

Service Manual

NATIONAL
HI-FI COMPONENTS
PANASONIC


STEREO INTEGRATED AMPLIFIER

MODEL SU-3000

TECHNISCHE DATEN (Änderungen vorbehalten)

(Erfüllt Mindestanforderungen nach DIN 45 500)

Musikleistung :	2 × 25W (4 Ω)
	2 × 19W (8 Ω)
Nennleistung :	2 × 14W (4 Ω)
	2 × 12W (8 Ω)
Klirrfaktor:	Nennleistung bei 1 kHz 4 Ω 0.8%
Leistungsbandbreite:	5~4000Hz -3dB
Eingänge	PHONO 3mV/47k Ω
	TUNER, AUX 1, 2 200mV/30k Ω
	MIC 3mV/47k Ω
Tonbandgerät:	PLAYBACK (Wiedergabe) 200mV/30k Ω
	REC OUT (Aufnahme) 200mV
REC/PLAY (Norm Buchse)	Wiedergabe 200mV/30k Ω
	Aufnahme 30mV/80k Ω

Fremdspannungsabstand :	bei Nennleistung PHONO 60dB
	TUNER, AUX 1, 2 80dB
	bei 50mW Ausgangsleistung
	PHONO 55dB
	TUNER, AUX 1, 2 55dB
Klangregler:	Tiefen-Bereich (BASS) 50 Hz. +10dB -12dB
	Höhen-Bereich (TREBLE) 10 kHz. +10dB -10dB
Tiefenfilter:	150 Hz. -6dB/OKT
Höhenfilter:	6 kHz. -6dB/OKT
Frequenzgang:	10Hz~50.000 Hz. -3dB
Dämpfungs-faktor:	35 (8 Ω)
Max. Eingangsspannungen:	PHONO 90mV
	MIC 200mV

ALLGEMEINE DATEN

Leistungsaufnahme:	115W
Netzspannung:	110/120/220/240V
Abmessungen (B × H × T):	336 × 115 × 295mm
Gewicht:	5.3kg

TECHNICAL SPECIFICATIONS

(Specifications are subject to change without notice.)

Music Power (IHF):	50W (4 Ω)
	38W (8 Ω)
RMS Power (each ch. driven):	18W/18W (4 Ω)
	14W/14W (8 Ω)
Harmonic Distortion:	0.8%
Intermodulation Distortion (60 Hz - 7 kHz = 4 : 1, SMPTE):	0.8%
Power Bandwidth:	5 Hz ~ 50 kHz. -3dB
Residual Hum & Noise:	0.7mV
Damping Factor:	35 (8 Ω)
Rated Load (MAIN or REMOTE):	4~16 Ω
Input Sensitivity & Impedance:	PHONO 3mV/47k Ω
	TUNER 200mV/30k Ω
	AUX 1, 2 200mV/30k Ω
	MIC 3mV/47k Ω
Maximum Input Voltage (1 kHz):	PHONO 90mV
	MIC 200mV
S/N (IHF, A):	PHONO 75dB
	TUNER 96dB
	AUX 1, 2 96dB
	MIC 65dB

Frequency Response:	PHONO (Deviation from RIAA standard) ±1 dB
	TUNER, AUX 1, 2 10 Hz ~ 50 kHz. ±1 dB
Tone Controls:	BASS 50 Hz. +10 dB -12 dB
	TREBLE 10 kHz. +10 dB -10 dB
Loudness Control (Volume, -30 dB):	100 Hz. +10 dB, 10 kHz. +5 dB
Low Filter:	150 Hz. -6 dB/oct
High Filter:	6 kHz. -6 dB/oct
Tape Monitor:	PLAYBACK 200mV/30k Ω
	REC OUT 200mV
	Input 200mV/30k Ω
	Output 30mV/80k Ω
REC/PLAY (DIN) 1, 2	
Mixing Rec Out (Volume, Max.):	Rated Output & Impedance 1V/5k Ω

GENERAL

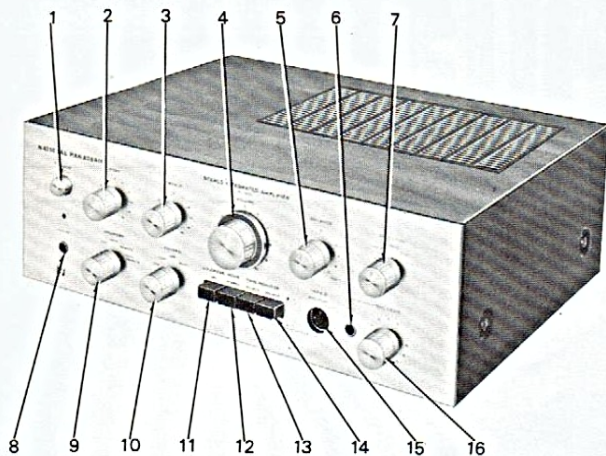
Power Consumption:	115W
Power Supply:	110/120/220/240V
Dimensions (W × H × D):	17-7/32" × 4-17/32" × 11-5/8" (336 × 115 × 295)mm
Weight:	11.7 lbs. (5.3kg)

MATSUSHITA ELECTRIC
MATSUSHITA ELECTRIC TRADING CO., LTD.

P. O. Box 288 Central, Osaka, Japan

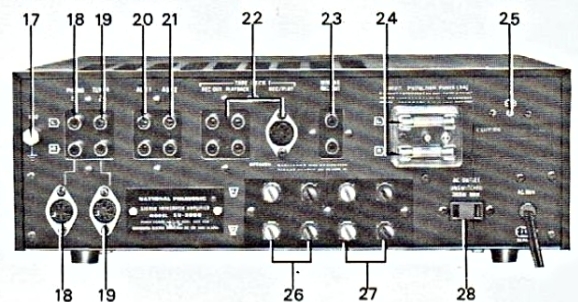


■ LOCATION OF CONTROLS



- | | |
|--------------------------|--------------------------------------|
| 1. POWER SOURCE SWITCH | 9. SPEAKERS SELECTOR SWITCH |
| 2. BASS CONTROL | 10. FILTERS SELECTOR SWITCH |
| 3. TREBLE CONTROL | 11. LOUDNESS SWITCH |
| 4. VOLUME CONTROL | 12. MODE SWITCH |
| 5. BALANCE CONTROL | 13. TAPE MONITOR [TAPE 1] SWITCH |
| 6. MICROPHONE JACK | 14. TAPE MONITOR [TAPE 2] SWITCH |
| 7. INPUT SELECTOR SWITCH | 15. TAPE MONITOR [TAPE 2] DIN SOCKET |
| 8. HEADPHONES JACK | 16. MICROPHONE LEVEL CONTROL |

- | | |
|-------------------------------------|---------------------------------------|
| 17. GROUND TERMINAL | 23. MIXING RECORDING OUTPUT TERMINALS |
| 18. INPUT TERMINALS [PHONO] | 24. CIRCUIT PROTECTION FUSES |
| 19. INPUT TERMINALS [TUNER] | 25. VOLTAGE SELECTOR SWITCH |
| 20. INPUT TERMINALS [AUX 1] | 26. MAIN SPEAKER TERMINALS |
| 21. INPUT TERMINALS [AUX 2] | 27. REMOTE SPEAKER TERMINALS |
| 22. TAPE MONITOR [TAPE 1] TERMINALS | 28. AC POWER OUTLET.....Unswitched |



■ TO REMOVE FRONT PANEL

1. Remove the cabinet from chassis.
2. Remove eight (8) control knobs from front panel.
(Volume, balance, bass, treble, mic level control knobs and speakers, filters, selector switch knobs)
3. Remove four (4) panel mounting black screws, nos. No. 1 ~ No. 4 as illustrated in figure 1 and 2.
4. Remove front panel from chassis.
5. To reassemble, reverse the above procedure.

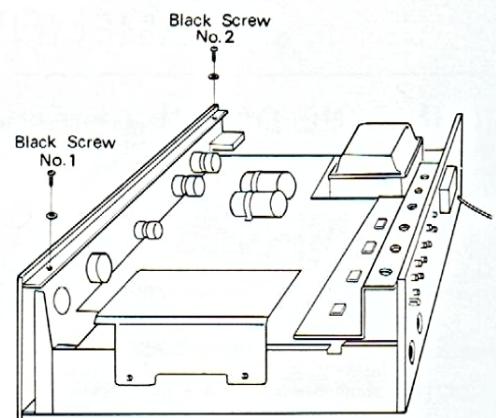


Fig. 1

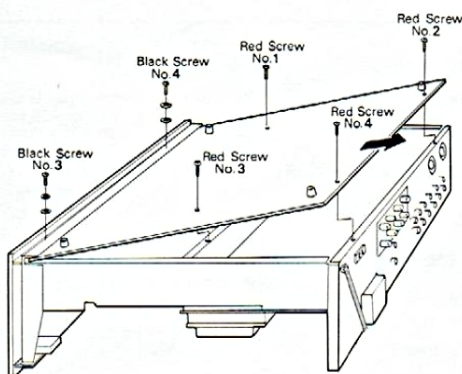


Fig. 2

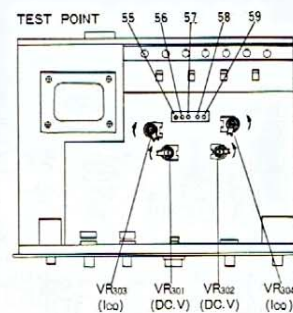
■ TO REMOVE BOTTOM BOARD

1. Remove four (4) bottom board mounting red screws, nos. No. 1 ~ No. 4 as illustrated in figure 2.
2. Remove bottom board from chassis, as illustrated in figure 2.
3. To reassemble, reverse the above procedure.

■ ALIGNMENT INSTRUCTIONS

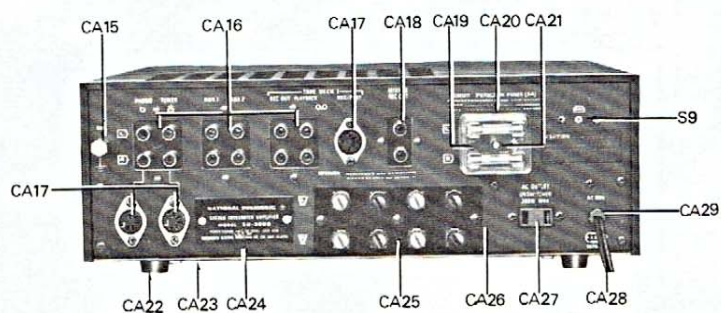
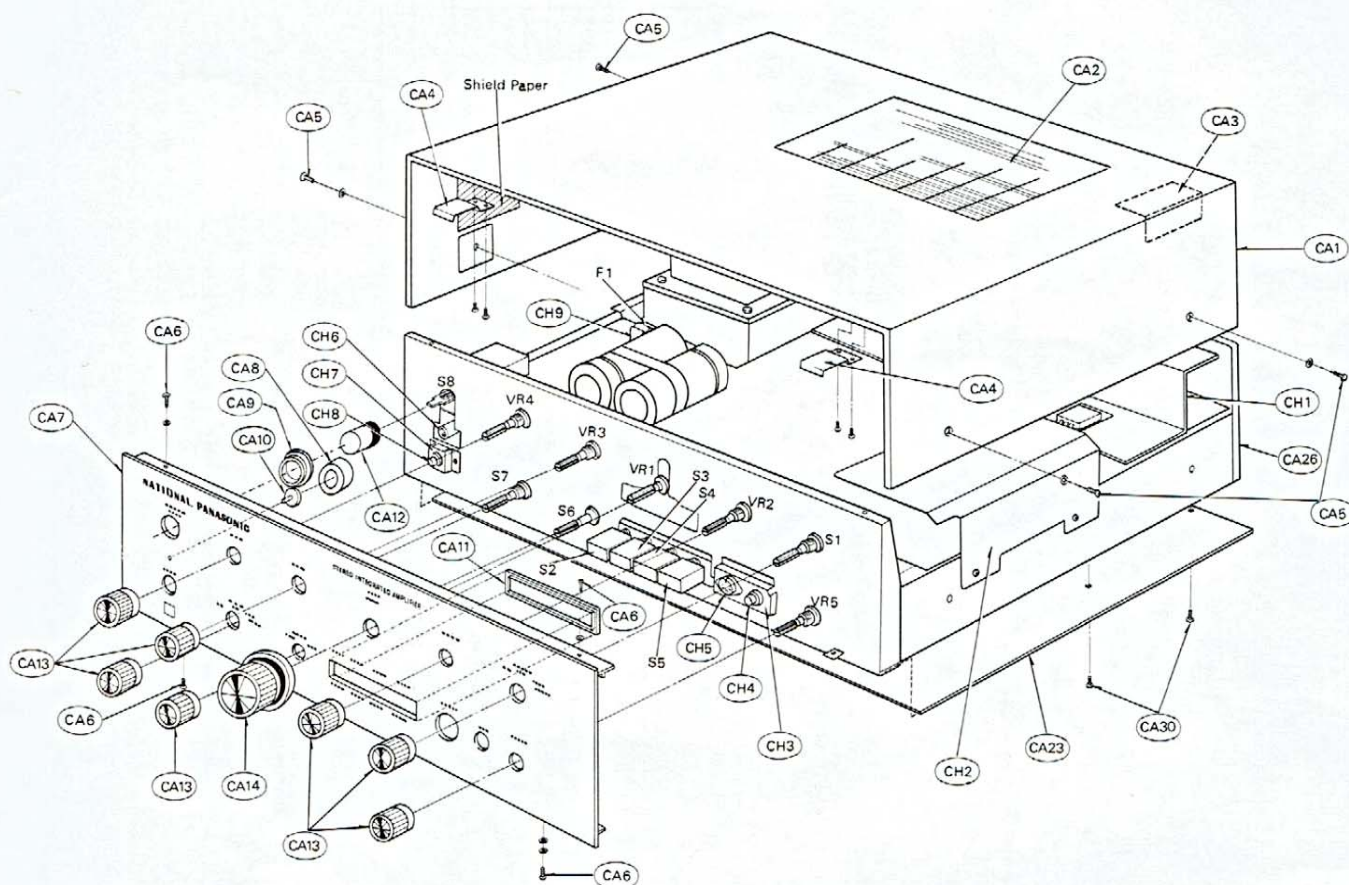
Notes :

1. Volume Control to Minimum.
2. Other Controls to Optional Position.
3. Before adjusting, ICQ and DC unbalance adjusting volumes (VR301, 302, 303 and 304) as right shown in Alignment Point Location.

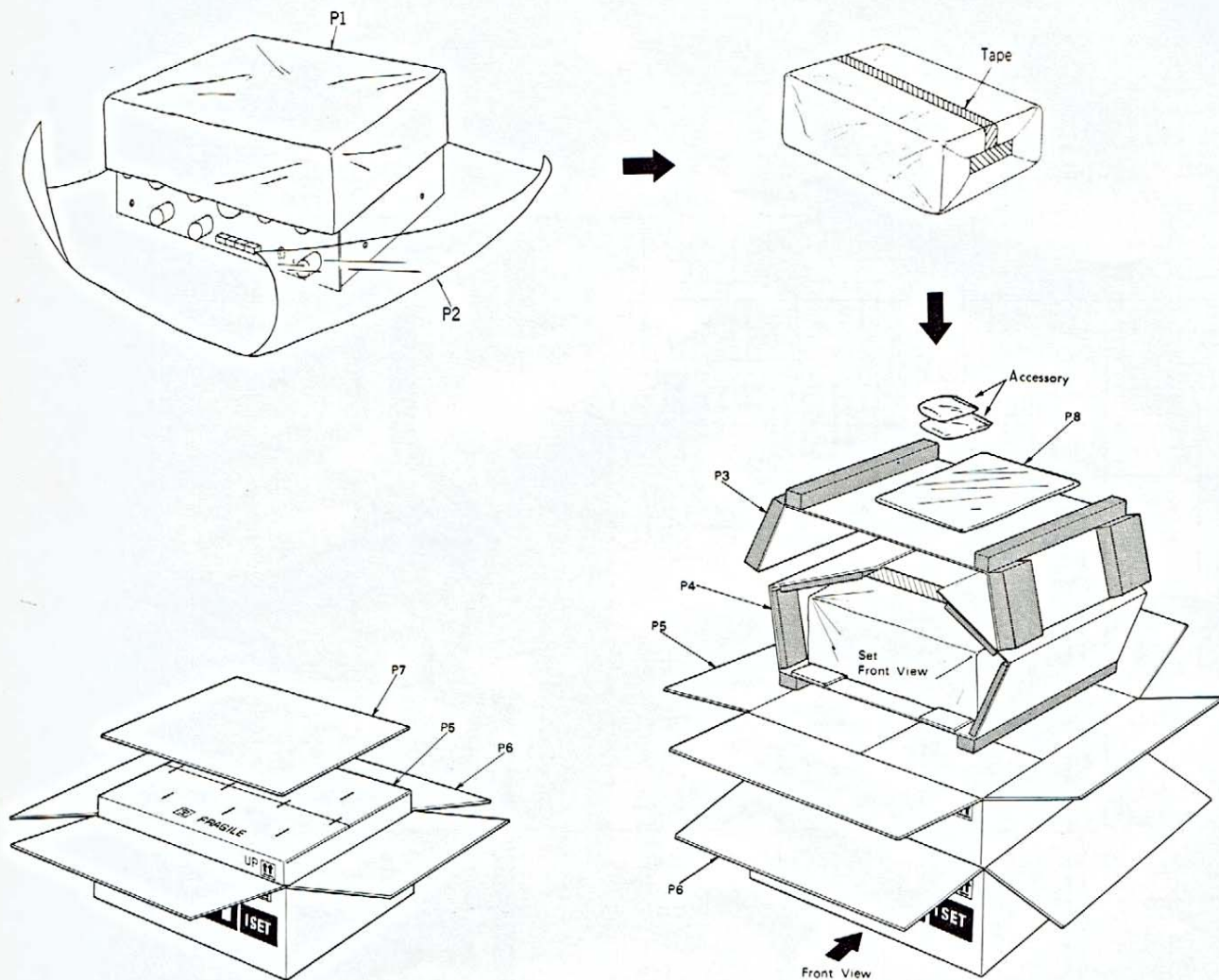


ALIGNMENT	DC VTVM CONNECTION	ADJUSTMENT	REMARKS
DC UNBALANCE	Right Channel → Connect VTVM to test point No. 57 and 58.	VR302	Make sure that VTVM becomes zero (0).
	Left Channel → Connect VTVM to test point No. 56 and 57.	VR301	
ICQ	Right Channel → Connect VTVM to test point No. 58 and 59.	VR304	Make adjustments so that the indication on VTVM becomes 3mV.
	Left Channel → Connect VTVM to test point No. 55 and 56.	VR303	

■ CABINET AND CHASSIS PARTS LOCATIONS

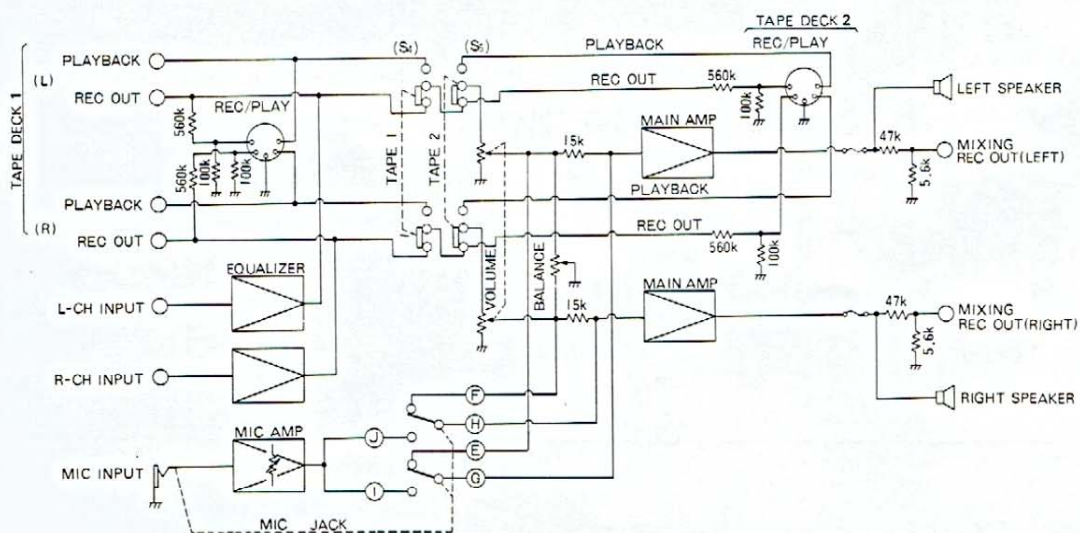


■ PACKINGS

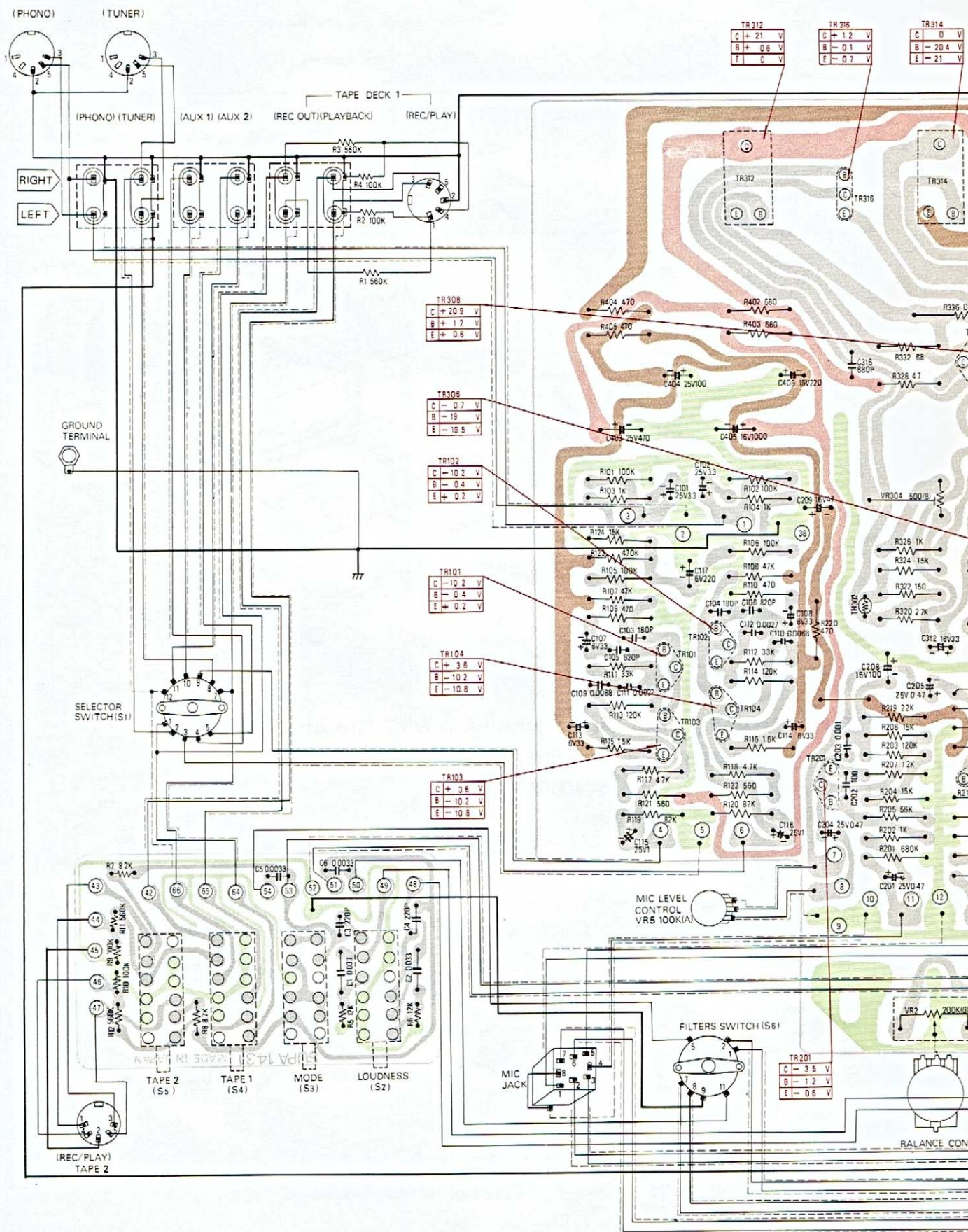


■ BLOCK DIAGRAM Tape Dubbing & MIC Circuit Only

1. S4 : Tape monitor (TAPE 1) switch in "SOURCE" position.
2. S5 : Tape monitor (TAPE 2) switch in "SOURCE" position.
3. MIC jack is not connected to MIC plug.



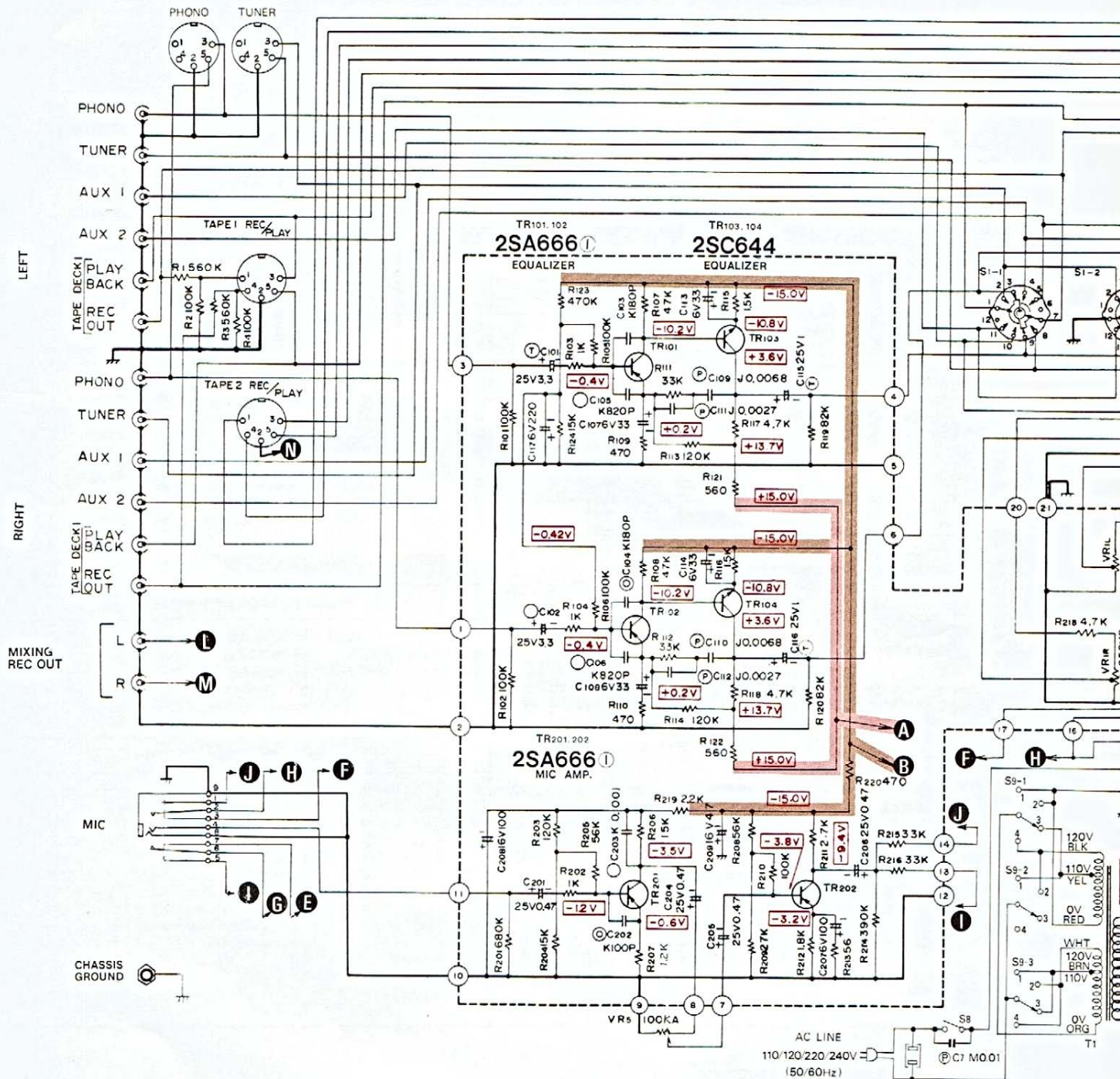
Circuit Board Wiring View Mo





Schematic Diagram Model SU-3000

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BOTTOM VIEW TOP VIEW

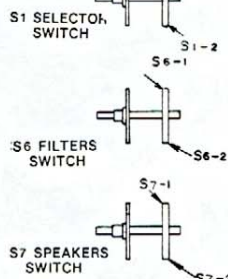
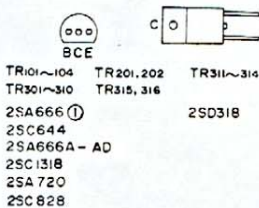
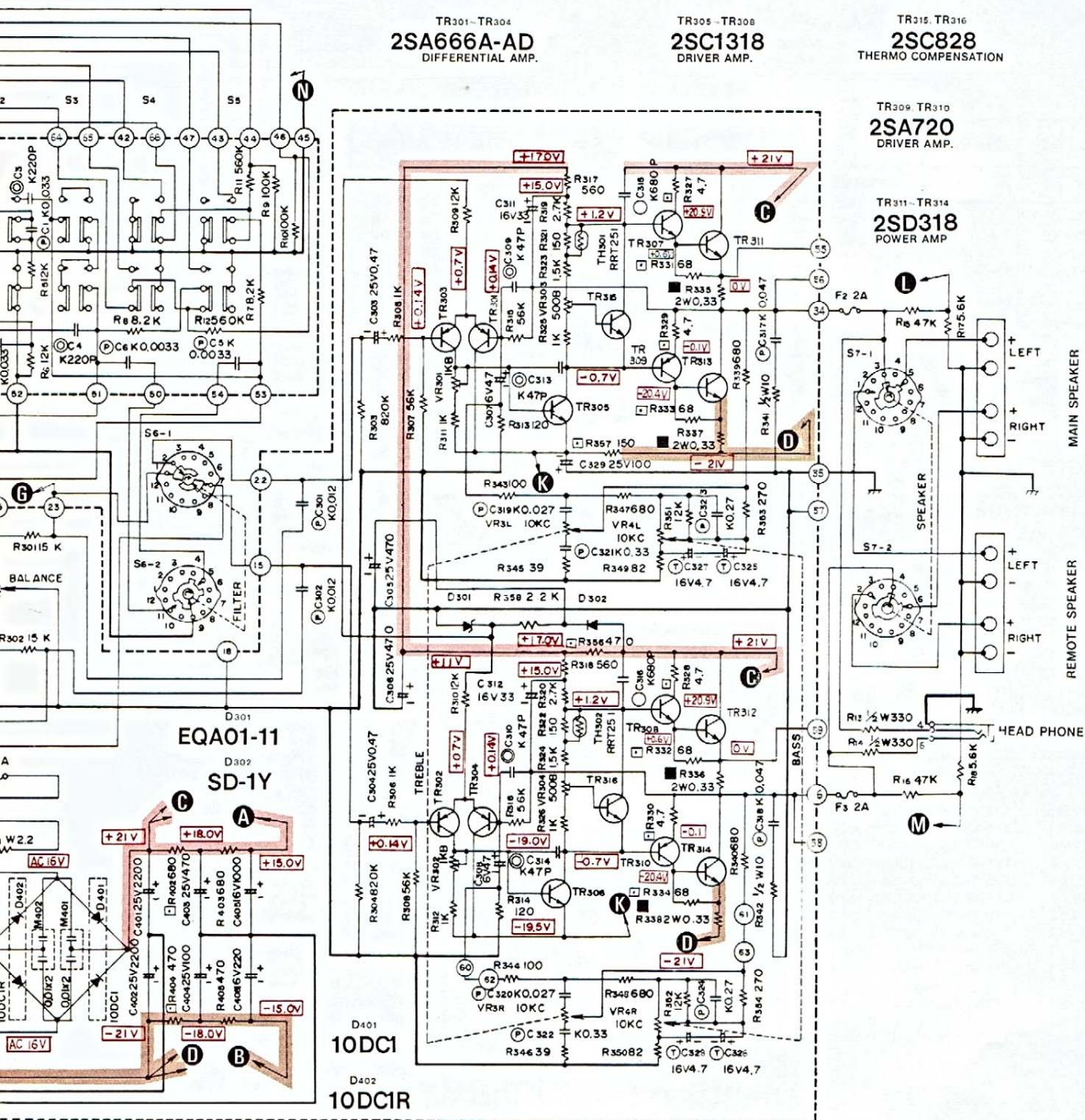


Diagram may be modified at any time with development of technology.)

⊕ B Voltage Line

⊖ B Voltage Line



Anmerkungen:

- S1-1, S1-2: Eingangsauswahlschalter auf "PHONO"
TUNER → PHONO → AUX 1 → AUX 2
- S2: Lautstärkekorr. auf "OFF"
- S3: Betriebsartenschalter auf "STEREO"
- S4: Bandmonitorschalter auf "SOURCE" (TAPE 1)
- S5: Bandmonitorschalter auf "SOURCE" (TAPE 2)
- S6-1, S6-2: Filterschalter auf "OFF"
LOW → HIGH → OFF → BOTH
- S7-1, S7-2: Lautsprecherschalter auf "MAIN"
OFF → MAIN → REMOTE → MAIN + REMOTE
- S8: Netzschalter auf "OFF"
- S9-1 ~ S9-3: Netzähler auf "220V"
110V → 120V → 220V → 240V
- Gleichungsmessungen erfolgen mit Röhrevoltmeter in bezug auf Chassispotential.

REPLACEMENT PARTS LIST

NOTES:

- Part numbers are indicated on most mechanical parts. Please use this part number, for parts orders.
- N indicates the New Parts.
- X-Z rank: X rank parts will cover 80% of repair needs.
X+Y rank parts will cover 95% of repair needs.
Z rank parts are less necessary.

Bemerkungen:

- Die meisten mechanischen Teile sind mit Teilnummern versehen. Bitte geben Sie diese Nummern an, sofern die Teile keine Bezugsnummern haben.
- N bedeutet: Neue Teile.
- Gruppen X-Z: Teile der Gruppe X machen 80% des Ersatzteilbedarfes aus. Teile der Gruppen X und Y machen 95% des Ersatzteilbedarfes aus. Teile der Gruppe Z werden seltener benötigt.

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
TRANSISTORS					R113, 114, 203	ERD14TJ124	120kΩ, 1/4W, ± 5%, Carbon	3	Y
TR101, 102, 201, 202	2SA666 I-R.S	Equalizer & Mic Amplifier	4	X	R214	ERD14TJ394	390kΩ, 1/4W, ± 5%, Carbon	1	Y
TR103, 104	2SC644R S	Equalizer Amplifier	2	X	R123	ERD14TJ474	470kΩ, 1/4W, ± 5%, Carbon	1	Y
TR301, 302, 303, 304	2SA666A-AD1 ~AD5	Differential Amplifier [Use in pairs]	4	X	R1, 3	ERD14TJ564	560kΩ, 1/4W, ± 5%, Carbon	2	Y
TR305, 306, 307, 308	2SC1318R.Q	Pre Driver & Driver Amplifier [Use in pairs]	4	X	R201	ERD14TJ684	680kΩ, 1/4W, ± 5%, Carbon	1	Y
TR309, 310	2SA720R.Q	Driver Amplifier	2	X	R303, 304	ERD14TJ824	820kΩ, 1/4W, ± 5%, Carbon	2	Y
TR311, 312, 313, 314	2SD318Q.P	Power Amplifier [Use in pairs]	4	X	R217, 218	ERD14VJ472	4.7kΩ, 1/4W, ± 5%, Carbon	2	Y
TR315, 316	2SC828Q.R.S	Thermo Compensation	2	X	R7, 8	ERD14VJ822	8.2kΩ, 1/4W, ± 5%, Carbon	2	Y
TRANSFORMER					R5, 6	ERD14VJ123	12kΩ, 1/4W, ± 5%, Carbon	2	Y
T1	SLTA5N8S-W	Power Transformer	1	N X	R9, 10	ERD14VJ104	100kΩ, 1/4W, ± 5%, Carbon	2	Y
DIODES					R11, 12	ERD14VJ564	560kΩ, 1/4W, ± 5%, Carbon	2	N Y
D301	SVDEQA01-11R	Zener, 11V, Noise Canceler	1	X	R327, 328, 329, 330	ERD14FJ4R7	4.7Ω, 1/4W, ± 5%, Carbon	4	Y
D302	RVDSD-1Y	Noise Canceler	1	X	R331, 332, 333, 334	ERD14FJ680	68Ω, 1/4W, ± 5%, Carbon	4	Y
D401	RVD10DC1	Rectifier	1	X	R357	ERD14FJ151	150Ω, 1/4W, ± 5%, Carbon	1	Y
D402	RVD10DC1R	Rectifier	1	X	R356, 404	ERD14FJ471	470Ω, 1/4W, ± 5%, Carbon	2	Y
RESISTORS					R402	ERD14FJ681	680Ω, 1/4W, ± 5%, Carbon	1	Y
R345, 346	ERD14TJ390	39Ω, 1/4W, ± 5%, Carbon	2	Y	R341, 342	ERD12TJ100	10Ω, 1/2W, ± 5%, Carbon	2	Y
R213	ERD14TJ560	56Ω, 1/4W, ± 5%, Carbon	1	Y	R13, 14	ERD12TJ331	330Ω, 1/2W, ± 5%, Carbon	2	Y
R349, 350	ERD14TJ820	82Ω, 1/4W, ± 5%, Carbon	2	Y	R401	ERD18FJ2R2	2.2Ω, 1/8W, ± 5%, Carbon	1	Y
R343, 344	ERD14TJ101	100Ω, 1/4W, ± 5%, Carbon	2	Y	R335, 336, 337, 338	ERX2ANKR33	0.33Ω, 2W, ± 10%, Metallic	4	Y
R313, 314	ERD14TJ121	120Ω, 1/4W, ± 5%, Carbon	2	Y	VARIABLE RESISTORS				
R321, 322	ERD14TJ151	150Ω, 1/4W, ± 5%, Carbon	2	Y	VR1L, 1R	SVVAKA30BF5	250kΩ (B), Volume Control	1	N X
R353, 354	ERD14TJ271	270Ω, 1/4W, ± 5%, Carbon	2	Y	VR2	EVE24AU30G25	200kΩ (G), Balance Control	1	X
R109, 110, 220, 405	ERD14TJ471	470Ω, 1/4W, ± 5%, Carbon	4	Y	VR3L, 3R, 4L, 4R	EVFNTAU30C14	10kΩ (C), Treble & Bass Control	2	X
R121, 122, 317, 318	ERD14TJ561	560Ω, 1/4W, ± 5%, Carbon	4	Y	VR5	EVHBB8A432A15	100kΩ (A), Mic Level Control	1	X
R339, 340, 347, 348, 403	ERD14TJ681	680Ω, 1/4W, ± 5%, Carbon	5	Y	VR301, 302	EVL33AA00B13	1kΩ (B), DC Unbalance Adjustment	2	X
R103, 104, 202, 305, 306, 311, 312, 325, 326	ERD14TJ102	1kΩ, 1/4W, ± 5%, Carbon	9	Y	VR303, 304	EVL33AA00B52	500Ω (B), ICQ Adjustment	2	X
R207	ERD14TJ122	1.2kΩ, 1/4W, ± 5%, Carbon	1	Y	CAPACITORS				
R115, 116, 323, 324	ERD14TJ152	1.5kΩ, 1/4W, ± 5%, Carbon	4	Y	C309, 310, 313, 314	ECCD1H470K	47pF, 50WV, ± 10%, Ceramic	4	Z
R212	ERD14TJ182	1.8kΩ, 1/4W, ± 5%, Carbon	1	Y	C202	ECCD1H101K	100pF, 50WV, ± 10%, Ceramic	1	Z
R219, 358	ERD14TJ222	2.2kΩ, 1/4W, ± 5%, Carbon	2	Y	C103, 104	ECCD1H181K	180pF, 50WV, ± 10%, Ceramic	2	Z
R211, 319, 320	ERD14TJ272	2.7kΩ, 1/4W, ± 5%, Carbon	3	Y	C3, 4	ECCD1H221K	220pF, 50WV, ± 10%, Ceramic	2	Z
R117, 118	ERD14TJ472	4.7kΩ, 1/4W, ± 5%, Carbon	2	Y	C315, 316	ECKD2H681KE	680pF, 500WV, ± 10%, Ceramic	2	Z
R17, 18	ERD14TJ562	5.6kΩ, 1/4W, ± 5%, Carbon	2	Y	C105, 106	ECKD2H821KB	820pF, 500WV, ± 10%, Ceramic	2	Z
R309, 310, 351, 352	ERD14TJ123	12kΩ, 1/4W, ± 5%, Carbon	4	Y	C203	ECKD1H102PF	0.001μF, 50WV, ± 100%, Ceramic	1	Z
R124, 204, 206, 301, 302	ERD14TJ153	15kΩ, 1/4W, ± 5%, Carbon	5	Y	C301, 302	ECQM05123KZ	0.012μF, 50WV, ± 10%, Polyester	2	Z
R209	ERD14TJ273	27kΩ, 1/4W, ± 5%, Carbon	1	Y	C319, 320	ECQM05273KZ	0.027μF, 50WV, ± 10%, Polyester	2	Z
R111, 112, 215, 216	ERD14TJ333	33kΩ, 1/4W, ± 5%, Carbon	4	Y	C1, 2	ECQM05333KZ	0.033μF, 50WV, ± 10%, Polyester	2	Z
R15, 16, 107, 108	ERD14TJ473	47kΩ, 1/4W, ± 5%, Carbon	4	Y	C317, 318	ECQM05473KZ	0.047μF, 50WV, ± 10%, Polyester	2	Z
R205, 208, 307, 308, 315, 316	ERD14TJ563	56kΩ, 1/4W, ± 5%, Carbon	6	Y	C323, 324	ECQM05274KZ	0.027μF, 50WV, ± 10%, Polyester	2	Z
R119, 120	ERD14TJ823	82kΩ, 1/4W, ± 5%, Carbon	2	Y	C321, 322	ECQM05334KZ	0.33μF, 50WV, ± 10%, Polyester	2	Z
R2, 4, 101, 102, 105, 106, 210	ERD14TJ104	100kΩ, 1/4W, ± 5%, Carbon	7	Y	C7	ECQU2A103MD	0.01μF, 250WV, ± 20%, Polyester	1	Z
					C111, 112	ECQG05272JZN	0.0027μF, 50WV, ± 5%, Polyester	2	Z
					C5, 6	ECQG05332JZN	0.0033μF, 50WV, ± 5%, Polyester	2	Z
					C109, 110	ECQG05682JZN	0.0068μF, 50WV, ± 5%, Polyester	2	Z
					C201, 204, 205, 206, 303, 304	ECAG25ER47X	0.47μF, 25WV, Electrolytic	6	Y
					C325, 326, 327, 328	ECSZ16EF4R7M	4.7μF, 16WV, Electrolytic	4	Y
					C101, 102	ECSZ25EF3R3B	3.3μF, 25WV, Electrolytic	2	Y
					C115, 116	ECSZ25EF1B	1μF, 25WV, Electrolytic	2	Y
					C107, 108, 113, 114	ECEA6V33	33μF, 6.3WV, Electrolytic	4	Y
					C307, 308	ECEA6V47	47μF, 6.3WV, Electrolytic	2	Y
					C207	ECEA6V100	100μF, 6.3WV, Electrolytic	1	Y
					C117	ECEA6V220	220μF, 6.3WV, Electrolytic	1	Y
					C311, 312	ECEA16V33	33μF, 16WV, Electrolytic	2	Y
					C209	ECEA16V47	47μF, 16WV, Electrolytic	1	Y

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
C208	ECEA16V100	100 μ F, 16WV, Electrolytic	1	Y	CA16	SJFA3407	Terminal, Input & Tape Monitor	3	Z
C406	ECEA16V220	220 μ F, 16WV, Electrolytic	1	Y	CA17	RJS31-1	DIN Socket, Tape Monitor, Phono & Tuner	3	Z
C405	ECEA16V1000	1000 μ F, 16WV, Electrolytic	1	Y	CA18	SJFA3203	Terminal, Mixing Rec Out	1	Z
C329, 404	ECEA25V100	100 μ F, 25WV, Electrolytic	2	Y	CA19	SJFA5201	Terminal, Circuit Protection Fuses	1	Z
C305, 306, 403	ECEA25V470	470 μ F, 25WV, Electrolytic	3	Y	CA20	SJFA5202	Cap, Circuit Protection Fuses Terminal	1	Y
C401, 402	ECB25V2200	2200 μ F, 25WV, Electrolytic	2	Y	CA21	XSN26+12	Screw, Circuit Protection Fuses Cap M'tg	1	Z
THERMISTORS and COMPONENT COMBINATIONS					CA22	SYUA20C	Bottom Board(Complete)	1	N Z
TH301, 302	RRT251	Thermistor, Driver Circuit	2	Y	CA23	SHG309	Leg	(4)	Z
M401, 402	RXAF103P22HD	Couplet, 0.01 μ F, 500WV, Rectifier Circuit	2	Y	CA24	SKUA280-1	Bottom Board Only	(1)	Z
SWITCHES					CA25	SGTA1310	Name Plate	1	N Z
S1-1, 1-2	SSRA24	Input Selector Switch	1	N X	CA26	SJFA4802	Terminal, Speakers	1	Z
S2, 3, 4, 5	SSHA404	Loudness, Mode, Tape 1, 2 Switches } Complete	1	N X	CA27	SGPA211A	Rear Panel	1	N Z
	SBCA42	Button, Push Switches [Order SSHA404]	(4)		CA28	SJSA1	Socket, AC Power Source	1	Z
S6-1, 6-2	SSRA25	Filters Switch	1	N X	CA29	SJAA3	Cord, AC Power Source	1	Y
S7-1, 7-2	SSRA23	Speaker Selector Switch	1	X	CA30	RHR111	Bushing, AC Cord	1	Z
S8	SSHA15S	Power Source Switch	1	X		XTB4+88R	Screw, Bottom Board M'tg.	4	Z
S9-1~9-3	SSRA7S	Power Source Voltage Selector Switch	1	X	CHASSIS PARTS				
FUSES and LIGHT					CH1	SMYA25-1	Heat Sink	1	N Z
F1	XBA1E20NR5	Fuse, Power Source	1	X	CH2	SMCA78	Plate, Shield	1	N Z
F2, 3	XBAS1A2001	Fuse, Circuit Protection	2	X	CH3	SMKA1	Mounting, Mic & Tape Monitor 2 Socket	1	N Z
PL	XAM35K	Light, Power Indicator	1	X	CH4	SJJA10	Jack, Microphone	1	Y
CABINET PARTS					CH5	SJSA2	Socket, Tape Monitor 2	1	N Z
CA1	SKAA580	Cabinet (Complete)	1	N Y	CH6	RMZ11A	Bracket, Pilot Lamp	1	Z
CA2	SKMA150	Cabinet Only	(1)		CH7	RJV1A	Holder, Pilot Lamp	1	Z
CA3	SKNA1	Hole, Ventilation	(1)		CH8	SMKA2	Mounting, Headphones Jack	1	N Z
CA4	SKW43-1	Mounting, Cabinet	(1)		CH9	SJJA8	Jack, Headphones	1	Y
CA5	SKYA2	Mounting, Cabinet	(2)			RJF107-2	Holder, Fuse, Power Supply p.c.b.	2	Z
CA6	XSB4+12BVCS	Screw, Cabinet M'tg.	4	Z			5 Pin Terminal, Test Point in p.c.b.	1	Z
	XSB3+6KS	Screw, Panel M'tg.	4	Z	ACCESSORIES				
	SYWSU3000XG1	Front Panel (Complete)	1	N Z	A1	RJP16AS	Plug, AC Power Source	1	Y
CA7	SGWA1010	Front Panel	(1)	N Z	A2	RJP17AS	Plug, AC Power Source	1	Y
CA8	SHRA601	Cover, Light	(1)	Z	A3	XBAS1A2001	Fuse, Circuit Protection	4	X
CA9	SGX6002	Bracket, Power Source Switch	(1)	Z	PACKING PARTS				
CA10	SGLA5-1	Indicator, Power ON-OFF	(1)	Z	P1	SPPA26	Soft Cover	1	N Z
CA11	SGXA6006	Bracket, Push Switches	(1)	N Z	P2	SPEA3	Cover, AC Plug	1	Z
CA12	SBCA34	Button, Power Source Switch	1	X	P3	SPHA1	Polyethylene Sheet	1	N Z
CA13	SBNA92	Knob, Balance, Bass, Treble, Mic Controls & Input, Speaker, Filter Switches	7	N X	P4	SPSA35	Pad, Upper	1	N Z
CA14	SBNA90	Knob, Volume Control	1	X	P5	SPSA34	Pad, Lower	1	N Z
CA15	SNEA404	Nut, Ground Terminal (Outer)	1	Z	P6	SPNA90A	Carton Box, Inner	1	N Z
	SNEA204S	Volt, Ground Terminal	1	Z	P7	SPGA42A	Carton Box, Outer	1	N Z
					P8	SPSA36	Pad, Inner Carton Box	1	N Z
						SQFA137	Printed Matter (Complete)	1	N Y
						SQXA5087	Instructions Book(Order SQFA137)	(1)	

■ ACCESSORIES

