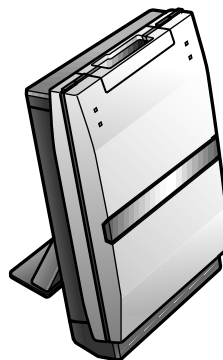


Service Manual

Pioneer



ORDER NO.
RRV2308

STEREO CASSETTE DECK CT-F10

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

Type	Model	Power Requirement	Remarks
	CT-F10		
ZVYXJ	○	DC power supplied from other system component	

- This products are component of systems. This product does not operate normally by itself. Please connect it to the STEREO CD TUNER XC-F10 and the STEREO POWER AMPLIFIER M-F10 for adjustment and operation inspection.
- This product is a system(s) component.
Be sure to connect it to the prescribed system component(s), otherwise damage may result.

Component	Model	Service manual	Remarks
STEREO CD TUNER	XC-F10	RRV2319	
STEREO POWER AMPLIFIER	M-F10	RRV2321	
SPEAKER SYSTEM	S-F10-LRW	RRV2330	
STEREO CASSETTE DECK	CT-F10	RRV2308	This manual.

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		8. PANEL FACILITIES AND SPECIFICATIONS	28

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
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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

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65



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.

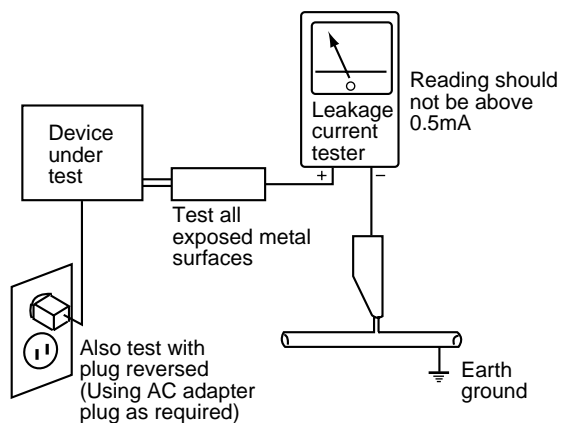
(FOR USA MODEL ONLY)

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 Δ on the schematics and on the parts list in this Service Manual.

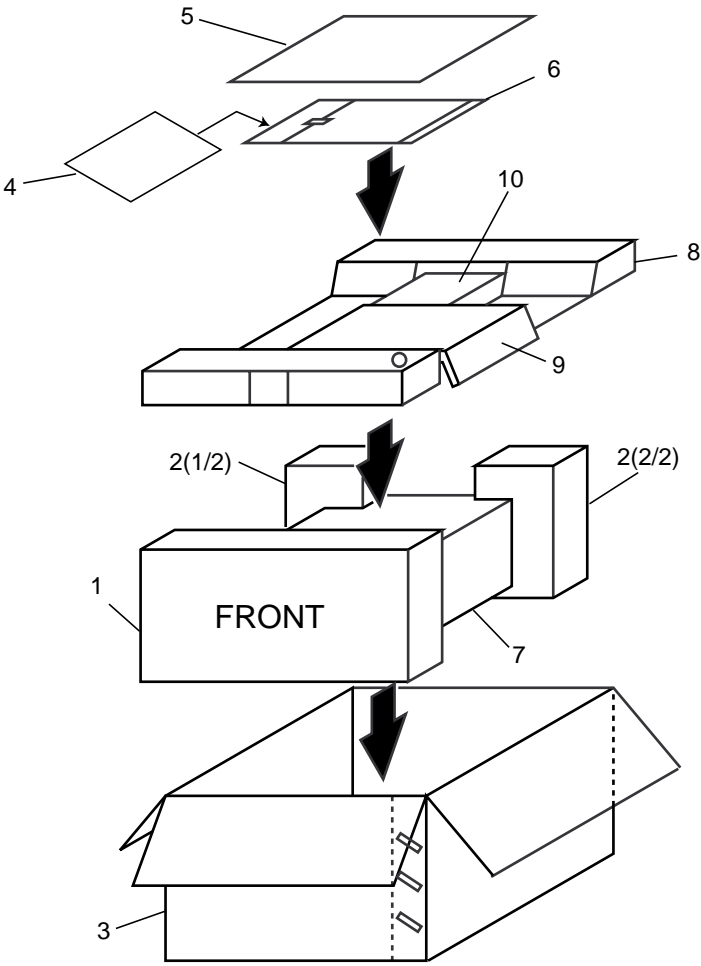
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

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

2. EXPLODED VIEWS 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 part. Therefore, when replacing, be sure to use parts of identical designation.
● Screws adjacent to ▼ mark on the product are used for disassembly.

2.1 PACKING

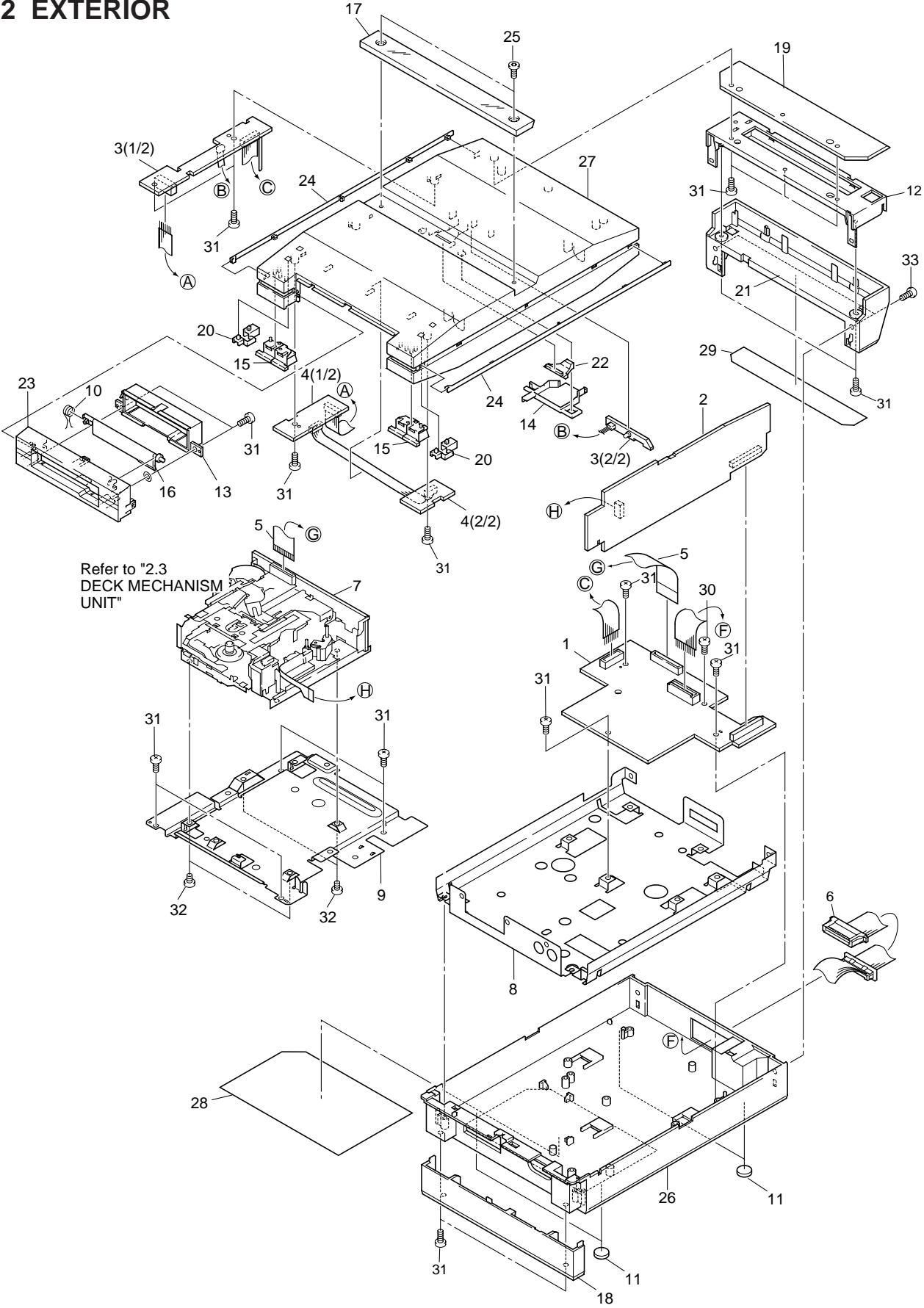


● PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	Pad Front	AHA7295
	2	Pad Rear	AHA7296
	3	Packing Case	AHD7899
	4	Operating Instructions (Spanish/Portuguese/Dutch/Swedish/ English/French/German/Italian)	ARE7257
NSP	5	Warranty Card	ARY7022

Mark	No.	Description	Part No.
	6	Polyethylene Bag (0.03 × 230 × 340)	Z21-038
	7	Mirror Mat Sheet (550x550x0.5)	Z23-026
	8	Spacer MD TC	AHB7038
	9	Stand A Assy	AXG7096
	10	Stand B Assy	AXG7097

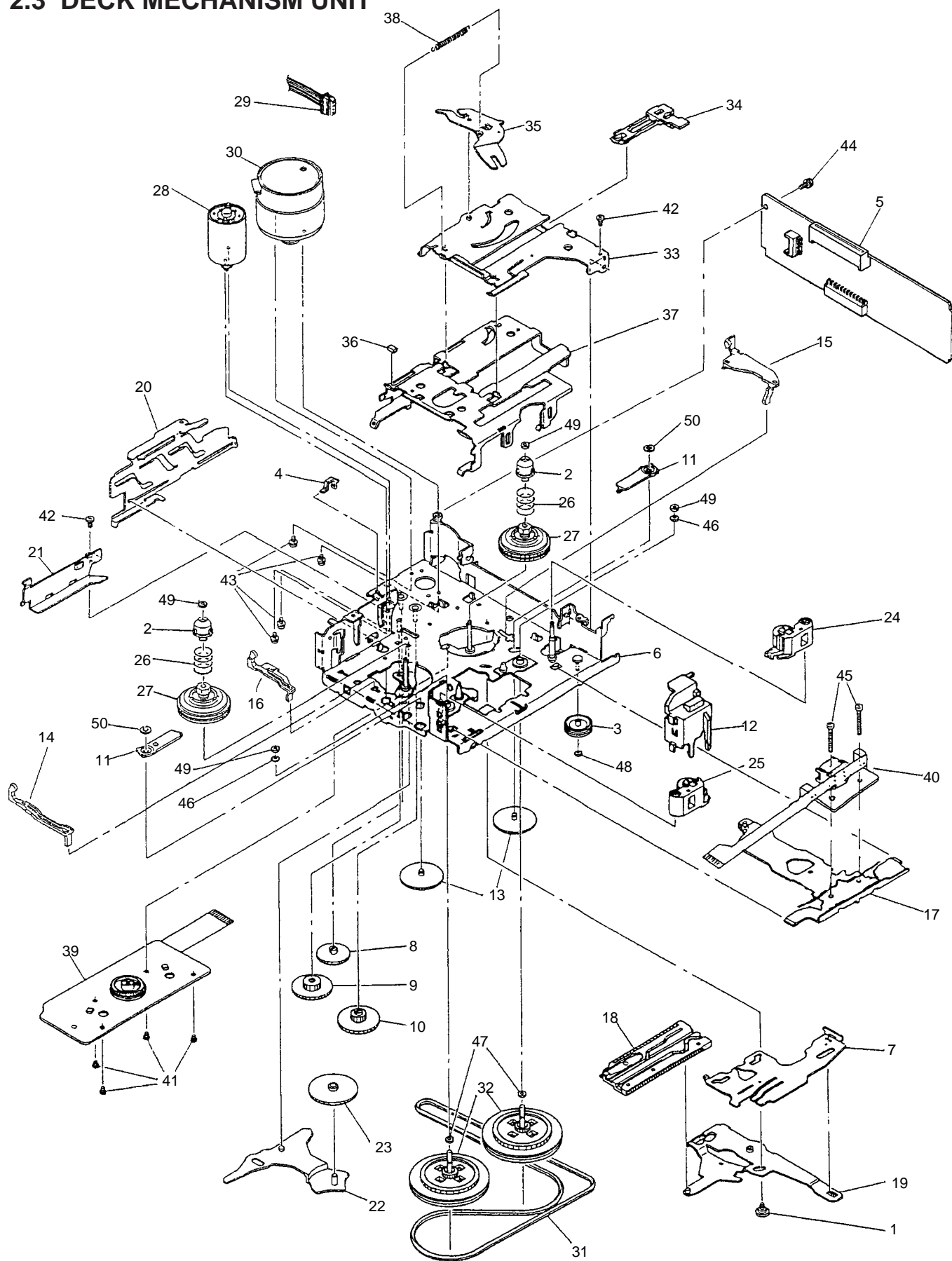
2.2 EXTERIOR



● EXTERIOR PARTS LIST

Mark	No.	Description	Part No.
	1	MAIN ASSY	AWU7571
	2	SIDE ASSY	AWU7572
	3	ILLUMI ASSY	AWU7573
	4	PANEL ASSY	AWU7574
	5	16P FFC/30V(J2701)	ADD7228
NSP	6	Cord With Plug(J2001)	ADE7058
	7	Deck Mechanism Unit	TN-708CR-142R
	8	Bottom Chassis MDTC	ANA7108
	9	Sub Chassis	AND7037
	10	TC Spring	ABH7190
	11	Leg	AEB7090
	12	FL Holder	AMR7312
	13	TC Flap Holder	AMR7315
	14	Illumination Holder	AMR7317
	15	Button TC	AAD7583
	16	TC Flap	AAK7759
	17	Display Window TC	AAK7768
	18	Rear Cap MD TC	AAK7772
	19	FI Window MDTC	AAK7793
	20	Lens MD TC	AAK7838
	21	FL Cover	AAK7841
	22	Illuminate Lens	AAK7842
	23	Sub Panel TC	AAP7070
	24	Side Line	AAP7074
	25	Screw	ABA7062
NSP	26	Bottom Base TC	AMA7018
	27	Top Panel TC	AMB7701
	28	Name Label(Pap)TC/ZV	AAL7252
	29	Connector Label TC/E	ARW7095
	30	Screw	BBZ30P080FMC
	31	Screw	BPZ30P080FZK
	32	Screw	PMZ30P030FMC
	33	Screw	VBZ30P100FZK

2.3 DECK MECHANISM UNIT

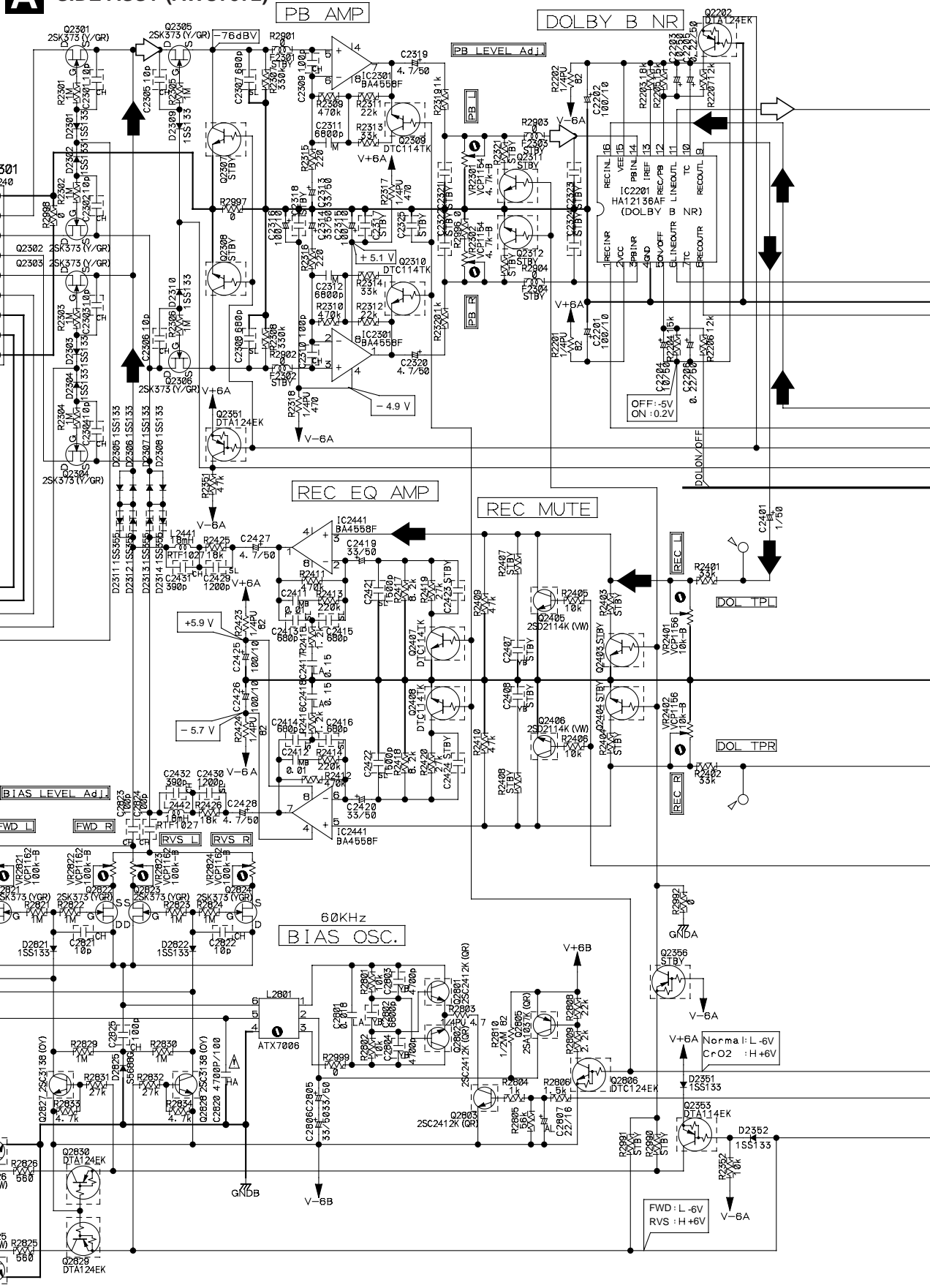
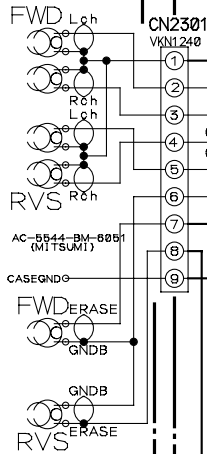


● DECK MECHANISM UNIT PARTS LIST


Mark	No.	Description	Part No.
	1	PK Collar Screw A	18211223
	2	Reel Cap	19500822
	3	Middle Pulley	19501002
	4	Wire Clumper	19501403
	5	PEAR PWB (P) ASSY	1970-16-310
	6	Chassis Rivet Assy	197001508
	7	Main Plate	19700201
	8	B Gear	19700202
	9	C Gear	19700203
	10	D Gear	19700204
	11	P. G Plate	19700206
	12	Guide BKT	19700207
	13	P Gear W	19700212
	14	REC Sensor F	19700213
	15	REC Sensor R	19700214
	16	CR Detective Plate H	19700215
	17	Head Panel Assy	197003303
	18	O.P Plate Assy	197004301
	19	S.B Plate Rivet Assy	197004502
	20	EJECT Lever Rivet Assy	197004504
	21	O.P Plate Holder	197004707
	22	FR Plate	19700601
	23	FR Gear	19700602
	24	Pinch Roller ARM (F)	197007303
	25	Pinch Roller ARM (R)	197007304
	26	Reel Wing Spring	19700812
	27	Reel Assy (K)	197008302
	28	SUB MOTOR ASSY	197009301
	29	M Connector Assy	19701002
	30	MAIN MOTOR ASSY(P)	197010303
	31	Main Belt (G)	19701106
	32	FL Capstan Assy	197011301
	33	Case Lifter B	19701201
	34	Pack Slider	19701203
	35	P.S Actuator Plate	19701204
	36	Cushion Rubber	19701206
	37	Cassette Case R	19701216
	38	P.S Spring (P)	19701219
	39	REEL PWB ASSY	197013312
	40	RPE AC-5544BM-5949	62010502
	41	Camera Screw 2.0x2.5	9C0420253
	42	Camera Screw 2.0x3.0	9C0420303
	43	Tams Screw 2.0x3.0	9P0220031
	44	Tams Tapping Screw	9P12-20-051
	45	Screw 2.6x4.0	9P1420042
	46	P. Washer 2.1x3.5x0.2	9W0120050
	47	P. Washer 2.1x3.5x0.35	9W0135010
	48	P. Washer 0.85x2.8x0.2	9W0225010
	49	P. Washer 1.55x3.5x0.5	9W0250040
	50	Hlw Washer 2.1x4.0x0.2	9W0635020

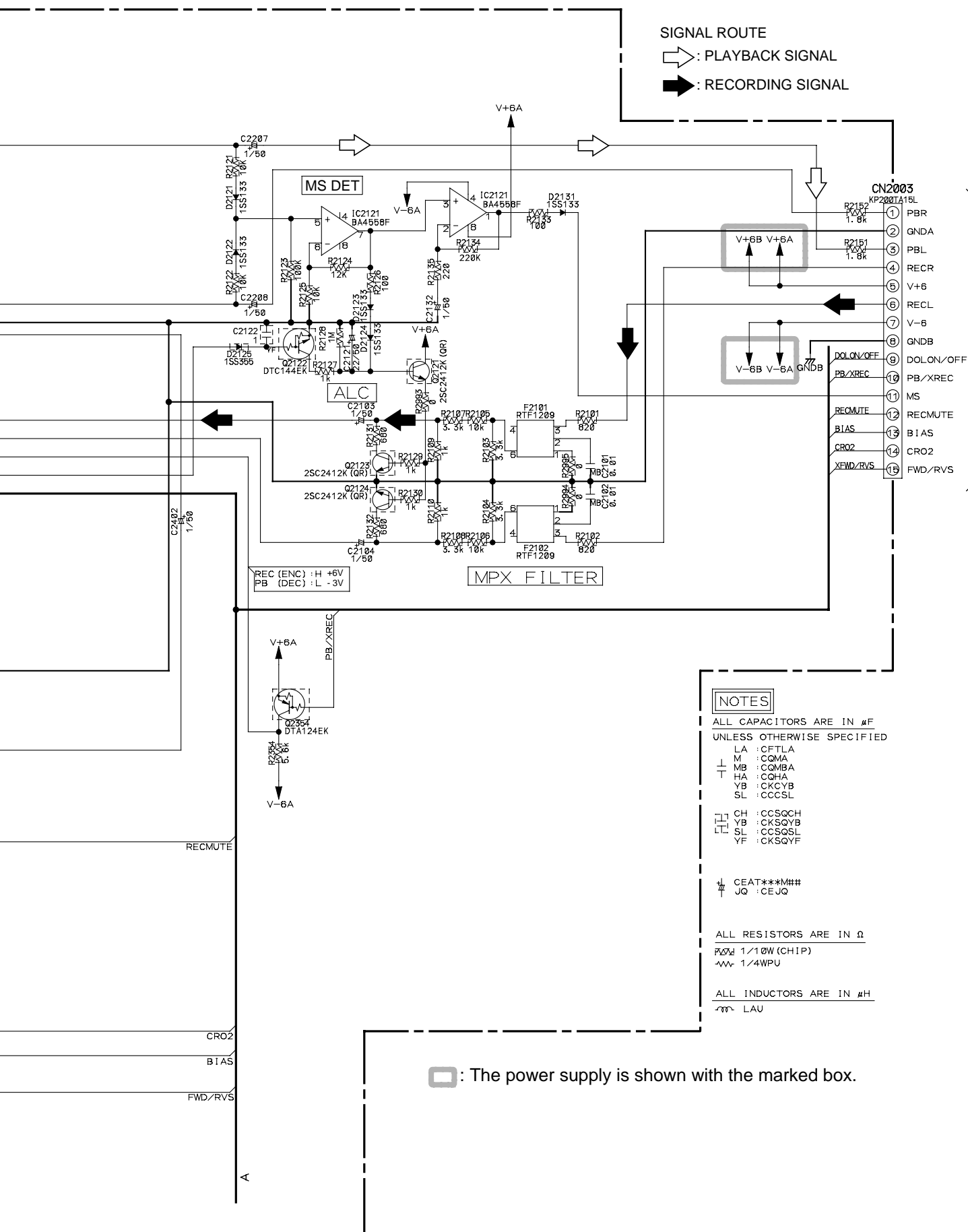
3.2 SIDE ASSY

A SIDE ASSY (AWU7572)

DECK
MECHANISM
UNIT
(TN-708CR-142R)

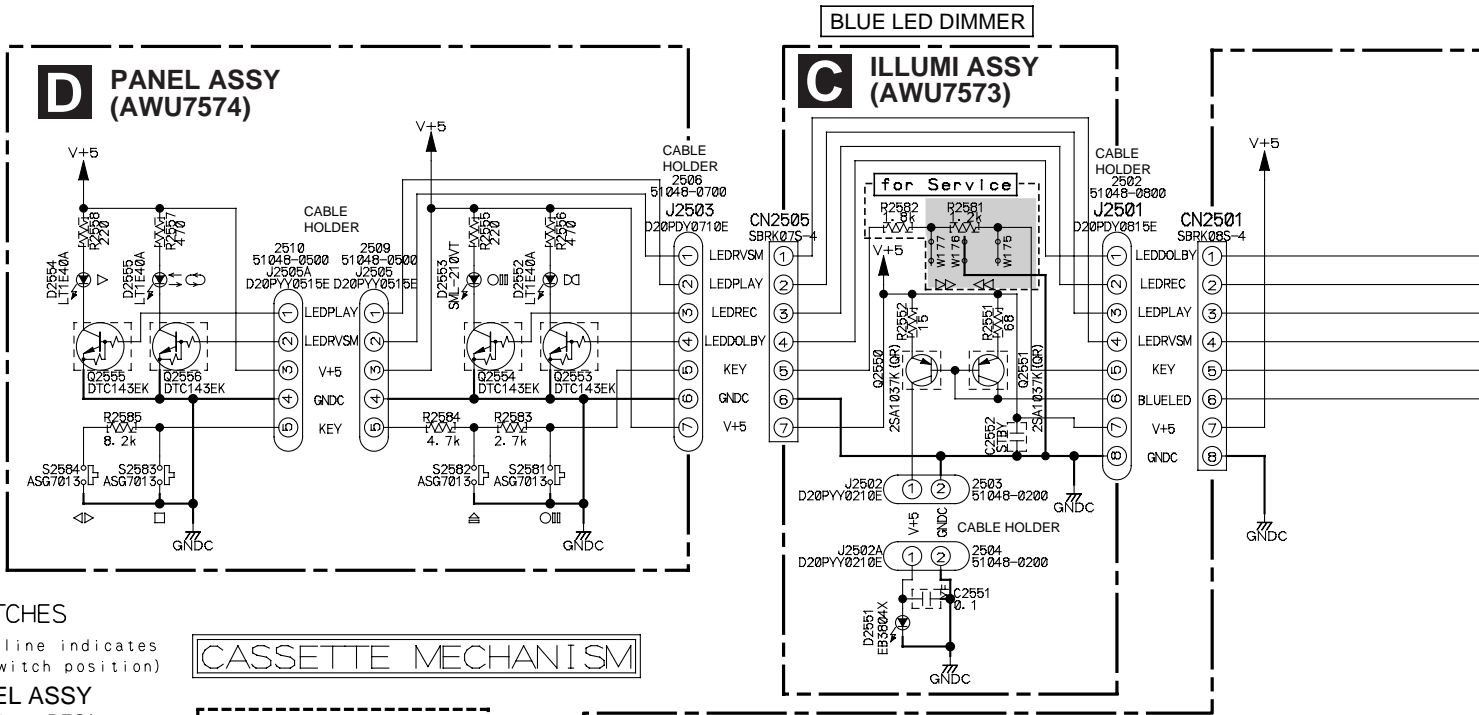
SIGNAL ROUTE

 : PLAYBACK SIGNAL

 : RECORDING SIGNAL


3.3 MAIN, ILLUMI and PANEL ASSYS

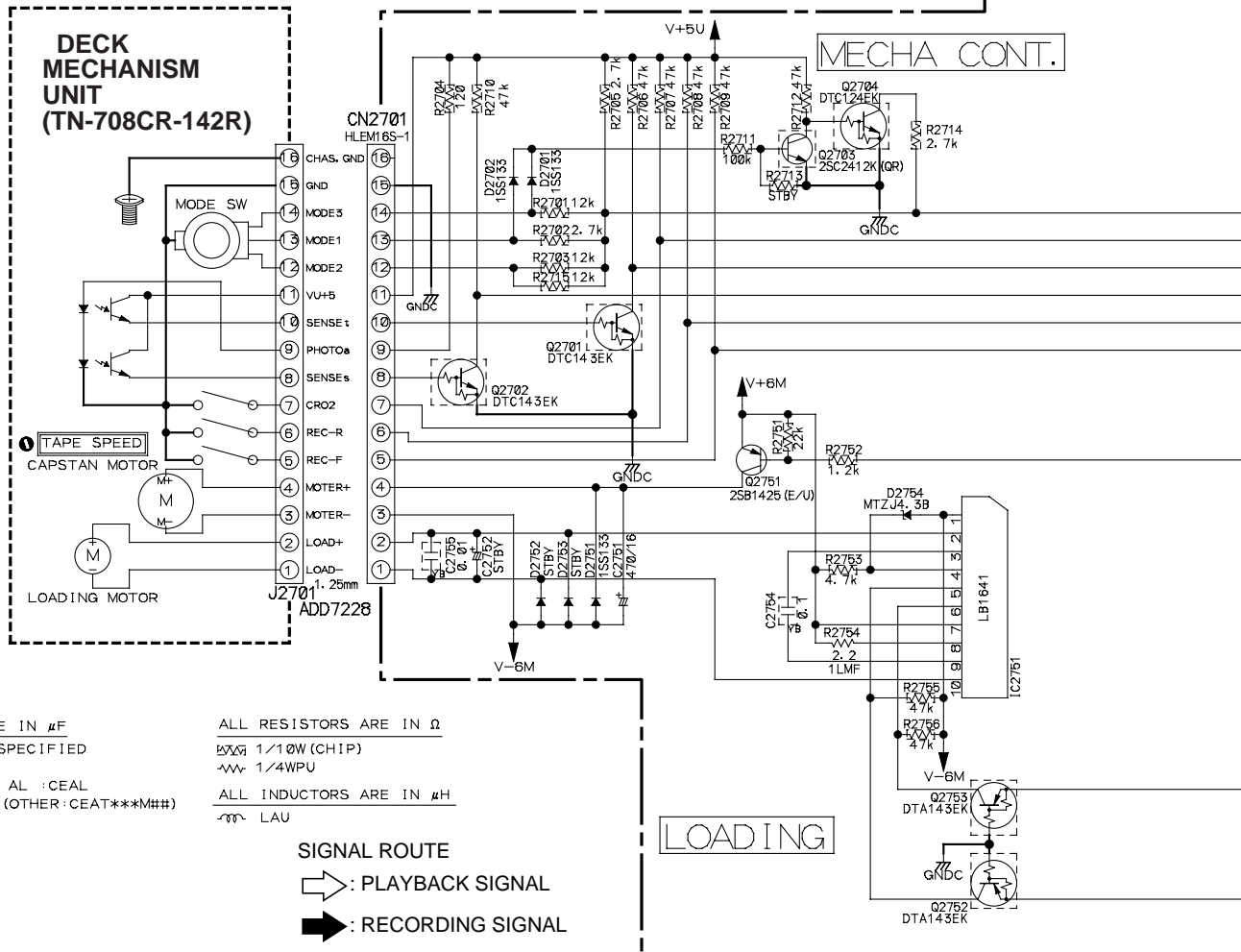
A

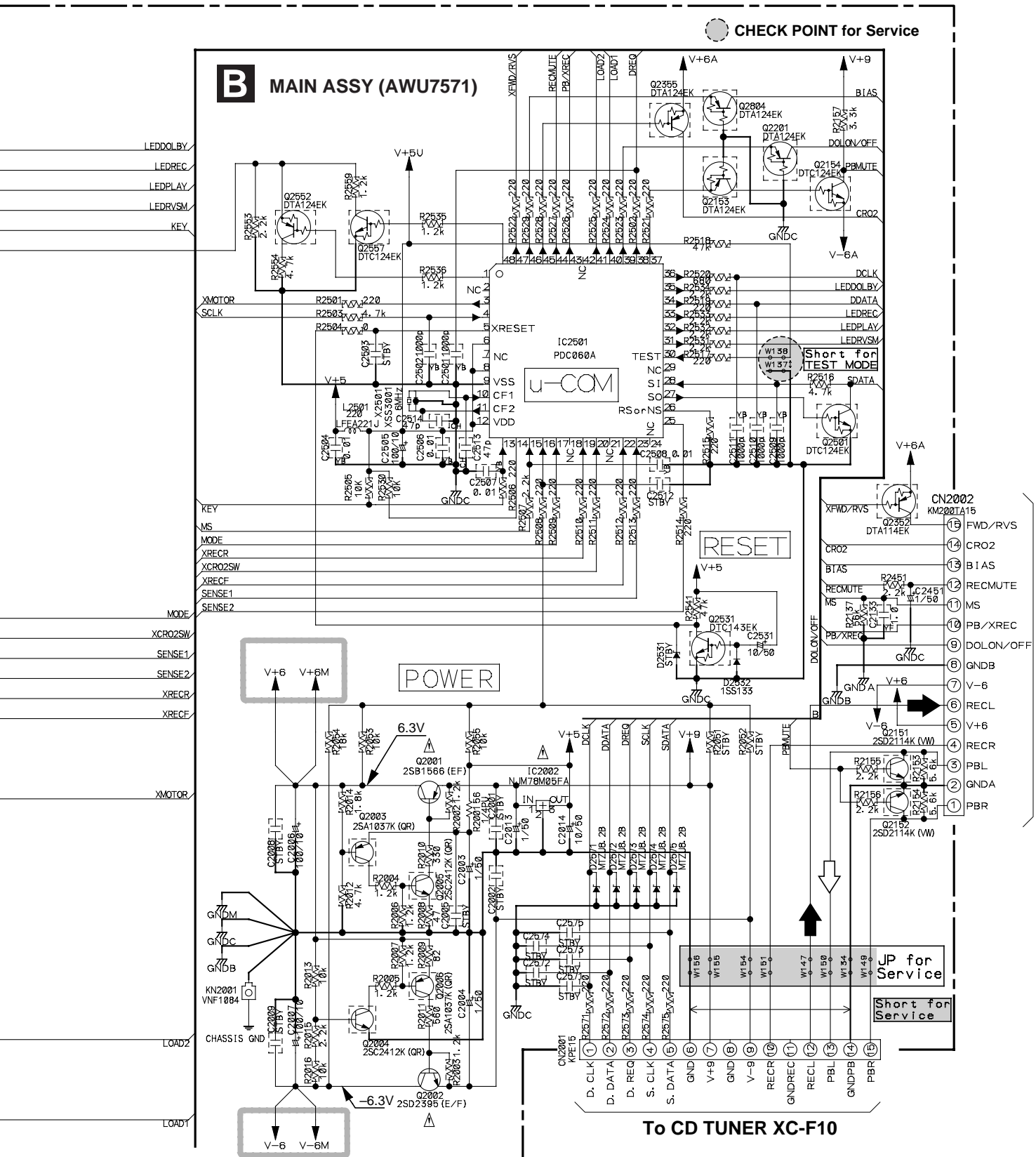


B

C

D





: The power supply is shown with the marked box.

4. PCB CONNECTION DIAGRAM

4.1 SIDE ASSY

A SIDE ASSY

SIDE A

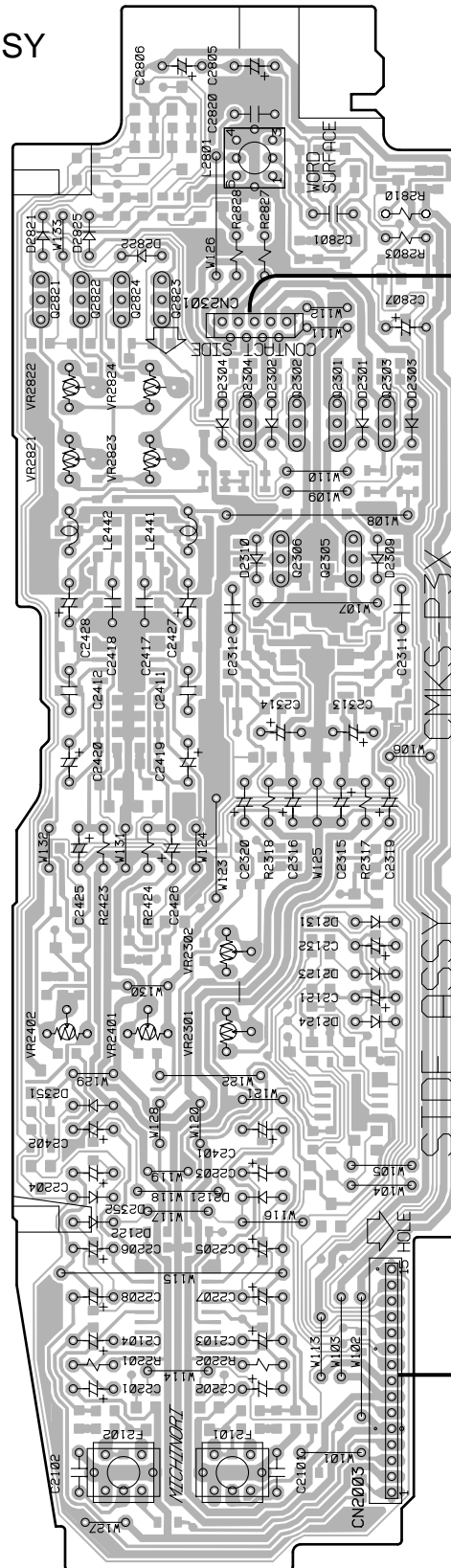
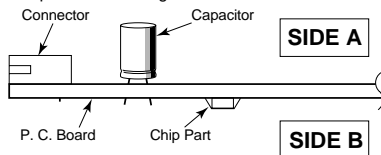
NOTE FOR PCB DIAGRAMS:

- 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

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

4. Viewpoint of PCB diagrams



To DECK Mechanism

- Q2821
- Q2822
- Q2823
- VR2822
- VR2824
- Q2304
- Q2302
- Q2301
- Q2303
- VR2821
- VR2823

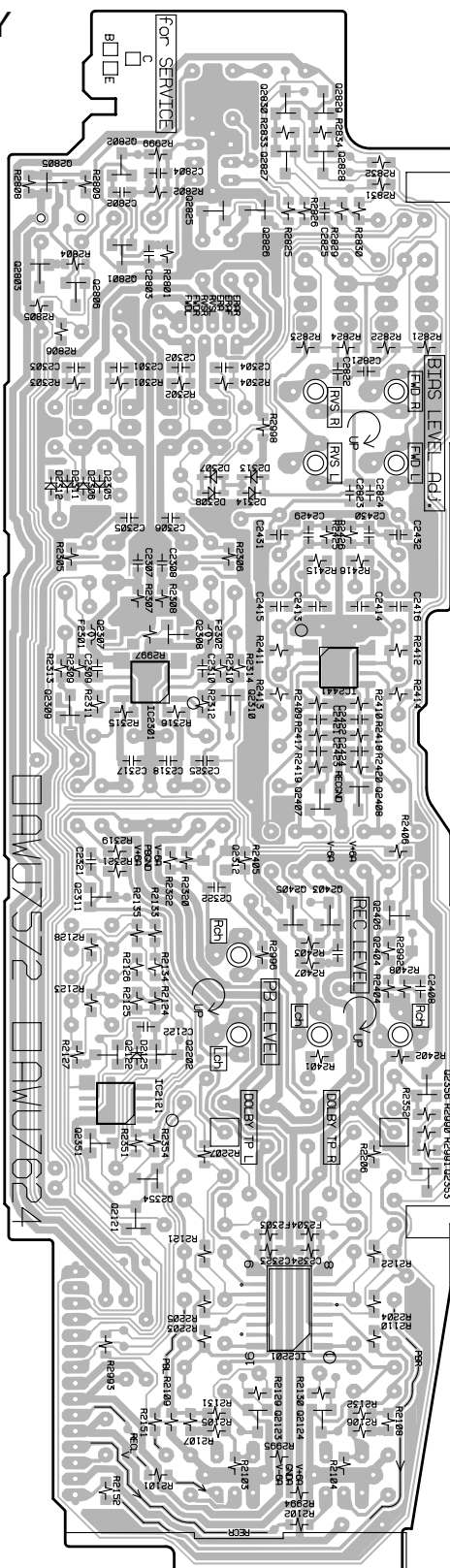
- Q2306
- Q2305

- VR2302
- VR2402
- VR2401
- VR2301

B CN2002

ANP7347-B

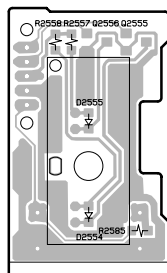
SIDE B



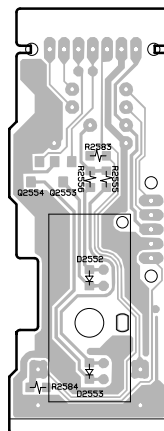
Q2123
Q2124

ANP7347-B

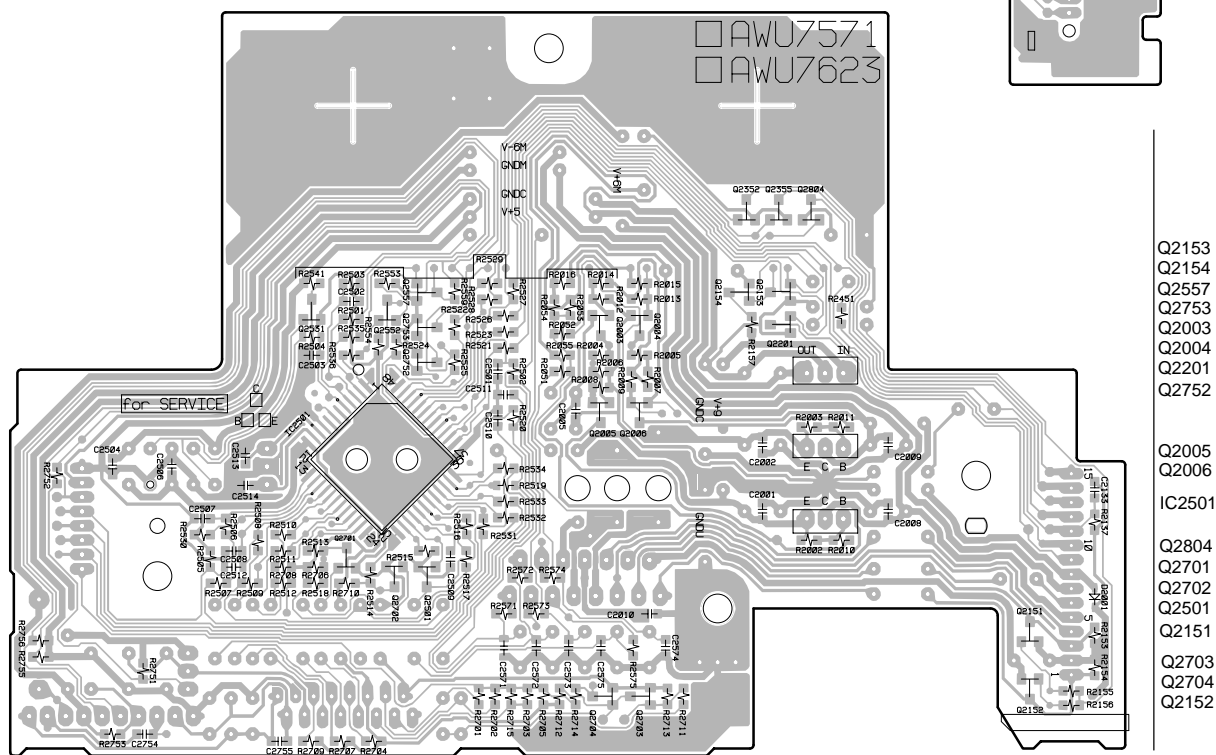
D PANEL ASSY R



D PANEL ASSY L



B MAIN ASSY



ANP7347-B

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.

●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 56×10^1 \rightarrow 561 RD1/4PU $\boxed{5} \boxed{6} \boxed{1} J$

47k Ω \rightarrow 47×10^3 \rightarrow 473 RD1/4PU $\boxed{4} \boxed{7} \boxed{3} J$

0.5 Ω \rightarrow R50 RN2H $\boxed{R} \boxed{5} \boxed{0} K$

1 Ω \rightarrow 1R0 RS1P $\boxed{1} \boxed{R} \boxed{0} K$

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

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

Mark	No.	Description	Part No.
------	-----	-------------	----------

LIST OF PCB ASSEMBLIES

NSP	TC MAIN ASSY	AWM7501
	└ MAIN ASSY	AWU7571
	└ SIDE ASSY	AWU7572
	└ ILLUMI ASSY	AWU7573
	└ PANEL ASSY	AWU7574

B MAIN ASSY

SEMICONDUCTORS

Δ	IC2751	LB1641
	IC2002	NJM78M05FA
	IC2501	PDC060A
	Q2003, Q2006	2SA1037K
	Q2751	2SB1425
Δ	Q2001	2SB1566
	Q2004, Q2005, Q2703	2SC2412K
	Q2151, Q2152	2SD2114K
Δ	Q2002	2SD2395
	Q2352	DTA114EK
	Q2153, Q2201, Q2355, Q2552, Q2804	DTA124EK
	Q2752, Q2753	DTA143EK
	Q2154, Q2501, Q2557	DTC124EK
	Q2704	DTC124EK
	Q2531, Q2701, Q2702	DTC143EK
	D2532, D2701, D2702, D2751	1SS133
	D2754	MTZJ4.3B
	D2571- D2575	MTZJ8.2B

COILS AND FILTERS

L2501		LFEA221J
X2501	CERAMIC RESONATOR (6.00 MHz)	XSS3001

CAPACITORS

C2513, C2514	CCSQCH470J50
C2014, C2531	CEAT100M50
C2006, C2007, C2505	CEAT101M10
C2003, C2004, C2013, C2451	CEAT1R0M50
C2751	CEAT471M16

Mark	No.	Description	Part No.
------	-----	-------------	----------

	C2501, C2502, C2509- C2511	CKSQYB102K50
	C2504, C2506- C2508, C2755	CKSQYB103K50
	C2754	CKSQYB104K25
	C2133	CKSQYF105Z16

RESISTORS

	R2001	RD1/4PU560J
	R2754	RS1LMF2R2J
	Other Resistors	RS1/10S□□□J

OTHERS

CN2701	16P FFC CONNECTOR	HLEM16S-1
CN2002	15P PLUG	KM200TA15
CN2001	JUMPER CONNECTOR(15P)	KPE15
KN2001	EARTH METAL FITTING	VNF1084

A SIDE ASSY

SEMICONDUCTORS

IC2121, IC2301, IC2441	BA4558F
IC2201	HA12136AF
Q2805	2SA1037K
Q2121, Q2123, Q2124, Q2801- Q2803	2SC2412K
Q2827, Q2828	2SC3138
Q2405, Q2406, Q2825, Q2826	2SD2114K
Q2301- Q2306, Q2821- Q2824	2SK373
Q2353	DTA114EK
Q2202, Q2351, Q2354, Q2829, Q2830	DTA124EK
Q2309, Q2310, Q2407, Q2408	DTC114TK
Q2806	DTC124EK
Q2122	DTC144EK
D2121- D2124, D2131, D2301- D2304	1SS133
D2309, D2310, D2351, D2352	1SS133
D2821, D2822	1SS133
D2125, D2305- D2308, D2311- D2314	1SS355
D2825	S5688G

COILS AND FILTERS

L2801 (OSC. COIL)	ATX7006
L2441, L2442 (18mH)	RTF1027
F2101, F2102 (MPX Filter)	RTF1209

Mark	No.	Description	Part No.
CAPACITORS			
	C2301- C2306, C2821, C2822		CCSQCH100D50
	C2309, C2310, C2823- C2825		CCSQCH101J50
	C2431, C2432		CCSQCH391J50
	C2429, C2430		CCSQSL122J50
	C2421, C2422		CCSQSL152J50
	C2307, C2308, C2413- C2416		CCSQSL681J50
	C2807		CEAL220M16
	C2203, C2204		CEAT100M50
	C2201, C2202, C2315, C2316		CEAT101M10
	C2425, C2426		CEAT101M10
	C2103, C2104, C2132, C2207, C2208		CEAT1R0M50
	C2401, C2402		CEAT1R0M50
	C2121		CEAT220M50
	C2313, C2314, C2419, C2420		CEAT330M50
	C2805, C2806		CEAT330M50
	C2319, C2320, C2427, C2428		CEAT4R7M50
	C2205, C2206		CEATR22M50
	C2417, C2418		CFTLA154J50
	C2801		CFTLA183J50
	C2803, C2804		CKSQYB472K50
	C2802		CKSQYB682K50
	C2122		CKSQYF105Z16
⚠	C2820		CQHA472J2A
	C2311, C2312		CQMA682J50
	C2101, C2102, C2411, C2412		CQMBA103J50

RESISTORS

R2827, R2828	RD1/4PU1R0J
R2317, R2318	RD1/4PU471J
R2201, R2202, R2423, R2324, R2810	RD1/4PU820J
R2803	RD1/4PU8R2J
VR2301, VR2302 (4.7 kΩ)	VCP1154
VR2401, VR2402 (10 kΩ)	VCP1156
VR2821- VR2824 (10 0kΩ)	VCP1162
Other Resistors	RS1/10S□□□J

OTHERS

CN2003 15P SOCKET	KP200TA15L
CN2301 9P FFC CONNECTOR	VKN1240

C ILLUMI ASSY
SEMICONDUCTORS

Q2550, Q2551	2SA1037K
D2551 LED (BLUE)	EB3804X

CAPACITORS

C2551	CKSQYF104Z25
-------	--------------

RESISTORS

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

OTHERS

2503, 2504 2P CABLE HOLDER	51048-0200
2502 8P CABLE HOLDER	51048-0800
J2501 8P 2mm JUMPER WIRE	D20PDY0815E
J2502 2P 2mm JUMPER WIRE	D20PYY0210E
CN2505 7P 2mm JUMPER CON.	SBRK07S-4
2501 PCB BINDER	VEF1040

Mark	No.	Description	Part No.
D PANEL ASSY SEMICONDUCTORS			
	Q2553- Q2556		DTC143EK
	D2552, D2554, D2555 LED(GR)		LT1E40A
	D2553		SML-210VT
SWITCHES AND RELAYS			
	S2581- S2584		ASG7013
RESISTOR			
	All Resistors		RS1/10S□□□J
OTHERS			
2509, 2510 5P CABLE HOLDER			51048-0500
2506 7P CABLE HOLDER			51048-0700
J2503 7P 2mm JUMPER WIRE			D20PDY0710E
J2505 5P 2mm JUMPER WIRE			D20PYY0515E

6. ADJUSTMENT

For adjustment, use the STEREO CD RECEIVER (XC-F10) in combination with the STEREO POWER AMPLIFIER(M-F10).

6.1 TEST MODE

■ How to Enter the Test Mode

In case of system operation

Receive "A15F" (bus data 1C5F) with the remote control or switch on the power with the TEST MODE JP [W137 (GNDC) and W138 (TEST)] of the MAIN ASSY short-circuited (pin 30 of the microcomputer connected to GND).
(Refer to Fig. 6-1.)

In case of single operation

Connect part (A) of the MAIN ASSY [W134 (GNDC) and W156 (GND)], short-circuit the TEST MODE JP [W137 GNDC) and W138 (TEST)] (pin 30 of the microcomputer connected to GND), and supply DC power to part [W155 (+9 V), W154 (-9 V) and W156 (GND)]. (Refer to Fig. 6-1.)

* Single operation the keys "EJECT", "STOP", "REC" and "PLAY" operate normally, and other connect part (B) of the ILLUMI ASSY W176 (GNDC), short-circuit the TEST JUMPER [W177(REW) and W175(FF)].

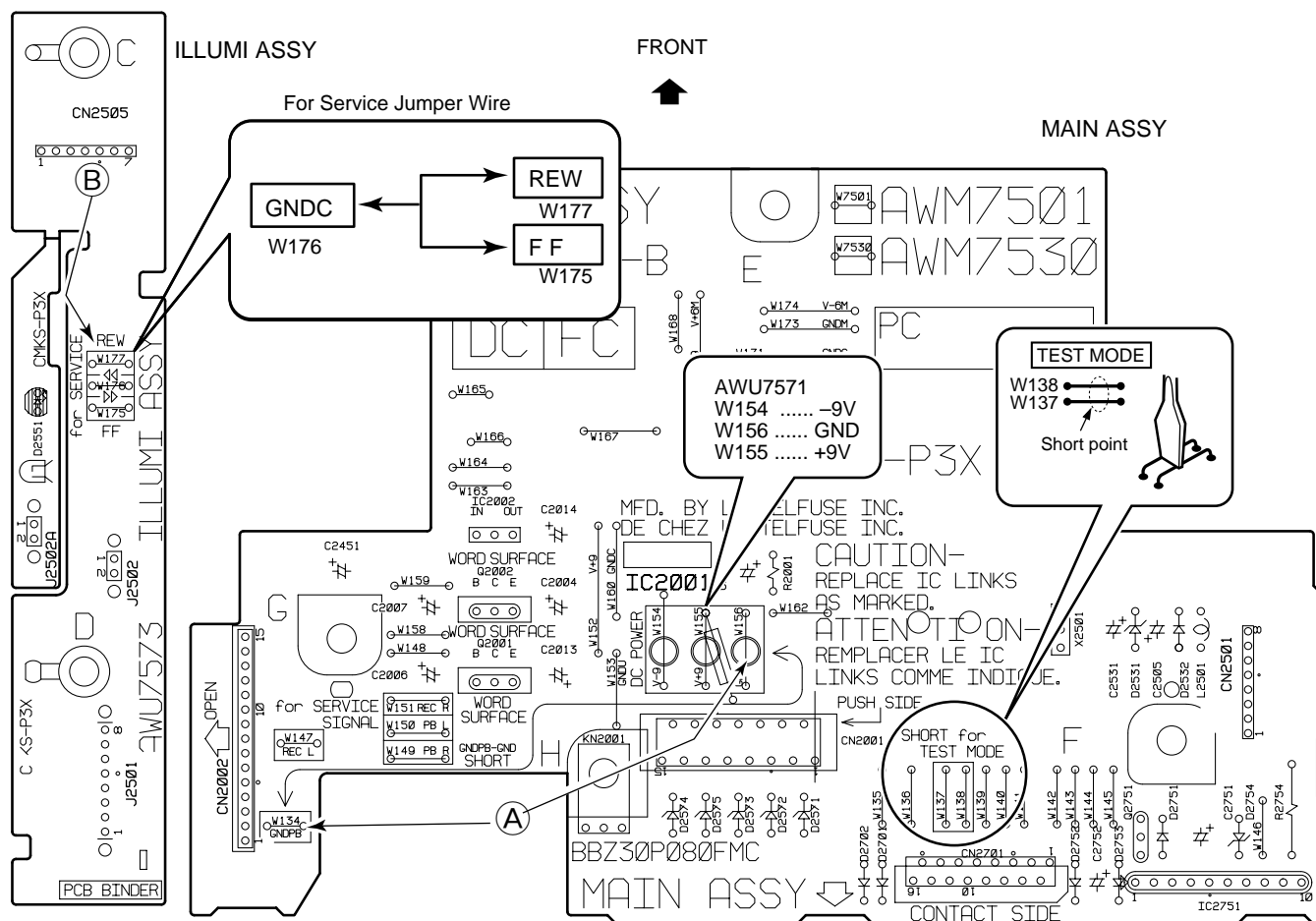
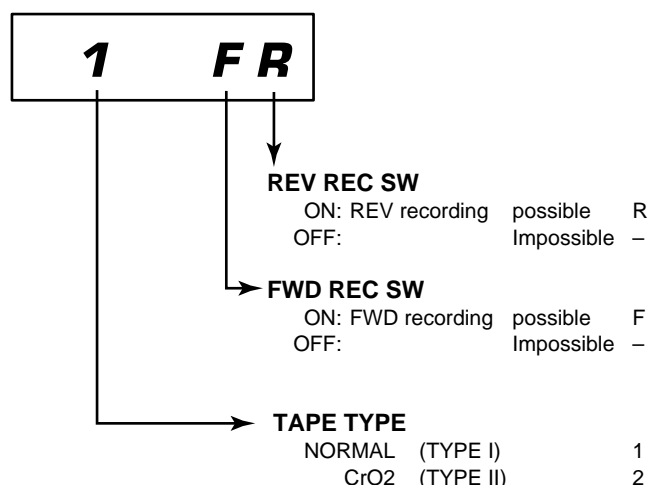


Fig. 6-1

■ Operation of the Test Mode

- When the "EJECT" key is pressed, cassette mechanism switch check mode is entered and the DISPLAY Part displays the following.

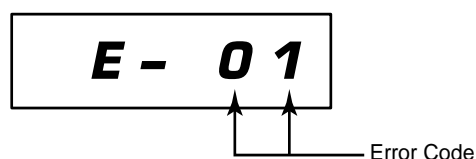


- When the "REC PAUSE" key is pressed, the mode for opening of REC PLAY is reached, automatic recording and playback mode is reached and the following operation is performed.

- ① FUNCTION is set to AUX.
- ② FWD recording is performed for 4 sec.
- ③ RVS recording is performed for 4 sec.
- ④ FWD playback is performed for 4 sec. (Function becomes TAPE), and the unit stops.
- ⑤ RVS playback is performed for 4 sec.
- ⑥ STOP.
- ⑦ REC PAUSE . (Direction becomes FWD)

LINE MUTE opens in REC condition.

- "DOLBY" ON/OFF check mode is made with the remote control " STOP" key.
- The remote control the keys "PLAY", "FF", "RWD", "STOP", and "REC" operate normally and LIN MUTE opens in REC/ REC PAUSE condition.
- When abnormal operation is detected, the corresponding code will be displayed on the DISPLAY Part.



- 01 The tape does not loading/eject-error.
 02 The deck mechanism assist does not setup position.

■ Cancellation of test mode

Press the "STANDBY/ON" key or disconnect the AC power supply.

6.2 SINGLE OPERATION METHOD

■ Operation of preparation

Connect part ① of the MAIN ASSY [W156 (GND) and W134 (GNDC)], short-circuit the TEST MODE JP [W137 GNDC) and W138 (TEST)] (pin 30 of the microcomputer connected to GND), and supply DC power to part [W155 (9 V), W154(-10 V) and W156 (GND)]. (Refer to Fig. 6-1.)

■ In case of single connect load

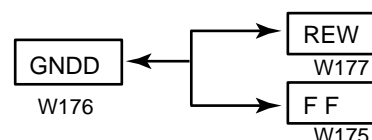
In case of adjustment as a single unit, connect a 27 kΩ load resistor to pins W149(PBR) and W150(PBL) of (MAIN ASSY). (Refer to Fig. 6-4.)

■ In case of input signal

In case of adjustment as a single unit, enter the signal at W147(REC_L) and W151(REC_R) of MAIN ASSY. At this time, connect an output buffer amplifier to the oscillator, and then connect a series resistor(180 Ω) after the impedance has become sufficiently low. (For MPX filter impedance matching) (Refer to Fig. 6-4.)

■ In case of Fuction

Connect part ② of the ILLUMI ASSY["REW"(W177) and "FF"(W175) circuit the TEST JUMPER [W176 GNDC] .



■ Adjustment Condition

- | | |
|----------|-------------------------------------|
| NCT-111 | : For Tape Speed Adjustment |
| | : For Head Azimuth Adjustment |
| NCT-132X | : For Playback Level Adjustment |
| | : For Playback Frequency Adjustment |
| STD-633 | : Normal blank tape |
| STD-622 | : CrO ₂ blank tape |

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

■ List of Adjustment

- (1) Tape Speed No Adjustment (Confirmation)
- (2) Head Azimuth Confirmation
- (3) Playback Level Adjustment FWD
REV Confirmation
- (4) Playback Frequency Characteristics Confirmation

(1) Recording Bias Adjustment FWD
(2) Recording Bias Adjustment REV
(3) Recording Level Adjustment FWD
REV Confirmation

The diagram shows a two-stage amplifier with a feedback loop. The first stage has a gain of 250 and a feedback of 3dB. The second stage has a gain of 10k and a feedback of 3dB. The overall feedback is 4dB.

The diagram shows a two-port network. The input port on the left has a power level of 250 and a 3dB loss indicated by a downward arrow. The output port on the right has a power level of 12.5k and a 5dB gain indicated by an upward arrow. The network is represented by a horizontal line with a 3dB loss and a 5dB gain.

Fig. 6-2 Frequency Characteristics

■ Test Tape NCT-132X

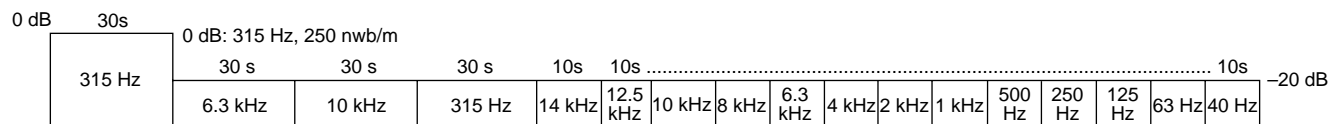


Fig. 6-3 Test Tape NCT-132X

6.2.1 Playback Section

(1) Tape Speed Confirmation

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	NCT-111 (3 kHz)	No Adjustment	PB OUT (PBR:W149) (MAIN ASSY)	3000 Hz+90Hz - 60Hz	REV Confirmation (3000 Hz + 90Hz) - 60Hz

(2) Head Azimuth Confirmation

- 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	Adjustment Points	Measurement Points	Remarks
1	PLAY	NCT-132X (10 kHz, -20dB)	Head azimuth No adjustment	PB L cH(W150) PB R cH(W149) (MAIN ASSY)	FWD / REV Confirmation

(3) Playback Level Adjustment

- Since this adjustment determines playback DolbyNR level, Perform it carefully.

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	NCT-132X test tape (Playback: 315 Hz, 0 dB)	L ch VR2301 R ch VR2302	PB L cH(W150) PB R cH(W149) (MAIN ASSY)	-6.0 dBV	FWD Adjstment REV Confirmation (- 6.0 dBv \pm 2.0dB)

(4) Playback Frequency Characteristics Confirmation

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	PLAY	NCT-132X test tape	_____	PB L cH(W150) PB R cH(W149) (MAIN ASSY)	_____	Check that the frequency characteristics is within the range of Fig. 6-2.

6.2.2 Recording Section

(1) Recording Bias Adjustment

- After the adjustment, caution should be exercised so as not to become under bias by checking the distortion rate.

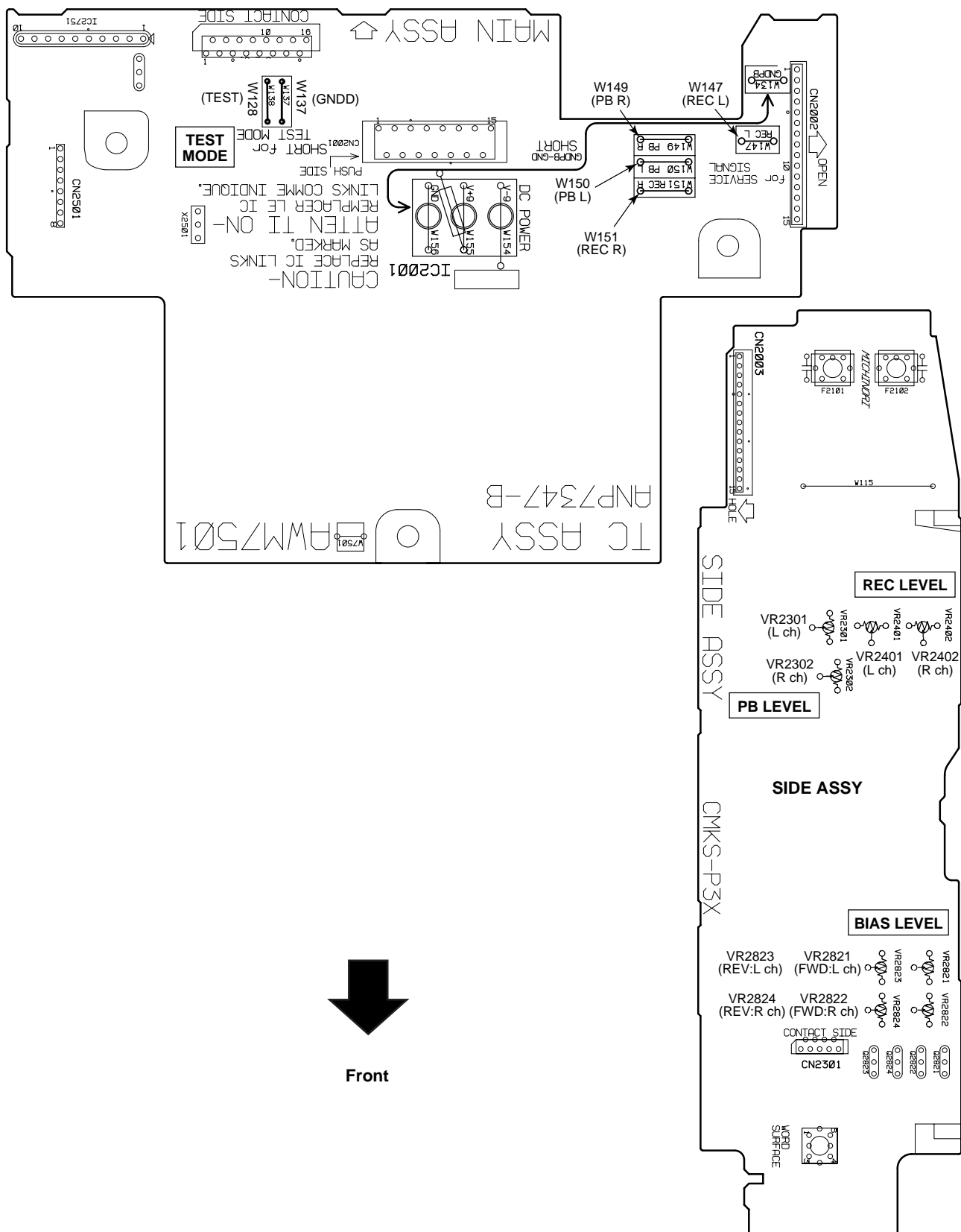
No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	*	Input a 315Hz (-26dBv)signal to the REC IN terminal . (W147:REC L) (W151: REC R)	Input signal level	PB L cH(W150) PB R cH(W149) (MAIN ASSY)	-26 dBV	
2	REC → PLAY	Load the STD-633 test tape and record/playback the 315Hz and 10kHz signals. (see the Note below)	L ch FWD.VR2821 R ch FWD.VR2822	REV.VR2823 REV.VR2824		Repeat adjustment until playback level of the 10kHz signal is within -0.5dB \pm 0.5dB from that of the 315Hz signal.

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

(2) Recording Level Adjustment

No.	Mode	Input Signal/Test Tape	Adjustment Points	Measurement Points	Adjustment Value	Remarks
1	*	Input a 315Hz (-10dBv)signal to the REC IN terminal . (W147:REC L) (W151: REC R)	Input signal level	PB L cH(W150) PB R cH(W149) (MAIN ASSY)	-10 dBV	
2	REC → PLAY	• STD-633 test tape and record/ playback the 315Hz signal. • DOLBY NR : OFF	L ch VR2401 R ch VR2402			Repeat recording, playback and adjustment until playback level of the 315Hz signal becomes -10dBV \pm 0.5dB.

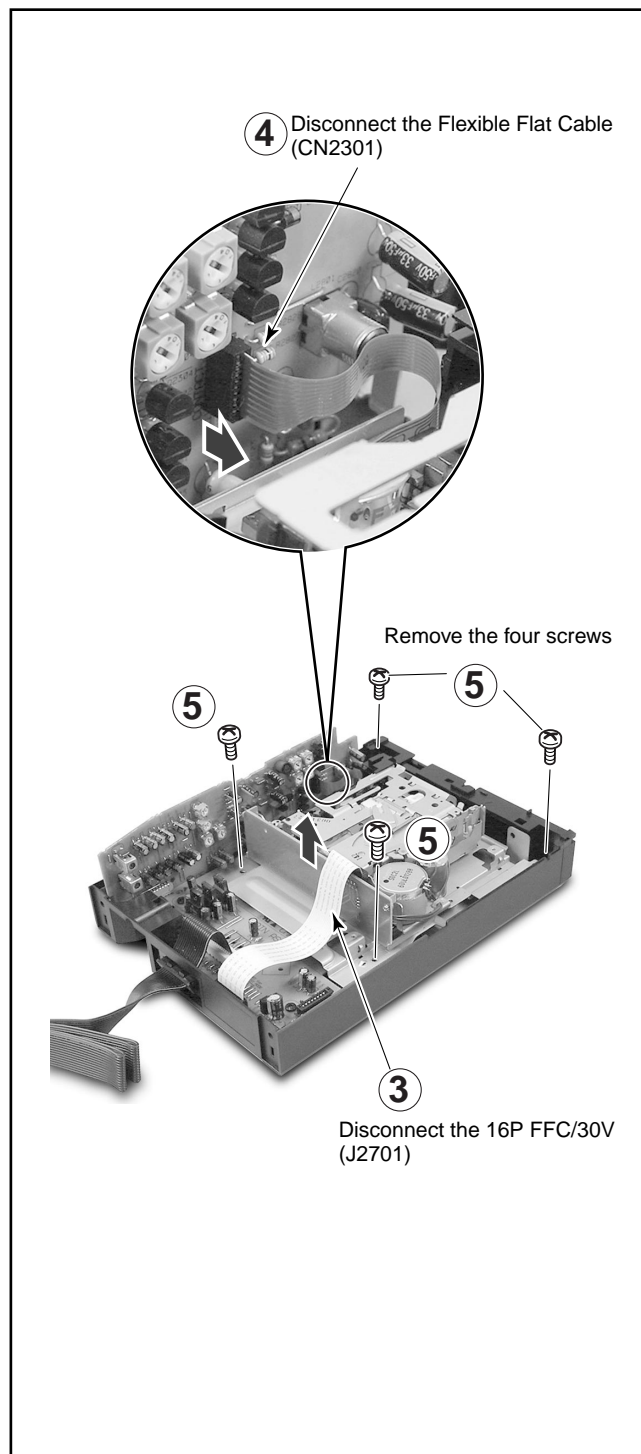
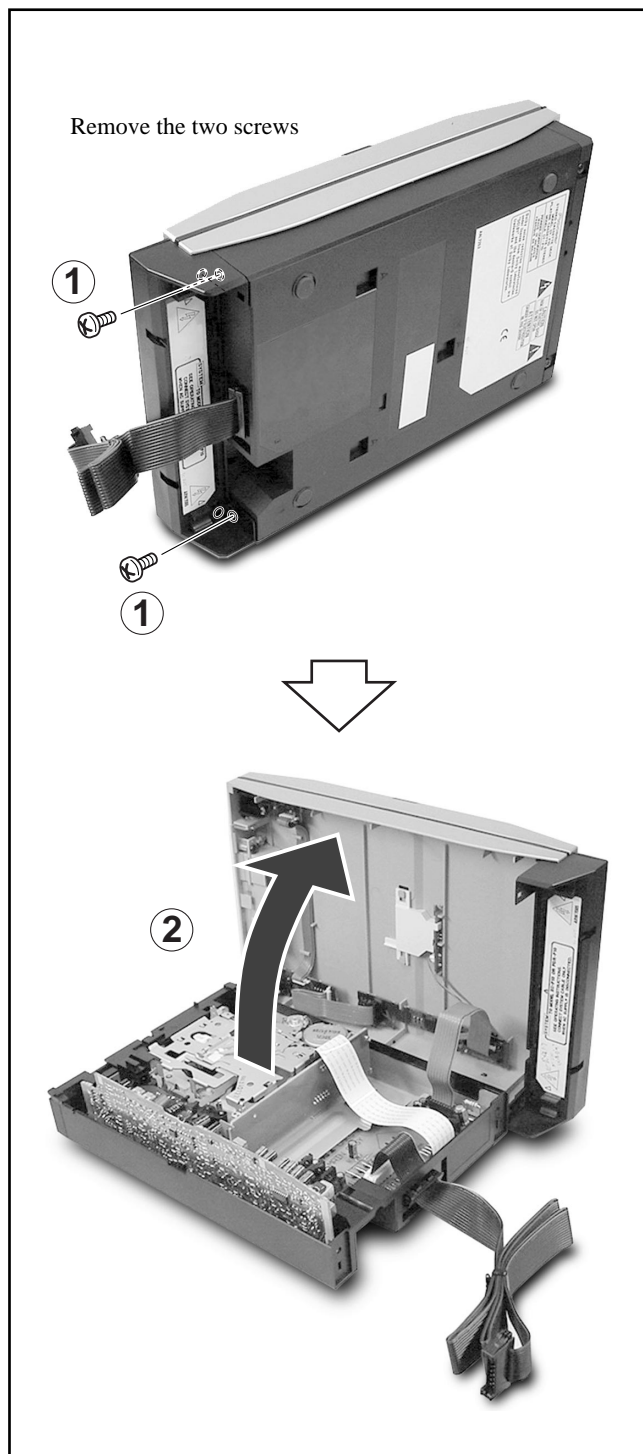
*: In case of adjustment as a single unit, enter the signal at W147(RECL)and W151(RECR) ofMAIN ASSY. At this time, connect an output buffer amplifier to the oscillator, and then connect a series resistor (180 Ω) after the impedance has become sufficiently low. (For MPX filter impedance matching)



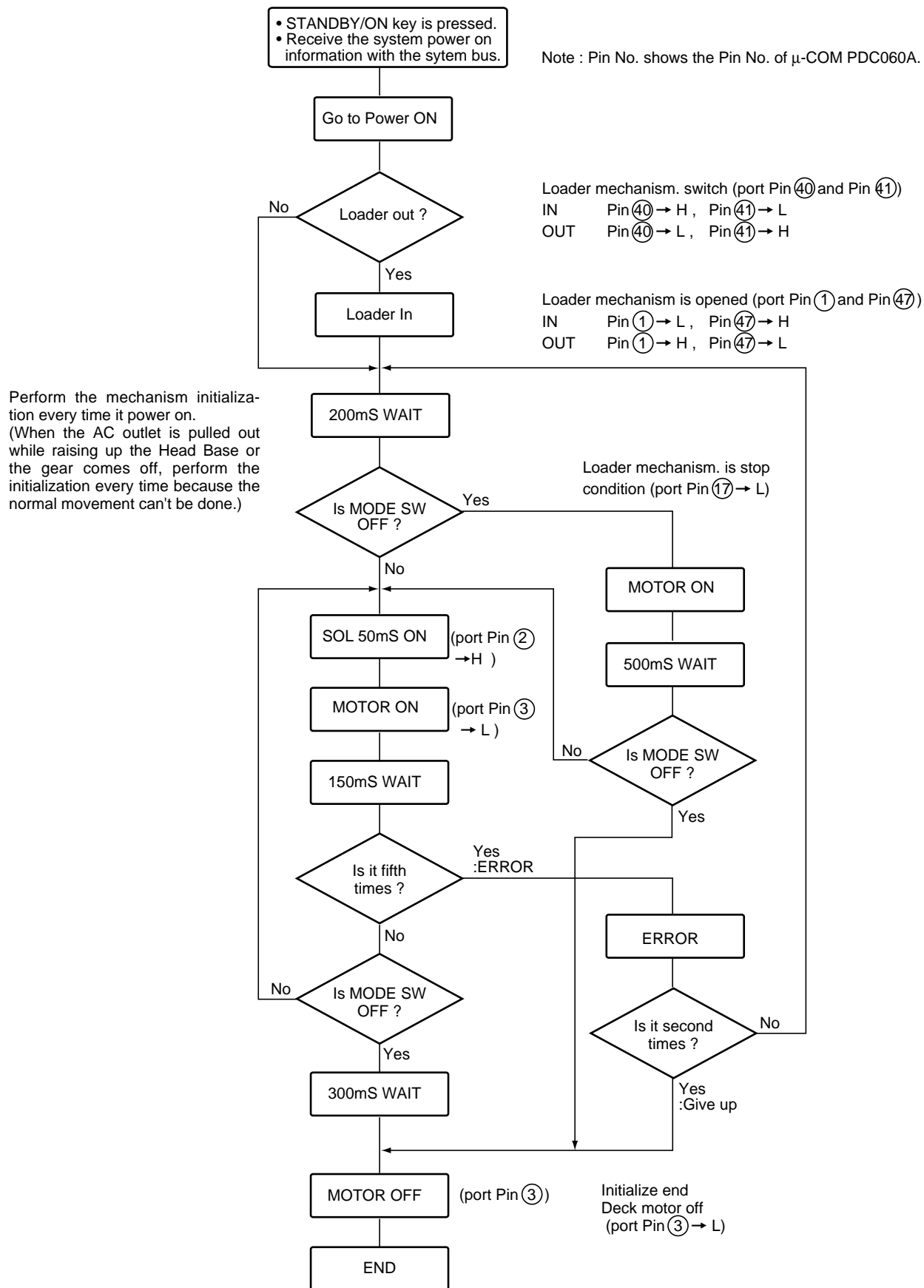
7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY



7.1.2 POWER ON SEQUENCE



7.2 PARTS

7.2.1 IC

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

■ PDC060A (MAIN UNIT : IC2501)

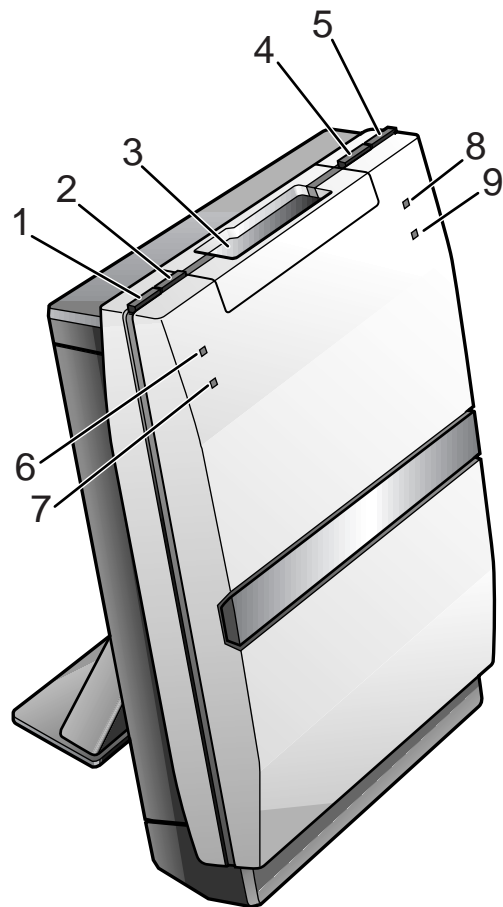
- System Microcomputer

●Pin Function

No.	Pin Name	I/O	Pin Function	No.	Pin Name	I/O	Pin Function
1	DIMR 1	O	BLUE LED Dimmer control 1	25	SENSE 2	I	Sensing pulse input 2
2	DIMR 2	O	BLUE LED Dimmer control 2	26	MODEL	I	Model switch input
3	XMOTOR	O	Cassette mechanism main motor control	27	S.DOUT	O	System bus output data
4	S.CLK	I	System bus clock	28	S.DIN	I	System bus input data
5	XRESET	I	Reset input	29	NC	–	Not used
6	E+5V	I	Connect to VDD	30	XTEST	I	Test mode detection input
7	NC	–	Not used	31	LEDRVSM	O	Dir LED(RVS MODE) ON/OFF
8	E+5V	I	Connect to VDD	32	LEDPLAY	O	PLAY LED (ON/OFF)
9	GNDD	–	GND	33	LEDREC	O	Dir LED(REC) ON/OFF
10	CF1	I	Connected to ceramic oscillator (6 MHz)	34	D.DATA	O	Display bus Data control
11	CF2	O		35	LEDDOLBY	O	Dolby LED (ON/OFF)
12	E+5V	–	Power supply +5V	36	D.CLK	O	Display bus Clock control
13	KEY1	I	AD key data input	37	XPB MUTE	O	PB MUTE control
14	KEY2	I		38	D.REQ	I	Display bus Request
15	MS	I	MS audio signal input	39	DOLBY	O	DOLBY NR control
16	PROTECT	I	Protection network detection input	40	LOAD 1	O	Loader mechanism motor close control (+)
17	XMODE	I	Cassette mechanism mode SW input	41	LOAD 2	O	Loader mechanism motor close control (–)
18	NC	–	Not used	42	NC	–	Not used
19	XRECR	I	REV REC detection SW input	43	PB/XREC	O	DOLBY PB/REC control
20	XCrO2(SW)	I	CrO2 position detection SW input	44	RECMUTE	O	REC MUTE control
21	NC	–	Not used	45	XCrO2	O	Normal / CrO2 control
22	XRECF	I	FWD REC detection SW	46	BIAS	O	BIAS control
23	SENSE	I	Sensing pulse input	47	XFWD/RVS	O	Head (FWD/RVS)SNLG Switch
24	NC	–	Not used	48	NC	–	Not used

8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES



Cassette deck

- 1 ◀▶ – Press to play a tape or reverse a tape that’s already playing.
- 2 ■ – Press to stop a tape.
- 3 **Cassette tape slot**
- 4 ●|| – Press to put the unit into record-pause.
- 5 ▲ – Press to eject a tape.
- 6 **Play indicator** – Lights when a tape is playing.
- 7 **Endless play indicator** – Lights when the reverse mode is set to Endless (reverse mode is One Way if not lit).
- 8 **REC** – Lights when recording or in record-pause.
- 9 **DOLBY NR*** – Lights when Dolby Noise Reduction is switched on.

*
• Dolby noise reduction manufactured under license from Dolby Laboratories.
• “Dolby”, and the double-D symbol are trademarks of Dolby Laboratories.

■ SPECIFICATIONS

Stereo Cassette Deck: CT-F10

System	4-track, 2-channel stereo
Heads	Recording/playback head × 1
	Erase head × 1
Motor	DC Servo motor x 1
Frequency Response (–20dB recording)	
Type I (Normal) tape .	20 Hz–16,000 Hz ± 6 dB
Type II (High/CrO ₂) tape	20 Hz–16,000 Hz ± 6 dB
Signal-to-Noise Ratio	56 dB
	(EIAJ, peak recording level, audio compensation)
Noise Reduction Effect	
Dolby B-type NR ON	More than 10 dB (at 5 kHz)
Wow and Flutter	0.08% (WRMS), ±0.14% (DIN)
Dimensions	170 (W) × 268 (H) × 66 (D) mm
	(without stands)
Weight	1.5 kg

Accessories

Stand A	1
Stand B	1
Operating instructions	1
Warranty card	1

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