

Service Manual

FM/AM STEREO RECEIVER

SA-80

(M), (MC)



Simulated wood cabinet.

- The model SA-80(M) is available in America only.
- The model SA-80(MC) is available in Canada only.

TECHNICAL SPECIFICATIONS

(Specifications are subject to change without notice for further improvement.)

POWER AMPLIFIER SECTION

Rated minimum sine wave RMS power output	
40 Hz ~ 20 kHz	
both channels driven	
0.3% total harmonic distortion	
	15 W per channel (8 ohms)
1 kHz continuous power output	
both channels driven	
0.3% total harmonic distortion	17 W per channel (8 ohms)
	18 W per channel (4 ohms)
Total harmonic distortion at 8 ohms	
rated power	0.3% (40 Hz ~ 20 kHz)
half power	0.15% (40 Hz ~ 20 kHz)
	0.03% (1 kHz)
Intermodulation distortion	0.3%
Residual hum and noise	0.6 mV
Damping factor	32 (8 ohms), 16 (4 ohms)
Load impedance	
MAIN or REMOTE	4 ~ 16 ohms
MAIN + REMOTE	8 ~ 16 ohms

PRE-AMPLIFIER SECTION

Input sensitivity and impedance	
PHONO	2.5 mV, 47 kilohms
AUX	150 mV, 33 kilohms
PLAYBACK	150 mV, 33 kilohms
PHONO maximum input voltage (1 kHz, RMS)	95 mV
S/N (IHF, A)	
PHONO	78 dB
AUX	95 dB
Frequency response	
PHONO	RIAA standard curve ±1 dB
AUX	20 Hz ~ 20 kHz ±0.8 dB
	10 Hz ~ 25 kHz -1 dB
Tone controls	
BASS	50 Hz, +10 dB ~ -10 dB
TREBLE	10 kHz, +10 dB ~ -10 dB
Loudness control (volume at -30 dB)	50 Hz, +9 dB
Output voltage	
REC OUT	150 mV

FM TUNER SECTION

Frequency range	88 ~ 108 MHz
Sensitivity	11.2 dBf (2.0 μV IHF '58)
50 dB quieting sensitivity	
MONO	18.2 dBf (4.5 μV IHF '58)
STEREO	39 dBf (49 μV IHF '58)
Total harmonic distortion	
100 Hz	0.2% (MONO), 0.35% (STEREO)
1 kHz	0.15% (MONO), 0.3% (STEREO)
6 kHz	0.3% (MONO), 0.4% (STEREO)
S/N	70 dB (MONO), 65 dB (STEREO)
Frequency response	30 Hz ~ 15 kHz, +1 dB
	-2 dB
Alternate channel selectivity	60 dB
Capture ratio	1.2 dB
Image rejection at 98 MHz	55 dB
IF rejection at 98 MHz	80 dB
Spurious response rejection at 98 MHz	70 dB
AM suppression	55 dB
Stereo separation	40 dB (1 kHz), 30 dB (10 kHz)
Leak carrier	-40 dB (19 kHz), -50 dB (38 kHz)
Antenna terminals	300 Ω (balanced), 75 Ω (unbalanced)

AM TUNER SECTION

Frequency range	525 ~ 1605 kHz
Sensitivity	30 μV, 300 μV/m
Selectivity	30 dB
Image rejection at 1000 kHz	45 dB
IF rejection at 1000 kHz	40 dB

GENERAL

Power consumption	100 W
Power supply	AC 120V, 60 Hz
Dimensions (W x H x D)	441 x 134 x 277 mm
	(17 3/8" x 5 1/8" x 10 7/8")
Weight	5.4 kg (11.9 lb.)

Weights and dimensions are approximate.

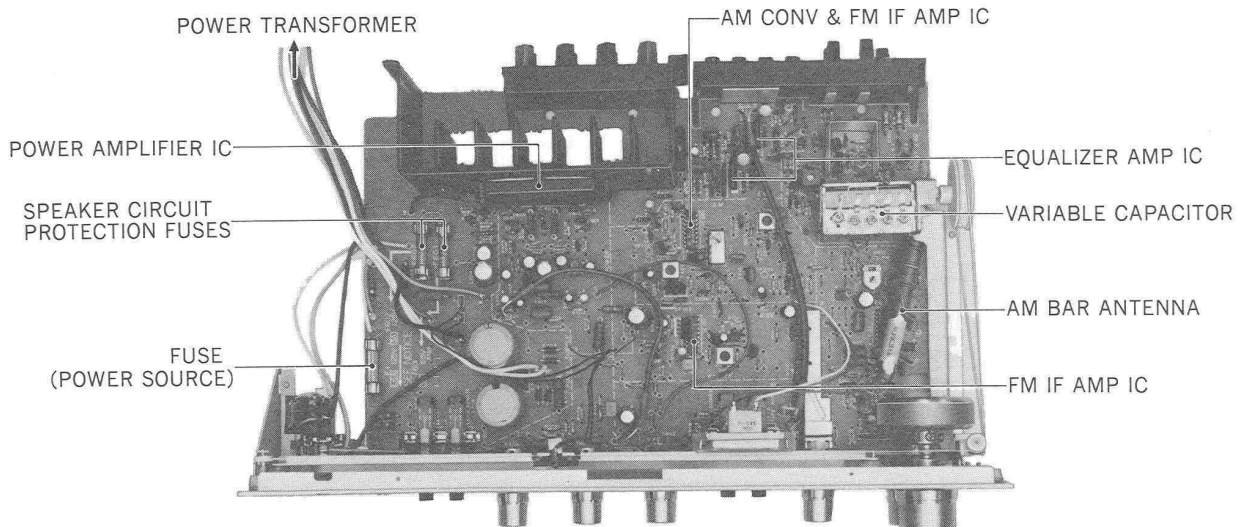
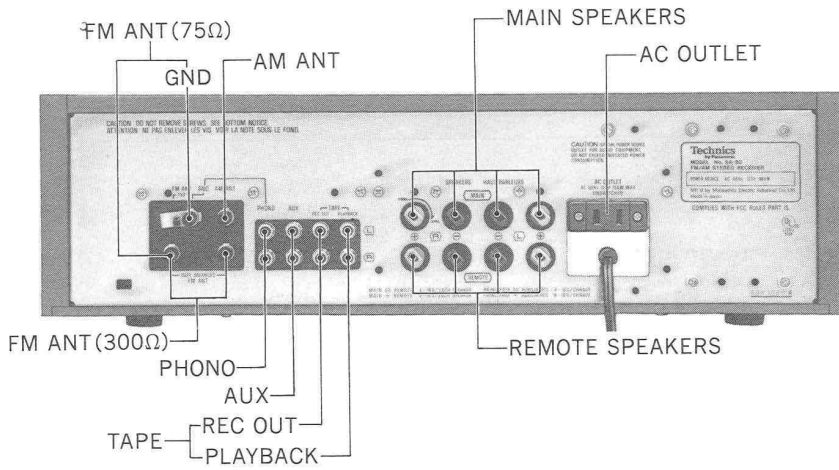
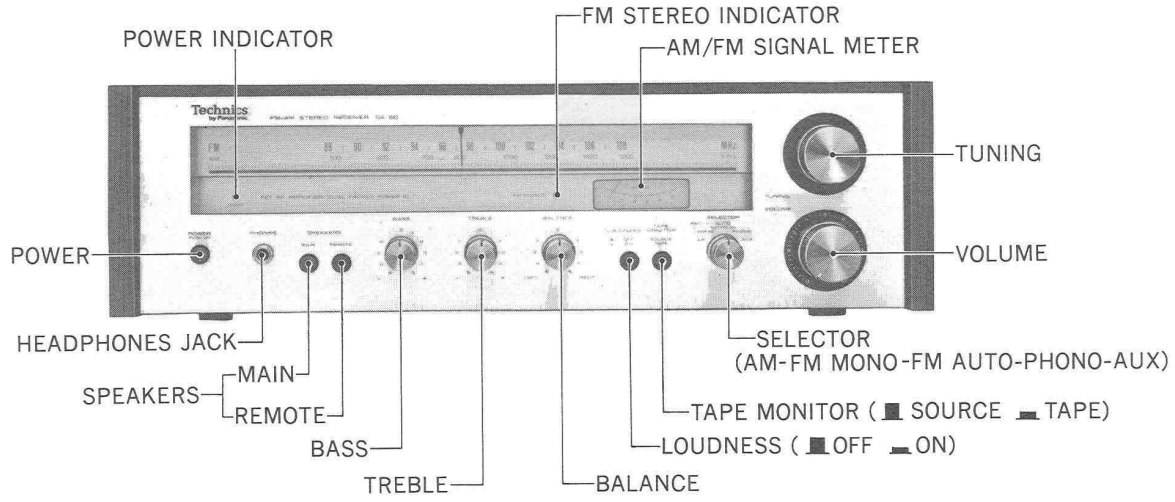
Technics
by Panasonic

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Division of Matsushita Electric
Corporation of America
One Panasonic Way, Secaucus,
New Jersey 07094

Panasonic Hawaii, Inc.
320 Waiakamilo Road, Honolulu,
Hawaii 96817

Matsushita Electric of Canada Ltd.
40 Ronson Drive, Rexdale,
Ontario, Canada M9W 1B5

■ LOCATION OF CONTROLS



■ NOTE

The unit is provided with the speaker circuit protection fuses at the right and left channels respectively. The fuse is to prevent the power IC from destruction, should the speaker terminals be short-circuited. Accordingly, if the unit fails to function upon completion of the speaker connections. Check the speaker circuit protection fuses first of all for possible blowing.

■ HOW TO REMOVE THE CHASSIS

1. Remove the 6 screws from the front panel, and the bottom board. (① ~ ⑥ in fig. 1)
2. Remove the 7 screws from the rear panel. (⑦ ~ ⑬ in fig. 2)
3. Place the dial pointer at the left corner of the dial scale. (Refer to fig. 3)
4. Pull the front panel out toward you. The panel can then be disengaged.
5. To reassemble, perform steps 1 through 4 in reverse.

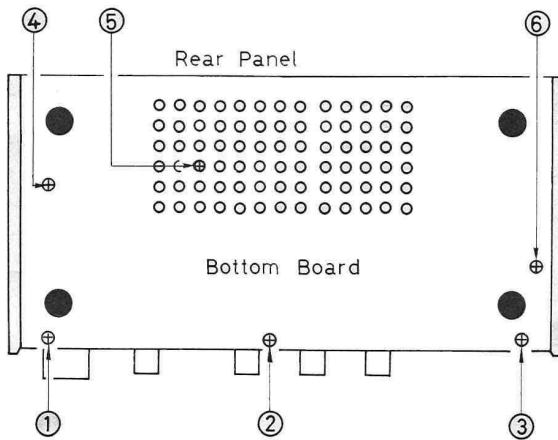


Fig. 1

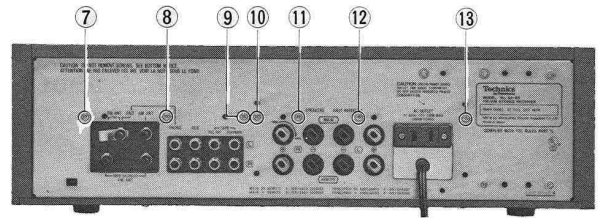
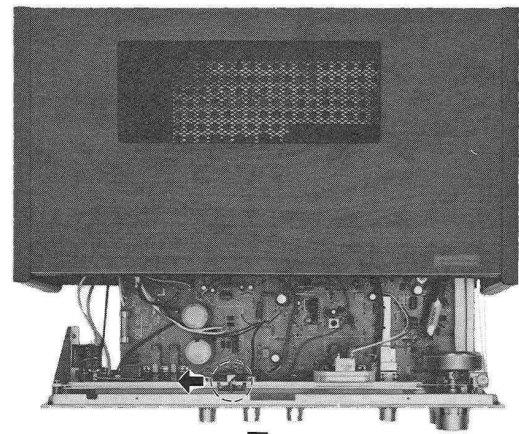


Fig. 2



PULL OUT

Fig. 3

■ HOW TO REMOVE THE POWER IC

1. Remove the chassis from cabinet. (Refer to "HOW TO REMOVE THE CHASSIS".)
2. Unsolder the power IC.
3. Remove the 2 screws [①, ② in fig. 4] holding the heat sink.
4. Lift the heat-sink upward [fig. 4: → A]
5. Remove the 2 screws [③, ④ in fig. 4] holding the power IC on the heat-sink. The power IC can be removed. [fig. 4: → B]
6. Use the reverse procedure to attach the power IC.

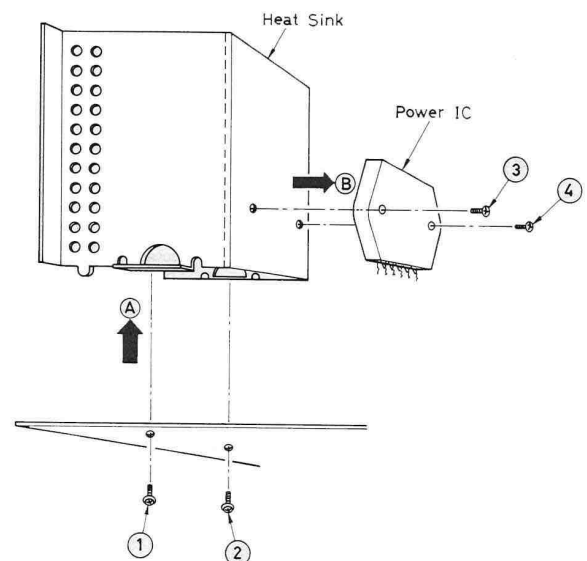


Fig. 4

ALIGNMENT INSTRUCTIONS

AM/FM SIGNAL GENERATOR		DIAL SETTING	INDICATOR (VTVM or SCOPE)	ADJUSTMENT POINTS	REMARKS
CONNECTION	FREQUENCY				
Notes: 1. Band selector switch FM MONO 2. Loudness switch OFF 3. Speaker switch ON 4. Tape monitor switch SOURCE 5. Maintain line voltage at 120 volts. 6. Output of signal generator should be no higher than necessary to obtain an output reading.					
AM ALIGNMENT					
1	AM signal generator high side through 0.001 μ F to AM antenna terminal.	455kHz (30% Mod. with 400Hz)	Point of non-inter-ference	Connect VTVM or scope to speaker terminal (L or R) or TP201 of set.	T201 (1st IFT) T202 (2nd IFT) Adjust for maximum output.
2	Fashion loop of several turns of wire and radiate signal into loop of tuner.	600kHz (30% Mod. with 400Hz)	600kHz	Connect VTVM or scope to speaker terminal (L or R) or TP201 of set.	L202 (OSC Coil) L201 (ANT Coil) Adjust for maximum output. Adjust L201 by moving coil bobbin along ferrite core.
3	Fashion loop of several turns of wire and radiate signal into loop of tuner.	1500kHz (30% Mod. with 400Hz)	1500kHz	Connect VTVM or scope to speaker terminal (L or R) or TP201 of set.	CT4 (OSC Trimmer) CT5 (ANT Trimmer) Adjust for maximum output. Repeat steps (2) and (3).
FM RF ALIGNMENT					
4	Connect FM signal generator to 300 Ω FM antenna terminals through FM dummy antenna.	90MHz (100% Mod. with 400Hz)	90MHz	Connect VTVM or scope to speaker terminal (L or R).	L4 (OSC Coil) L2 (DET Coil) L1 (ANT Coil) Adjust for maximum amplitude and symmetrical curve. (Refer to fig. 6).
5	Connect FM signal generator to 300 Ω FM antenna terminals through FM dummy antenna.	106MHz (100% Mod. with 400Hz)	106MHz	Connect VTVM or scope to speaker terminal (L or R).	CT3 (OSC Trimmer) CT2 (DET Trimmer) CT1 (ANT Trimmer) Adjust to maximum amplitude and symmetrical curve. Repeat steps (4) and (5).
FM MONO DISTORTION ALIGNMENT					
6		No-signal	Point of non-inter-ference	Connect DC VTVM between TP102 and TP103 (Refer to fig. 5)	T101 (Discri IFT) Adjust for 0mV of VTVM indication
SIGNAL METER ALIGNMENT					
7	1. Apply 100MHz FM signal of 100 dB (400Hz 30% modulation) to FM 300 Ω antenna terminal through FM dummy antenna.		4. If over 5 scale of signal meter indication, cut off the resistor (R108). When cutting off the resistor, cut off the same at the root.		
	3. Tune the signal meter to the maximum strength indicating position, and at the same time its indication should be below 5 scale.				
FM MPX PILOT ALIGNMENT					
Using a frequency counter			Using alternate system		
8	1. 98MHz Non-modulated mono signal applied to set. 2. Band selector switch to "FM AUTO". 3. Connect frequency counter to TP301 through resistor (100k Ω). 4. Adjust VR301 to 19kHz \pm 30Hz.			1. Apply stereo signal from generator or stereo station to tuner. 2. Adjust VR301 until stereo indicator lights up. Cement arm of VR301 as shown in fig. 7.	

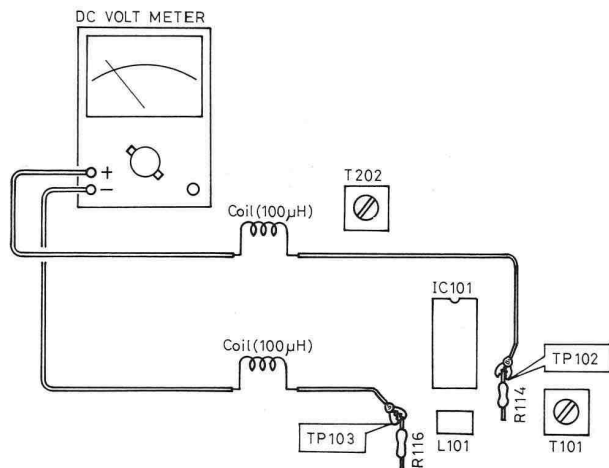


Fig. 5

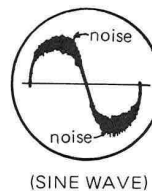
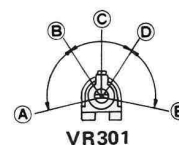


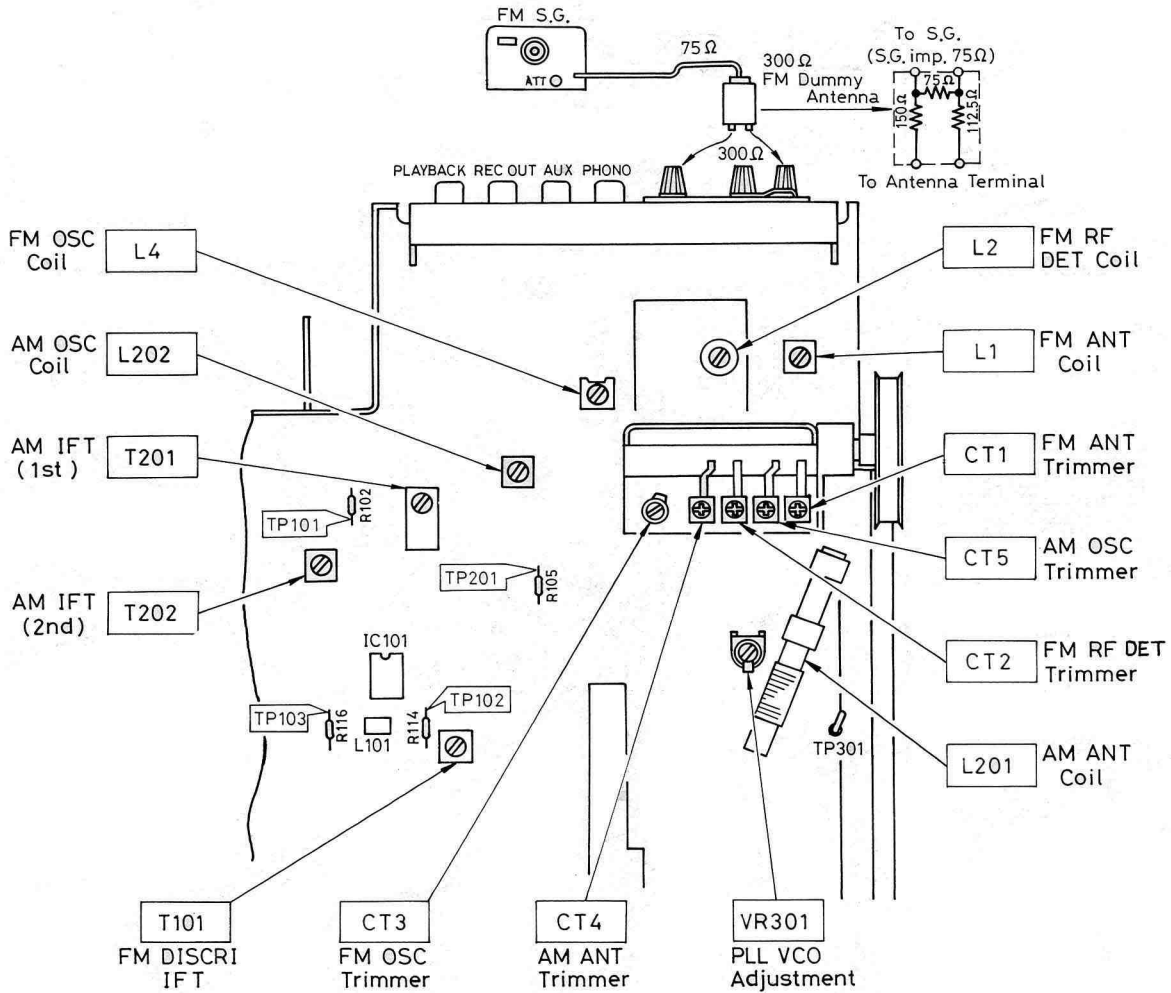
Fig. 6



VR301
A - B, D - E: Stereo OFF Position.
B - D: Stereo ON Position (indicator lighting).
C: Adjust Point of Pilot Circuit.

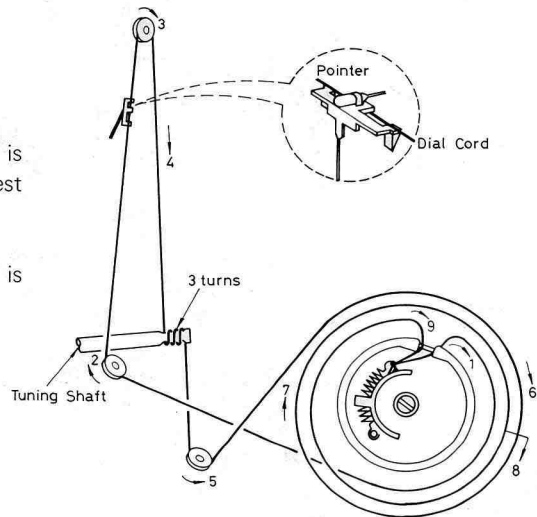
Fig. 7

ALIGNMENT POINTS



DIAL CORD INSTALLATION GUIDE

- For threading a fresh cord, proceed as follows.
 1. Prepare a fresh cord more than 170cm (66-7/8") in length.
 2. Bring the variable capacitor into a state where the drum is completely turned to the right (maximum capacity and lowest frequency for the variable capacitor)
 3. Direct the cord in the order from 1 to 9.
 4. Stretch the cord in such a tension as the spring length is elongated by 1.5 times that of the original state.
 5. Fix the knot of the cord with the bond.



PRINTED CIRCUIT BOARD WIRING VIEW

Earth (Ground) Lines

IC401, 402
SVTA7129P
EQUALIZER AMP

1	2V	5	0.6V
2	0.6V	6	9.9V
3	0.03V	7	21V
4	0.1V		

Q3
2SC1047
FM LOCAL OSC

Q2
2SC1047
FM MIXER

Q1
2SK49
FM RF AMP

IC201
AN217
AM CONV. & FM IF AMP

	FM		FM		AM
1	0V	9	0.8V	6.4V	
2	0V	10	1.2V	1.5V	
3	0.5V	11	0.8V	0.8V	
4	7.4V	12	0.8V	6.5V	
5	1V	13	0.55V	0.7V	
6	0V	14	0.8V	1.6V	
7	1V	15	0.8V	6.5V	
8	7.3V	16	0.55V	0.7V	

Q201
2SC828
AF AMP

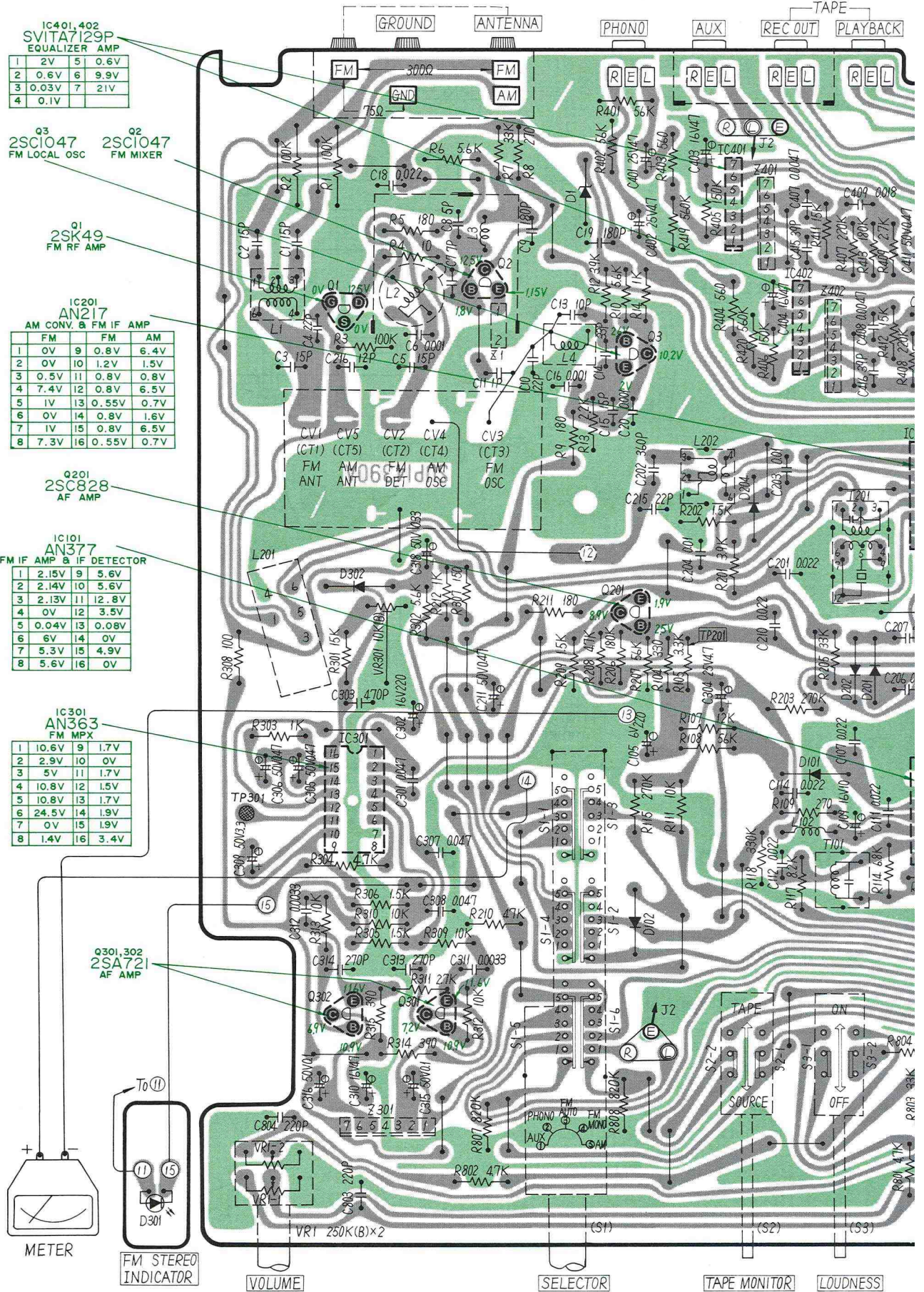
IC101
AN377
FM IF AMP & IF DETECTOR

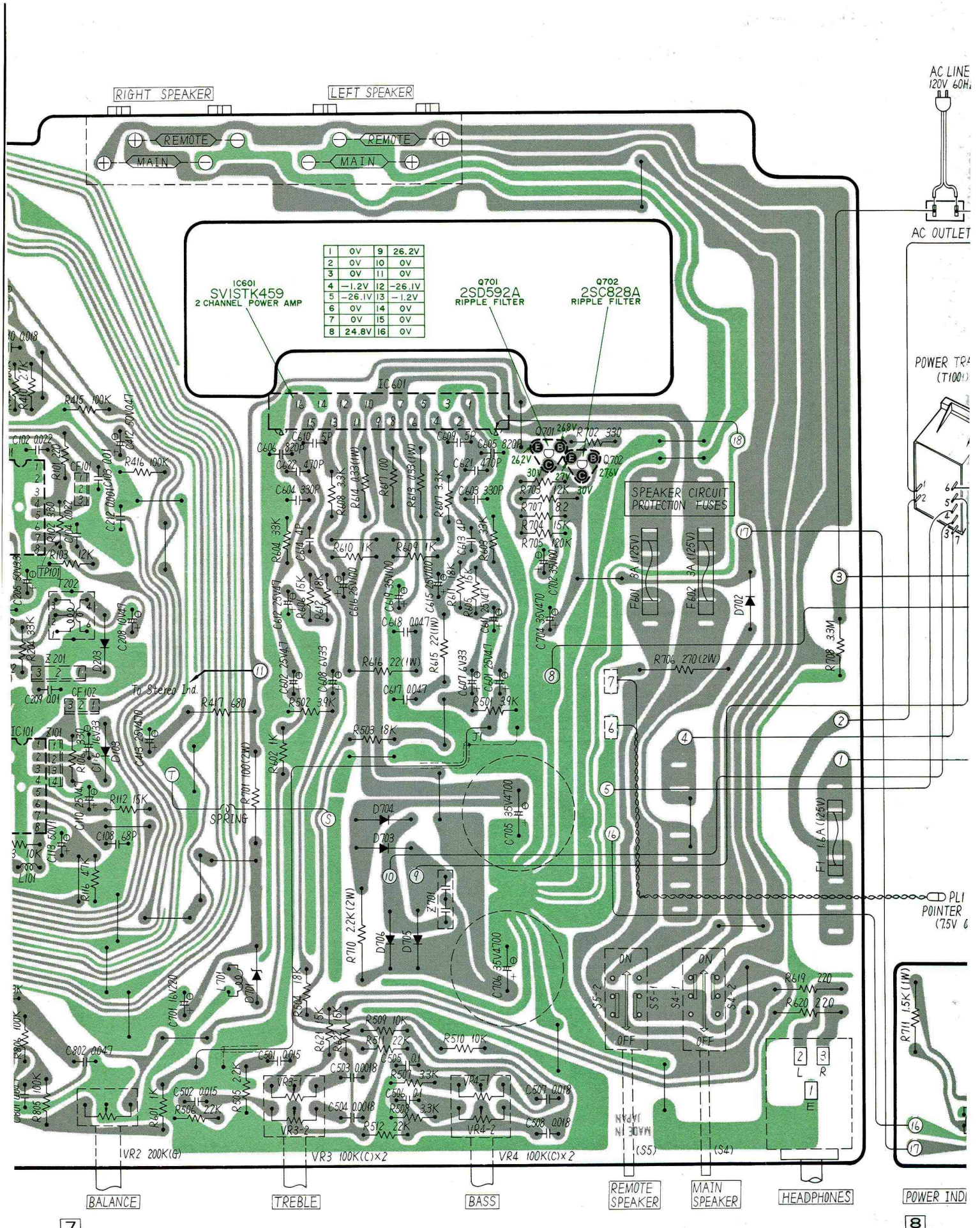
1	2.15V	9	5.6V
2	2.14V	10	5.6V
3	2.13V	11	12.8V
4	0V	12	3.5V
5	0.04V	13	0.08V
6	6V	14	0V
7	5.3V	15	4.9V
8	5.6V	16	0V

IC301
AN363
FM MPX

1	10.6V	9	1.7V
2	2.9V	10	0V
3	5V	11	1.7V
4	10.8V	12	1.5V
5	10.8V	13	1.7V
6	24.5V	14	1.9V
7	0V	15	1.9V
8	1.4V	16	3.4V

Q301, 302
2SA721
AF AMP





1	0V	9	26.2V
2	0V	10	0V
3	0V	11	0V
4	-1.2V	12	-26.1V
5	-26.1V	13	-1.2V
6	0V	14	0V
7	0V	15	0V
8	24.8V	16	0V

IC601
SV1STK459
2 CHANNEL POWER AMP

Q701
2SD592A
RIPPLE FILTER

Q702
2SC828A
RIPPLE FILTER

SPEAKER CIRCUIT
PROTECTION FUSES

AC LINE
120V 60Hz

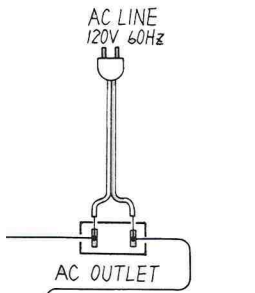
AC OUTLET

POWER TR
(T1001)

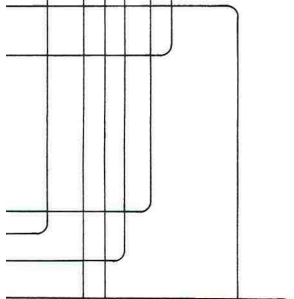
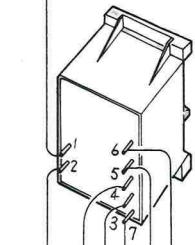
PL1
POINTER
(7.5V 6)

POWER IND

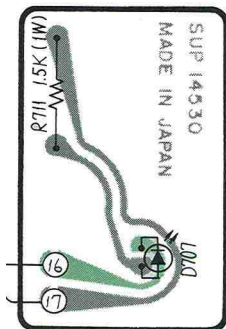
■ BLOCK DIAGRAM OF INTEGRATED CIRCUITS



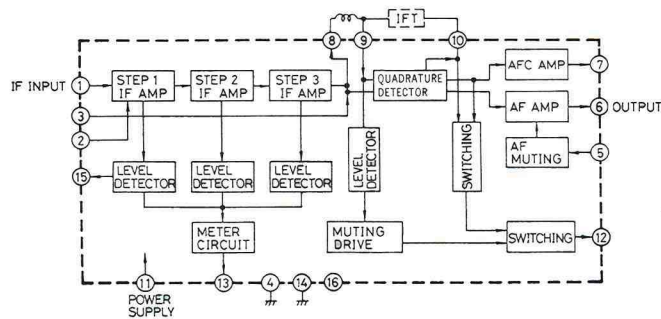
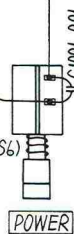
POWER TRANSFORMER (T1001)



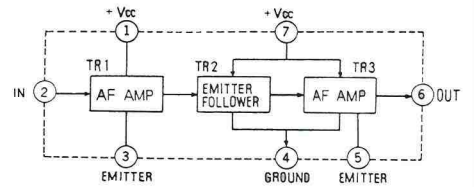
PL1 POINTER LAMP (7.5V 0.75A)



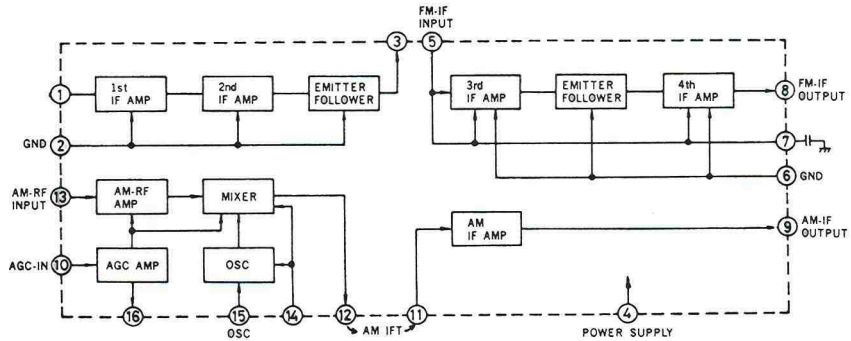
POWER INDICATOR



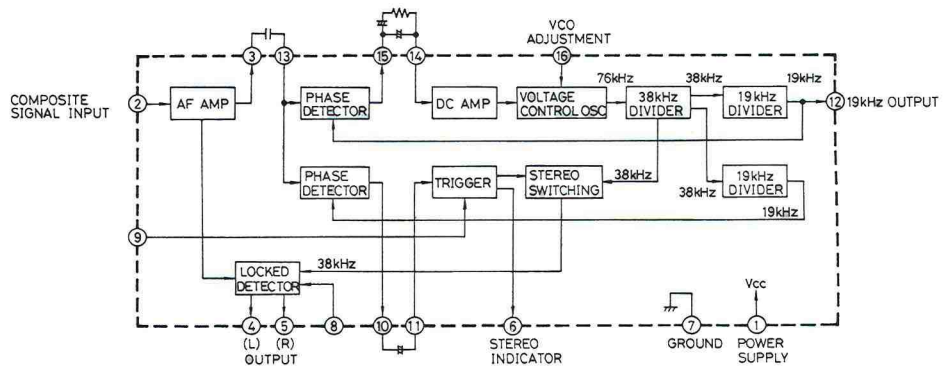
IC101 (AN377)
FM IF Amplifier & Detector



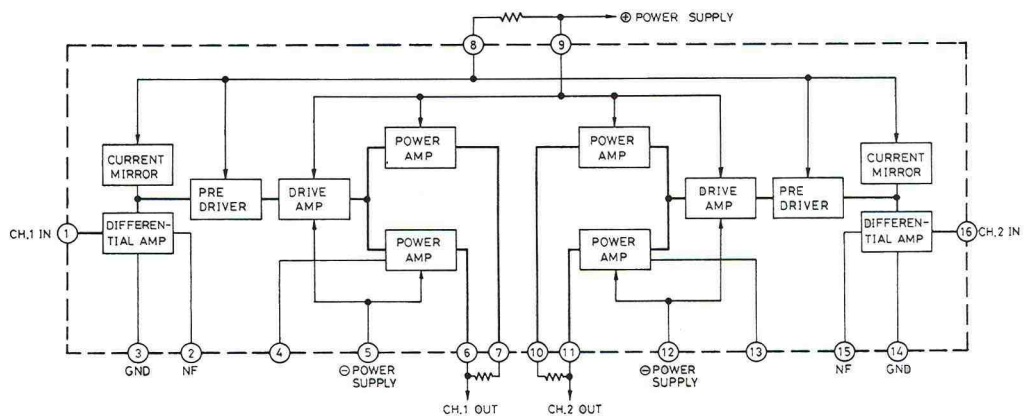
IC401, 402 (SVITA7129P)
Equalizer Amplifier



IC201 (AN217)
FM IF Amplifier & AM Converter

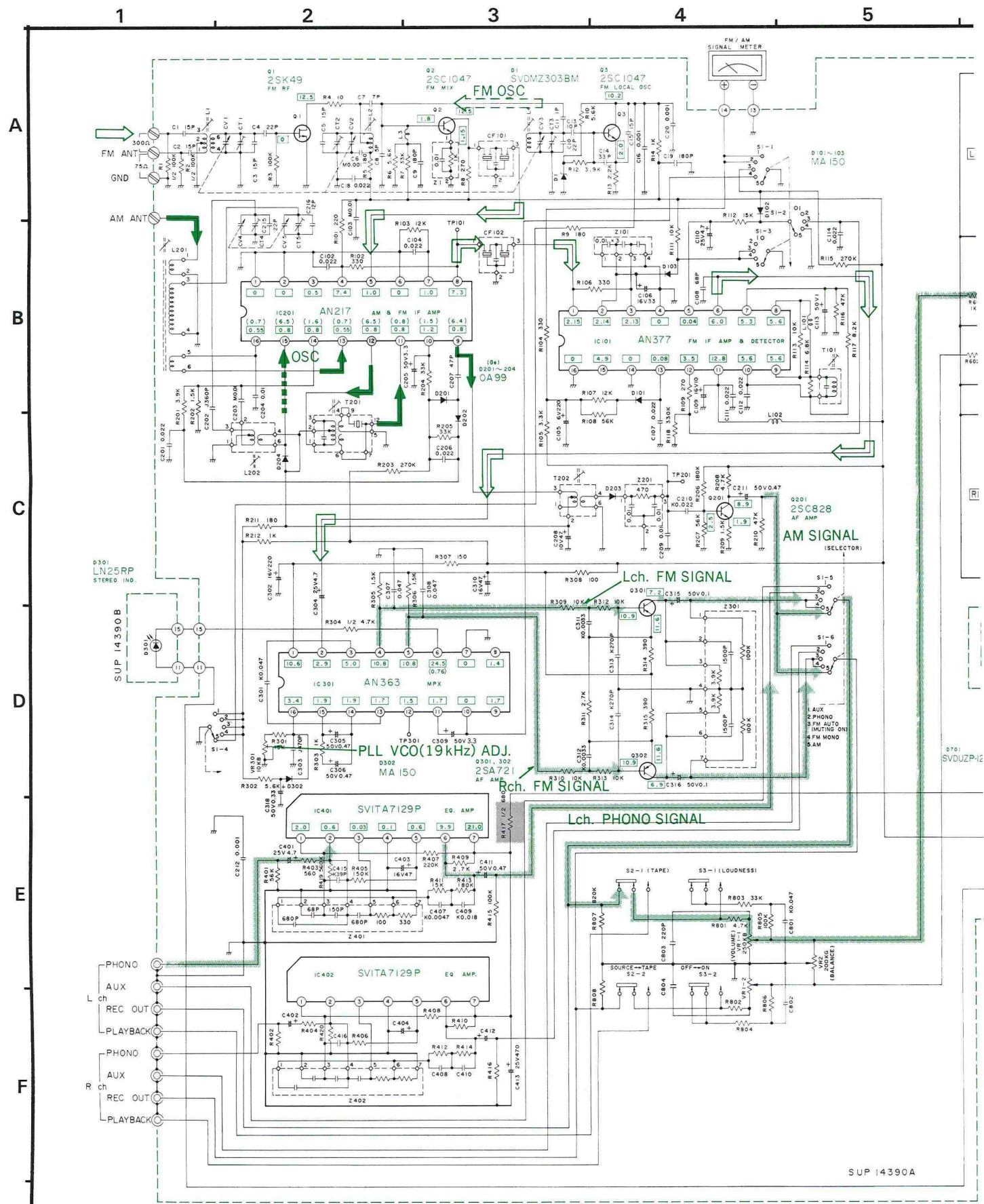


IC301 (AN363) FM Multiplex

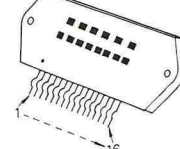
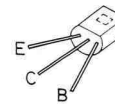
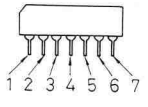
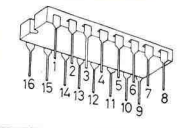


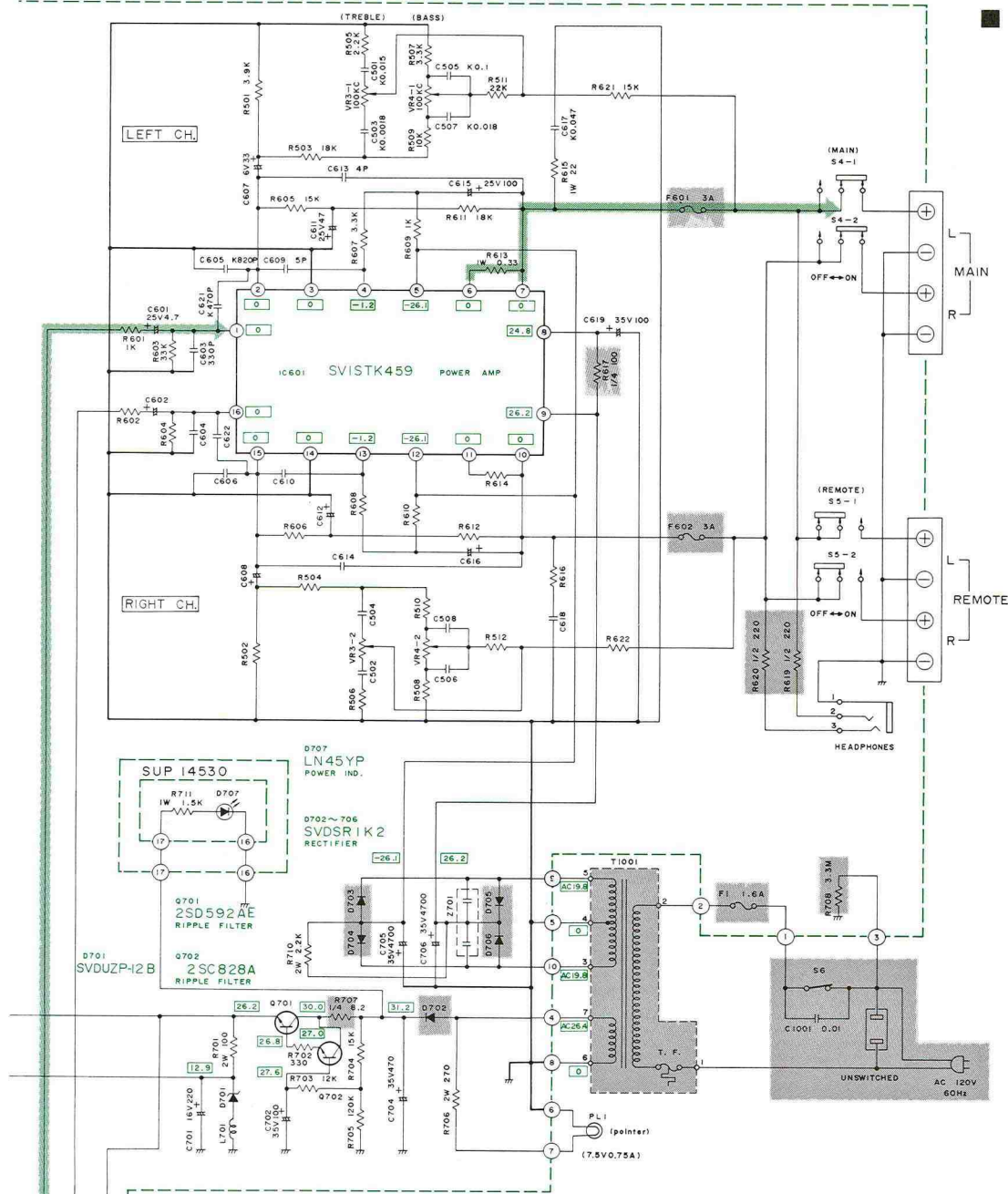
IC601 (SVISTK459)
2 Channel Power Amplifier

Schematic Diagram... Model SA-80



■ TERMINAL GUIDE OF TRANSISTOR AND IC

SV1STK459 
2SC1047, 2SC828 2SC828A, 2SA721 2SD592AE
2SK49 
SVITA7129P 
AN217, AN363, AN377 



NOTES

- S1-1 ~ S1-6: Selector switch in "AM" position.
⑤ AM ↔ ④ FM MONO ↔ ③ FM AUTO ↔ ② PHONO ↔ ① AUX
- S2-1, S2-2: Tape monitor switch in "SOURCE" position.
- S3-1, S3-2: Loudness switch in "OFF" position.
- S4-1, S4-2: Main speaker switch in "ON" position.
- S5-1, S5-2: Remote speaker switch in "OFF" position.
- S6: Power source switch in "ON" position.
- Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
 □ Not apply signal to set and selector switch to FM AUTO condition.
 () AM signal reception.
 ⌈ FM muting to ON condition. (Selector switch to FM AUTO position)
 < FM stereo signal reception.
- ➡ AF Signal lines. ⇨ FM signla lines. → AM signal lines.

13. This schematic diagram may be modified at any time with the development of new technology.

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR SAFETY. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

REPLACEMENT PARTS LIST

NOTES

1. Components identified by shaded area have special characteristic important for safety. When replacing any of these components use only manufacturer's specified parts.
2. Part numbers are indicated on most mechanical parts. Please use this part number for parts orders.
3. Guide letters of Resistor and Capacitor indicate;

Resistors

ERD Carbon ERG Metal oxide
 ERO Metal film ERC Solid
 ERX Metal film

Capacitors

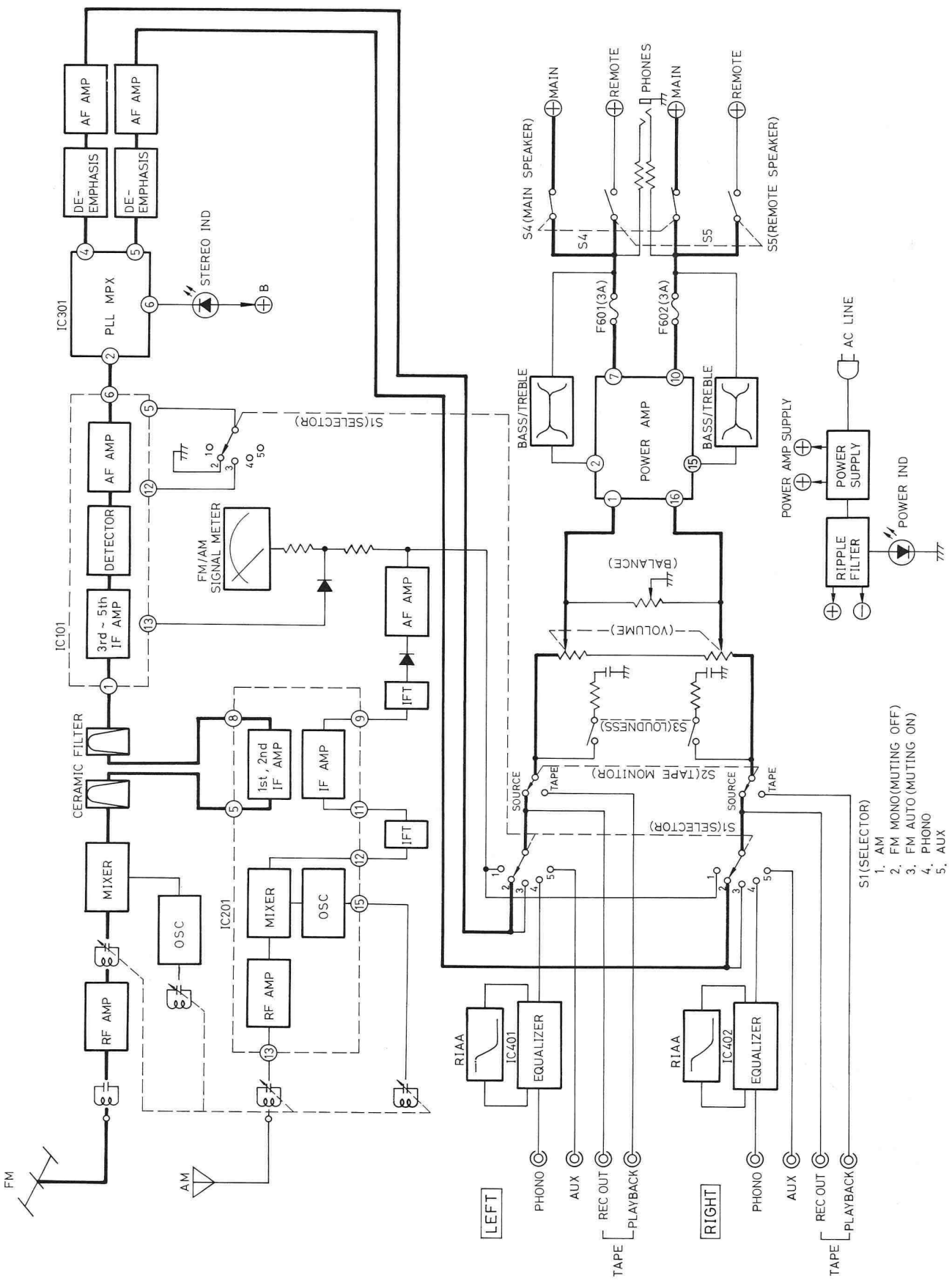
ECC Ceramic ECQM Polyester
 ECK Ceramic ECQS Polystyrene
 ECE Electrolytic ECQU Polyester

Ref. No.	Part No.
RESISTORS	
R1, 2	ERD50TJ104
R3	ERD25TJ104
R4	ERD25TJ100
R5	ERD25TJ181
R6	ERD25TJ562
R7	ERD25TJ333
R8	ERD25TJ271
R9	ERD25TJ181
R10	ERD25TJ562
R12	ERD25TJ392
R13	ERD25TJ222
R14	ERD25TJ102
R101	ERD25TJ221
R102	ERD25TJ331
R103	ERD25TJ123
R104	ERD25TJ331
R105	ERD25TJ332
R106	ERD25TJ331
R107	ERD25TJ123
R108	ERD25TJ563
R109	ERD25TJ271
R111	ERD25TJ103
R112	ERD25TJ153
R113	ERD25TJ103
R114	ERD25TJ682
R115	ERD25TJ274
R116	ERD25TJ473
R117	ERD25TJ822
R118	ERD25TJ334
R201	ERD25TJ392
R202	ERD25TJ152
R203	ERD25TJ274
R204, 205	ERD25TJ333
R206	ERD25TJ184
R207	ERD25TJ563
R208	ERD25TJ472
R209	ERD25TJ152
R210	ERD25TJ473
R211	ERD25TJ181
R212	ERD25TJ102
R301	ERD25TJ153
R302	ERD25TJ562
R303	ERD25TJ102
R304	ERD50TJ472
R305, 306	ERD25TJ152
R307	ERD25TJ151
R308	ERD25TJ101
R309, 310	ERD25TJ103
R311	ERD25TJ272
R312, 313	ERD25TJ103
R314, 315	ERD25TJ391
R401, 402	ERD25TJ563
R403, 404	ERD25TJ561
R405, 406	ERO25CKG1503
R407, 408	ERO25CKG2203
R409, 410	ERD25TJ272
R411, 412	ERD25TJ153
R413, 414	ERD25TJ184

Ref. No.	Part No.
R415, 416	ERD25TJ104
R417	ERD12FJ681
R419, 420	ERO25CKG5603
R501, 502	ERD25TJ392
R503, 504	ERD25TJ183
R505, 506	ERD25TJ222
R507, 508	ERD25TJ332
R509, 510	ERD25TJ103
R511, 512	ERD25TJ223
R601, 602	ERD25TJ102
R603, 604	ERD25TJ333
R605, 606	ERD25TJ153
R607, 608	ERD25TJ332
R609, 610	ERD25TJ102
R611, 612	ERD25TJ183
R613, 614	ERX1ANJR33
R615, 616	ERG1ANJ220
R617	ERD14FJ101
R619, 620	ERD12FJ221
R621, 622	ERD25TJ153
R701	ERG2ANJ101
R702	ERD25TJ331
R703	ERD25TJ123
R704	ERD25TJ153
R705	ERD25TJ124
R706	ERG2ANJ271
R707	ERD14FJ8R2
R708	ERC12ZGK335
R710	ERG2ANJ222
R711	ERG1ANJ152
R801, 802	ERD25TJ472
R803, 804	ERD25TJ333
R805, 806	ERD25TJ104
R807, 808	ERD25TJ824
CAPACITORS	
C1, 2	ECCD1H150K
C3	ECCD1H150KC
C4	ECCD1H220K
C5	ECCD1H150KC
C6	ECKD1H102MDA
C7	ECCD1H070DC
C8	ECCD1H050CC
C9	ECCD1H181K
C10	ECCD1H220KC
C11	ECCD1H010CC
C13	ECCD1H100KC
C14	ECCD1H330KC
C15	ECCD1H150KR
C16	ECKD1H102MDA
C18	ECKD1H223ZF
C19	ECCD1H181K
C20	ECKD1H102MD
C102	ECKD1H223ZF
C103	ECKD1H103MD
C104	ECKD1H223ZF
C105	ECEA1AS221
C106	ECEA1CS330
C107	ECKD1H223ZF
C108	ECCD1H680K

Ref. No.	Part No.
C109	ECEA1HS100
C110	ECEA1JS4R7
C111, 112	ECKD1H223ZF
C113	ECEA2AS010
C114	ECKD1H223ZF
C201	ECQM1H223KZ
C202	ECQS1361JZ
C203	ECKD1H103MD
C204	ECKD1H103ZF
C205	ECEA2AS3R3
C206	ECKD1H223ZF
C207	ECCD1H470K
C208	ECEA1AS470
C209	ECKD1H103MD
C210	ECQM1H223KZ
C211	ECEA50ZR47
C212	ECKD1H102MD
C215	ECCD1H220KC
C216	ECCD1H120K
C301	ECQS1471JZ
C302	ECEA1CS221
C303	ECQS1471JZ
C304	ECEA1JS4R7
C305, 306	ECEA50ZR47
C307, 308	ECQM1H473KZ
C309	ECEA50M3R3R
C310	ECEA1ES470
C311, 312	ECQM1H332KZ
C313, 314	ECKD1H271KB
C315, 316	ECEA50ZR1
C318	ECEA50ZR33
C401, 402	ECEA25M4R7R
C403, 404	ECEA1ES470
C407, 408	ECQM1H472KZ
C409, 410	ECQM1H183KZ
C411, 412	ECEA50ZR47
C413	ECEA1ES471
C415, 416	ECCD1H390K
C501, 502	ECQM1H153KZ
C503, 504	ECQM1H182KZ
C505, 506	ECQM1H104KC
C507, 508	ECQM1H183KZ
C601, 602	ECEA25Z4R7
C603, 604	ECKD1H331KB
C605, 606	ECKD2H821KB
C607, 608	ECEA1CS330
C609, 610	ECCD1H050C
C611, 612	ECEA1ES470
C613, 614	ECCD1H040C
C615, 616	ECEA1ES101
C617, 618	ECQM1H473KZ
C619	ECEA1VS101
C621, 622	ECKD1H471KB
C701	ECEA1CS221
C702	ECEA1VS101
C704	ECEA1VS471
C705, 706	ECET35R4700P
C801, 802	ECQM1H473KZ
C803, 804	ECKD1H221KB
C1001	ECQU1A103MC

■ BLOCK DIAGRAM



REPLACEMENT PARTS LIST

Important Safety Notice

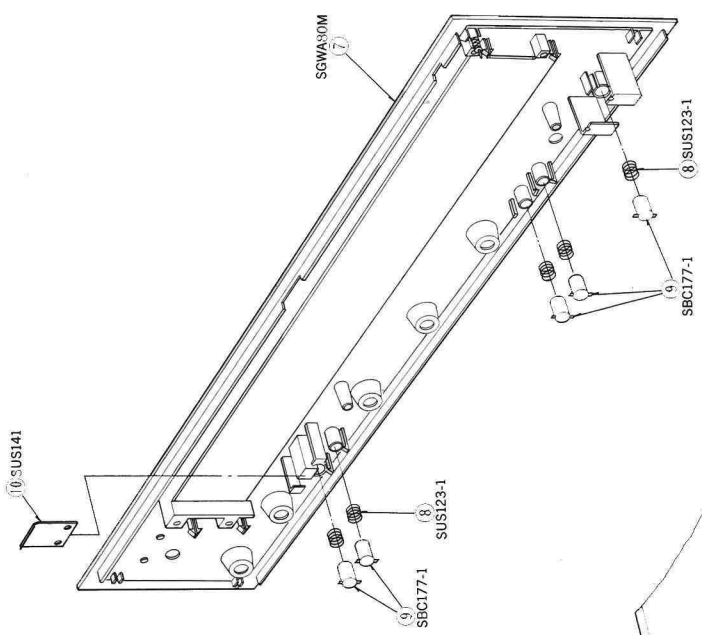
Components identified by shaded area have special characteristics important for safety. When replacing any of these components use only manufacturer's specified parts.

NOTE: 1. Part numbers are indicated on most mechanical parts.
Please use this part number for parts orders.

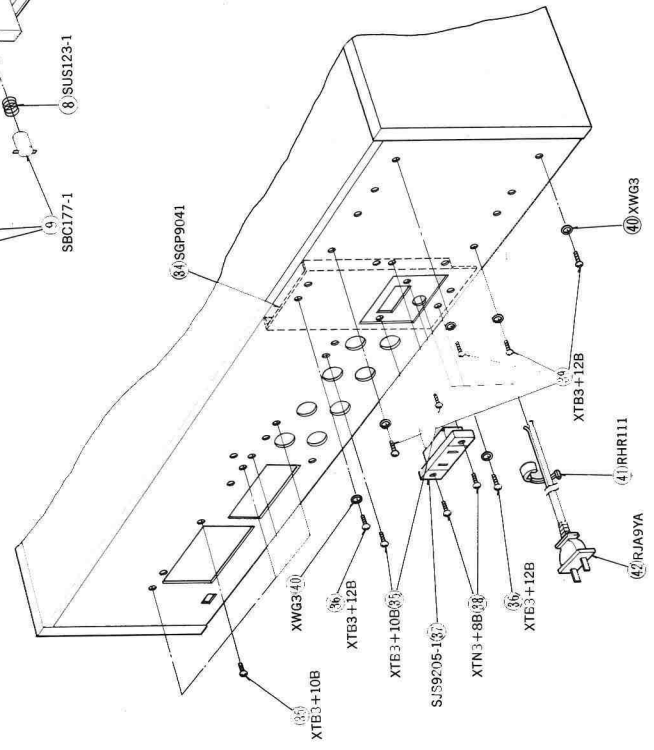
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
INTEGRATED CIRCUITS				
IC101	AN377	IC, FM IF Amplifier & FM Detector	1	
IC201	AN217-BB	IC, FM IF Amplifier & AM Converter	1	
IC301	AN363N	IC, FM Multiplex	2	○
IC401, 402	SVITA7129P	IC, Equalizer Amplifier	1	○
IC601	SVISTK459	IC, 2 Channel Power Amplifier	1	
TRANSISTORS				
Q1	25K49-H2	Transistor, FM RF Amplifier [FET]	1	○
Q2, 3	25C1047-C	Transistor, FM Mixer & Local Oscillator (Use in ranks C or D)	2	
Q201	25C1328-T	Transistor, AF Amplifier (Use in ranks S, T or U)	1	
Q301, 302	25A902-F	Transistor, AF Amplifier (Use in ranks F or G)	2	
Q701	25D592AE-Q	Transistor, Ripple Filter (Use in ranks Q, R or S)	1	
Q702	25C1328-T	Transistor, Ripple Filter (Use in ranks S, T or U)	1	
DIODES				
D1	SVDZM303BM	Diode, 3V Zener	1	○
D101, 102, 103	MAT50	Diode, Meter Detector & Switching	3	
D201~204	OA99	Diode, AM AGC & Detector	4	
D301	LN25RP	Light Emitting Diode, Stereo Indicator	1	
D302	MAT50	Diode, Switching	1	○
D701	SVDUZP-12B	Diode, 12V Zener	1	○
D702, 703, 704, 705, 706	SVDSRT1K2	Rectifier	5	○
D707	LN45YP	Light Emitting Diode, Power Indicator	1	○
COILS and TRANSFORMERS				
L1	SLA4P25	Coil, FM Antenna	1	
L2	SLD4P21-P	Coil, FM RF Detector	1	○
L3	RLQY15G5-Y	Coil, Choke	1	○
L4	SLO4P37-M	Coil, FM Local Oscillator	1	○
L101	SLQX180-4M	Coil, Choke	1	○
L102	SLQX101-2D	Coil, Choke	1	○
L201	SLF2C15-Y	Coil, AM Antenna	1	
L202	SLO2C9-P	Coil, AM Local Oscillator	1	
L701	SLQX101-3M	Coil, Choke	1	○
T101	SLI4C509-M	Transformer, FM Detector	1	○
T201	SLI7D101-M	Transformer, AM IF	1	
T202	RLI2C450	Transformer, AM IF	1	
T1001	SLT5M75-W	Transformer, Power Source	1	○

Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
COMPONENT COMBINATIONS				
Z1	EXRPI03P102C	Component Combination, 0.01µF & 1kΩ	1	
Z101	EXF35L04C	Component Combination, 0.01µF (X3)	1	
Z201	EXRF203Z471S	Component Combination, 0.01µF (X2) & 470Ω	1	
Z301	EXA6YD03CL	Component Combination, 3.9kΩ(X2), 100kΩ (X2) & 1500pF (X2)	1	
Z401, 402	EXA6SD01C	Component Combination, 100Ω, 330Ω, 68pF, 150pF & 680pF (X2)	2	
Z701	EXRFS203ZS	Component Combination, 0.01µF (X2)	1	
CERAMIC FILTERS				
CF101	SVFEI07MS8-A	Ceramic Filter, Red, 10.7 MHz	each 1	
	SVFEI07MS8-B	Ceramic Filter, Blue, 10.67 MHz		
	SVFEI07MS8-C	Ceramic Filter, Orange, 10.73 MHz		
	SVFEI07MS8-D	Ceramic Filter, Black, 10.64 MHz		
	SVFEI07MS8-E	Ceramic Filter, White, 10.76 MHz		
CF102	SVFEI07MA8-A	Ceramic Filter, Red, 10.7 MHz	each 1	
	SVFEI07MA8-B	Ceramic Filter, Blue, 10.67 MHz		
	SVFEI07MA8-C	Ceramic Filter, Orange, 10.73 MHz		
	SVFEI07MA8-D	Ceramic Filter, Black, 10.64 MHz		
	SVFEI07MA8-E	Ceramic Filter, White, 10.76 MHz		
(Use pair ranks as same as CF101 and CF102)				
VARIABLE RESISTORS				
VR1	EWKKA085BF5	Volume Control, 250kΩ (B)	1	○
VR2	EVHGPAF25G25	Balance Control, 200kΩ (G)	1	○
VR3, 4	EWKB9AF25C15	Bass & Treble Control, 100kΩ (C)	2	
VR301	EVT53MA00B14	PLL IC VCO Adjustment, 10kΩ (B)	1	
VARIABLE CAPACITOR				
CV1~CV5 (CT1~CT5)	ECV5MD34X71G	Variable Capacitor, FM/AM with Trimmer	1	○
FUSES				
F1	XBATF16NUJ14	Fuse, 1.6A (125V) Power Source	1	
F601, 602	XBAS1A3001	Fuse, 3A (125V) Speaker Circuit	2	
LAMP				
PL1	SWL71	Pointer Lamp Ass'y, with Colour Cap	1	○
SWITCHES				
S1	SSR127	Switch, Program Selector	1	○
S2, 3	SSH219S	Switch, Tape Monitor & Loudness	1	○
S4, 5	SSH251	Switch, Main Speaker & Remote Speaker	1	○
S6	ESB7086T	Switch, Power Source	1	

• Front Panel

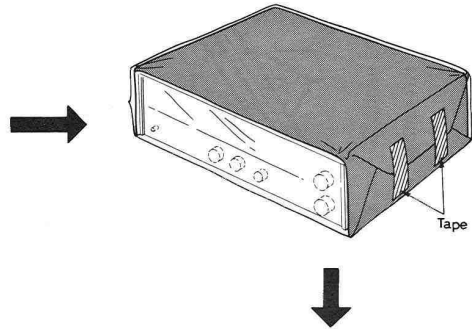
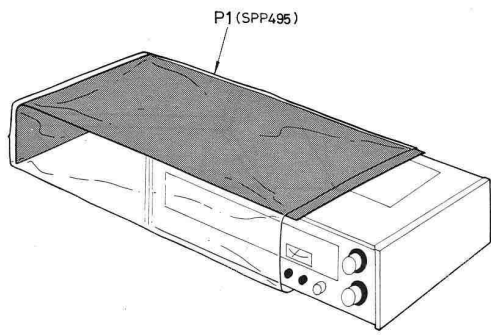


• Set Rear

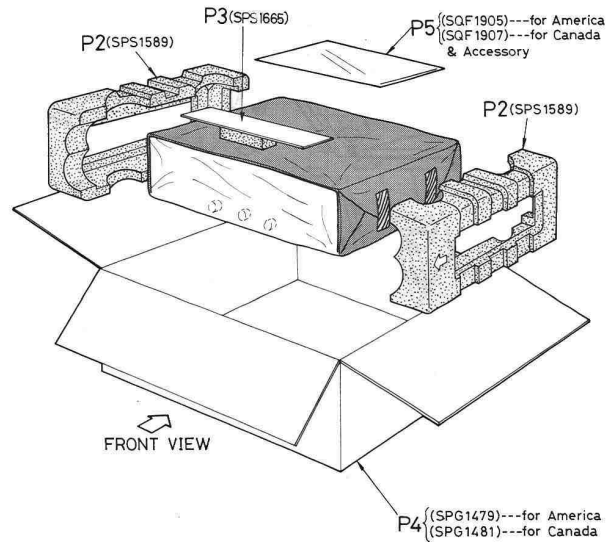
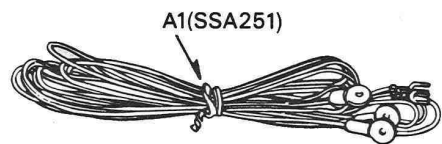


Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
CABINET and CHASSIS PARTS				
1	SBN765	Knob, Tuning	1	○
2	SBN767	Knob, Volume	1	○
3	SBN661	Knob, Bass, Treble, Balance & Selector	4	
4	XNS11	Nut, Tuning Shaft M'tg	1	
5	XNS8	Nut, Tuning Shaft M'tg	5	
6	SNE439	Nut, Headphones Jack M'tg	1	○
7	SGWA80M	Panel, Front Assy	1	○
8	SUS123-1	Spring, Push Switches	5	○
9	SBC177-1	Burton, Push Switches	5	○
10	SUS141	Bracket, Meter	1	○
11	RDR20	Pulley, Dial	3	
12	RNW150-2	Washer, Pulley	3	
13	SUH371	Bracket, Front Panel	1	*○
14	XNG3BS	Nut, Front Panel Bracket M'tg	4	*○
15	SDT8045	Shaft, Tuning	1	
16	SDX751S	Flywheel	1	
17	XXAS3K5S	Screw, Flywheel	2	*○
18	SKDA80M	Dial Scale	1	
19	SHRAM03	Latch, Indicator Circuit Board M'tg	2	
20	SDZ051-2	Cord, Dial 170cm (66-7/8")	1 roll	
21	SDP6071	Pointer, Dial	1	*○
22	SMP267	Bracket, Dial Lamp	1	*○
23	SDA77-1	Sheet, Pointer Slider	1	○
24	SSM145-N	Meter, Signal	1	○
25	XCJ6P13B-A	Jack, Headphones	1	○
26	SUL25	Spring, Dial Pointer Cord	1	○
27	SDD38-1	Drum, Variable Capacitor	1	○
28	SDSA4121	Spring, Dial Cord	1	○
29	XSN3+5S	Screw, Front Panel Bracket M'tg	1	
30	XWA3B	Washer, Front Panel Bracket Screw	1	
31	SJF8015	Terminal, Input & Antenna	1	○
32	SJF5807	Terminal, Speakers	1	○
33	SKA10190W	Cabinet Ass'y	1	○
34	SGP9041	Plate, AC Outlet & AC Cord	1	*○
35	XTB3+10B	Screw, Input & Speakers Terminal M'tg	7	
36	XTB3+12B	Screw, AC Outlet and AC Cord Plate M'tg	2	
37	SJS9205-1	AC Outlet	1	
38	XTN3+8B	Screw, AC Outlet M'tg	2	
39	XTB3+12B	Screw, Transformer M'tg	4	
40	XWG3	Washer, Transformer Screw	6	
41	RHR111	Bushing, AC Cord	1	○
42	RJA9YA	AC Cord, Power Source	1	○
43	XTB3+12B	Screw, Front Panel & Front Panel Bracket M'tg	7	
44	XWG3	Washer, Front Panel & Front Panel Bracket Screw	7	
45	SXE837	Bracket, Dial Cord Pulley	1	○
46	SUL23	Bracket, Transformer Cord	1	○

■ PACKINGS



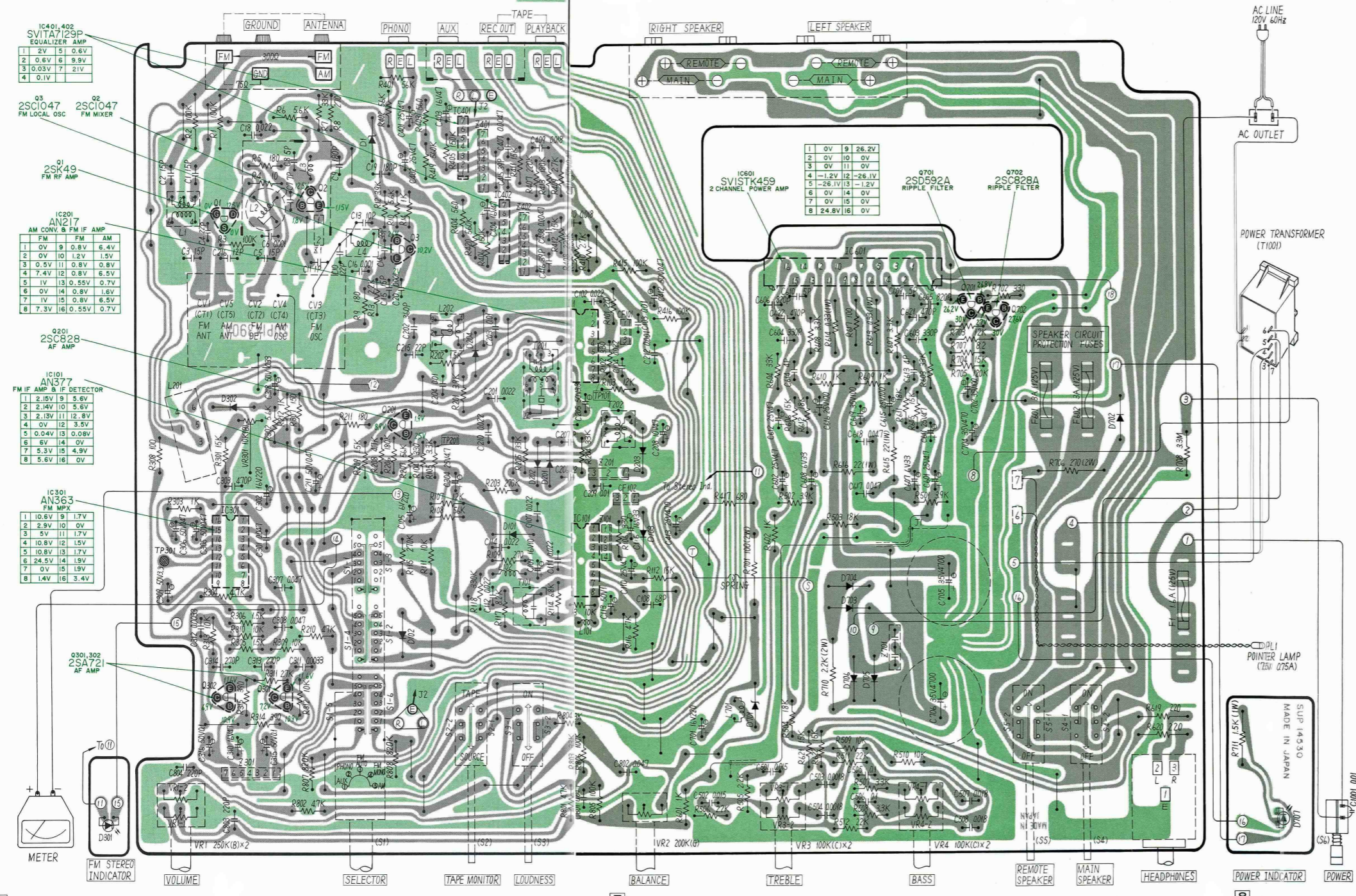
■ ACCESSORY



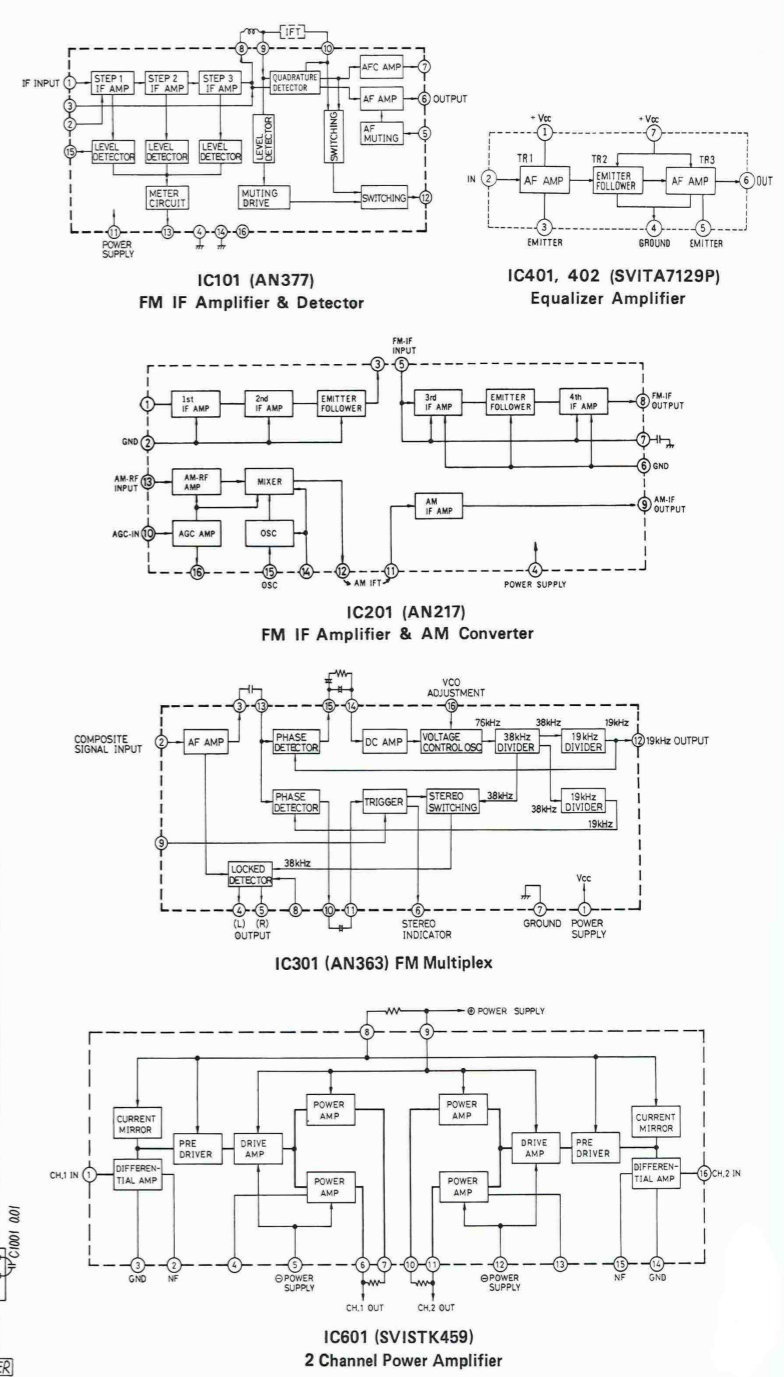
Ref. No.	Part No.	Part Name & Description	Per Set	Remarks
ACCESSORY				
A1	SSA251	Cord, FM Feeder	1	
PACKING PARTS				
P1	SPP495	Polyethylene Bag	1	
P2	SPS1589	Pad, Left and Right Side	2	○
P3	SPS1665	Pad, Set Front Side	1	○
P4 (M)	SPG1479	Carton Box	1	○
P4 (MC)	SPG1481	Carton Box	1	○
P5 (M)	SQF1905	Instructions Book, Printed Matter	1	○
P5 (MC)	SQF1907	Instructions Book, Printed Matter	1	○
(M) is available in America only. (MC) is available in Canada only.				

PRINTED CIRCUIT BOARD WIRING VIEW

Earth (Ground) Lines



BLOCK DIAGRAM OF INTEGRATED CIRCUITS

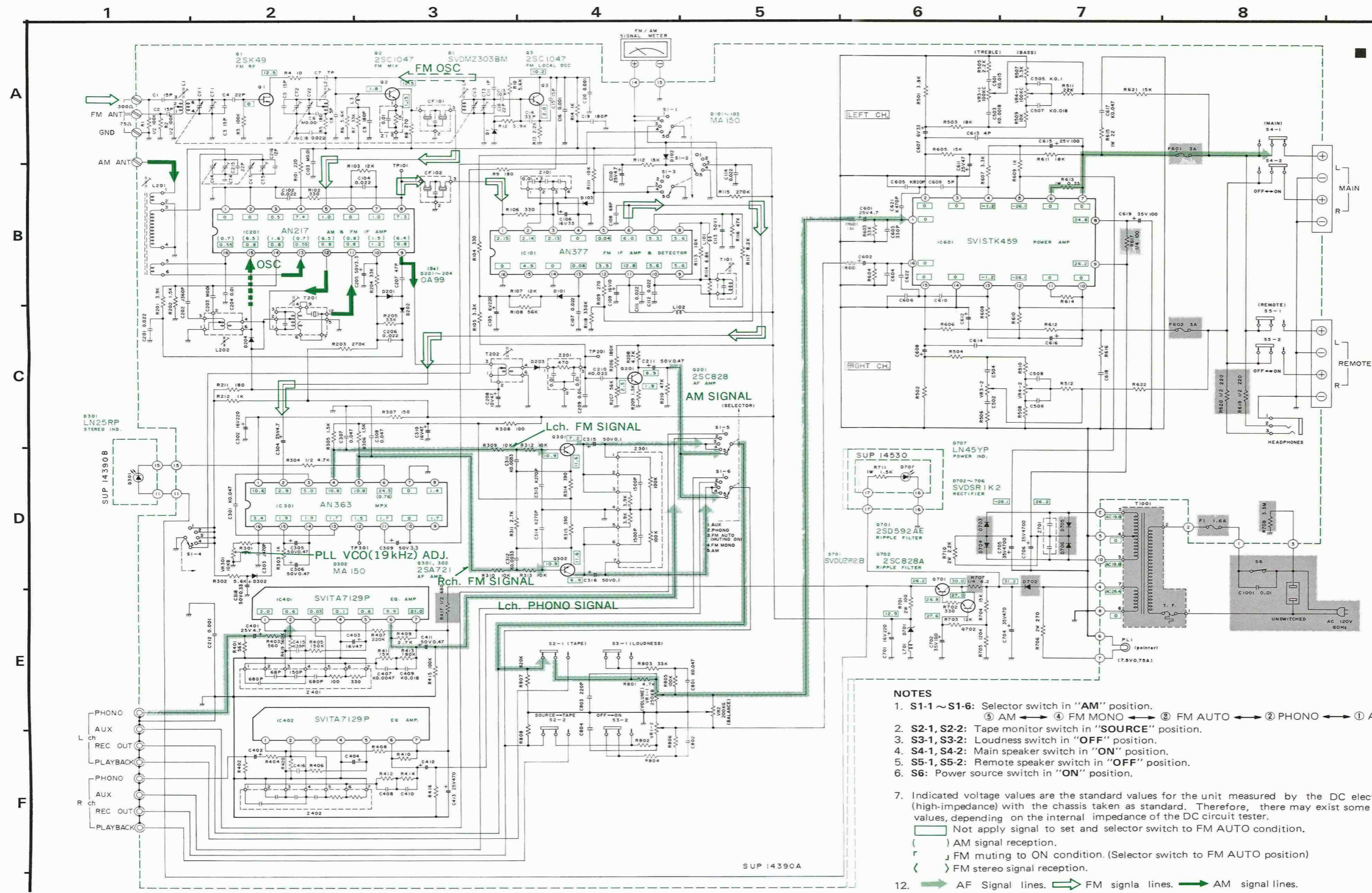


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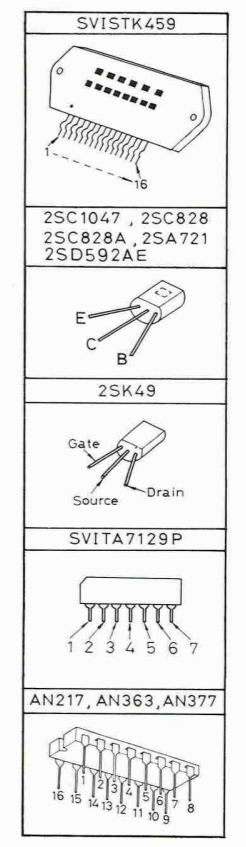
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8

Schematic Diagram... Model SA-80



■ TERMINAL GUIDE OF TRANSISTOR AND IC



NOTES

- S1-1 ~ S1-6: Selector switch in "AM" position. (5) AM ↔ (4) FM MONO ↔ (3) FM AUTO ↔ (2) PHONO ↔ (1) AUX
 - S2-1, S2-2: Tape monitor switch in "SOURCE" position.
 - S3-1, S3-2: Loudness switch in "OFF" position.
 - S4-1, S4-2: Main speaker switch in "ON" position.
 - S5-1, S5-2: Remote speaker switch in "OFF" position.
 - S6: Power source switch in "ON" position.
7. Indicated voltage values are the standard values for the unit measured by the DC electronic circuit tester (high-impedance) with the chassis taken as standard. Therefore, there may exist some errors in the voltage values, depending on the internal impedance of the DC circuit tester.
- Not apply signal to set and selector switch to FM AUTO condition.
 - () AM signal reception.
 - ┌ FM muting to ON condition. (Selector switch to FM AUTO position)
 - └ FM stereo signal reception.
- AF Signal lines. → FM signal lines. → AM signal lines.
 - This schematic diagram may be modified at any time with the development of new technology.