

# **Cirris Signature 500™ Cable Analyzer Performance Verification Procedure**

Version 1.0  
October, 1993

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Performance Verification Procedure

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Printed in the United States of America

## Introduction:

In this document, we will explain how to check the calibration of your Cirris Signature 500™ Cable Analyzer. When you perform this procedure, you'll verify that your analyzer is fully calibrated, can detect twisted pairs, and is operating within normal limits.

## What you'll need:

To perform this calibration procedure, you'll need the following items:

1. Your Signature 500 Cable Analyzer.
2. A 500 calibration adapter card.
3. This document. A stopwatch will be helpful, but is not required.

## What does this process do?:

The calibration method we'll discuss here allows you to check the calibration of your Signature 500 using a calibration adapter (a specially modified zero-ohm adapter). All of the pins of the adapter are used during calibration. This process verifies the operation of the analyzer at each significant resistance range.

## A general look at the procedure:

To begin, you'll set the analyzer to learn only connections. Then you'll install the zero-ohm adapter, and have the analyzer "learn" the adapter as if it were a sample cable.

Once the analyzer has learned the calibration adapter, you check the test timing, the adapter signature, and the wire list to verify that the analyzer is working properly.

## Learning the Calibration Adapter

To learn the 500 Calibration Adapter:

↵ TEST CABLE  
↓ SET OPTIONS

SET OPTIONS  
YES ↵ ↓ NO

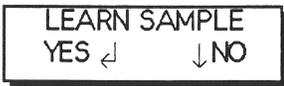
TEST CONNECTIONS  
YES ↵ + CHANGE

↵ TEST CABLE  
↓ SET OPTIONS

TEST CABLE FROM  
MEMORY ↵ ↓ SAMPLE

1. **Turn the analyzer on.** The analyzer will prompt "Test Cable Set Options."
2. **Press the List button to select "Set Options."** The analyzer will prompt "Set Options Yes No."
3. **Press the Enter button to choose "Yes."**
4. **Press the Change button** until the "Test Connections" setting appears in the display.
5. When "Test Connections" appears, **press the Enter button to choose "Yes."** An error tones prompt will appear.
6. **Press the Menu button** to return to the "Test Cable Set Options" prompt.
7. **Install the calibration adapter into the Signature 500.** For instructions on how to do this, see "Installing Adapters" on page 7 (manual versions 1.0, 1.1) of the Signature 500 User's Guide.
8. With the "Test Cable Set Options" screen displayed, **press the Enter button to choose "Test Cable."** The analyzer will prompt "Test Cable From Memory Sample."
9. **Press the List button to choose "Sample."** The analyzer will

prompt "Learn Sample Yes No."

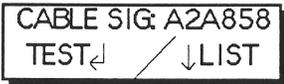


- 10. Press the Enter button to choose "Yes." The analyzer will learn the calibration adapter as if it were a sample cable. The learning process should take about six (6) seconds. If this takes less than 5 seconds or more than 7 seconds (use a stopwatch) there is an error.

Final Verification:

You've completed the process of learning the calibration adapter. The next step is to check the signature (displayed) of the calibration adapter, and the wire list that the analyzer has learned from the calibration adapter against the correct information shown here in the manual.

To verify that your analyzer is performing properly, proceed as follows:



This is the correct cable signature for the calibration adapter.

- 1. Check the displayed signature. It should be A2A858. Remember, you must also verify the timing (from when you push the button to when the correct screen appears) in step 10.
2. Check the wire list. You can do this by either pressing the List key repeatedly (the analyzer will display the adapter signature, then the wire list line by line as you step through it), or by pressing the Print key (if you have a printer connected to the analyzer) to print out the wire list that the 500 has learned from the calibration adapter.

The information displayed (or printed) should match that shown here:

SIGNATURE 500 CABLE DOCUMENTATION

Table with 2 columns: Field Name and Value. Fields include CABLE SIGNATURE, J1 ADAPTER SIGNATURE, CABLE DESCRIPTION, CABLE PART NO., and CONNECTOR DESCRIPTION.

SORTED WIRE LIST:

NO. COMMON CONNECTIONS

Table with 8 columns of wire identifiers (e.g., J1-01, J1-05, etc.) and 7 rows of connections.

NOTES:

Results:

If the test time was either too short or very long (see step 10), remove and reinstall the calibration adapter, then repeat the steps in the "Learning Calibration Adapter" section of this manual. If the test fails again, contact Cirris Systems for service. The 500 contains no user-serviceable parts inside. If the test timing is acceptable, the cable signature and adapter signatures are correct, and the wire list matches the one shown here, your analyzer is fully calibrated and operating properly.