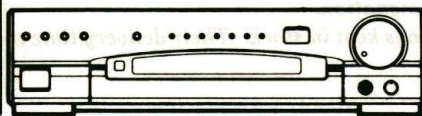


PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
ARP2401

TUNER CONTROL AMPLIFIER

CX-J400

CX-J300

CX-J400 AND CX-J300 HAVE THE FOLLOWING :

Type	Model		Power Requirement	Remarks
	CX-J400	CX-J300		
HE	○	○	AC 220 V-230 V, 240 V (switchable)*	
HEWZI	○	○	AC 220 V-230 V, 240 V (switchable)*	
HB	○	○	AC 220 V-230 V, 240 V (switchable)*	
SD 2	—	○	AC 110 V, 120 V-127 V, 220 V, 240 V (switchable)	
YPW 2	—	○	AC 240 V only	

* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the following : CX-J400/HE and HB ; CX-J300/HE and HB.
- As to the following : CX-J400/HB ; CX-J300/HE and HB, refer to page 35.
- As to the other type(s), refer to applicable service manual(s).
- These products are systems components. Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
- These products' instructions are contained within the operating instructions manual of the related system component(s).
- The manual is packed with those component(s). These products' accessories etc. are packed with their related component(s).
- Ce manuel pour le service comprend les explications de réglage en fran cais.
- Este manual de servicio trata del método ajuste escrito en español.

CONTENTS

1. EXPLODED VIEWS AND PARTS LIST	2	6. ADJUSTMENTS	29
2. PCB PARTS LIST	5	6. REGLAGE	30
3. PANEL FACILITIES	8	6. AJUSTE	31
4. SPECIFICATIONS	10	7. FOR CX-J400/HB ; CX-J300/HE AND HB	35
5. SCHEMATIC DIAGRAMS AND PCB CONNECTIONS DIAGRAMS	11		

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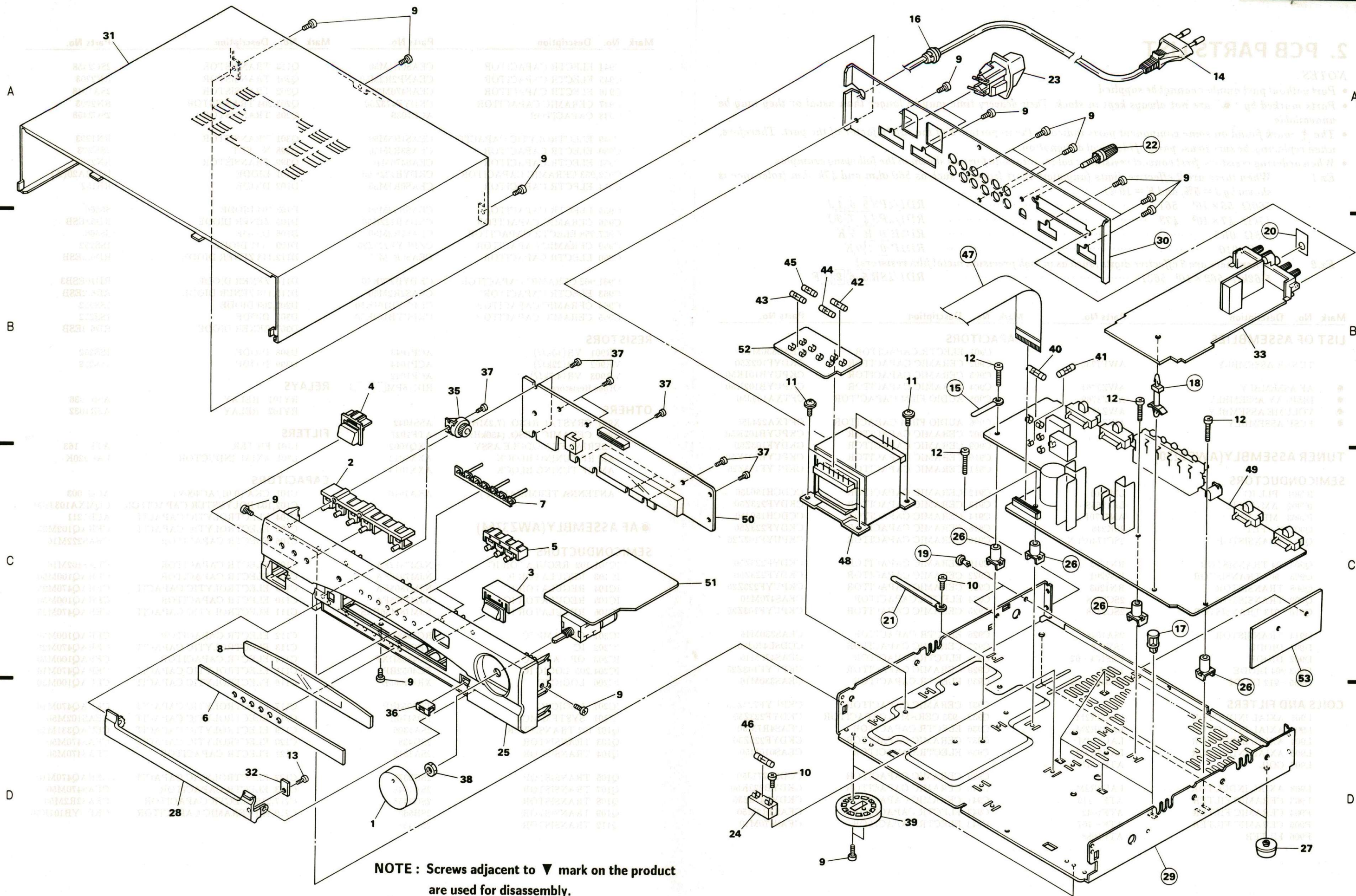
FS JAN. 1992 Printed in Japan

1. EXPLODED VIEWS AND PARTS LIST

NOTES:

- The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.
- The Δ 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.

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	VOL KNOB	AAB1259		31	METAL BONNET	ANE1323
	2	BAND BUTTON	AAD2100		32	MAGNET PLATE	ANG1558
	3	FUNCTION BUTTON	AAD2102		33	TUNER ASSEMBLY	AWE1230
	4	POWER BUTTON	AAD2104		34		
	5	TIMER BUTTON	AAD2105		35	DUMPER ASSY	AXA1013
	6	INTERNAL PANEL	AAK2221		36	MAGNET	AXX1016
	7	INDICATOR LENS	AAK2222		37	SCREW	BBZ26P080FMC
	8	PANEL	AAK2223		38	NUT	NK90FUC
	9	SCREW	ABA-298		39	FOOT ASSY(ABS)	RXA1448
	10	SCREW (STEEL)	ABA1009	Δ	40	FUSE(FU1 T2.5A)	AEK-512
	11	SCREW (STEEL)	ABA1011	Δ	41	FUSE(FU2 T1A)	AEK-508
	12	SCREW	ABA1018	Δ	42	FUSE(FU4 T5A)	AEK-515
Δ	13	SCREW (STEEL)	ABA1143	Δ	43	FUSE(FU5 T5A)	AEK-515
	14	AC POWER CORD	ADG1019	Δ	44	FUSE(FU6 T1.6A)	AEK-510
	15	BINDER	AEC-826	Δ	45	FUSE(FU7 T1.6A)	AEK-510
Δ	16	STRAIN RELIEF	AEC-882		46	FUSE(FU8 T2A)	AEK-511
	17	PCB SUPPORT	AEC1010		47	FFC	ADD1102
	18	PCB SPACER	AEC1100	Δ	48	POWER TRANSFORMER (T1)	ATT1178
	19	NYLON RIVET	AEC1160	●	49	AF ASSEMBLY	AWZ3764
	20	SPACER	AEC1236	●	50	DISPLAY ASSEMBLY	AWZ3769
	21	BINDER	AEP-215	●	51	VOLUME ASSEMBLY	AWZ3771
Δ	22	TERMINAL SCREW	AKE-031	●	52	FUSE ASSEMBLY	AWZ3975
Δ	23	AC SOCKET 1-P	AKP-508		53	SHIELD ASSY	AWZ4117
	24	FUSE HOLDER	AKR-038				
	25	FRONT PANEL	AMB1899				
	26	PCB MOLD	AMR1525				
	27	LEG ASSY(S)	AMR1937				
	28	SEALING DOOR ASSY	AMR2338				
	29	CHASSIS	ANA1160				
	30	REAR PANEL	ANC1786				



2. 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 Δ 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%).
- | | | | | | | | |
|--------------|------------------|-----|---------|---|---|---|---|
| 560 Ω | 56 $\times 10^1$ | 561 | RD1/4PS | 5 | 6 | 1 | J |
| 47k Ω | 47 $\times 10^3$ | 473 | RD1/4PS | 4 | 7 | 3 | J |
| 0.5 Ω | 0R5 | | RD2H | 0 | R | 5 | K |
| 1 Ω | 010 | | RD1P | 0 | 1 | 0 | K |
- Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
- | | | | | | | | | |
|----------------|-------------------|------|---------|---|---|---|---|---|
| 5.62k Ω | 562 $\times 10^1$ | 5621 | RD1/4SR | 5 | 6 | 2 | 1 | F |
|----------------|-------------------|------|---------|---|---|---|---|---|

Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES			
		TUNER ASSEMBLY	AWE1230
●		AF ASSEMBLY	AWZ3764
●		DISPLAY ASSEMBLY	AWZ3769
●		VOLUME ASSEMBLY	AWZ3771
●		FUSE ASSEMBLY	AWZ3975
TUNER ASSEMBLY(AWE1230)			
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 AND FILTERS			
	L901	AXIAL INDUCTOR	LAU2R2M
	L903	AXIAL INDUCTOR	LAU2R2M
	L904	AXIAL INDUCTOR	LAU010M
	L905	AXIAL INDUCTOR	LAU2R2M
	L907	COIL	ATE – 079
	L908	AXIAL INDUCTOR	LAU2R2M
	F903	CERAMIC FILTER	ATF – 119
	F904	CERAMIC FILTER	ATF1042
	F905	CERAMIC FILTER	ATF – 107
	F906	FILTER	ATF1088

Mark	No.	Description	Parts No.
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
	C909	CERAMIC CAPACITOR	CKDYF103Z50
	C910	CERAMIC CAPACITOR	CKPUYB101K50
	C911	CERAMIC CAPACITOR	CKPUYF103Z25
	C912	CERAMIC CAPACITOR	CCDCH150J50
	C913	CERAMIC CAPACITOR	CKDYF223Z50
	C914	CERAMIC CAPACITOR	CCDCH150J50
	C915	CERAMIC CAPACITOR	CKDYF223Z50
	C916	CERAMIC CAPACITOR	CKPUYF103Z25
	C919	CERAMIC CAPACITOR	CKDYF223Z50
	C922	CERAMIC CAPACITOR	CKDYF223Z50
	C923	CERAMIC CAPACITOR	CKPUYF223Z25
	C924	ELECTR.CAPACITOR	CEAS470M10
	C925	CERAMIC CAPACITOR	CKPUYF103Z25
	C926	ELECTR.CAPACITOR	CEAS330M16
	C927	CERAMIC CAPACITOR	CCDSL470J50
	C928	ELECTR.CAPACITOR	CEAS470M10
	C929	CERAMIC CAPACITOR	CKPUYF103Z25
	C930	ELECTR.CAPACITOR	CEAS330M16
	C931	CERAMIC CAPACITOR	CKPUYF223Z25
	C932 – 935	CERAMIC CAPACITOR	CKDYF223Z50
	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

Mark	No.	Description	Parts No.
	C944	ELECTR.CAPACITOR	CEAS0R1M50
	C945	ELECTR.CAPACITOR	CEANP2R2M50
	C946	ELECTR.CAPACITOR	CEAS470M25
	C947	CERAMIC CAPACITOR	CKDYF473Z50
	C948	CAPACITOR	ACE1039
	C949	ELECTROLYTIC CAPACIT	CEAS1R5M50
	C950	ELECTR.CAPACITOR	CEAS3R3M50
	C951	ELECTR.CAPACITOR	CEAS470M10
	C952,953	CERAMIC CAPACITOR	CKDYB122K50
	C954	ELECTR.CAPACITOR	CEAS0R1M50
	C955	ELECTR.CAPACITOR	CEASR22M50
	C956	CERAMIC CAPACITOR	CKDYB122K50
	C957,958	ELECTR.CAPACITOR	CEAS2R2M50
	C959	CERAMIC CAPACITOR	CKPUYF223Z25
	C960	ELECTR.CAPACITOR	CEAS0R1M50
	C961,962	CERAMIC CAPACITOR	CKDYB272K50
	C963	ELECTR.CAPACITOR	CEAS2R2M50
	C964	CERAMIC CAPACITOR	CKPUYB101K50
	C965	CERAMIC CAPACITOR	CKPUYB102K50
RESISTORS			
	VR901	VR(10k Ω)	ACP1043
	VR902	VR(22k Ω)	ACP1044
	VR903	VR(4.7k Ω)	ACP1042
	Other Resistors		RD1/8PM□□□J
OTHERS			
	X901	CRYSTAL RESO. (7.2MHz)	ASS1042
	X902	CERAMIC RESO. (450kHz)	ATF1027
	2 SERIAL FE MODULE ASSY		AXQ1002
	AM RF TUNING BLOCK		AXX1012
	AM RF TUNING BLOCK		AXX1013
	ANTENNA TERMINAL (4P)		AKA1010
●AF ASSEMBLY(AWZ3764)			
SEMICONDUCTORS			
	IC101,102	REGULATOR IC	NJM7812FA
	IC103	REGULATOR IC	NJM7912FA
	IC104	REGULATOR IC	NJM7805FA
	IC105	REGULATOR IC	NJM7905FA
	IC106	REGULATOR IC	NJM78M56FAS
	IC201	OP – AMP IC	RC4558DXP
	IC202	IC	UPC4570C
	IC203	OP – AMP IC	RC4558DXP
	IC204,205	LOGIC IC	TC4052BP
	IC206	LOGIC IC	XRU4066B
	IC207	LOGIC IC	TC4053BP
	IC301	SYSTEM MCU	PD5170B
	Q101,102	TRANSISTOR	2SA1306
	Q103	TRANSISTOR	2SD438
	Q104	TRANSISTOR	2SA1515
	Q105	TRANSISTOR	2SC3377
	Q107	TRANSISTOR	2SA1048
	Q108	TRANSISTOR	2SC2458
	Q109	TRANSISTOR	2SB560
	Q112	TRANSISTOR	2SD438

Mark	No.	Description	Parts No.
	Q113	TRANSISTOR	2SC2458
	Q201	TRANSISTOR	RN2203
	Q202	TRANSISTOR	2SA1048
	Q203,204	TRANSISTOR	RN2203
	Q205	TRANSISTOR	2SC2458
	Q301	TRANSISTOR	RN1203
	Q398	N – FET	2SK373
	Q399	TRANSISTOR	RN2203
	D101	DIODE	D3SBA20(A)
	D102	DIODE	RB152
	D103,104	DIODE	S5566
	D105	ZENER DIODE	RD33ESB
	D106	DIODE	S5566
	D109 – 111	DIODE	1SS252
	D112,113	ZENER DIODE	RD6.2ESB
	D114	ZENER DIODE	RD10ESB3
	D115,116	ZENER DIODE	RD6.2ESB
	D202,203	DIODE	1SS252
	D301	DIODE	1SS252
	D307	ZENER DIODE	RD6.2ESB
	D308	DIODE	1SS252
	D399	DIODE	1SS252
RELAYS			
	RY101	RELAY	ASR1036
	RY102	RELAY	ASR1032
FILTERS			
	L101	FILTER	ATF – 163
	L301	AXIAL INDUCTOR	LAU220K
CAPACITORS			
	C101	CKA (0.01/AC400V)	ACG1003
	C102,103	POLYESTER CAPACITOR	CQMXA103J100
	C104	ELECTROLYTIC CAPACIT	ACH1211
	C105	ELECTROLYTIC CAPACIT	CEHAQ102M35
	C106	ELECTR.CAPACITOR	CEAS222M16
	C107	ELECTR.CAPACITOR	CEAS102M16
	C108	ELECTR.CAPACITOR	CEHAQ100M50
	C109	ELECTROLYTIC CAPACIT	CEHAQ470M25
	C110	ELECTR.CAPACITOR	CEHAQ100M50
	C111	ELECTROLYTIC CAPACIT	CEHAQ470M25
	C112	ELECTR.CAPACITOR	CEHAQ100M50
	C113	ELECTROLYTIC CAPACIT	CEHAQ470M25
	C114	ELECTR.CAPACITOR	CEHAQ100M50
	C115	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C116	ELECTROLYTIC CAPACIT	CEHAQ100M50
	C117	ELECTROLYTIC CAPACIT	CEHAQ470M16
	C118	ELECTROLYTIC CAPACIT	CEAS102M50
	C119	ELECTROLYTIC CAPACIT	CEHAQ331M50
	C120	ELECTROLYTIC CAPACIT	CEAS470M50
	C121	ELECTR.CAPACITOR	CEAS470M50
	C122	ELECTROLYTIC CAPACIT	CEHAQ470M10
	C123	ELECTR.CAPACITOR	CEAS470M50
	C217,218	ELECTR.CAPACITOR	CEAS2R2M50
	C219,220	CERAMIC CAPACITOR	CKPUYB101K50

Mark	No.	Description	Parts No.
	C225,226	ELECTR.CAPACITOR	CEAS470M10
	C231,232	CERAMIC CAPACITOR	CKPUYB101K50
	C235	CERAMIC CAPACITOR	CKDYB562K50
	C236	CERAMIC CAPACITOR	CKCYB562K50
	C237,238	CERAMIC CAPACITOR	CKCYB152K50
	C239,240	ELECTR.CAPACITOR	CEAS3R3M50
	C241,242	ELECTR.CAPACITOR	CEAS470M10
	C243,244	ELECTR.CAPACITOR	CEAS100M25
	C249,250	ELECTR.CAPACITOR	CEAS100M25
	C257	CERAMIC CAPACITOR	CKCYX103M25
	C301	CERAMIC CAPACITOR	CKCYX473M25
	C302	CERAMIC CAPACITOR	CKCYF473Z50
	C303	ELECTR.CAPACITOR	CEAS470M16
	C304	CERAMIC CAPACITOR	CKCYX473M25
	C305	ELECTR.CAPACITOR	CEAS010M50
	C306	CERAMIC CAPACITOR	CKCYB102K50
	C307	CERAMIC CAPACITOR	CKDYB102K50

RESISTORS

R102	METAL OXIDE RESISTOR	RS1LMF102J
R104	METAL OXIDE RESISTOR	RS1LMF102J
R106	METAL OXIDE RESISTOR	RS1LMF562J
R107	FUSIBLE RESISTOR	RFA1/4PL4R7J
R116	METAL OXIDE RESISTOR	RS3LMF151J
R117	METAL OXIDE RESISTOR	RS3LMF181J
R119,120	CARBON FILM RESISTOR	RD1/4PMF470J
R121-124	CARBON FILM RESISTOR	RD1/4PM100J
R127	METAL OXIDE RESISTOR	RS1LMF180J
R245,246	CARBON FILM RESISTOR	RD1/4PM820J
R305	RESISTOR ARRAY (56k Ω)	RA5T563J
R312	RESISTOR ARRAY (56k Ω)	RA5T563J
R345	RESISTOR ARRAY (56k Ω)	RA5T563J
Other Resistors		RD1/8PM□□□J

OTHERS

X301	CERAMIC RESO. (4MHz)	ASS1025
CN2	CONNECTOR(15P)	KPE15
CN3	CONNECTOR(13P)	KPE13
CN5	SOCKET(27P)	AKP1099
CN6	SOCKET(10P)	AKP1073
CN7	SOCKET(9P)	AKP1072
JACK		AKN-203
PIN JACK(6P)		AKB1121
PIN JACK(6P)		AKB1129
SCREW		BBZ30P080FZK
SOCKET(15P)		AKP1049

●DISPLAY ASSEMBLY(AWZ3769)**SEMICONDUCTORS**

IC701	LOGIC IC	SN74LS42N
IC702	CONTROL MCU	PDG075A
Q701	TRANSISTOR	XDC143ES
Q702	TRANSISTOR	2SC2458
D701	DIODE	1SS252
D702-708	LED(RED)	AEL1108
D709-711	DIODE	1SS252
D712	ZENER DIODE	RD6.2ESB

Mark	No.	Description	Parts No.
------	-----	-------------	-----------

D713-721 DIODE

1SS252

SWITCHES

S701-716 SWITCH

ASG1034

SURROUND MODE, FUNC,
STATION MEMORY, LOCAL/DX,
SET, WAKE UP, REC, CLOCK ADJ,
AUDITION, CENTER MODE,
DELAY TIME, POWER, BAND,
FREQ/ST, DOWN, UP

FILTER

L701 AXIAL INDUCTOR

LAU220K

CAPACITORS

C702	ELECTROLYTIC CAPACIT	CEJA4R7M35
C703	CERAMIC CAPACITOR	CKCYF223Z50
C704	CERAMIC CAPACITOR	CKPUYF473Z16
C705	ELECTR.CAPACITOR	CEJA010M50
C706	ELECTR.CAPACITOR	CEAS2R2M50

C707	CERAMIC CAPACITOR	CKCYB102K50
C708	ELECTR.CAPACITOR	CEJA470M10
C709	CERAMIC CAPACITOR	CKCYX473M25
C710	CEA (47000/5.5V)	ACH1037
C711	ELECTR.CAPACITOR	CEJA470M10

C712	ELECTR.CAPACITOR	CEAS4R7M50
C713	CERAMIC CAPACITOR	CKPUYF473Z16
C715	ELECTR.CAPACITOR	CEAS471M10
C716	CERAMIC CAPACITOR	CKDYB472K50

RESISTORS

R734	RESISTOR ARRAY (47k Ω)	RA8S473J
R745	RESISTOR ARRAY (47k Ω)	RA8S473J
R746	RESISTOR ARRAY (47k Ω)	RA11S473J
Other Resistors		RD1/8PM□□□J

OTHERS

V701	FL TUBE	AAV1138
X702	CRYSTAL RESO. (8MHz)	ASS1015
CN4	SOCKET(27P)	AKP1099
	REMOTE RECEIVER UNIT	AXX1010

●VOLUME ASSEMBLY(AWZ3771)**SEMICONDUCTORS**

IC1601	MECHANISM DRIVER IC	TA7291S
IC1602	IC	UPC4570C
Q1601,1602	TRANSISTOR	2SC2878
Q1605	TRANSISTOR	RN2203

FILTER

L1601	AXIAL INDUCTOR	LAU221K
-------	----------------	---------

CAPACITORS

C1601-1604	ELECTR.CAPACITOR	CEAS2R2M50
C1605,1606	ELECTR.CAPACITOR	CEAS100M25
C1607,1608	ELECTR.CAPACITOR	CEAS101M16
C1609,1610	CERAMIC CAPACITOR	CKCYX104M25
C1627	CERAMIC CAPACITOR	CKCYX473M25

C1629,1630	CERAMIC CAPACITOR	CKCYB331K50
C1631	ELECTR.CAPACITOR	CEAS101M16

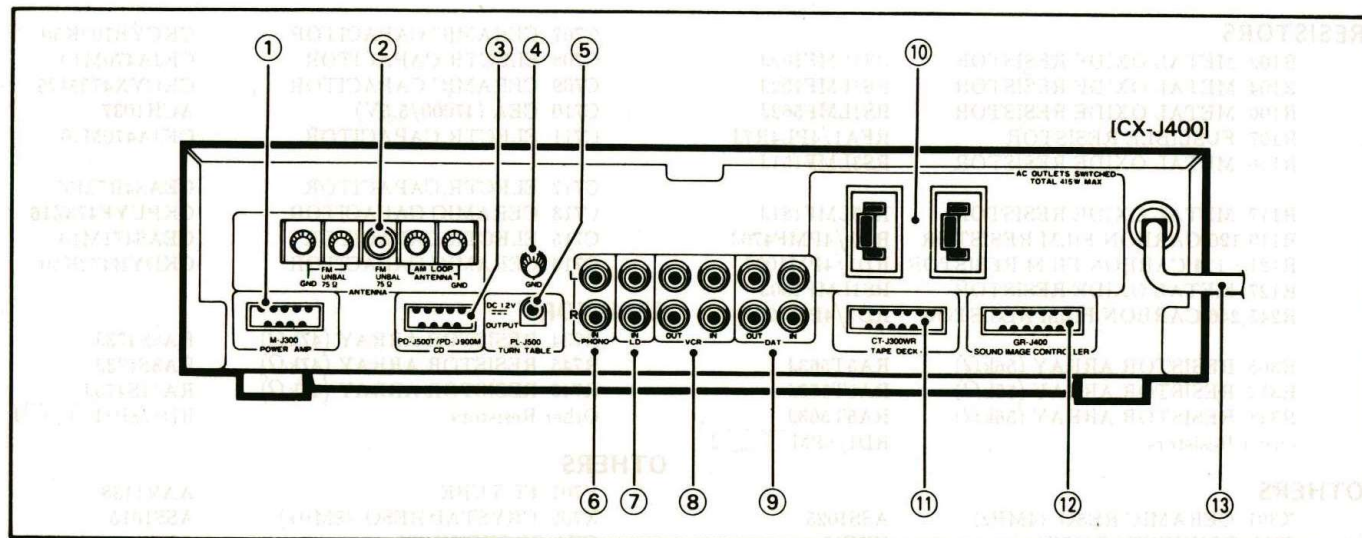
Mark	No.	Description	Parts No.
RESISTORS			
	VR1601	VARIABLE RESISTOR	ACX1064
	R1613,1614	CARBON FILM RESISTOR	RD1/4PM121J
	Other Resistors		RD1/8PM□□□J

● FUSE ASSEMBLY(AWZ3975)

FUSE assembly has no service part.

3. PANEL FACILITIES

REAR PANEL FACILITIES



① POWER AMP jack

Connect the power amplifier (M-J200/M-J300) system cable here.

② FM/AM ANTENNA terminals

Antennas must be connected to these terminals: otherwise you will not be able to receive stations. See page 11 for details on ANTENNA CONNECTIONS.

③ CD jack

Connect the compact disc player (PD-J400T/PD-J500T/PD-J800M/PD-J900M) system cable here.

④ Ground terminal (GND)

Connect this to the ground terminal on the turntable (except for PL-J400/PL-J500).

⑤ TURNTABLE (DC 12V OUTPUT) jack

This jack supplies power to the turntable PL-J400/PL-J500.

⑥ PHONO input jacks

Connect the audio output cord of the turntable to these jacks.

⑦ LD input jacks

Connect to the output jacks of the LD player.

⑧ VCR jacks

IN : Connect to the audio output jacks of VCR.

OUT : Connect to the audio input jacks of VCR.

⑨ DAT jacks

IN : Connect to the analog audio output jacks of the digital audio tape deck.

OUT : Connect to the analog audio input jacks of the digital audio tape deck.

⑩ AC OUTLETS (SWITCHED TOTAL 415 W MAX)

Power supplied through this outlet is turned on and off by the tuner control amplifier's POWER switch. Total electrical power consumption of connected equipment should not exceed 415 W. PD-J400T/PD-J500T or PD-J800M/PD-J900M CD player power cords, and the M-J200/M-J300 power amplifier cords can be connected.

NOTE:

Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk.

This can cause the tuner control amplifier to malfunction.

CAUTION:

DO NOT CONNECT TV SET OR MONITOR.

⑪ TAPE DECK jack

Connect the cassette deck system cable here.

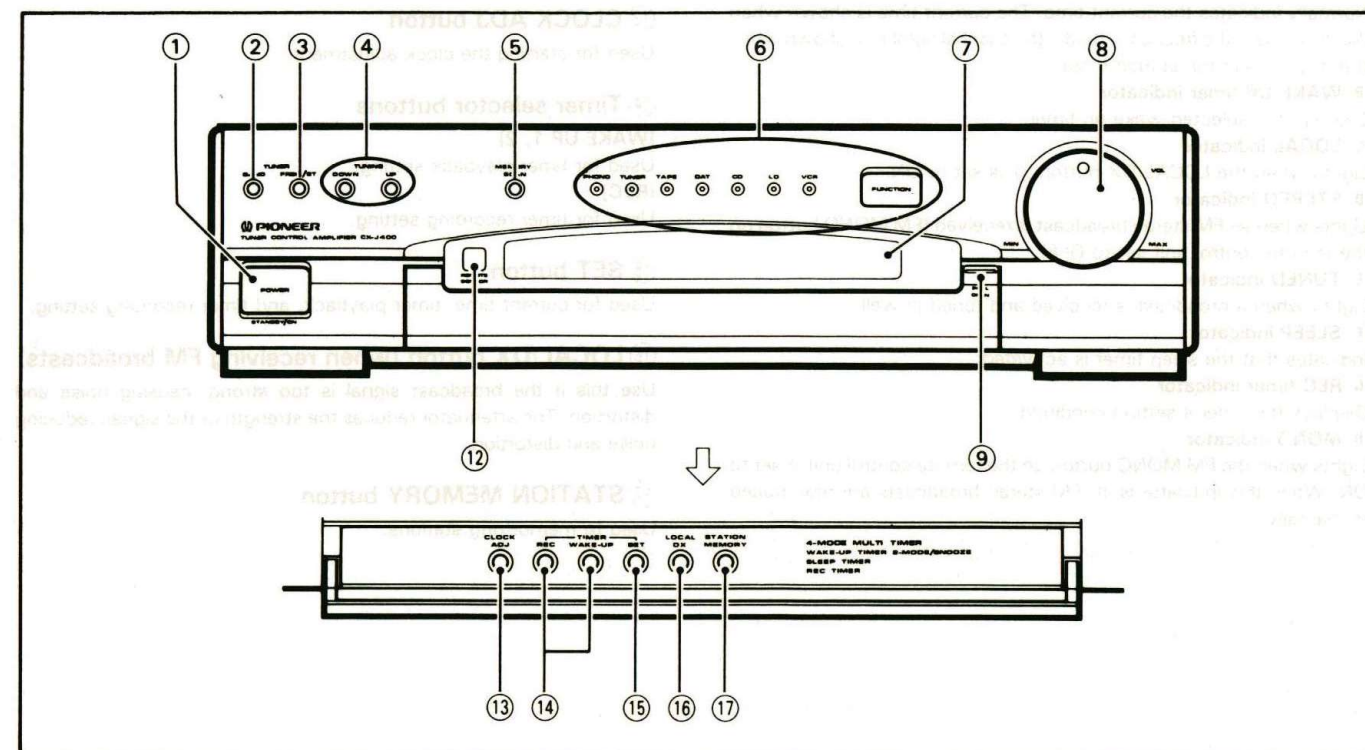
⑫ SOUND IMAGE CONTROLLER jack

Connect the sound image controller system cable here.

⑬ Power cord

Connect this to the AC wall socket.

FRONT PANEL FACILITIES



① 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.

• When only the time is indicated in the display section, the unit is in STANDBY.

② BAND selector button

Each time this button is pressed, FM, MW or LW (U.K. and European models only) reception is selected in order.

③ FREQ/ST (Frequency/Station) button

Press to switch between frequency and station modes.

④ TUNING (UP, DOWN) buttons

[During tuning]

• When in the Frequency mode, use to raise and lower the reception frequency.

• When in the Station mode, use to raise and lower the station number.

[During time and timer setting]

Used for adjusting the clock, timer settings and its relayed adjustments.

⑤ MEMORY SCAN button

Press this button to scan programs on the preset stations automatically for 7 seconds each. If you wish to continue listening to the station currently being scanned, press this button again to lock the tuning to the station. This will cancel the preset scan function and return you to normal reception.

⑥ FUNCTION button/indicators

Each time you press the FUNCTION button, the tuner control amplifier function changes. The selected function's indicator lights.

[PHONO]

Select to play records on a turntable connected to the PHONO input jacks.

[TUNER]

Select to listen to radio broadcast.

[TAPE]

Select to listen to cassette tape.

[DAT]

Select to listen a DAT playing on a digital audio tape deck connected to the DAT jacks.

[CD]

Select to listen to compact disc.

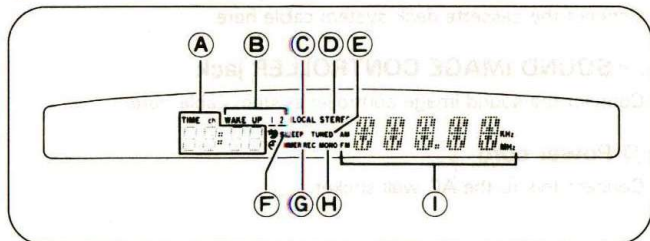
[LD]

Select to play an LD on a video disc player connected to the LD input jacks.

[VCR]

Select to play a tape on a video cassette recorder connected to the VCR jacks.

⑦ Display section

**A Time/channel indicator**

Normally indicates the current time. The current time is shown when the display is in the frequency mode; the channel number is shown when the display is in the station mode.

B WAKE UP timer indicator

Displays the selected wake up timer.

C LOCAL indicator

Lights when the LOCAL/DX button ⑮ is set to ON.

D STEREO indicator

Lights when an FM stereo broadcast is received (FM MONO button on the remote control unit set to OFF).

E TUNED indicator

Lights when a broadcast is received and tuned in well.

F SLEEP indicator

Indicates that the sleep timer is activated.

G REC timer indicator

Displays the timer's setting condition.

H MONO indicator

Lights when the FM MONO button on the remote control unit is set to ON. When this indicator is lit, FM stereo broadcasts are reproduced monaurally.

① Frequency display

Shows received broadcast frequency. Also gives scrolling display of main function status.

FM and MHz light: FM reception.

AM and kHz light: MW or LW (U.K. and European models only) reception.

⑧ VOL (volume) control**⑨ Open this with your finger.****⑫ Remote sensor window****⑬ CLOCK ADJ button**

Used for starting the clock adjustment.

⑭ Timer selector buttons

[WAKE-UP 1, 2]

Used for timer playback setting.

[REC]

Used for timer recording setting.

⑮ SET button

Used for current time, timer playback, and timer recording setting.

⑯ LOCAL/DX button (when receiving FM broadcasts)

Use this if the broadcast signal is too strong, causing noise and distortion. The attenuator reduces the strength of the signal, reducing noise and distortion.

⑰ STATION MEMORY button

Used to memorizing stations.

4. SPECIFICATIONS

FM Tuner Section

Reception frequency range..... 87.5 MHz to 108.0 MHz

Usable Sensitivity Mono: 12.8 dBf, IHF
(1.2 μ V/75 Ω)

Sensitivity (DIN)..... MONO (S/N 26 dB: 1 μ V/75 Ω)
STEREO (S/N 46 dB: 1 μ V/75 Ω)

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 %, 1kHz

Antenna input 75 Ω unbalanced

AM (MW) Tuner Section

Frequency Range (For European and multi-voltage models)

..... 531 kHz to 1,602 kHz

(For multi-voltage models) 530 kHz to 1,700 kHz

Sensitivity (IHF, Loop antenna) 350 μ V/m

Antenna Loop antenna

LW Tuner Section

(For LW equipped models only)

Frequency range 153 kHz to 281 MHz

Sensitivity (IHF, Loop antenna) 1,500 μ V/m

Antenna Loop antenna

Electrical Section, Other**Power requirements**

European models AC 220 – 230 V, 50/60 Hz

U.K. models AC 240 V, 50/60 Hz

Multi-voltage models AC 110/120–127/220/240 V
(switchable), 50/60 Hz

Power consumption

European models 40 W

Multi-voltage models 50 W

AC outlet Switched: 20 W or less

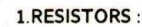
External dimensions 360 (W) x 90.5 (H) x 345 (D) mm

Weight 4.5 kg

* Measured by Audio Spectrum Analyzer.

5. SCHEMATIC DIAGRAMS AND PCB CONNECTIONS DIAGRAMS

OVERALL WIRING DIAGRAM



Indicated in Ω , $1/4W$, $1/6W$ and $1/8W$, $\pm 5\%$ tolerance unless otherwise noted k; k Ω , M; M Ω , (F); $\pm 1\%$, (G); $\pm 2\%$, (K); $\pm 10\%$, (M); $\pm 20\%$ 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 :

□; DC voltage (V) at no input signal unless otherwise noted.
Value in () is DC voltage at rated power.
↺mA or ←mA; DC current at no input signal unless
otherwise noted.

4.OTHERS :

➔ ; Signal route.

⊗ ; Adjusting point

▼(red): Measuring 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.

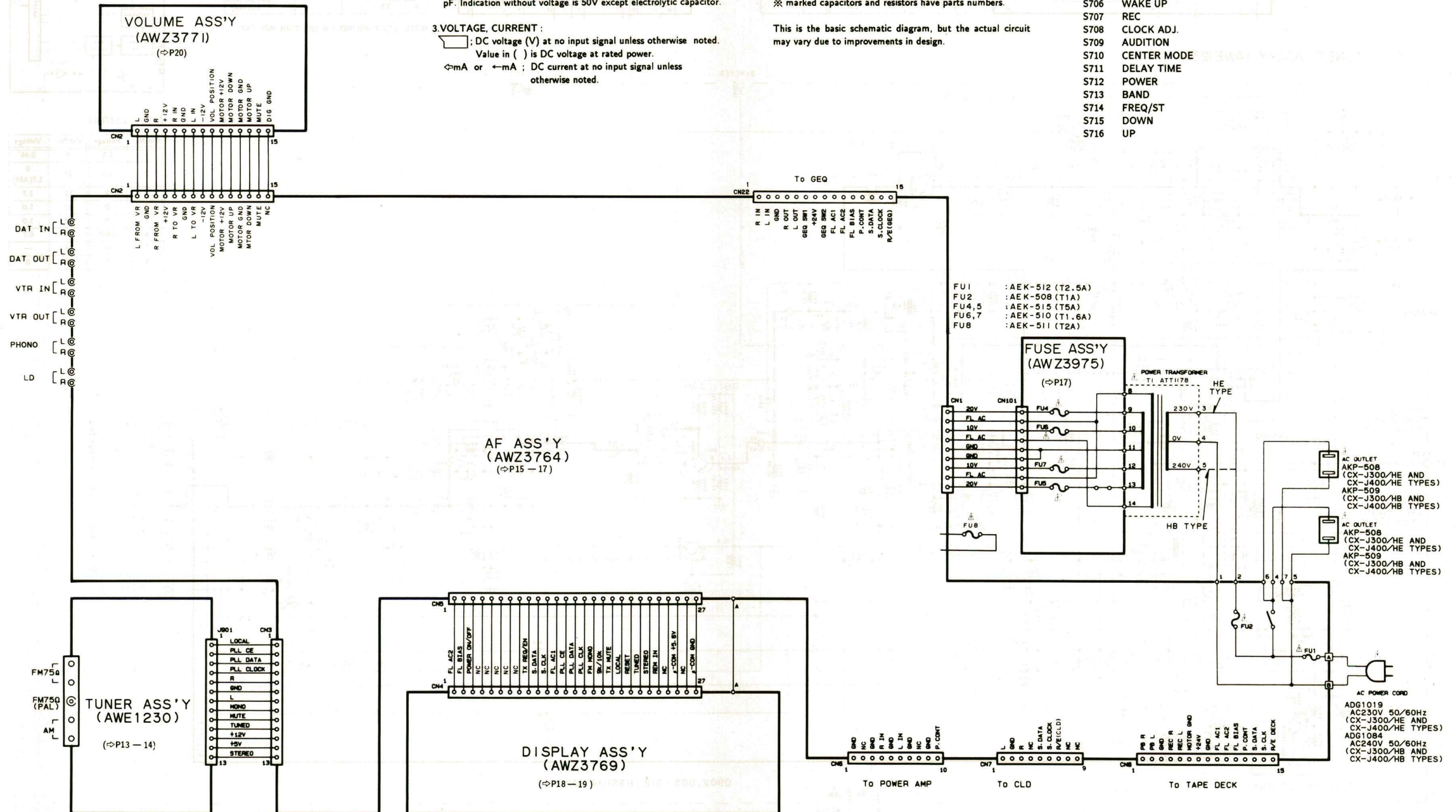
※ marked capacitors and resistors have parts numbers.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

5. SWITCHES : (The underlined indicates the switch position)

DISPLAY ASSEMBLY

S701	SURROUND MODE
S702	FUNC
S703	STATION MEMORY
S704	LOCAL/DX
S705	SET
S706	WAKE UP
S707	REC
S708	CLOCK ADJ.
S709	AUDITION
S710	CENTER MODE
S711	DELAY TIME
S712	POWER
S713	BAND
S714	FREQ/ST
S715	DOWN
S716	UP



AF AND FUSE ASSY

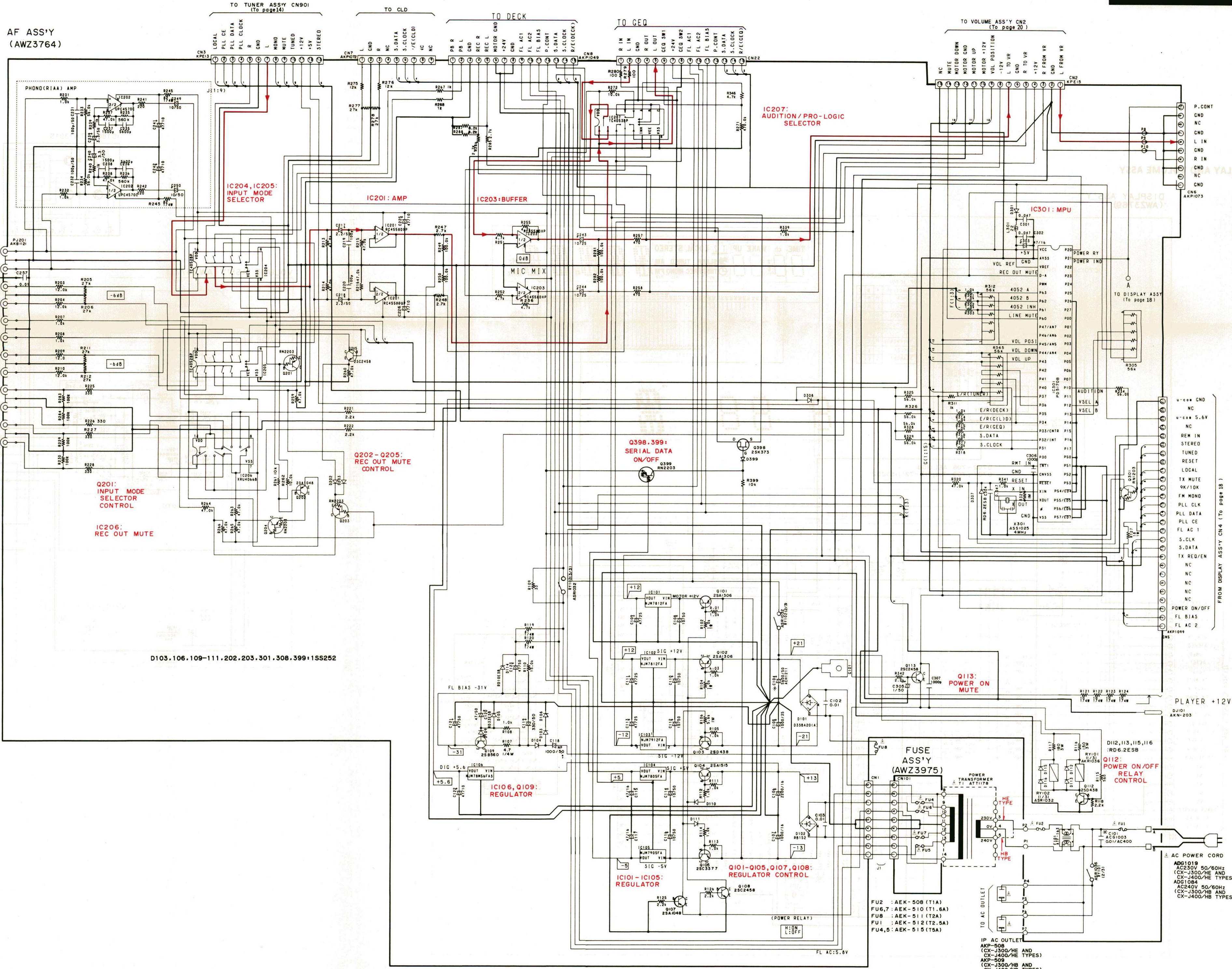
CX-J400, CX-J300

AF ASS'Y
(AWZ3764)

FUNCTION SELECTION

	INH	A	B
PHONO	L	L	L
CLD	L	H	L
TUNER	L	L	H
TAPE	L	H	H
LD	H	L	H
VTR	H	H	H
DAT	H	L	L

A: Pin6 of IC301
B: Pin7 of IC301
INH: Pin8 of IC301



D103, 106, 109-111, 202, 203, 301, 308, 399: 1SS252

FUSE ASS'Y
(AWZ3975)

FU2 : AEK-508 (T1A)
FU6,7 : AEK-510 (T1.6A)
FU8 : AEK-511 (T2A)
FU1 : AEK-512 (T2.5A)
FU4,5 : AEK-515 (T5A)

AC POWER CORD
ADG1019
AC230V 50/60Hz
CX-J300/HE AND
CX-J400/HE TYPES)
ADG1084
AC240V 50/60Hz
(CX-J300/HE AND
CX-J400/HE TYPES)

DISPLAY AND VOLUME ASSY

DISPLAY ASS'Y
(AWZ3769)

IC701: LED DRIVER

FUNCTION SELECTION
OF IC701

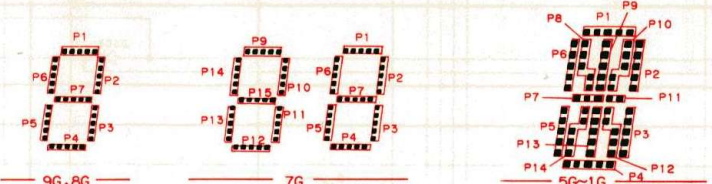
FUNCTION	A	B	C
TUNER	H	H	H
TAPE	L	H	H
CLD(CD)	H	L	H
VTR	H	H	L
DAT	L	H	L
TV(PHONO)	H	L	L
BS(LD)	L	L	L
STANDBY	L	L	H

D702 - 708: AEL108
D701, 709-711, 713-721: ISS252

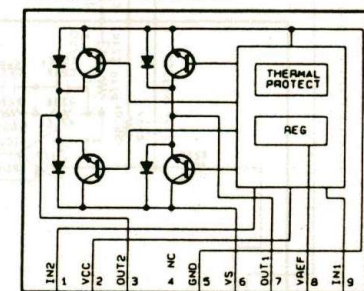
Q702: 50/60Hz DETECT

Q701: RESET

IC702: TUNER CONTROL MPU



IC1601 TA7291S



VOLUME ASS'Y (AWZ3771)

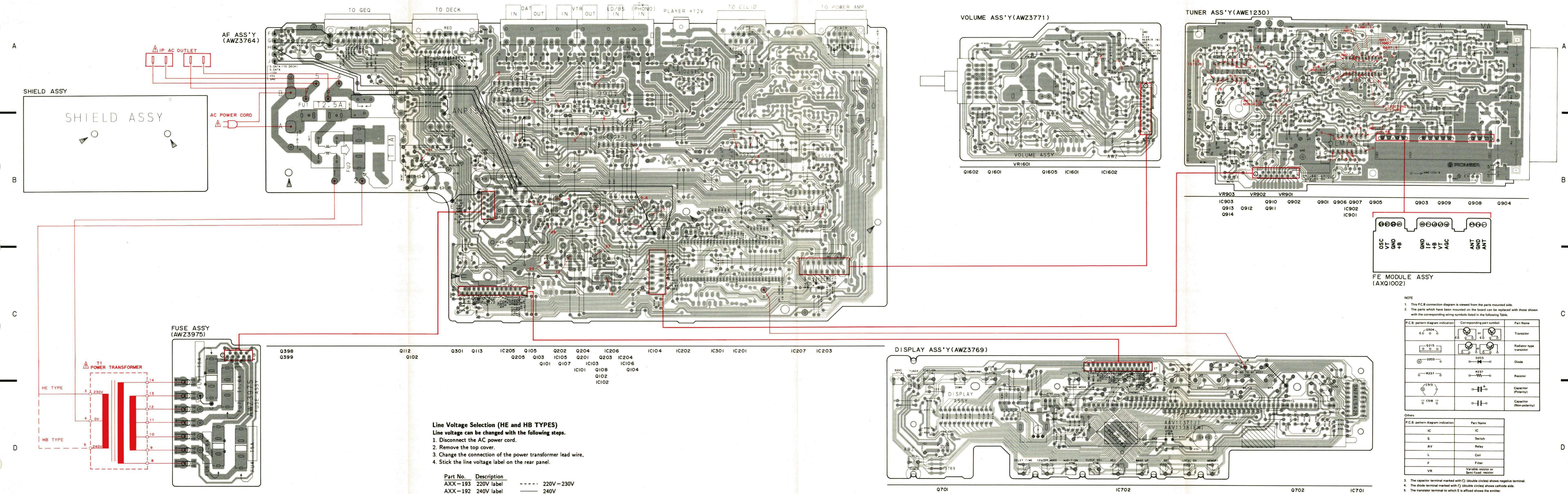
IC1601: MOTOR DRIVE

IC1602: AMP

Q1601,1602: MUTE

Q1605: LINE MUTE

TO AF ASSY CN2 (To page 17)



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.

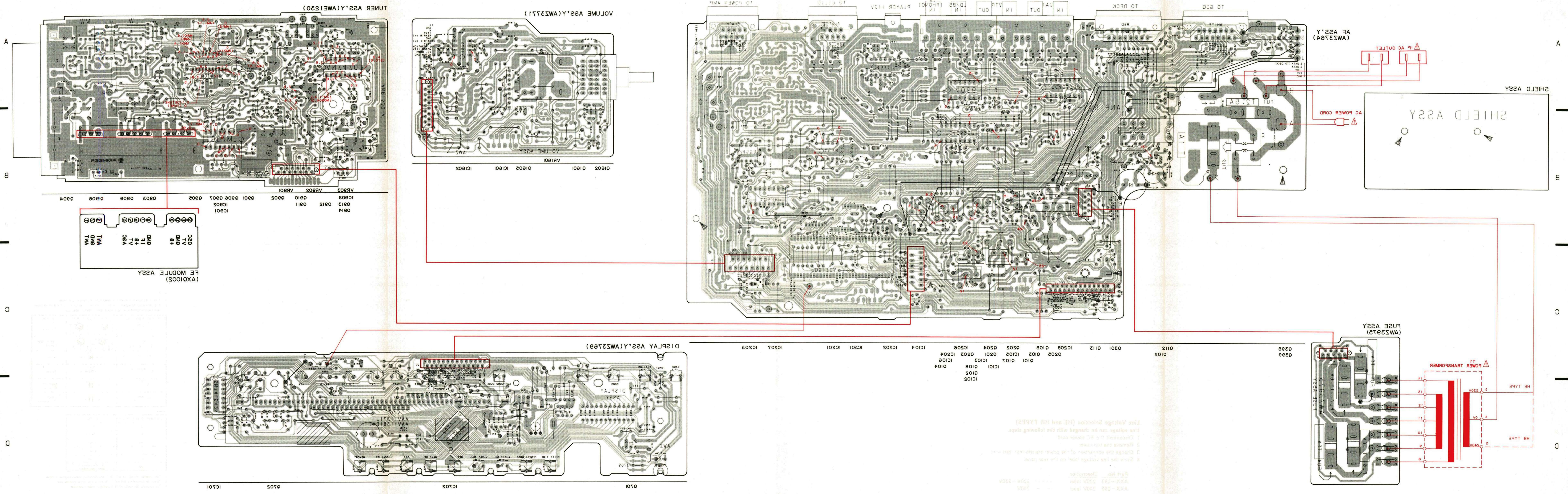
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
		Transistor
		Radiator type transistor
		Diode
		Resistor
		Capacitor (Polarity)
		Capacitor (Non-polarity)

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

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



6. ADJUSTMENTS

- As to connections and points to be adjusted, refer to Fig. 6-1, Fig. 6-2 and Fig. 6-3.

6.1 AM TUNER ADJUSTMENT

- Set the BAND selector to "AM".

Step No.	Adjustment Title	AM SG(400Hz, 30% modulation)		Reception Frequency Display	Adjustment	
		Frequency(kHz)	Level(dB μ V/m)		Adjustment Location	Specifications
1	TUNED indicator sensitivity adjustment	999	55 $\pm$ 5	999kHz	VR901	Adjust so that the indicator lights up.

6.2 FM TUNER ADJUSTMENT

- Set the BAND selector to "FM".
- Perform VCO adjustment two minutes or more after turning the power ON.

Note : Stereo modulation : Main 1 kHz L + R $\pm$ 68.25 Hz dev.

Pilot 19 kHz $\pm$ 6.75 kHz dev .

Step No.	Adjustment Title	FM SG(1kHz $\pm$ 75kHz dev.)		Reception Frequency Display	Adjustment	
		Frequency(MHz)	Level(dB μ V)		Adjustment Location	Specifications
1	Detector coil T-meter adjustment	98.0	80	98.0MHz	L907	Adjust so that the DC voltage between TP901 and TP902 is $\pm$ 50mV.
2	VCO adjustment	98.0 (No modulation)	80	98.0MHz	VR903	Adjust so that the frequency between TP905 and GND is 76 $\pm$ 0.5kHz
3	TUNED indicator sensitivity adjustment	98.0	18 $\pm$ 3	98.0MHz	VR902	Adjust so that the indicator lights up.

6. REGLAGE

- Les raccordements et les points de réglages sont représentés à la Fig. 6-1, Fig. 6-2 et Fig. 6-3.

6.1 REGLAGE DU SYNTONISEUR AM

- Placer le sélecteur BAND sur la position "AM".

Etape No	Items de réglage	AM SG(400Hz, 30% modulation)		Affichage de fréquence de réception	Réglage	
		Fréquence(kHz)	Niveau(dB μ V/m)		Lieu de réglage	Caractéristiques
1	Indicateurs de TUNED niveau d'éclairement	999	55 $\pm$ 5	999kHz	VR901	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

6.2 REGLAGE DU SYNTONISEUR AM

- Placer le sélecteur BAND sur la position "FM".
- Régler le VCO après deux minutes (ou plus) de mise sous tension.

Note : Modulation stéréo : Principal 1 kHz L + R $\pm$ 68,25 Hz dév.

Pilote 19 kHz $\pm$ 6,75 kHz dév.

Etape No	Items de réglage	FM SG(1kHz $\pm$ 75kHz dev.)		Affichage de fréquence de réception	Réglage	
		Fréquence(MHz)	Niveau(dB μ V)		Lieu de réglage	Specifications
1	Réglage de la bobine de détection	98,0	80	98,0MHz	L907	Régler de manière que la tension continue entre TP901 et TP902 soit égale à $\pm$ 50mV.
2	Réglage du VCO	98,0 (sans modulation)	80	98,0MHz	VR903	Régler de manière que la fréquence entre TP905 et GND soit égale à 76 $\pm$ 0,5 kHz.
3	Indicateurs de TUNED niveau d'éclairement	98,0	18 $\pm$ 3	98,0MHz	VR902	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

6. AJUSTE

- Para las conexiones y puntos de ajuste, refiérase a la Fig. 6-1, Fig. 6-2 y Fig. 6-3.

6.1 AJUSTE DE LA SECCION DEL SINTONIZADOR DE AM

- Ajuste el selector BAND a la posición "AM".

N°. de paso	Items de ajuste	AM SG(400Hz, 30% modulation)		Frecuencimetro de resepción	Ajuste	
		Frecuencia(kHz)	Nivel(dB μ V/m)		Lugar de ajuste	Especificaciones
1	Nivel de iluminación de TUNED	999	55 $\pm$ 5	999kHz	VR901	Ajústelo de forma que los indicadores de TUNED comiencen a encenderse.

6.2 AJUSTE DE LA SECCION DEL SINTONIZADOR DE FM

- Ajuste el selector BAND a la posición "FM".
- Realice el ajuste VCO dos minutos o mas despues de conectar la alimentacion.

Nota : Modulacion estereo : Principal : 1 kHz L + R $\pm$ 68,25 Hz dev.

Pilote 19 kHz $\pm$ 6,75 kHz dev.

N°. de paso	Items de ajuste	FM SG(1kHz $\pm$ 75kHz dev.)		Frecuencimetro de recepción	Ajuste	
		Frecuencia(MHz)	Nivel(dB μ V)		Lugar de ajuste	Especificaciones
1	Ajuste del medidor T de la bobina detectora	98,0	80	98,0MHz	L907	Ajuste de manera que la tensión de CC entre TP901 y TP902 sea de $\pm$ 50mV.
2	Ajuste VCO	98,0 (Sin modulación)	80	98,0MHz	VR903	Ajuste de manera que la frecuencia entre TP905 y GND sea de 76 $\pm$ 0,5kHz
3	Nivel de iluminación de TUNED	98,0	18 $\pm$ 3	98,0MHz	VR902	Ajústelo de forma que los indicadores de TUNED comiencen a encenderse.

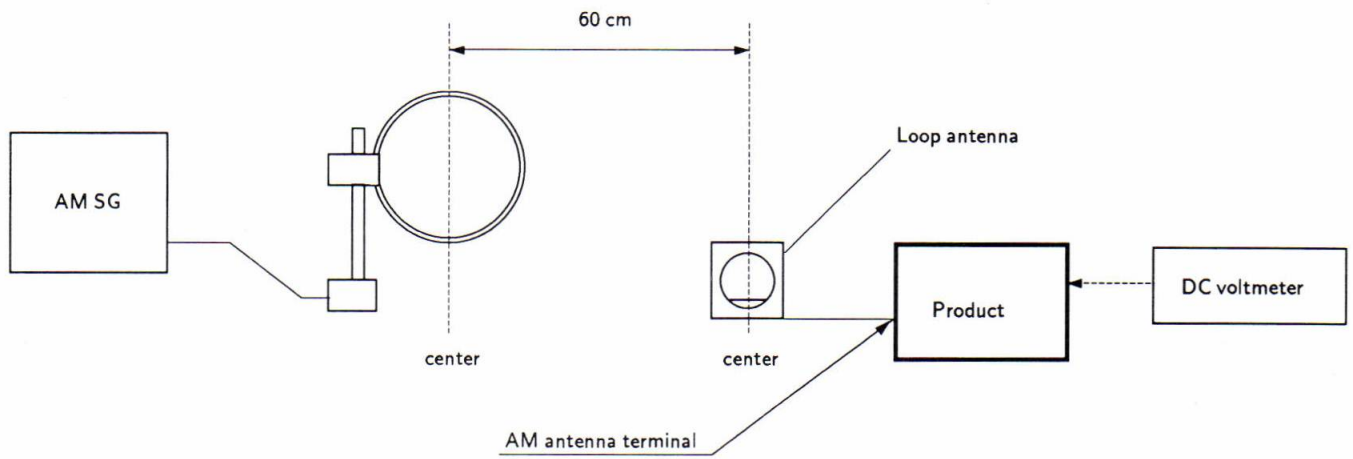


Fig. 6-1 AM Adjustment Connection Diagram

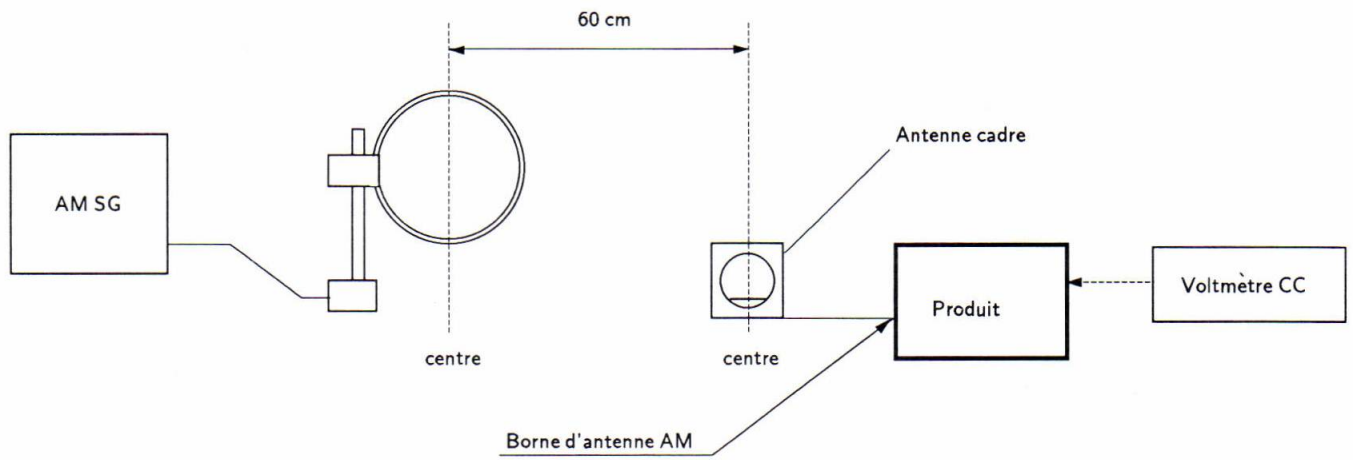


Fig. 6-1 Schéma de raccordement de réglage AM

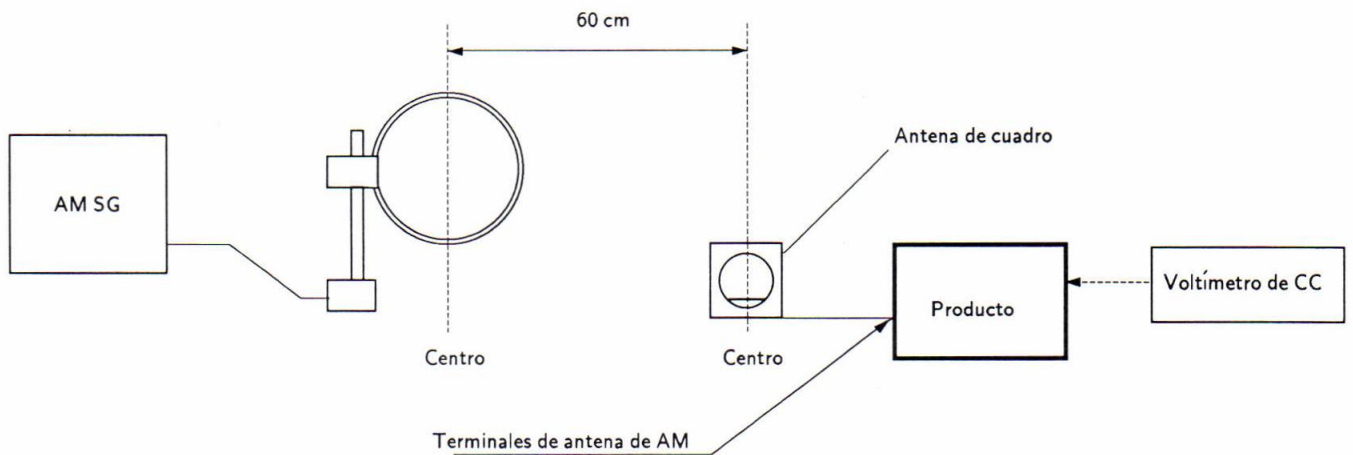


Fig. 6-1 Diagrama de conexiones para el ajuste de AM

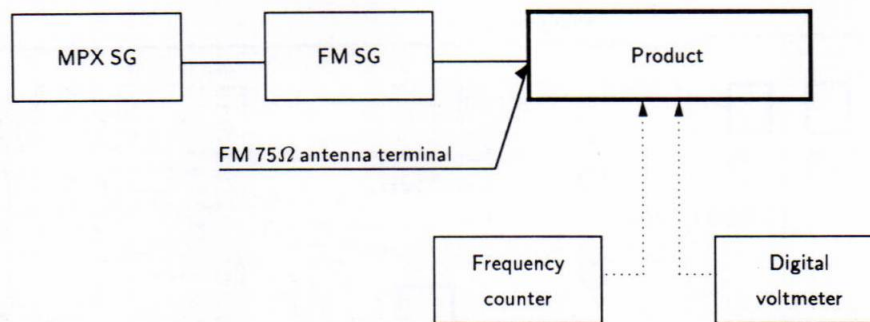


Fig. 6-2 FM Adjustment Connection Diagram

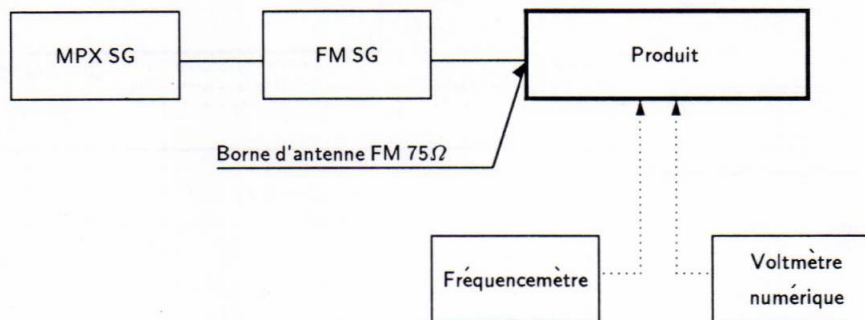


Fig. 6-2 Schéma de connexion de réglage FM

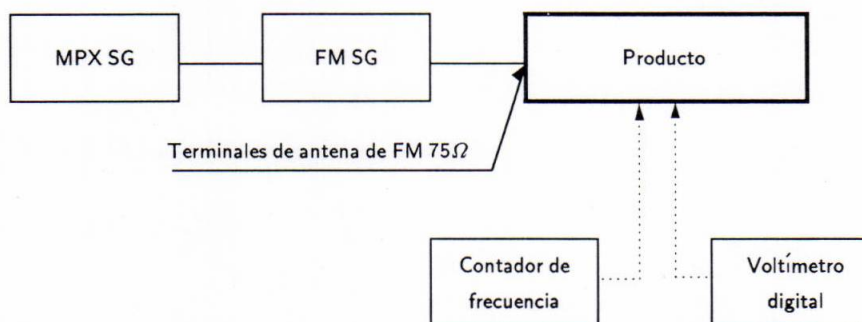


Fig. 6-2 Diagrama de conexiones para el ajuste de FM

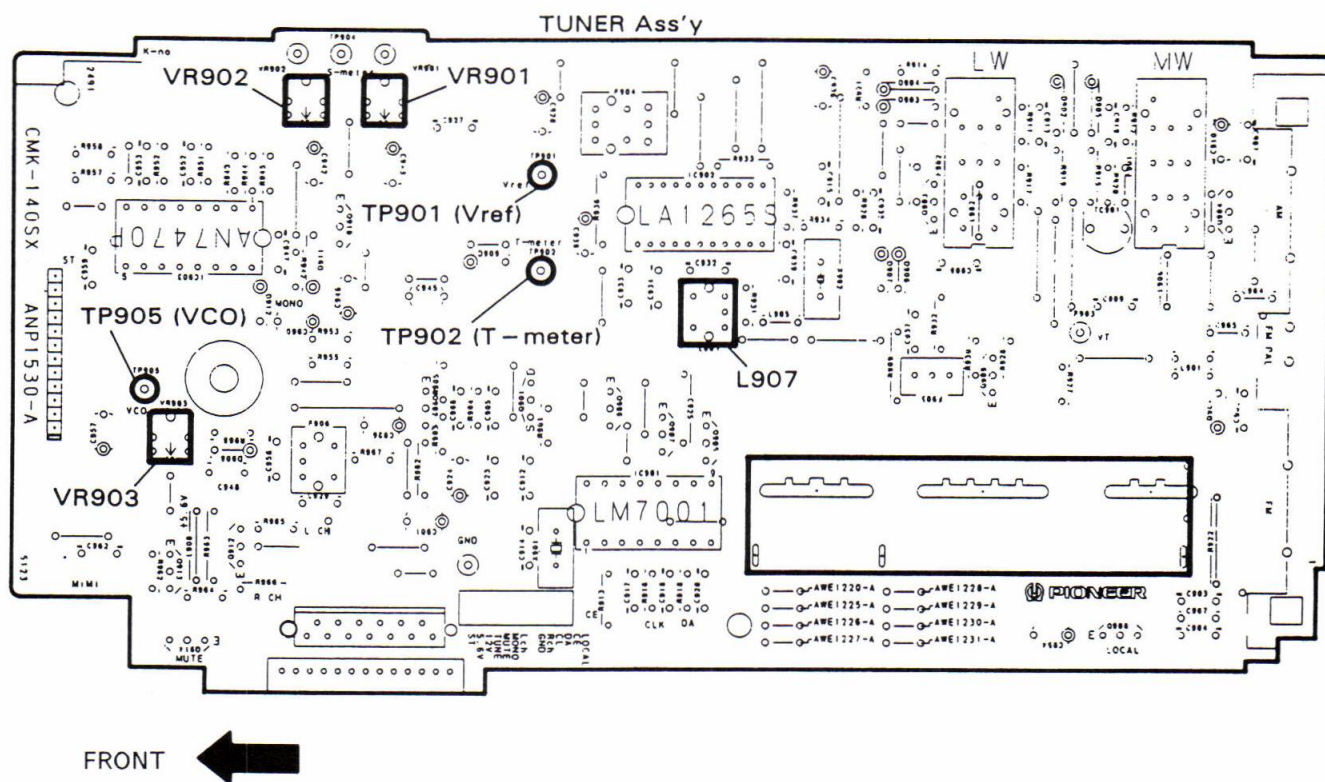


Fig. 6-3 Adjustment Points
 Fig. 6-3 Emplacements de réglage
 Fig. 6-3 Puntos de ajuste

7. FOR CX—J400/HB ; CX—J300/HE AND HB

NOTES :

- Parts 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.

CONTRAST OF MISCELLANEOUS PARTS

CX-J400/HB ; CX-J300/HE, HB and CX-J400/HE have the same construction except for the following :

Mark	Symbol & Description	Part No.				Remarks
		CX-J400/ HE type	CX-J400/ HB type	CX-J300/ HE type	CX-J300/ HB type	
△	AC power cord	ADG1019	ADG1084	ADG1019	ADG1084	For packing
△	AC outlet 1P	AKP-508	AKP-509	AKP-508	AKP-509	
	Front panel	AMB1899	AMB1899	AMB1898	AMB1898	
	Leg assembly	RXA1448	RXA1447	RXA1277	RXA1277	
	Packing case	AHD2184	AHD2184	AHD2185	AHD2185	