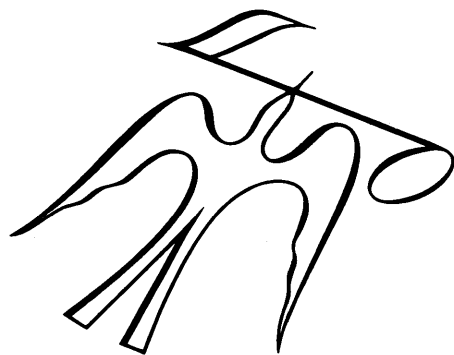




THE FISHER FM-200-B SERVICE MANUAL



MODEL FM-200-B

CHASSIS SERIAL NUMBERS
FROM 20001 TO 29999 INCLUSIVE

PRICE: \$1.00

FISHER RADIO CORPORATION • NEW YORK

CHASSIS SERIAL NUMBERS
FROM 20001 TO 29999 INCLUSIVE

THE FISHER FM-200-B

Ser. No.
21177B

ALIGNMENT INSTRUCTIONS

Read These Instructions With Extreme Care Before Attempting Alignment.

CHASSIS: Turn the TUNING knob completely counterclockwise without forcing. Dial pointer should be at zero index mark on logging scale. If not, reset the dial pointer. Disconnect the external antenna. When using an oscilloscope for alignment, set the AUDIO LEVEL control for no overload, as shown by the proper waveform shape. Set remaining controls as follows: SELECTOR, MONO; MUTING, OFF; AFC, OFF; SENSITIVITY, DISTANT; ANTENNA SELECTOR (on rear panel), 300.

SIGNAL GENERATOR: The signal generator equipment must be able to supply RF ± 22.5 KC deviation at 400 cps.

INDICATOR: DC VTVM, and scope for alignment.

ALIGNMENT: Allow the chassis and test instruments to warm up for at least 15 minutes. Adjust the line voltage for 117 volts AC, 50-60 cps. Use fully insulated tools: a small screwdriver for all trimming capacitors; a K-tran tool for Z1, Z2, Z3; a hex tool for Z4, Z5, Z6, L3, L9, L25, L10, and L14.

NOTES: 1—For accurate alignment, signal generator output voltage must be adjusted to produce meter readings within the range specified in the INDICATION column for each step.

2—Signal generator frequency should be held constant for IF, limiter, and ratio detector alignment (Z1 through Z6).

3—If adjustment of muting oscillator is necessary, adjust L14 for 3MC oscillation using a grid-dip meter.

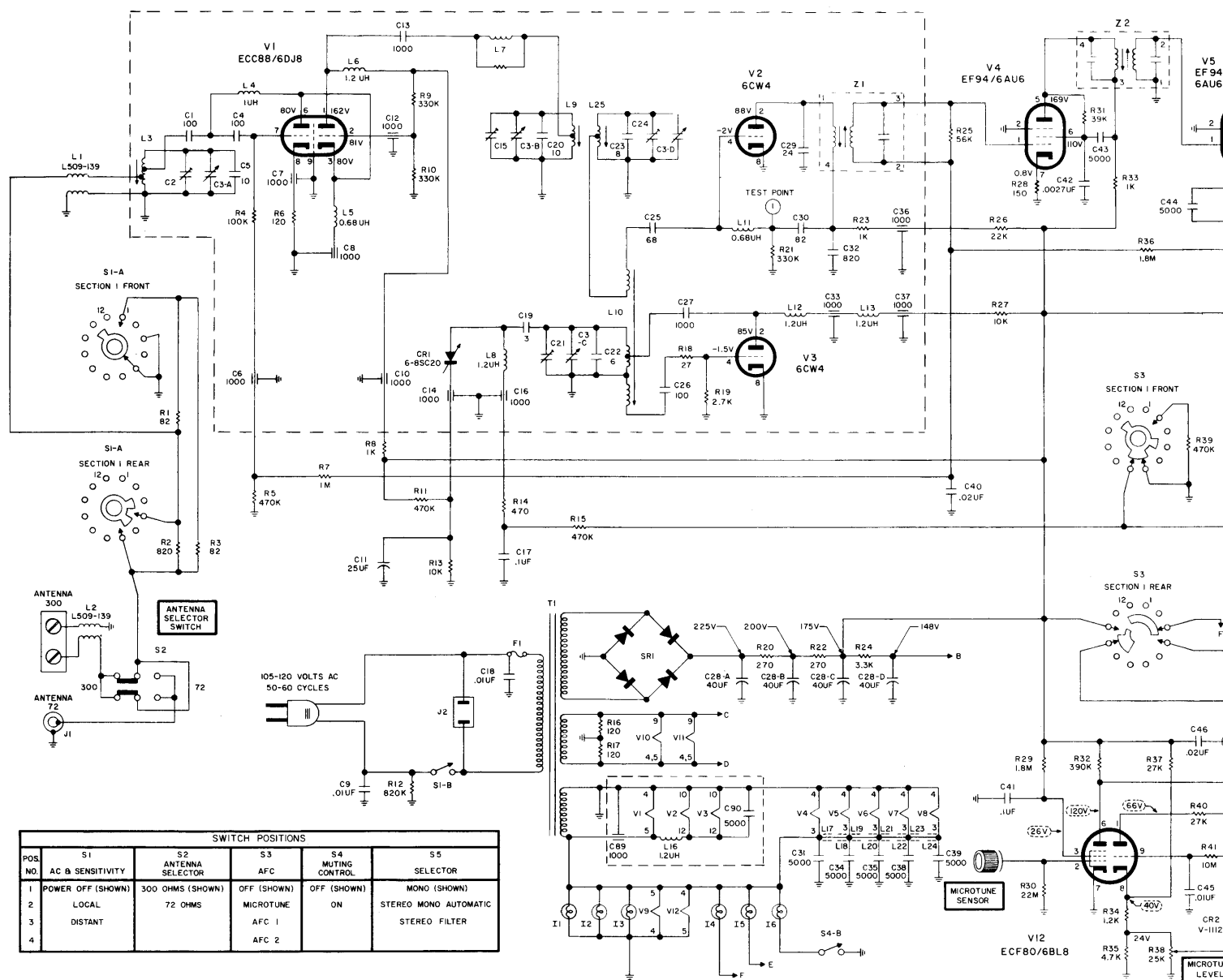
4—Do not tamper with adjustments on multiplex sub-chassis. These circuits are extremely stable and should require no service other than tube replacement, which does not affect alignment. Multiplex alignment requires special test equipment which will be available in the near future. If servicing is required, write to:

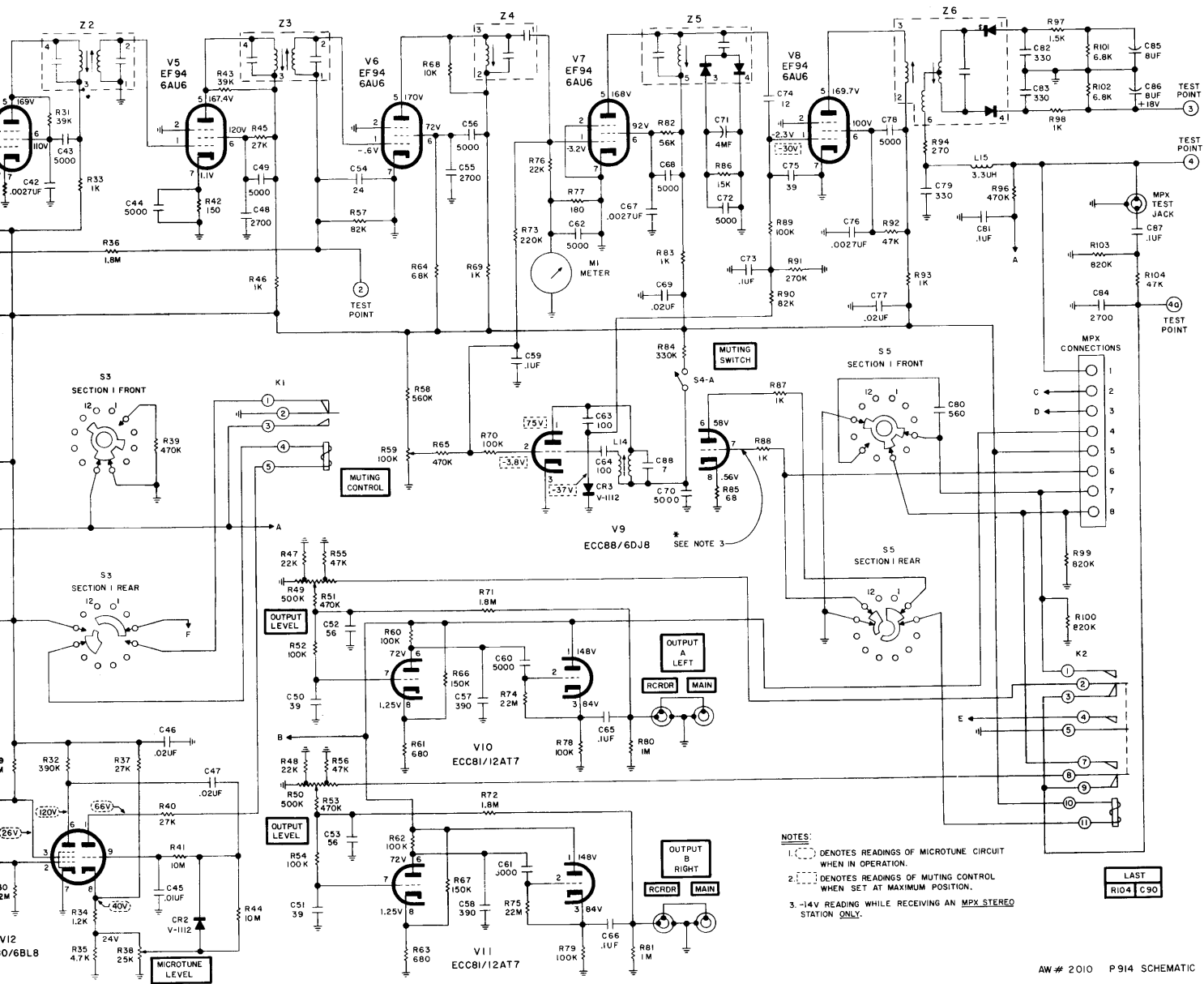
FISHER RADIO CORPORATION · 21-21 44th DRIVE · LONG ISLAND CITY 1, N. Y.

FM ALIGNMENT (tuner only)

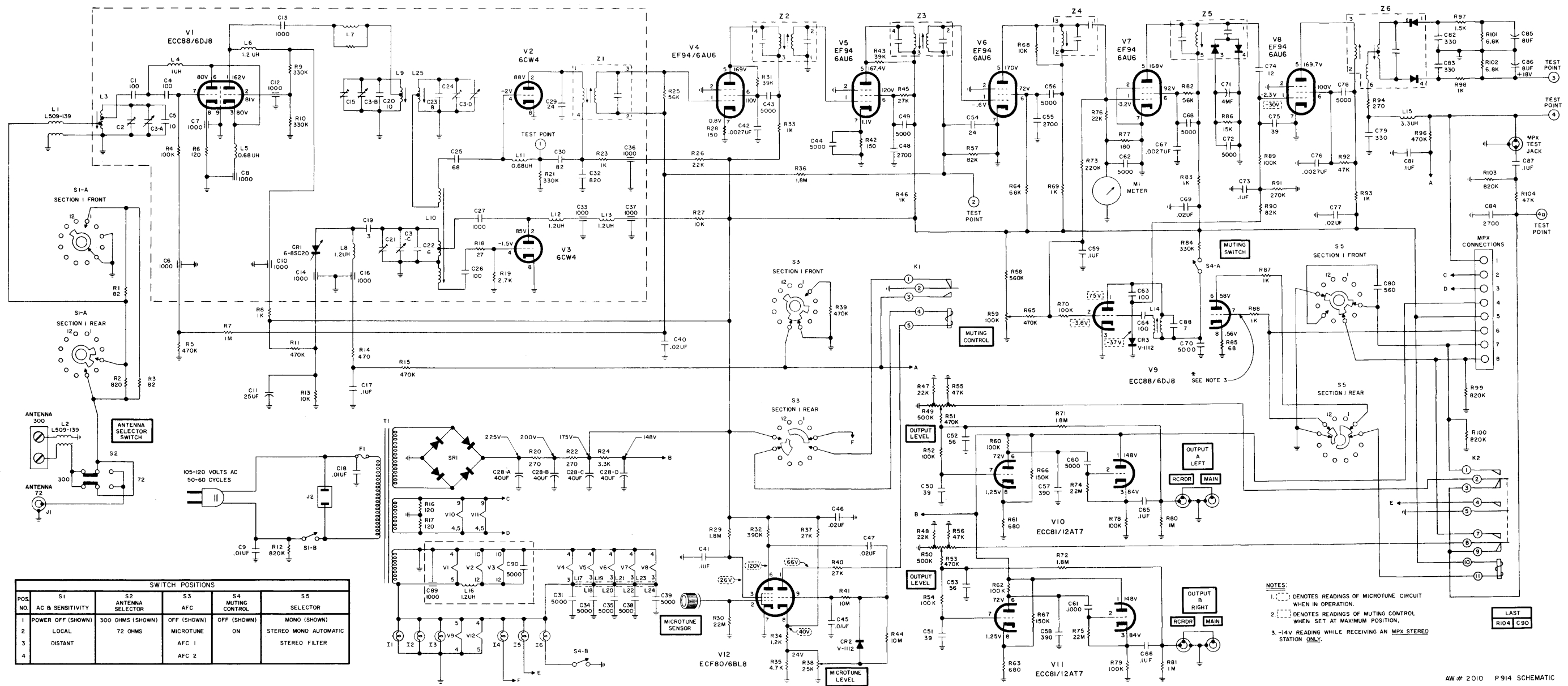
STEPS	CHASSIS	SIGNAL GENERATOR			INDICATOR	ALIGNMENT	
	TUNING	COUPLING	FREQ.	MOD.	TYPE CONNECTION	ADJUST	INDICATION
1	Point of no signal and no interference	FM generator connected to pin 1 of V6	10.7 MC	None	Connect DC VTVM to test point 3	Z4, Z5 top, Z6 bottom and top for max. indication	Between +5 and +9 volts
2	Point of no signal and no interference	FM generator connected to pin 1 of V6	10.7 MC	None	Connect DC VTVM to test point 4	Z6 top for min. indication	Zero reading on zero center scale
3	Point of no signal and no interference	FM generator connected to pin 1 of V5	10.7 MC	None	Connect DC VTVM to test point 2	Z3 top and bottom for max. indication	Between —0.5 and —1.0 volt
4	Point of no signal and no interference	FM generator connected to test point 1 through wire "gimmick" (less than 0.5 uuf)	10.7 MC	None	Connect DC VTVM to test point 2	Z1 and Z2 top and bottom for max. indication	Between —0.5 and —1.0 volt
5	90 MC	FM generator connected to 300 ohm terminals through 120 ohm carbon resistors	90 MC	30% FM (22.5 KC Dev.) at 400 cps.	DC VTVM to test point 2 and scope to RIGHT or LEFT OUTPUT jack	L10, L25, L9 and L3 for sine waveform and max. neg. voltage	Less than —3 volts
6	106 MC	FM generator connected to 300 ohm terminals through 120 ohm carbon resistors	106 MC	30% FM (22.5 KC Dev.) at 400 cps.	DC VTVM to test point 2 and scope to RIGHT or LEFT OUTPUT jack	C21, C24, C15 and C2 for sine waveform and max. neg. voltage	Less than —3 volts
7	Repeat steps 5 and 6 for proper dial calibration and maximum output.						

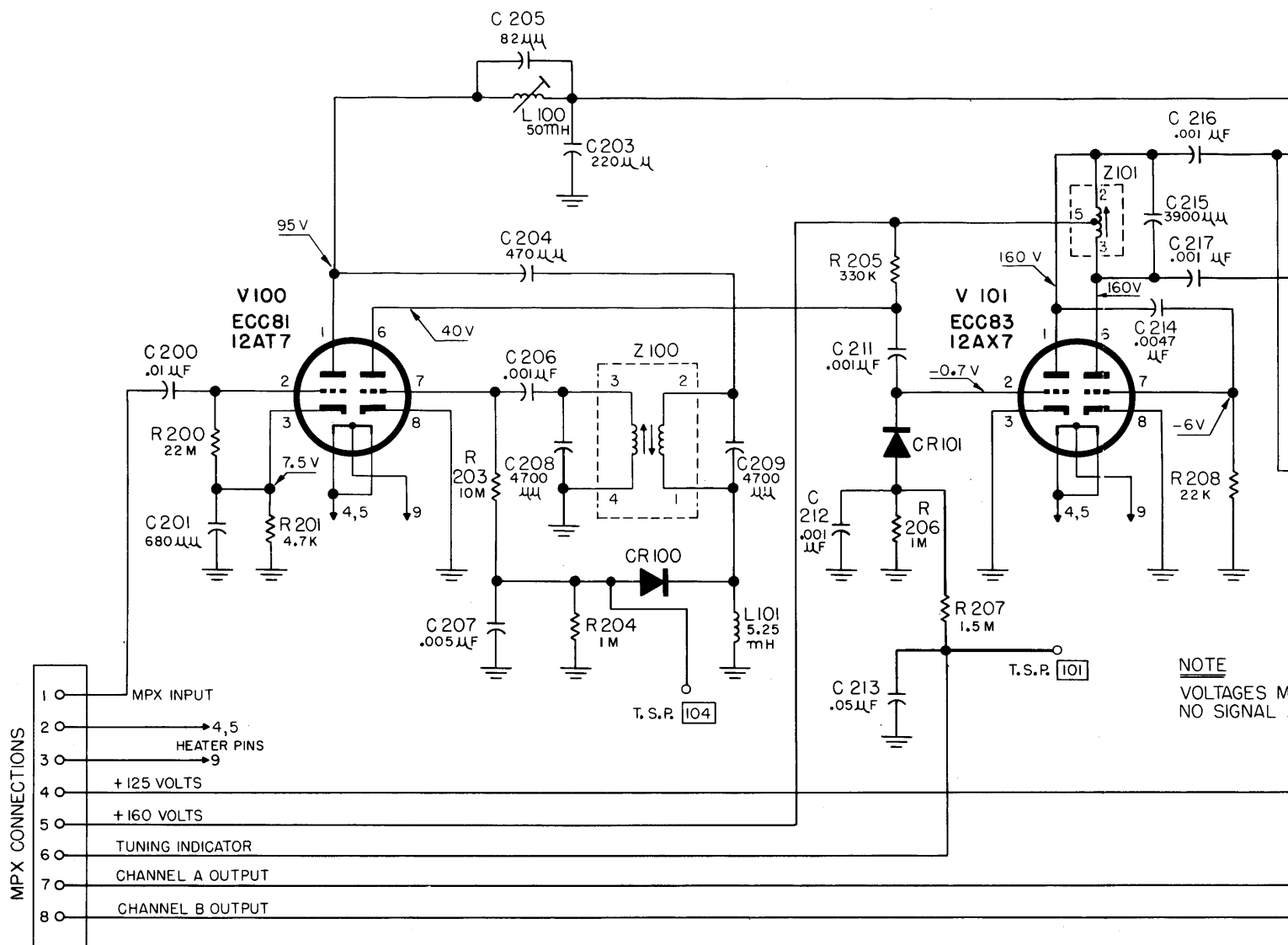
SCHEMATIC DIAGRAM



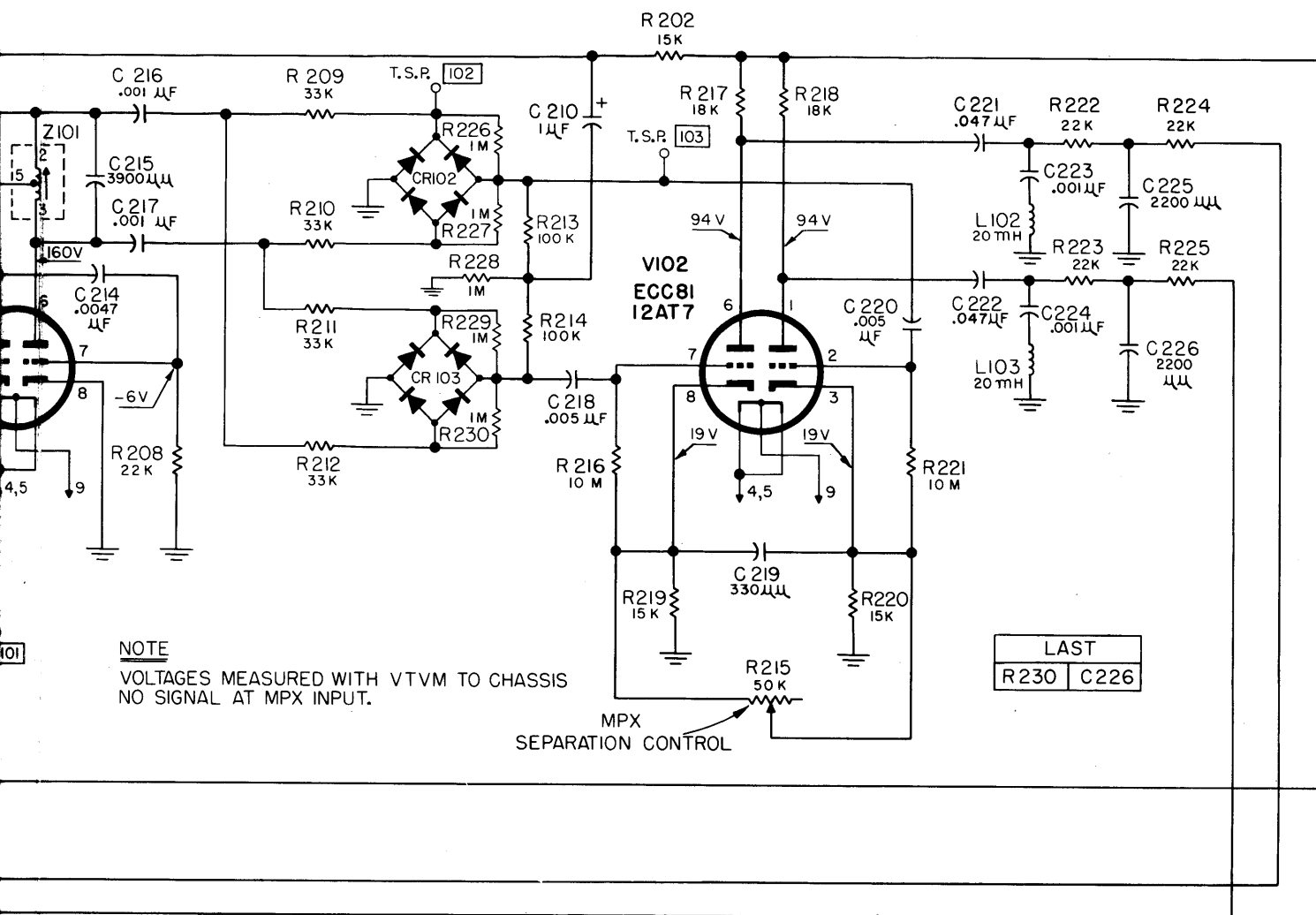


SCHEMATIC DIAGRAM

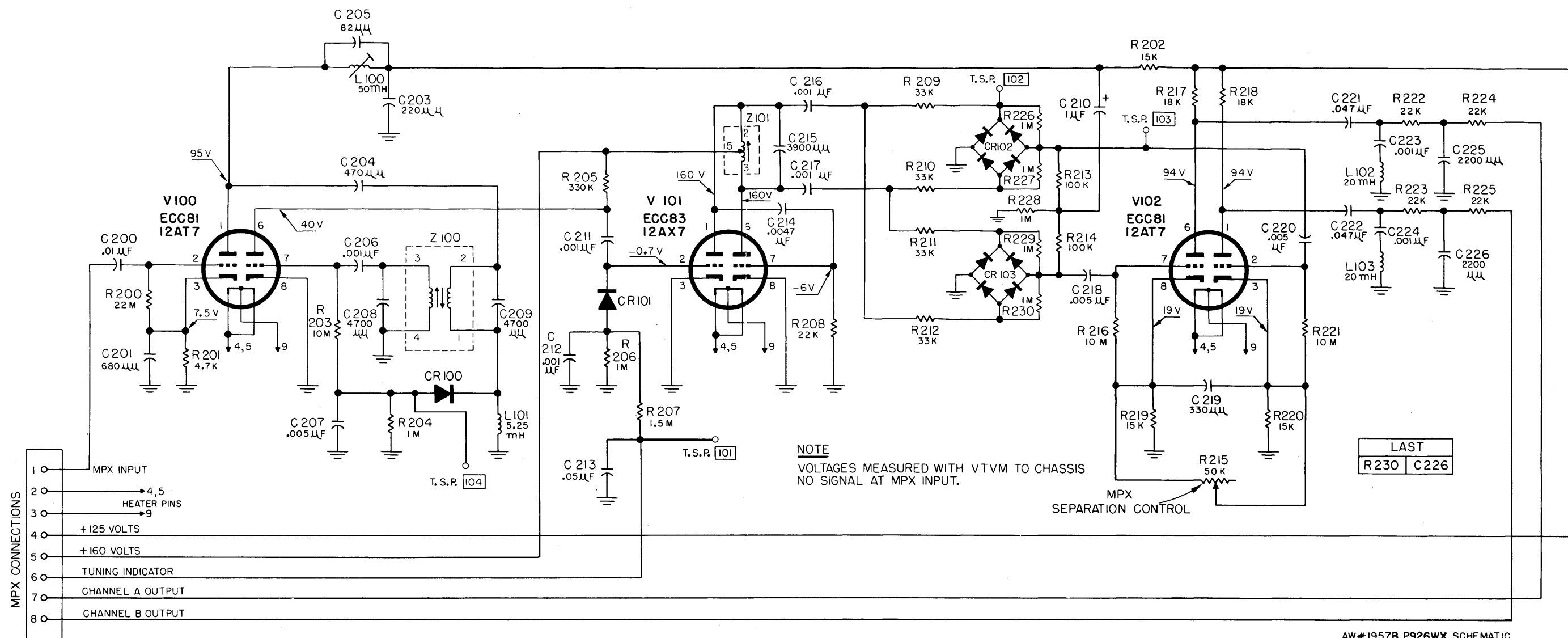




SCHEMATIC DIAGRAM • MULTIPLEX SECTION



SCHEMATIC DIAGRAM • MULTIPLEX SECTION



PARTS DESCRIPTION LIST • MULTIPLEX SECTION

CAPACITORS

10 % tolerance for all fixed capacitors, unless otherwise noted or marked GMV (guaranteed minimum value). All capacitors not marked uf are pF (uuf).

Symbol	Description	Part No.
C200	Ceramic, .01uf, +80 —20 %, 500V	C50089-7
C201	Ceramic, 680, 1000V	C50072-2
C203	Ceramic, 220, 1000V	C50183-3
C204	Mica, 470, 5 %, 300V	C50332-4
C205	Ceramic, 82, N1500, 1000V	C50070-7
C206	Ceramic, .001uf, GMV, 500V	C50089-2
C207	Ceramic, .005uf, +80 —20 %, 500V	C50089-6
C208, 209	Mica, 4700, 5 %, 500V	C50332-5
C210	Electrolytic, 1uf, 350V	C50283-3
C211, 212	Ceramic, .001uf, GMV, 500V	C50089-2
C213	Ceramic, .05uf, +80 —20 %, 100V	C50073-2
C214	Mylar, .0047uf, 400V	C50197-25
C215	Mica, 3900, 5 %, 500V	C50332-6
C216, 217	Ceramic, .001uf, GMV, 500V	C50089-2
C218	Ceramic, .005uf, 20 %, 500V	C50089-1
C219	Ceramic, 330, 1000V	C50072-1
C220	Ceramic, .005uf, 20 %, 500V	C50089-1
C221, 222	Mylar, .047uf, 10 %, 250V	C50197-52
C223, 224	Ceramic, .001uf, 1000V	C50072-3
C225, 226	Ceramic, 2200, 1000V	C50072-5

RESISTORS AND POTENTIOMETERS

In ohms, 10 % tolerance, 1/2 watt, unless otherwise noted. K=Kilohm, M=Megohm.

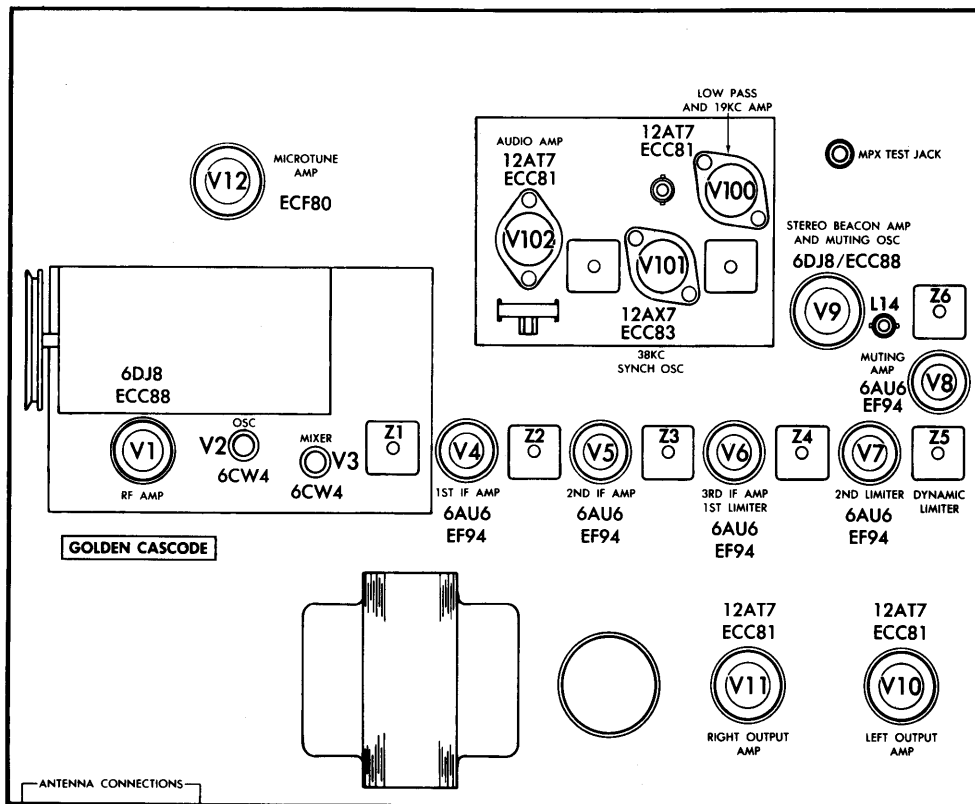
Symbol	Description	Part No.
R200	Composition, 22M	RC20BF226K

R201	Composition, 4.7K, 5 %	RC20BF472J
R202	Composition, 15K, 5 %	RC20BF153J
R203	Composition, 10M	RC20BF106K
R204	Dep. Carbon, 1M, 5 %, 1/3 W	R33DC105J
R205	Dep. Carbon, 330K, 5 %, 1/3 W	R33DC334J
R206	Dep. Carbon, 1M, 5 %, 1/3 W	R33DC105J
R207	Dep. Carbon, 1.5M, 5 %, 1/3 W	R33DC155J
R208	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R209, 210,		
211, 212	Composition, 33K, 5 %	RC20BF333J
R213, 214	Dep. Carbon, 100K, 5 %, 1/3 W	R33DC104J
R215	Potentiometer, 50K, MPX-separation	R50150-4
R216	Composition, 10M	RC20BF106K
R217, 218	Dep. Carbon, 18K, 5 %, 1/3 W	R33DC183J
R219, 220	Dep. Carbon, 15K, 5 %, 1/3 W	R33DC153J
R221	Composition, 10M	RC20BF106K
R222, 223,		
224, 225	Dep. Carbon, 22K, 5 %, 1/3 W	R33DC223J
R226, 227,		
228, 229,		
230	Dep. Carbon, 1M, 5 %, 1/3 W	R12DC105J

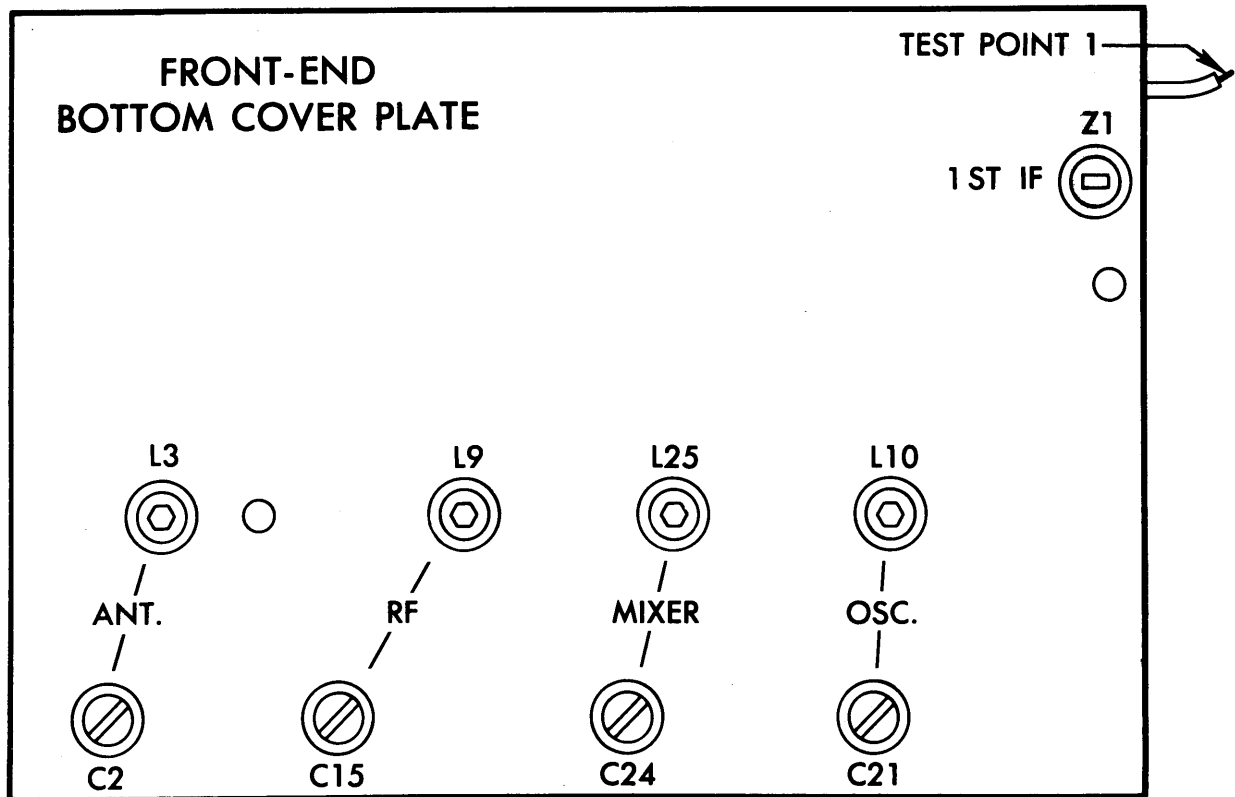
MISCELLANEOUS

Symbol	Description	Part No.
CR100, 101,		
102, 103	Diode, Type 1112	V-1112
L100	Coil, Low Pass	L50210-30
L101	Coil, 5.25 M.H., 5 %	L50334-1
L102, 103	Coil, 20 M.H., 5 %	L50334-2
Z100	Transformer, 19Kc	ZZ50210-34
Z101	Coil, 38Kc	ZZ50210-33

TUBE SOCKET LAYOUT



FRONT-END ADJUSTMENTS



INS 117



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