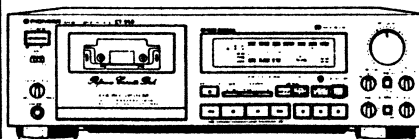


Service Manual



ORDER NO.
ARP2018

STEREO CASSETTE DECK

CT-959

CT-959 HAS FOLLOWING VERSIONS:

Type	Power requirement	Export destination
HEM	AC220V, 240V (switchable) *	European continent
HB	AC220V, 240V (switchable) *	United Kingdom

* Change the primary wiring of the power transformer.

- This manual is applicable to the HEM and HB types.
- Ce manuel pour le service comprend les explications de réglage en français.
- Este manual de servicio trata del método a juste escrito en español.

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1. EXPLODED VIEWS AND PARTS LIST

NOTES :

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

1.1 Parts List of Exterior

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
Δ	1	CM-22B	Strain relife		46	IBZ40P080FCC	Screw
Δ	2	ADG1036	AC power cord		47	RBN-006	Jack nut
Δ	3	REK-098	FU701, FU702 Fuse (630MA)		48	REC-371	Binder
Δ	4	RTT1132	Power transformer (T1)		49	RXX1064	Cassette plate assembly
	5	SLF-401C	LED (D3)		50	RXX1279	Bonnet
	6	PNB1109	Absorber plate (B)		51	RXX1281	Front panel assembly
	7	RBF1019	Washer		52	RLP1026	Door lens
	8	RBH1144	Button spring		53	BBT30P080FCU	Screw
	9	RBH1222	Door spring (L)		54	BBZ30P080FZK	Screw
	10	RBH1223	Door spring (R)		55	PMA30P060FCU	Screw
	11	RBL-059	Cassette plate spring		56	IBZ30P150FCC	Screw
	12	REB1038	Stabilizer (B)		57	REB1117	Door cushion
Δ	13	REK-103	FU703, FU704 Fuse (2A)		58	BPZ40P100FZK	Screw
	14		.....		59	WA30W120R100	Washer
	15	RNH-184	Cord clasper		101		Main unit
	16	ABE1009	Washer		102		Headphone unit
	17	VXA1257	Insulator assembly		103		Power switch unit
	18	FBT40P080FZK	Screw		104		Operation unit
	19		.....		105		Control unit
	20		.....		106		Timer unit
	21	RAA1009	Counter reset knob		107		INPUT VR unit
	22	RAC1410	Power button		108		Pin jack unit
	23	RAC1411	Function knob		109		Rubber spacer (A)
	24	RAC1412	Slide SW knob		110		Rubber spacer
	25	RAC1413	Push knob		111		Transformer sheet
	26	RAC1414	Knob (B)		112		Mechanism sheet
	27	RAC1415	Mode knob		113		Mechanism sheet (2)
	28	RAH1542	filter		114		VR shaft
	29	REB1094	Side rubber		115		Main chassis
	30	REB1119	Door sheet		116		Center stay
	31		.....		117		P.C.B base
	32		.....		118		Binder
	33	RNK1366	Line straight lens		119		VR holder
	34	RNK1495	Door		120		FL shield plate
	35	RXA1281	VR knob assembly (A)		121		Joint
	36	RAH1661	Door panel		122		VR shaft guide
	37	RLP1027	FL lens		123		P.C.B stad
	38	RNA1316	Rear panel		124		Panel stay
	39	ABZ26P080FZK	Screw		125		Name plate
	40	BBT30P060FCC	Screw		126		Cassette plate
	41	BBT30P100FZK	Screw		127		Front panel
	42	BBZ30P100FZK	Screw		128		Mechanism unit
	43	BBZ40P080FZK	Screw		129		.....
	44	IBZ30P060FCC	Screw		130		Protector 300×10
	45	IBZ30P100FCC	Screw		131		Cushion
					132		Acetate tape 10×10
					133		PS holder
					134		Acetate tape (K)

1.1 EXTERIOR

CT-959

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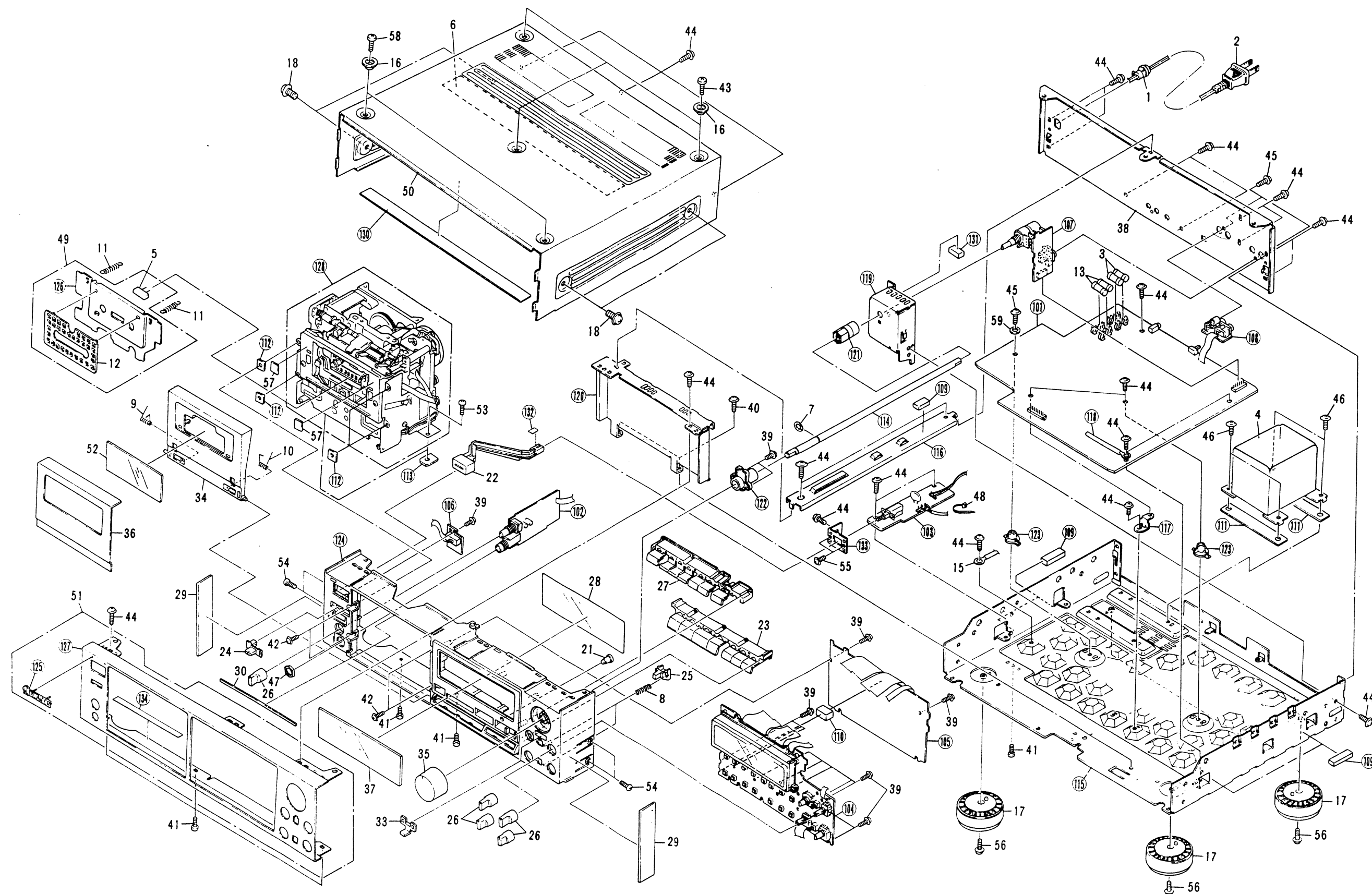
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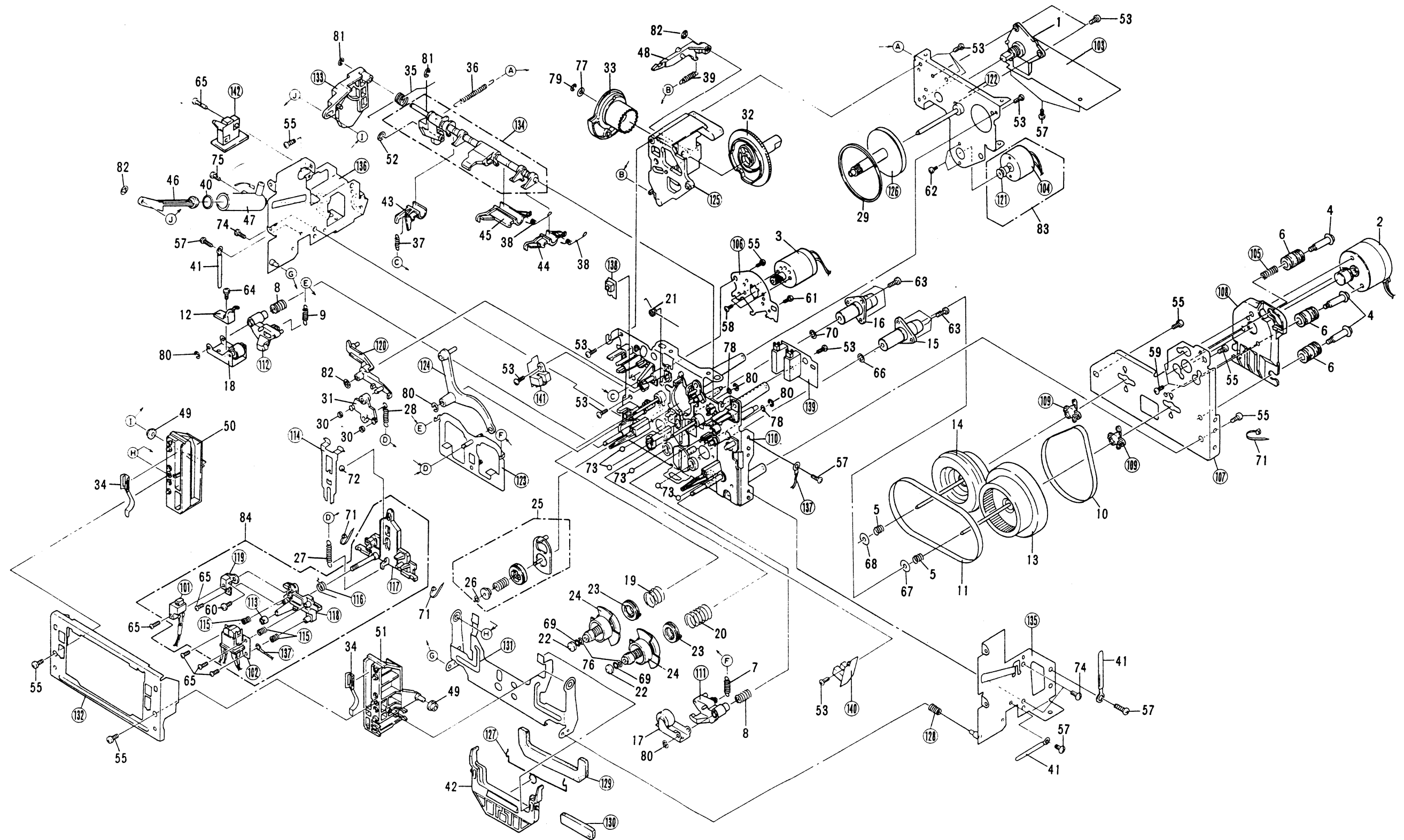
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1.2 Parts List of Mechanism Section

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1	RSX1004	Rotary encoder		56	.....	.....		126		Second pulley assembly
	2	RXM1016	Capstan motor assembly		57	BCZ30P060FMC	Screw		127		Cassette plate spring
	3	RXM1018	Reel motor assembly		58	BMZ26P030FZK	Screw		128		Position spring
	4	RBA1074	Step screw		59	BMZ26P040FMC	Screw		129		Plate rubber (A)
	5	RBL-044	Thrust spring		60	BMZ26P060FZK	Screw		130		Plate rubber (B)
	6	REB1099	Insulator		61	BMZ30P080FZK	Screw		131		Door arm
	7	RBL-028	Pinch spring		62	JGZ20P025FMC	Screw		132		Pocket frame
	8	RBL-030	Pinch thrust spring		63	PMA26P050FZK	Screw		133		Eject lever
	9	RBL-098	Sub-pinch spring		64	PMA26P060FZK	Screw		134		Shift shaft assembly
	10	REB-501	Capstan belt		65	PMZ20P080FZK	Screw		135		Door frame (R) assembly
	11	REB-509	Capstan belt (A)		66	RBF-030	Oil stopper		136		Door frame (L) assembly
	12	RNL-016	Tape guide		67	RBF-069	Thrust washer (A)		137		Earth lead assembly
	13	RXA1176	Flywheel assembly		68	RBF-070	Thrust washer (B)		138		REC switch unit
	14	RXA1177	Sub-flywheel assembly		69	RBF-076	Washer		139		Tape selector unit
	15	RXA1342	Metal holder assembly (A)		70	RBF1040	Oil stopper		140		Sensor unit (A)
	16	RXA1343	Metal holder assembly (B)		71	REC-371	Binder		141		Sensor unit (B)
	17	RXB-876	Pinch roller arm (R) assembly		72	REF-022	Steel ball (3mm)		142		Door switch unit
	18	RXB-877	Pinch roller arm (A) assembly		73	REF-023	Steel ball (4mm)				
	19	RBL-031	BT spring (A)		74	VCT30P060FZK	Screw				
	20	RBL-032	BT spring (B)		75	VCZ26P080FMC	Screw				
	21	RBL-033	Idler pressure spring		76	WA21D040D013	Washer				
	22	RNK-815	Reel shaft cap (B)		77	WA26N070W040	Washer				
	23	RXB-751	BT disk assembly		78	WA32D080D050	Washer				
	24	RXB-874	Reel base assembly		79	YE20FUC	E ring				
	25	RXB-875	Take-up idler assembly		80	YE25FUC	E ring				
	26	RBF-065	Washer		81	YE30FUC	E ring				
	27	RBL-037	Head base spring		82	YS24FBT	Snapring				
	28	RBL-038	Brake spring		83	RXX1055	Power motor assembly				
	29	REB-502	Drive belt		84	RXX1228	Head base assembly				
	30	REB-511	Brake shoe		101		E head				
	31	RNL-723	Brake		102		R&P head				
	32	RNL-729	Cam gear		103		Connector unit				
	33	RXB-884	Side cam gear assembly		104		Power motor				
	34	RBL-027	Pocket spring (A)		105		Insulator spring				
	35	RBL-039	Eject spring		106		Reel motor mounting plate				
	36	RBL-040	Half set arm spring		107		Flywheel holder				
	37	RBL-041	REC functioning spring		108		Motor bracket				
	38	RBL-042	Detection functioning spring		109		Thrust holder				
	39	RBL-043	Lock lever spring		110		Mechanism chassis assembly				
	40	REB-447	O ring		111		Pressure arm (R)				
	41	RNH-184	Cord clasper		112		Pressure arm (L)				
	42	RNK1498	Cassette plate		113		Adjustment nut				
	43	RNL-733	REC detector arm		114		Head base set spring				
	44	RNL-734	Chrom detector arm		115		Head adjustment spring (C)				
	45	RNL-735	Metal detector arm		116		Hight spring				
	46	RNL-739	Piston		117		Head base				
	47	RNL-740	Cylinder		118		Sub-head base				
	48	RNL-741	Lock lever		119		E head base				
	49	RNL-742	Collar		120		Brake lever				
	50	RNL-849	Pocket (L)		121		First pulley				
	51	RNL-850	Pocket (R)		122		Gear chassis assembly				
	52	RBF-057	Washer		123		Pinch base assembly				
	53	BBZ26P080FZK	Screw		124		Pinch lever assembly				
	54	.....	.....		125		Gear base assembly				
	55	BBZ30P080FZK	Screw								

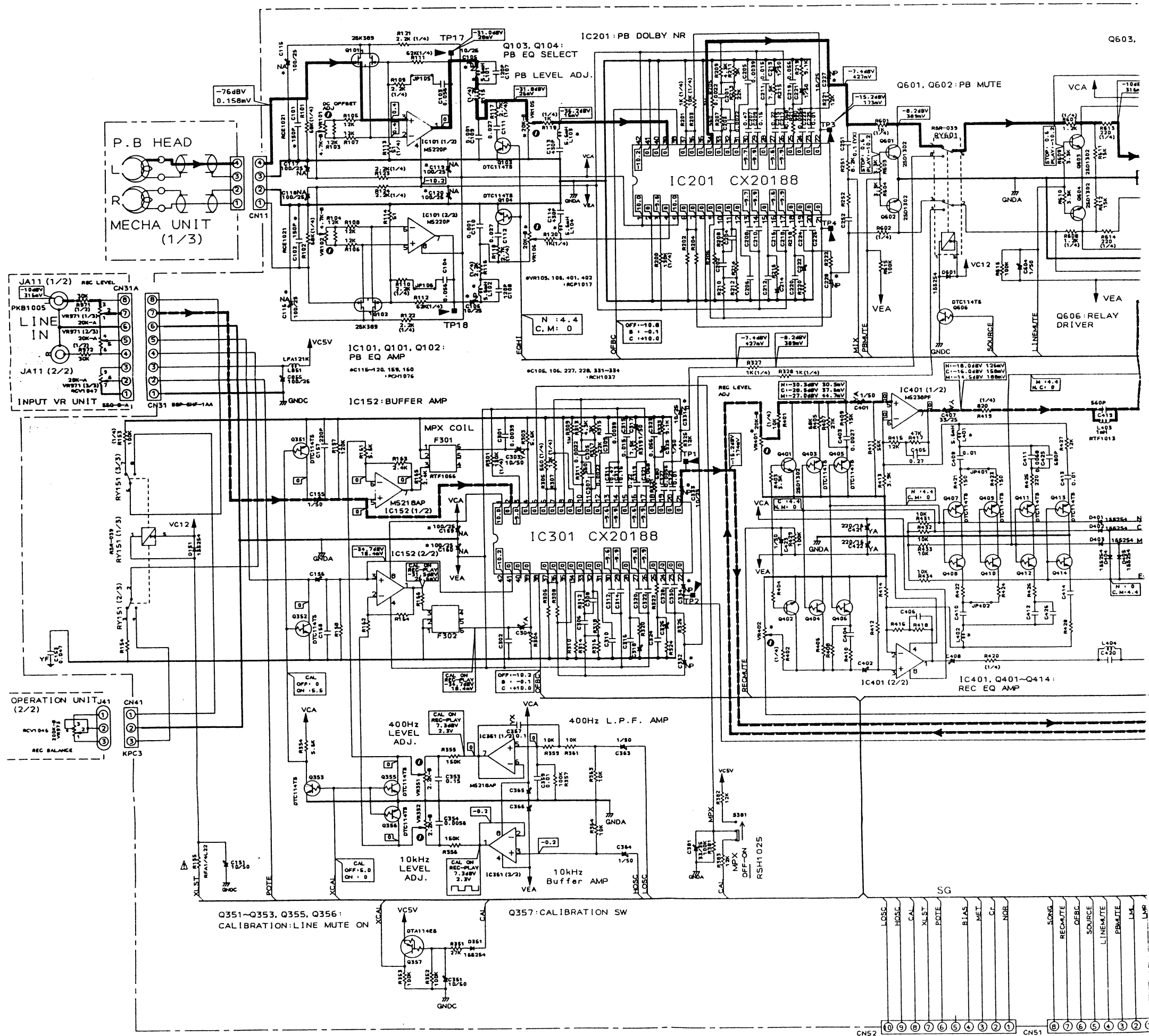
1.2 MECHANISM UNIT



SCHEMATIC DIAGRAM

- RESISTORS :**
Indicated in Ω , $1/6W$, $\pm 5\%$ tolerance unless otherwise noted
k; k Ω , M; M Ω , (F); $\pm 1\%$, (G); $\pm 2\%$, (K); $\pm 10\%$, (M); $\pm 20\%$ tolerance.
- CAPACITORS :**
Indicated in capacity (μF) /voltage (V) unless otherwise noted
p; pF.
Indication without voltage is 50V except electrolytic capacitor.
- VOLTAGE CURRENT :**
□ : DC voltage (V) at play state.
◀ mA : DC current at play state.
Value in () is DC current at stop state.
- OTHERS :**
→ : 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 capacitor and resistors have parts numbers.

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



5. SWITCHES (Underline indicates switch position)

MAIN UNIT

S381:MPX FILTER OFF-ON

POWER SW UNIT

S991:POWER OFF-ON

OPERATION UNIT

S801:MONITOR SELECT

S802:DISPLAY

S803: II

S804: II

S805: II

S806: II

S807: II

S808: II

S809:OPEN/CLOSE

S810:TAPE RETURN

S811: II

S813:COUNTER MODE

S814:RESET

S815:CD SYNCHRO

S816:METER RANGE

S817:PEAK MODE

S821:LINE STRAIGHT OFF-ON

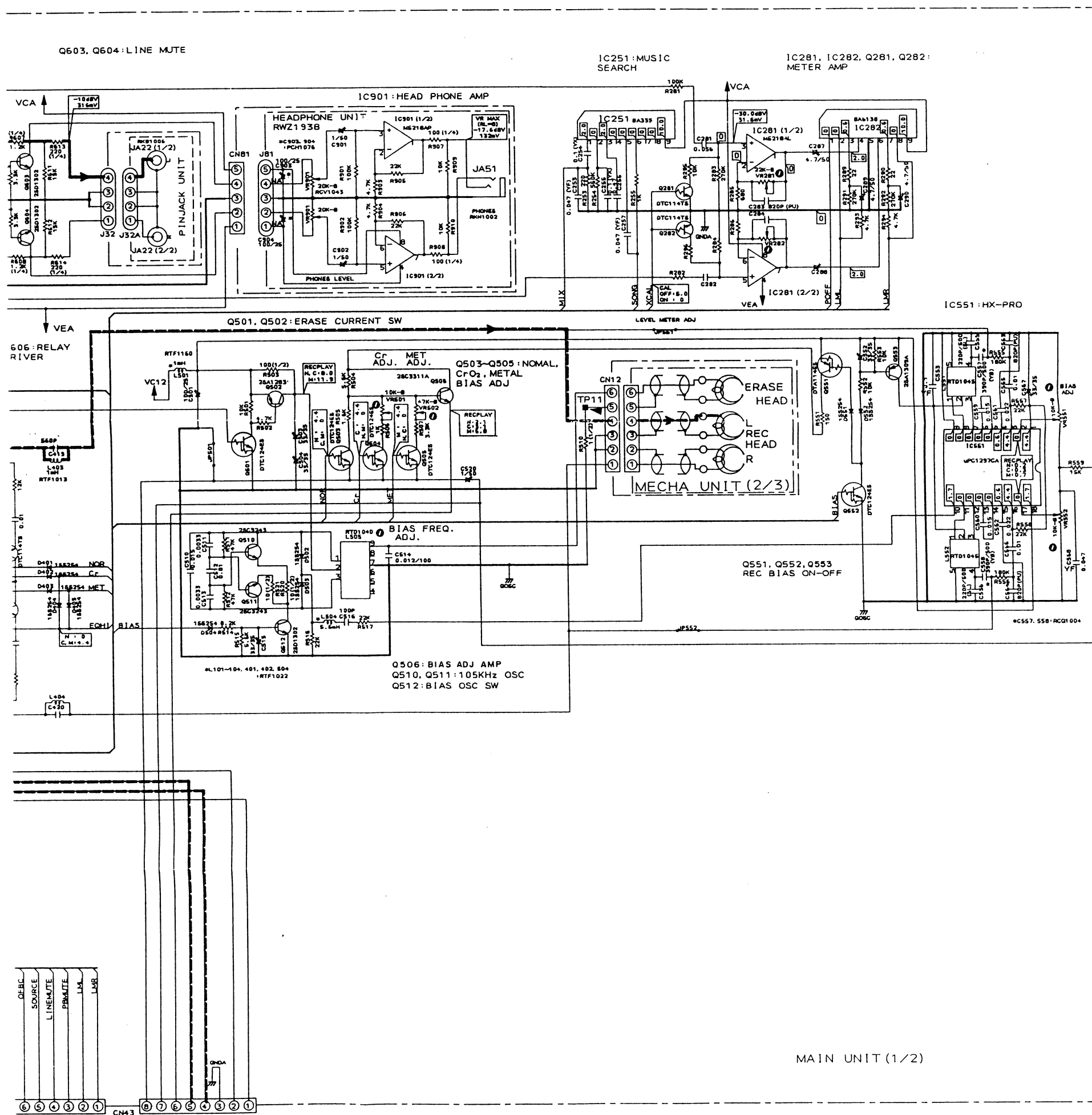
S822:DOLBY NR B-OFF-C

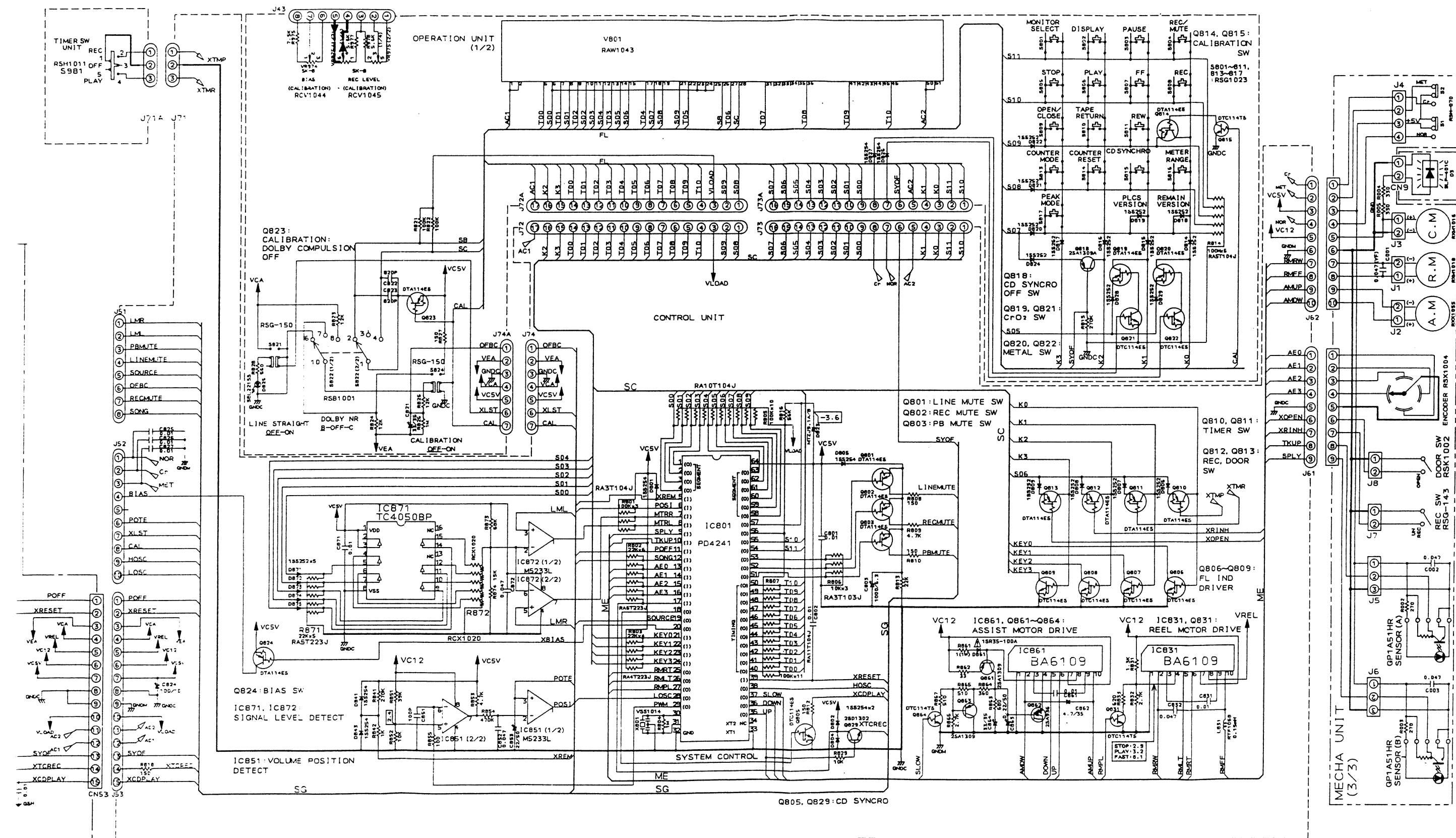
S824:CALIBRATION OFF-ON

TIMER UNIT

S981:TIMER REC-OFF-PLAY/REPEAT

——— PLAYBACK
- - - - REC





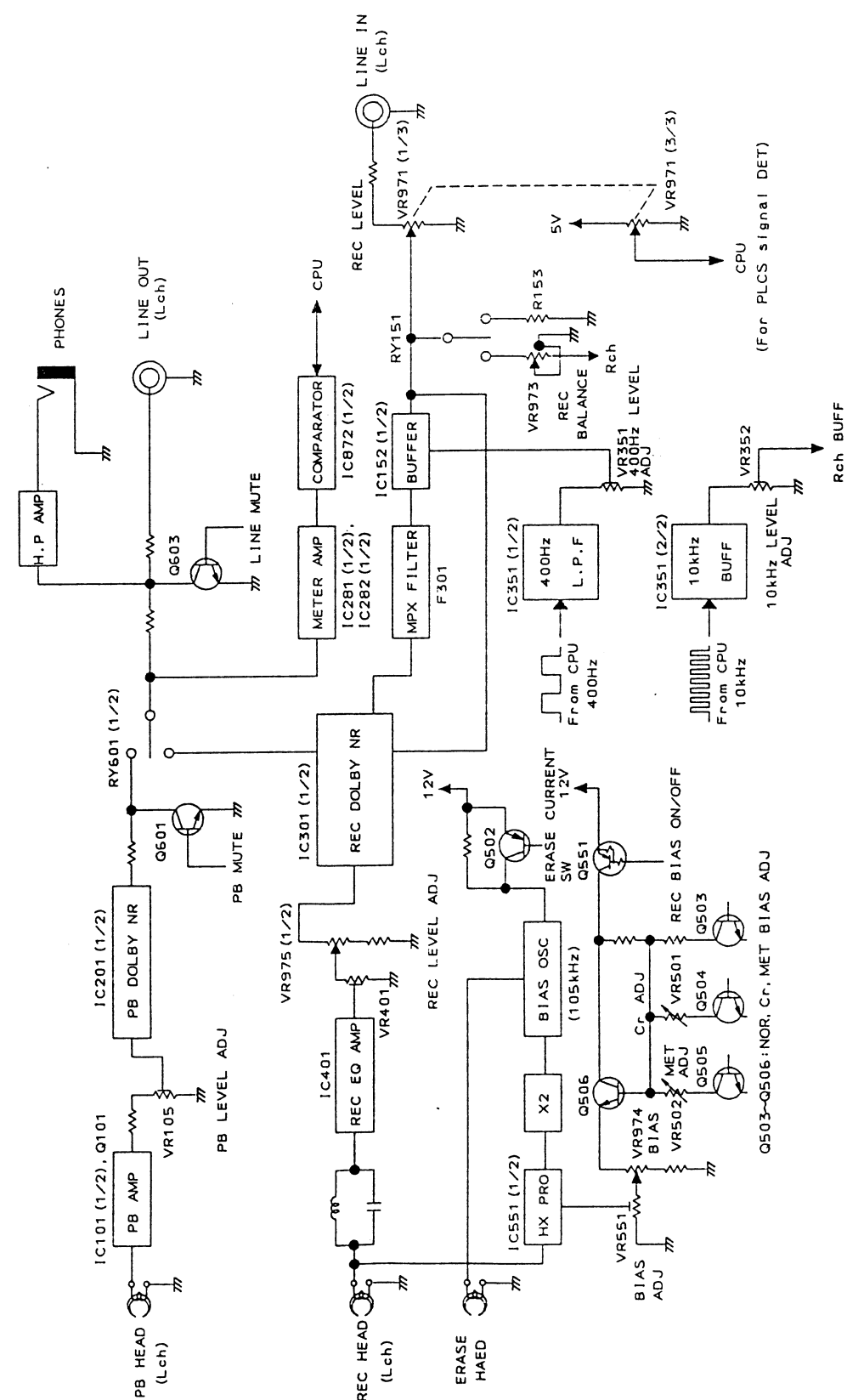
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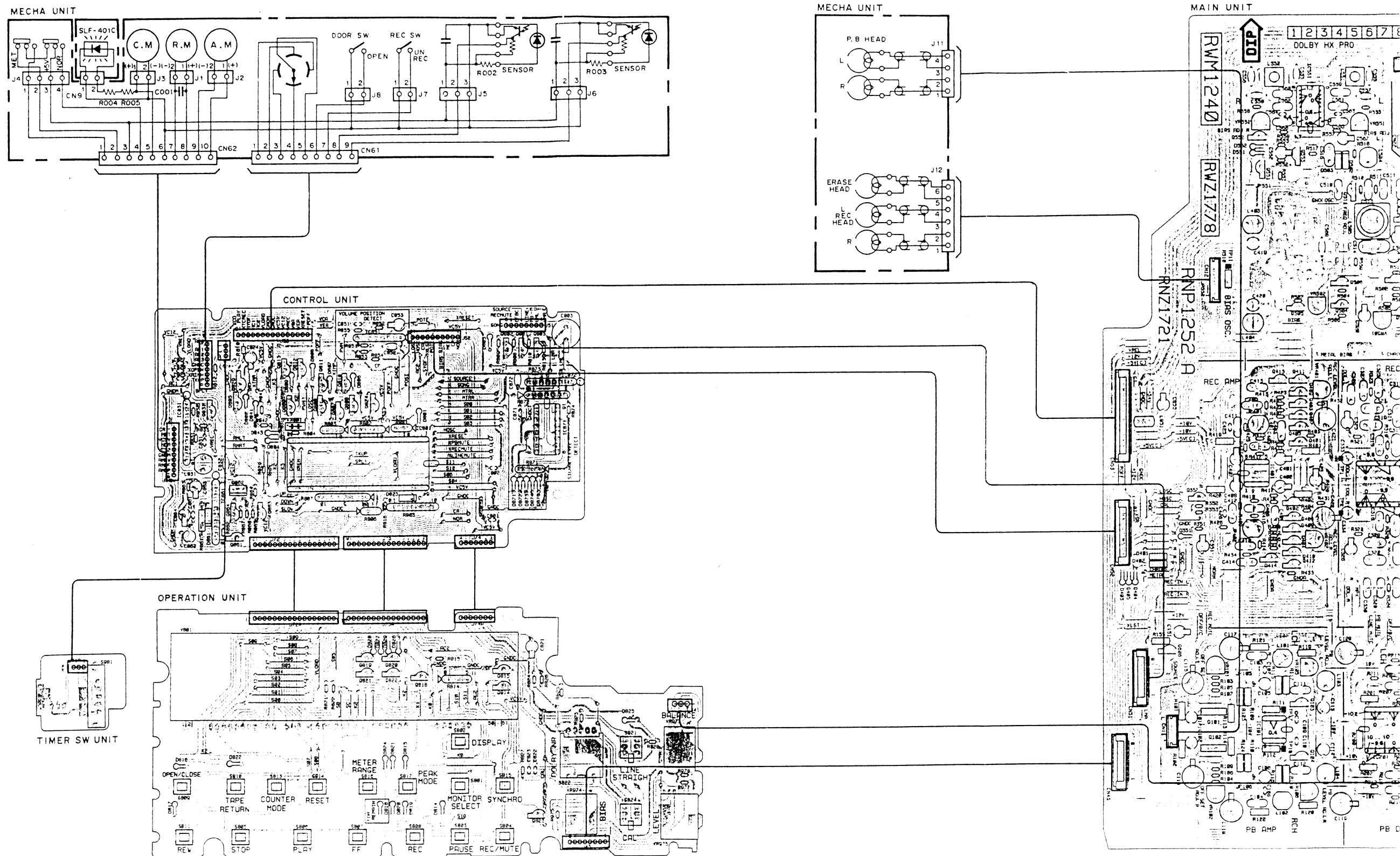
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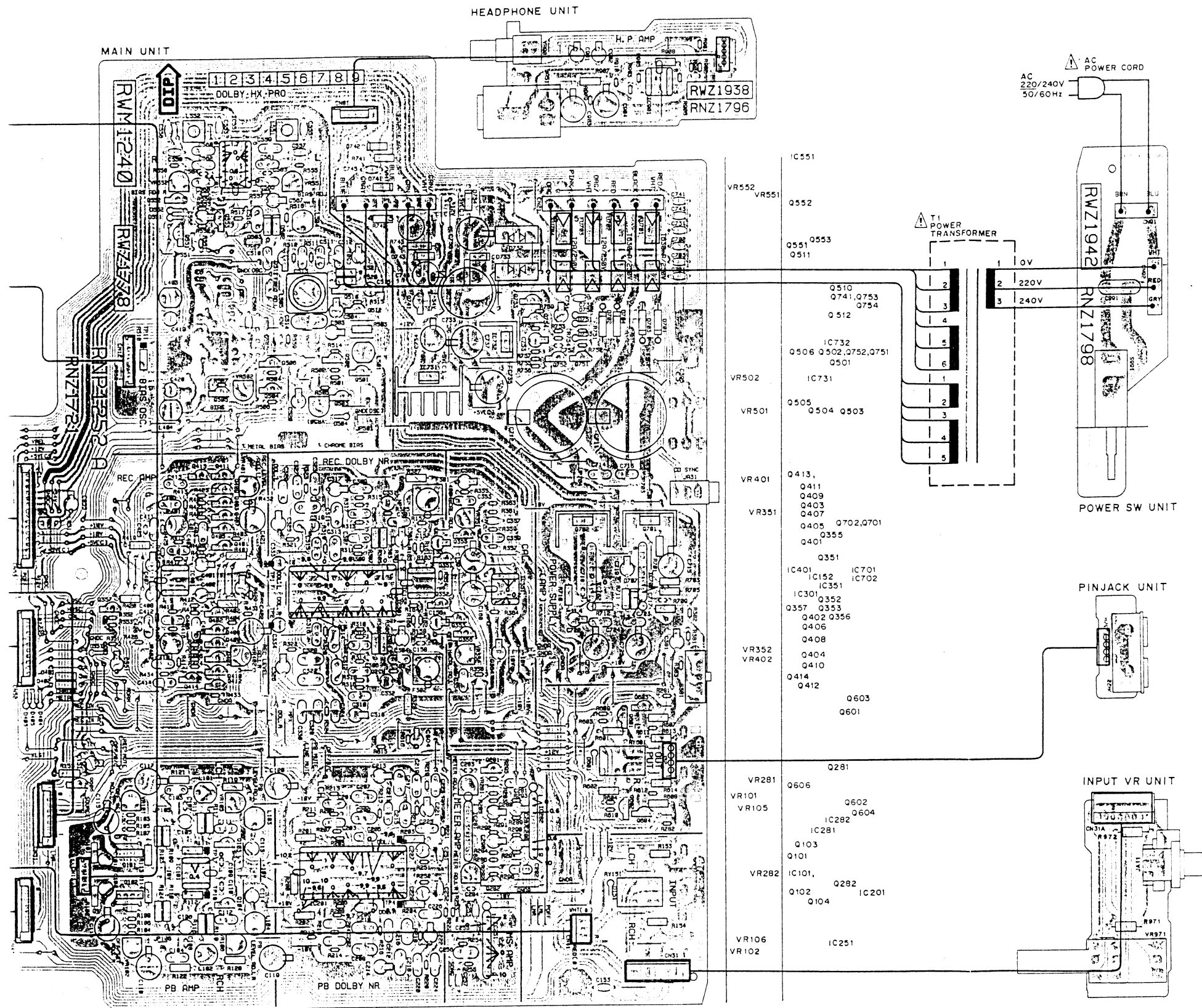
4. BLOCK DIAGRAM



5. P.C. BOARDS CONNECTION DIAGRAM

- View from component side



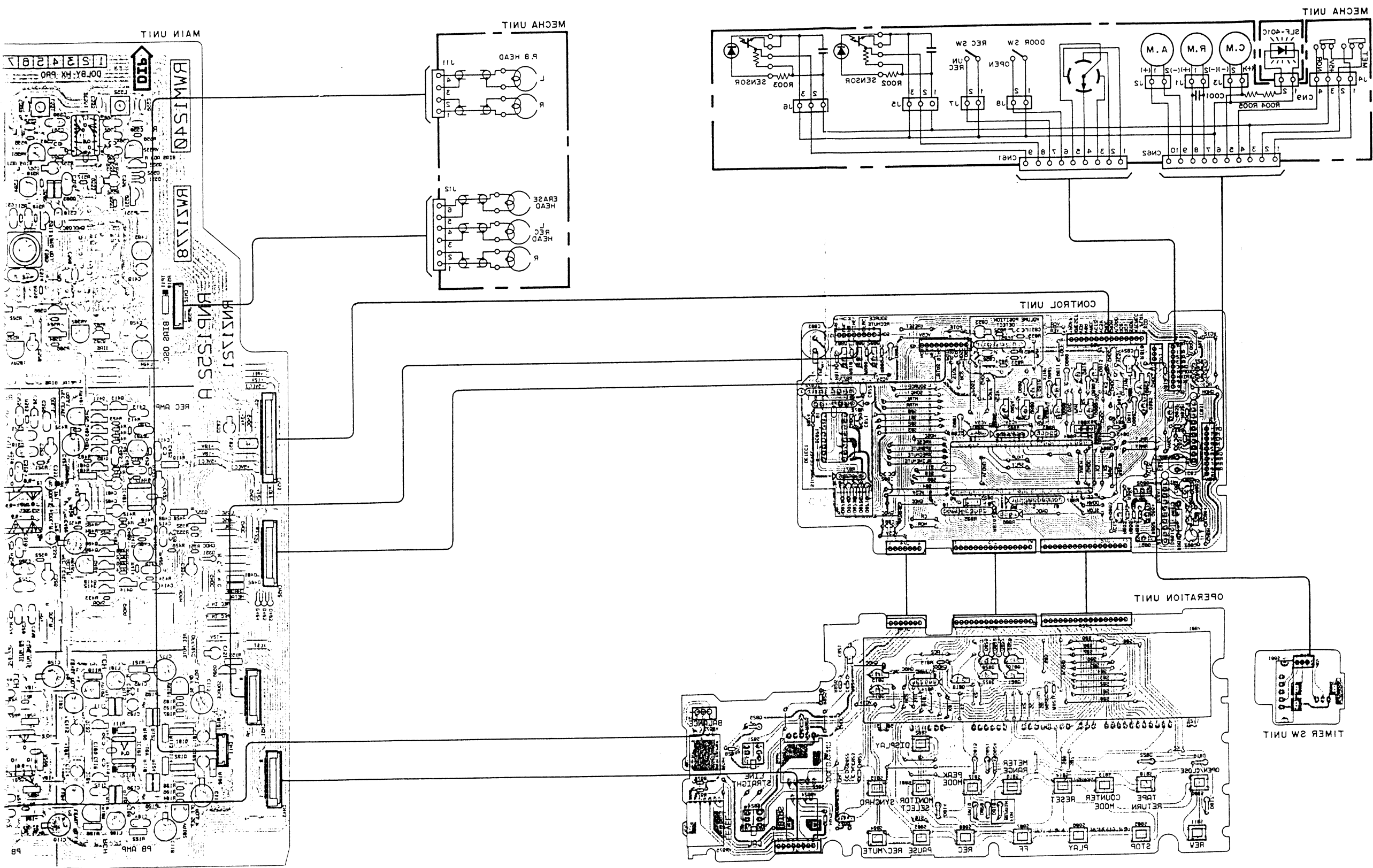


PCB pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		Diode
		Zener Diode
		LED
		Variable
		Rectifier Diode
		Inductor
		Coil
		Transformer
		Filter
		Ceramic Capacitor
		Mylar Capacitor
		Silver Capacitor
		Electrolytic Capacitor (Non-polarized)
		Electrolytic Capacitor (Polarized)
		Electrolytic Capacitor (Polarized)
		Electrolytic Capacitor (Polarized)
		Primary Capacitor
		Semifixed Resistor
		Resistor (trim)
		Resistor
		Resistor
		Thermistor

1. This PCB 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 in the above table.
3. The capacitor terminal marked with shows negative terminal.
4. The diode marked with shows cathode side.
5. The transistor terminal marked with shows emitter.

2. P.C. BOARDS CONNECTION DIAGRAM

• View from soldering side



6. P.C.B's 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 $\rightarrow$ $56 \times 10^1 \rightarrow 561$ RD1/4PS $\boxed{5}\boxed{6}\boxed{1}\text{J}$

47k Ω $\rightarrow$ $47 \times 10^3 \rightarrow 473$ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}\text{J}$

0.5 Ω $\rightarrow$ 0R5 RN2H $\boxed{0}\boxed{R}\boxed{5}\text{K}$

1 Ω $\rightarrow$ 010 RS1P $\boxed{0}\boxed{1}\boxed{0}\text{K}$

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

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

Mark	No.	Symbol & Description	Part No.	Mark	No.	Symbol & Description	Part No.
PIN JACK UNIT				DOOR SWITCH UNIT			
OTHERS				SWITCHES			
	JA22	JACK	PKB1006		S4		RSK1002
REC SWITCH UNIT				MAIN UNIT			
SWITCHES				SEMICONDUCTORS			
	S3	SWITCH	RSG-143		IC101		M5220P
TAPE SELECTOR UNIT					IC152	OP-AMP, IC	M5218AP
SWITCHES					IC201		CX20188
	S1.2		RSH-070		IC251		BA335
CONNECTOR UNIT					IC281		M5218AL
CAPACITORS					IC282		BA6138
	C1		CXCYF473Z50		IC301		CX20188
RESISTORS					IC351	OP-AMP, IC	M5218AP
	R4.5	CARBONFILM RESISTOR	RD1/6PM□□□J		IC401		M5238PF
SENSOR UNIT(A)					IC551		UPC1297CA
SEMICONDUCTORS					IC701		M5218AL
	D1		GP1A51HR		IC702		M5223L
CAPACITORS					IC731		NJM7812FA
	C2		CXPUY103N16		IC732		NJM7805FA
RESISTORS					Q101, 102	N-DUAL-FET	2SK389
	R2	CARBONFILM RESISTOR	RD1/6PM□□□J		Q103, 104	DIGITAL TRANSISTOR	DTC114TS
SENSOR UNIT(B)					Q281, 282	DIGITAL TRANSISTOR	DTC114TS
SEMICONDUCTORS					Q351-353	DIGITAL TRANSISTOR	DTC114TS
	D2		GP1A51HR		Q355, 356	DIGITAL TRANSISTOR	DTC114TS
CAPACITORS					Q357		DTA114ES
	C3		CXPUY103N16		Q401, 402	TRANSISTOR	2SD1302
RESISTORS					Q403-414	DIGITAL TRANSISTOR	DTC114TS
	R3	CARBONFILM RESISTOR	RD1/6PM□□□J		Q501	TRANSISTOR	DTC124ES
					Q502		2SA1283
					Q503-505	TRANSISTOR	DTC124ES
					Q506	TRANSISTOR	2SC3311A
					Q510, 511		2SC3243
					Q512	TRANSISTOR	2SD1302
					Q551		DTA114ES
					Q552	TRANSISTOR	DTC124ES
					Q553	TRANSISTOR	2SA1309A

Mark	No.	Symbol & Description	Part No.
	Q601-804	TRANSISTOR	2SD1302
	Q606	DIGITAL TRANSISTOR	DTIC114TS
	Q701		2SD1267
	Q702	TRANSISTOR	2SB942
	Q741		2SA1283
	Q751	TRANSISTOR	2SA1309A
	Q752	DIGITAL TRANSISTOR	DTIC114TS
	Q753		DTA114ES
	Q754	TRANSISTOR	2SC3311A
	D151	DIODE	1SS254
	D351	DIODE	1SS254
	D401-405	DIODE	1SS254
	D502-504	DIODE	1SS254
	D551, 552	DIODE	1SS254
	D601	DIODE	1SS254
	D701		EL12-LFG1
	D702, 703		EL12-LFF5
	D704		EL12-LFG1
	D707		HZ5BL1
	D731		1B2C1-LC2
	D732		1B2Z1-LC2
	D733, 734		1SR35-100A
	D741		1SR35-100A
	D742		MTZJ7. 5B
	D743		MTZ36A
	D751-753	DIODE	1SS254
SWITCHES			
	S381(MPX FILTER)		RSH1025
RELAYS			
	RY151 RELAY		RSR-039
	RY601 RELAY		RSR-039
COILS/TRANSFORMERS			
	L101-104		RTF1022
	L401, 402		RTF1022
	L403, 404		RTF1013
	L501		RTF1160
	L504		RTF1022
	L505		RTD1040
	L551, 552		RTD1045
	L851 RADIAL INDUCTOR		LFA121K
	F301, 302 FILTER		RTF1066
CAPACITORS			
	C101, 102		RCE1021
	C103, 104		CFTXA563J50
	C105, 106		RCH1037
	C107, 108		CKPUYB121K50
	C109, 110		CKPUYB102K50
	C111, 112		CFTXA273J50
	C113, 114 PL. STYRENE CAPACITOR		CQS4431J50
	C115-120 ELECTR. CAPACITOR		PCH1076
	C151 ELECTR. CAPACITOR		CEYA010M50
	C153 CERAMIC CAPACITOR		CKCYF473Z50
	C155, 156 ELECTR. CAPACITOR		CEYA010M50

Mark	No.	Symbol & Description	Part No.
	C157, 158	AXIAL CAPACITOR	CKPUYB221K50
	C159, 160	ELECTR. CAPACITOR	PCH1076
	C201-204		CFTXA222J50
	C205, 206		CFTXA392J50
	C207, 208	AUDIO FILM CAPACITOR	CFTXA474J50
	C209, 210	AUDIO FILM CAPACITOR	CFTXA154J50
	C211, 212		CFTXA153J50
	C213, 214	ELECTR. CAPACITOR	CEYA010M50
	C215, 216	AUDIO FILM CAPACITOR	CFTXA224J50
	C217, 218	AUDIO FILM CAPACITOR	CFTXA683J50
	C219, 220		CFTXA563J50
	C221, 222	ELECTR. CAPACITOR	CEYA010M50
	C223, 224		CFTXA562J50
	C225, 226	AUDIO FILM CAPACITOR	CFTXA103J50
	C227, 228		RCH1037
	C251, 252	CERAMIC CAPACITOR	CGCYX104K25
	C253	CERAMIC CAPACITOR	CKCYF473Z50
	C254, 255	CERAMIC CAPACITOR	CGCYX104K25
	C256	AUDIO FILM CAPACITOR	CFTXA474J50
	C257	CERAMIC CAPACITOR	CKCYF473Z50
	C281, 282		CFTXA563J50
	C283, 284	AXIAL CAPACITOR	CKPUYB221K50
	C287-290	ELECTR. CAPACITOR	CEAS4R7M50
	C301, 302		CFTXA392J50
	C303, 304	ELECTR. CAPACITOR	CEYA010M50
	C305-308		CFTXA222J50
	C309, 310		CFTXA392J50
	C311, 312	AUDIO FILM CAPACITOR	CFTXA474J50
	C313, 314	AUDIO FILM CAPACITOR	CFTXA154J50
	C315, 316		CFTXA153J50
	C317, 318	ELECTR. CAPACITOR	CEYA010M50
	C319, 320	AUDIO FILM CAPACITOR	CFTXA224J50
	C321, 322	AUDIO FILM CAPACITOR	CFTXA683J50
	C323, 324		CFTXA563J50
	C325, 326	ELECTR. CAPACITOR	CEYA010M50
	C327, 328		CFTXA562J50
	C329, 330	AUDIO FILM CAPACITOR	CFTXA103J50
	C331-334		RCH1037
	C351	ELECTR. CAPACITOR	CEYA010M50
	C353	AUDIO FILM CAPACITOR	CFTXA154J50
	C354		CFTXA562J50
	C357	CERAMIC CAPACITOR	CGCYX104K25
	C359	AUDIO FILM CAPACITOR	CFTXA103J50
	C363, 364	ELECTR. CAPACITOR	CEYA010M50
	C381	ELBCTR. CAPACITOR	CEAS330M35
	C395		CKPUY103M16
	C401, 402	ELECTR. CAPACITOR	CEYA010M50
	C403, 404		CFTXA272J50
	C405, 406		CFTXA274J50
	C407, 408	ELECTR. CAPACITOR	CEYA330M25
	C409, 410	AUDIO FILM CAPACITOR	CFTXA103J50
	C411, 412		CFTXA682J50
	C413, 414	AUDIO FILM CAPACITOR	CFTXA103J50
	C419, 420	PL. STYRENE CAPACITOR	CQSA561J50

Mark	No.	Symbol & Description	Part No.
	C421, 422	ELECTR. CAPACITOR	CEYA221M16
	C423	ELECTR. CAPACITOR	CEYA010M50
	C425, 426	AXIAL CAPACITOR	CKPUYB681K50
	C501	ELECTR. CAPACITOR	CEAS101M25
	C503, 504	ELECTR. CAPACITOR	CEAS330M35
	C510		CFTXA153J50
	C511	AUDIO FILM CAPACITOR	CFTXA332J50
	C512	AUDIO FILM CAPACITOR	CFTXA103J50
	C513	AUDIO FILM CAPACITOR	CFTXA332J50
	C514		CQPA123J100
	C515	ELECTR. CAPACITOR	CEAS330M35
	C516	AXIAL CAPACITOR	CKPUYB101K50
	C520	ELECTR. CAPACITOR	CEYA010M50
	C552	ELECTR. CAPACITOR	CEAS330M35
	C553	CERAMIC CAPACITOR	CGCYX104K25
	C555, 556	CERAMIC CAPACITOR	CCCSL221K500
	C557, 558	CERAMIC CAPACITOR	RCG1004
	C559, 560		CFTXA153J50
	C561, 562	AUDIO FILM CAPACITOR	CFTXA223J50
	C563, 564	AXIAL CAPACITOR	CKPUYB821K50
	C565, 566	AUDIO FILM CAPACITOR	CFTXA103J50
	C567	ELECTR. CAPACITOR	CEAS330M35
	C568	CERAMIC CAPACITOR	CKCYF473Z50
	C604	ELECTR. CAPACITOR	CEYA010M50
	C701-703	CERAMIC CAPACITOR	CKCYF473Z50
	C711, 712		RCH1044
	C713, 714		CFTXA563J50
	C715	ELECTR. CAPACITOR	CEAS221M25
	C717, 718	AXIAL CAPACITOR	CKPUYB101K50
	C719	ELECTR. CAPACITOR	CEYA010M50
	C722	ELECTR. CAPACITOR	CEYA010M50
	C723, 724		CFTXA563J50
	C725, 726		PCH1084
	C731, 732	CERAMIC CAPACITOR	CKCYF473Z50
	C733	ELECTR. CAPACITOR	CEAS472M25
	C734	ELECTR. CAPACITOR	CEAS101M25
	C735	ELECTR. CAPACITOR	CEAS102M6R3
	C736	ELECTR. CAPACITOR	CEAS102M16
	C737	ELECTR. CAPACITOR	CEAS222M16
	C741	CERAMIC CAPACITOR	CKCYF473Z50
	C742	ELECTR. CAPACITOR	CEAS101M50
	C743	CERAMIC CAPACITOR	CKCYF473Z50
	C744	ELECTR. CAPACITOR	CEAS101M50
	C745	CERAMIC CAPACITOR	CKCYF473Z50
	C751	ELECTR. CAPACITOR	CEAS4R7M50
	C752		CKPUY103M16
	C753	ELECTR. CAPACITOR	CEAS330M35
	C855	ELECTR. CAPACITOR	CEAS101M25
RESISTORS			
	R101, 102	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R103-103	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R109-124	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R153, 154	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R155	FUSIBLE RESISTOR	RFA1/4L□□□J

Mark	No.	Symbol & Description	Part No.
	R157, 158	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R161-166	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R200-204	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R205-222	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R251-255	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R281-286	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R289-296	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R301	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R303, 304	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R305-308	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R309-326	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R327, 328	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R351-357	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R359	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R361	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R363, 364	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R381-383	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R401, 402	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R403-418	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R419, 420	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R421-429	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R431-434	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R501, 502	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R503	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R504-507	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R510	CARBONFILM RESISTOR	RDR1/2LF□□□J
	R511, 512	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R514-517	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R520, 521	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R551-553	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R555-559	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R601, 602	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R603, 604	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R607, 608	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R609-612	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R613, 614	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R615, 616	CARBONFILM RESISTOR	RDR1/6PM□□□J
	R701	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R703	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R705	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R709-712	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R741	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R742	FUSIBLE RESISTOR	RFA1/4L□□□J
	R743	METAL OXIDE RESISTOR	RS1LM□□□J
	R751-759	CARBONFILM RESISTOR	RDR1/6PM□□□J
	VR101, 102	VR 4. 7k-B	VRTS6VS472
	VR105, 106	20k-B	RCP1017
	VR281, 282	VR 22k-B	VRTB6VS223
	VR351, 352	VR 2. 2k-B	VRTB6VS222
	VR401, 402	20k-B	RCP1017
	VR501	10k-B	VRTG6VS103
	VR502	47k-B	VRTG6VS473
	VR551, 552	10k-B	VRTG6VS103

Mark	No.	Symbol & Description	Part No.
OTHERS			
	CN31	B8P-SHF-1AA	
	CN41 JUMPER CONNECTOR 3-P	KPC3	
	JA31 JACK	RKN1014	
OPERATION UNIT			
SEMICONDUCTORS			
	Q814	DTA114ES	
	Q815 DIGITAL TRANSISTOR	DTIC114TS	
	Q818 TRANSISTOR	2SA1309A	
	Q819, 820	DTA114ES	
	Q821, 822	DTIC114ES	
	Q823	DTA114ES	
	D814-822 DIODE	1SS252	
	D824 DIODE	1SS252	
	D825	SEL2215S	
	D826, 827 DIODE	1SS254	
	D828, 829 DIODE	1SS252	
SWITCHES			
	S801-811 SWITCH	RSG1023	
	S813-817 SWITCH	RSG1023	
	S821 SWITCH(LINE STRAIGHT)	RSG-150	
	S822(DOLBY NR)	RSB1001	
	S824 SWITCH(CALIBRATION)	RSG-150	
CAPACITORS			
	C821 ELECTR. CAPACITOR	CEAS330M35	
	C822, 823 AXIAL CAPACITOR	CKPUYB821K50	
RESISTORS			
	R814 RESISTOR ARRAY	RA5T□□□J	
	R815 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R821-828 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R975 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R977, 978 CARBONFILM RESISTOR	RDF1/4PU□□□J	
	VR973 200k-B(REC. BALANCE)	RCV1046	
	VR974 5k-B(CALIBRATION)	RCV1044	
	VR975 5k-B(CALIBRATION)	RCV1045	
OTHERS			
	V801 FL TUBE	RAW1043	
CONTROL UNIT			
SEMICONDUCTORS			
	IC801	PD4211	
	IC831	BA6109	
	IC851	MS233L	
	IC861	BA6109	
	IC871	TC4050BP	
	IC872	MS233L	
	Q801-803	DTA114ES	
	Q805-809	DTIC114ES	
	Q810-813	DTA114ES	
	Q824	DTA114ES	
	Q829	2SD1302	
	Q831 DIGITAL TRANSISTOR	DTIC114TS	
	Q861 TRANSISTOR	2SA1309A	

Mark	No.	Symbol & Description	Part No.
	Q86C	2SA936	
	Q86C TRANSISTOR	2SA1309A	
	Q864 DIGITAL TRANSISTOR	DTIC114TS	
	D801, 802 DIODE	1SS254	
	D804, 805 DIODE	1SS254	
	D806-809 DIODE	1SS252	
	D82C	MTZJ9. 1A/B	
	D84C DIODE	1SS254	
	D84C DIODE	1SS254	
	D86C	1SR35-100A	
	D87C-875 DIODE	1SS252	
COILS/TRANSFORMERS			
	L83C	RTF1068	
CAPACITORS			
	C801, 802	CKPUYY103M16	
	C805 ELECTR. CAPACITOR	CEAS102M6R3	
	C824 ELECTR. CAPACITOR	CEAS101M10	
	C825-827	CKPUYY103M16	
	C831	CKPUYY103M16	
	C832 CERAMIC CAPACITOR	CKCYF473Z50	
	C851 AXIAL CAPACITOR	CKPUYB101K50	
	C85C CERAMIC CAPACITOR	CGCYX473K250	
	C85E ELECTR. CAPACITOR	CEAS220M50	
	C86C	CKPUYY103M16	
	C86C ELECTR. CAPACITOR	CEANP4R7M35	
	C86E ELECTR. CAPACITOR	CEASR22M50	
	C864 ELECTR. CAPACITOR	CEAS330M35	
	C87C	CKPUYY103M16	
	C87C CERAMIC CAPACITOR	CKCYF473Z50	
RESISTORS			
	R801 RESISTOR ARRAY	RA3T□□□J	
	R80C RESISTOR ARRAY	RA6T□□□J	
	R80S RESISTOR ARRAY	RA4T□□□J	
	R804 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R80E RESISTOR ARRAY	RA10T□□□J	
	R80F RESISTOR ARRAY	RA3T□□□J	
	R80T RESISTOR ARRAY	RA11T□□□J	
	R80F-810 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R81C, 813 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R81F CARBONFILM RESISTOR	RD1/6PM□□□J	
	R81E CARBONFILM RESISTOR	RD1/6PM□□□J	
	R81E CARBONFILM RESISTOR	RD1/6PM□□□J	
	R82E CARBONFILM RESISTOR	RD1/6PM□□□J	
	R83C-833 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R84C, 842 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R85C-855 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R86C METAL OXIDE RESISTOR	RS1LMF□□□J	
	R86C-867 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R87C RESISTOR ARRAY	RA5T□□□J	
	R87C	RCX1020	
	R87C, 874	RN1/6P□□□□□F	
OTHERS			
	X80C CERAMIC RESONATOR	VSS1014	

Mark	No.	Symbol & Description	Part No.
TIMER UNIT			
SWITCHES			
	S981(TIMER)		RSH1011
INPUT VR UNIT			
RESISTORS			
	R971, 972 CARBONFILM RESISTOR	RDR1/2PM□□□J	
	VR971	RCV1047	
OTHERS			
	CN31 CONNECTOR	SSQ-8-A	
	JA11 JACK	PKB1005	
HEADPHONE UNIT			
SEMICONDUCTORS			
	IC901 OP-AMP, IC		MS218AP
CAPACITORS			
	C901, 902 ELECTR. CAPACITOR	CEYA010M50	
	C903, 904 ELECTR. CAPACITOR	PCH1076	
RESISTORS			
	R901-906 CARBONFILM RESISTOR	RD1/6PM□□□J	
	R907, 908 CARBONFILM RESISTOR	RDR1/4PM□□□J	
	R909, 910 CARBONFILM RESISTOR	RD1/6PM□□□J	
	VR901 20k-B(PHONES LEVEL)	RCV1043	
OTHERS			
	JA51 JACK	RKN1002	
POWER SWITCH UNIT			
SWITCHES			
	△ S991 SWITCH(POWER)		RSA-063
CAPACITORS			
	△ C991 CAPACITOR (CERAMIC)		VCG-044

7. ADJUSTMENTS

7.1. MECHANISM RELATED ADJUSTMENT

1. Tape Speed Adjustment

Mode	Adjustment Location	Specifications
PLAY	Capstan motor adjustment hole (Refer to Fig. 1.)	Adjust so that the playback frequency is 3015 ± 5 Hz at the beginning of winding of test tape STD-301.
PLAY		Playback test tape STD-301 again and confirm that the above specifications are satisfied.

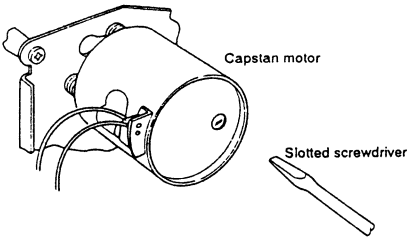


Fig. 1.

2. Adjustment of Door Damper

Adjustment Location	Specifications
Cylinder adjustment screw (Refer to Fig. 2.)	Make sure that the door opens smoothly, there is no two-stage motion, and that there is no bounding when it opens completely. (Perform with no cassette half inserted.)

Opening becomes slower (when bounding)

Opening becomes faster (when two-stage motion)

Adjustment screw

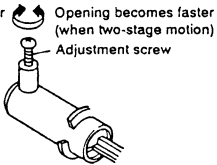


Fig. 2.

7.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

- The mechanical adjustments must be completed first.
- The head must be cleaned and demagnetized.
- Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
- The reference signal is $0dBv=1Vrms$.
- Connect a $50\text{ k}\Omega$ (or between $47k$ to $52\text{ k}\Omega$) load resistance to the OUTPUT terminals.
- 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. 7-1)
- STD-630 : NORMAL blank tape
- STD-620 : CrO₂ blank tape
- STD-610 : METAL blank tape

List of Adjustments

Playback sections

- Head azimuth adjustment.
- Playback level adjustment.

Recording sections

- Bias oscillator adjustment.
- Recording bias adjustment.
- Recording level adjustment.
- Level meter adjustment.
- DC balance adjustment
- Recording level and recording bias calibration adjustment.

NOTE: This unit has an automatic tape selection feature.

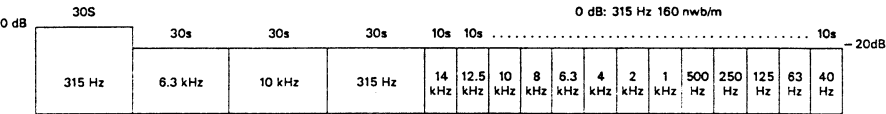


Fig. 7-1 Constants of the test tape STD-331B

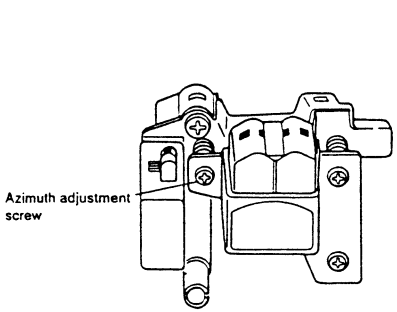


Fig. 7-2 Head azimuth adjustment

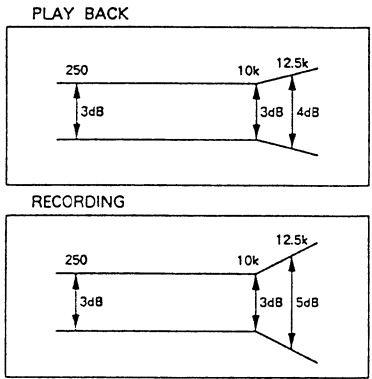


Fig. 7-3 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

• Turn VR105, VR106 to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/−20 dB section of STD-331B test tape.	Head azimuth adjustment screw. (See Fig. 7-2)	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 the STD-331B test tape.	Deck I VR105 (Lch) VR106 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	−14.7 dBv	

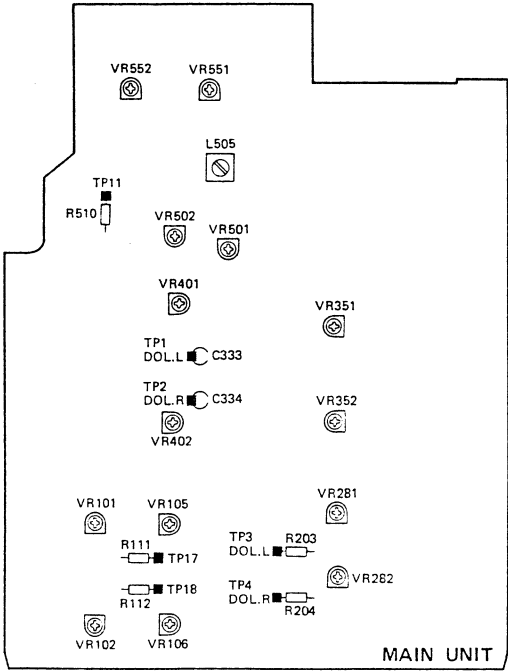


Fig. 7-4 Adjustment points

RECORDING SECTION

1. Bias Oscillator Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/PLAY	Load the STD-610 test tape with no input signal.	Deck I L 505	TP. 11	106 kHz±300 Hz	

2. Recording Bias Adjustment

• Since the STD-630 recording bias adjustment determines the calibration standard, it should be performed carefully.

2-1. Overbias Adjustment								
No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks	
1.	REC/ PAUSE	Apply a 6.3 kHz/10 dBv (−10VU meter reading) signal to the Line input terminals and insert STD-630.	—		LINE OUT	—	Turn control clockwise past the peak to assure proper overbias value.	
2.	REC →PLAY	Record and play back the 6.3 kHz signal at −10 dBv input level.	NOR	VR551 (L) VR552 (R)		NOR		3.0 dB overbias
3.		Record the 6.3 kHz/ −10 dBv signal on STD-620 and play back.	CrO ₂	VR501 (L/R)		CrO ₂		2.5 dB overbias
4.		Record the 6.3kHz/ −10 dBv signal on STD-610 and play back.	METAL	VR502 (L/R)		METAL		1.0 dB overbias
5. Turn control clockwise past the peak to assure proper overbias value.								
2-2. Frequency Response Adjustment								
No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks	
1.	REC/ PAUSE	Apply a 10kHz/315 Hz/ −20 dBv signal to the Line input terminals and insert STD-630.	—		LINE OUT	—		
2.	REC →PLAY	Record and play back the 315 Hz signal and a 10 kHz signal at −20 dBv input level.	NOR	VR551 (L) VR552 (R)		Record and play back repeatedly, comparing the 315 Hz and 10 kHz playback levels, and adjust to 0±0.5 dB.		
3.		Record the 10 kHz/ 315 Hz, −20 dBv signal on STD-620 and play back.	CrO ₂	VR501 (L/R)		0±1.0 dB		
4.		Record the 10 kHz/ 315 Hz, −20 dBv signal on STD-610 and play back.	METAL	VR502 (L/R)		0±1.0 dB		
5. Check distortion value after adjustment is completed and confirm that there is no underbias.								

3. Recording Level Adjustment

• Since the STD-630 recording level adjustment determines the calibration standard, it should be performed carefully.

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 315 Hz/0 dBv signal to the line input terminals, load the STD-630 test tape.	Rec Level control volume	TP. 3 (Lch) TP. 4 (Rch)	-15.2 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 1 VR401 (Lch) VR402 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes -15.2 dB.	
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. 3 (Lch) TP. 4 (Rch)	-15.2 dBv ± 1.5 dB	
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. 3 (Lch) TP. 4 (Rch)	-15.2 dBv ± 1.5 dB	

4. Level Meter Adjustment

• Adjust by turning clockwise until the lamp lights up.

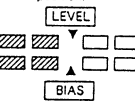
No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC PAUSE	Apply a 315 Hz/-10 dBv (316 mV) signal to the Line input terminals.	VR281 (Lch) VR282 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Always set the enlarged mode when adjusting. Adjust so that the 0 dB segment lights at a level of -15.2 ± 0.5 dBv (-15.2 ± 1.0 dBv in the normal mode).	

5. DC Balance Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.			VR101 (Lch) VR102 (Rch)	TP17 (Lch) TP18 (Rch)	0V ± 0.2V	

6. Recording Level and Recording Bias Calibration Adjustment.

• This adjustment should be performed last.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PLAY	Load the STD-630. Calibration switch: ON Recording level calibration potentiometer: Center click position Recording bias calibration potentiometer: Center click position	LEVEL CAL. (400 Hz) VR351 BIAS CAL. (10 kHz) VR352	Level meter	The meter should light up to the LEVEL or BIAS arrow position.  Adjust to the point immediately before the segment to the right of the arrow lights.	

8. FOR HB TYPE

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "O" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The CT-959/HB type is the same as the CT-959/HEM type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		CT-959/ HEM type	CT-959/ HB type	
Δ	AC power cord Operating instructions (French, Italian, Dutch, Swedish, Portuguese, Spanish)	ADG1036 RRD1078	PDG1004	

LINE VOLTAGE SELECTION

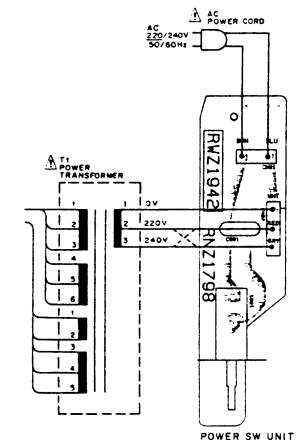
Line voltage can be changed with the following steps.

1. Disconnect the AC power cord.
2. Remove the top cover.
3. Change the transformer wire (To POWER SW UNIT) of terminal CN92-2 and CN92-3 as follows.

Voltage	Terminal No. CN92-2	Terminal No. CN92-3
220V	RED	GRAY
240V	GRAY	RED

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

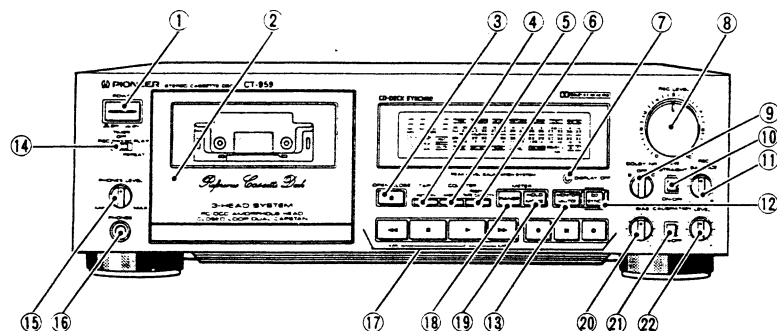
Parts NO.	Description
AAX-193	220V label
AAX-192	240V label



9. PANEL FACILITIES

Front panel

The illustration shows model CT-959



① POWER switch

② Cassette door

③ Cassette door OPEN/CLOSE button

④ TAPE RETURN button

When this button is pressed, the tape will be fast forwarded or reversed until the tape counter reaches the "0000" range.

⑤ COUNTER MODE button

When pressed, the mode will change in sequence.

- TAPE COUNTER
- TIME COUNTER (displays elapsed time of recording or playback)
- REMAIN counter (displays time remaining on the tape) (CT-959 only)

⑨ DOLBY* NR selector

To select Dolby type-B, type-C NR system and 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.*

⑩ LINE STRAIGHT button (CT-959 only)

Bypasses recording balance volume.

⑪ REC BALANCE knob

⑫ CD SYNCHRO button (CD SYNC)

For automatic operation when recording a CD from a Pioneer CD player compatible with the CD-DECK SYNCHRO function.

⑬ MONITOR (AUTO) selector

Switches SOURCE/TAPE sound when monitoring recording.

⑭ TIMER selector

REC: To record by timer.

OFF: To switch the timer or repeat functions off. Normally set to this position.

PLAY/REPEAT:

To play back by timer. When the switch is set to this position during normal playback, one side will be played back repeatedly (repeat playback).

⑮ Headphones level knob (PHONES LEVEL)

⑯ Headphones jack (PHONES)

⑰ Operation buttons

Recording button (●):

When this button is pressed, the mode will change to one-touch recording Pause (recording standby).

Recording will be started with the Pause (■) button or the Play (▶) button.

Pause button (■):

When this button is pressed, recording or playback will be stopped temporarily. To resume recording/playback, press the button again. This function does not work during Fast Forward or Rewind mode.

Recording mute button (○):

Produces a blank space during recording.

Play button (▶):

Stop button (■):

Rewind button (◀◀):

To rewind a tape. When this button is pressed during playback, the song being played back is rewound to the beginning. When this button is pressed twice, the song being played back is rewound to the beginning of the previous song.

Fast Forward button (▶▶):

To fast forward a tape. When this button is pressed during playback, the song being played back is forwarded to the beginning of the next song. When this button is pressed twice, the song being played back is fast forwarded to the beginning of the song following the next song.

⑱ METER RANGE selector

Switches the scale range (wide/expanded) of the level meter.

⑲ METER HOLD MODE button

Switches between the mode where the peak level lights for 1.2 seconds and the mode where the peak level lighting is continuous.

⑳ CALIBRATION-BIAS control knob

Changes the sound by increasing/decreasing the recording bias.

㉑ CALIBRATION-ON/OFF button

To set an optimum bias and level for the tape.

㉒ CALIBRATION-LEVEL control knob

Adjusts recording sensitivity according to the tape in use.

For CT-959

⑥ COUNTER RESET/TAPE CAPACITY button

This button resets the counter display when in the TAPE COUNTER or TIME COUNTER modes. In the REMAIN mode, tape type indication will change every time the button is pressed, for setting of the tape type to be used.

— C60—C46L—C90—C80L—

For CT-757

⑥ COUNTER RESET button

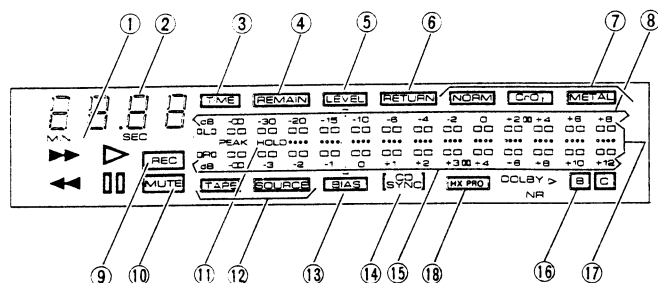
This button resets the counter display when in the TAPE COUNTER or TIME COUNTER modes.

⑦ DISPLAY OFF button

To turn on/off the FL display.

⑧ REC LEVEL control knob

Indicator

**① Travelling mode indicator**

- ◀◀: Lights during rewinding mode.
- ▶: Lights during playback, playback/recording Pause, and recording mode. Blinks during MUSIC SEARCH mode.
- ▶▶: Lights during fast forward mode.
- : Lights during pause mode.

② Counter displays (TAPE, TIME etc)

- Displays in three modes (CT-757 is two modes).
- Displays the number of songs during MUSIC SEARCH mode.

③ TIME counter mode

The numbers are lighted during TIME COUNTER mode.

④ REMAIN mode (CT-959 only)

The numbers are lighted during REMAIN mode.

⑤ Recording level (LEVEL)

Lights when the CALIBRATION ON/OFF button is pressed.

⑥ Return mode (RETURN)

Lights during tape return operation.

⑦ Tape type (NORM, CrO₂, METAL)

Displays the tape type (NORMAL/CrO₂/METAL) detected.

⑧ Wide range meter scale**⑨ Recording (REC)**

Lights during recording.

⑩ Muting (MUTE)

Blinks when muting the recording.

⑪ PEAK HOLD

Lights/goes off when the METER HOLD MODE button is turned ON/OFF.

⑫ Monitor source (TAPE/SOURCE)

TAPE: Sound of tape
SOURCE: Sound of source

⑬ Recording bias (BIAS)

Lights when the CALIBRATION ON/OFF button is pressed.

⑭ CD-DECK SYNCHRO (CD SYNC)

Lights when the CD-SYNCHRO function is functioning.

⑮ Expand range meter scale**⑯ DOLBY B-TYPE NR/C-TYPE NR**

Displays either DOLBY B-type or C-type NR system.

⑰ Level meter

L: Left channel

R: Right channel

Holds peak indications for about 1.2 second. □□ (double D) symbol beside the +3dB mark indicates the Dolby NR systems standard level.

⑱ Dolby HX PRO indicator

This unit is provided with a built in Dolby HX PRO Headroom Extension circuit. The Dolby HX PRO indicator always appears on the display when the POWER switch is turned on.

10. SPECIFICATIONS

System	4-track 2-channel stereo
Heads	Recording/playback head (Combined amorphous recording/amorphous playback head) × 1 Erasing head (Double-gap ferrite head with sendust) × 1
Motor	DC servo capstan motor × 1 DC reel motor × 1 DC assist motor × 1
Wow and flutter	0.022% (WRMS) ±0.052% (DIN)
Fast-winding time	Approx. 80 sec. (C-60 tape)
Frequency characteristics (−20 dB recording)	Metal tape 15 Hz to 22,000 Hz CrO ₂ tape 15 Hz to 21,000 Hz Normal tape 15 Hz to 21,000 Hz
Signal-to-Noise Ratio	DOLBY NR OFF More than 60 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 0.6% (0 dB)
Input	LINE: 60 mV (Input impedance: 47 kΩ)
Output	LINE: 316 mV (Output impedance: 1.8 kΩ) Head phones: 2.3 mW (Load impedance 8Ω, VR max.)

Miscellaneous

Power requirements	European model a.c. 220 V~, 50/60 Hz U.K. model a.c. 240 V~, 50/60 Hz
Power consumption	24W
Dimensions	420 (W) × 134.5 (H) × 370 (D) mm 16.9/16 (W) × 5.5/16 (H) × 14.9/16 (D) in.
Weight	approx. 3.4 kg (16 lb 7 oz)

Accessories

Operating instructions	1
Connection cord	2
CD-DECK SYNCHRO cord	1

NOTE:

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

Functions

- 3-mode counter
- ATLC (Auto Tape Loose Canceler)
- Meter range (wide/expanded) selector
- AUTO MONITOR
- Power eject (OPEN/CLOSE)
- MUSIC SEARCH
- TAPE RETURN/RETURN Play
- Headphones jack (with level control)
- LINE STRAIGHT
- DISPLAY OFF
- CD-DECK SYNCHRO
- PEAK LEVEL CALIBRATION system
- REC CALIBRATION (BIAS/LEVEL, built-in oscillator)
- MPX filter switch
- AUTO RECORDING MUTE
- Auto tape selector
- Timer start function recording/playback • REPEAT playback
- Dolby B-type and C-type Noise Reduction systems
- Dolby HX-PRO system
- Level meter: 2-mode PEAK HOLD selector