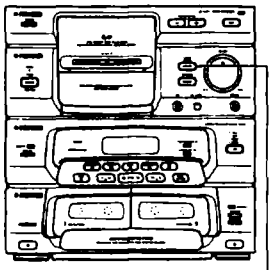
Service Manual

PIONEER
The Art of Entertainment



DEMO

ORDER NO.
RRV1549

STEREO FILE-TYPE CD CASSETTE DECK RECEIVER

XR-J2500F

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	XR-J2500F		
KUXJ	○	AC120V	
KCXJ	○	AC120V	

- **For the circuit and mechanism descriptions, refer to the service guide RRV1430 for XR-P760F.**

CONTENTS

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T-DFY MAR. 1996 Printed in Japan

1. SAFETY INFORMATION

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.

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

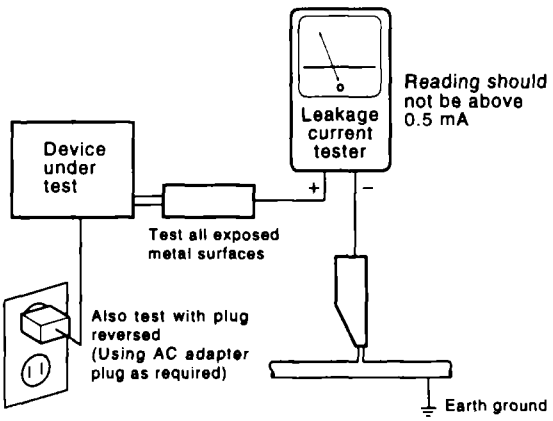
(FOR USA MODEL ONLY)

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 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



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.

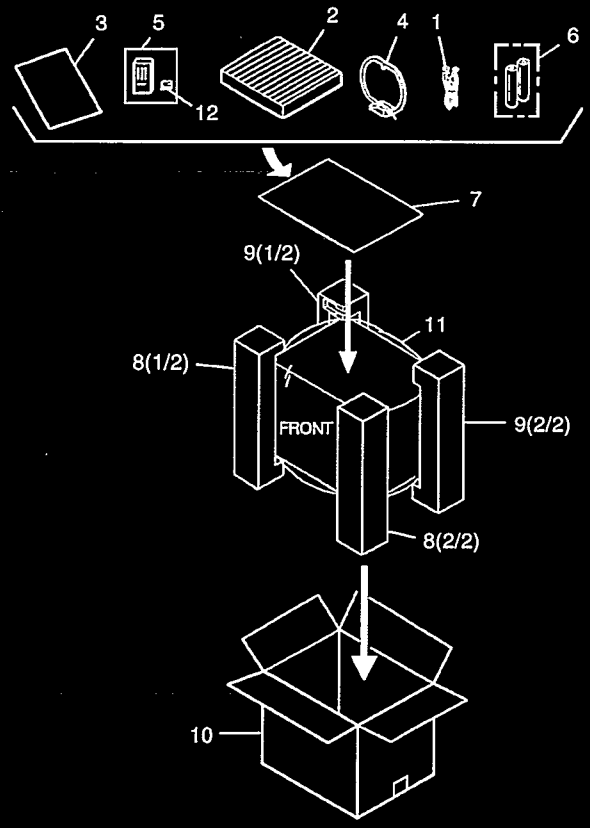
2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

- *Parts marked by "NSP" 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 PACKING

Mark	No.	Description	Parts No.
	1	FM ANTENNA	ADH1017
	2	CD CASE RACK	AMR7072
	3	OPERATING INSTRUCTIONS (English)	ARB7084
	3	OPERATING INSTRUCTIONS (French)(KCXJ only)	ARC7097
	4	LOOP ANTENNA	ATB7004
	5	REMOTECONTROL UNIT (CU-XR022)	AXD7078
NSP	6	BATTERY (R6P, AA)	VEM-013
NSP	7	POLYETHYLENE BAG (KUXJ type)	AHG7030
NSP	7	POLYETHYLENE BAG (KCXJ type)	AHG7032
	8	FRONT PAD LR	AHA7104
	9	REAR PAD LR	AHA7105
	10	PACKING CASE	AHD7239
	11	PACKING SHEET	AHG7025
	12	BATTERY COVER	AZA7123



2.2 EXTERIOR

Mark	No.	Description	Parts No.
	1	FM/AM TUNER MODULE	AXQ3112
	2	AF ASSY	AWZ8236
	3	AMP ASSY	AWZ8243
	4	REG ASSY	AWZ8247
NSP	5	PRIMARY ASSY	AWZ8252
NSP	6	SECONDARY ASSY	AWZ8259
	7	MECHA STOPPER	ANG7098
	8	GM-CD ASSY	AWZ8267
	9	VR ASSY	AWZ8274
NSP	10	HOME SW ASSY	AWZ8289
⚠	11	FUSE (4A, FU101)	REK1082
	12	22P F.F.C/30V	ADD7016
	13	19P F.F.C/30V	ADD7022
	14	SPACER	AEB7061
	15	DC FAN MOTOR	AXM7003
⚠	16	AC POWER CORD	PDG1057
NSP	17	CHASSIS	ANA7041
	18	SUB SHASSIS	ANA7038
	19	REAR PANEL (KUXJ type)	ANC7313
	19	REAR PANEL (KCXJ type)	ANC7362
	20	FRONT STAY	AND7017
	21	REAR STAY	AND7018
	22	HOME LOCK STAY	AND7012
	23	LINK M	ANG7076
	24	HEAT SINK	ANH7033
	25	CD COVER	AAK7204
	26	65 LABEL (KUXJ type only)	ORW1069
NSP	27	ASSIST ANGLE 2	ANB7065
	28	MOLD A	AMR7005
	29	LINK HOLDER	AMR7087
	30	STRAIN RELIEF	CM-22C
NSP	31	PCB HOLDER	PNW2174
NSP	32	LOCKING CARD SPACER	VEC1596
	33	BINDER	ZCA-SKB90BK
	34	RACK SPRING	ABH7057
	35	GUIDE SHAFT-25	ALA7007
	36	SHAFT HOLDER	ANB7021
	37	DISK RACK	ANW7069
	38	RACKBASE S	ANW7070
	39	DAMPER ASSY	AXA7018
	40	SCREW C	PBA1106
NSP	41	GM MECHA ASSY	AXA7026
	42	DISC RACK PANEL	AAK7251
	43	LABEL	ARW7016
	44	SCREW	BBZ30P080FZK
	45	SCREW	BBZ30P180FMC
	46	SCREW	BBZ40P080FZK
	47	SCREW	BPZ30P100FZK
	48	SCREW	BPZ30P350FZK
	49	SCREW	IBZ30P080FMC
	50	BONNET	ANE7124
⚠	51	POWER TRANSFORMER (T1) (KUXJ type)	ATS7099
⚠	51	POWER TRANSFORMER (T1) (KCXJ type)	ATS7100
	52	RIVET	AEC7025
	53	SERVO COVER	ANW7073
	54	NICE COVER	ANW7074
NSP	55	RUBBER SPACER	AEB7058
NSP	56	RUBBER SPACER	AEB7057
	57	SPACER	PNM1295

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

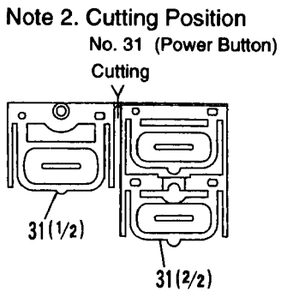
Refer to " 2.4 GM MECHA ASSY ".

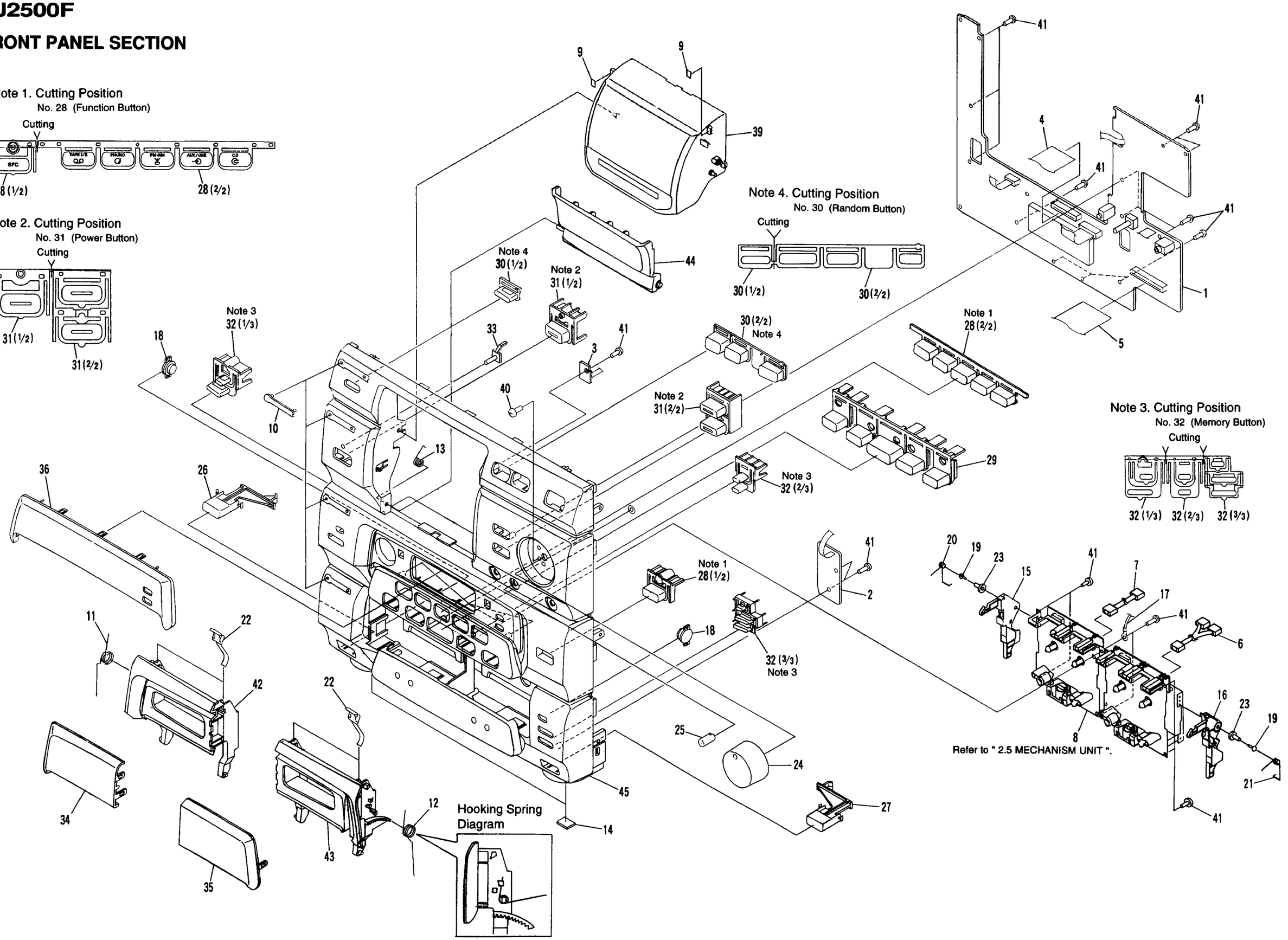
KUXJ Type Only

Refer to " 2.3 FRONT PANEL SECTION " .

XR-J2500F

2.3 FRONT PANEL SECTION



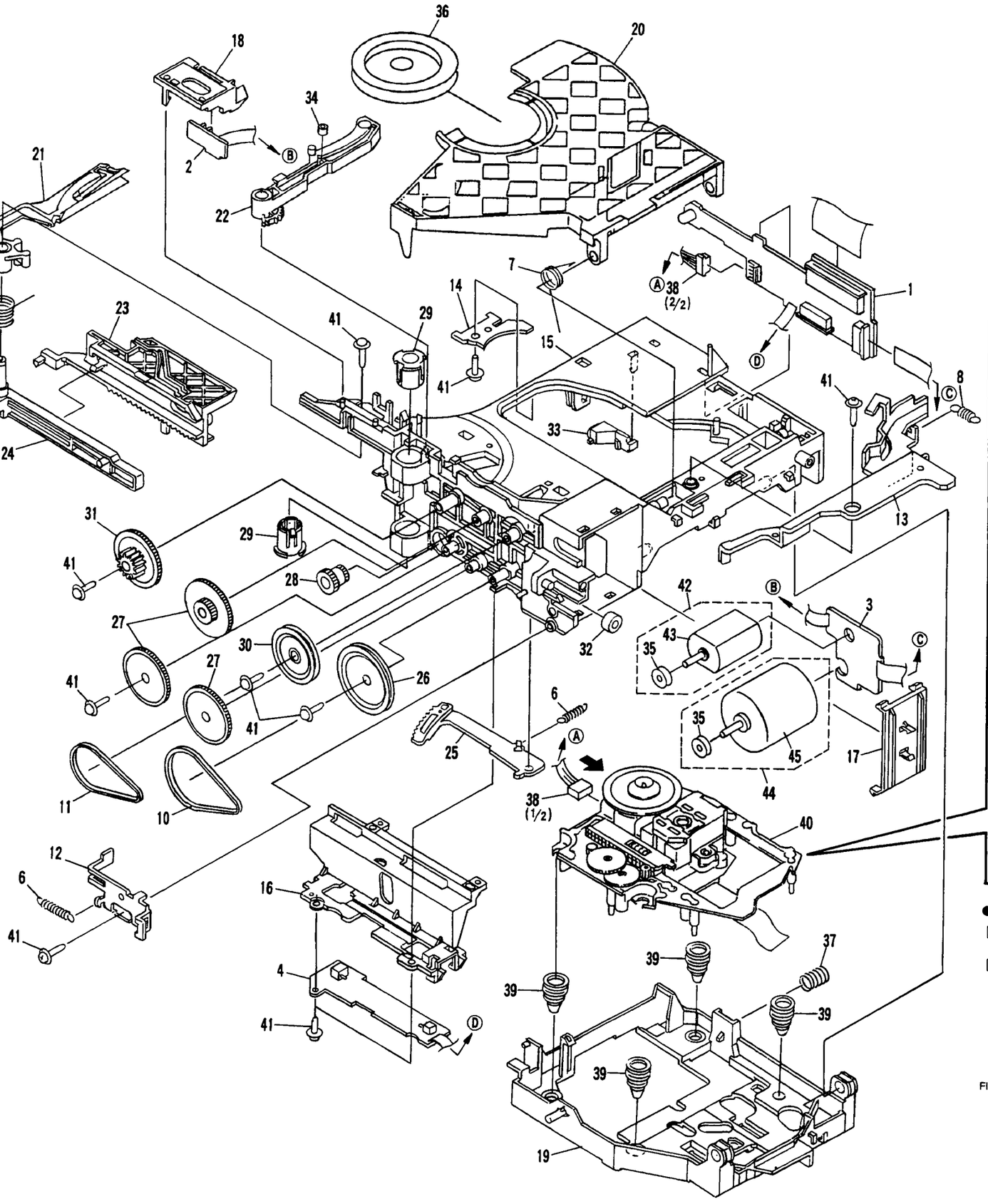


Mark	No.	Description	Parts No.
	1	FRONT ASSY	AWZ8281
NSP	2	TACT SW ASSY	AWZ8304
NSP	3	HOOD SW ASSY	AWZ8291
	4	28P F.F.C/30V	ADD7030
	5	35P F.F.C/30V	ADD7025
	6	CONNECTOR 5P	RKP1682
	7	CONNECTOR 3P	RKP1683
	8	MECHANISM UNIT	RYM1248
	9	RUBBER SHEET	AEB7054
	10	NAME PLATE	PAM1608
	11	DOOR SPLING L	ABH7116
	12	DOOR SPLING R	ABH7117
	13	DOOR SPRING D	ABH7097
	14	RUBBER SHEET	AEB1111
	15	EJECT ARM (L)	AMR7074
	16	EJECT ARM (R)	AMR7075
NSP	17	EARTH LEAD WIRE	DE025VF0
	18	DAMPER ASSY	AXA7021
	19	SCREW	BSZ20P120FMC
	20	EJECT SPRING (L)	ABH7102
	21	EJECT SPRING (R)	ABH7103
	22	SPRING	RBK1004
	23	COLLAR	RNK2135
	24	VOLUME KNOB	AAB7037
	25	MIC VOLUME KNOB	AAB7092
	26	EJECT BUTTON L	AAD7265
	27	EJECT BUTTON R	AAD7266
	28	FUNCTION BUTTON	AAD7260
	29	START BUTTON	AAD7261
	30	RANDOM BUTTON	AAD7262
	31	POWER BUTTON	AAD7263
	32	MEMORY BUTTON	AAD7264
	33	STA. LENS	AAK7210
	34	DOOR WINDOW L	AAK7228
	35	DOOR WINDOW R	AAK7229
	36	DISPLAY WINDOW D	AAK7227
	37	.....	
	38	.....	
	39	HOOD M	AAN7100
	40	SCREW	BBZ30P080FZK
	41	SCREW	BPZ30P080FMC
	42	DOOR PANEL L	AAN7131
	43	DOOR PANEL R	AAN7132
	44	DOOR D	AAN7133
	45	FRONT PANEL	AMB7344

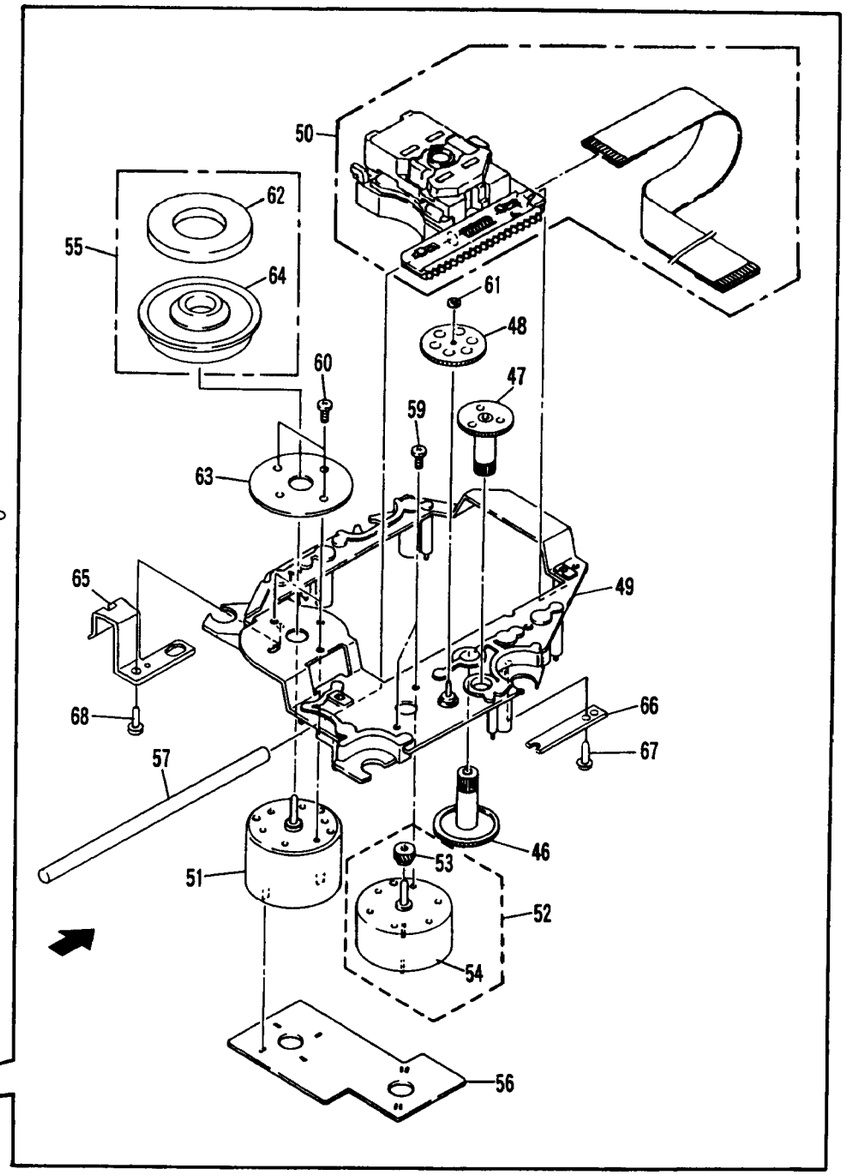
2.4 GM MECHA ASSY

Mark	No.	Description	Parts No.
NSP	1	MECHA PCB ASSY	AWZ7835
NSP	2	SENSOR PCB ASSY	AWZ7836
NSP	3	MOTOR PCB ASSY	AWZ7837
NSP	4	SW PCB ASSY	AWZ7838
	5	ARM A SPRING 2	ABH7124
	6	GEAR PLATE SPRING	ABH7051
	7	CLAMP SPRING	ABH7107
	8	LOCK LEVER SPRING	ABH7120
	9	.....	
	10	LOADING BELT	AEB7029
	11	BELT	AEB7030
NSP	12	LOCK ANGLE	ANB7027
NSP	13	LOCK LEVER P	ANB7042
NSP	14	SERVO STOPPER S	ANB7047
	15	LOADING BASE	ANW7051
	16	CAM COVER	ANW7052
	17	MOTOR HOLDER	ANW7053
	18	SENSOR HOLDER	ANW7054
	19	FLOAT BASE	ANW7055
	20	CLAMPER HOLDER	ANW7084
	21	ARM (A)	ANW7057
	22	ARM (B)	ANW7058
	23	DRIVE PLATE	ANW7059
	24	ARM PLATE	ANW7060
	25	GEAR PLATE	ANW7082
	26	GEAR PULLEY (B)	ANW7062
	27	GEAR A	ANW7063
	28	DRIVE GEAR	ANW7064
	29	BEARING	ANW7065
	30	GEAR PULLEY A	ANW7066
	31	SELECT GEAR	ANW7067
	32	ROLLER	ANW7068
	33	LED LENS	ANW7072
	34	ROLLER B	ANW7075
	35	MOTOR PULLEY	PNW1634
	36	CLAMPER	PNW7085
	37	FLOAT SPRING	ABH7049
	38	CONNECTOR ASSY (4P)	ADE7006
	39	FLOAT RUBBER	AEB7059
NSP	40	SERVO MECHANISM ASSY GM	AXA7028
	41	SCREW	IPZ20P080FMC
	42	MOTOR ASSY (SELECT)	AEA7005
NSP	43	MOTOR	PXM1002
	44	MOTOR ASSY	AEA7006
	45	LOADING MOTOR	VXM1034
	46	GEAR 1	PNW2052
	47	GEAR 2	PNW2053
	48	GEAR 3	PNW2054
	49	CARRIAGE BASE	PNW2445
	50	PICKUP ASSY	AEA7004

Mark	No.	Description	Parts No.
	51	D.C. MOTOR ASSY (SPDL)	PEA1235
	52	CARRIAGE DC MOTOR ASSY	PEA1246
	53	PINION GEAR	PNW2055
NSP	54	CARRIAGE DC MOTOR/0.3W	PXM1027
	55	DISC TABLE ASSY	PEA1314
	56	MECHANISM BOARD ASSY	PWX1192
	57	GUIDE BAR	PLA1094
	58	.....	
	59	SCREW	JFZ17P025FZK
	60	SCREW	JFZ20P040FMC
	61	WASHER	WT12D032D025
	62	CLAMP MAGNET	PMF1014
	63	YOKE M	PNB1312
NSP	64	DISC TABLE	PNW2410
NSP	65	FLOAT ANGLE	ANB7020
	66	GEAR STOPPER	PNB1303
	67	SCREW	BPZ20P060FMC
	68	SCREW	BPZ26P100FMC
		FROIL (for service)	GYA1001
		HA NARL (for service)	GEM1016



Servo Mechanism Assy GM

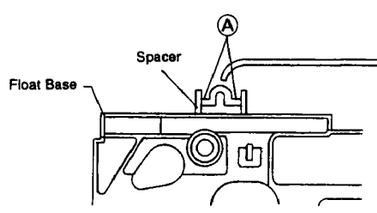


● How to install the disc table

1 Use nipper or other tool to cut the two sections marked Ⓐ figure 1.
Then remove the spacer.

2 While supporting the spindle motor shaft with the stopper, put spacer on top of the yoke M, and stick the disc table on top (takes about 9kg pressure). Take off the spacer.

1



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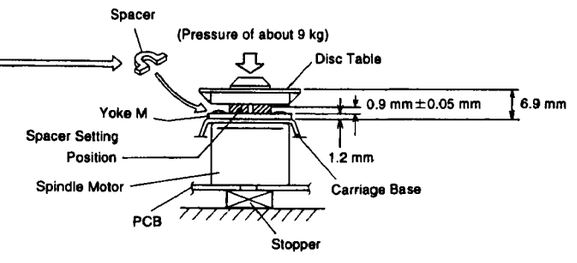
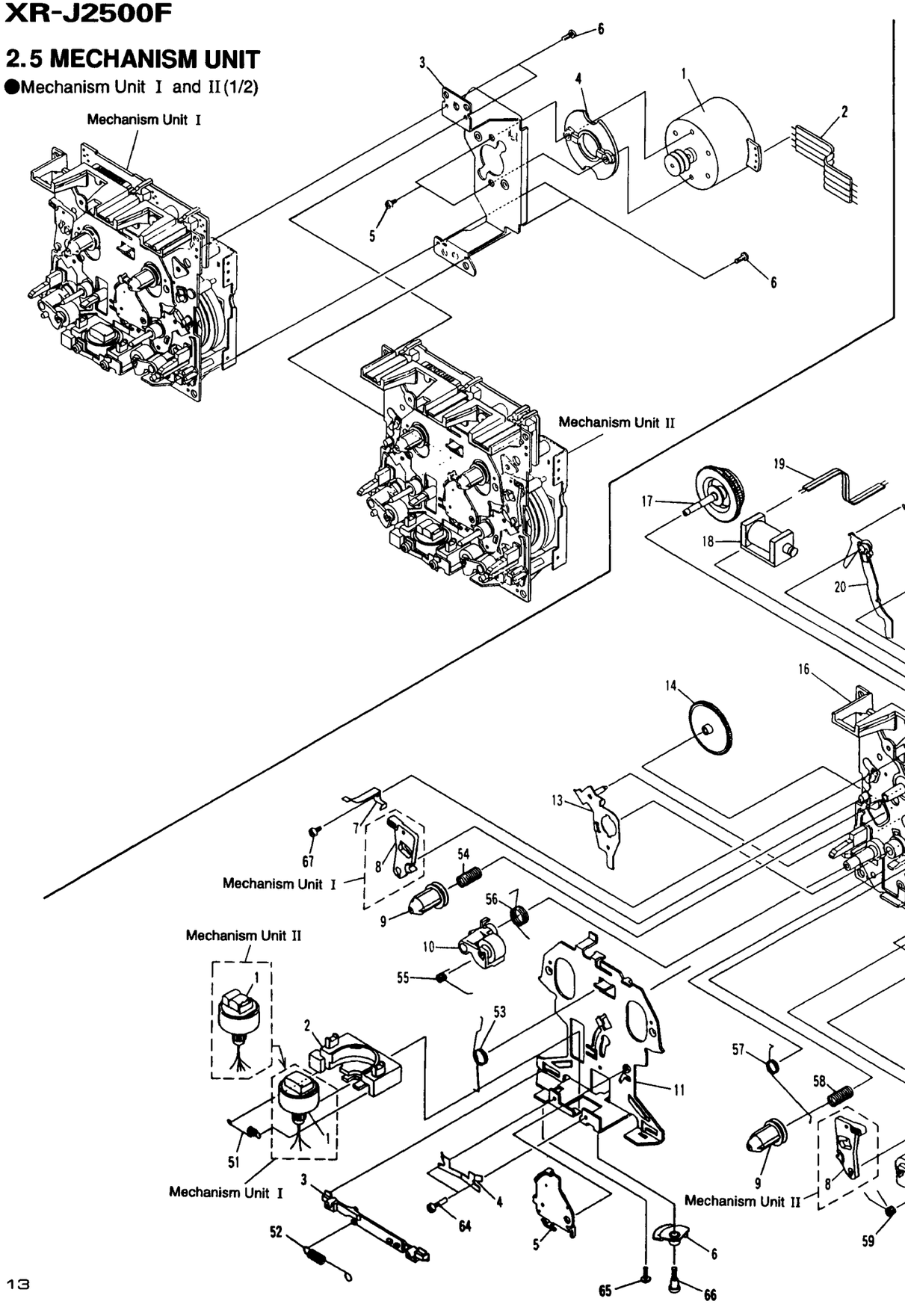
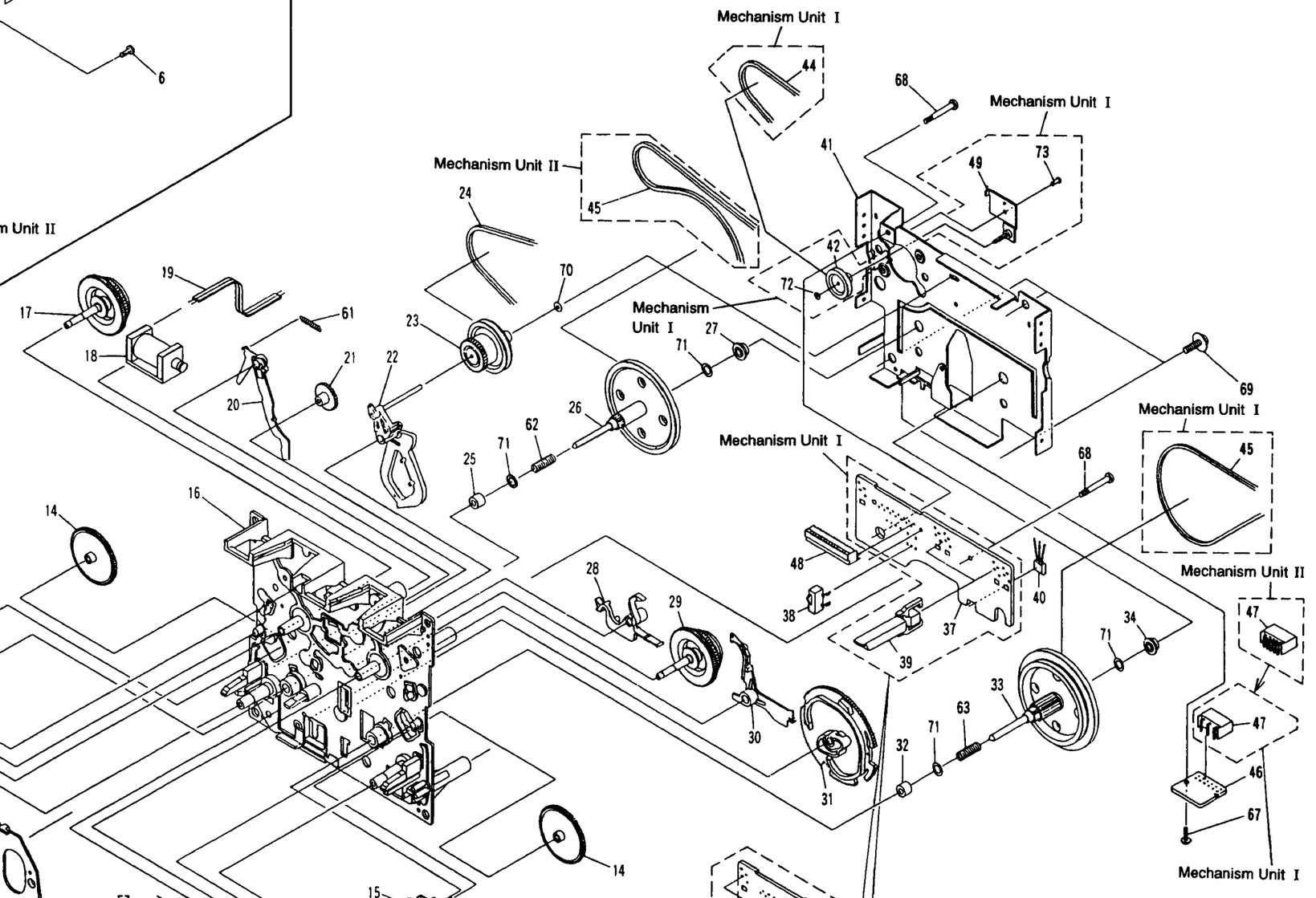


2.5 MECHANISM UNIT

●Mechanism Unit I and II (1/2)



●Mechanism Unit I and II (2/2)



■ Mechanism unit I and II (1/2)

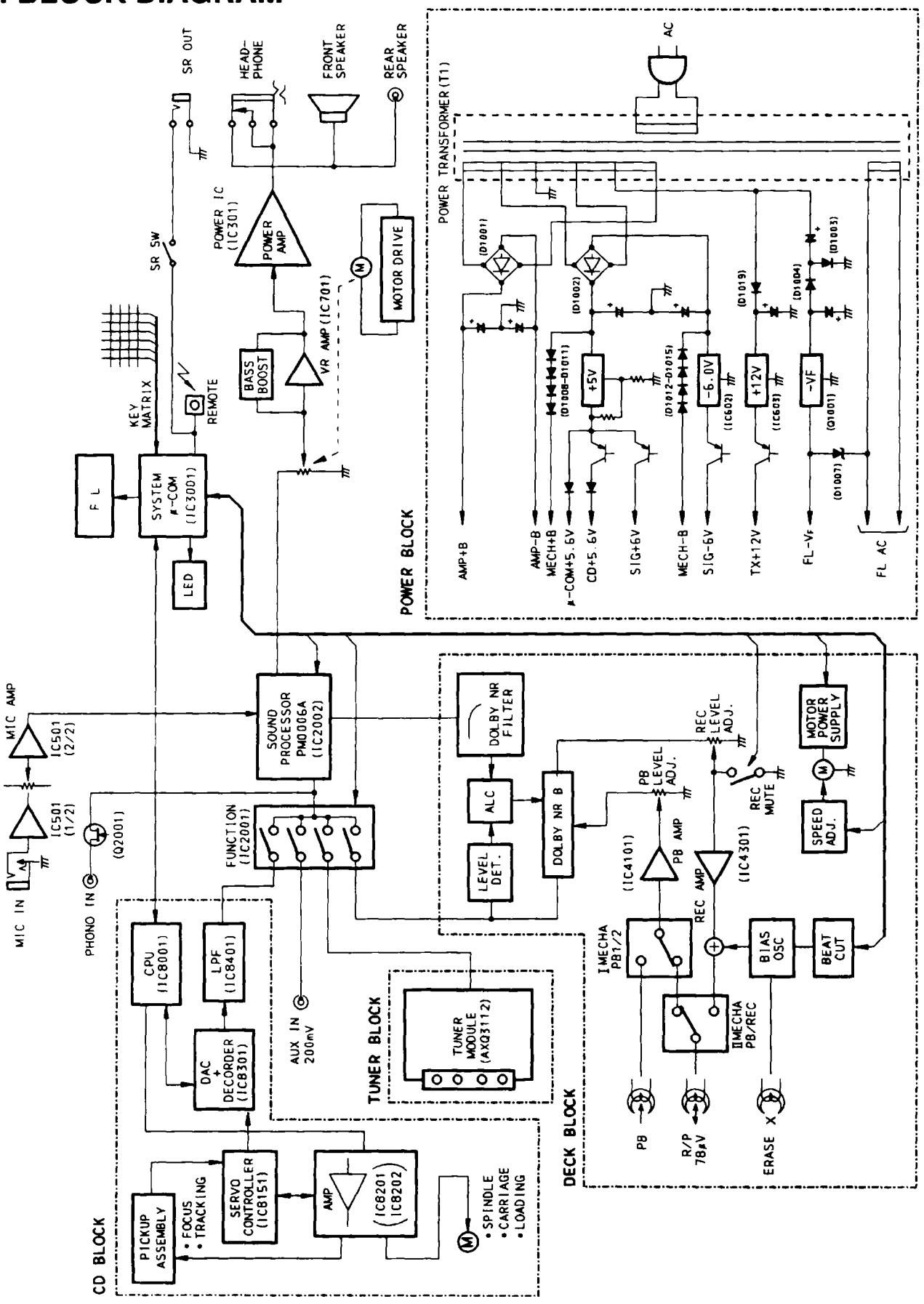
Mark	No.	Description	Parts No.
	1	ASSY MOTOR	RXM1080
NSP	2	JUMPER WIRE	RDD1012
	3	BRACKET MOTOR	RNE1830
	4	SPACER	RNK1822
	5	SCREW	RBA1100
	6	SCREW	PCZ20P040FMC

■ Mechanism unit I and II (2/2)

Mark	No.	Description	Parts No.
	1	ASSY HOLDER HEAD (*1)	RXA1400
	1	ASSY HOLDER HEAD (*2)	RXA1664
	2	FRAME HEAD	RNK1715
	3	LEVER HEAD	RNK1716
	4	SPRING AZIMUTH	RBK1006
	5	ASSY ARM ASSIST	RXA1401
	6	GEAR ARM HEAD	RNK1717
	7	SPRING CASSETTE	RBK1039
	8	EJECT LOCK	RNK1718
	9	CAP REEL	RNK1719
	10	ASSY PINCH ARM L	RXA1403
	11	CHASSIS HEAD	RNE1437
	12	ASSY PINCH ARM R	RXA1404
	13	ARM PLAY L	RNK1866
	14	GEAR PLAY	RNK1867
	15	ARM PLAY R	RNK1868
	16	CHASSIS OS	RXA1411
	17	ASSY SUB REEL L	RXA1407
	18	SOLENOID	RXP1020
	19	WIRE	RDC1006
	20	ARM RVS	RNK1721
	21	GEAR FF	RNK1723
	22	ASSY ARM FR	RXA1412
	23	ASSY PULLEY FR	RXA1413
	24	BELT FR	REB1292
	25	METAL	RNG1048
	26	ASSY FLYWHEEL L	RXA1690
	27	METAL	RNG1005
	28	ARM BRAKE	RNK1724
	29	ASSY SUB REEL R	RXA1408
	30	ARM TRIGER	RNK1722
	31	GEAR CAM	RNK1725
	32	METAL	RNG1049
	33	ASSY FLYWHEEL R	RXA1691
	34	METAL	RNG1004
	35	.....	
	36	.....	
	37	P. C. BOARD	RNP1610
	38	SWITCH MODE	RSN1020
	39	SWITCH (LEAF)	RSN1019
	40	HALL IC	DN6851A
	41	BRACKET FW (*1)	RNE1854
	41	BRACKET FW (*2)	RNE1438
	42	PULLEY (*1 only)	RNK2132
	43	.....	
	44	BELT FW (*1 only)	REB1291
	45	BELT MAIN (* 1)	REB1290
	45	BELT MAIN (* 2)	REB1289
	46	P. C. BOARD	RNP1348
	47	HOUSING (*1)	RKP1396
	47	HOUSING (*2)	RKP1397
	48	CONNECTOR (*1)	RKP1713
	48	CONNECTOR (*2)	RKP1714
	49	ASSY HOLDER (*1 only)	RXA1689
	50	.....	
	51	SPRING	RBH1282
	52	SPRING	RBH1283
	53	SPRING	RBH1284
	54	SPRING	RBH1286
	55	SPRING	RBH1288
	56	SPRING	RBH1291
	57	SPRING	RBH1285
	58	SPRING	RBH1287
	59	SPRING	RBH1289
	60	SPRING	RBH1290
	61	SPRING	RBH1292
	62	FWP SP (SPRING)	RBH1061
	63	SPRING	RBH1325
	64	SCREW (For AZIMUTH)	RBA1023
	65	SCREW	RBA1027
	66	SCREW	RBA1030
	67	SCREW	PCZ20P040FMC
	68	SCREW	RBA1093
	69	SCREW	RBA1094
	70	WASHER	RBF1046
	71	WASHER	WA26D047D013
	72	WASHER (*1 only)	WT13D030D025
	73	SCREW (*1 only)	RBA1118

Note) **1: Mechanism Unit I*
**2: Mechanism Unit II*

3. BLOCK DIAGRAM

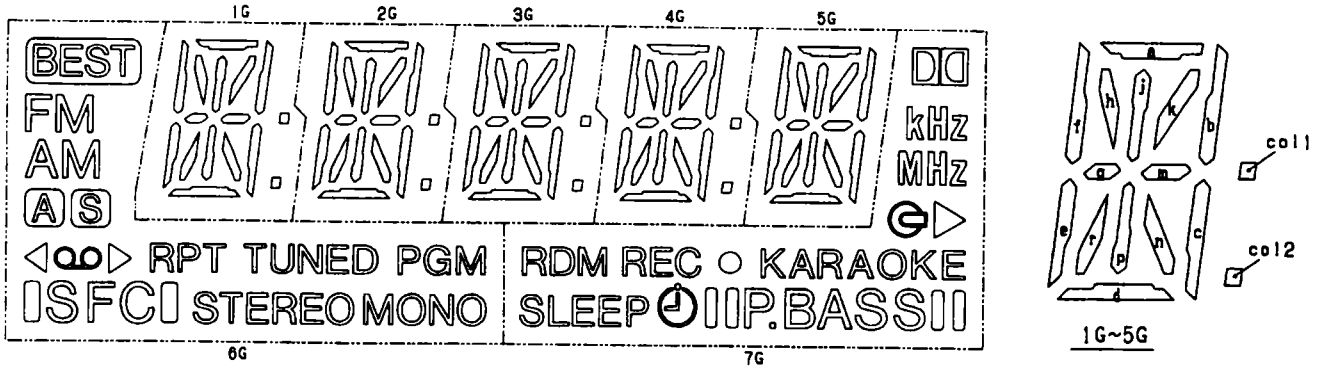


4. FL INFORMATION

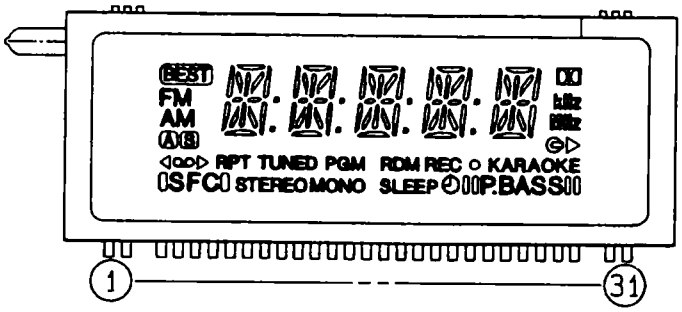
■ AAV7024 (V401: DISPLAY ASSY)

● FL Tube

● Grid assignment



● Pin Assignment



● Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Assignment	F	F	NP	P12	P13	P14	P15	P16	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NL

Pin No.	21	22	23	24	25	26	27	28	29	30	31
Assignment	NL	1G	2G	3G	4G	5G	6G	7G	NP	F	F

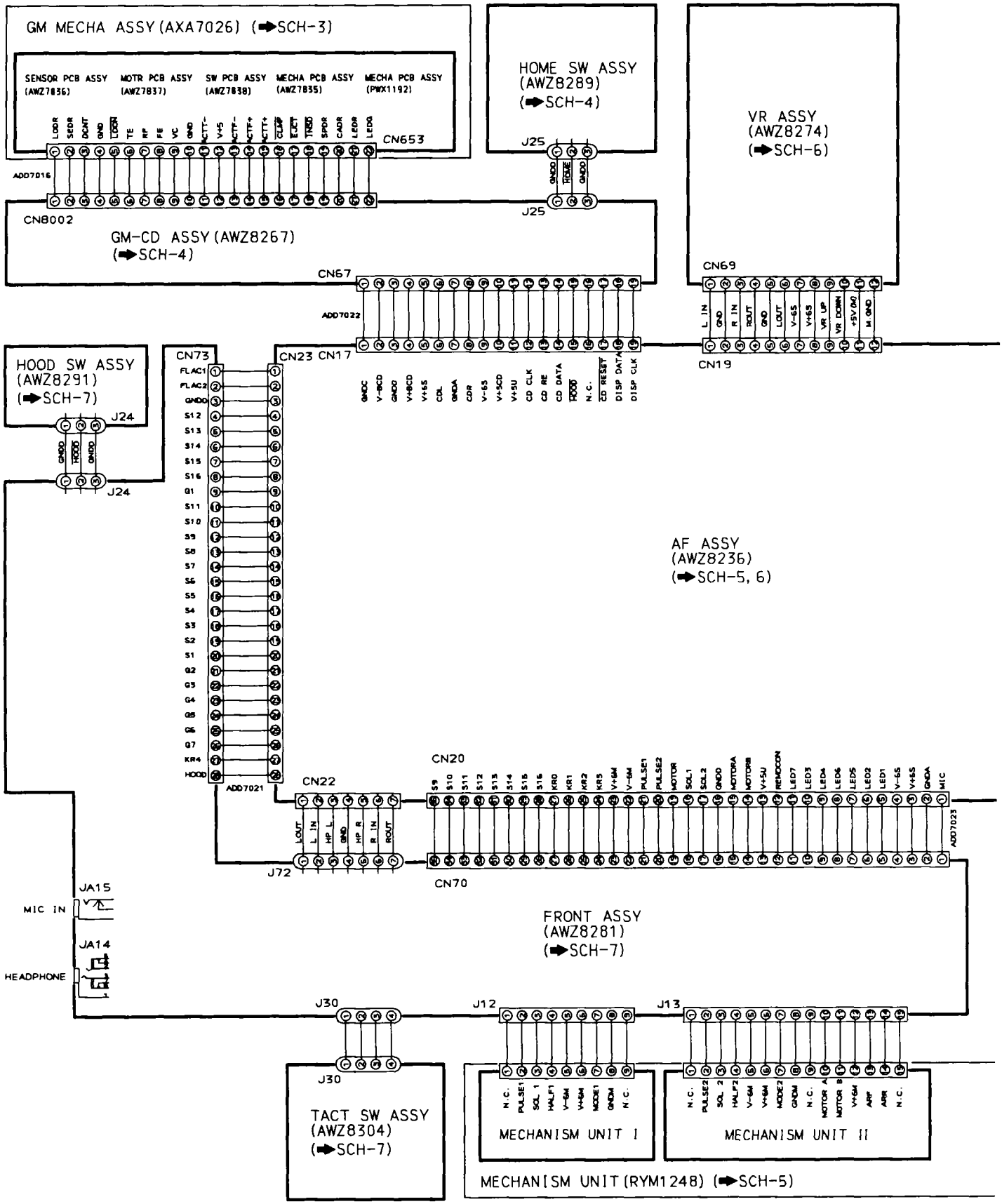
● Anode Connection

	1G~4G	5G	6G	7G
P1	col2		AM	KARAOKE
P2	d	d	FM	REC
P3	n	n		◷
P4	p	p	BEST	DD
P5	r	r	TUNED	▷
P6	e	e	S	○
P7	c	c	A	RDM
P8	g	g	◁	SLEEP
P9	m	m	▷	
P10	f	f	SFC	P. BASS
P11	b	b	PGM	kHz
P12	k	k	STEREO	MHz
P13	j	j	RPT	⟲
P14	h	h	MONO	
P15	a	a	∞	
P16	col1			

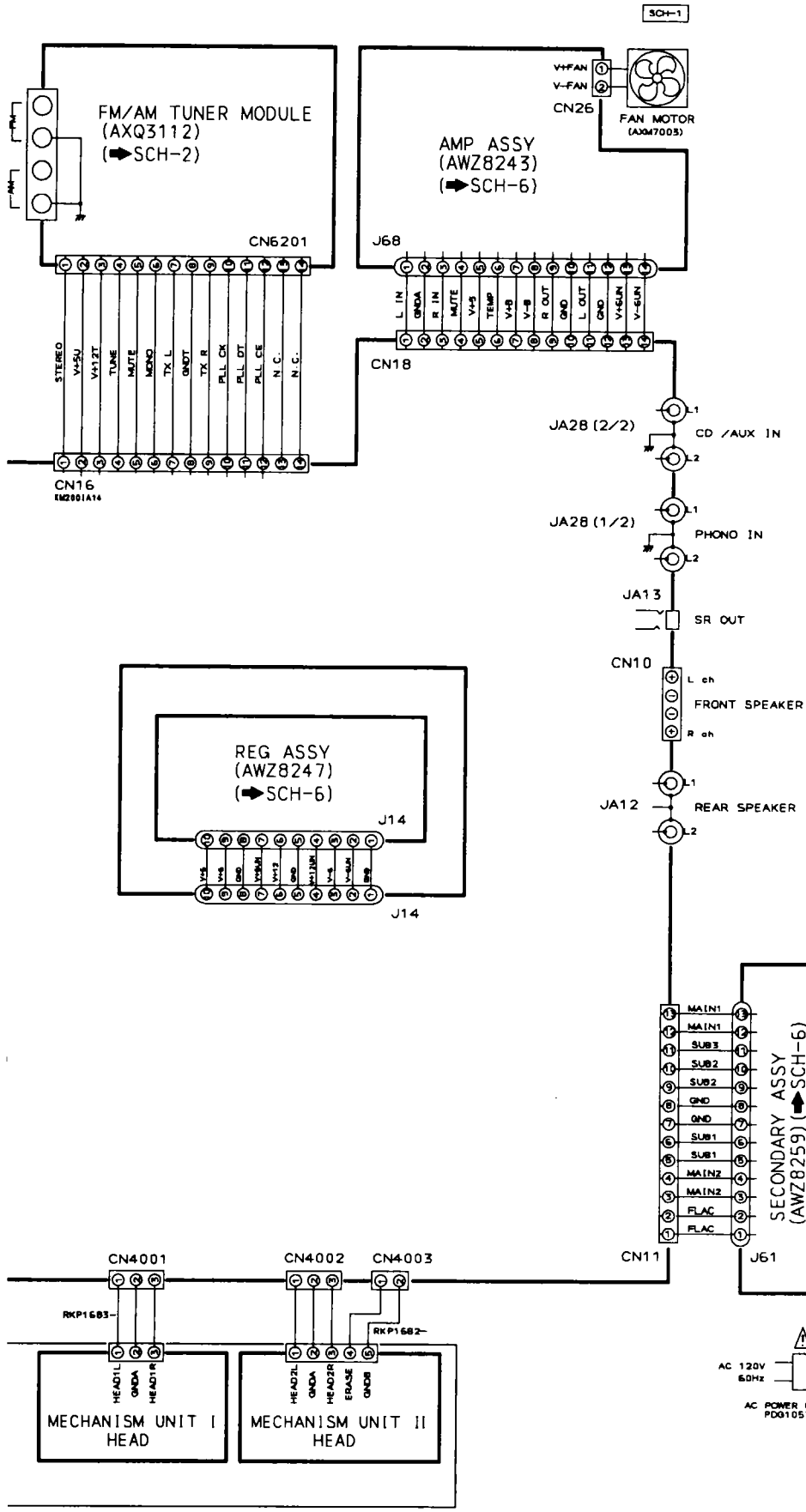
XR-J2500F

5. SCHEMATIC AND PCB CONNECTION DIAGRAMS

5.1 OVERALL SCHEMATIC DIAGRAM



SCH-1 OVERALL SCHEMATIC DIAGRAM



NOTE FOR SCHEMATIC DIAGRAMS (TYPE 1A)

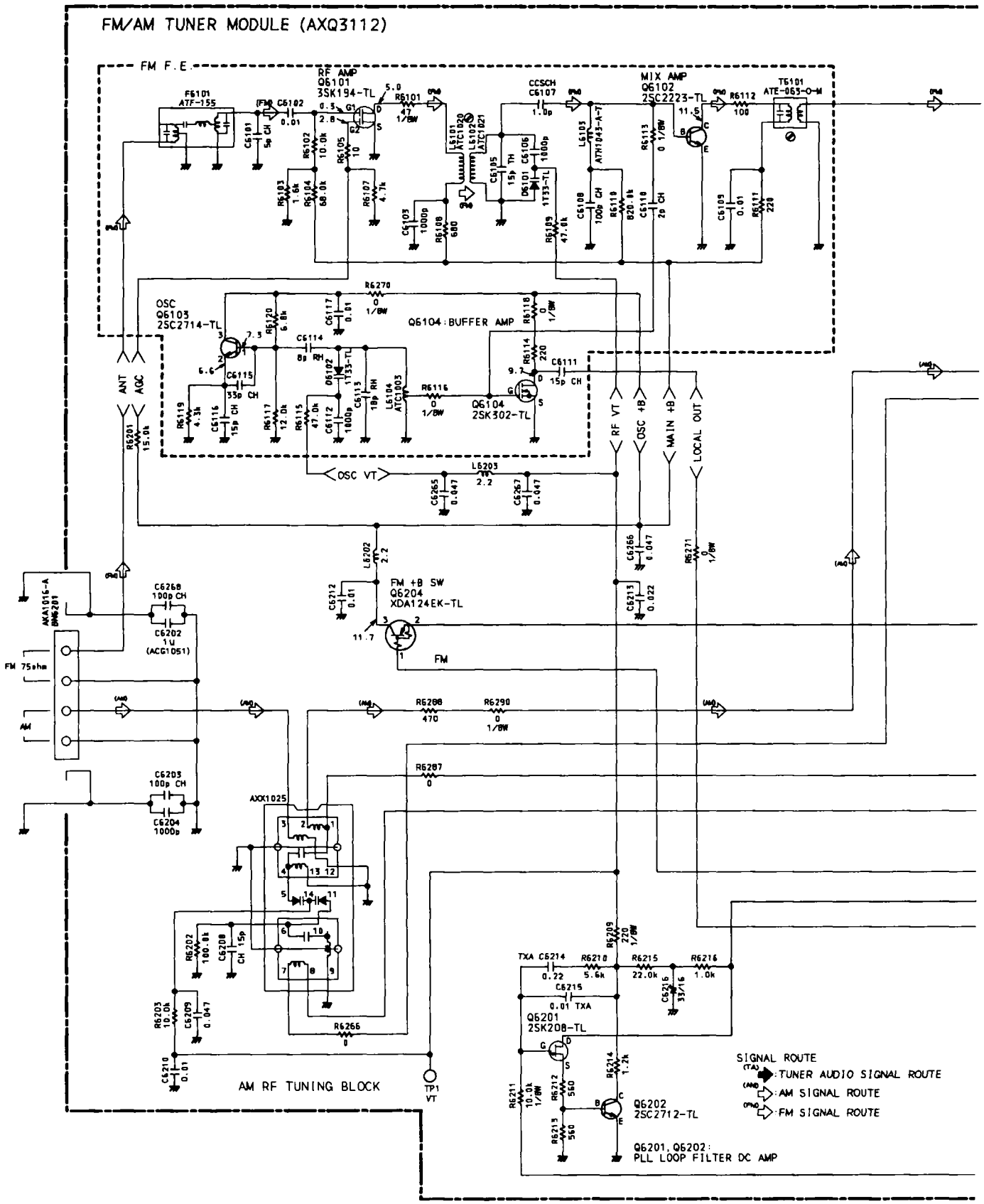
1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8, 1/10W unless otherwise noted.
   Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit: p:pF or µF unless otherwise noted.
   Ratings: capacitor (µF) / voltage (V) unless otherwise noted.
   Rated voltage: 50V except for electolytic capacitors.
5. **COILS:**
   Unit: m:mH or µH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   V : SIGNAL voltage at rated output.
   or ← V :
   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.
7. **OTHERS:**
   - ⊘ or ● : Adjusting point.
   - ◀ : Measurement point.
   - The ⚠ mark found on some components parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH-□ ON THE SCHEMATIC DIAGRAM:**
   - SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):

FRONT ASSY
- S501: POWER STANDBY/ON
- S503: ◀◀ I◀◀ –
- S504: BEST
- S507: FM/AM
- S508: TAPE I /II
- S509: STOP (■)
- S510: START (▶)
- S511: ▶▶ ▶▶I +
- S513: KARAOKE
- S514: AUX/CDII
- S515: CD
- S516. P.BASS (DEMO)
- S517: TIMER REC/WAKE UP
- S518: FREQ/STATION
- S519. MEMORY
- S520: CLOCK/CLOCK ADJ
- S521. SFC
- S522: RANDOM
- S523: DISPLAY
- S524: PHONO
- S401: DISC SELECTOR (+)
- S402: DISC SELECTOR (–)

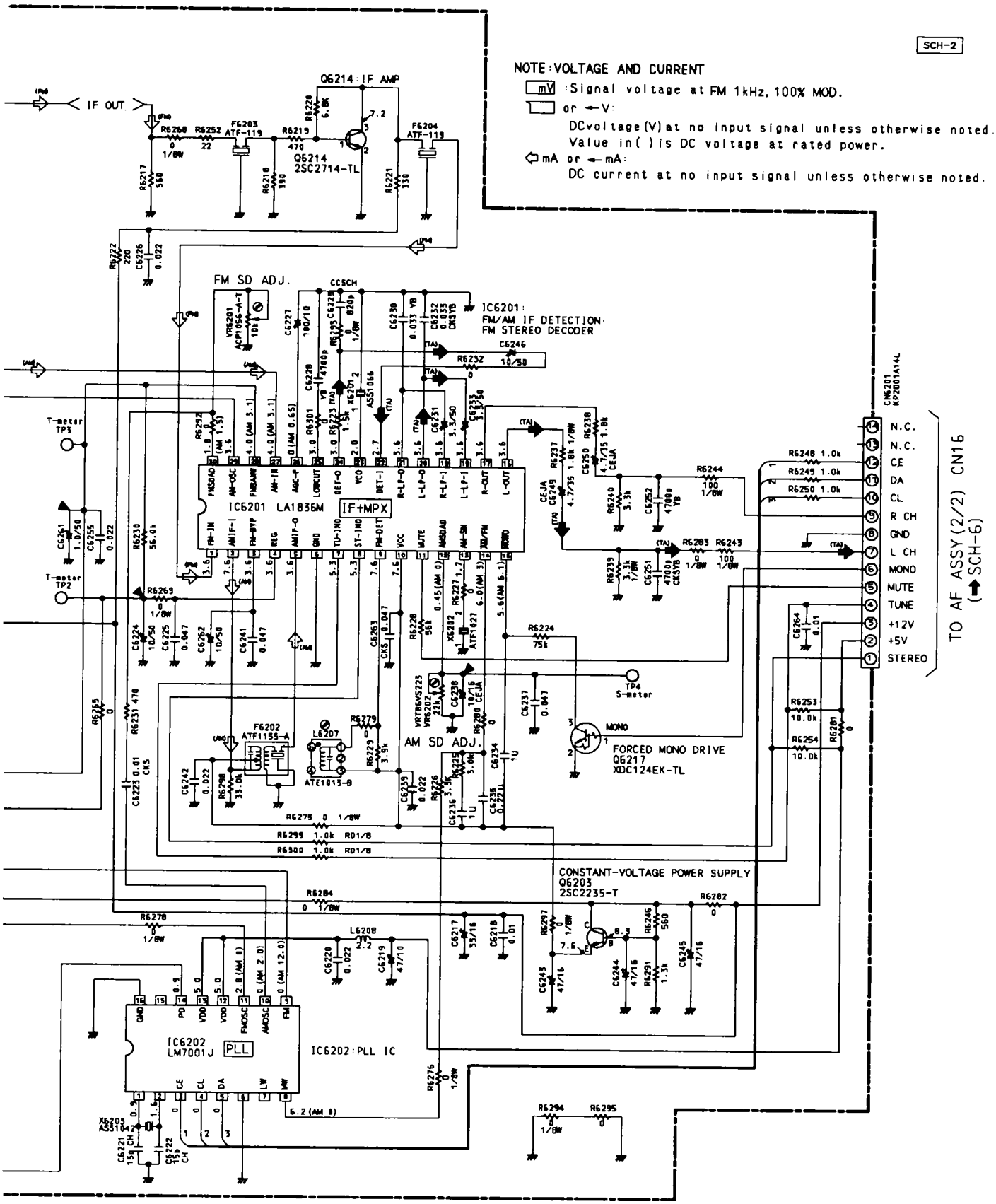
TACT SW ASSY
- S502: DOLBY ON/OFF
- S505: REC
- S506. ASES/COPY

OVERALL SCHEMATIC DIAGRAM **SCH-1**

5.2 FM/AM TUNER MODULE



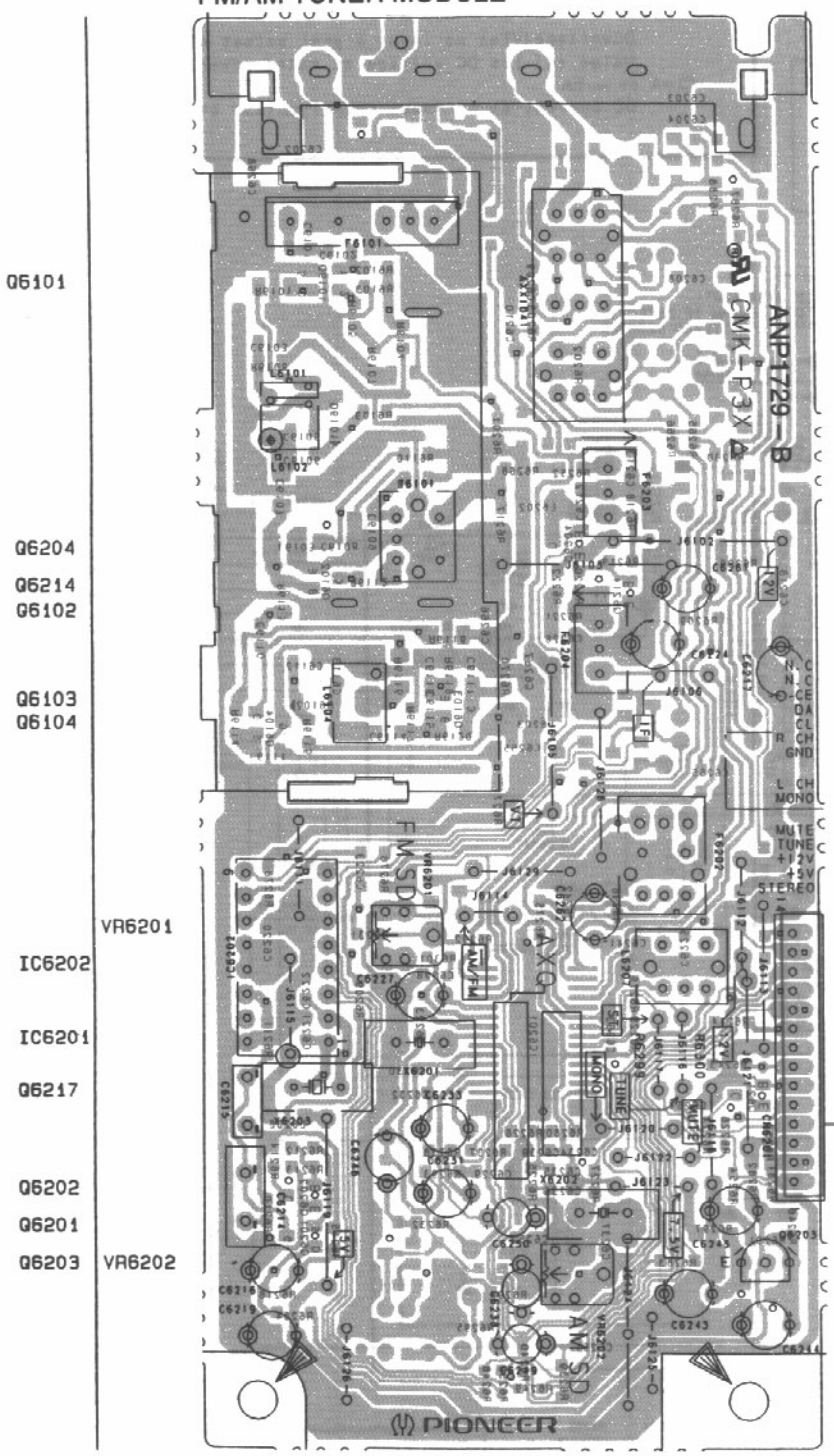
SCH-2 FM/AM TUNER MODULE



FM/AM TUNER MODULE **SCH-2**

PCB – 1

FM/AM TUNER MODULE



• This diagram is viewed from the mounted parts side.

NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 (E) / Q504	Q504 Q504	Transistor
D203 / D203	D203	Diode
C513 / C513	C513	Capacitor (Polarized)

3. The transistor terminal marked with E or ⊏ shows the emitter
4. The diode terminal marked with ⓒ or ⊐ shows cathode side.
5. The capacitor terminal marked with ⊖ or ⊏ shows negative terminal.

NOTE FOR PCB DIAGRAMS:

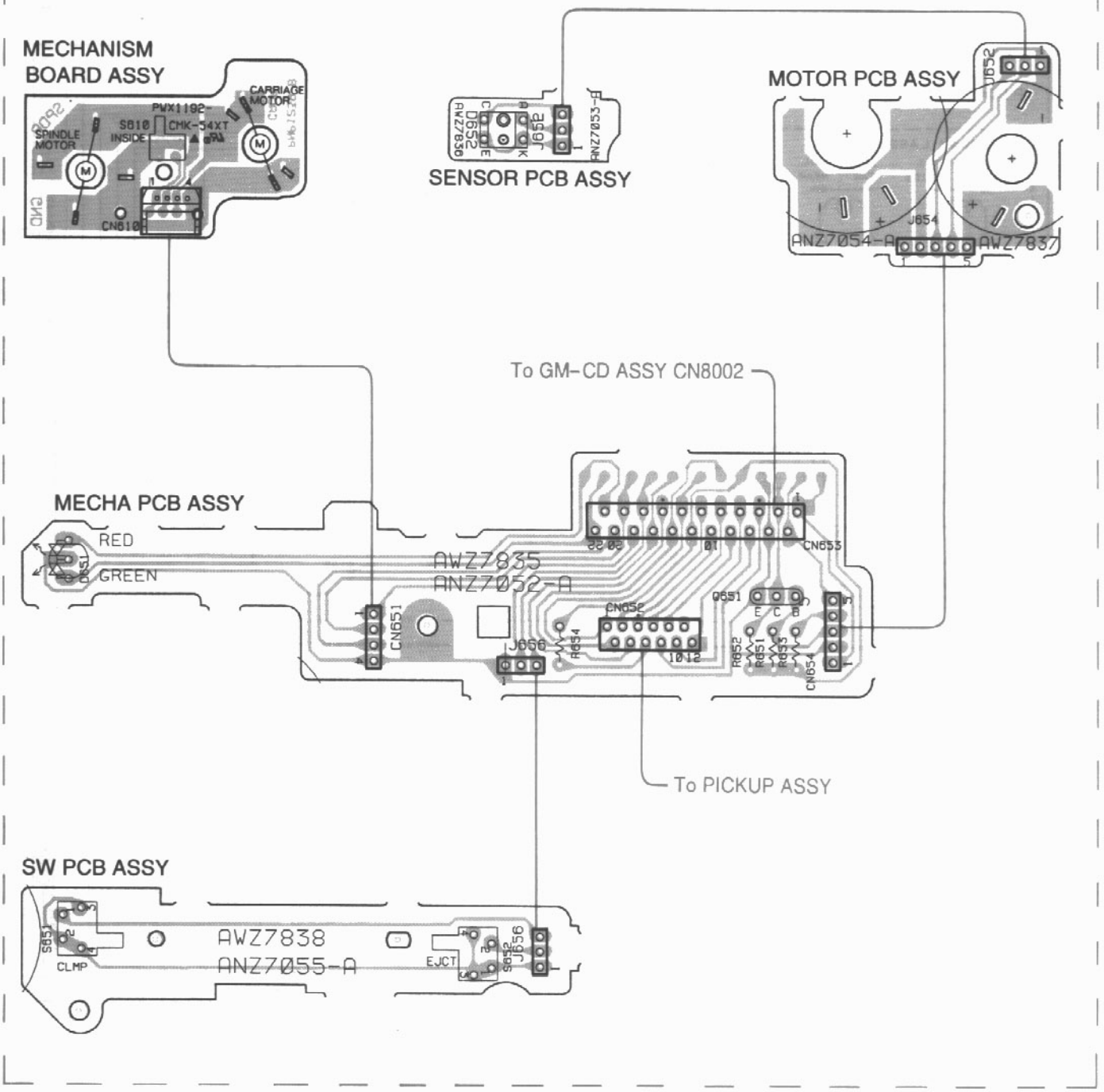
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3- terminal regulator

5.3 GM MECHA ASSY

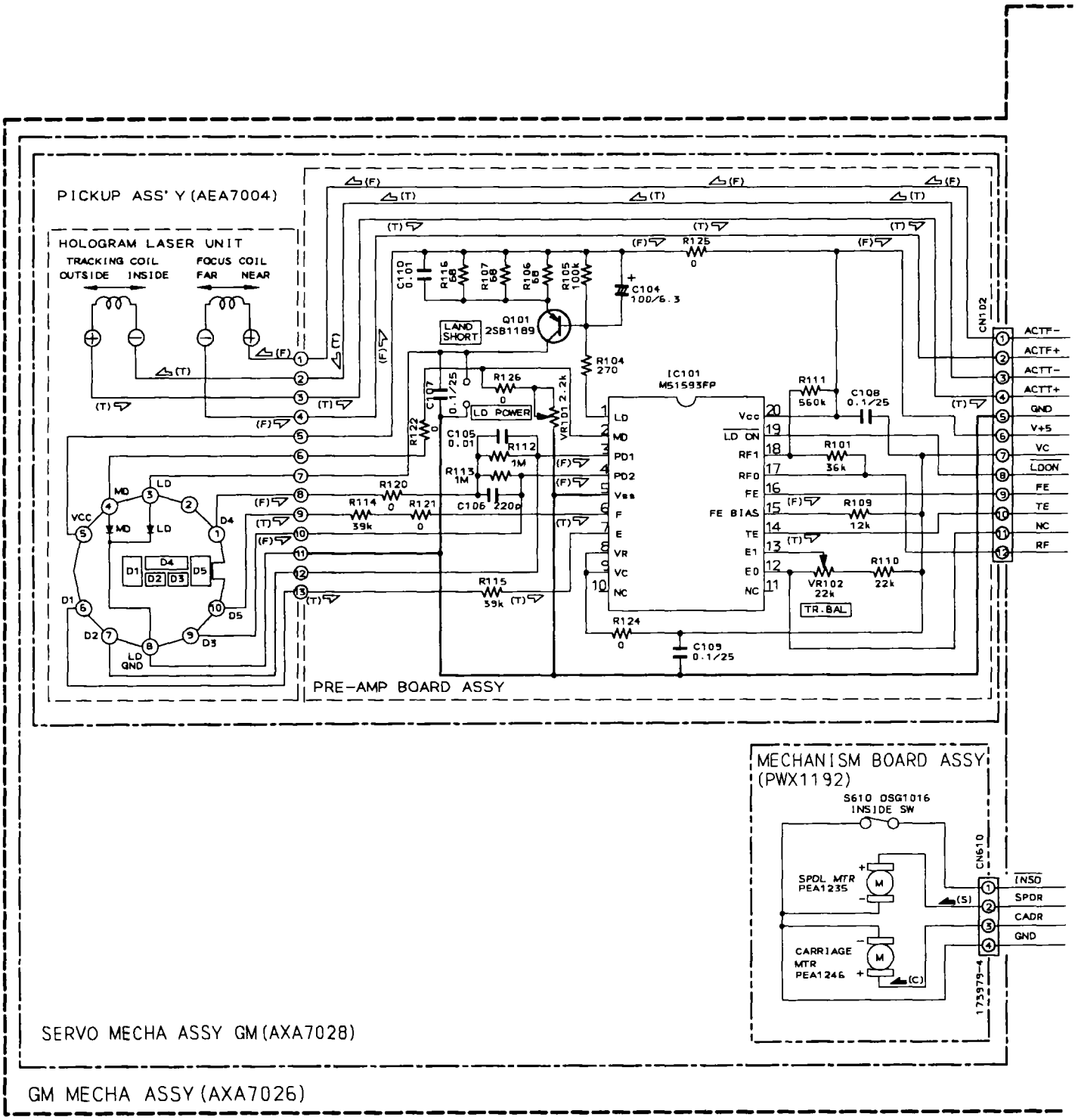
PCB – 2

GM MECHA ASSY



The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

- This diagram is viewed from the mounted parts side.



SIGNAL ROUTE

(F) : FOCUS SERVO LOOP LINE

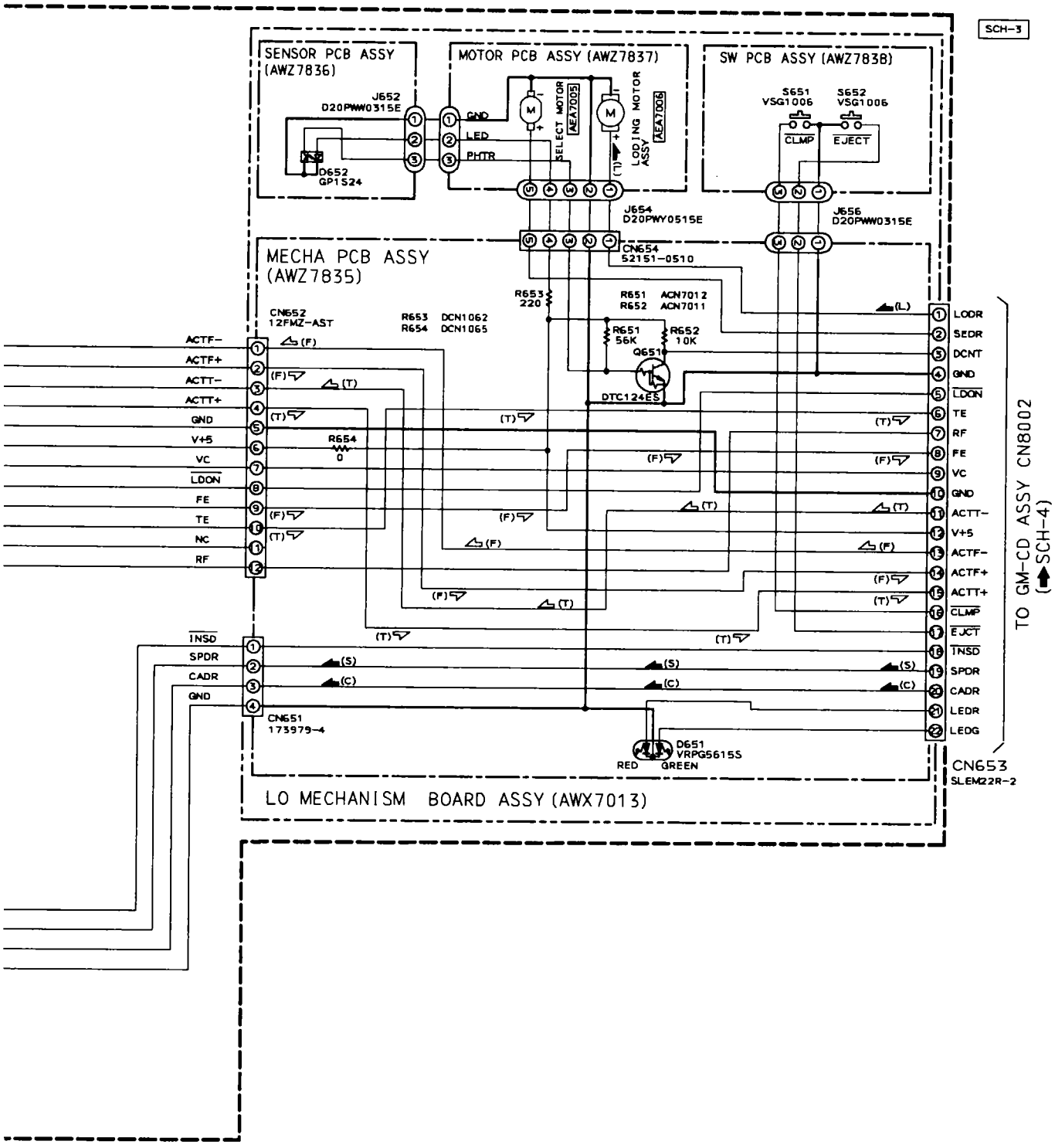
(T) : TRACKING SERVO LOOP LINE

(L) : LOADING MOTOR ROUTE

(S) : SPINDLE MOTOR ROUTE

(C) : CARRIAGE MOTOR ROUTE

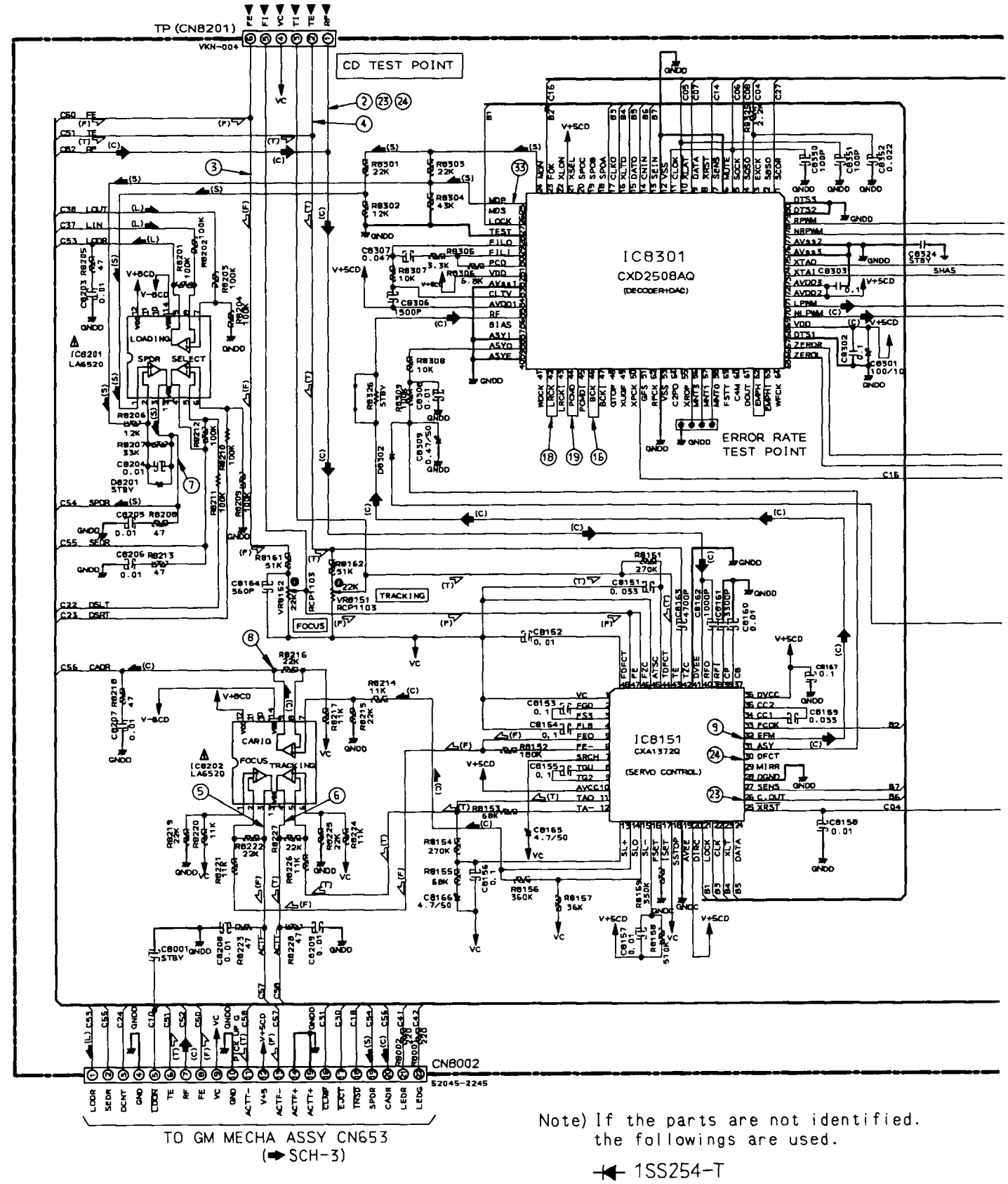
SCH-3



GM MECHA ASSY **SCH-3**

XR-J2500F

5.4 GM-CD ASSY AND HOME SW ASSY

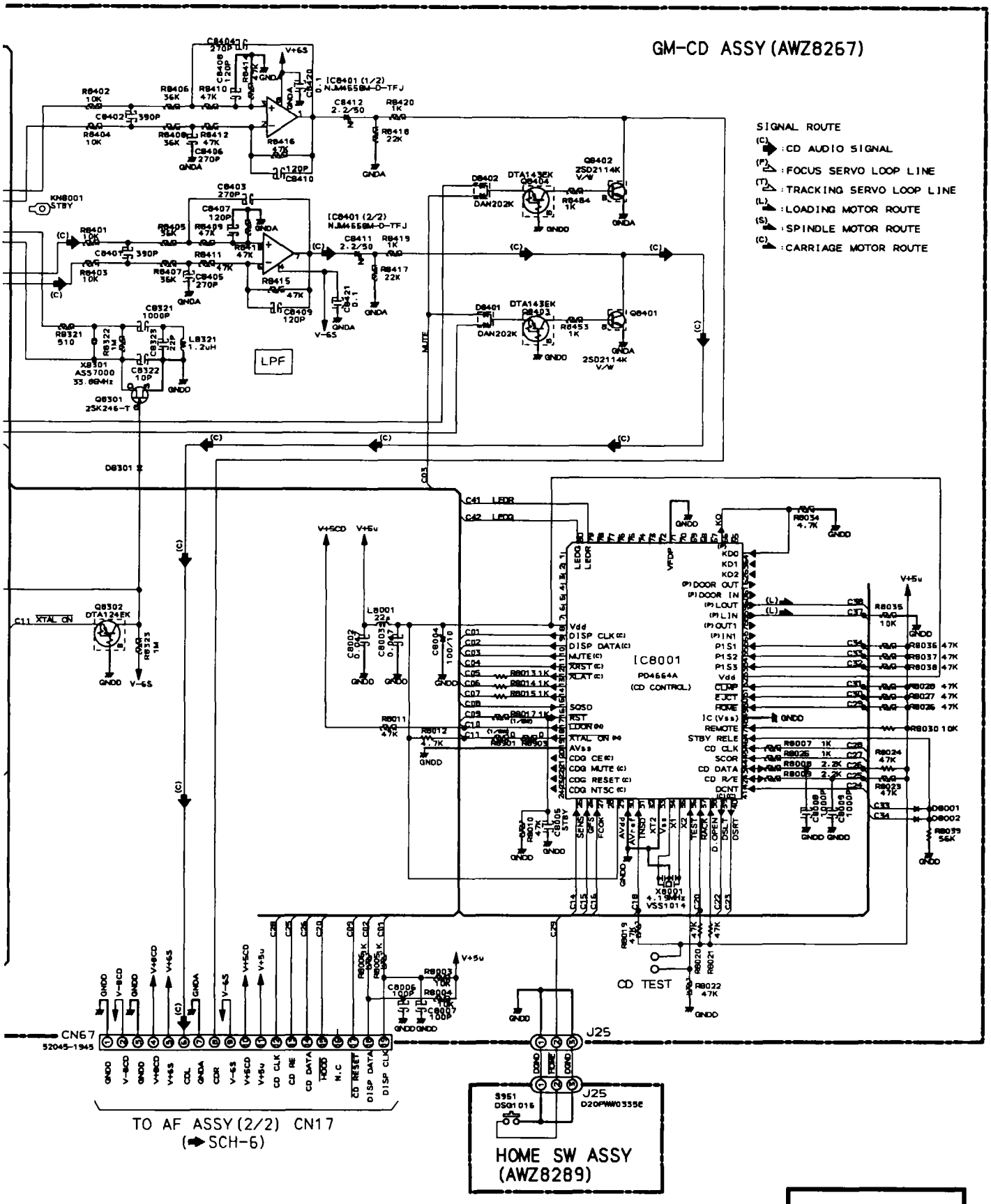


Note) If the parts are not identified.
the followings are used.

⊣◀ 1SS254-T

SCH-4

SCH-4



SCH-4

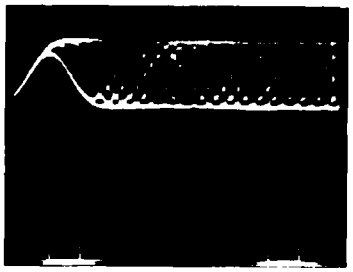
GM-CD ASSY, HOME SW ASSY

Waveforms (GM-CD Assy)

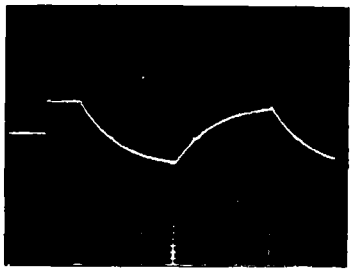
Note: The encircled numbers denote measuring point in the schematic disgram.

*2 FOCUS–IN: Press the key without loading a disc.

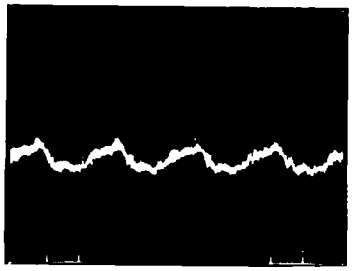
(2) TP(CN8201)-Pin1: PLAY MODE (RF)
500mV/div 500nsec/div



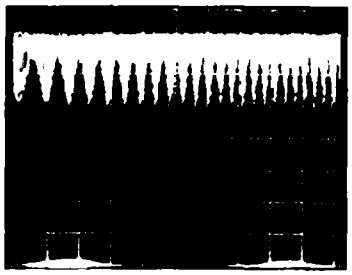
(5) IC8202-Pin3: FOCUS-IN (*2) MODE (FODR)
1V/div 200msec/div



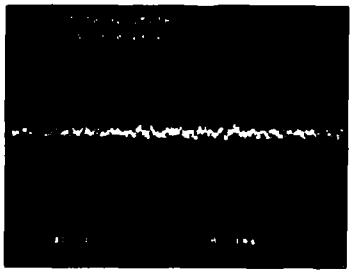
(7) IC8201-Pin3: PLAY MODE (SPDR)
1V/div 50msec/div



(2) TP(CN8201)-Pin1: TRACK SEARCH MODE (RF)
500mV/div 200μsec/div



(5) IC8202-Pin3: PLAY MODE (FODR)
1V/div 1msec/div

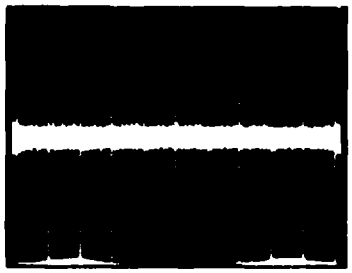


(7) IC8201-Pin3: TRACK SEARCH MODE (SPDR)
2V/div 50msec/div

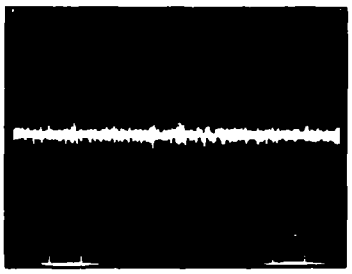
(3) TP(CN8201)-Pin6: PLAY MODE (FOER)
100mV/div 10msec/div

(8) IC8202-Pin9: PLAY MODE (CADR)
0.2V/div 2sec/div

(4) TP(CN8201)-Pin2: PLAY MODE (TRER)
1V/div 1msec/div

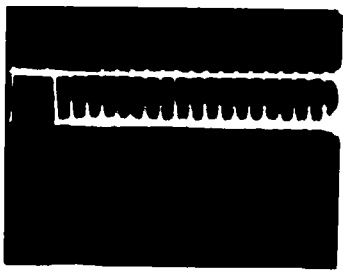


(6) IC8202-Pin4: PLAY MODE (TRDR)
500mV/div 1msec/div

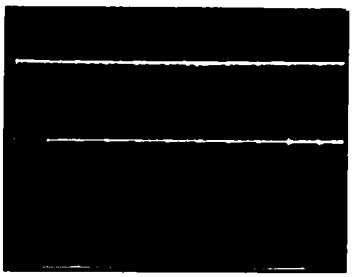


(8) IC8202-Pin9: TRACK SEARCH MODE (CADR)
2V/div 200msec/div

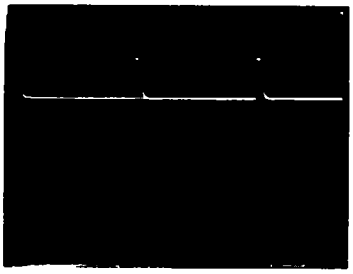
⑨ IC8151-Pin32: PLAY MODE (EFM)
2V/div 500nsec/div



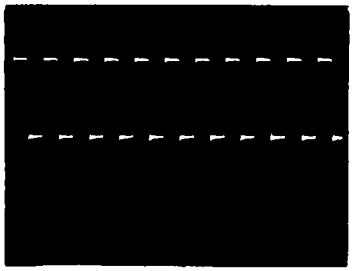
⑲ IC8301-Pin44: PLAY MODE (1kHz) (PCMD)
2V/div 500nsec/div



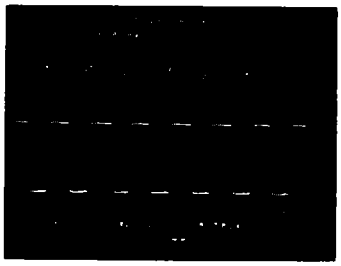
㉝ IC8301-Pin25: PLAY MODE (MDP)
2V/div 2μsec/div



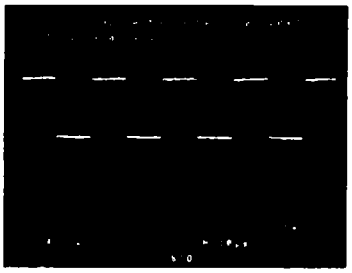
⑯ IC8301-Pin46: PLAY MODE (1kHz) (BCK)
2V/div 500nsec/div



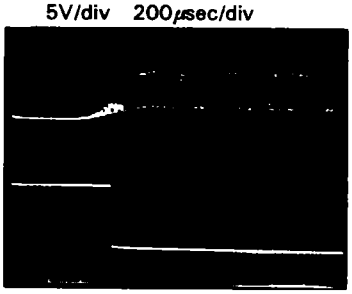
㉓ : TRACK SEARCH MODE
Upper: TP(CN8201)-Pin1 (RF) 1V/div
Lower: IC8151-Pin26 (C. OUT)
2V/div 50μsec/div



⑱ IC8301-Pin42: PLAY MODE (1kHz) (LRCK)
2V/div 10μsec/div

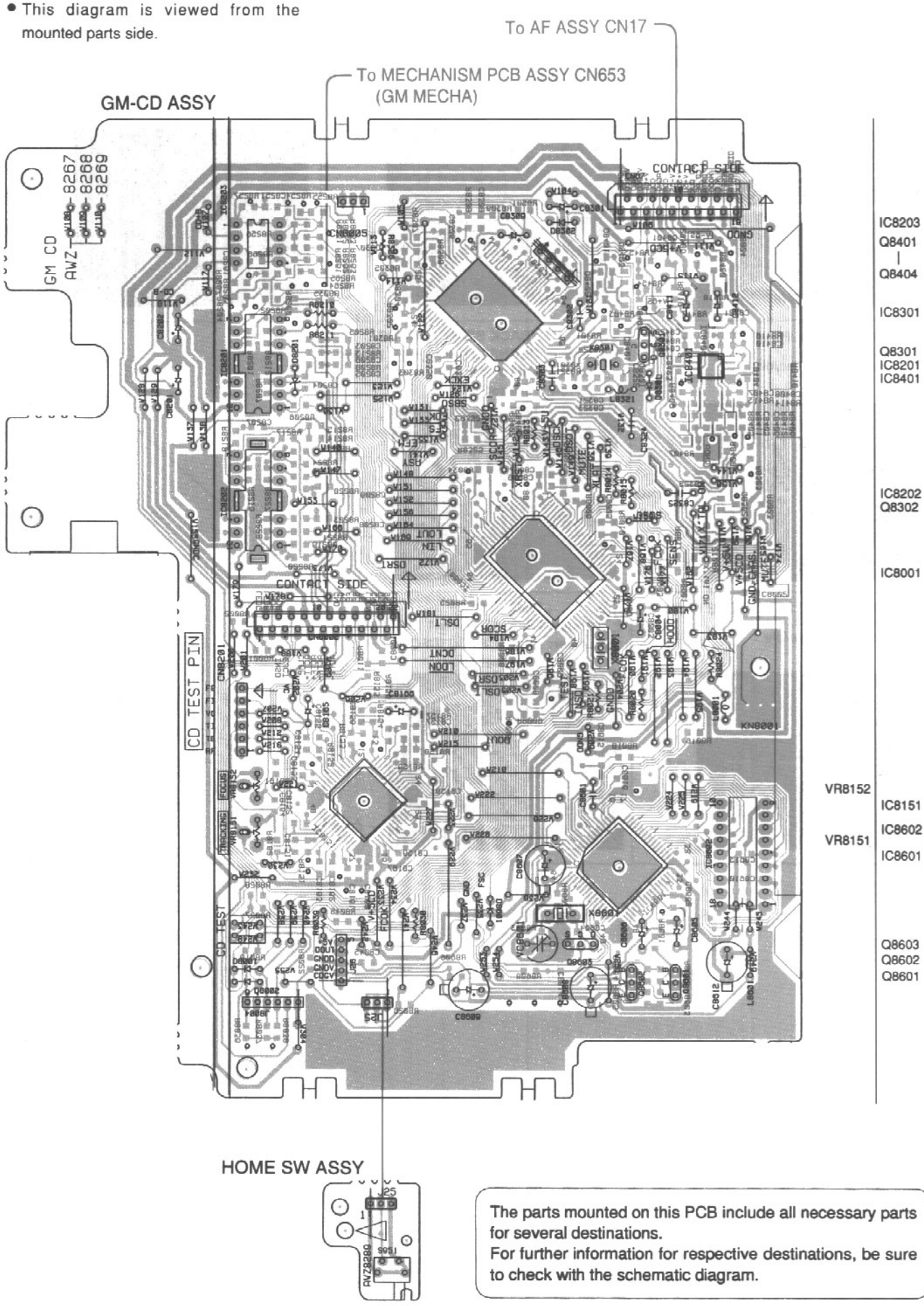


㉔ : PLAY MODE
Upper: TP(CN8201)-Pin1 (RF) 1V/div
Lower: IC8151-Pin30 (DFCT)
5V/div 200μsec/div



PCB – 3

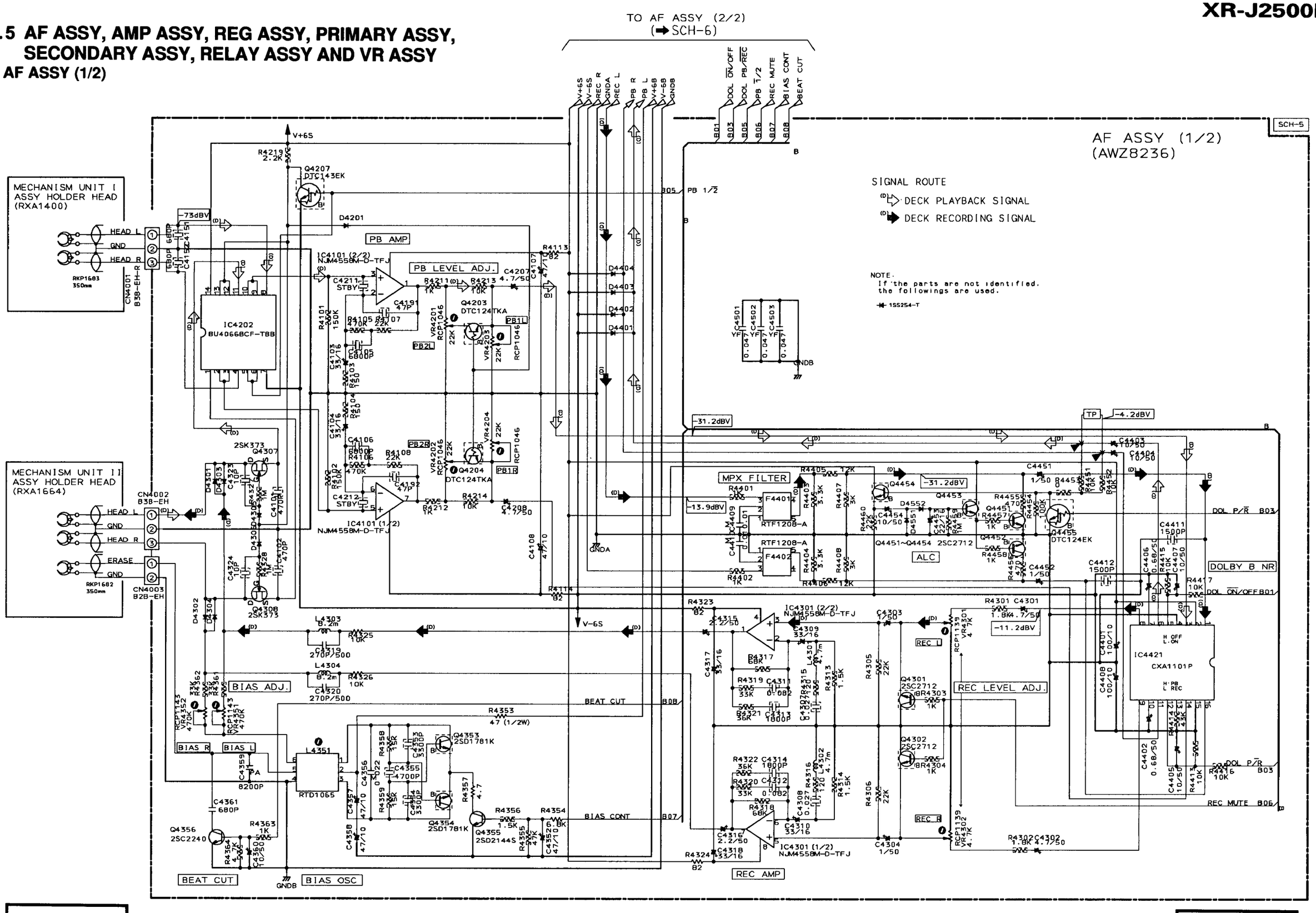
- This diagram is viewed from the mounted parts side.



The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

5.5 AF ASSY, AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, RELAY ASSY AND VR ASSY

● **AF ASSY (1/2)**



XR-J2500F

- This diagram is viewed from the mounted parts side.

PCB – 4

To MECHANISM UNIT 2 HEAD

To FM/AM TUNER MODULE CN6201

To FRONT ASSY CN73

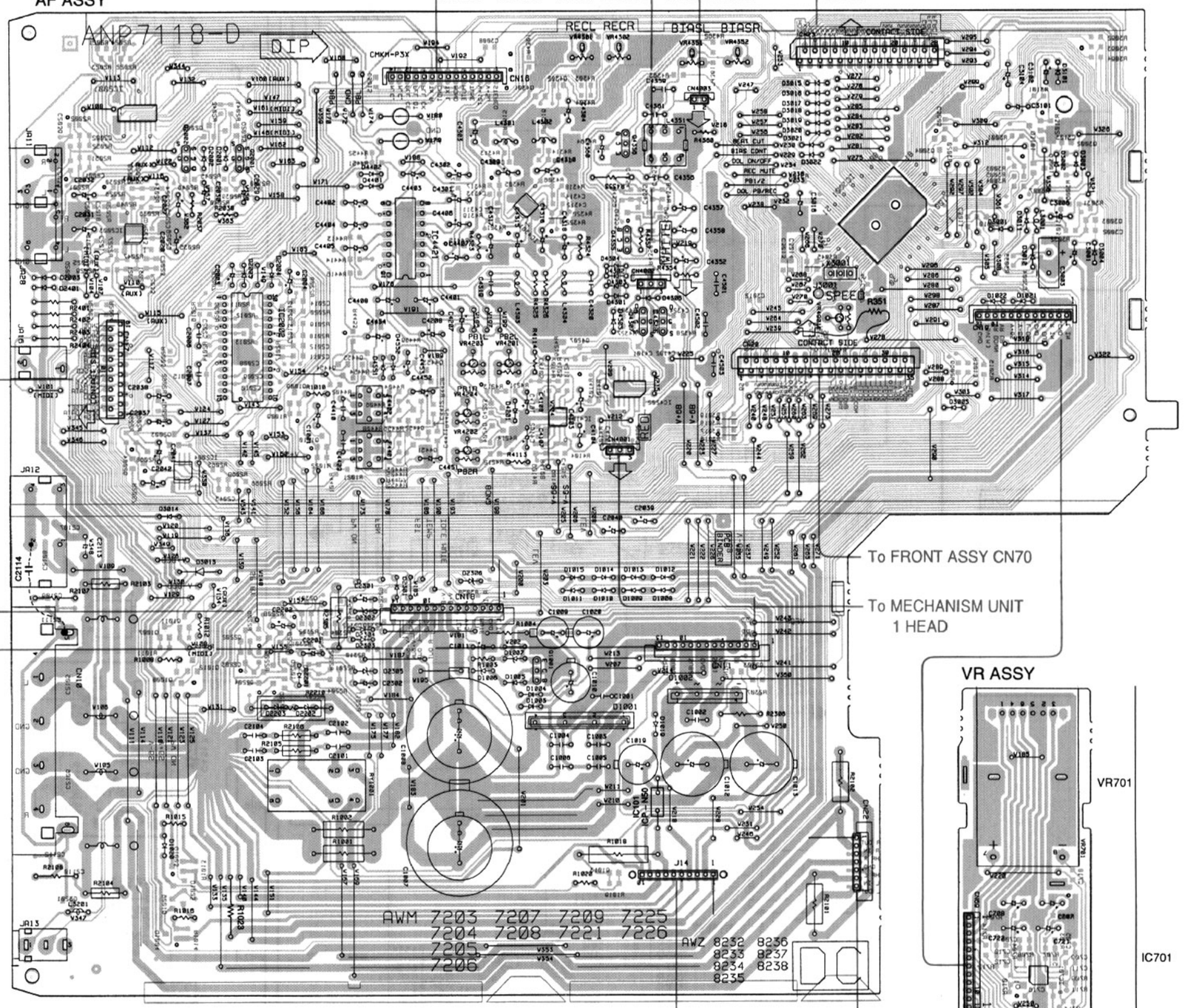
Q2009 IC2001 IC2003 Q2006 Q2002 Q2005 Q2001 IC4421
Q2004 Q2003 IC2004 IC2002 Q1009 Q1010 Q4451 – Q4455
Q1007 Q1008 Q1011 Q1012 Q2201 – Q2206 Q2301 Q2302
Q1003 – Q1006

IC4301 Q4301 Q4302 Q4353 – Q4356
Q4203 Q4204 IC4101 Q4207 IC4102 Q4307 Q4308
Q1001 Q2303
Q1013 IC101

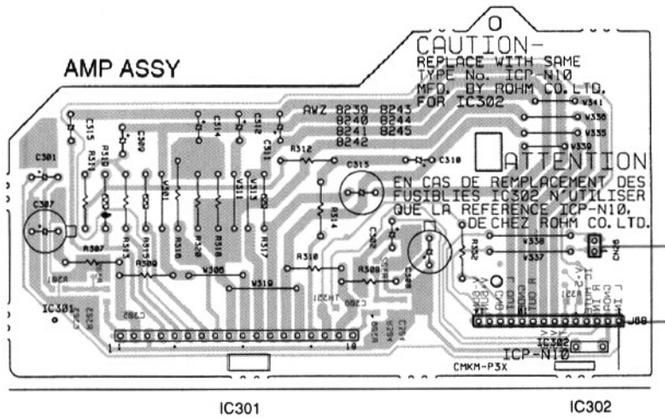
IC3001 Q3004 Q3101 Q3001 – Q3003

VR4201 – VR4204 VR4301 VR4302 VR4351 VR4352 VR4901

AF ASSY



AMP ASSY

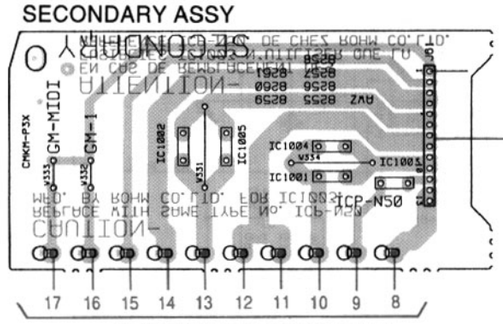


To FAN MOTOR

To GM- CD ASSY CN67

IC1002 IC1005 IC1004 IC1001 IC1003

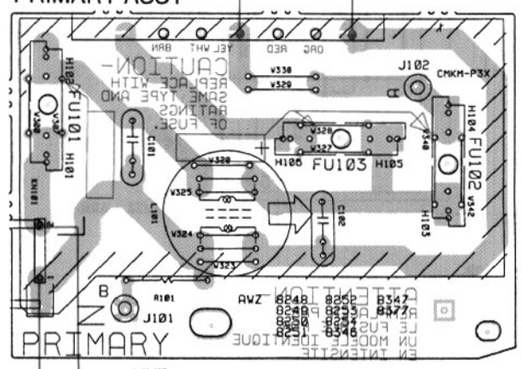
SECONDARY ASSY



To POWER TRANSFORMER

4 7

PRIMARY ASSY



LIVE

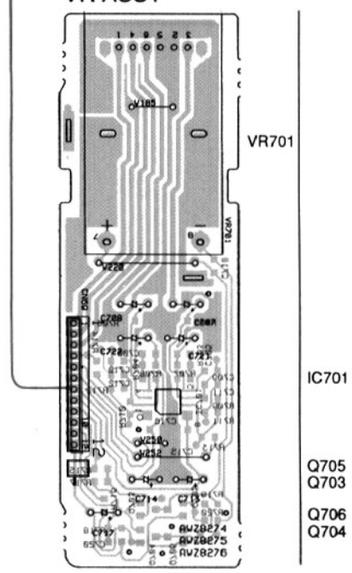
NEUTRAL

To AC POWER CORD

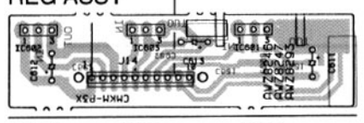
To FRONT ASSY CN70

To MECHANISM UNIT 1 HEAD

VR ASSY

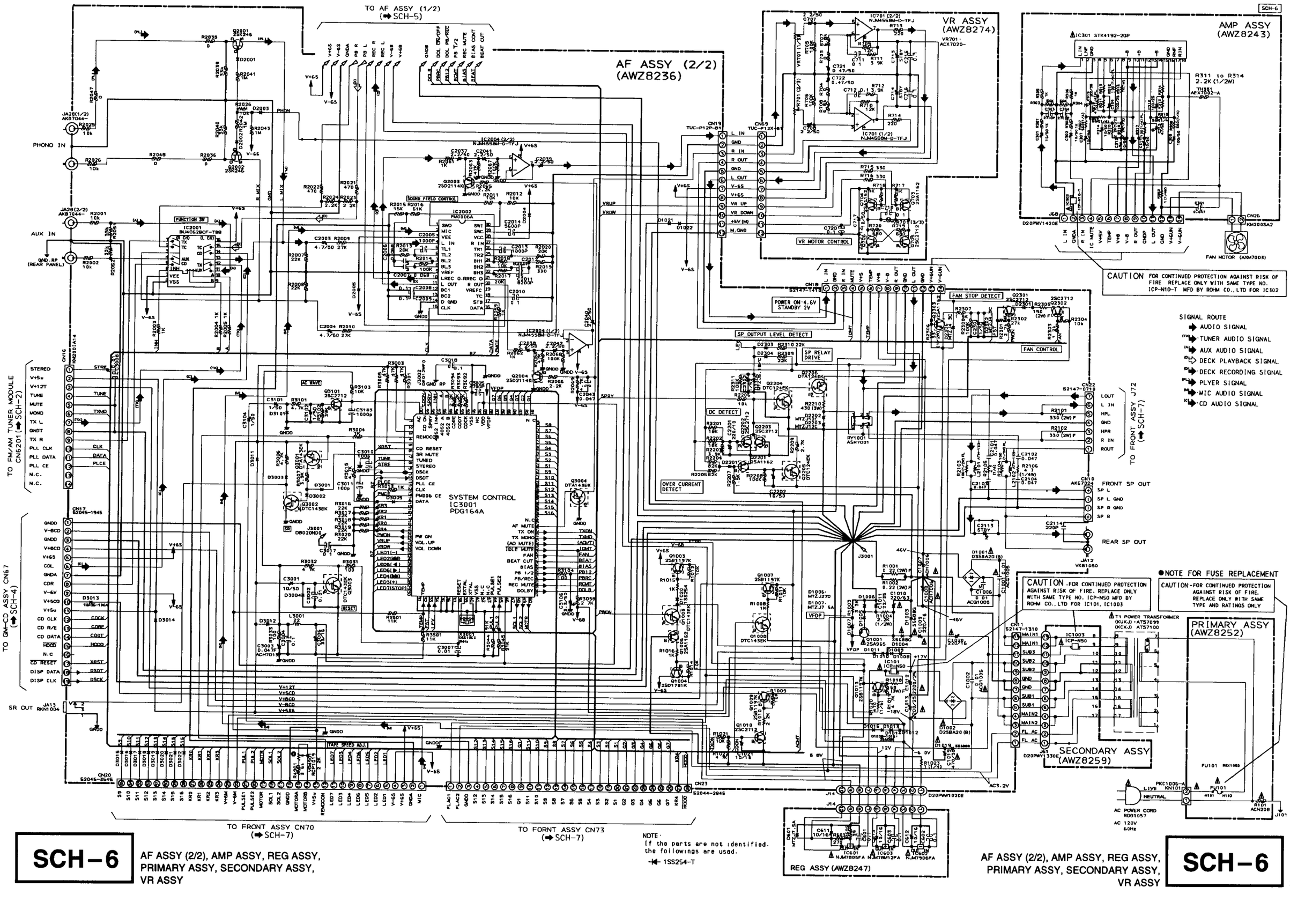


REG ASSY



To FRONT ASSY J72

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

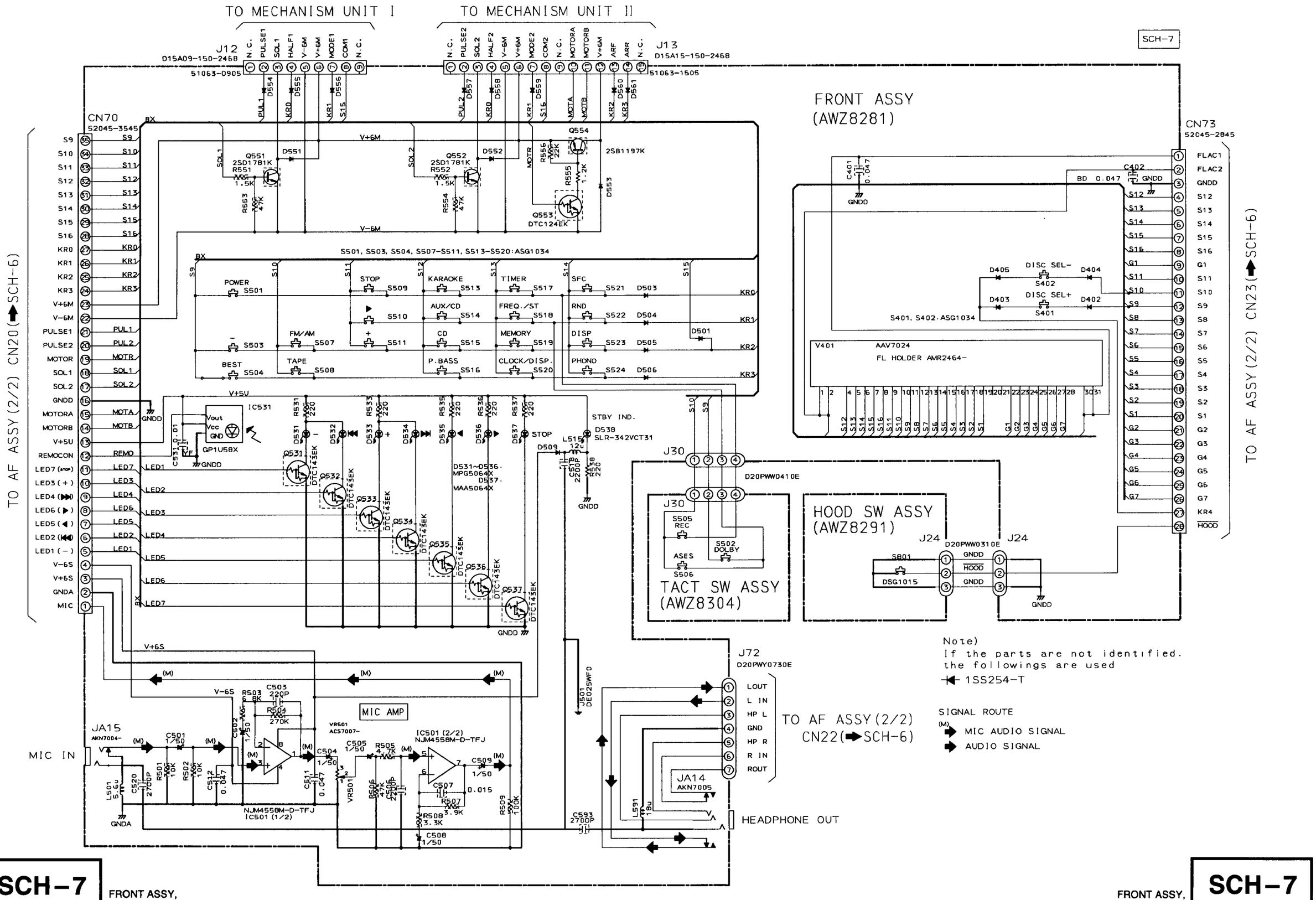


SCH-6 AF ASSY (2/2), AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, VR ASSY

AF ASSY (2/2), AMP ASSY, REG ASSY, PRIMARY ASSY, SECONDARY ASSY, VR ASSY

SCH-6

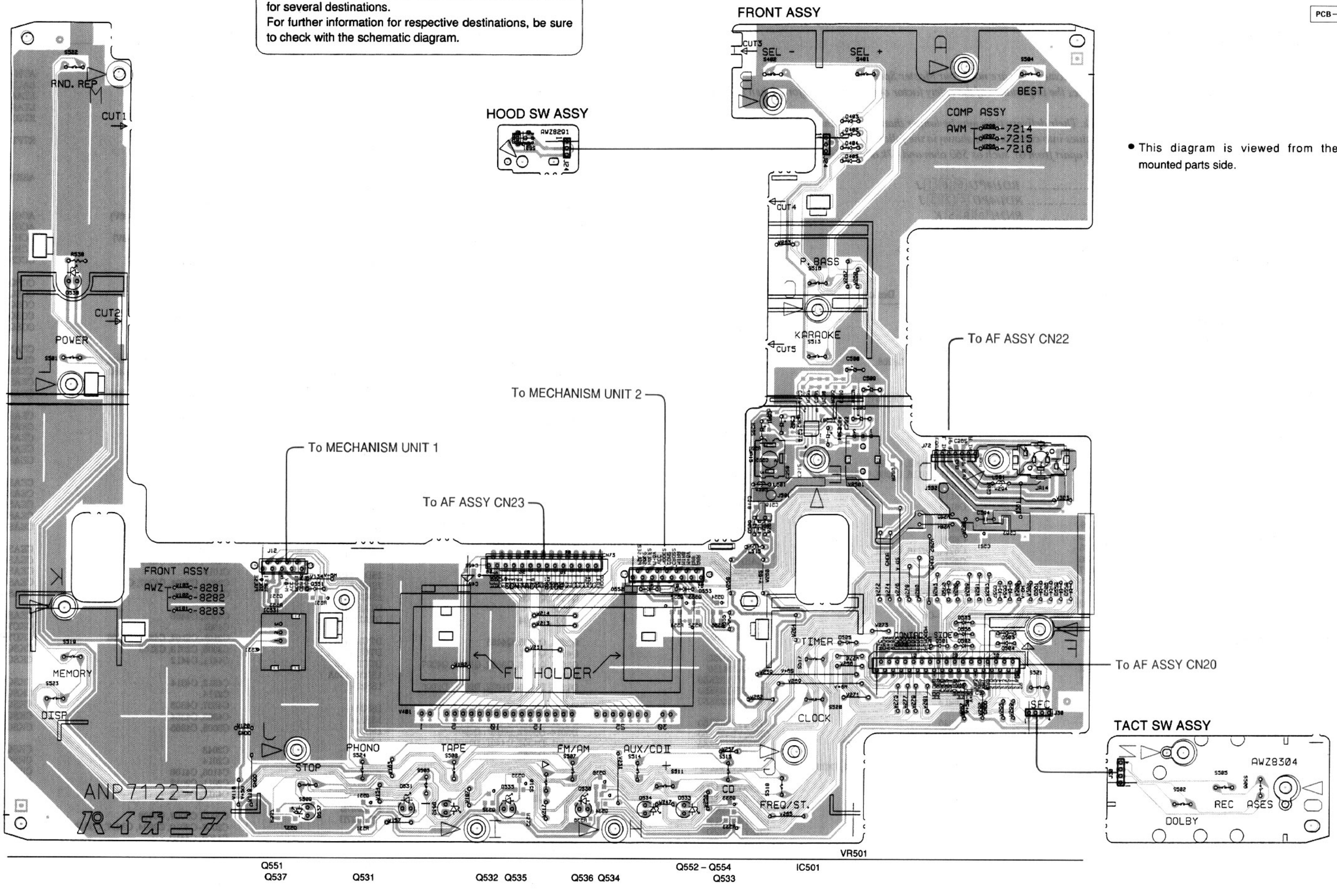
5.6 FRONT ASSY, TACT SW ASSY AND HOOD SW ASSY



SCH-7
FRONT ASSY,
TACT SW ASSY, HOOD SW ASSY

PCB – 5

The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.



- This diagram is viewed from the mounted parts side.

6. PCB PARTS LIST

NOTES :

- *Parts marked by " NSP " 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.*
- *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 x 10¹ = 561 ..... RD1/4PU 5 6 1 J
47kΩ → 47 x 10³ = 473 ..... RD1/4PU 4 7 3 J
0.5Ω → 0R5 ..... RN2H 0 R 5 K
1Ω → 1R0 ..... RS1P 1 R 0 K

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

5.62kΩ → 562 x 10¹ = 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Parts No.
	LIST OF PCB ASSEMBLIES		
	FM/AM TUNER MODULE		AXQ3112
NSP	MAIN ASSY		AWM7207
	├ AF ASSY		AWZ8236
	├ AMP ASSY		AWZ8243
	├ REG ASSY		AWZ8247
NSP	├ PRIMARY ASSY		AWZ8252
NSP	└ SECONDARY ASSY		AWZ8259
NSP	COMP. ASSY		AWM7214
	├ GM-CD ASSY		AWZ8267
	├ VR ASSY		AWZ8274
	├ FRONT ASSY		AWZ8281
NSP	├ HOME SW ASSY		AWZ8289
NSP	├ HOOD SW ASSY		AWZ8291
NSP	└ TACT SW ASSY		AWZ8304
NSP	GM MECHA ASSY		AXA7026
NSP	├ LO MECHANISM BOARD ASSY		AWX7013
NSP	│ ├ MECHA PCB ASSY		AWZ7835
NSP	│ ├ SENSOR PCB ASSY		AWZ7836
NSP	│ ├ MOTOR PCB ASSY		AWZ7837
NSP	│ └ SW PCB ASSY		AWZ7838
NSP	└ SERVO MECHANISM ASSY GM		AXA7028
NSP	└ MECHANISM BOARD ASSY		PWX1192
	FM/AM TUNER MODULE		
	SEMICONDUCTORS		
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33
	COILS AND FILTERS		
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	T6101		ATE-063
	L6207 (10.7MHz)		ATE1013

Mark	No.	Description	Parts No.
	F6203, F6204		ATF-119
	F6101		ATF-155
	F6202 (450kHz)		ATF1155
	L6103 (2.2µH)		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	CAPACITORS		
	C6202, C6234, C6236 (1µF/16V)		ACG1051
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6268		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6246, C6262		CEAS100M50
	C6227		CEAS101M10
	C6216, C6217		CEAS330M16
	C6231, C6233		CEAS3R3M50
	C6219		CEAS470M10
	C6243–C6245		CEAS470M16
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB333K50
	C6228, C6252		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB333K50
	C6251		CKSYB472K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
	RESISTORS		
	R6299, R6300		RD1/8PM102J

Mark	No.	Description	Parts No.
	R6113, R6116, R6118, R6268–R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1/8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	VR6201 (10kΩ)	ACP1056	
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□J
	OTHERS		
	BN6201	TERMINAL 4-P	AKA1016
	X6203 (7.200MHz)	CRYSTAL RESONATOR	ASS1042
	X6201 (456kHz)	CRYSTAL RESONATOR	ASS1066
	X6202 (450kHz)	CERAMIC RESONATOR	ATF1027
	AM RF	TUNING BLOCK	AXX1025
	CN6201	14P SOCKET	KP200IA14L
	AF ASSY		
	SEMICONDUCTORS		
	IC2001		BU4052BCF
	IC4202		BU4066BCF
	IC4421		CXA1101P
⚠	IC101		ICP-N50
	IC2004, IC4101, IC4301		NJM4558M-D
	IC3001		PDG164A
	IC2002		PM0006A
	Q1006, Q2201, Q2303		2SA1162
⚠	Q1001		2SA965
	Q1003, Q1007, Q1009, Q1013		2SB1197K
	Q4356		2SC2240
	Q1010, Q2202, Q2203, Q2301, Q2302		2SC2712
	Q3101, Q4301, Q4302, Q4451–Q4454		2SC2712
	Q1004, Q4353, Q4354		2SD1781K
	Q2003, Q2004		2SD2114K
	Q4355		2SD2144S
	Q2001, Q2002		2SK246
	Q4307, Q4308		2SK373
	Q2206		DTA124EK
	Q3001, Q3004		DTA143EK
	Q2204, Q2205, Q4455		DTC124EK
	Q4203, Q4204		DTC124TKA
	Q1005, Q1008, Q3002, Q3003, Q4207		DTC143EK
	D3013		1SR35-100A
	D1005, D1020–D1022, D2001–D2005		1SS254
	D2201, D2301, D2303, D2304		1SS254
	D3001–D3005, D3011, D3012		1SS254
	D3014–D3022, D3101, D4201		1SS254
	D4301–D4306, D4401–D4404		1SS254
	D4551, D4552		1SS254
⚠	D1002		D2SBA20 (B)
⚠	D1001		D3SBA20 (B)
	D2202, D2203		MTZJ12C
	D2306		MTZJ27B
	D1006		MTZJ27D
	D2302, D2305		MTZJ4.3C
	D1007		MTZJ7.5A
⚠	D1003, D1004, D1019		S5688G
	D1008–D1015		S5688G

Mark	No.	Description	Parts No.
	COILS AND FILTERS		
	L2101, L2102 (1µH)		ATH-133
	L3001		LAU220J
	L4301, L4302		LTA472J
	L4303, L4304		LTA822J
	L4351 (4.05µH)		RTD1065
	F4401, F4402		RTF1208
	SWITCHES AND RELAYS		
	RY1001		ASR7001
	CAPACITORS		
⚠	C1001, C1002 (0.01µF/150V)		ACG1005
	C1006 (0.01µF/150V)		ACG1005
⚠	C1007, C1008 (3300µF/56V)		ACH7006
	C3003		ACH7013
	C4319, C4320		CCCSL271K500
	C4323, C4324		CCSQCH100D50
	C3010, C3011		CCSQCH101J50
	C4101, C4102		CCSQCH471J50
	C4151, C4152		CCSQCH681J50
	C4191, C4192		CCSQSL470J50
	C3016		CEANP3R3M50
	C2301, C2302, C3101, C3102, C3104		CEAS010M50
	C4303, C4304, C4451, C4452		CEAS010M50
	C1021		CEAS100M16
	C2202, C3001, C4360, C4403–C4405		CEAS100M50
	C4407, C4454		CEAS100M50
	C4401, C4408		CEAS101M10
	C4453		CEAS220M16
	C1011		CEAS220M35
	C2201		CEAS221M10
⚠	C1009, C1020		CEAS221M16
⚠	C1010		CEAS221M63
⚠	C1012, C1013		CEAS222M25
	C2037–C2042, C4315, C4316		CEAS2R2M50
	C3006, C4103, C4104, C4309, C4310		CEAS330M16
	C4317, C4318		CEAS330M16
	C4107, C4108, C4352, C4357, C4358		CEAS470M10
⚠	C1019		CEAS471M35
	C2003, C2004, C4207, C4208		CEAS4R7M50
	C4301, C4302		CEAS4R7M50
	C4402, C4406		CEASR68M50
	C4361		CKCYB681K500
	C2101–C2104, C4501–C4503		CKCYF473Z50
	C2005, C2013, C3103		CKSQYB102K50
	C4411, C4412		CKSQYB152K50
	C4313, C4314		CKSQYB182K50
	C2114		CKSQYB221K50
	C4307, C4308		CKSQYB273K50
	C4353, C4354		CKSQYB332K50
	C3005, C4355		CKSQYB472K50
	C2043		CKSQYB473K50
	C2014		CKSQYB562K50
	C4105, C4106		CKSQYB682K50
	C2011, C2012		CKSQYB822K50
	C4311, C4312		CKSQYB823K25
	C3002, C3007, C3008		CKSQYF103Z50
	C2008–C2010, C3004, C3017, C3018		CKSQYF104Z50
	C4409, C4410		CQMA103J50
	C4356		CQMA223J50
	C2006, C2007		CQMA683J50
	C4359		CQPA822J100

Mark	No.	Description	Parts No.
RESISTORS			
	VR4901 (2.2kΩ)		RCP1019
	VR4201–VR4204 (22kΩ)		RCP1046
	VR4301, VR4302 (4.7kΩ)		RCP1139
	VR4351, VR4352 (470kΩ)		RCP1143
	R1004		RD1/2PM222J
	R2306		RD1/2PM330J
	R4353		RD1/2PM470J
	R2103, R2104		RD1/2PMFL101J
	R2105, R2106		RD1/4PM4R7J
	R1023		RD1/4PMF010J
	R1008, R1015, R1016		RD1/6PM102J
	R4325, R4326		RD1/6PM103J
	R1010		RD1/6PM222J
	R1003		RD1/6PM332J
	R1020		RD1/6PM471J
	R4357		RD1/6PM4R7J
	R4354		RD1/6PM682J
	R4113, R4114, R4323, R4324		RD1/6PM820J
	R2305		RS2LMF121J
	R2101, R2102		RS2LMF331J
	R1001, R1002		RS2LMFR22J
	R2210		RS3LMF431J
	R1018		RS3LMF680J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN23	FFC CONNECTOR (28P)	52044–2845
	CN17	FFC CONNECTOR (19P)	52045–1945
	CN20	FFC CONNECTOR (35P)	52045–3545
	CN22	JUMPER CONNECTOR (7P)	52147–0710
	CN11	JUMPER CONNECTOR (13P)	52147–1310
	JA28	PIN JACK (4P)	AKB7044
	CN10	SPEAKER TERMINAL 4–P	AKE7024
	CN4003	TOP POST (2P)	B2B–EH
	CN4002	TOP POST (3P)	B3B–EH
	CN4001	TOP POST (3P)	B3B–EH–R
	J3001	BOARD–IN WIRE	DB020ND0
	J3002	BOARD–IN WIRE	DB925ND0
	X3001 (8.00MHz)		DSS1053
	CN16	PLUG (14P)	KM200IA14
	JA13	REMOTE CONTROL JACK	RKN1004
	CN19	CONNECTOR (12P)	TUC–P12P–B1
		PCB BINDER	VEF1008
	JA12	PIN JACK (2P)	VKB1050

AMP ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC302		ICP–N10
⚠	IC301		STK4192–2GP
CAPACITORS			
	C315		CEANP220M50
	C313		CEANP470M50
	C301, C302, C311, C312, C314		CEAS100M50
	C309, C310		CEAS101M25
	C307, C308		CEAS101M50
	C303, C304		CKSQYB272K50
	C351		CKSQYB473K50
RESISTORS			
	R318, R320		RD1/2PM222J
	R311–R314		RD1/2PM332J
	R307, R308		RD1/4PM561J
	R309, R310		RD1/4PM563J
	R352		RD1/4PMF010J
	R315, R317		RD1/4PMFL101J
	R319		RD1/4PMFL471J
	R316		RS1LMF102J
	Other Resistors		RS1/10S□□□J
OTHERS			
	TH351	THERMISTOR	AEX7002

REG ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC601		NJM7805FA
⚠	IC603		NJM78M12FA
⚠	IC602		NJM7906FA
	D601		MTZJ7.5A
CAPACITORS			
	C611–C613		CEAS100M16
	C601–C603		CKSQYF104Z50
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	J14	JUMPER WIRE (10P)	D20PWW1020E

PRIMARY ASSY

Mark	No.	Description	Parts No.
RESISTORS			
⚠	R101 (2.2MΩ, 1/2W)		ACN–208

SECONDARY ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
⚠	IC1003		ICP–N50

GM-CD ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	IC8151		CXA1372Q
	IC8301		CXD2508AQ
⚠	IC8201, IC8202		LA6520
	IC8401		NJM4558M–D
	IC8001		PD4664A
	Q8401, Q8402		2SD2114K
	Q8301		2SK246
	Q8302		DTA124EK
	Q8403, Q8404		DTA143EK
	D8001, D8002, D8301, D8302		1SS254
	D8401, D8402		DAN202K
COILS AND FILTERS			
	L8321		LAU1R2J
	L8001		LAU220J
CAPACITORS			
	C8322		CCSQCH100D50
	C8006, C8007, C8350, C8351		CCSQCH101J50
	C8407–C8410		CCSQCH121J50
	C8323		CCSQCH220J50
	C8403–C8406		CCSQCH271J50
	C8401, C8402		CCSQCH391J50
	C8411, C8412		CEANP2R2M50

Mark	No.	Description	Parts No.
	C8004, C8301		CEAS101M10
	C8165, C8166		CEAS4R7M50
	C8309		CEASR47M50
	C8302, C8303		CGCYX104M16
	C8008, C8009, C8162, C8321		CKSQYB102K50
	C8152, C8157, C8160		CKSQYB103K50
	C8306		CKSQYB152K50
	C8352		CKSQYB223K50
	C8161		CKSQYB332K50
	C8151, C8159		CKSQYB333K50
	C8163		CKSQYB472K50
	C8002, C8003, C8307		CKSQYB473K50
	C8164		CKSQYB561K50
	C8158, C8203–C8209, C8308		CKSQYF103Z50
	C8153–C8156, C8167, C8420, C8421		CKSQYF104Z50
RESISTORS			
	VR8151, VR8152 (22kΩ)		RCP1103
	R8013–R8015		RD1/6PM102J
	R8030		RD1/6PM103J
	R8210, R8211		RD1/6PM104J
	R8020, R8021, R8024		RD1/6PM473J
	R8039		RD1/6PM563J
	R8901		RS1/8S000J
	R8017		RS1/8S102J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN67	FFC CONNECTOR (19P)	52045–1945
	CN8002	FFC CONNECTOR (22P)	52045–2245
	CN8201	SIDE POST (6P)	VKN–004
	X8301 (33.8688MHz)		ASS7000
	X8001 (4.19MHz)		VSS1014

VR ASSY

SEMICONDUCTORS

IC701		NJM4558M–D
Q703, Q704		2SA1162
Q705, Q706		2SC2712

CAPACITORS

C717		CEAS100M50
C707, C708		CEAS2R2M50
C721, C722		CEASR47M50
C711, C712, C715, C716, C718		CKSQYF104Z50
C720		CKSQYF104Z50

RESISTORS

VR701 (50kΩ–Bx2)		ACX7020
Other Resistors		RS1/10S□□□J

OTHERS

CN69	CONNECTOR (12P)	TUC–P12X–B1

FRONT ASSY

SEMICONDUCTORS

IC501		NJM4558M–D
Q554		2SB1197K
Q551, Q552		2SD1781K
Q553		DTC124EK
Q531–Q537		DTC143EK
D402–D405, D501, D503–D506		1SS254
D509, D551–D561		1SS254
D537		MAA5064X
D531–D536		MPG5064X
D538		SLR–342VCT31

Mark	No.	Description	Parts No.
COILS AND FILTERS			
	L515		LAU120J
	L591		LAU180J
	L501		LAU5R6J
SWITCHES AND RELAYS			
	S401, S402, S501, S503, S504		ASG1034
	S507–S511, S513–S524		ASG1034
CAPACITORS			
	C503		CCSQCH221J50
	C501, C502, C504, C505		CEAS010M50
	C508, C509		CEAS010M50
	C507		CKSQYB153K50
	C506, C518		CKSQYB222K50
	C520, C593		CKSQYB272K50
	C531		CKSQYF103Z50
	C401, C402, C511, C512		CKSQYF473Z50
RESISTORS			
	VR501 (10kΩ–B)		ACS7007
	R555		RD1/6PM122J
	R538		RD1/6PM221J
	Other Resistors		RS1/10S□□□J
OTHERS			
		CABLE HOLDER (9P)	51063–0905
		CABLE HOLDER (15P)	51063–1505
	CN73	FFC CONNECTOR (28P)	52045–2845
	CN70	FFC CONNECTOR (35P)	52045–3545
	V401	FL TUBE	AAV7024
	JA15	SR JACK	AKN7004
	JA14	MINITURE JACK	AKN7005
		REMOTE RECEIVER UNIT	GP1U58X

HOME SW ASSY

SWITCHES AND RELAYS

S951		DSG1016

HOOD SW ASSY

SWITCHES AND RELAYS

S801		DSG1015

OTHERS

J24	JUMPER WIRE (3P)	D20PWW0310E

TACT SW ASSY

SWITCHES AND RELAYS

S502, S505, S506		ASG1034

MECHA PCB ASSY

SEMICONDUCTORS

Q651		DTC124ES
D651		VRPG5615S

RESISTORS

R652 (10kΩ)		ACN7011
R651 (56kΩ)		ACN7012
R653 (220Ω, 1/6W)		DCN1062
R654 (0Ω)		DCN1065

Mark	No.	Description	Parts No.
OTHERS			
	CN652	FPC CONNECTOR (12P)	12FMZ-AST
	CN651	MT CONNECTOR (4P)	173979-4
	CN653	FFC CONNECTOR (22P)	SLEM22R-2

SENSOR PCB ASSY

SEMICONDUCTORS			
	D652		GP1S24
OTHERS			
	J652	JUMPER WIRE (3P)	D20PWW0315E

MOTOR PCB ASSY

OTHERS			
		LOADING MOTOR	VXM1034

SW PCB ASSY

SWITCHES AND RELAYS			
	S651, S652		VSG1006
OTHERS			
	J656	JUMPER WIRE (3P)	D20PWW0315E

MECHANISM BOARD ASSY

SWITCHES AND RELAYS			
	S610		DSG1016
OTHERS			
	CN610	MT CONNECTOR (4P)	173979-4

7. ADJUSTMENTS

7.1 TUNER SECTION

■ FM Tuner Section

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

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98 Non modulation	80 or more	—	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or ⊕ leads of C6224 and C6261) becomes 0V±50mV.
2	Front End Sensitivity	98	10-30	98MHz	L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 12 and GND (or ⊕ leads of C6238 and GND) becomes at maximum level.
3	Stereo Distortion	98	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- *Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.*
- *Make indicator adjustments in order of AM →FM.*

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz*1	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

*1: For the area using 10kHz step, frequencies should be 1000 kHz

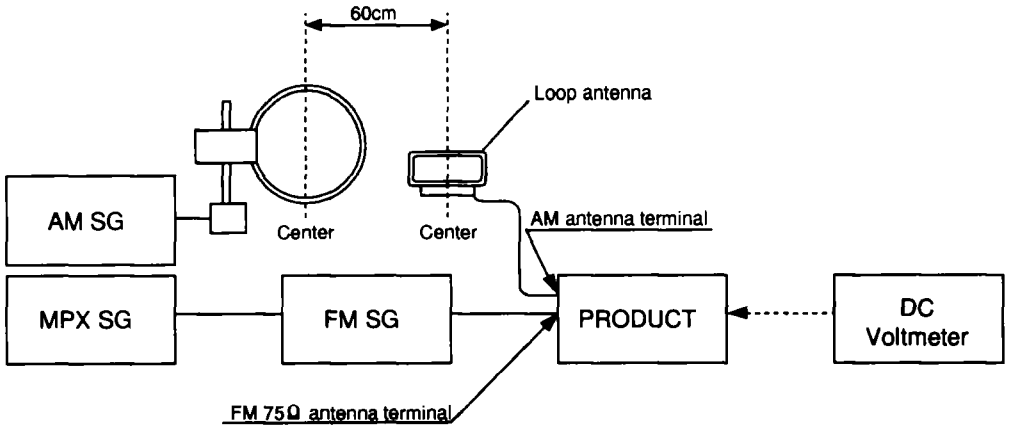


Fig. 1–1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE (AXQ3112)

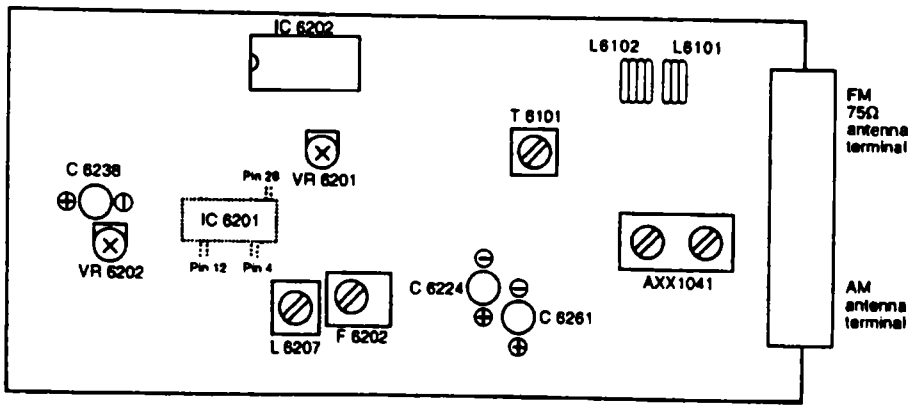


Fig. 1–2 Adjustment Points

7.2 CASSETTE DECK SECTION

• Adjustment points and test points are shown in Fig. 2-3 and Fig. 2-4.

■ Mechanical Adjustment

• Test tape: STD-301 (3kHz, 30min).

1. Tape Speed Adjustment

No.	Mode	Test Tape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	Deck I PLAY	STD-301 (Playback: 3kHz)	AF Assy VR4901	TAPE TEST POINT (Rch) (AF Assy)	Press the PLAY SW and adjust so that the reading becomes 3000Hz ±20Hz. Confirm that wow & flutter level is below 0.2% (in the reverse direction, confirm that the reading is within 3000Hz ±60Hz).	

■ Electrical Adjustment

Check the following before starting.

1. Confirm that the tape speed adjustment has been completed.
2. Clean the heads and demagnetize them using a head eraser.
3. Set the measurement level to 0 dBV = 1 Vrms.
4. Use the specified tape for adjustment. Use the labeled (A) side of the test tape.
   STD-331E: For playback adjustment
   STD-631or STD-632: Normal blank tape
5. Provide yourself with the following measuring devides:
   - AC millivoltmeter
   - Low-frequency oscillator
   - Attenuator
   - Oscilloscope
6. Adjust both right and left channels unless otherwise specified.
7. Turn the DOLBY NR switch off unless otherwize specified.
8. Warm up the unit for several minutes before adjustment. In particular, be sure to warm up the unit in the REC/PLAY mode for 3 to 5 minutes before starting recording/playback frequency characteristics adjustment.
9. Always follow the indicated adjustment order. Otherwise, a complete adjustment may not be achieved.

Playback Adjustment (Decks I and II)

1. Head Azimuth Adjustment
2. Playback Level Adjustment

Recording Adjustment (Deck II)

1. Bias Oscillation Frequency Adjustment
2. Recording Bias Adjustment
3. Recording Level Adjustment.
4. ALC Operation Check

* *As the reference recording level is 250nwb/m for STD-331E, the recording level will be higher by 4 dB for STD-331B (160nwb/m). When adjusting, pay carefull attention to the type of tape used.*

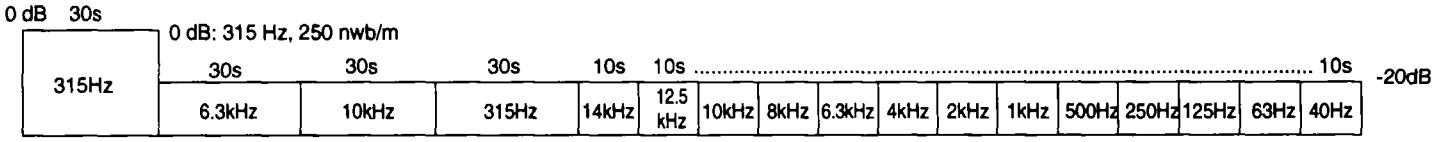


Fig. 2–1 STD-331E Test Tape

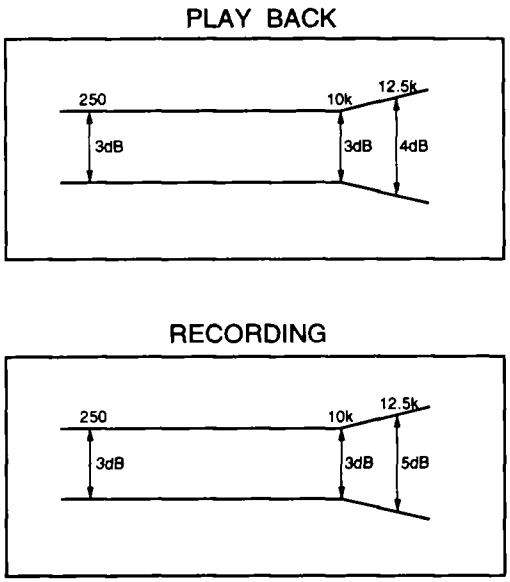


Fig. 2–2 Frequency Characteristics

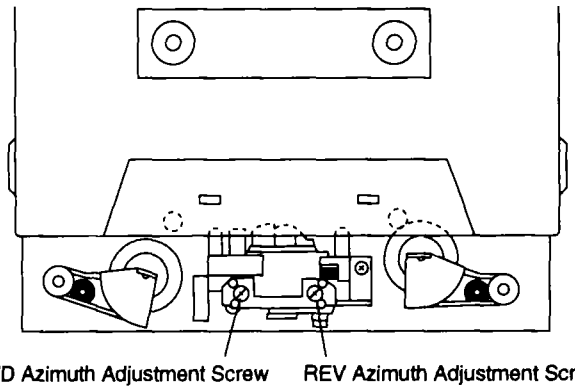


Fig. 2–3 Head Azimuth Adjustment

■ Playback Adjustment

1. Head Azimuth Adjustment

- This unit is equipped with auto tape selector.
- Do not switch between forward and reverse operation with the screwdriver inserted.

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD-331E test tape (Playback: 10kHz, -20dB)	Deck I Deck II	Head azimuth adjustment screw (Fig. 2-3)	TAPE TEST POINT (L, Rch) (AF Assy)	Max. playback signal level	After adjustment, apply silicon bond to the head azimuth adjustment screw.

2. Playback Level Adjustment

- Since this adjustment determines playback Dolby NR level, perform it carefully.

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	PLAY	STD-331E test tape (Playback: 315Hz, 0dB)	Deck I Deck II	VR4203 (Lch) VR4204 (Rch) VR4201 (Lch) VR4202 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	- 4.2 dBV	

Note: Please execute playback level adjustment always in the order of deck I → deck II.
When deck I has been adjusted, always adjust deck II also.

■ Recording Adjustment

1. Bias Oscillation Frequency Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/ Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Load the STD-631 or STD-632 test tape and set the recording mode.	Deck I Deck II	—— L4351	—— Between Ⓐ point in Fig. 2-4 and GND.	Oscillation frequency to be 105.0kHz ±2kHz.	When the power is turned ON while the MEMORY button is depressed, the frequency will decrease 2 - 3 kHz.

2. Recording Bias Adjustment

- Since this adjustment affects recording bias, prevent distortion from increasing due to underbias.

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/ CD II terminal and set the input selector to AUX/CD II.	Deck I Deck II	—— Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	- 24.2 dBV	
2	NORMAL	REC→ PLAY	Load the STD-631 or STD-632 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	Deck I Deck II	—— VR4351 (Lch) VR4352 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat adjustment until playback level of the 10kHz signal is within 0±0.5dB from that of the 315Hz signal.	

Note: Set the 10kHz input signal level to the same value as the 315Hz input signal level of step 1.

3. Recording Level Adjustment

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points		Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/CD II terminal and set the input selector to AUX/CD II.	Deck I Deck II	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
2	NORMAL	REC → PLAY	STD-631 or STD-632 test tape and record/playback the 315Hz signal.	Deck I Deck II	— VR4301 (Lch) VR4302 (Rch)	TAPE TEST POINT (L, Rch) (AF Assy)	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -8.2dBV.	

4. ALC Operation Check

Step	Tape Selector (AUTO)	Mode	Input Signal/Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	NORMAL	REC	Input a 315Hz signal to the AUX/CD II terminal and set the input selector to AUX/CD II.	Input signal level	TAPE TEST POINT (L, Rch) (AF Assy)	– 8.2 dBV	
2				Set to a level +10 dB above the input level at step 1.		Confirm that the reading is –3.2±2.5dBV.	

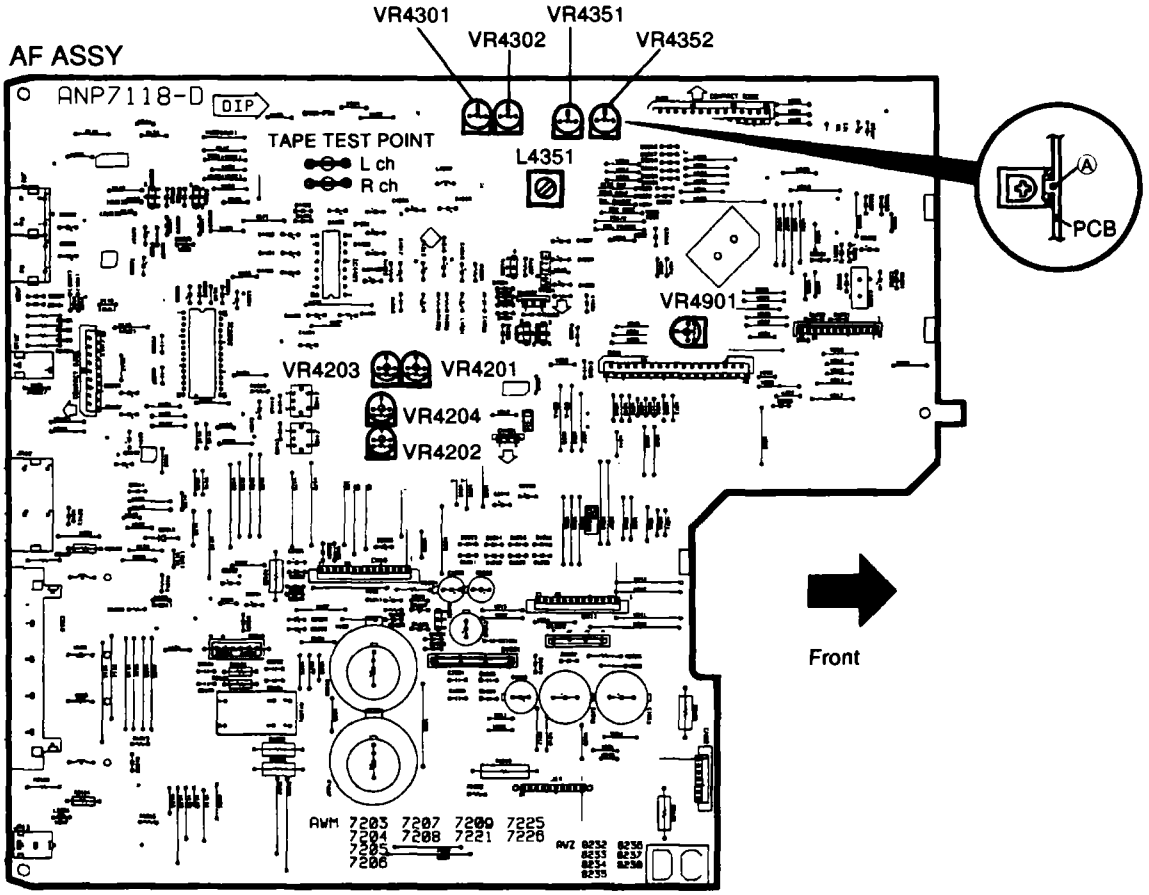
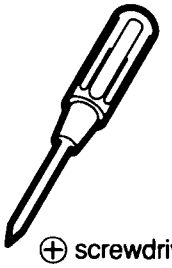
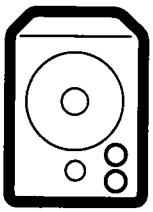
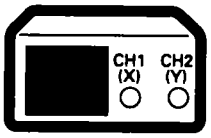
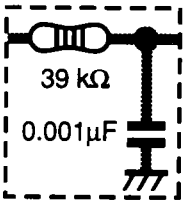


Fig. 2–4 Adjustment and Measurement points

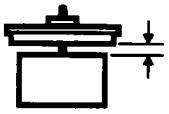
7.3 CD SECTION (CD部の調整)

1. PREPARATIONS (準備)

1.1 Jigs and Measuring Instruments (使用測定器/治工具類)

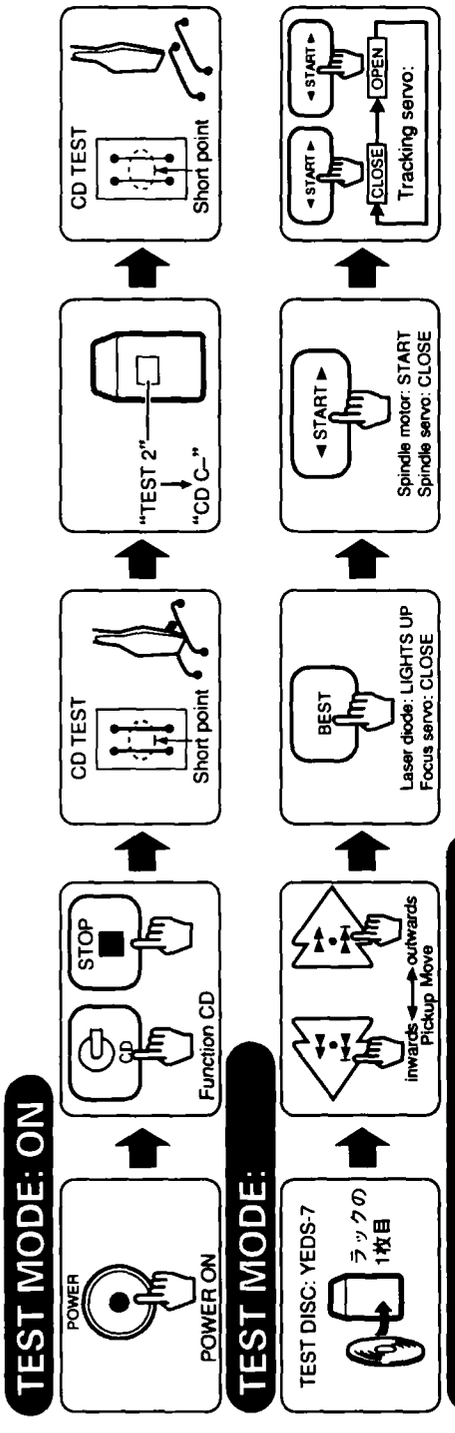
 CD TEST DISC (YEDS-7)	 ⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)
 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter (39 kΩ + 0.001μF)

1.2 Necessary Adjustment Points (調整に必要な項目)

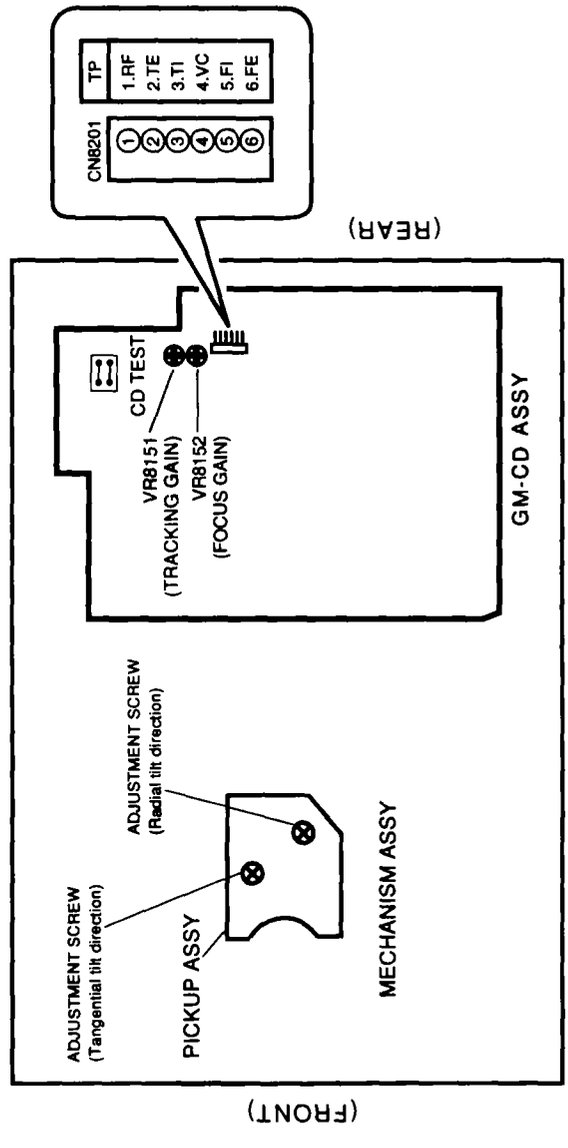
When (このような時)	Adjustment points
Exchange PICKUP (ピックアップを交換した時)	1.2.3.4.5.6. → Page 53~55
Exchange CD ASSY (CD ASSYを交換した時)	1.2.3.4.5.6. → Page 53~55
Exchange SERVO MECH ASSY (サーボメカ ASSYを交換した時)	1.2.3.4.5.6. → Page 53~55
Exchange SPINDLE MOTOR (スピンドルモーターを交換した時)	 ADJ → Page 12

2. ADJUSTMENT (調整)

2.1 How to Start/Cancel Test Mode (テストモードの設定/解除)

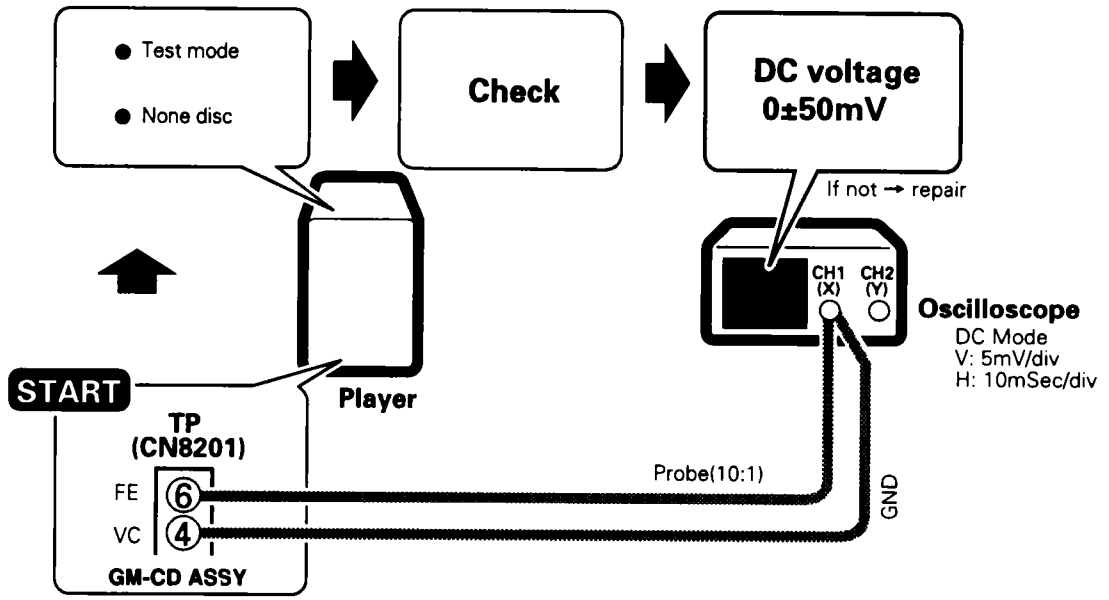


2.2Adjustment Locations (テストポイントと調整用VRの位置)

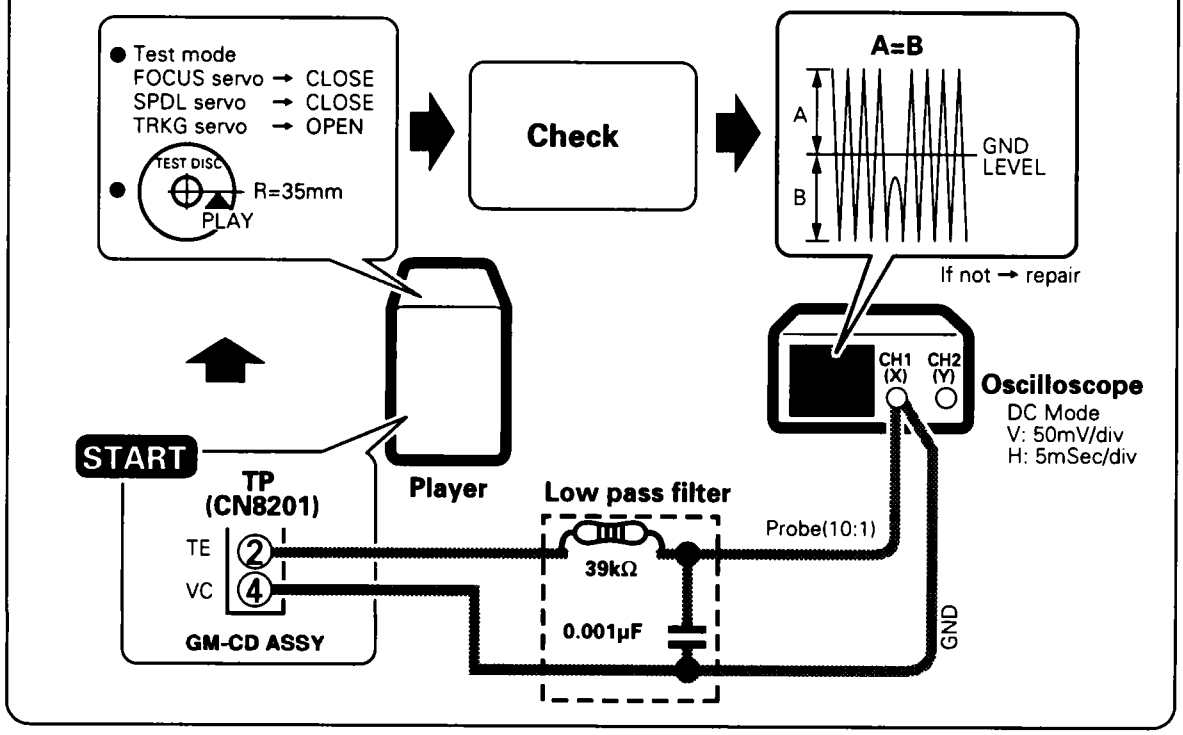


2.3 Check and Adjustment (確認、調整)

1. Focus Offset Check
(フォーカスオフセット確認)

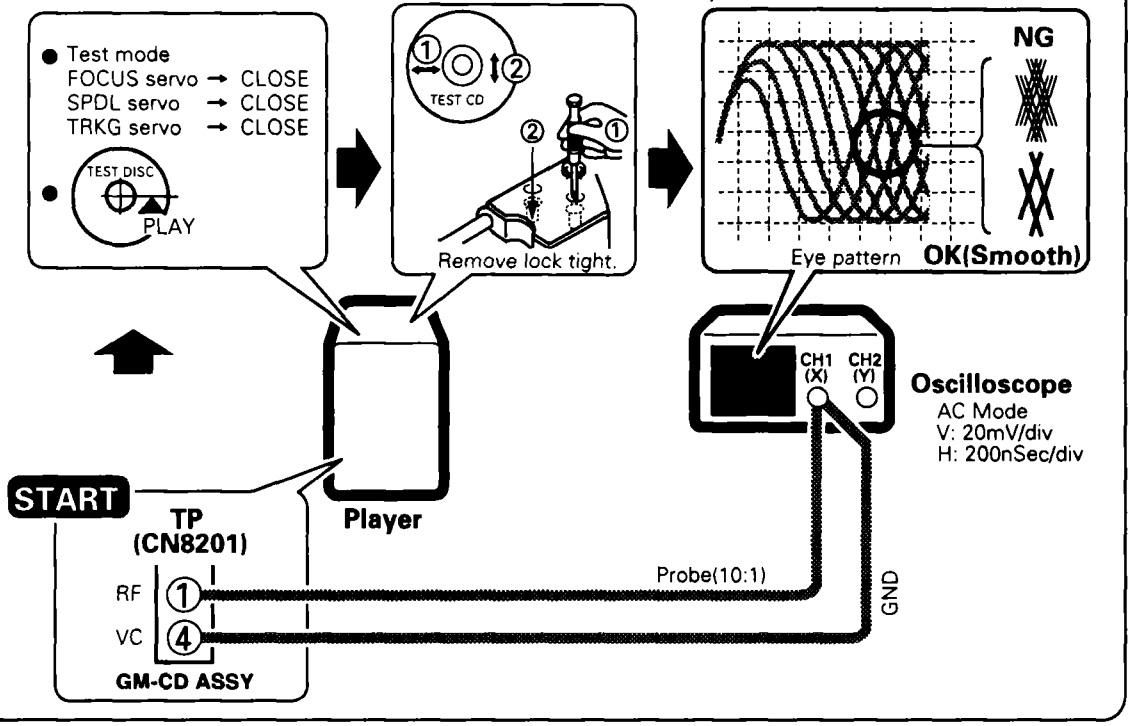


2. Tracking Error Balance Check
(トラッキングエラーバランス確認)



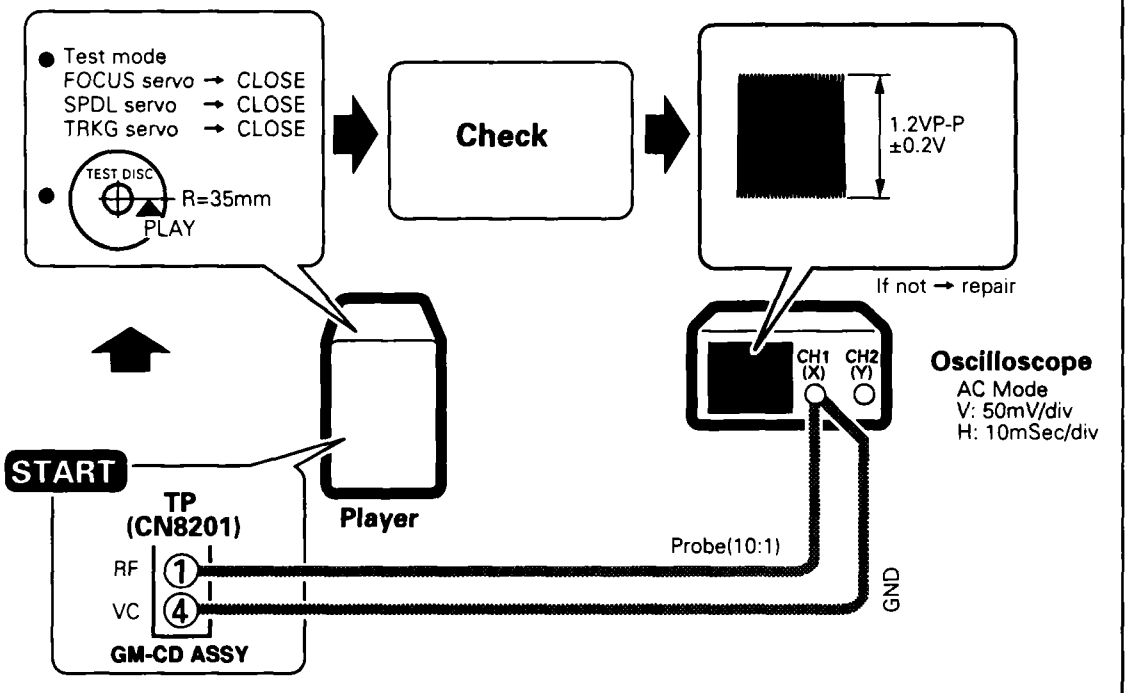
3. PICKUP ①RADIAL / ②TANGENTIAL DIRECTION TILT ADJUSTMENT

(ピックアップ①ラジアル方向②タンジェンシャル方向の傾き調整)

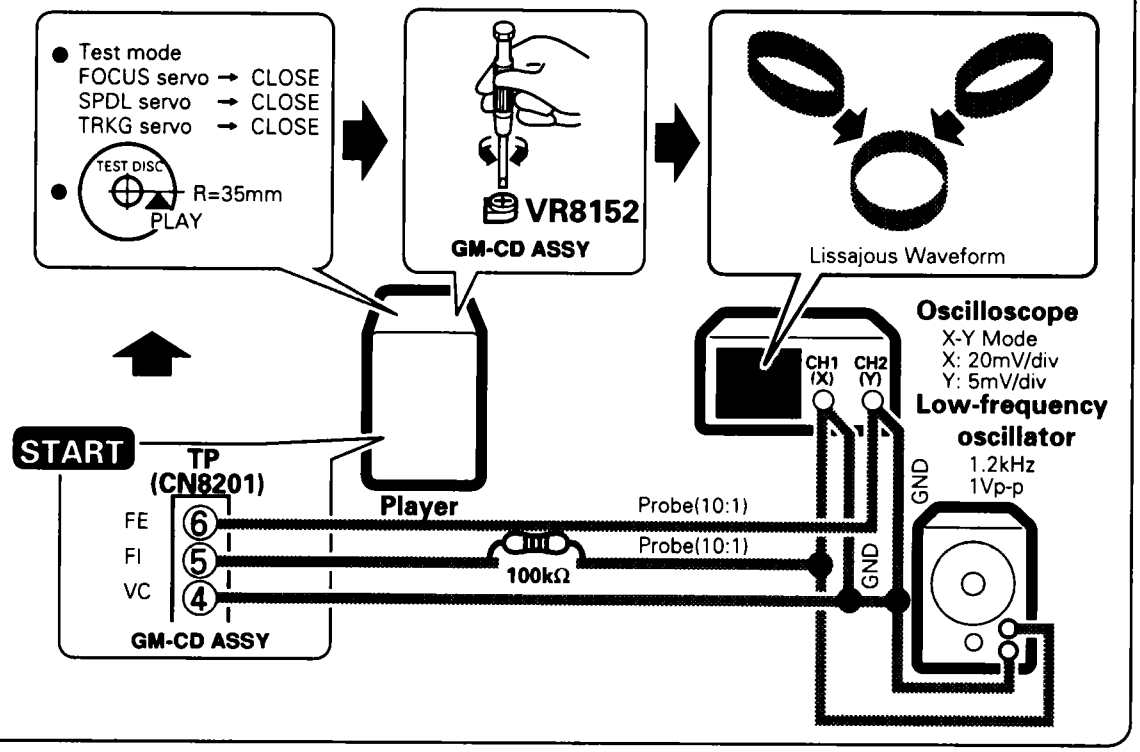


4. RF LEVEL CHECK

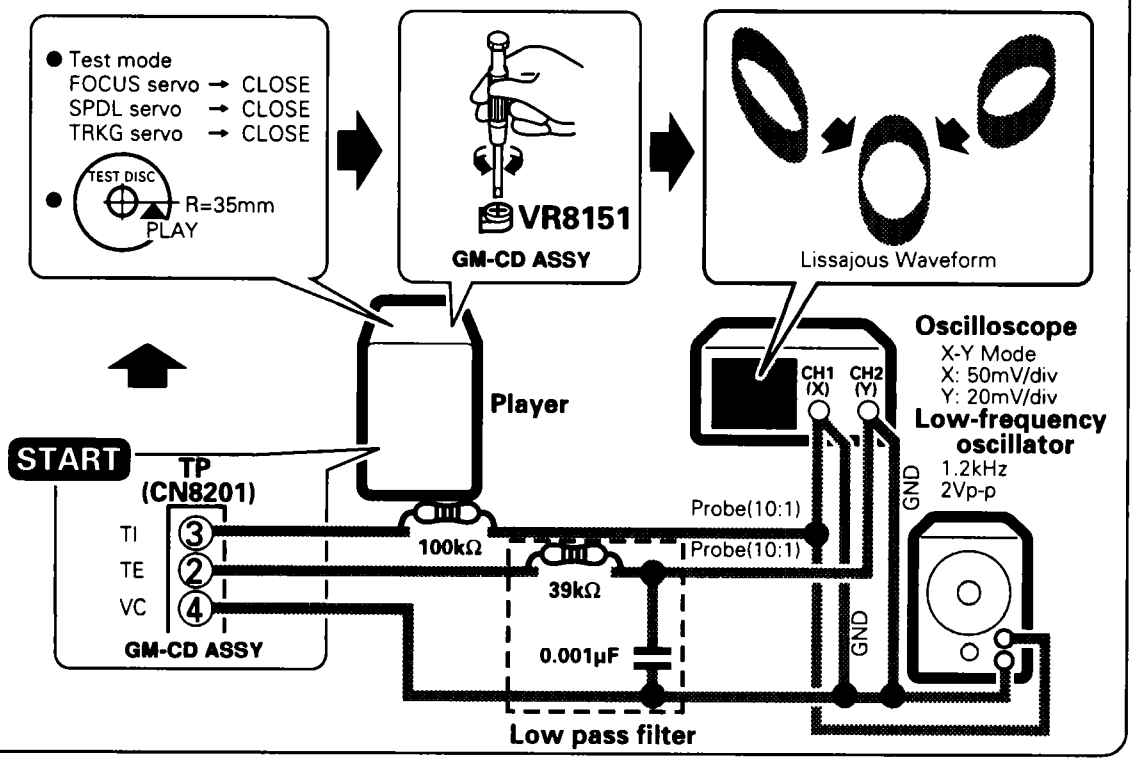
(RFレベル確認)



5. Focus Servo Loop Gain Adjustment
(フォーカスサーボループゲイン調整)



6. Tracking Servo Loop Gain Adjustment
(トラッキングサーボループゲイン調整)



8. IC INFORMATION

- *The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.*

■ PDG164A (IC3001 : AF ASSY)

● System Control Micro Computer

● Pin Function

No.	Pin Name	I/O	Description	ACT
1	PE1EC1/INT1	I	NOT USED	–
2	PE2/INT2	I	DISP CLK EDGE	↓
3	PE3/INT3/NMI	I	NOT USED	–
4	PE4/RMC	I	REMOCON	L
5	PE5/CTL	I	NOT USED	–
6	PE6/PWM	O	CD RESET	L
7	PE7/TO/ADJ	O	SR MUTE	L
8	PB0/CINT	I	TUNED	L
9	PB1/CS0	I	STEREO	L
10	PB2/SCK0	I	DISP CLK	↓
11	PB3/SI0	I	DISP DATA	–
12	PB4/SO0	O	PLL CE	H
13	PB5/SCK1	O	EX CLK	↑
14	PB6/SI1	O	PM0006 CE	H
15	PB7/SO1	O	EX DATA	–
16	PC0/KR0	I	KEY IN 3	H
17	PC1/KR1	I	KEY IN 2	H
18	PC2/KR2	I	KEY IN 1	H
19	PC3/KR3	I	KEY IN 0	H
20	PC4/KR4	I	KEY IN 4	H
21	PC5/KR5	C	POWER	H
22	PC6/KR6	C	VOLUME UP	L
23	PC7/KR7	C	VOLUME DOWN	L
24	PH0	C	LED –	H
25	PH1	C	LED ⏮	H
26	PH2	C	LED ◄	H
27	PH3	C	LED ►	H
28	PH4	C	LED ⏭	H
29	PH5	C	LED +	H
30	PH6	C	LED STOP	–
31	PH7	I	Connected to GND	–
32	PA0/AN0	A/D	TEMP *1	–
33	PA1/AN1	I	FST *1	–
34	PA2/AN2	A/D	LEV *1	–
35	PA3/AN3	I	Connected to GND	–
36	PA4/AN4	I	Connected to GND	–
37	PA5/AN5	I	Connected to GND	–
38	RST	–	RESET	–
39	EXTAL	–	Connected to Osillator (8MHZ)	–
40	XTAL	–	Connected to Osillator (8MHZ)	–
41	Vss	–	Connected to GND	–
42	TX	–	OPEN	–
43	TEX	–	OPEN	–
44	PA6/AN6	I	PULSE 1	EG
45	PA7/AN7	I	PULSE 2	EG
46	AVref	–	Connected to 5V	EG
47	AVss	–	Connected to GND	–
48	PD0/S0	P	SOL 1	H
49	PD1/S1	P	SOL 2	H
50	PD2/S2	P	MOTOR	H
51	PD3/S3	P	DOLBY NR	L
52	PD4/S4	P	REC MUTE	H
53	PD5/S5	P	PB/$\overline{\text{REC}}$	–
54	PD6/S6	P	PB $1/\bar{2}$	–

** 1 : Refer to page 58.*

No.	Pin Name	I/O	Description	ACT
55	PD7/S7	P	BIAS	H
56	PF0/S8	P	BEAT CUT	H
57	PF1/S9	P	FAN *1	H
58	PF2/S10	P	IDLE MUTE	L
59	PF3/S11	P	PHONO	H
60	PF4/S12	P	TX MONO	H
61	PF5/S13	P	TX ON	H
62	PF6/S14	P	AF MUTE	H
63	PF7/S15	P	NOT USED	H
64	P10/S16	P	S16	H
65	P11/S17	P	S15	H
66	P12/S18	P	S14	H
67	P13/S19	P	S13	H
68	P14/S20	P	S12	H
69	P15/S21	P	S11	H
70	P16/S22	P	S10	H
71	P17/S23	P	S9	H
72	T15/S24	P	S1	H
73	T14/S25	P	S2	H
74	T13/S26	P	S3	H
75	T12/S27	P	S4	H
76	T11/S28	P	S5	H
77	T10/S29	P	S6	H
78	T9/S30	P	S7	H
79	T8/S31	P	S8	H
80	T7	P	NOT USED	–
81	T6	P	G1	H

No.	Pin Name	I/O	Description	ACT
82	T5	P	G2	H
83	T4	P	G3	H
84	T3	P	G4	H
85	T2	P	G5	H
86	T1	P	G6	H
87	T0	P	G7	H
88	Vfdp	–	CONNECTED TO –30V	–
89	Vdd	–	CONNECTED TO 5V	–
90	NC	–	OPEN	–
91	Vss	–	CONNECTED TO GND	–
92	PG0/RT00	O	CD CLK	⌐
93	PG1/RT01	I/O	CD DATA	–
94	PG2/RT02	I/O	SB REQ/ENA	L
95	PG3/RT03	O	4052 B	H
96	PG4	O	4052 A	H
97	PG5	O	4052 INH	H
98	PG6	O	SP RELAY	H
99	PG7	O	CD POWER ON	H
100	PE0/EC0/INT0	I	AC	EG

I/O : INPUT/OUTPUT
I : INPUT
O : OUTPUT
C : CMOS OUTPUT
P : Pch OPEN DRAIN OUTPUT
A/D : A/D CONVERTER INPUT
EG : EDGE

*1 : *Refer to page 58.*

■ IN REGARD TO FAN CONTROL

(1) FAN CONTROL pin functions/names

The following five signals are used for L/H switching of the fan speed and for forces switching the set from Power on status to STD-by status.

	Function	Operation
PWON *1	The power status of the set is displayed.	L is displayed for STD-by and H for Power on.
FAN *2	The fan rotation status is shown.	L is displayed for L speed and H for H speed. The initial display at the time of Power on is L.
TEMP	The power pack temperature is detected.	The fan L/H speed is switched and the set is dropped to standby status according to the detected temperature.
LEV	Power amplifier level detection.	The fan L/H speed is switched according to the detected level.
FST	Fan lock status detection.	L is displayed when the fan is stopped and H when it is rotating.

(2) Operation specifications

*1 Power on → STD-by switching

The set is switched to STD-by condition when one of the following conditions occurs.

- When FST is L continuously for at least 2 sec after 4 seconds have elapsed after PWON output.
- When the TEMP voltage is 1.3 V or less after 4 seconds have elapsed after PWON output.

*2-1 Fan L → H speed switching

The fan is switched from L to H speed when one of the following conditions occurs.

- When the TEMP voltage is 2.6 V or less.
- When the LEV voltage is 1.7 V or more.

*2-2 Fan H → L speed switching

The fan is switched from H to L speed when the following condition occurs.

- When the TEMP voltage is 3.3 V or more and the LEV voltage is 1.2 V or less.

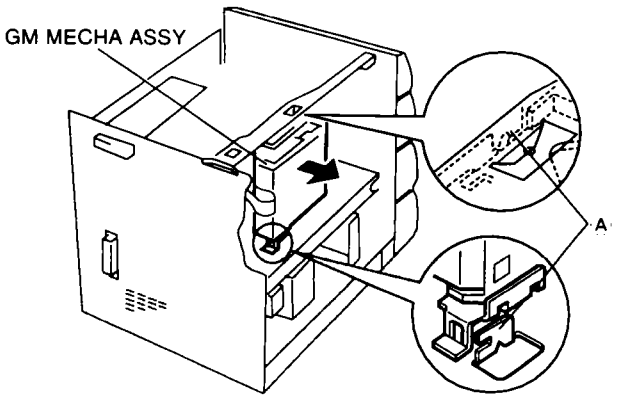
9. DISASSEMBLY

■ REMOVING THE GM MECHA ASSY

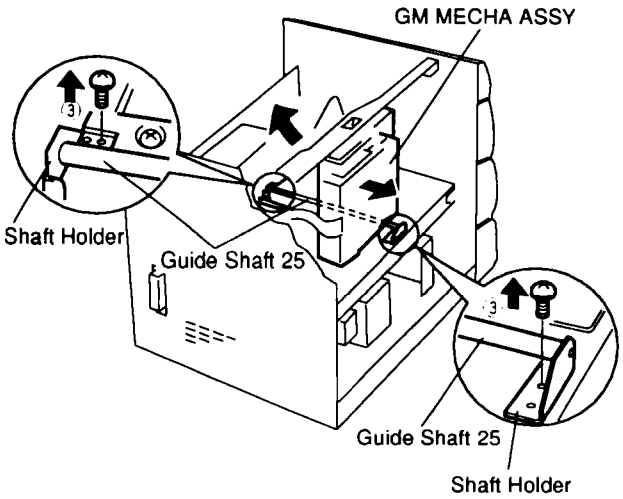
NOTE : Before removing the GM Mecha Assy, make sure you turn the power OFF and disconnect the AC power cord.

① Remove the bonnet. (Since the front of the home lock stay makes contact, hold the bonnet in that place and pull and lift at the same time.)

② Move the GM Mecha ASSY to the right (viewed from the rear), watching out for the 2 Lock locations (part A).



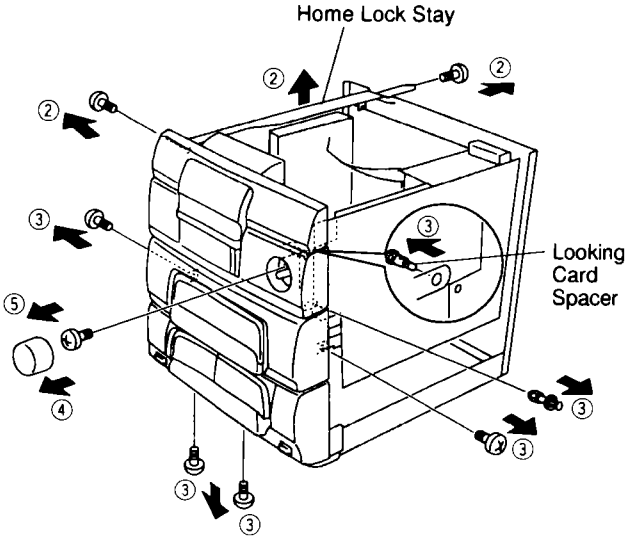
③ Remove the shaft holder that fixes guide shaft-25 in place (screw ③), and remove the GM Mecha ASSY together with guide shaft.



■ REMOVING THE FRONT PANEL

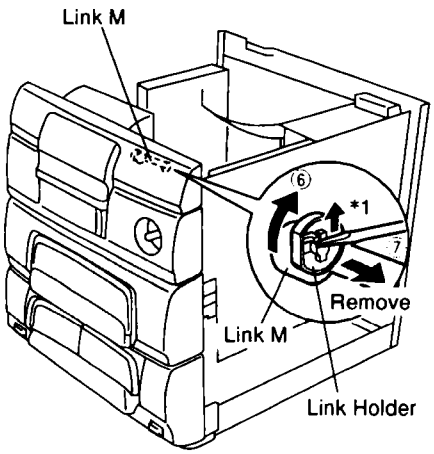
① Remove the bonnet.

②–⑤



⑥ Remove the link holder (*1) that fixes link M in place.

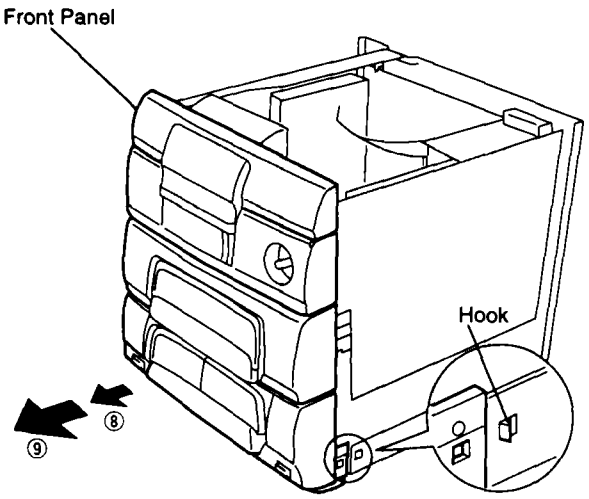
⑦ Remove the link M.



*Note *1: When removing the link holder , be careful not to press hard on the link holder hook, for this may cause the hook to break.*

⑧ Shift the front panel slightly toward you, being cautious of the left and right hook on the chassis and sub chassis.

⑨ Pull the front panel further toward you, and remove it from the chassis.

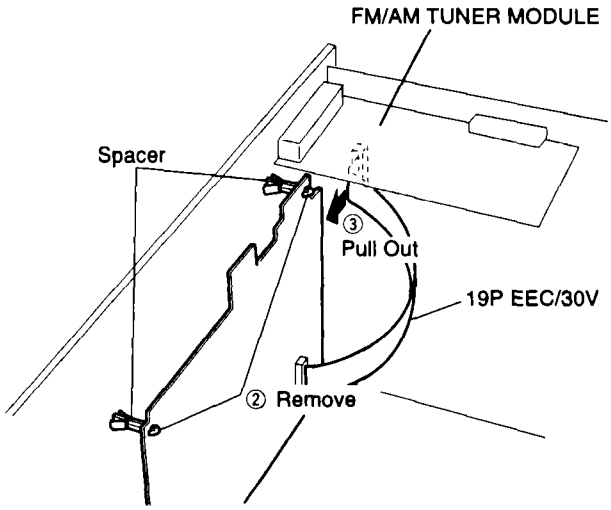


■ REMOVING THE AMP ASSY

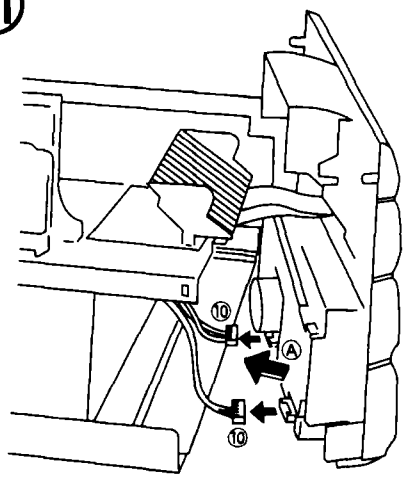
① Remove the bonnet and home lock stay. (Refer to "■ Removing the Front Panel")

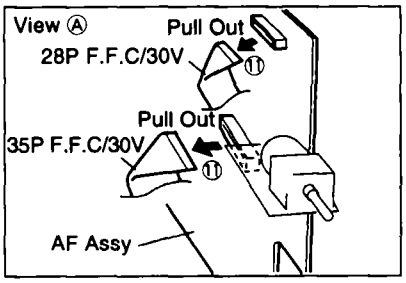
②, ③

Remove the spacer from the CD ASSY.

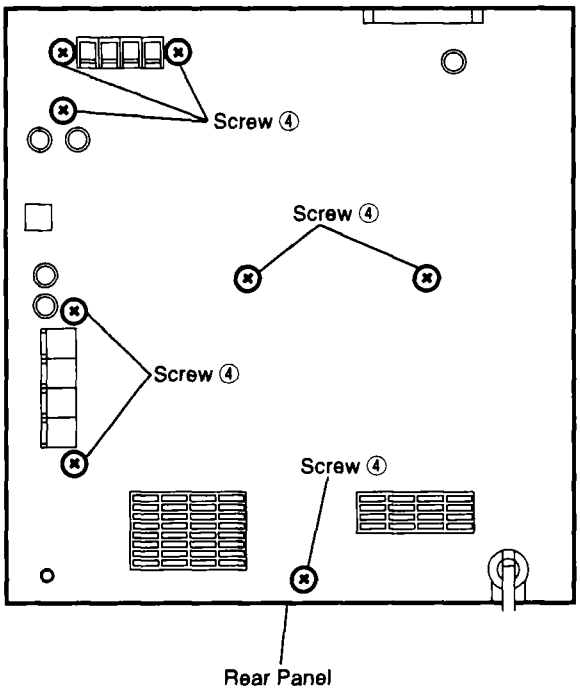


⑩, ⑪





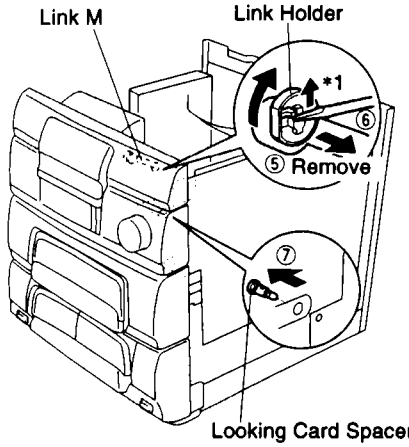
④ Remove the rear panel (screw ④ x 8).



⑤ Remove the link holder (*1) that fexes link M in place.

⑥ Remove the link M.

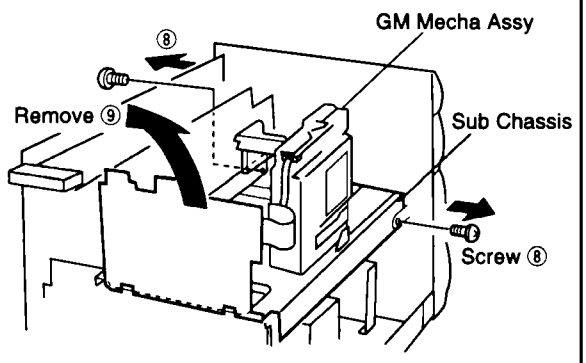
⑦ Remove the Looking card spacer.



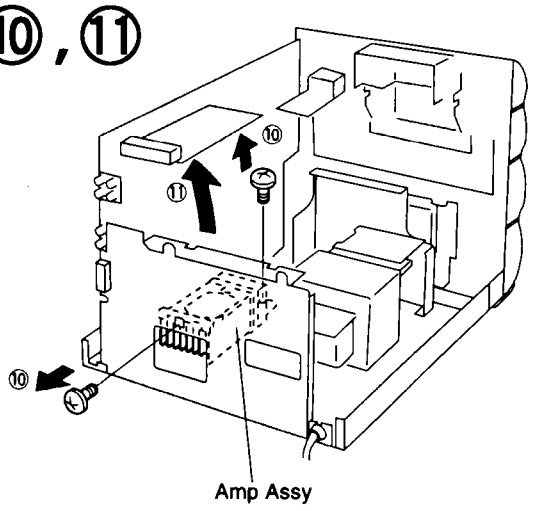
*Note *1: When removing the link holder , be careful not to press hard on the link holder hook, for this may cause the hook to break.*

⑧ , ⑨

Remove screw ⑧ and remove the sub chassis together with the GM Mecha ASSY.



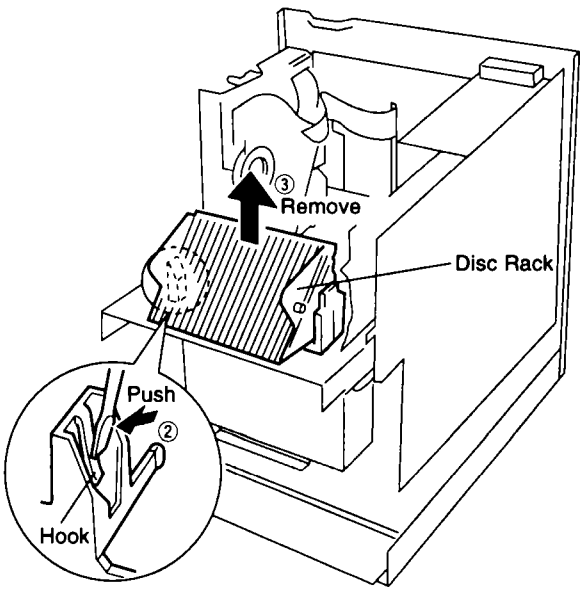
⑩ , ⑪



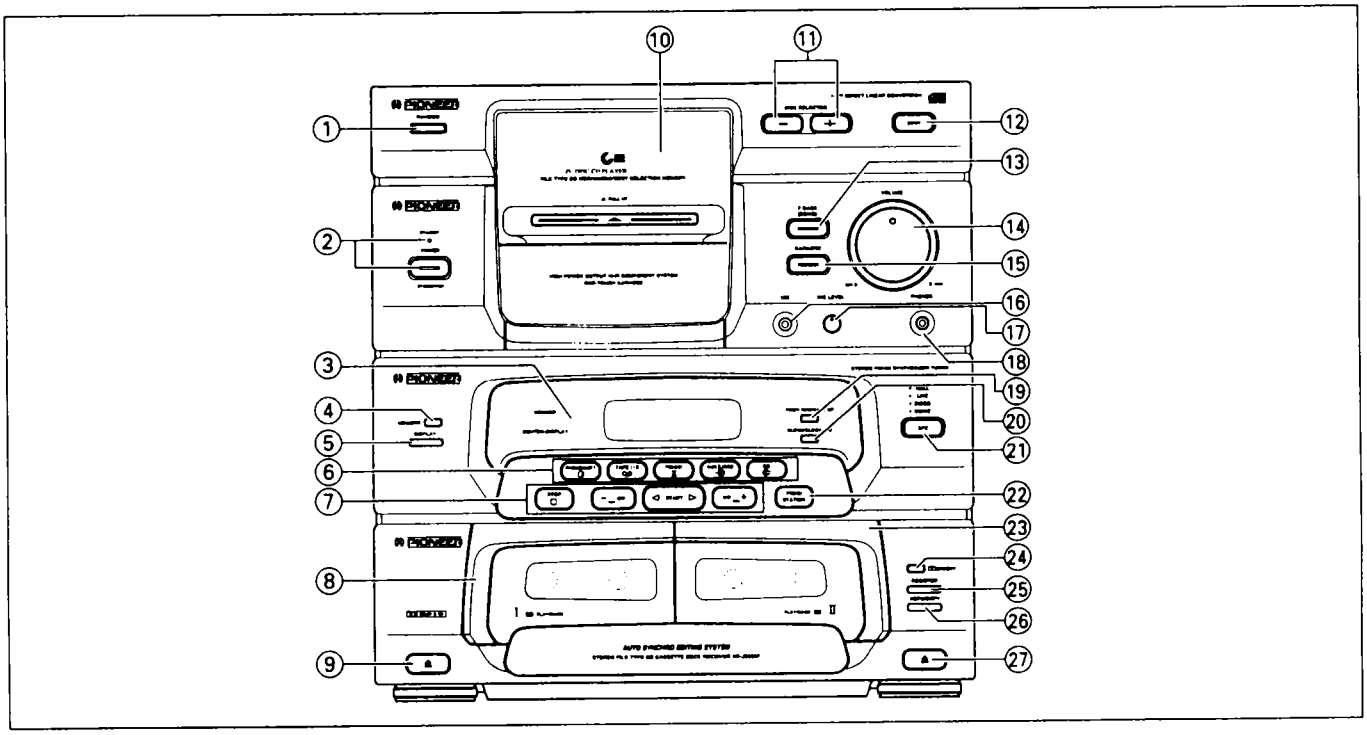
■ REMOVING THE DISC RACK

① Remove the front panel.

② , ③



10. PANEL FACILITIES



① **RANDOM button**

② **POWER STANDBY/ON switch and STANDBY indicator**
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 STANDBY indicator lights.)

③ **Remote sensor (SENSOR)**

④ **MEMORY button**

⑤ **DISPLAY button**

⑥ **Function buttons**

⑦ **Common operation button section**

⑧ **TAPE I cassette door**

⑨ **TAPE I Eject button (⏏)**

⑩ **Hood**

⑪ **DISC SELECTOR button (–, +)**

⑫ **BEST button**

⑬ **P.BASS (DEMO) button**

⑭ **VOLUME control**

⑮ **KARAOKE button**
NOTE:
If KARAOKE is selected, the center vocal part is muted and the instrumental accompaniment (backup) is played.

⑯ **Microphone jack (MIC)**

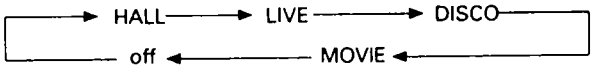
⑰ **Microphone level (MIC LEVEL)**

⑱ **Headphones jack (PHONES)**

⑲ **TIMER REC/WAKE-UP button**

⑳ **CLOCK/CLOCK ADJ button**

㉑ **SFC button**
Each time this button is pressed, the mode changes in the following sequence:



㉒ **FREQ/STATION button**

㉓ **TAPE II cassette door**

㉔ **Dolby* NR ON/OFF button**
Each time this button is pressed, the Dolby NR system turns on and off.

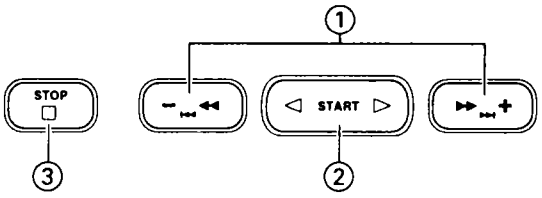
㉕ **REC/STOP button**

㉖ **ASES/COPY button**

㉗ **TAPE II Eject button (⏏)**

*
- *Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.*
- *"DOLBY" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.*

Common operation button section



① ⏮, ⏭ buttons

② START button (◄ ►)

③ STOP button (■)

- Roles of the common operation buttons (The roles of the buttons vary depending on the input functions as shown below.)

During CD input

START	: Play/pause button
STOP	: Stop button
⏭	: Fast forward/track search button
⏮	: Fast reverse/track search button

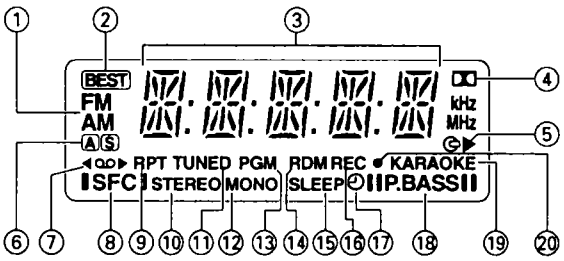
During cassette deck input

START	: Play button/Tape transport direction
STOP	: Stop button
⏭	: Fast forward button
⏮	: Rewind button

During tuner operation

⏭	: Frequency Up button
⏮	: Frequency Down button

Display



① Indicates the band AM or FM.

② Flashes during Best Selection setting, and lights during BEST (Selection memory) play.

③ Indicates frequency and major operation status.

④ Lights when Dolby NR is ON.

⑤ Lights during CD play.
(Flashes in pause mode.)

⑥ S : Lights during SINGLE mode operation.
A : Lights during ALL mode operation.

⑦ Lights to show TAPE II tape direction.

⑧ Lights during SFC mode operation.

⑨ RPT : Lights during repeat play.

⑩ Lights during FM stereo reception.

⑪ Lights during radio broadcast reception.

⑫ Lights when you press the MONO button.

⑬ Lights when you press the PGM button.

⑭ Lights when you press the RANDOM button.

⑮ Lights during sleep timer operation.

⑯ Lights during recording and recording timer operation.

⑰ Lights when you setting the timer.

⑱ Lights when you press the P.BASS button.

⑲ Lights during KARAOKE mode operation

⑳ Lights when setting the Beat Cut function.

11. SPECIFICATIONS

■ STEREO FILE-TYPE CD CASSETTE DECK RECEIVER: XR-J2500F

Amplifier Section
(U.S. and Canadian models)

Continuous average power output is 50 watts* per channel, min., at 8 ohms from 60 Hz to 15,000 Hz with no more than 1.0 % total harmonic distortion.**

FM Tuner Section
Reception frequencies ..... 87.5 MHz to 108 MHz
Antenna input ..... 75 Ω unbalanced

AM Tuner Section
Reception frequencies ..... 530 kHz to 1,700 kHz (10 kHz step)
Antenna ..... Loop antenna (included)

Double Cassette Deck Section
System type ..... 4-track, 2-channel stereo
Heads ..... Recording/playback head x 1
Playback head x 1
Erasing head x 1
Motor ..... DC servo motor x 1
Frequency response
Type I (Normal) tape ..... *35 Hz to 14,000 Hz ±6 dB
(recorded at –20 dB)
SN ratio ..... *56 dB
(peak recording level, audible compensation)
Dolby B type NR on ..... 10 dB compensation at 5 kHz

* Values measured in accordance with EIAJ standards.

■ FILE TYPE CD PLAYER

Type ..... Compact disc audio system
Usable discs ..... Compact audio discs
Channels ..... 2 channels (stereo)
Program steps ..... 32 steps maximum

■ ELECTRICAL REQUIREMENTS, ETC.

Power Requirements
U.S., Canadian models ..... AC 120 V, 60 Hz
Power Consumption
U.S. model ..... 160 W
Canadian model ..... 160 W
External dimensions ..... 360 (W) x 376.5 (H) x 369 (D) mm
14-3/16 (W) x 14-13/16 (H) x 14-1/2 (D) in.
Weight ..... 10.5 kg (23 lb 3 oz)

■ ACCESSORIES

Operating Instructions 1
FM antenna 1
AM loop antenna 1
Remote control unit 1
AA/R6 dry cell batteries 2
CD case stand 1

NOTE:
Specifications and design are subject to possible modifications without notice, due to improvements.

* *Measured pursuant to the Federal Trade Commissions's.* Trade Regulation rule on Power Output Claims for Amplifier.
** Measured by audio spectrum analyzer.