



The Signaltester RJ-F wire tester analyzes wiring on phone, computer network and coax cables in one easy step. The large backlit LCD display maps out connections and describes wiring faults.

The built-in tone generator and the included Video and Data remote identifiers can be used to quickly locate cables in wiring closets and patch panels.

■ WARNINGS

Do not connect the Signaltester RJ-F to a live circuit. Exposure to voltage can damage the tester.

Do not modify or try to repair the tester. No serviceable parts are inside.

Do not use the tester in a wet or damp environment or during electrical storms. Visually inspect an RJ plug before inserting it into the tester. Poorly terminated plugs may damage the jacks on the tester.

Plugging an RJ11 or RJ12 connector into the RJ45 jack of the Signaltester RJ-F may damage the RJ45 jack.

Please read the complete safety instructions in the booklet delivered with this device.

DESCRIPTION

TESTER

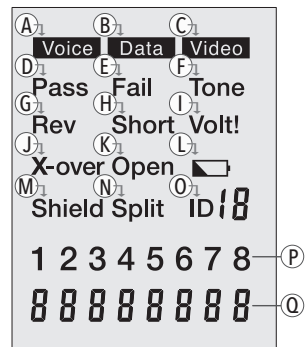
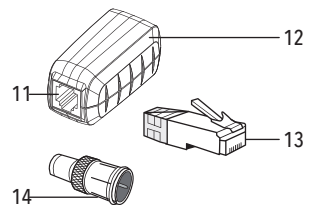
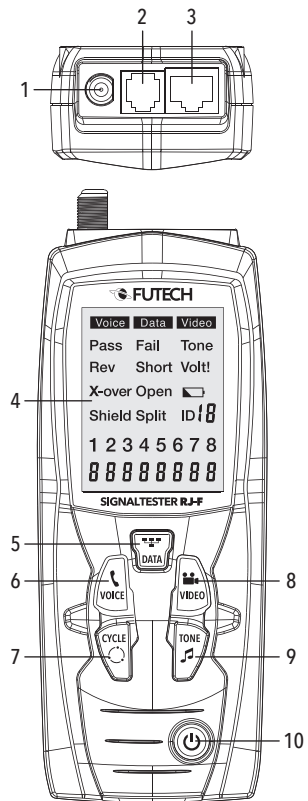
1. Video - F-connector
2. Voice - RJ11/RJ12 Jack
3. Data - RJ45 Jack
4. LCD Display
5. Data button
6. Voice button
7. Cycle button
8. Video button
9. Tone button
10. On/Off button

REMOTE & ID'S

11. Voice - RJ11/RJ12 Jack
12. Data - RJ45 jack
13. RJ45 Remote ID (5pcs. - permit mapping 5 remote locations)
14. F-connector Remote ID (5pcs. - permit mapping 5 remote locations)

LCD DISPLAY

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| <p>A. VOICE</p> <p>B. DATA</p> <p>C. VIDEO</p> <p>D. Pass</p> <p>E. Fail</p> <p>F. Tone</p> <p>G. Rev</p> <p>H. Short</p> <p>I. Volt!</p> <p>J. X-over</p> <p>K. Open</p> <p>L. Battery</p> <p>M. Shield</p> <p>N. Split</p> <p>O. ID</p> <p>P. Wire map</p> <p>Q. Wire map</p> | <p>Appears when testing or toning a phone cable.</p> <p>Appears when testing or toning a network cable.</p> <p>Appears when testing or toning a coax cable.</p> <p>Indicates proper wiring on cable being tested.</p> <p>Indicates wiring error on cable being tested.</p> <p>Appears when the tone generator is activated.</p> <p>Indicated the connections on one or more pairs is reversed at one of the cables.</p> <p>Indicates that two or more wires are shorted to each other</p> <p>Flashes when the tester is connected to a cable with voltage on it. Exposure to voltage can damage the tester. If this warning appears, immediately disconnect the cable from the tester.</p> <p>Appears when the tester detects a properly wired cross over cable.</p> <p>Appears when one or more pairs are open.</p> <p>Indicates low battery. When this symbol appears, results from the tester may not be reliable and the battery should be replaced immediately.</p> <p>Appears when the cable being tested has a shield that is connected at both ends. The shield indicator will flash if there is a short between the shield and any wire within the cable.</p> <p>Appears when the tester detects the signal is split between two or more pairs.</p> <p>Appears when the tester detects a Remote ID. Then number that appears correspondsto the number on the Remote ID.</p> <p>(near end) - The top row of numbers display the connector pins on the tester end of the cable in numerical order. These pins are mapped to the pins shown directly below on the bottom row of numbers.</p> <p>(remote end) - The bottom row of numbers displays the corresponding pin numbers on the remote end of the cable. Dash lines indicate shorted pins. No pin numbers indicate an open pair.</p> |
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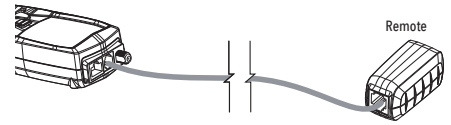
OPERATION

VOICE

Warning: Exposure to voltage can damage the Signaltester RJ-F. Immediately disconnect the cable under test if Voltage warning appears on the display. Make sure the cable is not connected to any device that can supply voltage before retesting. Do not connect two different cables into the Voice (RJ11/RJ12) and Data (RJ45) test ports at the same time. The cables will interact with each other and alter test results.

1. Press ON/OFF button to turn on the Signaltester RJ-F. Press the Voice button to select the voice wire test function.
2. Connect one end of the cable under test to the RJ11/RJ12 port on the tester.
3. Connect the other end of the cable under test to the RJ11/RJ12 port on the remote.
4. Interpret the results using the Wiring and Display Examples for Voice further in this manual.

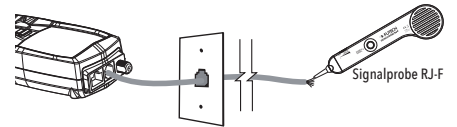
NOTE: SPLIT MAY APPEAR ON THE DISPLAY WHEN TESTING CABLES THAT HAVE NO TWISTING ON THE PAIRS.



Using the Tone Generator to trace a phone line

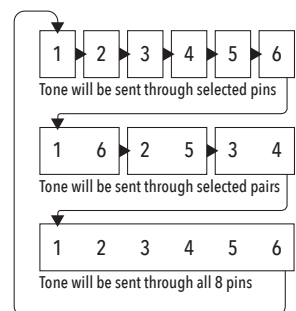
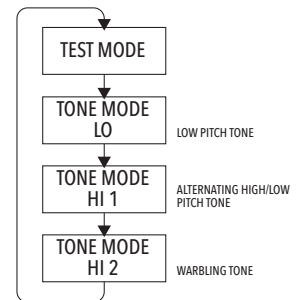
It is necessary to use the Signalprobe RJ-F.

1. Connect the cable under test to the RJ11/RJ12 port on the tester.
2. Press the ON/OFF button to turn on the Signaltester RJ-F, then press Voice button to select the voice wire test function.
3. Press the Tone button to activate the Tone Generator.
4. Repeatedly press the Tone button to select the desired tone. Refer to sequence chart for explanation of the tone selection.



5. The connector pins the tone is being sent through will be shown on the bottom of the display. Repeatedly press the Cycle button to select the desired pins. Refer to sequence chart for explanation of the pin selection.

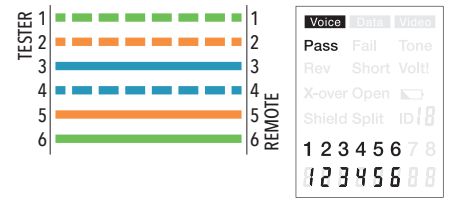
- When tracing a cable run from the tone generator to the end of the cable, applying the tone on a single pin will allow the tone to be detected at a greater distance from the cable.
- When trying to locate a cable in a equipment room or patch panel, sending the tone through all pins or a single pair will limit the tone signal from speaking to other nearby cables.
- The tone will be loudest when the probe tip is placed directly on the wires the tone is being sent through at the end of the cable.
- When sending a tone through a single pair, verification can be made by shorting the suspected pair. The tone will be very faint when the pair the tone is being sent through is shorted.



Wiring en Display examples for Voice cable

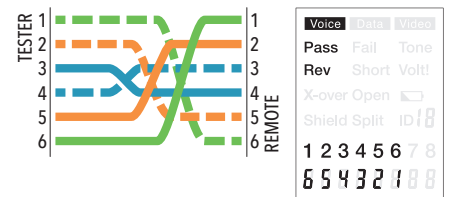
· USOC Phone Cable Properly Wired

Pass appears on the display indicating a properly wired cable. The pin numbers on the top row and bottom row are the same indicating proper continuity.



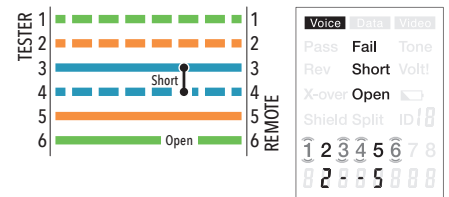
· USOC Cross Wired Phone Cable Properly Wired

A cross wired cable reverses the connection at one end of the cable. Pins 1-6 cross over to pins 6-1, pins 2-5 cross over to pins 5-2 and pins 3-4 cross over to pins 4-3. Cross wired cables are often used between the wall port and phone. Pass and Rev appear on the display indicating a properly wired cross wired cable. The pin numbers on the bottom row indicate the corresponding reversal to the pin members on the top row.



· USOC Phone Cable with Shorted and Open Pair

The pair on pins 3-4 is shorted and the pair on pins 1-6 is open. Fail, Short and Open appear on the display indicating a defective cable. The pins with wiring errors will flash. The dash lines below pins 3-4 indicate a shorted pair. The blank space under pins 1-6 indicate an open pair.

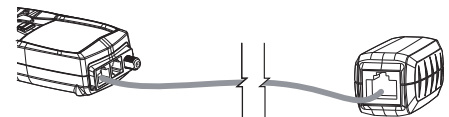


DATA

Warning: Exposure to voltage can damage the Signaltester RJ-F. Immediately disconnect the cable under test is Voltage warning appears on the display. Make sure the cable is not connected to any device that can supply voltage before retesting. Do not connect two different cables into the Voice (RJ11/RJ12) and Data (RJ45) test ports at the same time. The cables will interact with each other and alter test results.

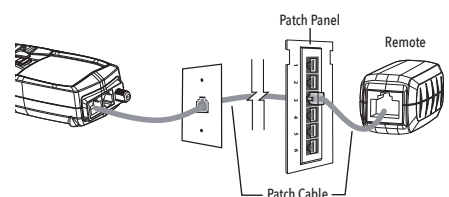
Testing a Data Patch Cable terminated with RJ45 Connector

1. Press ON/OFF button to turn on the tester. Press the Data button to select the data wire set function.
2. Connect one end of the cable under test to the RJ45 port of the tester.
3. Connect the other end of the cable under test to the RJ45 port of the remote.
4. Interpret the results using the Wiring and Display examples for Data further in this manual.



Testing an Installed Data Cable

1. Connect a known good patch cable to the wall port or patch panel of the cable being tested.
2. Connect the other end of the patch cable to the RJ45 port on the tester.
3. Connect another known good patch cable to the RJ45 port on the remote.
4. Connect the other end of the patch cable to the wall port or patch panel at the other end of the cable being tested.



5. Press ON/OFF button to turn on the tester. Press the Data button to select the wire test function.
6. Interpret the results using the Wiring and Display examples for Data further in this manual.

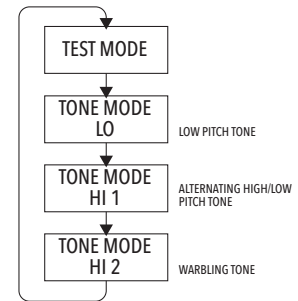
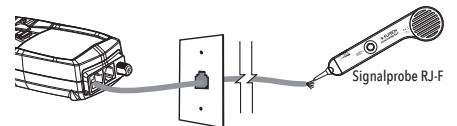
· Testing Shielded Cables

When testing a shielded cable, the Shield indicator will appear on the display if the shield is connected at both ends of the cable. If the shield is shorted to a wire within the cable, the Shield indicator and the corresponding shorted pin will flash. A dash mark under the flashing pin will appear indicating a short.

Using the Tone Generator to trace a Data Cable

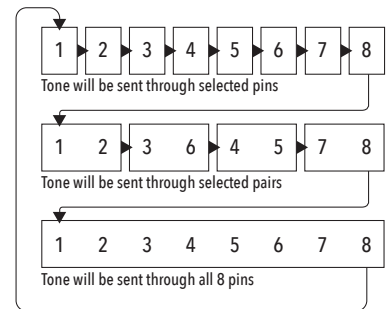
It is necessary to use the Signalprobe RJ-F.

1. Connect the cable under test to the RJ45 port on the tester.
2. Press the ON/OFF button to turn on the Signaltester RJ-F, then press the Data button to select the data wire test function.
3. Press the Tone button to activate the Tone Generator.
4. Repeatedly press the Tone button to select the desired tone. Refer to sequence chart for explanation of the tone selection.



5. The connector pins the tone is being sent through will be shown on the bottom of the display. Repeatedly press the Cycle button to select the desired pins. Refer to sequence chart for explanation of the pin selection.

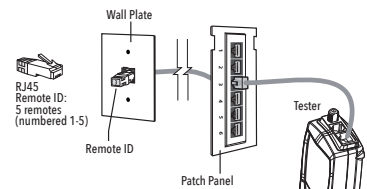
- When tracing a cable run from the tone generator to the end of the cable, applying the tone on a single pin will allow the tone to be detected at a greater distance from the cable.
- When trying to locate a cable in a equipment room or patch panel, sending the tone through all pins or a single pair will limit the tone signal from speaking to other nearby cables.
- The tone will be loudest when the probe tip is placed directly on the wires the tone is being sent through at the end of the cable.
- When sending a tone through a single pair, verification can be made by shorting the suspected pair. The tone will be very faint when the pair the tone is being sent through is shorted.



Cable Identification on installed Data Cable

The Remote IDs can be used to identify cable runs from the patch panel to a wall port. Each identifier has a labeled ID number. When the tester is connected to a cable that has an identifier attached at the other end, the tester will display the ID number that is marked on the identifier.

1. Connect the numbered remote IDs to the port for each cable that needs to be identified.
2. At the wiring closet or patch panel, connect the unknown cable to the RJ45 port on the Signaltester RJ-F.
3. Press the ON/OFF button to turn on the tester. Press the Data button to select the data wire test function.
4. If the cable being tested is connected to one of the remote IDs, the display will indicate the number that corresponds to the remote.



· **THE RJ45 REMOTE IDS DO NOT TEST THE WIRING ON THE CABLE. ONLY THE REMOTE CAN IDENTIFY WIRING FAULTS. THE REMOTE MAY NOT IDENTIFY THE CABLE IF THE CABLE IS**

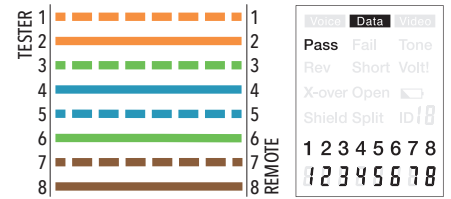
MISS-WIRED.

Wiring and Display Examples for Data Cable

- T568B Data Cable Properly Wired

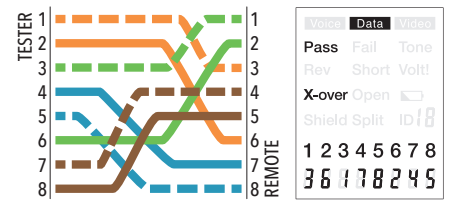
Pass appears on the display indicating a properly wired cable. The pin numbers on the top row agree with the bottom row indicating proper continuity.

Both the T568A and T568B wiring standards will test the same as long as the same standard is used on both ends of the cable



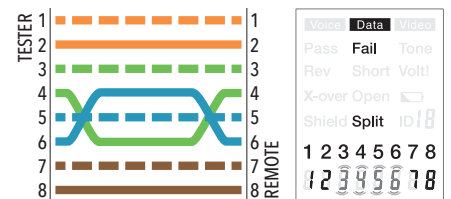
- T568B Cross Wired Data Cable Properly Wired

The pairs cross over (transmit to receive and receive to transmit). Pass and X-over appear on the display and the pin numbers on the bottom row indicate the corresponding cross over to the pin numbers on the top row.



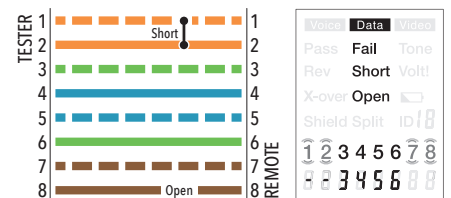
- T568B Data Cable with Split Pairs

There is a split between the pairs on pins 3-6 and 4-5. Fail and Split appear on the display and the pin numbers with the split will flash.



- T568B Data Cable with a Shorted and Open Pair

Pins 1-2 are shorted and the pair on pins 7-8 is open. Short and open appear on the display and the pins with wiring errors will flash. Dash lines will appear below the shorted pins. Blank space will appear below the open pairs.

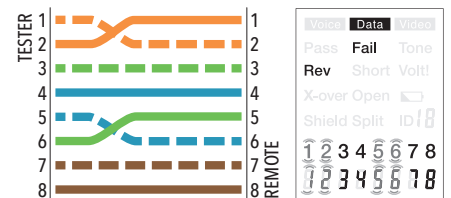


- T568B Data Cable with Reversed Pair and Crossed Connection

The pair on pins 1-2 is reversed and the wires on pins 5-6 are crossed at one end of the cable. Fail will appear on the display indicating a defective cable. The pins with wiring errors will flash.

Pins 1-2 on the top row show below pins 2-1 indicate a reversal on the orange pair.

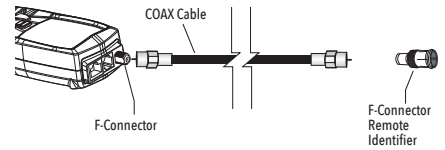
Pins 5-6 on the top row show below pins 6-5 indicate a crossed connection.



■ VIDEO

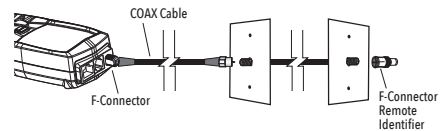
Testing wiring on COAX patch cables terminated with F-connectors.

Test signals in the Video mode may not pass through a splitter. Only one remote ID can be connected at a time when testing cables connected to a common splitter.



┌ Testing wiring on Installed COAX cables

1. Connect a known good patch cable to the F-connector on the tester
2. Connect the other end of the patch cable to the wall port or patch panel connected to the cable under test.
3. Connect a numbered COAX-remote to the wall port at the other end of the cable under test.
4. Press the ON/OFF button to turn on the Signaltester RJ-F and press the Video button to select the video cable test function
5. Interpret the results using the Wiring and Display examples for Video further in this manual.

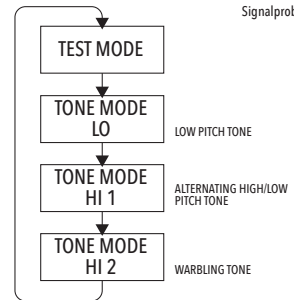
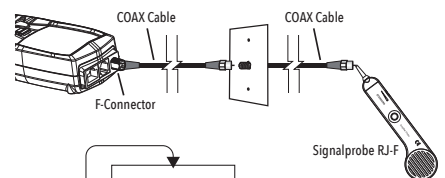


┌ Tone Tracing on COAX Cable

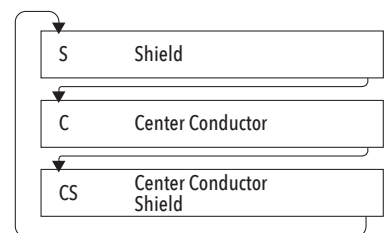
It is necessary to use the Signalprobe RJ-F.

Certain splitters used on coax cables will prevent the tone from passing.

1. Connect the cable under test to the F-connector on the tester.
2. Press the ON/OFF button to turn on the Signaltester RJ-F, then press the Video button to select the video cable test function.
3. Press the Tone button to activate the Tone Generator.
4. Repeatedly press the Tone button to select the desired tone. Refer to sequence chart for explanation of the tone selection.



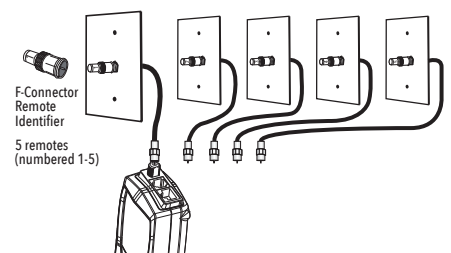
5. The tone can be sent through the center conductor, the shield or both. Repeatedly press the CYCLE button to select the desired conductors. The selection will be shown on the bottom of the display. Refer to the sequence chart for explanation.



Applying the tone on the center conductor and the shield or just the shield will allow the tone to be detected at a greater distance from the cable. When trying to identify a cable in the presence of multiple cables, sending the tone through just the center conductor will limit the signal spreading to other cables. The cable that is being toned can be identified by touching the probe tip to the center conductor at the end of the cable.

┌ Cable Identification on Installed Video Cable

The remote IDs can be used to identify cable runs from the patch panel to a wall port. Each identifier has a labeled ID number. When the tester is connected to a cable that has an identifier attached at the other end, the tester will display the ID number that is marked on the identifier.



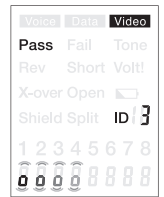
1. Connect the numbered remote IDs to the F-connector port for each location needs to be identified.
2. At the patch panel, connect the unknown cable to the F-port on the Signaltester RJ-F.
3. Press the ON/OFF button to turn on the tester and press Video to select the video cable test function.
4. If the cable being tested is connected to one of the remote IDs, the display will indicate the number of the corresponding remote ID.

The Open or Short indicator will appear if the cable is defective.

Wiring and Display Examples for Coax Cable

- COAX cable with Proper Continuity

The cable is good and passes the test. ID3 signifies that Remote Identifier number 3 is being used to terminate the cable. The flashing "o"s on the bottom of the display indicate the tester is running a continuous test.



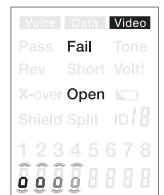
- COAX cable with Short

The center conductor is shorted to the shield. The cable fails the test and the remote Identifier cannot be detected.



- COAX Cable with an Open Circuit

There is a break in the cable causing an open circuit. A broken connection in the center conductor or shield will trigger a fault. The cable fails the test and the Remote Identifier cannot be detected.



BATTERY REPLACEMENT

Pull down locking tab and open the battery door.
Replace the 2x AA battery
Re-assemble the tester.

Do not use the Signaltester with the battery door removed!

SPECIFICATIONS

Operating temperature	0°C to 50°C
Storage temperature	-20°C to 60°C
Humidity	10% to 90%, non condensing
Maximum voltage between any two pins without damage	60V DC or 55V AC
Batteries	2x AA
Cable types	Shielded or Unshielded Cat 7, Cat 7a, Cat 6a, Cat 6, Cat 5e, Cat 5, Cat 4, Cat 3, Coax
Max. Coax cable length	305m
Min. Cable length for split pair detection	0.5m
Max. Coax cable Resistance	100Ω max. DC
Dimensions	152x61x34
Weight	230g

Futech is a registered brand of Laseto NV, Belgium.

Futech declares that the Signaltester RJ-F is in conformity with the following standards:

- EN 61326-1:2013
- EN 61326-2-2:2013

following the provisions of Directive:

- Electromagnetic Compatibility Directive 2014/30/EU

Tested by Bureau Veritas Shenzhen Co., Ltd - Guangdong 523942, China
Certificate number 1888AB0607N059001 - CE180607N059

