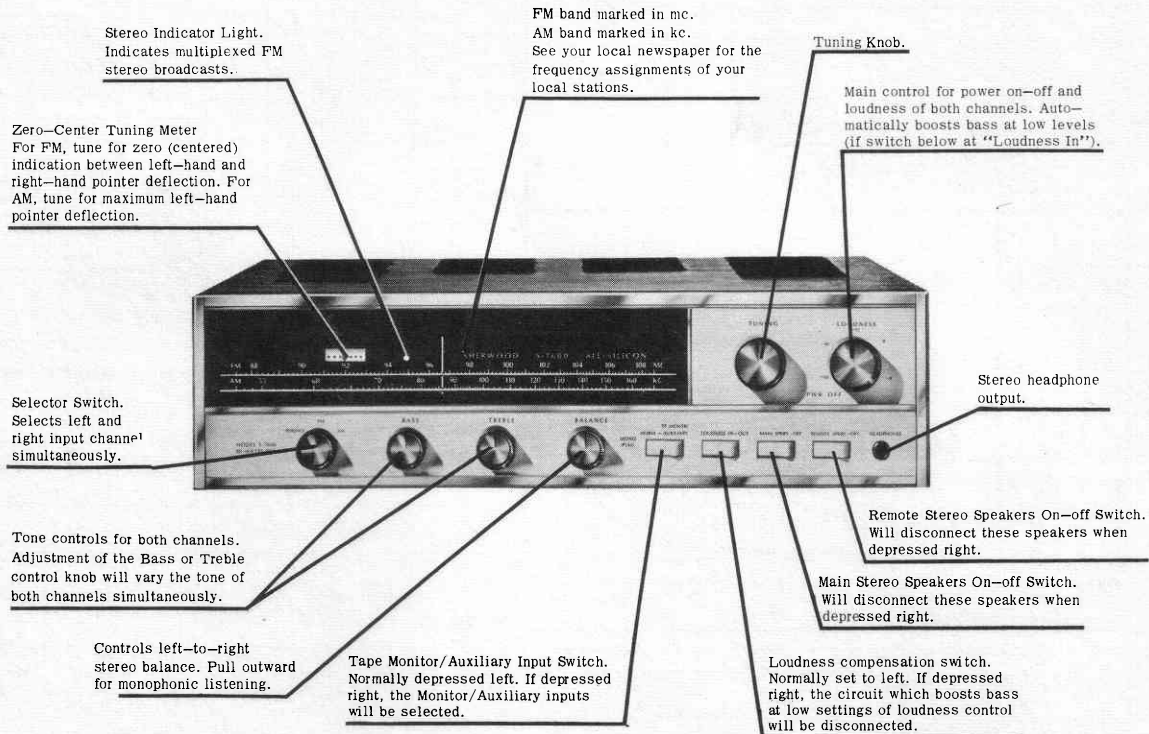


Sherwood

MODEL S-7600-FET ALL-SILICON SOLID-STATE FM STEREO RECEIVER SERVICE MANUAL

S 7600

Serial No. A701001 to A702102



MODEL S-7600 -FET STEREO RECEIVER SPECIFICATIONS

FM SENSITIVITY: (IHF) 1.8 μ v for -30 db. noise and distortion below 100% mod.

TYPICAL SENSITIVITY: FM - 1.1 μ v for 20 db quieting, 6.0 μ v for 50 db. S/N. AM - 2 μ v at 60% mod. for 6 db S/N.

TYPICAL SELECTIVITY: FM - 250KHz at -6 db, 820 KHz at -60 db. AM - 7.5KHz at -6 db.

FM DETECTOR: 800KHz peak/peak

FM CAPTURE RATIO: 2.6 db.

TUNING RANGE: 87.5 - 108.5 MHz

FM DISTORTION: 0.15% harmonic at 100% mod.

FM CROSS-MODULATION REJECTION: -95db.

HUM AND NOISE LEVEL: FM - 70 db below 100% mod.

AM - 56 db below 100% mod.

FM STABILITY: ± 10 KHz ($\pm 0.01\%$)

FM OUTPUT: 0.7 volts at 100% FM

FM OSCILLATOR RADIATION: 3 db below FCC requirements.

ANTENNAS: FM - 300-ohm balanced. AM - directable ferrite rod w/external antenna connection.

FREQUENCY RESPONSE: FM mono: 20-20,000 Hz $\pm 1/2$ db.

FM Stereo: 20-15,000 Hz $\pm 1/2$ db.

AM: -6 db at 4.0 KHz.

Amplifier: 20-20,000 Hz $\pm 1/2$ db.

INPUTS: 2(RIAA) Phono-preamp, 2 tape monitor/aux.

OUTPUTS: 4 to 16 ohms, main & remote (left and right) speakers, stereo headphone, and record output.

MUSIC POWER OUTPUT: 80 watts at 4 ohms, 50 watts at 8 ohms.

CONTINUOUS POWER OUTPUT (each channel): 30 watts at 4 ohms, 20 watts at 8 ohms for 1.0% distortion.

INVERSE FEEDBACK: 35 db.

DAMPING FACTOR: 30:1 at 8 ohms.

TONE CONTROL RESPONSE: Flat setting, 20 Hz to 20KHz $\pm 1/2$ db.

TONE CONTROL RANGE: 15KHz, 15 db boost or cut. 40 Hz. 20 db boost or cut.

PREAMP. EQUALIZER CURVES: AES/RIAA phono. **SENSITIVITY:** Phono selectable 1.5mv, 6mv, 12mv, Aux 0.4V

MAX. INPUT CAPABILITY: Preamp: 160mv. for less than 1% dist. Aux: 3.0V for less than 1% dist.

MAX. HUM and NOISE:

Vol. control min., -90 db (weighted) below rated output.

Auxiliary input (controls maximum), -80 db (weighted) below rated output.

Phono input (controls flat), -60 db below rated output.

INTERCHANNEL CROSSTALK: Less than -45 db at 1KHz.

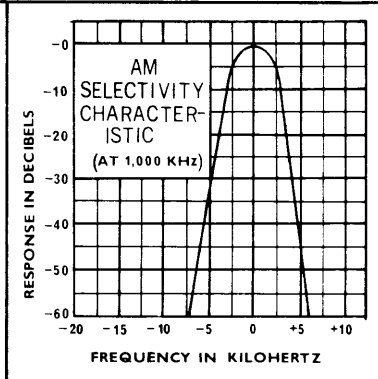
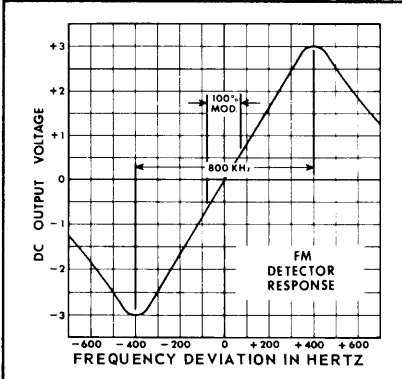
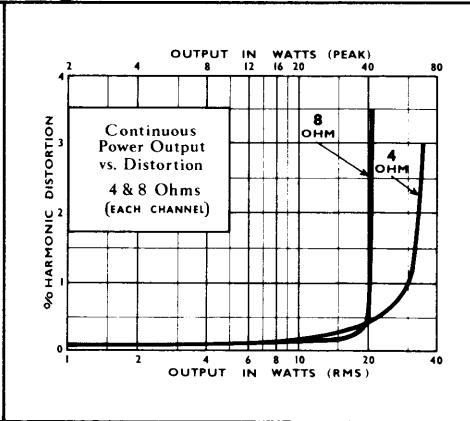
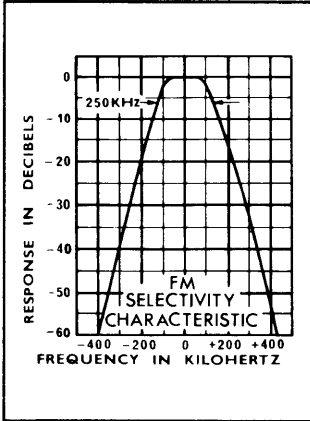
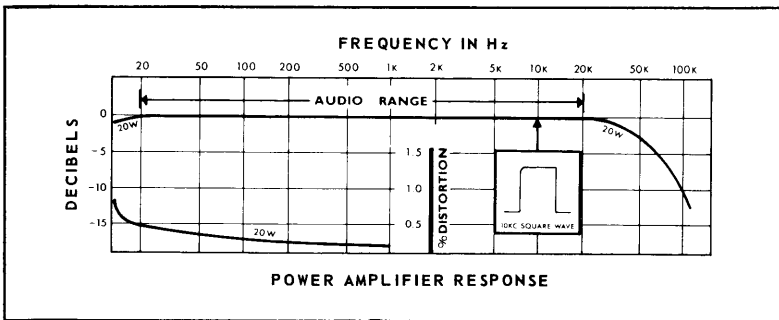
POWER CONSUMPTION: 115-125V, 60 Hz, 30 to 120 watts fused.

SIZE: 16-1/2 x 12 x 4-1/2 high.

SHIPPING WEIGHT: 27 lbs. (with case)

TRANSISTOR COMPLEMENT: 38 silicon transistors (2 field-effect), 5 silicon rectifiers, 15 silicon diodes, 1 zener diode.

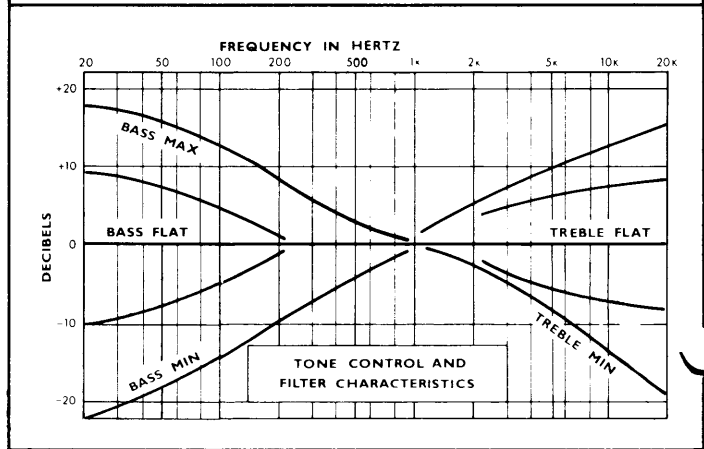
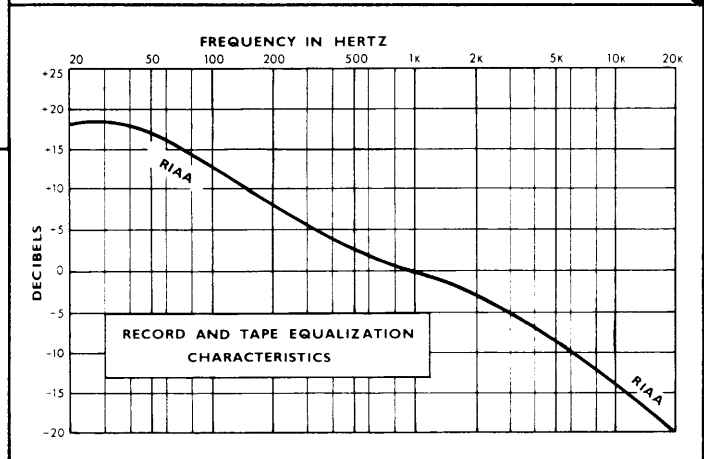
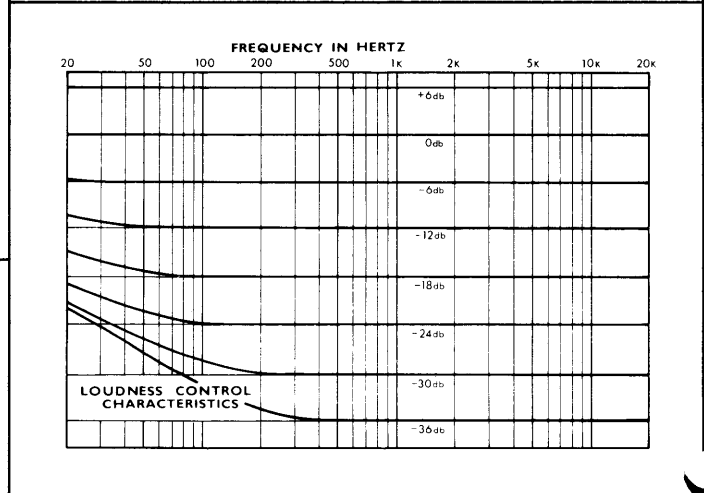
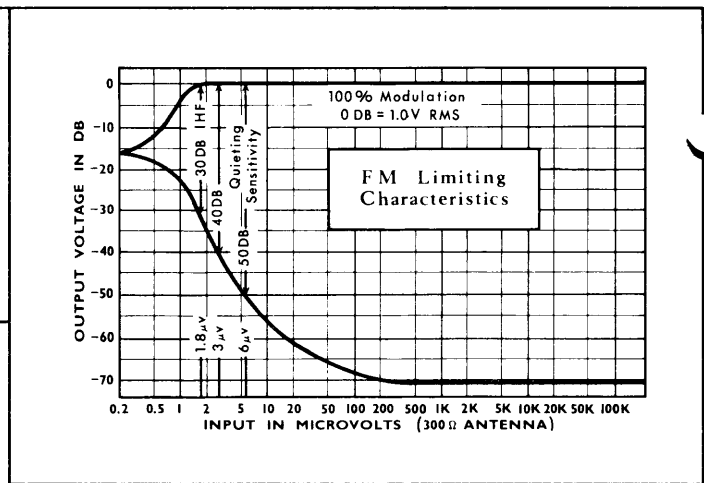




REALIGNMENT: To check alignment, refer to page 3. Do not attempt realignment unless adequate test equipment is available.

Optimum FM alignment, similar to the original factory alignment, consists of feeding a properly-terminated FM signal into the antenna terminals. To simulate a balanced 300-ohm input with the typical low-impedance single-ended generator, connect a 120-ohm carbon 1/2 watt resistor from each generator terminal to a receiver FM antenna input terminal. While observing the IF response curve with an oscilloscope through a 10K ohm resistor to the collector of Q7, carefully adjust IF transformers, top and bottom, for the maximum symmetrical response. Check the bandpass for 150KHz flat top with 100% FM modulation. With this flat top bandpass centered on the oscilloscope, repeat step 3 for a zero reading.

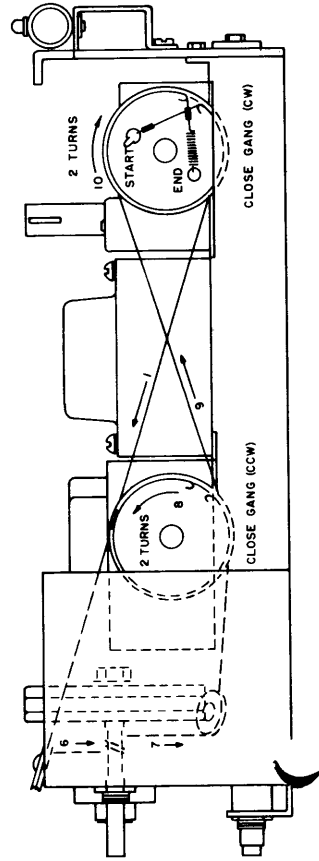
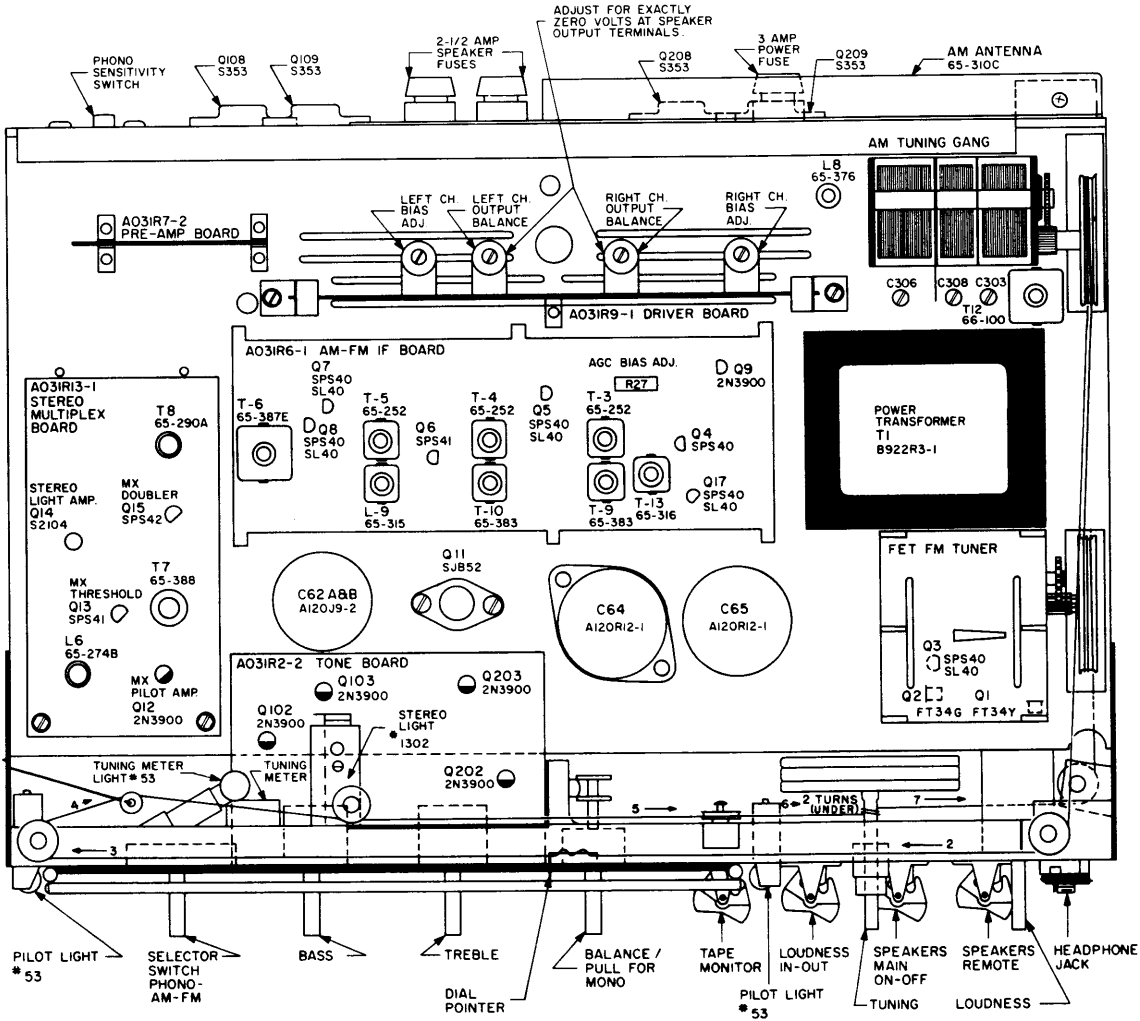
All Sherwood tuners are also adjusted and checked to see that they meet 1/3%IM distortion at 100% FM. To adjust, feed 60 Hz: 7KHz at 4:1 ratio into a low-distortion FM generator. With FM generator rf signal at 100% FM, feeding into antenna terminals, read IM distortion at FM detector output with receiver tuned for zero volts. Adjust primary of T6 for minimum distortion.



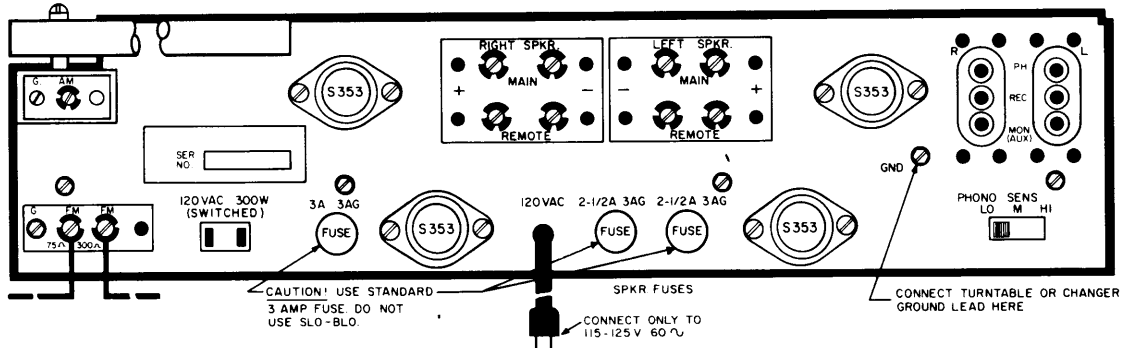
ALIGNMENT CHART

	switch position	signal generator input			dial setting	indicating instrument	adjust	indication	
		coupling	freq.	modulation					
AM ALIGNMENT	1	Selector at AM	.01 μ f to base of Q17	455KC	400cps 30% AM	point of no interference	AC voltmeter at audio output	T9, T10, L9 top & bottom	maximum deflection
	2	"	300 Ω to ant. tap	600KC	"	check pointer for alignment at left start mark, then tune to 600KC	"	L8, T12 & T13	"
	3	"	"	1400KC	"	tune to 1400KC	"	C303, C306 & C308	"
	4	Repeat step 2 & 3 until no further improvement is possible.							
FM ALIGNMENT	1	Selector: FM Mode: Mono	none	none	none	pt. of no interf.	DC-VTVM across R24 820 Ω	R27 bias adj	1.2V-DC
	2	"	.01 μ f to base of Q4 (HI INPUT)	10.7MHz	400 or 60 Hz \pm 300KHz FM	"	CRO thru 10K Ω to Collector of Q7 & shunt CRO input w/.005 μ f	T3, T4, T5 top & bot.	maximum deflection & symmetry *
	3	"	"	"	none	"	DC VTVM across C55	T6 top	0V-DC
	4	Repeat Step #1							
	5	"	300 Ω ant. input	90MHZ	400 or 60 cps \pm 300KHz FM	90MHZ	CRO at Δ CH-1 OUTPUT (Left)	L2, L3, L4, T2 top & bottom	maximum deflection & symmetry *
	6	"	"	106MHZ	"	106MHZ	CRO thru 10K Ω to Collector of Q7 & shunt CRO input w/.005 μ f.	C2, C6, C19 T6 bottom.	"
	7	Repeat Steps 5 & 6 until no further improvement							
	8	Same as Step 5			\pm 300KHz FM	"	CRO thru 10K to Collector of Q7	T2, T3, T4, T5 top & bottom	recheck for max. deflection & adj. for symmetry *
MX ALIGNMENT	1	Disconnect FM detector from Point A							
	2	Selector: FM Mode: Auto Stereo	10K source impedance	60MV RMS 19KHz into point A	none	point of no interf. & short Q13 emitter base junction.	AC voltmeter base of Q15	T7 top & bottom	maximum deflection
	3	"	"	"	"	"	AC voltmeter T8 pin 1 to ground	T8 top & bottom	"
	4	"	"	1.0V RMS 67KHz into point A	"	"	"	L6	null
	5	"	"	feed composite MX sig. left CH modulation 1.7V p-p or 0.3V RMS 400Hz into point A		"	AC voltmeter across C97	T7 top	null at unmodulated channel output
	6	Reconnect FM detector to point A							
	7	"	300 Ω balanced input to FM ant. input	96MHZ 100 μ v	\pm 75KHz composite stereo sig. left CH modulation only	96MHZ	"	fine adjust T7 top	null at unmodulated channel output. separation 30db

* If distortion analyzer is available, null T6 bottom for minimum distortion with 75KHz modulation.



All power fuses on export models using 230V for power, will require 50% less current rating than the comparable domestic unit. Voltage rating will remain the same.



REAR PANEL VIEW

PARTS LIST

TRANSISTOR (All are silicon)	PART NO.	PRICE
Audio, Low signal - no dot (Hi-beta), (Q9, 12, 101, 102, 110, 201, 202, 210)	2N3900	\$1.04
Audio, Low signal - Green dot (Low Noise), (Q100, 103, 200, 203)	2N3900N	1.14
Pre-Driver, NPN, (Q105, 205)	16E1330	1.26
Pre-Driver, PNP, (Q104, 204)	S2103 (SPS47A)	1.44
Driver, PNP, (Q107, 207)	S437 (40394)	3.16
Driver, NPN, (Q106, 206)	S409F	2.88
Output, NPN, (Q108, 109, 208, 209)	S353	2.84
Power supply, NPN, (Q11)	SJ852 (S374)	1.80
RF, FET, Yellow Dot (Q1)	FT34Y	2.70
RF, FET, Green Dot (Q2)	FT34G	2.70
IF, NPN, (Low Cap. SPS41) (Q6)	SPS4345	0.84
RF, IF, NPN (Use same beta code -1, -2 or -3) (Q1, 3, 4, 5, 7, 8, 16, 17)	SL40 (SPS40)	0.95
Audio, NPN, (Q13)	SPS41	0.81
Audio, PNP, (Q15)	SPS42	0.90
Audio, NPN, (Q14)	S2104	0.92

You will note that all transistors used in the S-7600 are color-coded with a dot or mark of some color prominently located on the top of their case. (Some transistors have no mark, but this also is identification.) When ordering replacement transistors, it is imperative that you indicate not only its part no., but the color dot on the transistor body: red, yellow, none, (1, - 2, - or - 3). This is particularly important when replacing output transistors.

DESCRIPTION	PART NO.	PRICE
1 μ f, 25V, (C25, 46, 47, 71, 110, 191, 192, 210, 291, 292)	B120X7	\$ 0.59
8 μ f, 40V, (C81, 133, 134, 140, 233, 234, 240)	B120X8	0.45
20 μ f, 50V, (C142, 242)	B120X14	0.68
100 μ f, 3V or 125 μ f, 4V, (C100, 104, 200, 204)	B120X24	0.45
250 μ f, 35V, (C143)	B120X33	0.95
640 μ f, 16V, (C66)	B120X34	0.95
1000 μ f, 3V, (C141, 146)	B120X35	0.86
50 μ f, 15V (plug-in) (C21)	B120X36	0.77
250 μ f, 50V, (C61)	B120X72	1.31
5 μ f, 15V, (C180, 280)	B120X73	0.68
2000 μ f, 35V, (C64, 65)	A120R12-1	3.65
500 - 500 μ f, 45V, (C62A & B)	A120J9-2	3.11
Insulator, Mica (TO-3) (Under S353 Transistor)	A021F1-0	0.05
Insulator, Mica (TO-66) (Under SJ852 Transistor)	A021F2-0	0.05
Fuse, 2.5 Amp.	31202.5	0.14
Fuse, 3 Amp.	312003	0.14
Dial Glass	B322R5-1	1.13
Knobs, small	B467X1	1.98
Knob, large (unmarked)	B467X2	2.16
Knob, large (w/indicator)	B467X3	2.20
Light bulb, Pilot, #53	630B53	0.14
Light bulb, Stereo, #1302	630B1302	0.23
Control, Bass, 1 Meg Ω , dual, (R131, 231)	A670R6-3A	2.70
Control, Treble, 250K Ω , dual, (R135 A & B)	A670R7-3A	2.03
Control, Balance, 100K Ω , W/DPDT Pull switch, (R184, S7)	A671R2-4A	1.71
Control, Loudness, 50K Ω , dual, W/AC sw. (R181, 281)	A671R4-0A (Replace with A671R3-1)	4.77 4.23

DESCRIPTION	PART NO.	PRICE
Pot. P. C. 500 Ω , (R155, 255)	A675T1-0A	0.54
Pot. P. C. 5K Ω , (R142, 242)	A675T5-0A	0.54
Pot. P. C. 250K Ω , (R27)	A675T9-0A	0.72
Diode, Germanium (Low-offset) (X1, 5)		
Diode, Silicon, (X2, 3, 4, 9, 10, 11, 12, 13, 14, 17, 18)	B692X13-4	0.41
Rectifier, Silicon (X8, 15, 16, 17, 18)	A692T3-0	0.77
Socket, Output transistor	A790T7-0	0.18
Socket, Driver transistor	A790T4-0	0.23
Jack, Headphone	A795L1-0	1.08
Fuse post	A796X2-1(A)	0.95
Switch, Rocker (non-shorting), DPDT, (S3A, 3B)	A864H22-5	0.90
Switch, Rocker (Shorting) DPDT, (S2A, 2B, 4A, 4B, 5A, 5B)	A864H23-5	0.90
Switch, Rocker, DPTT, (S6A, 6B)	A864R1-0	0.68
Switch, Rotary (S1)	A860R6-0A	2.92
Transformer, Power (T1)	B922R3-1	13.73
Diode, Zener, 13V 5% (Z1)	A694X1	1.08
Coil, FM IF, (T3, 4, 5)	65-252C	2.75
Transformer, FM Discriminator, (T6)	65-387E	4.92
Transformer, FM Converter, (T2)	67-101	2.00
Transformer, 19KHz, (T7)	65-388	2.20
Transformer, 38KHz, (T8)	65-290A	1.52
Coil, 67KHz, (L6)	65-274B	0.96
Transformer, AM IF (T9, 10)	65-383	2.03
Transformer, AM Osc. (T13)	65-316	1.71
Transformer, AM RF (T12)	66-100	1.89
Coil, AM Detector (L9)	65-315	1.31
Coil, AM Antenna (L8)	65-376	0.90
Rod, AM Antenna Assy. (T11)	65-311C	4.21

SERVICING

VOLTAGE CHECKS

Preliminary checks of the D.C. voltages present at various points in the S-7600 can prove useful in locating defective components. They are inconclusive, however, in determining if transistors are operating properly in all aspects. They can only indicate whether the transistor is open, shorted or functioning, not how well the transistor is functioning.

IN GENERAL:

Correct voltages indicate a functioning transistor.

The same voltage at the collector and emitter indicates a shorted transistor.

Full supply voltage on the collector and no voltage on the emitter indicates an open transistor.

OUTPUT TRANSISTOR BIAS

Of all the specifications which require checking to ascertain correct performance of the S-7600, proper output transistor operation is the most important and critical. Adjustment of the output transistor bias is necessary if output transistors are replaced*, or the amplifier exhibits one or more of the following symptoms:

1. Overheating of the output transistors under normal operating conditions.
2. Excessive low level Intermodulation Distortion—more than 0.5% at 2.0 volts across 8 ohms (0.8 watts, IM power).

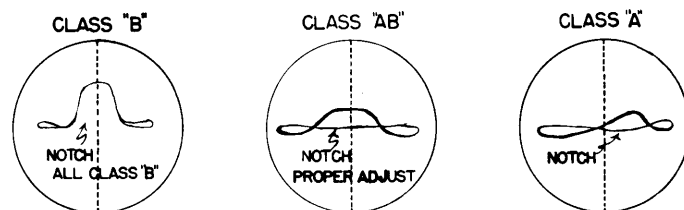
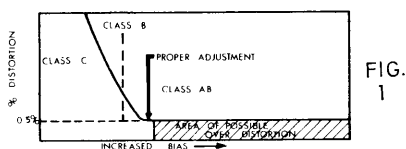
Adjustment of output transistor bias should then proceed as follows:

1. Turn amplifier off.
2. Set output balance pots (R142 and R242) to mechanical center and bias pots (R153 and R255) fully counter-clockwise.
3. Connect D.C. voltmeter of at least 3% known accuracy to transistor side of appropriate channel's output terminals.
4. Turn amp. on and adjust output balance pot (R142 or R242) so that exactly zero voltage is on the output terminals.
5. Connect an Intermodulation Distortion analyzer to the amplifier TP. MON. (aux.) input, turn volume control to maximum and adjust the analyzer output for an amplifier output of 2.0V across 8 ohms. (Because the output stages have been set into heavy class "B" operation by the "pre-setting" in Step 2, a class "B" notch in the distortion waveform will be obvious.) NOTE: When adjusting bias for class "AB", adjust until class "B" notch is almost eliminated. Class "A" begins beyond this point. Notch shifts to right.

IMPORTANT: Misadjustment of the bias pot can cause heavy class "A" operation of the output transistors, causing them to overheat.

The following performance indicates a properly operating output stage with 8 ohm load.

- Less than 0.5% IM distortion at 2.0V.
- Typically 0.6% IM distortion at 10 Volts.
- 18 watts of power per channel at clipping.



*It is extremely important that the mica insulating washers used to separate the output transistors from their heat sinks be unbroken and installed properly with silicon grease liberally applied to all surfaces in contact with each other. Make certain the emitter and base pins of the output transistors do not contact any part of the heat sinks.

SERVICING

1. FUSE & SPEAKER SYSTEM CHECK: Check speaker fuse. If open, disconnect speakers. Measure speaker system line with ohmmeter. Speaker line should not measure below 3 ohms. Replace defective fuse.

2. AMPLIFIER/PREAMP STAGE ISOLATION: Evaluate whether both channels are inoperative. If thus, B+ supply should be suspected for malfunction. If one channel only, evaluate with test signal whether signal feeds properly through phono preamp, auxiliary high-level input, or into loudness control at high side (this isolates power amplifier section from tone amplifier section).

3. FAULT ISOLATED TO POWER AMPLIFIER: With DC voltmeter, verify accuracy of all power supply voltages, collector, emitter, and base voltages of transistors on the driver-circuit boards and of output transistors in the faulty power amplifier channel. The voltages should be verified against those shown on the schematic for 120V power line and also against those in the 2nd channel (assumed to be operating correctly). It is valuable to operate the amplifier with a variable voltage power line (Variac) equipped with a line wattmeter (or ammeter) to identify abnormal power consumption.

With the Variac, reduce the power line voltage to zero, and slowly increase power line voltage upward while observing wattmeter. (The power consumption should not exceed 10-15 watts as the voltage is increased up to rated 120 volts. If power consumption reading begins to exceed 15 watts, starting from zero voltage, do not increase power line voltage further.) Now verify center-point voltage for zero-voltage reading.

Note that the voltage at the + speaker terminal should read exactly zero volts. Slight variations + or - from zero can be adjusted to zero with the output balance potentiometer (located lower center of driver board). If balance control has little or no effect on the center zero, suspect Q104 (Q204) S-2103 transistor. If center zero reads an excess of + voltage, suspect shorted Q106 (Q206) S409F transistor or shorted Q108 (Q208) S353 transistor. Should center zero read an excess of - voltage, suspect a shorted Q107 (Q207) S437 transistor, or a shorted Q109 (Q209) S353 transistor.

Remove both driver transistors from their sockets. If power consumption drops considerably, then faulty driver transistors should be suspected. If power consumption remains unusually high, then faulty output transistors should be suspected. If not, suspect pre-driver or bias-regulator transistor or associated components.

If all above seems not to be at fault, then verify that capacitors are not shorted, circuit board contains no solder or etching shorts, open resistors, or poor solder connections. (Note: a small error voltage at pre-driver base and/or emitter will disrupt grossly the operation of the driver and output transistors.)

If center-point voltage reads zero voltage in accordance with above check, apply audio signal to channel being investigated and measure distortion. Distortion which exceeds amplifier ratings might be due to one of the following:

1. Output transistors not matched beta.
2. Output bias requires readjustment.
3. Driver transistor has low beta.

4. FAULT ISOLATED TO TONE CONTROL AMPLIFIER: Check DC voltages at transistor collector, emitter, and base on tone circuit board and compare with schematic and with good channel. Feed 1KHz audio signal to input connection to tone circuit board. Compare output voltage to input voltage which should have a gain ratio of about 6db (2X).

Isolate inoperative stage by checking signal at input of treble control. Compare this voltage to input voltage which should result in 1st stage gain - approximately 6db (2X).

Evaluate distortion in conjunction with power amplifier. Verify bass and treble frequency response with bass and treble boost and cut characteristic curves shown.

5. FAULT ISOLATED TO PREAMP: Check DC voltages at transistor collector, emitter, and base on preamp circuit board and compare with schematic and with good channel. Feed 1KHz audio signal to phono input jack. Compare output voltage at input of tone circuit board to input voltage. The resulting calculated gain ratio should be approximately 40db (100X). Isolate the inoperative stage by checking signal voltage at collector of 1st stage. Verify frequency response with phono equalization curves shown.

6. FAULT ISOLATED TO POWER SUPPLY: Check DC voltages at input and output filter capacitor sections and compare with those shown on schematic. If a voltage measures low, remove leads to amplifier or receiver loads to isolate possibility of leaky or shorted electrolytic capacitor section. Proper operation of zener diode regulating tuner section is -12 volts +5%. Higher voltage indicates open zener diode.

TROUBLE-SHOOTING HINTS

SYMPTOM	POSSIBLE CAUSES AND SOLUTIONS
NO SOUND & DIAL IS <u>NOT</u> LIGHTED.	The main fuse is blown. (Replace it with a 3AG 3-amp fuse - do not use a slo-blo type.)
NO SOUND BUT DIAL IS LIGHTED.	The SPKRS ON-OFF switch is in the OFF position. (Switch it ON.) The NORM-TP MONTR switch is in the TP MONTR (AUX) position. (Switch it to the NORM position.)
ONE CHANNEL IS DEAD	The protective output fuses has blown. Reread the section titled ELECTRICAL CONNECTIONS and then replace fuses. Use 3AG 2-1/2 amp fuses only.
RECEIVER OPERATES IN PHONO MODE ONLY. NO FM RECEPTION.	The FM antenna has become disconnected. Reread the ELECTRICAL CONNECTIONS Section of the manual, and re-install the antenna.
DISTORTED SOUND ON FM	If changing the position of the antenna results in a change in the sound, a better antenna is called for. FM Multipath reception might be suspected. See your local dealer for suggestions.
HUM ON PHONO BUZZ ON PHONO	The phono cables are not connected properly. Check for loose shield connections or lack of phono chassis ground wire. Move the tone arm on its pivot. If the hum changes, the phono cartridge is not properly shielded, or should be moved farther away from the receiver power transformer.
THE DIAL GLASS SEEMS CROOKED	With the case off the receiver, the dial glass may easily be straightened.
THE DIAL POINTER DOES NOT ACCURATELY LOG THE STATIONS	The dial pointer may also be moved in either direction on its cable to correct for minor logging error.

DIAL DRIVE SLIPPAGE: If turning knob does not result in corresponding movement of the dial pointer, dial drive string slippage should be suspected. To remedy, remove the chassis from its cabinet. Ascertain that no oil has reached the drive shaft string notch. If this has occurred, it will be necessary to remove the dial string and clean the notch with carbon tetrachloride. Replace string as per chassis diagram. Adjust spring in drum notch to furnish sufficient tension to prevent slippage on the drive shaft.

If dial pulleys and shaft appear to be dry or "squeak" apply one small drop of LUBRIPLATE to their bearings, being careful that no lubricant reaches the dial shaft string notch. If the dial string shows evidence of oil, it will be necessary to replace the string.

CLEANING ESCUTCHEON FACE PLATE: The beige escutcheon on your Sherwood equipment has been finished with a durable baked enamel. To clean, wipe with a chamois or cloth dampened with a water solution

of liquid detergent. Wipe with dry cloth. Do not use an abrasive scouring powder.

INDICATOR LIGHTS: To replace the indicator lights you must remove the receiver case and escutcheon. Push bulb in and twist counterclockwise.

FM DISTORTION: Your Sherwood receiver has been designed with the correct value of FM audio deemphasis feeding the audio system. Since this amount of deemphasis permits the overall FM audio response to be flat to 20,000 Hz, any distortion generated at the FM station will be heard without moderation by the receiver. With a good high-fidelity speaker system, your ear will be acutely aware of any distortion generated in the system. If you suspect distortion in your FM reception, check several other FM stations to ascertain the degree of distortion originating in the program. Your Sherwood FM receiver has been checked to have less than 1/3% intermodulation distortion before leaving the factory. Each FM program probably has not had a similar check.

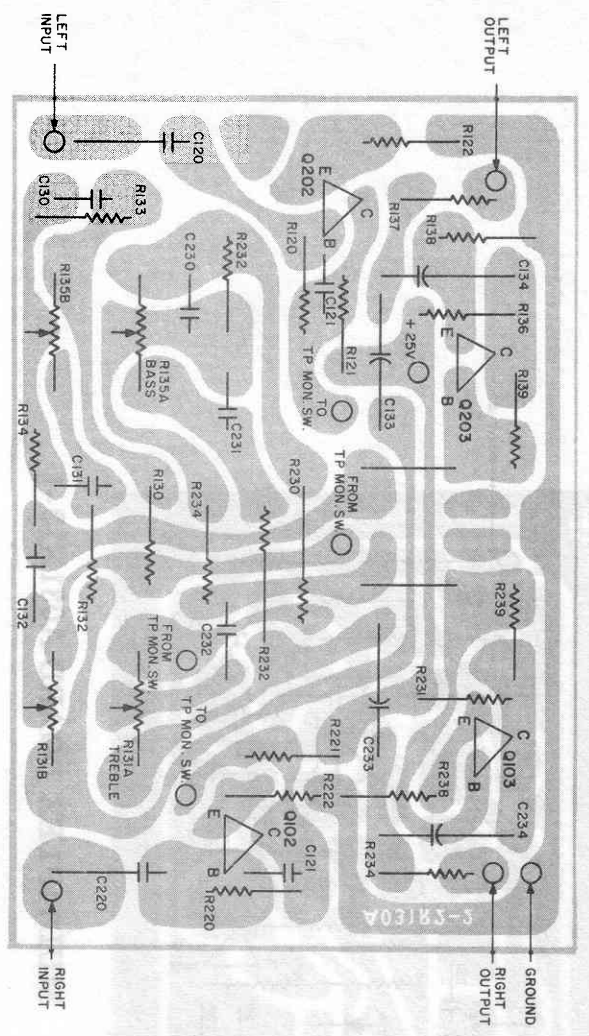
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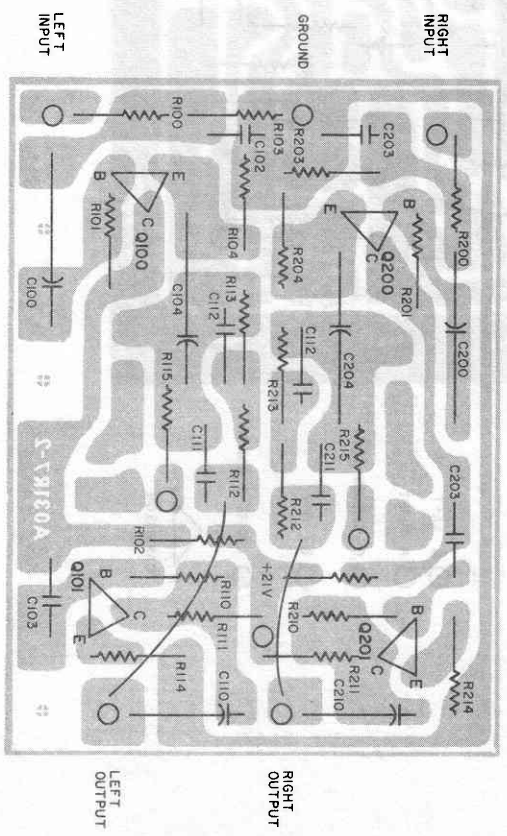
ELECTRONIC LABORATORIES, INC.

4300 NORTH CALIFORNIA AVENUE, CHICAGO, ILLINOIS 60618 IRVING 8-7300

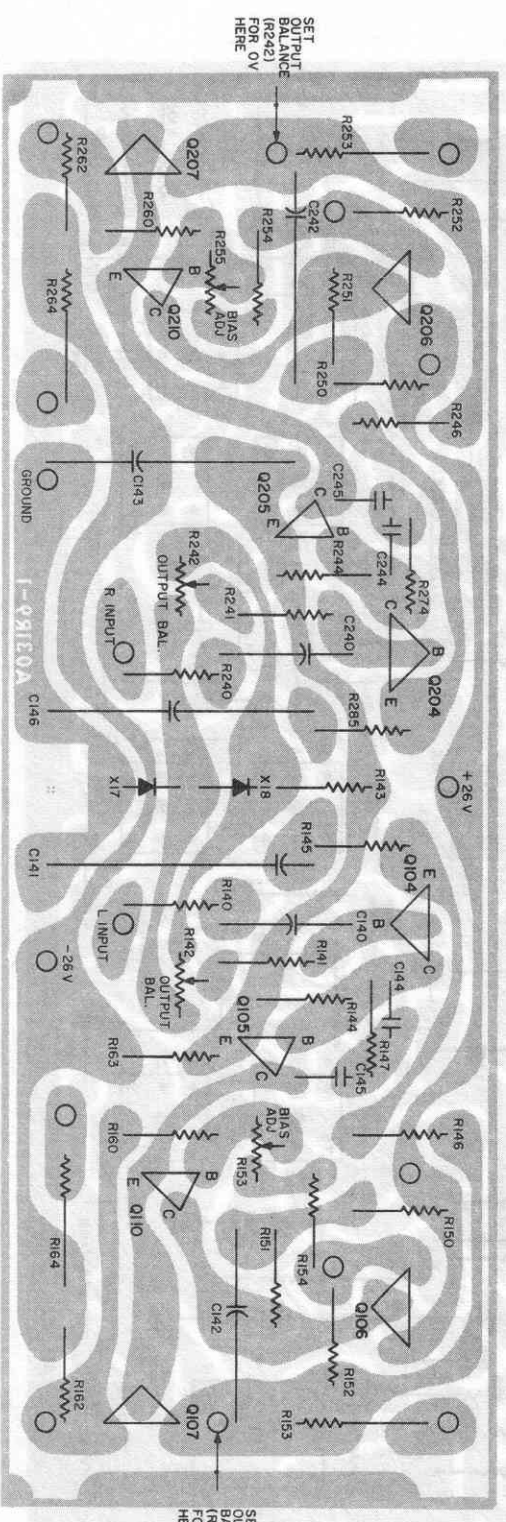
MODEL S-7600 AMPLIFIER SECTION (Serial No. A701001 to A702102)



TONE BOARD A031R2-2



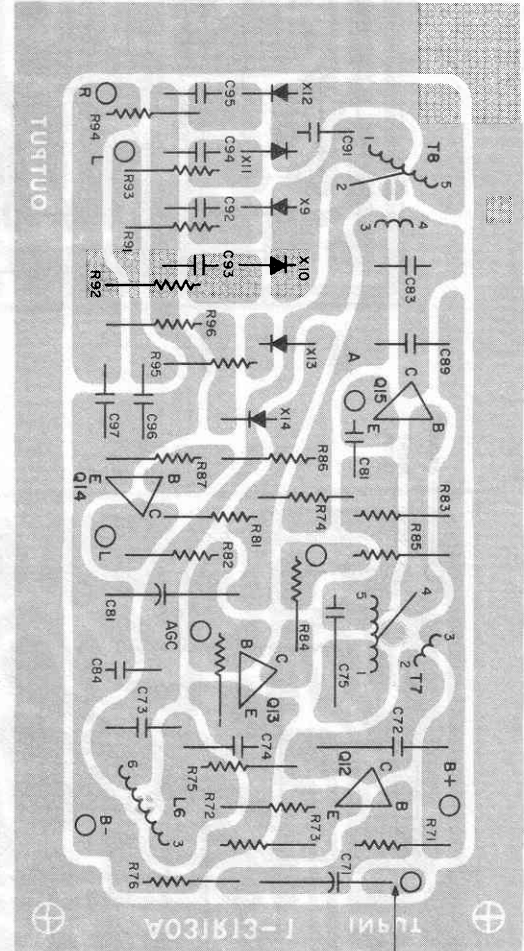
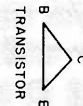
PRE-AMP BOARD A031R7-2



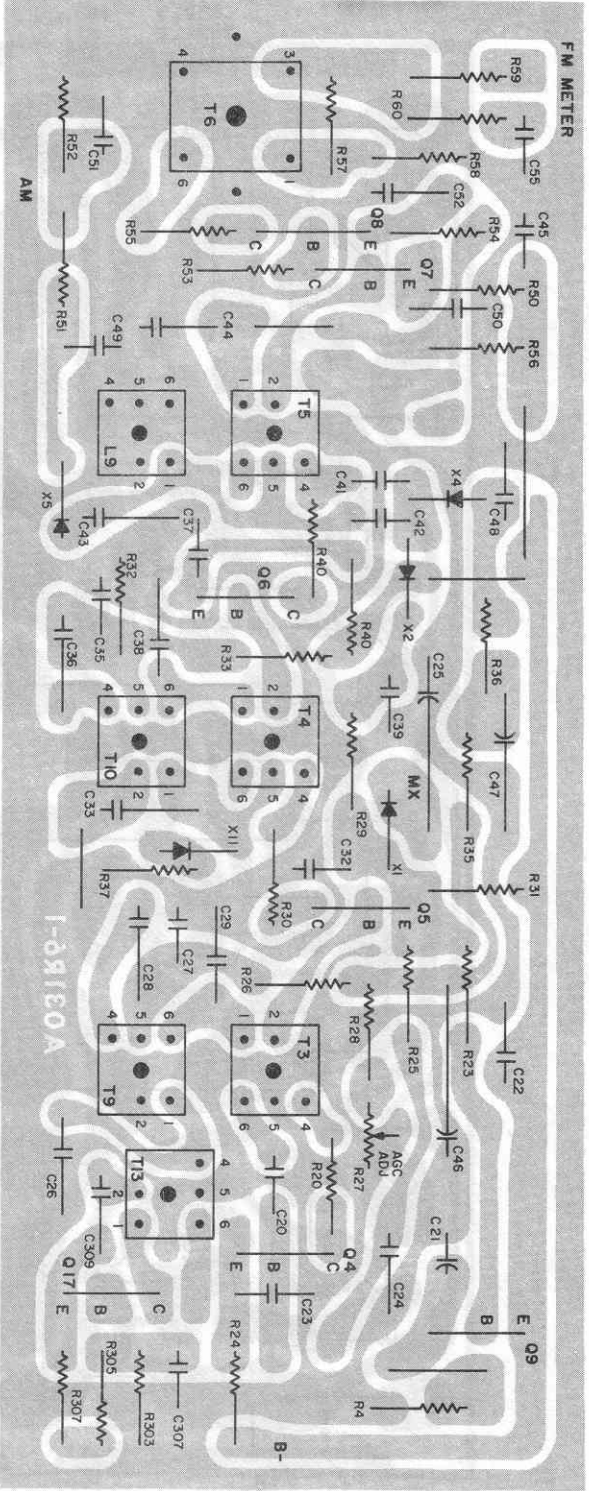
DRIVER BOARD A031R9-1

COMPONENT BOARDS ARE SHOWN FROM COMPONENT SIDE.

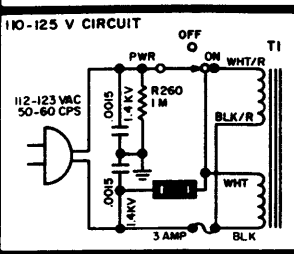
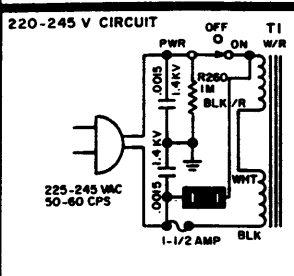
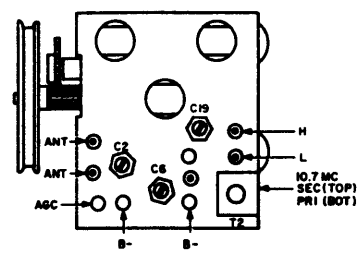
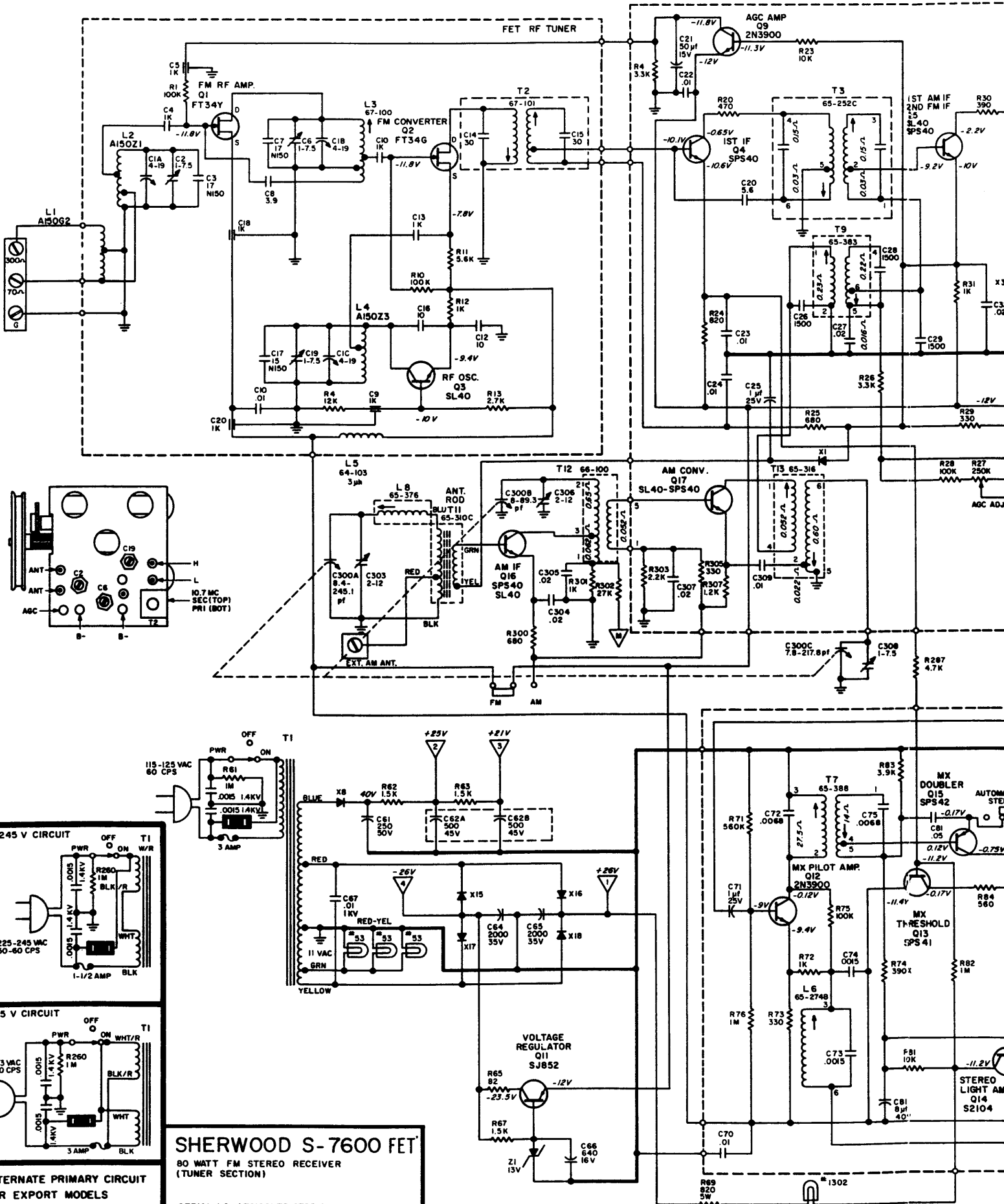
- A TO AUTOMATIC STEREO SWITCH
- L TO STEREO LITE
- L LEFT
- R RIGHT
- B+ GROUND
- B- -12 V
- AGC TO IF BOARD



MULTIPLY BOARD A031R13-1

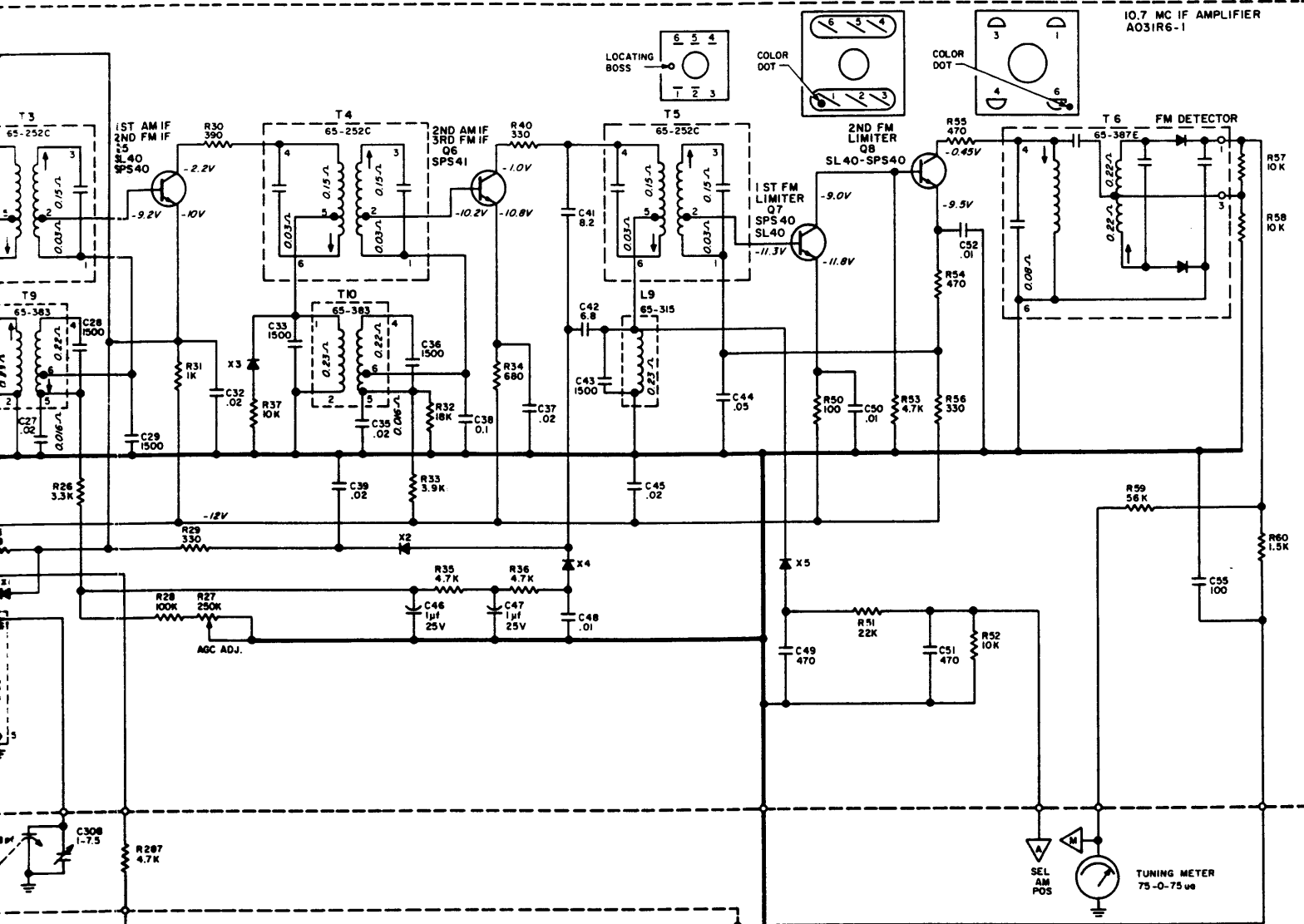


AM-FM I.F. BOARD A031R6-1



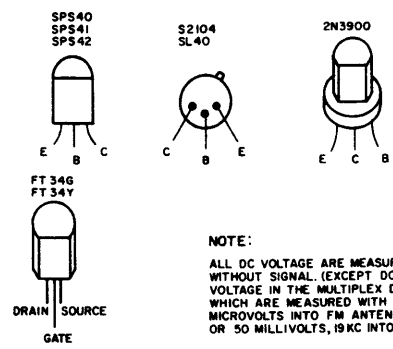
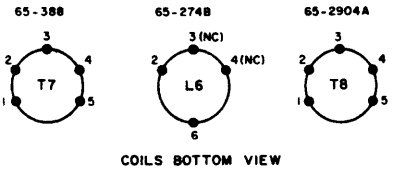
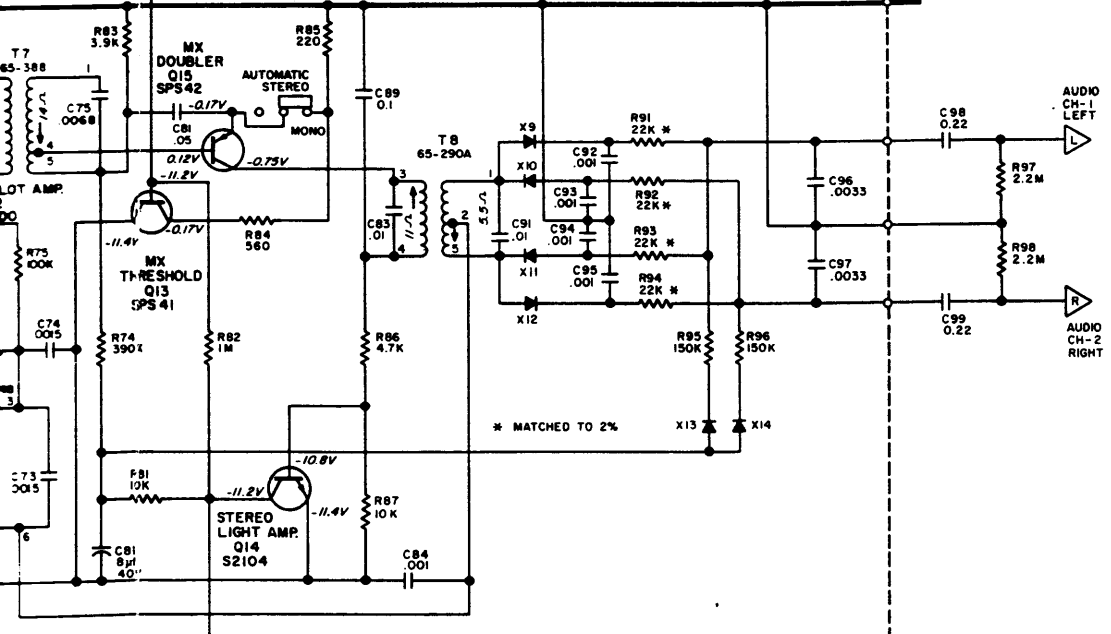
SHERWOOD S-7600 FET
 80 WATT FM STEREO RECEIVER
 (TUNER SECTION)
 SERIAL NO. A701001 TO A702102

10.7 MC IF AMPLIFIER
AO31R6-1

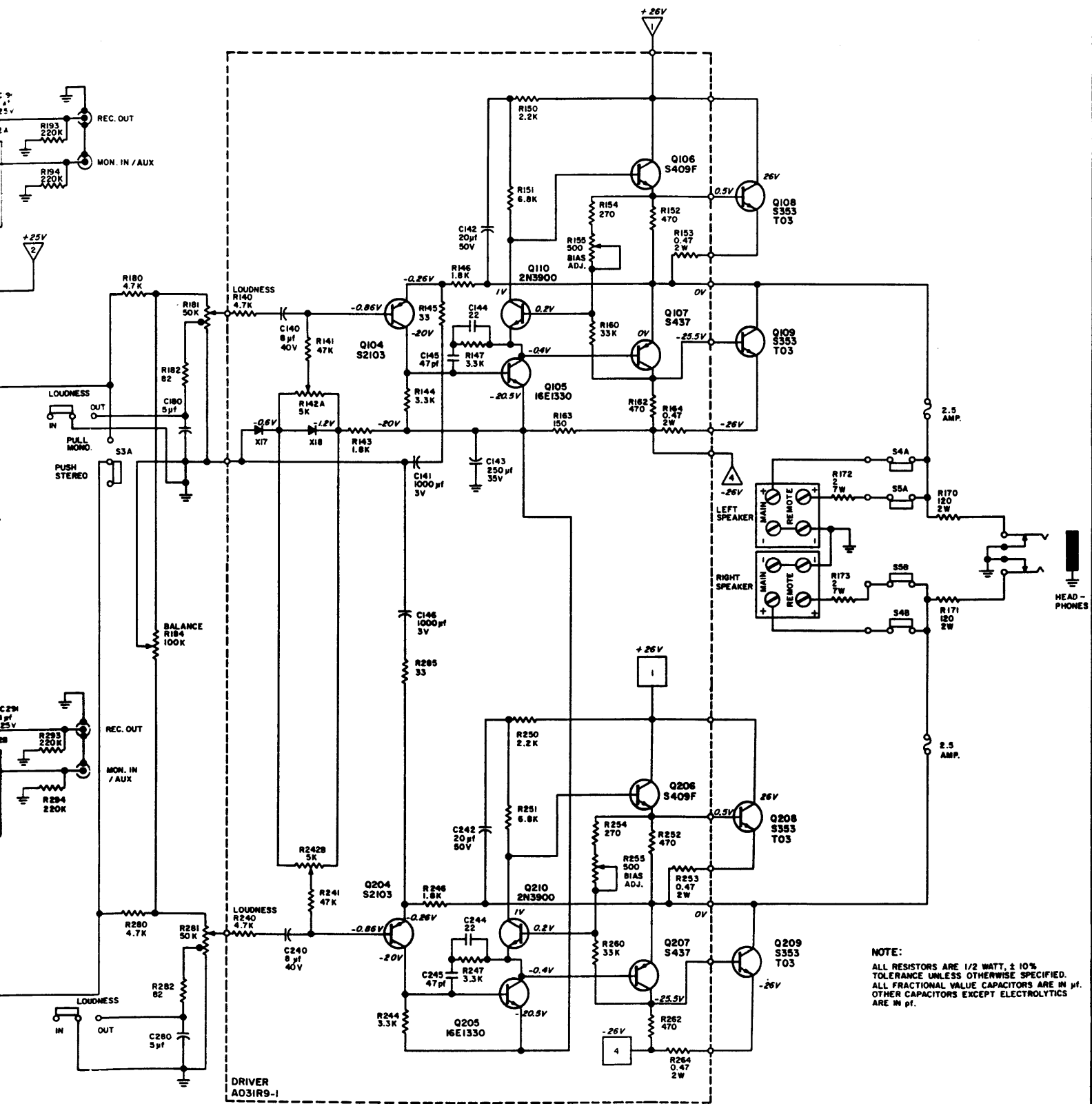


STEREO MULTIPLEX

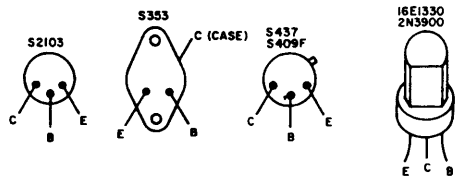
POINT A
SEE NOTE



NOTE:
ALL DC VOLTAGE ARE MEASURED WITHOUT SIGNAL (EXCEPT DC VOLTAGE IN THE MULTIPLEX DECODER WHICH ARE MEASURED WITH 100 MICROVOLTS INTO FM ANTENNA OR 50 MILLIVOLTS, 19 KC INTO POINT A)

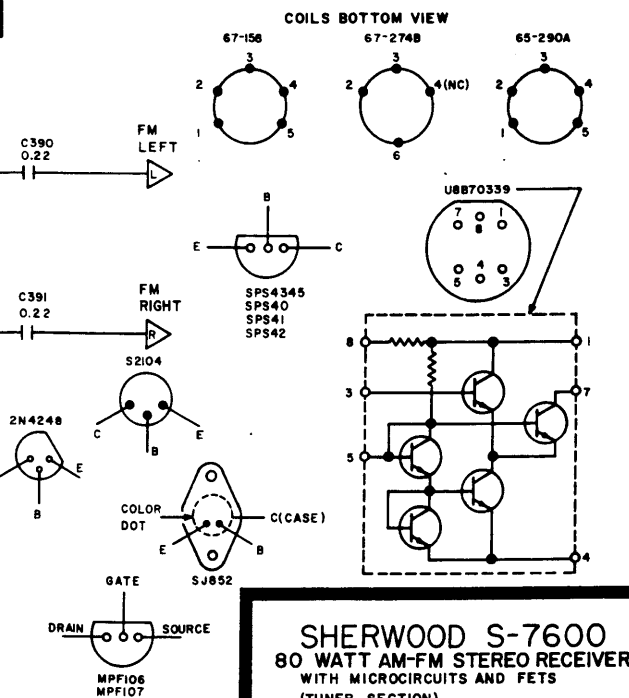
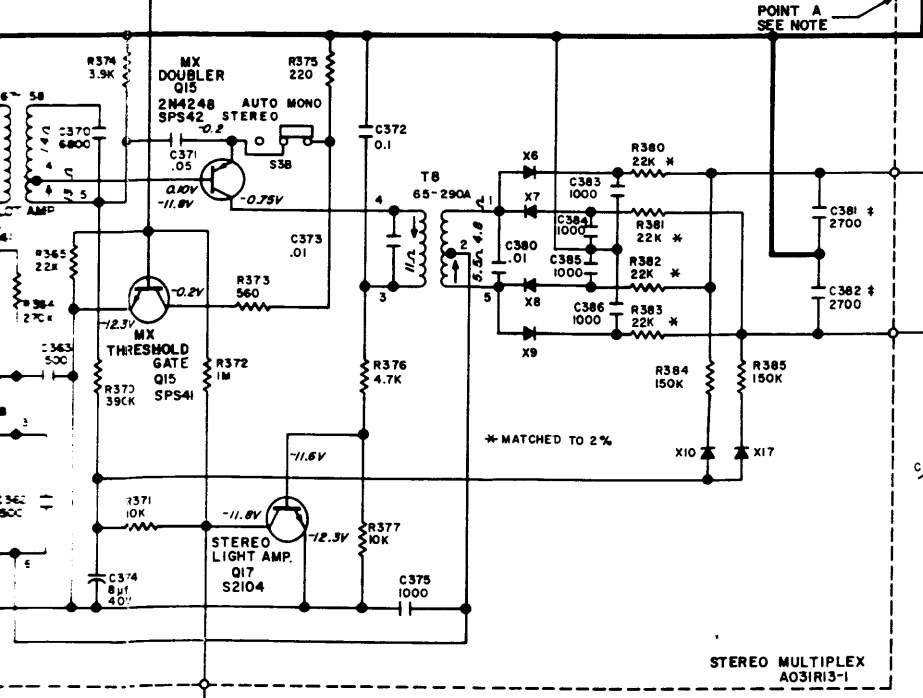
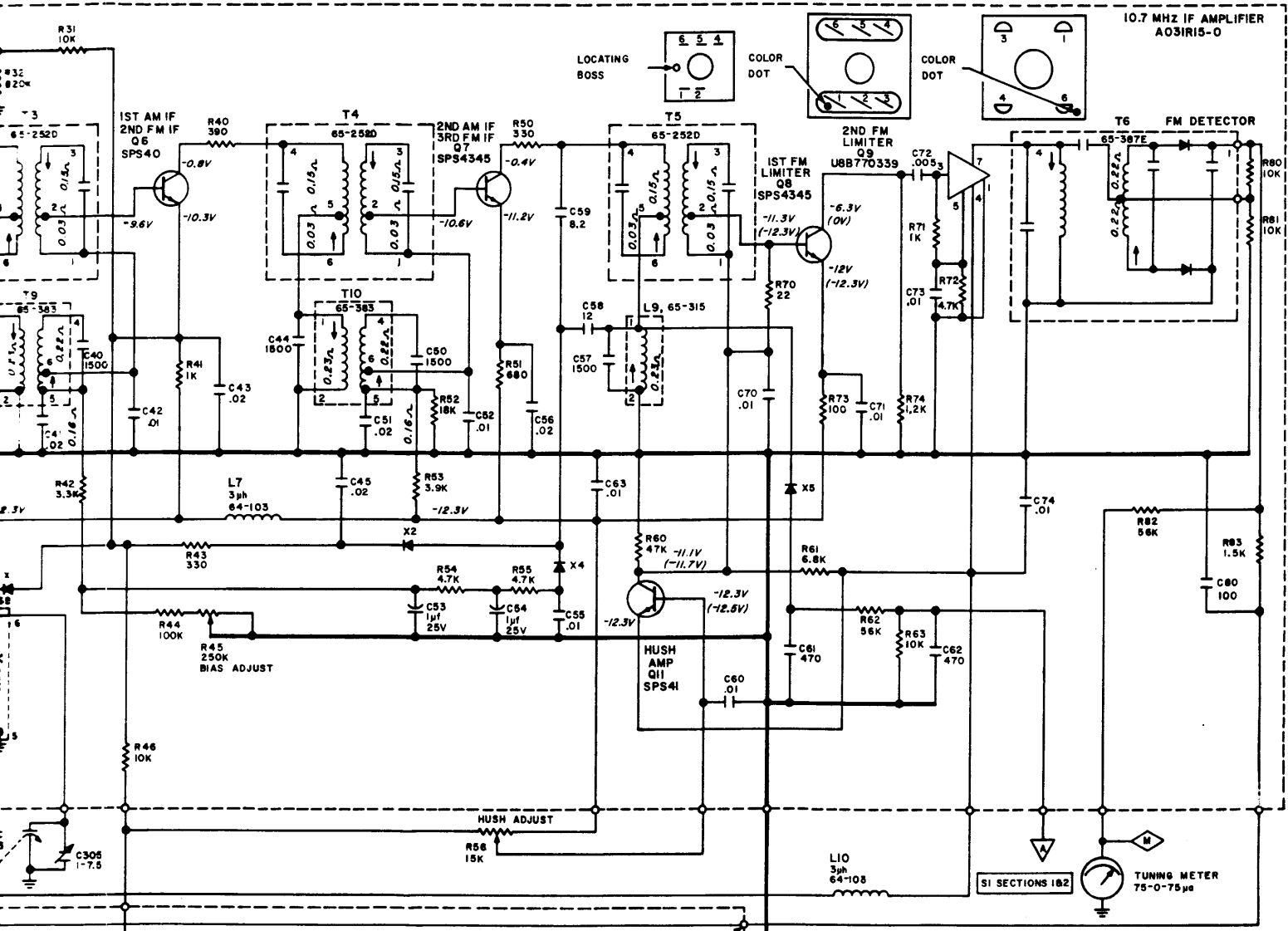


NOTE:
 ALL RESISTORS ARE 1/2 WATT, ± 10% TOLERANCE UNLESS OTHERWISE SPECIFIED. ALL FRACTIONAL VALUE CAPACITORS ARE IN μ F. OTHER CAPACITORS EXCEPT ELECTROLYTICS ARE IN pF.

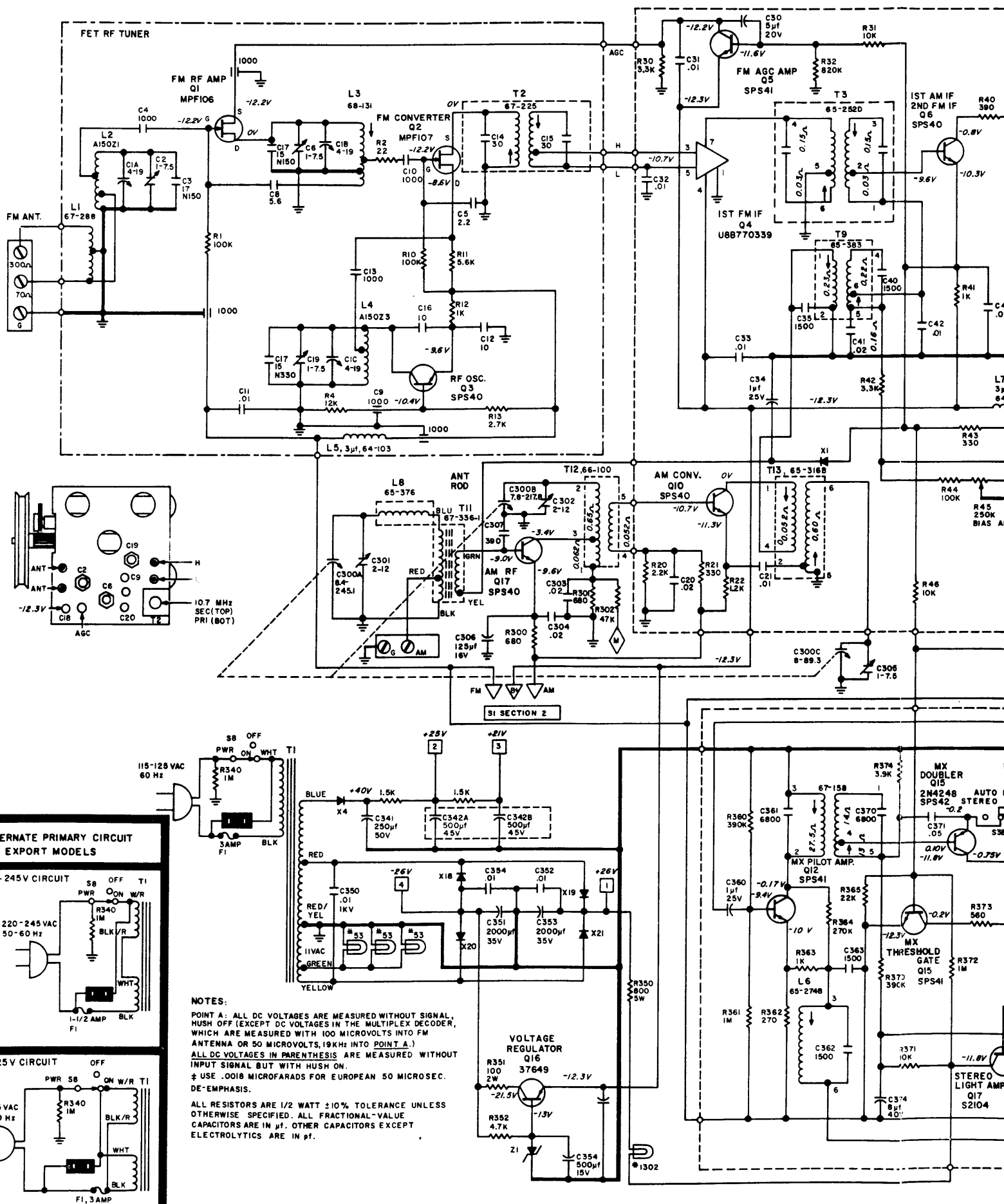


SHERWOOD S-7600 FET
 80 WATT AM-FM STEREO RECEIVER
 (AMPLIFIER SECTION)

SERIAL NO. A701001 TO A702102



SHERWOOD S-7600
80 WATT AM-FM STEREO RECEIVER
 WITH MICROCIRCUITS AND FETS
 (TUNER SECTION)
 SERIAL NO. A802201 TO A803200



FET RF TUNER

FM RF AMP Q1 MPF106

FM CONVERTER Q2 MPF107

FM AGC AMP Q5 SPS41

1ST FM IF Q4 U8B770339

AM CONV. Q10 SPS40

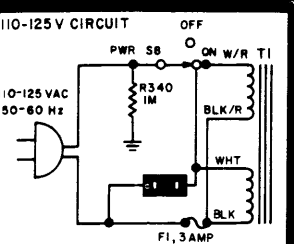
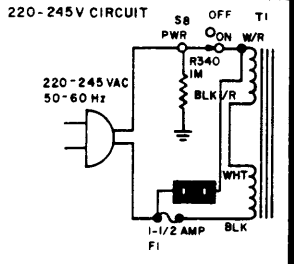
AM RF Q17 SPS40

MX PILOT AMP. Q12 SPS41

MX DOUBLER Q15 2N4248 AUTO M SPS42 STEREO

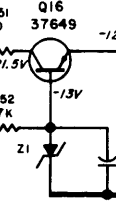
STEREO LIGHT AMP. Q17 S2104

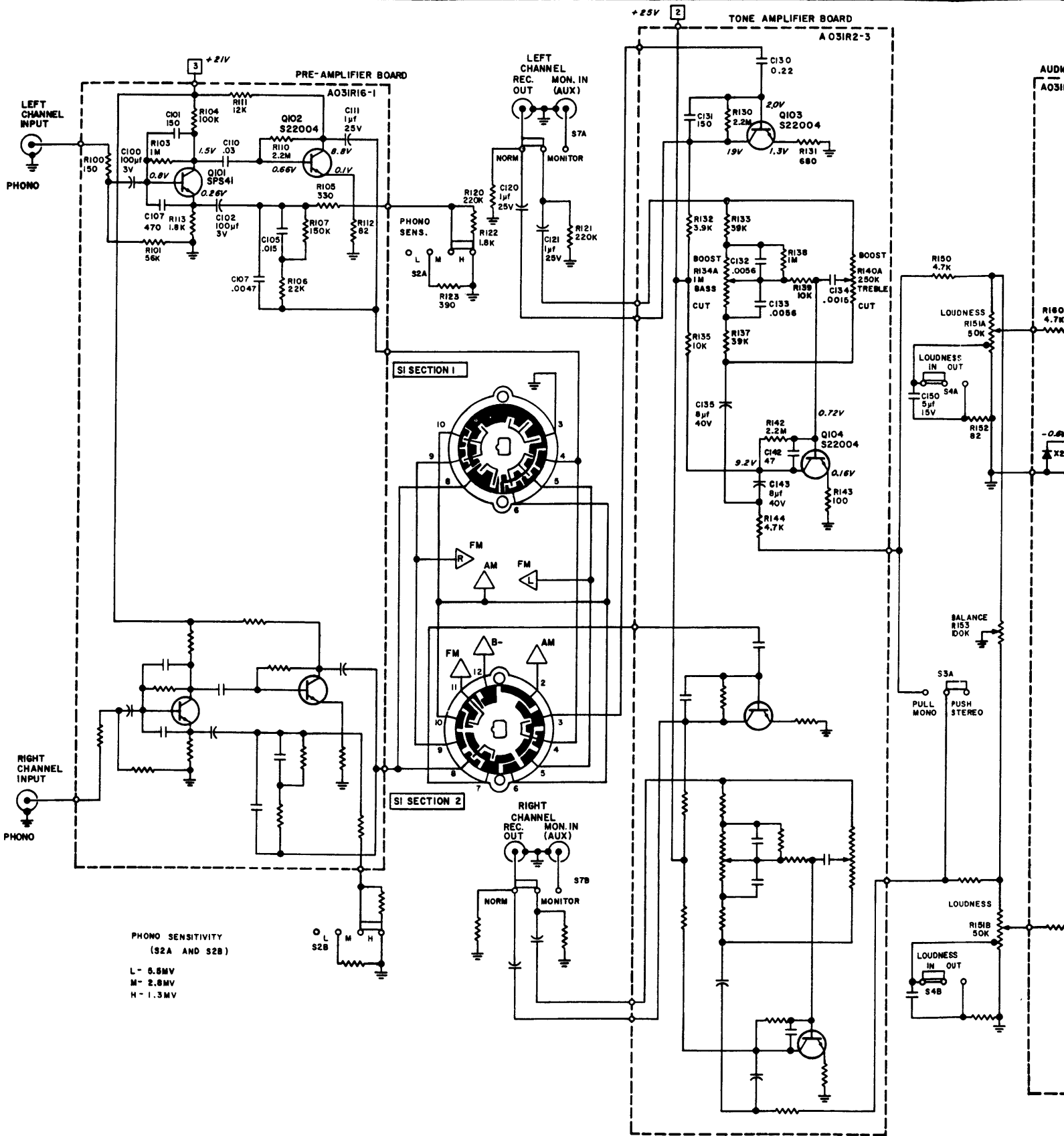
ALTERNATE PRIMARY CIRCUIT FOR EXPORT MODELS



NOTES:
 POINT A: ALL DC VOLTAGES ARE MEASURED WITHOUT SIGNAL, HUSH OFF (EXCEPT DC VOLTAGES IN THE MULTIPLEX DECODER, WHICH ARE MEASURED WITH 100 MICROVOLTS INTO FM ANTENNA OR 50 MICROVOLTS, 19KHz INTO POINT A.)
 ALL DC VOLTAGES IN PARENTHESES ARE MEASURED WITHOUT INPUT SIGNAL BUT WITH HUSH ON.
 ‡ USE .0018 MICROFARADS FOR EUROPEAN 50 MICROSEC. DE-EMPHASIS.
 ALL RESISTORS ARE 1/2 WATT ±10% TOLERANCE UNLESS OTHERWISE SPECIFIED. ALL FRACTIONAL-VALUE CAPACITORS ARE IN µF. OTHER CAPACITORS EXCEPT ELECTROLYTICS ARE IN pF.

VOLTAGE REGULATOR Q16 37649





SHERWOOD S-7600
 80 WATT AM-FM STEREO RECEIVER
 WITH MICROCIRCUITS AND FETS
 (AMPLIFIER SECTION)
 SERIAL NO. A80220 TO A803200

