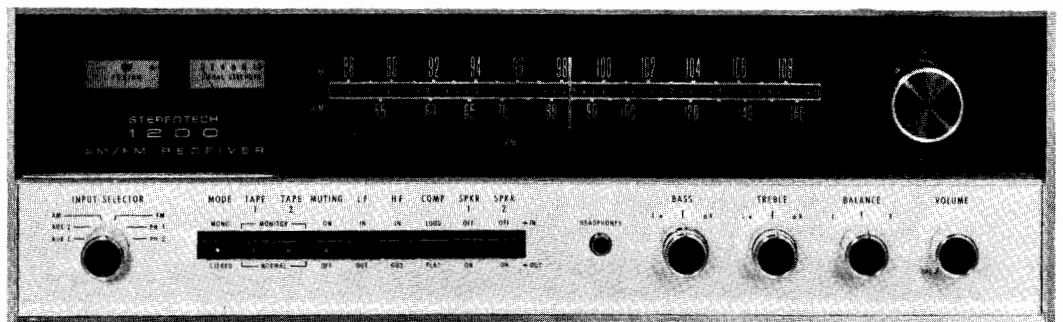


1 2 0 0

STEREOTECH
AM/FM RECEIVER

SERVICE INFORMATION



SERIAL NUMBER BK1001 AND ABOVE

PERFORMANCE DETAILS

PREAMPLIFIER AND POWER AMPLIFIER**POWER OUTPUT**

50 watts minimum sine wave continuous average power output, per channel, both channels operating into 8 ohms load impedance.

30 watts minimum sine wave continuous average power output, per channel, both channels operating into 16 ohms load impedance.

OUTPUT LOAD IMPEDANCE

8 ohms or 16 ohms

RATED POWER BAND

20 Hz to 20,000 Hz

TOTAL HARMONIC DISTORTION

0.2% maximum harmonic distortion at any power level from 250 milliwatts to rated power per channel across 8 ohms or 16 ohms; both channels operating.

INTERMODULATION DISTORTION

0.2% if instantaneous peak power output is twice rated power or less per channel with both channels operating for any combination of frequencies 20 Hz to 20,000 Hz

FREQUENCY RESPONSE

20 Hz to 20,000 \pm 1 dB

NOISE AND HUM

Power Amplifier: 95 dB below rated output
Tape 1 and Tape 2, Aux 1 and Aux 2: 89 dB below rated output
Phono 1 and Phono 2: 70 dB below 10 mV input

RATINGS**DAMPING FACTOR**

48 at 8 ohms output
96 at 16 ohms output

INPUT SENSITIVITY AND IMPEDANCE

Power Amplifier: 1.2 volts, 40,000 ohms
Phono 1 and Phono 2: 3.0 mV, 47,000 ohms
Tape 1 and Tape 2: 350 mV, 100,000 ohms
Aux 1 and Aux 2: 350 mV, 100,000 ohms

TAPE OUTPUT

Preamp: 12 volts with rated input
Tuner: 1.2 volts at 100% FM modulation
Tape: 350 mV with rated input from low level inputs
Phono: 1.2 volts with 10 mV input at 1000 Hz

TONE CONTROLS: Bass \pm 16 dB at 20 Hz. Treble \pm 16 dB at 20,000 Hz.

L.F. FILTER: Active filter with 12 dB per octave roll off below 50 Hz, down 18 dB at 20 Hz.

H.F. FILTER: Active filter with 12 dB per octave roll off above 7000 Hz, down 18 dB at 20,000 Hz.

AM TUNER

TUNING RANGE: 535 to 1605 kHz.

SENSITIVITY: 75 μ V IHF (external ant.)

SIGNAL TO NOISE RATIO: 50 dB minimum (IHF,) 60 dB at 100% modulation.

HARMONIC DISTORTION: Less than 1% (IHF.)

IMAGE REJECTION: Greater than 60 dB 535 to 1605 kHz.

FM TUNER

TUNING RANGE: 87.5 to 108.5 MHz.

USEABLE SENSITIVITY: 2.5 microvolts at 100% modulation (\pm 75 kHz deviation) for 3% total noise and harmonic distortion (IHF).

SIGNAL TO NOISE RATIO: 70 dB below 100% modulation.

HARMONIC DISTORTION: Less than 0.5% mono and less than 0.7% stereo.

AUDIO FREQUENCY RESPONSE: \pm 1 dB 50 Hz to 10,000 Hz, \pm 2 dB 20 Hz to 15,000 Hz.

SELECTIVITY: 55 dB alternate channel minimum (IHF)

SPURIOUS REJECTION: 90 dB minimum (IHF)

IMAGE REJECTION: 70 dB minimum

STEREO SEPARATION: 35 dB minimum at 1,000 Hz.

SCA FILTER: 60 dB minimum

GENERAL INFORMATION

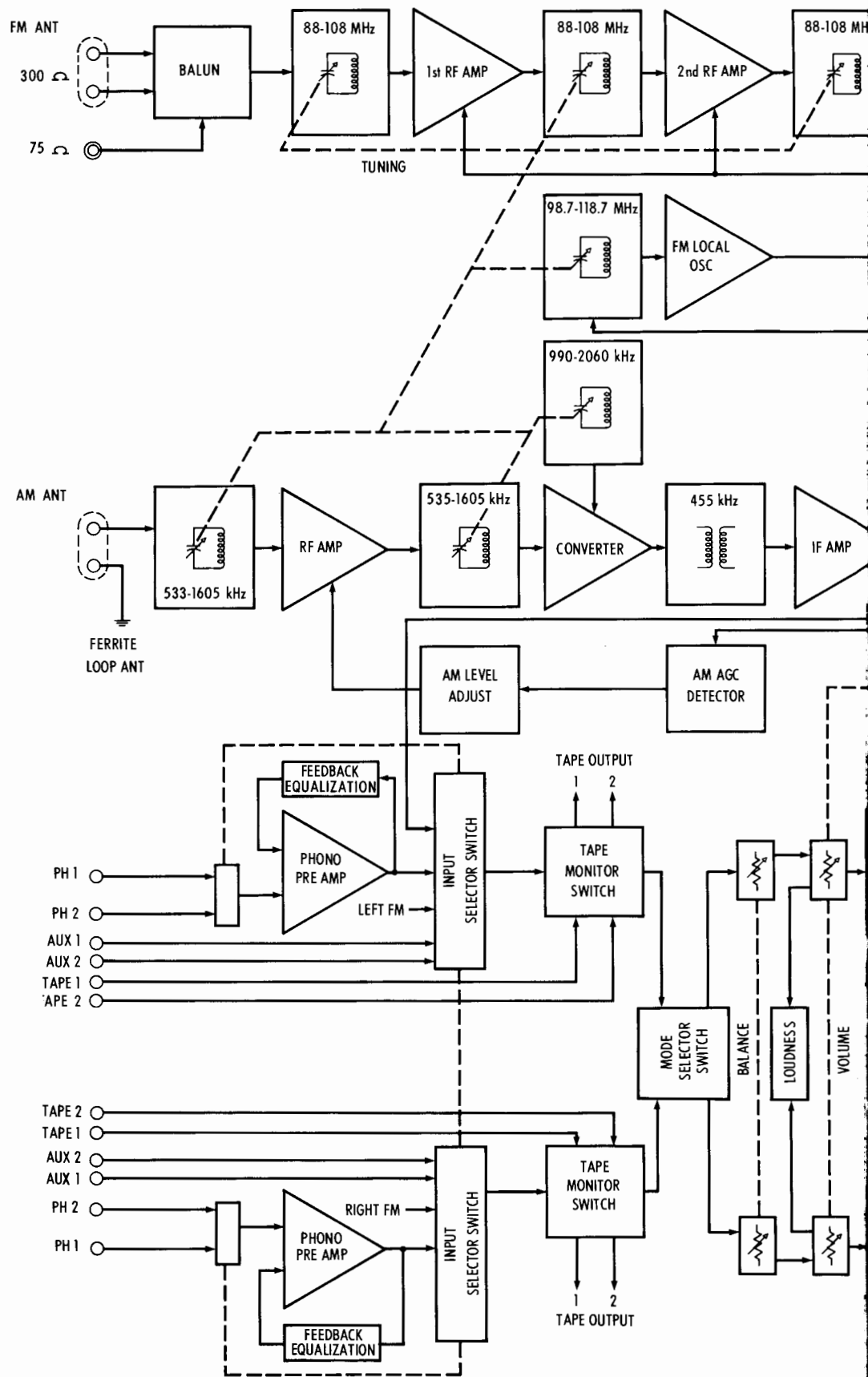
POWER REQUIREMENTS: 120 volts 50-60 Hz 50 watts at zero input, 320 watts rated output.

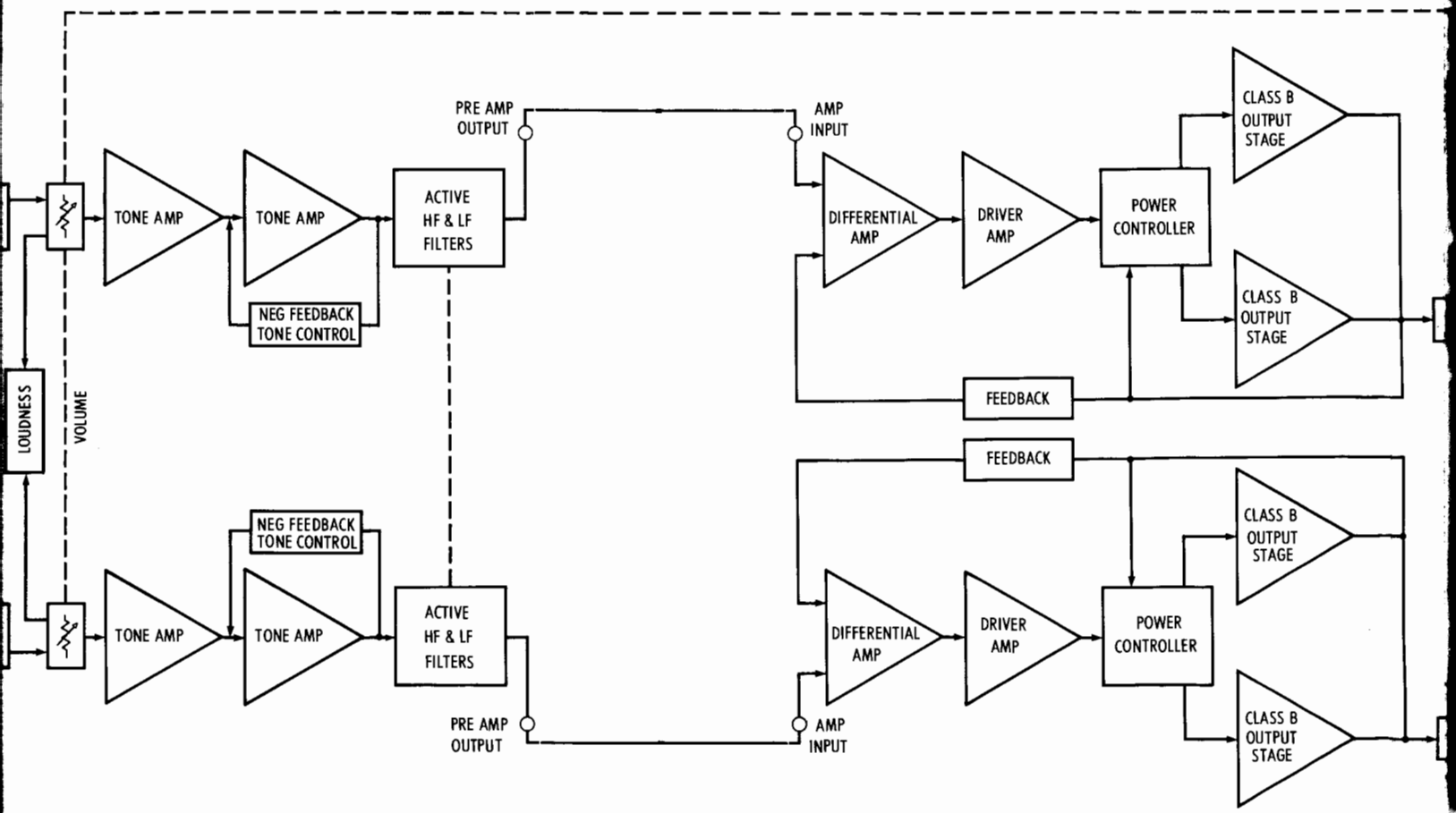
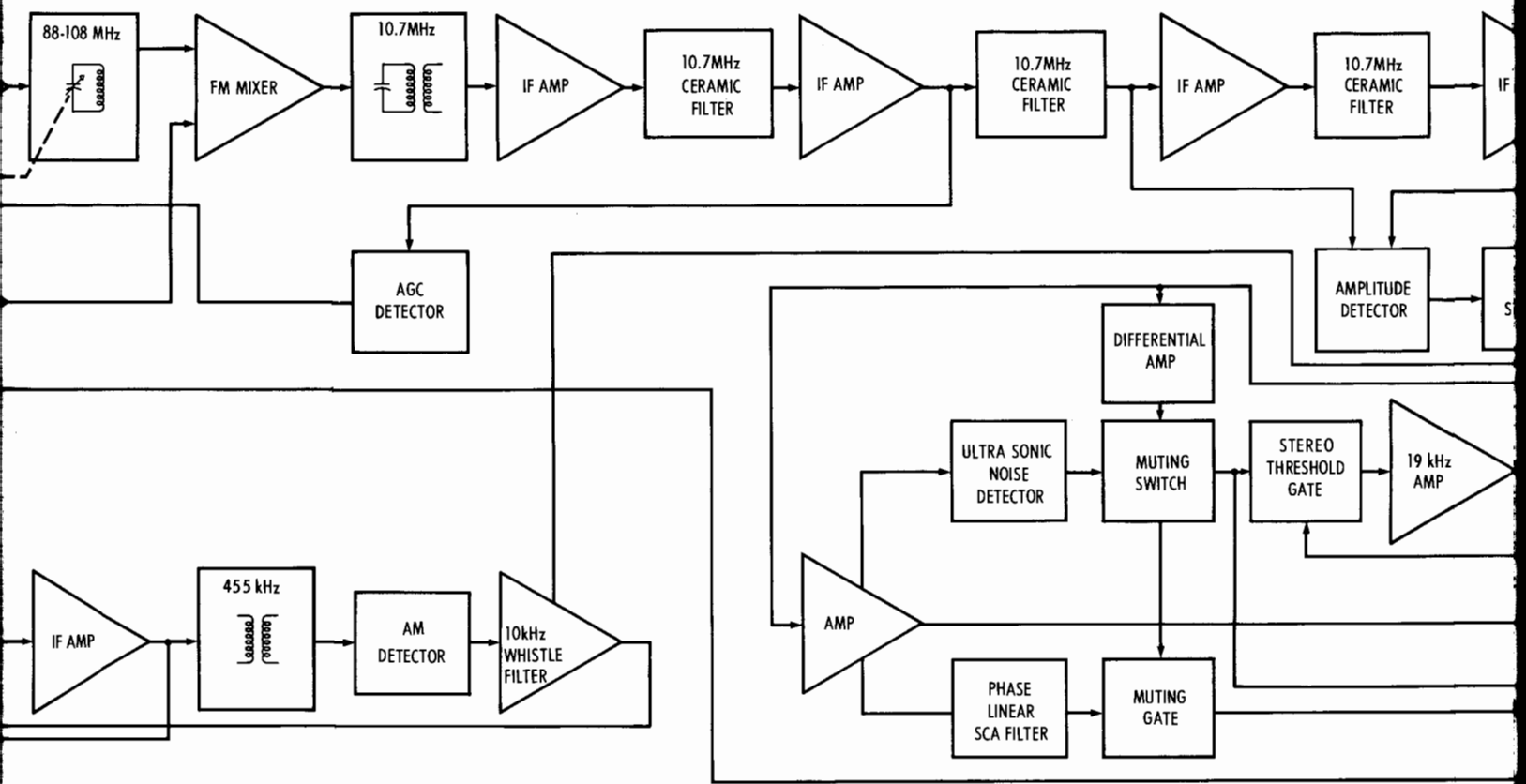
SEMICONDUCTOR COMPLEMENT: 68 Transistors; 4 FETs, 5 ICs, 39 Diodes.

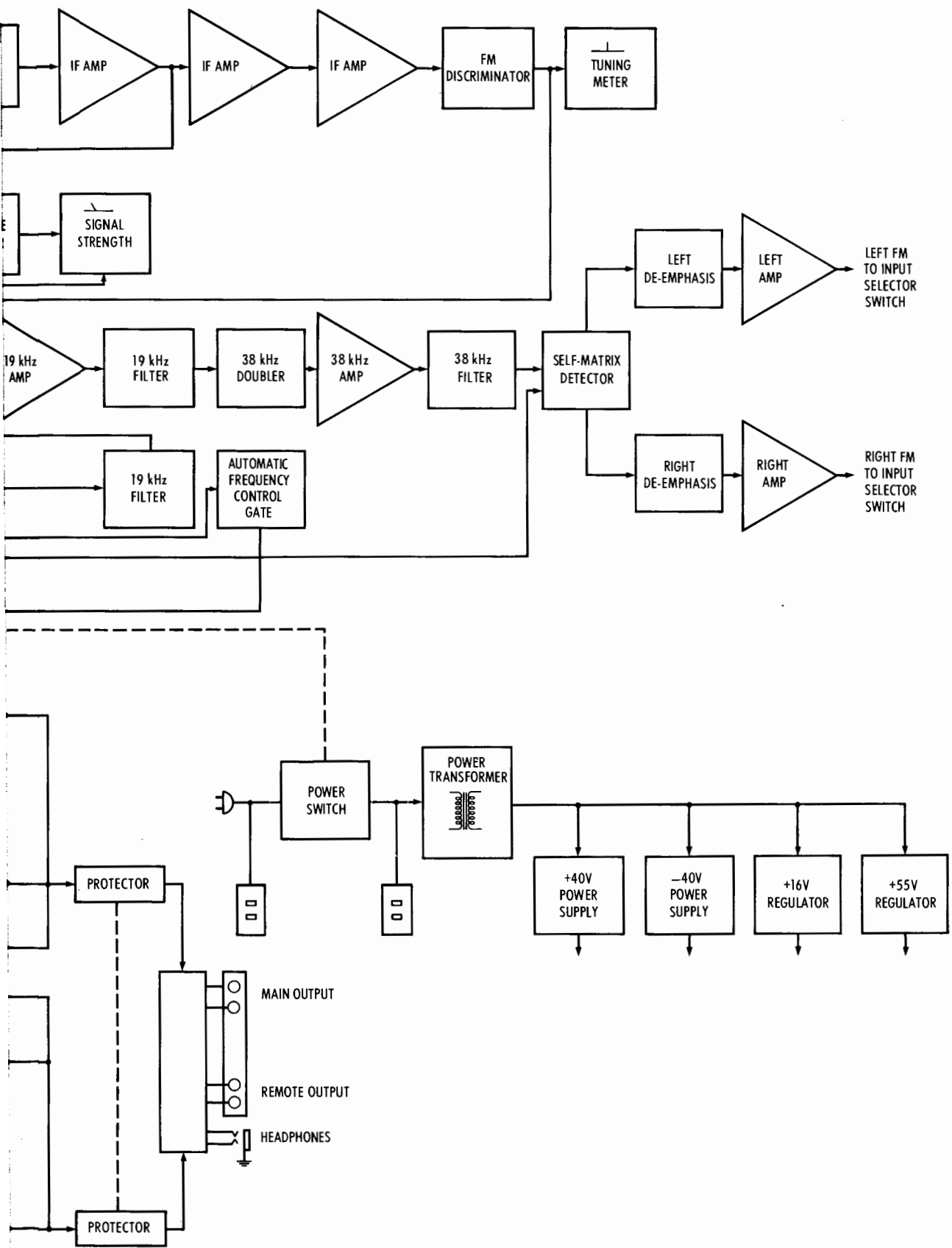
MECHANICAL INFORMATION

SIZE: Front panel measures 17-1/2 inches wide (444 mm), by 5-5/32 inches high (131 mm). Chassis measures 16-15/16 inches wide (430 mm), by 4-5/8 inches high (117 mm), by 15-7/8 inches deep (403 mm) plus antenna. Knob clearance required is 1-1/2 inches (31 mm) in front of the mounting panel.

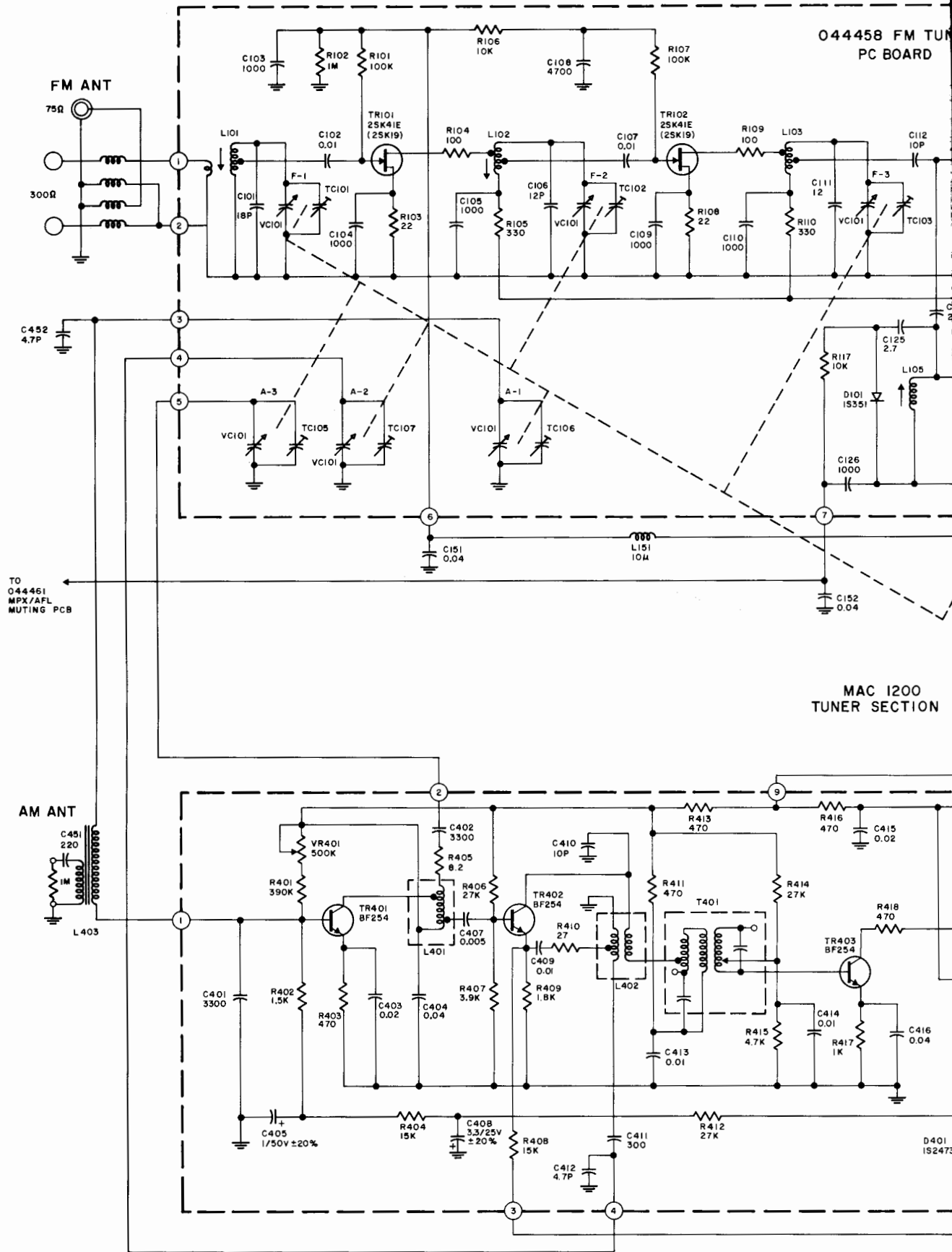
WEIGHT: 33 pounds (14.97 kg) net, 39 pounds (17.69 kg) in shipping cartons.





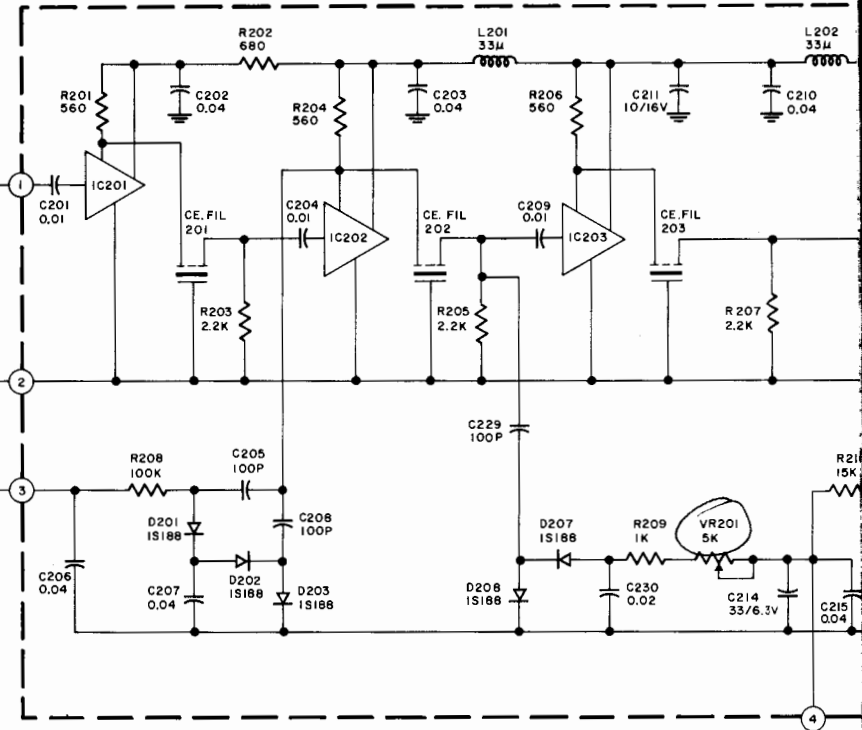
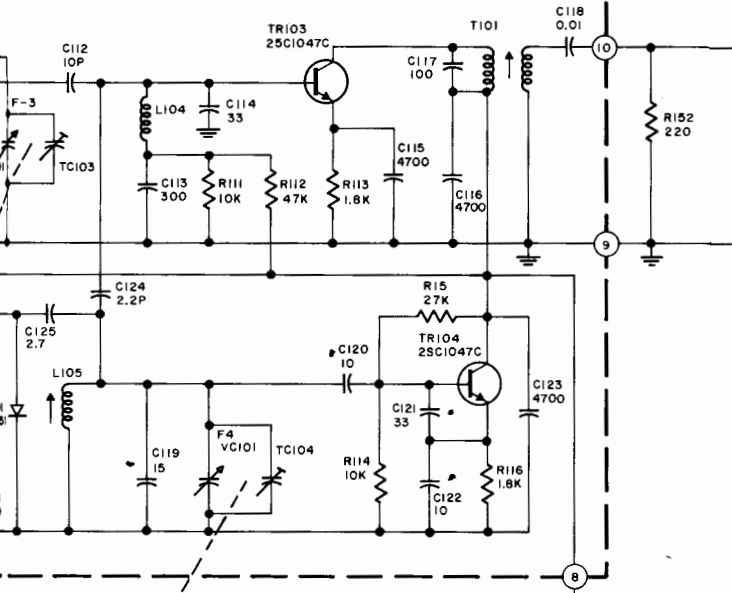


BLOCK DIAGRAM

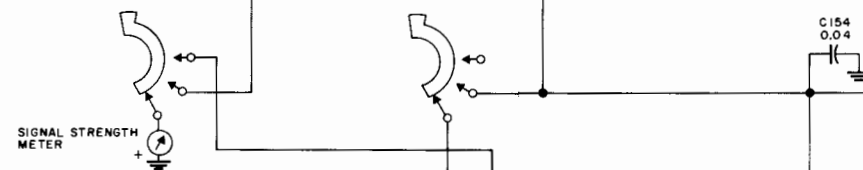


AM-FM TUNER

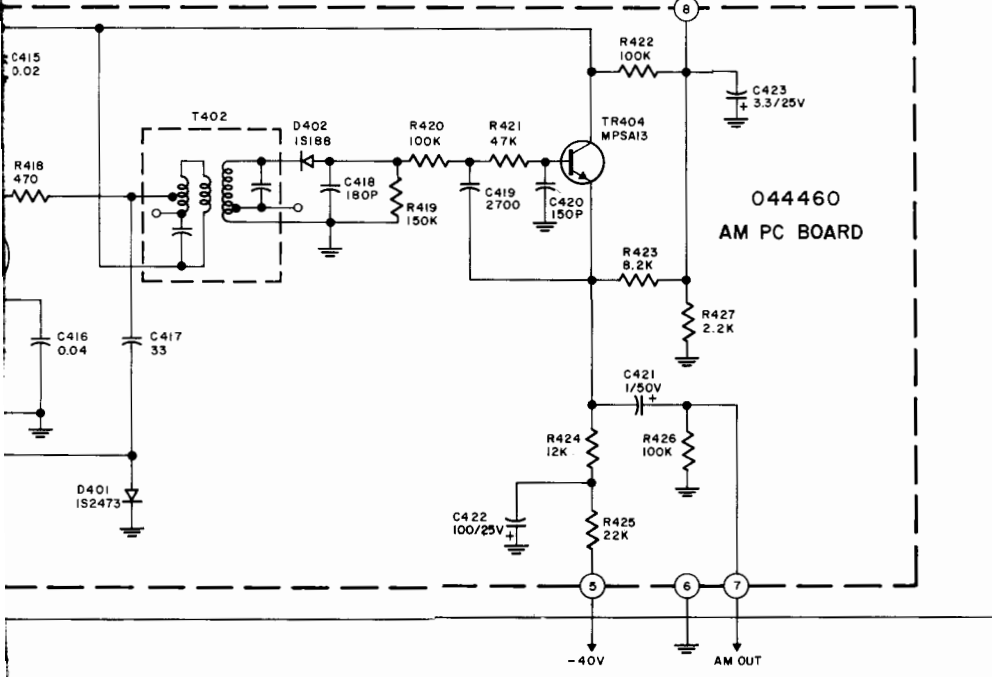
58 FM TUNER
PC BOARD



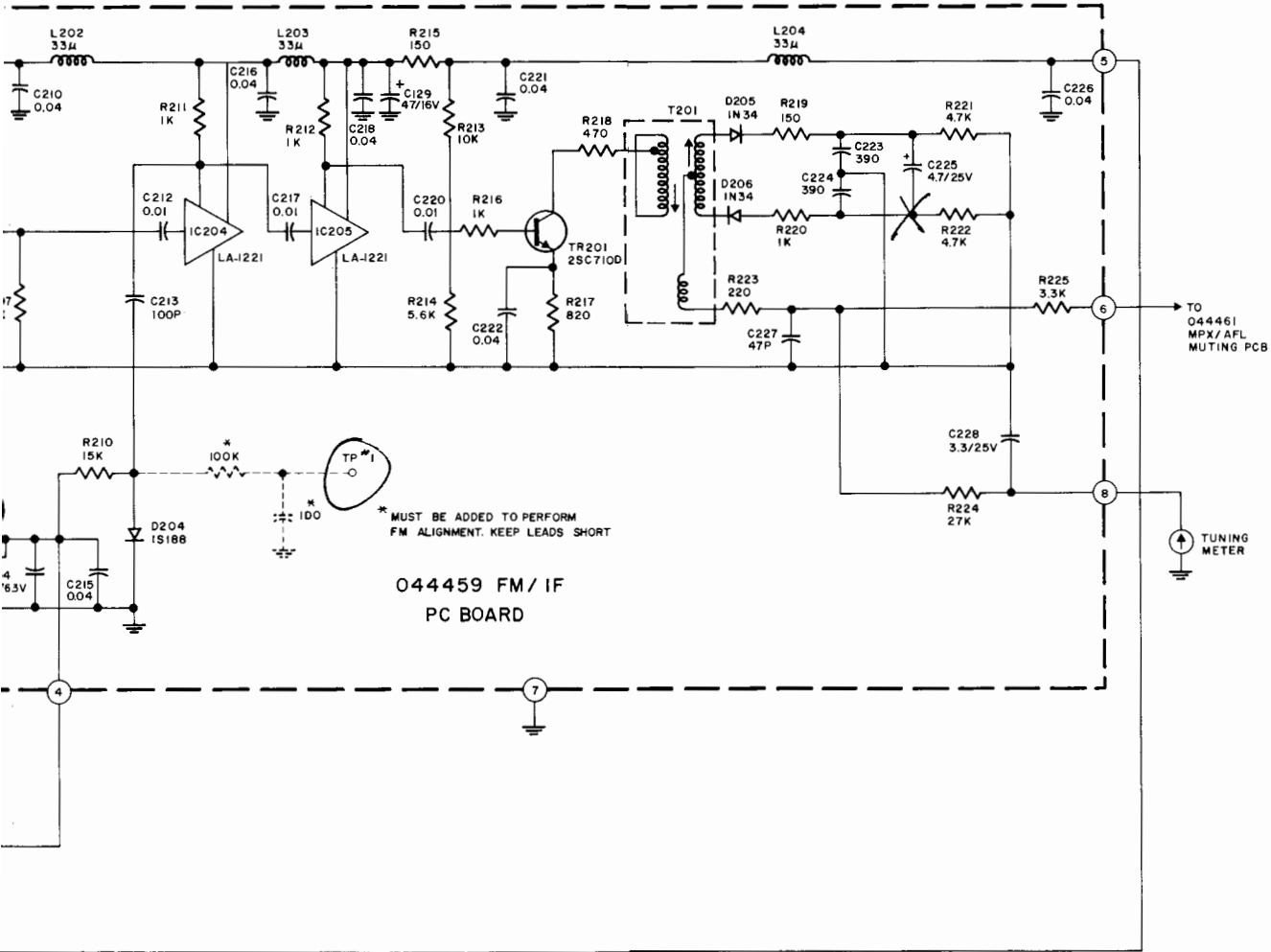
AC 1200
SECTION



044460
AM PC BOARD

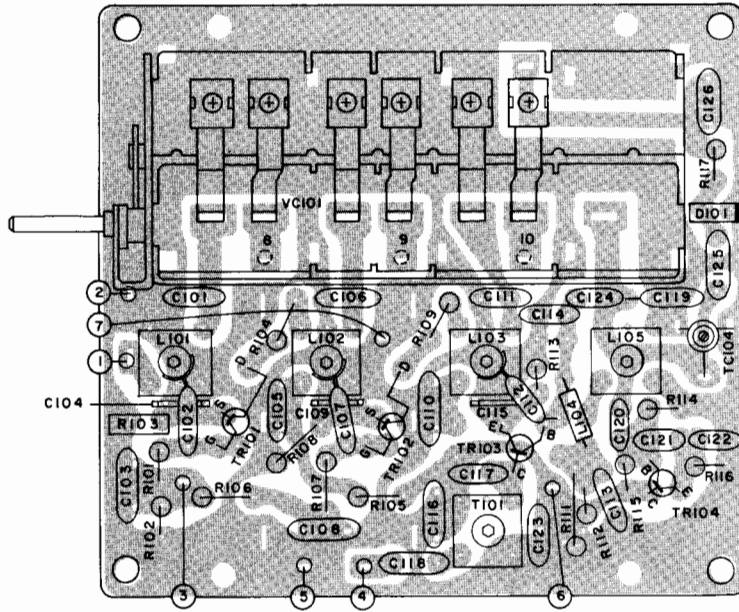


-40V
AM OUT

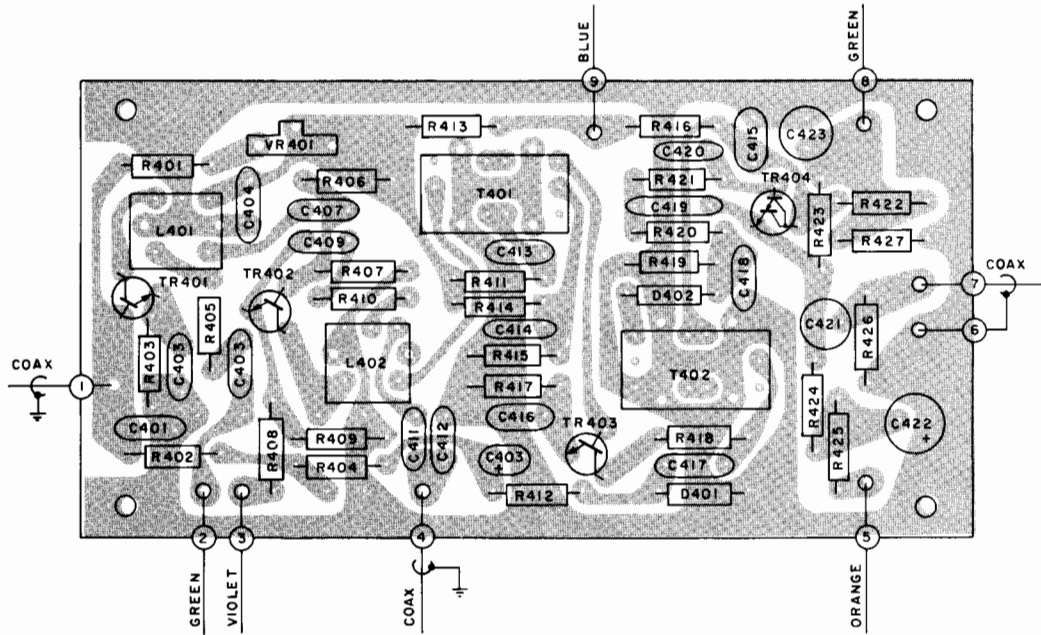


TO +6V
044461
MPX/AFL
MUTING PCB

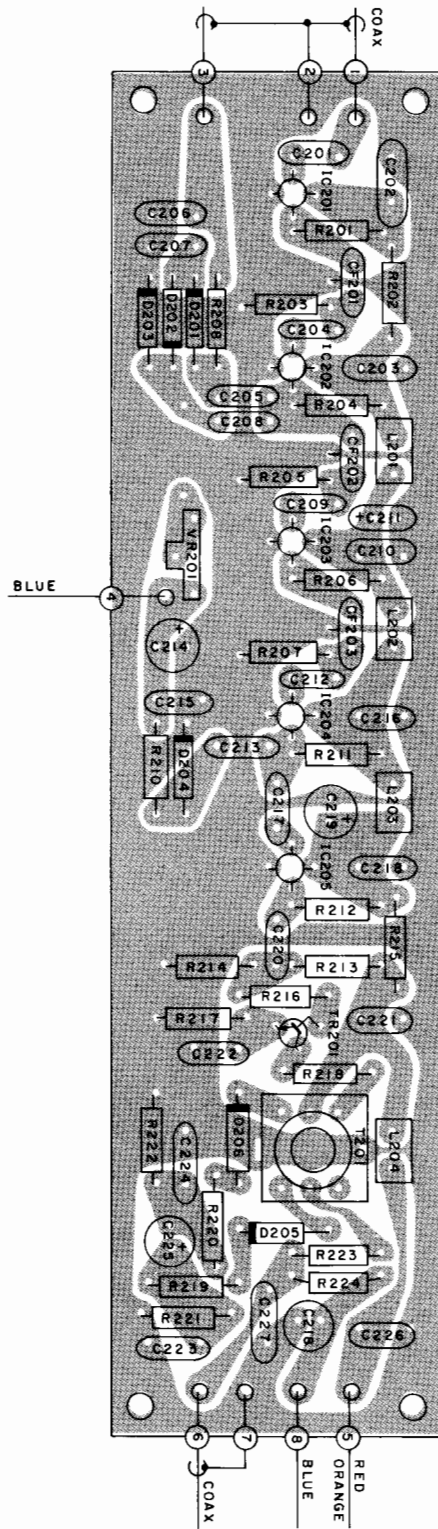
FM TUNER PC BOARD 044-458



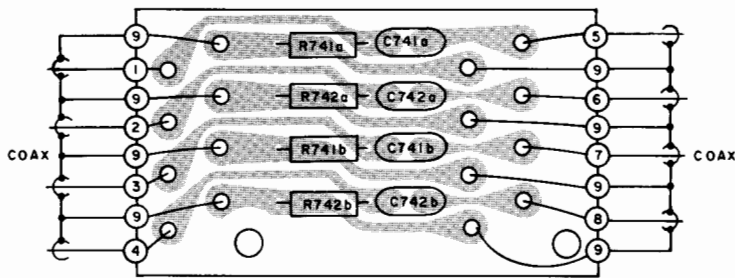
AM PC BOARD 044-460



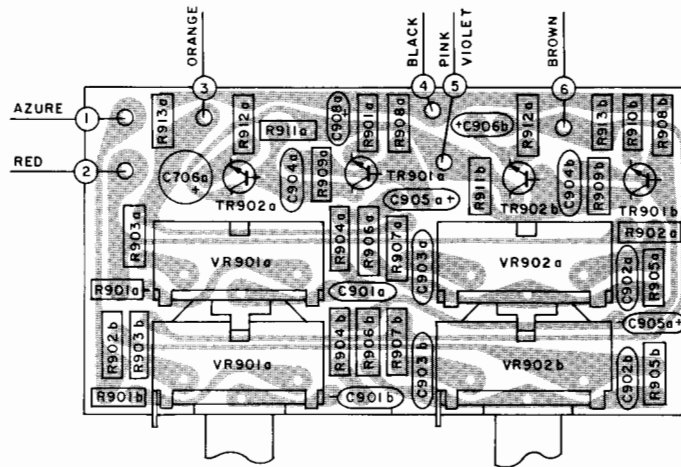
FM IF PC BOARD 044 -459



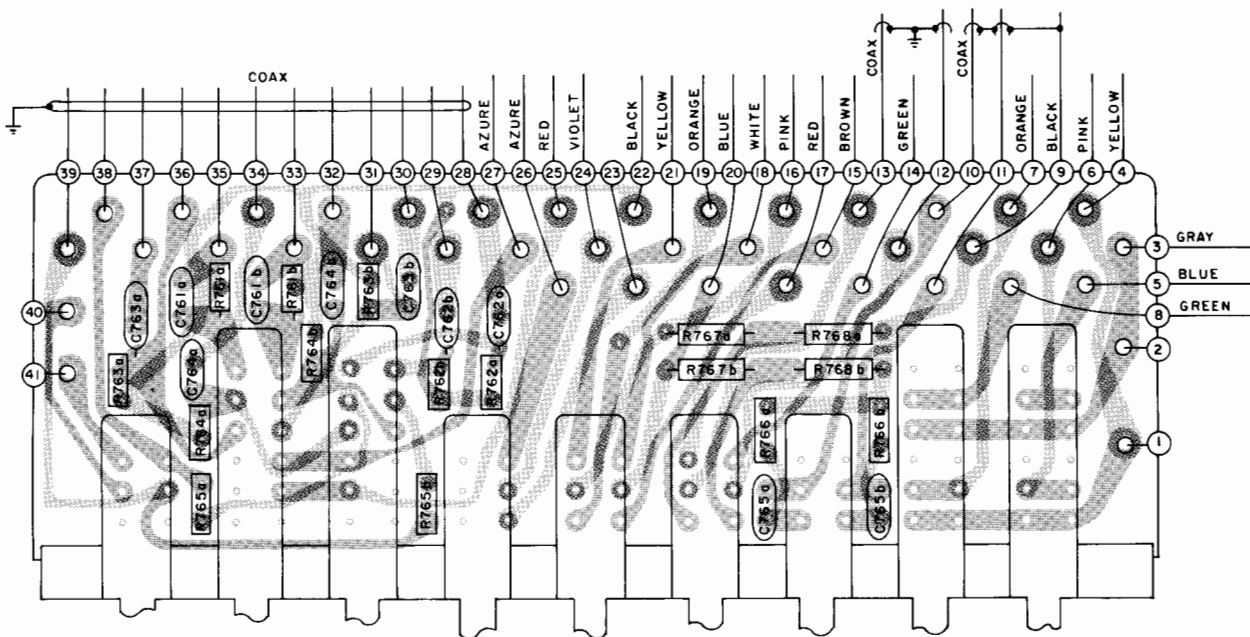
INPUT PC BOARD 044-467



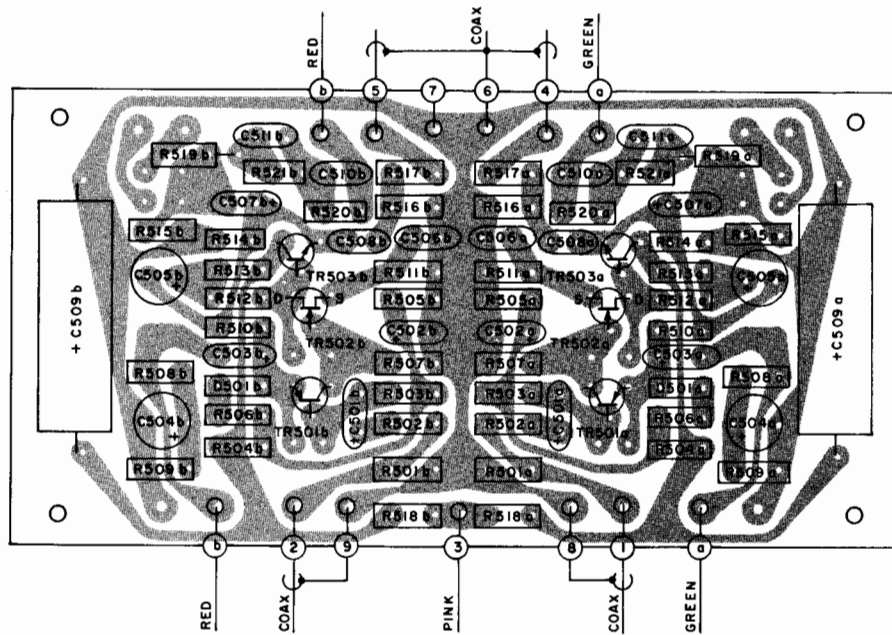
tone CONTROL PC BOARD 044-476



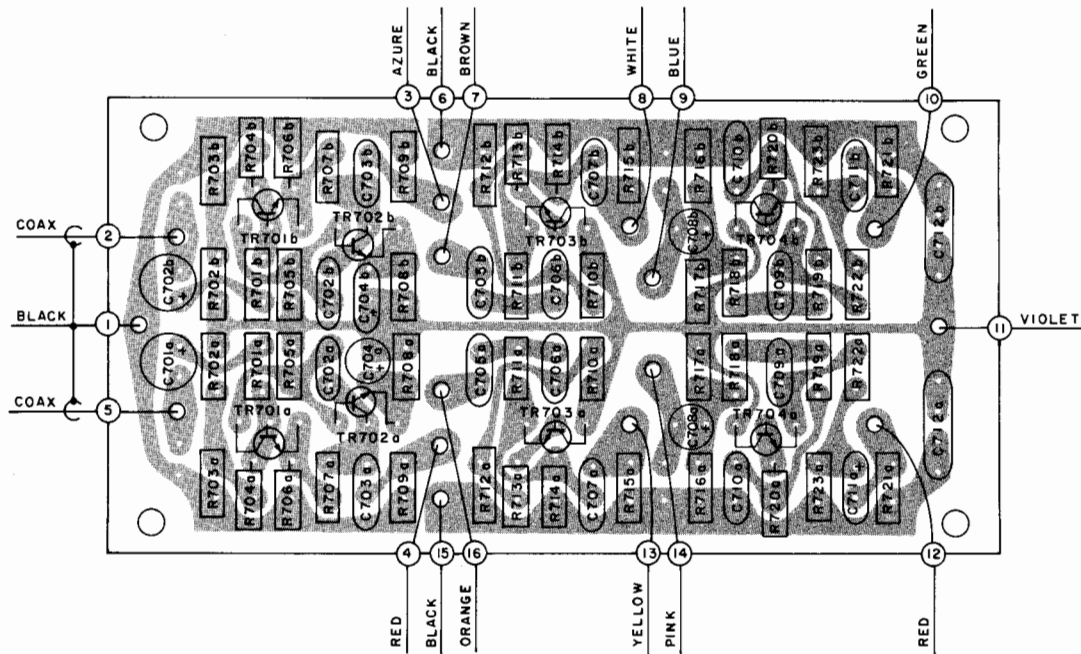
MODE SELECTOR PC BOARD 044-465



PREAMP PC BOARD 044-462

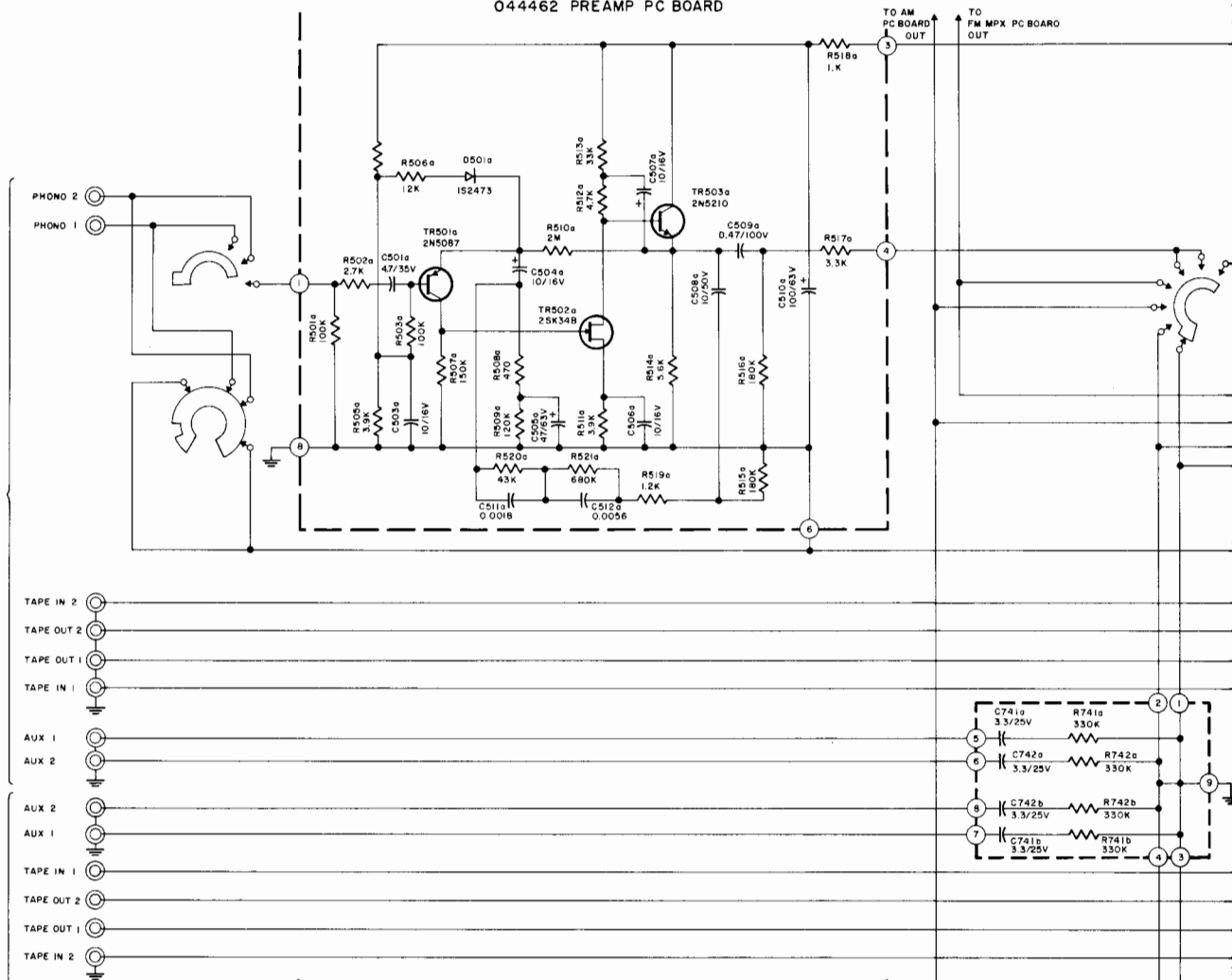


FILTER AMP PC BOARD 044-466

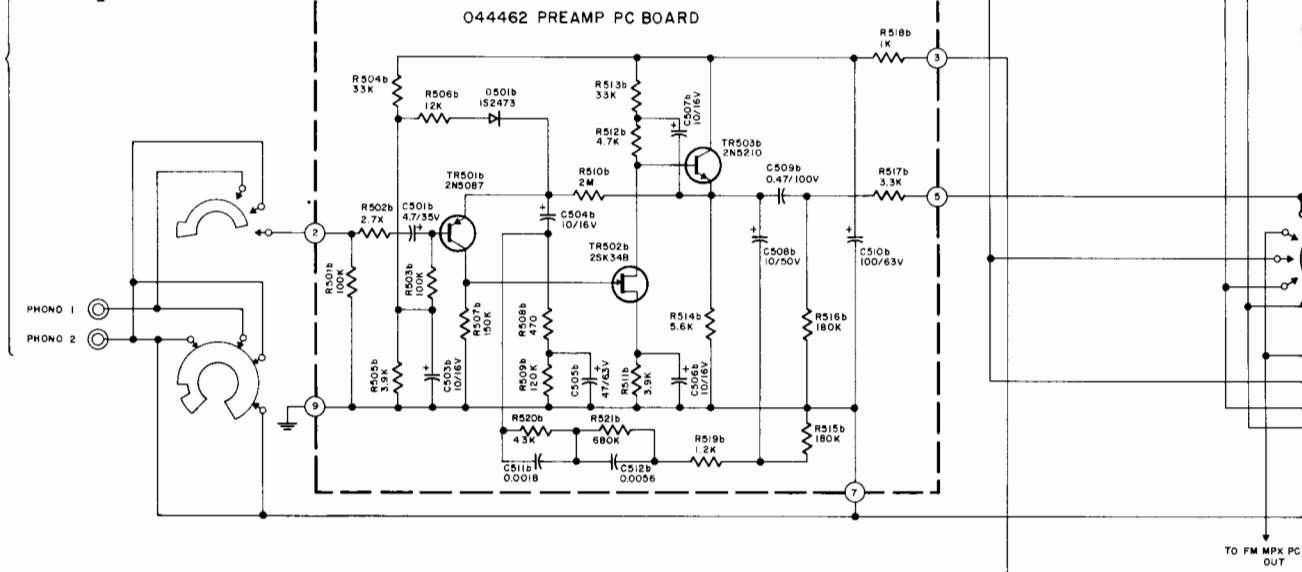


044462 PREAMP PC BOARD

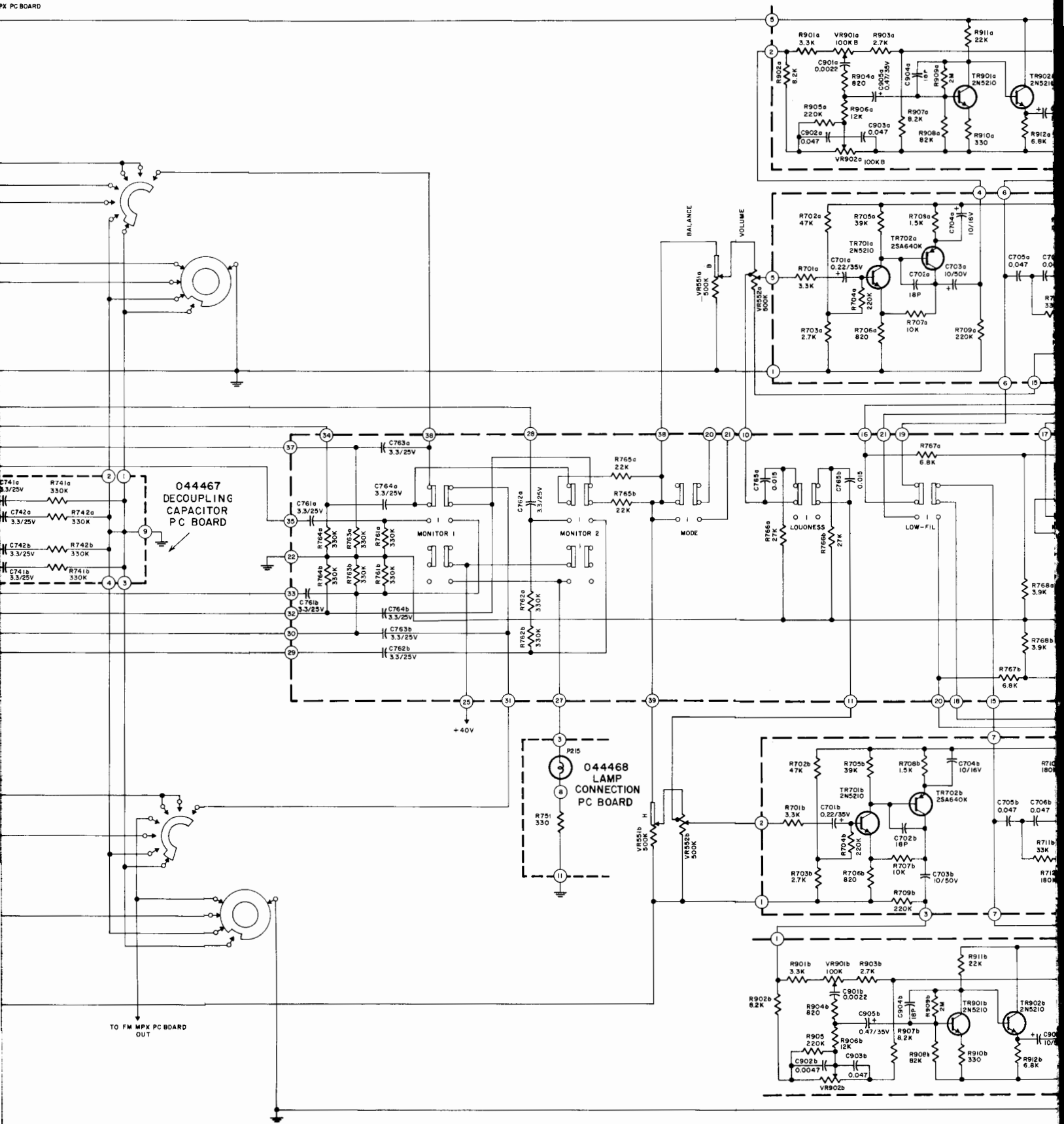
LEFT CHANNEL INPUT



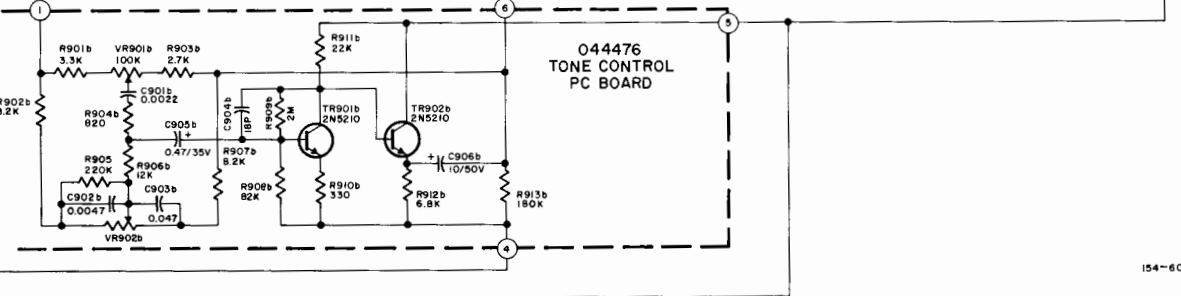
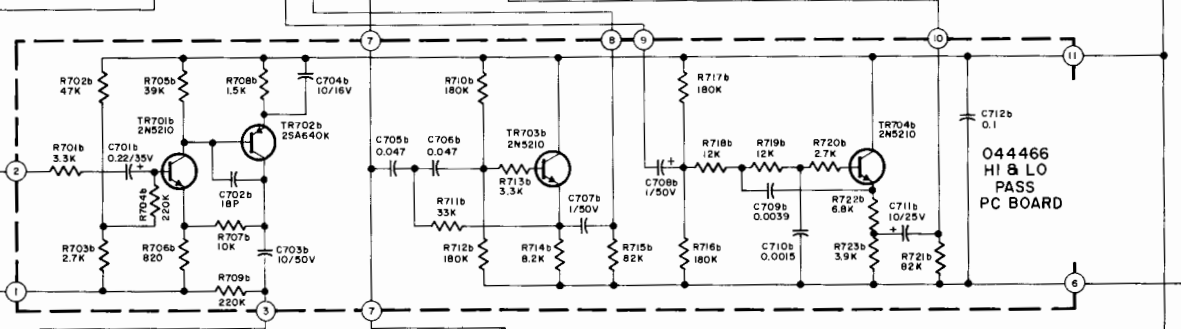
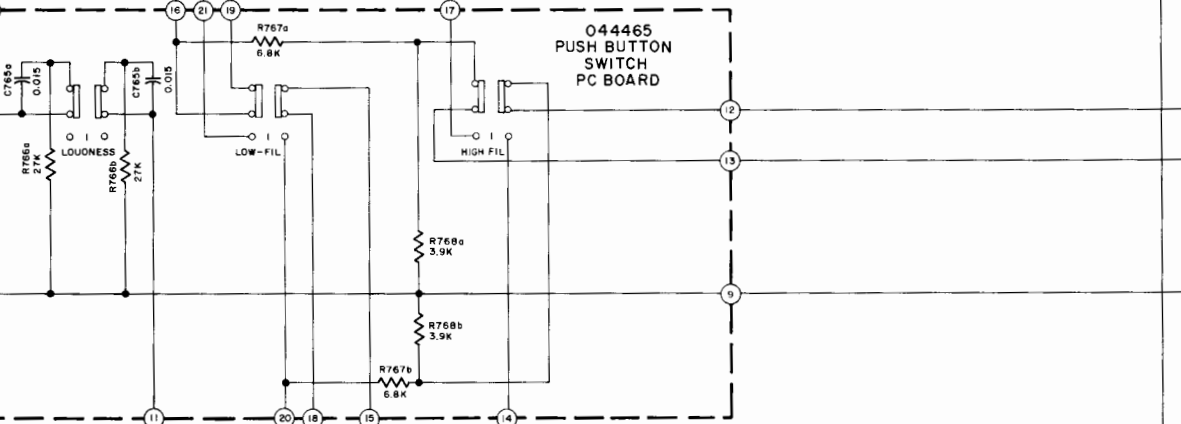
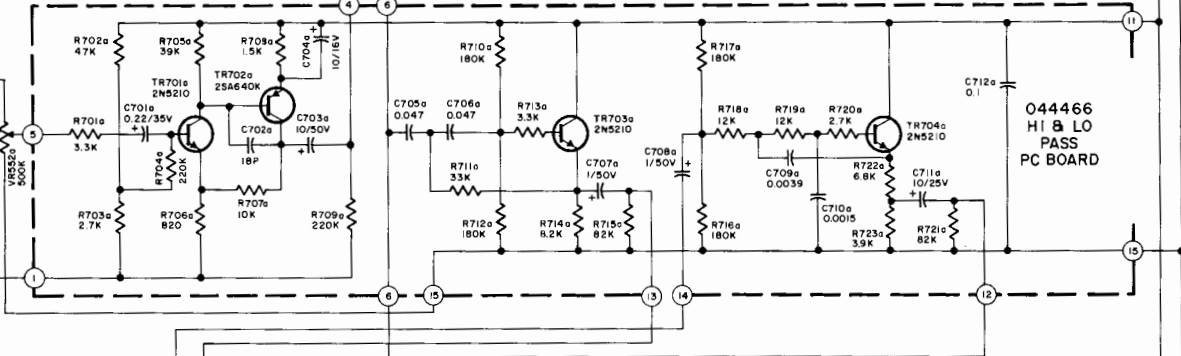
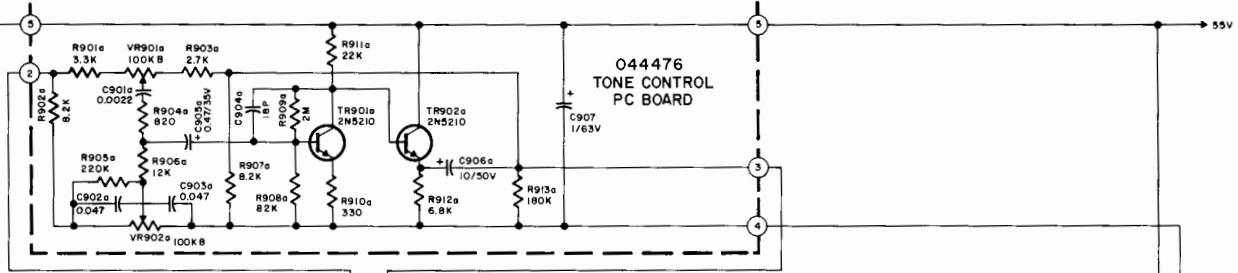
RIGHT CHANNEL INPUT



TO FM MPX PC BOARD OUT



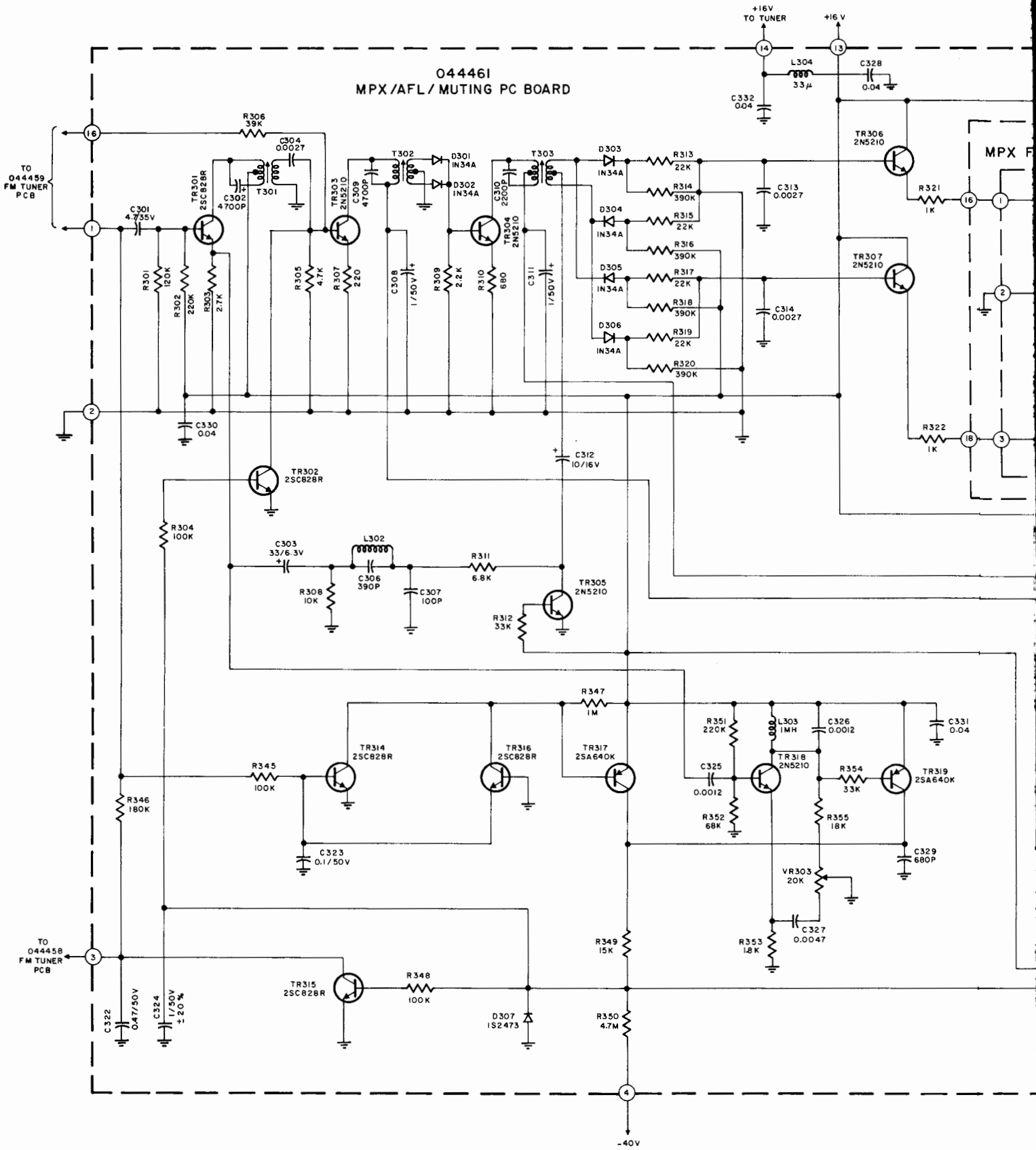
TO FM MPX PC BOARD OUT



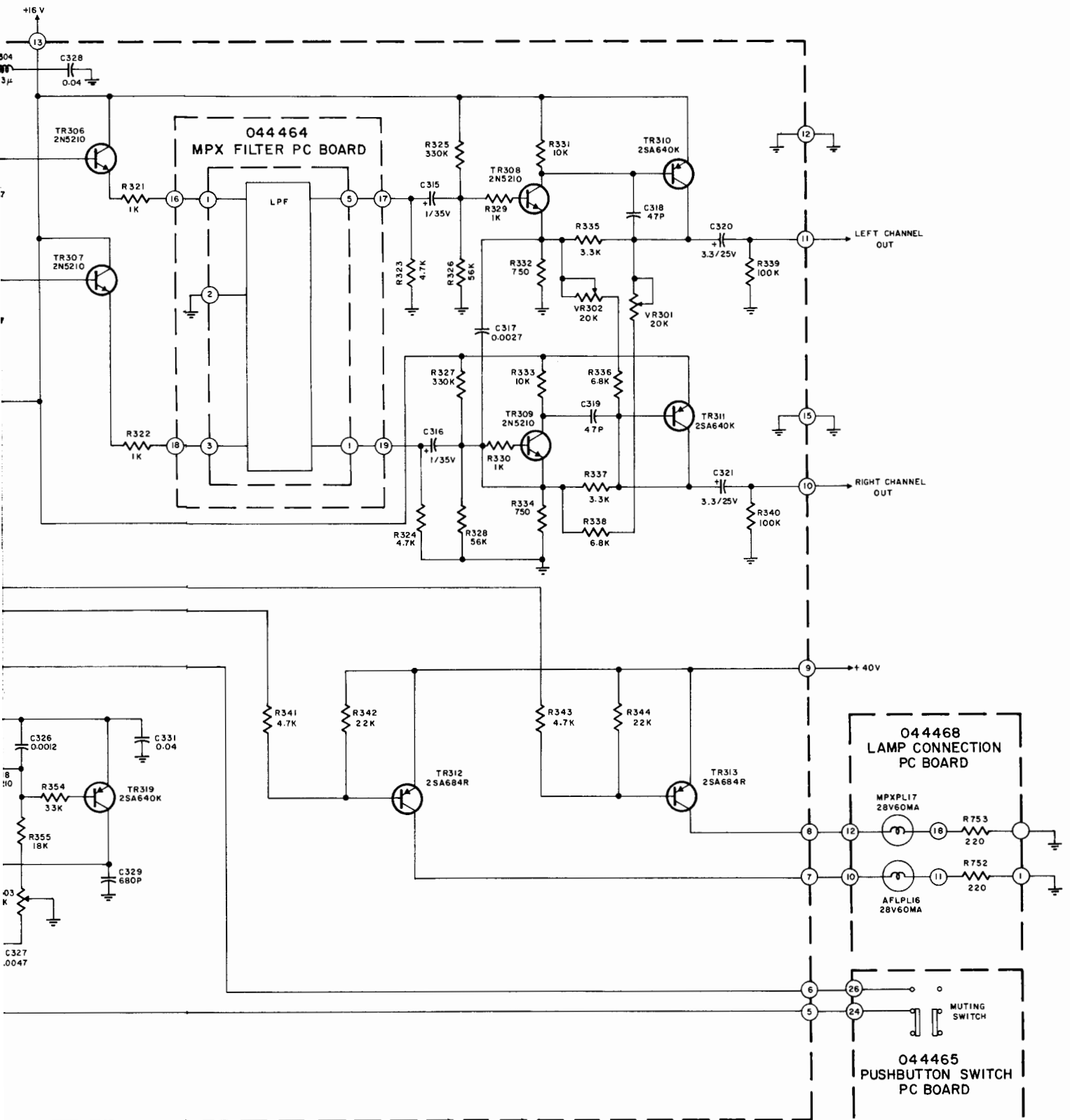
RIGHT CHANNEL
OUT
LEFT CHANNEL
OUT

154-604

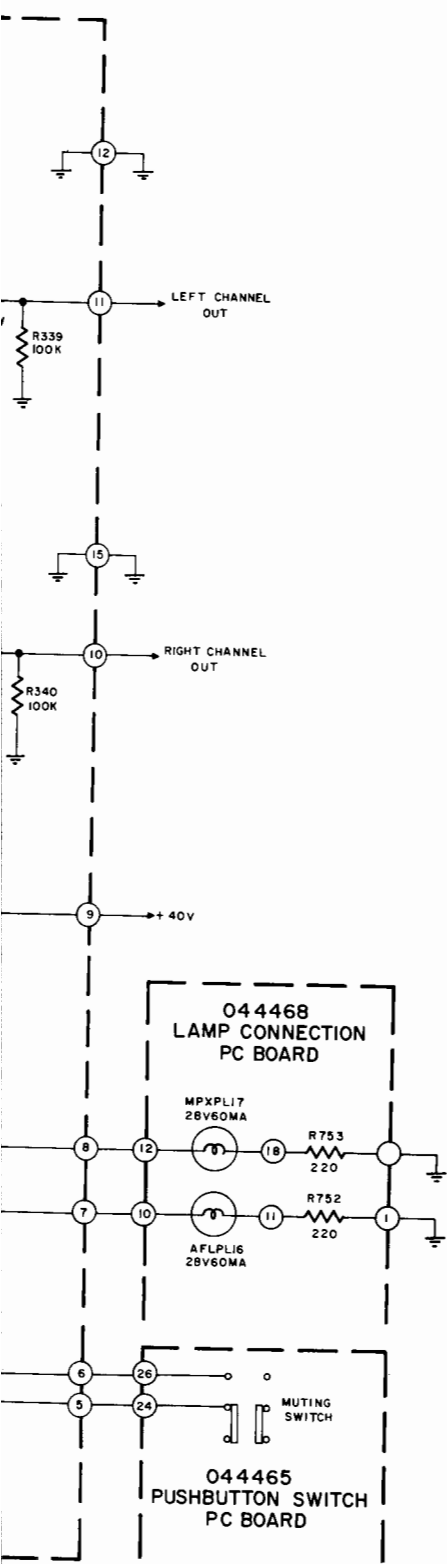
044461
MPX/AFL/MUTING PC BOARD



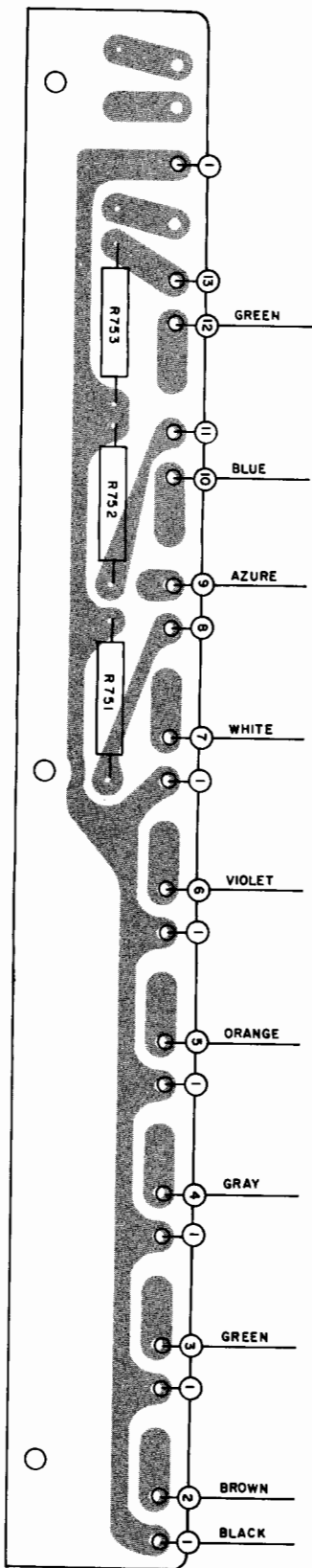
MULTIPLEX



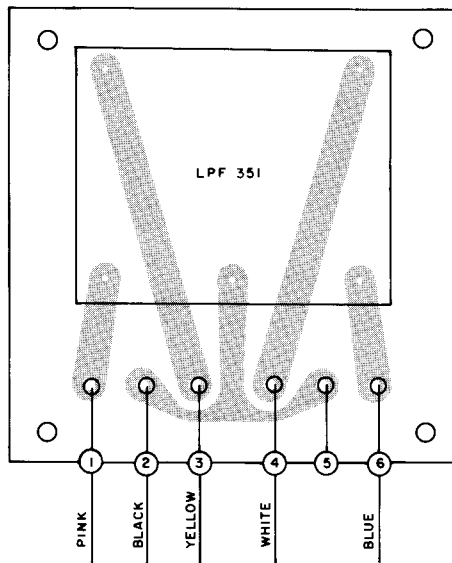
PL PC BOARD 044-468



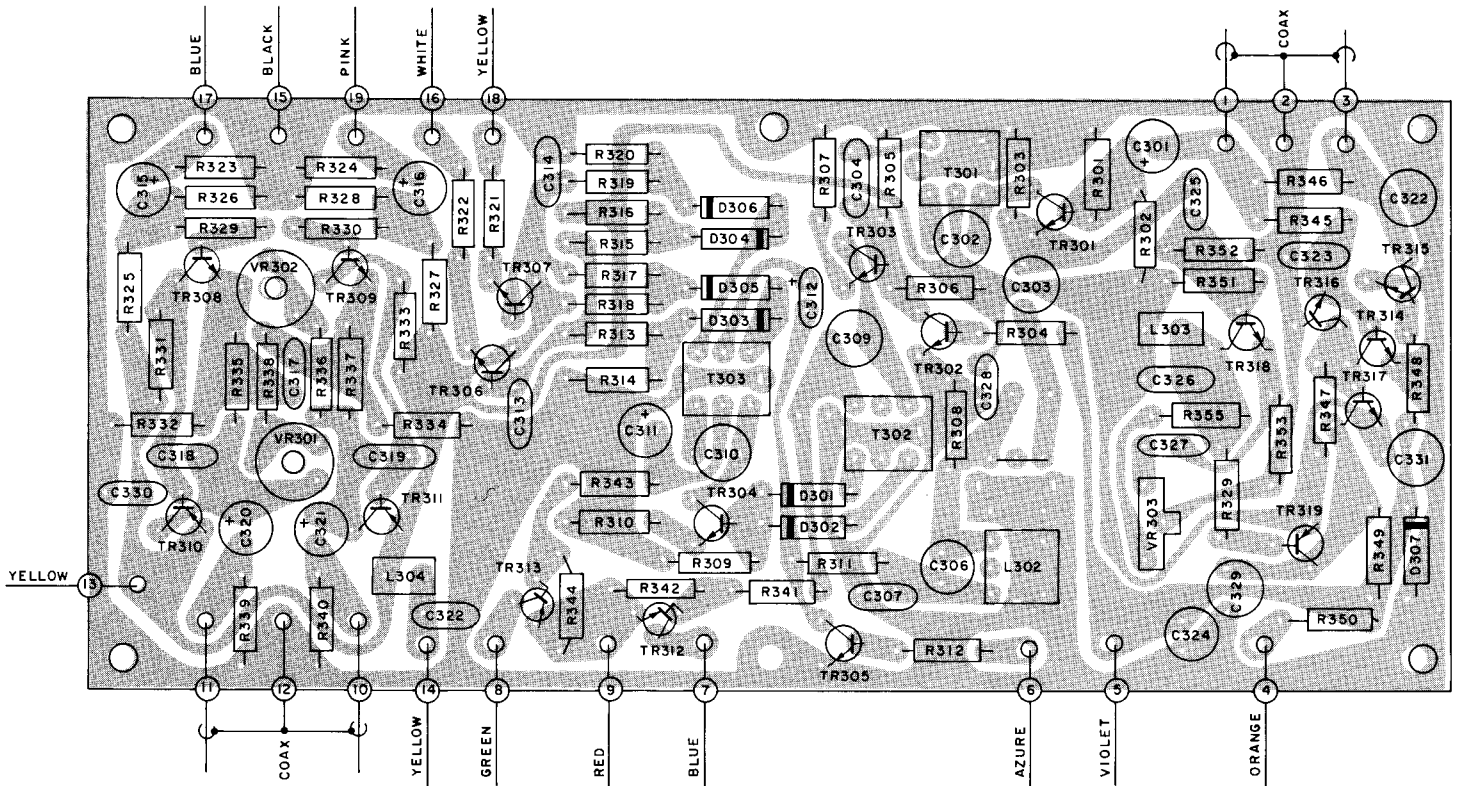
184-805



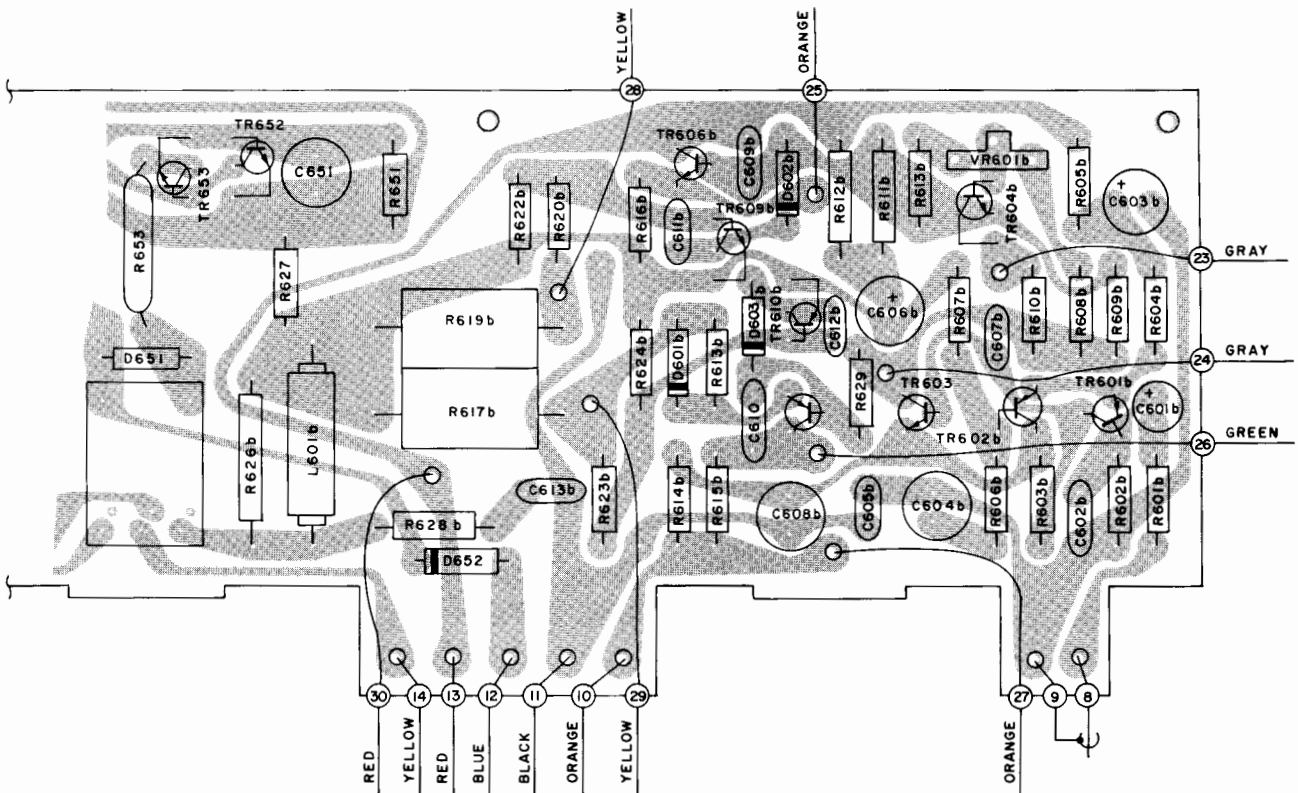
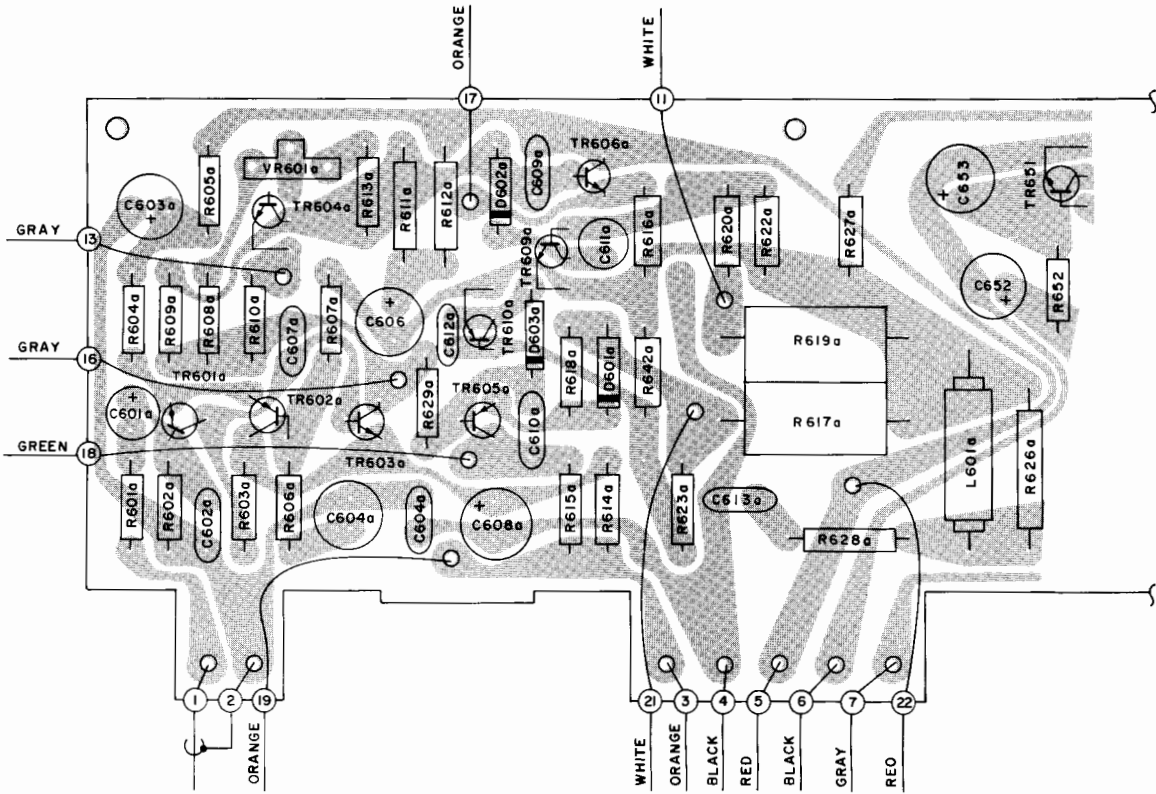
MPX FILTER PC BOARD 044-464



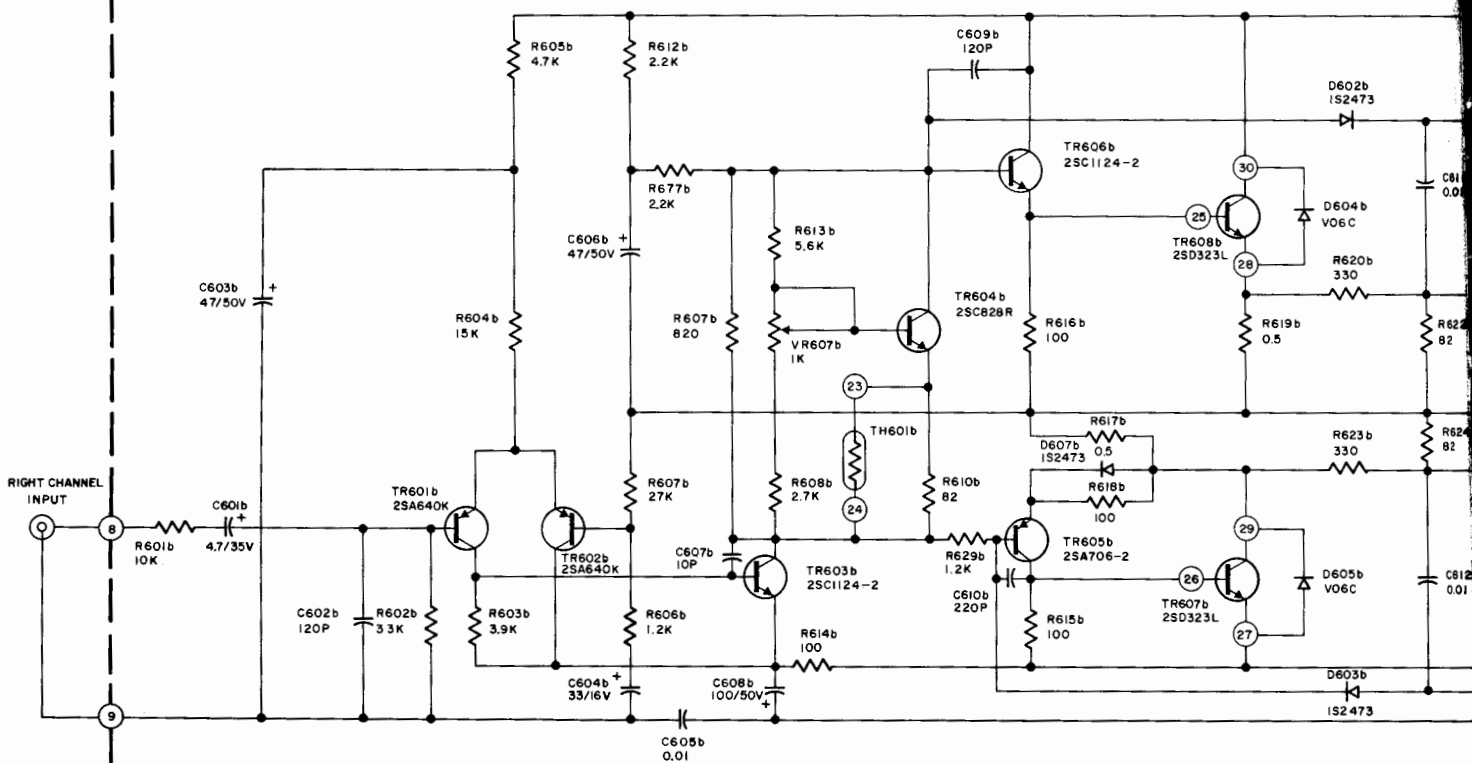
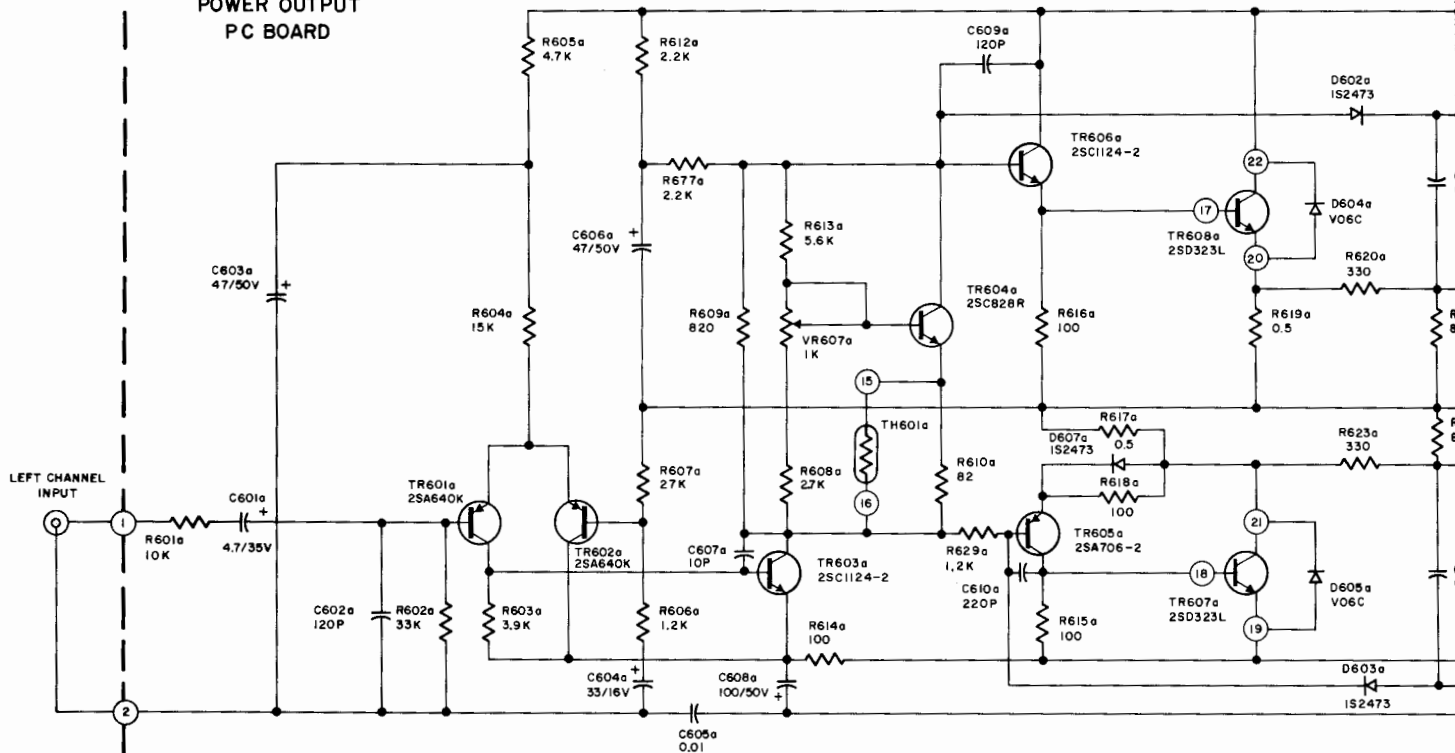
MPX PC BOARD 044-461

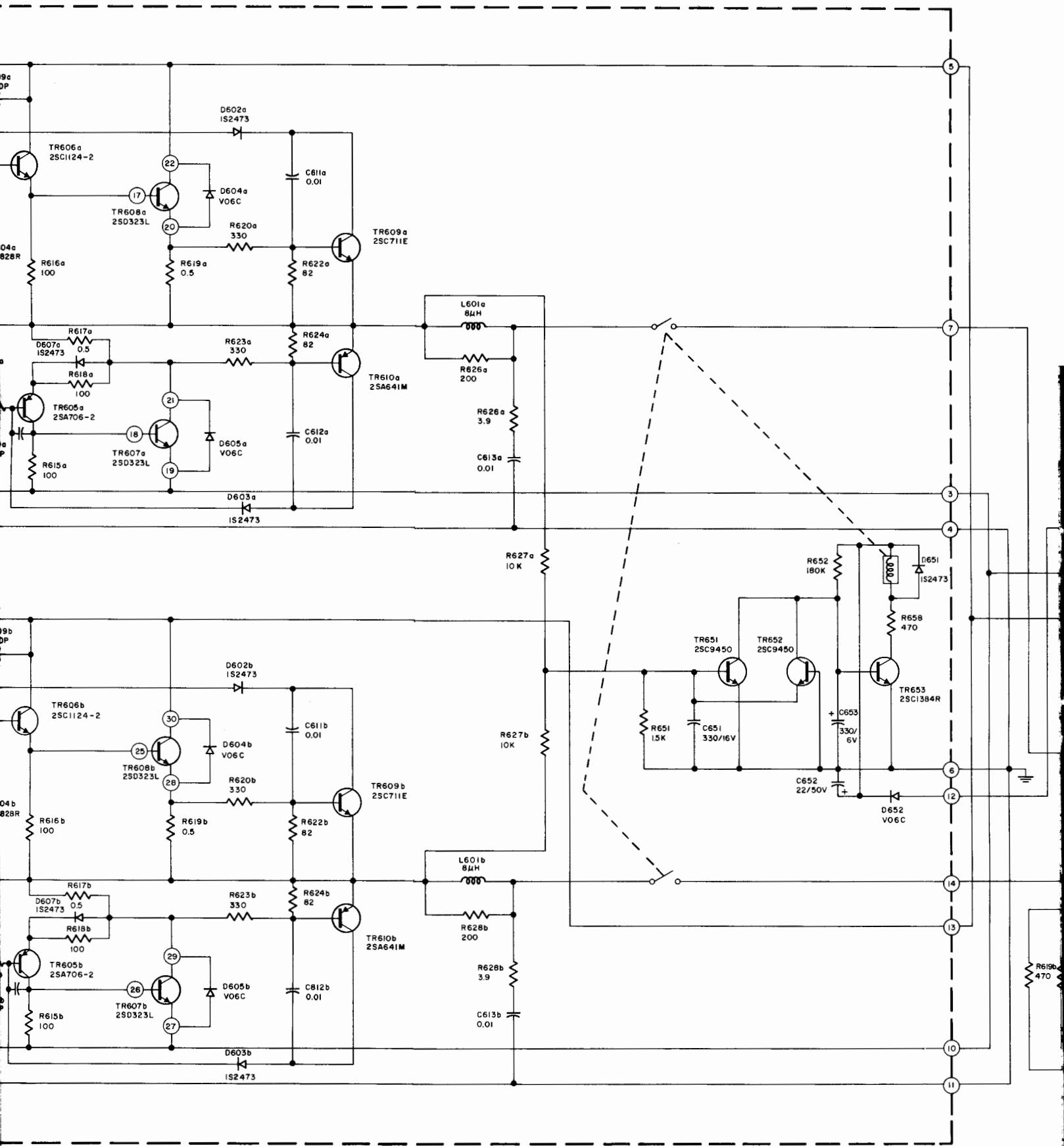


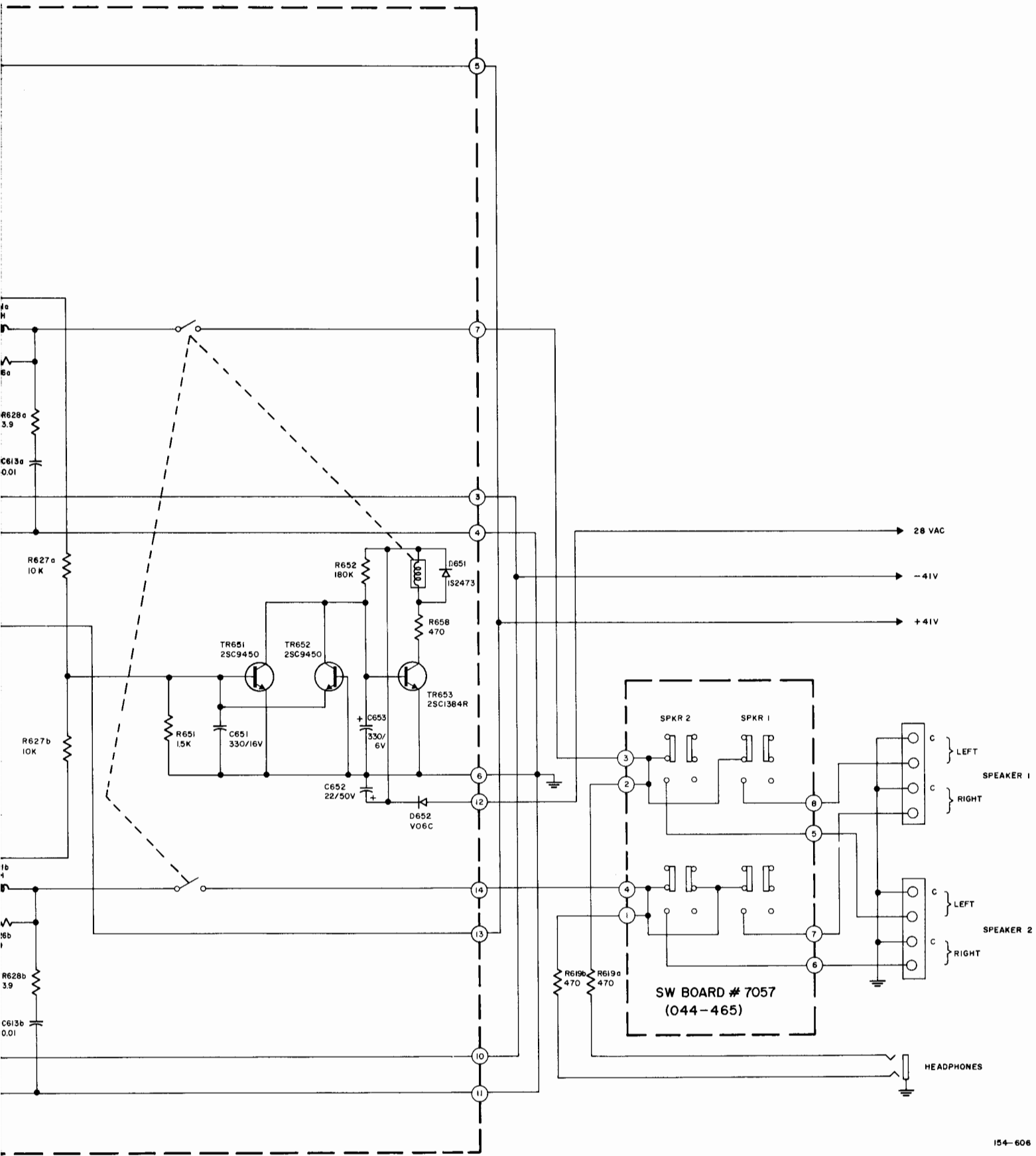
POWER OUTPUT PC BOARD 044-463



044463
POWER OUTPUT
PC BOARD

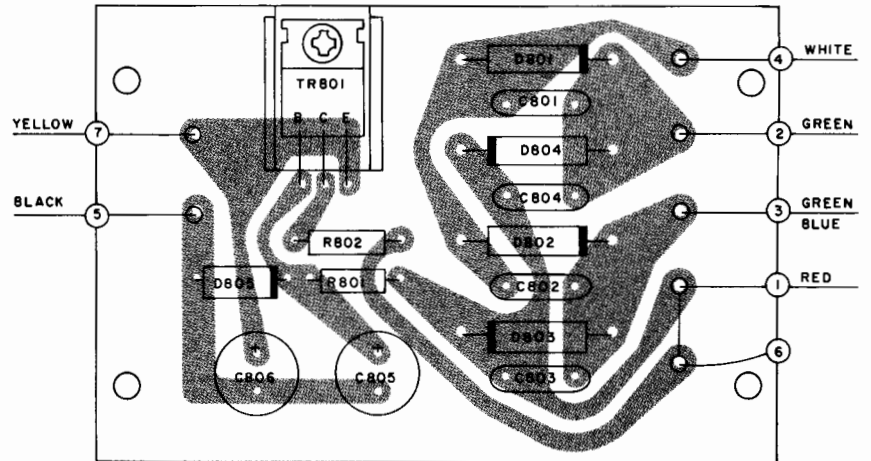




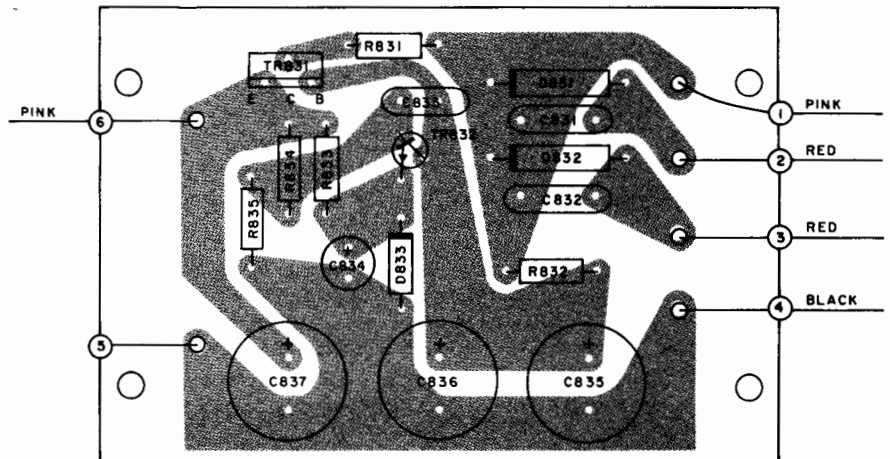


POWER OUTPUT

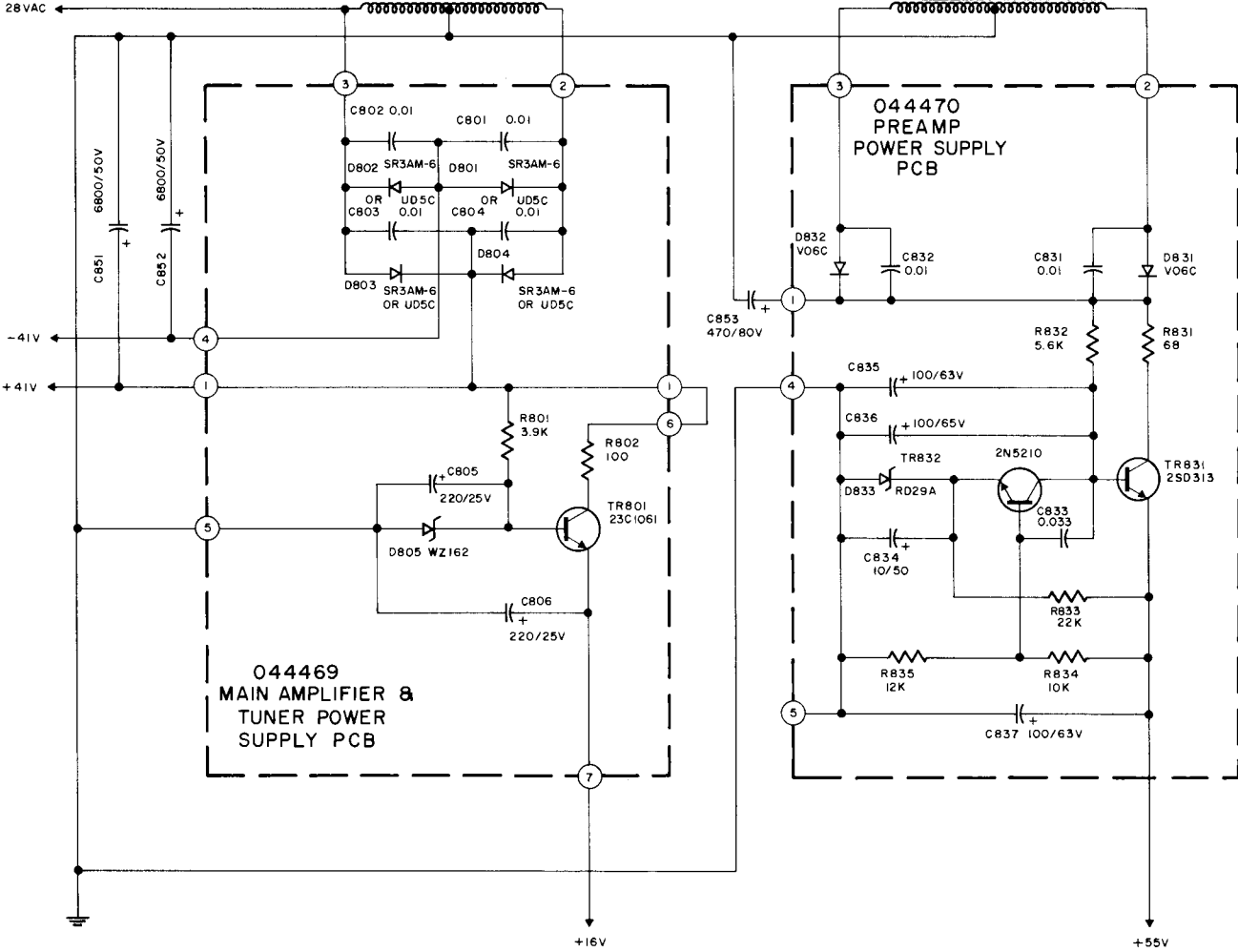
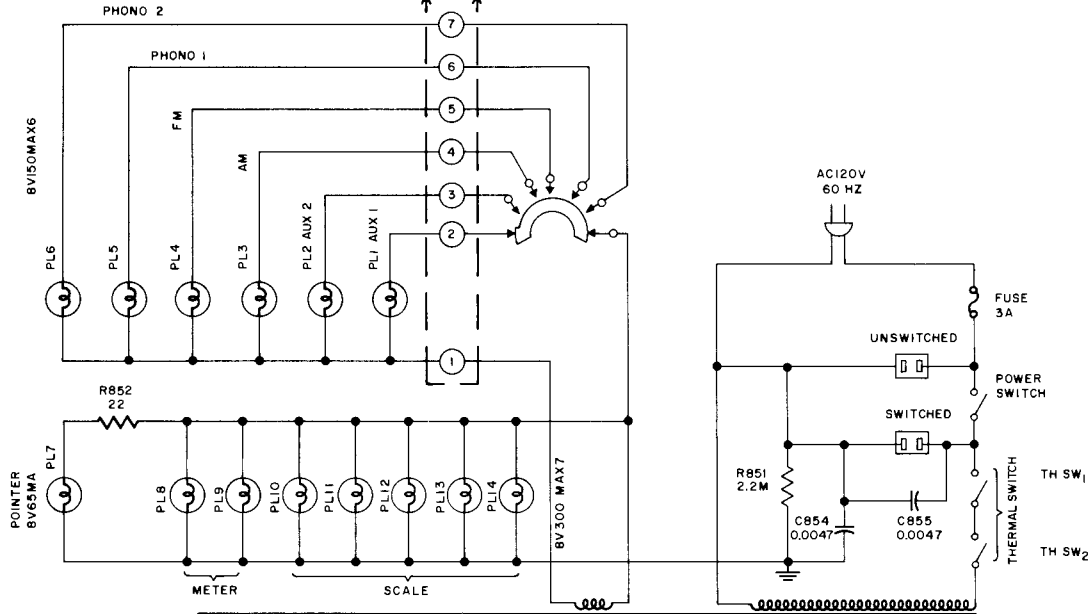
POWER SUPPLY PC BOARD 044-469



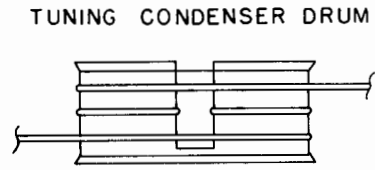
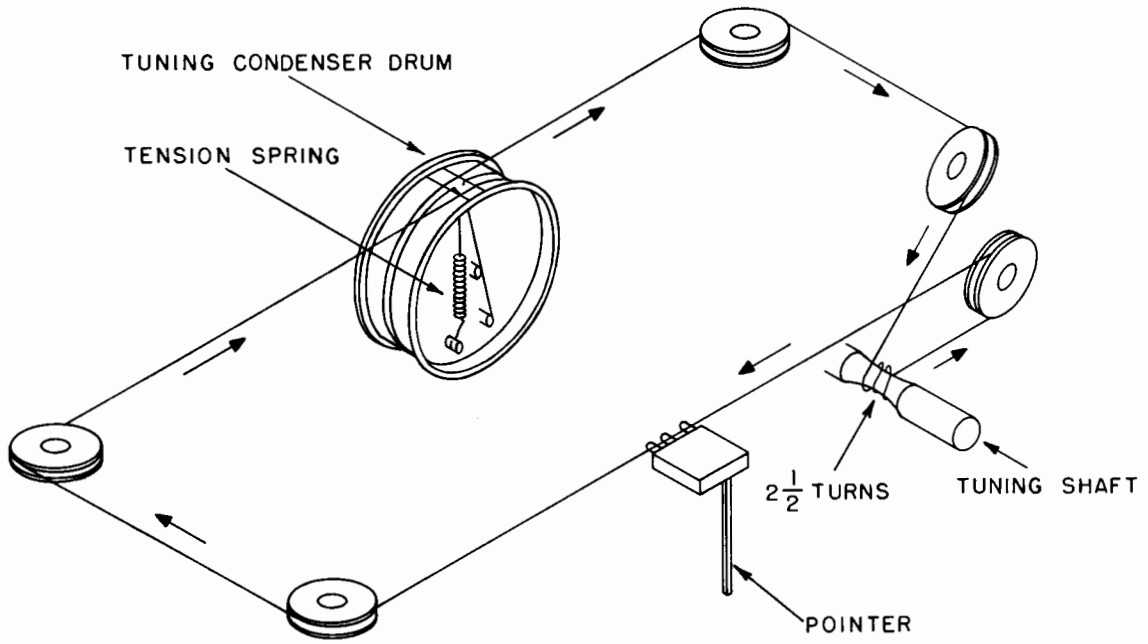
PREAMP POWER SUPPLY PC BOARD 044-470



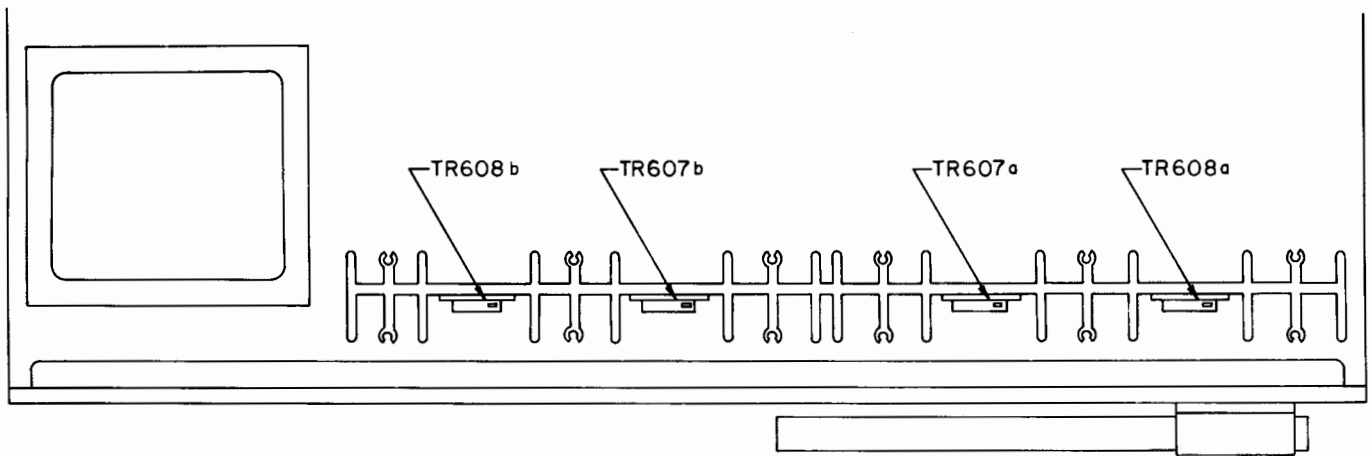
044468
LAMP CONNECTION
PCB
(IN PART)



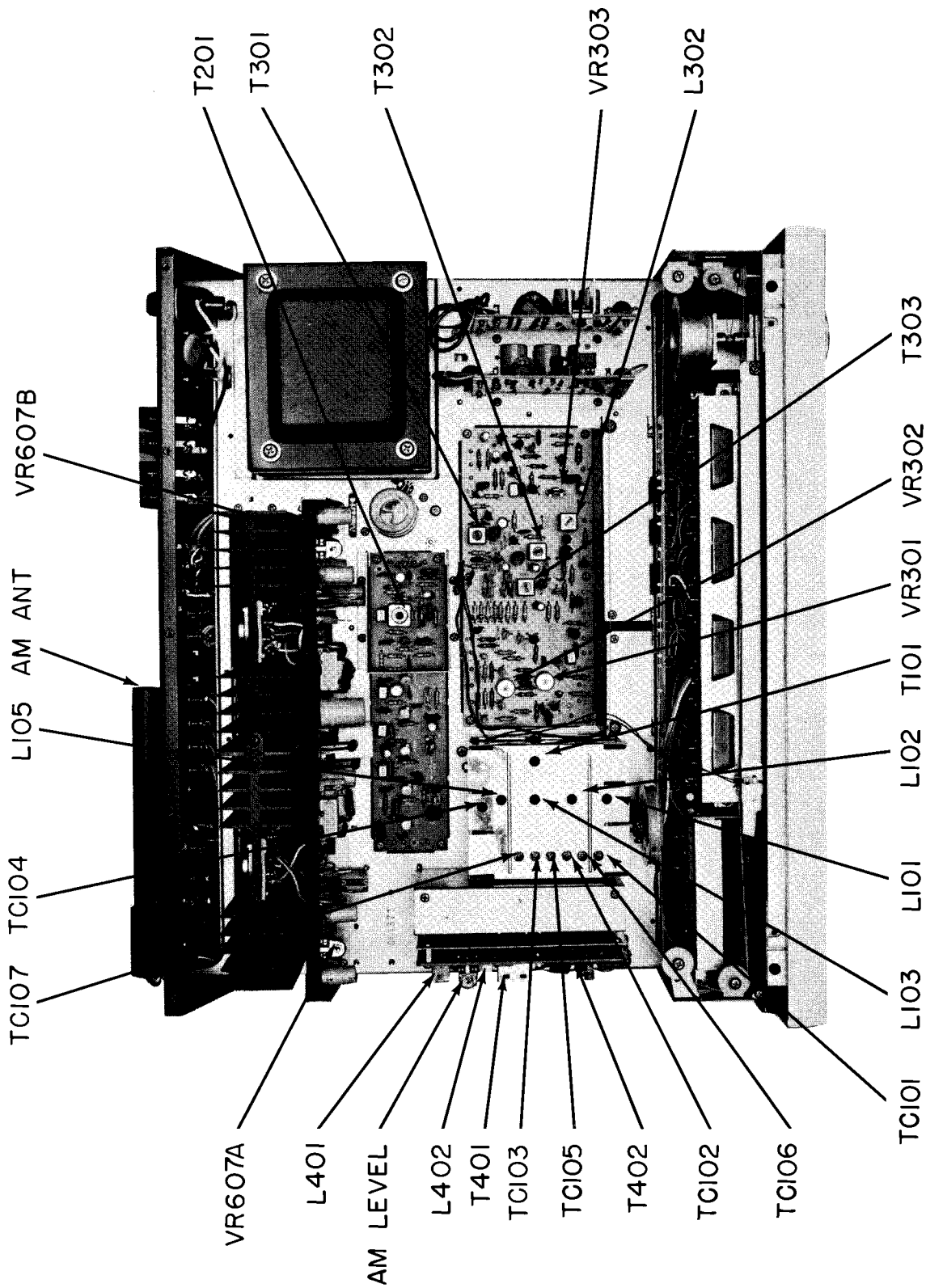
POWER SUPPLY



DIAL STRINGING



LOCATION OF TRANSISTORS NOT ON PC BOARD



STEREOTECH 1200 ALIGNMENT INSTRUCTIONS

TEST EQUIPMENT REQUIRED

All Stereotech receivers are carefully aligned and tested at the factory using the finest available test equipment. All Stereotech receivers will meet their published specifications when shipped from the factory.

After extensive operation, or servicing, it may be desirable to realign the receiver circuits for best performance. The charts below give complete information on the circuit realignment procedure for the Stereotech 1200.

The test equipment listed (or its equivalent) is necessary to properly align a 1200. The accuracy of the alignment will be directly related to the accuracy and calibration of the test equipment used.

If the necessary test equipment is not available, alignment should not be attempted.

Alignment should be done in the following order: AM-FM-MPX.

WARNING The center frequency of the IF ceramic filters vary from 10.64MHz to 10.76MHz. A 10.7MHz crystal controlled generator should not be used for IF alignment.

1. FM Signal Generator (Measurement 188 or Sound Technology 1000A).
2. VTVM (RCA WV96C).
3. Multiplex Generator (Radiometer SMG1) or Sound Technology 1000A.
4. Oscilloscope (Hewlett-Packard 120B or equivalent).
5. Harmonic Distortion Analyzer (Hewlett-Packard 333A or equivalent).

AM ALIGNMENT

STEP	TUNER DIAL SETTING	SIGNAL GENERATOR			INDICATOR		ADJUST	TEST LIMITS	REMARKS
		FREQ.	COUPLING	MODULATION	TYPE	CONNECTED TO			
1	Point of no interference or signal	455kHz	Through external .01µF capacitor to Pin 2 on AM circuit board	CW	Signal strength meter.	Normal.	Pri. & Sec. cores of T401 & T402	Maximum possible indication below 4.	As the tuner output increases, attenuate generator output to keep meter indication below 4.
2	600kHz	600kHz	Through a 200pF capacitor to ant. terminals.	Same	Same	Same	L402 (oscillator coil.)	Same	Same as Step 1.
3	1400kHz	1400kHz	Same	Same	Same	Same	TC107 (oscillator trimmer)	Same	Repeat Steps 2 & 3 until dial calibration is accurate.
4	600kHz	600kHz	Same	Same	Same	Same	AM antenna rod & L401 (AM=RF)	Same	Same as Step 1 except adjust generator so that output signal is just above the noise level. Position antenna rod away from chassis and nearby objects.
5	1400kHz	1400kHz	Same	Same	Same	Same	TC106 (AM antenna trimmer) & TC105 (AM=RF trimmer).	Same	Repeat Steps 4 & 5 until output is as high as possible.
	1000kHz	1000kHz	Same	30% @ 400Hz	Distortion Analyzer.	L or R output.			With a distortion analyzer, the following measurements can be performed:

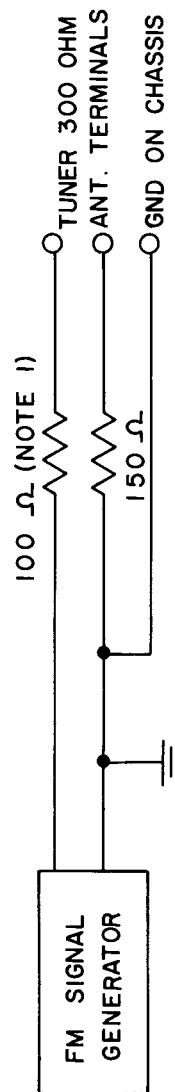
MULTIPLEX DECODER ALIGNMENT

7	90MHz	Same	Same	Same	Same	Mixer, RF-2, and RF-1; coils L101, 102, 103	Same	Same	Same as Step 3. Then repeat Steps 6 and 7 until TP#1 voltage is as high as possible for the least signal input at both alignment frequencies.
8	Same	Same	Same	Same	Same	VTVM connected to TP#1 and a harmonic distortion analyzer to L or R output.	VTVM connected to TP#1 and a harmonic distortion analyzer to L or R output.	VTVM connected to TP#1 and a harmonic distortion analyzer to L or R output.	This step is an overall sensitivity check. Reduce input signal to the point where total noise and distortion reads 3% (-30dB). The input signal will then be the usable sensitivity and should be less than 2.5µV.

STEP	TUNER DIAL SETTING	SIGNAL GENERATOR			INDICATOR		ADJUST	TEST LIMITS	REMARKS
		FREQ.	COUPLING	MODULATION	TYPE	CONNECTED TO			
1	100MHz	100MHz	300Ω antenna terminals w/ approx. 1000 microvolts signal w/* matching network.	75kHz deviation @ 67kHz.	AC-VTVM or oscilloscope w/very low cap. probe.	Collector TR305 MPX-PC Board.	L302 (SCA adj.)	Minimum output	Adjust for minimum 67kHz output.
2	Same	Same	Same	19kHz stereo pilot.	Same	Collector TR303 MPX-PC Board	T301 (19kHz phase adj.) & T302 (19 kHz transformer.)	Adjust for maximum AC voltage.	Decrease pilot level, if necessary, so that 19kHz circuits do not limit or saturate.
3	Same	Same	Same	Same	Same	Collector TR304	T303	Adj. for maximum AC voltage.	Decrease pilot level so that 19kHz and 38kHz circuits do not limit. Mode switch must be in stereo position.
4	Same	Same	Same	1kHz (100% modulation) L or R only, pilot level normal and on.	AC-VTVM	L or R output Jack.	First T301 Then VR301 & VR302	35dB separation or more.	Set VR301 & VR302 at maximum resistance. Modulate left channel and measure right channel output. Adjust tuning core (T301) for minimum right channel output (maximum separation). Then, adjust VR301 for maximum separation. Reverse channels then adjust VR302.
5	Same	Same	Input 15µF	Same	Same	Same	VR303		Adjust stereo threshold for auto switchover at 15µV input.

Note 1:

If signal generator has other than 50 ohm internal impedance, use a resistor of 150 ohms less internal generator impedance.



REPLACEMENT PARTS

Replacement parts may be obtained when ordered by PART NUMBER from:

Stereo Technology Division
Box A
Conklin, New York 13748

CAPACITORS

Symbol Number	Description	Part Number
C851,852	Elect 6800 μ F 50V	066-207

DIODES

D101	Si. Signal diode	070-067
D151	Si. Signal diode	070-068
D201,202	Si. Signal diode	070-068
D203,204	Si. Signal diode	070-068
D205,206	Ge. Signal diode	070-069
D207,208	Si. Signal diode	070-068
D301,302	Ge. Signal diode	070-069
D303,304	Ge. Signal diode	070-069
D305,306	Ge. Signal diode	070-069
D307	Si. Signal diode	070-070
D401	Si. Signal diode	070-070
D501a,b	Si. Signal diode	070-070
D602a,b	Si. Signal diode	070-070
D603a,b	Si. Signal diode	070-070
D604a,b	Si. Signal diode	070-071
D605a,b	Si. Signal diode	070-071
D607a,b	Si. Signal diode	070-070
D651	Si. Signal diode	070-070
D652	Si. Signal diode	070-071
D801,802	Si. Signal diode	070-072
D803,804	Si. Signal diode	070-072
D805	Zener diode	070-074
D830	Zener diode	070-073
D831,832	Si. Signal diode	070-071

CHOKES & COILS

L302	67kHz Filter coil	122-146
L303	Muting filter coil	122-147
L401	AM RF coil	122-144
L402	AM Osc coil	122-145
L403	AM Antenna	122-143

TRANSISTORS

TR101,102	Transistor	132-107	VR551
TR103,104	Transistor	132-108	VR552
TR201	Transistor	132-109	VR901
TR301,302	Transistor	132-112	VR902
TR303,304	Transistor	132-113	
TR305,306	Transistor	132-113	
TR307,308	Transistor	132-113	TH601
TR309	Transistor	132-113	
TR310,311	Transistor	132-114	
TR312,313	Transistor	132-115	S
TR314,315	Transistor	132-112	S
TR316	Transistor	132-112	TH SW
TR317	Transistor	132-114	
TR319	Transistor	132-114	
TR401,402	Transistor	132-110	T101
TR403	Transistor	132-110	T201
TR404	Transistor	132-111	T301
TR501a,b	Transistor	132-117	T302
TR502a,b	Transistor	132-118	T303
TR503a,b	Transistor	132-113	T401,
TR601a,b	Transistor	132-114	T801
TR602a,b	Transistor	132-114	
TR603a,b	Transistor	132-119	
TR604a,b	Transistor	132-112	M201
TR605a,b	Transistor	132-120	M401
TR606a,b	Transistor	132-119	
TR607a,b	Transistor	132-121	
TR608a,b	Transistor	132-121	IC201
TR609a,b	Transistor	132-122	IC203
TR610a,b	Transistor	132-123	IC205
TR651,652	Transistor	132-124	
TR653	Transistor	132-125	
TR701a,b	Transistor	132-113	CE. F
TR702a,b	Transistor	132-114	CE. F
TR703a,b	Transistor	132-113	CE. F
TR704a,b	Transistor	132-113	LPF
TR801	Transistor	132-126	
TR831	Transistor	132-127	
TR832	Transistor	132-113	PL1,2
TR901a,b	Transistor	132-113	PL3,4
TR902a,b	Transistor	132-113	PL5,6
			PL7
			PL8,9

FUSES

F801	Fuse 3A	089-026
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STEREO TECHNOLOGY DIVISION

BOX A CONKLIN, NEW YORK, 13748