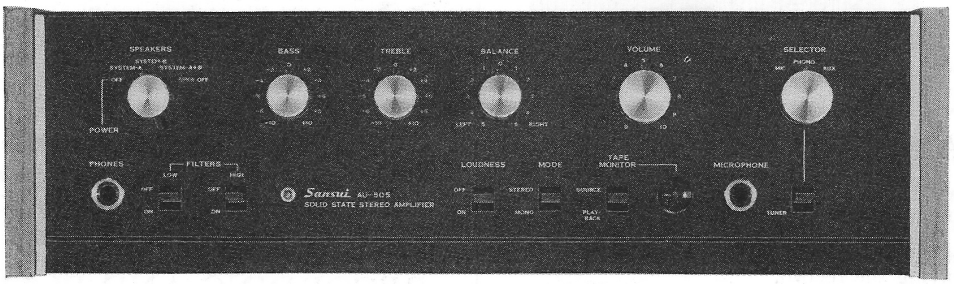
OPERATING INSTRUCTIONS & SERVICE MANUAL

SOLID-STATE STEREO AMPLIFIER

SANSUI AU-505



Sansui

SANSUI ELECTRIC CO., LTD.

OPERATIONS

Congratulations on joining the thousands of proud, satisfied owners of quality stereo components from Sansui, the audio specialist.
The AU-505 is a 90-watt integrated amplifier loaded with many state-of-the-art features and distinctively styled with its sophisticated satin-black front panel, walnut-finished side panels and rational layout of controls and switches. Among which are such convenience features as a Tuner Selector to let you instantly switch to radio reception, a Mode Switch to select between stereo and mono playback, high and low filters, and provisions for connecting and selecting two pairs of speaker systems.
Beyond and above these features, the AU-505's tonal quality, like that of all other Sansui AU series amplifiers, has been perfected and proven not only by precision electronic measuring instruments, but through repeated listening tests in a wide variety of acoustic environments.
This manual and the enclosed reference sheet have been prepared to guide you in operating and caring for your AU-505 correctly. Please read them once carefully, and retain for future reference.

TO PLAY RECORDS

1. Set the Selector Control to 'PHONO.'
2. Start the turntable, and adjust it for the right speed.
3. Start playing the record.
4. Adjust the amplifier for optimum sound volume and channel balance.
5. Use the tone controls and other switches and controls according to your personal preference and room acoustics.

TO RECEIVE BROADCASTS

1. Set the Tuner Selector to 'TUNER.'
2. Adjust controls on the tuner to suit your needs.
3. Use the amplifier's other controls and switches according to your personal preference and room acoustics.

TO USE A MICROPHONE

Use a high-impedance dynamic microphone for best results.
1. Set the Selector Control to 'MIC.'
2. Use other controls and switches according to your personal preference and room acoustics.

Note: When using a microphone, same sound will be delivered by both left and right speaker systems whether the Mode Switch is set to 'STEREO' or 'MONO.'

RECORDING AND PLAYBACK ON A TAPE DECK

To Record into a Tape Deck

1. Use the Selector Control or Tuner Selector to select the program source you want to record.
2. Start the tape deck in the recording mode.
3. To monitor the sound being recorded, set the Tape Monitor Switch to 'PLAYBACK.'
Note: Monitoring is possible only if the tape deck is equipped with separate heads for recording and playback.

To Reproduce Recorded Tape

1. Set the Tape Monitor Switch to 'PLAYBACK.'
2. Start the tape deck in the playback mode.
3. Use the amplifier's other controls and switches according to your personal preference and room acoustics.

SIMPLE MAINTENANCE HINTS

REAR-PANEL AC OUTLETS

Of the two AC outlets provided on the rear panel, the one marked 'SWITCHED' is controlled by the front-panel Power/Speakers Switch. The other, marked 'UNSWITCHED,' is always 'live' and independent of the Power/Speakers Switch. The voltage delivered at these AC outlets is the same as the power supply voltage used.

Each outlet has a power capacity of 150W. Before you connect any appliance to them, be sure that it is adjusted for use at the same power supply voltage, and that its power consumption is below 150W.

VOLTAGE ADJUSTMENT

Your AU-505 is adjusted to operate at the correct power supply voltage of your area prior to shipment from our factory.

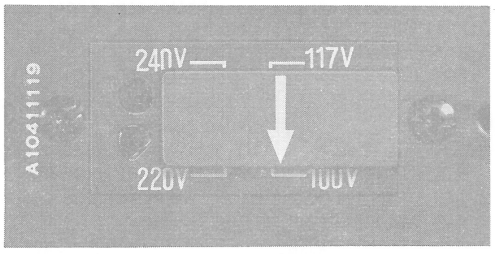
Should you move after purchasing the amplifier or send it to someone as a gift, it may be necessay to adjust the Voltage Selector.

1. Remove the two screws securing the name plate on the unit's rear panel, then remove the name plate.

2. Unplug the Voltage Selector once, and reset it so that the arrow mark on it faces the correct voltage indication.

3. Change the power fuse as well whenever the power supply voltage has changed. For 100/117 volt operation, use a 2.5-ampere glass-tubed fuse. For 220/240 volt operation, use a 1.5-ampere one.

4. Where the power supply voltage considerably fluctuates, the Voltage Selector may be reset to avoid unpleasant side effects of such fluctuation. Reset it to the voltage immediately higher than the peak of the fluctuation.

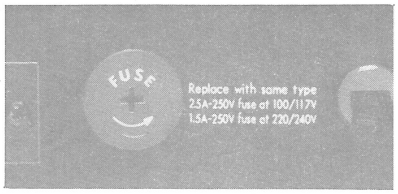


SHOULD THE POWER FUSE BLOW

If the Power Indicator should fail to glow and your AU-505 remains dead when you turn on the Power/Speakers Switch, it is possible that its power fuse has blown.

If this happens, disconnect the power cord from the AC outlet and examine the power fuse on the unit's rear panel. If you find it blown, replace the blown fuse with a new glass-tubed fuse of the rated capacity (2.5-ampere for 100/117 volts, 1.5-ampere for 220/240 volts).

Never use a fuse of a different capacity or a piece of wire, even as a stopgap measure, or serious danger could result.

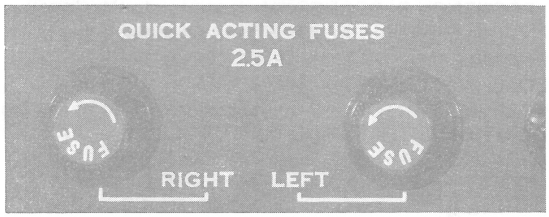


ABOUT THE QUICK-ACTING FUSES

If the Power Indicator illuminates but no sound is heard from both or either of the speaker systems, examine their connections and your operating procedure once. If nothing is wrong with them, it is possible that both or either of the quick-acting fuses protecting the power transistors has blown.

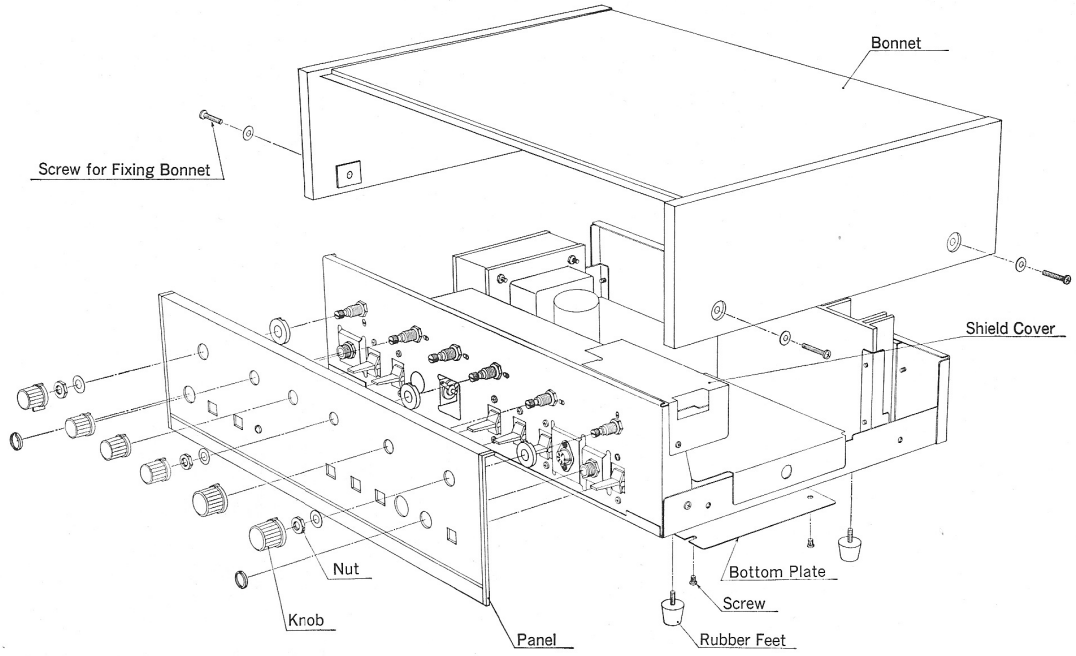
If this happens, disconnect the power cord from the AC outlet and check the two quick-acting fuses on the unit's rear panel.

If you find both or either of them blown, discover and eliminate the cause of the blowout, then replace it with a new 2.5-ampere quick-acting fuse supplied. Probable causes of the blowout include excessively large input signals and a short-circuit at the speaker terminals.



DISASSEMBLY PROCEDURE/SPECIFICATIONS

REMOVING THE FRONT PANEL, BONNET AND BOTTOM PLATE



SPECIFICATIONS

POWER OUTPUT
- IHF MUSIC POWER: 90W (4Ω) at 1,000Hz
  70W (8Ω) at 1,000Hz
- CONTINUOUS RMS POWER (each channel driven):
  35/35W (4Ω) at 1,000Hz
  25/25W (8Ω) at 1,000Hz
- CONTINUOUS RMS POWER (both channels driven):
  23+23W (8Ω) at 1,000Hz
- CONTINUOUS RMS POWER (both channels driven at rated distortion, 20 to 20,000Hz):
  12W×2 (8Ω)

TOTAL HARMONIC DISTORTION (including preamplifier): less than 0.5% at rated output

INTERMODULATION DISTORTION (60Hz: 7,000Hz =4:1 SMPTE method, including preamplifier): less than 0.5% at rated output

IHF POWER BANDWIDTH (each channel driven at 8Ω): 25 to 40,000Hz

FREQUENCY RESPONSE (at normal listening level)
- OVER-ALL (from AUX): 20 to 60,000Hz ±2dB

PHONO EQUALIZATION: RIAA CURVE

LOAD IMPEDANCE: 4 to 16Ω

DAMPING FACTOR: approximately 50 at 8Ω load

INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)
- PHONO: 3mV (50kΩ)
- MIC: 4mV (50kΩ)
- TUNER: 200mV (50kΩ)
- AUX: 200mV (50kΩ)
- TAPE MONITOR (Pin): 200mV (50kΩ)
  (DIN): 200mV (50kΩ)

RECORDING OUTPUT VOLTAGE (at rated input, 1,000Hz)
- TAPE REC (Pin): 200mV
  (DIN): 30mV

CROSSTALK (at rated output, 1,000Hz)
- PHONO: better than 50dB
- AUX: better than 50dB

IHF HUM AND NOISE
- PHONO: better than 70dB
- MIC: better than 70dB
- AUX: better than 75dB

CONTROLS AND SWITCHES
- BASS: +13dB, −13dB at 50Hz
- TREBLE: +10dB, −10dB at 10kHz
- LOUDNESS: +10dB at 50Hz, +8dB at 10,000Hz (volume control at −30dB)
- LOW FILTER: OFF, ON −10dB at 50Hz (6dB/oct)
- HIGH FILTER: OFF, ON −10dB at 10kHz (6dB/oct)

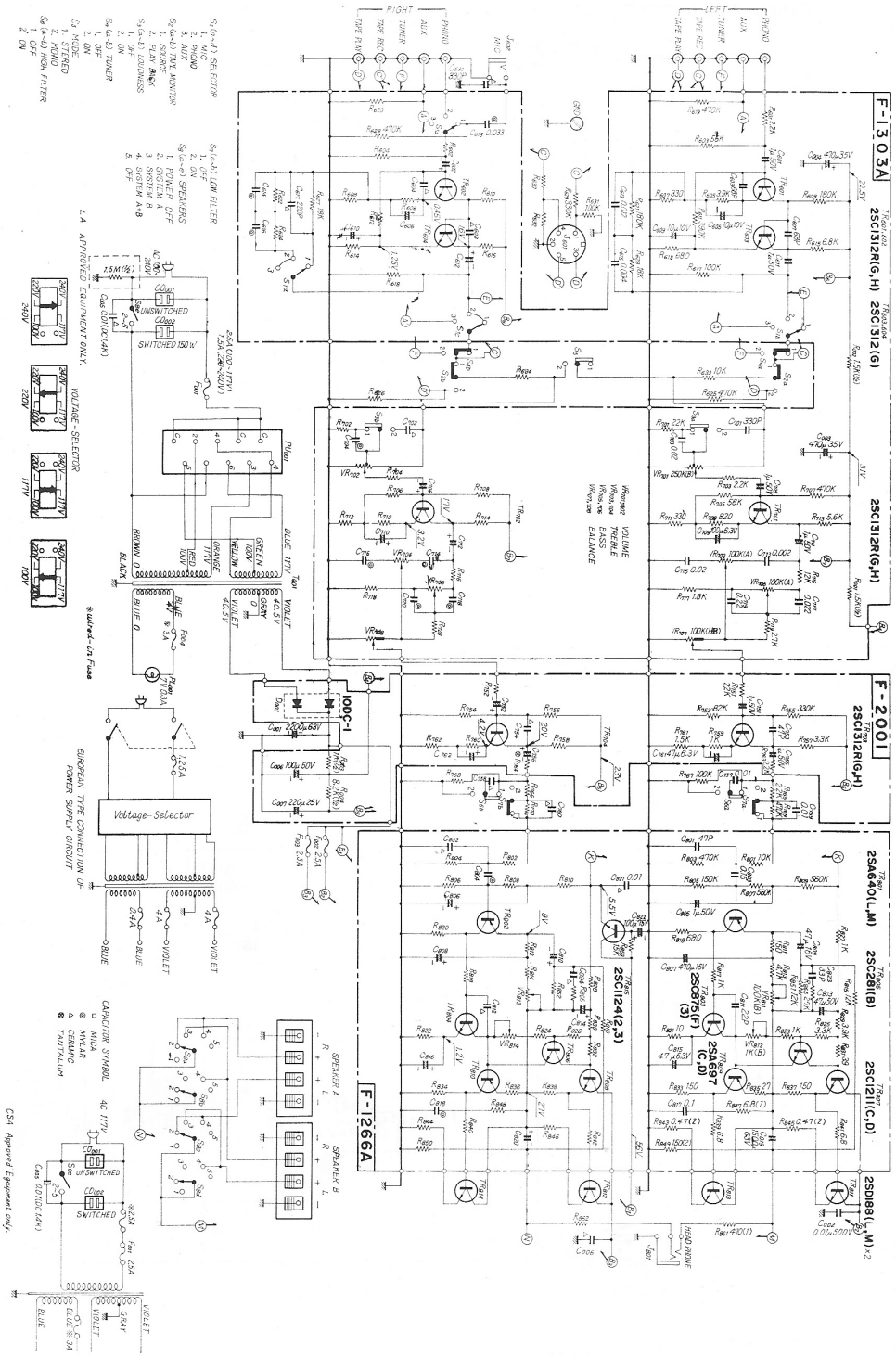
SEMICONDUCTORS: Transistors: 23 Diodes: 2

POWER REQUIREMENTS
- POWER VOLTAGE: 100, 117, 220, 240V 50/60Hz
- POWER CONSUMPTION: 135W (max.) 70W (rated)

DIMENSIONS: 115mm(4 17/32″)H, 407mm(16″)W, 278mm(10 15/16″)D

WEIGHT: 8.0kg (17.7 lbs.)

SCHEMATIC DIAGRAM



PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

EQUALIZER/TONE CONTROL BLOCK 〈F-1303A〉

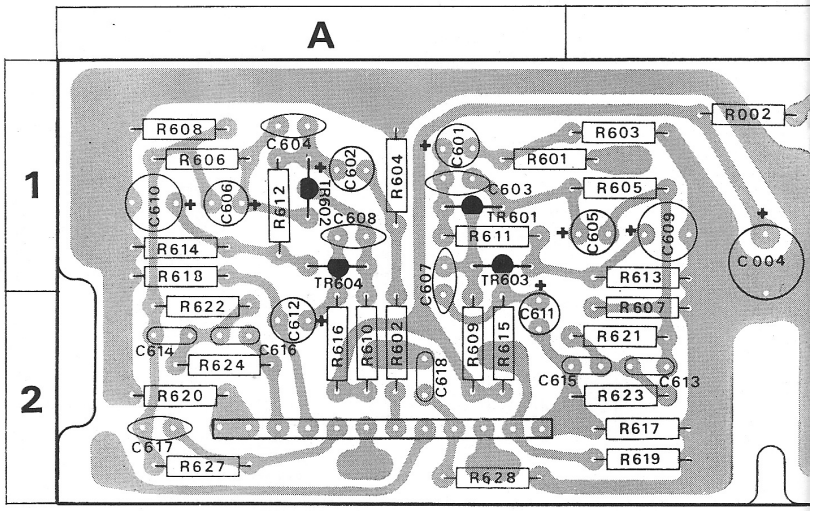
Stock No. 7560530

W	X	Y	Z
R001	1.5kΩ } ±10% ½W SR.	0111152	1 D
R002	1.5kΩ }	0111152	1 B
R601	2.2kΩ	0101222	1 A, B
R602	2.2kΩ	0101222	2 A
R603	56kΩ	0101563	1 B
R604	56kΩ	0101563	1 A
R605	3.9kΩ	0101392	1 B
R606	3.9kΩ	0101392	1 A
R607	330Ω	0101331	2 B
R608	330Ω	0101331	1 A
R609	180kΩ	0101184	2 A
R610	180kΩ	0101184	2 A
R611	390kΩ	0101394	1 A
R612	390kΩ	0101394	1 A
R613	680Ω } ±10% ¼W CR.	0101681	2 B
R614	680Ω	0101681	1 A
R615	6.8kΩ	0101682	2 A
R616	6.8kΩ	0101682	2 A
R617	100kΩ	0101104	2 B
R618	100kΩ	0101104	1 A
R619	470kΩ	0101474	2 B
R620	470kΩ	0101474	2 A
R621	180kΩ	0101184	2 B
R622	180kΩ	0101184	2 A
R623	18kΩ	0101183	2 B
R624	18kΩ	0101183	2 A
R627	18kΩ	0101183	2 A
R628	470kΩ	0101474	2 A

W	X		Y	Z
R701	22kΩ }		0101223	2 B, C
R702	22kΩ }		0101223	2 B, C
R703	2.2kΩ }		0101222	2 C
R704	2.2kΩ }		0101222	1, 2 B
R705	56kΩ }		0101563	1 C
R706	56kΩ }		0101563	1 B
R707	470kΩ }		0101474	1 C
R708	470kΩ }		0101474	1 C
R709	820Ω }		0101821	1 C
R710	820Ω } ±%10 ¼W CR.		0101821	1 B
R711	330Ω }		0101331	1 C
R712	330Ω }		0101331	1 B
R713	5.6kΩ }		0101562	1 C
R714	5.6kΩ }		0101562	1 C
R715	12kΩ }		0101123	2 D
R716	12kΩ }		0101123	2 D
R717	1.8kΩ }		0101182	1 D
R718	1.8kΩ }		0101182	1 D
R719	2.7kΩ }		0101272	1, 2 D
R720	2.7kΩ }		0101272	2 D
VR701,702	250kΩ (B) ×2	Volume Control	1010610	2 B
VR703,704	100kΩ (A) ×2	Treble Control	1010600	2 D
VR705,706	100kΩ (A) ×2	Bass Control	1010600	2 D
VR707,708	100kΩ (HB)	Balance Control	1010590	2 C
C003	470μF	35 V EC.	0514471	1 D
C004	470μF	35 V EC.	0514471	1, 2 B

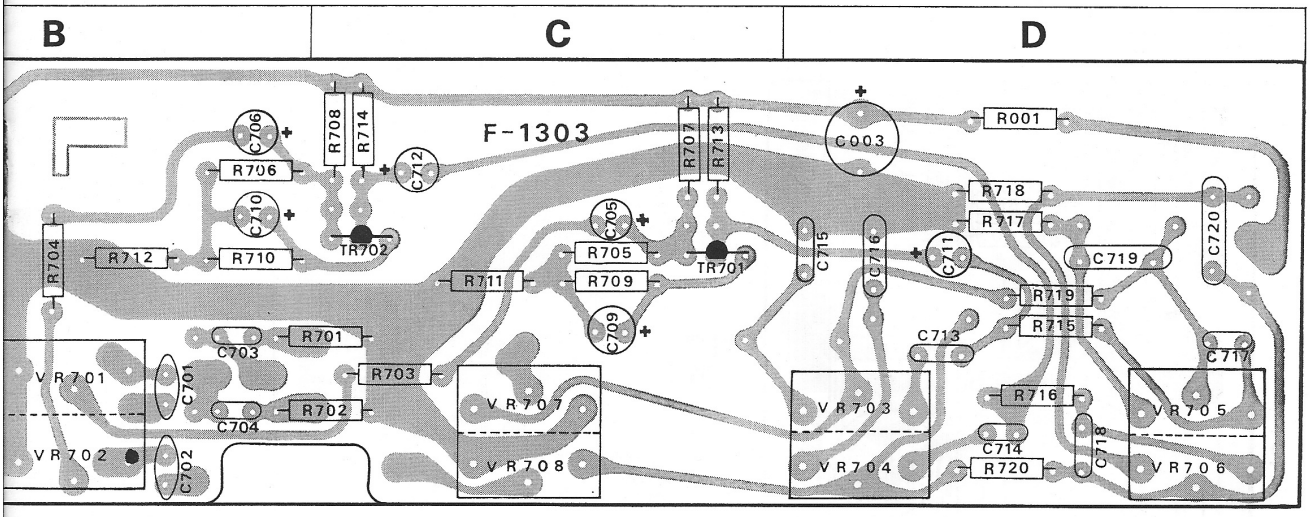
——Abbreviations——

CR : Carbon Resistor
SR : Solid Resistor
CeR : Cement Resistor
MFR: Metal Oxide Film Resistor
MC : Mylar Capacitor
EC : Electrolytic Capacitor
CC : Ceramic Capacitor
TC : Tantalum Capacitor



W	X		Y	Z
C601	1 μF	50 V EC.	0515109	1 A
C602	1 μF		0515109	1 A
C603	68pF	±10% 50 V CC.	0660680	1 A
C604	68pF		0660680	1 A
C605	10 μF	10 V EC.	0511100	1 A, B
C606	10 μF		0511100	1 A
C607	68pF	±10% 50 V CC.	0660680	1, 2 A
C608	68pF		0660680	1 A
C609	10 μF	10 V EC.	0511100	1 B
C610	10 μF		0511100	1 A
C611	1 μF	50 V EC.	0515109	1, 2 A
C612	1 μF		0515109	2 A
C613	0.012 μF		0601127	2 B
C614	0.012 μF	±10% 50 V MC.	0601127	2 A
C615	0.004 μF		0601406	2 A, B
C616	0.004 μF		0601406	2 A
C617	220pF	±10% 50 V CC.	0660221	2 A
C618	0.033 μF	±10% 50 V MC.	0601337	2 A
C701	330pF	±10% 50 V CC.	0660331	2 B
C702	330pF		0660331	2 B
C703	0.02 μF	±10% 50 V MC.	0601207	2 B
C704	0.02 μF		0601207	2 B
C705	1 μF	50 V EC.	0515109	1 C
C706	1 μF		0515109	1 B
C709	100 μF	6.3 V EC.	0510101	2 C
C710	100 μF		0510101	1 B
C711	1 μF	50 V EC.	0515109	1 D
C712	1 μF		0515109	1 C

W	X		Y	Z
C713	0.002 μF	±10% 50 V MC.	0601206	2 D
C714	0.002 μF		0601206	2 D
C715	0.02 μF		0601207	1 D
C716	0.02 μF		0601207	1 D
C717	0.022 μF		0601227	2 D
C718	0.022 μF		0601227	2 D
C719	0.22 μF		0601228	1 D
C720	0.22 μF		0601228	1 D
TR601	2SC1312R (G, H)		0306091, 2	1 A
TR602	2SC1312R (G, H)		0306091, 2	1 A
TR603	2SC1312 (G)		0306161	1 A
TR604	2SC1312 (G)		0306161	1 A
TR701	2SC1312R (G, H)		0306091, 2	1 C
TR702	2SC1312R (G, H)		0306091, 2	1 C
S1(a~d)	Selector Control 1-4-3		1101240	2 A
	F-1303 Printed Circuit Board		2560310	



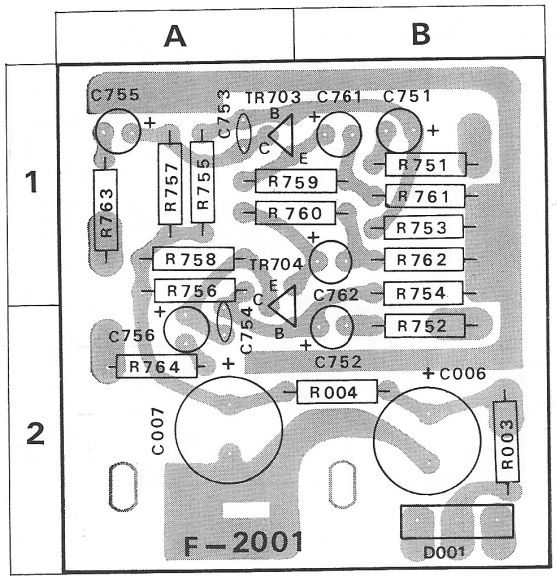
PRINTED CIRCUIT BOARDS AND PARTS LIST

W: Parts No. **X:** Parts Name **Y:** Stock No. **Z:** Position of Parts

FILTER BLOCK 〈F-2001〉

Stock No. 7590920

W	X	Y	Z
R003	1kΩ } ±10% ½W SR.	0111102	2 B
R004	8.2kΩ }	0111822	2 B
R751	2.2kΩ	0101222	1 B
R752	2.2kΩ	0101222	1 B
R753	82kΩ	0101823	1 B
R754	82kΩ	0101823	1 B
R755	330kΩ	0101334	1 B
R756	330kΩ	0101334	1 A
R757	3.3kΩ	0101332	1 A
R758	3.3kΩ } ±10% ¼W CR.	0101332	1 A
R759	1kΩ	0101102	1 A, B
R760	1kΩ	0101102	1 A, B
R761	1.5kΩ	0101152	1 B
R762	1.5kΩ	0101152	1 B
R763	2.2kΩ	0101222	1 A
R764	2.2kΩ	0101222	2 A
C006	100μF 50 V EC.	0515101	2 B
C007	220μF 25 V EC.	0513221	2 A
C751	1μF } 50 V EC.	0515109	1 B
C752	1μF }	0515109	2 B
C753	47pF } ±10% 50 V CC.	0660470	1 A
C754	47pF }	0660470	2 A
C755	1μF } 25 V TC.	0573109	1 A
C756	1μF }	0573109	2 A
C761	47μF } 6.3 V EC.	0510470	1 B
C762	47μF }	0510470	1 B
TR703	2SC1312R (G, H)	0306091, 2	1 A
TR704	2SC1312R (G, H)	0306091, 2	1 A
D001	10DC-1	0310680	2 B
	F-2001 Printed Circuit Board	2591130	



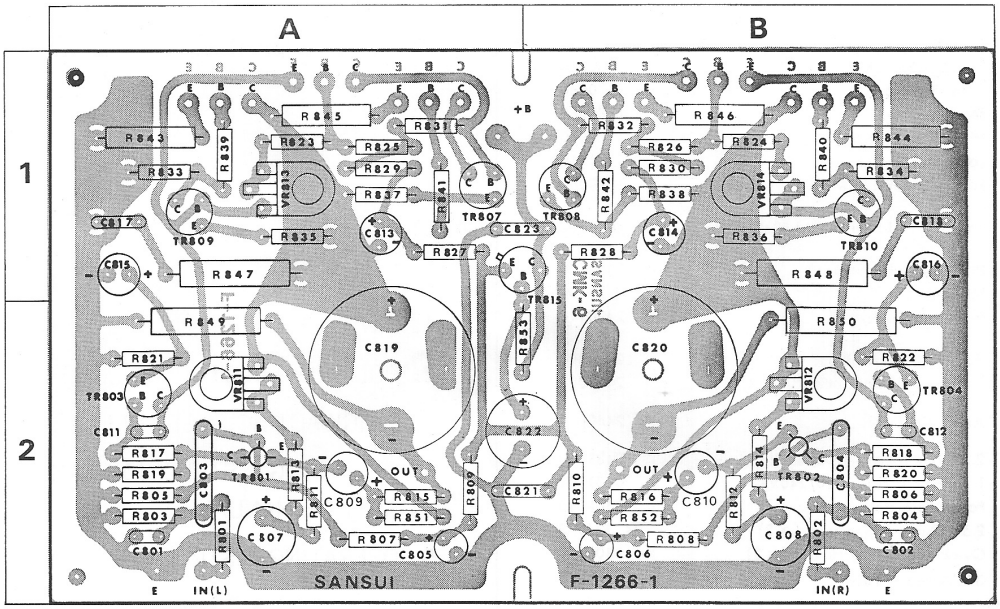
POWER AMP. BLOCK 〈F-1266A〉

Stock No. 7570640

W	X	Y	Z
R801	10kΩ	0101103	2 A
R802	10kΩ	0101103	2 C
R803	470kΩ	0101474	2 A
R804	470kΩ	0101474	2 B
R805	150kΩ	0101154	2 A
R806	150kΩ	0101154	2 B
R807	560kΩ	0101564	2 A
R808	560kΩ	0101564	2 B
R809	560kΩ	0101564	2 A
R810	560kΩ	0101564	2 B
R811	150Ω	0101151	2 A
R812	150Ω	0101151	2 B
R813	4.7kΩ	0101472	2 A
R814	4.7kΩ	0101472	2 B
R815	12kΩ	0101123	2 A
R816	12kΩ	0101123	2 B
R817	1kΩ } ±10% ¼W CR.	0101102	2 A
R818	1kΩ	0101102	2 B
R819	680Ω	0101681	2 A
R820	680Ω	0101681	2 B
R821	10Ω	0101100	2 A
R822	10Ω	0101100	2 B
R823	1kΩ	0101102	1 A
R824	1kΩ	0101102	1 B
R825	3.3kΩ	0101332	1 A
R826	3.3kΩ	0101332	1 B
R827	1kΩ	0101102	1 A
R828	1kΩ	0101102	1 B
R829	3.9kΩ	0101392	1 A
R830	3.9kΩ	0101392	1 B
R831	39Ω	0101390	1 A
R832	39Ω	0101390	1 B

W	X	Y	Z
R833	150Ω	0101151	1 A
R834	150Ω	0101151	1 B
R835	27Ω	0101270	1 A
R836	27Ω	0101270	1 B
R837	150Ω ±10% ¼W CR.	0101151	1 A
R838	150Ω	0101151	1 B
R839	6.8Ω	0101689	1 A
R840	6.8Ω	0101689	1 B
R841	6.8Ω	0101689	1 A
R842	6.8Ω	0101689	1 B
R843	0.47Ω	0132478	1 A
R844	0.47Ω ±10% 2W CeR.	0132478	1 B
R845	0.47Ω	0132478	1 A
R846	0.47Ω	0132478	1 B
R847	6.8Ω ± 5% 1W CR.	0104689	1 A
R848	6.8Ω	0104689	1 B
R849	150Ω ±10% 2W MFR.	0172151	2 A
R850	150Ω	0172151	2 B
R851	12kΩ	0101123	2 A
R852	12kΩ ±10% ¼W CeR.	0101123	2 B
R853	15kΩ	0101153	2 A, B
R865	27kΩ ± 5% ¼W CR.	0107273	2 A
R866	27kΩ	0107273	2 A
VR811	100kΩ(B) AC Balance Adj.	1032142	2 A
VR812	100kΩ(B)	1032142	2 B
VR813	1kΩ(B) DC Balance Adj.	1030590	1 A
VR814	1kΩ(B)	1030590	1 B
C801	47pF ±10% 50 V CC.	0660470	2 A
C802	47pF	0660470	2 B
C803	0.15μF ±10% 50 V MC.	0601158	2 A
C804	0.15μF	0601158	2 B

W	X	Y	Z
C805	1μF 50 V EC.	0515109	2 A
C806	1μF	0515109	2 B
C807	470μF 16 V EC.	0512471	2 A
C808	470μF	0512471	2 B
C809	33μF	0512330	2 A
C810	33μF	0512330	2 B
C811	22pF ±10% 50 V CC.	0660220	2 A
C812	22pF	0660220	2 B
C813	47μF 50 V EC.	0515470	1 A
C814	47μF	0515470	1 B
C815	47μF 6.3 V EC.	0510470	1 A
C816	47μF	0510470	1 B
C817	0.1μF ±10% 50 V MC.	0601108	1 A
C818	0.1μF	0601108	1 B
C819	1500μF 63 V EC.	0549204	1, 2 A
C820	1500μF	0549204	1, 2 B
C821	0.01μF +80 −20% 500V CC.	0659011	2 A, B
C822	100μF 75 V EC.	0519301	2 A, B
C823	33pF ±10% 50 V CC.	0660330	2 A
C824	33pF	0660330	2 A
TR801	2SA640 (L, M)	0300301, 2	2 A
TR802		0300301, 2	2 B
TR803	2SC875-3 (F)	0305982	2 A
TR804		0305982	2 B
TR805	2SC281 (B)	0305121	1 A
TR806		0305121	1 B
TR807	2SC1211 (C, D)	0305930, 1	1 A
TR808		0305930, 1	1 B
TR809	2SA697 (C, D)	0300310, 1	1 A
TR810		0300310, 1	1 B
TR815	2SC1124 (2, 3)	0305901, 2	1 A, B
	F-1266-1 Printed Circuit Board	2570271	



OTHER PARTS AND THEIR POSITIONS ON CHASSIS

W: Parts No. **X:** Parts Name **Y:** Stock No.

OTHER PARTS

W	X	Y
R625	470kΩ ±10% ¼W CR.	0101474
R626	470kΩ	0101474
R629	330kΩ	0101334
R630	330kΩ	0101334
R631	100kΩ	0101104
R632	100kΩ	0101104
R633	10kΩ	0101103
R634	10kΩ	0101103
R765	2.2kΩ	0101222
R766	2.2kΩ	0101222
R767	100kΩ	0101104
R768	100kΩ	0101104
R769	470kΩ	0101474
R770	470kΩ	0101474
R861	470Ω ±10% 1W CR.	0105471
R862	470Ω	0105471
C001	2200μF 63 V EC.	0559504
C002	0.01μF 500V CC.	0659011
C005	0.01μF 1.4kV CC.	0659801
C006	0.01μF 500V CC.	0659011
C630	330μF ±10% 50 V CC.	0660331
C757	0.01μF ±10% 50 V MC.	0601107
C758	0.01μF	0601107
C759	0.01μF	0601107
C760	0.01μF	0601107
TR811	2SD188 (L, M)	0308301, 2
TR812		0308301, 2
TR813		0308301, 2
TR814		0308301, 2
	Power Transistor Socket (×4)	2030020
S2	Tape Monitor Switch	1170060
S3	Loudness Switch	1170060
S4	Tuner Selector	1170060
S5	Mode Switch	1170060
S6	High Filter Switch	1170060
S7	Low Filter Switch	1101410
S8	Power/Speakers Switch Y-1-4-5	1170060
T001	Power Transformer 400-A1040XX	4001102
J601	DIN Connector Socket	2430050
J602	MIC Jack	2430100
J801	Headphones Jack	2430110
PU001	Voltage Selector Plug	2410090
	Voltage Selector Socket	2410080
CO001,2	AC Outlet (×2)	2450010
F001	2.5A Power Fuse (100/117V)	0431252
	1.5A Power Fuse (220/240V)	0431232
	Power Fuse Holder	2300060
F002,003	2.5A Quick-Acting Fuse (×2)	0433240, 2
	Quick-Acting Fuse Holder (×2)	2300020
F004	3A Wired in Fuse	0431850

W	X	Y
PL001	7V 0.3A Power Indicator Lamp	0400250
	Lamp Socket	2320080
	Power Supply Cord	3800020
	F-1303A Equalizer Unit	7560530
	F-2001 Filter Unit	7590920
	F-1266A Power Amp. Unit	7570640

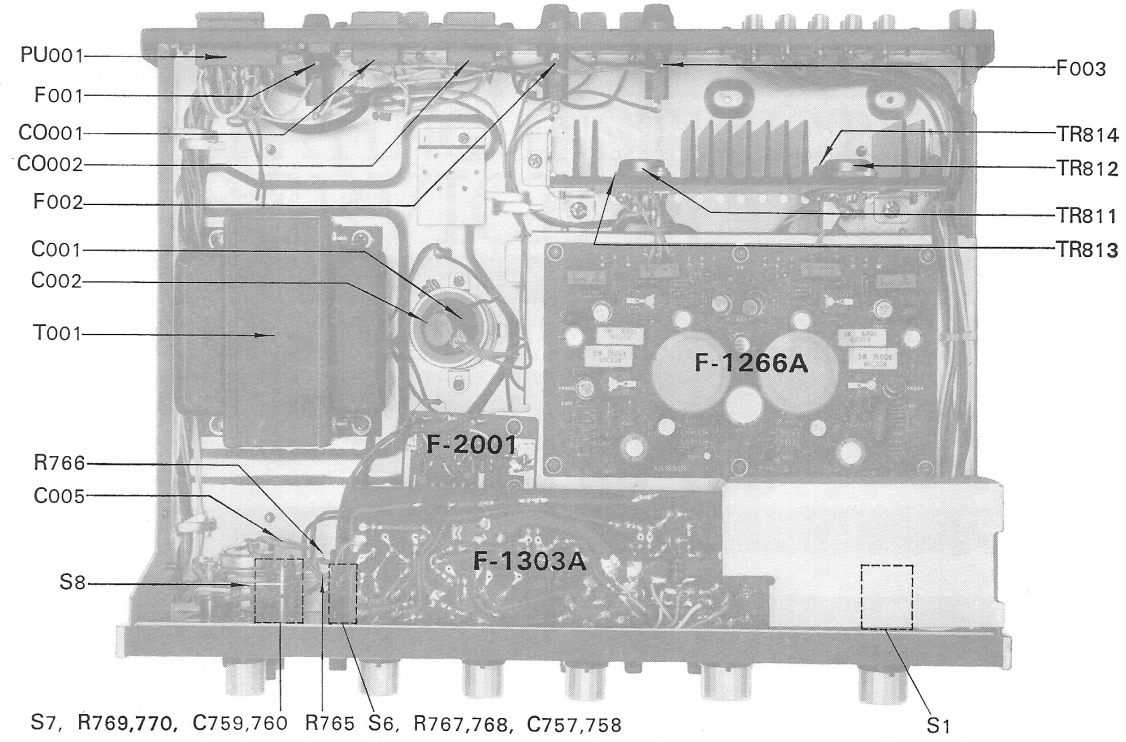
About Servicing

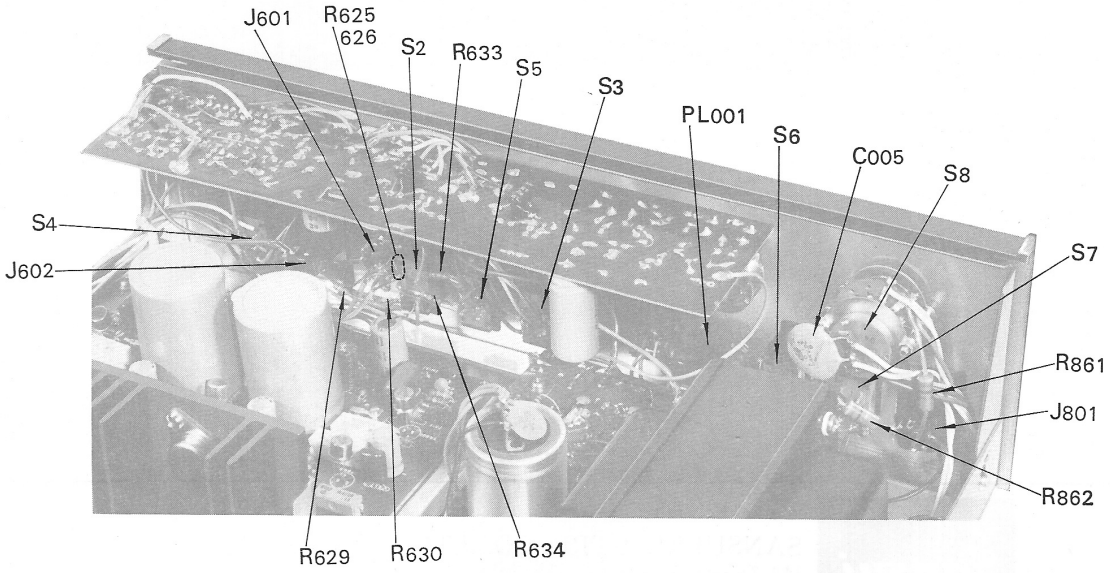
Should anything ever go wrong with your AU-505, or if you have any question about it, please contact the Sansui dealer from whom you purchased it or your nearest Authorized Sansui Service Station.

List of Accessories

1. PIN PLUGS 4
2. POLISHING CLOTH..... 1
3. QUICK-ACTING FUSES (2.5A) 2
4. OPERATING INSTRUCTIONS AND SERVICE MANUAL 1
5. OPERATING INSTRUCTIONS SHEET 1

* Design and specifications subject to change without notice for improvements.





Sansui

SANSUI ELECTRIC CO., LTD.
14-1, 2-chome, Izumi, Suginamiku, Tokyo 168, Japan.
TELEPHONE: (03) 323-1111 / TELEX: 232-2076

Stock No. 9206990

Printed in Japan (D3M1)