



**FM/AM COMPACT STEREO
 WITH AUTOMATIC CHANGER
 MODEL SD - 3210
 SERVICE MANUAL**

No. 493

1972

SPECIFICATIONS

CIRCUIT SYSTEM	Solid state FM/AM 2 Band Superheterodyne with FM multiplex stereo adaptor	D 601 VO-6C	}Rectifier
TUNING RANGE	FM : 88~108MHz AM: 530~1,605kHz	D 602 VO-6C	
INTERMEDIATE FREQUENCY...	FM : 10.7MHz AM : 455kHz	D 603 VO-6C	
TRANSISTOR		D 604 VO-6C	
FET		Z 601 AW01-13.....	Voltage Stabilizer
IC		VR 201 VD-1211	Voltage stabilizer
IC 201 HA-1203	FM IF Amp,	D 001 HV-80.....	Switching
IC 202 TRM-1207	FM/AM IF Amp.	D 151 1N60	AM AGC.
IC 203 TRM-1209	FM IF Amp. & DC Amp.	LOUDSPEAKER.....	7 $\frac{7}{8}$ "(20cm) (8 Ω) \times 2(Woofers) 2 $\frac{3}{16}$ "(6.5cm) (8 Ω) \times 2(Tweeter)
IC 401A FA-6001D }	Equalizer	AUDIO OUTPUT	
IC 401B FA-6001D }		POWER SUPPLY	AC 120V 60Hz
IC 402 FA-6016	Pre-amp.	POWER CONSUMPTION...	75W
IC 501A STK-015 }	Power Amp.	ANTENNA	FM : Line cord or ext. antenna AM : Built-in ferrite-core antenna
IC 501B STK-015 }		SENSITIVITY.....	FM : 5 μ V (Max.) 10 μ V (Practical) AM: 150 μ V (Max.) 200 μ V (Practical)
DIODE		TERMINAL	Stereo head phone Jack Rec. jack AUX. jack
D 101 HV80.....	FM Llimit.	PLAYER SYSTEM.....	Auto. changer
D 102 1S85WT	FM AFC.	DIMENSIONS	RADIO : 4 $\frac{3}{8}$ "(H) \times 18 $\frac{1}{2}$ "(W) \times 15 $\frac{3}{4}$ "(D) (11.6 \times 47 \times 40cm)
D 201 1N60 }	FM Ratio Det.	SPEAKER BOX :	18 $\frac{1}{2}$ "(H) \times 10 $\frac{7}{8}$ "(W) \times 7 $\frac{7}{8}$ "(D) (47 \times 27.5 \times 20cm)
D 202 1N60 }		WEIGHT	RADIO : 25 lbs. 5 oz (11.5kg) SPEAKER BOX : 9 lbs. (4.1kg) \times 2
D 203 1N34A	AM Det.		
D 204 1N34A.....	AM Det.		
D 205 1N60 }	FM Det.		
D 206 1N60 }			

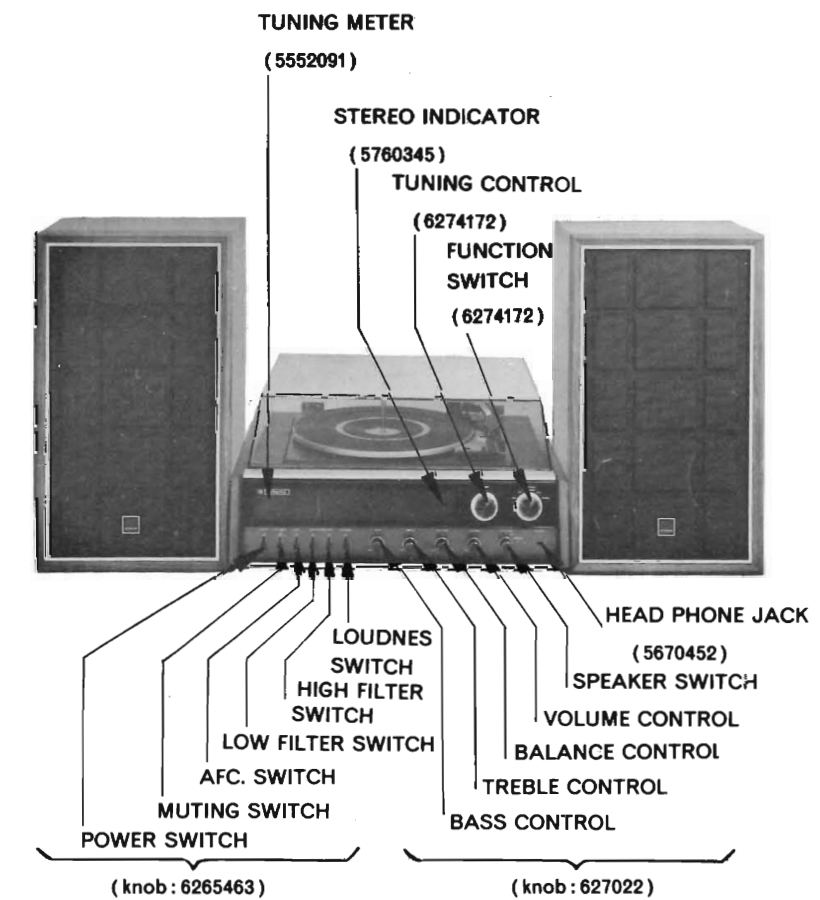
CONTROLS


Fig. 1

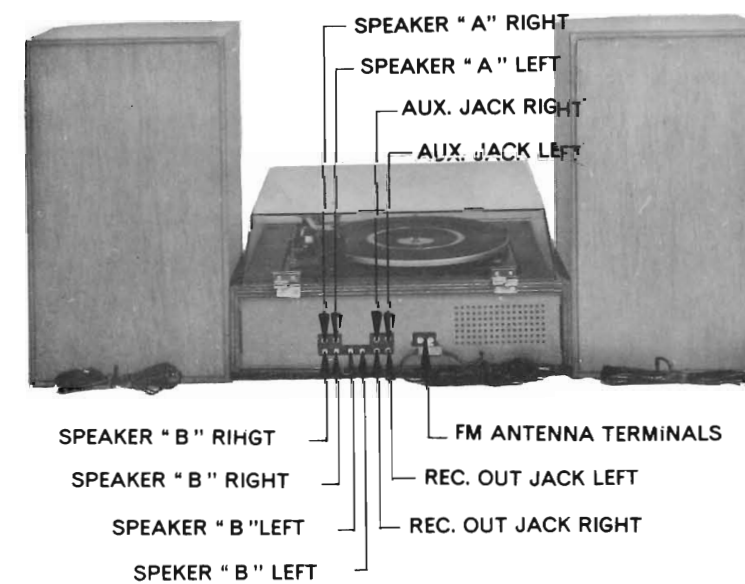


Fig. 2

DISASSEMBLY

1. Removal of back cover

Remove three screws holding back cover shown in Fig. 3.

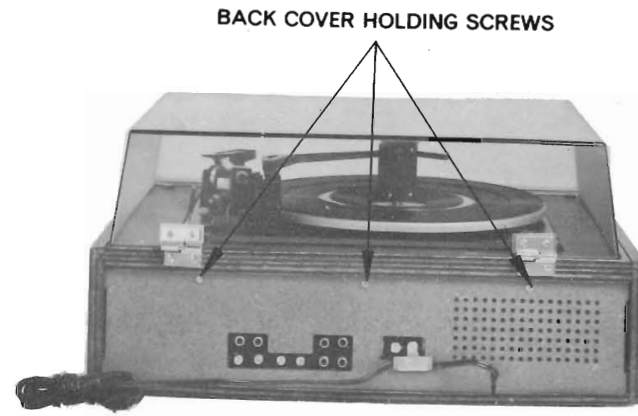


Fig. 3

2. Removal of cabinet

Remove four screws holding cabinet shown in Fig. 4.

3. Removal of chassis

Remove six screws holding chassis shown in Fig. 4.

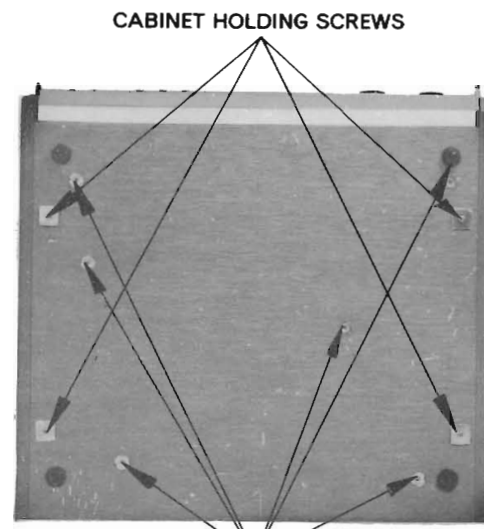


Fig. 4

4. Removal of front panel

After pulling out the thirteen knobs, remove three screws holding front panel shown in Fig. 5.

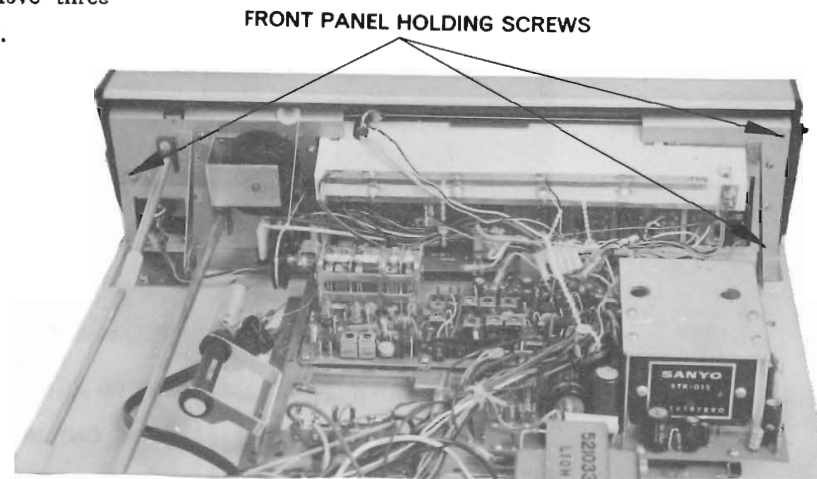


Fig. 5

DIAL CORD RESTRINGING

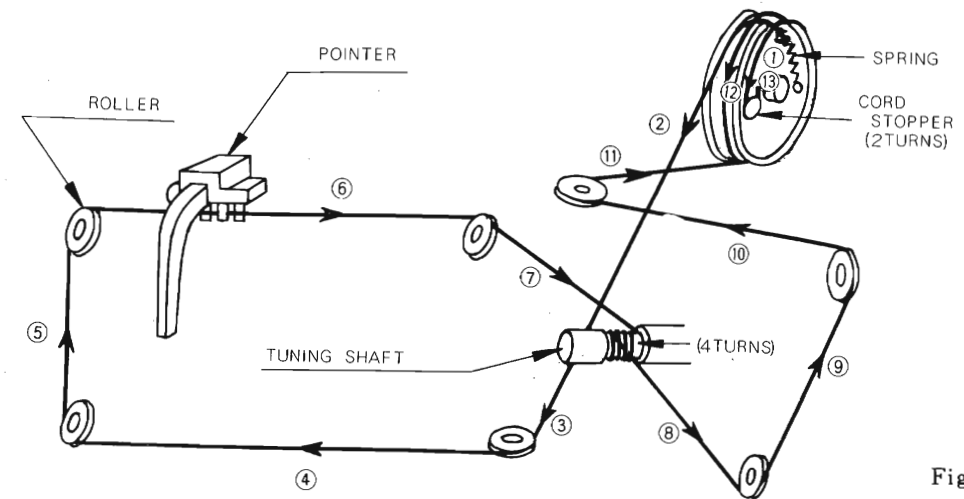


Fig. 6

V. C. POSITION: FULLY COUNTERCLOCKWISE (HEIGHT FREQUENCY END)

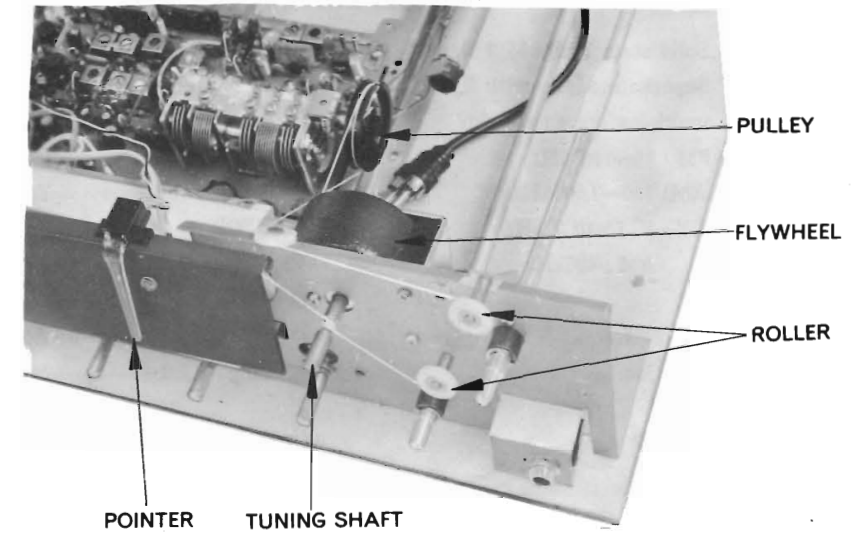


Fig. 7

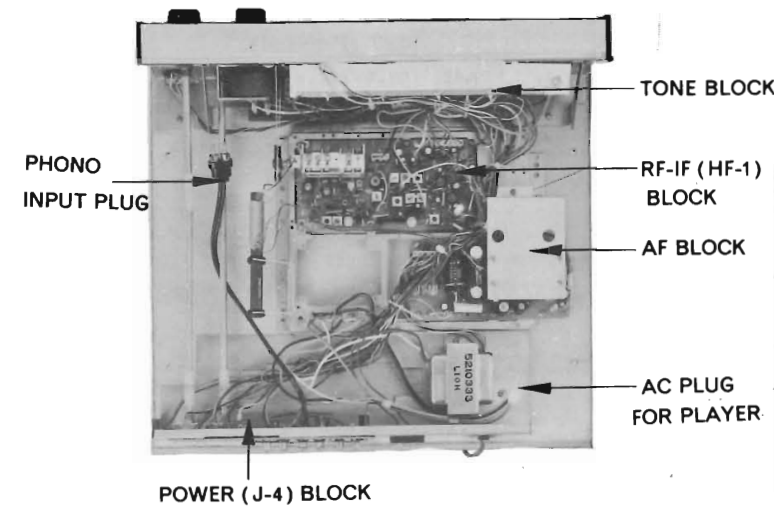


Fig. 8

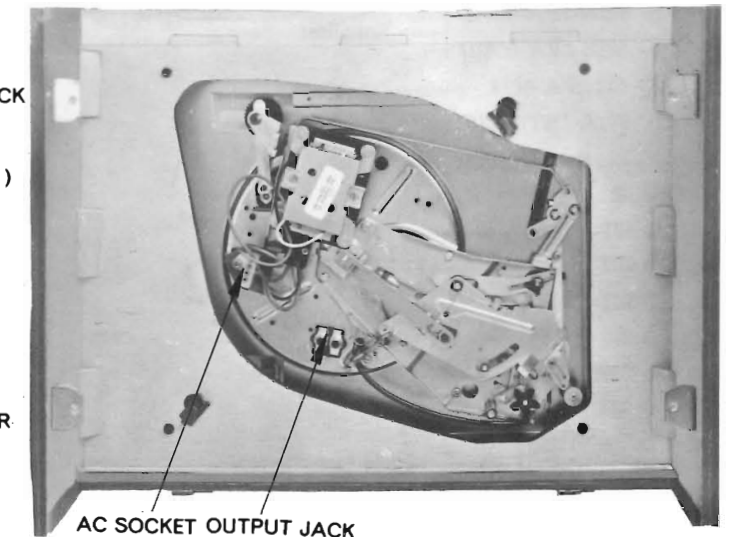


Fig. 9

REPLACEMENT PARTS

INTERNAL VIEW

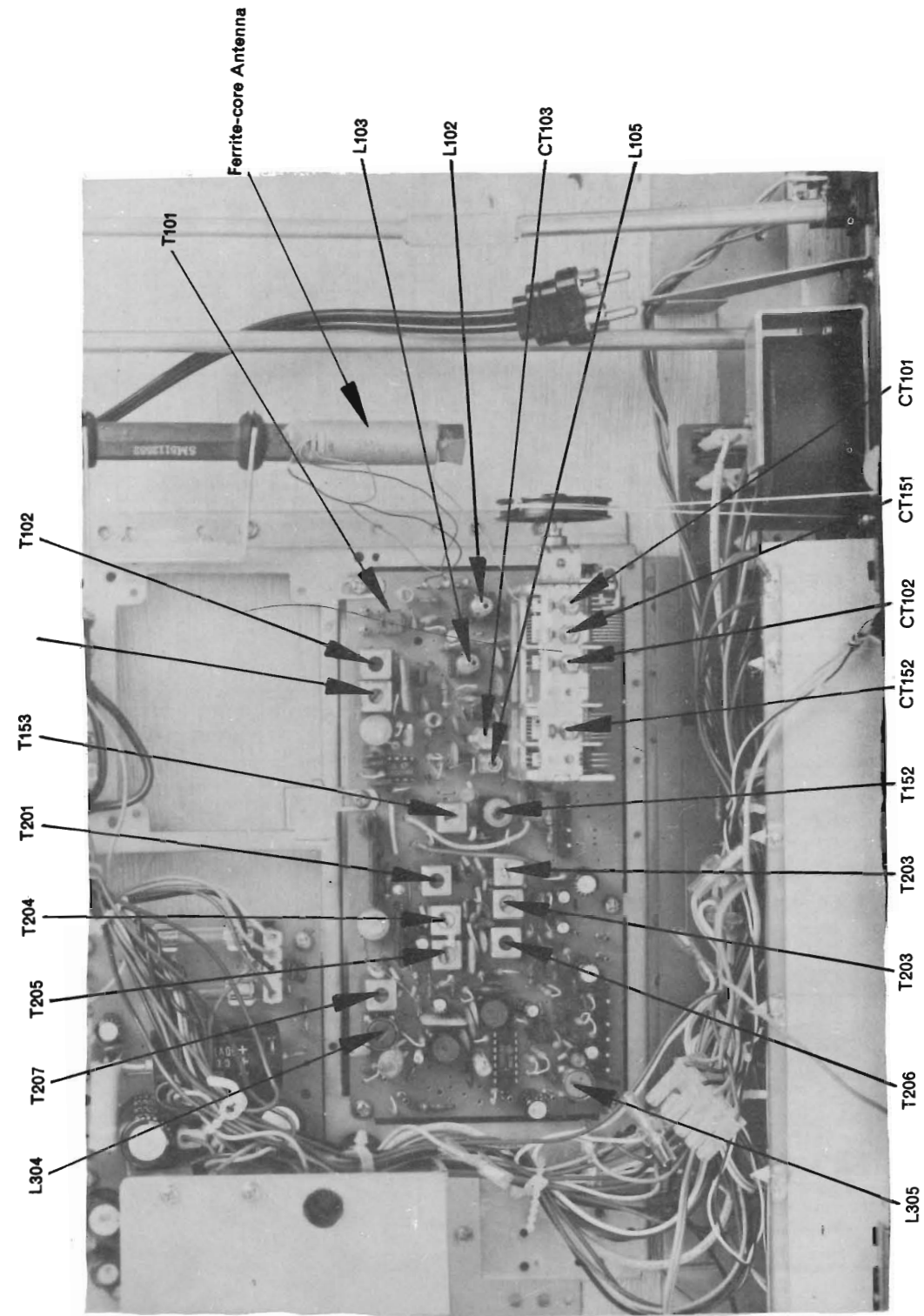
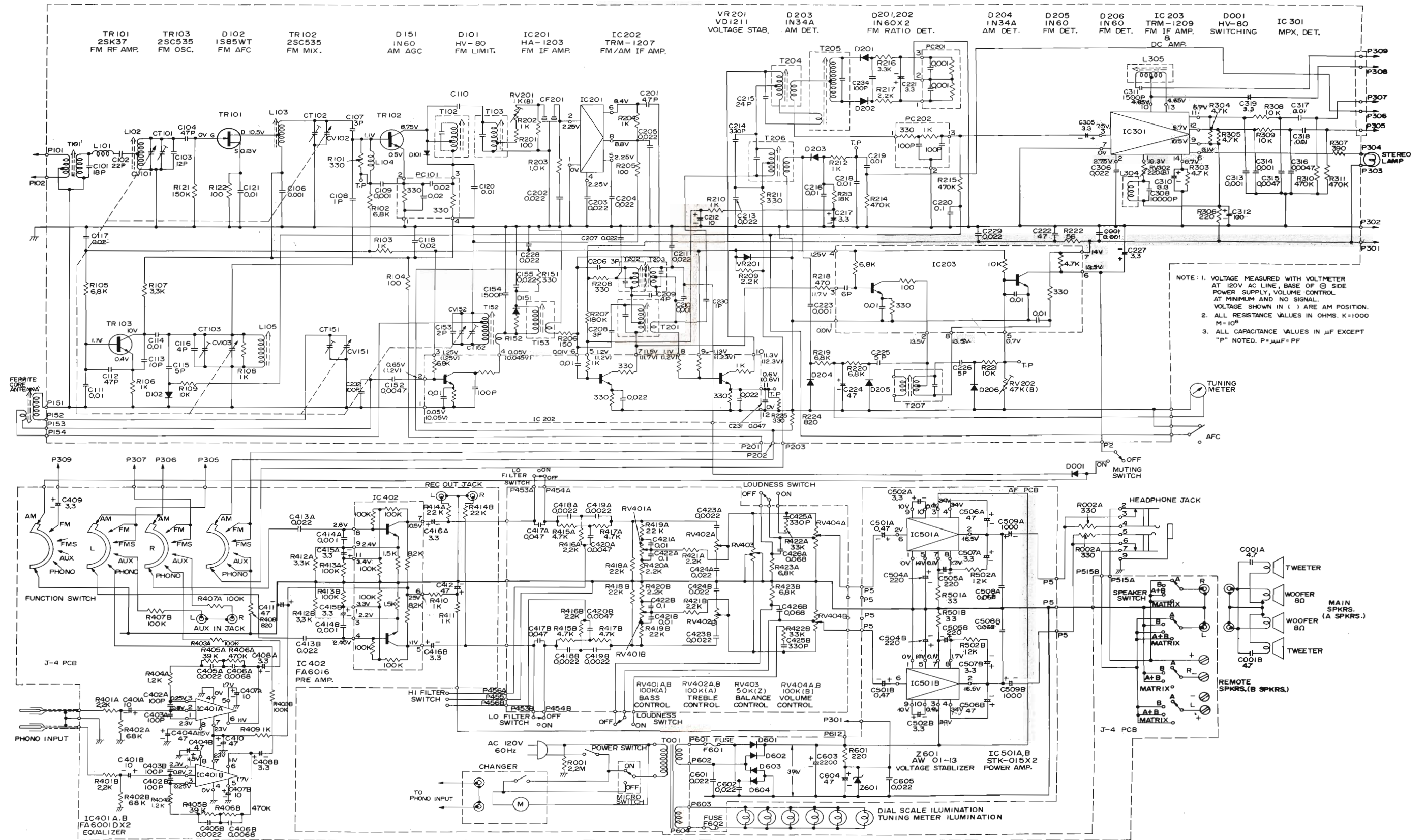


Fig. 10

Symbol No.	Stcok No.	Description	Symbol No.	Stcok No.	Description
CAPACITORS:					
C001A,B		included SP box			
C 001	0244016	Ceramic, diacal	C 232	0248724	Ceramic, discal
C 101	0248706	Ceramic, discal	C 234	0248724	Ceramic, discal
C 102	0248708	Ceramic, discal	C 301	0274113	Mylar
C 103	0248662	Ceramic, discal	C 305	0252613	Electrolytic
C 104	0248716	Ceramic, discal	C 306	0275113	Mylar
C 106	0244016	Ceramic, discal	C 308	0217825	Styrol
C 107	0248643	Ceramic, discal	C 310	0252613	Electrolytic
C 108	0248641	Ceramic, discal	C 311	0217823	Mylar
C 109	0244016	Ceramic, discal	C 312	0252531	Electrolytic
C 110	0248645	Ceramic, discal	C 313	0274111	Mylar
C 111	0245017	Ceramic, discal	C 314	0274111	Mylar
C 112	0248716	Ceramic, discal	C 315	0274115	Mylar
C 113	0246430	Ceramic, discal	C 316	0274115	Mylar
C 114	0245017	Ceramic, discal	C 317	0275111	Mylar
C 115	0241852	Ceramic, discal	C 318	0275111	Mylar
C 116	0246424	Ceramic, discal	C 319	0252613	Electrolytic
C 117	0245018	Ceramic, discal	C401A,B	0252621	Electrolytic
C 118	0245018	Ceramic, discal	C402A,B	0249719	Ceramic, discal
C 120	0275111	Mylar	C403A,B	0249719	Ceramic, discal
C 121	0245017	Ceramic, discal	C404A,B	0252525	Electrolytic
C 122	0274115	Mylar	C405A,B	0274113	Mylar
C 123	0241434	Ceramic, discal	C406A,B	0274116	Mylar
C 154	0217823	Mylar	C407A,B	0252621	Electrolytic
C 155	0275113	Mylar	C408A,B	0252613	Electrolytic
C 201	0248716	Ceramic, discal	C 409	0252613	Electrolytic
C 202	0275113	Mylar	C 410	0252625	Electrolytic
C 203	0275113	Mylar	C 411	0252825	Electrolytic
C 204	0275113	Mylar	C 412	0252825	Electrolytic
C 205	0275113	Mylar	C413A,B	0275113	Mylar
C 206	0248643	Ceramic, discal	C414A,B	0274111	Mylar
C 207	0275113	Mylar	C415A,B	0252613	Electrolytic
C 208	0248643	Ceramic, discal	C416A,B	0252613	Electrolytic
C 209	0248644	Ceramic, discal	C417A,B	0275115	Mylar
C 210	0274111	Mylar	C418A,B	0274113	Mylar
C 211	0275113	Mylar	C419A,B	0274113	Mylar
C 212	0252621	Electrolytic	C420A,B	0274115	Mylar
C 213	0275113	Mylar	C421A,B	0275111	Mylar
C 214	0248736	Ceramic, discal	C422A,B	0276111	Mylar
C 215	0248669	Ceramic, discal	C423A,B	0274113	Mylar
C 216	0275111	Mylar	C424A,B	0275113	Mylar
C 217	0252613	Electrolytic	C425A,B	0248736	Ceramic, discal
C 218	0275111	Mylar	C426A,B	0275116	Mylar
C 219	0275111	Mylar	C501A,B	0257040	Electrolytic
C 220	0276111	Mylar	C502A,B	0252613	Electrolytic
C 221	0252613	Electrolytic	C504A,B	0252632	Electrolytic
C 222	0252525	Electrolytic	C505A,B	0252332	Electrolytic
C 223	0274111	Mylar	C506A,B	0252825	Electrolytic
C 224	0252225	Electrolytic	C507A,B	0252613	Electrolytic
C 225	0248645	Ceramic, discal	C508A,B	0275116	Ceramic, discal
C 226	0248642	Ceramic, discal	C509A,B	0256074	Electrolytic
C 227	0252613	Electrolytic	C 601	0275113	Mylar
C 228	0275113	Mylar	C 602	0275113	Mylar
C 229	0275113	Mylar	C 603	0256108	Electrolytic
C 230	0248641	Ceramic, discal	C 604	0252525	Electrolytic
C 231	0275115	Mylar	C 665	0275113	Mylar
			CV101		
			~103,		
			151~152		
			CT101,	0281579	Variable
			102, 151,		
			152		
			CT103	0283113	Variable

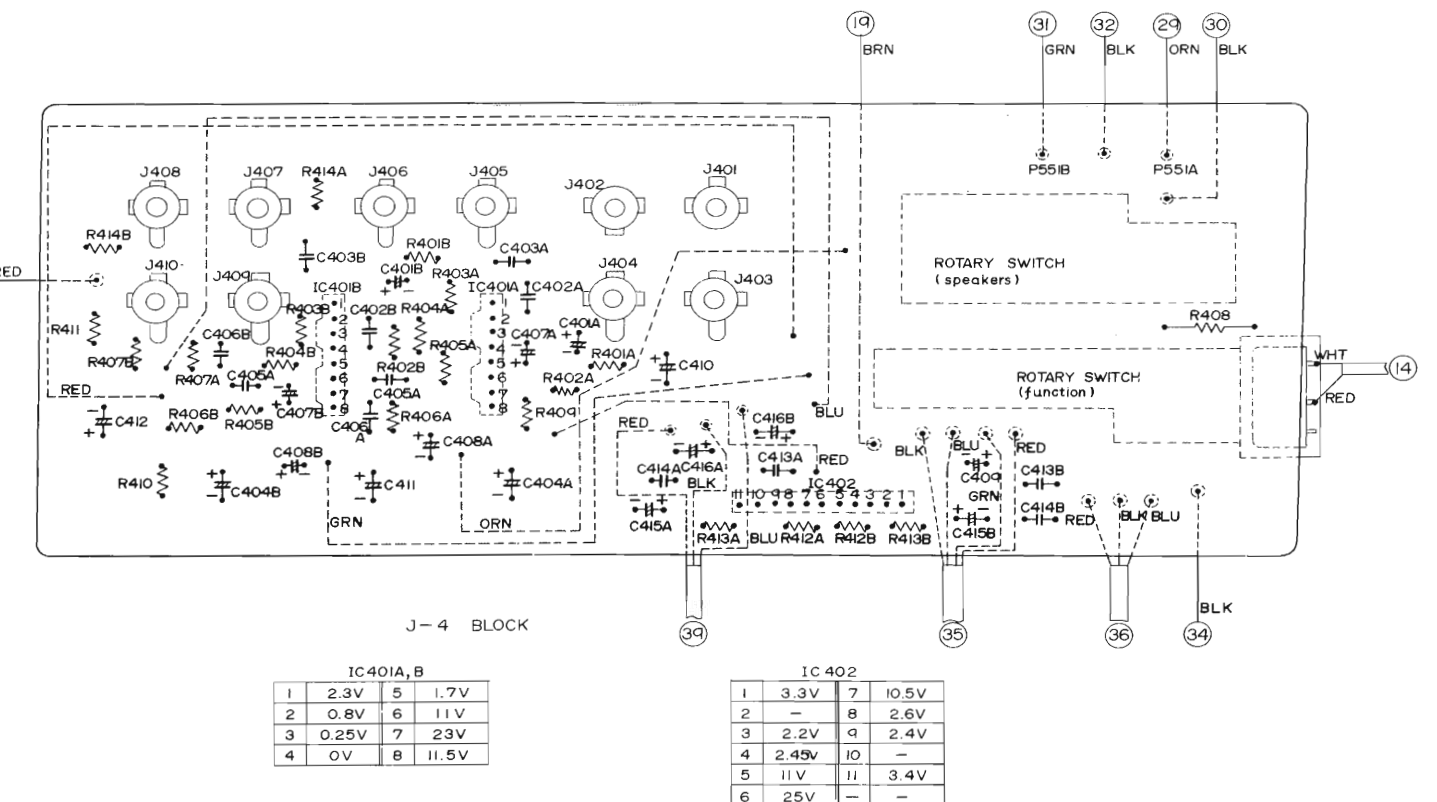
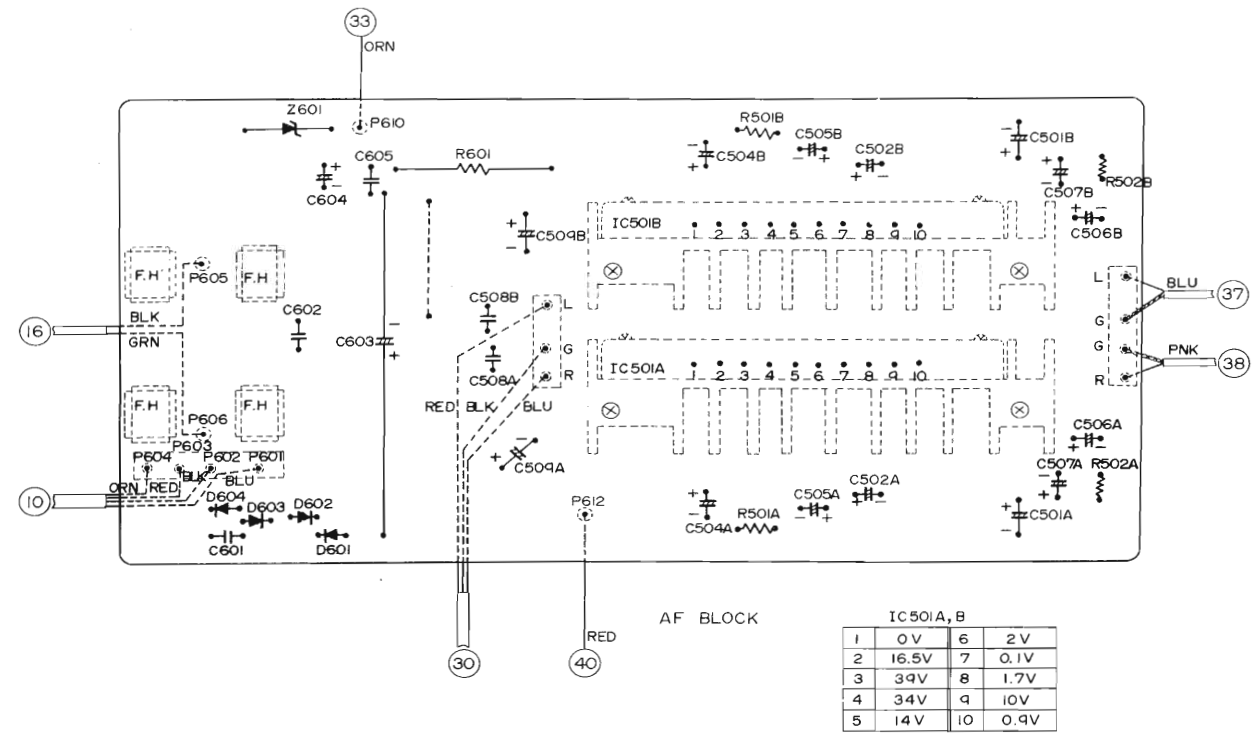
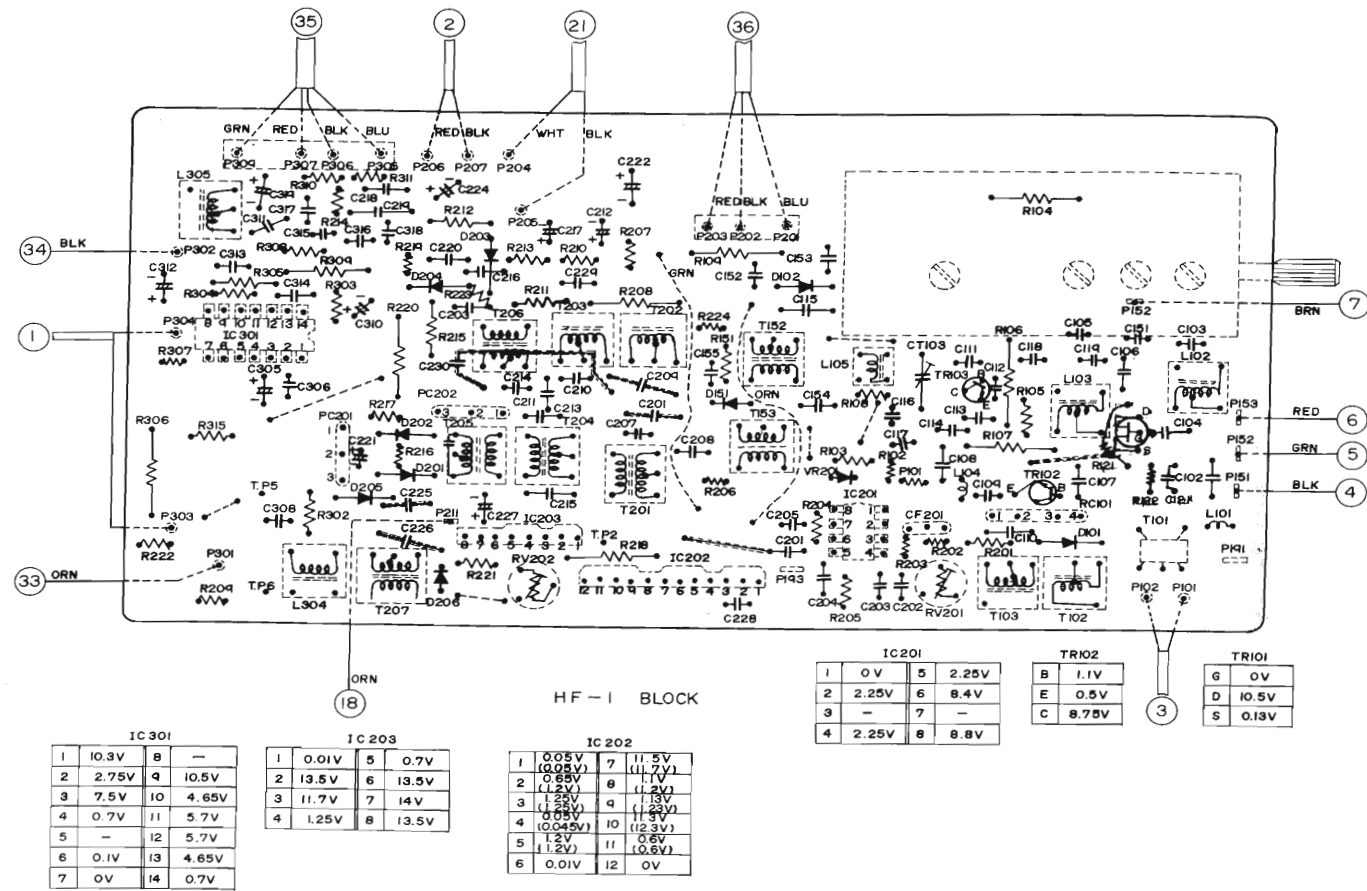
CIRCUIT DIAGRAM



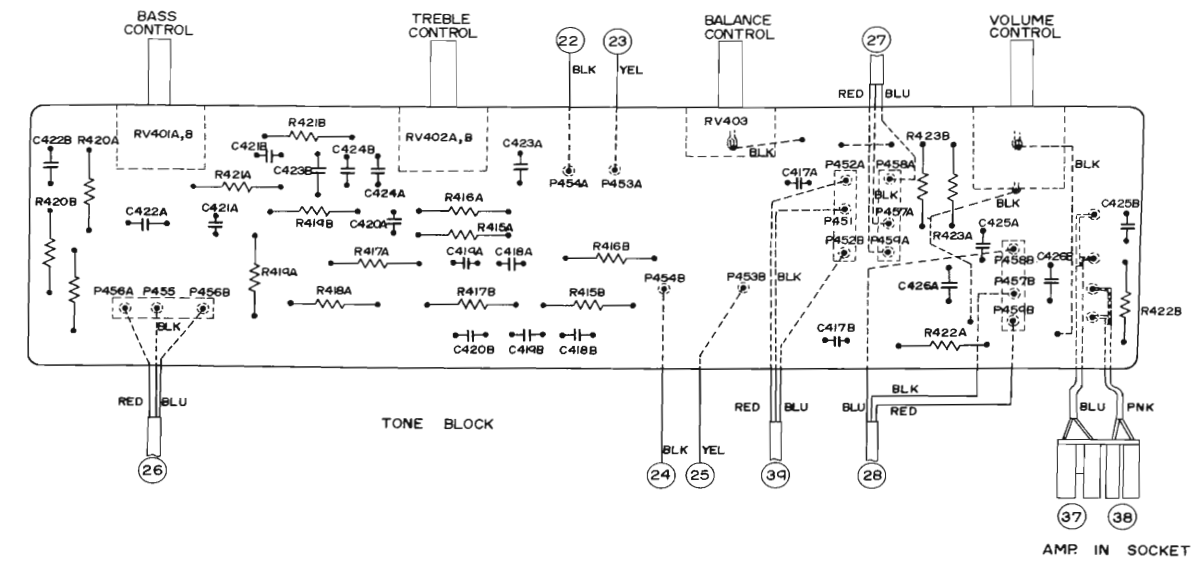
NOTE: 1. VOLTAGE MEASURED WITH VOLTMETER AT 120V AC LINE, BASE OF ⊕ SIDE POWER SUPPLY, VOLUME CONTROL AT MINIMUM AND NO SIGNAL. VOLTAGE SHOWN IN () ARE AM POSITION. 2. ALL RESISTANCE VALUES IN OHMS. K=1000 M=10⁶ 3. ALL CAPACITANCE VALUES IN μF EXCEPT "P" NOTED. P=μμF=PF

V60-604
V60CX4
RECTIFIER

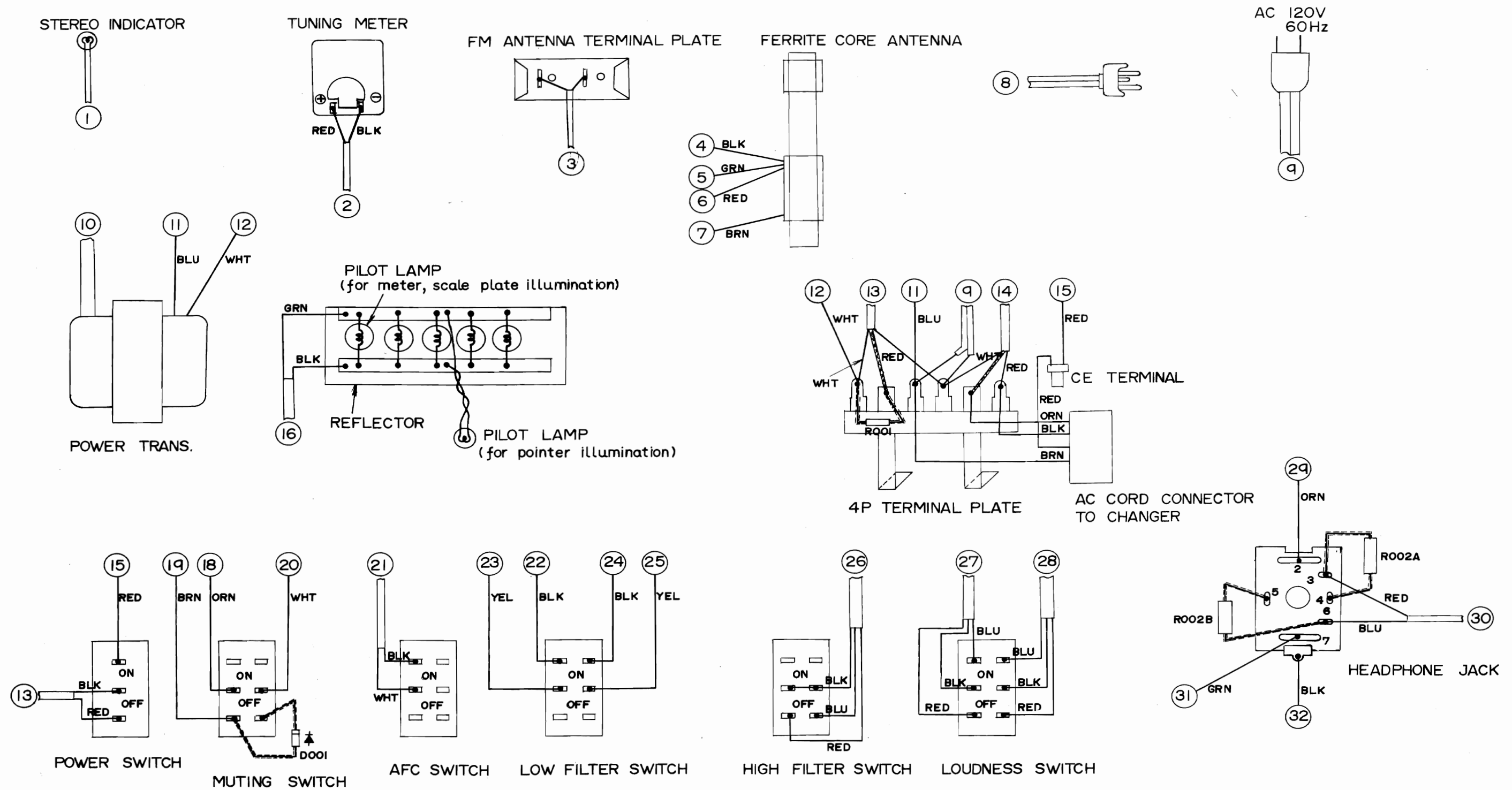
CIRCUIT BOARD DIAGRAM



SD-3210 (KI) (SM) S47.8.17 (Y)



WIRING DIAGRAM



Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
RESISTORS:					
R 001	0134477	Composition	R 412A, B	0137857	Carbon film
R 002A, B	0134367	Composition	R 413A, B	0137951	Carbon film
R 101	0114447	Carbon film	R 414A, B	0137905	Carbon film
R 102	0137861	Carbon film	R 415A, B	0170259	Carbon film
R 103	0137851	Carbon film	R 416A, B	0170255	Carbon film
R 104	0170231	Carbon film	R 417A, B	0170259	Carbon film
R 105	0137861	Carbon film	R 418A, B	0170275	Carbon film
R 106	0170251	Carbon film	R 419A, B	0170275	Carbon film
R 107	0170257	Carbon film	R 420A, B	0170255	Carbon film
R 108	0137851	Carbon film	R 421A, B	0170255	Carbon film
R 109	0170271	Carbon film	R 422A, B	0170277	Carbon film
R 121	0137953	Carbon film	R 423A, B	0170261	Carbon film
R 122	0137801	Carbon film	R 501A, B	0137765	Carbon film
R 151	0137807	Carbon film	R 502A, B	0137902	Carbon film
R 201	0137801	Carbon film	R 601	0111707	Oxide metal
R 202	0137851	Carbon film	PC 101	0186368	CR pack
R 203	0137851	Carbon film	PC 201	0186385	CR pack
R 204	0137851	Carbon film	PC 202	0186386	CR pack
R 205	0137801	Carbon film	RV 201	0151883	Semi variable
R 206	0137803	Carbon film	RV 202	0151888	Semi variable
R 207	0137954	Carbon film	RV 302	0151881	Semi variable
R 208	0170237	Carbon film	RV401A, B	0151444	Variable
R 209	0137855	Carbon film	RV402A, B	0151444	Variable
R 210	0137851	Carbon film	RV 403	0151423	Variable
R 211	0137807	Carbon film	RV404A, B	0151464	Variable
R 212	0114461	Carbon film	CF 201	5160211	Ceramic filter
R 213	0137904	Carbon film			
R 214	0137959	Carbon film			
R 215	0137959	Carbon film			
R 216	0137857	Carbon film			
R 217	0137855	Carbon film			
R 218	0170239	Carbon film			
R 219	0137861	Carbon film			
R 220	0170261	Carbon film			
R 221	0114521	Carbon film			
R 222	0137768	Carbon film			
R 224	0137812	Carbon film			
R 225	0137807	Carbon film			
R 303	0137859	Carbon film			
R 304	0137859	Carbon film			
R 305	0137859	Carbon film			
R 306	0170222	Carbon film			
R 307	0137808	Carbon film			
R 308	0170271	Carbon film			
R 309	0137901	Carbon film			
R 310	0137959	Carbon film			
R 311	0137959	Carbon film			
R 401A, B	0137855	Carbon film			
R 402A, B	0137911	Carbon film			
R 403A, B	0137951	Carbon film			
R 404A, B	0137852	Carbon film			
R 405A, B	0137908	Carbon film			
R 406A, B	0137717	Carbon film			
R 407A, B	0137951	Carbon film			
R 408	0134372	Carbon film			
R 409	0137851	Carbon film			
R 410	0137851	Carbon film			
R 411	0137851	Carbon film			

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
VR201	5340022	Varistor	8781438		Tapping screw-3mmφ×8mm (2 req'd) for scale plate mounting
D 601	5330101	Diode	6462572		Scale plate
D 602	5330101	Diode	6710493		Indicator
D 603	5330101	Diode	7662641		Rubber plate for pilot lamp (stereo)
D 604	5330101	Diode	5760345		Pilot lamp for stereo lamp
TRANSFORMERS:					
T 101	0318543	FM balun	6392491		Pointer assembly
T 102	5142021	FM IFT	7666741		Rubber plate for pilot lamp (Pointer)
T 103	5142023	FM IFT	5760586		Pilot lamp for pointer assembly illumination
T 152	5120174	MW (AM) oscillator	6714211		Nylon rivet-3mmφ for reflector plate mounting
T 153	5132002	AM IFT	7722332		Reflector plate } (5 req'd) for scale plate illumination
T 201	0329606	FM IFT	5760711		Pilot lamp illumination
T 202	0322116	AM IFT	7257013		Antenna holder
T 203	0322137	AM IFT	8781438		Tapping screw-3mmφ×8mm (2 req'd) for antenna supporter mounting
T 204	0326026	Discriminator	0638351		Wedge for ferrite-core antenna
T 205	0326028	Discriminator	5112552		Ferrite-core antenne
T 206	0322120	AM IFT	5670452		Headphone jack
T 207	5142022	FM IFT	5680682		FM terminal plate
COILS:					
L 101	0318530	FM trap	8781438		Tapping screw-3mmφ×8mm (4 req'd) for radiator plate mounting
L 102	5123231	FM antenna	7255601		Radiator plate
L 103	5123119	FM antenna	8781438		Tapping screw-3mmφ×8mm (2 req'd) for radiator plate mounting
L 104	5123271	FM trap	5680823		4P terminal plate
L 105	5126007	FM oscillator	8781438		Tapping screw-3mmφ×8mm (2 req'd) for 4P terminal plate mounting
L 304	5120187	19KHz tuner	0043793		Bushing for power cord
L 305	5120189	38KHz tuner	5210333		Power transformer
for Final assembly					
6128372		Front case assembly	8781638		Tapping screw 4mmφ×8mm (2 req'd) for power transformer mounting
6272022		Knob (BASS, TREBLE, BALANCE, VOLUME and SPEAKER)	5552091		Tuning meter
6274171		Knob (TUNING)	7667604		Pannel sheet for tuning meter
6274173		Knob (FUNCTION)	7533103		Shaft
6310162		Spring washer (7 req'd) for knob mounting	7532345		Shaft (B)
6265463		Knob-9 (POWER, MUTING, AFC, LOW FILTER, HIGH FILTER and LOUDNESS)	7532338		Shaft
7736801		Spacer for knob	7230903		"E" ring
6128181		Cabinet bottom plate	7723061		Terminal cover for 4P terminal plate
7780143		Screw with washer (6 req'd) for chassis bottom Plate mounting	6341862		Pulley
6128171		Cabinet	6316232		Spring for pulley
8711616		Pan head screw-4mmφ×16mm } (2 req'd) for lock washer cabinet mounting	5741042		AC cord
0040045			5741322		Phono cable
6725264		Dust cover	5741666		Power cord (BROWN) 8Feet
6191072		Back cover	7197661		Cord holder } for power cord
8788412		Tapping screw-3mmφ×12mm (3 req'd) for button cover mounting	0043791		Cord cover } for power cord
6170381		Pin jack cover	6724792		U joint
5598531		Magnetic cartridge	5631511		Power switch
for Chassis assembly					
6715061		Rollar-13mmφ	8721406		Flat screw-3mmφ×6mm (12 req'd) for slide switch mounting
7230902		"E" ring-3mmφ (6 req'd) for roller	5631811		Lever slide switch for muting AFC, low filter, high filter and loudness
7253531		Switch bracket	5720263		Fuse (4A)
8781438		Tapping screw-3mmφ×8mm (2 req'd) for switch bracket mounting	5650481		3P socket (TONE↔LOUDNESS) ℓ=250
6371051		Flywheel assembly	5650483		3P socket (TONE↔HI FILTER) ℓ=150
8711404		Pan head screw-3mmφ×4mm (3 req'd) for flywheel bracket mounting	5650619		4P socket (TONE↔AF) ℓ=50
for P. C. B. assembly					
P305	~309	5660623	5P plug		
P101	~102				
P204	~207	0542109	Plug		
P301	~304				
		5680692	Earth terminal		

MODEL SD-3210 SERVICE MANUAL

Symbol No.	Stock No.	Description	Symbol No.	Stock No.	Description
	8781436	Tapping screw- $3\text{mm}\phi\times 6\text{mm}$ (4 req'd) for radiator plate mountina		5610633	Rotary switch for function
	8781442	Tapping screw- $3\text{mm}\phi\times 12\text{mm}$ (4 req'd) for IC mounting		5660621	3P plug
	7255602	Radiator plate		5660622	4P plug
	5720221	Fuse holder	P201	0542109	GT pin
	0542109	Plug	~203	5660621	3P plug
	5660621	3P plug		6152751	Speaker box
	5660622	4P piug		7772452	Nut (16 req'd) for speaker mounting
	7263151	Radiafor plate		5411431	Speaker- 20cm
	0541209	GT pin		5410621	Speaker- 6.5cm
	5671531	Jack pin		8775413	Oval wood screw- $3.1\text{mm}\phi\times 13\text{mm}$ (16 rep'd) for bottom cover mounting
	5680951	Screw terminal		5742811	Speaker cord
	5610521	Rotary switch for speaker			



Head Office : 5,1-chome, Marunouchi, Chiyoda-ku, Tokyo
 Tel. Tokyo (212) 1111 (80 lines)
 Cable Address : "HITACHY" TOKYO
 Codes : All Codes Used

Printed in Japan
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