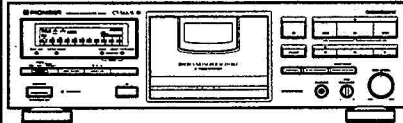


Service Manual



• The above illustration shows CT-S630S.

**ORDER NO.
RRV1084**

The chapter 1 of this Service Manual will not be reprinted. On your additional orders, we may supply only the chapter 2. For the chapter 1, please make copies and attach to the chapter 2 at your side if necessary.

STEREO CASSETTE DECK

CT-S630S

CT-S630S-G

CT-S530

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

Type	Model			Power Requirement	The voltage can be converted by the following method.
	CT-S630S	CT-S630S-G	CT-S530		
HEM	○	○	○	AC220 - 230V	AC230 - 240V, *
HB	○	-	-	AC230 - 240V	AC220 - 230V, *

* : Alter the wiring of the Power-supply block at the primary winding of power transformer referring to the "Line Voltage Selection" described in Service Manual.

CONTENTS

CHAPTER1

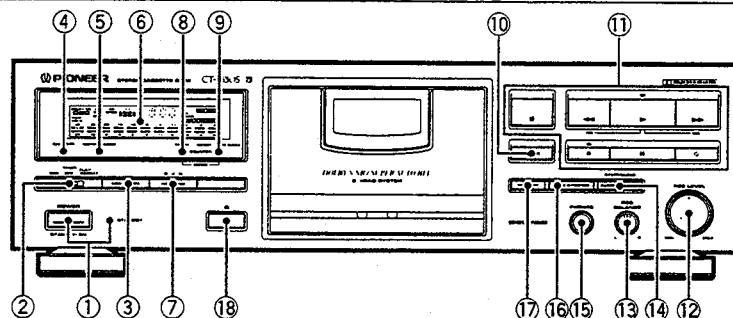
1.1 PANEL FACILITIES.....	1-2
1.2 SPECIFICATIONS	1-3
1.3 IC INFORMATION	1-4
1.4 FL INFORMATION	1-5
1.5 ADJUSTMENTS	1-6
1.6 PARTS LIST FOR EXPLODED VIEWS AND PACKING	1-10
1.7 PCB PARTS LIST	1-13

CHAPTER2

2.1 BLOCK DIAGRAM	2-2
2.2 EXPLODED VIEWS AND PACKING	2-3
2.3 PCB CONNECTION DIAGRAM.....	2-7
2.4 SCHEMATIC DIAGRAM.....	2-15

CHAPTER 1

1.1 PANEL FACILITIES



• The above illustration shows CT-S630S.

① **POWER STANDBY/ON switch and STANDBY indicator**

The POWER switch activates the secondary transformer only. Even when the switch is in the STANDBY position, there will be a power flow to the deck's circuits as long as the power cord is connected to a power outlet.

② **TIMER mode/repeat play switch (TIMER REC/OFF/PLAY-REPEAT)**

③ **MPX FILTER button**

④ **Display off button (DISP OFF)**

Press to select the function display on or off.

⑤ **Level meter range selector button (METER RANGE)**


Press to select wide or expanded range on the level meter.

⑥ **Function display**

⑦ **Dolby* NR button (DOLBY NR OFF/B/C/S (CT-S630S))
Dolby* NR button (DOLBY OFF/B/C (CT-S530))**

*

• *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.*

⑧ **Tape counter mode button (COUNTER MODE)**

⑨ **Counter reset/tape capacity selector button (COUNTER RESET/TAPE CAPA)**

⑩ **FLEX button**

⑪ **Operation buttons**

◀/MS : Rewind/music search

■ : Stop

▶ : When pressed during stop, begins playback.

▶▶/MS : Fast forward/music search

● : Recording

|| : When pressed during playback or recording, pauses playback or recording. When pressed during pause, resumes play or starts recording.

○ : Recording mute

⑫ **Recording level control (REC LEVEL)**

⑬ **Recording balance control (REC BALANCE)**

⑭ **SUPER AUTO BLE START/CLEAR button**

⑮ **Headphones jack (PHONES)**

⑯ **CD DECK SYNCHRO recording button (CD SYNCHRO)**

⑰ **Monitor selector button (MONITOR)**

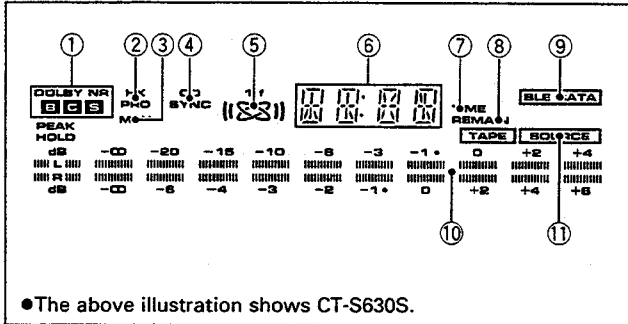
Used to monitor the source sound or the actual recorded sound source during recording.

• When the unit is set to record or playback mode, the TAPE indicator lights up and the monitor mode is automatically selected.

⑱ **Eject button (▲)**

• If the tape is moving (recording, playback, tape winding, etc.), press the stop (■) button before pressing this button.

FUNCTION DISPLAY



•The above illustration shows CT-S630S.

- ① **DOLBY NR B/C/S indicator (CT-S630S)**
DOLBY NR B/C indicator (CT-S530)
- ② **DOLBY HX PRO indicator**
- ③ **MPX indicator**
This indicator lights when the MPX filter button is set to ON (only when DOLBY NR is also set to ON).
- ④ **CD SYNC indicator**
Lights when synchro recording from a CD player is being carried out.
- ⑤ **FLEX (1/f) indicator (1/f symbol)**
symbol indicator lights when the FLEX button is pressed.

- ⑥ **Counter indicator**
Normally the tape or time counter is displayed as a number (see "COUNTER MODES").
The indicator flashes for approximately 4 seconds when the power is connected to the power supply.
During AUTO BLE tuning, indicates STRT, BIAS, LEVL, EQ, TUNE or Err.
- ⑦ **TIME counter indicator**
Lights up in the time counter mode.
- ⑧ **REMAIN counter indicator**
Lights up in the remaining time counter mode.
- ⑨ **BLE DATA indicator**
- ⑩ **Level meter with peak hold function**
The beside the -1 dB mark indicates the Dolby NR system's reference level.
Meter range:
Wide mode: -20 dB to +4 dB
Expand mode: -6 dB to +6 dB
- ⑪ **Monitor source indicators**
TAPE: Recorded sound
SOURCE: Original source sound

1.2 SPECIFICATIONS

System.....	4-track, 2-channel stereo
Heads. Combined "Hard Permalloy" recording/playback head × 1	"Ferrite" erasing head × 1
Motor.....	DC servo capstan motor × 1 DC reel motor × 1
Wow and Flutter.....	No more than 0.05% (WRMS, JIS) No more than ±0.14% (DIN)
Fast Winding Time.....	Approx. 90 seconds (C-60 tape)
Frequency Response (at -20 dB recording level)	
TYPE IV (Metal) tape.....	20 to 21,000 Hz (±6 dB)
TYPE II (CrO ₂) Tape.....	20 to 19,000 Hz (±6 dB)
TYPE I (Normal) Tape.....	20 to 19,000 Hz (±6 dB)
Signal-to-Noise Ratio (Dolby NR OFF).....	More than 59 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)
Dolby S-type NR ON.....	More than 22 dB (at 5 kHz)
Harmonic Distortion.....	No more than 0.6% (at -4 dB: 160 nwb/m)
Input (Sensitivity)	
LINE (INPUT).....	100 mV (Input impedance 72 kΩ)
Output (Reference level)	
LINE (OUTPUT).....	0.5 V (Output impedance 2.2 kΩ)
Headphones (PHONES).....	1.41 mW (Load impedance 32 Ω)

Miscellaneous

Power requirements	
U.K., model.....	AC 230—240 Volts~, 50/60 Hz
European model.....	AC 220—230 Volts~, 50/60 Hz
Power consumption	
CT-S630S.....	25 W
CT-S530.....	21 W
Dimensions.....	420 (W)×125 (H)×280 (D) mm
Weight.....	4.1 kg (European model) 4.4 kg (U.K. model only)

Subfunctions

- DOLBY B-type, C-type and S-type NR Systems (CT-S630S)
- DOLBY B-type and C-type NR Systems (CT-S530)
- DOLBY HX PRO system
- MPX FILTER
- Headphones jack
- 4-digit electronic tape/time/remain counter
- Music search up to ±15 selections
- Automatic space recording mute
- SUPER AUTO BLE tuning system
- FL level meter 9 +1 segments (with peak hold)
- SR System remote control available
- CD · DECK SYNCHRO function
- Timer Recording/Playback (Automatic repeat playback ON)
- Auto tape selector
- FLEX system
- Last memory

Accessories

Operating instructions.....	1
Connection cord with pin plugs.....	2
SR Remote control cord.....	1
CD · DECK SYNCHRO control cord.....	1

NOTE:

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

1.3 IC INFORMATION

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

1. PD4443A (IC701) System Control (CPU)

● Pin Function

Pin No.	Pin Name	Functions
1	P04	FL segment output (*1) A/D 5-bit level scan output (*2) Key scan output (*3)
2	P03	
3	P02	
4	P01	
5	XPOFF	POWER OFF detection \bar{L} (L: EDGE)
6	FIN	Level scan input for the 1/f high frequency level
7	POWER	POWER KEY input detection \bar{L} (L: EDGE)
8	SENT	TAKE-UP side reel sense input. For the auto stop electronic counter
9	SENS	Supply side reel sense input. For measuring the remain counter.
10	XREM	Remote control unit input
11	LMET	Lch level scan input
12	RMET	Rch level scan input
13	KEY0	4-bit key scan input (L: EDGE)
14	KEY1	
15	KEY2	
16	KEY3	
17	BIAS	Bias oscillation drive. H: ON
18	SYNC	CD-SYNCHRO code in detection. L: IN
19	FRCD	CONT to CD (for CD-SYNCHRO) INPUT
20	MTRS	Meter amplifier gain selection.
21	DAT0	Data input from the memory IC (NM93C46N).
22	DAT1	Data output to NM93C46N and LC7570.
23	SCK	Clock for communicating with NM93C46N and LC7570
24	CS	Chip select for communicating with NM93C46N
25	WR	Data latch for communicating with LC7570
26	XBLK	L CONT of all outputs of LC7570
27	XLMU	LINE MUTE. L: ON
28	XRMU	REC MUTE. L: ON
29	OSC	TEST signal output for the auto BLE (400 Hz, 3 kHz, 15 kHz)
30	—	Clock input for the CPU (4.19 MHz)
31	—	
32	GND	To GNDC

Pin No.	Pin Name	Function
33	—	To GNDC
34	—	Non connection
35	MC2	Motor CONTs for the door and reel
36	MC0	
37	RMPL	Reel motor PLAY torque selection. H: ON
38	CPM	Mechanism capstan motor driving. H: ON
39	XRESET	For resetting the CPU. L: Resetting
40	G01	Output for the FL grid
41	G02	
42	G03	
43	G04	
44	G05	
45	G06	
46	G07	
47	G08	
48	G09	
49	G10	
50	STBY	LED driving for the POWER STANDBY. H: ON
51	SDLA	Solenoid driving for the mechanism. H: ON
52	MC1	Motor CONTs for the door and reel
53	NRS0	1 bit of the 2-bit Dolby NR selection
54	P12	FL segment (*1)
55	P11	
56	VLOAD	For FL. Vf
57	VPRE	CPU internal FL output buffer power supply (Approx. -4V)
58	P10	FL segment output (*1)
59	P09	
60	P08	FL segment output (*1) Key scan output (*3)
61	P07	
62	P06	
63	P05	FL segment output (*1) Level scan (*2) Key scan output (*3)
64	Vcc	To Vcc +5V

*1: To the FL

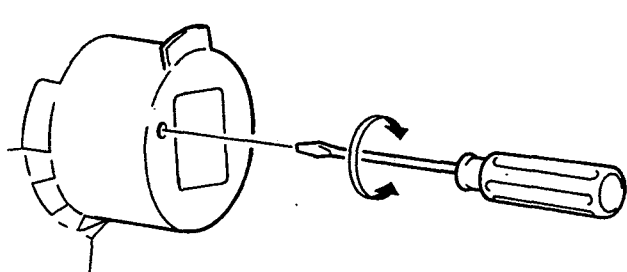
*2: To the anodes D541 to D545

*3: To each key and SW

1.5 ADJUSTMENTS

1. MECHANICAL ADJUSTMENT

1. Tape Speed Adjustment			
Mode	Test tape	Adjustment position	Specification rating (playback frequency)
PLAY	Play the STD-301 tape (3kHz)	Tape speed adjustment hole	3000Hz \pm 5Hz

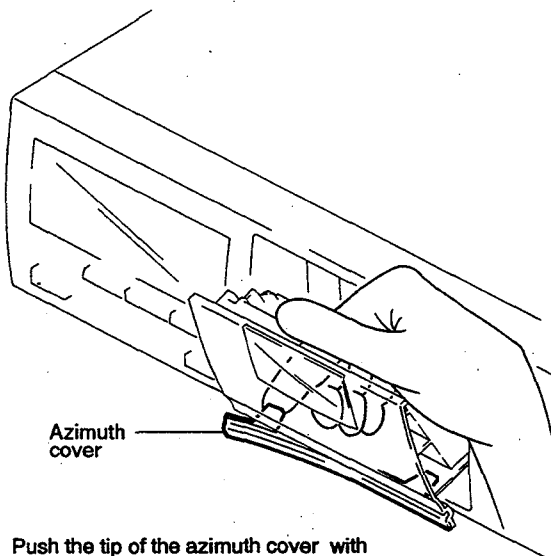


The diagram shows a close-up of the tape speed adjustment mechanism. A screwdriver is inserted into a hole on the side of a cylindrical component. The screwdriver has a circular ring with two curved arrows on its shaft, indicating the direction of rotation for adjustment.

Fig. 1 Tape speed adjustment

● Before performing the head azimuth adjustment

Remove the azimuth cover before performing this adjustment.

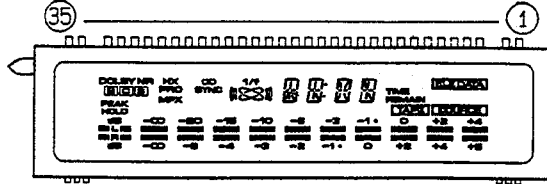


Push the tip of the azimuth cover with your figure from inside the door pocket.

Fig. 2 Removal of Azimuth Cover

1.4 FL INFORMATION

● V1501(RAW1133)

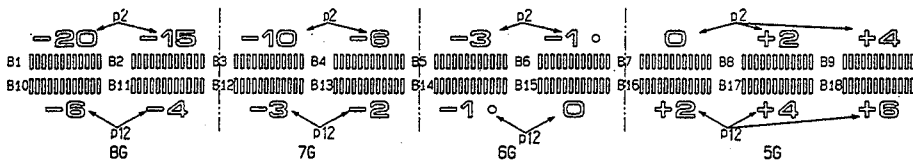
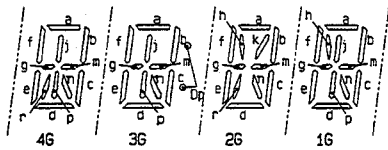
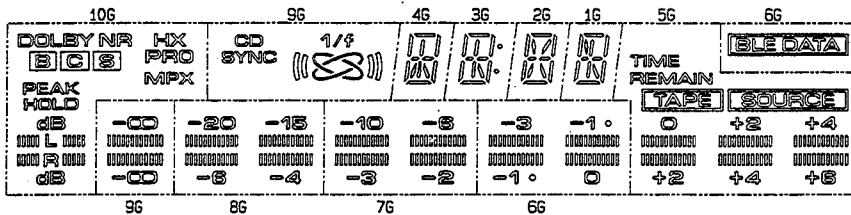


Pin Connection

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Assignment	F	F	NP	NC	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	NC	P12	P13	NC	P11
Pin No.	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35			
Assignment	NC	P10	NC	P9	P8	P7	P6	P5	NC	P4	P3	P2	P1	NP	F	F			

F:Filament G1~G10:Grid P1~P13:Anode NP:No pin NC:No connection

Grid Assignment



Anode Connection

	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1
P1			B1	B3	B5	B7	a	a	a	a
P2	HOLD	CD SYNC	B10	B12	B14	B16	b	b	b	b
P3	PEAK	/	B2	B4	B6	B8	f	f	f	f
P4	HX PRO	1/f	B11	B13	B15	B17	g	g	g	g
P5	MPX	()	-8 -4 -3 -2 -1 0	+2 +4 +6	m	m	m	m	m	m
P6		()	-20 -15 -10 -8 -3 -1 0	+2 +4	c	c	c	c	c	c
P7		/	/	/	/	B9	e	e	e	e
P8		/	/	/	/	B18	d	d	d	d
P9	DOLBY NR	/	/	/	/	REMAN	j, p	j, p	h	j, p
P10	/	/	/	/	/	TIME	r	Dp	n	h
P11	/	/	/	/	/	TAPE	n	n	r, k	n
P12	/	/	/	/	/	/	/	/	/	/
P13	/	/	/	/	/	BLE DATA	/	/	/	/

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR101, 102 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-331E test tape.	Head azimuth adjustment screw. (See Fig. 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 the STD-331E test tape.	Deck VR101 (Lch) VR102 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	-7.2 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 L622	TP. 11	106 kHz \pm 0.3 kHz	

2. Recording Bias Adjustment

- Turn the DOLBY NR switch is OFF.
- 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.	REC/ PAUSE	Apply a 315 Hz and 10 kHz signal to the line input terminals, load the STD-631 or STD-632 test tape.	REC level control volume	LINE OUT	-28 dBV	
2.	REC	Record the above signal onto the STD-631 or STD-632 test tape, and playback	Deck VR601 (Lch) VR602 (Rch)		Repeatedly record, playback and adjust so that the playback level of 10 kHz signal becomes 0 dB \pm 0.5 dB when compared with the 315 Hz signal.	

3. Recording Level Adjustment

- Turn the DOLBY NR switch is OFF.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz signal to the line input terminals, load the STD-631 or STD-632 test tape.	REC level control volume	LINE OUT	-10.0 dBV	
2.	REC/ PLAY	Record the above signal onto the STD-631 or STD-632 test tape, and playback.	Deck VR551 (Lch) VR552 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes -11.2 dBV.	
3.	REC/ PLAY	Record the above signal onto the STD-621 test tape, and playback.	Check	TP. 3 (Lch) TP. 4 (Rch)	-11.2 dBV \pm 1.5 dB	
4.	REC/ PLAY	Record the above signal onto the STD-610 test tape, and playback.	Check	TP. 3 (Lch) TP. 4 (Rch)	-11.2 dBV \pm 1.5 dB	

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 0 dBV=1 Vrms.
5. Connect a 10 kΩ 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-331E : Playback adjustments
 (See Fig. 3)
 STD-631 or STD-632 : NORMAL blank tape
 STD-621 : CrO₂ blank tape
 STD-610 : METAL blank tape

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

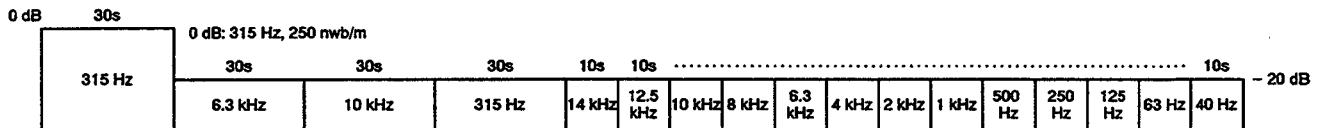


Fig. 3 Constants of the test tape STD-331E

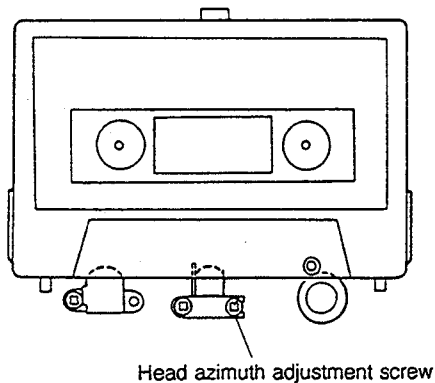


Fig. 4 Head azimuth adjustment

List of Adjustments


Playback sections

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

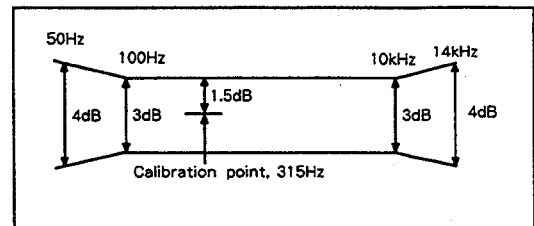
Recording sections

1. Bias oscillator adjustment.
2. Recording bias adjustment.
3. Recording level adjustment.
4. AUTO BLE adjustment

NOTE: This unit has an automatic tape selection feature.

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

PLAY BACK



RECORDING

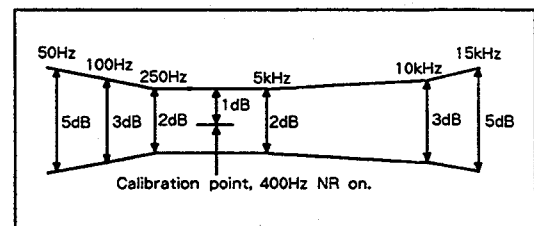


Fig. 5 Frequency response zone

4. AUTO BLE Adjustment

- BLE adjustment should be performed after all other adjustments are completed.
- This adjustment should be performed in the test mode.
- Entering the Test Mode.
Turn on the power, and after more than 4 seconds, press the "COUNTER RESET" button, "COUNTER MODE" button and **|||** (PAUSE) button simultaneously.
- Releasing the Test Mode.
Press the "COUNTER RESET" button.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.		Set to test mode.	-	-	-	
2.		Press the AUTO BLE key on the front panel.	VR401	Level meter Rch	Adjust the Lch segment which is lit until Rch is not lighting up. → Lch <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Rch <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> (<input checked="" type="checkbox"/> : light up <input type="checkbox"/> : not light up)	400 Hz adjustment (FL indication 1)
3.		Press the AUTO BLE key on the front panel.	VR402			3 kHz adjustment (FL indication 2)
4.		Press the AUTO BLE key on the front panel.	VR403			15 kHz adjustment (FL indication 3)

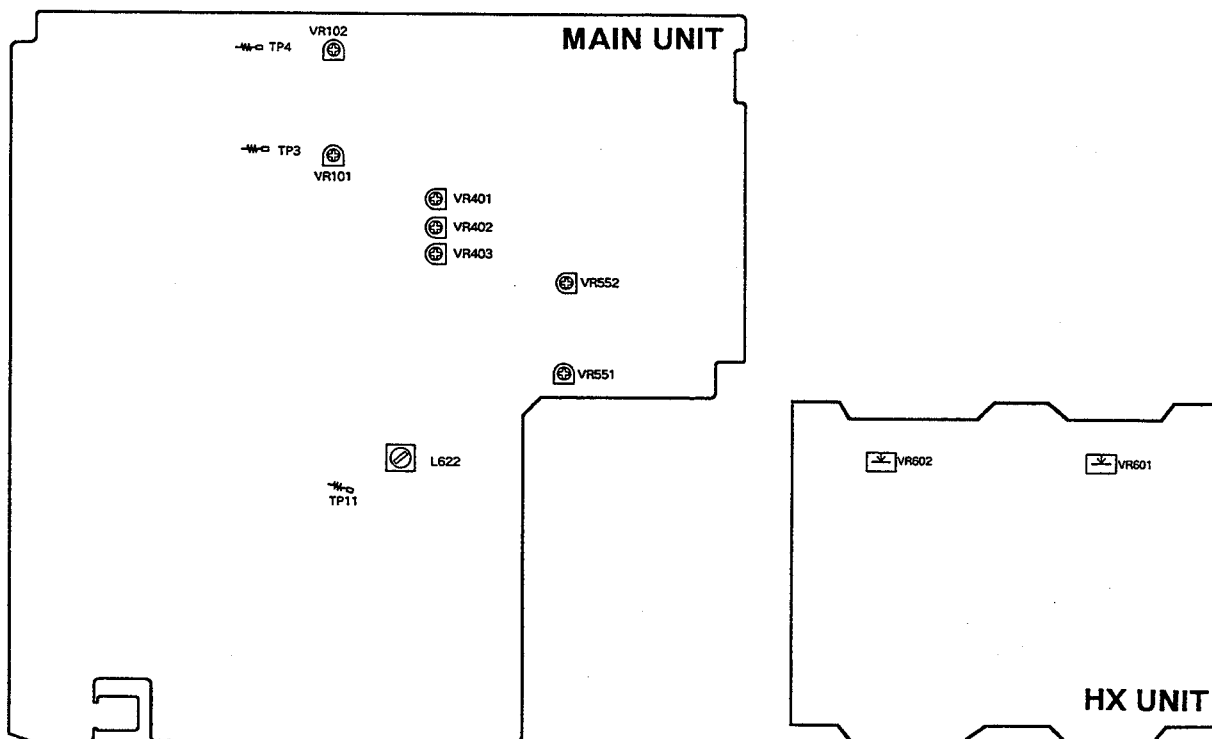


Fig. 6 Adjusting points

1.6 PARTS LIST FOR EXPLODED VIEWS AND PACKING

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

1. EXTERIOR AND PACKING

● **PACKING**

Contrast of CT-S630S/HEM, CT-S630S/HB, CT-S630S-G/HEM and CT-S530/HEM

CT-S630S/HEM, CT-S630S/HB, CT-S630S-G/HEM and CT-S530/HEM and have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.				Remarks
			CT-S630S/HEM	CT-S630S/HB	CT-S630S-G/HEM	CT-S530/HEM	
	3	Packing case Operating instructions (German/Italian/Dutch/Swedish/ Spanish/Portuguese)	RHG1566	RHG1567	RHG1568	RHG1569	
	7		RRD1153	Not used	RRD1153	RRD1153	
	11	Pad spacer A	Not used	RHC1039	Not used	Not used	
	12	Pad spacer B	Not used	RHC1041	Not used	Not used	

• **For CT-S630S/HEM**

Parts List

Mark	No.	Description	Part No.
	1	Pad (L)	RHA1111
	2	Pad (R)	RHA1112
	3	Packing case	RHG1566
	4	Sheet	RHX - 034
	5	Connection cord assy (For AUDIO)	RDE1036
	6	Control cord (For CD • DECK SYNCHRO)	RDE1038
	7	Operating instructions (German/Italian/Dutch/ Swedish/Spanish/Portuguese)	RRD1153
	8	Operating instructions (English/French)	RRE1103
	9	Spacer A	RHC1044
	10	Cord with mini plug (For SR cord)	PDE1247

CT-S630S, CT-S630S-G, CT-S530

2. MECHANISM UNIT

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Fixed core	RLA1130		46	Chassis base BLK	RXA1557
	2	Planger	RLA1132		47	Head base	RNE1390
	3	Head (R/P)	RPB1047		48	Head spacer	RNK2106
	4	Head (E)	RPB1040		49	Eject prevention arm (L)	RNE1199
	5	Push SW	RSG1018		50	Lever (L) (EJECT)	RNK1593
	6	MTR reel BLK	RXM1057		51	Screw	PMZ20P080FMC
	7	MTR main BLK	RXM1058		52	Spacer	RLA1275
	8	Solenoid BLK	RXP1010				
	9	Photo - transistor	SPI33534FG				
	10	Main belt	REB1163				
	11	Pinch roller ass'y	RXA1183				
	12	F/W ass'y	RXA1346				
	13	Washer	WA26D045D025				
	14	Screw 2.6 x 6.4 ZN	RBA1076				
	15	Washer	RBF - 057				
	16	Reel base BLK	RXA1184				
	17	Idler BLK	RXA1248				
	18	.....				
	19	Washer	RBF1038				
	20	Azimuth SP	RBH1076				
	21	Head base SP	RBL1003				
	22	Slide SP	RBH1239				
	23	Play arm	RNK1525				
	24	Cam gear (3R)	RNK1672				
	25	.....				
	26	Lever SP (L) (EJECT)	RBH1262				
	27	Eject prevention spring (L)	RBH1234				
	28	Spring (CASSETTE)	RBK1048				
	29	Lever collar B	RLA1146				
	30	Detector lever (REC)	RNK1527				
	31	Metal detector lever (L)	RNK1529				
	32	Detector lever (P)	RNK1543				
	33	.....				
	34	Screw	RBA1101				
	35	Plate HD BLK	RXA1488				
	36	Screw	PMA26P050FMC				
	37	F lock screw	RBA1031				
	38	Screw (7.7)	RBA1048				
	39	Screw	RBA1078				
	40	Washer	WA26D047D050				
	41	Washer	YE15FUC				
	42	Holder cushion (L)	RED1027				
	43	F lock screw	RBA1102				
	44	Screw	RBA1068				
	45	PCB control BLK	RXA1487				

CT-S630S, CT-S630S-G, CT-S530

● EXTERIOR

Contrast of CT-S630S/HEM, CT-S630S/HB, CT-S630S-G/HEM and CT-S530/HEM

CT-S630S/HEM, CT-S630S/HB, CT-S630S-G/HEM and CT-S530/HEM have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.				Remarks	
			CT-S630S/HEM	CT-S630S/HB	CT-S630S-G/HEM	CT-S530/HEM		
△	2	Power cord with plug	PDG1003	PDG1055	PDG1003	PDG1003		
	4	Name plate	RAM1007	RAM1007	RAM1014	RAM1007		
	7	Azimuth cover	RAH2431	RAH2431	RAH2432	RAH2431		
	9	Main unit	RWZ3221	RWZ3221	RWZ3221	RWZ3282		
	10	DISP unit	RWZ3222	RWZ3222	RWZ3222	RWZ3283		
	11	1/f unit	RWX1092	RWX1092	RWX1092	RWX1086		
	16	VR knob	RAC1707	RAC1707	RAC1708	RAC1707		
	17	Power knob	RAC1809	RAC1809	RAC1912	RAC1809		
	18	Operation knob	RAC1795	RAC1795	RAC1910	RAC1795		
	19	Balance knob	RAC1705	RAC1705	RAC1662	RAC1705		
	20	Mode knob A	RAC1800	RAC1800	RAC1909	RAC1800		
	21	Slide knob	RAC1713	RAC1713	RAC1915	RAC1713		
	26	Dolby S unit	RWX1101	RWX1101	RWX1101	.....	
	28	Door pocket	RAH2440	RAH2440	RAH2441	RAH2442		
	30	Bonnet	REA1077	REA1077	REA1134	REA1077		
	31	Front panel	RAH2428	RAH2428	RAH2429	RAH2430		
	41	Eject knob	RAC1772	RAC1772	RAC1914	RAC1772		
	48	OPSW unit	RWZ3223	RWZ3223	RWZ3223	RWZ3284		
	NSP	49	TRN 2 unit	RWZ3225	RWZ3225	RWZ3225	RWZ3286	
	NSP	50	TRN 1 unit	RWZ3224	RWZ3224	RWZ3224	RWZ3285	
	NSP	52	Rear panel	RNA1830	RNA1831	RNA1832	RNA1833	
	NSP	62	Pin cap	Not used	VEC1616	Not used	Not used	
	NSP	63	Insect proof plate	Not used	DEC1158	Not used	Not used	
	NSP	64	Screw	Not used	Not used	BBZ30P080FCC	Not used	
	NSP	65	Earth plate	Not used	Not used	RNE1795	Not used	
	△	66	Fuse (T5A)	Not used	PEK1003	Not used	Not used	

• For CT-S630S/HEM

Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
△	1	Strain relief	CM - 22B		31	Front panel	RAH2428
△	2	Power cord with plug	PDG1003		32	Screw	ABZ30P080FMC
△	3	FU801, FU803 Fuse (T1A)	REK1022		33	Screw	BBZ26P060FMC
	4	Name plate	RAM1007		34	Screw	BBZ30P060FZK
△	5	Power transformer (T1)	RTT1268		35	Screw	BBZ30P080FMC
	6	Cord clamber	RNH - 184		36	.....
	7	Azimuth cover	RAH2431		37	.....
	8	Half pressure spring	RBK1004		38	Screw	IBZ30P150FCU
	9	Main unit	RWZ3221		39	Lead card 33P	RDD1284
	10	DISP unit	RWZ3222		40	Connector assy 2P	RKP1681
	11	1/f unit	RWX1092		41	Eject knob	RAC1772
	12	HX unit	RWX1069		42	Door spring L	RBH1341
	13	Insulator	PNW1912		43	Damper assy	REC1005
	14	Lens S	RNK1911		44	Screw	BCZ26P050FMC
	15	LED lens	PNW2019		45	Screw	IPZ26P080FMC
	16	VR knob	RAC1707		46	Eject spring	RBH1342
	17	Power knob	RAC1809		47	Washer	WA52D080D025
	18	Operation knob	RAC1795		48	OPSW unit	RWZ3223
	19	Balance knob	RAC1705	NSP	49	TRN 2 unit	RWZ3225
	20	Mode knob A	RAC1800	NSP	50	TRN 1 unit	RWZ3224
	21	Slide knob	RAC1713	NSP	51	Mechanism bracket	RNE1601
	22	Mode knob B	RAC1808		52	Rear panel	RNA1830
	23	Door lens	RAH2171	NSP	53	PCB spacer	PNY - 404
	24	.....		NSP	54	Trans shield plate	RNE1451
	25	Mechanism unit	RYM1224	NSP	55	Main chassis	RNB1090
	26	Dolby S unit	RWX1101		56	Connector assembly 4P	RKP1696
	27	Remain display paper	REE - 113		57	Connector assembly 4P	RKP1697
	28	Door pocket	RAH2240	NSP	58	Arm Collar	RLA1124
	29	FL lens	RAH2291	NSP	59	Eject arm	RNE1597
	30	Bonnet	REA1077		60	Screw	BBZ30P040FZK
				NSP	61	Binder	Z09 - 058

1.7 PCB PARTS LIST

NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

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

560 Ω \rightarrow 56 \times 10¹ \rightarrow 561 RD1/8PM **5****6****1**J
 47k Ω \rightarrow 47 \times 10³ \rightarrow 473 RD1/4PS **4****7****3**J
 0.5 Ω \rightarrow 0R5 RN2H **0****R****5**K
 1 Ω \rightarrow 010 RS1P **0****1****0**K

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

5.62k Ω \rightarrow 562 \times 10¹ \rightarrow 5621 RN1/4PC **5****6****2****1**F

LIST OF WHOLE PCB ASSEMBLIES

Mark	PCB Assemblies	Part No.				Remarks
		CT-S630S/ HEM	CT-S630S/ HB	CT-S630S-G/ HEM	CT-S530/ HEM	
NSP	MOTHER UNIT	RWM1698	RWM1698	RWM1698	RWM1719	
	├─ MAIN UNIT	RWZ3221	RWZ3221	RWZ3221	RWZ3282	
	│ ├─ HX UNIT	RWX1069	RWX1069	RWX1069	RWX1069	
	│ │ ├─ 1/F UNIT	RWX1092	RWX1092	RWX1092	RWX1086	
	│ │ └─ DOLBY S UNIT	RWX1101	RWX1101	RWX1101	Not used	
	└─ DISP UNIT	RWZ3222	RWZ3222	RWZ3222	RWZ3283	
	└─ OPSW UNIT	RWZ3223	RWZ3223	RWZ3223	RWZ3284	
NSP	└─ TRN 1 UNIT	RWZ3224	RWZ3224	RWZ3224	RWZ3285	
NSP	└─ TRN 2 UNIT	RWZ3225	RWZ3225	RWZ3225	RWZ3286	

MAIN UNIT

RWZ3221 and RWZ3282 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		RWZ3221	RWZ3282	
	IC201, IC251	CXA1583S	CXA1580S	
	IC341	BA15218N	Not used	
	Q284	DTA124ES	Not used	
	D286	1SS254	Not used	
	C343, C344	CEAS330M16	Not used	
	C209	CCCSL101J50	Not used	
	R261	RD1/6PM223J	Not used	
	R331, R332	RD1/6PM104J	Not used	
	R341 - R344	RD1/6PM152J	Not used	
	R710	RD1/6PM473J	Not used	
	C341, C342	CEAS470M16	Not used	

1/F UNIT

RWX1092 and RWX1086 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		RWX1092	RWX1086	
	R1115	RD1/6PM363J	RD1/6PM183J	

CT-S630S, CT-S630S-G, CT-S530

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	C559, C560, C953, C954		CEAS101M10		VR551, VR552 (22K)		RCP1046
	C808		CEAS101M16		VR101, VR102, VR403 (47K)		RCP1047
	C806, C810		CEAS101M50		VR191		RCS1028
	C809		CEAS102M6R3		VR192		RCY1095
	C833		CEAS220M16		Other Resistors		RD1/6PM□□□J
	C803, C804		CEAS221M10	OTHERS			
	C801, C802		CEAS222M16		CN501 33P CONNECTOR		3-177644-3
	C173, C174, C253, C254		CEAS330M16		CN14 CONNECTOR POST		B2B-PH-K
	C259, C260, C343, C344		CEAS330M16		CN11 CONNECTOR POST		B4B-PH-K-E
	C555, C556, C628		CEAS330M16		CN12 CONNECTOR POST		B4B-PH-K-R
	C503, C504		CEAS3R3M50		JA853 JACK		PKN1005
	C171, C172, C331, C332		CEAS470M16		JA351 4P JACK		RKB-020
	C341, C342, C522, C621, C702		CEAS470M16		JA951 JACK		RKN1002
	C721		CEAS470M16		JA851, JA852 JACK		RKN1004
	C201, C202, C553, C554, C831		CEAS4R7M50		CN401 11P JUMPER CONNECTOR		SBRK11S
	C834		CEAS4R7M50		PCB BINDER		VEF1008
	C203, C204, C255, C256		CEASR10M50		EARTH PLATE		VNF-091
	C505, C506		CEASR47M50		X701 CERAMIC RESONATOR (4.19MHz)		VSS1014
	C557, C558		CFTXA102J50	HX UNIT			
	C405, C624, C625		CFTXA332J50	SEMICONDUCTORS			
	C406, C626		CFTXA682J50		IC601		UPC1297CA
	C261, C262, C407		CFTYA103J50		Q602		2SA1309A
	C623		CFTYA223J50		Q603		DTC124ES
	C109, C110, C402		CFTYA273J50		D602		1SS254
	C105, C106, C403		CFTYA563J50	COILS AND FILTERS			
	C205, C206, C257, C258		CFTYA683J50		L601, L602 (4.6MH)		RTD1011
	C404		CFTYA823J50	CAPACITORS			
	C501, C502		CGCYX473K25		C609, C610		CCCSL101K500
	C507, C508		CKCYB122K50		C616, C617		CEAS330M35
	C541, C701, C703-C705, C722		CKCYF103Z50		C614		CEASR10M50
	C761, C762, C851, C852, C905		CKCYF103Z50		C601, C602		CFTXA103J50
	C921, C955		CKCYF103Z50		C605, C606		CFTXA223J50
	C353, C815-C821, C853		CKCYF473Z50		C607, C608		CGCYX223K25
	C941, C942		CKPUYB101K50		C613		CKPUYB101K50
	C103, C104		CKPUYB102K50		C603, C604		CKPUYB821K50
	C113, C114		CQPA271J100		C611, C612 (390P/500)		RCG1004
	C101, C102		CQPA682J100	RESISTORS			
	C627				VR601, VR602		VRTB6HS473
	C805 (3300/35)		RCH1125		Other Resistors		RD1/6PM□□□J
	C807 (3300/16)		RCH1126	1/F UNIT			
RESISTORS				SEMICONDUCTORS			
	R714		RA10T223J		IC1111, IC1131		BA15218N
	R707		RA4T103J		Q1131-Q1136		DTC124ES
	R701		RA4T683J		D1111		1SS254
	R545		RA5T223J	CAPACITORS			
	R709		RA9T683J		C1141-C1143		CEAS010M50
	R623, R624 (4.7Ω)		RCN1022		C1117, C1118		CEAS101M10
	R205, R206 (22K)		RCN1023		C1139, C1140		CEAS4R7M50
	R263, R264 (560Ω)		RCN1024		C1119		CEASR47M50
	R546 (11K)		RCX1020		C1133, C1134		CGCYX152K25
	R611		RD1/2LMF010J		C1135, C1136		CGCYX272K25
△	R801		RFA1/4L220J	RESISTORS			
	R905		RS2LMF560J		VR601, VR602		VRTB6HS473
	VR401, VR402 (10K)		RCP1045		Other Resistors		RD1/6PM□□□J

CT-S630S, CT-S630S-G, CT-S530

Mark	No.	Description	Part No.
	C1115, C1116 C1120 C1137, C1138 C1111, C1112		CGCYX332K25 CGCYX473K25 CGCYX562K25 CGCYX822K25
	C1113		CKPUYB101K50
RESISTORS			
	Other Resistors		RD1/6PM□□□J
DOLBY S UNIT			
SEMICONDUCTORS			
	IC1001, IC1002		CXA1417Q-Q
CAPACITORS			
	C1003, C1004, C1015, C1016 C1051, C1052 C1089, C1090 C1085, C1086 C1029, C1030, C1035, C1036		CEJA010M50 CEJA010M50 CEJA100M25 CEJA220M25 CEJA470M16
	C1033, C1034 C1001, C1002, C1031, C1032 C1045, C1046, C1091, C1092 C1027, C1028, C1041, C1042 C1075, C1076		CEJAR10M50 CEJAR22M50 CEJAR22M50 CEJAR47M50 CEJAR47M50
	C1019, C1020 C1037, C1038 C1013, C1014, C1055, C1056 C1007, C1008, C1025, C1026 C1043, C1044, C1067, C1068		CFTYA224J50 CFTYA334J50 CKSQYB102K50 CKSQYB104K25 CKSQYB104K25
	C1077, C1078, C1081, C1082 C1087, C1088 C1023, C1024, C1049, C1050 C1065, C1066, C1069-C1072 C1083, C1084		CKSQYB104K25 CKSQYB104K25 CKSQYB153K50 CKSQYB182K50 CKSQYB182K50
	C1079, C1080 C1059, C1060 C1009, C1010, C1073, C1074 C1093, C1094 C1005, C1006, C1061, C1062		CKSQYB183K50 CKSQYB222K50 CKSQYB223K50 CKSQYB333K50 CKSQYB393K50
	C1063, C1064 C1047, C1048 C1011, C1012 C1017, C1018, C1053, C1054 C1021, C1022, C1039, C1040		CKSQYB471K50 CKSQYB473K50 CKSQYB681K50 CKSQYB822K50 CKSQYB823K25
RESISTORS			
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN1002 CONNECTOR 7P CN1001 CONNECTOR 8P		6033B-07Z029 6033B-08Z029

Mark	No.	Description	Part No.
DISP UNIT			
SEMICONDUCTORS			
	Q1701 D1501-D1509, D1511-D1513 D1701		DTC124ES 1SS254 SEL6210S
SWITCHES AND RELAYS			
	S1506, S1507, S1701 S1501-S1504 S1509		RSG1030 RSG1034 RSH1041
CAPACITORS			
	C1501		CEAS470M16
RESISTORS			
	All Resistors		RD1/6PM□□□J
OTHERS			
	CN1501 33P CONNECTOR V1501 FL INDICATOR TUBE		3-177640-3 RAW1133
OPSW UNIT			
SEMICONDUCTORS			
	Q1401, Q1402 D1401-D1404 D1409 D1408		DTC124ES 1SS254 SEL6410G SEL6C10R
SWITCHES AND RELAYS			
	S1401-S1411		RSG1030
CAPACITORS			
	C1401		CEAS100M50
RESISTORS			
	All Resistors		RD1/6PM□□□J
TRN 1 UNIT			
This unit has no service parts.			
TRN 2 UNIT			
This unit has no service parts			

Service Manual

ORDER NO.
RRZ1084

The chapter 1 of this Service Manual will not be reprinted. On your additional orders, we may supply only the chapter 2. For the chapter 1, please make copies and attach to the chapter 2 at your side if necessary.

STEREO CASSETTE DECK

CT-S630S

CT-S630S-G

CT-S530

CHAPTER 2

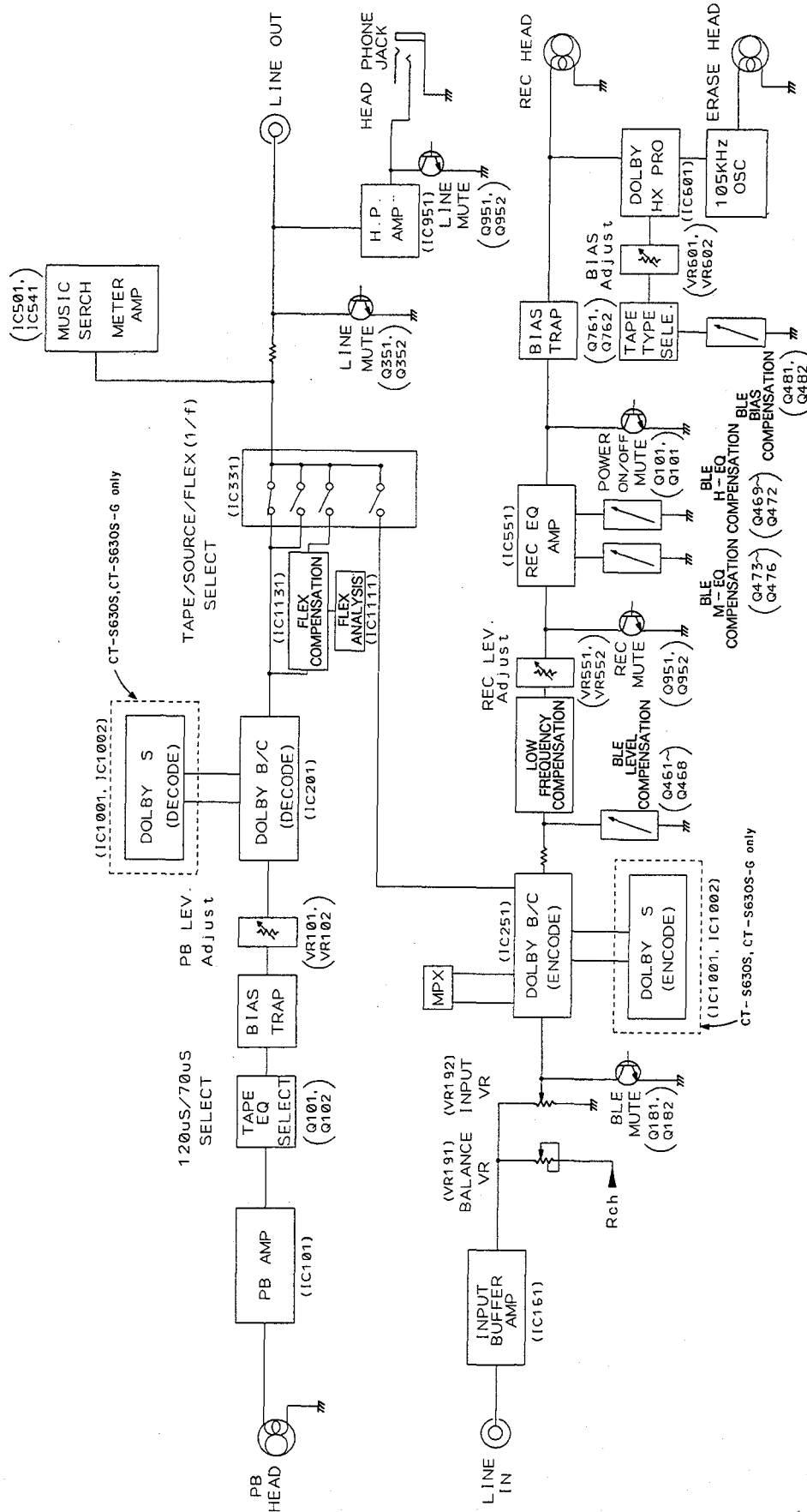
CONTENTS

CHAPTER2

2.1 BLOCK DIAGRAM	2-2
2.2 EXPLODED VIEWS AND PACKING	2-3
2.3 PCB CONNECTION DIAGRAM.....	2-7
2.4 SCHEMATIC DIAGRAM.....	2-15

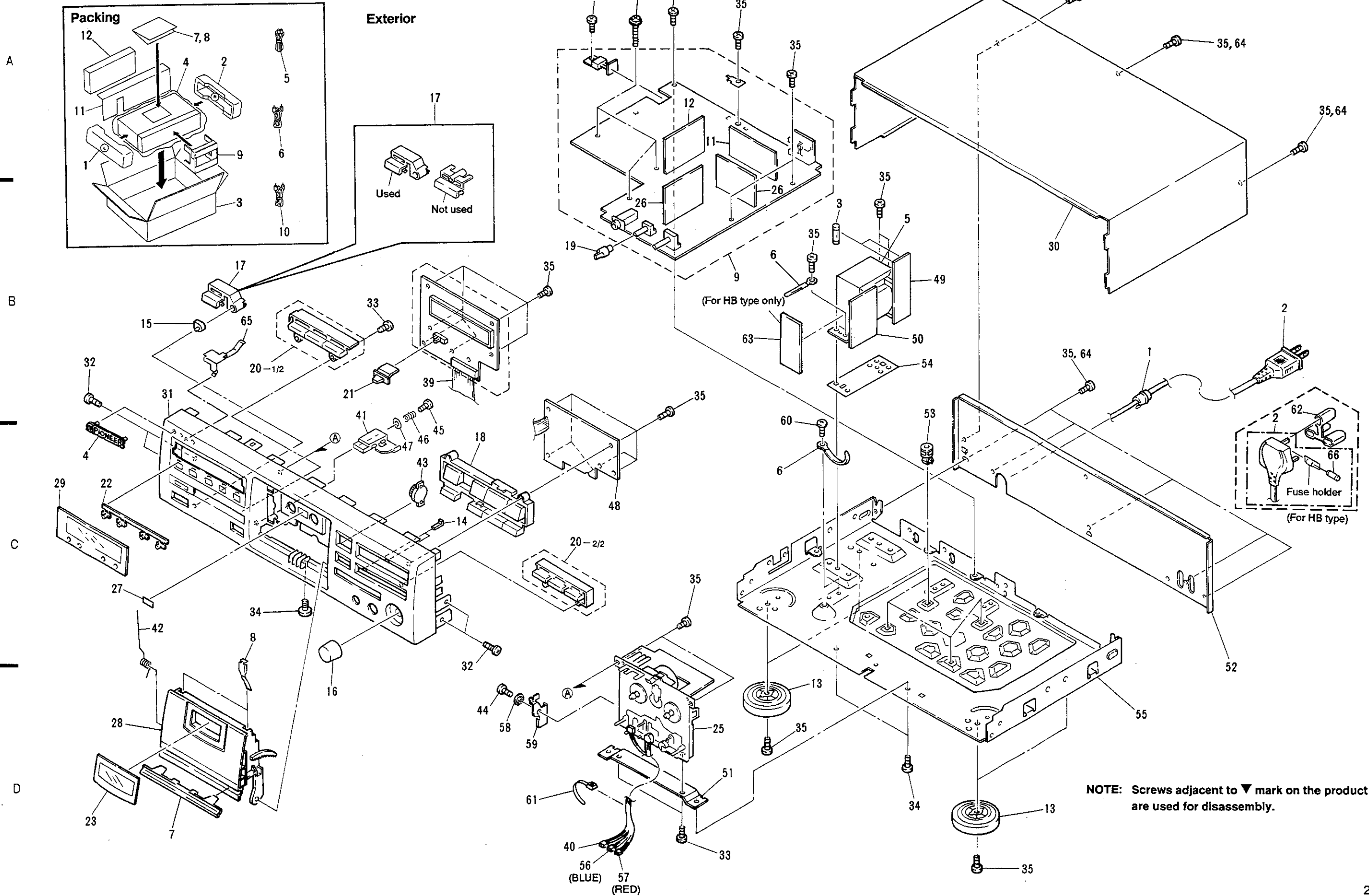
PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 300 Allstate Parkway Markham, Ontario L3R 0P2 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087 Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
© PIONEER ELECTRONIC CORPORATION 1994

2.1 BLOCK DIAGRAM

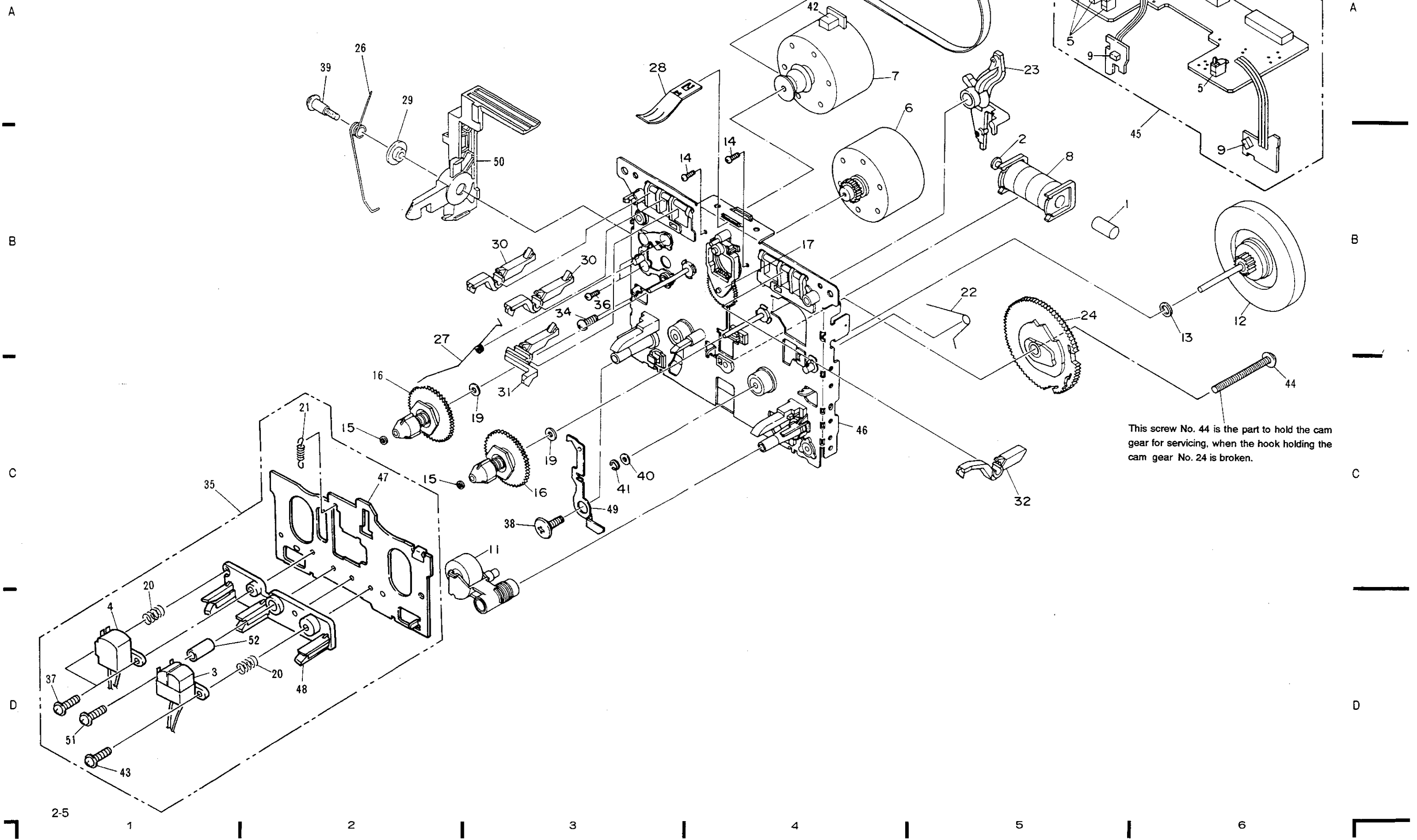


2.2 EXPLODED VIEWS AND PACKING

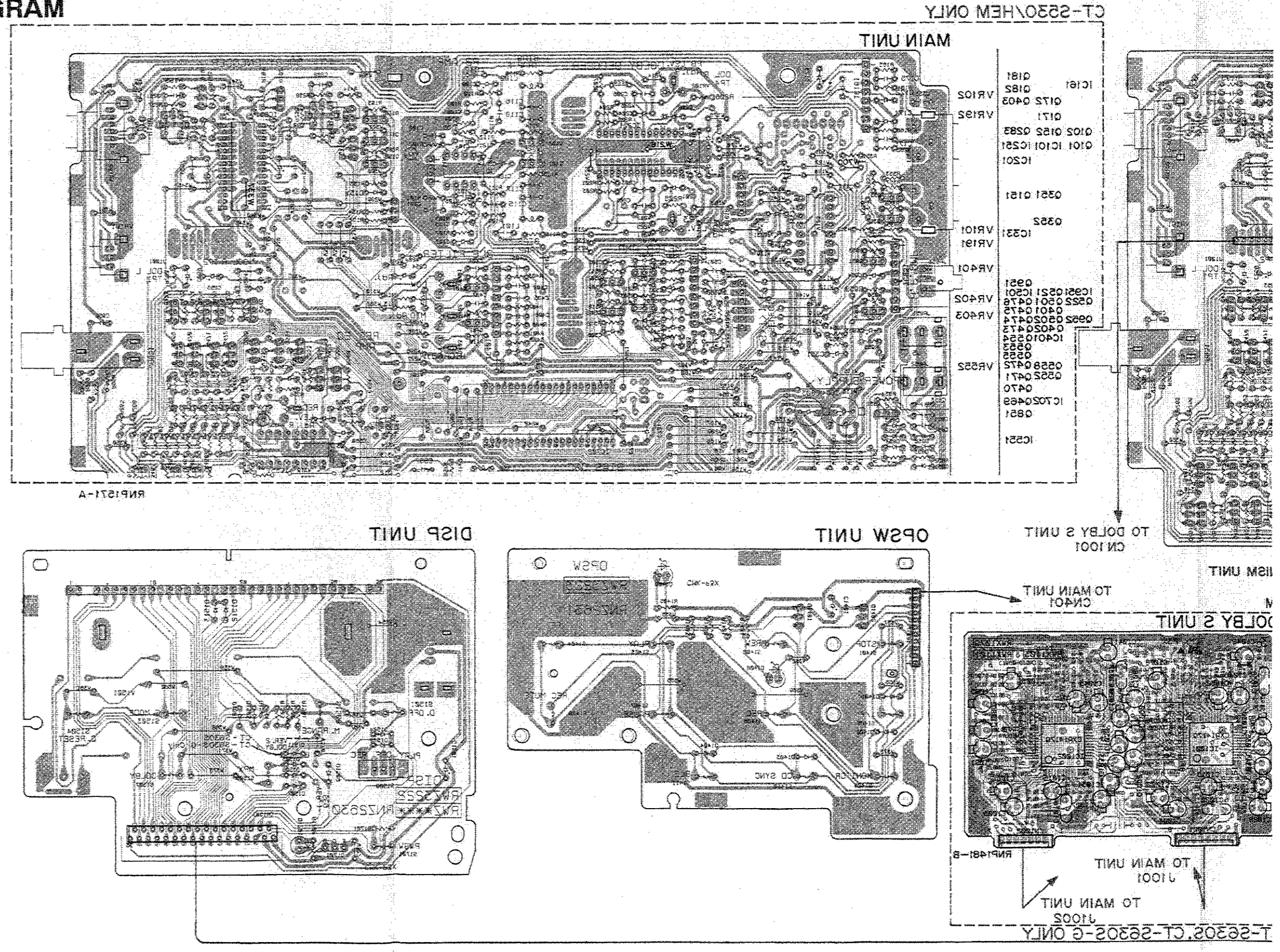
1. EXTERIOR AND PACKING



2. MECHANISM UNIT



2.3 PCB CONNECTION DIAGRAM



A

B

C

D

• This diagram is viewed from the mounted parts side.

A

Line Voltage Selection

- Line voltage can be changed by the following modification:
 1. Disconnect the AC power cord.
 2. Remove the Top cover.
 3. Change the connection of TRN 1 UNIT primary pins.

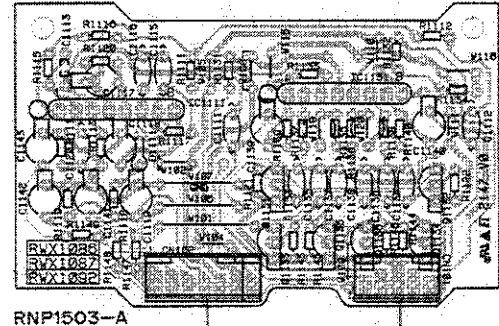
Voltage	Terminal No. of TRN 1 UNIT
220V-230V	J 12
230V-240V	J 13

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

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

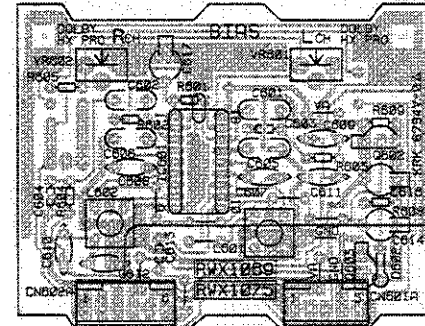
B

1/F UNIT



RNP1503-A

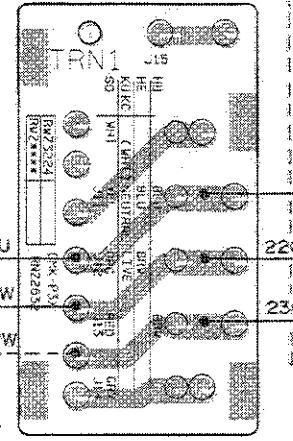
HX UNIT



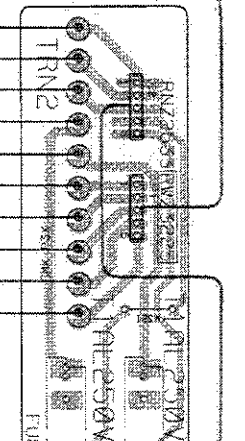
RNP1448-A

C

TRN 1 UNIT



TRN 2 UNIT



AC POWER CORD

BLU

BRW

BRW

HEM : AC 220 - 230V

50/60Hz

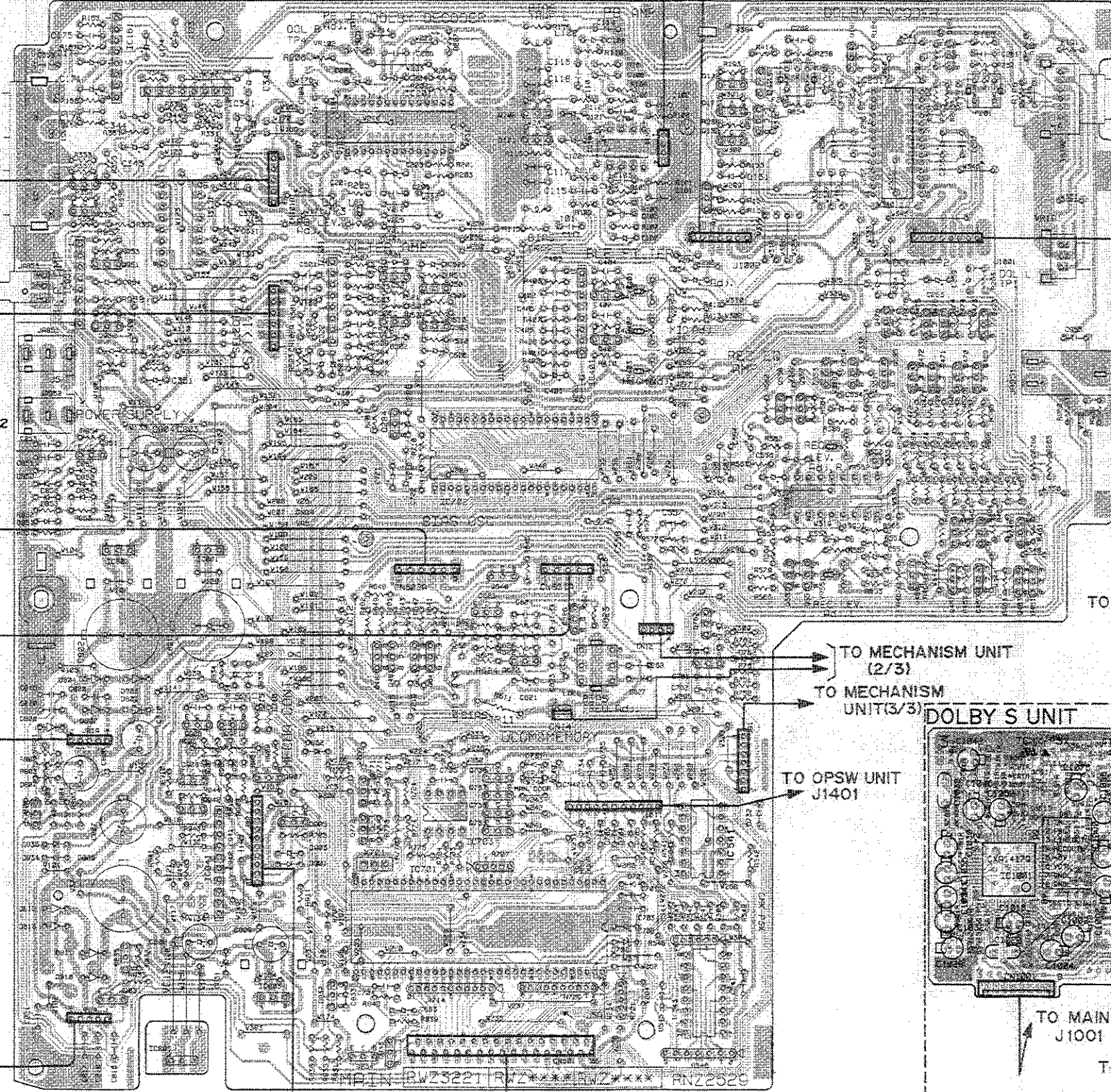
HB : AC 230 - 240V

50/60Hz

POWER TRANSFORMER

D

MAIN UNIT



TO MECHANISM UNIT (3/3)

TO MECHANISM UNIT (1/3)

TO DOLBY S UNIT CN1002

TO I/F UNIT CN101

TO I/F UNIT CN102

TO MAIN UNIT CN102A

TO MAIN UNIT CN101A

TO DOLBY S UNIT CN1001

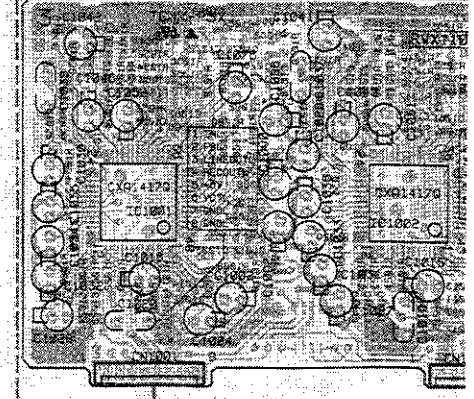
TO MECHANISM UNIT (2/3)

TO MECHANISM UNIT (3/3)

TO MAIN UNIT CN401

TO OPSW UNIT J1401

DOLBY S UNIT



TO MAIN UNIT J1001

TO MAIN UNIT J1002

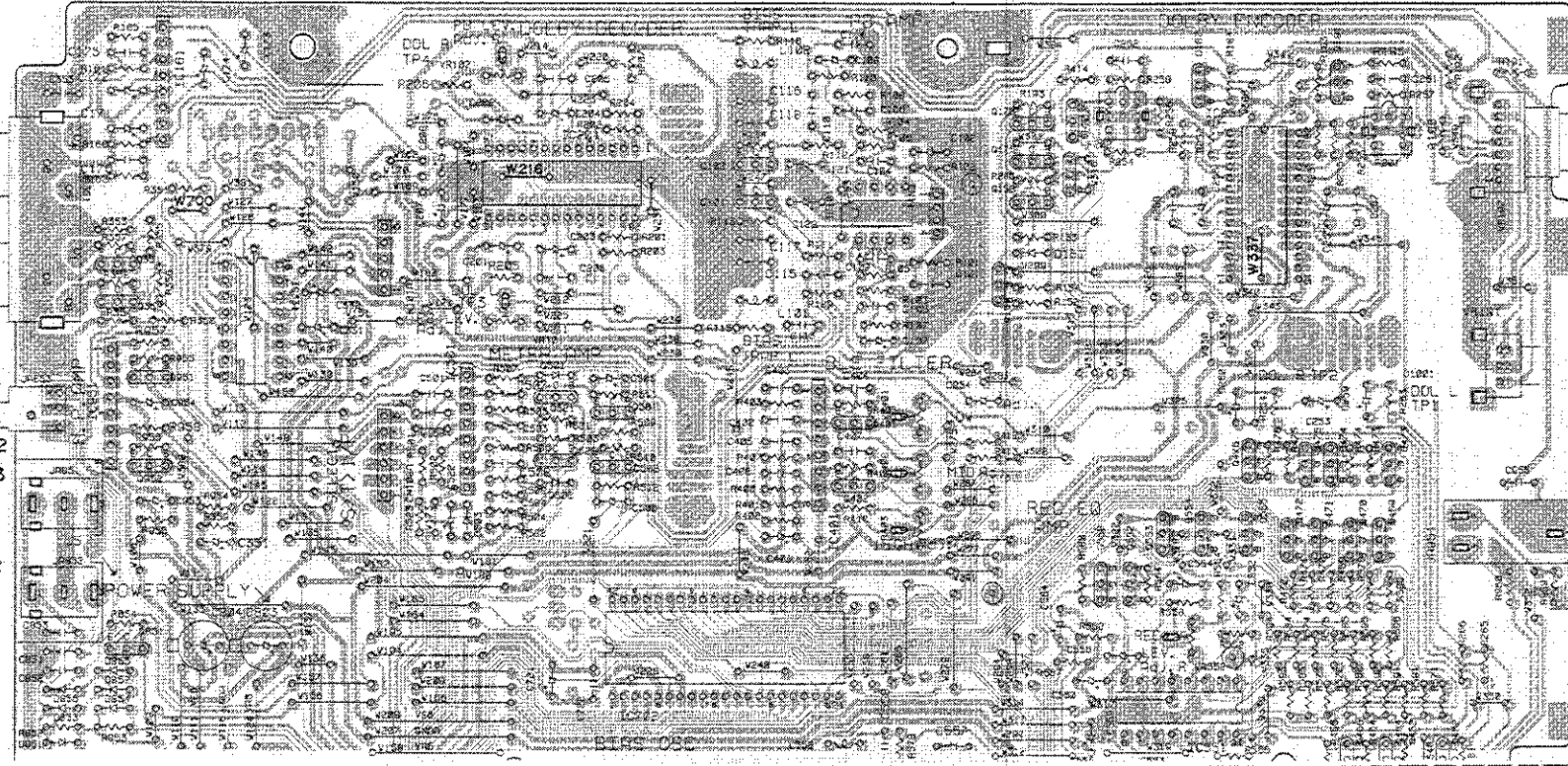
RNP 1564 - A

CT-S630S, CT-S630S-G ONLY

CT-S530/HEM ONLY

MAIN UNIT

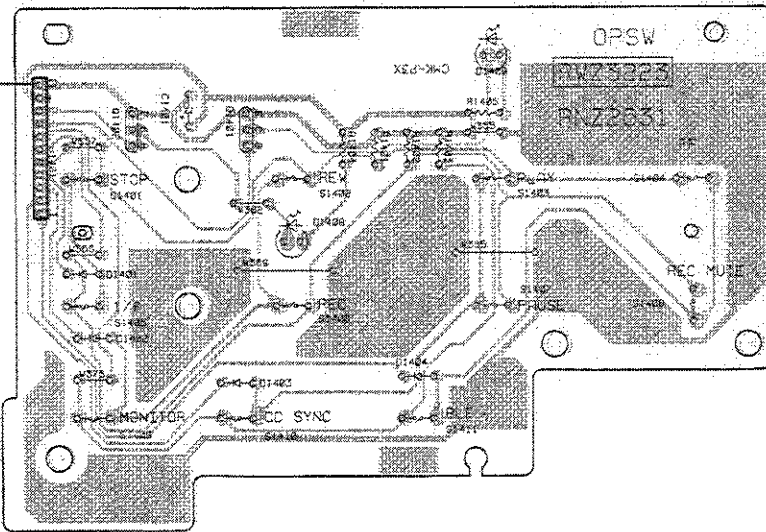
- IC161 Q181
- Q172 Q403
- Q171
- VR102
- VR192
- Q102 Q152 Q283
- Q101 IC101 IC251
- IC201
- Q351 Q151
- Q352
- IC331
- VR101
- VR191
- VR401
- VR402
- VR403
- VR552
- Q951
- IC951 Q521 IC501
- Q522 Q501 Q476
- Q401 Q475
- Q952 Q502 Q474
- Q402 Q473
- IC401 Q554
- Q553
- Q555
- Q558 Q472
- Q552 Q471
- Q470
- IC702 Q469
- Q851
- IC551



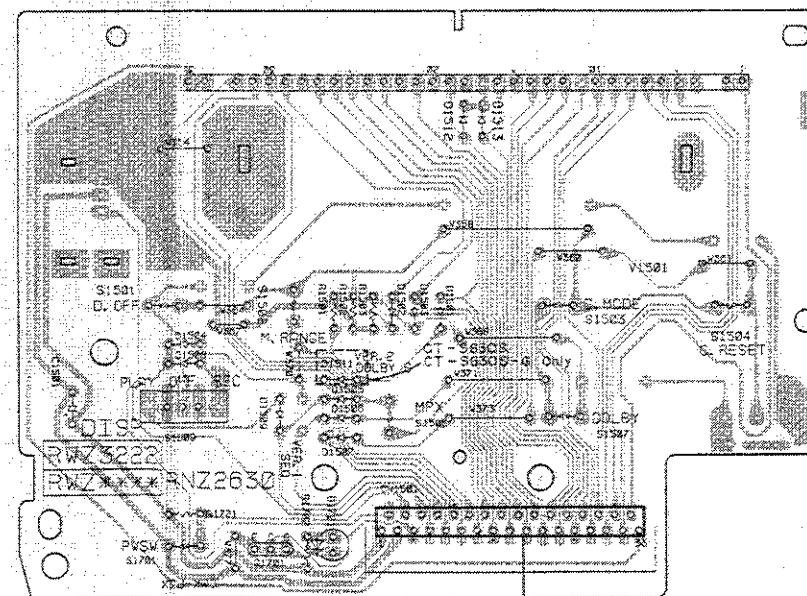
RNP1571-A

TO DOLBY S UNIT
CN1001

OPSW UNIT

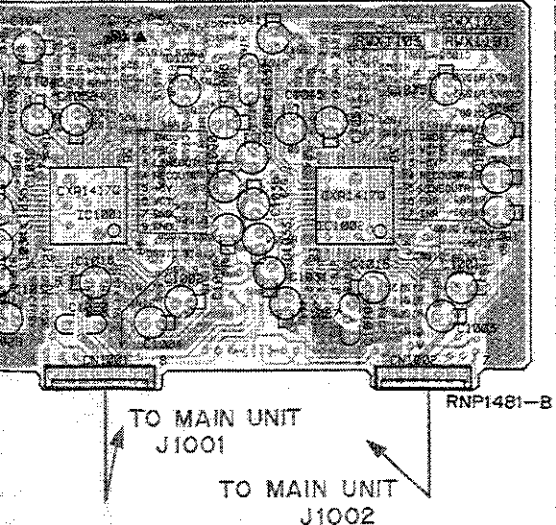


DISP UNIT



SM UNIT

DOLBY S UNIT



TO MAIN UNIT
J1001

TO MAIN UNIT
J1002

-S630S, CT-S630S-G ONLY

NOTE FOR PCB DIAGRAMS:

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

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

3. The transistor terminal marked with E or shows the emitter.
4. The diode terminal marked with or shows cathode side.
5. The capacitor terminal marked with or shows negative terminal.

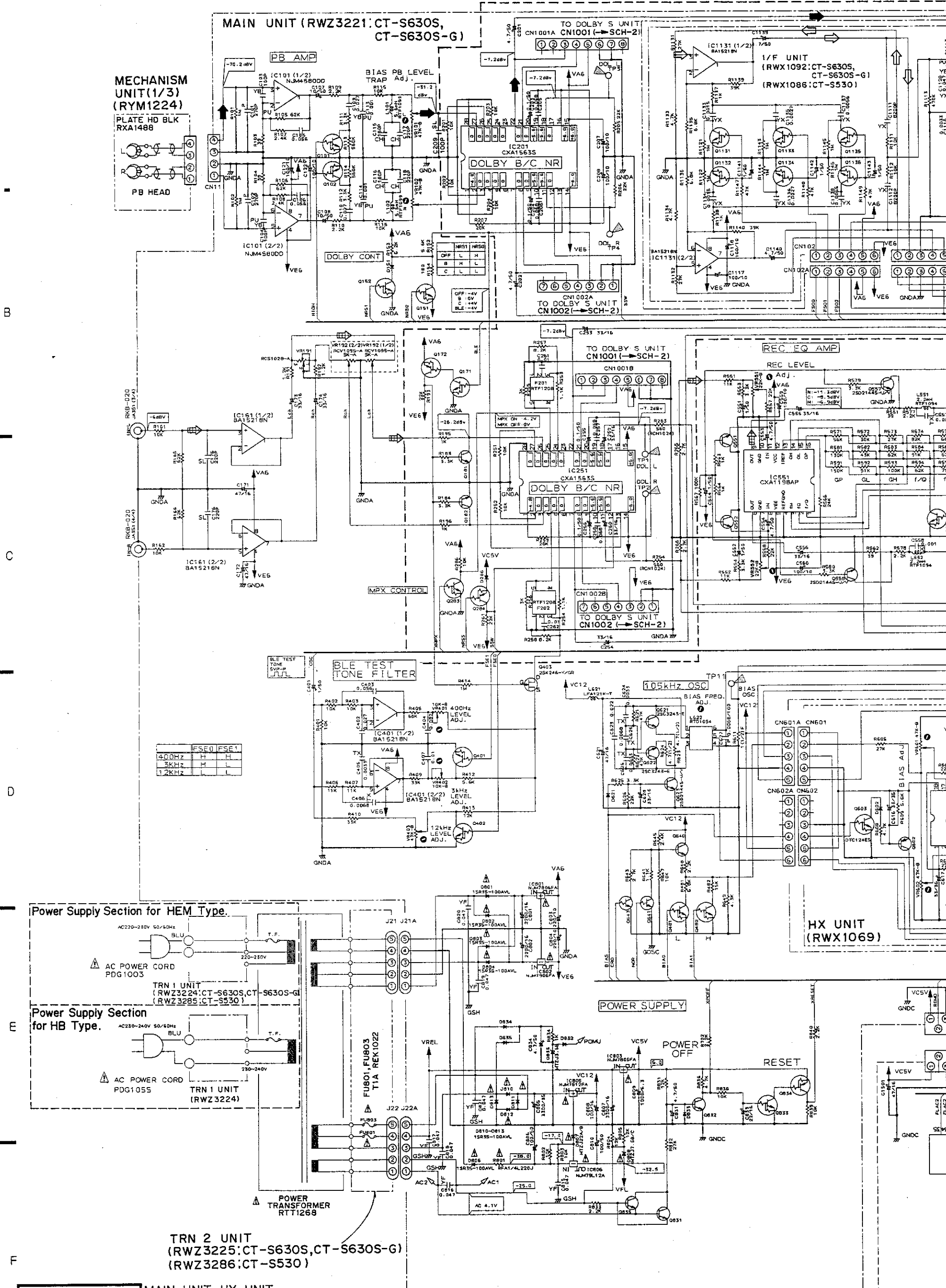
NOTE FOR PCB DIAGRAMS:

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

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

2.4 SCHEMATIC DIAGRAM

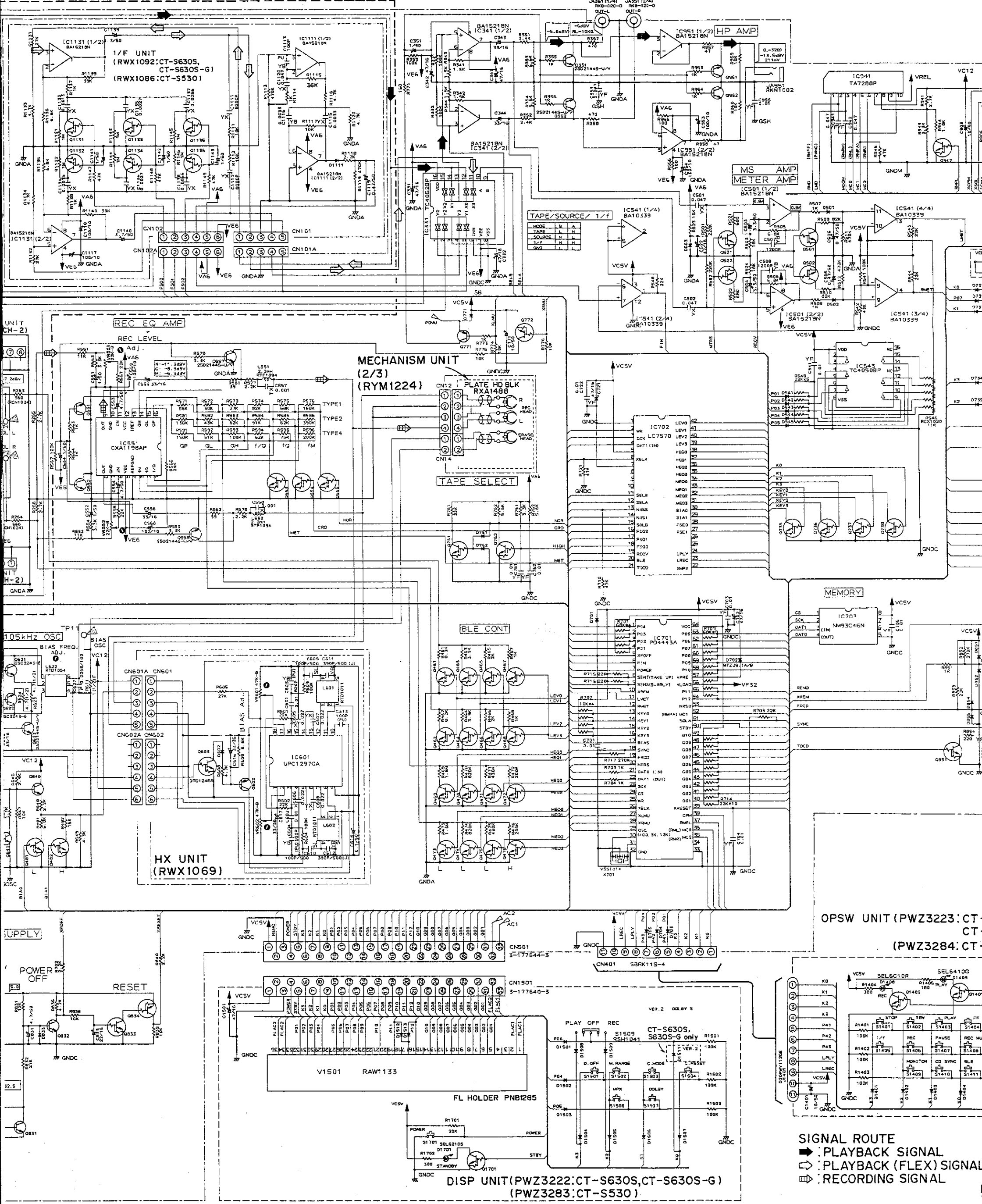
Refer to SCH-3 for the circuit diagram for this CT-S530 part.



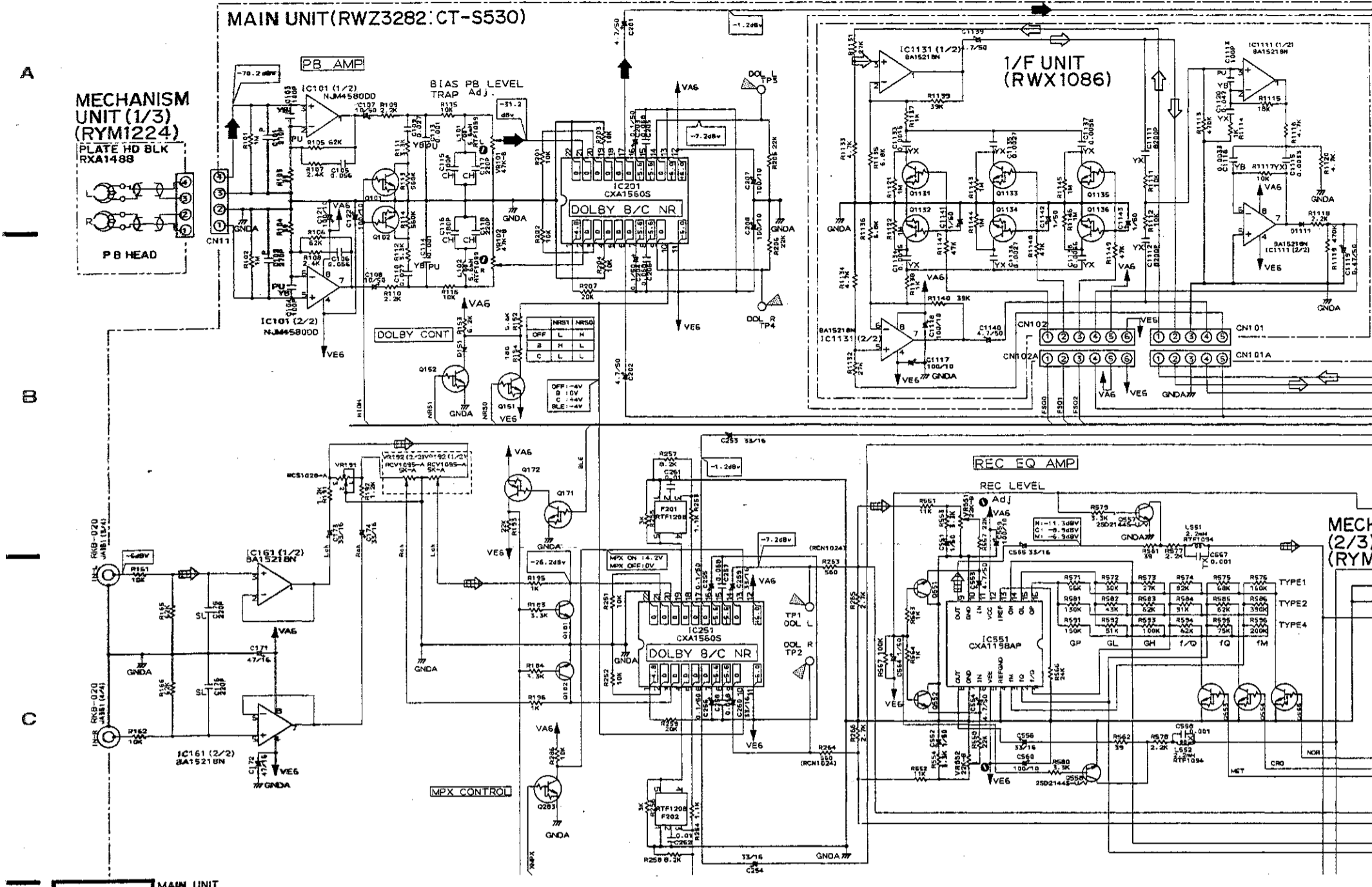
SCH-1

MAIN UNIT, HX UNIT,
I/F UNIT, DOLBY S UNIT,
DISP UNIT, OPSW UNIT,
TRN 1 UNIT, TRN 2 UNIT

unit diagram for this CT-S530 part.



Note: This circuit diagram shows the differences between CT-S630S and CT-S530. For other details, refer to the circuit diagram for CT-S630S.



SCH-3 MAIN UNIT

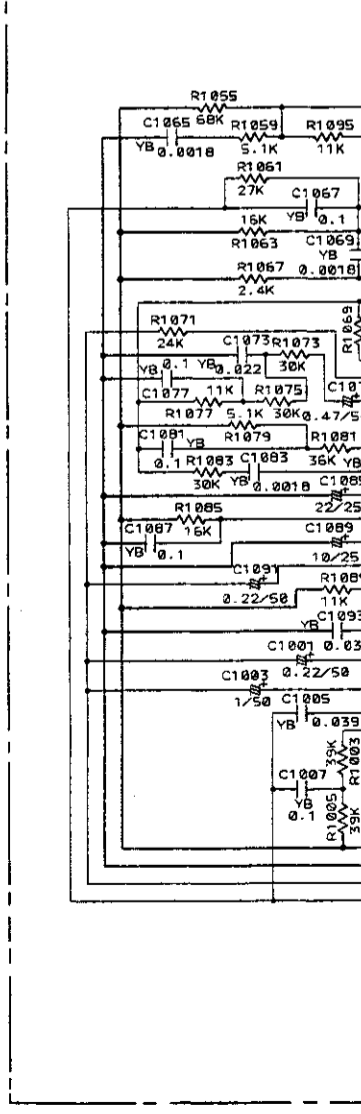
NOTE FOR SCHEMATIC DIAGRAMS (Type 6A)

- When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".
- Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.
- RESISTORS:**
Unit: k: kΩ, M: MΩ, or Ω unless otherwise noted.
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
- CAPACITORS:**
Unit: p: pF or μF unless otherwise noted.
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.
- COILS:**
Unit: m: mH or μH unless otherwise noted.
- VOLTAGE AND CURRENT:**
□ or - V : DC voltage (V) in STOP mode unless otherwise noted.
↪ mA or - mA : DC current in STOP mode unless otherwise noted.
- OTHERS:**
⊙ or ⊚ : Adjusting point.
◁ : Measurement point.
• The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
- SCH-□ ON THE SCHEMATIC DIAGRAM:**
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

9. SWITCHES (Underline indicates switch position):

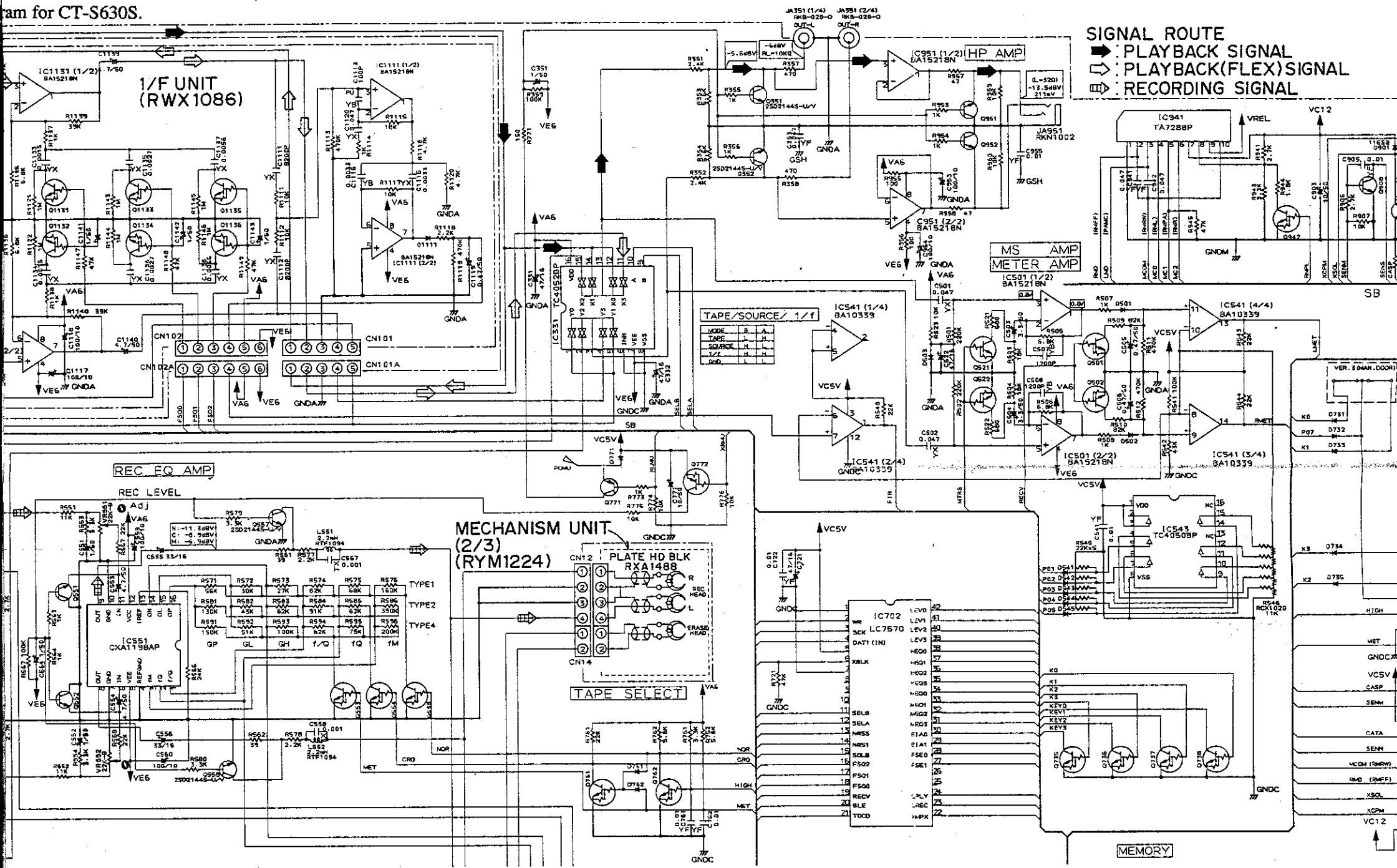
- OPSW UNIT**
- S1401 : STOP
 - S1402 : REW
 - S1403 : PLAY
 - S1404 : FF
 - S1405 : FLEX (1/f)
 - S1406 : REC
 - S1407 : PAUSE
 - S1408 : REC MUTE
 - S1409 : MONITOR
 - S1410 : CD SYNCHRO
 - S1411 : AUTO BLE
- DISP UNIT**
- S1501 : DISP OFF
 - S1502 : METER RANGE
 - S1503 : COUNTER MODE
 - S1504 : COUNTER RESET
 - S1506 : MPX FILTER
 - S1507 : DOLBY NR
 - S1509 : TIMER (REC - OFF - PLAY)
- S1701 : POWER

DOLBY S UNIT (RWX1086)



SCH-2 DOLBY S UNIT

Diagram shows the differences between S and CT-S530. For other details, refer to the schematic for CT-S630S.



switch position):

DOLBY S UNIT (RWX1101)
(CT-S630S, CT-S630S-G Only)

