510 651 0500
E-mail: customercare@veexinc.com

MPA Product Technical Support

Support is generally available 8:30 AM to 5:30 PM, Eastern Standard Time, Monday to Friday.
Phone: +1 877 929 4357
International: +1 727 475 1206
E-mail: serviceandsupport@veexinc.com

1.2 Warranty

For warranty information on VeEX products, go to https://www.veexinc.com/Support/Warranty.

To activate the warranty, please register your product at https://www.veexinc.com/Support/ProductRegistration.

1.3 Patent Information

VeEX product hardware and software may be protected by one or more patents on file with the United States Patent Office.

1.4 Documentation Conventions

Icons used in this manual:

Marks a helpful tip (action or method), which can save time and improve usability of the product.

Provides important information needed to use this product and avoid missteps.

Cautions against and action or inactivity, which can hinder productivity.

Strongly warns against a condition, an action, or inactivity which can lead to a health hazard, injury, equipment damage, data loss, and/or financial losses.

Stop and read before continuing.

2.0 Safety Information

Safety precautions should be observed during all phases of operation of this instrument. The instrument has been designed to ensure safe operation however please observe all safety markings and instructions. Do not operate the instrument in the presence of flammable gases or fumes or any other combustible environment. VeEX Inc. assumes no liability for the customer's failure to comply with safety precautions and requirements.

Optical Connectors

The test platform displays a laser warning icon when the laser source is active to alert the user about a potentially dangerous situation. Make sure that optical sources are inactive before connecting fiber to the test set to avoid skin or eye damage, or damage to the unit. It is recommended to:

- Deactivate the laser before connecting or disconnecting optical cables or patchcords.
- Never look directly into an optical patchcord or an optical interface (e.g., CFP, CFP2, CFP4, QSFP+, SFP+, SFP, OTDR, LS, VFL) while the laser is enabled. Even though optical transceivers are typically fitted with Class 1/1M lasers, which are considered eye safe, using external lens or viewing optical radiation for an extended period can cause irreparable damage to the eyes.
- Never use a fiber microscope to check the optical connectors when the laser source is active.

The operator is assumed to have received basic training in fiber optics and related testing and measurement practices.

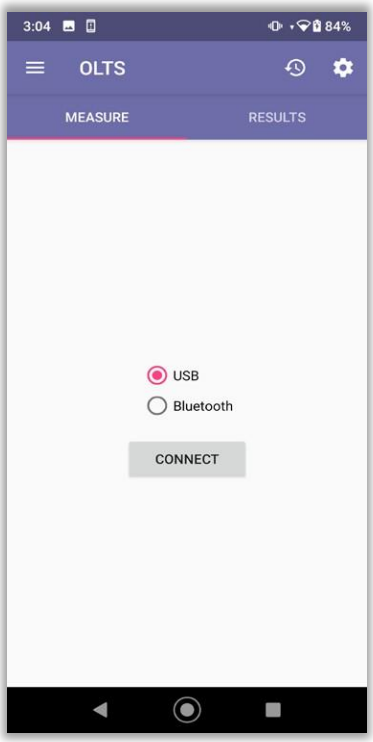
3.0 Getting Started

Fiberizer™ Mobile Optical Loss Test Set (FMOLTS) application works with FX8x devices via USB or Bluetooth, and with FX4x devices via USB only. The USB option has full functionality (performing tests, managing test results on the Android device, and downloading results to the Android device), while the Bluetooth option can only manage and download previously saved results from the testing device (FX8x or FX4x) to the Android device.

3.1 Establishing USB Connection

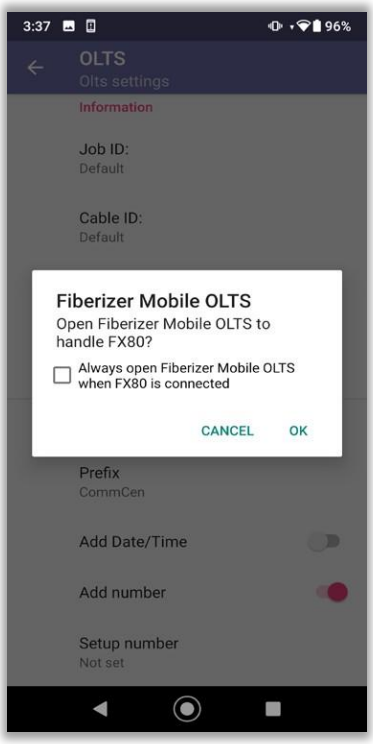
FMOLTS works via USB with FX8x devices and with FX4x devices. The following procedure uses an FX8x device as an example.

To establish a USB connection between the Android device and the FX8x device, launch FMOLTS on the Android device and turn on the FX8x (these actions can be performed in any order). The view shown below then appears:



Connection via USB

Plug in an OTG cable into the Android device and plug in the FX8x into the OTG cable. If this is the first USB connection for the Android device, the view shown below then appears:

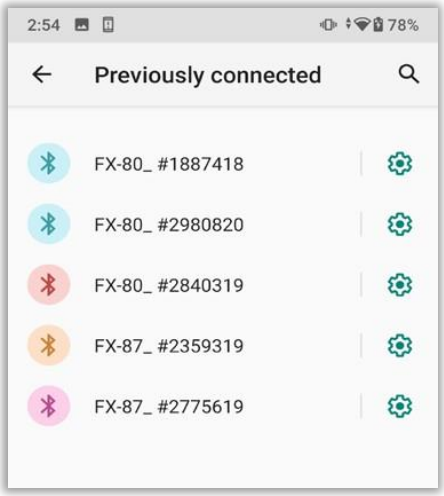


Granting permission to launch FMOLTS when FX8x is connected

To automatically open FMOLTS every time the testing device is connected, select the checkbox for the option shown above. To finalize the USB connection, tap OK.

3.2 Establishing a Bluetooth Connection

To establish a Bluetooth connection between the Android device and an FX8x equipped with Bluetooth, pair the two using the standard pairing procedure for Android (**Settings** - **Connections** - **Bluetooth**).



FX8x devices paired with Android device

4.0 Setting File Locations

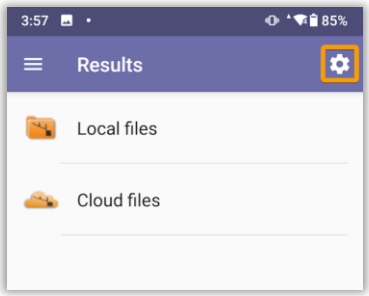
Measurement results can be saved in any of the following locations:

- R-Server: VeEX Inc. centralized storage and management system for optical testing
- Fiberizer Cloud: a family of different cloud-based software applications that work exclusively with VeEX fiber optic test and connector inspection products
- Local system: the mobile device storage

The locations above are not mutually exclusive and can be combined.

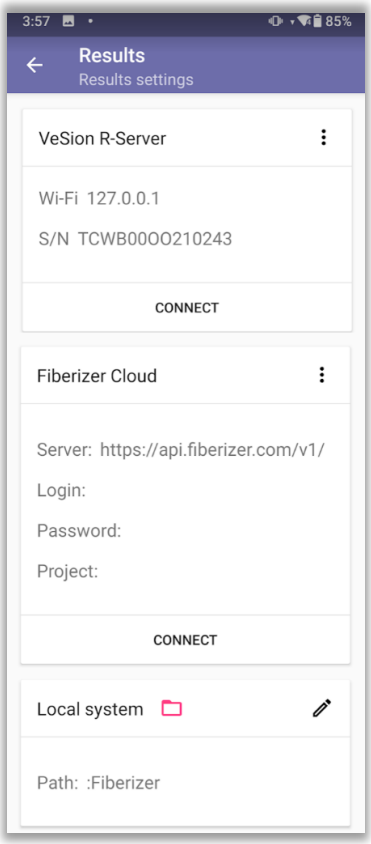
To set file locations:

1. On the **Results** screen, tap the **Settings** icon (shown below):



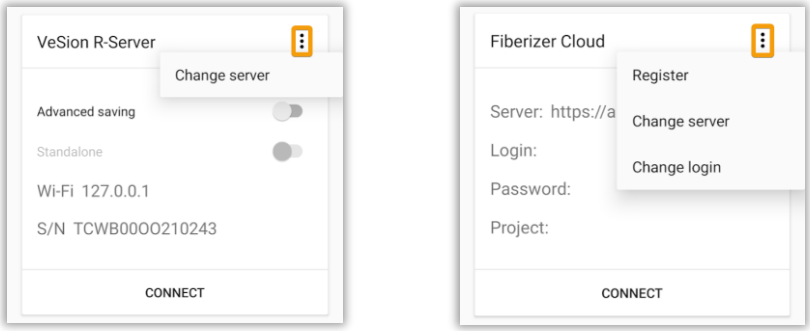
Going to file location settings

2. In the resulting screen, tap **CONNECT** on the chosen location type (scroll down to reach the interface bottom):



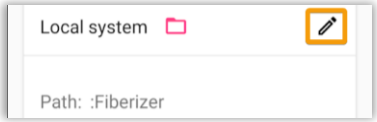
File location types: R-Server, Fiberizer Cloud, Local system

3. To change the settings of one of the cloud storages, tap the additional menu ("kabob") icon next to the cloud storage name. The **Fiberizer Cloud** additional menu also allows for registering and changing the login if necessary.



Changing cloud storage server settings

4. To change the local system storage location, tap the pen icon and follow the onscreen instructions.

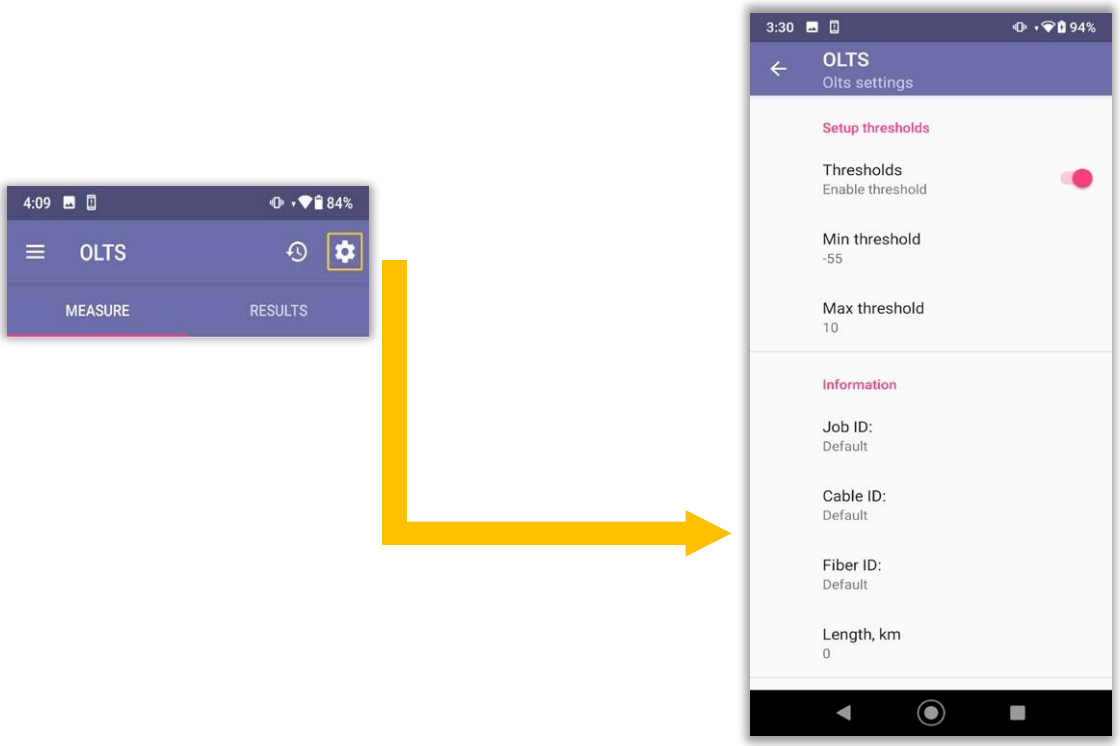


Changing the local system storage location

5.0 Setting OLTS Testing Parameters

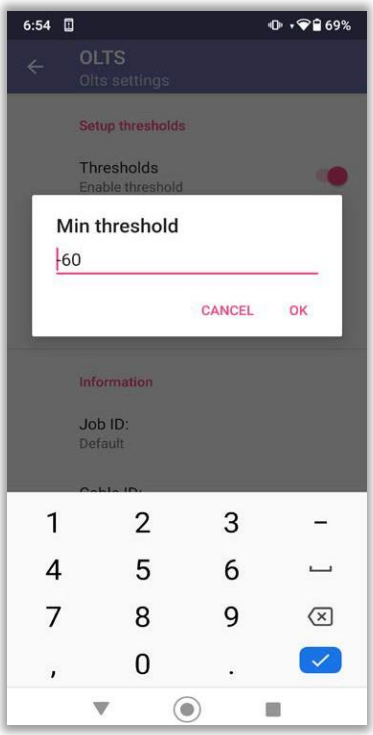
Before performing actual testing, define the test parameters:

1. Tap the **Settings** icon in the top right corner, which shows the OLTS settings list consisting of three sections (**Setup thresholds**, **Information**, **File naming**) in red.



Accessing OLTS settings

2. To set thresholds for testing, enable **Thresholds** in the **Setup thresholds** section. Then tap the field (**Min threshold** and **Max threshold**) and edit it:



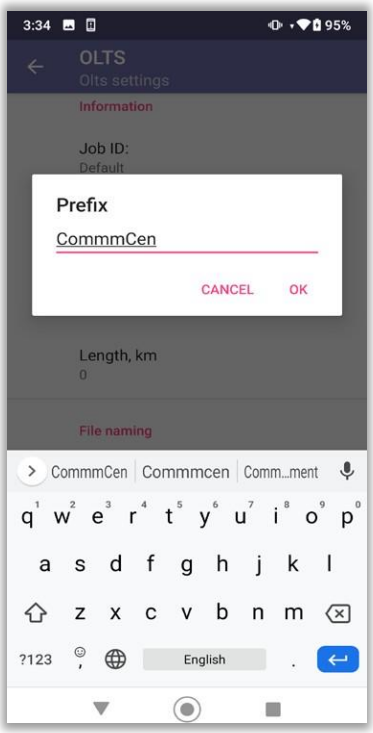
Setting thresholds

*If **Thresholds** are enabled and **dBm** selected as the measurement unit, FMOLTS shows the test results in color:*

- ***Green** if the result is within the thresholds (PASSED)*
- ***Red** if the result is outside the thresholds (FAILED)*
- *Gray if the signal is too low*

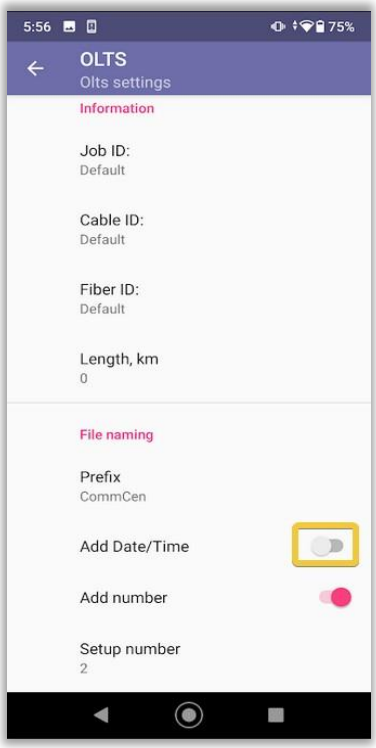
In other cases, the result shows in gray.

3. To set the values for the **Information** section fields (**Job ID**, **Cable ID**, **Fiber ID**, **Length**, **km**), tap the corresponding field and set the necessary value as in the previous item.
4. Scroll down to the **File naming** section and define the file name **Prefix**:



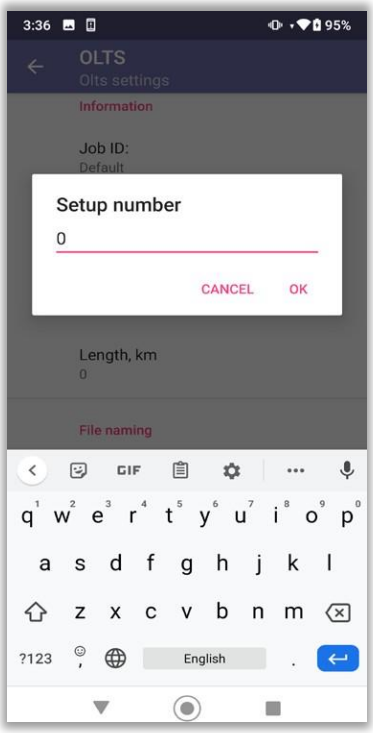
Defining the file name prefix

5. To add the Date/Time to the file name, tap the toggle switch to enable the corresponding field:



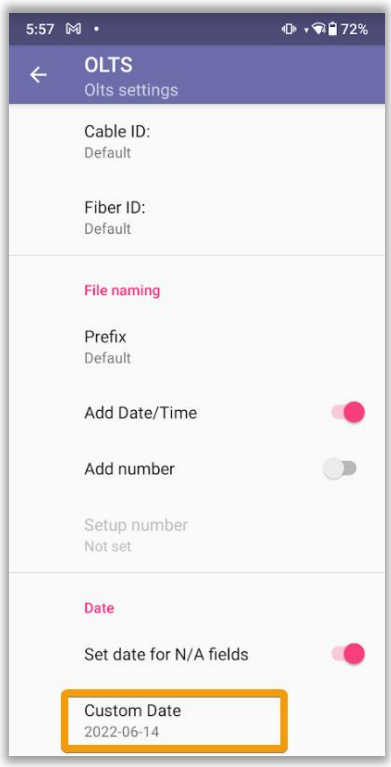
Adding Date/Time to the file name

6. To add the number to the file name, enable the corresponding field by tapping the toggle switch, the tap Setup number and set the number which increments by "1" with every new test:



Setting number for the file name

7. To set a custom date of testing for the measurement results table, scroll down to the **Date** section shown below and tap **Custom date**, then select the date in the resulting calendar:

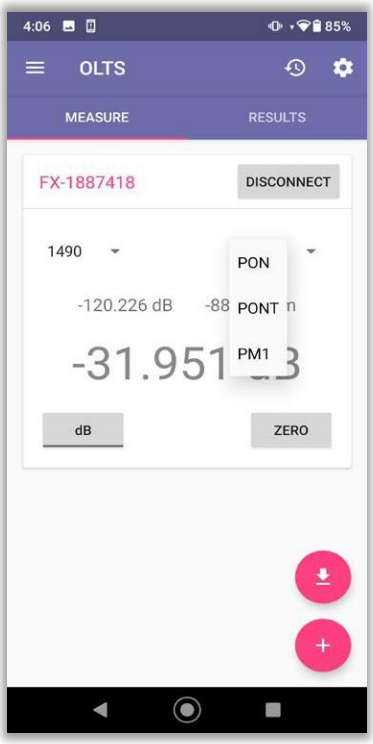


Setting a custom date for the measurement results table (scroll down to get to this section)

6.0 Testing via USB

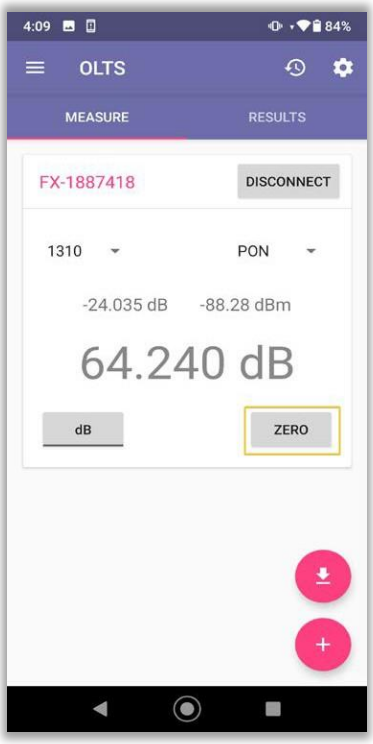
After the test parameters are set and a USB connection is established, the testing view appears onscreen, showing the **MEASURE** tab in **OLTS**. To perform testing:

1. Select the PON type or PM in the drop-down menu by tapping **PON** on the right. The selection available depends on the testing device configuration.



Selecting PON or PM after USB connection established

2. **Close the caps on the testing device** and set the ZERO level for the previously selected PON or PM by tapping the **ZERO** button (highlighted in the Figure below).

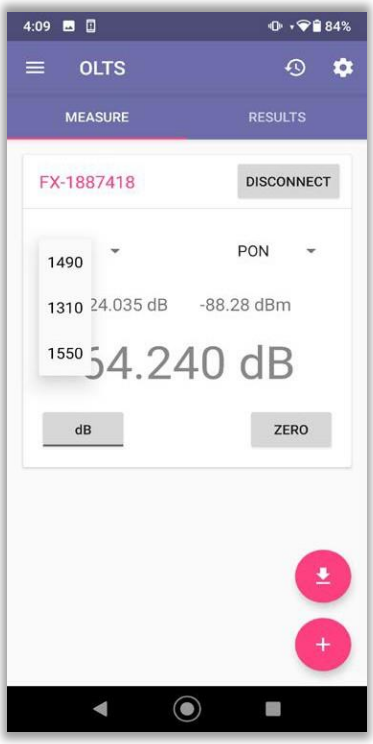


Setting ZERO level for selected PON or PM

*ZERO does not have to be set before every testing. However, it is **strongly recommended** to set the ZERO level:*

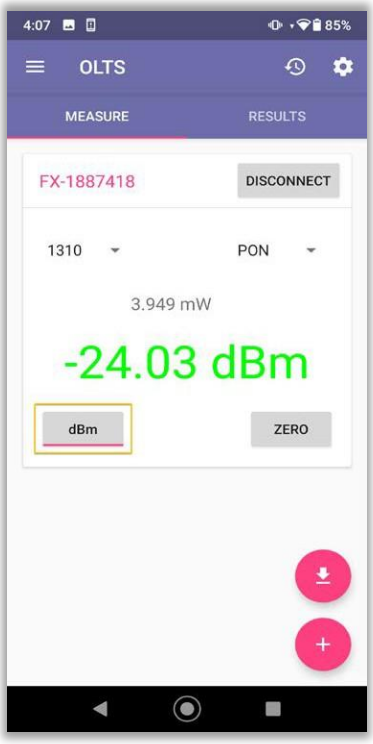
- *Before testing low signals*
- *If environmental conditions (temperature, humidity) have changed*
- *If the testing device has not been used for a long time*

3. Select the wavelength in the drop-down menu by tapping **wavelength value** on the left. The selection available depends on the testing device configuration.



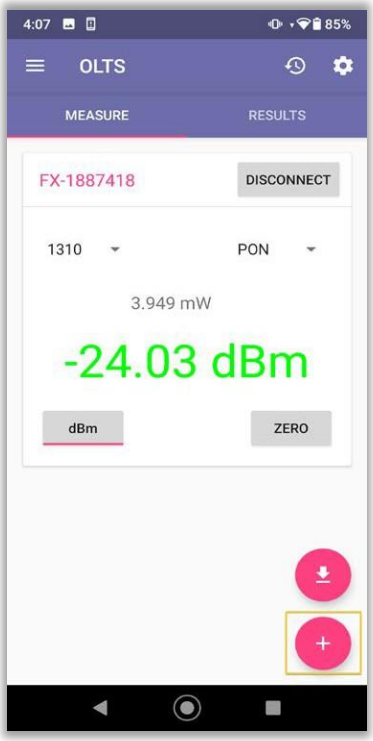
Selecting wavelength for testing

4. Select the measurement unit by tapping the **dB/dBm** button on the left (**dBm** for absolute measurements, **dB** for loss testing/relative measurements).



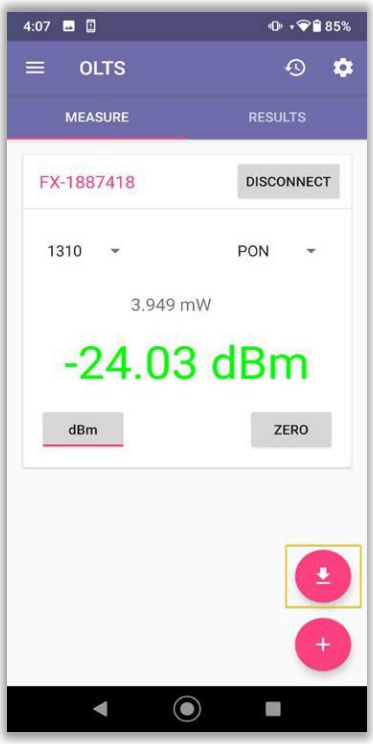
Selecting measurement unit for testing

The Android device will show the testing result onscreen. To add this result to the current **RESULTS** table, tap the **(+)** button in the bottom right corner.



Button for adding current testing result to RESULTS table

The connected FX8x or FX4x device can also have results previously taken and stored in the FX8x or FX4x device internal memory. To add those results to the RESULTS table, tap the **(⬇)** button at the bottom right corner. Select the period in the pop-up Calendar, then tap **CONTINUE**.



Button for adding results previously stored in FX8x/4x to RESULTS table

FMOLTS cannot operate FX8x devices (Generator and Receiver) during sweep tests. However, it can download the measurement results from the devices, show them as a table (see, for example, the Figure in Chapter 8.0. Managing Saved Results), and allow for all operations with the measurement results file, including PDF report generation.

6.1 Downloading Results from FX8x Testing Device via Bluetooth

To download the test results previously saved in the FX8x testing device via Bluetooth:

1. Pair the two devices as described in Section 3.2. Establishing a Bluetooth Connection
2. Turn on the FX8x testing device via Bluetooth and enter the **READ** mode. The Bluetooth sign then inverts its color.
3. Tap the (⬇) button at the bottom right corner and wait for the download to finish

*Tapping the (+) or (⬇) buttons adds the current onscreen result or results from the testing device to Android device **RAM (i. e., volatile memory) only**. To manage test results and save them in Android permanent internal memory, follow the procedure described in Section 7.0. Saving Test Results.*

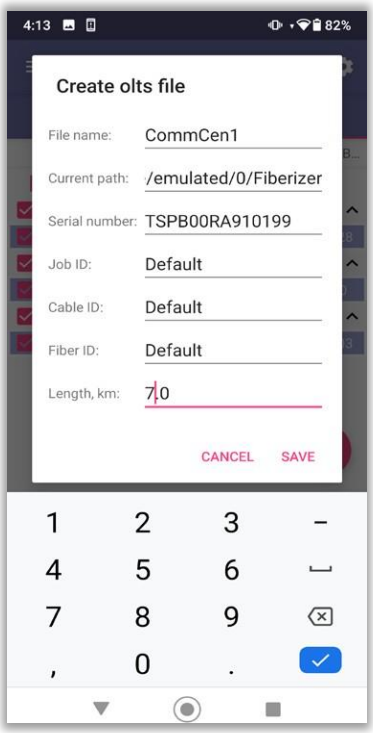
7.0 Saving Test Results

To save the test results added to the RESULTS table in the internal (permanent) memory of the Android device:

1. Tap the **RESULTS** tab. The **RESULTS** table appears:

RESULTS table saved in RAM (volatile) memory of Android device

2. Select the results to be saved in the internal (permanent) memory of the Android device and tap the **Save** icon in the top right corner. The form for creating an OLTS file then appears:



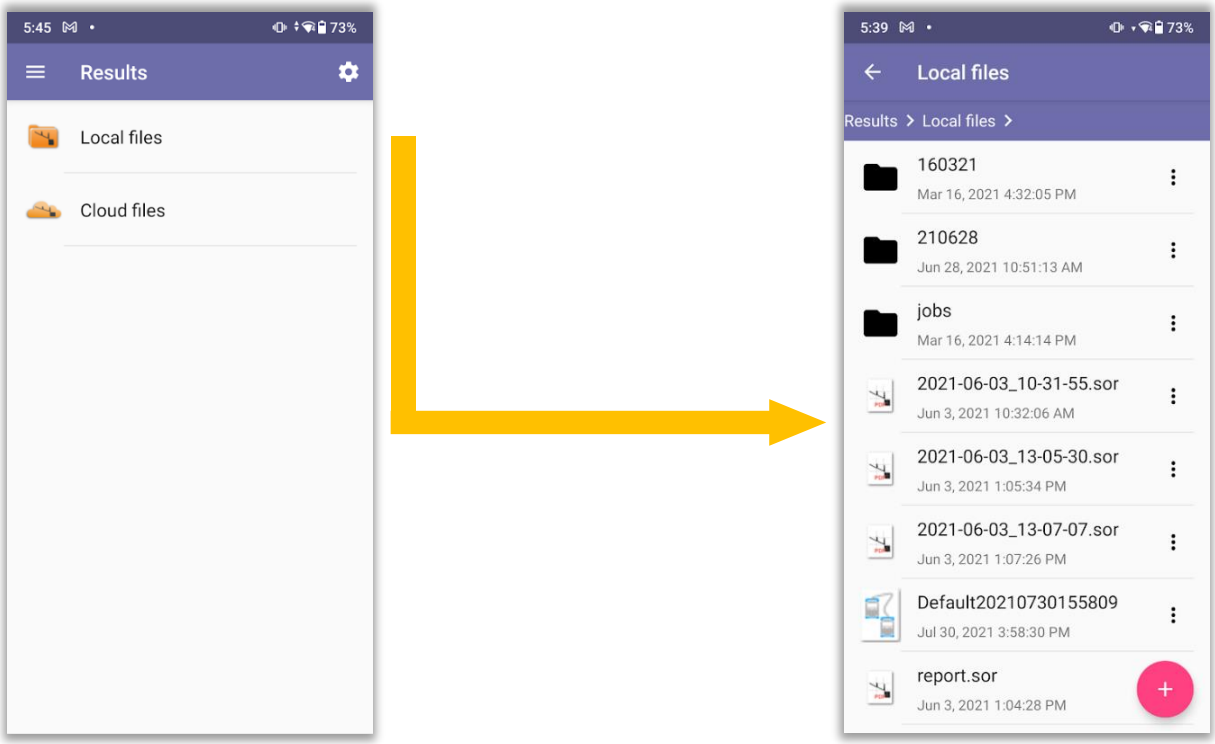
Form for creating an OLTS file

3. Edit the fields, if necessary, then tap **SAVE**.

The results are then saved in the internal (permanent) memory of the Android device.

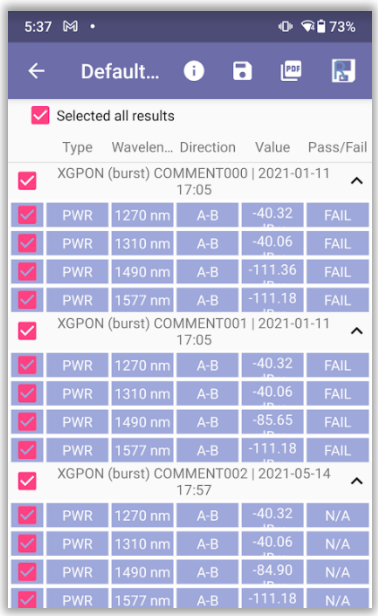
8.0 Managing Saved Results

To view the list of saved test results, go to the main menu in the top left corner (the ‘hamburger’ icon), tap **Results**, then tap **Local files**.

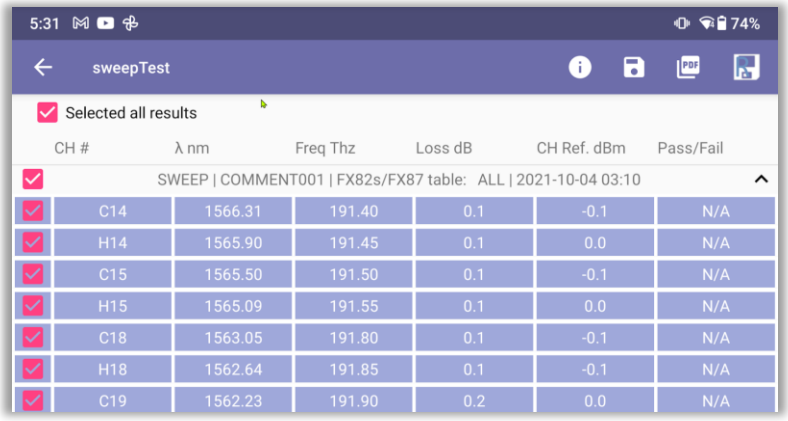


Accessing previously saved test results

To view a file from the resulting list, tap it (an example is shown below).



Viewing a previously saved table from a loss measurement

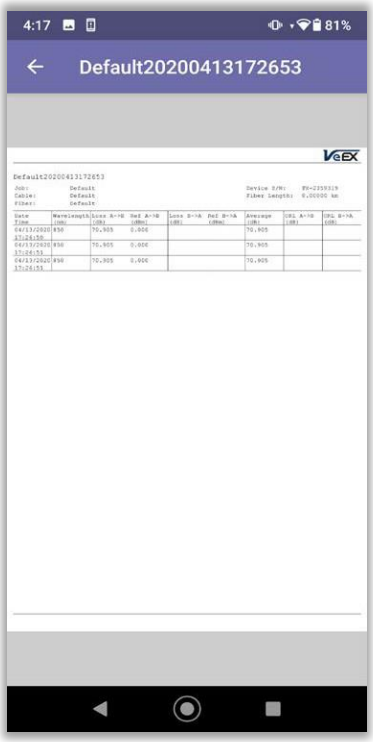


Viewing a previously saved table from a sweep test, landscape mode

Edit the table, if necessary, by selecting rows, then save the changes by tapping the **Save** icon. View the file information by tapping the **Information** icon.

8.1 Generating PDF Reports

To generate a PDF report from the test results, open a saved table by tapping it (see the example above), then tap the PDF icon in the top right corner. The generated report is shown below:

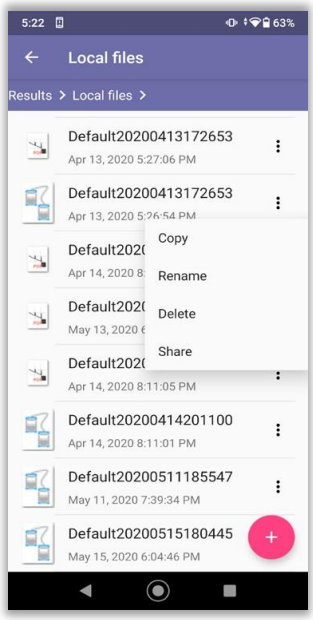


PDF report generated from a previously saved table

8.2 File Operations

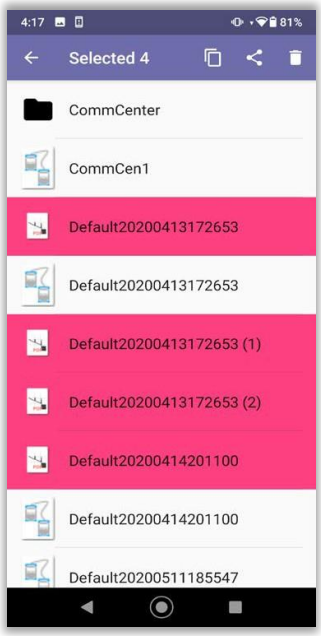
To create a new folder, tap the **(+)** icon in the bottom right corner, then type the folder name and tap **OK**.

To copy, rename, delete, or share a single file or a folder, tap the triple-dot ('kabob') icon to the right of the file/folder in the list of previously saved results and select the desired option:



Operations with single item

To perform operations with several files or folders at once, tap and hold any of them until it turns magenta, then tap the other necessary files and folders. Then, use the icons on the top for copying, sharing, and deleting the items, respectively:



Group operations with saved items

9.0 Certifications and Declarations

Declaration of Conformity

What is CE?

The CE marking is a mandatory European marking for certain product groups to indicate conformity with the essential health and safety requirements set out in European Directives. To permit the use of a CE mark on a product, proof that the item meets the relevant requirements must be documented.

Use of this logo implies that the unit conforms to requirements of European Union and European Free Trade Association (EFTA) EN61010-1.

For a copy of the CE Declaration of Conformity relating to VeEX products, please contact VeEX customer service.

ROHS Statement

RoHS Compliance

VeEX QUALITY AND ENVIRONMENTAL POLICY

Our quality and environmental policy is to limit and progressively eliminate the use of hazardous substances and chemicals in the design and manufacture of our products.

VeEX products are classified as Monitoring and Control Instruments under Article 2, Section (1), Category 9 of the WEEE 2002/96/EC Directive.

RoHS and WEEE Position Statement

The Council of the European Union and the European Parliament adopted Directive 2002/95/EC (January 27, 2003), to Reduce the use of certain Hazardous Substances (RoHS) in Electrical and Electronic Equipment, and Directive 2002/96/EC on Waste Electrical and Electronics Equipment (WEEE), with the purpose of reducing the environmental impact of waste electrical and electronic equipment. Both were later recast by Directives 2011/65/EU and 2012/19/EU respectively. All VeEX products being placed on the EU market conform with these directives.

Additional RoHS substance restrictions for the Monitoring and Control Instruments were adopted by EU Directive 2015/863 (March 31, 2015). These new restrictions will take effect from July 22, 2021. VeEX has established a program to ensure that from July 22, 2021, all its products to be sold and shipped into the EU market will conform with (EU) 2015/863.

VeEX Inc. is committed to comply with RoHS and WEEE Directives to minimize the environmental impact of our products.

For more information about RoHS as it relates to VeEX Inc, go to the VeEX web site at https://www.veexinc.com/company/rohscompliance.

10.0 About VeEX

VeEX Inc., a customer-oriented communications test and measurement company, develops innovative test and monitoring solutions for next generation telecommunication networks and services. With a blend of advanced technologies and vast technical expertise, VeEX products address all stages of network deployment, maintenance, field service turn-up, and integrate service verification features across copper, fiber optics, CATV/DOCSIS, mobile 4G/5G backhaul and fronthaul, next generation transport network, Fiber Channel, carrier & metro Ethernet technologies, WLAN and synchronization.

Visit us online at www.veexinc.com for the latest updates and additional documentation.

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