PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
ARP2483

STEREO CASSETTE DECK

CT-S710 HEM
CT-S710-G HEM

- **Refer to the service manual ARP2482 for CT–S910.**
- **This manual is applicable to CT–S710/HEM and CT–S710–G/HEM.**

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SN APR. 1992 Printed in Japan

CONTRAST OF MISCELLANEOUS PARTS

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.

CT–S710/HEM, CT–S710–G/HEM and CT–S910/HEM have the same construction except for the following:

Mark	Symbol & Description	Part No.			Remarks
		CT–S910/ HEM type	CT–S710/ HEM type	CT–S710–G/ HEM type	
	CONTROL unit	Non supply	Non supply	Non supply	
	BALANCE VR unit	Non supply	Non supply	Non supply	
	FL unit	Non supply	Non supply	Non supply	
	FUNCTION unit	Non supply	Non supply	Non supply	
	BIAS unit	Non supply	Non supply	Non supply	
	HEADPHONE unit	Non supply	Non supply	Non supply	
	VR unit	.....	Non supply	Non supply	
	MAIN unit	Non supply	Non supply	Non supply	
⊙	Mechanism unit	RYM1152	RYM1161	RYM1161	
⚠	AC power cord	ADG1036	PDG1003	PDG1003	
⚠	Power transformer	RTT1201	RTT1202	RTT1202	
	VR ring	RAT1011	RAT1011	RAT1010	
	VR knob	.....	RAC1707	RAC1708	
	FL lens	RAH2019	RAH2032	RAH2032	
	Function knob	RAC1704	RAC1706	RAC1711	
	Slide SW knob	RAC1562	RAC1562	RAC1540	
	Balance knob	RAC1705	RAC1705	RAC1662	
	Power button	RAC1703	RAC1703	RAC1657	
	Packing case	RHG1356	RHG1357	RHG1358	
	Panel stay	RNT1139	RNT1140	RNT1141	
	Washer	ABE1009	.....	.....	
	Washer	RBF1019	.....	.....	
	Cord with mini plug	.....	PDE–319	PDE–319	
	VR knob assembly	RXA1472	.....	.....	
	Bonnet	RXX1505	RXX1516	RXX1506	
	Door assembly	RXX1514	.....	.....	
	Front panel assembly	RXX1510	RXX1511	RXX1512	

MECHANISM Unit

Mechanism Unit RYM1161 and RYM1152 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		RYM1152	RYM1161	
	Screw	RBA1074	RBA–064	
	Spring	RBH1226	.....	
	Belt	REB–501	REB1143	
	Insulator	REB1099	.....	
	Rubber cushion	.....	REB1125	
	Motor bracket	RNK1497	.....	
	Capstan motor assembly	RXM1016	RXX1491	
	Capstan motor	.....	RXM1054	
	Head base assembly	RXX1443	RXX1523	

CONTRAST OF MISCELLANEOUS PARTS

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	HEADPHONE unit	Non supply	Non supply	Non supply	
	VR unit	.....	Non supply	Non supply	
	MAIN unit	Non supply	Non supply	Non supply	
⊙	Mechanism unit	RYM1152	RYM1161	RYM1161	
⚠	AC power cord	ADG1036	PDG1003	PDG1003	
⚠	Power transformer	RTT1201	RTT1202	RTT1202	
	VR ring	RAT1011	RAT1011	RAT1010	
	VR knob	.....	RAC1707	RAC1708	
	FL lens	RAH2019	RAH2032	RAH2032	
	Function knob	RAC1704	RAC1706	RAC1711	
	Slide SW knob	RAC1562	RAC1562	RAC1540	
	Balance knob	RAC1705	RAC1705	RAC1662	
	Power button	RAC1703	RAC1703	RAC1657	
	Packing case	RHG1356	RHG1357	RHG1358	
	Panel stay	RNT1139	RNT1140	RNT1141	
	Washer	ABE1009	.....	.....	
	Washer	RBF1019	.....	.....	
	Cord with mini plug	.....	PDE–319	PDE–319	
	VR knob assembly	RXA1472	.....	.....	
	Bonnet	RXX1505	RXX1516	RXX1506	
	Door assembly	RXX1514	.....	.....	
	Front panel assembly	RXX1510	RXX1511	RXX1512	

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	Rubber cushion	.....	REB1125	
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	Capstan motor assembly	RXM1016	RXX1491	
	Capstan motor	.....	RXM1054	
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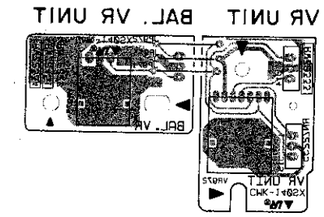
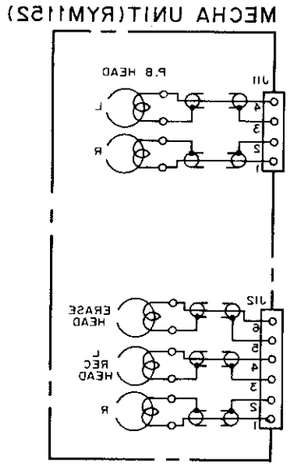
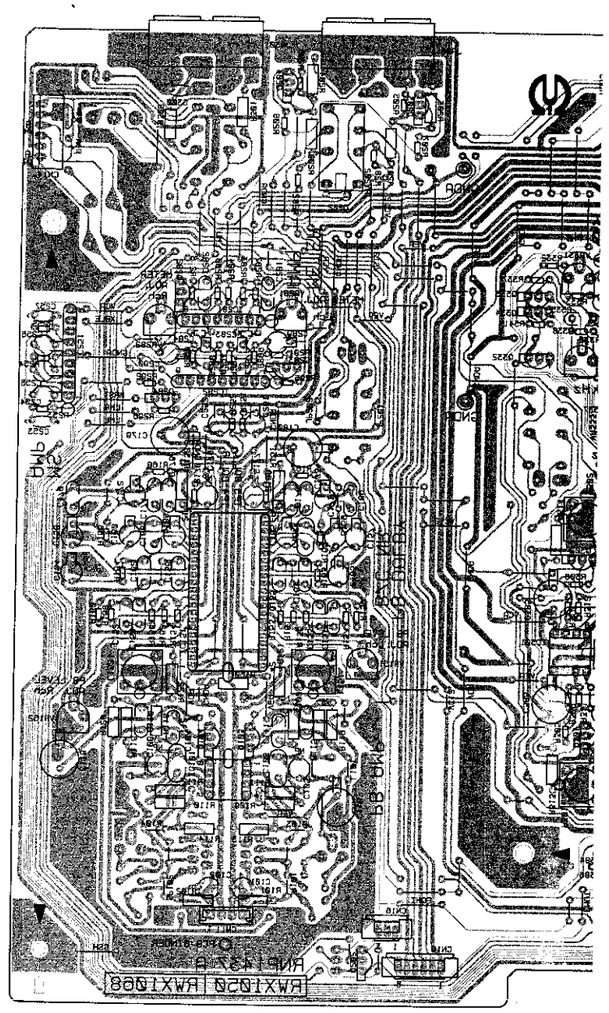
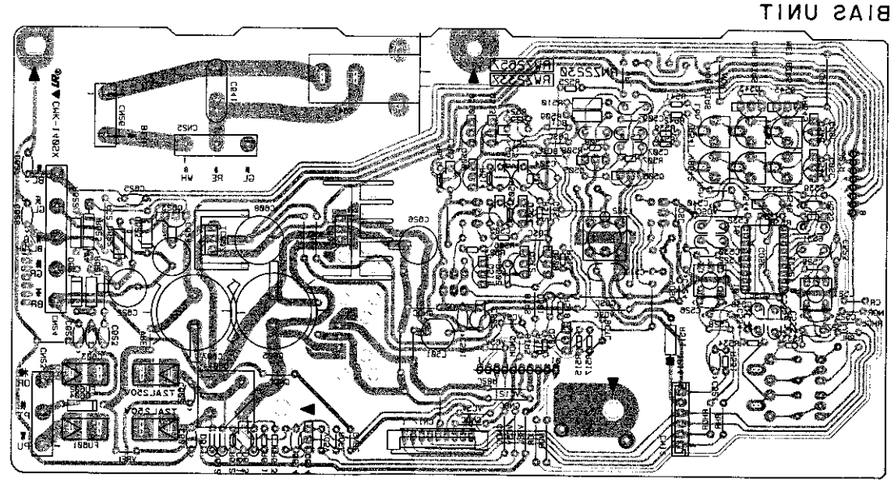
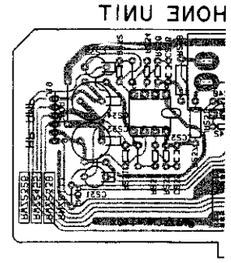
● PCB CONNECTIONS DIAGRAM

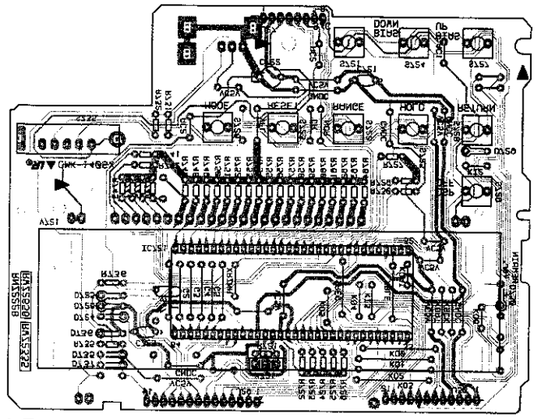




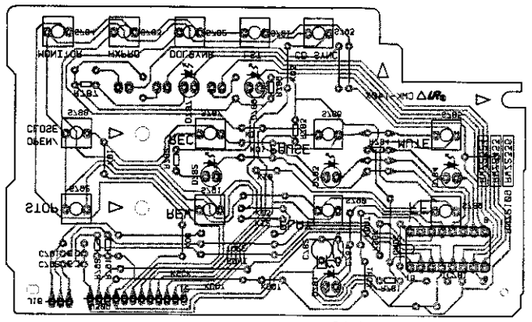




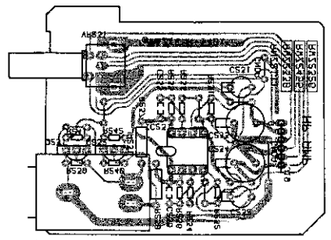




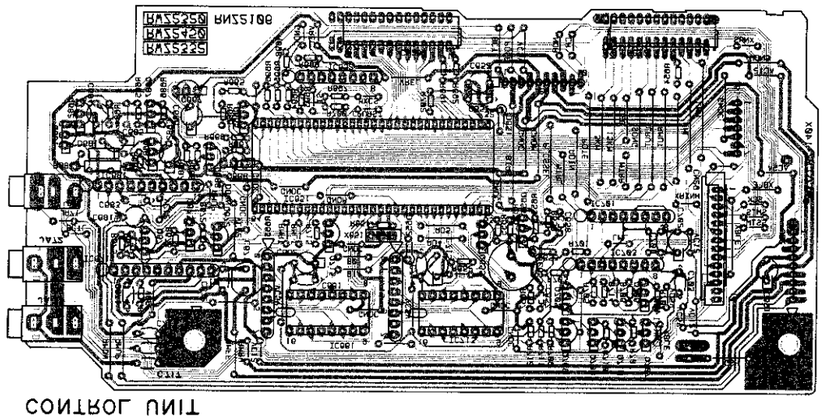
EL UNIT



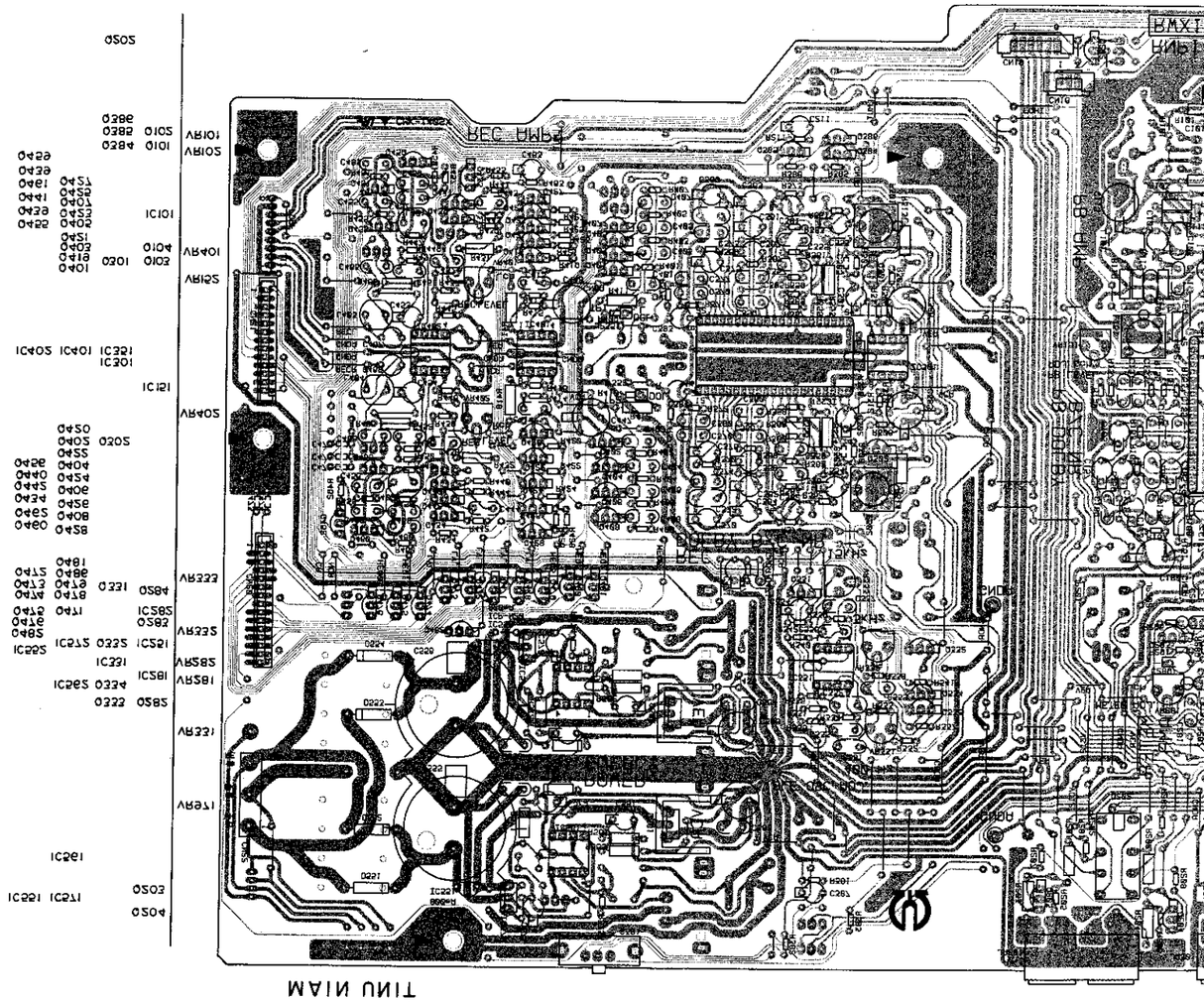
OPERATION UNIT



HEADPHONE UNIT



CONTROL UNIT



MAIN UNIT

CT-S710, CT-S710-G

• View from soldering side

• **View from component side**

1 2 3 4 5 6 7

A

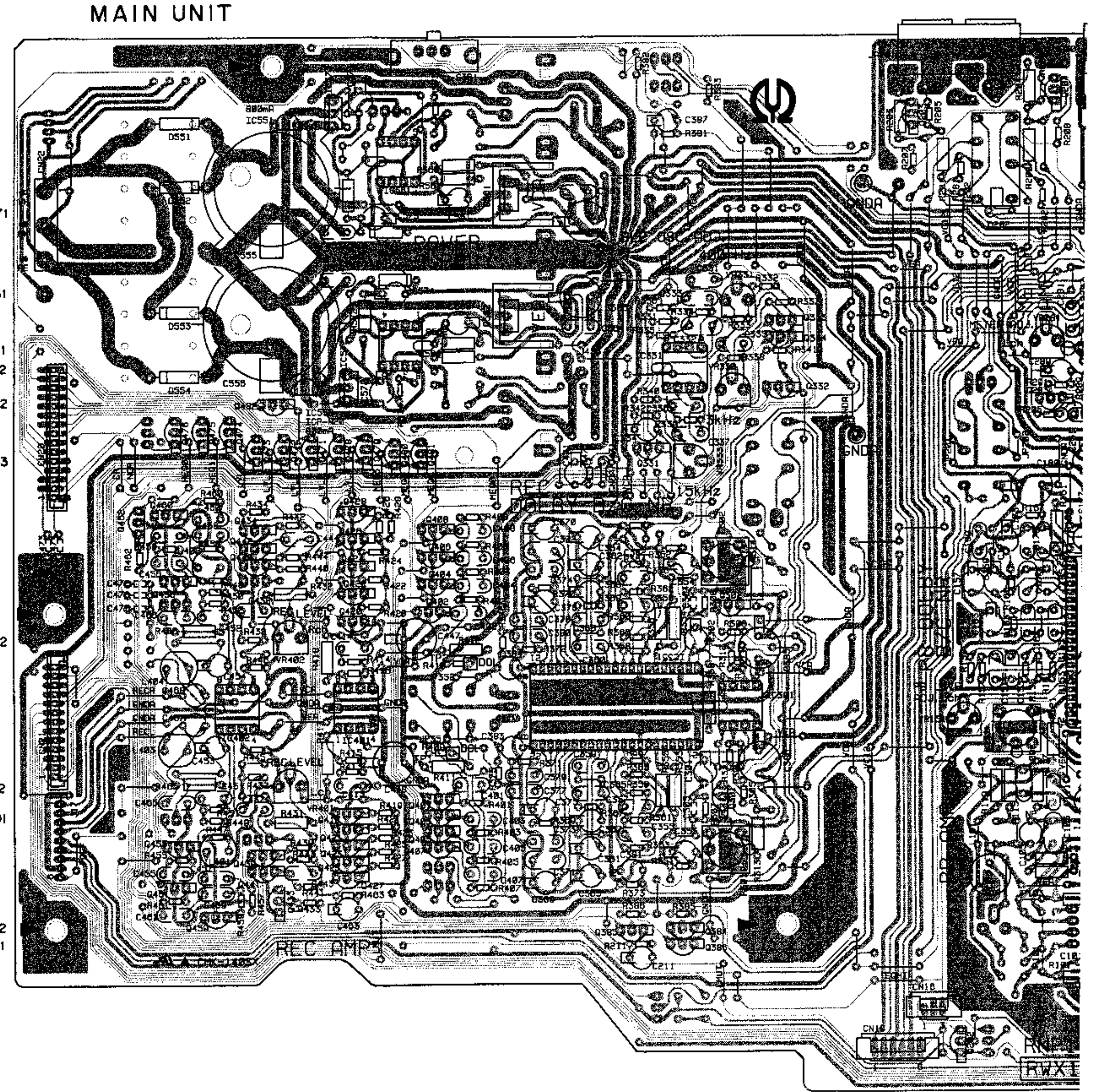
B

C

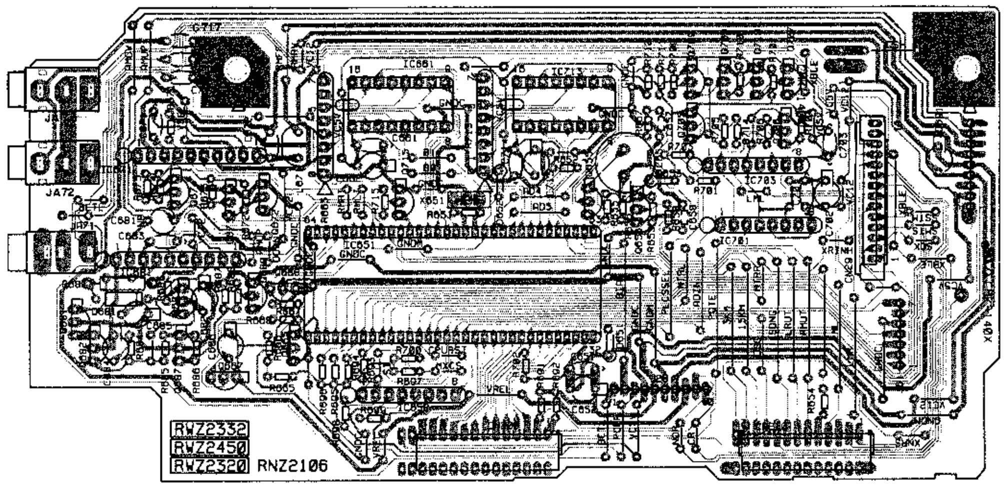
D

MAIN UNIT

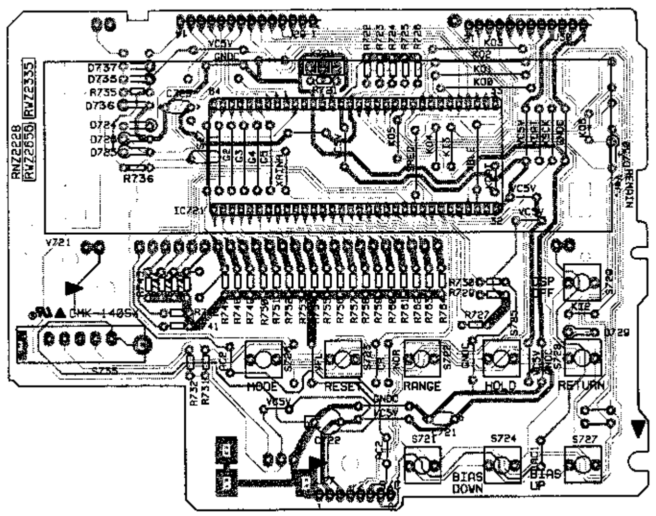
IC551 IC571 Q204
Q203
IC561
VR971
VR331
Q333 Q282
IC562 Q334 IC281 VR281
IC331 VR282
IC552 IC572 Q332 IC251
Q482 VR332
Q476 Q283
Q475 Q471 IC282
Q474 Q478 Q331 Q284
Q473 Q479 VR333
Q472 Q486
Q481
Q460 Q428
Q462 Q408
Q434 Q426
Q442 Q406
Q440 Q424
Q456 Q404
Q422
Q402 Q302
Q420
VR402
IC151
IC301
IC402 IC401 IC351
VR152
Q401 Q301 Q103
Q419 Q104 VR401
Q403
Q421
Q455 Q405
Q439 Q423 IC101
Q441 Q407
Q461 Q425
Q439 Q427
Q459
Q384 Q101 VR102
Q385 Q102 VR101
Q386
Q202



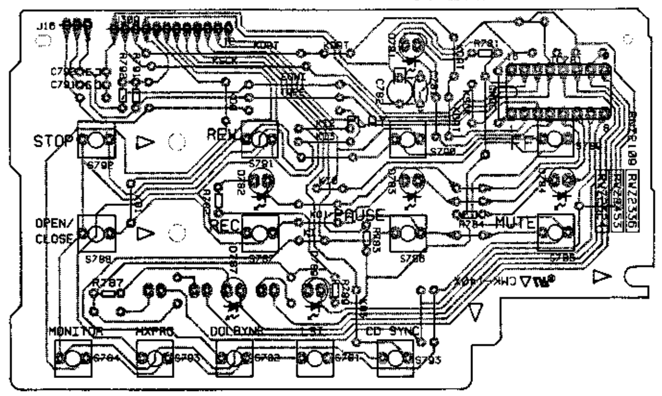
CONTROL UNIT



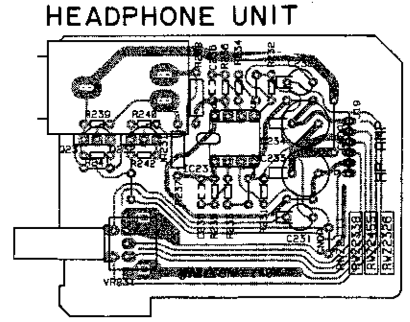
FL UNIT

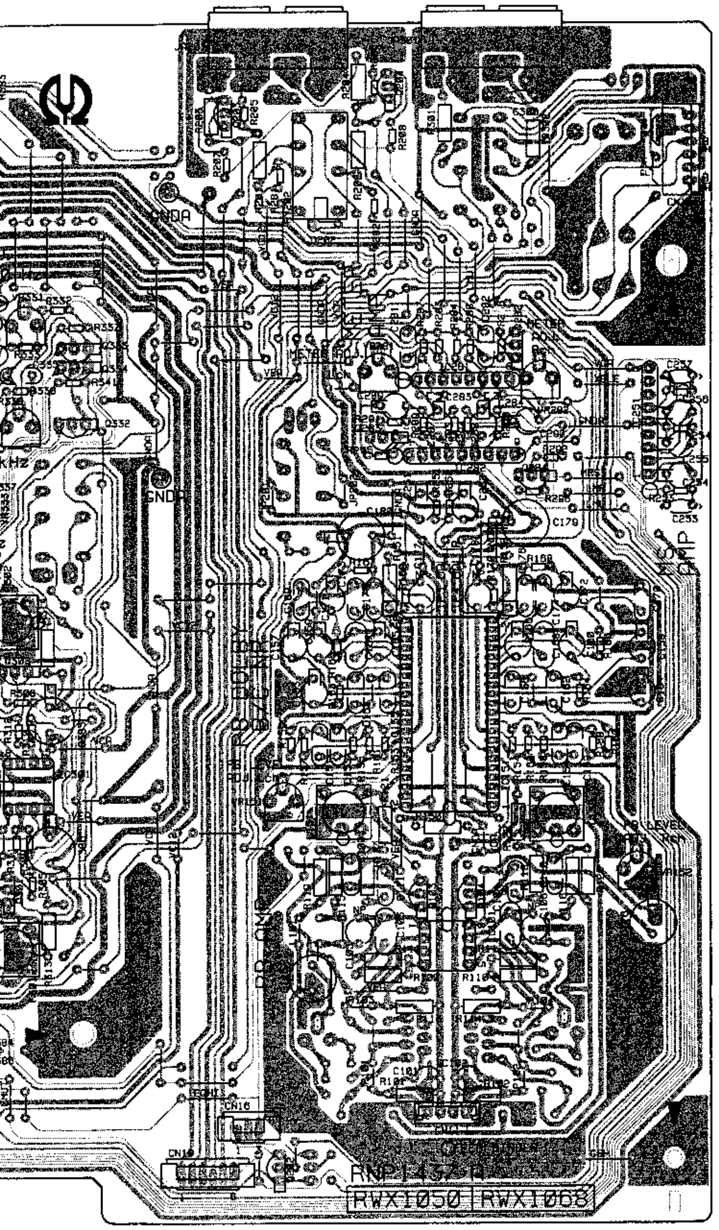


OPERATION UNIT

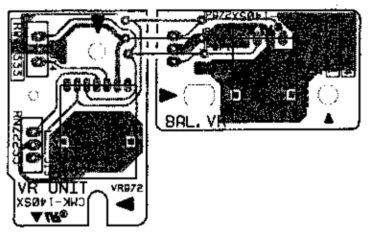


HEADPHONE UNIT

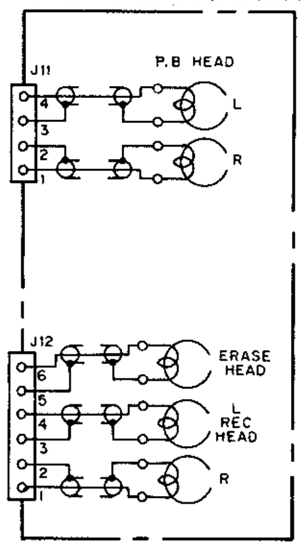




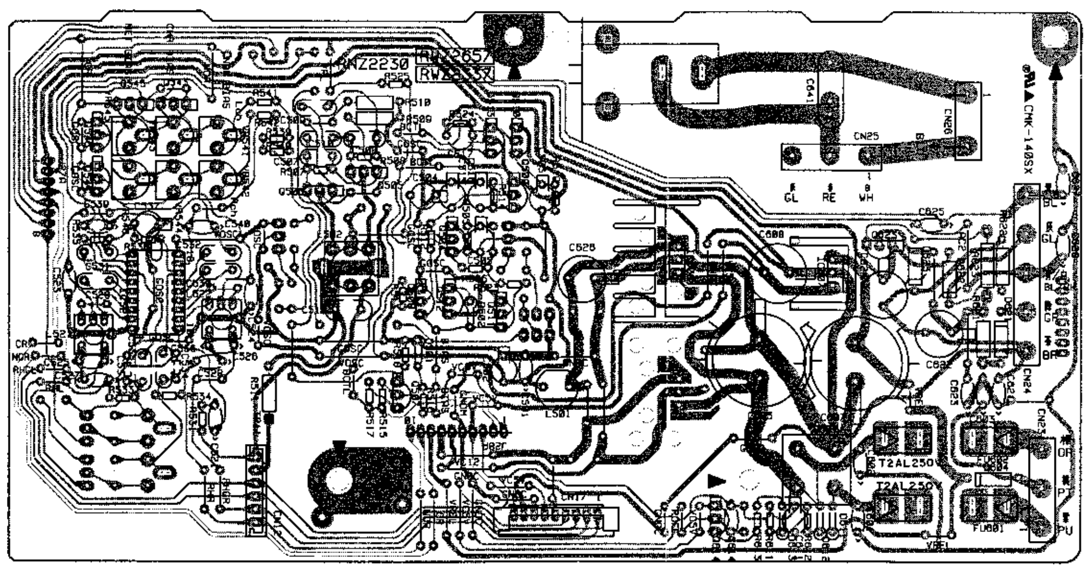
VR UNIT BAL. VR UNIT



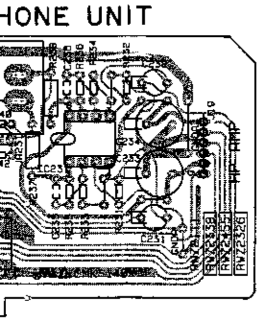
MECHA UNIT(RYM1152)



BIAS UNIT



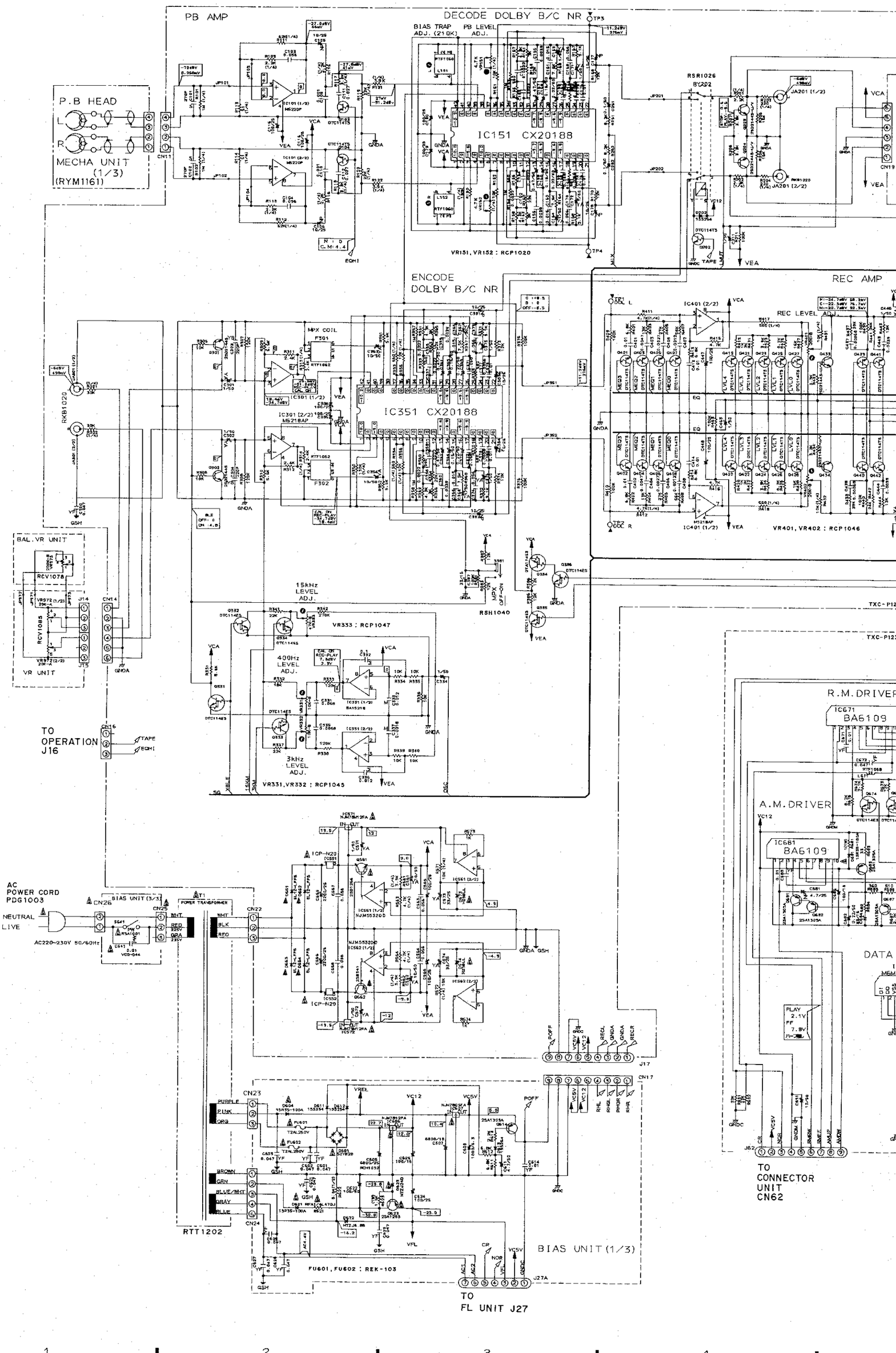
HONE UNIT



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 ▭ shows negative terminal.
4. The diode marked with O shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

● SCHEMATIC DIAGRAMS



MAIN UNIT

M.S.

METER AMP

HEADPHONE UNIT

REC AMP

REC LEVEL

BIAS OSC.

BIAS FREQ ADJ. (105kHz)

HX PRO

BIAS UNIT (2/3)

CONTROL UNIT

R.M.DRIVER

A.M.DRIVER

DATA MEMORY

BIAS CONTROL

MAIN C.P.U.

IC651 PD4359A

IC652 MSM80011AL

IC671 BA6109

IC681 BA6109

IC661 TC4050BP or CD4050B

IC713 TC4050BP or CD4050B

UPC1297CA

METER LEVEL ADJ.

VR281, VR282 : RCP1046

VR401, VR402 : RCP1046

TO CONNECTOR UNIT CN62

TO CONNECTOR UNIT CN61

TO FL UNIT J29

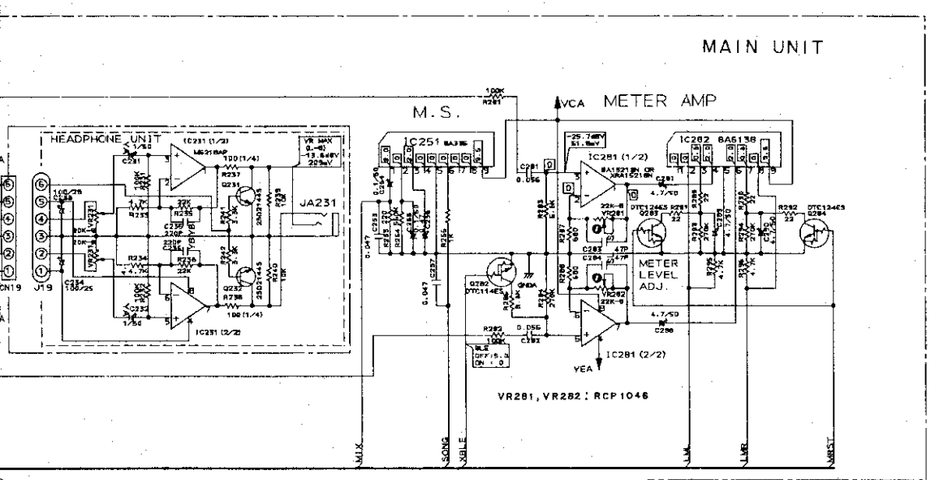
1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W, 1/8W, ± otherwise noted k;kΩ, M;MΩ, (F) ; ±1%, ((M) ; ± 20 % tolerance.

2. CAPACITORS :
Indicated in capacity (μF) /voltage (V) u p ; pF. Indication without voltage is 50 capacitor.

3. VOLTAGE CURRENT :
; DC voltage (V) at no input signal.
mA ; DC current at no input signal.

4. OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point.
The ⚠ mark found on some component importance of the safety factor of the replacing, be sure to use parts of identical
※ marked capacitors and resistors have pa

This is the basic schematic diagram, but t vary due to improvements in design.



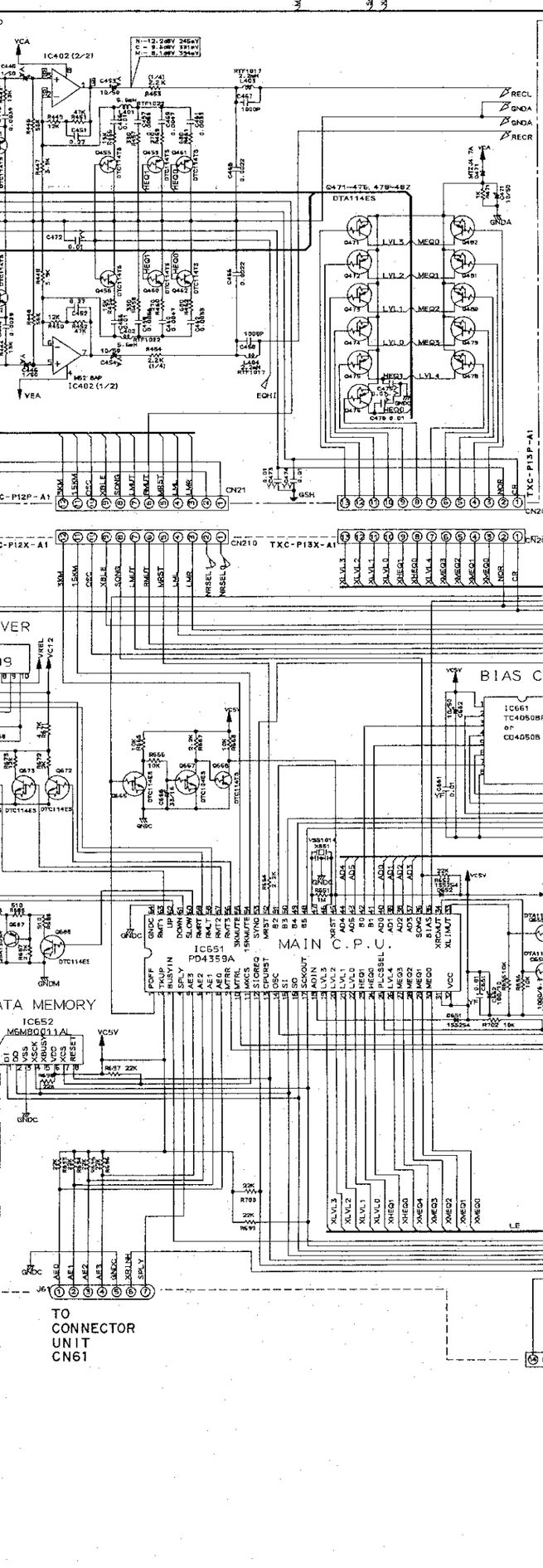
1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W, 1/8W, ±5% tolerance unless otherwise noted k;kΩ, M;MΩ, (F);±1%, (G);±2%, (K);±10%, (M);±20% tolerance.

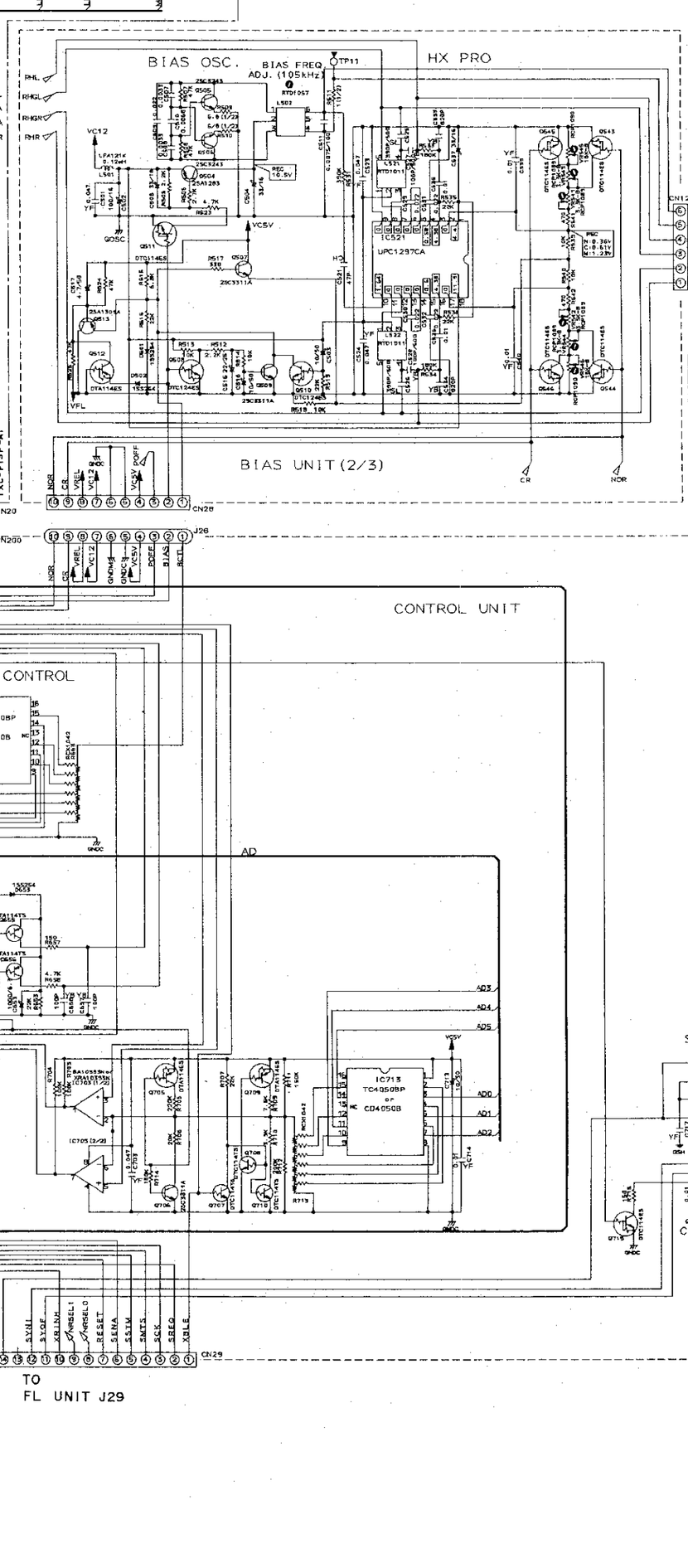
2. CAPACITORS :
Indicated in capacity (μF)/voltage (V) unless otherwise noted p; pF. Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
; DC voltage (V) at no input signal.
mA ; DC current at no input signal.

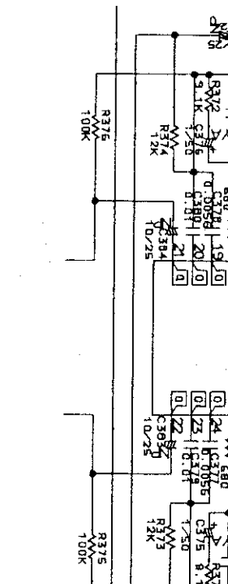
4. OTHERS :
➡ ; Signal route.
; Adjusting point.
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.

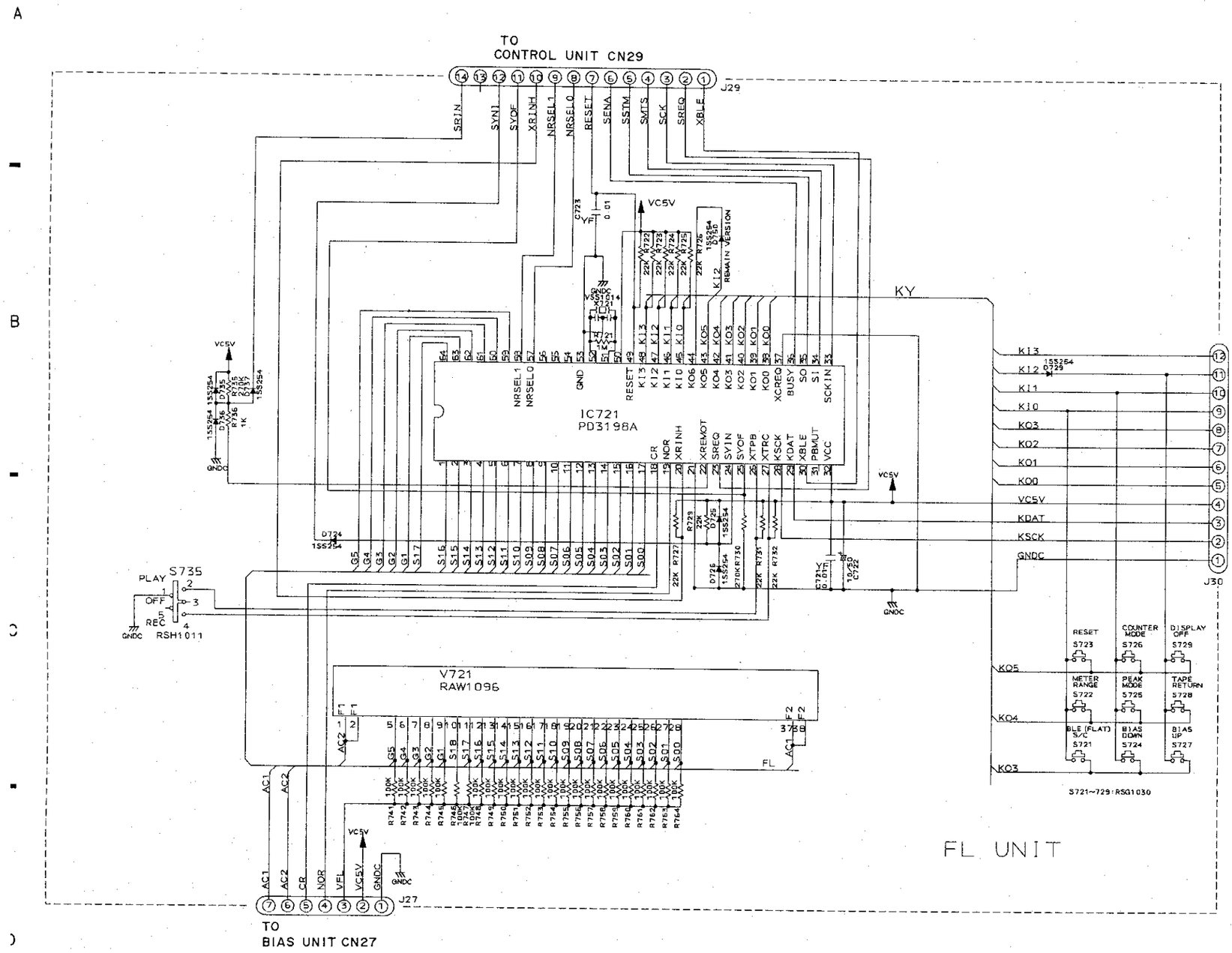
This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

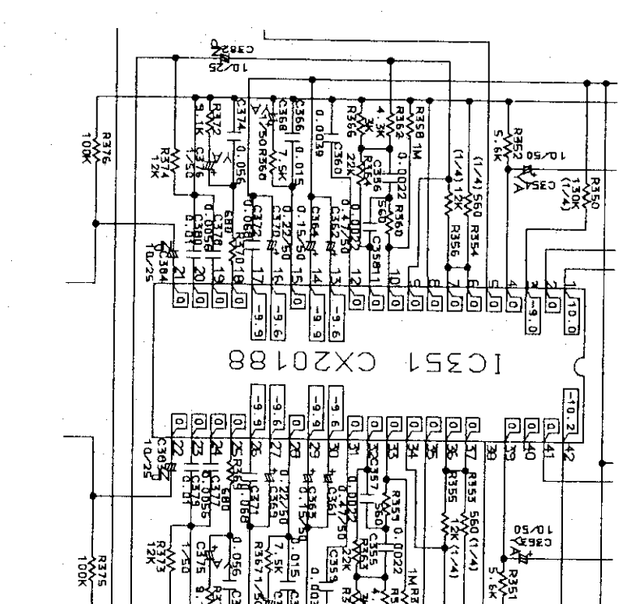




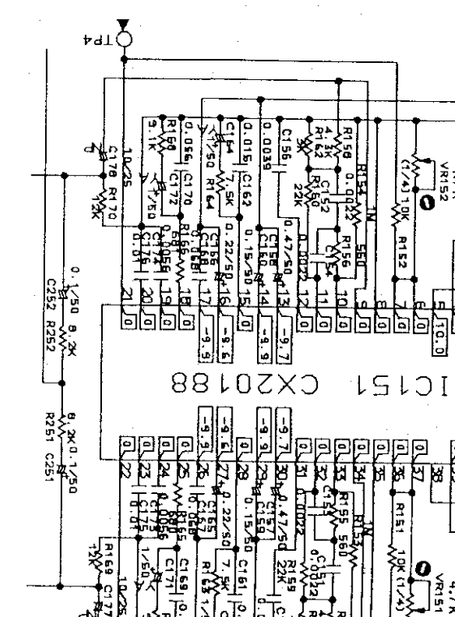
	Lch	Rch
TYPE I	VR541	VR542
TYPE II	VR543	VR544
TYPE IV	VR545	VR546



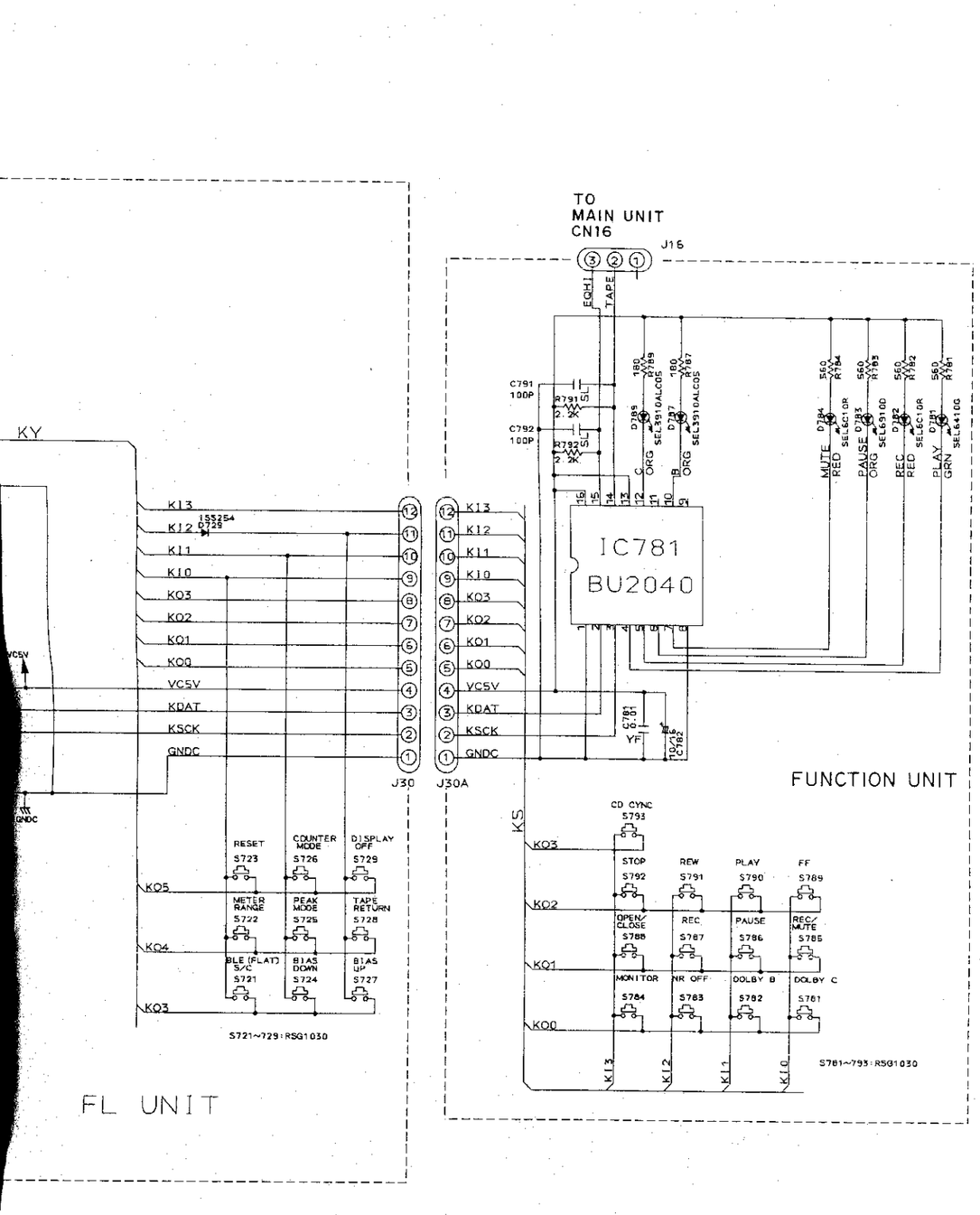

TO
CONTROL UNIT CN29
J29
SRIN
SYNI
SYOF
XRINH
NRSEL1
NRSEL0
RESET
SENA
SSTM
SMTS
SCK
SREQ
XBLE
VC5V
KY
IC721
PD3198A
V721
RAW1096
PLAY
S735
OFF
REC
RSH1011
RESET
S723
COUNTER MODE
S726
DISPLAY OFF
S729
METER RANGE
S722
PEAK MODE
S725
TAPE RETURN
S728
BLE (FLAT) S/C
S721
BIAS DOWN
S724
BIAS UP
S727
S721~729:RSG1030
J30
J30A
FL UNIT
TO
BIAS UNIT CN27
J27



IC351 ENCODE DOLBY B/C NR



B/C NR



• PCB PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
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- The ⚠ mark found on some component parts indicates the importance of th to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as sh

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560

560 Ω → 56 × 10¹ → 561 .....
47k Ω → 47 × 10³ → 473 .....
0.5 Ω → 0R5 .....
1 Ω → 010 .....

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

5.62k Ω → 562 × 10¹ → 5621 .....

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

CONTROL UNIT
BALANCE VR UNIT
FL UNIT
FUNCTION UNIT
BIAS UNIT
HEADPHONE UNIT
MAIN UNIT
VR UNIT

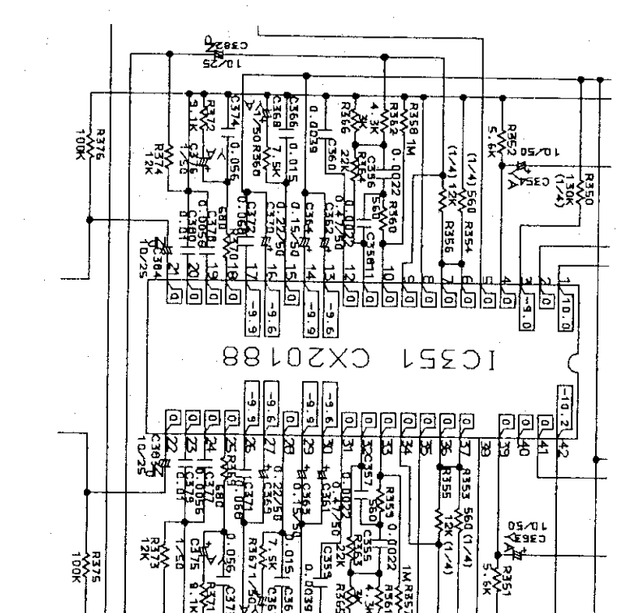
CONTROL UNIT

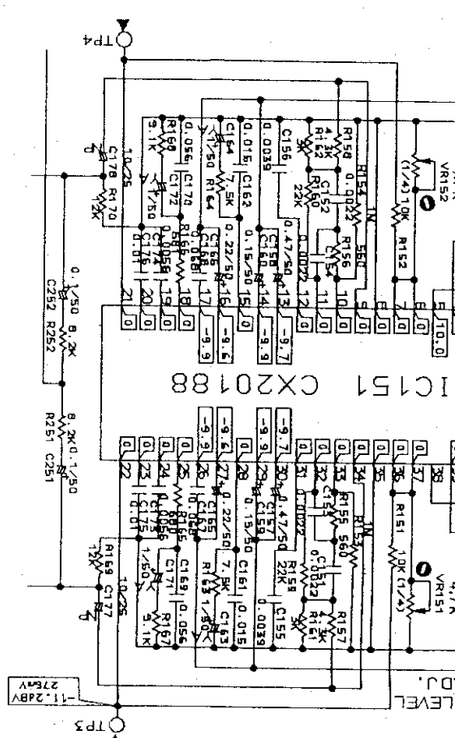
SEMICONDUCTORS

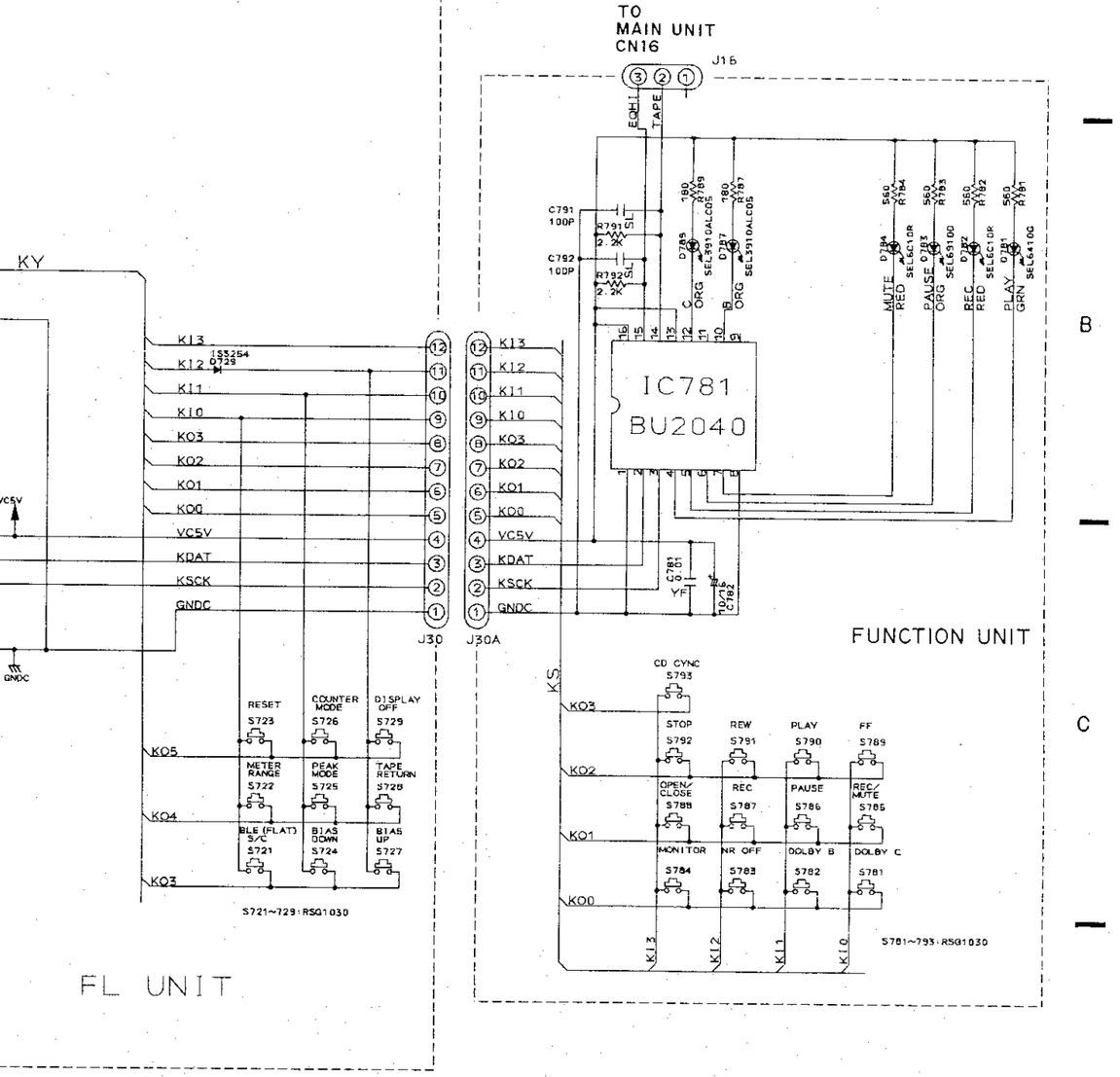
	IC651 MAIN CPU	PD4359A
	IC652	M6M80011AL
	IC661 CMOS LOGIC IC	TC4050BP
	IC671 IC	BA6109
	IC681 IC	BA6109
	IC703 COMPARATOR	BA10393N
	IC713 CMOS LOGIC IC	TC4050BP
	Q655, 656 DIGITAL TRANSISTOR	DTA114TS
	Q665 TRANSISTOR	DTC114ES
	Q667 TRANSISTOR	DTC124ES
	Q668 DIGITAL TRANSISTOR	DTC114TS
	Q672-674 TRANSISTOR	DTC114ES
	Q681-683 TRANSISTOR	2SA1309A
	Q687 TRANSISTOR	2SA1309A
	Q688 TRANSISTOR	DTC114ES
	Q705 DIGITAL TRANSISTOR	DTA114ES
	Q706 TRANSISTOR	2SC3311A
	Q707, 708 DIGITAL TRANSISTOR	DTC114TS
	Q709 DIGITAL TRANSISTOR	DTA114ES
	Q710 DIGITAL TRANSISTOR	DTC114TS
	Q715 TRANSISTOR	DTC114ES
	D651-653 DIODE	1SS254
⚠	D681 RECRIFIER DIODE	1SR35-100A

COILS/TRANSFORMERS

	L671	RTF1068







• PCB PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may
- The ⚠ mark found on some component parts indicates the importance of th to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as sh

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560

560 Ω → 56 × 10¹ → 561 .....
47k Ω → 47 × 10³ → 473 .....
0.5 Ω → 0R5 .....
1 Ω → 010 .....

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

5.62k Ω → 562 × 10¹ → 5621 .....

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

CONTROL UNIT
BALANCE VR UNIT
FL UNIT
FUNCTION UNIT
BIAS UNIT
HEADPHONE UNIT
MAIN UNIT
VR UNIT

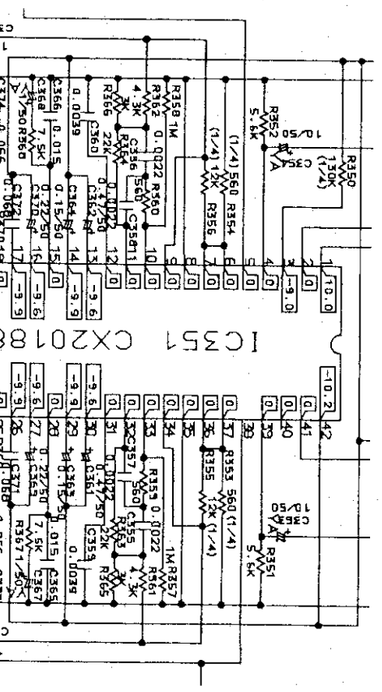
CONTROL UNIT

SEMICONDUCTORS

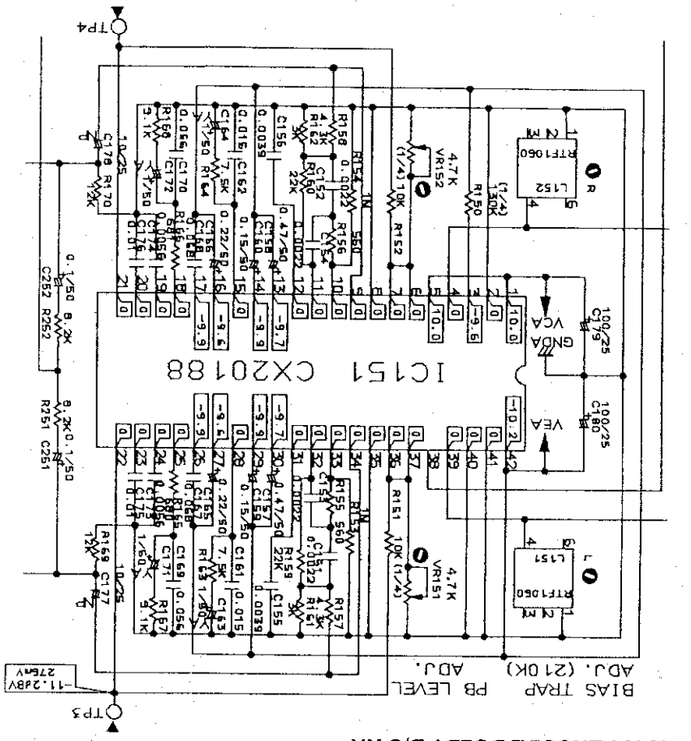
	IC651 MAIN CPU	PD4359A
	IC652	M6M80011AL
	IC661 CMOS LOGIC IC	TC4050BP
	IC671 IC	BA6109
	IC681 IC	BA6109
	IC703 COMPARATOR	BA10393N
	IC713 CMOS LOGIC IC	TC4050BP
	Q655, 656 DIGITAL TRANSISTOR	DTA114TS
	Q665 TRANSISTOR	DTC114ES
	Q667 TRANSISTOR	DTC124ES
	Q668 DIGITAL TRANSISTOR	DTC114TS
	Q672-674 TRANSISTOR	DTC114ES
	Q681-683 TRANSISTOR	2SA1309A
	Q687 TRANSISTOR	2SA1309A
	Q688 TRANSISTOR	DTC114ES
	Q705 DIGITAL TRANSISTOR	DTA114ES
	Q706 TRANSISTOR	2SC3311A
	Q707, 708 DIGITAL TRANSISTOR	DTC114TS
	Q709 DIGITAL TRANSISTOR	DTA114ES
	Q710 DIGITAL TRANSISTOR	DTC114TS
	Q715 TRANSISTOR	DTC114ES
	D651-653 DIODE	1SS254
⚠	D681 RECRIFIER DIODE	1SR35-100A

COILS/TRANSFORMERS

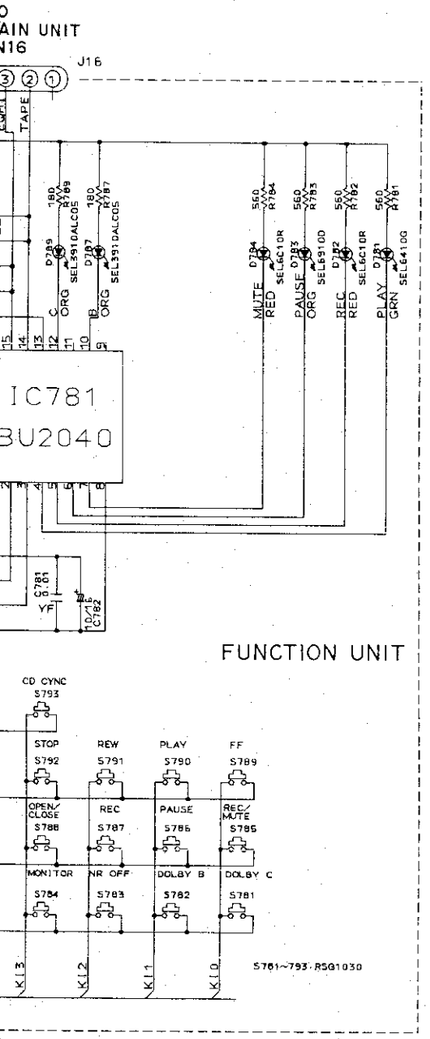
	L671	RTF1068



IC351 ENCODE DOLBY B/C NR



IC151 ENCODE DOLBY B/C NR



• PCB 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 ⚠ 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 × 10¹ → 561 ····· RD1/4PS 5 6 1 J
47k Ω → 47 × 10³ → 473 ····· RD1/4PS 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 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 → 562 × 10¹ → 5621 ····· RN1/4SR 5 6 2 1 F

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

CONTROL UNIT
BALANCE VR UNIT
FL UNIT
FUNCTION UNIT
BIAS UNIT
HEADPHONE UNIT
MAIN UNIT
VR UNIT

CONTROL UNIT

SEMICONDUCTORS

	IC651	MAIN CPU	PD4359A
	IC652		M6M80011AL
	IC661	CMOS LOGIC IC	TC4050BP
	IC671	IC	BA6109
	IC681	IC	BA6109
	IC703	COMPARATOR	BA10393N
	IC713	CMOS LOGIC IC	TC4050BP
	Q655, 656	DIGITAL TRANSISTOR	DTA114TS
	Q665	TRANSISTOR	DTC114ES
	Q667	TRANSISTOR	DTC124ES
	Q668	DIGITAL TRANSISTOR	DTC114TS
	Q672-674	TRANSISTOR	DTC114ES
	Q681-683	TRANSISTOR	2SA1309A
	Q687	TRANSISTOR	2SA1309A
	Q688	TRANSISTOR	DTC114ES
	Q705	DIGITAL TRANSISTOR	DTA114ES
	Q706	TRANSISTOR	2SC3311A
	Q707, 708	DIGITAL TRANSISTOR	DTC114TS
	Q709	DIGITAL TRANSISTOR	DTA114ES
	Q710	DIGITAL TRANSISTOR	DTC114TS
	Q715	TRANSISTOR	DTC114ES
	D651-653	DIODE	1SS254
⚠	D681	RECRIFIER DIODE	1SR35-100A

COILS/TRANSFORMERS

	L671		RTF1068

CAPACITORS

	C651	CERAMIC CAPACITOR	CKCYF103Z50
	C652	ELECTR. CAPACITOR	CEAS101M10
	C653	ELECTR. CAPACITOR	CEAS102M6R3
	C657, 658	AXIAL CAPACITOR	CKPUYB101K50
	C661	CERAMIC CAPACITOR	CKCYF103Z50
	C662	ELECTR. CAPACITOR	CEAS100M50
	C666	ELECTR. CAPACITOR	CEAS330M16
	C671	CERAMIC CAPACITOR	CKCYF103Z50
	C672	CERAMIC CAPACITOR	CKCYF473Z50
	C681	ELECTR. CAPACITOR	CEANP4R7M25
	C682	ELECTR. CAPACITOR	CEASR22M50
	C683	CERAMIC CAPACITOR	CKCYF103Z50
	C684	ELECTR. CAPACITOR	CEAS330M16
	C685	ELECTR. CAPACITOR	CEAS101M16
	C691	ELECTR. CAPACITOR	CEAS100M50
	C703	CERAMIC CAPACITOR	CKCYF473Z50
	C713	ELECTR. CAPACITOR	CEAS100M50
	C714-716	CERAMIC CAPACITOR	CKCYF103Z50
	C717	CERAMIC CAPACITOR	CKCYF103Z50

RESISTORS

	R651-658	CARBONFILM RESISTOR	RD1/6PM□□□J
	R663(10k)		RCX1042
	R665-668	CARBONFILM RESISTOR	RD1/6PM□□□J
	R671-675	CARBONFILM RESISTOR	RD1/6PM□□□J
	R681	METAL OXIDE RESISTOR	RS1LMF□□□J
	R683-688	CARBONFILM RESISTOR	RD1/6PM□□□J
	R691-700	CARBONFILM RESISTOR	RD1/6PM□□□J
	R702-704	CARBONFILM RESISTOR	RD1/6PM□□□
	R705, 706	METALFILM RESISTOR	RN1/6PQ□□□□F
	R707	CARBONFILM RESISTOR	RD1/6PM□□□J
	R709-712	METALFILM RESISTOR	RN1/6PQ□□□□F
	R713(10k)		RCX1042
	R714, 715	CARBONFILM RESISTOR	RD1/6PM□□□J

OTHERS

	CN200	CONECTOR(13P)	TXC-P13X-A1
	CN210	CONECTOR(12P)	TXC-P12X-A1
	JA71	JACK	RKN1014

Mark	No.	Description	Part No.
	JA72, 73	REMOTE CONTROL JACK	RKN1004
	X651	CERAMIC RESONATOR	VSS1014

BALANCE VR UNIT

RESISTORS

	VR973(200k)		RCV1078

FUNCTION UNIT

SEMICONDUCTORS

	IC781	LOGIC IC	BU2040
	D781	LED	SEL6410G
	D782		SEL6C10R
	D783	LED	SEL6910D
	D784		SEL6C10R
	D787	LED	SEL3910ALC05
	D789		SEL3910ALC05

SWITCHES

	S781-793	SWITCH	RSG1030

CAPACITORS

	C781	CERAMIC CAPACITOR	CKCYF103Z50
	C782	ELECTR. CAPACITOR	CEJA100M16
	C791, 792	AXIAL CAPACITOR	CKPUYB101K50

RESISTORS

	R781-784	CARBONFILM RESISTOR	RD1/6PM□□□J
	R787	CARBONFILM RESISTOR	RD1/6PM□□□J
	R789	CARBONFILM RESISTOR	RD1/6PM□□□J
	R791, 792	CARBONFILM RESISTOR	RD1/6PM□□□J

HEADPHONE UNIT

SEMICONDUCTORS

	IC231	OP AMP	M5218AP
	Q231, 232	TRANSISTOR	2SD2144S

CAPACITORS

	C231, 232	ELECTR. CAPACITOR	CEYA010M50
	C233, 234	ELECTR. CAPACITOR(100/25)	PCH1076
	C235, 236	AXIAL CAPACITOR	CKPUYB221K50

RESISTORS

	R231-236	CARBONFILM RESISTOR	RD1/6PM□□□J
	R237, 238	CARBONFILM RESISTOR	RD1/4PM□□□J
	R239-242	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR231	VARIABLE RESISTOR(20k)	PCS1002

OTHERS

	JA231	JACK	RKN1002

FL UNIT

SEMICONDUCTORS

	IC721		PD3198A
	D724-726	DIODE	1SS254
	D729	DIODE	1SS254
	D735-737	DIODE	1SS254
	D750	DIODE	1SS254

Mark	No.	Description	Part No.

SWITCHES

	S721-729	SWITCH	RSG1030
	S735		RSH1011

CAPACITORS

	C721	CERAMIC CAPACITOR	CKCYF103Z50
	C722	ELECTR. CAPACITOR	CEAS100M50
	C723	CERAMIC CAPACITOR	CKCYF103Z50

RESISTORS

	R721-727	CARBONFILM RESISTOR	RD1/6PM□□□J
	R729-732	CARBONFILM RESISTOR	RD1/6PM□□□J
	R735	CARBONFILM RESISTOR	RD1/6PM□□□J
	R736	CARBONFILM RESISTOR	RD1/6PM□□□J
	R741-764	CARBONFILM RESISTOR	RD1/6PM□□□J

OTHERS

	V721		RAW1096
	X721	CERAMIC RESONATOR	VSS1014

BIAS UNIT

SEMICONDUCTORS

	IC521	DOLBY HX PRO IC	UPC1297CA
⚠	IC606	REGULATOR IC	NJM7812FA
⚠	IC607	REGULATOR IC	NJM7805FA
	Q504	TRANSISTOR	2SA1283
	Q505, 506	TRANSISTOR	2SC3243
	Q507	TRANSISTOR	2SC3311A
	Q508	TRANSISTOR	DTC124ES
	Q509	TRANSISTOR	2SC3311A
	Q510	TRANSISTOR	DTC124ES
	Q511	TRANSISTOR	DTC114ES
	Q512	DIGITAL TRANSISTOR	DTA114ES
	Q513	TRANSISTOR	2SA1309A
	Q543-546	TRANSISTOR	DTC114ES
	Q614	TRANSISTOR	2SA1309A
⚠	Q623	TRANSISTOR	2SA1283
	D501, 502	DIODE	1SS254
⚠	D601		S2VB20
⚠	D604	RECRIFIER DIODE	1SR35-100A
	D611-613	DIODE	1SS254
⚠	D621	RECRIFIER DIODE	1SR35-100A
	D622	ZENER DIODE	MTZJ6.8B
⚠	D623	ZENER DIODE	MTZJ24D

SWITCHES

⚠	S641	SWITCH	RSA1001

COILS/TRANSFORMERS

	L501		LFA121K
	L502		RTD1057
	L521, 522		RTD1011

CAPACITORS

	C501	CERAMIC CAPACITOR	CKCYF473Z50
	C502	ELECTR. CAPACITOR	CEAS101M16
	C503	ELECTR. CAPACITOR	CEAS100M50
	C504, 505	ELECTR. CAPACITOR	CEAS330M16
	C507, 508	AUDIO FILM CAPACITOR	CFTXA332J50

Mark	No.	Description	Part No.
	C509	AUDIO FILM CAPACITOR	CFTXA223J50
	C510	AUDIO FILM CAPACITOR	CFTXA682J50
	C511	PORYPROPYLENE FILM C	CQPA752J100
	C515	ELECTR. CAPACITOR	CEAS220M25
	C516	ELECTR. CAPACITOR	CEAS100M50
	C517	ELECTR. CAPACITOR	CEAS4R7M50
	C521	CERAMIC CAPACITOR	CCCCH470J50
	C523, 524	CERAMIC CAPACITOR	CKCYF473Z50
	C525, 526	CERAMIC CAPACITOR (390P/500)	RCG1004
	C527, 528	CERAMIC CAPACITOR	CCCSL101K500
	C529-532	AUDIO FILM CAPACITOR	CFTXA223J50
	C533, 534	AXIAL CAPACITOR	CKPUYB821K50
	C535, 536	AUDIO FILM CAPACITOR	CFTXA103J50
	C537	ELECTR. CAPACITOR	CEAS330M16
	C539, 540	CERAMIC CAPACITOR	CKCYF103Z50
	C601-603	CERAMIC CAPACITOR	CKCYF473Z50
	C605	ELECTR. CAPACITOR(6800μF/25)	RCH1032
	C607	ELECTR. CAPACITOR	CEAS682M16
	C608	ELECTR. CAPACITOR	CEAS102M6R3
	C611	ELECTR. CAPACITOR	CEAS4R7M50
	C614	CERAMIC CAPACITOR	CKCYF103Z50
	C621	CERAMIC CAPACITOR	CKCYF473Z50
	C622	ELECTR. CAPACITOR	CEAS101M50
	C623	CERAMIC CAPACITOR	CKCYF473Z50
	C624	ELECTR. CAPACITOR	CEAS101M25
	C625	CERAMIC CAPACITOR	CKCYF473Z50
	C626	ELECTR. CAPACITOR	CEAS101M16
	C627, 628	CERAMIC CAPACITOR	CKCYF473Z50
⚠	C641	CAPACITOR (0.01/AC400)	VCG-044

RESISTORS

	R505-508	CARBONFILM RESISTOR	RD1/6PM□□□J
	R509, 510	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R511	CARBONFILM RESISTOR	RD1/2LF□□□J
	R512-514	CARBONFILM RESISTOR	RD1/6PM□□□J
	R515, 516	METALFILM RESISTOR	RN1/6PQ□□□□F
	R517-519	CARBONFILM RESISTOR	RD1/6PM□□□J
	R523-525	CARBONFILM RESISTOR	RD1/6PM□□□J
	R531	CARBONFILM RESISTOR	RD1/6PM□□□J
	R533-536	CARBONFILM RESISTOR	RD1/6PM□□□J
	R539-542	CARBONFILM RESISTOR	RD1/6PM□□□J
	R611-613	CARBONFILM RESISTOR	RD1/6PM□□□J
⚠	R621	FUSLIBLE RESISTOR	RFA1/4L□□□J
	R622	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R623	METAL OXIDE RESISTOR	RS1LMF□□□J
	VR545, 546	VR(15k)	RCP1090
	VR541-544	(3.3k)	RCP1089

MAIN UNIT

SEMICONDUCTORS

	IC101	OP-AMP-IC	M5220P
	IC151	DOLBY-B, C IC	CX20188
	IC251	IC	BA335
	IC281	IC	BA15218N
	IC282		BA6138
	IC301	OP-AMP, IC	M5218AP
	IC331	OP-AMP IC	BA15218
	IC351	DOLBY-B, C IC	CX20188
	IC401, 402	OP AMP	M5218AP
⚠	IC551, 552	IC PROTECTOR	ICP-N20
	IC561, 562	OP-AMP IC	NJM5532DD
⚠	IC571	REGULATOR IC	NJM78M12FA
⚠	IC572	REGULATOR IC	NJM79M12FA
	Q104	DIGITAL TRANSISTOR	DTC114TS
	Q202	DIGITAL TRANSISTOR	DTC114TS
	Q203, 204	TRANSISTOR	2SD2144S
	Q282	TRANSISTOR	DTC114ES
	Q283, 284	TRANSISTOR	DTC124ES
	Q301, 302	TRANSISTOR	2SD2144S
	Q303	DIGITAL TRANSISTOR	DTC114TS
	Q331-334	TRANSISTOR	DTC114ES
	Q384	DIGITAL TRANSISTOR	DTA114ES
	Q385, 386	TRANSISTOR	DTC114ES
	Q401-408	DIGITAL TRANSISTOR	DTC114TS
	Q419-428	DIGITAL TRANSISTOR	DTC114TS
	Q433, 434	TRANSISTOR	2SD2144S
	Q439-442	DIGITAL TRANSISTOR	DTC114TS
	Q455, 456	DIGITAL TRANSISTOR	DTC114TS
	Q459-462	DIGITAL TRANSISTOR	DTC114TS
	Q471-476	DIGITAL TRANSISTOR	DTA114ES
	Q478-482	DIGITAL TRANSISTOR	DTA114ES
⚠	Q561	TRANSISTOR	2SD1266
⚠	Q562	TRANSISTOR	2SB941
⚠	D551-554		EL1Z-LFF5
⚠	D573, 574	ZENER DIODE	HZ5BLL

SWITCHES

	S381		RSH1040

RELAYS

	RY202		RSR1026

COILS/TRANSFORMERS

	L151, 152	BIAS TRAP(210KHZ)	RTF1060
	L401, 402	COIL	RTF1022
	L403, 404		RTF1017
	F301, 302	FILTER	RTF1062

CAPACITORS

	C101, 102	PL. STYRENE CAPACITOR	CQSF271J50
	C103, 104	AUDIO FILM CAPACITOR	CFTXA563J50
	C105, 106	ELECTR. CAPACITOR(10/25)	RCH1037
	C109, 110	AUDIO FILM CAPACITOR	CFTXA102J50
	C111, 112	AUDIO FILM CAPACITOR	CFTXA273J50
	C115, 116	ELECTR. CAPACITOR(100/25)	PCH1076
	C151-154	AUDIO FILM CAPACITOR	CFTXA222J50
	C155, 156	AUDIO FILM CAPACITOR	CFTXA392J50
	C157, 158	AUDIO FILM CAPACITOR	CEASR47M50
	C159, 160	AUDIO FILM CAPACITOR	CEASR15M50
	C161, 162	AUDIO FILM CAPACITOR	CFTXA153J50
	C163, 164	ELECTR. CAPACITOR	CEAS010M50
	C165, 166	AUDIO FILM CAPACITOR	CEASR22M50
	C167, 168	AUDIO FILM CAPACITOR	CFTXA683J50

Mark	No.	Description	Part No.
	C169, 170	AUDIO FILM CAPACITOR	CFTXA563J50
	C171, 172	ELECTR. CAPACITOR	CEAS010M50
	C173, 174		CFTXA562J50
	C175, 176	AUDIO FILM CAPACITOR	CFTXA103J50
	C177, 178	ELECTR. CAPACITOR(10/25)	RCH1037
	C179, 180	ELECTR. CAPACITOR(100/25)	PCH1076
	C211	ELECTR. CAPACITOR	CEAS010M50
	C251, 252	ELECTR. CAPACITOR	CEASR10M50
	C253	AUDIO FILM CAPACITOR	CFTXA473J50
	C254, 255	ELECTR. CAPACITOR	CEASR10M50
	C256	ELECTR. CAPACITOR	CEASR47M50
	C257	AUDIO FILM CAPACITOR	CFTXA473J50
	C281, 282	AUDIO FILM CAPACITOR	CFTXA563J50
	C283, 284	AXIAL CERAMIC C.	CCPUSL470J50
	C287-290	ELECTR. CAPACITOR	CEAS4R7M50
	C300	CERAMIC CAPACITOR	CKCYF473Z50
	C301, 302	ELECTR. CAPACITOR	CEYA010M50
	C303, 304	AXIAL CAPACITOR	CKPUYB221K50
	C331	AUDIO FILM CAPACITOR	CFTXA683J50
	C332	MYLAR FILM CAPACITOR	CQMA104J50
	C333	MYLAR FILM CAPACITOR	CQMA123J50
	C334	ELECTR. CAPACITOR	CEAS010M50
	C335	AUDIO FILM CAPACITOR	CFTXA682J50
	C336	MYLAR FILM CAPACITOR	CQMA123J50
	C337	MYLAR FILM CAPACITOR	CQMA182J50
	C353, 354	ELECTR. CAPACITOR	CEYA100M50
	C355-358	AUDIO FILM CAPACITOR	CFTXA222J50
	C359, 360	AUDIO FILM CAPACITOR	CFTXA392J50
	C361, 362	AUDIO FILM CAPACITOR	CEASR47M50
	C363, 364	AUDIO FILM CAPACITOR	CEASR15M50
	C365, 366	AUDIO FILM CAPACITOR	CFTXA153J50
	C367, 368	ELECTR. CAPACITOR	CEAS010M50
	C369, 370	AUDIO FILM CAPACITOR	CEASR22M50
	C371, 372	AUDIO FILM CAPACITOR	CFTXA683J50
	C373, 374	AUDIO FILM CAPACITOR	CFTXA563J50
	C375, 376	ELECTR. CAPACITOR	CEAS010M50
	C377, 378		CFTXA562J50
	C379, 380	AUDIO FILM CAPACITOR	CFTXA103J50
	C381-384	ELECTR. CAPACITOR(10/25)	RCH1037
	C385, 386	ELECTR. CAPACITOR(100/25)	PCH1076
	C387	ELECTR. CAPACITOR	CEAS330M16
	C401, 402	AUDIO FILM CAPACITOR	CFTXA103J50
	C403, 404	AUDIO FILM CAPACITOR	CFTXA472J50
	C405, 406		CFTXA272J50
	C407, 408	AUDIO FILM CAPACITOR	CFTXA122J50
	C413, 414	AUDIO FILM CAPACITOR	CFTXA103J50
	C445, 446		CEYA010M50
	C437, 438		CFTXA681J50
	C443, 444	AUDIO FILM CAPACITOR	CFTXA392J50
	C447, 448	ELECTR. CAPACITOR(100/25)	PCH1076
	C451, 452	AUDIO FILM CAPACITOR	CFTXA274J50
	C453, 454	ELECTR. CAPACITOR	CEYA100M50
	C455, 456	AUDIO FILM CAPACITOR	CFTXA103J50
	C457, 458		CFTXA562J50
	C459, 460	AUDIO FILM CAPACITOR	CFTXA472J50
	C461, 462	AUDIO FILM CAPACITOR	CFTXA332J50
	C463	ELECTR. CAPACITOR	CEAS010M50
	C467, 468	PL. STYRENE CAPACITOR	CQSA102J50
	C471	ELECTR. CAPACITOR	CEAS100M50
	C472-476	CERAMIC CAPACITOR	CKPUYY103N16
	C465, 466		CFTXA222J50
	C551-554	CERAMIC CAPACITOR	CKCYF473Z50
	C555, 556 (2200/25)	ELECTR. CAPACITOR	RCH1036
	C557, 558	AUDIO FILM CAPACITOR	CFTXA563J50
	C561, 562	ELECTR. CAPACITOR	CEYA100M50
	C563, 564	AUDIO FILM CAPACITOR	CFTXA563J50
	C565, 566	ELECTR. CAPACITOR(100/25)	PCH1076
	C571, 572	ELECTR. CAPACITOR	CEYA010M50
	C573, 574	ELECTR. CAPACITOR	CEYA330M25
RESISTORS			
	R101, 102	CARBONFILM RESISTOR	RD1/4PM□□□J
	R109-122	CARBONFILM RESISTOR	RD1/4PM□□□J
	R150-152	CARBONFILM RESISTOR	RD1/4PM□□□J
	R153-170	CARBONFILM RESISTOR	RD1/6PM□□□J
	R201-204	CARBONFILM RESISTOR	RD1/4PM□□□J
	R205-208	CARBONFILM RESISTOR	RD1/6PM□□□J
	R211	CARBONFILM RESISTOR	RD1/6PM□□□J
	R251-255	CARBONFILM RESISTOR	RD1/6PM□□□J
	R281-284	CARBONFILM RESISTOR	RD1/6PM□□□J
	R286-296	CARBONFILM RESISTOR	RD1/6PM□□□J
	R301, 302	CARBONFILM RESISTOR	RD1/4PM□□□J
	R305-312	CARBONFILM RESISTOR	RD1/6PM□□□J
	R313, 314	CARBONFILM RESISTOR	RD1/4PM□□□J
	R331-342	CARBONFILM RESISTOR	RD1/6PM□□□J
	R350	CARBONFILM RESISTOR	RD1/4PM□□□J
	R351, 352	CARBONFILM RESISTOR	RD1/6PM□□□J
	R353-356	CARBONFILM RESISTOR	RD1/4PM□□□J
	R357-376	CARBONFILM RESISTOR	RD1/6PM□□□J
	R381-383	CARBONFILM RESISTOR	RD1/6PM□□□J
	R385, 386	CARBONFILM RESISTOR	RD1/6PM□□□J
	R401-408	CARBONFILM RESISTOR	RD1/6PM□□□J
	R409, 410(100k)		RCN1043
	R411, 412	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R413-416	CARBONFILM RESISTOR	RD1/6PM□□□J
	R417, 418	CARBONFILM RESISTOR	RD1/4PM□□□J
	R419-428	CARBONFILM RESISTOR	RD1/6PM□□□J
	R431, 432	CARBONFILM RESISTOR	RD1/4PM□□□J
	R433, 434	CARBONFILM RESISTOR	RD1/6PM□□□J
	R437-452	CARBONFILM RESISTOR	RD1/6PM□□□J
	R453, 454	CARBONFILM RESISTOR	RD1/4PM□□□J
	R455-463	CARBONFILM RESISTOR	RD1/6PM□□□J
	R471	CARBONFILM RESISTOR	RD1/6PM□□□J
	R561-564	CARBONFILM RESISTOR	RD1/4PM□□□J
	R571, 572	CARBONFILM RESISTOR	RD1/4PM□□□J
	R573, 574	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR151, 152	VARIABLE RESISTOR(4.7k)	RCP1020
	VR281, 282	VR(22k)	RCP1046

Mark	No.	Description	Part No.
	VR331, 332	VR(10k)	RCP1045
	VR333	VR(47k)	RCP1047
	VR401, 402	VARIABLE RESISTOR(20k)	RCP1046

OTHERS

	SCREW	IBZ30P100FCC
	CN20	TXC-P13P-A1
	CN21	TXC-P12P-A1
	JA201 JACK	RKB1020
	JA301 JACK	RKB1020

VR UNIT

RESISTORS

	VR972 VR(20k)	RCV1085

• ADJUSTMENT

RECORDING SECTION

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	L502	TP. 11	106 kHz ± 300 Hz	

• REGLAGE

SECTION D'ENREGISTREMENT

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/ PLAY	Charger la bande d' essai STD-610 et n'introduire aucun signal.	Platine	L502	TP. 11	106 kHz ± 300 Hz	

• AJUSTE

SECCIÓN DE GRABACIÓN

Ajuste del oscilador de polarización

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PLAY	Introduzca la cinta de prueba STD-610 sin señal de entrada.	Platina	L502	TP. 11	106 kHz ± 300 Hz	

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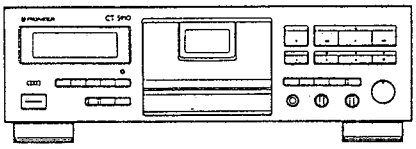
The Art of Entertainment

3754

Service Manual



ORDER NO.
ARP2482

STEREO CASSETTE DECK

CT-S910

- **This manual is applicable to HEM type.**
- **Ce manuel pour le service comprend les explications de réglage en français.**
- **Este manual de servicio trata del método ajuste escrito en español.**

CONTENTS

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PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

3754

SN APR. 1992 Printed in Japan

1. EXPLODED VIEWS AND PARTS LIST

NOTES:

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

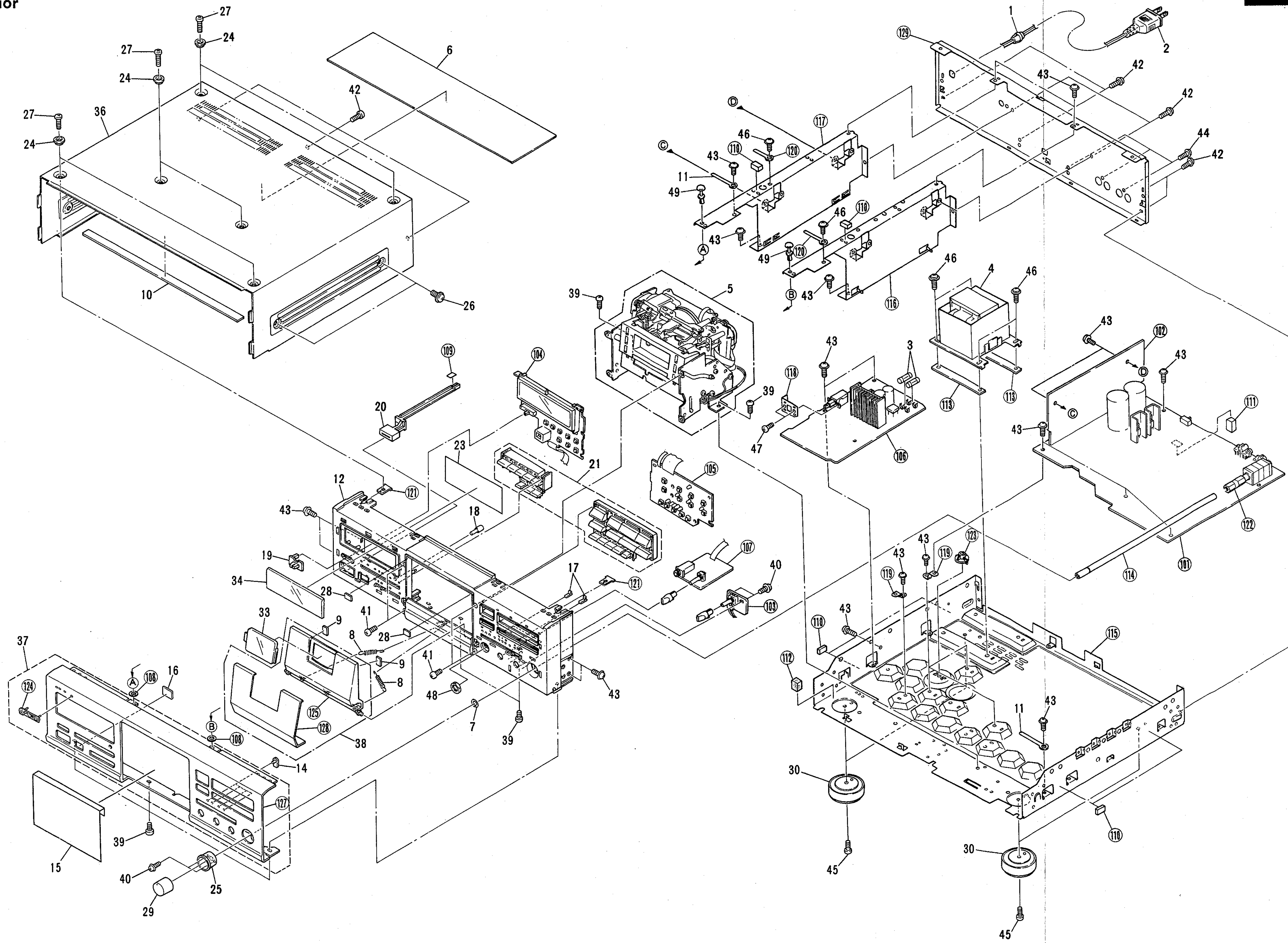
1.1 EXTERIOR

Parts List

Mark	No.	Description	Part No.
⚠	1	Strain relief	CM – 22B
⚠	2	AC power cord	ADG1036
⚠	3	FU601, FU602 Fuse (T2A)	REK – 103
⚠	4	T1 Power transformer	RTT1201
⊙	5	Mechanism unit	RYM1152
	6	Absorb plate (B)	PNB1109
	7	Washer	RBF1019
	8	Door spring	RBH1306
	9	Door cushion	REB1174
	10	Protector	RED1020
	11	Cord clamper	RNH – 184
	12	Panel stay	RNT1139
	13	.....	
	14	LED lens	AMR1160
	15	Sheet	RHC1028
	16	.....	
	17	Lens S	PNW1893
	18	Counter reset knob	RAA1009
	19	Slide SW knob	RAC1562
	20	Power button	RAC1703
	21	Function knob	RAC1704
	22	Balance knob	RAC1705
	23	FL filter	RAH1936
	24	.....	
	25	VR ring	RAT1011
	26	Screw	FBT40P080FZK
	27	Screw	BBZ40P080FZK
	28	Door sheet	REB1191
	29	VR knob assembly (A)	RXA1472
	30	Foot assembly	AMR1159
	31	.....	
	32	.....	
	33	Door lens	RAH1927
	34	FL lens	RAH2019
	35	.....	
	36	Bonnet	RXX1505
	37	Front panel assembly	RXX1510
	38	Door assembly	RXX1514
	39	Screw	BBT30P100FZK
	40	Screw	BBZ26P080FZK

Mark	No.	Description	Part No.
	41	Screw	BBZ30P080FZK
	42	Screw	IBZ30P060FCC
	43	Screw	IBZ30P080FCC
	44	Screw	IBZ30P100FCC
	45	Screw	IBZ30P150FCC
	46	Screw	IBZ40P080FCC
	47	Screw	PMA30P060FCU
	48	Jack nut	RBN – 006
	49	Rivet	RBM – 003
	101	MAIN unit	RWX1048
	102	CONTROL unit	RWZ2450
	103	BALANCE VR unit	RWZ2451
	104	FL unit	RWZ2656
	105	FUNCTION unit	RWZ2453
	106	BIAS unit	RWZ2657
	107	HEADPHONE unit	RWZ2455
	108	Washer	RBF1017
	109	Acetate tape	REH1020
	110	Rubber spacer (A)	REB1057
	111	Rubber spacer	REB1192
	112	Rubber spacer	REB1187
	113	Transformer sheet	REE1004
	114	VR shaft	RLA1169
	115	Main chassis	RNB1059
	116	Center stay	RNC1058
	117	Center stay	RNC1059
	118	PS holder	RNE1185
	119	PCB base	RNE1221
	120	Binder	DNF1128
	121	Bonnet bracket	RNE1470
	122	Joint	RNK1333
	123	PCB stud	RNL – 792
	124	Name plate	PAN1035
	125	Door	RNK1820
	126	.....	
	127	Front panel	RAH2033
	128	Door panel	RAH2034
	129	Rear panel	RNA1564

Exterior



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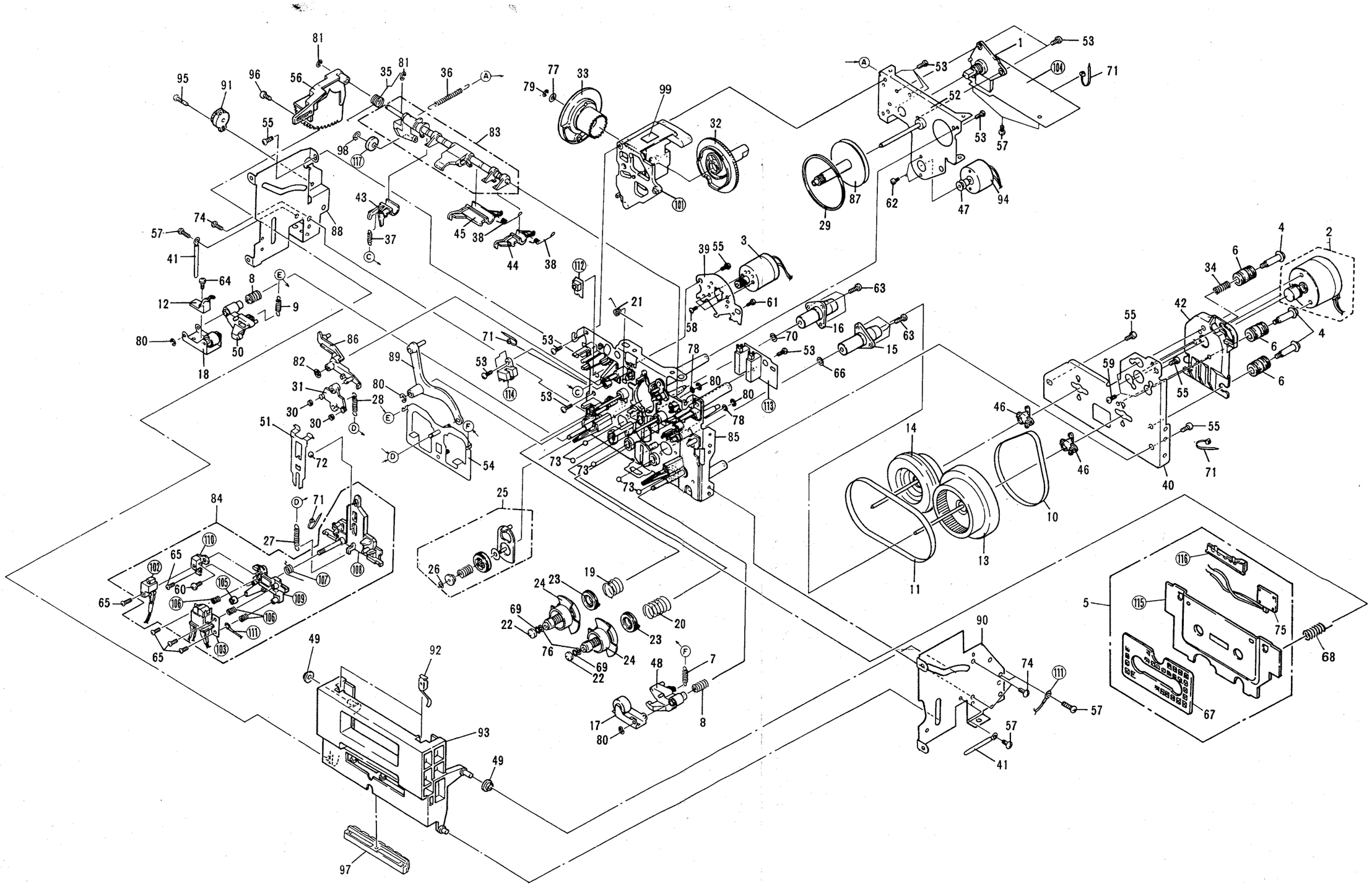
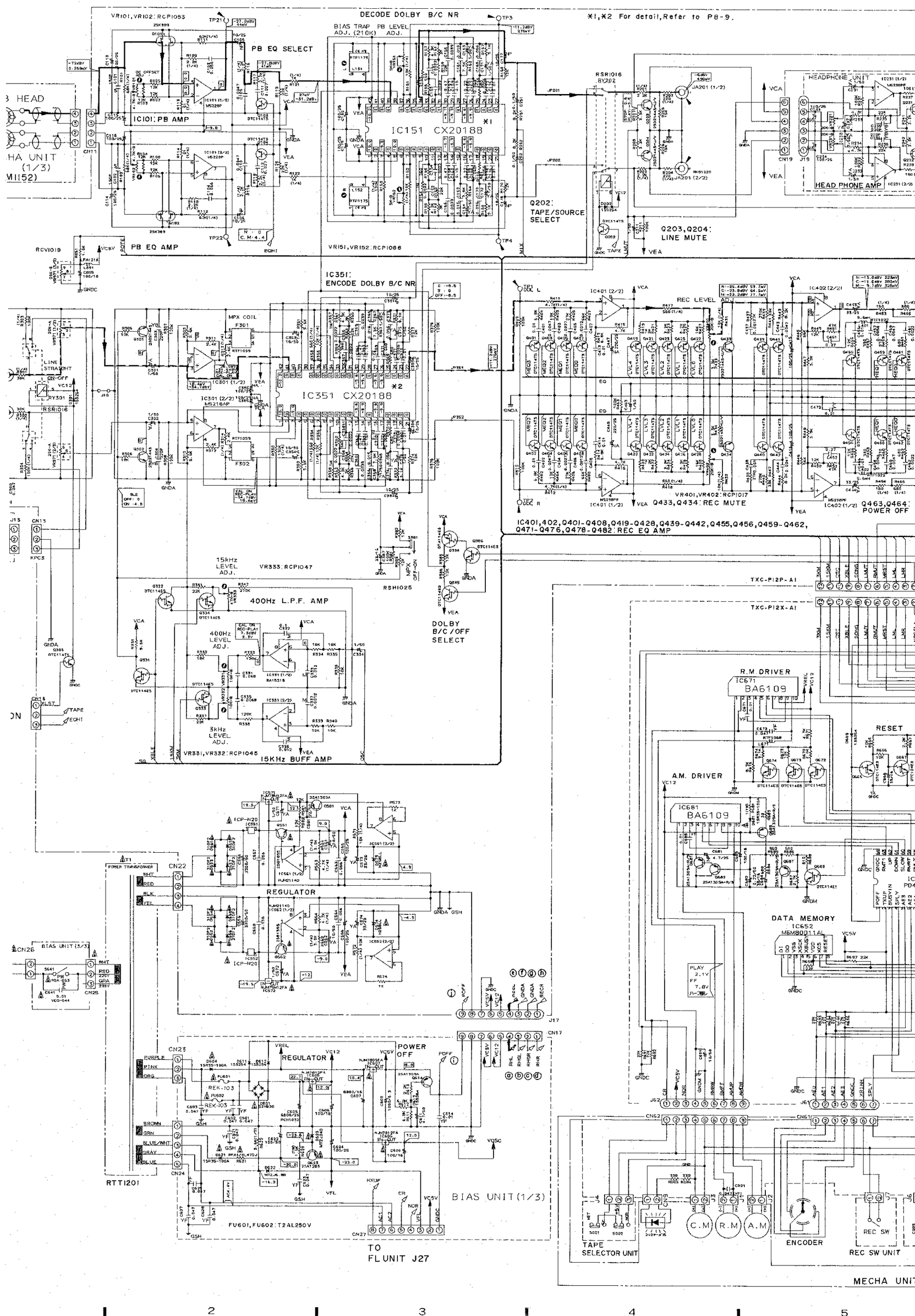
101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 127 128 129
A B C D

1.2 MECHANISM UNIT



MATIC AND PCB CONNECTIONS DIAGRAMS



※1,※2 For detail, Refer to P8-9.

MAIN UNIT

1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) : ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) / voltage (V) unless otherwise noted p ; pF.
Indication without voltage is 50V except electrolytic capacitor.

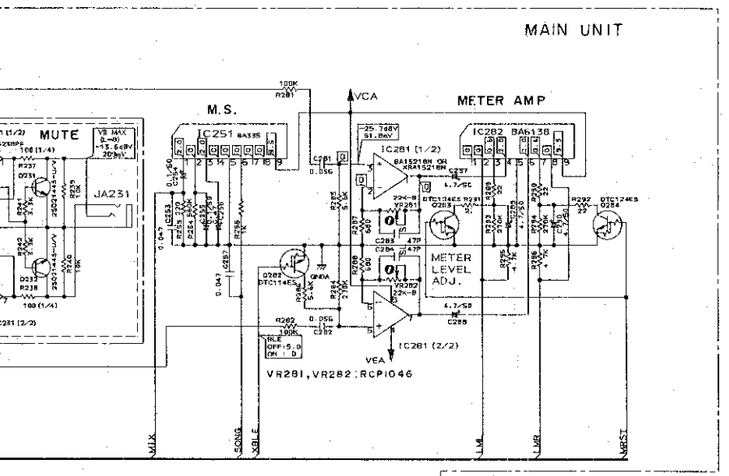
3. VOLTAGE CURRENT :
[ ] ; DC voltage (V) in stop mode.
←mA ; DC current in stop mode.

4. OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point
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.
※ marked capacitors and resistors have parts numbers.

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

: MEASUREMENT POINT
: PLAYBACK SIGNAL
: RECORDING SIGNAL

HEADPHONE UNIT
HEAD PHONE AMP
MUTE
M.S.
METER AMP
METER LEVEL ADJ.
Q202: TAPE/SOURCE SELECT
Q203,Q204: LINE MUTE
VR291,VR292:RCP1046
REC LEVEL ADJ.
VR401,VR402:RCP1017
Q433,Q434:REC MUTE
Q463,Q464: POWER OFF
Q401,402,Q401-Q408,Q419-Q428,Q439-Q442,Q455,Q456,Q459-Q462, Q471-Q476,Q478-Q482:REC EQ AMP
BIAS OSC
BIAS FREQ. ADJ. (210kHz)
HX PRO
BIAS UNIT (2/3)
CONTROL UNIT
R.M DRIVER
A.M. DRIVER
RESET
BIAS CONTROL
MAIN C.P.U.
DATA MEMORY
Q655: LINE MUTE
Q656: REC MUTE
SIGNAL LEVEL DETECT
TO FL UNIT J29
CONNECTOR UNIT
TAPE SELECTOR UNIT
ENCODER
REC SW UNIT
SENSOR UNIT
MECHA UNIT (3/3)(RYMII152)



1. RESISTORS :
Indicated in Ω, 1/4W, 1/6W, 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%,(M) ; ±20% tolerance.

2. CAPACITORS :
Indicated in capacity (μF) /voltage (V) unless otherwise noted p ; pF.
Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
; DC voltage (V) in stop mode.
←mA ; DC current in stop mode.

4. OTHERS :
→ ; Signal route.
⊘ ; Adjusting point
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.
※ marked capacitors and resistors have parts numbers.

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

5. SWITCHES (The underlined indicates the switch

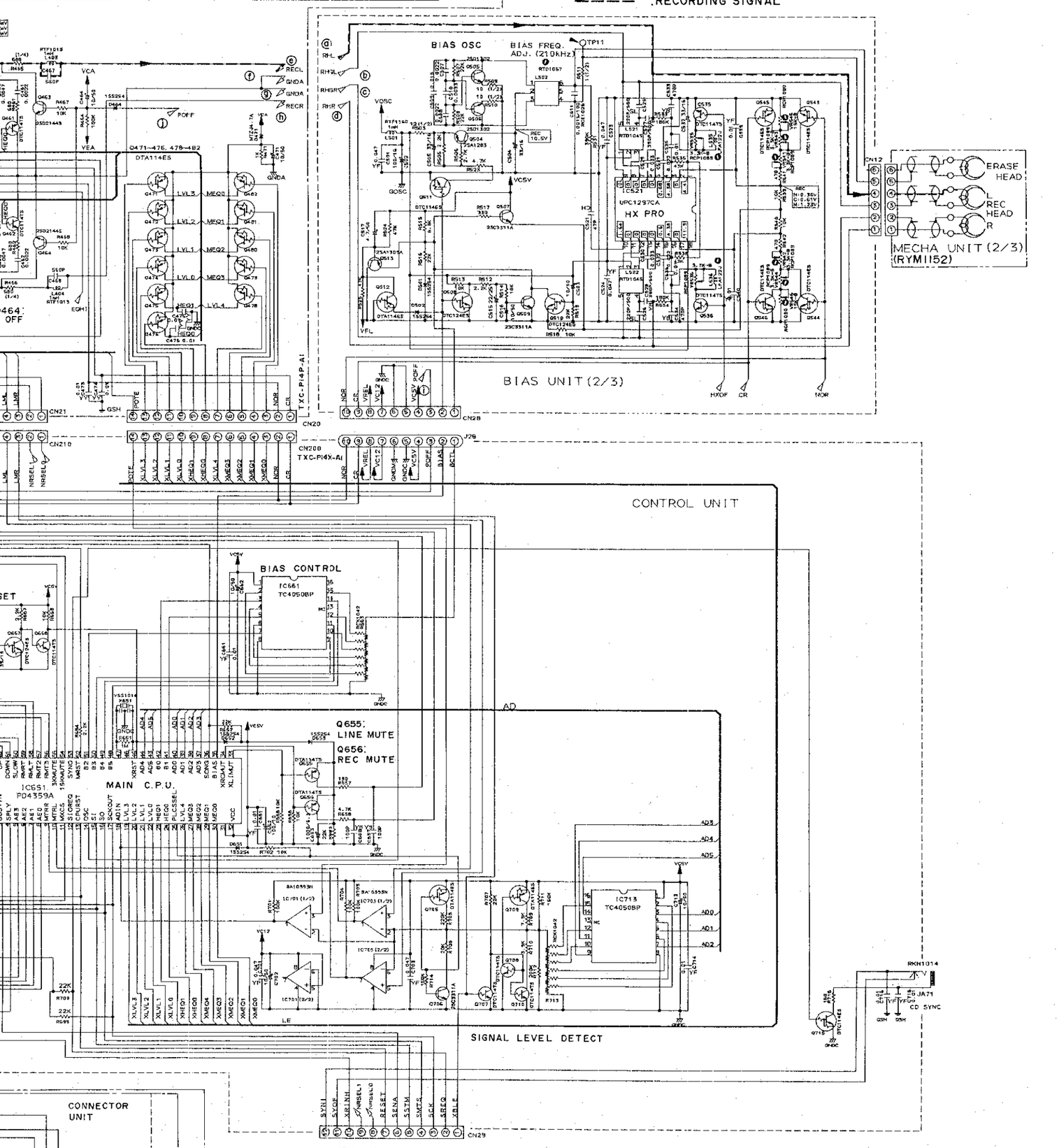
MAIN UNIT
S381 : MPX ONN – OFF

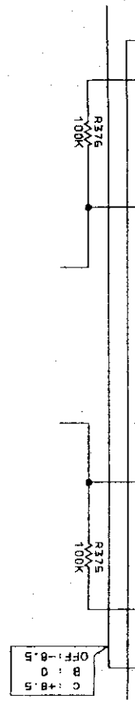
BIAS UNIT
S641 : POWER ONN – OFF

FL UNIT
S721 : BLE (FLAT) S/C
S722 : METER RANGE
S723 : RESET
S724 : BIAS DOWN
S725 : PEAK MODE
S726 : COUNTER MODE
S727 : BIAS UP
S728 : TAPE RETURN
S729 : DISPLAY OFF
S735 : PLAY – OFF – REC

FUNCTION UNIT
S781 : LINE STRAI
S782 : DOLBY – NR
S783 : HX PRO
S784 : MONITOR
S785 : REC/MUTE
S786 : PAUSE
S787 : REC
S788 : OPEN/CLOS
S789 : FF
S790 : PLAY
S791 : REW
S792 : STOP
S793 : CD CYNC

: MEASUREMENT POINT
: PLAYBACK SIGNAL
: RECORDING SIGNAL



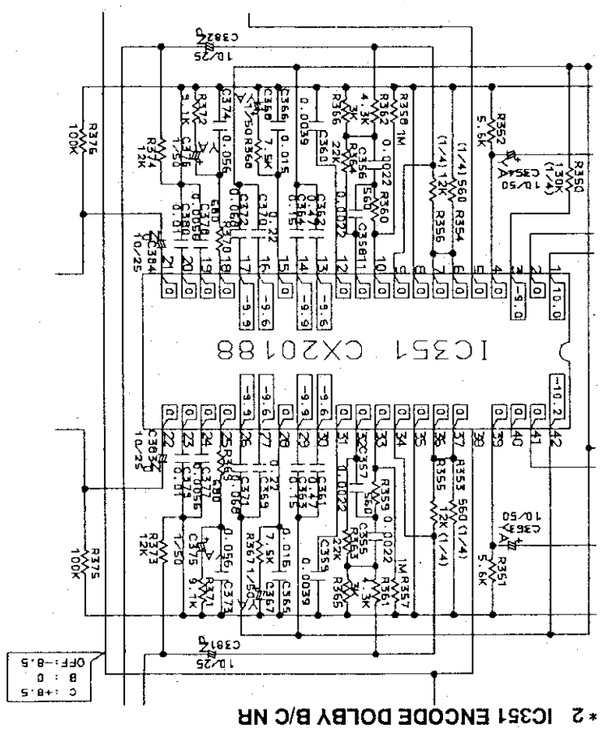


Parts List

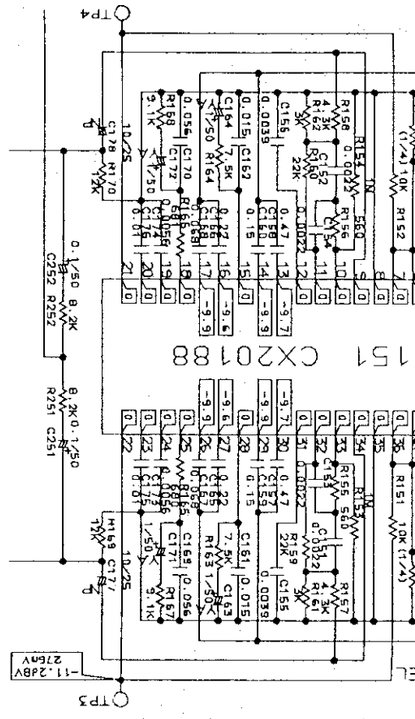
Mark	No.	Description	Part No.
	1	Rotary encoder	RSX1004
	2	Capstan motor assembly	RXM1016
	3	Reel motor assembly	RXM1018
	4	Step screw	RBA1074
	5	Cassette plate assembly	RXX1064
	6	Insulator	REB1099
	7	Pinch spring	RBL – 028
	8	Pinch thrust spring	RBL – 030
	9	Sub – pinch spring	RBL – 098
	10	Capstan belt	REB – 501
	11	Capstan belt (A)	REB – 509
	12	Tape guide	RNK1823
	13	Flywheel assembly	RXA1374
	14	Sub – flywheel assembly	RXA1375
	15	Metal holder assembly(A)	RXA1426
	16	Metal holder assembly(B)	RXA1343
	17	Pinch roller arm (R) assembly	RXB – 876
	18	Pinch roller arm (A) assembly	RXB – 877
	19	BT spring (A)	RBL – 031
	20	BT spring (B)	RBL – 032
	21	Idler pressure spring	RBL – 033
	22	Reel shaft cap (B)	RNK – 815
	23	BT disk assembly	RXB – 751
	24	Reel base assembly	RXB – 874
	25	Take – up idler assembly	RXB – 875
	26	Washer	RBF – 065
	27	Head base spring	RBL – 037
	28	Brake spring	RBL – 038
	29	Drive belt	REB1182
	30	Brake shoe	REB – 511
	31	Brake	RNL – 723
	32	Cam gear	RNK1640
	33	Side cam gear	RNK1765
	34	Insulator spring	RBH1226
	35	Eject spring	RBL – 039
	36	Half set arm spring	RBL – 040
	37	REC functioning spring	RBL – 041
	38	Detection functioning spring	RBL – 042
	39	Reel motor mounting plate	RNE1169
	40	Flywheel holder	RNH – 304
	41	Cord clamper	RNH – 184
	42	Motor bracket	RNK1497
	43	REC detector arm	RNL – 733
	44	Chrom detector arm	RNL – 734
	45	Metal detector arm	RNL – 735
	46	Thrust holder	RNL – 743
	47	Motor pulley	PNW1634
	48	Pressure arm (R)	RNL – 725
	49	Collar	RNL – 742
	50	Pressure arm (L)	RNL – 726

Mark	No.	Description	Part No.
	51	Head base set spring	RBL – 026
	52	Gear chassis assembly	RXA1171
	53	Screw	BBZ26P080FZK
	54	Pinch base assembly	RXB – 878
	55	Screw	BBZ30P080FZK
	56	Eject lever	RNK1763
	57	Screw	BCZ30P060FMC
	58	Screw	BMZ26P030FZK
	59	Screw	BMZ26P040FMC
	60	Screw	BMZ26P060FZK
	61	Screw	BMZ30P080FZK
	62	Screw	PMZ30P040FMC
	63	Screw	PMA26P050FZK
	64	Screw	PMA26P060FZK
	65	Screw	PMZ20P080FZK
	66	Washer	RBF – 030
	67	Stabilizer (B)	REB1038
	68	Cassette plate spring	RBL – 059
	69	Washer	RBF – 076
	70	Washer	RBF1040
	71	Binder	REC – 371
	72	Steel ball (3mm)	REF – 022
	73	Steel ball (4mm)	REF – 023
	74	Screw	VCT30P060FZK
	75	LED (D3)	SLF – 401C
	76	Washer	WA21D040D013
	77	Washer	WA26N070W040
	78	Washer	WA32D080D050
	79	E ring	YE20FUC
	80	E ring	YE25FUC
	81	E ring	YE30FUC
	82	Snapring	YS24FBT
	83	Shift shaft assembly	RXB – 885
	84	Head base assembly	RXX1443
	85	Mechanism chassis assembly	RXA1366
	86	Brake lever	RNK1638
	87	Second pulley assembly	RXA1350
	88	Door frame (L)	RNE1475
	89	Pinch lever assembly	RXA1360
	90	Door frame (R)	RNE1476
	91	Damper assembly	VXA1153
	92	Half pressure spring	RBK1004
	93	Door pocket	RNK1764
	94	Loading motor	VXM1034
	95	Screw	PBZ20P060FMC
	96	Screw	BBZ20P060FMC
	97	Stabilizer	REB1161
	98	Washer	RBF – 057
	99	Acetate tape (B)	REH1003

Mark	No.	Description	Part No.
	101	Gear base assembly	RXB – 882
	102	E head	RPB1046
	103	R & P head	RPB1029
	104	Connector unit	RWZ2459
	105	Adjustment nut	RBA1047
	106	Head adjustment spring (C)	RBL – 034
	107	Hight spring	RBL – 036
	108	Head base	RNG – 334
	109	Sub – head base	RNG – 335
	110	E head base	RNG1033
	111	Earth lead assembly	RDF – 001
	112	REC switch unit	RWZ2457
	113	Tape selector unit	RWZ2458
	114	Sensor unit (B)	RWZ2460
	115	Cassette plate	RAH1306
	116	Lead cover	RNL – 793
	117	Shift roller	RNL – 731



*2 IC351 ENCODE DOLBY B/C NR



BY B/C NR

Mark	No.	Description	Part No.
	101	Gear base assembly	RXB – 882
	102	E head	RPB1046
	103	R & P head	RPB1029
	104	Connector unit	RWZ2459
	105	Adjustment nut	RBA1047
	106	Head adjustment spring (C)	RBL – 034
	107	Hight spring	RBL – 036
	108	Head base	RNG – 334
	109	Sub – head base	RNG – 335
	110	E head base	RNG1033
	111	Earth lead assembly	RDF – 001
	112	REC switch unit	RWZ2457
	113	Tape selector unit	RWZ2458
	114	Sensor unit (B)	RWZ2460
	115	Cassette plate	RAH1306
	116	Lead cover	RNL – 793
	117	Shift roller	RNL – 731

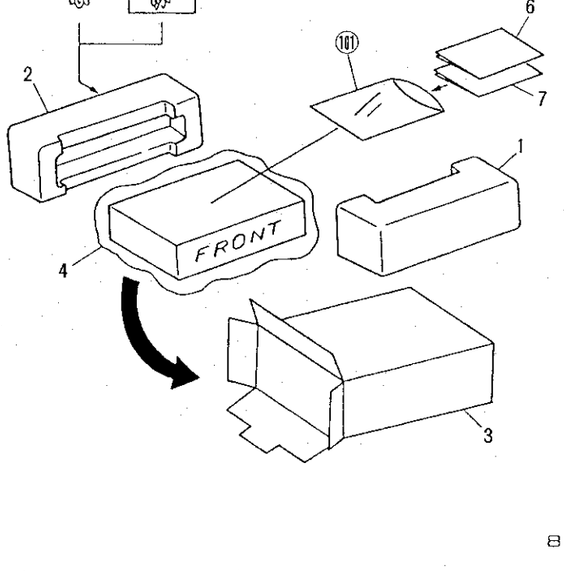
2. PACKING

NOTES:

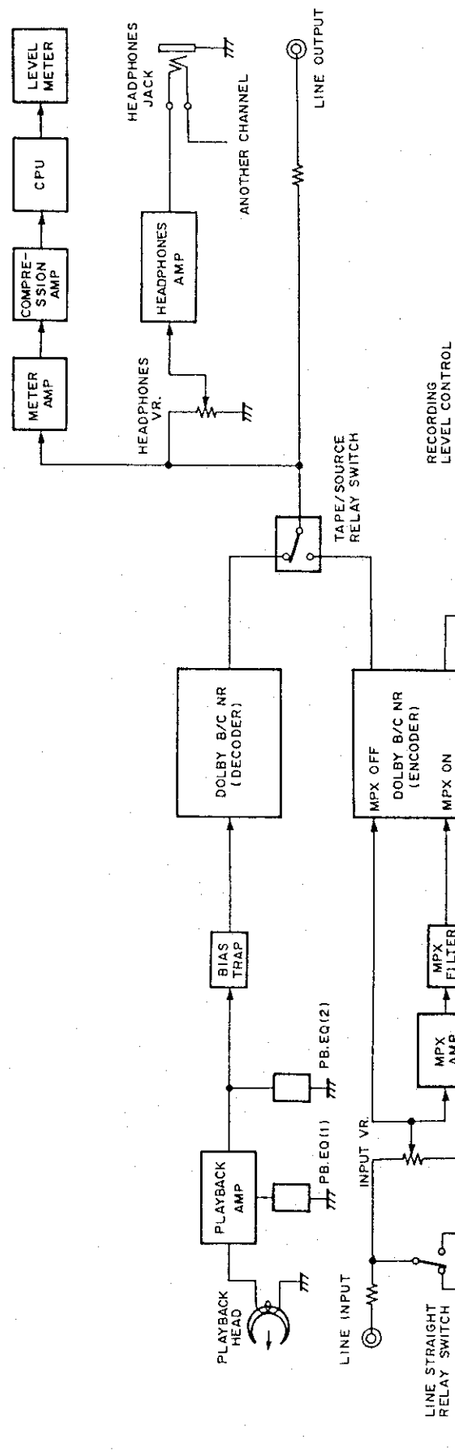
- The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked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

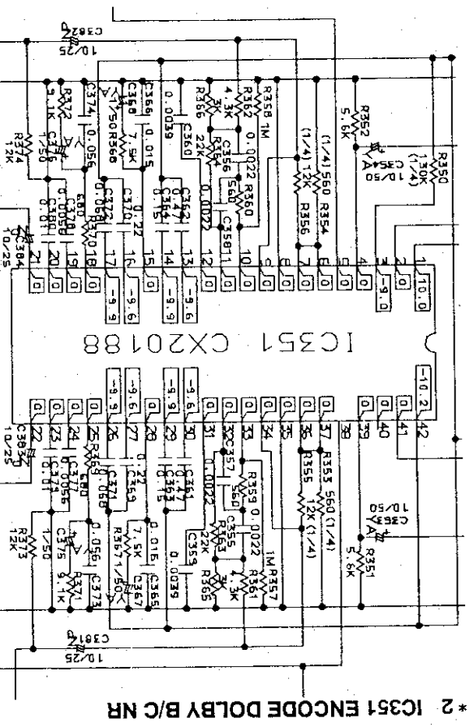
Parts List

Mark	No.	Description	Part No.
	1	Pad (F)	RHA1095
	2	Pad (R)	RHA1096
	3	Packing case	RHG1356
	4	Sheet	RHX1007
	5	Control cord	RDE1031
	6	Operating instructions (English/French)	RRE1057
	7	Operating instructions (German/Italian/Dutch/ Swedish/Spanish/Portuguese)	RRD1126
	8	Connection cord assembly	RDE1002
	9	Sheet	PHC1057
	10	Connection cord	RDE – 010
	101	Vinyl bag	RHL – 018

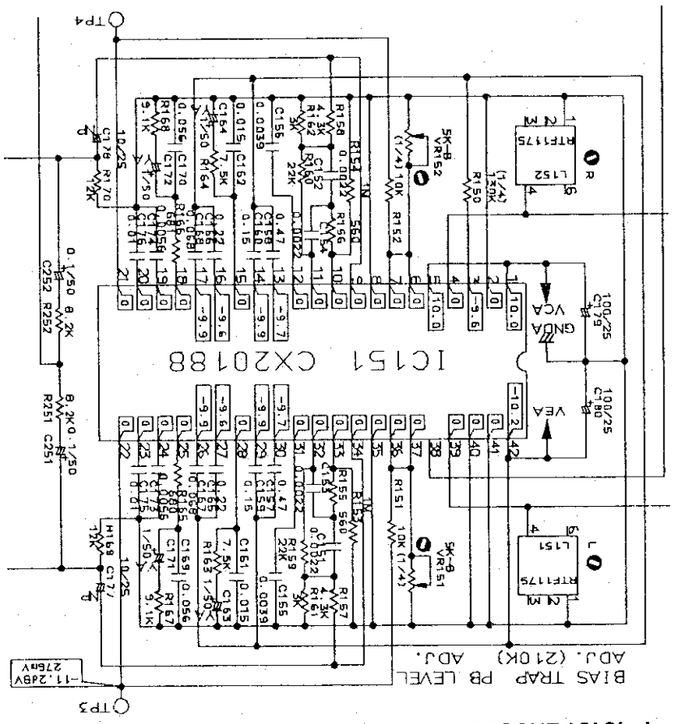


3. BLOCK DIAGRAM





*2 IC351 ENCODE DOLBY B/C NR



*1 IC151 ENCODE DOLBY B/C NR

CT-S910

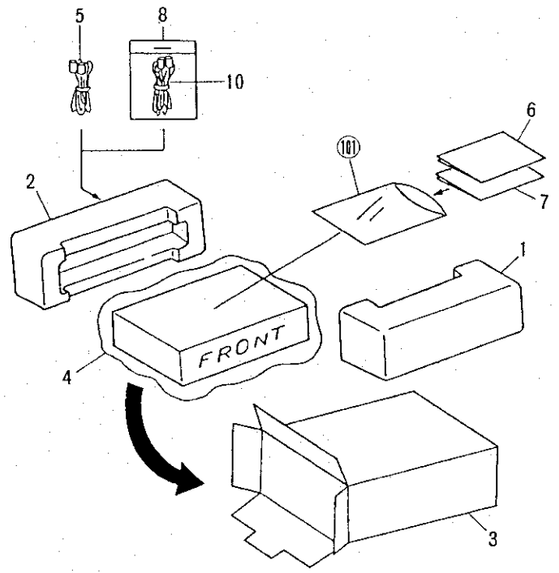
2. PACKING

NOTES:

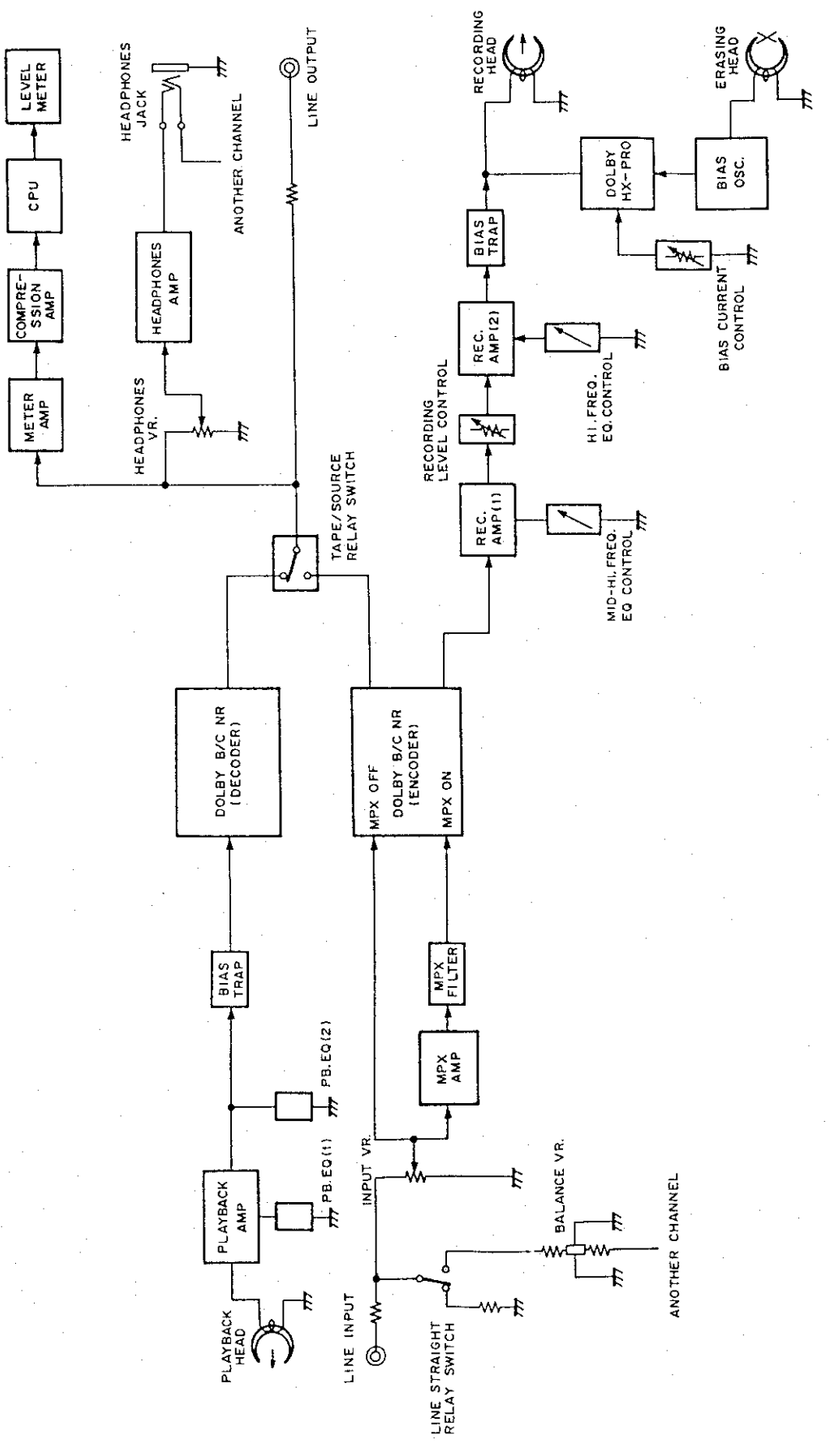
- The parts with an encircled number are generally unavailable because they are not in our Master Spare Parts List.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked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

Parts List

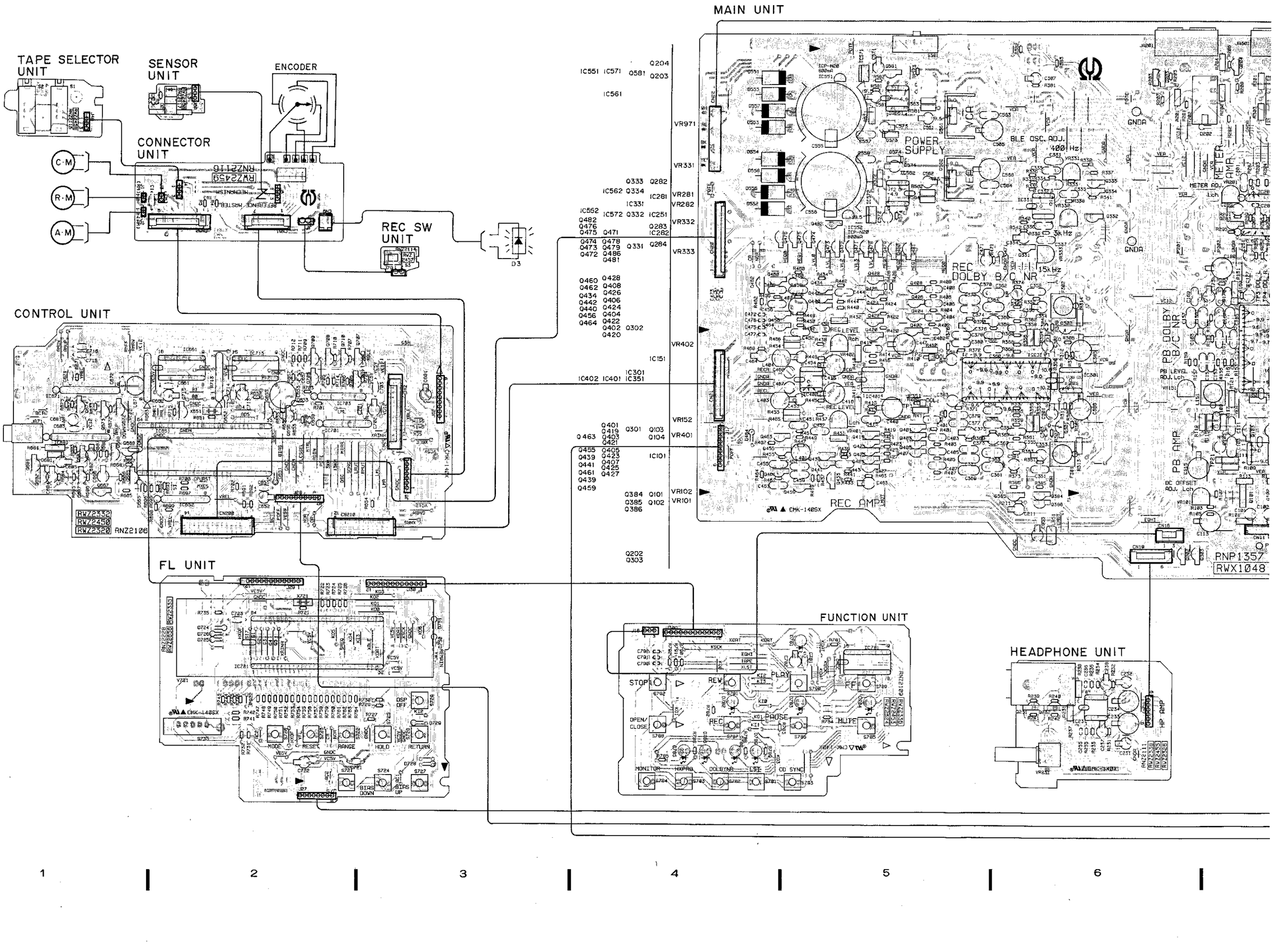
Mark	No.	Description	Part No.
	1	Pad (F)	RHA1095
	2	Pad (R)	RHA1096
	3	Packing case	RHG1356
	4	Sheet	RHX1007
	5	Control cord	RDE1031
	6	Operating instructions (English/French)	RRE1057
	7	Operating instructions (German/Italian/Dutch/ Swedish/Spanish/Portuguese)	RRD1126
	8	Connection cord assembly	RDE1002
	9	Sheet	PHC1057
	10	Connection cord	RDE – 010
	101	Vinyl bag	RHL – 018

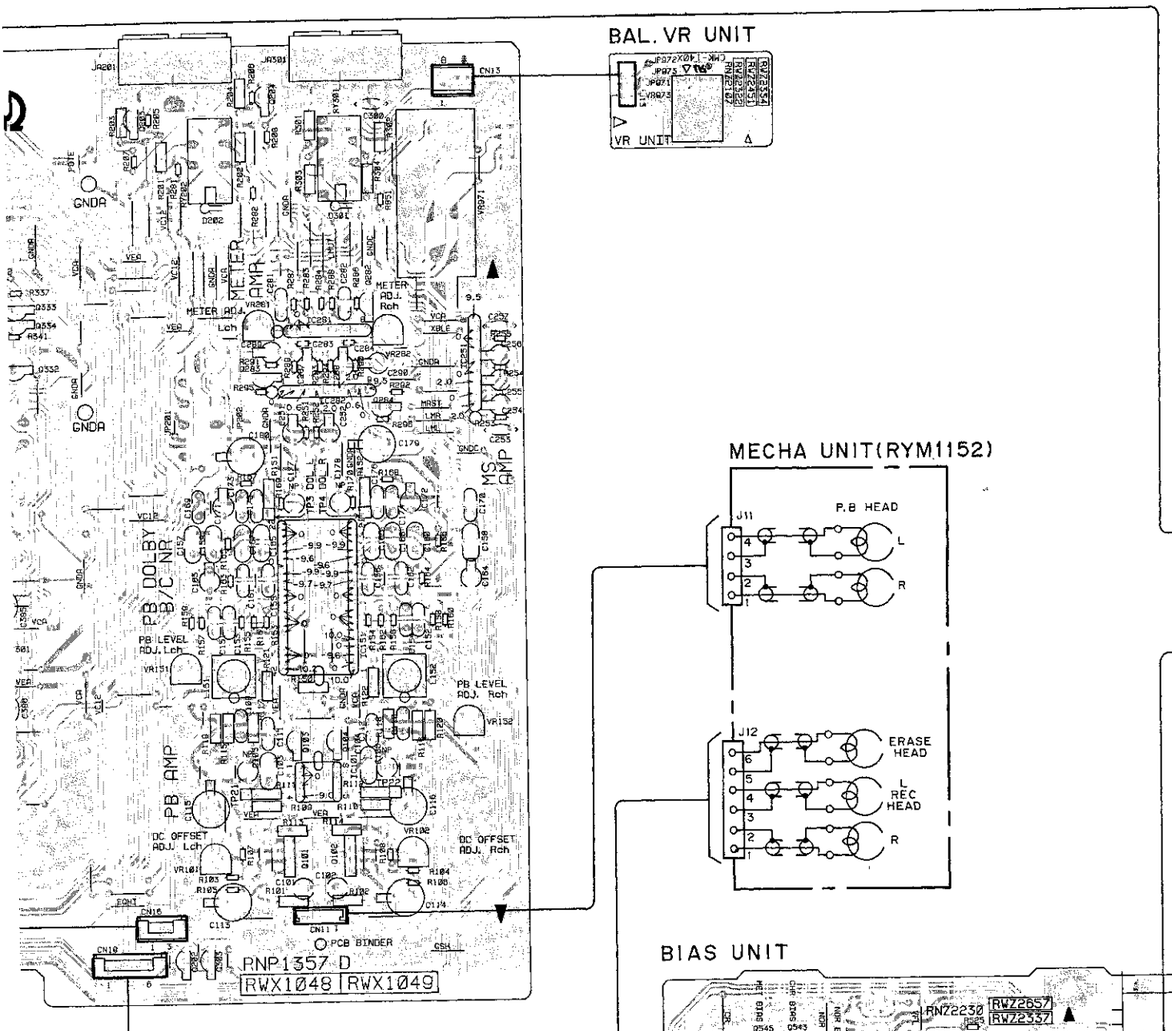


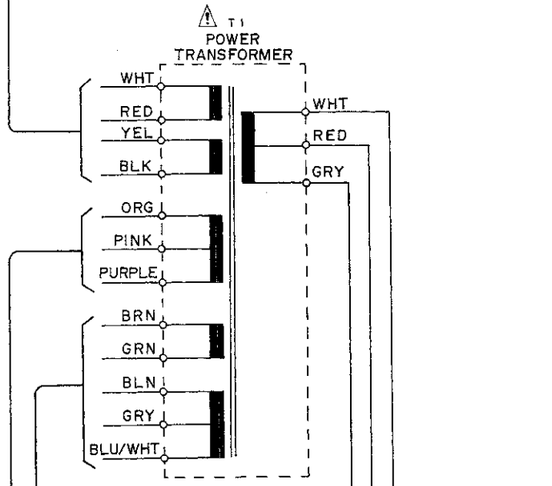
3. BLOCK DIAGRAM

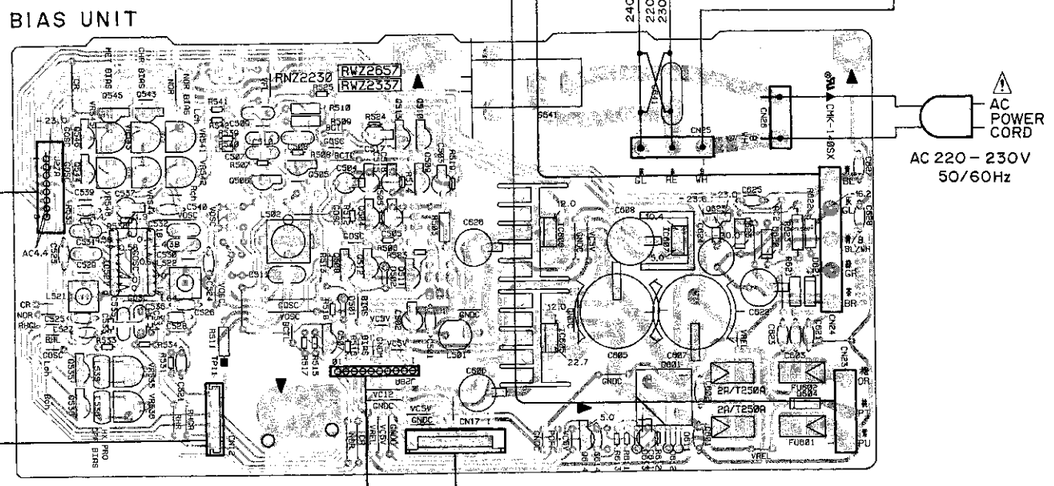


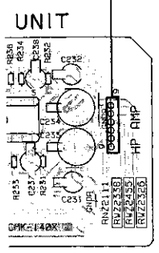
• View from component side











Line Voltage Selection

Line voltage can be changed with the following steps.
1. Disconnect the AC power cord.
2. Remove the Bonnet case.
3. Change the connection of the power transformer lead wire.
4. Stick the line voltage label on the rear panel.

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

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

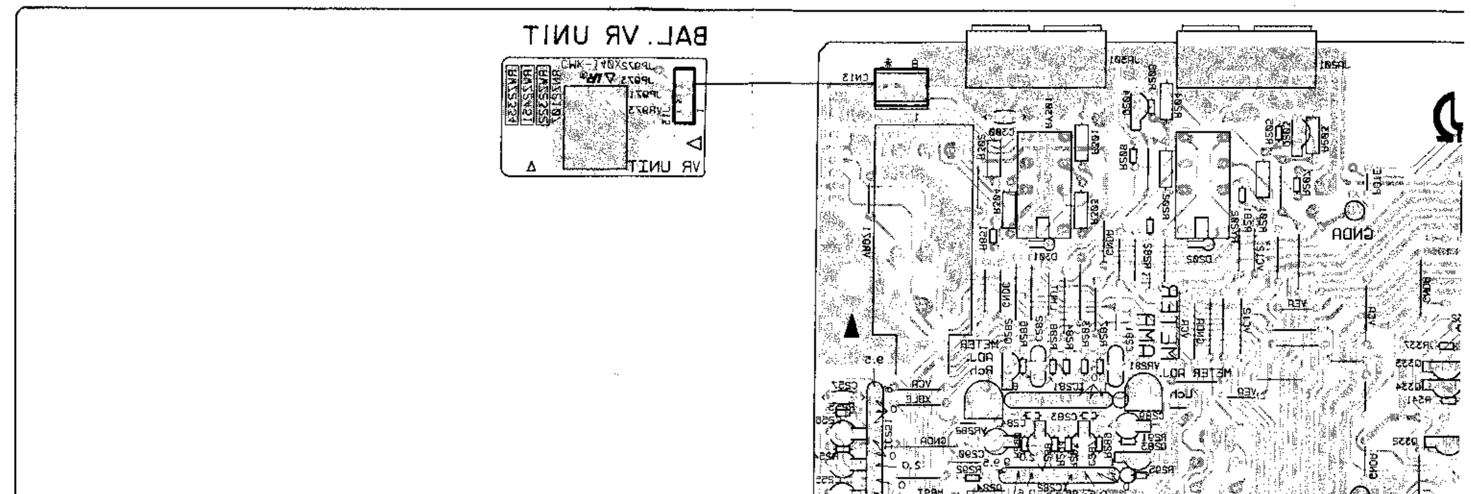
1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked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

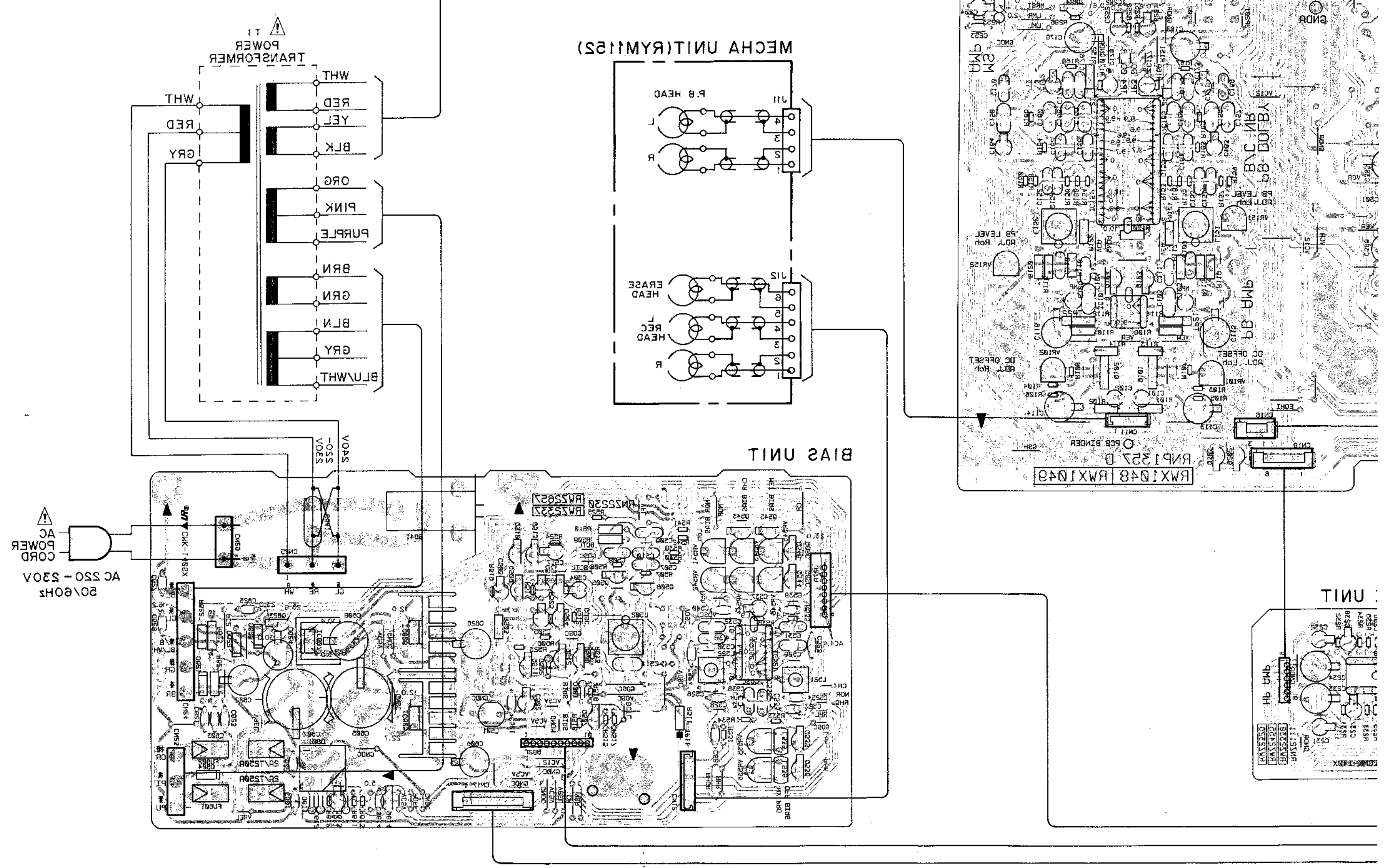
Line Voltage Selection

Line voltage can be changed with the following steps.

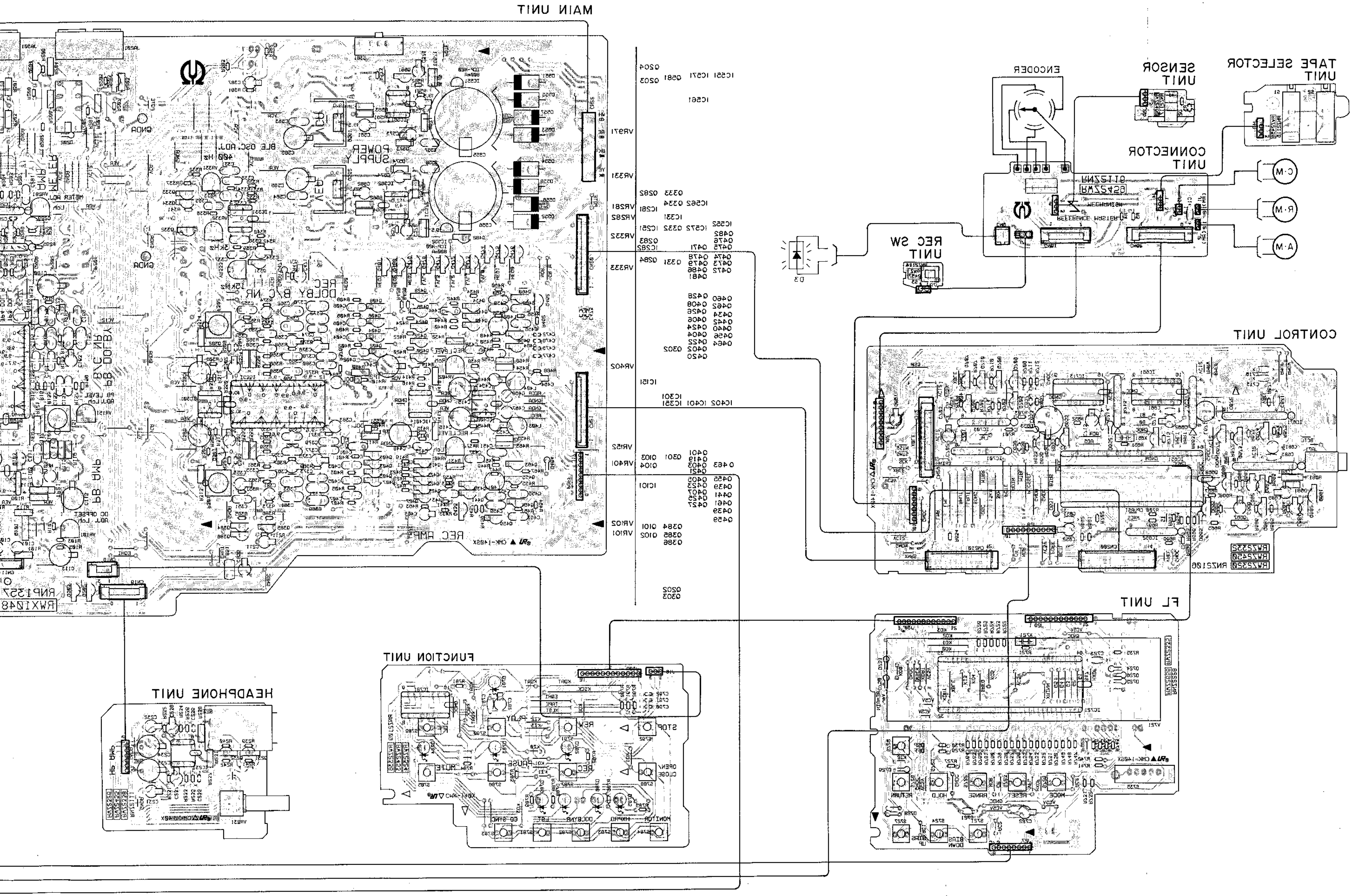
1. Disconnect the AC power cord.
2. Remove the Bonnet case.
3. Change the connection of the power transformer lead wire.
4. Stick the line voltage label on the rear panel.

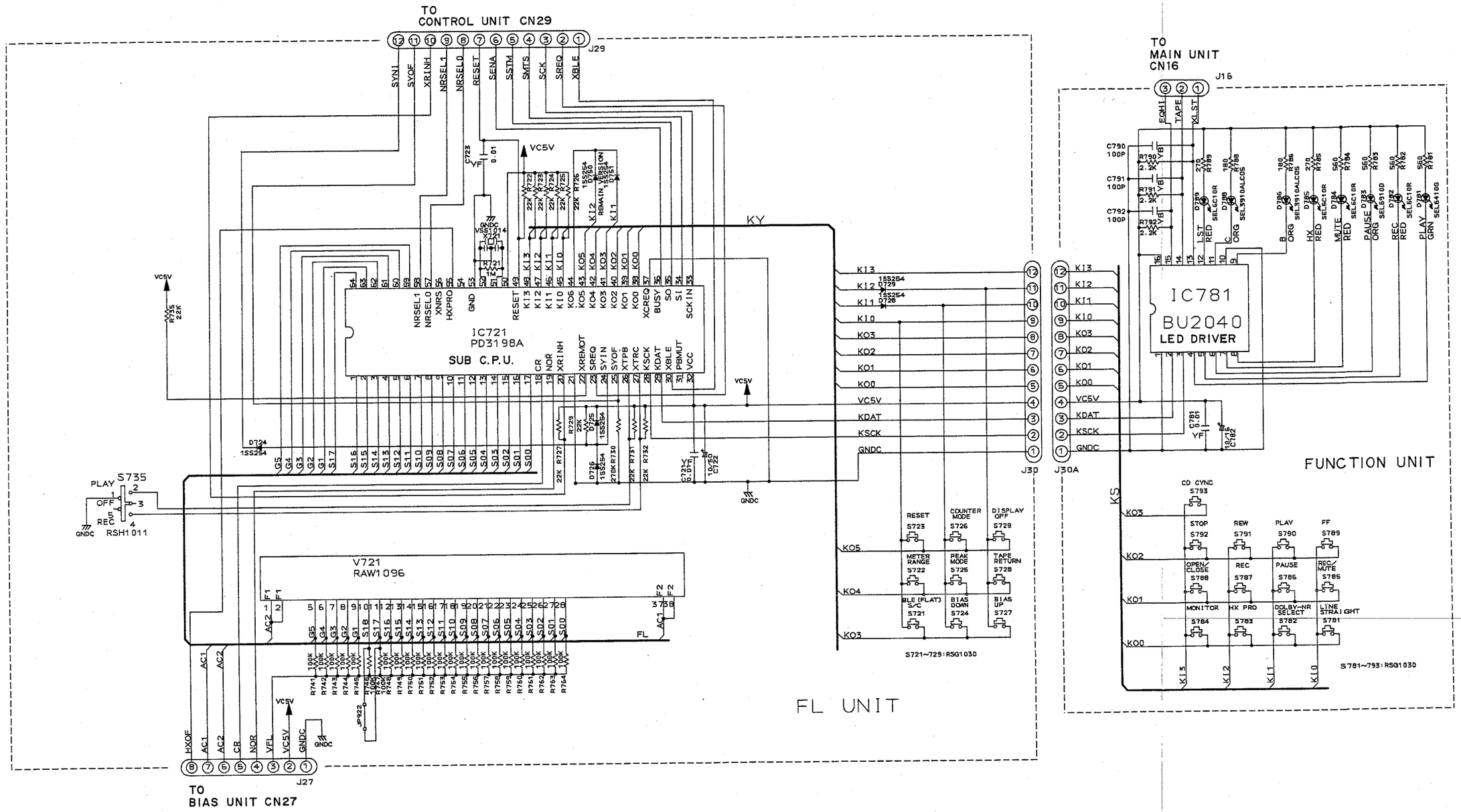
Port NO.	Description
AAX-193	220V label
AAX-192	240V label





• **View from soldering side**




TO
CONTROL UNIT CN29
J29
SYNI
SYOF
XRINH
NRSEL1
NRSEL0
RESET
SENA
SSTM
SMTS
SCK
SREQ
XBLE
IC721
PD3198A
SUB C.P.U.
KY
FL UNIT
V721
RAW1096
S735
PLAY
OFF
REC
RSH1011
TO
BIAS UNIT CN27
J27
J30
S721~729:RSG1030
TO
MAIN UNIT
CN16
J15
J30A
FUNCTION UNIT
IC781
BU2040
LED DRIVER
S781~793:RSG1030
RESET
COUNTER MODE
DISPLAY OFF
METER RANGE
PEAK MODE
TAPE RETURN
BLE (FLAT) S/C
BIAS DOWN
BIAS UP
CD CYNC
STOP
REW
PLAY
FF
OPEN/CLOSE
REC
PAUSE
REC/MUTE
MONITOR
HX PRO
DOLBY-NR SELECT
LINE STRAIGHT

5. PCB 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 ⚠ 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 × 10^1 → 561 ····· RD1/4PS 5 6 1 J
47k Ω → 47 × 10^3 → 473 ····· RD1/4PS 4 7 3 J
0.5 Ω → 0R5 ····· RN2H 0 R 5 K
1 Ω → 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 → 562 × 10^1 → 5621 ····· RN1/4SR 5 6 2 1 F

Mark	No.	Description	Part No.

LIST OF ASSEMBLIES

	CONTROL UNIT	
	BALANCE VR UNIT	
	FL UNIT	
	FUNCTION UNIT	
	BIAS UNIT	
	HEADPHONE UNIT	
	MAIN UNIT	
	RELAY UNIT	RWM1454
	├REC SWITCH UNIT	
	├TAPE SELECTOR UNIT	
	├CONNECTOR UNIT	
	└SENSOR UNIT	

CONTROL UNIT

SEMICONDUCTORS

	IC651 MAIN CPU	PD4359A
	IC652	M6M80011AL
	IC661 CMOS LOGIC IC	TC4050BP
	IC671 IC	BA6109
	IC681 IC	BA6109
	IC701 COMPARATOR	BA10393N
	IC703 COMPARATOR	BA10393N
	IC713 CMOS LOGIC IC	TC4050BP
	Q655, 656 DIGITAL TRANSISTOR	DTA114TS
	Q665 TRANSISTOR	DTC114ES
	Q667 TRANSISTOR	DTC124ES
	Q668 DIGITAL TRANSISTOR	DTC114TS
	Q672-674 TRANSISTOR	DTC114ES
	Q681-683 TRANSISTOR	2SA1309A
	Q687 TRANSISTOR	2SA1309A
	Q688 TRANSISTOR	DTC114ES
	Q705 DIGITAL TRANSISTOR	DTA114ES
	Q706 TRANSISTOR	2SC3311A
	Q707, 708 DIGITAL TRANSISTOR	DTC114TS
	Q709 DIGITAL TRANSISTOR	DTA114ES
	Q710 DIGITAL TRANSISTOR	DTC114TS
	Q715 TRANSISTOR	DTC114ES
	D651-653 DIODE	1SS254
	D665 DIODE	1SS254
⚠	D681 RECRIFIER DIODE	1SR35-100A

COILS/TRANSFORMERS

	L671	RTF1068

CAPACITORS

	C651 CERAMIC CAPACITOR	CKCYF103Z50
	C652 ELECTR. CAPACITOR	CEAS101M10
	C653 ELECTR. CAPACITOR	CEAS102M6R3
	C657, 658 AXIAL CAPACITOR	CKPUYB101K50
	C661 CERAMIC CAPACITOR	CKCYF103Z50
	C662 ELECTR. CAPACITOR	CEAS100M50
	C666 ELECTR. CAPACITOR	CEAS330M16
	C671 CERAMIC CAPACITOR	CKCYF103Z50
	C672 CERAMIC CAPACITOR	CKCYF473Z50
	C681 ELECTR. CAPACITOR	CEANP4R7M25
	C682 ELECTR. CAPACITOR	CEASR22M50
	C683 CERAMIC CAPACITOR	CKCYF103Z50
	C684 ELECTR. CAPACITOR	CEAS330M16
	C685 ELECTR. CAPACITOR	CEAS101M16
	C691 ELECTR. CAPACITOR	CEAS100M50
	C701 CERAMIC CAPACITOR	CKCYF473Z50
	C702 ELECTR. CAPACITOR	CEAS100M50
	C703 CERAMIC CAPACITOR	CKCYF473Z50
	C713 ELECTR. CAPACITOR	CEAS100M50
	C714-716 CERAMIC CAPACITOR	CKCYF103Z50

RESISTORS

	R651-658 CARBONFILM RESISTOR	RD1/6PM□□□J
	R663(10k)	RCX□□□□
	R665-668 CARBONFILM RESISTOR	RD1/6PM□□□J
	R671-675 CARBONFILM RESISTOR	RD1/6PM□□□J
	R681 METAL OXIDE RESISTOR	RS1LMF□□□J
	R683-688 CARBONFILM RESISTOR	RD1/6PM□□□J
	R691-704 CARBONFILM RESISTOR	RD1/6PM□□□J
	R705, 706 METALFILM RESISTOR	RN1/6PQ□□□□F
	R707 CARBONFILM RESISTOR	RD1/6PM□□□J
	R709-712 METALFILM RESISTOR	RN1/6PQ□□□□F
	R713(10k)	RCX□□□□
	R714, 715 CARBONFILM RESISTOR	RD1/6PM□□□J

OTHERS

	CN200	TXC-P14X-A1
	CN210 CONECTOR(12P)	TXC-P12X-A1
	JA71 JACK	RKN1014
	X651 CERAMIC RESONATOR	VSS1014

BALANCE VR UNIT

RESISTORS

	VR973(200k)	RCV1078

FUNCTION UNIT

SEMICONDUCTORS

	IC781 LOGIC IC	BU2040
	D781 LED	SEL6410G
	D782	SEL6C10R
	D783 LED	SEL6910D
	D784, 785	SEL6C10R
	D786 LED	SEL3910ALC05
	D788 LED	SEL3910ALC05
	D789	SEL6C10R

SWITCHES

	S781-793 SWITCH	RSG1030

CAPACITORS

	C781 CERAMIC CAPACITOR	CKCYF103Z50
	C782 ELECTR. CAPACITOR	CEJA100M16
	C790-792 AXIAL CAPACITOR	CKPUYB101K50

RESISTORS

	R781-786 CARBONFILM RESISTOR	RD1/6PM□□□J
	R788-792 CARBONFILM RESISTOR	RD1/6PM□□□J

HEADPHONE UNIT

SEMICONDUCTORS

	IC231 OP AMP	M5238PF
	Q231, 232 TRANSISTOR	2SD2144S

CAPACITORS

	C231, 232 ELECTR. CAPACITOR	CEYA010M50
	C233, 234 ELECTR. CAPACITOR(100/25)	PCH1076
	C235, 236 AXIAL CAPACITOR	CKPUYB221K50
	C237, 238 ELECTR. CAPACITOR	CEYA4R7M50

RESISTORS

	R231-236 CARBONFILM RESISTOR	RD1/6PM□□□J
	R237, 238 CARBONFILM RESISTOR	RDR1/4PM□□□J
	R239-242 CARBONFILM RESISTOR	RD1/6PM□□□J
	VR231 VARIABLE RESISTOR(20k)	PCS1002

OTHERS

	JA231 JACK	RKN1019

REC SWITCH UNIT

SWITCHES

	S3 SWITCH	RSG-143

TAPE SELECTOR UNIT

SWITCHES

	S1, 2	RSH-070

CONNECTOR UNIT

CAPACITORS

	C1 CERAMIC CAPACITOR	CKCYF473Z50

RESISTORS

	R4, 5 CARBONFILM RESISTOR	RD1/6PM□□□J

SENSOR UNIT

SEMICONDUCTORS

	D2	GP1A51HR

CAPACITORS

	C3 CERAMIC CAPACITOR	CKPUYY103N16

RESISTORS

	R3 CARBONFILM RESISTOR	RD1/6PM□□□J

FL UNIT

SEMICONDUCTORS

	IC721	PD3198A
	D724-726 DIODE	1SS254
	D728, 729 DIODE	1SS254
	D750, 751 DIODE	1SS254

SWITCHES

	S721-729 SWITCH	RSG1030
	S735	RSH1011

CAPACITORS

	C721 CERAMIC CAPACITOR	CKCYF103Z50
	C722 ELECTR. CAPACITOR	CEAS100M50
	C723 CERAMIC CAPACITOR	CKCYF103Z50

RESISTORS

	R721-727 CARBONFILM RESISTOR	RD1/6PM□□□J
	R729-732 CARBONFILM RESISTOR	RD1/6PM□□□J
	R735 CARBONFILM RESISTOR	RD1/6PM□□□J
	R741-764 CARBONFILM RESISTOR	RD1/6PM□□□J

OTHERS

	V721	RAW1096
	X721 CERAMIC RESONATOR	VSS1014

BIAS UNIT

SEMICONDUCTORS

	IC521 DOLBY HX PRO IC	UPC1297CA
⚠	IC605, 606 REGULATOR IC	NJM7812FA
⚠	IC607 REGULATOR IC	NJM7805FA
	Q504 TRANSISTOR	2SA1283
	Q505, 506 TRANSISTOR	2SD1302
	Q507 TRANSISTOR	2SC3311A
	Q508 TRANSISTOR	DTC124ES
	Q509 TRANSISTOR	2SC3311A
	Q510 TRANSISTOR	DTC124ES
	Q511 TRANSISTOR	DTC114ES

Mark	No.	Description	Part No.
	Q512	DIGITAL TRANSISTOR	DTA114ES
	Q513	TRANSISTOR	2SA1309A
	Q535, 536	DIGITAL TRANSISTOR	DTC114TS
	Q543-546	TRANSISTOR	DTC114ES
	Q614	TRANSISTOR	2SA1309A
⚠	Q623	TRANSISTOR	2SA1283
	D501, 502	DIODE	1SS254
⚠	D601		S2VB20
⚠	D604	RECRIFIER DIODE	1SR35-100A
	D611-613	DIODE	1SS254
⚠	D621	RECRIFIER DIODE	1SR35-100A
	D622	ZENER DIODE	MTZJ6.8B
⚠	D623	ZENER DIODE	MTZJ24D

SWITCHES

⚠	S641	SWITCH	RSA-063

COILS/TRANSFORMERS

	L501		RTF1160
	L502		RTD1067
	L521, 522		RTD1045
	L535, 536	RADIAL INDUCTOR	LFA122J

CAPACITORS

	C501	CERAMIC CAPACITOR	CKCYF473Z50
	C502	ELECTR. CAPACITOR	CEAS101M16
	C503	ELECTR. CAPACITOR	CEAS100M50
	C504, 505	ELECTR. CAPACITOR	CEAS330M16
	C507, 508	AUDIO FILM CAPACITOR	CFTXA222J50
	C509	AUDIO FILM CAPACITOR	CFTXA153J50
	C510	AUDIO FILM CAPACITOR	CFTXA332J50
	C511	PORYPROPYLENE FILM C(1500PF)	RCE1026
	C515	ELECTR. CAPACITOR	CEAS220M25
	C516	ELECTR. CAPACITOR	CEAS100M50
	C517	ELECTR. CAPACITOR	CEAS4R7M50
	C521	CERAMIC CAPACITOR	CCCCH470J50
	C523, 524	CERAMIC CAPACITOR	CKCYF473Z50
	C525, 526	CERAMIC CAPACITOR	CCCSL221K500
	C527, 528 (390P/500)	CERAMIC CAPACITOR	RCG1004
	C529, 530	AUDIO FILM CAPACITOR	CFTXA333J50
	C531, 532	AUDIO FILM CAPACITOR	CFTXA223J50
	C533, 534	AXIAL CAPACITOR	CKPUYB471K50
	C535, 536	AUDIO FILM CAPACITOR	CFTXA103J50
	C537	ELECTR. CAPACITOR	CEAS330M16
	C539, 540	CERAMIC CAPACITOR	CKCYF103Z50
	C601-603	CERAMIC CAPACITOR	CKCYF473Z50
	C605	ELECTR. CAPACITOR(6800μF/25)	RCH1032
	C606	ELECTR. CAPACITOR	CEAS101M16
	C607	ELECTR. CAPACITOR	CEAS682M16
	C608	ELECTR. CAPACITOR	CEAS102M6R3
	C611	ELECTR. CAPACITOR	CEAS4R7M50
	C614	CERAMIC CAPACITOR	CKCYF103Z50
	C621	CERAMIC CAPACITOR	CKCYF473Z50
	C622	ELECTR. CAPACITOR	CEAS101M50
	C623	CERAMIC CAPACITOR	CKCYF473Z50
	C624	ELECTR. CAPACITOR	CEAS101M25
	C625	CERAMIC CAPACITOR	CKCYF473Z50
	C626	ELECTR. CAPACITOR	CEAS101M16
	C627, 628	CERAMIC CAPACITOR	CKCYF473Z50
⚠	C641	CAPACITOR(0.01μF/AC400)	VCG-044

RESISTORS

	R503	CARBONFILM RESISTOR	RD1/2LF□□□J
	R505-508	CARBONFILM RESISTOR	RD1/6PM□□□J
	R509, 510	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R511	CARBONFILM RESISTOR	RD1/2LF□□□J
	R512-514	CARBONFILM RESISTOR	RD1/6PM□□□J
	R515, 516	METALFILM RESISTOR	RN1/6PQ□□□□F
	R517-519	CARBONFILM RESISTOR	RD1/6PM□□□J
	R523-525	CARBONFILM RESISTOR	RD1/6PM□□□J
	R531	CARBONFILM RESISTOR	RD1/6PM□□□J
	R533-536	CARBONFILM RESISTOR	RD1/6PM□□□J
	R539-542	CARBONFILM RESISTOR	RD1/6PM□□□J
	R611-613	CARBONFILM RESISTOR	RD1/6PM□□□J
⚠	R621	FUSLIBLE RESISTOR	RFA1/4L□□□J
	R622	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R623	METAL OXIDE RESISTOR	RS1LMF□□□J
	VR535, 536, 541-544	VR(3.3k)	RCP1089
	VR545, 546	VR(15k)	RCP1090

MAIN UNIT

SEMICONDUCTORS

	IC101	OP-AMP-IC	M5220P
	IC151	DOLBY-B, C IC	CX20188
	IC251	IC	BA335
	IC281	IC	BA15218N
	IC282		BA6138
	IC301	OP-AMP, IC	M5218AP
	IC331	OP-AMP IC	BA15218
	IC351	DOLBY-B, C IC	CX20188
	IC401, 402	OP AMP	M5238PF
⚠	IC551, 552	IC PROTECTOR	ICP-N20
	IC561, 562	OP-AMP IC	NJM2114D
⚠	IC571	REGULATOR IC	NJM78M12FA
⚠	IC572	REGULATOR IC	NJM79M12FA
	Q101, 102	N-DUAL-FET	2SK389
	Q103, 104	DIGITAL TRANSISTOR	DTC114TS
	Q202	DIGITAL TRANSISTOR	DTC114TS
	Q203, 204	TRANSISTOR	2SD2144S
	Q282	TRANSISTOR	DTC114ES
	Q283, 284	TRANSISTOR	DTC124ES
	Q301, 302	TRANSISTOR	2SD2144S
	Q303	DIGITAL TRANSISTOR	DTC114TS
	Q331-334	TRANSISTOR	DTC114ES
	Q384	DIGITAL TRANSISTOR	DTA114ES
	Q385, 386	TRANSISTOR	DTC114ES
	Q401-408	DIGITAL TRANSISTOR	DTC114TS
	Q419-428	DIGITAL TRANSISTOR	DTC114TS
	Q433, 434	TRANSISTOR	2SD2144S
	Q439-442	DIGITAL TRANSISTOR	DTC114TS
	Q455, 456	DIGITAL TRANSISTOR	DTC114TS

CT-S910

Mark	No.	Description	Part No.
	Q459-462	DIGITAL TRANSISTOR	DTC114TS
	Q463, 464	TRANSISTOR	2SD2144S
	Q471-476	DIGITAL TRANSISTOR	DTA114ES
	Q478-482	DIGITAL TRANSISTOR	DTA114ES
⚠	Q561	TRANSISTOR	2SD1855
⚠	Q562	TRANSISTOR	2SB1335
	Q581	TRANSISTOR	2SA1309A
	D202	DIODE	1SS254
	D301	DIODE	1SS254
	D464	DIODE	1SS254
	D471	ZENER DIODE	MTZJ4.7A
⚠	D551-558		31DF2-FC5
⚠	D573, 574	ZENER DIODE	HZ5BLL
SWITCHES			
	S381		RSH1025
RELAYS			
	RY202		RSR1016
	RY301		RSR1016
COILS/TRANSFORMERS			
	L151, 152	BIAS TRAP(210KHZ)	RTF1175
	L401, 402	COIL	RTF1022
	L403, 404		RTF1013
	L851	RADIAL INDUCTOR	LFA121K
	F301, 302	FILTER	RTF1059
CAPACITORS			
	C101, 102	PL. STYRENE CAPACITOR	CQSF151J50
	C103, 104	AUDIO FILM CAPACITOR	CFTXA563J50
	C105, 106	ELECTR. CAPACITOR (10μF/25)	RCH1037
	C109, 110	AUDIO FILM CAPACITOR	CFTXA472J50
	C111, 112	AUDIO FILM CAPACITOR	CFTXA273J50
	C113-116	ELECTR. CAPACITOR(100/25)	PCH1076
	C151-154	AUDIO FILM CAPACITOR	CFTXA222J50
	C155, 156	AUDIO FILM CAPACITOR	CFTXA392J50
	C157, 158	AUDIO FILM CAPACITOR	CFTXA474J50
	C159, 160	AUDIO FILM CAPACITOR	CFTXA154J50
	C161, 162	AUDIO FILM CAPACITOR	CFTXA153J50
	C163, 164	ELECTR. CAPACITOR	CEYA010M50
	C165, 166	AUDIO FILM CAPACITOR	CFTXA224J50
	C167, 168	AUDIO FILM CAPACITOR	CFTXA683J50
	C169, 170	AUDIO FILM CAPACITOR	CFTXA563J50
	C171, 172	ELECTR. CAPACITOR	CEYA010M50
	C173, 174		CFTXA562J50
	C175, 176	AUDIO FILM CAPACITOR	CFTXA103J50
	C177, 178	ELECTR. CAPACITOR (10μF/25)	RCH1037
	C179, 180	ELECTR. CAPACITOR(100/25)	PCH1076
	C211	ELECTR. CAPACITOR	CEAS010M50
	C251, 252	ELECTR. CAPACITOR	CEASR10M50
	C253	AUDIO FILM CAPACITOR	CFTXA473J50
	C254, 255	ELECTR. CAPACITOR	CEASR10M50
	C256	ELECTR. CAPACITOR	CEASR47M50
	C257	AUDIO FILM CAPACITOR	CFTXA473J50
	C281, 282	AUDIO FILM CAPACITOR	CFTXA563J50
	C283, 284	AXIAL CERAMIC C.	CCPUSL470J50
	C287-290	ELECTR. CAPACITOR	CEAS4R7M50
	C300	CERAMIC CAPACITOR	CKCYF473Z50
	C301, 302	ELECTR. CAPACITOR	CEYA010M50
	C303, 304	AXIAL CAPACITOR	CKPUYB221K50
	C331	AUDIO FILM CAPACITOR	CFTXA683J50
	C332	MYLAR FILM CAPACITOR	CQMA104J50
	C333	MYLAR FILM CAPACITOR	CQMA123J50
	C334	ELECTR. CAPACITOR	CEAS010M50
	C335	AUDIO FILM CAPACITOR	CFTXA682J50
	C336	MYLAR FILM CAPACITOR	CQMA123J50
	C337	MYLAR FILM CAPACITOR	CQMA182J50
	C353, 354	ELECTR. CAPACITOR	CEYA100M50
	C355-358	AUDIO FILM CAPACITOR	CFTXA222J50
	C359, 360	AUDIO FILM CAPACITOR	CFTXA392J50
	C361, 362	AUDIO FILM CAPACITOR	CFTXA474J50
	C363, 364	AUDIO FILM CAPACITOR	CFTXA154J50
	C365, 366	AUDIO FILM CAPACITOR	CFTXA153J50
	C367, 368	ELECTR. CAPACITOR	CEYA010M50
	C369, 370	AUDIO FILM CAPACITOR	CFTXA224J50
	C371, 372	AUDIO FILM CAPACITOR	CFTXA683J50
	C373, 374	AUDIO FILM CAPACITOR	CFTXA563J50
	C375, 376	ELECTR. CAPACITOR	CEYA010M50
	C377, 378		CFTXA562J50
	C379, 380	AUDIO FILM CAPACITOR	CFTXA103J50
	C381-384	ELECTR. CAPACITOR (10/25)	RCH1037
	C385, 386	ELECTR. CAPACITOR(100/25)	PCH1076
	C387	ELECTR. CAPACITOR	CEAS330M16
	C401, 402	AUDIO FILM CAPACITOR	CFTXA103J50
	C403, 404	AUDIO FILM CAPACITOR	CFTXA472J50
	C405, 406		CFTXA272J50
	C407, 408	AUDIO FILM CAPACITOR	CFTXA122J50
	C413, 414	AUDIO FILM CAPACITOR	CFTXA103J50
	C415, 416	ELECTR. CAPACITOR(100/25)	PCH1076
	C437, 438		CFTXA102J50
	C443, 444	AUDIO FILM CAPACITOR	CFTXA472J50
	C447, 448	ELECTR. CAPACITOR(220/25)	PCH1077
	C451, 452	AUDIO FILM CAPACITOR	CFTXA274J50
	C453, 454	ELECTR. CAPACITOR	CEYA330M25
	C455, 456	AUDIO FILM CAPACITOR	CFTXA103J50
	C457, 458		CFTXA562J50
	C459, 460	AUDIO FILM CAPACITOR	CFTXA472J50
	C461, 462	AUDIO FILM CAPACITOR	CFTXA222J50
	C463	ELECTR. CAPACITOR	CEAS010M50
	C464	ELECTR. CAPACITOR	CEAS100M50
	C467, 468	PL. STYRENE CAPACITOR	CQSA561J50
	C471	ELECTR. CAPACITOR	CEAS100M50
	C472-476	CERAMIC CAPACITOR	CKPUYY103N16
	C555	ELECTR. CAPACITOR(3300μF)	RCH1048
	C556	ELECTR. CAPACITOR(3300μF)	RCH1049
	C557, 558	AUDIO FILM CAPACITOR	CFTXA563J50
	C561, 562	ELECTR. CAPACITOR	CEYA100M50
	C563, 564	AUDIO FILM CAPACITOR	CFTXA563J50

Mark	No.	Description	Part No.
	C565, 566	ELECTR. CAPACITOR (100 μF/25)	PCH1084
	C571, 572	ELECTR. CAPACITOR	CEYA010M50
	C573, 574	ELECTR. CAPACITOR	CEYA330M25
	C581	ELECTR. CAPACITOR	CEAS220M50
	C855	ELECTR. CAPACITOR	CEAS101M10
RESISTORS			
	R101, 102	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R103-108	CARBONFILM RESISTOR	RD1/6PM□□□J
	R109-122	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R150-152	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R153-170	CARBONFILM RESISTOR	RD1/6PM□□□J
	R201-204	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R205-208	CARBONFILM RESISTOR	RD1/6PM□□□J
	R211	CARBONFILM RESISTOR	RD1/6PM□□□J
	R251-255	CARBONFILM RESISTOR	RD1/6PM□□□J
	R281-284	CARBONFILM RESISTOR	RD1/6PM□□□J
	R286-296	CARBONFILM RESISTOR	RD1/6PM□□□J
	R301-304	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R305-312	CARBONFILM RESISTOR	RD1/6PM□□□J
	R313, 314	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R331-342	CARBONFILM RESISTOR	RD1/6PM□□□J
	R350	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R351, 352	CARBONFILM RESISTOR	RD1/6PM□□□J
	R353-356	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R357-376	CARBONFILM RESISTOR	RD1/6PM□□□J
	R381-383	CARBONFILM RESISTOR	RD1/6PM□□□J
	R385, 386	CARBONFILM RESISTOR	RD1/6PM□□□J
	R401-408	CARBONFILM RESISTOR	RD1/6PM□□□J
	R409, 410(100k)		RCN□□□□
	R411, 412	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R413-416	CARBONFILM RESISTOR	RD1/6PM□□□J
	R417, 418	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R419-428	CARBONFILM RESISTOR	RD1/6PM□□□J
	R431, 432	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R433, 434	CARBONFILM RESISTOR	RD1/6PM□□□J
	R437-452	CARBONFILM RESISTOR	RD1/6PM□□□J
	R453, 454	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R455-464	CARBONFILM RESISTOR	RD1/6PM□□□J
	R465, 466	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R467, 468	CARBONFILM RESISTOR	RD1/6PM□□□J
	R471	CARBONFILM RESISTOR	RD1/6PM□□□J
	R561-564	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R571, 572	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R573, 574	CARBONFILM RESISTOR	RD1/6PM□□□J
	R581, 582	CARBONFILM RESISTOR	RD1/6PM□□□J
	R851	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR101, 102	VR(4.7k)	RCP1053
	VR151, 152	VARIABLE RESISTOR(5k)	RCP1088
	VR281, 282	VR(22k)	RCP1046
	VR331, 332	VR(10k)	RCP1045
	VR333	VR(47k)	RCP1047
	VR401, 402	VARIABLE RESISTOR(20k)	RCP1017
	VR971	VARIABLE RESISTOR(20k)	RCV1019
OTHERS			
	SCREW		IBZ30P100FCC
	CN20		TXC-P14P-A1
	CN21		TXC-P12P-A1
	JA201	JACK	RKB1020
	JA301	JACK	RKB1020

6. ADJUSTMENTS

6.1 MECHANISM RELATED ADJUSTMENT

1. Tape running and azimuth adjustment

No.	Mode	Adjustment Location	Specifications
1	–	–	*Insert half mirror in side A* (set screws at front).
2	PLAY	Height adjust ment unit (Refer to Fig. 1)	Playback the above tape and adjust so that there is no curling of the tape in the guide section of the head. (Refer to Fig. 2.)
3	PLAY	Azimuth adjustment screw(Refer to Fig. 1.)	Playback test tape STD–331E and adjust so that the 10 kHz output level is maximum and also so that there is no phase difference between L–ch and R–ch.
4	Check Item 2 above again and adjust again if it dnes not satisfy the specifications. (Be sure to adjust Item 3 when Item 2 is adjusted.)		

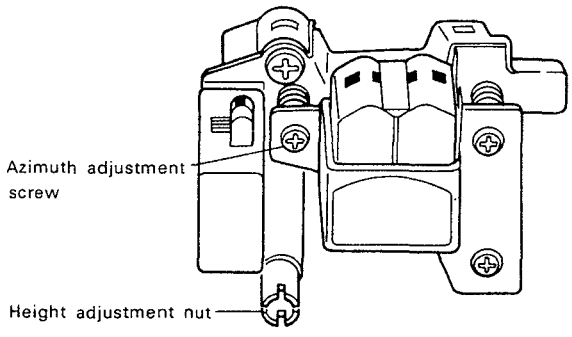


Fig. 1

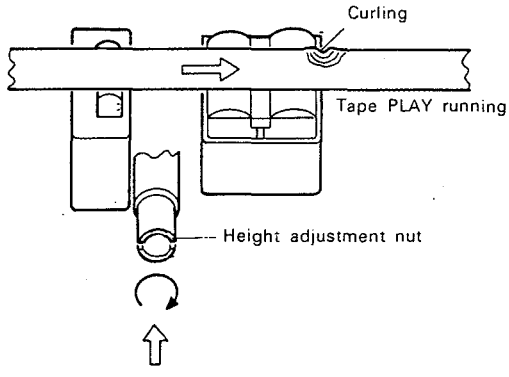


Fig. 2

2. Tape Speed Adjustment

Mode	Adjustment Location	Specifications
PLAY	Capstan motor adjustment hole (Refer to Fig. 3.)	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.

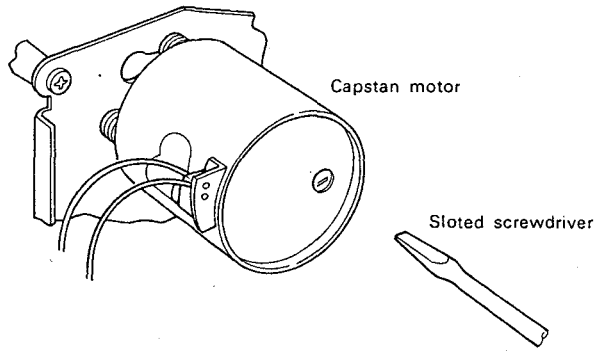


Fig. 3

6.2 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 50 kΩ (or between 47k to 52 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. 6–1)
STD–631 : 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.

List of Adjustments

Playback sections

1. Head azimuth adjustment.
2. Playback level adjustment.
3. DC balance adjustment.

Recording sections

1. Bias oscillator adjustment.
2. Bias trap adjustment.
3. Recording bias adjustment.
4. Recording level adjustment.
5. Level meter check.
6. AUTO BLE adjustment.

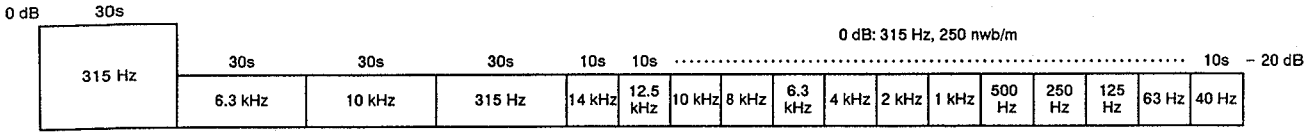


Fig. 6–1 Constants of the test tape STD–331E

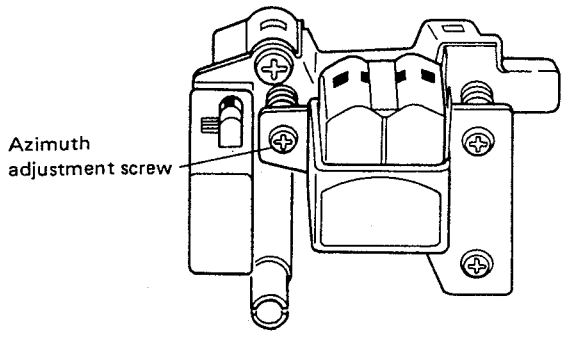


Fig. 6–2 Head azimuth adjustment

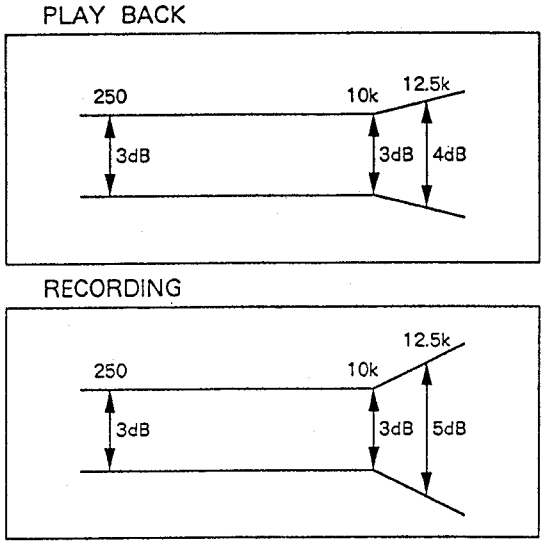


Fig. 6–3 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR105, 106 to mechanical center positions.

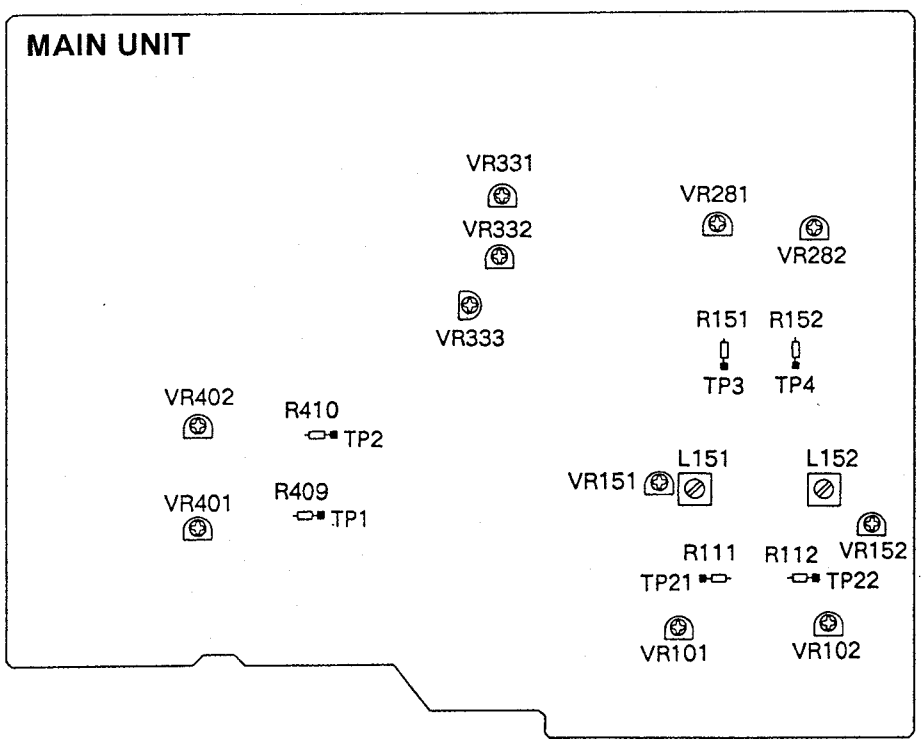
No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/–20 dB section of STD–331E test tape.	Head azimuth adjustment screw. (See Fig. 6–2)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

2. Playback Level Adjustment

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	VR151 (Lch) VR152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	–11.0 dBV	This adjustment must be performed accurately for proper Dolby level setting.

3. DC Balance Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.			VR101 (Lch) VR102 (Rch)	TP. 21 (Lch) TP. 22 (Rch)	0V ± 0.2V	



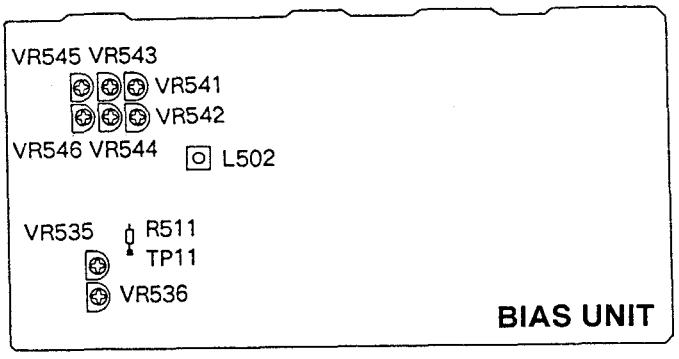


Fig. 6–4 Adjusting points

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	L502	TP. 11	210kHz ± 600 Hz	

2. Bias Trap 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	L151 (Lch) L152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Minimum output	

3. Recording Bias Adjustment

- Turn ON the DOLBY HX PRO switch on the front panel, and set the BIAS control to the center position.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz/–26 dBV (–20VU meter reading) signal to the line input terminals and insert STD–631.	—		LINE OUT	—	
2.	REC → PLAY	Record and play back the 315 Hz signal and a 10 kHz signal at –26 dBV input level.	NOR	VR541 (L ch) VR542 (R ch)		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, –26 dBV signal on STD–621 and play back.	CrO2	VR543 (L ch) VR544(R ch)		0 dBV ± 0.5 dB	
4.		Record the 10 kHz/315 Hz, –26 dBV signal on STD–610 and play back.	METAL	VR545 (L ch) VR546 (R ch)		0 dBV ± 0.5 dB	
5.	Check distortion value after adjustment is completed and confirm that there is no underbias.						
6.	Turn OFF the DOLBY HX PRO switch.						
7.	REC → PLAY	Record and play back the 315 Hz signal and a 10kHz signal at –26 dBV input level.	NOR	VR535 (L ch) VR536 (R ch)	LINE OUT	Turn the control fully counterclockwise, and gradually turn to the right to adjust to 0 dB ± 0.5 dB compared when HX–Pro is ON.	Turn control clockwise past the peak to assure proper overbias value.

Adjust in the order of NOR → CrO2 → METAL. After completing all adjustments, note that the adjustment values for CrO2 and METAL will be altered if NOR is re-adjusted, and that for METAL will be altered if CrO2 is re-adjusted.

4. Recording Level Adjustment

- Turn OFF the DOLBY NR switch.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply the 315 Hz/–6 dBV signal to the line input, and load STD–631 (NORM).	REC level control volume		TP. 1 (Lch) TP. 2 (Rch)	–11.2 dBV	
2.	REC →PLAY	Record and play back the 315 Hz/–6 dBV signal.	Deck	VR401 (Lch) VR402 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes –11.2 dBV.	Recording bias adjustment and recording level adjustment with STD–631 must be performed accurately as reference for BLE adjustment.
3.	REC →PLAY	Record the 315 Hz/–6 dBV signal on STD–621 (CrO_2), and play it back.	Check			–11.2 dBV ± 1 dB	
4.	REC →PLAY	Record the 315 Hz/–6 dBV signal on STD–610 (METAL), and play it back.	Check			–11.2 dBV ± 1 dB	

5. Level Meter Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz/–6 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 –11.2 ± 0.5 dBV (–11.2 ± 1.0 dBV in the normal mode).	Adjust by turning clockwise until the lamp lights up.

6. AUTO BLE Adjustment

- BLE Adjustment must be performed after all other adjustments are completed.
- This adjustment should be performed in the test mode.
- Entering the test mode
  Press the MODE (COUNTER), RANGE and MONITOR keys on the front panel simultaneously, with the power ON. The unit enters the test mode and oscillates a 400 Hz signal.
  Thereafter, each time the START/CLEAR key is pressed, the oscillation frequency changes as follows: 3 kHz oscillation → 15 kHz oscillation → Release

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	–	REC LEVEL VR MIN or no signal input.	–	–	–	
2.		Press the three keys MODE (COUNTER), RANGE and MONITOR on the front panel simultaneously.	VR331	Level meter Rch	Adjust so that 0 dB on the level meter lights.	400 Hz adjustment
3.		Press the START/CLEAR key once.	VR332		Adjust so that 0 dB on the level meter lights.	3 kHz adjustment
4.		Press the START/CLEAR key once.	VR333		Adjust so that –3 dB on the level meter lights.	15 kHz adjustment
5.	When the START/CLEAR key is pressed again, the test mode is released.					

6. REGLAGES

6.1 REGLAGES RELATIFS AU MECANISME

1. Réglage d'azimuth et de défilement de bande				2. Réglage de vitesse de bande		
N.°	Mode	Emplacement de réglage	Spécifications	Mode	Point de réglage	Caractéristiques
1	–	–	Insérer le demi–miroir dans le côté A (régler les vis à l'avant).	LEC–TURE	Orifice de réglage du moteur de cabestan (Se reporter à la Fig. 3)	Régler afin que la fréquence de lecture soit de 3015 ± 5 Hz au début de l'enroulement de la bande d'essai STD–301.
2	PLAY	Ecrou de réglage de hauteur (Se reporter à la Fig. 1.)	Reproduire la bande ci–dessus et régler pour qu'il n'y ait pas d'ondulation de la bande dans la section guide de la tête. (Se reporter à la Fig. 2.)	LEC–TURE	–	Reproduire à nouveau la bande d'essai STD–301 et confirmer que les caractéristiques ci–dessus sont satisfaisantes.
3	PLAY	Vis de réglage d'azimuth (Se reporter à la Fig. 1.)	Reproduire la bande d'essai STD–331E et régler pour que le niveau de sortie de 10 kHz soit maximum et également pour qu'il n'y ait pas de déphasage entre le canal gauche et le canal droit.			
4	Vérifier à nouveau l'article 2 ci–dessus et régler s'il ne satisfait pas les spécifications.(Toujours régler l'article 3 lorsque l'article 2 est réglé.)					

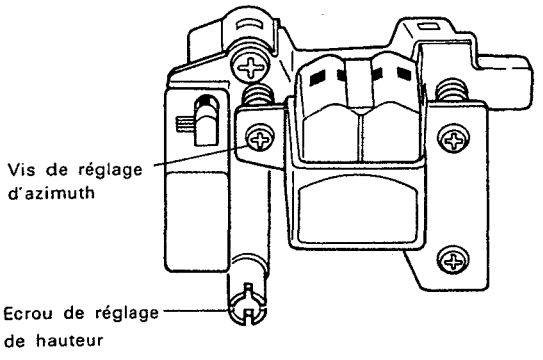


Fig. 1

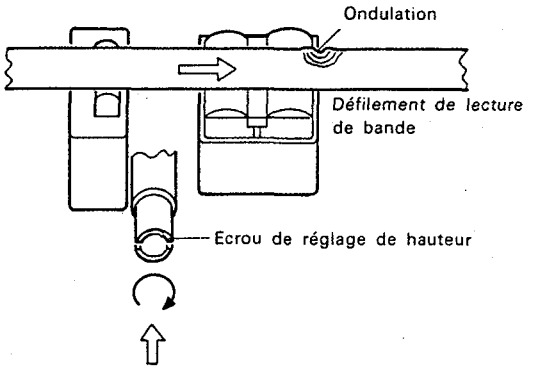


Fig. 2

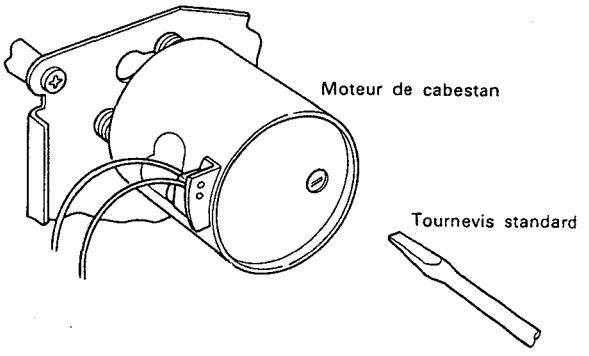


Fig. 3

6.2 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 0 dBV=1 Vrms.
5. Connecter une résistance de charge de 50 kΩ (tolérance 47k à 52 kΩ) 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 (TAPE SELECTOR) : NORM

Bandes d'essai

STD–331E : Réglages de la lecture (Voir fig. 6–1)
STD–631 : Bande vierge de type normal
STD–621 : Bande vierge de type chrome
STD–610 : Bande vierge de type métal

Liste des réglages

Sections de lecture

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

Sections d'enregistrement

1. Réglage de l'oscillateur de polarisation.
2. Réglage du circuit réjecteur de polarisation
3. Réglage de la polarisation d'enregistrement.
4. Réglage du niveau d'enregistrement.
5. Réglage de l'indicateur de niveau.
6. Réglage de AUTO BLE

* Le niveau d'enregistrement de référence étant de 250 nwb/m pour le STD–331E, le niveau d'enregistrement sera supérieur de 4 dB pour le STD–331B (160 nw/m). Pour le réglage, tenir compte du type de bande utilisé.

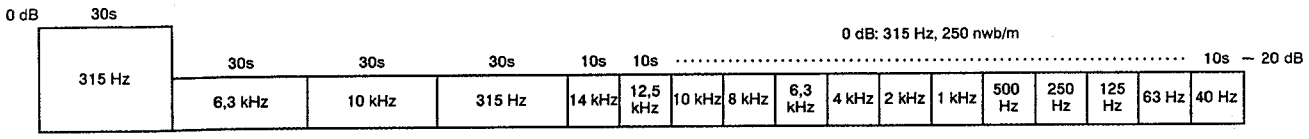


Fig. 6–1 Constantes de la bande d'essai STD–331E

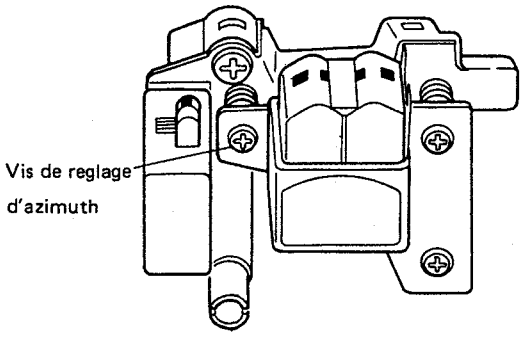


Fig. 6–2 Réglage de l'azimut de la tête

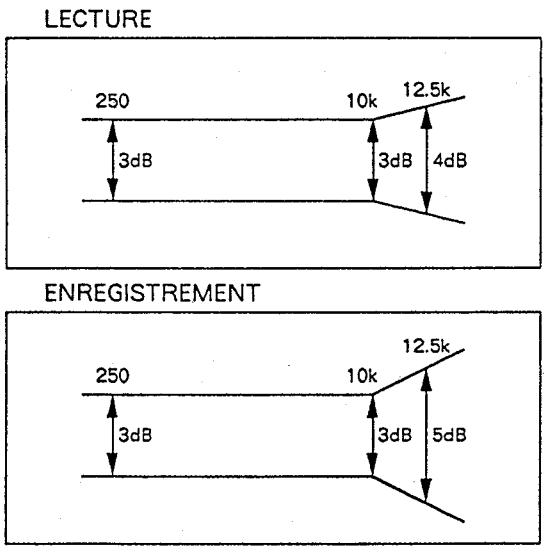


Fig. 6–3 Zone de réponse en fréquence

SECTION DE LECTURE

1. Réglage de l'azimut de la tête

- Tourner VR105, 106 sur leur position centrale mécanique.

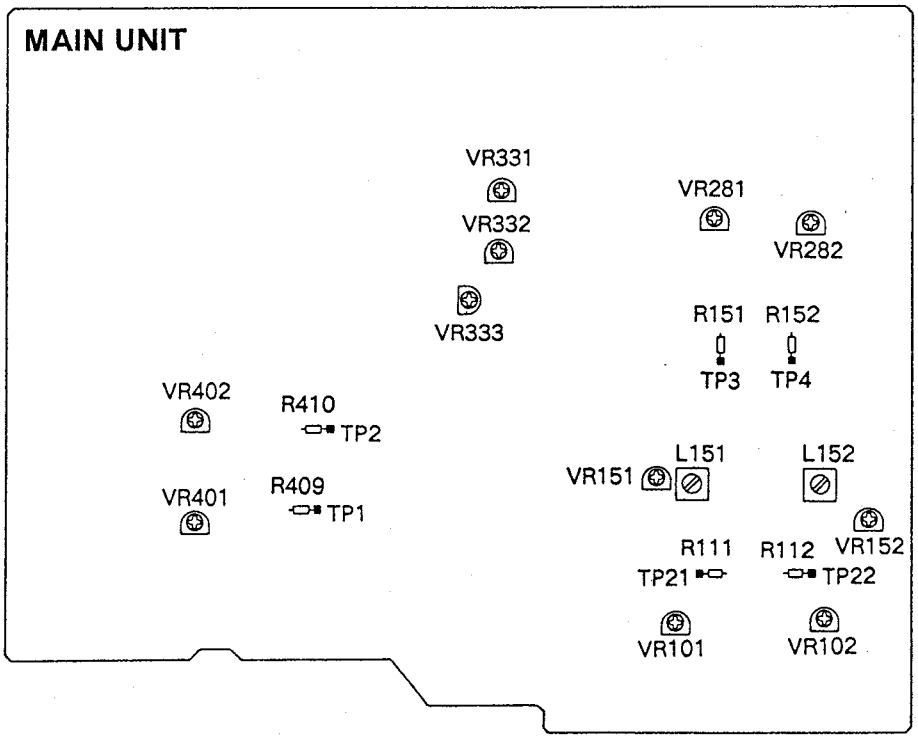
No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	PLAY	Reproduire la section 10 kHz/–20 dB de la bande d'essai STD–331E.	Vis de réglage de l'azimut de la tête. (Voir fig. 6–2)	LINE OUT	Niveau du signal de reproduction maximum.	
2.	STOP	Verrouiller la vis avec le verrouillage de vis après avoir terminé le réglage.				

2. Réglage du niveau de lecture

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage		Points de mesure	Valeur de réglage	Remarques
1.	PLAY	Reproduire la section 315 Hz/0 dB de la bande d'essai STD–331E.	Platine	VR151 (can. G) VR152 (can. D)	TP. 3 (can. G) TP. 4 (can. D)	–11,0 dBV	Ce réglage doit être effectué avec précision pour un réglage adéquat du niveau Dolby.

3. Réglage de l'équilibre CC

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.			VR101 (can. G) VR102 (can. D)	TP. 21 (can. G) TP. 22 (can. D)	0V ± 0,2V	



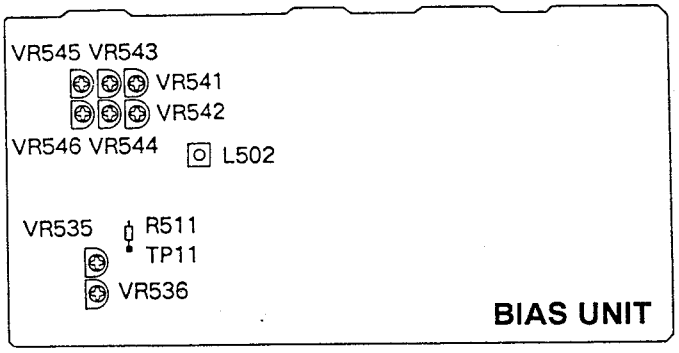


Fig. 6–4 Points réglage

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/ PLAY	Charger la bande d'essai STD–610 et n'introduire aucun signal.	Platine	L502	TP. 11	210 kHz ± 600 Hz	

2. Réglage du circuit réjecteur de polarisation

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage		Points de mesure	Valeur de réglage	Remarques
1.	REC/ PLAY	Charger la bande d'essai STD–610 et n'introduire aucun signal.	Platine	L151 (can. G) L152 (can. D)	TP. 3 (can. G) TP. 4 (can. D)	Sortie minimum	

3. Réglage de la polarisation d'enregistrement

- Mettre l'interrupteur DOLBY HX PRO en circuit sur le panneau avant et régler la commande de polarisation BIAS sur la position centrale.

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/–26 dBV (lecture du décibelmètre –20) aux terminaux d'entrée de ligne et insérer STD–631.	–		LINE OUT	–	
2.	REC → PLAY	Enregistrer et reproduire un signal de 315 Hz et un signal de 10 kHz à un niveau d'entrée de –26 dBV.	NOR	VR541 (can.G) VR542 (can.D)		Enregistrer et reproduire continuellement, comparant les niveaux de lecture de 315 Hz et 10 kHz et régler à 0 ± 0,5 dB.	
3.		Enregistrer le signal de 10 kHz/315 Hz/–26 dBV sur STD–621 et reproduire.	CrO2	VR543 (can.G) VR544 (can.D)		0 dBV ± 0,5 dB	
4.		Enregistrer le signal 10 kHz/315 Hz/–26 dBV sur STD–610 et reproduire.	METAL	VR545 (can.G) VR546 (can.D)		0 dBV ± 0,5 dB	
5.	Vérifier la valeur de distorsion après avoir trminé le réglage et confirmer qu'il n'y a pas de sous polarisation.						
6.	Mettre l'interrupteur DOLBY HX PRO hors circuit.						
7.	REC → PLAY	Enregistrer et reproduire un signal de 315 Hz et un signal de 10 kHz à un niveau d'entée de –26 dBV.	NOR	VR535 (can.G) VR536 (can.D)	LINE OUT	Tourner la commande à fond dans le sens contraire des aiguilles d'une montre. Puis la tourner graduellement vers la droite pour ajuster à 0 dB ± 0,5 dB comparé quand HX–Pro est en circuit.	Tournerla commande à droite au–delà de la crête pour assurer la valeur overbias correcte.

Régler dans l'ordre NOR → CrO2 → METAL. Après l'achèvement de tous les réglages, noter que la valeur de CrO2 et METAL sera modifiée si NOR est réajusté, et que celle de METAL le sera si CrO2 est réajusté.

4. Réglage du niveau d'enregistrement

- Mettre l'interrupteur DOLBY NR hors circuit.

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage		Points de mesure	Valeur de réglage	Remarques
1.	REC/ PAUSE	Appliquer le signal 315 Hz/ –6 dBV à l'entrée de ligne line et charger STD–631 (NORM).	Volume de la commande de niveau d'enregistrement.		TP. 1 (can.G) TP. 2 (can. D)	–11.2 dBV	
2.	REC →PLAY	Enregistrer et reproduire le signal 315 Hz/–6 dBV.	Platine	VR401 (can. G) VR402 (can. D)	TP. 3 (can. G) TP. 4 (can. D)	Enregistrer, reproduire et régler de manière répétée de sorte que le niveau du signal devienne –11.2 dBV.	L'enregistrement du réglage de polarisation et l'enregistrement du réglage de niveau avec STD–631 doivent être réalisés avec précision comme référence pour le réglage BLE.
3.	REC →PLAY	Enregistrer le signal 315 Hz/ –6 dBV sur STD–621 (CrO2) et le reproduire.	Vérifier			–11.2 dBV ± 1 dB	
4.	REC →PLAY	Enregistrer le signal 315 Hz/ –6 dBV sur STD–610 (METAL) et le reproduire.	Vérifier			–11.2 dBV ± 1 dB	

5. Réglage 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/–6 dBV (316 mV) aux bornes d'entée de ligne.	VR281 (can. G) VR282 (can. D)	TP. 1 (can. G) TP. 2 (can. D)	Toujours prévoir un mode supérieur lors du réglage. Faire en sorte que le segment 0 dB s'allume à un niveau de –11,2 ± 0,5 dBV (–11,2 ± 1,0 dBV en mode normal).	Ajuster en tournant dans le sens des aiguilles d'une montre jusqu' à ce que le témoin s'allume.

6. Réglage de AUTO BLE

- Le réglage de BLE doit être effectués que tous les autres réglages ont été complétés.
- Ce réglage doit être effectué dans le mode d'essai
- Introduction du mode d'essai
  Appuyer simultanément sur les touches MODE (COUNTER), RANGE et MONITOR du panneau avant, lorsque l'unité est sous tension. L'unité est alors en mode d'essai et fait osciller un signal de 400 Hz. Dés lors, chaque fois que l'on appuie sur la touche START/CLEAR, la fréquence d'oscillation change comme suit: Oscillation 3 kHz → oscillation 15 kHz → relâchement.

No.	Mode	Signal d'entrée et bande d'essai	Points de réglage	Points de mesure	Valeur de réglage	Remarques
1.	–	REC LEVEL VR MIN (résistance variable du niveau d'enregistrement mini) ou pas d'entrée de signal.	–	–	–	
2.		Appuyer simultanément sur les trois touches MODE (COUNTER), RANGE et MONITOR du panneau avant.	VR331	Décibelmetre (can. D)	Ajuster afin que 0 dB sur le décibelmètre s'allume.	Réglage 400 Hz
3.		Appuyer une fois sur la touche START/CLEAR.	VR332		Ajuster afin que 0 dB sur le décibelmètre s'allume.	Réglage 3 kHz
4.		Appuyer une fois sur la touche START/CLEAR.	VR333		Ajuster afin que –3 dB sur le décibelmètre s'allume.	Réglage 15 kHz
5.	Lorsque la touche START/CLEAR est enfoncée á nouveau, le mode d'essai est relâché.					

6. AJUSTES

6.1 AJUSTES RELACIONADOS AL MECANISMO

1. Ajuste del azimut y movimiento de la cinta

N.	Mode	Punto de ajuste	Especificaciones
1	–	–	Inserte medio espejo en el lado A (fije los tormillos de delante).
2	PLAY	Tuerca de ajuste de altura (Consulte la figura 1.)	Reproduzca la cinta de arriba y ajústela de forma que no esté doblada en la sección guía de la cabeza. (Consulte la figura 2.)
3	PLAY	Tornillo de ajuste de azimut (Consulte la figura 1.)	Reproduzca la cinta de prueba STD–331E y ajústela de forma que el nivel de salida de 10 kHz sea el máximo, y que no exista diferencia de fase entre el canal izquierdo y el canal derecho.
4	Compruebe de nuevo el ítem 2 de arriba y ajuste si no se satisfacen las especificaciones. (Asegúrese de ajustar el ítem 3 después de haber ajustado el ítem 2.)		

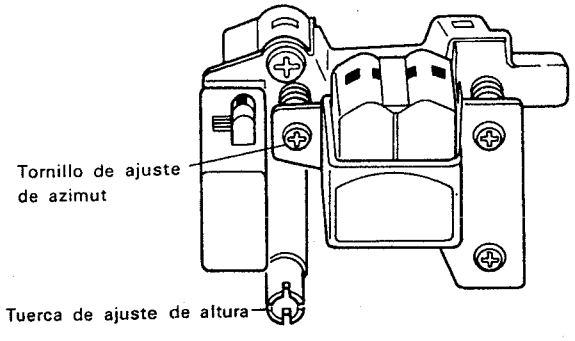


Fig. 1

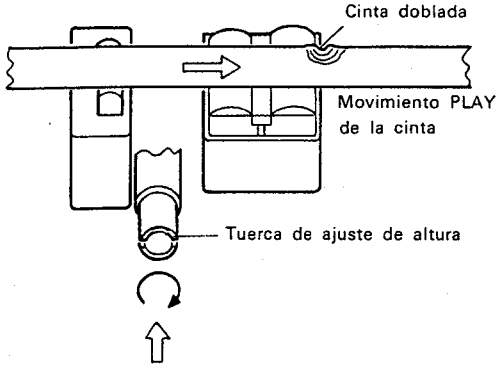


Fig. 2

2. Ajuste de velocidad de cinta

Modo	Punto de ajuste	Especificaciones
PLAY	Orificio de ajuste del motor de cabrestante (vea la Fig. 3)	Ajuste de modo que la frecuencia de reproducción sea 3015 ± 5 Hz al comienzo del bobinado de la cinta de prueba STD–301.
PLAY	–	Reproduzca nuevamente la cinta de prueba STD–301 y confirme que las especificaciones de arriba sea satisfechas.

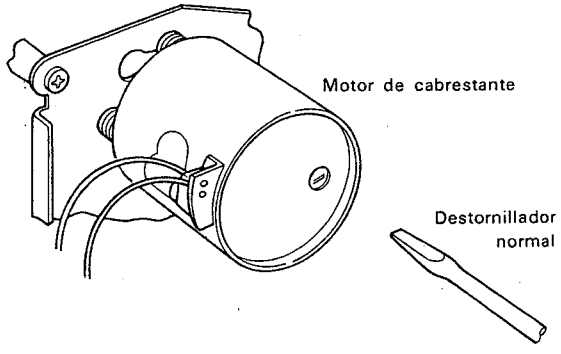


Fig. 3

6.2 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 47k 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–331E : Ajustes de reproducción (Consulte la figura 6–1)
STD–631 : Cinta virgen NORMAL
STD–621 : 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
3. Ajuste del equilibrio de CC

Secciones de grabación

1. Ajuste del oscillador de polarización
2. Ajuste del eliminador de polarización
3. Ajuste de la polarización de grabación
4. Ajuste del nivel de grabación
5. Ajuste del medidor de nivel
6. Ajuste BLE Automático

* Como el nivel de grabación de referencia es igual a 250 nwb/m para el STD–331E, el nivel de grabación será 4 dB mayor para el STD–331B (160 nwb/m). Al realizar el ajuste, preste suma atención al tipo de cintá que se está utilizando.

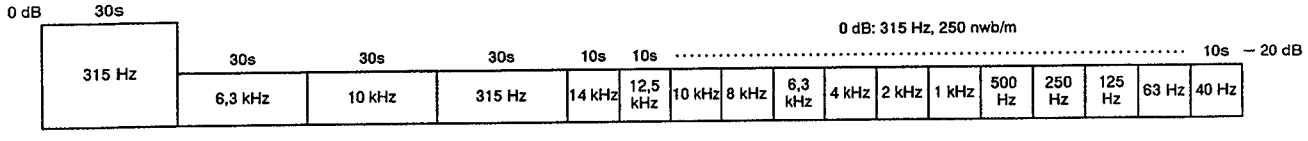


Figura 6–1 Constantes de la cinta de prueba STD–331E

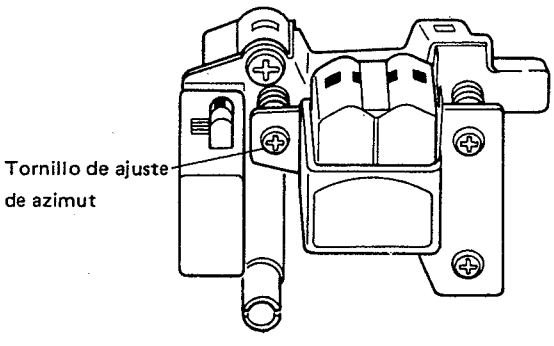


Figura 6–2 Zona de respuesta de frecuencia

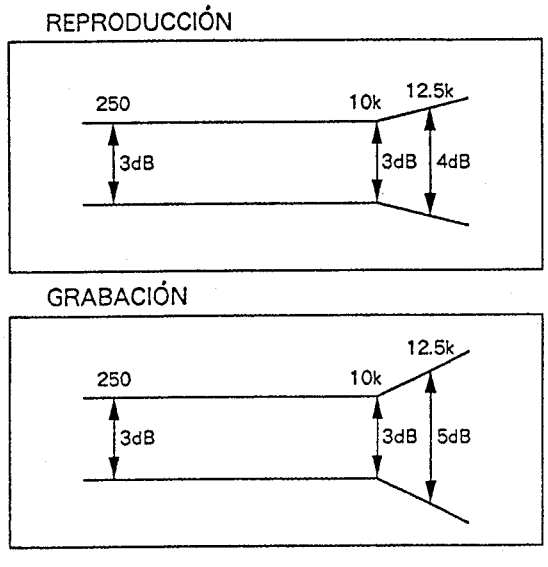


Figura 6–3 Ajuste de azimut de la cabeza

SECCIÓN DE REPRODUCCIÓN

1. Ajuste del azimut de la cabeza

- Poner VR105, 106 en las posiciones del centro mecánico.

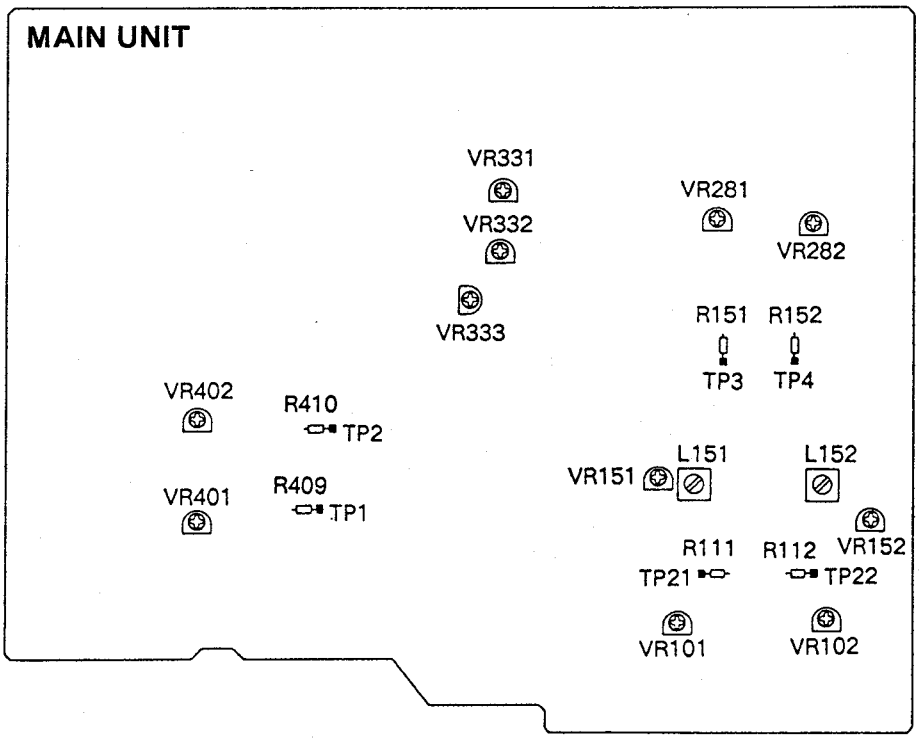
N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	PLAY	Reproduzca la sección de 10 kHz/–20 dB de la cinta de prueba STD–331E.	Tornillo de ajuste del azimut de la cabeza. (Vea la figura 6–2)	LINE OUT	Nivel máximo de la señal de reproducción.	
2.	STOP	Bloquee el tornillo con su cierre una vez finalizado el ajuste.				

2. Ajuste del nivel de reproducción

N.º	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–331E.	Platina	VR151 (Lch) VR152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	–11,0 dBV	Este ajuste debe efectuarse con precisión para lograr un buen reglaje del nivel Dolby.

3. Ajuste del equilibrio de CC

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.			VR101 (Lch) VR102 (Rch)	TP. 21 (Lch) TP. 22 (Rch)	0V ± 0,2V	



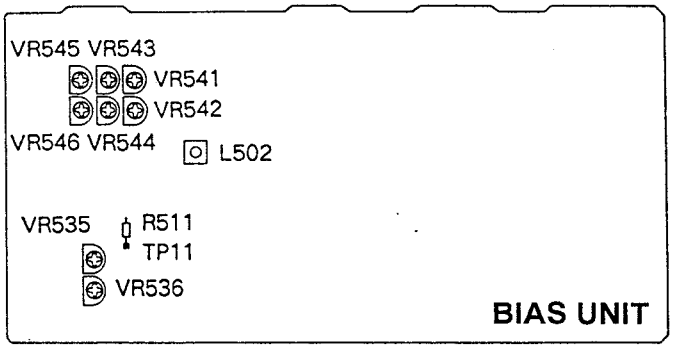


Figura. 6–4 Puntos de ajuste

SECCIÓN DE GRABACIÓN

1. Ajuste del oscilador de polarización

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PLAY	Introduzca la cinta de prueba STD–610 sin señal de entrada.	Platina	L502	TP. 11	210 kHz ± 600 Hz	

2. Adjuste del eliminador de polarización

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PLAY	Introduzca la cinta de prueba STD–610 sin señal de entrada.	Platina	L151 (Lch) L152 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Salida mínima	

3. Ajuste de la polarización de grabación

- Conecte el interruptor DOLBY HX PRO del panel delantero y coloque el control BIAS en la posición central.

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PAUSE	Aplique una señal de 315 Hz/–26 dBV (dando una lectura de –20 UV en el medidor de volumen) a los terminales de entrada de línea, e inserte el casete STD–631.	–		LINE OUT	–	
2.	REC → PLAY	Grabe y reproduzca la señal de 315 Hz y una señal de 10 kHz a un nivel de entrada de –26 dBV.	NOR	VR541 (L ch) VR542 (R ch)		Grabe y reproduzca repetidamente, comparando los niveles de reproducción 315 Hz y 10 kHz, y ajuste a 0 ± 0,5 dB.	
3.		Grabe la señal de 10 kHz /315 Hz –26 dBV en la cina STD–621, y reprodúzcala.	CrO2	VR543 (L ch) VR544 (R ch)		0 dBV ± 0,5 dB	
4.		Grabe la señal de 10 kHz /315 Hz, –26 dBV en la cinta STD–610, y reprodúzcala.	METAL	VR545 (L ch) VR546 (R ch)		0 dBV ± 0.5 dB	
5.	Verifique el valor de la distorsión una vez finalizado el ajuste y confirm e que no haya subpolarización.						
6.	Desconecte el interruptor DOLBY HX PRO.						
7.	REC → PLAY	Grabe y reproduzca la señal de 315 Hz y una señal de 10 kHz a un nivel de entrada de –26 dBV.	NOR	VR535 (L ch) VR536 (R ch)	LINE OUT	Gire el control completamente hacia la izquierda y luego gírelo gradualmente a la derecha para ajustar a 0 dB ± 0,5 dB cuando HX–PRO está conectado.	Gire el control en sentido horario hasta pasar el pico para asegurar un correcto valor de sobrepolarización.

Ajuste en el orden siguiente: NOR → CrO2 → METAL. Después de completar todos los ajustes, observe que los valores de ajuste para CrO2 y METAL se alterarán si se reajusta NOR, y que para METAL se alterarán si se reajusta CrO2.

4. Ajuste del nivel de grabación

- Desconecte el interruptor DOLBY NR.

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste		Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PAUSE	Aplique la señal de 315 Hz/–6 dBV a la entrada line y cargue STD–631 (NORM).	Control de nivel de grabación.		TP. 1 (Lch) TP. 2 (Rch)	–11.2 dBV	
2.	REC → PLAY	Grabe y reproduzca la señal de 315 Hz/–6 dBV.	Platina	VR401 (Lch) VR402 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Grabe, reproduzca y ajuste repetidamente para que el nivel de la señal de repro–ducción sea de –11.2 dBV.	El ajuste de la polarización de grabación y el ajuste del nivel de grabación con STD–631 debe efectuarse con precisión para que sirva como referencial al ajuste BLE.
3.	REC → PLAY	Grabe la señal de 315 Hz/–6 dBV en STD–621 (CrO2) y reprodúzcala.	Verifique			–11.2 dBV ± 1 dB	
4.	REC → PLAY	Grabe la señal de 315 Hz/ –6 dBV en STD–610 (METAL) y reprodúzcala.	Verifique			–11.2 dBV ± 1 dB	

5. Ajuste del medidor de nivel

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	REC/ PAUSE	Aplique una señal de 315 Hz/–6 dBV (316 mV) a los terminales de entrada de línea.	VR281 (Lch) VR282 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Seleccione siempre el modo aumentado para el ajuste. Ajuste de modo que el segmento de 0 dB se ilumine a un nivel de –11,2 ± 0,5 dBV (–11,2 ± 1,0 dBV en el modo nornal).	Ajuste girando hacia la derecha hasta que la luz se encienda.

6. Ajuste BLE Automático

- El ajuste BLE debe efectuarse después de haber terminado todos los otros ajustes.
- Este ajuste debe efectuarse en el modo de prueba.
- Cómo establecer el modo de prueba.
  Pulse simultáneamente las teclas MODE (COUNTER), RANGE y MONITOR del panel delantero con la alimentación encendida.
  La unidad entrará en el modo de prueba y oscilará una señal de 400 Hz. De aquí en adelante, cada vez que pulse la tecla START/CLEAR, la frecuencia de oscilación cambiará de la forma siguiente: Oscilación de 3 kHz → Oscilación de 15 kHz → Liberación.

N.º	Modo	Señal de entrada y cinta de prueba	Punto de ajuste	Punto de medición	Valor de ajuste	Comentarios
1.	–	VR del nivel de grabación mínimo o sin entrada de señal.	–	–	–	
2.		Pulse simultáneamente las tres teclas MODE (COUNTER), RANGE y MONITOR del panel delantero.	VR331	Medidor de nivel Rch	Ajuste de modo que se ilumine 0 dB en el medidor de nivel.	Ajuste de 400 Hz
3.		Pulse la tecla START/CLEAR una vez.	VR332		Ajuste de modo que se ilumine 0 dB en el medidor de nivel.	Ajuste de 3 kHz
4.		Pulse la tecla START/CLEAR una vez.	VR333		Ajuste de modo que se ilumine –3 dB en el medidor de nivel.	Ajuste de 15 kHz
5.	Cuando la tecla START/CLEAR se pulse de nuevo, se soltará el modo de prueba.					

7. SPECIFICATIONS

System ..... 4 track, 2-channel stereo
Heads
Recording and playback head:
Laser amorphous playback head and Laser amorphous recording head combination × 1
Motor ..... DC servo capstan motor × 1
DC reel motor × 1
DC auxiliary motor × 1
Wow and Flutter ..... No more than 0.022% (WRMS)
No more than ±0.052% (DIN)
Fast Winding Time ..... Approximately 75 seconds (C-60 tape)

Frequency Response
−20 dB recording:
TYPE IV (Metal) tape ..... 15 to 23,000 Hz ±6 dB
TYPE II (HIGH/CrO_2) tape ..... 15 to 21,000 Hz ±6 dB
TYPE I (Normal) tape ..... 15 to 21,000 Hz ±6 dB
Signal-to-Noise Ratio (Dolby NR off) ..... More than 63 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% (−4 dB)
Input (Sensitivity)
LINE (INPUT) ..... 95 mV (Input impedance 47 kΩ)
Output (Reference level)
LINE (OUTPUT) ..... 0.5 V (Output impedance 1.8 kΩ)
Headphone ..... 5.5 mW
(Load impedance 8 Ω, PHONES LEVEL control max.)

Subfunctions

- Super AUTO BLE system
- Bias control
- Dolby HX Pro Headroom Extension system (on/off possible)
- Dolby B-type and C-type noise reduction systems
- MPX filter
- Level meter with 2 modes peak hold selection (16 + 1 segments)
- Level meter range selection (wide/expanded)
- Peak level calibration system
- 4-digit electronic tape counter with mode selection
- Auto monitor selection (Tape/Source)
- Display off
- Music search (over ±15 selections)
- Automatic Tape Loose Canceller (ATLC)
- Tape return/Return play
- Auto space recording mute
- Auto tape selector
- Line straight
- Playback/recording timer start function
- CD•DECK SYNCHRO recording
- Headphones jack with level control
- Power eject (Open/Close)
- Repeat playback
- Last memory

Miscellaneous

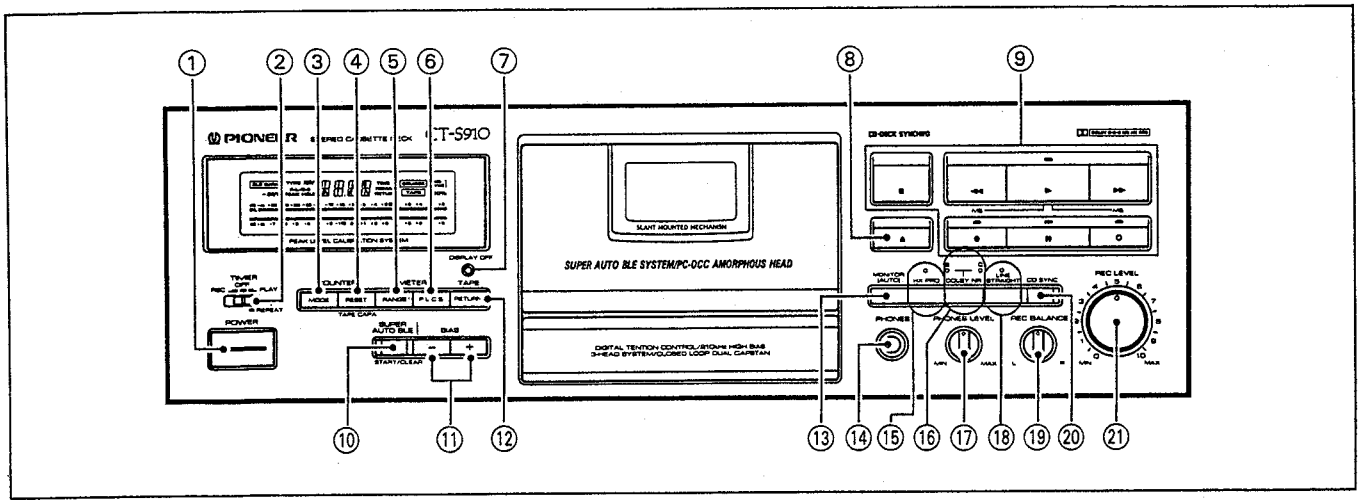
Power Requirements ..... AC 220—230 Volts~, 50/60 Hz
Power Consumption 25W
Dimensions ..... 420(W) × 146(H) × 375(D) mm
Weight (without package) ..... 8.2 kg

Accessories

Operating instructions 1
Connection cord with pin plugs 2
CD•DECK SYNCHRO control cord 1

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

8. PANEL FACILITIES



① Power switch (POWER)

After pressing the switch, the WAIT mesage will appear in the counter display and the level meter scale will flash for about four seconds (the time necessary for circuitry to stabilize). During the time the display is flashing, no operating buttons will respond, with the exception of the cassette door open/close button (⏏). When closing the cassette door, do so while the power is turned on.

② Timer mode/repeat play switch (TIMER)

REC: Set to this position to perform timer recording.

OFF: Set to this position under ordinary conditions, (when not using the timer or repeat functions).

PLAY/REPEAT:

Set to this position to perform timer playback. When the switch is set to this position during normal playback, repeat playback of a single tape can be performed.

③ Counter mode button (COUNTER MODE)

Each time this button is pressed, one of the three mode (Normal tape counter/Time counter/Remaining time counter) is set in sequence.

④ Counter reset/Tape capacity selector button (COUNTER RESET/TAPE CAPA)

Reset the counter indication to "0000" in the normal tape counter or the time counter mode.

To indicate the correct time value in the remaining time counter mode, this button must be set in accordance with the tape used.

⑤ Level meter range selector button (METER RANGE)

Switches between wide range, expanded range, and bias display.

⑥ Meter PLCS button (METER PLCS)

Selects the display mode of the peak level.

When press this button so that the PEAK HOLD indicator lights up, the level meter holds the maximum level indications of the signal. To erase the maximum level indications, press this button again. When the PEAK HOLD indicator goes off, the level meter holds peak indications for about 1.2 second.

In addition to the peak level display noted above, the button can also be used with the peak level calibration system to adjust tape recording levels.

⑦ Display off button (DISPLAY OFF)

Press this button to turn off the function display.

⑧ Open/close button (⏏)

Press this button to open or close the cassette door. Whenever inserting or removing a cassette tape, be sure that the power is turned on.

NOTE:

If the cassette door is closed while the unit is turned off, and the power is then turned on, the cassette door may open and close after pressing one of the operation buttons. This occurs when the microprocessor resets the door mechanism to its initial state and does not indicate any malfunctioning of the unit.

⑨ Operation buttons

■ : Stop
◀◀/MS : Rewind/music search
▶ : Playback
▶▶/MS : Fast forward/music search
● : Recording
❚❚ : Pause
O : Recording mute

⑩ SUPER AUTO BLE START/CLEAR button

⑪ Recording bias buttons (BIAS −/+)

When desired, these buttons can be used to manually adjust the recording bias after performing AUTO BLE tuning.

−: Changes tone by reducing recording bias
+: Changes tone by increasing recording bias

⑫ Tape return button (TAPE RETURN)

This button is used in the normal tape counter mode to fast forward or rewind the tape to a point near the counter reading "0000."

⑬ Monitor selector button (MONITOR [AUTO])

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

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

⑭ Headphones jack (PHONES)

⑮ DOLBY* HX PRO ON/OFF button/indicator

The indicator lights when the button is in the ON position.

⑯ **DOLBY NR B/C select button/indicator**
Use to switch between DOLBY B type NR and DOLBY C type NR.

┌→OFF→B→C┐

*
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⑰ **Headphones level control (PHONES LEVEL)**
⑱ **Line straight button/indicator (LINE STRAIGHT)**
When this button is pressed so that the indicator lights, sound signals bypass the REC BALANCE controls circuits. This allows enhanced clarity of recording.
⑲ **Recording balance control (REC BALANCE)**
⑳ **CD•DECK SYNCHRO recording button (CD SYNC)**
㉑ **Recording level control (REC LEVEL)**

ATLC (Automatic Tape Loose Canceller)

With the tape slack prevention function, when the cassette door closes, the take-up reel automatically revolves to eliminate any tape slack.

SUPER AUTO BLE

With commercially available cassette tapes, sensitivity and frequency characteristics might differ slightly from one another, even though the same sound adjustment is set for them. To utilize tape characteristics to the maximum possible and realize an ideal recording which reproduces the source exactly, optimum recording level (sensitivity) and equalizer values must be set accordingly for each tape. In many conventional tape decks, standard values are fixed for standard tapes, thus nullifying the subtle differences between individual tapes. Perfect tuning by ear through use of fine adjustment controllers for bias and sensitivity is difficult and requires a lot of effort.
The AUTO BLE on this unit automatically adjusts bias, level and equalizer by using a microprocessor to set the optimum recording characteristics accordingly for each tape.
The recording bias is adjusted with 64 steps at 15 kHz. The recording level is adjusted with 32 steps at 400 Hz. The recording equalizers are adjusted with 16 steps at 3 kHz and with 4 steps at 15 kHz.