

ADDITIONAL

 PIONEER

Service Manual

AM/FM STEREO RECEIVER

SX-690

KU

SX-680

KC
S
S/G

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MODEL SX-690/KU

Although the basic features of models SX-680/KU and SX-690/KU are the same, there are a few minor changes in design. Please refer to the SX-680/KU service manual with exception of this supplement.

CONTRAST OF MISCELLANEOUS PARTS

Part Name	Part No.	
	SX-680/KU	SX-690/KU
Front panel assembly	ANB-596	ANB-625
Dial panel	AAG-158	AAG-172
Packing case	AHD-551	AHD-578
Operating instructions	ARB-268	ARB-291

MODEL SX-680/KC, S, S/G

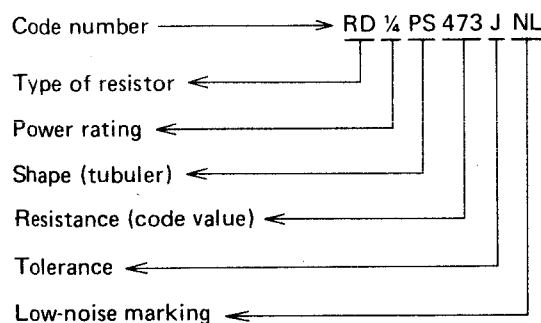
MODEL SX-680 COMES IN FOUR VERSIONS DISTINGUISHED AS FOLLOWS:

Type	Voltage	Remarks
KU	120V only	U.S.A. model
KC	120V only	Canada model
S	110V, 120V, 220V and 240V (Switchable)	General export model
S/G	110V, 120V, 220V and 240V (Switchable)	U.S. Military model

The variations in safety standards in different countries has also necessitated variations in power supply and circuit component specifications. Furthermore, the difference in the pre-emphasis characteristics employed by FM broadcasting stations has also meant variations in de-emphasis circuit time constant.

RESISTANCE VALUE CODES

Code numbers of resistors used in Pioneer equipment are expressed in the following way:—



Furthermore, in the list of parts found in the Service Manual, the resistance (code value) part of the above code number is expressed as □□□ or □□□□.

Resistors included in the Service Manual list of parts

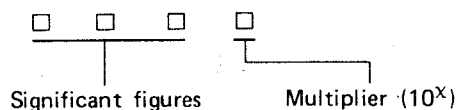
Ex. RD 1/4 PS □□□ JNL

When ordering resistor components, first ascertain the actual resistance value from the circuit diagram, and then convert it into code no. form as shown in the following examples.

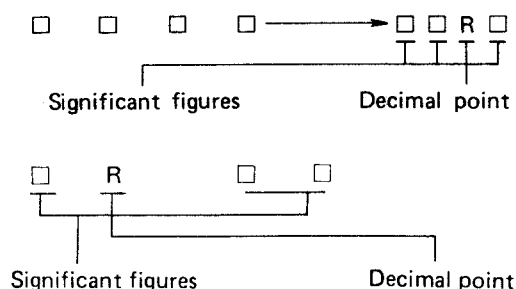
For further details on code numbers, refer to "Tuning Fork" VOL. 1.

Ex. 1 For □□□□ Codes

* General resistors



* Resistors with fractional values

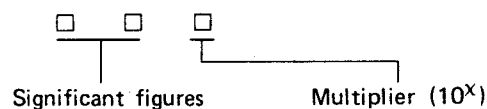


Ex. 1

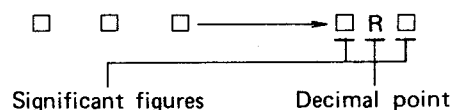
Nominal resistance (Ω)	Significant figure (three figures)	Multiplier (10 ^x)	Resistance value code
5.1	510	.....	5R10
5.62	562	.....	5R62
10	100	.....	10R0
22.5	225	.....	22R5
110	110	x10 ⁰	1100
1k (1000)	100	x10 ³	1001
1.56k (1560)	156	x10 ³	1561
10k (10000)	100	x10 ⁴	1002
33.6k (33600)	336	x10 ⁴	3362
112k (112000)	112	x10 ⁵	1123
1M (1000000)	100	x10 ⁶	1004
1.56M (1560000)	156	x10 ⁶	1564

Ex. 2 For □□□ Codes

* General resistors



* Resistors with fractional values



Ex. 2

Nominal resistance (Ω)	Significant figure (two figures)	Multiplier (10 ^x)	Resistance value code
0.5	05	.....	0R5
1.5	15	.....	1R5
1	01	x10 ⁰	010
22	22	x10 ⁰	220
330	33	x10 ¹	331
1k (1000)	10	x10 ³	102
5.6k (5600)	56	x10 ³	562
68k (68000)	68	x10 ³	683
820k (820000)	82	x10 ⁴	824
1M (1000000)	10	x10 ⁶	105
2.2M (2200000)	22	x10 ⁶	225

CONTRAST OF MISCELLANEOUS PARTS
P. C. BOARD ASSEMBLIES

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
	Main board assembly	GWM-117	GWM-118	GWM-119	GWM-119
	De-emphasis switch assembly	GWX-180	GWX-180	GWX-183	GWX-183
	FM front-end	GWB-101	GWB-103	GWB-103	GWB-103
	Tape assembly	GWX-186	GWX-186	GWX-188	GWX-188
	Fuse holder assembly	GWX-178	GWX-187	.....	.....
	Terminal assembly	.....	.....	GWX-201	GWX-201

TRANSFORMER

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
T1	Power transformer	ATT-511	ATT-516	ATT-520	ATT-520

SWITCHES

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
S9	Push switch (POWER)	ASG-508 (ASG-503)	ASG-503	ASG-507 (ASG-501)	ASG-507 (ASG-501)
S10	Plug in selector	.....	.....	AKR-031	AKR-031

FUSES

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
FU1	Fuse 4A (primary: 110, 120V) Fuse 2A (primary: 220, 240V)	AEK-100	AEK-100	(AEK-100) AEK-103	AEK-100 (AEK-103)
FU2	Fuse 1.5A	AEK-104	AEK-104	.....	.....
FU5	Fuse 1A	.....	AEK-106	.....	.....
FU6	Fuse 1A	.....	AEK-106	.....	.....

CAPACITORS

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
C1	Ceramic 0.01 250V Ceramic 0.01 125V	ACG-001	 ACG-014	ACG-001	ACG-001
C2	Ceramic 0.01 250V Ceramic 0.01 125V	 ACG-003	 ACG-014	ACG-001	ACG-001

OTHERS

Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
	AC power cord	ADG-023	ADG-005	ADG-016	ADG-016
	AC socket (AC OUTLETS)	AKP-004	AKP-004	AKP-019	AKP-019
	Capacitor cover (for C1)	AEC-294	AEC-365	AEC-099	AEC-099
	Capacitor cover (for C2)	AEC-279	AEC-365	AEC-099	AEC-099

PACKING AND FURNISHED PARTS

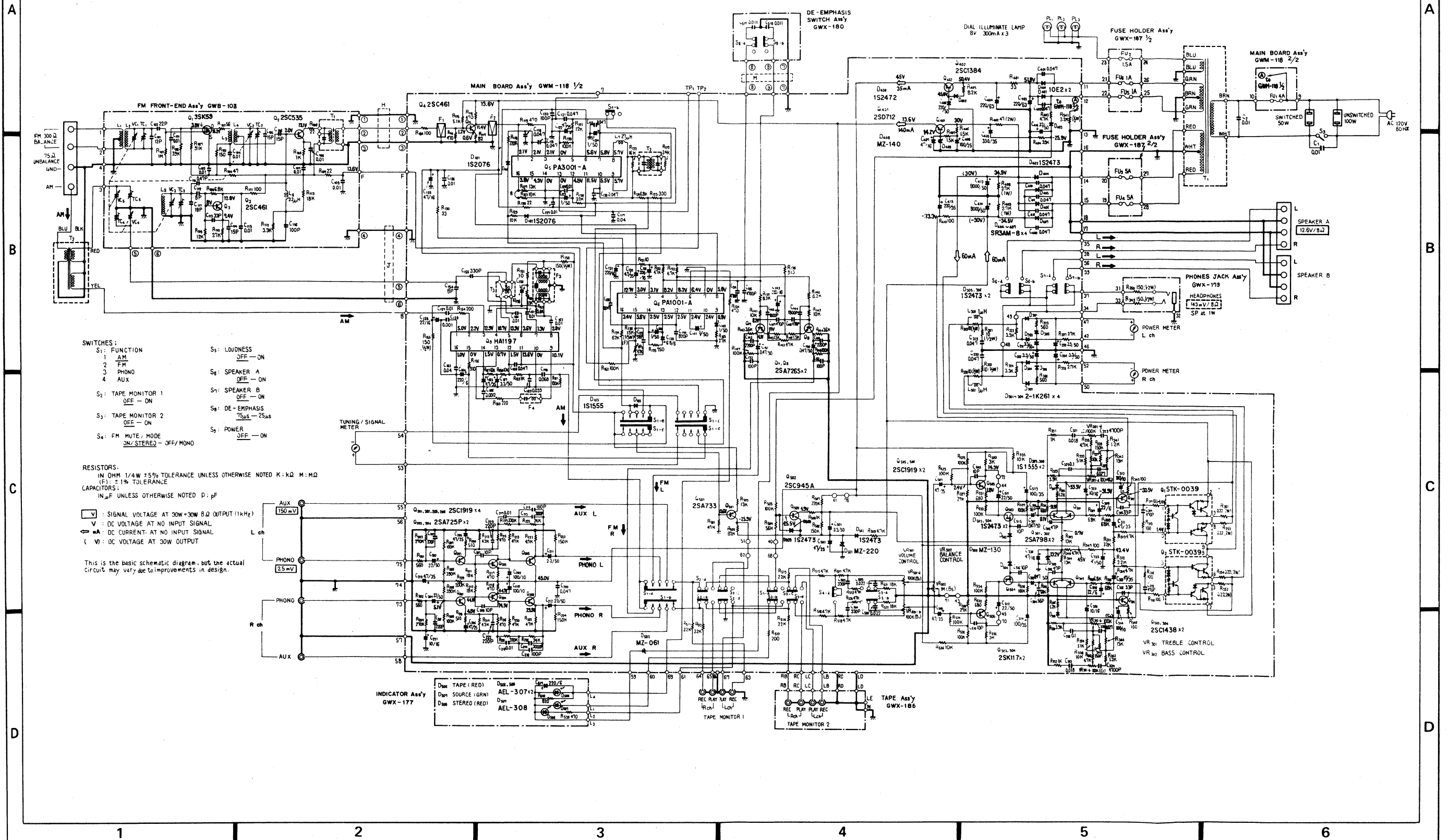
Symbol	Part Name	Part No.			
		KU type	KC type	S type	S/G type
	Packing case	AHD-551	AHD-557	AHD-551	AHD-558
	Cardboard spacer	.....	.....	.....	AHG-095
	Operating instructions	ARB-268	ARB-268	ARB-280	ARB-280
	Fuse 4A	.....	.....	AEK-100	AEK-100
	Fuse 2A	.....	.....	AEK-103	AEK-103
	Vinyl pouch (for fuses)	.....	.....	E11-033	E11-033

FM FRONT-END (GWB-103)

The circuitry of the FM front-end GWB-103 is the same as the GWB-101 (for KU type), with exception of the part installation method.

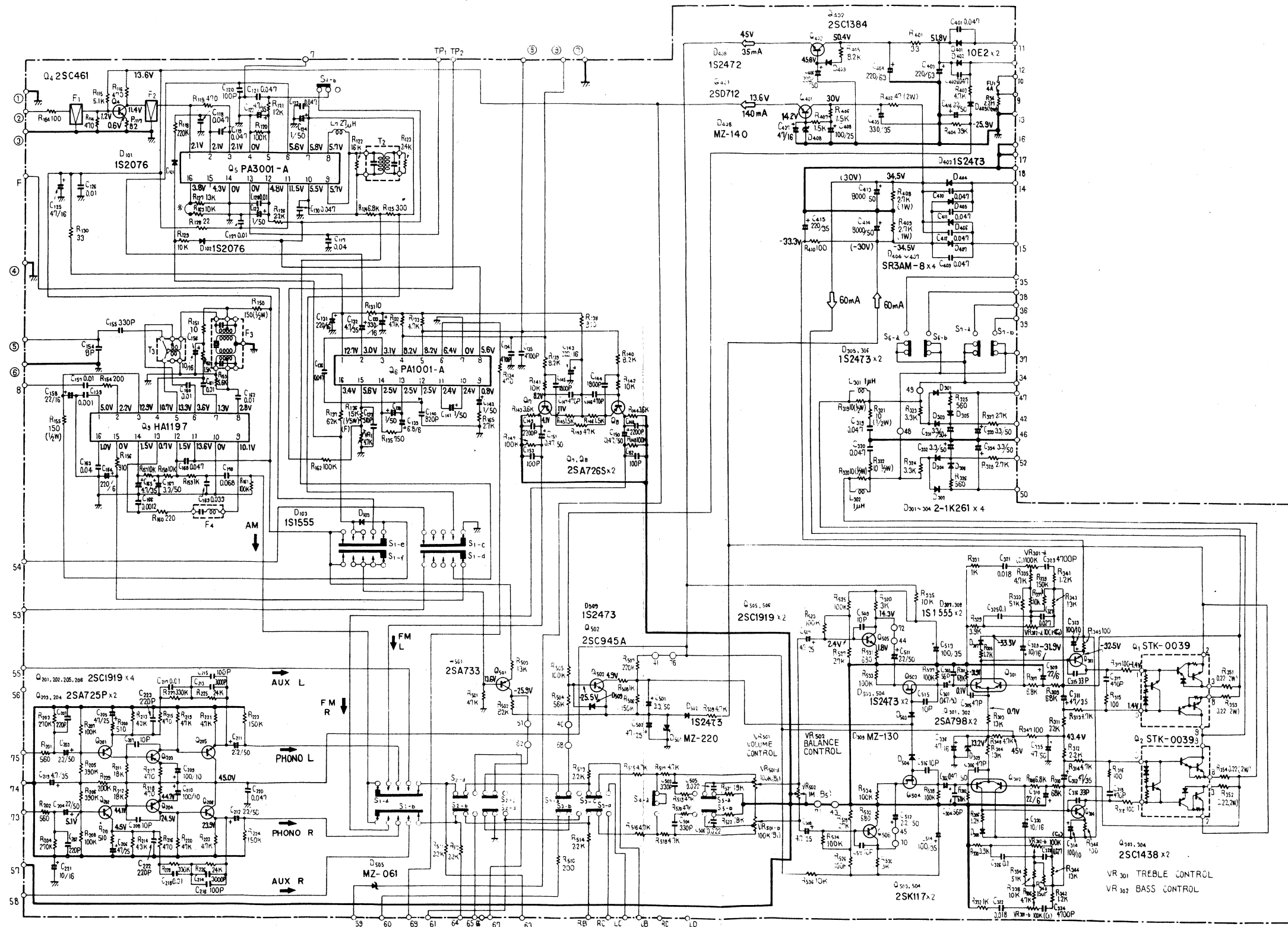
MODEL SX-680/KC SCHEMATIC DIAGRAM FOR KC TYPE

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.



SX-680/KC

MAIN BOARD ASSEMBLY (GWM-118, FOR KC TYPE)





SX-680/KC

Parts List of Main Board Assembly (GWM-118)

COILS AND FILTERS

Part No.	Symbol & Description		Part No.	Symbol & Description	
ATF-013	F1, F2	FM ceramic filter	CEA 221P 6	C164	
ATF-034	F3	AM ceramic filter	CEA 470P 25	C502	
ATF-038	F4	455 kHz BPF	CEA 100P 16	C221, C156	
			CEA 331P 35	C405	
ATE-040	T2	FM DET	CKDYF 403Z 50	C117, C163	
ATB-013	T3	AM osc. coil	CKDYF 103Z 50	C126—C128, C157, C160—C162	
			CEA 221P 16	C131, C143	
ATH-022	L7	Micro inductor	CEA 331P 16	C133	
			CQMA 473K 50	C136	

SWITCHES

Part No.	Symbol & Description	
ASE-107	S1	Slide rotary (FUNCTION)
ASG-140	S2, S3	Dual push (TAPE MONITOR 1, 2)
ASG-138	S4, S5	Push (MODE/FM MUTE, LOUDNESS)
ASG-139	S6, S7	Dual push (SPEAKERS)

CAPACITORS

Part No.	Symbol & Description	
CCDSL 221K 50	C201, C202, C222, C223	
CEANL 2R2P 50	C203, C204, C211, C212, C511, C512	
CEANL R47M 50	C301, C302	
CEANL 470P 25	C205, C206	
CCDSL 100F 50	C207, C208, C509, C510, C515, C516	
CEA 101P 10	C209, C210, C313, C314	
CKDYA 302J 50	C213, C214	
CCDSL 101K 50	C215, C216, C120, C152, C153	
CKDYA 103J 50	C217, C218	
CEA 4R7P 35	C219, C122, C132, C165	
CKDYF 473Z 50	C220, C319, C320, C118, C119, C121, C123	
CKDYF 473Z 50	C130, C168	
CQMA 472J 50	C134, C135	
(CKDYA 472J 50)		
CCDSL 560K 50	C303, C304	
CCDSL 470K 50	C305, C306	
CEA 220P 6	C309, C310	
CEA 470P 35	C311, C312	
CCDSL 330K 50	C315, C316	
CCDSL 471K 50	C317, C318	
CQMA 183J 50	C321, C322	
CQMA 472J 50	C323, C324	
CQMA 104J 50	C325, C326	
CQMA 273J 50	C327, C328	
CEANL 100P 16	C329, C330	
CEA 3R3P 50	C331—C334, C167, C501	
CEA 470P 16	C336, C125, C407	
CEA 470P 50	C335	

Part No.	Symbol & Description	
CEA 221P 6	C164	
CEA 470P 25	C502	
CEA 100P 16	C221, C156	
CEA 331P 35	C405	
CKDYF 403Z 50	C117, C163	
CKDYF 103Z 50	C126—C128, C157, C160—C162	
CEA 221P 16	C131, C143	
CEA 331P 16	C133	
CQMA 473K 50	C136	
CQSH 511J 50	C137	
CEANL 010M 50	C138, C141	
CSZA 6R8M 6	C139	
CKDYB 821K 50	C140	
CKDYB 182K 50	C144, C145	
CKDYB 471K 50	C146, C147	
CKDYB 222K 50	C148, C149	
CCDXL 080F 50	C154	
CEA 220P 16	C158	
CKDYB 102K 50	C159	
CKDYB 122K 50	C166	
CQMA 683K 50	C170	
ACG-009	C401, C402, C409—C412	Ceramic 0.047/150V
CEA 221P 63	C403, C404	
CEA 221P 35	C415	
CEA 221P 50	C406	
CEA 101P 25	C408	
ACH-082	C413, C414	Electrolytic 8000/50V
CQSH 331J 50	C155	
CQMA 333K 50	C169	
CEA 2R2P 50	C416	
CCDSL 331K 50	C503, C504	
CQMA 223J 50	C505, C506	
CEANL 4R7P 25	C507, C508	
CEA 101P 35	C513, C514	
CEA 010P 50	C124, C129, C142	
CEA 4R7P 50	C150, C151	

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description	
C92-051	VR1	Semi-fixed 4.7k-B
ACV-186	VR301, VR302	Variable (TREBLE, BASS)
ACV-161	VR501	Variable (VOLUME)
ACT-019	VR502	Variable (BALANCE)

Part No.	Symbol & Description	
RD%PS □□□ J	R114—R135, R137—R149, R151—R154	
RD%PS □□□ J	R156—R163, R165	
RD%PS □□□ J	R201—R204, R209—R229, R301—R314	
RD%PS □□□ J	R323—R346, R348	
RD%PS □□□ J	R403—R407, R501—R538	
RD%PS □□□ JNL	R205—R208	
RD%PS □□□ J	R150, R155, R319—R322	
RD%VS □□□ J	R164	
RN ¹ / ₄ SQ □□□□ F	R136	
ACN-030	R351—R354 Wire wound 0.22/2W	
RF%PS □□□ J	R401, R410, R315—R318, R347	
RS2P □□□ J	R402	
RS1P □□□ J	R408, R409	
ACN-029	R541 Carbon composition 2.2M/1/2W	

SEMICONDUCTORS

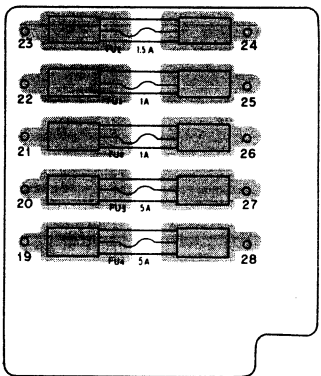
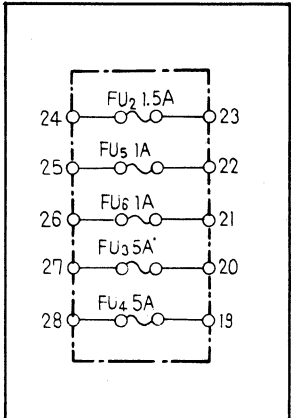
Part No.	Symbol & Description	
2SC461-B or C	Q4	
PA3001-A	Q5	
PA1001-A	Q6	
2SA726S-G or F	Q7, Q8	
(2SA750-E or F)		
HA1197	Q9	
2SC1919-G or F	Q201, Q202, Q205, Q206, Q505, Q506	
(2SC1400-E)		
2SA725P-F or G	Q203, Q204	
2SA798-F or G	Q301, Q302	
2SC1438-V or B	Q303, Q304	
2SD712-C or D	Q401	
(2SD313-D or E)		
2SC1384-Q or R	Q402	
2SA733-Q or R	Q501	
2SC945A-Q or R	Q502	
2SK117-GR or Y	Q503, Q504	
1S2076	D101, D102	
(1S2473)		
1S1555	D103	
(1S2473)		
1S1555	D307, D308	
1S2473	D403, D305, D306, D502—D504, D509	
2-1K261	D301—D304	
MZ-130	D309	
(WZ-130)		
10E2	D401, D402	
(SIB01-02)		
SR3AM-8	D404—D407	
(30D4)		
MZ-140	D408	
(WZ-140)		
1S2472	D409	
(1S1554)		

Part No.	Symbol & Description
MZ-220	D501
(WZ-220)	
MZ-061	D505
(WZ-061)	

OTHERS

Part No.	Symbol & Description
AKR-013	Fuse clip
AKH-014	IC socket
ANH-203	Heat sink
ABN-024	Washerfaced nut
ABN-047	Union nut

FUSE HOLDER ASSEMBLY
(GWX-187, FOR KC TYPE)



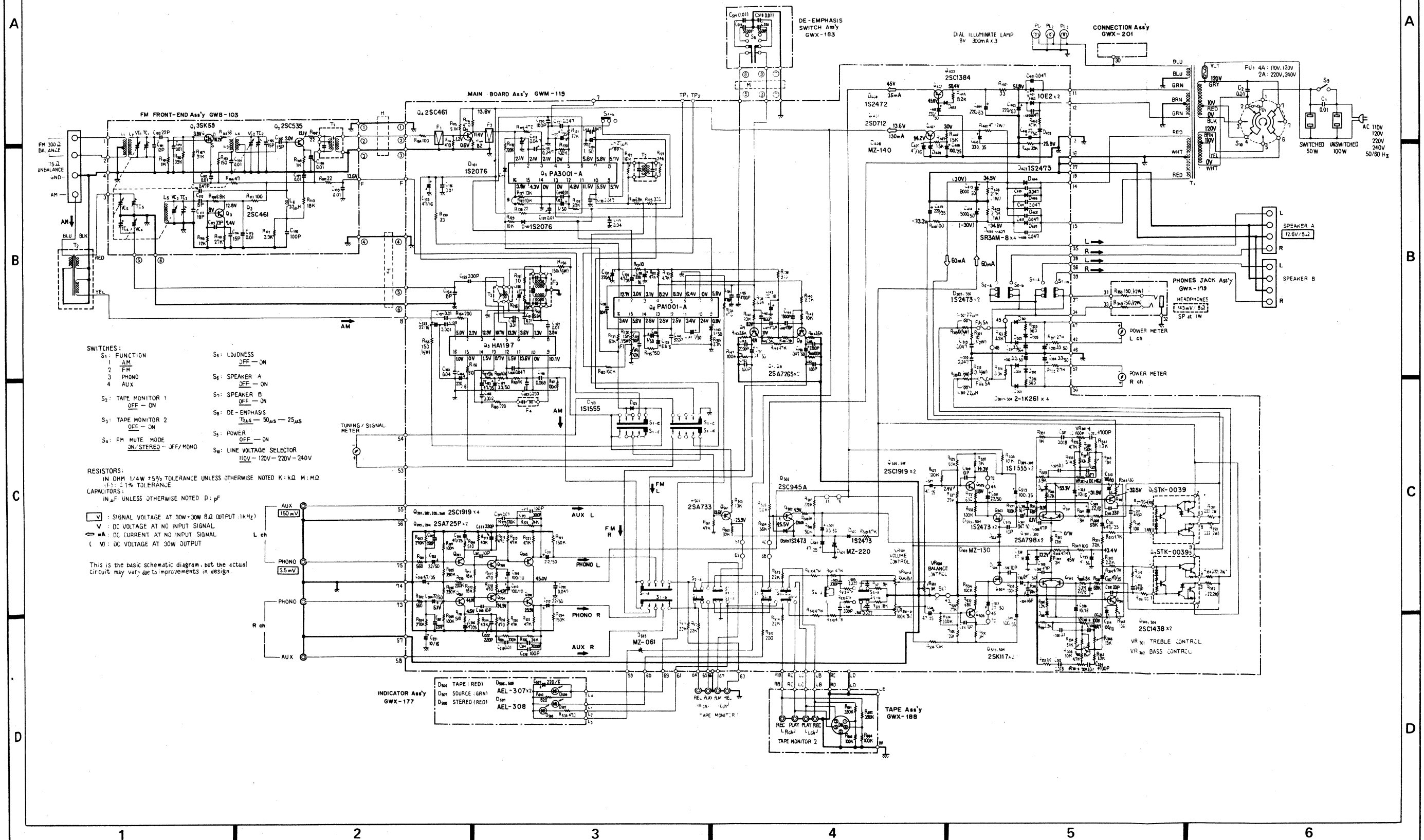
Parts List of Fuse Holder Assembly (GWX-187)

Part No.	Description
AKR-013	Fuse clip

MODEL SX-680/S, S/G

SCHEMATIC DIAGRAM FOR S, S/G TYPES

NOTE:
The indicated semiconductors are representative ones only. Other alternative semiconductors may be used and are listed in the parts list.



SX-680/S, S/G

Parts List of Main Board Assembly (GWM-119)

COILS AND FILTERS

Part No.	Symbol & Description		Part No.	Symbol & Description	
ATF-013	F1, F2	FM ceramic filter	CEA 221P 6	C164	
ATF-034	F3	AM ceramic filter	CEA 470P 25	C502	
ATF-038	F4	455 kHz BPF	CEA 100P 16	C221, C156	
			CEA 331P 35	C405	
ATE-040	T2	FM DET	CKDYF 403Z 50	C117, C163	
ATB-013	T3	AM osc. coil			
			CKDYF 103Z 50	C126—C128, C157, C160—C162	
ATH-022	L7	Micro inductor	CEA 221P 16	C131, C143	
			CEA 331P 16	C133	
			CQMA 473K 50	C136	
			CQSH 511J 50	C137	

SWITCHES

Part No.	Symbol & Description		Part No.	Symbol & Description	
ASE-107	S1	Slide rotary (FUNCTION)	CEANL 010M 50	C138, C141	
ASG-140	S2, S3	Dual push (TAPE MONITOR 1, 2)	CSZA 6R8M 6	C139	
ASG-138	S4, S5	Push (MODE/FM MUTE, LOUDNESS)	CKDYB 821K 50	C140	
			CKDYB 182K 50	C144, C145	
ASG-139	S6, S7	Dual push (SPEAKERS)	CKDYB 471K 50	C146, C147	

CAPACITORS

Part No.	Symbol & Description		Part No.	Symbol & Description	
CCDSL 221K 50	C201, C202, C222, C223		CQMA 683K 50	C170	
CEANL 2R2P 50	C203, C204, C211, C212, C511, C512		ACG-009	C401, C402, C409—C412	
CEANL R47M 50	C301, C302			Ceramic	0.047/150V
CEANL 470P 25	C205, C206		CEA 221P 63	C403, C404	
CCDSL 100F 50	C207, C208, C509, C510, C515, C516		CEA 221P 35	C415	
CEA 101P 10	C209, C210, C313, C314		CEA 221P 50	C406	
CKDYA 302J 50	C213, C214		CEA 101P 25	C408	
(CQMA 302J 50)			ACH-082	C413, C414	Electrolytic
CCDSL 101K 50	C215, C216, C120, C152, C153		CQSH 331J 50	C155	8000/50V
CKDYA 103J 50	C217, C218		CQMA 333K 50	C169	
(CQMA 103J 50)					
CEA 4R7P 35	C219, C122, C132, C165		CEA 2R2P 50	C416	
CKDYF 473Z 50	C220, C319, C320, C118, C119, C121, C123		CCDSL 331K 50	C503, C504	
CKDYF 473Z 50	C130, C168		CQMA 223J 50	C505, C506	
CCDSL 560K 50	C303, C304		CEANL 4R7P 25	C507, C508	
CCDSL 470K 50	C305, C306		CEA 101P 35	C513, C514	
CEA 220P 6	C309, C310		CEA 010P 50	C124, C129, C142	
CEA 470P 35	C311, C312		CEA R47P 50	C150, C151	
CCDSL 330K 50	C315, C316				
CCDSL 471K 50	C317, C318				
CQMA 183J 50	C321, C322				
CQMA 472J 50	C323, C324, C134, C135				
CQMA 104J 50	C325, C326				
CQMA 273J 50	C327, C328				
CEANL 100P 16	C329, C330				
CEA 3R3P 50	C331—C334, C167, C501				
CEA 470P 16	C336, C125, C407				
CEA 470P 50	C335				

RESISTORS

Part No.	Symbol & Description	
C92-051	VR1	Semi-fixed 4.7k-B
ACV-186	VR301, VR302	
		Variable (TREBLE, BASS)
ACV-161	VR501	Variable (VOLUME)
ACT-019	VR502	Variable (BALANCE)

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

Part No.	Symbol & Description		Part No.	Symbol & Description	
RD¼PS □□□ J	R114—R135, R137—R149, R151—R154		SR3AM-8	D404—D407	
RD¼PS □□□ J	R156—R163, R165		(30D4)		
RD¼PS □□□ J	R201—R204, R209—R229, R301—R314		MZ-140	D408	
RD¼PS □□□ J	R323—R346, R348		(WZ-140)		
RD¼PS □□□ J	R403—R407, R501—R538		1S2472	D409	
			(1S1554)		
RD¼PS □□□ JNL	R205—R208				
RD¼PS □□□ J	R150, R155, R319, R320		MZ-220	D501	
RD¼VS □□□ J	R164		(WZ-220)		
RN¼SQ □□□□ F	R136		MZ-061	D505	
ACN-030	R351—R354 Wire wound 0.22/2W		(WZ-061)		
RF¼PS □□□ J	R401, R410, R315—R318, R347				
RS2P □□□ J	R402				
RS1P □□□ J	R408, R409				
RF¼PS □□□ J	R321, R322				

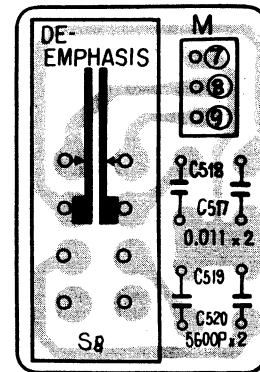
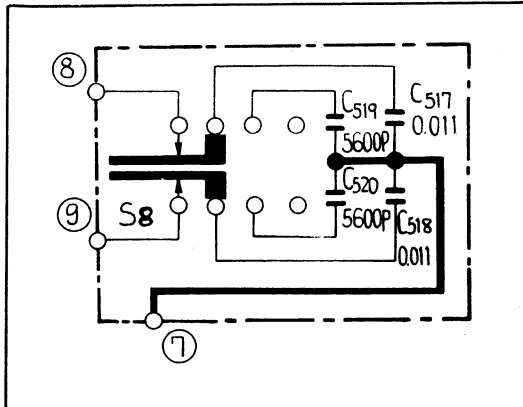
SEMICONDUCTORS

Part No.	Symbol & Description	
2SC461-B or C	Q4	
PA3001-A	Q5	
PA1001-A	Q6	
2SA726S-G or F	Q7, Q8	
(2SA750-E or F)		
HA1197	Q9	
2SC1919-G or F	Q201, Q202, Q205, Q206, Q505, Q506	
(2SC1400-E)		
2SA725P-F or G	Q203, Q204	
2SA798-F or G	Q301, Q302	
2SC1438-V or B	Q303, Q304	
2SD712-C or D	Q401	
(2SD313-D or E)		
2SC1384-Q or R	Q402	
2SA733-Q or R	Q501	
2SC945A-Q or R	Q502	
2SK117-GR or Y	Q503, Q504	
(2SK34-C or D)		
1S2076	D101, D102	
(1S2473)		
(1S1555)		
1S1555	D307, D308, D103	
(1S2473)		
1S2473	D305, D306, D403, D502—D504, D509	
2-1K261	D301—D304	
MZ-130	D309	
(WZ-130)		
10E2	D401, D402	
(SIB01-02)		

OTHERS

Part No.	Description
AKR-013	Fuse clip
AKH-014	IC socket
ANH-203	Heat sink
ABN-024	Washerfaced nut
ABN-047	Union nut

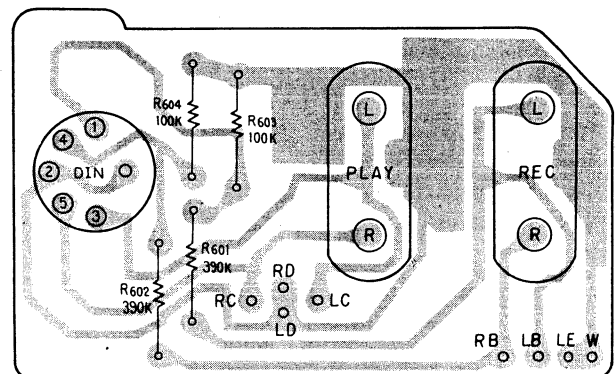
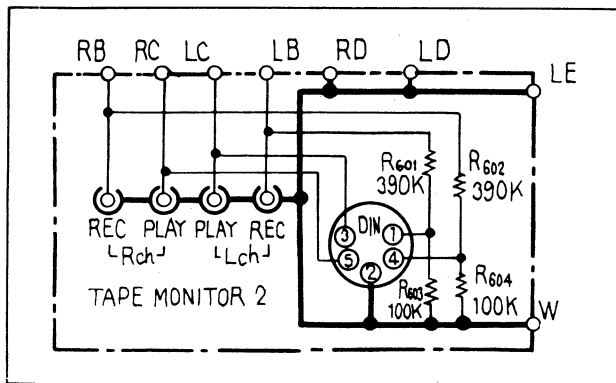
DE-EMPHASIS SWITCH ASSEMBLY
(GWX-183, FOR S, S/G TYPES)



Parts List

Part No.	Symbol & Description
CQMA 113J 50	C517, C518
CQMA 562J 50	C519, C520
ASH-017	S8 Slide switch

TAPE ASSEMBLY (GWX-188)



Parts List

Note: When ordering resistors, convert the resistance value into code form, and then rewrite the part no. as before.

RESISTORS

Part No.	Symbol & Description
RD¼PS □□□J	R601 - R604

OTHERS

Part No.	Description
AKB-045	Terminal (TAPE 2)
AKP-011	Connector socket (REC/PLAY)