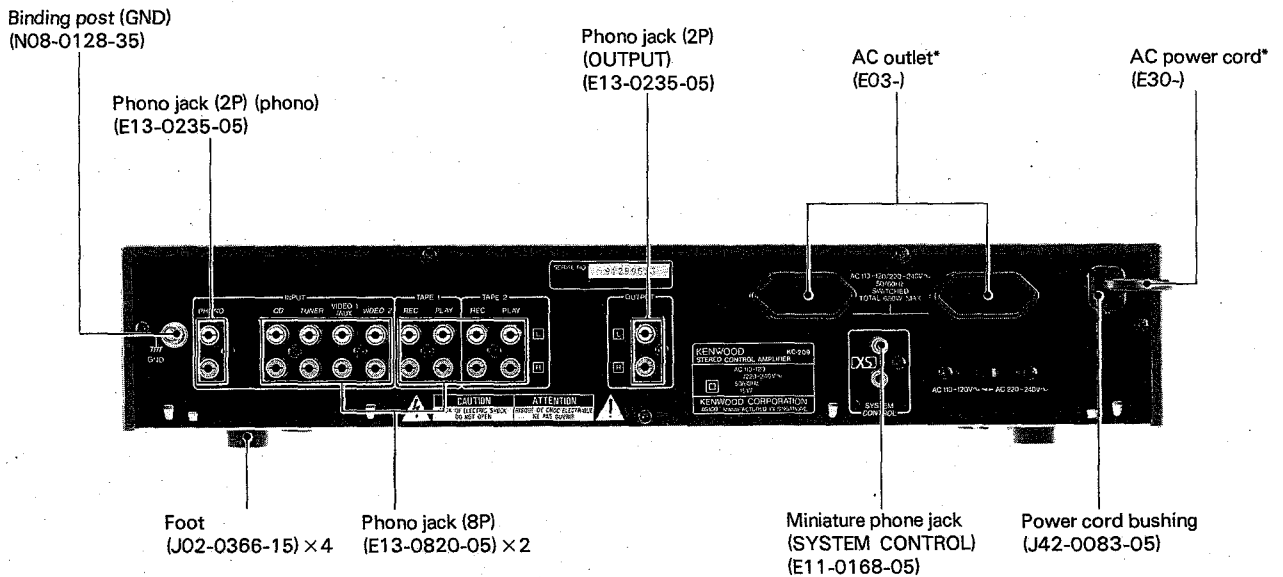
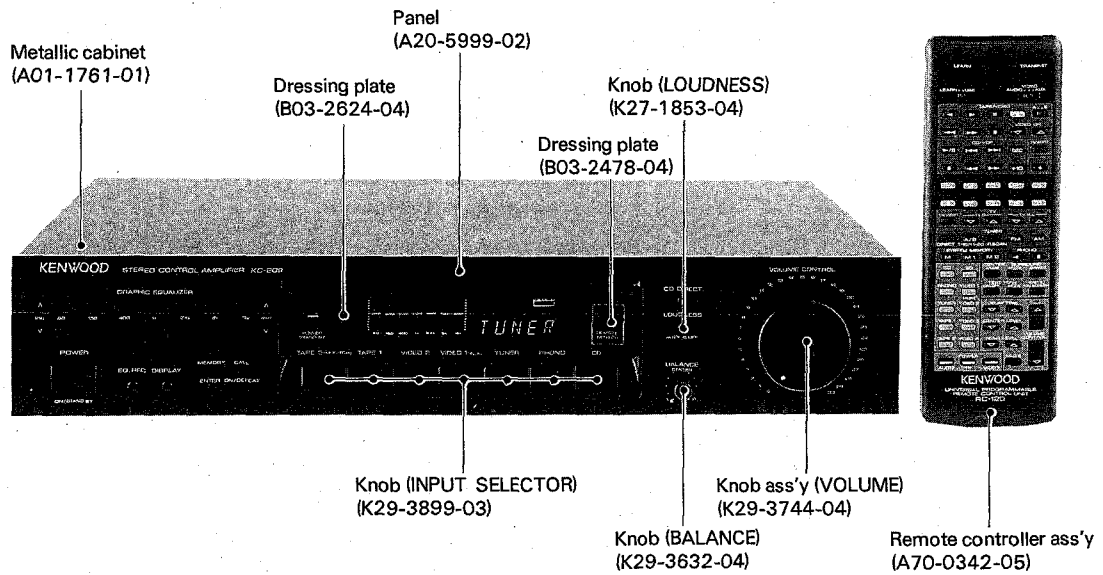


STEREO CONTROL AMPLIFIER

KC-209

SERVICE MANUAL

KENWOOD

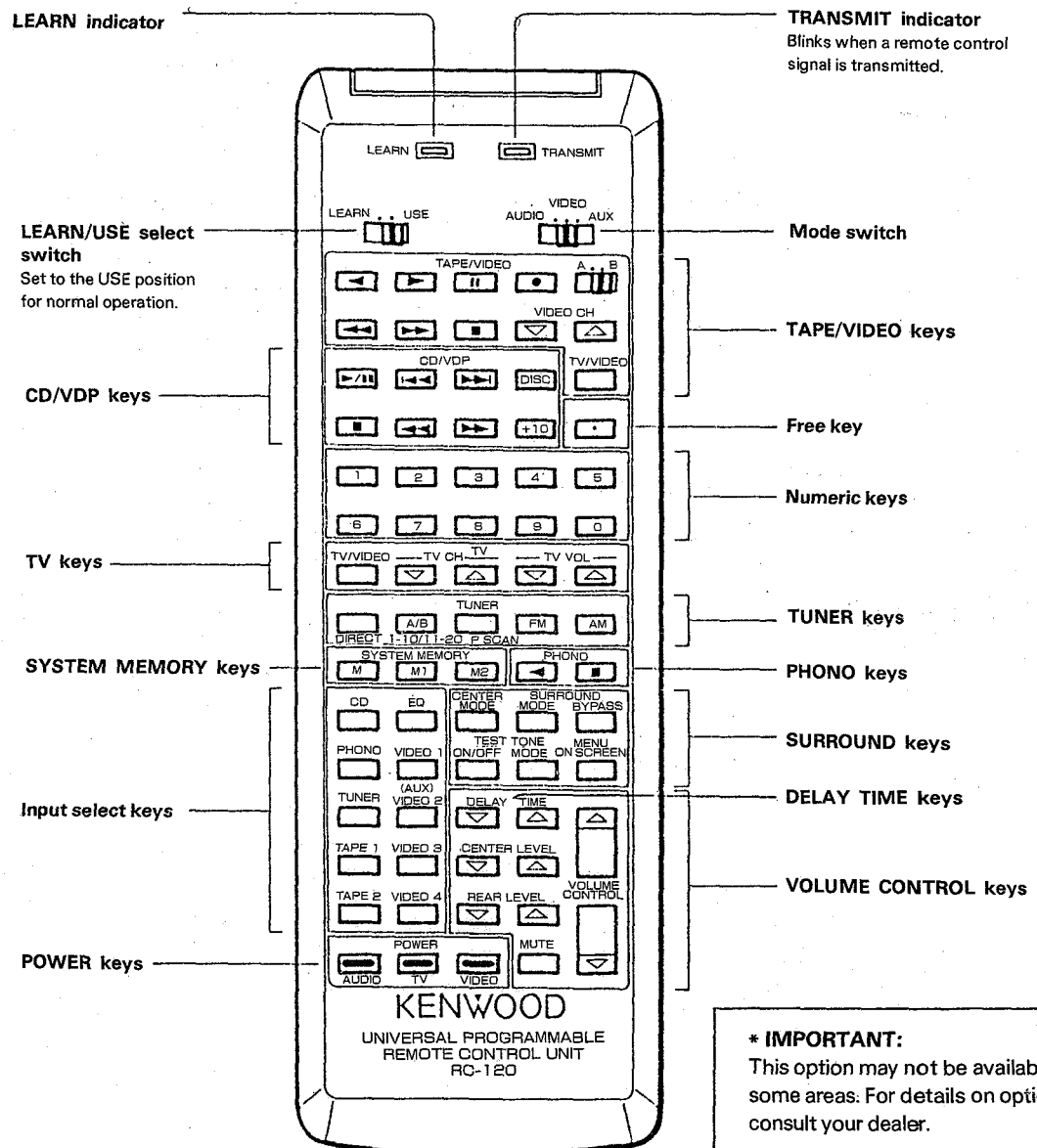


*Refer to Parts List on page 22.

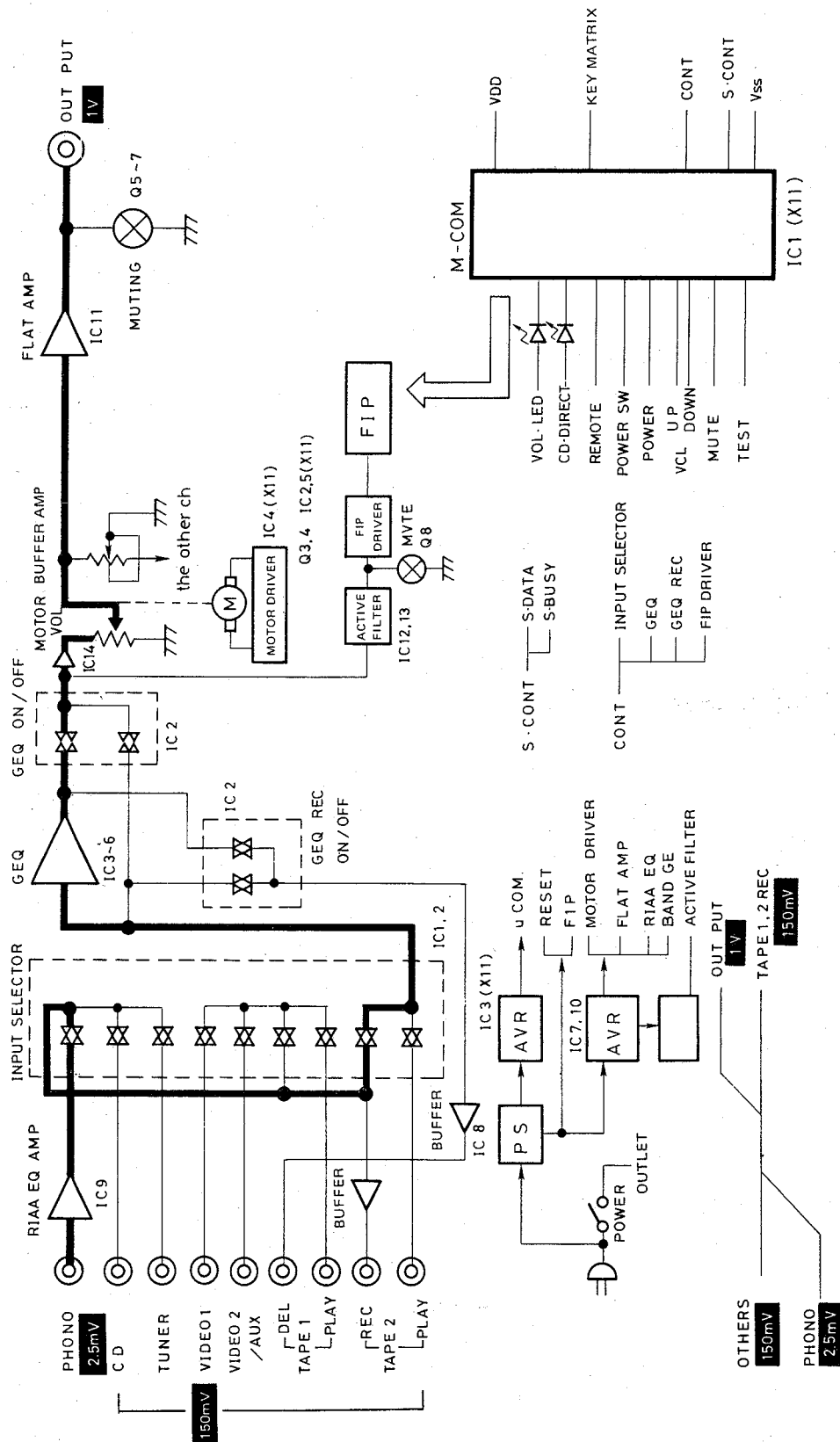
CONTENTS

BLOCK LEVEL DIAGRAM	3	SCHEMATIC DIAGRAM	13
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WIRING DIAGRAM	7	PARTS LIST	22
PC BOARD	9	SPECIFICATIONS	Back cover

NAMES AND OPERATION OF CONTROLS



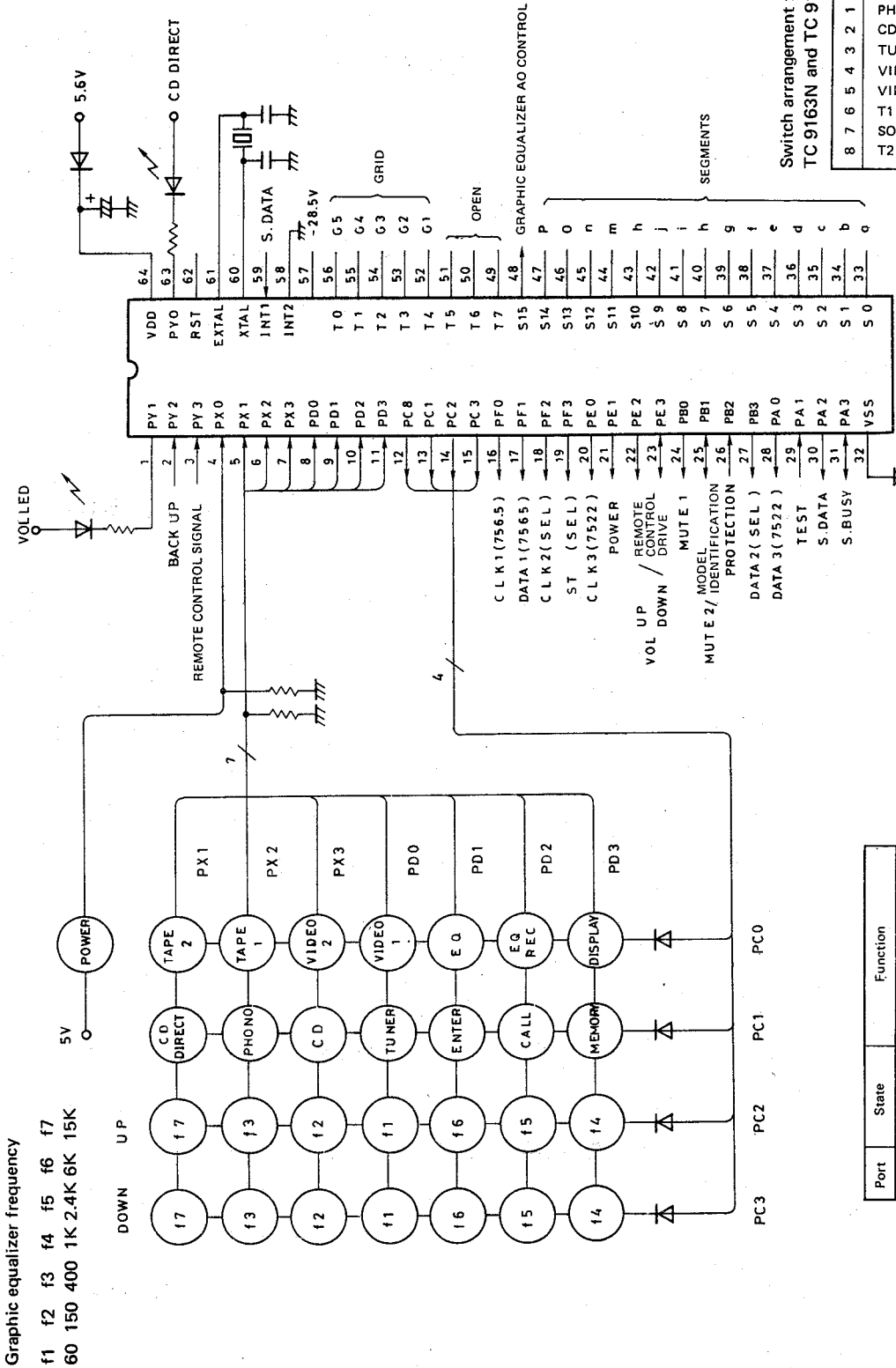
BLOCK LEVEL DIAGRAM



KC-209

CIRCUIT DESCRIPTION

IC1 (X11-2660-XX): μ -com. CXP 5014-519S



Switch arrangement for TC9163N and TC9164N

8	7	6	5	4	3	2	1	SEL. IC
PHONE	CD	TUNER	VIDEO1	VIDEO2	T1 PLAY	SOURCE	T2 PLAY	TC9163N
GE ON	GE OFF	CD DIRECT						TC9164N

*The output port for the display tube requires pulldown for piggybacking.

Port	State	Function
PE3	Output	VOL DOWN
	Input	Remote control: No Remote control: Yes
PB1	Output	MUTE 2
	Input	KC-209 KA-129
PA1	Input	NORM
	Input	TEST
PB2	Input	PROTECTION
	Input	NORM

CIRCUIT DESCRIPTION

CIRCUIT DESCRIPTION

Pin description

Pin No.	Symbol	I/O	Description
1	PY ₁	$\bar{0}$	Volume control, LED control pin. Normally ON; flashing when remote control volume UP/DOWN is pressed.
2	PY ₂	I	Backup detection pin "H": Normal operation "L": Backup
3	PY ₃	I	Remote control signal input pin. Active "L".
4	PX ₀	I	Key matrix return signal input pin. Active "H"
5	PX ₁	I	
6	PX ₂	I	
7	PX ₃	I	
8	PD ₀	I	
9	PD ₁	I	
10	PD ₂	I	
11	PD ₃	I	
12	PC ₀	$\bar{0}$	Key matrix digit signal output pin. (Normally all "H")
13	PC ₁	$\bar{0}$	
14	PC ₂	$\bar{0}$	
15	PC ₃	$\bar{0}$	
16	PF ₀	$\bar{0}$	LC7565 clock pin (CLK1)
17	PF ₁	$\bar{0}$	LC7565 data pin Active "H"
18	PF ₂	$\bar{0}$	TC9163N and TC9164N clock pin (CLK ₂) TC9163N and TC9164N: Selector switching ICs Active "H"
19	PF ₃	$\bar{0}$	TC9163N and TC9164N strobe pin (ST) Active "H"
20	PE ₀	$\bar{0}$	LC7522 clock pin (CLK3) LC7522: Electronic volume control for graphic equalizer. Active "H"
21	PE ₁	$\bar{0}$	Power relay control pin Active "H"
22	PE ₂	$\bar{0}$	UP Electronic volume control pin Active "H"
23	PE ₃	$\bar{0}/1$	DOWN Electronic volume control pin *The DOWN pin also functions as a remote control identification pin
24	PB ₀	$\bar{0}$	MUTE1 Mute control pin (for LINE muting) Active "L"
25	PB ₁	$0/1$	MUTE2 Mute control pin (for REC muting) Active "L"
26	PB ₂	I	PROTECTION Protection state detection pin Active "H"
27	PB ₃	0	TC9163N and TC9164N data pin (DATA2) Active "H"
28	PA ₀	$\bar{0}$	LC7522 data pin (DATA3) Active "H"
29	PA ₁	I	TEST Test mode detection pin "H" Normal operation "L" Test mode * Detected when reset
30	PA ₂	$I/\bar{0}$	S. DATA Used for serial communication (data pin) Active "H"
31	PA ₃	$I/\bar{0}$	S. BUSY Used for serial communication (busy pin) Active "H"
32	V _{SS}		GND pin
33	S ₀	$\bar{0}$	a FL tube segment control pin Active "H"
47	S ₁₄	$\bar{0}$	* With a pulldown resistor as a mask option (pins 33 to 66) p
48	S ₁₅	$\bar{0}$	-30V control pin for KC-209 A φ pin control pin for graphic equalizer display in the FL tube for (KA-128). Active "H"
49	T7	$\bar{0}$	Not used
51	T5	$\bar{0}$	
52	T4	$\bar{0}$	G1 Grid control pin for FL tube Active "H"
56	T0		G2
57	V _{FDP}		FL tube drive power pin (-30V)
58	INT ₂	I	Unused interrupt pin
59	INT ₁	I	Receive interrupt pin for serial communication
60	X _{IAL}		System clock generation pin 4.19 MHz
61	X _{EXTAL}		
62	RST	I	Reset input pin "L" reset
63	PY _φ	$\bar{0}$ (n, d)	CD DIRECT LED control pin * Used for KC-209 only
64	V _{DD}		5V power pin for microprocessor * Keep the potential with a super capacitor, etc, for backup.

1. Test mode

When pin 29 of the microprocessor is pulled LOW (grounded) by connecting it to an outlet (reset), test mode is entered.

(a) All-segments-ON mode

All the segments except those of the graphic equalizer and the $\bar{0}$ in figure 1 come on. When this happens, the graphic equalizer key is inhibited and the SELECTOR key can be operated, but the display remains unchanged. Pressing the Power key once cancels the all-segments-ON mode.

2. Protection function (expect KC-209)

Pin 26 of the microprocessor goes high (5V) to indicate the protection state (abnormal operation).

(a) Protection state setting conditions

The state of the protection IC of the main amplifier is always monitored. When the protection IC enters the protection state, a high signal (5V) is input to the microprocessor. The microprocessor allows about 400ms chattering time (to prevent malfunction) and then enters the protection state.

(b) Protection indication

"P-OFF" flashes on the character display (selector display) of the fluorescent tube.

3. Model Identification (KC-209 [Preamplifier]/ KA-129 [Pre-main amplifier])

- When the signal on pin 25 of the microprocessor is high, the model is identified as a KC-209 (preamplifier). When the signal is low, the model is identified as a KA-129 (Pre-main amplifier).
- Separate program processing is performed when the power is switched ON and OFF.
- Pin 48 (S15) of the KC-209 (preamplifier) controls the FL tube drive power supply (-30V) when the power is switched ON, S15 is pulled high when the display lights.

(b) Graphic equalizer test mode

The state of the graphic equalizer can be switched between MAX and MIN by pressing the UP/DOWN key once.

MAX \rightleftharpoons FLAT \rightleftharpoons MIN

(c) Cancel

Test modes a and b are set to their initial states (SEL, TUNER, and graphic equalizer memory all flat) when pin 29 of the microprocessor is disconnected.

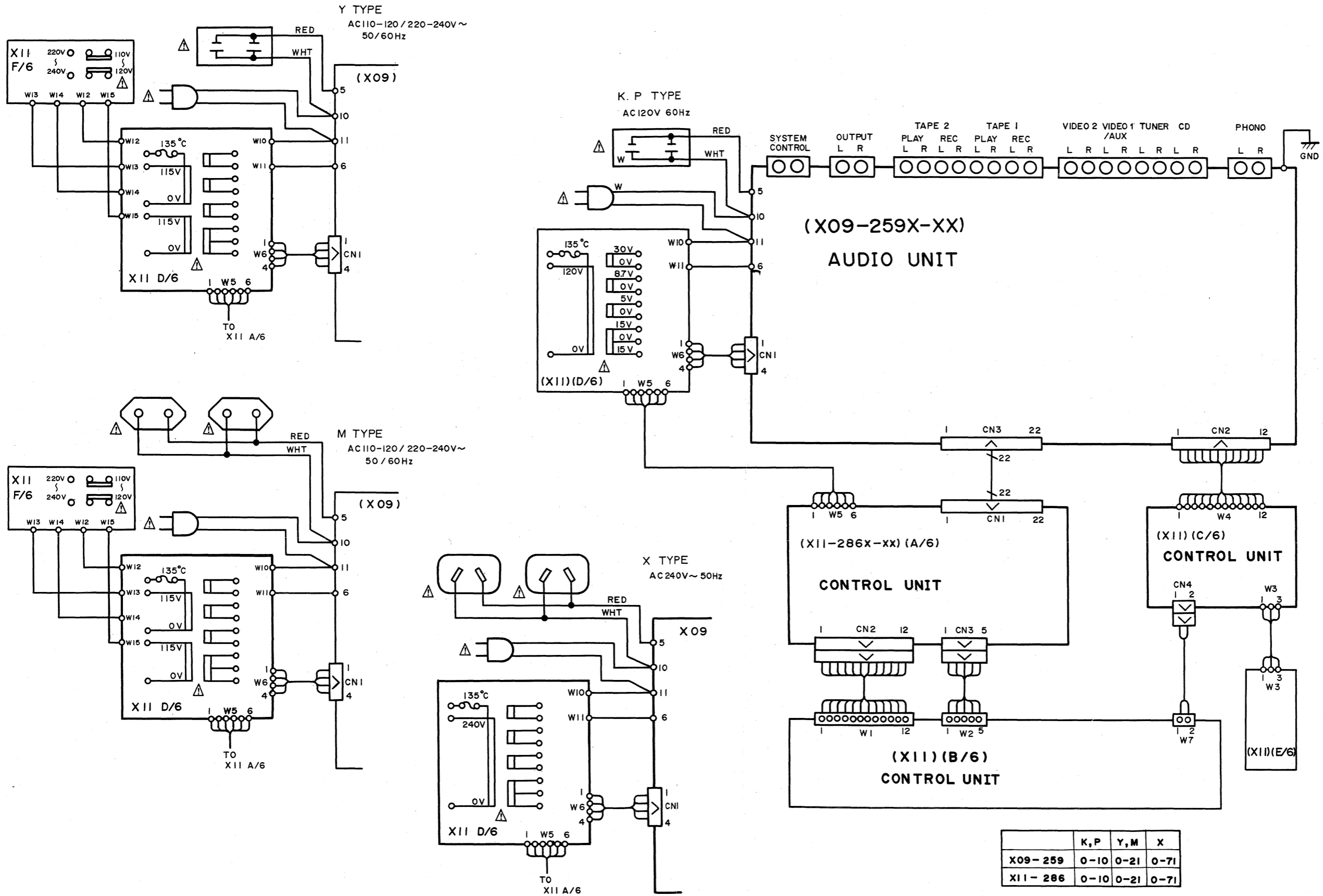
(c) Canceling the state

- When in the protection state, all keys except the POWER key are disabled.
- When the protection IC enters the protection state because of a momentary voltage drop or power failure and recovers from it automatically, the protection display automatically returns to the normal selector display.

(d) The microprocessor does not monitor the protection IC state for 5 seconds after the power is switched ON.

KC-209 KC-209

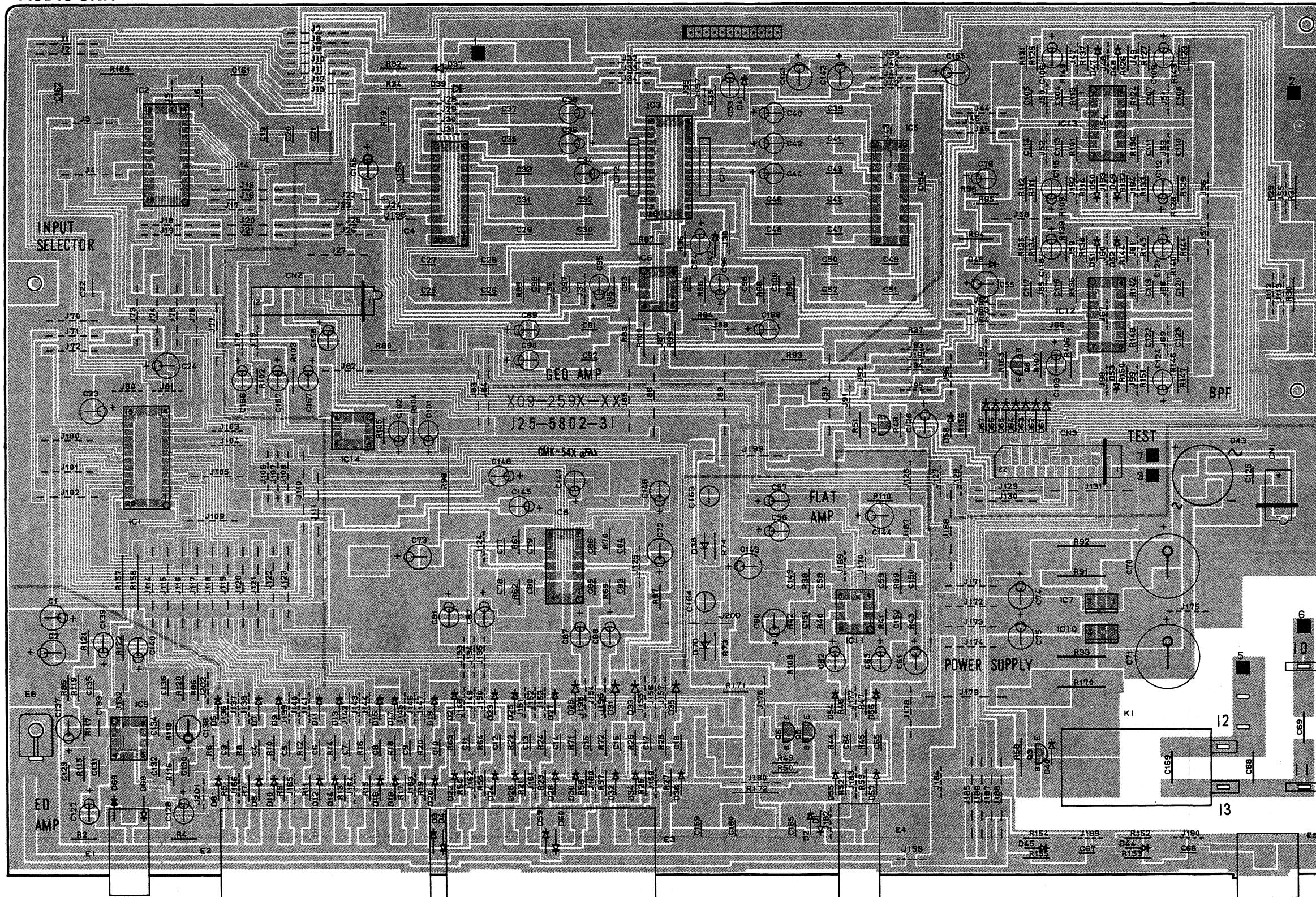
WIRING DIAGRAM



	K, P	Y, M	X
X09-259	0-10	0-21	0-71
X11-286	0-10	0-21	0-71

PC BOARD (Component Side View)

AUDIO UNIT



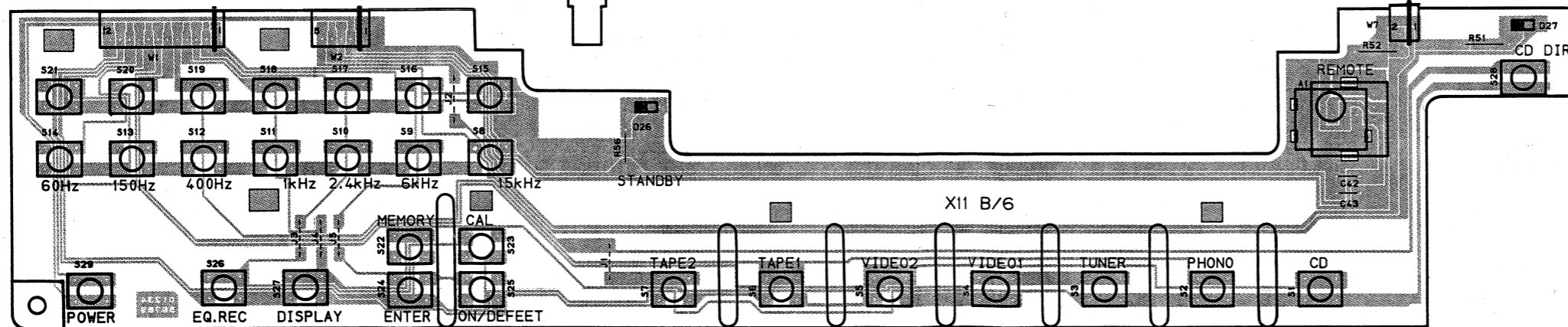
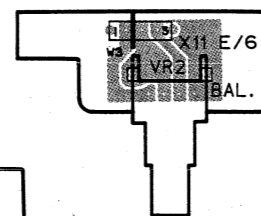
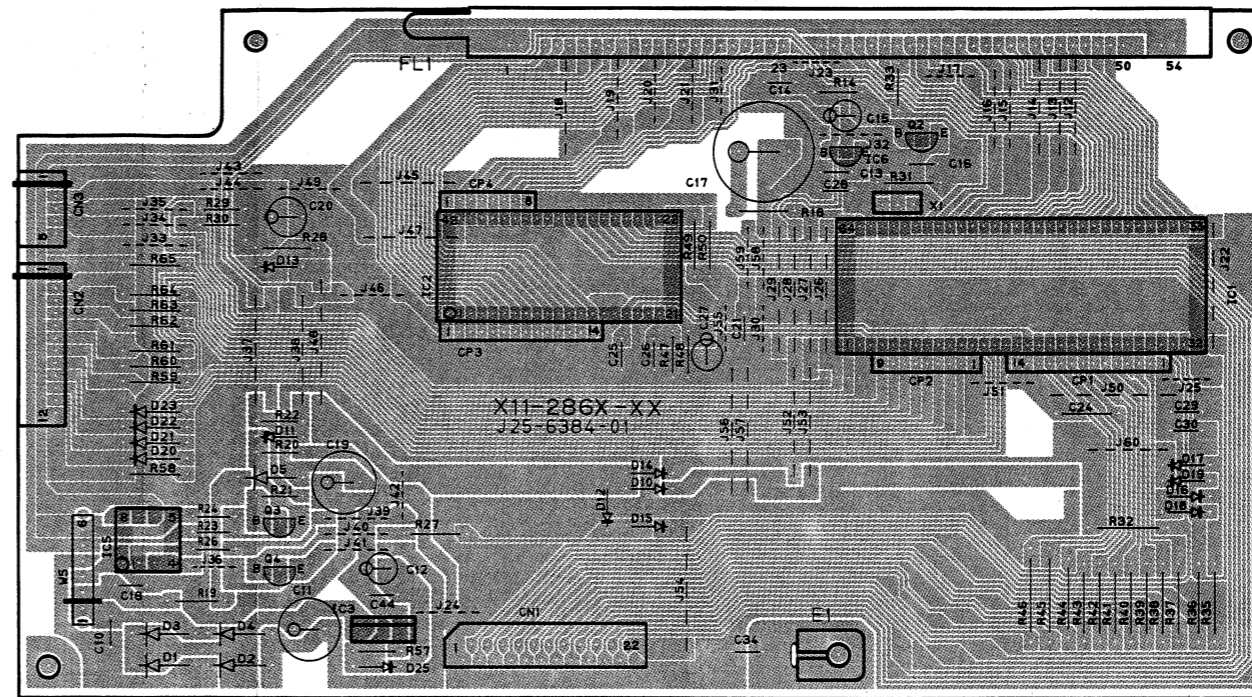
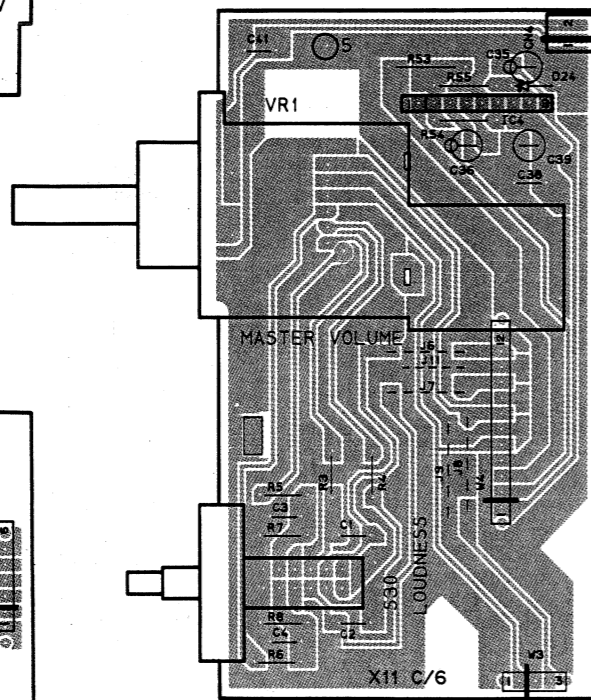
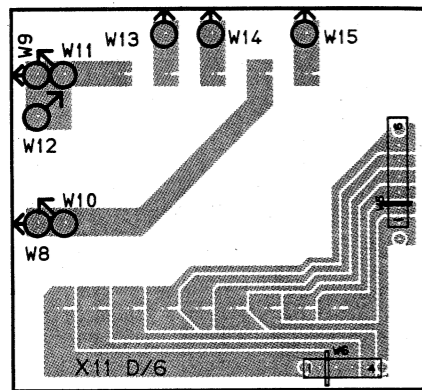
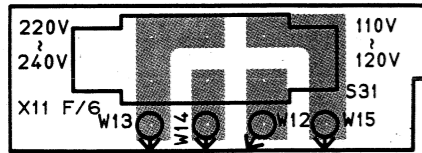
X09-2590-10

Ref. No.	IC	Q	Address
		3	6G
		5	6F
		6	6F
		7	4F
		8	3G
1			4B
2			2B
3			2E
4			2D
5			2F
6			3E
7			5G
8			5D
9			6B
10			5G
11			5F
12			3G
13			2G
14			4C

	K, P	Y, M	X
X09-259	0-10	0-21	0-71

PC BOARD (Component Side View)

CONTROL UNIT

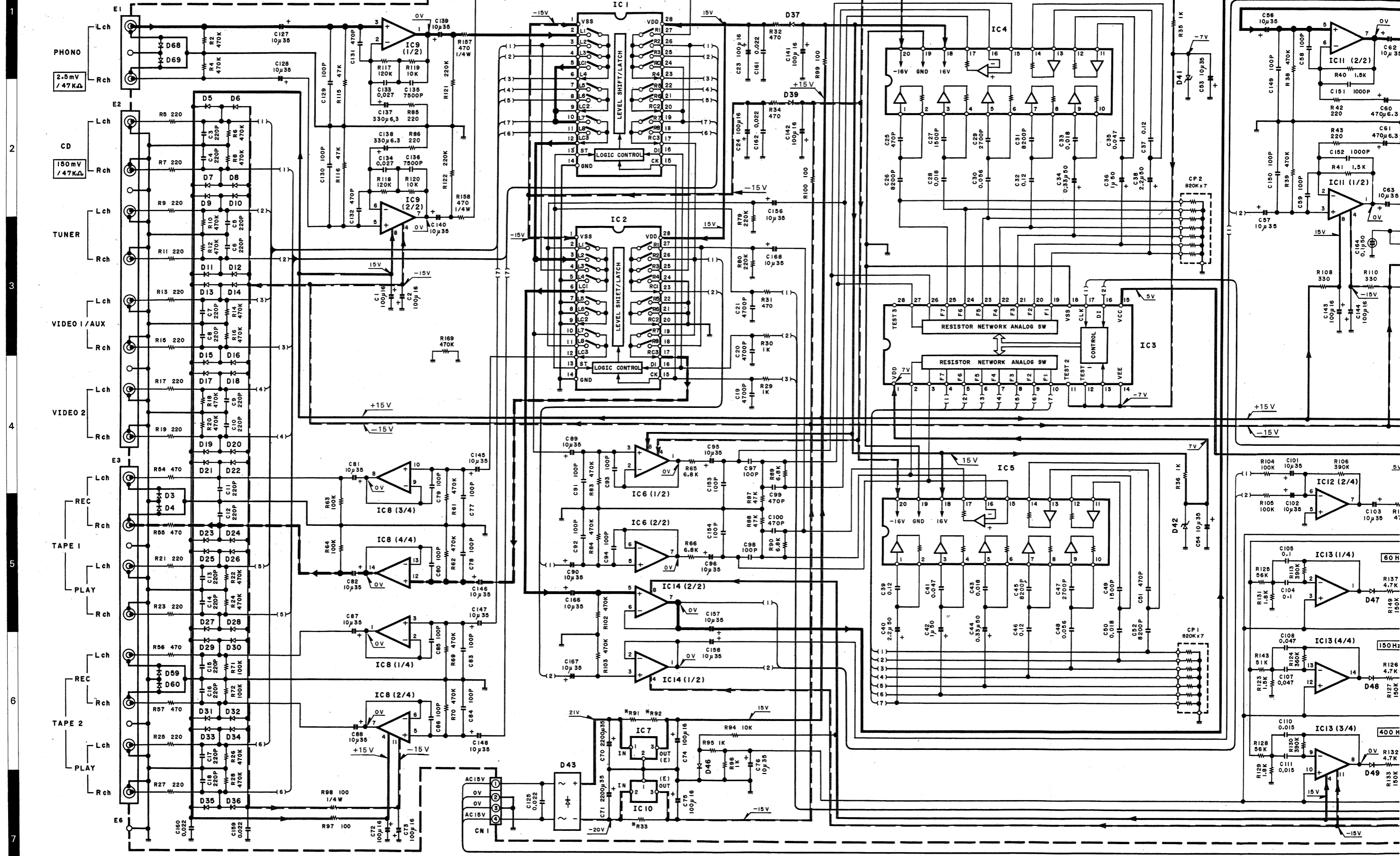


X11-2860-xx

Ref. No.	Q	Address
IC	2	2R
	3	3P
	4	3P
1		2R
2		2P
3		3P
4		2N
5		3O
6		2R

	K,P	Y,M	X
X11-286	0-10	0-21	0-71

AUDIO AMPLIFIER UNIT (X09-259X-XX)



2

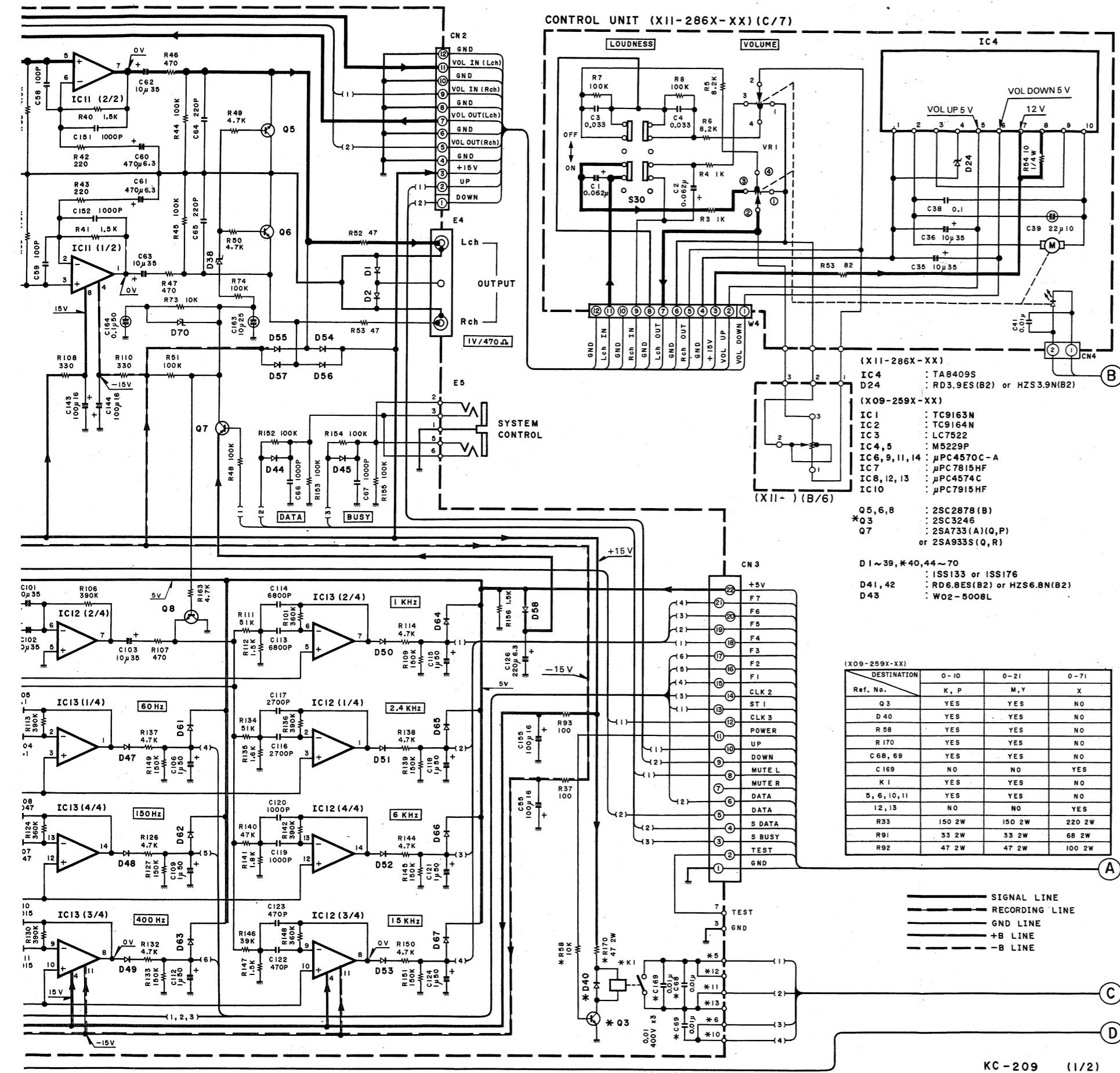
3

4

5

6

7



KC-209 (1/2)

2SA733 (A)
2SC2878
2SC3246
2SC945 (A)

2SA933S
2SC1740S

UPC4574C

M5229P

UPC4570C-A

LC7565

LC7522

TLP3501

UPC7805H
UPC7815HF

M51951ASL

TC9163N
TC9164N

CXP5014-519

UPC7915HF

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ 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 a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

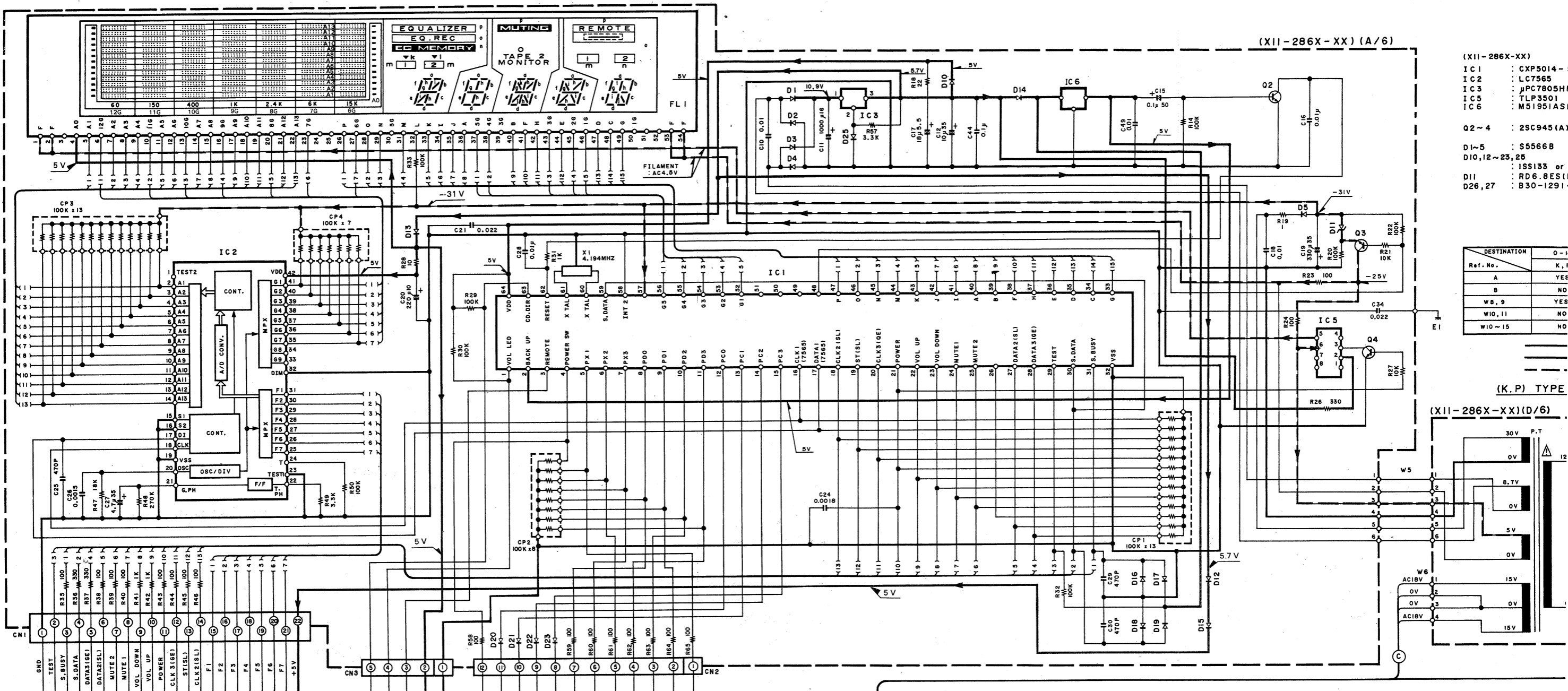
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance, une cassette étant insérée en mode de lecture. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

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 Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

KC-209
KENWOOD

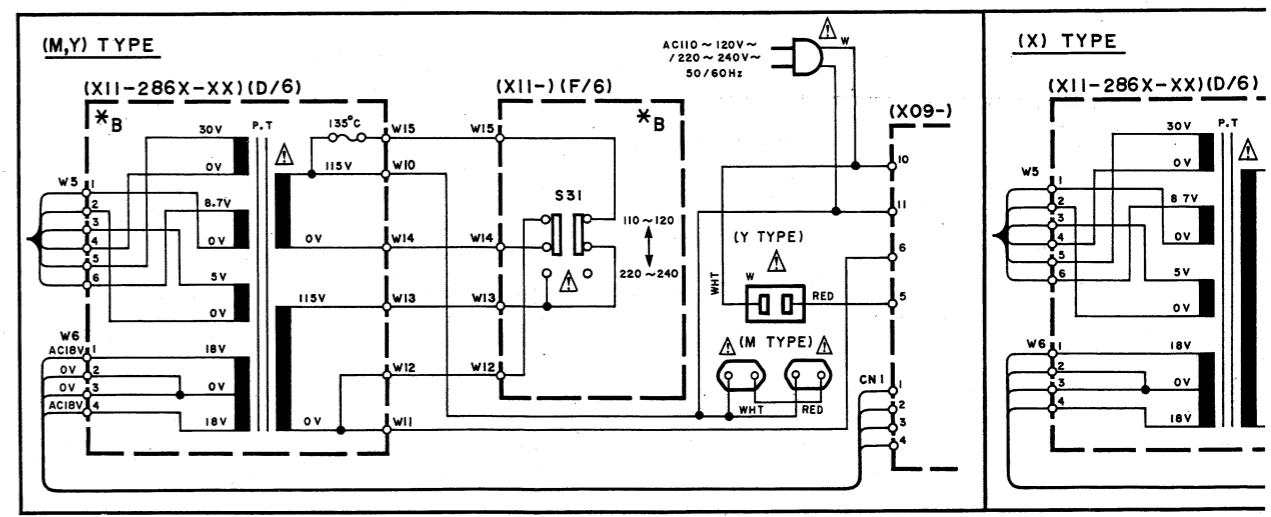
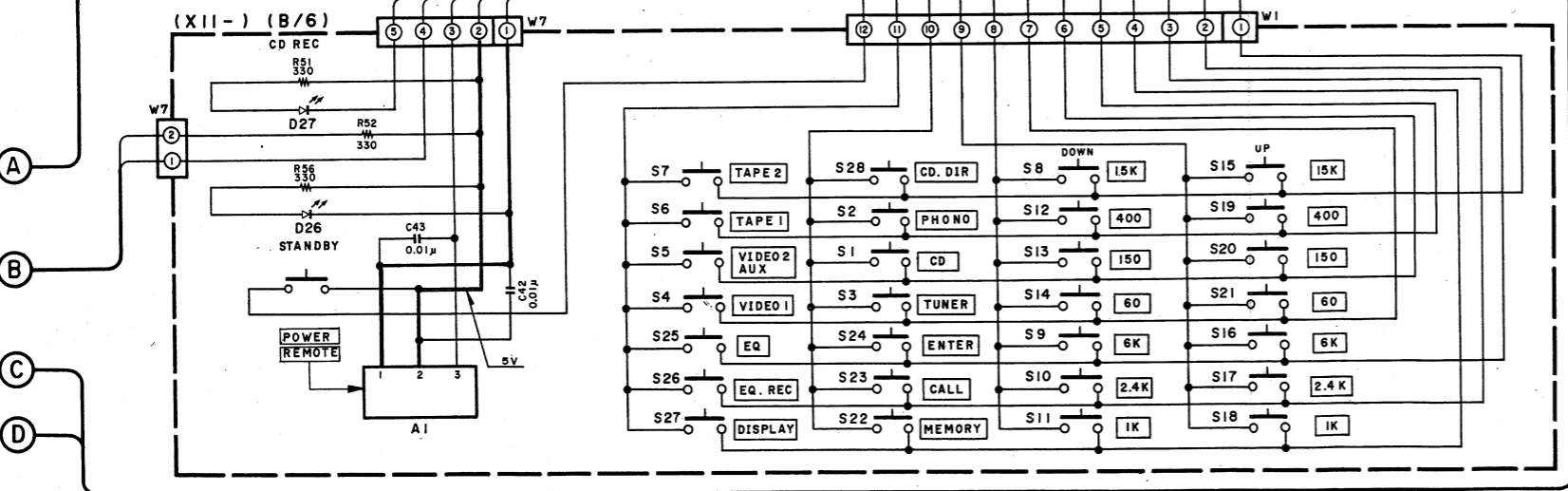
Y08-4060-10



- (X11-286X-XX)
- IC 1 : CXP5014 - I
 - IC 2 : LC7565
 - IC 3 : µPC7805HF
 - IC 4 : TLP3501
 - IC 5 : M51951ASL
- Q2~4 : 2SC945 (A)
- D1~5 : S5566B
- D10,12~23,25 : 1SS133 or
- D11 : RD6.8ES(I)
- D26,27 : B30-1291

DESTINATION	0-1
Ref. No.	K, I
A	YES
B	NO
W8, 9	YES
W10, 11	NO
W10~15	NO

(K.P) TYPE



2

3

5

7

(X11-286X-XX)

- IC 1 : CXP5014-519S
- IC 2 : LC7565
- IC 3 : μPC7805HF
- IC 5 : TLP3501
- IC 6 : M51951ASL

Q2~4 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)

D1~5 : S5566B

D10,12~23,25 : ISS133 or ISS104

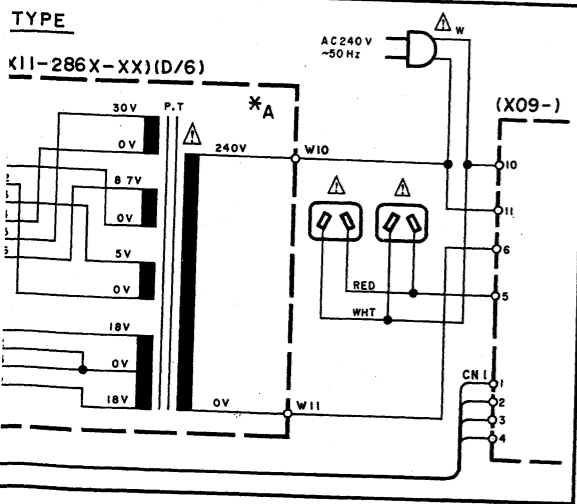
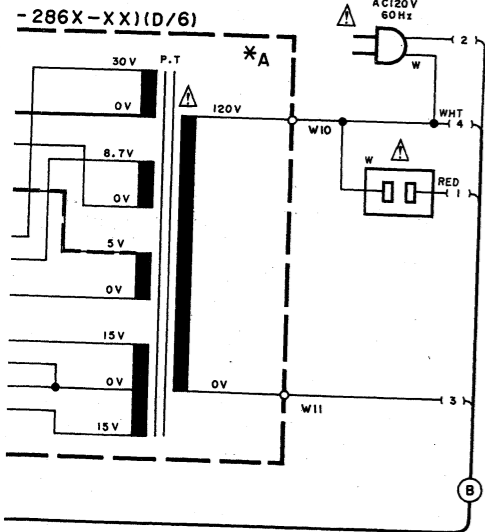
D11 : RD6.8ES(B2) or HZS6.8N(B2)

D26,27 : B30-1291-05

DESTINATION	0-10	0-21	0-71
Ref. No.	K, P	M, Y	X
A	YES	NO	YES
B	NO	YES	NO
W8, 9	YES	NO	NO
W10, 11	NO	NO	YES
W10-15	NO	YES	NO

— GND LINE
 — +B LINE
 - - - -B LINE

(K,P) TYPE



KC-209 (2/2)

CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ 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.

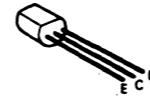
DC voltages are as measured with a high impedance voltmeter with a cassette loaded at playback mode. Values may vary slightly due to variations between individual instruments or/and units. Bias circuit DC voltages are as measured while in the record mode.

Les tensions c.c. doivent être mesurées avec un voltmètre à 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.

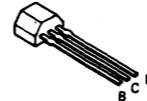
Les tensions c.c. du circuit de polarité doivent être mesurées, l'appareil étant en mode d'enregistrement.

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 Vormagnetisierungsschaltung wurden in der Aufnahme-Betriebsart gemessen.

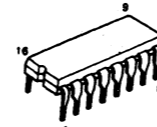
2SA733 (A)
 2SC2878
 2SC3246
 2SC945 (A)



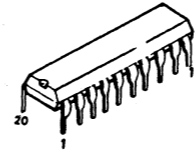
2SA933S
 2SC1740S



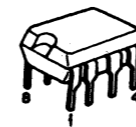
UPC4574C



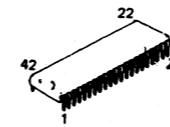
M5229P



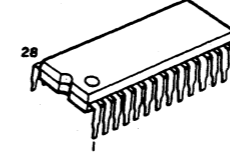
UPC4570C-A



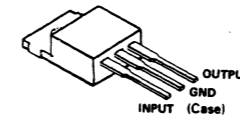
LC7565



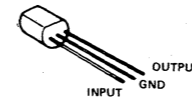
LC7522



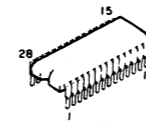
UPC7805H
 UPC7815HF



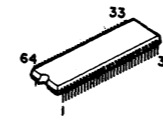
M51951ASL



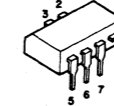
TC9163N
 TC9164N



CXP5014-519



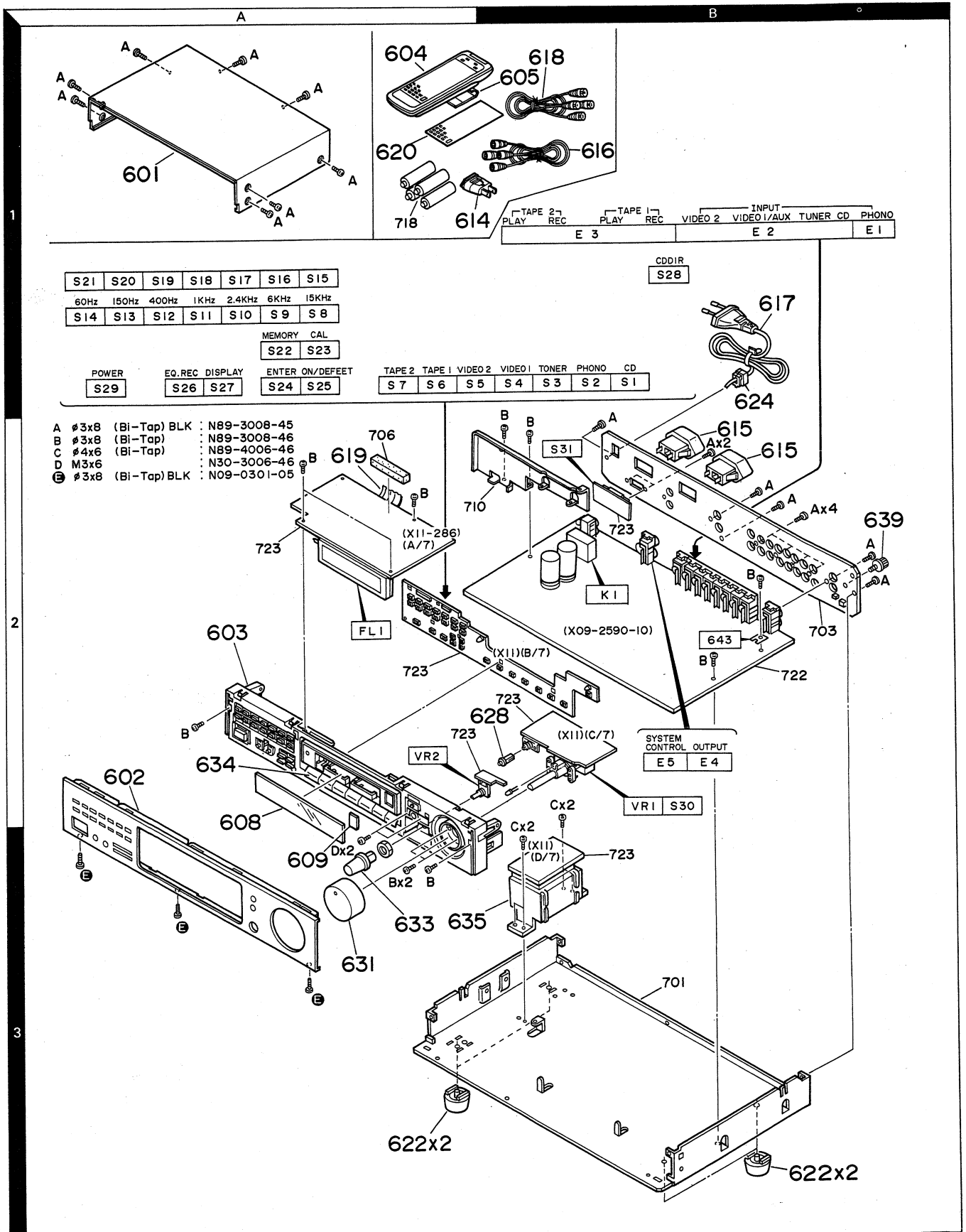
TLP3501



UPC7915HF



EXPLODED VIEW



Parts with the exploded numbers larger than 700 are not supplied. ;

KC-209

PARTS LIST

× New Parts

Parts without Parts No. are not supplied.

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

Telle ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
KC-209						
601	1A		A01-1761-01	METALLIC CABINET		
602	2A, 3A	*	A20-5999-02	PANEL		
603	2A	*	A22-1174-02	SUB PANEL ASSY		
604	1A, 1B	*	A70-0342-05	REMOTE CONTROLLER ASSY		
605	1A, 1B		A09-0086-08	BATTERY COVER (REMOTE CON)		
608	2A	*	B03-2624-04	DRESSING PLATE		
609	2A, 3A		B03-2478-04	DRESSING PLATE (REMOTE SENCER)		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0096-13	WARRANTY CARD	X	
-			B46-0121-03	WARRANTY CARD	P	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0015-00	INSTRUCTION MANUAL (ENGLISH)		
-		*	B60-0016-00	INSTRUCTION MANUAL (FRANCH)	PM	
-		*	B60-0017-00	INSTRUCTION MANUAL (SPA, ARA, CH)	M	
614	1A, 1B	*	E03-0115-05	AC PLUG ADAPTOR	M	
615	2B		E03-0055-05	AC OUTLET	M	
615	2B		E03-0072-05	AC OUTLET	KPY	
△ 615	2B	*	E03-0114-05	AC OUTLET	X	
616	1B		E30-0615-05	AUDIO CORD		
617	2B		E30-0459-05	AC POWER CORD	M	
△ 617	2B		E30-0812-05	AC POWER CORD	Y	
△ 617	2B		E30-0996-05	AC POWER CORD	KP	
△ 617	2B		E30-1341-05	AC POWER CORD	X	
618	1B		E30-1392-05	CORD WITH PLUG		
619	2A		E31-4334-05	FLAT CABLE		
620	1A	*	G16-0756-08	WRITING SEET		
-		*	H01-8758-04	ITEM CARTON CASE		
-		*	H10-3977-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3978-02	POLYSTYRENE FOAMED FIXTURE		
-			H25-0148-04	PROTECTION BAG (110X230X0.07)		
-			H25-0223-04	PROTECTION BAG (750X350X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
△ 622	3A, 3B		J02-0366-15	FOOT		
624	1A, 2B		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
628	2B		K27-1853-04	KNOB (BUTTON) LOUDNESS		
631	3A		K29-3744-04	KNOB ASSY VOL CONTROL		
633	3A		K29-3632-04	KNOB BALANCE		
634	2A, 3A	*	K29-3899-03	KNOB INPUT SELECTOR		
635	3B		L01-5071-05	POWER TRANSFORMER	KP	
635	3B		L01-5072-05	POWER TRANSFORMER	X	
635	3B		L01-5074-05	POWER TRANSFORMER	YM	
639	2B		N08-0128-35	BINDING POST (GND)		
A	1A		N89-3008-45	BINDING HEAD TAPTITE SCREW		
B	2A		N89-3008-46	BINDING HEAD TAPTITE SCREW		
C	3B		N89-4006-46	BINDING HEAD TAPTITE SCREW		
D	3A		N30-3006-46	PAN HEAD MACHINE SCREW		

E: Scandinavia & Europe K: USA

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E	3A		N09-2706-05	SCREW		
AUDIO UNIT (X09-2590-10: K, P, 0-21: Y, M, 0-71: X)						
C1 ,2			CE04LW1C101M	ELECTRO 100UF 16WV		
C3 -18			CC45FSL1H221J	CERAMIC 220PF J		
C19 -22			CK45FF1H472Z	CERAMIC 4700PF Z		
C23 ,24			CE04LW1C101M	ELECTRO 100UF 16WV		
C25			CK45FB1H471K	CERAMIC 470PF K		
C26			CF92FV1H822J	MF 8200PF J		
C27			CF92FV1H152J	MF 1500PF J		
C28			CF92FV1H183J	MF 0.018UF J		
C29			CF92FV1H272J	MF 2700PF J		
C30			CF92FV1H563J	MF 0.056UF J		
C31			CF92FV1H822J	MF 8200PF J		
C32			CF92FV1H124J	MF 0.12UF J		
C33			CF92FV1H183J	MF 0.018UF J		
C34			CE04LW1HR33M	ELECTRO 0.33UF 50WV		
C35			CF92FV1H473J	MF 0.047UF J		
C36			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C37			CF92FV1H124J	MF 0.12UF J		
C38			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C39			CF92FV1H124J	MF 0.12UF J		
C40			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C41			CF92FV1H473J	MF 0.047UF J		
C42			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C43			CF92FV1H183J	MF 0.018UF J		
C44			CE04LW1HR33M	ELECTRO 0.33UF 50WV		
C45			CF92FV1H822J	MF 8200PF J		
C46			CF92FV1H124J	MF 0.12UF J		
C47			CF92FV1H272J	MF 2700PF J		
C48			CF92FV1H563J	MF 0.056UF J		
C49			CF92FV1H152J	MF 1500PF J		
C50			CF92FV1H183J	MF 0.018UF J		
C51			CK45FB1H471K	CERAMIC 470PF K		
C52			CF92FV1H822J	MF 8200PF J		
C53 ,54			CE04LW1V100M	ELECTRO 10UF 35WV		
C55			CE04LW1C101M	ELECTRO 100UF 16WV		
C56 ,57			CE04LW1V100M	ELECTRO 10UF 35WV		
C58 ,59			CC45FSL1H101J	CERAMIC 100PF J		
C60 ,61			CE04LW0J471M	ELECTRO 470UF 6.3WV		
C62 ,63			CE04LW1V100M	ELECTRO 10UF 35WV		
C64 ,65			CC45FSL1H221J	CERAMIC 220PF J		
C66 ,67			CK45FB1H102K	CERAMIC 1000PF K		
△ C68 ,69			C91-0647-05	CERAMIC 0.01UF P	KPYM	
C70 ,71			CE04LW1V222M	ELECTRO 2200UF 35WV		
C72 -75			CE04LW1C101M	ELECTRO 100UF 16WV		
C76			CE04LW1V100M	ELECTRO 10UF 35WV		
C77 -80			CC45FSL1H101J	CERAMIC 100PF J		
C81 ,82			CE04LW1V100M	ELECTRO 10UF 35WV		
C83 -86			CC45FSL1H101J	CERAMIC 100PF J		
C87 -90			CE04LW1V100M	ELECTRO 10UF 35WV		
C91 -94			CC45FSL1H101J	CERAMIC 100PF J		
C95 ,96			CE04LW1V100M	ELECTRO 10UF 35WV		
C97 ,98			CC45FSL1H101J	CERAMIC 100PF J		
C99 ,100			CK45FB1H471K	CERAMIC 470PF K		

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C101-103 C104, 105 C106 C107, 108 C109			CE04LW1V100M CF92FV1H104J CE04LW1H010M CF92FV1H473J CE04LW1H010M	ELECTRO 10UF 35WV MF 0.10UF J ELECTRO 1.0UF 50WV MF 0.047UF J ELECTRO 1.0UF 50WV		
C110, 111 C112 C113, 114 C115 C116, 117			CF92FV1H153J CE04LW1H010M CF92FV1H682J CE04LW1H010M CF92FV1H272J	MF 0.015UF J ELECTRO 1.0UF 50WV MF 6800PF J ELECTRO 1.0UF 50WV MF 2700PF J		
C118 C119, 120 C121 C122, 123 C124			CE04LW1H010M CF92FV1H102J CE04LW1H010M CK45FB1H471K CE04LW1H010M	ELECTRO 1.0UF 50WV MF 1000PF J ELECTRO 1.0UF 50WV CERAMIC 470PF K ELECTRO 1.0UF 50WV		
C125 C126 C127, 128 C129, 130 C131, 132			CK45FF1H223Z CE04LW0J221M CE04LW1V100M CC45FSL1H101J CK45FB1H471K	CERAMIC 0.022UF Z ELECTRO 220UF 6.3WV ELECTRO 10UF 35WV CERAMIC 100PF J CERAMIC 470PF K		
C133, 134 C135, 136 C137 C138 C139, 140			CF92FV1H273J CF92FV1H752J CE04LW0J331M CE04LW0J331M CE04LW1V100M	MF 0.027UF J MF 7500PF J ELECTRO 330UF 6.3WV ELECTRO 330UF 6.3WV ELECTRO 10UF 35WV		
C141-144 C145-148 C149, 150 C151, 152 C153, 154			CE04LW1C101M CE04LW1V100M CC45FSL1H101J CK45FB1H102K CC45FSL1H101J	ELECTRO 100UF 16WV ELECTRO 10UF 35WV CERAMIC 100PF J CERAMIC 1000PF K CERAMIC 100PF J		
C155 C156 C157, 158 C159-162 C163			CE04LW1C101M CE04JW1V100M CE04LW1V100M CK45FF1H223Z C90-1332-05	ELECTRO 100UF 16WV ELECTRO 10UF 35WV ELECTRO 10UF 35WV CERAMIC 0.022UF Z NP-ELEC 10UF 25WV		
C164 C165 C166-168 C169			C90-1455-05 CK45FF1H223Z CE04LW1V100M C91-0647-05	NP-ELEC 0.1UF 50WV CERAMIC 0.022UF Z ELECTRO 10UF 35WV CERAMIC 0.01UF P		X
△ 643 CN3 E1 E2 , 3 E5	2B 2B 2B		E23-0159-05 E10-2211-05 E13-0235-05 E13-0820-05 E11-0168-05	TERMINAL FLAT CABLE CONNECTOR PHONE JACK (2P) PHONE PHONE JACK (INPUT) MINIATURE PHONE JACK(SYNCR0)		
CP1 , 2 R33 R33 R91 R91	 		R90-0491-05 RS14KB3D151J RS14KB3D221J RS14KB3D330J RS14KB3D680J	MULTI-COMP 820KX7 J 1/6W FL-PROOF RS 150 J 2W FL-PROOF RS 220 J 2W FL-PROOF RS 33 J 2W FL-PROOF RS 68 J 2W		KPYM X X X
R92 R92 R170			RS14KB3D101J RS14KB3D470J RS14KB3D470J	FL-PROOF RS 100 J 2W FL-PROOF RS 47 J 2W FL-PROOF RS 47 J 2W		X KPYM KPYM
△ K1	2B		S51-1036-05	MAGNETIC RELAY		KPYM

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D1 -39			1SS133	DIODE	X	
D1 -39			1SS176	DIODE	X	
D1 -40			1SS133	DIODE	KPYM	
D1 -40			1SS176	DIODE	KPYM	
D41 ,42			HZS6.8N(B2)	ZENER DIODE		
D41 ,42			RD6.8ES(B2)	ZENER DIODE		
D43			W02-5008L	DIODE		
D44 -70			1SS133	DIODE		
D44 -70			1SS176	DIODE		
IC1			TC9163N	IC(BILATERAL SWITCH X16)		
IC2			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3			LC7522	IC(7CH GRAPHIC EQUALIZER)		
IC4 ,5			M5229P	IC(7CH GRAPHIC EQUALIZER)		
IC6			UPC4570C-A	IC(OP AMP X2)		
IC7			UPC7815HF	IC(VOLTAGE REGULATOR/ +15V)		
IC8			UPC4574C	IC(OP AMP X4)		
IC9			UPC4570C-A	IC(OP AMP X2)		
IC10			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC11			UPC4570C-A	IC(OP AMP X2)		
IC12,13			UPC4574C	IC(OP AMP X4)		
IC14			UPC4570C-A	IC(OP AMP X2)		
Q3			2SC3246	TRANSISTOR	KPYM	
Q5 ,6			2SC2878(B)	TRANSISTOR		
Q7			2SA733(A)(Q,P)	TRANSISTOR		
Q7			2SA933S(Q,R)	TRANSISTOR		
Q8			2SC2878(B)	TRANSISTOR		
CONTROL UNIT (X11-2860-10: K, P, 0-21: Y, M, 0-71: X)						
D26 ,27		*	B30-1291-05	LED		
C1 ,2			CF92FV1H623J	MF 0.062UF J		
C3 ,4			CF92FV1H333J	MF 0.033UF J		
C10			CK45FF1H103Z	CERAMIC 0.010UF Z		
C11			CE04LW1C102M	ELECTRO 1000UF 16WV		
C12			CE04LW1V100M	ELECTRO 10UF 35WV		
C14			CK45FF1H103Z	CERAMIC 0.010UF Z		
C15			CE04LW1HOR1M	ELECTRO 0.1UF 50WV		
C16			CK45FF1H103Z	CERAMIC 0.010UF Z		
C17			C90-1416-05	ELECTRO 18UF 5.5WV		
C18			CK45FF1H103Z	CERAMIC 0.010UF Z		
C19			CE04LW1V331M	ELECTRO 330UF 35WV		
C20			CE04LW1A221M	ELECTRO 220UF 10WV		
C21			CK45FF1H223Z	CERAMIC 0.022UF Z		
C24			C91-0085-05	CERAMIC 0.022UF N		
C25			CK45FB1H471K	CERAMIC 470PF K		
C26			CK45FB1H152K	CERAMIC 1500PF K		
C27			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C28			CK45FF1H103Z	CERAMIC 0.010UF Z		
C29 ,30			CK45FB1H471K	CERAMIC 470PF K		
C34			CK45FF1H223Z	CERAMIC 0.022UF Z		
C35 ,36			CE04LW1V100M	ELECTRO 10UF 35WV		
C38			CF92FV1H104J	MF 0.10UF J		
C39			C90-1333-05	NP-ELEC 22UF 10WV		
C41 -43			CK45FF1H103Z	CERAMIC 0.010UF Z		
C44			CF92FV1H104J	MF 0.10UF J		

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CN1			E10-2212-05	FLAT CABLE CONNECTOR		
X1			L78-0209-05	RESONATOR (4.194MHZ)		
CP1			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP2			R90-0492-05	MULTI-COMP 100KX8 J 1/6W		
CP3			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP4			R90-0803-05	MULTI-COMP 100KX7 J 1/4W		
R19			RD14GB2E1R0J	FL-PROOF RD 1.0 J 1/4W		
R53			RS14KB3A820J	FL-PROOF RS 82 J 1W		
R54			RD14GB2E100J	FL-PROOF RD 10 J 1/4W		
VR1	3B	*	R29-5038-15	POTENTIOMETER (VOL CONTROL)		
VR2	3B	*	R05-5034-05	POTENTIOMETER (BALANCE)		
S1 -29	1A, 2A		S40-1064-05	PUSH SWITCH (CD, PHONO, TUNER)		
S30	3B	*	S40-4080-05	PUSH SWITCH (LOUDNESS)		
S31	2B		S31-2128-05	SLIDE SWITCH (POWER TYPE)	YM	
D1 -5			S5566B	DIODE		
D10			HSS104	DIODE		
D10			1SS133	DIODE		
D11			HZS6.8N(B2)	ZENER DIODE		
D11			RD6.8ES(B2)	ZENER DIODE		
D12 -23			HSS104	DIODE		
D12 -23			1SS133	DIODE		
D24			HZS3.9N(B2)	ZENER DIODE		
D24			RD3.9ES(B2)	ZENER DIODE		
D25			HSS104	DIODE		
D25			1SS133	DIODE		
FL1	2A		FIP12AMW19A	FLUORESCENT INDICATOR TUBE		
IC1		*	CXP5014-519S	IC(MICROPROCESSOR)		
IC2			LC7565	IC(GRAPHIC EQ FL DISPLAY DR)		
IC3			UPC7805HF	IC(VOLTAGE REGULATOR/ +5V)		
IC4		*	TA8409S	IC(MOTOR CONTROL)		
IC5			TLP3501	IC(PHOTO TRIAC +LED)		
IC6			M51951ASL	IC(SYSTEM RESET)		
Q2 -4			2SC1740S(Q,R)	TRANSISTOR		
Q2 -4			2SC945(A)(Q,P)	TRANSISTOR		
A1	2A	*	W02-1043-05	ELECTRIC CIRCUIT MODULE		

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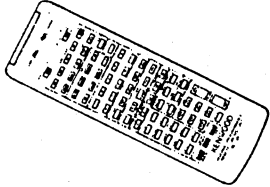
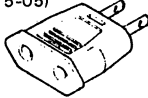
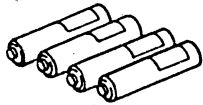
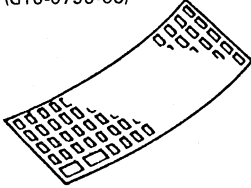
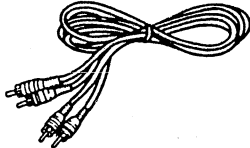
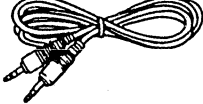
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ACCESSORIES

Accessories

Remote control unit 1 (A70-0342-05)	AC plug adaptor 1 (except for some areas). For the unit with a European AC plug in areas other than Europe. (E03-0115-05)
	
Battery ("AAA" or "R03") 4	Overlay sheet 1 (G16-0756-08)
	
Audio cord 1 (E30-0615-05)	System control cord 1 (E30-1392-05)
	

KC-209

SPECIFICATIONS

PERFORMANCE

Input Sensitivity

PHONO 2.5 mV, 47 kohms
TUNER/AUX/TAPE PLAY/CD/VIDEO 150 mV, 33 kohms

Signal to Noise Ratio (IHF-A) (IHF'66)

PHONO 79 dB, 2.5 mV input
85 dB, 5.0 mV input
TUNER/AUX/TAPE PLAY/CD/VIDEO 103 dB

Maximum Input Voltage for Phono 130 mV (RMS), T.H.D. 0.03% at 1,000 Hz

Frequency Response

PHONO RIAA Standard Curve ± 0.3 dB
(20 Hz - 20 kHz)

LINE - SPEAKER 10 Hz - 70 kHz (-3 dB)

Total Harmonic Distortion

LINE - SPEAKER

20 Hz ~ 20 kHz 0.004% at Rated Output
1 kHz 0.003% at 1/2 Rated Output

Output Voltage and Impedance TAPE REC: 150 mV/330 ohms

PRE OUT: 1000 mV/330 ohms

Loudness Control +8 dB (100 Hz) (at volume -30 dB)

Graphic equalizer control

(60 Hz, 150 Hz, 400 Hz, 1 kHz,
2.4 kHz, 6 kHz, 15 kHz) ± 12 dB

GENERAL

Power Consumption 15 W

AC Outlet 1 Switched (Except for some areas.)

Dimensions W 420 mm (16-9/16")

H 80 mm (3-1/8")

D 272 mm (10-11/16")

Weight (Net) 3.0 kg (6.6 lb)

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

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige, Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.

Note

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the U.S.A. (K) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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