

Technics
 by Panasonic

HI-FI COMPONENTS
Technics
 by Panasonic

Service Manual



(for European Military)

Stereo Control Center

MODEL **SU-9600**
TECHNICAL SPECIFICATIONS (For accommodating future improvements, specifications are subject to change without notice.)

AMPLIFIER SECTIONS (IHF)
Input sensitivity and impedance

PHONO 1	2 mV/25k, 50k, 100k Ω
PHONO 2	1 mV~3 mV/25k, 50k, 100k Ω
TUNER, AUX 1, AUX 2	100mV/50k Ω
TAPE DECK 1, 2 PLAYBACK	100mV/50k Ω

PHONO maximum input voltage

PHONO 1	900mV
PHONO 2	450mV~1350mV

Total harmonic distortion	0.08%
Intermodulation distortion	0.08%

Signal-to-noise ratio

PHONO 1	73 dB
PHONO 2	69 dB~76 dB
TUNER, AUX 1, 2	95 dB

Frequency response

PHONO	RIAA standard curve ± 0.3 dB
TUNER, AUX 1, 2	2 Hz~100 kHz, +0 dB, -3 dB

Tone controls

BASS	50 Hz, +12.5 dB - 12.5 dB (11 steps)
TREBLE	20 kHz, +12.5 dB - 12.5 dB (11 steps)

Turnover frequencies

BASS	125 Hz, 500 Hz
TREBLE	2 kHz, 8 kHz

Filters

Low	15 Hz, 30 Hz - 18 dB/oct.
High	10 kHz, 15 kHz - 18 dB/oct.

Muting

-20 dB

Output voltage and impedance

OUTPUT 1, 2	Rated	1V/600 Ω
	Max.	11V/600 Ω
TAPE DECK 1, 2	REC OUT	100mV/600 Ω

GENERAL

Power supply	AC 110/120/220/240V 50/60Hz
Power consumption	17W
Dimensions (W x H x D)	17 $\frac{3}{8}$ " x 6 $\frac{1}{8}$ " x 14 $\frac{3}{4}$ "
	450 x 173 x 375 mm
Weight	23.2 lb. 10.5 kg

Matsushita Electric Corp. of America
 Matsushita Electric Corp. of Hawaii, Inc.
 Matsushita Electric of Canada Ltd.

Pan Am Bldg., 200 Park Ave., New York, N. Y. 10017
 320. Waiakamilo Road Honolulu, Hawaii 96817
 40 Ronson Drive, Rexdale, Ont.

REPLACEMENT PARTS LIST

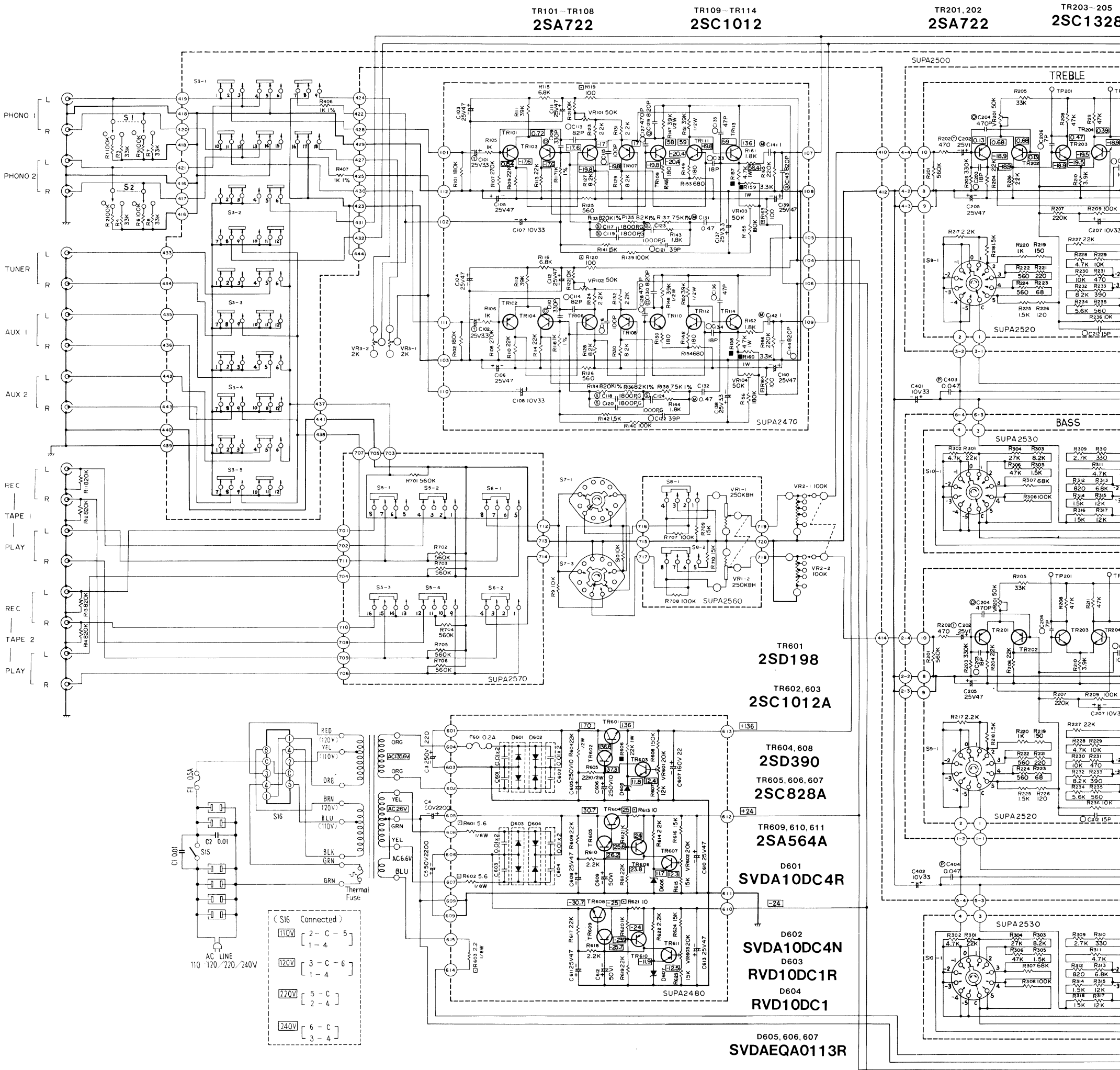
NOTES:

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

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
TRANSISTORS									
TR101, 102, 103, 104, 105, 106, 107, 108, (201, 202) × 2, 501, 502, 505, 506, 509, 510, 513, 514	2SA722T	Equalizer, Tone & Filter Amplifier	20		R9, 10, 121, 122, (229, 230, 236) × 2, 509, 510, 527, 528, 537, 538, 541, 542, 551, 552, 561, 562, 563, 564, 573, 574	ERD14TJ103	10kΩ, 1/4W, ±5%, Carbon	26	
TR109, 110, 111, 112, 113, 114	2SC1012	Equalizer Amplifier	6		R (315, 317) × 2, 401, 607	ERD14TJ123	12kΩ, 1/4W, ±5%, Carbon	6	
TR (203, 204, 205) × 2, 503, 504, 507, 508, 511, 512, 515, 516	2SC1328T	Tone & Filter Amplifier	14		R (316) × 2, 615, 616, 623, 624, 709, 710	ERD14TJ153	15kΩ, 1/4W, ±5%, Carbon	8	
TR601	2SD198	DC Voltage Control	1		R109, 110, 113, 114, (204, 206, 227, 301) × 2, 609, 611, 617, 619	ERD14TJ223	22kΩ, 1/4W, ±5%, Carbon	16	
TR602, 603	2SC1012A	An Error Voltage Det. & DC Amp.	2		R (304) × 2, R3, 4, 7, 8, (205) × 2	ERD14TJ273	27kΩ, 1/4W, ±5%, Carbon	2	
TR604, 608	2SD390P	DC Voltage Control	2		R111, 112, 403, R (208, 211, 306) × 2, 404	ERD14TJ333	33kΩ, 1/4W, ±5%, Carbon	6	
TR401, 402, 605, 606, 607	2SC828A-R	Relay Driver & An Error Voltage Detector	5		R525, 526, R (307) × 2, 507, 508	ERD14TJ393	39kΩ, 1/4W, ±5%, Carbon	3	
TR609, 610, 611	2SA564A-R	DC Amp & An Error Voltage Det.	3		R1, 2, 5, 6, (308) × 2, 707, 708	ERD14TJ473	47kΩ, 1/4W, ±5%, Carbon	2	
DIODES									
D401	MA150	Rectifier	1		R139, 140, (209) × 2, 543, 544, 545, 546, 565, 566, 567, 568	ERD14TJ563	56kΩ, 1/4W, ±5%, Carbon	7	
D601	SVDA10DC4-R	Rectifier	1		R511, 512, 529, 530	ERD14TJ683	68kΩ, 1/4W, ±5%, Carbon	4	
D602	SVDA10DC4-N	Rectifier	1		R608	ERD14TJ104	100kΩ, 1/4W, ±5%, Carbon	8	
D603	RVD10DC1-R	Rectifier	1		R405	ERD14TSJ104	100kΩ, 1/4W, ±5%, Carbon	12	
D604	RVD10DC1	Rectifier	1		R101, 102, 155, 156, 523, 524	ERD14TJ154	150kΩ, 1/4W, ±5%, Carbon	4	
D605, 606, 607	SVDAEQAO113R	13V Zener, Voltage Stabilizer	3		R (207) × 2, 505, 506, R165, 166, (214) × 2, 517, 518, 535, 520, 536, 557, 558, 579, 580	ERD14TJ184	180kΩ, 1/4W, ±5%, Carbon	6	
TRANSFORMER									
T1	SLTA5N15S	Power Transformer	1		R107, 108, R (203) × 2, R501, 502, 519, 520, 539, 540, 559, 560	ERD14TSJ224	220kΩ, 1/4W, ±5%, Carbon	4	
RESISTORS									
R (223) × 2	ERD14TJ680	68Ω, 1/4W, ±5%, Carbon	2		R (201) × 2, 701, 702, 703, 704, 705, 706	ERD14TSJ224	220kΩ, 1/4W, ±5%, Carbon	12	
R (226) × 2	ERD14TJ121	120Ω, 1/4W, ±5%, Carbon	2		R11, 12, 13, 14, R117, 118, 406, 407	ERD14TSJ274	270kΩ, 1/4W, ±5%, Carbon	2	
R (219) × 2	ERD14TJ151	150Ω, 1/4W, ±5%, Carbon	2		R137, 138	ERD14TSJ334	330kΩ, 1/4W, ±5%, Carbon	2	
R149, 150	ERD14TJ181	180Ω, 1/4W, ±5%, Carbon	2		R135, 136	ERD14TSJ474	470kΩ, 1/4W, ±5%, Carbon	8	
R (221) × 2	ERD14TJ221	220Ω, 1/4W, ±5%, Carbon	2		R133, 134	ERD14TSJ564	560kΩ, 1/4W, ±5%, Carbon	8	
R (310) × 2	ERD14TJ331	330Ω, 1/4W, ±5%, Carbon	2		R613, 621	ERD14TSJ824	820kΩ, 1/4W, ±5%, Carbon	4	
R (233) × 2	ERD14TJ391	390Ω, 1/4W, ±5%, Carbon	2		R119, 120, 163, 164, (215, 216) × 2, 581, 582, 583, 584	ERD14TF1001	1kΩ, 1/4W, ±1%, Carbon	4	
R (202, 231) × 2	ERD14TJ471	470Ω, 1/4W, ±5%, Carbon	4		R145, 146	ERD14TF7502	75kΩ, 1/4W, ±1%, Carbon	2	
R125, 126, (213, 222, 224, 235) × 2, 515, 516, 533, 534, 555, 556, 577, 578	ERD14TJ561	560Ω, 1/4W, ±5%, Carbon	18		R105, 106	ERD14TF8202	82kΩ, 1/4W, ±1%, Carbon	2	
R (312) × 2	ERD14TJ821	820Ω, 1/4W, ±5%, Carbon	2		R603	ERD14CKF8203	820kΩ, 1/4W, ±1%, Carbon	2	
R (220) × 2, 503, 504, 521, 522, 547, 548, 569, 570, 612, 620	ERD14TJ102	1kΩ, 1/4W, ±5%, Carbon	12		R601, 602	ERD14FJ100	100Ω, 1/4W, ±5%, Carbon	2	
R141, 142, (218, 225, 305, 314) × 2	ERD14TJ152	1.5kΩ, 1/4W, ±5%, Carbon	10		R604, 605	ERD14FJ101	100Ω, 1/4W, ±5%, Carbon	12	
R143, 144, 161, 162	ERD14TJ182	1.8kΩ, 1/4W, ±5%, Carbon	4		R147, 148, 151, 152	ERD12TJ393	39kΩ, 1/2W, ±5%, Carbon	4	
R123, 124, 131, 132, (217) × 2, 610, 614, 618, 622	ERD14TJ222	2.2kΩ, 1/4W, ±5%, Carbon	10		R159, 160	ERGIANJ332	3.3kΩ, 1W, ±5%, Metallic	2	
R (309) × 2	ERD14TJ272	2.7kΩ, 1/4W, ±5%, Carbon	2		R157, 158	ERGIANJ472	4.7kΩ, 1W, ±5%, Metallic	2	
R402	ERD14TJ332	3.3kΩ, 1/4W, ±5%, Carbon	1		R606	ERGIANJ223	22kΩ, 1W, ±5%, Metallic	1	
R (210, 212) × 2	ERD14TJ392	3.9kΩ, 1/4W, ±5%, Carbon	4		VARIABLE RESISTORS				
R (228, 302, 311) × 2	ERD14TJ472	4.7kΩ, 1/4W, ±5%, Carbon	6		VR601, 602, 603	EVLS3AA00B24	20kΩ (B), Voltage Stabilizer Adjustment	3	
R (239) × 2	ERD14TJ562	5.6kΩ, 1/4W, ±5%, Carbon	6						
R115, 116, (313) × 2, 553, 554, 575, 576	ERD14TJ682	6.8kΩ, 1/4W, ±5%, Carbon	8						
R127, 128, 129, 130, (232, 303) × 2, 549, 550, 571, 572	ERD14TJ822	8.2kΩ, 1/4W, ±5%, Carbon	12						

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
LIGHT and FUSES									
VR101, 102, 103, 104, VR (201) × 2	EVLS3AA00B54	50kΩ (B), Equalizer Circuit Adjustment	4		PL	XAM37K250	Pilot Lamp (7.5V 75mA)	1	
VR1-1, 1-2	EWFNFAF25252	50kΩ (B), Tone Amp. Adjustment	2		F1	XBA2F05NU5	Fuse, Power Source. 0.5A	1	
VR2-1, 2-2	SWAAG38260R	250kΩ (BH), Balance Control	1		F601	XBA2H02NS5	Fuse, Power Source. 0.2A	1	
VR3-1, 3-2	EVR4AA300B23	100kΩ (A), Volume Control	1		SWITCHES				
		2kΩ (B), Phono Gain Control	1		S1, 2	SSRA65	Phono 1, 2 Impedance Switch	2	
CAPACITORS									
C (206) × 2	ECCD1H070DC	7pF, 50WV, ±0.5pF, Ceramic	2		S3	SSHA47S	Input Selector Push Switch	1	
C (208) × 2	ECCD1H100DC	10pF, 50WV, ±0.5pF, Ceramic	2		S5	SSLA32S	Recording Mode Lever Switch	1	
C (212) × 2	ECCD1H150K	15pF, 50WV, ±10%, Ceramic	2		S6	SSLA31S	Tape Monitor Lever Switch	1	
C (203) × 2	ECCD1H180K	18pF, 50WV, ±10%, Ceramic	2		S7	SSRA61	Mode Switch	1	
C113, 114	ECCD1H820JC	82pF, 50WV, ±5%, Ceramic	2		S8	SSLA33S	Audio Muting Lever Switch	1	
C115, 116	ECCD1H101JC	100pF, 50WV, ±5%, Ceramic	2		S9, 10	SSRA63	Bass & Treble Control Switch	4	
C133, 134	ECCD2H180K	18pF, 500WV, ±10%, Ceramic	2		S11, 12	SSHA48S	Bass & Treble Turn Over Switch	2	
C135, 136	ECCD2H470JC	47pF, 500WV, ±5%, Ceramic	2		S13, 14	SSRA62	Low & High Filter Switch	2	
C (204) × 2	ECKD1H471KB	470pF, 50WV, ±10%, Ceramic	2		S15	SSLA34S	Power Source Switch	1	
C425	ECKE1H472MD	0.0047μF, 50WV, ±20%, Ceramic	1		S16		Socket, Voltage Selector	1	
C109, 110	ECKD2H331KB	330pF, 500WV, ±10%, Ceramic	2		RELAY				
C127, 128	ECKD2H471KB	470pF, 500WV, ±10%, Ceramic	2			SSYA8	Shock Noise Silence Relay	1	
C129, 130	ECKD2H821KB	820pF, 500WV, ±10%, Ceramic	2		CABINET PARTS				
C415, 416, 417, 418, 525, 526	ECQS1331JZ	330pF, 125WV, ±5%, Styrol	6		SBN119S	Knob, Bass & Treble Control	4		
C539, 540	ECQS1371JZ	370pF, 125WV, ±5%, Styrol	2		SBN118S	Knob, Volume Control	1		
C523, 524	ECQS1471JZ	470pF, 125WV, ±5%, Styrol	2		SBCA52	Button, Turn Over Push Switch	6		
C143, 144, 537, 538	ECQS1821JZ	820pF, 125WV, ±5%, Styrol	4		SBCA53	Button, Selector Push Switch	5		
C123, 124	ECQS1102GZ	1000pF, 125WV, ±2%, Styrol	2		SBLA4-1	Knob, Power, Rec Mode, Tape & Audio Muting Switch	4		
C117, 118, 119	ECQS1182GZ	1800pF, 125WV, ±2%, Styrol	4		SBSA9S	Knob, Filter & Mode Switch	3		
C419, 420, 531, 532	ECQM05102JZ	0.001μF, 50WV, ±5%, Polyester	4		SBSA10S	Knob, Impedance & Gain Control	3		
C545, 546	ECQM05152JZ	0.0015μF, 50WV, ±5%, Polyester	2		SBN120S	Knob, Balance Control	1		
C527, 528	ECQM05182JZ	0.0018μF, 50WV, ±5%, Polyester	2		SGWA1202	Front Panel, Complete	1		
C541, 542	ECQM05272JZ	0.0027μF, 50WV, ±5%, Polyester	2		SGXA65	Bracket, Selector Push Button	1		
C423, 424	ECQM05332JZ	0.0033μF, 50WV, ±5%, Polyester	2		SGXA68	Bracket, Turn Over Push Button	6		
C407, 408	ECQM05392JZ	0.0039μF, 50WV, ±5%, Polyester	2		SGXA64	Handle, Bracket	4		
C405, 406	ECQM05472JZ	0.0047μF, 50WV, ±5%, Polyester	2		SKYA4	Handle, Front Panel	2		
C421, 422	ECQM05103JZ	0.01μF, 50WV, ±5%, Polyester	2		XNAGFFZ	Nut, Handle M'tg.	4		
C409, 410	ECQM05153JZ	0.015μF, 50WV, ±5%, Polyester	2		SGLA9	Panel Light, Plastic, Orange	1		
C413, 414	ECQM05223JZ	0.022μF, 50WV, ±5%, Polyester	2		SKPA7	Top Board	1		
C403, 404	ECQM05473JZ	0.047μF, 50WV, ±5%, Polyester	2		XTB3+8CK	Black Screw, Top Board M'tg.	11		
C513, 514, 515, 516, 517, 518	ECQM05563JZ	0.056μF, 50WV, ±5%, Polyester	6		SKUA370	Bottom Board	1		
C411, 412, 505, 506, 507, 508, 509, 510	ECQM05104JZ	0.1μF, 50WV, ±5%, Polyester	8		SHGA303	Leg	4		
C428	ECQM05154M Z	0.15μF, 50WV, ±20%, Polyester	1		XSN4D25S	Screw, Leg M'tg.	4		
C511, 512, 519, 520	ECQM05474M Z	0.47μF, 50WV, ±20%, Polyester	4		XTV3+BCR	Red Screw, Bottom Board M'tg.	11		
C (211) × 2	ECQM05105M Z	1μF, 50WV, ±20%, Polyester	6		SKSA2	Side Board	2		
C141, 142	ECQH2105M Z	1μF, 250WV, ±20%, Polyester	2		XVE48BK	Six Corner Box Bolt, Side Board M'tg.	10		
C131, 132	ECQT2474N	0.47μF, 250WV, ±20%, Polyester	2		SYPA302AS	Rear Panel, Complete	1		
C1	ECQU2A103MD	0.01μF, 250VAC, ±20% Polyester	1		SGPA4618S	Rear Panel Only	1		
C2	ECQU2A103MD	0.01μF, 250VAC, ±20% Polyester	1		SJFA3409	Terminal, Tape Monitor 1, 2 & Output	3		
C4, 5	ECEM50R222U	2200μF, 50WV, Electrolytic	2		SJFA3005	Terminal, Input	1		
C3	ECEM250V220U	220μF, 250WV, Electrolytic	1		SJSA66-1	AC Outlet	6		
C107, 108	ECEA10V33	33μF, 10WV, Electrolytic	6		SNEA204-2S	Bolt, Ground Terminal	1		
(207) × 2, 401, 402	ECEA10V47	47μF, 10WV, Electrolytic	4		SNEA404	Nut, Ground Terminal	1		
C529, 530, 543, 544	ECEA10V1000	1000μF, 10WV, Electrolytic	1		SHGA302	Rubber Cushion, Set Rear	2		
C427	ECEA25V3R3	3.3μF, 25WV, Electrolytic	3		SJJA6	AC Cord	1		
C137, 138, 426	ECEA25V10	10μF, 25WV, Electrolytic	3		SHRA107	Bushing, AC Cord	1		
C (209) × 2	ECEA25V10	10μF, 25WV, Electrolytic	14		SJJA65	Socket, Circuit Board Connecting	6		
C105, 106, 139, 140, (205, 210) × 2, 501, 502, 503, 504, 610, 613	ECEA25V47	47μF, 25WV, Electrolytic	2		SJJA1	Fuse Holder	1		
C609, 612	ECEA50V1	1μF, 50WV, Electrolytic	2		SJJA11	Short Pin, Phono 2 Terminal	2		
C608, 611	ECEA50V47	47μF, 50WV, Electrolytic	2		SJEA4	Socket, Voltage Selector	1		
C607	ECEA160V22	22μF, 160WV, Electrolytic	1		SGTA2010	Name Plate	1		
C605, 606	ECEA250V10	10μF, 250WV, Electrolytic	2		ACCESSORIES				
C10									

Schematic Diagram Model SU-9600 (This schematic diagram may be modified at any time with the development of new components.)

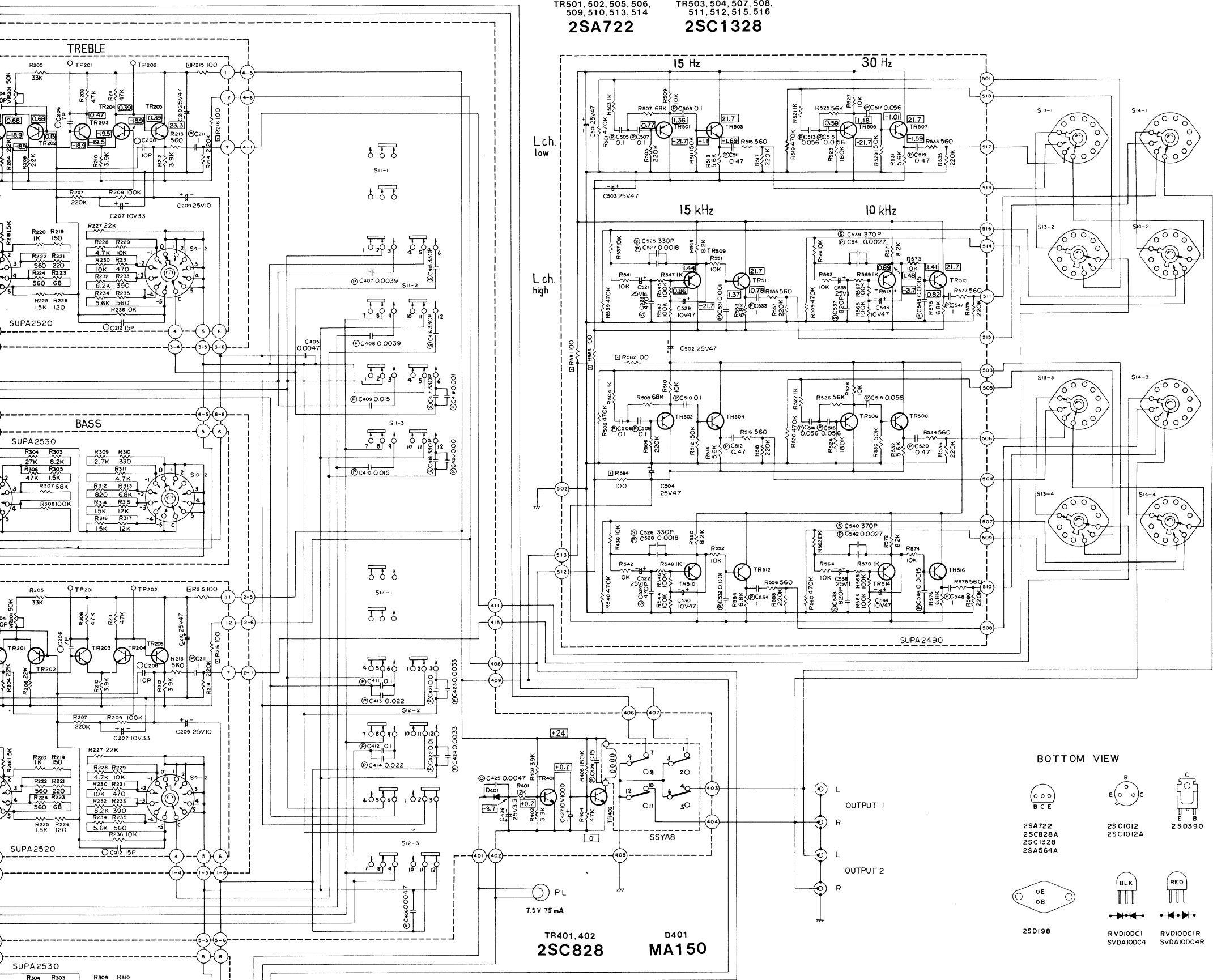


the development of new technology)

TR203-205
2SC1328

TR501, 502, 505, 506,
509, 510, 513, 514
2SA722

TR503, 504, 507, 508,
511, 512, 515, 516
2SC1328



NOTES

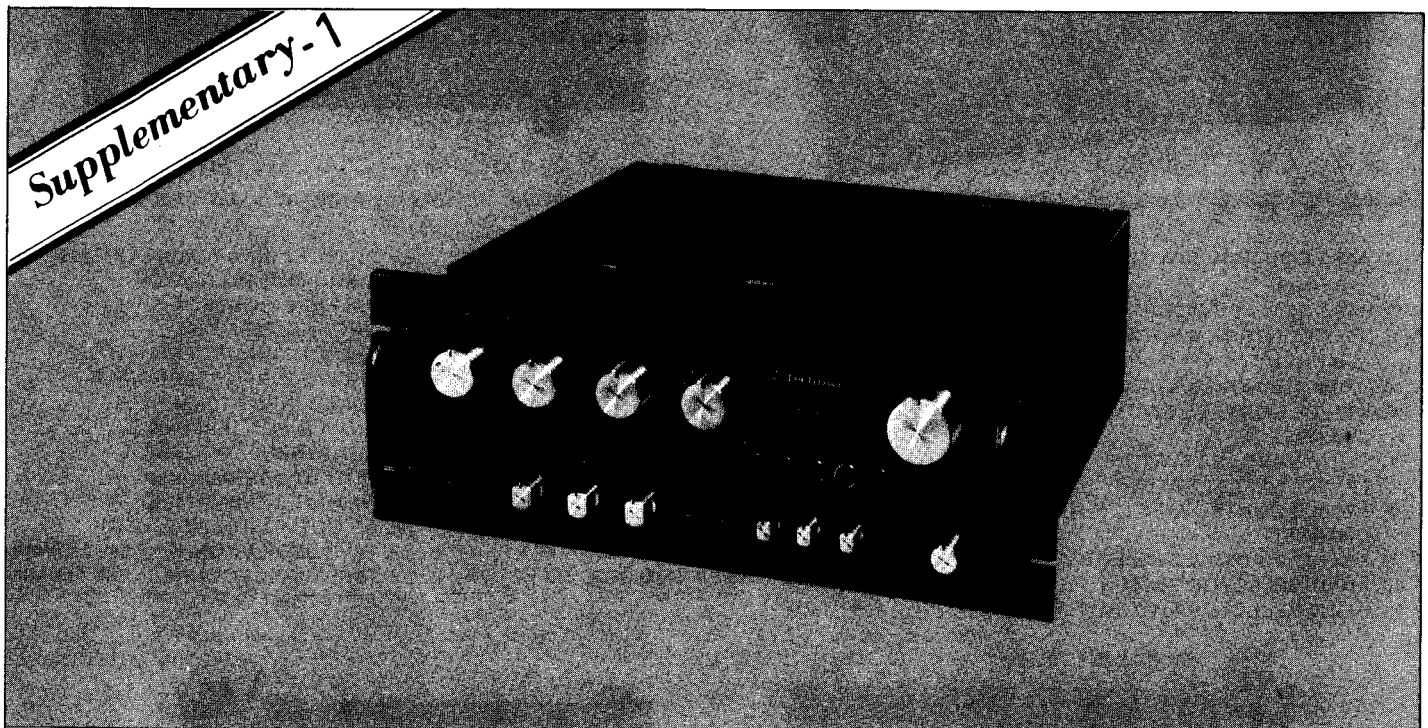
- S1 : Phono 1 impedance selector switch in "50 kΩ" position.
25 kΩ ↔ 50 kΩ ↔ 100 kΩ
- S2 : Phono 2 impedance selector switch in "50 kΩ" position.
25 kΩ ↔ 50 kΩ ↔ 100 kΩ
- S3 : Input selector switch in "phono 1" position.
S3-1 (phono 1 or phono 2), S3-2 (phono), S3-3 (tuner),
S3-4 (aux 1), S3-5 (aux 2)
- S5-1 ~ S5-4 : Recording mode switch in "source" position.
tape 1 ▶ tape 2 ↔ source ↔ tape 2 ▶ tape 1
- S6-1, S6-2 : Tape monitor switch in "source" position.
tape 1 ↔ source ↔ tape 2
- S7-1, S7-3 : Mode switch in "stereo" position.
reverse ↔ stereo ↔ L+R ↔ L-R
- S8-1, S8-2 : Audio muting switch in "0 dB" position.
- S9-1, S9-2 : Treble control switch in "0 dB" position.
-12.5 dB ~ (2.5 dB step) ~ 0 dB ~ (2.5 dB step) ~ +12.5 dB
- S10-1, S10-2 : Bass control switch in "0 dB" position.
-12.5 dB ~ (2.5 dB step) ~ 0 dB ~ (2.5 dB step) ~ +12.5 dB
- S11 : Treble turn over frequency switch in "treble defeat" position.
S11-1 (treble defeat), S11-2 (8 kHz), S11-3 (2 kHz)
- S12 : Bass turn over frequency switch in "bass defeat" position.
S12-1 (500 Hz), S12-2 (125 Hz), S12-3 (bass defeat)
- S13-1 ~ S13-4 : Low filter switch in "off" position.
off ↔ 15 Hz ↔ 30 Hz
- S14-1 ~ S14-4 : High filter switch in "off" position.
off ↔ 15 kHz ↔ 10 kHz
- S15 : Power source switch in "off" position.
- S16 : Voltage Selector Socket

DC voltage measurements are taken with DC VTVM from chassis ground.


Technics
HI-FI COMPONENTS

Technics

Service Manual


Stereo Control Center
MODEL SU-9600
TECHNICAL SPECIFICATIONS (For accommodating future improvements, specifications are subject to change without notice.)

AMPLIFIER SECTIONS (IHF)
Input sensitivity and impedance

PHONO 1	2 mV/25k, 50k, 100k Ω
PHONO 2	1 mV~3 mV/25k, 50k, 100k Ω
TUNER, AUX 1, AUX 2	100mV/50k Ω
TAPE DECK 1, 2 PLAYBACK	100mV/50k Ω

PHONO maximum input voltage

PHONO 1	900mV
PHONO 2	450mV~1350mV

Total harmonic distortion	0.08%
intermodulation distortion	0.08%

Signal-to-noise ratio

PHONO 1	73 dB
PHONO 2	69 dB~76 dB
TUNER, AUX 1, 2	95 dB

Frequency response

PHONO	RIIA standard curve ± 0.3 dB
TUNER, AUX 1, 2	2 Hz~100 kHz, +0 dB, -3 dB

Tone controls

BASS	50 Hz, +12.5 dB -12.5 dB (11 steps)
TREBLE	20 kHz, +12.5 dB -12.5 dB (11 steps)

Turnover frequencies

BASS	125 Hz, 500 Hz
TREBLE	2 kHz, 8 kHz

Filters

Low	15 Hz, 30 Hz -18 dB/oct.
High	10 kHz, 15 kHz -18 dB/oct.

Muting

-20 dB

Output voltage and impedance

OUTPUT 1, 2	Rated	1V/600 Ω
	Max.	11V/600 Ω

TAPE DECK 1, 2	REC OUT	100mV/600 Ω
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GENERAL

Power supply	AC 110/120/220/240V 50/60Hz
Power consumption	17W

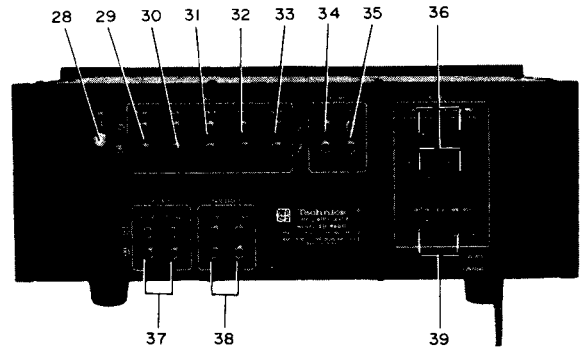
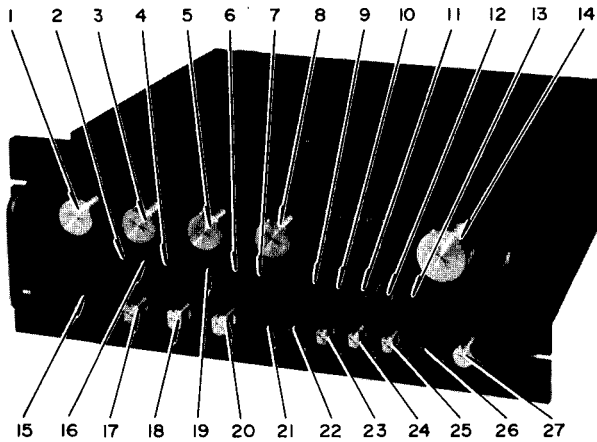
Dimensions (W x H x D)	17 $\frac{3}{8}$ " x 6 $\frac{1}{2}$ " x 14 $\frac{3}{4}$ "
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	450 x 173 x 375 mm
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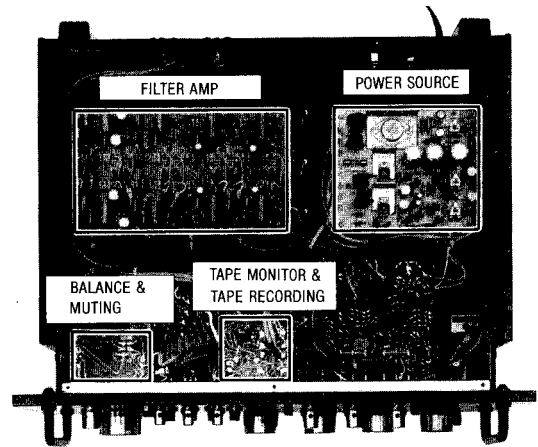
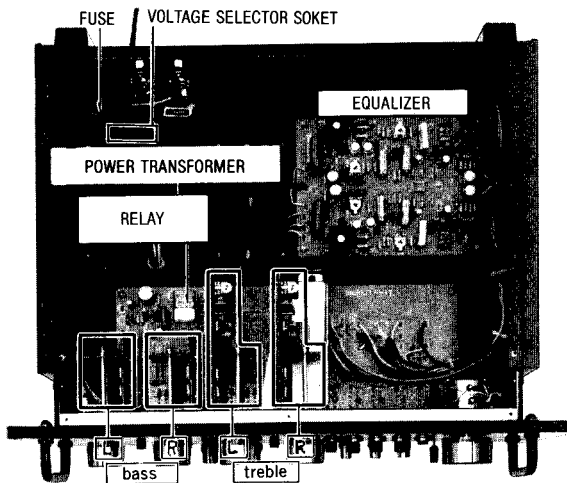
Weight	23.2 lb. 10.5 kg
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Matsushita Electric
Matsushita Electric Trading Co., Ltd.
P. O. Box 238, Central Osaka, Japan

■ LOCATION OF CONTROLS



- | | | |
|---|---|--------------------------------------|
| 1. BASS CONTROL SWITCH OF LEFT CHANNEL | 12. INPUT SELECTOR SWITCH, AUX 1 | 25. PHONO 2 INPUT GAIN CONTROL |
| 2. BASS DEFEAT SWITCH | 13. INPUT SELECTOR SWITCH, AUX 2 | 26. AUDIO MUTING SWITCH |
| 3. BASS CONTROL SWITCH OF RIGHT CHANNEL | 14. VOLUME CONTROL | 27. BALANCE CONTROL |
| 4. 500Hz TURNOVER SWITCH | 15. POWER SOURCE SWITCH | 28. GROUND TERMINAL |
| 5. TREBLE CONTROL SWITCH OF LEFT CHANNEL | 16. 125Hz TURNOVER SWITCH | 29. PHONO 1 INPUT TERMINALS |
| 6. 8kHz TURNOVER SWITCH | 17. LOW FILTER SWITCH | 30. PHONO 2 INPUT TERMINALS |
| 7. TREBLE DEFEAT SWITCH | 18. HIGH FILTER SWITCH | 31. TUNER INPUT TERMINALS |
| 8. TREBLE CONTROL SWITCH OF RIGHT CHANNEL | 19. 2kHz TURNOVER SWITCH | 32. AUX 1 INPUT TERMINALS |
| 9. PHONO INPUT 1 & 2 SELECTOR SWITCH | 20. MODE SWITCH | 33. AUX 2 INPUT TERMINALS |
| 10. INPUT SELECTOR SWITCH, PHONO | 21. REC MODE (TAPE DOUBBING) SWITCH | 34. OUTPUT 1 TERMINALS |
| 11. INPUT SELECTOR SWITCH, TUNER | 22. TAPE MONITOR SWITCH | 35. OUTPUT 2 TERMINALS |
| | 23. PHONO 1 INPUT IMPEDANCE SELECTOR SWITCH | 36. AC OUTLET (UNSWITCHED) |
| | 24. PHONO 2 INPUT IMPEDANCE SELECTOR SWITCH | 37. TAPE DECK 1 CONNECTION TERMINALS |
| | | 38. TAPE DECK 2 CONNECTION TERMINALS |
| | | 39. AC OUTLET (SWITCHED) |



■ ALIGNMENT POINTS

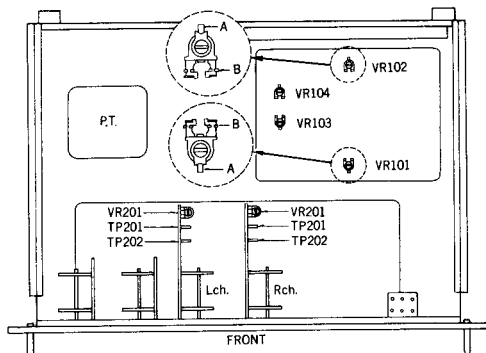


Fig. 1 (Set Top View)

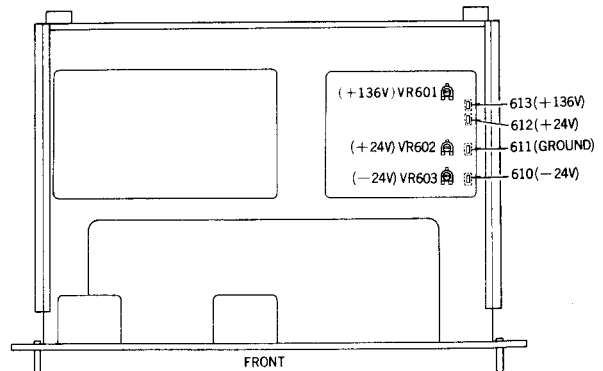
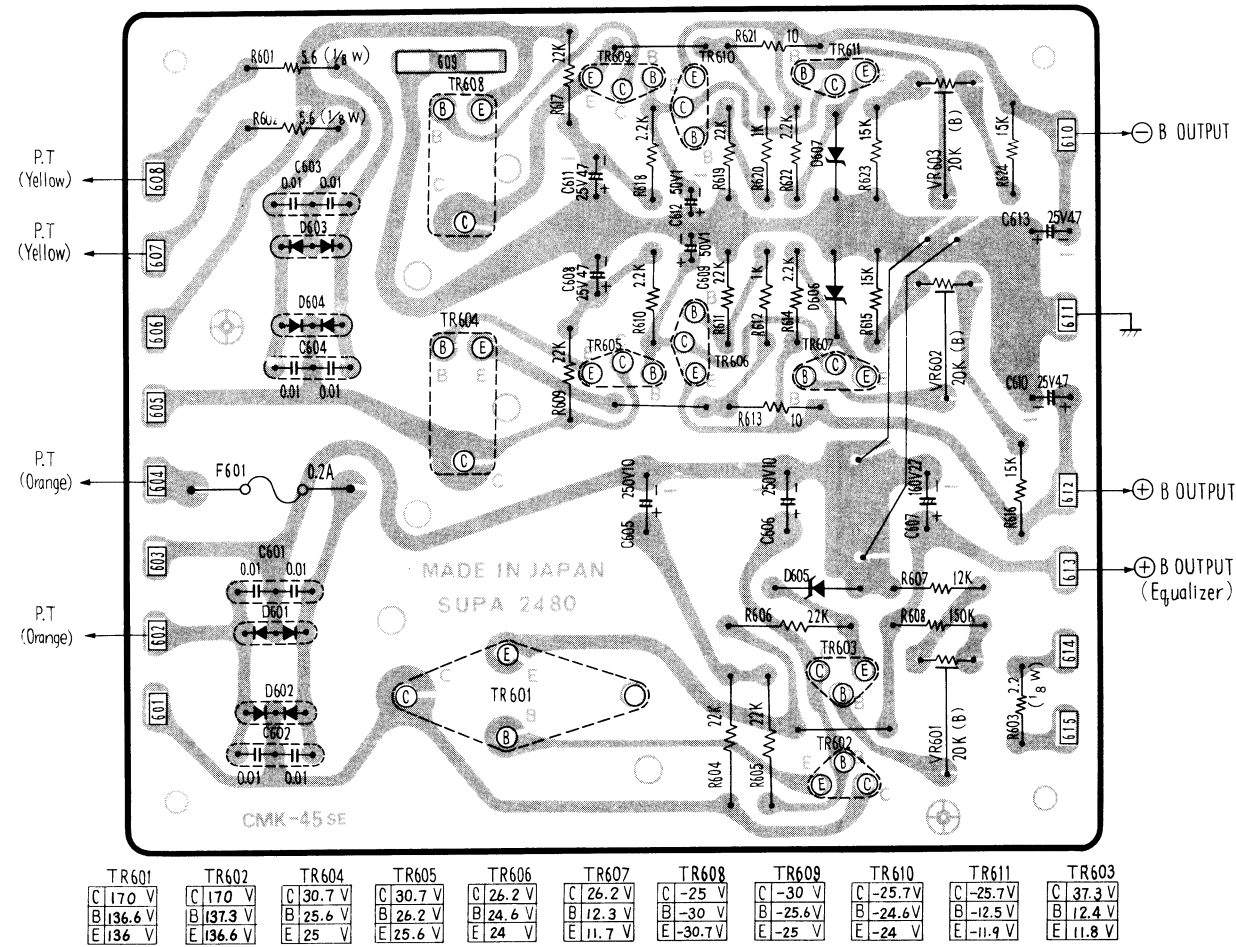


Fig. 2 (Set Bottom View)

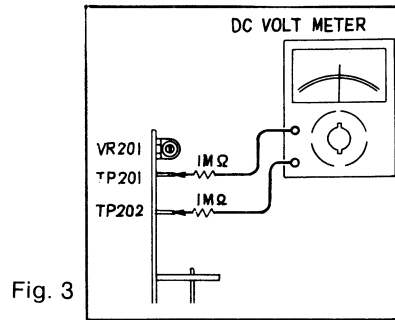
POWER SOURCE CIRCUIT BOARD



ALIGNMENT INSTRUCTIONS

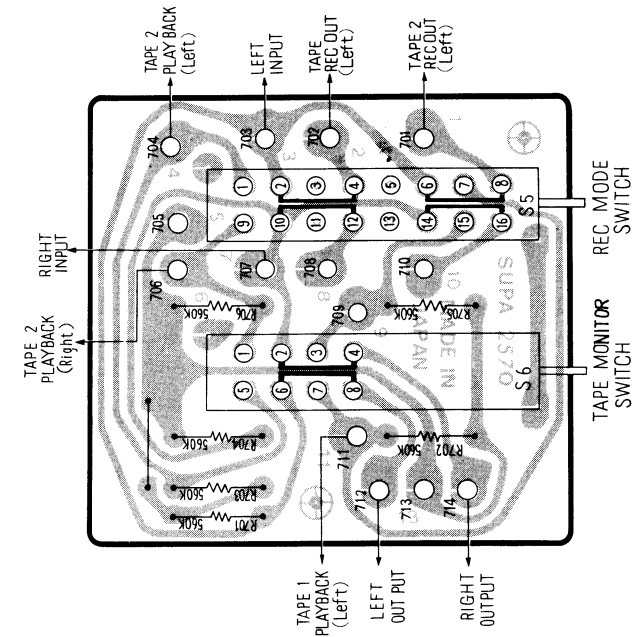
Notes:

- Volume control to "minimum" position.
- Recording mode switch and tape monitor switch to "source" position.



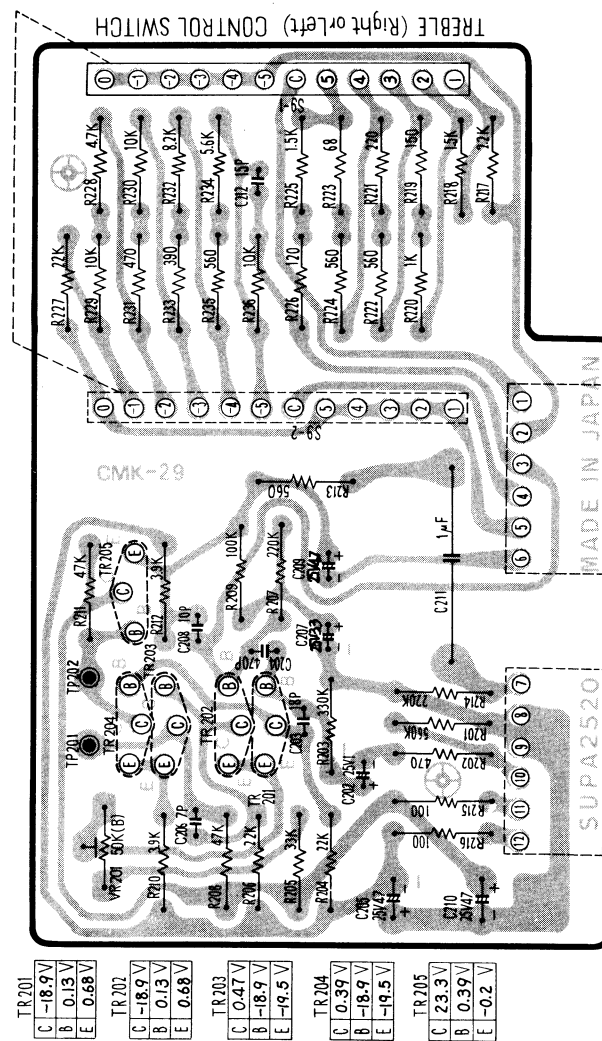
ALIGNMENT	DC VOLTMETER CONNECTION	ALIGNMENT POINTS	REMARKS
EQUALIZER	Connect circuit tester to point A and point B of VR101 and VR102. Refer to fig. 1.	VR101 (L ch) VR102 (R ch)	① Power switch to "off" position ② Make adjustments so that the indication on circuit tester (Resistor) becomes 30 kΩ
NEGATIVE POWER VOLTAGE	Connect DC VTVM to No. 611 and No. 610 terminal. Refer to fig. 2	VR603	Make sure that DC VTVM becomes negative (-) 24 volts
POSITIVE POWER VOLTAGE	Connect DC VTVM to No. 611 and No. 612 terminal. Refer to fig. 2	VR602	Make sure that DC VTVM becomes positive (+) 24 volts
POSITIVE POWER	Connect DC VTVM to No. 611 and No. 613 terminal. Refer to fig. 2	VR601	Make sure that DC VTVM becomes positive (+) 136 volts
TONE CONTROL	Connect DC VTVM to TP201 and TP202 through 1 MΩ resistor. Refer to fig. 3	VR201 (L ch or R ch)	Make sure that VTVM becomes 0 volt
BIAS OF EQUALIZER	① Connect DC VTVM and audio oscillator to PHONO 1 resistor. of set ② Impouring 1kHz signal and 1V signal level	VR103 (L ch) VR104 (R ch)	① Connect distortion meter to REC OUT terminal of set rear panel ② Adjust for minimum distortion.

TAPE MONITOR & TAPE REC MODE SWITCH CIRCUIT BOARD

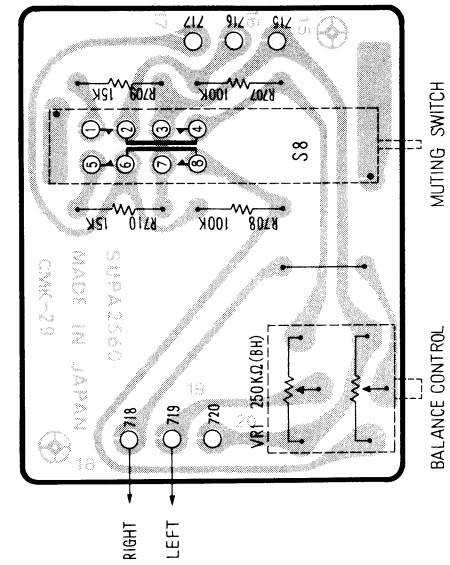


TREBLE CONTROL & TONE AMP. CIRCUIT BOARD

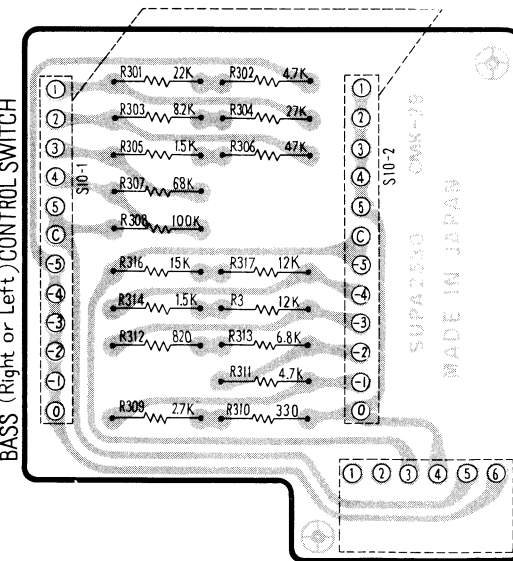
Left channel is same as Right channel.



BALANCE & MUTING CIRCUIT BOARD



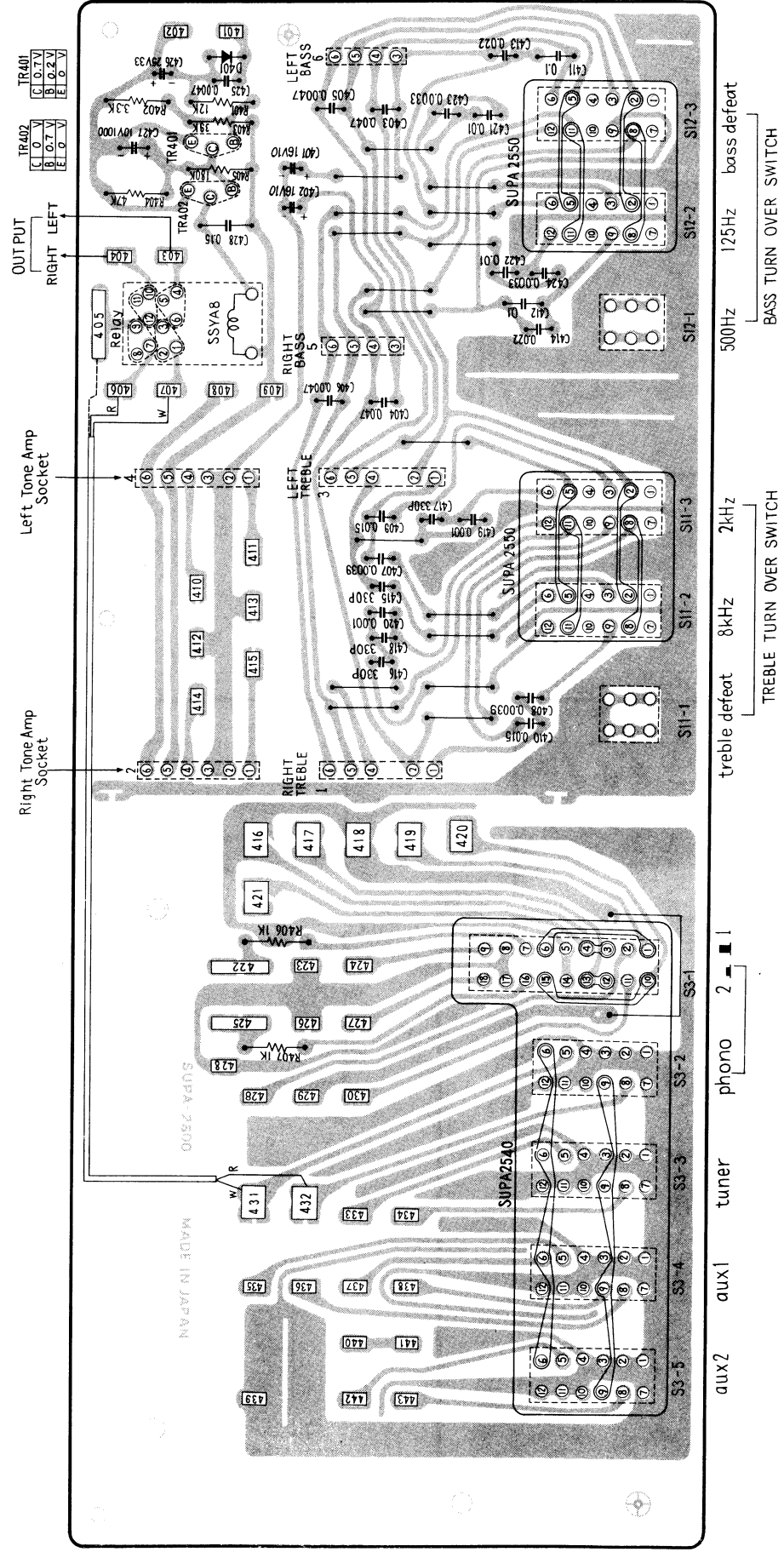
BASS (Right or Left) CONTROL SWITCH



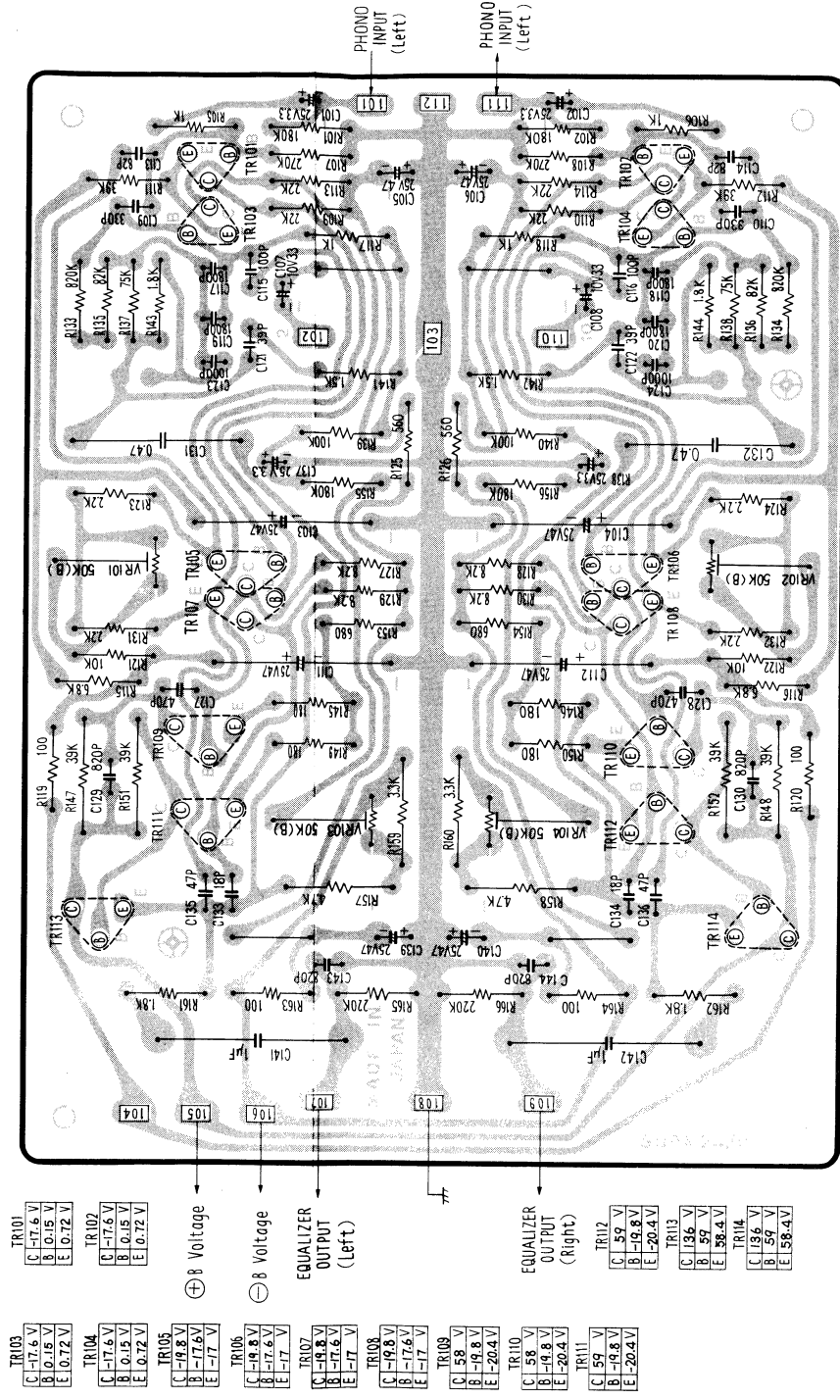
BASS CONTROL CIRCUIT BOARD

Left channel is same as Right channel.

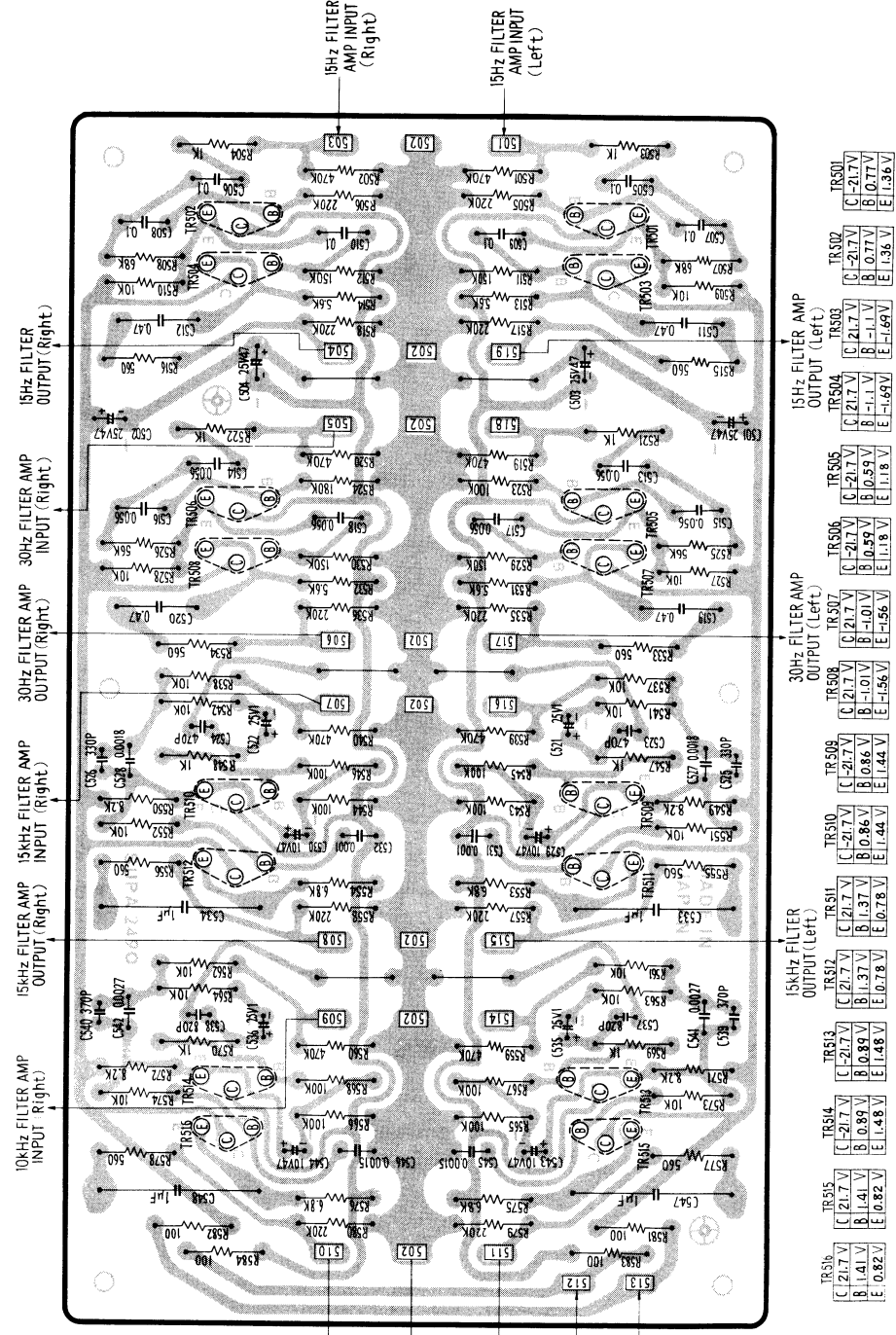
RELAY, TURNOVER FREQUENCY SWITCH & INPUT SELECTOR SWITCH CIRCUIT BOARD



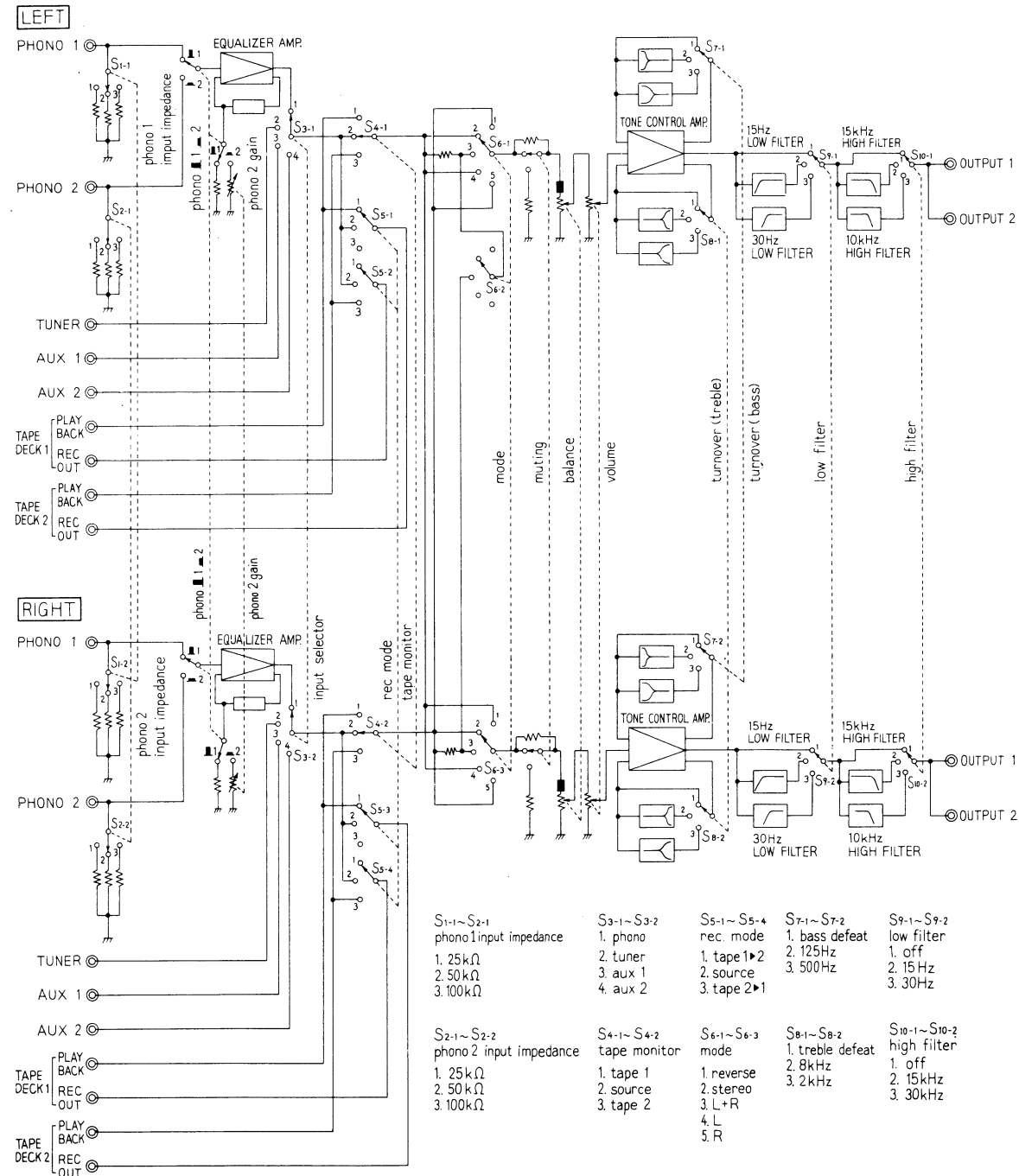
EQUALIZER CIRCUIT BOARD



FILTER AMP. CIRCUIT BOARD



■ BLOCK DIAGRAM



■ TO REMOVE FRONT PANEL

1. Remove four (4) knobs of lever switches.
2. Remove control knobs by accessory screw driver.
3. Remove three (3) six corner screws, nos. ① ~ ③ or remove two (2) nuts, nos. ④ and ⑤, as illustrated in fig. 4. (Left and Right sides)
4. Remove front panel from chassis.

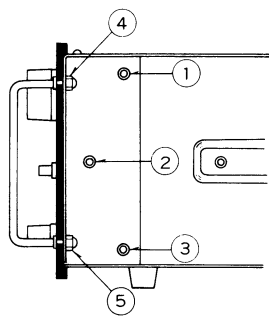


Fig. 4

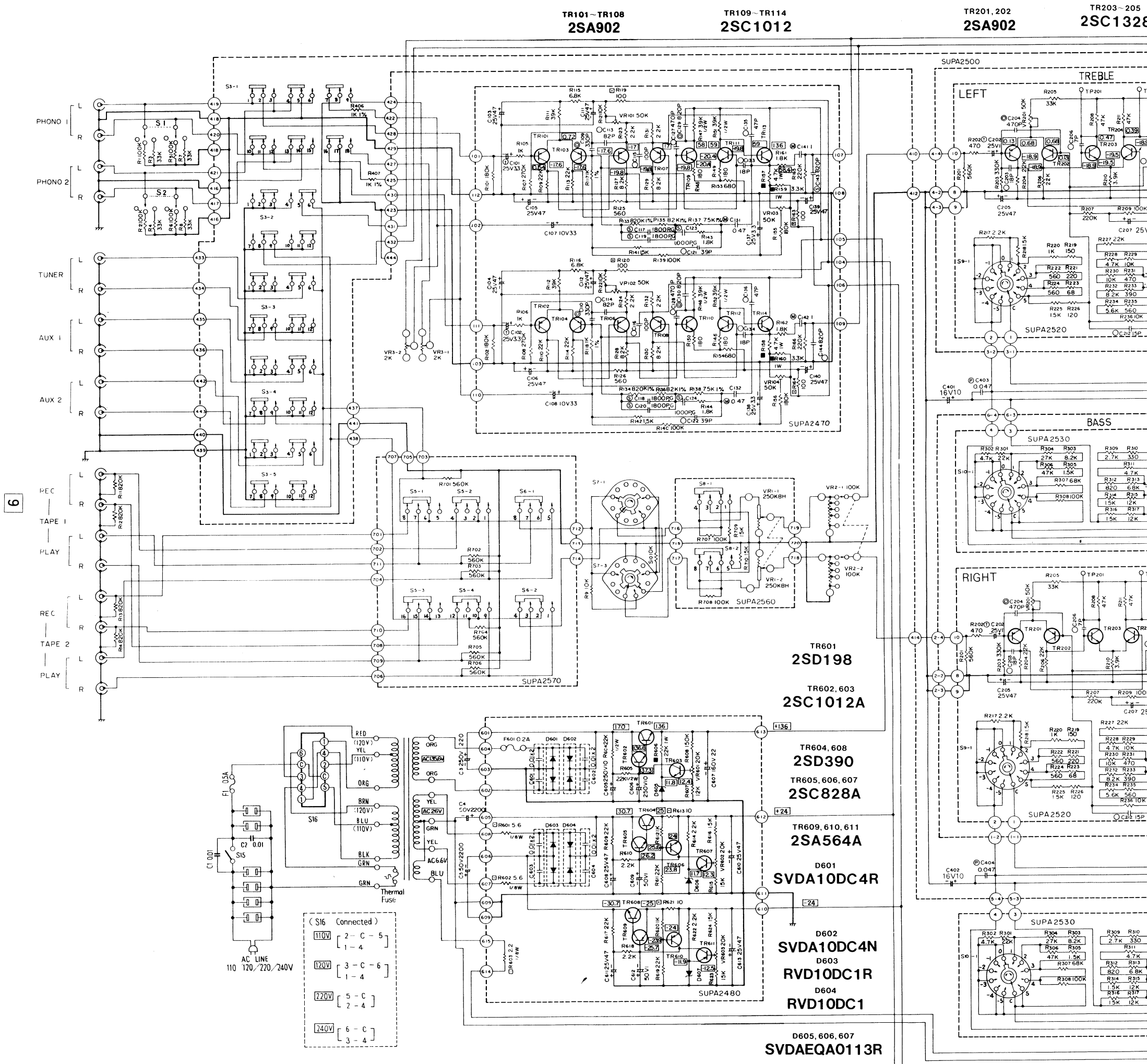
■ REPLACEMENT PARTS LIST

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

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
TRANSISTORS									
TR101, 102, 103, 104, 105, 106, 107, 108, (201, 202) × 2, 501, 502, 505, 506, 509, 510, 513, 514	2SA902F	Equalizer, Tone & Filter Amplifier	20	○	R9, 10, 121, 122, (229, 230, 236) × 2, 509, 510, 527, 528, 537, 538, 541, 542, 551, 552, 561, 562, 563, 564, 573, 574	ERD14TJ103	10kΩ, 1/4W, ±5%, Carbon	26	
TR109, 110, 111, 112, 113, 144, TR (203, 204, 205) × 2, 503, 504, 507, 508, 511, 512, 515, 516	2SC1012	Equalizer Amplifier	6		R (315, 317) × 2, 401, 607	ERD14TJ123	12kΩ, 1/4W, ±5%, Carbon	6	
TR601	2SD198	DC Voltage Control	1	○	R (316) × 2, 615, 616, 623, 624, 709, 710	ERD14TJ153	15kΩ, 1/4W, ±5%, Carbon	8	
TR602, 603	2SC1012A	An Error Voltage Det. & DC Amp.	2	○	R109, 110, 113, 114, (204, 206, 227, 301) × 2, 609, 611, 617, 619	ERD14TJ223	22kΩ, 1/4W, ±5%, Carbon	16	
TR604, 608	2SD390P	DC Voltage Control	2	○	R (304) × 2	ERD14TJ273	27kΩ, 1/4W, ±5%, Carbon	2	
TR401, 402, 605, 606, 607	2SC828A-R	Relay Driver & An Error Voltage Detector	5		R3, 4, 7, 8, (205) × 2	ERD14TJ333	33kΩ, 1/4W, ±5%, Carbon	6	
TR609, 610, 611	2SA564A-R	DC Amp & An Error Voltage Det.	3		R111, 112, 403, R (208, 211, 306) × 2, 404	ERD14TJ393	39kΩ, 1/4W, ±5%, Carbon	3	
DIODES									
D401	MA150	Rectifier	1		R525, 526	ERD14TJ563	56kΩ, 1/4W, ±5%, Carbon	2	
D601	SVDA10DC4-R	Rectifier	1		R (307) × 2, 507, 508	ERD14TJ683	68kΩ, 1/4W, ±5%, Carbon	4	
D602	SVDA10DC4-N	Rectifier	1		R1, 2, 5, 6, (308) × 2, 707, 708	ERD14TJ104	100kΩ, 1/4W, ±5%, Carbon	8	
D603	RVD10DC1-R	Rectifier	1		R139, 140, (209) × 2, 543, 544, 545, 546, 565, 566, 567, 568	ERD14TSJ104	100kΩ, 1/4W, ±5%, Carbon	12	
D604	RVD10DC1	Rectifier	1						
D605, 606, 607	SVDAEQAO113R	13V Zener, Voltage Stabilizer	3	○					
TRANSFORMER									
T1	SLTA5N15S	Power Transformer	1	○					
RESISTORS									
R (223) × 2	ERD14TJ680	68Ω, 1/4W, ±5%, Carbon	2		R511, 512, 529, 530	ERD14TSJ154	150kΩ, 1/4W, ±5%, Carbon	4	
R (226) × 2	ERD14TJ121	120Ω, 1/4W, ±5%, Carbon	2		R608	ERD14TJ154	150kΩ, 1/4W, ±5%, Carbon	1	
R (219) × 2	ERD14TJ151	150Ω, 1/4W, ±5%, Carbon	2		R405	ERD14TJ184	180kΩ, 1/4W, ±5%, Carbon	1	
R149, 150	ERD14TJ181	180Ω, 1/4W, ±5%, Carbon	2		R101, 102, 155, 156, 523, 524	ERD14TSJ184	180kΩ, 1/4W, ±5%, Carbon	6	
R (221) × 2	ERD14TJ221	220Ω, 1/4W, ±5%, Carbon	2		R (207) × 2, 505, 506, 515, 166, (214) × 2, 517, 518, 535, 536, 557, 558, 579, 580	ERD14TSJ224	220kΩ, 1/4W, ±5%, Carbon	4	
R (310) × 2	ERD14TJ331	330Ω, 1/4W, ±5%, Carbon	2		R107, 108	ERD14TSJ274	270kΩ, 1/4W, ±5%, Carbon	2	
R (233) × 2	ERD14TJ391	390Ω, 1/4W, ±5%, Carbon	2		R (203) × 2	ERD14TSJ334	330kΩ, 1/4W, ±5%, Carbon	2	
R (202, 231) × 2	ERD14TJ471	470Ω, 1/4W, ±5%, Carbon	4		R501, 502, 519, 520, 539, 540, 559, 560	ERD14TSJ474	470kΩ, 1/4W, ±5%, Carbon	8	
R125, 126, (213, 222, 224, 235) × 2, 515, 516, 533, 534, 555, 556, 577, 578	ERD14TJ561	560Ω, 1/4W, ±5%, Carbon	18		R (201) × 2, 701, 702, 703, 704, 705, 706	ERD14TSJ564	560kΩ, 1/4W, ±5%, Carbon	8	
R (312) × 2	ERD14TJ821	820Ω, 1/4W, ±5%, Carbon	2		R11, 12, 13, 14	ERD14TSJ824	820kΩ, 1/4W, ±5%, Carbon	4	
R (220) × 2, 503, 504, 521, 522, 547, 548, 569, 570, 612, 620	ERD14TJ102	1kΩ, 1/4W, ±5%, Carbon	12		R117, 118, 406, 407	ERD14TF1001	1kΩ, 1/4W, ±1%, Carbon	4	○
R141, 142, (218, 225, 305, 314) × 2	ERD14TJ152	1.5kΩ, 1/4W, ±5%, Carbon	10		R137, 138	ERD14TF7502	75kΩ, 1/4W, ±1%, Carbon	2	○
R143, 144, 161, 162	ERD14TJ182	1.8kΩ, 1/4W, ±5%, Carbon	4		R135, 136	ERD14TF8203	82kΩ, 1/4W, ±1%, Carbon	2	○
R123, 124, 131, 132 (217) × 2, 610, 614, 618, 622	ERD14TJ222	2.2kΩ, 1/4W, ±5%, Carbon	10		R133, 134	ERD14CKF8203	820kΩ, 1/4W, ±1%, Carbon	2	○
R (309) × 2	ERD14TJ272	2.7kΩ, 1/4W, ±5%, Carbon	2		R613, 621	ERD14FJ100	10Ω, 1/4W, ±5%, Carbon	2	○
R402	ERD14TJ332	3.3kΩ, 1/4W, ±5%, Carbon	1		R119, 120, 163, 164, (215, 216) × 2, 581, 582, 583, 584	ERD14FJ101	100Ω, 1/4W, ±5%, Carbon	2	○
R (210, 212) × 2	ERD14TJ392	3.9kΩ, 1/4W, ±5%, Carbon	4		R145, 146	ERD14FJ181	180Ω, 1/4W, ±5%, Carbon	2	○
R (228, 302, 311) × 2	ERD14TJ472	4.7kΩ, 1/4W, ±5%, Carbon	6		R153, 154	ERD14FJ681	680Ω, 1/4W, ±5%, Carbon	2	○
R (239) × 2, 513, 514, 531, 532	ERD14TJ562	5.6kΩ, 1/4W, ±5%, Carbon	6		R105, 106	ERD14FJ102	1kΩ, 1/4W, ±5%, Carbon	2	○
R115, 116, (313) × 2, 553, 554, 575, 576	ERD14TJ682	6.8kΩ, 1/4W, ±5%, Carbon	8		R603	ERD18FJ2R2	2.2Ω, 1/4W, ±5%, Carbon	1	○
R127, 128, 129, 130, (232, 303) × 2, 549, 550, 571, 572	ERD14TJ822	8.2kΩ, 1/4W, ±5%, Carbon	12		R601, 602	ERD18FJ5R6	5.6Ω, 1/4W, ±5%, Carbon	2	○
					R604, 605	ERD12TJ223	22kΩ, 1/4W, ±5%, Carbon	2	○
					R147, 148, 151, 152	ERD12TJ393	39kΩ, 1/4W, ±5%, Carbon	4	○
					R159, 160	ERG1ANJ332	3.3kΩ, 1W, ±5%, Metallic	2	○
					R157, 158	ERG1ANJ472	4.7kΩ, 1W, ±5%, Metallic	2	○
					R606	ERG1ANJ223	22kΩ, 1W, ±5%, Metallic	1	○
VARIABLE RESISTORS									
VR601, 602, 603	EVLS3AAO0B24	20kΩ (B), Voltage Stabilizer Adjustment	3						

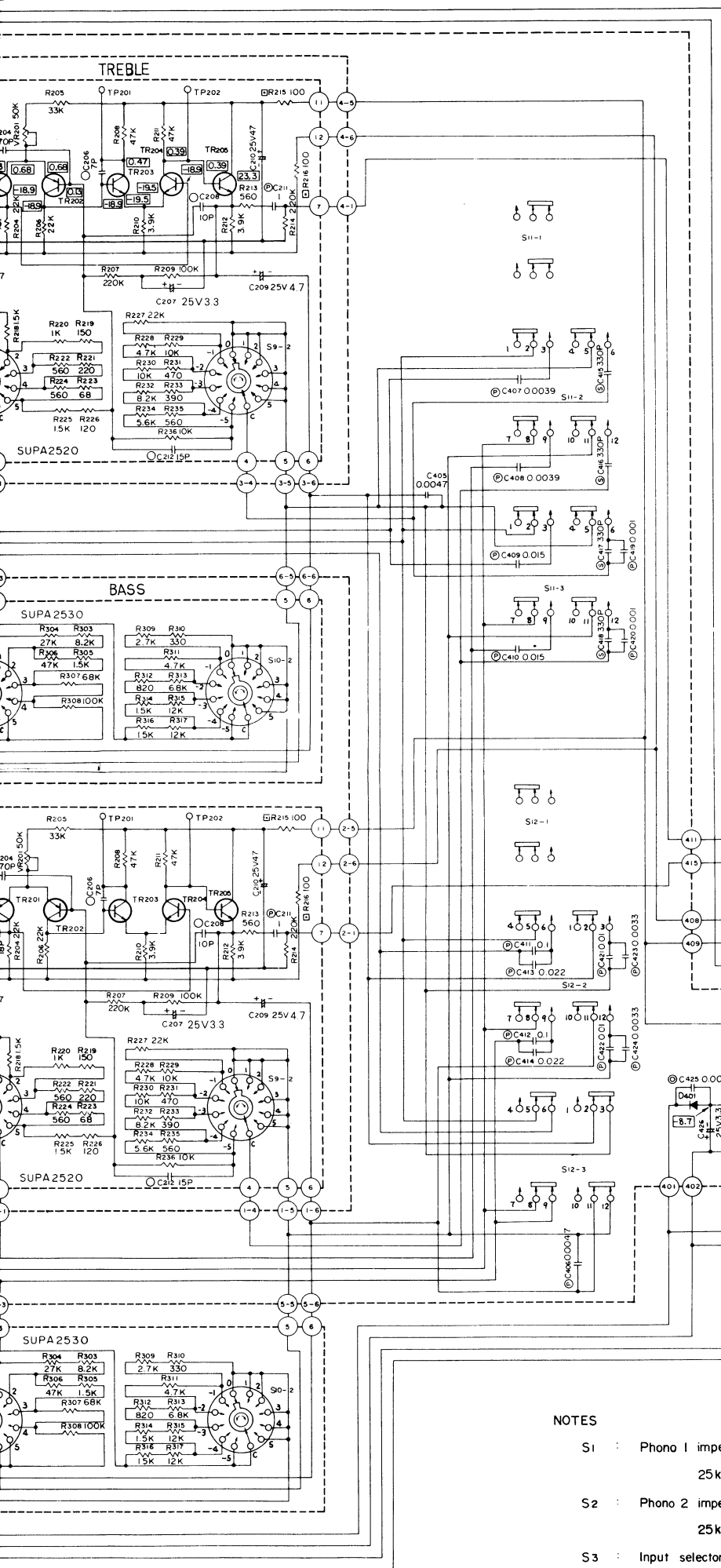
Schematic Diagram.....Model SU-9600

(This schematic diagram may be modified at any time with the development of new components)



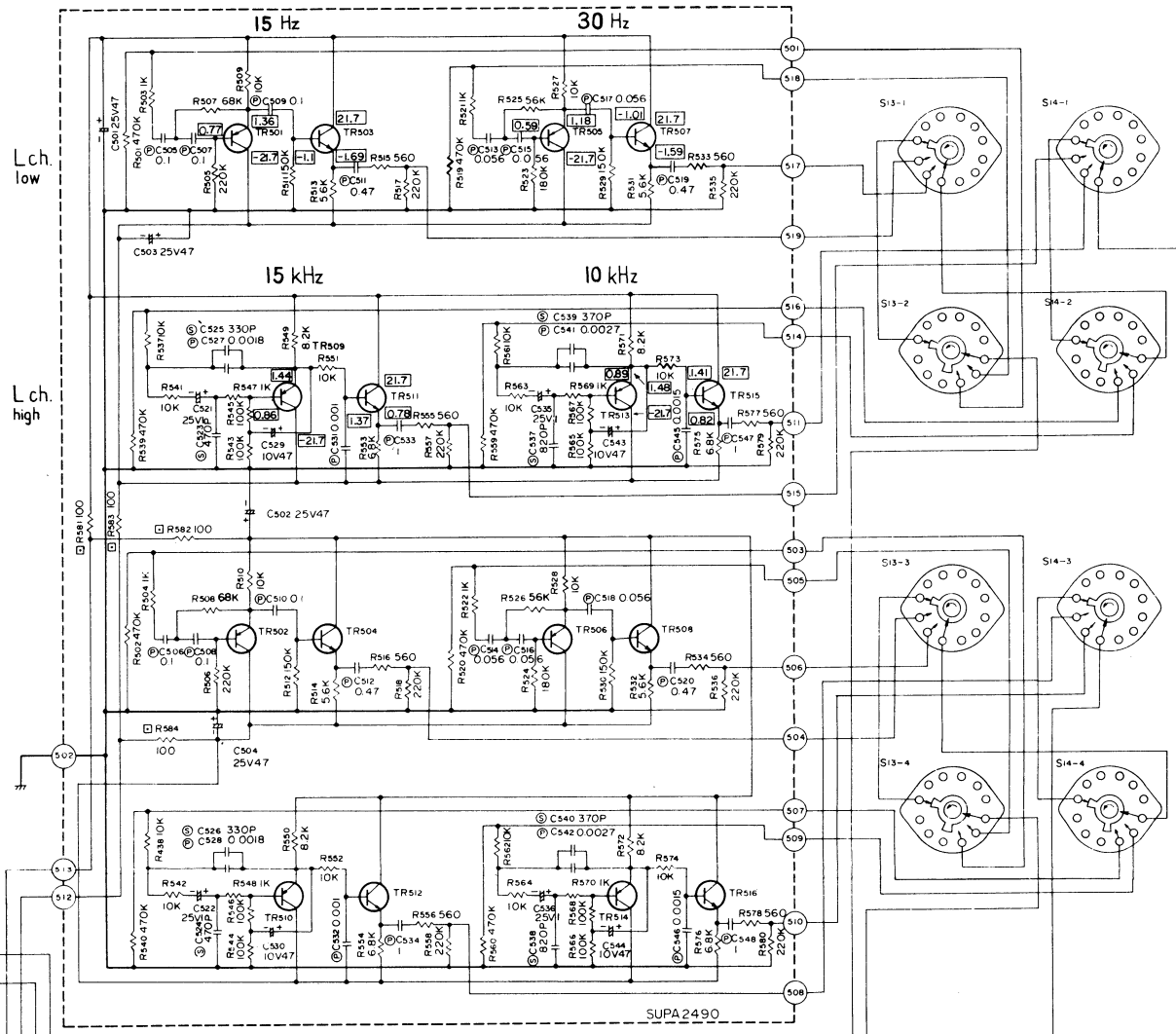
(the development of new technology)

TR203-205
2SC1328



TR501, 502, 505, 506,
509, 510, 513, 514
2SA902

TR503, 504, 507, 508,
511, 512, 515, 516
2SC1328



TR401, 402
2SC828

D401
MA150

NOTES

- S1 : Phono 1 impedance selector switch in "50 kΩ" position.
25 kΩ ↔ 50 kΩ ↔ 100 kΩ
- S2 : Phono 2 impedance selector switch in "50 kΩ" position.
25 kΩ ↔ 50 kΩ ↔ 100 kΩ
- S3 : Input selector switch in "phono 1" position.
S3-1 (phono 1 or phono 2), S3-2 (phono), S3-3 (tuner),
S3-4 (aux 1), S3-5 (aux 2)
- S5-1 ~ S5-4 : Recording mode switch in "source" position.
tape 1 ▶ tape 2 ↔ source ↔ tape 2 ▶ tape 1
- S6-1, S6-2 : Tape monitor switch in "source" position.
tape 1 ↔ source ↔ tape 2
- S7-1, S7-3 : Mode switch in "stereo" position.
reverse ↔ stereo ↔ L+R ↔ L-R
- S8-1, S8-2 : Audio muting switch in "0 dB" position.

- S9-1, S9-2 : Treble control switch in "0 dB" position.
-12.5 dB ~ (2.5 dB step) ~ 0 dB ~ (2.5 dB step) ~ +12.5 dB
 - S10-1, S10-2 : Bass control switch in "0 dB" position.
-12.5 dB ~ (2.5 dB step) ~ 0 dB ~ (2.5 dB step) ~ +12.5 dB
 - S11 : Treble turn over frequency switch in "treble defeat" position.
S11-1 (treble defeat), S11-2 (8 kHz), S11-3 (2 kHz)
 - S12 : Bass turn over frequency switch in "bass defeat" position.
S12-1 (500 Hz), S12-2 (125 Hz), S12-3 (bass defeat)
 - S13-1 ~ S13-4 : Low filter switch in "off" position.
off ↔ 15 Hz ↔ 30 Hz
 - S14-1 ~ S14-4 : High filter switch in "off" position.
off ↔ 15 kHz ↔ 10 kHz
 - S15 : Power source switch in "off" position.
 - S16 : Voltage Selector Socket
- DC voltage measurements are taken with DC VTVM from chassis ground.

BOTTOM VIEW

