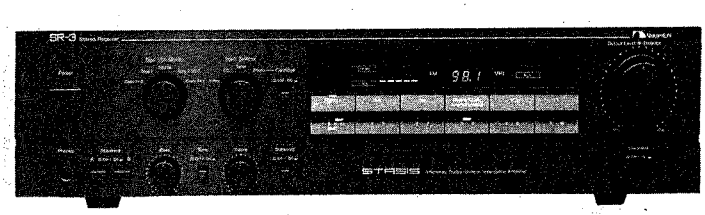
Nakamichi

Service Manual

Nakamichi

SR-3
SR-3A
SR-3E

Stereo Receiver



CONTENTS

1. GENERAL

1.1. Voltage Selector

Voltage selector is installed on the rear panel for Other version of the Nakamichi SR-3.
This voltage selector can select either 110 V, 120 V, 220 V or 240 V at customer's disposal.

Schematic Ref. No.	Part No.	Description	Q'ty
	FA03548A	Package Ass'y (SR-3 (Canada))	1
	FA03550A	Package Ass'y (SR-3 (Australia))	1
	FA03549A	Package Ass'y (SR-3 (Other))	1
	FA03547A	Package Ass'y (SR-3A)	1
	FA03569A	Package Ass'y (SR-3E (Europe & Germany))	1
01	0F03988A	Carton Box (SR-3)	1
	0F03987A	Carton Box (SR-3A)	1
	0F03990B	Carton Box (SR-3E)	1
02	0F03984B	Packing L	1
03	0F03991A	Packing R	1
04	0F03670A	Poly-Sheet	1
—	0M03456A	Voltage Seal 220V (SR-3 (Other))	2
—	0M03457A	Voltage Seal 240V (SR-3 (Australia))	2
	DA03991A	Accessory Ass'y (SR-3 (Canada))	1
	DA03992A	Accessory Ass'y (SR-3 (Australia))	1
	DA04009A	Accessory Ass'y (SR-3 (Other))	1
	DA03990A	Accessory Ass'y (SR-3A)	1
	DA03996A	Accessory Ass'y (SR-3E (Europe))	1
	DA04055A	Accessory Ass'y (SR-3E (Germany))	1
01	0B90070A	AM Loop Antenna Holder	1
02	0B90081A	Feeder Antenna	1
03	0B90194A	Antenna Adapter F (SR-3 & SR-3A)	1
	0B90208A	Antenna Adapter EP (SR-3E)	1
04	0B90198A	AM Loop Antenna	1
—	0D03092B	Poly-Bag 320x340x0.08	1
—	0D04449A	Important Notice Card	1
—	0D04651B	Owner's Manual SR-4/3/2 & SR-4A/3A/2A	1
	0D04764B	Owner's Manual SR-4E/3E/2E	1
—	0D04673B	French Text (SR-4/3/2 (Canada))	1
—	0D04674B	Owner's Manual Text (SR-4/3/2 (Australia))	1
—	0D04675B	Owner's Manual Text (SR-4/3/2 (Other))	1
—	DA03873A	Warranty Card Ass'y (SR-3A)	1
—	0D04766A	Catalogue (SR-3A)	1
—	0D04767A	Warranty Card (SR-3 (Canada))	1

1.2. Package Ass'y and Parts List

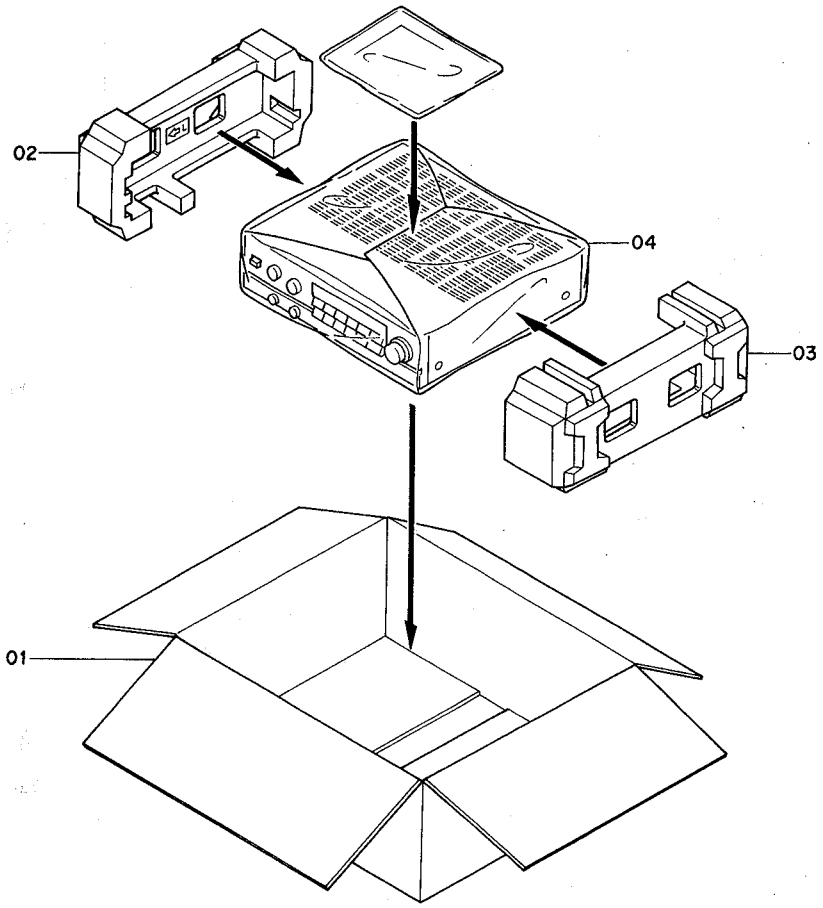


Fig. 1.1

1.3. Accessory Ass'y and Parts List

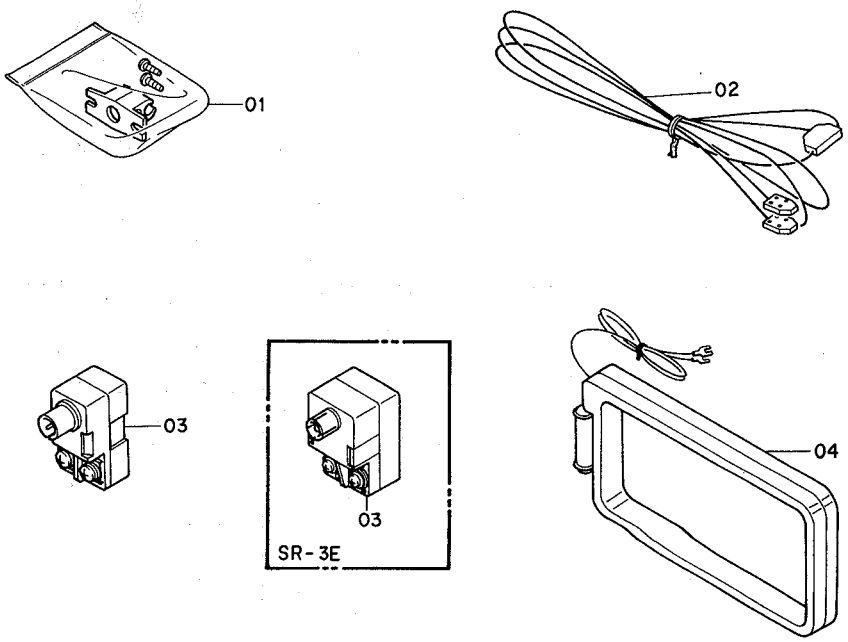


Fig. 1.2

2. PARTS LOCATION FOR ELECTRICAL ADJUSTMENT

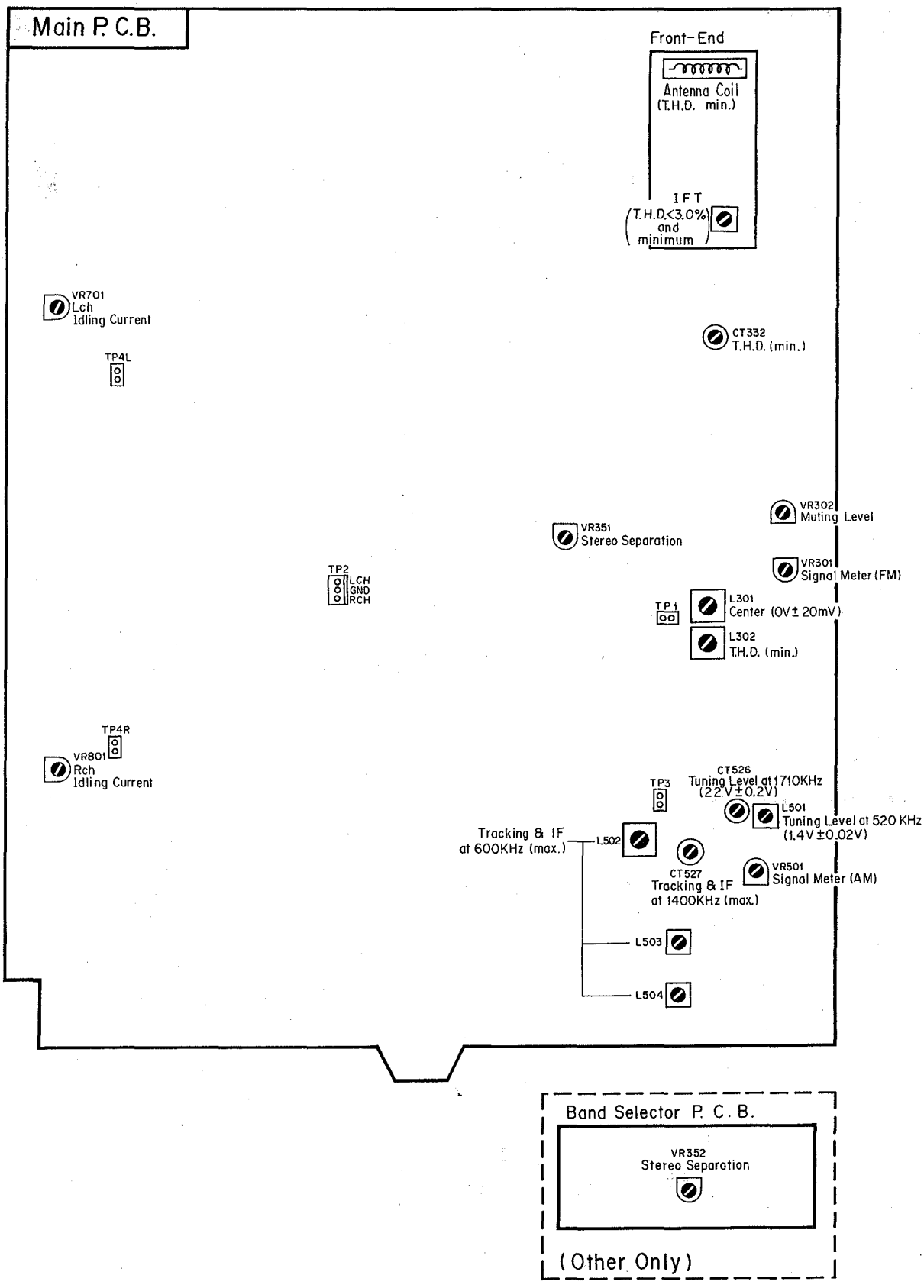


Fig. 2

3. ELECTRICAL ADJUSTMENTS

3.1. Power Amplifier Section

STEP	ITEM	SIGNAL SOURCE	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
1	Idling Current	None	DC Voltmeter between TP4L-1 & 2 and TP4R-1 & 2 on Main P.C.B.	Input Selector - CD Output Level - Min. Speaker Selector A/B - OFF	Main P.C.B. VR701 VR801	1. Insert shorting plugs into the CD Player Input Jacks. 2. Turn ON the power and allow 3 minutes before adjusting. (Top Cover must be installed in this period of time.) 3. Adjust VR701 (VR801) to obtain 20 mV ±1 mV on the DC voltmeter.

3.2. Tuner Section

Note: Adjustment should be made in a shielded room in principle.

3.2.1. FM Tuner Section

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
1	Preliminary Step	See Fig. 3.1	Stereo Receiver Input Selector - Tuner Band Selector - FM Tape Monitor - Source Signal Generator Freq. - 98 MHz RF Level - 65 dBf Modulation - See REMARKS		1. Set the Stereo Receiver as indicated in the MODE. 2. Adjustment and confirmation should be made after tuning in to the set carrier frequency of the Signal Generator. Note: Contents of modulation 1. For U.S.A., Canada & Other (Wide) o Stereo Audio: 1 kHz, 91% Pilot: 19 kHz, 9% o Mono Audio: 1 kHz, 100% 2. For Europe, Germany, Australia & Other (Narrow) o Stereo Audio: 1 kHz, 51% Pilot: 19 kHz, 9% o Mono Audio: 1 kHz, 60%
2	Usable Sensitivity Adjustment	Distortion Meter to Tape 1 Record Output Jacks	Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 12.5 dBf Modulation - Mono	Main P.C.B. Front-end IFT Antenna Coil (See Fig. 2)	1. Set the Stereo Receiver to Manual mode by pressing the Tuning Mode button. 2. Adjust the IFT to obtain minimum distortion (total harmonic distortion (THD): 3% or less). 3. Adjust the distance between windings of antenna coil to obtain minimum distortion. 4. Set the frequency of the Signal Generator to 90 MHz/106 MHz and check that the THD is 3% or less.

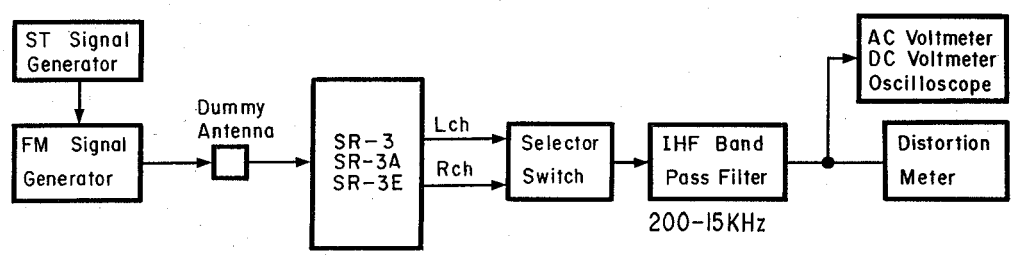


Fig. 3.1

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
3	Center Voltage and THD Adjustment	DC Voltmeter between TP1-1 & TP1-2 on Main P.C.B. and Distortion Meter to Tape 1 Record Jacks	Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 65 dBf Modulation - Mono	Main P.C.B. L301 L302	1. Set the Stereo Receiver to Manual mode. 2. Adjust L301 so that the reading on the DC voltmeter is 0 V ±20 mV. 3. Adjust L302 to obtain minimum distortion (THD: 0.07% or less). Repeat 2 and 3, if necessary.
4	Muting Level Adjustment	Oscilloscope to Tape 1 Record Output Jacks	Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 30 dBf Modulation - Stereo	Main P.C.B. VR302	1. Set the Stereo Receiver to Auto mode. 2. Rotate VR302 fully counterclockwise. Then, return it clockwise gradually until a waveform appears on the oscilloscope. 3. Decrease the RF level of the Signal Generator until the waveform on the oscilloscope disappears. Then increase the RF level gradually until a waveform appears again. At this point, check that the RF level of the Signal Generator is 30 dBf ±3 dB.
5	Signal Strength Meter Level Adjustment	None	Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 56 dBf Modulation - Stereo	Main P.C.B. VR301	1. Set the Stereo Receiver to Auto mode. 2. Adjust VR301 so that all segments (1-5) of the signal strength meter light up. 3. Decrease the RF level of the Signal Generator to distinguish the segment 5. Next, increase the RF level gradually so that the segment 5 starts illuminating. At this point, check that the RF level of the Signal Generator is 56 dBf ±2 dB.
6	Stereo Separation Adjustment	AC Voltmeter to Tape 1 Record Output Jacks	Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 65 dBf Modulation - L or R only	Main P.C.B. VR351 Band Selector P.C.B. VR352 (Other only)	**Except for Other version:** 1. Set the Stereo Receiver to Auto mode. 2. Apply modulation to only L channel. 3. Adjust VR351 to obtain minimum reading on the AC voltmeter at the R channel output jack. 4. Apply modulation to only R channel. 5. Check that the reading on the AC voltmeter at the L channel output jack is within ±1 dB with respect to the reading in 3. If not, repeat 2 through 4. **For Other version:** 1. Set the switches on the rear panel as follows: Freq. Step FM/AM - 100 kHz/10 kHz IF Band - Wide 2. Adjust VR351 by applying the same procedures as mentioned above. 3. Set the switches as follows: Freq. Step FM/AM - 50 kHz/9 kHz IF Band - Narrow 4. Apply the same procedures as mentioned above, except for VR352.

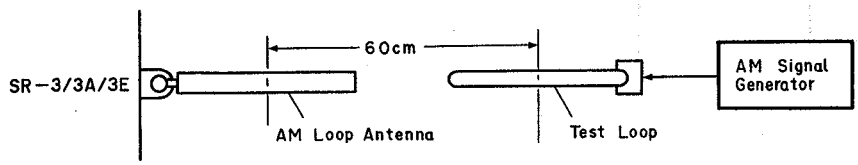


Fig. 3.2

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
7	Stereo/Mono Selection Check and THD Adjustment		Stereo Receiver Same as above Signal Generator Freq. - 98 MHz RF Level - 65 dBf Modulation - Stereo/ Mono	Main P.C.B. CT332	1. Set the Stereo Generator to L=-R mode. 2. Set the Stereo Receiver to Manual mode and check that the Stereo indicator goes out and stereo outputs disappear. 3. Set the Stereo Receiver to Auto mode and adjust CT332 to obtain minimum distortion (THD: 0.09% or less).

3.2.2. AM Tuner Section

Note: Frequencies for Europe, Germany, Australia and Other (Narrow) are indicated in parentheses.

STEP	ITEM	OUTPUT CONNECTION	MODE	ADJUST-MENT	REMARKS
1	Tuning Level Adjustment	DC Voltmeter between TP3-1 and TP3-2 on Main P.C.B.	Stereo Receiver Input Selector -Tuner Band Selector - AM Tape Monitor - Source Signal Generator Freq. - 520 (522) kHz/ 1710 (1611) kHz	Main P.C.B. L501 CT526	1. Set the frequency of the Signal Generator to 520 kHz (522 kHz) and make tuning. 2. Adjust L501 to obtain 1.4 V ±0.02 V on the DC voltmeter. 3. Change the frequency to 1710 kHz (1611 kHz) and make tuning. 4. Adjust CT526 to obtain 22 V ±0.2 V on the DC voltmeter. 5. If satisfactory results are not obtained, repeat 1 through 4.
2	Tracking and IF Adjustment	AC Voltmeter to Tape 1 Record Output Jacks	Stereo Generator Same as above Signal Generator Freq. - 600 (603) kHz/ 1400 (1404) kHz RF Level - 82 dBμ/m Modulation - 400 Hz 30%	Main P.C.B. L502 L503 L504 CT527	1. Set the measurement instruments as shown in Fig. 3.2. Set the distance between the AM Loop Antenna of the SR-3/3A/3E and a test loop to 60 cm. To obtain 56 dBμ/m at the AM Loop Antenna, set the RF level output of the AM Signal Generator to 82 dBμ/m as loss is 26 dBμ/m in this setting. 2. Set the frequency of the Signal Generator to 600 kHz (603 kHz) and make tuning. 3. Adjust L502 to obtain maximum reading on the AC voltmeter. 4. Adjust L503 to obtain maximum reading on the AC voltmeter. 5. Adjust L504 to obtain maximum reading on the AC voltmeter. 6. Set the frequency to 1400 kHz (1404 kHz) and make tuning. 7. Adjust CT527 to obtain maximum reading on the AC voltmeter. 8. Repeat 2 through 7 once.
3	Signal Strength Meter Level Adjustment	None	Stereo Generator Same as above Signal Generator Freq. - 1000 (999) kHz RF Level - 106 dBμ/m	Main P.C.B. VR501	1. With the same setting as in Step 2, set the RF level output of the AM Signal Generator to 106 dBμ/m in order to obtain 80 dBμ/m at the AM Loop Antenna. 2. Adjust VR501 so that the segment 5 of the signal strength meter starts illuminating. Note: Before adjustment, select AM mode and wait for more than three minutes.

4. MECHANISM ASS'Y AND PARTS LIST

4.1. Synthesis

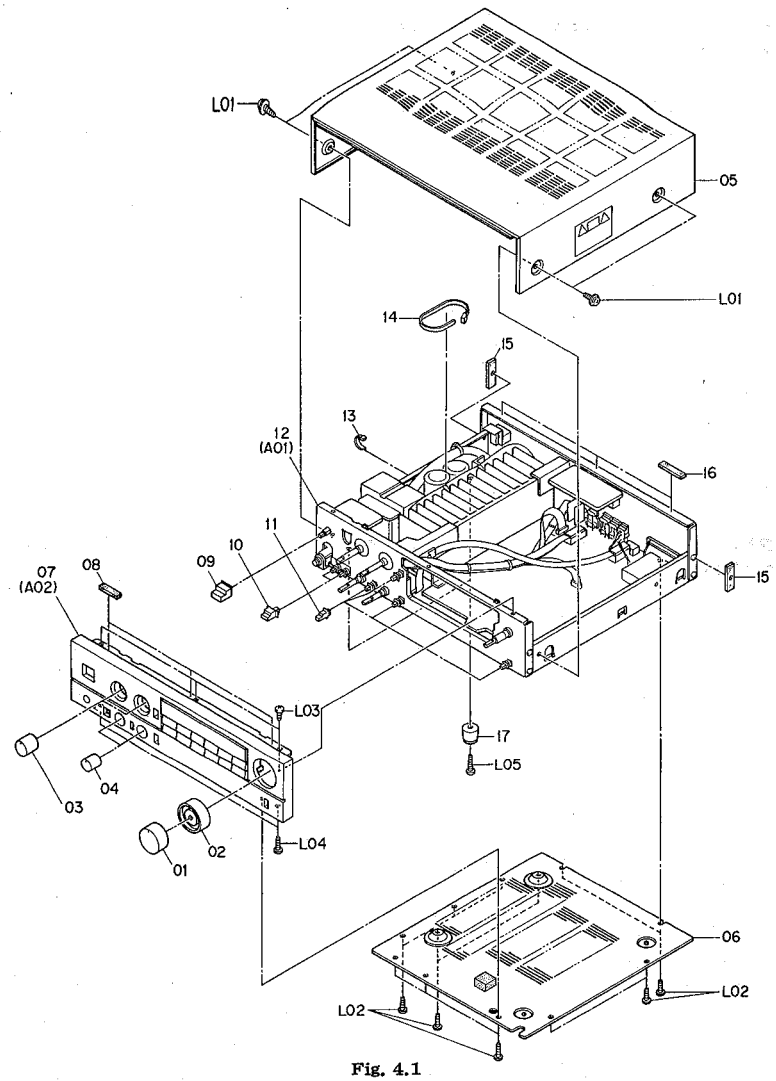


Fig. 4.1

Schematic Ref. No.	Part No.	Description	Q'ty	Schematic Ref. No.	Part No.	Description	Q'ty
		Synthesis			(0E00888A)	BT3x12 ⊕Binding	(2)
		Serial No.: D10501001 -			(0J05214A)	P.C.B. Cushion	(1)
				07	HA05098A	Front Panel Ass'y (SR-3 (Canada))	1
01	HA05103A	Volume Knob Ass'y	1		HA05099A	Front Panel Ass'y (SR-3 (Australia & Other))	1
02	HA05104A	Balance Knob Ass'y	1				
03	HA05105A	Selector Knob Ass'y	2		HA05101A	Front Panel Ass'y (SR-3A)	1
04	HA05106A	Tone Control Knob Ass'y	2		HA05100A	Front Panel Ass'y (SR-3E (Europe & Germany))	1
05	HA05149A	Top Cover Ass'y (SR-3 (Canada & Australia), SR-3A & SR-3E (Europe))	1	08	0J05364A	Top Cover Cushion T4	3
				09	0H04947A	Power Switch Knob	1
	HA05180A	Top Cover Ass'y (SR-3 (Other))	1	10	0H04950B	Push Switch Knob 10L	2
	HA05266A	Top Cover Ass'y (SR-3E (Germany))	1	11	0H04949B	Push Switch Knob 5L	4
		(Consisting of the followings:)		12	JA04240A	Chassis Ass'y (SR-3 (Canada))	1
					JA04242A	Chassis Ass'y (SR-3 (Australia))	1
	(0H04934C)	Top Cover	(1)		JA04241A	Chassis Ass'y (SR-3 (Other))	1
	(0J05215B)	Power Transformer Cushion (SR-3, SR-3A & SR-3E (Europe))	(1)		JA04244A	Chassis Ass'y (SR-3A)	1
					JA04243A	Chassis Ass'y (SR-3E (Europe))	1
					JA04288A	Chassis Ass'y (SR-3E (Germany))	1
	(0J05376A)	Power Transformer Cushion VDE (SR-3E (Germany))	(1)	13	0B90019A	Insu-Lock SKB80	27
				14	0B08515A	Insu-Lock BK-1	4
	(0M04377B)	Caution Label	(1)	15	0J05226A	Side Cushion	2
	(0J05261A)	Top Cover Cushion S	(3)	16	0J05363A	Top Cover Cushion T3	3
	(0M04811A)	Voltage Caution Sheet (SR-3 (Other))	(1)	17	0J05162A	Leg T-S	2
				L01	0E03032A	BT4x8 ⊕Pan Washer-faced (Black Chromate)	4
	(0M04812A)	Voltage Caution Label (SR-3 (Other))	(1)				
				L02	0E00868A	BT3x8 ⊕Binding	12
06	JA04245A	Bottom Cover Ass'y (Consisting of the followings:)	1	L03	0E00857A	BT3x6 ⊕Binding	3
				L04	0E00921A	BT3x8 ⊕Binding (Black Chromate)	2
	(0J05203C)	Bottom Cover	(1)				
	(0J05162A)	Leg T-S	(2)	L05	0E00888A	BT3x12 ⊕Binding	2
	(0M04377B)	Caution Label	(1)				

4.2. Chassis Ass'y (A01)

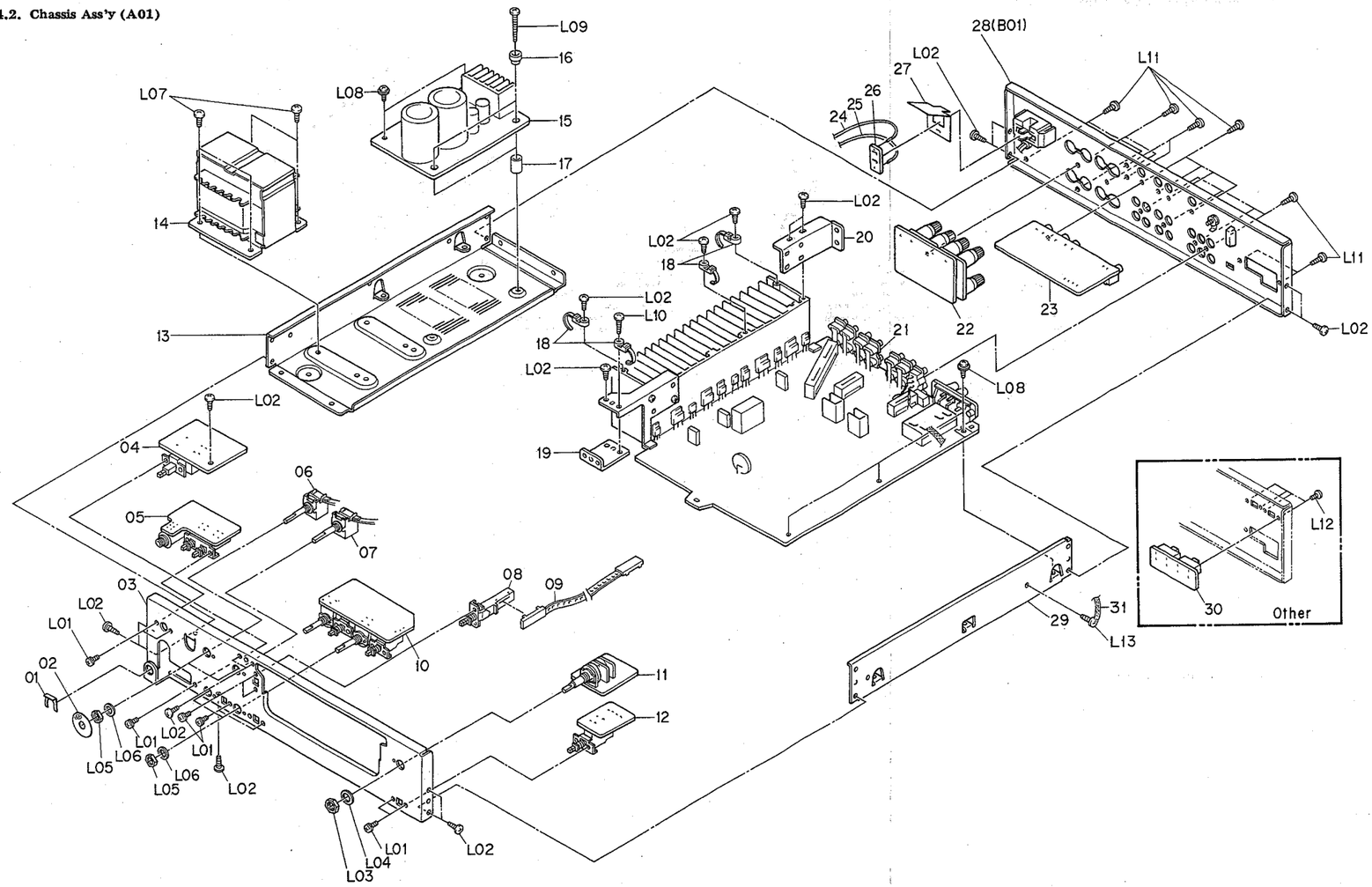


Fig. 4.2

Schematic Ref. No.	Part No.	Description	Q'ty
A01	JA04240A	Chassis Ass'y (SR-3 (Canada))	1
	JA04242A	Chassis Ass'y (SR-3 (Australia))	1
	JA04241A	Chassis Ass'y (SR-3 (Other))	1
	JA04244A	Chassis Ass'y (SR-3A)	1
	JA04243A	Chassis Ass'y (SR-3E (Europe))	1
	JA04288A	Chassis Ass'y (SR-3E (Germany)) Serial No.: D10501001 -	1
01	0J05092A	Snap Plate	1
02	0J05258B	Selector Knob Himelon	2
03	0J05200C	Front Chassis	1
04	BA06380A	Power Switch P.C.B. Ass'y (SR-3 (Canada) & SR-3A)	1
	BA06252A	Power Switch P.C.B. Ass'y (SR-3 (Australia & Other))	1
	BA06251A	Power Switch P.C.B. Ass'y (SR-3E (Europe))	1
	BA06821A	Power Switch P.C.B Ass'y (SR-3E (Germany))	1
05	BA06254A	Speaker Switch P.C.B. Ass'y	1
06	0B70081A	Rotary Switch Controller 6-5	1
07	0B70080A	Rotary Switch Controller 4-4	1
08	0B70084A	Push Switch Controller	1
09	0B70085A	Push Switch Wire	1
10	BA06245A	Tone Control P.C.B. Ass'y (SR-3, SR-3A & SR-3E (Europe))	1
	BA06827A	Tone Control P.C.B. Ass'y (SR-3E (Germany))	1
11	BA06243A	Volume P.C B. Ass'y	1
12	BA06290A	Loudness Switch P.C.B Ass'y	1
13	0J05201C	Power Supply Chassis	1
14	0B50075A	Power Transformer (SR-3 (Canada) & SR-3A)	1
	0B50076A	Power Transformer (SR-3 (Australia) & SR-3E (Europe))	1
	0B50077A	Power Transformer (SR-3 (Other))	1
	0B50091A	Power Transformer (SR-3E (Germany))	1
15	BA06248A	Power Supply P.C.B. Ass'y (SR-3 (Canada & Other) & SR-3A)	1
	BA06249A	Power Supply P.C.B. Ass'y (SR-3 (Australia) & SR-3E (Europe))	1
	BA06828A	Power Supply P.C.B. Ass'y (SR-3E (Germany))	1
16	0J05019A	Collar Bushing 10mm	2
17	0J05208A	Collar Bushing 15mm	2
18	0B90210A	Insu-Lock T30MR-HS	4
19	0J05206A	Heat Sink Holder B	1
20	0J05204B	Heat Sink Holder C	1
21	BA06237A	Main P.C.B. Ass'y (SR-3 (Canada) & SR-3A)	1
	BA06310A	Main P.C.B. Ass'y (SR-3 (Australia))	1
	BA06239A	Main P.C B. Ass'y (SR-3 (Other))	1
	BA06238A	Main P.C.B. Ass'y (SR-3E (Europe))	1
	BA06825A	Main P.C B. Ass'y (SR-3E (Germany))	1
22	BA06283A	Speaker Terminal P.C.B. Ass'y (SR-3, SR-3A & SR-3E (Europe))	1
	BA06822A	Speaker Terminal P.C.B. Ass'y (SR-3E (Germany))	1
23	BA06257A	Video Amp. P.C.B. Ass'y (SR-3 & SR-3A)	1
	BA06850A	Video Amp. P.C.B. Ass'y (SR-3E (Europe))	1
	BA06830A	Video Amp. P.C.B. Ass'y (SR-3E (Germany))	1
24	0B82759A	PD Connector (BLK) (SR-3 (Canada & Other) & SR-3A)	1
25	0B82758A	PD Connector (BRN) (SR-3 (Canada & Other) & SR-3A)	1
26	0B60388A	AC Outlet P.C.B. (SR-3 (Canada & Other) & SR-3A)	1
27	0J05224A	Insulator (SR-3 (Canada))	1
28	HA05089A	Rear Panel Ass'y (SR-3 (Canada))	1
	HA05091A	Rear Panel Ass'y (SR-3 (Australia))	1
	HA05090A	Rear Panel Ass'y (SR-3 (Other))	1
	HA05093A	Rear Panel Ass'y (SR-3A)	1
	HA05092A	Rear Panel Ass'y (SR-3E (Europe & Germany))	1
29	0J05202C	Side Chassis	1
30	BA06308A	Band Selector P.C.B. Ass'y (SR-3 (Other))	1
31	0B81738A	Ground Wire (SR-3E (Germany))	1
L01	0E00612A	M3x6 ⊕ Pan (2A)	9
L02	0E00868A	BT3x8 ⊕ Binding	18
L03	—	Nut M9	(1)
L04	—	Washer	(1)

Schematic Ref. No.	Part No.	Description	Q'ty
L05	—	Nut M7	(4)
L06	—	Washer	(4)
L07	0E03217A	BT4x8 ⊕ Binding	4
L08	0E03157A	BT3x8 ⊕ Binding with Washer	5
L09	0E03071A	BT3x25 ⊕ Binding	2
L10	0E00888A	BT3x12 ⊕ Binding	1
L11	0E00921A	BT3x8 ⊕ Binding (Black Chromate)	16
L12	0E00945A	M2.6x4 ⊕ Binding (Black Chromate) (SR-3 (Other))	4
L13	0E03321A	ST3x6 ⊕ Binding (SR-3E (Germany))	1

4.3. Front Panel Ass'y (A02)

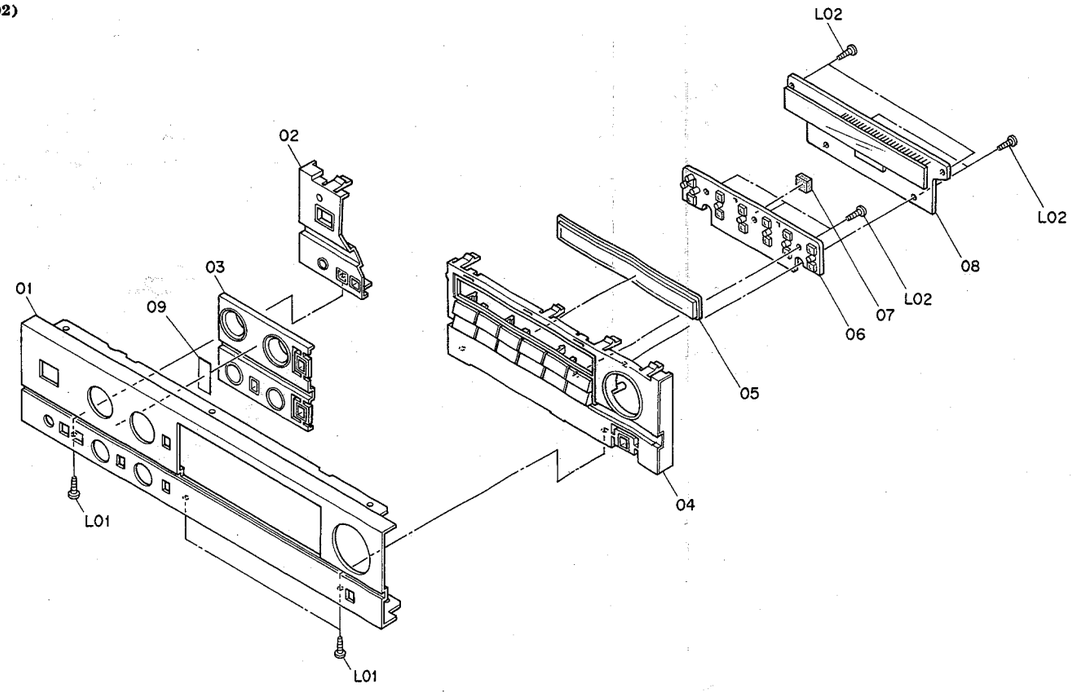


Fig. 4.3

4.4. Rear Panel Ass'y (B01)

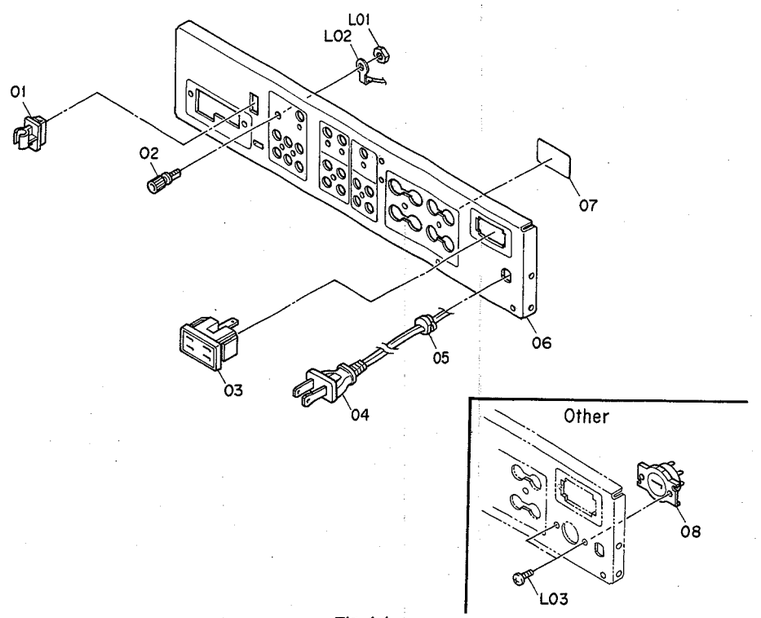


Fig. 4.4

Schematic Ref. No.	Part No.	Description	Q'ty
A02	**HA05098A**	**Front Panel Ass'y (SR-3 (Canada))**	**1**
	HA05099A	**Front Panel Ass'y (SR-3 (Australia & Other))**	**1**
	HA05101A	**Front Panel Ass'y (SR-3A)**	**1**
	HA05100A	**Front Panel Ass'y (SR-3E (Europe & Germany))** Serial No.: D10501001 -	**1**
01	0H04924B	Front Panel (SR-3)	1
	0H04923B	Front Panel (SR-3A)	1
	0H04925A	Front Panel (SR-3E)	1
02	0H04935C	Front Escutcheon L	1
03	0H04936A	Front Escutcheon C	1
04	HA05102B	Front Escutcheon R Ass'y	1
05	0H04938A	Display Lens	1
06	BA06242A	Control Switch P.C.B. Ass'y	1
07	0J05262A	Indicator Cushion	1
08	BA06240A	Display P.C.B. Ass'y (SR-3 (Canada) & SR-3A)	1
	BA06241A	Display P.C.B. Ass'y (SR-3 (Australia & Other) & SR-3E (Europe & Germany))	1
L01	0E00921A	BT3x8 ⊕ Binding (Black Chromate)	3
L02	0E00868A	BT3x8 ⊕ Binding	7
B01	**HA05089A**	**Rear Panel Ass'y (SR-3 (Canada))**	**1**
	HA05091A	**Rear Panel Ass'y (SR-3 (Australia))**	**1**
	HA05090A	**Rear Panel Ass'y (SR-3 (Other))**	**1**
	HA05093A	**Rear Panel Ass'y (SR-3A)**	**1**
	HA05092A	**Rear Panel Ass'y (SR-3E (Europe & Germany))** Serial No.: D10501001 -	**1**
01	0B90071A	AM Loop Antenna Holder	1
02	0B81604A	Ground Terminal T-5435	1
03	0B81597A	AC Outlet 2P (SR-3 (Canada & Other) & SR-3A)	1
04	0B90205A	Power Cord (SR-3 (Canada & Other) & SR-3A)	1
	0B05241A	Power Cord (SR-3 (Australia))	1
	0B08093U	Power Cord (SR-3E (Europe & Germany))	1
05	0B08351A	Cord Bushing 4K-4 (SR-3 (Canada & Other) & SR-3A)	1
	0B08037U	Cord Bushing C (SR-3 (Australia & SR-3E (Europe & Germany))	1
06	0H04931B	Rear Panel (SR-3 (Canada))	1
	0H04965B	Rear Panel (SR-3 (Australia))	1
	0H04933B	Rear Panel (SR-3 (Other))	1
	0H04930B	Rear Panel (SR-3A)	1
	0H04932A	Rear Panel (SR-3E (Europe & Germany))	1
07	0M04380A	Barrier Caution Label (SR-3 (Canada) & SR-3A)	1
08	0B70049A	Voltage Selector (SR-3 (Other))	1
L01	—	Nut (Ground Terminal)	(1)
L02	—	Earth Lug (Ground Terminal)	(1)
L03	0E00985A	M3x6 ⊕ Binding (Black Chromate) (SR-3 (Other))	2

Schematic Ref. No.	Part No.	Description
L502	0B51236A	Ant. Coil
L503	0B51234A	IFT 2 AM
L504	0B51233A	IFT 1 AM
L505,506	0B51239A	Micro Coil 22μH
VR501	0B32086A	Semi VR 100K
R501	0B01857A	RK 1K 1/4W J
R502,503 510	0B09725A	RK 100K 1/6W J
R504,509 512	0B09685A	RK 2.2K 1/6W J
R505,506 519	0B09701A	RK 10K 1/6W J
R507	0B09733A	RK 220K 1/6W J
R508	0B09677A	RK 1K 1/6W J
R511	0B09671A	RK 560 1/6W J
R514	0B09661A	RK 220 1/6W J
R515	0B09665A	RK 330 1/6W J
R516	0B09681A	RK 1.5K 1/6W J
R517	0B09651A	RK 82 1/6W J
R518	0B09708A	RK 20K 1/6W J
CF502	0B41701A	Ceramic Filter SFZ450G3L
CT526,527	0B42005A	C Trimmer 20P
C501,506 507,512 515,518 519,520 522,525	0B41554A	CC 0.022μ 25V
C502	0B41401A	CP 430P 50V J
C504,505	0B01402A	CE 4.7μ 25V
C508	0B40111A	CE 0.47μ 50V
C509,523	0B01403A	CE 47μ 16V
C510	0B41296A	CMM 0.068μ 50V J
C511	0B09586A	CC 2200P 50V K
C513,517 521	0B09288A	CC 1000P 50V K
C514	0B41553A	CC 0.01μ 25V
C524	0B41711A	CC 82P 50V K
C528	0B09372A	CE 2.2μ 50V
X501	0B92003A	Crystal 450kHz BFU450C4N
CN1	0B82791A	2P Connector 250mm
TP3	0B81634A	2P-T Post
		— MPX —
IC351	0B11245A	IC LA3400N
Q351	0B10062A	TR DTC144ES
Q352,353	0B10058A	TR DTA114ES
Q354,355	0B06299A	TR 2SC2878
D351,352 353	0B06398A	SiD 1SS176
L351,352	0B51237A	MPX Filter
VR351	0B32066A	Semi VR 220K
R352,353	0B09721A	RK 68K 1/6W J
R354,355	0B09723A	RK 82K 1/6W J
R356-359 368	0B09689A	RK 3.3K 1/6W J (5)
R360,361	0B09685A	RK 2.2K 1/6W J
R362,363	0B09695A	RK 5.6K 1/6W J
R364	0B09663A	RK 270 1/6W J
R369	0B09701A	RK 10K 1/6W J
C351	0B40418A	CE 330μ 16V (LN)
C352	0B41290A	CMM 0.022μ 50V J
C353,354 366,367	0B09816A	CE 10μ 16V (LN)
C355,358 362	0B01405A	CE 1μ 50V
C356,357	0B01412A	CE 10μ 16V
C359	0B41555A	CC 0.047μ 25V
C360	0B09287A	CC 680P 50V K
C361	0B40023A	CE 0.22μ 50V J
C364,365	0B41404A	CP 560P 50V J
C368,369	0B41281A	CMM 3900P 50V J
X351	0B90172A	Ceramic Filter CSB456F11
TP2	0B81635A	3P-T Post
		— Sync. Cont. —
IC651	0B11159A	IC TD6104
IC652	0B11161A	IC TC9147BP
IC653	0B06219A	IC μPD4081BC
Q651,652	0B10088A	TR 2SC1815L (GR)
Q653,657 660,661	0B01872A	TR 2SC945L (P,Q)
Q654,656 658,662 663	0B10068A	TR DTC114ES

Schematic Ref. No.	Part No.	Description
Q655	0B10058A	TR DTA114ES
Q659	0B06013A	TR 2SA733 (P,Q)
Q664,665	0B06372A	TR 2SA953 (K,L)
D301,664 666	0B06181A	SiD 1SS53
D651 653-659 661,662 663,665	0B06398A	SiD 1SS176 (12)
D652	0B12363A	SiD MA700
D660	0B12100A	SiD MC921
L651	0B51239A	Micro Coil 22μH
X651	0B92006A	Crystal 7.2MHz
R653,656 657,664 667,669 672,676 677,683 685,688	0B09725A	RK 100K 1/6W J
R654	0B09661A	RK 220 1/6W J
R655,660	0B09677A	RK 1K 1/6W J
R658,662 665,678 692,693	0B09701A	RK 10K 1/6W J
R661	0B09699A	RK 8.2K 1/6W J
R663	0B24114A	RF 1K 1/2W J
R666,687	0B09707A	RK 18K 1/6W J
R670,671 691	0B09721A	RK 68K 1/6W J
R673,679 682,690	0B09719A	RK 56K 1/6W J
R674,675 680,681	0B09749A	RK 1M 1/6W J
R684	0B09727A	RK 120K 1/6W J
R686	0B09693A	RK 4.7K 1/6W J
R689	0B09709A	RK 22K 1/6W J
R694,695	0B09717A	RK 47K 1/6W J
C651	0B01403A	CE 47μ 16V
C652,663 668-673 679	0B41554A	CC 0.022μ 25V (9)
C653	0B41187A	CC 39P 50V J
C654	0B09586A	CC 2200P 50V K
C655	0B09288A	CC 1000P 50V K
C656	0B40103A	CE 47μ 16V
C657	0B09327A	CE 0.33μ 50V (LN)
C658	0B41298A	CMM 0.1μ 50V J
C659	0B41553A	CC 0.01μ 25V
C661,666 674,678	0B01405A	CE 1μ 50V
C662,677	0B01400A	CE 100μ 16V
C664	0B41708A	CC 22P 50V J
C665	0B41709A	CC 47P 50V J
C667	0B40111A	CE 0.47μ 50V
C675	0B41304A	CMM 0.33μ 50V J
C676	0B01863A	CE 3.3μ 50V
M651	0B90200B	Lithium Battery 3V CR2430-FT4-1
CN8	0B81639A	7P-T Post
CN9	0B81638A	6P-T Post
CN10	0B81635A	3P-T Post
CN12	0B81644A	12P-T Post
CN13	0B81637A	5P-T Post
CN14	0B82802A	4P Connector
		— Eq. Amp. —
IC391	0B06146A	IC NJM4558DD
Q101,102 201,202	0B10195A	FET 2SK146 (BL,V)
Q103,203	0B01872A	TR 2SC945L (P,Q)
ZD101,201	0B12168A	ZD 10V RD10JS-T1B2
D101,102 201,202	0B06398A	SiD 1SS176
R101,201	0B22423A	RM 51.0K 1/6W F
R102,202	0B22684A	RM 5.62 1/4W F
R103,203	0B09695A	RK 5.6K 1/6W J
R104,105 204,205	0B09356A	RM 4.7K 1/4W F
R106,206	0B09631A	RK 12 1/6W J
R107,207	0B22253A	RM 1.69K 1/6W F
R108,208	0B22635A	RM 1.21K 1/4W F
R109,209	0B22493A	RM 220K 1/6W F
R110,122 152,210 222,252	0B22457A	RM 100K 1/6W F
R111,211	0B09562A	RM 75.0K 1/4W F
R112,212	0B22641A	RM 887K 1/4W F

Schematic Ref. No.	Part No.	Description
R113,213	0B22576A	RM 475 1/4W F
R115,215	0B22567A	RM 100 1/4W F
R116,216	0B22643A	RM 47.5 1/4W F
R117,217	0B09891A	RM 80.6 1/4W F
C044,045	0B41803A	C 470P 50V J
C101,201	0B41703A	CSP 100P 50V J
C102,202	0B04129A	CMM 0.027μ 50V J
C103,104 122,203 204,222	0B09816A	CE 10μ 16V (LN)
C105,205	0B41238A	CP 3600P 100V J
C106,124 206,224	0B41225A	CP 1000P 100V J
C108,208	0B41706A	CSP 3600P 50V J
C121,221	0B40422A	CE 220μ 10V (LN)
SW301	0B70076A	Push Switch 4-2
SW302	0B70078A	Slide Switch 4-2
CN34	0B82862A	10P Connector
	BA06317A	Eq. Sub P.C.B. Ass'y
	BA06803A	Phono Input P.C.B. Ass'y
		— Subsonic Filter —
IC392	0B11005A	IC NJM072DE
Q104,204	0B06299A	TR 2SC2878
ZD403	0B12186A	ZD 18V RD18JSB2
D401	0B06398A	SiD 1SS176
R114,214	0B22303A	RM 4.53K 1/6W F
R118,218	0B09749A	RK 1M 1/6W J
R119,154 219	0B09741A	RK 470K 1/6W J
R120,220	0B22247A	RM 1.50K 1/6W F
R254	0B01684A	RK 470K 1/4W J
R416	0B09727A	RK 120K 1/6W J
C107,207	0B09933A	CE 2.2μ 50V (LN)
C109,209	0B05582A	CM 0.022μ 50V J
C120,220	0B41298A	CMM 0.1μ 50V J
C392	0B40117A	CE 22μ 50V
CN4	0B81636A	4P-T Post
HJ	0B82215A	PD Connector V090
		— Power Supply —
	0B06013A	TR 2SA733 (P,Q)
	0B01872A	TR 2SC945L (P,Q)
	0B06452A	TR 2SD1406 (Y)
	0B06451A	TR 2SB1015 (Y)
ZD401	0B12162A	ZD 8.2V RD8.2JS-T1B2
R401,402	0B09725A	RK 100K 1/6W J
R403,404	0B09669A	RK 470 1/6W J
R405	0B09695A	RK 5.6K 1/6W J
R406,407 408,409	0B22343A	RM 10.0K 1/6W F
C394,395	0B41507A	C 22P 50V J
CN3	0B81635A	3P-T Post
GJ	0B82135B	PD Connector V130 (1)
	0B08680B	Heat Sink A (2)
	0E00972A	Nut Hex. M3 (2)
	0E03319A	M3x8 ⊕ Binding (2)
		— Tuner Buffer —
IC394	0B11070A	IC NJM072S
R141-144 241-244	0B01889A	RK 100K 1/4W J (8)
R151,251	0B01857A	RK 1K 1/4W J
C118,218	0B09814A	CE 1μ 50V (LN)
		— Input Sel. —
R003,004	0B05698A	RK 1.5K 1/4W J
R145,146 147,149 245,246 247,249	0B09733A	RK 220K 1/6W J
R148,248 250	0B09491A	RM 1.00K 1/4W F
R150	0B22229A	RM 1.00K 1/6W F
R161	0B22324A	RM 6.80K 1/6W F
R261	0B09529A	RM 6.8K 1/4W F
R391	0B09681A	RK 1.5K 1/6W J
R395	0B05794A	RK 680 1/4W J
R396	0B05509A	RK 33K 1/4W J

Schematic Ref. No.	Part No.	Description
C042,043	0B41418A	CP 2200P 50V J
C130,230	0B09814A	CE 1μ 50V (LN)
C339,399	0B41298A	CMM 0.1μ 50V J
C397	0B40120A	CE 100μ 50V
C398	0B01674A	CE 10μ 25V
RL301	0B90204A	Relay FBR42ND024P
SW305	0B70082A	Rotary Slide Switch 4-4
SW307	0B70083A	Rotary Slide Switch 8-6
CN5,6	0B81013A	Dip Mate 6P
CN30	0B82806A	5P Connector
CN32	0B82751A	PD Connector V80
	0B81593A	4P Pin Jack (3)
		— Protector —
IC901	0B11246A	IC μPC1237H
Q714,716 814,816	0B10050A	TR 2SA970 (BL)
Q715,815	0B06142A	TR 2SC2240 (BL)
Q901	0B06322A	TR 2SC2002 (K,L)
Q902	0B06372A	TR 2SA953 (K,L)
ZD702,802	0B12390A	ZD 13V RD13EB3
ZD901	0B06123A	ZD 12V RD12EB3
D901,902	0B06181A	SiD 1SS53
R733,833	0B01681A	RK 3.3K 1/4W J
R734,740 834,840	0B05627A	RK 330K 1/4W J
R735,737 835,837	0B01856A	RK 8.2K 1/4W J
R736,836	0B05625A	RK 220K 1/4W J
R739,839	0B05621A	RK 120K 1/4W J
R901	0B01888A	RK 10K 1/4W J
R902	0B01682A	RK 6.8K 1/4W J
R903	0B24113A	RF 2.2K 1/2W J
R904	0B05641A	RK 47K 1/4W J
R905	0B01933A	RK 220 1/4W J
R906	0B01889A	RK 100K 1/4W J
R907	0B09263A	RK 12K 1/4W J
R908	0B05508A	RK 56K 1/4W J
R909	0B24107A	RF 1K 2W J
C901	0B40408A	CE 330μ 10V (BP)
C902	0B40116A	CE 10μ 50V
C903	0B09372A	CE 2.2μ 50V
C905	0B01400A	CE 100μ 16V
RL901	0B90199A	Relay 24V
CN11	0B82799A	3P Connector
		— Power Amp. —
Q701-704 706,707 801-804 806,807	0B06142A	TR 2SC2240 (BL) (12)
Q705,708 805,808	0B10050A	TR 2SA970 (BL)
ZD701,801	0B12162A	ZD 8.2V RD8.2JSB2
VR701,801	0B32078A	Semi VR 4.7K
R701,711 801,811	0B09441A	RM 22K 1/4W F
R702,713 714,802 813,814	0B09420A	RM 2.2K 1/4W F
R703,803	0B09421A	RM 2.67K 1/4W F
R704,804	0B01857A	RK 1K 1/4W J
R705,805	0B22635A	RM 1.21K 1/4W F
R706,806	0B24111A	RF 22K 1/2W J
R707,807	0B01846A	RK 4.7K 1/4W J
R708,808	0B05959A	RK 75 1/4W J
R709,809	0B05623A	RK 1.2K 1/4W J
R710,810	0B01933A	RK 220 1/4W J
R712,715 812,815	0B22632A	RM 75 1/4W F
R716,816	0B05622A	RK 2.2K 1/4W J
R717,720 817,820	0B24110A	RF 10 1/2W J
R718,719 818,819	0B22700A	RM 3.32 1/4W F
R721,722 821,822	0B24094A	RC 1 5W K
R741,841	0B24112A	RF 5.6 1W J
R743,843	0B22457A	RM 100K 1/6W F
R750,850	0B01683A	RK 15K 1/4W J
C701,801	0B41213A	CP 330P 100V J
C702,802	0B40421A	CE 220μ 25V (LN)
C703,803	0B41225A	CP 1000P 100V J

Schematic Ref. No.	Part No.	Description
C704,705 804,805	0B41702A	CSP 22P 50V J
C706,806	0B41594A	CM 0.1μ 100V J
C707,807	0B09816A	CE 10μ 16V (LN)
TP4L,4R	0B81634A	2P-T Post
		— Miscellaneous —
	0B60377F	Main P.C.B.
Q709,809	0B06303A	TR 2SB772 (P,Q)
Q710,810	0B10121A	TR 2SD1407
Q711,811	0B10120A	TR 2SB1016
Q712,812	0B10178A	TR 2SA1386 (P,Y)
Q713,813	0B10180A	TR 2SC3519 (P,Y)
R001,002	0B01679A	RK 100 1/4W J
C013-015 018-020 029-032	0B41007A	C 1000P 25V (10)
C021,023	0B41803A	C 470P 50V J
C022,024	0B09370A	CC 33P 50V J
C025,026	0B09545A	C 330P 50V J
C040,041	0B41654A	CP 4700P 100V J
TH901	0B19004A	Thermistor 50KD-5
	0B90201A	Insulator (2)
	0E00037A	Earth Lug B-5 (1)
	0B82748B	PD Connector V300 (1)
	0E00868A	BT3x8 ⊕ Binding (4)
	0E03138A	M3x10 ⊕ Binding (10)
	0J05199A	Heat Sink (1)
	0J05205A	Heat Sink Holder A (1)
	0J05207A	Main P.C.B. Holder (1)
	0J05212C	Thermistor Holder (1)
	0E00607A	M3x8 ⊕ Pan (3A) (2)
	0B90078A	Antenna Terminal (1)
	0B90019A	Insu-Lock SKB80 (1)
	0M04956A	Lithium Battery Caution Label (1)
	BA06317A	Eq. Sub P.C.B. Ass'y
	0B60394B	Eq. Sub P.C.B.
Q106,206	0B06299A	TR 2SC2878
Q107	0B10050A	TR 2SA970 (BL)
ZD103	0B12321A	ZD 15V MTZ15C
R156,256	0B09677A	RK 1K 1/6W J
R157,257	0B09749A	RK 1M 1/6W J
R158,159	0B09725A	RK 100K 1/6W J
R160	0B09737A	RK 330K 1/6W J
CN34	0B81631A	10P Connector
	BA06803A	Phono Input P.C.B. Ass'y
	0B60460A	Phono Input P.C.B.
L101,102 201,202	0B51247A	Coil 20μH
C101,201	0B41508A	C 56P 50V J
	0B83054B	4P Connector S80L (1)
	0B83055B	4P Connector S80R (1)
	0B83052A	PD Connector V50 (1)
	0B81020A	2P Pin Jack (1)

5.14. Eq. Sub P.C.B. Ass'y

Note: This P.C.B. Ass'y is included in the Eq. Amp. section of the Main P.C.B. Ass'y.

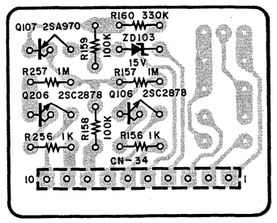


Fig. 5.14

5.15. Phono Input P.C.B. Ass'y

Note: This P.C.B. Ass'y is included in the Eq. Amp. section of the Main P.C.B. Ass'y.

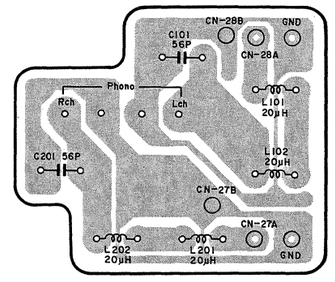


Fig. 5.15

6. SCHEMATIC DIAGRAMS

6.1. IC Block Diagrams

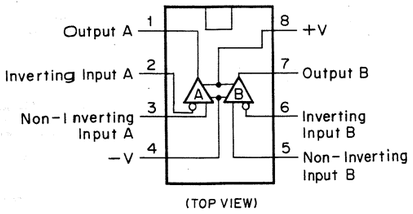


Fig. 6.1.1 Operational Amp. IC 4558DD, 072DE

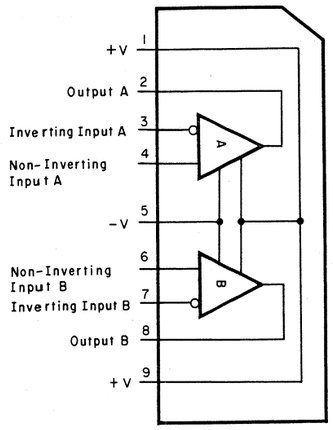


Fig. 6.1.2 Operational Amp. IC 072S

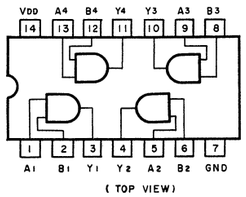


Fig. 6.1.3 AND Gate C-MOS IC μPD4081BC

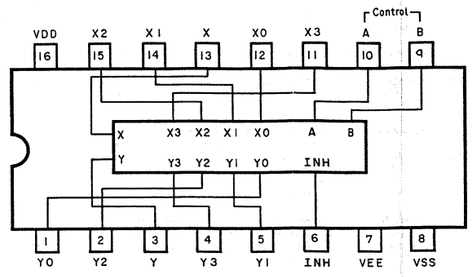


Fig. 6.1.4 Analog Multiplexers/Demultiplexers IC μPD4052BC

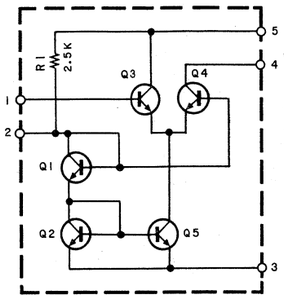


Fig. 6.1.5 FM IF Amp. IC TA7060AP

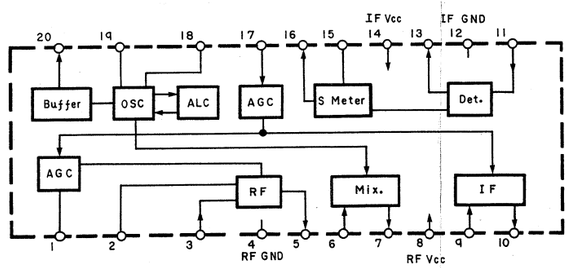


Fig. 6.1.6 AM Tuner IC LA1247

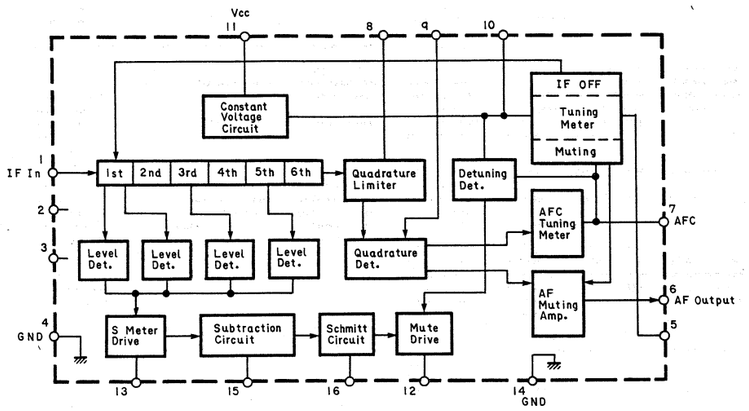


Fig. 6.1.7 FM IF System IC LA1235

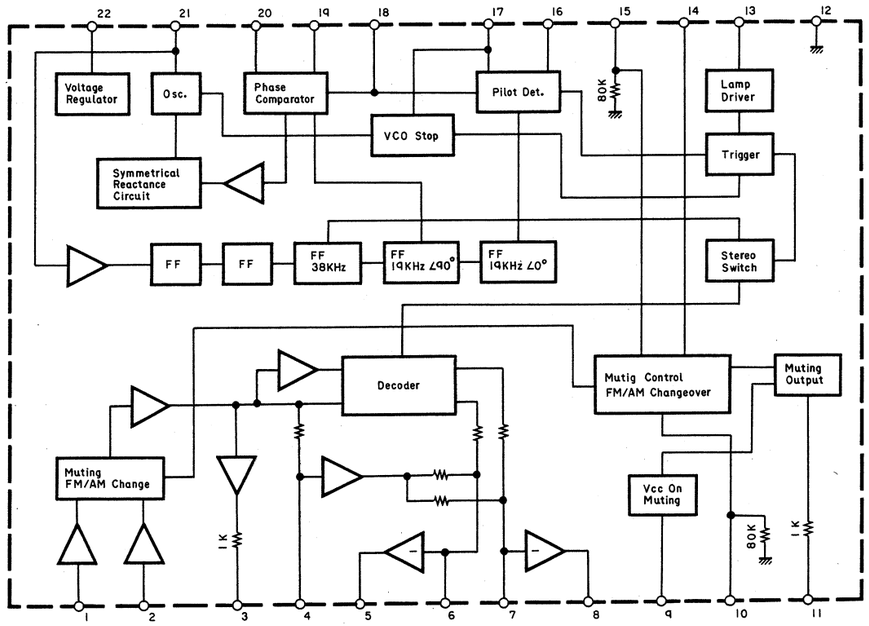


Fig. 6.1.8 FM Stereo Demodulator IC LA3400N

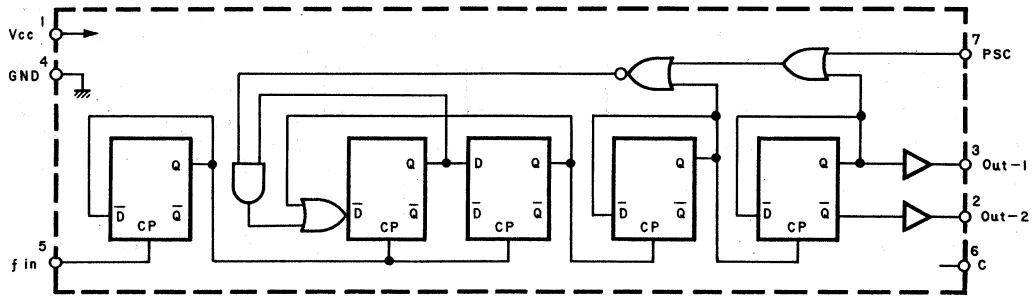


Fig. 6.1.9 ECL Prescaler (FM) IC TD6104

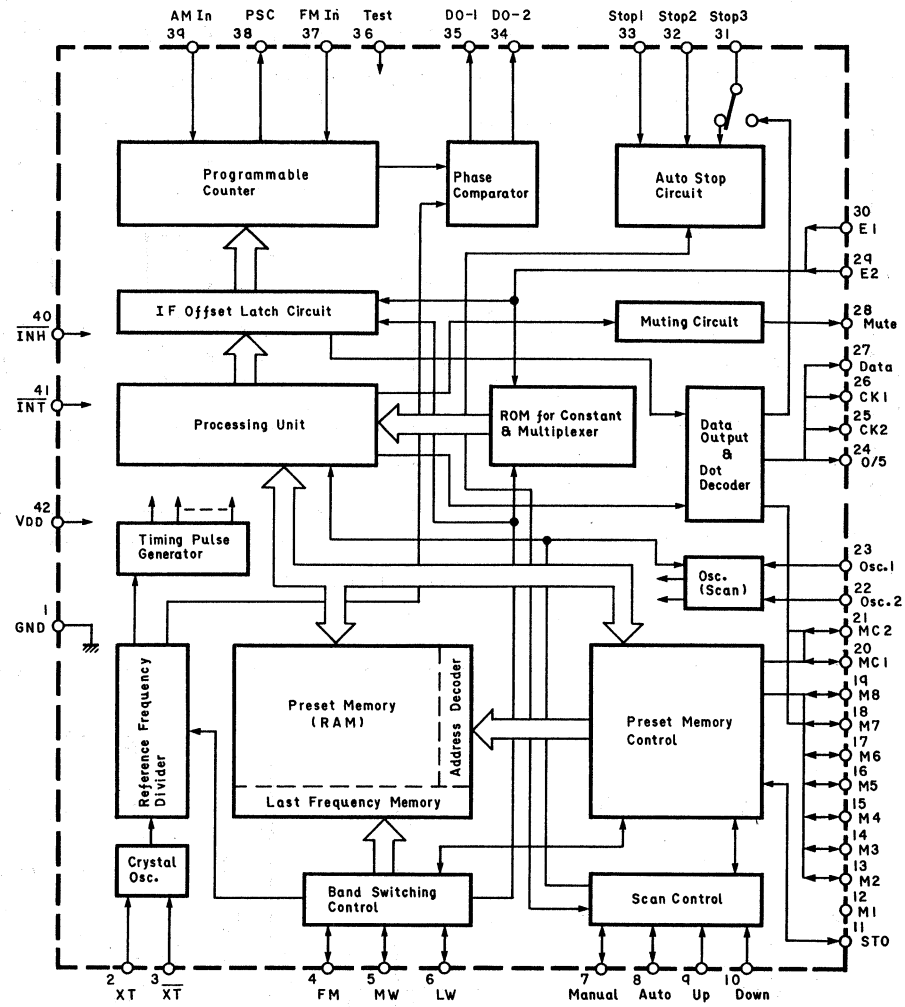


Fig. 6.1.10 FM/MW/LW 3-Band Digital Tuning (Static Method) IC TC9147BP

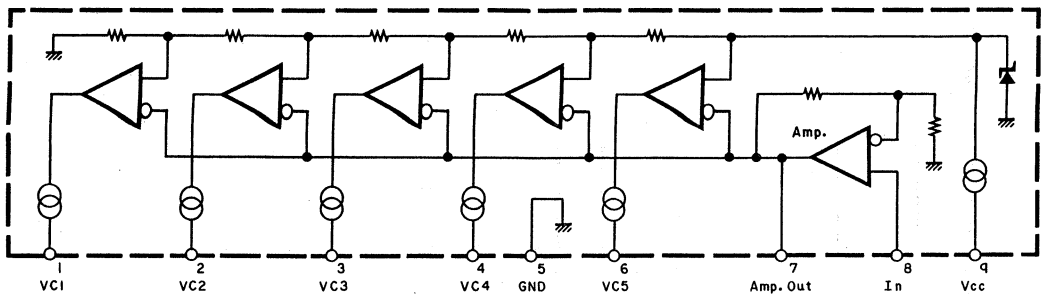


Fig. 6.1.11 Signal Meter Driver IC LB1413N

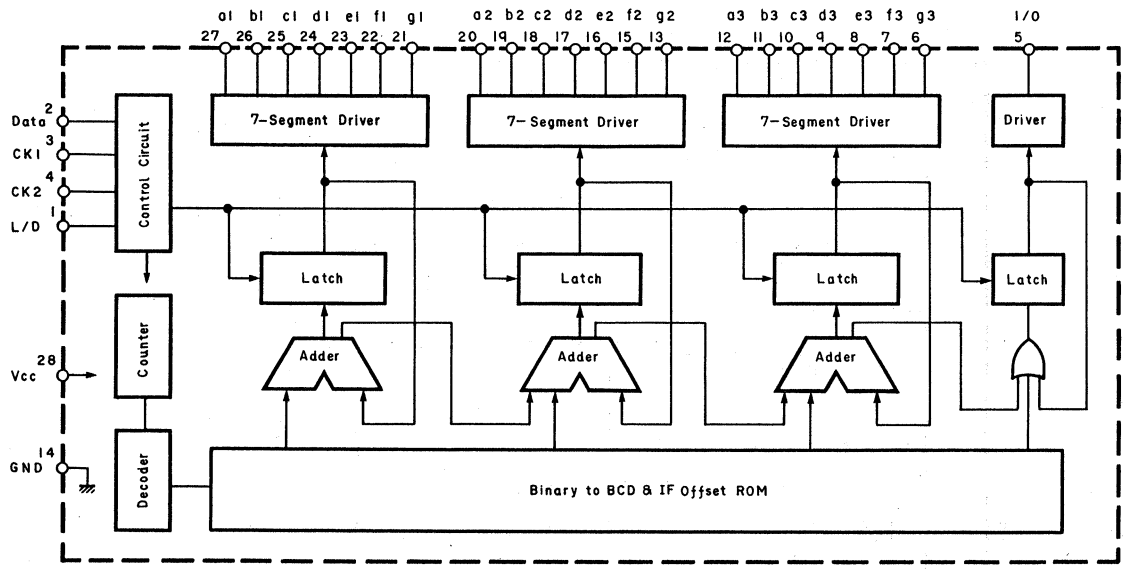


Fig. 6.1.12 Indicator Driver IC TD6301A

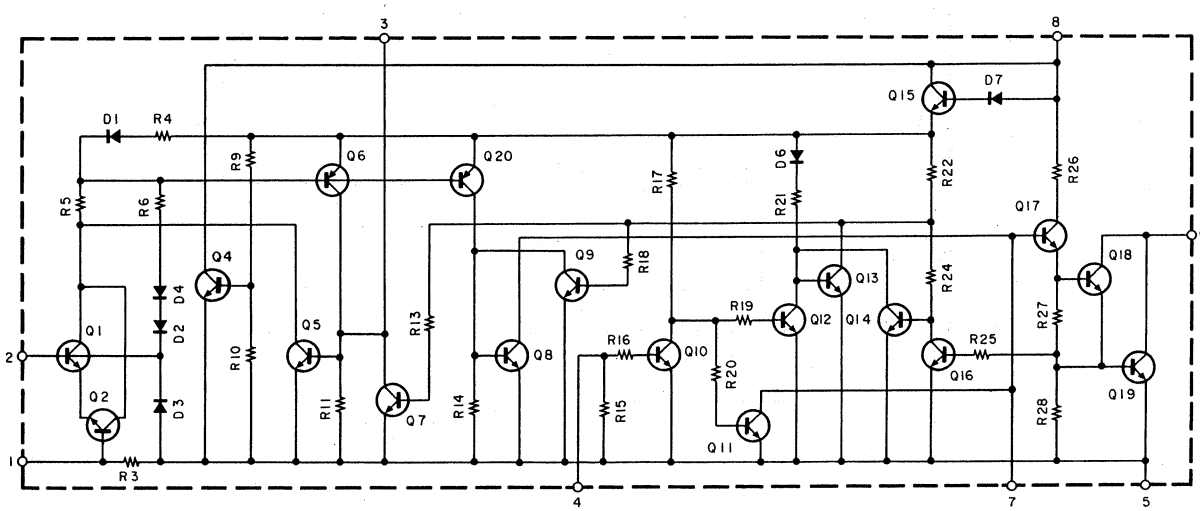
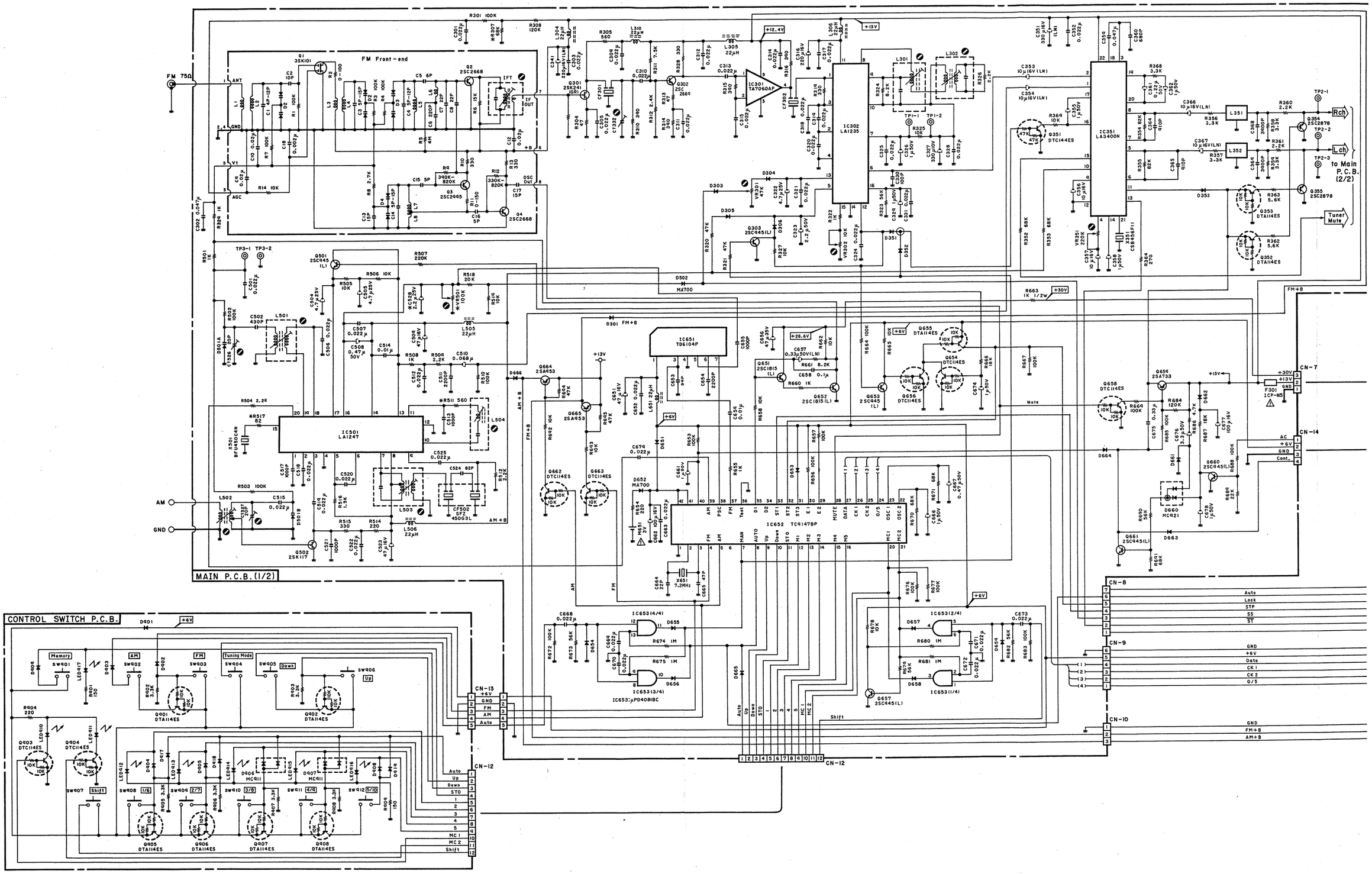


Fig. 6.1.13 Power Amp./Speaker Protector IC μPC1237H

6.2. Schematic Diagrams
6.2.1. Tuner and Power Supply Section
(1) For SR-3 (Canada) & SR-3A


FM 75Ω
AM
GND
FM Front-end
MAIN P.C.B.(1/2)
CONTROL SWITCH P.C.B.
IC501 LA1247
IC651 TD6104P
IC652 TC91478P
IC653(4/4)
IC653(2/4)
IC653(3/4)
IC653:μPD4081BC
IC1301 TA7060AP
IC302 LA1235
IC351 LA3400N
Q1 3SK101
Q2 2SC2668
Q3 2SC2945
Q4 2SC2668
Q301 2SK241(GR)
Q302 2SC2668
Q501 2SC945(L)
Q502 2SK117
Q503 2SC945(L)
Q651 2SC1815(L)
Q652 2SC1815(L)
Q653 2SC945(L)
Q654 DTC114ES
Q655 DTA114ES
Q656 DTC114ES
Q657 2SC945(L)
Q658 DTC114ES
Q659 2SA733
Q660 2SC945(L)
Q661 2SC945(L)
Q662 DTC114ES
Q663 DTC114ES
Q664 2SA953
Q665 2SA953
Q901 DTA114ES
Q902 DTA114ES
Q903 DTC114ES
Q904 DTC114ES
Q905 DTA114ES
Q906 DTA114ES
Q907 DTA114ES
Q908 DTA114ES
Q351 DTC144ES
Q352 DTA114ES
Q353 DTA114ES
Q354 2SC2878
Q355 2SC2878
D502 MA700
D652 MA700
D652 MC421
D660 MC421
D901 +6V
D301 FM+B
D666 AM+B
D664
D663
D353
D351
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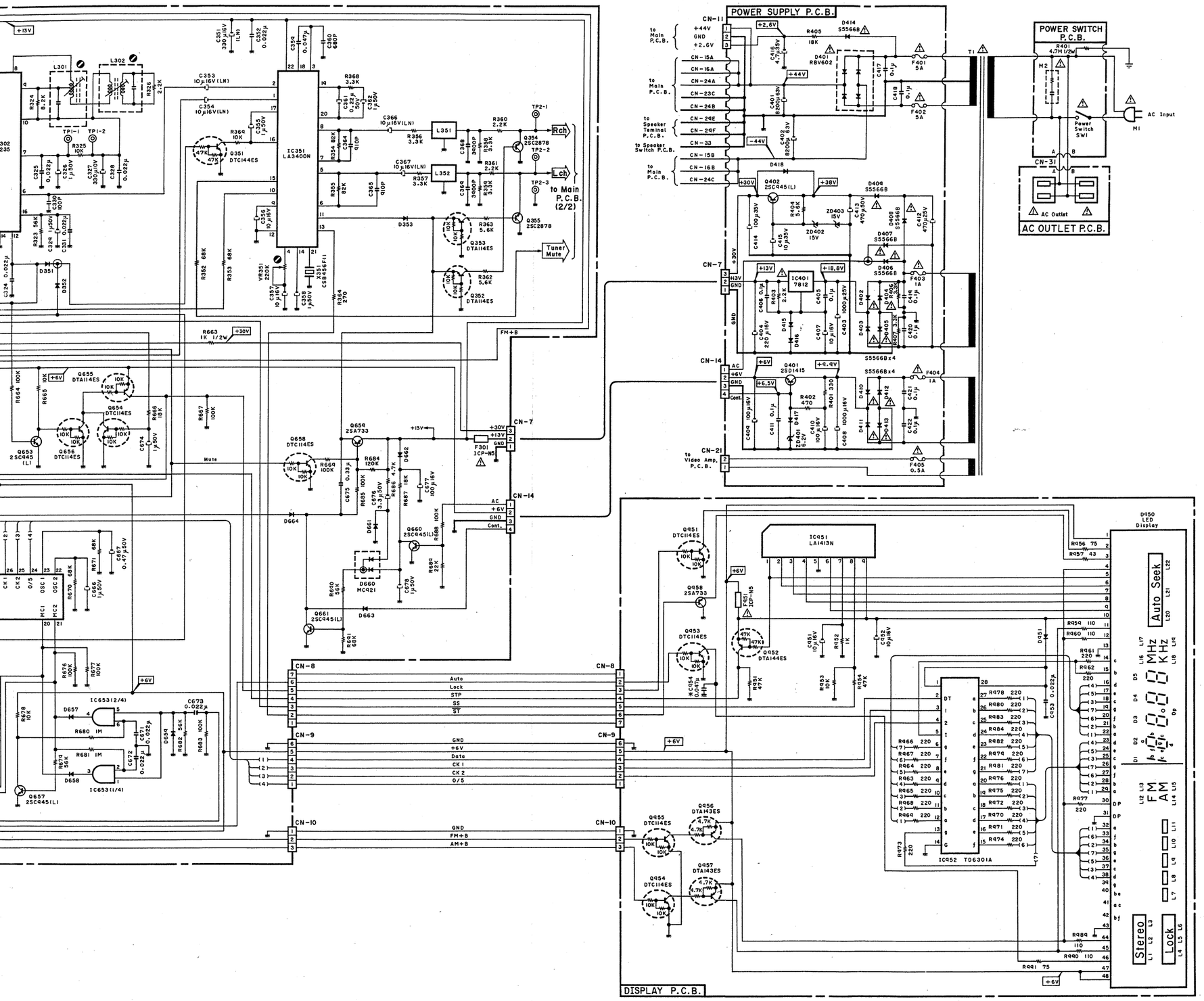


Fig. 6.2.1.1 For SR-3 (Canada) & SR-3A

WARNING:

Parts marked with the symbol ⚠ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.
It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.
WARNING — DO NOT return the unit to the customer until the problem is located and corrected.

For Lithium Battery:

Use ONLY replacement parts recommended by the manufacturer.
Replacement must be done only by qualified service personnel because of risk for explosion.

Notes: 1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.
3. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
4. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

(2) For SR-3 (Australia & Other)

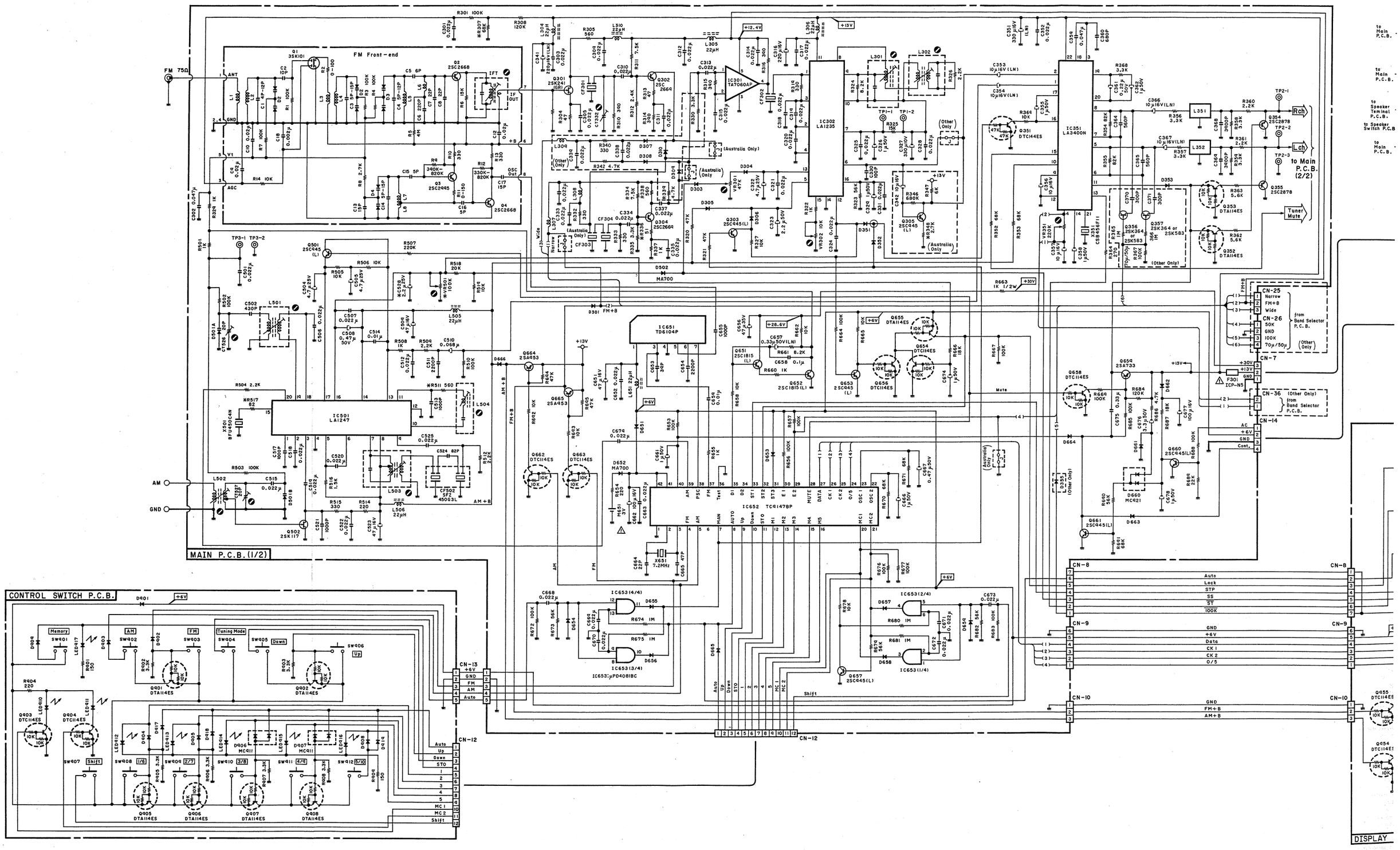
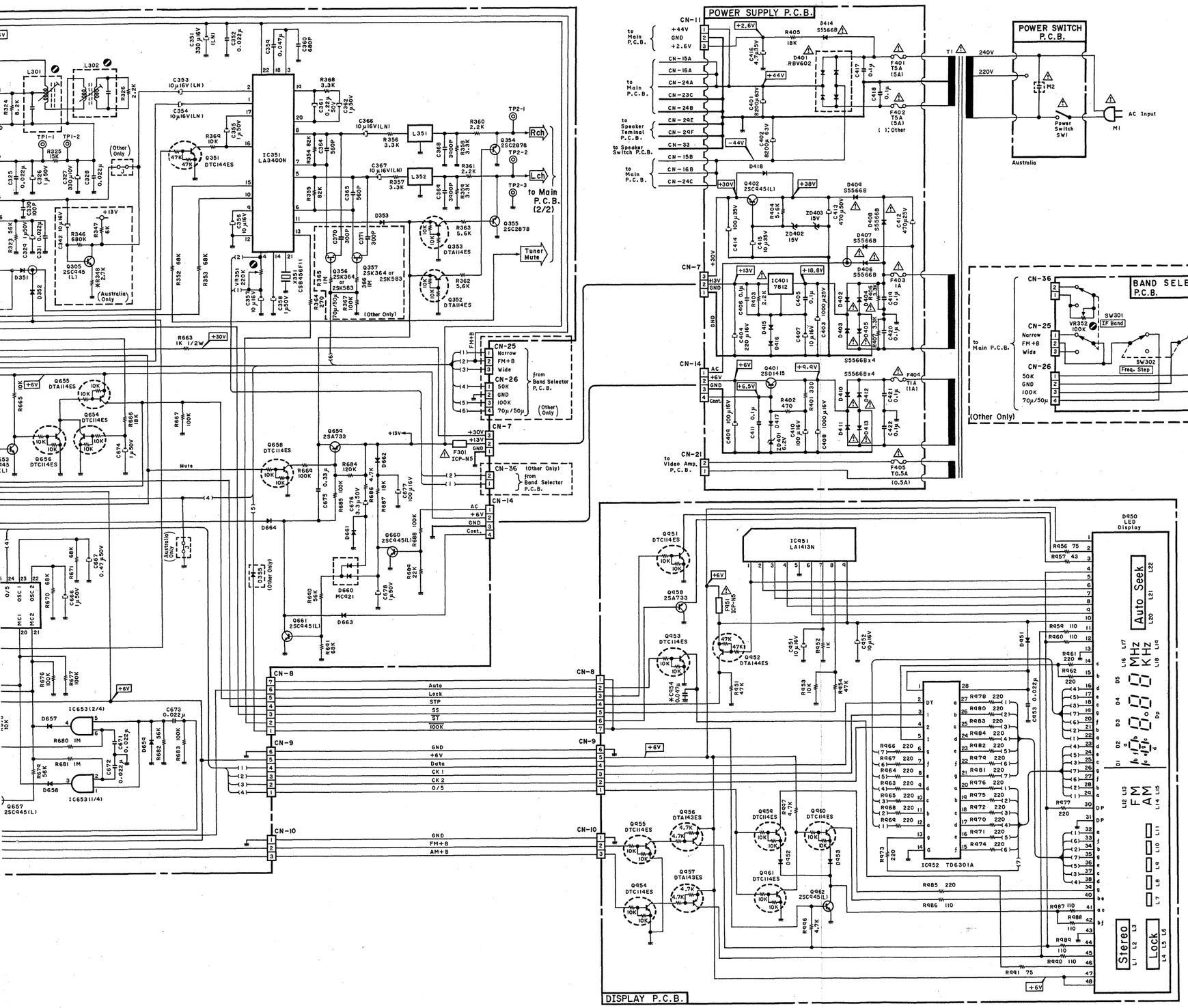


Fig. 6.2.1.2 For SR-3 (Australia & Other)



WARNING:

Parts marked with the symbol ⚠ have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.

WARNING — DO NOT return the unit to the customer until the problem is located and corrected.

For Lithium Battery:

Use ONLY replacement parts recommended by the manufacturer.

Replacement must be done only by qualified service personnel because of risk for explosion.

Notes:
1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.
3. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
4. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

(3) For SR-3E (Europe & Germany)

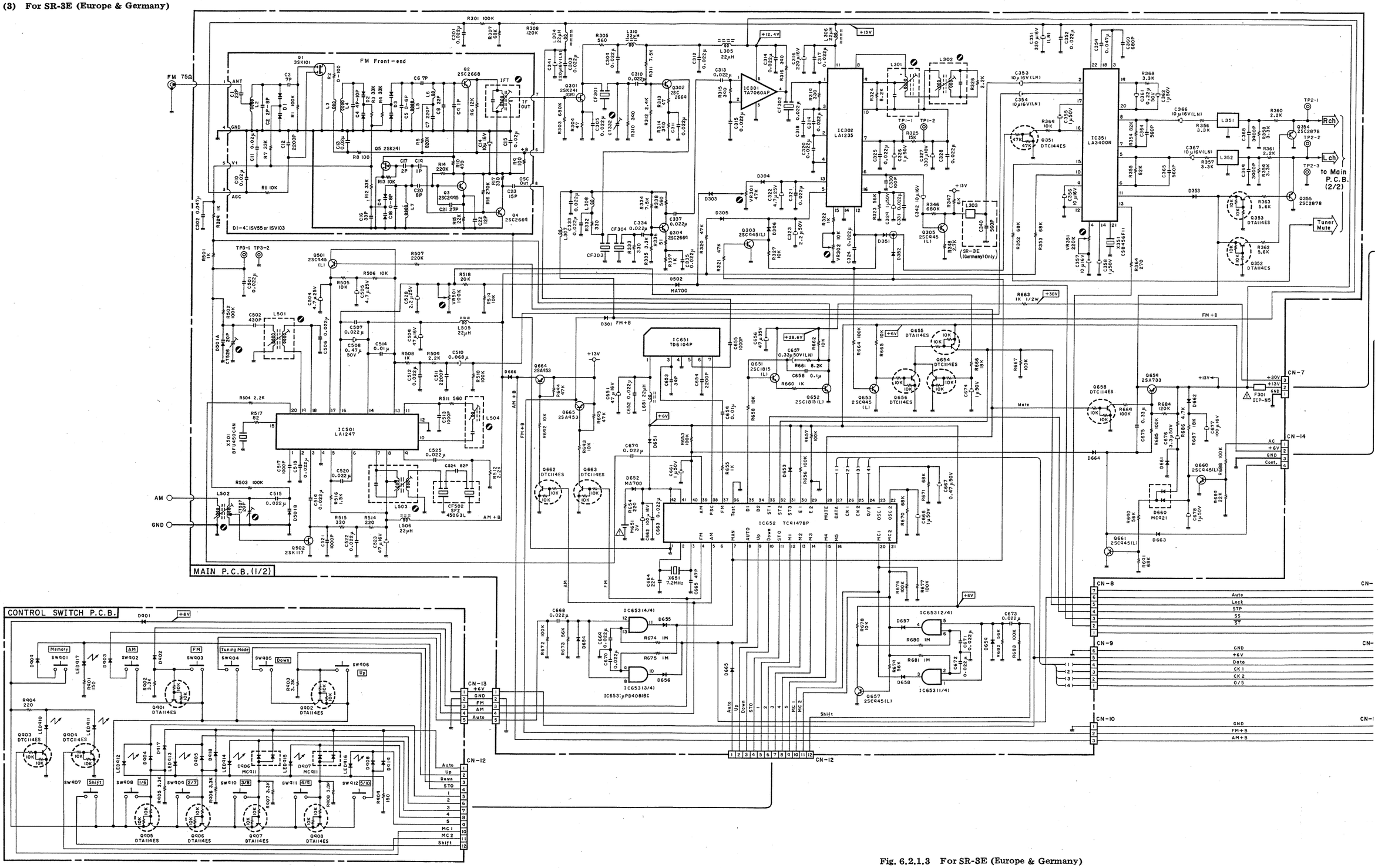


Fig. 6.2.1.3 For SR-3E (Europe & Germany)

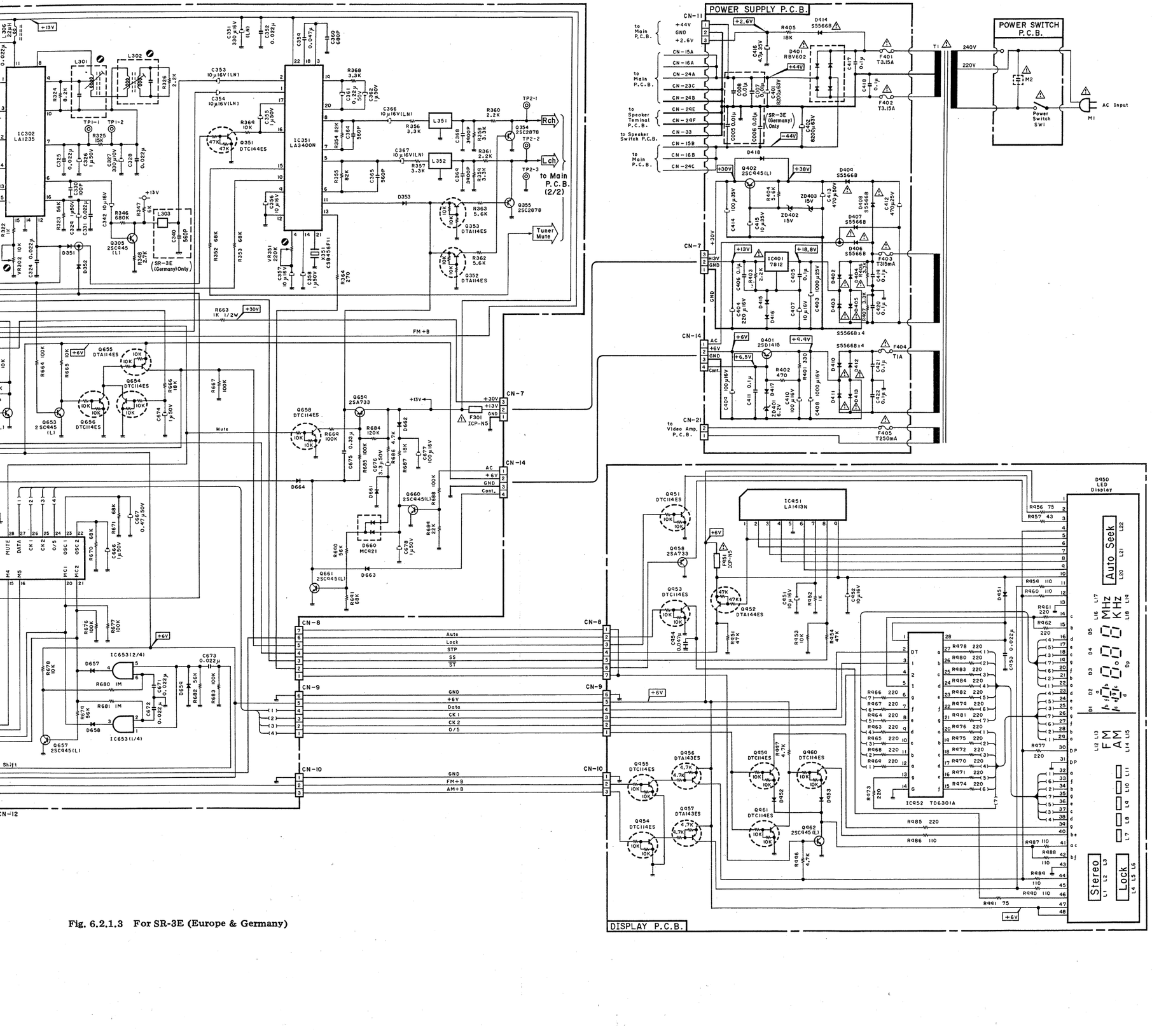


Fig. 6.2.1.3 For SR-3E (Europe & Germany)

WARNING:

Parts marked with the symbol ⚠ have critical characteristics.

Use ONLY replacement parts recommended by the manufacturer.

It is recommended that the unit be operated from a suitable DC supply or batteries during initial check-out procedures.

CAUTION:

Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamp, or if the resistance from chassis to either side of the power cord is less than 240 k ohms, the unit is defective.

WARNING — DO NOT return the unit to the customer until the problem is located and corrected.

For Lithium Battery:

Use ONLY replacement parts recommended by the manufacturer.

Replacement must be done only by qualified service personnel because of risk for explosion.

Notes:

1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
3. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

6.2.2. Amplifier Section
(1) For SR-3 & SR-3A

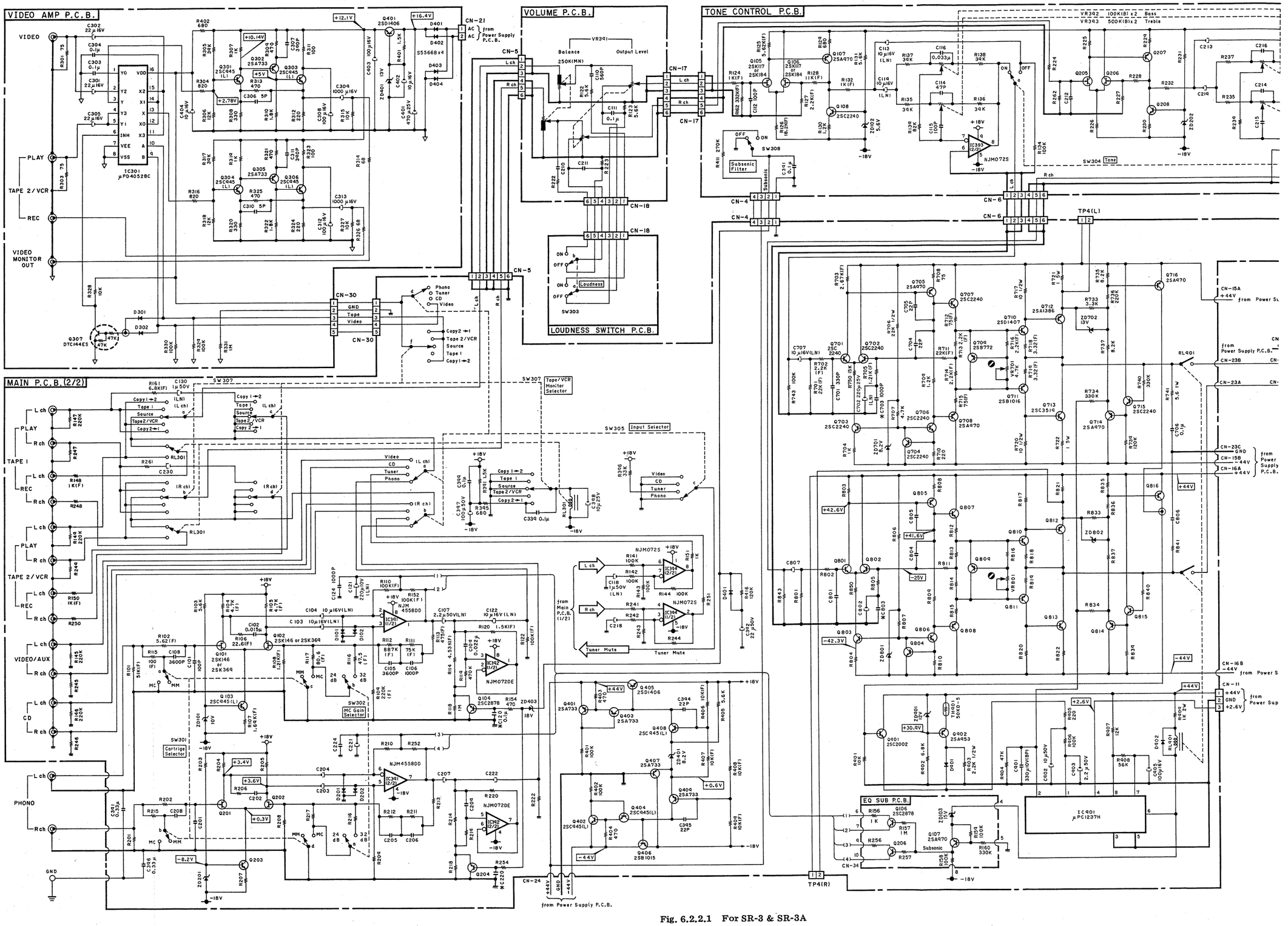
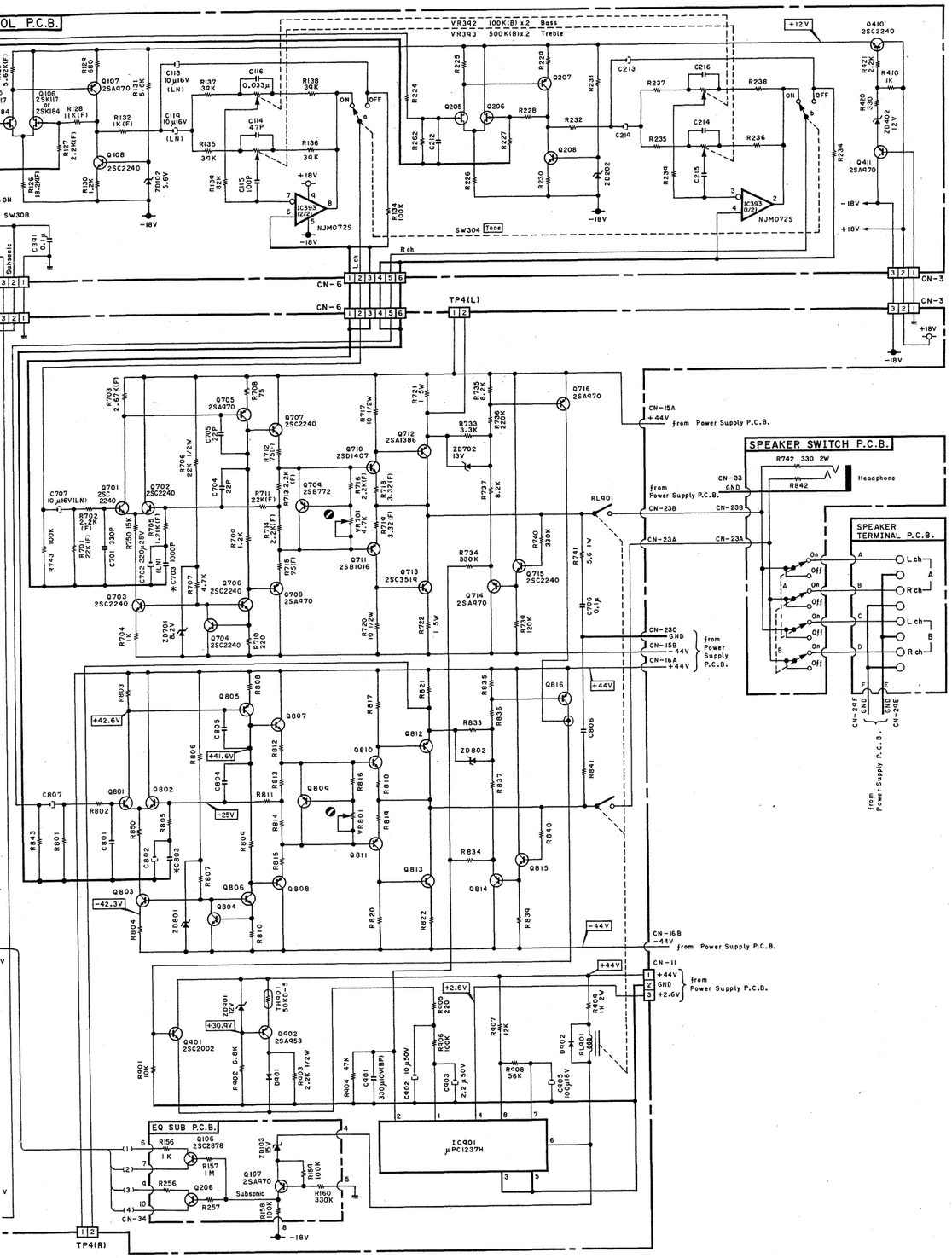
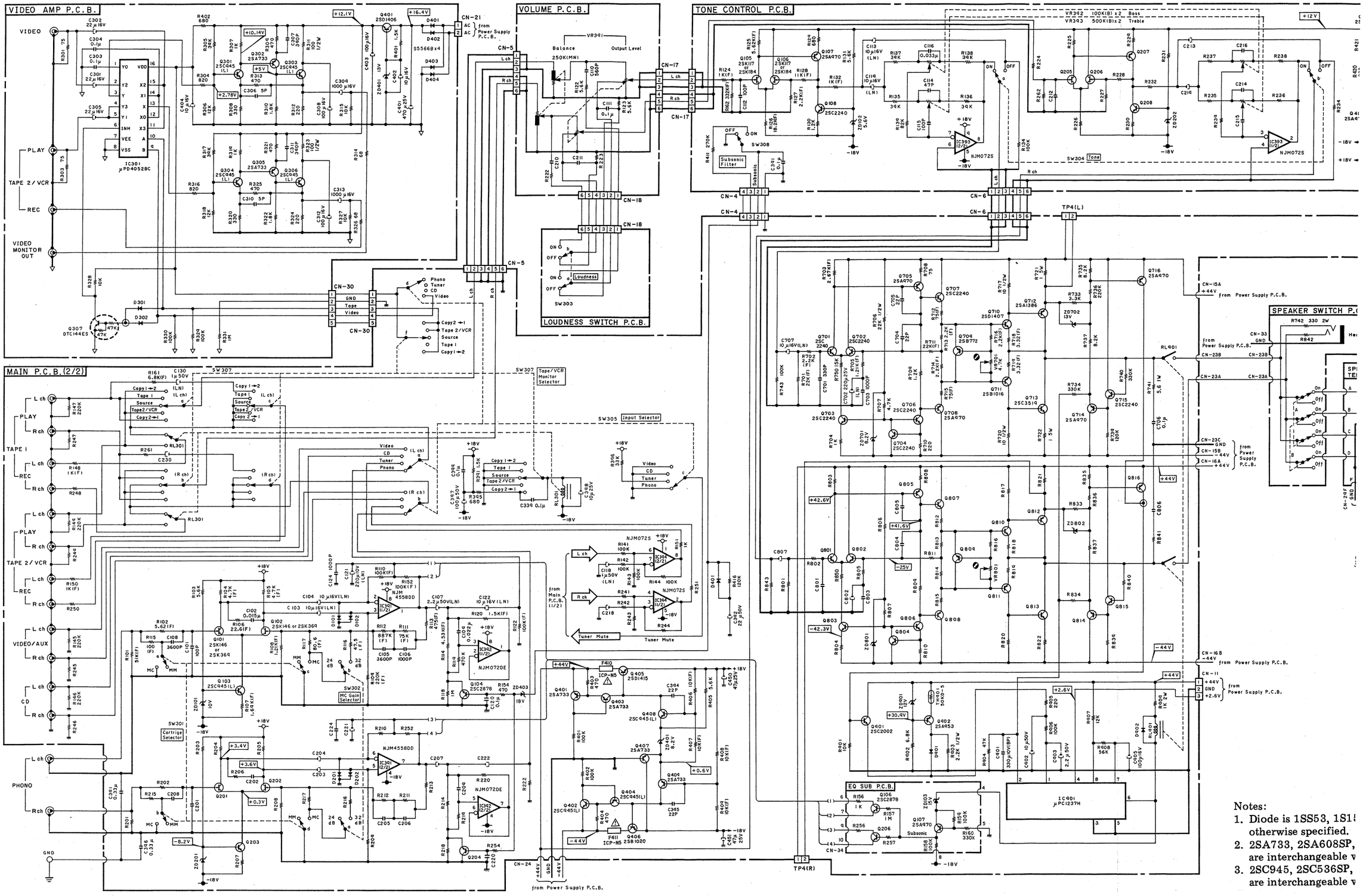


Fig. 6.2.2.1 For SR-3 & SR-3A



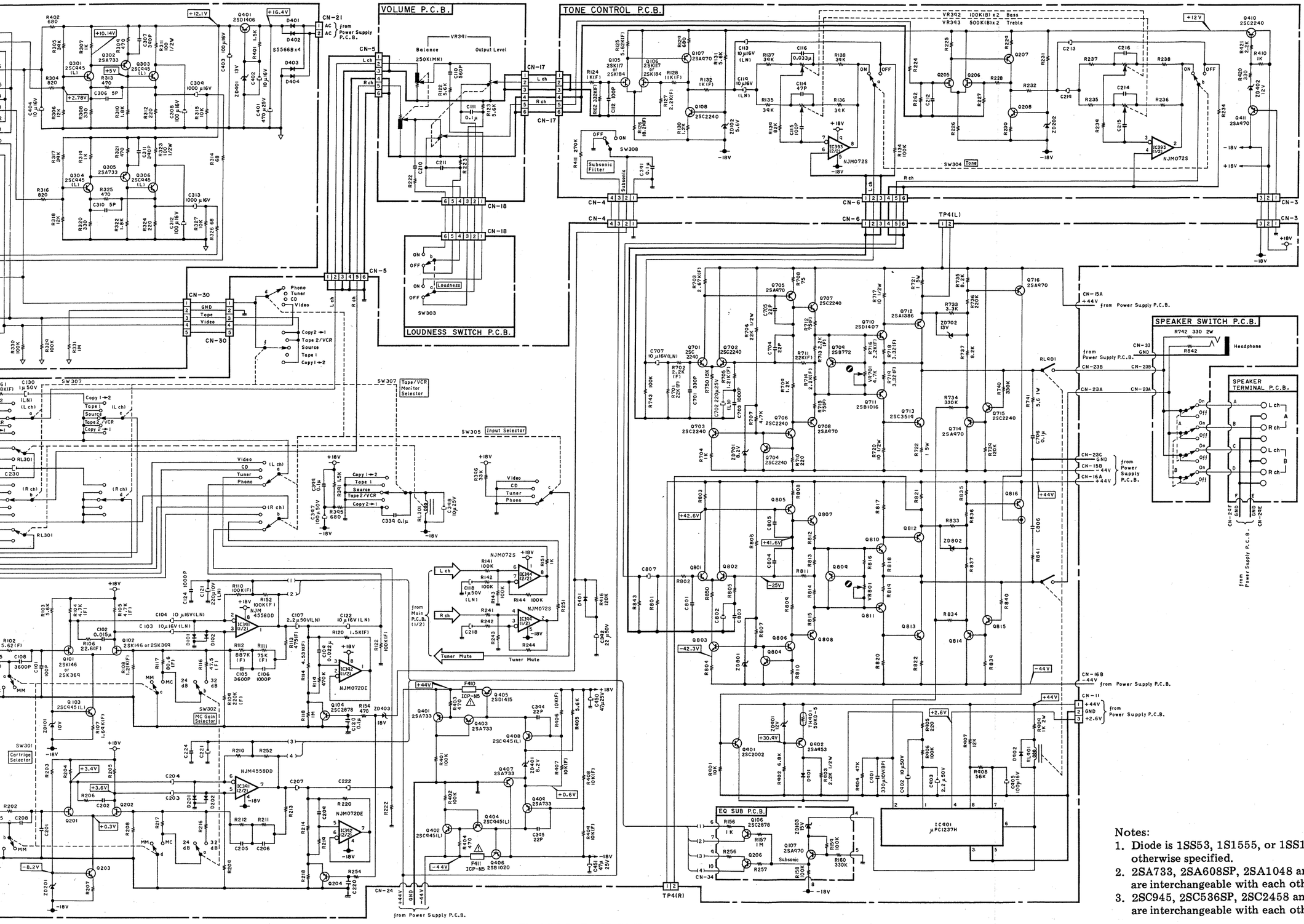
Notes: 1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. Resistor and capacitor marked with * show typical value.
3. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
4. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

(2) For SR-3E (Europe)



Notes:
1. Diode is 1SS53, 1S1
otherwise specified.
2. 2SA733, 2SA608SP,
are interchangeable v
3. 2SC945, 2SC536SP,
are interchangeable v

Fig. 6.2.2.2 For SR-3E (Europe)

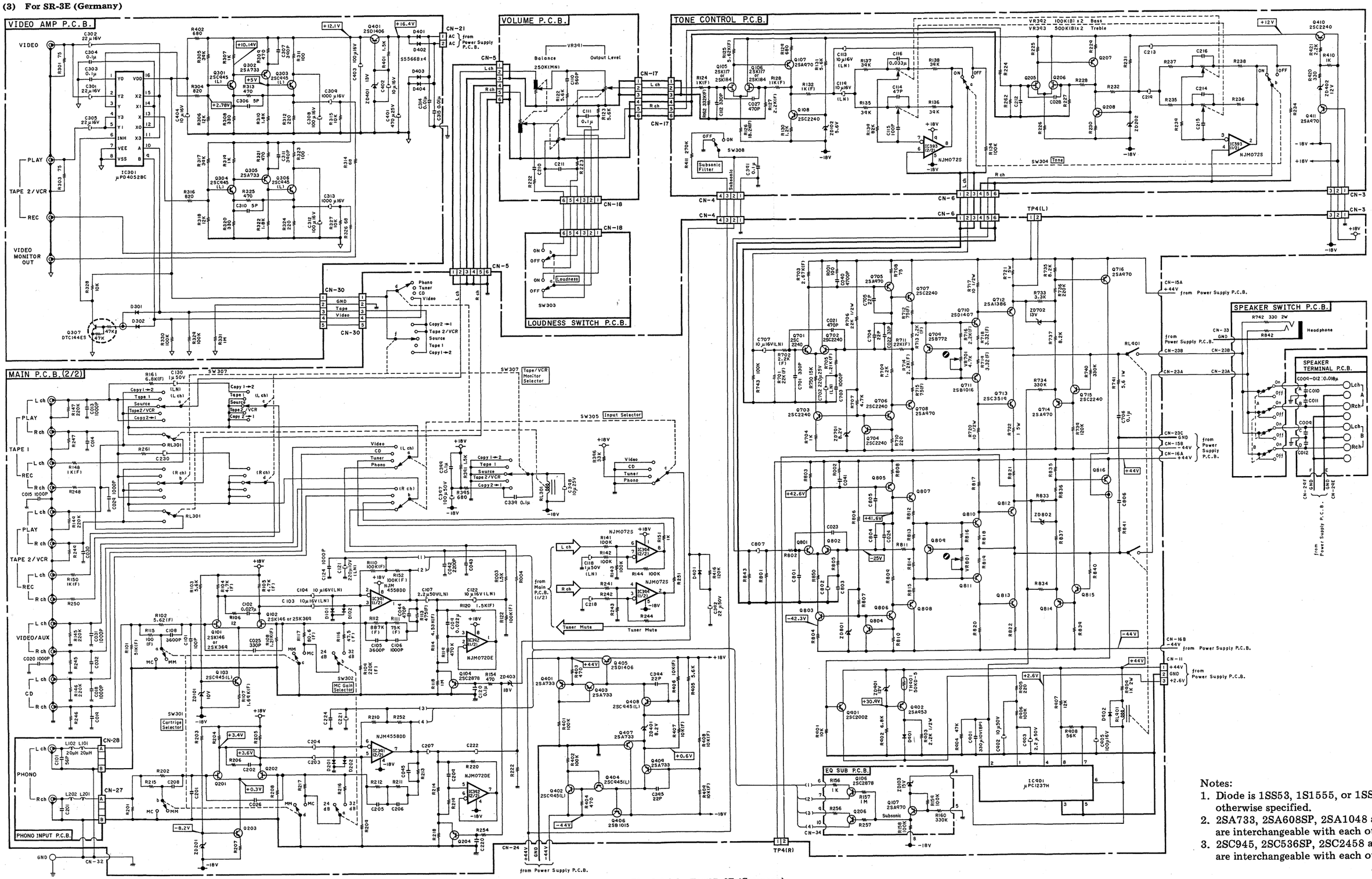


Notes:

1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
3. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

Fig. 6.2.2.2 For SR-3E (Europe)

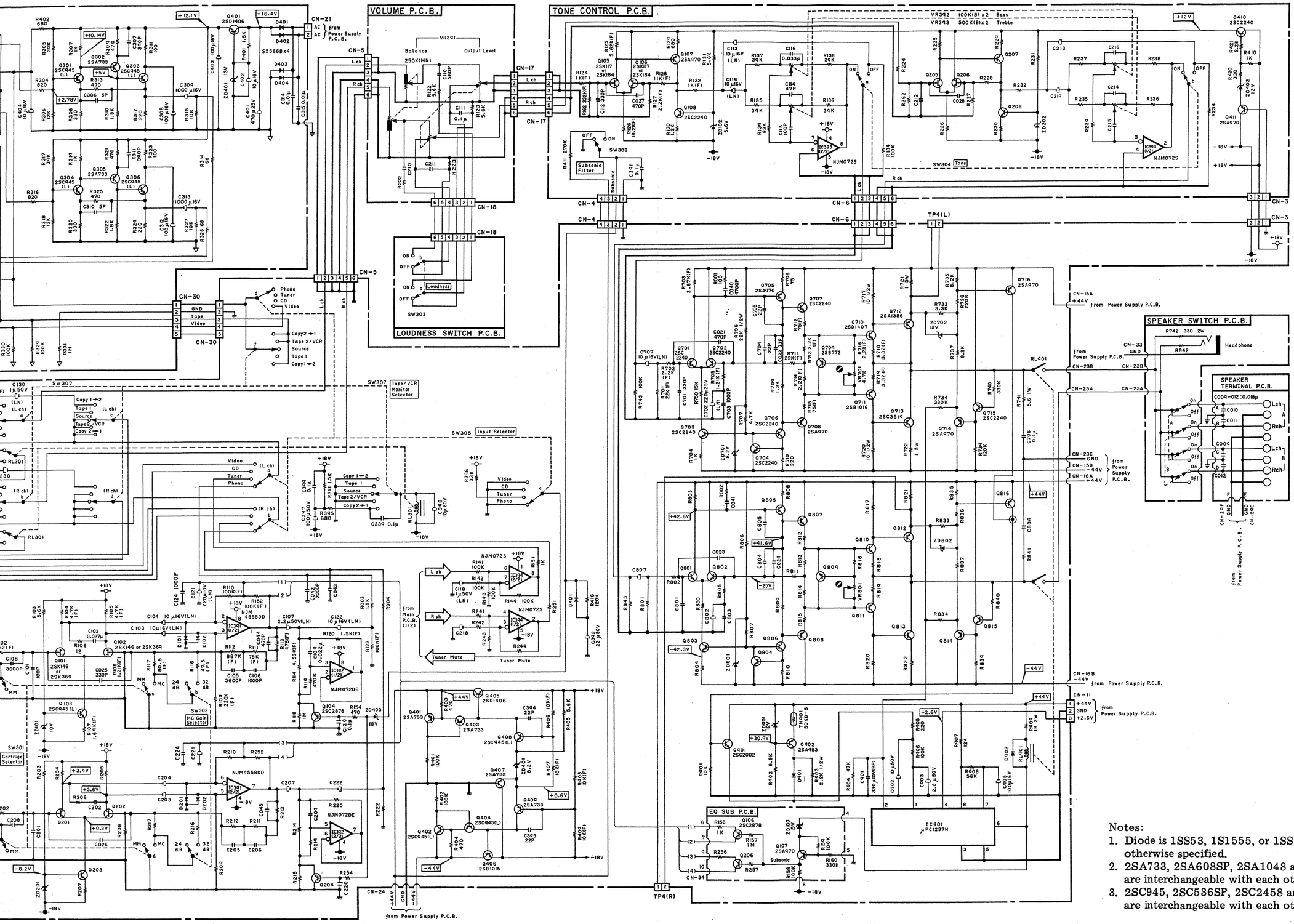
(3) For SR-3E (Germany)



Notes:

1. Diode is 1SS53, 1S1555, or 1SS17 otherwise specified.
2. 2SA733, 2SA608SP, 2SA1048 an are interchangeable with each othe
3. 2SC945, 2SC536SP, 2SC2458 and are interchangeable with each othe

Fig. 6.2.2.3 For SR-3E (Germany)



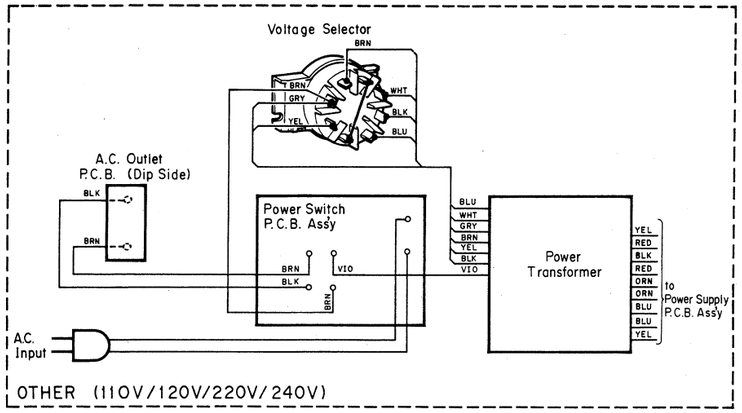
Notes:

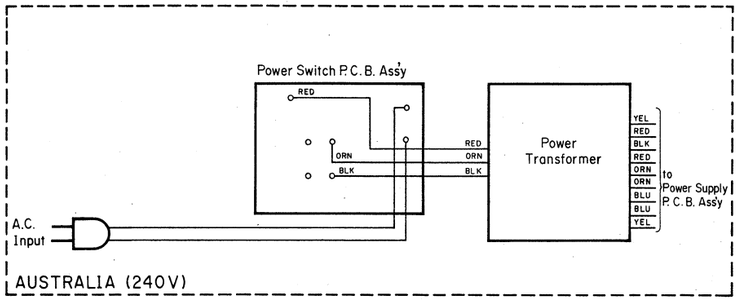
1. Diode is 1SS53, 1S1555, or 1SS176 unless otherwise specified.
2. 2SA733, 2SA608SP, 2SA1048 and 2SA1175 are interchangeable with each other.
3. 2SC945, 2SC536SP, 2SC2458 and 2SC2785 are interchangeable with each other.

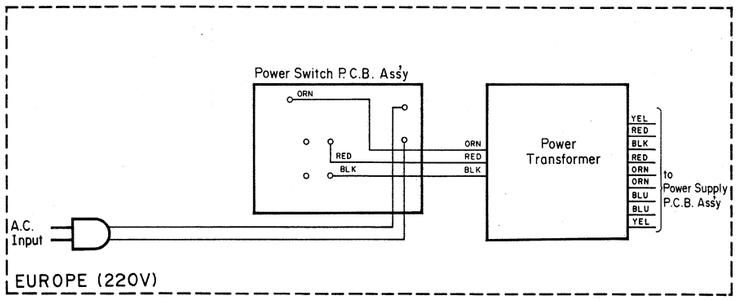
Fig. 6.2.2.3 For SR-3E (Germany)

7. WIRING DIAGRAMS

(1) For SR-3, SR-3A & SR-3E (Europe)







Notes: 1. Table of wire colors

BRN — Brown	BLU — Blue
RED — Red	VIO — Violet
ORN — Orange	GRY — Gray
YEL — Yellow	WHT — White
GRN — Green	BLK — Black

2. Component side view of the P.C.B. is illustrated unless otherwise specified.
3. CN-36 on the Main P.C.B. Ass'y and the Band Selector P.C.B. Ass'y are not mounted for the former Models.

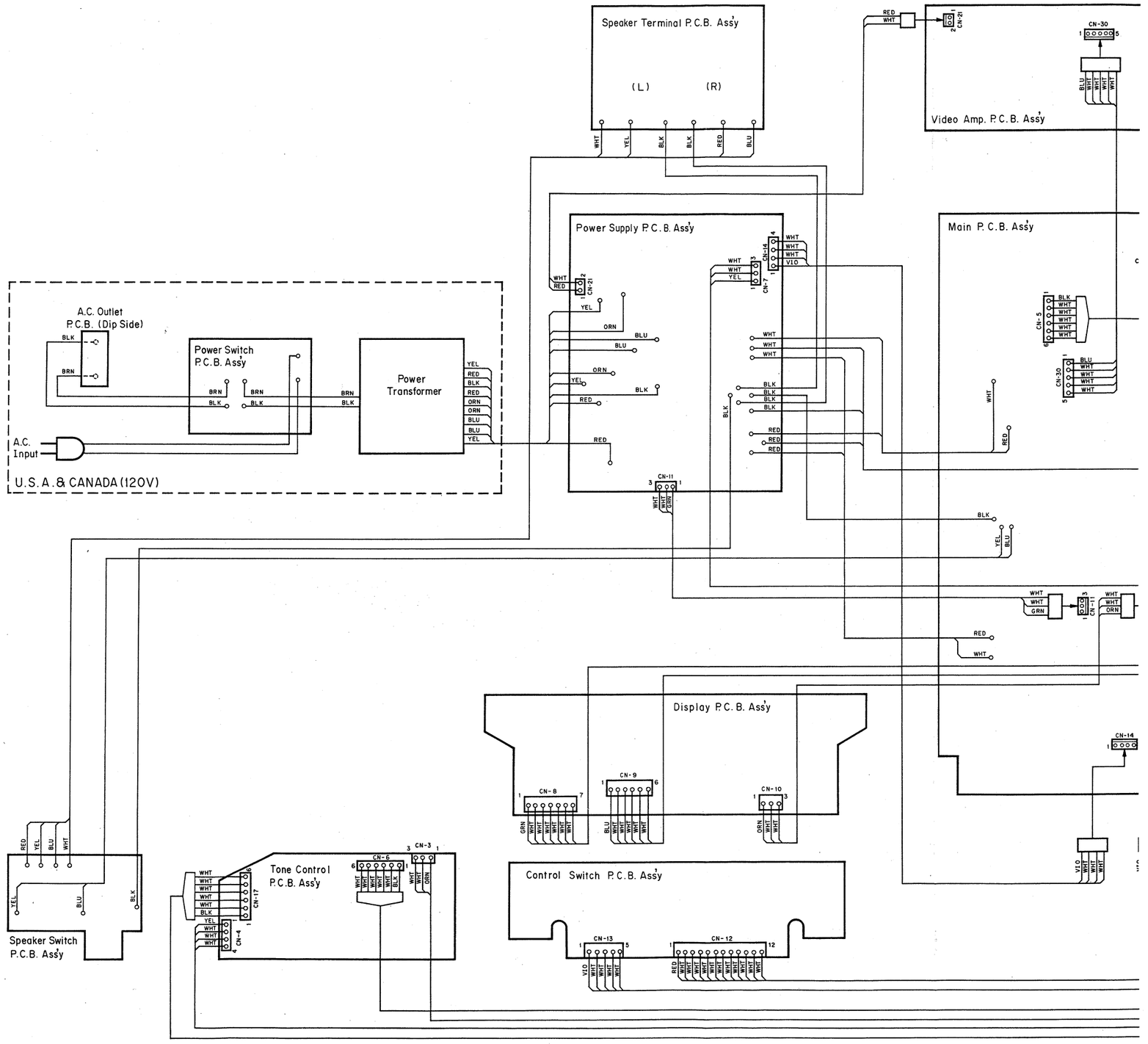
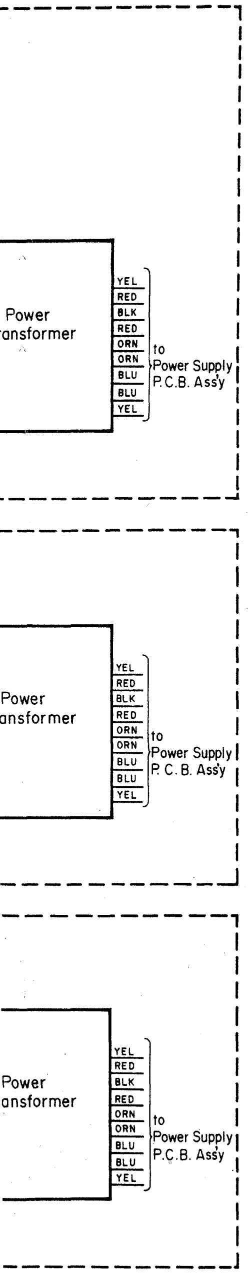


Fig. 7.1 For SR-3, SR-3A & SR-3E (Europe)



ss otherwise specified.
or P.C.B. Ass'y are

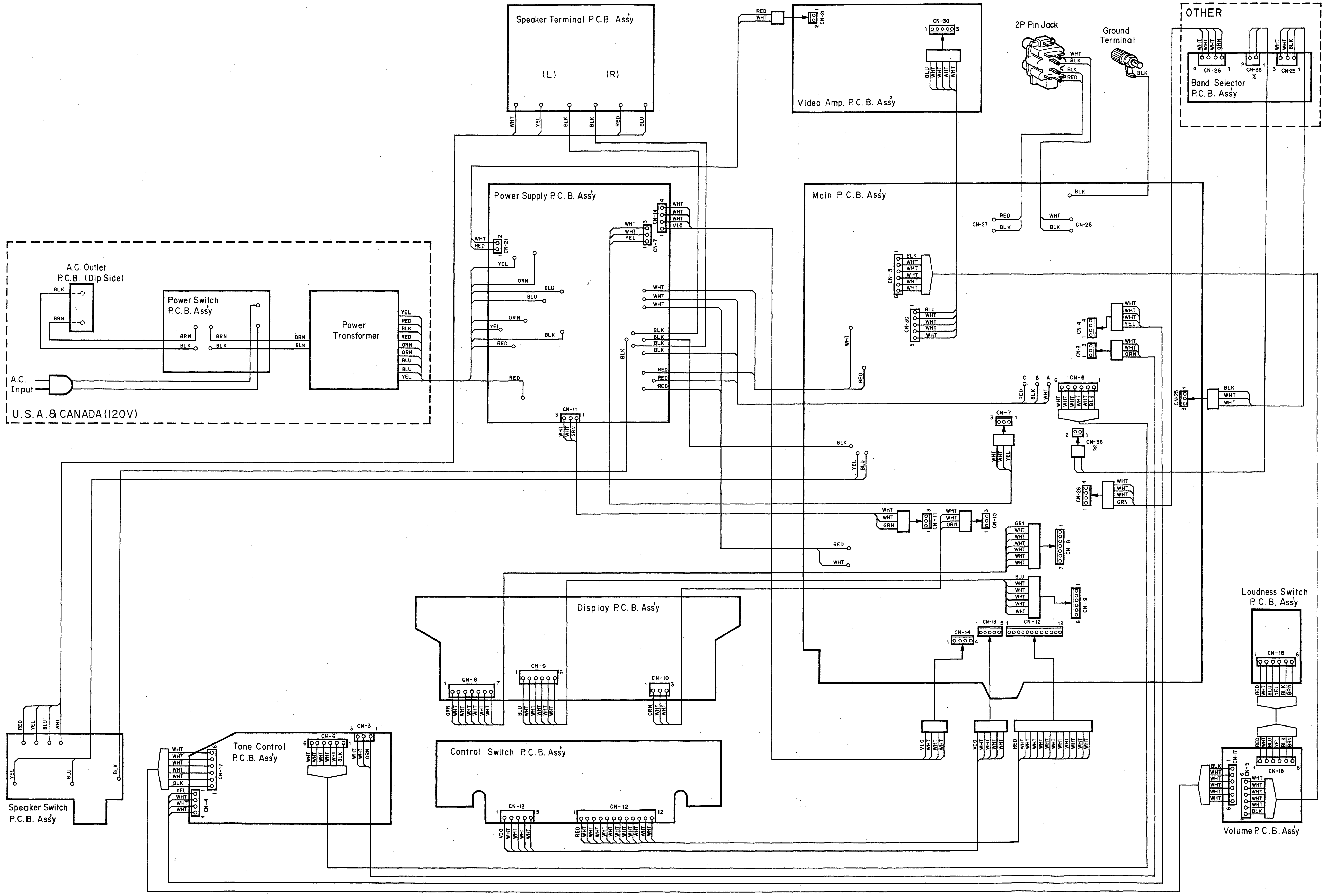


Fig. 7.1 For SR-3, SR-3A & SR-3E (Europe)

(2) For SR-3E (Germany)

Notes: 1. Table of wire colors

BRN — Brown	BLU — Blue
RED — Red	VIO — Violet
ORN — Orange	GRY — Gray
YEL — Yellow	WHT — White
GRN — Green	BLK — Black

2. Component side view of the P.C.B. is illustrated unless otherwise specified.

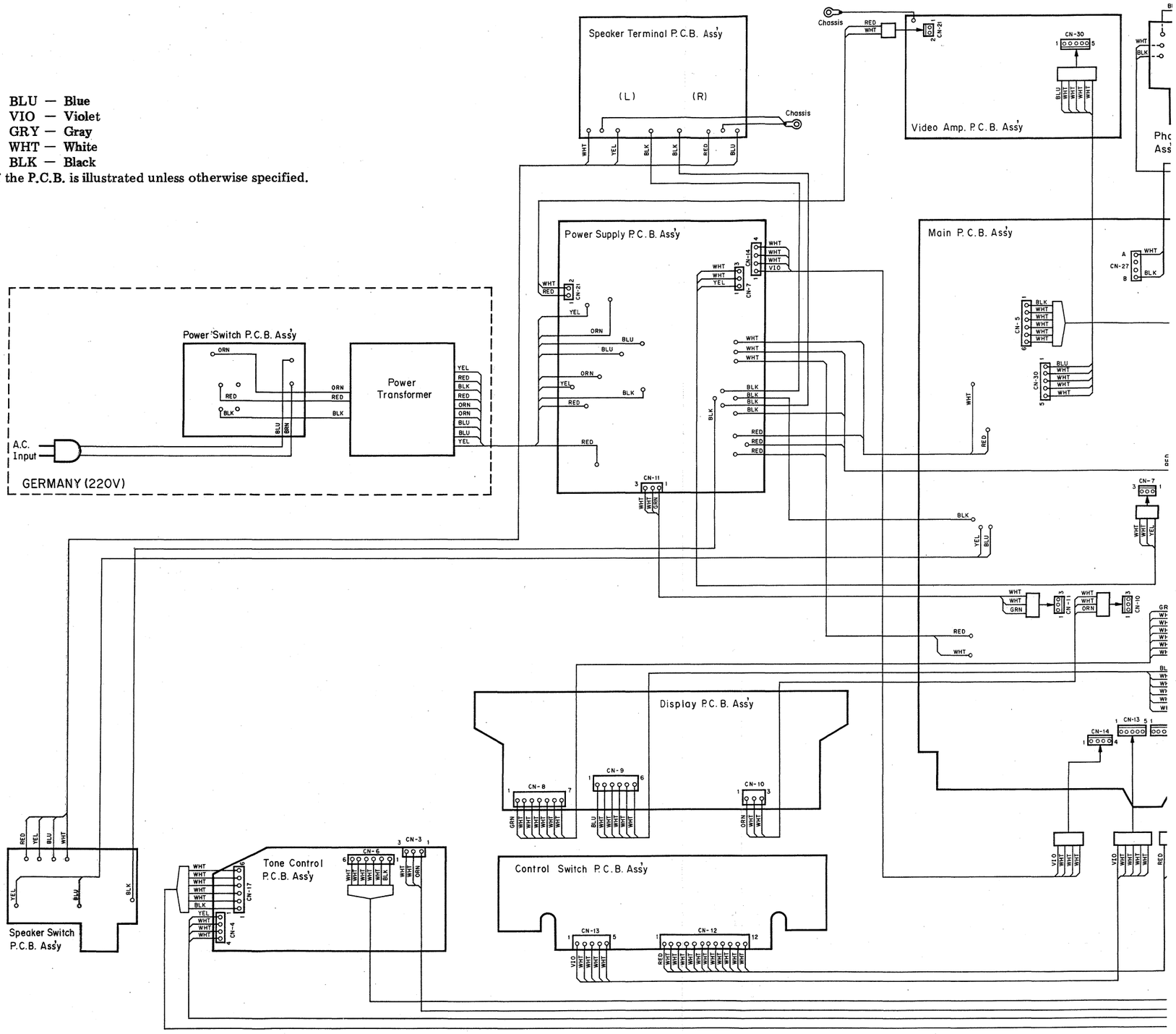


Fig. 7.2 For SR-3E (Germany)

Table of wire colors

BRN — Brown	BLU — Blue
RED — Red	VIO — Violet
ORN — Orange	GRY — Gray
YEL — Yellow	WHT — White
GRN — Green	BLK — Black

Component side view of the P.C.B. is illustrated unless otherwise specified.

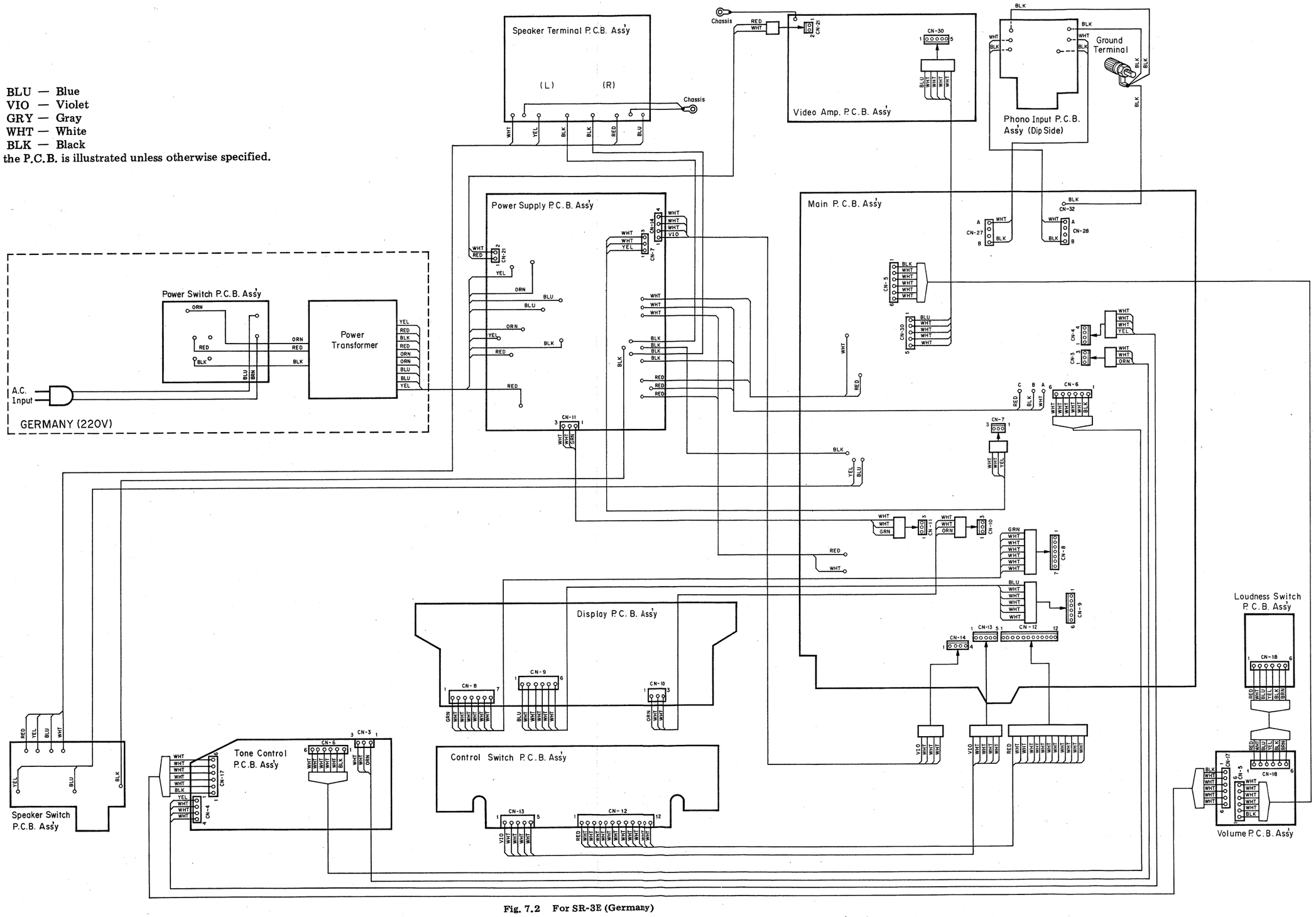


Fig. 7.2 For SR-3E (Germany)

8. BLOCK DIAGRAMS

8.1. Tuner Section

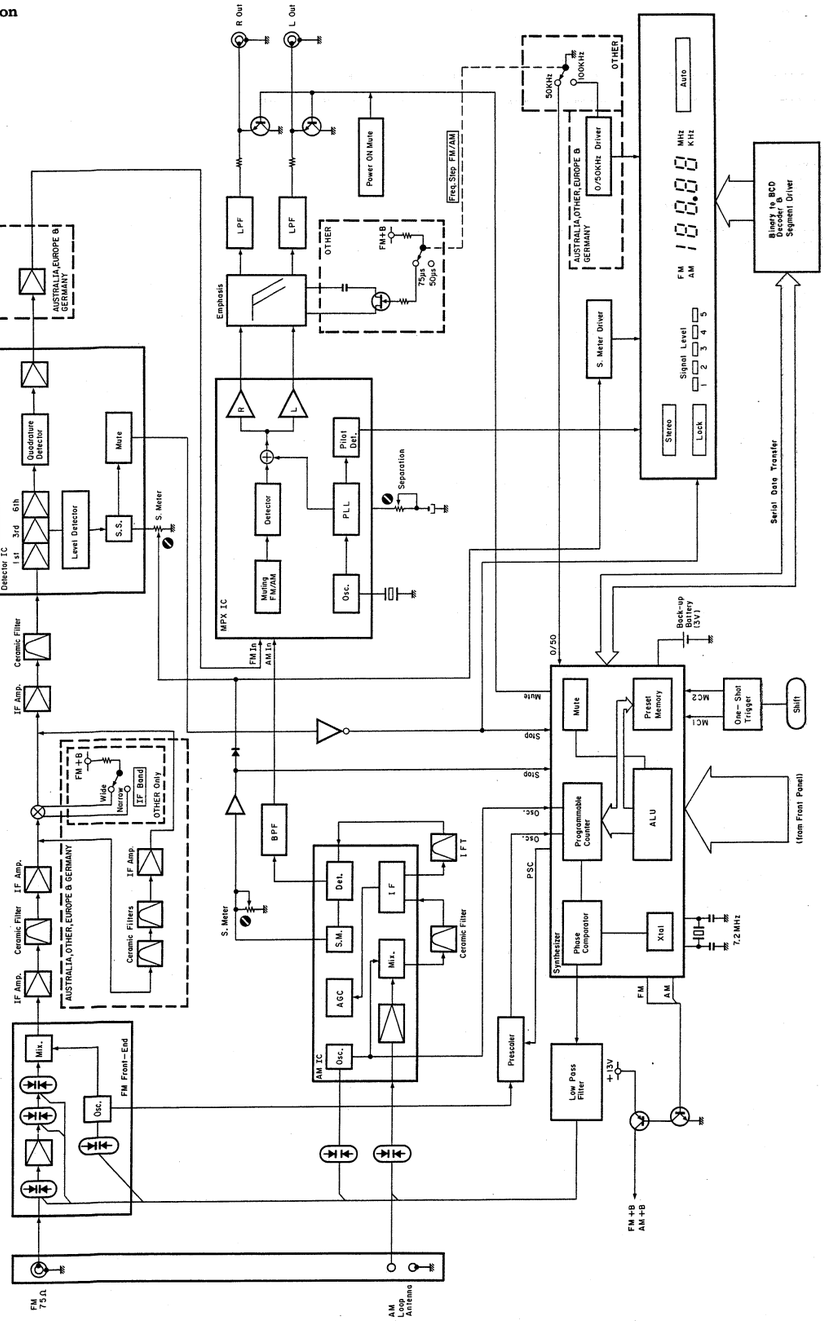


Fig. 8.1

8.2. Amplifier Section

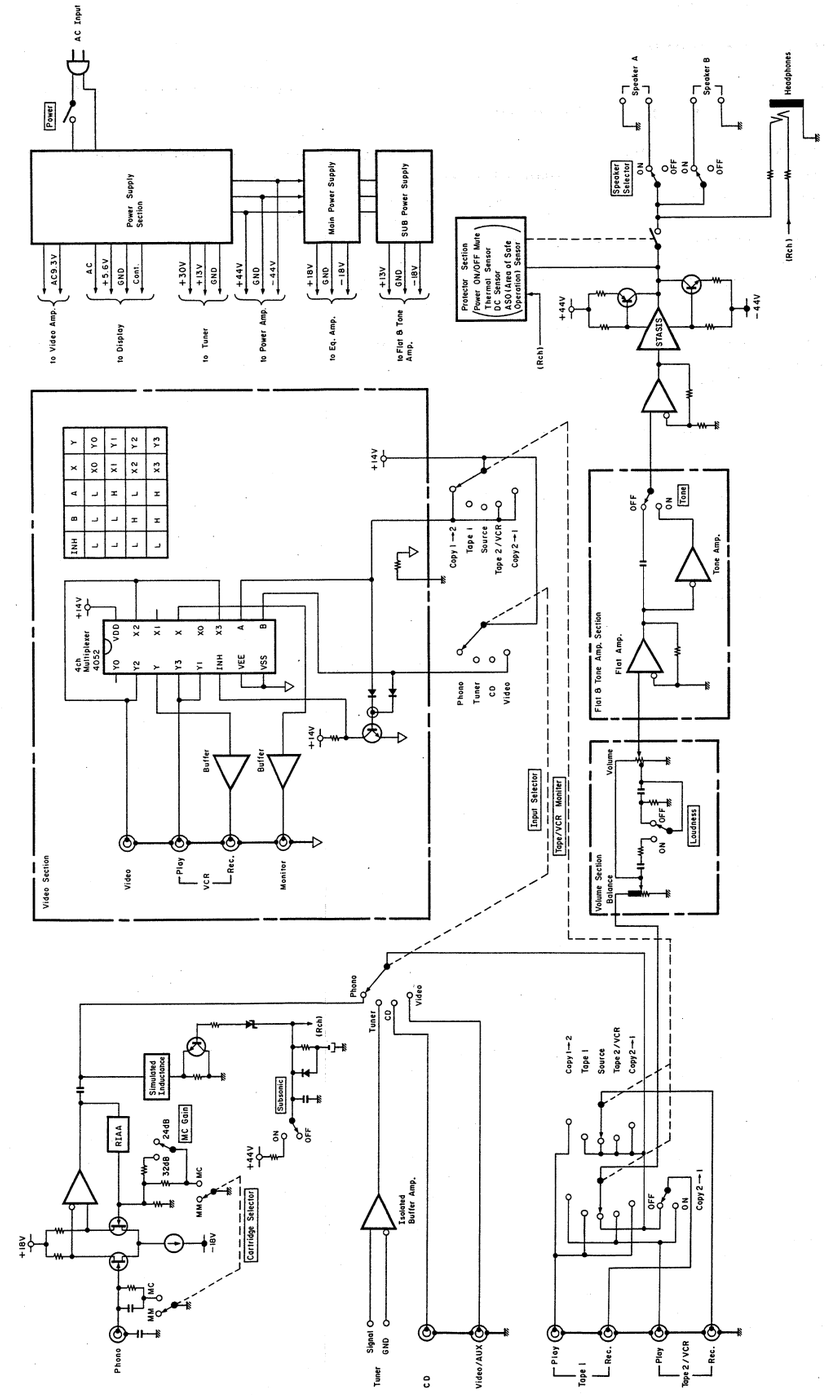


Fig. 8.2

9. SPECIFICATIONS

9.1. For SR-3 & SR-3A

Power Amplifier Section

Note: Unless otherwise noted specifications are in accordance with IHF-A-202 measured from any high-level input (CD/VIDEO/TAPE) to the speaker output.

Continuous Average Output Power	**45 watts per channel into 8 ohms, both channels driven, 20—20,000 Hz at no greater than 0.1% THD**
Dynamic Output Power	64 watts per channel into 8 ohms 80 watts per channel into 4 ohms
Dynamic Head Room (8 ohms)	1.5 dB
Power Bandwidth	5—40,000 Hz
Frequency Response	20—20,000 Hz; +0, —0.5 dB 5—75,000 Hz; +0, —3 dB
Signal to Noise Ratio (A-WTD, Input Shorted)	Better than 105 dB re Rated Power Better than 85 dB (IHF-A-202)
Total Harmonic Distortion (8 ohms, Rated Power, 20 Hz—20 kHz)	Less than 0.1%
Intermodulation Distortion (8 ohms, Rated Power, 60 Hz:7 kHz, 4:1)	Less than 0.15%
Headphone Rated Output (40 ohms)	105 mW
Output Current Capability	18A peak per channel

Preamplifier Section

Note: Unless otherwise noted, specifications are in accordance with IHF-A-202. Except for Sensitivity, S/N, Tone and Loudness characteristics (which are measured to the speaker outputs), measurements are made from the specified input to Rec. Out.

Sensitivity: (for rated Output)	
Phono MC	60/160 μV
(Gain: 32/24 dB)	
Phono MM	2.5 mV
CD/Tape	200 mV
Video	200 mV
Sensitivity: (for 1-watt output per IHF-A-202)	
Phono MC	8.94/23.9 μV
(Gain: 32/24 dB)	
Phono MM	0.37 mV
CD/Tape	29.8 mV
Video	29.8 mV
Input Impedance	
Phono MC	100 ohms
Phono MM	47 kohms
CD/Tape	22 kohms
Video	22 kohms
Maximum Input Level (1 kHz)	
Phono MC	3/8 mV
(Gain: 32/24 dB)	
Phono MM	140 mV
Record Output Level/ Impedance	200 mV/1 kohms
Total Harmonic Distortion (1 kHz, to Rec Out, at 1 V)	
Phono MC	Less than 0.003% (either gain)
Phono MM	Less than 0.002%
RIAA Deviation	
Phono MC	30—20,000 Hz ±0.5 dB
Phono MM	30—20,000 Hz ±0.5 dB
Signal to Noise Ratio (to speaker output per IHF-A-202)	
Phono MC with 32 dB Gain	Better than 73 dB
24 dB Gain	Better than 72 dB
Phono MM	Better than 80 dB
Tone Controls	
Bass	20 Hz, ±10 dB
Treble	20 kHz, ±10 dB
Loudness (Volume: —30 dB)	20 Hz, +10 dB; 20 kHz, +6 dB
Subsonic Filter (Phono Only)	Cutoff Frequency 20 Hz, —12 dB/octave

Tuner Section

(1) SR-3 (Canada & Other (see Note)) & SR-3A

Note: Selector switch settings for Other Model
Frequency Step FM/AM: 100 kHz/10 kHz, De-emphasis: 75 μs,
IF Band: Wide

[FM Section]

Note: All RF levels in microvolts given re 300-ohm antenna input. Modulation: Mono 100%, Stereo Pilot 9%, Stereo Audio Signal 91%. All measurements made at Rec Out Jack.

Frequency Range	87.5—108.0 MHz in 100 kHz steps
IHF Usable Sensitivity (Mono)	11 dBf/1.9 μV
50-dB Quieting Sensitivity	
Mono	14.7 dBf/3.0 μV
Stereo	37.5 dBf/41.1 μV
Signal to Noise Ratio at 65 dBf	
Mono	Better than 79 dB
Stereo	Better than 74 dB
Muting Threshold	30 dBf/17.3 μV
Frequency Response	20—15,000 Hz ±1 dB
Total Harmonic Distortion (1 kHz)	
Mono	Less than 0.05%
Stereo	Less than 0.07%
Capture Ratio	2.0 dB
Alternate Channel Selectivity	55 dB (±400 kHz)
Stereo Separation at 100 Hz	Better than 46 dB
at 1 kHz	Better than 50 dB
at 10 kHz	Better than 46 dB
Spurious Response Rejection	Better than 90 dB
Image Rejection	Better than 75 dB
IF Rejection	Better than 80 dB
AM Suppression	Better than 60 dB

[AM Section]

Note: Modulation — 400 Hz, 30%

Frequency Range	520—1,710 kHz in 10 kHz steps
Sensitivity	53 dBμ/m
Signal to Noise Ratio at 90 dBμ/m	Better than 52 dB
Total Harmonic Distortion at 90 dBμ/m	Less than 0.3%
Selectivity	Better than 20 dB (±10 kHz)

(2) SR-3 (Australia & Other (see Note))

Note: Selector switch settings for Other Model
Frequency Step FM/AM: 50 kHz/9 kHz, De-emphasis: 50 μs,
IF Band: Narrow

[FM Section]

Note: All RF levels in microvolts given re 300-ohm antenna input. Modulation: Mono 60%, Stereo Pilot 9%, Stereo Audio Signal 51%. All measurements made at Rec Out jack.

Frequency Range	87.50—108.00 MHz in 50 kHz steps
IHF Usable Sensitivity (Mono)	11 dB/1.9 μV
50-dB Quieting Sensitivity	
Mono	21.0 dBf/6.1 μV
Stereo	42.0 dBf/69.0 μV

Signal to Noise Ratio at 65 dBf	
Mono	Better than 74 dB
Stereo	Better than 69 dB
Muting Threshold	30 dBf/17.3 μV
Frequency Response	20—15,000 Hz ±1 dB
Total Harmonic Distortion (1 kHz)	
Mono	Less than 0.12% (for Australia), Less than 0.15% (for Other)
Stereo	Less than 0.20% (for Australia), Less than 0.25% (for Other)
Capture Ratio	2.0 dB
Alternate Channel Selectivity	70 dB (±300 kHz)
Stereo Separation at 100 Hz	Better than 43 dB
at 1 kHz	Better than 43 dB
at 10 kHz	Better than 37 dB
Spurious Response Rejection	Better than 90 dB
Image Rejection	Better than 75 dB
IF Rejection	Better than 80 dB
AM Suppression	Better than 60 dB

[AM Section]
Note: Modulation: 400 Hz, 30%

Frequency Range	522—1,611 kHz in 9 kHz steps
Sensitivity	53 dBμ/m
Signal to Noise Ratio at 90 dBμ/m	Better than 52 dB
Total Harmonic Distortion at 90 dBμ/m	Less than 0.3%
Selectivity	Better than 20 dB (±9 kHz)

General

Power Source	120, 240 or 110/120/220/240 V AC, 50/60 Hz (According to country of sale)
Power Consumption	270 watts max.
Convenience Outlets	Switched: 2 (For U.S.A., Canada & Other only)
Dimensions	430 (W) x 100 (H) x 370 (D) mm 16-15/16 (W) x 3-15/16 (H) x 14-9/16 (D) inches
Approximate Weight	8.5 kg, 18 lbs. 12 oz.

9.2. For SR-3E (Europe & Germany)

Power Amplifier Section

Note: Unless otherwise noted specifications are in accordance with IHF-A-202 measured from any high-level input (CD/VIDEO/TAPE) to the speaker output.

Continuous Average Output Power	**45 watts per channel into 8 ohms, both channels driven, 20—20,000 Hz at no greater than 0.1% THD**
Dynamic Output Power	64 watts per channel into 8 ohms 80 watts per channel into 4 ohms
Dynamic Head Room (8 ohms)	1.5 dB
Power Bandwidth	5—30,000 Hz
Frequency Response	20—20,000 Hz; +0, —1 dB 5—45,000 Hz; +0, —3 dB
Signal to Noise Ratio (A-WTD, Input Shorted)	Better than 105 dB re Rated Power Better than 85 dB (IHF-A-202)
Total Harmonic Distortion (8 ohms, Rated Power, 20 Hz—20 kHz)	Less than 0.1%
Intermodulation Distortion (8 ohms, Rated Power, 60 Hz:7 kHz, 4:1)	Less than 0.15%
Headphone Rated Output (40 ohms)	105 mW
Output Current Capability	18A peak per channel

Preamplifier Section

Note: Unless otherwise noted, specifications are in accordance with IHF-A-202. Except for Sensitivity, S/N, Tone and Loudness characteristics (which are measured to the speaker outputs), measurements are made from the specified input to Rec. Out.

Sensitivity: (for rated Output)	
Phono MC	60/160 μV
(Gain: 32/24 dB)	
Phono MM	2.5 mV
CD/Tape	200 mV
Video	200 mV
Sensitivity: (for 1-watt output per IHF-A-202)	
Phono MC	8.9/24 μV
(Gain: 32/24 dB)	
Phono MM	0.37 mV
CD/Tape	29.8 mV
Video	29.8 mV
Input Impedance	
Phono MC	100 ohms
Phono MM	47 kohms
CD/Tape	20 kohms
Video	20 kohms
Maximum Input Level (1 kHz)	
Phono MC	3/8 mV
(Gain: 32/24 dB)	
Phono MM	140 mV
Record Output Level/ Impedance	200 mV/1 kohms
Total Harmonic Distortion (1 kHz, to Rec Out, at 1 V)	
Phono MC	Less than 0.003% (either gain)
Phono MM	Less than 0.002%
RIAA Deviation	
Phono MC	30—20,000 Hz ±0.5 dB
Phono MM	30—20,000 Hz ±0.5 dB
Signal to Noise Ratio (to speaker output, IHF-A-202)	
Phono MC with 32 dB Gain	Better than 71 dB
24 dB Gain	Better than 70 dB
Phono MM	Better than 78 dB

Tone Controls
- Bass . . . . . 20 Hz, ±10 dB
- Treble . . . . . 20 kHz, ±10 dB

Loudness (Volume: —30 dB) . . 20 Hz, +10 dB; 20 kHz, +6 dB
Subsonic Filter (Phono Only) . . Cutoff Frequency 20 Hz, —12 dB/octave

Tuner Section

[FM Section]

Note: All RF levels in microvolts given re 300-ohm antenna input. Modulation: Mono 60%, Stereo Pilot 9%, Stereo Audio Signal 51%. All measurements made at Rec Out jack.

Frequency Range . . . . . 87.50—108.00 MHz in 50 kHz steps
IHF Usable Sensitivity . . . . . 11 dBf/1.9 μV
(Mono)
50-dB Quieting Sensitivity
- Mono . . . . . 23.0 dBf/7.7 μV
- Stereo . . . . . 43.0 dBf/77.4 μV

Signal to Noise Ratio at 65 dBf
- Mono . . . . . Better than 72 dB
- Stereo . . . . . Better than 67 dB

Muting Threshold . . . . . 30 dBf/17.3 μV
Frequency Response . . . . . 20—15,000 Hz ±1 dB
Total Harmonic Distortion (1 kHz)
- Mono . . . . . Less than 0.20%
- Stereo . . . . . Less than 0.25%

Capture Ratio . . . . . 2.0 dB
Alternate Channel Selectivity . . 70 dB (±300 kHz)
Stereo Separation at 100 Hz . . . Better than 43 dB
at 1 kHz . . . . Better than 43 dB
at 10 kHz . . . Better than 27 dB
Spurious Response Rejection . . Better than 90 dB
Image Rejection . . . . . Better than 75 dB
IF Rejection . . . . . Better than 80 dB
AM Suppression . . . . . Better than 60 dB

[AM Section]

Note: Modulation — 400 Hz, 30%

Frequency Range . . . . . 522—1,611 kHz in 9 kHz steps
Sensitivity . . . . . 53 dBμ/m
Signal to Noise Ratio at 90 . . . . Better than 52 dB
dBμ/m
Total Harmonic Distortion . . . . Less than 0.3%
at 90 dBμ/m
Selectivity . . . . . Better than 20 dB (±9 kHz)

General

Power Source . . . . . 220 V AC, 50/60 Hz
Power Consumption . . . . . 270 watts max.
Dimensions . . . . . 430 (W) x 100 (H) x 370 (D) mm
16-15/16 (W) x 3-15/16 (H) x 14-9/16 (D) inches
Approximate Weight . . . . . 8.5 kg, 18 lbs, 12 oz.

- Specifications and design are subject to change for further improvement without notice.
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