

# CATV Quick Start Guide

## Agilent Technologies

### 8712ET/ES and 8714ET/ES

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This quick start guide provides basic instructions on how to make measurements that test the quality of coaxial cables. Refer to the *Option 100 Fault Location and Structural Return Loss Measurement User's Guide Supplement* for more detailed information. Also, please refer to your analyzer's *User's Guide* for safety, warranty, and assistance information.

#### NOTE

This quick start guide assumes the use of an 8712ET or 8714ET. If you are using an 8712ES or 8714ES, some key presses and displays will be slightly different.

### To Make a Fault Location Measurement

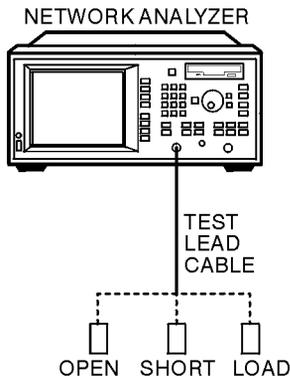
#### 1. Choose the measurement parameters or recall an instrument state.

**PRESET** **BEGIN** **Cable** **Fault Location**

**Start Distance** **(XX)** **(ENTER)** **Stop Distance** **(XX)** **(ENTER)**

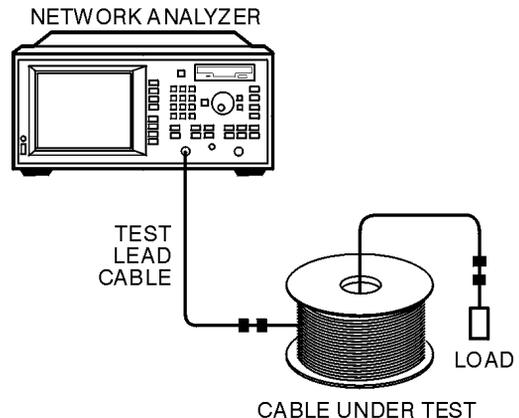
#### 2. Calibrate the analyzer.

**CAL** **Full Band Cal**



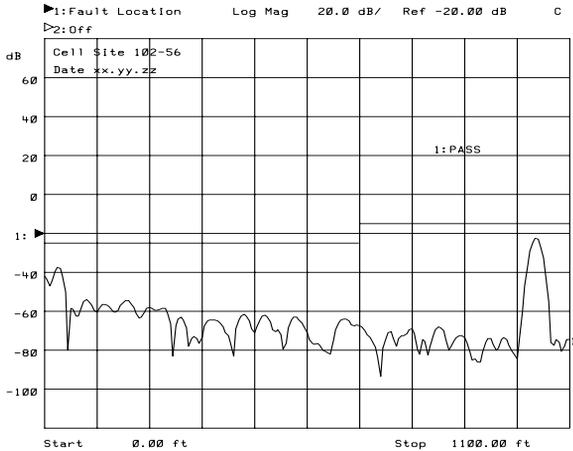
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#### 3. Connect the equipment.



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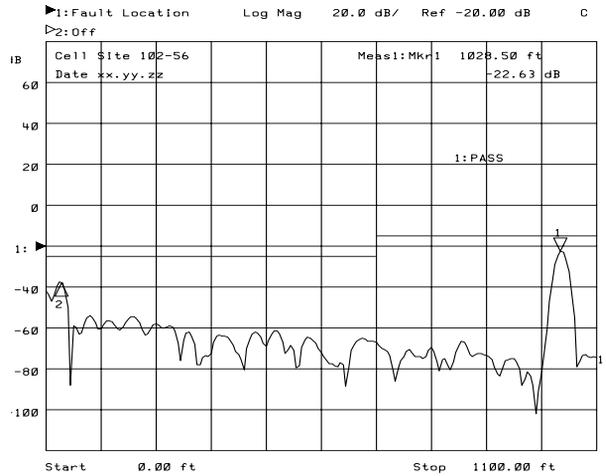
#### 4. View the fault location results.



#### 5. Interpret the measurement / save results.

**MARKER** Marker Search Max Search

Mkr -> Max



**SAVE RECALL** Define Save Data ON

Prior Menu Save State

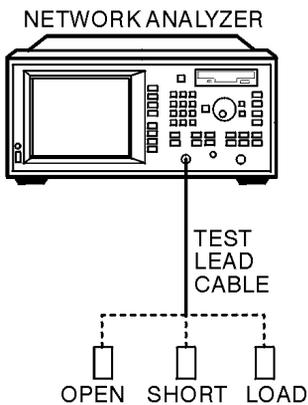
### To Make an SRL Measurement

#### 1. Select SRL measurement function.

**PRESET** **BEGIN** Cable SRL

#### 2. Calibrate the analyzer.

**CAL** Full Band Cal

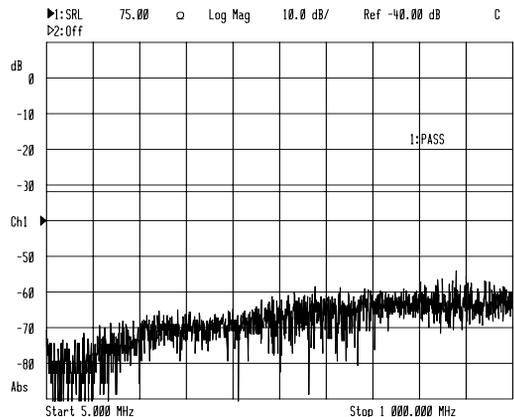


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Leave load connected.

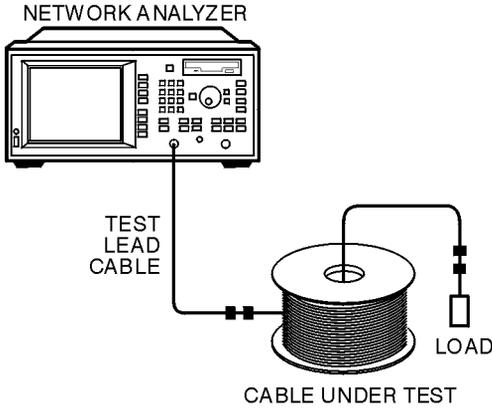
#### 3. Verify the calibration.

Directivity is good if trace is below -50 dB.



Wiggle (move) the test-lead cable. The test-lead cable is good if the trace remains stable.

#### 4. Connect the equipment.

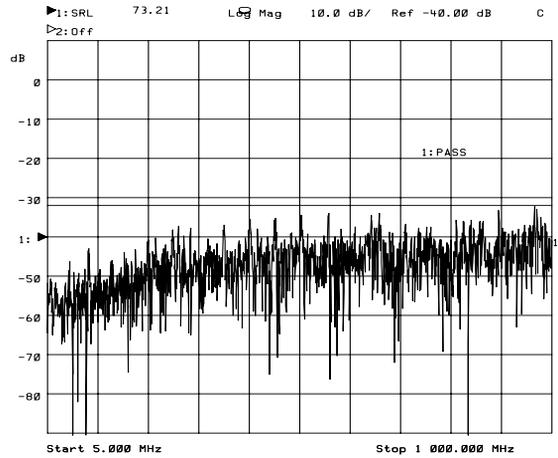


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#### 5. Measure the connector.

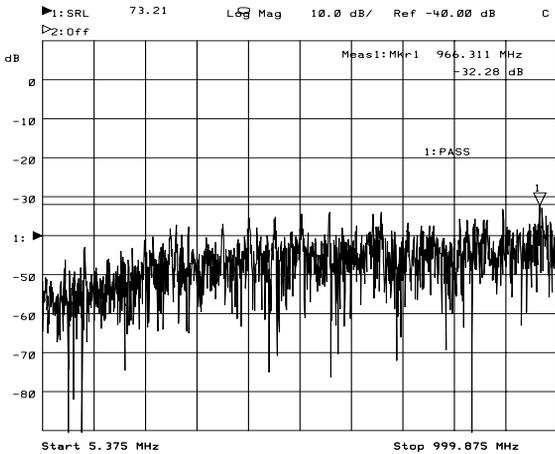
**BEGIN** Cable SRL Connector Model

**Measure Connector**



#### 6. Scan the cable.

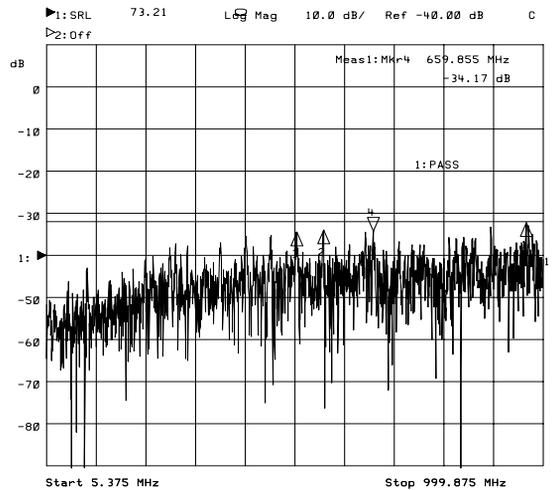
**BEGIN** Cable SRL SRL Cable Scan



#### 7. Interpret the measurement / save results.

**MARKER** Marker Search Max Search

**Mkr -> Max**



**SAVE RECALL** Define Save Data ON

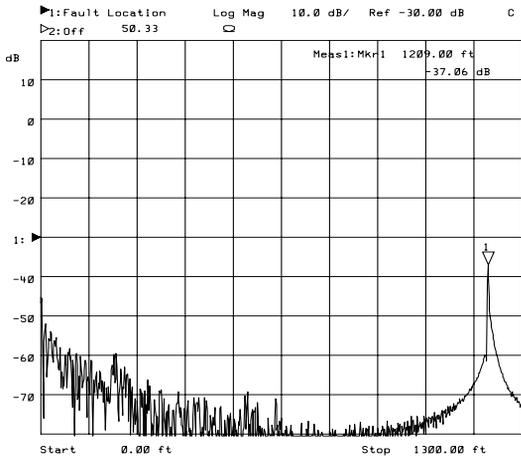
**Prior Menu** Save State

## If Measurement Results Were Poor

The following results indicate some specific problems you may encounter. The 2nd and 3rd problem/solution are displayed using the “connector fault” feature. Refer to your *Option 100 User’s Guide Supplement* for more information.

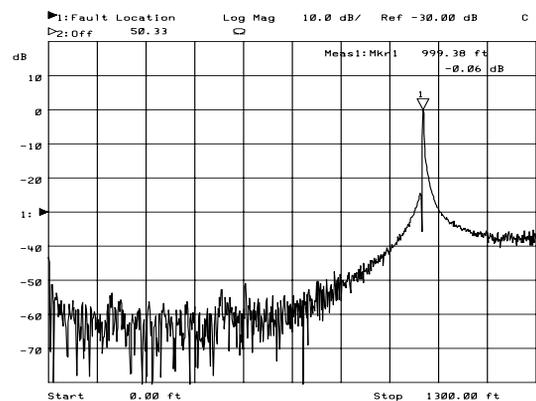
### Problem 1

The measured amplitude and distance of a 1000 ft. cable are wrong. (Cable is not terminated in this example.)



### Solution 1

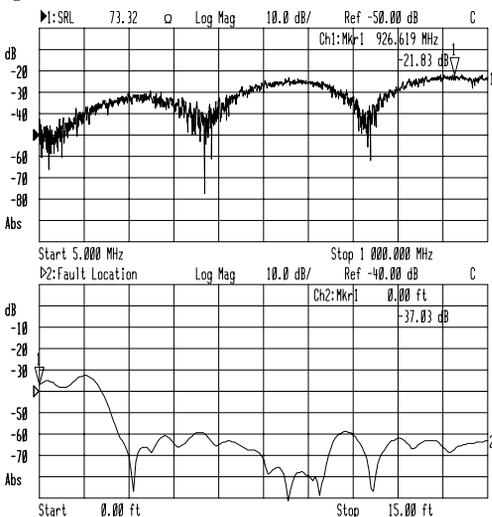
Change the “velocity factor” and “cable loss” values to the values specified by the cable manufacturer.



**BEGIN** Cable Fault Location **CAL**  
 Velocity Factor Cable Loss

### Problem/Solution 2

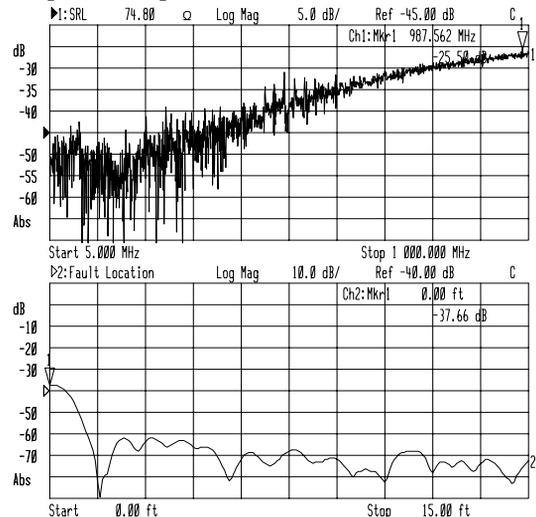
The cable is bent near the connector (indicated by the 2nd bump in the “connector fault” response).



**Solution:** Remove the bend.

### Problem/Solution 3

The cable connector is failing or the cable is poorly prepared. Connector compensation fails to improve response.



**Solution:** Clean or replace the connector.