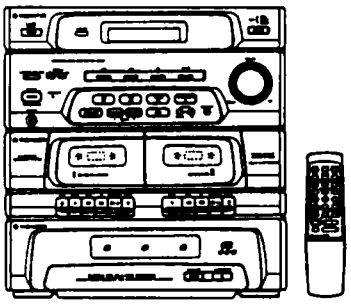
Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
RRV1552

STEREO CD CASSETTE DECK RECEIVER

XR-J1500C

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-J1500C		
KUXJ	○	AC120V	———
KCXJ	○	AC120V	———
SDXJ	○	AC110/120-127V/220-230V/240V	With the voltage selector
SXJ/NC	○	AC110/120-127V/220-230V/240V	With the voltage selector
YPWXJ	○	AC240V	———

CONTENTS

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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.

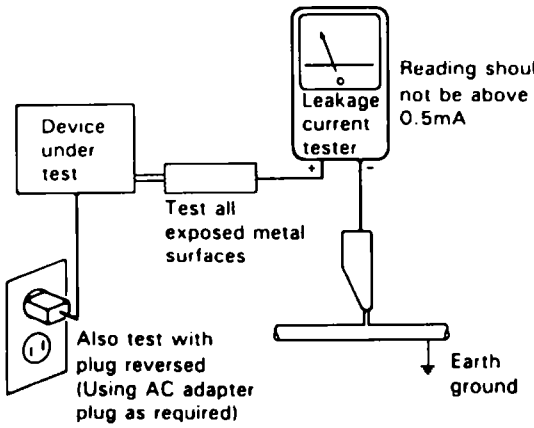
(FOR USA MODEL ONLY)

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



AC Leakage Test

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

2. PRODUCT SAFETY NOTICE

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

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

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

VARO!
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NAKYMATTOMALLE LASERSATEILYLLE ALA KATSO SATEESEEN

ADVERSEL
USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSAETTELSE FOR STRÅLING

VARNING!
OSYNLIG LASERSTRÅLNING NAR DENNA DEL AR OPPNAD OCH SPARREN AR URKOPPLAD BETRAKTA EJ STRÅLEN.

LASER
Kuva 1
Lasersateilyn varoitusmerkki

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

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

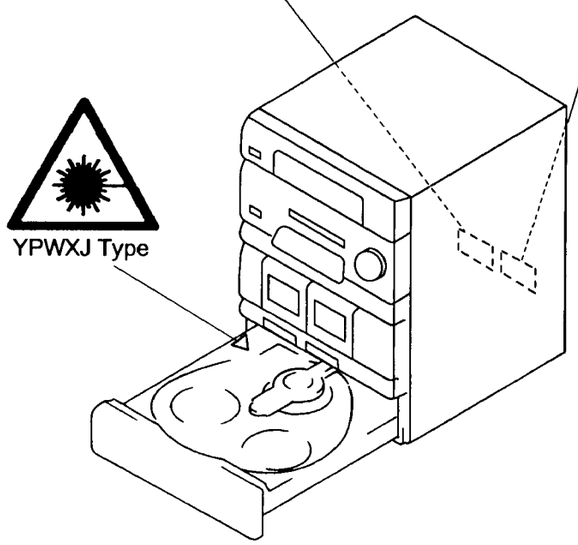
LASER DIODE CHARACTERISTICS
MAXIMUM OUTPUT POWER. 5 mw
WAVELENGTH. 780-785 nm

LASER
Picture 1
Warning sign for laser radiation

LABEL CHECK

YPWXJ Type

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM



KUXJ and KCXJ Types

CAUTION
INVISIBLE LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

ATTENTION!
RADIATION INVISIBLE DU LASER QUAND OUVERT. NE PAS REGARDER FIXEMENT LE RAYON.

YPWXJ Type

CLASS 1
LASER PRODUCT

Additional Laser Caution
The laser beam may be active when the turntable is removed.
Use of controls for adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
The compact disc player should not be adjusted or repaired by anyone except properly qualified service personnel.

2. PACKING, EXPLODED VIEWS 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

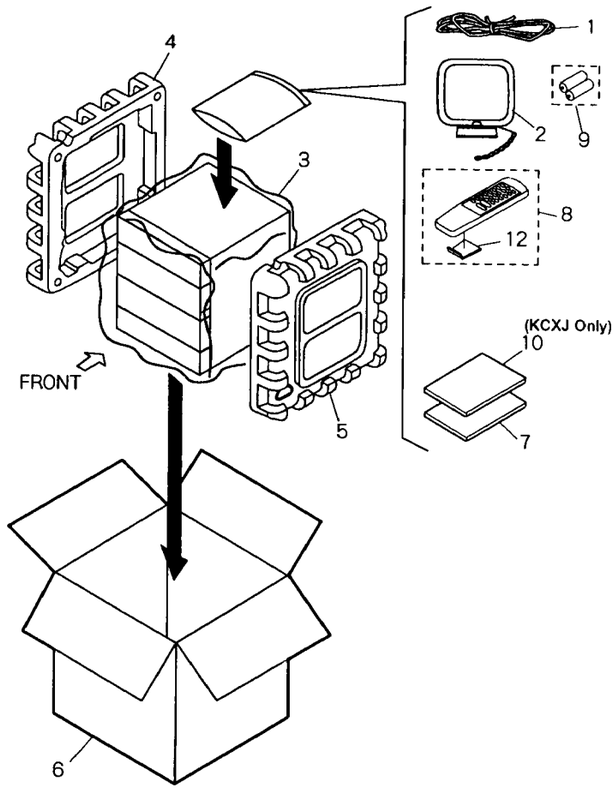
(1) CONTRAST OF XR-J1500C/KUXJ, KCXJ, SDXJ, SXJ/NC AND YPWXJ

XR-J1500C/KUXJ, KCXJ, SDXJ, SXJ/NC and YPWXJ have the same construction except for the following:

Mark	No.	Symbol & Description	Part No. XR-J1500C KUXJ	KCXJ	SDXJ	SXJ/NC	YPWXJ	Remarks
	6	Master Carton	AZH7085	AZH7091	AZH7086	AZH7087	AZH7088	
	7	Operating Instructions (English)	AZR7047	AZR7047	Not used	Not used	AZR7047	
	7	Operating Instructions (English/Spanish/Chinese)	Not used	Not used	AZR7048	AZR7048	Not used	
	10	Operating Instructions (French)	Not used	AZR7051	Not used	Not used	Not used	

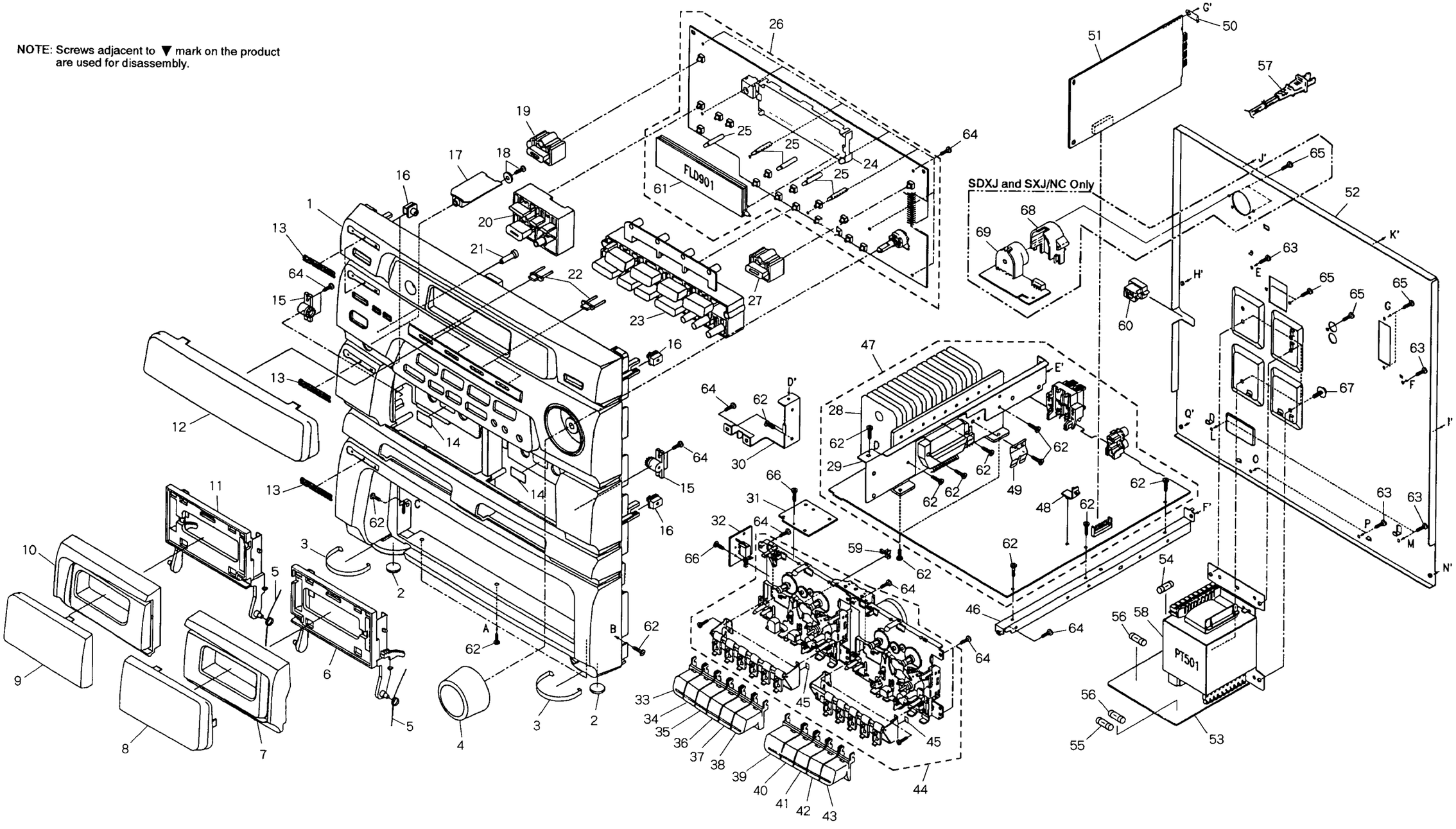
(2) PARTS LIST FOR XR-J1500C/KUXJ

Mark	No.	Description	Part No.
	1	FM Line Ant	AZE1070
	2	AM Loop Ant Coil	AZE7026
	3	Soft Sheet 1500 × 800mm	AZH7081
	4	Snow Box (L)	AZH7082
	5	Snow Box (R)	AZH7083
	6	Master Carton	AZH7085
	7	Operating Instructions (English)	AZR7047
	8	Remote Control Unit	AZW7215
NSP	9	Dry Cell Battery (R03, AAA)	AEX-021
	10	• • • • •	
	11	• • • • •	
	12	Battery Cover	AZN7649



2.2 EXTERIOR (1/2) SECTION

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



(1) CONTRAST OF XR-J1500C/KUXJ, KCXJ, SDXJ, SXJ/NC AND YPWXJ

XR-J1500C/KUXJ, KCXJ, SDXJ, SXJ/NC and YPWXJ have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.					Remarks
			XR-J1500C					
			KUXJ	KCXJ	SDXJ	SXJ/NC	YPWXJ	
	26	FRONT PCB Assy	AZW7228	AZW7228	AZW7229	AZW7229	AZW7230	
	47	MAIN PCB Assy	AZW7207	AZW7207	AZW7235	AZW7235	AZW7207	
	52	Rear Panel	AZN7636	AZN7636	AZN7637	AZN7638	AZN7639	
NSP	53	AC SUPPLY PCB Assy	AZW7223	AZW7223	AZW7204	AZW7204	AZW7224	
⚠	54	Fuse (F501, 3A/125V)	AZE7110	AZE7110	Not used	Not used	Not used	
⚠	54	Fuse (F501, T2AL/250V)	Not used	Not used	AZE7107	AZE7107	Not used	
⚠	54	Fuse (F501, T1.6AL/250V)	Not used	Not used	Not used	Not used	AZE7106	
⚠	55	Fuse (F502, 1.6A/125V)	AZE7109	AZE7109	Not used	Not used	Not used	
⚠	55	Fuse (F502, T1.6AL/250V)	Not used	Not used	AZE7106	AZE7106	AZE7106	
⚠	56	Fuse (F503, F504, 4A/125V)	AZE7108	AZE7108	Not used	Not used	Not used	
⚠	56	Fuse (F503, F504, T4AL/250V)	Not used	Not used	AZE7105	AZE7105	AZE7105	
⚠	57	AC Cord	AZD7079	AZD7079	AZD7075	AZD7075	AZD7083	
⚠	58	Power Transformer (PT501, AC120V)	AZT7081	AZT7081	Not used	Not used	Not used	
⚠	58	Power Transformer (PT501, AC110V/120-127V/220-230V/240V)	Not used	Not used	AZT7075	AZT7075	Not used	
⚠	58	Power Transformer (PT501, AC240V)	Not used	Not used	Not used	Not used	AZT7084	
	68	Voltage Cover	Not used	Not used	AZN7093	AZN7093	Not used	
NSP	69	VOL. SEL. PCB Assy	Not used	Not used	AZW7209	AZW7209	Not used	

(2) PARTS LIST FOR XR-J1500C/KUXJ

Mark	No.	Description	Part No.
	1	Front Escutcheon	AZN7631
	2	Foot	AZN7630
	3	Foot Overlay	AZN7634
	4	Volume Knob	AZA7183
	5	Eject Spring	AZN7645
	6	Door Holder (R)	AZN7508
	7	Cassette Door (R)	AZN7627
	8	Cassette Window (R)	AZA7194
	9	Cassette Window (L)	AZA7195
	10	Cassette Door (L)	AZN7628
	11	Door Holder (L)	AZN7509
	12	Display Window	AZA7193
	13	PIONEER Badge	PAM1608
	14	Mirror	AZN7170
	15	Gear Damper	AZN7179
	16	Side Nut	AZN7643
NSP	17	HEADPHONE PCB Assy	AZW7208
	18	Screw	AZB1213
	19	Bass Knob	AZA7196
	20	Timer Knob	AZA7198
	21	Indicator	AZA7025
	22	LED Lens	AZA7188
	23	Function Knob	AZA7199
	24	Display Holder	AZA7185
NSP	25	LED Holder	• • • • •
	26	FRONT PCB Assy	AZW7228
	27	Disc Knob	AZA7197
	28	Heat Sink Assy	AZN7641
	29	Heat Sink Bracket	AZN7142
NSP	30	Heat Sink Bracket (B)	• • • • •
NSP	31	CONNECTOR PCB Assy	AZW7210
NSP	32	R/P SW PCB Assy	AZW7211
	33	Cassette Button Record	AZA7172
	34	Cassette Button Play (L)	AZA7173
	35	Cassette Button REW (L)	AZA7177
	36	Cassette Button F.F. (L)	AZA7175
	37	Cassette Button Eject/Stop(L)	AZA7179
	38	Cassette Button Pause (L)	AZA7181
	39	Cassette Button Play (R)	AZA7174
	40	Cassette Button REW (R)	AZA7178
	41	Cassette Button F.F. (R)	AZA7176
	42	Cassette Button Eject/Stop(R)	AZA7180
	43	Cassette Button Pause (R)	AZA7182
	44	Cassette Deck Assy	AZW7206
NSP	45	PVC Sheet 6 × 4.5 × 0.3T	• • • • •
NSP	46	Main PCB Bracket	• • • • •
	47	MAIN PCB Assy	AZW7207
	48	PCB Hinge	AZN7517
	49	Spring Transistor (B)	AZB7019
	50	Earth Terminal	AZN7536
	51	TUNER PCB Assy	AZW7205
	52	Rear Panel	AZN7636
NSP	53	AC SUPPLY PCB Assy	AZW7223
⚠	54	Fuse (F501, 3A/125V)	AZE7110
⚠	55	Fuse (F502, 1.6A/125V)	AZE7109
⚠	56	Fuse (F503,F504, 4A/125V)	AZE7108
⚠	57	AC Cord	AZD7079

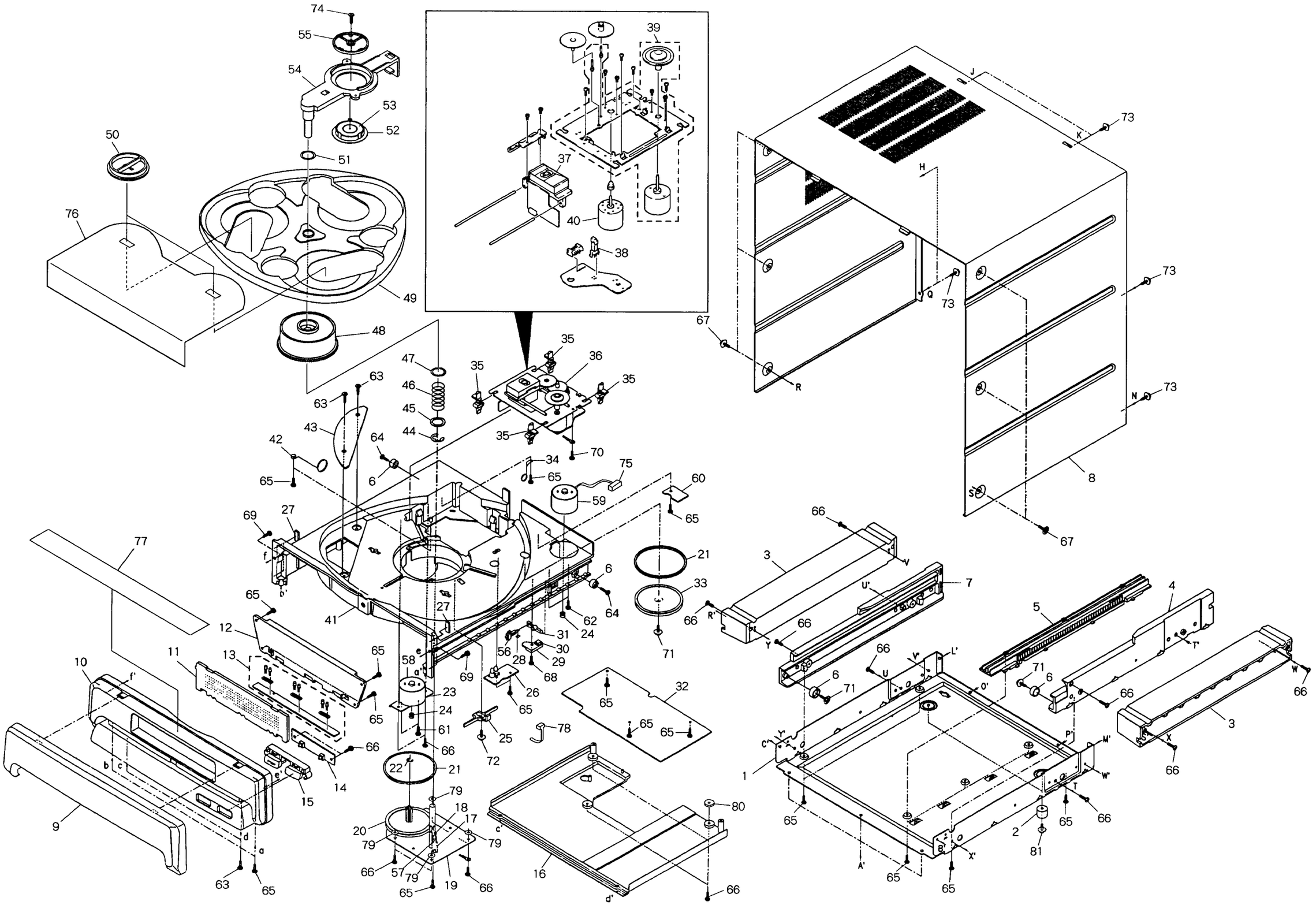
Mark	No.	Description	Part No.
⚠	58	Power Transformer (PT501, AC120V)	AZT7081
	59	Leaf Switch	AZS7033
⚠	60	Cord Bushing	AZE7104
	61	FLD BJ435GK (FLD901)	AZA7191
	62	Screw	BBZ30P060FMC
	63	Screw	BBZ30P060FZK
	64	Screw	BBZ30P100FMC
	65	Screw	BBZ30P100FZK
	66	Screw	PBZ20P050FMC
	67	Screw	IBZ40P080FCC
	68	• • • • •	
	69	• • • • •	

2.3 EXTERIOR (2/2) SECTION

Parts List

Mark	No.	Description	Part No.
NSP	1	Bottom Chassis	• • • • •
	2	Foot	AZN7633
	3	Bottom Plate	AZN7635
	4	Side Rail (R)	AZN7520
	5	Guide Pin Plate	AZN7522
	6	Pulley (Side)	AZN7030
	7	Side Rail (L)	AZN7521
	8	Top Cover	AZN7629
	9	CD Window	AZA7200
	10	CD Escutcheon	AZN7632
	11	CD Display Lens	AZA7187
	12	CD Lens Holder	AZN7515
NSP	13	CD LED PCB Assy	AZW7213
NSP	14	CD CONTROL PCB Assy	AZW7233
	15	CD Knob	AZA7201
	16	CD PCB Cover	AZN7644
	17	Switch Box	AZN7121
	18	Switch Pin	AZN7276
	19	Mounting Plate Assy	AZW7132
	20	Wheel	AZN7057
	21	Belt (60 × 1.6)	AZN7059
	22	E Ring 2.5Q	AZB7007
	23	Motor Bracket	AZN7124
	24	Motor Pulley	AZN7053
	25	Guide Plate	AZN7041
NSP	26	CD SENSOR PCB Assy	AZW7214
	27	Spacer (4 × 13 × 2)	AZN7277
	28	Himelon Sheet	AZN7518
	29	Lever Plate	AZN7117
	30	Sponge (5.5 × 7)	AZN7279
	31	Shaft (Lever Switch)	AZN7116
	32	CD DECODER PCB Assy	AZW7234
	33	Gear Wheel	AZN7123
	34	Wire Holder	AZN7122
	35	Cushion Holder	AZN7125
	36	CD Mechanism CD94V5	AZN7281
	37	Pickup Assy	AZN7295
	38	Leaf Switch (S17:LIMIT)	AZS7016
	39	Chassis Assy	AZW7236
	40	Motor Assy (SLED)	AZX7015
	41	Changer Base	AZN7523
	42	Spring Holder	AZN7282
	43	Main Base Cover	AZN7009
	44	E Ring 8Q	AZB7011
	45	Washer	AZB7010
	46	Clutch Spring	AZB7016
	47	Poly Washer (13.8Q × 18Q × 0.25T)	AZB7012
	48	Cam Gear	AZN7510
	49	Turntable	AZN7519
	50	Transit Lock	AZN7103
	51	Poly Washer (20Q × 13.2Q × 0.25T)	AZB7047
	52	Magnetic Holder	AZN7273
	53	Magnet (30 × 18 × 5)	AZN7114
	54	Arm Assy	AZW7131
	55	Magnetic Cover	AZN7063
	56	Leaf Switch MLS-1 (S3)	AZS7003
	57	Leaf Switch LSC-1223-31 (S18)	AZS7001
	58	Turntable Motor MMN-6E9D1	AZX7003
	59	Drawer Motor MEN-7E9T2	AZX7002
NSP	60	Fix PCB 24.5×16×1.6mm	AZN7548
	61	Screw	BBZ26P030FMC
	62	Screw	BBZ26P040FMC
	63	Screw	BBZ26P080FZK
	64	Screw	BBZ30P060FMC
	65	Screw	BBZ30P080FMC
	66	Screw	BBZ30P100FMC
	67	Screw	BBZ30P100FZK
	68	Screw	BBZ30P120FMC
	69	Screw	CBZ30P080FZK
	70	Screw	IBZ20P050FMC
	71	Screw	IBZ26P060FMC
	72	Screw	IBZ30P080FMC
	73	Screw	IBZ30P080FZK
	74	Screw	BBZ26P060FZK
	75	2P CON. Assy	AZD7076
	76	CD Lock Sheet	AZH7038
	77	Soft Sheet 320 ×80mm	AZH7084
	78	Bind Type-A	AZN7160
	79	Fiber Washer (0.25T)	AZB7124
	80	Fiber Washer (1.0T)	AZB7125
	81	Screw	AZB7139

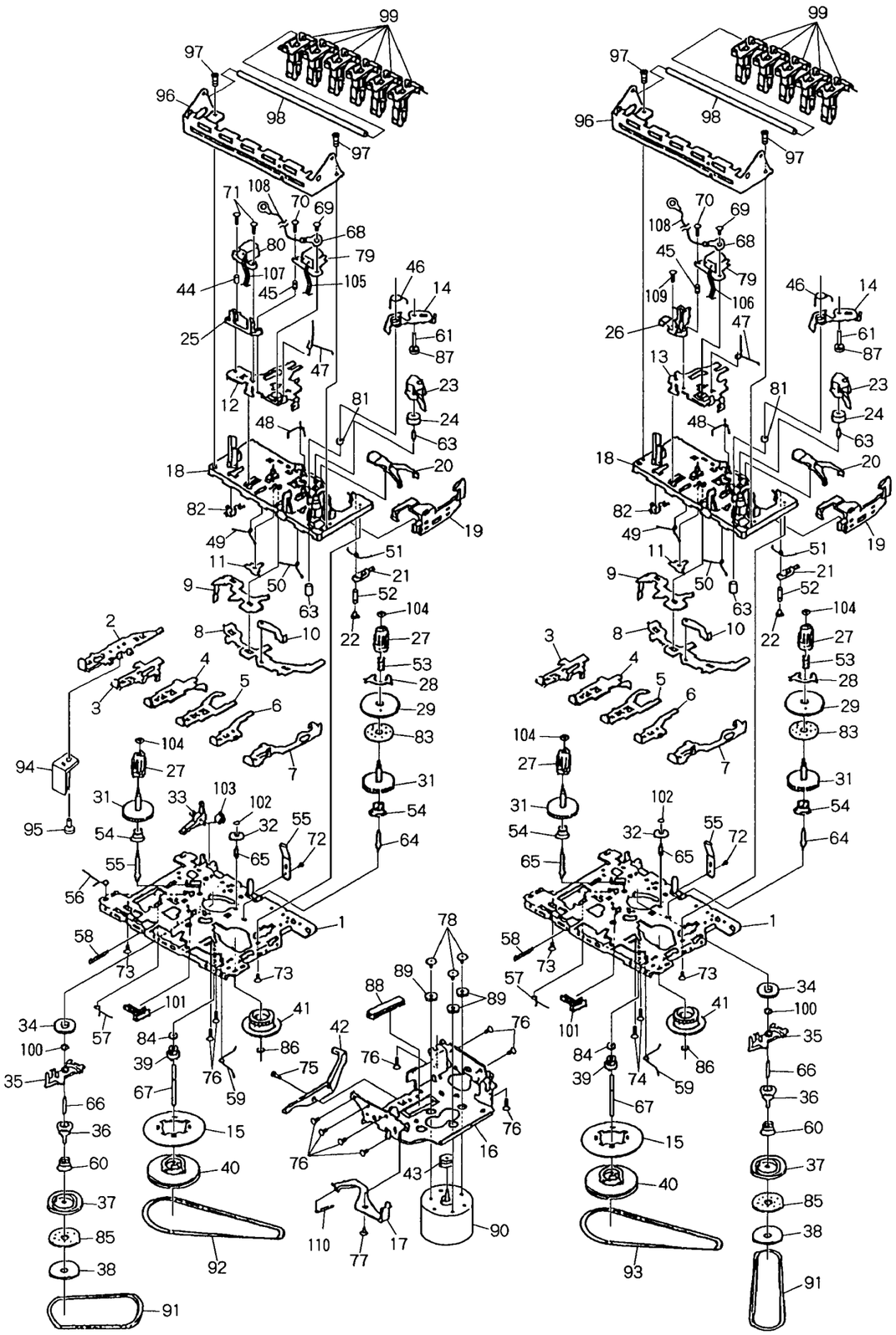
• **Exterior (2/2) Section**



2.4 CASSETTE MECHANISM SECTION

Parts List

Mark	No.	Description	Part No.
NSP	1	Sub Chassis	• • • • •
NSP	2	Rec Button Lever (F)	• • • • •
NSP	3	Play Button Lever (F)	• • • • •
NSP	4	REW. Button Lever (F)	• • • • •
NSP	5	F.F. Button Lever (F)	• • • • •
NSP	6	Stop Button Lever (F)	• • • • •
NSP	7	Pause Button Lever (F)	• • • • •
NSP	8	Push Button Actuator Plate	• • • • •
NSP	9	Switch Actuator Plate	• • • • •
NSP	10	Eject Lever	• • • • •
NSP	11	REW. Fixed Plate	• • • • •
NSP	12	Head Panel R/P	• • • • •
NSP	13	Head Panel P/B	• • • • •
NSP	14	Takeup Reel Plate	• • • • •
	15	Flywheel Plate	AZN7551
NSP	16	Deck Angle Connector	• • • • •
	17	P. Cancel Plate	AZN7552
	18	Main Base	AZN7553
	19	E. Slide Lever (F)	AZN7554
	20	Auto Stop Lever	AZN7555
	21	Pause Lever	AZN7556
	22	Pause Stopper	AZN7557
	23	Pinch Roller Arm	AZN7558
	24	Pinch Roller	AZN7559
	25	Head Base R/P	AZN7560
	26	Head Base P/B	AZN7561
	27	Takeup Reel Cap	AZN7562
NSP	28	Sensing Ring	• • • • •
	29	Takeup Reel Disk	AZN7563
	30	• • • • •	
	31	Takeup Reel Gear	AZN7564
	32	F.F. Gear	AZN7565
	33	Reco. Safety Lever	AZN7566
	34	R.F Gear	AZN7567
	35	R.F Arm	AZN7568
	36	R.F Spring Stopper	AZN7569
	37	R.F Pulley	AZN7570
	38	R.F Disk	AZN7571
	39	Flywheel Gear	AZN7572
	40	Flywheel Pulley	AZN7573
	41	T. Up Idler Gear	AZN7574
	42	Pause Cancel Arm	AZN7575
	43	Motor Pulley	AZN7576
	44	E Head Spring	AZN7577
	45	Head Spring	AZN7578
	46	T. Up Idler PL. Spring	AZN7579
	47	Pinch Roller Spring	AZN7580
	48	Auto Lever Spring	AZN7581
	49	F/R Button Lever Spring	AZN7582
	50	S/P Button Lever Spring	AZN7583
	51	Pause Spring	AZN7584
	52	Pause Lever Spring	AZN7585
	53	T. Up Reel Clutch Spring	AZN7586
	54	Back Tension Spring	AZN7587
	55	Pack Spring (F)	AZN7588
	56	Rec Button Lever Spring	AZN7589
	57	Switch Lock Plate Spring	AZN7590
	58	Play Button Lever Spring	AZN7591
	59	Eject Slide Lever Spring	AZN7592
	60	R.F Clutch Spring	AZN7593
	61	Takeup Idler Gear Shaft	AZN7594
	62	Pinch Roller Shaft	AZN7595
	63	Capstan Metal	AZN7596
	64	Takeup Reel Shaft	AZN7597
	65	F.F. Gear Shaft	AZN7598
	66	R.F. Shaft	AZN7599
	67	Flywheel Shaft	AZN7600
	68	Lug Plate	AZN7601
	69	Head Screw ISO	AZB7126
	70	Azimuth Screw	AZB7127
	71	E Head Screw	AZB7128
	72	Pack Spring Screw	AZB7129
	73	C Tapping Screw	AZB7130
	74	TP Screw	AZB7131
	75	Special Screw	AZB7132
	76	C Tapping Screw	AZB7133
	77	Special Screw	AZB7134
	78	Motor Collar Screw	AZB7135
	79	Head (MS18R-AKON1)	AZP7019
	80	E Head (LE15B-C1)	AZP7020
	81	P Washer Cut	AZN7602
	82	Leaf Switch	AZS7034
	83	Takeup Reel Felt	AZN7603
	84	P Washer	AZN7604
	85	R.F Felt	AZN7605
	86	Takeup Idler P Washer Cut	AZN7606
	87	Takeup Idler Gear Washer	AZN7607
	88	Motor Felt	AZN7608
	89	Motor Rubber	AZN7609
	90	Motor (SHU2L-70)	AZX7037
	91	R.F Belt	AZN7610
	92	Main Belt (6KEY)	AZN7611
	93	Main Belt (5KEY)	AZN7612
	94	Rec Spring Plate	AZN7613
	95	Rec Spring Plate Screw	AZB7137
	96	Button Frame	AZN7614
	97	FH Screw for Camera	AZB7138
	98	Button Shaft	AZN7615
	99	Button	AZN7616
	100	R.F Washer	AZN7617
	101	Leaf Switch	AZS7035
	102	Washer Cut	AZN7618
	103	Rec Safety Lever Lock	AZN7619
	104	Takeup Reel Washer Cup	AZN7620
	105	5P Connector Assy	AZD7002
	106	3P Connector Assy	AZD7003
	107	2P Connector Assy	AZD7004
	108	Earth Terminal Assy	AZK7046
	109	Screw	AZB7136
	110	P Kick Lever Spring	AZN7650



3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

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:
[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 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):
R/P SW PCB ASSY
S604: R/P SW

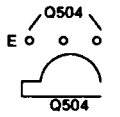
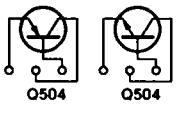
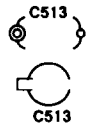
FRONT PCB ASSY
S901: POWER STANDBY/ON
S902: TUNER/BAND
S903: TAPE
S904: AUX
S905: SFC
S906: P. BASS (DEMO)
S907: TUNING + (▶▶ • ▶▶|)
S908: TUNING - (|◀◀ • ◀◀)
S909: PRESET UP
S910: PRESET DOWN
S911: MEMORY
S912: STOP
S913: CD ▶/||
S914: PROGRAM
S915: CLOCK/CLOCK ADJ ┐
S916: TIMER SET ├ TIMER
S917: ON/OFF ┘

CD CONTROL PCB ASSY
S11: OPEN/CLOSE (▲)
S12: VDISC SKIP

VOL. SEL. PCB ASSY (SDXJ and SXJ/NC only)
S501: AM CHANNEL STEP 9kHz — 10kHz
S502: VOLTAGE SELECTOR
AC110V — AC120 - 127V — AC220 - 230V — AC240V

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.

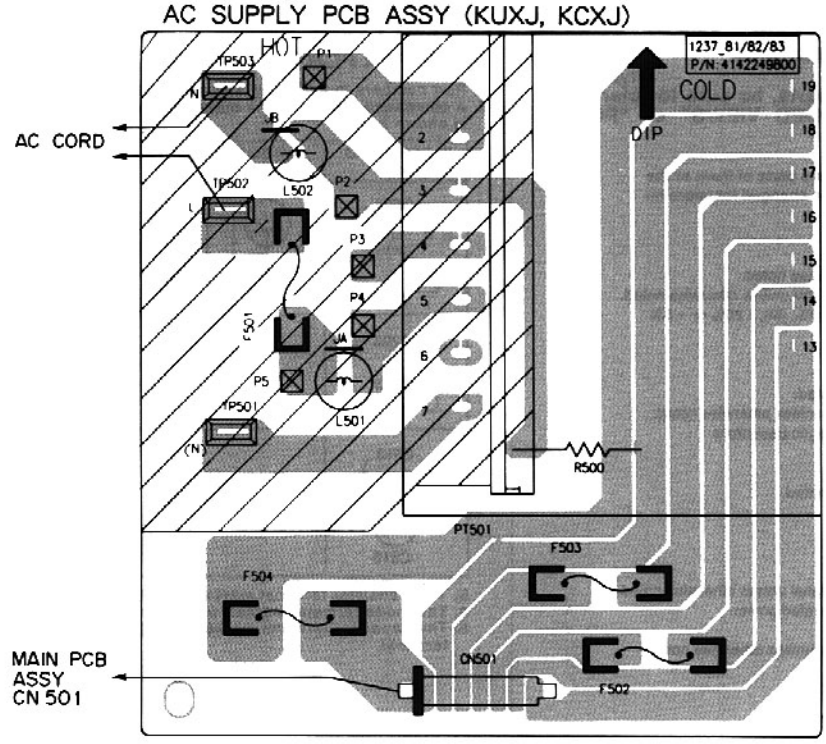
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

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.

• AC SUPPLY PCB AND VOL. SEL. PCB ASSEMBLIES

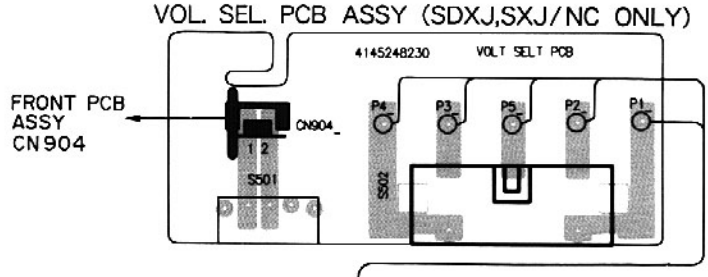
AC SUPPLY PCB ASSY (KUXJ, KCXJ)

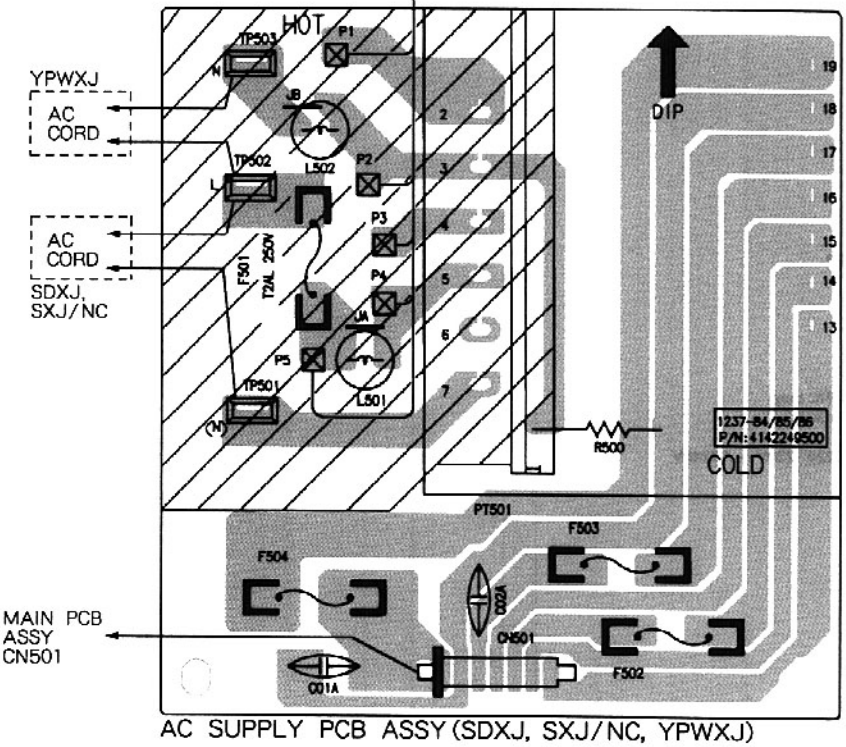
PCB-1



(AZN7550-A)

VOL. SEL. PCB ASSY (SDXJ,SXJ/NC ONLY)



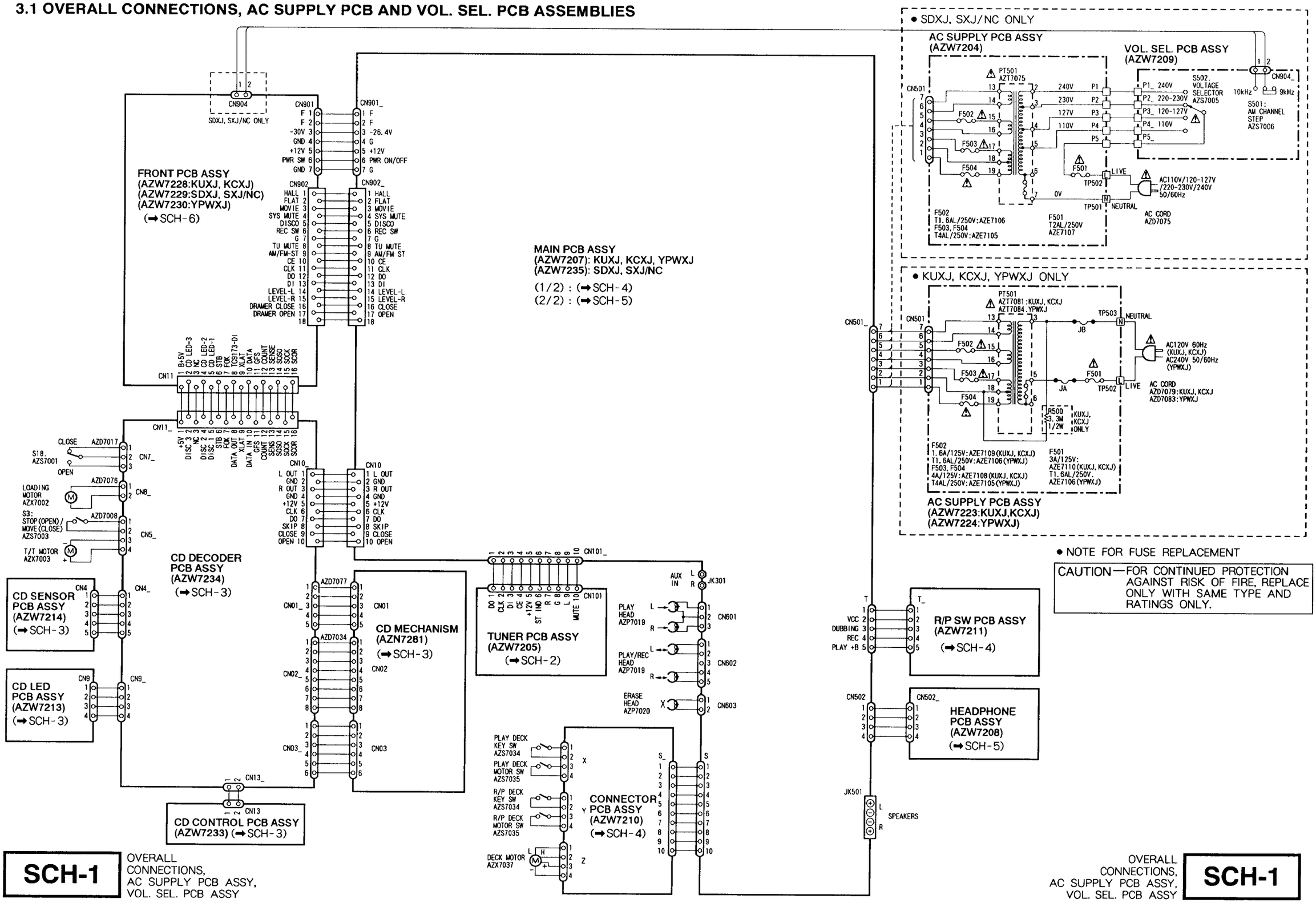


(AZN7535 - A)

AC SUPPLY PCB ASSY (SDXJ, SXJ/NC, YPWXJ)

- 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.

3.1 OVERALL CONNECTIONS, AC SUPPLY PCB AND VOL. SEL. PCB ASSEMBLIES

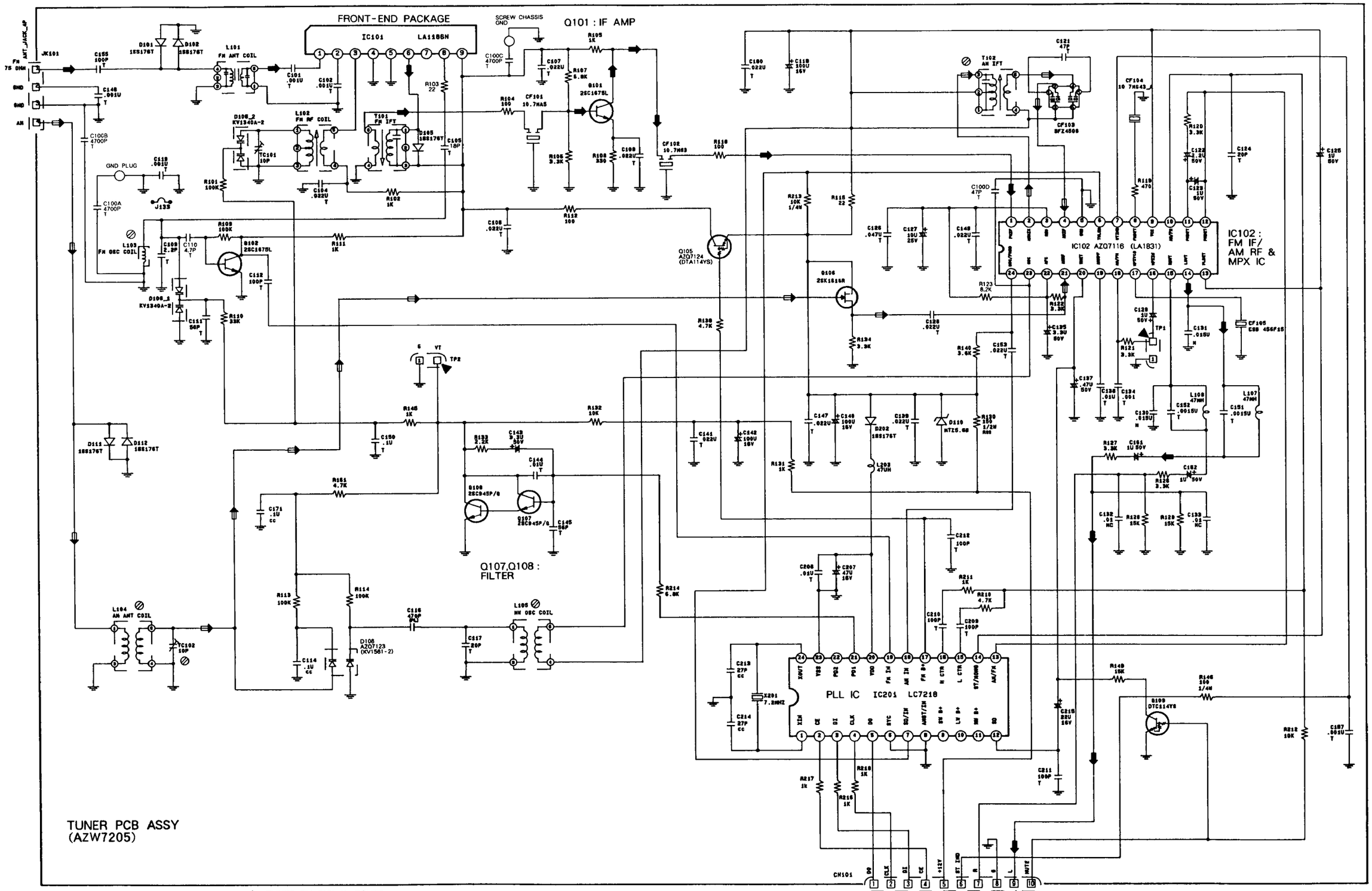


SCH-1 OVERALL CONNECTIONS, AC SUPPLY PCB ASSY, VOL. SEL. PCB ASSY

OVERALL CONNECTIONS, AC SUPPLY PCB ASSY, VOL. SEL. PCB ASSY **SCH-1**

3.2 TUNER PCB ASSY

SCH-2



SCH-2 TUNER PCB ASSY

TUNER PCB ASSY SCH-2

VOLTAGES OF THE TUNER PCB ASSY

1. IC

	IC NO.	PIN NO.																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	IC101	0.9	1.7	3.3	0	0	4.3	0	3.5	4.3											
AM	IC102	2	5	2	2	0	5.6	5	3.5	5	0	1.6	0	0	1.2	1.2	2	0	1	2	1
FM	IC102	2	5	2	2	0	5.4	5	2.7	5	0	3.8	3.8	3.9	0	1.2	2	2.2	2.8	1.5	0.2
AM	IC201	2.2	0	0	0	5	0	5.6	0	0	5	0	0	0	0	0	0	5.6	2.6	0	5
FM	IC201	2.1	0	0	0	5	0	5.4	0	0	4.6	4.6	0	3.8	3.9	0	0	0	0	2.4	4.6

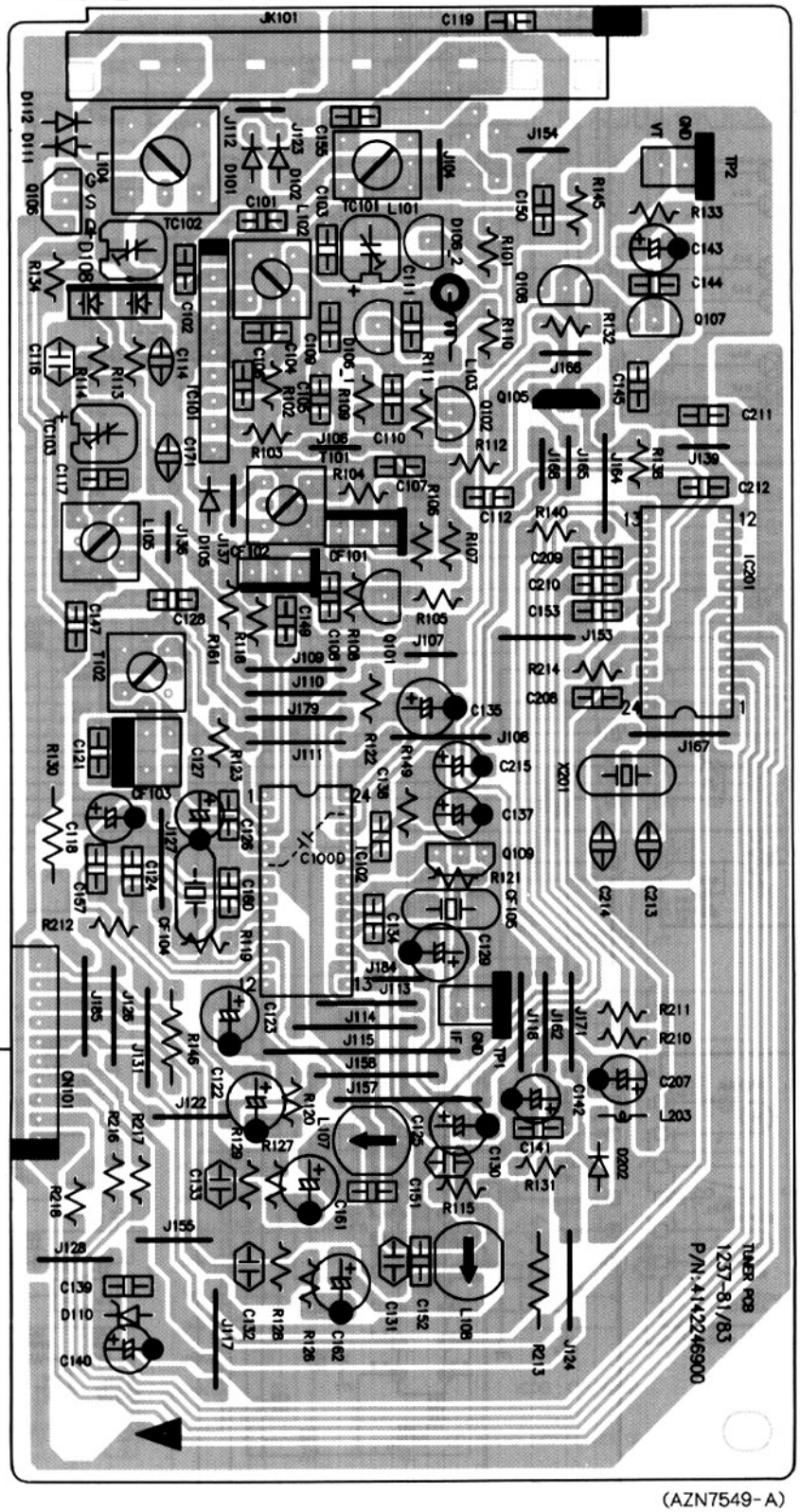
IC NO.	PIN NO.			
	21	22	23	24
IC102(AM/FM)	2/3.1	2/2	5.2/5	3.8/3.5
IC201(AM/FM)	1.1/1.1	0.2/0.2	0/0	2.5/2.3

2. TRANSISTORS

TR NO.	Q101	Q102	Q105	Q105	Q107	Q108	Q109	Q109		Q106
E	0.6	0	5.6	5.4	0.6	0	0	0	S	1.2
C	2.4	2.5	0	5.3	1.2	1.2	1	0.2	D	5.4
B	1.3	0.7	5.6	1.4	1.1	0.6	0	0	G	0
			AM	FM			AM	FM		

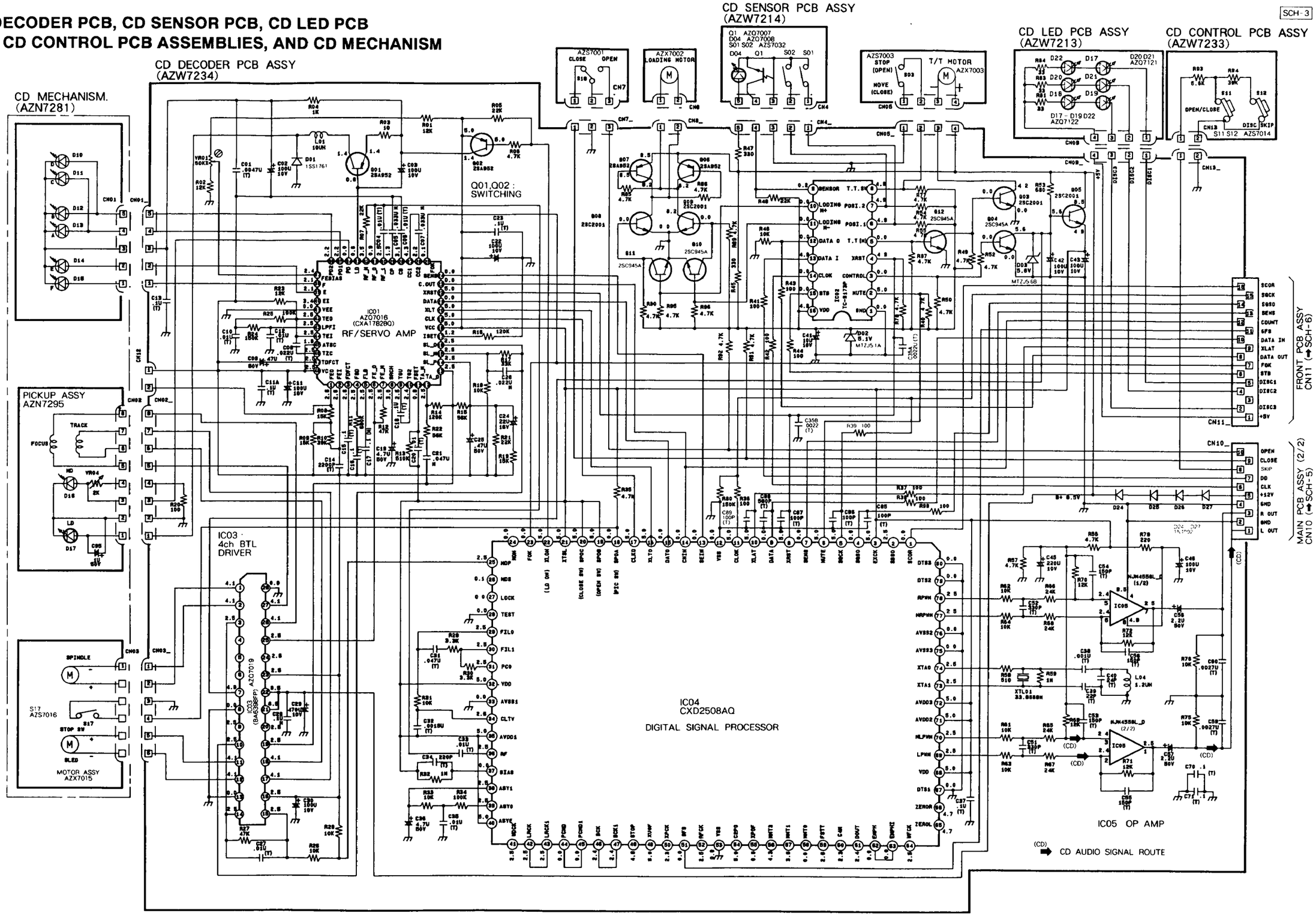
PCB-2

TUNER PCB 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.

3.3 CD DECODER PCB, CD SENSOR PCB, CD LED PCB AND CD CONTROL PCB ASSEMBLIES, AND CD MECHANISM



SCH-3 CD DECODER PCB ASSY,
CD SENSOR PCB ASSY,
CD LED PCB ASSY,
CD CONTROL PCB ASSY,
CD MECHANISM

CD DECODER PCB ASSY,
CD SENSOR PCB ASSY,
CD LED PCB ASSY,
CD CONTROL PCB ASSY,
CD MECHANISM **SCH-3**

VOLTAGES OF THE CD DECODER PCB ASSY

1. IC

IC NO.	PIN NO.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC01	2.6	2.6	2.6	2.5	2.5	2.5	2.5	3	2.5	2.4	0.8	2.5	2.5	2.5	2.5	2.5	1.2	5	5	5
IC02	0	5	0	4.9	0	4.9	4.9	4.9	0.2	0	0	0	4.9	0	0	4.9				
IC03	4.1	4.1	2.5	–	–	–	4.9	0	2.5	2.5	4.1	4.1	0	2.5	2.5	2.5	4.1	4.1	2.5	2.5
IC04	0	2.5	5	0	5	5	0	5	0	5	5	0	0	0	0	5	5	0	5	5
IC05	2.5	2.4	2.4	8.5	2.4	2.4	2.5	4.9												

IC NO.	PIN NO.																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
IC01	0	5	0	0	0.1	2.2	4.3	3.1	1.3	2.5	0.9	3.5	0.8	0	2.2	2.2	2.4	2.1	2.1	3.4
IC03	8.5	8.5	2.5	2.5	2.5	4.1	4.1	0												
IC04	5	5	0	0	2.5	0.1	0	0	2.5	2.5	2.5	5	0	2.6	5	2.5	0	2.5	2.5	5

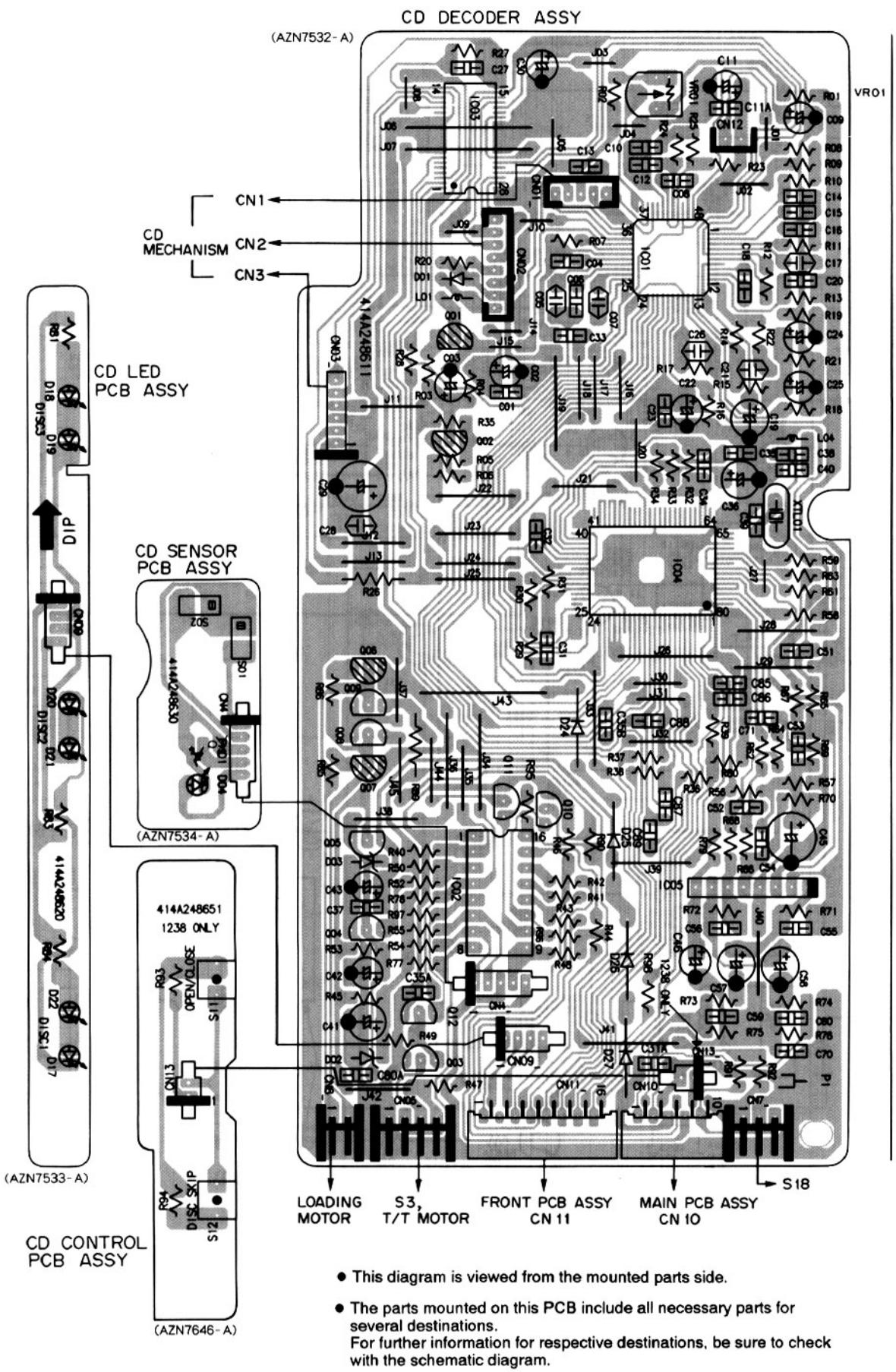
IC NO.	PIN NO.																			
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
IC01	0	2.5	2.5	2.5	1.9	2.5	2.5	2.5												
IC04	2.5	2.5	2.5	0	0	2.4	2.4	4.8	5	2.3	0	2.5	0	5	0	4.3	3.6	0	2.6	2.3

IC NO.	PIN NO.																			
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
IC04	2.4	0	0	2.5	4.7	4.7	0	5	2.5	2.5	5	5	2.5	2.5	0	0	2.5	2.5	0	0

2. TRANSISTORS

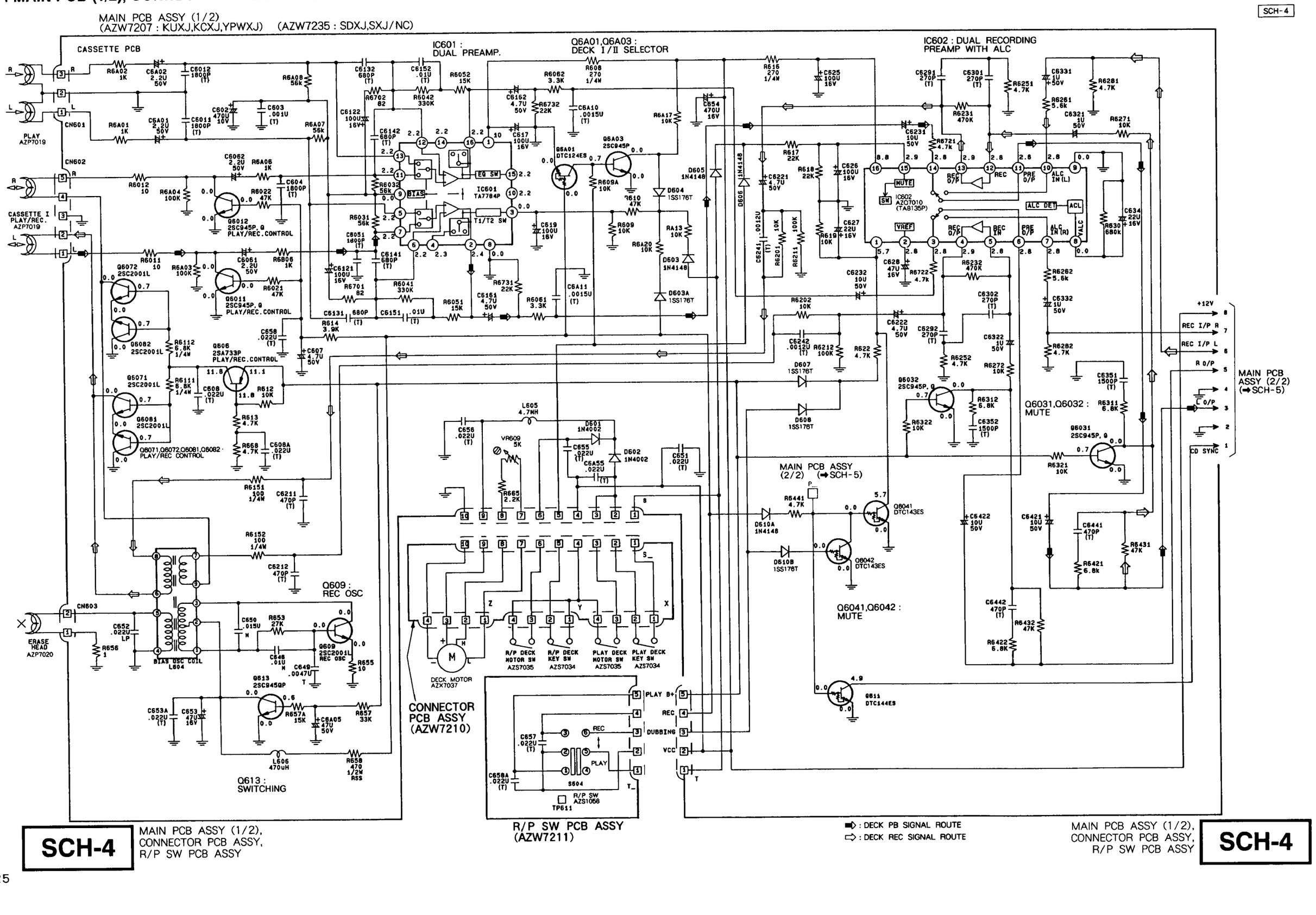
TR NO.	Q01	Q02	Q03	Q04	Q05	Q06	Q07	Q08	Q09											
E	1.4	5.0	0	0	4.9	8.5	8.5	0	0											
C	1.4	1.4	4.2	5.6	8.5	8.2	8.2	8.2	8.2											
B	0.8	5.0	0	0	5.6	8.5	8.5	0	0											

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.

3.4 MAIN PCB (1/2), CONNECTOR PCB AND R/P SW PCB ASSEMBLIES



SCH-4 MAIN PCB ASSY (1/2), CONNECTOR PCB ASSY, R/P SW PCB ASSY

MAIN PCB ASSY (1/2), CONNECTOR PCB ASSY, R/P SW PCB ASSY **SCH-4**

VOLTAGES OF THE MAIN PCB ASSY (1/2)

(CASSETTE)-RECORD

1. IC

IC NO.	PIN NO.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
IC601	10.25	2.27	1.83	2.2	2.14	2.16	2.15	0	2.18	0	2.15	2.16	2.15	2.19	2.2	2.26				
IC602	0	2.82	2.81	2.88	2.82	2.82	2.81	0	0	2.81	2.82	2.82	2.88	2.81	2.98	8.99				

2. TRANSISTORS

TR NO.	Q606	Q609	Q611	Q613	Q6011	Q6012	Q6031	Q6032	Q6041	Q6042	Q6071	Q6072	Q6081	Q6082	Q6A01	Q6A03	
E	0	0.14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C	0	5.13	0	5.14	0	0	0	0	0	5.55	0	0	0	0	0	0.94	
B	0	0.47	5.55	0	0.63	0.63	0	0	5.55	0	0	0	0	0	11.87	0	

(CASSETTE)-PLAY

1. IC

IC NO.	PIN NO.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
IC601	10.26	2.26	0	2.19	2.14	2.16	2.15	0	2.17	0	2.15	2.16	2.14	2.19	2.2	2.26				
IC602	5.72	0	2.81	2.88	2.82	2.82	2.81	0	0	2.81	2.82	2.82	2.88	2.81	2.98	8.82				

2. TRANSISTORS

TR NO.	Q606	Q609	Q611	Q613	Q6011	Q6012	Q6031	Q6032	Q6041	Q6042	Q6071	Q6072	Q6081	Q6082	Q6A01	Q6A03	
E	11.88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
C	11.85	0	4.98	0	0	0	0	0	5.73	0	0	0	0	0	0.7	0	
B	11.16	0	0	0.65	0	0	0.7	0.7	0	0	0.67	0.67	0.67	0.67	0	0.7	

VOLTAGES OF THE MAIN PCB ASSY (2/2)

1. IC

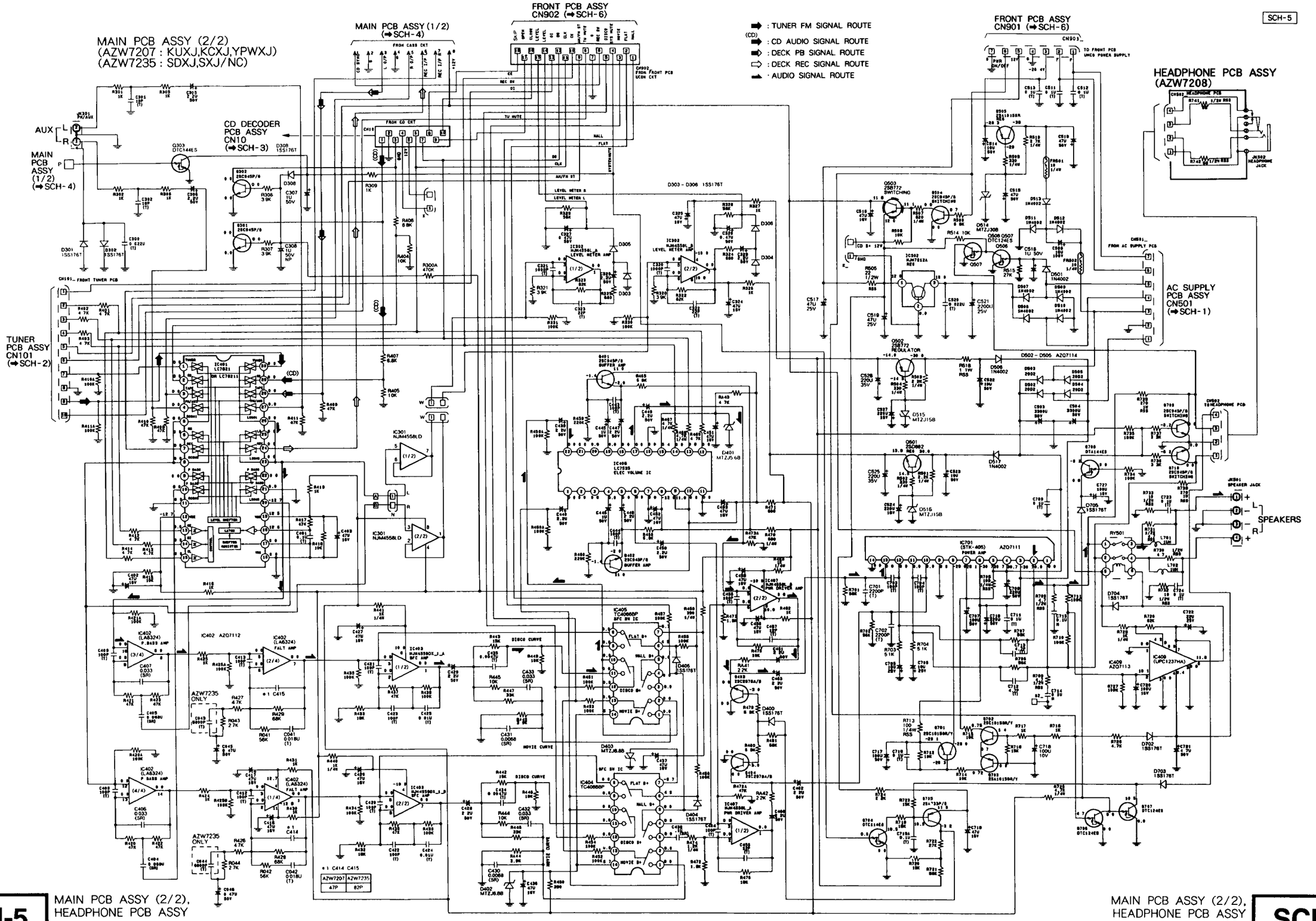
IC NO.	PIN NO.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC302	0	0	0	−10	0	0	0	10												
IC401	0	0	0	0	0	0	0	0	0	0	0	−12.7	0	0	0	0	0	12.6	12.5	−12.7
IC402	0	0	0	12.7	0	0	0	0	0	0	−12.8	0	0	0						
IC403	0	0	0	−10	0	0	0	10												
IC404	0	0	0	0	0	4.9	−6.7	0	0	0	0	0	0	6.7						
IC405	0	0	0	0	0	4.9	−6.7	0	0	0	0	0	0	6.7						
IC406	0	0	0	0	0	0	0	−12	11	0	0	0	0	0	5.4	0	0	0	0	0
IC407	0	0	0	−10	0	0	0	10												
IC409	0	18.1	0	0.4	0	11.8	0	4.2												
IC502	12	0	18																	
IC701	0	0	−30.7	30.7	30.7	−30.7	29.1	−29	0	0	0	0	0	0						

IC NO.	PIN NO.										TR NO.	Q301	Q302	Q401	Q402	Q403	Q404	Q501	Q502	Q503
	21	22	23	24	25	26	27	28	29	30										
IC401	0	0	0	0	0	0	0	0	0	0	E	0	0	−2	−2	0	0	13.9	−14	12
IC406	0	0									C	0	0	11	11	0	0	30	−30	11.8
											B	0	0	−1.4	−1.4	−3	−3	14.5	−14.5	11.1

2. TRANSISTORS

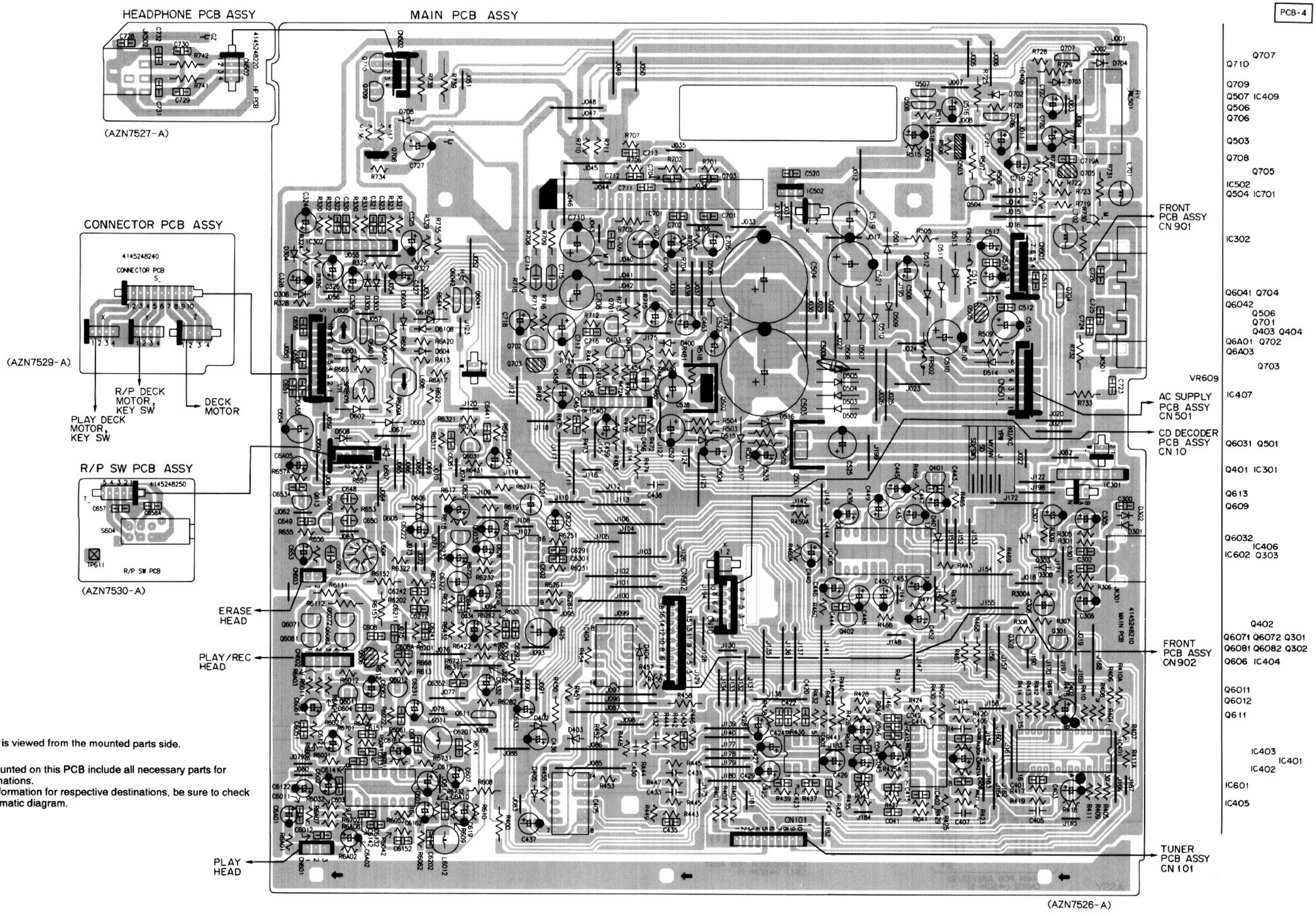
TR NO.	Q504	Q505	Q701	Q702	Q703	Q704	Q705	Q706	Q707	Q708	Q709	Q710								
E	0	−28.3	−29.1	0.7	0.7	0	11.8	0	0	0	0	0								
C	0	−38	−29	0.75	0.72	10.5	−3.2	0	10.5	−8.2	0	0								
B	0.7	−29	−28.3	1.4	0	0	10.5	4.7	0	0	−8.2	−8.2								

3.5 MAIN PCB (2/2) AND HEADPHONE PCB ASSEMBLIES



SCH-5 MAIN PCB ASSY (2/2), HEADPHONE PCB ASSY

MAIN PCB ASSY (2/2), HEADPHONE PCB ASSY **SCH-5**



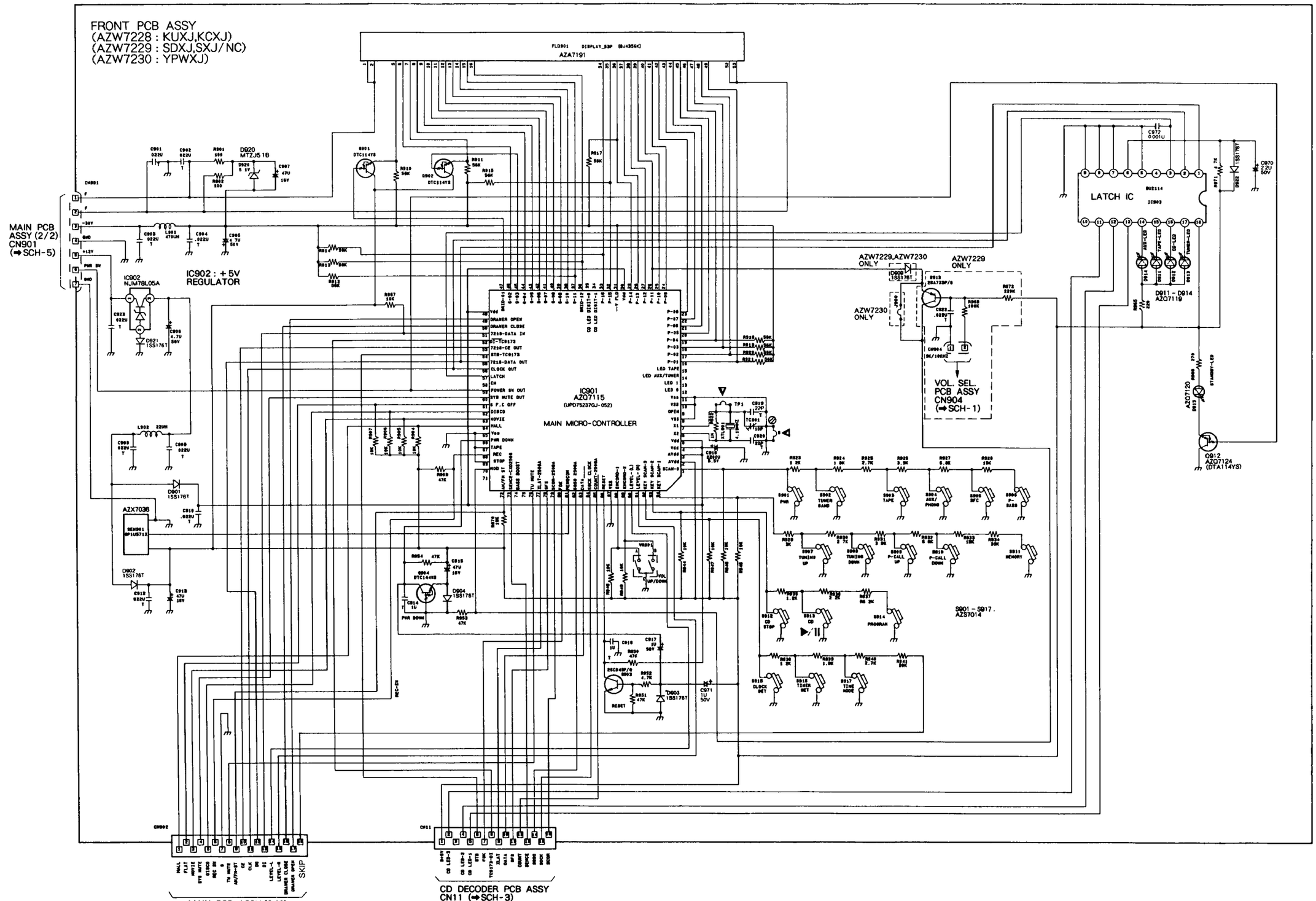
PCB-4

Q707
Q710
Q709
Q507 IC409
Q506
Q706
Q503
Q708
Q705
IC502
Q504 IC701
IC302
Q6041 Q704
Q6042
Q506
Q701
Q403 Q404
Q6A01 Q702
Q6A03
Q703
VR609
IC407
Q6031 Q501
Q401 IC301
Q613
Q609
Q6032
IC406
IC602 Q303
Q402
Q6071 Q6072 Q301
Q6081 Q6082 Q302
Q606 IC404
Q6011
Q6012
Q611
IC403
IC401
IC402
IC601
IC405

- 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.

3.6 FRONT PCB ASSY

SCH-6



VOLTAGES OF THE FRONT PCB ASSY

1. IC

IC NO.	PIN NO.																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC901	4.9	4.9	4.9	4.9	4.9	2.3	2.3	0	4.9	0	0	1	0.6	0.6	0	-23.2	-15	-23.2	-27.5	-25.3
IC902	11.8	0	5.6																	
IC903	0	0	0	4.9	0	4.9	0	0	0	1.3	0	0	0	0.7	0.7	0.6	0	4.9		

IC NO.	PIN NO.																			
	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
IC901	-18.7	-12.2	-18.7	-12.2	-16.6	-14.4	-25.3	-27.5	-18.9	4.9	-27.7	-14.5	-21	0	0	-25.7	-25.7	-25.7	-25.7	-25.7

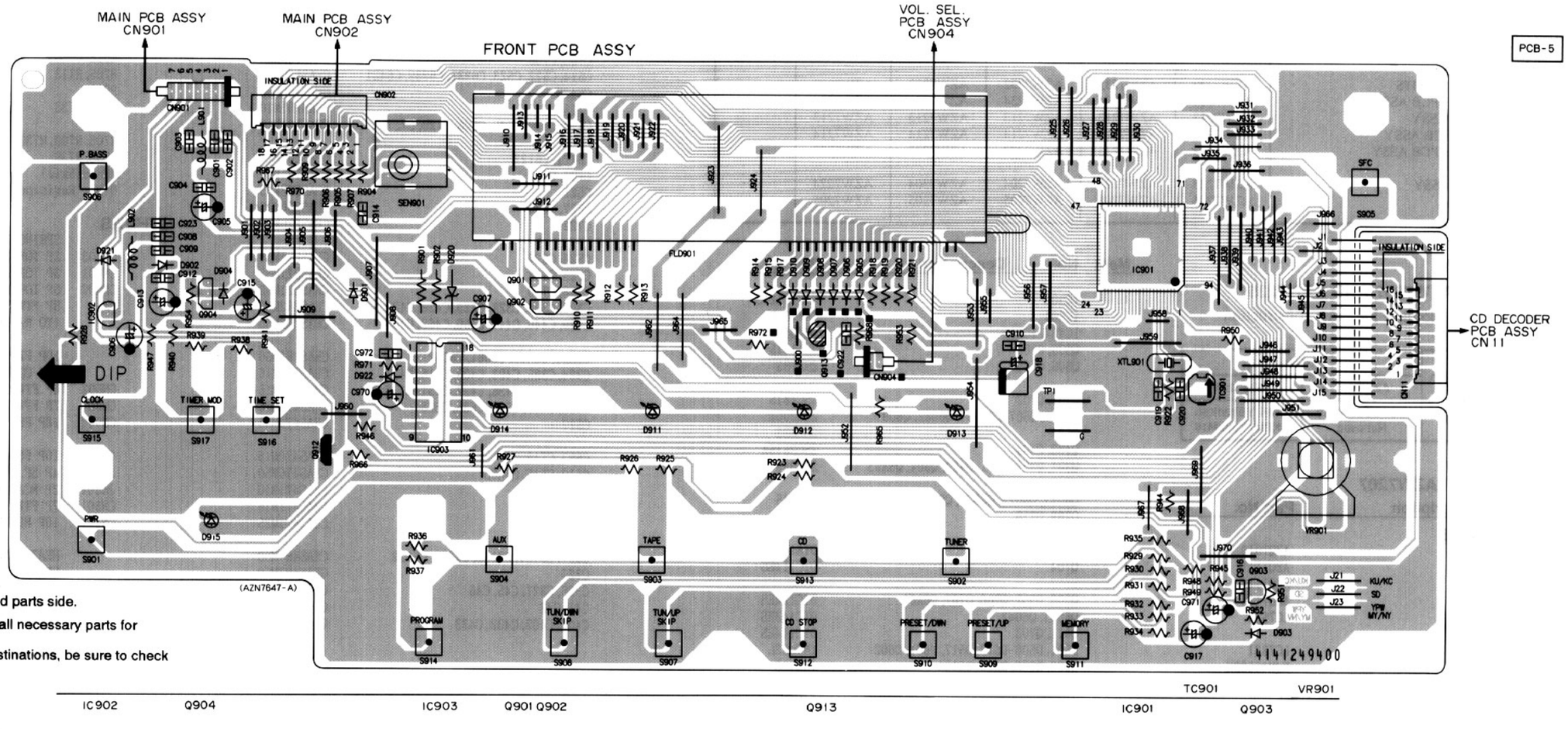
IC NO.	PIN NO.																			
	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
IC901	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7	4.9	1.2	1.2	4.9	1	0	0	4.9	0	0	0	4.6	4.8

IC NO.	PIN NO.																			
	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
IC901	4.9	0	0	0	0	4.8	0	4.8	0	0	0	4.9	0.2	4.9	0	0	0	0.7	0.6	1.2

IC NO.	PIN NO.																			
	81	82	83	84	85	86	87	88	89	90	91	92	93	94						
IC901	0.8	1	0	0.9	1	4.8	0	4.9	4.8	0.6	0.6	4.8	4.8	4.8						

2. TRANSISTORS

TR NO.	Q901	Q902	Q903	Q904	Q912	Q913
E	-25.8	-25.8	0	0	4.6	1.4
C	4.9	4.9	4.8	4.8	0	1.1
B	-25.7	-25.6	0	0	4.6	2



- 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.

4. 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%).

560 Ω → 56 × 10¹ → 561 ····· RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ····· RD1/4PU 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 1R0 ····· RS1P 1 R 0 K

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

5.62k Ω → 562 × 10¹ → 5621 ····· RN1/4PC 5 6 2 1 F

LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No. of XR-J1500C					Remarks
		KUXJ	KCXJ	SDXJ	SXJ/NC	YPWXJ	
NSP	MAIN PCB ASSY KITS	AZW7216	AZW7216	AZW7201	AZW7201	AZW7216	
	├ MAIN PCB ASSY	AZW7207	AZW7207	AZW7235	AZW7235	AZW7207	
NSP	├ HEADPHONE PCB ASSY	AZW7208	AZW7208	AZW7208	AZW7208	AZW7208	
NSP	├ VOL SEL. PCB ASSY	Not used	Not used	AZW7209	AZW7209	Not used	
NSP	├ CONNECTOR PCB ASSY	AZW7210	AZW7210	AZW7210	AZW7210	AZW7210	
NSP	└ R/P SW PCB ASSY	AZW7211	AZW7211	AZW7211	AZW7211	AZW7211	
	FRONT PCB ASSY	AZW7228	AZW7228	AZW7229	AZW7229	AZW7230	
NSP	CD DECODER ASSY KITS	AZW7232	AZW7232	AZW7232	AZW7232	AZW7232	
	├ CD DECODER PCB ASSY	AZW7234	AZW7234	AZW7234	AZW7234	AZW7234	
NSP	├ CD LED PCB ASSY	AZW7213	AZW7213	AZW7213	AZW7213	AZW7213	
NSP	├ CD SENSOR PCB ASSY	AZW7214	AZW7214	AZW7214	AZW7214	AZW7214	
NSP	└ CD CONTROL PCB ASSY	AZW7233	AZW7233	AZW7233	AZW7233	AZW7233	
NSP	AC SUPPLY PCB ASSY	AZW7223	AZW7223	AZW7204	AZW7204	AZW7224	
	TUNER PCB ASSY	AZW7205	AZW7205	AZW7205	AZW7205	AZW7205	

MAIN PCB ASSY

• CONTRAST OF AZW7207 AND AZW7235

AZW7207 and AZW7235 have the same construction except for the following :

Mark	Symbol & Description	Part No.	
		AZW7207	AZW7235
	C414,C415	CCPUSL470J50	CKPUYB820K50
	C43,C44	Not used	CKPUYX682M16

• PARTS LIST FOR AZW7207

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC602		AZQ7010
	IC701		AZQ7111
	IC402		AZQ7112
	IC409		AZQ7113
	IC406		LC7535
	IC401		LC7821
	IC403		NJM4558DX
	IC301, IC302, IC407		NJM4558LD
	IC502		NJM7812AS
	IC601		TA7784P
	IC404, IC405		TC4066BP
	Q505, Q703		2SA1015
	Q606, Q705		2SA733
	Q701, Q702		2SC1815
	Q6071, Q6072, Q6081, Q6082, Q609		2SC2001
	Q501		2SD882
	Q403, Q404		2SC2878A
	Q301, Q302, Q401, Q402, Q504, Q6A03		2SC945
	Q6011, Q6012, Q6031, Q6032, Q613		2SC945
	Q709, Q710		2SC945
	Q502, Q503		2SB772
	Q708		DTA144ES
	Q704		DTC114ES
	Q506, Q507, Q706, Q707, Q6A01		DTC124ES
	Q6041, Q6042		DTC143ES
	Q611, Q703		DTC144ES
	D501, D506-D513, D517, D601, D602		1N4002L
	D603, D605, D606, D610A		1N4148
	D301-D306, D308, D400, D404, D405, D603A		1SS176T
	D604, D607, D608, D610B, D702-D705		1SS176T
	D502-D505		AZQ7114
	D514		MTZJ30B
	D402, D403		MTZJ6.8B
	D515, D516		MTZJ15B
	D401		MTZJ5.6B
RELAY			
	RY501		AZS7031
COILS			
	L606	(470 μH)	AZT7021
	L605	(4.7mH)	AZT7047
	L604	BIAS OSC COIL	AZT7048
	L701, L702	(1 μH)	AZT7076
CAPACITORS			
	C503, C504	(3300 μF/50V)	AZC7015
	C301, C302		CCPUSL100J50
	C456, C457		CCPUSL120J50
	C322, C323		CCPUSL220J50
	C414, C415		CCPUSL470J50
	C712, C713		CCPUSL4R7K50
	C308, C6321, C6322		CEANP010M50
	C460, C461		CEANP2R2M50
	C307, C445, C446, C518, C6331, C6332		CEAS010M50
	C508		CEAS100M100
	C705, C706		CEAS100M25
	C514, C522, C523, C6231, C6232, C6421		CEAS100M50
	C6422		CEAS100M50
	C718		CEAS101M10
	C617, C619, C625, C626, C720, C727		CEAS101M16
	C6121, C6122		CEAS101M16
	C707, C717		CEAS101M50
	C521		CEAS222M25
	C627, C634		CEAS220M16
	C722		CEAS220M25
	C524, C527		CEAS221M16
	C525, C528		CEAS221M35
	C708, C710		CEAS221M50
	C305, C306, C328, C329, C428, C429		CEAS2R2M50
	C439, C440, C447-C450, C462, C463		CEAS2R2M50
	C6A01, C6A02, C6061, C6062		CEAS2R2M50
	C324, C325, C402, C403, C416, C417		CEAS470M16
	C426, C427, C436, C437, C451-C453		CEAS470M16
	C458, C459, C516, C535, C628		CEAS470M16
	C517		CEAS470M25
	C653, C719		CEAS470M16
	C510, C515, C6A05		CEAS470M50
	C602		CEAS471M10
	C654		CEAS471M16
	C519		CEAS471M25
	C607, C6161, C6162, C6221, C6222		CEAS4R7M50
	C721		CEAS4R7M50
	C326, C327, C45, C46		CEASR47M50
	C41, C42		CGCYX183K25
	C406, C407, C432, C433		CGCYX333K25
	C430, C431		CGCYX682K25
	C404, C405		CGCYX683K25
	C408, C409, C412, C413		CKPUYB101K50
	C420-C423, C443, C444, C454, C455		CKPUYB101K50
	C703, C704		CKPUYB101K50
	C320, C321, C603		CKPUYB102K50
	C6291, C6292, C6301, C6302		CKPUYB271K50
	C6211, C6212, C644i		CKPUYB471K50
	C6442		CKPUYB471K50
	C6131, C6132, C6141, C6142		CKPUYB681K50
	C401, C438, C511-C513, C709, C711		CKPUYF104Z50
	C716, C719A, C723, C724		CKPUYF104Z50
	C300, C41, C42, C520, C608, C608A		CKPUYF223Z25
	C651, C6A55, C653A, C655, C656, C658		CKPUYF223Z25
	C6241, C6242		CKPUYX122M16
	C6351, C6352, C6A10, C6A11		CKPUYX152M16
	C6011, C6012, C604, C6051		CKPUYX182M16
	C701, C702		CKPUYX222M16
	C434, C435, C649		CKPUYX472M16
	C424, C425, C6151, C6152		CKPUYY103M16
	C648		CQMXA103J100
	C714, C715		CQMXA104J100
	C650		CQMXA153J100
	C652		CQPA223J100
RESISTORS			
	FR501, FR502		RFA1/4PS100J
	R518		RF1/2LMF010J
	R705, R713		RFA1/4PS101J
	R505		RS1/2LMF220J
	R732, R733		RS1/2LMF100J
	R708, R709, R730, R731		RS1/2LMF4R7J
	R738, R739		RS1LMF271J
	VR609 (5kΩ)		VRTP6VS502
	Other Resistors		RD1/4PU□□□J
OTHERS			
		SPRING TR. (B)	AZB7019
	CN603	2P TOP BASE	AZK1073
	CN601	3P TOP BASE	AZK1074
	CN602	5P TOP BASE	AZK1076
	CN	5P FTW TOP BASE(2.0) (TO R/P SW PCB ASSY)	AZK7010
		10P FTW TOP BASE (TO CONNECTOR PCB ASSY)	AZK7067
	CN502	4P FTW TOP BASE(2.0)	AZK7096
	CN901	7P FTW TOP BASE	AZK7230
	CN902	18P FFC TOP BASE(1.25mm)	AZK7231
	CN10	10P FFC TOP BASE(1.25mm)	AZK7232
	JK501	4P SP. TERMINAL	AZK7233
	JK301	2P RCA JACK	AZK7234
	CN501	7P FTW BASE(2.5mm)	AZK7239
	CN101	10P HEADER IMSA-9115	AZK7240
		HEAT SINK BRACKET	AZN7142
		HEAT SINK ASSY(7FIN)	AZN7525
		WIRE HOLDER 2P20	AZK7061
		WIRE HOLDER 2P25	AZK7248
		EARTH TER ASSY BLK-2	AZK7249
		HEAT SINK(for Q501, Q502)	AZN7648

Mark	No.	Description	Part No.

HEADPHONE PCB ASSY

RESISTORS

	R741, R742		RS1/2LMF680J

OTHERS

	CN502	WIRE HOLDER 4P20	AZK7098
	JK502	HEADPHONE JACK	AZK7235
		H/P PCB 48×28×1.6mm	AZN7527

VOL. SEL. PCB ASSY (SDXJ AND SXJ/NC ONLY)

SWITCHES

⚠	S502		AZS7005
	S501		AZS7006

OTHERS

	CN904	2P FTW TOP BASE(2.0)	AZK7011
	VOL. SEL. PCB		AZN7528

CONNECTOR PCB ASSY

OTHERS

		4P CON. ASSY 140mm	AZD7021
		WIRE HOLDER 4P25	AZK7054
		WIRE HOLDER 10P20	AZK7055
	CN	4P CON. ASSY 240mm (TO DECK SW)	AZK7241
		CONNECTOR PCB 44×41×1.6mm	AZN7529

R/P SW PCB ASSY

SWITCH

	S604		AZS1058

CAPACITORS

	C657, C658A		CKPUYF223Z25

OTHERS

		WIRE HOLDER 5P20	AZK7051
	TP611	TERMINAL PIN "K"	AZK7052
		R/P SW PCB 33×30×1.6mm	AZN7530

FRONT PCB ASSY

• CONTRAST OF AZW7228, AZW7229 AND AZW7230

AZW7228, AZW7229 and AZW7230 have the same construction except for the following :

Mark	Symbol & Description	Part No.		
		AZW7228	AZW7229	AZW7230
	Q913	Not used	2SA733	Not used
	D909	Not used	1SS176T	1SS176T
	C922	Not used	CKPUYF223Z25	Not used
	R968	Not used	RD1/6W104J	Not used
	R972	Not used	RD1/6W224J	Not used
	CN904 WIRE HOLDER 2P20	Not used	AZK7061	Not used

Mark	No.	Description	Part No.

• PART LIST FOR AZW7228

SEMICONDUCTORS

	IC901		AZQ7115
	IC902		NJM78L05A
	IC903		BU2114
	Q903		2SC945
	Q912	(DTA114YS)	AZQ7124
	Q901, Q902		DTC114YS
	Q904		DTC144WS
	D901-D904, D921, D922		1SS176T
	D911-D914		AZQ7119
	D915		AZQ7120
	D920		MTZJ5.1B

SWITCHES

	S901-S917		AZS7014

COILS

	L901	(470μH)	AZT7077
	L902	(22μH)	AZT7078

CAPACITORS

	TC901	TRIMMER(10P)	AZC7265
	C919, C920		CCPUSL220J50
	C918	(2200μ, 5.5V)	AZC7272
	C917, C971		CEJA010M50
	C970		CEJA2R2M50
	C907, C913, C915		CEJA470M16
	C905, C906		CEJA4R7M50
	C972		CKPUYF103Z25
	C914, C916		CKPUYF104Z50
	C901-C904, C908-C910, C912, C923		CKPUYF223Z25

RESISTORS

	VR901	ROTARY ENCODER	ASX1021
	Other Resistors		RD1/4PU□□□J

OTHERS

	FLD901	FLD BJ435GK	AZA7191
	XTL901	X'TAL(4.194304MHz)	AZC7264
	CN902	18P FFC SIDE BASE	AZK7246
	CN11	16P FFC SIDE BASE 96	AZK7247
	CN901	WIRE HOLDER 7P20	AZN7537
		DISPLAY HOLDER	AZN7538
		LED HOLDER	AZN7539
	SEN901	REMOTE SENSOR(GP1U571X)	AZX7036

CD DECODER PCB ASSY

SEMICONDUCTORS

	IC1		AZQ7016
	IC3		AZQ7019
	IC4		CXD2508AQ
	IC5		NJM4558LD
	IC2		TC9173P
	Q1, Q2, Q6, Q7		2SA952
	Q3, Q5, Q8, Q9		2SC2001
	Q4, Q10-Q12		2SC945A
	D24-D27		1N4002L
	D1		1SS176T
	D2		MTZJ5.1A
	D3		MTZJ5.6B

Mark	No.	Description	Part No.
COILS			
	L1	(10 μH)	AZT7016
	L4	(1.2 μH)	AZT7017
CAPACITORS			
	C39		CCPUSL220J50
	C40		CCPUSL240J50
	C2, C3, C11, C22, C30, C41-C43, C46		CEAS101M10
	C24		CEAS220M16
	C45		CEAS221M10
	C57, C58		CEAS2R2M50
	C29		CEAS471M10
	C19, C36		CEAS4R7M50
	C9, C25		CEASR47M50
	C85-C87, C89		CKPUYB101K50
	C38		CKPUYB102K50
	C53-C56		CKPUYB151K50
	C34		CKPUYB221K50
	C51, C52		CKPUYB331K50
	C88		CKPUYB561K50
	C11A, C13, C15, C16, C18, C23, C37, C70, C71		CKPUYF104Z50
	C8		CKPUYF223Z25
	C31		CKPUYF473Z50
	C32		CKPUYX152M16
	C14, C35A, C35B		CKPUYX222M16
	C59, C60		CKPUYX272M16
	C1		CKPUYX472M16
	C4, C6, C10, C12, C20, C27, C33, C35		CKPUYY103M16
	C17, C28		CQMXA104J100
	C26		CQMXA223J100
	C5, C7		CQMXA333J100
	C21		CQMXA473J100
RESISTORS			
	VR1	SFR(50kΩ)	AZC7105
	Other Resistors		RD1/4PU□□□J
OTHERS			
	XTL1	X'TAL(33.8688MHz)	AZC7058
		4P CON. ASSY 300×200mm	AZD7008
		3P CON. ASSY 200mm	AZD7017
		8P CON. ASSY 400mm	AZD7034
		5P CON. ASSY(PH) 350mm	AZD7077
	CN3	6P CON. ASSY 400mm	AZD7078
	CN1	PH 5P TOP BASE	AZK7012
	CN2	PH 8P TOP BASE	AZK7022
	CN4	WIRE HOLDER 5P20	AZK7051
	CN13	WIRE HOLDER 2P20	AZK7061
	CN12	EH 2P TOP BASE	AZK7068
	CN8	EH 2P SIDE BASE	AZK7085
	CN7	EH 3P SIDE BASE	AZK7086
	CN5	EH 4P SIDE BASE	AZK7087
	CN9	WIRE HOLDER 4P20	AZK7098
	P1	EARTH TER ASSY	AZK7105
	CN11	16P FFC SIDE BASE	AZK7236
	CN10	10P FFC SIDE BASE	AZK7237

Mark	No.	Description	Part No.
CD LED PCB ASSY			
SEMICONDUCTORS			
	D20, D21		AZQ7121
	D17-D19, D22		AZQ7122
RESISTORS			
	All Resistors		RD1/4PU□□□J
OTHERS			
	CN9	WIRE HOLDER 4P20	AZK7098
		CD LED PCB 140×10×1.6mm	AZN7533
CD SENSOR PCB ASSY			
SEMICONDUCTORS			
	Q1		AZQ7007
	D4		AZQ7008
SWITCHES			
	S1, S2		AZS7032
OTHERS			
	CN4	WIRE HOLDER 5P20	AZK7051
		2 LED HOLDER	AZK7059
		CD SEN. PCB 39.9×20×1.6mm	AZN7534
CD CONTROL PCB ASSY			
SWITCHES			
	S11, S12		AZS7014
RESISTORS			
	All Resistors		RD1/4PU□□□J
OTHERS			
	CN13	WIRE HOLDER 2P20	AZK7061
		CD CONTROL PCB 73×16	AZN7646

Mark	No.	Description	Part No.

AC SUPPLY PCB ASSY

• CONTRAST OF AZW7223, AZW7204 AND AZW7224

AZW7223, AZW7204 and AZW7224 have the same construction except for the following :

Mark	Symbol & Description	Part No.		
		AZW7223	AZW7204	AZW7224
	R500 (3.3M,1/2W)	AZC7023	Not used	Not used
	AC SUP. PCB 95 × 98.5 × 1.6 MM	AZN7550	AZN7535	AZN7535

• PARTS LIST FOR AZW7223

RESISTOR

	R500(3.3MΩ, 1/2W)	AZC7023

OTHERS

	TP502, TP503 TERMINAL PIN "L"	AZK7079
	FUSE HOLDER	AZK7158
	CN501 WIRE HOLDER 7P25	AZK7242
	AC SUP. PCB 95×98.5×1.6mm	AZN7550

TUNER PCB ASSY

SEMICONDUCTORS

	IC102	AZQ7116
	IC101	LA1186N
	IC201	LC7218
	Q101, Q102	2SC1675
	Q107, Q108	2SC945
	Q106	2SK161
	Q105	AZQ7124
	Q109	DTC114YS
	D101, D102, D105, D111, D112, D202	1SS176T
	D108	AZQ7123
	D106-1, D106-2	AZQ7127
	D110	MTZ5.6B

COILS AND FILTERS

	L103 FM OSC. COIL	AZT1072
	L102 FM RF COIL	AZT1074
	L107, L108	AZT1078
	L105 MW OSC. COIL	AZT7003
	L104 AM ANT. COIL	AZT7029
	L101 FM ANT. COIL	AZT7079
	L203 P. COIL	AZT7080
	CF103 CERAMIC F.	AZT7004
	CF101 CERAMIC F.	AZT7015
	CF102 CERAMIC F.	AZT7027

TRANSFORMERS

	T101 FM IF TRANS.	AZT1080
	T102 AM IF TRANS.	AZT1082

Mark	No.	Description	Part No.

CAPACITORS

	TC101, TC102 TRIMER (10P)	AZC7268
	C213, C214	CCCCH270J50
	C105	CCPUCH180J50
	C109	CCPUCH2R2K50
	C110	CCPUCH4R7K50
	C117, C124	CCPUSL200J50
	C121	CCPUSL470J50
	C111, C145	CCPUSL560J50
	C123, C125, C129, C161, C162	CEAS010M50
	C127	CEAS100M25
	C118, C140, C142	CEAS101M16
	C215	CEAS220M16
	C122	CEAS2R2M50
	C135, C143	CEAS3R3M50
	C207	CEAS470M16
	C137	CEASR47M50
	C114, C171	CGCYF104Z25
	C112, C155, C209, C210-C212	CKPUYB101K50
	C101, C102, C119, C134, C148, C157	CKPUYB102K50
	C100D	CKPUYB470K50
	C100A-C100C	CKPUYB472K50
	C150	CKPUYF104Z50
	C104, C106-C108, C128, C139, C141	CKPUYF223Z25
	C147, C149, C153, C160	CKPUYF223Z25
	C126	CKPUYF473Z16
	C151, C152	CKPUYX152M16
	C138, C144, C208	CKPUYY103M16
	C132, C133	CQMXA103J100
	C130, C131	CQMXA153J100
	C116	CQPA471J100

RESISTORS

	R130	RS1/2LMF151J
	Other Resistors	RD1/4PU□□□J

OTHERS

	X201 X'TAL(7.2MHz)	AZC1243
	CF105 RESONATOR CSB456F15	AZC7266
	CF104 RESONATOR CDA10.7MG43-A	AZC7267
	JK101 4P ANT TER.	AZK7063
	TP1, TP2 2P PIN HEADER(2.5mm)	AZK7068
	CN101 10P SOCKET IMEA9115S	AZK7243
	EARTH TERMINAL	AZN7536

5. ADJUSTMENTS

5.1 CLOCK FREQUENCY ADJUSTMENT

(1) Connect a Frequency Counter to TP1 and G on the FRONT PCB ASSY via the BUFFER AMP PCB as shown in Fig. 1.

(2) Adjust TC901 so that the frequency becomes 4.194304MHz ± 40Hz (4.194264MHz to 4.194344 MHz).

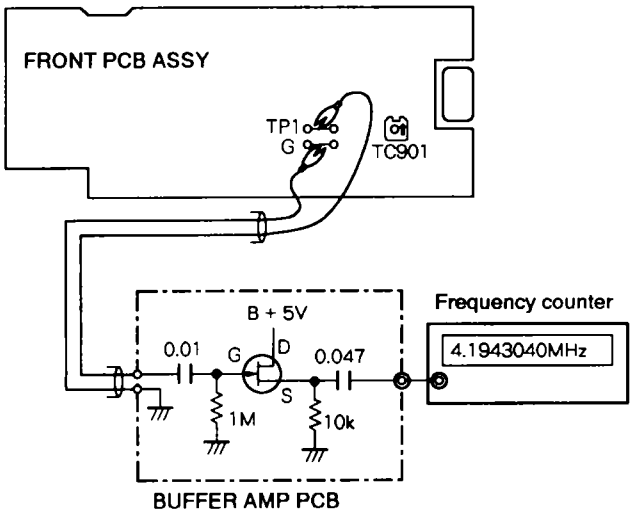


Fig. 1 Clock Frequency Adjustment

5.2 TUNER SECTION

5.2.1 FM TUNER SECTION

■ FM Range Adjustment

(1) Connect FM RF signal generator input through JK101 FM antenna IN.

(2) Digital DC voltmeter connected to TP2 on the TUNER PCB ASSY.

(3) Tuning to 87.5MHz, adjust L103 and let counter reading as 1.2V ± 0.05V.

(4) Tuning to 108MHz, check the reading as 6.5V to 8.5V.

(5) Repeat adjustments as necessary to minimize tracking error.

■ FM Sensitivity Adjustment

(1) Connect FM RF signal generator input though JK101 FM antenna IN.

(2) Oscilloscope connected to speaker terminal. (pin 3 and 4 of JK501)

(3) Tuning to 90MHz, adjust L102 for maximum output.

(4) Tuning to 106MHz, adjust TC101 for maximum output.

(5) Repeat adjustments as necessary to L102 and TC101 for maximum output.

5.2.2 AM TUNER SECTION

■ AM Range Adjustment

(1) AM RF signal generator output from loop antenna, and received by AM loop antenna.

(2) Digital DC voltmeter connected to TP2 on the TUNER PCB ASSY.

(3) Tuning to 530kHz, adjust L105 and let counter reading as 1.1V ± 0.05V.

(4) Tuning to 1720kHz, check counter reading as 6.5V to 8.5V.

(5) Repeat adjustments as necessary to minimize tracking error.

AM Frequency : 530kHz to 1720kHz (10kHz Step)
522kHz to 1611kHz (9kHz Step)

■ AM IF Adjustment

(1) Connect AM SG (999kHz mod. 30%; 400Hz; 63dB) input from JK101 AM antenna terminal IN.

(2) Connect the oscilloscope to TP1 on the TUNER PCB ASSY.

(3) Adjust T102 on the TUNER PCB ASSY for maximum output. (Fig. 2)

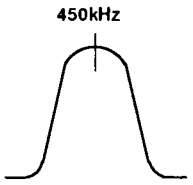


Fig. 2

■ AM Sensitivity Adjustment

(1) Tuning to 600kHz, adjust L104 on the TUNER PCB ASSY for maximum output. (Fig. 3)

(2) Tuning to 1400kHz, adjust TC102 for maximum output. (Fig. 3)

(3) Repeat adjustments as necessary to L104 and TC102 for maximum output.

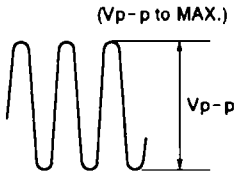


Fig. 3

5.3 CASSETTE DECK SECTION

■ Tape Speed Adjustment

(1) Insert Test tape STD - 301E into Deck I , in play mode. (normal speed)
(2) Digital counter connect to JK501 speaker terminal on the MAIN PCB ASSY.
(3) Adjust VR609 on the MAIN PCB ASSY, let counter reading as 2940Hz to 3090Hz.

■ Head Azimuth Adjustment

(1) Insert Test tape STD - 331E into Deck I , in play mode.
(2) AC milli-voltmeter connect to JK501 Speaker terminal on the MAIN PCB ASSY.
(3) Adjust the left side screw Ⓐ for the maximum output. (Fig. 4)
(4) Insert Test tape STD - 331E into deck II .
(5) In play mode.
(6) Adjust the left side screw Ⓐ for the maximum output. (Fig. 4)

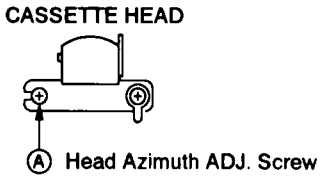


Fig. 4

5.4 CD SECTION

(1) Stop the test disc after the play.
(2) Connect the Voltmeter to CN12 on the CD DECODER PCB ASSY as shown in Fig. 5.
(3) Adjust VR01 so that the voltage becomes 0mV ± 20mV.

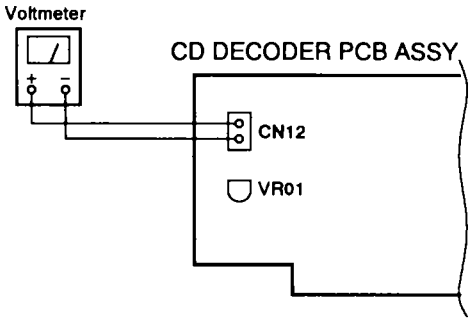


Fig. 5

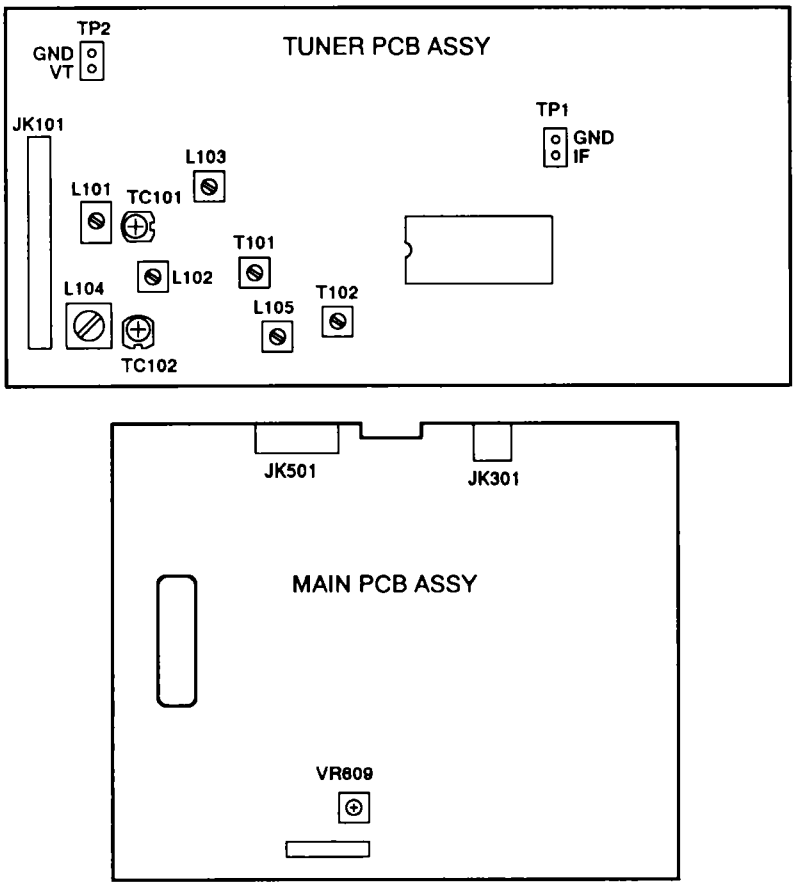


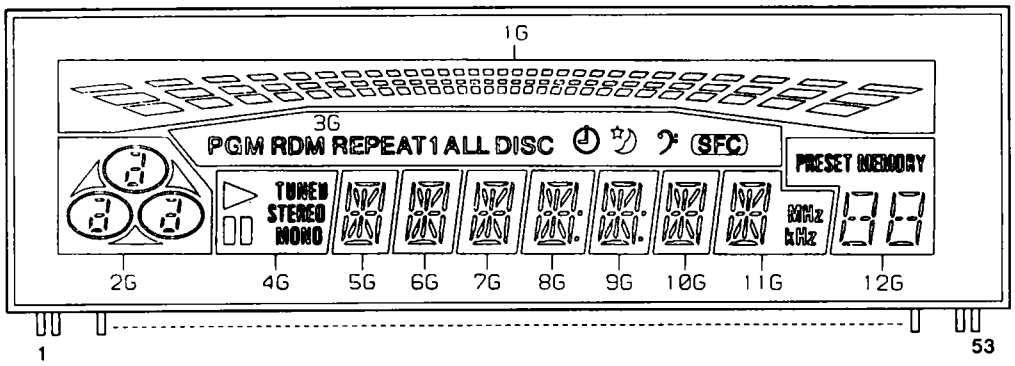
Fig.6 Adjustment points

6. FL INFORMATION

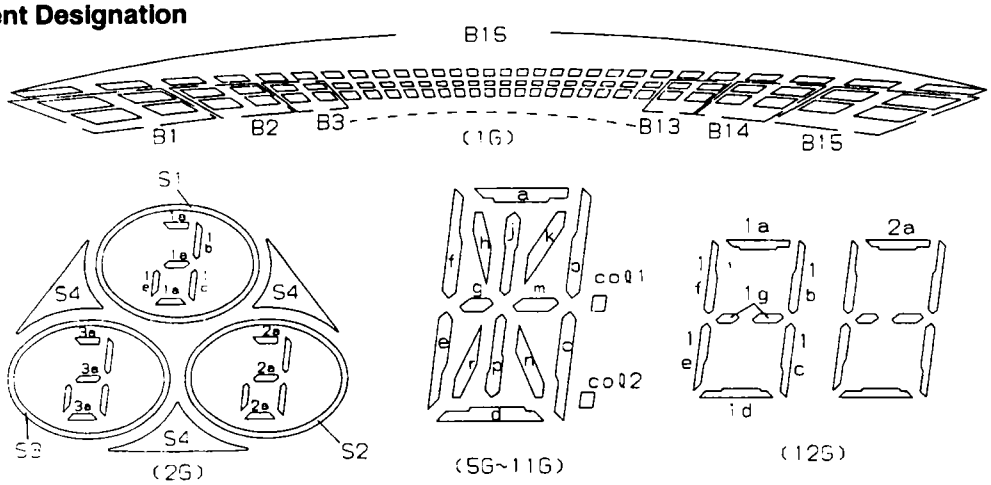
■ AZA7191 (FRONT PCB ASSY : FLD901)

- **FL Display**

- **Grid Assignment and Pin Assignment**



- **Segment Designation**



- **Pin Connection**

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
CONNECTION	F1	F1	NP	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	NP	F2	F2

- **Anode Connection**

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G	12G
P1	B1	1a	PGM	▷	-	-	-	col1	col1	-	MHz	1a
P2	B2	1b	RDM	▯▯	a	a	a	a	a	a	a	1b
P3	B3	1c	REPEAT	TUNED	h	h	h	h	h	h	h	1c
P4	B4	1e	1	STEREO	j	j	j	j	j	j	j	1g
P5	B5	2a	ALL	MONO	k	k	k	k	k	k	k	1c
P6	B6	2b	DISC	-	b	b	b	b	b	b	b	1e
P7	B7	2c	◔	-	f	f	f	f	f	f	f	1d
P8	B8	2e	♪	-	m	m	m	m	m	m	m	2a
P9	B9	3a	𝄢	-	g	g	g	g	g	g	g	2b
P10	B10	3b	SFC	-	c	c	c	c	c	c	c	2f
P11	B11	3c	-	-	e	e	e	e	e	e	e	2g
P12	B12	3e	-	-	r	r	r	r	r	r	r	2c
P13	B13	S1	-	-	p	p	p	p	p	p	p	2e
P14	B14	S2	-	-	n	n	n	n	n	n	n	2d
P15	B15	S3	-	-	d	d	d	d	d	d	d	PRESET
P16	B1S	S4	-	-	-	-	-	col2	col2	-	kHz	MEMORY

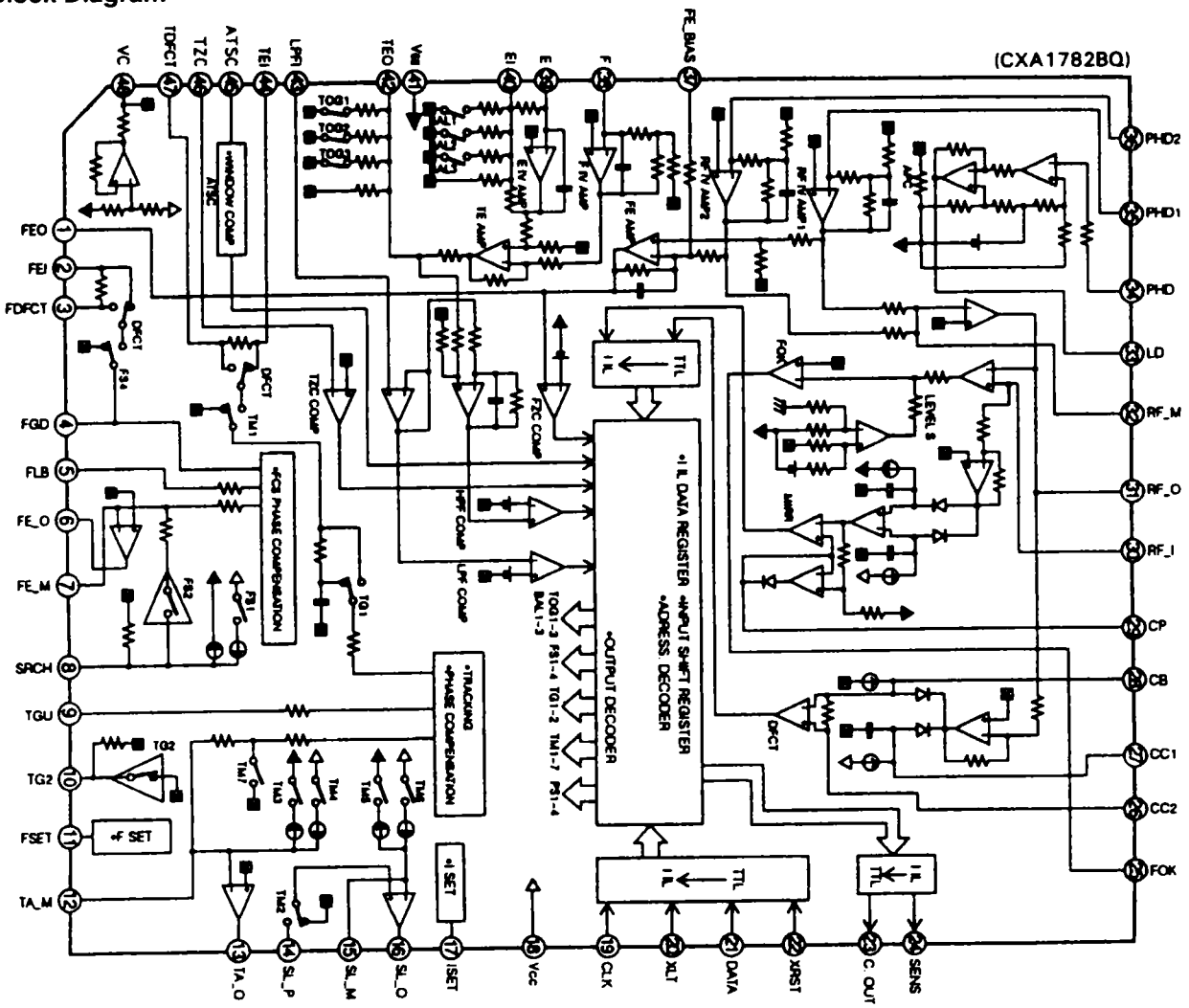
7. IC INFORMATION

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

■ AZQ7016 (IC01 : CD DECODER PCB ASSY)

• RF/Servo Amplifier

• Block Diagram



• Pin Function

No.	Pin Name	I/O	Description
1	FEO	I	Focus errer amplifier output terminal, internally connected to the FZC comparator input.
2	FEI	I	Focus errer input terminal
3	FDFCT	I	Time constant capacitor connection terminal at the time of a defect.
4	FGD	I	Connect this terminal to earth via a capacitor to drop the high-range gain of the focus servo.

No.	Pin Name	I/O	Description
5	FLB	I	Time constant external connection terminal for raising of the focus servo low range.
6	FE O	O	Focus drive output
7	FE M	I	Focus amplifier reversion input terminal
8	SRCH	I	Time constant external connection terminal to produce the focus search waveform.

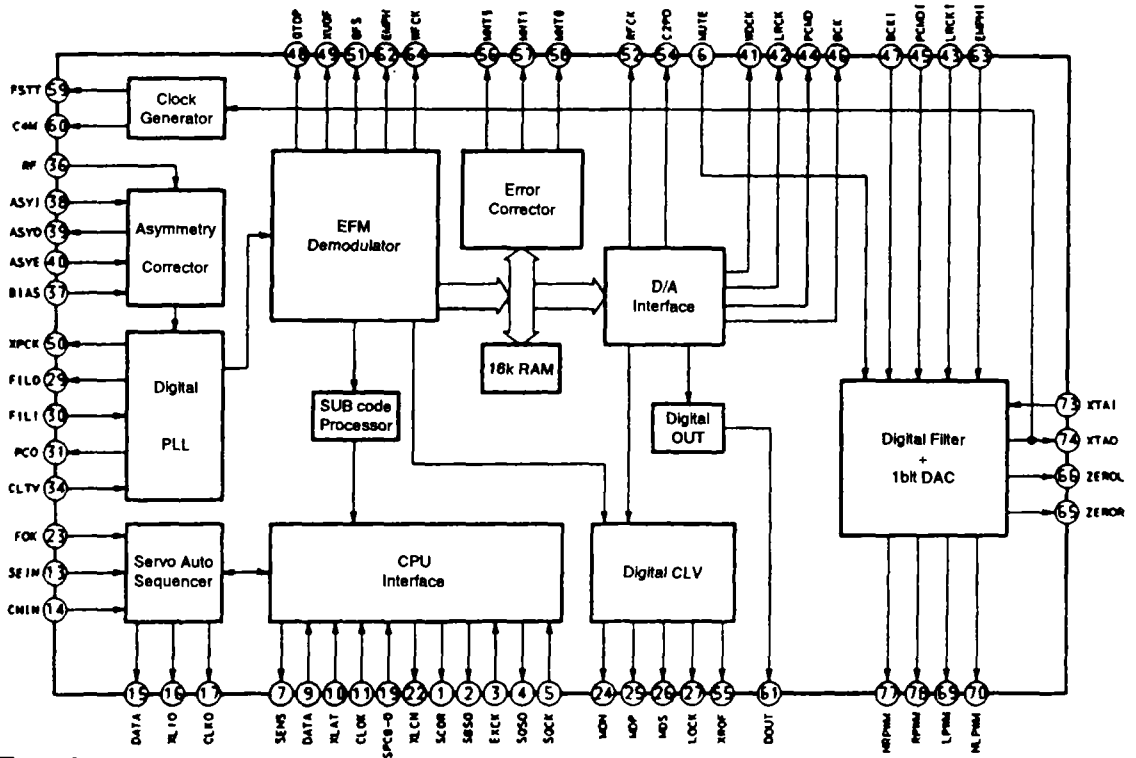
No.	Pin Name	I/O	Description
9	TGU	I	Time constant external connection terminal for tracking high-range gain switching.
10	TG2	I	
11	FSET	I	Terminal for peak setting for focus tracking phase compensation.
12	TA M	I	Tracking amplifier reversion input terminal
13	TA O	O	Tracking drive output
14	SL P	I	Sled amplifier non reversion input terminal
15	SL M	I	Sled amplifier reversion input terminal
16	SL O	O	Sled drive output
17	ISET	I	Current for decision of focus search, track jump, and sled kick height flows.
18	Vcc	–	
19	CLK	I	Serial data transmission clock input from the CPU (no pull-up resistor)
20	XLT	I	Latch input from the CPU (no pull-up resistor)
21	DATA	I	Serial data input from the CPU (no pull-up resistor)
22	XRST	I	Reset input terminal "L" = Reset (no pull-up resistor)
23	C.OUT	O	Signal output for track number count
24	SENS	O	Output of FZC, DFCT, TZC, Gain, BAL, etc. by command from the CPU.
25	FOK	O	Output terminal of the focus OK comparator
26	CC2	O	Input terminal for capacitative-coupled DEFECT bottom hold output
27	CC1	I	DEFECT bottom hold output terminal
28	CB	I	DEFECT bottom hold capacitor connection terminal
29	CP	I	MIRR hold capacitor connection terminal MIRR comparator non reversion input terminal
30	RF I	I	Input terminal for capacitative-coupled RF summing amplifier output
31	RF O	O	RF summing amplifier output terminal Eye pattern checkpoint

No.	Pin Name	I/O	Description
32	RF M	I	RF summing amplifier reversion input terminal The RF amplifier gain is decided by the resistor connected between this terminal and the RFO terminal.
33	LD	O	APC amplifier output terminal
34	PHD	I	APC amplifier input terminal
35	PHD1	I	RFI-V amplifier reversion input terminals Connected to the A+C, B+D terminals of the photodiode and receiving current input.
36	PHD2	I	
37	FE BIAS	I	Bias adjustment terminal of the focus errer amplifier.
38	F	I	F, E I-V amplifier reversion input terminals Connected to F and E of the photodiode and receiving current input.
39	E	I	
40	EI	–	Gain adjustment terminal of the I-V amplifier. (when automatic BAL adjustment is not used)
41	VEE	–	
42	TEO	O	Output terminal of the tracking error amplifier. E-F signal output
43	LPFI	I	Comparator input terminal for BAL adjustment. (input from TEO via LPF)
44	TEI	I	Tracking error input terminal
45	ATSC	I	ATSC detection window comparator input terminal
46	TZC	I	Tracking zero cross comparator input terminal.
47	TDFCT	I	Time constant capacitor connection terminal at the time of a defect.
48	VC	O	(VCC + VEE)/2 DC voltage output terminal

■ CXD2508AQ (IC04 : CD DECODER PCB ASSY)

• Digital Signal Processor

• Block Diagram



• Pin Function

No.	Pin Name	I/O	Description
1	SCOR	O	"H" when subcode sync S0 or S1 has been detected
2	SBSO	O	Serial output of SUBP to W
3	EXCK	I	Clock input for SBSO readout
4	SQSO	O	Serial output of SUBQ 80 BIT
5	SQCK	I	Clock input for SQSO readout
6	MUTE	I	Mute with "H", cancellation with "L"
7	SENS	O	SENS output, output to the CPU
8	XRST	I	System reset, reset with "L"
9	DATA	I	Serial data input from the CPU
10	XLAT	I	Latch input from the CPU, serial data latching with drop
11	CLOK	I	Serial data transmission clock input from the CPU
12	Vss	–	GND

No.	Pin Name	I/O	Description
13	SEIN	I	Sensing input from SSP
14	CNIN	I	Track jump number count signal input
15	DATO	O	Serial data output to SSP
16	XLTO	O	Serial data latching output to SSP, latching with drop
17	CLKO	O	Serial data transmission clock output to SSP
18	SPOA	I	Microcomputer expansion interface (Input A)
19	SPOB	I	Microcomputer expansion interface (input B)
20	SPOC	I	Microcomputer expansion interface (input C)
21	XTSL	I	X'tal select input terminal L : 16.9344MHz , H : 33.8688MHz
22	XLON	O	Microcomputer expansion interface (output)
23	FOK	I	Focus OK input pin, used for SENS output and servo autosequencer

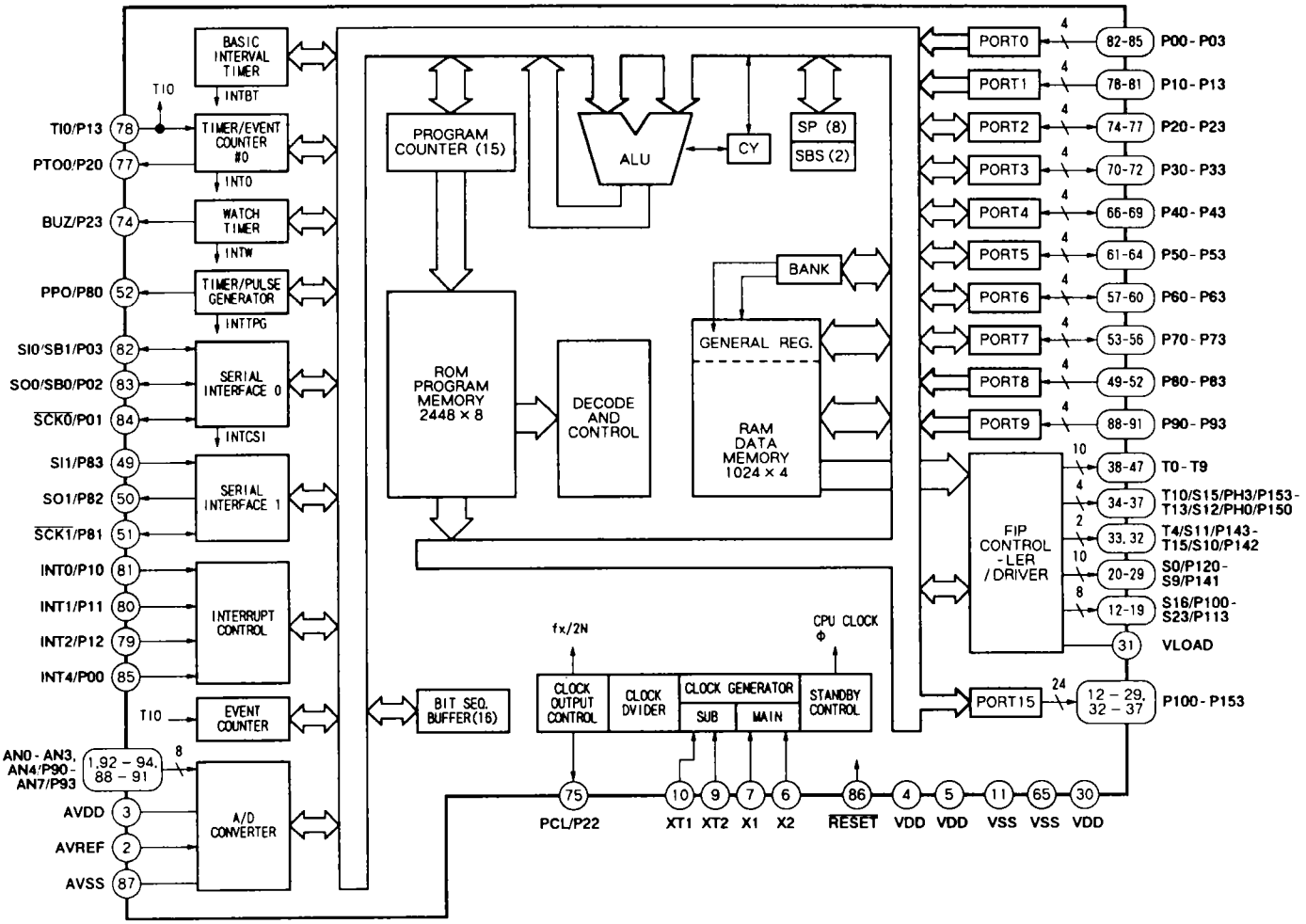
No.	Pin Name	I/O	Description
24	MON	O	Spindle motor ON/OFF control output
25	MDP	O	Spindle motor servo control
26	MDS	O	
27	LOCK	O	GFS sampling at 460 Hz, "H" output when GFS is "H", "L" output with 8 consecutive times "L"
28	TEST	I	TEST pin, GND at the time of normal use
29	FILO	O	Filter output for master PLL (slave = digital PLL)
30	FILI	I	Filter input for master PLL
31	PCO	O	Charge pump output for master PLL
32	V_{DD}	–	Digital power supply for DSP
33	AV_{SS1}	–	Analog GND for DSP
34	CLTV	I	VCO control voltage input for master PLL
35	AV_{DD1}	–	Analog power supply for DSP
36	RF	I	EFM signal input
37	BIAS	I	Asymmetry compensation circuit constant current input
38	ASYI	I	Asymmetry compensation circuit comparation voltage input
39	ASYO	O	EFM full swing output ("L" = V_{SS}, "H" = V_{DD})
40	ASYE	I	"L": Asymmetry compensation OFF, "H": Asymmetry compensation ON
41	WDCK	O	48 bit slot D/A interface, read clock (2FS)
42	LRCK	O	48 bit slot D/A interface, LR clock (FS)
43	LRCKI	I	LR clock input to DAC (48 bit slot)
44	PCMD	O	D/A interface, serial data (2'SCOMP, MSB first)
45	PCMDI	I	Audio data input to DAC (48 bit slot)
46	BCK	O	D/A interface, bit clock
47	BCKI	I	Bit clock input to DAC (48 bit slot)
48	GTOP	O	GTOP output
49	XUGF	O	XUGF output
50	XPCK	O	XPLCK output
51	GFS	O	GFS output
52	RFCK	O	RFCK output

No.	Pin Name	I/O	Description
53	V_{SS}	–	GND
54	C2PO	O	C2PO output
55	XROF	O	XRAOF output
56	MNT3	O	MNT3 output
57	MNT1	O	MNT1 output
58	MNT0	O	MNT0 output
59	FSTT	O	2/3 frequency division output of the pins 73 and 74
60	C4M	O	4.2336 MHz output
61	DOUT	O	Digital Out output terminal
62	EMPH	O	"H" with emphasis for the playback disc, "L" with no emphasis
63	EMPHI	I	DAC deemphasis ON/OFF, ON with "H", OFF with "L"
64	WFCK	O	WFCK (WRITE FRAME CLOCK) output
65	ZEROL	O	No sound data detection output, "H" with no sound data detection (Lch)
66	ZEROR	O	No sound data detection output, "H" with no sound data detection (Rch)
67	DTSI	I	DAC test terminal 1, normally "L"
68	V_{DD}	–	DAC digital power supply
69	LPWM	O	Lch PWM output (reverse phase)
70	NLPWM	O	Lch PWM output (normal phase)
71	AV_{DD2}	–	Power supply for Lch PWM driver
72	AV_{DD3}	–	Power supply for Xtal
73	XTAI	I	Xtal oscillation circuit input for 33.8688 MHz
74	XTAO	O	Xtal oscillation circuit output for 33.8688 MHz
75	AV_{SS3}	–	GND for Xtal
76	AV_{SS2}	–	GND for PWM driver
77	NRPWM	O	Rch PWM output (reverse phase)
78	RPWM	O	Rch PWM output (normal phase)
79	DTS2	I	Test terminal 2 for DAC, normally "L"
80	DTS3	I	Test terminal 3 for DAC, normally "L"

■ AZQ7115 (IC901 : FRONT PCB ASSY)

• Microcomputer

• Block Diagram



• Pin Function

No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
1	AN0	I	Analog input to A/D converter	16	S20/P110	O	Segment output / P-ch open drain 4 bit output port
2	AVREF	I	Reference voltage input for A/D converter	17	S21/P111		
3	AVDD	—	Power supply for A/D converter	18	S22/P112		
4	VDD	—	Power supply voltage	19	S23/P113		
5	VDD	—	Power supply voltage	20	S0/P120	O	Segment output / P-ch open drain 4 bit output port
6	X2	I	Connect the crystal or ceramic resonator for the main system clock oscillation	21	S1/P121		
7	X1			22	S2/P122		
8	IC	—		23	S3/P123		
9	XT2	—	Connect the crystal resonator for the sub system clock oscillation Input to XT1 and XT2 is open	24	S4/P130	O	Segment output / P-ch open drain 4 bit output port
10	XT1	I		25	S5/P131		
11	VSS	—	GND	26	S6/P132		
12	S16/P100	O	Segment output / P-ch open drain 4 bit output port	27	S7/P133		
13	S17/P101			28	S8/P140	O	Segment output / P-ch open drain 4 bit output port
14	S18/P102			29	S9/P141		
15	S19/P103			30	VDD	—	Power supply voltage

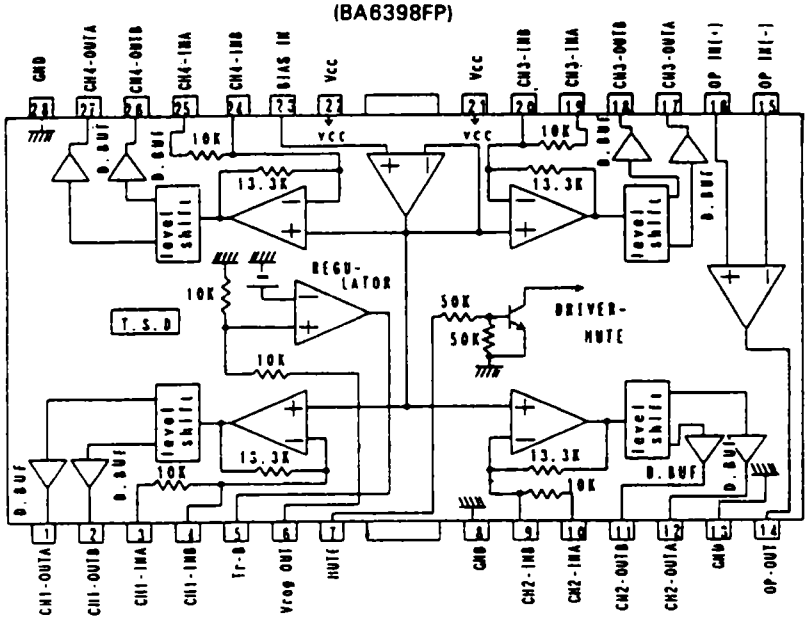
No.	Pin Name	I/O	Function	No.	Pin Name	I/O	Function
31	VLOAD	—	FIP controller/connect a pull-down resistor of driver / Apply a power	63	P51	I/O	N-ch open drain 4 bit input/output port (PORT5)
32	T15/S10/P142	O	Digit/segment current output / P-ch open drain 4 bit output port	64	P50		
33	T14/S11/P143			65	VSS	—	GND
34	PH0/T13/S12/P150	O	Digit/segment current output / P-ch open drain 4 bit output port	66	P43	I/O	N-ch open drain 4 bit input/output port (PORT4)
35	PH1/T12/S13/P151			67	P42		
36	PH2/T11/S14/P152			68	P41		
37	PH3/T10/S15/P153			69	P40		
38	T9	O	Current output for digit output	70	P33	I/O	Programmable 4 bit input/output port (PORT3)
39	T8			71	P32		
40	T7			72	P31		
41	T6			73	P30		
42	T5			74	P23/BUZ	I/O	4 bit input/output port (PORT2)/ Fixed frequency output (for buzzer or trimming the system clock)
43	T4			75	P22/PCL	I/O	4 bit input/output port (PORT2)/ Clock output
44	T3			76	P21	I/O	4 bit input/output port (PORT2)
45	T2			77	P20/PTO0	I/O	4 bit input/output port (PORT2)/ Timer / event counter output
46	T1			78	P13/TI0	I	4 bit input port (PORT1)/ External event pulse output to the timer/event counter #0 and #1
47	T0			79	P12/INT2	I	4 bit input port (PORT1)/ Edge detection testable input (non-synchronous)
48	VDD	—	Power supply voltage	80	P11/INT1	I	4 bit input port (PORT1)/ Edge detection vector interrupt input (non-synchronous)
49	P83/SI1	I	4 bit input port (PORT8) / Serial data input	81	P10/INT0	I	4 bit input port (PORT1)/ Edge detection vector interrupt input (clock synchronous)
50	P82/SO1	I/O	4 bit input port (PORT8) / Serial data output	82	P03/SIO/SB1	I/O	4 bit input port (PORT0)/ Serial data input / Serial bus input/output
51	P81/$\overline{SCK1}$	I/O	4 bit input port (PORT8) / Serial clock input/output	83	P02/SO0/SB0	I/O	4 bit input port (PORT0)/ Serial data output / Serial bus input/output
52	P80/PPO	I/O	4 bit input port (PORT8) / Pulse output of the timer/pulse generator	84	P01/$\overline{SCK0}$	I/O	4 bit input port (PORT0)/ Serial clock input/output
53	P73	I/O	4 bit input/output port (PORT7)	85	P00/INT4	I	4 bit input port (PORT0)/ Edge detection vector interrupt input
54	P72			86	$\overline{RESET}$	I	System reset input
55	P71			87	AVSS	—	Reference GND of A/D converter
56	P70			88	AN7/P93	I	Analog input to A/D converter / 4 bit input port (PORT9)
57	P63	I/O	Programmable 4 bit input/output port (PORT6)	89	AN6/P92		
58	P62			90	AN5/P91		
59	P61			91	AN4/P90		
60	P60			92	AN3	I	Analog input to A/D converter
61	P53	I/O	N-ch open drain 4 bit input/output port (PORT5)	93	AN2		
62	P52			94	AN1		

■ AZQ7019 (IC03 : CD DECODER PCB ASSY)

• 4ch BTL Driver

• Block Diagram

(BA6398FP)



• Pin Function

No.	Pin Name	Description
1	CH1 – OUT A	Inverted output of CH1
2	CH1 – OUT B	Non inverted output of CH1
3	CH1 – IN A	Input for CH1
4	CH1 – IN B	Gain adjustment of CH1
5	Tr – B	Connection with BASE of PNP Tr
6	Vreg OUT	Output for regulator (5V) (*1)
7	MUTE	Mute Control
8	GND	Ground
9	CH2 – IN B	Gain adjustment of CH2
10	CH2 – IN A	Input for CH2
11	CH2 – OUT B	Non inverted output of CH2
12	CH2 – OUT A	Inverted output of CH2
13	GND	Substrate Ground
14	OP OUT	Output for OP-amp

No.	Pin Name	Description
15	OP IN (–)	Inverting input for OP-amp
16	OP IN (+)	Non inverting input for OP-amp
17	CH3 – OUT A	Non inverted output of CH3
18	CH3 – OUT B	Inverted output of CH3
19	CH3 – IN A	Input for CH3
20	CH3 – IN B	Gain adjustment of CH3
21	Vcc	Vcc
22		
23	BIAS IN	Input for reference voltage
24	CH4 – IN B	Gain adjustment of CH4
25	CH4 – IN A	Input for CH4
26	CH4 – OUT B	Non inverted output of CH4
27	CH4 – OUT A	Inverted output of CH4
28	GND	Substrate Ground

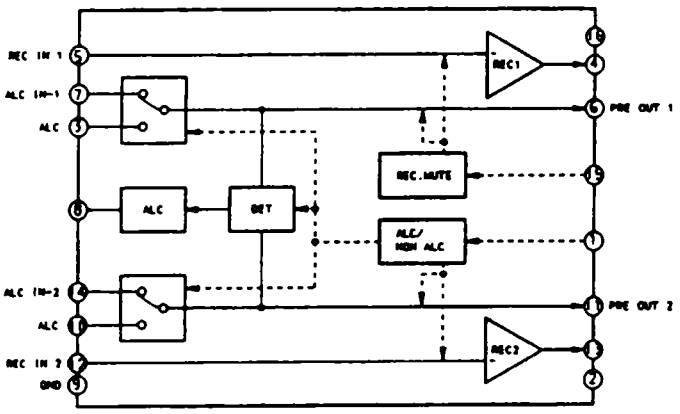
**1. Connect collector of external PNP Tr.*

■ AZQ7010 (IC602 : MAIN PCB ASSY)

• Dual Recording Pre-amp. with ALC

• Block Diagram

(TA8135P)

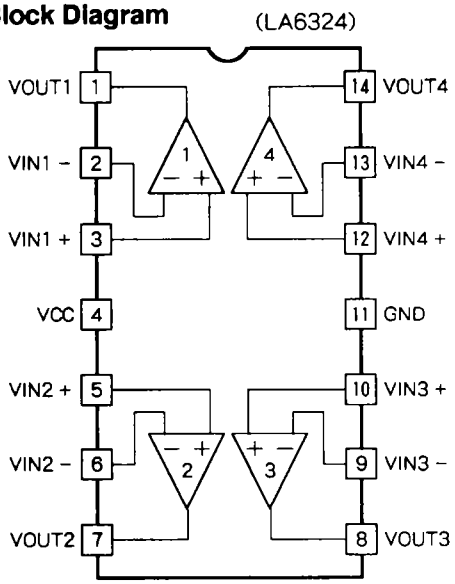


■ AZQ7112 (IC402 : MAIN PCB ASSY)

• Quad OP Amplifier

• Block Diagram

(LA6324)

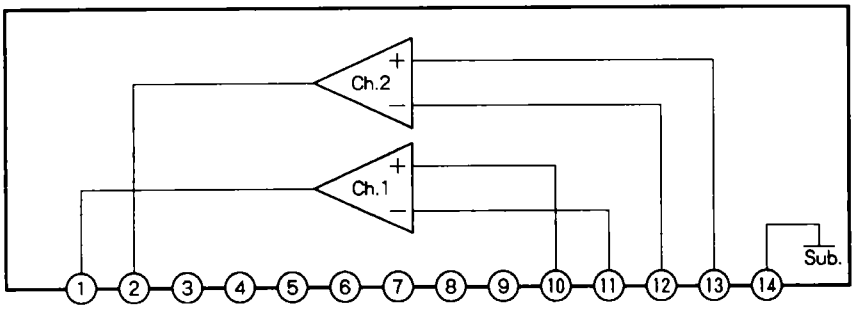


■ AZQ7111 (IC701 : MAIN PCB ASSY)

• AF Power Amplifier

• Block Diagram

(STK405)

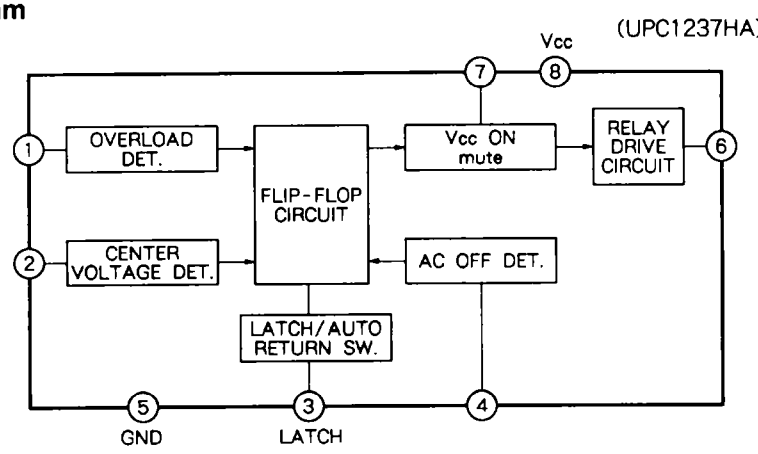


■ AZQ7113 (IC409 : MAIN PCB ASSY)

• Protection Circuit IC for Power Amplifier

• Block Diagram

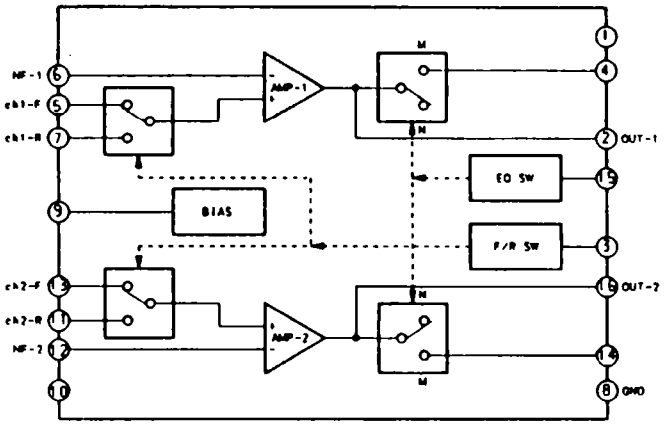
(UPC1237HA)



■ TA7784P (IC601 : MAIN PCB ASSY)

• Dual Pre-amp. for Autoservos

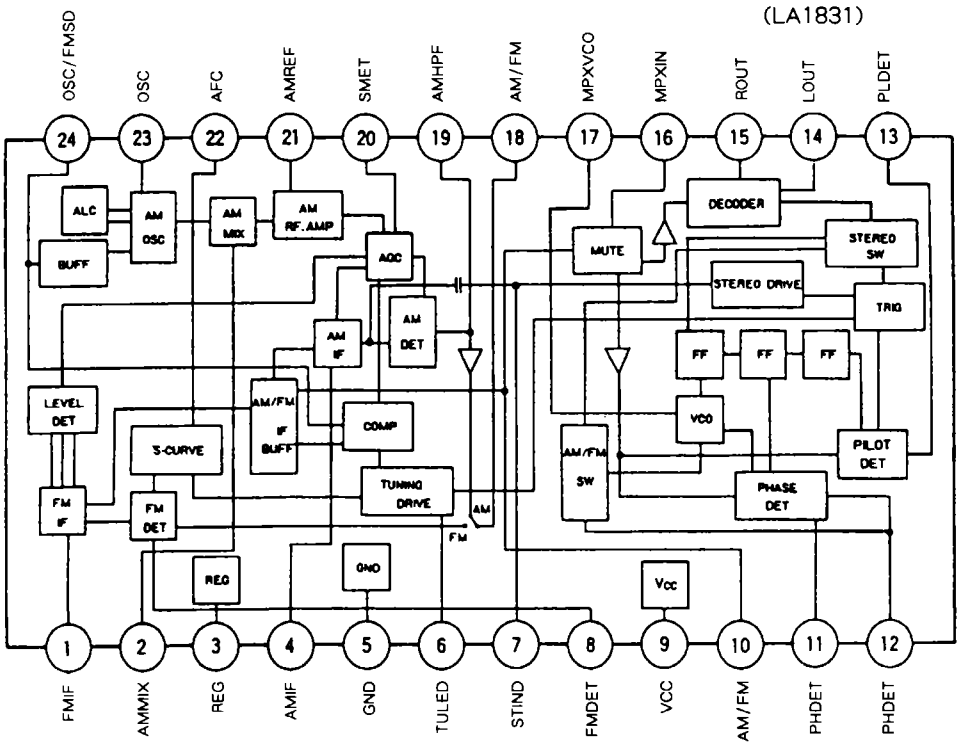
● Block Diagram



■ AZQ7116 (IC102 : TUNER PCB ASSY)

• AM/FM IF + MPX

● Block Diagram



8. DISASSEMBLY

8.1 HOW TO REMOVE CHANGER BASE

Remove the Changer Base by removing the two screws Ⓐ and pull out Changer Base from the Chassis.

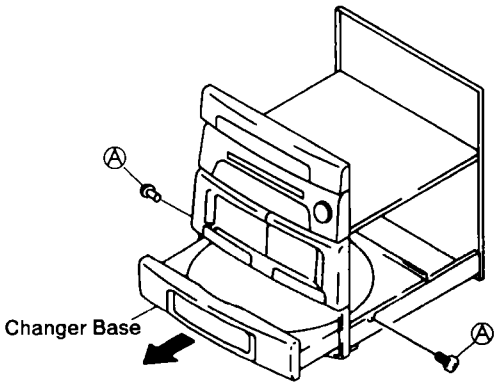


Fig. 1

8.2 HOW TO REMOVE TURNTABLE

1. Remove the Turntable by sliding the Guide Plate outward.
2. Disassemble the Base Cover by removing the 2 screws Ⓑ.

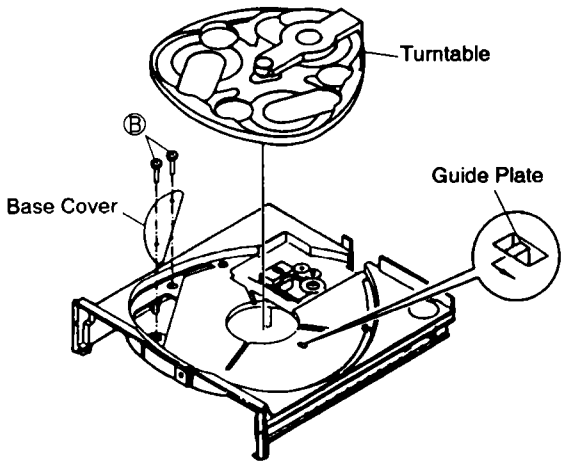


Fig. 2

After removing the Turntable, remove Magnetic Holder from the Arm assy, and use it to clamp a CD.

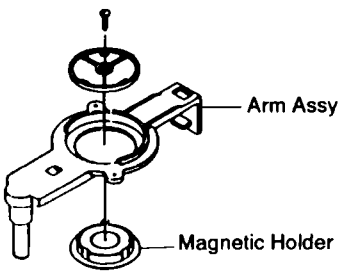


Fig. 3

8.3 LASER DIODE PROTECTION OF THE PICKUP

During transit, Laser diode of the Pickup is protected from an electrostatic damage, by shorting Vcc and GND of the Pickup assy with solder. Remove the solder after you have mounted the Pickup assy to the unit.
Laser diode will not light unless this protection solder is removed.

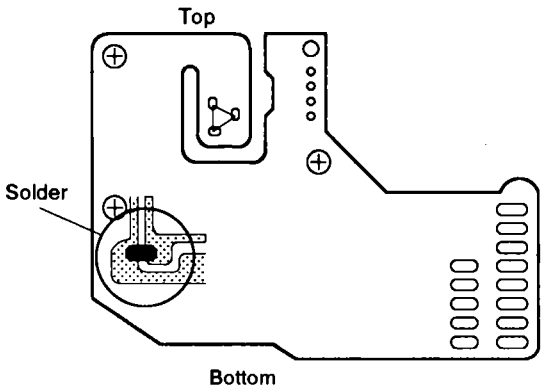


Fig. 4 Pickup Side View

8.4 HEIGHT OF SPINDLE MOTOR TURNTABLE

Spindle motor is available as CD mechanism assy, and so the height adjustment of Spindle Motor Turntable is unnecessary. But in case of confirming the height level, refer to the following figure.

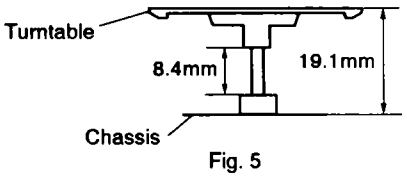
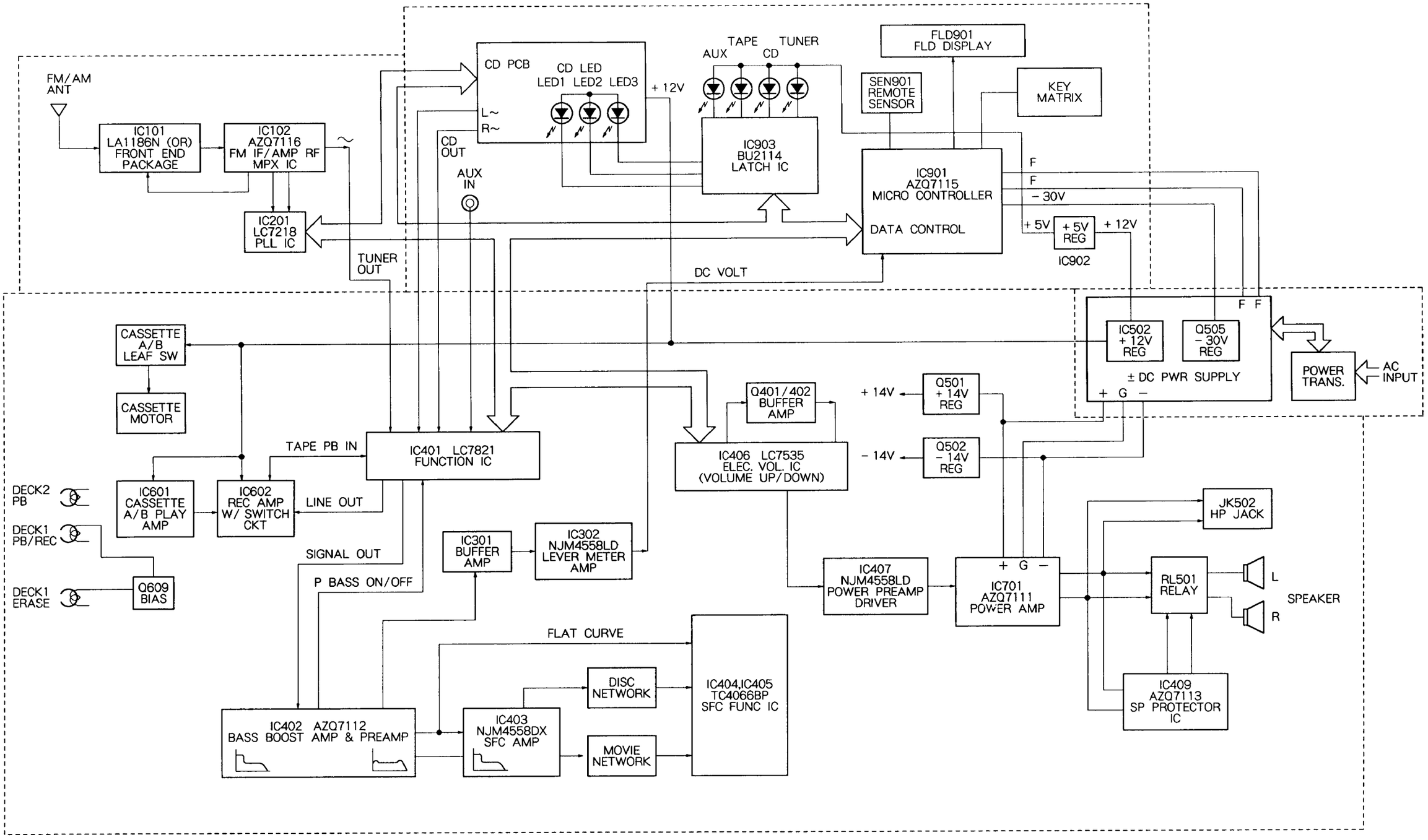


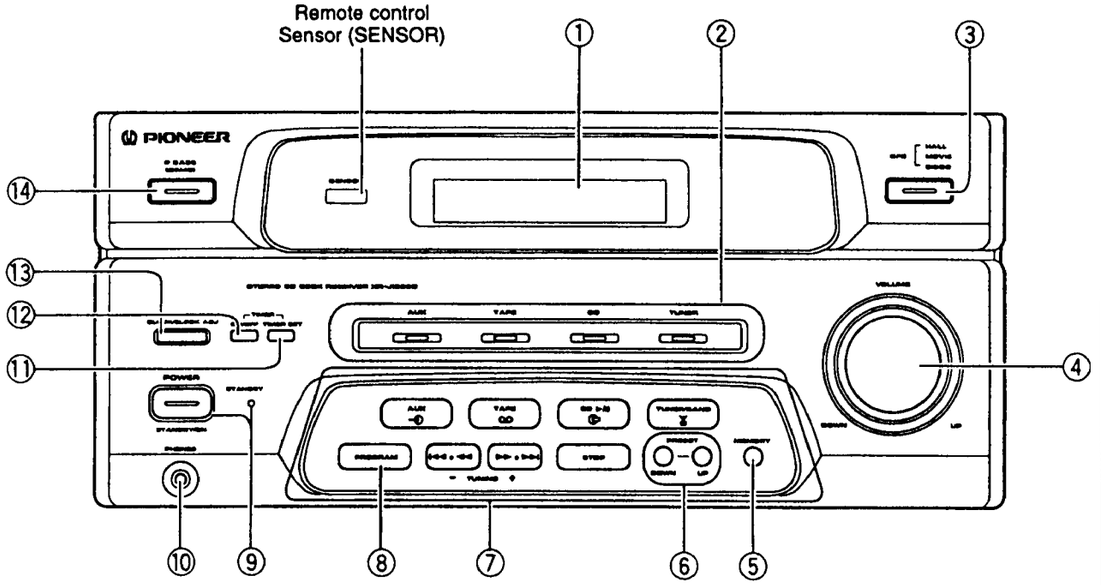
Fig. 5

9. BLOCK DIAGRAM

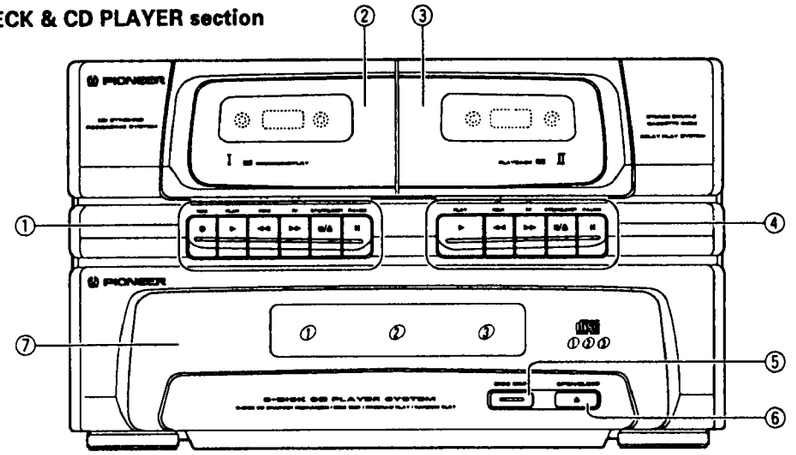


10. PANEL FACILITIES

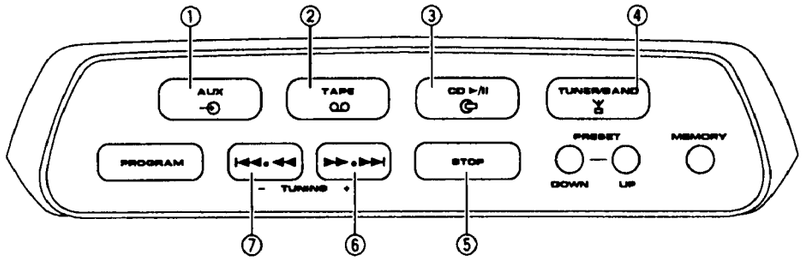
RECEIVER section



TAPE DECK & CD PLAYER section



FUNCTION button section



RECEIVER section

① **DISPLAY**

② **FUNCTION indicators**

③ **SFC button**
Each time this button is pressed, the mode changes in the following sequence.

HALL → MOVIE → DISCO → off

④ **VOLUME control**

⑤ **MEMORY button**

⑥ **PRESET DOWN/UP buttons**

⑦ **FUNCTION buttons**

⑧ **PROGRAM button**

⑨ **POWER switch/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.

⑩ **Headphones jack**

⑪ **TIMER SET button**

⑫ **TIMER ON/OFF button**

⑬ **CLOCK/CLOCK ADJ button**

⑭ **P.BASS (DEMO) button**
Set to ON to produce powerfully enhanced bass sound.

TAPE DECK & CD PLAYER section

① **DECK I operation buttons (Recording ●, Play ▶, Fast ◀◀ ▶▶, Stop/Eject ■/⏏, Pause II)**

② **DECK I cassette door**

③ **DECK II cassette door**

④ **DECK II operation buttons (Play ▶, Fast ◀◀ ▶▶, Stop/Eject ■/⏏, Pause II)**

⑤ **DISC SKIP button**

⑥ **OPEN/CLOSE (⏏) button**

⑦ **CD tray**

AUTO FUNCTION SELECTOR

The amplifier in this unit employs an auto function selector; by merely beginning playback on CD player or tuner causes the amplifier to automatically select the respective function.

FUNCTION button section

① **AUX button and indicator**

② **TAPE button and indicator**

③ **CD (▶/II) button and indicator**

④ **TUNER/BAND button and indicator**

⑤ **Stop button**

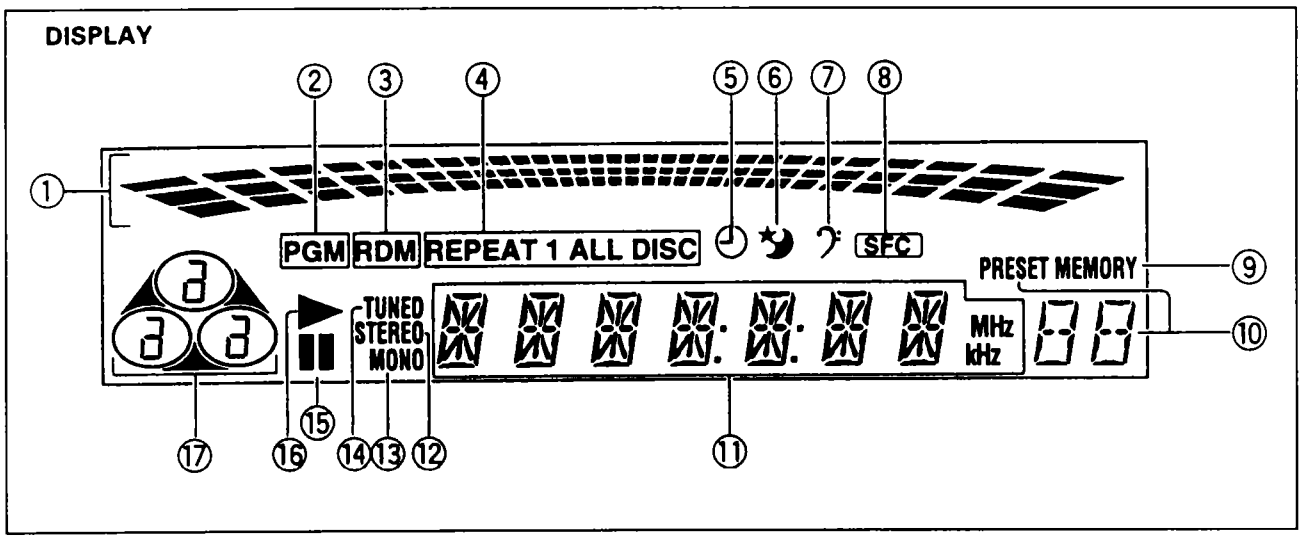
⑥ **▶▶ • ▶▶| button**

⑦ **|◀◀ • ◀◀ button**

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

During tuner operation
▶▶ • ▶▶| : Frequency + (up) button
|◀◀ • ◀◀ : Frequency – (down) button

During CD input
▶▶ • ▶▶| : Forward Manual/Track Search button
|◀◀ • ◀◀ : Reverse Manual/Track Search button



DISPLAY

① Multi meter
Provides a visual display of signal level, volume level or other operation conditions.

② PGM (PROGRAM) indicator
Lights during the program mode.

③ RDM (RANDOM) indicator
Lights during random playback mode.

④ REPEAT indicators

REPEAT 1	: Lights during "repeat-1" playback mode.
REPEAT DISC	: Lights when using repeat playback for a single disc.
REPEAT ALL DISC	: Lights during "repeat all discs" playback mode.

⑤ TIMER indicator
Lights when the timer is set.

⑥ SLEEP TIMER indicator
Lights when the sleep timer is set.

⑦ P.BASS indicator
Lights when the P.BASS function is ON.

⑧ SFC (Sound Field Control) indicator
Lights when the SFC function is ON.

⑨ MEMORY indicator
Lights when the MEMORY button is pressed during the manual preset operation.

⑩ Preset number display
When manual preset operation is used, the preset station number is displayed here.

⑪ Displays broadcast reception frequencies and other main operating conditions.

⑫ STEREO indicator
Lights during reception of a stereo broadcast.

⑬ MONO indicator
Lights when receiving a broadcast program in monaural.

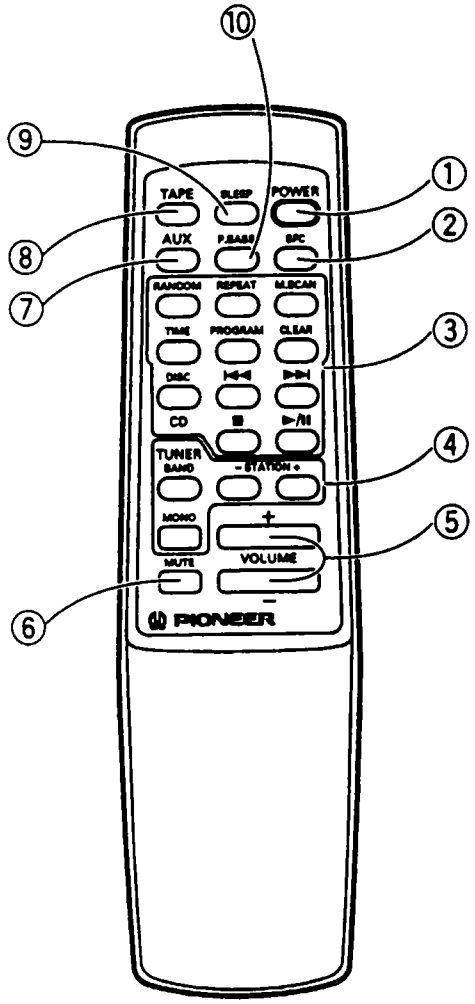
⑭ TUNED indicator
Lights to indicate reception of a broadcast frequency.

⑮ Pause indicator (II)
Lights during pause mode.

⑯ Play indicator (►)
Lights when playing a CD.

⑰ Disc tray number indicator
Lights when the function is set to CD. The currently playing disc number flashes.

REMOTE CONTROL UNIT



REMOTE CONTROL UNIT

① POWER button

② SFC (Sound Field Control) button

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

HALL → MOVIE → DISCO → off

③ CD operation buttons

RANDOM	: Random playback
REPEAT	: Repeat playback
M.SCAN	: Music (Intro) Scan
TIME	: Select time display mode.
PROGRAM	: Set to track programming mode.
CLEAR	: Use to erase the track program.
DISC	: Disc No. selection
⏮	: Manual/Track search (reverse)
⏭	: Manual/Track search (forward)
■	: Stop
►/II	: Play/Pause

Each time this button is pressed, the mode changes between playback and pause.

④ TUNER operation buttons

STATION -/+ (down/up) buttons

Before operation, memorize broadcast stations with the STATION CALL buttons.

+ ..... Stations change in order in the upward direction.

- ..... Stations change in order in the downward direction.

MONO button

During reception of FM stereo broadcasts, use to switch between stereo and monaural reception.

BAND button

Use to switch between FM and AM bands.

⑤ VOLUME -/+ buttons

Increases/decreases the sound volume of the unit.

⑥ MUTE button

Press to temporarily minimize sound volume. Press again (or use the VOLUME button) to restore sound to its original volume.

⑦ AUX function button

⑧ TAPE function button

⑨ SLEEP button

Each time this button is pressed, the setting changes in the following sequence:

SLEEP 90 → SLEEP 60 → SLEEP 30 → SLEEP 0 → off

⑩ P.BASS button

11. SPECIFICATIONS

STEREO CD CASSETTE DECK RECEIVER: XR-J1500C

Amplifier section

<U.S. and Canadian models>

Continuous Average Power Output is 33 Watts* per channel, min., at 6 ohms from 80 Hertz to 15,000 Hertz with no more than 1 % total harmonic distortion.**

<European model>

Continuous Power output (DIN)
..... 25 W+ 25 W (1 kHz, T.H.D. 1%, 6 Ω)
Continuous Power output (RMS)
..... 30 W+ 30 W (1 kHz, T.H.D. 10%, 6 Ω)

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

<Australian model>

Continuous Power output (DIN)
..... 25 W+ 25 W (1 kHz, T.H.D. 1%, 6 Ω)
Continuous Power output (RMS)
..... 30 W+ 30 W (1 kHz, T.H.D. 10%, 6 Ω)

FM/AM tuner section

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108.0 MHz
Antenna input ..... 75 Ω unbianced

AM Tuner Section

Frequency Range
<European and Australian models>
With 9 kHz step ..... 522 kHz to 1,611 kHz
<U.S. and Canadian models>
With 10 kHz step ..... 530 kHz to 1,720 kHz
Antenna ..... Loop antenna

CD Section

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

Cassette deck section

Systems ..... 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
Tape type ..... TYPE I (Normal) tape

Miscellaneous

Power Requirements
U.S. and Canadian models ..... AC 120 V, 60 Hz
Australian model ..... AC 240 V, 50/60 Hz
European model ..... AC 220–230 V, 50/60 Hz
Power Consumption
U.S. and Canadian models ..... 130 W
Australian model ..... 180 W
European model ..... 180 W
Dimensions ..... 360 (W) x 375 (H) x 340 (D) mm
14-3/16 (W) x 14-3/4 (H) x 13-3/8 (D) in
Weight (without package)
U.S. and Canadian models ..... 9.5 kg (20 lb 15 oz)
Australian model ..... 9.5 kg
European model ..... 9.5 kg

SPEAKER SYSTEM: S-J1500

<U.S., Canadian and Australian models>

Enclosure ..... Book-shelf style, bass reflex type
System ..... 3-way 3-speaker system
Loudspeakers
Woofer ..... 17 cm cone type
Mid-range ..... 6.6 cm cone type
Tweeter ..... 1.6 cm dome type
Nominal Impedance ..... 6 Ω
Dimensions ..... 240 (W) x 430.5 (H) x 225 (D) mm
9-7/16 (W) x 16-15/16 (H) x 8-7/8 (D) in.
Weight ..... 4.4 kg (9 lb 11 oz)

<European model>

Enclosure ..... Book-shelf style, bass reflex type
System ..... 2-way 2-speaker system
Loudspeakers
Woofer ..... 14 cm cone type
Tweeter ..... 6.6 cm cone type
Nominal Impedance ..... 6 Ω
Dimensions ..... 212 (W) x 430 (H) x 213 (D) mm
Weight ..... 3.4 kg

Accessories

Operating Instructions 1
Remote Control Unit 1
Dry Cell Batteries (AAA/R03) 2
FM Antenna 1
AM Loop Antenna 1
Speaker cords (included with speaker systems)
(European models only) 2

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