SUPERSEDES: 4155A-10

4155A Semiconductor Parameter Analyzer

04155-66501/04155-69501 CPU Assembly

Serial Numbers: 0000A00000/JP10A01089

Replacing CPU board ROMs to fix firmware defects

Duplicate Service Notes: 4156A-11A

To be Performed by: Agilent-qualified personnel

Parts Required:

P/N	Description	Quantity
04155-65431	ROM Upgrade Kit 1.06	1

Situation:

The firmware revision 1.06 of the 4155A/4156A was released. The firmware 1.06 fixes 13 defects found in the firmware revision 1.04/1.05. This firmware update can be implemented in the installed base.

The ADC ROM revision did not change. (Current revision is 1.00.)

Continued

DATE: August 1998

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	☐ IMMEDIATELY ■ ON SPECIFIED FAILURE ☐ AGREEABLE TIME	STANDARDS: LABOR 1.0 Hours		
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ■ SERVICE CENTER	SERVICE INVENTORY: ☐ RETURN ☐ SCRAP ■ SEE TEXT	USED PARTS: ☐ RETURN ■ SCRAP ☐ SEE TEXT	
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: August 2000		
AUTHOR: MO	ENTITY: 3301	ADDITIONAL INFORMATION:		

Agilent Technologies

The following are the items fixed by revision 1.06:

Knob Sweep Measurements

- Result curve on the screen sometimes lies on the Y axis.

- When using SMU, VAR1 50 mA range setting cannot be applied to the actual source output properly.

- Using VMU1/VMU2 in the differential voltage measurement mode sometimes causes improper measurement results.

- When using R-box, measurement setup change causes improper measurement results.

- Unexpected status message is sometimes displayed on the screen.

SCPI Commands

- If the :DISP OFF command and any :PAGE command invalid for the present screen page are entered in this order, the LOCAL softkey sometimes makes the PAGE CONTROL front panel keys void.

- If the :DISP OFF command and :PAGE:GLIS:LIST command are entered in this order, measurement trigger sometimes causes unexpected operation or hang up.

- The fixed screen mode by the :DISP OFF command cannot sometimes be released normally.

Other Defects

- Direct cursor MIN/MAX softkey cannot sometimes work properly.

- In the current pulse sweep measurements with 0 A base value setting, the negative output setting results the output containing offset current.

- In the sampling measurements with simultaneous output sequence, the standby outputs fall to 0 V for the repeated measurements.

- In the thinned-out sampling measurements, improper sampling interval is used for the measurements if the total sampling time is changed from any value to NO LIMIT.

- When an GPIB peripheral (in power on state) is connected, the external trigger is sometimes not effective and just causes the remote state.

Solution/Action:

Replace the following three ROMs on the 04155-66501/04155-69501 CPU Assembly:

ROM	New Revision P/N
HOSTC 1/2	04155-85211 (1.06)
HOSTC 2/2	04155-85212 (1.06)
SMUC	04155-85215 (1.08)

The ROM upgrade kit (04155-65431) contains three new revision ROMs plus Firmware Release Note for customer (04155-90907), which explains the items fixed on the firmware 1.06. The ROMs are identical for the 4155A and 4156A. For replacement procedure, see "Replacement Procedures" in the 4155A/4156A Service Manual (P/N 04155-90600).

Be sure to give the Firmware Release Note and the previous (before the update) firmware revision number information to the customer.

To do this replacement, 41501A SMU/PGU Expander for the 4155A/4156A is not necessary.