

# MANUAL CHANGES

## MANUAL IDENTIFICATION

**Model Number:** 8690B  
**Date Printed:** August, 1968  
**Part Number:** 08690-90007

This supplement contains important information for correcting manual errors and for adapting the manual to instruments containing improvements made after the printing of the manual.

**To use this supplement:**

Make all ERRATA corrections

Make all appropriate serial number related changes indicated in the tables below.

Serial Prefix or Number	Make Manual Changes
846-00151 thru 846-00450	1
846-00451 thru 846-00650	1, 2
846-00651 thru 846-00800	1, 2, 3
921-	1, 2, 3, 4
937-01113 thru 937-01200	1 thru 5
937-01201 thru 937-01650	1 thru 6

Serial Prefix or Number	Make Manual Changes
959-01651 thru 959-01800	1 thru 7
959-01801 thru 959-02070	1 thru 8
959-02071 thru 959-02190	1 thru 9
1050A-	1 thru 10
1114A-	1 thru 12
1124A-	1 thru 11, 13
1143A02906 thru 1143A03055	1 thru 11, 13, 14, 15
1202A03056 and above	1-11, 13-17

► **NEW ITEM**

### ERRATA

#### ENTIRE MANUAL:

- Delete all references to power meter leveling.
- Delete all references to RF Unit BWO elapsed time indicator.
- Change all RF Unit H01 references to Option 100.
- Delete all references to 8691D RF Unit.
- Change all RF Unit H02 references to Option 200.

#### Page 3-2:

Change paragraph 3-18 to read "Refer to Table 1-1 for RF power output specifications."

#### Page 4-21:

Delete paragraph 4-130.

#### Page 5-1:

Delete paragraphs 5-8 and 5-9.

#### Page 5-2, Table 5-1:

Add to frequency meter recommended models: 532 Series for waveguide frequencies.  
 Change: DC Voltmeter range required to "0 to  $\pm 300V$  and recommended model to HP 3459A.

#### Page 5-8, Table 5-2:

Paragraph 17(h): Change to read  $\geq 20$  dB at max leveled output.

#### Page 5-12, Table 5-2:

Paragraph 26(f): Change residual FM specs as follows:

- 8691B: <10 kHz peak
- 8692B, 8693B, 8694B: <15 kHz peak
- H01-8692B, H01-8694B, H02-8694B: <20 kHz peak

### NOTE

Manual change supplements are revised as often as necessary to keep manuals as current and accurate as possible. Hewlett-Packard recommends that you periodically request the latest edition of this supplement. Free copies are available from all HP offices. When requesting copies quote the manual identification information from your supplement, or the model number and print date from the title page of the manual.

**ERRATA (cont'd)**

Page 5-21, Table 5-4, ALC BALANCE Adjustment:

Change step 13(f) to read: "... to full counterclockwise position . . . Voltmeter reading should be approximately  $-5.600\text{V}$ ."

Change step 13(g) to read: "Adjust A12R7 ALC Balance Adjust clockwise through dip (dip is 10 mV deep) until voltage is same as noted in step f."

Page 6-2, Table 6-1:

Add asterisk to A2C3 to indicate "Factory Selected Part, typical value given."

Page 6-3, Table 6-1:

Add asterisk to A2R33 and A3C42 to indicate "Factory Selected Part, typical value given."

Page 6-5, Table 6-1:

Add asterisk to A4C3 and A4C4 to indicate "Factory Selected Part, typical value given."

Page 6-6, Table 6-1:

Change resistor A4R32 to HP Part number 2100-1759. No description change.

Page 6-12, Table 6-1:

Add asterisk to A11C6 to indicate "Factory Selected Part, typical value given."

Page 6-13, Table 6-1:

Add asterisk to A11R1, A11R17, and A11R40 to indicate "Factory Selected Part, typical value given."

Page 6-14, Table 6-1:

Change A12R3 and A12R16 to HP Part No. 0757-0059 R: FXD MET FLM 1 MEGOHM 1% 1/2W.

Page 6-16, Table 6-1:

Change chassis part F1 description to read "0.01 Amp."

Page 6-17, Table 6-1:

Change chassis part S9 HP Part No. to 3100-2622.

Page 6-18, Table 6-1:

Add "(LIGHT GRAY)" to the GLIDE: CORNER (HP Part No. 08690-4105).

Add 08690-40002 GLIDE: CORNER (MINT GRAY).

Page 6-19, Table 6-1:

Add 08690-00033 COVER ASSY: TOP (OLIVE GRAY).

Add 08690-00035 PANEL: REAR (MINT GRAY).

Add 08690-00034 COVER ASSY: BOTTOM (OLIVE GRAY).

► Delete Reference Designations XC1 thru XC12. HP Part Number and Description remains.

Page 7-3/7-4, Figure 7-2:

Change dc levels on both sides of diode A10CR3 to negative ( $-$ ) voltages.

Page 7-5, Figure 7-3:

Change designator of resistor A3R49 (located between  $+275\text{V}$  and emitter of A3Q5) to A3R69.

Change designator of capacitor A3C1 (located between connector XA3 pin 1 and ground) to A3C41.

Page 7-7 and 7-9, Figures 7-4 and 7-5, A4 Assy Component Identification Photo:

Substitute the attached A4 Assembly component Identification photo (Figure 6) for those shown in the manual.

Pages 7-11/7-12, Figure 7-6:

Add asterisk to resistor A2R33 to indicate "Factory Selected Part, typical value given."

Change the voltage levels on transistor A11Q2 as follows. Show  $+16.1\text{Vdc}$  at the base and  $+12.9\text{V}$  at the emitter.

Change schematic to show the BLANKING output connector J9 (lower right-hand corner) wired to the wiper side of BLANKING switch S13. Continuity between J12 pin 3 and the BLANKING output connector occurs only in the ON position of S13.

Select resistors A11R1 and A11R17 with MARKER ADJ. controls, A11R2 and A11R18 centered.

Page 7-13, Figure 7-7:

Add chassis parts CR4 and CR5 between ground and cable going from connector P12 pin 20 to connector J4. CR4 anode and CR5 cathode connect to ground.

Pages 7-17/7-18, Figure 7-9:

Reverse diode A6CR2.

Change designator of 10V zener diode A5CR5 (located between A5R5 and A5R6) to CR4.

**CHANGE 1**

Page 6-5, Table 6-1:

Add resistor A3R80 0757-0442 R: FXD MET FLM 10K OHM 1% 1/8W.

Page 6-7, Table 6-1:

Change A4V2 Part No. to 1932-0067 ELECTRON TUBE: 12AY7. (Recommended replacement for 1932-0049.)

Page 7-5, Figure 7-3:

Add resistor A3R80, 10K. (Connect one end to gate lead of A3Q1 and the other end to capacitor A3C40.)

Substitute the attached photo (Figure 1) for the A3 Assy.

**CHANGE 2**

Page 5-2, Table 5-1, under Recommended Models:

Change DC Voltmeter from HP 3430 to HP 3460B.

Page 5-17, Table 5-4, ADJUSTMENTS, under 1. Power Supply:

Change step 1(c) to read "Adjust A5R7 for  $-300 \pm 0.1$  Vdc."

Change step 1(g) to read "Adjust A5R27 for  $+275 \pm 0.2$  Vdc."

Change step 1(i) to read "Adjust A14R21 for  $+20 \pm 0.1$  Vdc."

Under 2. Sweep Calibration: Ramp Amplitude:

Change step 2(d) to read "Adjust A3R75 73V Ramp Adj for  $+73.00 \pm 0.01$  Vdc."

Under 3. Sweep Calibration: Ramp Zero:

Change step 3(d) to read "Adjust A3R53 Ramp Zero Adj for  $0.0 \pm 0.01$  Vdc."

Under 4. Sweep Calibration: Reciprocal Zero:

Change step 4(d) to read "Adjust A3R50 Reciprocal Zero for  $0.00 \pm 0.01$  Vdc."

Page 5-18, Table 5-4:

Under 5. Frequency Control Calibration: Low End:

Change step 5(d) to read "Adjust A1R1, Start Low Freq. Adj. for  $+3.0 \pm 0.01$  Vdc."

Change step 5(f) to read "Adjust A1R2, Marker Sweep Start Low Freq. Adj. for  $+3.00 \pm 0.01$  Vdc."

Change step 5(g) to read "Change 8690B controls as follows:

SWEEP SELECTOR . . . . . MANUAL

MANUAL SWEEP . . . . . Fully CW."

Change step 5(h) to read "Adjust A1R3, Marker Sweep Stop Low Freq. Adj. for  $3.00 \pm 0.01$  Vdc."

Change step 5(j) to read "Adjust A1R4, Stop Low Freq. Adj. for  $+3.00 \pm 0.01$  Vdc."

Page 5-19, Table 5-4:

Under 6. Helix Feedback Amplifier Gain:

Change step 6(d) to read "Adjust A4R32, Helix Feedback Zero Adj. for  $0.00 \pm 0.01$  Vdc."

Page 5-20, Table 5-4:

Under 8. Frequency Control Calibration: High End:

Change step 8(d) to read "Adjust A2R24, Stop HF Adj for  $+73.00 \pm 0.01$  Vdc."

Change step 8(f) to read "Adjust A2R30, Marker Sweep Stop HF Adj for  $+73.00 \pm 0.01$  Vdc."

Change step 8(h) to read "Adjust A2R22, Marker Sweep Start HF Adj for  $+73.00 \pm 0.01$  Vdc."

Change step 8(j) to read "Adjust A2R19,  $\Delta F$  CW Adj. for  $+73.00 \pm 0.01$  Vdc."

Page 5-21, Table 5-4:

Under 11.  $\Delta F$  Calibration:  $\Delta F$  Center Frequency:

Change step 11(d) to read "Set Manual Sweep Control for voltmeter reading of  $+38.00 \pm 0.01$  Vdc."

Change step 11(f) to read "Adjust A2R28,  $\Delta F$  Center Adj for  $+3.00 \pm 0.01$  Vdc."

Under 12.  $\Delta F$  Calibration:  $\Delta F$  Zero:

Change step 12(e) to read "Adjust A2R8, Zero  $\Delta F$  Adj, so that voltmeter reading is  $+3.00 \pm 0.01$  Vdc during step d."

Page 5-22, Table 5-5:

Add a white-black-gray wire (908) from connector J12 pin 2 to ground. Supplies ground for 8699B RF unit in CW.

**CHANGE 3**

Page 5-21, Table 5-4, ADJUSTMENTS:

Under 10.  $\Delta F$  Calibration:  $\Delta F$  Bandwidth:

Change step 10(e) to read "Adjust A2R25,  $\Delta F$  Bandwidth Adj for voltmeter reading change of  $7.0 \pm 0.1$  Vdc."

**CHANGE 4**

Page 6 5, Table 6-1:

Change resistor A3R63 to HP Part No. 0757-0860 R: FXD MET FLM 121K OHM 1% 1/2W.

Page 6-13, Table 6-1:

Change resistors A11R1 and A11R17 to HP Part No. 0698-3154 R: FXD MET FLM 4.22K OHM 1% 1/8W.

Page 6-15, Table 6-1:

Change transistor A14Q3 to HP Part No. 1854-0039 TRANSISTOR: SILICON NPN.

Page 7-5, Figure 7-3:

Change value of resistor A3R63 to 121K OHMS.

Pages 7-11/7-12, Figure 7-6:

Change values of resistors A11R1 and A11R17 to 4220 OHMS. Normally selected with MARKER ADJ controls, A11R2 and A11R18, centered.

Page 7-15, Figure 7-8:

Change HP Part number of transistor A14Q3 to 1854-0039. No description change.

**CHANGE 5**

Page 6-17, Table 6-1:

Change T1 HP Part No. to 9100-2882. (Recommended replacement for Part No. 9100-0350.)

**CHANGE 6**

Page 6-5, Table 6-1:

Change A4C3 HP Part No. to 0140-0201 C: FXD MICA 12 PF 5%.

Add to description of A4C4 "may not be used."

Page 7-7, Figure 7-4:

Change A4C3 to 12 pF.

**CHANGE 7**

Page 1-3, Table 1-2, under GENERAL:

Delete: "Existing power specification and replace with the following,

"Power 115 or 230V ac  $\pm 10\%$ , 48-66 Hz. Approximately 350 watts with one RF unit; if RF unit holders, 8707A, are used, add approximately 30 watts for each RF unit."

Page 2-1, Paragraph 2-8:

Add to existing paragraph 2-8: "Note: Fuse ratings when using 8690B with 8706A and 8707A:

No. of RF Units	Acceptable Range of Fuse Rating	
	115V	230V
1	4 -- 6 amps	2 -- 3 amps
2	4 -- 6.5 amps	2 -- 3.5 amps
3	4.5 -- 7.5 amps	2.25 -- 4 amps
4	5 -- 8.5 amps	2.5 -- 4.5 amps
5	5.5 -- 9 amps	2.75 -- 5 amps
6	6 -- 10 amps	3 -- 5.5 amps
7	6.5 -- 10.5 amps	3.25 -- 6 amps
8	7 -- 12 amps	3.5 -- 7 amps
9	7 -- 12 amps	3.5 -- 7 amps

**CHANGE 7 (cont'd)**

Page 6-16, Table 6-1:

Add chassis component F2 2110-0002 FUSE: 2 AMP 230V.  
Change chassis component J6 HP Part No. to 1251-2357.

Page 6-17, Table 6-1:

Change chassis component T1 HP Part No. to 9100-3111.  
Change cable W1 HP Part No. to 8120-1348.

Page 6-19, Table 6-1:

Change Rear Panel HP Part No. to 08690-00031 (LIGHT GRAY)

Page 7-15, Figure 7-8:

Change primary power circuit as indicated in attached partial schematic (Figure 2).

**CHANGE 8**

Page 6-18, Table 6-1:

Delete: HP Part No. 1450-0152.  
Add: HP Part No. 1450-0157 LENS: LAMPHOLDER, WHITE.  
Add: HP Part No. 1450-0371 LENS: LAMPHOLDER, AMBER.

**CHANGE 9**

Page 6-4, Table 6-1:

Change A3R55 and A3R56 HP Part No. to 0811-2993. Description remains the same.

Page 6-6, Table 6-1:

Change A4R3 and A4R4 HP Part No. to 0811-2993. Description remains the same.

Page 6-19, Table 6-1:

Change Miscellaneous part XC7 (SIDE HANDLE ASSY) to HP Part No. 5060-0222.  
Add: 08690-90013 8690B/RF-UNIT OVERALL SCHEMATIC.

**CHANGE 10**

Page 1-1: Substitute the following for paragraph 1-13,

1-13. The Model 8690B carries a nine-digit and one letter serial number (0000A00000). The first four digits comprise the serial prefix, the letter is the country of origin, and the last five digits form the sequential suffix. This manual applies directly to an instrument with a serial number prefix the same as listed on the title page. For instruments with a serial prefix number lower than those listed on the title page, refer to Section VII. For instruments with a serial prefix number higher than those listed on the title page, refer to a yellow "Manual Changes" insert.

Page 6-2, Table 6-1:

Change A2C1 to HP Part No. 0150-0052 C: FXD CER 0.05 UF 20% 400 VDCW.

► Change A2C3 to HP Part No. 0160-2675 C: FXD MICA 8900 PF 1% 300 VDCW.

► Add A2C10 HP Part No. 0160-2120 C:FXD MICA 0.01 UF ± 1%.

Page 6-10, Table 6-1:

Change A9C6 to HP Part No. 0150-0052 C: FXD CER 0.05 UF 20% 400 VDCW.

Page 7-3/7-4, Figure 7-2:

Change A2C1 to 0.05 UF.

Change A2C3 to 3900 PF.

Add A2C10 (0.01 UF capacitor) across clamp diode A2CR3.

Page 7-17, 7-18, Figure 7-9:

Change A9C6 to 0.05 UF.

**CHANGE 11**

Page 5-17, Table 5-4, Power Supply Adjustment:

Change the power supply adjustment sequence as indicated below:

Old Adjustment Sequence	New Adjustment Sequence
a, b, c, d, e, f, g, h, i	a, b, c, f, g, h, i, d, e

Page 6-4, Table 6-1:

Add diodes A3CR56, A3CR57 and A3CR58

1901-0033 DIODE: SILICON 100 mA 180 WV.

Page 6-6, Table 6-1:

Add diode A4CR11

1902-3400 DIODE: BREAKDOWN 78.7V 2% 400 mW.

Change resistors A10R17/A10R18 to HP Part No. 0698-3136 R: FXD 17.8K 1% 1/8W.

Page 6-10, Table 6-1:

Change A8 Assy to HP Part No. 08690-60053.

Add A8Q2

1884-0073 THYRISTOR, SCR.

Add Resistor A8R15

0757-1000 R: FXD MET FLM 51.1 OHM 1% 1/2W.

Add Resistor A8R16

0757-0280 R: FXD MET FLM 1.0K OHM 1% 1/8W.

Change Capacitor

A8C6 to 0180-0183 C: FXD ELECT 10 UF +75 -10% 50 VDCW.

Change A8Q1 to 1855-0010 UNIJUNCTION: SILICON.

Change Resistor A8R13 to 0698-4348 R: FXD MET FLM 4.99M OHM 1% 1/2W.

Change Resistor A8R14 to 0698-3444 R: FXD MET FLM 316 OHM 1% 1/8W.

Page 6-11, Table 6-1:

Change Transistors A10Q3 and A10Q4 to

1853-0020 TRANSISTOR: PNP SILICON (Recommended replacement for 1850-0062).

Pages 6-12, and 6-13, Table 6-1:

Add diode A11CR19 1901-0033 DIODE: SILICON 100 mA 180 WV.

Change Transistors A11Q2, A11Q3, A11Q4, A11Q6, A11Q7, A11Q8 and A11Q11 to

1853-0020 TRANSISTOR: PNP SILICON (Recommended replacement for 1850-0062).

Page 6-16, Table 6-1:

Add chassis mounted diodes CR6 and CR7

1901-0033 DIODE: SILICON 100 MA 180 WV.

Change chassis mounted Fuse F3 to

2110-0002 FUSE: 2A.

Change chassis mounted Fuse F4 to

2110-0036 FUSE: 8A 125V.

Page 6-17, Table 6-1:

Add chassis mounted resistor R26

0812-0019 R: FXD WW 0.33 OHM 5% 3W.

Add chassis mounted resistor R27

0812-0020 R: FXD WW 0.39 OHM 5% 3W.

Page 7-3/7-4, Figure 7-2:

Change A10Q3 and A10Q4 to HP Part No. 1853-0020 (Recommended replacement for 1850-0062).

Change value of resistors A10R17/A10R18 to 17.8K ohms.

Page 7-5, Figure 7-3:

Add diode A3CR56. (Connect anode to source of A3Q2A and cathode to emitter of A3Q3.)

Add diode A3CR57. (Connect anode to source of A3Q2B and cathode to emitter of A3Q4.)

Add diode A3CR58. (Connect anode to base of A3Q5 and cathode to emitter of A3Q5.)

Change the A3 column of REFERENCE DESIGNATIONS Table to include diodes A3CR56, A3CR57 and A3CR58.

**CHANGE 11 (cont'd)**

Pages 7-9/7-10, Figure 7-5:

Substitute the attached A8 Assy board photo (Figure 3) for the photo shown in the manual.

Add 78.7V breakdown diode A4CR11. (Connect anode to ground and cathode to A4R34, A4C8 junction.)

Change the A4 column of REFERENCE DESIGNATIONS Table to include diode A4CR11.

Pages 7-11/7-12, Figure 7-6:

Change Transistors A11Q2, A11Q3, A11Q4, A11Q6, A11Q7, A11Q8 and A11Q11 to HP Part Number 1853-0020. (Recommended replacement for 1850-0062).

Add diode A11CR19. (Connect anode to base of A11Q11 and cathode to emitter of A11Q11.)

Add chassis mounted diode CR6. (Connect anode to center conductor of MARKER output jack and cathode to ground.)

Add chassis mounted diode CR7. (Connect anode to center conductor of BLANKING output jack and cathode to ground.)

Change A11 column of REFERENCE DESIGNATIONS Table to include diode A11CR19.

Change chassis mounted component column (no heading) of REFERENCE DESIGNATIONS Table to include diodes CR6 and CR7.

Page 7-14:

Substitute the attached A8 Assy, component Identification board photo (Figure 3) for the photo shown in the 8690B Manual.

**CHANGE 12**

Pages 6-14 and 6-15, Table 6-1:

Change A14 Heater Supply Assy to HP Part Number 08690-60054 (New board).

Add the following A14 Assy Components (Parts list for new A14 Assy).

C1	0160-3534	C: FXD MICA 510 PF 5% 100 VDCW.
C3	0180-0089	C: FXD ELECT 10 UF -10% +100% 150 VDCW.
C4	0160-3539	C: FXD MICA 820 PF 5% 100 VDCW.
C5	0180-0141	C: FXD ELECT 50 UF +75 -10% 50 VDCW.
C6	0160-2205	C: FXD MICA 120 PF 5%.
C7	0180-0094	C: FXD ELECT 100 UF 25 VDCW.
CR1	1902-0041	DIODE, BREAKDOWN: 5.11V 5% 400 mW.
CR2	1901-0025	DIODE, SILICON 100 MA/1V.
CR3	1901-0025	DIODE, SILICON 100 MA/1V
CR4	1901-0025	DIODE; SILICON 100 mA/1V.
IC1	1820-0196	IC: VOLTAGE REGULATOR.
IC2	1820-0196	IC: VOLTAGE REGULATOR.
IC3	1820-0196	IC: VOLTAGE REGULATOR.
Q1	1854-0062	TRANSISTOR: SILICON NPN.
R1	0757-0418	R: FXD MET FLM 619 OHM 1% 1/8W.
R2	0757-0440	R: FXD MET FLM 7.5K OHM 1% 1/8W.
R3	0757-0438	R: FXD MET FLM 5.11K OHM 1% 1/8W.
R4	0757-0461	R: FXD MET FLM 68.1K OHM 1% 1/8W.
R5	0757-0473	R: FXD MET FLM 221K OHM 1% 1/8W.
R6	0757-0401	R: FXD MET FLM 100 OHM 1% 1/8W.
R7	0757-0416	R: FXD MET FLM 511 OHM 1% 1/8W.
R8	0698-3156	R: FXD MET FLM 14.7K OHM 1% 1/8W.
R9	0757-0447	R: FXD MET FLM 16.2K OHM 1% 1/8W.
R10	2100-1759	R: VAR WW 2K OHM 10% LIN 1/2W.
R11	0757-0441	R: FXD MET FLM 8.25K OHM 1% 1/8W.
R12	0757-0199	R: FXD MET FLM 21.5K OHM 1% 1/8W.
R13	0698-3154	R: FXD MET FLM 4.22K OHM 1% 1/8W.
R14	0757-0416	R: FXD MET FLM 511 OHM 1% 1/8W.
R15	0757-0280	R: FXD MET FLM 1.0K OHM 1% 1/8W.
R16	0757-0289	R: FXD MET FLM 13.3K OHM 1% 1/8W.
R17	0698-3152	R: FXD MET FLM 3.48K OHM 1% 1/8W.

**CHANGE 12 (cont'd)**

R18 2100-1758 R: VAR WW 1K OHM 10% LIN 1/2W.  
 R19 0757-0440 R: FXD MET FLM 7.5K OHM 1% 1/8W.

Page 7-14/7-15, Component Identification photo and Figure 7-8:

Substitute the attached A14 Assy board photo and schematic (Figures 4 and 5) for those shown in the 8690B Manual.

**CHANGE 13**

Page 6-8, Table 6-1:

Add 9 pin tube socket for A5V1 (HP Part No. 1200-0062).

Page 6-10, Table 6-1:

Change capacitor A8C6 to HP Part No. 0180-2268 C: F 140 UF 30 WVDC.  
 Change resistor A8R13 to HP Part No. 0757-0868 R: F 562K OHM 1% 1/2W.  
 Change resistor A8R16 to HP Part No. 0757-0422 R: F 909 OHM 1% 1/8W.

Page 6-12, Table 6-1:

Add 7 pin tube socket for A10 V1 (HP Part No. 1200-0053).

**CHANGE 14**

Page 6-18, Table 6-1, under MISCELLANEOUS:

Add the following note to define the 8690B color scheme.

**NOTE**

This change implements a different color scheme for the standard instrument. Colors prior to this change are now available as options. Refer to listing below.

8690B STANDARD. Indicates color scheme for the 8690B beginning with this change. (Includes MINT GRAY front panel and OLIVE GRAY cabinet.)

8690B Option A85. Indicates combination color scheme for the 8690B. (Includes LIGHT GRAY front panel and OLIVE GRAY cabinet.)

8690B Option X95. Indicates color scheme for the 8690B prior to this change. (Includes LIGHT GRAY front panel and BLUE GRAY cabinet.)

Add the following 8690B parts or description changes:

08690-4105 CORNER GLIDE (LIGHT GRAY)  
 # 08690-40002 CORNER GLIDE (MINT GRAY) (STANDARD COLOR)  
 08690-6041 ASSY: FRONT PANEL (LIGHT GRAY)  
 # 08690-60055 ASSY: FRONT PANEL (MINT GRAY) (STANDARD COLOR)  
 08690-6042 DRIVE ASSY: DIAL (LIGHT GRAY)  
 # 08690-60056 DRIVE ASSY: DIAL (MINT GRAY) (STANDARD COLOR)

#Denotes standard color for 8690B part beginning with this change.

Page 6-19, Table 6-1, under MISCELLANEOUS:

Add the following 8690B parts or description changes.

08690-0016 TOP COVER ASSY (BLUE GRAY)  
 #08690-00033 TOP COVER ASSY (OLIVE GRAY) (STANDARD COLOR)  
 08690-00031 REAR PANEL (LIGHT GRAY)  
 # 08690-00035 REAR PANEL (MINT GRAY) (STANDARD COLOR)  
 5000-0746 SIDE COVER 8 X 16 (BLUE GRAY)  
 #5000-8725 SIDE COVER 8 X 16 (OLIVE GRAY) (STANDARD COLOR)



**CHANGE 14 (cont'd)**

08690-0017	BOTTOM COVER ASSY (BLUE GRAY)
#08690-00034	BOTTOM COVER ASSY (OLIVE GRAY) (STANDARD COLOR)
5060-0777	RACK MOUNT KIT 8H (LIGHT GRAY)
#5060-8742	RACK MOUNT KIT 8H (MINT GRAY) (STANDARD COLOR)
5060-0765	RETAINER HANDLE ASSY (BLUE GRAY)
#5060-8735	RETAINER HANDLE ASSY (OLIVE GRAY) (STANDARD COLOR)

#Denotes standard color for 8690B part beginning with this change.

**CHANGE 15**

Page 6-4, Table 6-1:

Change transistor A3Q6 to HP Part No. 1854-0079, TRANSISTOR: SILICON NPN, 2N3439.

Page 6-6, Table 6-1:

Add diode A4CR12 1901-0033 DIODE: SILICON 100 mA 180 WV.

Page 6-9, Table 6-1:

Change transistors A6Q1/A6Q2 to HP Part No. 1854-0079, TRANSISTOR: SILICON NPN, 2N3439.

Page 6-12, Table 6-1:

Change resistors A10R17/A10R18 to HP Part No. 0698-3126; R: FXD 17.8K OHM 1% 1/8W. (Recommended replacement for 8690B instruments with serial prefixes 1114A and 1124A.)

Page 7-3, Figure 7-2:

Change value of resistors A10R17/A10R18 to 17.8K ohms.

Page 7-5, Figure 7-3:

Change transistor A3Q6 to HP Part No. 1854-0079.

Page 7-9, Figure 7-5:

Add diode A4CR12 in series with zener diode A4CR11. Connect cathode of A4CR12 to ground, and anode to A4CR11.

Page 7-17, Figure 7-9:

Change transistors A6Q1/A6Q2 to HP Part No. 1854-0079.

**CHANGE 16**

Page 6-16, Table 6-1:

Change F1 to HP Part No. 2110-0420 FUSE .0312A 250V.

Page 7-5, Figure 7-3:

Change F1 to .0312A.

**► CHANGE 17**

Page 6-7, Table 6-1:

Change A5Q2 to HP Part No. 1854-0475.

Page 6-14, Table 6-1:

Change A12Q4 to HP Part No. 1854-0475.

Page 6-15, Table 6-1:

Change B1 to HP Part No. 3160-0056 preferred replacement.

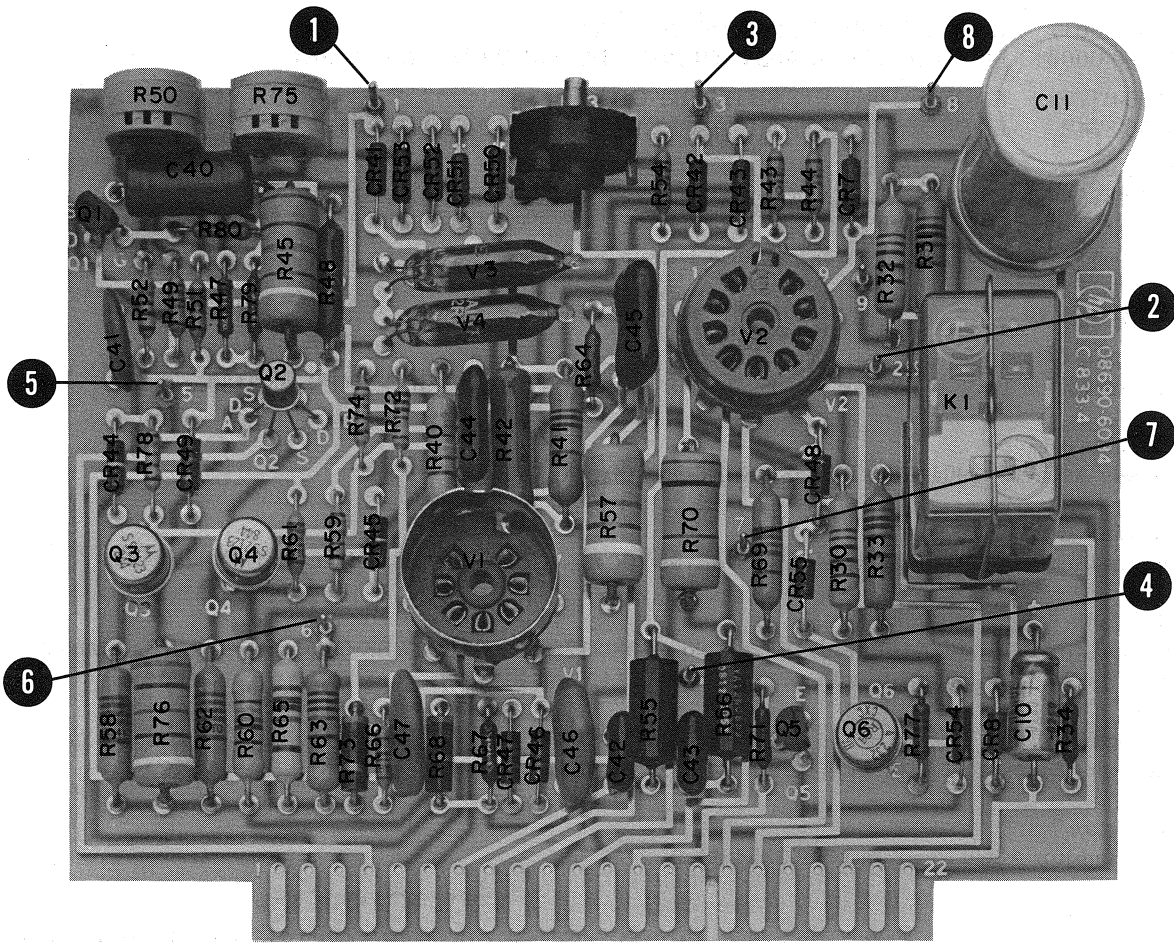


Figure 1. Component Identification, A3 Assembly (Part of Change 1)

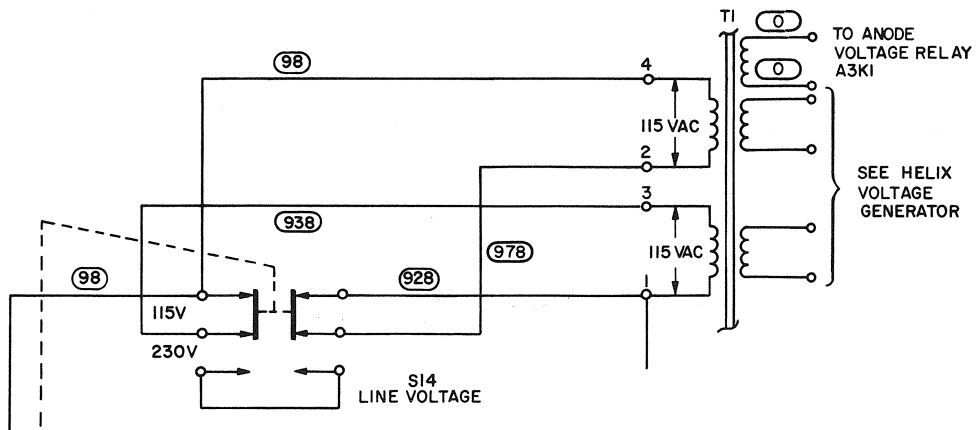


Figure 2. Partial Schematic of AC Primary Circuit (Part of Change 7)

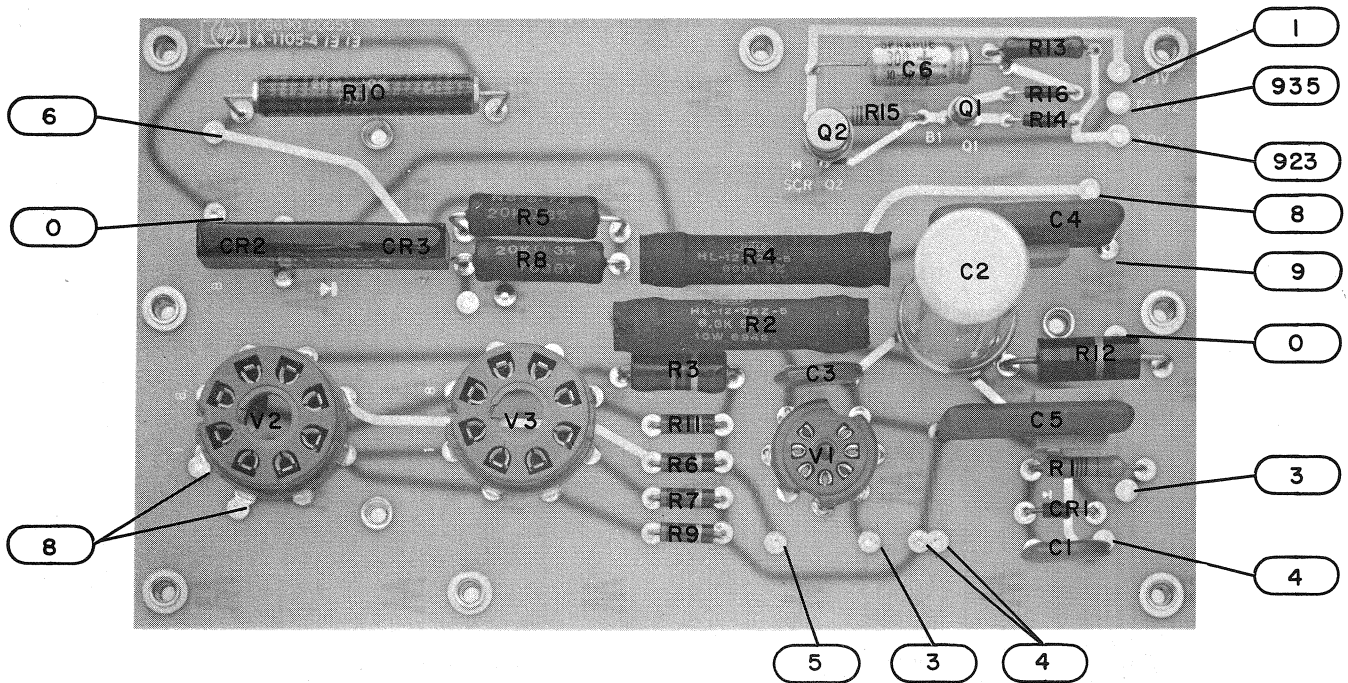


Figure 3. Component Identification, A8 Assembly (Part of Change 11)

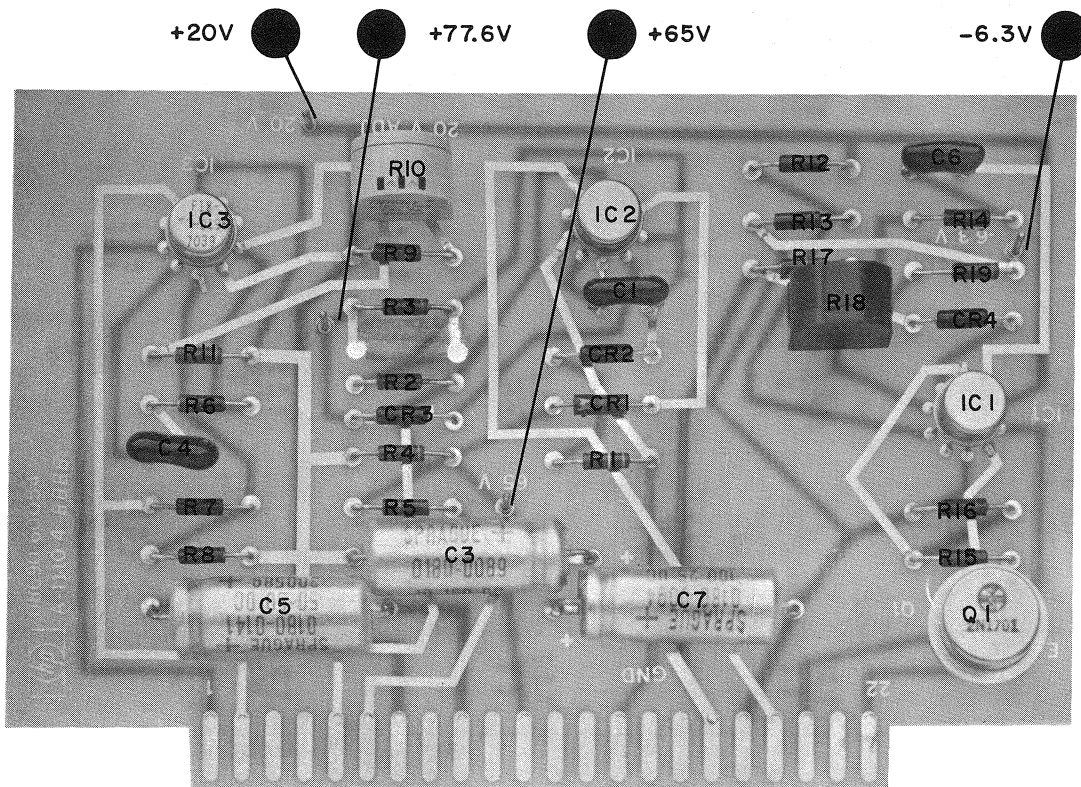


Figure 4. Component Identification, A14 Assembly (Part of Change 12)



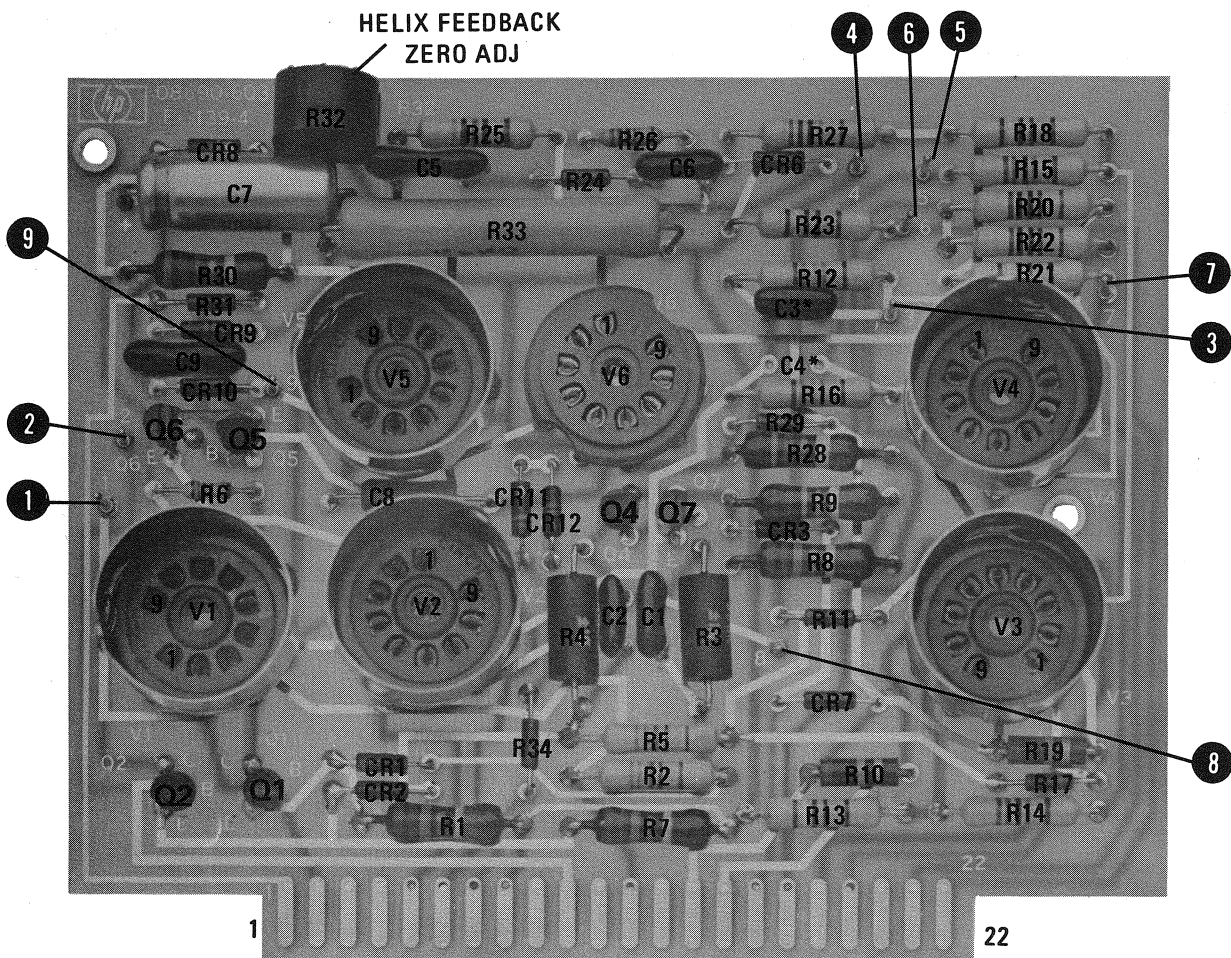


Figure 6. Component Identification, A4 Assembly (Part of Change 15)