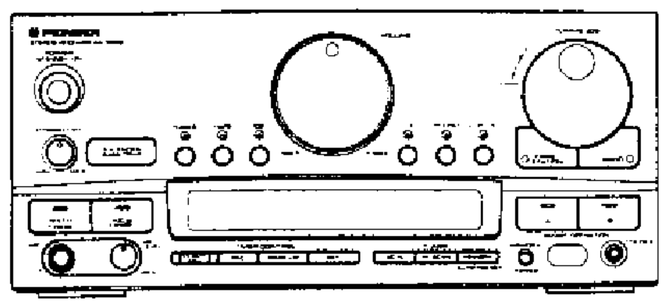
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
ARP2398

STERO RECEIVER

SX-P920
SX-P720

SX – P920 AND SX – P720 HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	SX – P920	SX – P720		
HE	○	○	AC220V – 230V, 240V (Switchable)*	
HB	○	○	AC220V – 230V, 240V (Switchable)*	
HEWZI	○	○	AC220V – 230V, 240V (Switchable)*	
SD	○	○	AC110V, 120V – 127V, 220V, 240V (Switchable)	
KUC	—	○	AC120V only	

CONTENTS

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2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:

- *The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 PARTS LIST OF SX – P920/HE

Mark	No.	Description	Parts No.
	1	KNOB (VOLUME)	AAB1249
	2	KNOB (JOG)	AAB1251
	3	KNOB (P.BASS LEVEL, MIC LEVEL)	AAB1253
	4	FUNCTION BUTTON (TUNER, TAPE, CD, LD, PHONO, VCR/DAT)	AAD2067
	5	BAND BUTTON (FREQ. STATION, BAND)	AAD2069
	6	POWER BUTTON	AAD2070
	7	P-BASS BUTTON (2) ASSY (SUPER P. BASS, VOCAL CANCEL)	AAD2074
	8	AI BUTTON ASSY (SMART OPERATION, MEMORY)	AAD2080
	9	FUNCTION LENS	AAK2206
	10	FILTER (REMOCON)	AAK2208
	11	DECORATIVE PLATE (TUNER)	AAK2255
◉	12	MAIN ASSEMBLY	AWZ3719
◉	13	SUB. POWER ASSEMBLY	AWZ3727
	14	SCREW	ABA – 258
	15	SCREW (STEEL)	ABA1095
	16	NUT	ABN1016
⚠	17	AC POWER CORD	ADG1019
	18	RUBBER SHEET	AEB1111
	19	BINDER	AEC – 826
	20	STRAIN RELIEF	AEC – 882
	21	SPACER	AEC1236
	22	PCB SPACER (3 × 8)	AEC1371
	23	PCB SPACER (3 × 12)	AEC1372
	24	.....	
◉	25	FR. AMP ASSEMBLY	AWZ3734
	26	FRONT PAD	AHA1453
	27	REAR PAD	AHA1454
	28	PACKING CASE	AHD2179
	29	PACKING SHEET	AHG1093
	30	MIC ASSEMBLY	AWZ3736
	31	FRONT PANEL ASSY	AMB1874
	32	PCB MOULD	AMR2115
	33	CHASSIS	ANA1155
	34	REAR PANEL	ANC1777
	35	BONNET (FE)	ANE1309
	36	HEAT SINK	ANH1352
	37	SHIELD BOX	ANK1179
	38	OPERATING INSTRUCTIONS (German, Italian)	ARC1305
	39	OPERATING INSTRUCTIONS (English, French, German, Italian)	ARC1306
	40	OPERATING INSTRUCTIONS (English, French)	ARE1211
	41	HEAD. P ASSEMBLY	AWZ3737
	42	CONNECT ASSEMBLY	AWZ3739
	43	TUNER ASSEMBLY	AWE1226
◉	44	DISPLAY ASSEMBLY	AWZ3705
◉	45	VR ASSEMBLY	AWZ3708
	46	DC MOTOR	AXM1013
	47	SCREW	BBZ30P060FZK
	48	SCREW	BBZ30P080FZK
	49	SCREW	BBZ40P060FZK
	50	SCREW	BPZ26P080FMC
	51	NUT	NK90FUC
	52	SCREW	PPZ50P100FZK
	53	FOOT (RUBBER)	REC – 434
	54	SCREW	ABA1024
	55	SCREW	VBZ30P160FMC
⚠	56	FUSE (T1.6A/250V, FU51)	AEK – 510
	57	FFC (J27)	ADD1100
⚠	58	POWER TRANSFORMER (T1)	ATS1378
◉	59	REGULATOR ASSEMBLY	AWZ4009

;T

ster Spare Parts List.
f the part. Therefore, when replacing,

al or they may be unavailable.

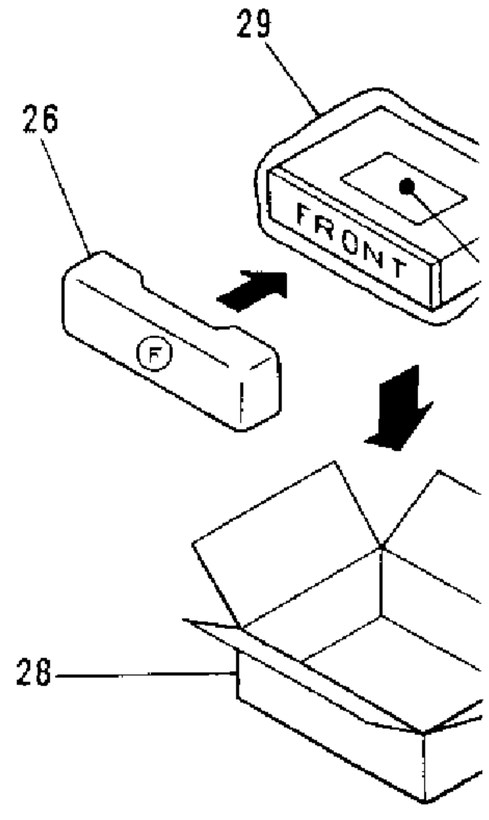
n	Parts No.
K	ANH1352
)X	ANK1179
'G INSTRUCTIONS alian)	ARC1305
'G INSTRUCTIONS ench, German,	ARC1306
'G INSTRUCTIONS ench)	ARE1211
SSEMBLY	AWZ3737
ASSEMBLY	AWZ3739
SEMBLY	AWE1226
ASSEMBLY	AWZ3705
BLY	AWZ3708
	AXM1013
	BBZ30P060FZK
	BBZ30P080FZK
	BBZ40P060FZK
	BPZ26P080FMC
	NK90FUC
	PPZ50P100FZK
3BER)	REC−434
	ABA1024
	VBZ30P160FMC
A/250V, FU51)	AEK−510
	ADD1100
:ANSFORMER (T1)	ATS1378
)R ASSEMBLY	AWZ4009

2.2 PARTS LIST OF SX−P720/HE

Mark	No.	Description	Parts No.
	1	KNOB (VOLUME)	AAB1249
	2	KNOB (JOG)	AAB1251
	3	KNOB (P.BASS LEVEL)	AAB1253
	4	FUNCTION BUTTON (TUNER, TAPE, CD, LD, PHONO, VCR/DAT)	AAD2067
	5	BAND BUTTON (FREQ. STATION, BAND)	AAD2069
	6	POWER BUTTON	AAD2070
	7	P-BASS BUTTON (1) ASSY (SUPER P. BASS)	AAD2076
	8	A1 BUTTON ASSY (SMART OPERATION, MEMORY)	AAD2080
	9	FUNCTION LENS	AAK2206
	10	FILTER (REMOCON)	AAK2208
	11	DECORATIVE PLATE (TUNER)	AAK2255
◉	12	MAIN ASSEMBLY	AWZ3714
◉	13	SUB. POWER ASSEMBLY	AWZ3722
	14	SCREW	ABA−258
	15	SCREW (STEEL)	ABA1095
	16	NUT	ABN1016
⚠	17	AC POWER CORD	ADG1019
	18	RUBBER SHEET	AEB1111
	19	BINDER	AEC−826
	20	STRAIN RELIEF	AEC−882
	21	SPACER	AEC1236
	22	PCB SPACER (3×8)	AEC1371
	23	PCB SPACER (3×12)	AEC1372
	24	.....	
◉	25	FR. AMP ASSEMBLY	AWZ3730
	26	FRONT PAD	AHA1453
	27	REAR PAD	AHA1454
	28	PACKING CASE	AHD2178
	29	PACKING SHEET	AHG1093
	30	.....	
	31	FRONT PANEL ASSY	AMB1876
	32	PCB MOULD	AMR2115
	33	CHASSIS	ANA1155
	34	REAR PANEL	ANC1778
	35	BONNET (FE)	ANE1309
	36	HEAT SINK	ANH1352
	37	SHIELD BOX	ANK1179
	38	OPERATING INSTRUCTIONS (German, Italian)	ARC1305
	39	OPERATING INSTRUCTIONS (English, French, German, Italian)	ARC1306
	40	OPERATING INSTRUCTIONS (English, French)	ARE1211

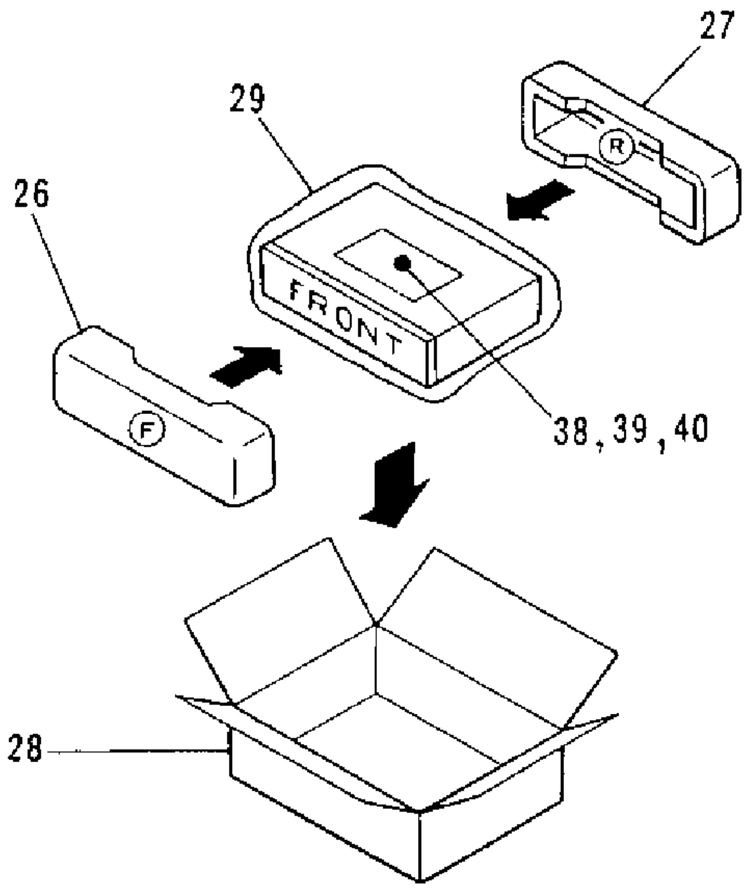
Mark	No.	Description
	41	HEAD. P ASSEMBLY
	42	CONNECT ASSEMBL
	43	TUNER ASSEMBLY
◉	44	DISPLAY ASSEMBL'
◉	45	VR ASSEMBLY
	46	DC MOTOR
	47	SCREW
	48	SCREW
	49	SCREW
	50	SCREW
	51	NUT
	52	SCREW
	53	FOOT (RUBBER)
	54	SCREW
	55	SCREW
⚠	56	FUSE (T1.25A/250V,
	57	FFC (J27)
⚠	58	POWER TRANSFOR
◉	59	REGULATOR ASSEN

● PACKING (SX−P920/H

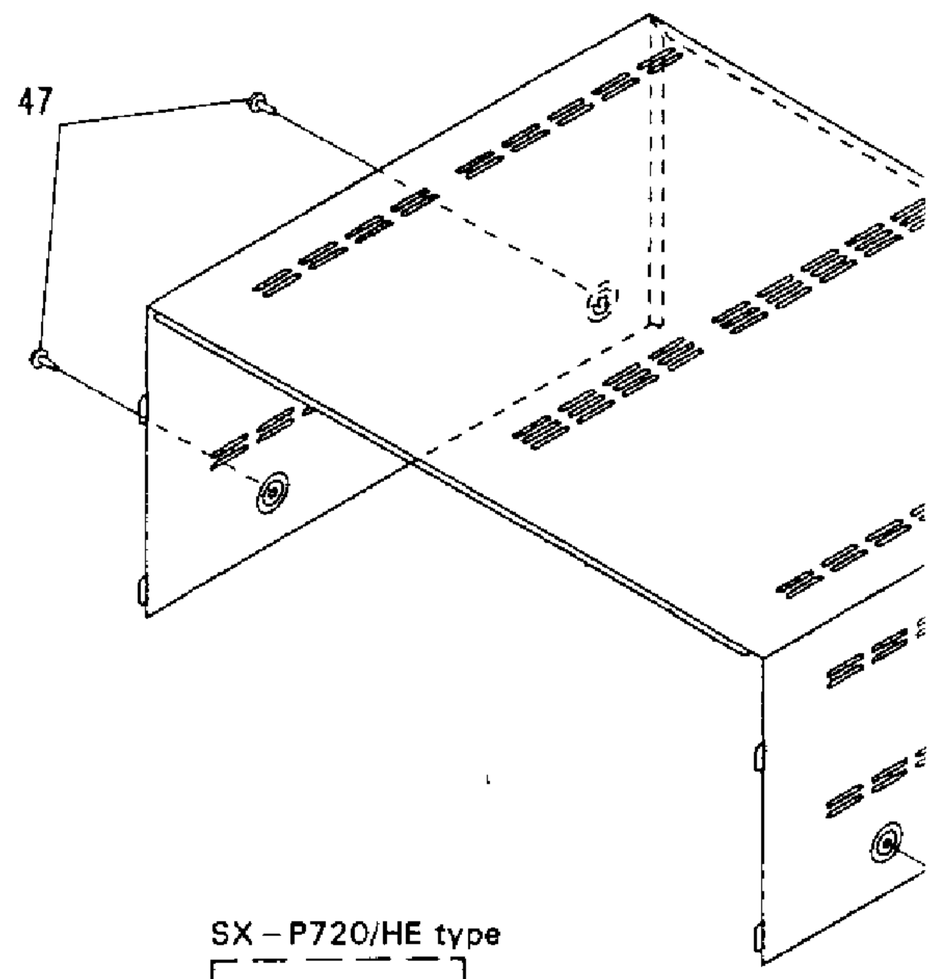


Mark	No.	Description	Parts No.
	41	HEAD. P ASSEMBLY	AWZ3737
	42	CONNECT ASSEMBLY	AWZ3739
	43	TUNER ASSEMBLY	AWE1226
◉	44	DISPLAY ASSEMBLY	AWZ3701
◉	45	VR ASSEMBLY	AWZ3708
	46	DC MOTOR	AXM1013
	47	SCREW	BBZ30P060FZK
	48	SCREW	BBZ30P080FZK
	49	SCREW	BBZ40P060FZK
	50	SCREW	BPZ26P080FMC
	51	NUT	NK90FUC
	52	SCREW	PPZ50P100FZK
	53	FOOT (RUBBER)	REC-434
	54	SCREW	ABA1024
	55	SCREW	VBZ30P160FMC
⚠	56	FUSE (T1.25A/250V, FU51)	AEK-509
	57	FFC (J27)	ADD1100
⚠	58	POWER TRANSFORMER (T1)	ATS1374
◉	59	REGULATOR ASSEMBLY	AWZ4009

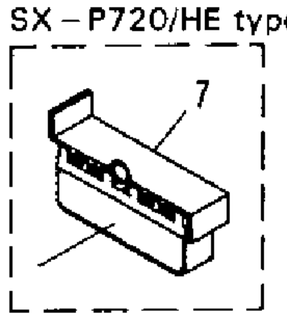
● PACKING (SX-P920/HE & SX-P720/HE)



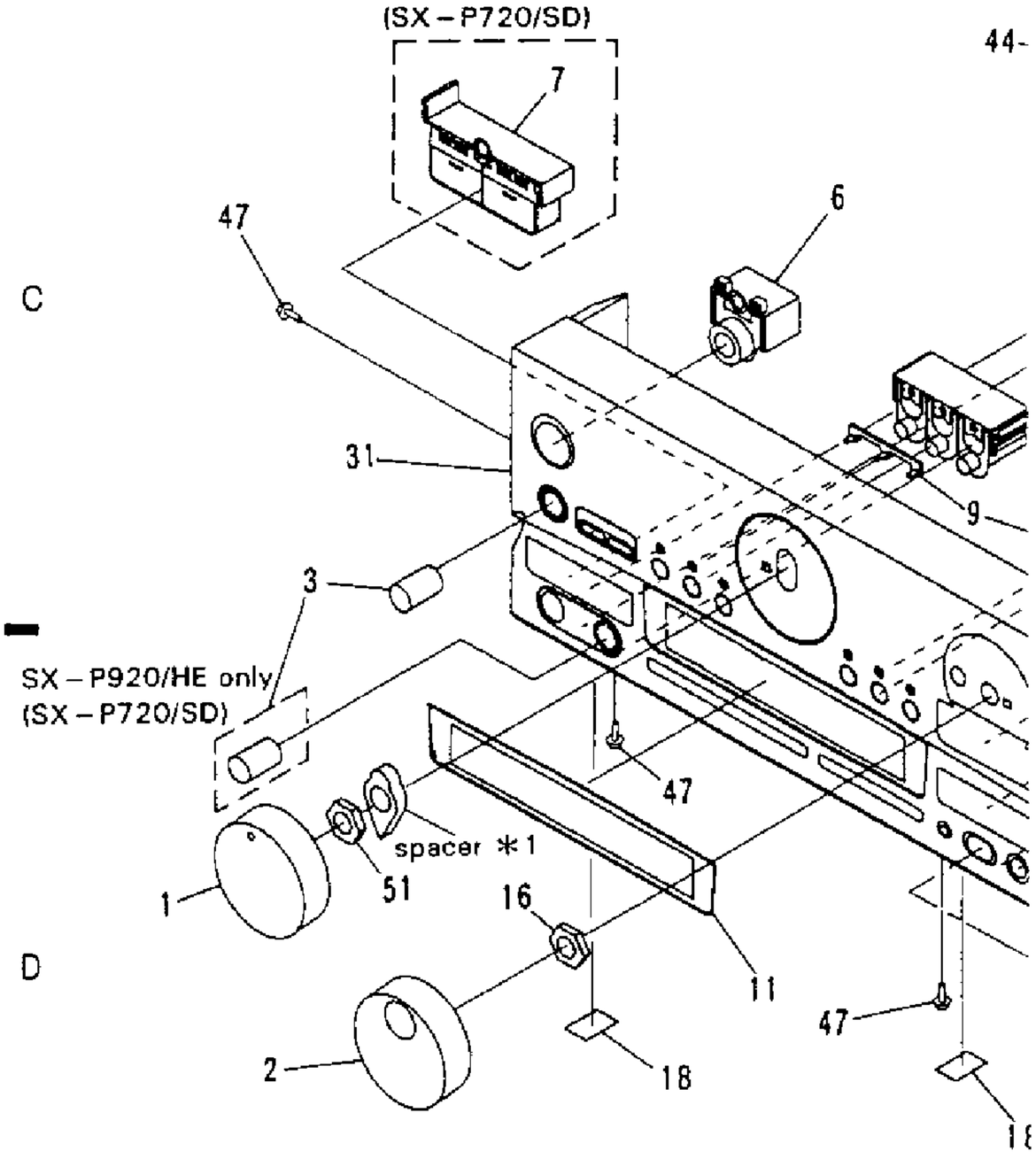
● EXPLODED VIEWS (SX-P920/HE & SX-P720/HE)



SX-P720/HE type

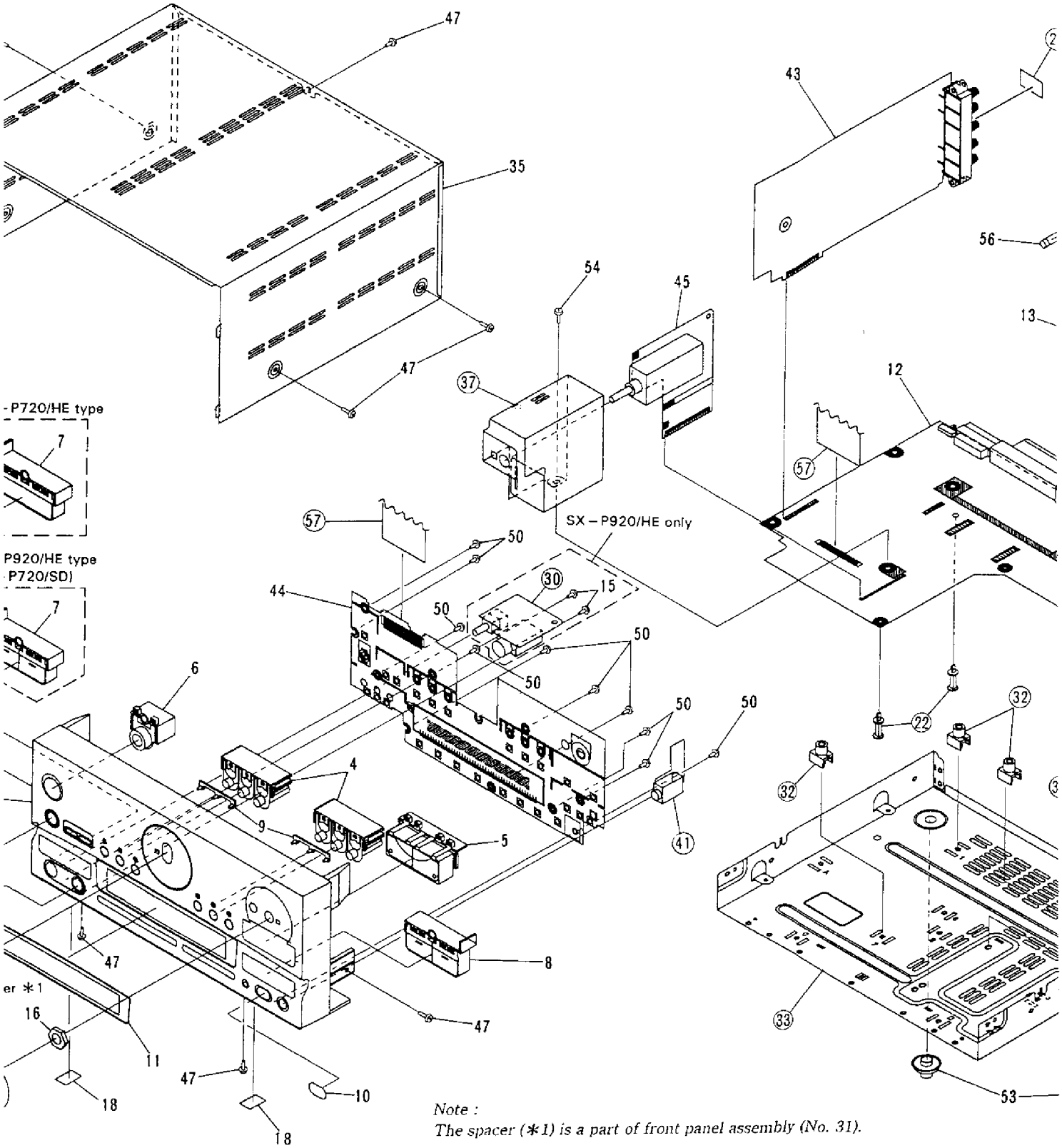


SX-P920/HE type
(SX-P720/SD)



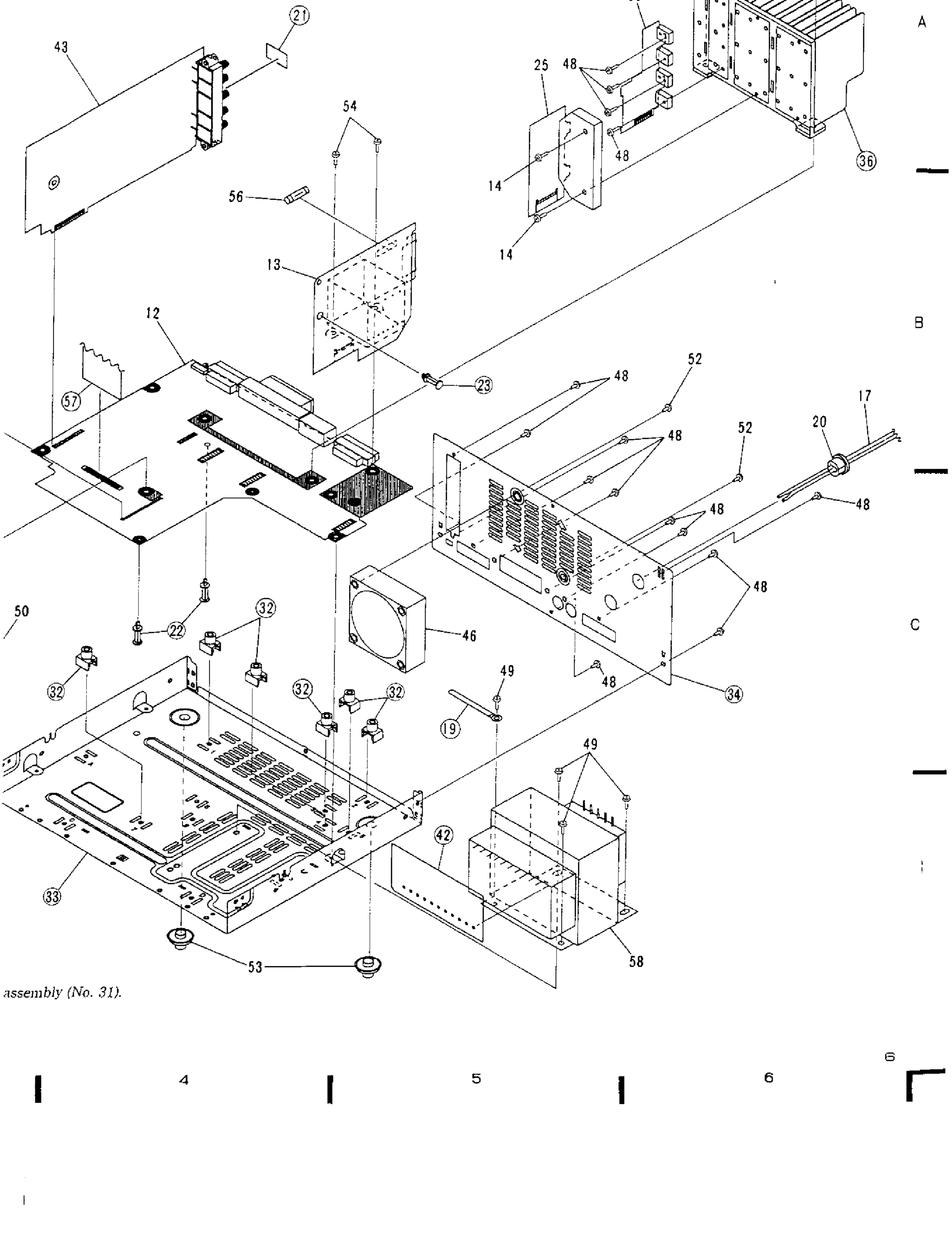
'IEWS
HE & SX – P720/HE)

NOTE : Screws adjacent to ▼ mark on th
are used for disassembly.



Note :
*The spacer (*1) is a part of front panel assembly (No. 31).*

: Screws adjacent to ▼ mark on the product are used for disassembly.

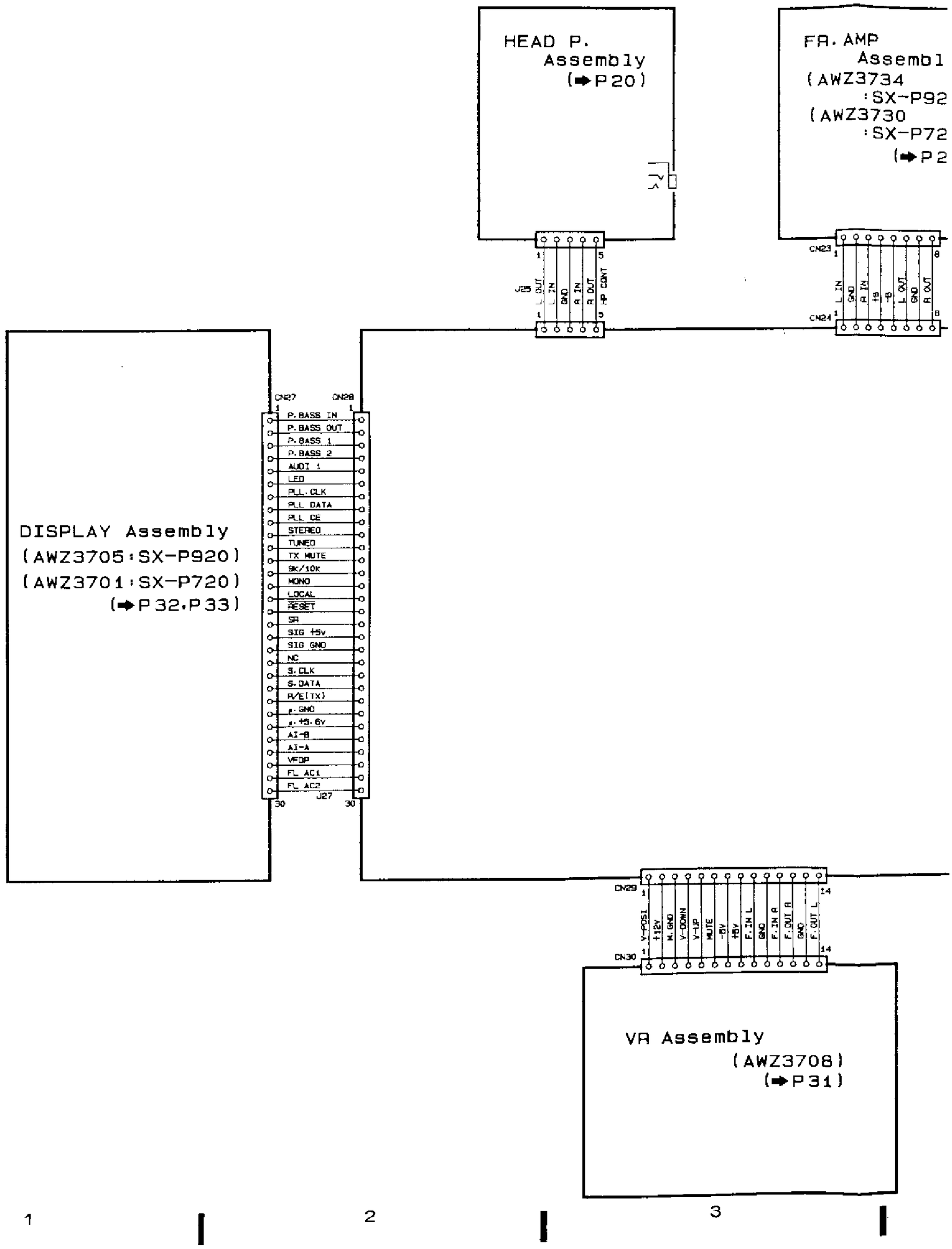


assembly (No. 31).

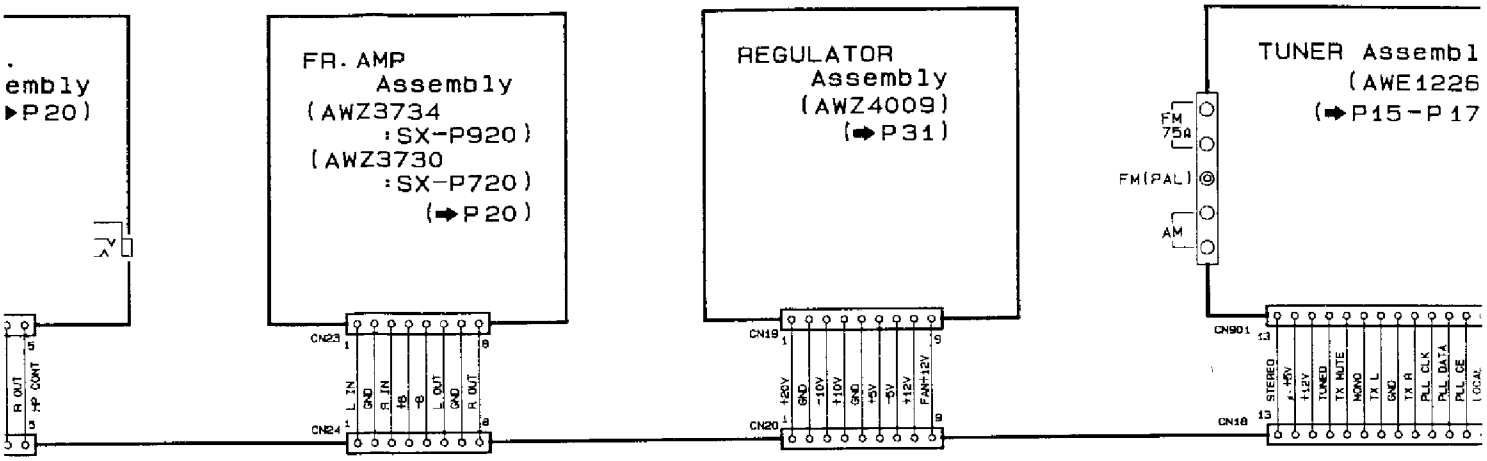
3. SCHEMATIC DIAGRAMS AND PCB CONNECTION DIAGRAMS

(SX – P920/HE & SX – P720/HE)

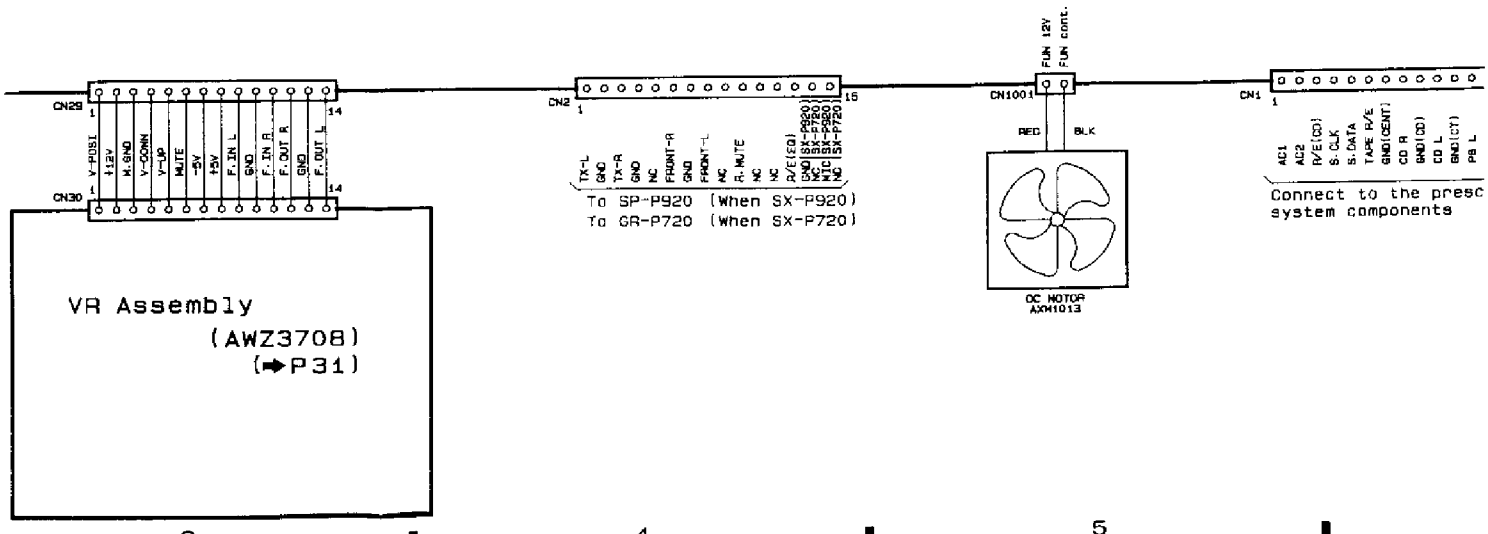
3.1 OVER ALL SCHEMATIC DIAGRAM



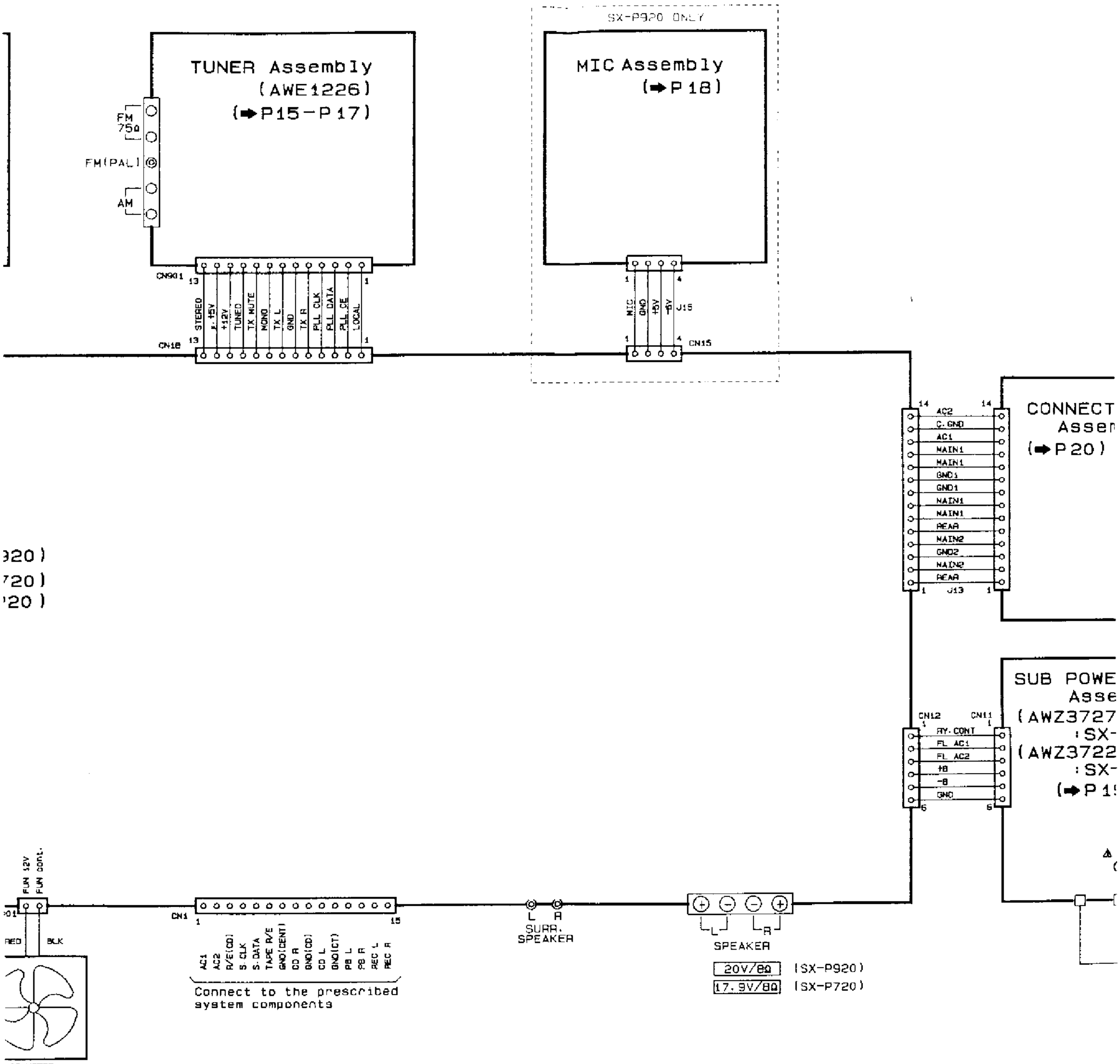
ɔN DIAGRAMS

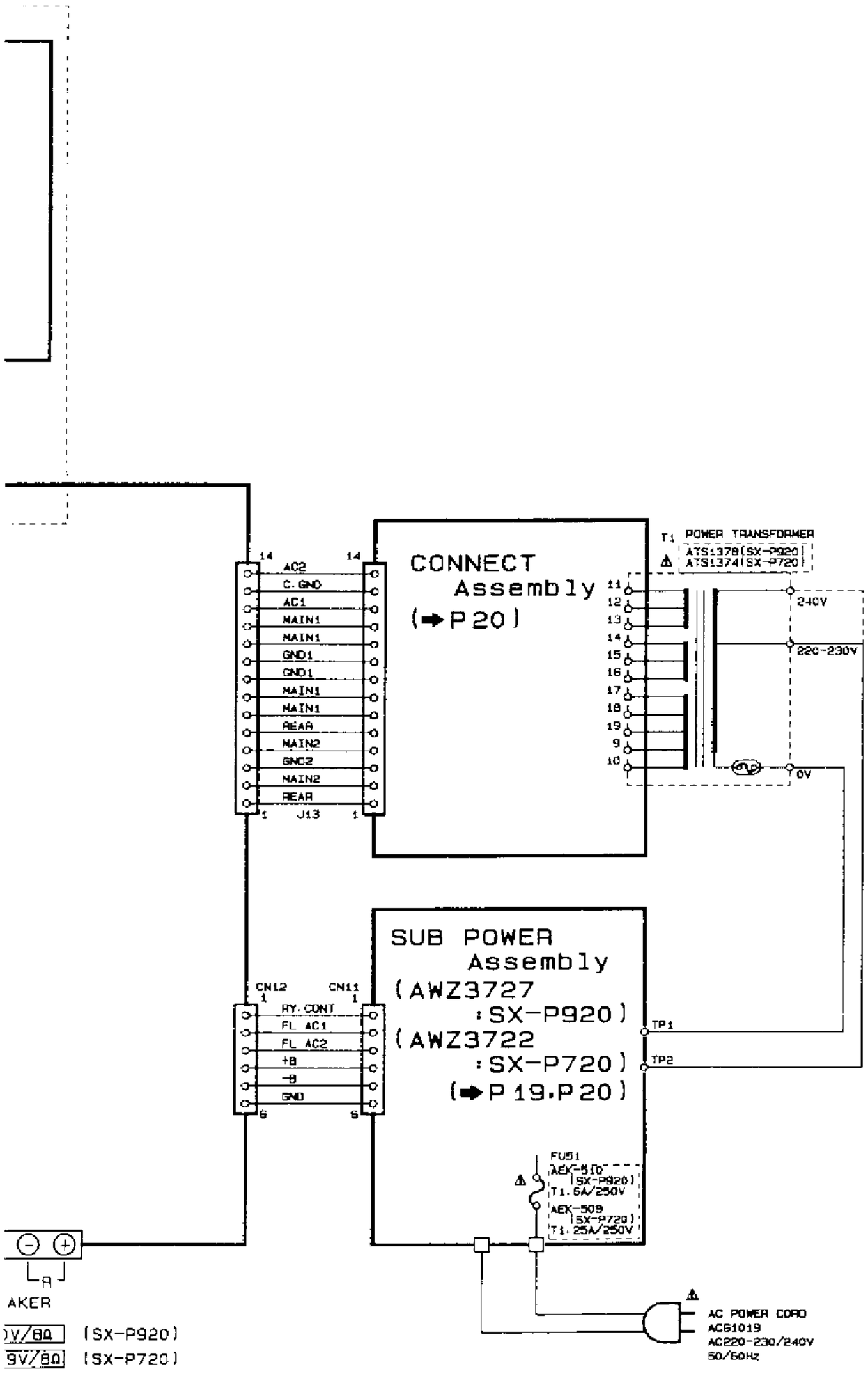


MAIN Assembly
(AWZ3719 : SX-P920)
(AWZ3714 : SX-P720)
(➡P18-P20)



VR Assembly
(AWZ3708)
(➡P31)


TUNER Assembly
(AWE1226)
(➡P15-P17)
FM 75Ω
FM(PAL)
AM
CN901
13
1
STEREO
+5V
+12V
TUNED
TX MUTE
MONO
TX L
GND
TX R
PLL CLK
PLL DATA
PLL CE
LOCAL
CN18
SX-P920 ONLY
MIC Assembly
(➡P18)
MIC
GND
+5V
-5V
J16
CN15
CONNECT
Asser
(➡P20)
AC2
C.GND
AC1
MAIN1
MAIN1
GND1
GND1
MAIN1
MAIN1
REAR
MAIN2
GND2
MAIN2
REAR
J13
920)
720)
'20)
SUB POWE
Asse
(AWZ3727
:SX-
(AWZ3722
:SX-
(➡P1
CN12
CN11
RY. CONT
FL AC1
FL AC2
+B
-B
GND
FUN 12V
FUN CONT.
RED
BLK
CN1
AC1
AC2
R/E(CD)
S.CLK
S.DATA
TAPE R/E
GND(CENT)
CD R
GND(CD)
CD L
GND(CT)
PB L
PB R
REC L
REC R
Connect to the prescribed system components
L
R
SURR. SPEAKER
SPEAKER
20V/8Ω (SX-P920)
17.9V/8Ω (SX-P720)
DC MOTOR
ADH1013



1. RESISTORS:
Indicated in Ω, ¼W, ⅛W±5% tolerance unless otherwise noted k : kΩ
M : MΩ, (F) : ±1%, (G) :2%, (K) : ±10% (M): ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μ)/voltage (V) unless otherwise noted p : pF
Indication without volge is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT
: Signal voltage; (SX-P920 : 50W + 50W, SX-P720 : 40 output (1kHz)
: DC voltage (V)t no input signal
[a] and [b] in t circuit diagram describe the following :
a = SX-P92(
b = SX-P72(
None = SX-P20 and SX-P720
Value in ( ), DC voltage at rated power.
⇦ mA : DC current at t input signal
mV : Signal voltage at FM 1kHz ±75kHz

4. OTHERS:
➡ : Signal route.
⊘ : Adjusting point.
The ⚠ mark found n some component parts indicates the importance of the safety ctor of the part. Therefore, when replacing, be sure to use parts of ientical designation.
※ marked capacitors ad resistors have parts numbers.
▼ (RED) : TEST POINT
This is the basic schemic diagram, but the actual circuit may vary due to improvements indesign.

5. SWITCHES (The underie indicates the switch position)

DISPLAY Assembly

S701	LD
S702	VCR/DAT
S703	PHONO
S704	TAPE
S705	TUNER
S706	CD
S709	POWER STANDY/ON
S710	AI. A
S711	SUPER P. BASS(SX-P920 ONLY)
S712	AI. B
S713	AI. MEMORY
S714	AUDITION (SX-P920 ONLY)
S715	SUPER P. BASS(SX-P720 ONLY)
S1001	BAND
S1002	M. SCAN
S1003	CLOCK ADJ
S1005	MEMORY
S1006	SET
S1008	LOCAL
S1009	WAKE UP
S1010	FREQ/STATION
S1011	REC
S1030	TUNING JOG

olerance unless otherwise noted k : kΩ,
K) : ±10% (M): ±20% tolerance

ge (V) unless otherwise noted p : pF
50V except electrolytic capacitor.

-P920 : 50W + 50W, SX-P720 : 40W + 40W, 8Ω)

nput signal
it diagram describe the following :

d SX-P720
oltage at rated power.
t signal
1kHz ±75kHz

e component parts indicates the im-
f the part. Therefore, when replacing,
designation.
stors have parts numbers.

gram, but the actual circuit may vary

cates the switch position)

920 ONLY)

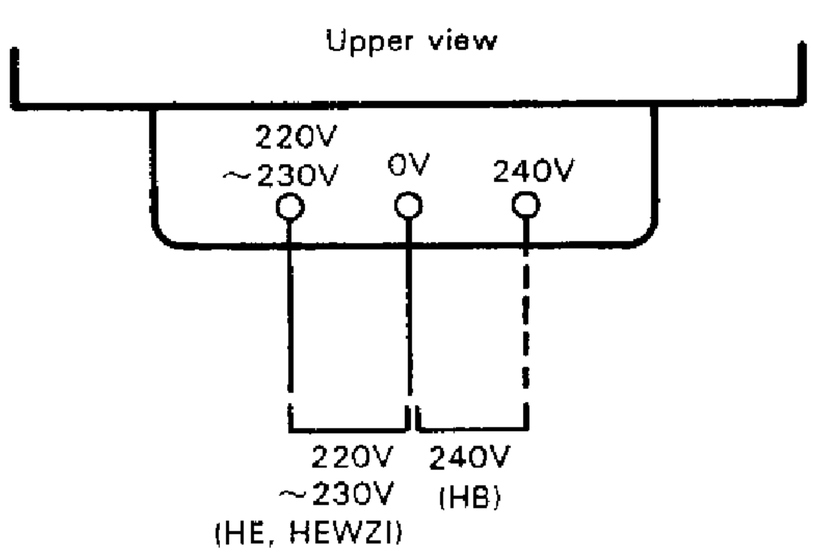
ONLY)

720 ONLY)

Line Voltage Selection
(For HE, HB and HEWZI types)

Line voltage can be changed with the following steps.

1. Disconnect the AC Power cord.
2. Remove the top cover.
3. Change the connection with the power transformer (T1) primary taps.



4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

3.2 TUNER ASSEMBLY

This P. C. B. connection diagram is viewed from the foil side.

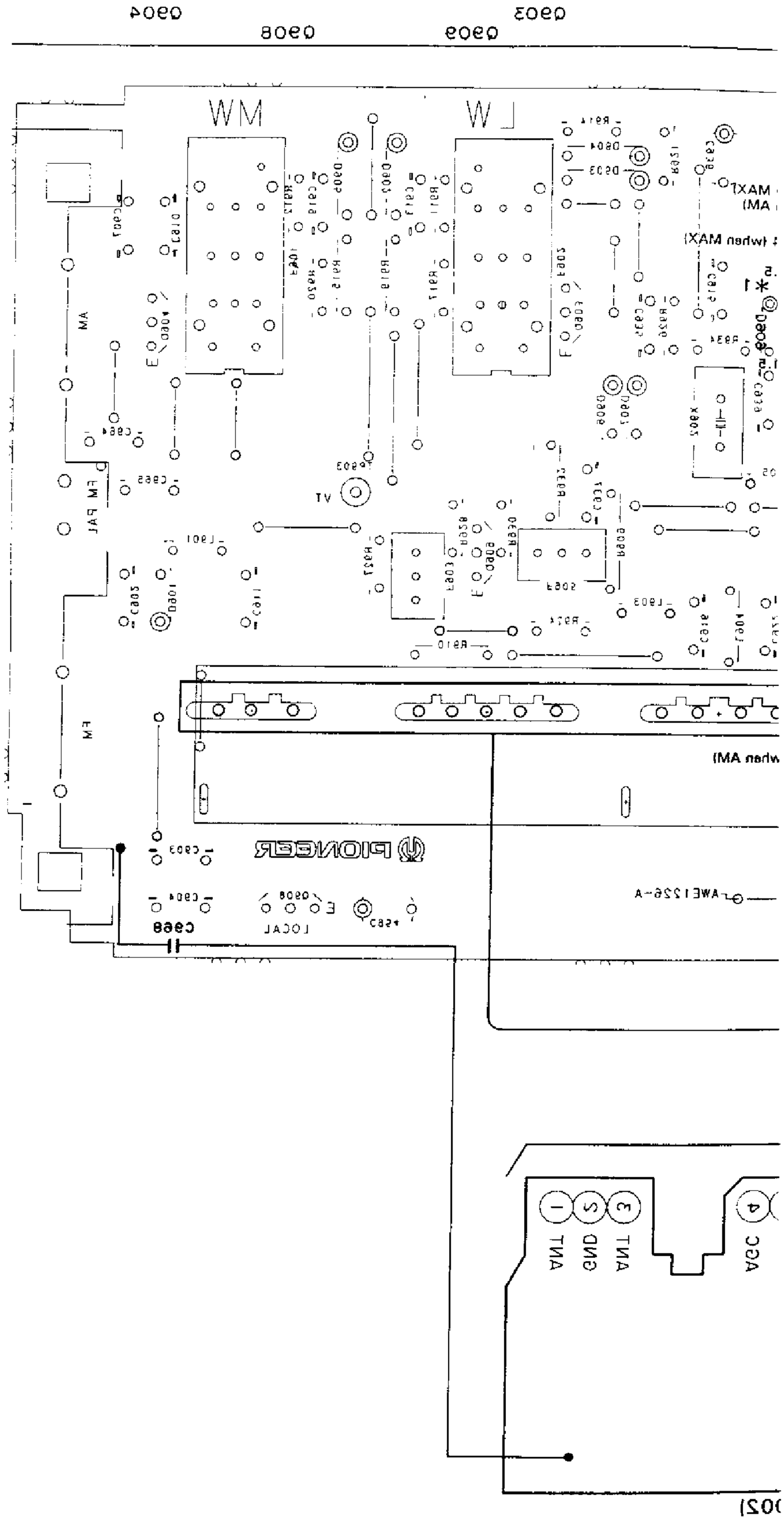
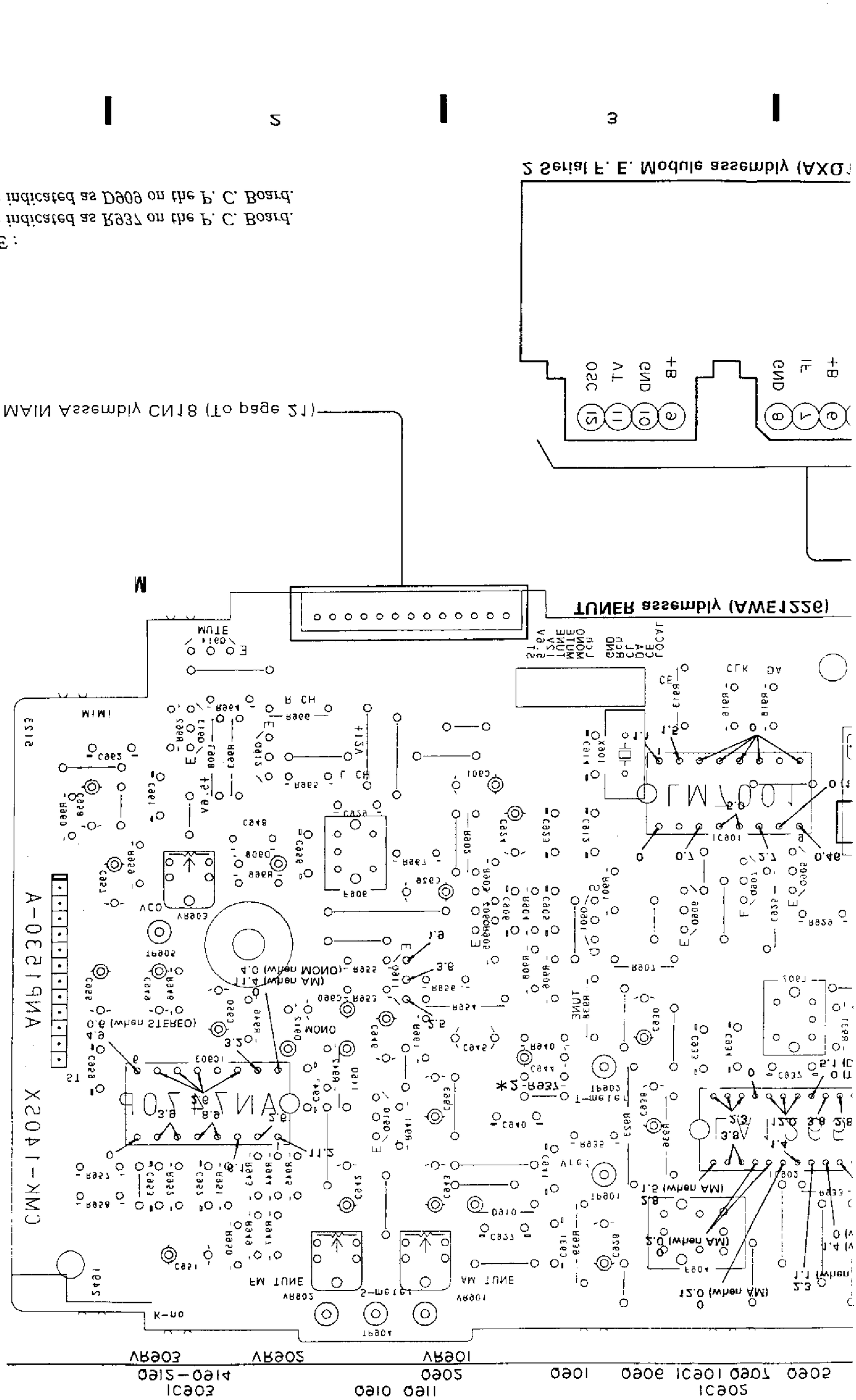
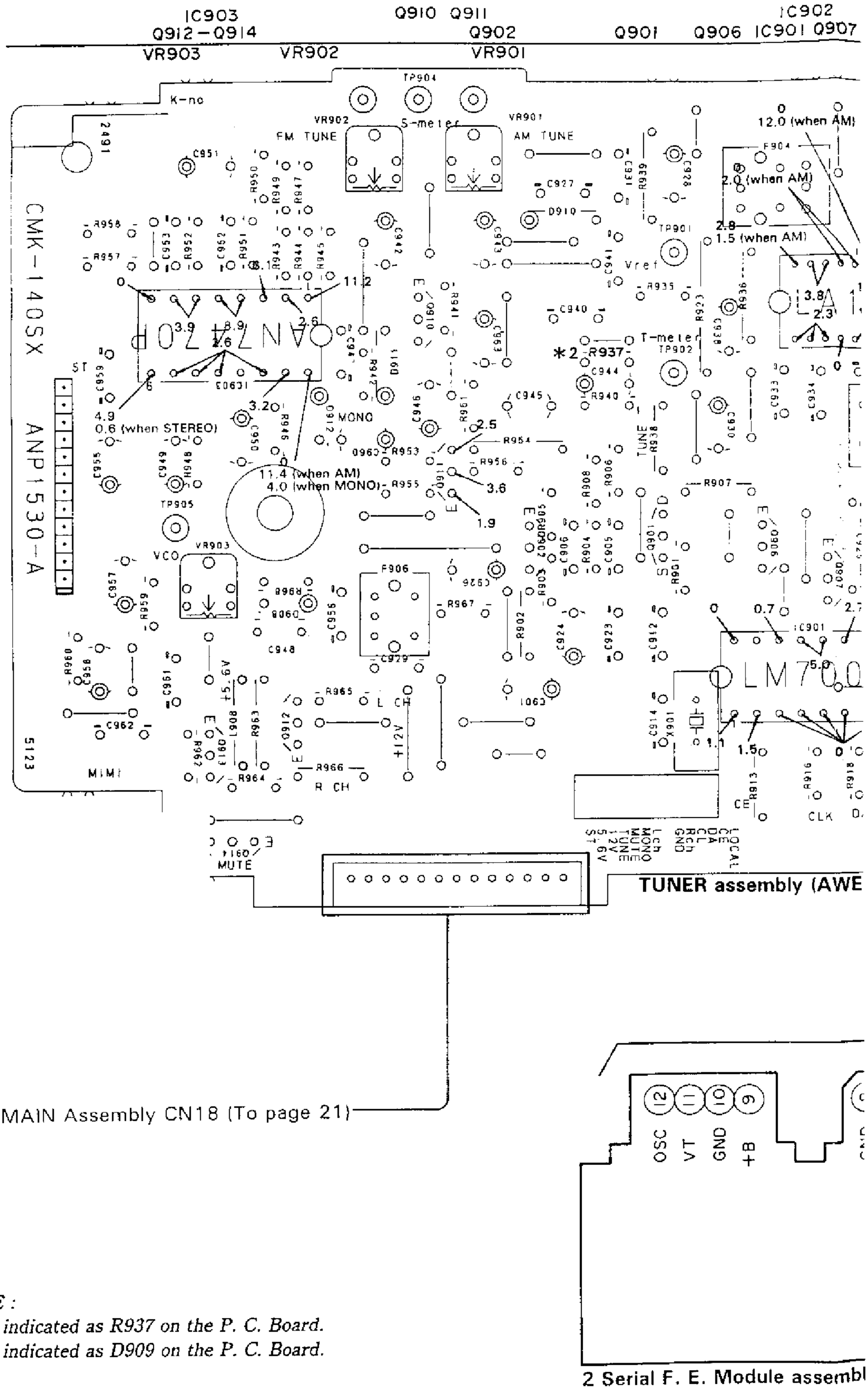


diagram is viewed from the foil side.

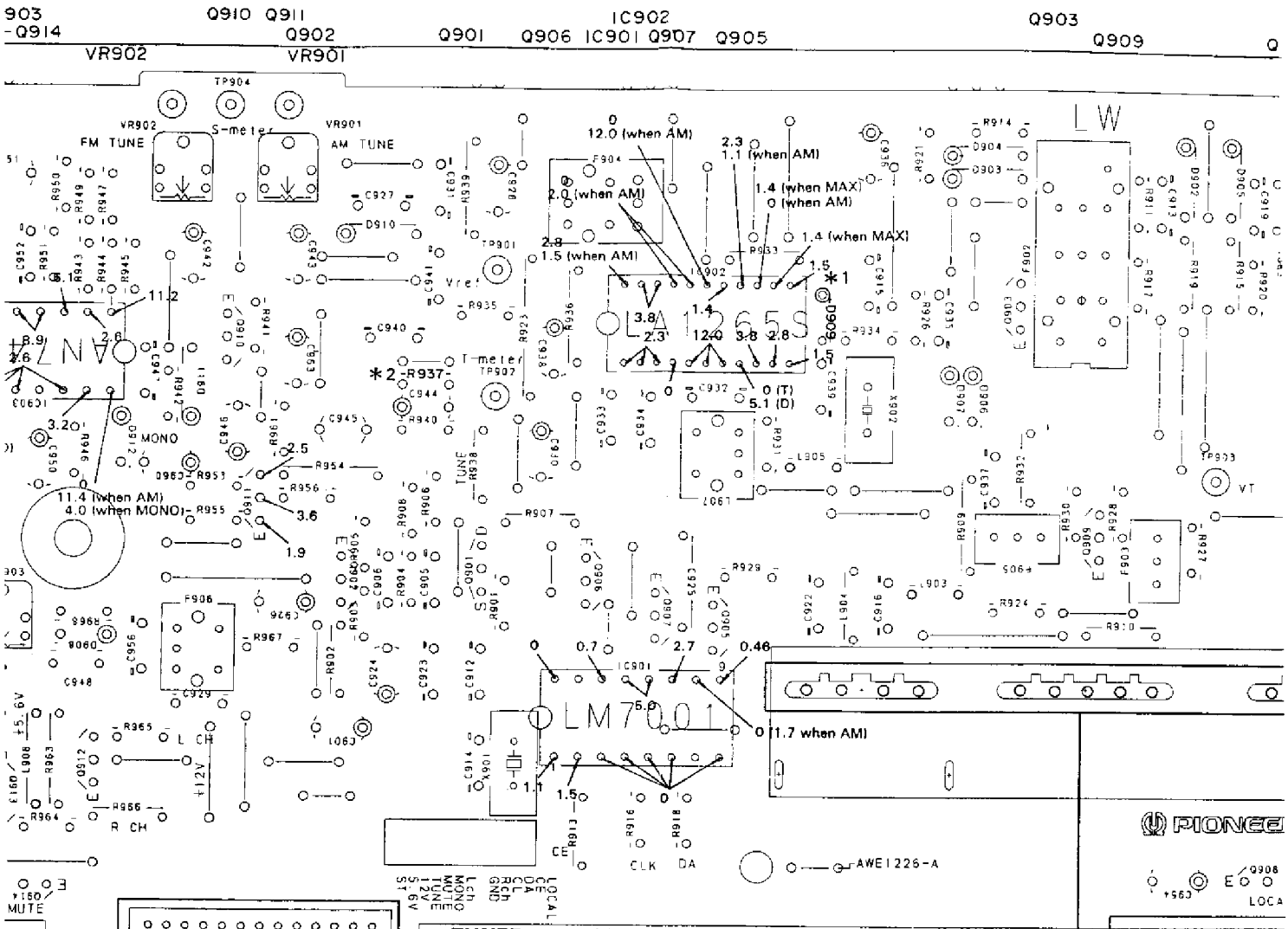

A-0301HA (MAIN) CHK-1
TUNER assembly (AWF1556)
S Serial E. E. Module assembly (AXO
To MAIN Assembly CN18 (To page 15)
NOTE :
*1 is indicated as K6317 on the P. C. Board.
*2 is indicated as D906 on the P. C. Board.

This P. C. B connection diagram is viewed from the parts mounted side.



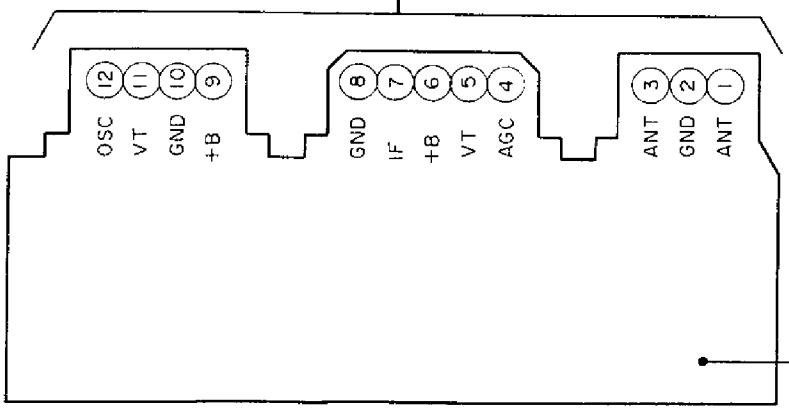
NOTE :
∗1 is indicated as R937 on the P. C. Board.
∗2 is indicated as D909 on the P. C. Board.

:tion diagram is viewed from the parts mounted side.



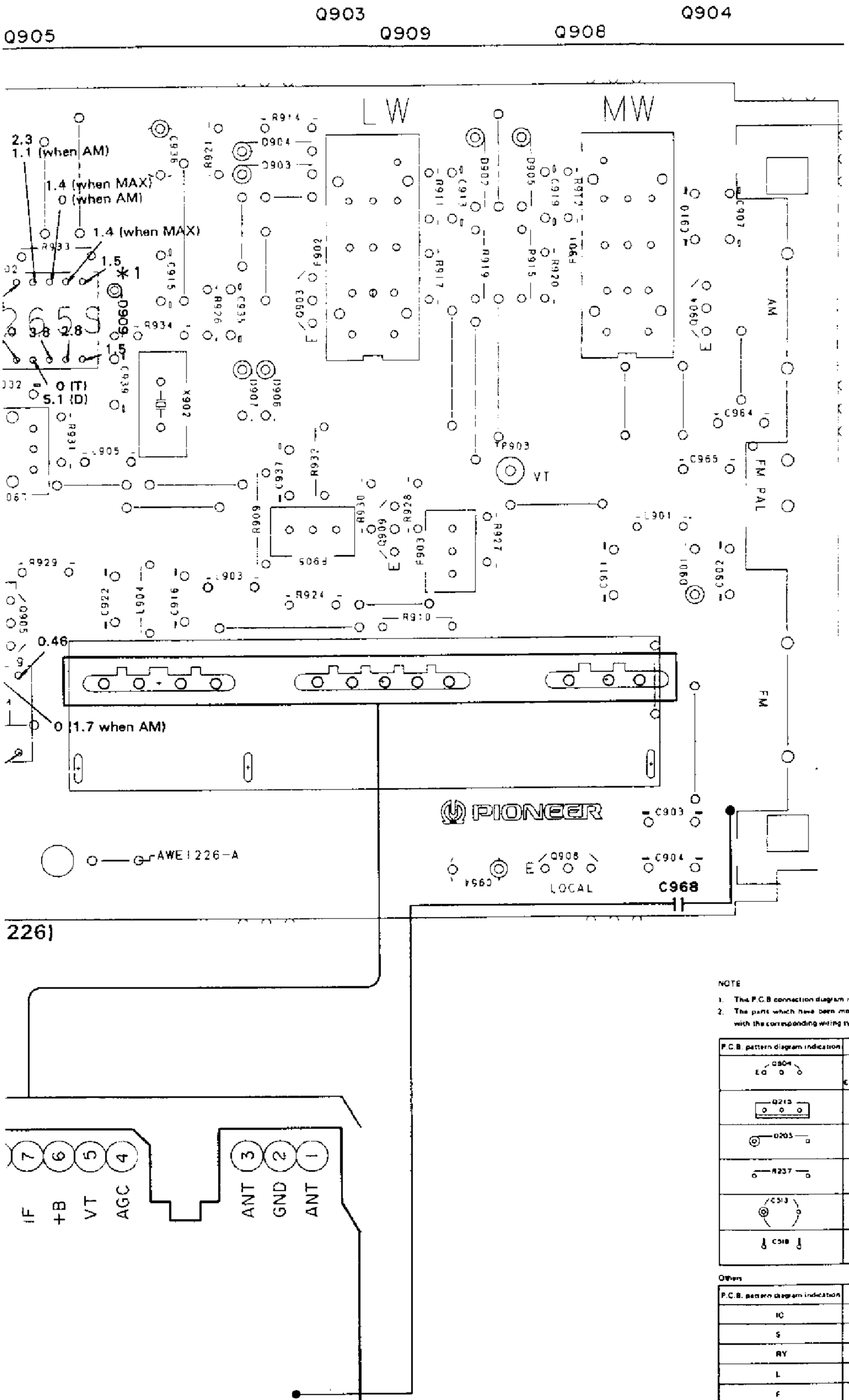
TUNER assembly (AWE1226)

(To page 21)



P. C. Board.
P. C. Board.

2 Serial F. E. Module assembly (AXQ1002)



NOTE

1. The P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q904 E C B	C B or E	Transistor
Q213		Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarized)
C518		Capacitor (Non-polarized)

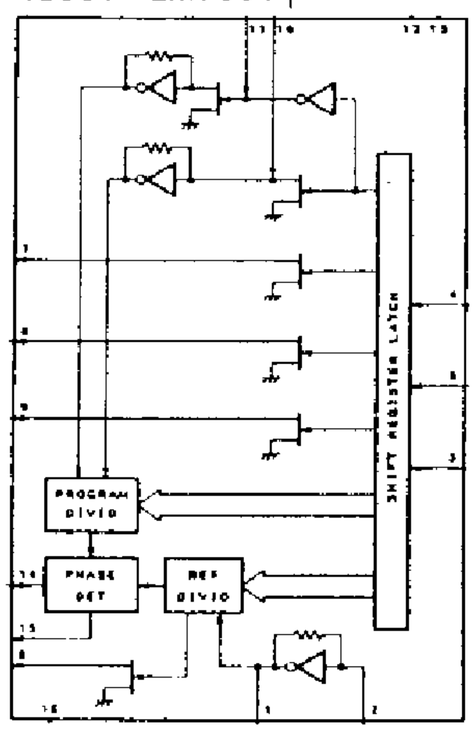
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⓞ (double circle) shows negative terminal.
4. The diode terminal marked with ⓞ (double circle) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

1 2 3

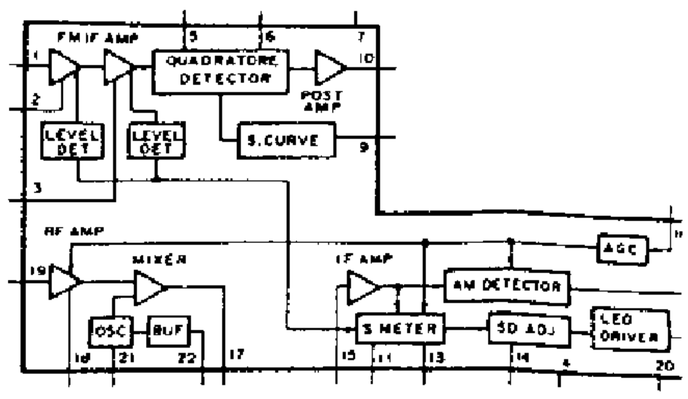
IC901 LM7001



IC901 (LM7001)

Pin No.	Voltage	Pin No.	Voltage
1	1.1	9	0.46
2	1.5	10	0 (1.7 when AM)
3	0	11	2.7
4	0	12	5.0
5	0	13	5.0
6	0	14	0.7
7	—	15	—
8	0	16	0

IC902 LA1265S



TUNER assembly (AV

2 Serial F. E. Module assembly (AXQ1002)

Q908 : LOCAL ON/OFF

Q909 :

Q906 : LW PLL SWITCH

Q907 : MW PLL SWITCH

Q905 : F. E SWITCH

Q904 : MW SWITCH

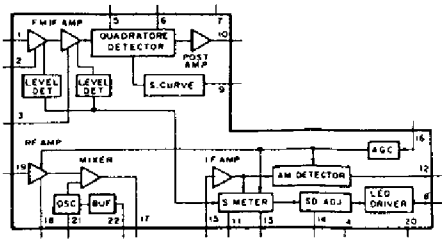
AM RF TUNING BLOCK (MW)

Q903 : LW SWITCH

L907 : CENTER Adj.

Voltage
0.46
0 (1.7 when AM)
2.7
5.0
5.0
0.7
—
0

IC902 LA1265S

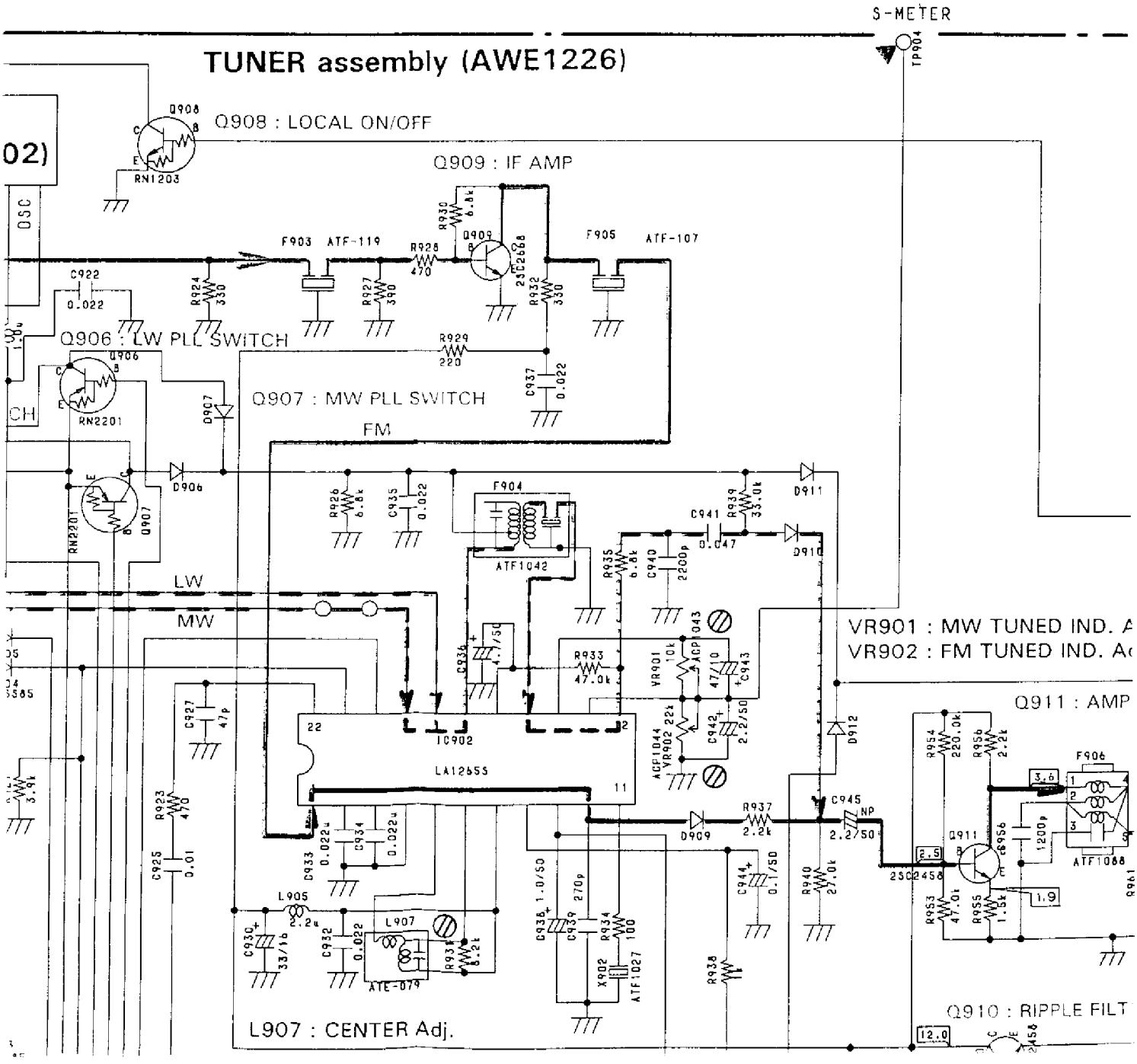


IC902 (LA1265S)

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	2.3	10	2.8	17	0
2	2.3	11	1.5		12.0 (when AM)
3	2.3	12	1.5	18	0
4	0	13	1.4 (when MAX)		2.0 (when AM)
5	12.0	14	1.4 (when MAX)	19	0
6	12.0		0 (when AM)		2.0 (when AM)
7	12.0	15	2.3	20	3.8
8	0 (T)		1.1 (when AM)	21	3.8
	5.1 (D)	16	1.4	22	2.8
9	3.8				1.5 (when AM)

NOTE :
(T) when TUNE IND. is ON, (D) when TUNE IND. is OFF.

TUNER assembly (AWE1226)

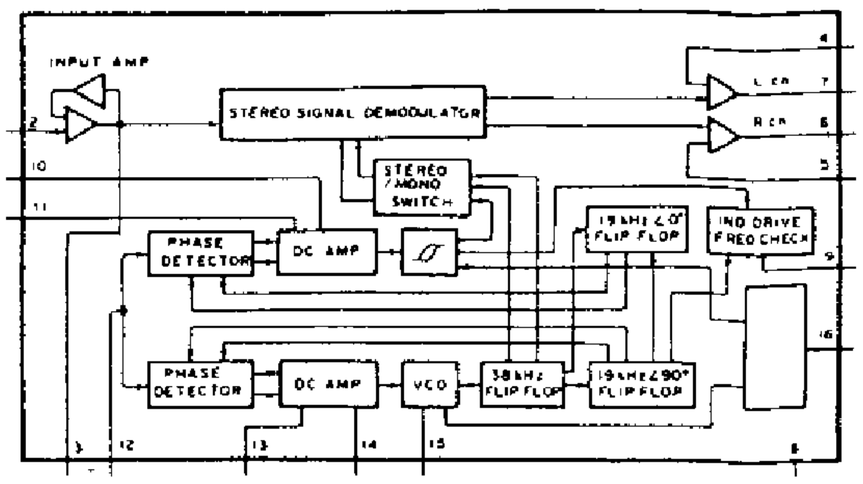


1265S)

Voltage	Pin No.	Voltage	Pin No.	Voltage
2.3	10	2.8	17	0
2.3	11	1.5		12.0 (when AM)
2.3	12	1.5	18	0
0	13	1.4 (when MAX)		2.0 (when AM)
12.0	14	1.4 (when MAX)	19	0
12.0		0 (when AM)		2.0 (when AM)
12.0	15	2.3	20	3.8
0 (T)		1.1 (when AM)	21	3.8
5.1 (D)	16	1.4	22	2.8
3.8				1.5 (when AM)

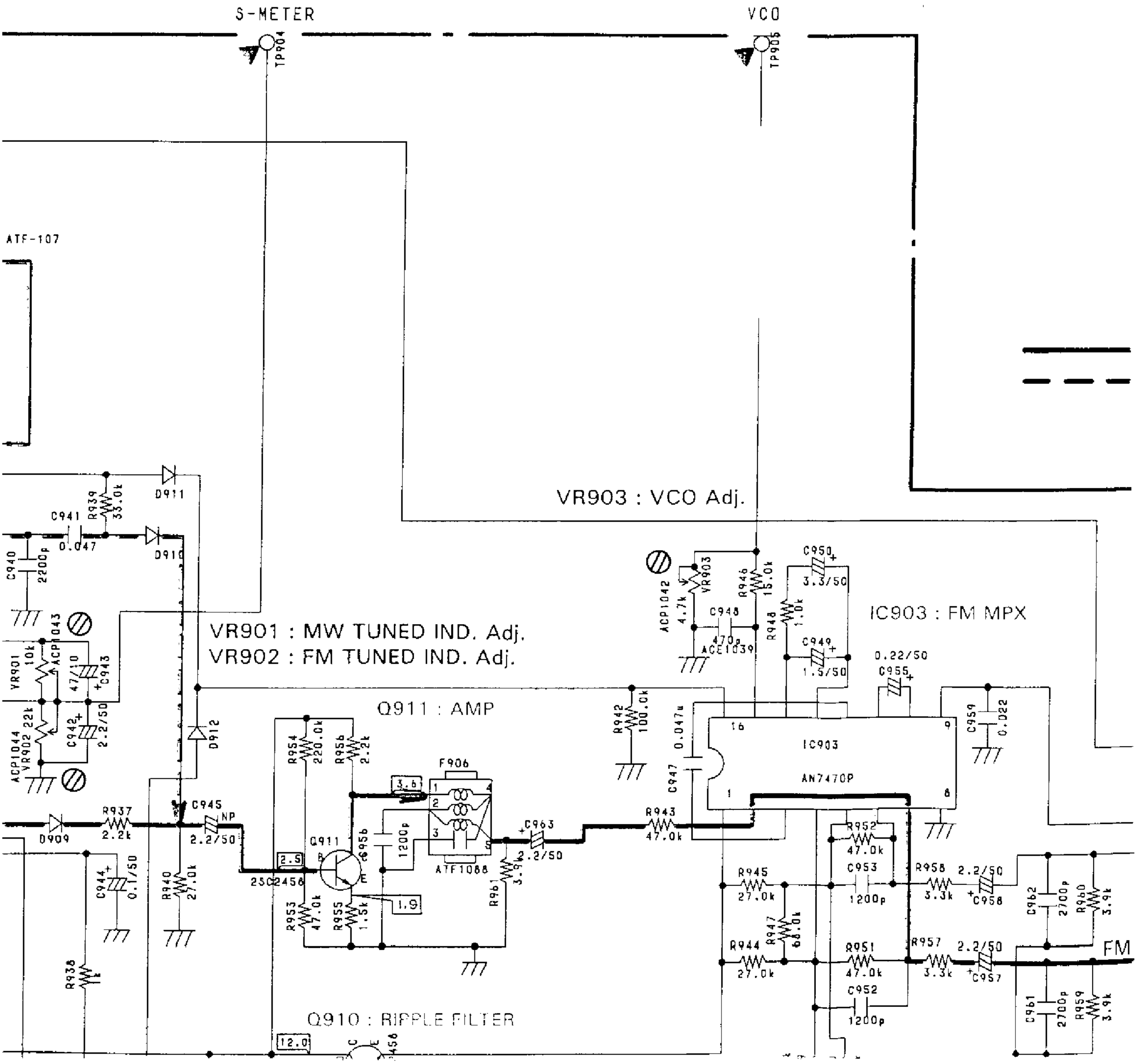
'UNE IND. is ON, (D) when TUNE IND. is OFF.

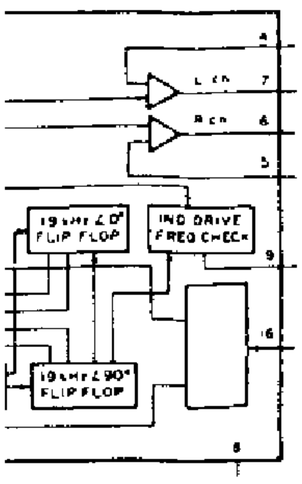
IC903 AN7470P



IC903 (AN7470P)

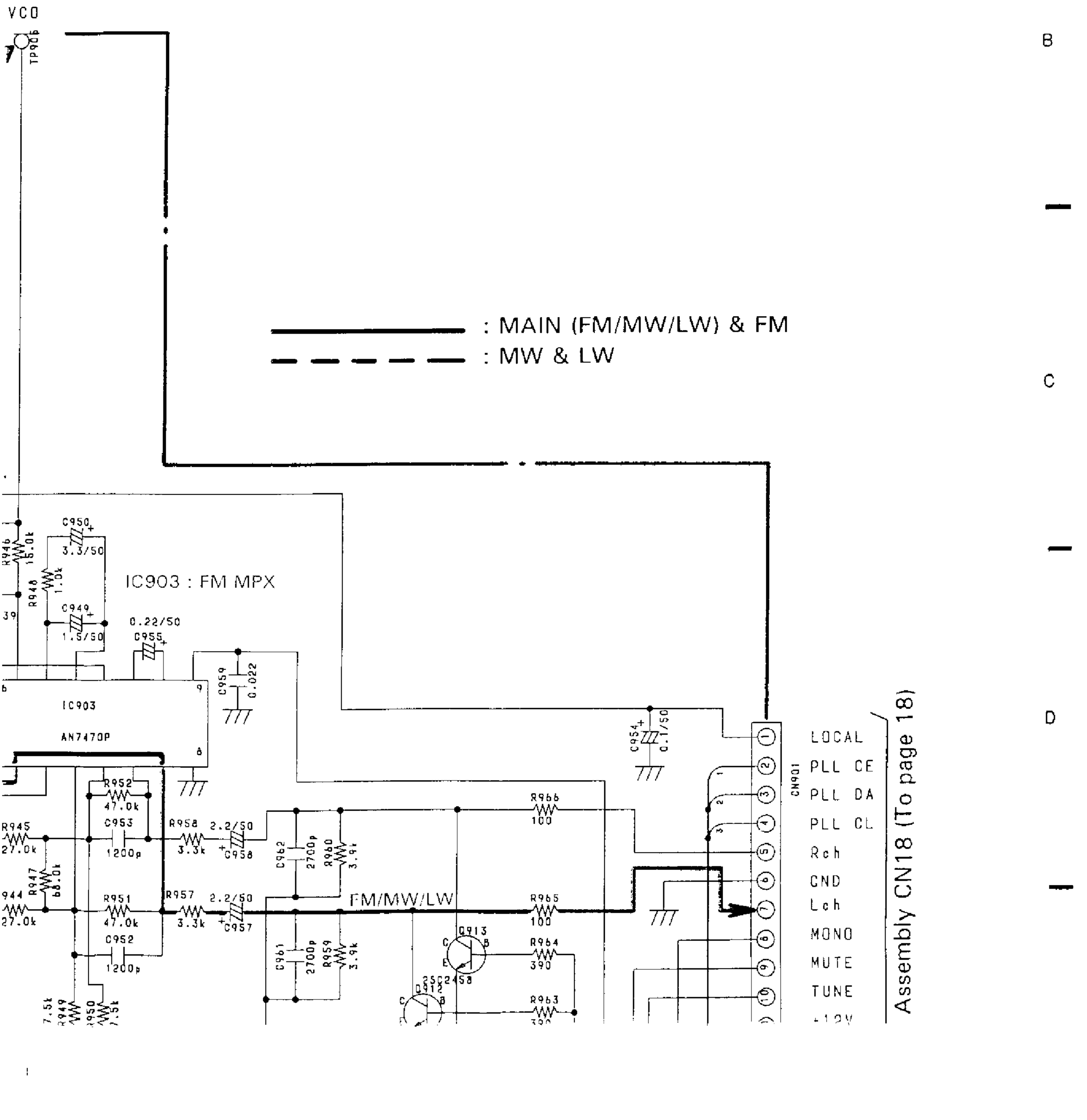
Pin No.	Voltage	Pin No.
1	11.2	9
2	2.6	
3	6.1	
4	8.9	10
5	8.9	11
6	3.9	12
7	3.9	13
8	0	14

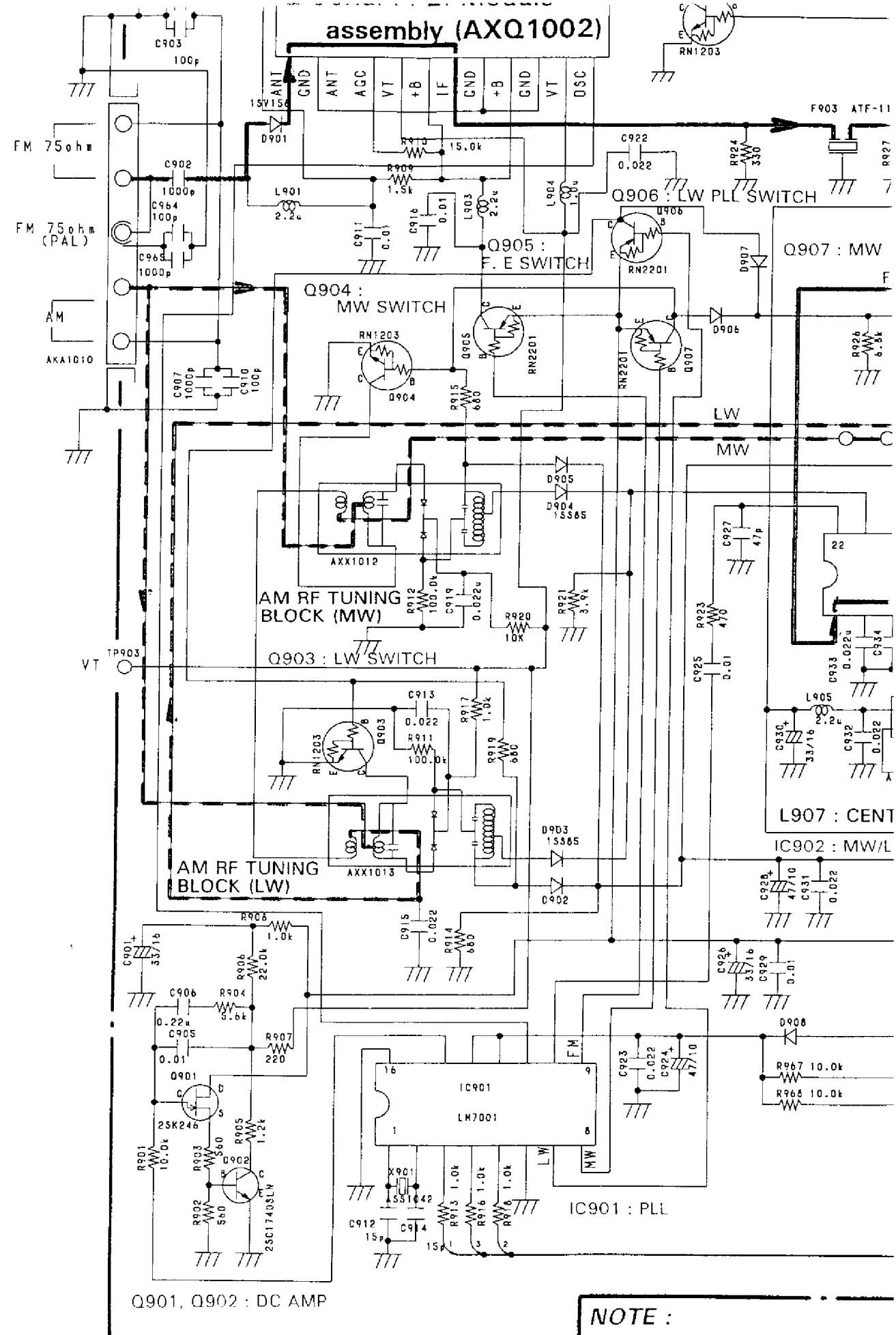




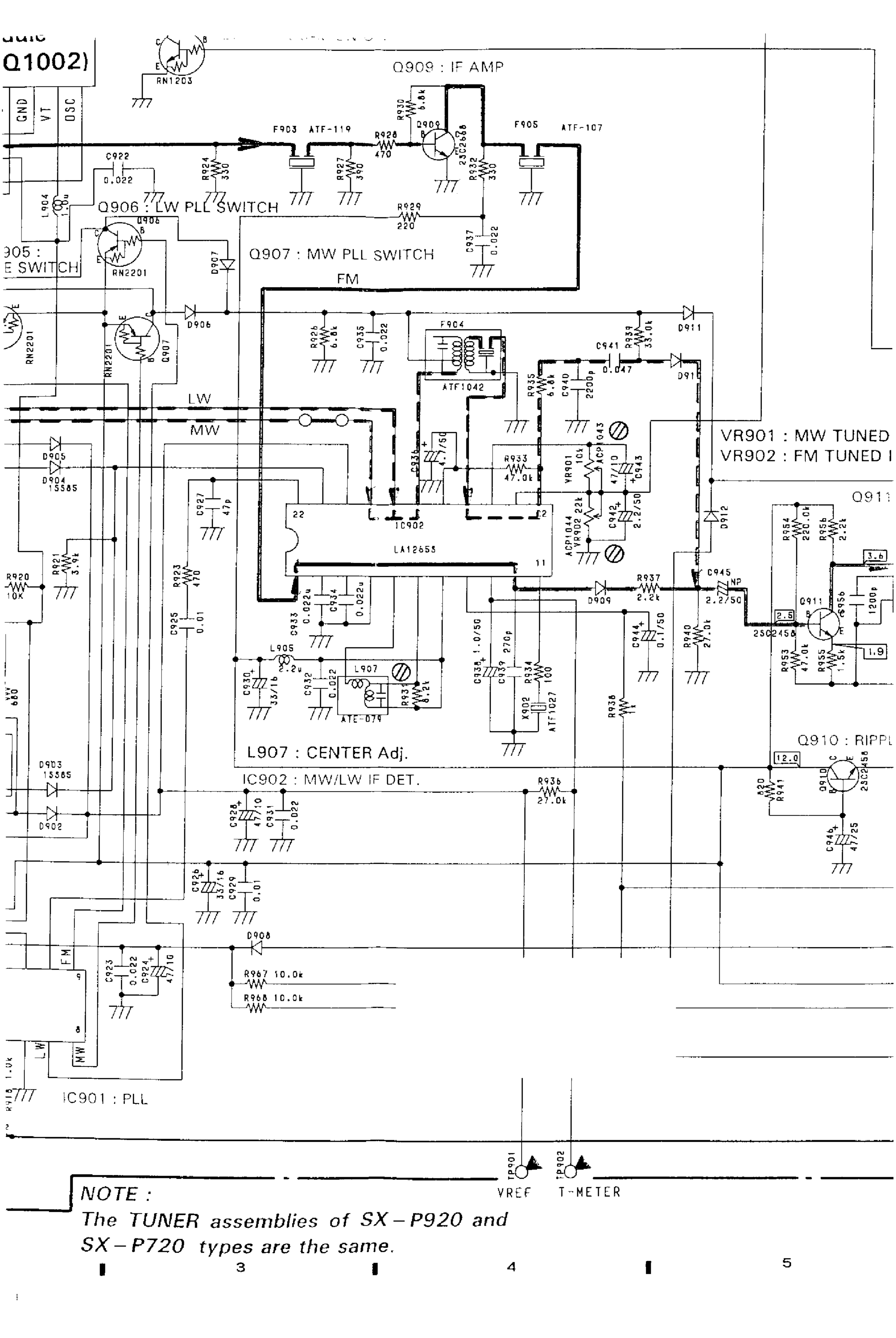
IC903 (AN7470P)

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	11.2	9	4.9	15	3.2
2	2.6		0.6 (when STEREO)	16	0
3	6.1				11.4 (when AM)
4	8.9	10	2.6		
5	8.9	11	2.6		4.0 (when MONO)
6	3.9	12	2.6		
7	3.9	13			
8	0	14	2.6		

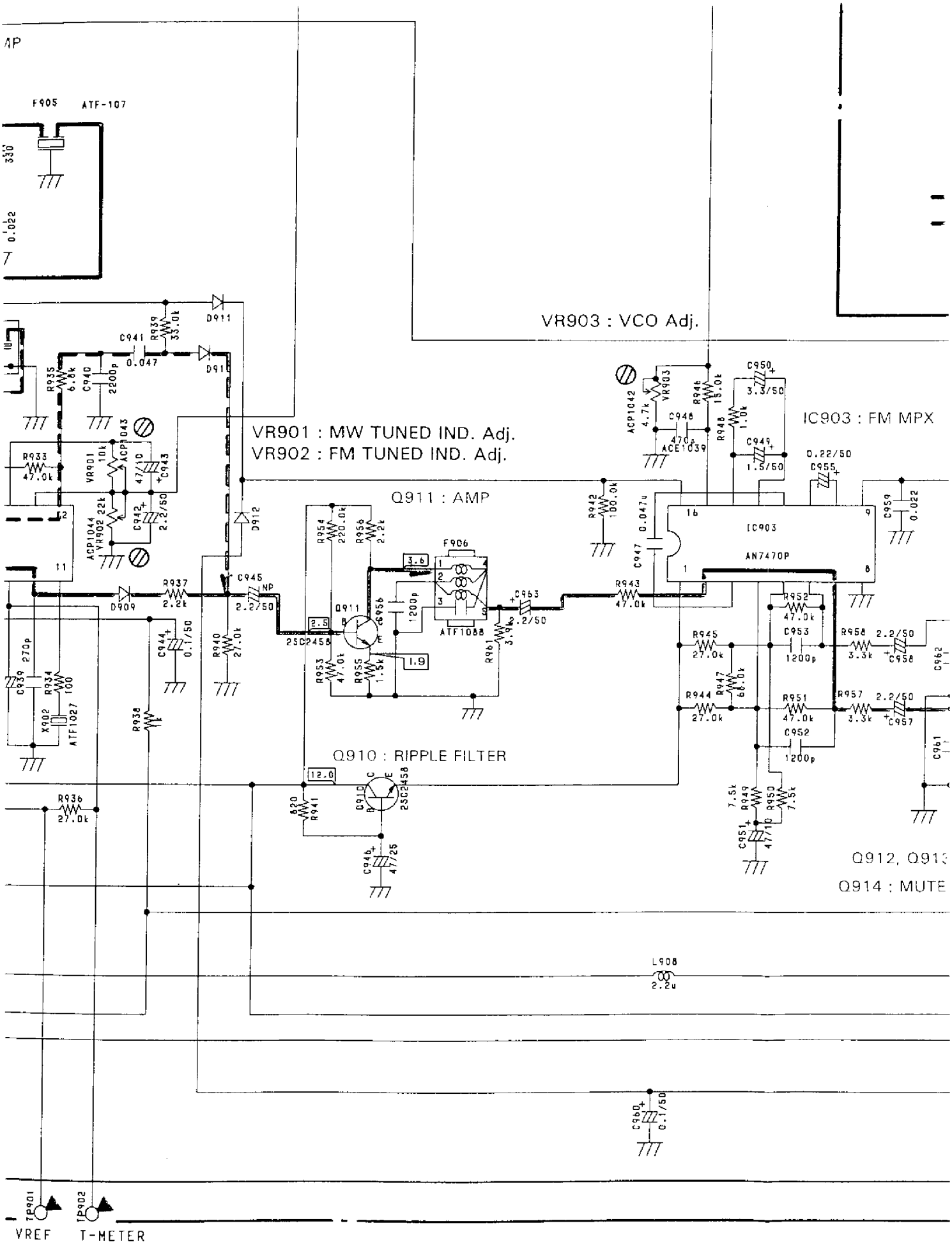



assembly (AXQ1002)
ANT GND ANT AGC VT +B IF GND +B GND VT OSC
FM 75ohm
FM 75ohm (PAL)
AM
AKA1010
C903 100p
C902 1000p
C964 100p
C965 1000p
C907 1000p
C910 100p
D901 1SV156
L901 2.2u
C911 0.01
C916 0.01
L903 2.2u
L904 1.0u
R910 15.0k
R909 1.5k
C922 0.022
R924 330
F903 ATF-11
Q906 : LW PLL SWITCH
Q906 RN2201
Q907 : MW
D907
Q905 : F. E SWITCH
Q905 RN2201
Q907
D906
Q904 : MW SWITCH
RN1203 Q904
R915 680
R926 6.8k
LW
MW
D905
D904 1SS85
AXX1012
AM RF TUNING BLOCK (MW)
R912 100.0k
C919 0.022u
R920 10k
R921 3.9k
C927 47p
R923 470
C925 0.01
C933 0.022u
C934
Q903 : LW SWITCH
TP903
VT
C913 0.022
R917 1.0k
R911 100.0k
RN1203 Q903
R919 680
L905 2.2u
C930 33/16
C932 0.022
L907 : CENT
IC902 : MW/L
D903 1SS85
D902
AM RF TUNING BLOCK (LW)
AXX1013
C928 47/10
C931 0.022
C915 0.022
R914 680
R908 1.0k
C901 33/16
R906 22.0k
C926 33/16
C929 0.01
C906 0.22u
R904 5.6k
C905 0.01
R907 220
D908
R967 10.0k
R968 10.0k
Q901 2SK246
R901 10.0k
R903 560
R905 1.2k
Q902 2SC1740SLN
R902 560
IC901 LM7001
FM
LW
MW
C923 0.022
C924 47/10
X901 455kHz
R913 1.0k
R916 1.0k
R917 1.0k
C912 15p
C914 15p
IC901 : PLL
Q901, Q902 : DC AMP
NOTE :
The TUNER assemblies of
SX-P720 types are the s

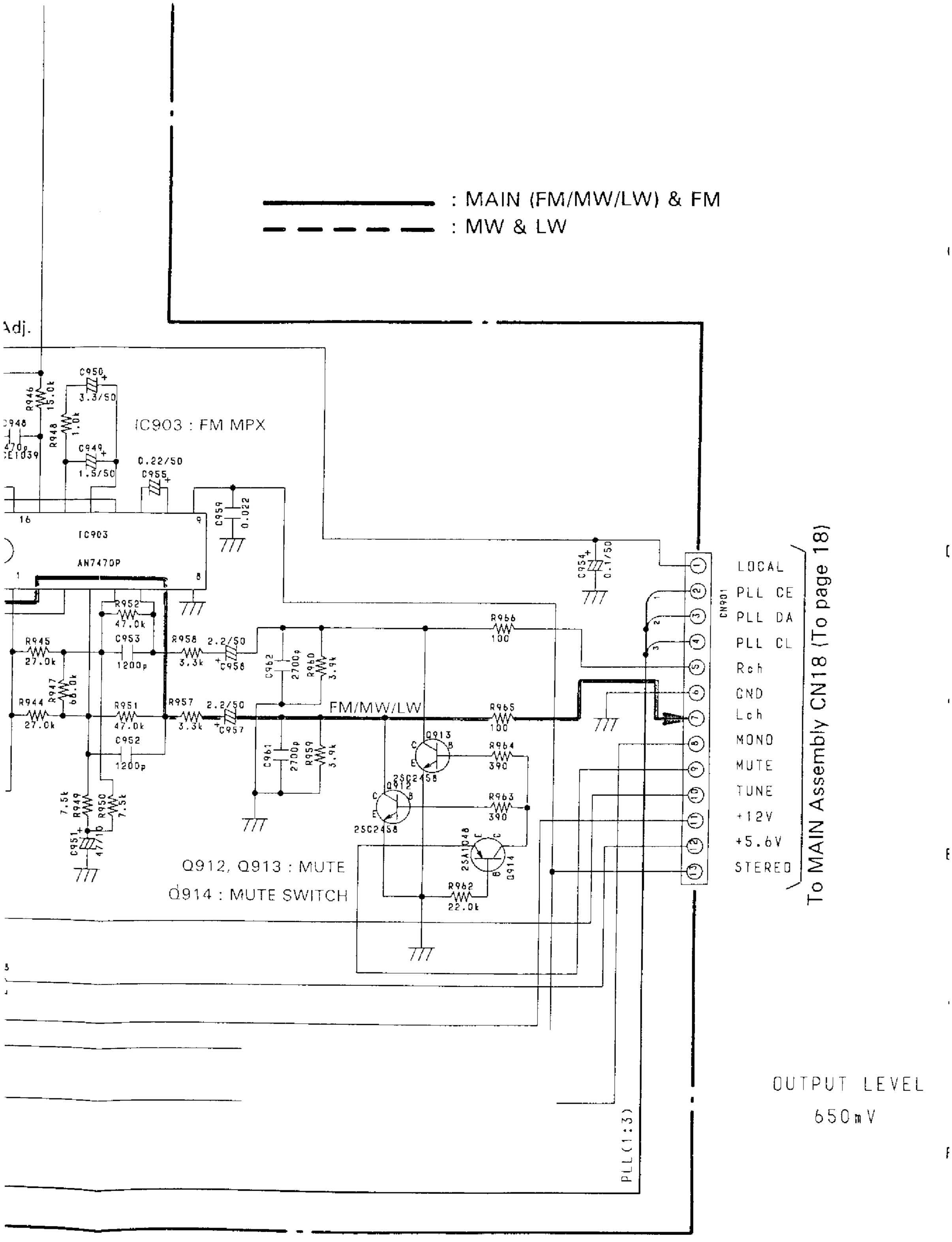
1 2 3



NOTE :
The TUNER assemblies of SX – P920 and SX – P720 types are the same.

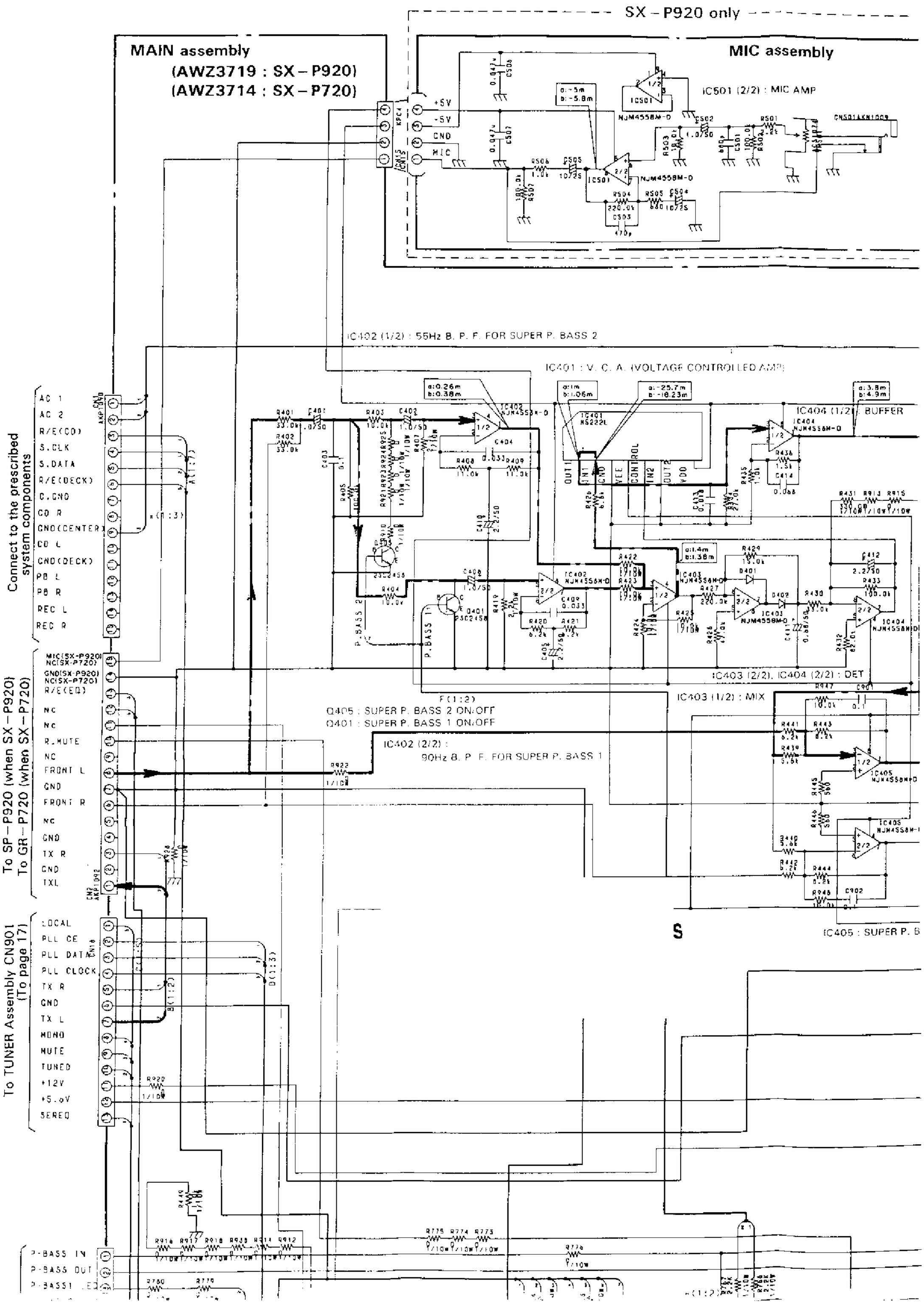

VR903 : VCO Adj.
VR901 : MW TUNED IND. Adj.
VR902 : FM TUNED IND. Adj.
IC903 : FM MPX
Q911 : AMP
Q910 : RIPPLE FILTER
Q912, Q913
Q914 : MUTE
IC903
AN7470P
F905 ATF-107
F906
ATF1088
2SC2458
ATF1027
X902
L908
2.2u
TP901
TP902
VREF
T-METER

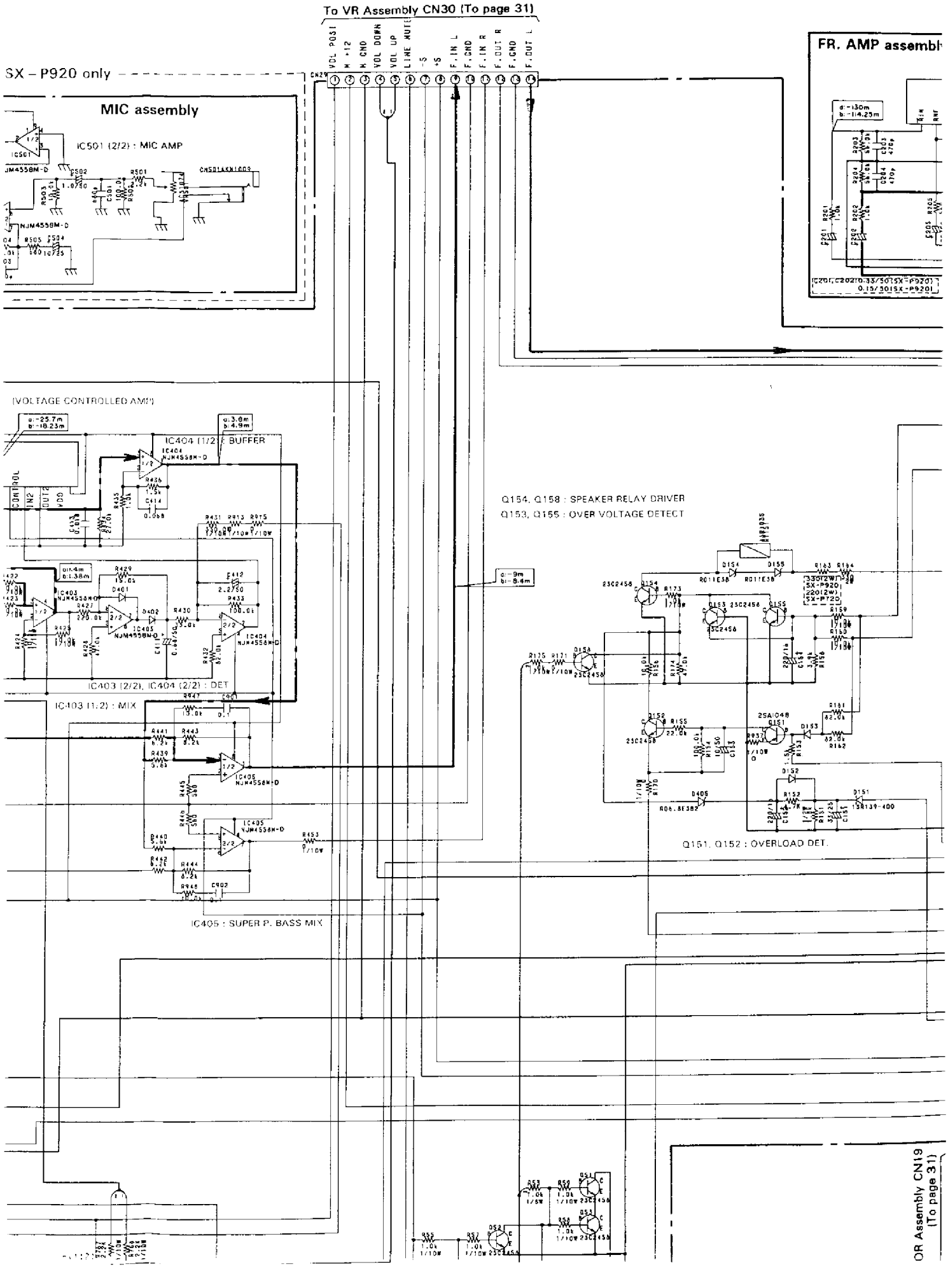
4 5 6 7


: MAIN (FM/MW/LW) & FM
: MW & LW
Adj.
C950
3.3/50
R946
15.0k
C948
470p
CE1039
R948
1.0k
C949
1.5/50
0.22/50
C955
IC903 : FM MPX
16
9
IC903
AN7470P
1
8
C959
0.022
C954
0.1/50
R952
47.0k
R945
27.0k
C953
1200p
R958
3.3k
2.2/50
C956
C962
2700p
R960
3.9k
R966
100
R947
68.0k
R944
27.0k
R951
47.0k
R957
3.3k
2.2/50
C957
FM/MW/LW
R965
100
C952
1200p
C961
2700p
R959
3.9k
Q913
2SC2458
R964
390
Q912
2SC2458
R963
390
7.5k
R949
7.5k
R950
C951
47/16
2SA1048
Q914
R962
22.0k
Q912, Q913 : MUTE
Q914 : MUTE SWITCH
CN901
LOCAL
PLL CE
PLL DA
PLL CL
Rch
GND
Lch
MONO
MUTE
TUNE
+12V
+5.6V
STEREO
To MAIN Assembly CN18 (To page 18)
PLL(1:3)
OUTPUT LEVEL
650mV

7 8 9

3.3 MAIN ASSEMBLY, SUB. POWER ASSEMBLY, FR. AMP ASSEMBLY, MIC ASSEMBLY, HEAD. P ASSEMBLY AND CONNECT ASSEMBLY




To VR Assembly CN30 (To page 31)
VOL POSI
M +12
M GND
VOL DOWN
VOL UP
LINE MUTE
-S
+S
F.IN L
F.GND
F.IN R
F.OUT R
F.GND
F.OUT L
SX – P920 only
MIC assembly
IC501 (2/2) : MIC AMP
FR. AMP assembl
(VOLTAGE CONTROLLED AMP)
IC404 (1/2) : BUFFER
IC403 (2/2), IC404 (2/2) : DET
IC403 (1/2) : MIX
IC405 : SUPER P. BASS MIX
Q154, Q158 : SPEAKER RELAY DRIVER
Q153, Q155 : OVER VOLTAGE DETECT
Q151, Q152 : OVERLOAD DET.
OR Assembly CN19
(To page 31)

o page 31)

F.IN R
F.OUT R
F.GND
F.OUT L

FR. AMP assembly (AWZ3734 : SX – P920)
(AWZ3730 : SX – P720)

IC201 : POWER AMP

IC201 STK4180-2G(SX-P920)
STK4160-2G(SX-P720)

a:-130m
b:-114.25m

a:6m
b:-3.5m

R207 56.0k/4W
R208 56.0k/4W
R210 1301/4W
R209 1301/4W
R203 56.0k
R204 56.0k
R201 1.0k
R202 1.0k
R205 1k/1W
R206 1k/1W
C203 470p
C204 470p
C201 100/50
C202 100/50
C210 10/50
C209 10/50
C211 0.047
C212 2.2/50
C213 0.047
C214 1/50
R211 1/4W
R212 4.7/1/4W

C201,C202:0.33/50(SX-P920)
0.15/50(SX-P920)

CN23
CN24

: DC voltage (V
[a] and [b] in
a = SX – P92
b = SX – P72
None = SX –
Value in (

RY151
A3R103S

RY151
A3R103S

Q154, Q158 : SPEAKER RELAY DRIVER
Q153, Q155 : OVER VOLTAGE DETECT

a:-9m
b:-8.4m

D154 RD11ES8
D155 RD11ES8
R163 R164 330(2W) SX-P920 220(2W) SX-P720
2SC2458
R173 1/10W
R159 1/10W
R160 1/10W
R175 1/10W
R171 1/10W
R174 47.0Ω
R156 10.0Ω
C154 220/16
R158 3.9Ω
R161 82.0k
R155 22.0k
R154 100.0Ω
C153 10/50
R153 1.5Ω
R162 82.0k
2SA1048
R937 1/10W
D153
D152
D405 RD6.8ES82
R152 4.7k
C152 220/16
R151 1/2W
C151 33/25
D151 1SR139-400

Q151, Q152 : OVERLOAD DET.

D1005
D1006
NTH221BF
TH1001
NJM4558M-D
IC100
R1014 1/10W
R1004 1/10W
R1009 1/10W
R1002 1/10W
R1007 1/10W
R1010 1/10W
R1011 1/10W
R1015 1/10W
Q1001
Q1002
2SC1456
XDCT4BE3

IC1001, Q1001, Q1002 : FAN CONTROL

C103,C104:ACH1145,3300/50(SX-
ACH1017,3300/50(SX-

a:41.3
b:38.7

a:-41.5
b:-38.9

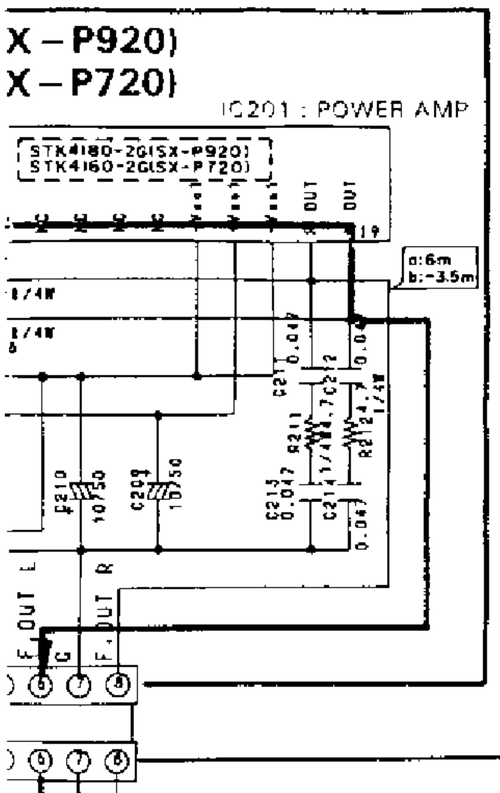
R101 0.22Ω 2W
R102 0.22Ω 2W
C103 ※
C104 ※
D101
D358A20
D102
D103
D104
D105 D1S2-1S9
D106
D107
C105 1000/6
C106 1000/16
C113 220/25
C111

OR Assembly CN19
(To page 31)

CN20
FAN12
12
-5
5
±SC
+5VIN
-5VIN

Q51 Q52 Q53 Q55 Q56 R53 1.0k 1/2W R59 1.0k 1/10W 2SC2456 R58 1.0k 1/10W 2SC2456

X – P920)
X – P720)



: DC voltage (V) at no input signal

[a] and [b] in the circuit diagram describe the following :

a = SX – P920

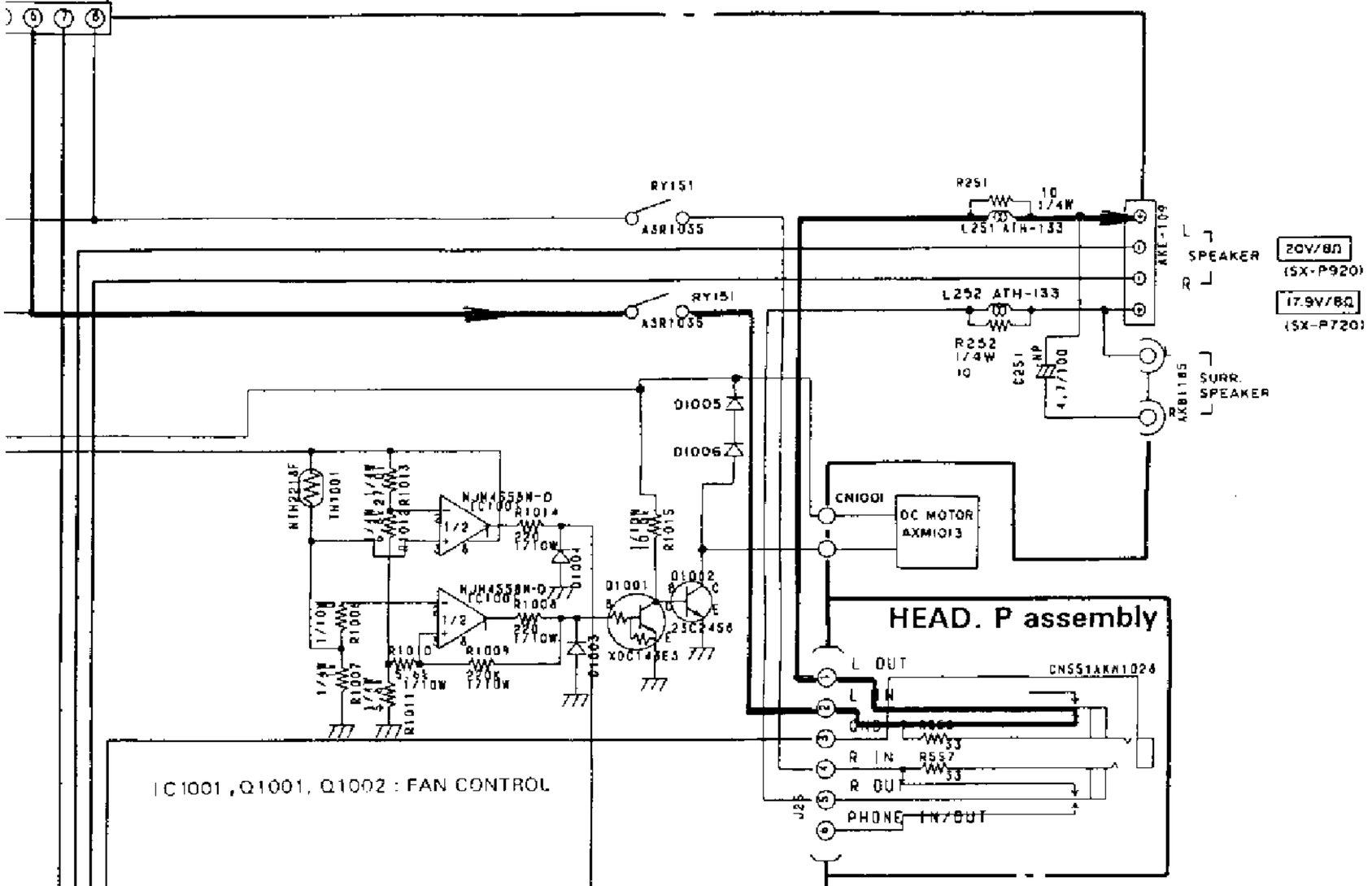
b = SX – P720

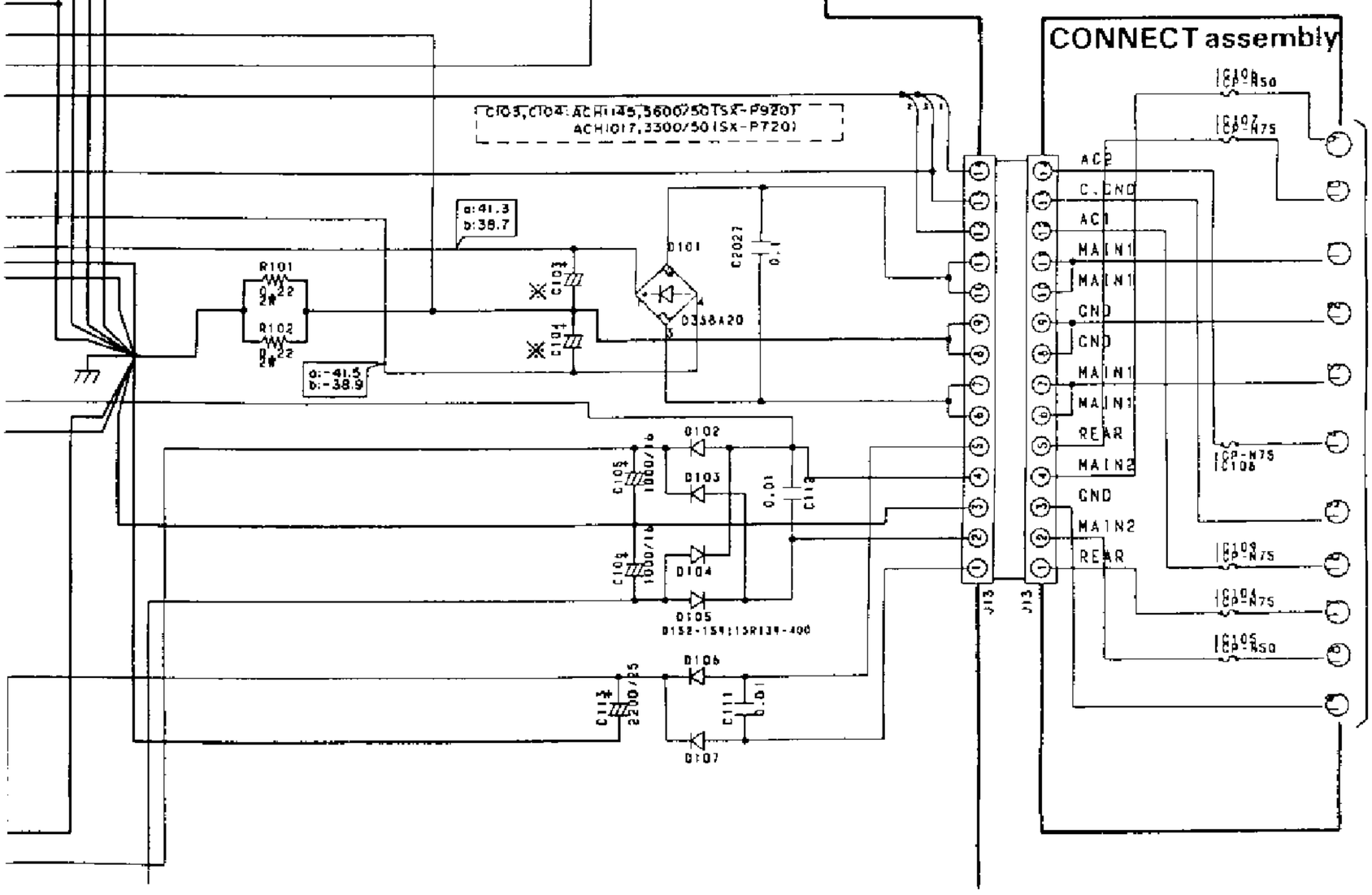
None = SX – P920 and SX – P720

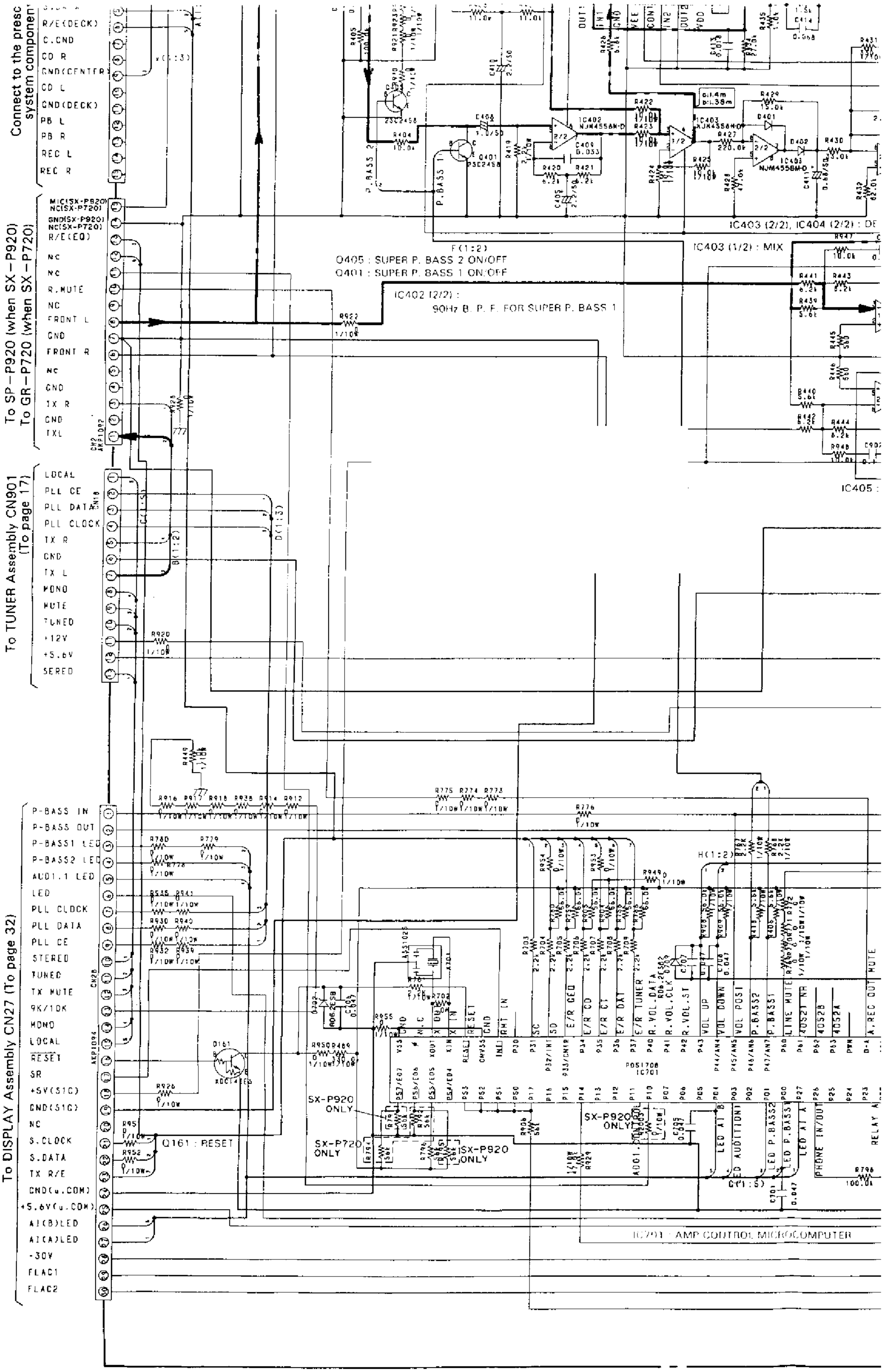
Value in ( ) is DC voltage at rated power.

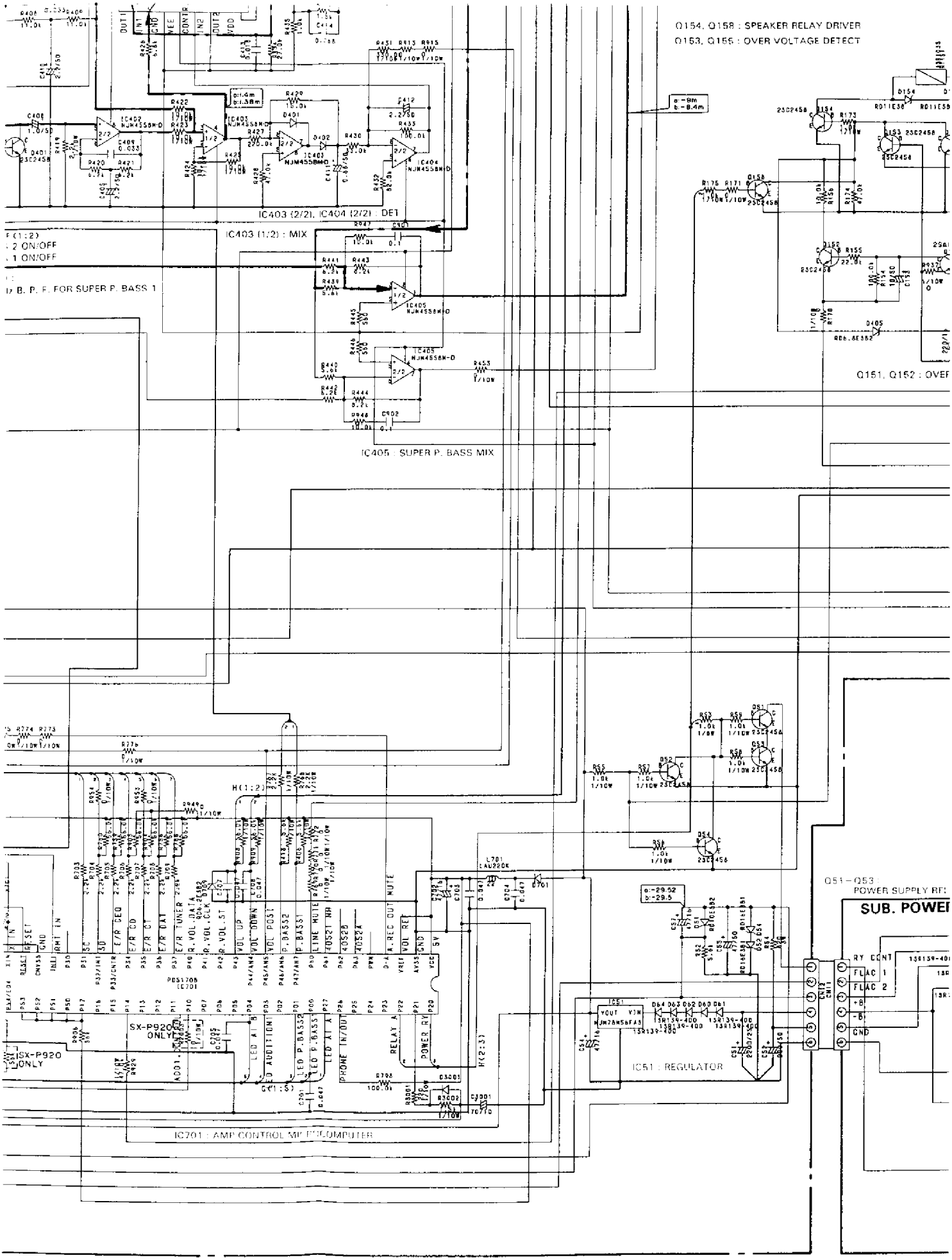
: MAIN (TUNER FM/MW/LW)

: P. BASS



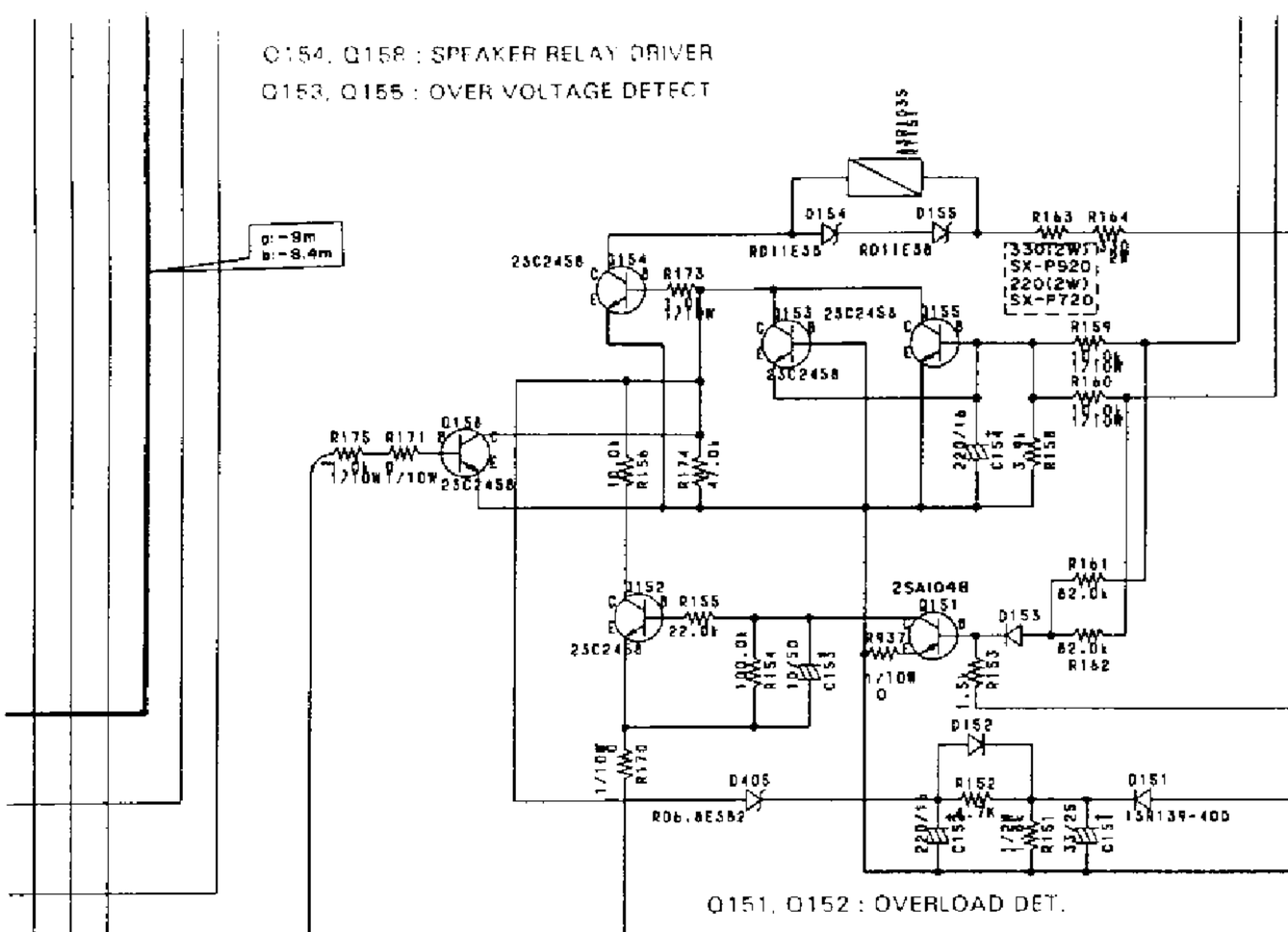


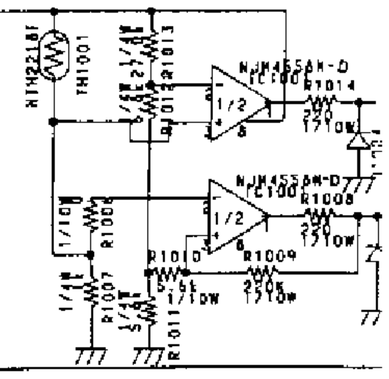

Connect to the presc system componen
R/E(DECK)
C.GND
CD R
GND(CENTER)
CD L
GND(DECK)
PB L
PB R
REC L
REC R
To SP-P920 (when SX-P920)
To GR-P720 (when SX-P720)
MIC(SX-P920) NC(SX-P720)
GND(SX-P920) NC(SX-P720)
R/E(EQ)
NC
NC
R.MUTE
NC
FRONT L
GND
FRONT R
NC
GND
TX R
GND
TXL
To TUNER Assembly CN901 (To page 17)
LOCAL
PLL CE
PLL DATA
PLL CLOCK
TX R
GND
TX L
MONO
MUTE
TUNED
+12V
+5.6V
STEREO
To DISPLAY Assembly CN27 (To page 32)
P-BASS IN
P-BASS OUT
P-BASS1 LED
P-BASS2 LED
AUDI.1 LED
LED
PLL CLOCK
PLL DATA
PLL CE
STEREO
TUNED
TX MUTE
9K/10K
MONO
LOCAL
RESET
SR
+5V(S1G)
GND(S1G)
NC
S.CLOCK
S.DATA
TX R/E
GND(u.COM)
+5.6V(u.COM)
AI(B)LED
AI(A)LED
-30V
FLAC1
FLAC2
IC402 NJM4558M-D
IC403 NJM4558M-D
IC403 (2/2), IC404 (2/2) : DE
IC403 (1/2) : MIX
Q405 : SUPER P. BASS 2 ON/OFF
Q401 : SUPER P. BASS 1 ON/OFF
IC402 (2/2) :
90Hz B. P. F. FOR SUPER P. BASS 1
Q161 : RESET
SX-P920 ONLY
SX-P720 ONLY
IC405 :
IC701 : AMP CONTROL MICROCOMPUTER


Q154, Q158 : SPEAKER RELAY DRIVER
Q153, Q155 : OVER VOLTAGE DETECT
IC403 (2/2), IC404 (2/2) : DET
IC403 (1/2) : MIX
IC405 : SUPER P. BASS MIX
Q151, Q152 : OVER
IC701 : AMP CONTROL MICROCOMPUTER
IC51 : REGULATOR
SX-P920 ONLY
SUB. POWER

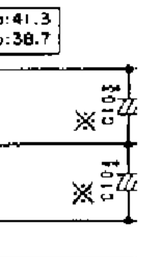
3 4 5

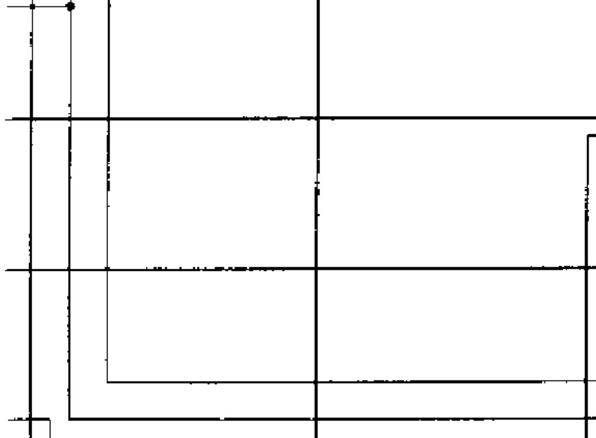
Q154, Q158 : SPEAKER RELAY DRIVER
Q153, Q155 : OVER VOLTAGE DETECT

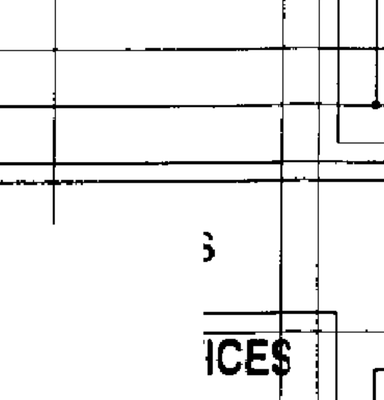




IC1001 , Q1001, Q1002 : FAN CONTROL

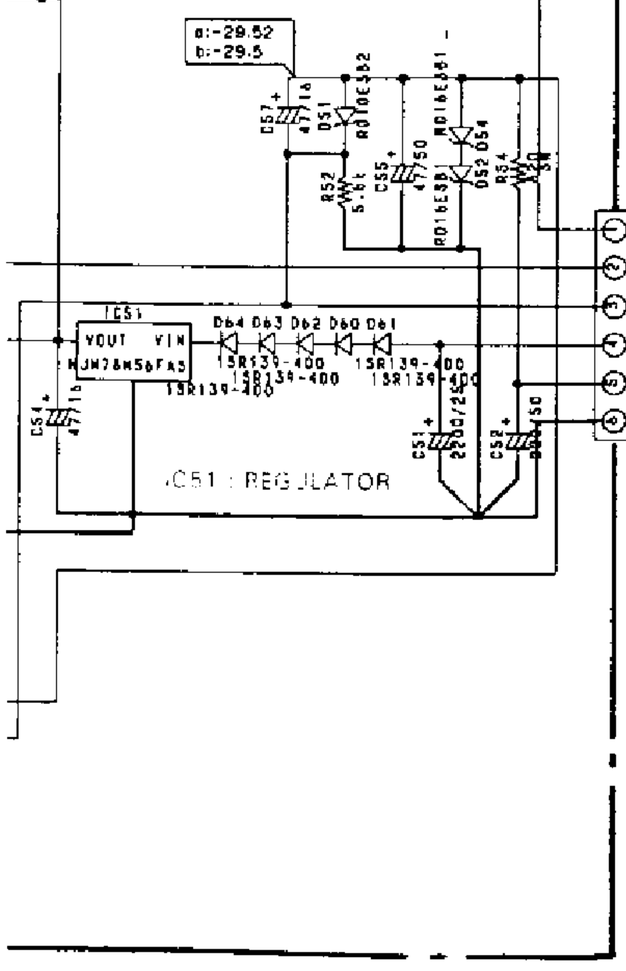


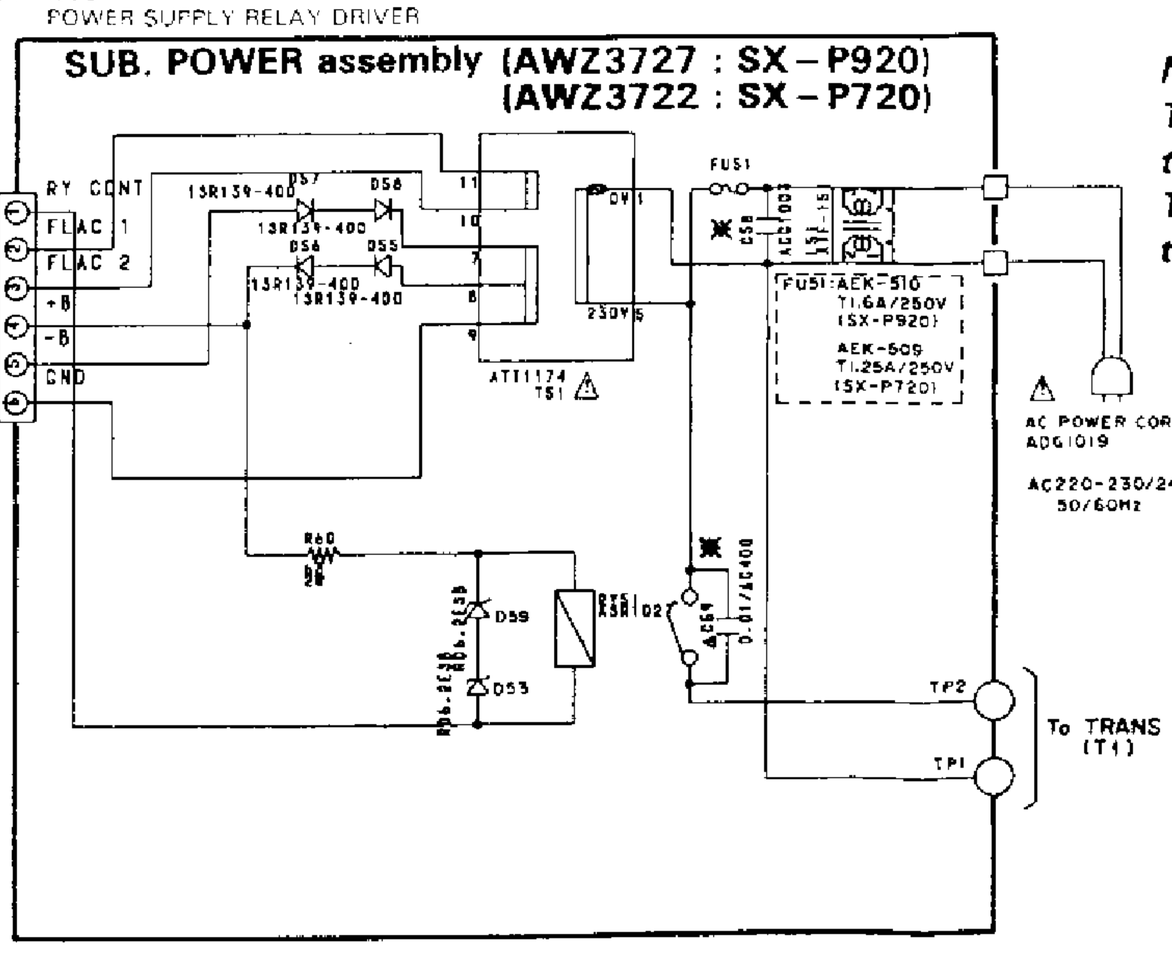




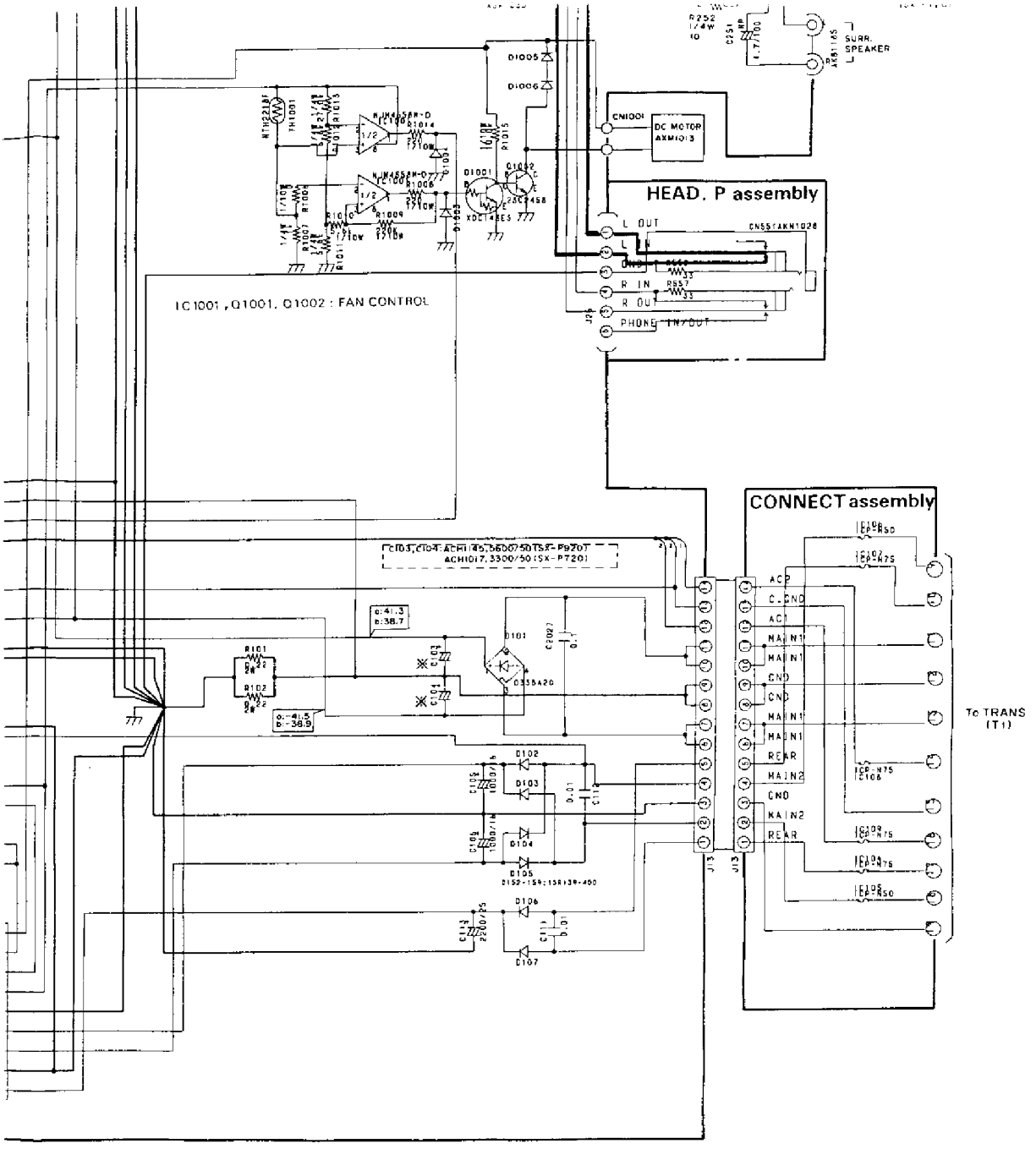
Q51 – Q53 :
POWER SUPPLY RELAY DRIVER

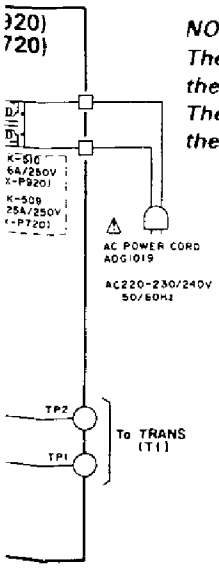
SUB. POWER assembly (AWZ3727 : SX – P920) (AWZ3722 : SX – P720)





NOTE :
The HEAD P. assemblies of SX
the same.
The CONNECT assemblies of SX
the same.



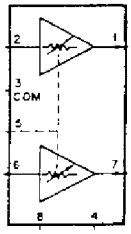


NOTE :

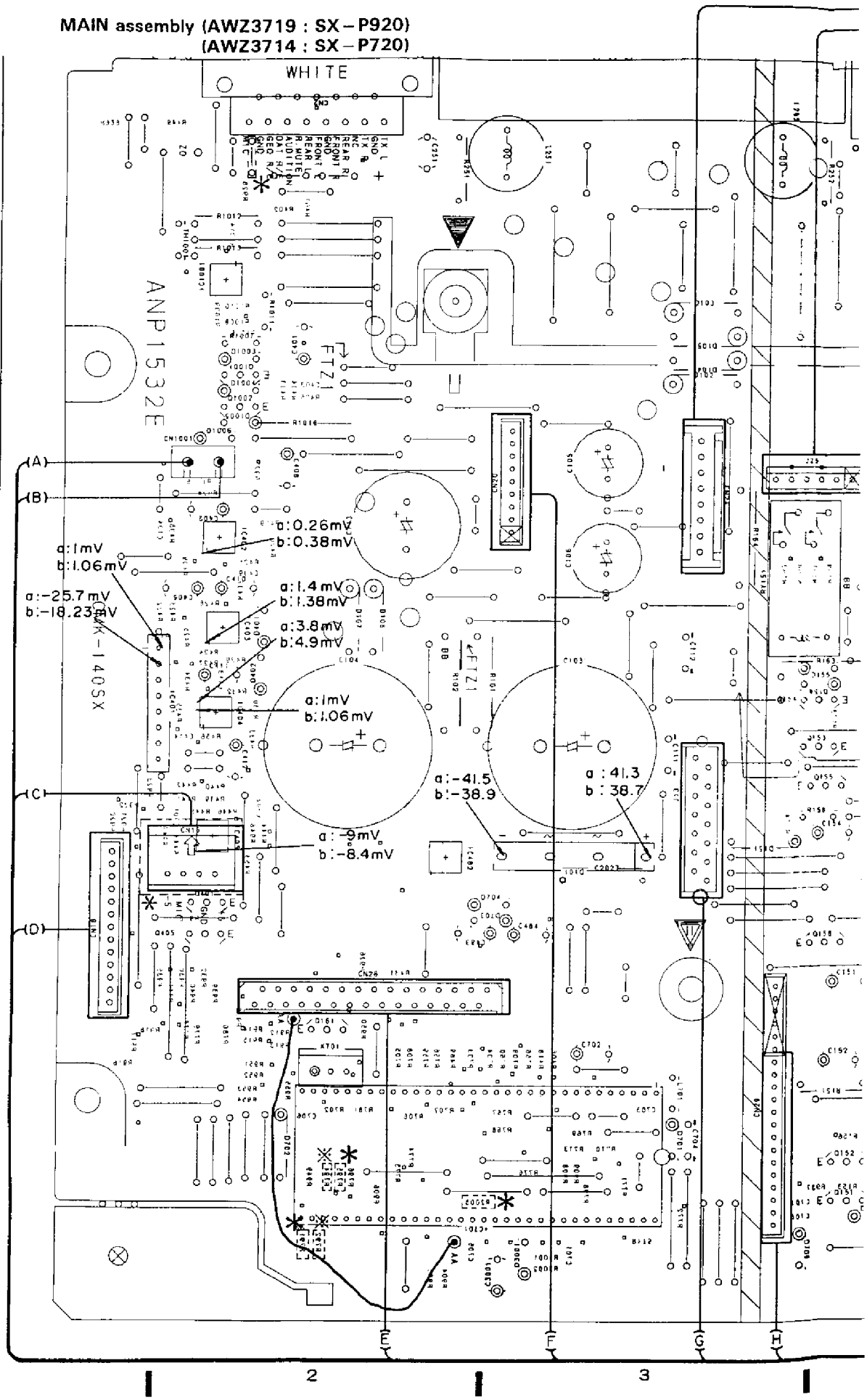
The HEAD P. assemblies of SX – P920 and SX – P720 types are the same.

The CONNECT assemblies of SX – P920 and SX – P720 types are the same.

IC401 M5222L



MAIN assembly (AWZ3719 : SX – P920)
(AWZ3714 : SX – P720)



Q54
A Q52
Q53
IC1001
Q1001
Q1002 Q51
B IC402
IC51
IC403
IC401 Q154
IC404
Q153
Q155
C IC405
Q401
Q405 Q158
Q161
Q152
D Q151
IC701

3 4 5

BLACK

HEAD. P as:

AWZ

a:-29.52
b:-29.5

CAUTION
ATTENTION : REPLACER AVEC CAT: NO. ICP-N25
POUR IC114.

CAUTION
REPLACE WITH SAME TYPE NO. ICP-N25 MFD. BY ROHM FOR IC114.

a:41.3
b:38.7
-41.5
-38.9

DC MOTOR
(A) BLK
(B) RED

(D) To TUNER Assembly CN901
(To page 13)

(E) To DISPLAY Assembly CN27
(To page 29)

(F) To REGULATOR Assembly CN19
(To page 29)

(H) To VR Assembly CN30
(To page 30)

AWK

SUB. POWER assembly
(AWZ3727 : SX – P920)
(AWZ3722 : SX – P720)

F G H

3 4 5

5 6 7

FR. AMP assem

HEAD. P assembly

SX – P920 only

MIC assembly

a : 6mV
b : –3.5mV

a : –5mV
b : –5.8mV

1 : –29.52
2 : –29.5

ATTENTION : REPLACER AVEC CAT. NO. ICP-N25
POUR IC114.

DC MOTOR
(A) BLK
(B) RED

(D) To TUNER Assembly CN901
(To page 13)

(E) To DISPLAY Assembly CN27
(To page 29)

(F) To REGULATOR Assembly CN19
(To page 29)

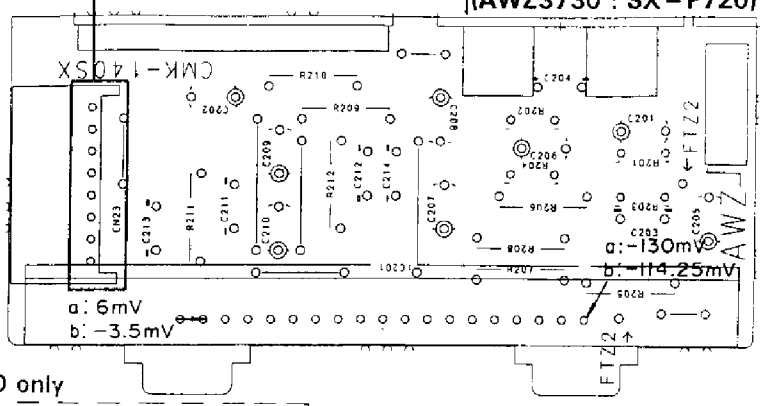
(H) To VR Assembly CN30
(To page 30)

SUB. POWER assembly
(AWZ3727 : SX – P920)
(AWZ3722 : SX – P720)

This P.

5 6 7

FR. AMP assembly (AWZ3734 : SX – P920)
(AWZ3730 : SX – P720)



NOTE
1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E C	Q504 E C or E C	Transistor
Q215	Q215 or	Radiator type transistor
D205	D205	Diode
R237	R237	Resistor
C513	C513	Capacitor (Polarity)
C516	C516	Capacitor (Non-polarity)

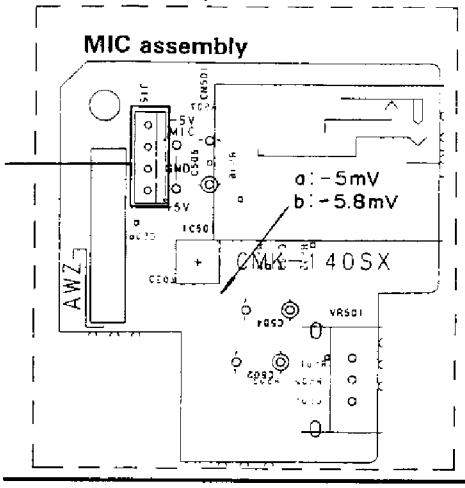
Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

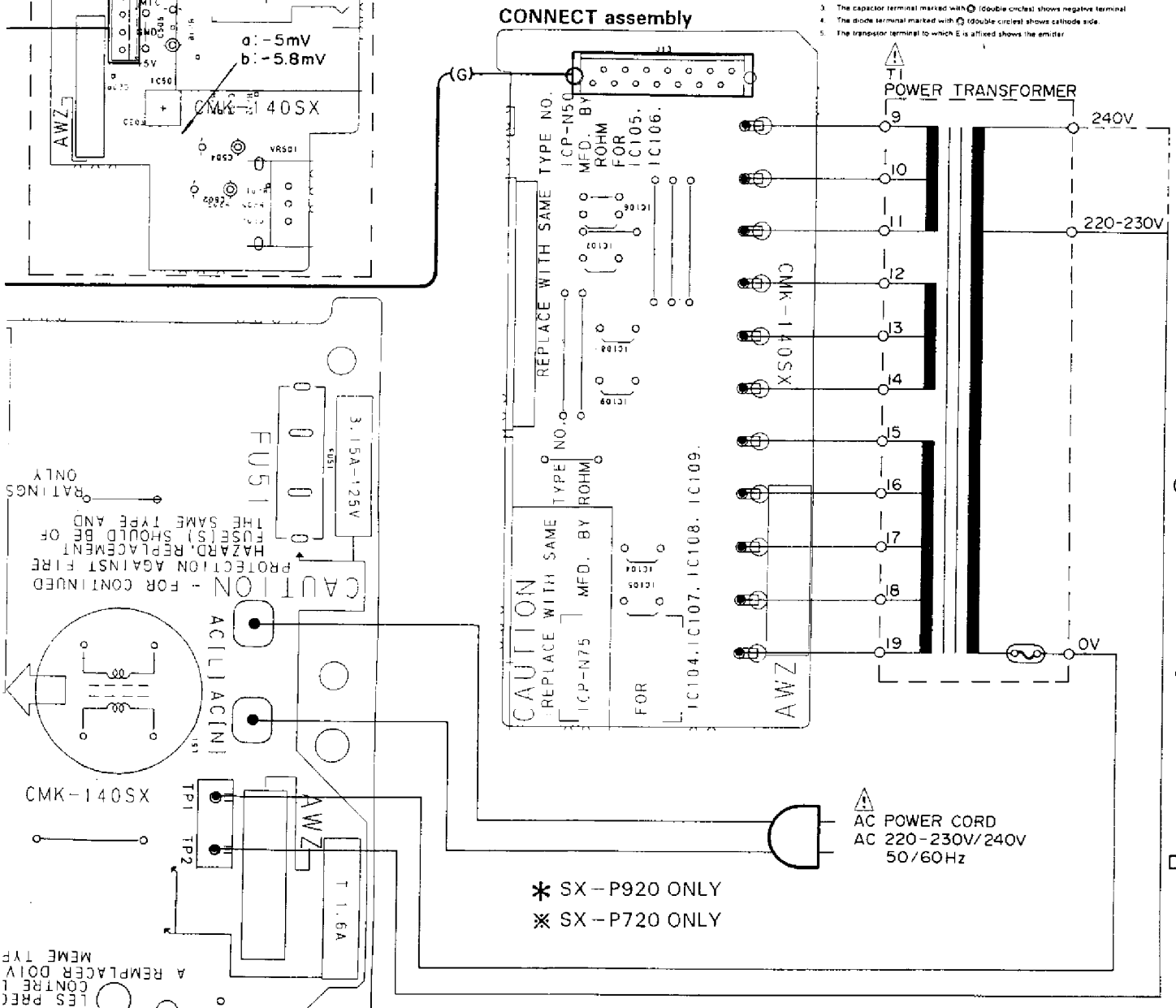
3. The capacitor terminal marked with ⊖ (double circles) shows negative terminal.
4. The diode terminal marked with ⊖ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

SX – P920 only

MIC assembly

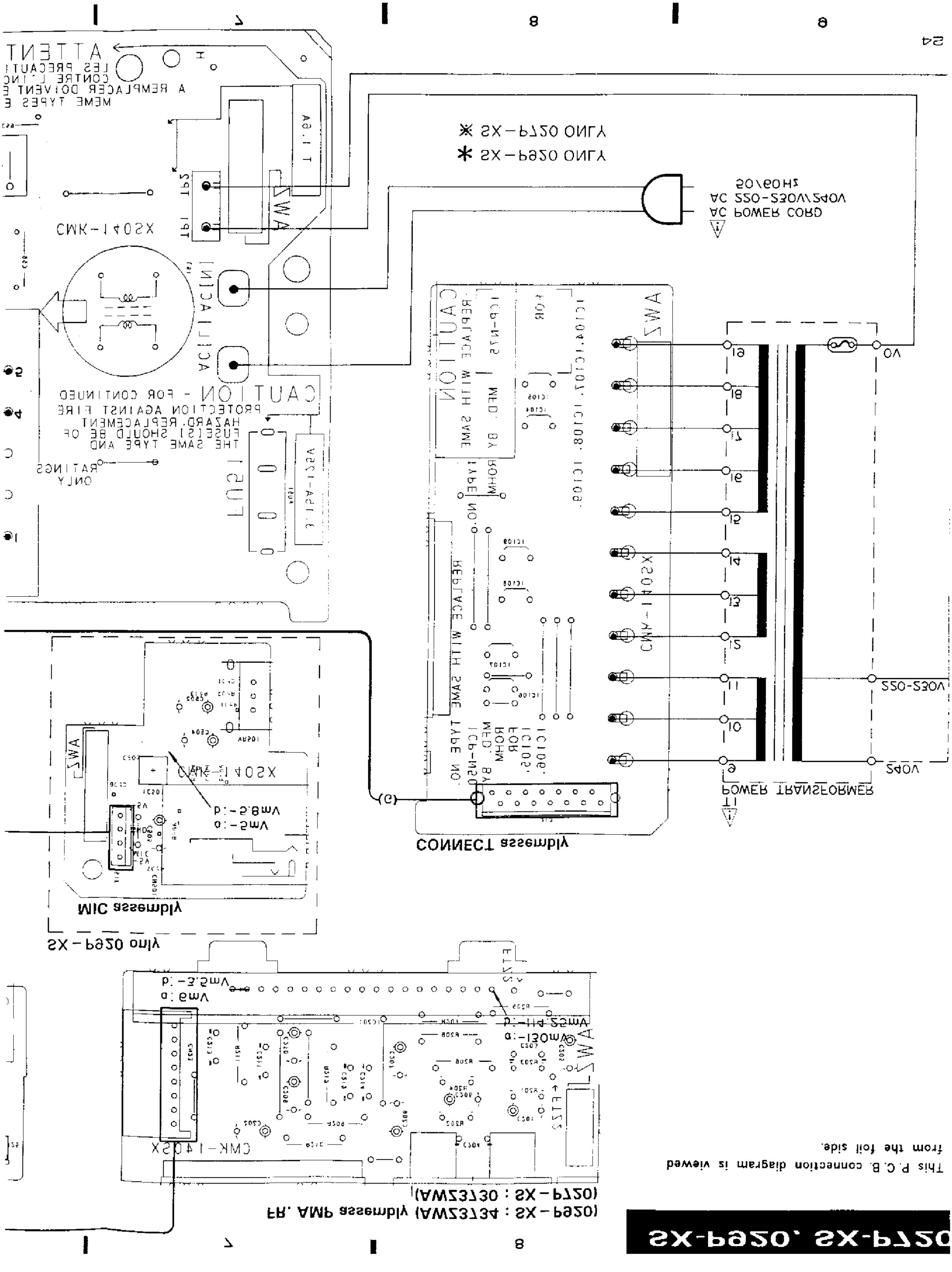


CONNECT assembly



This P. C. B connection diagram is viewed from the parts mounted side.

SX-9650, SX-9750



This P.C.B. connection diagram is viewed from the foil side.

SUB. POWER assembly
(AWZ272) : SX-P920)
(AWZ272) : SX-P720)
HEAD. P assembly
MIC assembly
SX-P920 only
DC MOTOR
BLK
RED
(D)-To TUNER Assembly CN901
(To page 13)
(E)-To DISPLAY Assembly CN27
(To page 29)
(F)-To REGULATOR Assembly CN19
(To page 29)
(H)-To VR Assembly CN30
(To page 30)
CAUTION - FOR CONTINUED
PROTECTION AGAINST FIRE
HAZARD, REPLACEMENT
FUSE(S) SHOULD BE OF
THE SAME TYPE AND
RATING
ATTENTION - POUR
CONTINUER LA PROTECTION CONTRE LES RISQUES
D'INCENDIE, LES FUSIBLES
DOIVENT ETRE DE
MEME TYPE ET NORMES.
AC(IN)
FR. AM

Mark	No.	Description	Parts No.
	R1034, 1054	CHIP RESISTOR	RS1/10S000J
	R1055	CHIP RESISTOR	RS1/10S473J
	R1056	CHIP RESISTOR	RS1/10S000J
	R1060	CHIP RESISTOR	RS1/10S563J
	R1061	CHIP RESISTOR	RS1/10S102J
	R726	CHIP RESISTOR	RS1/10S151J
	R732	CHIP RESISTOR	RS1/10S000J
	R741, 777	CHIP RESISTOR	RS1/10S000J
		Other resistors	RD1/8PM□□□J

OTHERS

CN27	30P SOCKET	AKP1095
	REMOTE RECEIVER UNIT	AXX1010
V1001	FL TUBE	AAV1134
X1001	CRYSTAL RESONATOR (8MHz)	ASS1015

◉ VR ASSEMBLY (AWZ3708)

SEMICONDUCTORS

IC301	OP−AMP IC	NJM4558M−D
IC302	MECHANISM DRIVER IC	TA7291S
Q301, 302	TRANSISTOR	2SC2878
Q303	TRANSISTOR	RN2203

CAPACITORS

C301−304	ELECTR. CAPACITOR	CEAS2R2M50
C305	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
C311, 312	CERAMIC CAPACITOR	CKSQYF473Z50
C321	ELECTR. CAPACITOR	CEAS101M16
C323	CERAMIC CAPACITOR	CKDYX104M25

RESISTORS

VR301	VARIABLE RESISTOR (100k×2, 50k×1)	ACX1064
R301−303	CHIP RESISTOR	RS1/10S472J
R305, 306	CHIP RESISTOR	RS1/10S102J
R307, 308	CHIP RESISTOR	RS1/10S104J
	Other resistors	RD1/8PM□□□J

Mark	No.	Description	Parts No.

◉ REGULATOR ASSEMBLY (AWZ4009)

SEMICONDUCTORS

IC101	REGULATOR IC	NJM78M05FAS
IC102	REGULATOR IC	NJM79M05FA
IC103, 104	REGULATOR IC	MC7812CT

CAPACITORS

C108	ELECTR. CAPACITOR	CEAS220M16
C109	ELECTROLYTIC CAPACIT	CEJA220M16
C110, 111	ELECTR. CAPACITOR	CEAS220M16

OTHERS

CN27	30P SOCKET	AKP1095
	REMOTE RECEIVER UNIT	AXX1010
V1001	FL TUBE	AAV1134
X1001	CRYSTAL RESONATOR (8MHz)	ASS1015

4.2 SX – P720/HE

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
		TUNER ASSEMBLY	AWE1226
◉		MAIN ASSEMBLY	AWZ3714
◉		SUB. POWER ASSEMBLY	AWZ3722
◉		FR. AMP ASSEMBLY HEAD. P ASSEMBLY CONNECT ASSEMBLY	AWZ3730
◉		DISPLAY ASSEMBLY	AWZ3701
◉		VR ASSEMBLY	AWZ3708
◉		REGULATOR ASSEMBLY	AWZ4009

TUNER ASSEMBLY (AWE1226)

The TUNER assembly of SX-P720 is the same as that of SX-P920.
Refer to page 34.

◉ MAIN ASSEMBLY (AWZ3714)

SEMICONDUCTORS

IC1001	OP-AMP IC	NJM4558M-D
IC401	E-VR IC	M5222L
IC402-405	OP-AMP IC	NJM4558M-D
IC51	REGULATOR IC	NJM78M56FAS
IC701	SYSTEM CONTROL MICROCOMPUTER	PD5170B
Q1001	TRANSISTOR	XDC143ES
Q1002	TRANSISTOR	2SC2458
Q151	TRANSISTOR	2SA1048
Q152-155	TRANSISTOR	2SC2458
Q158	TRANSISTOR	2SC2458
Q161	TRANSISTOR	XDC143ES
Q401, 405	TRANSISTOR	2SC2458
Q51-54	TRANSISTOR	2SC2458
D1003-1006	DIODE	1SS252
D101	DIODE	D3SBA20
D102-107	DIODE	1SR139-400
D151	DIODE	1SR139-400
D152, 153	DIODE	1SS252
D154, 155	ZENER DIODE	RD11ESB
D3001	DIODE	1SS252
D401, 402	DIODE	1SS252
D405	ZENER DIODE	RD6.8ESB2
D51	ZENER DIODE	RD10ESB2
D52, 54	ZENER DIODE	RD16ESB1
D60-64	DIODE	1SR139-400
D701	DIODE	1SS252
D702, 709	ZENER DIODE	RD6.2ESB2

Mark	No.	Description	Parts No.
RELAY			
	RY151	RELAY	ASR1035
COILS			
	L251, 252	COIL	ATH-133
	L701	AXIAL INDUCTOR	LAU220K
CAPACITORS			
	C103, 104	ELECTROLYTIC CAPACIT (3300/50V)	ACH1017
	C105, 106	ELECTR. CAPACITOR	CEAS102M16
	C111, 112	CERAMIC CAPACITOR	CKCYF103Z50
	C113	ELECTR. CAPACITOR	CEAS222M25
	C151	ELECTR. CAPACITOR	CEAS330M25
	C152	ELECTR. CAPACITOR	CEAS221M16
	C153	ELECTR. CAPACITOR	CEAS100M50
	C154	ELECTR. CAPACITOR	CEAS221M16
	C2027	MYLAR FILM CAPACITOR	CQMA104K250
	C251	ELECTROLYTIC CAPACIT	CEANP4R7M100
	C3001	ELECTR. CAPACITOR	CEAS471M10
	C401, 402	ELECTR. CAPACITOR	CEAS010M50
	C403	CERAMIC CAPACITOR	CKSQYF104Z50
	C404	CERAMIC CAPACITOR	CKSQYB333K50
	C405	ELECTR. CAPACITOR	CEAS2R2M50
	C408	ELECTR. CAPACITOR	CEAS010M50
	C409	CERAMIC CAPACITOR	CKSQYB333K50
	C410	ELECTR. CAPACITOR	CEAS2R2M50
	C411	ELECTR. CAPACITOR	CEASR68M50
	C412	ELECTR. CAPACITOR	CEAS2R2M50
	C413	CERAMIC CAPACITOR	CKSQYB183K50
	C414	CERAMIC CAPACITOR	CKSQYF683Z50
	C51	ELECTROLYTIC CAPACIT	CEAS222M25
	C52	ELECTR. CAPACITOR	CEAS221M50
	C54	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C55	ELECTROLYTIC CAPACIT	CEHAQ470M50
	C57	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C701	CERAMIC CAPACITOR	CKSQYF473Z50
	C702	ELECTR. CAPACITOR	CEAS470M16
	C703	CERAMIC CAPACITOR	CKSQYF473Z50
	C704	CERAMIC CAPACITOR	CKDYF473Z50
	C705-708	CERAMIC CAPACITOR	CKSQYF473Z50
	C901, 902	CERAMIC CAPACITOR	CKSQYF104Z50
RESISTORS			
	R1007	METAL FILM RESISTER	RN1/4PC1001F
	R101, 102	METAL OXIDE RESISTOR	RS2LMFR22J

Mark	No.	Description	Parts No.
	R1011	METAL FILM RESISTER	RN1/4PC5601F
	R1012	METAL FILM RESISTER	RN1/4PC6801F
	R1013	METAL FILM RESISTER	RN1/4PC2702F
	R151	CARBON FILM RESISTOR	RD1/2PM182J
	R158	CARBON FILM RESISTOR	RD1/8PM392J
	R163	METAL OXIDE RESISTOR	RS2LMF221J
	R164	METAL OXIDE RESISTOR	RS2LMF331J
	R251, 252	CARBON FILM RESISTOR	RD1/4PMFL100J
	R52	CARBON FILM RESISTOR	RD1/8PM562J
	R53	CARBON FILM RESISTOR	RD1/8PM102J
	R54	METAL OXIDE RESISTOR	RS3LMF821J
		Other resistors	RS1/10S□□□J
OTHERS			
		SPEAKER TERMINAL 4-P	AKE-109
	CN	PIN JACK 2P (REAR SPEAKERS)	AKB1185
	CN1	SOCKET (15P)	AKP1090
	CN2	SOCKET (15P)	AKP1092
	CN28	30P SOCKET	AKP1094
	TH1001	THERMISTOR	NTH2218F
	X701	CERAMIC RESONATOR (4MHz)	ASS1025

◉ SUB. POWER ASSEMBLY (AWZ3722)

SEMICONDUCTORS			
	D53	ZENER DIODE	RD6.2ESB
	D55-58	DIODE	1SR139-400
	D59	ZENER DIODE	RD6.2ESB
RELAY			
	RY51	RELAY	ASR1027
COIL & TRANSFORMER			
	L51	FILTER	ATF-151
	T51	POWER TRANSFORMER	ATT1174
CAPACITORS			
	C58, 59	CKA (0.01/AC400V)	ACG1003

Mark	No.	Description	Parts No.
RESISTOR			
	R60	METAL OXIDE RESISTOR	RS2LMF680J

◉ FR. AMP ASSEMBLY (AWZ3730)

SEMICONDUCTOR			
	IC201	AUDIO IC	STK4160-2G
CAPACITORS			
	C201, 202	ELECTROLYTIC CAPACIT	CEASR15M50
	C203, 204	CERAMIC CAPACITOR	CKCYB471K50
	C205-208	ELECTR. CAPACITOR	CEAS101M50
	C209, 210	ELECTR. CAPACITOR	CEAS100M50
	C211-214	CERAMIC CAPACITOR	CKCYF473Z50
RESISTORS			
	R201, 202	CARBON FILM RESISTOR	RD1/8PM102J
	R203, 204	CARBON FILM RESISTOR	RD1/8PM563J
	R209, 210	CARBON FILM RESISTOR	RD1/4PMFL101J
		Other resistors	RD1/4PM□□□J

HEAD. P ASSEMBLY

The HEAD. P assembly of SX-P720 is the same as that of SX-P920.
Refer to page 37.

CONNECT ASSEMBLY

The CONNECT assembly of SX-P720 is the same as that of SX-P920.
Refer to page 37.

◉ DISPLAY ASSEMBLY (AWZ3701)

SEMICONDUCTORS			
	IC1001	CONTROL MICROCOMPUTER	PDG075A
	IC1003	LOGIC IC	SN74LS42NP
	Q1001	TRANSISTOR	XDC143ES
	Q1002	TRANSISTOR	2SC2458
	Q1003	TRANSISTOR	2SA1048
	Q701, 702	TRANSISTOR	XDA143ES
	Q705, 706	TRANSISTOR	XDA143ES
	D1001	DIODE	1SS252
	D1002	ZENER DIODE	RD6.2ESB
	D1003	ZENER DIODE	RD4.7ESB2
	D1006-1014	DIODE	1SS252
	D1020	ZENER DIODE	RD6.2ESB

Mark	No.	Description	Parts No.
	D701	DIODE	1SS252
	D702 – 707	LED (RED)	AEL1108
	D710, 711	LED (LIGHT GREEN)	AEL1058
	D712	LED (RED, AMBER)	AEL1115
	D720, 721	DIODE	1SS252
SWITCHES			
	S1001 – 1003	SWITCH (BAND, M. SCAN, CLOCK ADJ.)	ASG1029
	S1005, 1006	SWITCH (MEMORY, SET)	ASG1029
	S1008 – 1011	SWITCH (LOCAL, WAKE UP, FREQ/STATION, REC)	ASG1029
	S1030	ROTARY ENCODER (TUNING JOG)	ASX1013
	S701 – 706	SWITCH (LD, VCR/DAT, PHONO, TAPE, TUNER, CD)	ASG1029
	S709, 710	SWITCH (POWER STANDBY/ON, AI. A)	ASG1029
	S712, 713	SWITCH (AI. B, AI, MEMORY)	ASG1029
	S715	SWITCH (SUPER P. BASS)	ASG1029
COIL			
	L1001	AXIAL INDUCTOR	LAU220K
CAPACITORS			
	C1001	CERAMIC CAPACITOR	CKDYF473Z50
	C1002	CERAMIC CAPACITOR	CKDYF223Z50
	C1003	ELECTR. CAPACITOR	CEAS4R7M50
	C1004	ELECTR. CAPACITOR	CEAS010M50
	C1005	AUDIO FILM CAPACITOR	CFTXA224J50
	C1006	CERAMIC CAPACITOR	CKDYB102K50
	C1007	ELECTR. CAPACITOR	CEJA470M10
	C1008	AXIAL CERAMIC CAPACITOR	CKPUYF473Z16
	C1009	CAPACITOR (0.047/5.5)	ACH1135
	C1020, 1021	CERAMIC CAPACITOR	CKSQYF473Z50
	C1022	CERAMIC CAPACITOR	CKPUYB102K50
	C1025	CERAMIC CAPACITOR	CKPUYB101K50
	C1026	AXIAL CERAMIC CAPACITOR	CKPUYF473Z16
	C1027	CERAMIC CAPACITOR	CKSQYB103K50
	C1028 – 1030	CERAMIC CAPACITOR	CKSQYF473Z50
	C1031	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C705	CERAMIC CAPACITOR	CKPUYB101K50
RESISTORS			
	VR1001	VARIABLE (10k)	ACS1048
	R1014, 1015	CHIP RESISTOR	RS1/10S563J
	R1031	RESISTOR ARRAY	RA8S473J
	R1032, 1033	CHIP RESISTOR	RS1/10S473J
	R1034, 1054	CHIP RESISTOR	RS1/10S000J
	R1055	CHIP RESISTOR	RS1/10S473J
	R1056	CHIP RESISTOR	RS1/10S000J
	R1060	CHIP RESISTOR	RS1/10S563J
	R1061	CHIP RESISTOR	RS1/10S102J
	R726	CHIP RESISTOR	RS1/10S151J
	R732, 741	CHIP RESISTOR	RS1/10S000J
	R777	CHIP RESISTOR	RS1/10S000J
		Other resistors	RD1/8PM□□□J
OTHERS			
	CN27	30P SOCKET	AKP1095
		REMOTE RECEIVER UNIT	AXX1010
	V1001	FL TUBE	AAV1134
	X1001	CRYSTAL RESONATOR (8MHz)	ASS1015

◉ VR ASSEMBLY (AWZ3708)

The VR assembly of SX – P720 is the same as that of SX – P920.
Refer to page 38.

◉ REGULATOR ASSEMBLY (AWZ4009)

The REGULATOR assembly of SX – P720 is the same as that of SX – P920.
Refer to page 38.

5. ADJUSTMENTS

5.1 ADJUSTMENT OF THE FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 5−1.

Step No.	Adjustment title	FM SG (1kHz±75kHz dev.)		Reception frequency display	Adjustment location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center adjustment	83	80	83.0MHz	L907	Adjust so that the DC voltage between the TP901 (Vref) and TP902 (T−meter) becomes 0V±50mV.
2	VCO adjustment	Non modulation	80	83.0MHz	VR903	Adjust so that the output of the TP905 (VCO) becomes 76kHz±0.5kHz.
3	TUNED IND. Lighting level	83 *1 (Stereo modulation)	18 (±3dB)	83.0MHz	VR902	Adjust so that the indicators of TUNED, STEREO IND. start to light up.

Note :
Perform steps 1 and 3 when the F. E. module assembly is replaced.
Confirm VCO (step 2) and adjust if improper.

*1 Stereo modulation : Main 1kHz L+R ±68.25Hz dev.
Pilot 19kHz ±6.75kHz dev.

5.2 ADJUSTMENT OF MW TUNER SECTION

- Set the mode selector to MW BAND.
- Connect the wiring as shown in Fig. 5−2.

Step No.	Adjustment title	AM SG (400Hz 30% Mod.)		Reception frequency display	Adjustment location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	Tracking adjustment *4	603 *1	Feeble input	603kHz *1	AM RF Tuning block antenna coil	Adjust so that the DC voltage between the TP904 (S-meter) and GND becomes at maximum level.
		1395 *3		1395kHz *3	TC901	
2	IFT adjustment *4	603 *1		603kHz *1	F904	
3	TUNED IND. Lighting level	999 *2	55 (±5dB)	999kHz *2	VR901	Adjust so that the indicators of TUNED IND. start to light up.

Note 1 :
Frequencies indicated in the above table are for the area using 9kHz step (SD : 9kHz, HE, HB, HEWZI)
For the area using 10kHz step (SD : 10kHz, KUC), frequencies should be as follows :
**1 : 600kHz*
**2 : 1000kHz*
**3 : 1400kHz*

Note 2 :
*Adjustment marked with " *4 " is only for HEWZI.*

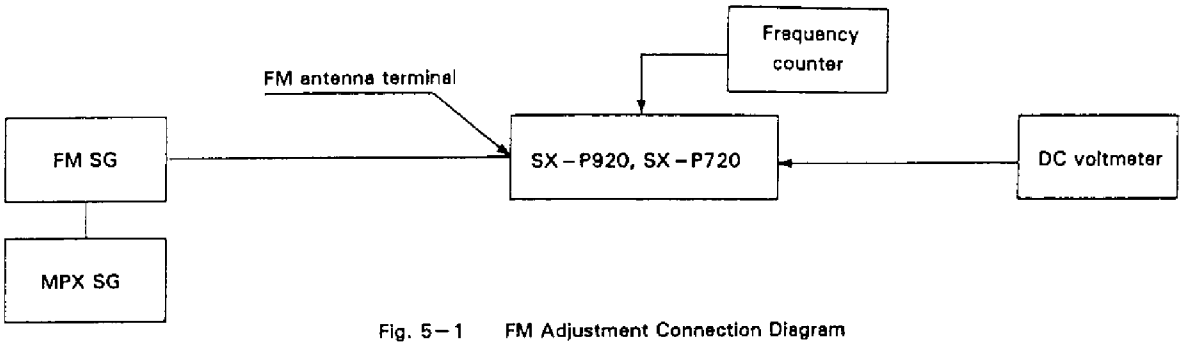


Fig. 5 – 1 FM Adjustment Connection Diagram

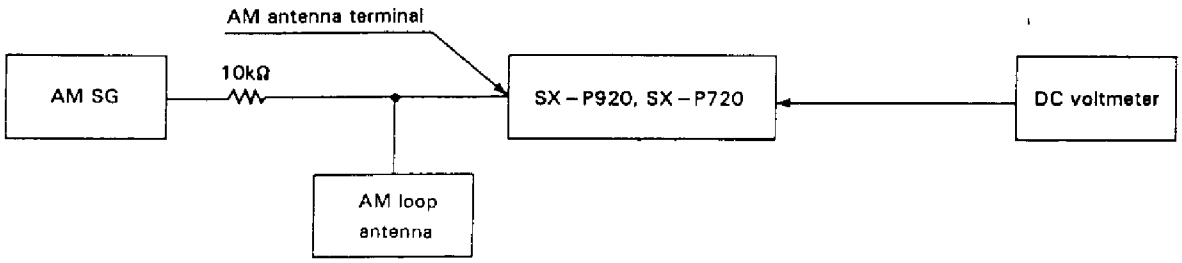


Fig. 5 – 2 MW Adjustment Connection Diagram

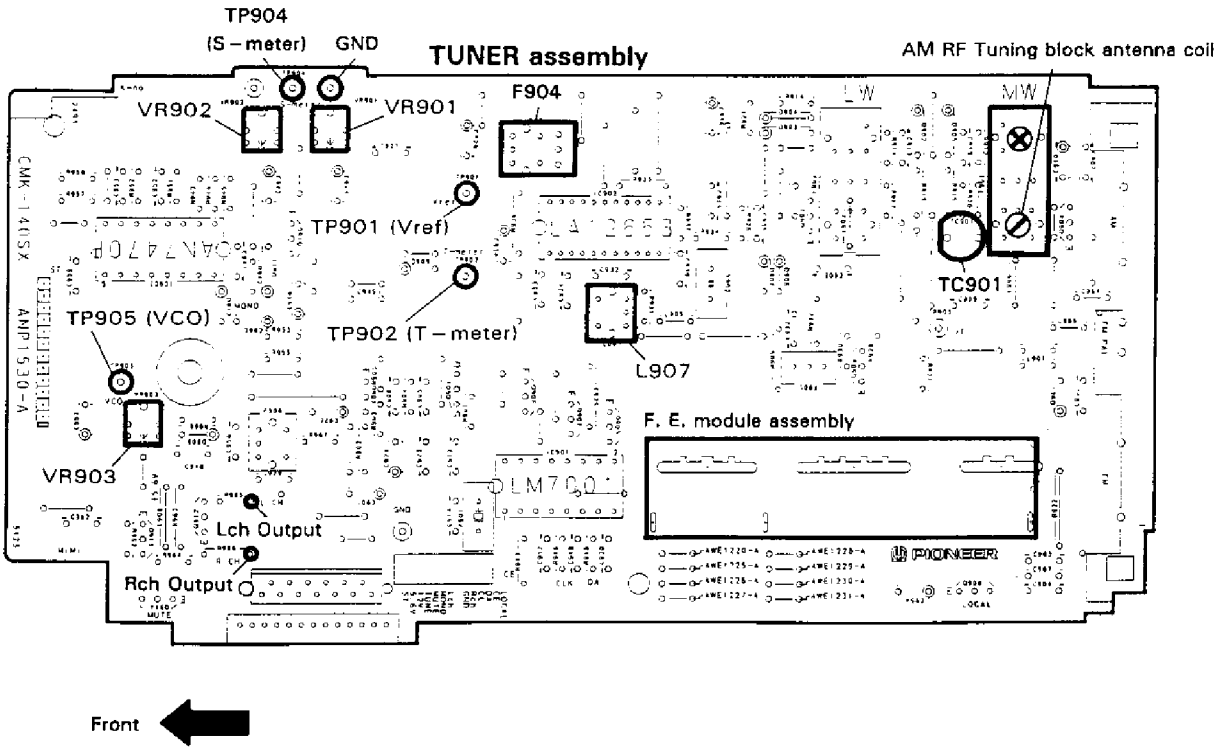


Fig. 5 – 3 Adjustment Points

5. REGLAGE

5.1 REGLAGE DU TUNER FM

- Régler le sélecteur de mode sur la position FM BAND.
- Connecter le câblage comme indiqué sur la Fig. 5−1.

Etape No.	Items de réglage	FM SG (1kHz±75kHz dév.)		Affichage de fréquence de réception	Liea de réglage	Caractéristiques
		Fréquence (MHz)	Niveau (dBμV)			
1	Réglage central	83	80	83,0MHz	L907	Régler de sorte que le niveau de tension entre TP901 (Vref) et TP902 (Indicateur T) est 0±50mV.
2	Réglage VCO	Non modulé	80	83,0MHz	VR903	Régler de manière que la sortie de TP905 (VCO) soit de 76kHz±0,5kHz.
3	TUNED IND. Niveau déclairement	83 *1 (modulation stéréo)	18 (±3dB)	83,0MHz	VR902	Régler de manière que l'indicateur TUNED STEREO IND. s'allume.

REMARQUE :
Effectuer les étapes 1 et 3 lorsque le module F. E. est remplacé.
Vérifier le VCO (étape 2) et le remplacer en cas d'anomalie.

*1 modulation stéréo : Principal : 1kHz L+R ±68,25Hz dev.
Pilote : 19kHz ±6,75kHz dev.

5.2 REGLAGE DU TUNER PO

- Régler le sélecteur de mode sur la position PO BAND.
- Connecter le câblage comme indiqué sur la Fig. 5−2.

Etape No.	Items de réglage	AM SG (400Hz 30% Mod.)		Affichage de fréquence de réception	Liea de réglage	Caractéristiques
		Fréquence (kHz)	Niveau (dBμV/m)			
1	Réglage de l'alignement *4	603 *1	Entrée faible	603kHz *1	Bobine de bloc antenne Accord RF AM	Régler de sorte que la tension entre TP 904 (Indicateur S) et la terre GND est au niveau maximal.
		1395 *3		1395kHz *3	TC901	
2	Réglage IFT *4	603 *1		603kHz *1	F904	
3	TUNED IND. Niveau déclairement	999 *2	55 (±5dB)	999kHz *2	VR901	Régler de manière que l'indicateur TUNED IND. s'allume.

REMARQUE 1 :
Les fréquences indiquées dans le tableau ci-dessus concerne les régions utilisant des intervalles de 9kHz (SD : 9kHz, HE, HB, HEWZI).
Pour les régions utilisant des intervalles de 10kHz (SD : 10kHz, KUC), les fréquences doivent être les suivantes :

**1 : 600kHz*
**2 : 1000kHz*
**3 : 1400kHz*

REMARQUE 2 :
*Le réglage indiqué par *4 n'est que pour HEWZI.*

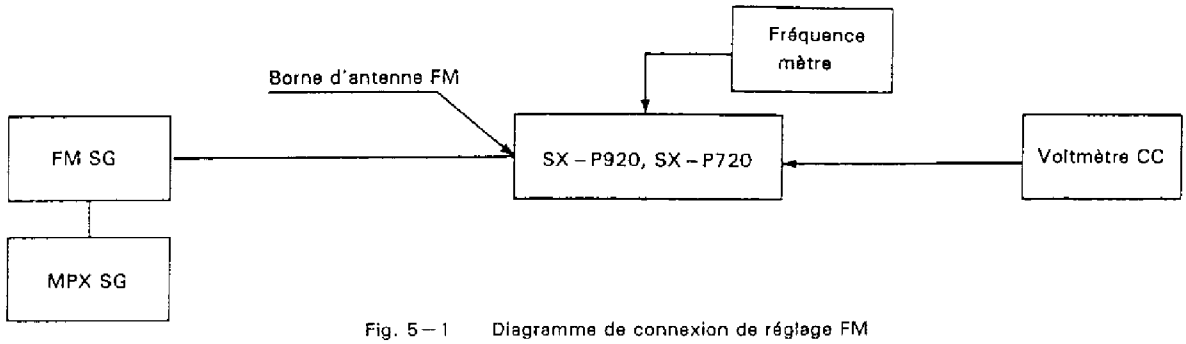


Fig. 5 – 1 Diagramme de connexion de réglage FM

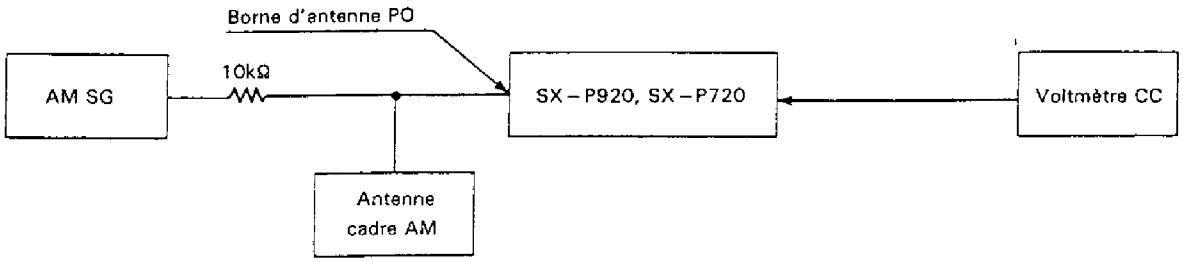


Fig. 5 – 2 Diagramme de connexion de réglage PO

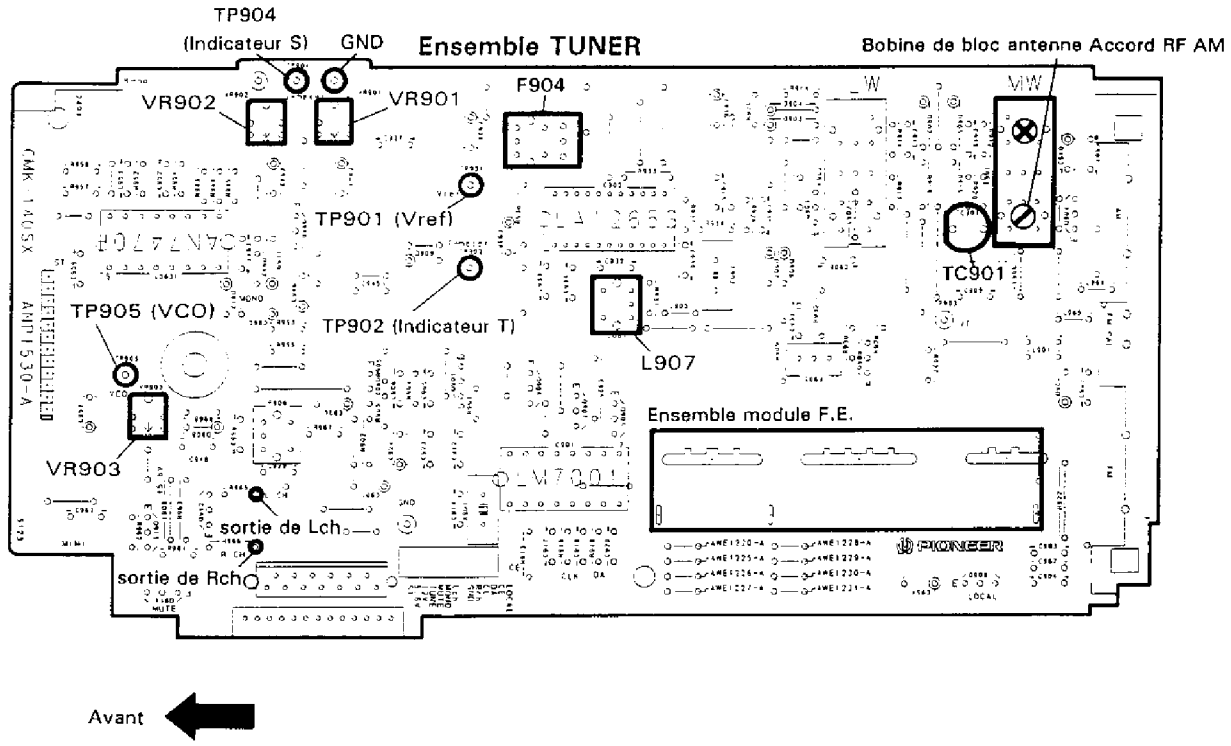


Fig. 5 – 3 Points de réglage

5. AJUSTE

5.1 AJUSTE DEL SINTONIZADOR DE FM

- Ajustar el selector de mode a FM BAND.
- Conectar el conexionado de la manera observada en la Fig. 5−1.

N° de paso	Items de ajuste	FM SG (1kHz±75kHz dev.)		Fresuenci metro de recepción	Lugar de Ajuste	Especificaciones
		Frecuencia (MHz)	Nivel (dBμV)			
1	Ajuste central	83	80	83,0MHz	L907	Ajuste de forma que el nivel de tensión entre TP901 (Vref) y TP902 (medidor T) sea de 0V±50mV.
2	Ajuste de VCO	No modulación	80	83,0MHz	VR903	Ajuste de forma que la salida de TP905 (VCO) sea de 76kHz±0,5kHz.
3	Nivel de luz TUNED IND.	83 *1 (Modulación estéreo)	18 (±3dB)	83,0MHz	VR902	Ajuste de forma que TUNED STEREO IND. esté encendido.

NOTA :
Realice los pasos 1 y 3 cuando se reemplace el conjunto del módulo F. E.
Confirme VCO (paso 2) y ajústelo si está incorrecto.

*1 Modulación estéreo : Principal : 1kHz L+R ±68,25Hz dev.
Piloto : 19kHz ±6,75kHz dev.

5.2 AJUSTE DEL SINTONIZADOR DE MW

- Ajustar el selector de mode a MW BAND.
- Conectar el conexionado de la manera observada en la Fig. 5−2.

N° de paso	Items de ajuste	AM SG (400Hz 30% Mod.)		Fresuenci metro de recepción	Lugar de Ajuste	Especificaciones
		Frecuencia (kHz)	Nivel (dBμV/m)			
1	Ajuste de seguimiento *4	603 *1	Entrada débil	603kHz *1	Bobina de antena de bloque de Sintonización AM RF	Ajuste de forma que la tensión entre TP904 (medidor S) y GND esté en el nivel máximo.
		1395 *3		1395kHz *3	TC901	
2	Ajuste de IFT *4	603 *1		603kHz *1	F904	
3	Nivel de luz TUNED IND.	999 *2	55 (±5dB)	999kHz *2	VR901	Ajuste de forma que TUNED IND. esté encendido.

NOTA 1 :
Las frecuencias indicadas en la tabla de encima son para áreas que usa pasos de 9kHz (SD : 9kHz, HE, HB, HEWZI).
Para áreas que usan pasos de 10kHz (SD : 10kHz, KUC), las frecuencias han de ser como sigue :

**1 : 600kHz*
**2 : 1000kHz*
**3 : 1400kHz*

Note 2 :
*El ajuste marcado con *4 es sólo para HEWZI.*

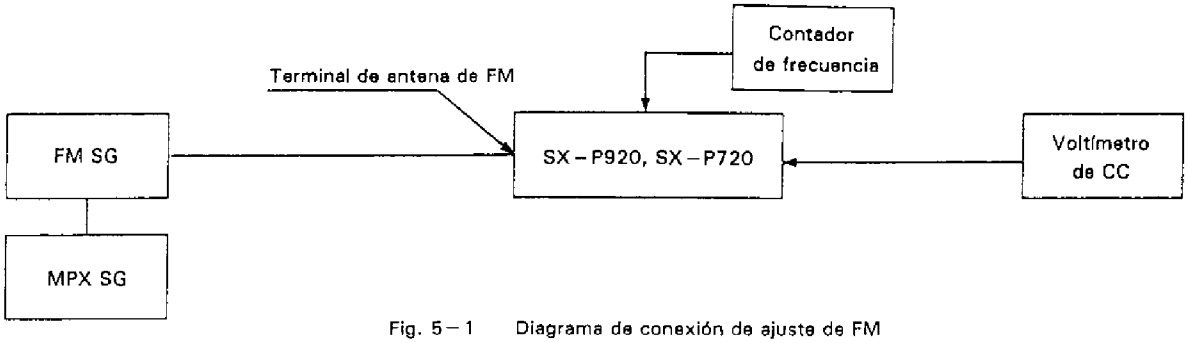


Fig. 5 – 1 Diagrama de conexión de ajuste de FM

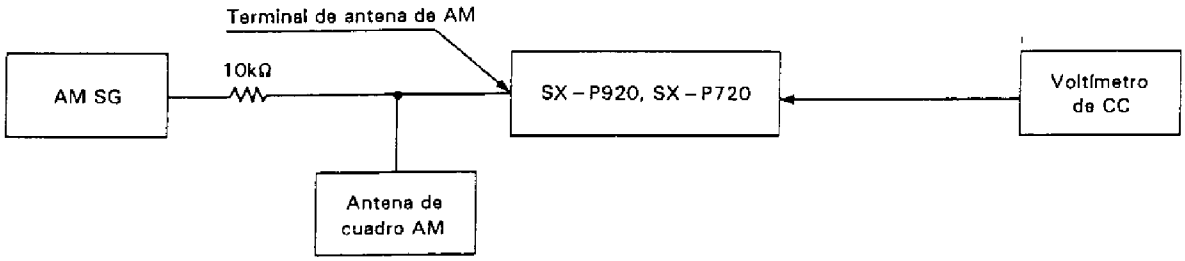


Fig. 5 – 2 Diagrama de conexión de ajuste de MW

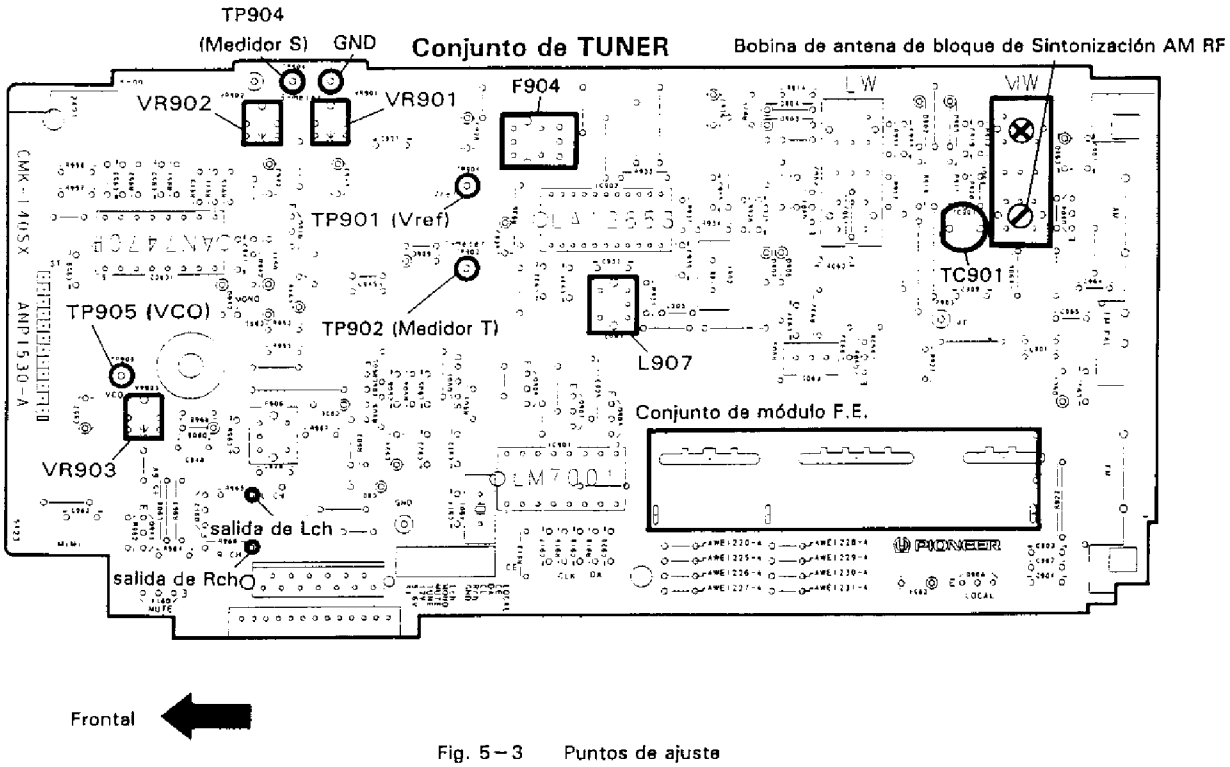


Fig. 5 – 3 Puntos de ajuste

6. IC INFORMATION

■ PDG075A (IC1001) : TUNER CONTROL MICRO-COMPUTER

● Pin Function

No.	Pin Name	I/O	Description	ACT
1	–	I	Switching Destination SX – P920, SX – P720 : L	
2	STEREO	I	$\overline{\text{STEREO}}$ Signal Input	L
3	TUNE	I	$\overline{\text{TUNED}}$ Signal Input	L
4	RESET	O	AMP MICRO-COMPUTER Reset Output	L
5	LOCAL	O	LOCAL Output	
6	TX MUTE	O	TUNER MUTE Output	
7	J/EX	I	Japan (H) / Export (L) Input	
8	LW Y/N	I	LW (H) / no LW (L) Input	
9	9k/10k	I	Switchig Channel Step Frequency 10 (H) / 9 (L) kHz Input	
10	FM MONO	O	FM MONO Output	
11	PLL CLK	O	PLL CLK Output (LM7001)	
12	PLL DATA	O	PLL DATA Output (LM7001)	
13	PLL CE	O	PLL CE Output (LM7001)	
14	S. CLK	I	System bus CLK Input	
15	S. DATA	I/O	System bus DATA Input/Output	
16	TX REQ/EN	O	System bus REQ Output	
		I	System bus ENABLE Input	
17	POWER ON/OFF	I	POWER IN ON (H) / OFF (L)	
18	KI0	I	Key Scan Input	
19	KI1	I	Key Scan Input	
20	KI2	I	Key Scan Input	
21	KI3	I	Key Scan Input	
22	–	I	Switching model type SX – P920, SX – P720 : L	
23	–	I	Not Used	
24	–	I	Not Used	
25	–	I	Not Used	

No.	Pin Name	I/O	Description	ACT
26	–	I	Not Used	
27	–	I	Not Used	
28	–	I	Not Used	
29	–	I	Not Used	
30	RST	I/O	RESET Input	L
31	EXTAL	I	Connected to ceramic oscillator (8MHz).	
32	XTAL	O		
33	Vss	GND	Connected to GND	
34	–	DP	Not Used	
35	–	DP	Not Used	
36	–	DP	Not Used	
37	–	DP	Not Used	
38	–	DP	Not Used	
39	–	DP	Not Used	
40	–	DP	Not Used	
41	–	DP	Not Used	
42	P1	DP	Segment Output	
43	P2	DP	Segment Output	
44	P3	DP	Segment Output	
45	P4	DP	Segment Output	
46	P5	DP	Segment Output	
47	P6	DP	Segment Output	
48	P7/KO0	DP	Segment Output/Key Scan Output	
49	P8/KO1	DP	Segment Output/Key Scan Output	
50	P9/KO2	DP	Segment Output/Key Scan Output	
51	P10/KO3	DP	Segment Output/Key Scan Output	
52	P11/KO4	DP	Segment Output/Key Scan Output	
53	P12/KO5	DP	Segment Output/Key Scan Output	
54	P13/KO6	DP	Segment Output/Key Scan Output	
55	P14	DP	Segment Output	

No.	Pin Name	I/O	Description	ACT
56	P15	DP	Segment Output	
57	P16	DP	Segment Output	
58	–	DP	Not Used	
59	–	DP	Not Used	
60	–	DP	Not Used	
61	–	DP	Not Used	
62	9G	DP	FL Grid Output (9G)	
63	8G	DP	FL Grid Output (8G)	
64	7G	DP	FL Grid Output (7G)	
65	6G	DP	FL Grid Output (6G)	
66	5G	DP	FL Grid Output (5G)	
67	4G	DP	FL Grid Output (4G)	
68	3G	DP	FL Grid Output (3G)	
69	2G	DP	FL Grid Output (2G)	
70	1G	DP	FL Grid Output (1G)	
71	VFDP	–	−30V FDP load power Input	
72	VDD	–	+5V Power Suplly Input	
73	–	–	Connected to Vdd.	
74	–	O	Not Used	
75	LS42N C	O	FUNCTION LED DRIVE IC (SN74LS42N) Control (C)	
76	LS42N B	O	FUNCTION LED DRIVE IC (SN74LS42N) Control (B)	
77	LS42N A	O	FUNCTION LED DRIVE IC (SN74LS42N) Control (A)	
78	50/60 IN	I	AC Input (50/60Hz)	
79	JOG2	I	JOG 2 Input	
80	JOG1	I	JOG 1 Input	

NOTE :

I : CMOS Input
O : CMOS Output
N : Nch Open Drain Output
P : Pch Open Drain Output
UN : Nch Open Drain Output with Pull-up Resistor
DP : Pch Open Drain Output with Pull-down Resistor
UI : CMOS Input with Pull-up Resistor
DI : CMOS Input with Pull-down Resistor

■ PD5170B (IC701) : AMPLIFIER CONTROL MICRO-COMPUTER

● Pin Function

No.	Pin Name	Description	I/O
1	+5V	+5V Power supply	
2	GND	GND	
3	VOL REF	A/D Reference Voltage Input	I
4	A. REC OUT MUTE	REC OUT Audio Output MUTE ON/$\overline{\text{OFF}}$	O
5	N. C	Not Used	
6	4052A		O
7	4052B		O
8	4052INH		O
9	$\overline{\text{LINE MUTE}}$	LINE MUTE $\overline{\text{ON}}$/OFF	O
10	P. BASS 1	SUPER P. BASS1 ON/$\overline{\text{OFF}}$	O
11	P. BASS 2	SUPER P. BASS2 ON/$\overline{\text{OFF}}$	O
12	VOL. POSI	MAIN VOL Position	I
13	VOL. DOWN	VOL UP/DOWN (TA 7291S) Control Pin 14 / Pin 13: UP = H / L; DOWN = L / H; STOP = L / L	O
14	VOL. UP		O
15	R. VOL. ST	Not Used	O
16	R. VOL. CLK		O
17	R. VOL. DATA		O
18	E/R TUNER	System bus TUNER Enable / Request	I/O
19	E/R DAT	System bus DAT Enable / Request	I/O
20	E/R CT	System bus TAPE Enable / Request	I/O
21	E/R CD	System bus CD Enable / Request	I/O
22	E/R GEQ	System bus GEQ Enable / Request	I/O

No.	Pin Name	Description	I/O
23	SD	System bus DATA	I/O
24	SC	System bus CLOCK	O
25	N.C	Not Used	I
26	$\overline{\text{RMT IN}}$	Remocon Signal Input Port	I
27	GND	GND	
28	$\overline{\text{RESET}}$	RESET PULSE Terminal	I
29	X IN	Connected to Ceramic resonator (4MHz).	
30	X OUT		
31	N. C	Not Used	
32	GND	GND	
33	Switching Destination	Pin 33 / Pin 34 / Pin 35: SX-P720 = H / L / H; SX-P920 = L / H / H	I
34			I
35			I
36		Not Used	I
37			I
38			I
39			I
40			I
41			O
42			O
43			O
44	FAN ERR	FAN ERR Terminal	I
45		Not Used	O
46			O
47			O
48	AD01. COTROL	AUDITION CONTROL	O
49		Not used	O

No.	Pin Name	Description	I/O
50		Not Used	O
51			O
52	LED AI. B	LED Control	O
53	LED AUDITION		O
54		Not Used	O
55	LED P-BASS2	LED Control	O
56	LED P-BASS1		O
57	LED AI. A		O
58	PHONE IN/OUT	Not Used	I
59		Not Used	O
60			O
61			O
62	RELAY A	Speaker Relay Port	O
63	POWER IND	Power Indicator Port	O
64	POWER RY	Power ON/OFF Relay Port	O

- When POWER is OFF, POWER RY RELAY A, LINE MUTE will be output at the "L" level, and A. REC. OUT MUTE will be output at the "H" level. Other I/O ports will be specified to input, and the output port will be ouput at the "L" level.

7. DISASSEMBLY

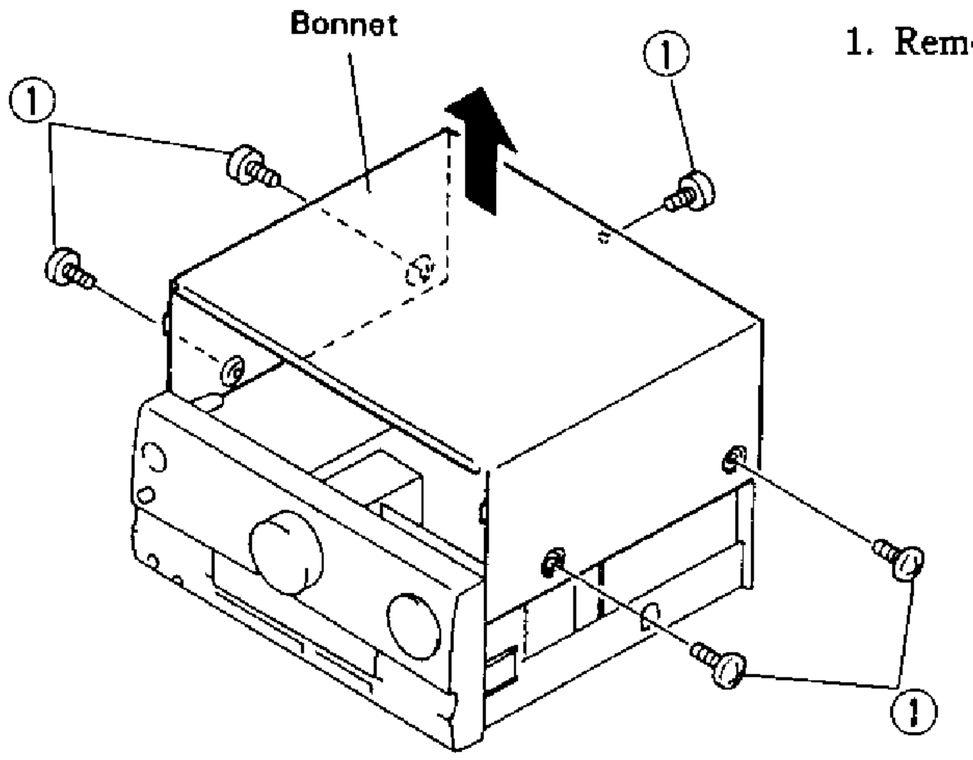


Fig. 1

1. Remove the Bonnet case. (Screw ① × 5)

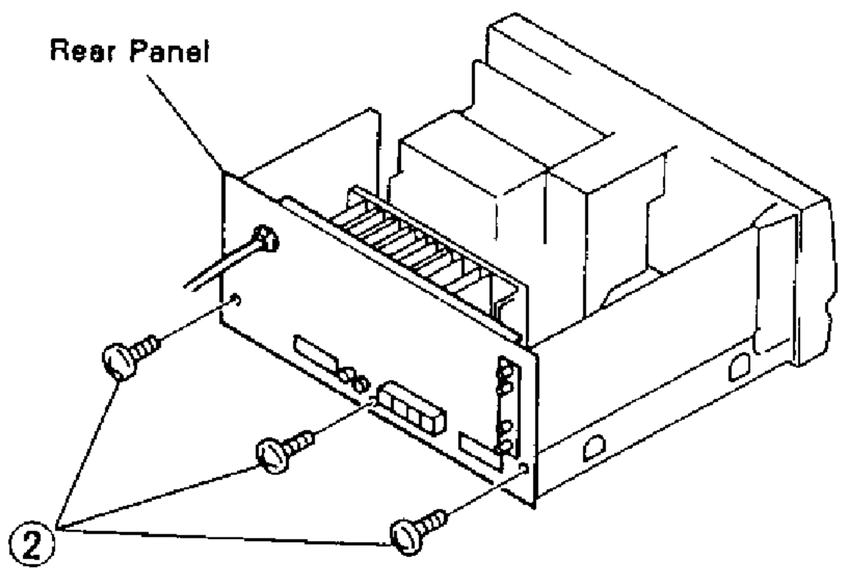


Fig. 2

2. Remove the three screws ② from the rear panel.
   (Screw ② × 3)

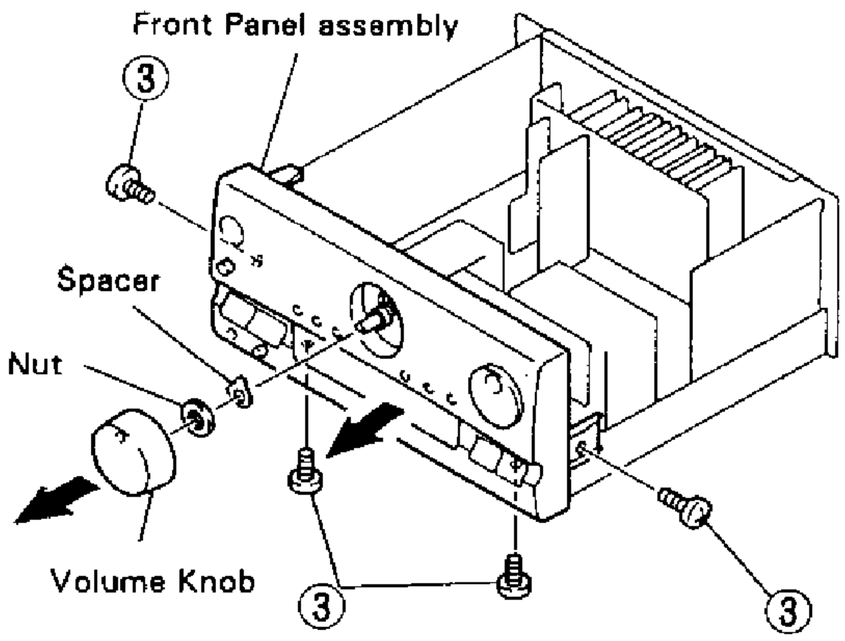


Fig. 3

3. Remove the Volume knob, nut, spacer in sequence.

4. Remove the four screws ③ from the front panel assembly.
   Remove the front panel assembly.

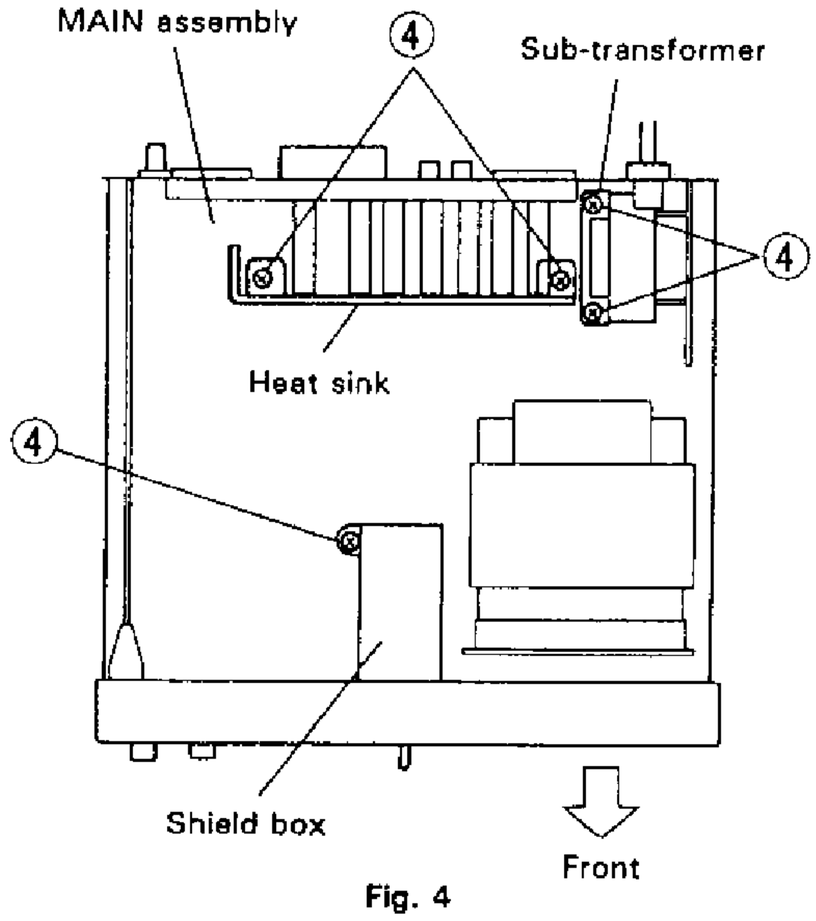


Fig. 4

5. Remove the five screws ④ from the MAIN assembly.
   - Heat sink × 2
   - Sub-transformer × 2
   - Shield box × 1

6. Remove the shield box.

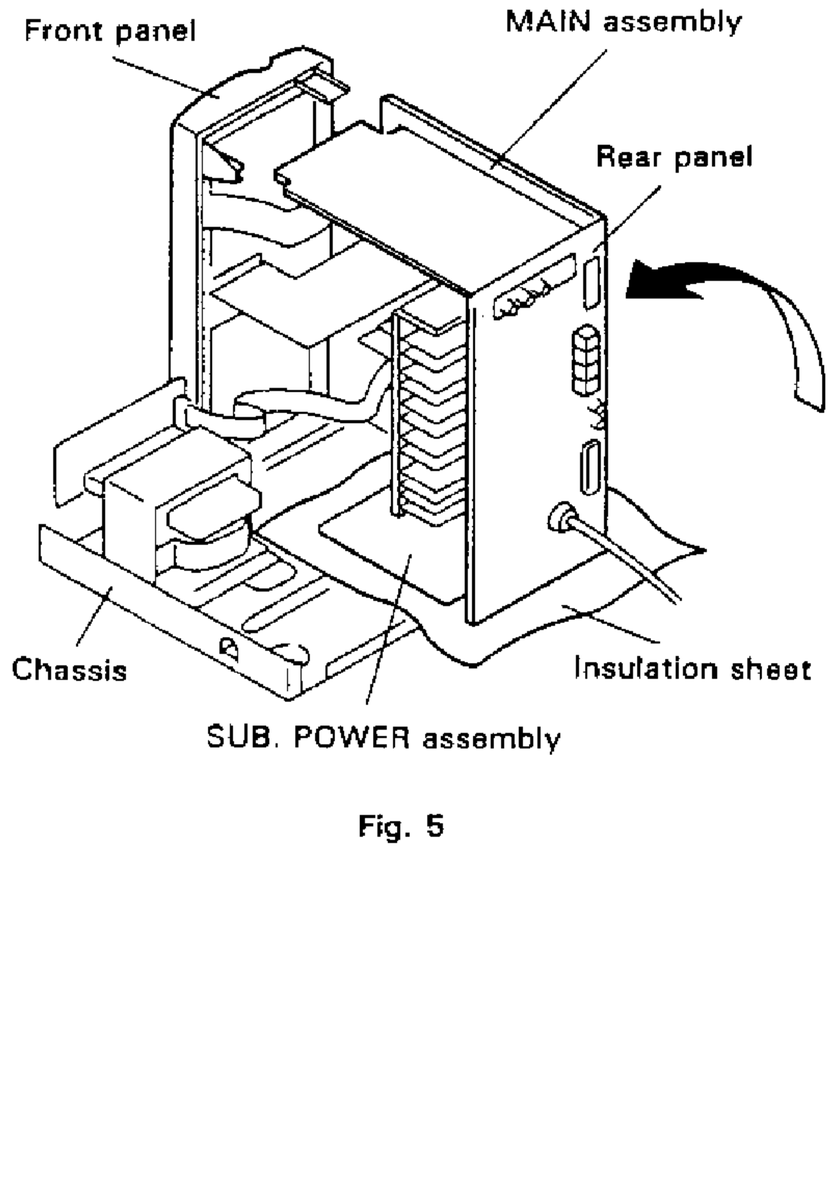


Fig. 5

7. Lift the front panel assembly and the rear panel. Remove the MAIN assembly from the chassis, and stand it by placing the SUB. POWER assembly at the bottom. Insert the insulation sheet into the space between the SUB. POWER assembly and the chassis.

8. FOR SX – P920/HB, HEWZI AND SX – P720/HB, HEWZI TYPES

NOTES:

- *Part without part number cannot be supplied.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

8.1 CONTRAST OF MISCELLANEOUS PARTS (FOR SX – P920/HB AND HEWZI TYPES)

SX – P920/HB, HEWZI and SX – P920/HE have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		SX – P920/ HE type	SX – P920/ HB type	SX – P920/ HEWZI type	
◉	MAIN assembly	AWZ3719	AWZ3719	AWZ3720	
◉	SUB. POWER assembly	AWZ3727	AWZ3727	AWZ3723	
◉	FR. AMP assembly	AWZ3734	AWZ3734	AWZ3735	
	HEAD. P assembly	Non supply	Non supply	Non supply	∗1
◉	DISPLAY assembly	AWZ3705	AWZ3705	AWZ3706	
◉	VR assembly	AWZ3708	AWZ3708	AWZ3709	
	TUNER Assembly	AWE1226	AWE1226	AWE1225	
⚠	AC Power cord	ADG1019	ADG1084	ADG1012	
	Operating instructions (English, French, German, Italian)	ARC1306	.....	.....	
	Operating instructions (English, French)	ARE1211	ARE1211	.....	
	Operating instructions (German, Italian)	ARC1305	.....	ARC1305	

∗1 : The HEAD. P assemblies of HE and HB types are the same.

◉ MAIN ASSEMBLY (AWZ3720)

MAIN assembly (AWZ3720) and MAIN assembly (AWZ3719) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3719	AWZ3720	
	L251, 252	ATH – 133	ATH – 059	
	L2001, L2002	.....	ATH – 059	
	C111	CKCYF103Z50	CKCYB103K50	
	C704	CKDYF473Z50	CKCYF473Z50	
	C2007 – C2009, C2011	.....	CKCYB103K50	
	C2012, C2013	.....	CCSQCH470J50	
	C2018	.....	CQMA473K250	
	C2019	.....	CKSQYB103K50	
	C2020, C2021	.....	CCSQCH101J50	
	C2022, C2023	.....	CKSQYB473K50	
	R251, R252	RD1/4PMFL100J	RD1/4PMFL101J	
	R2003	RS1/10S000J	.....	

◉ FR. AMP ASSEMBLY (AWZ3735)

FR. AMP assembly (AWZ3735) and FR. AMP assembly (AWZ3734) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3734	AWZ3735	
	C2024, C2025	.....	CCSQCH101J50	

HEAD. P ASSEMBLY (HEWZI type)

HEAD. P assembly (HEWZI type) and HEAD. P assembly (HE type) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		HE type	HEWZI type	
	C2501, C2502	.....	CKSQYB473K50	

◉ DISPLAY ASSEMBLY (AWZ3706)

DISPLAY assembly (AWZ3706) and DISPLAY assembly (AWZ3705) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3705	AWZ3706	
	C1001	CKDYF473Z50	CKCYF473Z50	
	C1002	CKDYF223Z50	CKCYF223Z50	
	C1006	CKDYB102K50	CKCYB102K50	
	R1025	.....	RS1/10S473J	
	R1033	RS1/10S473J	.....	

◉ VR ASSEMBLY (AWZ3709)

VR assembly (AWZ3709) and VR assembly (AWZ3708) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3708	AWZ3709	
	C323	CKDYX104M25	CKCYX104M25	
	C2305, C2306	.....	CCSQCH101J50	
	C2307, C2308	.....	CCSQCH220J50	

◉ SUB. POWER ASSEMBLY (AWZ3723)

SUB. POWER assembly (AWZ3723) and SUB. POWER assembly (AWZ3727) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3727	AWZ3723	
	C2026	.....	CQMA473K250	

TUNER ASSEMBLY (AWE1225)

TUNER assembly (AWE1225) and TUNER assembly (AWE1226) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWE1226	AWE1225	
	Q903, Q904	RN1203	.....	
	Q906	RN2201	.....	
	D902, D905 – D907	HSS104 – 02	.....	
	D903, D904	1SS85	.....	
	L906	.....	LAU330K	
	TC901	.....	ACM – 018	
	C908	.....	CKDYF223Z50	
	C909	.....	CKDYF103Z50	
	C913, C915	CKDYF223Z50	.....	
	C919	CKDYF223Z50	CKDYF473Z50	
	C922	CKDYF223Z50	CKPUYF223Z50	
	C952, C953	CKDYB122K50	CKDYB102K50	
	C961, C962	CKDYB272K50	CKDYB392K50	
	C968	CCDSL101J50	CCDCH101J50	
	C969	.....	CCDCH270J50	
	R911	RD1/8PM104J	.....	
	R914, R915, R919	RD1/8PM681J	.....	
	R917	RD1/8PM102J	.....	
	R920	RD1/8PM103J	RD1/8PM472J	
	R921	RD1/8PM392J	.....	
	R922	.....	RD1/8PM680J	
	R924	RD1/8PM331J	RD1/8PM561J	
	R925	.....	RD1/8PM221J	
	R955	RD1/8PM152J	RD1/8PM122J	
	R959, R960	RD1/8PM392J	RD1/8PM682J	
	Antenna terminal 4 – P	AKA1010	.....	
	Antenna terminal 2 – P	.....	AKA1012	
	2 Serial F. E. module assembly	AXQ1002	.....	
	4 Serial F. E. module assembly	.....	AXQ1004	
	AM RF Tuning block	AXX1012	.....	
	AM RF Tuning block	AXX1013	.....	
	AM RF Tuning block	.....	AXX1014	

8.2 CONTRAST OF MISCELLANEOUS PARTS (FOR SX – P720/HB AND HEWZI TYPES)

SX – P720/HB, HEWZI and SX – P720/HE have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		SX – P720/ HE type	SX – P720/ HB type	SX – P720/ HEWZI type	
◉	MAIN assembly	AWZ3714	AWZ3714	AWZ3715	
◉	SUB. POWER assembly	AWZ3722	AWZ3722	AWZ3723	
◉	FR. AMP assembly	AWZ3730	AWZ3730	AWZ3731	
	HEAD. P assembly	Non supply	Non supply	Non supply	*1
◉	DISPLAY assembly	AWZ3701	AWZ3701	AWZ3702	
◉	VR assembly	AWZ3708	AWZ3708	AWZ3709	*2
	TUNER Assembly	AWE1226	AWE1226	AWE1225	*3
⚠	AC Power cord	ADG1019	ADG1084	ADG1012	
	Operating instructions (English, French, German, Italian)	ARC1306	.....	.....	
	Operating instructions (English, French)	ARE1211	ARE1211	.....	
	Operating instructions (German, Italian)	ARC1305	.....	ARC1305	

*1 : The HEAD. P assemblies of SX – P720/HE and HB types are the same as that of SX – P920/HE and HB types. The HEAD. P assembly of SX – P720/HEWZI type is the same as that of SX – P920/HEWZI types. Refer to page 55, "8.1 CONTRAST OF MISCELLANEOUS PARTS (FOR SX – P920/HB AND HEWZI TYPES)".

*2 : The VR assemblies of SX – P720/HE and HB types are the same as that of SX – P920/HE and HB types. The VR assembly of SX – P720/HEWZI type is the same as that of SX – P920/HEWZI type. Refer to page 55, "8.1 CONTRAST OF MISCELLANEOUS PARTS (FOR SX – P920/HB AND HEWZI TYPES)".

*3 : The TUNER assemblies of SX – P720/HE and HB types are the same as that of SX – P920/HE and HB types. The TUNER assembly of SX – P720/HEWZI type is the same as that of SX – P920/HEWZI type. Refer to page 56, "8.1 CONTRAST OF MISCELLANEOUS PARTS (FOR SX – P920/HB AND HEWZI TYPES)".

◉ MAIN ASSEMBLY (AWZ3715)

MAIN assembly (AWZ3715) and MAIN assembly (AWZ3714) have the same construction except for the following :

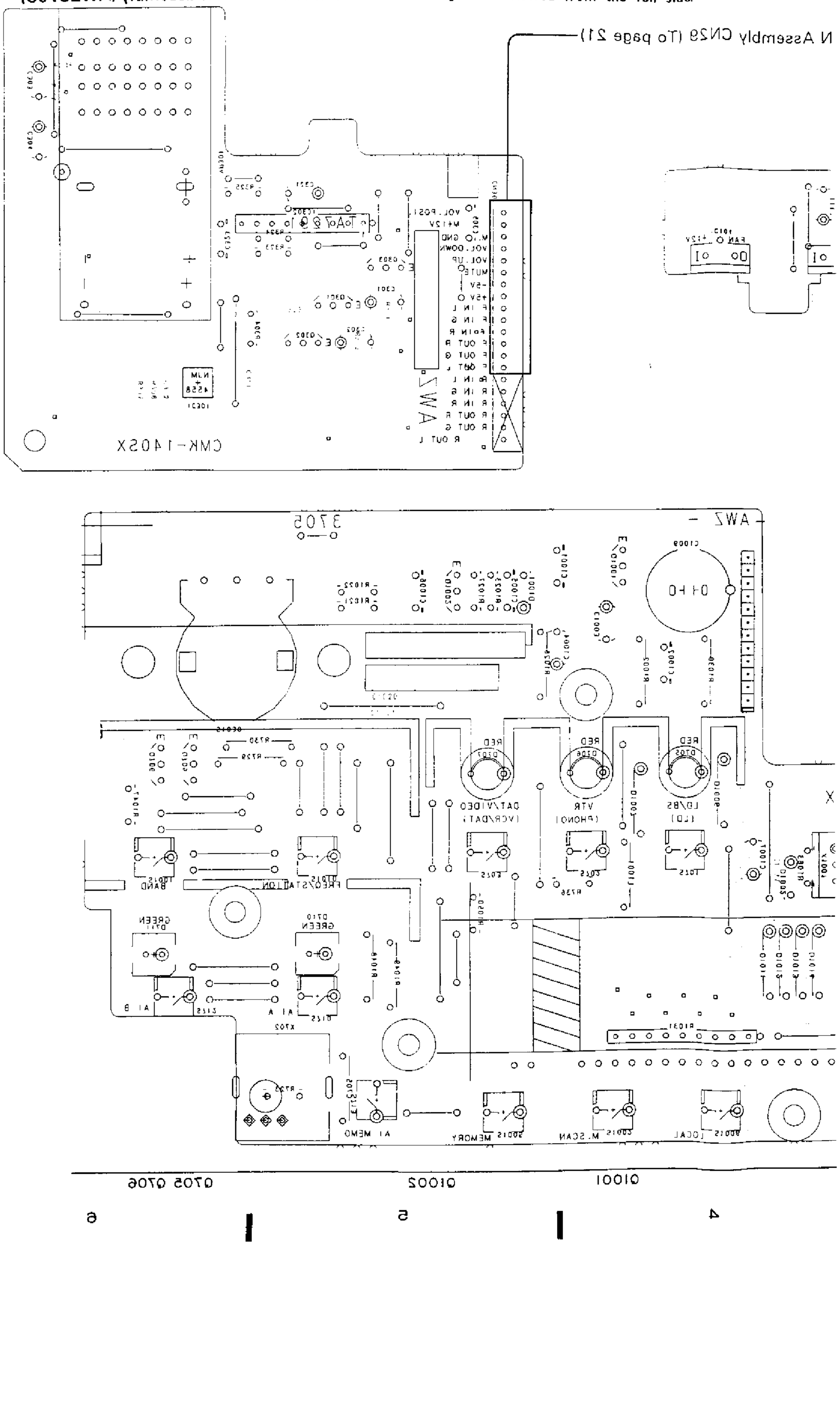
Mark	Symbol & Description	Part No.		Remarks
		AWZ3714	AWZ3715	
	L251, 252	ATH – 133	ATH – 059	
	L2001, L2002	.....	ATH – 059	
	C704	CKDYF473Z50	CKCYF473Z50	
	C1023, C2012	.....	CCSQCH470J50	
	C2007 – C2009, C2011	.....	CKCYB103K50	
	C2018	.....	CQMA473K250	
	C2019	.....	CKSQYB103K50	
	C2020, C2021, C2024, C2025	.....	CCSQCH101J50	
	C2022, C2023	.....	CKSQYB473K50	
	R251, R252	RD1/4PMFL100J	RD1/4PMFL101J	
	R2001, R2002	.....	RS1/10S000J	

DC MOTOR
BLK
RED
(A)
(B)
(D)-To TUNER Assembly CN901
(To page 13)
(E)-To DISPLAY Assembly CN27
(To page 29)
(F)-To REGULATOR Assembly CN19
(To page 29)
(H)-To VR Assembly CN30
(To page 30)
CAUTION
REPLACE WITH SAME
TYPE NO. IC9-IC25
MADE BY ROHM
FOR IC14
REMPLACER AVEC CAT: NO.
POUR IC114.
BLACK
a:-29.5Z
b:-29.5
a:-41.3
b:38.7
a:-41.5
b:-38.9
8.4mV
SUB. POWER assembl
(AWZ372Z : SX-P92(
(AWZ372Z : SX-P72(

MAIN assembly (AWZ3719 : SX-P920)
(AWZ3714 : SX-P720)

3.4 DISPLAY ASSEMBLY, VR ASSEMBLY AND REGULATOR ASSEMBLY

This P. C. B. connection diagram is viewed from the foil side.



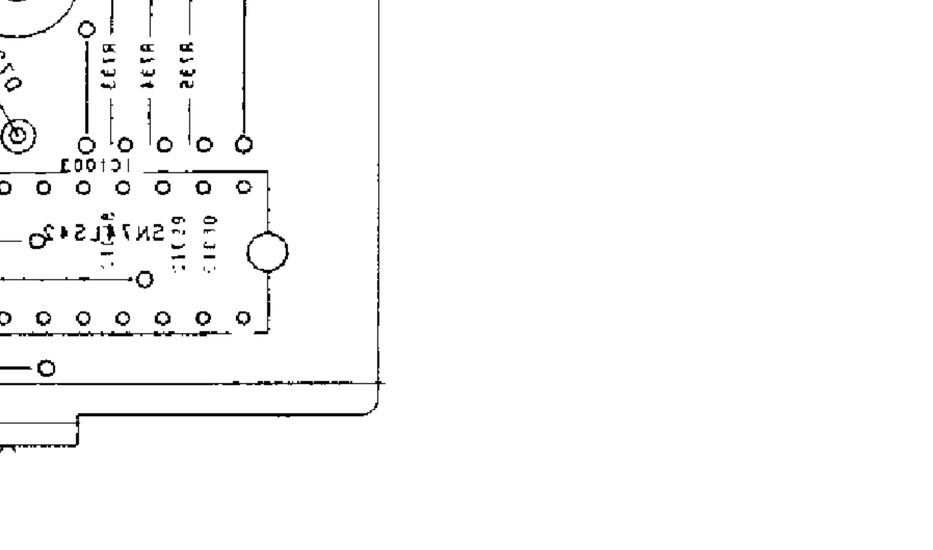
Y, VR ASSEMBLY AND REGULATOR ASSEMBLY

* SX-P920 ONLY
※ SX-P720 ONLY

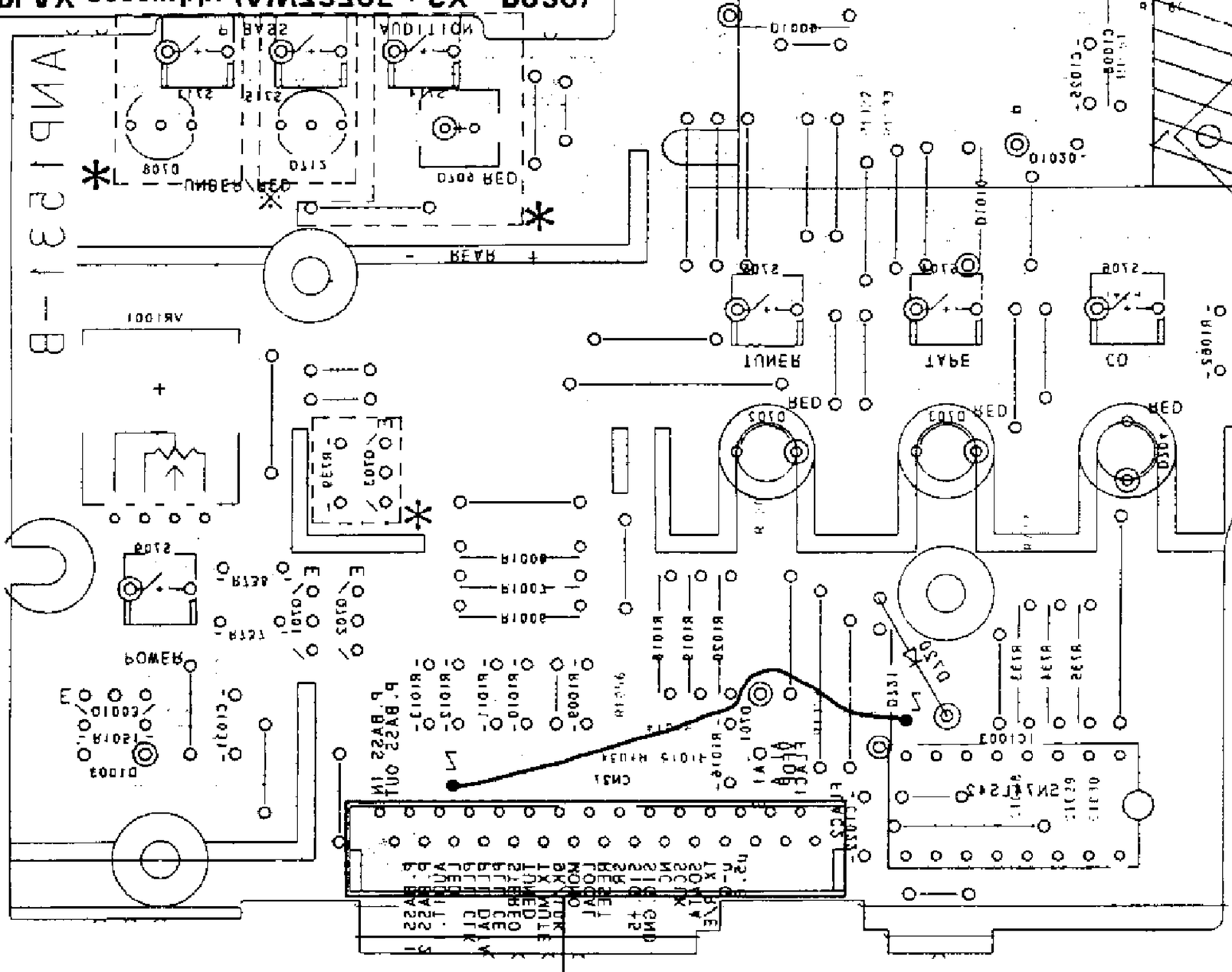
This P. C. B. connection diagram is viewed from the foil side.

※ SX-P750 ONLY
✱ SX-P950 ONLY

To MAIN Assemply CN50 (To page 51)



To MAIN Assemply CN58 (To page 51)



SX-P920, SX-P720

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E C B	E C B or E C B	Transistor
Q215		Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⊖ (double circles) shows negative terminal.
4. The diode terminal marked with ⊖ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

✱ SX-P920 ONLY
※ SX-P720 ONLY

To MAIN Assembly CN20 (To page 21)

To MAIN Assembly CN28 (To page 21)

REGULATOR assembly (AWZ4009)

DISPLAY assembly (AWZ3705 : SX-P920)
(AWZ3701 : SX-P720)

VR1001 Q1003 Q701-Q703 IC1003 IC1001

This P. C. B connection diagram is viewed from the parts mo

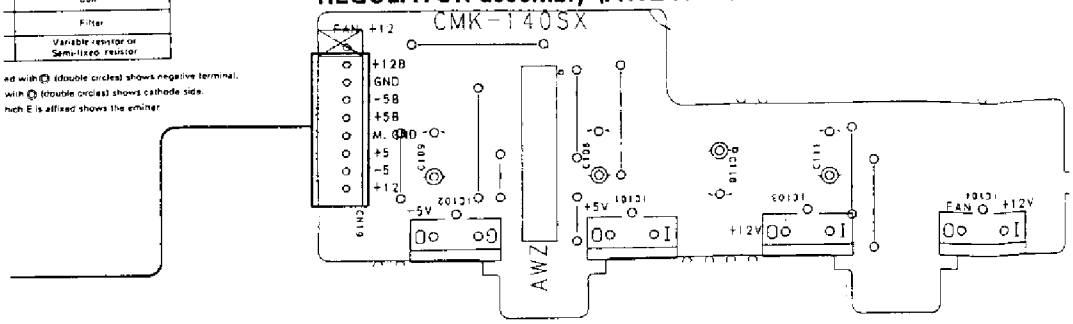
* SX－P920 ONLY
※ SX－P720 ONLY

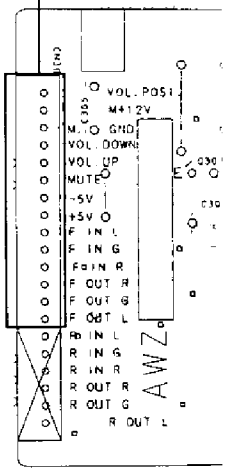
Part Name
IC
Switch
Relay
Coil
Filter
Variable resistor or Semi-fixed resistor

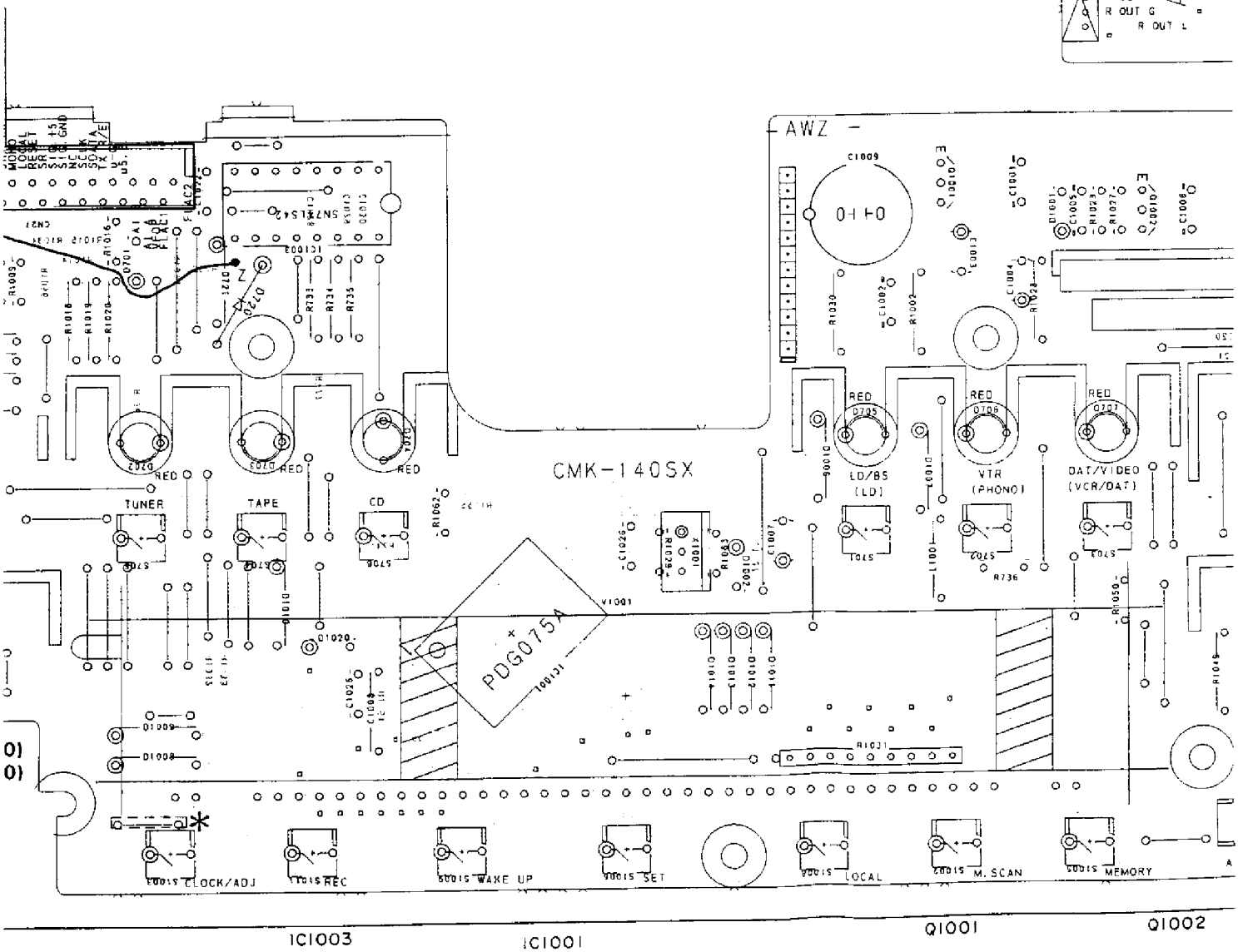
ed with ⓓ (double circles) shows negative terminal.
with ⓒ (double circles) shows cathode side.
hich E is affixed shows the emitter

To MAIN Assembly CN29 (To page 21)

REGULATOR assembly (AWZ4009)



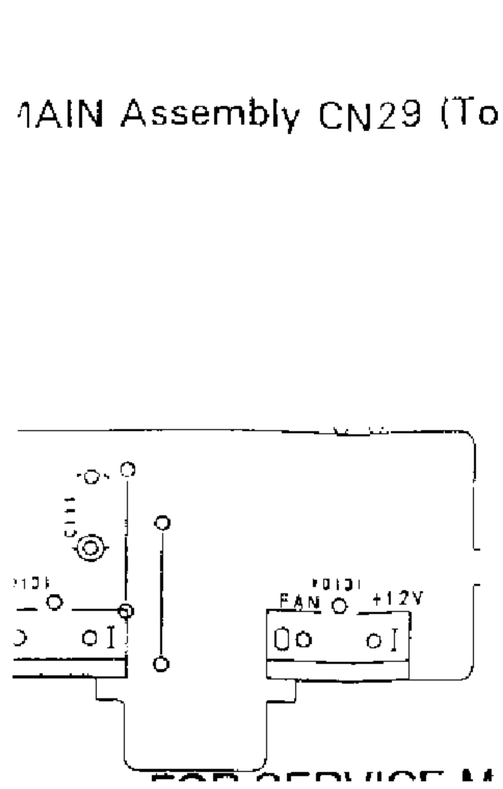




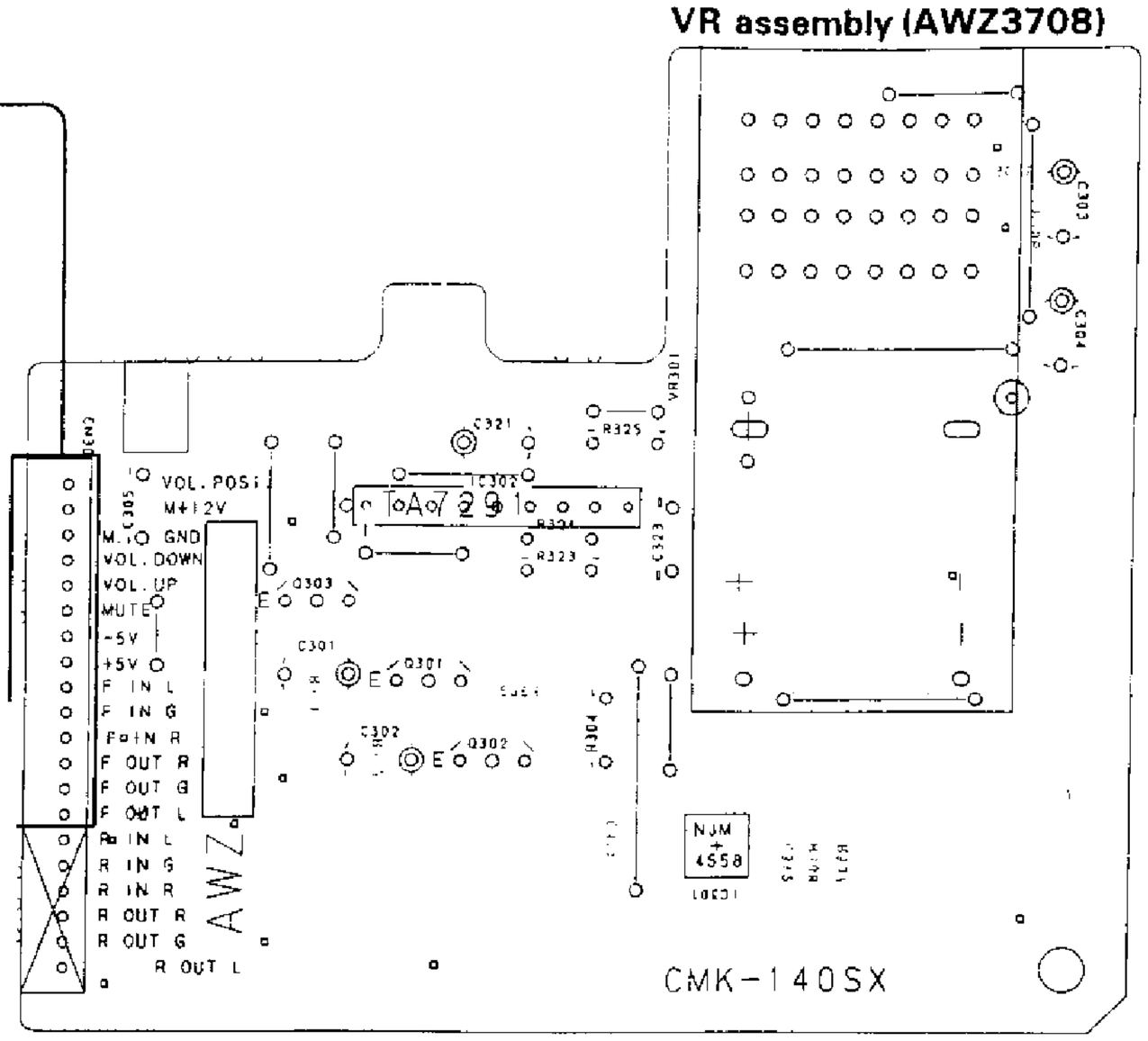
IC1003 IC1001 Q1001 Q1002

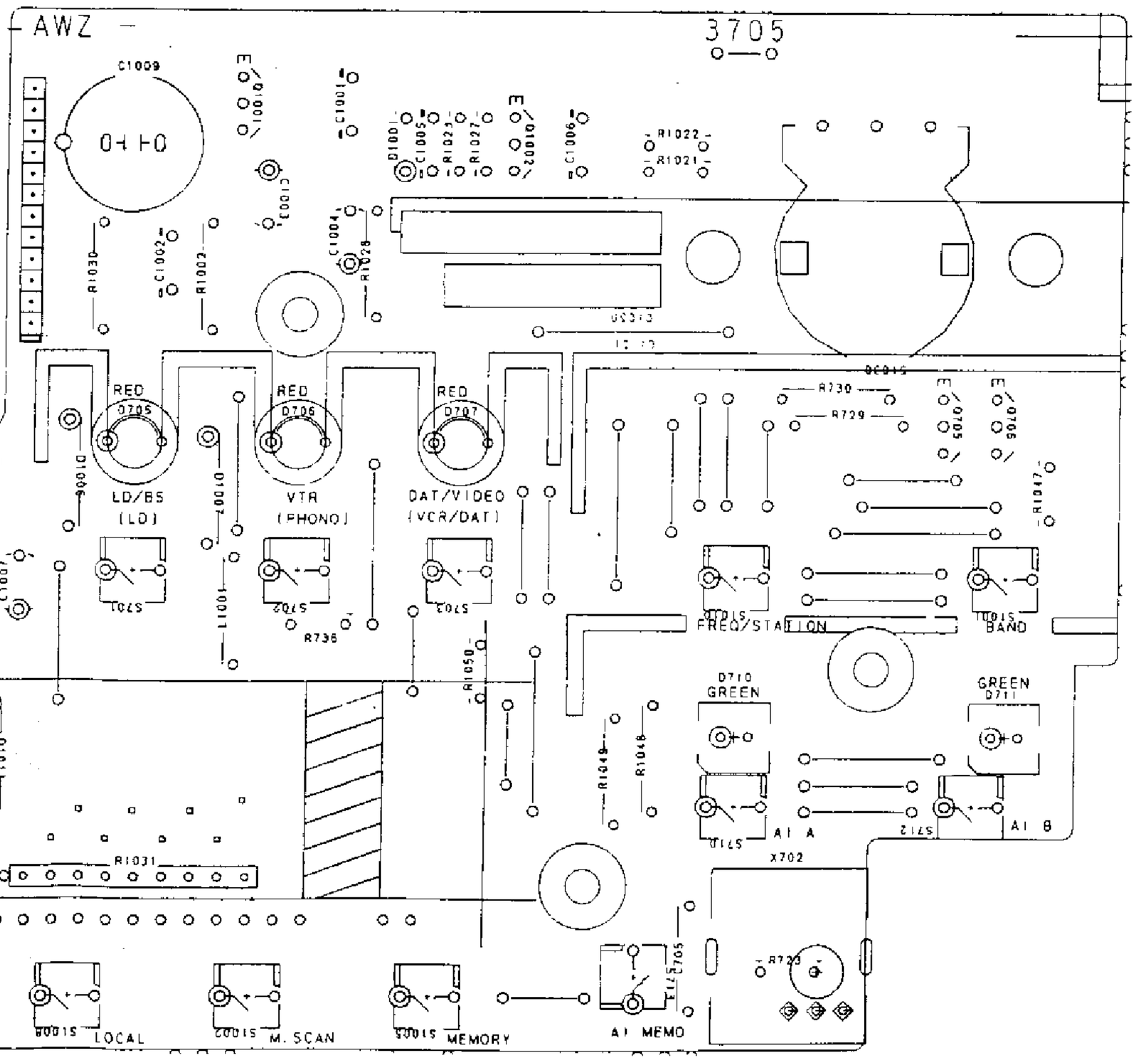
This P. C. B connection diagram is viewed from the parts mounted side.

MAIN Assembly CN29 (To page 21)



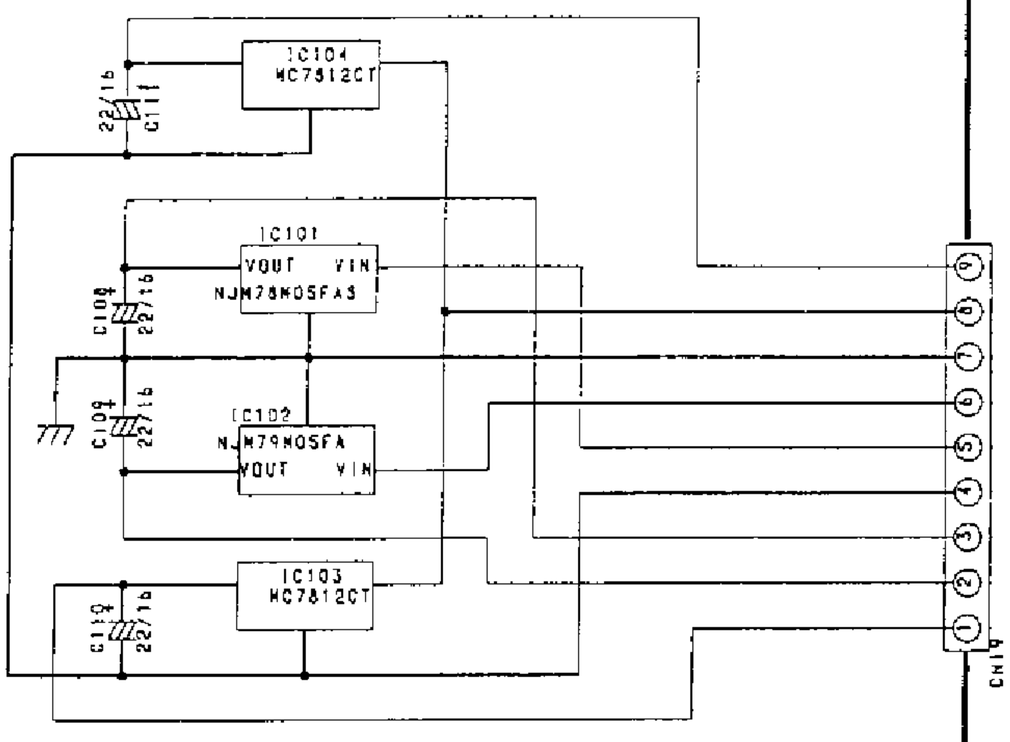
VR assembly (AWZ3708)





Q1001 Q1002 Q705 Q706

REGULATOR assembly (AWZ4009)

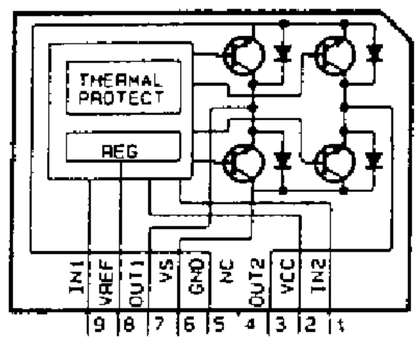


To MAIN Assembly CN20
(To page 19)

IC101 ~ IC104 : REGULATOR

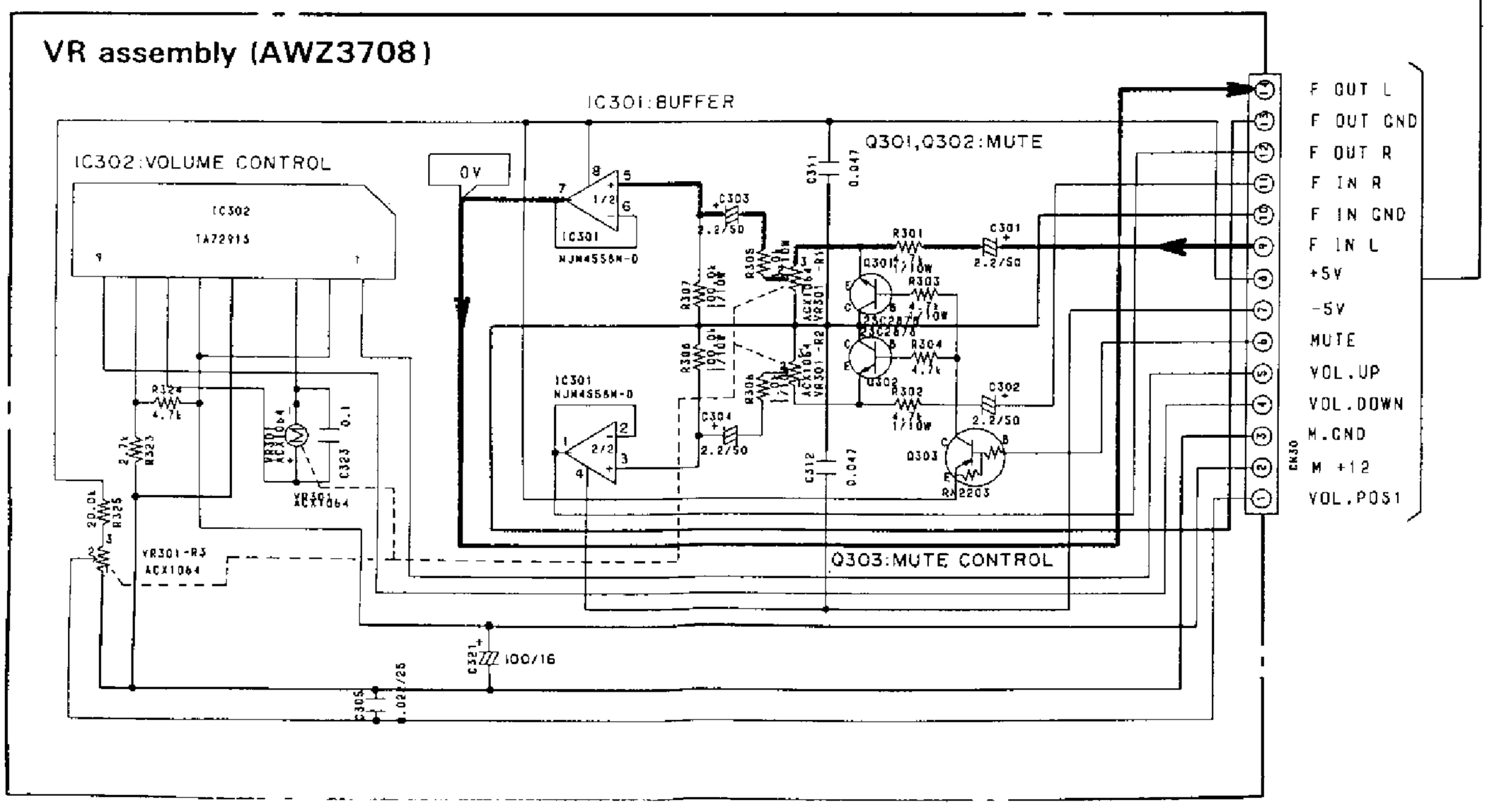
M

IC302 TA7291S

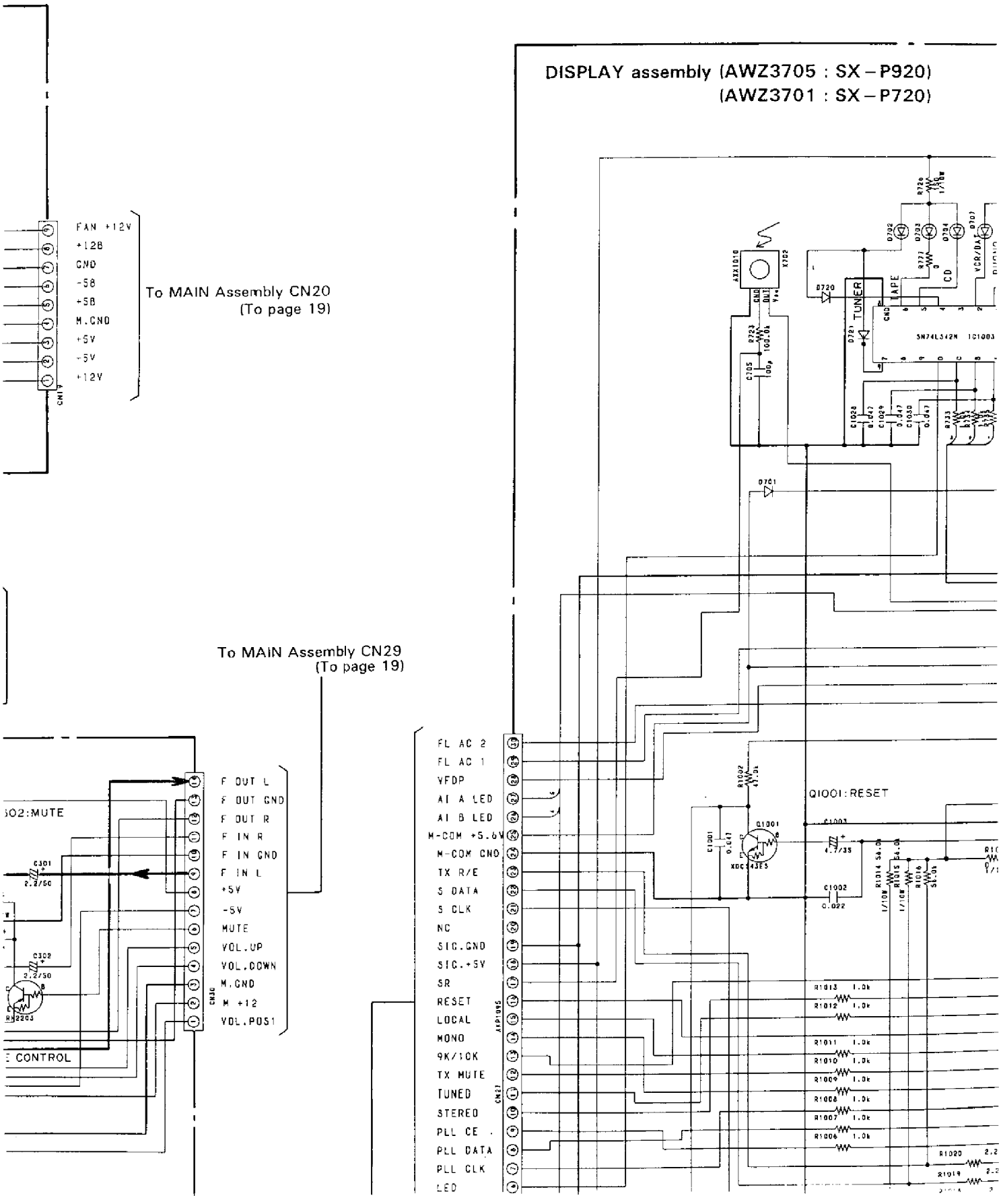


To MAIN Assembly CN29
(To page 19)

VR assembly (AWZ3708)



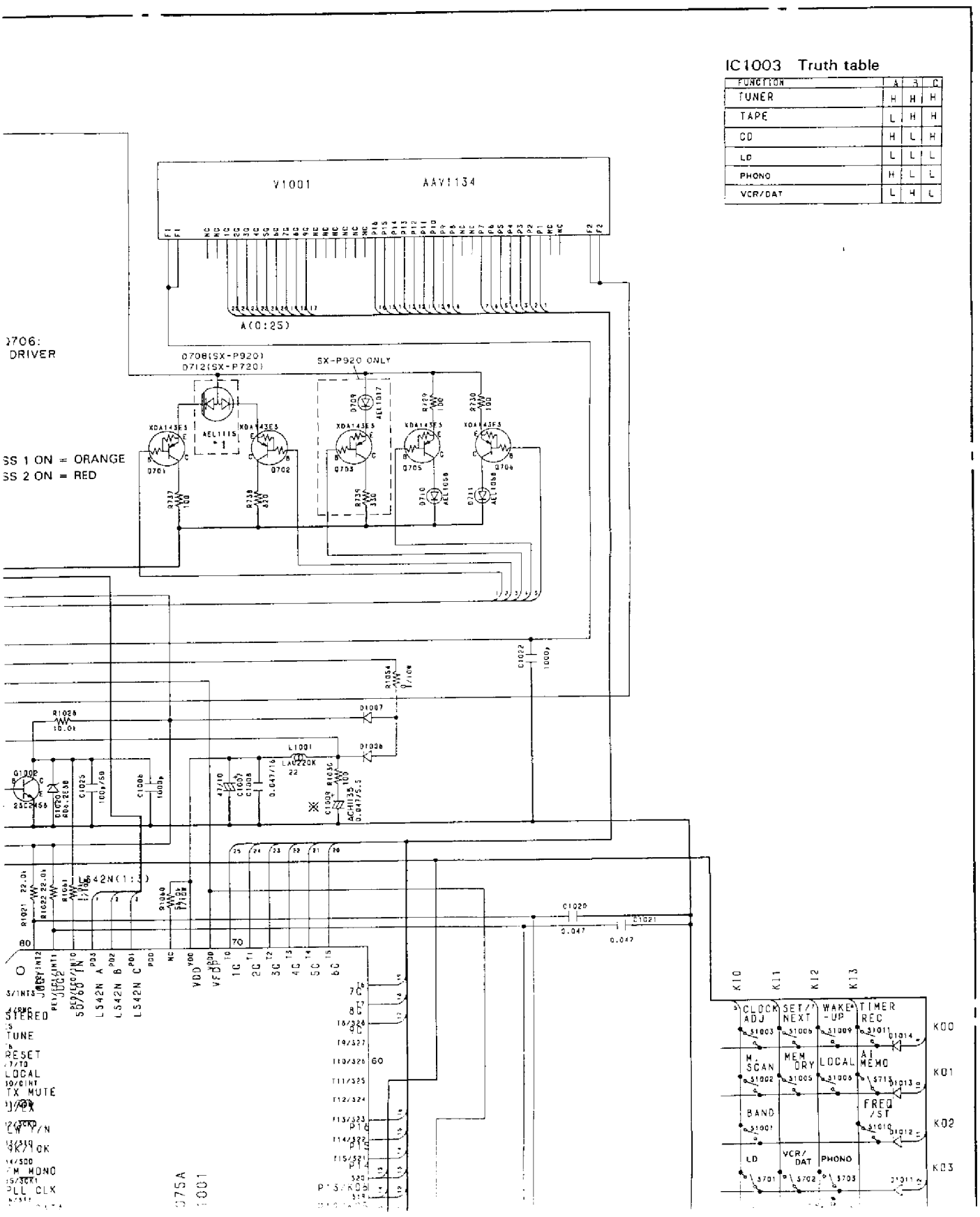
DISPLAY assembly (AWZ3705 : SX-P920)
(AWZ3701 : SX-P720)

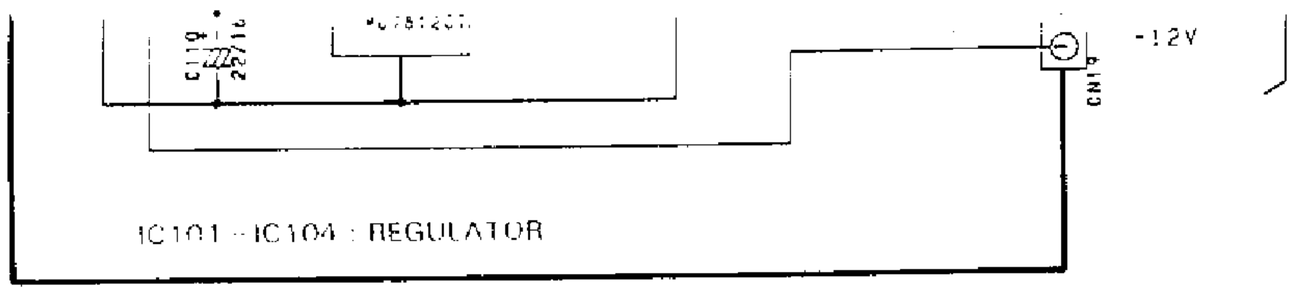


Y assembly (AWZ3705 : SX – P920)
(AWZ3701 : SX – P720)

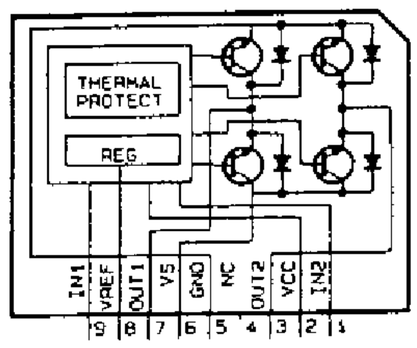
IC1003 Truth table

FUNCTION	A	B	C
TUNER	H	H	H
TAPE	L	H	H
CD	H	L	H
LD	L	L	L
PHONO	H	L	L
VCR/DAT	L	H	L



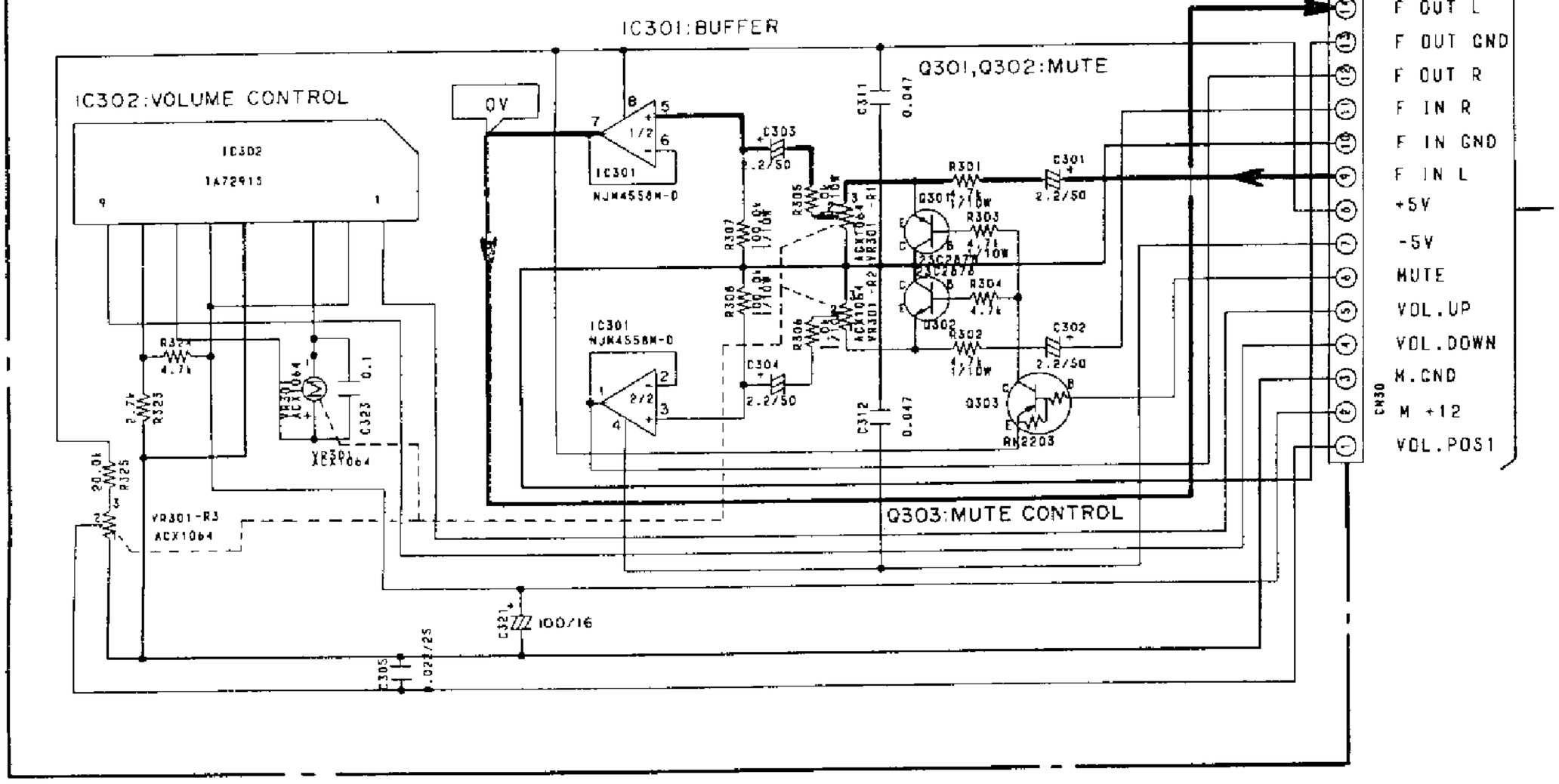


IC302 TA7291S



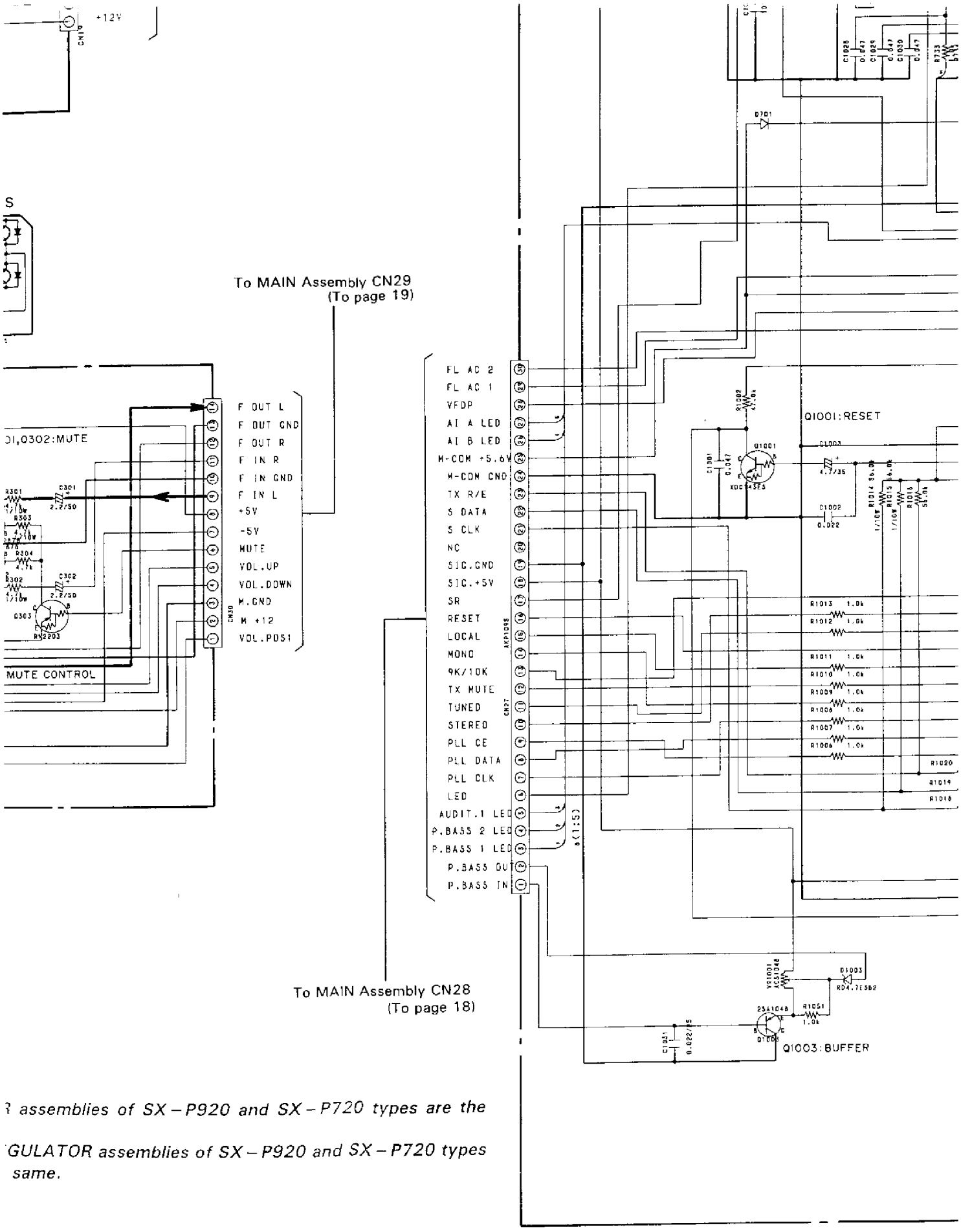
To MAIN As:

VR assembly (AWZ3708)



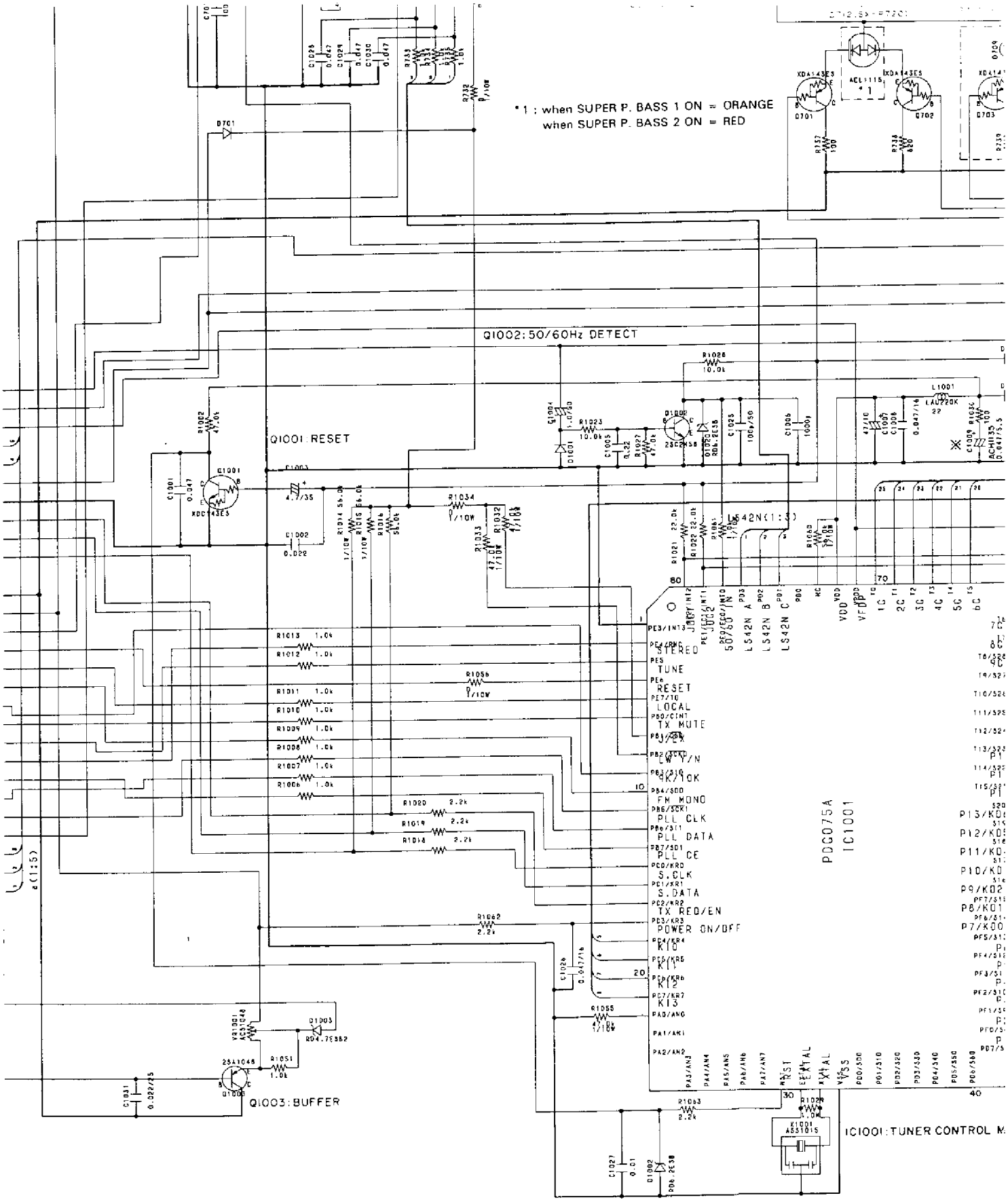
To M

NOTE :
The VR assemblies of SX – P920 and SX –
same.
The REGULATOR assemblies of SX – P920 a
are the same.



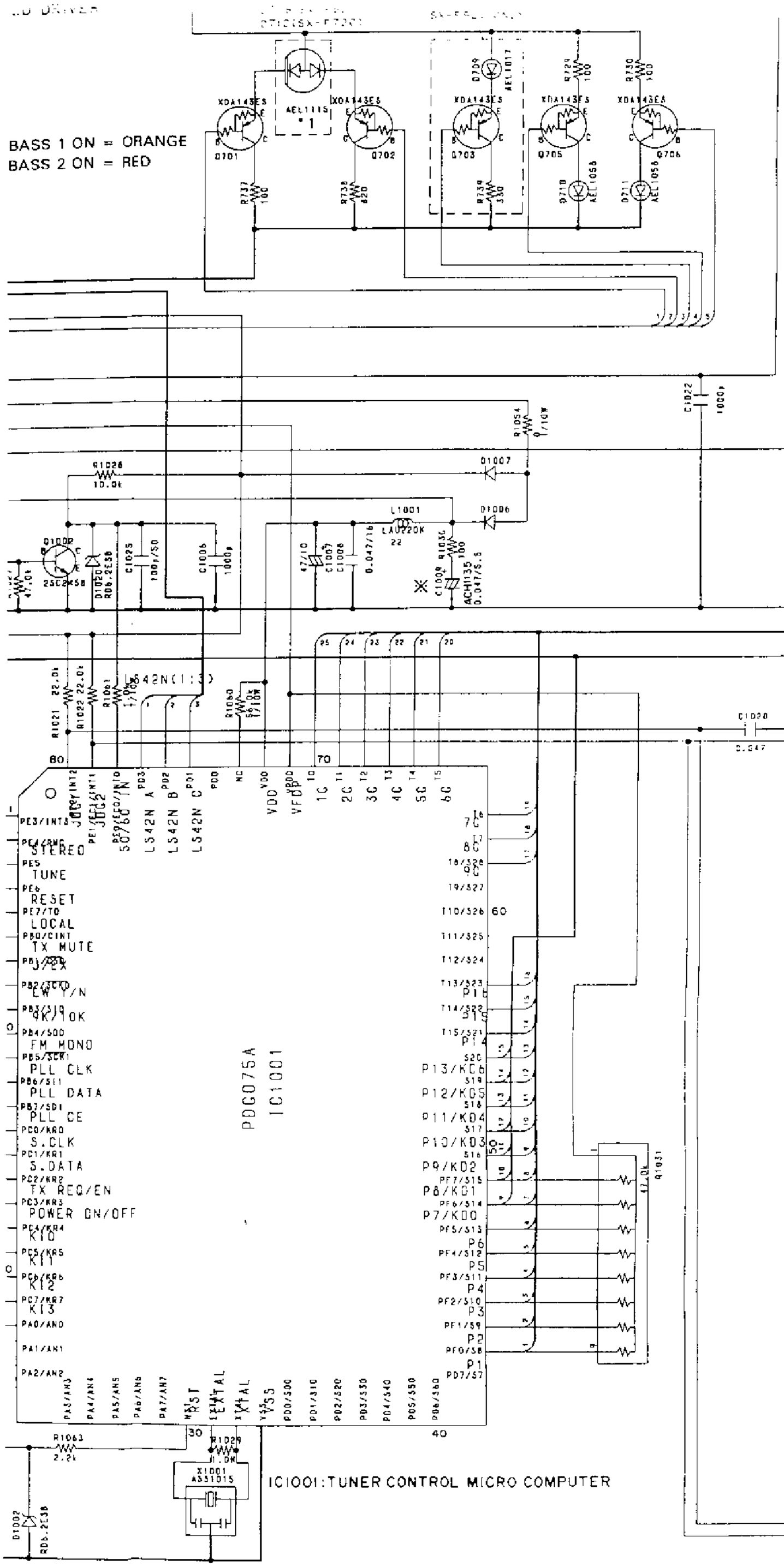
assemblies of SX – P920 and SX – P720 types are the

GULATOR assemblies of SX – P920 and SX – P720 types same.


*1 ; when SUPER P. BASS 1 ON = ORANGE
when SUPER P. BASS 2 ON = RED
Q1002:50/60Hz DETECT
Q1001:RESET
Q1003:BUFFER
IC1001:TUNER CONTROL M
IC1001
PDG075A
STEREO
TUNE
RESET
LOCAL
TX MUTE
LCD F/N
CLOCK
FM MONO
PLL CLK
PLL DATA
PLL CE
S.CLK
S.DATA
TX REQ/EN
POWER ON/OFF
K10
K11
K12
K13
L542N(1:3)

5 6 7

BASS 1 ON = ORANGE
BASS 2 ON = RED



IC1001 : TUNER CONTROL MICRO COMPUTER

4. PCB PARTS LIST

NOTES:

- *Part without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	*56 × 10¹*	*561*	*RD1/8PM 5 6 1 J*
47kΩ	*47 × 10³*	*473*	*RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		*RN2H 0 R 5 K*
1Ω	*010*		*RS1P 0 1 0 K*

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	*562 × 10¹*	*5621*	*RN1/4SR 5 6 2 1 F*

4.1 SX – P920/HE

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
		TUNER ASSEMBLY	AWE1226
◉		MAIN ASSEMBLY	AWZ3719
◉		SUB. POWER ASSEMBLY	AWZ3727
◉		FR. AMP ASSEMBLY	AWZ3734
		MIC ASSEMBLY	
		HEAD. P ASSEMBLY	
		CONNECT ASSEMBLY	
◉		DISPLAY ASSEMBLY	AWZ3705
◉		VR ASSEMBLY	AWZ3708
◉		REGULATOR ASSEMBLY	AWZ4009
TUNER ASSEMBLY (AWE1226)			
SEMICONDUCTORS			
	IC901	PLL IC	LM7001
	IC902	AM/FM IC	LA1265S
	IC903	MPX IC	AN7470P
	Q901	N–FET	2SK246
	Q902	TRANSISTOR	2SC1740SLN
	Q903, 904	TRANSISTOR	RN1203
	Q905–907	TRANSISTOR	RN2201
	Q908	TRANSISTOR	RN1203
	Q909	TRANSISTOR	2SC2668
	Q910–913	TRANSISTOR	2SC2458
	Q914	TRANSISTOR	2SA1048
	D901	DIODE	1SV156
	D902	DIODE	HSS104–02
	D903, 904	DIODE	1SS85
	D905–912	DIODE	HSS104–02
COILS			
	F903	CERAMIC FILTER	ATF–119
	F904	CERAMIC FILTER	ATF1042
	F905	CERAMIC FILTER	ATF–107
	F906	FILTER	ATF1088
	L901, 903	AXIAL INDUCTOR	LAU2R2M
	L904	AXIAL INDUCTOR	LAU010M
	L905	AXIAL INDUCTOR	LAU2R2M
	L907	COIL	ATE–079
	L908	AXIAL INDUCTOR	LAU2R2M
CAPACITORS			
	C901	ELECTR. CAPACITOR	CEAS330M16
	C902	CERAMIC CAPACITOR	CKDYF102Z50
	C903	CERAMIC CAPACITOR	CKPUYB101K50
	C904	CERAMIC CAPACITOR	CKPUYB102K50
	C905	AUDIO FILM CAPACITOR	CFTXA103J50
	C906	AUDIO FILM CAPACITOR	CFTXA224J50
	C907	CERAMIC CAPACITOR	CKPUYB102K50
	C910	CERAMIC CAPACITOR	CKPUYB101K50
	C911	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C912	CERAMIC CAPACITOR	CCDCH150J50
	C913	CERAMIC CAPACITOR	CKDYF223Z50
	C914	CERAMIC CAPACITOR	CCDCH150J50
	C915	CERAMIC CAPACITOR	CKDYF223Z50
	C916	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C919, 922	CERAMIC CAPACITOR	CKDYF223Z50
	C923	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C924	ELECTR. CAPACITOR	CEAS470M10
	C925	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C926	ELECTR. CAPACITOR	CEAS330M16
	C927	CERAMIC CAPACITOR	CCDSL470J50
	C928	ELECTR. CAPACITOR	CEAS470M10
	C929	AXIAL CERAMIC CAPACITOR	CKPUYF103Z25
	C930	ELECTR. CAPACITOR	CEAS330M16
	C931	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
	C932–935	CERAMIC CAPACITOR	CKDYF223Z50

Mark No.	Description	Parts No.
C936	ELECTR. CAPACITOR	CEAS4R7M50
C937	CERAMIC CAPACITOR	CKDYF223Z50
C938	ELECTR. CAPACITOR	CEAS010M50
C939	CERAMIC CAPACITOR	CCDSL271J50
C940	CERAMIC CAPACITOR	CKDYB222K50
C941	CERAMIC CAPACITOR	CKDYF473Z50
C942	ELECTR. CAPACITOR	CEAS2R2M50
C943	ELECTR. CAPACITOR	CEAS470M10
C944	ELECTR. CAPACITOR	CEAS0R1M50
C945	ELECTR. CAPACITOR	CEANP2R2M50
C946	ELECTR. CAPACITOR	CEAS470M25
C947	CERAMIC CAPACITOR	CKDYF473Z50
C948	CAPACITOR (470p)	ACE1039
C949	ELECTROLYTIC CAPACIT	CEAS1R5M50
C950	ELECTR. CAPACITOR	CEAS3R3M50
C951	ELECTR. CAPACITOR	CEAS470M10
C952	CERAMIC CAPACITOR	CKDYB122K50
C953	CERAMIC CAPACITOR	CKDYB122K50
C954	ELECTR. CAPACITOR	CEAS0R1M50
C955	ELECTR. CAPACITOR	CEASR22M50
C956	CERAMIC CAPACITOR	CKDYB122K50
C957, 958	ELECTR. CAPACITOR	CEAS2R2M50
C959	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
C960	ELECTR. CAPACITOR	CEAS0R1M50
C961, 962	CERAMIC CAPACITOR	CKDYB272K50
C963	ELECTR. CAPACITOR	CEAS2R2M50
C964	CERAMIC CAPACITOR	CKPUYB101K50
C965	CERAMIC CAPACITOR	CKPUYB102K50
C968	CERAMIC CAPACITOR	CCDSL101J50
RESISTORS		
VR901	VR (10k)	ACP1043
VR902	VR (22k)	ACP1044
VR903	VR (4.7k)	ACP1042
	Other resistors	RD1/8PM□□□J
OTHERS		
X901	CRYSTAL RESONATOR (7.2MHz)	ASS1042
X902	CERAMIC RESONATOR (450kHz)	ATF1027
	ANTENNA TERMINAL 4-P	AKA1010
	AM RF TUNING BLOCK	AXX1012
	AM RF TUNING BLOCK	AXX1013
	2 Serial F. E. MODULE ASSEMBLY	AXQ1002

NOTE :
The 2 serial F. E. module assembly (AXQ1002) will be replaced upon periodical servicing. Therefore, individual parts in the assembly are not specified for service.

Mark No.	Description	Parts No.
◉ MAIN ASSEMBLY (AWZ3719)		
SEMICONDUCTORS		
IC1001	OP-AMP IC	NJM4558M-D
IC401	E-VR IC	M5222L
IC402-405	OP-AMP IC	NJM4558M-D
IC51	REGULATOR IC	NJM78M56FAS
IC701	SYSTEM CONTROL MICROCOMPUTER	PD5170B
Q1001	TRANSISTOR	XDC143ES
Q1002	TRANSISTOR	2SC2458
Q151	TRANSISTOR	2SA1048
Q152	TRANSISTOR	2SC2458
Q153-155	TRANSISTOR	2SC2458
Q158	TRANSISTOR	2SC2458
Q161	TRANSISTOR	XDC143ES
Q401, 405	TRANSISTOR	2SC2458
Q51-54	TRANSISTOR	2SC2458
D1003-1006	DIODE	1SS252
D101	DIODE	D3SBA20
D102-107	DIODE	1SR139-400
D151	DIODE	1SR139-400
D152, 153	DIODE	1SS252
D154, 155	ZENER DIODE	RD11ESB
D3001	DIODE	1SS252
D401, 402	DIODE	1SS252
D405	ZENER DIODE	RD6.8ESB2
D51	ZENER DIODE	RD10ESB2
D52	ZENER DIODE	RD16ESB1
D53	ZENER DIODE	RD6.2ESB
D54	ZENER DIODE	RD16ESB1
D55-58	DIODE	1SR139-400
D59	ZENER DIODE	RD6.2ESB
D60-64	DIODE	1SR139-400
D701	DIODE	1SS252
D702, 709	ZENER DIODE	RD6.2ESB2
RELAY		
RY151	RELAY	ASR1035
COILS		
L251, 252	COIL	ATH-133
L701	AXIAL INDUCTOR	LAU220K
CAPACITORS		
C103, 104	ELECTROLYTIC CAPACIT (5600p/50V)	ACH1145
C105, 106	ELECTR. CAPACITOR	CEAS102M16
C111, 112	CERAMIC CAPACITOR	CKCYF103Z50
C113	ELECTR. CAPACITOR	CEAS222M25
C151	ELECTR. CAPACITOR	CEAS330M25
C152	ELECTR. CAPACITOR	CEAS221M16
C153	ELECTR. CAPACITOR	CEAS100M50
C154	ELECTR. CAPACITOR	CEAS221M16
C2027	MYLAR FILM CAPACITOR	CQMA104K250

Mark	No.	Description	Parts No.
	C251	ELECTROLYTIC CAPACIT	CEANP4R7M100
	C3001	ELECTR. CAPACITOR	CEAS471M10
	C401, 402	ELECTR. CAPACITOR	CEAS010M50
	C403	CERAMIC CAPACITOR	CKSQYF104Z50
	C404	CERAMIC CAPACITOR	CKSQYB333K50
	C405	ELECTR. CAPACITOR	CEAS2R2M50
	C408	ELECTR. CAPACITOR	CEAS010M50
	C409	CERAMIC CAPACITOR	CKSQYB333K50
	C410	ELECTR. CAPACITOR	CEAS2R2M50
	C411	ELECTR. CAPACITOR	CEASR68M50
	C412	ELECTR. CAPACITOR	CEAS2R2M50
	C413	CERAMIC CAPACITOR	CKSQYB183K50
	C414	CERAMIC CAPACITOR	CKSQYF683Z50
	C51	ELECTROLYTIC CAPACIT	CEAS222M25
	C52	ELECTR. CAPACITOR	CEAS221M50
	C54	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C55	ELECTROLYTIC CAPACIT	CEHAQ470M50
	C57	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C701	CERAMIC CAPACITOR	CKSQYF473Z50
	C702	ELECTR. CAPACITOR	CEAS470M16
	C703	CERAMIC CAPACITOR	CKSQYF473Z50
	C704	CERAMIC CAPACITOR	CKDYF473Z50
	C705 – 708	CERAMIC CAPACITOR	CKSQYF473Z50
	C901, 902	CERAMIC CAPACITOR	CKSQYF104Z50
RESISTORS			
	R1007	METAL FILM RESISTER	RN1/4PC1001F
	R101, 102	METAL OXIDE RESISTOR	RS2LMFR22J
	R1011	METAL FILM RESISTER	RN1/4PC5601F
	R1012	METAL FILM RESISTER	RN1/4PC6801F
	R1013	METAL FILM RESISTER	RN1/4PC2702F
	R151	CARBON FILM RESISTOR	RD1/2PM182J
	R158	CARBON FILM RESISTOR	RD1/8PM392J
	R163, 164	METAL OXIDE RESISTOR	RS2LMF331J
	R251, 252	CARBON FILM RESISTOR	RD1/4PMFL100J
	R52	CARBON FILM RESISTOR	RD1/8PM562J
	R53	CARBON FILM RESISTOR	RD1/8PM102J
	R54	METAL OXIDE RESISTOR	RS3LMF821J
		Other resistors	RS1/10S□□□J

Mark	No.	Description	Parts No.
OTHERS			
		SPEAKER TERMINAL 4 – P	AKE – 109
	CN	PIN JACK 2P (REAR SPEAKERS)	AKB1185
	CN1	SOCKET (15P)	AKP1090
	CN15	CONNECTOR (4P)	KPC4
	CN2	SOCKET (15P)	AKP1092
	CN28	30P SOCKET	AKP1094
	TH1001	THERMISTOR	NTH2218F
	X701	CERAMIC RESONATOR (4MHz)	ASS1025

◉ SUB. POWER ASSEMBLY (AWZ3727)

RELAY			
	RY51	RELAY	ASR1027
COIL & TRANSFORMER			
	L51	FILTER	ATF – 151
	T51	POWER TRANSFORMER	ATT1174
CAPACITORS			
	C58, 59	CKA (0.01/AC400V)	ACG1003
RESISTOR			
	R60	METAL OXIDE RESISTOR	RS2LMF680J

◉ FR. AMP ASSEMBLY (AWZ3734)

SEMICONDUCTOR			
	IC201	AUDIO IC	STK4180 – 2G
CAPACITORS			
	C201, 202	ELECTR. CAPACITOR	CEASR33M50
	C203, 204	CERAMIC CAPACITOR	CKCYB471K50
	C205 – 208	ELECTR. CAPACITOR	CEAS101M50
	C209, 210	ELECTR. CAPACITOR	CEAS100M50
	C211 – 214	CERAMIC CAPACITOR	CKCYF473Z50
RESISTORS			
	R201, 202	CARBON FILM RESISTOR	RD1/8PM102J
	R203, 204	CARBON FILM RESISTOR	RD1/8PM563J
	R209, 210	CARBON FILM RESISTOR	RD1/4PMFL101J
		Other resistors	RD1/4PM□□□J

Mark No.	Description	Parts No.
MIC ASSEMBLY		
SEMICONDUCTOR		
IC501	OP−AMP IC	NJM4558M−D
CAPACITORS		
C501	CERAMIC CAPACITOR	CKSQYB681K50
C502	ELECTR. CAPACITOR	CEJA010M50
C503	CERAMIC CAPACITOR	CKSQYB471K50
C504, 505	ELECTROLYTIC CAPACIT	CEJA100M25
C506, 507	CERAMIC CAPACITOR	CKSQYF473Z50
RESISTORS		
VR501	VARIABLE RESISTOR (10k)	ACS1074
	Other resistors	RS1/10S□□□J
OTHERS		
	JACK (MIC)	AKN1009
HEAD. P ASSEMBLY		
RESISTORS		
R557, 558	METAL OXIDE RESISTOR	RS2LMF331J
OTHERS		
CN551	JACK (HEAD PHONE)	AKN1028
CONNECT ASSEMBLY		
SEMICONDUCTORS		
IC104	IC PROTECTOR	ICP−N75
IC105, 106	IC PROTECTOR	ICP−N50
IC107−109	IC PROTECTOR	ICP−N75
◉ DISPLAY ASSEMBLY (AWZ3705)		
SEMICONDUCTORS		
IC1001	CONTROL MICROCOMPUTER	PDG075A
IC1003	LOGIC IC	SN74LS42NP
Q1001	TRANSISTOR	XDC143ES
Q1002	TRANSISTOR	2SC2458
Q1003	TRANSISTOR	2SA1048
Q701−703	TRANSISTOR	XDA143ES
Q705, 706	TRANSISTOR	XDA143ES
D1001	DIODE	1SS252
D1002	ZENER DIODE	RD6.2ESB
D1003	ZENER DIODE	RD4.7ESB2
D1006−1014	DIODE	1SS252
D1020	ZENER DIODE	RD6.2ESB

Mark No.	Description	Parts No.
D701	DIODE	1SS252
D702−707	LED (RED)	AEL1108
D708	LED(RED, AMBER)	AEL1115
D709	LED (RED)	AEL1017
D710, 711	LED (LIGHT GREEN)	AEL1058
D720, 721	DIODE	1SS252
SWITCHES		
S1001−1003	SWITCH (BAND, M. SCAN, CLOCK ADJ.)	ASG1029
S1005, 1006	SWITCH (MEMORY, SET)	ASG1029
S1008−1011	SWITCH (LOCAL, WAKE UP, FREQ/STATION, REC)	ASG1029
S1030	ROTARY ENCODER (TUNING JOG)	ASX1013
S701−706	SWITCH (LD, VCR/DAT, PHONO, TAPE, TUNER, CD)	ASG1029
S709−714	SWITCH (POWER STANDBY/ON, AI. A, SUPER P. BASS, AI. B, AI. MEMORY, AUDITION)	ASG1029
COIL		
L1001	AXIAL INDUCTOR	LAU220K
CAPACITORS		
C1001	CERAMIC CAPACITOR	CKDYF473Z50
C1002	CERAMIC CAPACITOR	CKDYF223Z50
C1003	ELECTR. CAPACITOR	CEAS4R7M50
C1004	ELECTR. CAPACITOR	CEAS010M50
C1005	AUDIO FILM CAPACITOR	CFTXA224J50
C1006	CERAMIC CAPACITOR	CKDYB102K50
C1007	ELECTR. CAPACITOR	CEJA470M10
C1008	AXIAL CERAMIC CAPACITOR	CKPUYF473Z16
C1009	CAPACITOR (0.047/5.5)	ACH1135
C1020, 1021	CERAMIC CAPACITOR	CKSQYF473Z50
C1022	CERAMIC CAPACITOR	CKPUYB102K50
C1025	CERAMIC CAPACITOR	CKPUYB101K50
C1026	AXIAL CERAMIC CAPACITOR	CKPUYF473Z16
C1027	CERAMIC CAPACITOR	CKSQYB103K50
C1028−1030	CERAMIC CAPACITOR	CKSQYF473Z50
C1031	AXIAL CERAMIC CAPACITOR	CKPUYF223Z25
C705	CERAMIC CAPACITOR	CKPUYB101K50
RESISTORS		
VR1001	VARIABLE (10k)	ACS1048
R1014, 1015	CHIP RESISTOR	RS1/10S563J
R1031	RESISTOR ARRAY	RA8S473J
R1032, 1033	CHIP RESISTOR	RS1/10S473J

◉ SUB. POWER ASSEMBLY (AWZ3723)

SUB. POWER assembly (AWZ3723) and SUB. POWER assembly (AWZ3722) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3722	AWZ3723	
	C2026	.....	CQMA473K250	

◉ FR. AMP ASSEMBLY (AWZ3731)

FR. AMP assembly (AWZ3731) and FR. AMP assembly (AWZ3730) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3730	AWZ3731	
	C2024, C2025	.....	CCSQCH101J50	

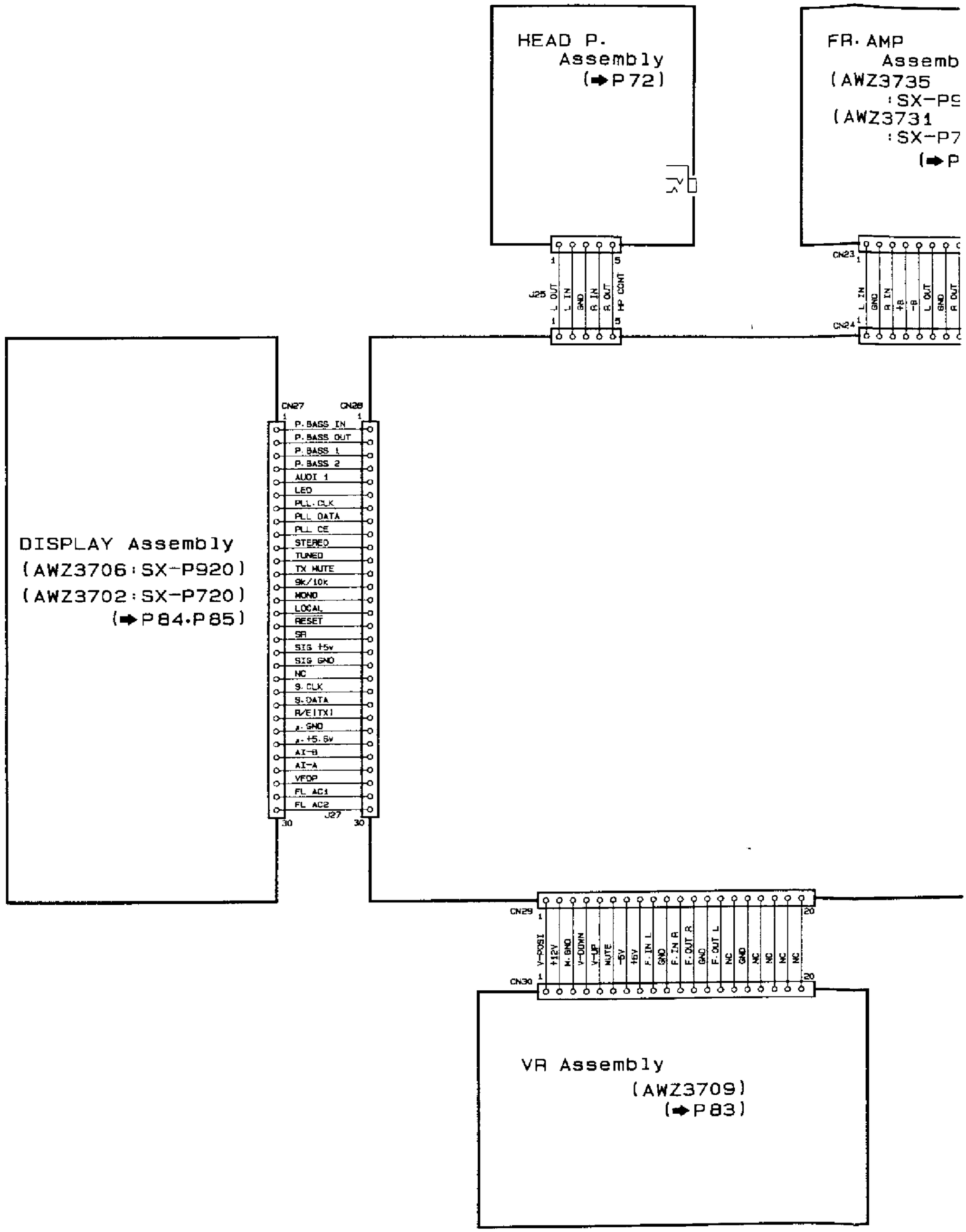
◉ DISPLAY ASSEMBLY (AWZ3702)

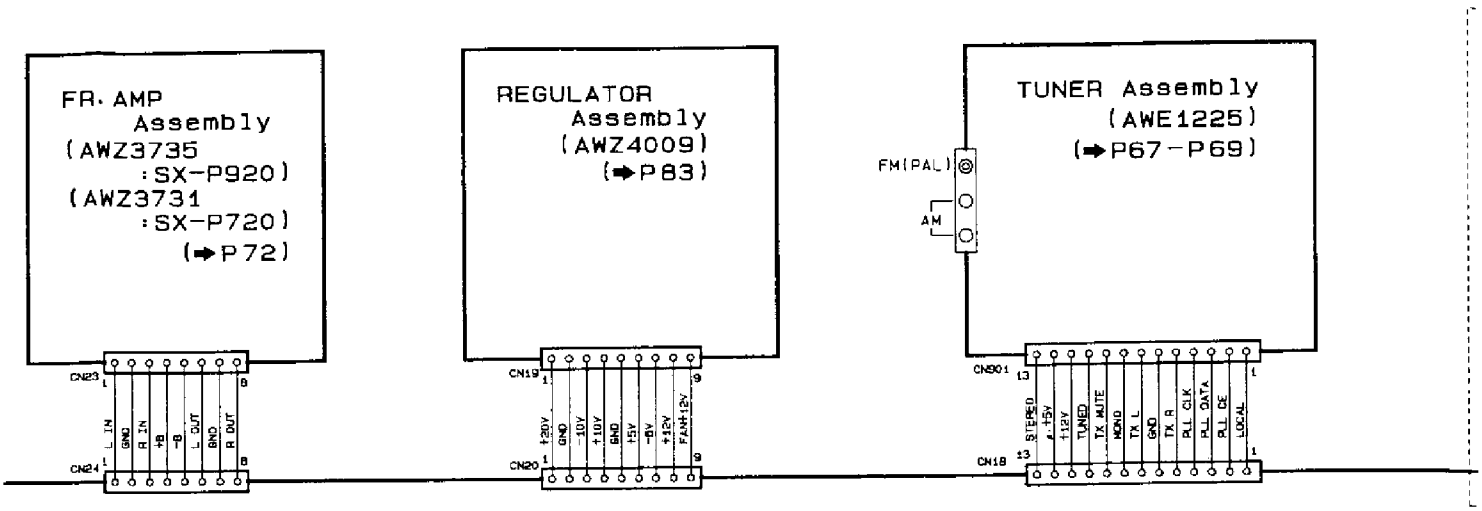
DISPLAY assembly (AWZ3702) and DISPLAY assembly (AWZ3701) have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ3701	AWZ3702	
	C1001	CKDYF473Z50	CKCYF473Z50	
	C1002	CKDYF223Z50	CKCYF223Z50	
	C1006	CKDYB102K50	CKCYB102K50	
	R1025	.....	RS1/10S473J	
	R1033	RS1/10S473J	.....	

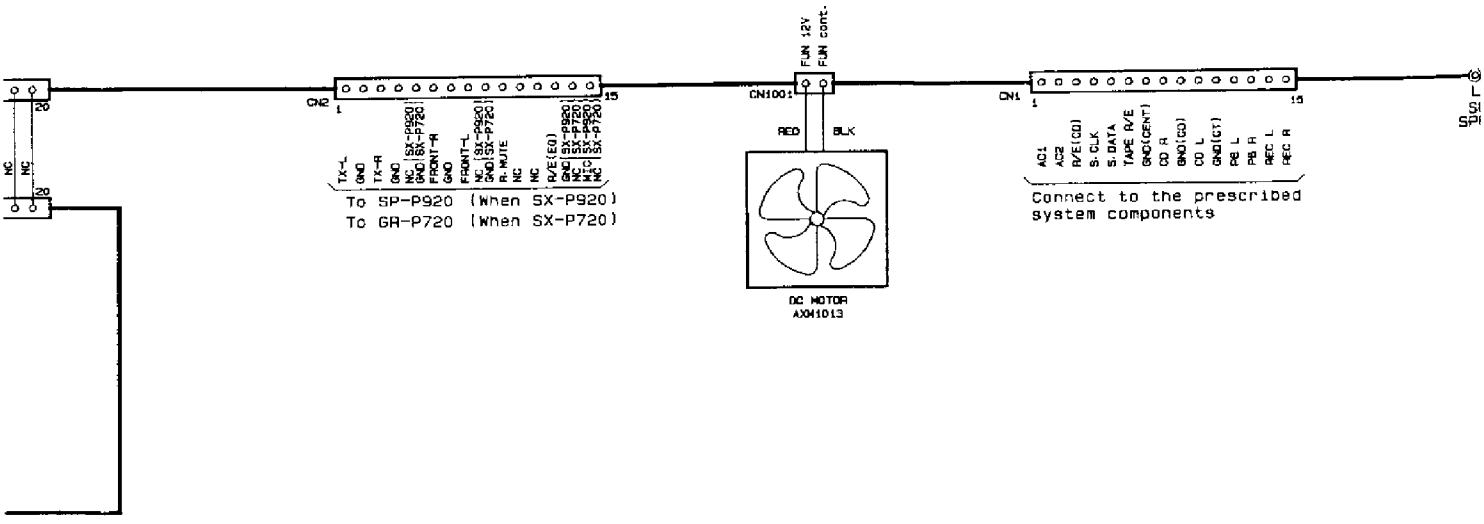
8.3 SCHEMATIC DIAGRAMS AND PCB CONNECTION DIAGRAMS (SX – P920/HEWZI AND SX – P720/HEWZI TYPES)

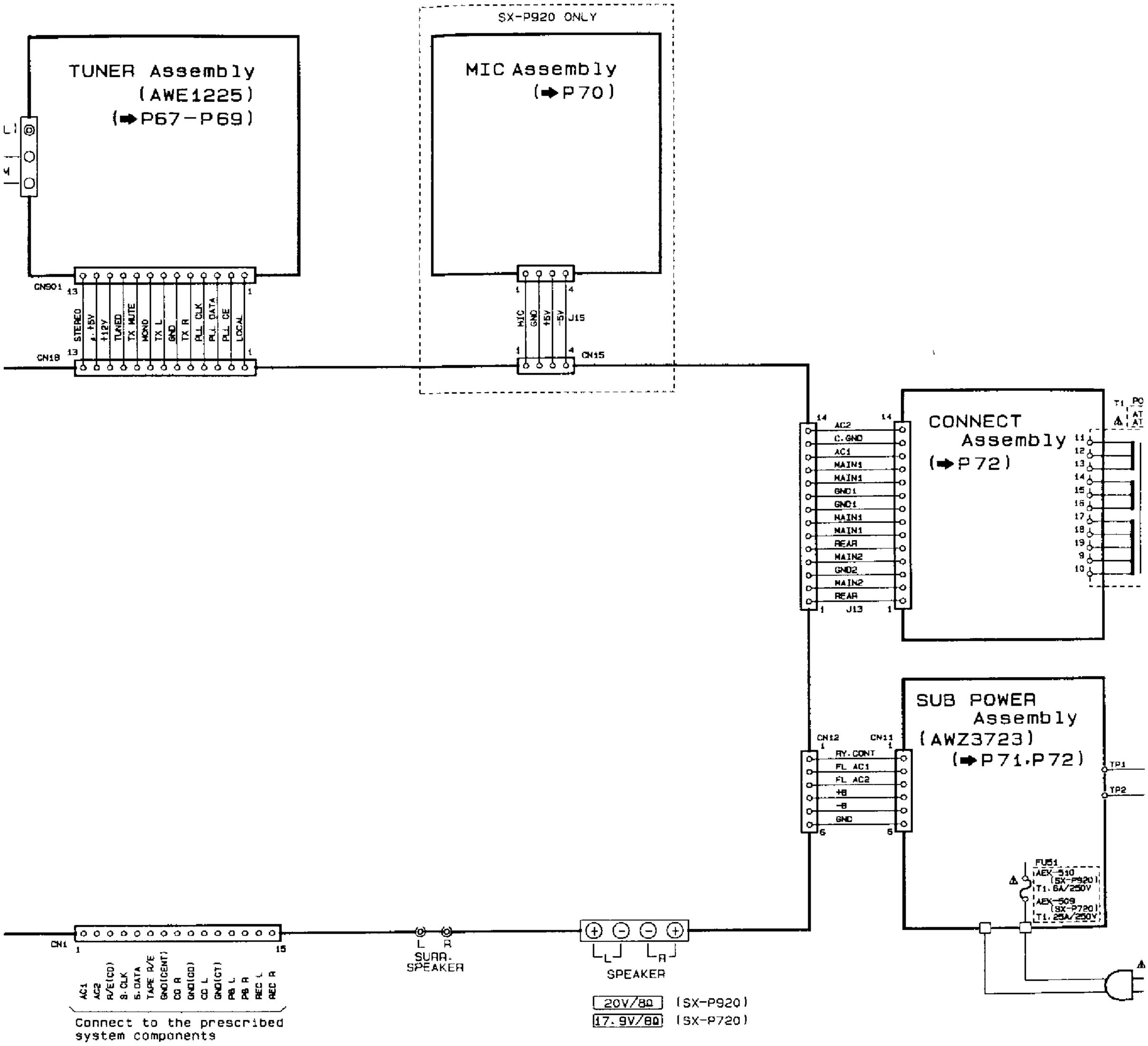
8.3.1 Over All Schematic Diagram

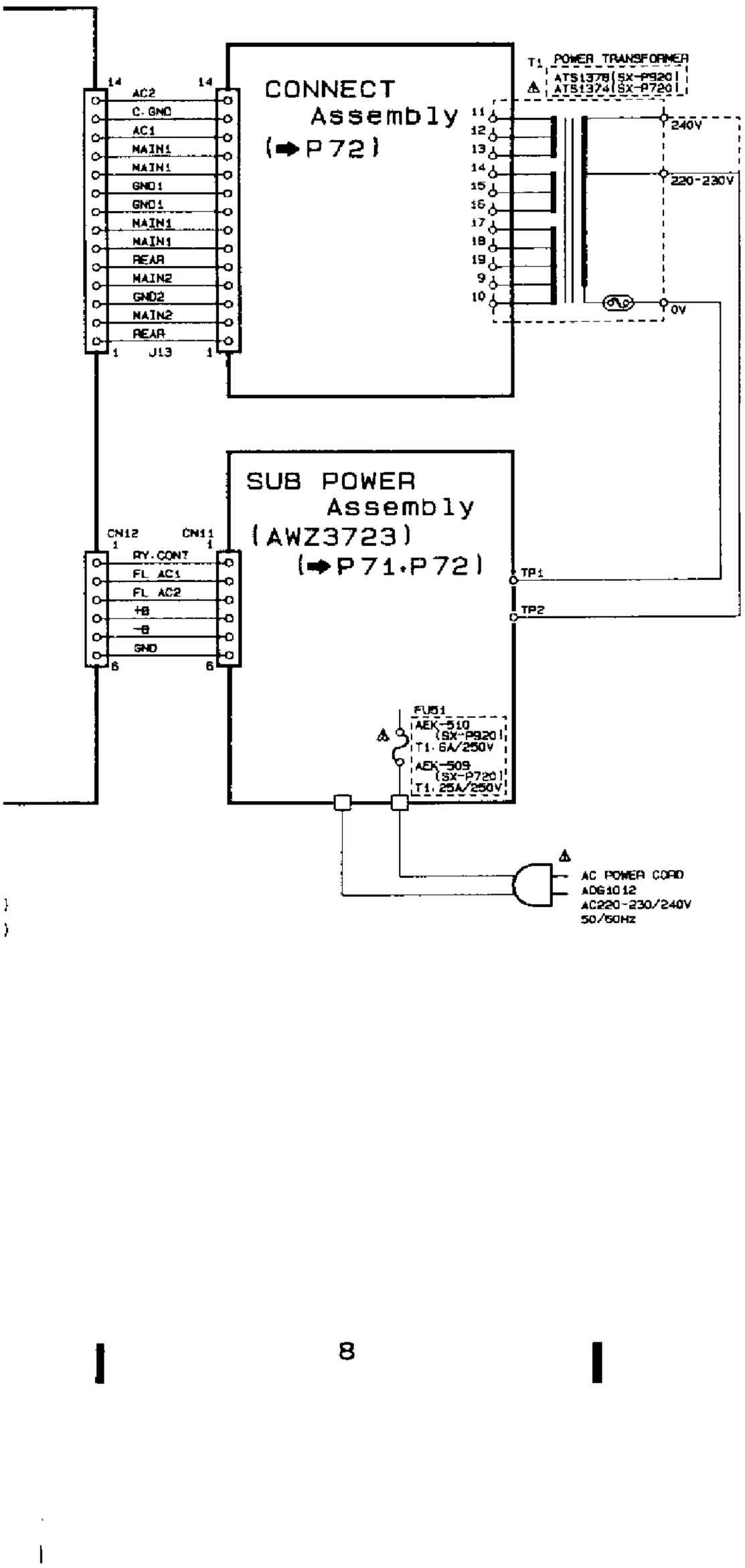




MAIN Assembly
(AWZ3720 : SX-P920)
(AWZ3715 : SX-P720)
(➡P70-P72)




TUNER Assembly
(AWE1225)
(➡P67-P69)
CN901
13
1
STEREO
+5V
+12V
TUNED
TX MUTE
MONO
TX L
GND
TX R
PLL CLK
PLL DATA
PLL CE
LOCAL
CN18
13
1
SX-P920 ONLY
MIC Assembly
(➡P70)
1
4
MIC
GND
+5V
-5V
J15
1
4
CN15
CONNECT
Assembly
(➡P72)
14
14
AC2
C.GND
AC1
MAIN1
MAIN1
GND1
GND1
MAIN1
MAIN1
REAR
MAIN2
GND2
MAIN2
REAR
1
J13
1
SUB POWER
Assembly
(AWZ3723)
(➡P71.P72)
CN12
1
CN11
1
RY.CONT
FL AC1
FL AC2
+B
-B
GND
6
6
TP1
TP2
FU51
(AEK-510)
(SX-P920)
T1.6A/250V
(AEK-509)
(SX-P720)
T1.25A/250V
CN1
1
15
AC1
AC2
R/E(CD)
S.CLK
S.DATA
TAPE R/E
GND(CENT)
CD R
GND(GD)
CD L
GND(GT)
PB L
PB R
REC L
REC R
Connect to the prescribed system components
L
R
SURR.
SPEAKER
SPEAKER
20V/8Ω (SX-P920)
17.9V/8Ω (SX-P720)



1. RESISTORS:
Indicated in Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ, M: MΩ, (F) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

2. CAPACITORS:
Indicated in capacity (μF)/voltage (V) unless otherwise noted p : pF
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE, CURRENT:
▭ : Signal voltage at (SX-P920 : 50W + 50W, SX-P720 : 40W output (1kHz)
▭ : DC voltage (V) at no input signal
[a] and [b] in the circuit diagram describe the following :
a = SX-P920
b = SX-P720
None = SX-P920 and SX-P720
Value in ( ) is DC voltage at rated power
<▭ mA : DC current at no input signal
mV : Signal voltage at FM 1kHz ±75kHz

4. OTHERS:
➡ : Signal route.
θ : Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
∨ marked capacitors and resistors have parts numbers.
▼ (RED) : TEST POINT
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES (The underline indicates the switch position)

DISPLAY Assembly
S01 LD
S02 VCR/DAT
S03 PHONO
S04 TAPE
S05 TUNER
S06 CD
S09 POWER STANDBY/ON
S10 AI. A
S11 SUPER P. BASS (SX-P920 ONLY)
S12 AI. B
S13 AI. MEMORY
S14 AUDITION (SX-P920 ONLY)
S15 SUPER P. BASS (SX-P720 ONLY)
S001 BAND
S002 M. SCAN
S003 CLOCK ADJ
S005 MEMORY
S006 SET
S008 LOCAL
S009 WAKE UP
S010 FREQ/STATION
S011 REC
S030 TUNING JOG

S:
n Ω, ¼W, ⅛W, ±5% tolerance unless otherwise noted k : kΩ,
) : ±1%, (G) : ±2%, (K) : ±10% (M); ±20% tolerance

RS:
n capacity (μF)/voltage (V) unless otherwise noted p : pF
without voltage is 50V except electrolytic capacitor.

, CURRENT:
gnal voltage at (SX-P920 : 50W + 50W, SX-P720 : 40W + 40W, 8Ω)
itput (1kHz)
C voltage (V) at no input signal
l and [b] in the circuit diagram describe the following :
= SX-P920
= SX-P720
one = SX-P920 and SX-P720
alue in ( ) is DC voltage at rated power.
C current at no input signal
ignal voltage at FM 1kHz ±75kHz

route.
ing point.
mark found on some component parts indicates the im-
the safety factor of the part. Therefore, when replacing,
se parts of identical designation.
capacitors and resistors have parts numbers.
TEST POINT
basic schematic diagram, but the actual circuit may vary
rovements in design.
(The underline indicates the switch position)

embly

R/DAT
ONO
PE
NER

WER STANDBY/ON
A
PER P. BASS (SX-P920 ONLY)
B
MEMORY
DITION (SX-P920 ONLY)
PER P. BASS (SX-P720 ONLY)
ND
SCAN
OCK ADJ
MORY
F
CAL
KE UP
EQ/STATION
NING JOG

A

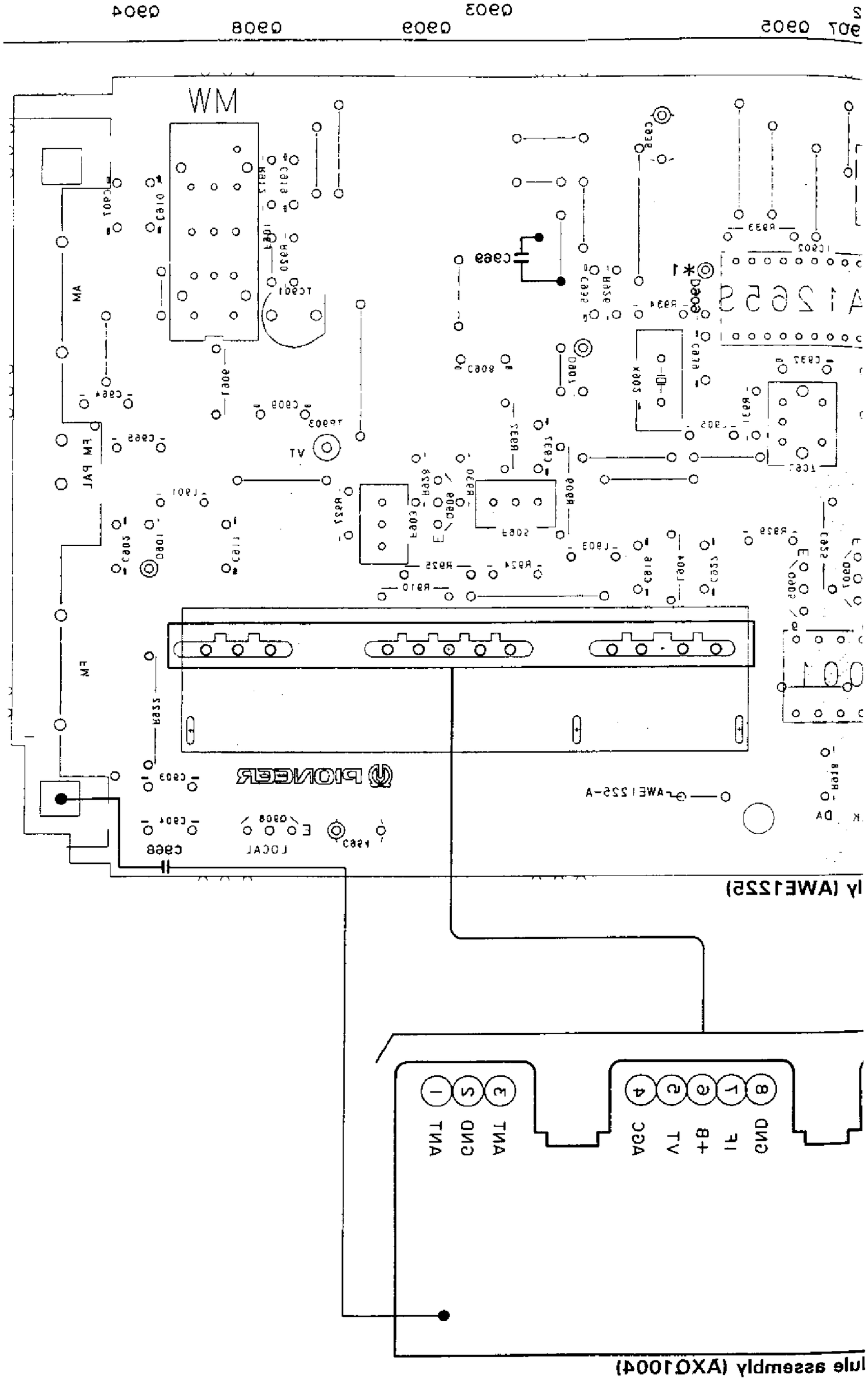
B

C

D

This P. C. B. connection diagram is viewed from the foil side.

8.3.2 TUNER assembly

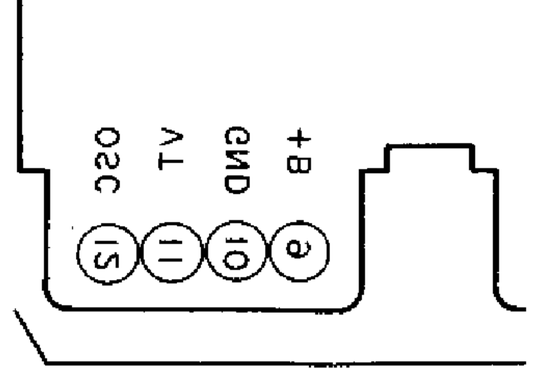


. connection diagram is viewed from the foil side.

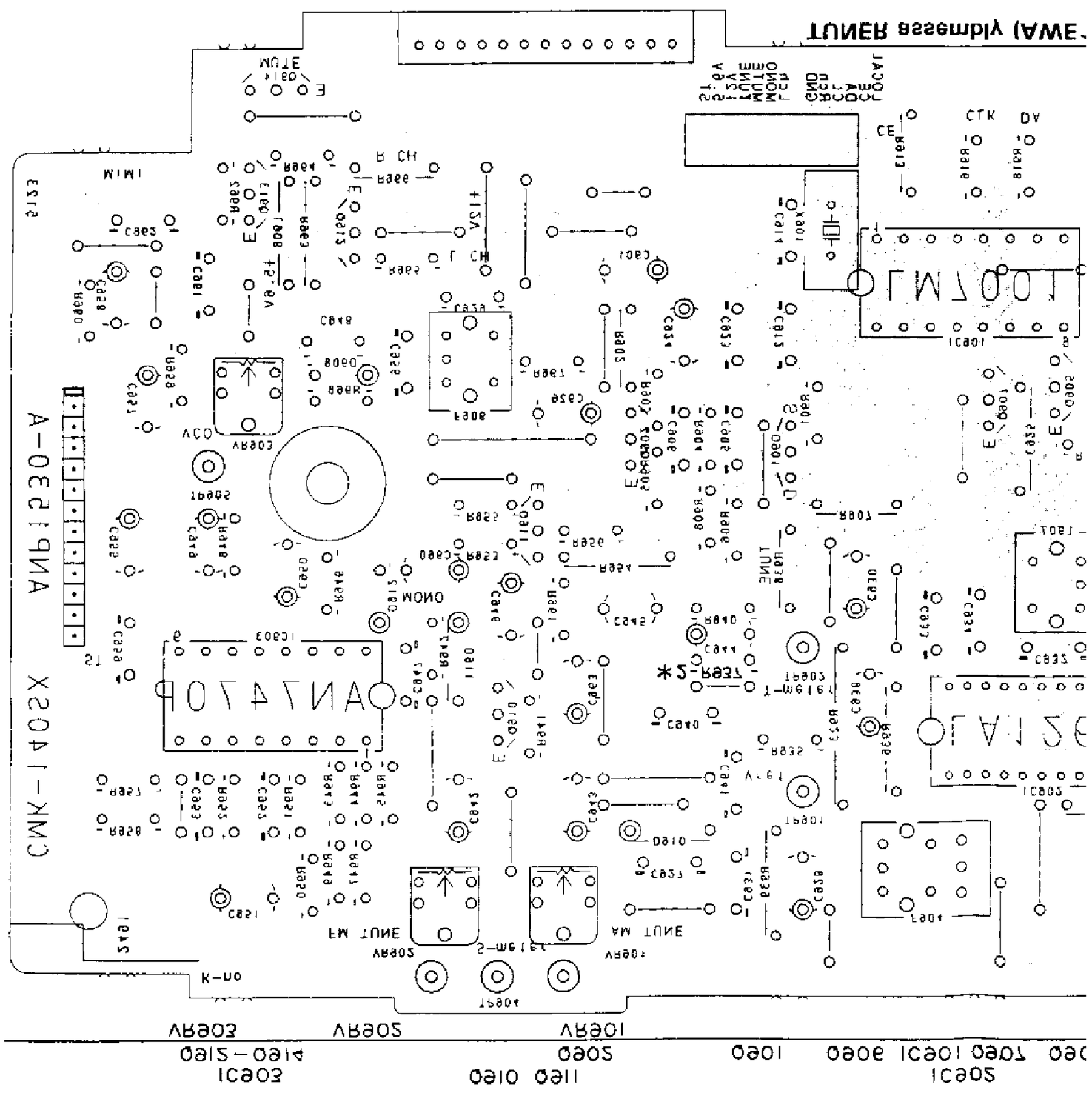
4 Serial F. E. Module assembly (AXQ1004)

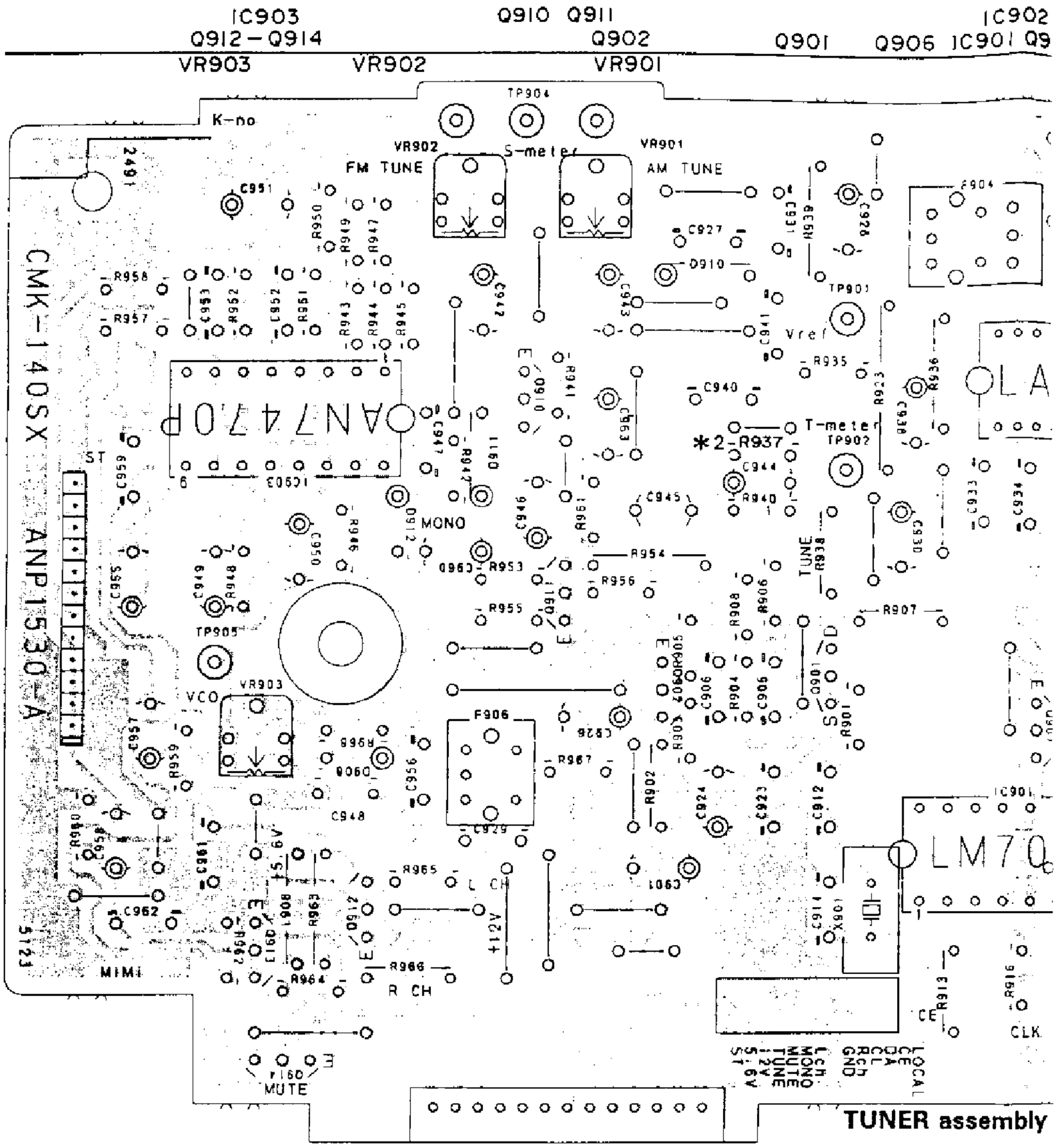
Board.
Board.

A Serial E. E. Module assembly

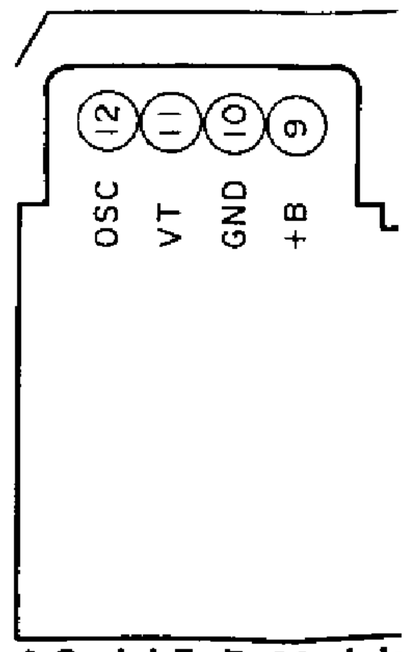


TUNER assembly (AWE-





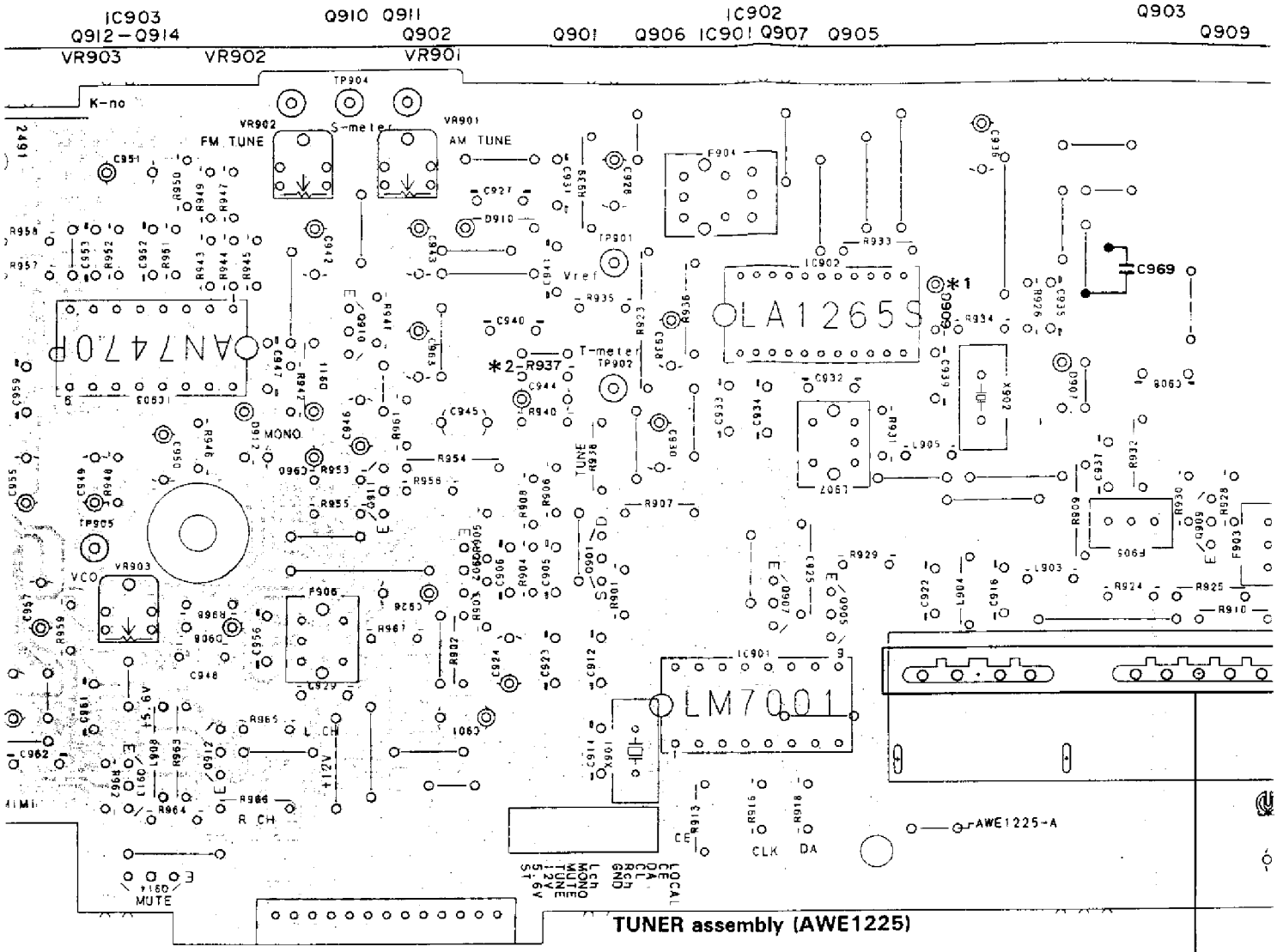
TUNER assembly



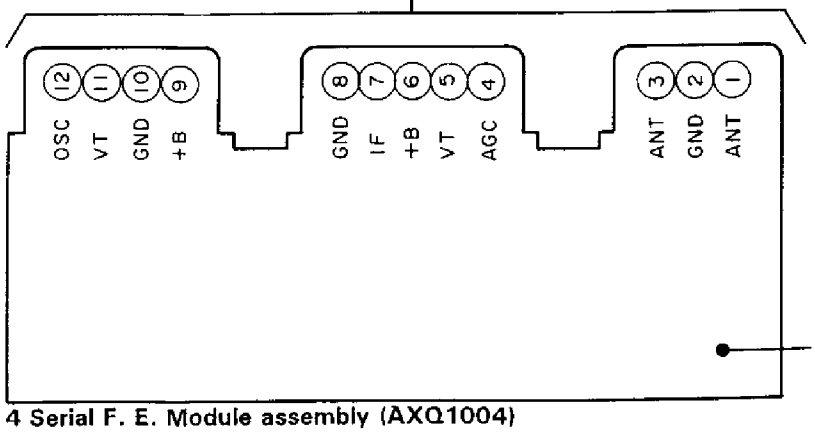
4 Serial F. E. Module

NOTE :
**1 is indicated as R937 on the P. C. Board.*
**2 is indicated as D909 on the P. C. Board.*

This P. C. B connection diagram is viewed from the parts mounted side.



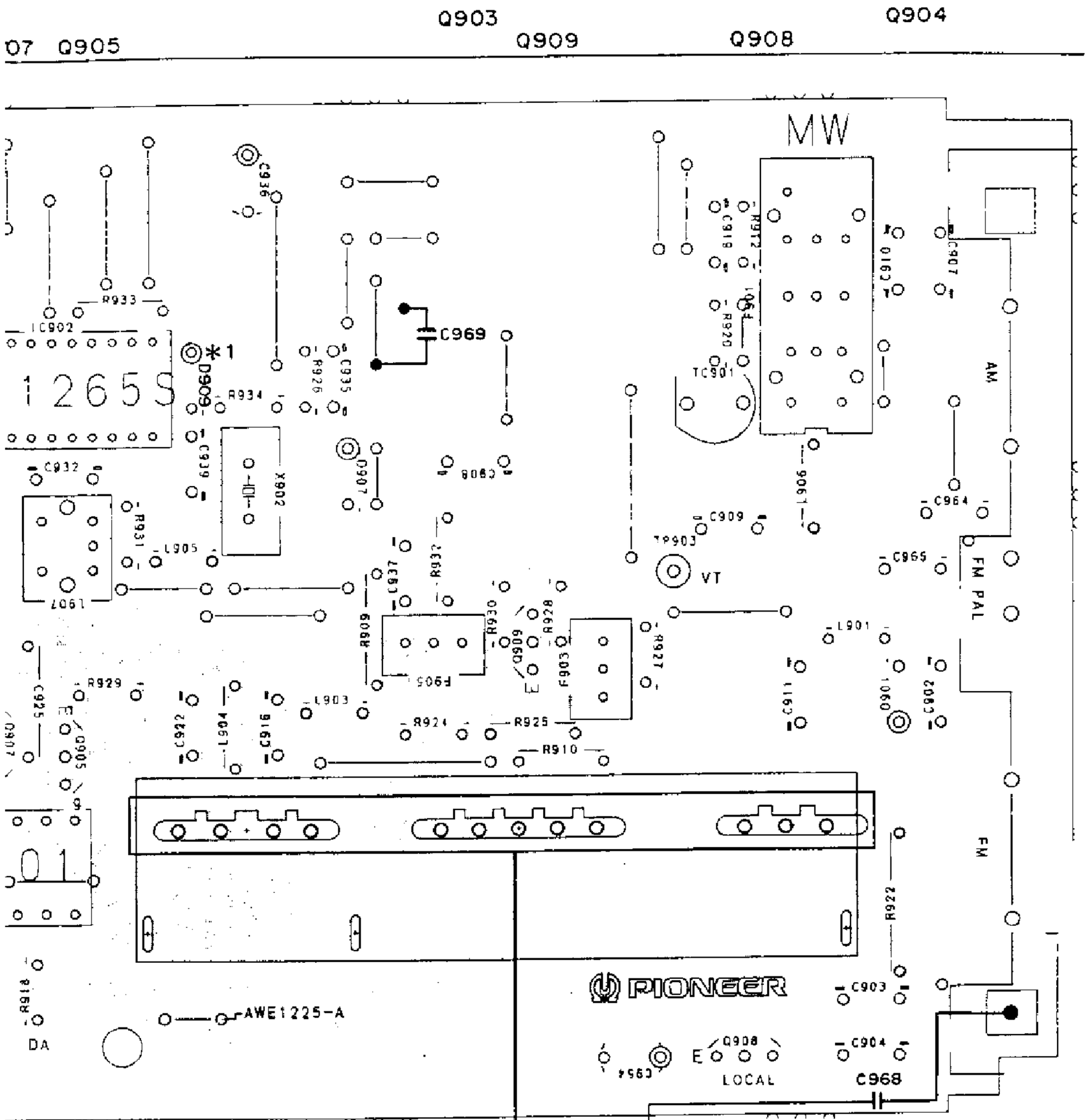
TUNER assembly (AWE1225)



4 Serial F. E. Module assembly (AXQ1004)

; *R937 on the P. C. Board.*
; *D909 on the P. C. Board.*

's viewed from the parts mounted side.



(AWE1225)

le assembly (AXQ1004)

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

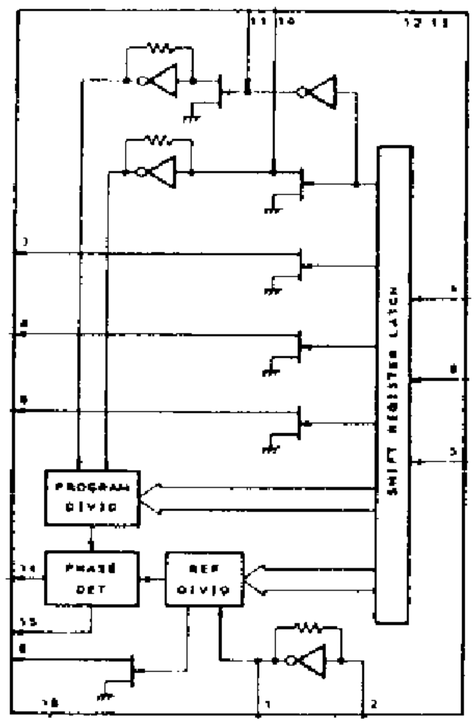
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E C B	or	Transistor
Q215		Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarized)
C516		Capacitor (Non-polarized)

Others

P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ⊖ (double circle) shows negative terminal.
4. The diode terminal marked with ⊕ (double circle) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

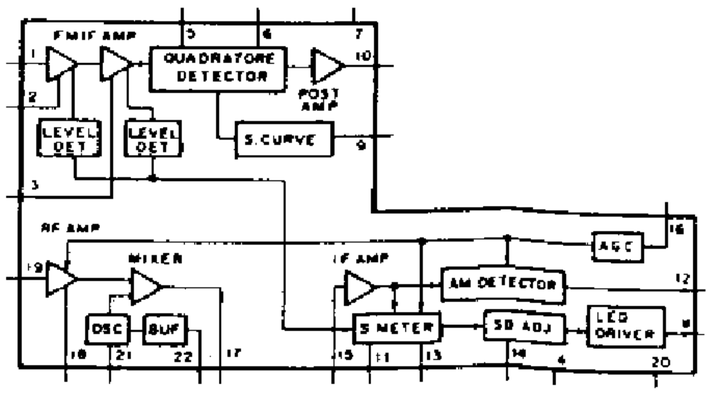
IC901 LM7001



IC901 (LM7001)

Pin No.	Voltage	Pin No.	Voltage
1	1.1	9	0.46
2	1.5	10	0 (1.7 when AM)
3	0	11	2.7
4	0	12	5.0
5	0	13	5.0
6	0	14	0.7
7	—	15	—
8	0	16	0

IC902 LA1265S



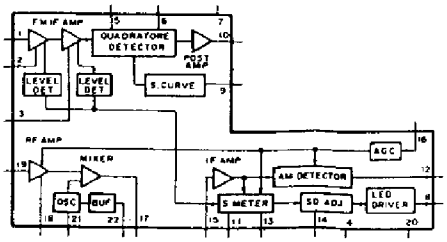
TUNER assembly

4 Serial F. E. Module assembly (AXQ1004)

C968 100p
C904 1000p
C903 100p
C902 1000p
C964 100p
C965 1000p
C907 1000p
C910 100p
FM 75ohm (PAL)
AM
TP903
VT
ANT
GND
ANT
AGC
VT
+B
IF
GND
+B
GND
VT
OSC
1SV156
D901
R910 15.0k
R909 1.5k
L901 2.2u
C911 0.01
L903 LAU2R2M 2.2u
L904 1.8u
C916 0.01
C922 0.022
R922 68
Q906 RN1203
Q905 RN2201
RN2201 Q907
F903 ATF-119
R925 220
R924 560
R927 390
R92 470
R926 6.8k
C935 0.022
C969
L906 33
AM RF TUNING BLOCK : TRACKING Adj.
AM RF TUNING BLOCK (MW)
10p ACM-018 TC901
AXX1014
R912 100.0k
C919 0.047u
R920 4.7K
C927 47p
R923 470
C925 0.01
C909 0.01
C908 0.022
TC901 : TRACKING Adj.
22
1
C933 0.022u
C934 0.022u
L905 .2u
C930 33/16
C932 0.022
L907
ATE-079
L907 : CENTER A

oltage
0.46
when AM)
2.7
5.0
5.0
0.7
—
0

IC902 LA1265S

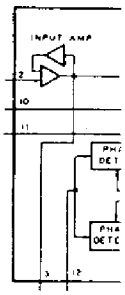


IC902 (LA1265S)

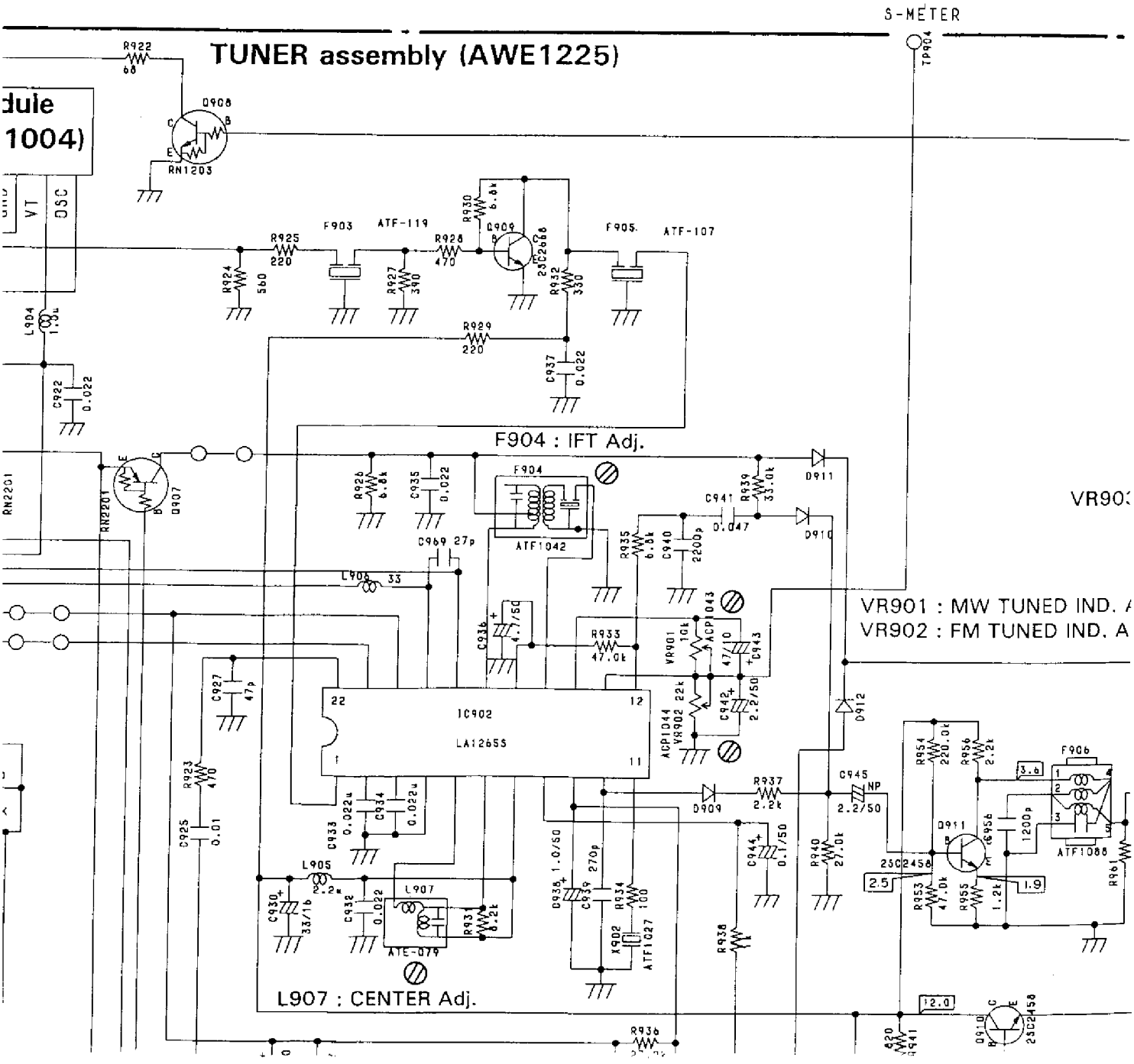
Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	2.3	10	2.8	17	0
2	2.3	11	1.5		12.0 (when AM)
3	2.3	12	1.5	18	0
4	0	13	1.4 (when MAX)		2.0 (when AM)
5	12.0	14	1.4 (when MAX)	19	0
6	12.0		0 (when AM)		2.0 (when AM)
7	12.0	15	2.3	20	3.8
8	0 (T)		1.1 (when AM)	21	3.8
	5.1 (D)	16	1.4	22	2.8
9	3.8				1.5 (when AM)

NOTE :
(T) when TUNE IND. is ON, (D) when TUNE IND. is OFF.

IC903 AN



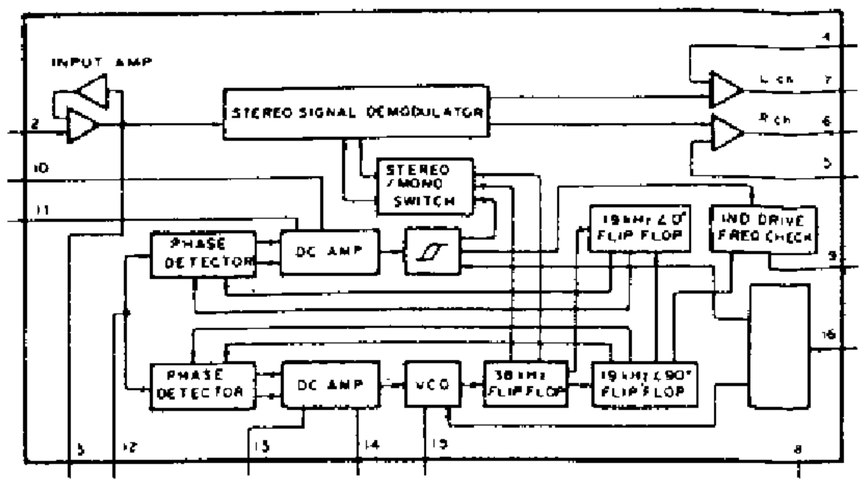
TUNER assembly (AWE1225)



Pin No.	Voltage	Pin No.	Voltage
10	2.8	17	0
11	1.5		12.0 (when AM)
12	1.5	18	0
13	1.4 (when MAX)		2.0 (when AM)
14	1.4 (when MAX)	19	0
	0 (when AM)		2.0 (when AM)
15	2.3	20	3.8
	1.1 (when AM)	21	3.8
16	1.4	22	2.8
			1.5 (when AM)

(D) when TUNE IND. is OFF.

IC903 AN7470P



IC903 (AN7470P)

Pin No.	Voltage	Pin No.	Voltage
1	11.2	9	4.9
2	2.6		0.6 (when STE
3	6.1		
4	8.9	10	2.6
5	8.9	11	2.6
6	3.9	12	2.6
7	3.9	13	
8	0	14	2.6

S-METER

TP904

VCO

TP905

ATF-107

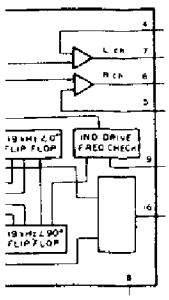
VR901 : MW TUNED IND. Adj.
VR902 : FM TUNED IND. Adj.

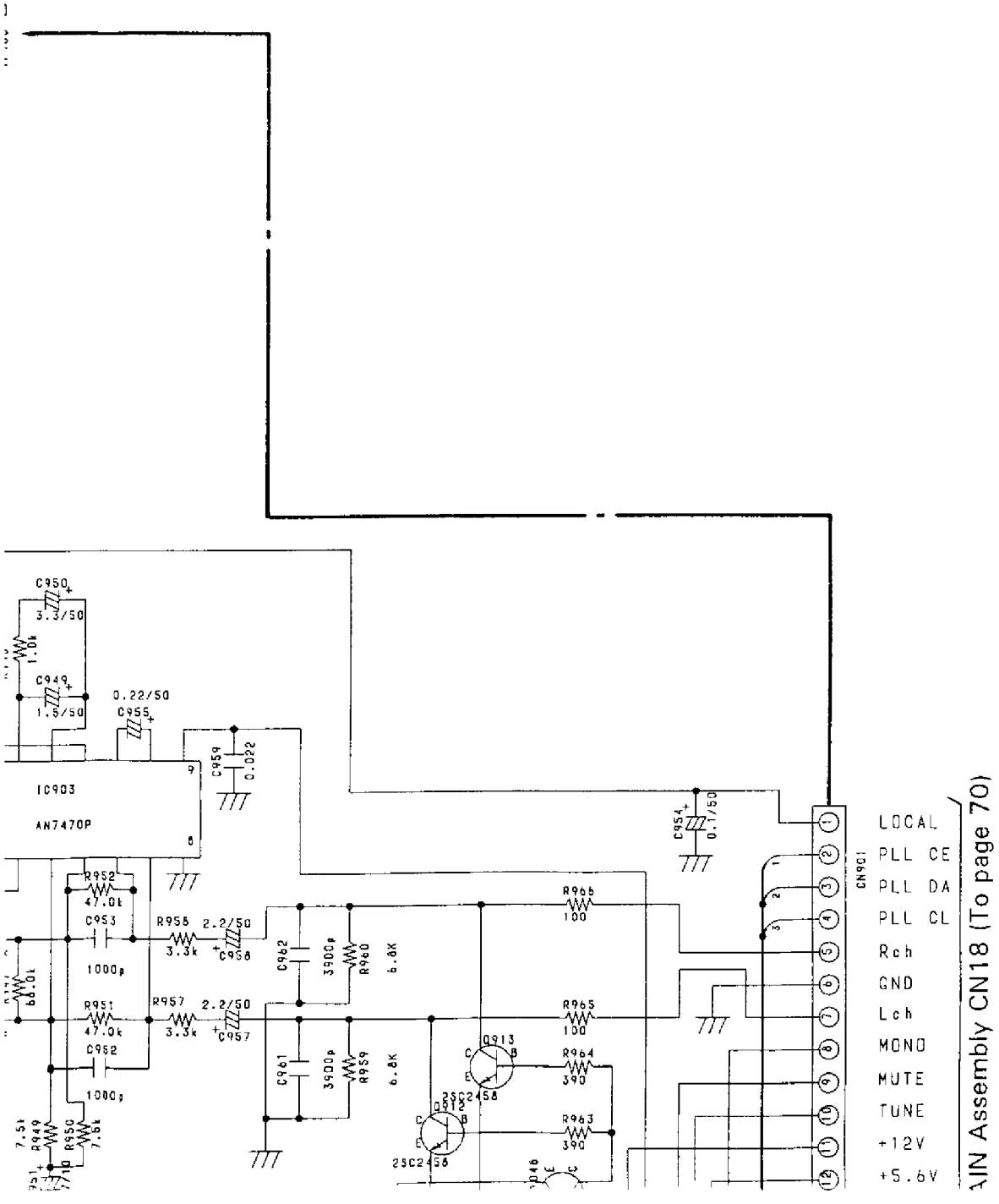
VR903 : VCO Adj.

D911
R939 33.0k
C941 0.047
D910
C940 2200p
ACP1043
VR901 10k
47/10 C943
ACP1044
VR902 22k
C942 2.2/50
D912
D909
R937 2.2k
C945 NP 2.2/50
C944 0.1/50
R938
R940 27.0k
R954 220.0k
R956 2.2k
F906
3.6
C956 1200p
Q911 2SC2458
2.5
R953 47.0k
R955 1.2k
1.9
ATF1086
C963 2.2/50
R943 47.0k
R961 3.9k
R942 100.0k
0.047u C947
ACP1042
4.7k VR903
C948 470p ACE1039
R946 15.0k
R948 1.0k
C950 3.3/50
C949 1.5/50
0.22/50 C955
C959 0.022
IC903
AN7470P
16
9
1
8
R952 47.0k
C953 1000p
R945 27.0k
R947 68.0k
R944 27.0k
R951 47.0k
C952 1000p
7.5k R949
R950 7.5k
R958 3.3k
2.2/50 C958
R957 3.3k
2.2/50 C957
C962 3900p
R960 6.8K
C961 3900p
R959 6.8K
Q913 2SC2458
Q912 2SC2458
12.0
820 R941
Q910 2SC2458

IC903 (AN7470P)

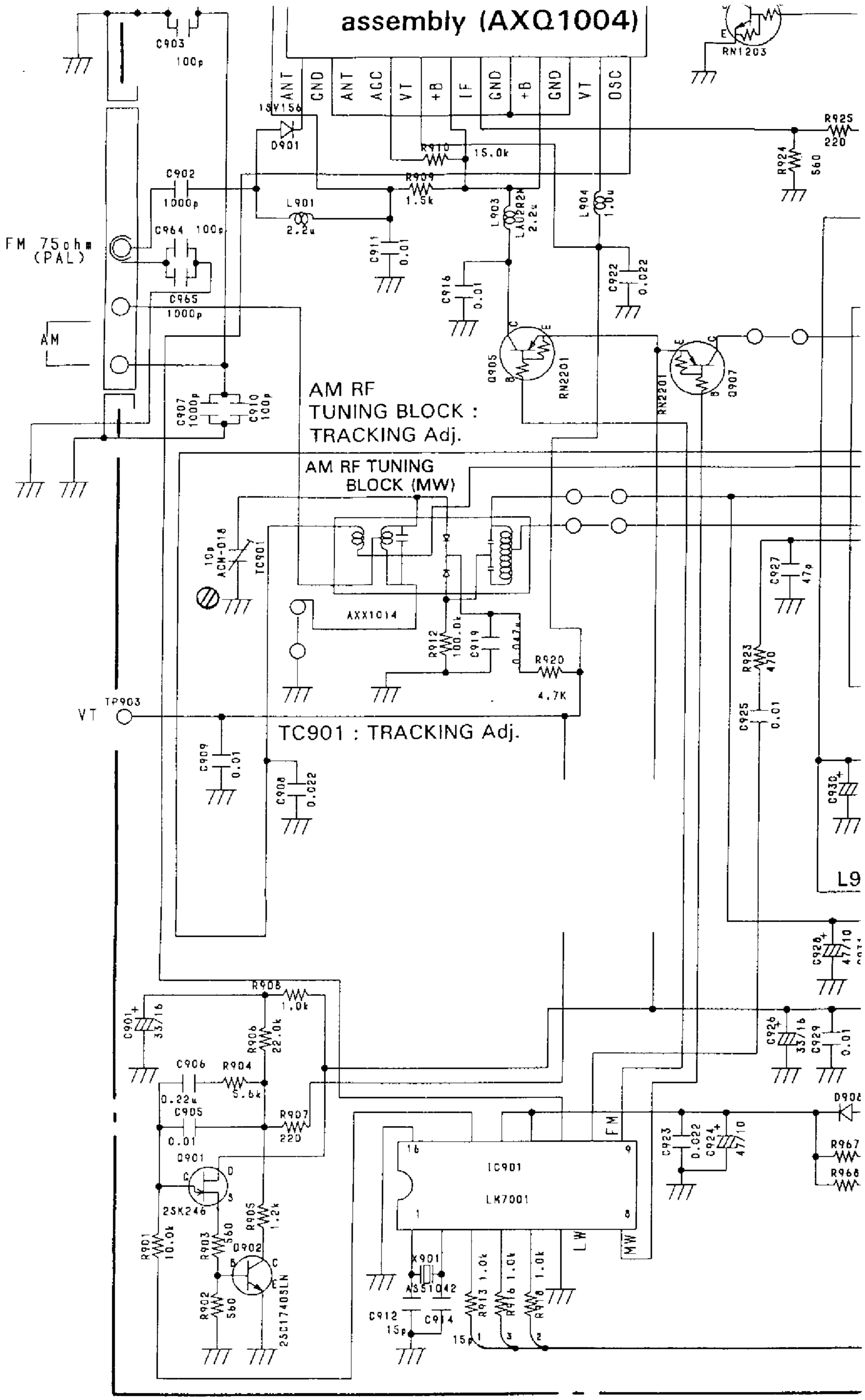
Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	11.2	9	4.9	15	3.2
2	2.6		0.6 (when STEREO)	16	0
3	6.1				11.4 (when AM)
4	8.9	10	2.6		4.0 (when MONO)
5	8.9	11	2.6		
6	3.9	12	2.6		
7	3.9	13			
8	0	14	2.6		



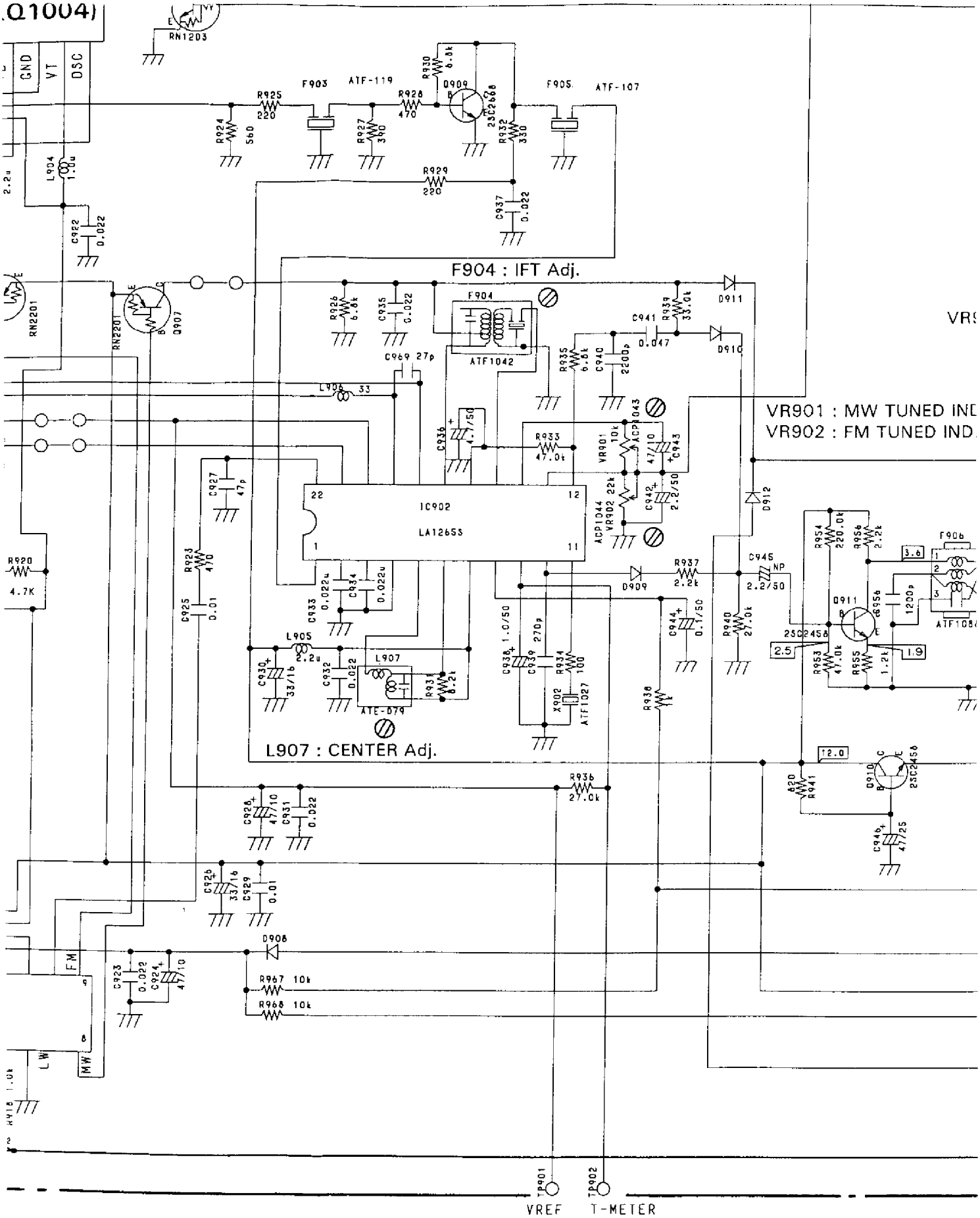


MAIN Assembly CN18 (To page 70)

assembly (AXQ1004)



NOTE :
The TUNER assemblies of SX–P920 and SX–P720 types are the same.



SX – P920 and

ne.

3 4 5

F905. ATF-107

Γ Adj.

VR903 : VCO Adj.

VR901 : MW TUNED IND. Adj.
VR902 : FM TUNED IND. Adj.

IC903
AN7470P

F906
ATF1088

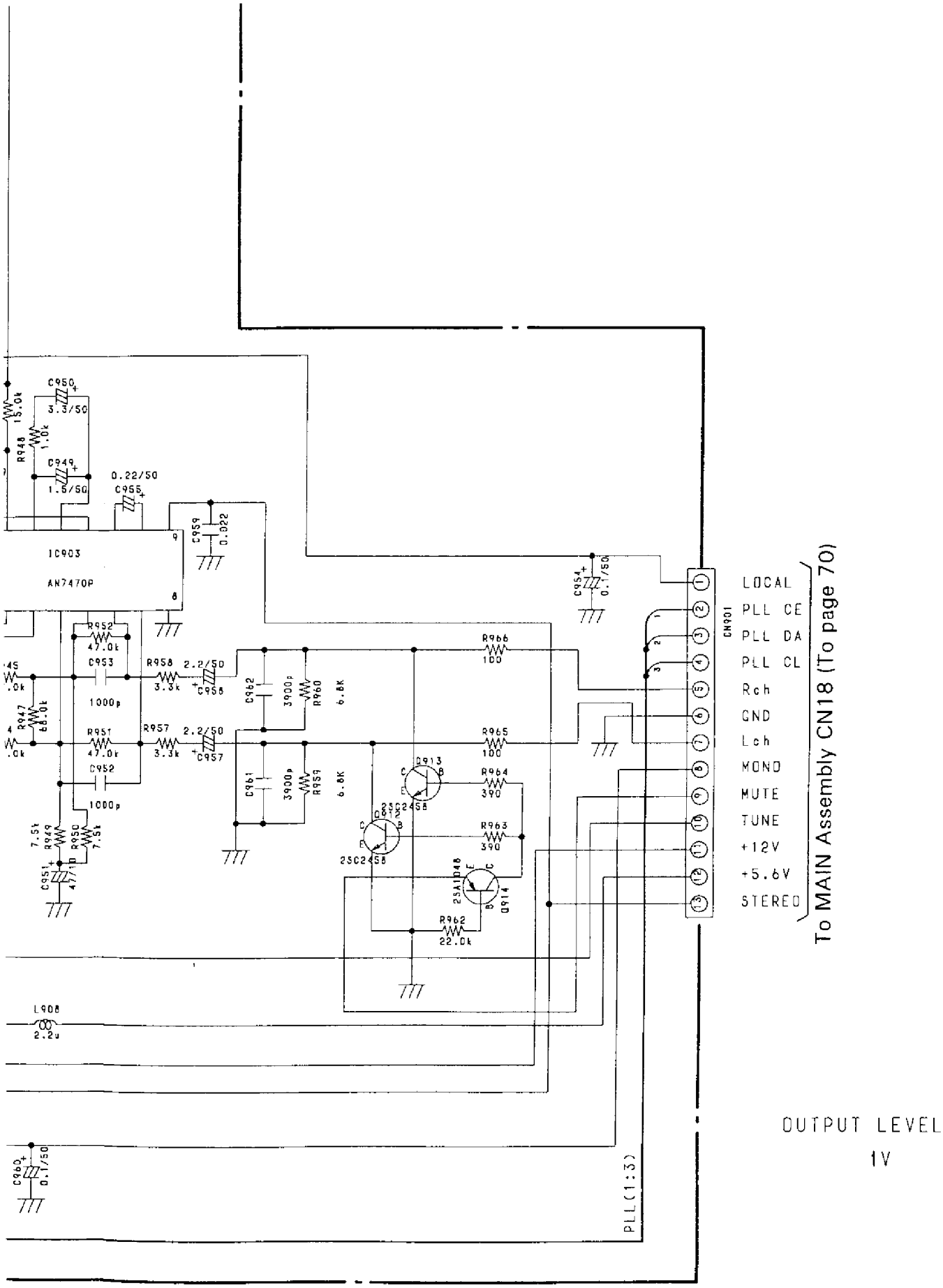
2SC2458

X902
ATF1027

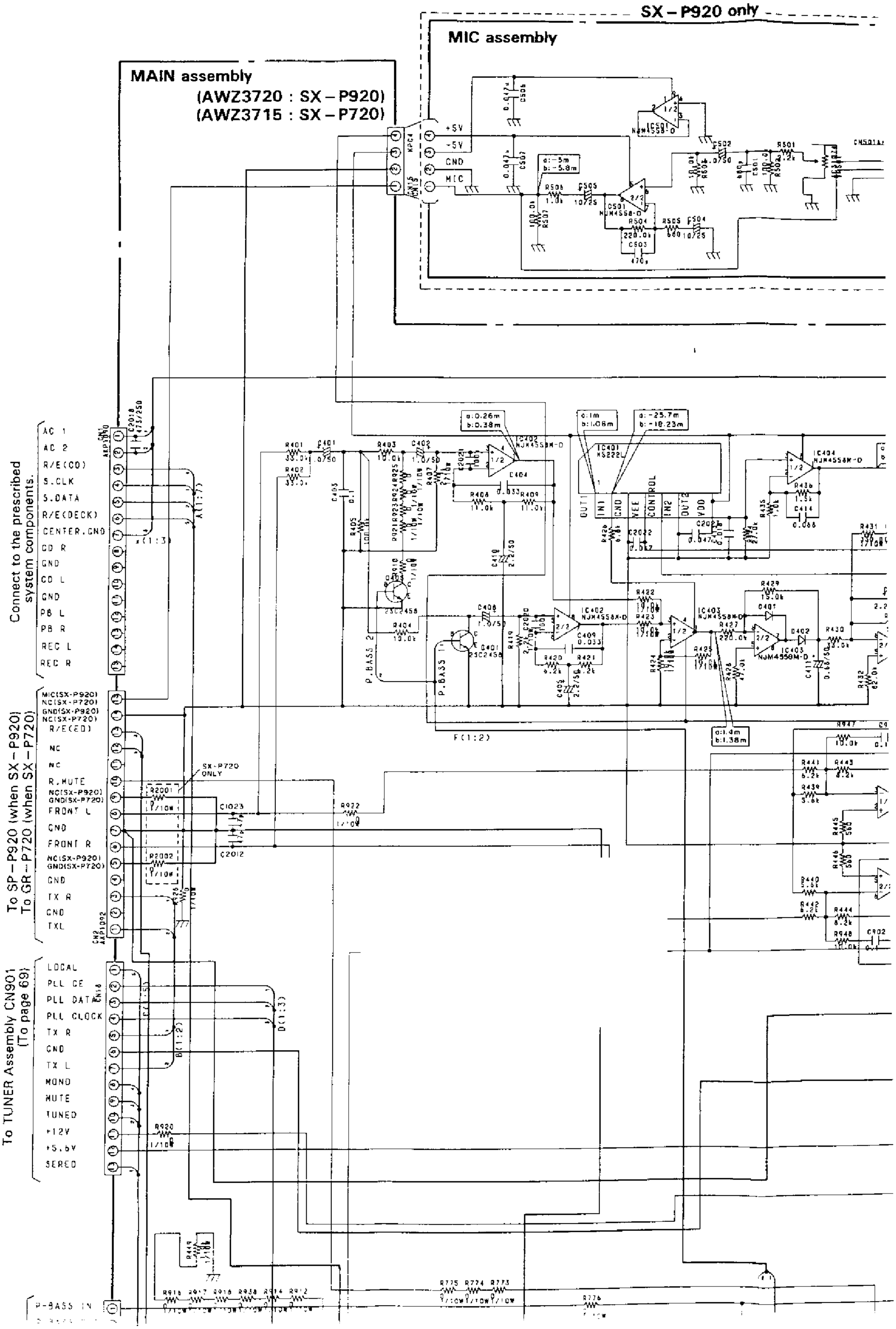
L908
2.2u

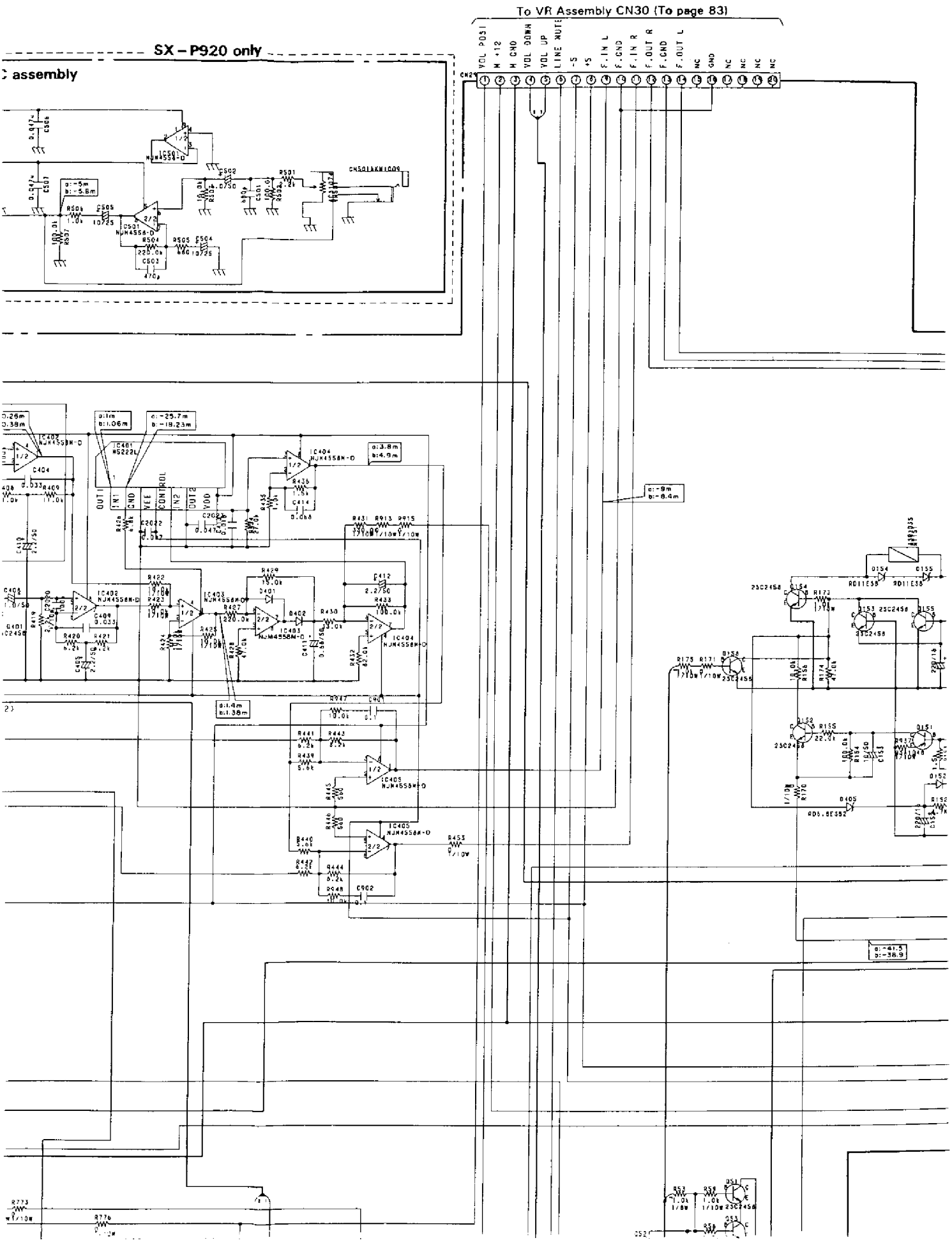
TP901 REF
TP902 T-METER

5 6 7

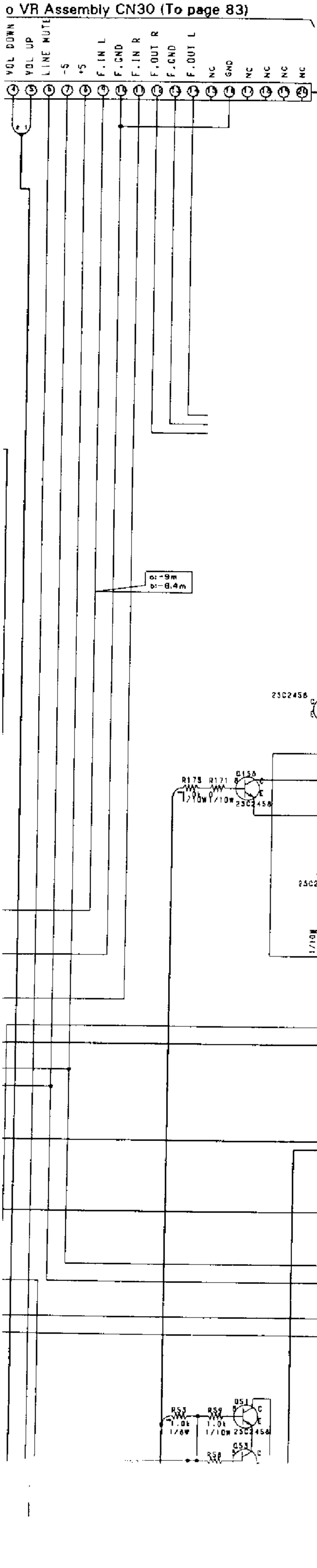

C950
3.3/50
R948
15.0k
1.0k
C949
1.5/50
0.22/50
C955
C959
0.022
IC903
AN7470P
C954
0.1/50
CN901
LOCAL
PLL CE
PLL DA
PLL CL
Rch
GND
Lch
MONO
MUTE
TUNE
+12V
+5.6V
STEREO
To MAIN Assembly CN18 (To page 70)
R952
47.0k
C953
1000p
R958
2.2/50
3.3k
C956
R947
68.0k
R951
47.0k
C952
1000p
R957
2.2/50
3.3k
C957
C962
3900p
R960
6.8K
C961
3900p
R959
6.8K
R966
100
R965
100
R964
390
R963
390
Q913
2SC2458
2SC2458
2SA1048
Q914
R962
22.0k
7.5k
R949
R950
7.5k
C951
47/10
L908
2.2u
C960
0.1/50
PLL(1:3)
OUTPUT LEVEL
1V

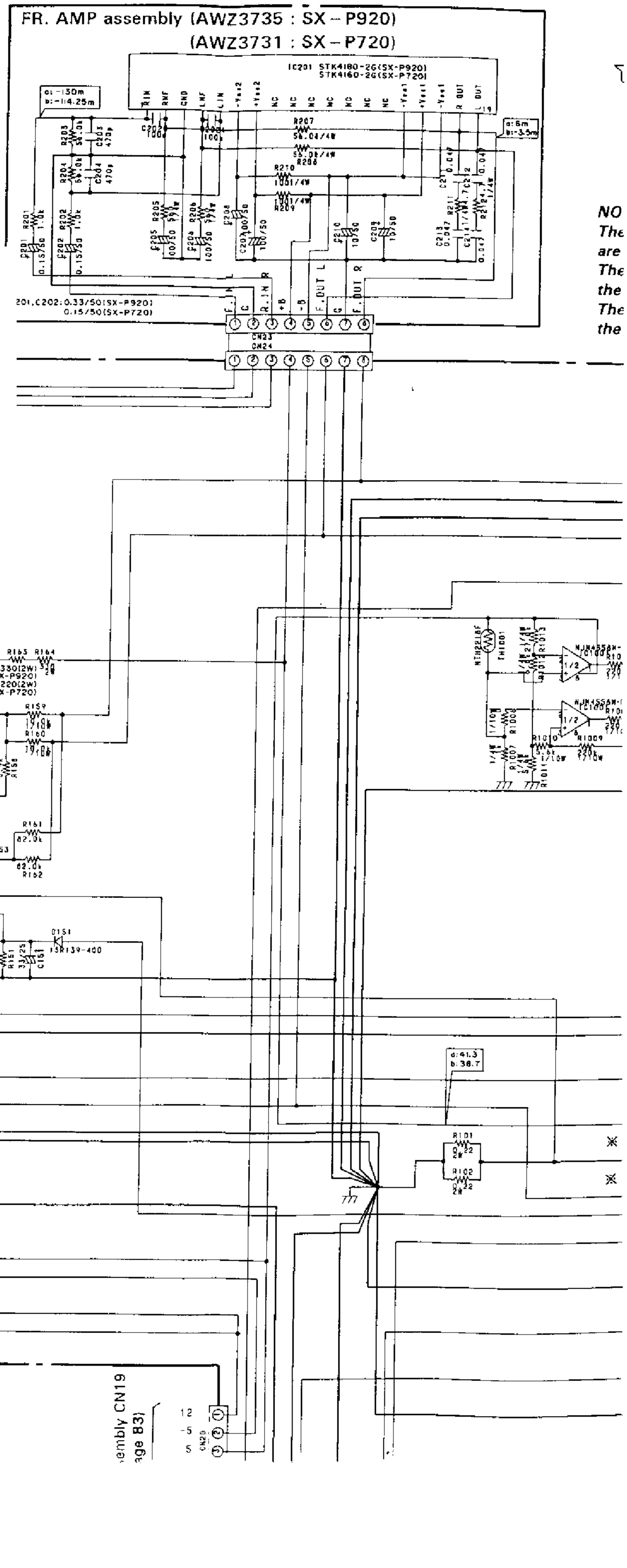
.3.3 MAIN assembly, SUB. POWER assembly, FR. AMP assembly, MIC assembly, HEAD. P assembly AND CONNECT assembly

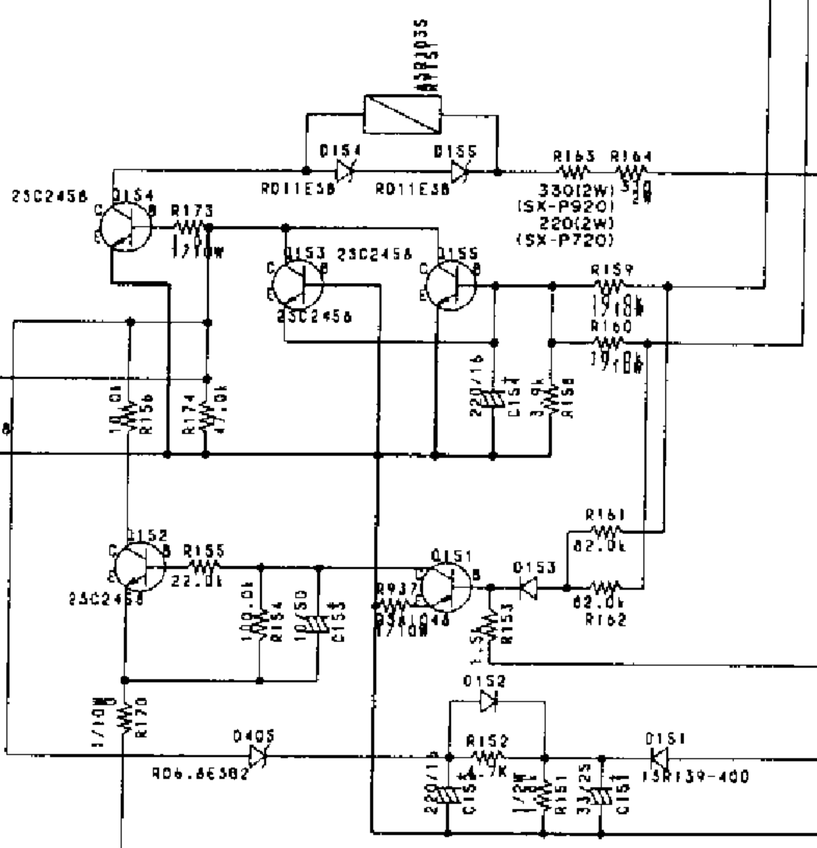

SX – P920 only
MIC assembly
MAIN assembly
(AWZ3720 : SX – P920)
(AWZ3715 : SX – P720)
+5V
-5V
GND
MIC
KPC4
CN15
Connect to the prescribed system components.
AC 1
AC 2
R/E(CD)
S.CLK
S.DATA
R/E(DECK)
CENTER.GND
CD R
GND
CD L
GND
PB L
PB R
REC L
REC R
CN1
AXP1092
C2018
470/250
A(1:7)
MIC(SX-P920)
NC(SX-P720)
GND(SX-P920)
NC(SX-P720)
R/E(ED)
NC
NC
R.MUTE
NC(SX-P920)
GND(SX-P720)
FRONT L
GND
FRONT R
NC(SX-P920)
GND(SX-P720)
GND
TX R
GND
TXL
CN2
AXP1092
SX-P720 ONLY
R2001
R2002
C1023
C2012
R922
To SP – P920 (when SX – P920)
To GR – P720 (when SX – P720)
LOCAL
PLL CE
PLL DATA
PLL CLOCK
TX R
GND
TX L
MOND
MUTE
TUNED
+12V
+5.6V
SERED
CN16
B(1:2)
D(1:3)
To TUNER Assembly CN901
(To page 69)
P-BASS IN
R920
R419
R918
R917
R916
R938
R914
R912
R775
R774
R773
R776
F(1:2)
IC401
NJM4558M-D
IC402
NJM4558M-D
IC403
NJM4558M-D
IC404
NJM4558M-D
IC501
NJM4558M-D
CN501
R501
R502
R503
R504
R505
R506
R507
C501
C502
C503
C504
C505
C506
C507
C508
C509
C510
C511
C512
C513
C514
C2021
C2022
C2023
C2024
C401
C402
C403
C404
C405
C406
C407
C408
C409
C410
C411
C412
C413
Q401
Q402
2SC2458
D401
D402
IC1001
NJM4558M-D
R1001
R1002
R1003
R1004
R1005
R1006
R1007
R1008
R1009
R1010
R1011
R1012
R1013
R1014
R1015
R1016
R1017
R1018
R1019
R1020
R1021
R1022
R1023
R1024
R1025
C1001
C1002
C1003
C1004
C1005
C1006
C1007
C1008
C1009
C1010
C1011
C1012
C1013
C1014
C1015
C1016
C1017
C1018
C1019
C1020
C1021
C1022
C1023
C1024
C1025
C1026
C1027
C1028
C1029
C1030
C1031
C1032
C1033
C1034
C1035
C1036
C1037
C1038
C1039
C1040


To VR Assembly CN30 (To page 83)
SX – P920 only
VOL POS1
M +12
M GND
VOL DOWN
VOL UP
LINE MUTE
-S
+S
F. IN L
F. GND
F. IN R
F. OUT R
F. GND
F. OUT L
NC
GND
NC
NC
NC
CN2A
IC402 NJM4558M-D
IC401 NS222L
IC404 NJM4558M-D
IC402 NJM4558M-D
IC403 NJM4558M-D
IC404 NJM4558M-D
IC403 NJM4558M-D
IC405 NJM4558M-D
IC550 NJM4558-D
IC501 NJM4558-D
OUT1
IN1
GND
VEE
CONTROL
IN2
OUT2
VDD
Q154
Q155
Q153
Q152
Q151
Q405
Q51
Q52
Q53
D405
RD11ES5
RD5.6ES52
25C2458

o VR Assembly CN30 (To page 83)

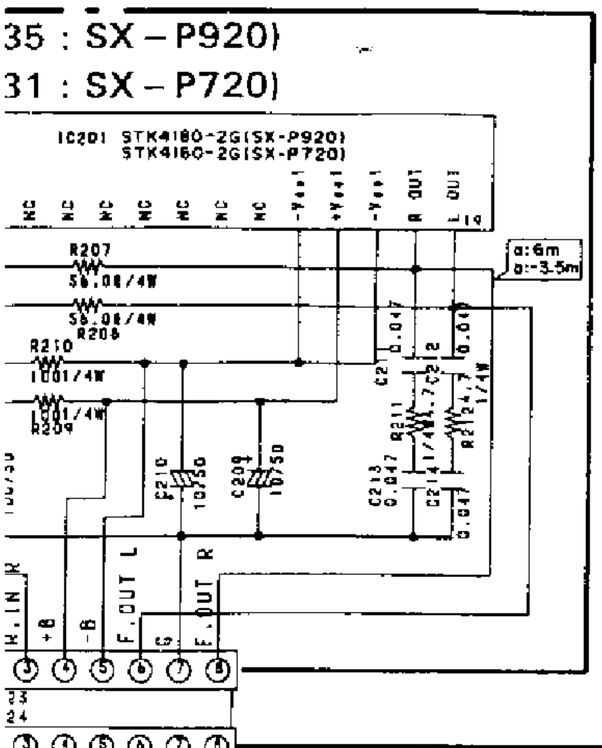






NO
The
are
The
the
The
the

35 : SX – P920)
31 : SX – P720)



: DC voltage (V) at no input signal

[a] and [b] in the circuit diagram describe the following :

a = SX – P920

b = SX – P720

None = SX – P920 and SX – P720

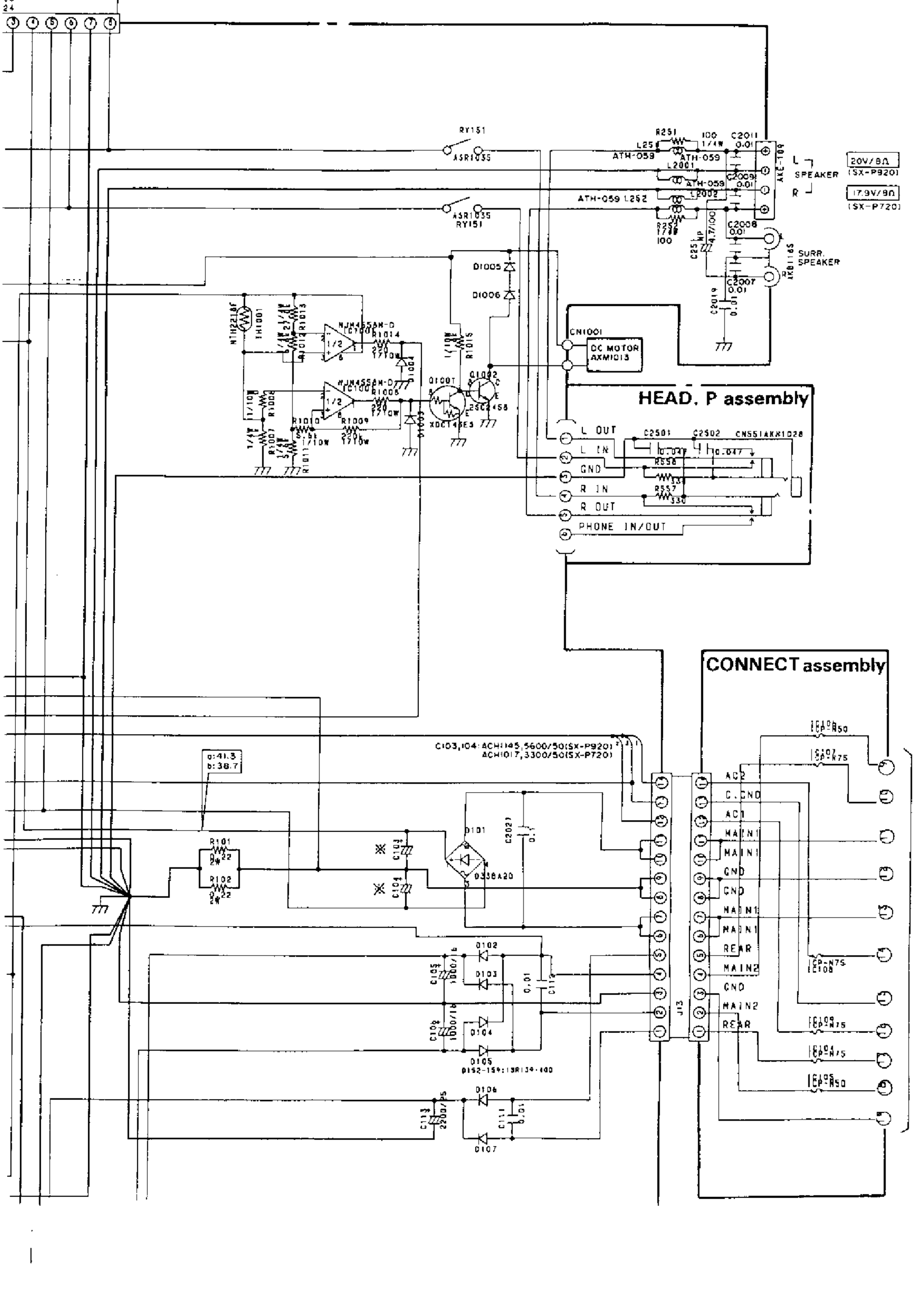
Value in ( ) is DC voltage at rated power.

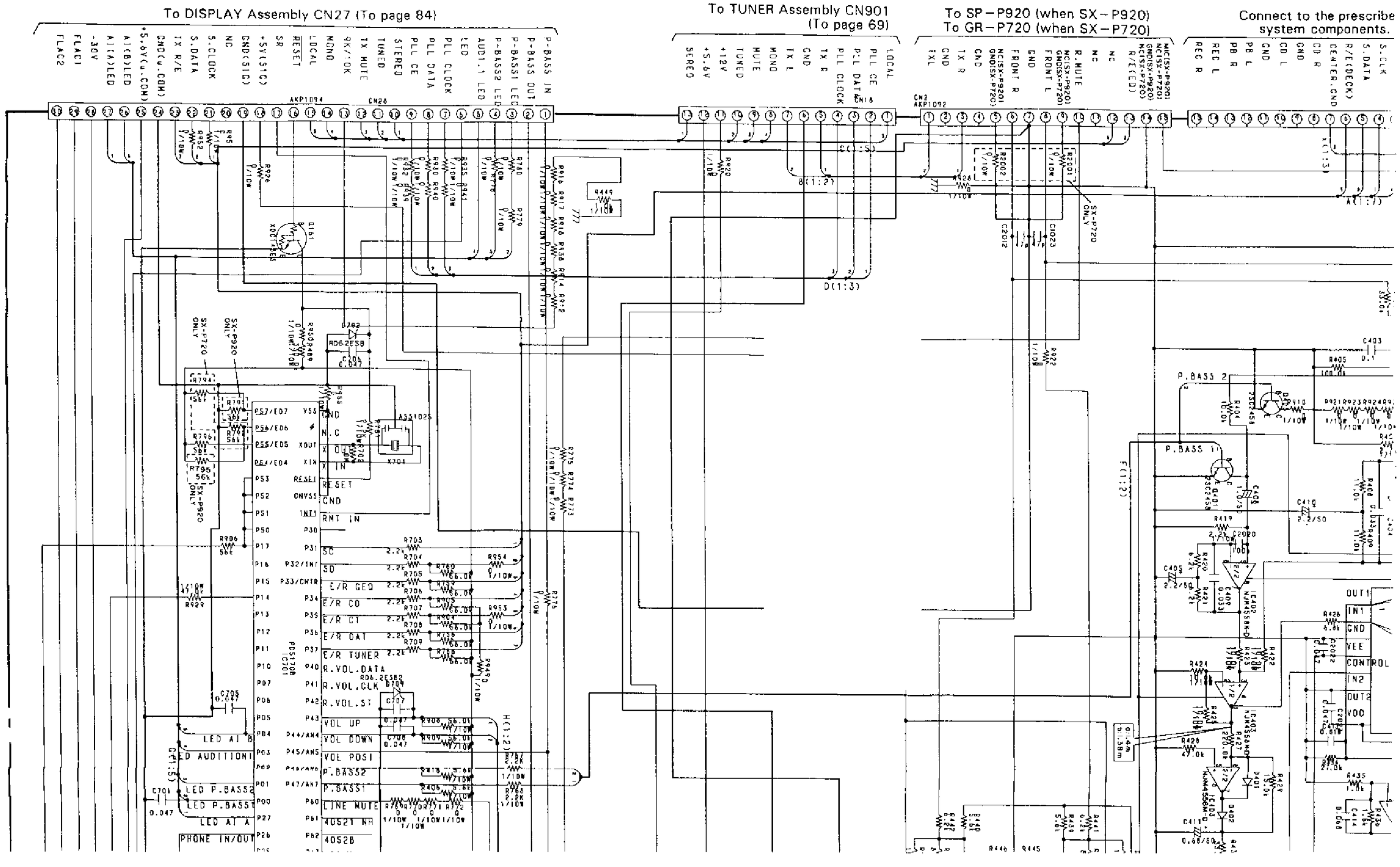
NOTE :

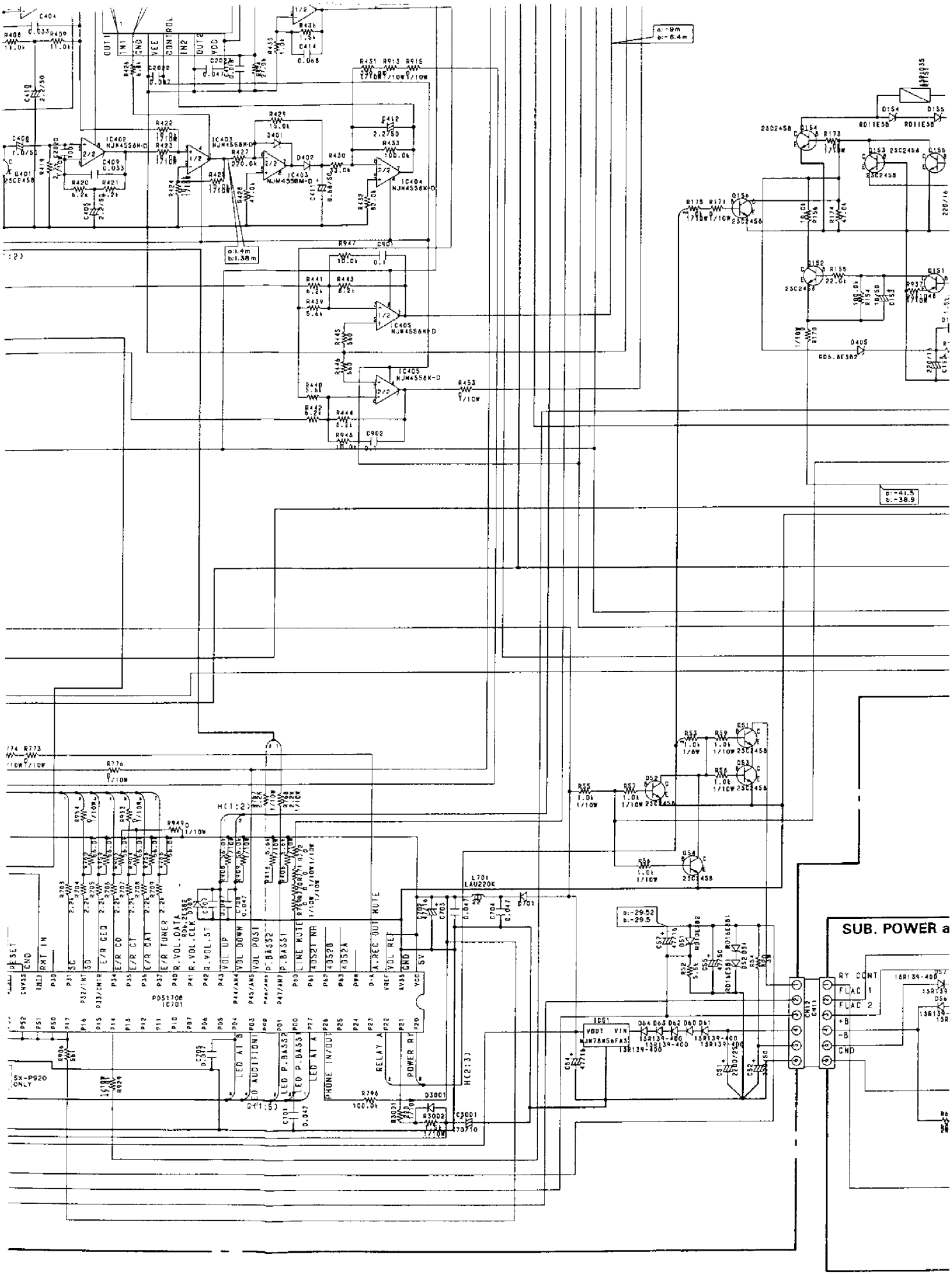
The SUB POWER assemblies of SX – P920 and SX – P720 types are the same.

The HEAD P. assemblies of SX – P920 and SX – P720 types are the same.

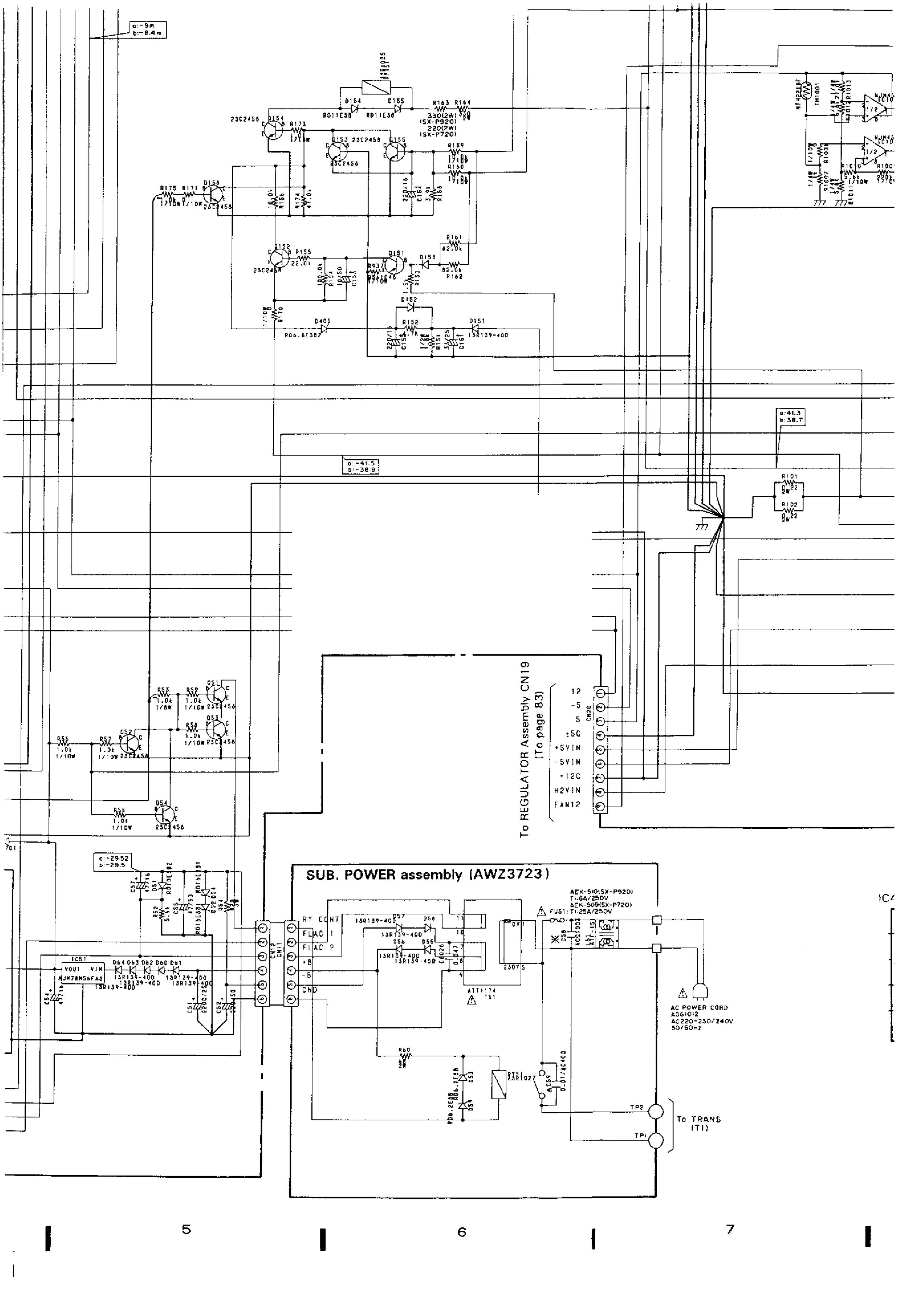
The CONNECT assemblies of SX – P920 and SX – P720 types are the same.

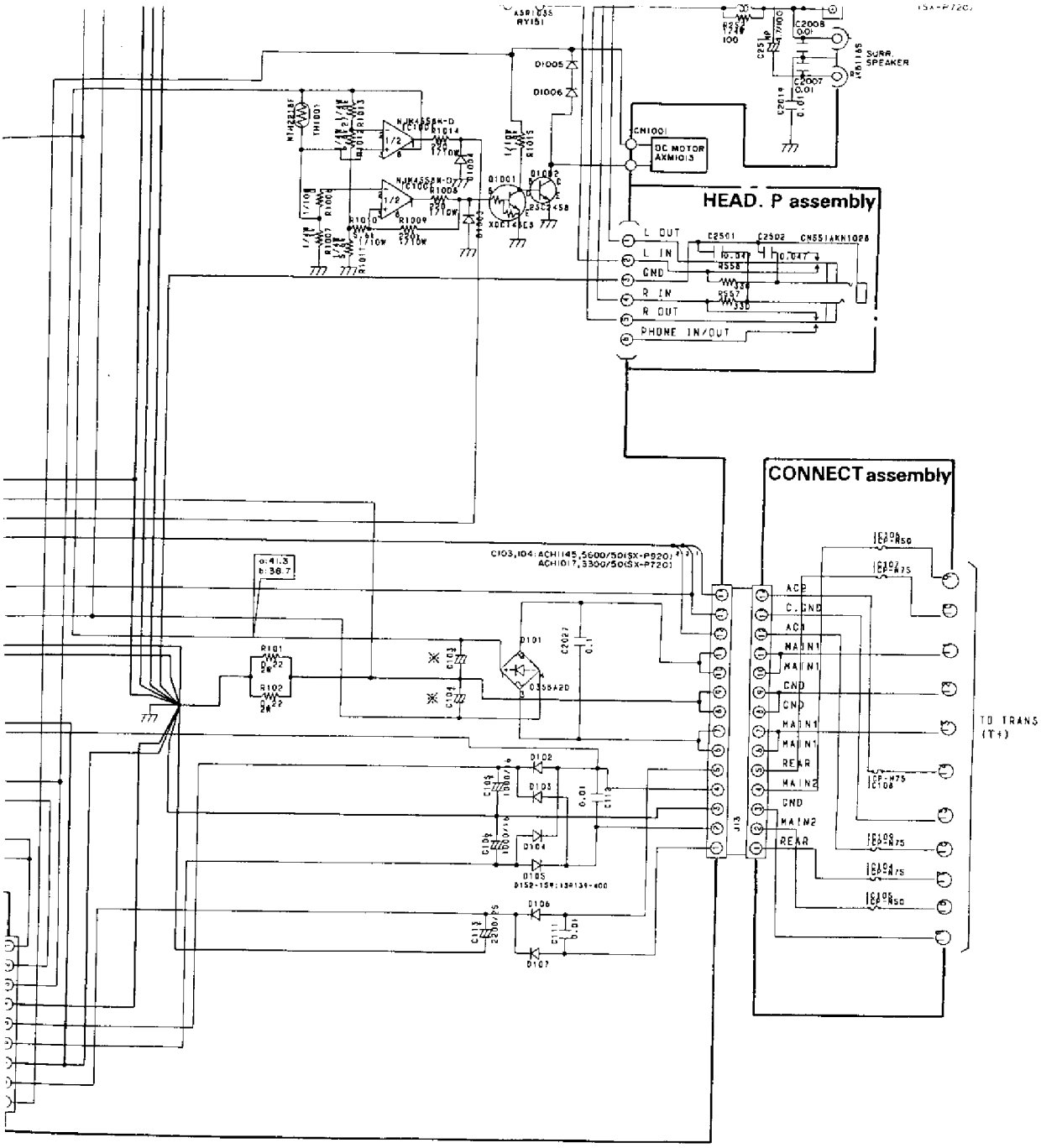


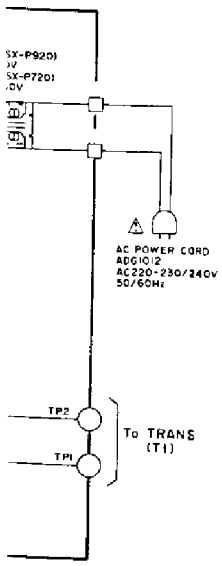

To DISPLAY Assembly CN27 (To page 84)
To TUNER Assembly CN901 (To page 69)
To SP−P920 (when SX−P920)
To GR−P720 (when SX−P720)
Connect to the prescribe system components.
AKP1094
CN28
CN2 AKP1092
P-BASS IN
P-BASS OUT
P-BASS1 LED
P-BASS2 LED
AUDI.1 LED
LED
PLL CLOCK
PLL DATA
PLL CE
STEREO
TUNED
TX MUTE
9K/10K
MONO
LOCAL
RESET
SR
+5V(S1C)
GND(S1C)
NC
S.CLOCK
S.DATA
IX R/E
GND(μ.COM)
+5.6V(μ.COM)
A1(B)LED
A1(A)LED
-30V
FLAC1
FLAC2
SERIO
+5.6V
+12V
TUNED
MUTE
MONO
IX L
GND
TX R
PLL CLOCK
PLL DATA
PLL CE
LOCAL
TXL
GND
TX R
GND
NC(SX-P920)
GND(SX-P720)
FRONT R
GND
FRONT L
R.MUTE
NC
NC
MIC(SX-P920)
NC(SX-P720)
GND(SX-P920)
NC(SX-P720)
R/E(FED)
GND
CD L
CD R
CENTER.GND
R/E(DECK)
REC L
REC R
PB L
PB R
S.CLK
S.DATA
SX-P720 ONLY
SX-P920 ONLY
PD5107B
P.BASS 2
P.BASS 1
IC402 NJM4558MD
IC403 NJM4558MD
IC103 NJM4558MD
OUT1
IN1
GND
VEE
CONTROL
IN2
OUT2
VDD
E/R GEQ
E/R CD
E/R CT
E/R DAT
E/R TUNER
R.VOL.DATA
R.VOL.CLK
R.VOL.ST
VOL UP
VOL DOWN
VOL POSI
P.BASS2
P.BASS1
LINE MUTE
40521 NR
4052B
LED A1 B
LED AUDITION
LED P.BASS2
LED P.BASS1
LED A1 A
PHONE IN/OUT
X701
RMT IN
RESET
GND
N.C
X OUT
X IN
D(1:3)
E(1:2)
F(1:2)
H(1:2)


SUB. POWER a
IC401 NJM4558M-D
IC402 NJM4558M-D
IC403 NJM4558M-D
IC404 NJM4558M-D
IC405 NJM4558M-D
IC405 NJM4558K-D
L701 LAU220K
IC701 PD5170B
IC651 NJM78M56FA3
RY CONT
FLAC 1
FLAC 2
+B
-B
GND
SX-P920 ONLY
LED AT B
LED P.BASS2
LED P.BASS1
LED AT A
LED AUDITION
PHONE IN/OUT
RELAY A
POWER RY
E/R GEQ
E/R CD
E/R CT
E/R SAT
E/R TUNER
R.VOL.DATA
R.VOL.CLK
R.VOL.ST
VOL UP
VOL DOWN
VOL POS1
P.BASS2
P.BASS1
LINE MUTE
4052T NR
4052B
4052A
A.REC/OUT MUTE
VOL REF
SW
RESET
RMT IN
SIC
SO
INT
CONTROL
VDD
VEE
GND
IN1
IN2
OUT1
OUT2

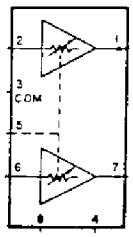
3 4 5


To REGULATOR Assembly CN19
(To page 83)
12
-5
5
±5C
+5VIN
-5VIN
+12C
H2VIN
FAN12
CN20
SUB. POWER assembly (AWZ3723)
RY CONT
FLAC 1
FLAC 2
+B
-B
GND
CN12
CN11
AEK-510(SX-P920)
T1.6A/250V
AEK-509(SX-P720)
FUS1: T1.25A/250V
AC POWER CORD
ADG1012
AC220-230/240V
50/60Hz
TP2
TP1
To TRANS
(T1)
a:-9m
b:-8.4m
a:-41.5
b:-38.9
a:41.3
b:38.7
a:-29.52
b:-29.5
5
6
7





IC401 M5222L



C

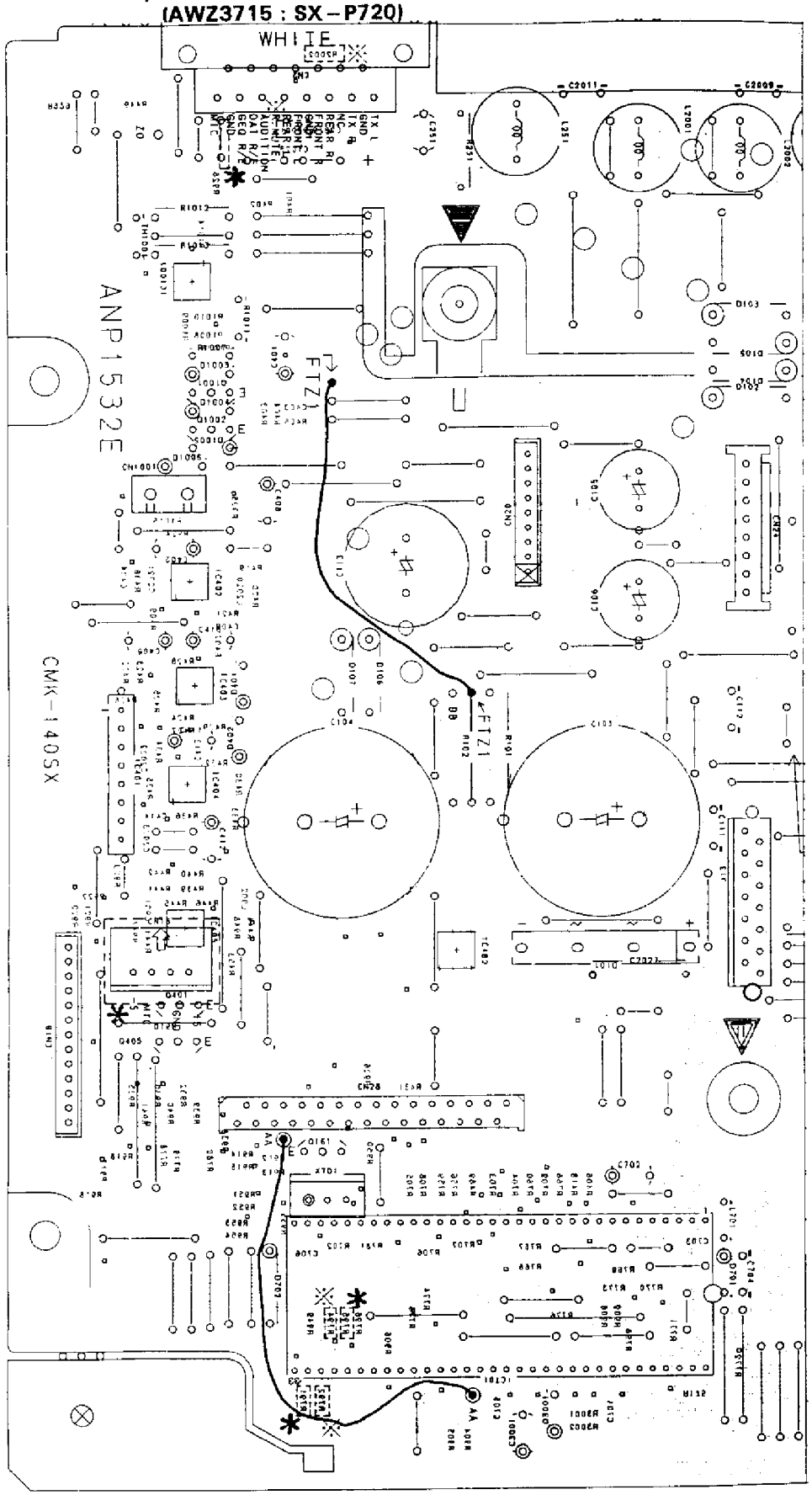
D

E

F

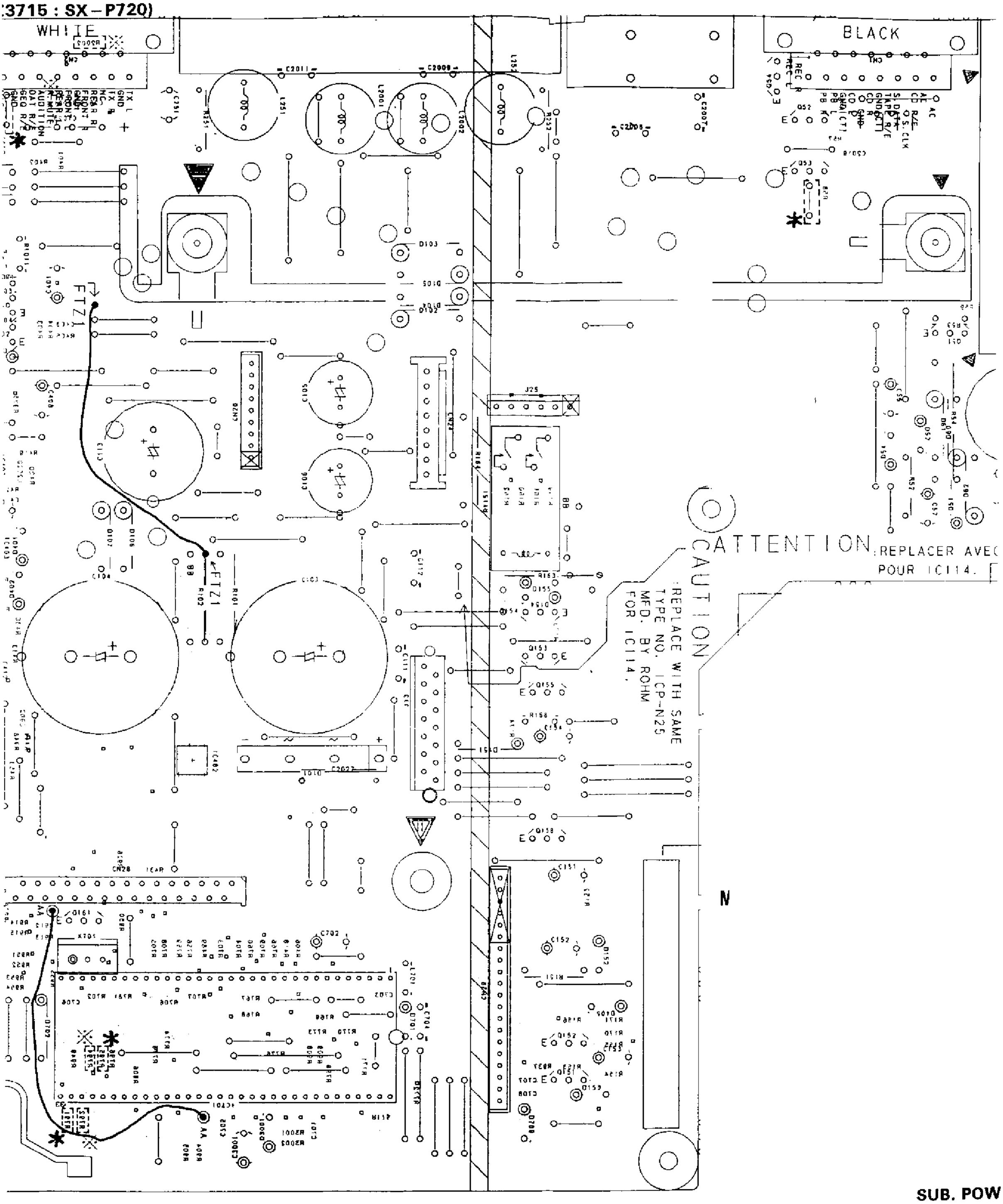
7 8 9

MAIN assembly (AWZ3720 : SX – P920)
(AWZ3715 : SX – P720)

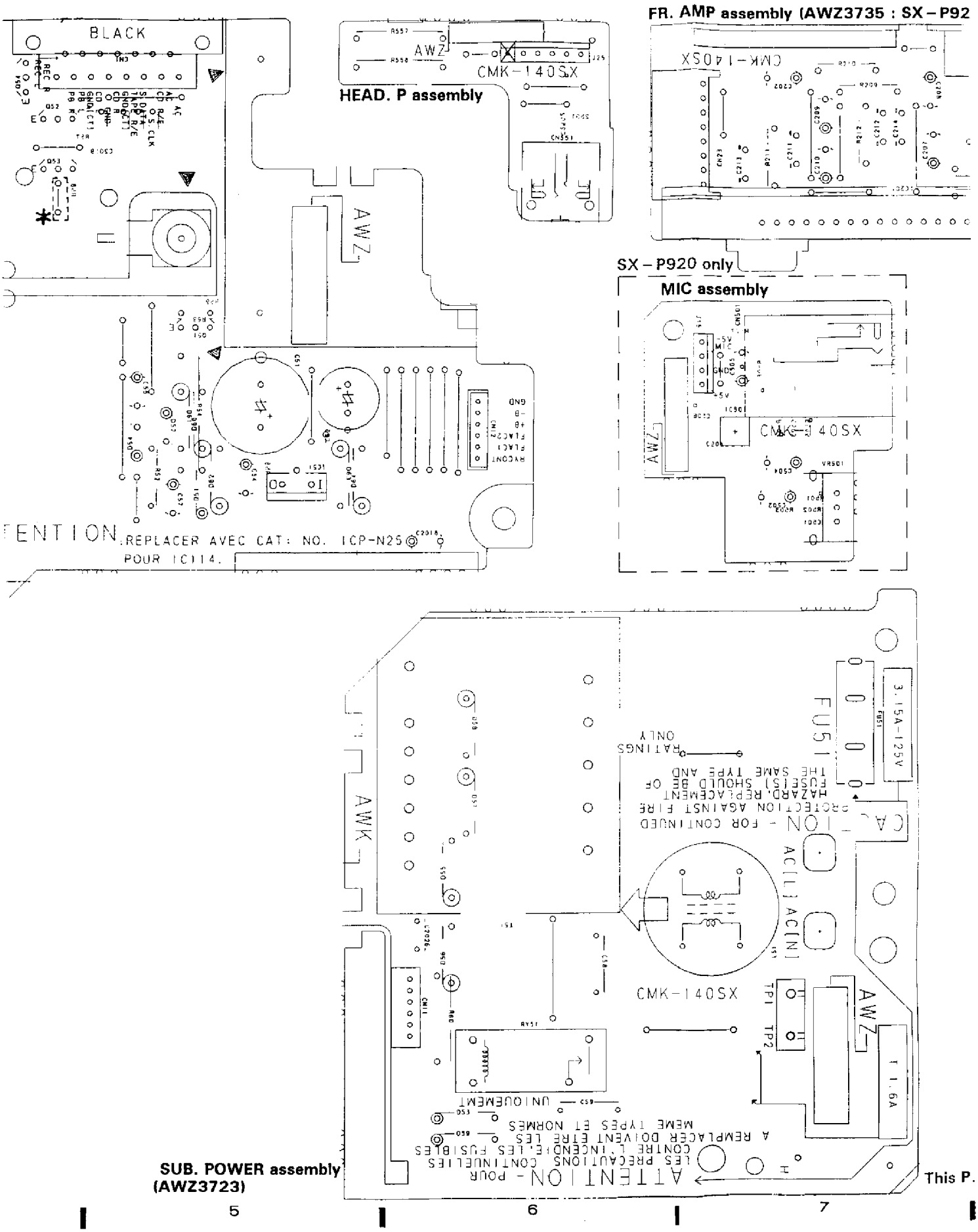


Q54
Q52
A
Q53
IC1001
Q1001
Q1002
Q51
B IC402
IC51
IC403
IC401
IC404
Q154
Q153
Q155
IC405
C
Q401
Q405
Q158
Q161
Q152
D
IC701
Q151

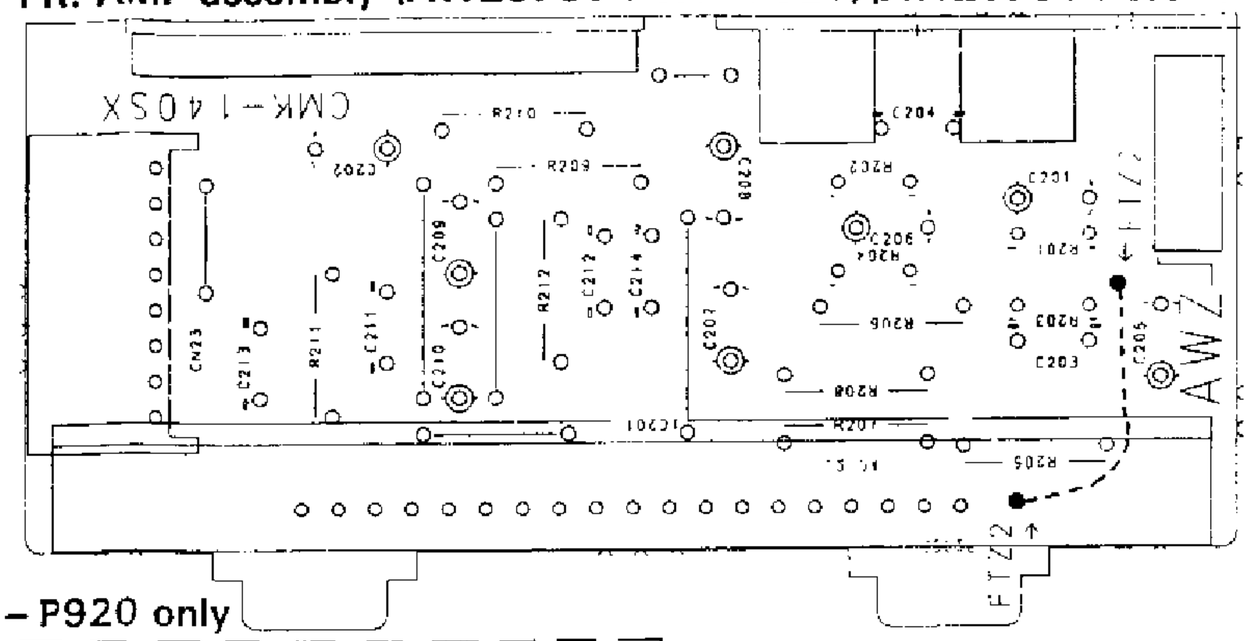
(3720 : SX – P920)
(3715 : SX – P720)



SUB. POW
(AWZ3723)

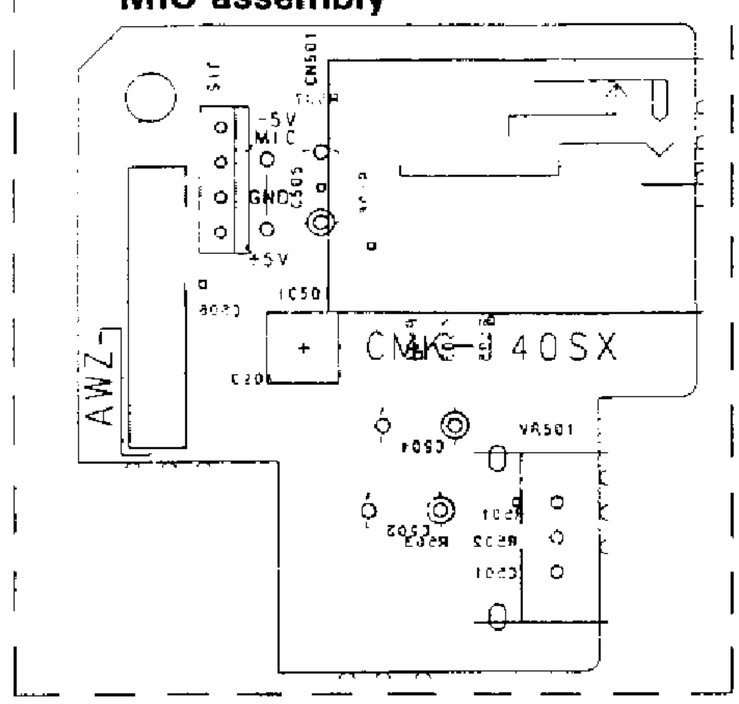

FR. AMP assembly (AWZ3735 : SX – P92
HEAD. P assembly
SX – P920 only
MIC assembly
SUB. POWER assembly
(AWZ3723)
This P.
CMK-140SX
AWZ
BLACK
TENTION. REMPLACER AVEC CAT. NO. ICP-N25
POUR IC114.
FU51
3.15A-125V
T1.6A
TP1
TP2
CMK-140SX
AWZ

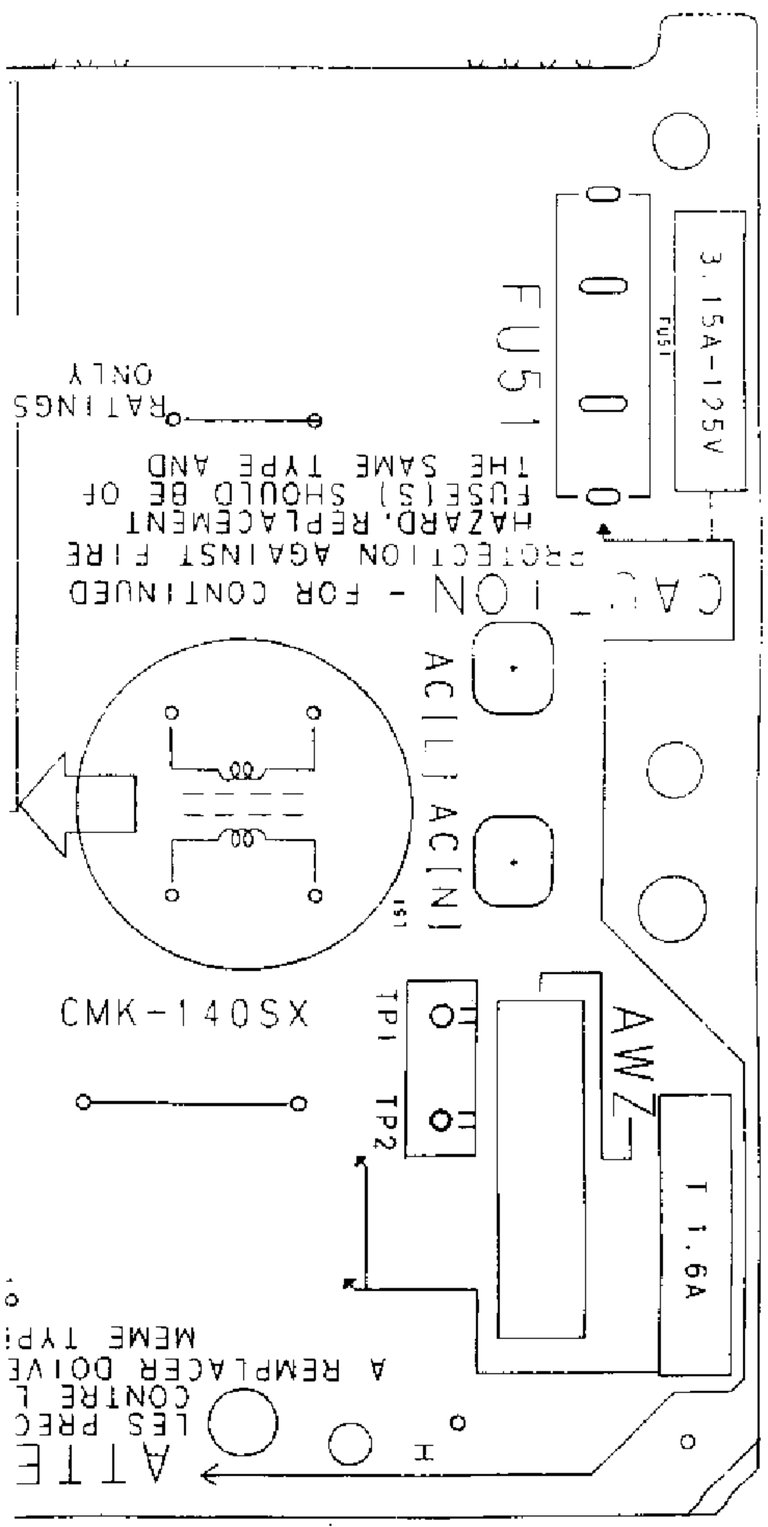
FR. AMP assembly (AWZ3735 : SX – P920) (AWZ3731 : SX – P720)



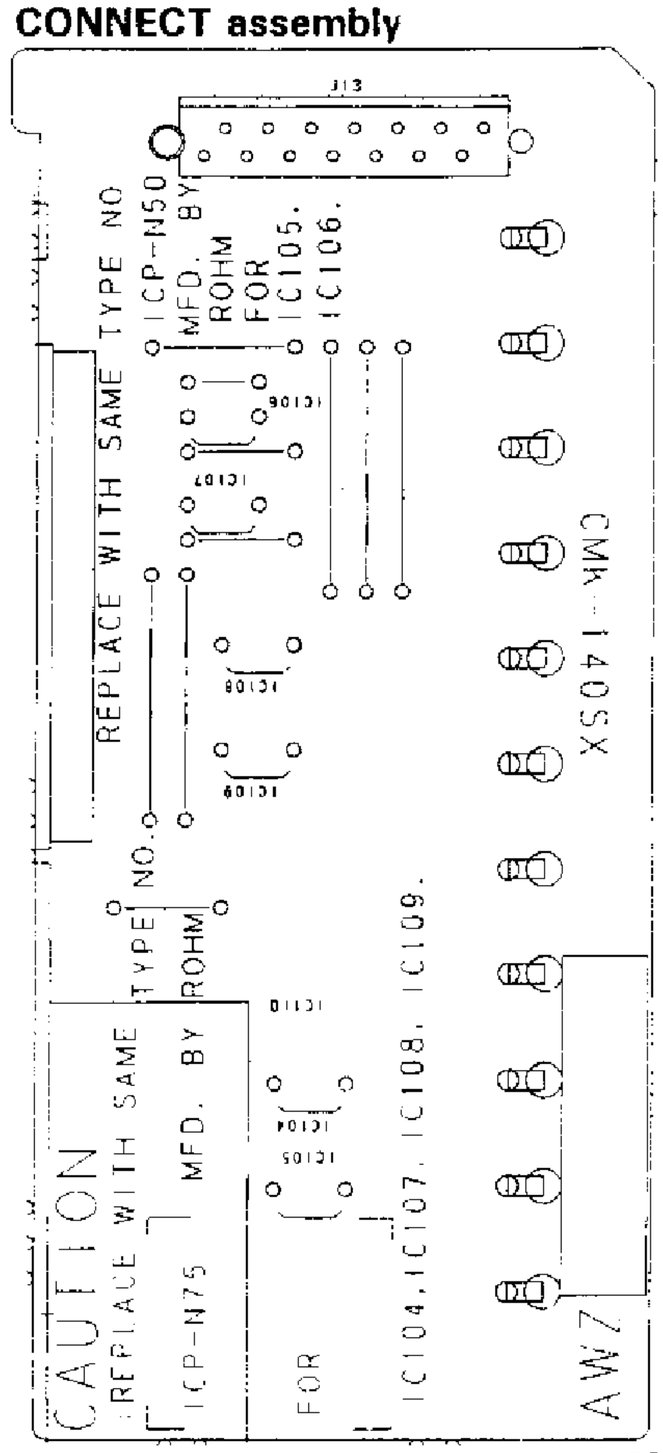
SX – P920 only

MIC assembly





CONNECT assembly



NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table.

P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E	E or E	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C515	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

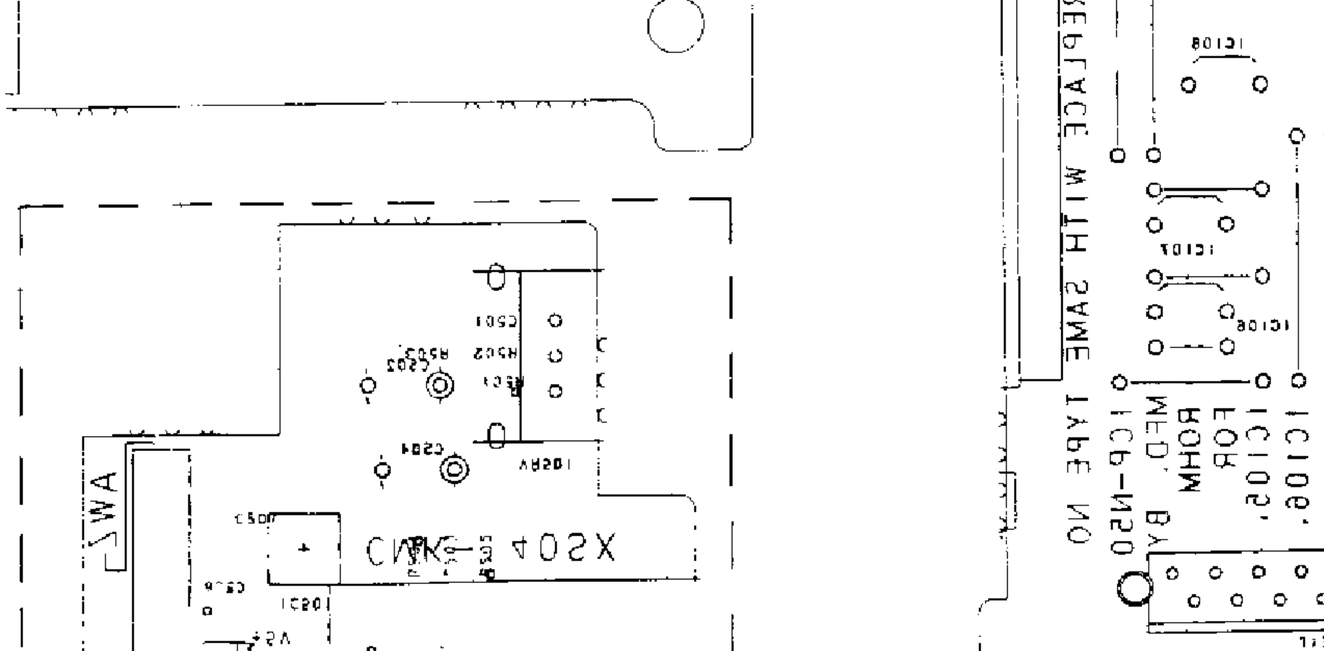
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

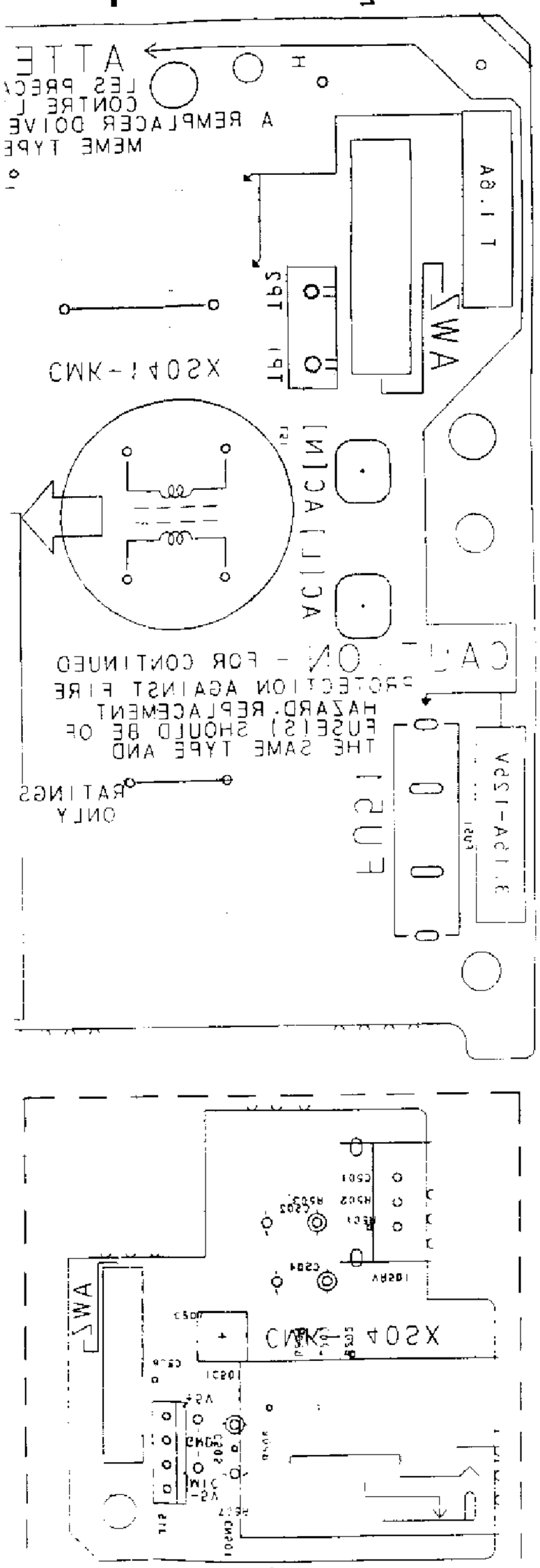
3. The capacitor terminal marked with ⊖ (double circles) shows negative terminal.
4. The diode terminal marked with ⊖ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

* SX – P920 ONLY
※ SX – P720 ONLY

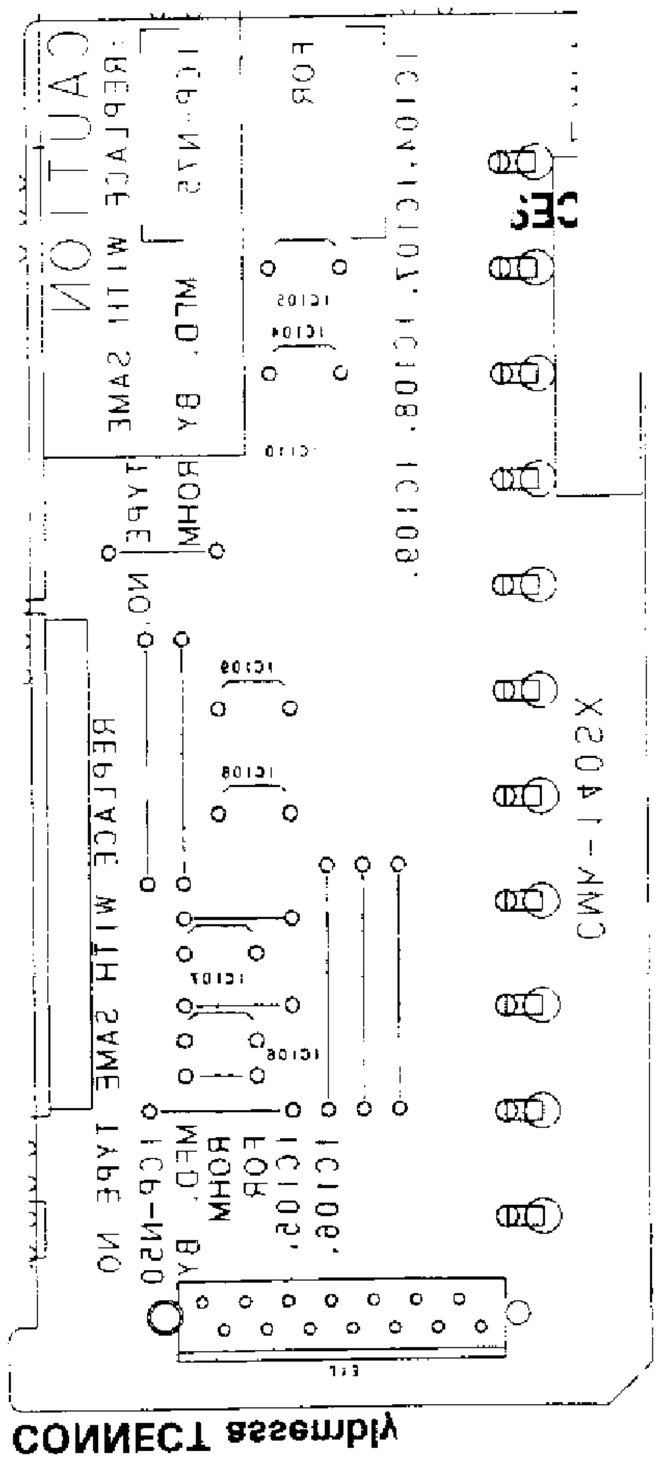
This P. C. B connection diagram is viewed from the parts mounted side.

FR. AMp assemply (AWZ3138 : SX-P950)(AWZ3137 : SX-P750)





CONNECT assemply

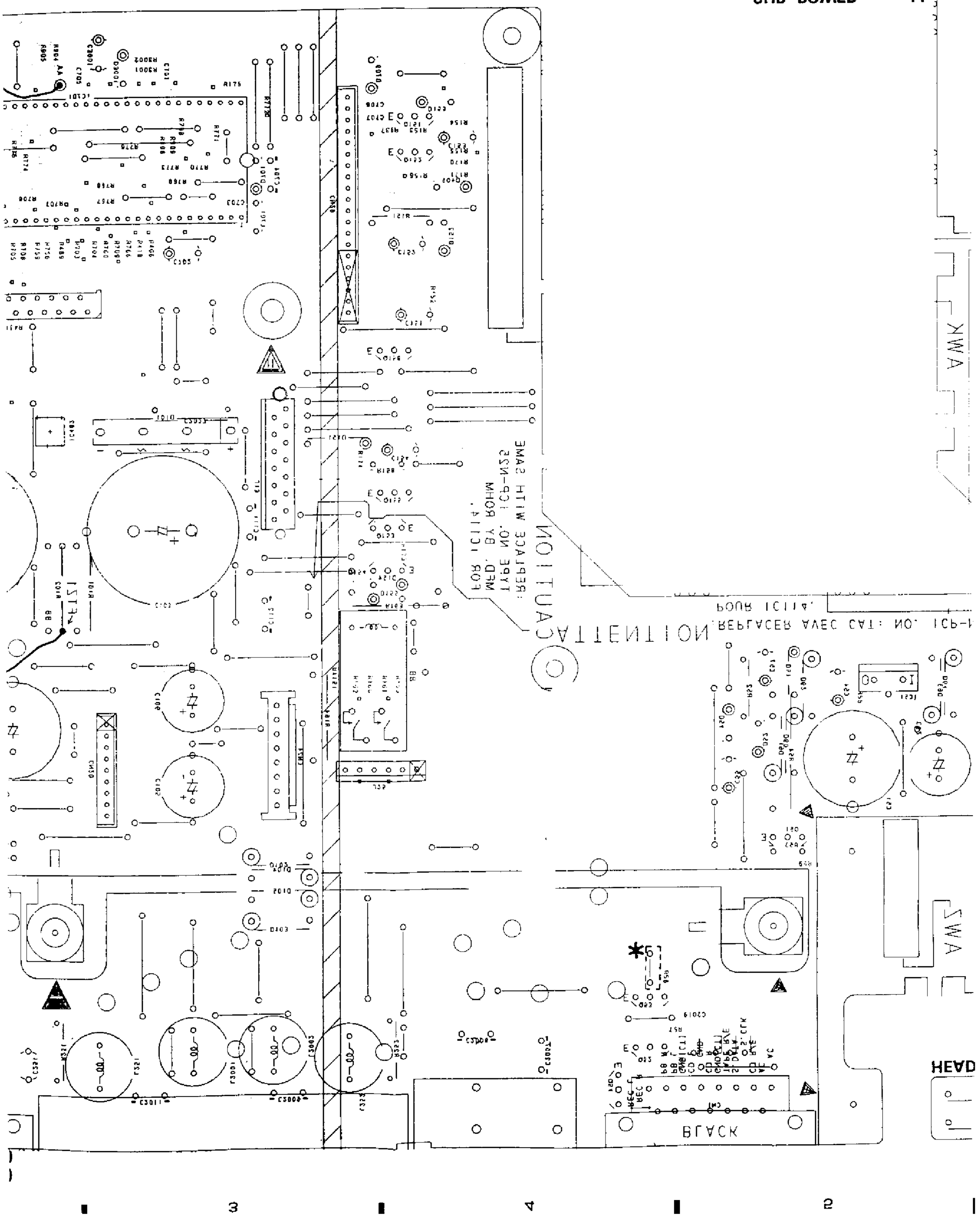


This P.C.B. connection diagram is viewed from the foil side.

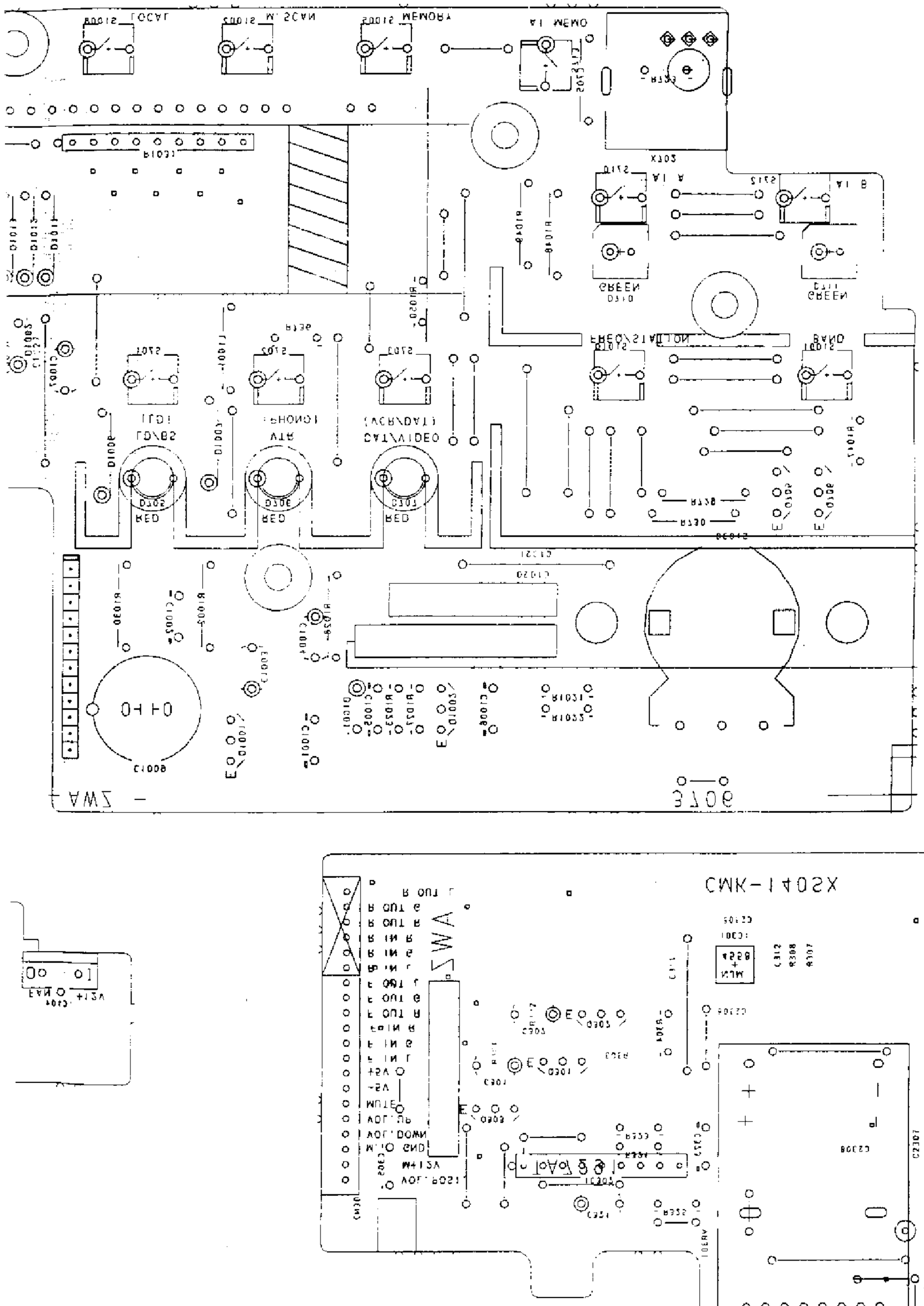
* SX-P950 ONLY
※ SX-P750 ONLY

FR. AMP assembly (AWZ3735 : SX-P
SX-P920 only
MIC assembly
HEAD. P assembly
SUB. POWER assembly
(AWZ3723)

SUB. POWER assembly
(AWZ3153)



MAIN assembly (AWZ3720 : SX-P920)
(AWZ3715 : SX-P720)


(601ZWA)
VR assembly
8.3.4 DISPLAY assembly, VR assembly AND REGULATOR assembly

ssembly, VR assembly AND REGULATOR assembly

* SX-P920 ONLY
※ SX-P720 ONLY

VR
(AV

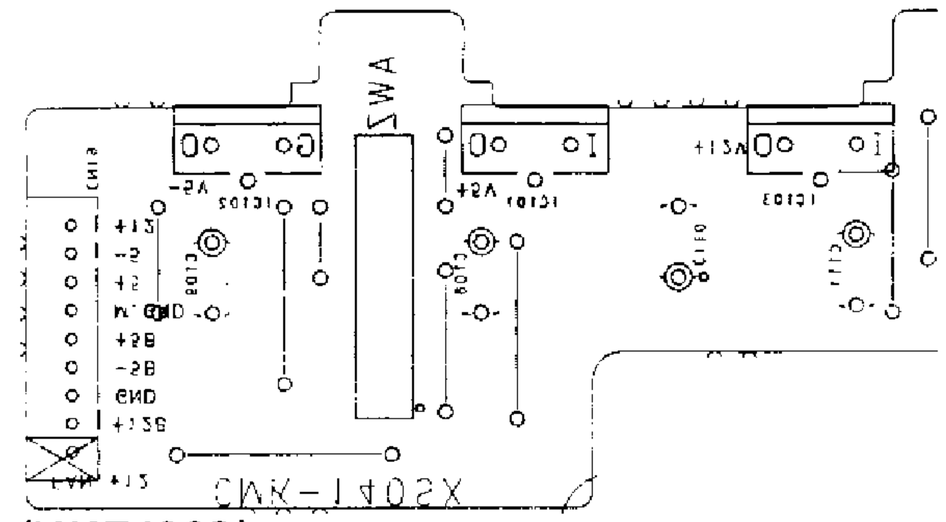
REGULATOR assembly
(AWZ4009)

SX-9950\HEWZ1, SX-9750\HEWZ1

This P.C.B. connection diagram is viewed from the foil side.

* SX-9950 ONLY
※ SX-9750 ONLY

REGULATOR assembly
(AWZ4009)



SX-P920/HEWZI, SX-P720/HEWZI

✱ SX－P920 ONLY
※ SX－P720 ONLY

This P. C. B connection diagram is viewed from the parts mounted side.

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the following Table

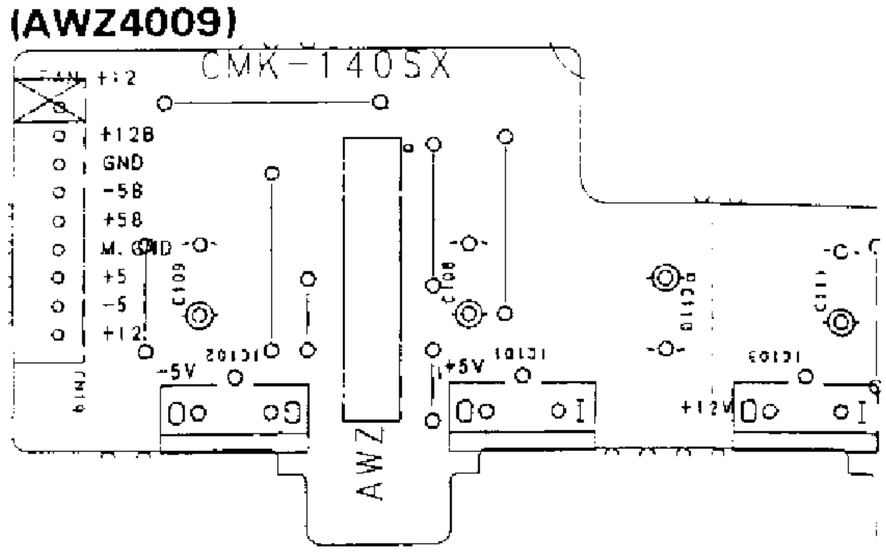
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 E C B	E C B or E C B	Transistor
Q215 C B E	or	Radiator type transistor
Q203 A K	Q203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

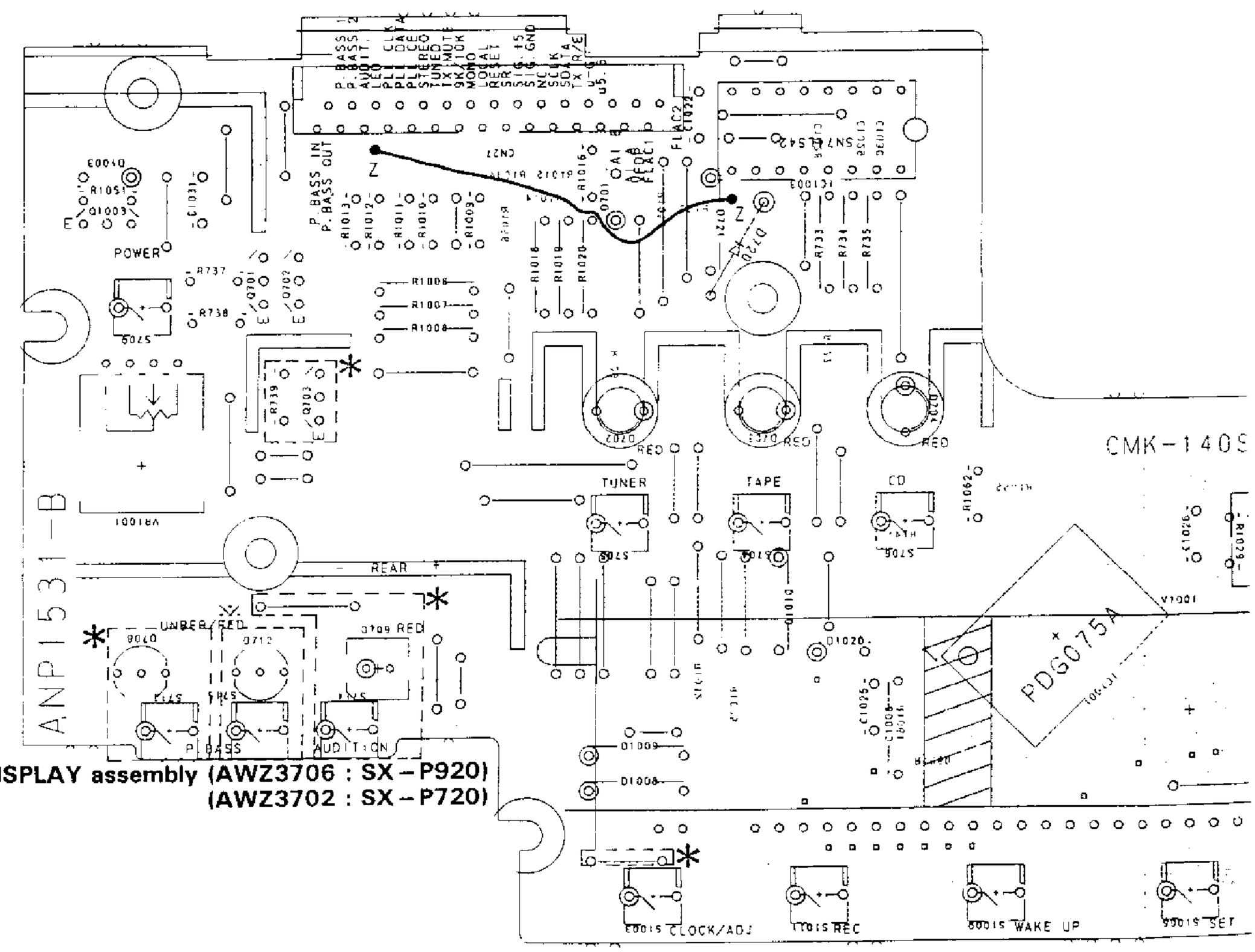
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

REGULATOR assembly (AWZ4009)



DISPLAY assembly (AWZ3706 : SX－P920) (AWZ3702 : SX－P720)



VR1001 Q1003 Q701-Q703 IC1003 IC1001

81

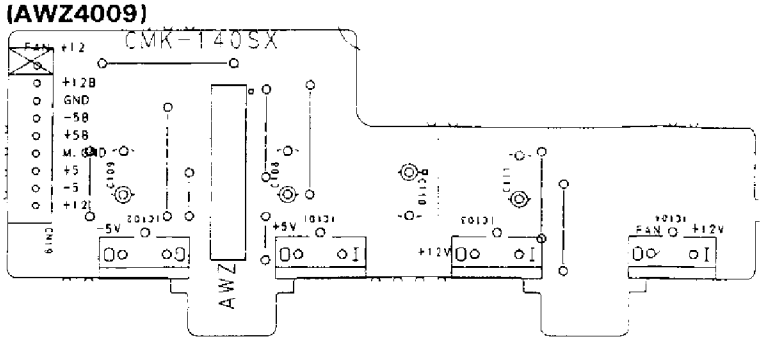
m the parts mounted side.

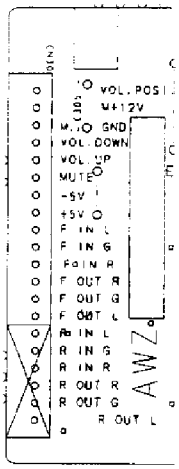
✱ SX−P920 ONLY
✱ SX−P720 ONLY

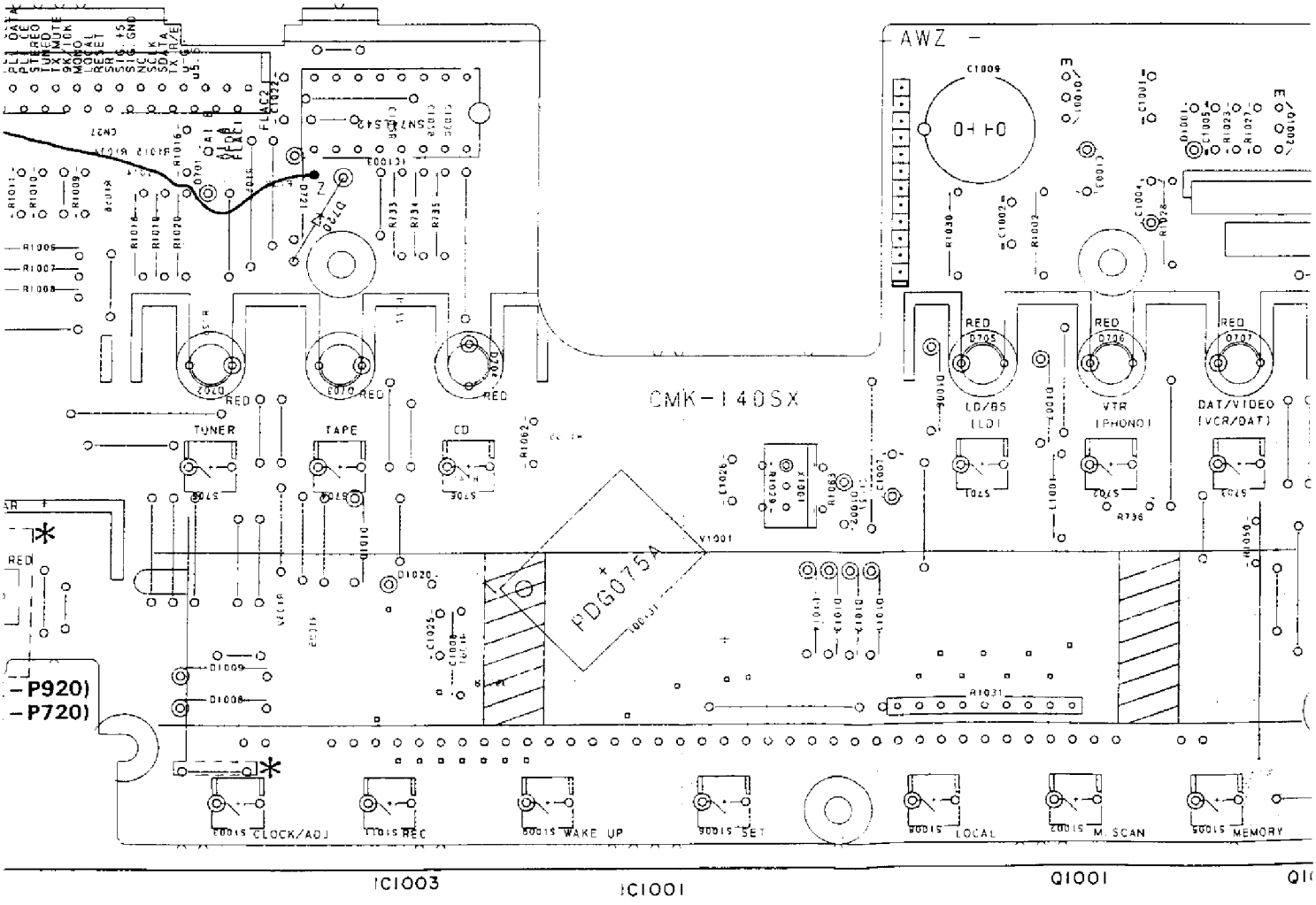
am indication	Part Name
	IC
	Switch
	Relay
	Coil
	Filter
	Variable resistor or Semi fixed resistor

minal marked with ◎ (double circles) shows negative terminal
inal marked with ◎ (double circles) shows cathode side
erminal to which E is affixed shows the emitter

REGULATOR assembly (AWZ4009)



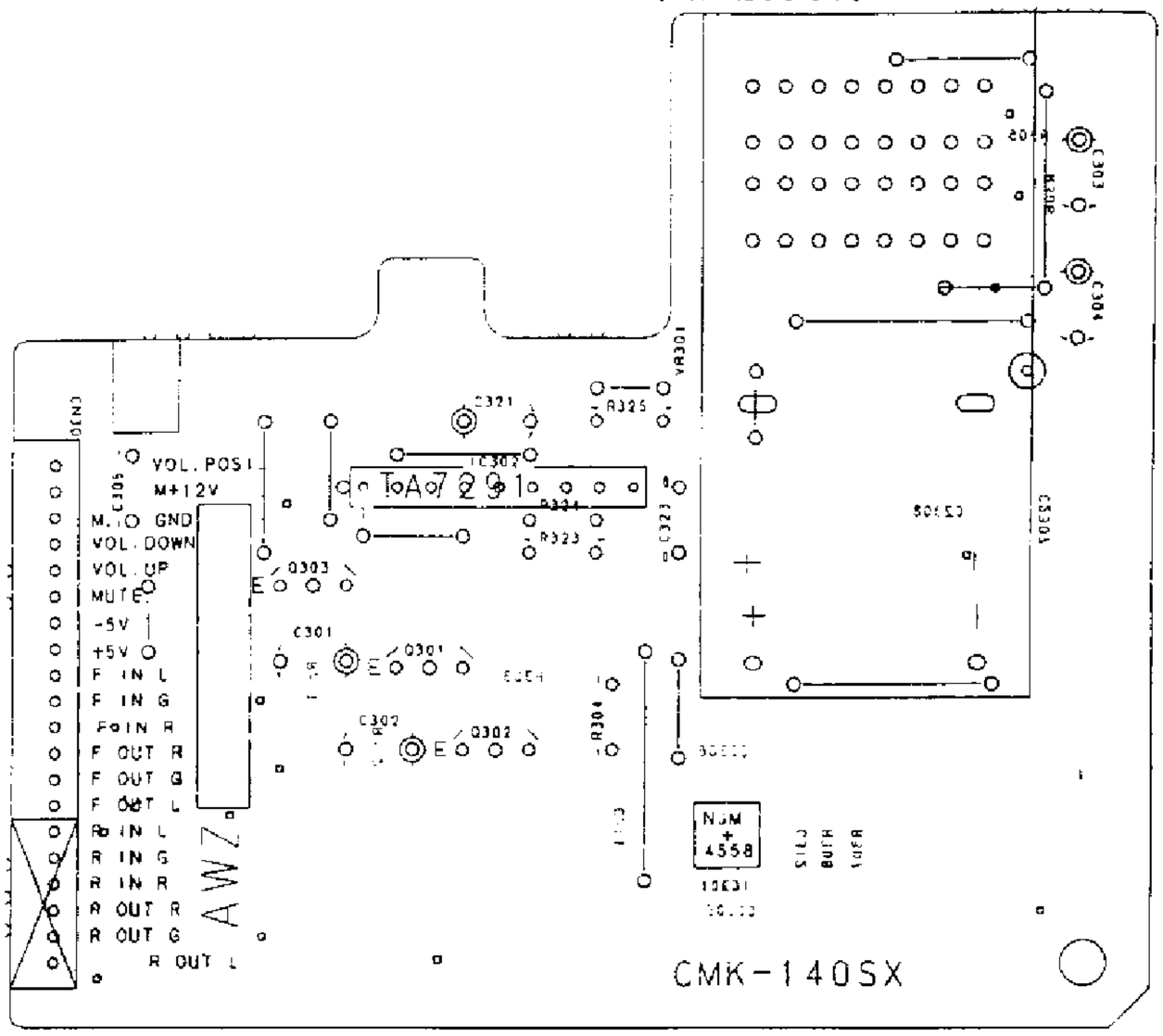


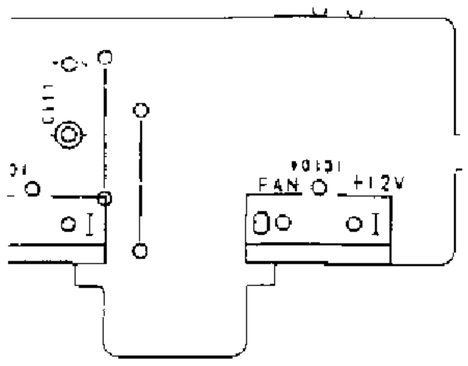


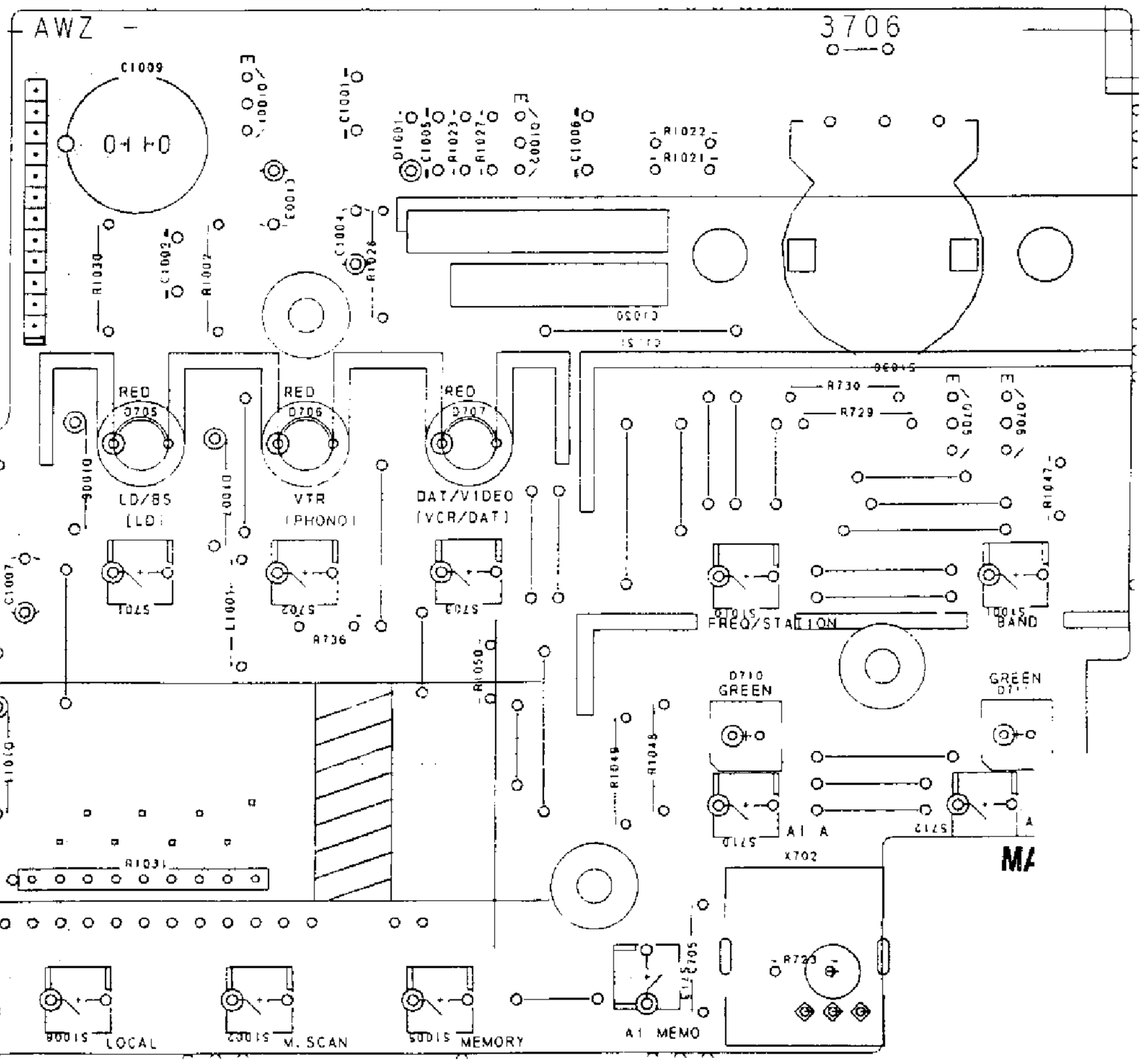
IC1003 IC1001 Q1001 Q1

2 3 4

VR assembly (AWZ3709)





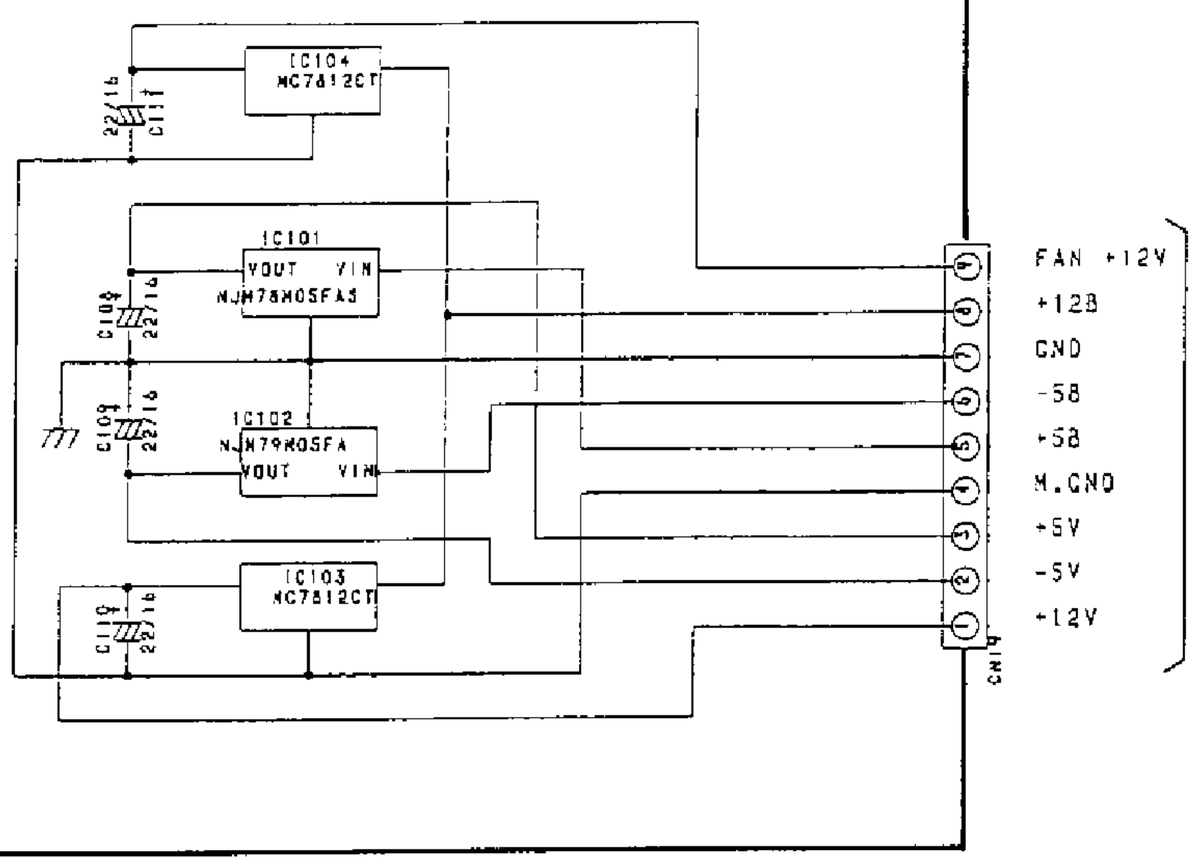


Q1001 Q1002 Q705 Q706

1 2 3

A

REGULATOR assembly (AWZ4009)



To MAIN Assembly CN20
(To page 72)

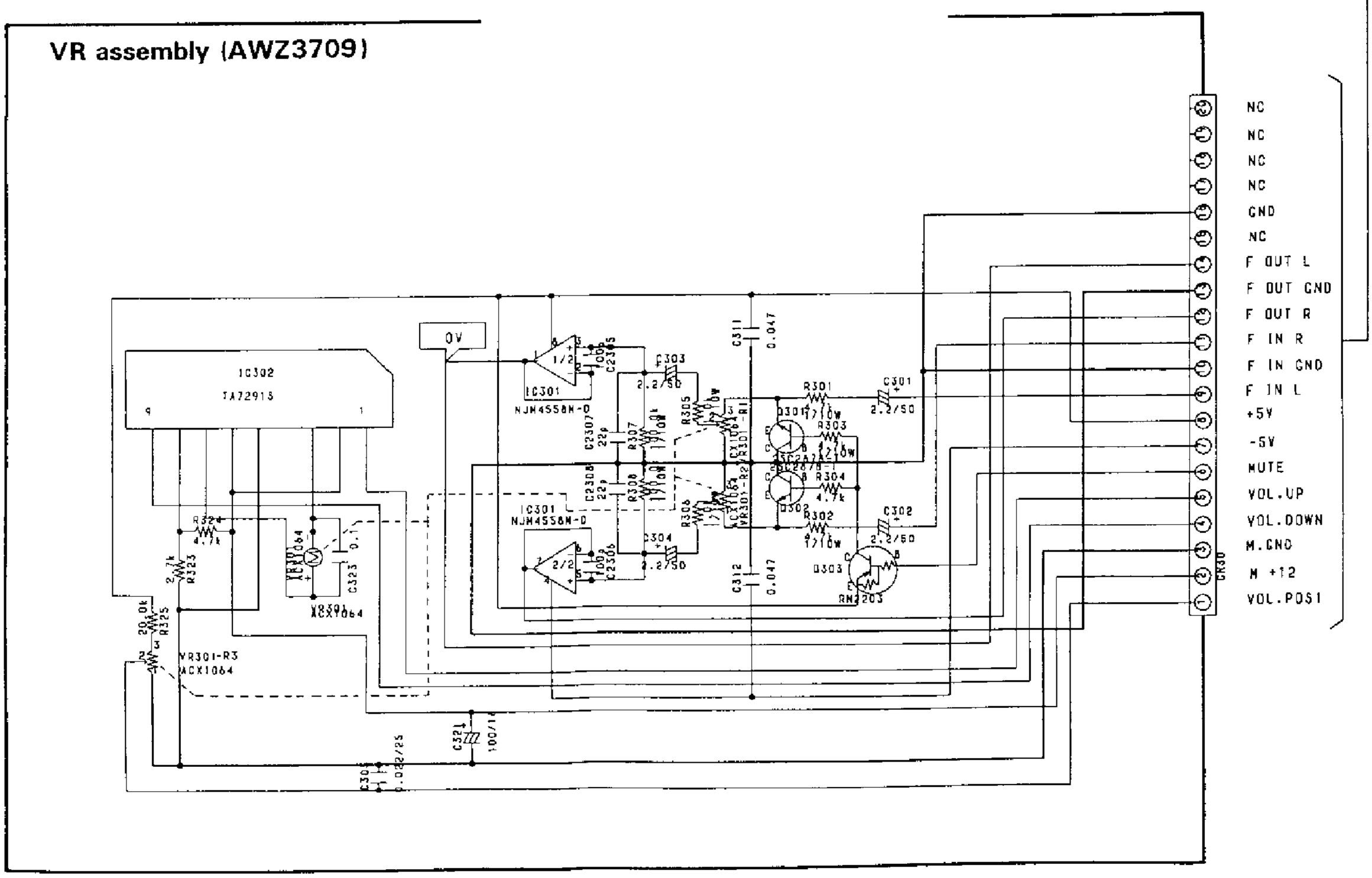
B

To MAIN Assembly
(To page

C

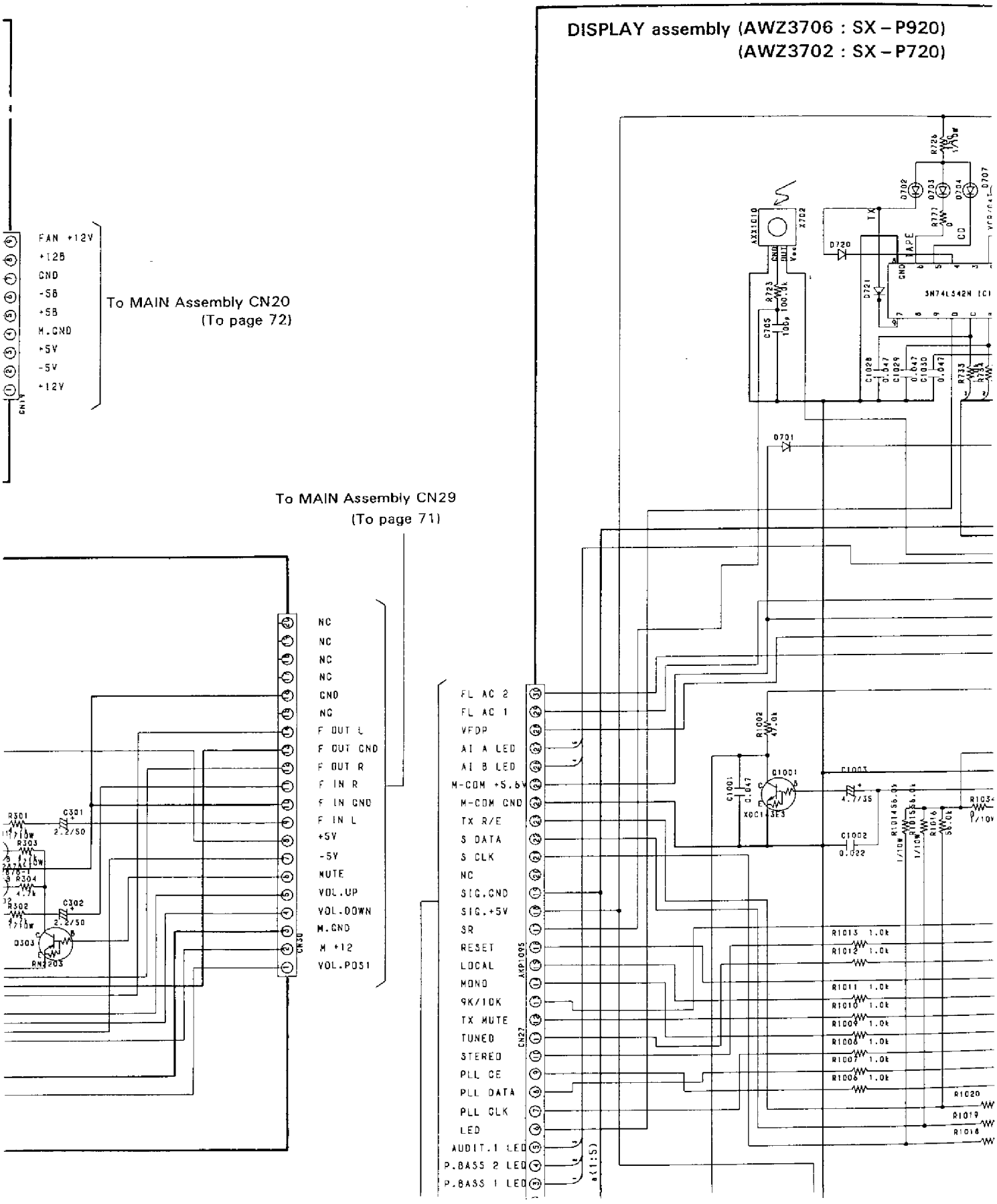
D

VR assembly (AWZ3709)



IC302 TA72918

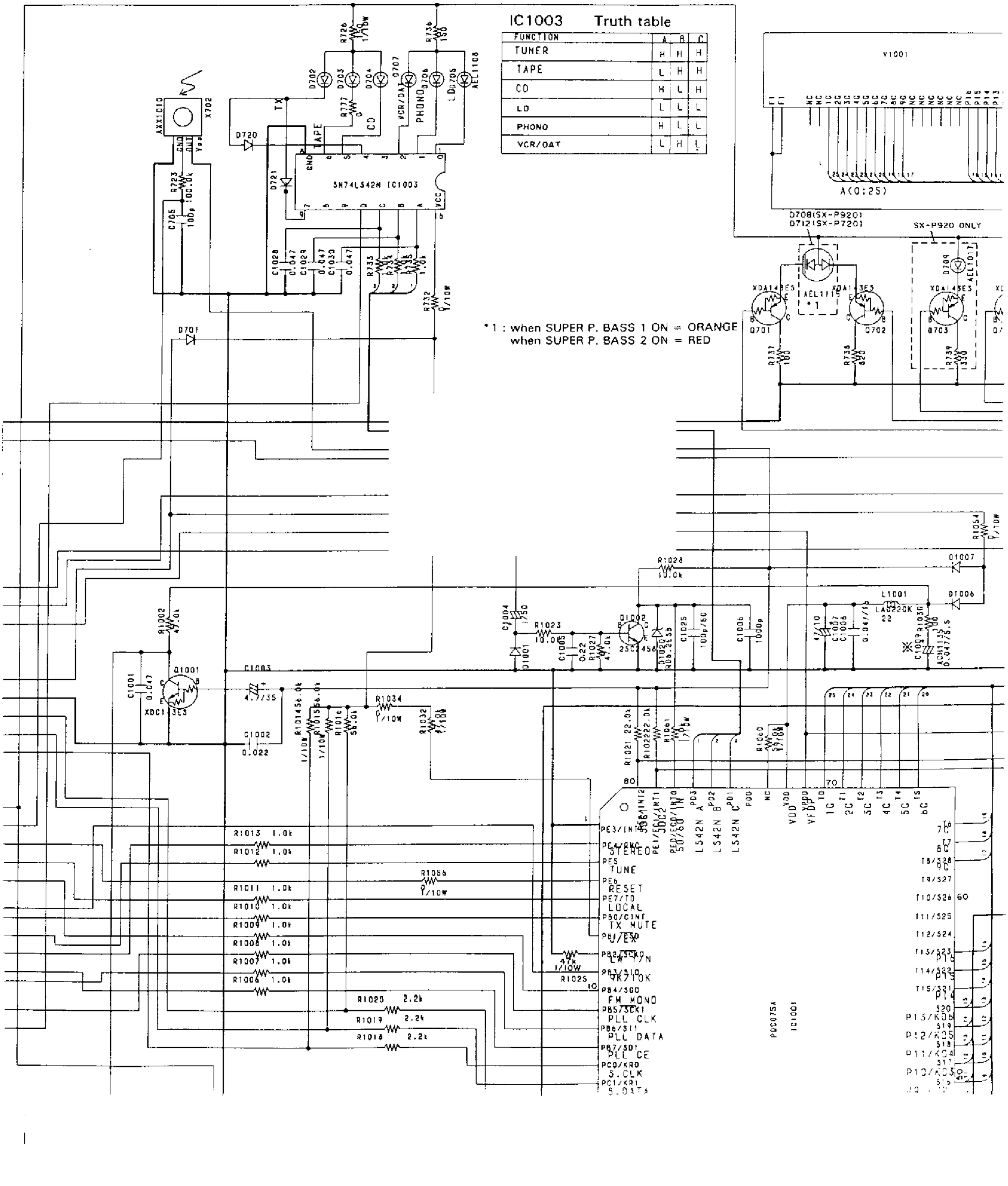
DISPLAY assembly (AWZ3706 : SX – P920)
(AWZ3702 : SX – P720)



PLAY assembly (AWZ3706 : SX – P920)
(AWZ3702 : SX – P720)

IC1003 Truth table

FUNCTION	A	B	C
TUNER	H	H	H
TAPE	L	H	H
CD	H	L	H
LD	L	L	L
PHONO	H	L	L
VCR/DAT	L	H	L



Truth table

	A	B	C
	H	H	H
	L	H	H
	H	L	H
	L	L	L
	H	L	L
	L	H	L

V1001 AAV1154

A(0:25)

D708(SX-P920)
D712(SX-P720)

SX-P920 ONLY

AEL1017

*1

XDA143ES

Q701 Q702 Q703 Q705 Q706

R737 180 R738 820 R739 1500 R729 1000 R730 1000

D709 D710 D711 AEL1054

P. BASS 1 ON = ORANGE
P. BASS 2 ON = RED

R1054 1/10W C1022 1000p R1026 10.0k D1007 D1006 L1001 LAU220K 22 R1027 47.0k Q1002 2SC2458 D1020 RD6.2ES0 C1025 100p/50 C1006 1000p 47/10 C1007 C1008 0.047/16 R1030 100 C1009 ACH1135 0.047/5.5 R1021 22.0k R1022 22.0k R1061 1/10W R1060 5/10W C1020 0.047 C1021 0.047

IC1001 PDC075A

PE3/INT2 PE4/INT1 PE5/INT0 PE7/TO PB0/CINT PB3/SCK0 PB5/SI0 PB4/SO0 PB5/SCK1 PB6/SI1 PB7/SO1 PC0/KR0 PC1/KR1 PC2/KR2 PC3/KR3 P13/KO5 P12/KO4 P11/KO3 P10/KO2 P9 P8 P7 P6 P5 P4 P3 P2 P1 P0

STEREO TUNE RESET LOCAL TX MUTE LW TYN FM MONO PLL CLK PLL DATA PLL CE S.CLK S.DATA

LS42N A LS42N B LS42N C

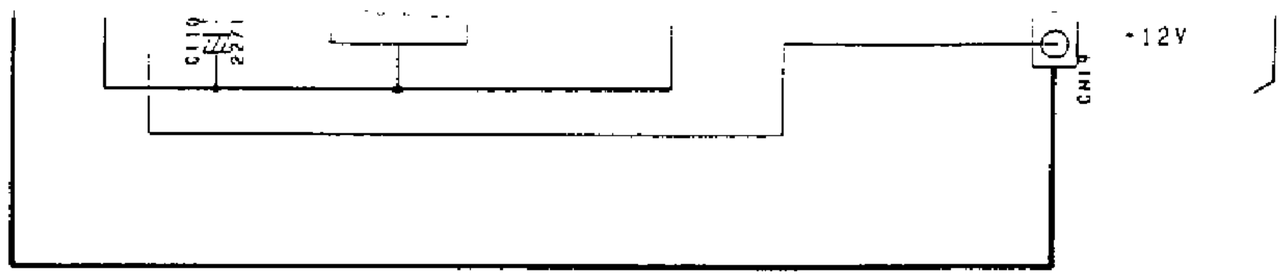
K10 K11 K12 K13 K00 K01 K02 K03 K04

CLOCK ADJ SET/ NEXT WAKE -UP TIMER REC M. SCAN MEM ORY LOCAL AI MEMO BAND FREQ /ST LD VCR/ DAT PHONO TAPE TX CD POWER

S1003 S1006 S1009 S1011 S1002 S1005 S1008 S1013 S1001 S1010 S701 S702 S703 S704 S705 S706

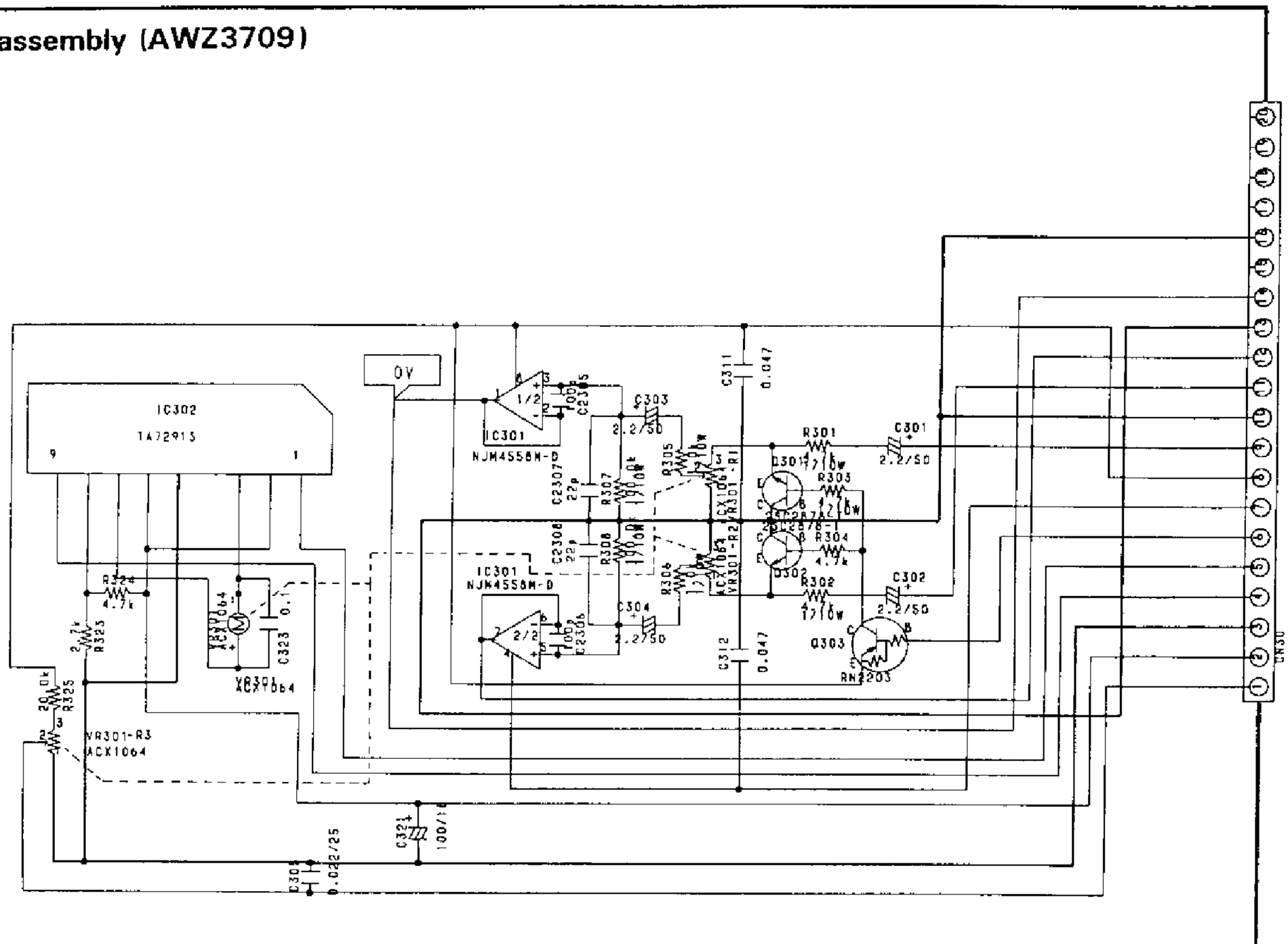
D1014 D1013 D1012 D1011 D1010

R741 0 1/10W

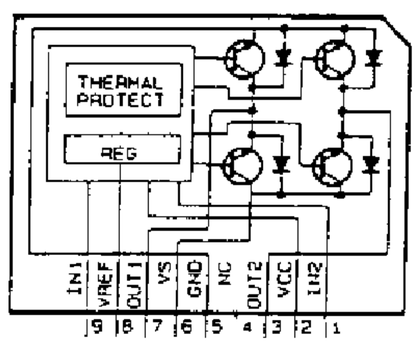


To

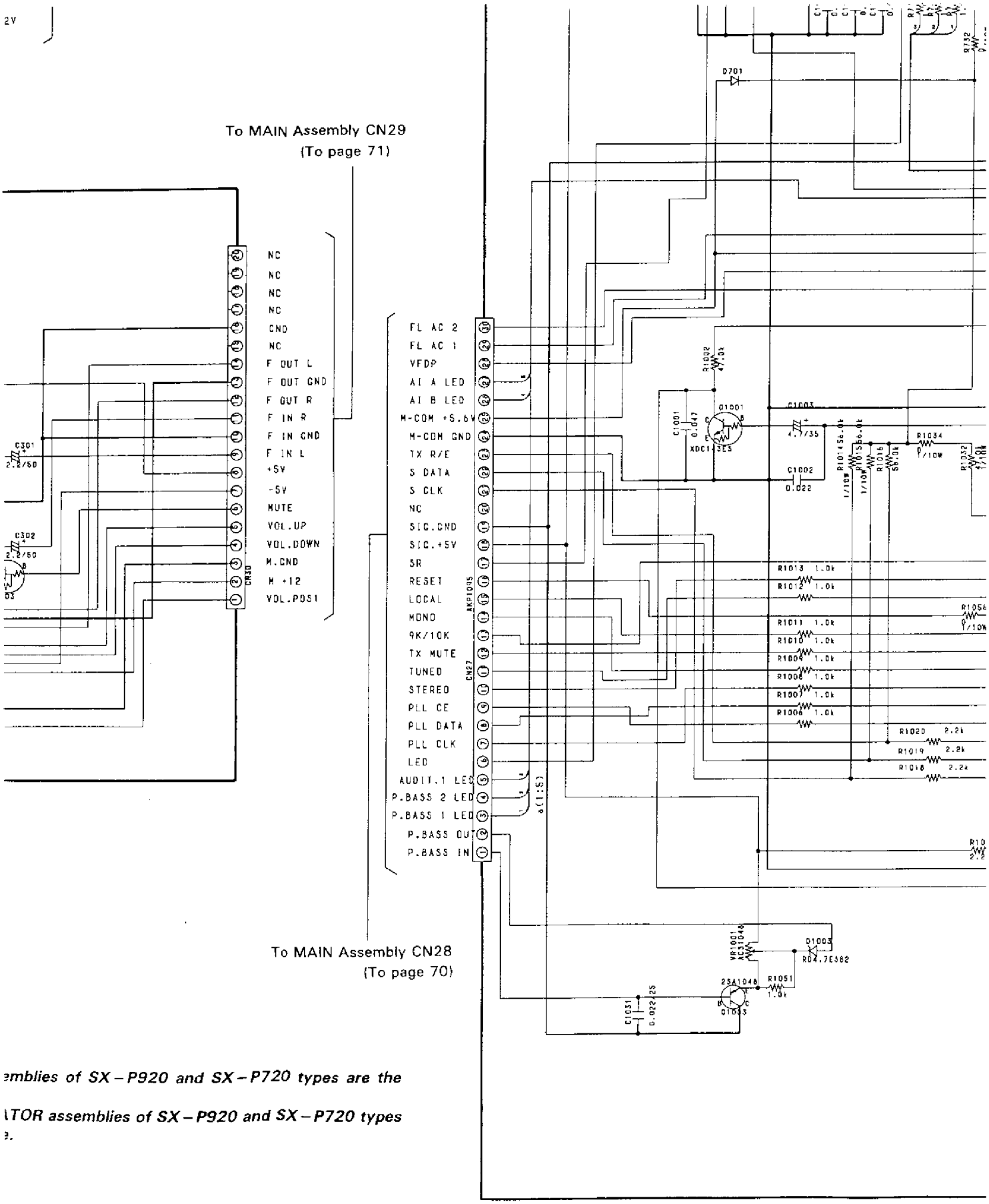
VR assembly (AWZ3709)



IC302 TA7291S



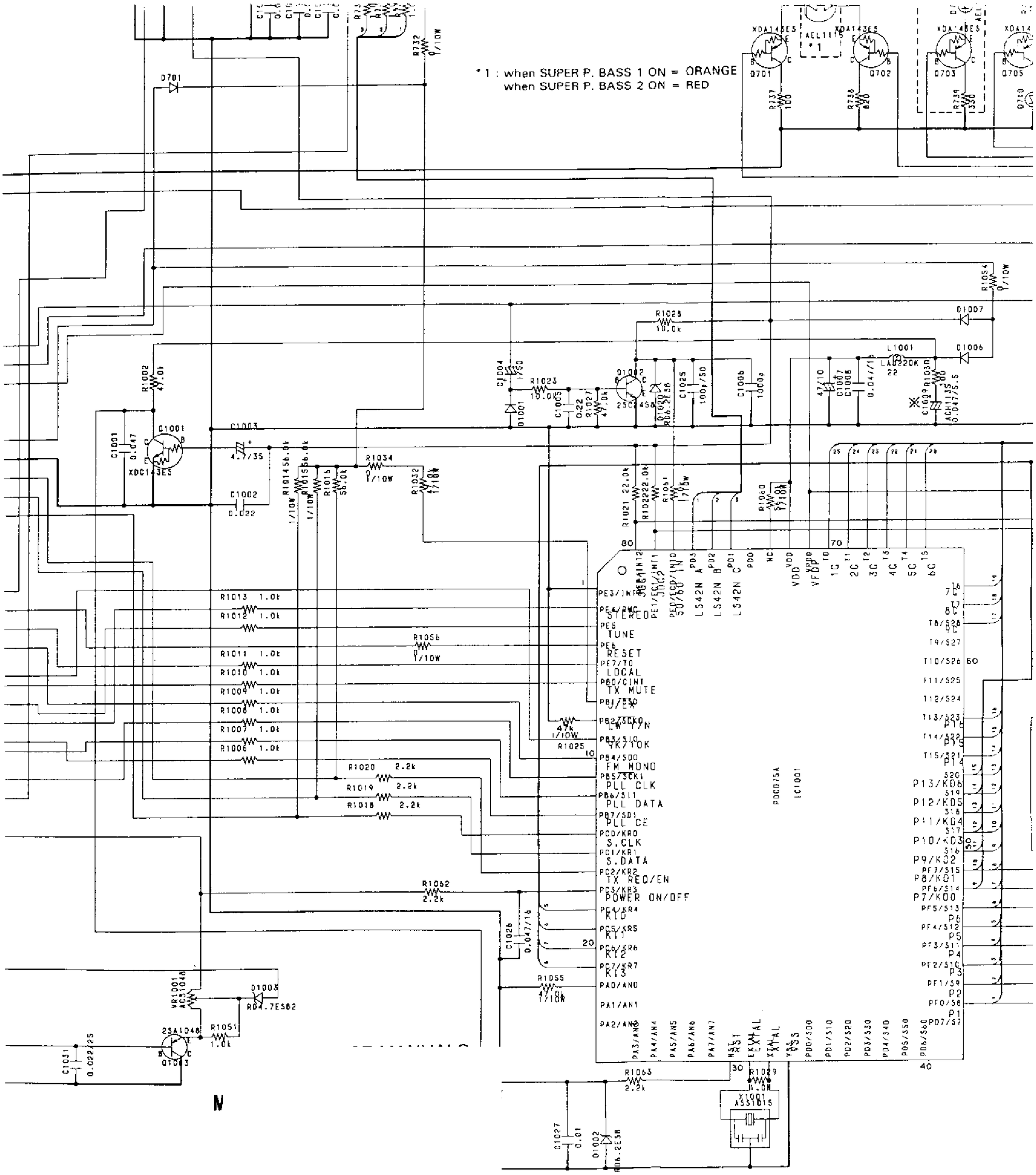
NOTE :
The VR assemblies of SX – P920 and SX – P
same.
The REGULATOR assemblies of SX – P920 ar
are the same.

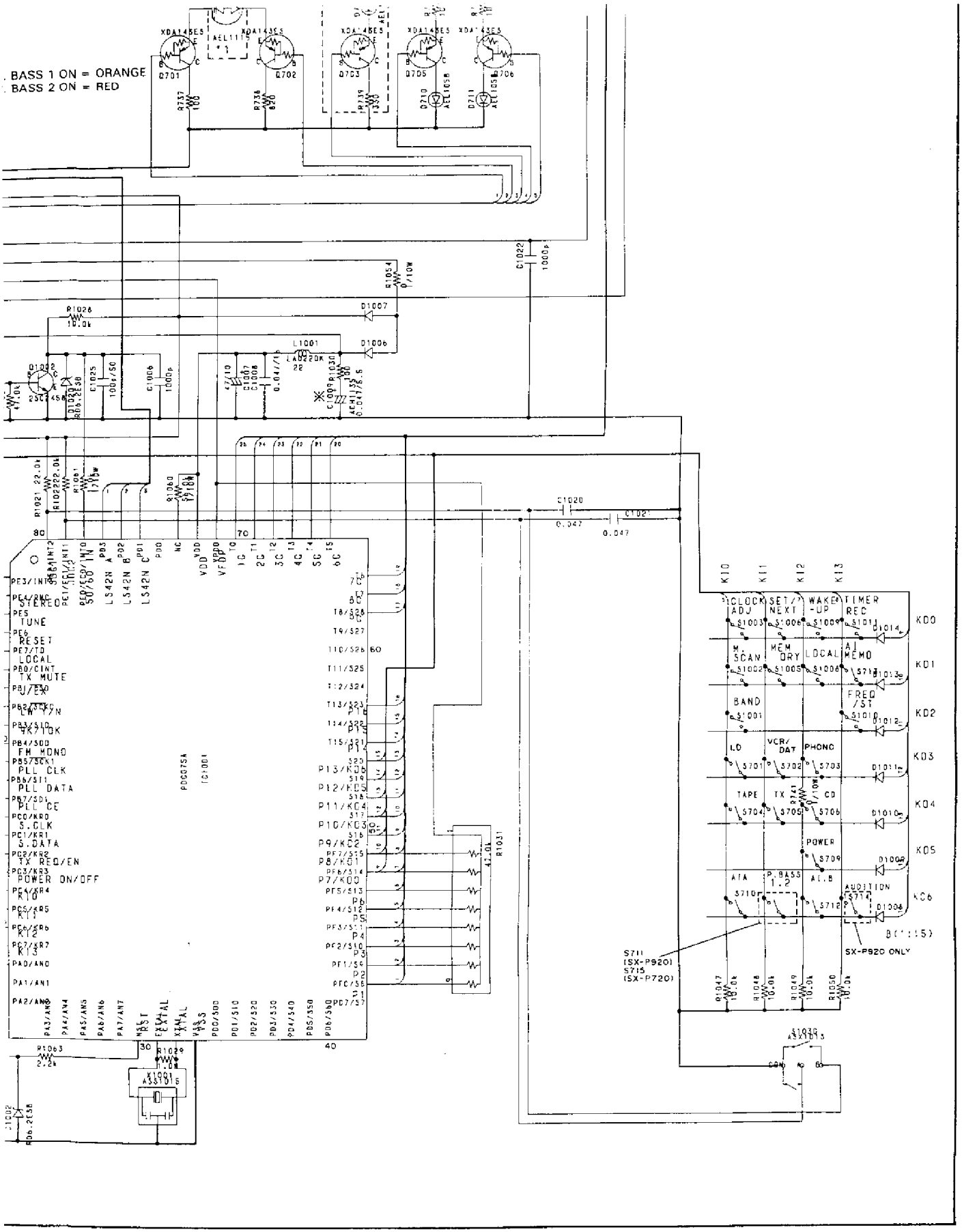


emblies of SX – P920 and SX – P720 types are the

ITOR assemblies of SX – P920 and SX – P720 types
e.

*1 : when SUPER P. BASS 1 ON = ORANGE
when SUPER P. BASS 2 ON = RED

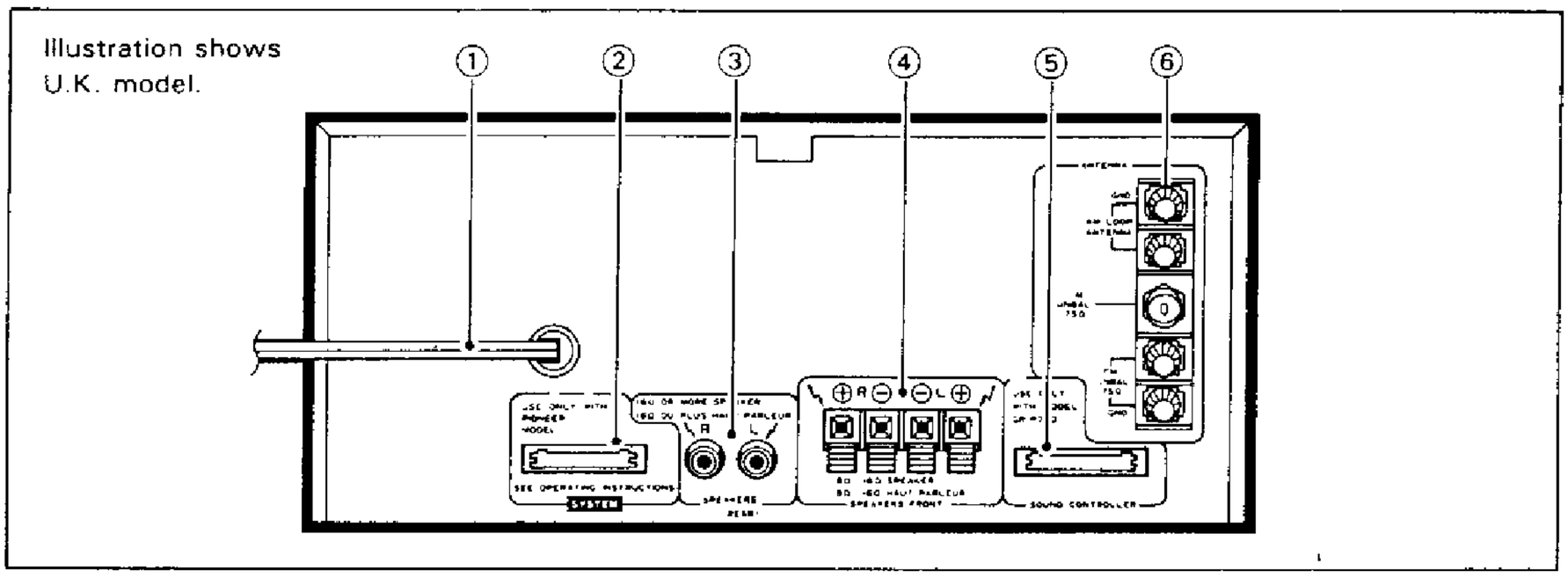



BASS 1 ON = ORANGE
BASS 2 ON = RED
Q701
Q702
Q703
Q705
Q706
D210
D211
D1007
D1006
L1001
D1002
C1022
1000p
R1054
0.1W
R1026
10.0k
C1020
0.047
C1021
0.047
R1063
2.2k
R1029
1.0M
X1001
4.5MHz
X1002
4.5MHz
R1031
47.0k
S1036
CLOCK ADJ
SET / NEXT
WAKE -UP
TIMER REC
M. SCAN
MEM ORY
LOCAL
AI MEMO
BAND
FREQ /ST
LD
VCR/ DAT
PHONO
TAPE
TX
CD
POWER
AFA
P.BASS 1.2
AI.B
AUDITION
S711
(SX-P920)
S715
(SX-P720)
SX-P920 ONLY
R1047
10.0k
R1048
10.0k
R1049
10.0k
R1050
10.0k
PE3/INT0
PE4/BNC STEREO
PE5 TUNE
PE6 RESET
PE7/TD LOCAL
PB0/CINT TX MUTE
PB1/EXT
PB2/SCK0 LW T/N
PB3/SI0 4K/10K
PB4/SO0 FM MONO
PB5/SCK1 PLL CLK
PB6/SI1 PLL DATA
PB7/SO1 PLL CE
PC0/KR0 S.CLK
PC1/KR1 S.DATA
PC2/KR2 TX REQ/EN
PC3/KR3 POWER ON/OFF
PC4/KR4 K10
PC5/KR5 K11
PC6/KR6 K12
PC7/KR7 K13
PA0/AN0
PA1/AN1
PA2/AN2
PA3/AN3
PA4/AN4
PA5/AN5
PA6/AN6
PA7/AN7
PDD075A
IC1001
K10
K11
K12
K13
KD0
KD1
KD2
KD3
KD4
KD5
KD6

9. PANEL FACILITIES

9.1 REAR PANEL FACILITIES

STEREO RECEIVER : SX – P920/SX – P720



① Power cord

Connect this to the AC wall socket.

② SYSTEM jack

Connect the system cable here.

③ SPEAKERS (REAR) jack

Connect the surround speaker systems.

NOTE:

Connect a speaker system with a nominal impedance of 16Ω or more.

④ SPEAKERS (FRONT) terminals

L: Connect the left speaker system as seen from the listening position.

R: Connect the right speaker system as seen from the listening position.

NOTE:

Connect a speaker system with a nominal impedance ranging from 8Ω to 16Ω.

⑤ SOUND PROCESSOR jack SX-P920
SOUND CONTROLLER jack SX-P720

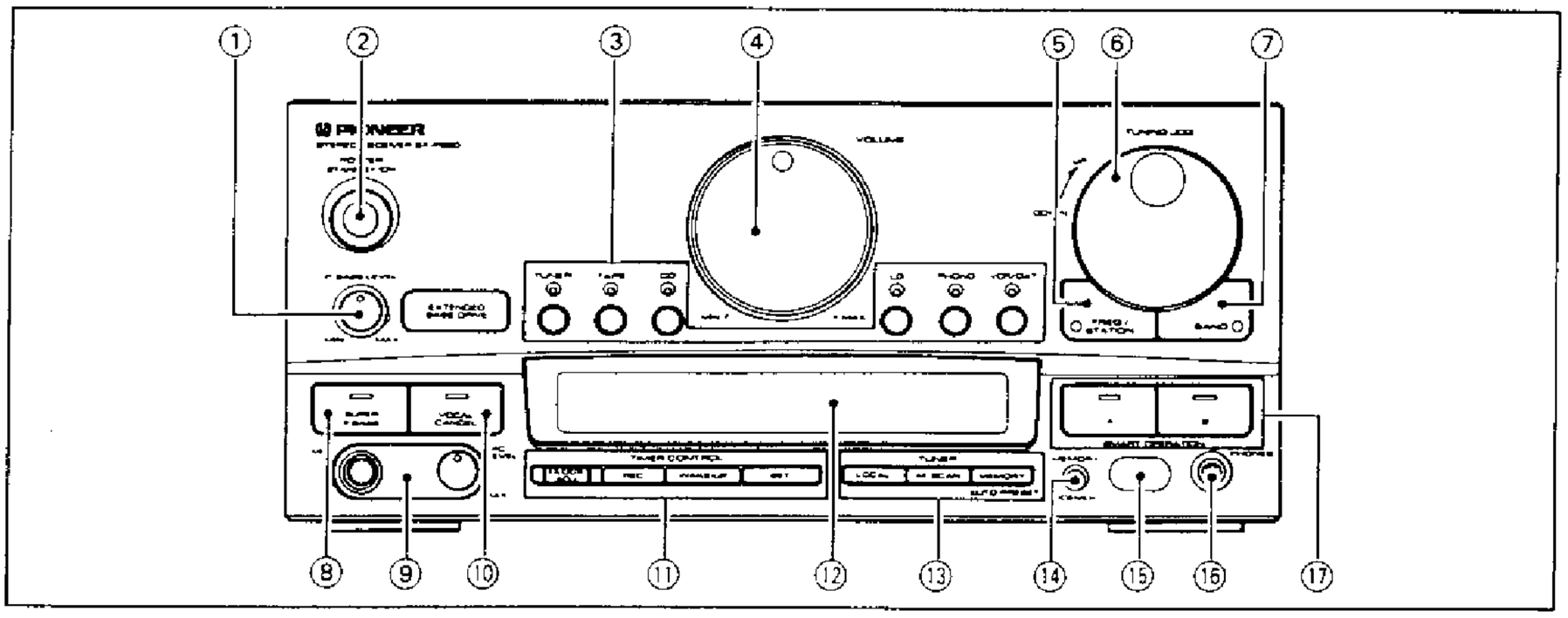
Connect the SOUND FIELD PROCESSOR (or SOUND IMAGE CONTROLLER) system cable here.

⑥ FM/AM ANTENNA terminals

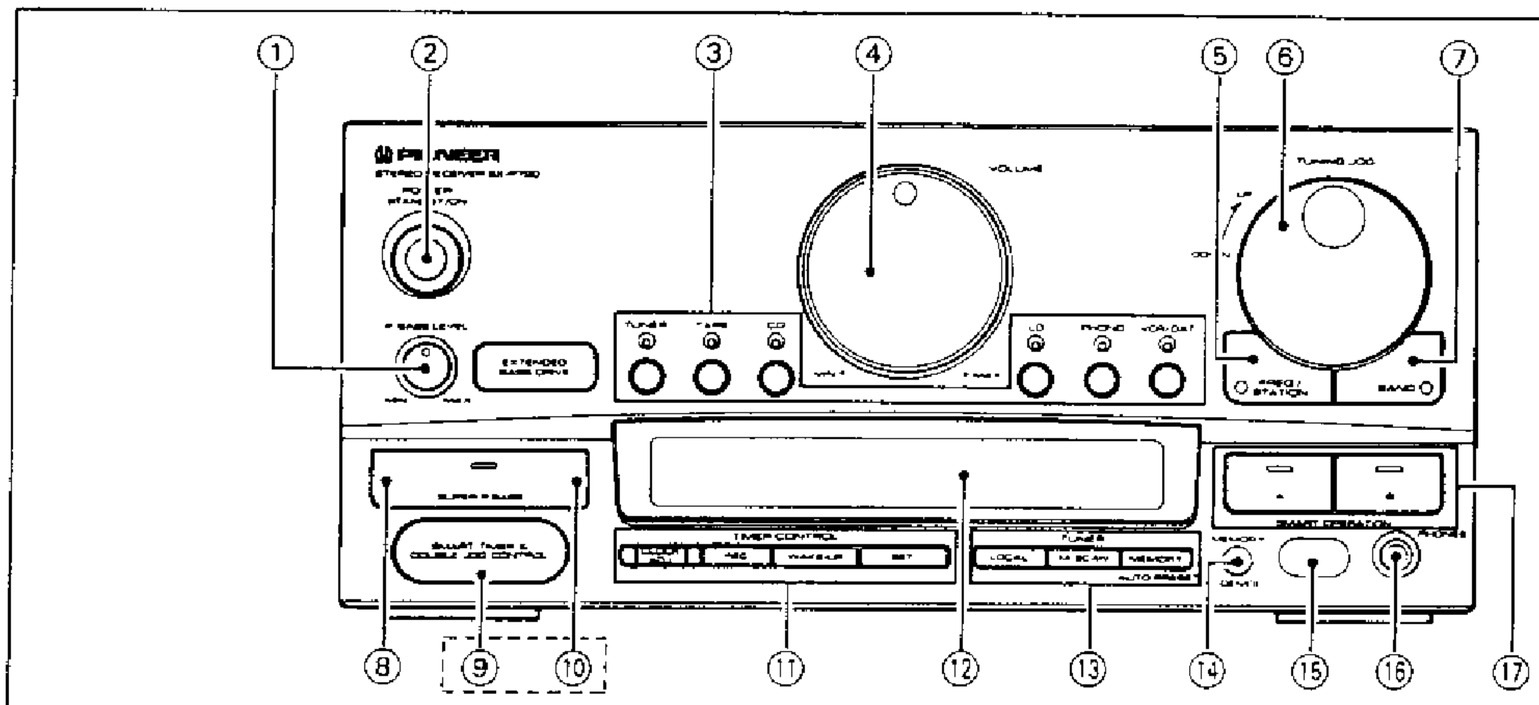
Antennas must be connected to these terminals: otherwise station reception is not possible. See page 11 for details on ANTENNA CONNECTIONS.

9.2 FRONT PANEL FACILITIES

STEREO RECEIVER : SX – P920



STEREO RECEIVER : SX – P720



- Multi-voltage models include the ⑨ and ⑩ shown on the SX-P920.

① P.BASS LEVEL control

P.BASS stands for Proper Bass Active Supply System, and refers to the built-in system for emphasizing low sound ranges.

This unit is equipped with the Super P.BASS to allow you to select two kinds of bass reproduction, depending on the kind of music source and your own preference. This knob can be used to adjust the super P.BASS level when the SUPER P.BASS button is set to ON.

② POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

The receiver section display indicates only the time.

③ Input selectors (TUNER, TAPE, CD, LD, PHONO, VCR/DAT)

④ VOLUME control

⑤ FREQ./STATION button

Use to select the display mode (frequency mode or station mode).

- **Frequency mode:** Display indicates the frequency of the tuned station, and the current time.
- **Station mode:** Display indicates the frequency of the tuned station together with the recorded station number assigned to that station.

⑥ TUNING JOG control

Use to set the time and tune the receiver's reception frequency.

⑦ BAND button

Use to select FM or AM bands.

⑧ SUPER P.BASS button

Use this button to select from among the two types of super P.BASS effect desired, then use the P.BASS level control to adjust the level as desired.

⑨ MIC (microphone) jack and MIC LEVEL (microphone level) control [on SX-P920 and SX-P720 (multi-voltage model) only]

⑩ VOCAL CANCEL button [on SX-P920 and SX-P720 (multi-voltage model) only]

Set to ON to use the vocal cancel function.

⑪ TIMER CONTROL buttons (CLOCK ADJ., REC, WAKE-UP, SET)

Use these buttons to set the current clock time and the timer for timed recording and playback.

⑫ Display

⑬ TUNER buttons

- **LOCAL button:** Set to ON when receiving very nearby stations (the strong signals may otherwise produce high levels of static).
- **M.SCAN (memory scan) button:** Automatically scans (for about five seconds each) each of the stations stored in the station memory.
- **MEMORY button:** Use to save broadcasting stations in the station memory.

⑭ MEMORY (DEMO) button

Use in conjunction with the SMART operation memory. If this button is pressed when the unit's power is STANDBY, the DEMO mode will be selected; the power will turn on and the unit's various features will be displayed.

⑮ Remote sensor window

⑯ Headphone jack (PHONES)

⑰ SMART OPERATION A/B buttons

These buttons are used with the SMART operation mode function to store your favorite listening modes, thus allowing you to select them at a single touch.

10. SPECIFICATIONS

10.1 SX – P920

STEREO RECEIVER: SX-P920

Amplifier Section

<For Multi-voltage models>

Continuously Average Power Output is 50 Watts* per channel, min., at 8 ohms from 40 Hertz to 17,000 Hertz, with no more than 0.9% total harmonic distortion

* Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers

Continuous power output (DIN)
- U.K., European models ..... 50 W +50 W (1 kHz, T.H.D 1%, 8 ohms)

Continuous power output (RMS)
- U.K., European models ..... 60 W +60 W (1 kHz, T.H.D 5%, 8 ohms)
- Multi-voltage models ..... 70 W +70 W

Music power (DIN) (1 kHz, T.H.D 1%, 8 ohms)
- U.K., European models ..... 85 W +85 W
- Multi-voltage models ..... 95 W +95 W

Peak music power
(Multi-voltage models only) ..... 465 W
Total harmonic distortion,
1 kHz, 25 W, 8 ohms 0.2%**

Electrical Section, Other

Power requirements
- U.K. models ..... AC 240 V, 50/60 Hz
- European models ..... AC 220-230 V, 50/60 Hz
- Multi-voltage models ..... AC 110/120–127/220/240 V (switchable), 50/60 Hz

Power consumption
- U.K. models ..... 300 W
- European models ..... 290 W
- Multi-voltage models ..... 325 W

External dimensions .....
260 (W) × 117 (H) × 262 (D) mm
10-1/4 (W) × 4-5/8 (H) × 10-5/16 (D) in
Weight ..... 5.4 kg (11 lb 15 oz.)

** Measured with audio spectrum analyzer.

FM Tuner Section

Reception frequency range ..... 87.5–108.0 MHz
Usable Sensitivity ..... MONO: 12.8 dBf, IHF (1.2 μV/75 ohms)
Sensitivity (DIN)
- MONO (S/N 26 dB) ..... 1 μV/75 ohms
- STEREO (S/N 46 dB) ..... 50 μV/75 ohms

Signal-to-Noise Ratio
(IHF, 85 dBf Input) ..... MONO: 77 dB
Signal-to-Noise Ratio (DIN) ..... MONO: 66 dB
STEREO: 60 dB
Distortion ..... STEREO: 0.5%, 1 kHz
Antenna input ..... 75 ohms unbalanced

AM (MW) Tuner Section

Frequency range (For U.K., European and multi-voltage models) ..... 531 kHz to 1,602 kHz
(For U.S., Canadian and multi-voltage models) ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Antenna ..... Loop Antenna

LW Tuner Section
(For LW equipped models only)

Frequency range ..... 153 kHz to 281 kHz
Sensitivity (IHF, Loop Antenna) ..... 1,500 μV/m
Antenna ..... Loop Antenna

10.2 SX – P720

STEREO RECEIVER: SX-P720

Amplifier Section

<For U.S., Canadian and Multi-voltage models>
Continuously Average Power Output is 40 Watts* per channel, min., at 8 ohms from 40 Hertz to 20,000 Hertz, with no more than 0.9% total harmonic distortion

* Measured pursuant to the Federal Trade Commission's Trade Regulation rules on Power Output Claims for Amplifiers

Continuous power output (DIN)
U.K., European models ..... 40 W +40 W
(1 kHz, T.H.D 1%, 8 ohms)
Continuous power output (RMS)
U.K., European models ..... 50 W +50 W
(1 kHz, T.H.D 5%, 8 ohms)
U.S., Canadian and
Multi-voltage models ..... 57 W +57 W
Music power (DIN) (1 kHz, T.H.D 1%, 8 ohms)
U.K., European models ..... 65 W +65 W
Multi-voltage models ..... 75 W +75 W
Peak music power
(Multi-voltage models only) ..... 375 W
Total harmonic distortion,
1 kHz, 20 W, 8 ohms 0.2%**

Electrical Section, Other

Power requirements
U.K. models ..... AC 240 V, 50/60 Hz
European models ..... AC 220-230 V, 50/60 Hz
U.S., Canadian models ..... AC 120 V, 60 Hz
Multi-voltage models ..... AC 110/120–127/
220/240 V (switchable), 50/60 Hz
Power consumption
U.K. models ..... 250 W
European models ..... 240 W
U.S., Canadian models ..... 125 W
Multi-voltage models..... 265 W
External dimensions .....
260 (W) × 117 (H) × 262 (D) mm
10-1/4 (W) × 4-5/8 (H) × 10-5/16 (D) in
Weight ..... 5.2 kg (11 lb 7 oz.)

** Measured with audio spectrum analyzer.

FM Tuner Section

Reception frequency range ..... 87.5–108.0 MHz
Usable Sensitivity ..... MONO: 12.8 dBf, IHF
(1.2 μV/75 ohms)
Sensitivity (DIN)
MONO (S/N 26 dB) ..... 1 μV/75 ohms
STEREO (S/N 46 dB) ..... 50 μV/75 ohms
Signal-to-Noise Ratio
(IHF, 85 dBf Input) ..... MONO: 77 dB
Signal-to-Noise Ratio (DIN) ..... MONO: 66 dB
STEREO: 60 dB
Distortion ..... STEREO: 0.5%, 1 kHz
Antenna input ..... 75 ohms unbalanced

AM (MW) Tuner Section

Frequency range (For U.K., European and multi-voltage models) ..... 531 kHz to 1,602 kHz
(For U.S., Canadian and
multi-voltage models) ..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Antenna ..... Loop Antenna

LW Tuner Section
(For LW equipped models only)

Frequency range ..... 153 kHz to 281 kHz
Sensitivity (IHF, Loop Antenna) ..... 1,500 μV/m
Antenna ..... Loop Antenna

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).
When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

1. SAFETY INFORMATION

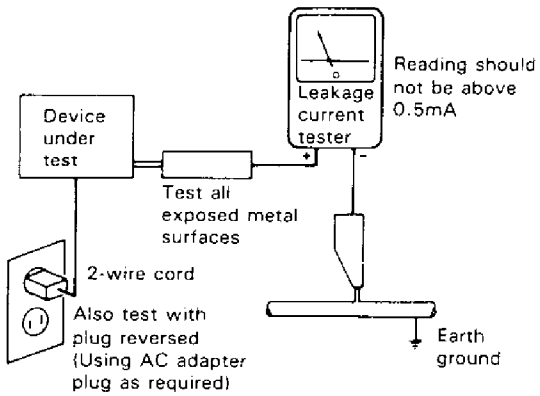
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which dose not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.