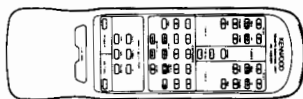


## CONTENTS

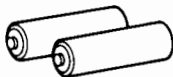
DISASSEMBLY FOR REPAIR.....	2	PC BOARD.....	11
REMOTE CONTROL OPERATION .....	3	SCHEMATIC DIAGRAM.....	19
BLOCK DIAGRAM .....	4	EXPLODED VIEW .....	27
CIRCUIT DESCRIPTION.....	5	PARTS LIST .....	28
WIRING DIAGRAM.....	10	SPECIFICATIONS.....	BACK COVER

### Accessories

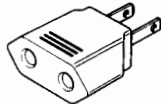
Remote control unit ..... 1  
(X94-1000-11)



Batteries  
(R03/UM-4/"AAA")..... 2



AC plug adaptor..... 1  
(Except for some areas.)  
For the unit with a European AC plug in areas other than Europe.



### Instruction manual

B60-0608-00	ENGLISH	
B60-0609-00	FRENCH	E
B60-0610-00	GERMAN	E
B60-0611-00	DUTCH	E
B60-0612-00	ITALIANO	E
B60-0613-00	SPANISH	M
B60-0652-00	CHINESE	M

### Item carton case

H50-0145-04

### Polystyrene foamed fixture

H10-5184-02

L

H10-5185-02

R

When the protection circuitry is enabled , the output power ceases and the message, "P. OFF" is displayed.

## Remote control operation keys

Operation keys for KENWOOD components connected by System Control cords

### TAPE A operation keys

These keys perform the same operations as the corresponding keys on the cassette deck. However, operations requiring simultaneous pressing of two keys are not possible. These keys are used for operating Deck A of a double-cassette deck.

### TUNER operation keys

### TAPE B operation keys

These keys perform the same operations as the corresponding keys on the cassette deck. However, operations requiring simultaneous pressing of two keys are not possible. These keys are used for operating a single-cassette deck or Deck B of a double-cassette deck.

### Numeric keys

When the INPUT SELECTOR is set to TUNER:

These keys are used for specifying preset station numbers.

When the INPUT SELECTOR is set to CD:

These keys are used for direct tune selection.

### CD player operation keys

### INPUT SELECTOR keys

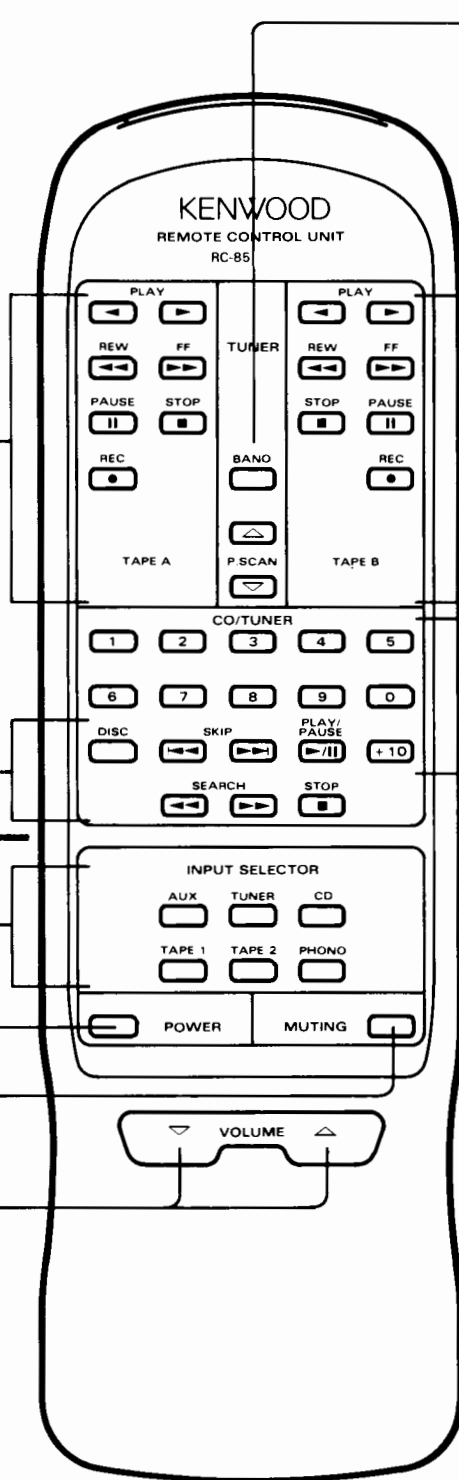
### POWER key

### MUTING key

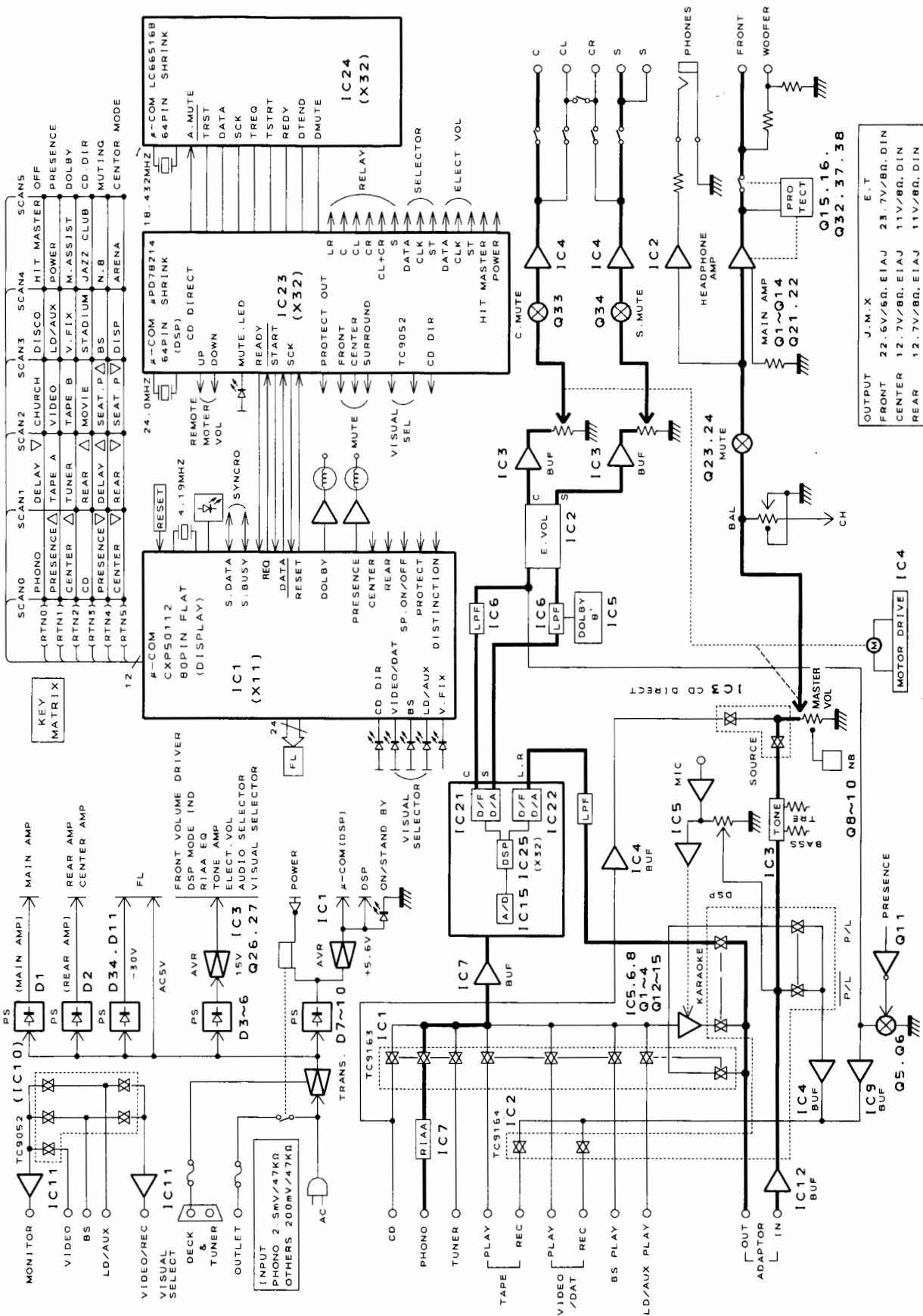
### VOLUME UP $\Delta$ , DOWN $\nabla$ keys

### A-85 Operation keys

These keys have the same function as the corresponding keys on the main unit.



## BLOCK DIAGRAM



# CIRCUIT DESCRIPTION

## TEST MODE

The test mode in A-85 consists of the following two modes:  
 Test 1....Mode in which all FL and LED indicators go on.  
 Test 2....Mode in which the RAM contents are initialized.

### Auxiliary 1

Transits from the Test 1 state to the surround test modes.

- MASTER VOLUME
- CENTER VOLUME
- REAR VOLUME
- PRESENCE VOLUME
- DELAY TIME
- SEAT POSITION
- DOLBY TEST TONE

### Auxiliary 2

Discriminates ROXY and MIDI by the BS selector display in the test mode.

ROXY: [BS]

MIDI: [DBS]

### Setting

- Test 1

Insert the AC plug into a receptacle while pressing the CD key.

- Test 2

Insert the AC plug into a receptacle while pressing the TUNER key.

### How to use

During the operation in step 1), all the FL and LED indicators go on and the DOLBY and PRESENCE indicator lamps go on as indicated below.

DOLBY ↔ PRESENCE

During the operation in step 2), data is initialized and the power is switched off (factory setting).

Press the DOLBY or PRESENCE key after the Test 1 mode operation is completed. The display returns to normal. Press the PRESENCE +/- KEY for a), CENTER + key for b), REAR + key for c), CENTER + key for d), DELAY + key for e), SEAT POSITION FRONT key for f), and VISUAL FIX key for g). The following operation is performed.

#### a) MASTER VOLUME

VOLUME UP, STOP, and DOWN are assigned to the following keys to perform the following operations:

PRESENCE + key: VOLUME UP = Increases continuously (UP).

PRESENCE +/- key: VOLUME STOP = Stops UP/DOWN during volume control operation

PRESENCE - key: VOLUME DOWN = Decreases continuously (DOWN)

#### b) CENTER VOLUME

Use the CENTER + key during DOLBY.

(-15 dB) → -∞ dB → -40 dB → -0 dB  
 ↑ \_\_\_\_\_ ↓

Ineffective during PRESENCE.

#### c) REAR VOLUME

DOLBY (prologic)

(-15 dB) → -∞ dB → -40 dB → -0 dB  
 ↑ \_\_\_\_\_ ↓

The same as during PRESENCE (when the rear speaker is on).

#### d) PRESENCE VOLUME

Ineffective during DOLBY.

Use the CENTER + key during PRESENCE.

(-8 dB) → -20 dB → -10 dB → -0 dB  
 ↑ \_\_\_\_\_ ↓

#### e) DELAY TIME

The delay time changes from 15 to 30 ms in 1 ms units during DOLBY.

The delay time changes from 5 to 100 ms in 5 ms units during PRESENCE.

#### f) SEAT POSITION

Ineffective during DOLBY.

PRESENCE

REAR -12 → CENTER 0 → FRONT +12  
 ↑ \_\_\_\_\_ ↓

#### g) DOLBY TEST TONE

Use the VISUAL FIX key.

Press the key to enter the test tone mode during DOLBY. The mode is selected about every 2 seconds. Press the key again. The mode is then selected every second. The test tone mode is terminated when the key is pressed again. PROLOGIC (NORMAL WIDE)

LEFT → CENTER → RIGHT → REAR  
 ↑ \_\_\_\_\_ ↓

PROLOGIC (PHANTOM)

LEFT → RIGHT → REAR  
 ↑ \_\_\_\_\_ ↓

3 STEREO

LEFT → CENTER → RIGHT  
 ↑ \_\_\_\_\_ ↓

Note: The through mode is entered in the PRESENCE of ARENA only.

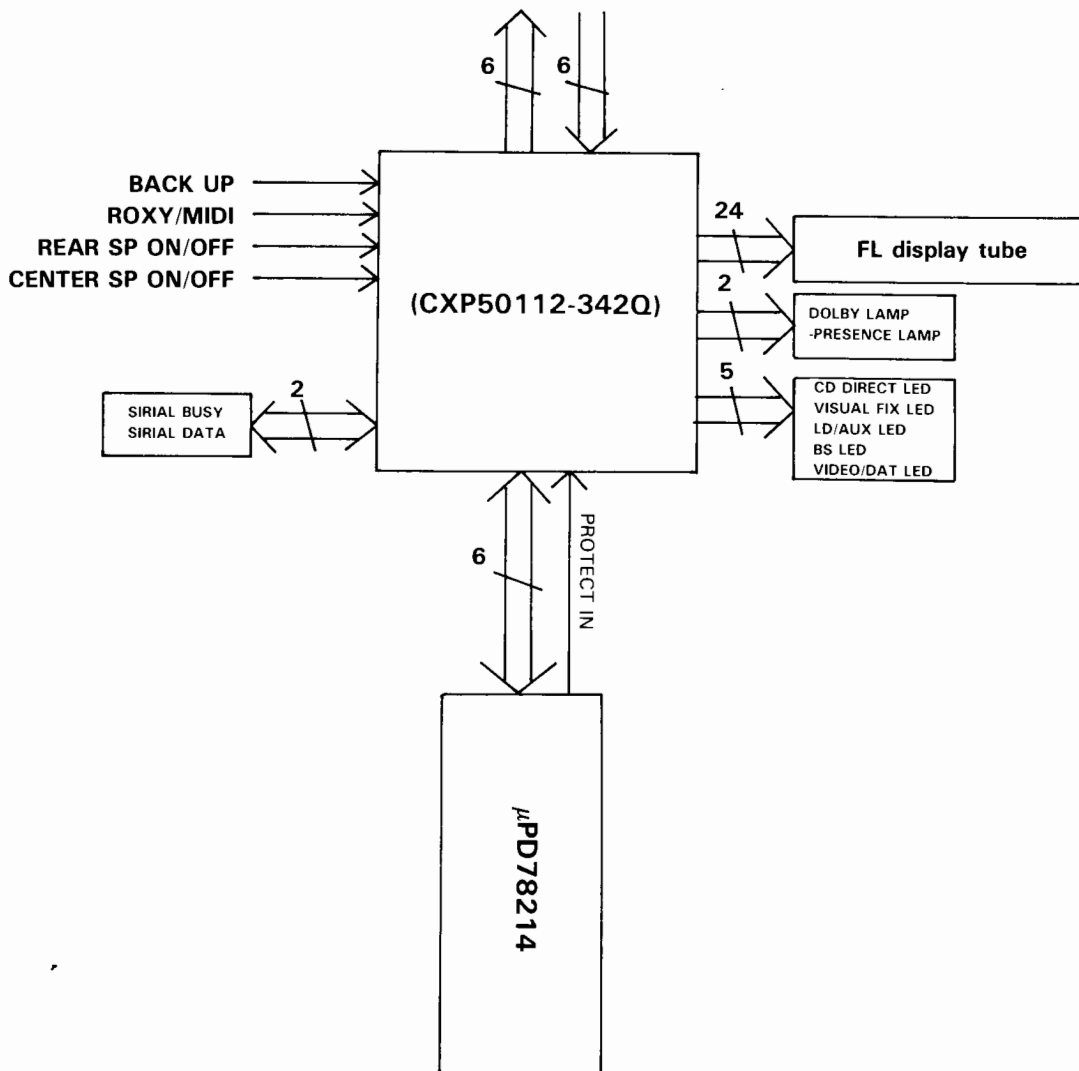
## CIRCUIT DESCRIPTION

### Microprocessor

Block diagram of microcomputer's peripheral equipment

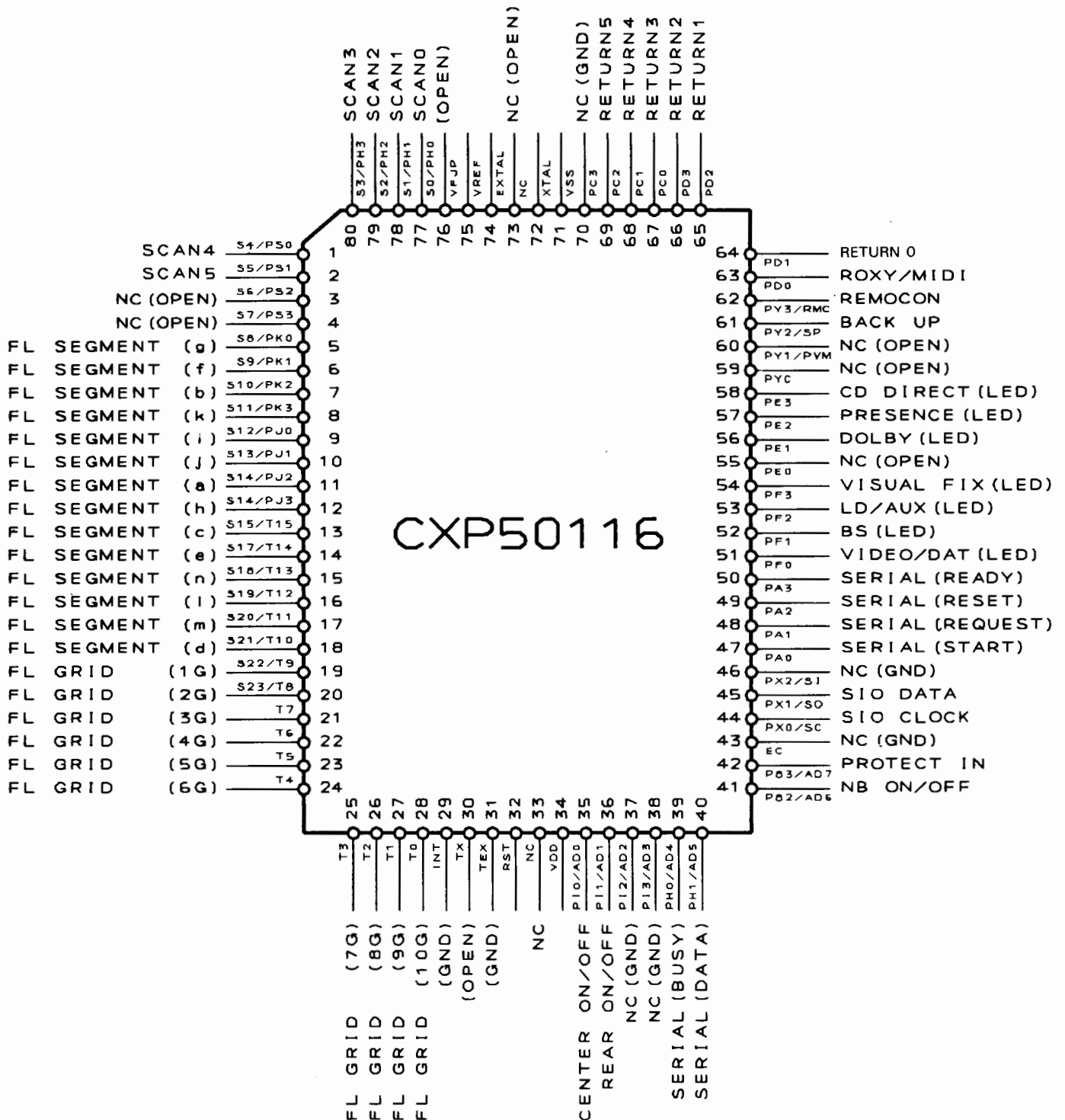
SCAN 5	OFF	PRESENCE	3STEREO	CD DIRECT	MUTE	CENTER MODE
SCAN 4	HIT MASTER	POWER	MELODY ASSIST	JAZZ CLUB	NB CIRCUIT	ARENA
SCAN 3	DISCO	LD/AUX	VISUAL FIX	STADIUM	BS	DISPLAY
SCAN 2	CHURCH	VIDEO DAT	TAPE A	MOVIE	SEAT-P FRONT	SEAT-P REAR
SCAN 1	DELAY DOWN	TAPE B	TUNER	REAR UP	DELAY UP	REAR DOWN
SCAN 0	PHONO	P-VOL. UP	CENTER UP	CD	P-VOL. DOWN	CENTER DOWN

RETURN 0 RETURN 1 RETURN 2 RETURN 3 RETURN 4 RETURN 5



## CIRCUIT DESCRIPTION

### Pin Connection



## CIRCUIT DESCRIPTION

## Pin Functions

Pin No.	Pin name	I/O	Name	Description
1	S4/PG0	O	SCAN 4	Key scan 4
2	S5/PG1	O	SCAN 5	Key scan 5
3	S6/PG2	—	NC (OPEN)	
4	S7/PG3	—	NC (OPEN)	
5	S8/PK0	O	FL SEGMENT (g)	FL segment (g)
6	S9/PK1	O	FL SEGMENT (f)	FL segment (f)
7	S10/PK2	O	FL SEGMENT (b)	FL segment (b)
8	S11/PK3	O	FL SEGMENT (k)	FL segment (k)
9	S12/PJ0	O	FL SEGMENT (i)	FL segment (i)
10	S13/PJ1	O	FL SEGMENT (j)	FL segment (j)
11	S14/PJ2	O	FL SEGMENT (a)	FL segment (a)
12	S15/PJ3	O	FL SEGMENT (h)	FL segment (h)
13	S16/T15	O	FL SEGMENT (c)	FL segment (c)
14	S17/T14	O	FL SEGMENT (e)	FL segment (e)
15	S18/T13	O	FL SEGMENT (n)	FL segment (n)
16	S19/T12	O	FL SEGMENT (l)	FL segment (l)
17	S20/T11	O	FL SEGMENT (m)	FL segment (m)
18	S21/T10	O	FL SEGMENT (d)	FL segment (d)
19	S22/T9	O	FL GRID (1G)	FL grid (1G)
20	S23/T8	O	FL GRID (2G)	FL grid (2G)
21	T7	O	FL GRID (3G)	FL grid (3G)
22	T6	O	FL GRID (4G)	FL grid (4G)
23	T5	O	FL GRID (5G)	FL grid (5G)
24	T4	O	FL GRID (6G)	FL grid (6G)
25	T3	O	FL GRID (7G)	FL grid (7G)
26	T2	O	FL GRID (8G)	FL grid (8G)
27	T1	O	FL GRID (9G)	FL grid (9G)
28	T0	O	FL GRID (10G)	FL grid (10G)
29	INT	I	NC (GND)	External interrupt (unused)
30	TX	—	NC (OPEN)	32 kHz T/C clock output (unused)
31	TEX	I	NC (GND)	32 kHz T/C clock input (unused)
32	RST	I/O		Microcomputer reset
33	NC	—		
34	VDD	—		Positive power supply
35	PI0/AD0	I	CENTER SP ON/OFF	Center speaker ON/OFF input
36	PI1/AD1	I	REAR SP ON/OFF	Rear speaker ON/OFF input
37	PI2/AD2	—	NC (GND)	
38	PI3/AD3	—	NC (GND)	
39	PB0/AD4	I/O	SERIAL (BUSY)	Serial BUSY line
40	PB1/AD5	I/O	SERIAL (DATA)	Serial DATA line
41	PB2/AD6	O	NB CIRCUIT ON/OFF	NB circuit ON/OFF output
42	PB3/AD7	I	PROTECT IN	Protection input
43	EC	—	NC (GND)	
44	PX0/SC	O	SIO CLOCK	SIO CLOCK (for communication)
45	PX1/SO	O	SIO DATA	SIO DATA (for communication)
46	PX2/SI	—	NC (GND)	



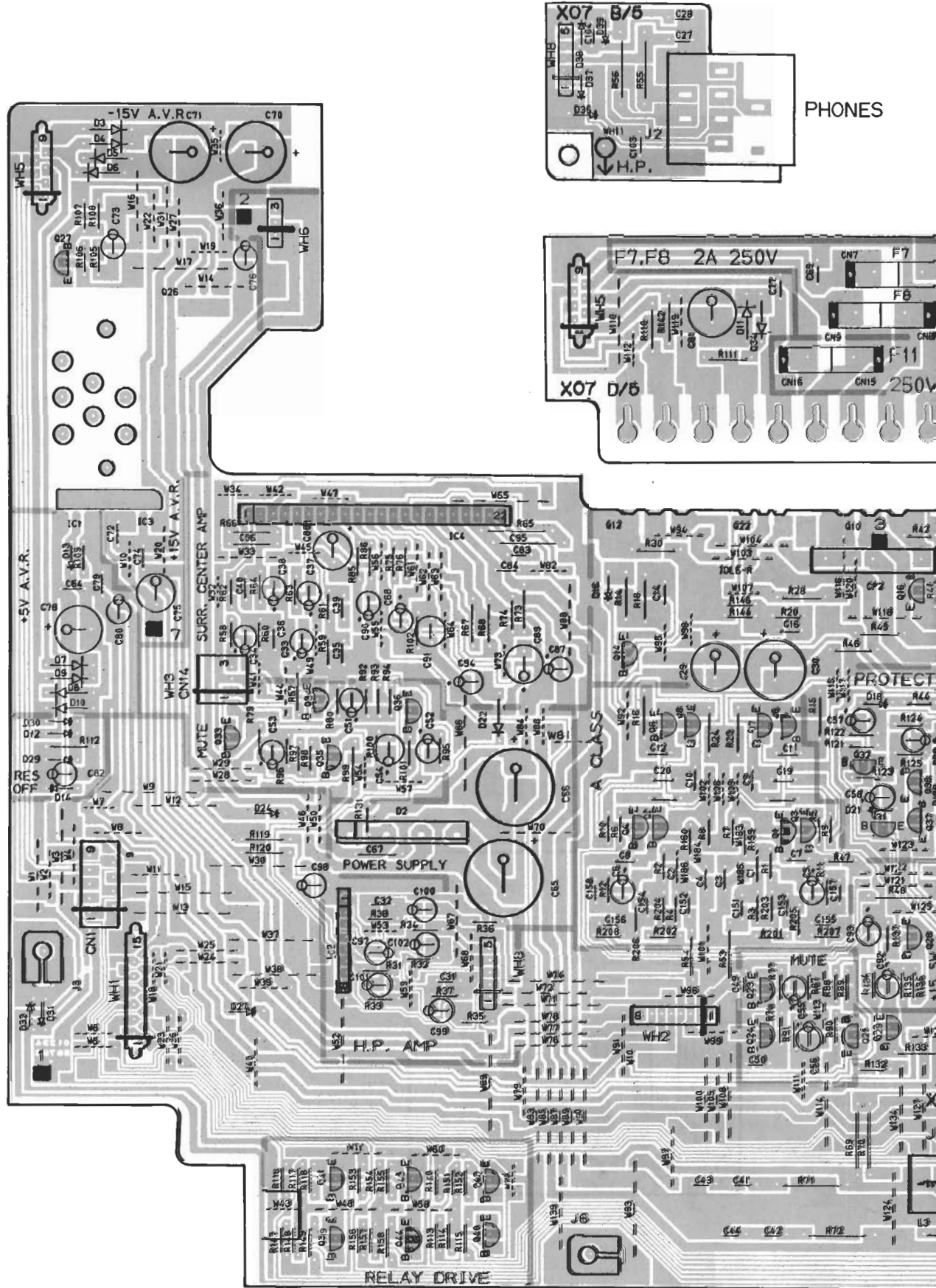
## CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Name	Description
47	PA0	O	SERIAL (START)	Serial START (for communication)
48	PA1	O	SERIAL (REQUEST)	Serial REQUEST (for communication)
49	PA2	O	SERIAL (RESET)	Serial RESET (for communication)
50	PA3	I	SERIAL (READY)	Serial READY (for communication)
51	PF0	I	VIDEO/DAT (LED)	LED
52	PF1	I	BS (LED)	LED
53	PF2	I	LD/AUX (LED)	LED
54	PF3	I	VISUAL FIX (LED)	LED
55	PE0	I	NC (OPEN)	
56	PE1	I	DOLBY (LED)	LAMP
57	PE2	I	RPESENCE (LED)	LAMP
58	PE3	I	CD DIRECT (LED)	LAMP
59	PY0	I	NC (OPEN)	
60	PY1/PWM	I	NC (OPEN)	
61	PY2/WP	I	BACK UP	Backup input
62	PY3/RMC	I	REMOCON	Remote control input
63	PDO	I	ROXY/MIDI	Type discrimination input
64	PD1	I	RETURN0	Key return 0
65	PD2	I	RETURN1	Key return 1
66	PD3	I	RETURN2	Key return 2
67	PC0	I	RETURN3	Key return 3
68	PC1	I	RETURN4	Key return 4
69	PC2	I	RETURN5	Key return 5
70	PC3	I	NC (OPEN)	
71	Vss	—		GND pin
72	XTAL	—		Clock output
73	CN	—	NC (OPEN)	
74	EXTAL	I		Clock input
75	VREF	—		Reference voltage pin for voltage detection (unused)
76	VFDP	—		FL load power supply pin
77	S0/PH0	O	SCAN0	Key scan 0
78	S1/PH1	O	SCAN1	Key scan 1
79	S2/PH2	O	SCAN2	Key scan 2
80	S3/PH3	O	SCAN3	Key scan 3

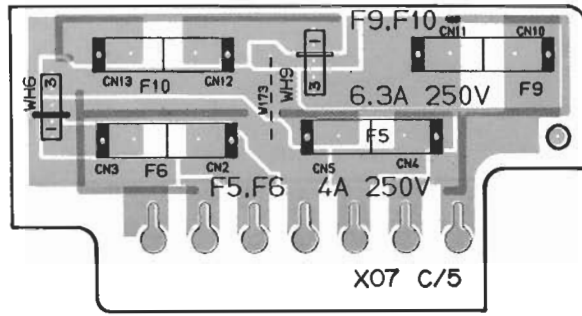


# PC BOARD (Component Side View)

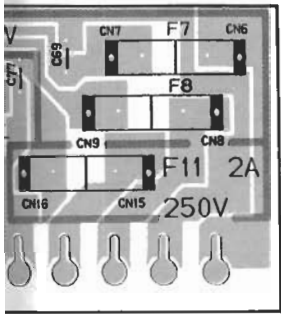
## MAIN AMP UNIT



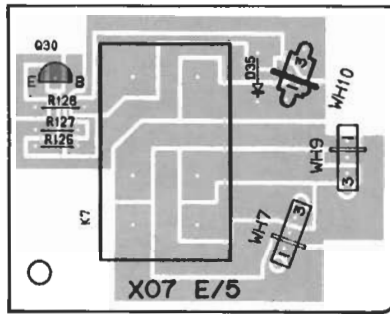
PHONES



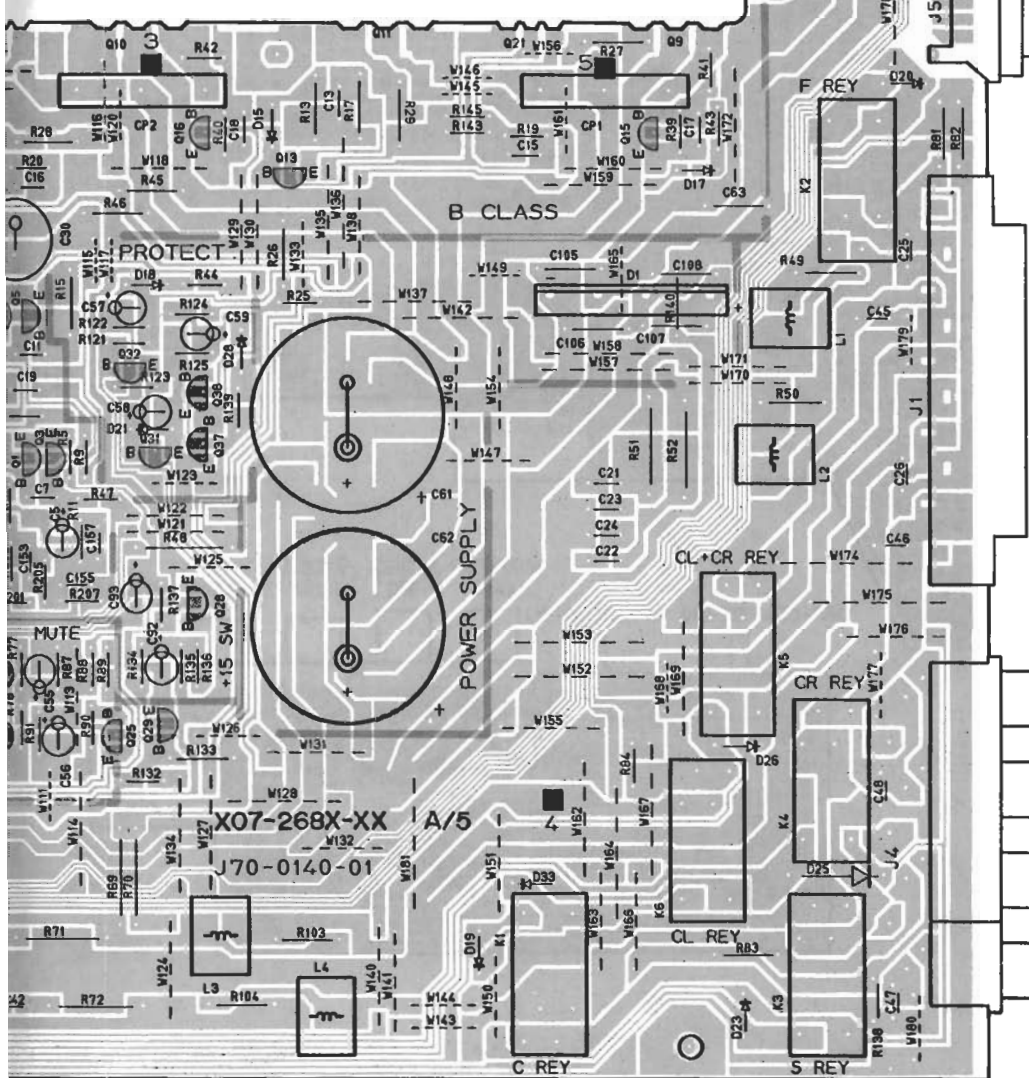
X07 C/5



X07 E/5



POWER SUPPLY FOR SYSTEM



FRONT SP  
CENTER SP

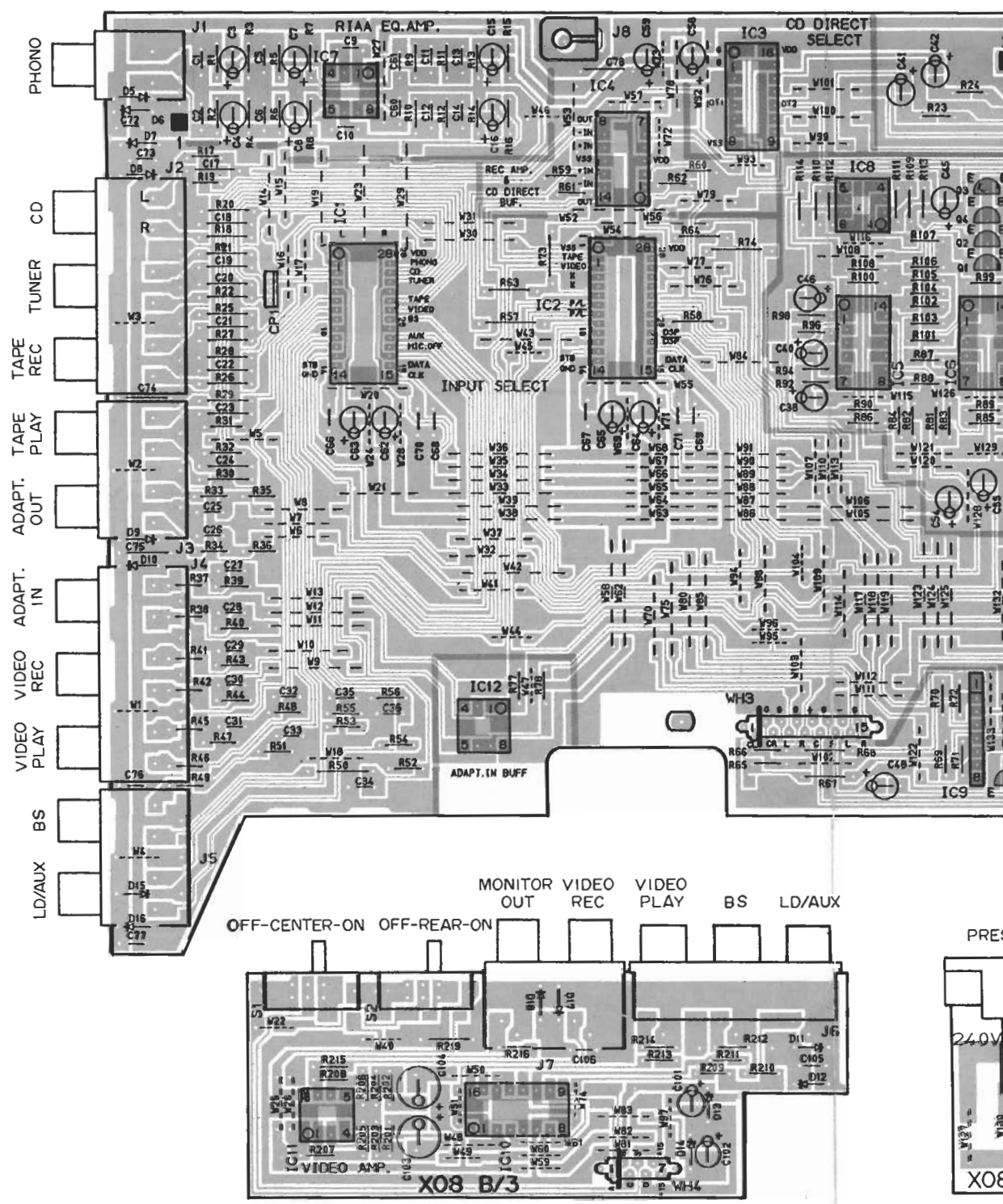
SURROUND SP

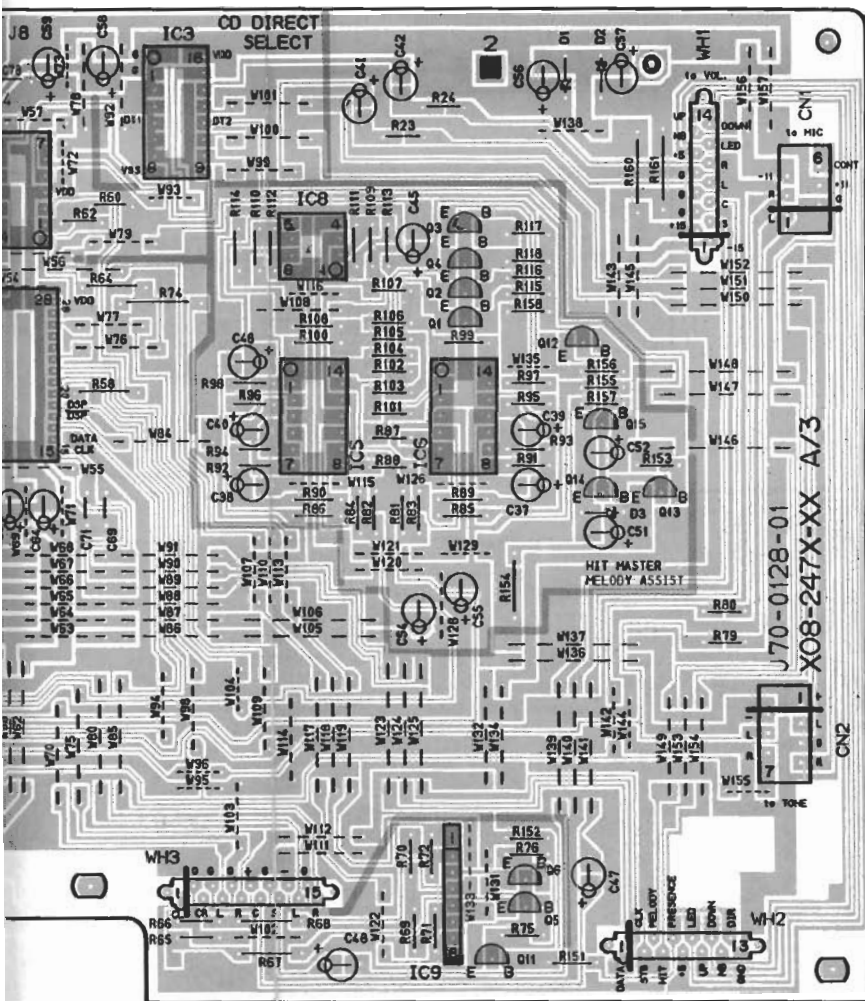
SUPER WOOFER PREOUT

CENTER SP

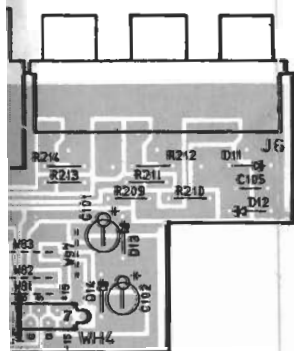
Refer to the schematic diagram for the values of resistors and capacitors.

PRE AMPLIFIER UNIT

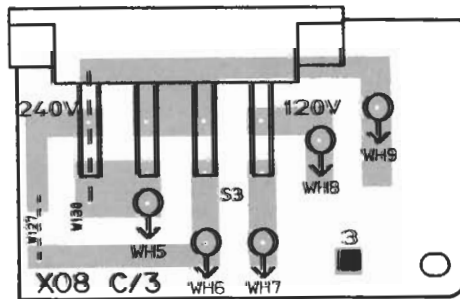




VIDEO PLAY BS LD/AUX

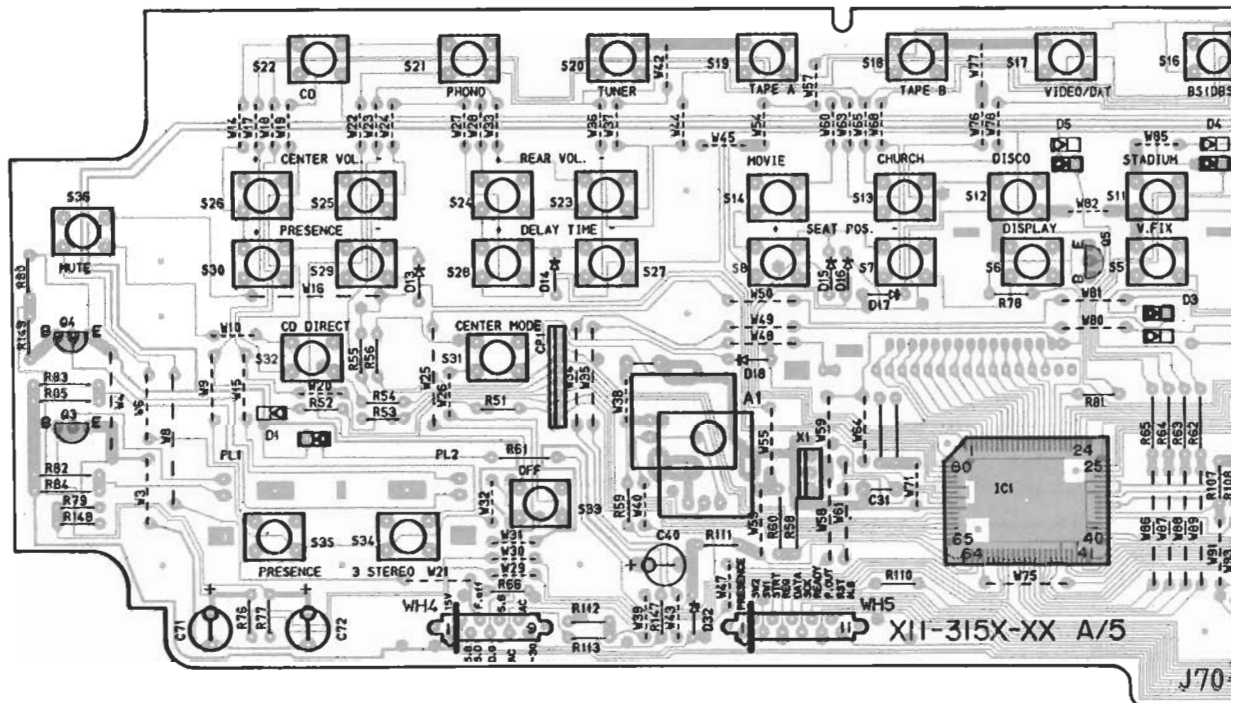


PRESENCE REC AMP

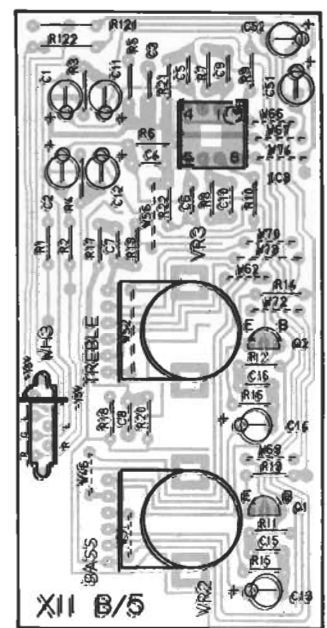
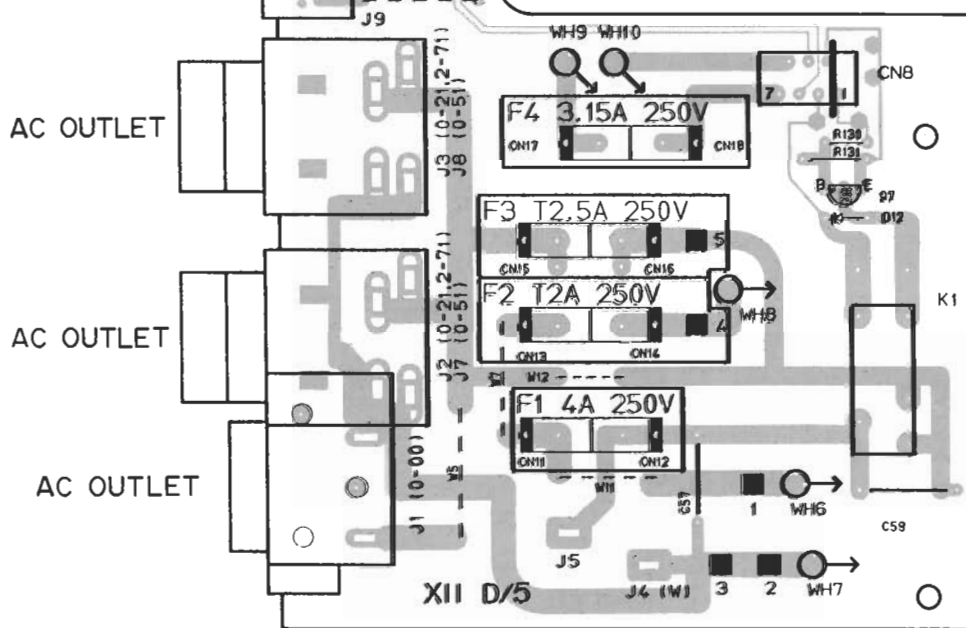


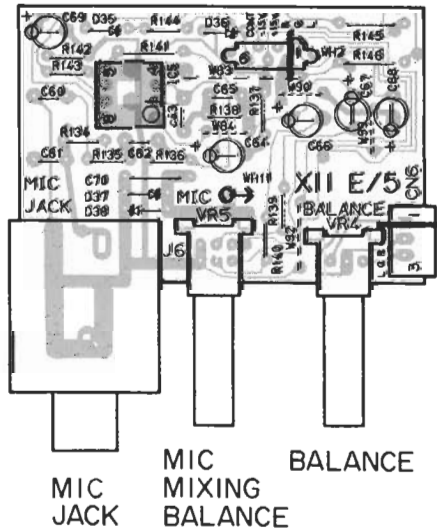
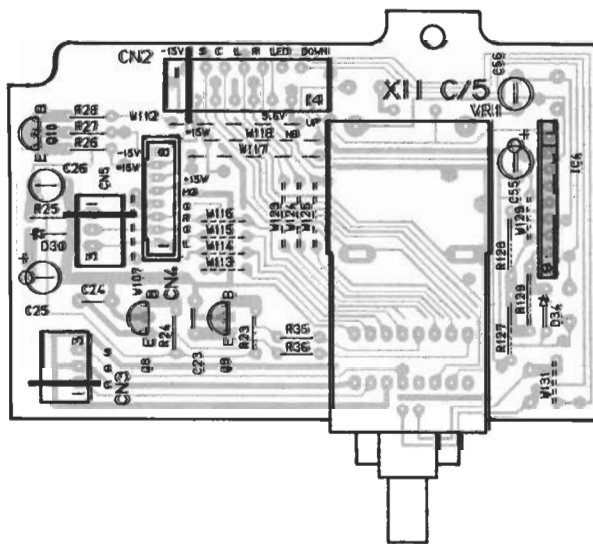
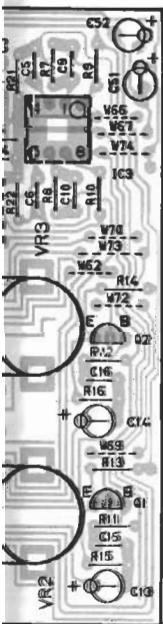
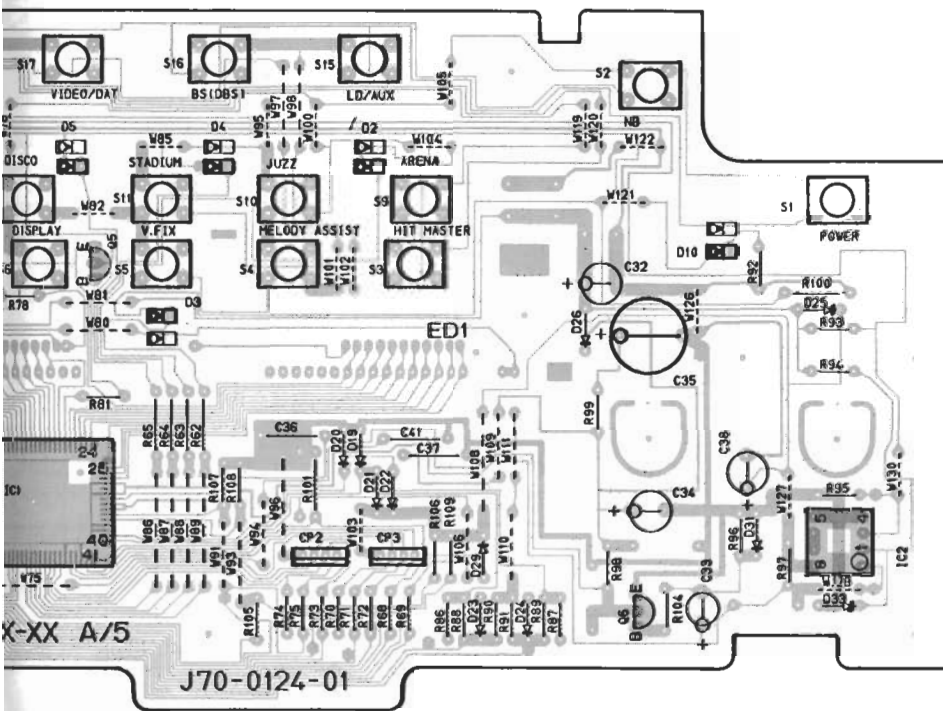
# PC BOARD (Component Side View)

## CONTROL UNIT



## SYSTEM CONTROL

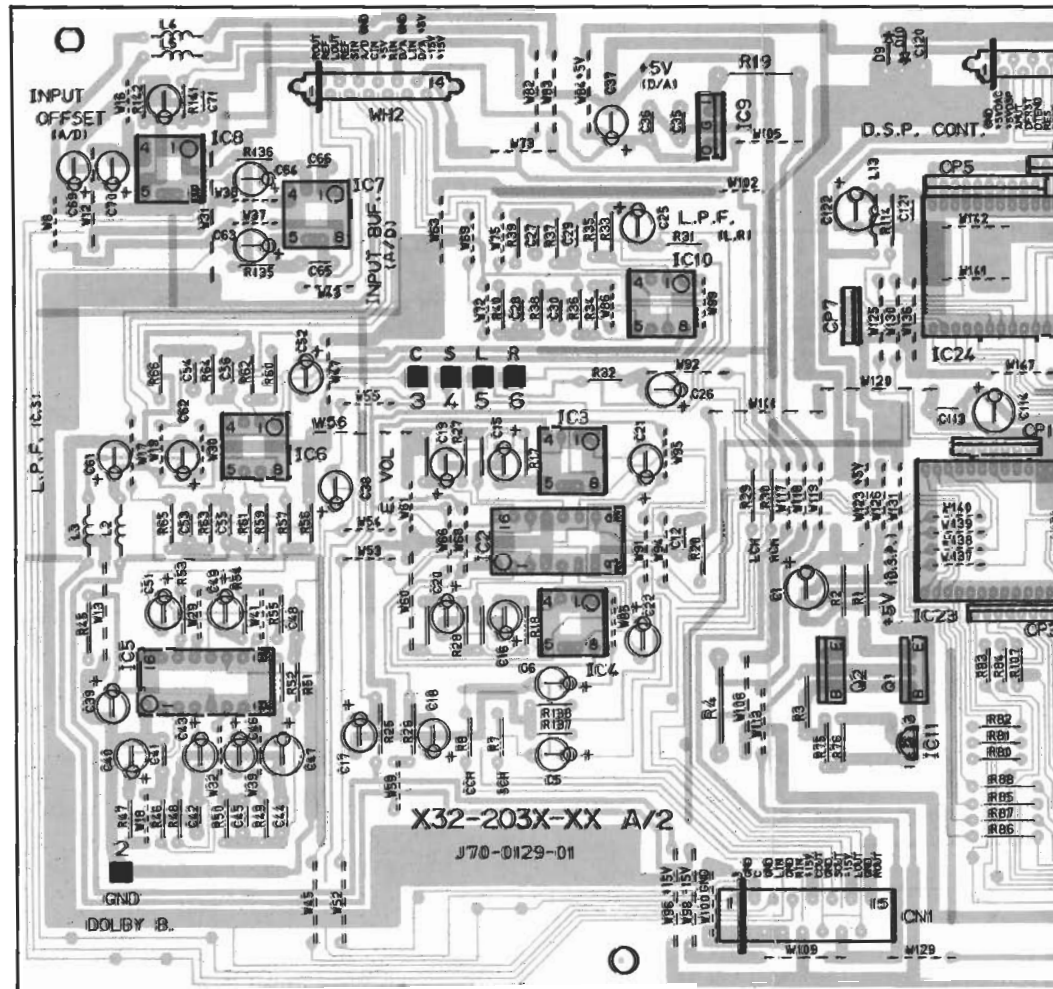
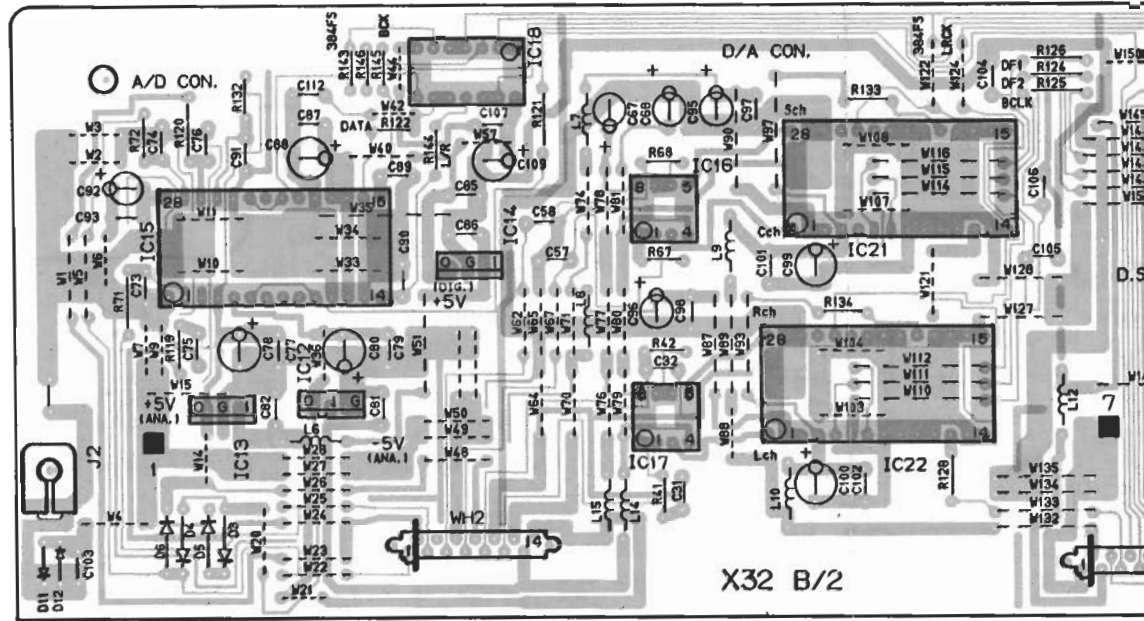




Refer to the schematic diagram for the values of resistors and capacitors.

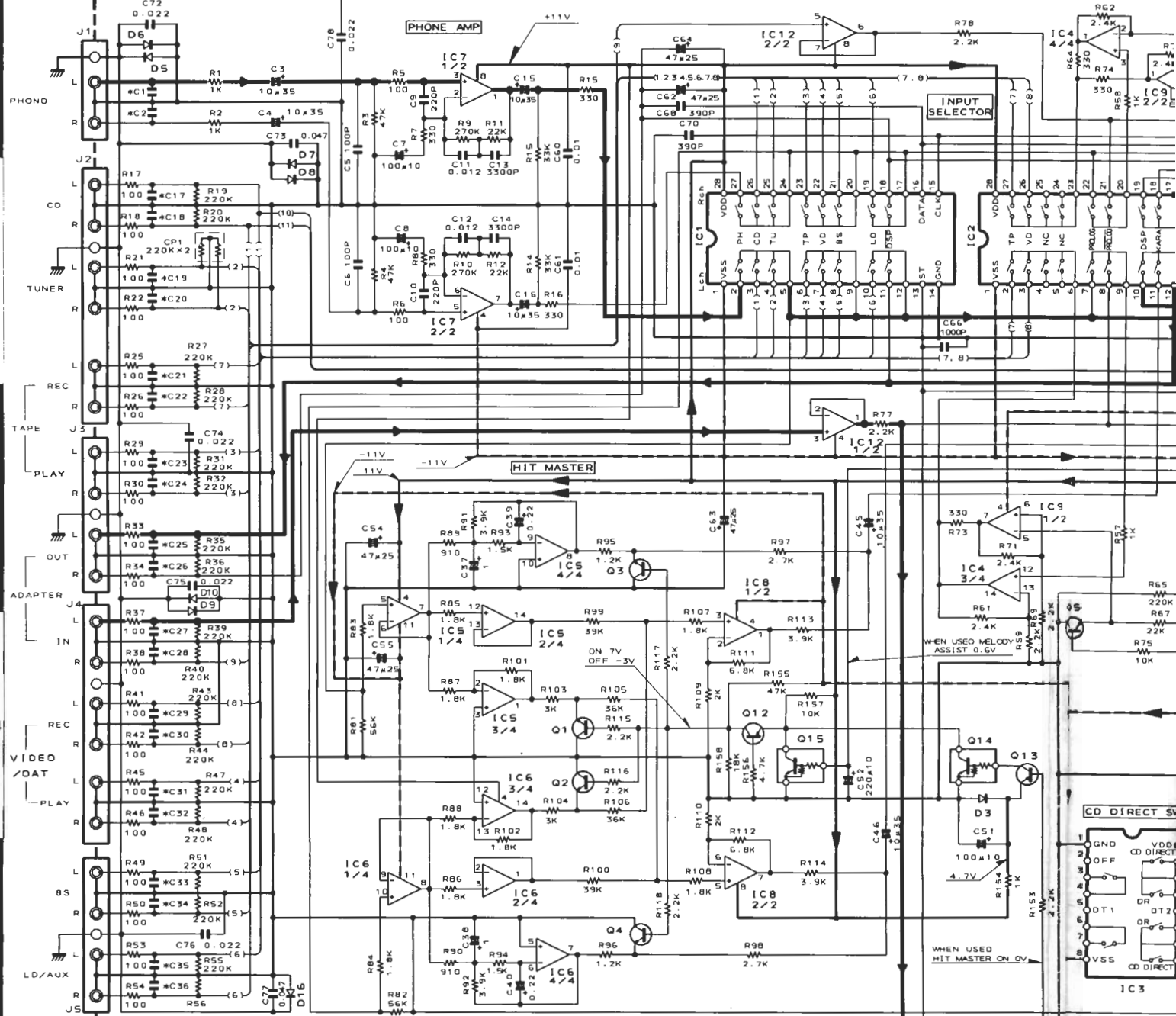


SIGNAL PROCESSOR UNIT

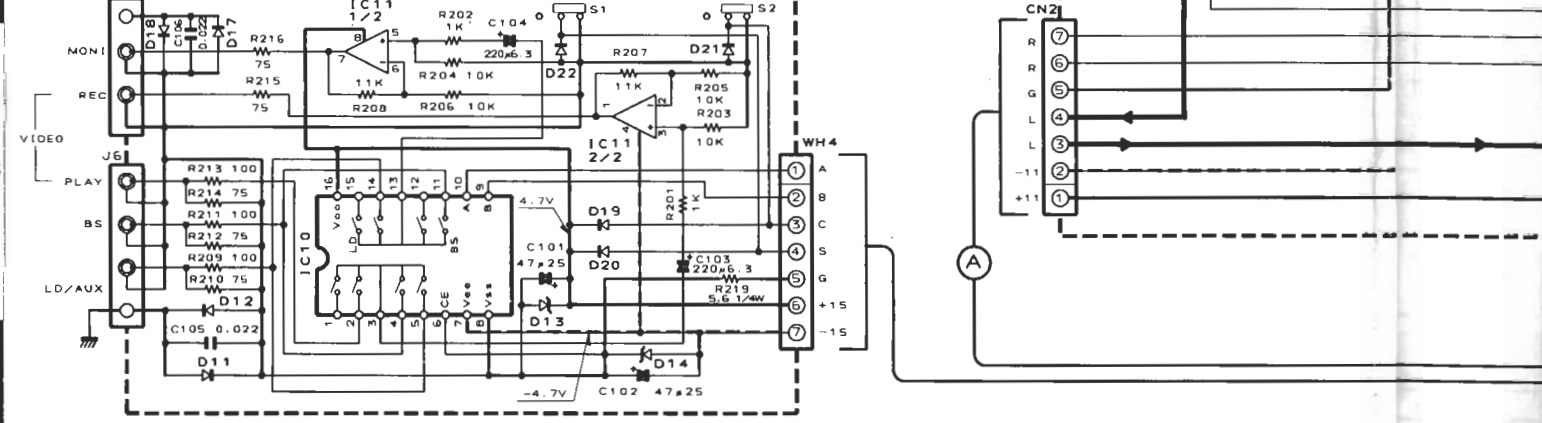




X08-247X-XX A/3

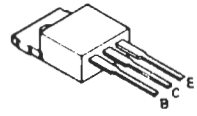
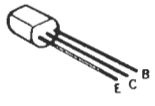


X08-B/3

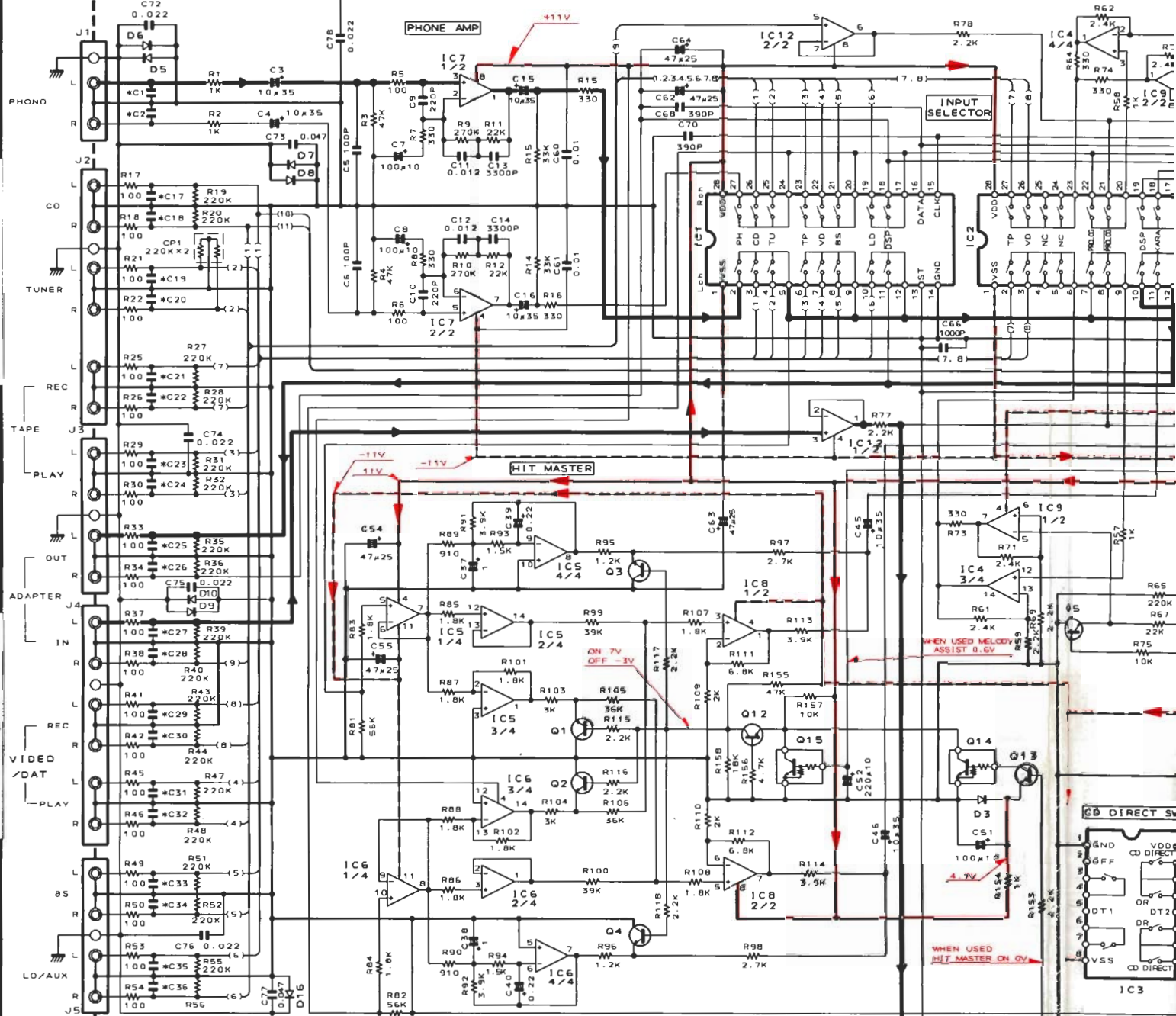


- 2SA1123
- 2SA733 (A)
- 2SA992
- 2SC1845
- 2SC1923
- 2SC2003
- 2SC2878
- 2SC945 (A)

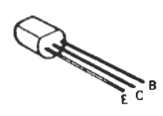
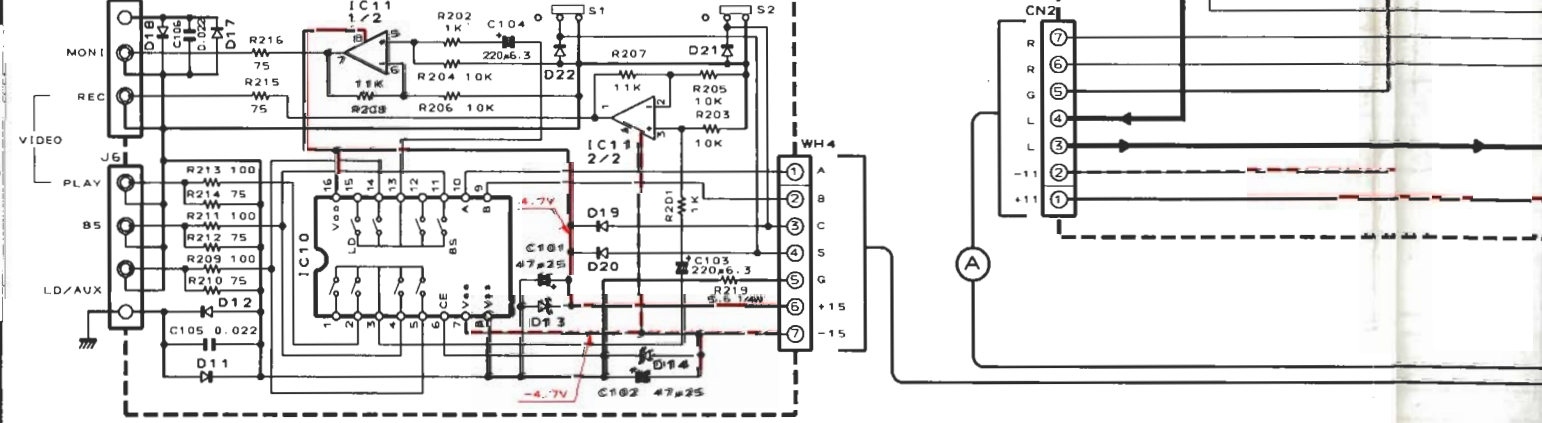
2SD1266



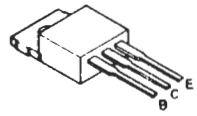
X08-247X-XX A/3



X08-B/3

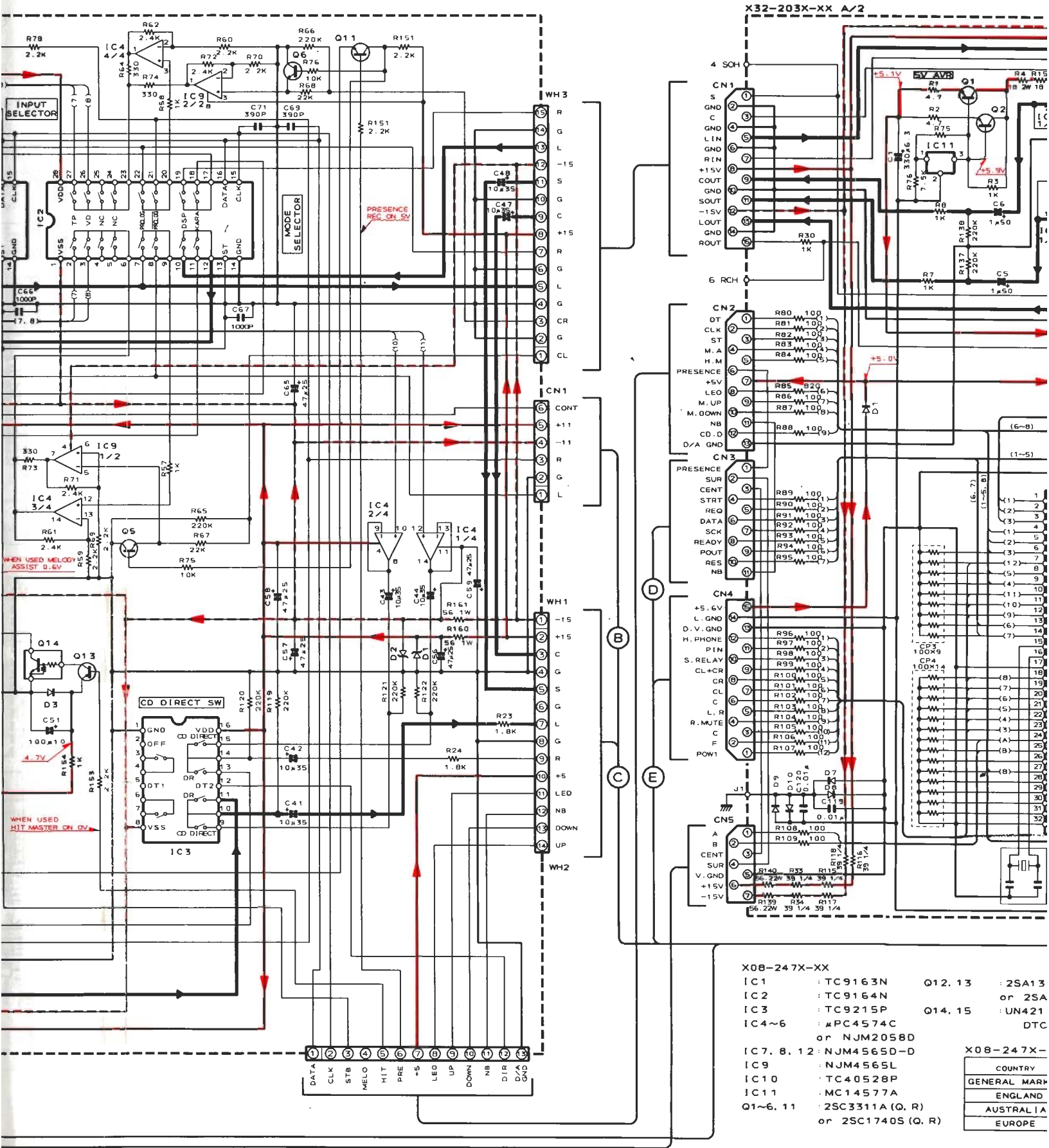


- 2SA1123
- 2SA733 (A)
- 2SA992
- 2SC1845
- 2SC1923
- 2SC2003
- 2SC2878
- 2SC945 (A)



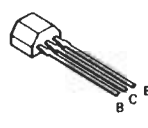
2SD1266





X08-247X-XX

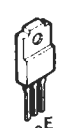
IC1	: TC9163N	Q12, 13	: 2SA13
IC2	: TC9164N		or 2SA
IC3	: TC9215P	Q14, 15	: UN421
IC4~6	: $\mu$ PC4574C		DTC
	or NJM2058D		
IC7, 8, 12	: NJM4565D-D	X08-247X-	
IC9	: NJM4565L		COUNTRY
IC10	: TC40528P		GENERAL MARK
IC11	: MC14577A		ENGLAND
Q1~6, 11	: 2SC3311A (Q, R)		AUSTRALIA
	or 2SC1740S (Q, R)		EUROPE



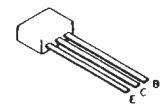
DTC124ES  
2SA933S  
2SC1740S



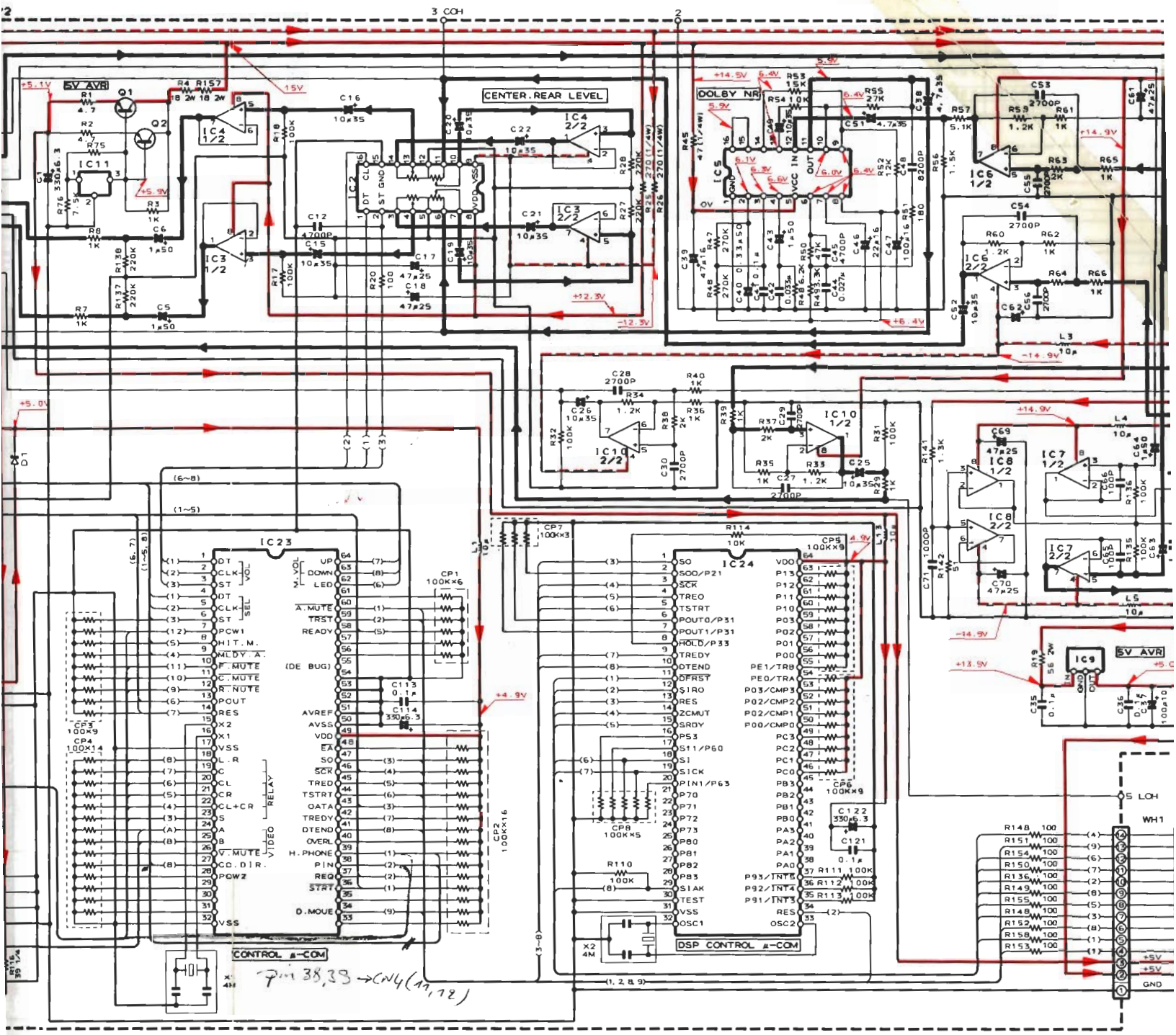
2SC4137



2SB941

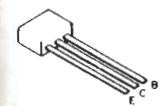


UN421  
2SA13  
2SC3311A

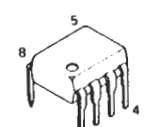


163N	Q12, 13	: 2SA1309A (Q, R)	D1, 2	: RD11ES (B2)	X32-203X-XX	IC3, 4,		IC19, 20	: LM33464G-12
164N		or 2SA9235 (Q, R)		or HZS11N (B2)		5, 10	: NJM4565D-D		or HM50464RP-12
215P	Q14, 15	: UN4212 or	D3, 13, 14	: RD4.7ES (B)	IC2		: TC9213P	IC21, 22	: LC7883K
4574C		DTC124ES		or HZS4.7N (B)	IC5		: LA2730	IC23	: UPD78214CW-770
JM2058D			D5~12	: 1SS133 or HSS104	IC7, 8		: UPC4072C	IC24	: LC66516B-4733
4565D-D	X08-247X-XX				IC11		: TL431CLP or NJM431L	IC25	: LC83010N
4565L					IC12		: UPC7905HF	Q1, 2	: 2SD1266
0528P					IC9, 13, 14		: UPC7805HF	Q3	: UN4212 or DTC124ES
4577A					IC15		: CS5339-KP	Q4	: 2SC1923 (R, O)
311A (Q, R)					IC16, 17		: NJM4558D	Q5	: 2SA1309A (Q, R)
IC1740S (Q, R)					IC18		: UPD74HC08C		or 2SA9335 (Q, R)
							or HM50464RP-12	D1, 3~10	: 1SS133 or HSS104

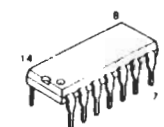
COUNTRY	ABB	UNITY NAME	AREP. NO	WHS~9	C1, 2, 17~36
GENERAL MARKET	M		0-21	YES	NO
ENGLAND	T				
AUSTRALIA	X		2-71	NO	220P
EUROPE	E				



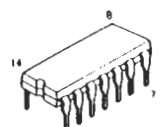
UN4212  
2SA1309A  
2SC3311A



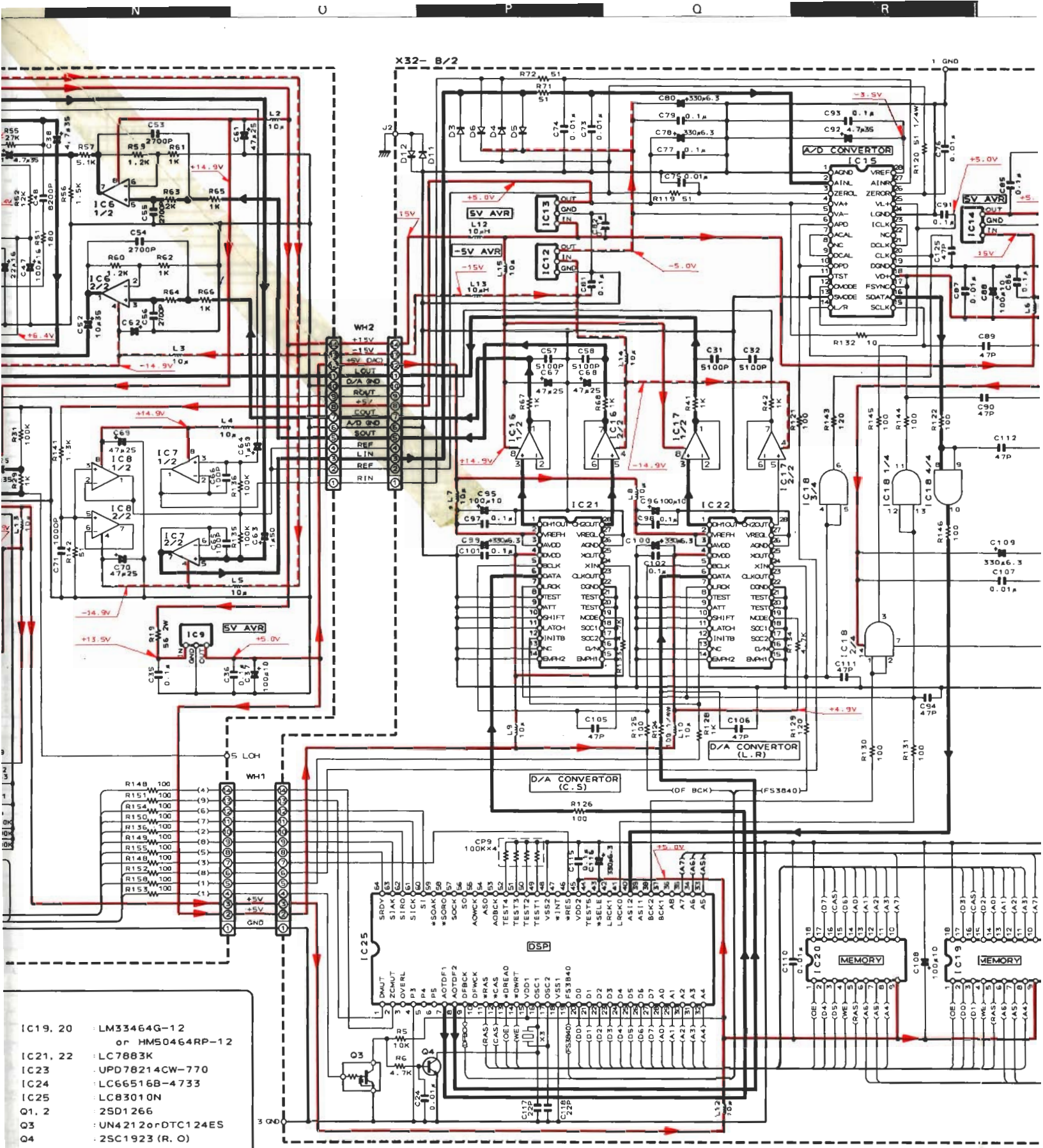
NJM4558D  
NJM4565D-D



NJM2058D



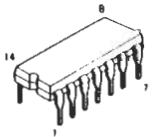
UPC4  
UPD7



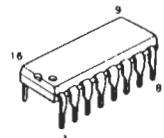
- IC19, 20 : LM3346G-12  
or HMS0464RP-12
- IC21, 22 : LC7883K
- IC23 : UPD78214CW-770
- IC24 : LC66516B-4733
- IC25 : LC83010N
- Q1, 2 : 2SD1266
- Q3 : UN4212 or DTC124ES
- Q4 : 2SC1923 (R, O)
- Q5 : 2SA1309A (Q, R)  
or 2SA9335 (Q, R)
- D1, 3-10 : 1SS133 or HSS104

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

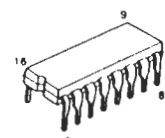
058D



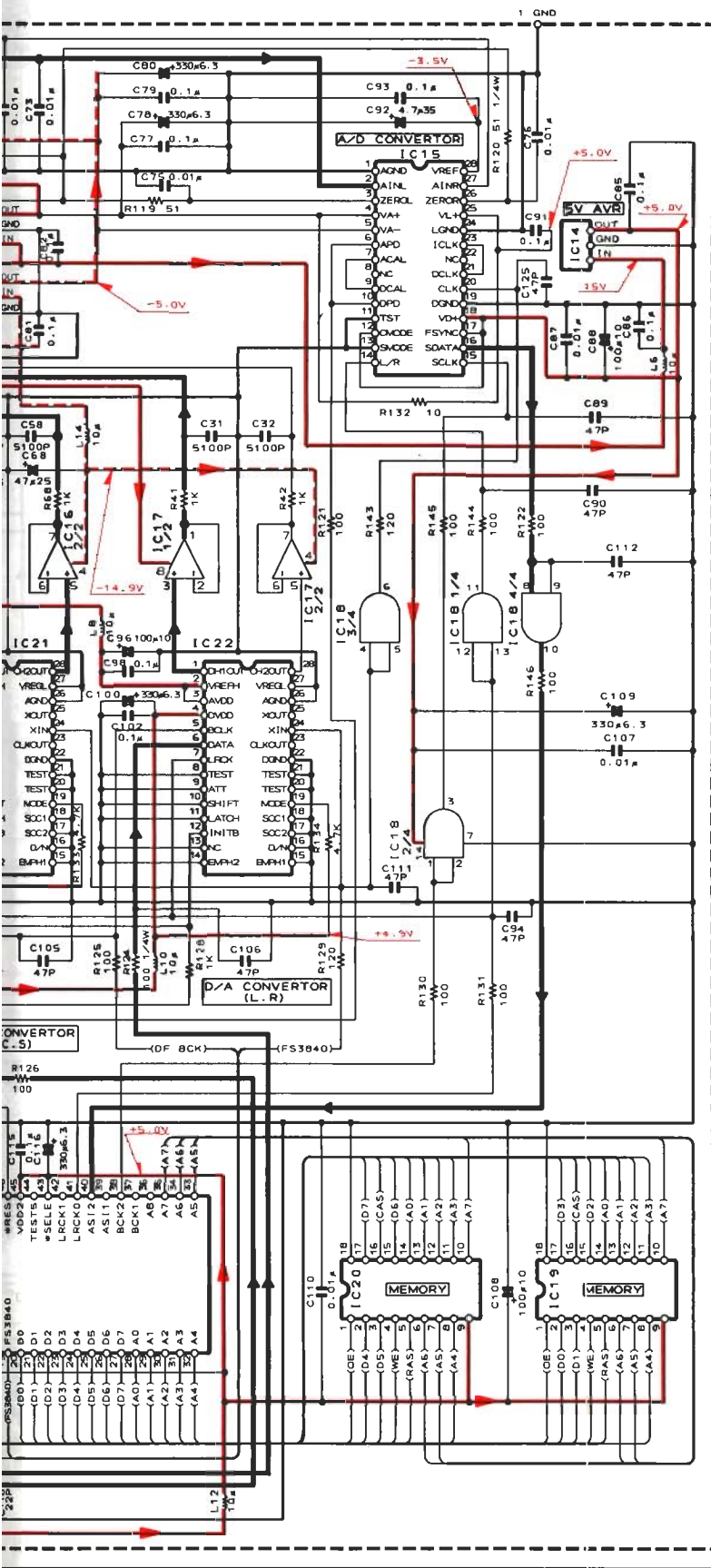
UPC4574C  
UPD74HC08C



LA2730



TC4052BP  
TC9213P  
TC9215P

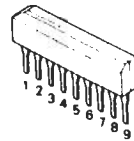


DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

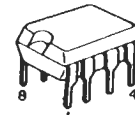
Les tensions c.c. doivent être mesurées avec un voltmètre à haute impédance sans signal d'entrée. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

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.

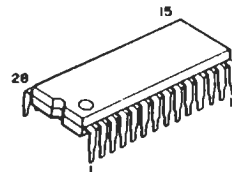
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are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



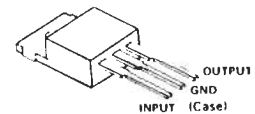
TA8409S



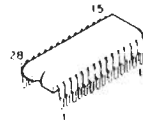
BA10393  
UPC4072C



LC7883K



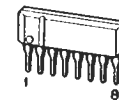
UPC7805HF  
UPC7815HF



TC9163N  
TC9164N

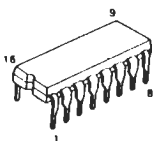


UPC7905HF



NJM4565L

LA2730



TC4052BP  
TC9213P  
TC9215P

Y08-4460-21

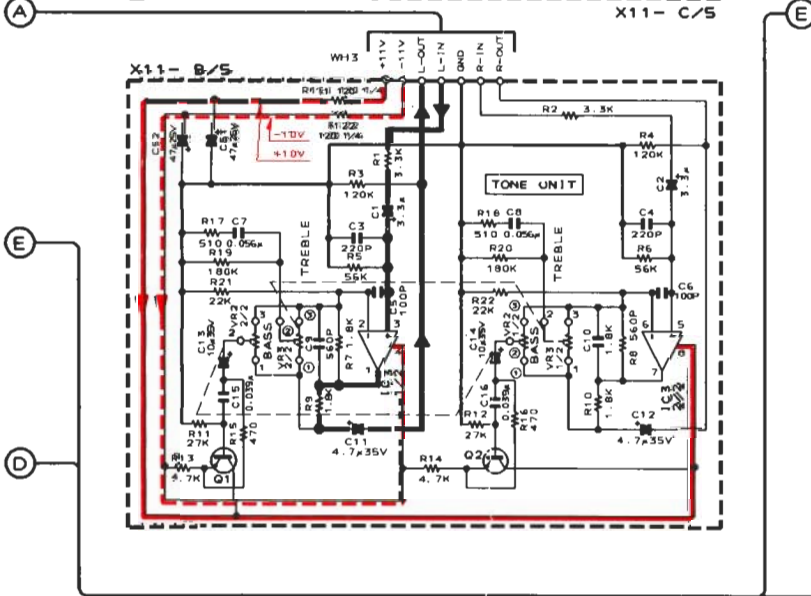
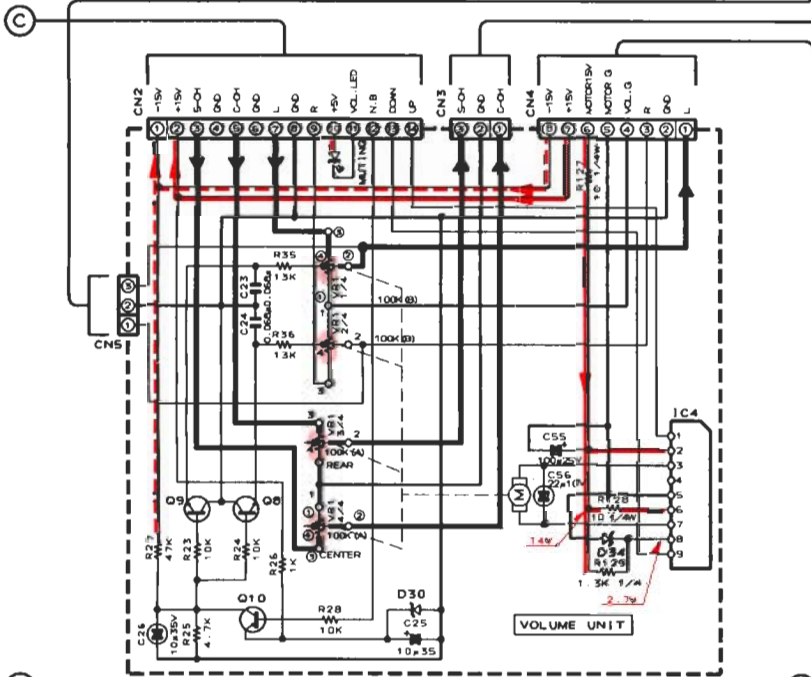
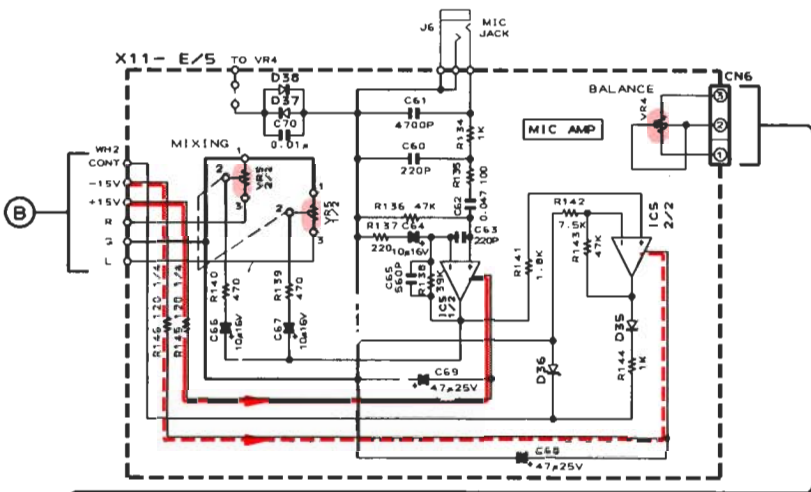
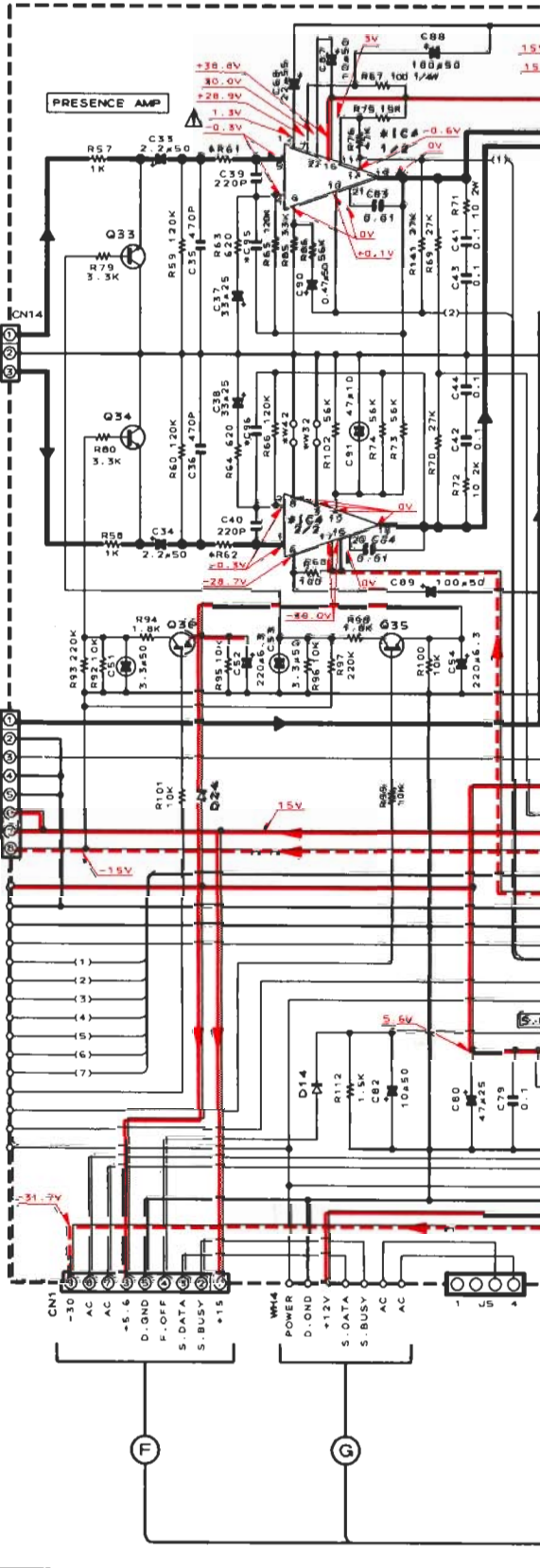




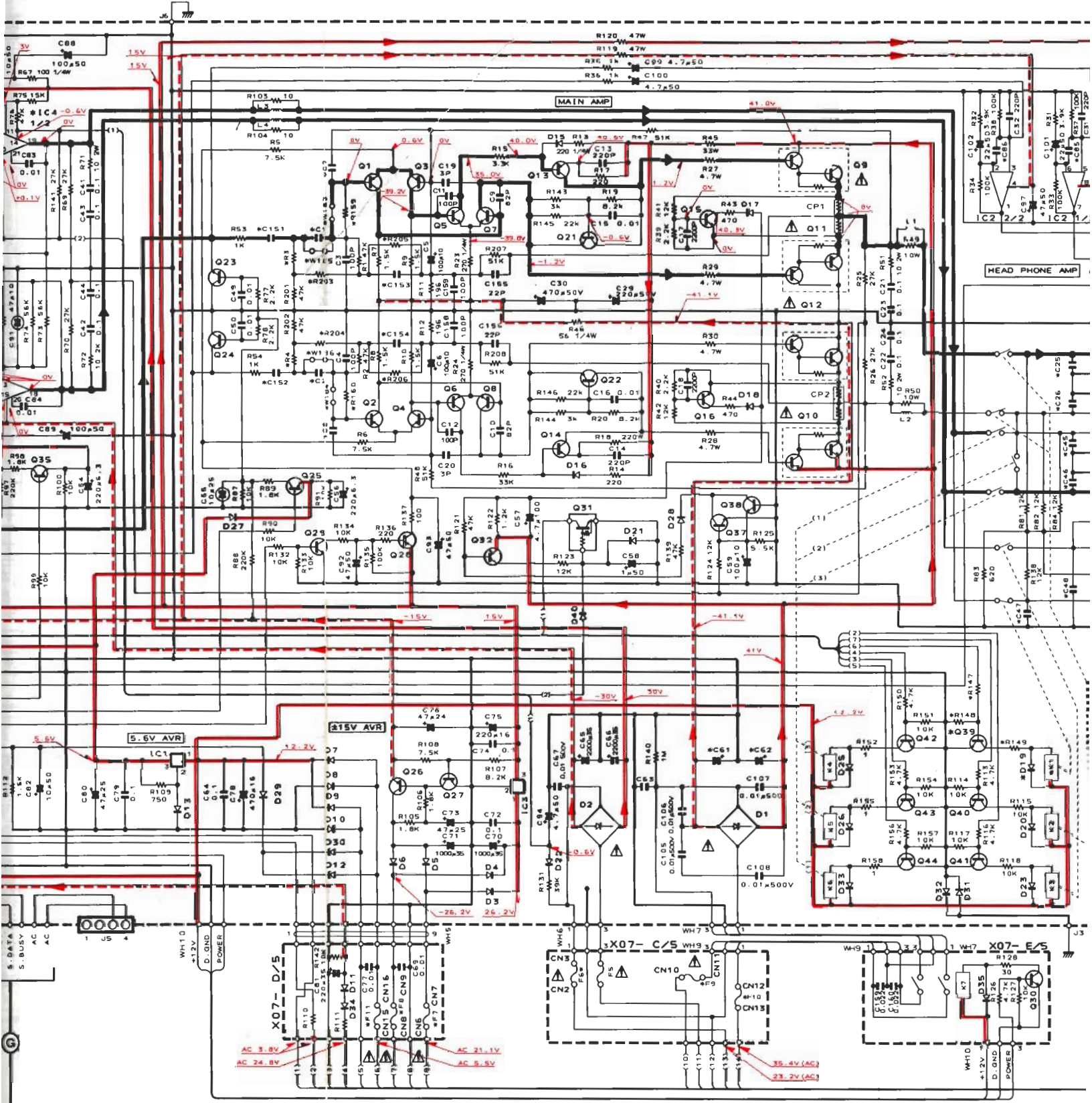
X07-268X-XX

COUNTRY	ABB	UNIT RANGE	REF. NO	R5.4	R61, 62	R203, 204	R205.
GENERAL MARKET	M						
AUSTRALIA	X	0-21	10K	1K	1.5K	1.2	
EUROPE	E	2-71	NO	2.7K	6.2K	NO	
ENGLAND	T	0-51	NO	1K	6.2K	NO	

X07-268X-XX A/S



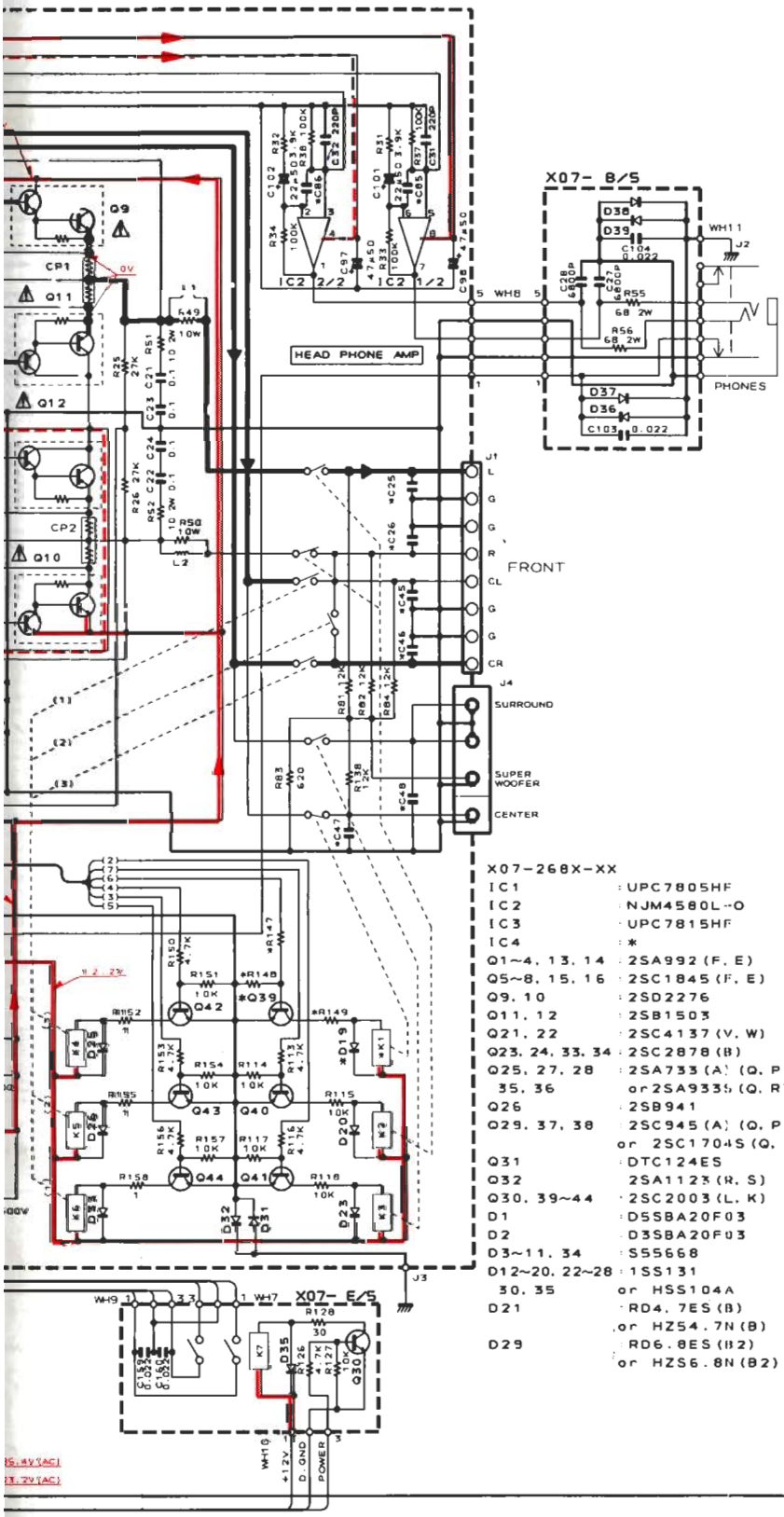
R61. 62	R203, 204	R205, 206	R159, 160	R147	R148	R149	C1. 2	C7. 8	C25, 26	C45-48	C61, 62	C85, 86	C95, 96	C151, 152	C153, 154	D19	D39	F6. 6	F7. 8	F9, 10	F11	J4	K1	W32	W
1K	1.5K	1.2K	NO	4.7K	10K	1	0.1	100P	NO	NO	6800µ50	NO	10P	0.024	0.1	YES	YES	T4A	T2A	T6. 3A	T2A	E13-1403	YES	YES	N
2.7K	6.2K	NO	1K	NO	NO	NO	NO	470P	4700P	2200P	6800µ63	220P	10P	10µ35	NO	NO	NO	T4A	T2A	T6. 3A	T2A	F62-0078	NO	NO	Y
1K	6.2K	NO	NO	NO	NO	NO	NO	100P	NO	NO	6800µ63	NO	10P	10µ35	NO	NO	NO	T4A	T2A	T2A	E63-0028	NO	YES	N	



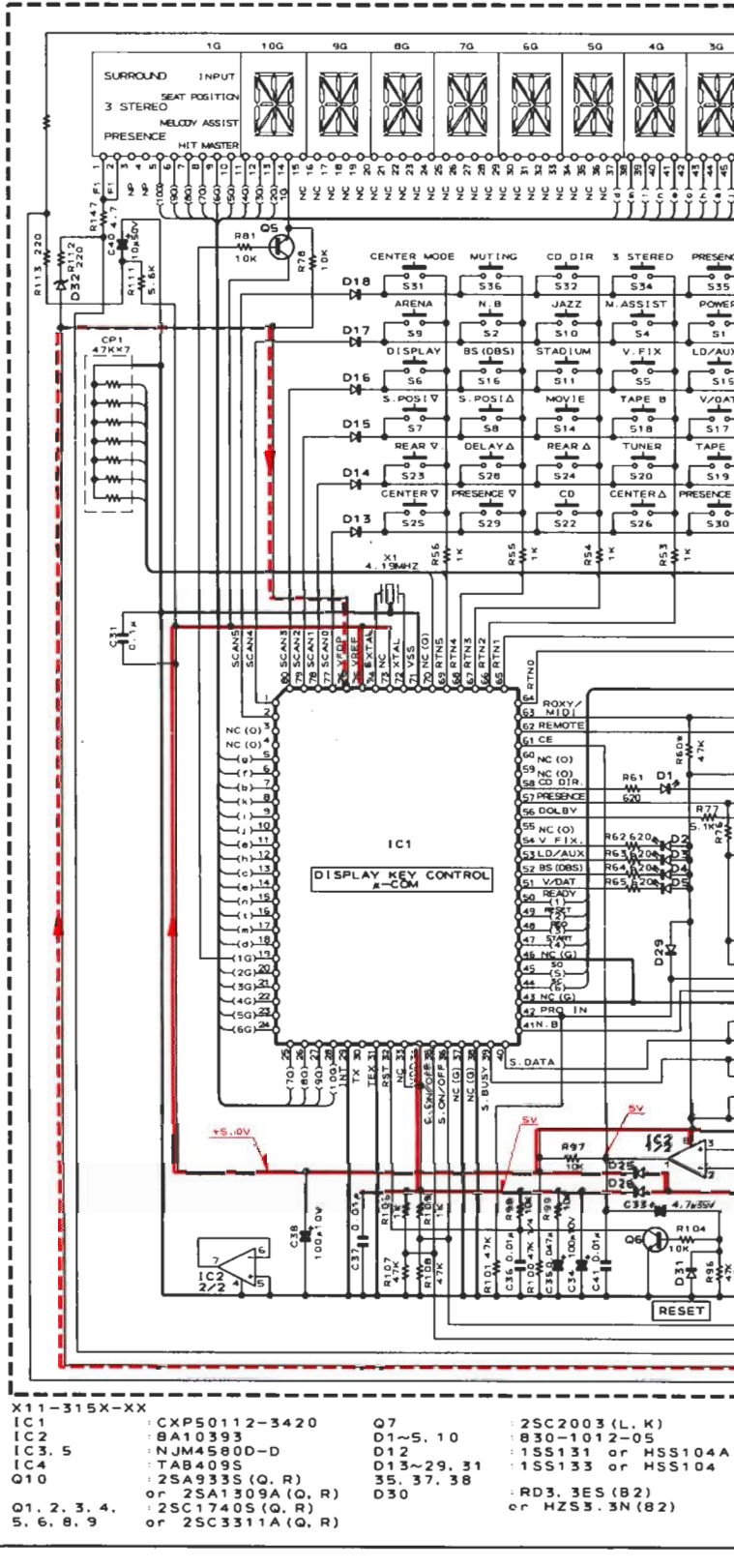
9	D39	F5, 6	F7, 8	F9, 10	F11	J4	K1	W22	W42	W103, 104	W105, 106	IC4
YES	T4A	T2A	T6, 3A	T2A	E13-1403	YES	YES	NO	YES	NO	NO	STK4145MK2
NO	T4A	T2A	T6, 3A	T2A	F67-0078	NO	NO	YES	NO	YES	YES	STK4145MK5
NO	T4A	T2A	T2A	E63-0028	NO	YES	NO	YES	YES	YES	YES	STK4145MK2

X11-315X-XX

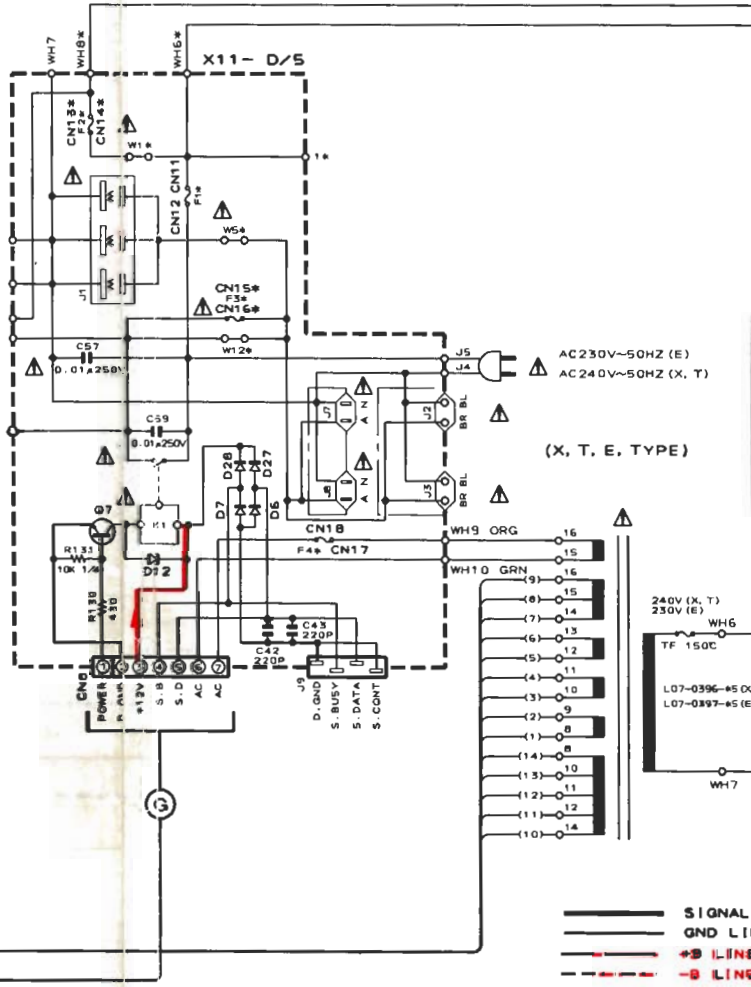
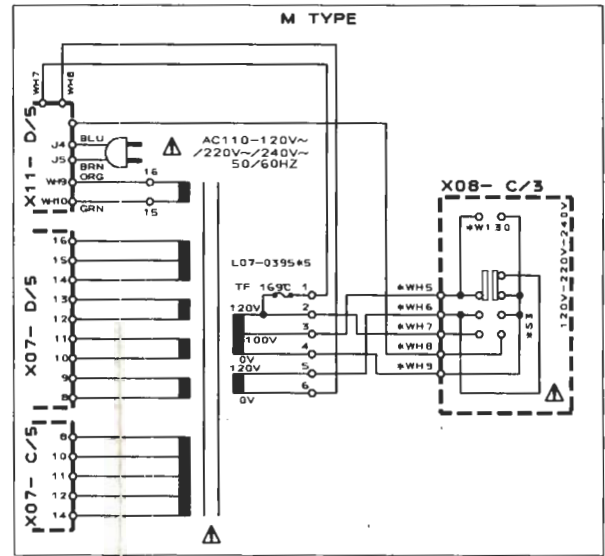
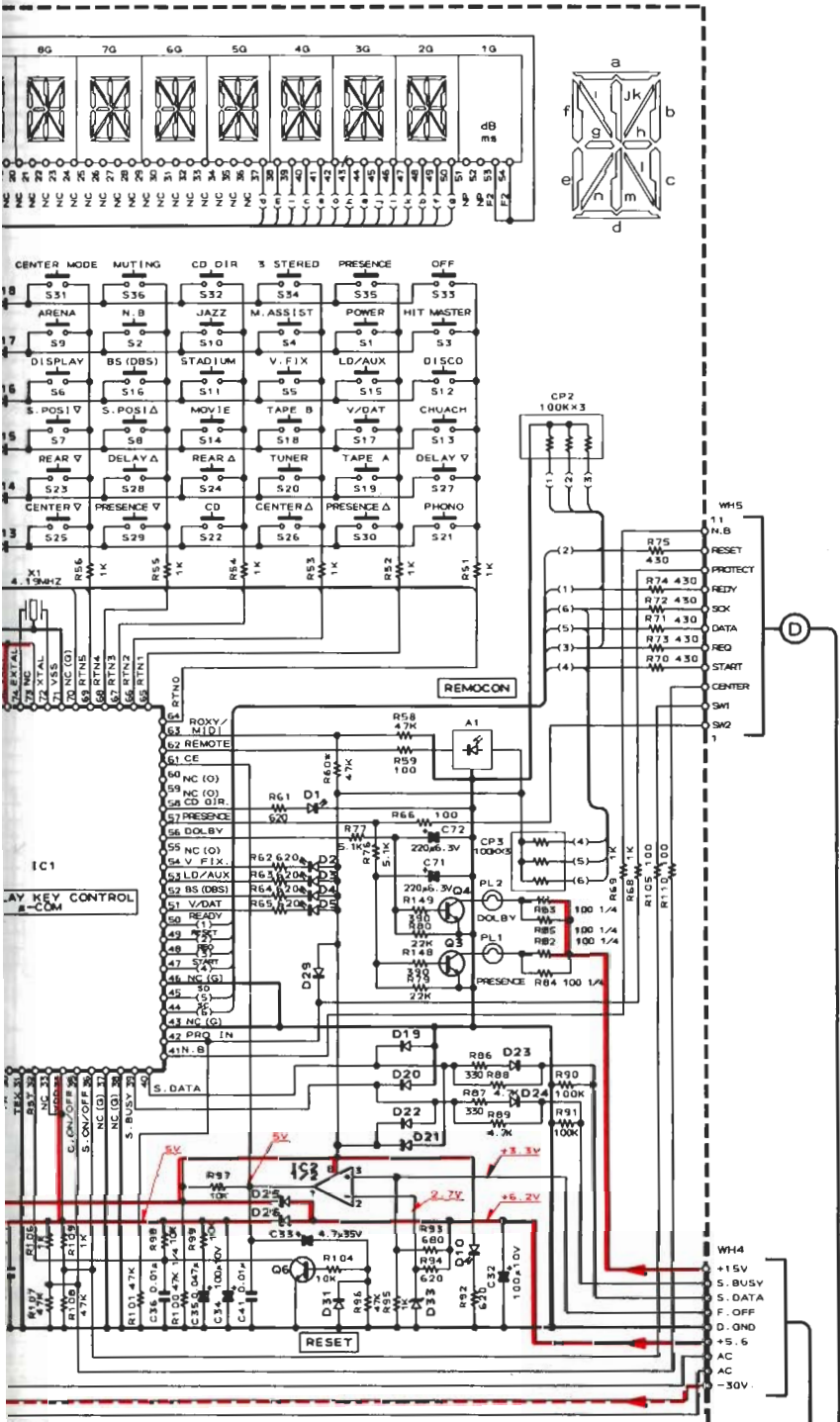
COUNTRY	ABB	UNIT NAME	AREP. NO	R58	R60	F1	F2	F3	FA	CH13, 14
GENERAL MARKET	M	0-21	47K	NO	T4A	T2A	NO	NO	T3, 15A	YES
ENGLAND	T	0-51	NO	47K	T2A	NO	NO	NO	T3, 15A	NO
AUSTRALIA	X	0-71	47K	NO	T2A	NO	NO	NO	T3, 15A	NO
EUROPE	E	2-71	NO	47K	T2A	NO	NO	T2, 5A	T3, 15A	NO

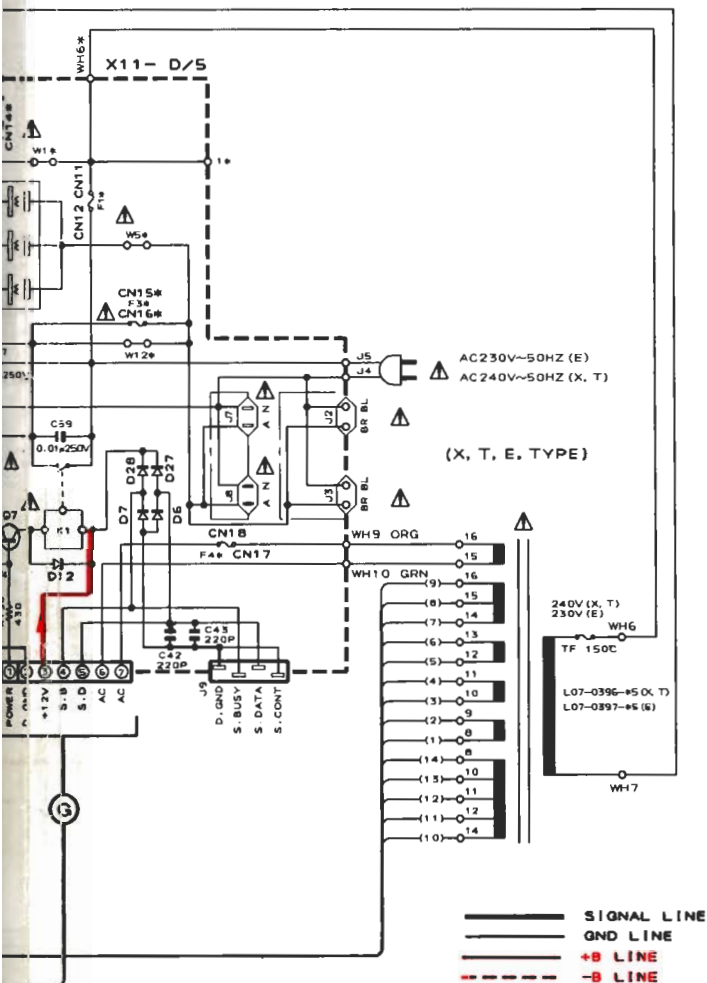
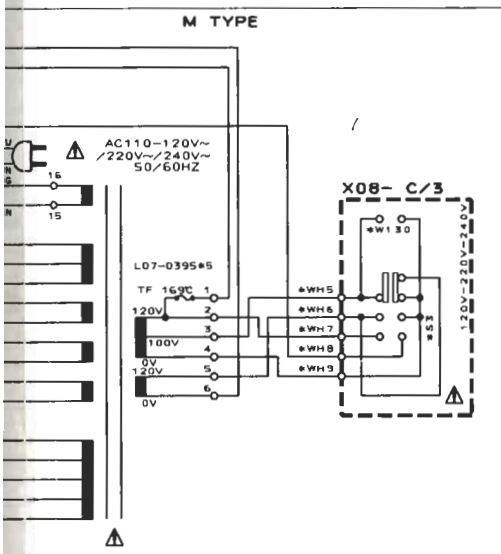


X11-315X-XX A/S



R60	F1	F2	F3	F4	CN13, 14	CN15, 16	J1	J2, 3	J7, 8	WH6	WH8	WE	W7	W12	2, 5	1
NO	T4A	T2A	NO	T3, 15A	YES	NO	NO	YES	NO	NO	YES	NO	YES	YES	NO	YES
47K	T2A	NO	NO	T3, 15A	NO	NO	NO	NO	YES	YES	NO	NO	NO	YES	NO	NO
NO	T2A	NO	NO	T3, 15A	NO	NO	NO	NO	NO	YES	NO	NO	NO	YES	YES	NO
47K	T2A	NO	T2, 5A	T3, 15A	NO	YES	NO	YES	NO	YES	NO	NO	NO	NO	NO	NO





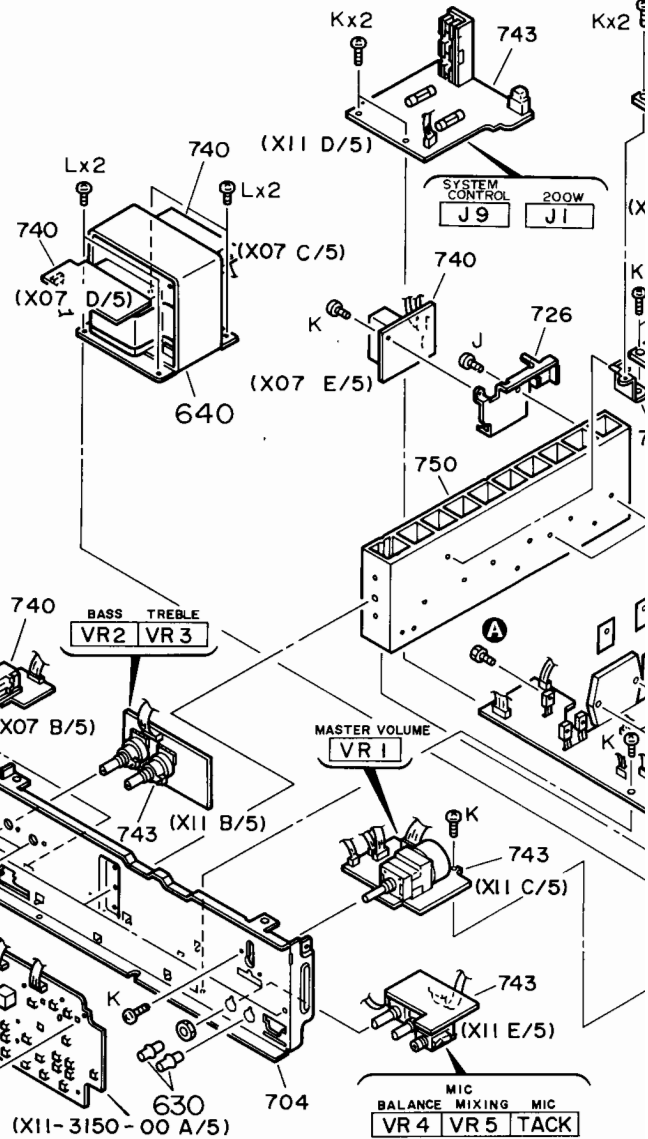
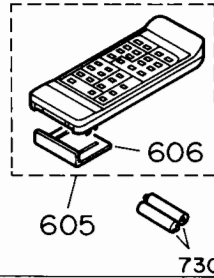
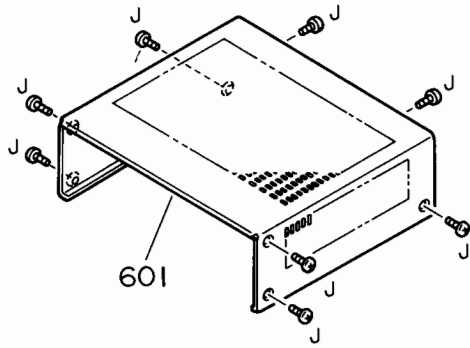
DC voltages are as measured with a high impedance voltmeter with no signal input. Values may vary slightly due to variations between individual instruments or/and units.

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.

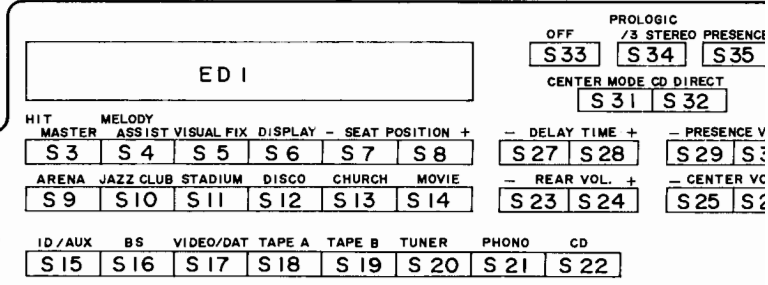
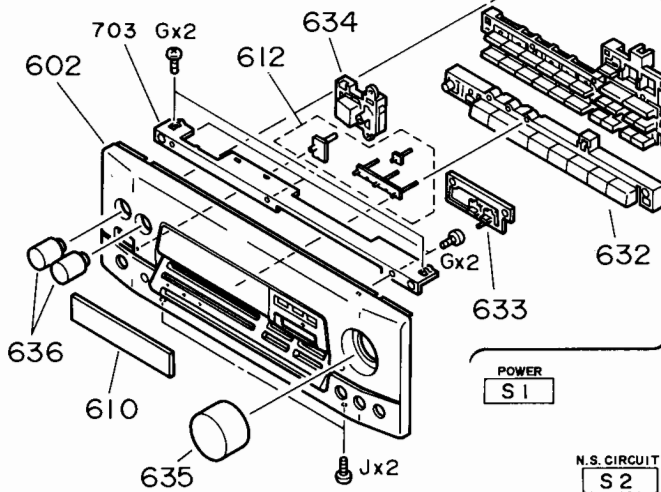
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

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# A-85 EXPLODED VIEW



- A** M3 x 12 (Hex-Tap) : N09-0333-05
- B** M3 x 16 (Hex-Tap) : N09-1236-05
- C** M3 x 8 R Tight : N09-1473-05
- D** M3 x 6 : N30-3006-46
- G** M2.6 x 8 (Bi-Tap) : N89-2608-46
- H** M3 x 6 (Bi-Tap) : N89-3006-46
- J** M3 x 8 (Bi-Tap) BLK : N89-3008-45
- K** M3 x 8 (Bi-Tap) : N89-3008-46
- L** M4 x 8 (Bi-Tap) BLK : N89-4008-45





PARTS LIST

NO. 2

\* 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 Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
L	1B		N89-4008-46	BINDING HEAD TAPITTE SCREW		
			MAIN AMP UNIT X07-2680-21: M, X, 00-51: T, 2-71: E			
C1	-2		CF92FV1H104J	0.10UF J		MX
C3	-4		CC45FSL1H101J	100PF J		
C5	-6		CE04KW1A101M	100UF 10WV		
C7	-8		CC45FSL1H101J	100PF J		
C9	-10		CC45FSL1H820J	82PF J		
C11	-12		CC45FSL1H101J	100PF J		
C13	-14		CC45FSL1H221J	220PF Z		
C15	-16		CK45FF1H103Z	0.010UF Z		
C17	-18		CF92FV1H221J	2200PF J		
C19	-20		CC45FSL1H030C	3.0PF C		
C21	-24		CF92FV1H104J	0.10UF J		E
C23	-26		CF92FV1H470J	4700PF J		
C25	-28		CF92FV1H682J	6800PF J		
C27	-28		CF92FV1H682J	220UF 50WV		
C29	-28		CE04KW1H221M	470UF 50WV		
C30			CE04KW1H471M			
C31	-32		CC45FSL1H221J	220PF J		
C33	-34		CE04KW1H221M	2.2UF 50WV		
C35	-36		CF92FV1H471J	470PF J		
C37	-38		CE04KW1E330M	33UF 25WV		
C39	-40		CC45FSL1H221J	220PF J		
C41	-44		CF92FV1H104J	0.10UF J		E
C43	-44		CF92FV1H221J	2200PF J		
C45	-48		CK45FF1H103Z	0.010UF Z		
C49	-50		C90-1351-05	3.3UF 50WV		
C51			CE04KW0J221M	NP-ELEC		
C52			CE04KW0J221M	220UF 6.3WV		
C53			C90-1351-05	3.3UF 50WV		
C54			CE04KW0J221M	NP-ELEC		
C55			C90-1332-05	10UF 25WV		
C56			CE04KW0J221M	220UF 6.3WV		
C57			CE04KW2A4R7M	4.7UF 100WV		
C58			CE04KW1H010M	1.0UF 50WV		
C59			CE04KW1A101M	100UF 10WV		
C60			CK45FF1H223Z	0.022UF Z		
C61	-62		C90-1828-05	6800UF 50WV		MX
C61	-62		C90-1829-05	6800UF 63WV		TE
C63			CK45FE2H103P	0.010UF P		
C64			CF92FV1H104J	0.10UF J		
C65	-66		CE04KW1V222M	2200UF 35WV		
C67			CK45FE2H103P	0.010UF P		
C68			CE04KW1H220M	22UF 50WV		
C69	-71		CK45FF1H103Z	0.010UF Z		
C70			CE04KW1V102M	1000UF 35WV		
C72			CF92FV1H104J	0.10UF J		
C73			CE04KW1E470M	47UF 25WV		
C74			CF92FV1H104J	0.10UF J		
C75			CE04KW1C221M	220UF 16WV		
C76	-48		CE04KW1E470M	47UF 25WV		
C77			CK45FF1H103Z	0.010UF Z		
C78			CE04KW1C102M	1000UF 16WV		
C79			CF92FV1H104J	0.10UF J		
C80			CE04KW1E470M	47UF 25WV		
C81			CE04KW1V221M	2200UF 35WV		

△ indicates safety critical components

NO. 1

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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 向	Re- marks 備考
			A-85			
601	1A		A01-1810-01	METALLIC CABINET		
602	3A	*	A60-0117-00	PANEL		
605	1B	*	X94-1000-11	REMOTE CONTROL ASSY		
606		*	A09-0115-13	BATTERY COVER		
610	3A	*	B10-1880-03	FRONT GLASS	E	
612	3A	*	B12-0170-03	INDICATOR	X	
613		*	B09-0068-05	CAPACITOR	TE	
614		*	B46-0096-23	WARRANTY CARD	E	
615		*	B46-0122-13	WARRANTY CARD	E	
616		*	846-0143-13	WARRANTY CARD	T	
617		*	B52-0399-00	CONNECTING DIAGRAM	MX	
618		*	B52-0400-00	CONNECTING DIAGRAM	TE	
619		*	B60-0608-00	INSTRUCTION MANUAL (ENGLISH)	E	
620		*	B60-0609-00	INSTRUCTION MANUAL (FRENCH)	E	
621		*	B60-0610-00	INSTRUCTION MANUAL (GERMAN)	E	
622		*	B60-0611-00	INSTRUCTION MANUAL (DUTCH)	E	
623		*	B60-0612-00	INSTRUCTION MANUAL (ITALIANO)	E	
624		*	B60-0613-00	INSTRUCTION MANUAL (SPANISH)	M	
625		*	B60-0652-00	INSTRUCTION MANUAL (CHINESE)	M	
626	1D		E30-0459-05	AC POWER CORD	ME	
627	1D		E30-1341-05	AC POWER CORD	X	
628	1D		E30-1416-05	AC POWER CORD	T	
629	1D		E03-0114-05	AC OUTLET	X	
630		*	H50-0145-04	ITEM CARTON CASE	TE	
631		*	H10-5184-02	POLYSTYRENE FOAMED FIXTURE (L)	X	
632		*	H10-5185-02	POLYSTYRENE FOAMED FIXTURE (R)	X	
633		*	H25-0232-04	PROTECTION BAG (235X350X0.03)	MXE	
634		*	H25-0391-04	PROTECTION BAG	MXE	
635		*	H25-0651-04	PROTECTION BAG (0232 PRINTED)	T	
636	3D		J02-0366-15	FOOT		
637	1D		J02-1040-05	FOOT		
638	1D		J12-0091-05	PIN		
639	3C		J19-3180-05	UNIT HOLDER		
640	1D		J42-0083-05	POWER CORD BUSHING		
641		*	J61-0307-05	WIRE BAND		
642	3B		K29-3886-04	KNOB BALANCE MIC MIXING		
643	3B	*	K29-4242-02	KNOB SURROUND SELECTOR		
644	3B	*	K29-4243-03	KNOB INPUT SELECTOR		
645	3A	*	K29-4244-04	KNOB PROLOGIC/STEREO PRESENCE		
646	3A	*	K29-4245-03	KNOB POWER		
647	3A	*	K29-4246-04	KNOB MASTER VOLUME		
648	3A	*	K29-4247-04	KNOB BASS/TREBLE		
649	1B	*	L07-0395-05	POWER TRANSFORMER	M	
650	1B	*	L07-0396-05	POWER TRANSFORMER	X	
651	1B	*	L07-0397-05	POWER TRANSFORMER	TE	
652	C		N09-1473-05	TAPPING SCREW (M3X8)		
653	G		N89-2608-46	BINDING HEAD TAPITTE SCREW		
654	H		N89-3006-46	BINDING HEAD TAPITTE SCREW		
655	J		N89-3008-45	BINDING HEAD TAPITTE SCREW		
656	K		N89-3008-46	BINDING HEAD TAPITTE SCREW		

△ indicates safety critical components

L:Scandinavia  
Y:PA(Far East, Hawaii)  
Y:AAFE(S)(Europe)

K:USA  
T:England  
X:Australia  
M:Other Areas

L:Scandinavia  
Y:PA(Far East, Hawaii)  
Y:AAFE(S)(Europe)

K:USA  
T:England  
X:Australia  
M:Other Areas



## PARTS LIST

### NO. 4

\* New Parts  
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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 Parts 新部品	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向備考
K1 -6		*	S76-0008-05	MAGNETIC RELAY	MX TE
K2 -6		*	S76-0008-05	MAGNETIC RELAY	
K7		*	S76-0015-05	MAGNETIC RELAY	
D1			D5SBA20F03	DIODE	TE TE
D2			D3SBA20F03	DIODE	
D3 -11			S55668	DIODE	
D12 -18			HSS104A	DIODE	MX MX TE TE
D12 -18			HSS131	DIODE	
D12 -20			HSS104A	DIODE	
D20			HSS131	DIODE	ZENER DIODE
D21			HSS131	DIODE	
D21			HZ54.7N(B)	ZENER DIODE	
D21 -28			RD4.7ES(B)	ZENER DIODE	DIODE
D22 -28			HSS104A	DIODE	
D22 -28			HSS131	DIODE	
D29			HZ56.2N(B2)	ZENER DIODE	ZENER DIODE
D29			RD6.2ES(B2)	ZENER DIODE	
D30 -33			HSS104A	DIODE	
D30 -33			HSS131	DIODE	DIODE
D34			S33680	DIODE	
D35			HSS104A	DIODE	
D35			HSS131	DIODE	DIODE
D36 +37			HSS104A	DIODE	
D36 +37			HSS131	DIODE	
D38 -42			HSS104A	DIODE	DIODE
D38 -42			HSS131	DIODE	
D38 -42			HSS131	DIODE	
IC1			UPC7805HP	IC(VOLTAGE REGULATOR/ +5V)	IC(OP AMP) IC(VOLTAGE REGULATOR/ +15V) IC(AF POWER AMP) IC(AF POWER AMP) TRANSISTOR
IC2			NJM4580L-D	TRANSISTOR	
IC3		*	UPC7815HF	TRANSISTOR	
IC4		*	STK4145MK2	TRANSISTOR	MX E
IC4		*	STK4145MK2	TRANSISTOR	
IC4		*	2SA992(F,E)	TRANSISTOR	
Q1 -4			2SC1845(F,E)	TRANSISTOR	TRANSISTOR
Q5 -8			2SC1845(F,E)	TRANSISTOR	
Q9 -10			2SD2276	TRANSISTOR	
Q11 -12			2SA992(F,E)	TRANSISTOR	TRANSISTOR
Q13 -14			2SC1845(F,E)	TRANSISTOR	
Q15 -16			2SC1845(F,E)	TRANSISTOR	
Q21 -22			2SC4137(V,W)	TRANSISTOR	TRANSISTOR
Q23 -24			2SC2878(B)	TRANSISTOR	
Q25			2SA733(A)(Q,P)	TRANSISTOR	
Q26			2SA933S(Q,R)	TRANSISTOR	TRANSISTOR
Q27 -28			2SB941	TRANSISTOR	
Q27 -28			2SA733(A)(Q,P)	TRANSISTOR	
Q29			2SC1740S(Q,R)	TRANSISTOR	DIGITAL TRANSISTOR
Q30			2SC945(A)(Q,P)	TRANSISTOR	
Q30			2SC2003(L,K)	TRANSISTOR	
Q31			DT0124ES	DIGITAL TRANSISTOR	TRANSISTOR
Q32			2SA1123(Q,S)	TRANSISTOR	
Q33 -34			2SC2878(B)	TRANSISTOR	
Q35 -36			2SA733(A)(Q,P)	TRANSISTOR	TRANSISTOR
Q35 -36			2SA933S(Q,R)	TRANSISTOR	
Q37 -38			2SC1740S(Q,R)	TRANSISTOR	

L:Scandinavia  
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K:USA  
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△ indicates safety critical components

### NO. 3

\* 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 Parts 新部品	Parts No. 部品番号	Description 部品名/規格	Desti- nation 仕向備考
C82			CE04KW1H100M	ELECTRO	50WV
C83 ,84			CF92EV1H473J	100UF	
C87			CE04KW1H100M	0.047UF	
C88 ,89			CE04KW1H101M	100UF	50WV
C90			CE04KW1HR47H	0.47UF	
C91			C90-1334-05	NP-ELEC	
C92 ,93			CE04KW1H470M	47UF	50WV
C94			CE04KW1H477M	47UF	
C95 ,96			C91-0721-05	ELECTRO	
C97 ,98			CE04KW1H470M	10PF	50WV
C99 ,100			CE04KW1H477M	47UF	
C101 ,102			CE04KW1H220M	22UF	
C103			CK45FF1H223Z	0.022UF	Z
C104			CK45FF1H223Z	0.022UF	
C105-108			CK45FE2H103P	0.010UF	
C151 ,152			CE04KW1V100M	10UF	35WV
C151 ,152			CF92EV1H243J	0.024UF	
C153 ,154			CF92EV1H104J	0.10UF	
C155 ,156			CC45FSLH220J	22PF	J
J1			E70-0008-05	LOCK TERMINAL BOARD SPEAKERS	
J2		*	E11-0208-05	PHONE JACK PHONES	
J4		*	E13-1403-05	PHONE JACK SURROUND SPEAKERS	MX
J4		*	E63-0028-05	PHONE JACK SURROUND SPEAKERS	
J5		*	E08-0411-05	RECTANGULAR RECEPTACLE POWER	
F7 ,6			F05-4025-05	FUSE (SEHM0) (250V T4A)	TE
F7 ,6			F08-2921-05	FUSE (SEHM0) (250V T7A)	
F9 ,10			F05-6321-05	FUSE (SEHM0) (250V T6.3A)	
F11			F08-2021-05	FUSE (SEHM0) (250V T2A)	MX
CN2 -13			J13-0075-05	FUSE CLIP	
CN15 ,16			J13-0075-05	FUSE CLIP	
L1 -4			L39-0085-05	PHASE-COMPENSATION COIL	TE
A			N09-0333-05	TAPPING SCREW (3X12)	
B		2C	N09-1236-05	TAPPING SCREW (3X16)	
J		1C,2C	N89-3008-45	BINDING HEAD TAPITIE SCREW	MX
K		1C,2C	N89-3008-46	BINDING HEAD TAPITIE SCREW	
CPI ,2			R90-0187-05	MULTI-COMP	
R11 ,12			RN14BK2C1960F	RN	K 5W
R13 ,14			RD14AB2E221J	FL-PR00F RD 220	
R15 ,16			RD14AB2E332J	FL-PR00F RD 3.3K	
R17 ,18			RD14AB2E221J	FL-PR00F RD 220	J 1/4W
R23 ,24			RD14AB2E271J	FL-PR00F RD 270	
R27 -30			RD14AB2E4R7J	FL-PR00F RD 4.7	
R45			RD14AB2E330J	FL-PR00F RD 33	J 1/4W
R46			RD14AB2E560J	FL-PR00F RD 56	
R49 ,50			RD14AB2E100J	FL-PR00F RD 10	
R51 ,52			RS14DB3D100J	FL-PR00F RS 10	J 2W
R55 ,56			RS14DB3D680J	FL-PR00F RS 68	
R67 ,68			RS14AB2E101J	FL-PR00F RD 100	
R71 ,72			RS14DB3D100J	FL-PR00F RS 10	J 2W
R103 ,104			RD14AB2E100J	FL-PR00F RD 10	
R110 ,111			RD14AB2E1R0J	FL-PR00F RD 1.0	
R112			RD14AB2E152J	FL-PR00F RD 1.5K	J 1/4W
R142			RD14AB2E103J	FL-PR00F RD 10K	

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## PARTS LIST

### NO. 6

✕ New Parts  
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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 Parts 部品番号	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
IC1		TC9163N		IC(BILATERAL SWITCH X16)		
IC2		TC9164N		IC(16CH BILATERAL SELECTOR SW)		
IC3		TC9015P		IC(ANALOG SWITCH X 6)		
IC4 -6		NJM2056D		IC(OP AMP X4)		
IC4 -6		UPC4574C		IC(OP AMP X4)		
IC7 ,8		NJM4565D-D		IC(OP AMP X2)		
IC9		NJM4565L		IC		
IC10		TC4052BP		IC(4CH HPX/DE-MPX)		
IC11		MC14577A		IC		
IC12		NJM4565D-D		IC(OP AMP X2)		
Q1 -6		2SC1740S(Q,R)		TRANSISTOR		
Q11 -6		2SC3311A(Q,R)		TRANSISTOR		
Q11		2SC1740S(Q,R)		TRANSISTOR		
Q11		2SC3311A(Q,R)		TRANSISTOR		
Q12 ,13		2SA1309A(Q,R)		TRANSISTOR		
Q12 ,13		2SA933S(Q,R)		TRANSISTOR		
Q14 ,15		DTC124ES		DIGITAL TRANSISTOR		
Q14 ,15		UN4212		TRANSISTOR		
<b>CONTROL UNIT (X11-3150-21: M, 0-71: X, 0-51: T, 2-71: E)</b>						
D1 -5		B30-1012-05		LED(SLP-981C-50)		
D10		B30-1012-05		LED(SLP-981C-50)		
PL1 ,2		B30-2407-05		LAMP		
C1 -2		CE04KWIH3R3M		ELECTRØ		50WV
C3 ,4		CC45FSL1H221J		CERAMIC		220PF J
C5 ,6		CC45FSL1H101J		CERAMIC		100PF J
C7 ,8		CF92FV1H563J		MF		0.056UF J
C9 ,10		CK45FB1H561K		CERAMIC		560PF K
C11 ,12		CE04KWIH4R7M		ELECTRØ		4.7UF 35WV
C13 ,14		CE04KWIH100M		ELECTRØ		10UF 35WV
C15 ,16		CF92FV1H393J		MF		0.039UF J
C23 ,24		CF92FV1H683J		MF		0.068UF J
C25		CE04KWIH100M		ELECTRØ		10UF 35WV
C26		C90-1332-05		NP-ELEC		10UF 25WV
C31		CF92FV1H104J		MF		0.10UF J
C32		C90-3222-05		ALUMINIUM ELECTROLYTIC C.		25WV
C33		C90-3242-05		ALUMINIUM ELECTROLYTIC C.		25WV
C34		C90-3222-05		ALUMINIUM ELECTROLYTIC C.		25WV
C35		C90-1827-05		BACKUP		0.047F 5.5WV
C36		C91-0769-05		CERAMIC		0.01UF K
C38		C90-3222-05		ALUMINIUM ELECTROLYTIC C.		25WV
C40		C90-3258-05		ALUMINIUM ELECTROLYTIC C.		25WV
C41		C91-0769-05		CERAMIC		0.01UF K
C42 ,43		CC45FSL1H221J		CERAMIC		220PF J
C51 ,52		CE04KWIH470M		ELECTRØ		470UF 25WV
C55		CE04KWIH101M		ELECTRØ		100UF 25WV
C56		C90-1333-05		NP-ELEC		22UF 10WV
C57		C91-0971-05		FILM		0.01UF 250WV
C59		C91-1421-05		FILM		0.01UF 250AC
C60		CQ92FM1H472J		MYLAR		4700PF J
C61		CC45FSL1H221J		CERAMIC		220PF J
C62		CF92FV1H473J		MF		0.047UF J
C63		CC45FSL1H221J		CERAMIC		220PF J
C64		CE04KWIH100M		ELECTRØ		10UF 35WV
C65		CK45FB1H561K		CERAMIC		560PF K

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### NO. 5

✕ New Parts  
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Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 部品番号	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
Q37 ,38		2SC945(A)(Q,P)		TRANSISTOR		MX
Q39 -44		2SC2003(L,K)		TRANSISTOR		TE
Q40 -44		2SC2003(L,K)		TRANSISTOR		TE
<b>PRE AMPLIFIER UNIT (X08-2470-21: M, 2-71: X, T, E)</b>						
C1 ,2		CC45FSL1H221J		CERAMIC		XTE
C3 ,4		CE04KWIH100M		ELECTRØ		J 35WV
C5 ,6		CC45FSL1H101J		CERAMIC		J
C7 ,8		CE04KWIH101M		ELECTRØ		10WV
C9 ,10		CC45FSL1H221J		CERAMIC		J
C11 ,12		CF92FV1H123J		MF		J 0.012UF
C13 ,14		CF92FV1H332J		MF		J 3300PF
C15 ,16		CE04KWIH100M		ELECTRØ		J 35WV
C17 -24		C91-0749-05		CERAMIC		XTE
C25 -36		CC45FSL1H221J		CERAMIC		XTE
C37 ,38		CE04KWIH010M		ELECTRØ		1.0UF 50WV
C39 ,40		CE04KWIH222M		ELECTRØ		0.22UF 50WV
C41 -48		CE04KWIH100M		ELECTRØ		10UF 35WV
C51 ,52		CE04KWIH101M		ELECTRØ		100UF 10WV
C54 -59		CE04KWIH470M		ELECTRØ		47UF 25WV
C60 ,61		CF92FV1H103J		MF		0.010UF J
C62 ,65		CE04KWIH470M		ELECTRØ		47UF 25WV
C66 ,67		CK45FB1H02K		CERAMIC		1000PF K
C68 ,69		CK45FB1H301K		CERAMIC		390PF K
C72 ,73		CK45FF1H223Z		CERAMIC		0.022UF Z
C74 ,75		C91-0085-05		CERAMIC		0.022UF N
C76 ,77		CK45FF1H23Z		CERAMIC		0.022UF Z
C78		C91-0085-05		CERAMIC		0.022UF N
C101 ,102		CE04KWIH470M		ELECTRØ		47UF 25WV
C103 ,104		CE04KWIH221M		ELECTRØ		220UF 6.3WV
C105 ,106		CK45FF1H223Z		CERAMIC		0.022UF Z
J1		E13-0249-05		PHONO JACK PHONO		
J2		E13-0633-05		PHONO JACK CD, TUNER, TAPE REC		
J3		E13-0445-05		PHONO JACK TAPE PLAY, ADAPTER		
J4		E13-0633-05		PHONO JACK ADAPTER, VIDEO/DAT		
J5		E13-0445-05		PHONO JACK BS, LD/AUX		
J6		E13-0313-05		PHONO JACK PLAY, BS, LD/AUX		
J7		E13-0297-05		PHONO JACK MONITOR, REC		
CP1		R90-0490-05		MULTI-COMP		J 1/6W
R160 ,161		RS14K3A560J		FL-PROOF RS 56		J 1W
R219		R014GB2ESR6J		FL-PROOF RD 5.6		J 1/4W
S1 ,2		S31-2094-05		SLIDE SWITCH CENTER SP/REAR SP		M
S3		S31-2322-05		SLIDE SWITCH VOLTAGE SELECTOR		M
D1 ,2		HZS11N(B2)		ZENER DIODE		
D1 ,2		R011ES(B2)		ZENER DIODE		
D3		HZS4.7N(B)		ZENER DIODE		
D3		R04.7ES(B)		ZENER DIODE		
D5 -12		HSS104		DIODE		
D5 -12		LSS133		DIODE		
D13 ,14		HZS4.7N(B)		ZENER DIODE		
D13 ,14		R04.7ES(B)		ZENER DIODE		
D15 -18		HSS104		DIODE		
D15 -18		LSS133		DIODE		

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## PARTS LIST

NO. 8

x New Parts  
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Ref. No. 参照番号	Address 位置	New Parts 新部品	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
E01		*	10-BT-86GK	FLUORESCENT INDICATOR TUBE		
I01		*	CYP50112-342Q	IC (DUAL COMPALATOR)		
I02			B110393	IC		
I03			NJM45800-D	IC (MOTOR CONTROL)		
I04			TA8409S	IC		
IC5			NJM45800-D	IC		
Q1	-6		25C17405(G,R)	TRANSISTOR		
Q1	-6		25C3311A(G,R)	TRANSISTOR		
Q7	,9		25C2003(L,K)	TRANSISTOR		
Q8	,9		25C17405(G,R)	TRANSISTOR		
Q8	,9		25C3311A(G,R)	TRANSISTOR		
Q10			25A1309A(G,R)	TRANSISTOR		
Q10			25A933S(G,R)	TRANSISTOR		
A1			W02-0776-05	ELECTRIC CIRCUIT MODULE		
A1			W02-1046-05	ELECTRIC CIRCUIT MODULE		
<b>SIGNAL PROCESSOR UNIT (X32-2030-00)</b>						
C1	,6		CE04KWJ331M	ELECTRO 330UF		
C5	,6		CE04KW1H010M	ELECTRO 6.3KV		
C12	,16		CK45FF1H472Z	ELECTRO 1.0UF		
C15	,16		CE04KW1V100M	CERAMIC 4700PF		
C17	,18		CE04KW1E470M	ELECTRO 10UF		
C19	-22		CE04KW1V100M	ELECTRO 10UF		
C25	,26		CE04KW1V100M	ELECTRO 10UF		
C27	,30		C992FM1H272J	MYLAR 2700PF		
C31	,32		C992FM1H512J	MYLAR 5100PF		
C35	,36		CF92FV1H104J	MF 0.10UF		
C37			CE04KW1A101M	ELECTRO 100UF		
C38			CE04KW1V4R7M	ELECTRO 4.7UF		
C39			CE04KW1C470M	ELECTRO 47UF		
C40			CE04KW1HR33M	ELECTRO 0.33UF		
C41			CF92FV1H104J	MF 0.10UF		
C42			CF92FV1H333J	MF 0.033UF		
C43			CE04KW1H010M	ELECTRO 1.0UF		
C44			CF92FV1H272J	MF 0.027UF		
C45			C992FM1H472J	MYLAR 4700PF		
C46			CE04KW1C220M	ELECTRO 22UF		
C47			CE04KW1C101M	ELECTRO 100UF		
C48			C992FM1H822J	MYLAR 8200PF		
C49			CE04KW1V100M	ELECTRO 10UF		
C51			CE04KW1V4R7M	ELECTRO 4.7UF		
C52			CE04KW1V100M	ELECTRO 10UF		
C53	-56		C992FM1H272J	MYLAR 2700PF		
C57	,58		C992FM1H512J	MYLAR 5100PF		
C61	,62		CE04KW1E470M	ELECTRO 47UF		
C63	,64		CE04KW1H010M	ELECTRO 1.0UF		
C65	,66		CC45FSL1H101J	CERAMIC 100PF		
C67	-70		CE04KW1E470M	ELECTRO 47UF		
C71			CK45FB1H102K	CERAMIC 1000PF		
C73	-76		C992FM1H103J	MYLAR 0.010UF		
C77			CF92FV1H104J	MF 0.10UF		
C78			CE04KW1V100M	ELBCTRO 10UF		
C79			CF92FV1H104J	MF 0.10UF		
C80			CE04KW1V100M	ELECTRO 10UF		
C81	-86		CF92FV1H104J	MF 0.10UF		

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NO. 7

x New Parts  
 Parts without Parts No. are not supplied.  
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 Teile ohne Parts No. werden nicht geliefert.

Ref. No. 参照番号	Address 位置	New Parts 新部品	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 向	Re- marks 備考
C66, 67			CE04KW1V100M	ELECTRO 10UF		
C68, 69			CE04KW1E470M	ELECTRO 47UF		
C70			C91-0787-05	CERAMIC 0.01UF		
C71, 72			CE04JWJ221M	ELECTRO 220UF		MXT
A, J2, 3			E03-0108-05	AC OUTLET		ME
J6		*	E11-0206-05	PHONE JACK		T
J7, 8			E03-0109-05	AC OUTLET		MX
J9			E08-0311-05	RECTANGULAR RECEPTACLE SYSTEM		TE
F1			E08-0312-05	RECTANGULAR RECEPTACLE SYSTEM		TE
F1, F2			F05-4025-05	FUSE (SEMKO) (250V T4A)		M
F2, F3			F06-2021-05	FUSE (SEMKO) (250V T2A)		XTE
F3, F4			F06-2021-05	FUSE (SEMKO) (250V T2A)		M
F4			F05-2525-05	FUSE (SEMKO) (250V T2.5A)		E
F4			F05-3121-05	FUSE (SEMKO) (250V T3.15A)		E
		*	J19-3433-03	HOLDER		M
CN11-14			J13-0075-05	FUSE CLIP		XTE
CN11-12			J13-0075-05	FUSE CLIP		E
CN15-18			J13-0075-05	FUSE CLIP		MXT
CN17, 18			J13-0075-05	FUSE CLIP		MXT
X1			L78-0267-05	RESONATOR		
CP1			R90-0816-05	MULTIPLE RESISTOR		
CP2, 3			R90-0850-05	MULTIPLE RESISTOR		
R121, 122			R014GB2E121J	FL-PROOF RD 120		J 1/4W
R127, 128			R014GB2E100J	FL-PROOF RD 10		J 1/4W
R145, 146			R014GB2E121J	FL-PROOF RD 120		J 1/4W
VR1		*	R09-5057-05	POTENTIOMETER MASTER VOLUME		
VR2, 3			R06-5193-05	POTENTIOMETER BASS TREBLE		
VR4			R05-5037-05	POTENTIOMETER BALANCE		
VR5			R10-5042-05	POTENTIOMETER RLC MIXING		
K1			S76-0009-05	MAGNETIC RELAY		
S1	-36		S40-1064-05	PUSH SWITCH SELECTOR		
D12			HSS104A	DIODE		
D12			1SS131	DIODE		
D13	-26		HSS104	DIODE		
D13	-26		1SS133	DIODE		
D29			HSS104	DIODE		
D29			1SS133	DIODE		
D30			HZ53.3N(82)	ZENER DIODE		
D30			R03.3ES(82)	ZENER DIODE		
D31			HSS104	DIODE		
D31			1SS133	DIODE		
D32			HZ56.8N(82)	ZENER DIODE		
D32			R06.8ES(82)	ZENER DIODE		
D33			HZ52.7N(82)	ZENER DIODE		
D33			R02.7ES(82)	ZENER DIODE		
D34			HZ54.7N(82)	ZENER DIODE		
D34			R04.7ES(82)	ZENER DIODE		
D35			HSS104	DIODE		
D35			1SS133	DIODE		
D36			HZ52.7N(82)	ZENER DIODE		
D36			R02.7ES(82)	ZENER DIODE		
D37, 38			HSS104	DIODE		
D37, 38			1SS133	DIODE		

L:Scandinavia  
 Y:FX(Far East, Hawaii)  
 Y:AAF(Europe)  
 K:USA  
 T:England  
 X:Australia  
 P:Canada  
 E:Europe  
 M:Other Areas  
 A indicates safety critical components

## PARTS LIST

NO. 10

x 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 Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕	Re- marks 備考
IC16, 17						
IC18		*	NJM4558D	IC(OP AMP X2)		
IC19, 20			TC74HC08AP	IC (AND GATE)		
IC19, 20			UPD074HC08C	IC (RAM)		
IC19, 20			HM50464RP-12	IC (D RAM)		
IC19, 20			LM33464G-12	IC (D RAM)		
IC21, 22	f120B	*	LC7883K	IC (DIGITAL FILTER & D/A CONVER		
IC23		*	UP078214CW-770	IC		
IC24		*	LC66516B-4733	IC		
IC25			LC83010N	IC (DIGITAL SIGNAL PROCESSOR)		
Q1, 2			2S01266	TRANSISTOR		
Q3			DTC124ES	DIGITAL TRANSISTOR		
Q3			UN4212	TRANSISTOR		
Q4			2S01923(R, 0)	TRANSISTOR		

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NO. 9

x New Parts  
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Teile 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	Re- marks 備考
C87			CK45FF1H103Z	CERAMIC		
C88			CE04KW1A101M	ELECTR0	Z	
C91			CF92RV1H104J	ELECTR0	100UF	
C92			CE04KW1V4R7M	MF	0.10UF	J
C93			CK45FB1H102K	ELECTR0	4.70UF	35WV
				CERAMIC	1000PF	K
C95, 96			CE04KW1A101M	ELECTR0	100UF	10WV
C97, 98			CF92RV1H104J	MF	0.10UF	J
C99, 100			CE04KW1A101M	ELECTR0	100UF	10WV
C101, 102			CF92RV1H104J	MF	0.10UF	J
C103			CK45FF1H103Z	CERAMIC	0.010UF	Z
C107			CK45FF1H103Z	CERAMIC	0.010UF	Z
C108			CE04KW1V100M	ELECTR0	100UF	35WV
C109			CE04KW1A101M	ELECTR0	100UF	10WV
C110			C91-0769-05	CERAMIC	0.01UF	K
C113			CF92RV1H104J	MF	0.10UF	J
C114			CE04KW1A101M	ELECTR0	100UF	10WV
C115			CF92RV1H104J	MF	0.10UF	J
C116			CE04KW1A101M	ELECTR0	100UF	10WV
C117, 118			CC45FCH1H220J	CERAMIC	22PF	J
C119, 120			CK45FF1H103Z	CERAMIC	0.010UF	Z
C121			CF92RV1H104J	MF	0.10UF	J
C122			CE04KW1A101M	ELECTR0	100UF	10WV
L1 -15			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
X1			L78-0277-05	RESONATOR		
X2			L78-0244-05	RESONATOR		
X3			L77-1199-05	CRYSTAL RESONATOR		
CP1			R90-0500-05	MULTI-COMP	100KX6	J 1/4W
CP2			R90-0850-05	MULTI-COMP	100KX5	J 1/6W
CP3			R90-0493-05	MULTI-COMP	100KX9	J 1/6W
CP4			R90-0864-05	MULTI-COMP	100KX9	J 1/6W
CP5, 6			R90-0493-05	MULTI-COMP	100KX9	J 1/6W
CP7			R90-0850-05	MULTI-COMP	100KX5	J
CP8			R90-0853-05	MULTI-COMP	100KX5	J
CP9			R90-0482-05	MULTI-COMP	100KX4	J 1/6W
R4			RS14KB30330J	FL-PR00F RS 33	J 2W	
R19			RS14KB3A220J	FL-PR00F RS 2.2	J 1W	
R139, 140			RS14KB3D181J	FL-PR00F RS 180	J 2W	
D1			HSS104	DIODE		
D1			ISS133	DIODE		
D3 -10			HSS104	DIODE		
D3 -10			ISS133	DIODE		
IC2			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC3, 4			NJM45650-D	IC(OP AMP X2)		
IC5			LA2730	IC(DOLBY SYSTEM)		
IC6			NJM45650-D	IC(OP AMP X2)		
IC7, 8			UPC4072C	IC(OP AMP X2)		
IC9			UPC7805HF	IC(VOLTAGE REGULATOR/ +5V)		
IC10			NJM45650-D	IC(OP AMP X2)		
IC11		*	NJM431L	IC(REGULATOR)		
IC11			TL431CLP	IC		
IC12			UPC79D5HF	IC(VOLTAGE REGULATOR/ -5V)		
IC13, 14			UPC7805HF	IC(VOLTAGE REGULATOR/ +5V)		
IC15			CS5339-KP	IC(A/D CONVERTER)		

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## SPECIFICATIONS

### Rated power output

#### Front

(IEC/NF) from 63Hz to 12,500Hz, 0.7% T.H.D.

at 8  $\Omega$  ..... 70W + 70W

(DIN) 1,000Hz at 8  $\Omega$  ..... 70W + 70W

#### Center

(DIN) 1,000Hz ,0.9% T.H.D. at 8  $\Omega$  ..... 15W + 15W

#### Rear

(DIN) 1,000Hz ,0.9% T.H.D. at 8  $\Omega$  ..... 15W + 15W

Total harmonic distortion(1kHz, 8  $\Omega$ )..... 0.02% at 35W

### Frequency response

CD..... 20Hz~ 70kHz +0dB, -3dB

### Signal to noise ratio (IHF- A)

PHONO (MM)..... 75dB for 2.5mV input

CD,TAPE,VIDEO..... 95dB for 200mV input

### Signal to noise ratio (DIN weighted at 50mW output )

PHONO (MM)..... 58dB

CD,TAPE,VIDEO..... 59dB

### Input sensitivity/Impedance

PHONO(MM)..... 2.5 mV/47k  $\Omega$

CD,TAPE, VIDEO..... 200mV/47k  $\Omega$

MIC ..... 1.5mV/47k  $\Omega$

### Tone controls

BASS.....  $\pm$  10dB (at 100Hz)

TREBLE.....  $\pm$  10dB (at 10kHz)

N.B.circuit (-30dB Volume level)..... + 12 dB (at 55Hz )

### Output

SUPER WOOFER OUT..... 1.8 V/600  $\Omega$

### General

Power consumption..... 220 W

Dimensions..... W: 360 mm

H: 129 mm

D: 380 mm

Weight (net)..... 9.3 kg

AC outlets(switched) ..... 2 (Total 200W max)

#### Note:

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

#### 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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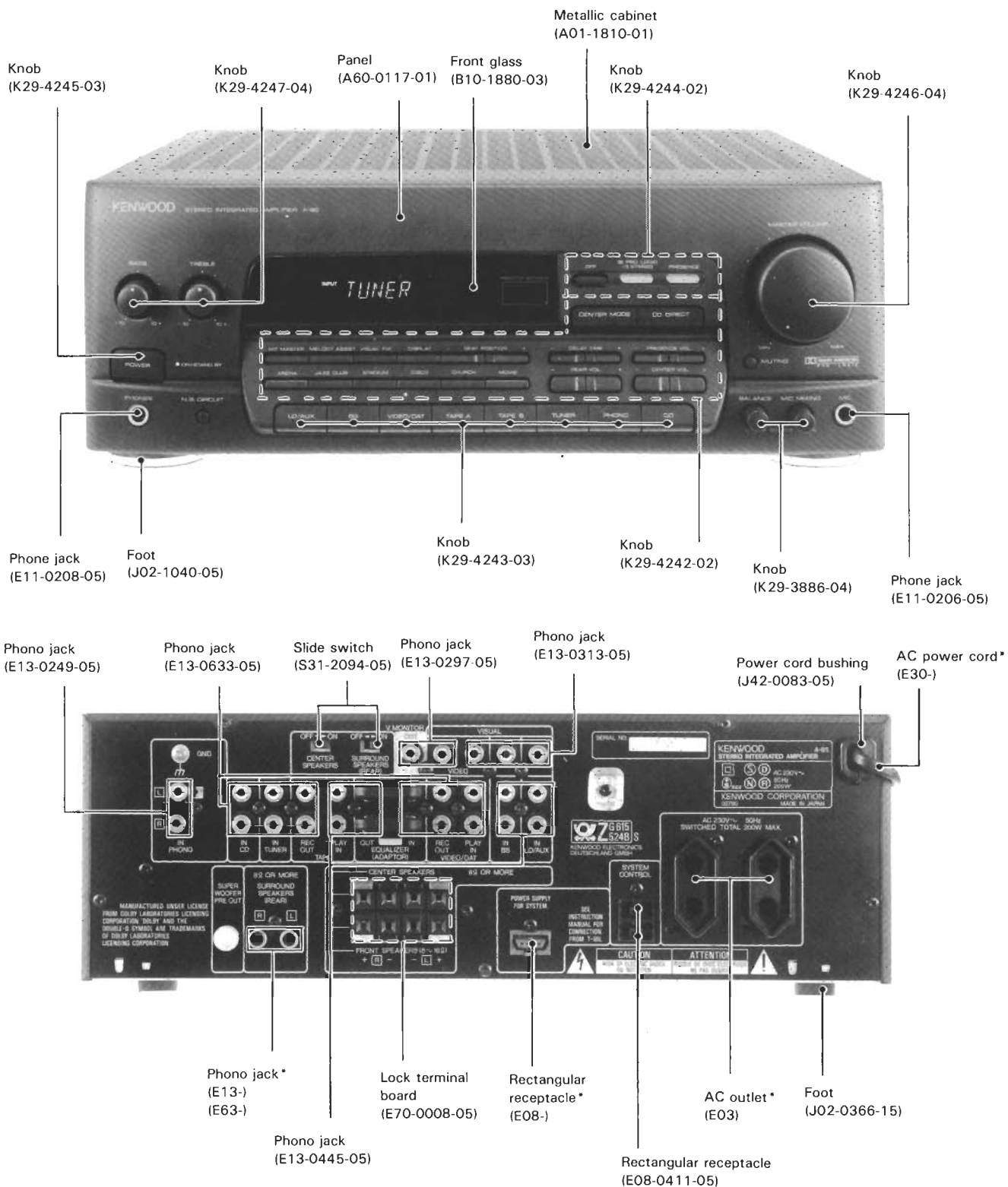
P.O. Box 504, 8 Figtree Drive, Australia Centre, Homebush, N.S.W. 2140, Australia

KENWOOD & LEE ELECTRONICS, LTD.

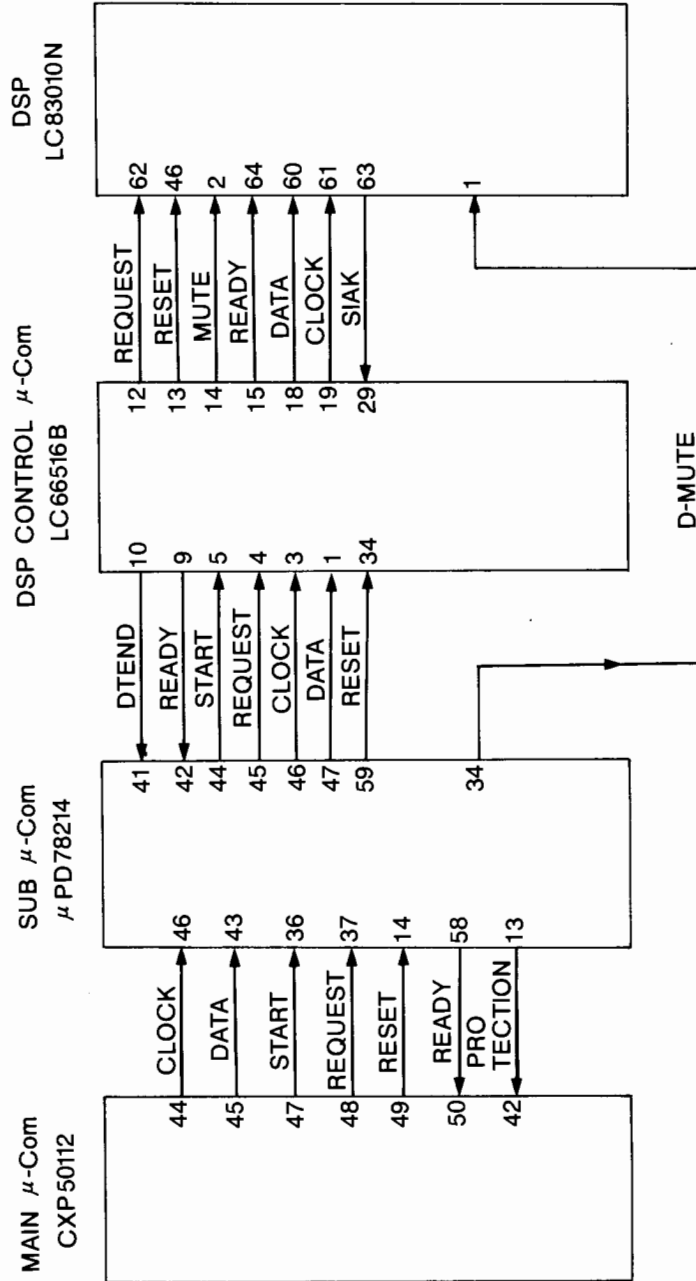
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# A-85

## SERVICE MANUAL MICROPROCESSOR EDITION



Micro processor



# CIRCUIT DESCRIPTION

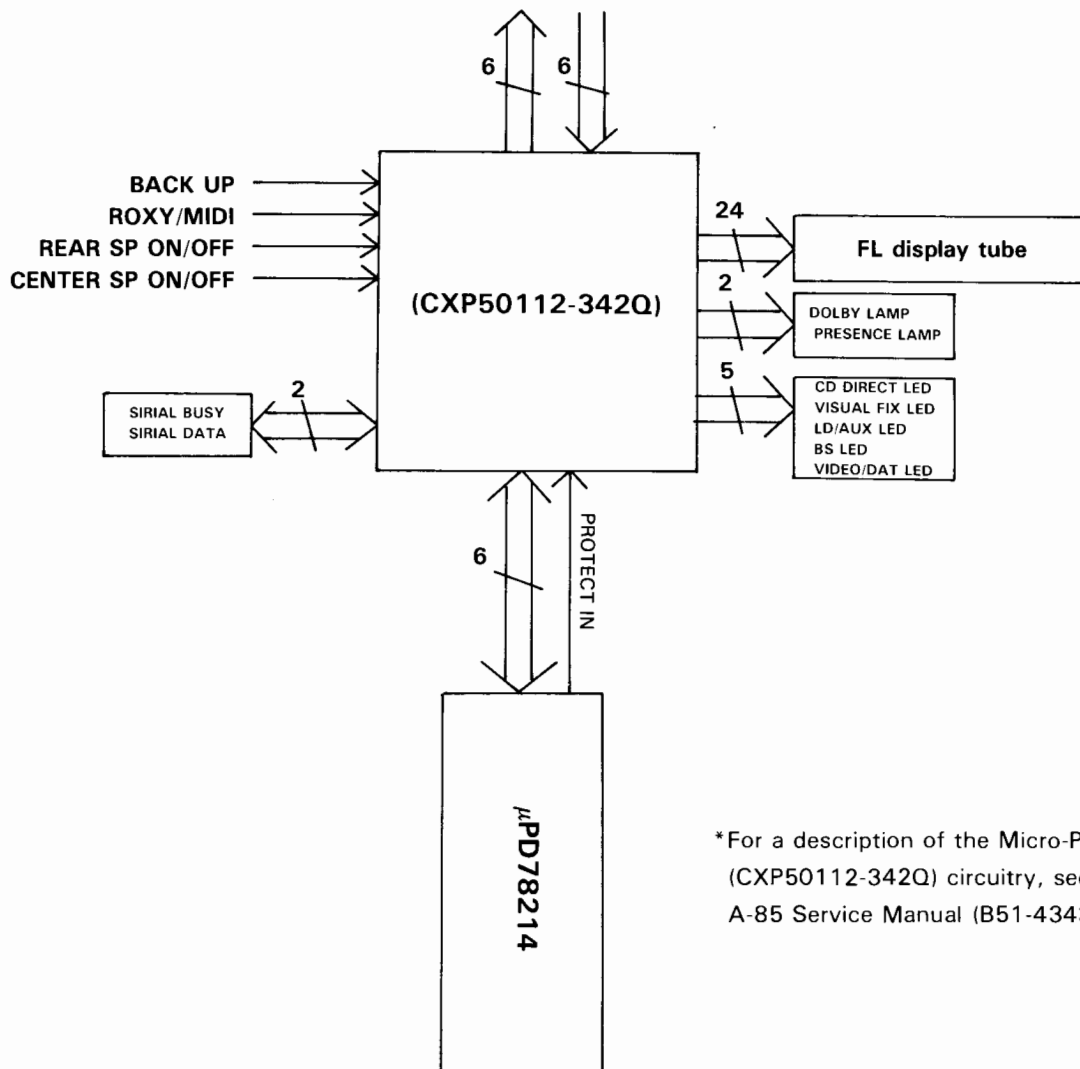
# A-85

## Microprocessor

Block diagram of microcomputer's peripheral equipment

SCAN 5	OFF	PRESENCE	3STEREO	CD DIRECT	MUTE	CENTER MODE
SCAN 4	HIT MASTER	POWER	MELODY ASSIST	JAZZ CLUB	NB CIRCUIT	ARENA
SCAN 3	DISCO	LD/AUX	VISUAL FIX	STADIUM	BS	DISPLAY
SCAN 2	CHURCH	VIDEO DAT	TAPE A	MOVIE	SEAT-P FRONT	SEAT-P REAR
SCAN 1	DELAY DOWN	TAPE B	TUNER	REAR UP	DELAY UP	REAR DOWN
SCAN 0	PHONO	P-VOL. UP	CENTER UP	CD	P-VOL. DOWN	CENTER DOWN

RETURN 0 RETURN 1 RETURN 2 RETURN 3 RETURN 4 RETURN 5



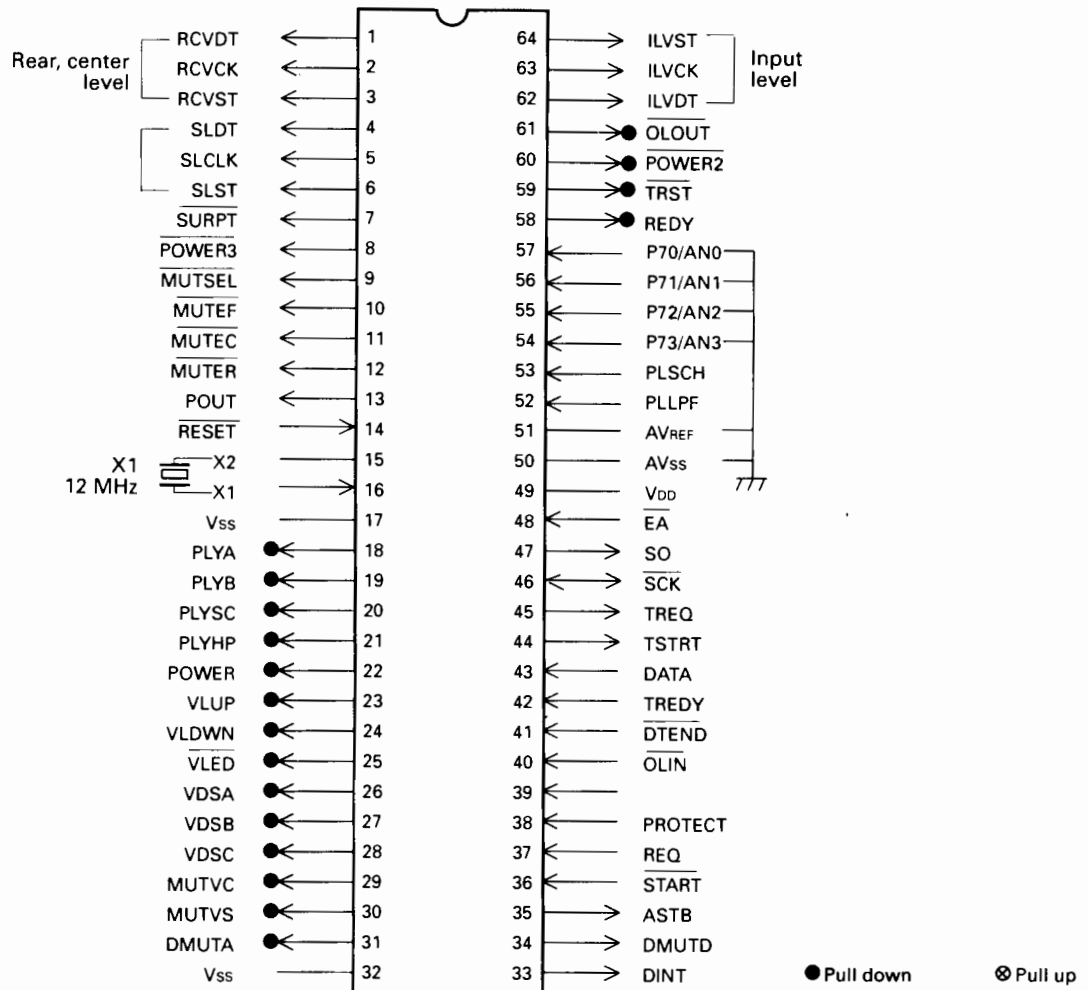
\*For a description of the Micro-Processor (CXP50112-342Q) circuitry, see page 6 of the A-85 Service Manual (B51-4343-00).



## CIRCUIT DESCRIPTION

System control microprocessor :  $\mu$ PD78214CW

Terminal connection diagram



### Pin function

Pin No.	Pin name	I/O	Name	Description
1	P03	O	RCVDT	Rear, center electric volume
2	P04	O	RCVCK	TC9213P control pin CK signal
3	P05	O	RCVST	STB signal
4	P06	O	SLDT	Switch array IC DATA signal
5	P07	O	SLCLK	TC9162N, 9163N CK signal
6	P67	O	SLST	TC9164N control pin ST signal
7	P66	O	SURPT	Surround (DSP IC) oscillate control H: Stop L: Oscillate
8	P65	O	POWER3	Port used to synchronize with the timing of the power up of the D/A converter
9	P64	O	MUTSEL	Selector mute pin H: MUTE OFF L: MUTE ON
10	P63	O	MUTEF	Front signal mute pin H: MUTE OFF L: MUTE ON
11	P62	O	MUTEC	Center signal mute pin H: MUTE OFF L: MUTE ON
12	P61	O	MUTER	Rear signal mute pin H: MUTE OFF L: MUTE ON
13	P60	O	POUT	Pin that notifies the main $\mu$ -com of protection detection
14	RESET	I		Reset pin

## CIRCUIT DESCRIPTION

## Pin function

Pin No.	Pin name	I/O	Name	Description
15	X2			System clock oscillator connect pin
16	X1 /	I		
17	V <sub>SS</sub>	O		Gnd
18	P57	O	RLYA	Speaker A relay control pin L: Power OFF H: Power ON
19	P56	O	RLYB	Speaker B relay control pin L: Power OFF H: Power ON
20	P55	O	RLYSC	Speaker (SURROUND CENTER) relay control pin L: Power OFF H: Power ON
21	P54	O	RLYHP	Headphone relay control pin L: Power OFF H: Power ON
22	P53	O	POWER	Powersupply control pin L: POWER OFF H: POWER ON
23	P52	O	VLUP	Master volume UP control pin
24	P51	O	VLDWN	Master volume DOWN control pin
25	P50	O	VLED	Master volume LED control pin L: LED ON H: LED OFF
26	P47	O	VDSA	Video selection control pin
27	P46	O	VDSB	
28	P45	O	VDSC	
29	P44	O	MUTVC	
30	P43	O	MUTVS	S ch video mute control pin MUTE is OFF only entered the VIDEO 3 mode
31	P42	O	DMUTA	DSP analog mute control pin SURROUND ON: MUTE OFF SURROUND OFF: MUTE ON When switched : MUTE ON
32	V <sub>SS</sub>			Gnd
33	P41	O	DINT	No used
34	P40	O	DMUTD	DSP digital mute control pin
35	ASTB			No used
36	P20/NMI	I	START	START signal input pin for communicating to main $\mu$ -com
37	P21	I	REQ	REQ signal input pin for communicating to main $\mu$ -com
38	P22	I	PROTECT	Protection signal detection pin
39	P23			No used
40	P24	I	OLIN	Over level signal detection pin
41	P25	I	DTEND	DTEND signal input pin for communicating to DSP IC control $\mu$ -com
42	P26	I	TREDY	TREDY signal input pin for communicating to DSP IC control $\mu$ -com
43	P27/SI	I	DATA	DATA signal input SI port of communicating to main $\mu$ -com
44	P30	O	TSTRT	START signal output pin for communicating to DSP IC control $\mu$ -com
45	P31	O	TREQ	REQ signal output pin for communicating to DSP IC control $\mu$ -com
46	P32/SCK	I/O	SCK	SCK I/O pin for communicating to main $\mu$ -com and DSP IC control $\mu$ -com
47	P33/SO	O	SO	SO signal output pin for communicating to DSP IC control $\mu$ -com
48	EA			No used
49	V <sub>DD</sub>			Power supply pin
50,51	AV <sub>SS</sub> , AV <sub>REF</sub>			No used
52 ~57	P75 ~ P70	I		No used
58	P34	O	REDY	REDY signal output pin for communicating to main $\mu$ -com
59	P35	O	TRST	DSP IC control $\mu$ -com reset pin
60	P36	O	POWER2	Port used to synchronize with the timing of the power up of the D/A converter
61	P37	O	OLOUT	Over level output pin L: FL light H: FL not light
62	P00	O	ILVDT	Input level electric volume DATA signal
63	P01	O	ILVCK	CK signal
64	P02	O	ILVST	ST signal

	V1	V2	V3	V1 ~ V3 input of VIDEO 1 ~ VIDEO 3
VDSA	0	1	1	
VDSB	1	0	1	
VDSC	1	1	0	

Monitor  
OUTCOMPOSITE  
S-OUT

V1

V2

V3

-

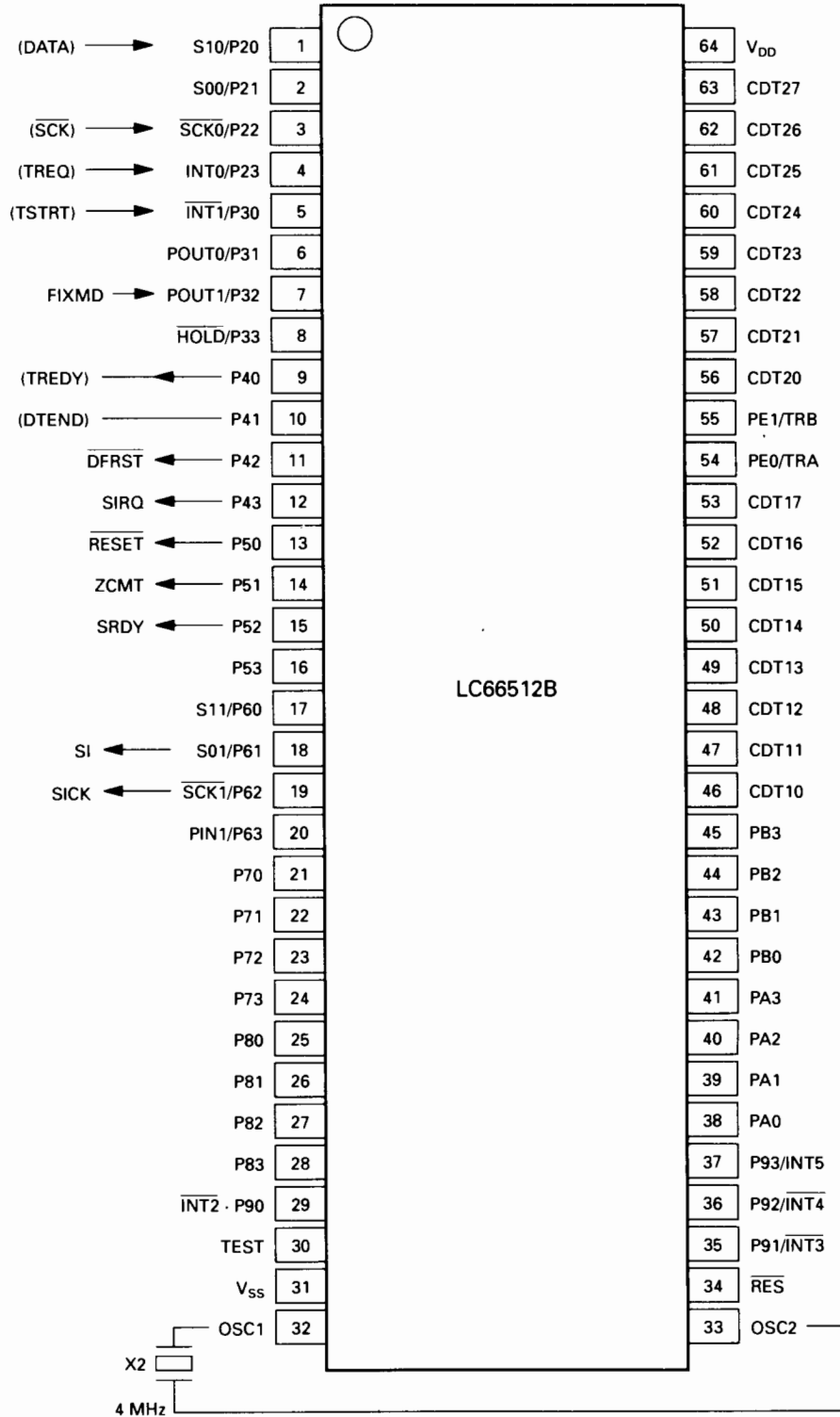
V2

V3

V3

## CIRCUIT DESCRIPTION

DSP  $\mu$ -Com: LC66516B



## CIRCUIT DESCRIPTION

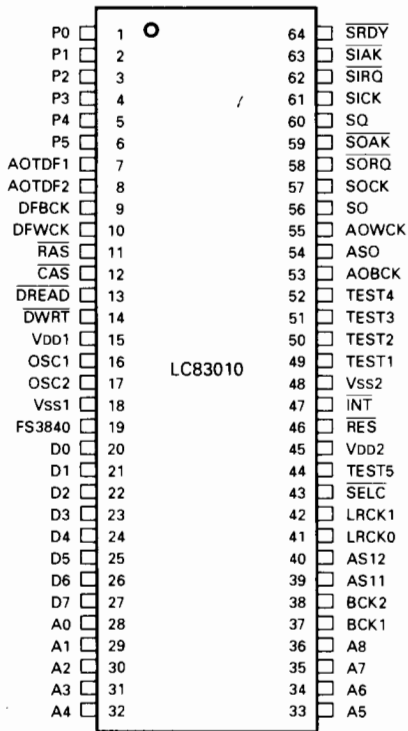
## Pin function

Pin No.	Pin name	I/O	Name	Description
1	SI0/P20	I	DATA	DATA signal input pin from system control $\mu$ -com
2	SO0			No used
3	$\overline{SCK}$ /P22	I	$\overline{SCK}$	Clock signal input pin from system control $\mu$ -com
4	INT0/P23	I	TREQ	TREQ signal input pin from system control $\mu$ -com
5	INT1/P30	I	TSTRT	TSTRT signal input pin from system control $\mu$ -com
6	Pout0/P31	I		No used
7	Pout1/P32	I	FIXMD	Fixation terminal mode setting pin. Low: Normal mode High: Fixation terminal mode
8	$\overline{HOLD}$ /P33	I	TSTRT	HOLD mode control input
9	P40	O	TREDY	TREDY signal output pin to system control $\mu$ -com
10	P41	O	DTEND	At mode change (command 0 ~ 2) and during clear the DRAM, transfer the data to DSP IC.
11	P42	O	$\overline{DFRST}$	Digital filter reset signal output pin (Normally High)
12	P43	O	SIRQ	DSP IC LC83010 SIRQ signal output pin
13	P50	O	$\overline{RES}$	DSP IC LC83010 Reset signal output pin (Normally High)
14	P51	O	ZCMT	Zero cross mute control signal output pin
15	P52	O	SRDY	DSP IC LC83010 SRDY signal output pin
16,17	P53, SU/P06			No used
18	SO1/P61	O	SI	DSP IC LC83010 SI signal output pin
19	$\overline{SCK1}$ /P62	O	SICK	DSP IC LC83010 SICK signal output pin
20 ~ 28	PIN1/P63 P70 ~ P73 P80 ~ P83	O		No used
29	$\overline{INT2}$ /P90			DSP IC LC83010 SIAK signal input pin
30	TEST			CPU test pin. Connected to V <sub>ss</sub> .
31	V <sub>ss</sub>			GND pin
32	OSC1	I		System clock oscillator pin
33	OSC2	O		System clock oscillator pin
34	$\overline{RES}$	I		System reset signal input pin
35 ~ 37	P91 ~ 93 $\overline{INT3}$ ~ $\overline{INT5}$			No used
38 ~ 45	PA0 ~ PA3 PB0 ~ PB3	I I		No used
46 ~ 53	PC0	I	CDT10 ~ 17	Correspond to bit 0 ~ 7 of data address 1 of command data in the fixed pin mode.
54	PE0/TRA	I		Correspond to 2 low-order bits of command data in the fixed pin mode. The fixed pin mode can be set to 00, 01, 02 or 03.
55	PE1/TRB	I		
56 ~ 63	P35	I	CDT20 ~ 27	Corresponds to bit 0 ~ 7 of data address 2 of command data in the fixed pin mode.
64	V <sub>DD</sub>			Power supply

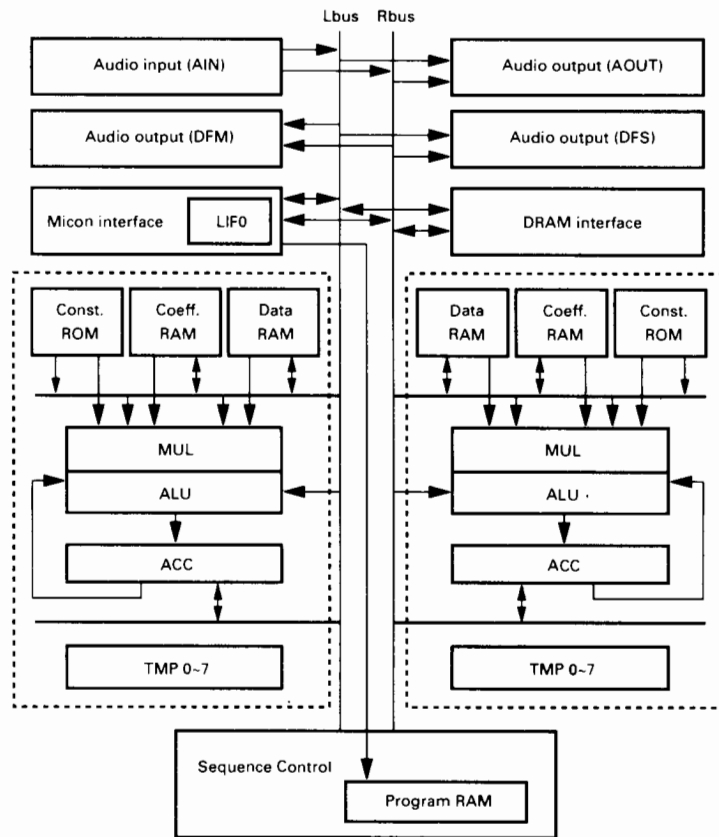
## CIRCUIT DESCRIPTION

DSP IC : LC83010

Pin connection



Block diagram



# CIRCUIT DESCRIPTION

## Pin function

Pin No.	Pin name	I/O	Description	
1	P0	I	Digital mute - High: mute; Low: unmute during DSP program	
2	P1	I	Soft muting - High during DSP program: Soft mute with time constant of 1 ms; Low: Unmute	
3	P2	O	Overflow detection If the input data from the A/D converter becomes the maximum positive or negative value a low signal is output, held for 100 ms, and goes high.	
4	P3	I	Phase shifter control The phase shifter is turned on and off during 3-channel sound field program. Low: on; High; off. Always used with "LOW".	
5	P4	I	Direct sound add control Control whether direct sound is added in the DSP during sound field program. High: Add; Low: Do not add. Always used with "LOW".	
6	P5	I/O	General input/output port No used (open)	
7	AOTDF2	O	Audio data output 1 C ch and S ch data is output during Dolby pro logic and 4-ch sound field. If 3 stereo and 3-CH are set, only C ch data is output.	
8	AOTDF2	O	Audio data output 2 Decoded L/R data is output for Dolby. The L/R sound field signal is output for sound field.	
9	DFBCK	O	Bit clock for AOTDF 1 and 2 48 fs bit clock is output.	
10	DFWCK	O	Word clock for AOTDF 1 and 2 No used	
11	$\overline{\text{RAS}}$	O	For row address strobe DRAM access control	
12	$\overline{\text{CAS}}$	O	For column address strobe DRAM access control	
13	$\overline{\text{DREAD}}$	O	DRAM read control signal	
14	$\overline{\text{DWRT}}$	O	DRAM write control signal	
15, 45	VDD1, 2	I	Power supply pin	
18, 48	VSS1, 2		GND pin	
16	OSC1	I	Crystal oscillator pin	
17	OSC2	O	Crystal oscillator pin	
19	FS3840	O	384fs output pin	
20 ~ 27	D0 ~ D7	I/O	DRAM data I/O pin	
28 ~ 36	A0 ~ A8	O	DRAM address output pin (A8 is no used)	
37	BCK1	I	No used	
38	BCK2	O	Bit clock output pin 32fs bit clock output for A/D	
39	ASI1	I	No used	
40	ASI2	I	Audio data input pin 2 Data input from A/D	
41	LRCKO	O	L/R clock output pin	
42	LRCKI	I	No used	
43	$\overline{\text{SELC}}$	I	Self oscillation and external clock input switching	
44	TEST 5	O	Test pin Used by open	
46	$\overline{\text{RES}}$	I	Reset pin	
47	$\overline{\text{INT}}$	I	No used	
49 ~ 52	TEST 1 ~ 4	I	Test pin Connected to GND	
53	AOBCK	O	No used	
54	ASO	O	Audio data output (overflow detection) Used by the the KR-V9030 to detect overflow for Dolby.	
55 ~ 59	A0WCK etc.		No used	
60	SI	I	Serial data input from $\mu$ -com	DSP $\leftrightarrow$ $\mu$ -com interface
61	SICK	I	Serial clock input of SI input	
62	$\overline{\text{SIRQ}}$	I	SI request signal input	
63	$\overline{\text{SIACK}}$	O	Output signal to indicate that the SI serial communication is executing	
64	$\overline{\text{SRDY}}$	I	Input signal to indicate that the mail box communication is finished	

## REMOTE CONTROLLER

The illustration for the Remote Controller depicted in the A-85 Service Manual (B51-4343-00) is NOT correct. Use the illustration shown below in it's place. The part numbers however, are the same.



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# SERVICE TECHNICAL REPORT

# KENWOOD

KENWOOD CORPORATION

Home  Car  A.R.  LMR/Marine

NO. E 1 1 - 9 1 - 0 0 9 1/

MODEL	A - 8 5	DATE	September 2nd, 1991
SUBJECT	No output with the Dolby surround switch or DSP presence switch ON/OFF		
CONTENTS	REFERENCE: B 1 1 - 9 1 - 0 1 1		

[Symptom] If the dolby surround switch or the DSP presence switch is turned ON, OFF, then ON again, no sound is sometimes output.

[Cause] SIAK (communication flag) of the DSP control  $\mu$ -com (LC66516B) and DSP IC (LC83010N) interface is unstable when the DSP presence is turn ON and OFF. Consequently, DSP IC CLK ON $\leftrightarrow$  OFF switching becomes unstable.

[Countermeasure] To stabilize SIAK, retain the ON state of DSP IC CLK that currently changes from ON to OFF.

In other words, cut X32-2030-XX B/2 W155.

The above counter measure is already done in the latter sets of the August production lot. Countermeasure-applied sets are indicated by "1" stamped on the carton box. As a permanent countermeasure, the DSP control microcomputer will be modified. .

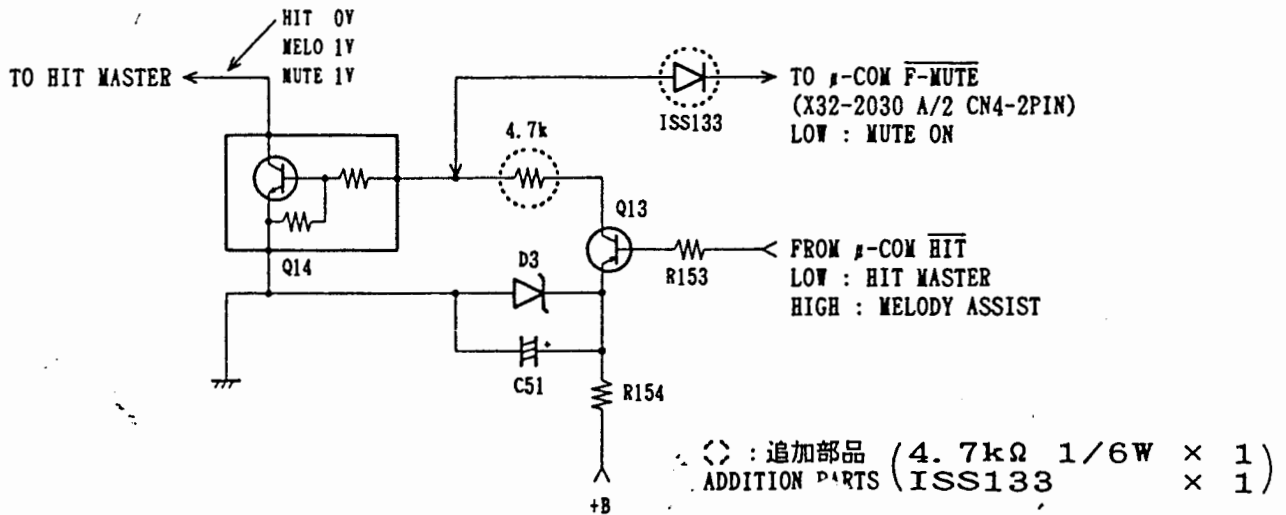
※ Parts stock: YES, NO, Delivery:

Remarks	Prod. change	S/N	109 xxxxx
	Application	<input type="checkbox"/> All repair units	<input checked="" type="checkbox"/> Defectives only <input type="checkbox"/>
	Parts included	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> Mail
Service code A: 02 B: X32-2030 C: W155 D: 91			

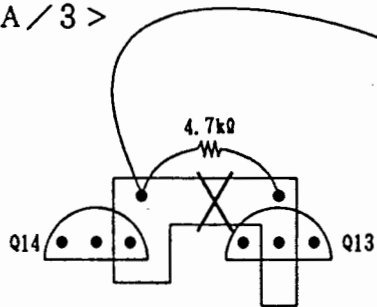
Distribution	<input checked="" type="checkbox"/> U.S.A. (3ヶ所)	<input checked="" type="checkbox"/> U.K.	<input checked="" type="checkbox"/> ショールーム	<input checked="" type="checkbox"/> 第3課	MANAGER
	<input checked="" type="checkbox"/> CANADA	<input checked="" type="checkbox"/> ITALY	<input checked="" type="checkbox"/> 相談室	<input checked="" type="checkbox"/> 営業管理S	
	<input checked="" type="checkbox"/> GERMANY	<input checked="" type="checkbox"/> AUSTRALIA	<input type="checkbox"/> 部品S	<input type="checkbox"/> 通、営業課	KUMESHI TA
	<input checked="" type="checkbox"/> BELGIUM	<input checked="" type="checkbox"/> SINGAPORE	<input type="checkbox"/> 教育担当	<input type="checkbox"/>	



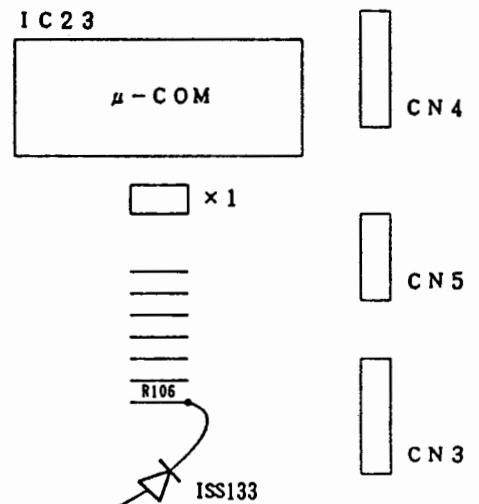
[Circuit change] X 0 8 - 2 4 7 0 A / 3



< X 0 8 A / 3 >



< X 3 2 A / 2 >



- ① Cut the pattern connecting between Q13's collector and Q14's base, and connect them via 4.7 kΩ.
- ② Draw a thin lead from Q14's base and connect it via a diode to R106 of side near CN3 in upper part board (X32- A/2).



