

# STEREO CONTROL AMPLIFIER

# KC-991

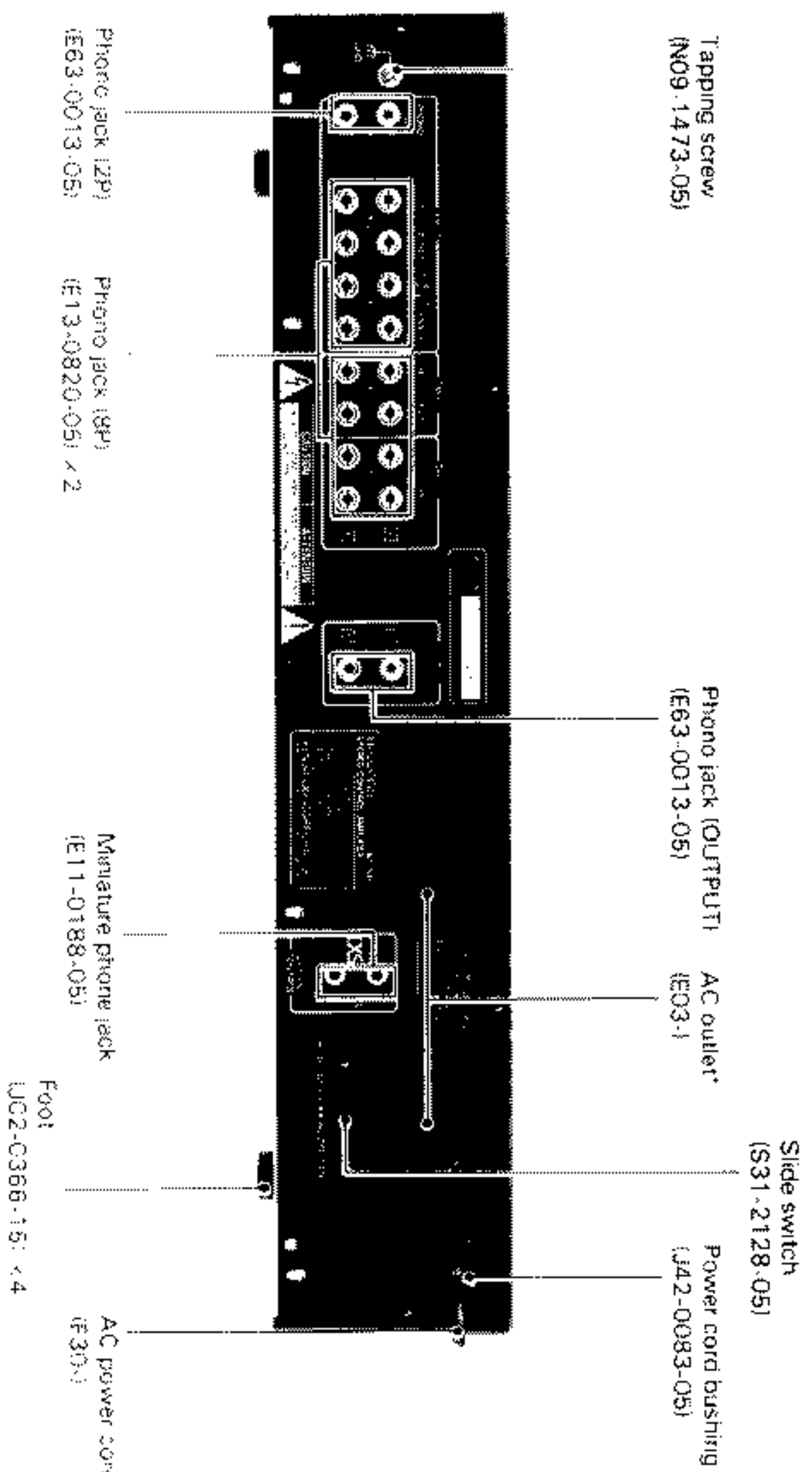
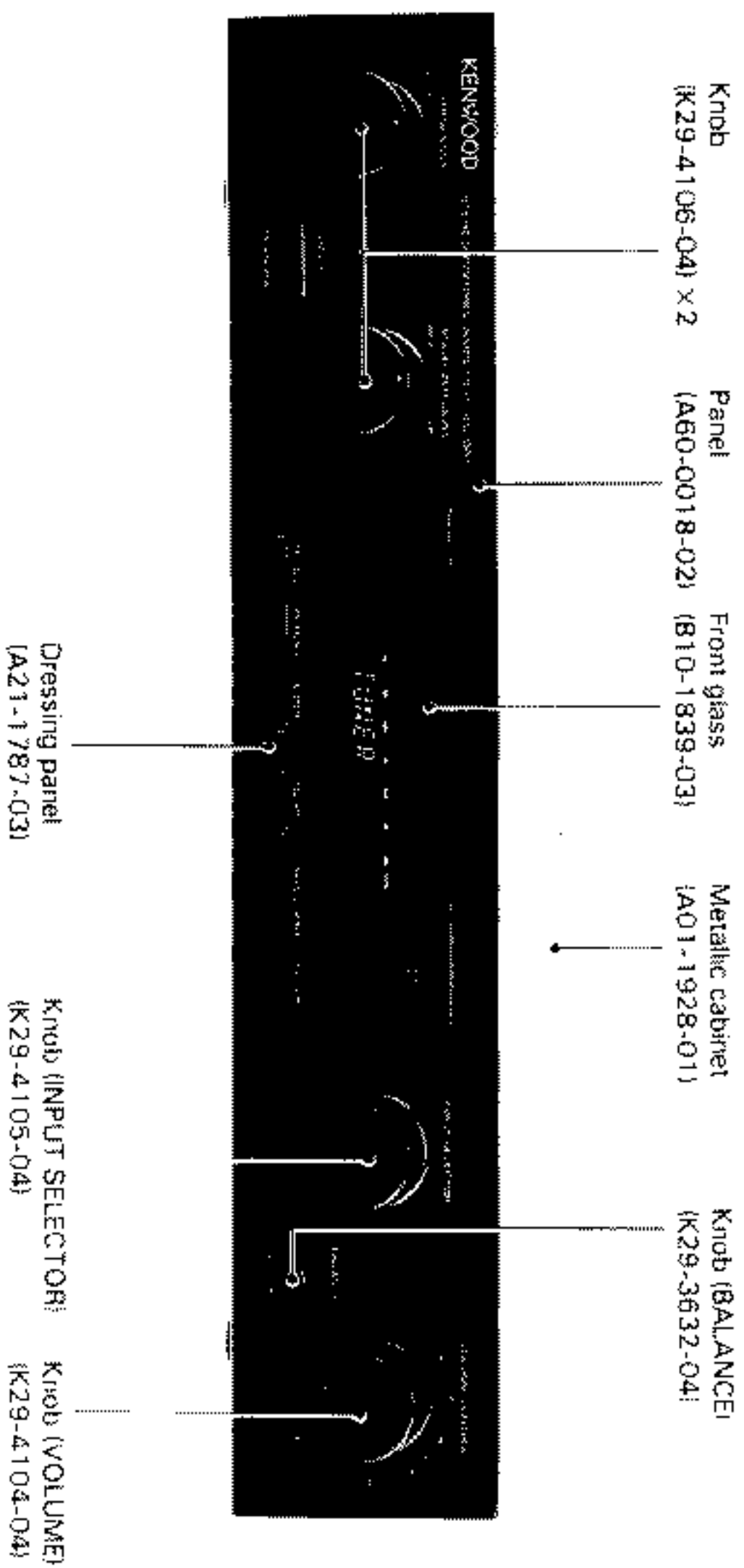
## SERVICE MANUAL

KENWOOD

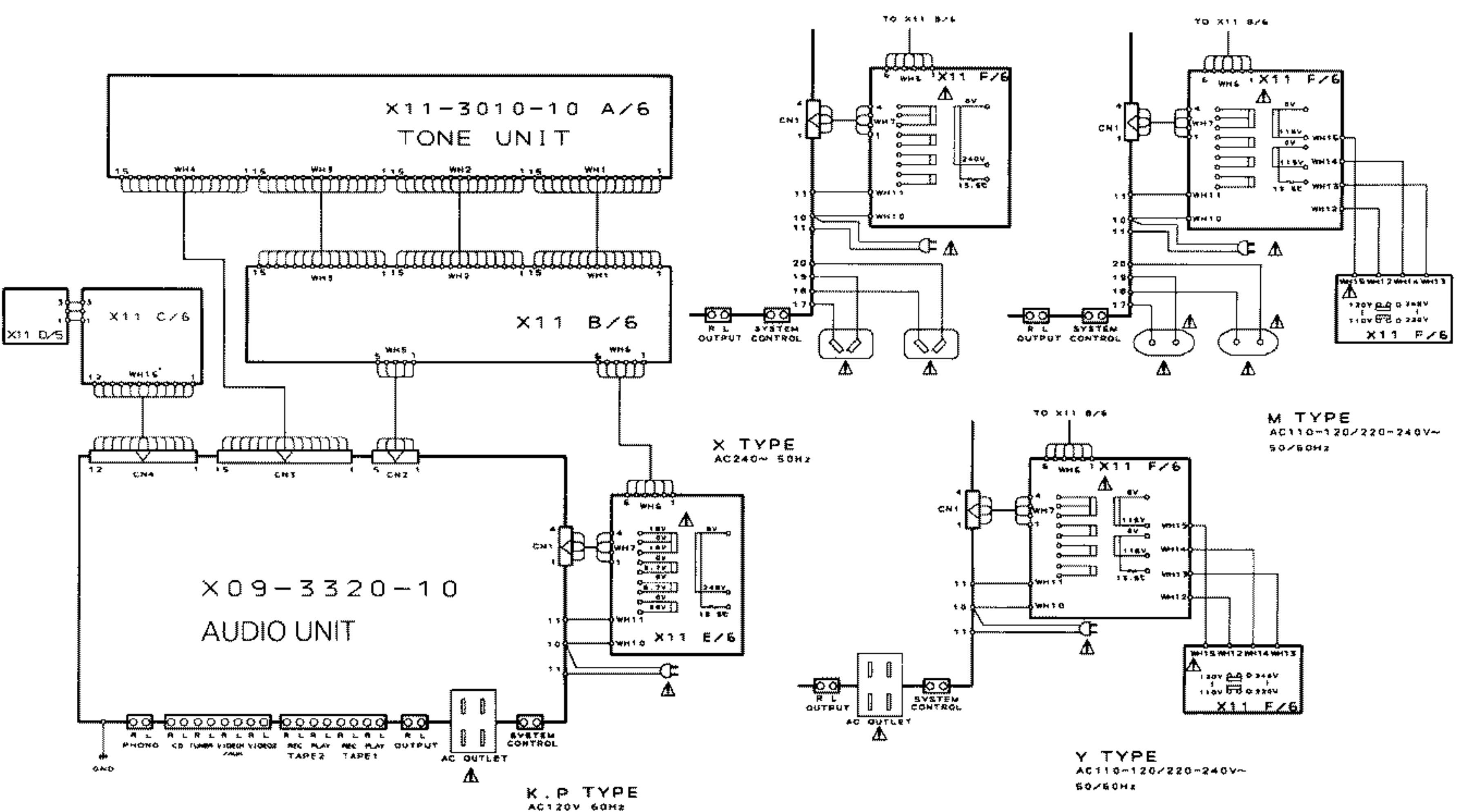
KC-991

WIRING DIAGRAM

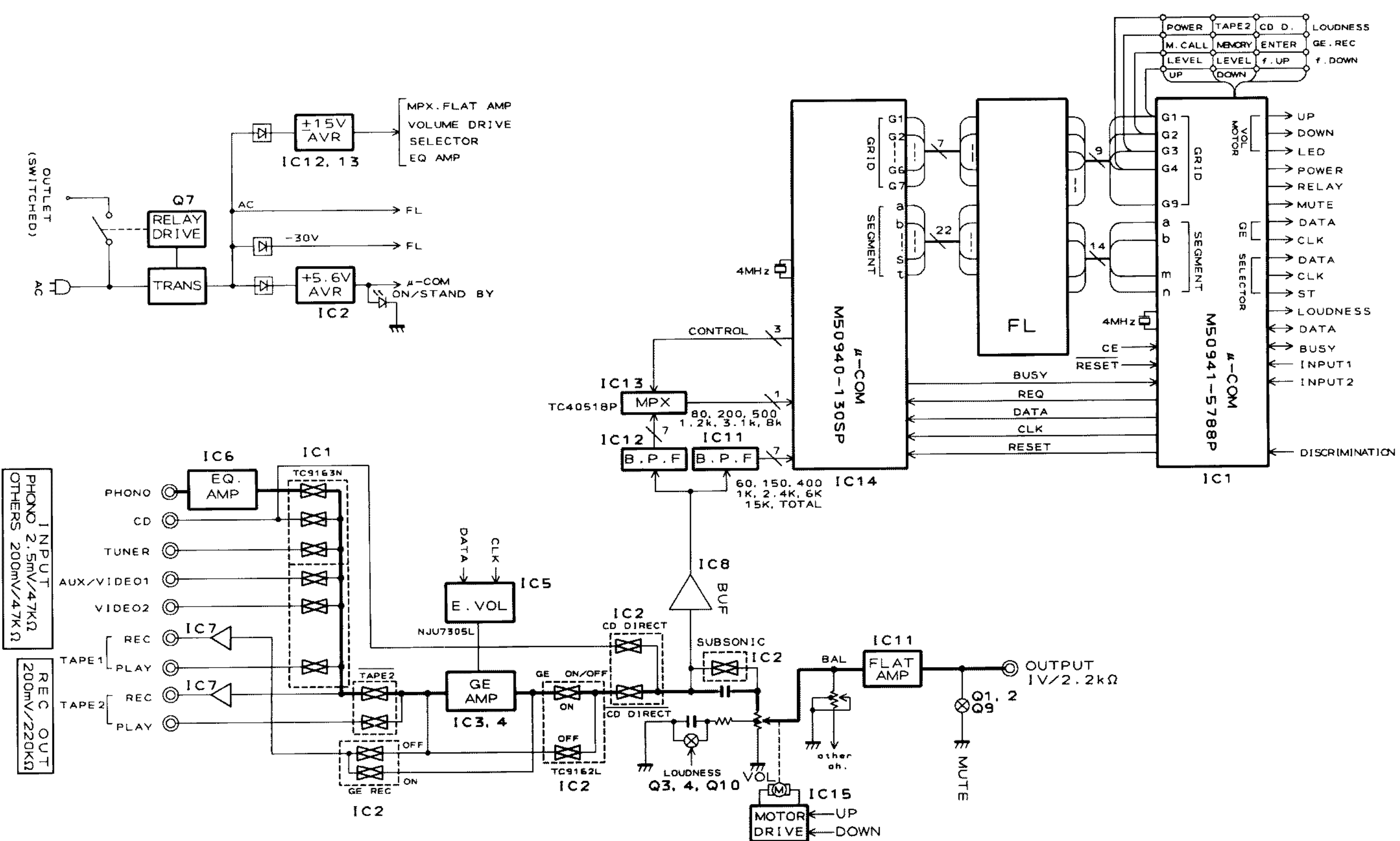
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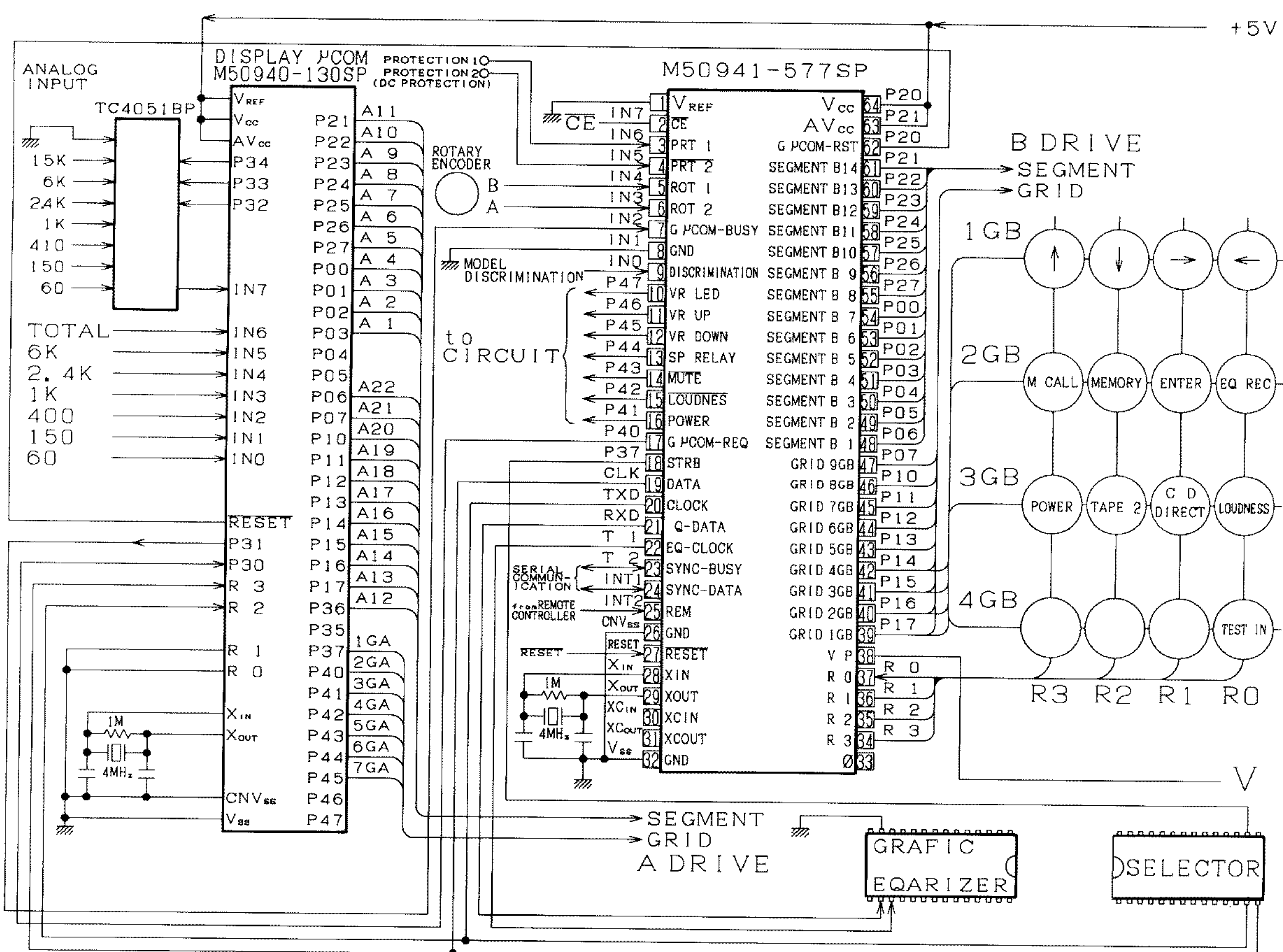
\* Refer to parts list on page 20.



BLOCK DIAGRAM



CIRCUIT DESCRIPTION





CIRCUIT DESCRIPTION

Pin description

Pin No.	Pin Name	I/O	Name	Description
1	VREF	I	OV	GND
2	IN 7	I	CE	Chip enable
3	IN 6	I	PRT 1	Protection
4	IN 5	I	PRT 2	DC protection
5	IN 4	I	ROT 1	Rotary encoder
6	IN 3	I	ROT 2	Rotary encoder
7	IN 2	I	G $\mu$ COM-BUSY	Display $\mu$ -COM busy
8	IN 1	I		
9	IN 0	I		
10	P4 7	O	VR LED	Volume LED
11	P4 6	O	VR UP	Volume up
12	P4 5	O	VR DOWN	Volume down
13	P4 4	O	SP RELAY	Speaker relay
14	P4 3	O	MUTE	Mute
15	P4 2	O	LOUDNESS	Loudness
16	P4 1	O	POWER	Power
17	P4 0	O	G $\mu$ COM-REQ	Display $\mu$ -COM request
18	P3 7 S-RDY	O	STRB	Strobe (Selector)
19	P3 6 CLK	O	DATA	Data (Selector, Display $\mu$ -COM)
20	P3 5 TXD	O	CLOCK	Clock (Selector Display $\mu$ -COM)
21	P3 4 RXD	O	EQ-DATA	Data for GE
22	P3 3 T1	O	EQ-CLOCK	Clock for GE
23	P3 2 T2	I/O	SYNC-BUSY	Synco busy
24	P3 1 INT1	I/O	SYNC-DATA	Synco data
25	P3 0 INT2	I	REM	Remote controller input
26	CNVSS	I	GND	
27	RESET	I	RESET	Reset
28	XIN	I	XIN	Clock
29	XOUT	O	XOUT	Clock
30	XCM	I	XCM	GND
31	XCOULT	O	XCOULT	
32	Vss	I	GND	GND
33	$\phi$	O	$\phi$	Timing output
34	R3	I	R3	Key return input 3
35	R2	I	R2	Key return input 2
36	R1	I	R1	Key return input 1
37	RO	I	RO	Key return input 0
38	VP	I	VP	Pull-down voltage
39	P1 7	O	GRID 1GB	Grid
40	P1 6	O	GRID 2GB	Grid
41	P1 5	O	GRID 3GB	Grid
42	P1 4	O	GRID 4GB	Grid
43	P1 3	O	GRID 5GB	Grid
44	P1 2	O	GRID 6GB	Grid

Pin No.	Pin Name	I/O	Name	Description
45	P1 1	O	GRID 7GB	Grid
46	P1 0	O	GRID 8GB	Grid
47	P0 7	O	GRID 9GB	Grid
48	P0 6	O	SEGMENT 91	Segment
49	P0 5	O	SEGMENT 92	Segment
50	P0 4	O	SEGMENT 93	Segment
51	P0 3	O	SEGMENT 94	Segment
52	P0 2	O	SEGMENT 95	Segment
53	P0 1	O	SEGMENT 96	Segment
54	P0 0	O	SEGMENT 97	Segment
55	P2 7	O	SEGMENT 98	Segment
56	P2 6	O	SEGMENT 99	Segment
57	P2 5	O	SEGMENT 100	Segment
58	P2 4	O	SEGMENT 101	Segment
59	P2 3	O	SEGMENT 102	Segment
60	P2 2	O	SEGMENT 103	Segment
61	P2 1	O	SEGMENT 104	Segment
62	P2 0	O	G $\mu$ COM-RST	Display $\mu$ -COM reset
63	P2 1	O	AV <sub>cc</sub>	
64	P2 0	O	V <sub>cc</sub>	V <sub>cc</sub>

CIRCUIT DESCRIPTION

TEST mode

1. Setting method

The power supply code is connected AC wall socket while pressing CD DIRECT key.

2. Content

- 2-1 A spectrum analyzer sections except for all FL tube is lighted.
- 2-2 When other key are pushed all illuminations are canceled.
- 2-3 EQ FREQ knob operation  
A selection of a frequency is carried out similarly with at the time of an ordinariness.

2-4 EQ LEVEL knob operation

A level of frequency range where was selected is controlled with 3 point of MAX CENTER MIN.

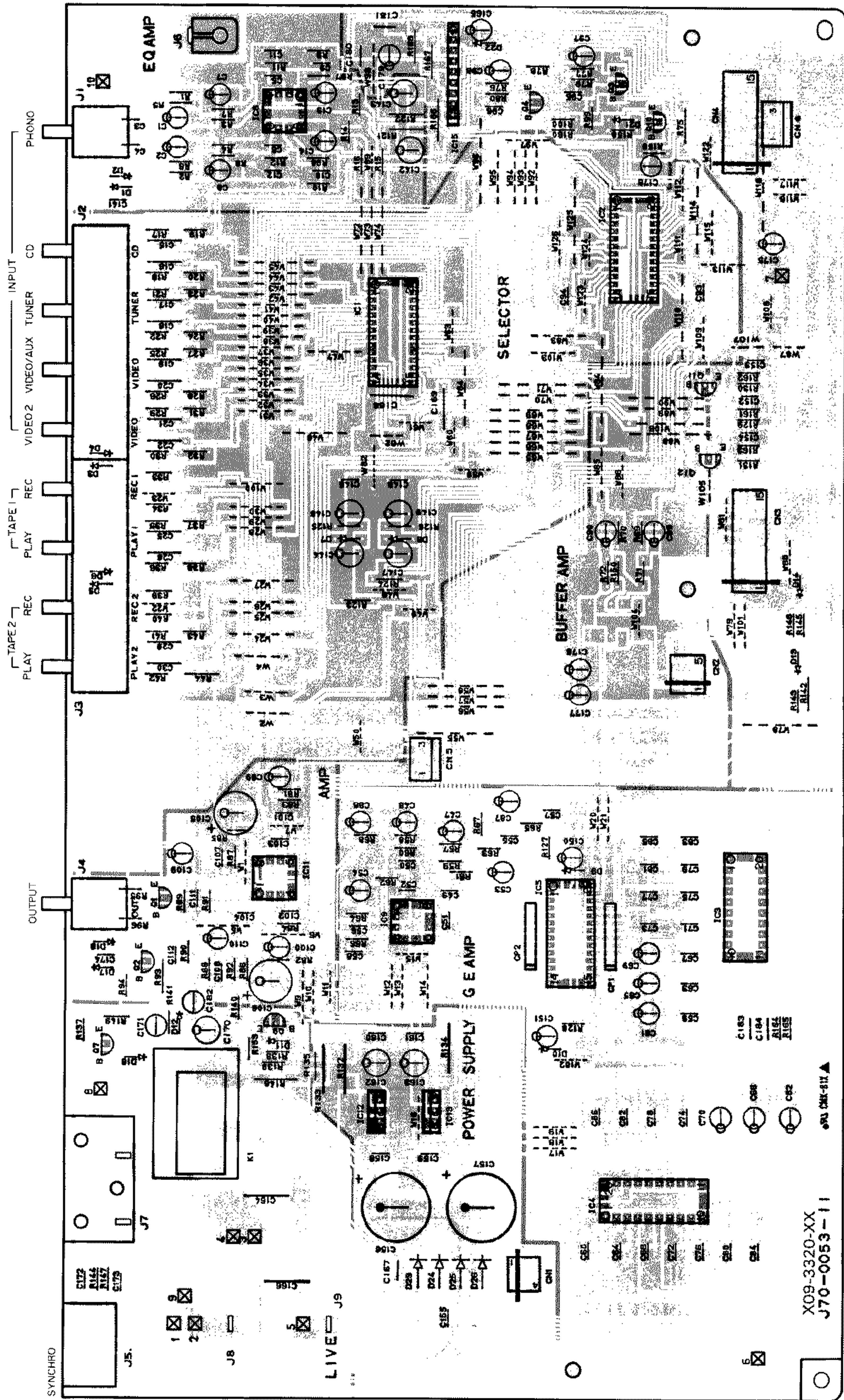
- 2-5 M1: MAX segments of all frequency range turn ON.  
M2: MIN segments of all frequency range turn ON.  
M3 — M5: Flat

- 2-6 CD DIRECT key operation Volume up
- 2-7 TAPE 2 key operation Volume down

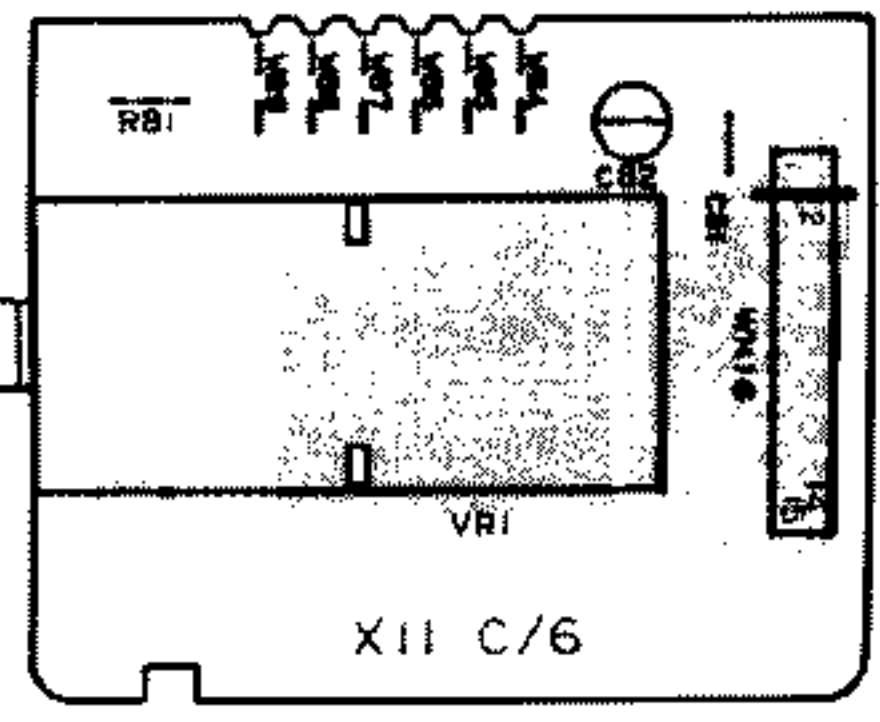
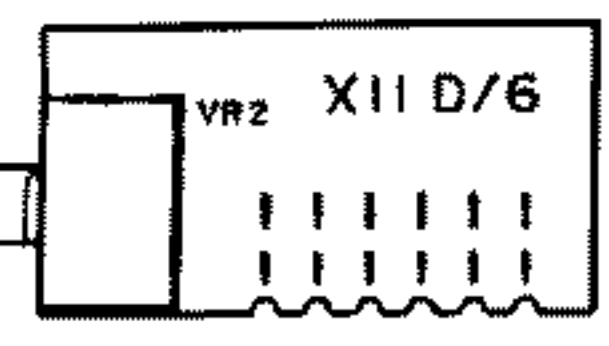
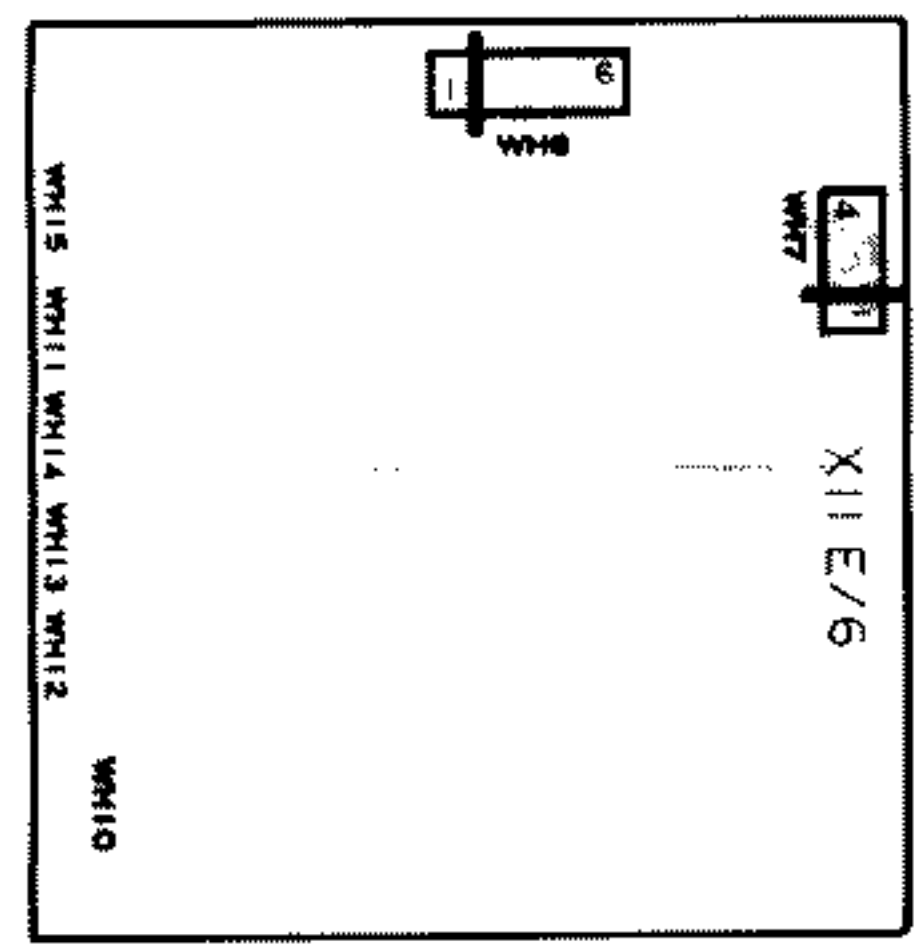
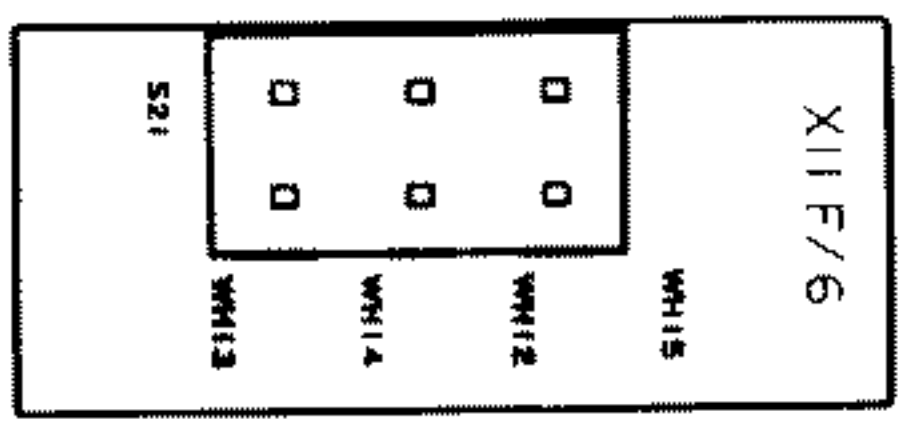
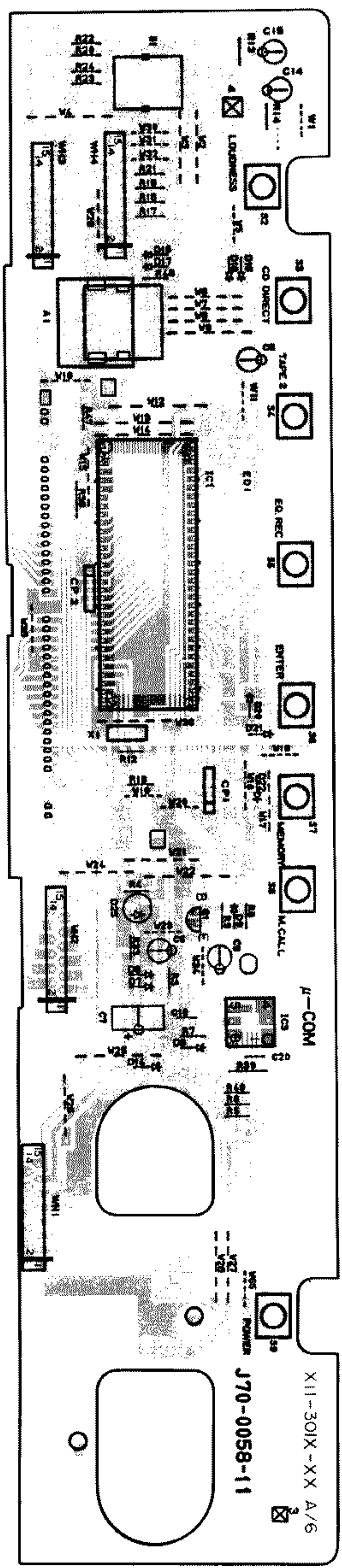
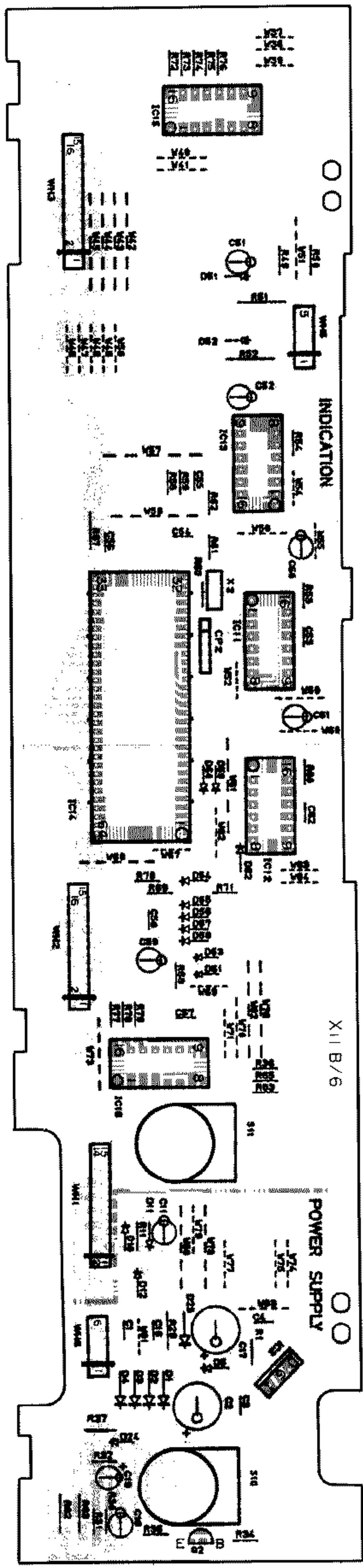
INITIALIZATION

The power supply code is connected AC wall socket while pressing ENTER key.

• AUDIO UNIT





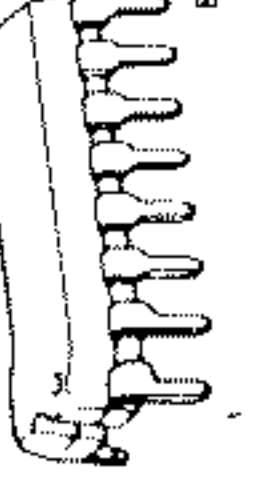
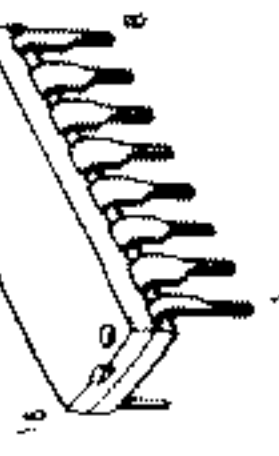
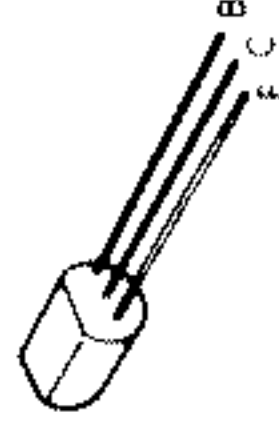


2SC2878  
2SC3246

DTC124ES  
2SA1048  
2SA933S  
2SC1740S  
2SC2458

XR-1091DCP

LB1294

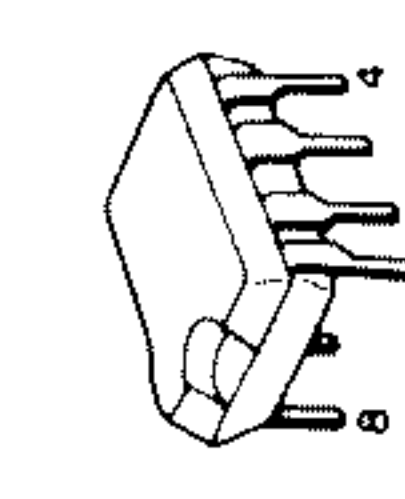
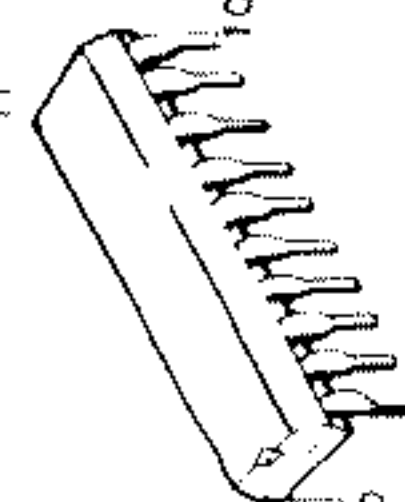
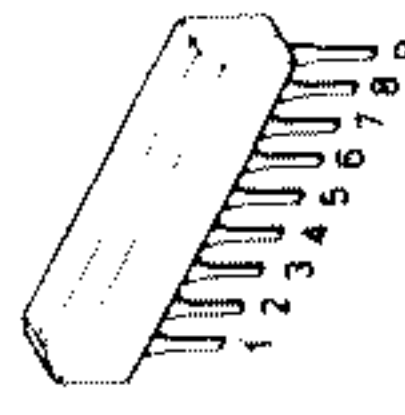
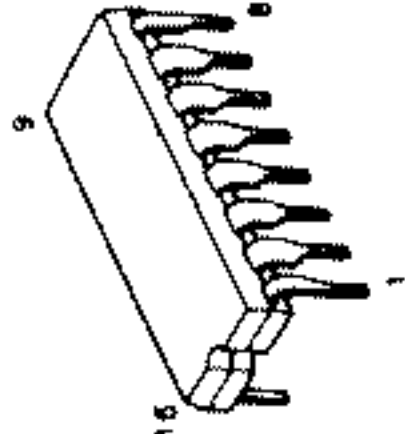


TC4051BP

TA8409S

M5229P

BA10393  
UPC4570C-A

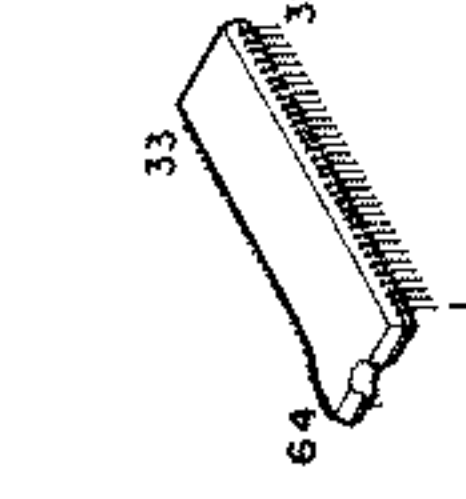
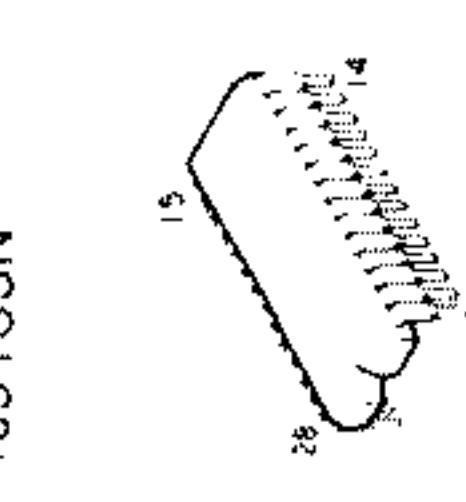
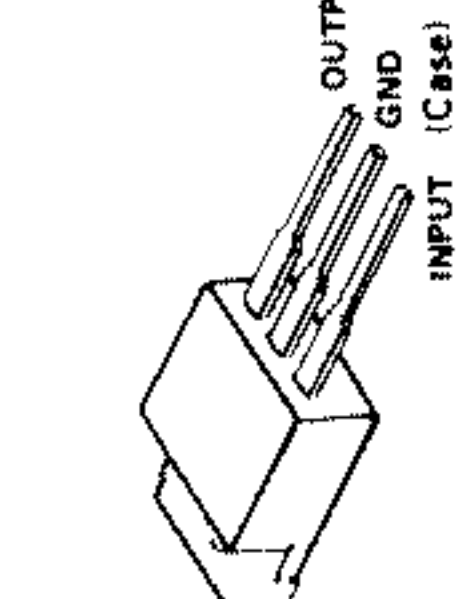
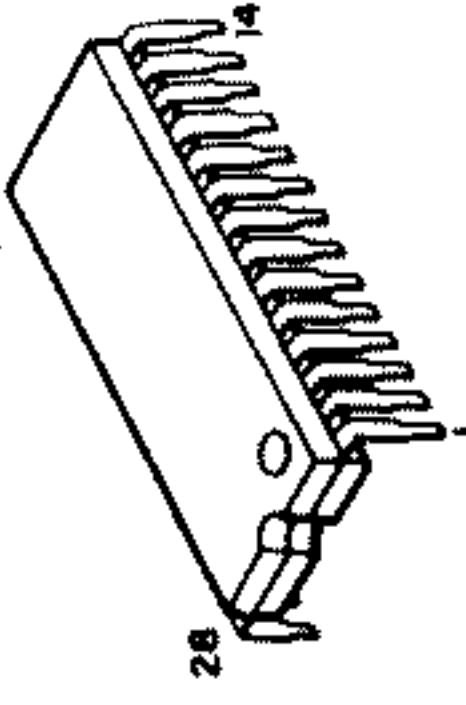


RZ7305L

UPC7805HF  
UPC7815HF

TC9162N  
TC9163N

M50941-578SP



TA7805S

UPC7915HF

TC9162N  
TC9163N

M50941-578SP



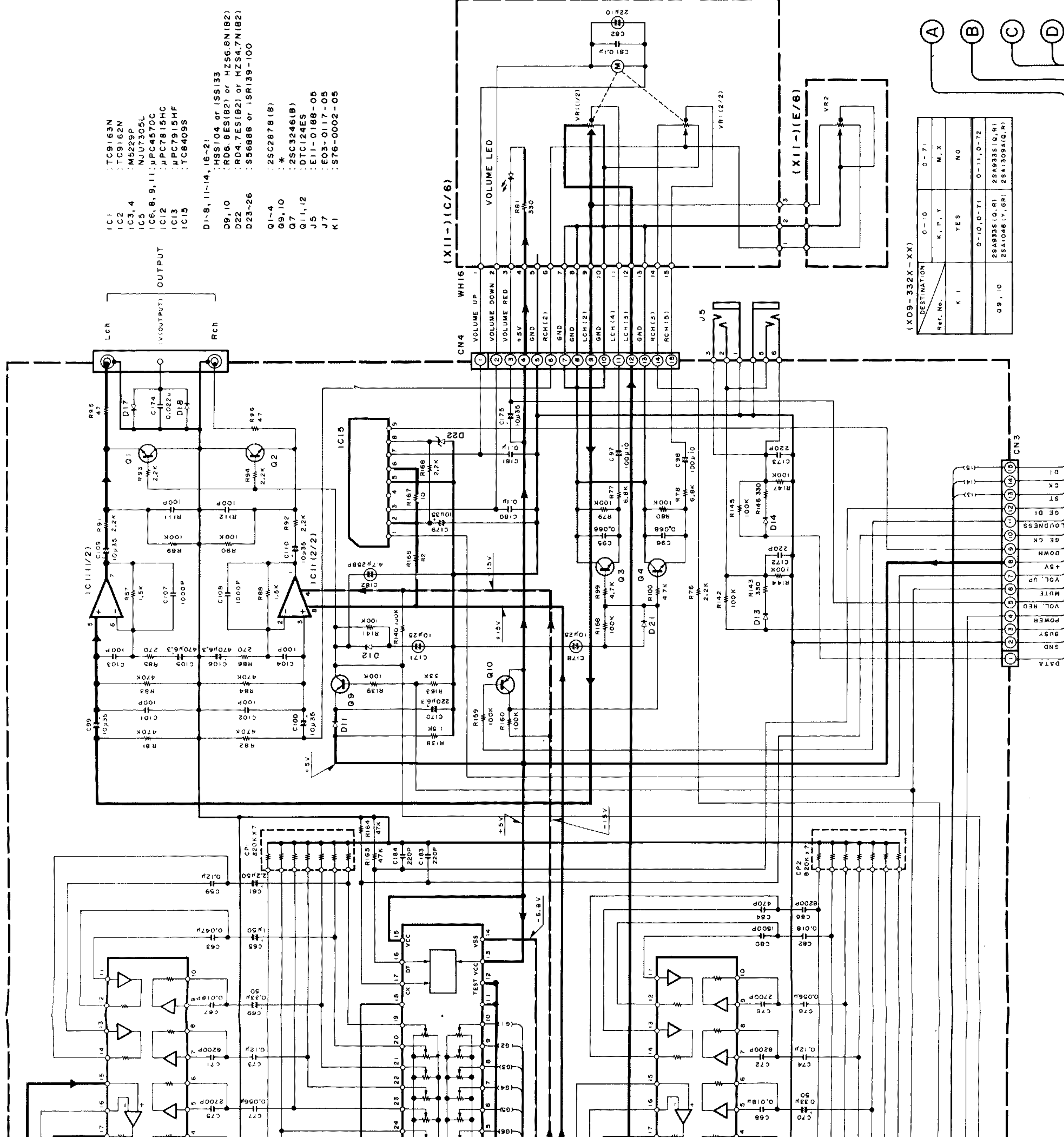
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **Δ** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

— SIGNAL LINE  
— GND LINE  
— +B LINE  
— -B LINE



(X09-332X-XX)			
Ref. No.	DESTINATION	0-10	0-71
K 1	X, P, Y	YES	M, X
Q 9, 10	Q-10, 0-71	YES	N 0
25A933S (Q, R)	Q-10, 0-71	YES	Q-11, 0-72
25A1048 (Y, GR)	Q-10, 0-71	YES	25A1048 (Y, GR)

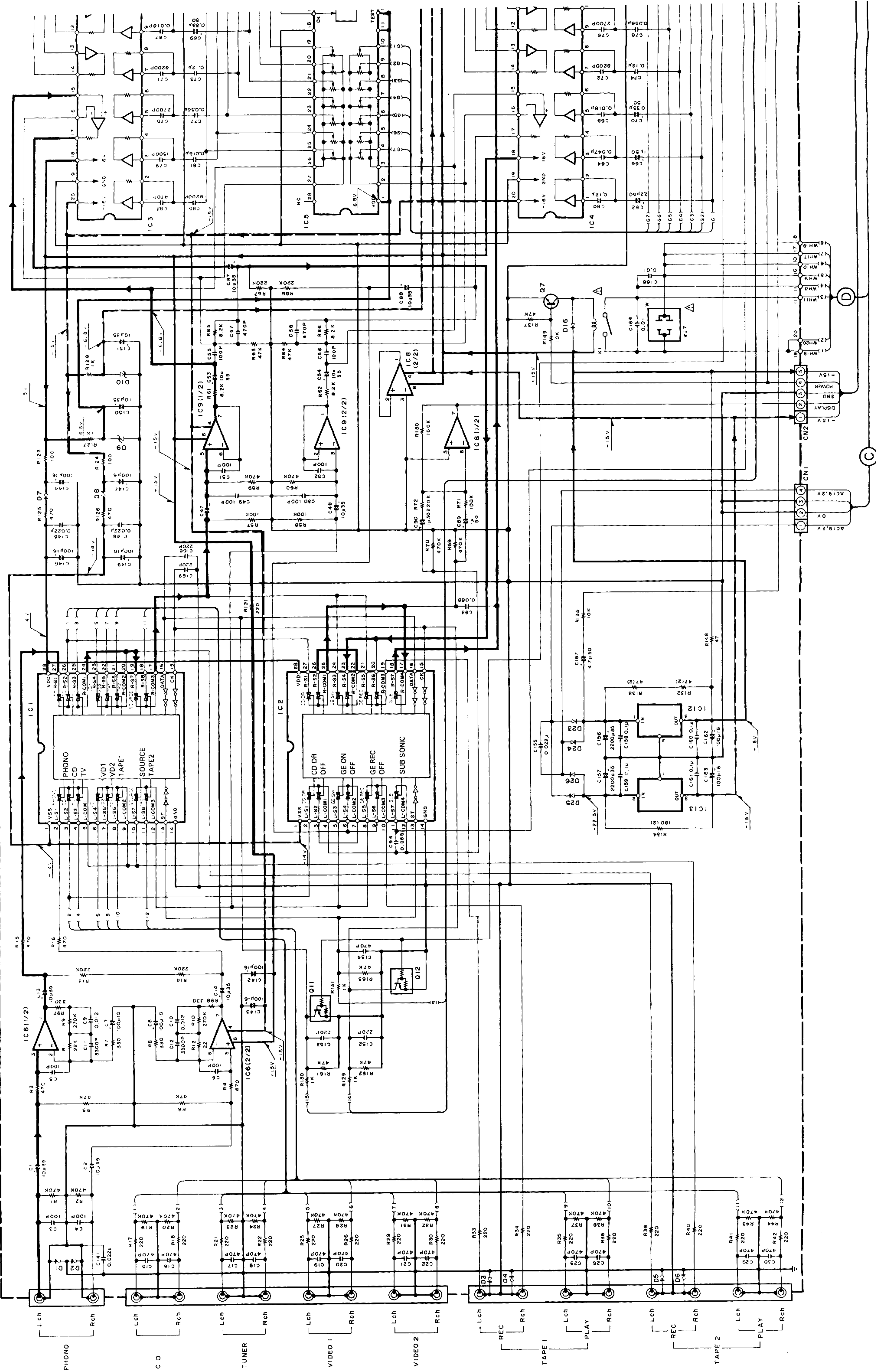
KC-991

Y08-4300-10

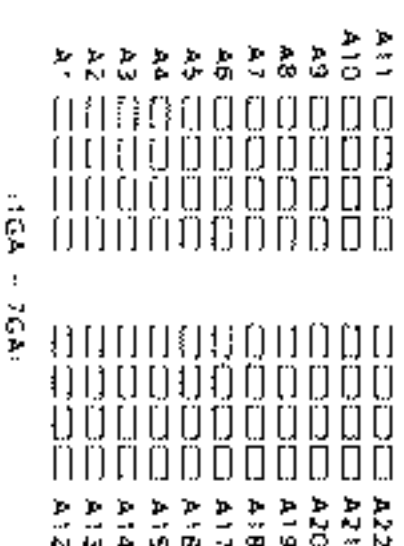
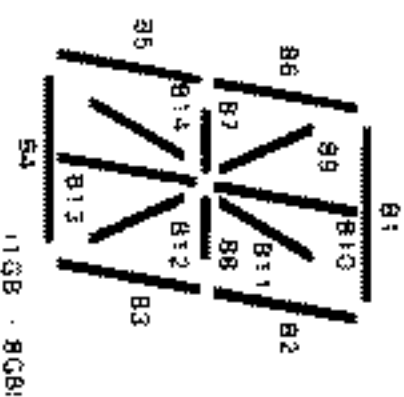
KENWOOD



(X09-332X-XX)

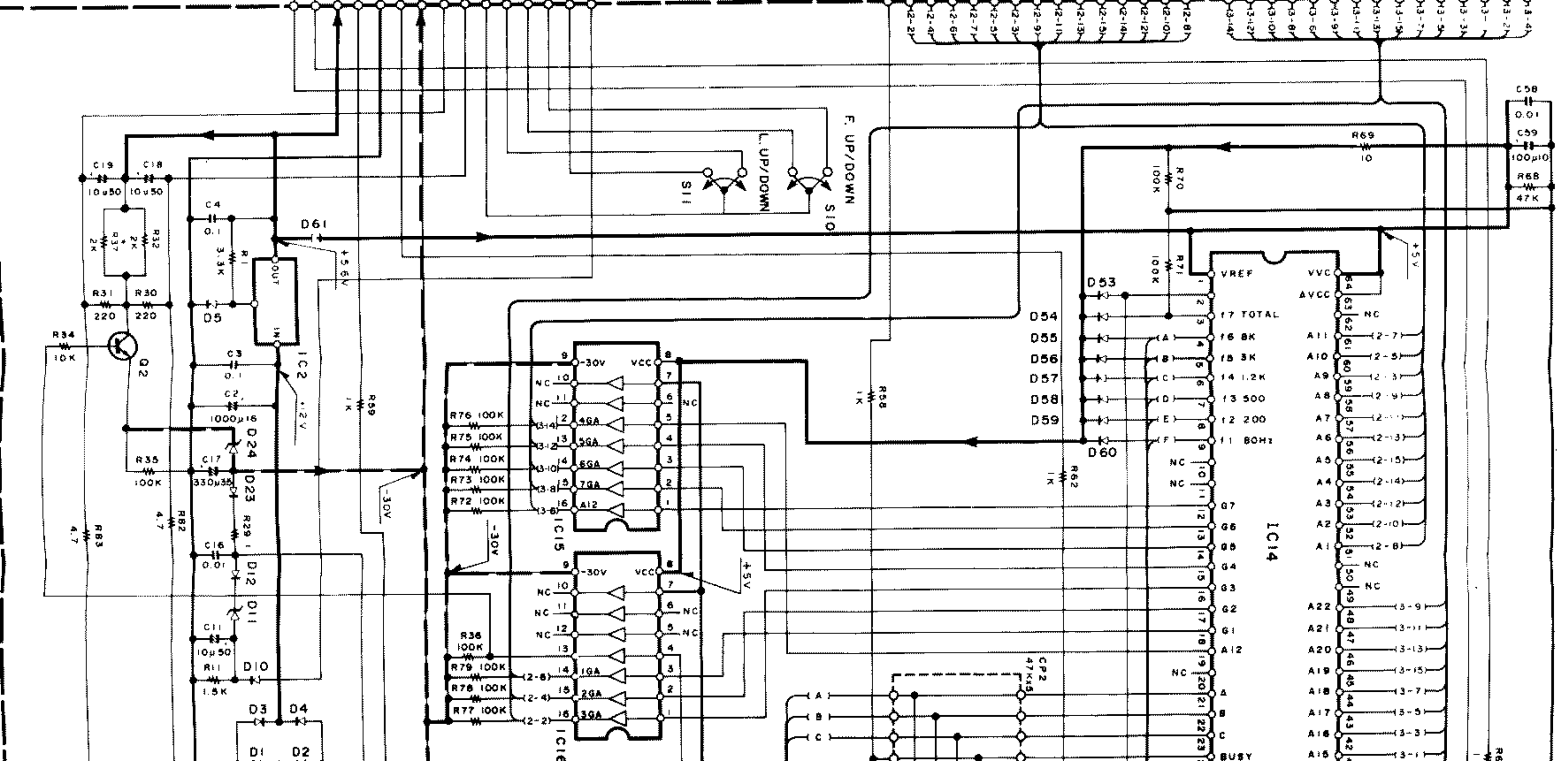
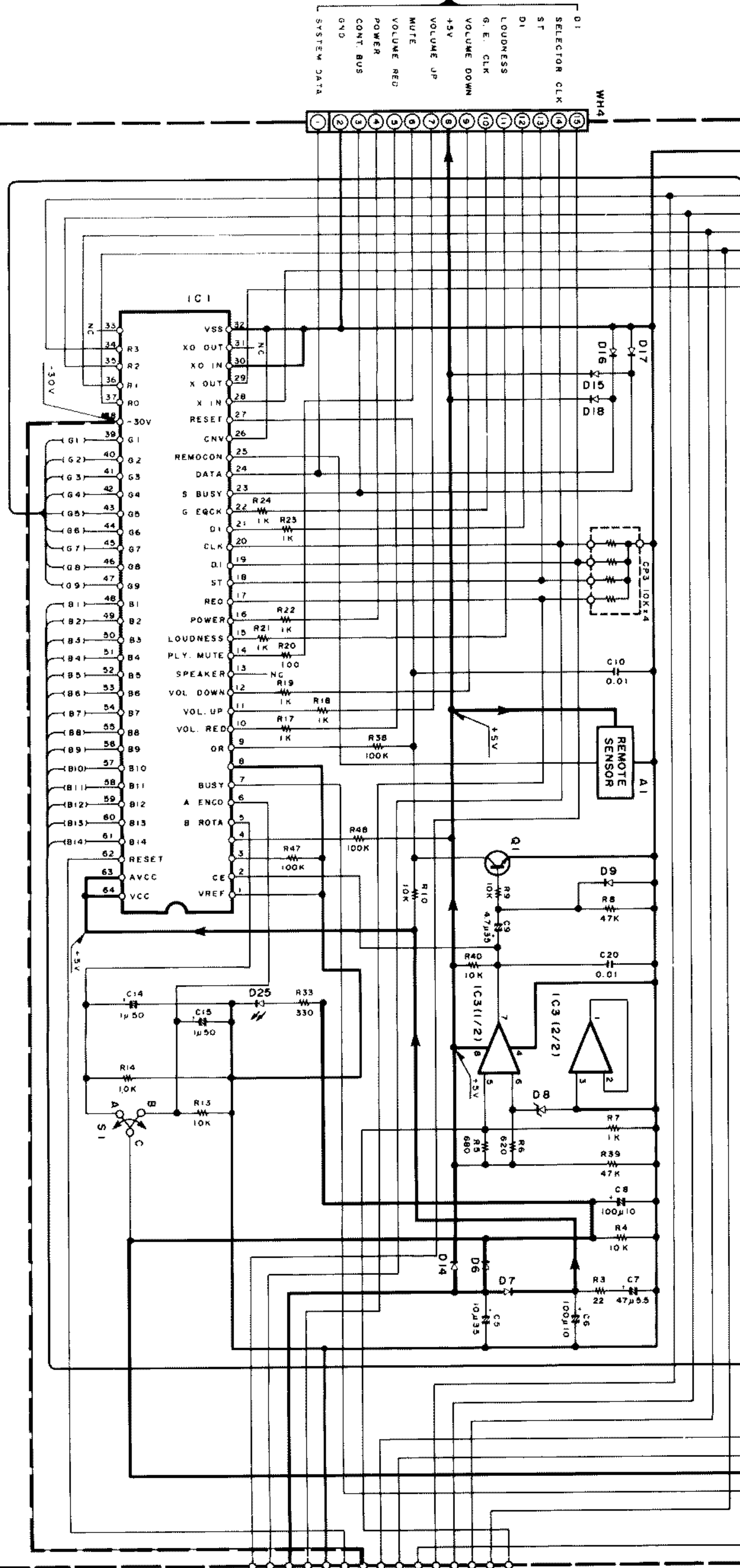
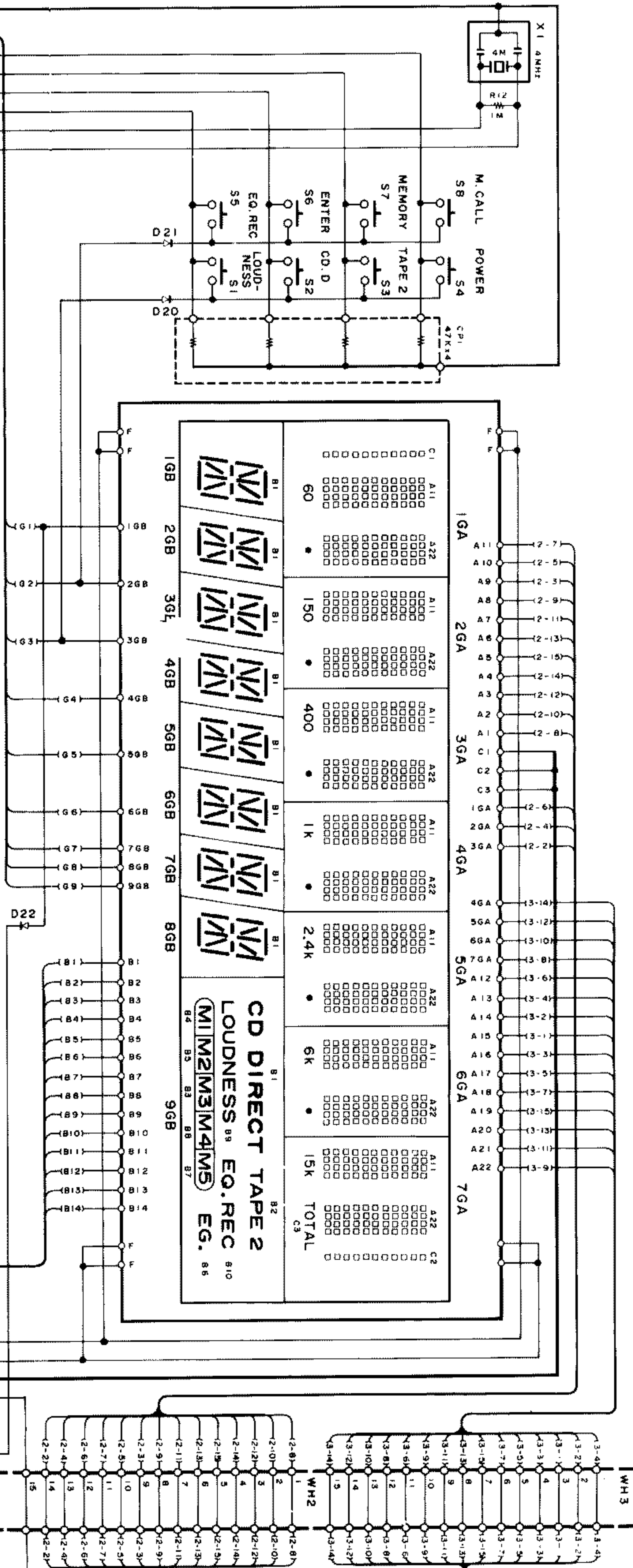






(X11-1) (A/6)

(X11-1) (B/6)



IC1 : 301X-XX (A/6)

IC2 : M50941-5785P

IC3

BA10393 or AN6914

DB

RD275(B2) or H2527N(B2)

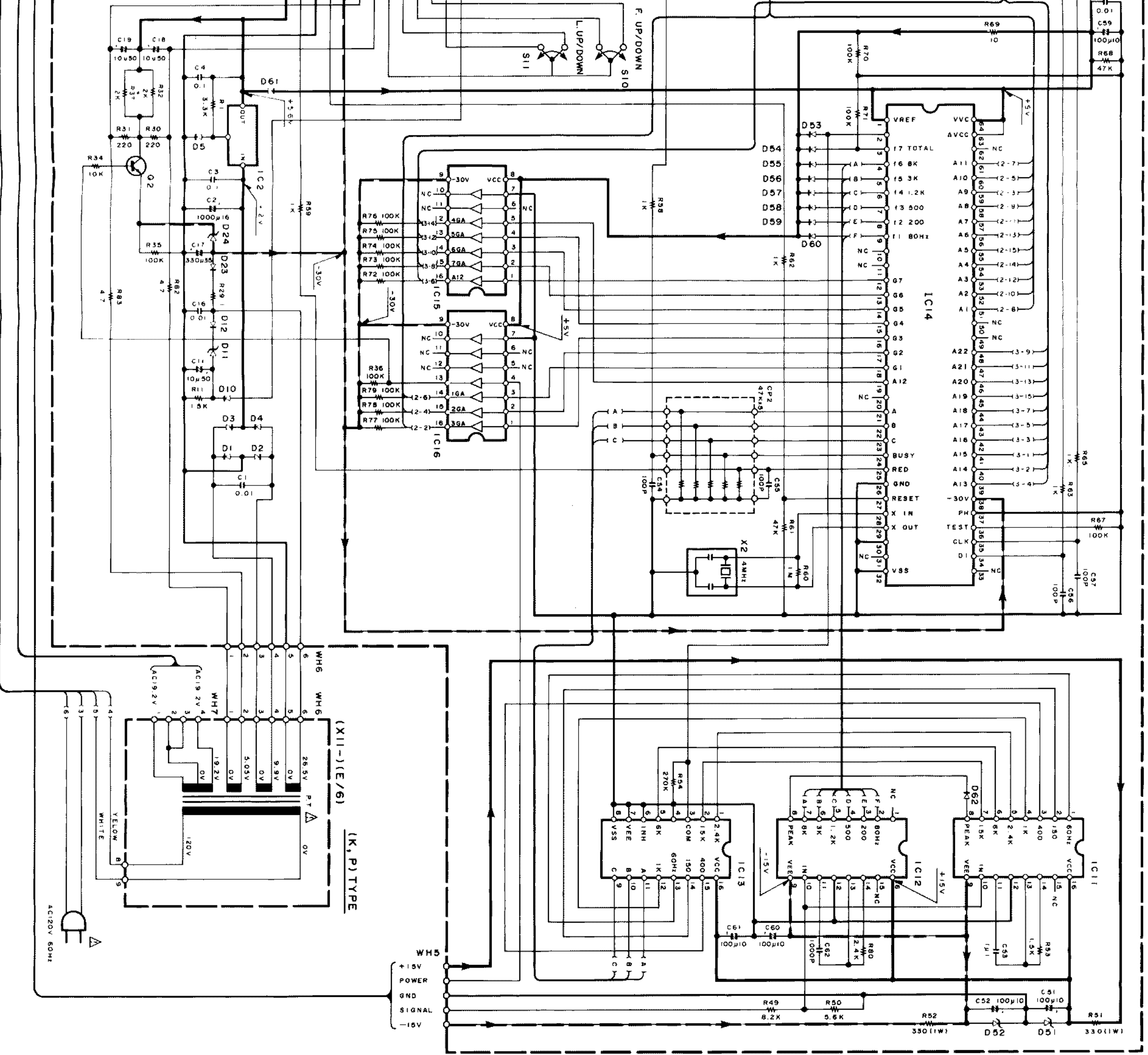
DS, 7, 9, 14-18, 20-22

HSS104 or ISS133

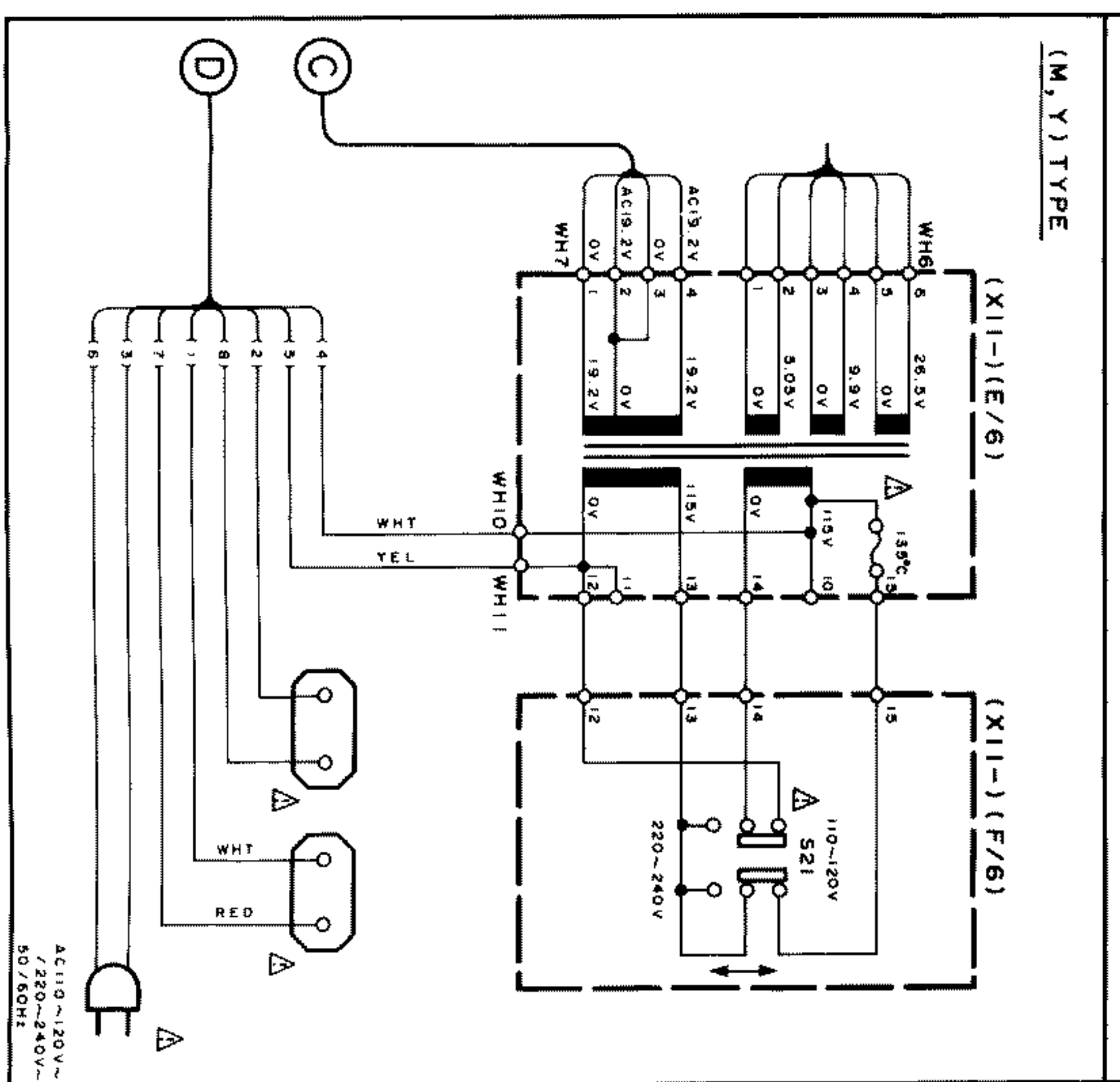
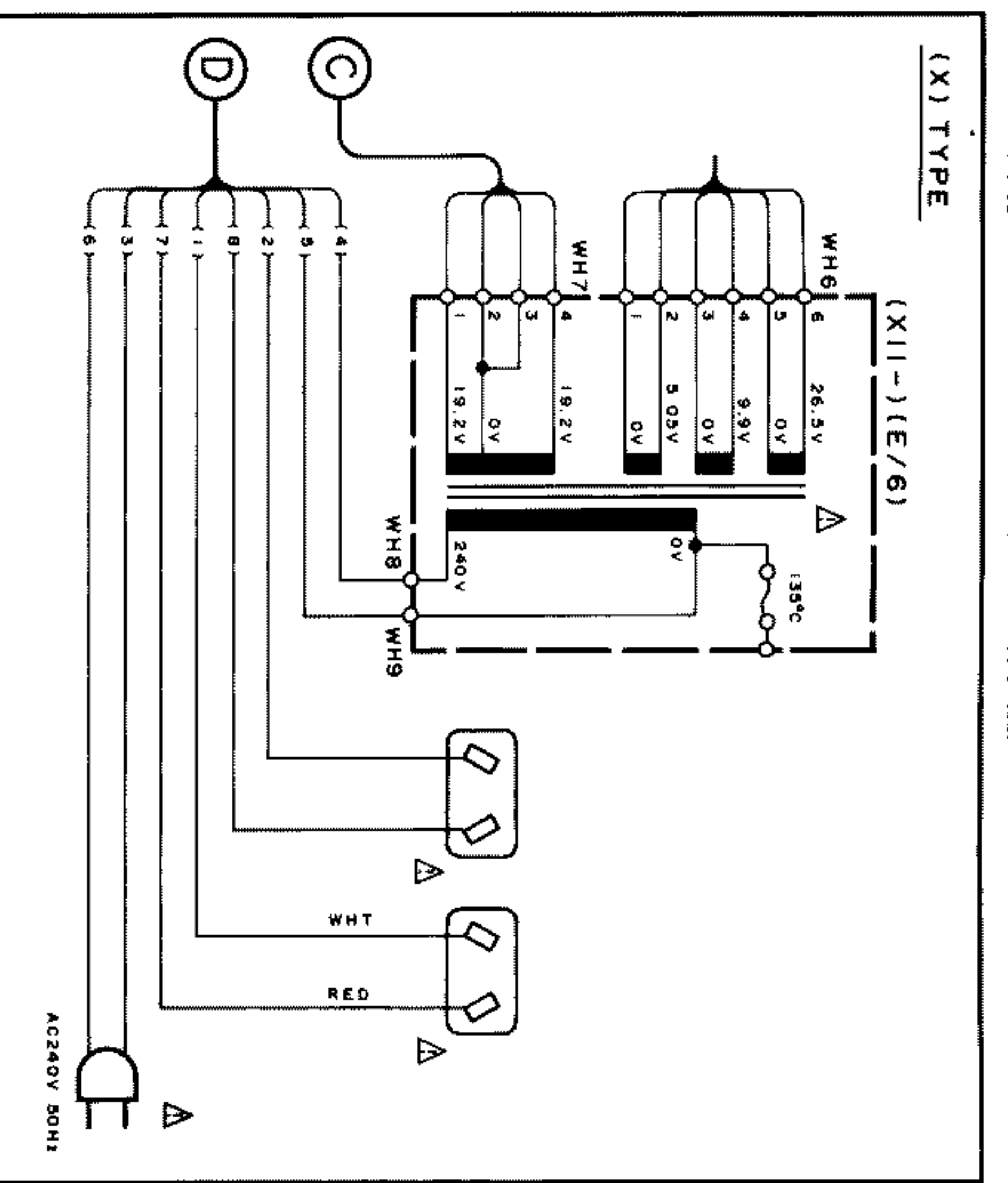
DS5

BS0-1291-05





- (X11-301X-XX) (B/6)
- IC2 : PC705HF
  - IC11, 12 : XR-1091DCP
  - IC13 : XR4051B or TC4051P
  - IC14 : MS0940-13OSP
  - IC15, 16 : L81294
  - D2 : 2SC1740(S,Q,R) or 2SC2458(Y,GR)
  - D1-A, 23 : 55688B or 1SR139-100
  - D5, 53-62 : HSS104 or 1SS133
  - D10, 12 : 1SS31(B2) or 4Z52(ZN(B2)
  - D11 : D06(B5(B2) or HZ56(BN(B2)
  - D24 : RDS153(B2) or HZ551N(B2)
  - D51, 52 : RDS653(B2) or HZ556N(B2)



SIGNAL LINE  
GND LINE  
+B LINE  
-B LINE

**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (re parts list). **Δ** indicates safety critical components. To reduce risk of electric shock, leakage-current or resistance measurement shall be carried out (exposed parts are acceptably insulated the supply circuit) before the appliance is returned to the customer.

DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instrument or/and units. Bias circuit DC voltages are as measured while the record mode.

Les tensions c.c. doivent être mesurées avec un voltmètre haute impédance, une cassette étant insérée en mode de lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

Les tensions c.c. du circuit de polarité doivent être mesurées l'appareil étant en mode d'enregistrement.

Die angegebenen Gleichspannungswerte wurden bei eingesetzter Cassette in der Wiedergabe mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Messwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig. Die angegebenen Gleichspannungswerte der Vormagnetisierungsschalt wurden in der Aufnahme-Betriebsart gemessen.

## KC-991

Ref. No.	Part No.	Description	Ratio
C9	CE04LV447M	ELECTRO	35V
C10	CE04LV447M	MYLAR	4.7UF
C11	CE04LV1010M	ELECTRO	50V
C14	CE04LV1010M	ELECTRO	50V
C15	CE04LV1010M	ELECTRO	10UF
C16	CE04LV1010M	ELECTRO	10UF
C17	CE04LV1010M	ELECTRO	35V
C18	CE04LV1010M	ELECTRO	35V
C19	CE04LV1010M	ELECTRO	35V
C20	CE04LV1010M	ELECTRO	35V
C21	CE04LV1010M	ELECTRO	35V
C22	CE04LV1010M	ELECTRO	35V
C23	CE04LV1010M	ELECTRO	35V
C24	CE04LV1010M	ELECTRO	35V
C25	CE04LV1010M	ELECTRO	35V
C26	CE04LV1010M	ELECTRO	35V
C27	CE04LV1010M	ELECTRO	35V
C28	CE04LV1010M	ELECTRO	35V
C29	CE04LV1010M	ELECTRO	35V
C30	CE04LV1010M	ELECTRO	35V
C31	CE04LV1010M	ELECTRO	35V
C32	CE04LV1010M	ELECTRO	35V
C33	CE04LV1010M	ELECTRO	35V
C34	CE04LV1010M	ELECTRO	35V
C35	CE04LV1010M	ELECTRO	35V
C36	CE04LV1010M	ELECTRO	35V
C37	CE04LV1010M	ELECTRO	35V
C38	CE04LV1010M	ELECTRO	35V
C39	CE04LV1010M	ELECTRO	35V
C40	CE04LV1010M	ELECTRO	35V
C41	CE04LV1010M	ELECTRO	35V
C42	CE04LV1010M	ELECTRO	35V
C43	CE04LV1010M	ELECTRO	35V
C44	CE04LV1010M	ELECTRO	35V
C45	CE04LV1010M	ELECTRO	35V
C46	CE04LV1010M	ELECTRO	35V
C47	CE04LV1010M	ELECTRO	35V
C48	CE04LV1010M	ELECTRO	35V
C49	CE04LV1010M	ELECTRO	35V
C50	CE04LV1010M	ELECTRO	35V
C51	CE04LV1010M	ELECTRO	35V
C52	CE04LV1010M	ELECTRO	35V
C53	CE04LV1010M	ELECTRO	35V
C54	CE04LV1010M	ELECTRO	35V
C55	CE04LV1010M	ELECTRO	35V
C56	CE04LV1010M	ELECTRO	35V
C57	CE04LV1010M	ELECTRO	35V
C58	CE04LV1010M	ELECTRO	35V
C59	CE04LV1010M	ELECTRO	35V
C60	CE04LV1010M	ELECTRO	35V
C61	CE04LV1010M	ELECTRO	35V
C62	CE04LV1010M	ELECTRO	35V
C63	CE04LV1010M	ELECTRO	35V
C64	CE04LV1010M	ELECTRO	35V
C65	CE04LV1010M	ELECTRO	35V
C66	CE04LV1010M	ELECTRO	35V
C67	CE04LV1010M	ELECTRO	35V
C68	CE04LV1010M	ELECTRO	35V
C69	CE04LV1010M	ELECTRO	35V
C70	CE04LV1010M	ELECTRO	35V
C71	CE04LV1010M	ELECTRO	35V
C72	CE04LV1010M	ELECTRO	35V
C73	CE04LV1010M	ELECTRO	35V
C74	CE04LV1010M	ELECTRO	35V
C75	CE04LV1010M	ELECTRO	35V
C76	CE04LV1010M	ELECTRO	35V
C77	CE04LV1010M	ELECTRO	35V
C78	CE04LV1010M	ELECTRO	35V
C79	CE04LV1010M	ELECTRO	35V
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C85	CE04LV1010M	ELECTRO	35V
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C96	CE04LV1010M	ELECTRO	35V
C97	CE04LV1010M	ELECTRO	35V
C98	CE04LV1010M	ELECTRO	35V
C99	CE04LV1010M	ELECTRO	35V
C100	CE04LV1010M	ELECTRO	35V



\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
<b>KC-991</b>						
601	1A	*	A01-1928-01	METALLIC CABINET		
602	2A, 3E	*	A60-0018-02	PANEL		
603	2A	*	A22-1469-01	SUB PANEL		
604	2A	*	A21-1787-03	DRESSING PANEL		
605	1B	*	A70-0512-05	REMOTE CONTROLLER ASSY		
606	1B	*	A09-0111-06	BATTERY COVER		
608	2A	*	B10-1039-03	FRONT GLASS		
-	-	-	B46-0092-03	WARRANTY CARD	K	
-	-	-	B46-0094-03	WARRANTY CARD	Y	
-	-	-	B46-0095-03	WARRANTY CARD	X	
-	-	-	B46-0096-23	WARRANTY CARD		
-	-	-	B46-0121-03	WARRANTY CARD	P	
-	-	-	B56-0513-04	CAUTION CARD (PRESET220-240)	Y	
-	-	*	B60-0335-00	INSTRUCTION MANUAL (ENGLISH)	P	
-	-	*	B60-0336-00	INSTRUCTION MANUAL (FRENCH)	M	
-	-	*	B60-0337-00	INSTRUCTION MANUAL (SP,AL,CH)		
614	1B	*	E03-0115-05	AC PLUG ADAPTER	M	
615	1B	*	E03-0055-05	AC OUTLET	M	
616	1B	*	E03-0114-05	AC OUTLET	X	
617	1B	*	E30-0615-05	AUDIO CORD	M	
617	1B	*	E30-0459-05	AC POWER CORD		
617	1B	*	E30-0812-05	AC POWER CORD	Y	
617	1B	*	E30-0996-05	AC POWER CORD	KP	
618	1B	*	E30-1341-05	AC POWER CORD	X	
618	1B	*	E30-1392-05	CORD WITH PLUG		
620	1B	*	G16-0772-08	REMOTE CONTROLLER ENTRY SHEET		
-	-	*	H50-0016-04	ITEM CARTON CASE		
-	-	*	H10-5140-02	POLYSTYRENE FOAMED FIXTURE		
-	-	*	H10-5141-02	POLYSTYRENE FOAMED FIXTURE		
-	-	*	H25-0223-04	PROTECTION BAG (750X350X0.03)		
-	-	*	H25-0232-04	PROTECTION BAG (235X350X0.03)		
622	3A, 3B	*	J02-0366-15	FOOT		
624	1B	*	J42-0083-05	POWER CORD BUSHING		
631	2A	*	K29-4104-04	KNGB VOLUME		
632	2A	*	K29-4106-04	KNGB FREQUENCY, EQ LEVEL		
633	2A	*	K29-3632-04	KNGB BALANCE		
634	2A	*	K29-4105-04	KNGB INPUT SELECTOR		
635	3A	*	L01-5071-05	POWER TRANSFORMER	NP	
635	3A	*	L01-5072-05	POWER TRANSFORMER	X	
635	3A	*	L01-5074-05	POWER TRANSFORMER	YM	
A	2B	*	N09-1473-05	TAPPING SCREW (M3X8)		
B	1B, 2B	*	N09-2736-05	TAPTITE SCREW		
C	1A, 2A	*	N09-3008-45	BINDING HEAD TAPTITE SCREW		
D	2B	*	N09-3008-46	BINDING HEAD TAPTITE SCREW		
J	3A	*	N09-4006-46	BINDING HEAD TAPTITE SCREW		
<b>NEEDLE UNIT (X11-3010-10: K,P,X, 0-21: M,Y)</b>						
C1	2	*	CE04LW1V100M	ELECTRO 100UF 35WV		
C3	6	*	CC45FSL1H101J	CERAMIC 100PF J		
C7	8	*	CE04LW1A101M	ELECTRO 100UF 10WV		
C9	10	*	CQ92FM1H123J	MYLAR 0.012UF J		
C11	12	*	CQ92FM1H123J	MYLAR 3300PF J		

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A indicates safety critical components

## Destination list

	JAPAN MADE
KC-991	K, P, M, X, Y

## Audio unit

X09-3320-10	KC-991K, P, Y
X09-3320-71	KC-991M, X

## Tone unit

X11-3010-10	KC-991K, P, X
X11-3010-21	KC-991M, Y

## PARTS LIST

\* New Parts

Parts without Parts No. are not supplied.

Les articles non mentionnés dans le Parts No. ne sont pas fournis.

Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C13, 14			CE04LW1V100M	ELECTRO 100UF 35WV		
C15, 22			C91-0753-05	CHIP C 470PF K		
C25, 26			C91-0753-05	CHIP C 470PF K		
C29, 30			C91-0753-05	CHIP C 470PF K		
C47, 48			CE04LW1V100M	ELECTRO 100UF 35WV		
C49, 52			CC45FSL1H101J	CERAMIC 100PF J		
C53, 54			CE04LW1V100M	ELECTRO 100UF 35WV		
C55, 56			CC45FSL1H101J	CERAMIC 100PF J		
C57, 58			CK45F1H471K	CERAMIC 470PF K		
C59, 60			CF92FV1H124J	MF 0.12UF J		
C61, 62			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C63, 64			CF92FV1H473J	MF 0.047UF J		
C65, 66			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C67, 68			CQ92FM1H183J	MYLAR 0.018UF J		
C69, 70			CE04LW1H333M	ELECTRO 0.33UF 50WV		
C71, 72			CQ92FM1H822J	MYLAR 8200PF J		
C73, 74			CF92FV1H124J	MF 0.12UF J		
C75, 76			CQ92FM1H272J	MYLAR 2700PF J		
C77, 78			CF92FV1H563J	MF 0.056UF J		
C79, 80			CQ92FM1H152J	MYLAR 1500PF J		
C81, 82			CQ92FM1H163J	MYLAR 0.016UF J		
C83, 84			CK45F1H471K	CERAMIC 470PF K		
C85, 86			CQ92FM1H822J	MYLAR 8200PF J		
C87, 88			CE04LW1V100M	ELECTRO 100UF 35WV		
C89, 90			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C93, 96			CF92FV1H603J	MF 0.060UF J		
C97, 98			CE04LW1A101M	ELECTRO 100UF 10WV		
C99, 100			CE04LW1V100M	ELECTRO 100UF 35WV		
C101, 104			CC45FSL1H101J	CERAMIC 100PF J		
C105, 106			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C107, 108			CQ92FM1H102J	MYLAR 1000PF J		
C109, 110			CE04LW1V100M	ELECTRO 100UF 35WV		
C111, 112			CC45FSL1H101J	CERAMIC 100PF J		
C141			CK45F1H223J	CERAMIC 0.022UF Z		
C142, 144			CE04LW1C101M	ELECTRO 100UF 16WV		
C145			CK45F1H223J	CERAMIC 0.022UF Z		
C146, 147			CE04LW1C101M	ELECTRO 100UF 16WV		
C148			CK45F1H223J	CERAMIC 0.022UF Z		
C149			CE04LW1C101M	ELECTRO 100UF 16WV		
C150, 151			CE04LW1V100M	ELECTRO 100UF 35WV		
C152, 153			CC45FSL1H221J	CERAMIC 220PF J		
C154			CK45F1H472Z	CERAMIC 4700PF Z		
C155			CK45F1H223J	CERAMIC 0.022UF Z		
C156, 157			CE04LW1V222M	ELECTRO 2200UF 35WV		
C158, 161			CF92FV1H104J	MF 0.10UF J		
C162, 163			CE04LW1C101M	ELECTRO 100UF 16WV		
C164			C91-0971-05	FILM 0.01UF 250WV		
C166			C91-0971-05	FILM 0.01UF 250WV		
C167			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C168, 169			C91-0749-05	CERAMIC 220PF K		
C170			CE04LW0J221M	ELECTRO 220UF 6.3WV		
C171			C90-1332-05	NP-ELEC 100UF 25WV		
C172, 173			CC45FSL1H221J	CERAMIC 220PF J		
C174			CK45F1H223J	CERAMIC 0.022UF Z		
C175			CE04LW1V100M	ELECTRO 100UF 35WV		

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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C178			C90-1332-05	NP-ELEC 100UF 25WV		
C179			CE04LW1V100M	ELECTRO 100UF 35WV		
C180, 181			CF92FV1H104J	MF 0.10UF J		
C182			C90-1352-05	NP-ELEC 4.7UF 25WV		
C183, 184			CC45FSL1H221J	CERAMIC 220PF J		
643	2B	*	E23-0159-05	TERMINAL		
J1		*	E63-0013-05	PHONE JACK PHONE		MX
J2, 3		*	E13-0820-05	PHONE JACK INPUT/TAPE1,2		
J4		*	E63-0013-05	PHONE JACK OUTPUT		
J5		*	E11-0166-05	MINIATURE PHONE JACK (SYS/CON)		
J7			E03-0117-05	AC OUTLET		KPY
CPl, 2			R90-0491-05	MULTI-COMP 620XX7 J 1/6W		
R132, 133			RS:4K830470J	FL-PROOF RS 47 J 2W		
R134			RS:4K830181J	FL-PROOF RS 180 J 2W		
R148			RS:4K83A470J	FL-PROOF RS 47 J 1W		
R166			RS:4K83A820J	FL-PROOF RS 82 J 1W		
A, X1		*	S76-0002-05	MAGNETIC RELAY		
D1, -8			HSS104	DIODE		
D1, -10			HSS133	DIODE		
D9, 10			HZS6.8N(B2)	ZENER DIODE		
D9, 10			R06.6ES(B2)	ZENER DIODE		
D11, -14			HSS104	DIODE		
D11, -14			HSS133	DIODE		
D16, -18			HSS104	DIODE		
D16, -18			HSS133	DIODE		
D21			HSS104	DIODE		
D21			HSS133	DIODE		
922			HZS4.7N(B)	ZENER DIODE		
922			R04.7ES(B)	ZENER DIODE		
923, -26		*	55688B	DIODE		
923, -26		*	1SR139-100	DIODE		
101			TC9163N	IC(BILATERAL SWITCH X16)		
102			TC9162N	IC(ANALOG SWITCH ARRAY)		
103, 4		*	M5229P	IC(7CH GRAPHIC EQUALIZER)		
105		*	RZ7305L	IC(ELECTRONIC VOLUME)		
106		*	UPC4570C-A	IC		
108, 9		*	UPC4570C-A	IC		
1011			UPC4570C-A	IC		
1012			UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		
1013			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
1015			TA8409S	IC(MOTOR CONTROL)		
Q1, -4			2SC2878(B)	TRANSISTOR		
Q7			2SC3246	TRANSISTOR		
Q9, 10			2SA1048(Y,GR)	TRANSISTOR		
Q9, 10			2SA933S(Q,R)	TRANSISTOR		
Q11, 12			DTC124ES	DIGITAL TRANSISTOR		
<b>AUDIO UNIT (X09-3320-10: K,P,Y, 0-71: M,X)</b>						
D25			B30-1291-05	LED(LM21CPSLX(V)-(TA4))		
C1		*	CK45F1H103Z	CERAMIC 0.010UF Z		
C2		*	CE04LW1C102M	ELECTRO 1000UF 16WV		
C3, 4		*	CF92FV1H104J	MF 0.10UF J		
C5		*	CE04LW1A101M	ELECTRO 100UF 10WV		
C7		*	C90-1826-05	BACKUP 0.047F 5.5WV		

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SPECIFICATIONS

Names of controls (AUDIO mode)

Keys masked with  are functions which are not supported with this product.

**LEARN indicator**  
Blinks or lights steady during programming procedure.

**LEARN/USE switch**  
Normally set to the USE position. Set to the LEARN position when programming remote control signals.

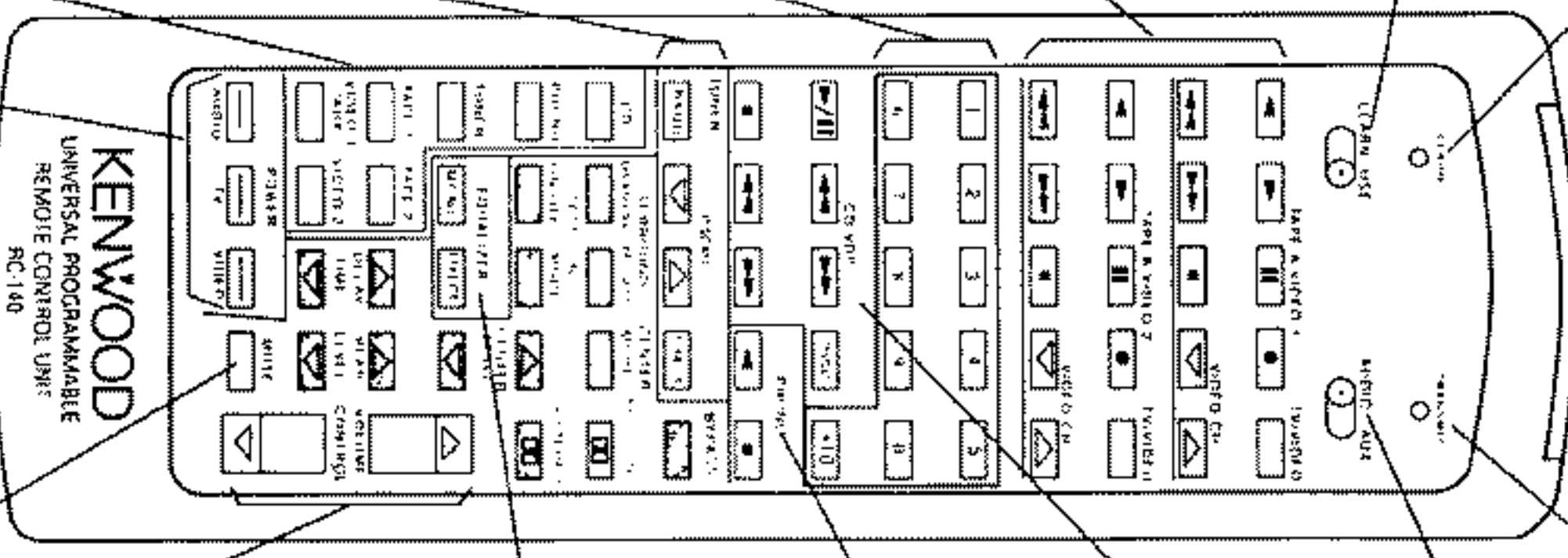
**Tape deck/video deck operation keys**  
The TAPE A and TAPE B keys allow to operate a double cassette tape deck. When using a single cassette tape deck, use the TAPE A keys. A video deck can also be operated by programming the control signals of a video deck in the AUX mode.

**Numeric keys**  
When the CD source is selected, these keys can be used as the numeric keys of the CD player. When the TUNER source is selected, they can be used as the numeric keys of the tuner.  
How to enter numerals:  
For 23 press [2] 10 times and [3].  
For 40 press [4] 10 times and [0].

**TUNER operation keys**  
**BAND:** Switches the bands.  
**P/SCAN:** Scans the preset stations.  
**DIRECT:** In conjunction with the numeric keys, tunes stations directly. (The DIRECT key cannot be used with the KT-591/S1)

**Input selector keys**  
Switches the input selector on the amplifier.

**POWER keys**  
Turn the power of components ON/OFF. For the TV and VIDEO keys, specific control signals should be programmed under them.



**KENWOOD**  
UNIVERSAL PROGRAMMABLE  
REMOTE CONTROL UNIT  
RC-140

**TRANSMIT indicator**  
Lights up while the remote control signal is being transmitted.

**MODE switch**  
Selects the mode to be used.

**CD player operation keys**  
Operate the CD player.  
**DISC:** The DISC key can be used as the disc selector key of a multi-disc player with a disc changer. For details, read the instruction manual provided with the CD player.

**Turntable operation keys**  
Control the start/stop of turntable.

**Amplifier's equalizer operation keys**  
**M/CALL:** Recalls programmed patterns.  
  
M1 → M2 → M3  
EQ OFF ← M5 ← M4  
**EFFECT:** Turns the graphic equalizer effect ON/OFF.

**VOLUME CONTROL keys**  
Adjust the volume. During operation, the VOLUME CONTROL on the front turns and the indicator on the knob blinks at high speed.

**MUTE key**  
Press to reduce the volume temporarily. During operation, the indicator on the VOLUME CONTROL knob blinks.

Performance

<b>Input Sensitivity</b>	
PHONO .....	2.5 mV/47 kΩ
TUNER/TAPE/CD/VIDEO .....	200 mV/47 kΩ
<b>Signal-to-Noise Ratio (IHF-A)</b>	
PHONO .....	80 dB for 2.5 mV input
TUNER/TAPE/CD/VIDEO .....	101 dB
<b>Phono Maximum Input Level</b>	100 mV, T.H.D. 0.3% at 1 kHz
<b>Total Harmonic Distortion</b>	
20 Hz to 20 kHz .....	0.005% at rated output
<b>Loudness Control</b> .....	+8 dB at 100 Hz (at -30 dB VOLUME Level)
<b>Graphic equalizer control</b> (60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz) .....	±10 dB
<b>Output Voltage and Impedance</b>	
Tape REC .....	200 mV/220Ω
PRE OUT .....	1 V/2.2 kΩ

General

**Power Consumption** ..... 15 W

**AC outlets**

**SWITCHED** .....

**Dimensions** .....

**Weight (Net)** .....

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

Accessories

Remote control unit .....	1	AC plug adaptor .....	1
(A70-0512-05)		(except for some areas)	
IA09-0111-08: Battery Cover		For the unit with a European AC plug in areas other than Europe	
		(E03-0115-05)	
Battery ("AAA" or "R03") ....	4	Overlay sheet .....	1
		(G16-0772-08)	
Audio cord .....	1	System control cord .....	1
E30-0459-05		(E30-1392-05)	

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