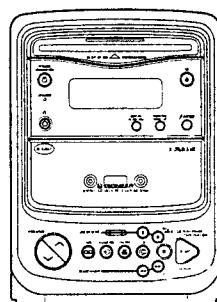


Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
RRV1437

STEREO CD DECK RECEIVER

XR-Q150

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

Type	Model	Power Requirement	The voltage can be converted by the following method.
	XR-Q150		
DD	○	AC110-127V/220-230V/240V	With the voltage selector
MYIW/DI	○	AC220-230V	_____
DL	○	AC110-120V/220-230V/240V	With the voltage selector

● This product is a component of a system.

For the system composition, packing, accessories, instruction manuals etc. of DD and DL types, refer to the service manual RRV1436 for X-Q10.

CONTENTS

1. SAFETY INFORMATION	2
2. PACKING AND PARTS LIST (For MYIW/DI Type)	3
3. EXPLODED VIEWS AND PARTS LIST	4
4. SCHEMATIC AND PCB CONNECTION DIAGRAMS	14
5. PCB PARTS LIST	40
6. ADJUSTMENTS	45
7. IC INFORMATION	55
8. FL INFORMATION	61
9. BLOCK DIAGRAM	62
10. DISASSEMBLY	63
11. OPERATING DESCRIPTION	65
12. FOR MYIW/DI AND DL TYPES	66
13. PANEL FACILITIES	72
14. SPECIFICATIONS	73

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U. S. A.

PIONEER ELECTRONIC (EUROPE) N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium

PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

© **PIONEER ELECTRONIC CORPORATION 1995**

T-SSK NOV. 1995 Printed in Japan

1. SAFETY INFORMATION

(FOR EUROPEAN MODEL ONLY)

VARO!

AVATTAESSA JA SUOJALUKITUS
OHITETTAESSA OLET ALTTIINA
NAKYMATTOMALLE LASERSATEILYLLE.
ALA KATSO SATEESEEN

ADVERSEL

USYNLIG LASERSTRÅLING VED ÅBNING
NÅR SIKKERHEDSAFBRYDERE ER UDE AF
FUNKTION. UNDGA UDSÆTTELSE FOR
STRÅLING.

VARNING!

OSYNLIG LASERSTRÅLNING NÅR DENNA
DEL ÄR ÖPPNAD OCH SPÄRREN
ÄR URKOPPLAD. BETRÄKTA EJ STRÅLEN.



LASER
Kuva 1
Lasersäteilyn
varoituserkki

WARNING!

DEVICE INCLUDES LASER DIODE WHICH
EMITS INVISIBLE INFRARED RADIATION
WHICH IS DANGEROUS TO EYES. THERE IS
A WARNING SIGN ACCORDING TO PICTURE
1 INSIDE THE DEVICE CLOSE TO THE LASER
DIODE.



LASER
Picture 1
Warning sign for
laser radiation

IMPORTANT

THIS PIONEER APPARATUS CONTAINS
LASER OF CLASS 1.
SERVICING OPERATION OF THE APPARATUS
SHOULD BE DONE BY A SPECIALLY
INSTRUCTED PERSON.

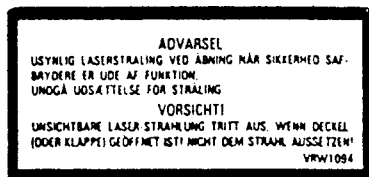
LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER: 5 mw
WAVELENGTH: 780-785 nm

LABEL CHECK

DL and
MYIW/DI types



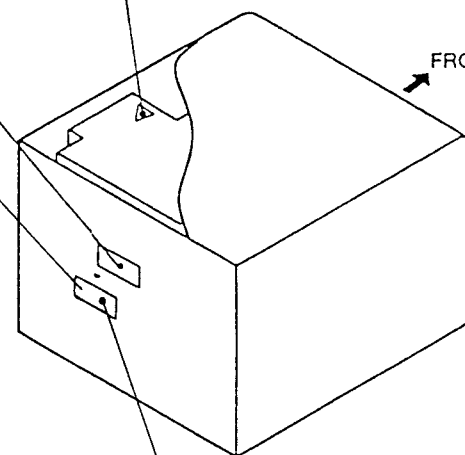
MYIW/DI type



DL and
MYIW/DI types



FRONT



DL type



Additional Laser Caution

1. Laser Interlock Mechanism

The position of the switch (S601) for detecting loading state is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S601) is not CLMP terminal side (when CLMP signal is OFF or high level).

Thus, the interlock will no longer function if the switch (S601) is deliberately set to CLMP terminal side (low level).

The interlock also does not function in the test mode *. Laser diode oscillation will continue, if pin 1 of M51593FP (IC101) on the PRE AMP BOARD ASSY mounted on the pickup assembly is connected to GND, or pin 19 is connected to low level (ON), or else the terminals of Q101 are shorted to each other (fault condition).

2. When the cover is opened, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

92S1B

* Refer to page 51.

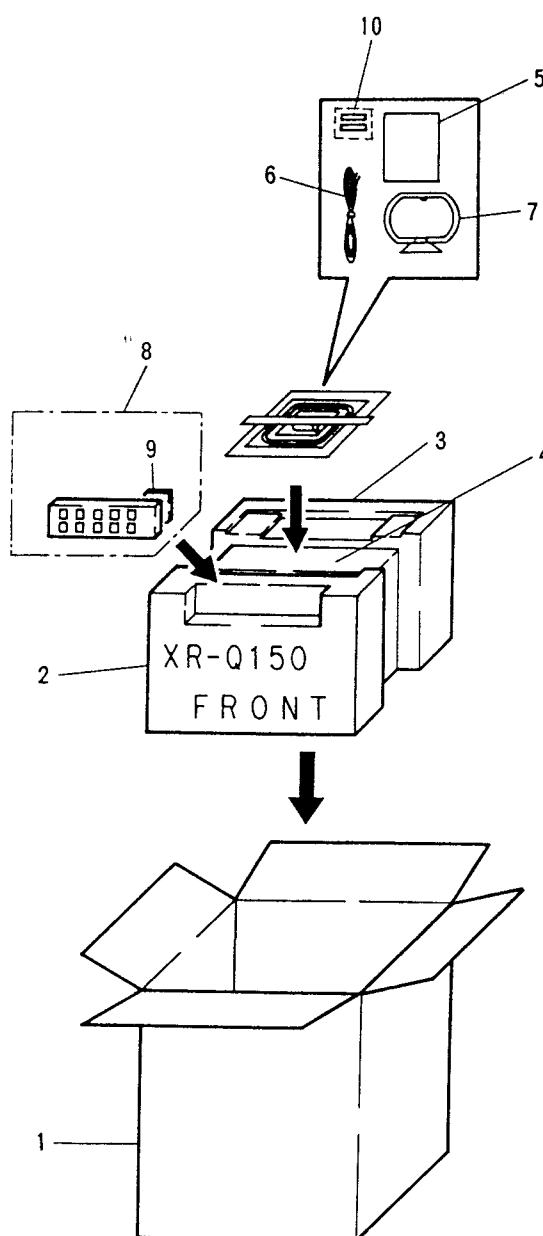
2. PACKING AND PARTS LIST (For MYIW/DI Type)

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The $\triangle$ mark found on some component parts indicates the importance of the safety factor of the parts. 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.

Parts List for MYIW/DI Type

Mark	No.	Description	Part No.
	1	Packing Case	AHD7279
	2	Pad F	AHA7078
	3	Pad R	AHA7079
	4	Mirror mat (800×900×0.5)	Z23-020
	5	Operating instructions (German/Italian)	ARC7083
	6	FM antenna assy	ADH1019
	7	Loop antenna assy	ATB1012
	8	Remotecontrol unit (CU-XR019)	AXD7067
	9	Battery cover	AZA7123
NSP	10	Battery (R6P, AA)	VEM-013



3. EXPLODED VIEWS AND PARTS LIST

NOTES:

- Parts marked by "NSP" 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 parts. 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.

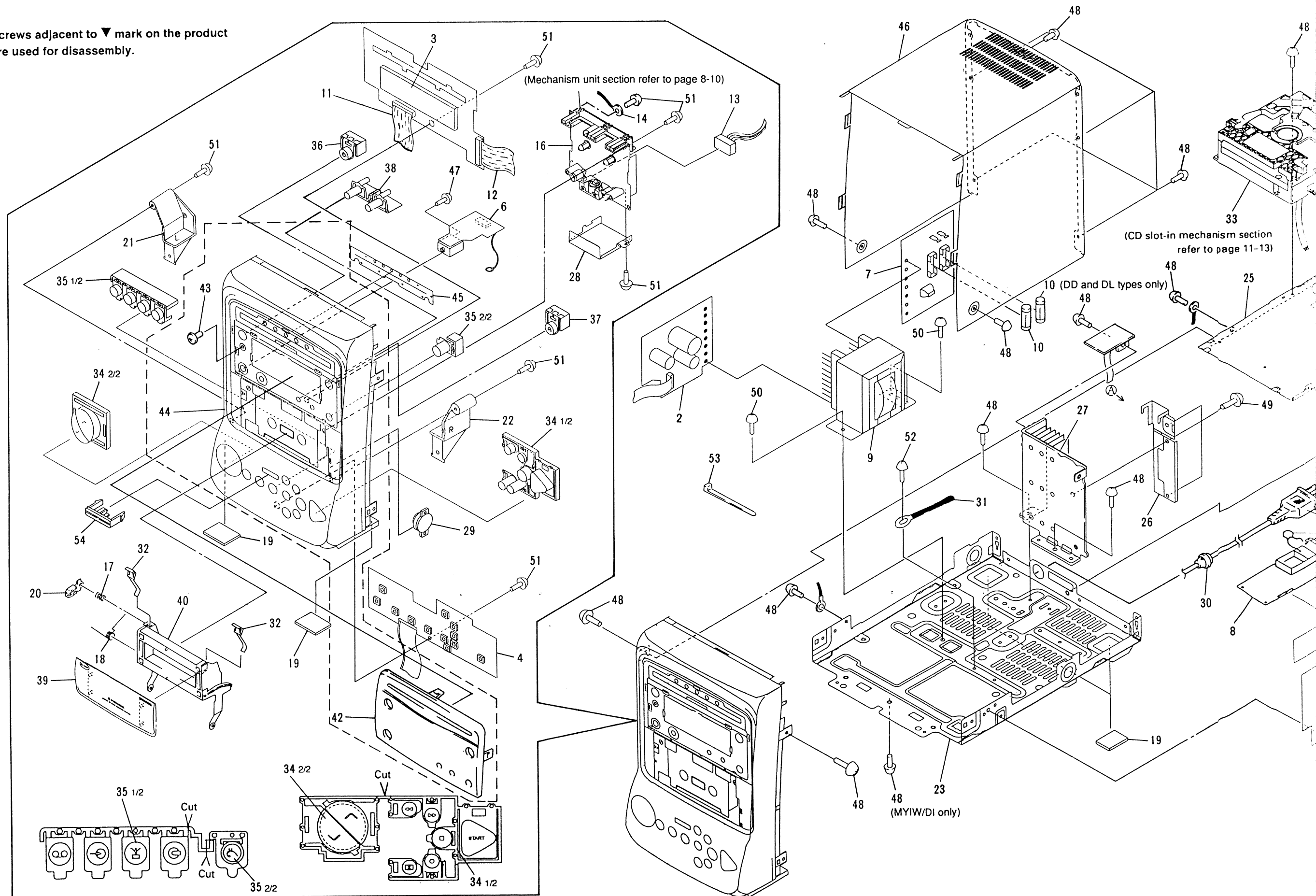
3.1 EXTERIOR

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	CMLPX ASSY	AWZ7967	NSP	41	Front panel assy	AMB7325
	2	SECND ASSY	AWZ7974		42	Display panel	AAK7173
	3	FRNT 1 ASSY	AWZ7981		43	Standby lens	AAK7182
	4	FRNT 2 ASSY	AWZ7988		44	Front panel	AMB7324
	5	EVOL ASSY	AWZ7995		45	Cover sheet	AWL7019
	6	H. PHONE ASSY	AWZ8002		46	Bonnet	ANE7079
	7	PRIMRY ASSY	AWZ8009		47	Screw	ABA1005
	8	FM/AM TUNER MODULE	AXQ1012		48	Screw	BBZ30P080FZK
Δ	9	Power transformer	ATS7093		49	Screw	BBZ30P140FMC
Δ	10	Fuse (T315mA)	AEK1049		50	Screw	BBZ40P060FMC
	11	20P F. F. C/30V	ADD7010		51	Screw	BPZ30P080FMC
	12	33P F. F. C/30V	ADD7011		52	Screw	BBZ30P060FMC
	13	Connector assy 5P	ADX7109		53	Binder	ZCA-SKB90BK
NSP	14	Earth lead	DE010VDO		54	Azimuth cover	AZA7150
Δ	15	AC power cord	PDG1013		55	Voltage selector	AKX7002
	16	Mechanism unit	RYM1250				
	17	Latch spring	ABH7113				
	18	Door spring	ABH7064				
	19	Nonskid sheet	AEB1111				
	20	Latch mold	AEC7016				
	21	Deck holder L	AMR7052				
	22	Deck holder R	AMR7053				
	23	Chassis	ANA7027				
	24	Rear panel	ANC7380				
	25	Mechanism stay	AND7003				
	26	Terminal holder	ANG7044				
	27	Heat sink	ANH7039				
	28	Shield plate	ANK7019				
	29	Damper assy	AXA7021				
	30	Strain relief	CM-22B				
NSP	31	Cord stopper	DNF1128				
	32	Half pressure spring	RBK1004				
NSP	33	CD slot-in mechanism	AXA7014				
	34	Operation knob	AAD7205				
	35	Function knob	AAD7207				
	36	Power knob	AAD7208				
	37	Eject knob	AAD7209				
	38	Timer knob	AAD7210				
	39	Cassette panel	AAK7174				
	40	Door pocket	AAN7074				

Exterior

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



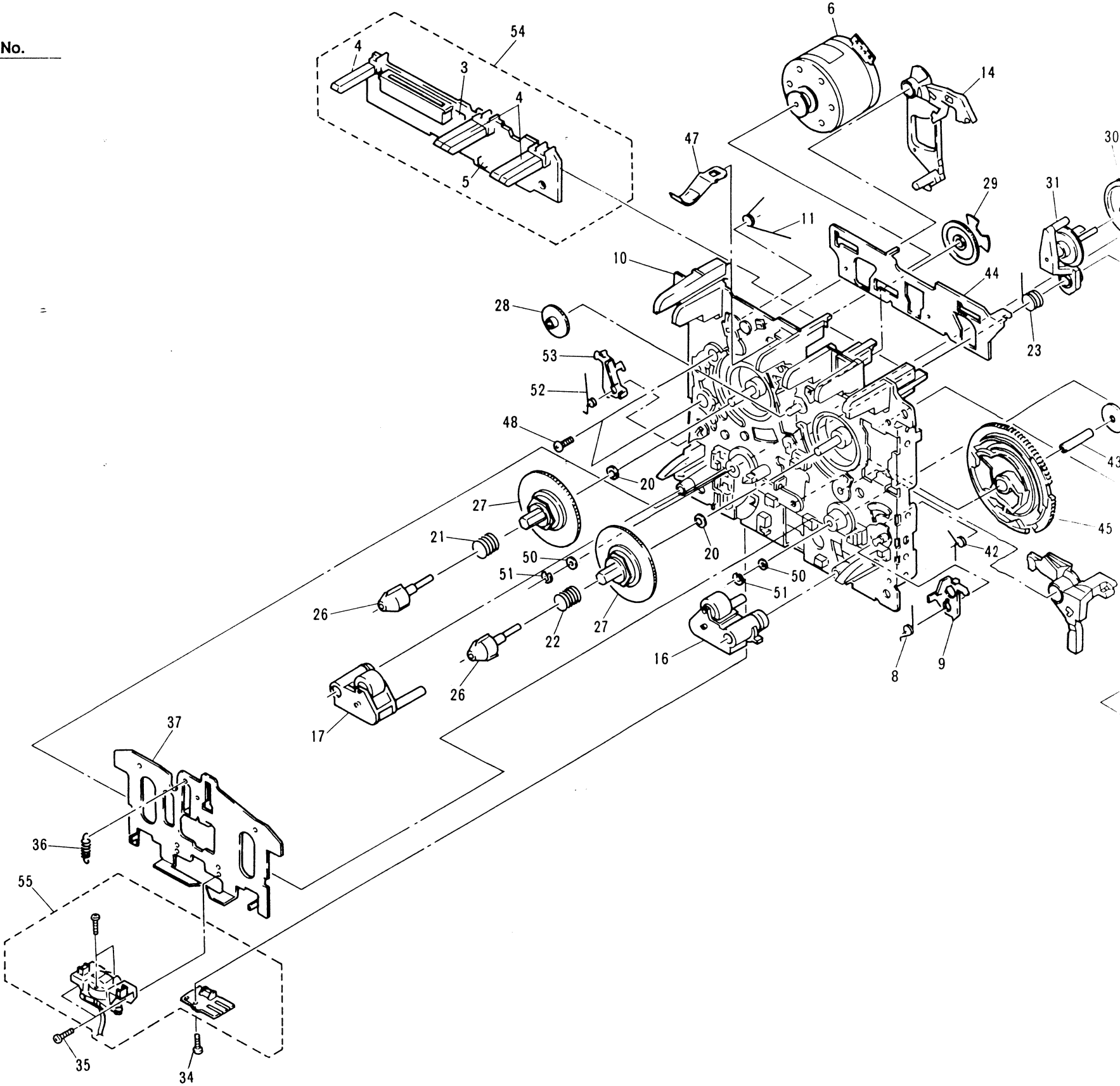
XR-Q150

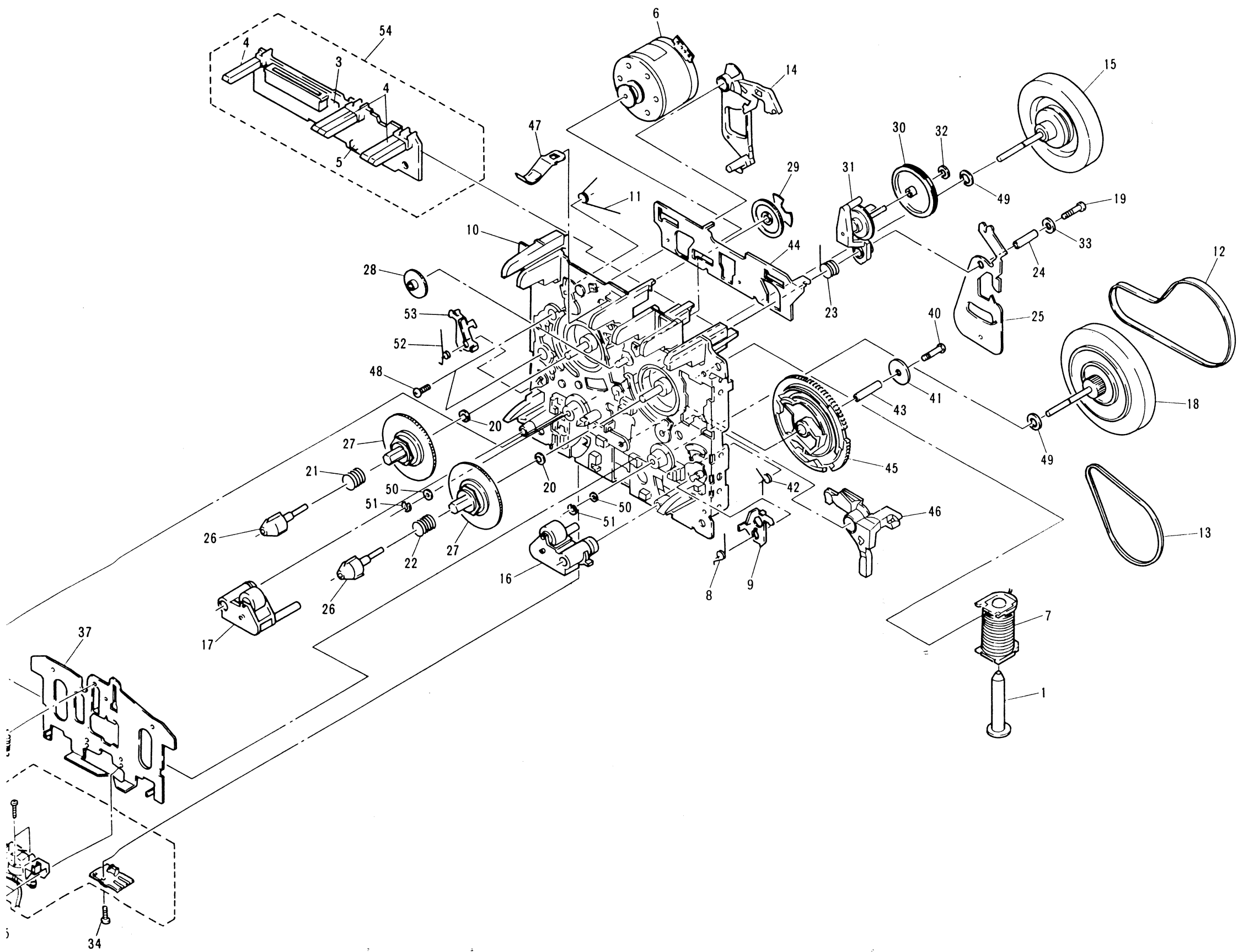
1.2 MECHANISM UNIT

Parts List

Mark	No.	Description	Part No.
	1	PLUNGER	RLA1288
	2		
	3	PUSH SWITCH	RSG1018
	4	SPLF	RSN1023
	5	PHOTO - TRANSISTOR	SPI33534FG
	6	MTR MAIN BLK	RXM1084
	7	SOLENOID BLK	RXP1021
	8	SPRING INTERLOCK R	RBH1386
	9	ARM INTERLOCK R	RNE1781
	10	CHASSIS BASE BLK	RXA1626
	11	SPRING BRAKE	RBH1387
	12	MAIN BELT	REB1157
	13	F/R BELT	REB1254
	14	LEVER BRAKE	RNK2071
	15	F/W ASSY	RXA1695
	16	PINCH ROLLER BLK R	RXA1628
	17	PINCH ROLLER BLK L	RXA1629
	18	CLUTCH BLK ASSY	RXA1694
	19	SCREW	RBA1113
	20	WASHER 2.1×0.25T	RBF1038
	21	SPRING REEL (L)	RBH1388
	22	SPRING REEL (R)	RBH1389
	23	CAM SPRING	RBH1393
	24	SPACER	RLA1286
	25	LEVER F/R	RNE1782
	26	REEL FEATHER	RNK2072
	27	REEL BASE	RNK2073
	28	PLAY GEAR (A)	RNK2074
	29	FF GEAR (A)	RNK2075
	30	F/R PULLEY	RNK2076
	31	CLUTCH BLK ASSY	RXA1632
	32	WASHER	WA17D040D025
	33	WASHER	WA23F060M040
	34	SCREW	PCZ20P040FMC
	35	SCREW	RBA1077
	36	SPRING HB	RBH1390
	37	HEAD BASE	RNE1783
	38		
	39		
	40	SCREW	RBA1113
	41	WASHER 2.0×0.3	RBE1009
	42	SPRING ARM PLAY	RBH1392
	43	SPACER	RLA1286
	44	PLATE SLIDE	RNE1785
	45	CAM GEAR	RNK2078
	46	ARM PLAY	RNK2079
	47	SPRING CASSETTE	RNE1786
	48	SCREW	BMZ26P040FZK
	49	WASHER	WA26D045D025
	50	WASHER	WA26D047D050

Mark	No.	Description	Part No.
	51	STOP RING	YE15FUC
	52	SPRING INTERLOCK L	RBH1385
	53	ARM INTERLOCK L	RNE1780
	54	PCB CONTROL BLK	RXA1699
	55	PLATE HD BLK	RXA1697

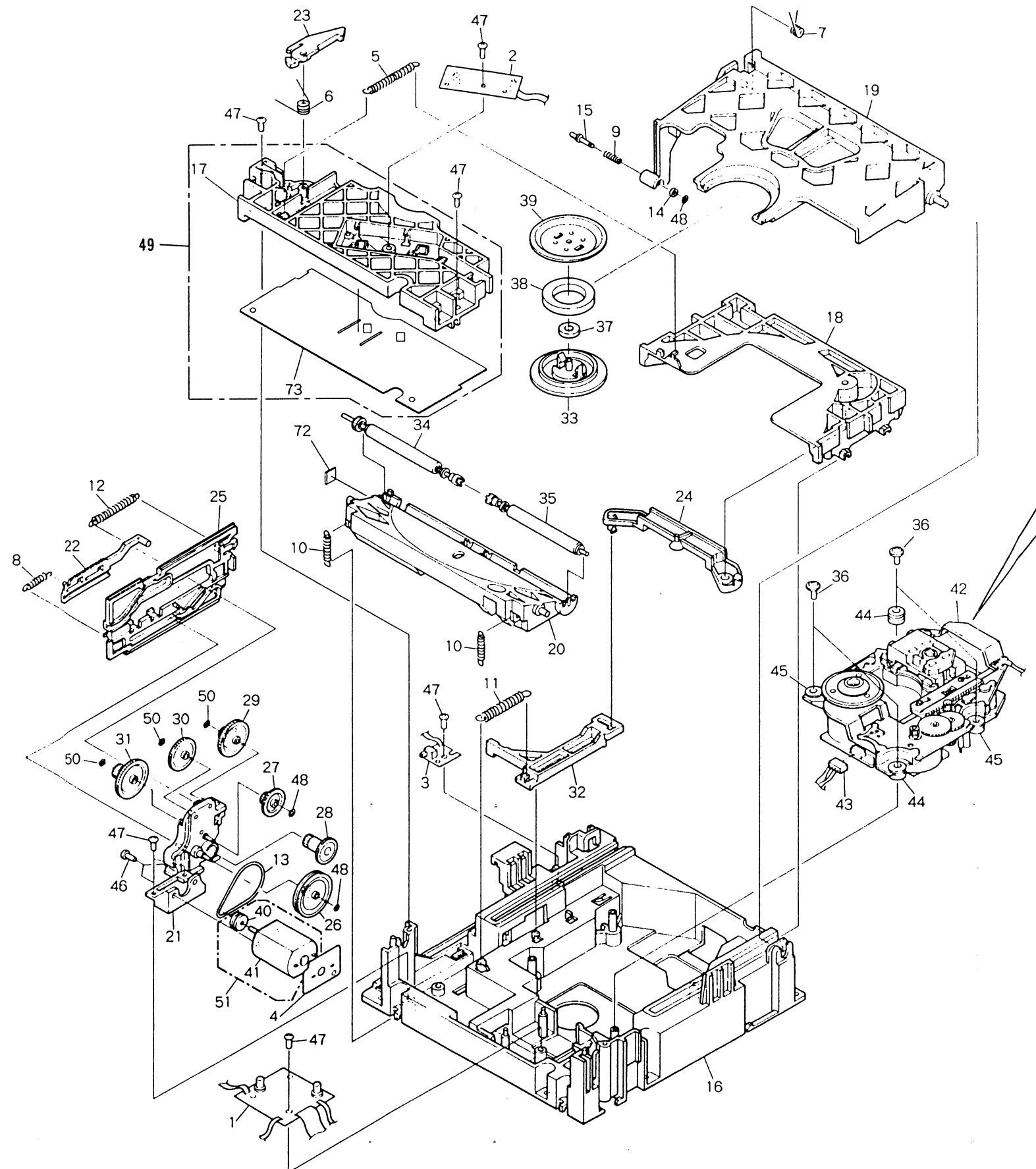




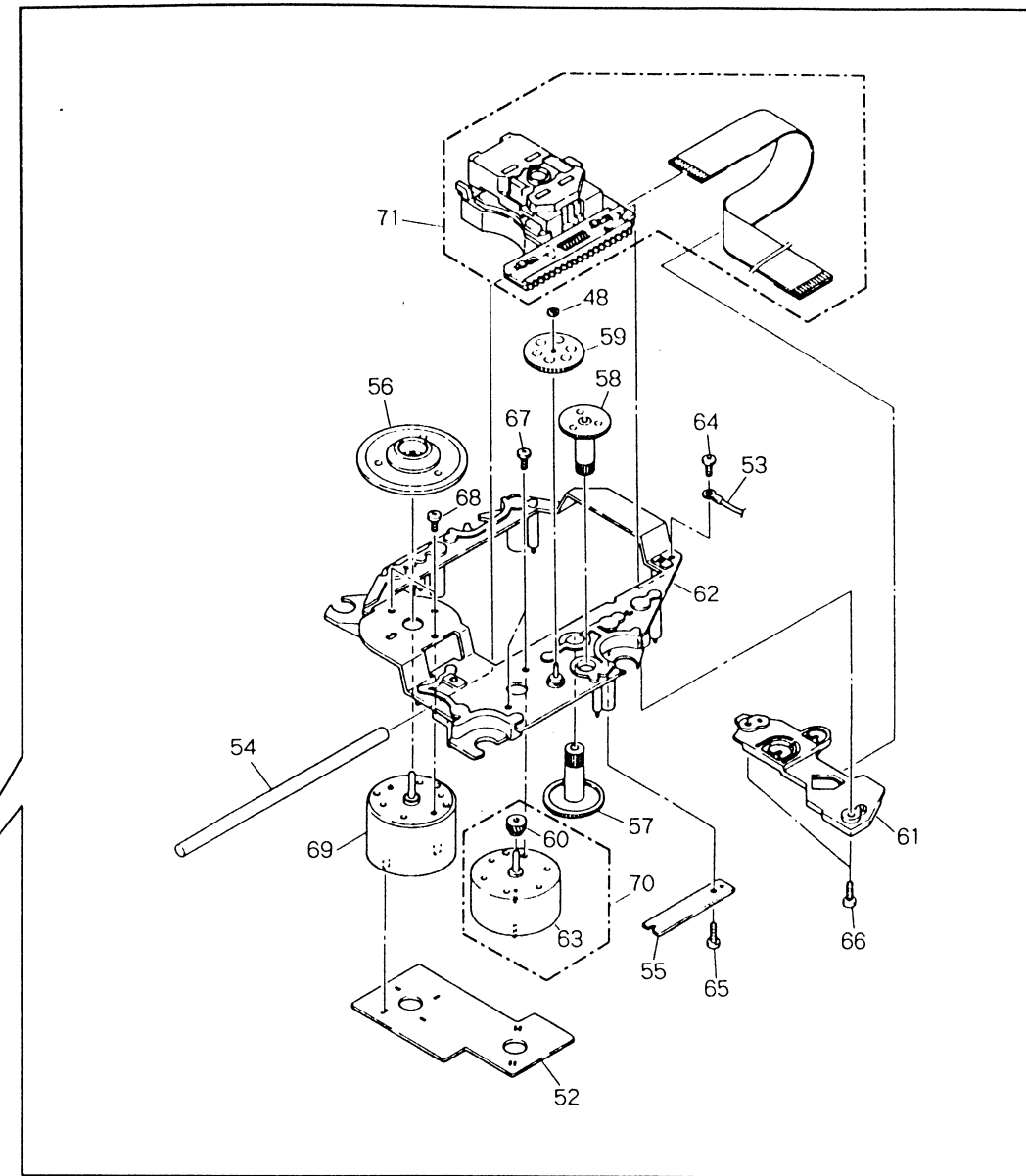
1.3 CD SLOT-IN MECHANISM

Parts List

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
NSP	1	SENSOR BOARD ASSY	AWZ7328		51	MOTOR ASSY	AEA7000
NSP	2	LED BOARD ASSY	AWZ7329		52	MECHANISM BOARD ASSY	PWX1192
NSP	3	SW BOARD ASSY	AWZ7330		53	GROUND LEAD UNIT	PDF1104
NSP	4	MOTOR BOARD ASSY	AWZ7331		54	GUIDE BAR	PLA1094
	5	SPRING	ABH7035	NSP	55	GEAR STOPPER	PNB1303
	6	ROCK LEVER SPRING	ABH7019		56	DISC TABLE	PNW1608
	7	CLAMP SPRING	ABH7020		57	GEAR 1	PNW2052
	8	RACK SPRING	ABH7021		58	GEAR 2	PNW2053
	9	P SPRING	ABH7022		59	GEAR 3	PNW2054
	10	ROLLER HOLDER SPRING	ABH7023		60	PINION GEAR	PNW2055
	11	SPRING B	ABH7024		61	PWB HOLDER	PNW2057
	12	CAM PLATE SPRING	ABH7025		62	CARRIAGE BASE	PNW2445
	13	BELT A	AEB7012	NSP	63	DC MOTOR (CARRIAGE)	PXM1027
	14	WASHER	AEB7018		64	SCREW	BBZ26P060FMC
	15	PIN	ALA7005		65	SCREW	BPZ20P060FMC
	16	MECHANISM BASE	ANW7022		66	SCREW	BPZ26P100FMC
	17	DISC PLATE	ANW7023		67	SCREW	JFZ17P025FZK
	18	CENTERING PLATE	ANW7024		68	SCREW	JFZ20P030FNI
	19	CLAMPER HOLDER	ANW7025		69	DC MOTOR ASSY (SPINDLE)	PEA1235
	20	ROLLER HOLDER	ANW7078		70	DC MOTOR ASSY (CARRIAGE)	PEA1246
	21	GEAR HOLDER	ANW7027		71	PICKUP ASSY	PEA1291
	22	RACK	ANW7028		72	AV SHEET	AEB7021
	23	ROCK LEVER	ANW7029	NSP	73	DISC PLATE SHEET	AEB7035
	24	STARTING LEVER	ANW7030		74	OIL (GREEN)	GEM1015
	25	CAM PLATE	ANW7031				
	26	GEAR PULLEY	ANW7032				
	27	GEAR A	ANW7033				
	28	GEAR B	ANW7034				
	29	GEAR C	ANW7035				
	30	GEAR D	ANW7036				
	31	DRIVE GEAR	ANW7037				
	32	STARTING PLATE	ANW7038				
	33	CLAMPER	ANW7044				
	34	ROLLER ASSY L	AXA7019				
	35	ROLLER ASSY R	AXA7020				
	36	SCREW	PBA1048				
NSP	37	H SPACER	PEB1249				
	38	CLAMP MAGNET	PMF1014				
	39	YOKE	PNB1216				
	40	MOTOR PULLEY	PNW1634				
NSP	41	MOTOR	PXM1002				
NSP	42	SERVO MECHANISM ASSY SL	AXA7017				
	43	CONNECTOR ASSY 2P (2mm PITCH)	PDE1238				
	44	FLOAT RUBBER	PEB1014				
	45	FLOAT RUBBER	PEB1132				
	46	SCREW	BMZ20P040FMC				
	47	SCREW	PPZ30P060FMC				
	48	WASHER	WT12D032D025				
	49	DISC PLATE ASSY	AEA7003				
	50	WASHER	WT17D034D025				

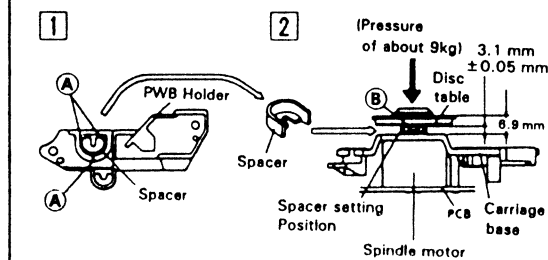


SERVO MECHANISM ASSY SL



● How to install the disc table

- 1 Use nipper or other tool to cut the three sections marked (A) figure 1. Then remove the spacer.
- 2 While supporting the spindle motor shaft with the stopper, put spacer on top of the motor base (angled so it doesn't touch section (B)), and stick the disc table on top (takes about 9kg pressure). Take off the spacer.



4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

4.1 OVERALL WIRING 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, 1/8W, 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 electrolytic capacitors.
5. COILS:
Unit: m:mH or μH unless otherwise noted.
6. VOLTAGE AND CURRENT:
 : Signal voltage at rated output.
 or $\pm$ V :
DC voltage (V) at no input signal unless otherwise noted.
Value in () is DC voltage at rated power.
 $\varnothing$ mA or $\pm$ mA :
DC current at no input signal unless otherwise noted.
7. OTHERS:
•  or  : Adjusting point.
• : Measurement point.
• The  mark found on some component 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.)

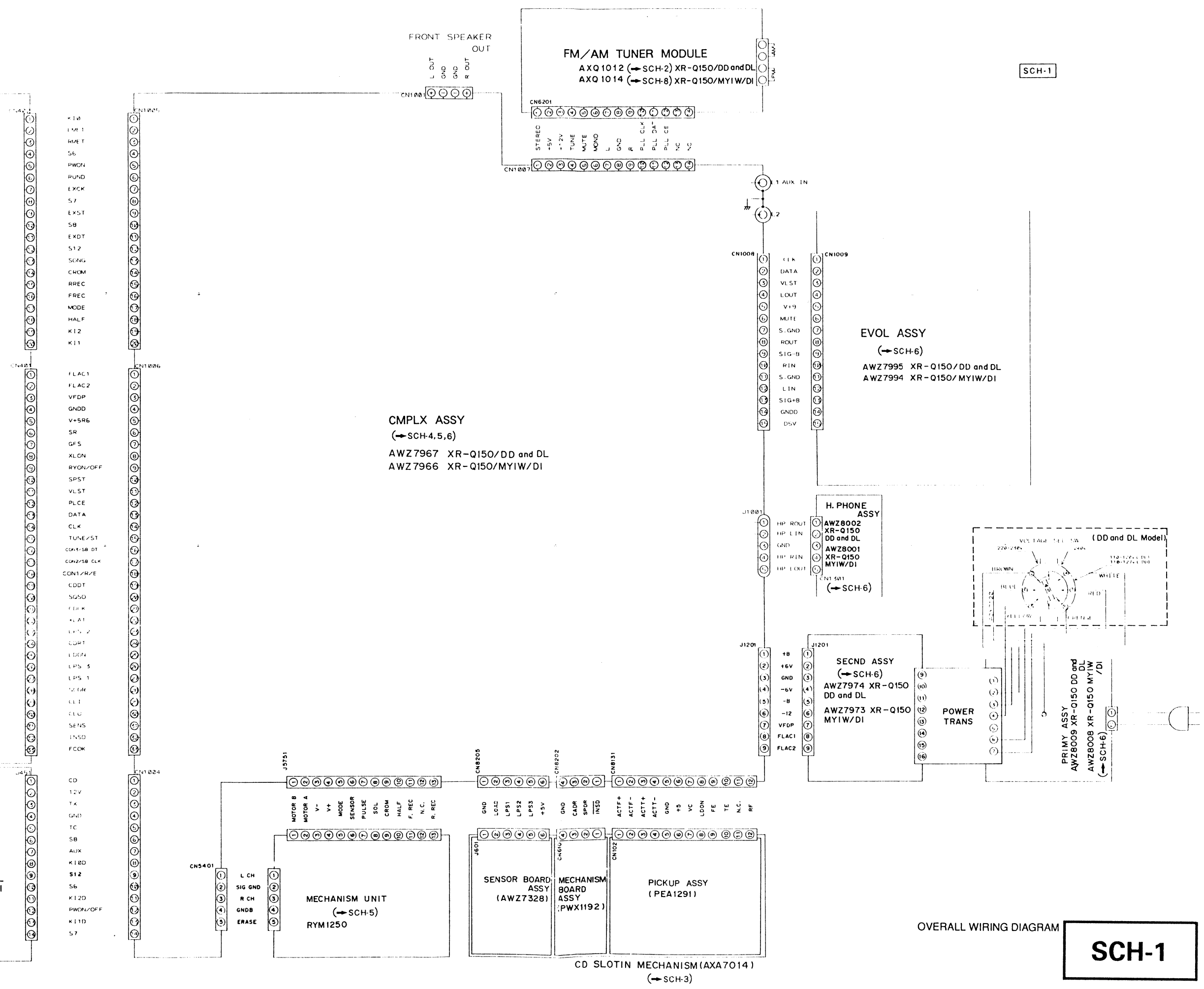
9. SWITCHES (Underline indicates switch position):

FRNT 1 ASSY
S401 : POWER ON/STANDBY
S402 : DISPLAY/CLOCK ADJ
S403 : TIMER REC/WAKE UP
S404 : F-MODE
S405 : CD EJECT

FRNT 2 ASSY
S451 : VOLUME UP
S452 : VOLUME DOWN
S453 : TAPE
S454 : AUX/CD II
S455 : FM/AM
S456 : CD
S457 :  SEARCH/SKIP
S458 :  SEARCH/SKIP
S459 : PLAY/PAUSE (START)
S460 : REC/ASES
S461 : DOLBY B NR
S462 : STOP

FRNT1 ASSY
(→SCH-7)
AWZ7981 XR-Q150 DD and DL
AWZ7980 XR-Q150 MYIW/DI

FRNT2 ASSY
(→SCH-7)
AWZ7988 XR-Q150 DD and DL
AWZ7987 XR-Q150 MYIW/DI



OVERALL WIRING DIAGRAM

SCH-1

4.2 FM/AM TUNER MODULE

• This diagram is viewed from the mounted parts side.

PCB-1

FM/AM TUNER MODULE (AXQ1012)

G6101

G6204

G6102 G6214

G6103

G6104

VR6201

IC6202

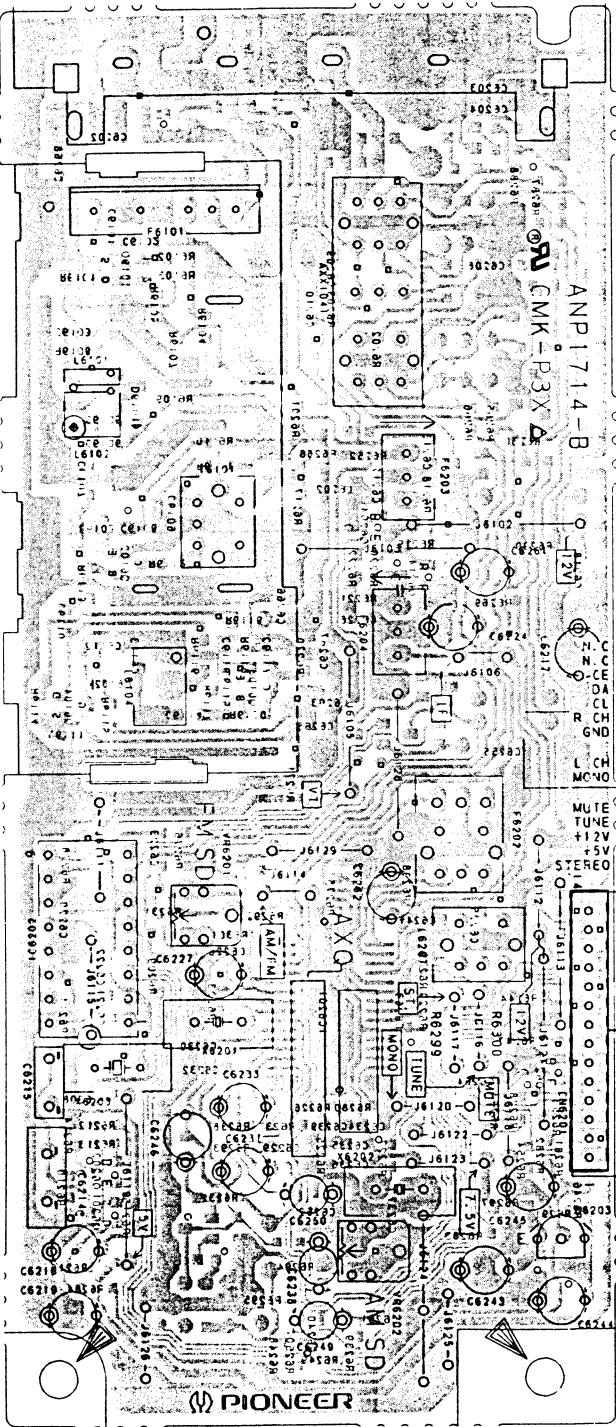
IC6201

G6217

G6202

G6201

G6203 VR6202



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
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

NOTE FOR PCB DIAGRAMS:

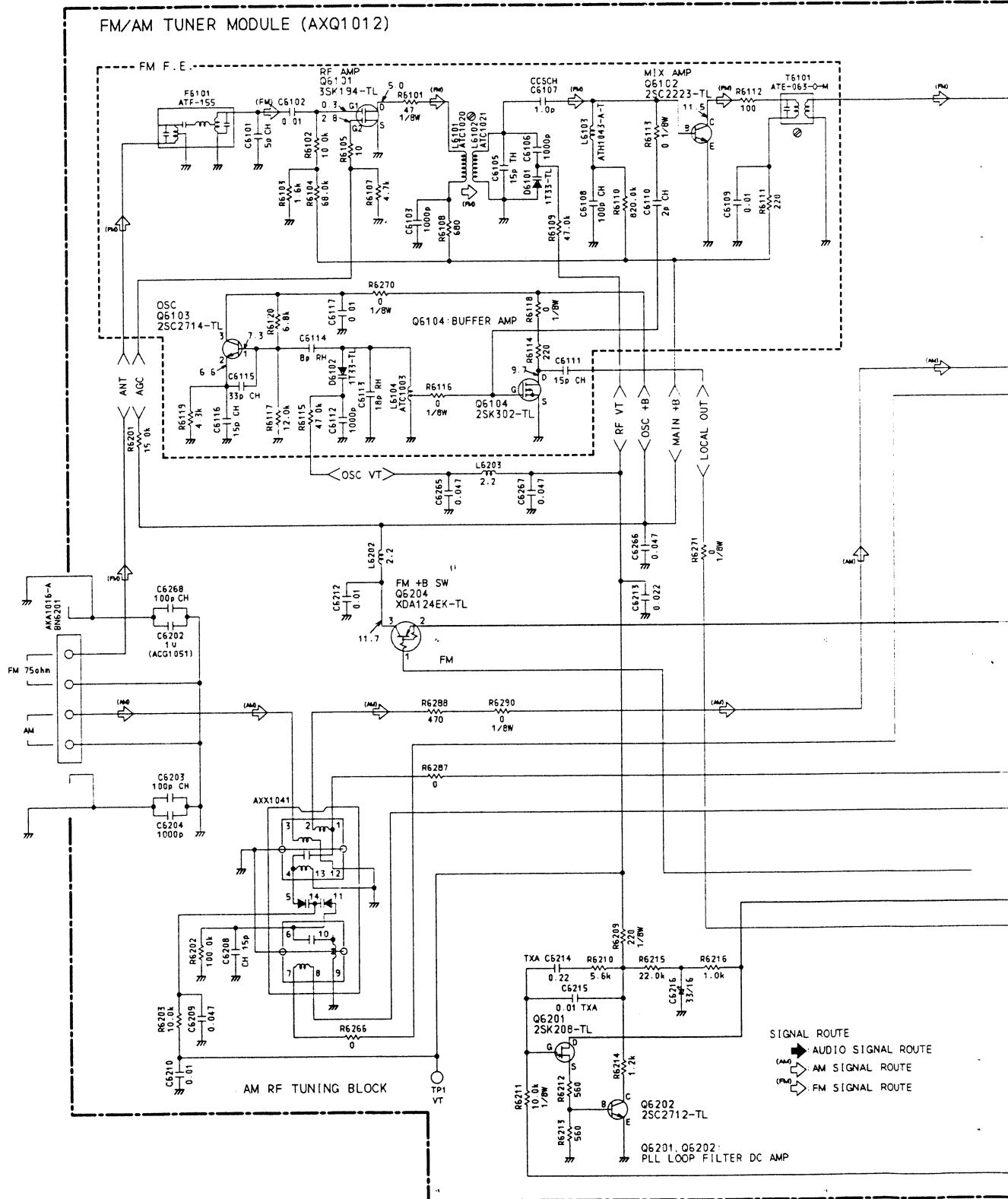
- 1. Part numbers in PCB diagrams match those in the schematic diagrams.
- 2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		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.

CMPLX ASSY
CN1007

XR-Q150



FM/AM TUNER MODULE

SCH-2

SCH-2

NOTE: VOLTAGE AND CURRENT

mV : Signal voltage at FM 1kHz, 100% MOD.

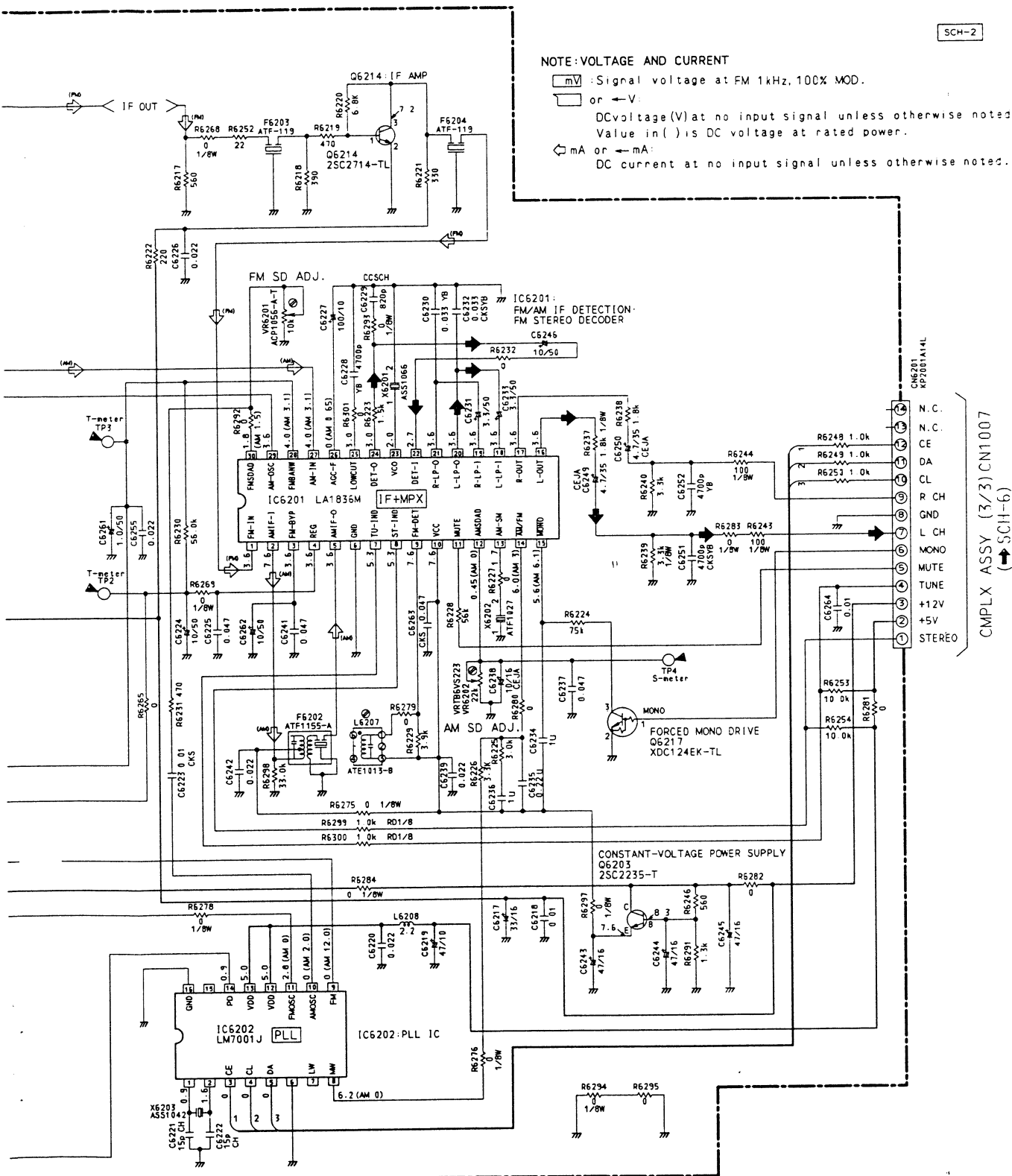
or $\leftarrow$ V.

DC voltage (V) at no input signal unless otherwise noted.

Value in () is DC voltage at rated power.

 $\leftarrow$ mA or $\leftarrow$ mA:

DC current at no input signal unless otherwise noted.



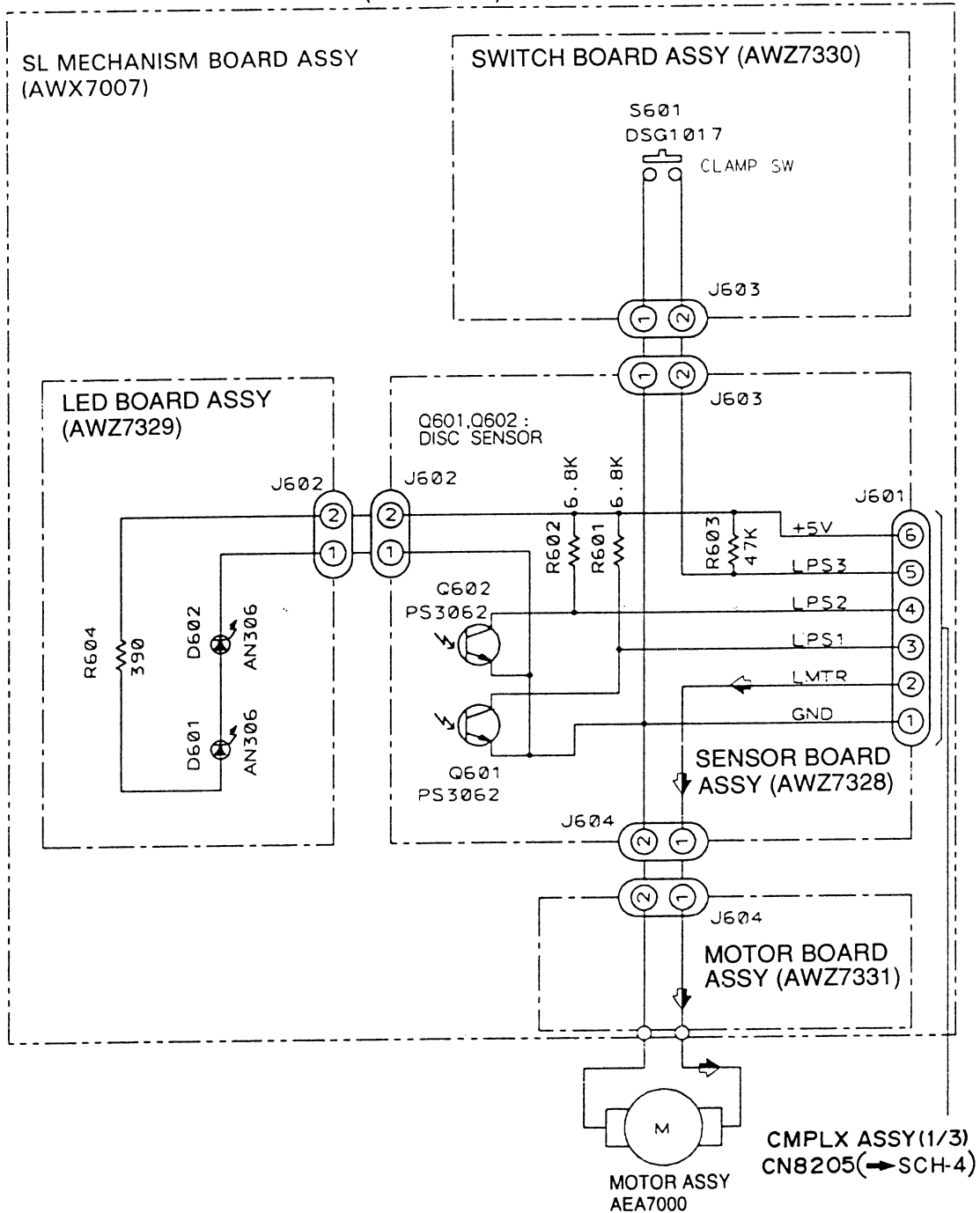
FM/AM TUNER MODULE

SCH-2

XR-Q150

4.3 CD SLOT-IN MECHANISM, LED BOARD ASSY, SENSOR BOARD ASSY, MOTOR BOARD ASSY, SWITCH BOARD ASSY, MECHANISM BOARD ASSY AND PICKUP ASSY

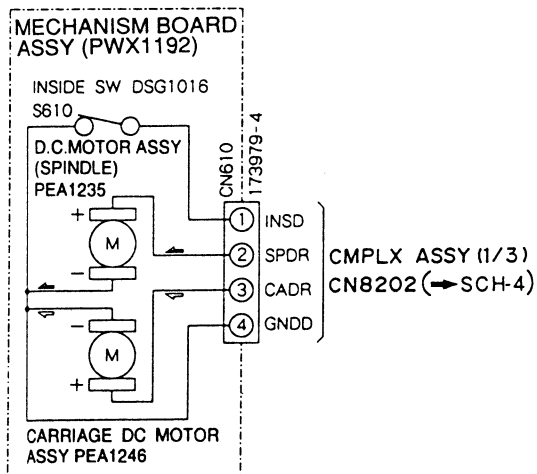
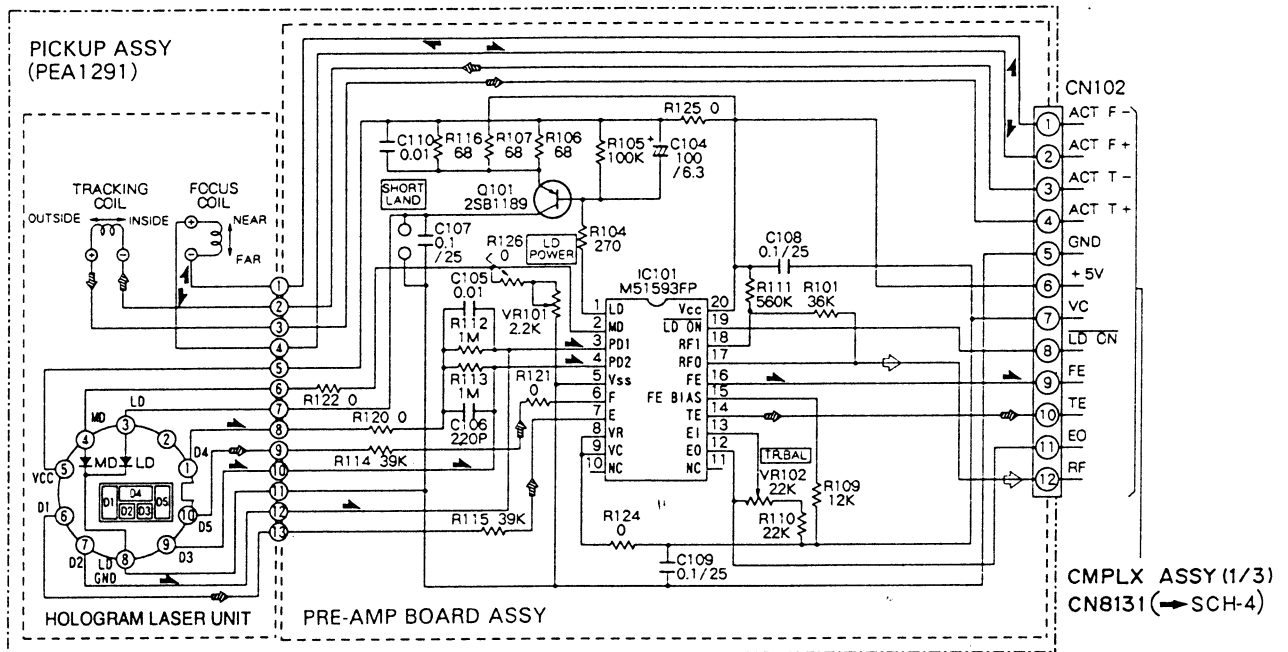
CD SLOT-IN MECHANISM (AXA7014)



SCH-3

CD SLOT-IN MECHANISM,
LED BOARD ASSY, SENSOR BOARD ASSY,
MOTOR BOARD ASSY,
SWITCH BOARD ASSY,
MECHANISM BOARD ASSY,
PICKUP ASSY

SCH-3



SIGNAL ROUTE

- ▶ : FOCUS SERVO LOOP LINE
- ◀ : TRACKING SERVO LOOP LINE
- ◁ : SIGNAL ROUTE
- ▷ : LOADING MOTOR ROUTE
- ◂ : SPINDLE MOTOR ROUTE
- : CARRIAGE MOTOR ROUTE

CD SLOT-IN MECHANISM,
LED BOARD ASSY, SENSOR BOARD ASSY,
MOTOR BOARD ASSY,
SWITCH BOARD ASSY,
MECHANISM BOARD ASSY,
PICKUP ASSY

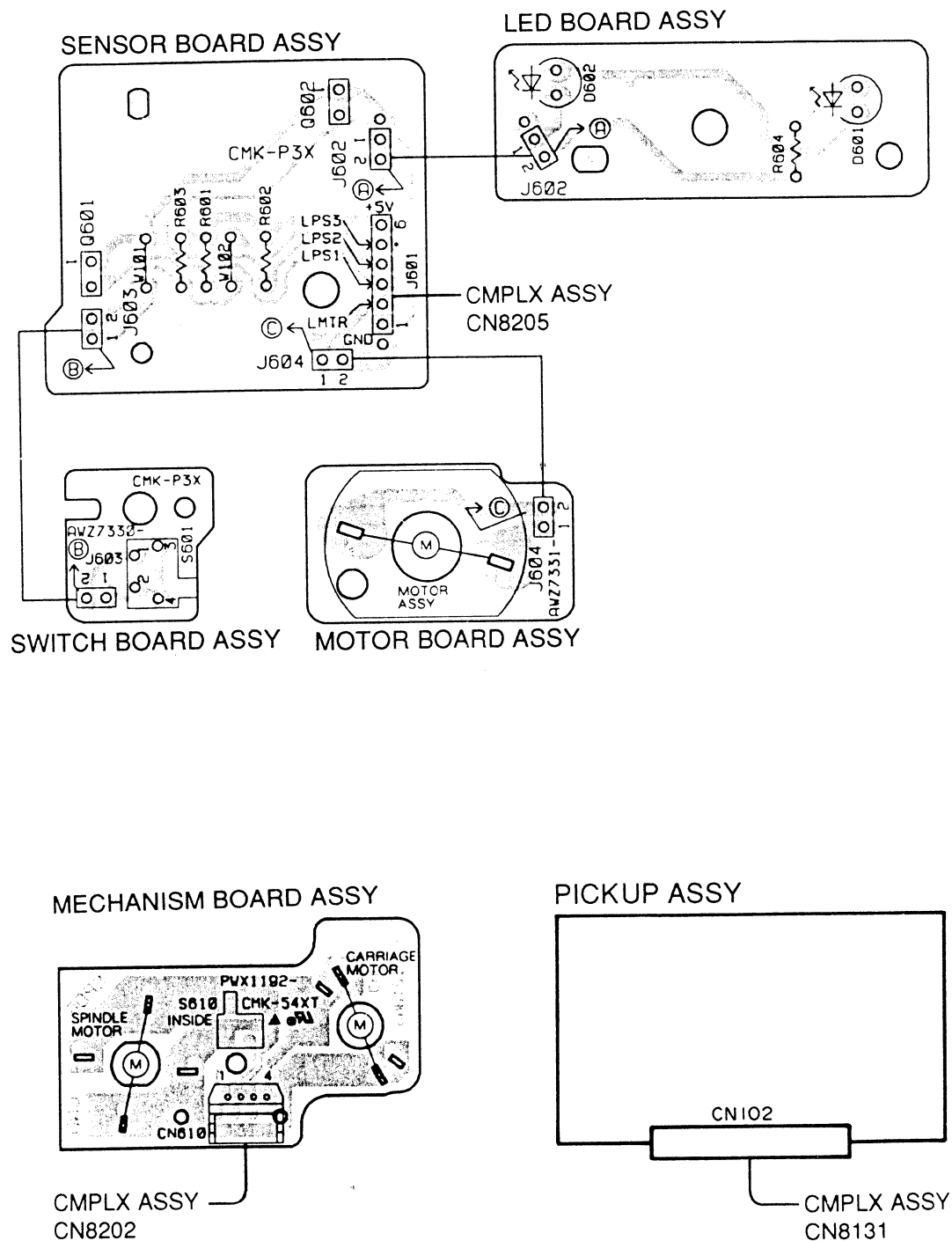
SCH-3

XR-Q150

- This diagram is viewed from the mounted parts side.

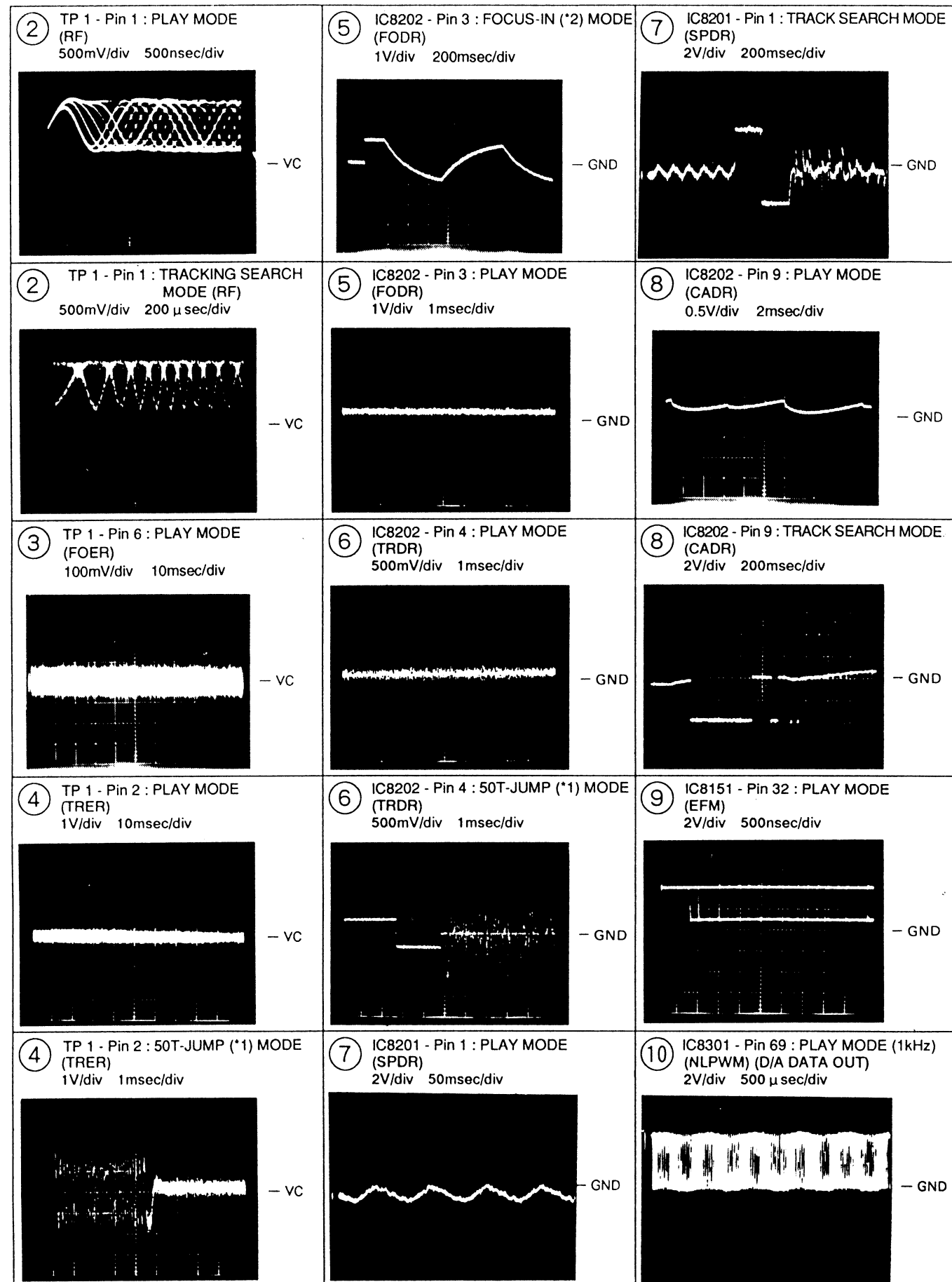
- The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.

PCB-2



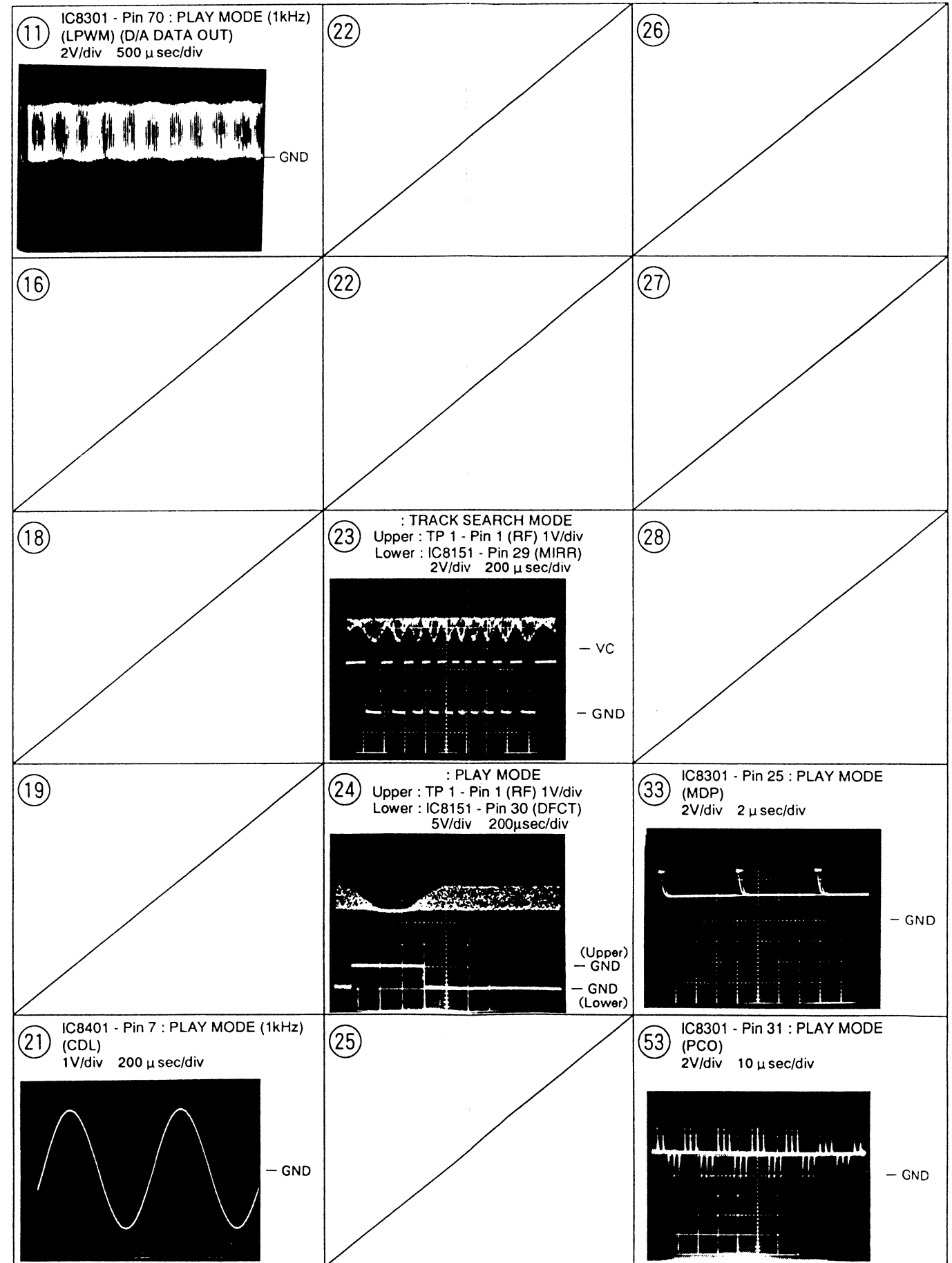
Waveforms

Note: The number marked with a circle shows the number of each measuring point on the circuit diagram.



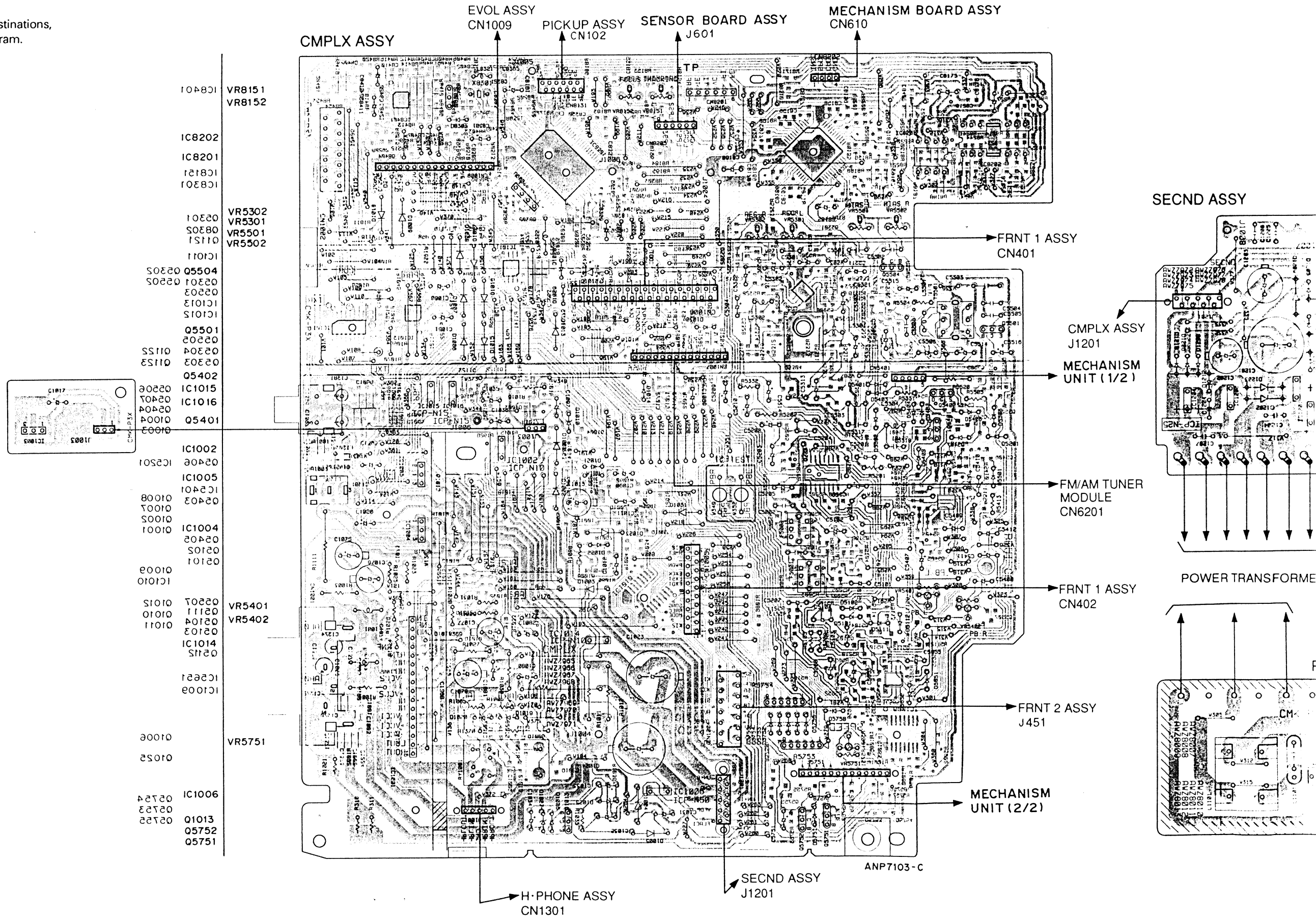
*1 50T-JUMP: After setting the PAUSE, press the manual search key.

***2 FOCUS-IN: Press the PLAY key unloading a disc.**

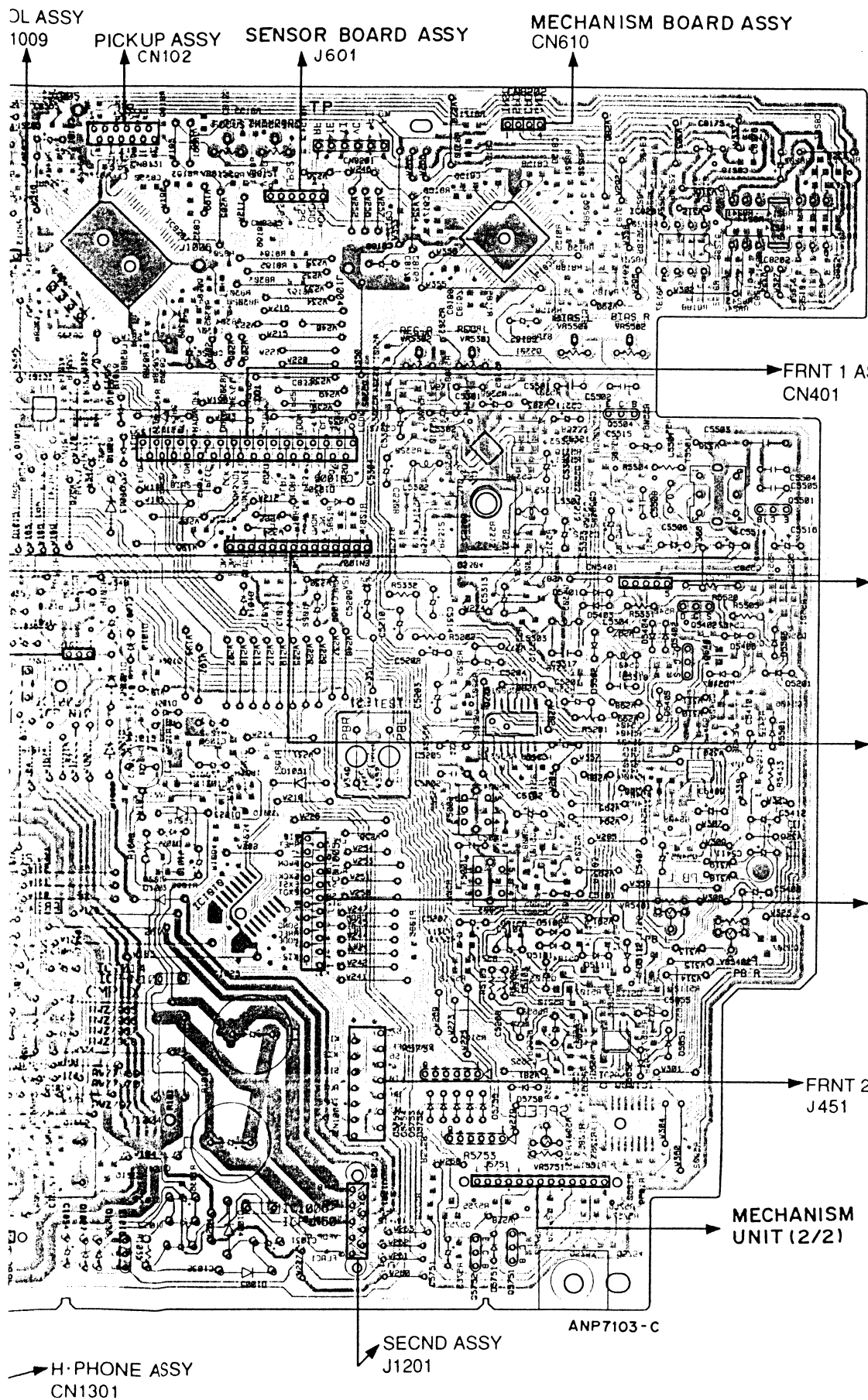


- This diagram is viewed from the mounted parts side.

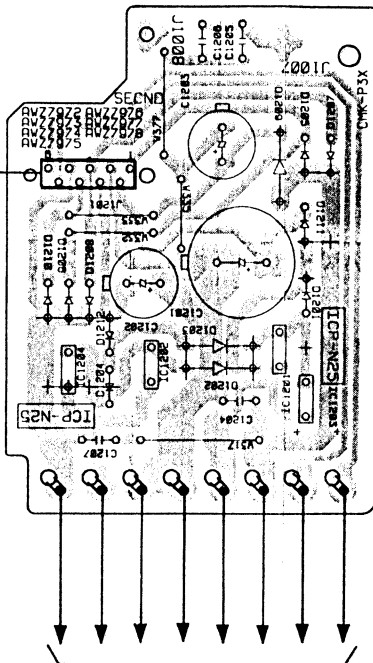
- The parts mounted on this PCB include all necessary parts for several destinations.
For further information for respective destinations, be sure to check with the schematic diagram.



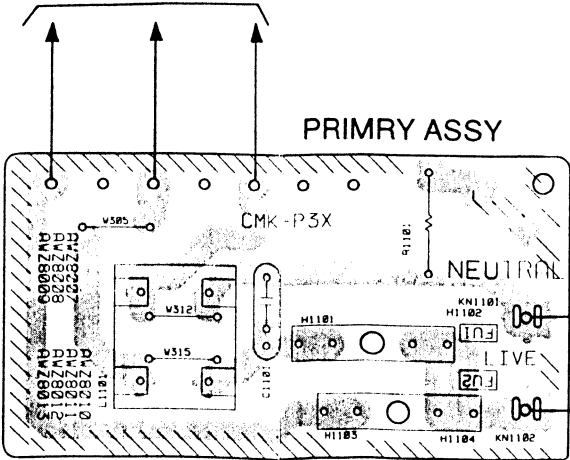
• This diagram is viewed from the mounted parts side.



SECND ASSY



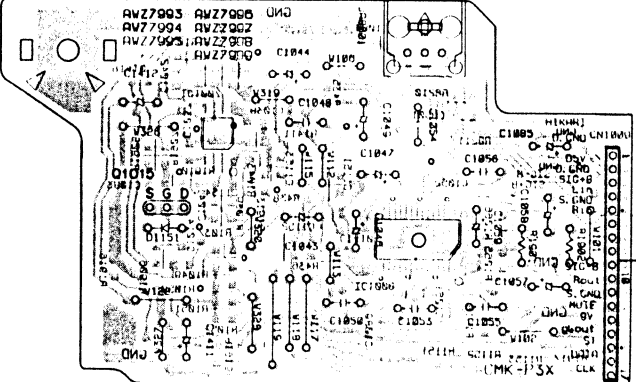
POWER TRANSFORMER



ANP7104-C

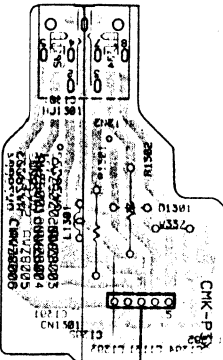
PCB-3

EVOL ASSY

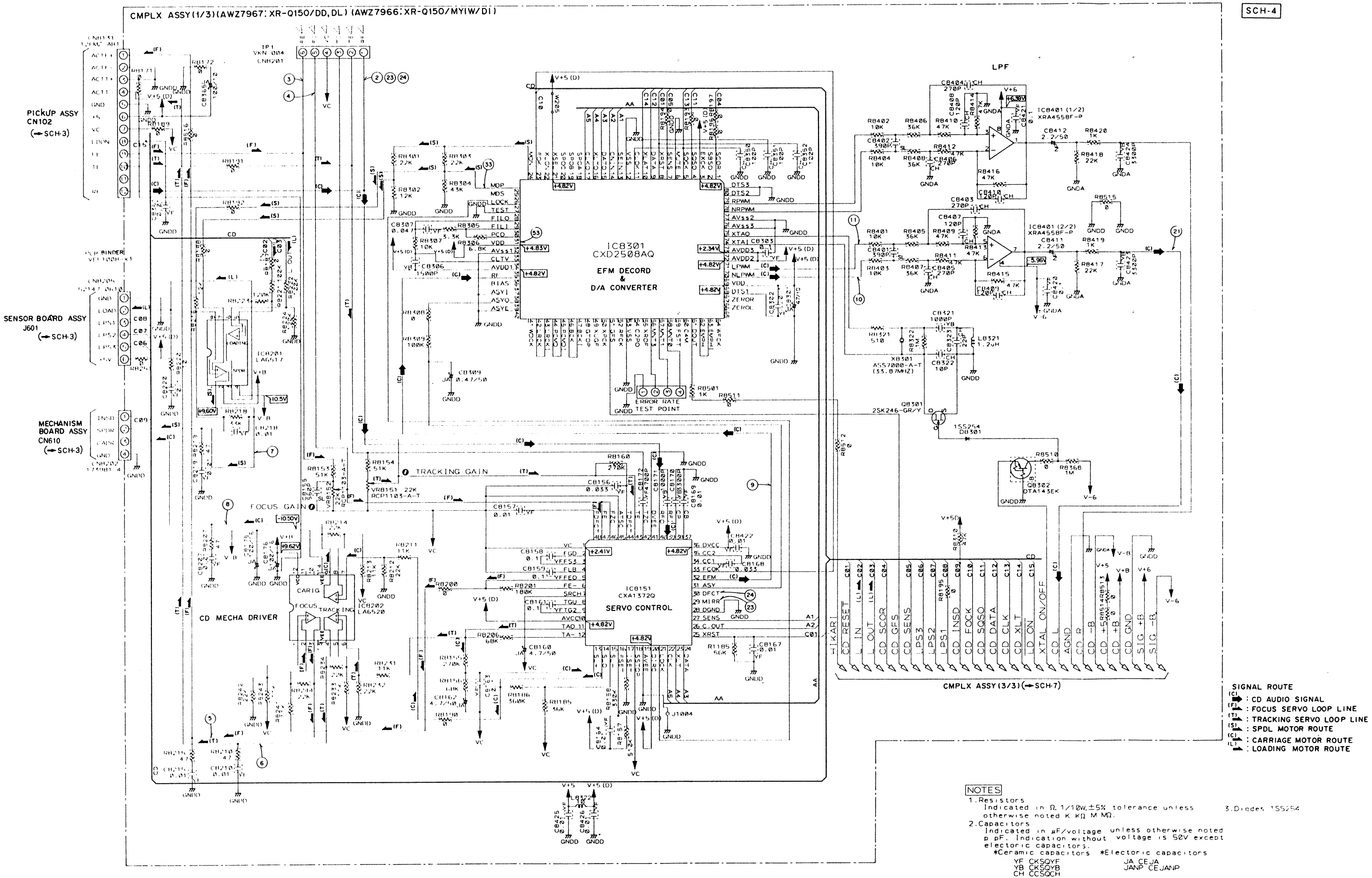


CMPLX ASSY CN1008

H-PHONE ASSY



CMPLX ASSY J1001

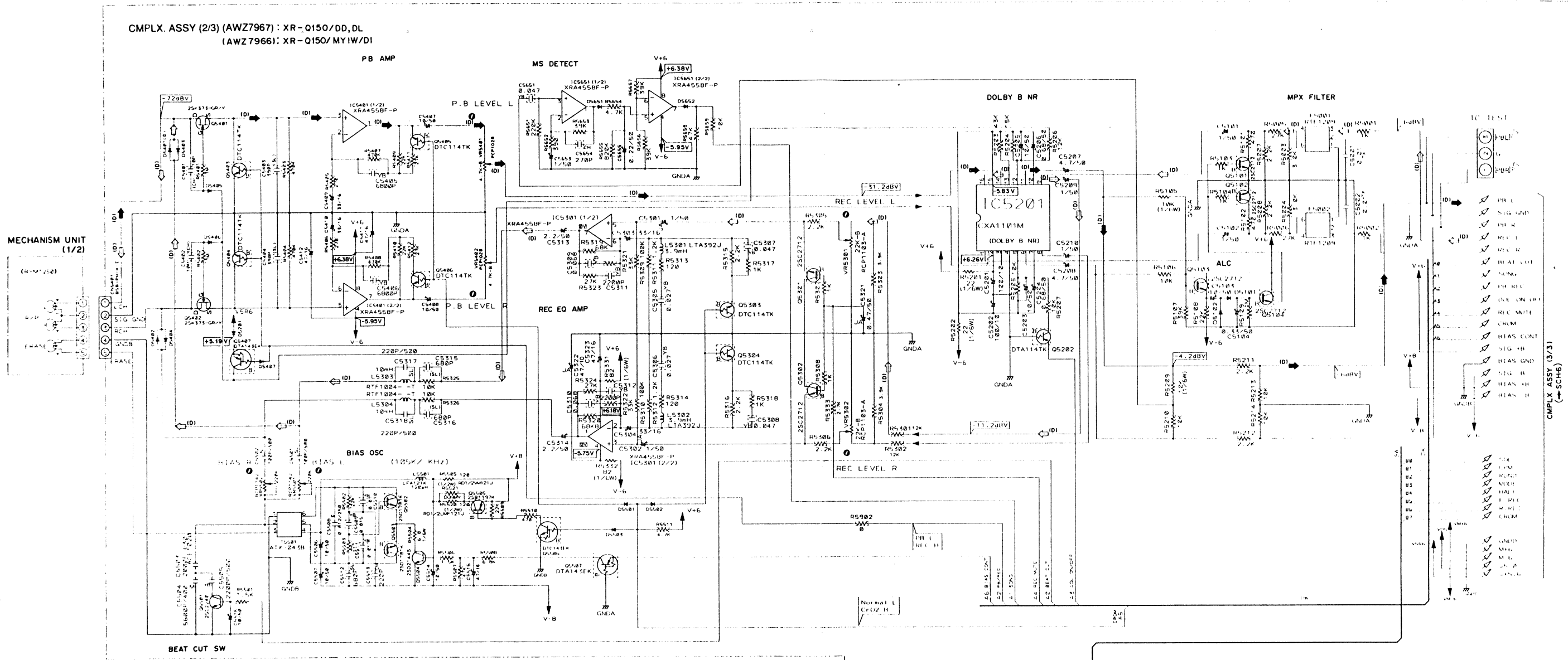


SCH-4

SCH-4

XR-Q150
4.6 CMLPX ASSY (2/3)

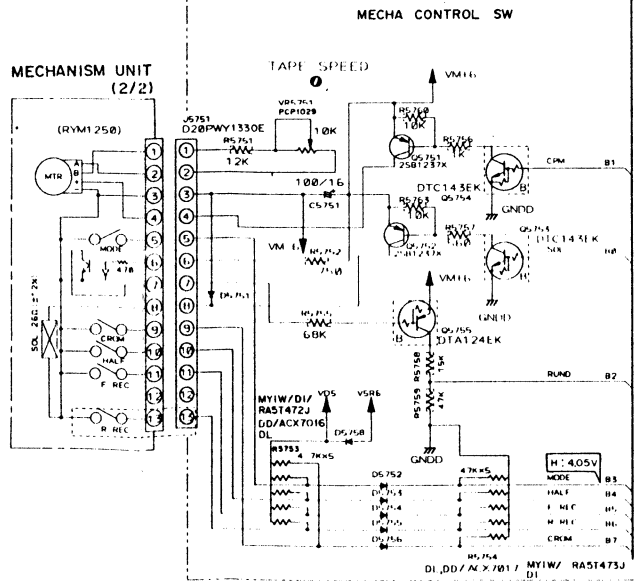
SCH-5



CMLPX ASSY (3/3)
(SCH-6)

NOTES

- 1 Resistors
Indicated in Ω , 1/10W, +5% tolerance unless otherwise noted K, M, M2.
- 2 Capacitors
Indicated in μ F/voltage unless otherwise noted p, pF. Indication without voltage is 50V except electrolytic capacitors.
*Electronic capacitors CEAS002M**
JA CEJA
*Ceramic capacitors
YB CKSOYB
CH CCSOCH
SL CCSL
CCSOCL
*Film capacitors
TX CFTXA
M CQMA
- 3 Diodes 1SS254



SIGNAL ROUTE
ID : DECK PB SIGNAL
ID : DECK REC SIGNAL

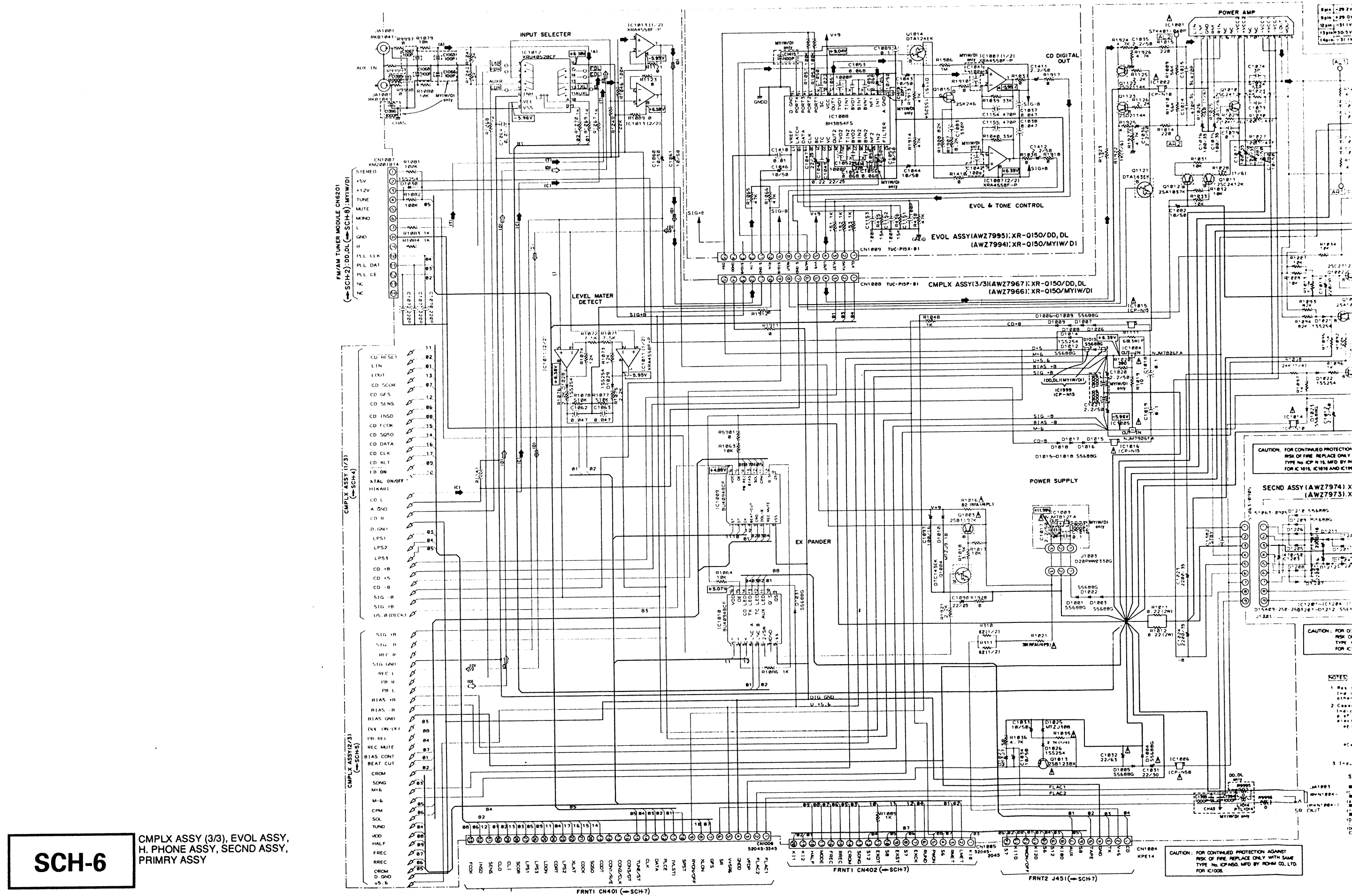
CMLPX ASSY (2/3)

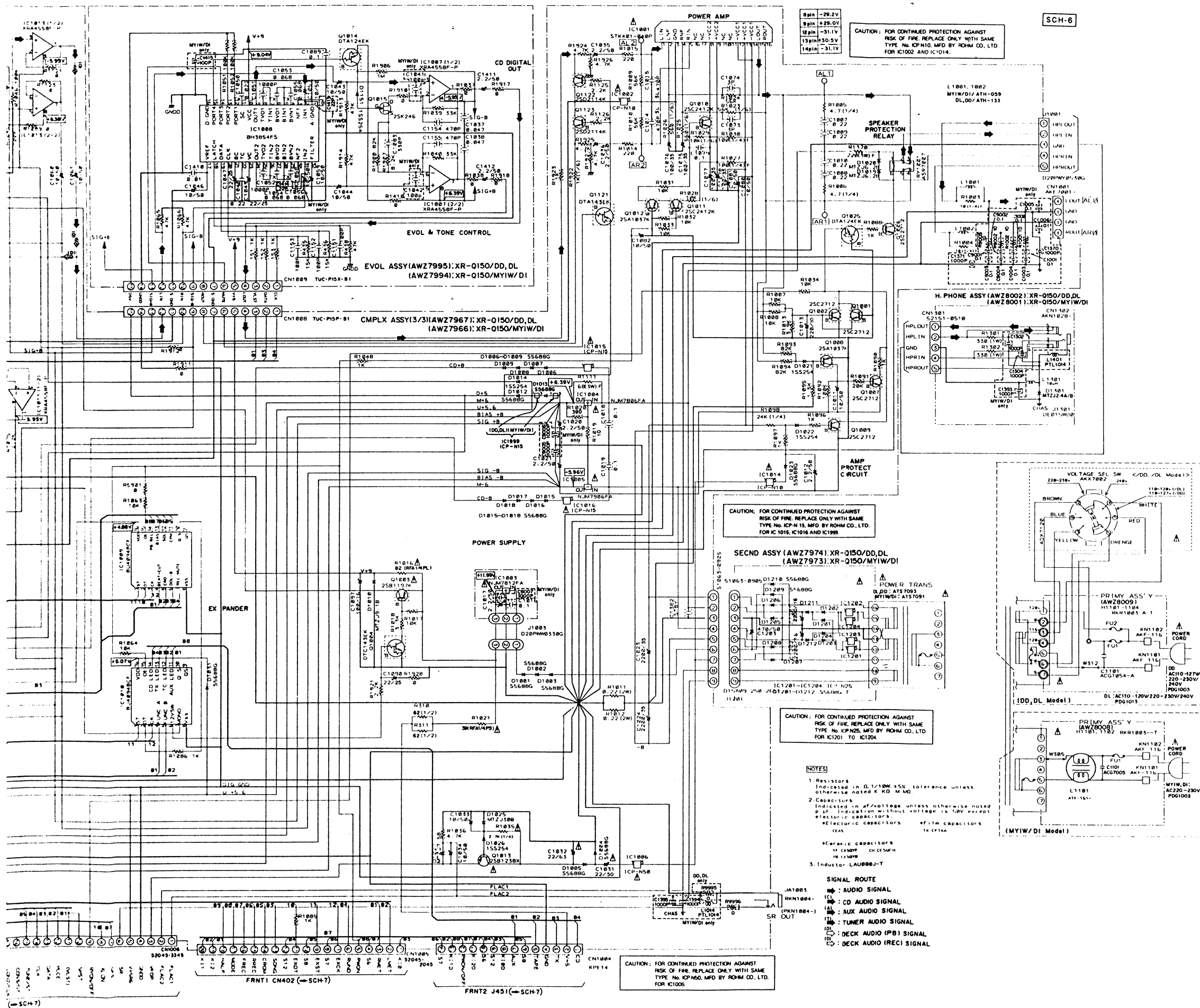
CMLPX ASSY (2/3)

SCH-5

SCH-5

4.7 CMLPX ASSY (3/3), EVOL ASSY, H. PHONE ASSY, SECND ASSY AND PRIMRY ASSY



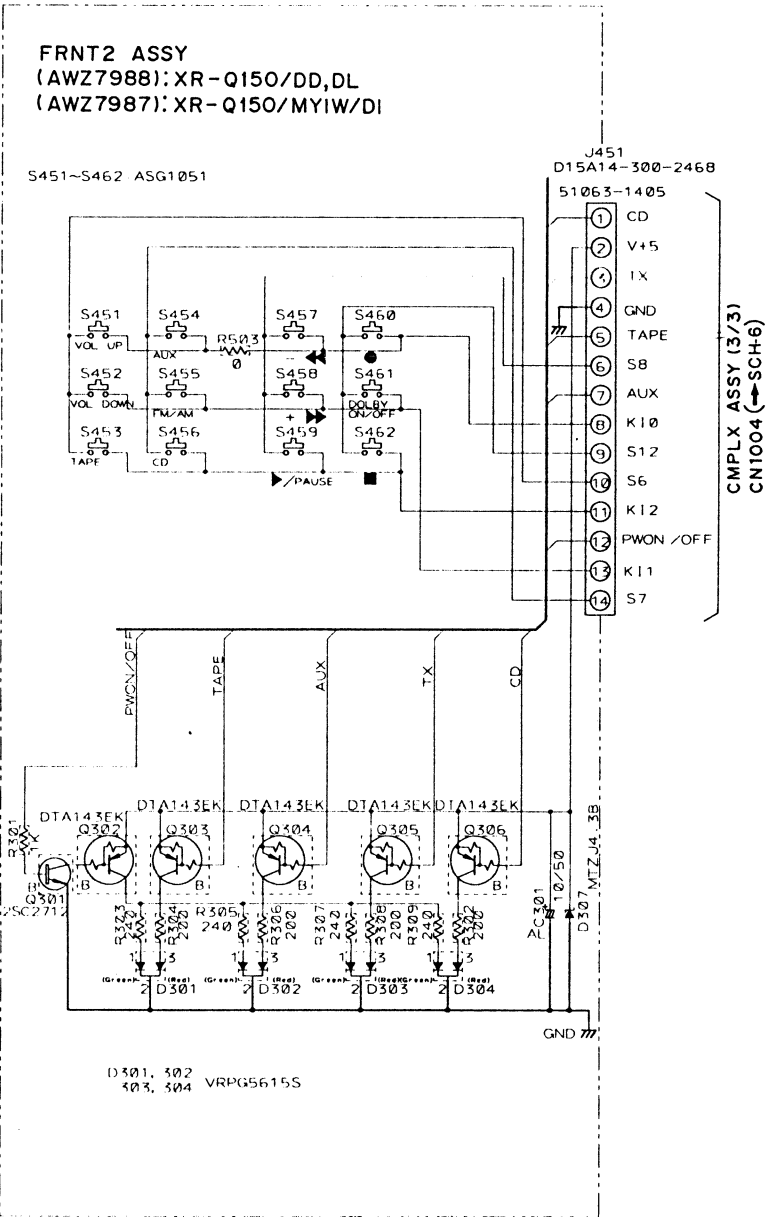


CMPLX ASSY (3/3), EVOL ASSY,
H. PHONE ASSY, SECDN ASSY,
PRIMRY ASSY

SCH-6

XR-Q150

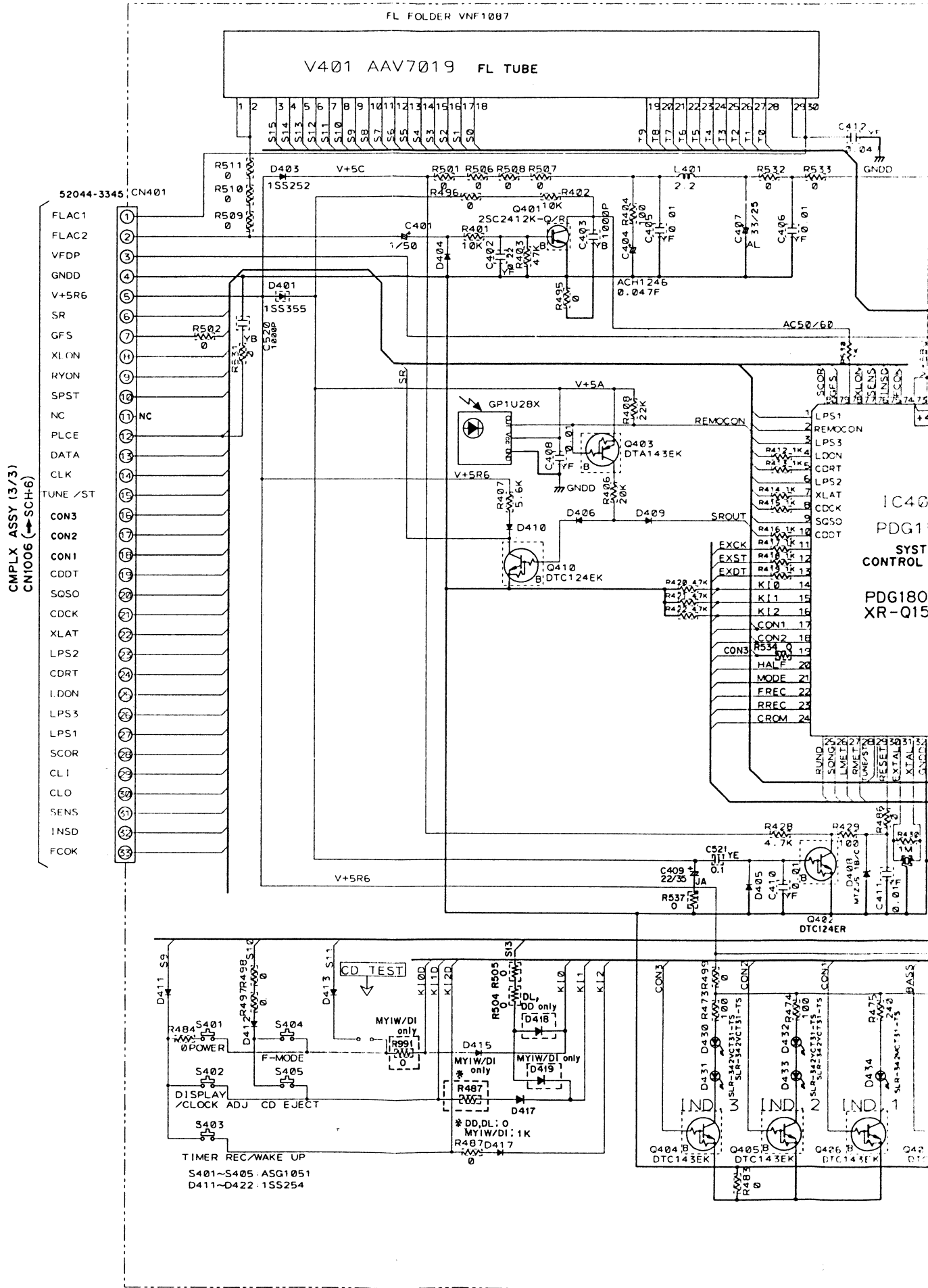
4.8 FRNT 1 ASSY AND FRNT 2 ASSY

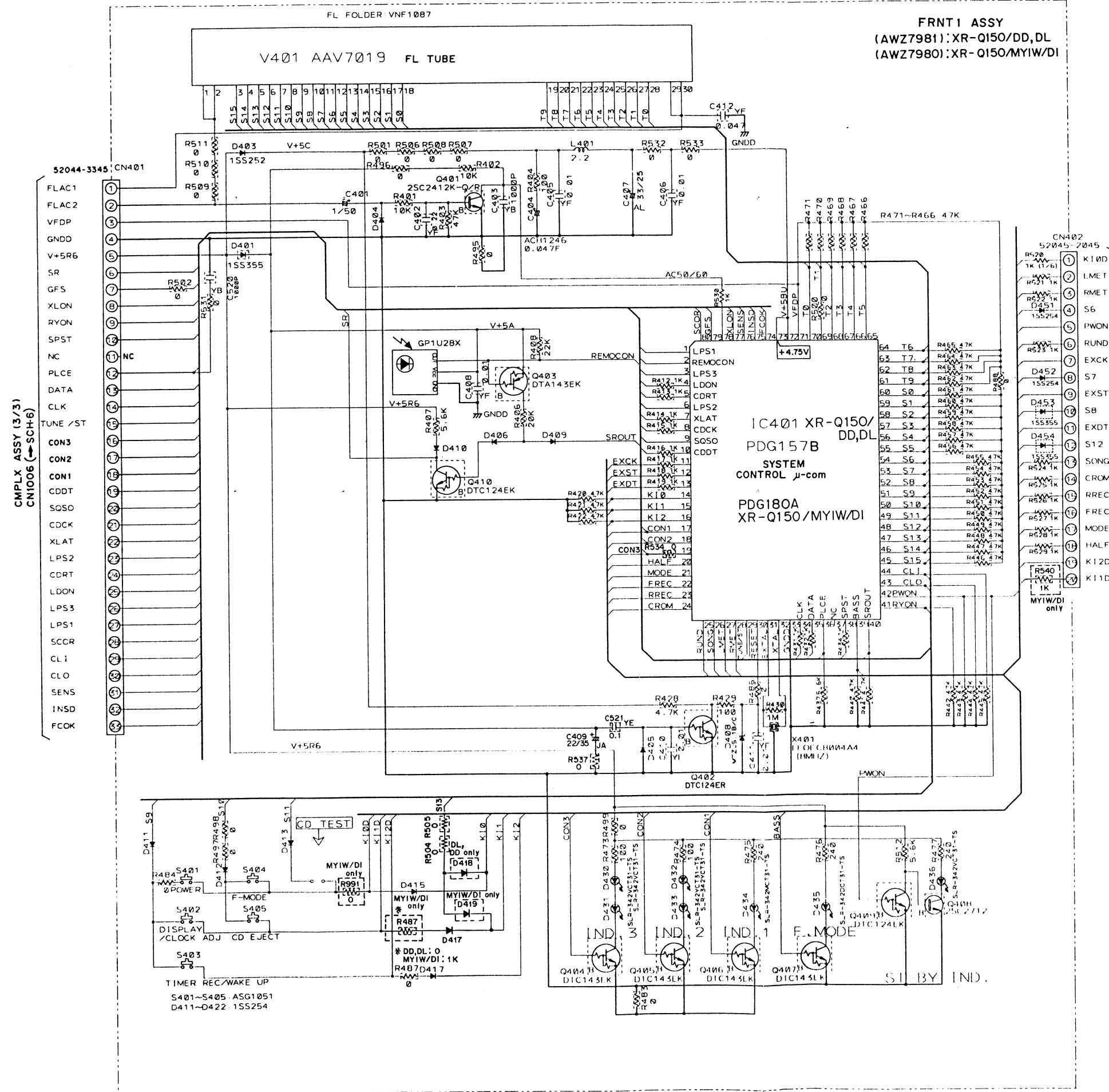


- [NOTES]
1. Resistors:
Indicated in Ω , 1/10W, $\pm 5\%$ tolerance unless otherwise noted K, K Ω , M, M Ω .
 2. Capacitors:
Indicated in μ F/voltage unless otherwise noted p, pF. Indication without voltage is 50V except electrolytic capacitors.
*Electronic capacitors: CEJA000J
AL: CEAL
*Ceramic capacitors
YF: CKSQYF
YB: CKSQYB
 3. Diodes: 1SS254
 4. Inductor: LAU000J

SCH-7

FRNT 1 ASSY,
FRNT 2 ASSY



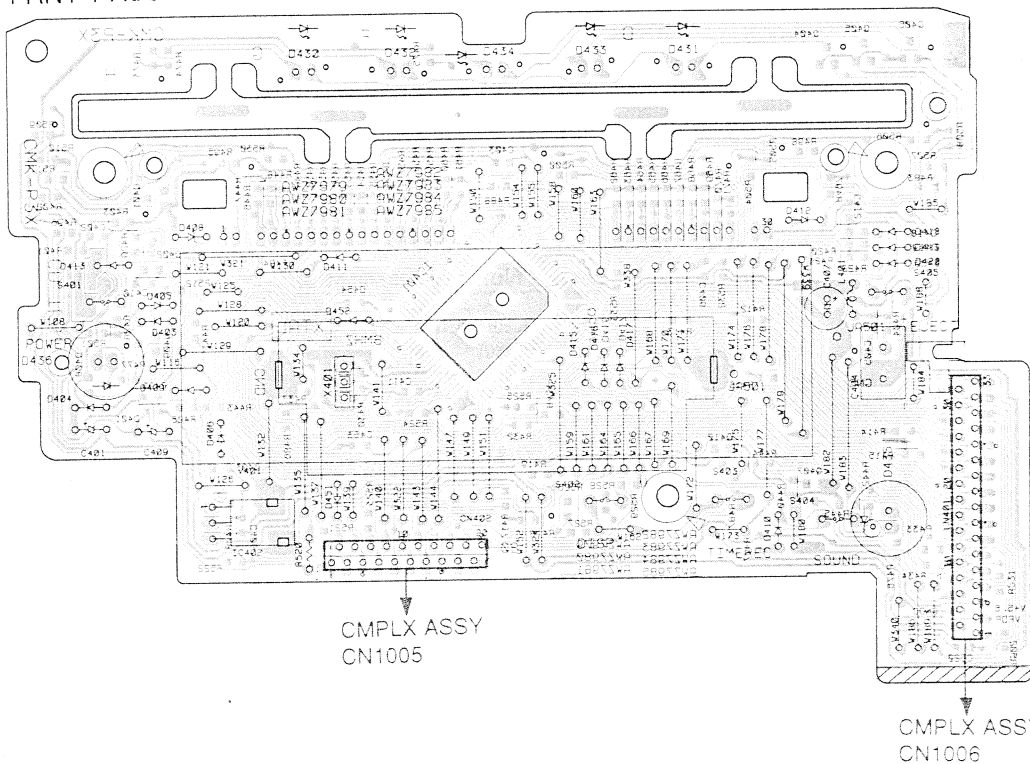


- This diagram is viewed from the mounted parts side.

- 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.

PCB-4

FRNT 1 ASSY



4040 2040 3040

1040

5040

10401

0408

00000000

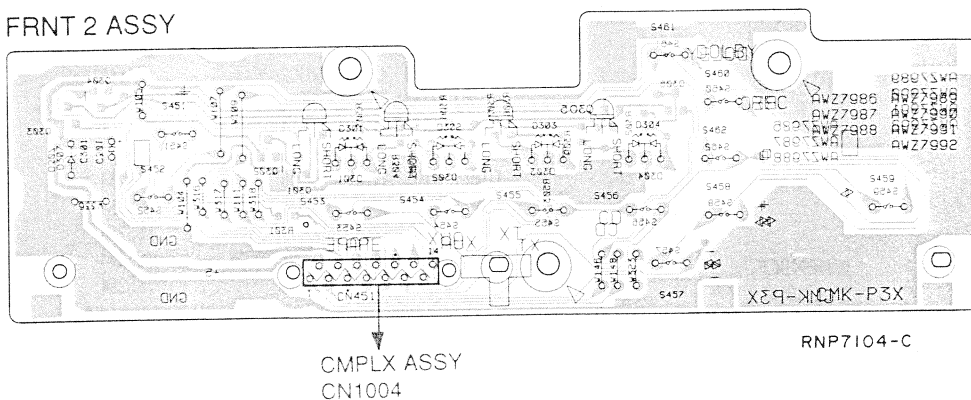
0140

0403

7040

IC402

FRNT 2 ASSY



4050

7000

0303

0000

100

2

1

RNP7104-C

5. PCB PARTS LIST

NOTES:

- Parts marked by "NSP" 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.
- 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 $\rightarrow$ $56 \times 10^1 \rightarrow 561$ RD1/8PM $\boxed{5}\boxed{6}\boxed{1}$ J
 47 k Ω $\rightarrow$ $47 \times 10^3 \rightarrow 473$ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J
 0.5 Ω $\rightarrow$ 0R5RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
 1 Ω $\rightarrow$ 010RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

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

5.62 k Ω $\rightarrow$ $562 \times 10^1 \rightarrow 5621$ RN1/4PC $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
LIST OF ASSEMBLIES							
NSP	MAIN ASSY	AWM7176			IC1011, IC1013, IC5301, IC5401, IC5651	XRA4558F-P	
	└ CMLX ASSY	AWZ7967			IC8401	XRA4558F-P	
	└ SECND ASSY	AWZ7974			IC1012	XRU4052BCF	
NSP	SUB ASSY	AWM7183		Δ	Q1008, Q1012	2SA1037K	
	└ FRNT 1 ASSY	AWZ7981			Q1003	2SB1197K	
	└ FRNT 2 ASSY	AWZ7988			Q5505	2SB1197K	
	└ EVOL ASSY	AWZ7995			Q5751, Q5752	2SB1237X	
	└ H. PHONE ASSY	AWZ8002		Δ	Q1013	2SB1238X	
	└ PRIMRY ASSY	AWZ8009			Q5501	2SC2240	
NSP	CD SLOT-IN MECHANISM	AXA7014			Q1010, Q1011	2SC2412K	
NSP	└ SL MECHANISM BOARD ASSY	AWX7007			Q1001, Q1002, Q1006, Q1007, Q1009	2SC2712	
NSP	└ SENSOR BOARD ASSY	AWZ7328			Q5101-Q5104, Q5301, Q5302	2SC2712	
NSP	└ LED BOARD ASSY	AWZ7329			Q5502, Q5503	2SD1781K	
NSP	└ SWITCH BOARD ASSY	AWZ7330			Q1122, Q1123	2SD2114K	
NSP	└ MOTOR BOARD ASSY	AWZ7331			Q5504	2SD2144S	
					Q8301	2SK246	
					Q5401, Q5402	2SK373	
NSP	SERVO MECHANISM ASSY	AXA7017			Q5202	DTA114TK	
	└ MECHANISM BOARD ASSY	PWX1192			Q1025, Q5755	DTA124EK	
	FM/AM TUNER MODULE	AXQ1012			Q1121, Q5407, Q5507, Q8302	DTA143EK	
					Q5303, Q5304, Q5403-Q5406	DTC114TK	
					Q1004, Q5506, Q5753, Q5754	DTC143EK	
CMLX ASSY					D1014, D1021, D1022, D1026	1SS254	
SEMICONDUCTORS					D1028-D1030, D5101, D5102, D5201	1SS254	
	IC1009, IC1010	BU4094BCF			D5401-D5407, D5501-D5503	1SS254	
	IC5201	CXA1101M			D5651, D5652, D5751-D5756, D5758	1SS254	
	IC8151	CXA1372Q			D8301	1SS254	
	IC8301	CXD2508AQ			D1025	MTZJ30B	
Δ	IC1002, IC1014	ICP-N10			D1019, D1020	MTZJ6.2B	
Δ	IC1015, IC1016, IC1999	ICP-N15			D1027	MTZJ7.5B	
Δ	IC1006	ICP-N50		Δ	D1010	MTZJ9.1B	
	IC8201	LA6517			D1001-D1009, D1012, D1013	S5688G	
	IC8202	LA6520		Δ	D1015-D1018, D1023, D1031	S5688G	
Δ	IC1004	NJM7806FA		COILS AND FILTERS			
Δ	IC1003	NJM7812FA			L1001, L1002 (1 μ H)	ATH-133	
Δ	IC1005	NJM7906FA			L8322	LAU100J	
Δ	IC1001	STK401-040P			L8321	LAU1R2J	

Mark	No.	Description	Part No.
	L5501		LFA121K
	L5301, L5302		LTA392J
	L5303, L5304 10MH(79.6kHz)		RTF1004
	F5001, F5002		RTF1209
TRANSFORMERS			
	T5501		ATX-043
SWITCHES AND RELAYS			
	RY1001		ASR7007
CAPACITORS			
	C5503 (2000pF/630V)		ACE1020
	C5501, C5502		CCCSL101K500
	C5317, C5318		CCCSL221K500
	C1073, C1074		CCSQCH030C50
	C5401, C5402, C8322		CCSQCH100D50
	C8350-C8352		CCSQCH101J50
	C8407-C8410		CCSQCH121J50
	C8323		CCSQCH220J50
	C1070-C1072, C5513		CCSQCH221J50
	C5654, C8403-C8406		CCSQCH271J50
	C5403, C5404, C8401, C8402		CCSSSL391J50
	C1014, C1015		CCSSSL471J50
	C8155		CCSSSL561J50
	C5315, C5316, C5512		CCSSSL681J50
	C8411, C8412		CEANP2R2M50
	C5101, C5102, C5209, C5210, C5653		CEAS010M50
	C1011, C1033, C1034, C1060, C1061		CEAS100M50
	C1080-C1082, C5103, C5203, C5205		CEAS100M50
	C5407, C5408, C5506, C5507, C5514		CEAS100M50
	C5516		CEAS100M50
	C5201, C5202		CEAS101M10
	C1097, C5751		CEAS101M16
	C1075-C1078		CEAS101M35
	C1090		CEAS220M25
△	C1031		CEAS220M50
△	C1032		CEAS220M63
△	C1013		CEAS221M10
△	C1023, C1024		CEAS222M35
	C1012, C1017, C1020, C1021		CEAS2R2M50
	C1035, C1036, C5313, C5314		CEAS2R2M50
	C5303, C5304, C5409, C5410		CEAS330M16
	C5323, C5411, C5412, C5515		CEAS470M16
	C5207, C5208		CEAS4R7M50
	C5655		CEASR22M50
	C5104		CEASR33M50
	C5204, C5206		CEASR68M50
	C5301, C5302		CEJA010M50
	C8365		CEJA101M10
	C8175, C8176		CEJA101M16
	C5322, C8301		CEJA470M10
	C8160, C8162		CEJA4R7M50
	C5321, C8309		CEJAR47M50
	C5001, C5002		CFTXA103J50
	C5505		CKCYB222K500

Mark	No.	Description	Part No.
	C8171, C8321		CKSQYB102K50
	C5510, C5511		CKSQYB103K50
	C8306		CKSQYB152K50
	C5509		CKSQYB153K50
	C5311, C5312		CKSQYB222K50
	C5305, C5306		CKSQYB273K50
	C8170, C8423, C8424		CKSQYB332K50
	C5307, C5308, C5651		CKSQYB473K50
	C5405, C5406		CKSQYB682K50
	C5309, C5310		CKSQYB683K25
	C1064, C8157, C8164, C8167, C8169		CKSQYF103Z50
	C8207, C8210, C8215, C8218, C8219		CKSQYF103Z50
	C8361, C8422, C8425, C8426		CKSQYF103Z50
	C1016, C1018, C1019, C1079		CKSQYF104Z50
	C8158, C8159, C8161, C8163, C8220		CKSQYF104Z50
	C8302, C8303, C8420, C8421		CKSQYF104Z50
	C1007-C1010		CKSQYF224Z25
	C8156, C8168		CKSQYF333Z50
	C8172		CKSQYF472Z50
	C1062, C1063, C8307		CKSQYF473Z50
	C5508		CQMA123K250
	C5504		CQMA562K400
RESISTORS			
	R5753 (4.7kΩ)		ACX7016
	R5754 (47kΩ)		ACX7017
	R5520		RD1/2LMF121J
△	R310, R311		RD1/2VM620J
△	R5505		RD1/2VM121J
△	R1021		RFA1/4PS390J
△	R1003, R1004		RD1/4LMF100J
△	R1027, R1030		RD1/4LMF101J
△	R1016		RFA1/4PL820J
	R1098		RD1/4VM243J
△	R1035		RD1/4VM272J
	R1005, R1006		RD1/4VM4R7J
	R1922		RD1/6PM102J
	R1028, R1029, R1031, R5105, R5209		RD1/6PM103J
	R5201, R5202		RD1/6PM220J
	R1025, R1026		RD1/6PM561J
	R1023, R1024		RD1/6PM563J
	R5504		RD1/6PM6R8J
	R5331, R5332		RD1/6PM820J
	R1011, R1012		RS2LMFR22J
	R1370		RS3LMF221J
	R1111		RS3LMF680J
	VR5401, VR5402 (4.7kΩ)		PCP1028
	VR5751 (10kΩ)		PCP1029
	VR5301, VR5302, VR8151, VR8152 (22kΩ)		RCP1103
	VR5501, VR5502 (220kΩ)		RCP1142
	Other Resistors		RS1/10S□□□J

OTHERS

X8301 (33.8688MHz)	ASS7000
CN8131 FPC CONNECTOR 12P	12FMZ-ABT

XR-Q150

Mark	No.	Description	Part No.
	CN8202	MT CONNECTOR 4P CABLE HOLDER 9P	173981-4 51063-0905
	CN1005	20P FFC CONNECTOR	52045-2045
	CN1006	33P FFC CONNECTOR	52045-3345
	CN8205	6P JUMPER CONNECTOR	52147-0610
	CN1001	SPEAKER TERMINAL 4P	AKE7001
	CN5401	KR CONNECTOR	B5B-PH-K-S
	CN1007	14P PLUG	KM2001B14
	CN1004	14P JUMPER CONNECTOR	KPE14
	JA1001	AUDIO 2P PIN JACK	RKB1041
	JA1003	REMOTE CONTROL JACK	RKN1004
	CN1008	CONNECTOR 15P PCB BINDER	TUC-P15P-B1 VEF1008
	CN8201	6P SIDE POST	VKN-004

SECND ASSY

SEMICONDUCTORS

△	IC1201-IC1204	ICP-N25
△	D1201-D1212	SS688G

CAPACITORS

△	C1202	CEAS222M16
△	C1201	CEAS332M16
△	C1203	CEAS471M50

OTHERS

CABLE HOLDER 9P	51063-0905
-----------------	------------

FRNT 1 ASSY

SEMICONDUCTORS

IC401	PDG157B
Q401	2SC2412K
Q408	2SC2712
Q403	DTA143EK
Q402, Q409, Q410	DTC124EK
Q404-Q407	DTC143EK
D403	1SS252
D404-D406, D409-D413	1SS254
D415-D418, D451, D452	1SS254
D401, D453, D454	1SS355
D408	MTZJ5.1B
D435	SLR-342DCT31
D434	SLR-342MCT31
D430, D431, D436	SLR-342VCT31
D432, D433	SLR-342YCT31

COILS AND FILTERS

L401	LAU2R2J
------	---------

SWITCHES AND RELAYS

S401-S405	ASG1051
-----------	---------

CAPACITORS

C404	ACH1246
C407	CEAL330M25
C401	CEJA010M50

Mark	No.	Description	Part No.
	C409		CEJA220M35
	C403, C520		CKSQYB102K50
	C405, C406, C408, C410, C411		CKSQYF103Z50
	C521		CKSQYF104Z50
	C402		CKSQYF224Z25
	C412		CKSQYF473Z50

RESISTORS

R520	RD1/6PM102J
Other Resistors	RS1/10S□□□J

OTHERS

CN401	33P FFC CONNECTOR	S2044-3345
CN402	20P FFC CONNECTOR	S2045-2045
V401	FL INDICATOR TUBE	AAV7019
X401	CERAMIC RESONATOR (8MHz) REMOTE RECEIVER UNIT	EFOEC8004A4 GPIU28X
	FL HOLDER	VNF1087

FRNT 2 UNIT

SEMICONDUCTORS

Q301	2SC2712
Q302-Q306	DTA143EK
D307	MTZJ4.3B
D301-D304	VRPG5615S

SWITCHES AND RELAYS

S451-S462	ASG1051
-----------	---------

CAPACITORS

C301	CEAL100M50
------	------------

RESISTORS

All Resistors	RS1/10S□□□J
---------------	-------------

OTHERS

CABLE HOLDER 14P	51063-1405
------------------	------------

EVOL ASSY

SEMICONDUCTORS

IC1008	BH3854FS
IC1007	XRA4558F-P
Q1015	2SK246
Q1014	DTA124EK
D1151	1SS254

CAPACITORS

C1151-C1153	CCSQCH101J50
C1043, C1044, C1046, C1057-C1059	CEAS100M50
C1047, C1049	CEAS220M25
C1411, C1412	CEAS2R2M50
C1050	CFTXA223J50
C1048	CFTXA224J50
C1053-C1056	CFTXA683J50
C1051, C1052	CKSQYB102K50
C1083	CKSQYB331K50

Mark	No.	Description	Part No.
	C1154, C1155		CKSQYB471K50
	C1410		CKSQYF103Z50
	C1089		CKSQYF104Z25
	C1037, C1038		CKSQYF473Z50
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN1009 CONNECTOR 15P		TUC-P15X-B1
H. PHONE ASSY			
SEMICONDUCTORS			
	D1301		MTZJ2.4A
COILS AND FILTERS			
	L1301		LAU100J
RESISTORS			
△	R1301, R1302		RS1LMF331J
OTHERS			
	CN1302		AKN1028
PRIMRY ASSY			
CAPACITORS			
△	C1101 (0.01/400V)		ACG1054
OTHERS			
	H1101-H1104 FUSE HOLDER		RKR1003
SENSOR BOARD ASSY			
SEMICONDUCTORS			
	Q601, Q602		PS3062
RESISTORS			
	All Resistors		RD1/6PM□□□J
LED BOARD ASSY			
SEMICONDUCTORS			
	D601, D602		AN306
RESISTORS			
	All Resistors		RD1/6PM□□□J
SWITCH BOARD ASSY			
SWITCHES AND RELAYS			
	S601		DSG1017
MOTOR BOARD ASSY			
This unit has no service parts.			

Mark	No.	Description	Part No.
MECHANISM BOARD ASSY			
SWITCHES AND RELAYS			
	S610		DSG1016
OTHERS			
	CN610 MT CONNECTOR 4P		173979-4
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
	L6207		ATE1013
	F6203, F6204		ATF-119
	F6101		ATF-155
	F6202 (450kHz)		ATF1155
	L6103 (2.2μH)		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
TRANSFORMERS			
	T6101		ATE-063
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

XR-Q150

Mark	No.	Description	Part No.
	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
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 (10k Ω /0.1W)	ACP1056
VR6202	VRTB6VS223
Other Resistors	RS1/10S□□□J

OTHERS

X6203	CRYSTAL RESONATOR (7.200MHz)	ASS1042
X6201	CRYSTAL RESONATOR (456KHz)	ASS1066
X6202	CERAMIC RESONATOR (450KHz)	ATF1027
BN6201	4P ANTENNA TERMINAL	AKA1016
CN6201	14P SOCKET	KP2001A14L
	AM RF TUNING BLOCK	AXX1041

6. ADJUSTMENTS

6.1 TUNER SECTION

■ FM Tuner Section

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

● For DD and DL types (AXQ1012)

Step No.	Adjustment Title	FM SG (1kHz, ± 75 kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dB μ V)			
1	Center Adjustment	98 Non modulation	80 or more	—	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or $\ominus$ leads of C6224 and C6261) becomes $0V \pm 50mV$.
2	Front End Sensitivity Adjustment	98	10 to 30	98MHz	L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 12 and GND (or $\ominus$ 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 $\rightarrow$ FM.

● For MYIW/DI type (AXQ1014)

Step No.	Adjustment Title	FM SG (1kHz, ± 75 kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dB μ V)			
1	Center Adjustment	98 Non modulation	80	98 MHz	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or $\ominus$ leads of C6224 and C6261) becomes $0V \pm 50mV$.
2	Front End Sensitivity Adjustment	106	10 to 30	106MHz	L6104 L6105 L6102 T6101	After adjusting L6104 and L6105 so that the DC voltage between IC6201-Pin 12 and GND (or $\oplus$ leads of C6238 and GND) becomes at maximum level, adjust T6101 and L6102.
3	Stereo Distortion	98	80	98 MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	$15 (\pm 2 \text{ dB})$	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 and between L6103 and L6104. 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 $\rightarrow$ FM.
- Adjustment sequence : L6104 $\rightarrow$ L6105 $\rightarrow$ L6102 $\rightarrow$ T6101

XR-Q150

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 (dB μ V/m)			
1	TUNED IND. Lighting Level	999*1	47 ($\pm$ 2dB)	999kHz*1	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

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

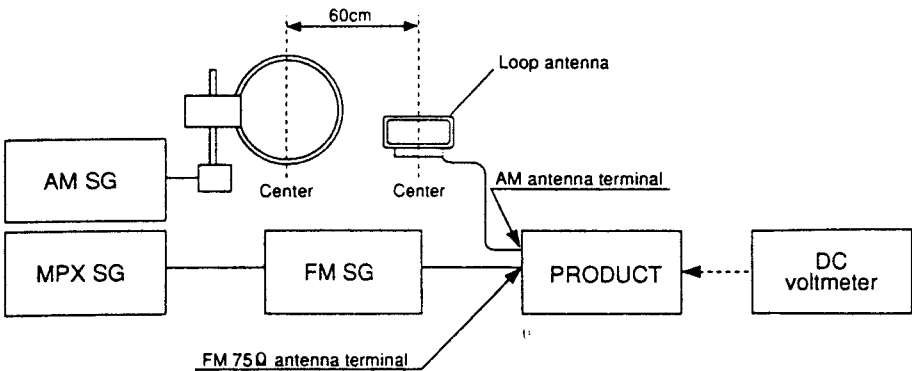
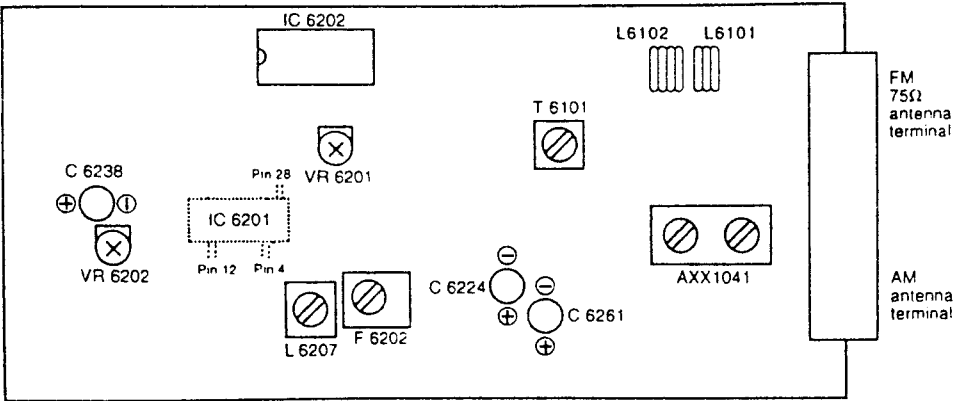


Fig. 1 – 1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE (AXQ1012)



FM/AM TUNER MODULE (AXQ1014)

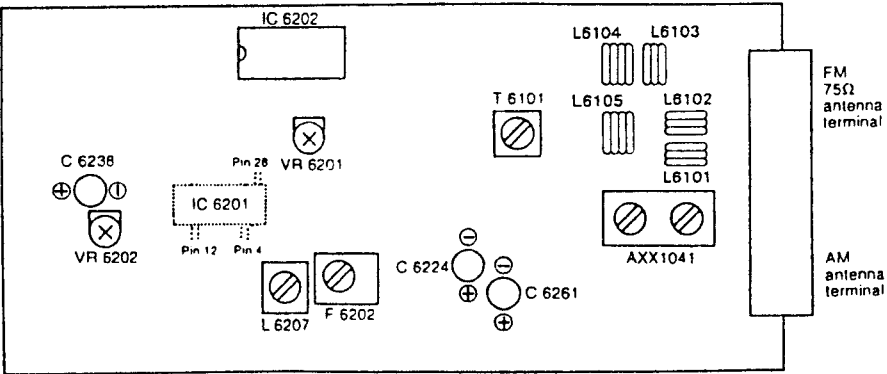


Fig. 1 – 2 Adjustment Points

6.2 CASSETTE DECK SECTION

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

1. Mechanical Adjustment

• Set the test tape: STD-301 (3kHz 30min).

1-1. Tape Speed Adjustment

No.	Mode	TestTape	Adjusting Points	Measurement Points	Adjustment Procedure	Remarks
1	PLAY	STD-301 (Playback:3kHz)	CMPLX ASSY VR5751	TAPE TEST POINT (Rch) (CMPLX ASSY)	Press the PLAY SW and adjust so that the reading becomes $3000\text{Hz} \pm 20\text{Hz}$. Confirm that wow & flutter level is below 0.2% (confirm that the reading is within $3000\text{Hz} \pm 60\text{Hz}$ in the reverse direction).	

2. Electrical Adjustment

Adjustment condition

1. Confirm that the mechanical adjustment has been completed.
2. Clean the heads and demagnetize them.
3. Warm up the unit for several minutes before adjustment.
4. Set the signal level to 0 dBV = 1 Vrms.
5. Connect the 10 k Ω load resistance to the line output terminal.
6. Turn the DOLBY NR switch off unless otherwise specified.

Test tape

For playback system adjustment: STD-331E (Fig. 2-1)

NORMAL blank tape : STD-632 or STD-631

CrO2 blank tape : STD-621

METAL blank tape : STD-610

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

List of Adjustment

• Playback sections

1. Head azimuth adjustment
2. Playback level adjustment

• Recording sections

1. Bias oscillation frequency adjustment
2. Recording bias adjustment
3. Recording level adjustment
4. ALC operation check

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

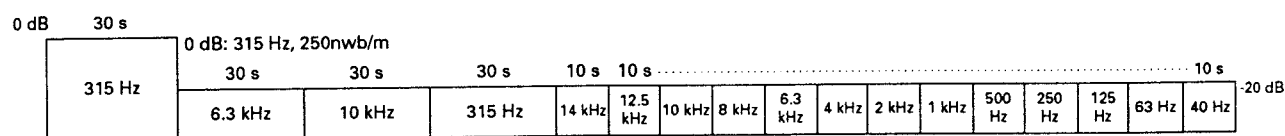


Fig. 2-1 Test tape STD-331E

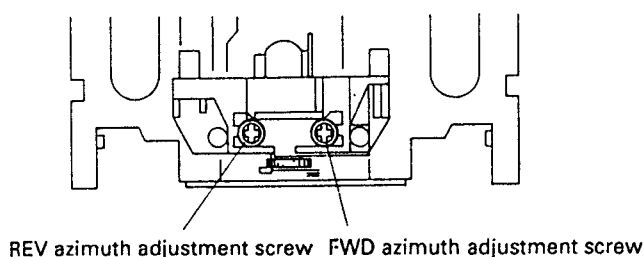


Fig. 2-2 Head azimuth adjustment

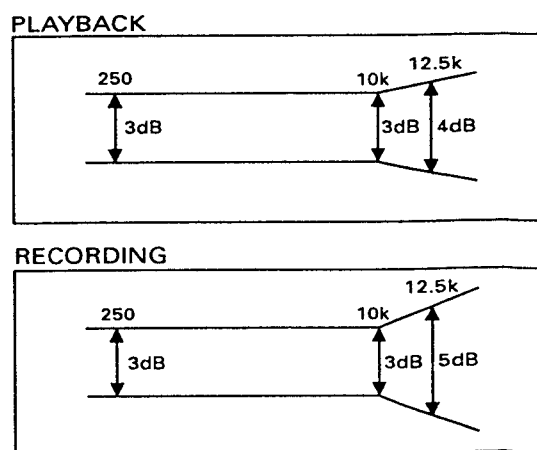


Fig. 2-3 Frequency characteristics

XR-Q150

● 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.

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	Test tape STD-331E Playback 10kHz, -20dB	Head azimuth adjustment screw (Fig. 2-2)	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	Max. playback signal level	After adjustment, apply lock paint to the head azimuth adjustment screw.

2. Playback Level Adjustment

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

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	Test tape STD-331E Playback 315kHz, 0dB	VR5401 (Lch) VR5402 (Rch)	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	-6 dBV	

● Recording Adjustment

1. Bias Oscillation Frequency Adjustment

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	REC	Load the STD-631 test tape and set the recording mode.	T5501	Between pins ⑤ and ④ of CN5401	Oscillation frequency to be 105.0kHz±2kHz	If the DOLBY NR button is pressed for four seconds while the power is in STANDBY mode, the frequency will decrease 2 - 3kHz when the power is on.

2. Recording Bias Adjustment

- This adjustment affects the recording level, caution the increase of distortion factor by an under bias.

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	REC	Input a 315Hz signal to the AUX terminal and set to "AUX".	Input signal level	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	-26 dBV	
2	REC→PLAY	Load the test tape STD-631, and record/playback the 315Hz and 10kHz signals. (See the note below)	VR5501 (Lch) VR5502 (Rch)	TAPE TEST POINT (L, Rch) (CMPLX 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 level to the same value as the 315Hz input signal level of step 1.

3. Recording Level Adjustment

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	REC	Input a 315Hz signal to the AUX terminal and set the input selector to "AUX".	Input signal level	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	-10 dBV	
2	REC→PLAY	Load the test tape STD-631 and record/playback the 315Hz signal.	VR5301 (Lch) VR5302 (Rch)	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -8.2dBV.	

4. ALC Operation Check

No.	Mode	Input Signal & Test Tape	Adjusting Points	Measurement Points	Adjustment Value	Remarks
1	REC/ PAUSE	Input a 315Hz signal to the AUX terminal and set the input selector to "AUX".	Input signal level	TAPE TEST POINT (L, Rch) (CMPLX ASSY)	-10 dBV	
2			Set to a level +10dB in comparison with the input level at step 1.		Confirm that it becomes -5±2.5dBV.	

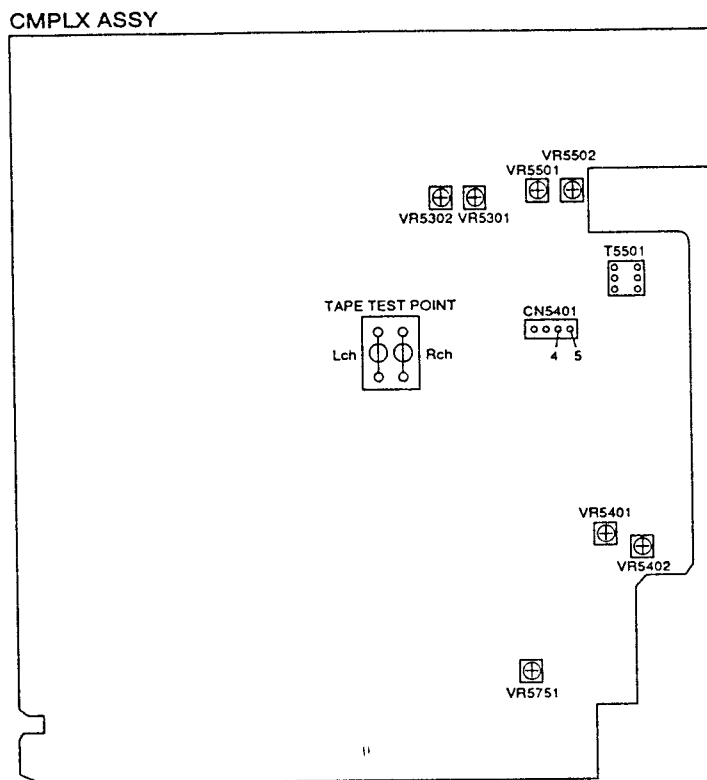


Fig. 2-4 Adjusting Points

■ When adjusting the head azimuth, remove the azimuth cover before adjustment.

1. Open the cassette door.
2. Insert your fingers into the cassette doors, grasp both ends of the azimuth cover with your fingers, and push it a little to the front. When the azimuth cover is pushed too much at this time, the cassette doors possibly may not close.
3. Confirm that the azimuth cover have been moved a little to the front, close the cassette doors and remove the azimuth cover.

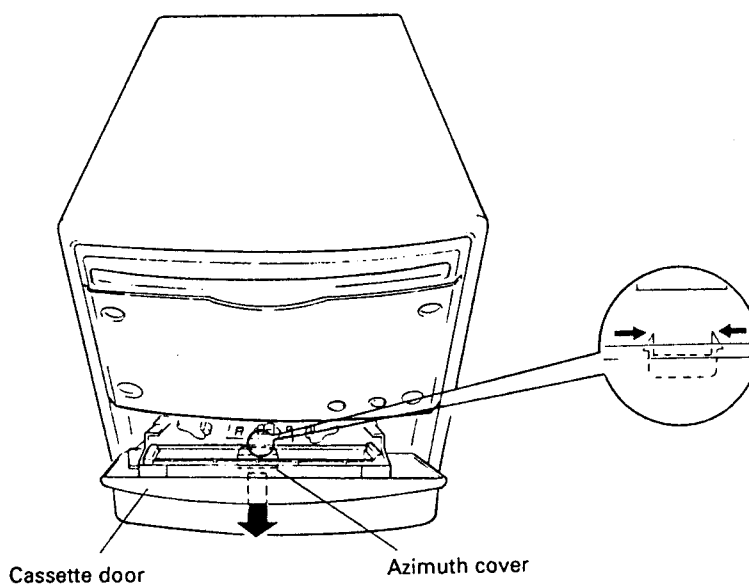


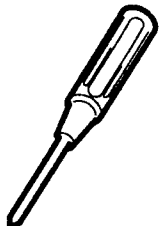
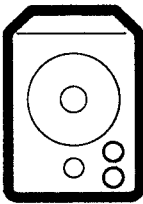
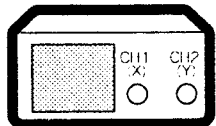
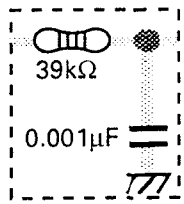
Fig. 2-5. Removing the azimuth cover

XR-Q150

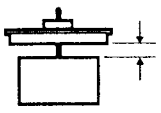
6.3 CD SECTION (CD部の調整)

1. PREPARATIONS (準備)

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

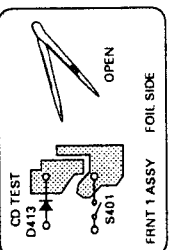
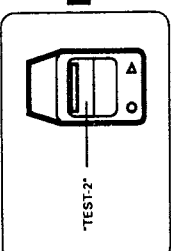
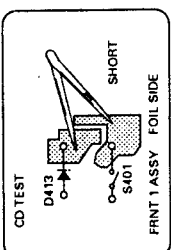
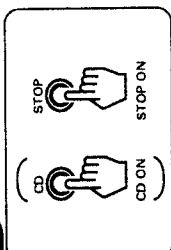
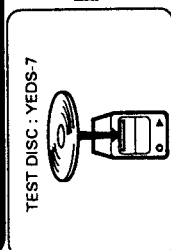
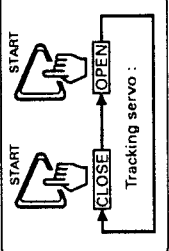
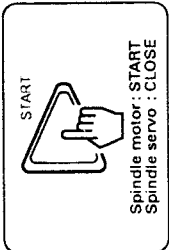
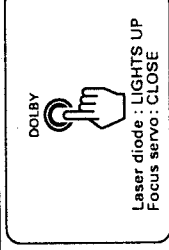
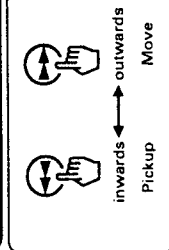
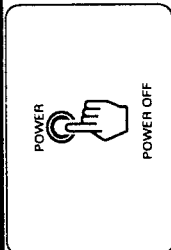
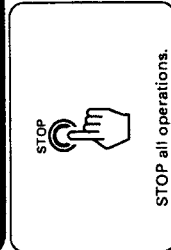
 8-cm DISC (With at least about 20 minutes recording) (20分程度信号の 入ったディスク)	 CD TEST DISC (YEDS-7)	 ⊖ Precise screwdriver	 ⊖ screwdriver (small)	 ⊕ screwdriver (medium)
 Ball point hexagon wrench (size: 1.5mm) GGK1002 ボールポイント付 六角ドラ イバー (対辺1.5mm)	 ⊕ screwdriver (large)	 Low-frequency oscillator	 Dual-trace oscilloscope (10 : 1 probe)	 Low pass filter (39kΩ + 0.001μF)

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

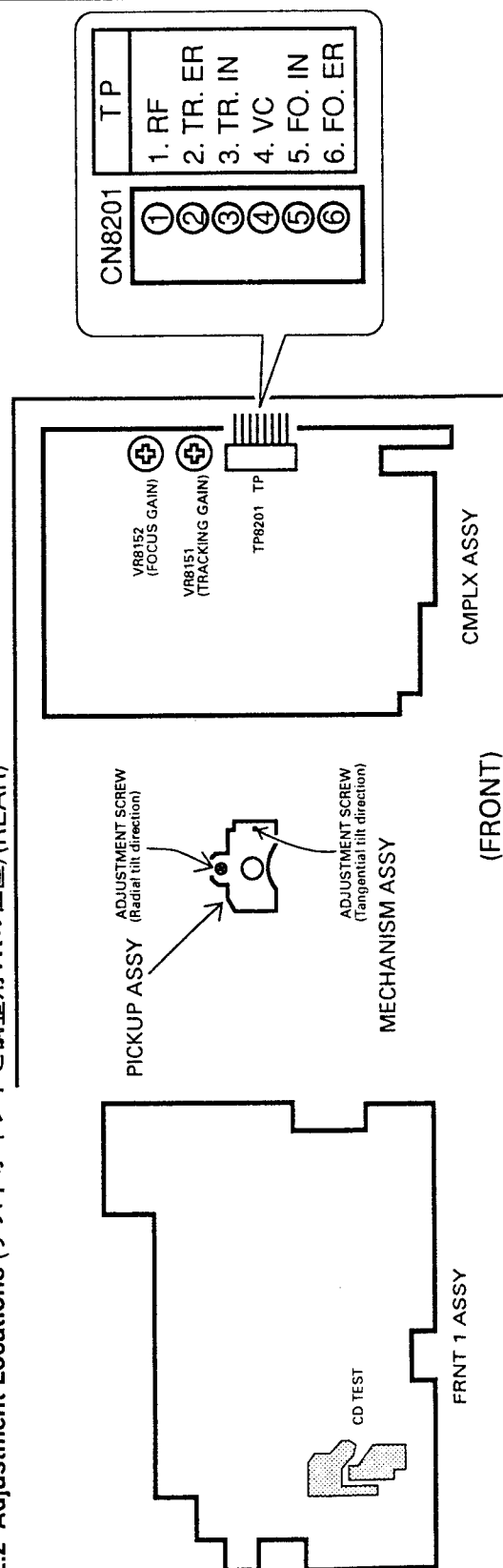
When (このような時)	Adjustment points
Exchange PICKUP (ピックアップを交換した時)	1.2.3.4.5.6. → Page 52~54
Exchange MAIN ASSY (メインASSYを交換した時)	1.2.3.4.5.6. → Page 52~54
Exchange SERVO MECH ASSY (サーボメカASSYを交換した時)	1.2.3.4.5.6. → Page 52~54
Exchange SPINDLE MOTOR (スピンドルモーターを交換した時)	 ADJ→ Page 13

2. ADJUSTMENT (調整)

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

TEST MODE : ON**TEST MODE : PLAY****TEST MODE : STOP → CANCEL**

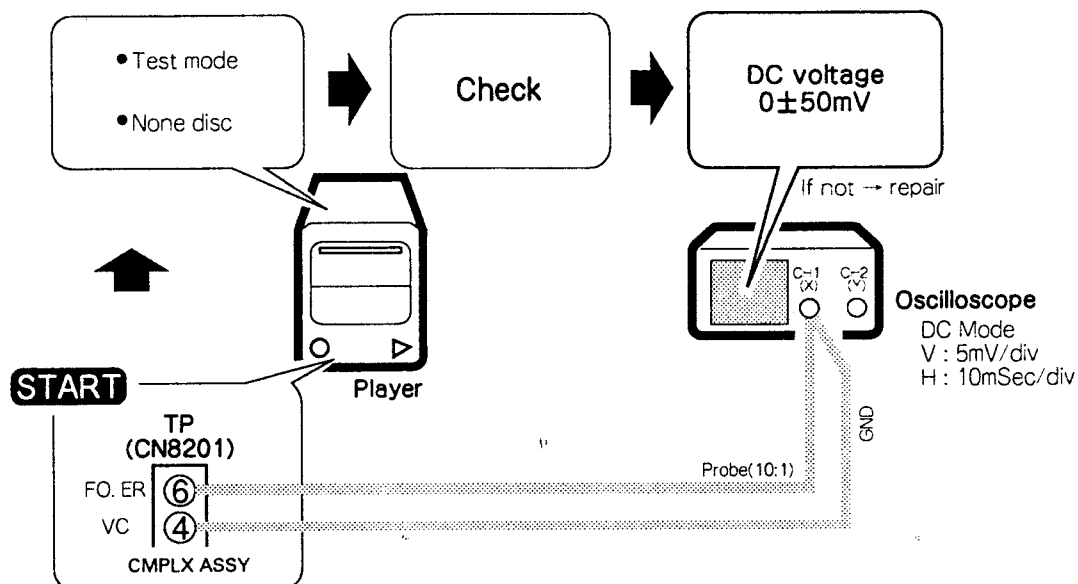
2.2 Adjustment Locations (テストポイントと調整用VRの位置) (REAR)



2.3 Check and Adjustment (確認, 調整)

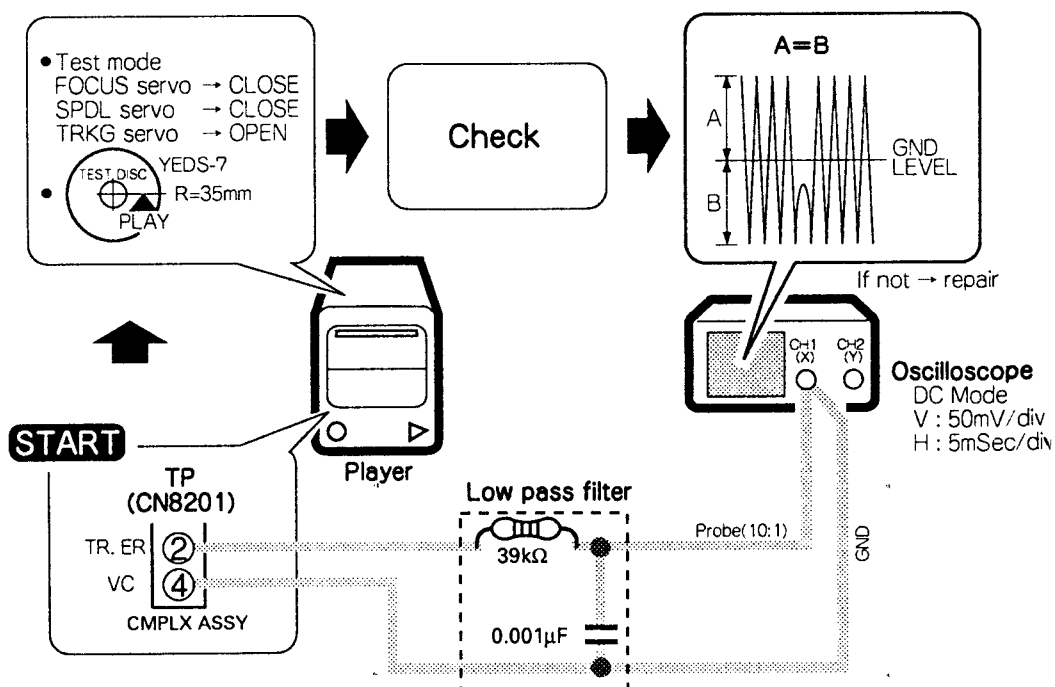
1. Focus Offset Check

(フォーカスオフセット確認)



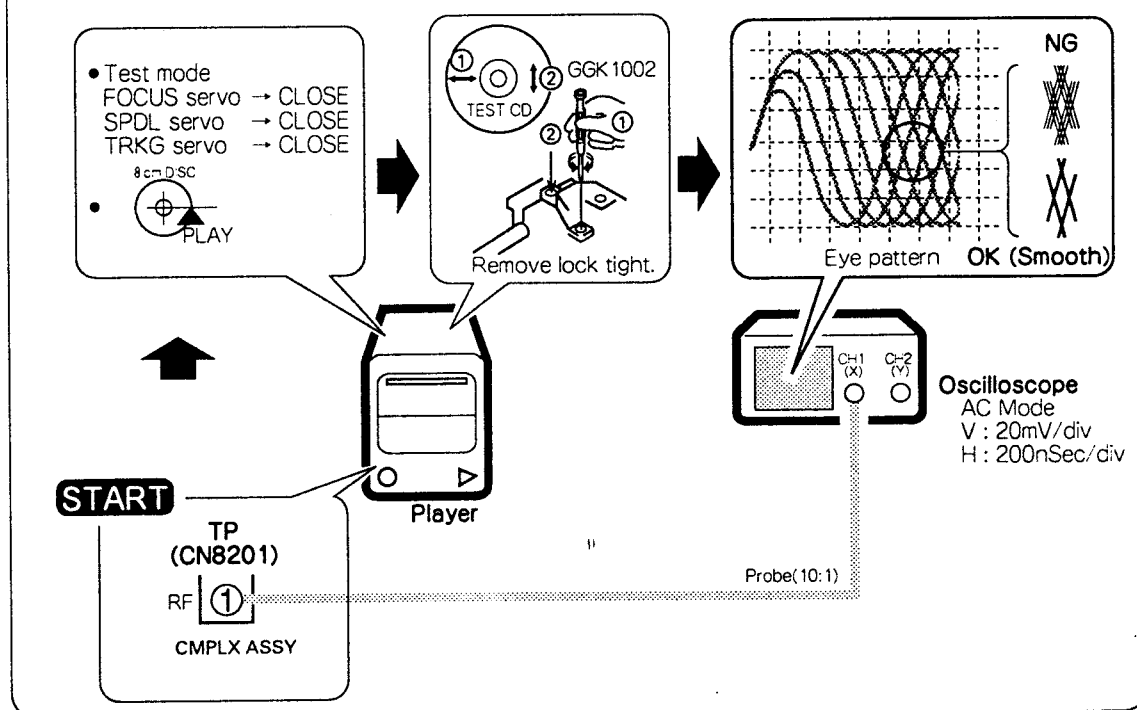
2. Tracking Error Balance Check

(トラッキングエラーバランス確認)



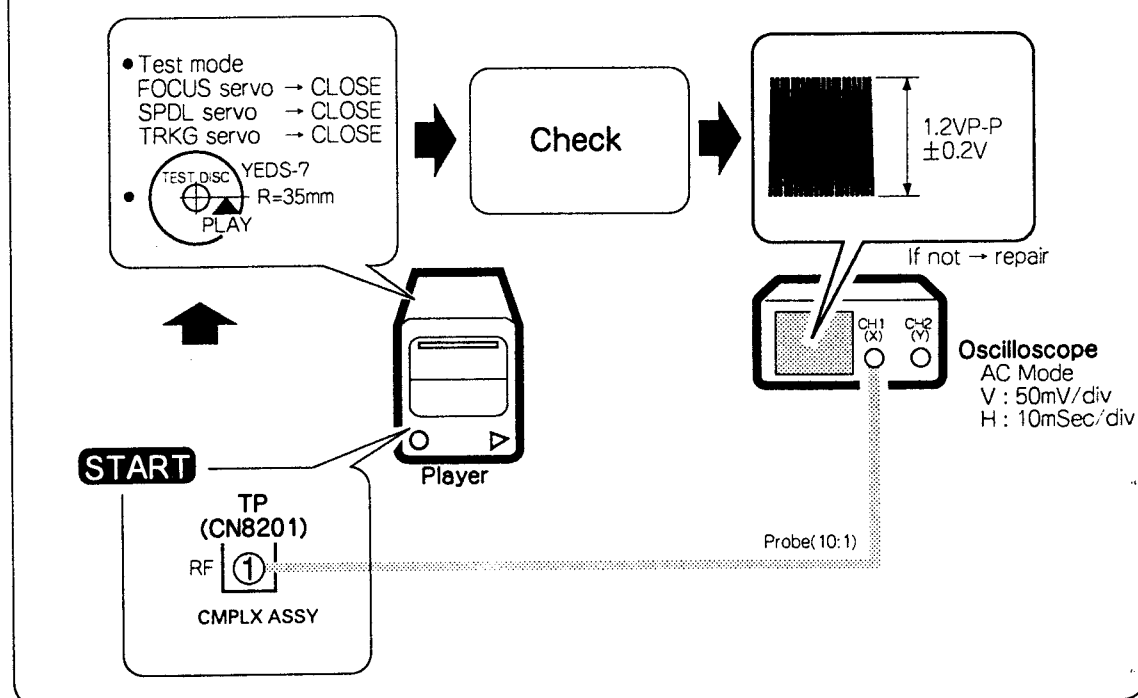
3. Pickup ①Radial / ②Tangential Direction Tilt Adjustment

(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)



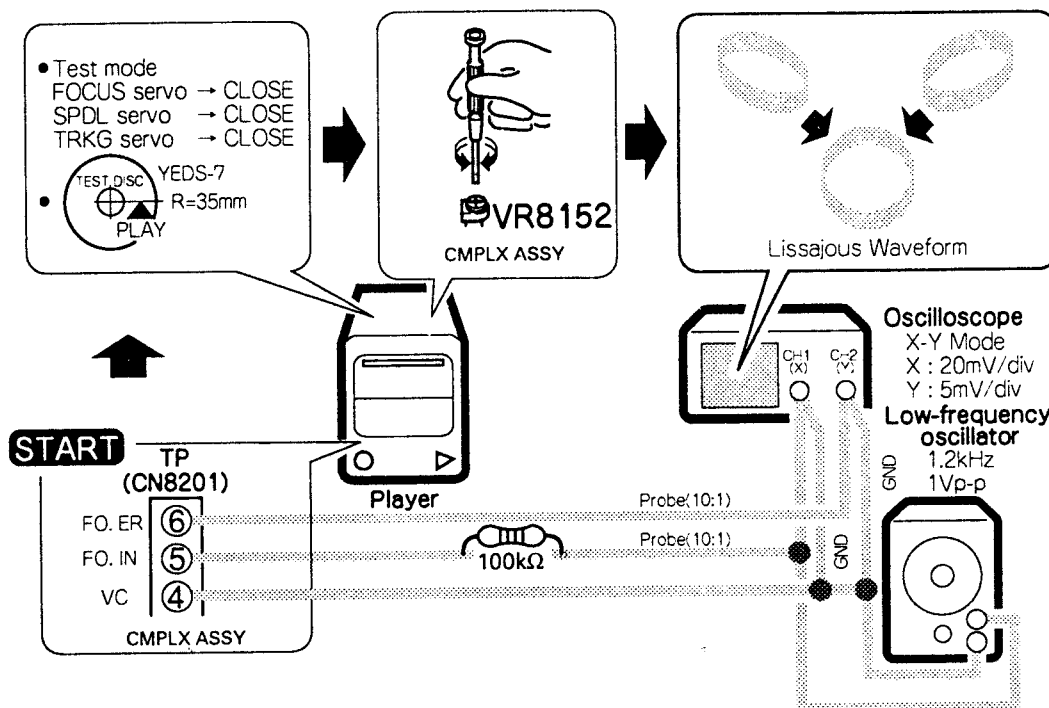
4. RF Level Check

(RFレベル確認)



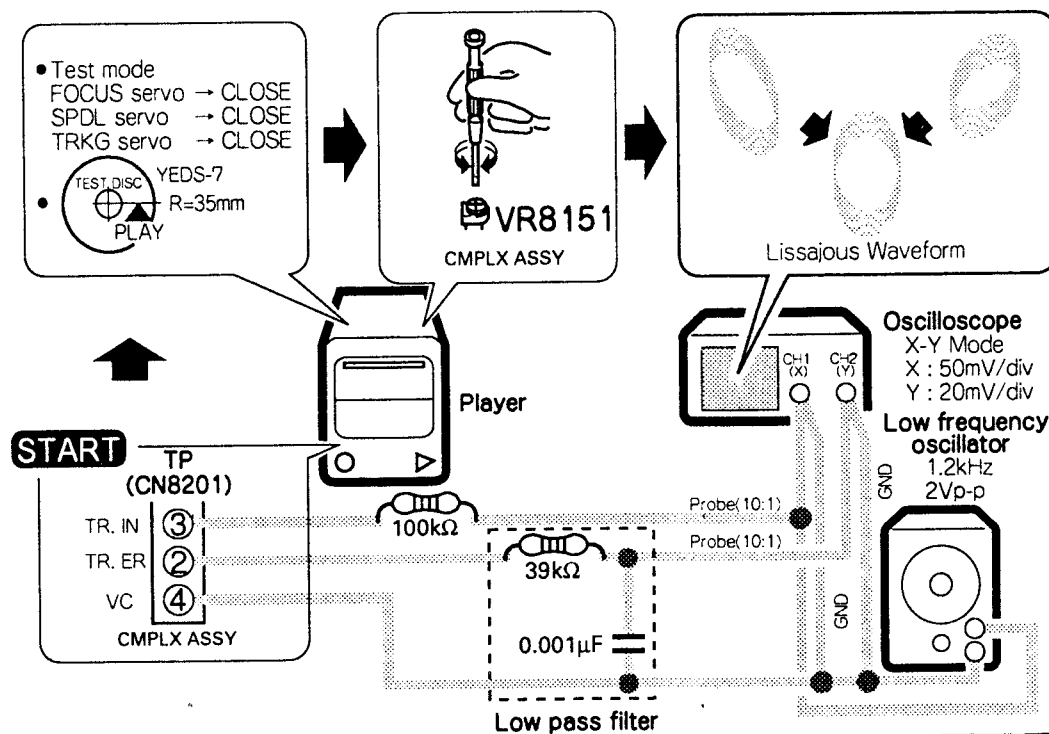
5. Focus Servo Loop Gain Adjustment

(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)

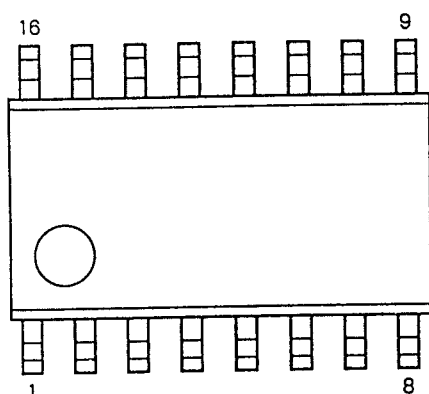


7. IC INFORMATION

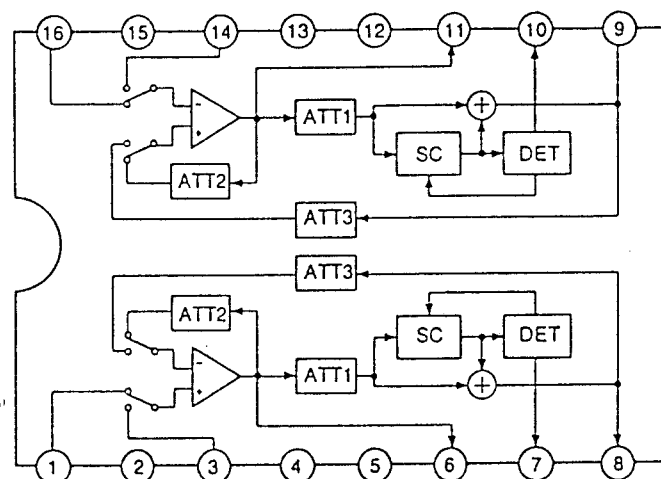
• The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

■ CXA1101M (CMPLX ASSY, IC5201) DOLBY B TYPE NOISE REDUCTION SYSTEM

● Pin Arrangement (Top view)



● Block Diagram



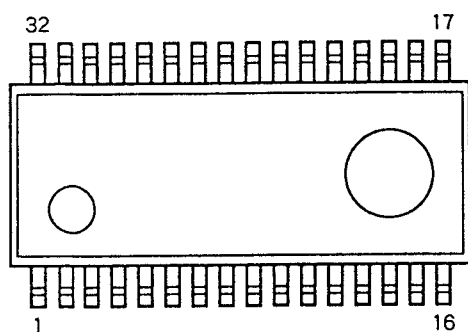
● Pin Function

Pin No.	Name	Function
1, 16	REC IN	Recording (encode) input
2	Vcc	Power supply
3, 14	PB IN	Playback (decode) input
4	Vcc/2	Power supply unit → Vcc/2, Plus and minus power supply → GND
5	ON/OFF	Switching NR ON/OFF. "H"→ NR OFF, "L"→ NR ON
6, 11	LINE OUT	Line (decode) output
7, 10	TC	Time constant of level detection tool
8, 9	REC OUT	Recording (encode) output
12	REC/PB	Switching REC/PB (encode/decode). "H"→ PB (decode), "L" → REC (encode)
13	IREF	Standard current input of active filter
15	GND	Power supply unit → GND, Plus and minus power supply → minus power supply

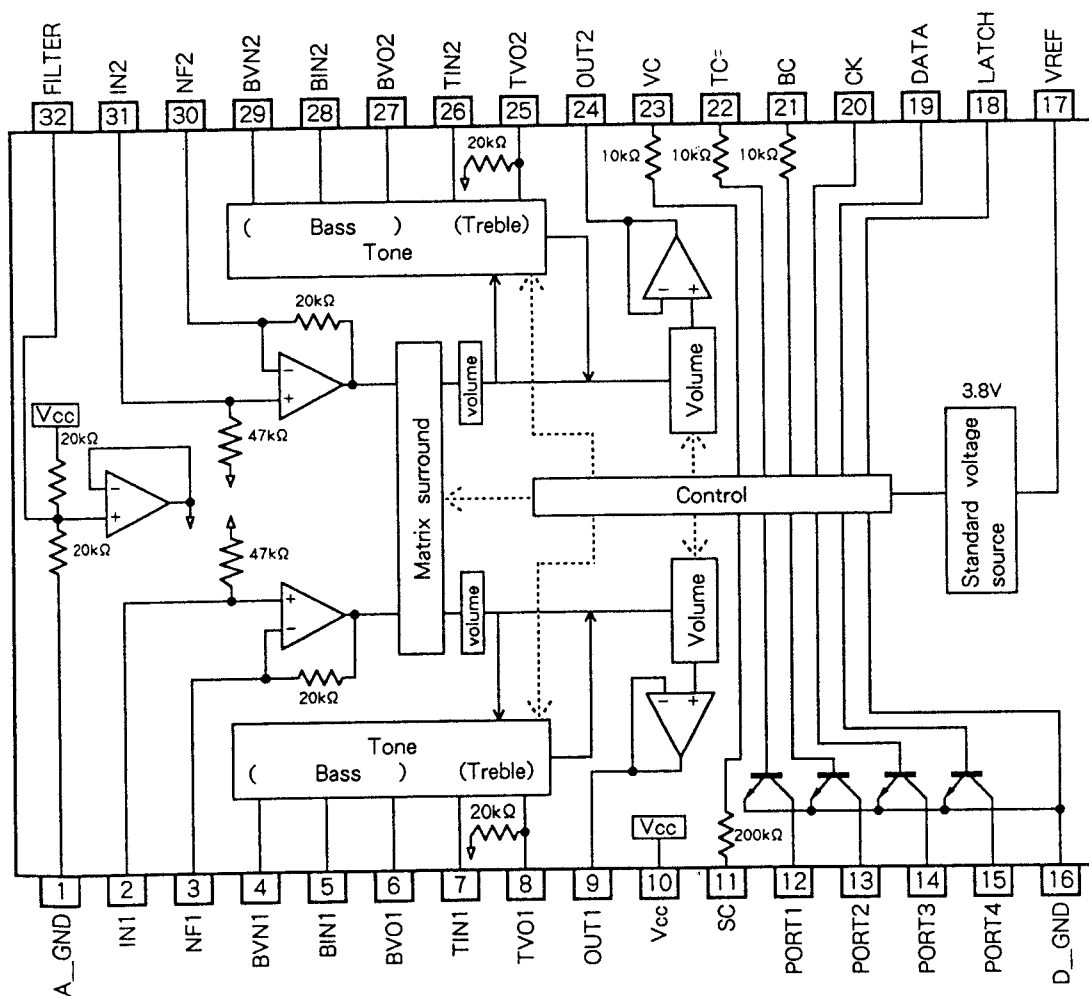
XR-Q150

■ BH3854FS (EVOL ASSY, IC1008) AUDIO SOUND CONTROL IC

● Pin Arrangement (Top view)



● Block Diagram

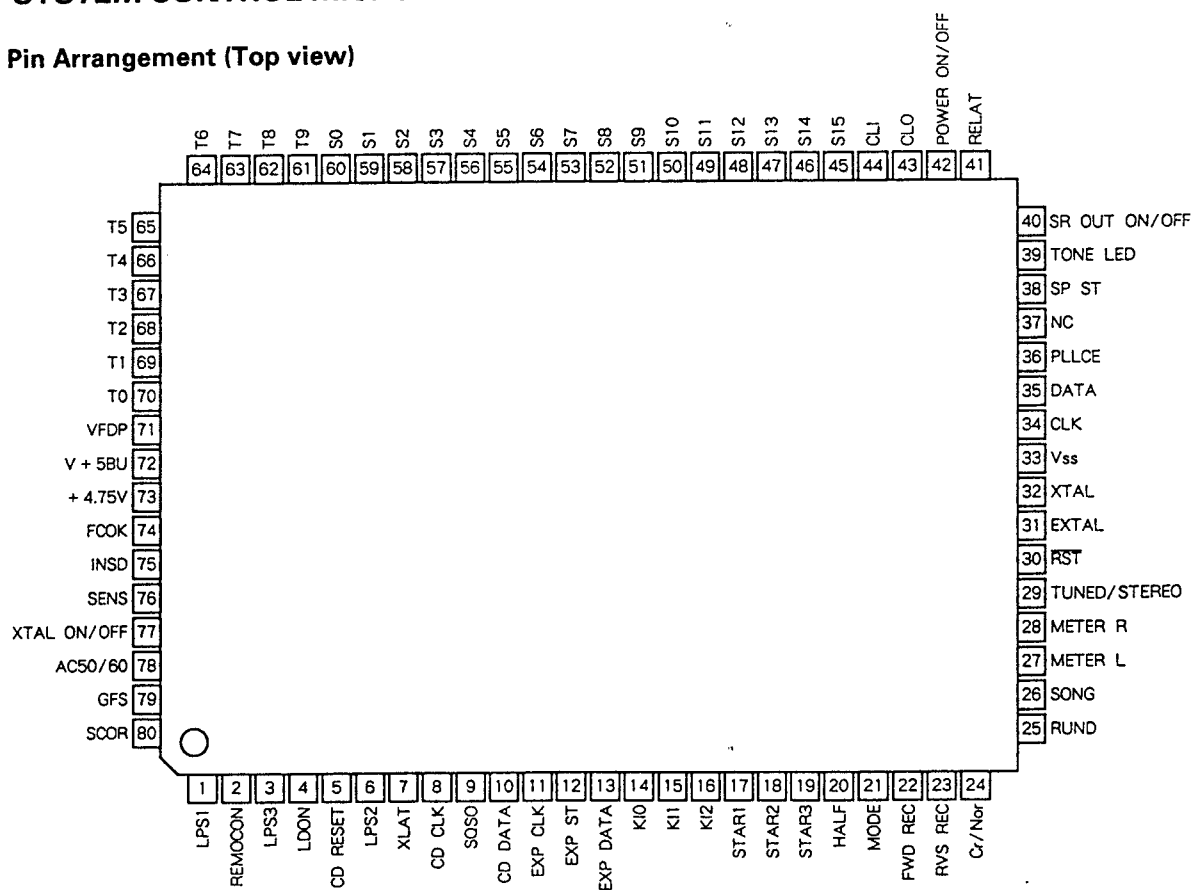


● Pin Function

Pin No.	Name	Function	Pin No.	Name	Function
1	A_GND	Analog system ground	17	VREF	3.8V standard voltage output
2	IN1	1ch volume input	18	LATCH	Receives latch data
3	NF1	For adjusting gain of input step AMP	19	DATA	Receives data
4	BVN1	For connecting 1ch low level filter	20	CK	Receives clock
5	BIN1		21	BC	Time constant installation pin to prevent from switching shock
6	BVO1		22	TC	
7	TIN1	For connecting 1ch high level filter	23	VC	
8	TVO1		24	OUT2	2ch volume output
9	OUT1	1ch volume output	25	TVO2	For connecting 2ch high level filter
10	Vcc	Power supply	26	TIN2	
11	SC	Time constant installation pin to prevent from switching shock	27	BVO2	For connecting 2ch low level filter
12	PORT1	Port output	28	BIN2	
13	PORT2		29	BVN2	
14	PORT3		30	NF2	For adjusting gain of input step AMP
15	PORT4		31	IN2	2ch volume input
16	D_GND	Digital system ground	32	FILTER	Filter

■ PDG157B (FRNT 1 ASSY, IC401) SYSTEM CONTROL MICROCOMPUTER

● Pin Arrangement (Top view)



XR-Q150

● Pin Function

Pin No.	Name	I/O	Function	ACT
1	LPS 1	I	Photo switch 1 to detect discs	L
2	REMOCON	I	Remote control input	L
3	LPS3	I	Clumping complete mechanical switch L: ON H: OFF	L
4	LDON	O : Cmos	Laser diode output L: ON H: OFF	L
5	CD RESET	O : Cmos	Decoder IC reset	L
6	LPS 2	I	Photo switch 2 to detect discs	L
7	XLAT	O : Cmos	Decoder IC latch	L
8	CD CLK	O : Cmos	Decoder IC clock	—
9	SQSO	I	Subcode Q data serial input	—
10	CD DATA	O : Cmos	Decoder IC serial input	—
11	EXP CLK	O : Cmos	Expanded output IC clock	—
12	EXP ST	O : Cmos	Expanded output IC strobe	H
13	EXP DATA	O : Cmos	Expanded output IC data	—
14	KI0	I	Key scan key input 0	H
15	KI1	I	Key scan key input 1	H
16	KI2	I	Key scan key input 2	H
17	STAR 1	O : Cmos	Star light LED 1 H: ON	H
18	STAR 2	O : Cmos	Star light LED 2 H: ON	H
19	STAR 3	O : Cmos	Star light LED 3 H: ON	H
20	HALF	I	Cassette half detection switch L: be H: none	—
21	MODE	I	Mechanical mode switch L: ON (PLAY) H: OFF (STOP)	—
22	FWD REC	I	FWD side REC switch L: REC enable H: REC prohibited	—
23	RVS REC	I	RVS side REC switch L: REC enable H: REC prohibited	—
24	Cr/Nor	I	Switch to discriminate tape types L: NORMAL H: CrO2	—
25	RUND	I	Reel pulse input	—
26	SONG	I	MS song detection input L: interval of songs H: during songs	—
27	METER L	A/D	Level meter input Lch	—
28	METER R	A/D	Level meter input Rch	—
29	TUNED/STEREO	A/D	TUNED/STEREO analog input	—
30	RST	I	Microprocessor reset input	L
31	EXTAL	I	Microprocessor system clock input	—
32	XTAL	—		—
33	Vss	—	GND	—
34	CLK	Pch OD	PLL/BH3854 CLK	—
35	DATA	Pch OD	PLL/BH3854 DATA	—
36	PLLCE	Pch OD	PLL CE	—
37	—	Pch OD	—	—
38	SP ST	Pch OD	BH3854 strobe	—
39	TONE LED	Pch OD	TONE LED L: OFF H: ON	H
40	SR OUT ON/OFF	Pch OD	SR output ON/OFF L: OFF H: ON	—

Pin No.	Name	I/O	Function	ACT									
41	RELAY	Pch OD	Relay ON/OFF L: OFF ON: ON	L									
42	POWER ON/OFF	Pch OD	Power ON/OFF L: Power off H: Power on	H									
43	CLO	Pch OD	<table><tr><td>L</td><td rowspan="2">Stop</td><td>H</td><td rowspan="2">EJECT</td><td>L</td><td rowspan="2">Load in</td></tr><tr><td>L</td><td>L</td><td>H</td></tr></table>	L	Stop	H	EJECT	L	Load in	L	L	H	H
L	Stop	H		EJECT		L		Load in					
L		L	H										
44	CLI	Pch OD		H									
45	S15	Pch OD	FL segment output	—									
46	S14	Pch OD		—									
47	S13	Pch OD		—									
48	S12	Pch OD		—									
49	S11	Pch OD		—									
50	S10	Pch OD		—									
51	S9	Pch OD		—									
52	S8	Pch OD		—									
53	S7	Pch OD		—									
54	S6	Pch OD		—									
55	S5	Pch OD		—									
56	S4	Pch OD		—									
57	S3	Pch OD		—									
58	S2	Pch OD		—									
59	S1	Pch OD		—									
60	S0	Pch OD		—									
61	T9	Pch OD	FL grid output	—									
62	T8	Pch OD		—									
63	T7	Pch OD		—									
64	T6	Pch OD		—									
65	T5	Pch OD		—									
66	T4	Pch OD		—									
67	T3	Pch OD		—									
68	T2	Pch OD		—									
69	T1	Pch OD		—									
70	T0	Pch OD		—									
71	VFDP	—	FL -30V	—									
72	VDD	—	BKUP 5V	—									
73	—	—	Connect to VDD (72 pin)	—									
74	FCOK	I	Focus OK input L: NG H: OK	—									
75	INSD	I	Slider inside switch L: ON H: OFF	—									
76	SENS	I	Decoder operational condition various mode input	—									
77	XTAL ON/OFF	O : Cmos	XTAL ON/OFF L: OFF H : ON	—									
78	AC50/60	I	AC50/60 input	—									
79	GFS	I	Frame synchronous clock input L: NG H: OK	—									
80	SCOR	I	Sub code sync S0+S1 input	↓									

XR-Q150

■ BU4094BCF (CMPLX ASSY, IC1009) EXPANDED OUTPUT DECK CONTROL

● Pin Function

Pin No.	Name	I/O	Function
1	ST	I	Strobe input
2	DATA	I	Data input
3	CLK	I	Clock input
4	BEAT CUT	Cmos	Beat cut L: OFF H: ON
5	CRMO	Cmos	Switching chrome L: NORMAL H: CrO ₂
6	DOLBY-B	Cmos	Dolby B L: ON H: OFF
7	R-MUTE	Cmos	Recording mute L: OFF H: ON
8	Vss	—	GND
9	QS	Cmos	
10	Q' S	Cmos	
11	PB REC	Cmos	Switching PB/REC L: PB H: REC
12	BIAS	Cmos	Bias L: OFF H: ON
13	SOL	Cmos	Solenoid L: OFF H: ON
14	CPM	Cmos	Motor L: OFF H: ON
15	OE	I	
16	VDD	—	Power supply (+5V)

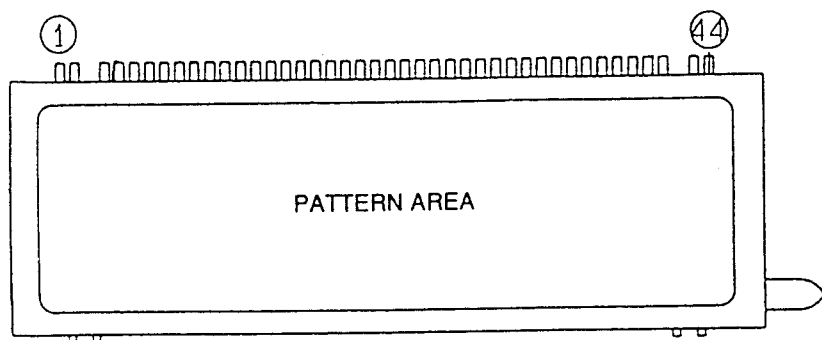
■ BU4094BCF (CMPLX ASSY, IC1010) EXPANDED OUTPUT AF CONTROL

● Pin Function

Pin No.	Name	I/O	Function																
1	ST	I	Strobe input																
2	DATA	I	Data input																
3	CLK	I	Clock input																
4	FUNC A	Cmos	<table><tr><td>L</td><td>Function</td><td>H</td><td>Function</td><td>L</td><td>Function</td><td>H</td><td>Function</td></tr><tr><td>L</td><td>TUNER</td><td>L</td><td>CD</td><td>H</td><td>TAPE</td><td>H</td><td>AUX</td></tr></table>	L	Function	H	Function	L	Function	H	Function	L	TUNER	L	CD	H	TAPE	H	AUX
L	Function	H	Function	L	Function	H	Function												
L	TUNER	L	CD	H	TAPE	H	AUX												
5	FUNC B	Cmos																	
6	12V SW	Cmos	12V system ON/OFF L: OFF H: ON																
7	MONO	Cmos	Mono ON/OFF L: OFF H: ON																
8	Vss	—	GND																
9	QS	Cmos																	
10	Q' S	Cmos																	
11	CD LED	Cmos	CD LED L: ON H: OFF																
12	TX LED	Cmos	TUNER LED L: ON H: OFF																
13	TC LED	Cmos	TAPE LED L: ON H: OFF																
14	AUX LED	Cmos	AUX LED L: ON H: OFF																
15	OE	I																	
16	VDD	—	Power supply (+5V)																

8. FL INFORMATION

■ AAV7019 (V401)



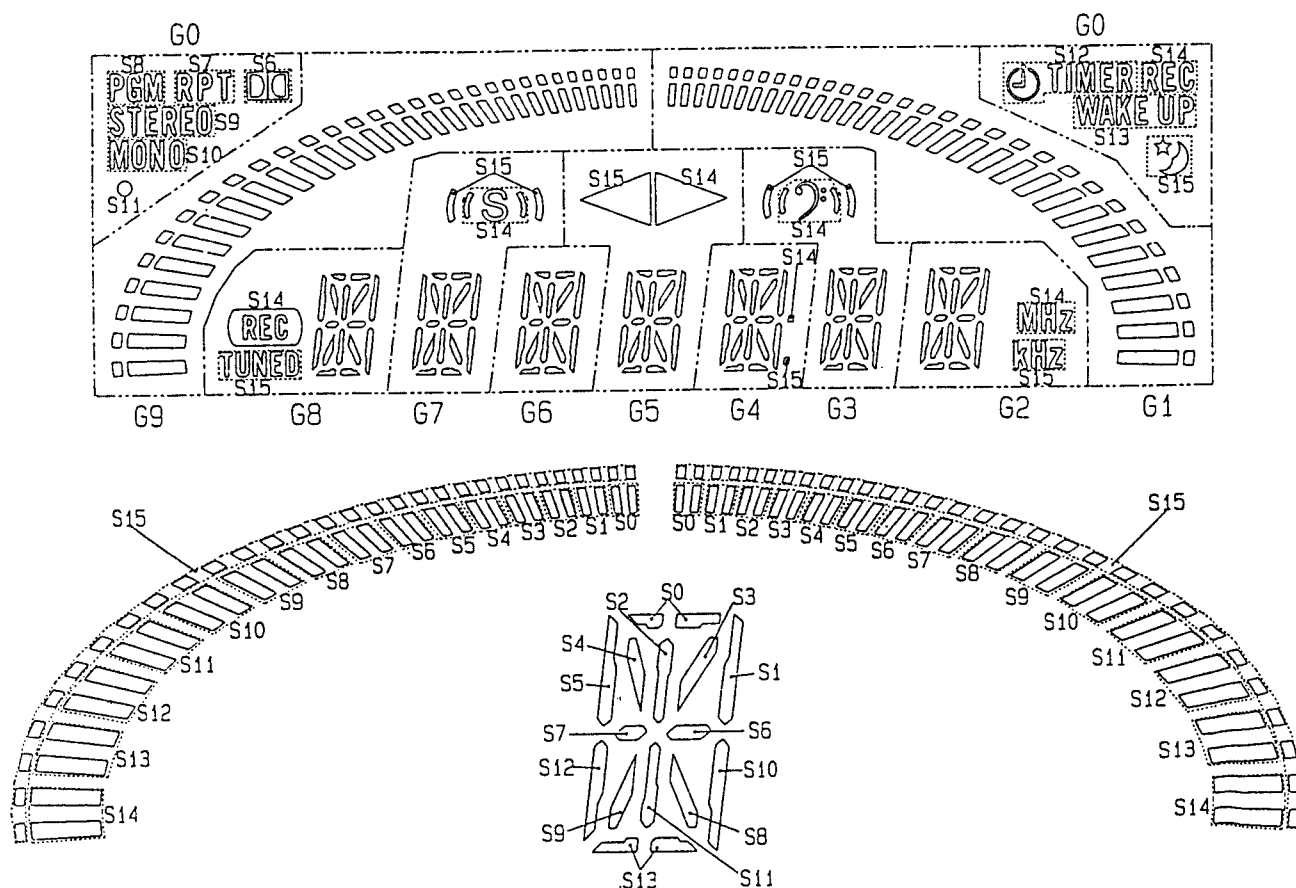
PIN ASSIGNMENT

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Assignment	F	F	NP	S15	S14	S13	S12	S11	S10	S9	S8	S7	S6	S5	S4	S3	S2	S1	S0	NL	NL	NL

Pin No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
Assignment	NL	NL	NL	NL	NL	NL	NL	NL	NL	G9	G8	G7	G6	G5	G4	G3	G2	G1	G0	NP	F	F

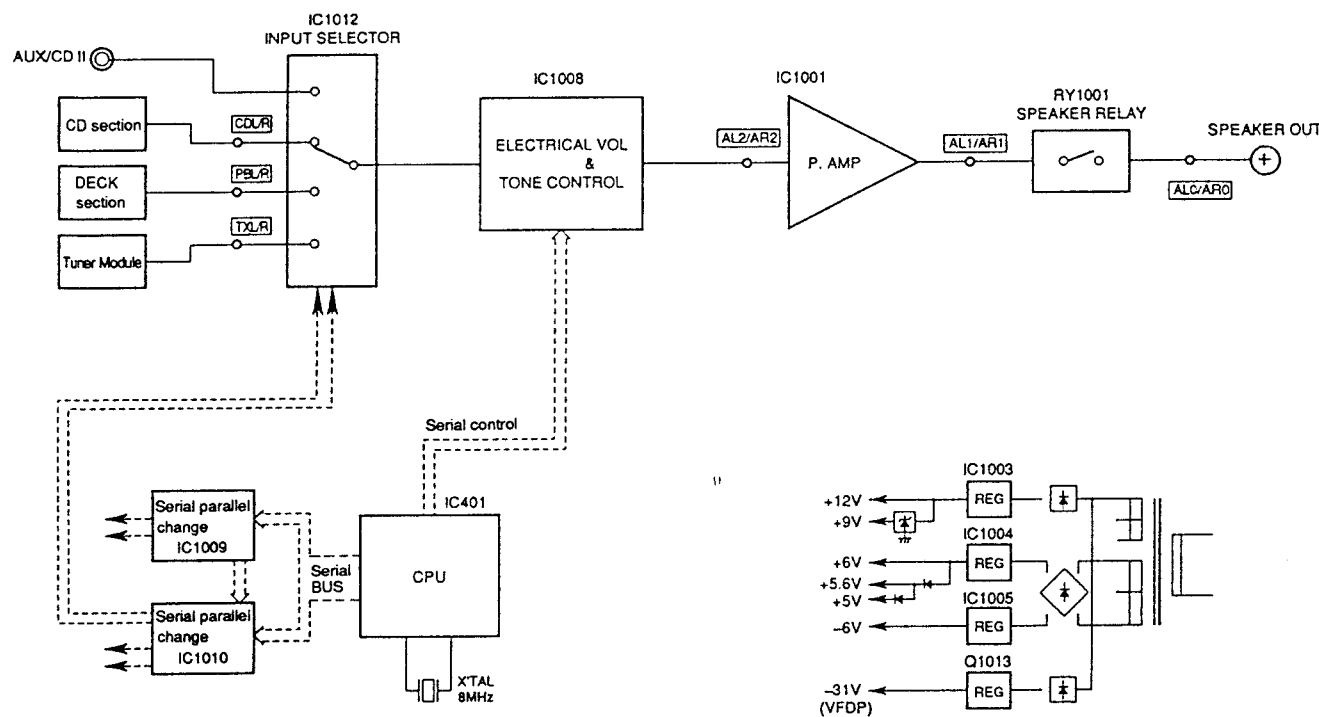
F:Filament G0~G9:Grid S0~S15:Anode NP:No Pin NL:No Lead

ANODE GRID ASSIGNMENT



9. BLOCK DIAGRAM

(Service point )



10. DISASSEMBLY

● CD SLOT-IN MECHANISM

1. Remove the bonnet.
2. Remove the binder (A).
3. Remove the two of screw (B) which are fastened on the CD slot-in mechanism, and a ground wire (one of screw (G)).
4. Pull back and remove the CD slot-in mechanism while lifting backside of it. (The insertion is on the front of CD slot-in mechanism.)

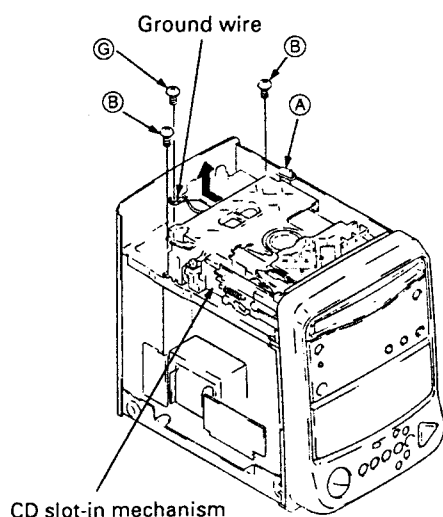


Fig. 1 Removing the slot-in mechanism

● POWER PACK IC

1. Remove the bonnet.
2. Remove the rear panel. (seven of screw (C))
3. Remove the EVOL ASSY and the FM/AM TUNER MODULE.
4. Remove the two of screw (D) on the side of front panel and the ground wire (one of screw (H)), and remove the CD slot-in mechanism together with the stay.

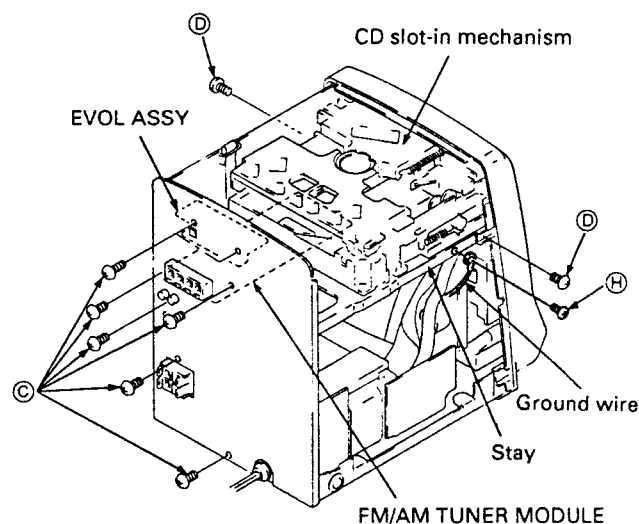


Fig. 2

5. Remove the power back fixture. (three of screw (E))
6. Remove a screw (F) which fixes a board and the heat sync.
7. Remove the solder and remove the power pack IC.

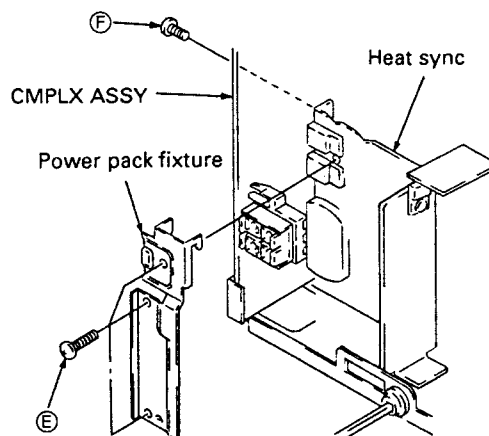
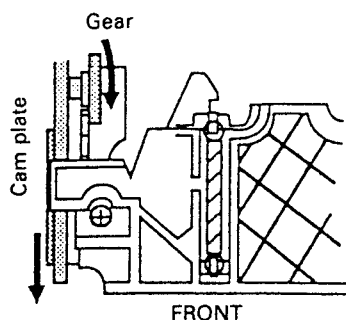


Fig. 3 Removing the power pack IC

XR-Q150

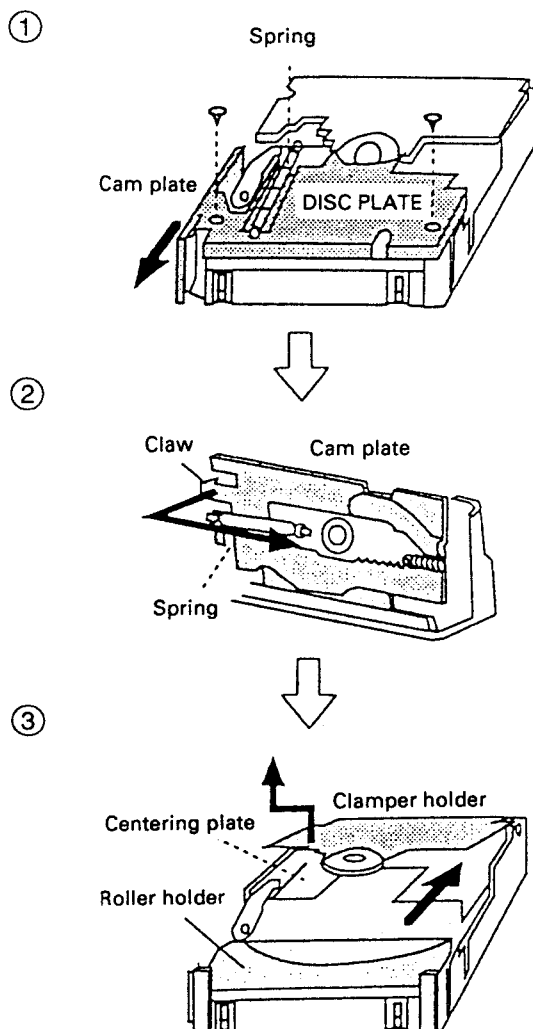
● CD DISC MANUAL REMOVAL METHOD



Turn the gear in arrow direction to the front, and move the cam plate to the front.

When the gear is turned until the cam plate comes to the very front position (EJECT position), the CD disc will be pulled out.

● SERVO MECHANISM EXCHANGE METHOD AND MECHANISM ADJUSTMENT METHOD



Remove the spring and two screws, and then remove the disc plate. Move the cam plate to the very front position (EJECT position). (Refer to the CD disc manual removal method.)

Remove the spring. Remove to the front while pulling the claw part of the cam plate to the outside.

Raise the clamber holder lightly, slide it in arrow direction, and remove it. When the centering plate is moved to the rear, the four screws fixing the servo mechanism become visible. When these screws are removed, the servo mechanism assembly can be removed.

TAN and RAD adjustment are executed from above with the clamber holder and the roller holder removed and only the magnet clamber placed onto the CD disc.

11. OPERATING DESCRIPTION

■ AUTO POWER ON

This unit automatically executed power ON when one of the following keys is pressed.

START : Power ON and start of play with the last memory function.

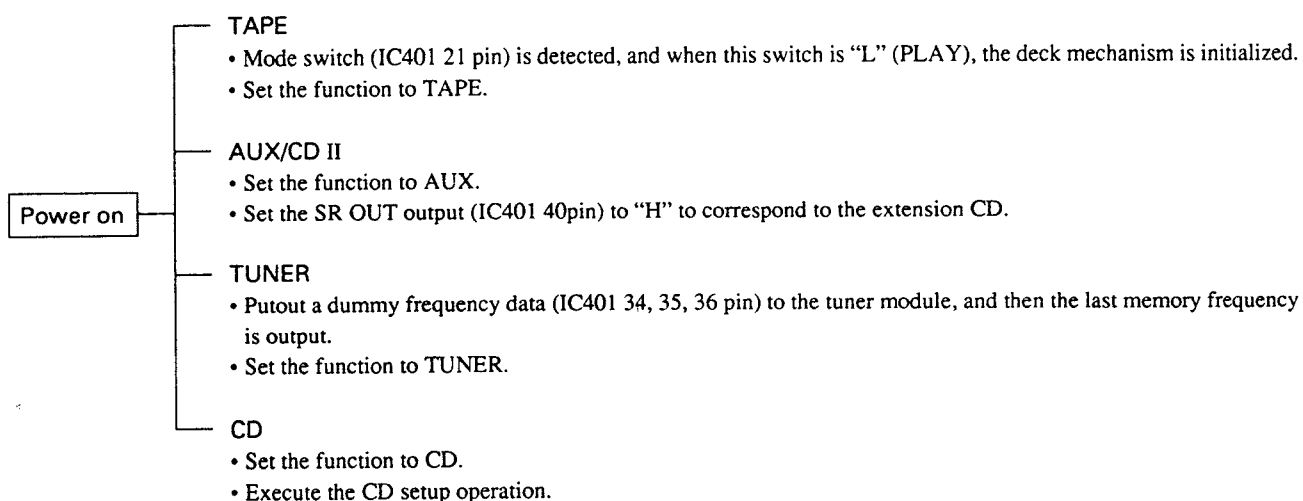
TAPE, AUX, FM/AM, CD : Power ON and start of play with the selected function.

CD EJECT : Power ON and ejection of the DISC.

When this is pressed during standby mode, it will be standby after the ejection.

POWER : Power ON with the last memory function.

■ INITIAL OPERATION AFTER POWER ON



■ OTHERS

- When the power code is plugged into an outlet, the "DEMO" display mode will be set automatically.

[DEMO Release Method]

Press the F-MODE (DEMO) during the DEMO operation, or turn the power ON.

[DEMO Re-operation Method]

Press the F-MODE (DEMO) during the standby mode.

12. FOR MYIW/DI AND DL TYPES

NOTES:

- Parts marked by "NSP" 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.
- 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 $\rightarrow 56 \times 10^1 \rightarrow 561$ RD1/8PM $\boxed{561} J$

47 k Ω $\rightarrow 47 \times 10^3 \rightarrow 473$ RD1/4PS $\boxed{473} J$

0.5 Ω $\rightarrow 0R5$ RN2H $\boxed{0R5} K$

1 Ω $\rightarrow 010$ RS1P $\boxed{010} K$

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

5.62 k Ω $\rightarrow 562 \times 10^1 \rightarrow 5621$ RN1/4PC $\boxed{5621} F$

■ CONTRAST OF MYIW/DI, DL AND DD TYPES

MYIW/DI, DL and DD types have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		DD type	MYIW/DI type	DL type	
NSP	MAIN ASSY	AWM7176	AWM7175	AWM7176	
	CMPLEX ASSY	AWZ7967	AWZ7966	AWZ7967	
	SECND ASSY	AWZ7974	AWZ7973	AWZ7974	
NSP	SUB ASSY	AWM7183	AWM7182	AWM7183	
	FRNT 1 ASSY	AWZ7981	AWZ7980	AWZ7981	
	FRNT 2 ASSY	AWZ7988	AWZ7987	AWZ7988	
	EVOL ASSY	AWZ7995	AWZ7994	AWZ7995	
	H.PHONE ASSY	AWZ8002	AWZ8001	AWZ8002	
	PRIMRY ASSY	AWZ8009	AWZ8008	AWZ8009	
	FM/AM TUNER MODULE	AXQ1012	AXQ1014	AXQ1012	
Δ	Voltage selector (AC110-127V/220-230V/240V)	AKX7002	Not Used	AKX7002	Refer to page 2.
Δ	Power transformer (AC110-127V/220-230V/240V)	ATS7093	Not Used	ATS7093	
Δ	Power transformer (AC220-230V)	Not Used	ATS7091	Not Used	
Δ	AC power cord	PDG1013	PDG1003	PDG1003	
	Door pocket	AAN7074	Not Used	AAN7074	
NSP	Door pocket	Not Used	AAN7108	Not Used	
	Deck holder L	AMR7052	AMR7084	AMR7052	
	Deck holder R	AMR7053	AMR7085	AMR7053	
	Chassis	ANA7027	ANA7028	ANA7027	
	Rear panel	ANC7380	ANC7399	ANC7411	
NSP	Bonnet	ANE7079	ANE7091	ANE7079	Refer to page 5-7.
	Azimuth cover	AZA7150	AZA7158	AZA7150	
	Caution label (F)	Not Used	VRW-328	VRW-328	
	Caution label (G)	Not Used	VRW-329	VRW-329	
	Caution label	Not Used	VRW1094	PRW1018	
	Front panel	AMB7324	AMB7295	AMB7324	
	Standby lens	AAK7182	AAK7221	AAK7182	
	Ceramic capacitor	Not Used	CKDYB152K50	Not Used	
	Screw	Not Used	ABA-115	Not Used	

■ CMLPX ASSY

AWZ7966 and AWZ7967 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7967	AWZ7966	
	L1001, L1002 L1004 C1001-C1006, C9001-C9004 C1065-C1068, C9008, C9009 C1370, C1371, C1394-C1396, C9005-C9007, C9010, C9011 R1001, R1002, R9002, R9003 R5753 R5754 R1021 R9995	ATH-133 Not Used Not Used Not Used Not Used Not Used ACX7016 ACX7017 RFA1/4PS390J RS1/10S000J	ATH-059 PTL1014 CKSQYF104Z50 CCSQCH101J50 CKSQYB102K50 RS1/10S100J RA5T472J RA5T473J RFA1/4PL390J Not Used	Refer to "SCH-6".

■ SECND ASSY

Although AWZ7973 and AWZ7974 are different in part number, they have the same service parts.

■ FRNT 1 ASSY

AWZ7980 and AWZ7981 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7981	AWZ7980	
	IC401 D418 D419 R487 R540 R991	PDG157B 1SS254 Not Used RS1/10S000J Not Used Not Used	PDG180A Not Used 1SS254 RS1/10S102J RS1/10S102J RS1/10S000J	Refer to "SCH-7". Refer to "SCH-7".

■ FRNT 2 ASSY

Although AWZ7987 and AWZ7988 are different in part number, they have the same service parts.

■ EVOL ASSY

AWZ7994 and AWZ7995 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ7995	AWZ7994	
	C1041, C1042, C1415 C1413, C1414	Not Used Not Used	CCSQCH101J50 CCSQCH220J50	Refer to "SCH-6".

■ H.PHONE ASSY

AWZ8001 and AWZ8002 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8002	AWZ8001	
	L1401 C1302, C1304, C1393	Not Used Not Used	PTL1014 CKSQYB102K50	Refer to "SCH-6".

■ PRIMRY ASSY

AWZ8008 and AWZ8009 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8009	AWZ8008	
	L1101 C1101 H1103, H1104 Fuse holder	Not Used ACG1054 RKR1003	ATF-151 ACG7005 Not used	Refer to "SCH-6".

XR-Q150

■ FM/AM TUNER MODULE (AXQ1014)

• PCB PARTS LIST

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202, Q6218		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104, Q6105		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101-D6104		1SV228
COILS AND FILTERS			
	L6106		ATC1003
	L6105		ATC1015
	L6101		ATC1016
	L6102		ATC1017
	L6103		ATC1018
	L6104		ATC1019
	L6207		ATE1013
	F6204		ATF-107
	F6203		ATF-119
	F6205		ATF1152
	F6202 (450KHz)		ATF1155
	L6107 (2.2μH)		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	L6205		LCTA680J3225
TRANSFORMERS			
	T6101		ATE-063
CAPACITORS			
	C6204, C6234, C6236, C6269 (1μF/16V)		ACG1051
	C6120		CCSCH060D50
	C6229		CCSCH102J50
	C6111, C6122		CCSQCH010C50
	C6112		CCSQCH020C50
	C6118		CCSQCH080D50
	C6113		CCSQCH101J50
	C6116, C6208, C6221, C6222		CCSQCH150J50
	C6117		CCSQCH330J50
	C6272		CCSQSL330J50
	C6105		CCSQSL471J50
	C6101		CCSQTH110J50
	C6119		CCSQTH150J50
	C6109		CCSQTH270J50
	C6107, C6110		CCSQTH300J50
	C6106		CCSQTH330J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6227		CEAS101M10
	C6216, C6217		CEAS330M16

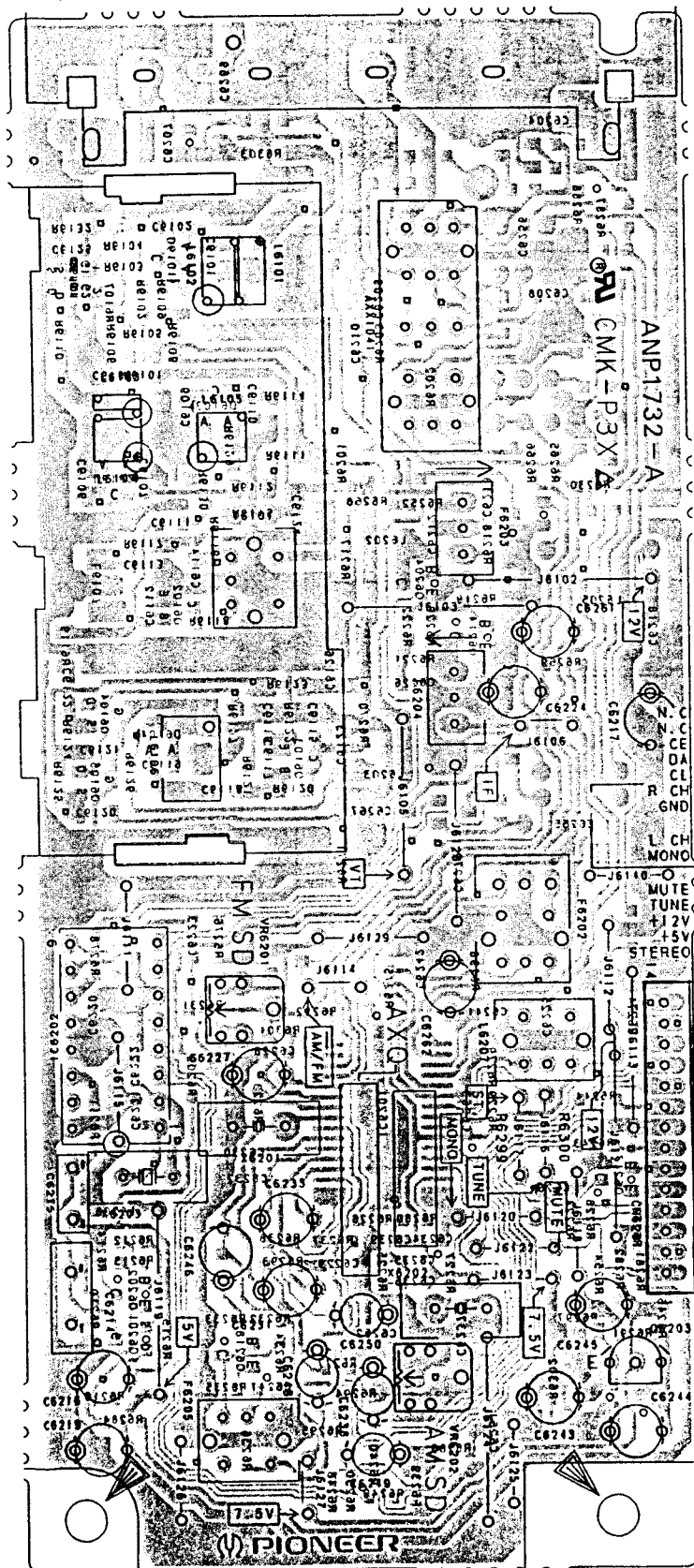
Mark	No.	Description	Part No.
	C6219		CEAS470M10
	C6243-C6245		CEAS470M16
	C6238, C6248		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6115, C6125, C6126, C6207		CKSQYB102K50
	C6102, C6114, C6121, C6124, C6210		CKSQYB103K50
	C6264		CKSQYB103K50
	C6247		CKSQYB122K50
	C6213		CKSQYB223K50
	C6230		CKSQYB273K50
	C6228		CKSQYB472K50
	C6209, C6237, C6267		CKSQYB473K50
	C6251, C6252		CKSQYB562K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242		CKSQYF223Z50
	C6255, C6256		CKSQYF223Z50
	C6235		CKSQYF224Z25
	C6225, C6241		CKSQYF473Z50
	C6123		CKSYB103K50
	C6232		CKSYB273K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
RESISTORS			
	R6299, R6300		RD1/8PM102J
	R6115, R6119, R6123, R6127, R6129		RS1/8S000J
	R6268-R6271, R6275, R6276, R6278		RS1/8S000J
	R6283, R6284, R6293, R6294, R6297		RS1/8S000J
	R6302, R6303		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211, R6239		RS1/8S103J
	R6237		RS1/8S122J
	R6209		RS1/8S221J
	R6112		RS1/8S473J
	VR6201 (10kΩ)		ACP1056
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□J

OTHERS

X6203	CRYSTAL RESONATOR (7.200MHz)	ASS1042
X6201	CRYSTAL RESONATOR (456kHz)	ASS1066
X6202	CERAMIC RESONATOR (450kHz)	ATF1027
BN6201	2P ANTENNA TERMINAL WITH PAL	AKA1017
CN6201	14P SOCKET	KP2001A14L
	AM RF TUNING BLOCK	AXX1041

• PCB CONNECTION DIAGRAM

- This diagram is viewed from the mounted parts side.
- FM/AM TUNER MODULE (AXQ1014)



PCB-5

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
		Transistor
		Diode
		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.

G6101

G6204

G6102

G6214

G6104

G6103

G6105

VR6201

IC6202

IC6201

G6217

CMPLX ASSY
CN1007

G6202

G6201

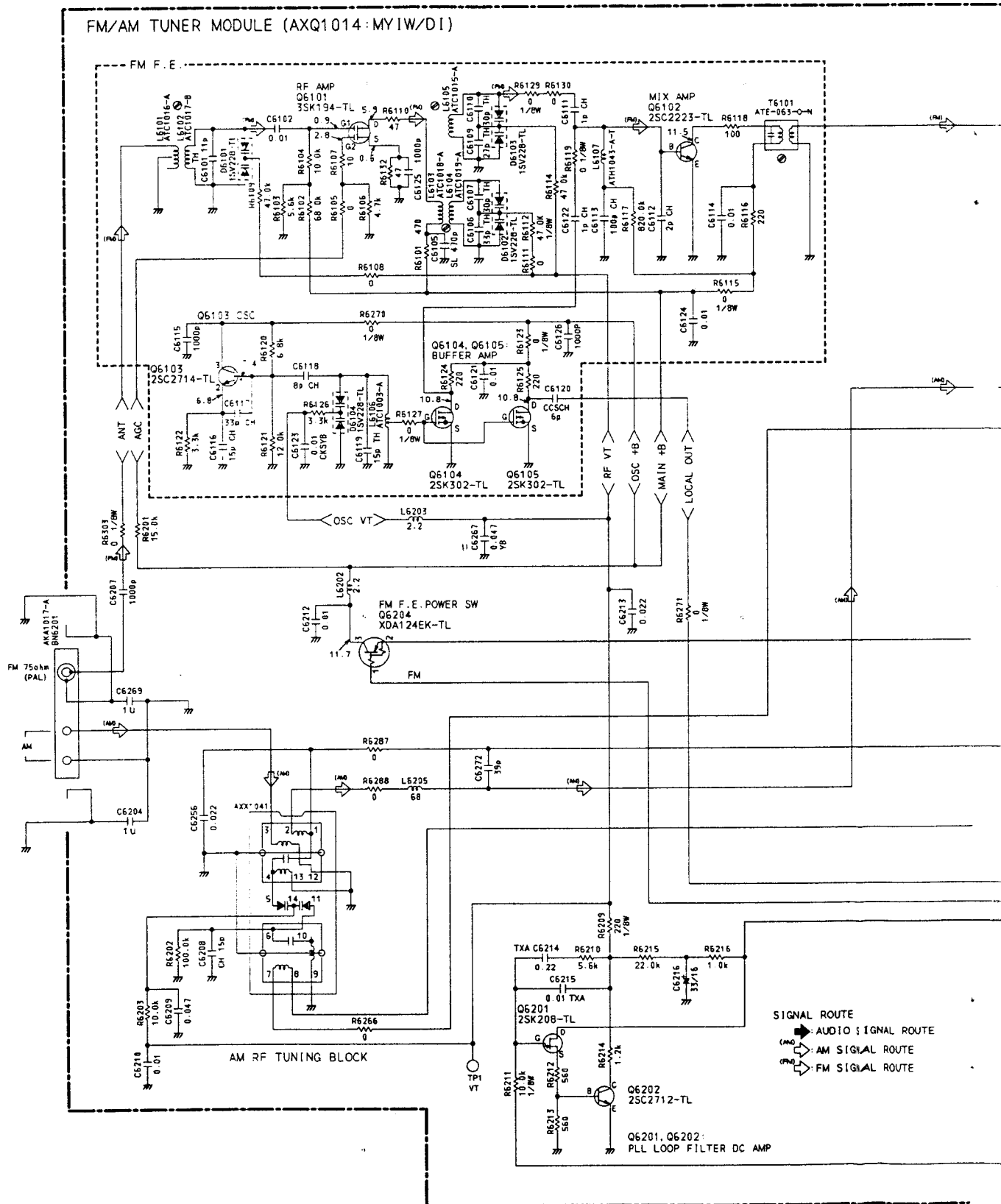
G6218

G6203

VR6202

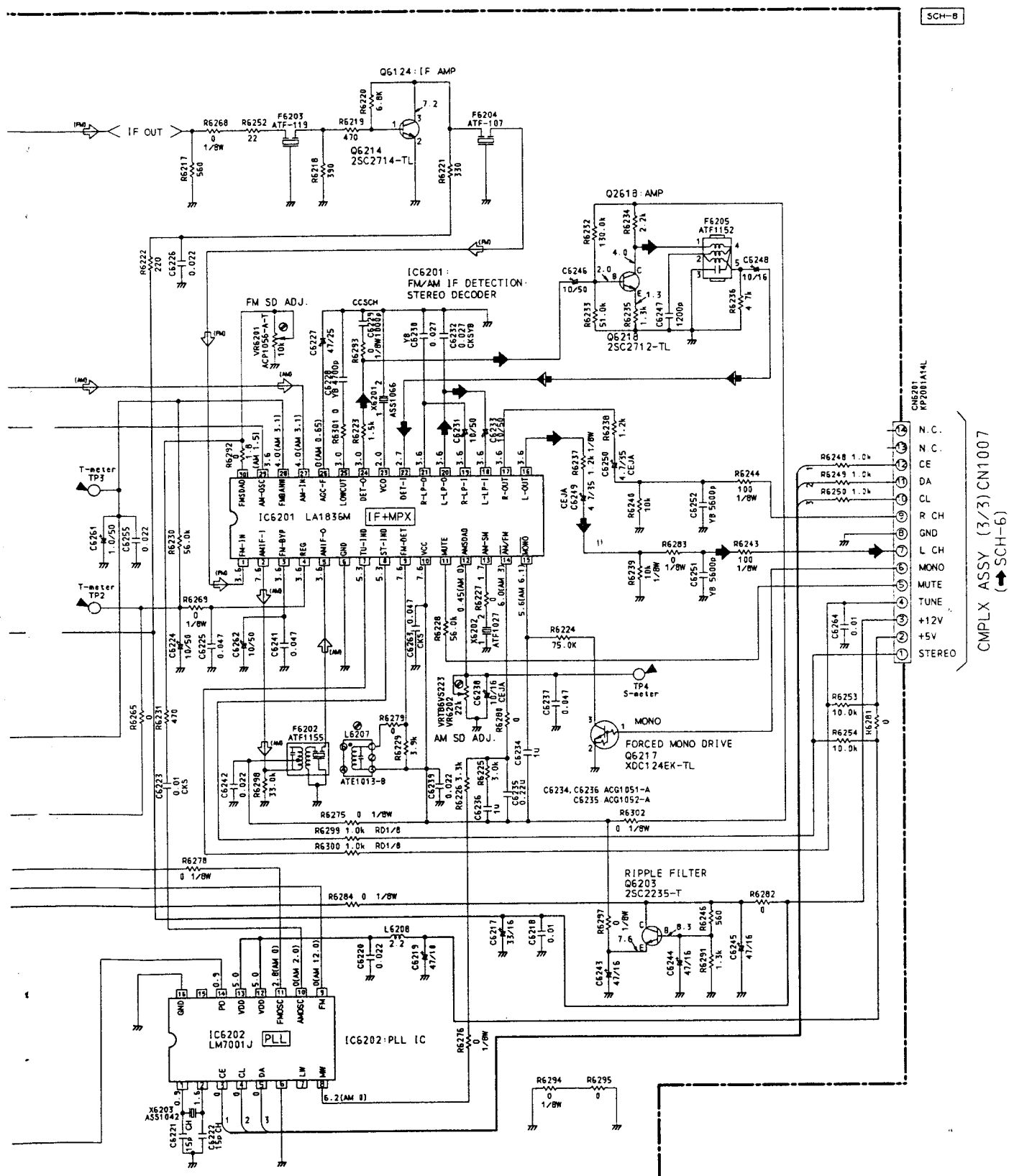
XR-Q150

• SCHEMATIC DIAGRAM



FM/AM TUNER MODULE

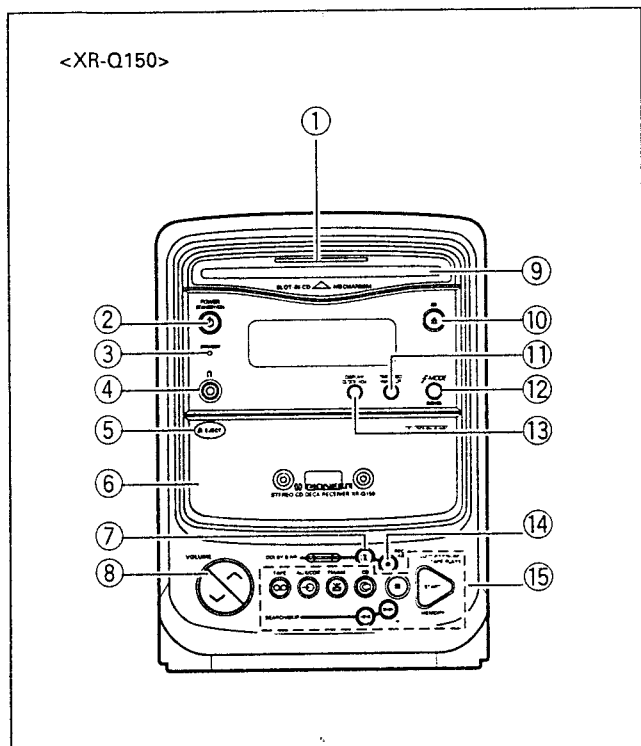
SCH-8



FM/AM TUNER MODULE

SCH-8

13. PANEL FACILITIES

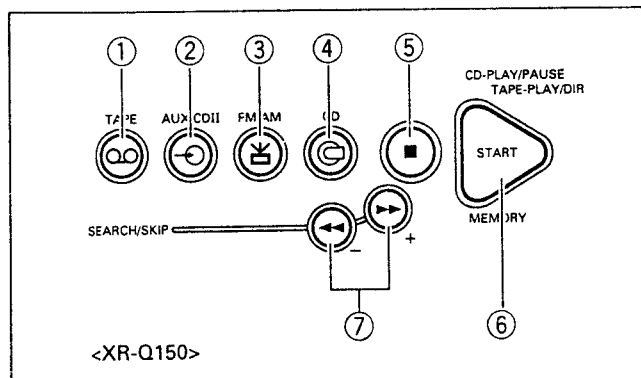


STEREO CD DECK RECEIVER (XR-Q150)

- ① CD Slot Indicator
- ② POWER STANDBY/ON switch
- ③ STANDBY indicator
- ④ Headphones jack
- ⑤ Cassette eject mark (▲ EJECT)
- ⑥ Cassette door
- ⑦ DOLBY* NR ON/OFF button
- ⑧ VOLUME ∇(down) / ▲(up) button
- ⑨ Disc insert slot
- ⑩ CD eject button (▲)
- ⑪ TIMER REC/WAKE-UP button
- ⑫ f-MODE button
- ⑬ DISPLAY/CLOCK ADJ button
- ⑭ REC/ASES button
- ⑮ Function buttons

*

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



Function button section

- ① TAPE function button
 - ② AUX/CDII function button
 - ③ Tuner (FM/AM) function button
 - ④ CD function button
 - ⑤ Stop button (■)
 - ⑥ START buttons
 - ⑦ Fast forward, fast reverse buttons
- Functions of the common operation buttons (the functions of the buttons vary, depending on the input device selected, as noted 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/track search button
 ◄◄: Rewind/track search button

During tuner operation

- START: Preset memory button
 ►►: Frequency + (up)/station select button
 ◄◄: Frequency - (down)/station select button.

14. SPECIFICATIONS

STEREO CD CASSETTE DECK RECEIVER: XR-Q150

Amplifier Section

Continuous Power Output (RMS) 25 W + 25 W
(1 kHz, T.H.D. 10%, 8 Ω)
(PMPO) 400 W

● Above specifications are for when power supply is 230 V.

FM Tuner Section

Frequency Range 87.5 MHz to 108 MHz
Antenna input 75 Ω unbalanced

AM Tuner section

Frequency Range	
With 10 kHz step	530 kHz to 1,700 kHz
With 9 kHz step	531 kHz to 1,602 kHz
Antenna	Loop antenna

Cassette deck section

Systems 4 track, 2-channel stereo
Heads Recording/playback head x 1
 Erasing head x 1
Motor..... DC servo motor x 1
Tape type TYPE I (Normal) tape
 TYPE II (HIGH/CrO₂) tape

CD section (XR-Q150)

Type.....Compact disc digital audio system
Wow and Flutter.....Limit of measurement
($\pm 0.001\%$ W.PEAK) or less (EIAJ)

Miscellaneous

Power Requirements AC 110–127,220–230, 240 V,
50/60 Hz (Flat blade 2-pin AC plug model)
AC 110–120, 220–230, 240 V,
50/60 Hz (Round blade 2-pin AC plug model)

Power Consumption

Power consumption

XR-Q150	135 W
---------------	-------

Dimensions

XR-Q150 180 (W) x 250 (H) x 268 (D) mm

Weight (without package)

Weight (without package)
XR-Q150 5.0 kg

Accessories

Operating instructions	1
Remote control unit	1
AA/R6P dry cell batteries	2
FM antenna	1
AM loop antenna	1

NOTE:

Specifications and design subject to possible modification without notice due to improvement.