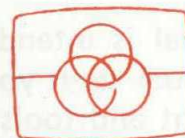




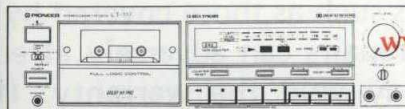
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Service Manual



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• The illustration shows model CT-337.

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CT-S407

CT-337

CT-337-S

MODEL CT-S407, CT-337 and CT-337-S HAVE FOLLOWING VERSIONS:

Type	Applicable model			Power requirement	Export destination
	CT-S407	CT-337	CT-337-S		
KUC	○			AC 120V only	U.S.A.
HEM		○		AC 220V, 240V (Switchable) *	European continent
HB		○		AC 220V, 240V (switchable) *	United Kingdom
HEWM			○	AC 220V, 240V (switchable) *	European continent
SD		○		AC110V, 120V, 220V, 240V (Switchable)	Kingdom of Saudi Arabia and General market

* Change the primary wiring of the power transformer.

- This manual is applicable to the KUC, HEM, HB, HEWM and SD types.
- As to the HEM, HB, HEWM and SD types, refer to pages 32, 33.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método ajuste escrito en español.

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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.

1. SAFETY INFORMATION

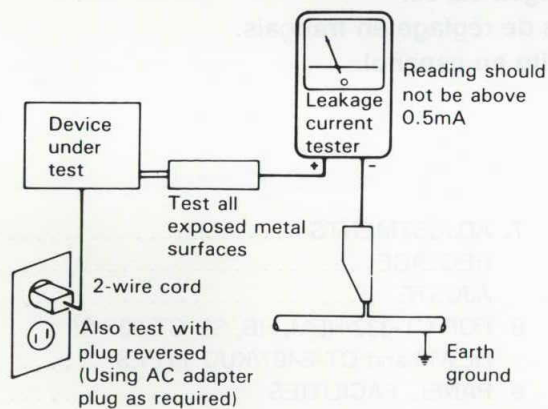
(FOR USA MODEL ONLY)

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.

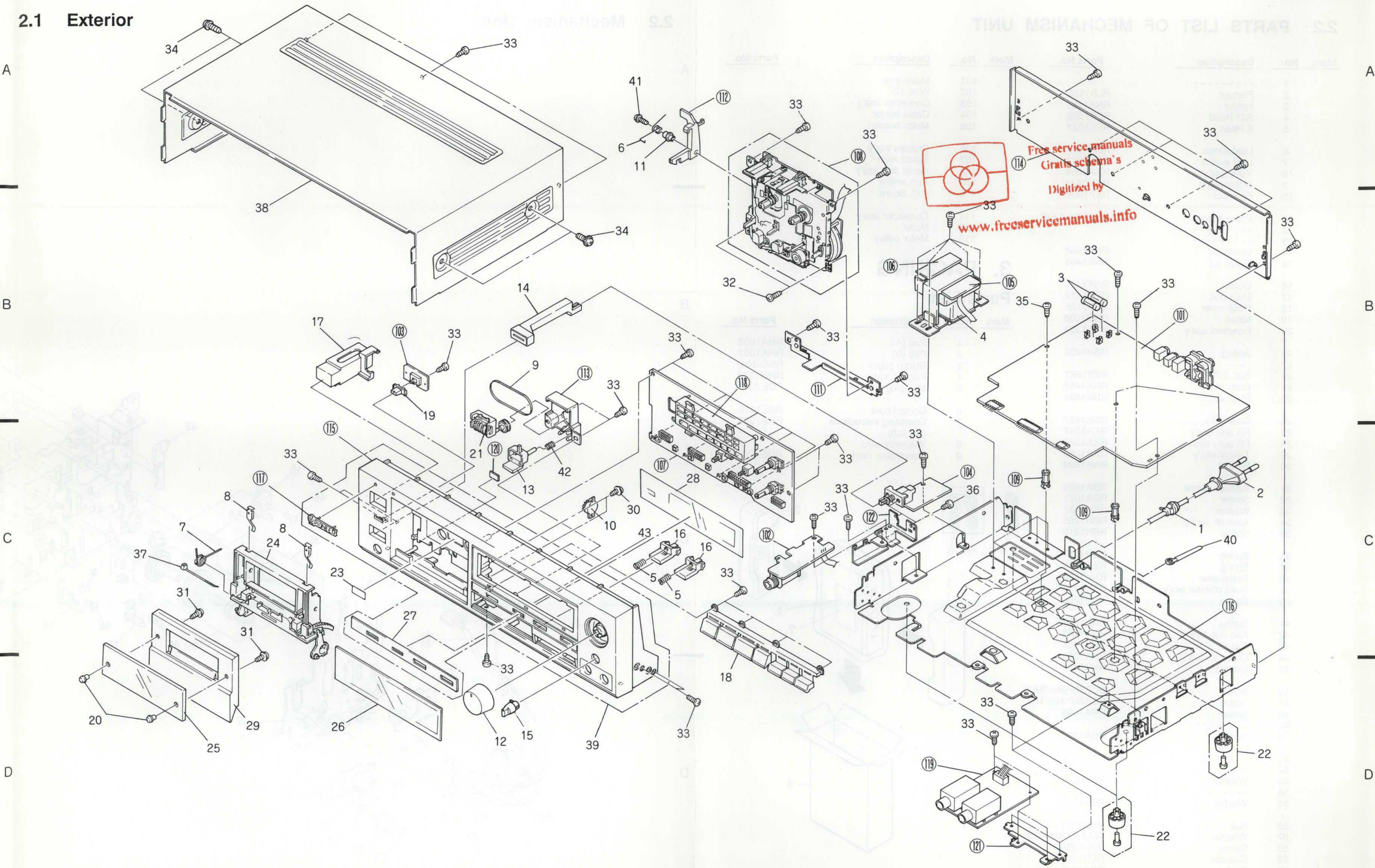
2.EXPLODED VIEWS AND PARTS LIST

- NOTES:
- Parts without part number cannot be supplied.
 - 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 PARTS LIST OF EXTERIOR

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	Strain relief	CM-22		101	Main unit	
	2	AC Power cord	RDG1010		102	Headphone unit	
	3	FU1, FU2 fuse (1.25A)	REK-073		103	Timer SW unit	
	4	T1 Power transformer	RTT1086		104	Power SW unit	
	5	Push spring	RBH1146		105	Transformer 1 unit	
	6	Eject lever spring (L) (For Mechanism unit)	RBH1201		106	Transformer 2 unit	
	7	Door spring (L)	RBH1203		107	Display unit	
	8	Half pressure spring	RBK1004		108	Mechanism unit	
	9	Counter belt	REB-514		109	PCB spacer	
	10	Damper ass'y	REC1013		110	-----	
	11	Collar (For Mechanism unit)	RLA1119		111	Mechanism mount plate	
	12	Knob (REC LEVEL)	RAC1363		112	Eject lever (L) (For Mechanism unit)	
	13	Knob (COUNTER RESET)	RAC1228		113	Counter holder	
	14	Botton (POWER)	RAC1364		114	Rear panel	
	15	Knob (REC BALANCE)	RAC1366		115	Front panel	
	16	Knob (DOLBY NR)	RAC1343		116	Main chassis	
	17	Knob (EJECT)	RAC1344		117	Name plate	
	18	Knob (◀, ■, ▶, ●, ■, ○)	RAC1345		118	LED holder	
	19	Knob (REC/TIMER OFF/ PLAY/REPEAT)	RAC1357		119	MIC unit	
	20	Screw	RAT1001		120	Spacer	
	21	Counter	RAW1041		121	MIC bracket	
	22	Leg ass'y	REC-369		122	Headphone bracket	
	23	Remaining sheet	REE-113				
	24	Door pocket	RNT1013				
	25	Door lens	RAH1244				
	26	Meter panel	RAH1457				
	27	Dolby name plate	RAH1655				
	28	Meter lens	RAH1637				
	29	Door panel	RAH1638				
	30	Screw	ARZ26P060FMC				
	31	Screw	ABZ26P050FMC				
	32	Screw	BBZ30P060FZK				
	33	Screw	BBZ30P080FMC				
	34	Screw	FBT40P080FZK				
	35	Screw	IBZ30P150FCU				
	36	Screw	PMA30P060FMC				
	37	Binder	REC-371				
	38	Bonnet	RXX1079				
	39	Front panel ass'y	RXX1267				
	40	Cord clamper	RNH-184				
	41	Screw	IBZ26P120FMC				
	42	Push spring (A) (Color:Black)	RBH1214				
	43	Tact knob	RAC1409				

2.1 Exterior



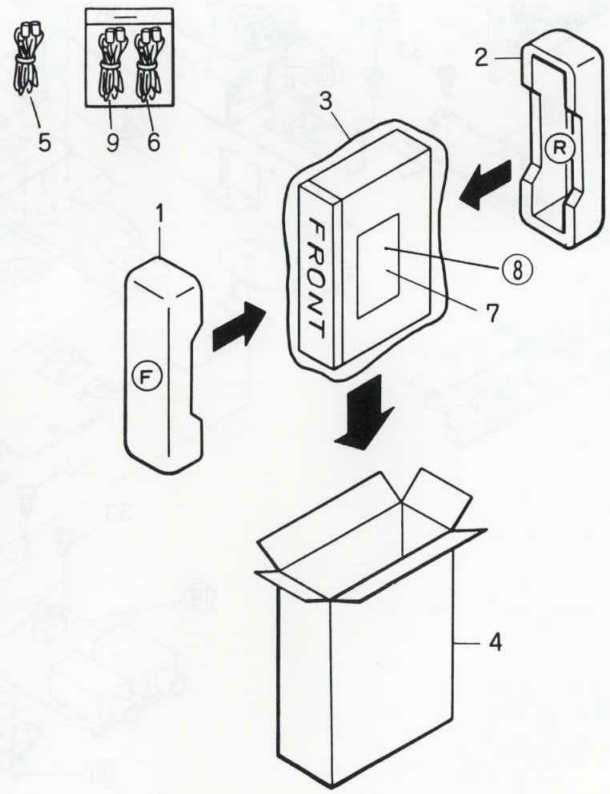
2.2 PARTS LIST OF MECHANISM UNIT

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	-----			101	Motor wire	
	2	Planger	RLA1120		102	Wire 12P	
	3	Holder	RNK1461		103	Connector ass'y	
	4	R/P Head	RPB1026		104	Cable holder	
	5	E Head	RPB1027		105	Motor bracket	
	6	Leaf switch	RSN1016		106	Chassis ass'y	
	7	Leaf switch	RSN1017		107	Select lever	
	8	Yoke ass'y	RXA1264		108	Assist arm ass'y	
	9	Motor ass'y	RXM1044		109	Arm switch	
	10	Solenoid	RXP1009		110	P.C. Board	
	11	Photo sensor	ON2170L(LF)R		111	Connector ass'y	
	12	-----			112	Motor	
	13	-----			113	Motor pulley	
	14	Guide (R)	RNK1468				
	15	Guide (L)	RNK1469				
	16	Guide	RNK1470				
	17	Main belt	REB1139				
	18	Pinch roller	REB1135				
	19	Metal	RNG1035				
	20	Frywheel ass'y	RXA1263				
	21	Spring	RBH1208				
	22	-----					
	23	Belt (FR)	REB1087				
	24	Gear (A)	RNK1465				
	25	Play arm	RNK1531				
	26	Gear (FF)	RNK1467				
	27	FR arm ass'y	RXA1347				
	28	FR pully ass'y	RXA1267				
	29	T-Reel ass'y	RXA1268				
	30	S-Reel	RNK1633				
	31	Azimuth screw	RBA1070				
	32	Screw	RBA1071				
	33	Washer	RBF1030				
	34	Azimuth spring	RBH1205				
	35	Spring	RBH1210				
	36	Spring	RBH1211				
	37	Spring	RBH1212				
	38	Assist gear	RNK1634				
	39	Head chassis ass'y	RXA1270				
	40	Spring	RBH1206				
	41	Spring	RBH1207				
	42	Arm cue lock	RNK1463				
	43	Trigger arm	RNK1464				
	44	Cassette spring	RBK1026				
	45	Eject lock (L)	RNK1451				
	46	Screw	BCZ20P060FMC				
	47	Screw	PCZ20P040FMC				
	48	Screw	RBA1086				
	49	-----					
	50	Screw	RBA1072				
	51	-----					
	52	-----					
	53	Washer	RBF1028				
	54	-----					
	55	Washer	RBF1031				
	56	Nut	RBN1001				
	57	Washer	WA21D040D013				
	58	Spring	RBH1268				
	59	Cushion	REB1103				
	60	Bush	RBA1075				

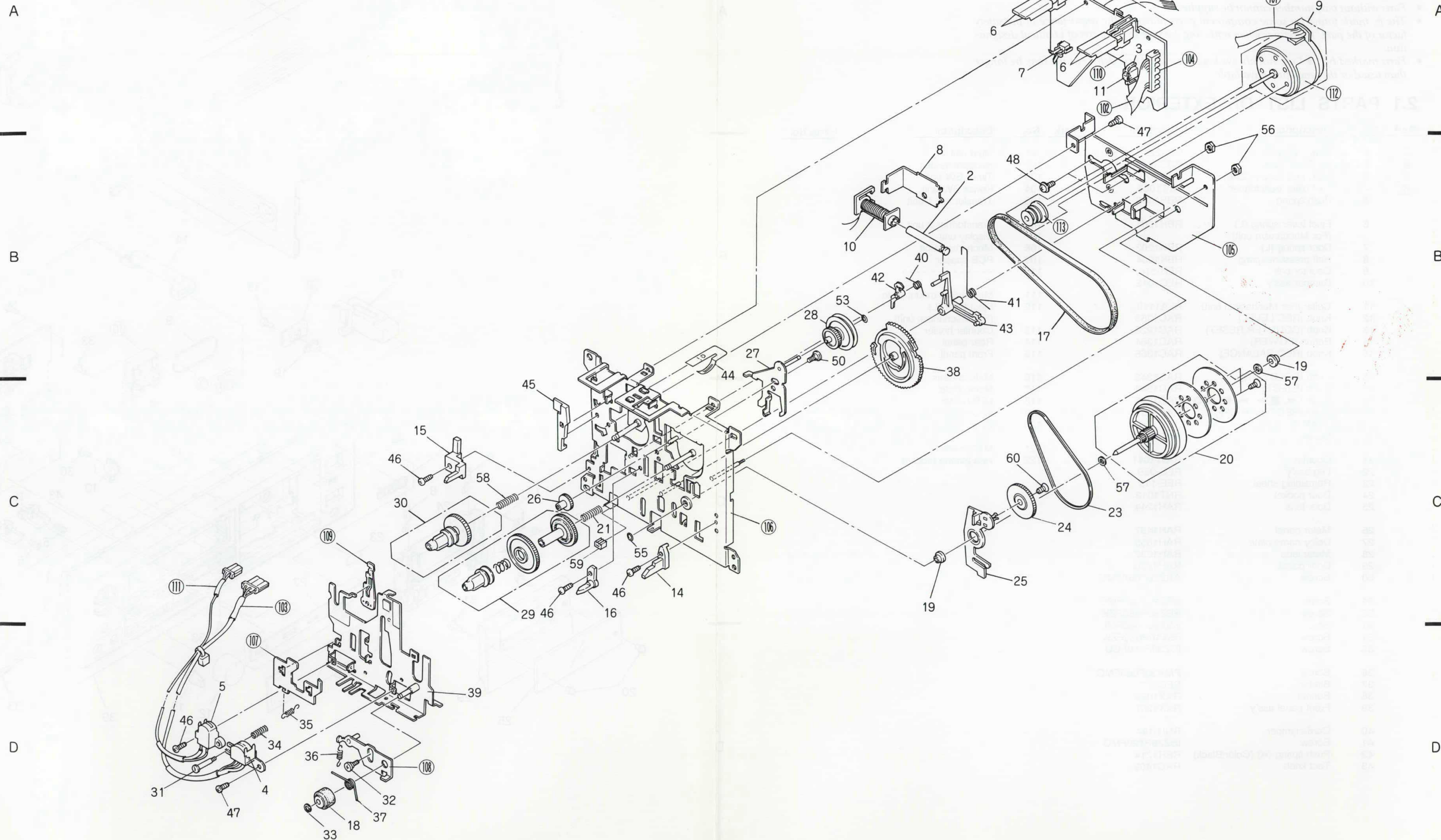
3. PACKING

Parts List

Mark	No.	Description	Parts No.
	1	Pad (A)	RHA1006
	2	Pad (B)	RHA1007
	3	Styren paper	RHC-161
	4	Packing case	RHG1178
	5	Mini-plug cord	PDE-319
	6	Control cord	RDE1018
	7	Operating instructions (English)	RRB1063
	8	Warranty card	
	9	Connection card	RDE-010

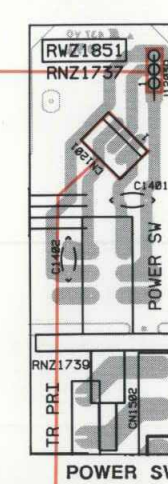
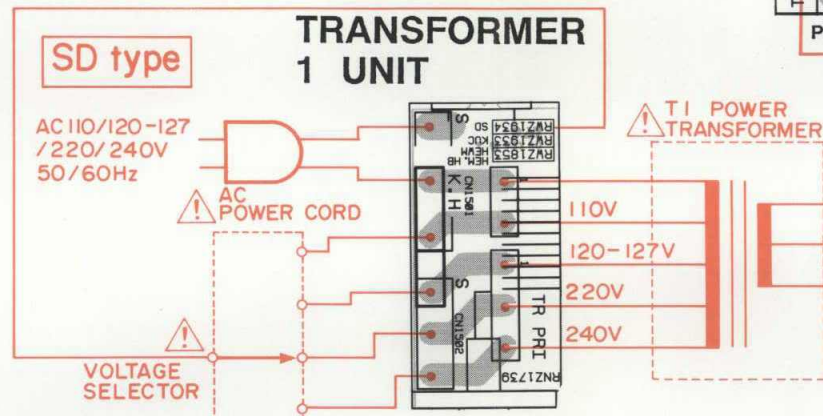
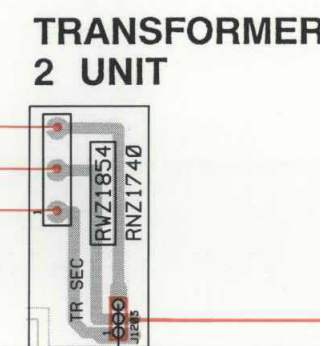


2.2 Mechanism Unit

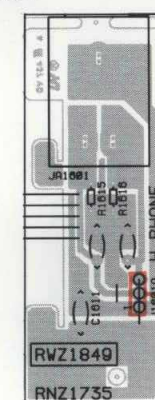
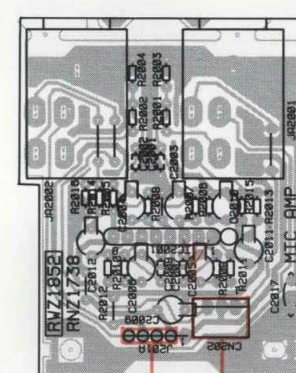
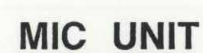


- **View from component side**

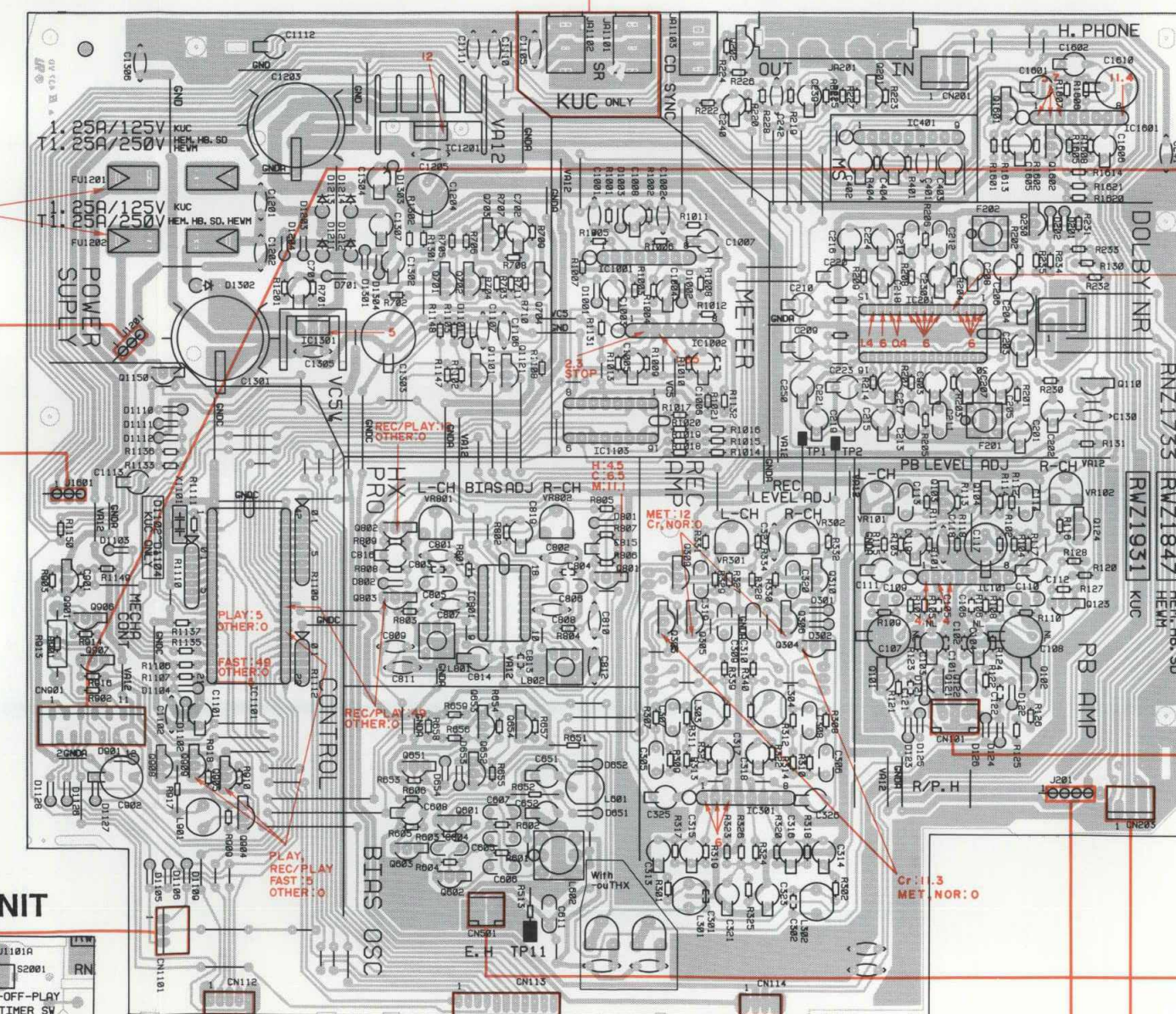
A



FU1201, FU1202:
I.25A / 125V --- CT-S407KUC
TI.25A / 250V --- CT-337HEM, HB, SD, HEWM



MAIN UNIT



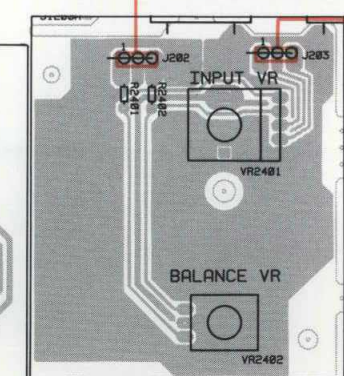
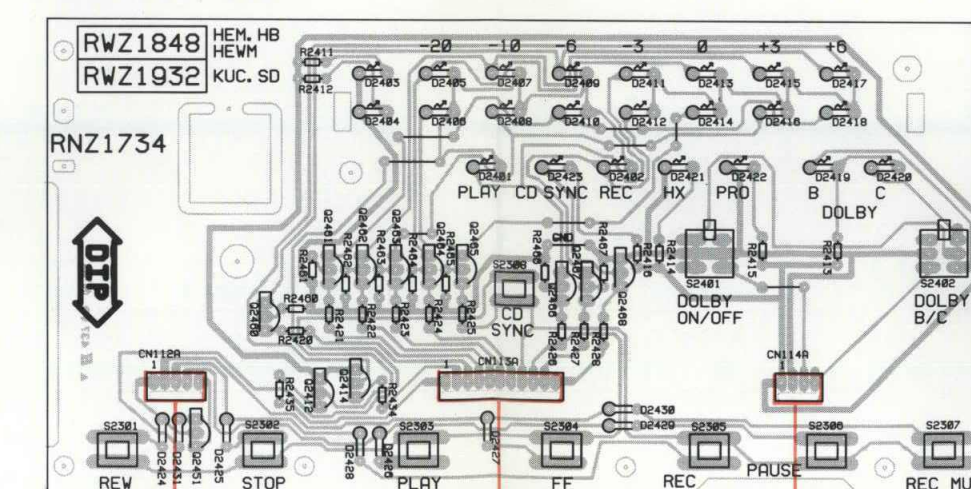
C HEM, HB type Line Voltage Section

Line voltage can be changed with following steps.

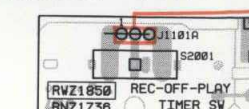
1. Disconnect the AC power cord.
2. Remove the Bonnet case.
3. Change the connection of the TRANSFORMER 1 UNIT assembly primary pins.

HEM, HEWM 220V ————
HB 240 V - - - - -

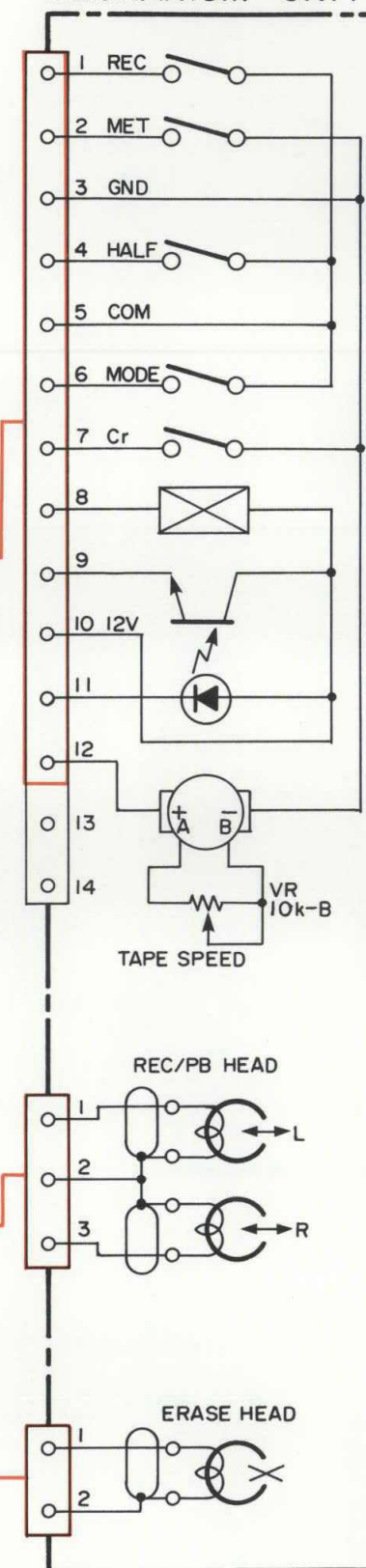
DISPLAY UNIT



TIMER UNIT



MECHANISM UNIT



P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

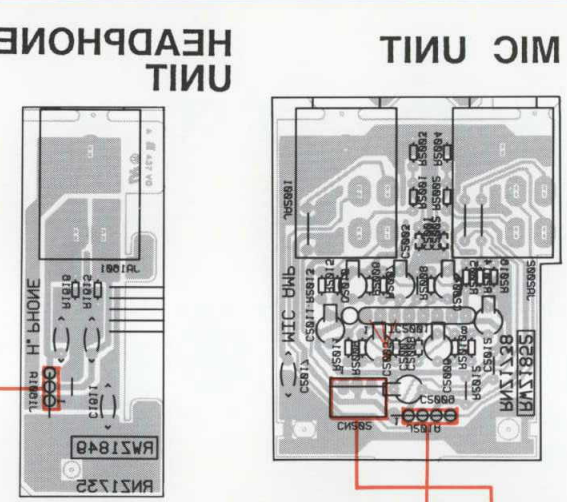
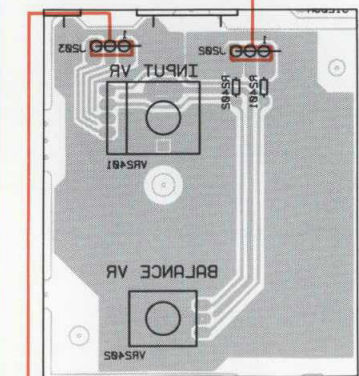
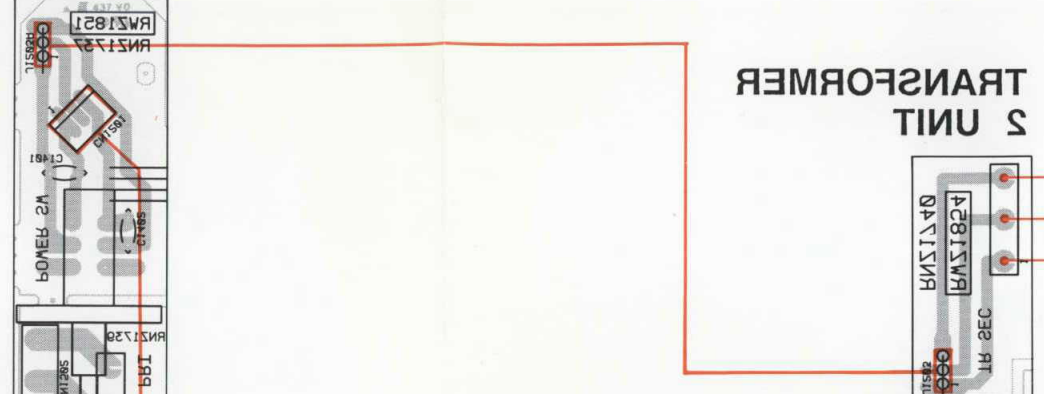
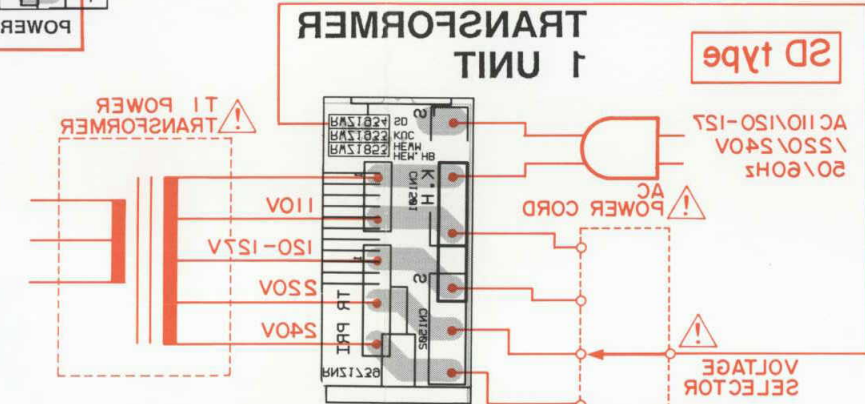
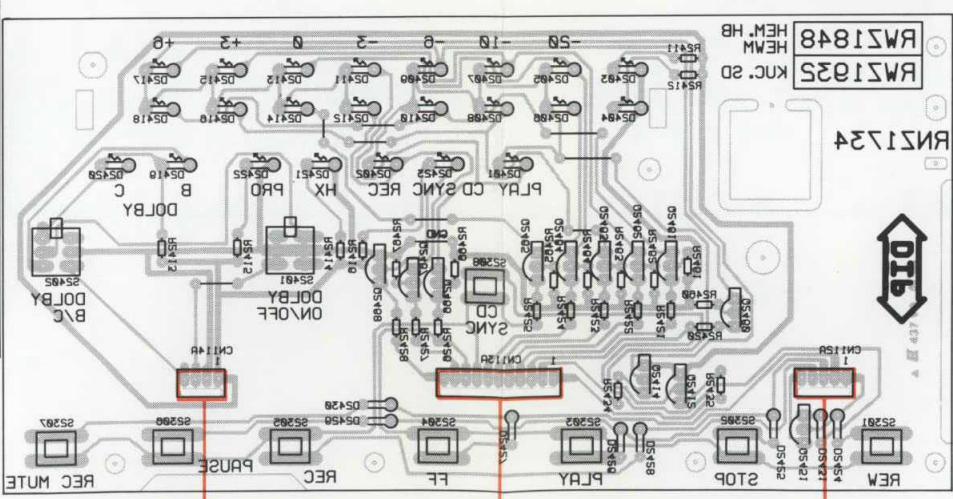
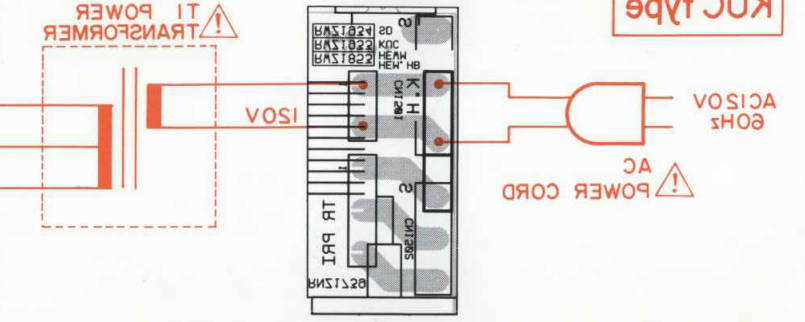
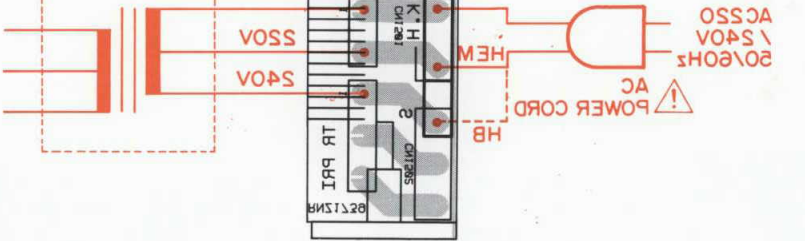
1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with $\square$ shows negative terminal.
4. The diode marked with $\circ$ shows cathode side.
5. The transistor terminal marked with $\square$ shows emitter.

Parts No.	Description
AAX-185	S40V label
AAX-183	SS0V label

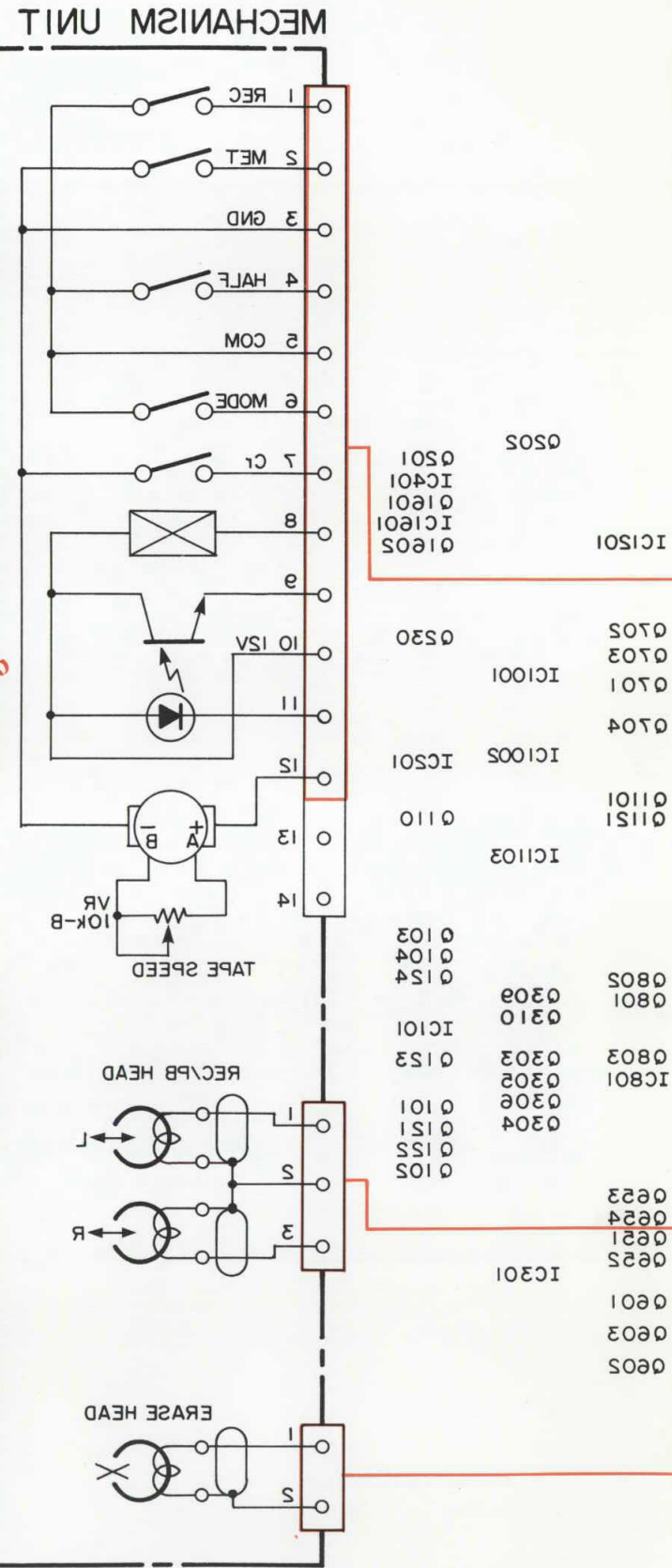
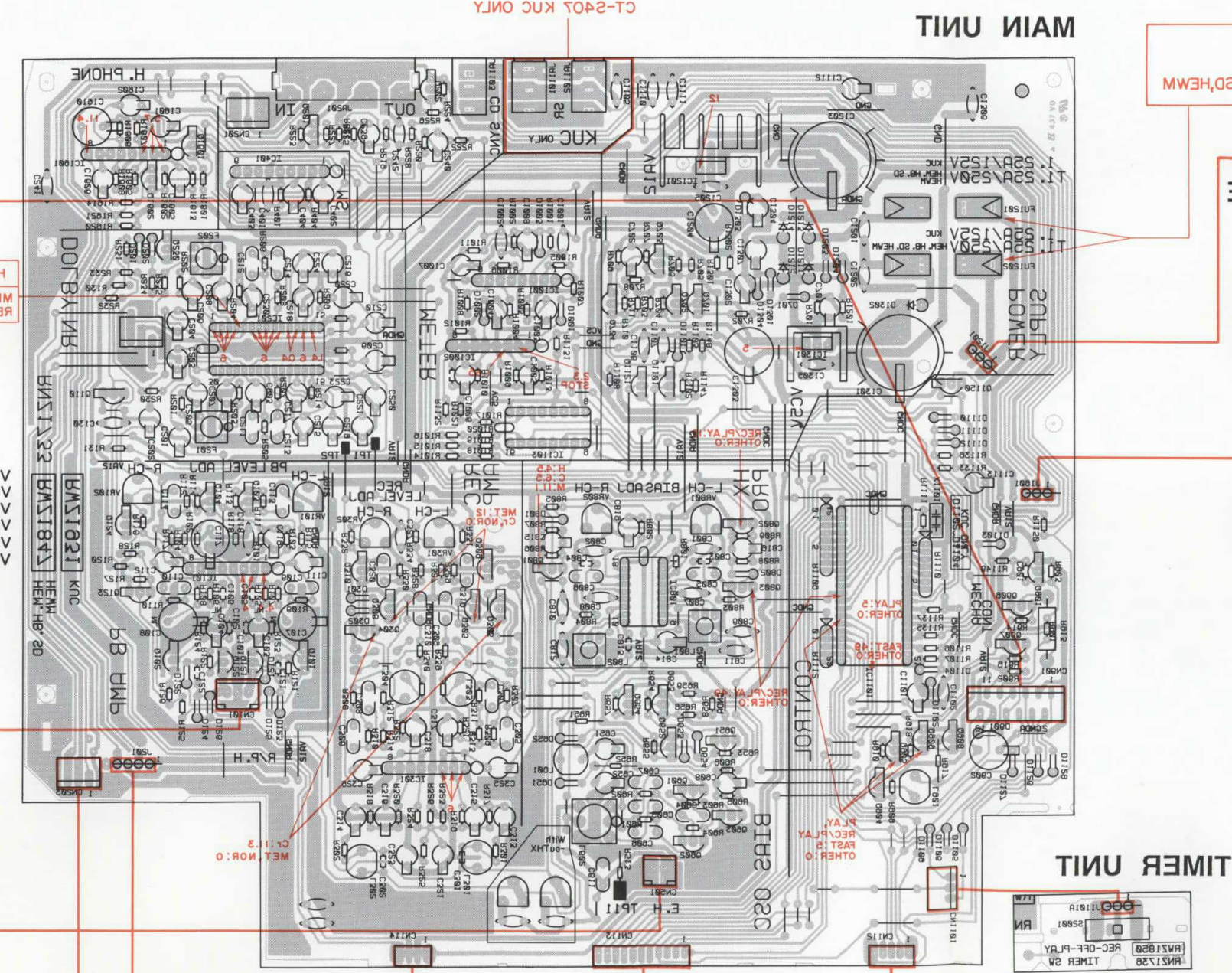
4. Stick the line voltage label on the rear panel.

Voltage	AC cord
S20 V	CN1501-3
S40 V	CN1501-2

- HEM' HB type Line Voltage Section**
- Line voltage can be changed with following steps.
1. Disconnect the AC power cord.
 2. Remove the Bonnet case.
 3. Change the connection of the TRANSFORMER 1 UNIT assembly primary pins.



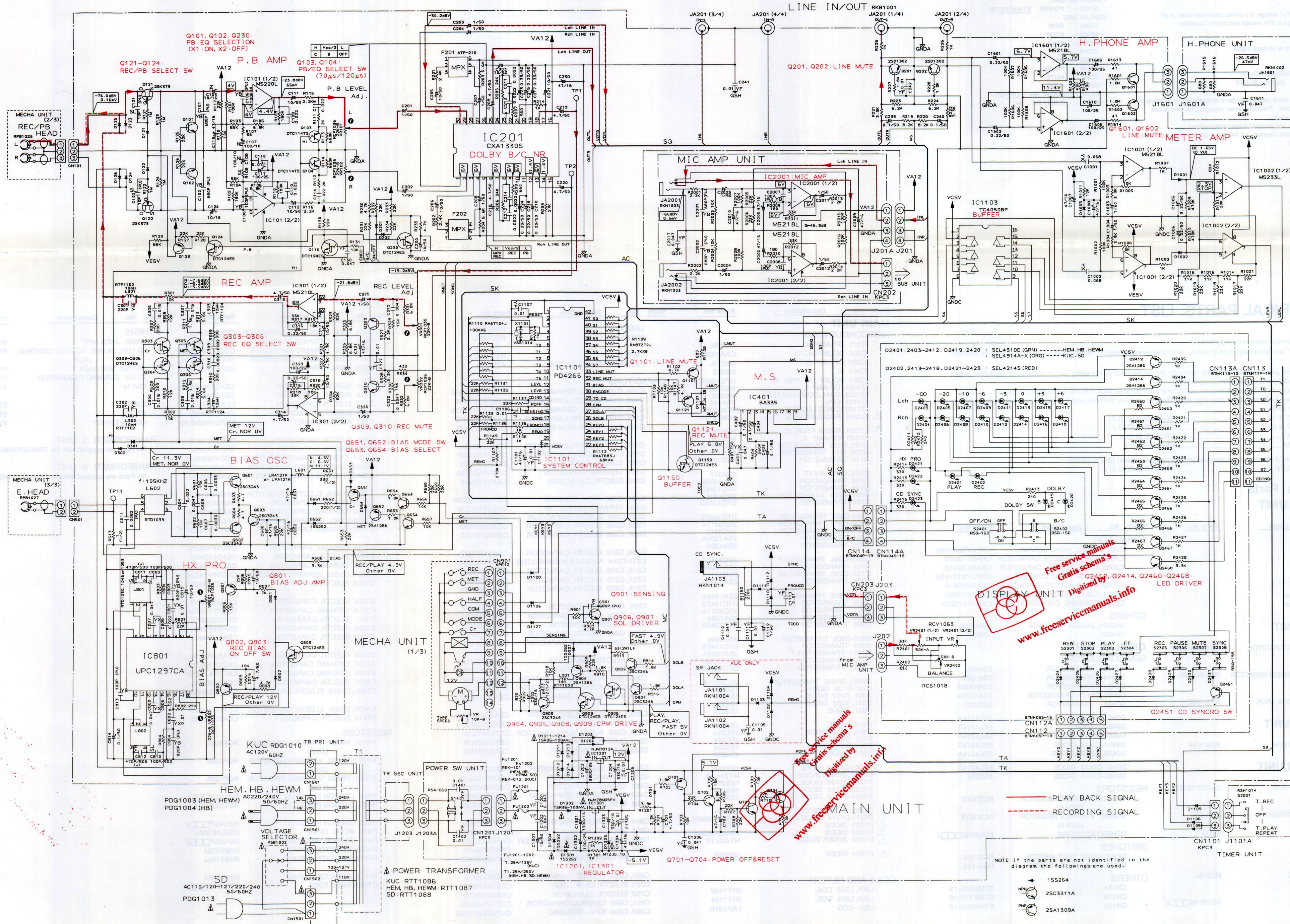
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View from soldering side

5. SCHEMATIC DIAGRAM



1. RESISTORS:

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

2. CAPACITORS:

Indicated in capacity (μ F) / voltage (V) unless otherwise noted p; pF.
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT:

 : DC voltage (V) at no input signal.

4. OTHERS

— PLAYBACK SIGNAL ROUTE
--- RECORDING SIGNAL ROUTE

⊙ : Adjusting point.

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.

※ marked capacitors and resistors have parts numbers.

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

▶ : Test point

5. SWITCHES (underline indicates switch position.)

TIMER UNIT

S2001 : TIMER REC-OFF-PLAY/REPEAT

POWER SW. UNIT

S1401 : POWER STANDBY/ON

DISPLAY UNIT

S2301 : REW

S2302 : STOP

S2303 : PLAY

S2304 : FF

S2305 : REC

S2306 : PAUSE

S2307 : MUTE

S2308 : SYNC

S2401 : DOLBY NR OFF-ON

S2402 : DOLBY NR B-C

6. ELECTRICAL PARTS LIST**NOTES:**

- Parts without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).
560 Ω 56 $\times 10^1$ 561.....RD1/4PS $\square \square \square$ J
47k Ω 47 $\times 10^3$ 473.....RD1/4PS $\square \square \square$ J
0.5 Ω 0R5.....RN2H $\square \square \square$ K
1 Ω 010.....RS1P $\square \square \square$ K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω 562 $\times 10^1$ 5621.....RN1/4SR $\square \square \square \square$ F

Miscellaneous Parts**P. C. BOARD UNIT**

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
		Headphone unit					
		Timer SW unit					
		Power SW unit					
		Mic. unit					
		Display unit					
		Main unit					
		Transformer 1 unit					
		Transformer 2 unit					
HEADPHONE UNIT							
CAPACITOR							
	C1611	CERAMIC CAPACITOR	CKCYF473Z50				
RESISTORS							
	R1615, R1616	CARBON RESISTOR	RD1/6PM681J				
OTHERS							
	JA1601	HEADPHONE JACK	RKN1002				
TIMER SWITCH UNIT							
SWITCH							
	S2001	SLIDE SWITCH	RSH1014				
POWER SWITCH UNIT							
CAPACITOR							
	C1401, C1402	CERAMIC	CKCYF103Z50				
SWITCH							
	Δ S1401	POWER SWITCH	RSA-069				
OTHER							
	CN1201		KPC3				
MIC UNIT							
SEMICONDUCTORS							
	IC2001	OP-AMP IC	M5218L				
RESISTORS							
		OTHER RESISTOR	RD1/6PM $\square \square \square$ J				

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
MAIN UNIT							
SEMICONDUCTORS							
	IC101	OP-AMP IC	M5220L		L602	COIL	RTD1039
	IC201	DOLBY-B/C IC	CXA1330S		L801, L802	COIL	RTD1030
	IC301	OP-AMP IC	M5218L		L901	COIL	RTF1090
	IC401	IC	BA335		F201, F202	DOLBY FILTER	ATF-210
	IC801	DOLBY HX PRO IC	UPC1297CA	CAPACITORS			
	IC1001	OP-AMP IC	M5218L		C101, C102	AXIAL CERAMIC	CKPUYB681K50
	IC1002	DUAL-COMPARATER	M5233L		C103, C104	ELECTR. CAPACITOR	CEANL100M16
	IC1101	CPU	PD4266		C105, C106	AXIAL CERAMIC	CKPUYB101K50
	IC1103	CMOS LOGIC IC	TC4050BP		C107, C108	ELECTR. CAPACITOR	CEANL101M10
	IC1201	REGULATOR IC	NJM7812A		C109, C110	AUDIO FILM CAPACITOR	CFTXA223J50
	Δ IC1301	REGULATOR IC	NJM78M05FA		C111, C112	ELECTR. CAPACITOR	CEAS100M50
	IC1601	OP-AMP IC	M5218L		C113, C114	AUDIO FILM CAPACITOR	CFTXA223J50
	Q101, Q102	TRANSISTOR	2SC3311A		C117	ELECTR. CAPACITOR	CEAS101M25
	Q103, Q104	TRANSISTOR	DTC114TS		C118	CERAMIC CAPACITOR	CKCYF103Z50
	Q110	TRANSISTOR	DTC124ES		C119	ELECTR. CAPACITOR	CEAS470M16
	Q121, Q122	N-FET	2SK373		C121, C122	AXIAL CERAMIC	CCPUSL100J50
	Q123	TRANSISTOR	2SA1309A		C130	CERAMIC CAPACITOR	CKCYF473Z50
	Q124	TRANSISTOR	DTC124ES		C201-C204	ELECTR. CAPACITOR	CEAS100M50
	Q201, Q202	TRANSISTOR	2SD1302		C205, C206	ELECTR. CAPACITOR	CEAS100M50
	Q230	TRANSISTOR	DTC124ES		C207, C208	ELECTR. CAPACITOR	CEAS100M50
	Q303-Q306	TRANSISTOR	DTC124ES		C209, C210	ELECTR. CAPACITOR	CEAS4R7M50
	Q309, Q310	TRANSISTOR	2SC3311A		C211-C214	AUDIO FILM CAPACITOR	CFTXA223J50
	Q601-Q603	TRANSISTOR	2SC3243		C215, C216	ELECTR. CAPACITOR	CEASR22M50
	Q651	TRANSISTOR	2SA1309A		C217, C218	ELECTR. CAPACITOR	CEASR33M50
	Q652	TRANSISTOR	2SA1286		C219, C220	ELECTR. CAPACITOR	CEAS4R7M50
	Q653, Q654	TRANSISTOR	2SC3311A		C221	ELECTR. CAPACITOR	CEAS100M50
	Q701	TRANSISTOR	2SA1309A		C223, C224	ELECTR. CAPACITOR	CEASR33M50
	Q702, Q703	TRANSISTOR	2SC3311A		C230	ELECTR. CAPACITOR	CEAS100M50
	Q704	TRANSISTOR	2SA1309A		C239, C240	ELECTR. CAPACITOR	CEASR10M50
	Q801, Q802	TRANSISTOR	2SA1309A		C241, C242	CERAMIC CAPACITOR	CKCYF103Z50
	Q803	TRANSISTOR	DTC124ES		C250	ELECTR. CAPACITOR	CEAR470M16
	Q901	TRANSISTOR	2SC3311A		C301, C302	AXIAL CERAMIC	CKPUYB221K50
	Q904	TRANSISTOR	2SA1286		C305-C308	AUDIO FILM CAPACITOR	CFTXA153J50
	Q905	TRANSISTOR	DTC124ES		C309, C310	AUDIO FILM CAPACITOR	CFTXA822J50
	Q906-Q908	TRANSISTOR	2SC3246		C313, C314	ELECTR. CAPACITOR	CEAS4R7M50
	Q909	TRANSISTOR	DTC124ES		C315, C316	ELECTR. CAPACITOR	CEASR22M50
	Q1101	TRANSISTOR	2SA1309A		C317, C318	ELECTR. CAPACITOR	CEAS100M50
	Q1121	TRANSISTOR	2SA1309A		C319, C320	AUDIO FILM CAPACITOR	CFTXA472J50
	Q1150	TRANSISTOR	DTC124ES		C321	ELECTR. CAPACITOR	CEAS470M16
	Q1601, Q1602	TRANSISTOR	2SC3311A		C323	ELECTR. CAPACITOR	CEAS101M25
	D121-D126	DIODE	1SS254		C325, C326	ELECTR. CAPACITOR	CEAS010M50
	D201, D202	DIODE	1SS254		C327	CERAMIC CAPACITOR	CKCYF103Z50
	D301, D302	DIODE	1SS254		C401	CERAMIC CAPACITOR	CGCYX473K25
	D651	DIODE	1SS254		C402, C403	ELECTR. CAPACITOR	CEASR10M50
	D652	DIODE	1SS252		C404	ELECTR. CAPACITOR	CEASR47M50
	D653, D654	DIODE	1SS254		C604	AUDIO FILM CAPACITOR	CFTXA223J50
	D701	DIODE	1SS254		C605	AUDIO FILM CAPACITOR	CFTXA472J50
	D801, D802	DIODE	1SS254		C606, C607	AUDIO FILM CAPACITOR	CFTXA332J50
	D901	DIODE	1SS252		C608	ELECTR. CAPACITOR	CEAS470M16
	D1001-D1003	DIODE	1SS254		C611	PP CAPACITOR	CQPA822J100
	D1101	ZENER DIODE	MTZJ4.3B		C651, C652	ELECTR. CAPACITOR	CEAS470M16
	D1102-D1106	DIODE	1SS254		C701	ELECTR. CAPACITOR	CEAS4R7M50
	D1109-D1112	DIODE	1SS254		C702	ELECTR. CAPACITOR	CEAS470M16
	D1126-D1128	DIODE	1SS254		C801, C802	CERAMIC CAPACITOR	CGCYX103K25
	Δ D1203, D1204	DIODE	1SS254		C803, C804	AXIAL CERAMIC	CKPUYB821K50
	Δ D1211-D1214	DIODE	1SR35-100AVL				
	Δ D1301	DIODE	1SS252				
	Δ D1302	DIODE	1SR35-100AVL				
	Δ D1303	ZENER DIODE	MTZJ5.1B				
	Δ D1304	DIODE	1SS252				
COILS AND FILTERS							
	L301, L302	COIL	RTF1102				
	L303, L304	COIL	RTF1124				
	L601	COIL	LRA121K				

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	C805, C806	AUDIO FILM CAPACITOR	CFXA223J50	OTHERS			
	C807, C808	CERAMIC CAPACITOR	CGCYX473K25		JA201	JACK (4P)	RKB1001
	C809, C810	CERAMIC CAPACITOR	CCCSL101K500		JA1101, JA1102	REMOTE CONTROL	RKN1004
	C811, C812	CERAMIC CAPACITOR	CKCYB471J500			JACK	
	C813	AXIAL CERAMIC	CKPUYB101K50		JA1103	MINI JACK	RKN1014
	C814	ELECTR. CAPACITOR	CEASR10M50		X1101	CERAMIC RESONATOR	VSS1014
	C815	ELECTR. CAPACITOR	CEAS100M50		CN114		BTMK04P-1R
	C816	ELECTR. CAPACITOR	CEAS4R7M50		CN113		BTMK11P-1R
	C819	ELECTR. CAPACITOR	CEAS100M50		CN112		BTMK05-1R
	C901	AXIAL CERAMIC	CKPUYB681K50		CN203, CN1101		KPC3
	C902	ELECTR. CAPACITOR	CEAS331M16	TRANSFORMER 1 UNIT			
	C903	ELECTR. CAPACITOR	CEAS100M50	No Parts are supplied with the TRANSFORMER 1 UNIT.			
	C1001, C1002	CERAMIC CAPACITOR	CGCYX683K25	TRANSFORMER 2 UNIT			
	C1003, C1004	ELECTR. CAPACITOR	CEAS010M50	No Parts are supplied with the TRANSFORMER 2 UNIT.			
	C1005, C1006	ELECTR. CAPACITOR	CEASR22M50				
	C1007, C1008	ELECTR. CAPACITOR	CEAS470M16				
	C1101	ELECTR. CAPACITOR	CEAS470M16				
	C1102	CERAMIC CAPACITOR	CKCYF103Z50				
	C1105-C1107	CERAMIC CAPACITOR	CKCYF103Z50				
	C1110	CERAMIC CAPACITOR	CKCYF473Z50				
	C1111	CERAMIC CAPACITOR	CKCYF103Z50				
	C1112	ELECTR. CAPACITOR	CEAS010M50				
	C1113	CERAMIC CAPACITOR	CKCYF103Z50				
	C1201, C1202	CERAMIC CAPACITOR	CKCYF473Z50				
	C1203	ELECTR. CAPCITOR	CEAS332M35				
	C1204	ELECTR. CAPACITOR	CEAS331M16				
	C1205	CERAMIC CAPACITOR	CKCYF103Z50				
	C1301	ELECTR. CAPACITOR	CEAS332M16				
	C1302	ELECTR. CAPACITOR	CEAS101M25				
	C1303	ELECTR. CAPACITOR	CEAS331M16				
	C1304	ELECTR. CAPACITOR	CEAS470M16				
	C1305	CERAMIC CAPACITOR	CKCYF103Z50				
	C1306	CERAMIC CAPACITOR	CKCYF473Z50				
	C1307	ELECTR. CAPACITOR	CEAS100M50				
	C1601, C1602	ELECTR. CAPACITOR	CEASR22M50				
	C1605, C1606	ELECTR. CAPACITOR	CEAS101M25				
	C1610	ELECTR. CAPACITOR	CEAS101M25				
RESISTORS							
	VR101, VR102	VARIABLE RESISTOR (22k Ω)	RCP1035				
	VR301, VR302	VARIABLE RESISTOR (22k Ω)	RCP1035				
	VR801, VR802	VARIABLE RESISTOR (22k Ω)	RCP1035				
	R513	CARBON RESISTOR	RD1/2LF□□□J				
	R651	CARBON RESISTOR	RD1/2LF□□□J				
	R652	CARBON RESISTOR	RD1/2LF□□□J				
	R913	METAL OXIDE	RS2LMF330J				
	R917	CARBON RESISTOR	RD1/2LF□□□J				
	R1109	RESISTOR ARRAY	RA8T272J				
	R1110	RESISTOR ARRAY	RA6T104J				
	R1112	RESISTOR ARRAY	RA4T683J				
	OTHER RESISTORS		RD1/6PM□□□J				

7. ADJUSTMENTS

7.1 MECHANICAL ADJUSTMENT

1. Tape speed adjustment

Mode	Test tape	Adjustment position	Specification rating (playback frequency)
PLAY	Play the STD-301 tape (3kHz)	Variable resistor control	3000Hz $\pm$ 5Hz

Note: Adjust after one minute of playback.

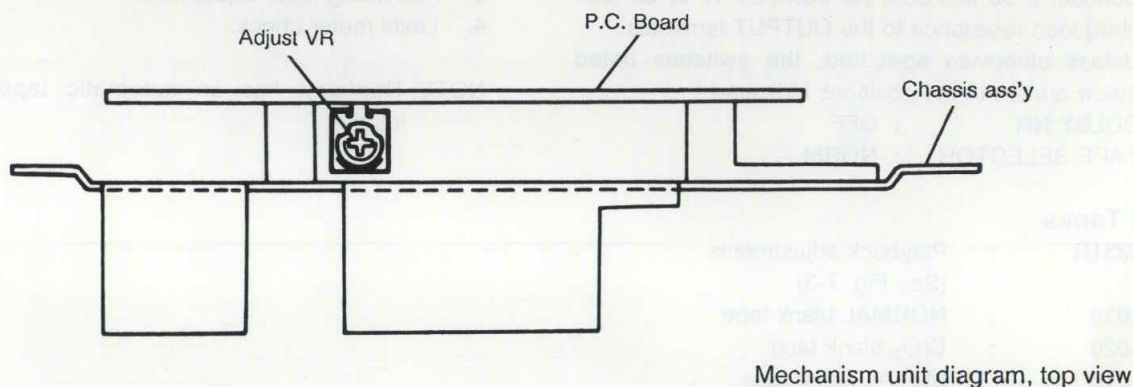


Fig. 7-1

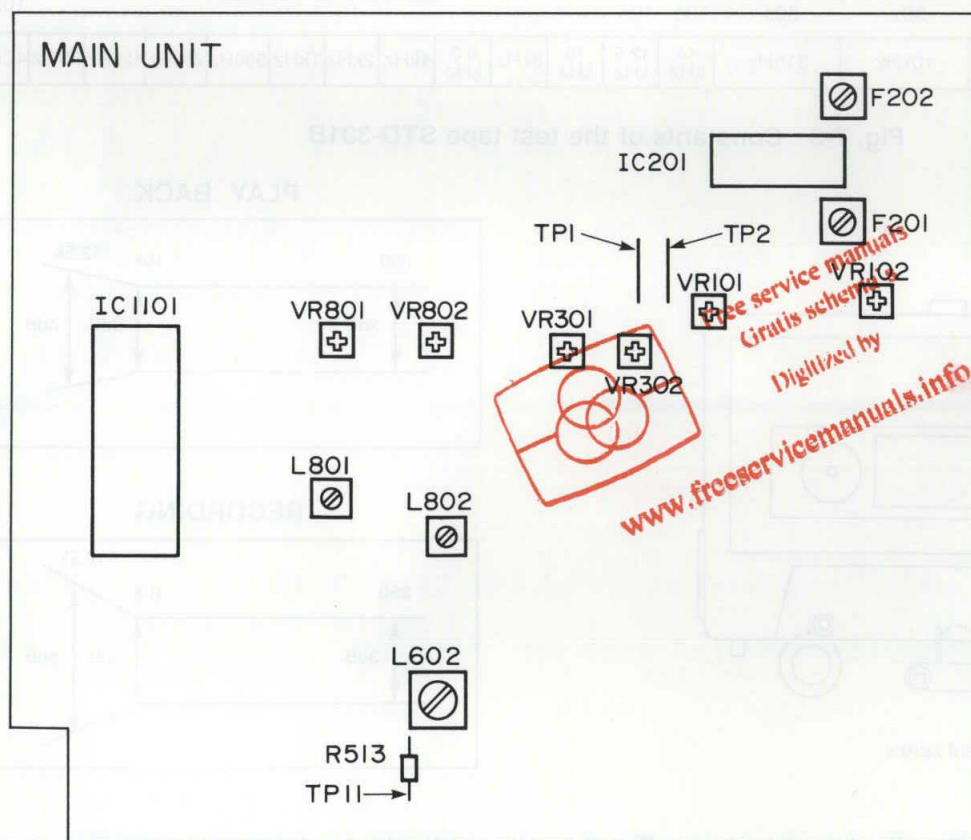


Fig. 7-2

7.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

1. The mechanical adjustments must be completed first.
2. The head must be cleaned and demagnetized.
3. Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
4. The reference signal is 0dBv = 1Vrms.
5. Connect a 50 kilo-ohm (or between 47 to 52 kilo-ohm) load resistance to the OUTPUT terminals.
6. Unless otherwise specified, the switches listed below are left in the positions indicated.

DOLBY NR : OFF
TAPE SELECTOR : NORM

Test Tapes

STD-331B : Playback adjustments
(See Fig. 7-3)
STD-630 : NORMAL blank tape
STD-620 : CrO₂ blank tape
STD-610 : METAL blank tape

List of Adjustments

Playback sections

1. Head azimuth adjustment.
2. Playback level adjustment.

Recording sections

1. Bias oscillator adjustment.
2. Recording bias adjustment.
3. Recording level adjustment.
4. Level meter check.

NOTE: This unit has an automatic tape selection feature.

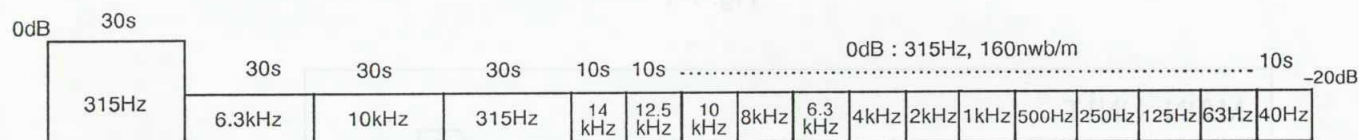


Fig. 7-3 Constants of the test tape STD-331B

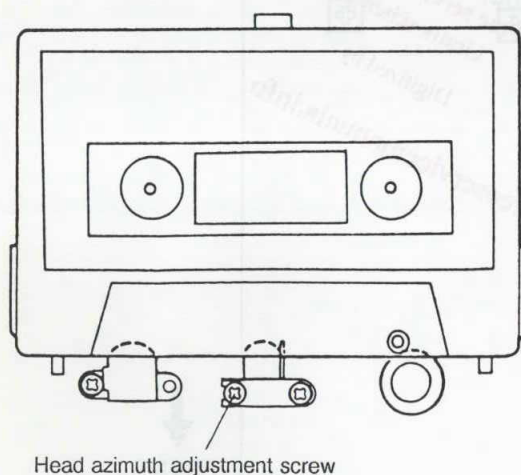
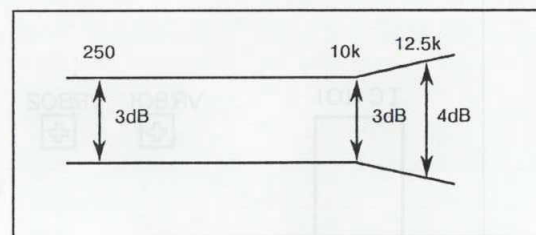


Fig. 7-4 Head azimuth adjustment

PLAY BACK



RECORDING

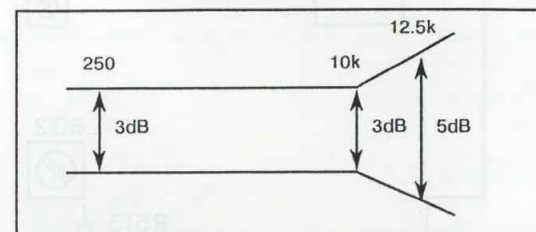


Fig. 7-5 Allowable playback frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR101, VR102 to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10kHz/-20dB section of STD-331B test tape.	Head azimuth adjustment screw. (See Fig. 7.4)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

2. Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 315 Hz/0 dB section of STD-331B test tape.	Deck I VR101 (Lch) VR102 (Rch)	TP1. (Lch) TP2. (Rch)	-10.7 dBv	

RECORDING SECTION

1. Bias Oscillator Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC	Load the STD-610 test tape with no input signal.	Deck I L602	TP. 11	105 kHz $\pm$ 0.3 kHz	

2. 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 location	Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.				
2.	REC	Record the 315 Hz and 6.3 kHz signals at -20 dBv input level and playback.	Deck I VR801 (Lch) VR802 (Rch)	LINE OUT	Repeatedly record, playback and adjust so that the playback level of 6.3 kHz signal becomes +0.5 dB $\pm$ 0.5 dB when compared with the 315 Hz signal.	

3. Recording Level Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	STOP	Set the TAPE SELECTOR switch to the NORM position.				
2.	REC PAUSE	Apply a 315Hz/0dBv signal to the line input terminals, load the STD-630 test tape.	Rec Level control volume	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv	
3.	STOP	Set the DOLBY NR switch to the ON position. (DOLBY B)				
4.	REC/PLAY	Record the above signal onto the STD-630 test tape, and playback.	Deck I VR301 (Lch) VR302 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes -11.2dB.	
5.	STOP	Set the TAPE SELECTOR switch to the CrO ₂ position.				
6.	REC/PLAY	Record the above signal onto the STD-620 test tape, and playback.	Check	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv $\pm$ 1.5dB	
7.	STOP	Set the TAPE SELECTOR switch to the METAL position.				
8.	REC/PLAY	Record the above signal onto the STD-610 test tape, and playback.	Check	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv $\pm$ 1.5dB	

4. Level Meter Check

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/-10 dBv (316 mV) signal to the Line Input terminals.	Rec level control volume	TP1. (Lch) TP2. (Rch)	Check that the level meters "0 dB" light up within -11.2 dBv $\pm$ 2 dB of the signal output level.	

7. RÉGLAGE

7.1 RÉGLAGES MÉCANIQUES

1. Réglage et vérification de la vitesse de defilement de la bande

Mode	Bande d'étalonnage	Position de réglage	Spécifications nominales (fréquence de lecture)
LECTURE	Lire la bande STD-301 (3kHz)	Contrôle à résistance variable	3000Hz $\pm$ 5Hz

Remarque: Ajuster après une minute de lecture.

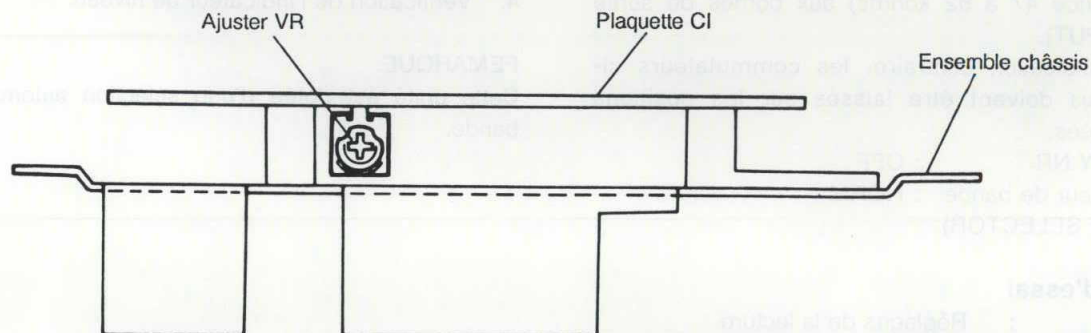


Diagramme de l'unité du mécanisme, vue de haut

Fig. 7-1

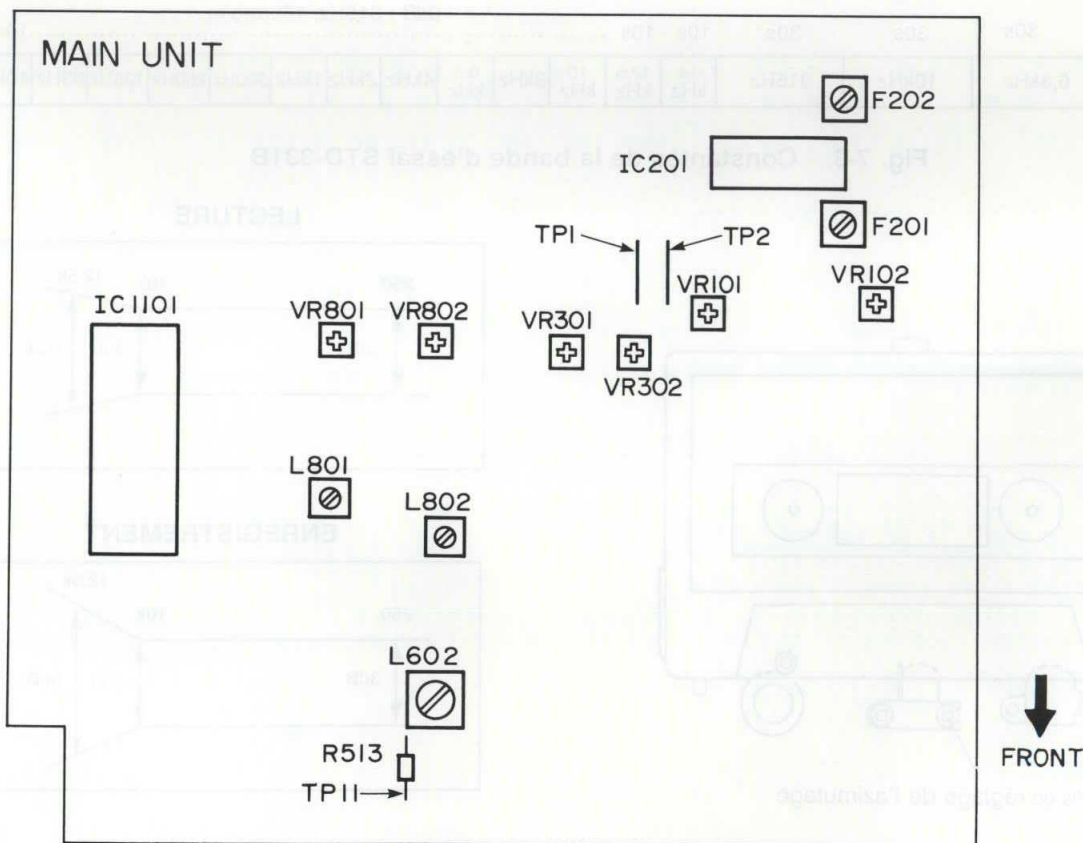


Fig. 7-2

7.2 REGLAGES ELECTRIQUES

Conditions de réglage

1. Les réglages mécaniques doivent tout d'abord être terminés.
2. Les têtes doivent être nettoyées et démagnétisées.
3. Mettre la platine sous tension et la laisser chauffer pendant au moins quelques minutes avant de commencer les réglages électriques.
4. Le signal de référence est de $\text{dBv} = 1 \text{ Vrms}$.
5. Connecter une résistance de charge de 50 kohms (tolérance 47 à 52 kohms) aux bornes de sortie (OUTPUT).
6. Sauf indication contraire, les commutateurs ci-dessous doivent être laissés sur les positions indiquées.
DOLBY NR : OFF
Sélecteur de bande : NORM
(TAPE SELECTOR)

Bandes d'essai

- STD-331B : Réglages de la lecture
(Voir fig. 7-3)
- STD-630 : Bande vierge de type normal
- STD-620 : Bande vierge de type chrome
- STD-610 : Bande vierge de type métal

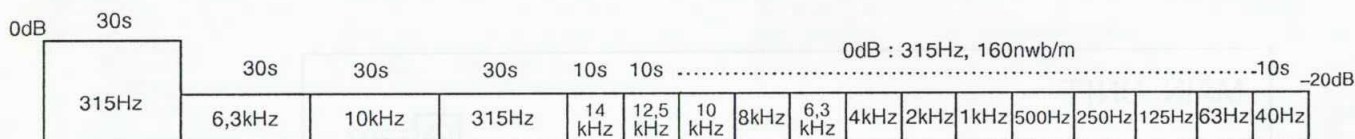
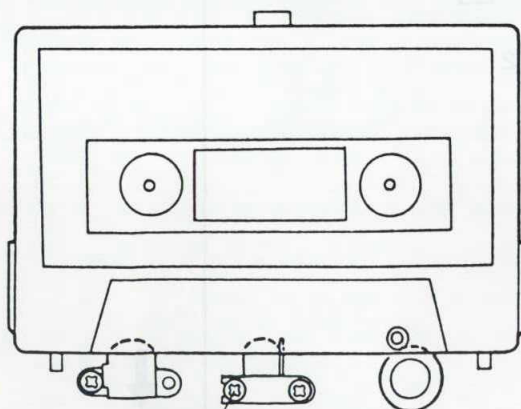


Fig. 7-3 Constantes de la bande d'essai STD-331B



Vis de réglage de l'azimutage

Fig. 7-4 Réglage de l'azimut de la tête

Liste des réglages

Sections de lecture

1. Réglage de l'azimut de la tête.
2. Réglage du niveau de lecture.

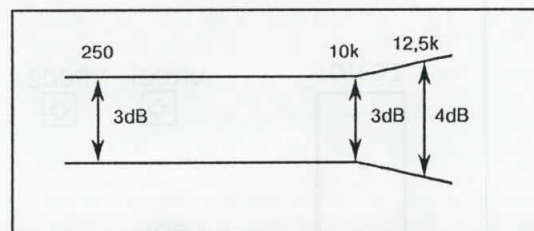
Sections d'enregistrement

1. Réglage de l'oscillateur de polarisation.
2. Réglage de la polarisation d'enregistrement.
3. Réglage du niveau d'enregistrement.
4. Vérification de l'indicateur de niveau.

FEMARQUE:

Cette unité est dotée d'une selection automatique de bande.

LECTURE



ENREGISTREMENT

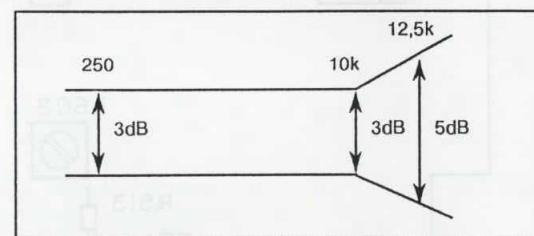


Fig. 7-5 Tolérance de la zone de réponse en fréquence de lecture

SECTION DE LECTURE

1. Réglage de l'azimut de la tête

- Tourner VR101, VR102 sur leur position centrale mécanique.

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	PLAY	Reproduire la section 10 kHz/-20 dB de la bande d'essai STD-331B.	Vis de réglage de l'azimut de la tête. (Voir fig. 7-4)	Sortie de ligne (LINE OUT)	Niveau du signal de reproduction maximum.	
2.	STOP	Verrouiller la vis avec le verrouillage de vis après avoir terminé le réglage.				

2. Réglage du niveau de lecture

- Ce réglage détermine le niveau DOLBY NR et il doit être effectué très soigneusement.

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	PLAY	Reproduire la section 315Hz/0dB de la bande d'essai STD-331B.	Platine I VR101(can. G) VR102(can. D)	TP. 1 (can. G) TP. 2 (can. D)	-10.7 dBv	

SECTION D'ENREGISTREMENT

1. Réglage de l'oscillateur de polarisation

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	REC	Charger la bande d'essai STD-610 et n'introduire aucun signal.	Platine I L602	TP. 11	-105 kHz $\pm$ 0.3 kHz	

2. Réglage de la polarisation d'enregistrement

- Après le réglage, des précautions doivent être prises pour éviter une sous-polarisation en vérifiant le taux de distorsion.

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	STOP	Régler le sélecteur de bande (TAPE SELECTOR) sur la position NORM.				
2.	REC	Enregistrer les signaux 315 Hz et 6.3 kHz à un niveau d'entrée de -20 dBv et les reproduire.	Platine I VR801(can. G) VR802(can. D)	Sortie de ligne (LINE OUT)	Enregistrer, reproduire et régler de manière répétée de sorte que le niveau de lecture du signal 6.3 kHz devienne +0.5dB $\pm$ 0.5dB lorsqu'il est comparé avec le signal 315 Hz.	

3. Réglage du niveau d'enregistrement

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	STOP	Régler le sélecteur de bande (TAPE SELECTOR) sur la position NORM.				
2.	REC PAUSE	Appliquer un signal de 315 Hz/0 dBv aux bornes d'entrée de ligne, charger la bande d'essai STD-630.	Volume de la commande de niveau d'enregistrement.	TP. 1 (can. G) TP. 2 (can. D)	-11.2 dBv	
3.	STOP	Régler le commutateur DOLBY NR sur la position ON. (DOLBY B)				
4.	REC/PLAY	Enregistrer le signal cidessus sur la bande d'essai STD-630 et le reproduire.	Platine I	VR301(can.G) VR302(can.D)	TP. 1 (can. G) TP. 2 (can. D)	Enregistrer, reproduire et régler de manière répétée de sorte que le niveau du signal devienne -11.2dB.
5.	STOP	Régler le sélecteur de bande (TAPE SELECTOR) sur la position CrO ₂ .				
6.	REC/PLAY	Enregistrer le signal cidessus sur la bande d'essai STD-620 et le reproduire.	Vérifier	TP. 1 (can. G) TP. 2 (can. D)	-11.2 dBv $\pm$ 1.5dB	
7.	STOP	Régler le sélecteur de bande (TAPE SELECTOR) sur la position METAL.				
8.	REC/PLAY	Enregistrer le signal cidessus sur la bande d'essai STD-610 et le reproduire.	Vérifier	TP. 1 (can. G) TP. 2 (can. D)	-11.2 dBv $\pm$ 1.5dB	

4. Vérification de l'indicateur de niveau

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	REC/PAUSE	Appliquer un signal de 315 Hz/-10 dBv (316 mV) aux bornes d'entrée de ligne.	Volume de la commande de niveau d'enregistrement.	TP. 1 (can. G) TP. 2 (can. D)	Vérifier que les indicateurs de niveau "0 dB"s'allument dans la limite de -11.2dBv $\pm$ 2dB du niveau de sortie du signal.	

7. AJUSTE

7.1 AJUSTE MECANICO

1. Ajuste de la velocidad de la cinta

Modo	Cinta de prueba	Posición de ajuste	Valor de especificación (frecuencis de reproducción)
PLAY	Reproducir la STD-301 (3kHz)	Control del resistor variable	3000Hz $\pm$ 5Hz

Nota: Ajustar la resistencia variable

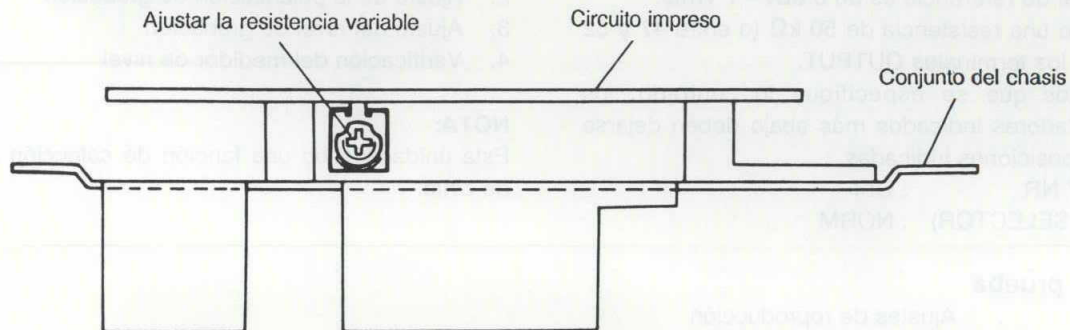


Diagrama del mecanismo, vista de arriba

Fig. 7-1

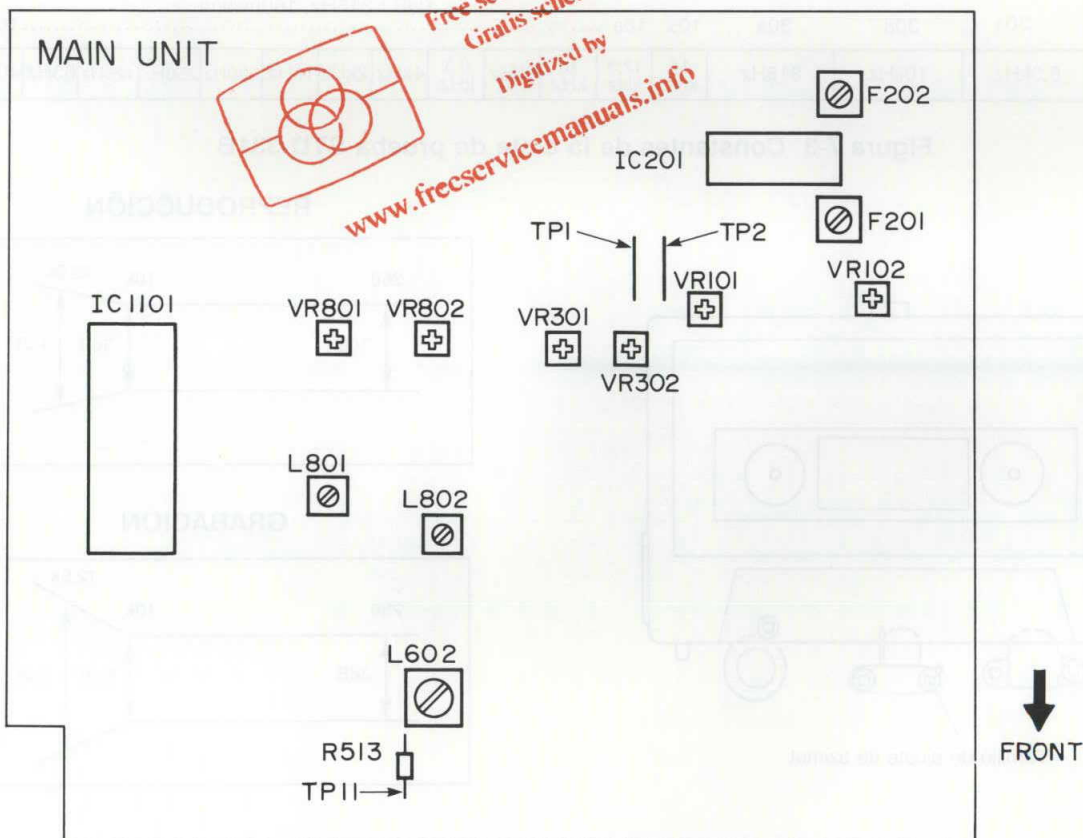


Fig. 7-2

7.2 AJUSTES ELÉCTRICOS

Condiciones de ajuste

1. Los ajustes mecánicos deben haberse completado primero.
2. La cabeza debe estar limpia y desmagnetizada.
3. Encienda la alimentación para permitir que la platina se caliente durante unos pocos minutos por lo menos antes de realizar cualquier ajuste eléctrico.
4. La señal de referencia es de 0 dBv = 1 Vrms.
5. Conecte una resistencia de 50 kΩ (o entre 47 y 52 kΩ) en los terminales OUTPUT.
6. A menos que se especifique lo contrario, los conmutadores indicados más abajo deben dejarse en las posiciones indicadas.

DOLBY NR : OFF
(TAPE SELECTOR) : NORM

Cintas de prueba

STD-331B : Ajustes de reproducción
(Consulte la figura 7-3)
STD-630 : Cinta virgen NORMAL
STD-620 : Cinta virgen de CrO₂
STD-610 : Cinta virgen de METAL

Lista de ajustes

Secciones de reproducción

1. Ajuste de azimut de la cabeza
2. Ajuste del nivel de reproducción

Secciones de grabación

1. Ajuste del oscilador de polarización
2. Ajuste de la polarización de grabación
3. Ajuste del nivel de grabación
4. Verificación del medidor de nivel

NOTA:

Esta unidad posee una función de selección automática de cinta.

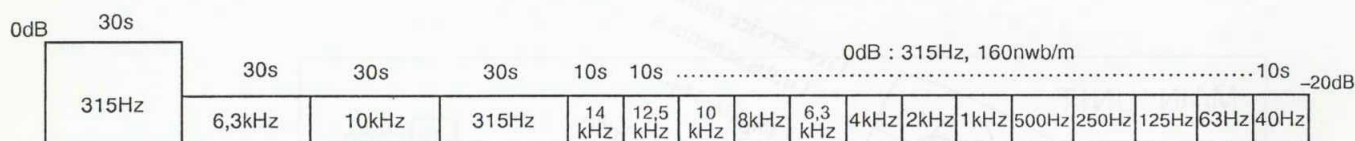


Figura 7-3 Constantes de la cinta de prueba STD-331B

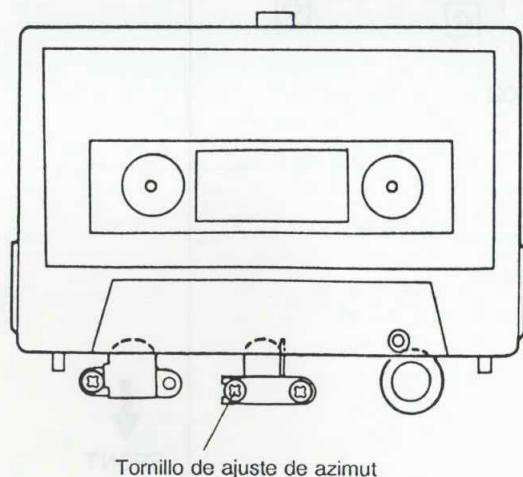
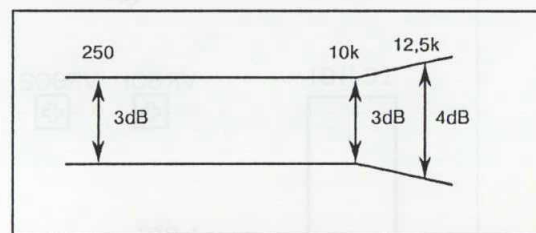


Figura 7-4 Ajuste de azimut de la cabeza

REPRODUCCIÓN



GRABACIÓN

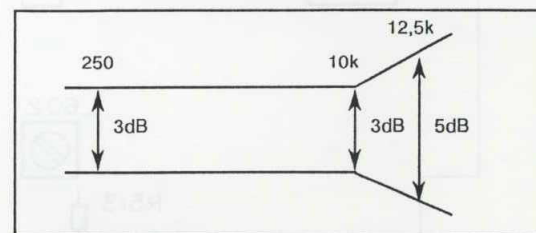


Figura 7-5 Zona permisible de respuesta de frecuencia de reproducción

SECCIÓN DE REPRODUCCIÓN

1. Ajuste del azimut de la cabeza

- Poner VR101, VR102 en las posiciones del centro mecánico.

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	PLAY	Reproduzca la sección de 10 kHz/-20 dB de la cinta de prueba STD-331B.	Tornillo de ajuste del azimut de la cabeza. (Vea la figura 7-4)	LINE OUT	Nivel máximo de la señal de reproducción.	
2.	STOP	Bloquee el tornillo con su cierre una vez finalizado el ajuste.				

2. Ajuste del nivel de reproducción

- Este ajuste determina el nivel DOLBY NR y debe realizarse con mucho cuidado.

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	PLAY	Produzca la parte de 315 Hz/0 dB de la cinta de prueba STD-331B.	Platina I VR 101 (Lch) VR 102 (Rch)	TP1. (Lch) TP2. (Rch)	-10.7 dBv	

SECCIÓN DE GRABACIÓN

1. Ajuste del oscilador de polarización

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	REC	Introduzca la cinta de prueba STD-610 sin señal de entrada.	Platina I L602	TP.11	105 kHz $\pm$ 0.3 kHz	

2. Ajuste de polarización de grabación

- Una vez finalizado el ajuste, compruebe el porcentaje de distorsión para no obtener subpolarización.

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	STOP	Ponga el conmutador TAPE SELECTOR en la posición NORM.				
2.	REC	Grabe la señal de 315 Hz y 6.3 kHz a un nivel de entrada de -20 dBv y reproduzca.	Platina I VR 801 (Lch) VR 802 (Rch)	LINE OUT	Grabe, reproduzca y ajuste repetidamente para que el nivel de la señal de reproducción de 6.3 kHz sea de +0.5dB $\pm$ 0.5dB cuando se compare con la señal de 315 Hz.	

3. Ajuste del nivel de grabación

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	STOP	Ponga el conmutador TAPE SELECTOR en la posición NORM.				
2.	REC/PAUSE	Aplice una señal de 315 Hz/0 dBv a los terminales de entrada de línea e introduzca la cinta de prueba STD-630.	Control de nivel de grabación.	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv	
3.	STOP	Ponga el conmutador DOLBY NR en la posición ON. (DOLBY B)				
4.	REC/PLAY	Grabe la señal de arriba en la cinta de prueba STD-630 y reproduzca.	Platina I	VR301 (Lch) VR302 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Grabe, reproduzca y ajuste repetidamente para que el nivel de la señal de reproducción sea de -11.2dB.
5.	STOP	Ponga el conmutador TAPE SELECTOR en la posición CrO ₂ .				
6.	REC/PLAY	Grabe la señal de arriba en la cinta de prueba STD-620 y reproduzca.	Verifique	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv $\pm$ 1.5dB	
7.	STOP	Ponga el conmutador TAPE SELECTOR en la posición METAL.				
8.	REC/PLAY	Grabe la señal de arriba en la cinta de prueba STD-610 y reproduzca.	Verifique	TP. 1 (Lch) TP. 2 (Rch)	-11.2 dBv $\pm$ 1.5dB	

4. Verificación del medidor de nivel

Nº	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	REC/PAUSE	Aplice una señal de 315 Hz/-10 dBv (316mV) a los terminales de entrada de línea.	Control de nivel de grabación	TP. 1 (Lch) TP. 2 (Rch)	Verifique si se encienden los medidores de nivel "0 dB" cuando el nivel de salida de la señal sea -11.2dBv $\pm$ 2dB. V (CC)	

8. FOR CT-337/HEM, HB, SD, CT-337-S/HEWM AND CT-S407/KUC TYPES

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560Ω	56 × 10 ¹	561.....	RD1/4PS 5 6 1 J
47kΩ	47 × 10 ³	473.....	RD1/4PS 4 7 3 J
0.5Ω	0R5.....		RN2H 0 5 K
1Ω	010.....		RSIP 0 1 0 K

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

5.62kΩ	562 × 10 ¹	5621.....	RN1/4SR 5 6 2 1 F
--------	-----------------------	-----------	-------------------

● Contrast of Miscellaneous Parts

The CT-337/HEM, HB, SD and CT-337-S/HEWM types are the same as the CT-S407/KUC type with the exception of the following sections.

Mark	Symbol & Description	Parts No.				
		CT-S407/KUC	CT-337/SD	CT-337/HEM	CT-337/HB	CT-337-S/HEWM
	Main unit	Non supply	Non supply	Non supply	Non supply	Non supply
	Display unit	Non supply	Non supply	Non supply	Non supply	Non supply
	Transformer 1 unit	Non supply	Non supply	Non supply	Non supply	Non supply
	Transformer 2 unit	Non supply	Non supply	Non supply	Non supply	Non supply
⚠	Strain relief	CM-22	CM-22B	CM-22B	CM-22B	CM-22B
⚠	AC power cord	PDG1010	PDG1013	PDG1003	PDG1004	PDG1003
⚠	Fuse (1.25A)	REK-073	REK-101	REK-101	REK-101	REK-101
⚠	Power transformer	RTT1086	RTT1088	RTT1087	RTT1087	RTT1087
	Voltage selector switch	-----	PSB1002	-----	-----	-----
	Front panel ass'y	RXX1267	RXX1266	RXX1266	RXX1266	RXX1268
	Knob (REC LEVEL)	RAC1363	RAC1363	RAC1363	RAC1363	RAC1496
	Knob (COUNTER RESET)	RAC1228	RAC1228	RAC1228	RAC1228	RAC1309
	Button (POWER)	RAC1364	RAC1364	RAC1364	RAC1364	RAC1497
	Knob (HEADPHONE)	RAC1366	RAC1366	RAC1366	RAC1366	RAC1498
	Knob (DOLBY NR)	RAC1343	RAC1343	RAC1343	RAC1343	RAC1351
	Knob (EJECT)	RAC1344	RAC1344	RAC1344	RAC1344	RAC1352
	Knob (TAPE RUN OPERATION)	RAC1345	RAC1345	RAC1345	RAC1345	RAC1353
	Knob (REC/TIMER/PLAY/REPEAT)	RAC1357	RAC1357	RAC1357	RAC1357	RAC1350
	TACT knob	RAC1409	RAC1409	RAC1409	RAC1409	RAC1501
	Operating instruction (ENGLISH/SPANISH)	-----	-----	RRD1073	-----	RRD1073
	DOLBY name plate	RAH1655	RAH1655	RAH1655	RAH1655	RAH1636
	Door panel	RAH1638	RAH1638	RAH1638	RAH1638	RAH1656
	Bonnet	RXX1079	RXX1079	RXX1079	RXX1079	RXX1080
	Leg ass'y	REC-369	REC-369	VNK1095	VNK1095	VNK1095
	Packing case	RHG1178	RHG1177	RHG1177	RHG1177	RHG1179
	Mini-plug cord	PDE-319	-----	-----	-----	-----
	Control cord	RDE1018	RDE1018	RDE1018	RDE1018	RDE1018
	Skid	-----	-----	VEC1061	VEC1061	VEC1061

● Main Unit

The main units of CT-337/HEM, HB, SD and CT-337-S/HEWM types are the same as the main unit of CT-S407/KUC type with the exception of the following sections.

Mark	Symbol & Description	Parts No.					Remarks
		CT-S407/KUC	CT-337/SD	CT-337/HEM	CT-337/HB	CT-337-S/HEWM	
	D1102-D1104	ISS254	-----	-----	-----	-----	
	C1105	CKCYF103Z50	-----	-----	-----	-----	
	JA1101, JA1102	RKN1004	-----	-----	-----	-----	

● Display Unit

The display units of CT-337/HEM, HB, SD and CT-337-S/HEWM types are the same as the display unit of CT-S407/KUC type with the exception of the following sections.

Mark	Symbol & Description	Parts No.					Remarks
		CT-S407/KUC	CT-337/SD	CT-337/HEM	CT-337/HB	CT-337-S/HEWM	
	D2401, D2403-D2412, D2419, D2420	SEL4914A	SEL4914A	SEL4310E	SEL4310E	SEL4310E	

● Transformer 1 Unit

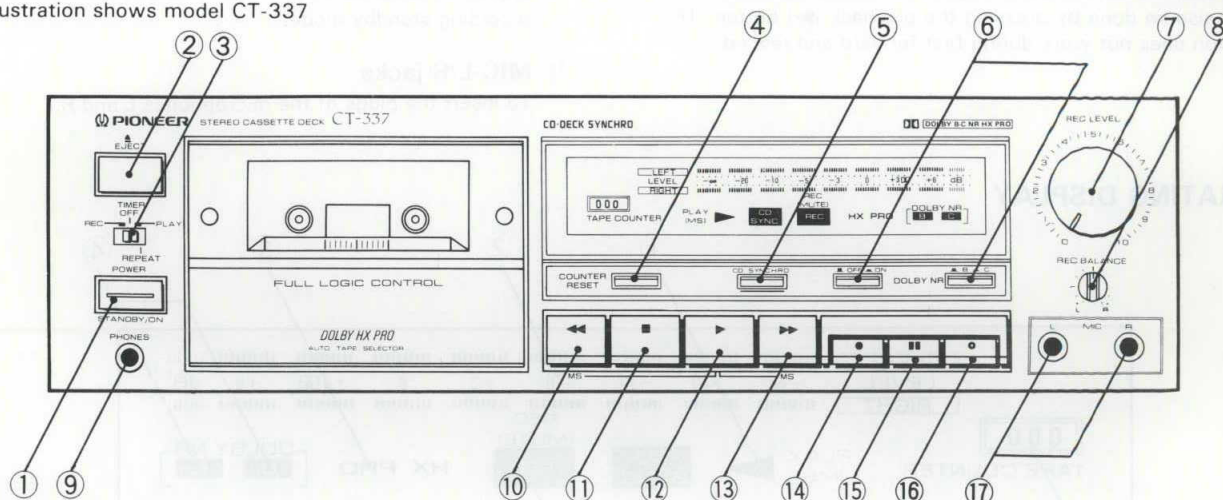
The transformer 1 units of CT-337/HEM, HB, SD and CT-337-S/HEWM types are the same as those of CT-S407/KUC type, though the part number of unit is different.

● Transformer 2 Unit

The CT-337/HEM, HB, SD and CT-337-S/HEWM types are the same as those of CT-S407/KUC type, though CT-S407/KUC type has no transformer 2 unit.

9. PANEL FACILITIES

The illustration shows model CT-337



① POWER STANDBY/ON switch

This is the switch for electric power.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

NOTE:

POWER switch turns off the transformer secondary circuits only, and so even at STANDBY position, the unit is connected to the mains as long as the power cord is connected to a power outlet.

② EJECT button (▲)

Press to open the cassette door after you have pressed the stop button (■) and the tape has stopped.

③ TIMER mode selector

OFF:

Normally, be sure to leave the switch in this position.

REC:

For timer recording.

PLAY/REPEAT:

For timer playback or for repeat playback.

- Recording or playback may suddenly start when turning the power on with this switch in the REC or PLAY/REPEAT position.

④ Tape COUNTER RESET button

Resets the tape counter reading to "000".

⑤ CD SYNCHRO button

This button is used to carry out CD-Deck synchro recording from a CD player.

⑥ DOLBY* NR switches

Set these switches to ON and B-TYPE or C-TYPE for recording with the built-in Dolby Noise Reduction Systems and for playback of tapes which have been recorded using the Dolby Noise Reduction Systems.

For other tapes, set the left DOLBY NR switch to OFF.

*

- Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
- "DOLBY", the double-D symbol  and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

⑦ REC LEVEL control

⑧ REC BALANCE control

Balancing the recording level between left (L) and right (R) channels.

⑨ PHONES jack

⑩ Rewind button (◀◀)

To rewind the tape in the direction of the arrows.

When this button is pressed once during playback of a selection, the same selection will be played again. If pressed in the blank between two selections, the first selection before the current tape position will be played. The unit will skip one selection in reverse direction for each time the ◀◀ button is pressed.

⑪ Stop button (■)

To stop all operations.

⑫ Playback button (▶)

To start playback.

⑬ Fast forward button (▶▶)

To fast-forward the tape in the direction of the arrows.

When pressed during playback, the unit will skip one selection in forward direction for each time the ▶▶ button is pressed.

⑭ Recording button (●)

When the recording (●) button is pressed, the unit is set to recording standby mode.

Press the pause (■) button or playback (▶) button when ready to record.

The unit will not enter the recording standby mode if a cassette with the erasure prevention tabs removed is loaded.

⑮ Pause button (||)

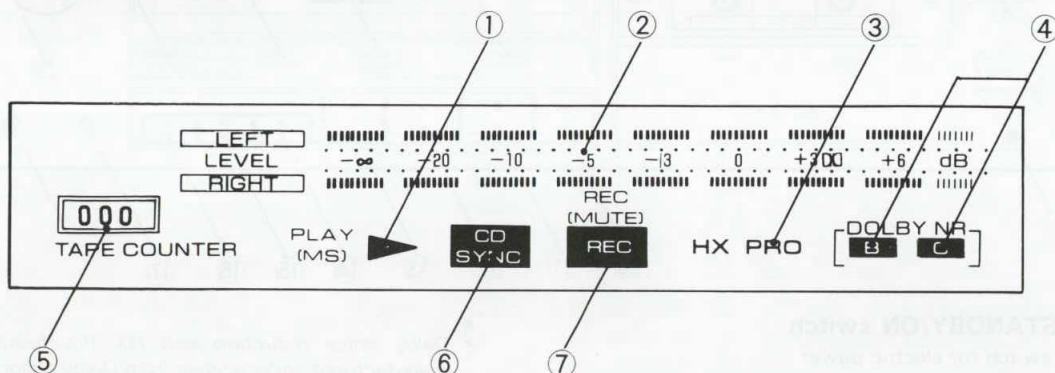
To stop tape transport momentarily during recording or playback. Press the button again to resume operation. This can also be done by pressing the playback (▶) button. This button does not work during fast-forward and rewind.

⑯ Recording mute button (○)

Press this button during recording to create a blank portion of approx. 4 seconds on the tape. The unit will then enter the recording standby mode.

⑰ MIC-L/R jacks

To insert the plugs of the microphones L and R.

OPERATING DISPLAY**① Play indicator**

▶ : Lights during playback and recording. The indicator flashes slowly in the pause mode, recording standby mode and fast during music search.

② LEVEL meter

LEFT Left channel.
RIGHT Right channel.

NOTE:

The  mark on the meter scale indicates the reference level for the DOLBY NR System.

③ DOLBY HX PRO indicator

Lights up when the POWER switch is pressed.

④ DOLBY B/C NR indicator

Indicates the selected Dolby Noise Reduction Systems, B-type or C-type.

⑤ TAPE COUNTER**⑥ CD SYNCHRO indicator**

Lights when synchro recording from a CD player is being carried out.

⑦ REC indicator

Lights or blinks during REC mode. Lights during recording and blinks during REC MUTE operation.

10. SPECIFICATIONS

Systems	4 track, 2-channel stereo
Heads	"Hard Permalloy" recording/playback head × 1 "Ferrite" erasing head × 1
Motor	DC servo capstan motor × 1
Wow and Flutter	No more than 0.075% (WRMS) No more than ±0.19% (DIN)
Fast winding Time	Approximately 110 seconds (C-60 tape)
Frequency Response (±6 dB)	
- 20 dB recording:	
Normal tape	25 to 16,000 Hz
Chrome tape	25 to 16,500 Hz
Metal tape	25 to 17,000 Hz
Signal-to-Noise Ratio	
Dolby NR OFF	More than 57 dB
Noise Reduction Effect	
Dolby B-type NR ON	More than 10 dB (at 5 kHz)
Dolby C-type NR ON	More than 19 dB (at 5 kHz)
Harmonic Distortion	No more than 0.7% (0 dB)
Input (Sensitivity)	
LINE (INPUT)	63 mV (Input impedance 50 kΩ)
MIC	0.4 mV
Output (Reference level)	
LINE (OUTPUT)	316 mV (Output impedance 3.4 kΩ)
PHONES	0.25 mW (load impedance 8Ω)

Subfunctions

- Dolby B-type and C-type NR Systems
- DOLBY HX PRO system
- Auto tape selector
- Headphones jack
- CD-DECK synchro recording capability
- Microphone jacks
- Music search up to ± 15 selections
- Automatic space recording mute
- REC BALANCE control
- 7 + 1 seg LED peak hold meter
- Timer Recording/Playback
-  System remote control available (CT-S407 only)
- Repeat playback

Miscellaneous

Power Requirements

U.S. Canadian models	AC 120 V, 60 Hz
European model	a.c. 220 Volts~, 50/60 Hz
U.K. model	a.c. 240 Volts~, 50/60 Hz
Other destination models (Multi-voltage models)	AC 110 V/120 V-127 V/220 V/240 V (switchable), 50/60 Hz

Power Consumption 15 W

Dimensions

U.S. and Canadian models	420 (W) × 120 (H) × 272 (D)mm 16-9/16 (W) × 4-11/16 (H) × 10-5/8 (D) in
U.K. and European models	420 (W) × 126 (H) × 272 (D)mm

Weight (without package) 3.6 kg (8 lb)

Accessories

Operating instructions	1
Connection cord with pin plugs	2
CD-Deck synchro control cord	1
 System remote control cord (CT-S407 only)	1

NOTE:

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