

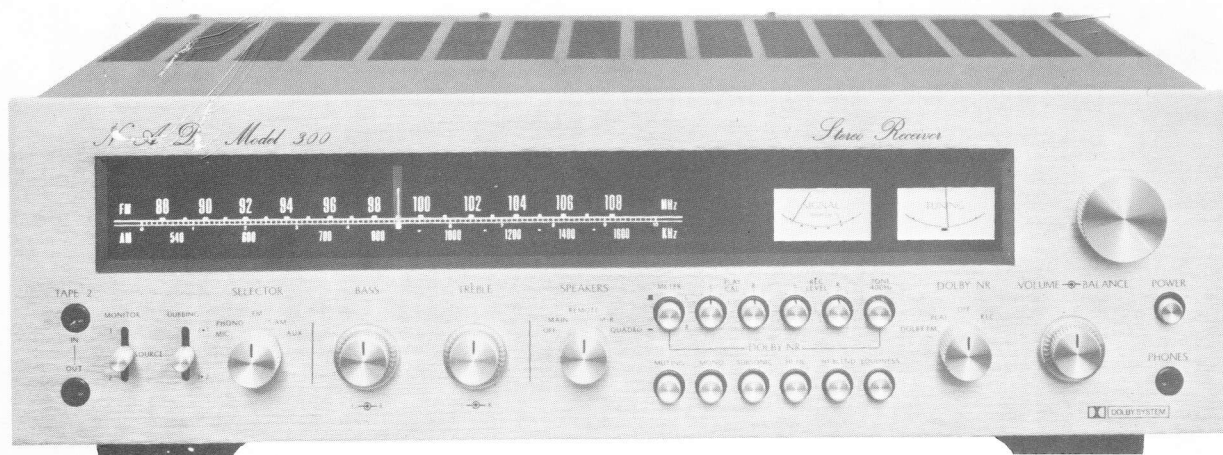


For more Hi-Fi manuals and set-up information
please visit www.hifiengine.com

SERVICE MANUAL

NAD Model 300

STEREO RECEIVER



CONTENTS

	PAGE
1. SPECIFICATIONS	3 ~ 6
2. DISASSEMBLY INSTRUCTIONS	7
3. DIAL STRINGING DETAIL	7
4. ALIGNMENT AND CHECK POINTS	8
5. ALIGNMENT PROCEDURES	9 ~ 12
6. CHANGING POWER LINE VOLTAGES	13
7. TROUBLESHOOTING	14 ~ 18
8. TUNER FRONT-END	19
9. 0036 TUNER BOARD	20
10. 5027 PRE-AMPLIFIER BOARD	21
11. 6038 MAIN AMPLIFIER BOARD	22
12. 7105 SWITCH BOARD	23
13. 7110 DOLBY NR BOARD	24
14. 7118 DOLBY FM CALIBRATION BOARD	25
15. 8025 POWER SUPPLY BOARD	25
16. 9025 TONE AMPLIFIER BOARD	26
17. ELECTRICAL PARTS LIST	27 ~ 36
18. MISCELLANEOUS PARTS LIST	37
19. BLOCK DIAGRAM	38
20. INTERNAL VIEW OF INTEGRATED CIRCUIT	39
21. SCHEMATIC DIAGRAM	SEPARATE SHEET

1. SPECIFICATIONS

	NOMINAL	LIMIT	UNIT
A. FM SECTION			
1. FM Tuning Range *Adjustment for tuning prohibited below 87.5 MHz in West Germany		*87.7—108	MHz
2. Dial Calibration Accuracy 90 & 106 MHz	±150	±200	kHz
98 MHz	±100	±200	kHz
3. IHF Sensitivity at 90, 98 & 106 MHz Noise and Distortion: —30 dB	1.8	2.8	μV
4. Image Rejection at 98 MHz	83	73	dB
5. IF Rejection at 90 MHz	90	75	dB
6. AM Rejection at 98 MHz at 30% AM & 100% FM Simultaneous Modulation, 100 — 20,000 μV Antenna Input	50	45	dB
7. Limiter Sensitivity at — 1 dB Below Maximum Audio	1.6	3	μV
8. Total Harmonic Distortion at 98 MHz TAPE OUT (at 400 Hz 100% Modulation, 1,000 μV Input)	0.25	0.6	%
9. Spurious Response at 98 MHz Antenna Input: 3 μV OSC 2nd 206.7 MHz 1/2 IF 103.35 MHz		80 80	dB dB
10. IF Bandwidth, 6 dB down Antenna Input: 100 μV	250	200	kHz
11. IF Bandwidth, 50 dB down Antenna Input: 100 μV	600	800	kHz
12. Signal-to-Noise Ratio 100% Mod., 1 mV Input	70	65	dB
13. Capture Ratio 1,000 μV, MONO Input	1.2	2	dB
14. Output Voltage Stereo and Mono, 400 Hz, 100% Mod. TAPE-2 OUT	1.0	0.8	V
15. Alternate Channel Selectivity (IHF) Antenna Input: 100 μV	75	60	dB
16. Muting Threshold	10	8—20	μV
B. FM MPX SECTION			
1. Stereo Separation at 98 MHz (Antenna Input: 1,000 μV) 100 Hz	35	30	dB
1 kHz	40	33	dB
10 kHz	28	22	dB
HI-BLEND on, at 1 kHz	13	13±3	dB
2. Total Harmonic Distortion at 98 MHz Stereo, 1 mV Antenna Input 1 kHz and/or 500 Hz 100% Mod., at REC OUT	0.4	1.2	%
3. Automatic Stereo Threshold	10	5—16	μV
4. Residual 19 kHz & 38 kHz at 98 MHz, 1 mV Input	50	45	dB
5. Stereo Frequency Response 40 — 10,000 Hz		±1	dB
6. 19 kHz Pilot Signal Dev. to Activate		7	%

	NOMINAL	LIMIT	UNIT
<u>C. AM SECTION</u>			
1. AM Tuning Range	525—1,650	535—1,605	kHz
2. Sensitivity (IHF) at 600, 1,000, 1,400 kHz, 400 Hz, 30% Mod.	200	400	μ V/m
3. Bandwidth 6 dB down at 1,000 kHz with Antenna Input of 500 μ V/m	6	4—10	kHz
4. Image Rejection at 1,400 kHz	80	60	dB
5. IF Rejection at 600 kHz	40	32	dB
6. AGC Figure of Merit Form 0.2 V/m, at 1,000 kHz	50	45	dB
7. Total Harmonic Distortion at 1,000 kHz 5,000 μ V/m Antenna Input, 400 Hz, 30% Mod., at REC OUT	1.5	2.5	%
8. Dial Calibration Accuracy			
600 kHz		± 12	kHz
1,000 kHz		± 20	kHz
1,400 kHz		± 30	kHz
9. Output Voltage 1 kHz 30% Mod. 5 mV/m Input at TAPE 2 OUT	150	120	mV
10. Signal-to-Noise Ratio 400 Hz 30% Mod. 50 mV/m Input	45	42	dB
<u>D. AUDIO SECTION</u>			
1. Output Power 0.3% THD, 20 Hz — 20 kHz, 8 ohms Load, Both Channels Driven	85	80	W/Channel
2. Harmonic Distortion at 1 kHz, 8 ohms Load, 65 Watts Output	0.03	0.1	%
3. Intermodulation Distortion at 2 V Output, 4 ohms Load	0.06	0.15	%
4. Frequency Response AUX 1 W Output, 8 ohms Load 20 Hz — 20 kHz		+0.5 -2.0	dB dB
5. Input Sensitivity at 1 kHz, for 25.3 Volt Output, 8 ohms Load			
PHONO	3	3 $\pm$ 0.5	mV
AUX	200	200 $\pm$ 30	mV
MIC	2.2	2.2 $\pm$ 0.5	mV
TAPE IN	200	200 $\pm$ 30	mV
6. Tape Recording Output Level Front Panel Phono Jack/Rear Panel DIN Jack at PHONO Input: 3 mV	200/30	200 $\pm$ 30/30 $\pm$ 5	mV
7. Phono Input Equalization 50 — 15,000 Hz	$\pm$ 0.5	$\pm$ 1.2	dB

	NOMINAL	LIMIT	UNIT
8. Harmonic Distortion of EQ Amplifier Section at 1 kHz, 50 mV Input	0.035	0.08	%
9. Overload Capability of EQ Amplifier Section at 1 kHz, 0.1% HD	240	200	mV
10. Tone Control			
BASS at 100 Hz	± 10	$\pm 10 \pm 2$	dB
TREBLE at 10 kHz	± 10	$\pm 10 \pm 2$	dB
11. Gain Difference of Left and Right Channels at AUX and PHONO		1.5	dB
12. High-Filter at 7 kHz	-5	± 2	dB
13. Subsonic Filter at 40 Hz	-3	± 2	dB
14. Channel Separation on AUX Input Opposite Channel: Shorted			
100 Hz	70	50	dB
1 kHz	80	60	dB
10 kHz	70	50	dB
15. Signal-to-Noise Ratio (Input Shorted)			
PHONO	63	58	dB
AUX	85	75	dB
TAPE IN	85	75	dB
Volume Minimum	90	85	dB
16. LOUDNESS Compensation (-30 dB)			
100 Hz	+8	$+8 \pm 2$	dB
10 kHz	+5	$+5 \pm 2$	dB
17. Harmonic Distortion of Pre-Amplifier Section 20 Hz - 20 kHz, 2 Volt Output 50 Kohms Load	0.02	0.1	%
18. Input Sensitivity of Pre-Amplifier Section at 1 kHz, for 25.3 Volts Output, 8 ohms Load	1	1 ± 0.2	V
E. DOLBY NR SECTION			
1. Output vs Input at REC Position at 2 kHz, 0 dB=30 mV			
Input Level 0 dB	0	± 2	dB
-20 dB	-15.7	-15.7 ± 2	dB
-30 dB	-21.5	-21.5 ± 2	dB
-40 dB	-31.1	-31.1 ± 2	dB
2. Output vs Input at PLAY Position at 5 kHz, 0 dB=30 mV			
Input Level 0 dB	0	± 2	dB
-20 dB	-26.7	-26.7 ± 2	dB
-30 dB	-40.3	-40.3 ± 2	dB
3. Frequency Response of DOLBY FM Input=30 mV 5 kHz	+3	$+3 \pm 1$	dB
10 kHz	+5	$+5 \pm 1$	dB

	NOMINAL	LIMIT	UNIT
<u>F. GENERAL</u> 1. Power Requirements 220 VAC, 50 Hz (120, 240 VAC, 50 Hz) 2. Dimensions 508(W) x 400(D) x 145(H) mm 3. Weight 22 Kg.			

2. DISASSEMBLY INSTRUCTIONS

- 1) Removing the metal enclosure from chassis. (Refer to Figure A)
Remove seven screws from top of the enclosure and four screws from both sides of the enclosure, then pull off the enclosure from the chassis.
- 2) Removing the Front Panel. (Refer to Figure A)
 - a) Pull off all the control knobs except for PLAY CAL and REC LEVEL.
 - b) Remove three nuts from SELECTOR, SPEAKERS and DOLBY NR controls.
 - c) Remove three screws from top of the Front Panel and remove Front Panel.

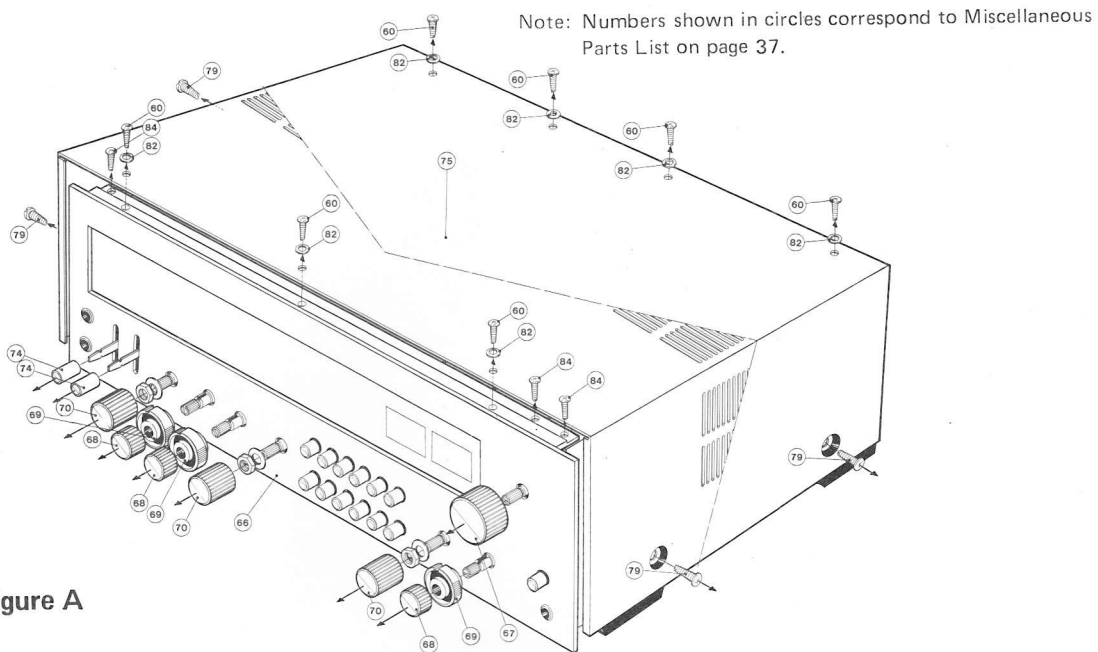
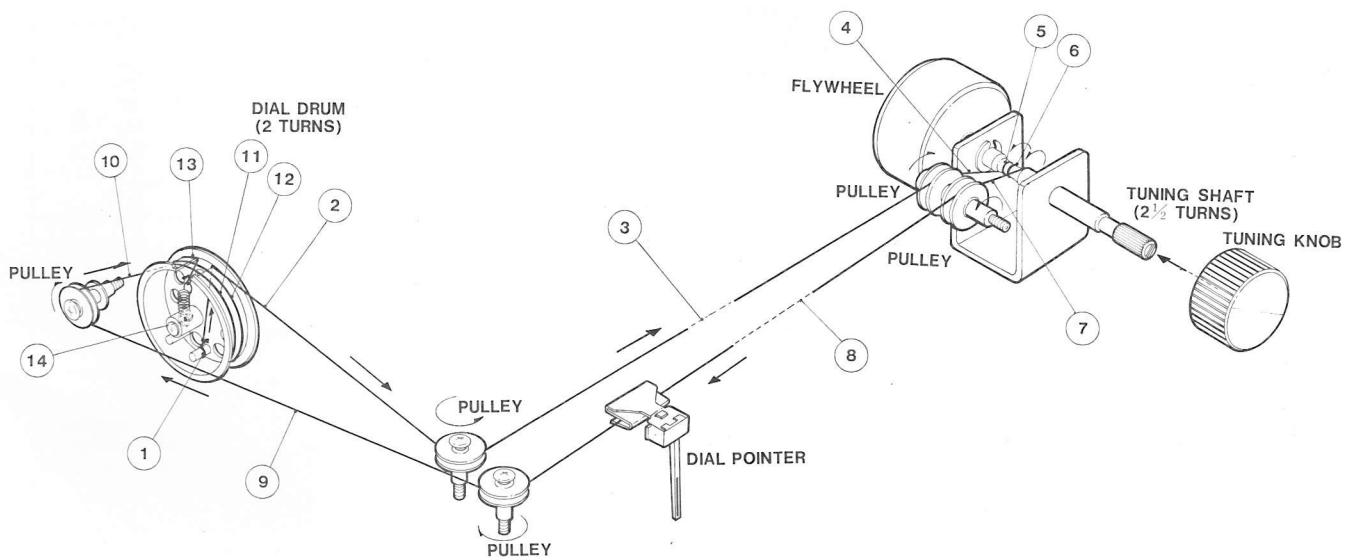


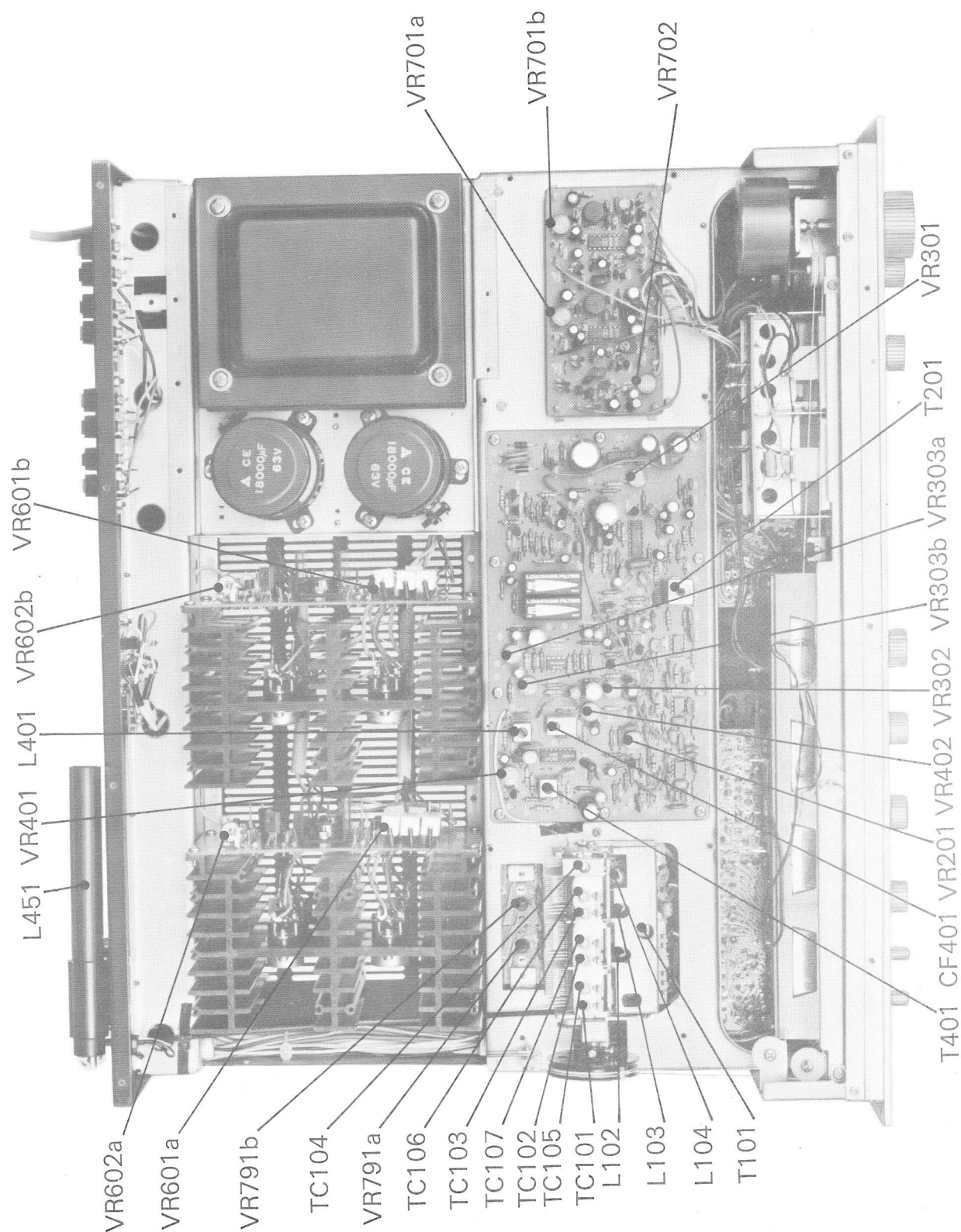
Figure A

3. DIAL STRINGING DETAIL

Note: Tuning capacitor should be fully closed position.



4. ALIGNMENT AND CHECK POINTS



5. ALIGNMENT PROCEDURES

Do not attempt alignment unless the following equipment is available.

EQUIPMENT DESCRIPTION

- | | | |
|------------------------|---------------------|----------------------|
| 1. AM Signal Generator | 5. Stereo Modulator | 9. Frequency Counter |
| 2. Oscilloscope | 6. Audio Generator | |
| 3. AC Voltmeter | 7. Distortion meter | |
| 4. FM Signal Generator | 8. DC Voltmeter | |

AM IF & RF ALIGNMENT

Output of signal generator should be no higher than necessary to obtain an output reading.
Set SELECTOR switch S1 to AM.

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Refer Fig. 1	455 kHz (400 Hz Mod.)	Point of non-interference. (on/about 600 kHz)	AC Voltmeter to TAPE OUT jack.	T401 (RF Coil) Both sections CF401	Adjust for maximum reading.
2	Same as Step 1	600 kHz (400 Hz Mod.)	600 kHz	Same as step 1	L401 (OSC Coil) L451 (ANT Coil)	Adjust for maximum reading.
3	Same as Step 1	1400 kHz (400 Hz Mod.)	1400 kHz	Same as step 1	TC107 (OSC Trimmer) TC105 (ANT Trimmer) TC106 (RF Trimmer)	Adjust for maximum reading. Repeat steps (2) and (3)
4	Same as Step 1	1000 kHz (400 Hz Mod.)	1000 kHz	Same as step 1	VR402	Adjust for 150 mV Audio Output
5	Same as Step 1	1000 kHz (400 Hz Mod.) SG output level 28mV/m	1000 kHz	SIGNAL Meter	VR401	Adjust for maximum reading on SIGNAL meter

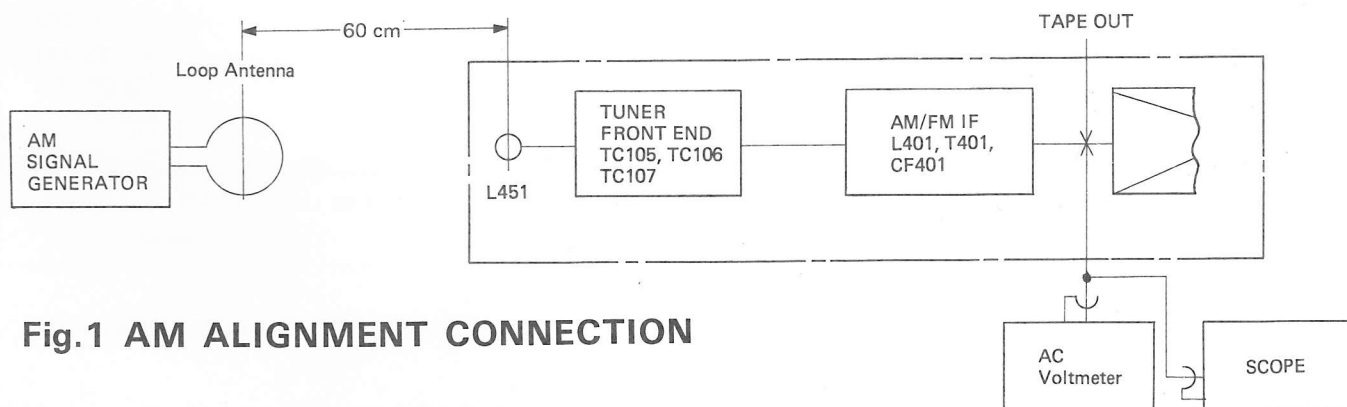


Fig.1 AM ALIGNMENT CONNECTION

FM RF AND IF ALIGNMENT

Signal generator output should be no higher than necessary to obtain an output reading.

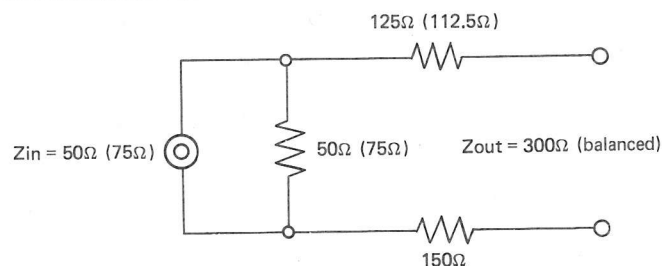
Set Selector switch to FM.

Signal Generator deviation: 75 kHz

STEP	SIGNAL GENERATOR COUPLING	SIGNAL GENERATOR FREQUENCY	RECEIVER DIAL SETTING	INDICATOR	ADJUSTMENT	REMARKS
1	Connect to FM Antenna Terminal through FM Dummy Antenna (300 Ω) Fig. 2	90 MHz (400 Hz, Mod.)	90 MHz	AC Voltmeter connected to TAPE OUT jack	L104 (FM OSC Coil) L101 (FM ANT Coil) L102, L103 (FM RF Coil)	Adjust for maximum reading on AC Voltmeter
2	Same as Step 1	106 MHz (400 Hz, Mod.)	106 MHz	Same as Step 1	TC104 (FM OSC Trimmer) TC101 (FM ANT Trimmer) TC102, TC103 (FM RF Trimmer)	Adjust for maximum reading
Repeat steps 1 & 2 until no further improvement is possible.						
3	Same as Step 1	90 MHz (400 Hz, Mod.)	90 MHz	Same as Step 1	T101 (FM IFT)	Adjust for maximum reading
4	Same as Step 1	90 MHz (400 Hz, Mod.)	90 MHz	DC Voltmeter: connect between BASE of TR305 and Ground	T201 TOP (DISCRIMINATOR)	Adjust for 0V on DC Voltmeter
5	Same as Step 1	90 MHz (400 Hz, Mod.)	90 MHz	Distortion Meter connected to TAPE OUT jack	T201 Bottom	Adjust for minimum distortion
6	Same as Step 1	98 MHz (400 Hz, Mod.) SG output level: 1 V	98 MHz	Signal Meter	VR201	Adjust for maximum reading
7	Same as Step 1	98 MHz (400 Hz, Mod.)	98 MHz	AC Voltmeter connected to PIN 2 (or 9) of 7110 DOLBY NR BOARD	VR791a(or b)	Adjust for 60 mV reading on AC Voltmeter

Fig.2 FM DUMMY ANTENNA

FM Dummy Antenna to 300 Ω antenna terminal of Receiver.



MPX ALIGNMENT

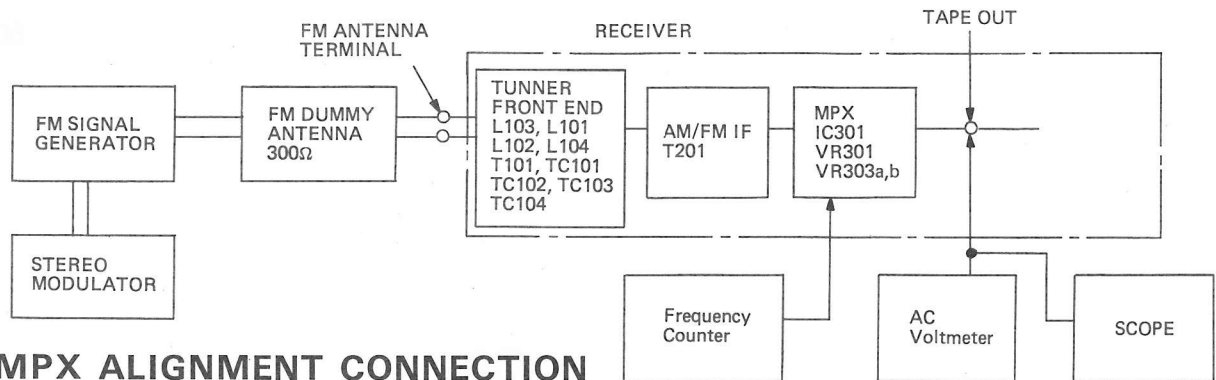


Fig.3 MPX ALIGNMENT CONNECTION

Set SELECTOR Switch to FM.

Tune for 98 MHz on band.

Signal Generator output level: 1000 μ V, Deviation: 75 kHz at 100% modulation of composite signal.

Connect Signal Generator to FM Antenna Terminal through FM Dummy Antenna (300Ω).

STEP	19 kHz (PILOT SIGNAL) Modulation Level	SIGNAL GENERATOR Freq. Set to	OUTPUT INDICATOR Connected to	ADJUST- MENT	ADJUST FOR	NOTE
1	PILOT OFF	Stereo Modulator (Sub Signal)	Frequency counter connect to #12 PIN on IC301	VR301	19 kHz	
2	8%	Composite 1 kHz R channel SG output level: 5 μ V	Stereo beacon lamp	VR302	Just turns ON	Adjust so TR311 turns ON, with SG output level of 5 μ V
3	8%	Composite 1 kHz R channel	AC Voltmeter to TAPE OUT jack of R channel			Adjust input for audio output of about 1.1 V
4	8%	Composite 1 kHz L channel	AC Voltmeter to TAPE OUT jack of R channel	VR303a	Minimum	AC Volt- meter reading should be at least 30 dB below read- ing in step 3.
5	8%	Composite 1 kHz R channel	AC Voltmeter to TAPE OUT jack of L channel	VR303b	Minimum	Same as Step 4.

MAIN AMP & DOLBY NR ALIGNMENT

STEP	ADJUSTMENT	INDICATOR	REMARKS
1	VR601a, b (Bias control)	DC Voltmeter	Adjust for 0.025V across R629a, b or R630a, b (0.82) with no signal.
2	VR602a, b (DC balance control of output)	DC Voltmeter	Connect DC Voltmeter to SPEAKER terminals. Adjust for $0V \pm 20$ mV reading on DC Voltmeter.
3	VR702 (output level control of 400 Hz TONE)	AC Voltmeter	Connect AC Voltmeter to output terminal (Pin #1) of 7110 DOLBY NR Board. Adjust for 30 mV reading on AC Voltmeter.
4	VR701a, b (DOLBY level cal. of SIGNAL Meter)	SIGNAL Meter	Adjust for DOLBY level on SIGNAL Meter reading with 400 Hz TONE button (located on the Front Panel) pushed in position, with DOLBY NR switch to the PLAY position.

NOTE:

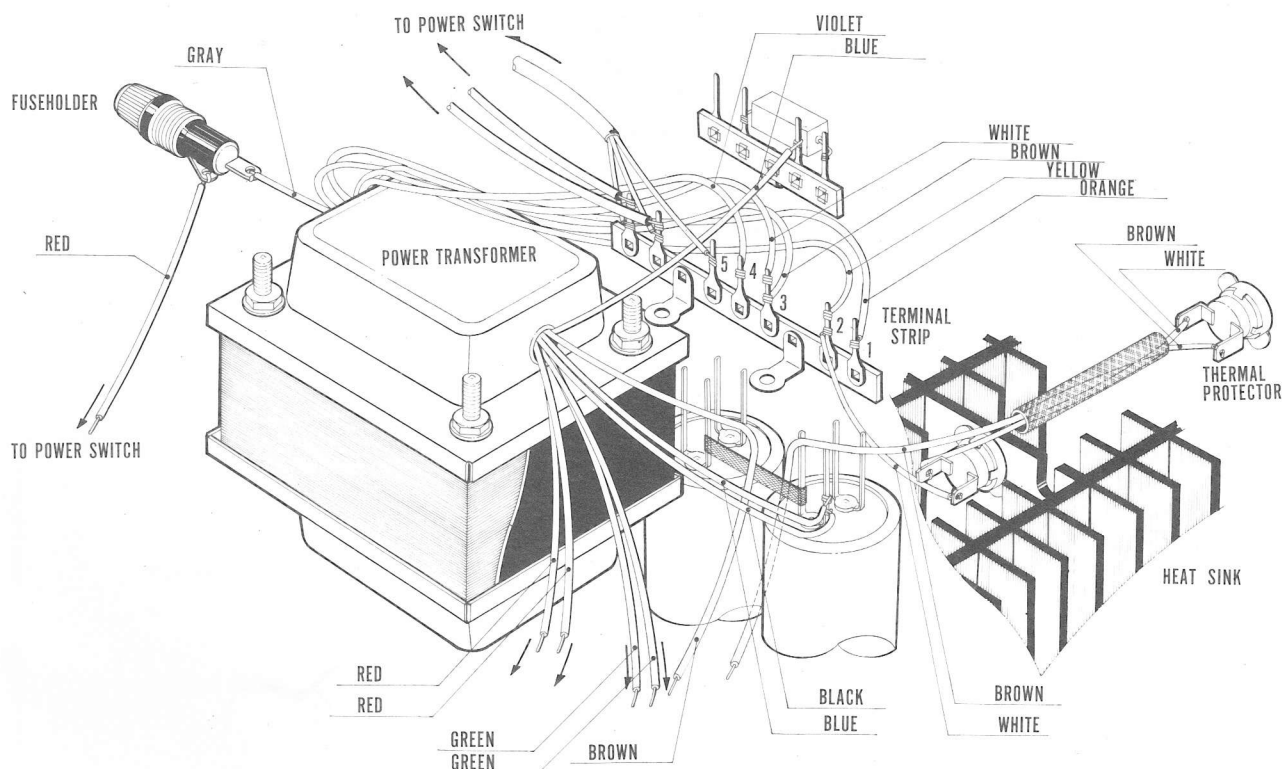
1. The proper bias adjustment is most important to assure correct performance of the amplifier. Bias adjustment is necessary if any of the transistors are replaced in the power amplifier circuitry or the amplifier exhibits overheating of the output transistors under normal operating conditions.
2. This Receiver has built-in overload thermal protections, one is installed within power transformer and the others are installed on heat sinks of power transistors.
In case of the thermal protector of power transformer, when the temperature of thermal protector reach to $135 \pm 5^{\circ}\text{C}$, the thermal protector will be automatically cut out, and as soon as the temperature goes down to $110 \pm 10^{\circ}\text{C}$, the thermal protector turns back on automatically.
The protectors of heat sinks have the same effect as above except for working temperature. When their temperature rises up to $115 \pm 5^{\circ}\text{C}$, these protectors will be automatically cut out, and as soon as the temperature falls down to $40 \pm 10^{\circ}\text{C}$, these protectors turn back on automatically.

6. CHANGING POWER LINE VOLTAGES

The NAD300 has a multi-voltage Power Transformer of 120V, 220V and 240V.

1. Remove the chassis out of cabinet and open the bottom cover of chassis.
2. Change the soldering of primary transformer wire as follows (with a setting of 220V as indicated in figure).
 - A. To change from 220V to 240V.
Remove the white wire from pin-2 of terminal strip and connect the white wire to pin-1 (already connected orange wire).
 - B. To change from 220V to 120V.
Remove the orange wire from pin-1 and the white wire from pin-3 of terminal strip, then connect the orange wire to pin-4 of terminal strip and the white wire to lug of fuseholder (already connected gray wire).
Also remove the white wire to pin-2 of terminal strip and connect the white wire to pin-3 of terminal strip.

"WARNING" If the power transformer connections are not set for the correct local voltage the set will be damaged in case it is switched on.
Please RE-CHECK the connections before power goes on.



7. TROUBLESHOOTING

Symptom	Cause and Remedy
1) Fuse blows when power is turned on.	A) Power Transformer T851 defective. Replace the transformer. B) Short in the primary or secondary of transformer circuitry. Repair the short. C) Damaged rectifier D806, D805, D831, D832. Replace the damaged rectifier. D) Short circuit in the power transistor TR610, TR611, TR612, TR613. Replace the defective transistor and check circuit.
2) Pilot lamp lights but no sound from both channels.	A) Resistor R811, R821 defective (open). Replace the defective resistor. B) Capacitor C807, C809, C810 or C814 defective. Replace the defective capacitor. C) Open in secondary winding of the power transformer T851. Replace the transformer. D) Transistor TR807 or TR810 damaged (open). Replace the damaged transistor. E) Diode D803 or D804 damaged. Replace the damaged diode.
3) "A" Speakers do not work.	A) Speaker switch S17 defective. Replace the switch.
4) "B" Speakers do not work.	A) Speaker switch S17 defective. Replace the switch.
5) One channel does not work with VOLUME at maximum with a test signal applied to the center terminal of VOLUME control VR551 of the dead channel.	A) Defect in transistor TR901, TR902, TR903 or TR904 of 9025 TONE AMP BOARD. Locate and correct the defect. B) Defect in transistor TR751, TR752 of 7105 SWITCH BOARD. Locate and correct the defect. C) Defect in transistor TR601–TR613 of 6038 MAIN AMP BOARD. Locate and correct the defect. D) Break in copper foil of printed circuit board 6038, 7105 or 9025. Repair the circuit board. E) Short in speaker output terminal. Repair the short.

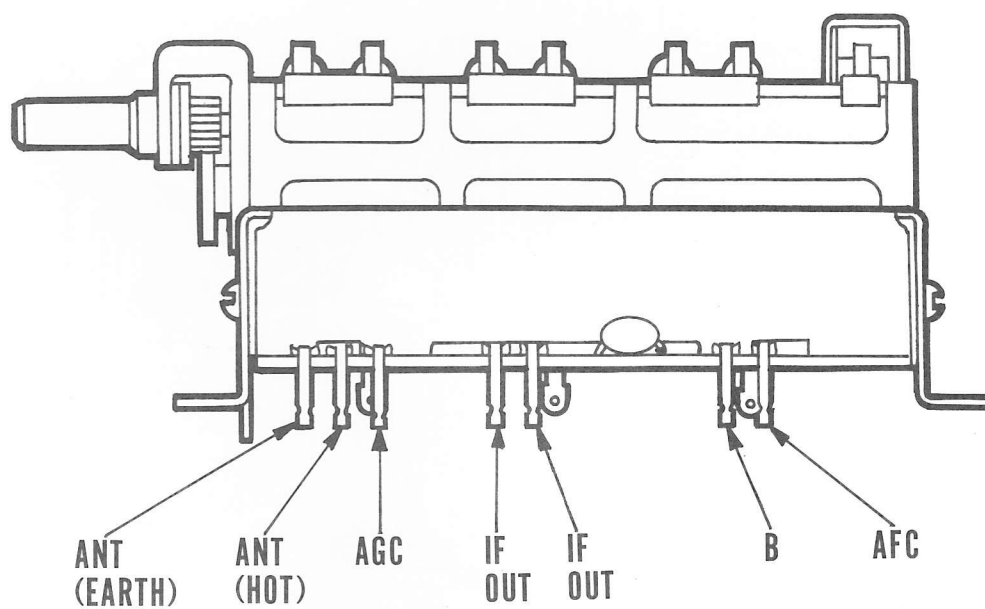
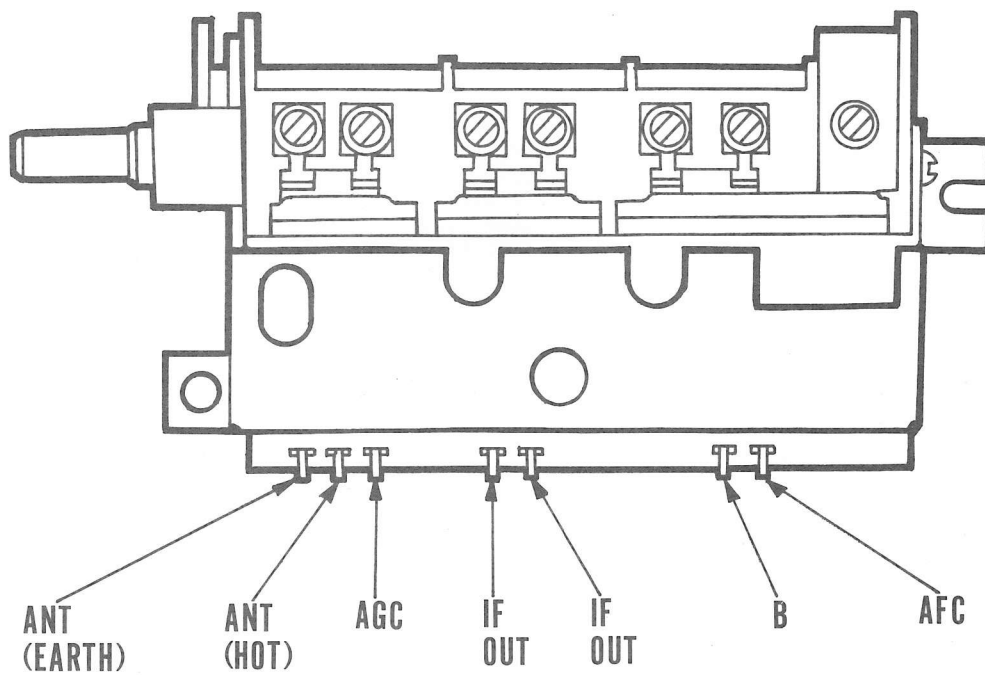
Symptom	Cause and Remedy
6) Same as 5 above but channel operates when test signal is applied as 7.	A) Defective transistor TR501, TR502, TR503, or TR504. Replace the defective transistor. B) Faulty resistor R502, R504, R505, R506, R510 or R512. Replace the faulty resistor. C) Faulty capacitor C501 or C505. Replace the faulty capacitor. D) Defective selector switch S1. Repair or replace the switch.
7) Speaker works normally but headphones do not work.	A) Headphone plug does not mate with jack. Replace the plug. B) Defective resistor R651a, b. Replace the resistor.
8) All the inputs work normally except AUX input.	A) Poor contact in AUX input jack. Repair or replace the jack. B) Poor contact in selector switch S1.
9) PHONO input not operative.	A) Poor contact in PHONO input jack. Repair or replace the jack. B) Faulty selector switch S1. Repair or replace the switch.
10) TAPE OUT not operative.	A) Defective contact in TAPE OUT jack. Repair or replace the jack.
11) FM does not operate.	A) Defective diode D833. Replace the diode. B) Transistor TR831 damaged (open). Replace the transistor. C) Defective resistor R831. Replace the resistor. D) Short-circuit in Tuner B+ circuit. Repair the short. E) Poor contact in selector switch S1. Repair or replace the switch. F) Resistor R301 defective. Replace the resistor. G) Capacitor C301 defective. Replace the capacitor. H) Defective IC IC201, IC202, IC203 or IC301. Replace the defective IC. I) Defective IFT T201. Replace the IFT.

Symptom	Cause and Remedy
	J) Defective capacitor C202, C208 or C222. Replace the defective capacitor. K) Defective transistor TR101, TR102, TR103 or coil L101, L104 of tuner front-end. Replace the defective component. L) Faulty lead-in. Repair or replace the lead in.
12) Poor multiplex separation.	A) Improper adjustment. Readjust T201, VR301 and VR303a, b. (Refer to MPX ALIGNMENT on page 11.) B) Defective transistor TR301, TR302, TR303 or IC IC301, IC302 of Turner Board 0036. Replace the defective component. C) Variable resistor VR301 defective. Replace the variable resistor. D) Variable resistor VR303a, b defective. Replace the defective variable resistor.
13) Stereo indicator lamp does not light.	A) Defective indicator lamp PL9. Replace the lamp. B) Improper adjustment of VR301 and VR302 of 0036 TUNER BOARD. Make readjustment. (Refer to MPX ALIGNMENT on page 11.) C) Defective IC301 or R835 of 0036 TUNER BOARD. Replace defective component.
14) FM volume not sufficient.	A) If volume both L and R channels not enough: Front End defective, or faulty IFT T201 or diode D207, D208 of 0036 TUNER BOARD or faulty C313, IC301 or IC302 of 0036 TUNER BOARD. Locate and replace the defective component. B) If sound of one channel not enough: Defective IC302 of 0036 TUNER BOARD. Replace the IC.
15) AM does not operate.	A) Damaged IC401 of Tuner Board 0036. Replace. B) Defective Coil L401, T401 or Ceramic Filter CF401 of 0036 Tuner Board. Replace the defective component. C) Selector switch S1 defective. Repair or replace the switch. D) Defective Tuning Gang. Replace.

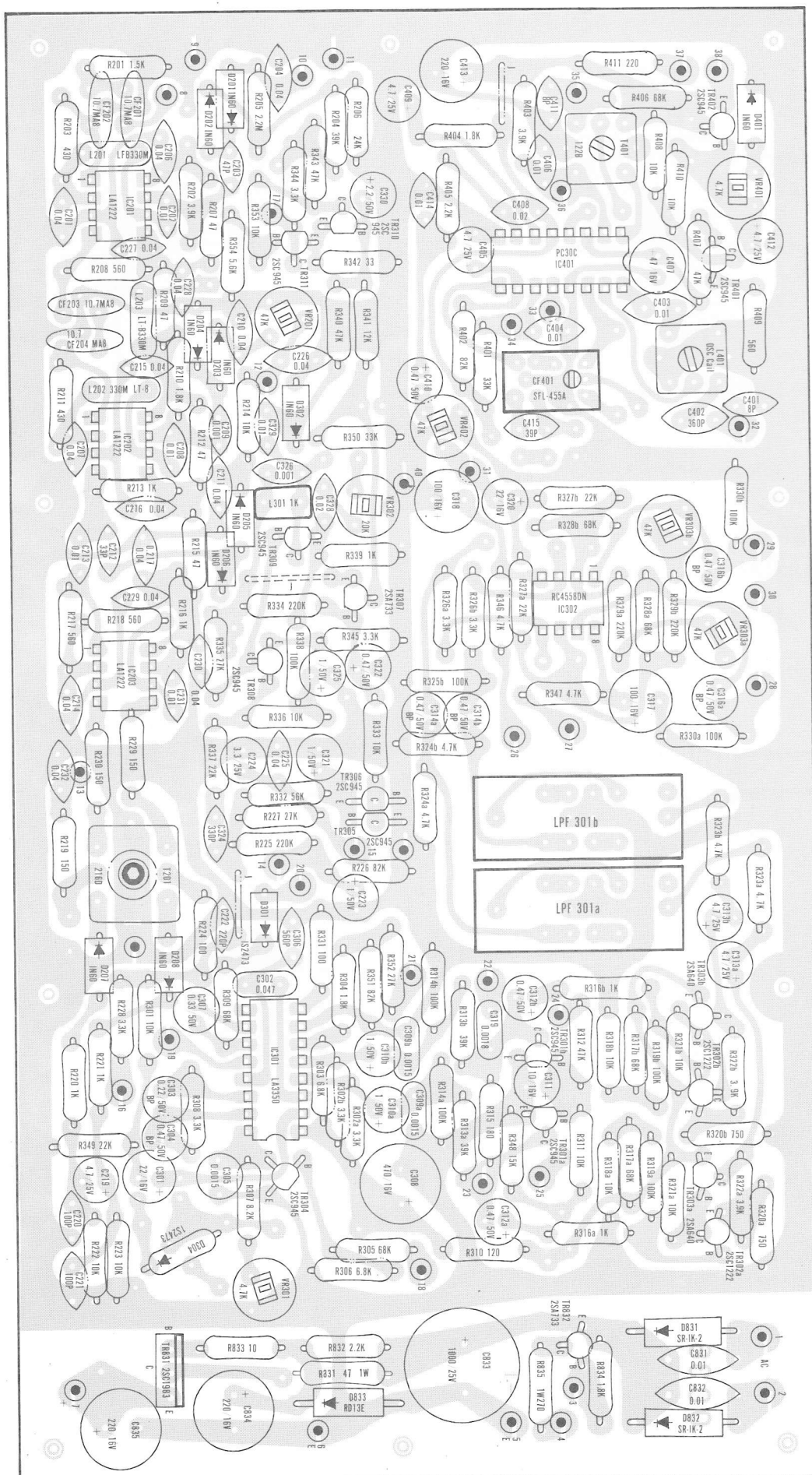
Symptom	Cause and Remedy
	E) Damaged AM bar antenna. Repair or replace bar antenna.
16) LOUDNESS has no effect.	A) Defective LOUDNESS switch S5. Replace the switch. B) Defective C758, C759 or R765. Replace defective component. C) Defective VOLUME control VR551. Replace.
17) STEREO-MONO not effective.	A) Defective MONO switch S6. Replace the switch.
18) TAPE-MONITOR not effective.	A) Defective TAPE MONITOR switch S2. Replace the switch. B) Poor contact in TAPE input jacks. Repair or replace the jack.
19) BASS control has no effect.	A) VR902 defective. Replace. B) Defective C905, C906, R911, R912, R913 of 9025 Tone Amplifier Board. Replace defective component.
20) TREBLE control has no effect.	A) VR901 defective. Replace. B) Defective C904, R908 or R909 of 9025 Tone Amplifier Board. Replace the defective component.
21) Excessive noise with PHONO (MAG) input.	A) Faulty TR501, TR502, TR503 or TR504. Replace the faulty transistor. B) Faulty R501, R503, R506, C501 or C505. Replace the faulty component.
22) Noisy VOLUME control.	A) Defective VR551. Replace the variable resistor. B) Defective capacitor C505 or C901. Replace the defective capacitor.
23) SIGNAL meter not functioning.	A) Defective meter. Replace the meter. B) In case of FM reception, C209, C210, D203, D204, D205 or D206 defective. Replace the defective component. C) In case of AM reception, R407, R408, R409, R410 or TR401 defective. Replace the defective component.

Symptom	Cause and Remedy
24) TUNING meter not functioning.	A) Defective meter. Replace the meter. B) In case of FM reception, R227, C224 or C225 defective. Replace the defective component. Note: In case of AM reception, the meter does not function.
25) QUADRO not effective.	A) Defective switch S17. Replace the switch.
26) SUBSONIC filter has no effect.	A) Defective switch S7. Replace the switch. B) Defective capacitor C752, C753 or C754. Replace the defective capacitor.
27) High-Filter has no effect.	A) Defective switch S8. Replace the switch. B) Defective C755, C756, TR751 or TR752. Replace the defective component.
28) DOLBY Noise Reduction System has no effect.	A) DOLBY NR switch S4 defective. Repair or replace the switch. B) IC IC701 defective. Replace the IC.

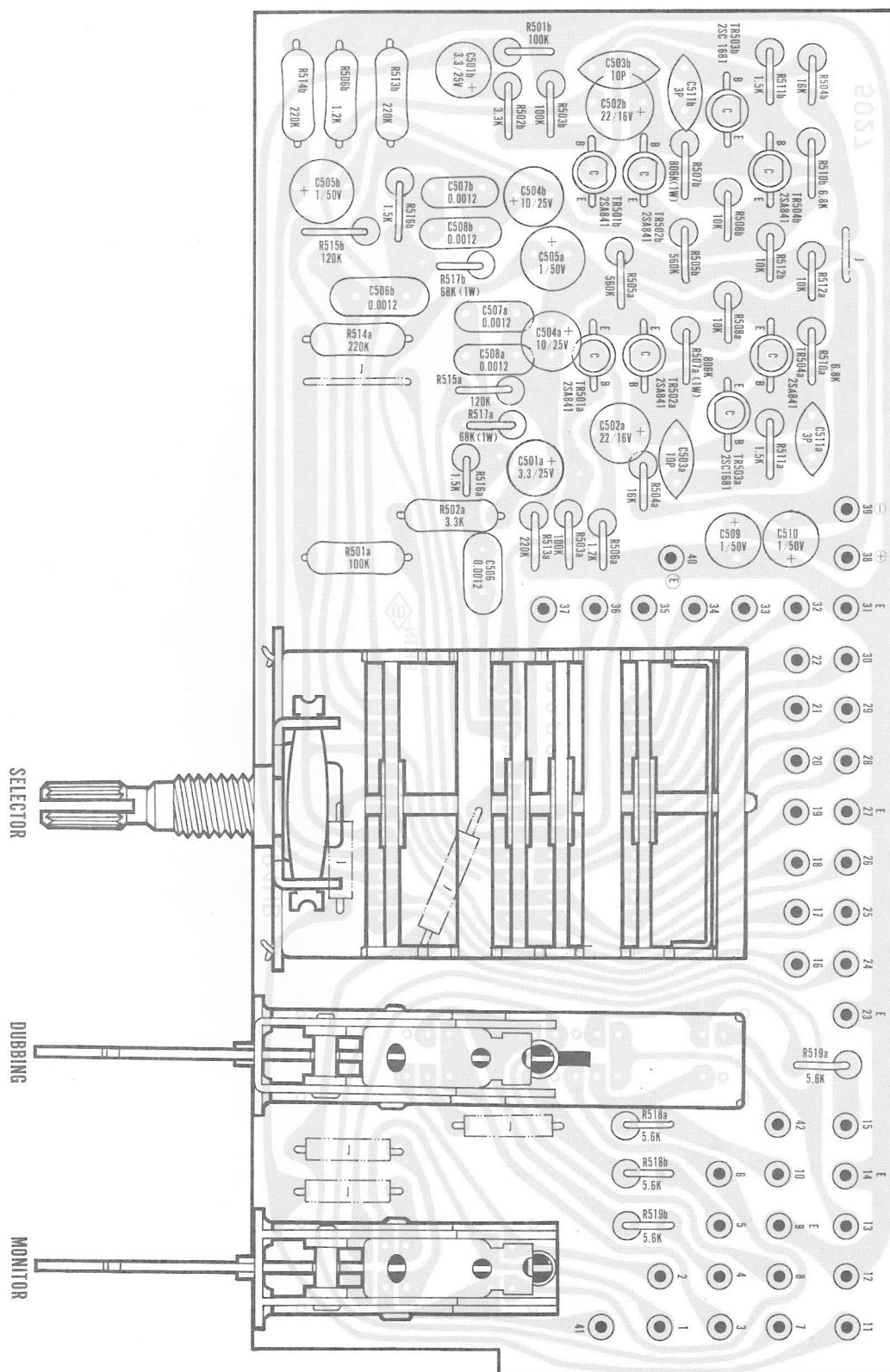
8. TUNER FRONT-END



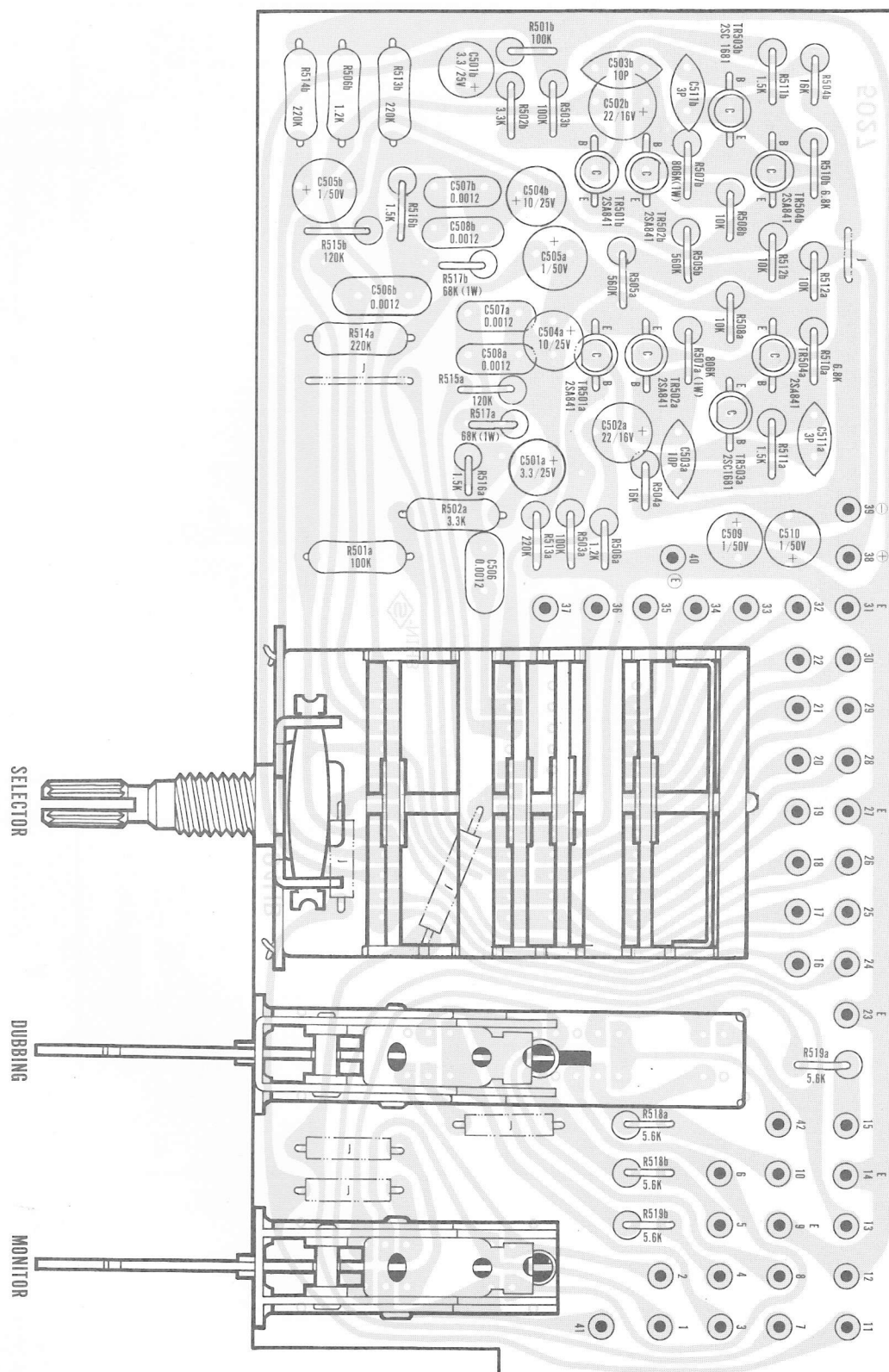
9. 0036 TUNER BOARD



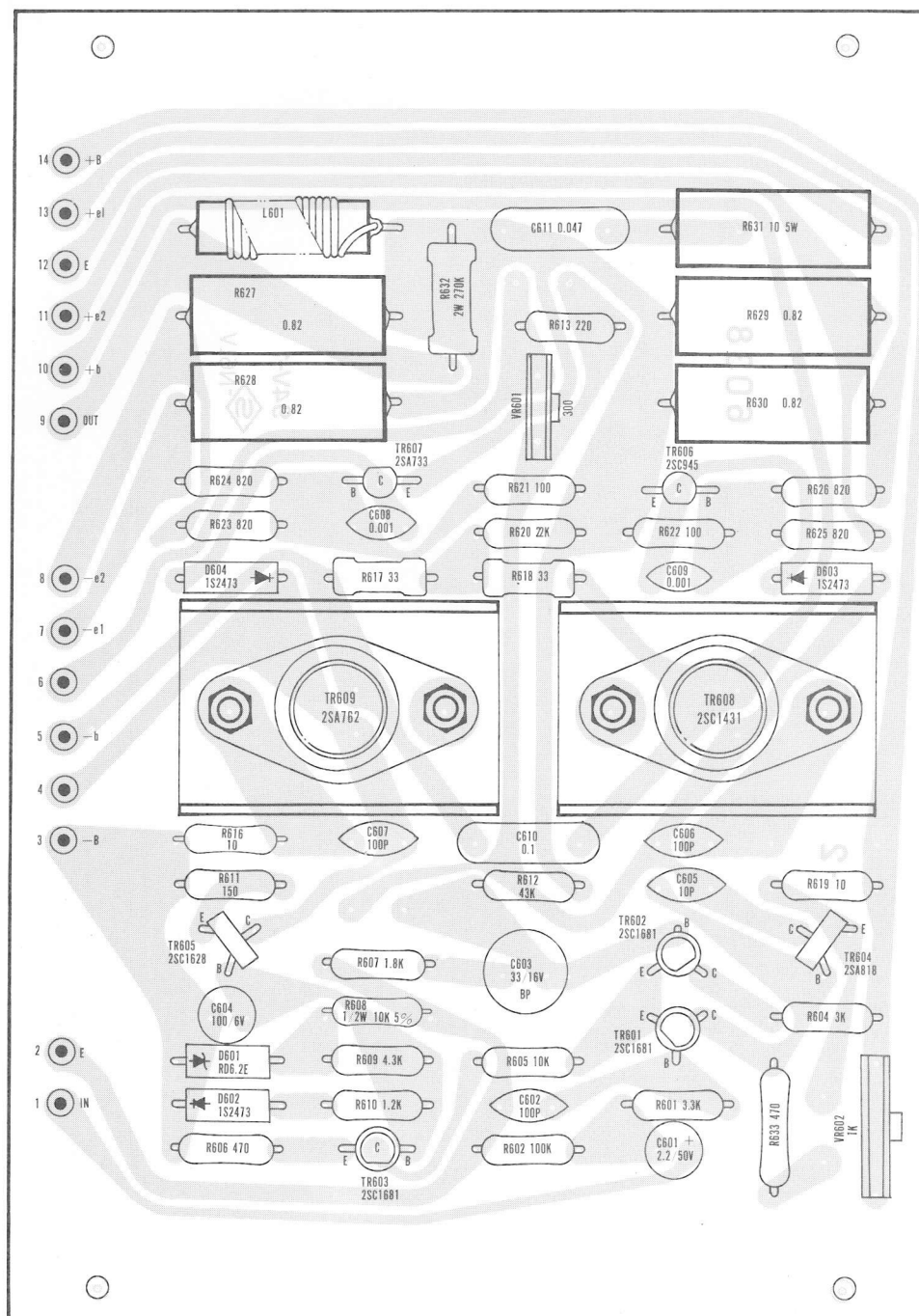
10. 5027 PRE-AMPLIFIER BOARD



10. 5027 PRE-AMPLIFIER BOARD



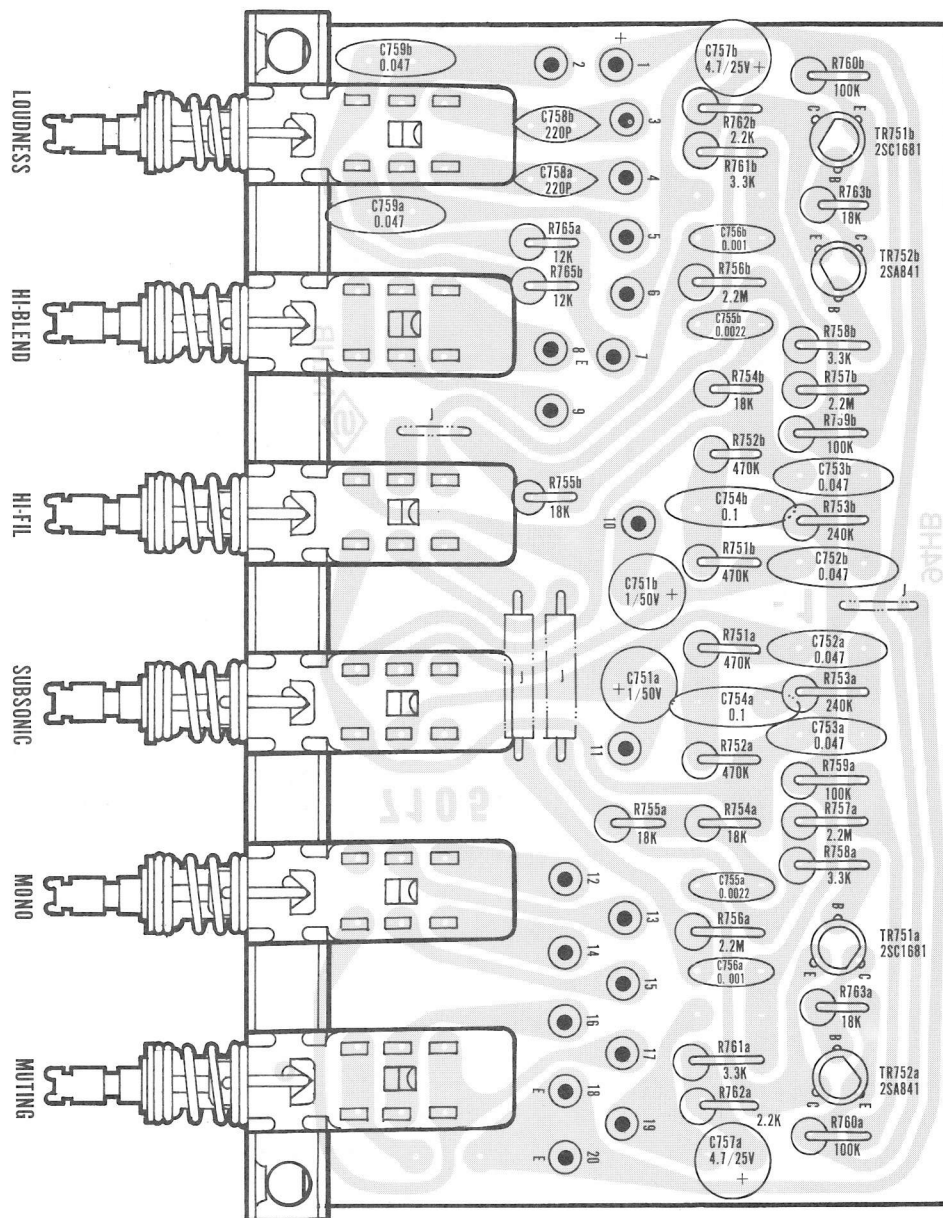
11. 6038 MAIN AMPLIFIER BOARD



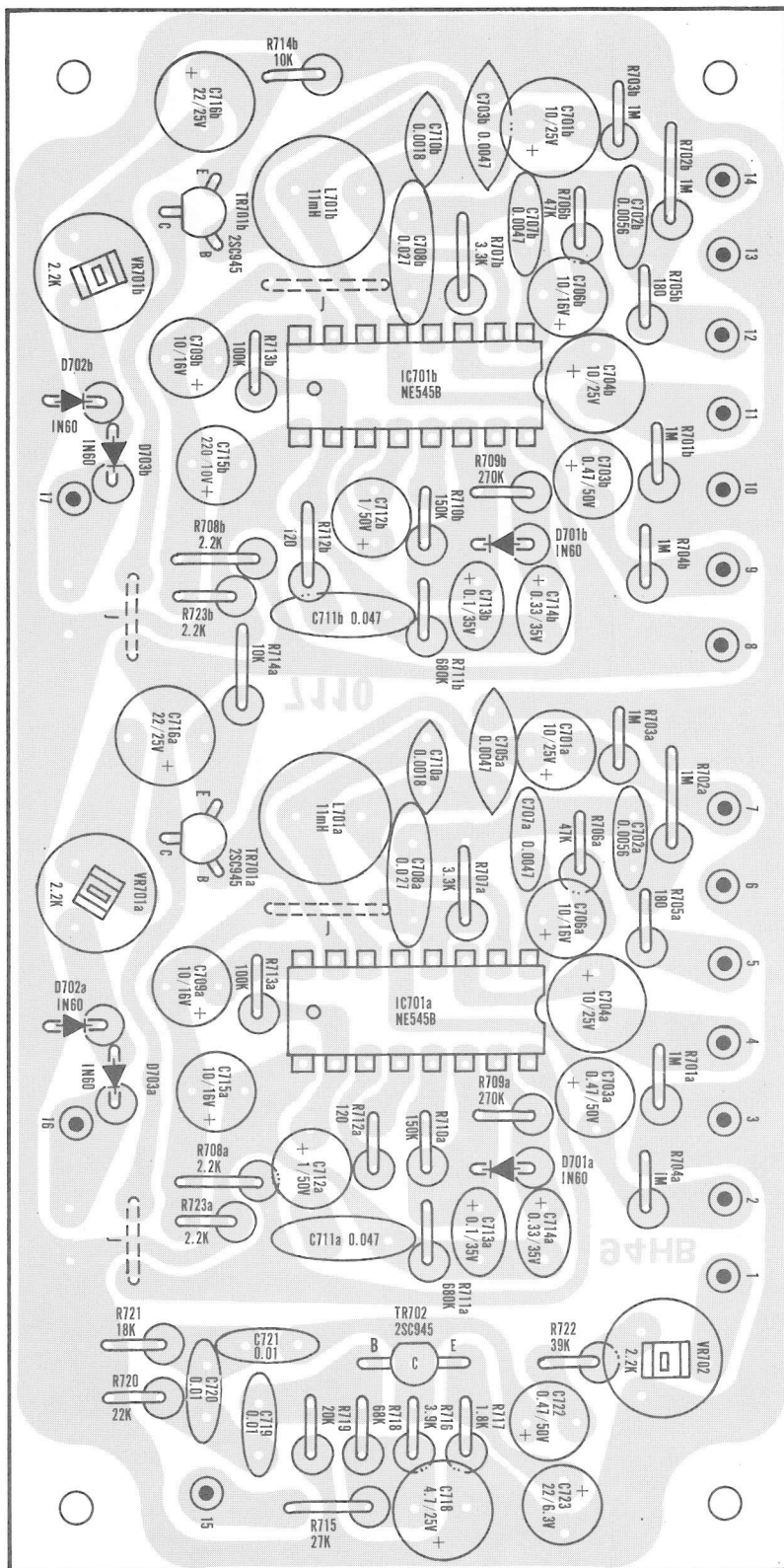
VR601
10V ADJUST

VR602
DC OFFSET
ADJUST

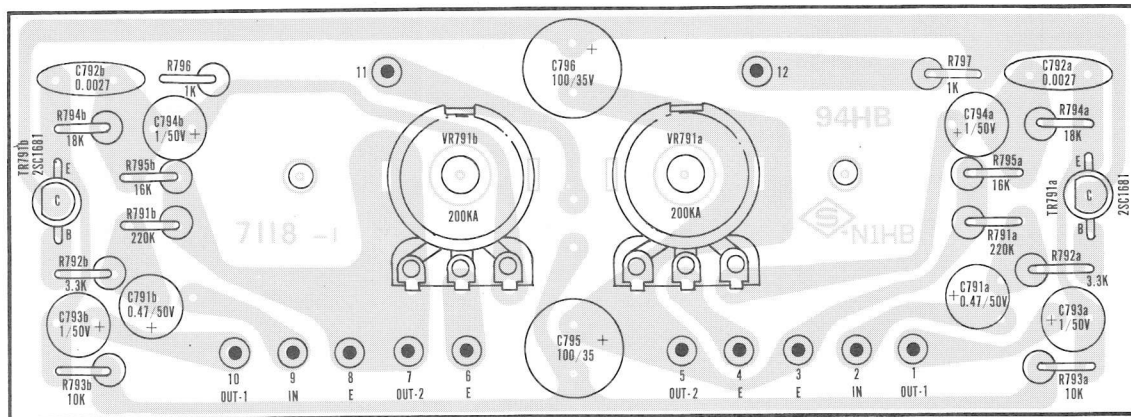
12. 7105 SWITCH BOARD



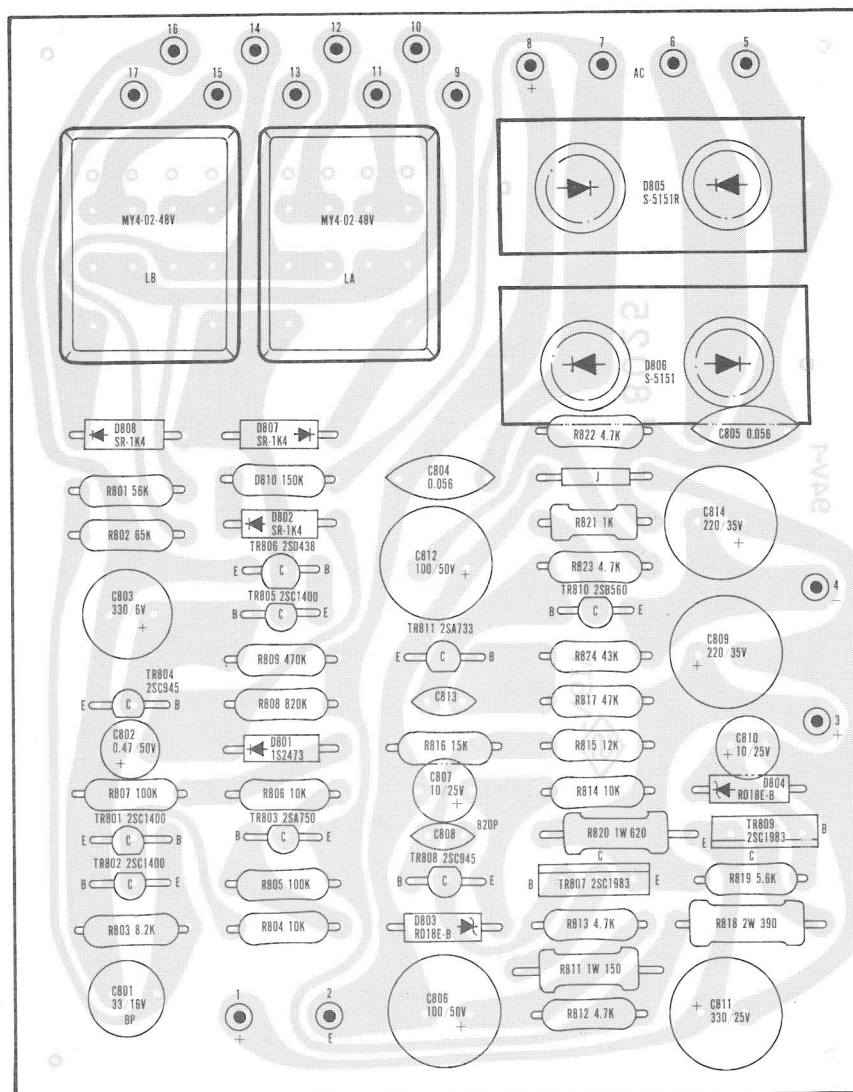
13. 7110 DOLBY NR BOARD



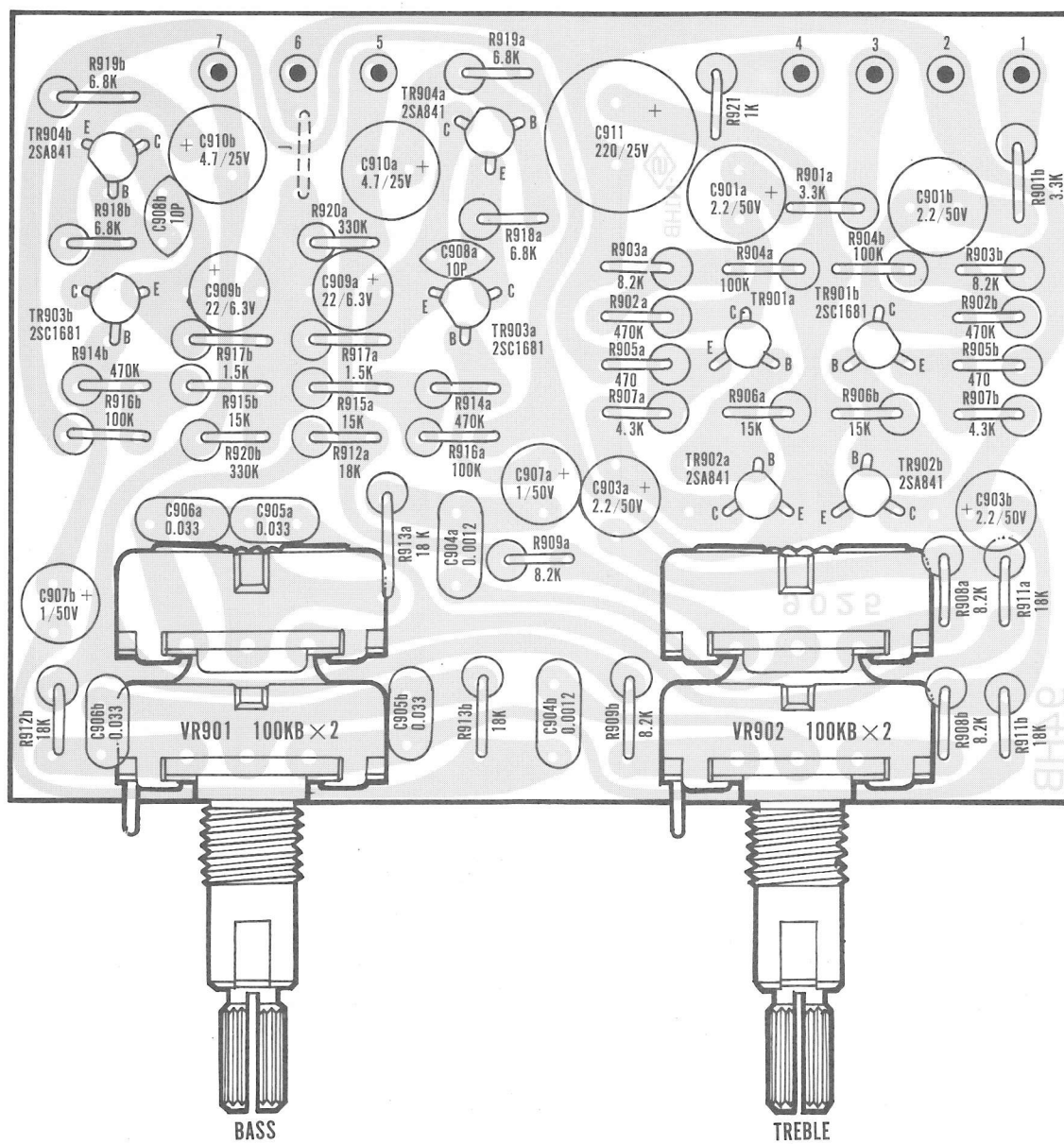
14. 7118 DOLBY FM CALIBRATION BOARD



15. 8025 POWER SUPPLY BOARD



16. 9025 TONE AMPLIFIER BOARD



17. ELECTRICAL PARTS LIST

CAPACITORS				Ref. No.	Value (F)	Voltage (V)	Material
Ref. No.	Value (F)	Voltage (V)	Material				
C201	0.04 μ	25	Ceramic	C314a,b	0.47 μ	50	"
C202	0.01 μ	"	"	C315	Not Used		
C203	47P	50	"	C316a,b	0.47 μ	50	Electrolytic
C204	0.04 μ	25	"	C317	100 μ	16	Electrolytic
C205	"	"	"	C318	"	"	"
C206	"	"	"	C319	1800P	50	Polyester
C207	"	"	"	C320	22 μ	16	Electrolytic
C208	0.01 μ	"	"	C321	1 μ	50	Electrolytic
C209	0.001 μ	"	"	C322	0.47 μ	"	"
C210	0.04 μ	"	"	C323	Not Used		
C211	"	"	"	C324	330P	50	Ceramic
C212	33P	50	"	C325	1 μ	"	Electrolytic
C213	0.01 μ	25	"	C326	0.001 μ	25	Ceramic
C214	0.04 μ	"	"	C327	Not Used		
C215	"	"	"	C328	0.02 μ	25	Ceramic
C216	"	"	"	C329	0.01 μ	"	"
C217	"	"	"	C330	2.2 μ	50	Electrolytic
C218	"	"	"	C401	8P	50	Ceramic
C219	4.7 μ	"	Electrolytic	C402	360P	"	"
C220	100P	50	Ceramic	C403	0.01 μ	25	"
C221	"	"	"	C404	0.01 μ	"	"
C222	220P	"	"	C405	4.7 μ	"	Electrolytic
C223	1 μ	"	Electrolytic	C406	0.01 μ	"	Ceramic
C224	3.3 μ	25	"	C407	47 μ	16	Electrolytic
C225	0.04 μ	"	Ceramic	C408	0.02 μ	25	Ceramic
C226	"	"	"	C409	4.7 μ	25	Electrolytic
C227	"	"	"	C410	0.47 μ	50	"
C228	"	"	"	C411	8P	"	Ceramic
C229	"	"	"	C412	4.7 μ	25	Electrolytic
C230	"	"	"	C413	220 μ	16	"
C231	0.01 μ	25	Ceramic	C414	0.01 μ	25	Ceramic
C232	0.04 μ	"	"	C415	39P	50	"
C251	0.04 μ	25	Ceramic	C501a,b	3.3 μ	25	Electrolytic
C252	47 μ	6.3	Electrolytic	C502a,b	22 μ	16	"
C301	22 μ	16	Electrolytic	C503a,b	10P	500	Ceramic
C302	0.047 μ	50	Polyester	C504a,b	10 μ	25	Electrolytic
C303	0.22 μ	"	Electrolytic	C505a,b	1 μ	50	"
C304	0.47 μ	"	"	C506a,b	0.0022 μ	"	Polypropylene
C305	1500P	"	Polystyrene	C507a,b	0.0012 μ	"	"
C306	560P	"	Ceramic	C508a,b	0.0012 μ	"	"
C307	0.33 μ	"	Electrolytic	C509	1 μ	"	Electrolytic
C308	480 μ	16	Electrolytic	C510	1 μ	"	"
C309a,b	15000P	50	Polyester	C511a,b	3P	500	Ceramic
C310a,b	1 μ	"	Electrolytic	C601a,b	2.2 μ	50	Electrolytic
C311	10 μ	16	"	C602a,b	100P	500	Ceramic
C312a,b	0.47 μ	50	"	C603a,b	33 μ	16	Electrolytic
C313a,b	4.7 μ	25	Electrolytic	C604a,b	100 μ	6	"
				C605a,b	10P	500	Ceramic

Ref. No.	Value (F)	Voltage (V)	Material	Ref. No.	Value (F)	Voltage (V)	Material
C606a,b	100P	500	Ceramic	C804	0.056 μ	50	Polyester
C607a,b	"	"	"	C805	"	"	"
C608a,b	0.001 μ	50	"	C806	100 μ	"	Electrolytic
C609a,b	"	"	"	C807	10 μ	25	"
C610a,b	Not Used			C808	820P	"	Ceramic
C611a,b	0.047 μ	50	Ceramic	C809	220 μ	35	Electrolytic
C612a,b	5P	"	"	C810	10 μ	25	"
C701a,b	10 μ	25	Electrolytic	C811	330 μ	25	"
C702a,b	5600P	50	Polyester	C812	100 μ	50	"
C703a,b	0.47 μ	50	Electrolytic	C813	820P	25	Ceramic
C704a,b	10 μ	25	"	C814	220 μ	35	Electrolytic
C705a,b	0.0047 μ	25	Ceramic				
C706a,b	10 μ	16	Electrolytic	C831	0.001 μ	500	Ceramic
C707a,b	4700P	50	Polyester	C832	"	"	"
C708a,b	0.027 μ	"	"	C833	1000 μ	25	Electrolytic
C709a,b	10 μ	16	Electrolytic	C834	220 μ	16	"
C710a,b	1800P	50	Polyester	C835	"	"	"
C711a,b	0.047 μ	"	"				
C712a,b	1 μ	50	Electrolytic	C851	18000 μ	63	Electrolytic
C713a,b	0.1 μ	35	Tantalume	C852	"	"	"
C714a,b	0.33 μ	"	"				
C715a,b	220 μ	10	Electrolytic	C901a,b	2.2 μ	50	Electrolytic
C716a,b	22 μ	25	"	C902a,b	Not Used		
C717a,b	Not Used			C903a,b	2.2 μ	50	Electrolytic
C718	4.7 μ	25	Electrolytic	C904a,b	1200P	"	Polyester
C719	0.01 μ	50	Polyester	C905a,b	0.033 μ	"	"
C720	"	"	"	C906a,b	"	"	"
C721	Not Used			C907a,b	1 μ	50	Electrolytic
C722	0.47 μ	50	Electrolytic	C908a,b	10P	50	Ceramic
C723	22 μ	6.3	"	C909a,b	22 μ	6.3	Electrolytic
				C910a,b	4.7 μ	25	"
C751a,b	1 μ	50	Electrolytic	C911	220 μ	"	"
C752a,b	0.047 μ	"	Polyester				
C753a,b	"	"	"				
C754a,b	0.1 μ	"	"				
C755a,b	2200P	"	"				
C756a,b	1000P	"	"				
C757a,b	4.7 μ	25	Electrolytic				
C758a,b	220P	50	Ceramic				
C759a,b	0.047 μ	"	Polyester				
C791a,b	0.47 μ	50	Electrolytic				
C792a,b	2700P	"	Polyester				
C793a,b	1 μ	"	Electrolytic				
C794a,b	"	"	"				
C795	100 μ	35	"				
C796	"	"	"				
C801	33 μ	16	Electrolytic				
C802	0.47 μ	50	"				
C803	330 μ	6	"				

CERAMIC FILTERS		
Ref. No.	Description	Mfr's Part No.
CF201	SFE 10.7 MA8	35300012
CF202	"	"
CF203	"	"
CF204	"	"
CF401	SFL-455A	35300016

DIODES

Ref. No.	Type No.	Manufacturer	Mfr's Part No.
	ITT410		
D201	1N60P	UNISON	30600011
D202	"	"	"
D203	"	"	"
D204	"	"	"
D205	"	"	"
D206	"	"	"
D207	"	"	"
D208	"	"	"
D301	1S2473	Toyo Electronics	30600410
D302	1N60P	UNISON	30600011
D303	1S2473	Toyo Electronics	30600410
D304	"	"	"
D401	1N60P	UNISON	30600011
D601a,b	RD6.2E	NEC	30600691
D602a,b	1S2473	Toyo Electronics	30600410
D603a,b	"	"	"
D604a,b	"	"	"
D605a,b	STV-3H	Sanken	30600881
D701a,b	1N60	UNISON	30600010
D702a,b	"	"	"
D703a,b	"	"	"
D801	1S2473	Toyo Electronics	30600410
D802	SR-1K2	UNISON	30600540
D803	RD-18E	NEC	30600630
D804	"	"	"
D805	S5151R	Toshiba	30600902
D806	S5151	"	30600901
D807	SR-1K2	UNISON	30600540
D808	"	"	"
D831	SR-1K2	UNISON	30600540
D832	"	"	"
D833	RD13E	NEC	30600332

INTEGRATED CIRCUITS

Ref. No.	Type No.	Manufacturer	Mfr's Part No.	Substitute	
				Type No.	Manufacturer
IC201 IC202 IC203	LA1222 " "	Sanyo " "	30900340 " "		
IC301 IC302	LA3350 RC4558DN	Sanyo JRC	30900310 30900360		
IC401	μ PC30C	NEC	30900350		
IC701a,b	NE545B	SIGNETICS	30900330		

RELAYS

Ref. No.	Description	Mfr's Part No.
K1a,b K2a,b	A Speakers Protection Relay B Speakers Protection Relay	82000040 82000040

COILS

Ref. No.	Description	Mfr's Part No.
L201 L202 L203	Inductor LT-B330M " "	35500090 " "
L301	Inductor 144HY-102K	35500150
L401 L451 L601a,b	OSC Coil 415L AM Bar Antenna Coil Choke Coil	35504156 35400441 35500170
L701a,b	Inductor 11mH	35500270

FILTERS

Ref. No.	Description	Mfr's Part No.
LF301a,b	L.P.F. 190BLR-3154-N	35000040

METERS

Ref. No.	Description	Mfr's Part
M1	SIGNAL Meter 200 μ A	60200016
M2	TUNING Meter $\pm 100\mu$ A	60100017

RESISTORS

Ref. No.	Value (ohm)	Wattage (W)	Material	Ref. No.	Value (F)	Voltage (V)	Material
R201	1.5K	$\frac{1}{4}$	Carbon	R309	68K	$\frac{1}{4}$	Carbon
R202	3.9K	"	"	R310	120	"	"
R203	430	"	"	R311	10K	"	"
R204	39K	"	"	R312	47K	"	"
R205	2.2M	"	"	R313a,b	39K	"	"
R206	24K	"	"	R314a,b	100K	"	"
R207	47	"	"	R315	180K	"	"
R208	560	"	"	R316a,b	1K	"	"
R209	47	"	"	R317a,b	68K	"	"
R210	1.8K	"	"	R318a,b	10K	"	"
R211	430	"	"	R319a,b	100K	"	"
R212	47	"	"	R320a,b	750	"	"
R213	1K	"	"	R321a,b	10K	"	"
R214	10K	"	"	R322a,b	3.9K	"	"
R215	47	"	"	R323a,b	4.7K	"	"
R216	1K	"	"	R324a,b	"	"	"
R217	560	"	"	R325a,b	100K	"	"
R218	"	"	"	R326a,b	3.3K	"	"
R219	150	"	"	R327a,b	22K	"	"
R220	1K	"	"	R328a,b	68K	"	"
R221	"	"	"	R329a,b	220K	"	"
R222	10K	"	"	R330a,b	100K	"	"
R223	"	"	"	R331	100	"	"
R224	100	"	"	R332	56K	"	"
R225	220K	"	"	R333	10K	"	"
R226	82K	"	"	R334	220K	"	"
R227	43K	"	"	R335	27K	"	"
R228	3.3K	"	"	R336	10K	"	"
R229	150	"	"	R337	22K	"	"
R230	"	"	"	R338	100K	"	"
R301	10K	$\frac{1}{4}$	Carbon	R339	1K	"	"
R302a,b	3.3K	"	"	R340	12K	"	"
R303	6.8K	"	"	R341	"	"	"
R304	1.8K	"	"	R342	33	"	"
R305	68K	"	"	R343	47K	"	"
R306	6.8K	"	"	R344	3.3K	"	"
R307	8.2K	"	"	R345	"	"	"
R308	3.3K	"	"	R346	4.7K	"	"
				R347	"	"	"
				R348	15K	"	"
				R349	22K	"	"

Ref. No.	Value (ohm)	Wattage (W)	Material	Ref. No.	Value (ohm)	Wattage (W)	Material
R350	33K	¼	Carbon	R608a,b	10K	½	Metal Oxide
R351	82K	"	"	R609a,b	4.3K	¼	Carbon
R352	27K	"	"	R610a,b	1.2K	"	"
R353	10K	"	"	R611a,b	150	"	"
R354	5.6K	"	"	R612a,b	43K	¼	Carbon
				R613a,b	220	"	"
R401	33K	¼	Carbon	R614a,b	100	"	"
R402	82K	"	"	R615a,b	Not Used		
R403	3.9K	"	"	R616a,b	10	¼	Carbon
R404	1.8K	"	"	R617a,b	33	"	"
R405	2.2K	"	"	R618a,b	"	"	"
R406	68K	"	"	R619a,b	10	"	"
R407	47K	"	"	R620a,b	2.2K	"	"
R408	10K	"	"	R621a,b	100	"	"
R409	560	"	"	R622a,b	"	"	"
R410	10K	"	"	R623a,b	820	"	"
R411	220	"	"	R624a,b	"	"	"
				R625a,b	"	"	"
R501a,b	100K	¼	Carbon	R626a,b	"	"	"
R502a,b	3.3K	"	"	R627a,b	0.82	5	Wire Wound
R503a,b	100K	"	"	R628a,b	"	"	"
R504a,b	16K	"	"	R629a,b	"	"	"
R505a,b	560K	"	"	R630a,b	"	"	"
R506a,b	1.2K	"	"	R631a,b	3	2	Metal
R507a,b	806K	½	Metal	R632a,b	27	"	"
R508a,b	10K	¼	Carbon	R633a,b	470	¼	Carbon
R509a,b	Not Used						
R510a,b	6.8K	¼	Carbon	R651	470	2	Metal Oxide
R511a,b	"	"	"	R652	5	10	Wire Wound
R512a,b	10K	"	"				
R513a,b	220K	"	"	R701a,b	1M	¼	Carbon
R514a,b	"	"	"	R702a,b	"	"	"
R515a,b	120K	"	"	R703a,b	"	"	"
R516a,b	1.6K	"	"	R704a,b	"	"	"
R517a,b	68K	½	Metal	R705a,b	180	"	"
R518a,b	5.6K	"	"	R706a,b	47K	"	"
R519a,b	"	"	"	R707a,b	3.3K	"	"
				R708a,b	2.2K	"	"
R551a,b	5.6K	¼	Carbon	R709a,b	270K	"	"
				R710a,b	150K	"	"
R591a,b	150K	¼	Carbon	R711a,b	680K	"	"
R592a,b	"	"	"	R712a,b	120	"	"
				R713a,b	100K	"	"
R601a,b	3.3K	¼	Carbon	R714a,b	10K	"	"
R602a,b	100K	"	"	R715	27K	"	"
R603a,b	Not Used			R716	3.9K	"	"
R604a,b	3K	¼	Carbon	R717	1.8K	"	"
R605a,b	10K	"	"	R718	68K	"	"
R606a,b	470	"	"	R719	20K	"	"
R607a,b	1.8K	"	"	R720	22K	"	"

Ref. No.	Value (ohm)	Wattage (W)	Material	Ref. No.	Value (ohm)	Wattage (W)	Material
R721	18K	¼	Carbon	R823	4.7K	¼	Carbon
R722	39K	"	"	R824	43K	"	"
R723a,b	2.2K	"	"				
R751a,b	470K	¼	Carbon	R851	33	¼	Carbon
R752a,b	"	"	"				
R753a,b	240K	"	"	R831	47	1	Metal Oxide
R754a,b	18K	"	"	R832	2.2K	¼	Carbon
R755a,b	"	"	"	R833	10	"	"
R756a,b	2.2M	"	"	R834	1.8K	"	"
R757a,b	"	"	"	R835	270	1	Metal Oxide
R758a,b	3.3K	"	"				
R759a,b	100K	"	"	R901a,b	3.3K	¼	Carbon
R760a,b	"	"	"	R902a,b	470K	"	"
R761a,b	3.3K	"	"	R903a,b	"	"	"
R762a,b	2.2K	"	"	R904a,b	100K	"	"
R763a,b	18K	"	"	R905a,b	470	"	"
R764a,b	Not Used	"	"	R906a,b	15K	"	"
R765a,b	12K	¼	Carbon	R907a,b	4.3K	"	"
				R908a,b	8.2K	"	"
R791a,b	220K	¼	Carbon	R909a,b	"	"	"
R792a,b	3.3K	"	"	R910a,b	Not Used	"	"
R793a,b	10K	"	"	R911a,b	18K	¼	Carbon
R794a,b	18K	"	"	R912a,b	"	"	"
R795a,b	16K	"	"	R913a,b	"	"	"
R796	1K	"	"	R914a,b	470K	"	"
R797	"	"	"	R915a,b	15K	"	"
				R916a,b	100K	"	"
R801	56K	¼	Carbon	R917a,b	1.5K	"	"
R802	"	"	"	R918a,b	6.8K	"	"
R803	8.2K	"	"	R919a,b	"	"	"
R804	10K	"	"	R920a,b	330K	"	"
R805	100K	"	"	R921	1K	"	"
R806	10K	"	"				
R807	100K	"	"				
R808	820K	"	"				
R809	470K	"	"				
R810	150K	"	"				
R811	150	1	Metal Oxide				
R812	4.7K	¼	Carbon				
R813	"	"	"				
R814	10K	"	"				
R815	12K	"	"				
R816	15K	"	"				
R817	47K	"	"				
R818	390	2	Metal Oxide				
R819	5.6K	¼	Carbon				
R820	620	1	Metal Oxide				
R821	1K	¼	Carbon				
R822	4.7K	"	"				

SWITCHES			TRANSFORMERS		
Ref. No.	Description	Mfr's Part No.	Ref. No.	Description	Mfr's Part No.
S1	SELECTOR	27100126	T201	IFT 216D	35702164
S2	TAPE MONITOR	27600024	T401	RF Coil 122B	35501222
S3	TAPE DUBBING	27600025	T851	Power Transformer	35900197
S4	DOLBY NR	27100127			
S5	LOUDNESS	27200078			
S6	MONO	"			
S7	SUBSONIC FILTER	"			
S8	HIGH FILTER	"			
S9	DOLBY NR 400Hz TONE	27200079			
S10	HIGH BLEND	27200078			
S11	DOLBY NR METER	27200079			
S12	MUTING	27200078			
S13	NORMAL-SEPARATED	27300008			
S14	POWER ESB-791	27200077			
S15a,b	THERMAL PROTECTOR	30700170			
S16	THERMAL PROTECTOR (Inside of Power Transformer)				
S17	SPEAKERS	27100125			

TRANSISTORS					
Ref. No.	Type No.	Manufacturer	Mfr's Part No.	Substitute	
				Type No.	Manufacturer
TR101	3SK45	Hitachi		3SK59	Toshiba
TR102	3SK45	"		3SK59	"
TR103	SE3001	Teledyne		2SC1342	Hitachi
TR301a,b	2SC945	NEC	30201031	2SC536	Sanyo
TR302a,b	2SC1222	"	30200662	2SC1681	Toshiba
TR303a,b	2SA640	"	30000241	2SA841	"
TR304	2SC945	"	30201031	2SC536	Sanyo
TR305	"	"	"	"	"
TR306	"	"	"	"	"
TR307	2SA733	"	30000423	2SA678	Sony
TR308	2SC945	"	30201031	2SC536	Sanyo
TR309	"	"	"	"	"
TR310	"	"	"	"	"
TR311	"	"	"	"	"
TR401	2SC945	NEC	30201031	2SC536	Sanyo
TR402	"	"	"	"	"
TR501a,b	2SA841	Toshiba	30000442	2SA640	NEC
TR502a,b	"	"	"	"	"
TR503a,b	2SC1681	"	30201133	2SC1400	"
TR504a,b	2SA841	"	30000442	2SA750	"

TRANSISTORS

Ref. No.	Type No.	Manufacturer	Mfr's Part No.	Substitute	
				Type No.	Manufacturer
TR601a,b	2SC1400	NEC	30201191	2SC1681	Toshiba
TR602a,b	"	"	"	"	"
TR603a,b	2SC1681GR	Toshiba	30201133	2SC1400	NEC
TR604a,b	2SA914	Matsushita	30000461	2SA818	Toshiba
TR605a,b	2SC1953	"	30201181	2SC1628	"
TR606a,b	2SC945	NEC	30201031	2SC536	Sanyo
TR607a,b	2SA733	"	30000423	2SA678	Sony
TR608a,b	2SC1431	Sony	30201201	2SC1161	NEC
TR609a,b	2SA762	"	30000481	2SA653	"
TR610a,b	2SD427	Toshiba	30300270	2SD388A(2)	"
TR611a,b	"	"	"	"	"
TR612a,b	2SB557	"	30100061	2SB541A	"
TR613a,b	"	"	"	"	"
TR701a,b	2SC945	NEC	30201031	2SC536	Sanyo
TR702	"	"	"	"	"
TR751a,b	2SC1681	Toshiba	30201133	2SC1400	NEC
TR752a,b	2SA841	"	30000443	2SA750	"
TR791a,b	2SC1681BL	Toshiba	30201132	2SC1400	NEC
TR801	2SC1400	NEC	30201191	2SC1681	Toshiba
TR802	"	"	"	"	"
TR803	2SA750	"	30000471	2SA841	"
TR804	2SC945L	"	30201031	2SC536	Sanyo
TR805	2SC1400	"	30201191	2SC1681	Toshiba
TR806	2SD438	Sanyo	30300250	2SC1509	Matsushita
TR807	2SC1983	Sanken	30201211	2SD330	Sanyo
TR808	2SC945L	NEC	30201031	2SC536	"
TR809	2SC1983	Sanken	30201211	2SD330	"
TR810	2SB560	Sanyo	30100041	2SA777	Matsushita
TR811	2SA733	NEC	30000423	2SA678	Sony
TR831	2SC1983	Sanken	30201211	2SD330	Sanyo
TR832	2SA733	NEC	30000423	2SA678	Sony
TR901a,b	2SC1681	Toshiba	30201133	2SC1400	NEC
TR902a,b	2SA841	"	30000443	2SA750	"
TR903a,b	2SC1681	"	30201133	2SC1400	"
TR904a,b	2SA841	"	30000443	2SA750	"

VARIABLE RESISTORS

Ref. No.	Description	Mfr's Part No.
VR201	FM Meter Level 47 K Ω /B	28100003
VR301	PLL VCO 4.7 K Ω /B	28100002
VR302	FM Muting Level 20 K Ω /B	28100005
VR303a,b	FM Separation 47 K Ω /B	28100003
VR401	AM Meter Level 4.7 K Ω /B	28100002
VR402	AM Output Level 4.7 K Ω /B	28100003
VR551a,b,c,d	VOLUME & BALANCE 200 K Ω /B 10 K Ω /MN	28000120
VR601a,b	Bias Control 300 Ω /B	28100090
VR602a,b	DC Balance Control 1 K Ω /B	28100089
VR701a,b	Meter Level 2.2 K Ω /B	28100088
VR702	400Hz Tone Output Control 2.2 K Ω /B	28100088
VR791a,b	FM DOLBY CAL 200 K Ω /A	28000123
VR792a,b	DOLBY PLAY CAL 200 K Ω /A	28000122
VR793a,b	DOLBY REC LEVEL 200 K Ω /A	28000122
VR901a,b	TREBLE 100 K Ω /B	28000121
VR902a,b	BASS 100 K Ω /B	"

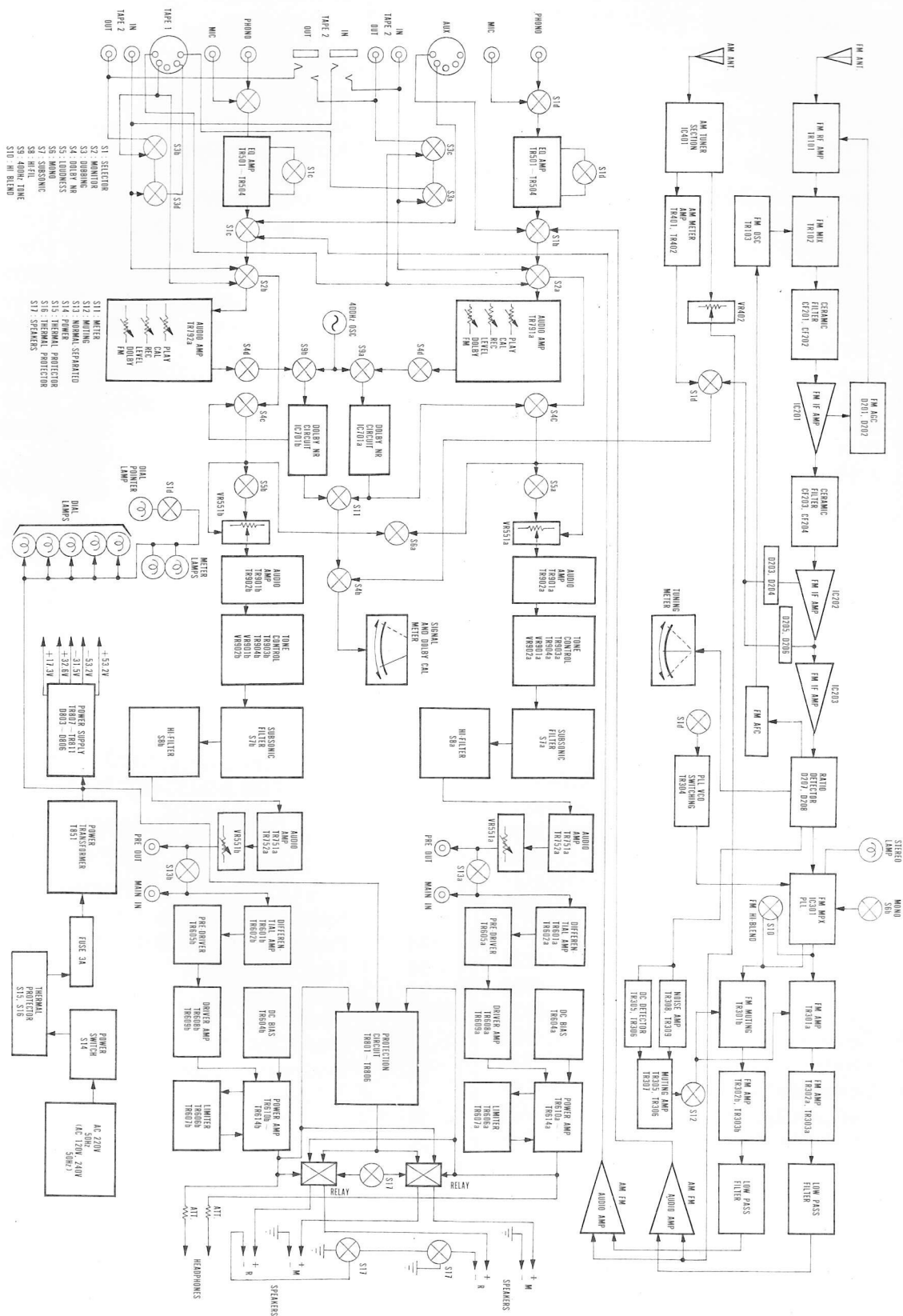
PRINTED WIRING BOARDS (ASSEMBLED)

Ref. No.	Description	Mfr's Part No.
0036	Tuner Front-End	95021001
5027	Tuner Board	97003610
6038	Pre-Amplifier Board	97502710
7105	Main Amplifier Board	97603820
7110	Switch Board	97710510
7118	DOLBY NR Board	97711010
8025	DOLBY FM Cal. Board	97711810
9025	Power Supply Board	97802510
7112	Tone Amplifier Board	97902510
7113	Dial Lamp Board	97711210
	Meter Lamp Board	97711310

18. MISCELLANEOUS PARTS LIST

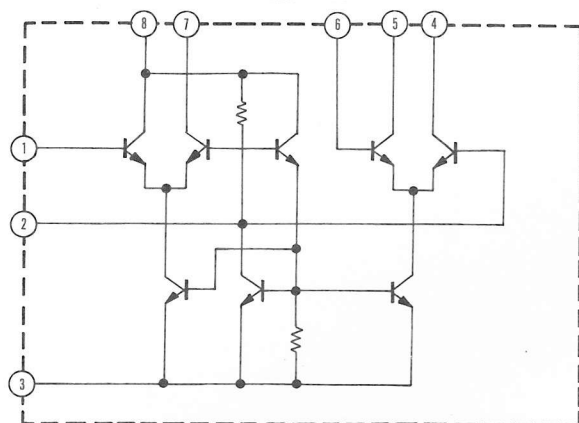
MISCELLANEOUS PARTS LIST			Ref. No.	Description	Mfr's Part No.
Ref. No.	Description	Mfr's Part No.			
1	Wire Wrap Pin	19043001	47	Meter Filter	84241001
2	Jumper Wire	92000001	48	Tuner Front-End	95021001
3	Tapping Screw M3x6	40130061	49	Nut for Pulley Shaft	63268001
4	Screw M3x15	40330151	50	Dial Drum	21008003
5	Binding Head Tapping Screw M3x8	40630081	51	Terminal Strip 2P1L2P	51040004
6	Heat Sink A	15071001	52	Terminal Strip 2P1L3P1L2P	51072002
7	Heat Sink B	15072001	53	Terminal Strip 1L2P	51045004
8	Flat Washer M3	42120321	54	Ground Lug	63319001
9	Tapping Screw M3x12	40130121	55	Flat Washer M5	42120521
10	Back Panel	11170001	56	Spring Washer M5	42250541
11	Speaker Terminal	53042930	57	Nut M5	61115010
12	4P Phono Jack	33040740	58	Printed Wiring Board Support	84232001
13	AM Bar Antenna Holder	63030001	59	Tapping Screw M3x12 Black	40130125
14	Metal Bracket for AM Bar Antenna	63026003	60	Binding Head Tapping Screw M3x6	40630065
15	Screw M4x45	40340451	61	Binding Head Tapping Screw M4x8	40640081
16	Lock Nut M4	40000030	62	Spring Coil for Dial Drum	19045001
17	Cord Strain Relief SR4K4	74035001	63	Binding Head Tapping Screw M3x8	40630081
18	AC Cord with Plug	62010006	64	Lock Washer M3	42380331
19	Fuseholder S-N2250	34047001	65	Glass Cloth Tubing	31601190
20	5P DIN Jack X-I3306	34057001	66	Front Panel Assembly	10187004
21	7P Phono Jack	33070240	67	Tuning Knob	29225001
22	Mic Jack	33031400	68	Knob for VOLUME, TREBLE(L) & BASS(L)	29211001
23	Antenna Terminals	53043130	69	Knob for BALANCE, TREBLE(R) & BASS (R)	29212002
24	Terminal Strip 2P1L2P	51040004	70	Knob for SELECTOR, SPEAKERS & DOLBY NR	29215001
25	Cord Stopper SR5P4	74045001	71	Knob for PLAY CAL & REC LEVEL	29226001
26	Phono Ground Terminal	53012300	72	Push Switch Button A	29227001
27	Nut M3	41113010	73	Push Switch Button B	29216001
28	Spring Washer	42250341	74	Lever Switch Knob	29217001
29	Binding Head Screw M3x8 Black	40430085	75	Metal Enclosure	70020001
30	Power Fuse 2.5A T	38444225	76	Bottom Plate	05046001
31	Balun Transformer	35500060	77	Plastic foot	84233001
32	Flat Washer M4	42120421	78	Binding Head Tapping Screw M4x15	40640151
33	Tuning Shaft Assembly	23045001	79	Binding Head Screw M4x10	40440105
34	Headphone Jack	33031300	80	Lock Washer M4 Black	42280438
35	Stereo Indicator Lamp	37008034	81	Shield Case	09056001
36	Dial Lamp House	08052001	82	Nylon Washer	42400017
37	Dial Pointer Assembly	25041001	83	Dipole Antenna	62120001
38	Plastic Pulley	84085001	84	Binding Head Tapping Screw M3x8	40630085
39	Pulley Shaft E	24003001			
40	Pulley Shaft G	24004002			
41	Dial Scale Glass	20090001			
42	Dial Lamp Diffuser	84235001			
43	Metal Clamper for Dial Scale	63322001			
44	Rubber for Dial Scale	74116001			
45	Light Shield Sponge	74118001			
46	Light Shield Fiber	73202001			

19. BLOCK DIAGRAM

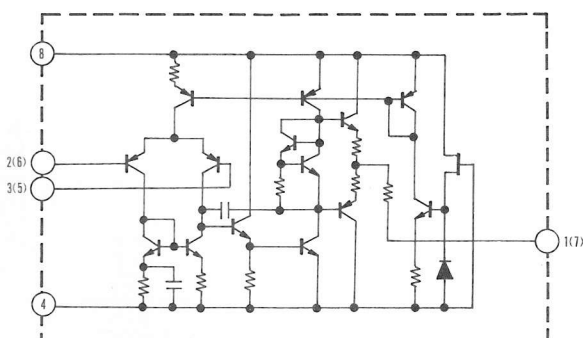


20. INTERNAL VIEW OF INTEGRATED CIRCUIT

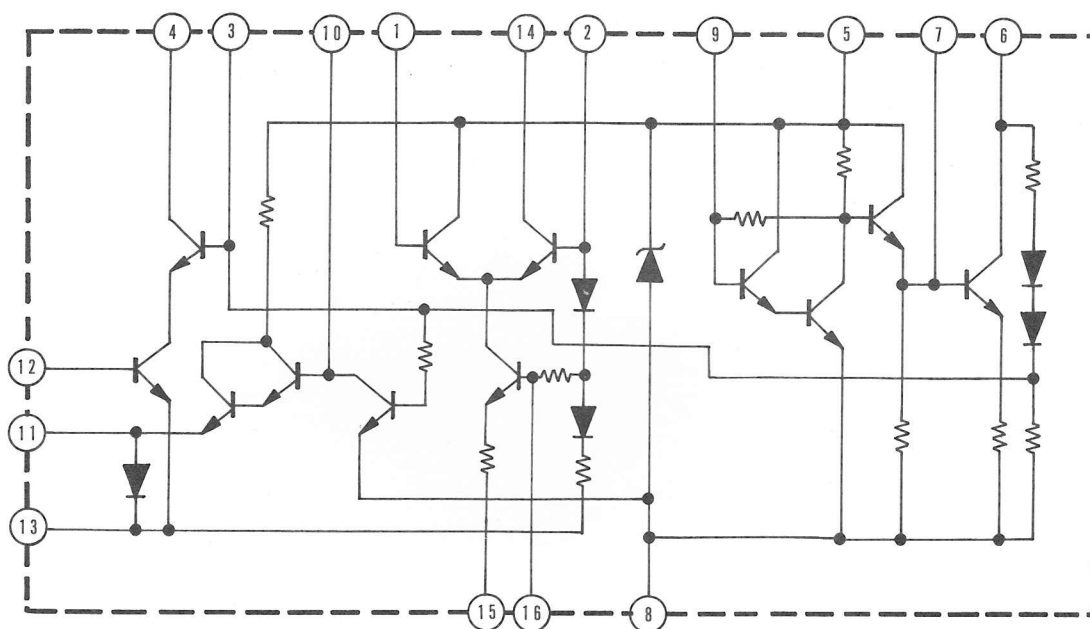
LA1222



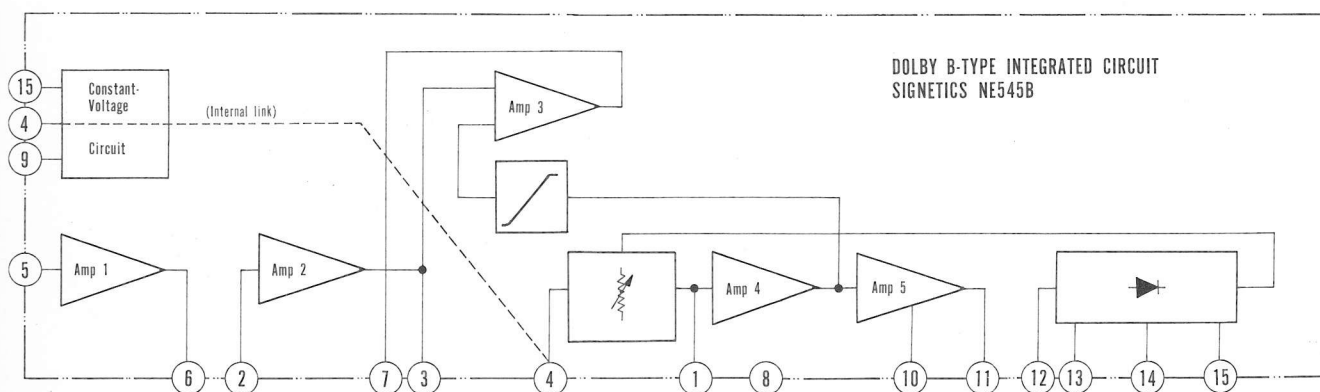
RC4558DN-F

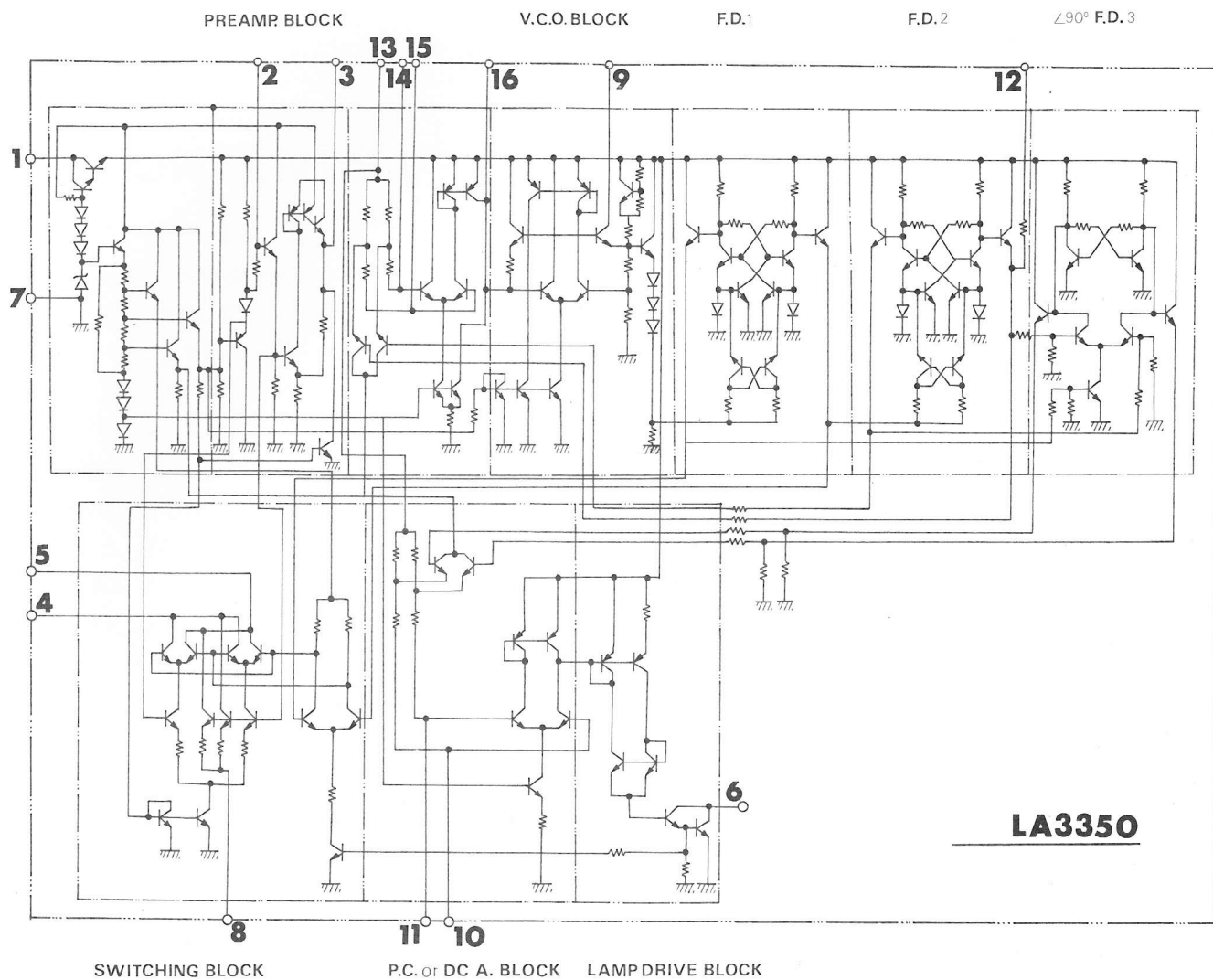


μ PC30C



DOLBY B-TYPE INTEGRATED CIRCUIT
SIGNETICS NE545B



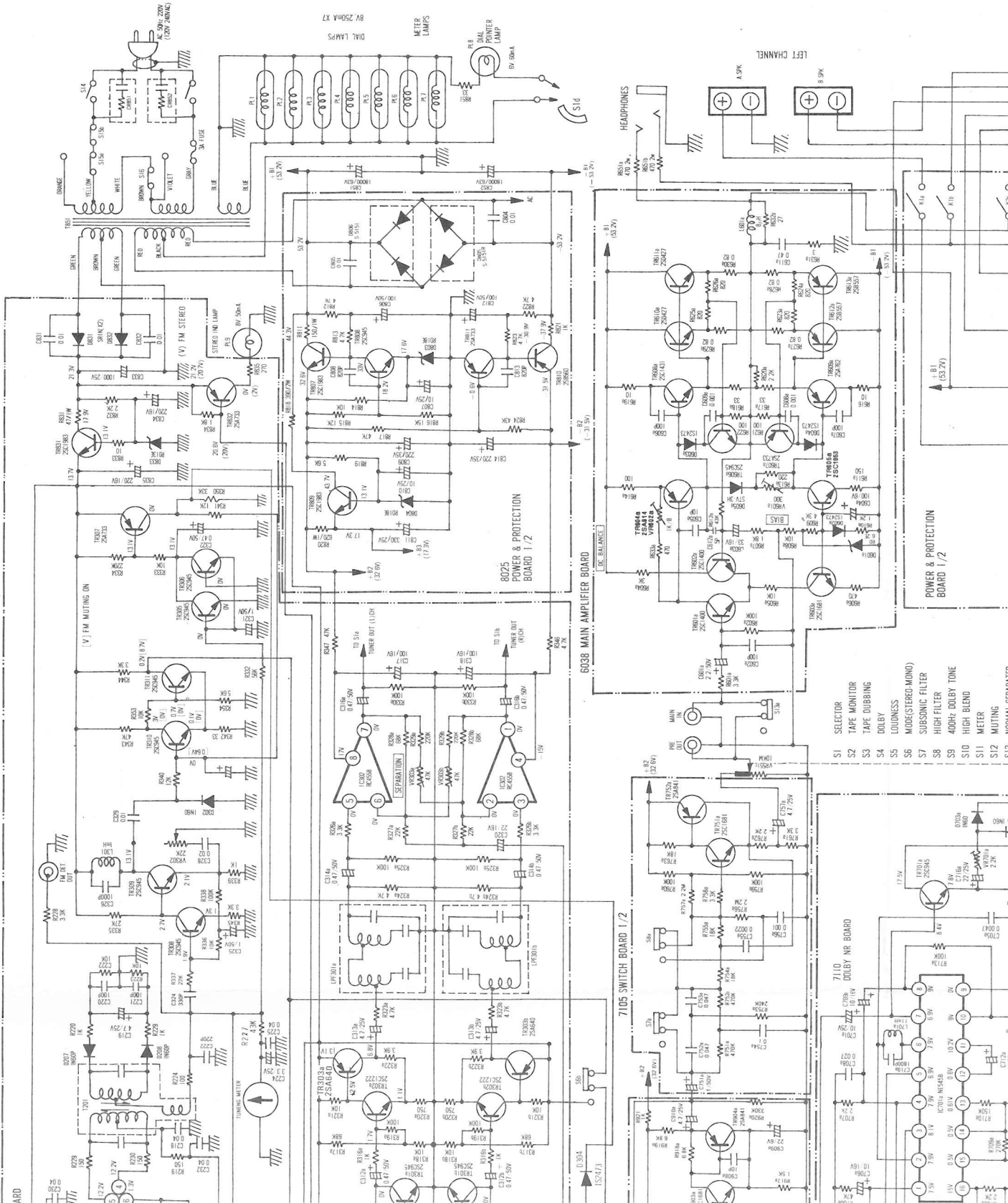


LA3350

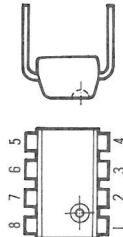
SCHEMATIC DIAGRAM

NAD-300

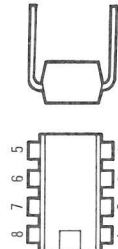
STEREO RECEIVER



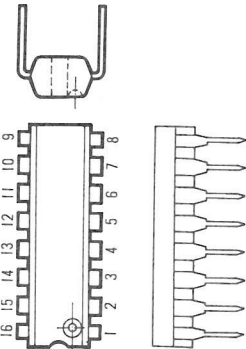
IC LA1222



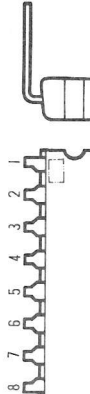
IC RC4558DN-F



IC LA3350



IC NC5458



The schematic diagram illustrates the internal circuitry of a radio receiver, organized into several functional sections:

- TUNER FRONT-END:** Located at the top left, it includes the FM antenna input, FM and AM tuning coils, and associated capacitors and resistors for initial signal processing.
- TUNER:** The central section of the diagram, featuring a complex network of vacuum tube sockets (e.g., 6X4, 6X5, 6X6, 6X7, 6X8, 6X9, 6X10, 6X11, 6X12, 6X13, 6X14, 6X15, 6X16, 6X17, 6X18, 6X19, 6X20, 6X21, 6X22, 6X23, 6X24, 6X25, 6X26, 6X27, 6X28, 6X29, 6X30, 6X31, 6X32, 6X33, 6X34, 6X35, 6X36, 6X37, 6X38, 6X39, 6X40, 6X41, 6X42, 6X43, 6X44, 6X45, 6X46, 6X47, 6X48, 6X49, 6X50, 6X51, 6X52, 6X53, 6X54, 6X55, 6X56, 6X57, 6X58, 6X59, 6X60, 6X61, 6X62, 6X63, 6X64, 6X65, 6X66, 6X67, 6X68, 6X69, 6X70, 6X71, 6X72, 6X73, 6X74, 6X75, 6X76, 6X77, 6X78, 6X79, 6X80, 6X81, 6X82, 6X83, 6X84, 6X85, 6X86, 6X87, 6X88, 6X89, 6X90, 6X91, 6X92, 6X93, 6X94, 6X95, 6X96, 6X97, 6X98, 6X99, 6X100), resistors, capacitors, and inductors for frequency conversion and amplification.
- 5027 ED AMPLIFIER BOARD 1/2:** A dedicated section for audio amplification, featuring a 5027 tube and associated components.
- 7105 TONE AMPLIFIER BOARD 1/2:** Another dedicated section for audio amplification, featuring a 7105 tube and associated components.
- 7106 SWITCH BOARD 1/2:** A section for switching and control, featuring a 7106 tube and associated components.
- 7107 DOLBY NR BOARD:** A section for Dolby noise reduction processing, featuring a 7107 tube and associated components.
- 7118 FM DOLBY CAL BOARD:** A section for FM Dolby calibration, featuring a 7118 tube and associated components.
- Output Stages:** The bottom section of the diagram shows the final output stages, including AM, FM, and Phono outputs, with associated speakers and control elements.

The diagram is a comprehensive technical drawing, providing detailed information on the electrical connections and component specifications for each section of the radio receiver.

