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SCOTT®

ADDENDA SHEET FOR MODEL 388-B

The audio section is exactly identical to the 348-B. The alignment of the 348-B FM section can be followed when aligning the 388-B. The AM alignment is as follows:

1. 455 kHz Alignment

Set tuning to middle of AM band, 1000 kHz. Output from left tape out jack. Input from 455 kHz Generator (modulated to 30% with 400 Hz) to External AM Antenna inputs (shorting bar removed). With 2 mv or less generator output peak the following if cans for maximum output: Z-PC-RF-3 T1 primary and secondary, Z-PC-IF-9 T302 primary and secondary and Z-PC-IF-9 T304 primary (single tuned can). After peaking to maximum remove 455 kHz generator leads and reconnect external Am antenna shorting bar.

2. Oscillator Adjustment

With tuning condenser maximum capacity (fully closed) adjust pointer to extreme left edge of dial (center of pointer aligned with edge of opening). Couple output of AM generator (600 kHz modulated to 60% with 400 Hz) to loopstick with AM coupling loop of Figure AM-1 using mechanical stop for 1" penetration of loopstick. Tune unit to 600 kHz. Attenuate input of r-f signal until signal level is just noticeable on scope (using maximum usable scope sensitivity). Adjust oscillator coil (Z-PC-RF-3 T2) while manually tuning unit for output peak as read on VTVM. Set AM generator to 1600 kHz modulated to 60% with 400 Hz.

Tune unit to 1600 kHz. Adjust oscillator trimmer (Z-AM/FM-9 C-232) for maximum output as read on VTVM using weak r-f input signal.

Repeat the above adjustments of oscillator coil and oscillator trimmer until no further improvement can be made.

3. Antenna Trimmer Adjustment

Set AM generator to 1400 kHz modulated to 60% with 400 Hz. Tune unit to 1400 kHz. Adjust antenna trimmer (Z-AM/FM-9 C230) for maximum output as read on VTVM using weak r-f input signal.

4. AGC Potentiometer Adjustment

Tune unit to 600 kHz. Couple output of AM Generator (600 kHz modulated to 60% with 400 Hz) to loopstick with AM coupling loop removing mechanical stop and using full penetration of coupling loop (5"). Adjust r-f attenuator for 2 kuV input to AM coupling loop. Adjust AGC Potentiometer (Z-PC-RF-3, R-11) for a Tuner Meter Reading of "9". Return AM coupling loop to 1" penetration (using mechanical stop to set penetration) and observe less than a 2 division drop in Tuner meter reading.

5. 600 kHz Measurements

With unit tuned to 600 kHz and AM coupling loop set for 1" penetration set r-f attenuator for an input to the AM coupling loop equivalent to a 10 kuV/M field (Generator output of 500 uV). Note audio output - should be between .3 and .6 volts from tape out jacks. Attenuate r-f input 35 db (equivalent to 178 uV/M field or approx. 8.9 uV). Check audio output which should not drop more than 6 dB from that noted for input equivalent to 10 kuV/M field.

6. 1000 kHz Measurements

(a) With unit tuned to 1000 kHz and Am coupling loop set for 1" penetration set r-f attenuator for an input to the AM coupling loop equivalent to a 10 kuV/m field (generator output of 500 uV). Note audio output - should be between .4 and .7 volts from tape out jacks. Attenuate r-f input 35 dB (equivalent to 178 uV/M field or apprax. 8.9 uV). Check audio output which should not drop more than 4 dB from that noted for input equivalent to 10 kuV/M field.

(b) Set r-f input to the AM coupling loop equivalent to a 10 kuV/M field. Measure harmonic distortion of audio output. Maximum allowable THD is 2.0%.

7. 1400 kHz Measurements

With unit tuned to 1400 kHz and Am coupling loop set for 1" penetration set r-f attenuator for an input to the AM coupling loop equivalent to a 10 kuV/M field (generator output of approx. 620 uV). Note audio output - should be between .5 and .8 volts from tape output jacks. Attenuate r-f input 35 dB (equivalent to 178 uV/M field or approx. 11 uV). Check audio output which should not drop more than 4 dB from that noted for input equivalent to 10 kuV/M field.

8. Calibration

(a) With AM coupling loop set for 1" penetration set r-f attenuator for an input to the AM coupling loop equivalent to a 300 uV/M field at 600 kHz. Tune unit to 600 kHz tuning for maximum tuning meter reading. Check calibration of dial pointer - should read 600 kHz ±10 kHz.

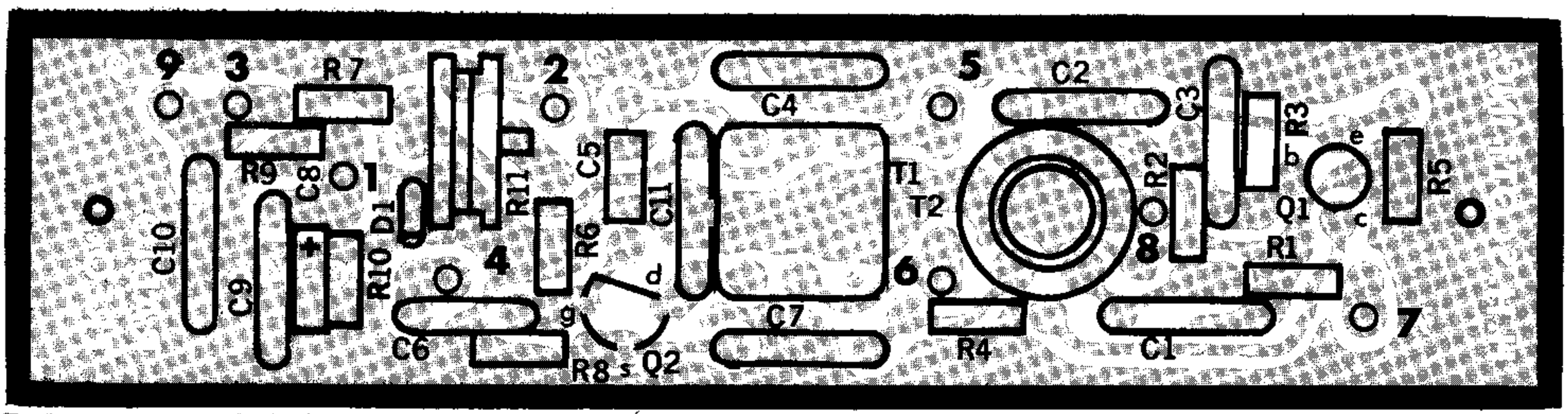
(b) Repeat above procedure for the following frequencies:

Frequency	Calibration
800 kHz	800 kHz ±10 kHz
1000 kHz	1000 kHz ±20 kHz
1200 kHz	1200 kHz ±20 kHz
1400 kHz	1400 kHz ±10 kHz
1600 kHz	1600 kHz ±10 kHz

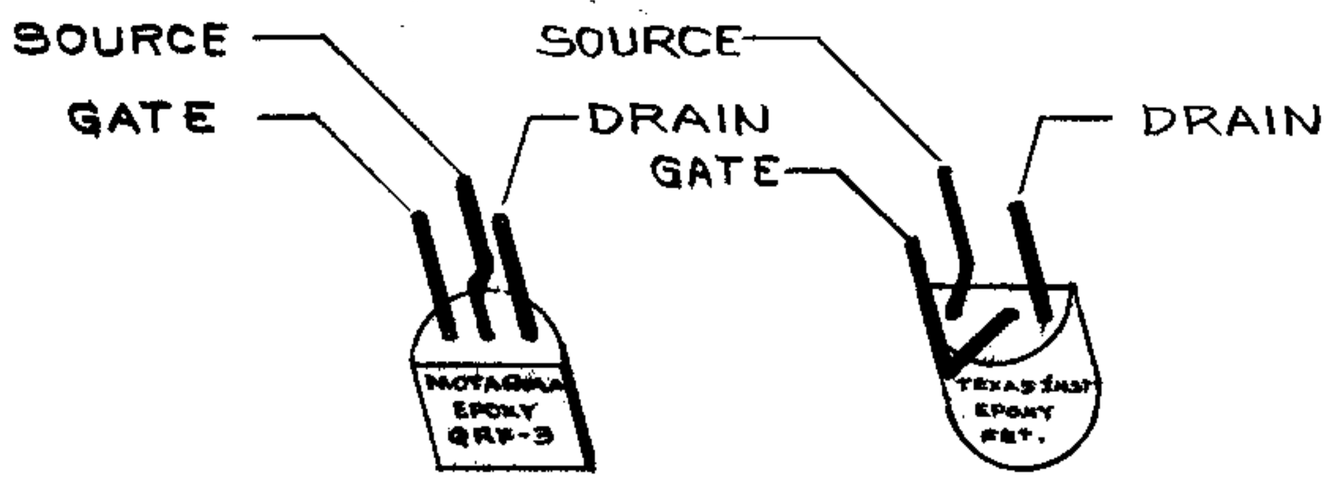
(c) At 1600 kHz check for a rise and fall of meter indication and audio output as unit is tuned through the r-f signal.

Remove AM coupling loop from loopstick antenna.

Q2-QRF-3 Q1-QRF-2

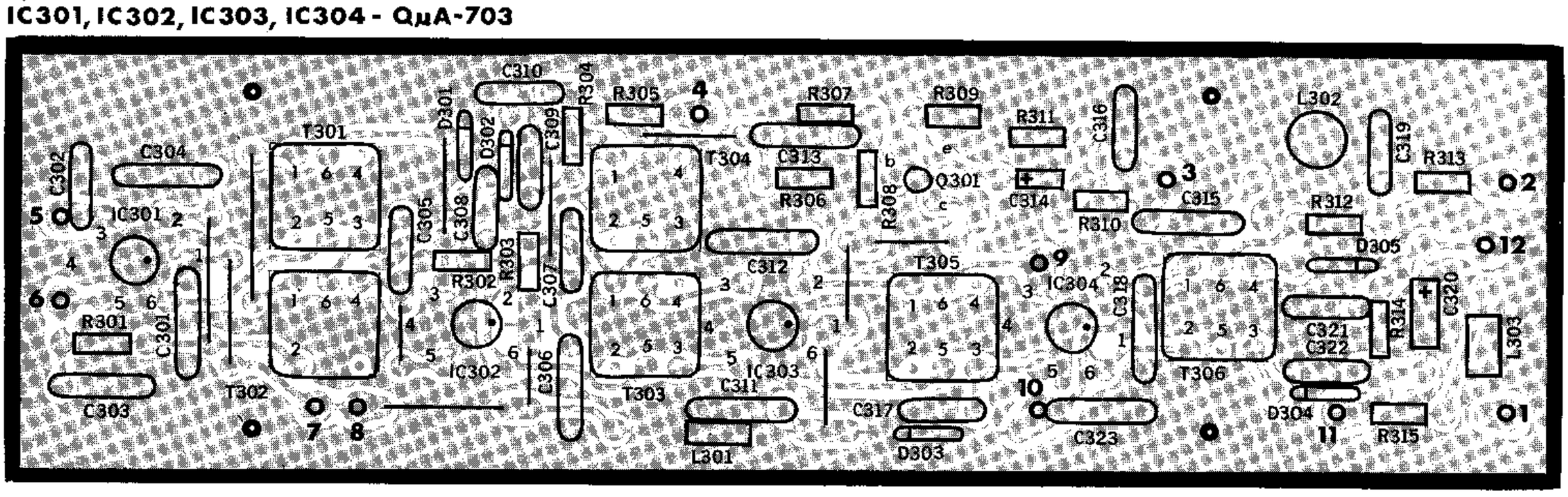


RADIO FREQ. Z-PC-RF-3 1

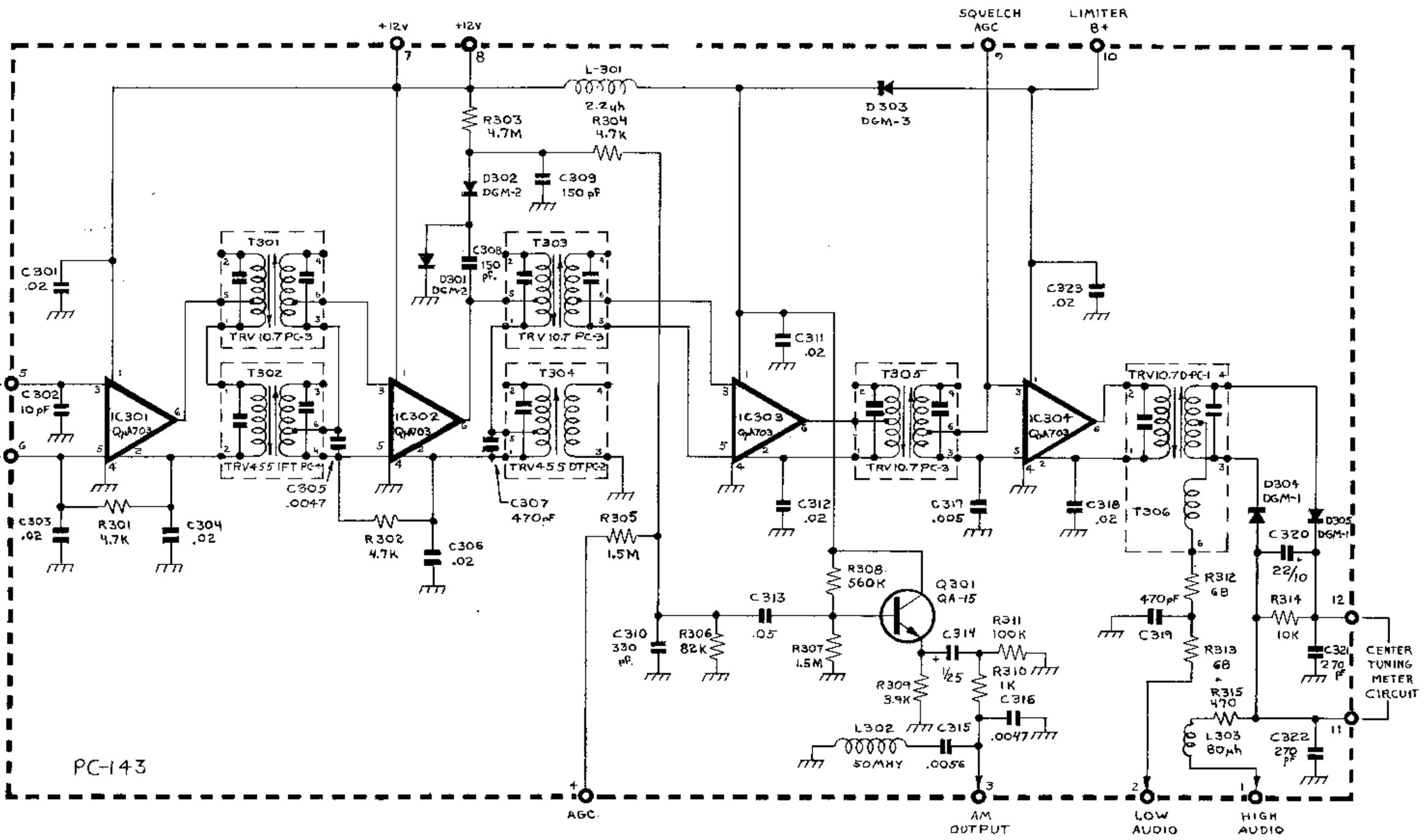


LEAD BENDING FOR Q2

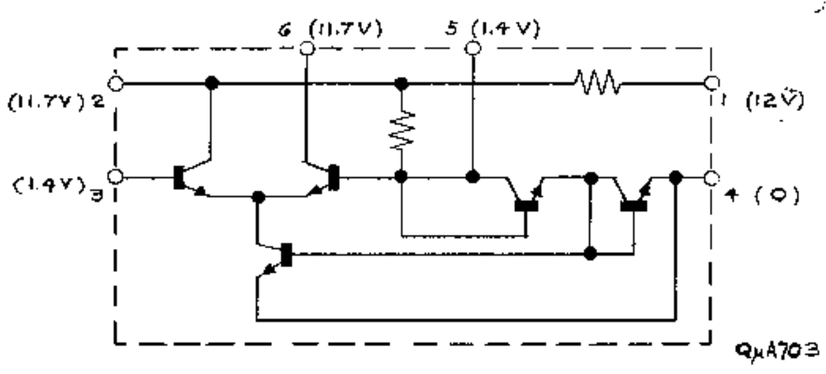
Q301 - QA - 15
IC301, IC302, IC303, IC304 - QμA-703



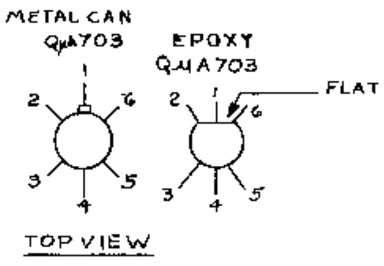
AM - FM IF AMPLIFIER **Z-PC-IF-9 REV. 0**



AM.-FM IF AMPLIFIER Z-PC-IF-9



QμA703 CIRCUIT DIAGRAM



NOTES:
1. UNLESS OTHERWISE SPECIFIED:
   RESISTANCE IN OHMS ± 10%.
   CAPACITANCE IN MFDS.
   RESISTORS ¼ WATT.
   VOLTS DC ± 15% MEASURED WITH 20KΩ/V. V.O.M
2. ARROW- HEADS INDICATE MAIN SIGNAL PATH

HIGHEST SERIES NUMBERS

C323	R315
Q301	L303
T306	D305
IC304	

VOLTAGES

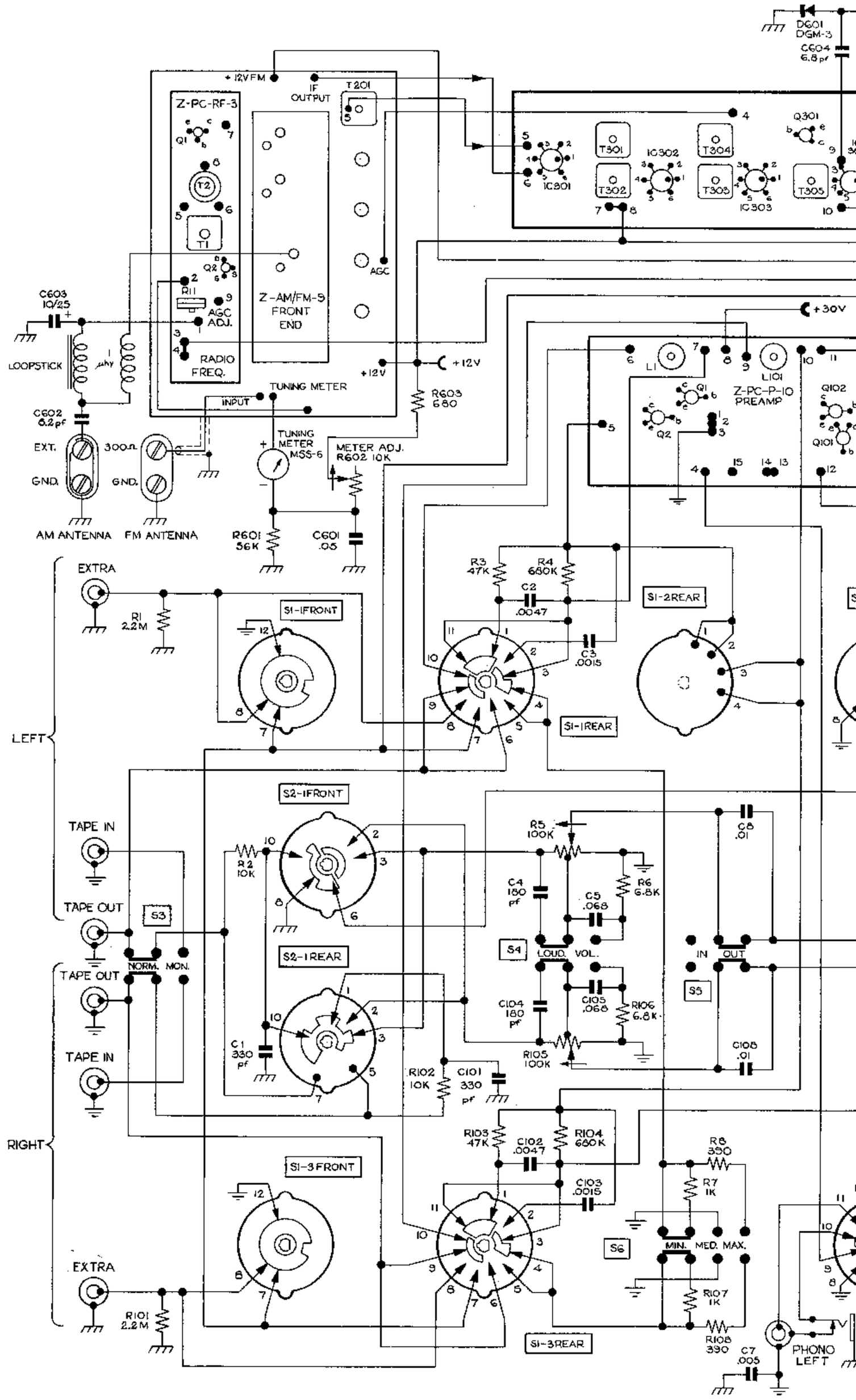
UNLESS OTHERWISE SPECIFIED:
ALL VOLTAGES POSITIVE DC ± 15% MEASURED WITH 20KΩ/V.V. O.M., 117VAC LINE, 300 OHM LOAD ON EXTERNAL ANTENNA TERMINALS, TUNER OFF STATION AND INPUT SWITCH IN "FM" POSITION. SELECTOR SWITCH IN "MONO" POSITION.
* VOLTAGES MEASURED UNDER SAME CONDITIONS AS ABOVE ONLY SELECTOR SWITCH IN "STEREO" POSITION AND STEREO SIGNAL FED INTO TUNER.
** VOLTAGES MEASURED WITH INPUT SWITCH IN "EXTRA" POSITION AND NO SIGNAL.
*** VOLTAGES MEASURED WITH FM MUTING SWITCH IN "ON" POSITION. TUNER OFF STATION.
▲ INDICATES LOADING BY V.O.M.
● VOLTAGES MEASURED WITH SCOPE OR V.T.V.M.

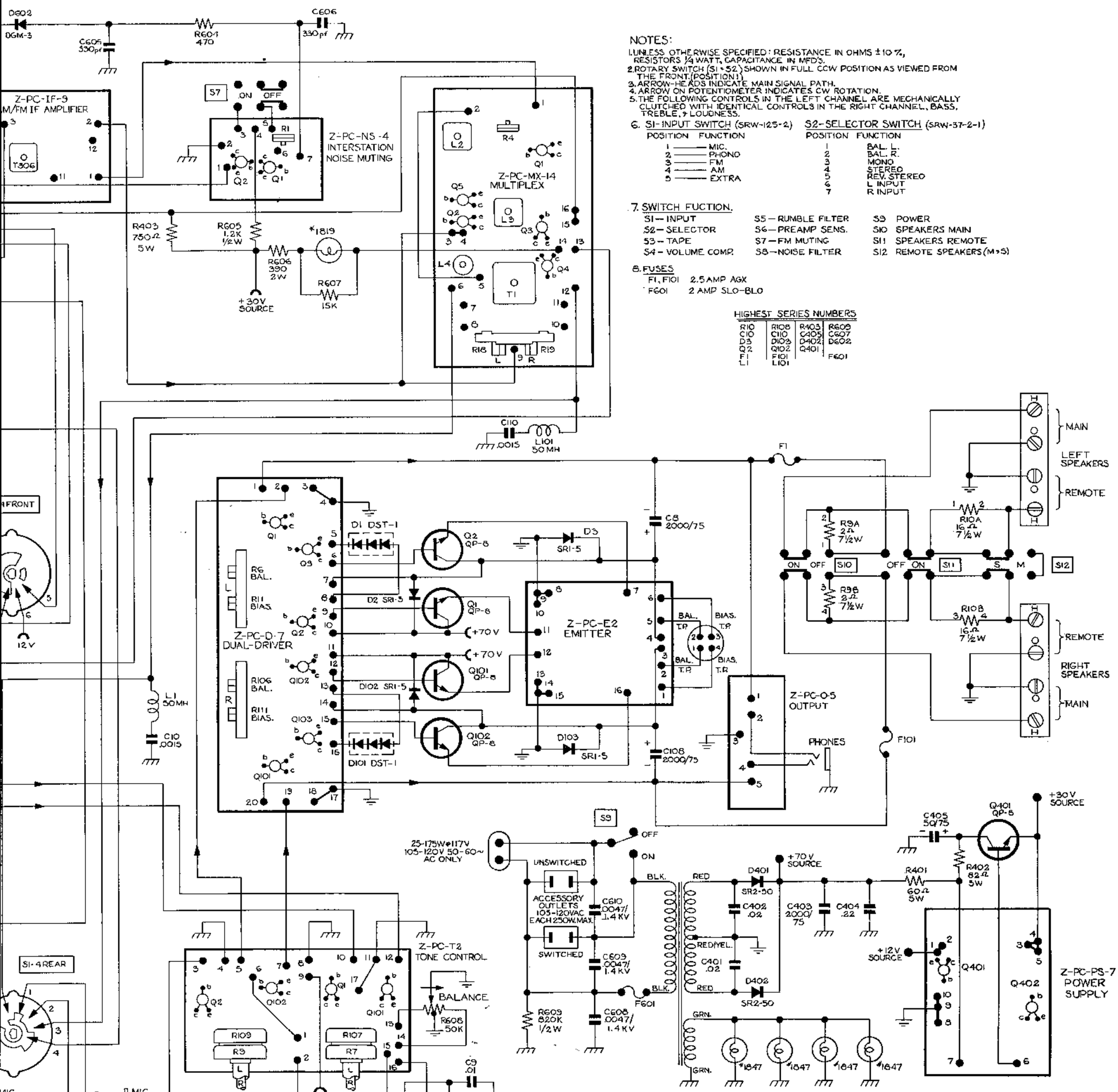
	Z-AM/FM-9	GATE	DRAIN	SOURCE
	Q201	0V.	10V	0V
	Q202	0V.	10V	1V
	Q203	0V	11.3V	1.2V
		e	b	c
	Q204	3.6V	2.1V	11V
	Z-PC-RF-3			
	Q1	3.0V	3.4V	10.3V
		G	D	S
	Q2	0V	8.6V	0.45V
	Z-PC-IF-9			

LEAD	1	2	3	4	5	6
IC-301	12V	11.7V	1.6V	0V	1.6V	11.7V
IC-302	12V	11.7V	1.6V	0V	1.6V	11.7V
IC-303	12V	11.7V	1.6V	0V	1.6V	11.7V
IC-304	12.5V	12V	1.6V	0V	1.6V	11.5V
*** IC-304	0V	0V	0V	0V	0V	0V

		e	b	c
	Q301	5.9V	2.7V▲ 6.5V●	12V
	Z-PC-NS-4			
	Q1	0V	0V	13.5V
	Q2	13V	13.5V	12.8V
***	Q1	0V	.6V	.15V
***	Q2	0V	.15V	30V
	Z-PC-MX-14			
	Q1	.5V	.7V▲ 1.1V●	5.4V
	Q2	.5V	1.1V	10.1V
	Q3	9.2V	10.2V	0V
	Q4	0V	0V	30V
	Q5	0V	.8V▲ 1.1V●	11.2V
*	Q1	.5V	.7V▲ 1.1V●	5.4V
*	Q2	.5V	1.1V	10.1V
*	Q3	7.8V	5.9V	.8V
*	Q4	0V	.75V	.17V
*	Q5	.5V	.55V▲ 1.15V●	6.4V
	Z-PC-P-10			
**	Q1,Q101	.2V	.65V	3.1V
**	Q2,Q102	2.6V	3.2V	14.5V
	Z-PC-T-2			
**	Q1	2.6V	2.2V▲	14.5V
**	Q2	3.4V	3.8V	17V
**	Q101	2.7V	2.3V▲	14V
**	Q102	3.5V	3.9V	16V
	Z-PC-D-7			
	Q1	2.1V	2.6V	34.5V
	Q2	36V	36.5V	70V
**	Q3	35V	34.5V	.6V
**	Q101	2.2V	2.8V	34.5V
**	Q102	36V	36.5V	70V
**	Q103	35V	34.5V	.6V
	Z-PC-PS-7			
**	Q401	12.3V	13V	27V
**	Q402	13V	13.7V	33V
	POWER TRANSISTORS			
**	Q1,Q101	35.5V	36V	70V
**	Q2,Q103	0V	.6V	35V
**	Q401	32.3V	33V	60V

AGC VOLTAGE (Z-PC-IF-9) TERM. 4
-.25▲ OR -1.3 TO -1.8● WITH 1000μV SIGNAL FED TO EXTERNAL ANTENNA TERMINALS, SELECTOR SWITCH IN "MONO" POSITION, INPUT SWITCH IN "FM" POSITION.





NOTES:

1. UNLESS OTHERWISE SPECIFIED: RESISTANCE IN OHMS ±10%, RESISTORS ¼ WATT, CAPACITANCE IN MFD'S.
2. ROTARY SWITCH (S1-S2) SHOWN IN FULL CCW POSITION AS VIEWED FROM THE FRONT. (POSITION 1)
3. ARROW-HEADS INDICATE MAIN SIGNAL PATH.
4. ARROW ON POTENTIOMETER INDICATES CW ROTATION.
5. THE FOLLOWING CONTROLS IN THE LEFT CHANNEL ARE MECHANICALLY CLUTCHED WITH IDENTICAL CONTROLS IN THE RIGHT CHANNEL, BASS, TREBLE, & LOUDNESS.
6. S1-INPUT SWITCH (SRW-125-2)

POSITION	FUNCTION
1	MIC.
2	PHONO
3	FM
4	AM
5	EXTRA

S2-SELECTOR SWITCH (SRW-37-2-1)

POSITION	FUNCTION
1	BAL. L.
2	BAL. R.
3	MONO
4	STEREO
5	REV. STEREO
6	L INPUT
7	R INPUT

7. SWITCH FUCTION.

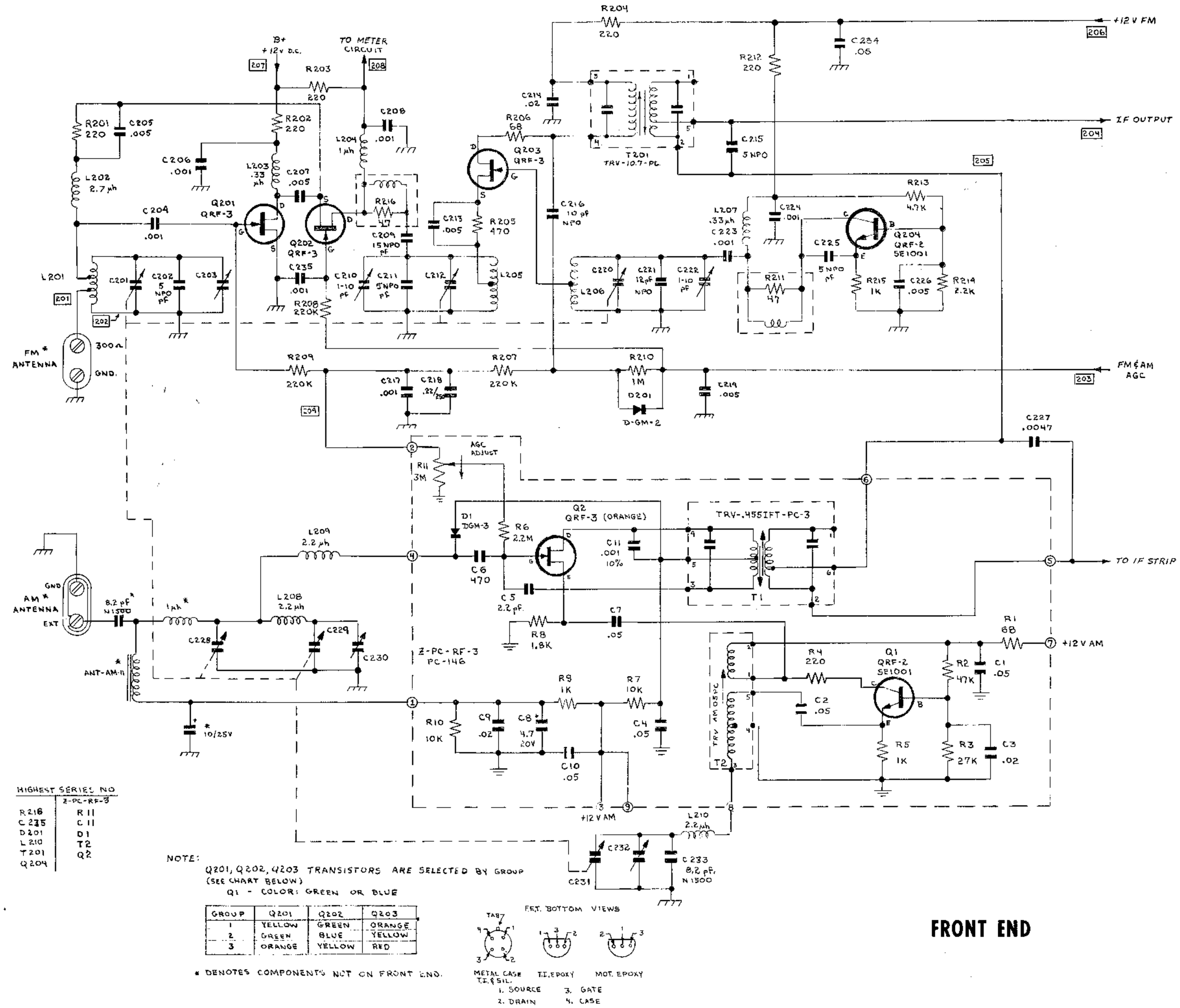
S1 — INPUT	S5 — RUMBLE FILTER	S9 POWER
S2 — SELECTOR	S6 — PREAMP SENS.	S10 SPEAKERS MAIN
S3 — TAPE	S7 — FM MUTING	S11 SPEAKERS REMOTE
S4 — VOLUME COMP.	S8 — NOISE FILTER	S12 REMOTE SPEAKERS (M+S)

8. FUSES

F1, F101	2.5 AMP AGX
F601	2 AMP SLO-BLO

HIGHEST SERIES NUMBERS

R10	R108	R403	R609
C10	C110	C405	C607
D3	D103	D402	D602
Q2	Q102	Q401	
F1	F101		F601
L1	L101		



HIGHEST SERIES NO	Z-PC-RF-3
R216	R11
C235	C11
D201	D1
L210	T2
T201	Q2
Q204	

NOTE:
Q201, Q202, Q203 TRANSISTORS ARE SELECTED BY GROUP (SEE CHART BELOW)
Q1 - COLOR: GREEN OR BLUE

GROUP	Q201	Q202	Q203
1	YELLOW	GREEN	ORANGE
2	GREEN	BLUE	YELLOW
3	ORANGE	YELLOW	RED

* DENOTES COMPONENTS NOT ON FRONT END.

FET BOTTOM VIEWS

FRONT END