

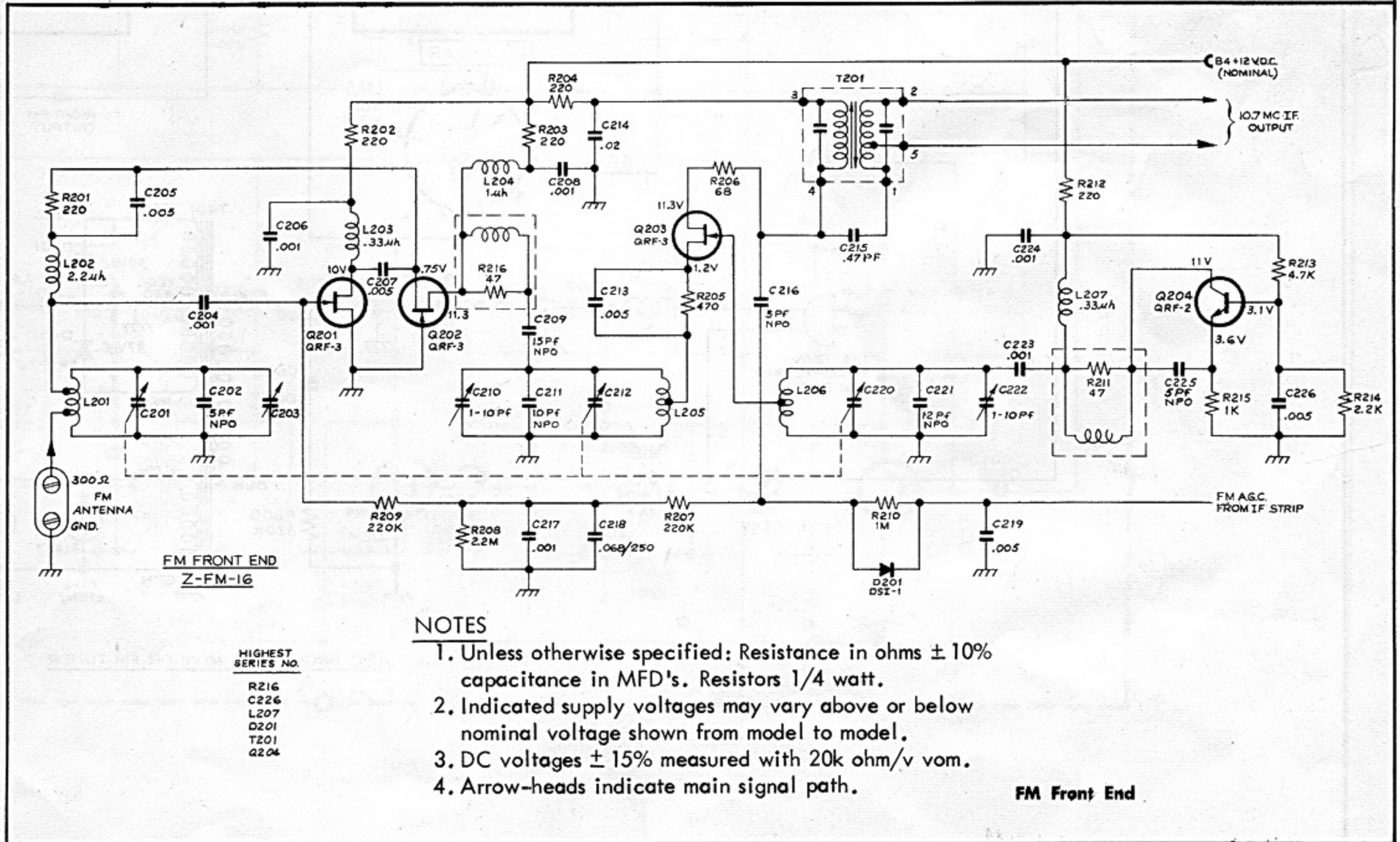
312C

Service Bulletin  
 for  
Model 312C Solid Sate FM Stereo Tuner

**SPECIFICATIONS**

Usable Sensitivity (UV)	1.7 uv
Cross Modulation Rejection	90 db
Signal to Noise Ratio	65 db
Total Harmonic Distortion	0.8%
Frequency Deviation	less than .02%
Frequency Response	* 50-15,000 hz : $\pm 1$ db
Selectivity	45 db
Hum	-70 db
Separation	40 db
Audio Output (100% modulation)	1.2 vrms
Tuning Range	87-109 mc
Accuracy of Calibration	0.5%
FM Front End	3 Field Effect

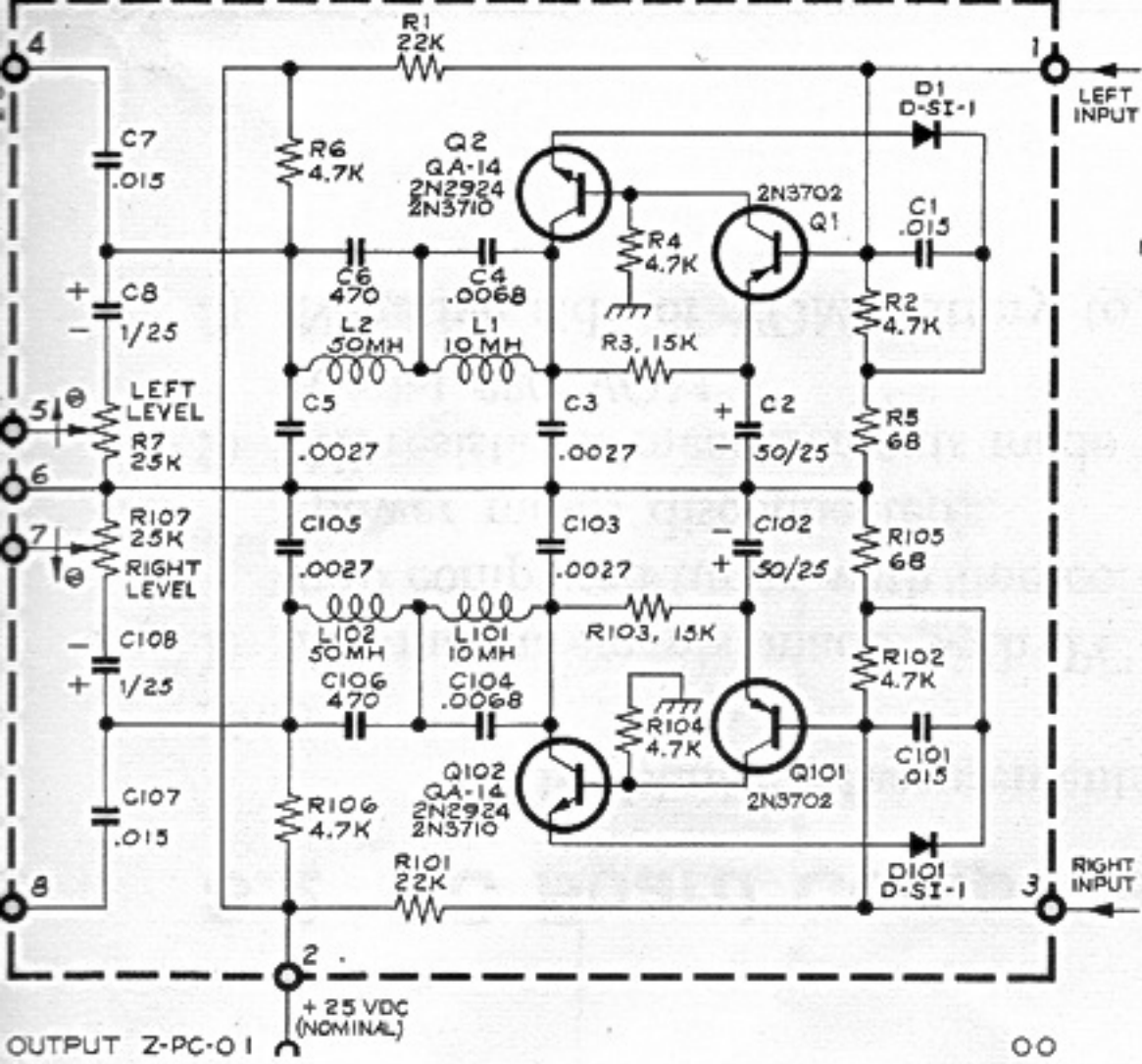
\* This is limit of F.C.C. specifications. All SCOTT tuners have far wider frequency response.



**NOTES**

1. Unless otherwise specified: Resistance in ohms  $\pm 10\%$  capacitance in MFD's. Resistors 1/4 watt.
2. Indicated supply voltages may vary above or below nominal voltage shown from model to model.
3. DC voltages  $\pm 15\%$  measured with 20k ohm/v vom.
4. Arrow-heads indicate main signal path.





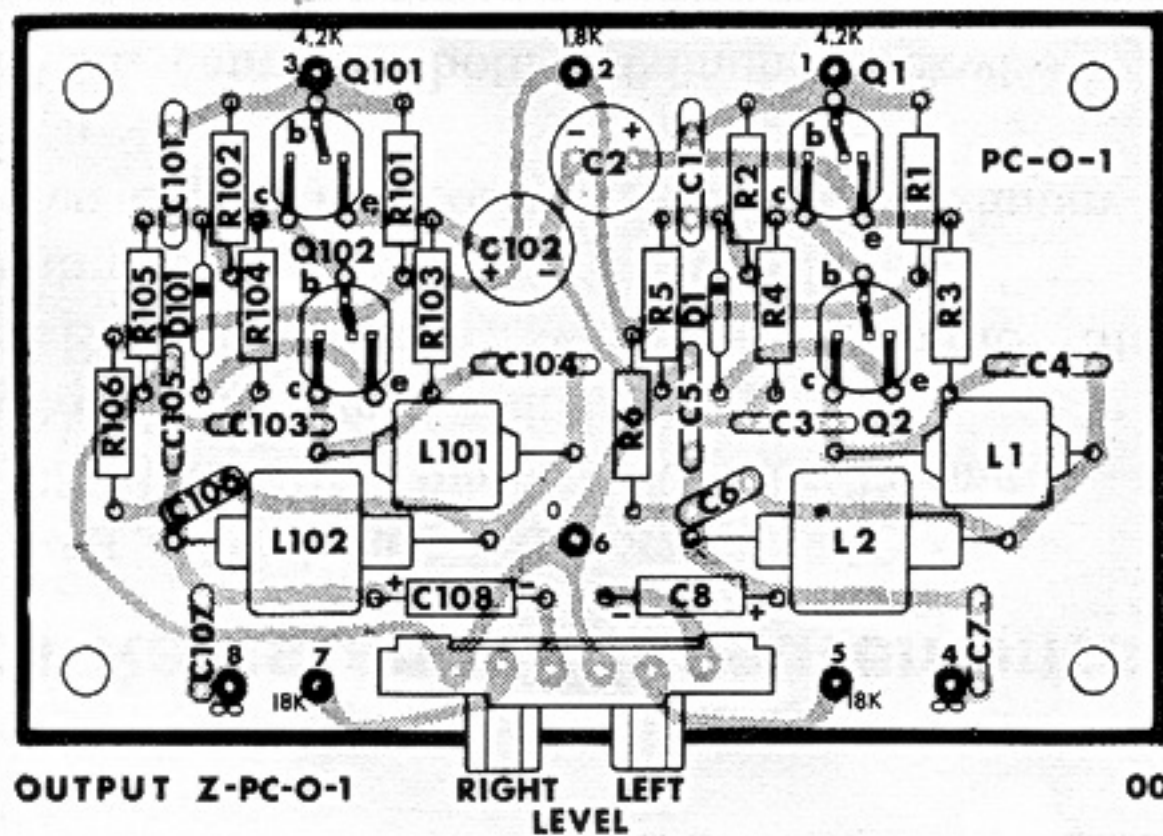
Output Audio Amplifier

- NOTES:
1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS  $\pm 10\%$  CAPACITANCE IN MFDS. RESISTORS 1/2 WATT
  2. ARROWS ON POTENTIOMETERS INDICATE CW ROTATION
  3. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.
  4. ARROW-HEADS INDICATE MAIN SIGNAL PATH.

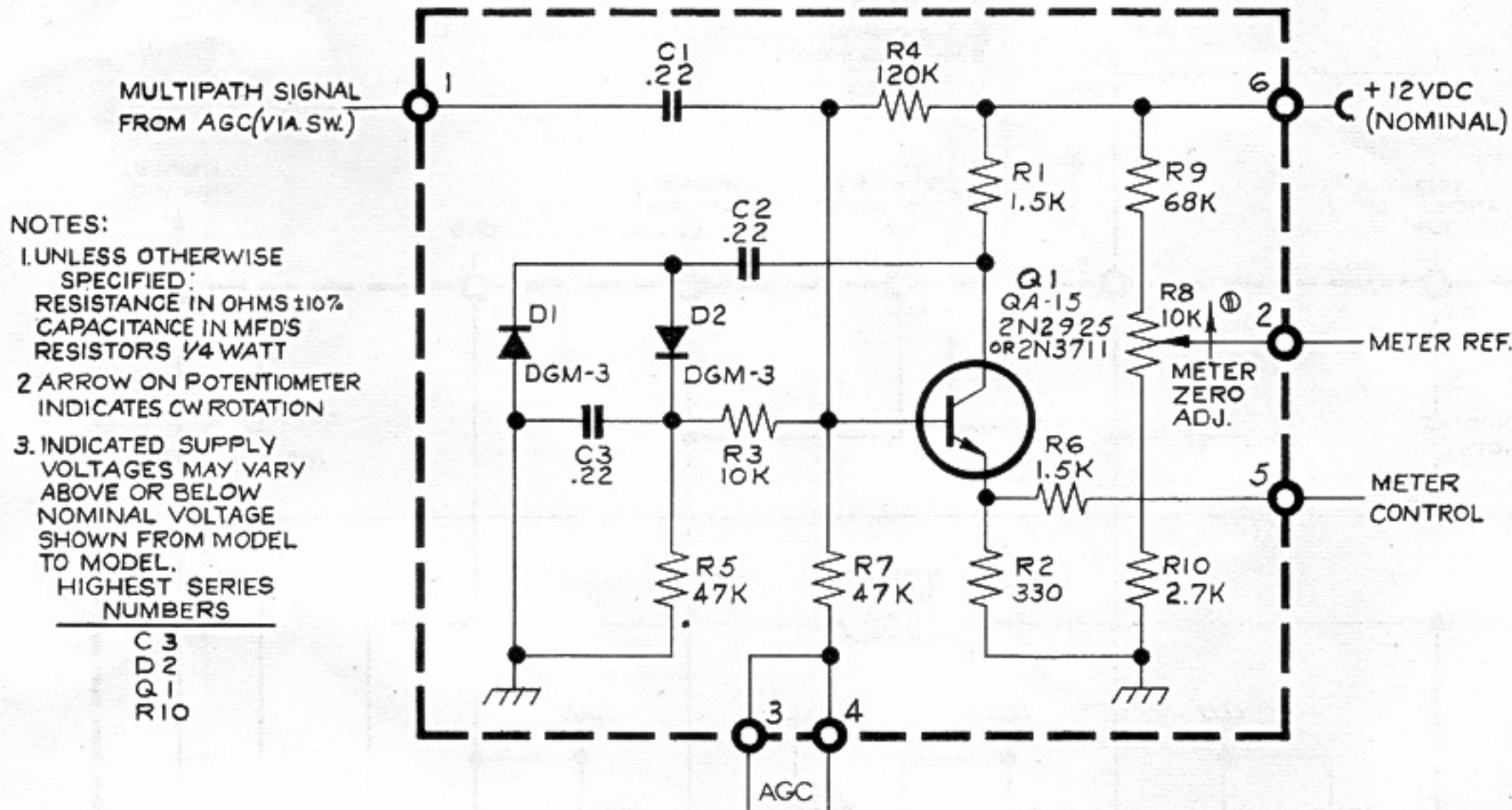
HIGHEST SERIES NUMBERS

C8	C108
D1	D101
L2	L102
R7	R107

Q1, Q101 - 2N3702  
Q2, Q102 - QA-14, 2N3710 & 2N2924



Output Z-PC-O-1



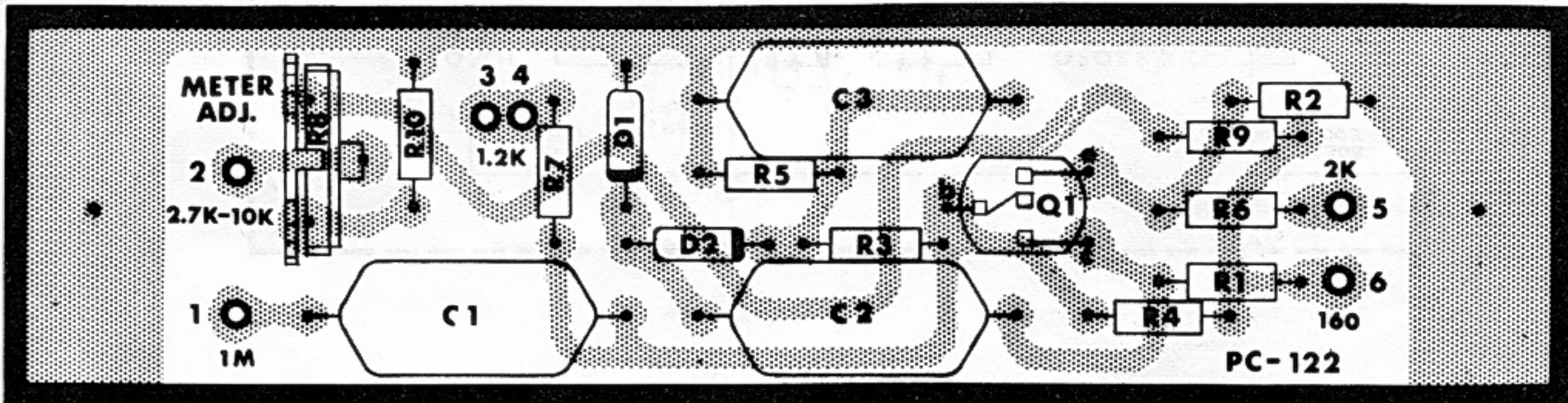
- NOTES:
1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS  $\pm 10\%$  CAPACITANCE IN MFDS. RESISTORS 1/4 WATT
  2. ARROW ON POTENTIOMETER INDICATES CW ROTATION
  3. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.
- HIGHEST SERIES NUMBERS

C3
D2
Q1
R10

MULTIPATH INDICATOR

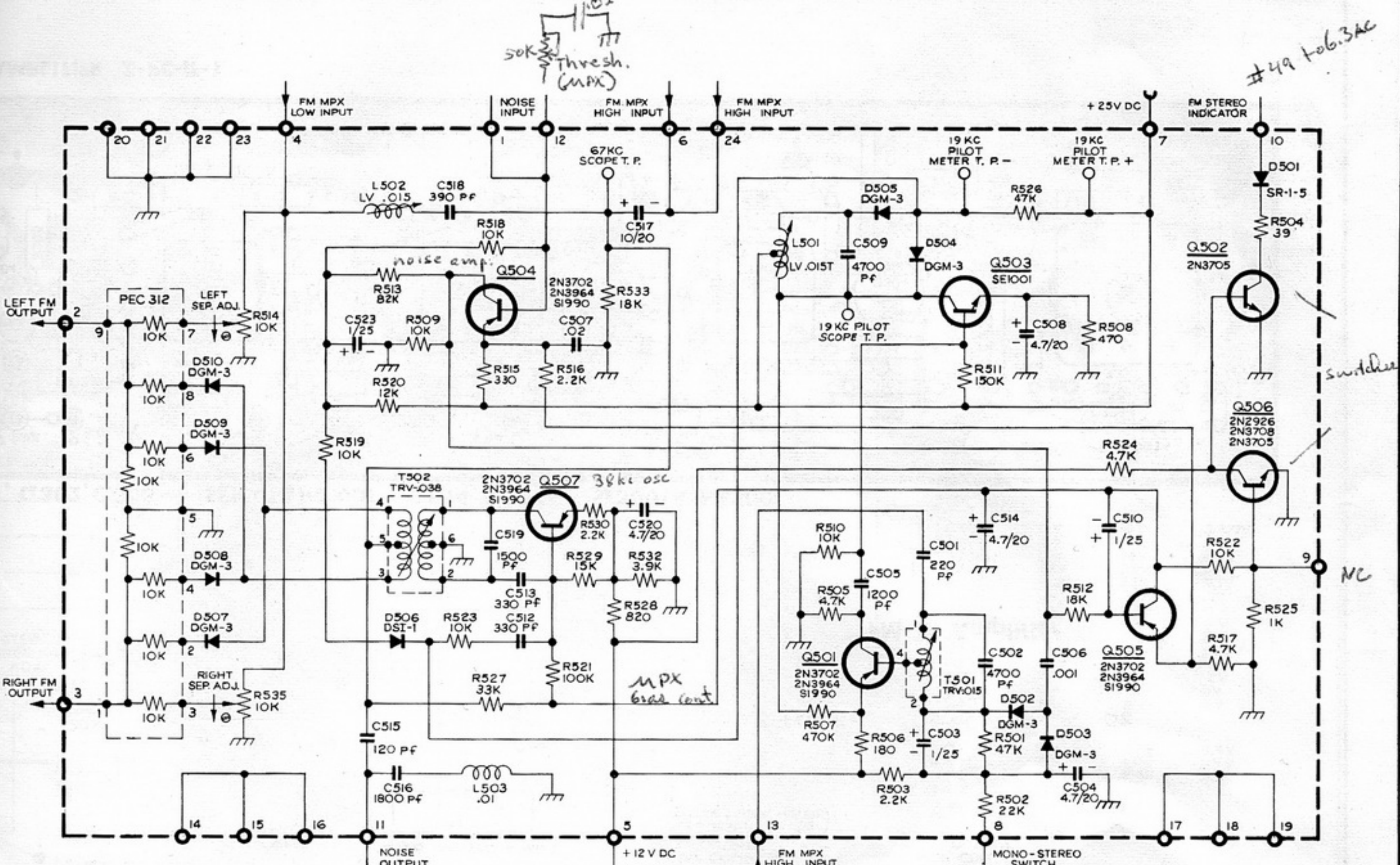
Z-PC-MI-1

Q1 - 2N2925 or 2N3711 (QA-15)



MULTIPATH INDICATOR Z-PC-MI-1





AUTOMATIC MULTIPLEX DEMODULATOR

NOTES:

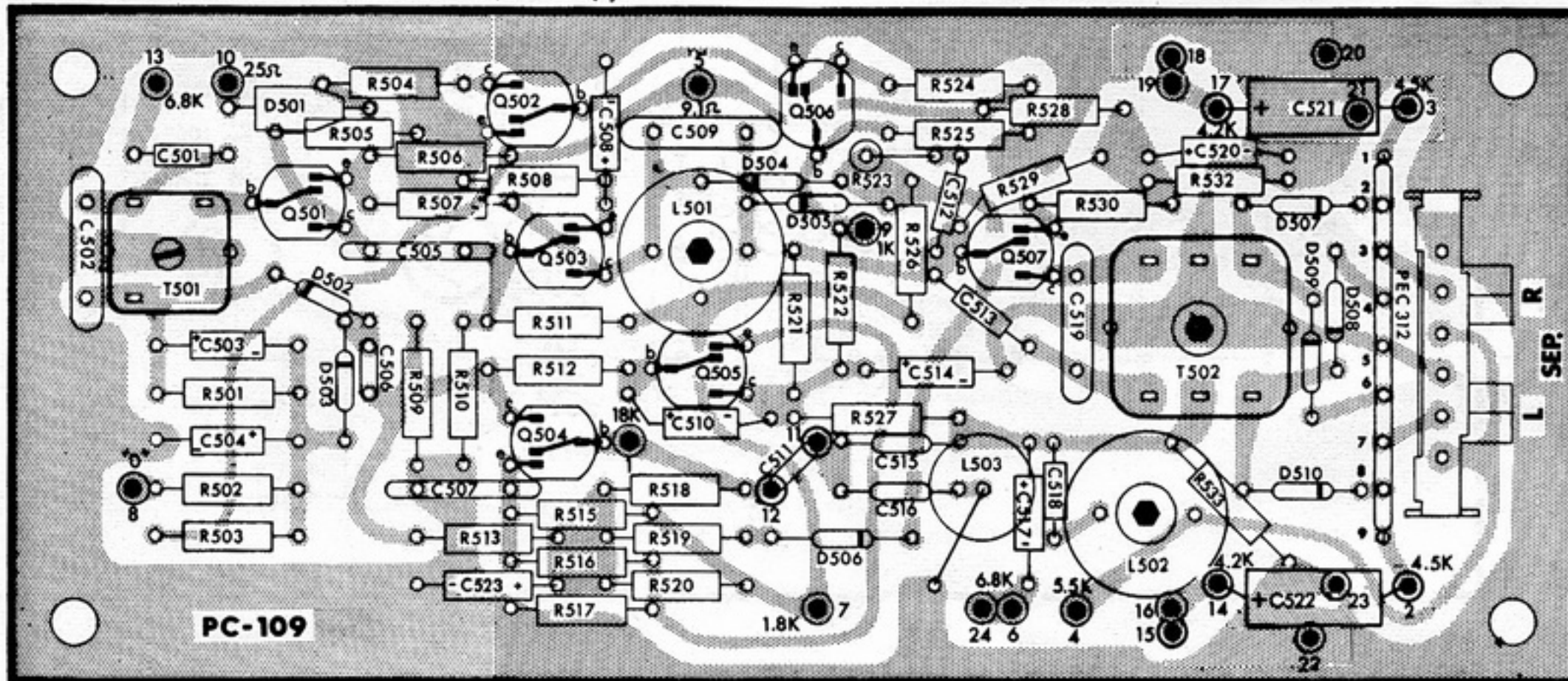
1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS  $\pm 10\%$  CAPACITANCE IN MFD'S, RESISTORS  $\frac{1}{2}$  WATT.
2. ARROWS ON POTENTIOMETERS INDICATE CW ROTATION.
3. PILOT ADJ. - USING 2000 OHM/V METER, MEASURE 4V MIN. DC. SEE INSTRUCTIONS.
4. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN. FROM MODEL TO MODEL.
5. ARROW-HEADS INDICATE MAIN SIGNAL PATH.

HIGHEST SERIES NUMBERS

- C523
- D510
- L503
- Q507
- R535
- T502

Multiplex

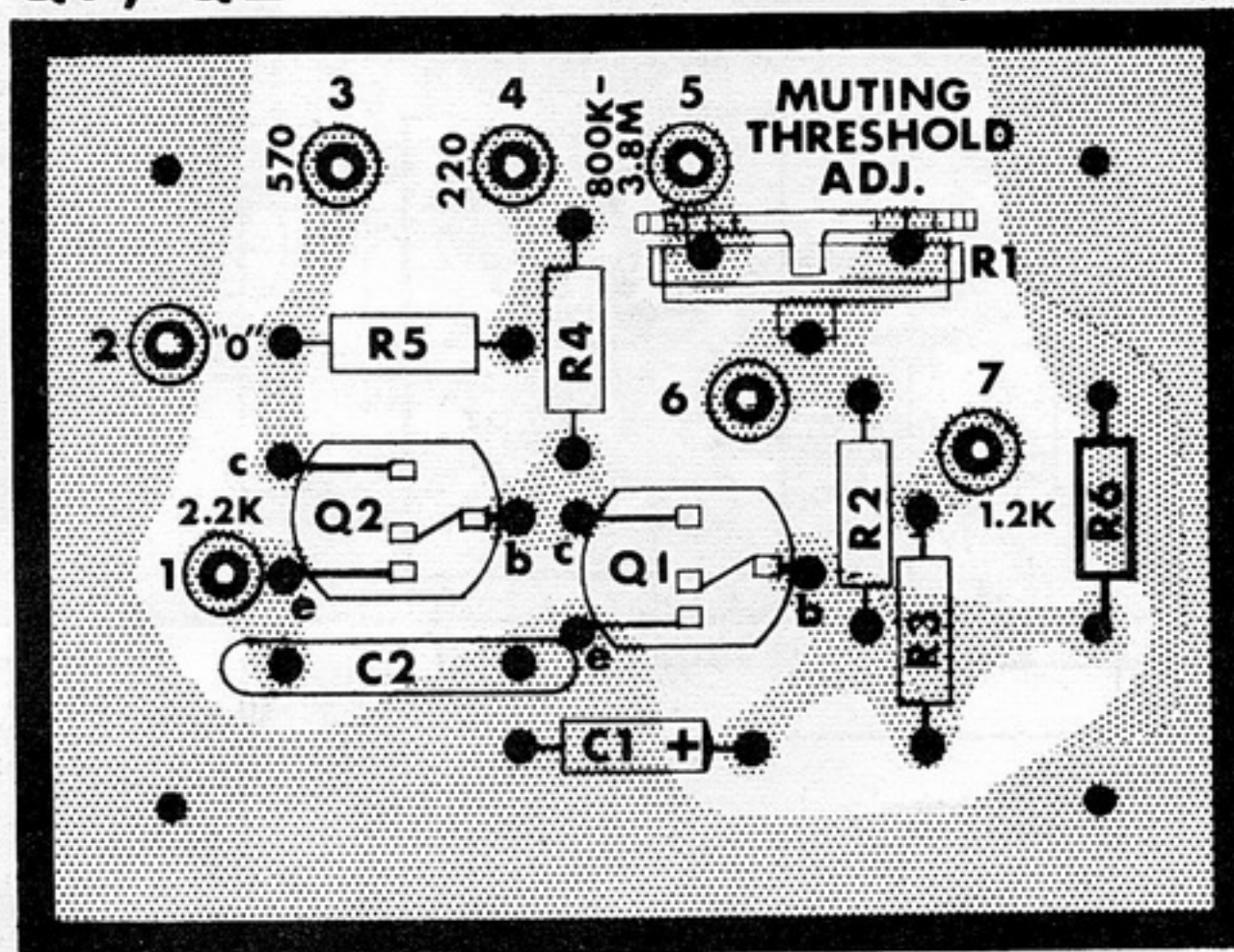
- Q501, Q504, Q505, Q507 - 51990, 2N3964, 2N3702
- Q502 - Q-2N3705
- Q503 - SE 1001
- Q506 - Q-2N2926 or Q-2N3708(QA-13), or 2N3705



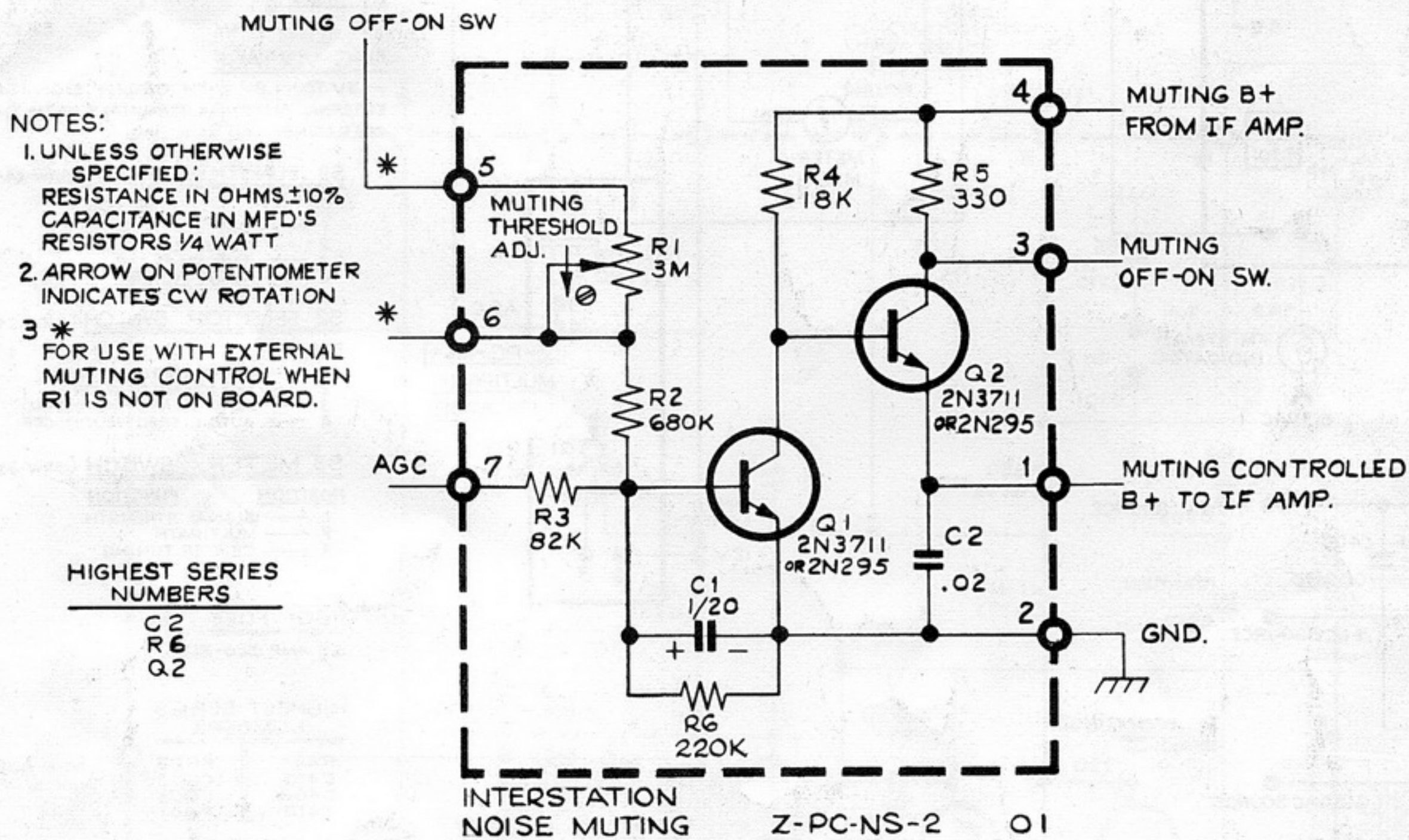
MULTIPLEX Z-PC-MX-11



**Q1, Q2 - 2N2925 or 2N3711(QA-15)**



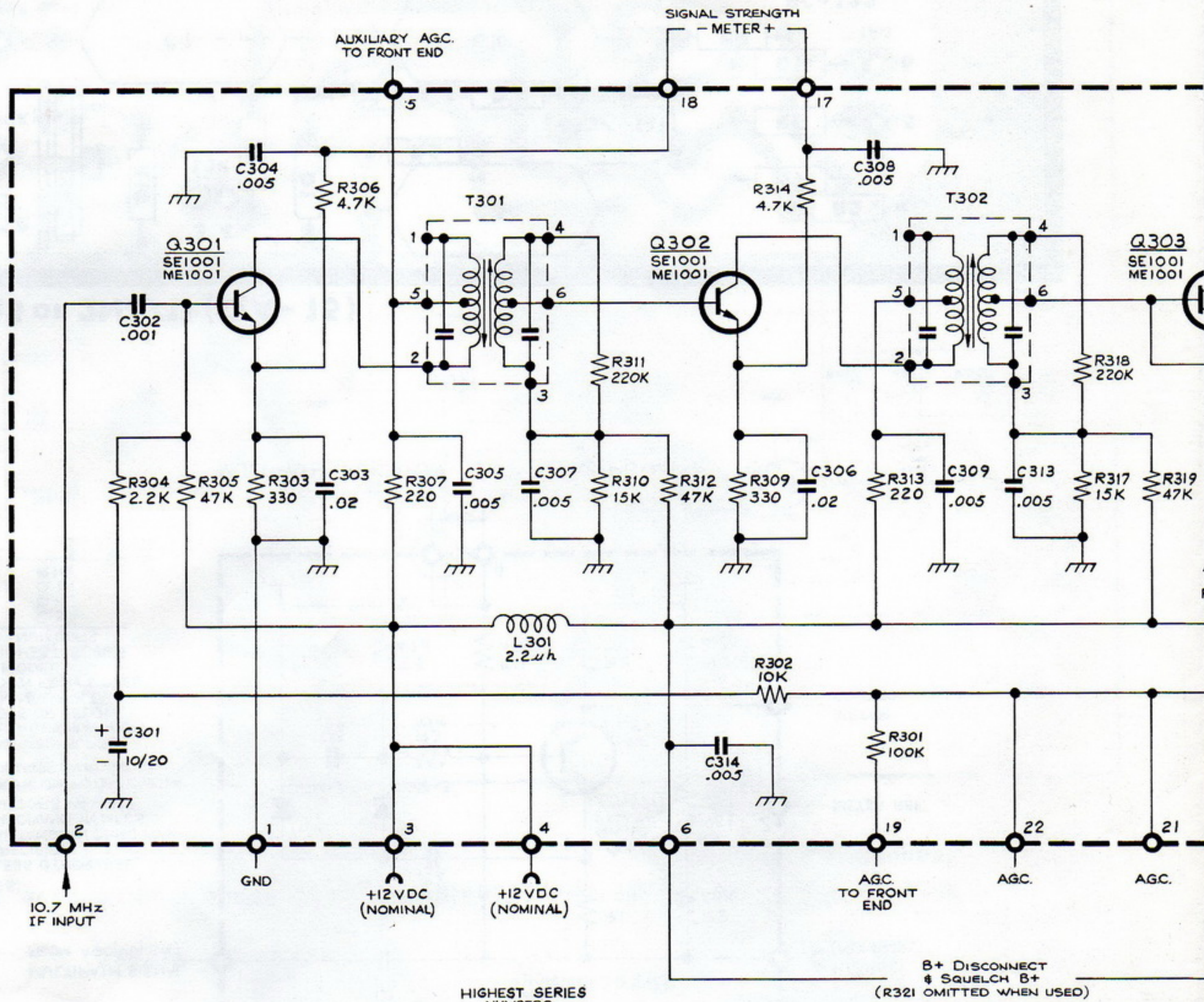
**INTERSTATION Z-PC-NS-2 00  
NOISE MUTING**



**Z-PC-NS-2 Parts List**

PC BOARD	PC-124	R1	RCV-3M-PCM
C1	CTT-1/25	R2	RC11-680k
C2	CC-.02	R3	RC11-82k
Q1, Q2	QA-15, 2N3711, 2N2925	R4	RC11-18k
		R5	RC11-330
		R6	RC11-220k





FM IF AMPLIFIER

HIGHEST SERIES NUMBERS  
 R330  
 C328  
 D304  
 L301  
 T304  
 Q305

**NOTES**

1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS  $\pm 10\%$  RESISTORS  $\frac{1}{2}$  WATT, CAPACITANCE IN MFD'S.
2. D.C. VOLTAGES  $\pm 15\%$  MEASURED WITH 20 K $\Omega$ /V V.O.M.
3. INDICATED SUPPLY VOLTAGES MAY VARY ABOVE OR BELOW NOMINAL VOLTAGE SHOWN FROM MODEL TO MODEL.
4. ARROW-HEADS INDICATE MAIN SIGNAL PATH.

## 8.2 PC Board Component Layout with Resistance Measurements

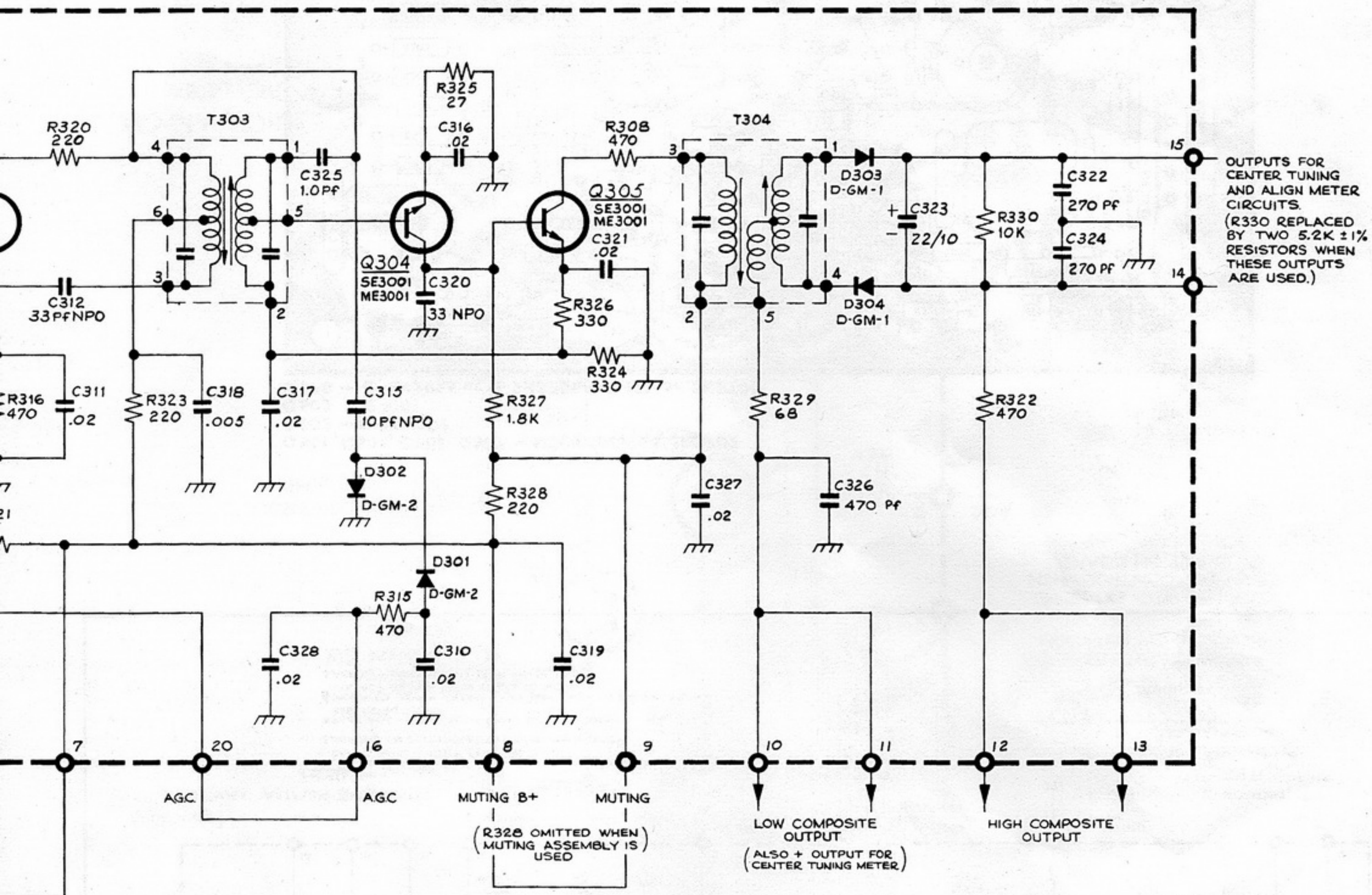
### Resistance Measurements

**Note**

- 1) All measurements made with PC boards wired into completed tuner, with line cord disconnected (power mains disconnected).
- 2) All resistance measurements made with a Triplet Model 630 VOM.
- 3) Negative side of VOM battery to ground.

- 4) All controls set as below.  
 METER function switch — "Center Tuning"  
 FUNCTION rotary switch — "Off"  
 SELECTOR rotary switch — "Automatic Stereo," "Muting-Off"  
 Stereo Separation controls — set for maximum separation  
 LEVEL controls — both maximum clockwise



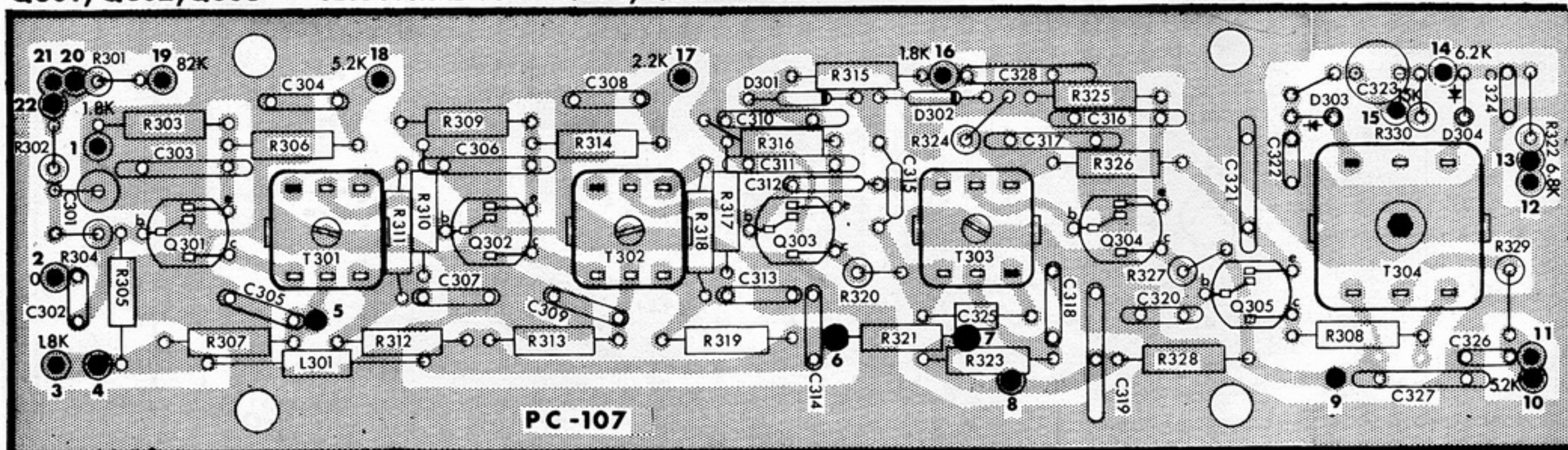


Z-PC-IF-1

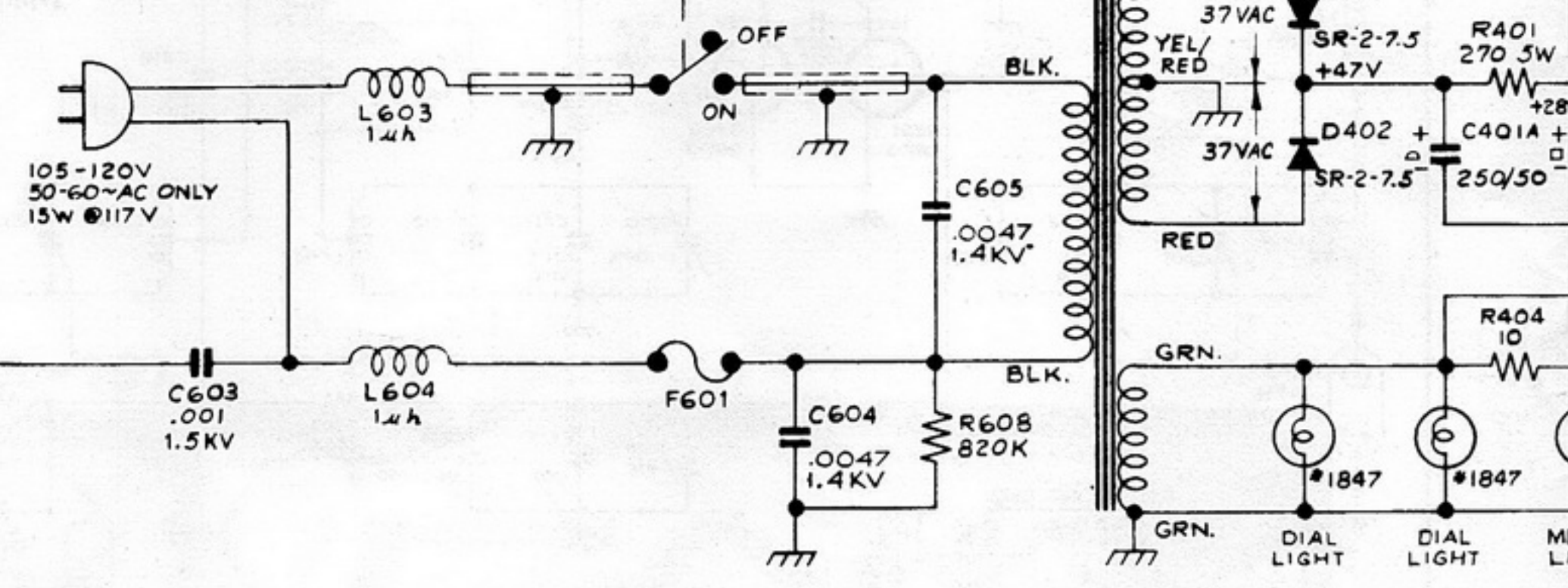
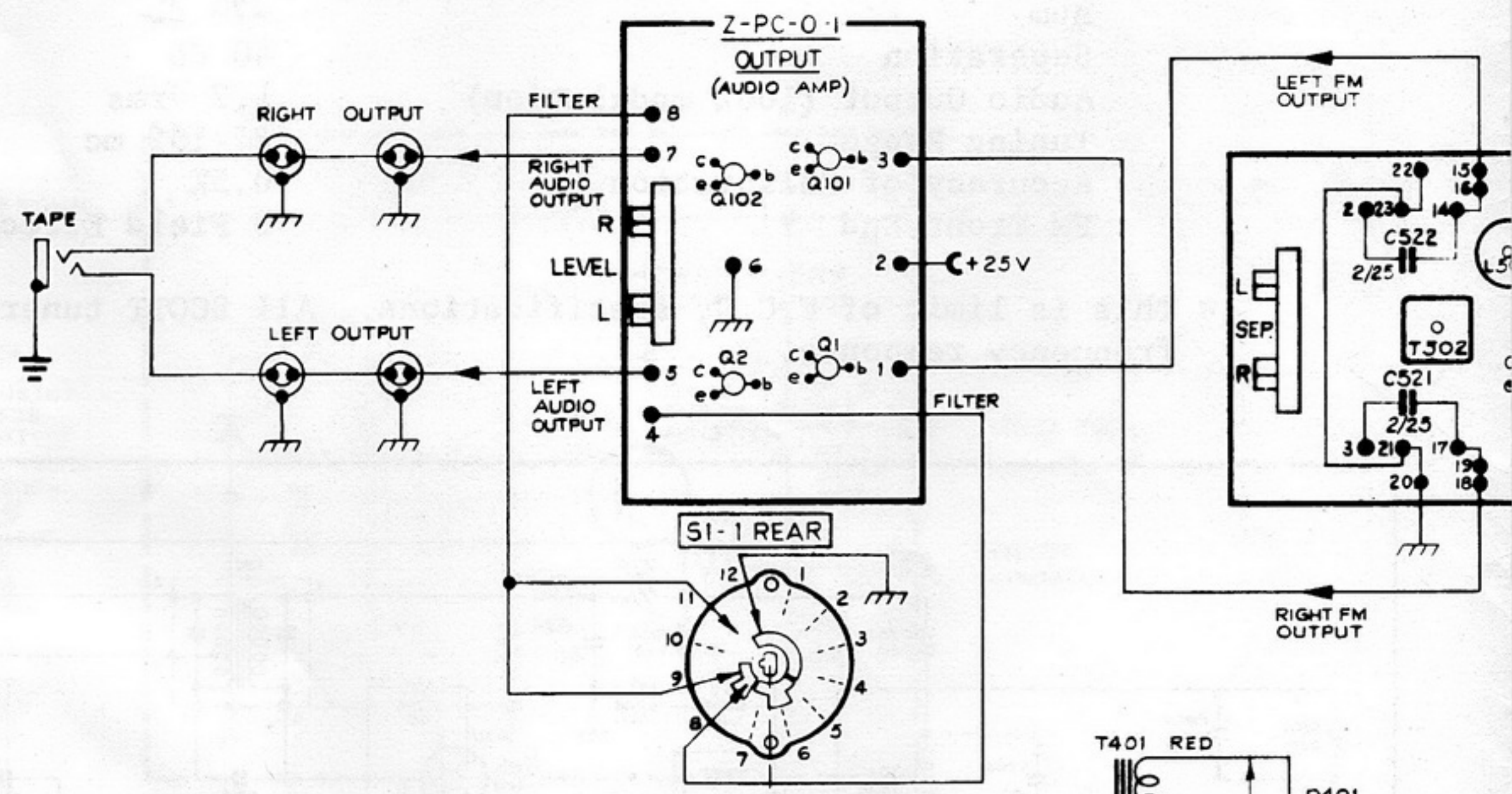
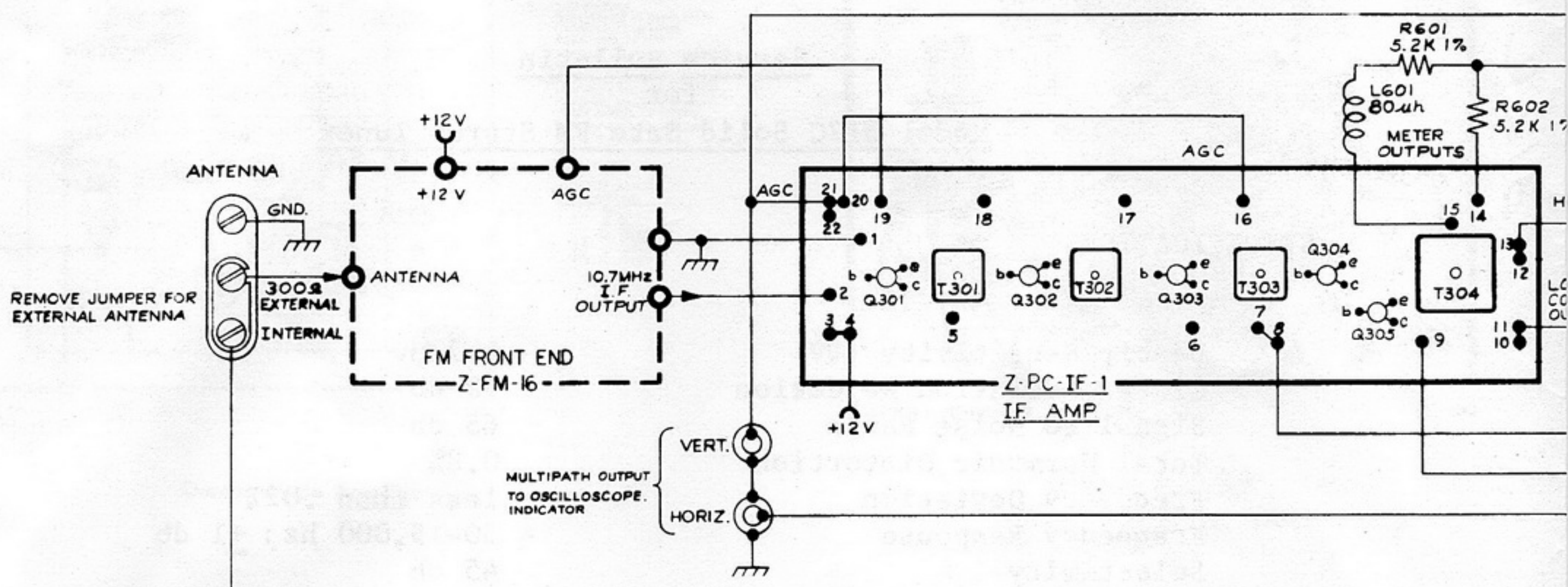
02

FM IF Amplifier

Q301, Q302, Q303 - SE1001 & ME1001    Q304, Q305 - SE3001 & ME3001







312 C BROADCAST MONITOR FM TUNER



REVISIONS			
SYM	DESCRIPTION	DATE	APP.

**VOLTAGES**

UNLESS OTHERWISE SPECIFIED:  
 ALL VOLTAGES POSITIVE DC ± 15% MEASURED WITH 20KΩ/V VOM AND 117 VAC LINE. 300 OHM LOAD ON EXTERNAL ANTENNA TERMINALS, TUNER OFF STATION AND FUNCTION SWITCH IN NORMAL POSITION, SELECTOR SWITCH IN MONO-MUTING OFF, METER SWITCH IN SIGNAL STRENGTH POSITION.  
 \* VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE, ONLY SELECTOR SWITCH IN MONO-MUTING ON POSITION.  
 \*\* VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE ONLY SELECTOR SWITCH IN AUTO STEREO-MUTING OFF WITH STEREO SIGNAL FED INTO TUNER.

Z-PC-IF-1			
	e	b	c
Q301	1.75V	2V	11V
Q302	1.75V	2V	11V
Q303	1.5V	2V	10V
Q304	.1V	.9V	2.5V
* Q304	0V	0V	0V
Q305	1.8V	2.5V	7.4V
* Q305	0V	0V	0V
Z-PC-O-1			
Q1	4.4V	4.2V	1.2V
Q2	1V	1.2V	9.2V
Q101	4.4V	4.2V	1.2V
Q102	1V	1.2V	9.2V
Z-PC-MX-11			
Q501	11V	10V	1.5 TO 7V
Q502	0V	.7V	1.1V
Q503	.7V	1.3V	23V
Q504	23V	22V	21V
Q505	15.5V	22V	.65V
Q506	0V	.1V	.7V
Q507	7.6V	8.3V	0V
Q501	11V	11V	0V
Q502	0V	0V	2.7V
Q503	.9V	1.4V	23.5V
Q504	23V	23V	10V
Q505	12V	12V	12V
Q506	0V	.5V	0V
Q507	9V	9V	0V
Z-PC-NS-2			
Q1	0V	.47V	9.4V
* Q1	0V	.66V	.19V
Q2	8.7V	9.4V	9.4V
* Q2	0V	.19V	11.8V
Z-PC-MI-1			
Q1	1.4V	2V	5.4V

**AGC VOLTAGE**

-1.5V TO -1.8V WITH 1000μV SIGNAL FED TO EXTERNAL ANTENNA TERMINALS WITH THE UNIT OPERATING.

**S1 FUNCTION SWITCH (SRW-44-11)**

POSITION	FUNCTION
1	OFF
2	NORMAL
3	SUB CH FILTER
4	NOISE FILTER

**S2 SELECTOR SWITCH (SRW-24-B)**

POSITION	FUNCTION
1	MONO - MUTING OFF
2	MONO - MUTING ON
3	AUTO STEREO - MUTING ON
4	AUTO STEREO - MUTING OFF

**S3 METER SWITCH (SRW-33-7)**

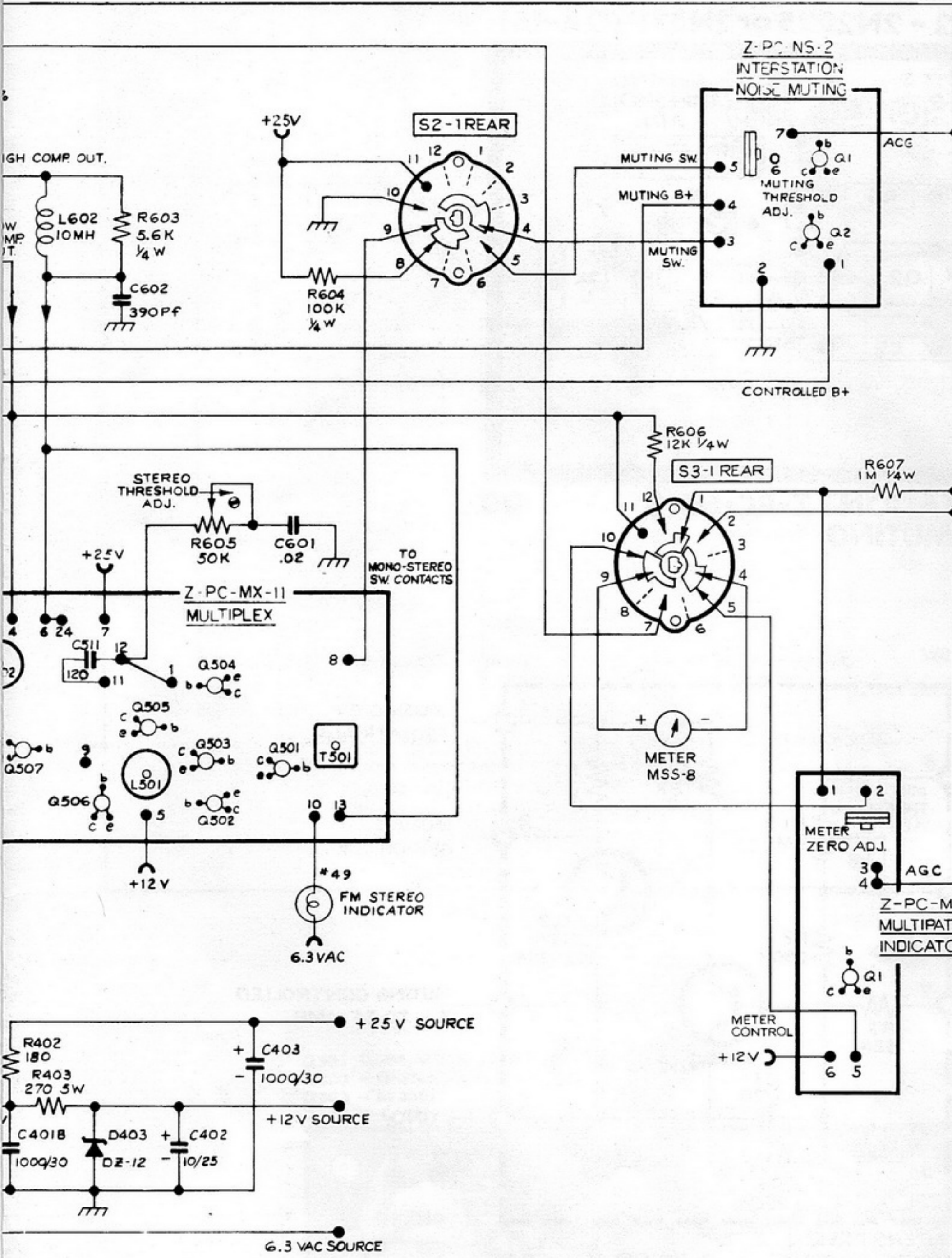
POSITION	FUNCTION
1	SIGNAL STRENGTH
2	MULTIPATH
3	CENTER TUNING

**F601 FUSE**

0.5 AMP SLO-BLO

**HIGHEST SERIES NUMBERS**

R404	R608
C404	C605
D403	L603
T401	F601



**NOTES**

- UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS ± 10% CAPACITANCE IN MFC'S, RESISTORS 1/2 WATT.
- CAPACITORS C521, C522, C511 ADDED TO Z-PC-MX-11 ASSEMBLY
- ROTARY SWITCHES SHOWN IN FULL CCW POSITION AS VIEWED FROM THE FRONT.
- ON Z-PC-IF-1 ASSEMBLY RESISTORS R328 AND R330 ARE REMOVED.
- ARROW-HEADS INDICATE MAIN SIGNAL PATH.
- ARROW ON POTENTIOMETER INDICATES CW ROTATION.

DATE 10-14-66	H.H. SCOTT, INC. NAYHARD, MASS.
DRAW. B	
CH.	CIRCUIT DIAGRAM
ENG. D.B. LANGMIR	SCALE: —
PROD.	SHEET 1 OF 1
	DWG. SIZE D
	312C-C1

312C-C1 0