

you are testing the correct pair. The LED flashes green once about every two seconds when in this mode. There is no time-out in Trace mode. To return to Idle/Off mode, press the button once. A second trace tone, with a different cadence (rhythmic pattern), is available when using two FEDs. This is helpful to distinguish one FED from the other. To start the second trace tone, press and hold the button for about two seconds.

Specifications

Operating temperature: 0 to 140°F (-18 to 60°C)
Storage temperature: -40 to 165°F (-40 to 75°C)
Wake up signal frequency: 577Hz
Strap resistance: <0.2Ohms
(excluding test leads)
AC/DC input impedance: >100 Megohms
(with Open)
AC adapter input: 100 to 240 VAC
AC adapter output: 12V, 1.25 Amp
Trace tone: 577Hz /1004 Hz
8v p-p into no load
Transmitted tones: 200Hz to 30MHz
0dBm ± 0.5 dBm
across the range

If you have questions related to the use or warranty of this product, contact JDSU's technical assistance center (TAC). For the latest TAC contact information, go to www.jdsu.com or contact your local sales office.

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ULTRA FAR END DEVICE Operating Instructions

Overview

The ULTRA Far End Device (FED) is used as a test aid with other test equipment (such as the JDSU HST-3000c) when performing copper tests. After a technician has connected the FED to the far end of the pair under test and has connected other test set to the near end, the near end equipment controls the FED using DTMF tones to allow two-ended pair testing with a single piece of test equipment.

Features of the ULTRA FED include:

- Frequency range of 200Hz – 30MHz
- 7-wire testing capability:
 - 2 test pairs and
 - Thru mode using the CO pair
- Trace tone, open circuit, and short line
- Sleep mode (wake up using tones or button press)
- 20-hour battery life, continuous use / 2-months, idle

Installing or replacing the battery

The FED is powered by a 9-volt alkaline battery. When the LED is red, the FED has less than 15% battery life left. It is recommended that you replace the battery at this time.

To replace the batteries

1. Power the FED off by pressing the button once.

2. Disconnect the test leads from the line.

**CAUTION: HAZARDOUS VOLTAGE**

Hazardous voltages may be present on the line which may cause minor injury or damage to equipment. When replacing the battery, you must disconnect the test leads from the line and power off the FED.

3. If you are using an AC adapter, disconnect the adapter.
4. Remove the battery door.
5. Remove the old battery and install a new battery.
6. Re-attach the battery door.

The FED is ready to use.

Connecting the FED

The FED comes equipped with a cable that includes 7 connectors. It may also include the optional AC adapter.

To connect the FED

1. If continuous power is required, connect the AC adapter to the unit and to AC power.

**WARNING: ELECTRICAL SHOCK**

Electrical shock may result in serious injury or death. Be sure the AC adapter is connected to the correct voltage mains. Do not use outdoors or in wet locations. Use only the AC adapter supplied with the test set.

2. Connect the blue leads to pair 1 of the line under test and connect the green lead to ground/earth.
3. Connect the red leads to pair 2 of the line, if needed.

4. If testing in thru mode, connect the yellow leads to the CO pair.

Operating the FED

Simply installing a battery (or plugging in the AC adapter) enables the FED to operate and respond to commands sent by a near-end test set. However, you can manually operate the FED as described below.

IDLE/OFF mode

In the Idle/Off mode, the FED is in a through mode between the primary pair and CO pair and will only respond to a wake up signal or a button press.

ON mode

To turn the FED On, press the button once. In the On mode, the FED is fully powered and supports all command functions. This mode will also be entered if the FED receives a wake-up signal. The LED flashes green about once per second when in this mode.

In this mode, the FED can be commanded to strap (short), terminate, or open the pair under test as well as send tones for loss measurements (performed at the near end).

There is a 4-hour time-out in this mode. This means that if the FED does not receive any DTMF commands or button presses within 4 hours, it will switch to Idle mode.

TRACE mode

To enter Trace mode, press the button twice quickly (within about one second). In Trace mode, the FED transmits a trace (warble) tone across the primary pair to help locate the pair at the other end to ensure that