

Supersedes:

None

HP MODEL 5345A A3/A4 INPUT ASSEMBLIES

All Serials

INPUT AMPLIFIER FAILURES/BIAS ADJUSTMENTS

There have been front end specification, IC, and bias adjustment revisions since the 5345A introduction. This Service Note summarizes these changes. A breakdown of these revisions (by Serial Number Prefix) are given in Table 1. This table includes A3 and A4 Assembly U1 and U2 changes, replacement part numbers, and bias adjustments. Bias adjustment procedures are given in the Operating and Service Manual. BIAS ADJUSTMENTS ARE VERY TEMPERATURE SENSITIVE; ALLOW TIME FOR THE INSTRUMENT TO WARM-UP AND STABILIZE.

Table 1. Summary of Revisions

SERIAL PREFIX	REFERENCE DESIGNATOR	ORIGINAL IC P/N	PART NUMBER REPLACEMENT	BIAS LEVEL ADJUSTMENT	BIAS POT
1426A AND BELOW	A3U2, U1	1826-0088	05345-80002 See Note 1	-70 mV \pm 10 mV	A3U2 — R44 A3U1 — R47
	A4U2, U1	1826-0151	05345-80002 See Note 1	+600 mV \pm 50 mV	A4U2 — R16 A4U1 — R19
1428A	A3U2, U1	1826-0088	1826-0088	-70 mV \pm 50 mV See Note 2	A3U2 — R44 A3U1 — R47
	A4U2, U1	1826-0151	1826-0290	+800 mV \pm 50 mV See Note 3	A4U2 — R16 A4U1 — R19
1440A	A3U2, U1	1826-0088	1826-0088	-70 mV \pm 50 mV See Note 2	A3U2 — R44 A3U1 — R47
	A4U2, U1	1826-0290	1826-0290	+800 mV \pm 50 mV See Note 3	A4U2 — R16 A4U1 — R19
1512A AND ABOVE	A3U2, U1	1826-0088	1826-0088	+1.00V \pm 50 mV	A3U2 — R44 A3U1 — R47
	A4U2, U1	1826-0290	1826-0290	+800 mV \pm 50 mV See Note 3	A4U2 — R16 A4U1 — R19

NOTES:

- A3U2/A4U2 and A3U1/A4U1 are matched IC sets (HP Part No. 05345-80002). If either IC in a set is replaced the second IC must also be replaced. The 05345-80002 matched set includes one 1826-0088 and one 1826-0085 IC (obsolete 1826-0151 is replaced by 1826-0085).
- If instrument has resistor modification shown in Table 2, adjust 1826-0088 to new bias level of 1.00 \pm 50 mV.
- If this bias adjustment is difficult, see Service Note 5345A-10A.

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SERIAL PREFIX 1426A AND BELOW:

These Serial Prefix instruments have a 10 mV rms input sensitivity specification and $\pm 5V$ trigger level range.

SERIAL PREFIX 1428A:

Starting with Serial Prefix 1428A, the 5345A has a 20 mV rms input sensitivity specification and $\pm 1.3 V$ trigger level range.

A3 Assembly

A matched set of IC's is not needed for replacement.

A4 Assembly

If U1 or U2 (P/N 1826-0151) on the A4 assembly fails, it must be replaced with the 1826-0290 IC. The 1826-0290 is the same part as the 1826-0151 but has a lower gain specification.

SERIAL PREFIX 1440A:**A4 Assembly**

These 5345A instruments have been shipped with the new A4U1, U2, P/N 1826-0290.

In some instances instruments have been shipped with the 1826-0085 in place of the 1826-0290. 1826-0290 is still the preferred replacement for A4U1 or A4U2.

SERIAL PREFIX 1512A AND ABOVE:**A3 Assembly**

The resistor modification in *Table 2* was added to optimize bias for the 1826-0088 IC. The 1.00V ± 50 mV bias adjustment must be made.

Table 2. A3 Assembly Resistor Modification

CKT REF	BELOW SERIAL PREFIX 1512A BIAS = -70 mV \pm 50 mV		SERIAL PREFIX 1512A AND ABOVE BIAS = 1V \pm 50 mV	
	HP P/N	DESCRIPTION	HP P/N	DESCRIPTION
R43, R46	0675-1021	1K OHM 10% .25W	0683-6984	470 OHM 5% .125W
R45	0683-1025	1K OHM 5% .25W	0683-2415	240 OHM 5% .25W
R38, R40	0757-0911	300 OHM 2% .25W	0683-1025	1K OHM 5% .25W
R48	0675-1021	1K OHM 10% .125W	0698-5564	240 OHM 5% .125W
R19, R20, R28, R29	0698-7964	100K OHM 5% .125W	0698-8615	75K OHM 1% 1/20W