Agilent E5070B/E5071B ENA Series RF Network Analyzers

ECal Assistant Program

Second Edition



No. 16000-95002 August 2002

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Agilent Technologies Japan, Ltd.

Component Test PGU-Kobe

1-3-2, Murotani, Nishi-ku, Kobe, Hyogo, 651-2241 Japan

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VBA Macro

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Calibration

Full 3-Port and Full 4-Port Calibration	Using	the 2	2-Port
ECal			

A VBA macro (ECal Assistant) is pre-installed in the E5070B/E5071B to carry out a full 3-port or a full 4-port calibration using the 2-port ECal.

NOTE ECal Assistant does not perform the isolation calibration.

Operation Method

- **Step 1.** Connect the USB port of the ECal module and the USB port on the E5070B/E5071B with a USB cable. The connection may be made with the E5070B/E5071B powered on.
- Step 2. Press Macro Setup .
- Step 3. Press Load Project.
- **Step 4.** From the Open dialog box, select the VBA project file "D:\Agilent\ECalAssistant.VBA" and press the **Open** button.
- Step 5. Press Macro Run.

A dialog box as shown in Figure 1 appears.

Figure 1 ECalAssistant (Start) Dialog Box

ECalAssistant	M.00.04	×
	ECalAssistant	
Copyright (c) 2001 Agilent Technologies, Inc.		
	Next	
:5070auj138		

Step 6. Press the Next button.

A dialog box as shown in Figure 2 appears.

Figure 2

ECalAssistant (Port/Channel Selection) Dialog Box

ECalAssistant M.00.04	x
Select Ports	- Select Channel
© 3 - port	Channel 1
C 4 - port	
Cancel < Back	Next > Measure
e5070auj085	

- Step 7. In the Select Ports area, click and select the 3-Port (for a full 3-port calibration) or the 4-Port (for a full 4-port calibration) radio button.
- Step 8. When a full 3-port calibration is carried out on an E5070B/E5071B with option 413 or 414, select the test ports to be calibrated on the drop down list box below the **3-Port** button (either 1-2-3, 1-2-4, 1-3-4, or 2-3-4).
- Step 9. In the Select Channel area, select the channel to be calibrated (one of the channels 1 ~ 9).
- Step 10. Press the Next button.

A dialog box as shown in Figure 3 appears.

Figure 3 ECalAssistant (Connection) Dialog Box



Step 11. Following the connection diagram shown in the dialog box (Figure 3), connect port A and B of the ECal module to test ports on the E5070B/E5071B.

Note that the connection diagram shown in each dialog box that appears in each step depends on the number of test ports on the E5070B/E5071B (option 313/314 or 413/414), and the test port selection made in Step 8.

Step 12. Press the Measure button to start the measurement of calibration data.

Upon completion of the measurement, a dialog box as shown in Figure 4 will be displayed.

Figure 4

ECalAssistant (Measurement Complete) Dialog Box



Step 13. Press the Next button.

A dialog box as shown in Figure 5 appears.

Figure 5ECalAssistant (Connection) Dialog Box



- **Step 14.** Re-connect the ECal module following the instructions given in each dialog box and continue the calibration process.
- **Step 15.** When all calibration data have been collected, a dialog box with the *Complete!* sign appears as shown in Figure 6. Press the **Done** button to finish the calibration. If you wish to cancel the calibration, press the **Cancel** button.

Figure 6 EcalAssistant (Finish) Dialog Box

