

S E R V I C E N O T E

Supersedes:
None

**1980B OSCILLOSCOPE MEASUREMENT SYSTEM
Serials Prefixed 2131A- and Below
HP-IB TALK/LISTEN AND ROM REPLACEMENT**

The design of the INTEL 8291A HP-IB Talk/Listen device (A23U3) used in the 1980 system has been improved by the vendor. The new design necessitated software changes and masked ROM (A3U1) has also been redesigned.

Since the old HP-IB device (HP Part No. 1820-2357) will no longer be supplied by the vendor we will also obsolete the old ROM (HP Part No. 1818-1113). Therefore, should either device require replacement in instruments prefix 2131A- and below, both must be replaced. Order kit HP Part No. 01980-69506, which includes:

Quan.	Part No.	Description	Ref. Desig.
1	1820-2549	HP-IB Talk/Listen	A23U3
1	1818-1639	HP-IB ROM	A23U1
1	5957-2251	Service Note 1980A/B-5	

After replacement correct the Service Manual parts list, insert the new HP-IB ROM TEST signatures before Service Sheet 31, and insert the operating changes listed in this Service Note in the Operators Manual.

Should either device require subsequent replacement they may be changed individually.

E/OF/WO

08/81-08

HP P/N 5957/2251


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For more information, call your local HP Sales Office or nearest Regional Office: Eastern (301) 258-2000; Midwestern (312) 255-9800; Southern (404) 955-1500; Western (213) 877-1282; Canadian (416) 678-9430. Ask the operator for Instrument Sales. Or, Write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, CA 94304. In Europe: Hewlett-Packard S.A., 7, rue du Bois-du-Lan, P.O. Box CH-1217 Meyrin 2, Geneva, Switzerland. In Japan: Yokogawa-Hewlett-Packard Ltd., 29-21, Takaudo-Higashi 3-chome, Suginami-ku, Tokyo, 168.

OPERATING CHANGES

Area	Old Devices	New Devices
OPTION MENU	SK5 labeled "19842A HP-IB"	SK5 labeled "HP-IB MODE"
Sweep and Sensitivity	Accepted only 3 mantissa digits	Will accept more than 3 mantissa digits ignoring those after 3
Delay Time (DY)	If input contained digits representing less than 100 ps a syntax error was reported	Digits representing less than 100 ps are truncated and no syntax error reported
Input Mask (IM)	Did not clear pending service requests	Clears all pending service requests
Service Requests Masked Off	SRQ key pressed sets bit 8 and bit 2	Sets only bit 8
Service Requests Masked Off	Reading status byte cleared status byte	Reading status byte does not clear byte (executing OQn will clear bit n. OQ2 will also clear bit 8, SRQ.)
Rotary Control	When changed from one function to another instrument would properly set FINE/COARSE but it would not be apparent to the operator. Therefore operator would attempt to change and confusion resulted.	Now set automatically as it should be. e.g. RC is transferred from MS (coarse) to VOLTS/DIV, FINE is set and FINE light is lit.
ALT/CHOP Selection	If Main or Delayed sweeps were changed from <1 ms to >1 ms (or vice versa) program had to select ALT or CHOP accordingly	Proper selection of ALT/CHOP is automatically accomplished, but can be overridden as desired by program
Device Clear	No device clear	Added. Therefore after set, next poll from 1980 main loop causes HP-IB interface to: 1) abort a Talk or Listen 2) reset the menus 3) clear all pending SRQ's Does not function during CAL or digitize. Clears 1980 only. Plug in, digitizer, or Feature ROMs not affected except to reset menus.

SERVICE SHEET 31 SIGNATURE ANALYSIS

Note

Remove Expansion Module before performing tests.

TEST 15. HP-IB ROM Test, HP Part No. 1818-1639

Note

This test checks the ability of the processor to access the HP-IB ROM. Ensure an external controller is not connected to the 1980 when this test is being performed.

- a. Set instrument power to off.
- b. Signature Analyzer Connections:
 - START \searrow to A23UI-20 (IBROM)
 - STOP \swarrow to A4U3-7 (IBROM)
 - CLOCK \swarrow to A4TP5 (LRD)
- c. Set A4S1-B and A4S1-C to closed.
- d. Set instrument power to on.

e. TEST POINT	SIGNATURE
Probe open	826P
A0 (U1-8)	7P25
A1 (U1-7)	2A1F
A2 (U1-6)	A206
A3 (U1-5)	C133
A4 (U1-4)	8P3U
A5 (U1-3)	3319
A6 (U1-2)	7C47
A7 (U1-1)	C25F
A8 (U1-23)	5H21
A9 (U1-22)	19H6
A10 (U1-19)	HP66
A11 (U1-18)	7A70
AD0 (A4U57-18)	H967
AD1 (A4U57-17)	1C71
AD2 (A4U57-16)	CA40
AD3 (A4U57-15)	0922
AD4 (A4U57-14)	CAPF
AD5 (A4U57-13)	24C2
AD6 (A4U57-12)	7ACA
AD7 (A4U57-11)	8U80

- f. Set A4S1-B and A4S1-C to open.