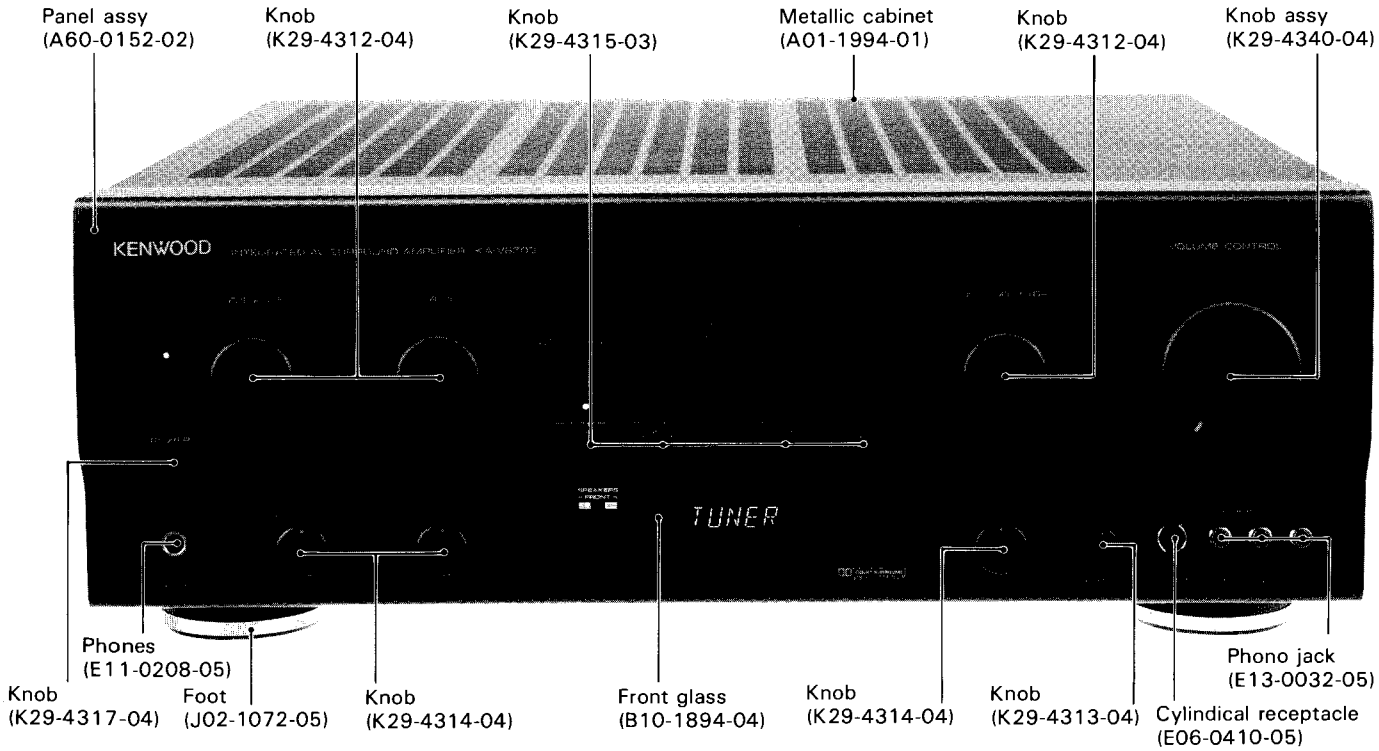
INTEGRATED AV SURROUND AMPLIFIER

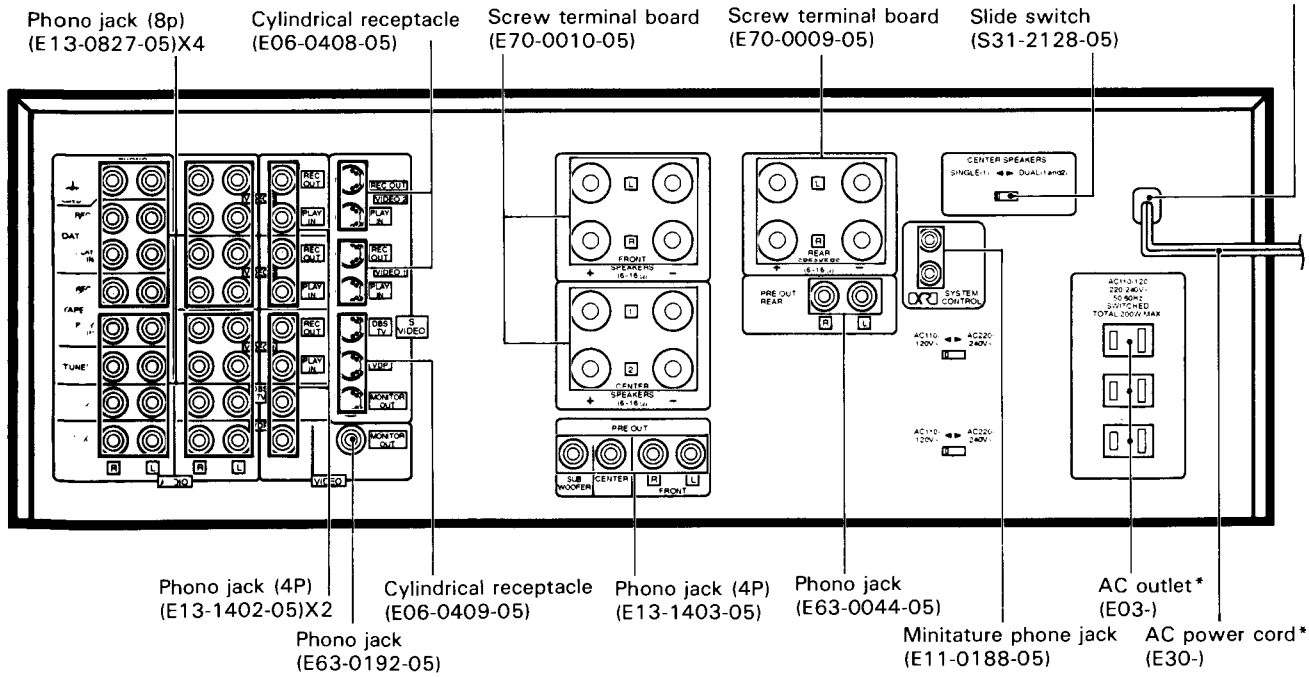
KA-V8500

SERVICE MANUAL

KENWOOD

B51-4417-00(S) 2268





*Refer to parts list on page 57.

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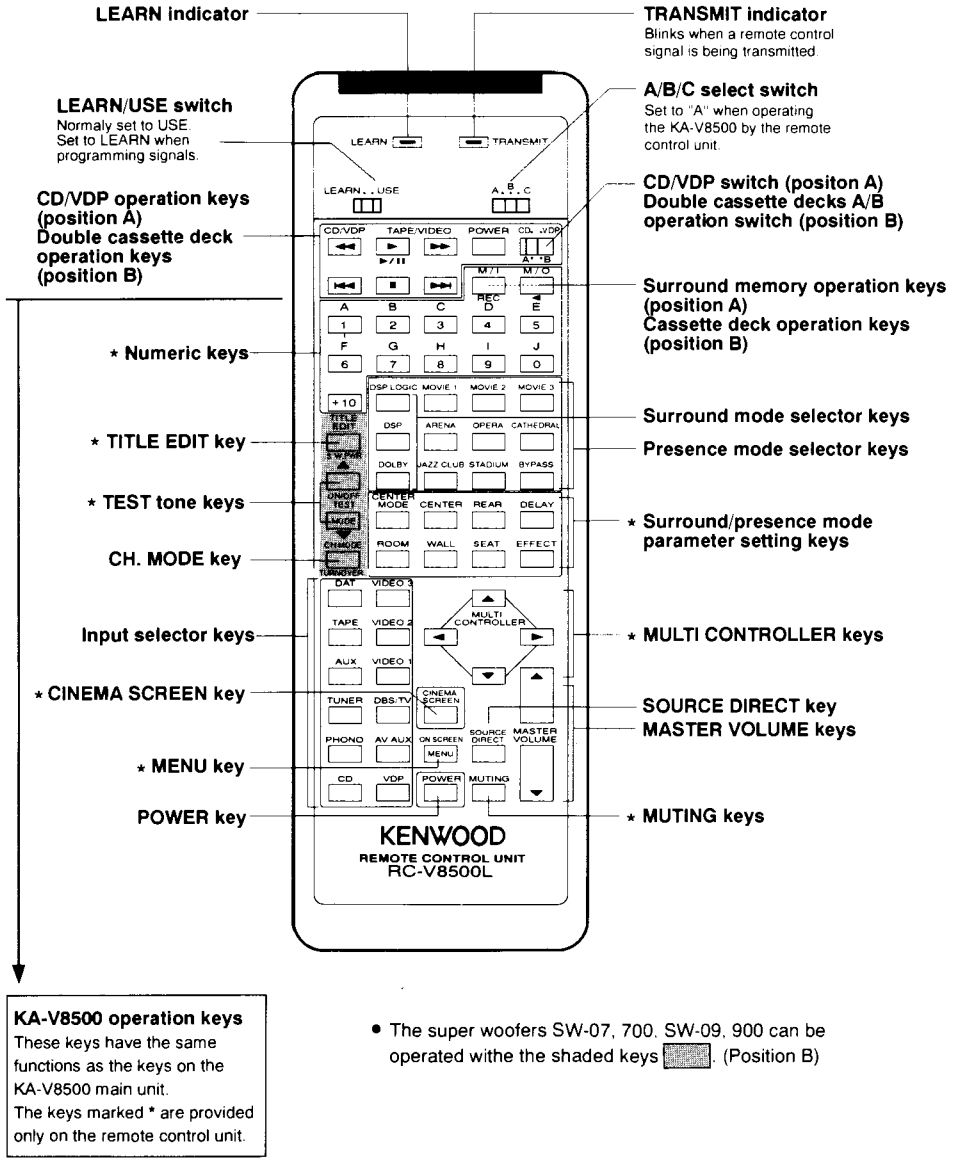
REMOTE CONTROL UNIT



KA-V8500 operation keys
These keys have the same functions as the keys on the KA-V8500 main unit.
The keys marked * are provided only on the remote control unit.

- The super woofers SW-07, 700, SW-09, 900 can be operated withe the shaded keys ▒. (Position B)

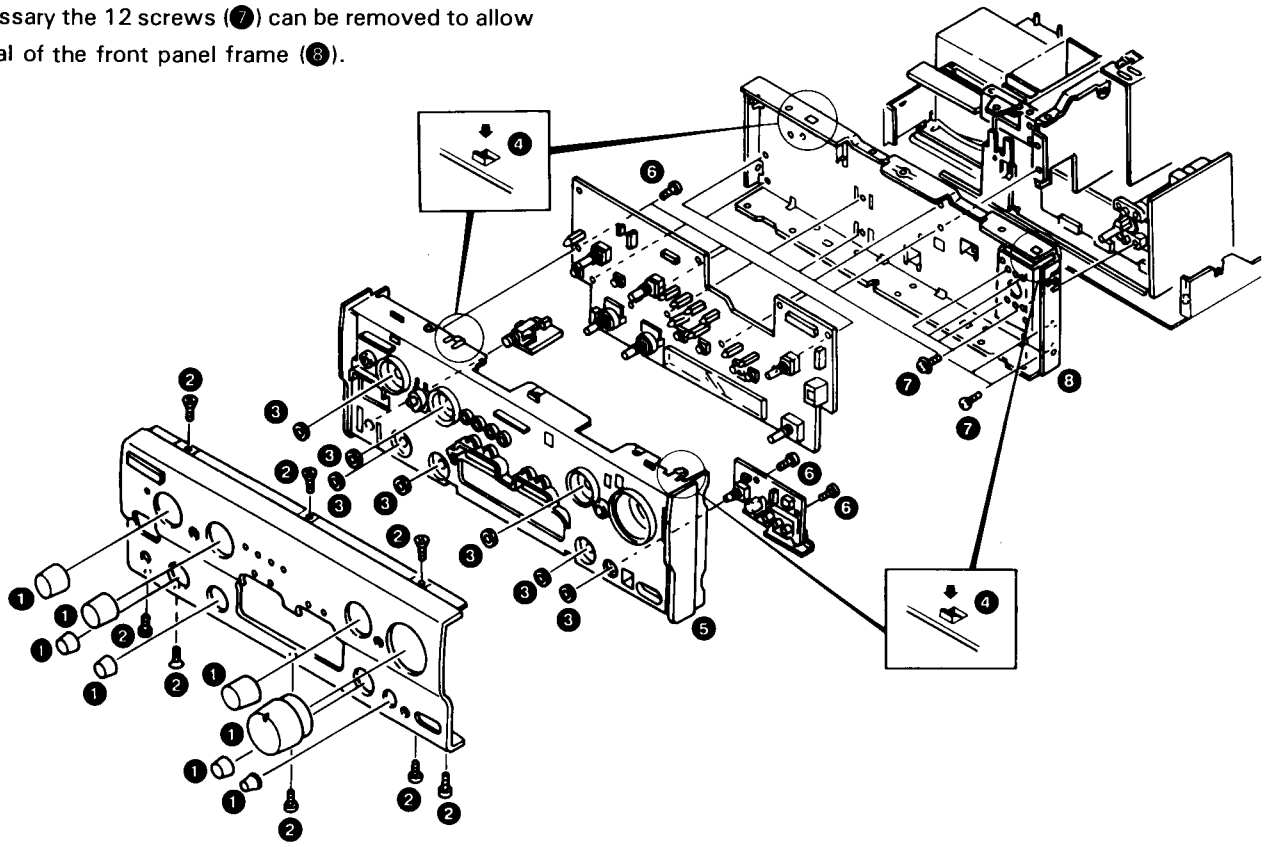
DISASSEMBLY FOR REPAIR

How to disassemble the for repairs

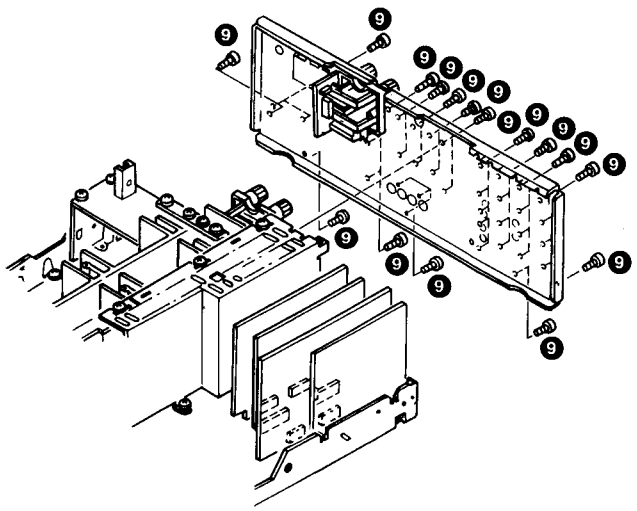
First remove the case.

How to remove the panels

1. Remove the 8 knobs (❶).
2. Remove the 8 screws (❷) and lift off the front panel.
3. Remove the 7 nuts (❸), push down the two tabs on top (❹) and remove the sub panel assembly (❺).
4. Remove the 10 screws (❻) and lift off the control unit.
5. If necessary the 12 screws (❼) can be removed to allow removal of the front panel frame (❽).



6. Remove the 37 screws (❾) and lift off the rear panel.



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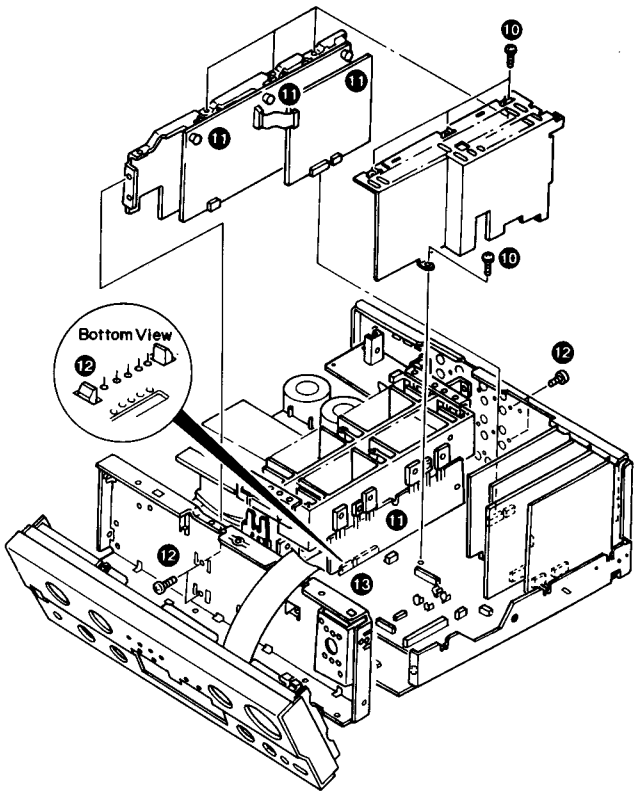
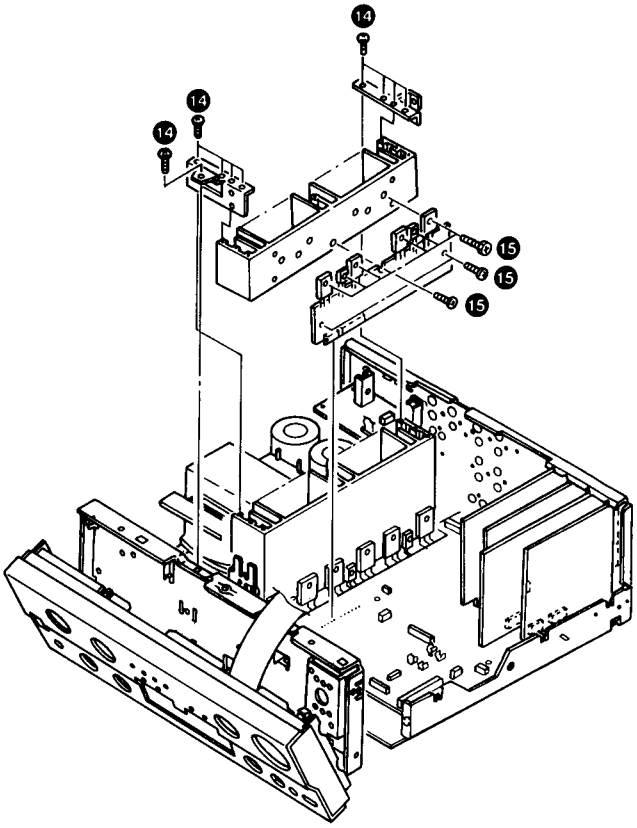
DISASSEMBLY FOR REPAIR

How to remove the surround unit

1. Remove the sub panel assembly (⑤) according to the instructions for removing the panels. (In this case it is not necessary to remove the knobs).
2. Remove the 4 screws (⑩) and lift off the shield cover.
3. Remove the 3 push rivets (⑪) and pull up the X08 A/6 and B/6.
4. Remove the 4 screws (⑫) and lift off the front side of the center frame. (At this point you can check the rear amplifier's power unit.)
5. Turn over the set, remove the bottom panel's 9 screws and lift off the bottom panel.
6. From the bottom side, remove the soldering of the X08 E/6 connector CN12 (⑬).



7. Turn over the set again (5, 6., upright it) remove the 9 screws (⑮) and lift off the heat sink and the X08 E/6. (At this point you can check the final transistors.)
8. If necessary the 9 screws (⑮) can be removed to allow removal of the X08 E/6.



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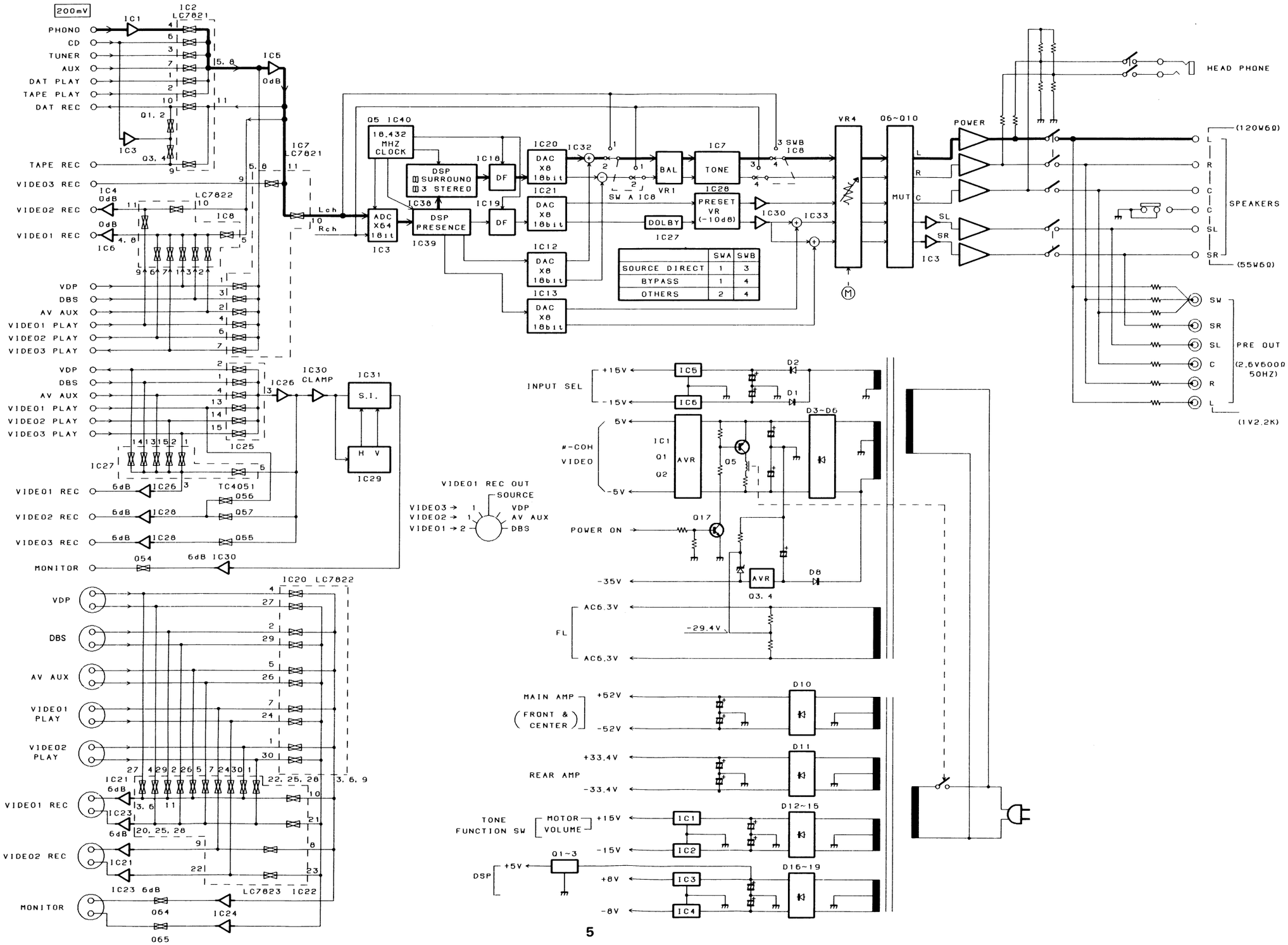
BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Outline

(1) Features

1. Input selectors
   - Audio : six circuits
   - AV : six circuits
   - S inputs : five circuits
   - S outputs : three circuits
2. TV on screen function
3. FL display
4. Surround user memory
5. Mode: Dolby Surround ProLogic, Dolby 3 stereo, DSP, DSP logic
6. Dolby Surround ProLogic (Normal, Wide, Phantom)
7. Dolby 3 stereo (Normal, Wide)
8. DSP, Presence mode during use of DSP logic
   . . . Movie Theater1, Movie Theater2, Movie Theater3, Arena, Opera House, Cathedral, Jazz Club, Stadium
9. Delay time : 0-80ms (during use of DSP logic)
   15-30ms (during use of Dolby Surround ProLogic)
   1ms step delay time
10. Remote controller compatibility
11. Serial input/output . . . Asynchronous serial communications
12. Source direct
13. Video1 independent rec selector (with V1>V2 dubbing-position), CD Rec
14. Title input
15. Function backup
16. Audio injection function
17. Cinema screen function (only during use of DSP or DSP logic)
18. Speakers CH mode selector switch (only during use of-DSP or DSP logic)
    DSP . . . 2ch, 3ch (L-C-R) 4ch (L-R-S), 5ch (L-C-R-S)
19. Parameters (only during use of DSP or DSP logic)
    . . . Room size, Wall (frequency), Seat position, Effect level

Parameter Setting Range

		Parameters				Cinema screen	Delay time	Senter level	Rear level
		Room size	Wall	Seat position	Effect level				
		50 steps	1kHz steps	5 steps	5 steps		1ms steps	1dB steps	1 dB steps
DSP	MOVIE 1 MOVIE 2 MOVIE 3 ARENA OPERA CATHEDRAL JAZZ CULB STADIUM	50 ≀ 200	1kHz ≀ 16kHz	5 ≀ 100	0 ≀ 100	OFF 1 2 3	—	0dB ≀ -30dB	0dB ≀ -30dB
DSP LOGIC	MOVIE 1 MOVIE 2 MOVIE 3 ARENA OPERA CATHEDRAL JAZZ CLUB STADIUM	50 ≀ 200	1kHz ≀ 16kHz	5 ≀ 100	0 ≀ 100	OFF 1 2 3	0ms ≀ 80ms	0dB ≀ -30dB	0dB ≀ -30dB
DOLBY	PRO LOGIC	—	—	—	—	—	15ms ≀ 30ms	0dB ≀ -30dB	0dB ≀ -30dB
	3STEREO	—	—	—	—	—	—	0dB ≀ -30dB	—

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CIRCUIT DESCRIPTION

1.Initial states

1. INPUT SELECTOR
   - AUDIO : TUNER
   - VISUAL : None
2. MODE : BYPASS
3. PRO LOGIC/3 STEREO : PRO LOGIC
4. CENTER MODE
   - PRO LOGIC : NORMAL
   - 3 STEREO : NORMAL
5. REAR,CENTER LEVEL : -10dB
6. SOURCE DIRECT : OFF
7. SPEAKER : ON
8. POWER : OFF
9. ON SCREEN DISPLAY (INFORMATION) : ON
10. SURROUND USER MEMORY
    - PRO LOGIC (NORMAL)
    - REAR LEVEL -10dB
    - CENTER LEVEL -10dB
    - DELAY TIME 20ms
11. CH MODE :5 CH(L,C,R,S)
12. DELAY TIME
    - PRO LOGIC : 20ms
    - DSP LOGIC : 20ms
13. USER MEMORY NUMBER : NOT ON (A~J)
14. AUDIO INJECTION : OFF

2, Test mode

2 – 1 Initialization

IN : Hold down the power key , and pluy the power cable into an outlet.

Description : When the items are set as in described 1, "Initial states", the EEPROM is cleared.

Note : If only the backup of a microprocessor fails, the EEPROM may not need to be cleared, but if the EEPROM is replaced, initialization is mandatory. If initialization is not carried out, the input selector, user memory title, and user memory will be incorrect.

2 – 2 Test mode

IN : Hold down the CD REC key, and plug the power cable intom an outlet.

OUT : Disconnect the power cable from the outlet, or switch the power off and then back on in any mode except the all – indicator – on mode. Even if the power is switched on in the all – indicators – on mode, the test mode remains unchanged.

Description :

Ⅰ) When the test mode is entered, all the indicators of the fluorescent display light. The indicators can be turned off by switching the power off and then back on, or by handling the ROTARY. ENCODER of input.

Ⅱ) In the test mode, the following items are different from in the normal mode.

◇Rear, center volume
→Only two points, MIN and MAX

◇Delay time
→PRO LOGIC : Only three points, 15, 21, and 30 ms
→DSP LOGIC : Only three points, 0 , 40 , and 80 ms

◇Effect Level
Only three points -- 0, 50, 100

◇Seat Position
Only two points -- 5, 100

◇Test Tone
The Test Tome output position is automatically changed every two seconds.

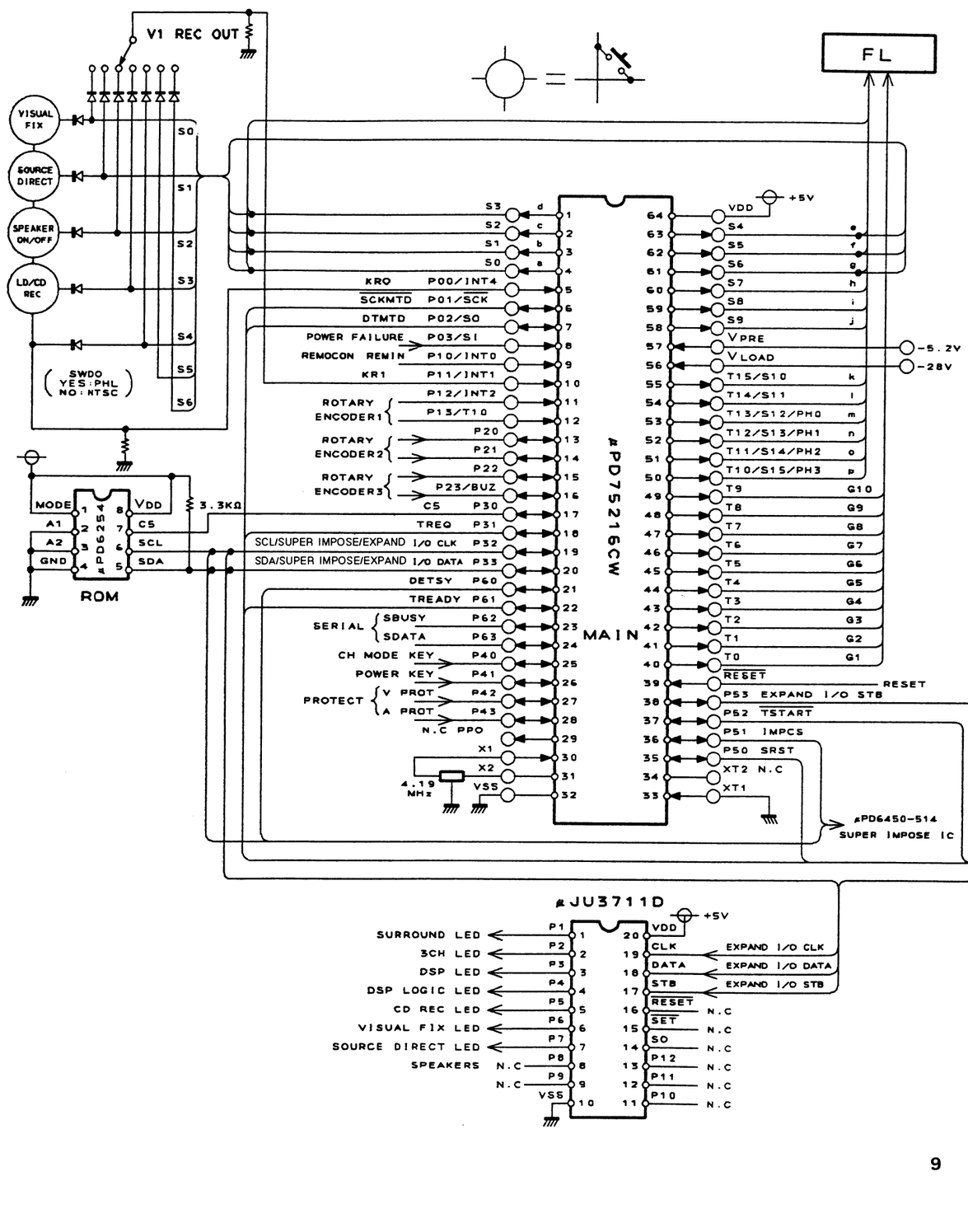
◇DSP Through Mode
During Test Mode if "Cathedral" is selected in DSP Mode or DSP Logic Mode, DSP Through Mode (a mode exclusively for Test Mode) is entered.

DSP parameter initial values

Ambience mode	ROOM SIZE	WALL	SEAT	EFFECT
MOVIE THEATER1	100	10kHz	50	60
MOVIE THEATER2	100	10kHz	50	60
MOVIE THEATER3	100	7kHz	50	60
JAZZ CLUB	100	10kHz	50	80
STADIUM	100	5kHz	50	80
ARENA	100	7kHz	50	60
OPERA HOUSE	100	7kHz	50	80
CATHEDRAL	100	16kHz	50	80

CIRCUIT DESCRIPTION

Microprocesser (μ PD75216ACW-C60' μ PD78214CW-E5,NJU3711D)



CIRCUIT DESCRIPTION

μ PD75216ACW-C60 (MAIN) Pin Description

Pin No.	Pin Name	I/O	Name	Description
1	S3	O	Segment d	FL segment signal
2	S2	O	Segment c	FL segment signal
3	S1	O	Segment b	FL segment signal
4	S0	O	Segment a	FL segment signal
5	P00/INT4	I	KR0	Key Return 0
6	P01/SCK	I/O	SCKMTD	Main --> Sub microprocessor communications serial clock output
7	P02/S0	I/O	DTMTD	Main --> Sub microprocessor communications serial data output
8	P03/SI	I	PCE	Power failure detection output (0: power failure)
9	P10/INT0	I	REMIN	Remote controller input (interrupt)
10	P11/INT1	I	KR1	Key Return 1
11	P12/INT2	I	ROTRY1	Rotary encoder input1 (Input Selector)
12	P13/TI0	I	ROTRY2	Rotary encoder input2 (Input Selector)
13	P20	I	ROTRY3	Rotary encoder input3 (Mode Selector)
14	P21	I	ROTRY4	Rotary encoder input4 (Mode Selector)
15	P22	I	ROTRY5	Rotary encoder input5 (Presence Selector)
16	P23/BUZ	I	ROTRY6	Rotary encoder input6 (Presence Selector)
17	P30	I	EEPDI	EEPROM serial data input
18	P31	O	TREQ	Main --> Sub microprocessor communications control signal (request signal)
19	P32	O	EEPCLK(SCL) / IMPCLK / EXI0CLK	EEPROM/superimpose/expansion I/O shared use Superimpose external/internal synchronization detection (H:internal)
20	P33	O	EEPDO(SDA/) / IMPSI / EXI0DO	Serial clock output EEPROM/superimpose/expansion I/O shared use
21	P60	I	DETSY	Serial data output
22	P61	I	TREADY	Main --> Sub microprocessor communications control signal (ready signal)
23	P62	I/O	SBUSY	External serial communications busy signal
24	P63	I/O	SDATA	External serial communications data signal
25	P40	I	KRSPM	CH mode key (independent key) Key Return
26	P41	I	KRPOW	Power mode key (independent key) Key Return
27	P42	I	PROTECT	Protection detection (H: protection on)
28	P43	I	IMPBSY	Superimpose busy signal input
29	PP0	O	SRST	SUB microprocessor reset signal detect
30	X1	—	—	Microprocessor system clock oscillation pin
31	X2	—	—	Microprocessor system clock oscillation pin
32	Vss	—	—	GND

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CIRCUIT DESCRIPTION

μ PD75216ACW-C60 (MAIN) Pin Description

Pin No.	Pin Nomenclature	I/O	Name	Description
33	XT1	—	—	Microprocessor sub clock oscillation pin (unused)
34	XT2	—	—	Microprocessor sub clock oscillation pin (unused)
35	P50	O	EEPCS	EEPROM CS & Reset output
36	P51	O	IMPCS	Superimpose chip select signal output
37	P52	O	TSTART	Main --> Sub microprocessor communications control signal (start signal)
38	P53	O	EXIOSTB	Expansion I/O (NJU3711) strobe signal
39	RESET		—	Reset input
40	T0	O	G1	FL digit signal
41	T1	O	G2	FL digit signal
42	T2	O	G3	FL digit signal
43	T3	O	G4	FL digit signal
44	T4	O	G5	FL digit signal
45	T5	O	G6	FL digit signal
46	T6	O	G7	FL digit signal
47	T7	O	G8	FL digit signal
48	T8	O	G9	FL digit signal
49	T9	O	G10	FL digit signal
50	T10/S15	O	Segment g	FL digit signal
51	T11/S14	O	Segment h	FL digit signal
52	T12/S13	O	Segment i	FL digit signal
53	T13/S12	O	Segment j	FL digit signal
54	T14/S11	O	Segment k	FL digit signal
55	T15/S10	O	Segment l	FL digit signal
56	V load	—	—	-31.8V
57	V pre	—	—	-4.1V
58	S9	O	Segment m	FL digit signal
59	S8	O	Segment n	FL digit signal
60	S7	O	Segment o	FL digit signal
61	S6	O	Segment p	FL digit signal
62	S5	O	Segment f	FL digit signal
63	S4	O	Segment e	FL digit signal
64	Vdd	O	—	+5.0V

CIRCUIT DESCRIPTION

Data communications format between main microprocessor and DSP microprocessor

* Master microprocessor μ PD75216ACW-C60
* Slave microprocessor μ PD78214CW-E25

(1) Communications method: clock synchronization(LSBlead)

(2) Data bit no. 8× n bit variable length

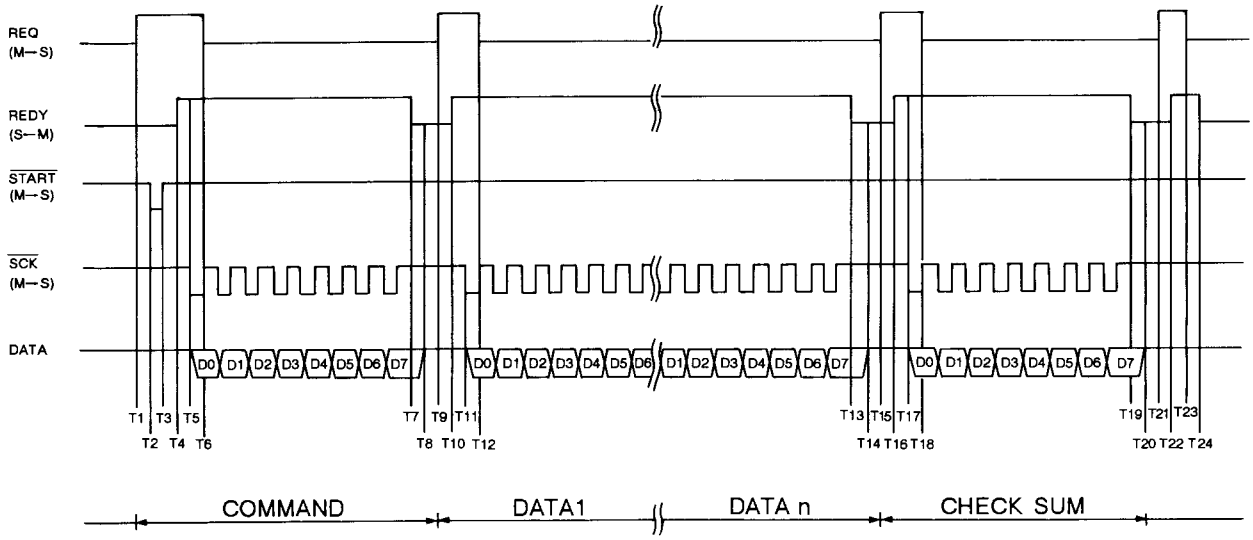
(3) Serial clock: Clock provided from master microprocessor
Clock pulse width = 7.6 μS

(4) Data composition

Command	Data 1	Data 2		Data n	Check sum
Address 0	1	2		n	n+1

- n =0 ~11
- The check sum is the aggregate lower 8 bits of the data from the command to datan.

(5) Time chart



CIRCUIT DESCRIPTION

μPD78214CW-E25 (sub microprocessor) pin description

Pin No.	Pin Name	I/O	Name	Description
1	P03	O	MCDREC	CD REC mute (L=mute on)
2	P04	O	MV1V2	VIDEO1 ► VIDEO2 mute (H=mute on)
3	P05	O	MMUTE	Monitor mute (H=mute on)
4	P06	O	MV2LOP	VIDEO2 loop prohibit mute (H=mute on)
5	P07	O	MV3LOP	VIDEO3 loop prohibit mute (H=mute on)
6	P67	O	OVERL	Sanyo DSP auxiliary pin (unused)
7	P66	O	SRDY	Sanyo DSP mailbox communications complete signal
8	P65	O	CBCI	NPC clock
9	P64	O	RST	Sanyo DSP reset signal
10	P63	O	SIRQ	Sanyo DSP request signal
11	P62	O	SELSTB	Audio/video selector (LC78**) chip enable
12	P61	O	SELDI	Audio/video selector (LC78**) data
13	P60	O	SELCLK	Audio/video selector (LC78**) clock
14	RESET	I	—	Master CPU ► slave CPU chip reset
15	X2	—	—	System clock oscillation crystal (12MHz) connection
16	X1	I	—	System clock oscillation crystal (12MHz) connection
17	Vss	—	—	GND
18	P57	O	ACRLY	Main unit power on/off relay
19	P56	O	SDBYCE	Source direct/bypass selector switch chip enable
20	P55	O	I4051A	Input selector control wire A (TC4051)
21	P54	O	I4051B	Input selector control wire B (TC4051)
22	P53	O	I4051C	Input selector control wire C (TC4051)
23	P52	O	R4051A	Rec selector control wire A (TC4051)
24	P51	O	R4051B	Rec selector control wire B (TC4051)
25	P50	O	R4051C	Rec selector control wire C (TC4051)
26	P47	O	SRLY	Rear speaker relay (H=sound produced)
27	P46	O	HDRLY	Headphone relay (H=sound produced)
28	P45	O	FRLY	Front speaker relay (H=sound produced)
29	P44	O	CRLY	Center speaker relay (H=sound produced)
30	P43	O	ANMUT	Audio mute (H=mute on)
31	P42	O	VOLLD	Electrical volume LED (L=illuminated)
32	Vss	—	—	GND
33	P41	O	MVDN	Electrical volume down (H=motor actuates)
34	P40	O	MVUP	Electrical volume up (H=motor actuates)
35	ASTB	O	—	(Unused) address latch timing output
36	P20/NM1	I	TSTART	Master CPU ► slave CPU start signal
37	P21	I	—	(Unused) Pull up
38	P22	I	—	(Unused) Pull up
39	P23	I	—	(Unused) Pull up
40	P24	I	—	(Unused) Pull up
41	P25	I	SIKA	Sanyo DSP ► slave CPU acknowledge signal
42	P26	I	TREQ	Master CPU ► slave CPU request signal
43	P27/SI	I	DTMTD	Master CPU ► slave CPU data
44	P30	I	TREADY	Master CPU ◄ slave CPU ready signal
45	P31	O	CDIO	NPC IC data
46	SCK	I/O	SCKMTD	SCKMTD or Sanyo DSP clock
47	P33/SO	O	SANYDT	Sanyo DSP data

CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Name	Description
48	EA	I	—	(unused) used at high level
49	Vdd	—	—	Positive power supply
50	Avss	—	—	(Unused) A/D converter GND
51	AVref	—	—	(Unused) A/D converter
52	P75/AN5	I	—	(Unused) pull down
53	P74/AN4	I	—	(Not Used) Pull down
54	P73/AN3	I	—	(Not Used) Pull down
55	P72/AN2	I	—	(Not Used) Pull down
56	P71/AN1	I	—	(Not Used) Pull down
57	P70/ANO	I	—	(Not Used) Pull down
58	P34/T00	O	CDIE	NPC chip enable
59	P35/T01	O	SEND	NPC input/output control
60	P36/T02	O	NPCRST	NPC reset (H=reset)
61	P37/T03	O	DMUTE	Sanyo DSP mute
62	P00	O	VOLCE	Electronic volume (TC9213) chip enable
63	P01	O	VOLCLK	Electronic volume (TC9213) clock
64	P02	O	VOLDI	Electronic volume (TC9213) data

NJU3711D (I/O PORT)

Pin No.	Pin Name	I/O	Name	Description
1	P3	O	DSPLED	DSP LED output
2	P4	O	DSPLOGICLED	DSP logic LED output
3	P5	O	CDRECLED	CD REC LED output
4	V ss	—	—	GND
5	P6	O	AUDIOINJLED	Audio injection LED output
6	P7	O	SDLED	Source direct LED output
7	P8	O	SPLED	Speakers on/off LED output
8	DATA	I	—	Serial data input pin
9	CLK	I	—	Clock signal input pin
10	$\overline{STB}$	I	—	Strobe signal input pin
11	$\overline{CLR}$	I	—	Clear signal input pin
12	P1	O	PROLLED	Dolby ProLogic LED output
13	P2	O	D3STLED	Dolby 3 stereo LED output
14	V dd	—	—	+5.0 V

KA-V8500

CIRCUIT DESCRIPTION

DSP exclusively for digital signal processor (SM5851AF)

1. Introduction

This LSI is a DSP exclusively for digital signal processing in Dolby ProLogic Surround systems. Beginning with an active matrix circuit, this LSI includes the main signal processing logic for Dolby ProLogic Surround Decoders. Accordingly, by combining this LSI with an A-D/D-A con verter IC, digital I/F receiver IC, distorted Dolby Bdcoder IC, digital delay DRAM and a master volume control, it is possible to put together a precision Dolby Proogic Sround decoder system.

Also, as an added function, in combination with DRAM this LSI enables a variety of ambience presence playback functions besides Dolby ProLogic Surround. Furthermore, the flexible interface facilitates integration into a wide range of systems.

2. Salient characteristies

2-1. Functions Dolby ProLogic Surround Decoder Related **Functions**

(1) Active Matrix
- * Bandwidth limiting tertiary IIR type BPF
- * Absolute value circuit
- * Linear / LOG conversion circuit
- * Threshold switch
- * Polarity splitter
- * LOG / linear conversion circuit
- * Converting network

(2) Center channel mode control
- * Selection among the normal, phantom or off modes
- * Wide mode addition

(3) 3 stereo logic mode
- * 3-channel mode without use of surround speakers

(4) Auto balance
- * Input signal level auto balance function
- * Auto / through switch

(5) Noise sequencer
- * Built-in noise sequencer for calibration
- * Noise average output level is set -11 dB lower than the output Dolby standard level (-18dB)

(6) S channel functions
- * Digital delay (DRAM) interface
- * Bandwidth limiting secondary IIR type LPF

2-2. Ambience playback function

(1) Dual mode selection -- effects, simulation

(2) Delay time controllable through microprocessor

(3) Ambience 2-channel (SL, SR) output

2-3. Stereo playback functions

(1) Stereo playback mode (may be used as a digital deemphasis filter)

2-4. Input/output interface

(1) Two serial data input circuits
- * Three-line input from digital I/F receiver: 1 circuit
- * A/D converter regulation clock output and data input: 1 circuit
- * Format
  16 bit; two's complement; MSB format
  L/R channel pair

(2) Two serial data output modes
- * 4-circuit serial output mode
  L/R exchange, C/MONO exchange, C (SL) /S (SR) exchange, LMON/RMON exchange output
- * 3-circuit serial output mode
  C (SL)/L/S(SR)/R exchange, LMON/C/RMON/MONO exchange, LMON/C(SL)/RMON/S(SR) exchange
- * 2 types of sample/hold controlsignaloutputs(SH1,SH2)
- * Format
  16/18 bit selectable
  Two's complement; MSB format

(3) Microprocessor interface
- * 4-wire type serial data input / output
- * Asynchronous input/output vis-a-vis system clock pos sible

(4) Digital delay (DRAM) interface
- * 256K DRAM (64K x 4 bit composition) direct interface
- * Four types of delay time control

2-5 Sampling frequency (fs)

(1) Accommodates three sampling frequencies -- 48kHz, 44.1kHz, 32kHz

(2) Each filter coefficient automatically selectable from the selected fs

(3) During A/D converter input selection, fixed at fs=48kHz

2-6. System clock

(1) System clock frequency: 384fs

(2) DSP master mode: 384fs and X'tal frequency or clock input

(3) DSP slave mode: 384fs input

2-7. Deemphasis function

(1) Digital deemphasis filter on/off switching

2-8. Dolby standard level

(1) The input signal is Dolby standard level: -15dB (however, 16 bit full scale is 0dB)

(2) The output signal at the L/R ch is Dolby standard level: -18dB
The output signal at the C/S ch is Dolby standard level: -15dB
(however, this is because the C/S ch is reduced -3dB during encoding)

2-9. Level/meter graphic output
- * Overflow display output (16 bit full scale -0.068dB, or greater)
- * Dolby level display output (16 bit full scale -15dB, or greater)

CIRCUIT DESCRIPTION

2-10. Package -- 64 pin QFP (evaluation-use 64-pin DIP)
2-11. Power supply voltage -- 5V single power supply
2-12. Structure -- Morigate CMOS

Test Mode

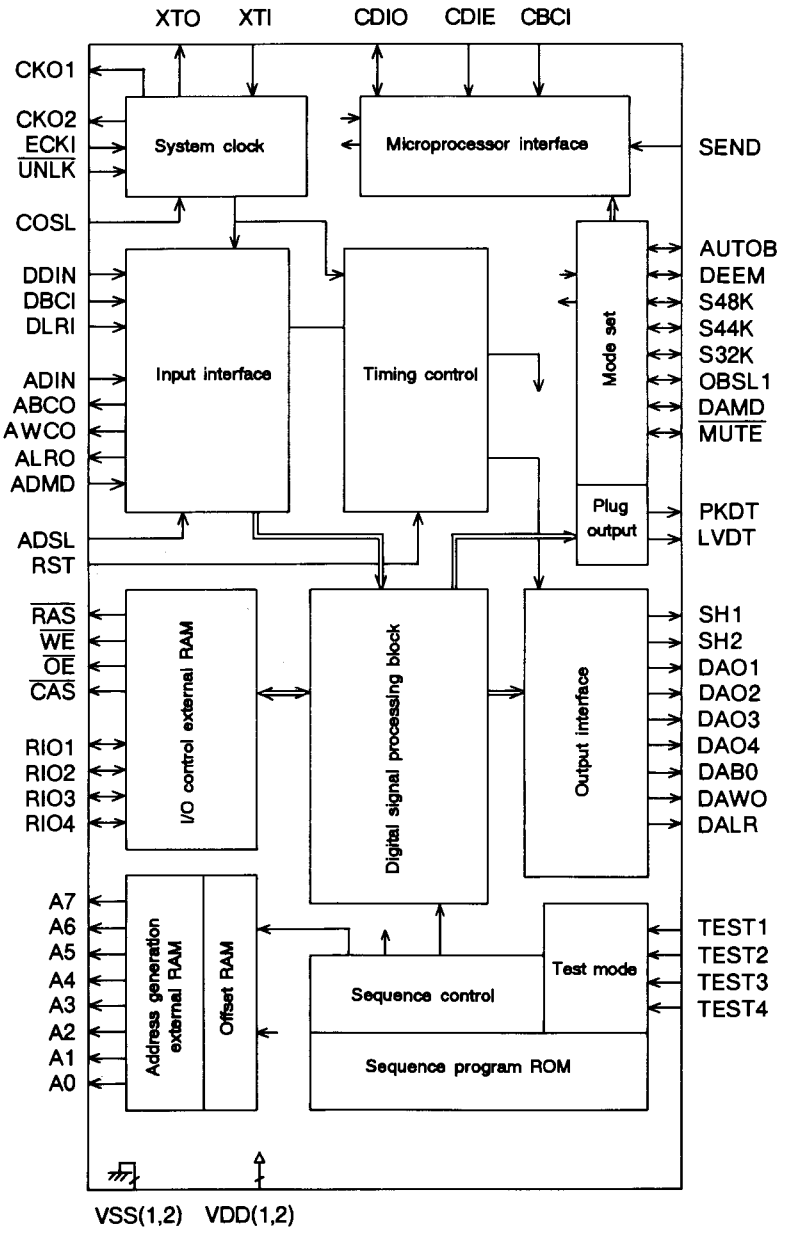
(1) Digital through test mode (TEST4)
This mode is for evaluation of the DAC system. By making the TEST4 pin 'L' the following input data LMON, RMON are output on the L, R, C, S, SL, SR, LMON, RMON and MONO output channels.

Table 8-11-1 Digital through test mode output data allocation

Output ch	L	R	C	S	SL	SR	LMON	RMON	MONO
Output data	LMON	RMON	LMON	RMON	LMON	RMON	LMON	RMON	RMON

when in this mode, the digital deemphasis function operates but the auto balance function does not. Also, LVDT and PKDT are not output.

3. Block diagram



CIRCUIT DESCRIPTION

5. Pin functions

Pin number	Pin nomenclature	IO	Pin function	Test output
1	XTI	I	X'tal oscillation input pin (oscillation frequency: 384fs)	
2	XTO	O	X'tal oscillation input pin	
3	CKO1	O	Master clock output1 (clock frequency: 384 fs or 192 fs)	
4	CKO2	O	Master clock output1 (clock frequency: 128 fs)	
5	ECKI	Ip	D-I/F external master clock input (clock frequency: 384 fs)	
6	$\overline{\text{UNLK}}$	Ip	D-I/F VCO unlock flag ($\overline{\text{UNLK}}$='L': VCO unlock; $\overline{\text{UNLCK}}$='H':VCO lock)	
7	COSL	Ip	CKO1 frequency switching (COSL='L': 192 fs; COSL='H': 384 fs)	
8	VSSI	—	GND pin 1 (0V)	
9	DDIN	Ip	Serial data input from the digital I/F	
10	DBCI	Ip	Bit clock input from the digital I/F	
11	DLRI	Ip	LR clock input from the digital I/F	
12	ADSL	Ip	Digital audio signal input selection (ADSL='L': D-I/F; ADSL='H': ADC)	
13	ADIN	Ip	Serial data input from ADC	
14	ABCO	O	Bit clock output for ADC control	
15	AWCO	O	Word clock output for ADC control	
16	ALRO	O	fs rate clock output from ADC	
17	ADMD	Ip	ADC mode control (ABCO selection) (ADMD='H': 32fs; ADMD='L': 64fs)	
18	VDD2	—	Power supply voltage 2 (5.0V)	
19	A7	O	External digital delay DRAM address output (bit 7)	
20	A4	O	External digital delay DRAM address output (bit 4)	
21	A3	O	External digital delay DRAM address output (bit 3)	
22	A5	O	External digital delay DRAM address output (bit 5)	
23	A2	O	External digital delay DRAM address output (bit 2)	
24	A6	O	External digital delay DRAM address output (bit 6)	
25	A1	O	External digital delay DRAM address output (bit 1)	
26	$\overline{\text{RAS}}$	O	External digital delay DRAM low address strobe output	
27	A0	O	External digital delay DRAM address output (bit 0)	
28	$\overline{\text{WE}}$	O	External digital delay DRAM write enable output	
29	RIO3	IO	External digital delay DRAM data input/output (bit 3)	
30	RIO2	IO	External digital delay DRAM data input/output (bit 2)	
31	$\overline{\text{CAS}}$	O	External digital delay DRAM column address strobe output	
32	RIO1	IO	External digital delay DRAM data input/output (bit 1)	
33	RIO4	IO	External digital delay DRAM data input/output (bit 4)	
34	$\overline{\text{OE}}$	O	External digital delay DRAM output enable output	

CIRCUIT DESCRIPTION

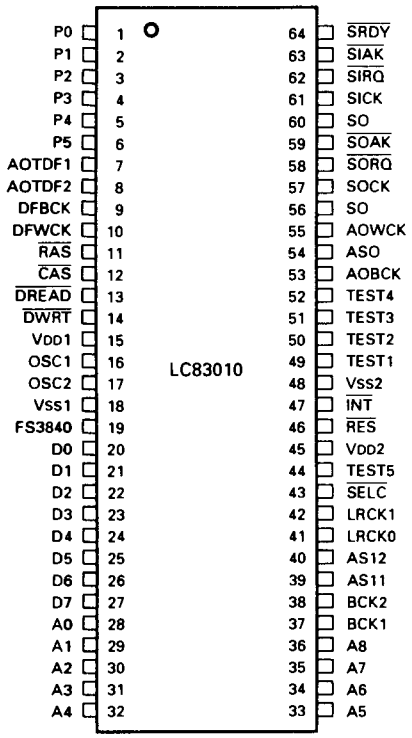
Pin No.	Pin Nomenclature	I/O	Pin Function	Test output
46	TEST1	Ip	Test pin 1	
47	TEST2	Ip	Test pin 2	
48	TEST3	Ip	Test pin 3	
49	TEST4	Ip	Test pin 4	
50	DAMD	IO	DAC output mode control input (DAMD = 'L': 3-circuit output; DAMD = 'H': 3-circuit output)	T009
51	OBSL	IO	DAO1—DAO4 output bit length setting (OBSL = 'L': 18 bit; OBSL = 'H': 16 bit)	T010
52	S32K	IO	fs = 32kHz select (S32K = 'L':unselected; S32K = 'H':selected)	T011
53	S44K	IO	fs = 44.1kHz select (S44K = 'L':unselected; S44K = 'H':selected)	T012
54	S48K	IO	fs = 48kHz select (S48K = 'L':unselected; S48K = 'H':selected)	T013
55	DEEM	IO	Deemphasis filter on/off control input (DEEM = 'L': OFF; DEEM = 'H': ON)	T014
56	AUTO	IO	Auto balance on/off control input (AUTOB = 'L': OFF; AUTOB = 'H': ON)	T015
57	$\overline{\text{MUTE}}$	IO	Output data mute control input (MUTE = 'L': mute on; MUTE = 'H': mute off)	T016
58	RST	I	System reset input (RST = 'L': normal operation; RST = 'H': reset)	
59	CDIO	IO	Microprocessor control serial data input/output	
60	$\overline{\text{CDIE}}$	Ip	Microprocessor control input data latch enable input	
61	CBCI	Ip	Microprocessor control bit clock input	
62	SEND	Ip	Microprocessor control input/output control (SEND = 'L': receive: SEND = 'H': send)	
63	PKDT	O	Input signal peak level detection flag	
64	LVDT	O	Input signal Dolby level optimum setting flag	

(I/O definition) I = input pin (without pull-up condenser)
Ip = input pin (with pull-up condenser)
O = Output pin
I/O = pin for both input and output (with pull-up condenser during input)

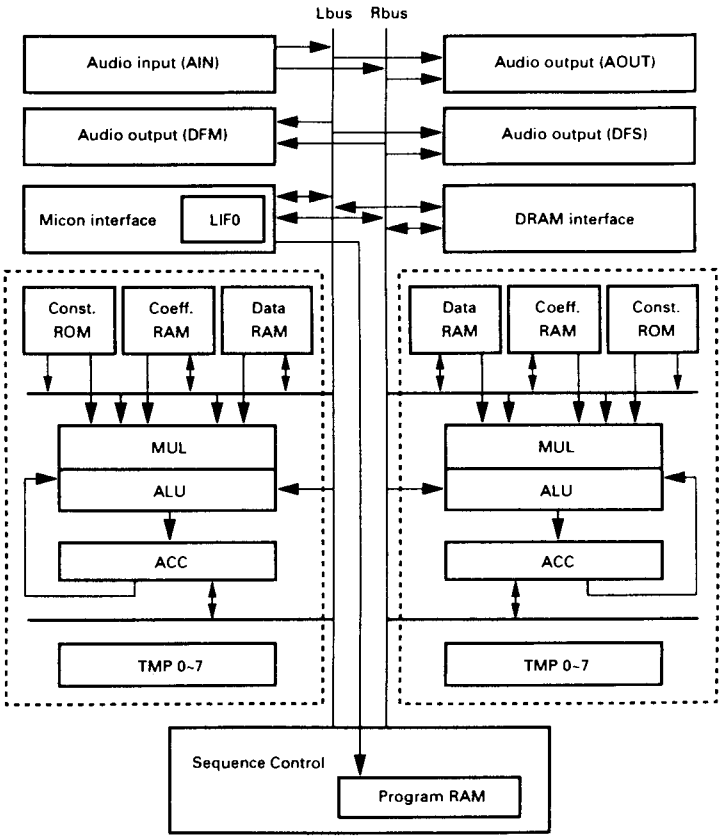
CIRCUIT DESCRIPTION

DSP IC [LC83010] (IC16 : X08)

Terminal Connection Diagram (Top View)



Block Diagram



CIRCUIT DESCRIPTION

Terminal Description [LC83010]

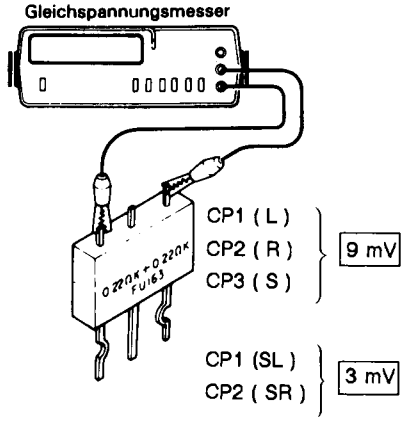
Pin No.	Pin name	I/O	Description	
1	P0	I	Digital mute - High: mute; Low: unmute during DSP program	
2	P1	I	Soft muting - High during DSP program: Soft mute with time constant of 1 ms; Low: Unmute	
3	P2	O	Overflow detection If the input data from the A/D converter becomes the maximum positive or negative 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	$\overline{RAS}$	O	For row address strobe DRAM access control	
12	$\overline{CAS}$	O	For column address strobe DRAM access control	
13	$\overline{DREAD}$	O	DRAM read control signal	
14	$\overline{DWRT}$	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	$\overline{SELC}$	I	Self oscillation and external clock input switching	
44	TEST 5	O	Test pin Used by open	
46	$\overline{RES}$	I	Reset pin	
47	$\overline{INT}$	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)	
55 ~ 59	A0WCK etc.		No used	
60	SI	I	Serial data input from µ-com	DSP ↔ µ-com interface
61	SICK	I	Serial clock input of SI input	
62	$\overline{SIRQ}$	I	SI request signal input	
63	$\overline{SIAK}$	O	Output signal to indicate that the SI serial communication is executing	
64	$\overline{SRDY}$	I	Input signal to indicate that the mail box communication is finished	

KA-V8500

ADJUSTMENT

No.	ITEM	IMPUT SETTINGS	OUT PUT SETTINGS	AMPLIFIER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
	Unless you have some special reason otherwise, please use the following settings for each switch: POWER: ON SPEAKER: B REC OUT: OFF SELECTOR: PHONO						
1	MAIN AMP Idle current (XO9-349)	—	Connect a DC voltometer to CP 1 (L) CP 2 (R) CP 3 (C)	VOLUME: 0	VR1 (L) VR2 (R) VR3 (C)	9 mV	(a)
2	REAR AMP Idle current (XO8-249 E/6)	—	Connect a DC Voltmeter to CP 1 (SL) CP 2 (SR)	VOLUME: 0	VR 1 (SL) VR 2 (SR)	3 mV	(a)
3	Distortion adjustment (XO8-249 A/6)	L & R channels are 1 kHz 25 mV rms at the pin jack input (tuner input)	+40 dB or greater AMP and THD meter from IC17 1 pin	Plug into the outlet while pressing the CD REC key and enter the DSP CATHEDRAL mode. Always wait 10 minutes after turning on the power and then turn on the power again before doing this.	VR4	Minimum distortion	
4	Distortion adjustment (XO8-249 A/6)	L & R channels are 1 kHz 25 mV rms at the pin jack input (tuner input)	+40 dB or greater AMP and THD meter from IC16 1 pin		VR5	Minimum distortion	
5	Distortion adjustment (XO8-249 A/6)	L & R channels are 1 kHz 25 mV rms at the pin jack input (tuner input)	+40 dB or greater AMP and THD meter from IC15 1 pin		VR6	Minimum distortion	
6	Distortion adjustment (XO8-249 A/6)	L & R channels are 1 kHz 25 mV rms at the pin jack input (tuner input)	+40 dB or greater AMP and THD meter from IC14 1 pin		VR7	Minimum distortion	
7	S/N (XO8-249 A/6)	Short with the pin jack input (tuner input)	Noise meter with the center speaker output	In pro logic normal mode, turn the master VR to MAX.	VR3	Minimum noise	

(a) DC voltmeter
Voltmètre de CC
Gleichspannungsmesser



REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DE L'AMPLIFICATEUR	POINTS DE L'ALIGNMENT	ALIGNER POUR	FIG.
A moins d'avoir des raisons spéciales pour le contraire, nous vous prions d'utiliser les réglages suivants pour chaque commande: POWER: ON SPEAKER: B REC OUT: OFF SELECTOR: PHONO							
1	Courant d'attente d'amplicateur principal (XO9-349)	—	Connecter un voltmètre de CC à CP 1 (L) CP 2 (R) CP 3 (C)	VOLUME: 0	VR1 (L) VR2 (R) VR3 (C)	9 mV	(a)
2	Courant d'attente d'amplicateur arrière (XO8-249 E/6)	—	Connecter un voltmètre de CC à CP 1 (SL) CP 2 (SR)	VOLUME: 0	VR 1 (SL) VR 2 (SR)	3 mV	(a)
3	Ajustement de distorsion (X08-249 A/6)	Les canaux G et D sont 1 kHz 25 mV rms à l'entrée de prise à broche (entrée de tuner)	+40 dV ou plus compteur AMP et THD de IC17 1 broche	Brancher dans la sortie tout en appuyant sur la touche CD REC et passe dans le mode DSP CATHEDRAL.	VR4	Distorsion minimum	
4	Ajustement de distorsion (X08-249 A/6)	Les canaux G et D sont 1 kHz 25 mV rms à l'entrée de prise à broche (entrée de tuner)	+40 dV ou plus compteur AMP et THD de IC16 1 broche		VR5	Distorsion minimum	
5	Ajustement de distorsion (X08-249 A/6)	Les canaux G et D sont 1 kHz 25 mV rms à l'entrée de prise à broche (entrée de tuner)	+40 dV ou plus compteur AMP et THD de IC15 1 broche	Toujours attendre 10 minutes après avoir mis sous tension, puis remettre sous tension avant d'effectuer cela.	VR6	Distorsion minimum	
6	Ajustement de distorsion (X08-249 A/6)	Les canaux G et D sont 1 kHz 25 mV rms à l'entrée de prise à broche (entrée de tuner)	+40 dV ou plus compteur AMP et THD de IC14 1 broche		VR7	Distorsion minimum	
7	S/N (X08-249 A/6)	Court-circuiter avec l'entrée de prise à broche (entrée de tuner)	Indicateur de bruit avec la sortie de haut-parleur central	Dans le mode normal pro logique, tourner le VR principal sur MAX.	VR3	Bruit minimum	

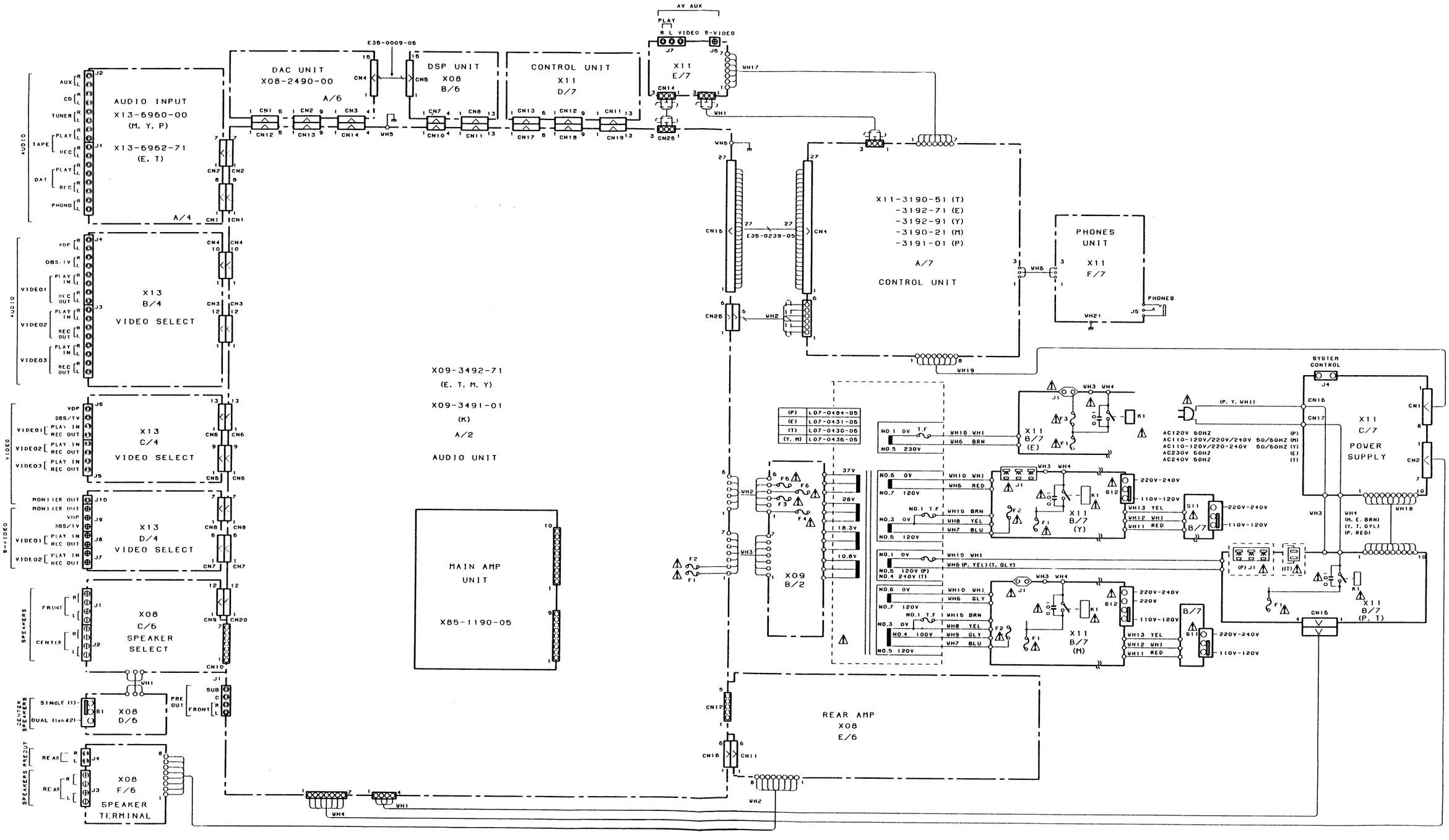
KA-V8500

ABGLEICH

NR.	GENGENSTAND	EINGANGS-EINSTELLUNG	AUSANG-EINSTELLUNG	VORSTÄRKER-EINSTELLUNG	ABGLEICHE-PUNKTE	ABGLEICHEN FÜR	ABB.
Stellen Sie die Schalter bitte wie folgt ein, sofern kein besonderer Grund für eine andere Einstellung besteht: POWER: ON SPEAKER: B REC OUT: OFF SELECTOR: PHONO							
1	Haupt-Verstärker-Leerlaufstrom (XO9-349)	—	Einen Gleichspannungsmesser an CP 1 (L) CP 2 (R) CP 3 (C) anschließen.	VOLUME: 0	VR1 (L) VR2 (R) VR3 (C)	9 mV	(a)
2	Rückverstärker-Leerlaufstrom arrière (XO8-249 E/6)	—	Einen Gleichspannungsmesser an CP 1 (L) CP 2 (R) CP 3 (C) anschließen.	VOLUME: 0	VR 1 (L) VR 2 (R) VR 3 (C)	3 mV	(a)
3	Verzerrungseinstellung (XO8-249 A/6)	Linker und rechter Kanal sind bei Stiftbuchseneingang (Tuner-Eingang) 1 kHz, 25 mV effektiv	+40 dB oder höher, AMP-und THD-Meter von IC17 1-Pin	In Steckdose einschieben, während die CD REC-Taste gedrückt wird, und auf DSP CATHEDRAL-Modus schalten	VR4	Minimale Verzerrungen	
4	Verzerrungseinstellung (XO8-249 A/6)	Linker und rechter Kanal sind bei Stiftbuchseneingang (Tuner-Eingang) 1 kHz, 25 mV effektiv	+40 dB oder höher, AMP-und THD-Meter von IC16 1-Pin		VR5	Minimale Verzerrungen	
5	Verzerrungseinstellung (XO8-249 A/6)	Linker und rechter Kanal sind bei Stiftbuchseneingang (Tuner-Eingang) 1 kHz, 25 mV effektiv	+40 dB oder höher, AMP-und THD-Meter von IC15 1-Pin	Nach dem Einschalten stets 10 Minuten warten und dann den Strom erneut einschalten, bevor dieser Schritt durchgeführt wird.	VR6	Minimale Verzerrungen	
6	Verzerrungseinstellung (XO8-249 A/6)	Linker und rechter Kanal sind bei Stiftbuchseneingang (Tuner-Eingang) 1 kHz, 25 mV effektiv	+40 dB oder höher, AMP-und THD-Meter von IC14 1-Pin		VR7	Minimale Verzerrungen	
7	S/N (XO8-249 A/6)	Mit Stiftbuchseneingang (Tuner-Eingang) kurzschließen	Fremdspannungsmesser mit Mittellautsprecherausgang	In ''pro logic normal mode'' Haupt-VR auf MAX stellen.	VR3	Minimales Rauschen	

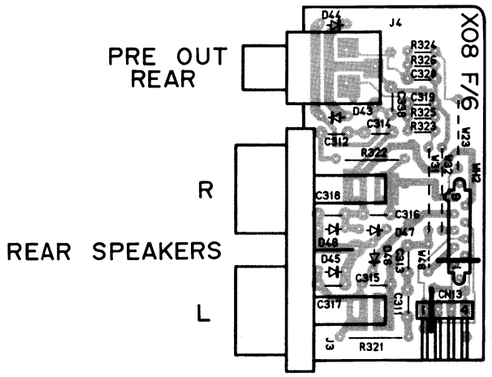
KA-V8500 KA-V8500

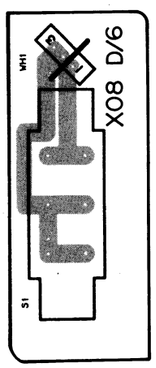
WIRING DIAGRAM

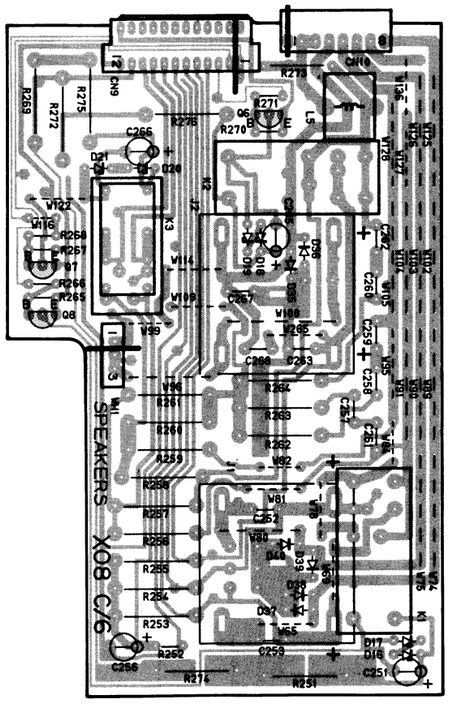


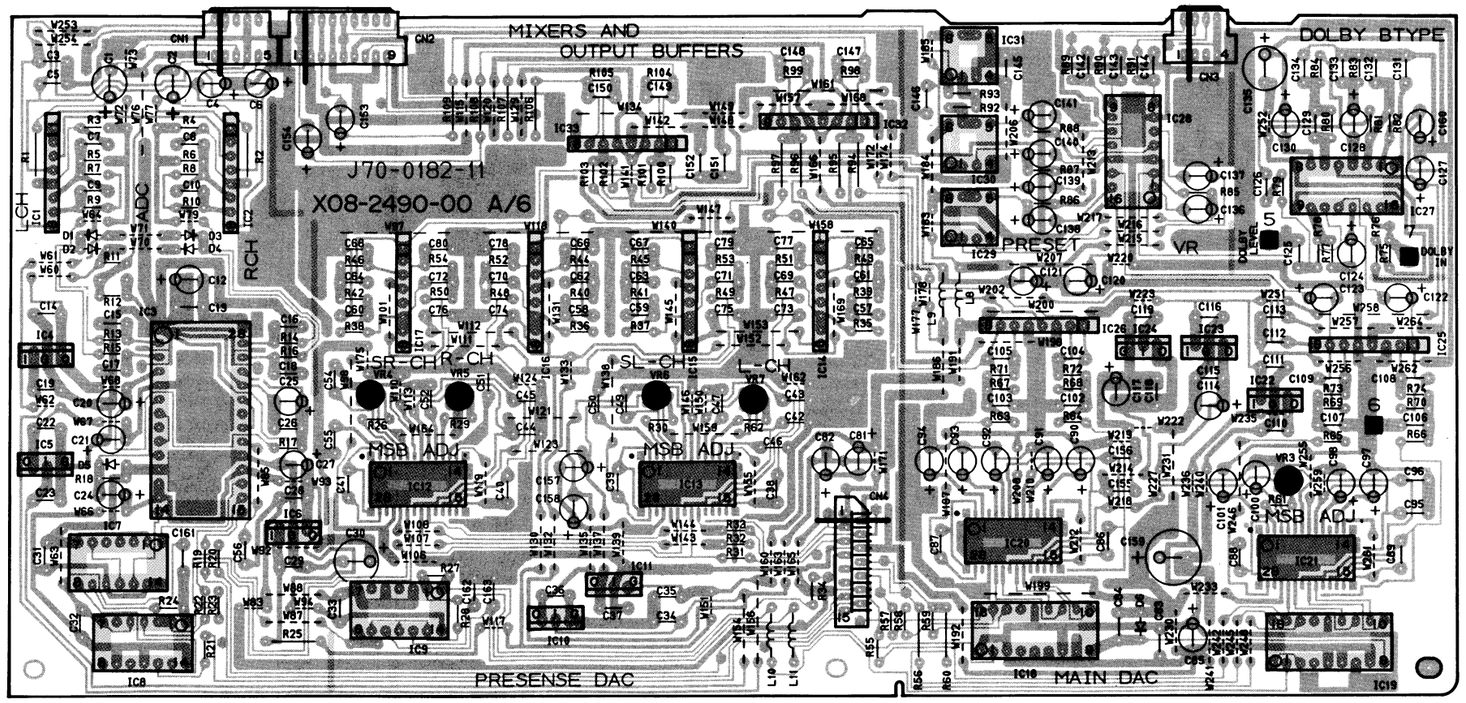
PC BOARD

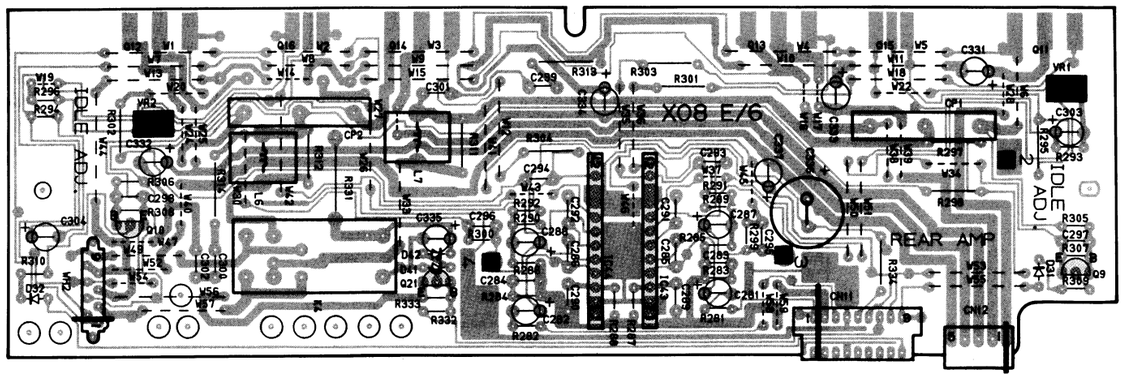
SURROUND UNIT(X08-2490-00)

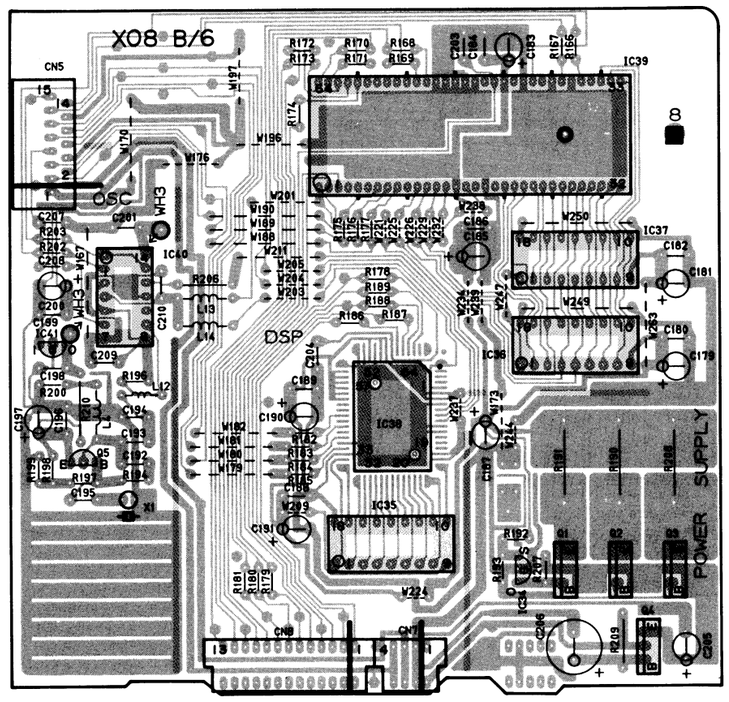








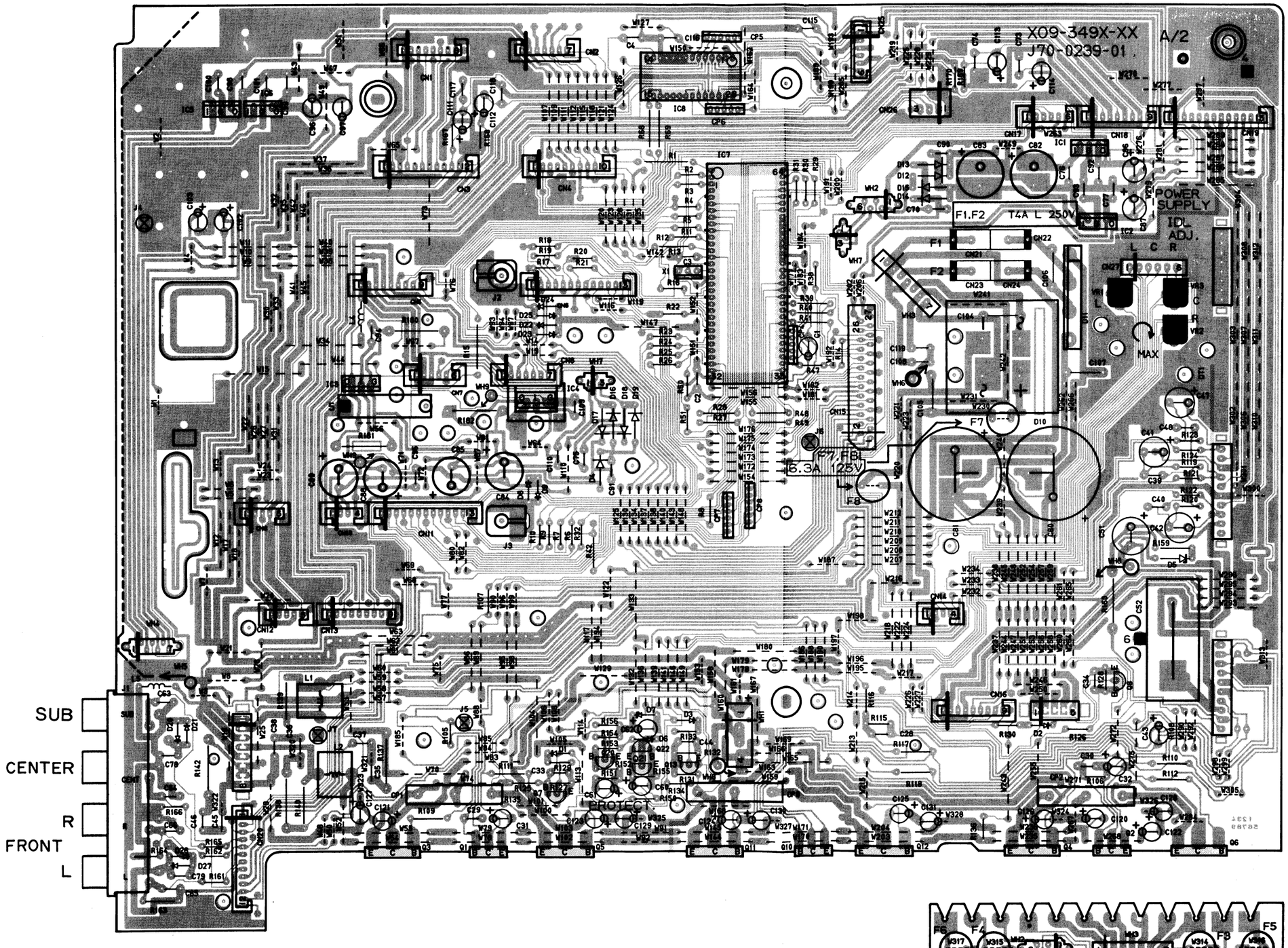


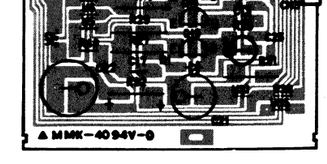


Refer to the schematic diagram for the values of resistors and capacitors.

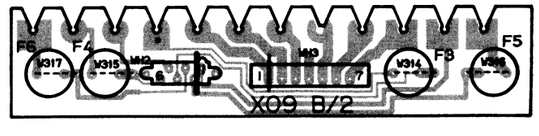
PC BOARD

AUDIO UNIT(X09-349X-XX)





MAIN AMPLIFIERUNIT
(X85-1190-06)



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

PC BOARD

CONTROL UNIT (X11-319X-XX)

SYSTEM CONTROL

XII C/7

POWER SUPPLY

SENTER SPEAKERS

F1 6.3A 250V

F2 T4A L 250V

F3 T4A L 250V

XII B/7

AC OUTLET AC100V 50/60Hz SWITCHED

MASTER VR

MASTER VOLUME

REAR BUFFER

MUTE

MOTOR CONTROL

XII D/7

PHONES

XII F/7

REC SELECTOR

J70-0175-11

XII-319X-XX A/7

TONE CONTROL

XII E/7

AV AUX

BALANCE

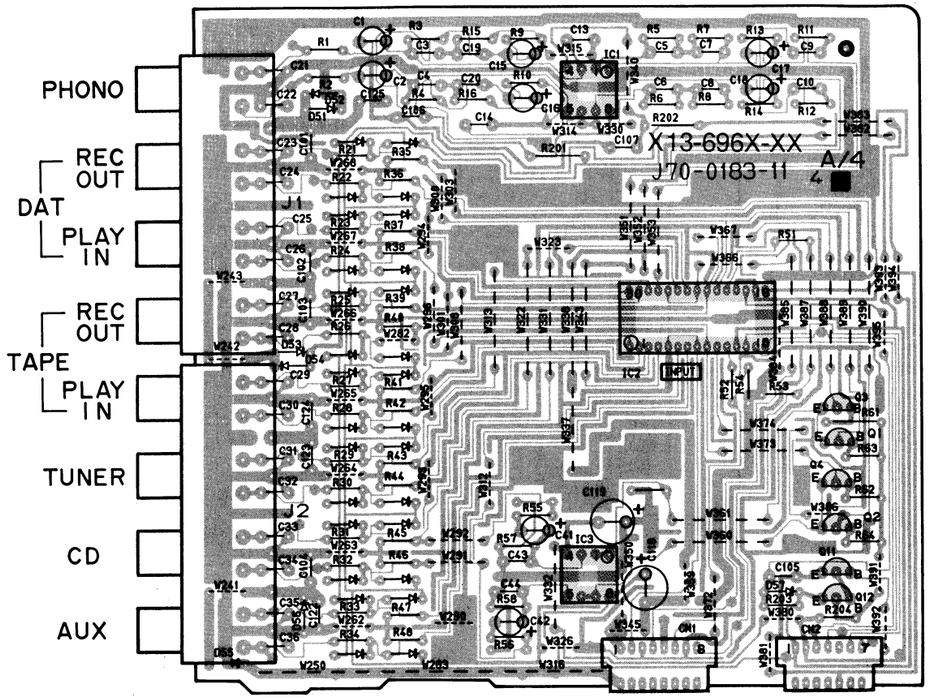
SYSTEM CONTROL

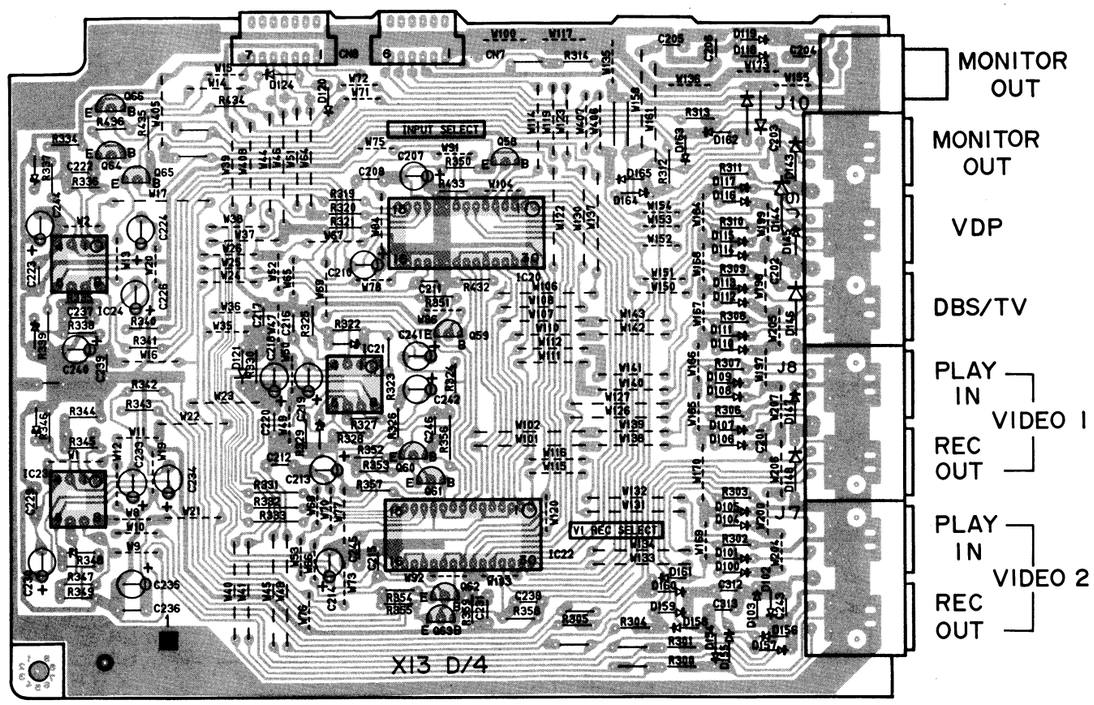
RESET SYSTEM

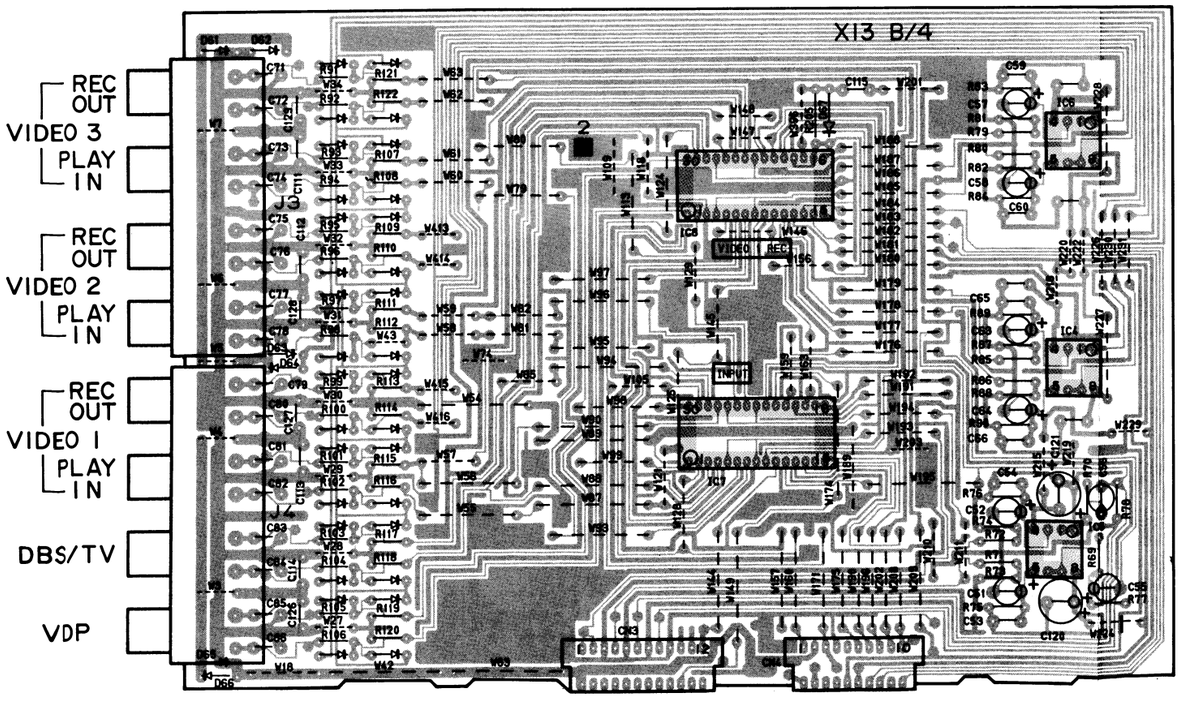
Refer to the schematic diagram for the values of resistors and capacitors.

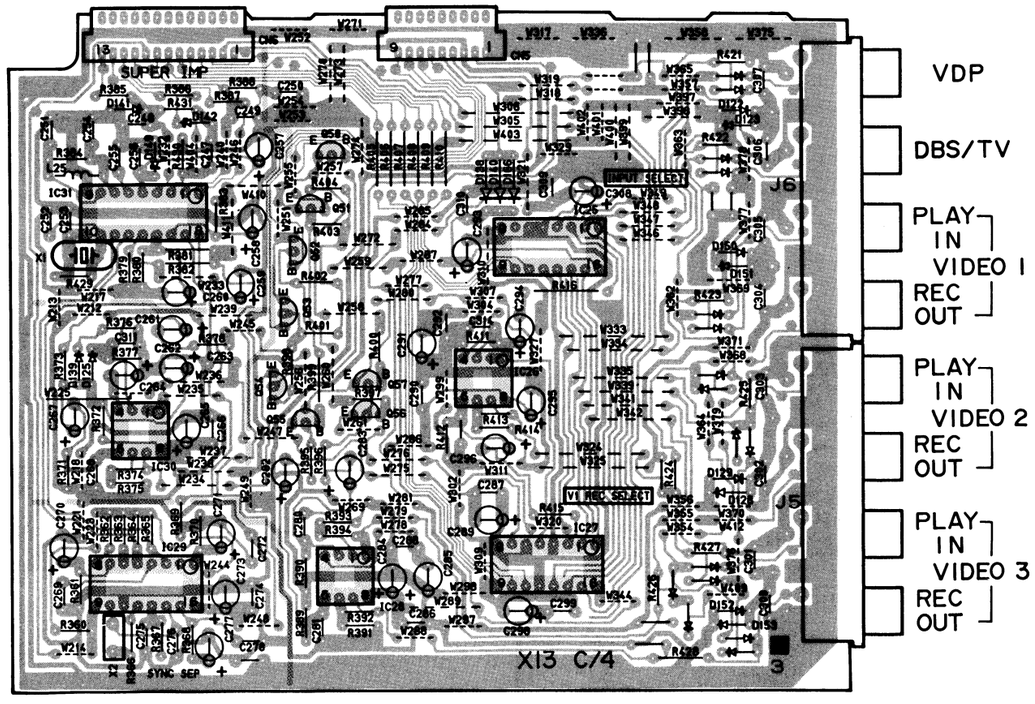
PC BOARD

ACCESSORY UNIT(X13-696X-XX)

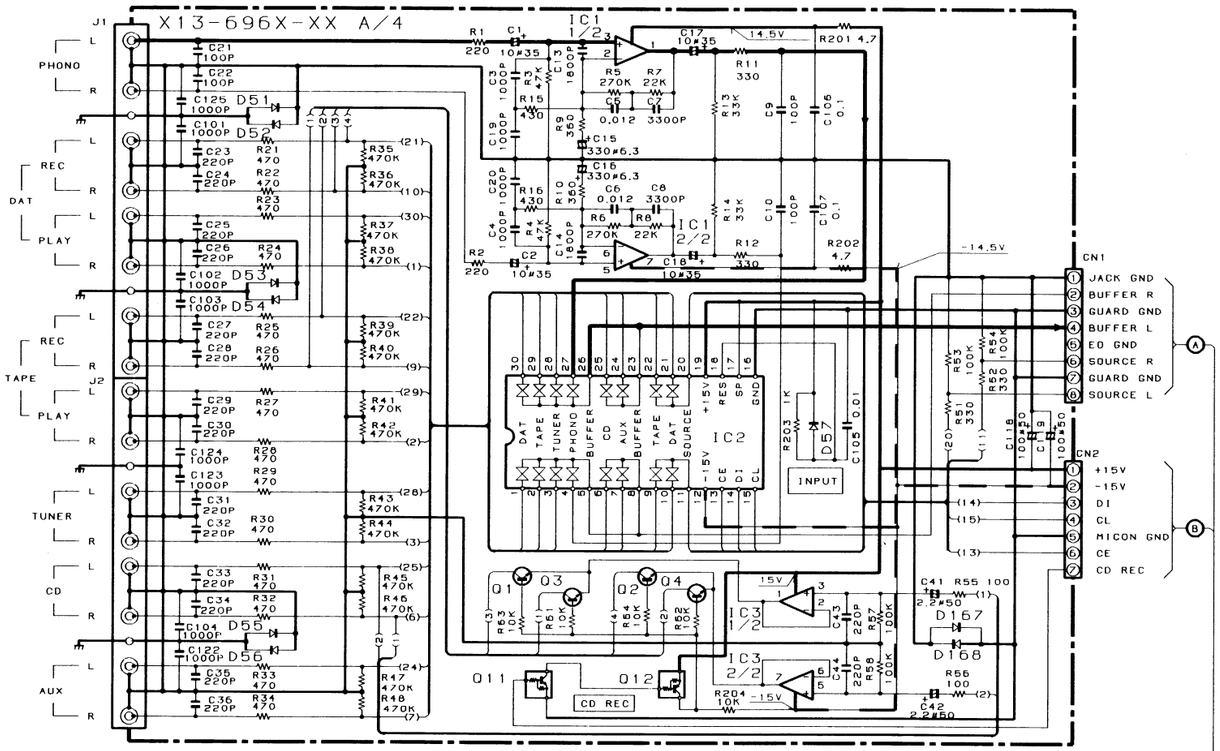


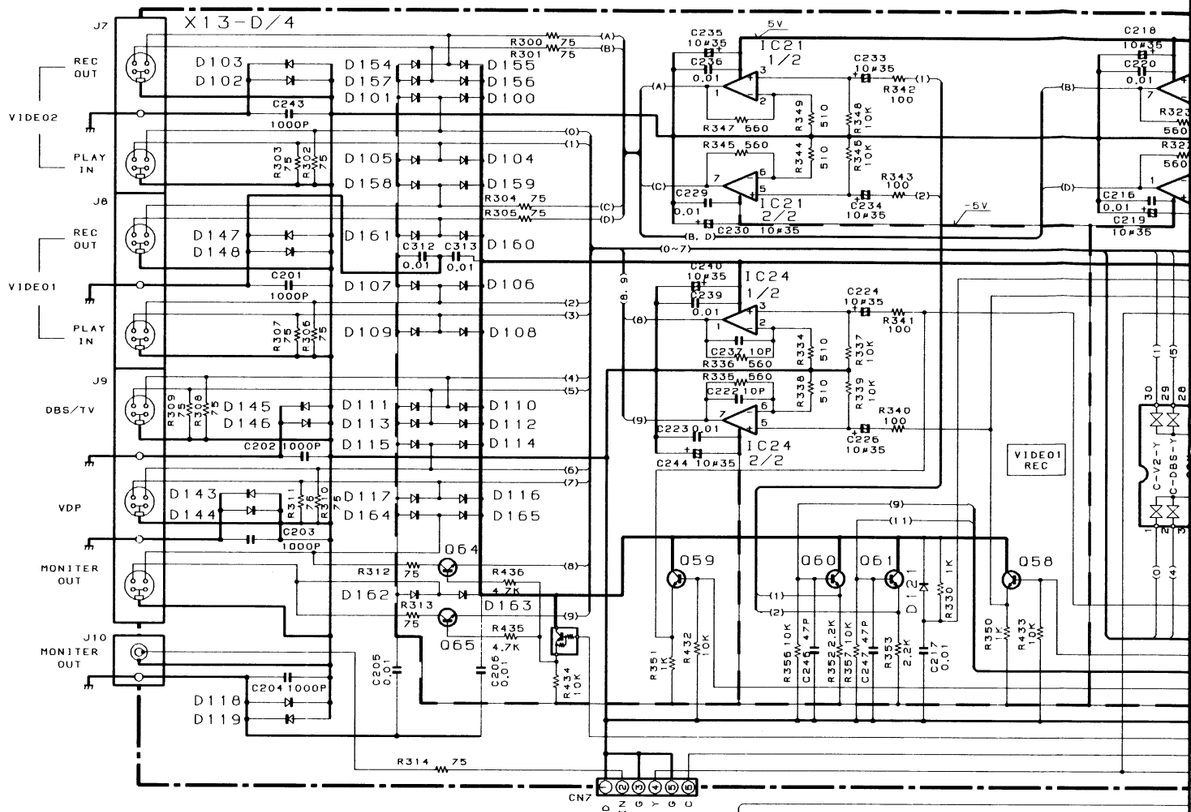


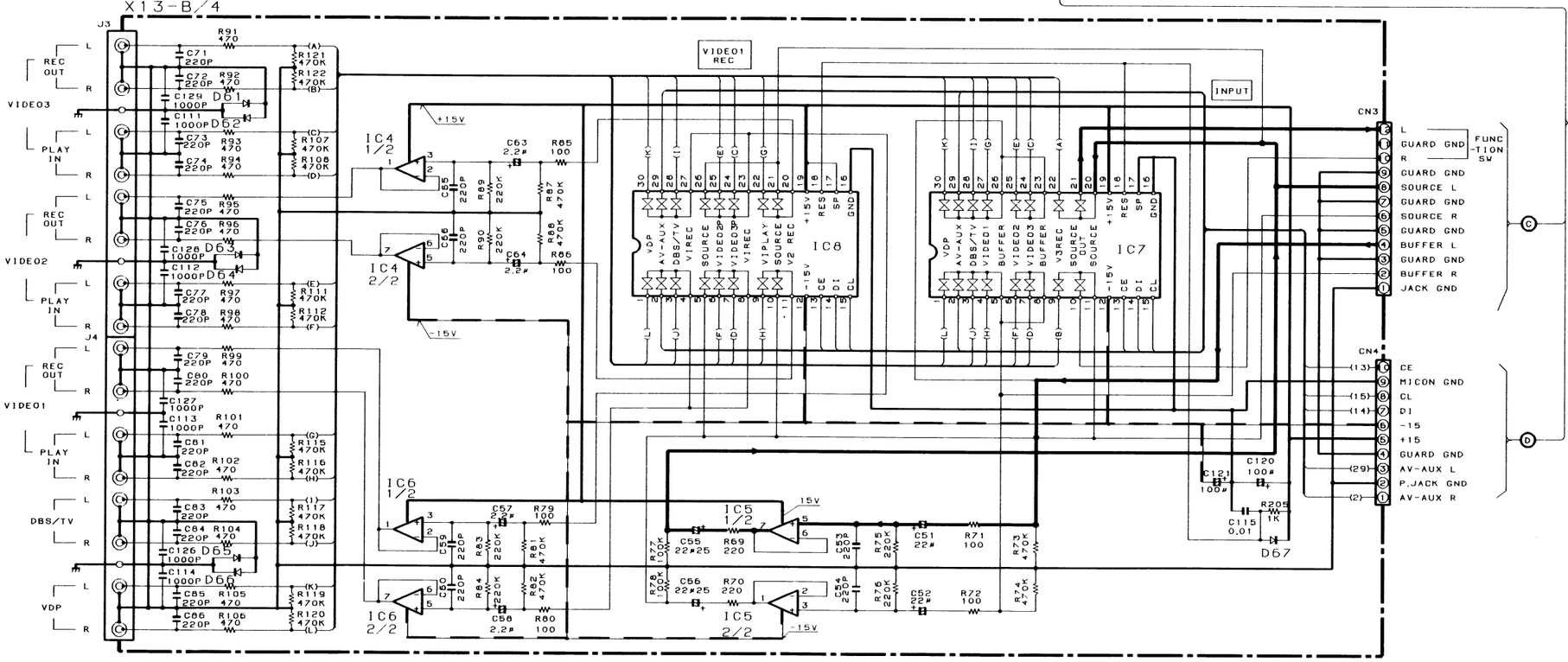


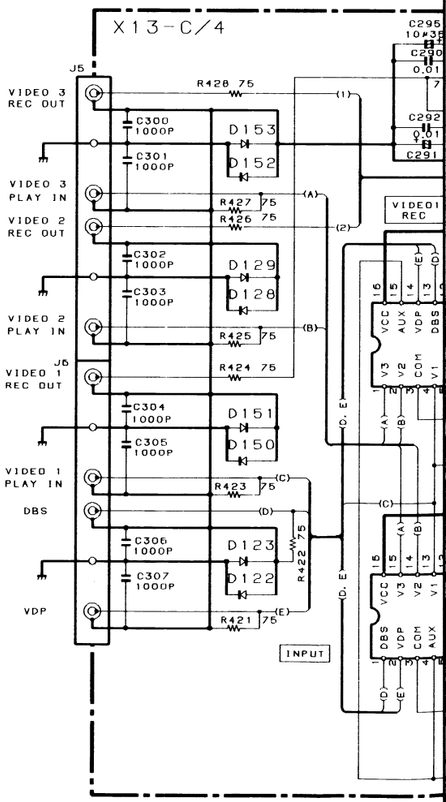


Refer to the schematic diagram for the values of resistors and capacitors.


X13-696X-XX A/4
J1
PHONO
DAT
REC
PLAY
TAPE
REC
PLAY
TUNER
CD
AUX
J2
IC1 1/2
IC1 2/2
IC2
IC3 1/2
IC3 2/2
D51
D52
D53
D54
D55
D56
D57
INPUT
CD REC
Q1
Q2
Q3
Q4
Q11
Q12
+14.5V
-14.5V
-15V
CN1
JACK GND
BUFFER R
GUARD GND
BUFFER L
EQ GND
SOURCE R
GUARD GND
SOURCE L
CN2
+15V
-15V
DI
CL
MICON GND
CE
CD REC


X13-D/4
J7
REC OUT
VIDEO2
PLAY IN
J8
REC OUT
VIDEO1
PLAY IN
J9
DBS/TV
VDP
MONITER OUT
J10
MONITER OUT
IC21 1/2
IC21 2/2
IC24 1/2
IC24 2/2
5V
-5V
VIDEO1 REC
Q58
Q59
Q60
Q61
Q64
Q65
CN7
P.J GND
MONITOR IN


X13-B/4
J3
REC OUT
VIDEO3
PLAY IN
REC OUT
VIDEO2
PLAY IN
J4
REC OUT
VIDEO1
PLAY IN
DBS/TV
VDP
IC4 1/2
IC4 2/2
IC6 1/2
IC6 2/2
IC5 1/2
IC5 2/2
IC8
IC7
VIDEO1 REC
INPUT
+15V
-15V
CN3
L
GUARD GND
R
GUARD GND
SOURCE L
GUARD GND
SOURCE R
GUARD GND
BUFFER L
GUARD GND
BUFFER R
JACK GND
FUNC-TION SW
CN4
CE
MICON GND
CL
DI
-15
+15
GUARD GND
AV-AUX L
P.JACK GND
AV-AUX R


X13-C/4
J5
VIDEO 3 REC OUT
VIDEO 3 PLAY IN
VIDEO 2 REC OUT
VIDEO 2 PLAY IN
J6
VIDEO 1 REC OUT
VIDEO 1 PLAY IN
DBS
VDP
VIDEO1 REC
INPUT

F G H I J K L M N O

X13-D/4

J7 REC OUT / PLAY IN — VIDEO2
J8 REC OUT / PLAY IN — VIDEO1
J9 DBS/TV
VDP
MONITER OUT
J10 MONITER OUT

D103 D102 D154 D157 D101 D155 D156 D100 D105 D158 D104 D159 D147 D148 D161 D160 D107 D106 D109 D108 D145 D146 D111 D113 D115 D110 D112 D114 D143 D144 D117 D164 D116 D165 D162 D163 D118 D119

R300 75 R301 75 R303 75 R302 75 R304 75 R305 75 R307 75 R306 75 R309 75 R308 75 R311 75 R310 75 R312 75 R313 75 R314 75 R435 4.7K R436 4.7K

C243 1000P C312 0.01 C313 0.01 C201 1000P C202 1000P C203 1000P C204 1000P C205 0.01 C206 0.01

Q64 Q65

IC21 1/2 IC21 2/2 IC23 1/2 IC23 2/2 IC24 1/2 IC24 2/2

C235 10#35 C236 0.01 C233 10#35 C229 0.01 C230 10#35 C234 10#35 C218 10#35 C220 0.01 C216 0.01 C219 10#35 C242 10#35 C214 10#35 C240 10#35 C239 0.01 C223 10P C222 10P C223 0.01 C224 10P C244 10#35 C226 10#35

R342 100 R343 100 R341 100 R340 100 R347 560 R345 560 R336 560 R335 560 R323 560 R327 560 R324 100 R326 100 R354 2.2K R355 2.2K R339 10K R337 10K R334 510 R338 510 R344 510 R349 510 R348 10K R346 10K R322 510 R328 510 R325 10K R329 10K

5V -5V

Q62 Q63

INPUT

IC22 IC20

C-V2-Y C-DBS-C COM C-VDP-Y C-AUX-C COM C-V1-Y COM SOURCE V2 REC V1 REC VEE CE DI CL VDD RES S VSS

Y-V2-C Y-DBS-C COM Y-VDP-C Y-AUX-C COM Y-V1-C COM VEE CE DI CL VDD RES S VSS

C214 47#10 C215 0.01 C213 47#10 C212 0.01 C210 47#10 C211 0.01 C207 47#10 C208 0.01 D124 D120

R331 100 R330 100 R329 100 R328 100 R327 100 R332 100 R321 100 R320 100 R319 100

VIDEO1 REC

Q59 Q60 Q61 Q58

R351 1K R432 10K R356 10K R352 2.2K R357 10K R353 2.2K R350 1K R433 10K R330 1K

C247 47P C248 47P C249 47P C251 0.01 C252 0.01

D-1 (2)

CN1 JACK GND / BUFFER R / GUARD GND / BUFFER L / EO GND / SOURCE R / GUARD GND / SOURCE L — A

CN2 +15V / -15V / DI / CL / MICON GND / CE / CD REC — B

CN7 P.J GND / MONITOR IN — E

CN6 MONITOR MUTE / CE / CLK / DI / +5V / -5V / GND — F

D51~57, 61~67 : 1SS133 or HSS104
100~125, 126, 129, 136~140, 143~148, 150~156 :
D141, 142, 149 : RD5.1ES (B) or HZS5.1N (B)

Q1~4, 54~57, 64, 65 : 2SC2878 (B)
Q11 : DTC124ES or UN4212
Q12, 50~53, 66 : DTA124ES or UN4112
Q58~63 : 2SC3311A (D, R) or 2SC2412K (D, R)

IC1 : UPC4570C-A
IC2, 7 : LC7821N
IC3~6 : NJM4565D-D or NJM4560D
IC8 : LC7822N
IC20, 22 : LC7823N
IC21, 23, 24, 26, 28, 30 : MC14577AP
IC25, 27 : TC40518P
IC29 : MM1067XD
IC31 : UPD6450X-514

COUNTRY ABB. \ Ref.NO		C252	C276	C277	C278	R366	
OTHER AREAS (M) AAFES, PX (Y) CANADA (P)	0~00	18P	3300P	2.2	0.022	390	L77-1 (14.3
ENGLAND (T) EUROPE (E)	2~71	15P	4700P	1	0.047	220	L77-1 (17.7

CN3 L / GUARD GND / R (FUNCTION SW) / GUARD GND / SOURCE L / GUARD GND / SOURCE R / GUARD GND / BUFFER L / GUARD GND / BUFFER R / JACK GND — C

CN4 (13) CE / (15) MICON GND / (14) CL / -15 / +15 / GUARD GND / (29) AV-AUX L / (2) AV-AUX R — D

IC7 VDP AV-AUX DBS/TV VIDEO1 BUFFER VIDEO2 VIDEO3 BUFFER V3REC SOURCE OUT SOURCE +15V -15V RES SP GND CE DI CL

R71 100 R73 47K R72 100 R74 47K C121 100# C120 100# C115 0.01 R205 1K D67

X13-C/4

J5 VIDEO 3 REC OUT / VIDEO 3 PLAY IN / VIDEO 2 REC OUT / VIDEO 2 PLAY IN — J6 VIDEO 1 REC OUT / VIDEO 1 PLAY IN / DBS / VDP

D153 D152 D129 D128 D151 D150 D123 D122

R428 75 R427 75 R426 75 R425 75 R424 75 R423 75 R422 75 R421 75

C300 1000P C301 1000P C302 1000P C303 1000P C304 1000P C305 1000P C306 1000P C307 1000P

VIDEO1 REC

IC26 2/2 IC26 1/2 IC27 IC25

C295 10#35 C290 0.01 C292 0.01 C291 10#35 C296 10#35 R415 100 R414 510 R413 560 R412 10K

C284 10#35 C285 0.01 C288 0.01 C285 10#35 C282 10#35 R395 100 R389 10K C281 47P R390 10K C280 47P R396 100 C283 10#35 R392 560 R394 560 R393 510

Q55 Q56 Q57 Q54

R397 4.7K R400 4.7K R389 4.7K R398 4.7K

IC28 2/2 IC28 1/2 IC30 1/2 IC30 2/2

C261 4.7#35 R378 220 C311 3300P R377 100K C278 47P R376 5.6K R371 10K C275 220P R372 15K C265 10#35 C266 0.01 R373 220 C267 10#35 R324 620 C263 0.01 C264 10#35 R416 100 C294 10#35 C314 22P R411 47K

C275 220P *C276 *X2 R367 2.2K R366 390 R370 100K R365 10K R369 390 R362 18K R363 10K R364 10K R368 1.8K C273 10#35 C277 0.01 C278 0.01 C279 0.01 C271 1#50 C269 47P C270 0.47# C272 0.01 C268 0.01 C274 0.01 C276 0.01 C252 C253 22P R429 1M

IC29 SYNC SEP

IC31 SUPER-IMPOSE

C299 47#10 C258 47#10 C260 47#10 C259 47#10 R382 2.2M R383 3K R384 1.8K R385 1.8K R386 560

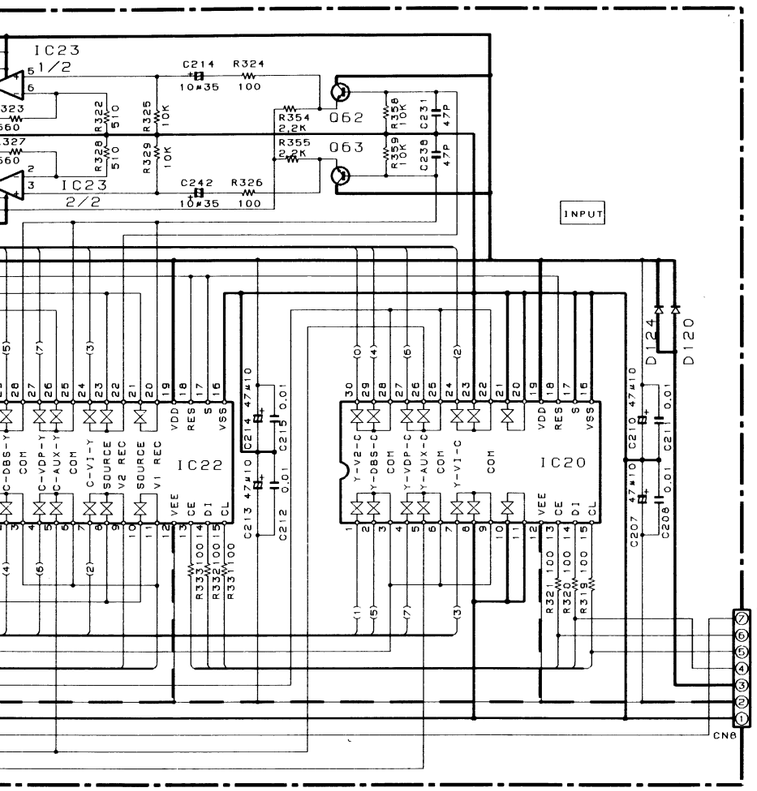
D140 D166 D138

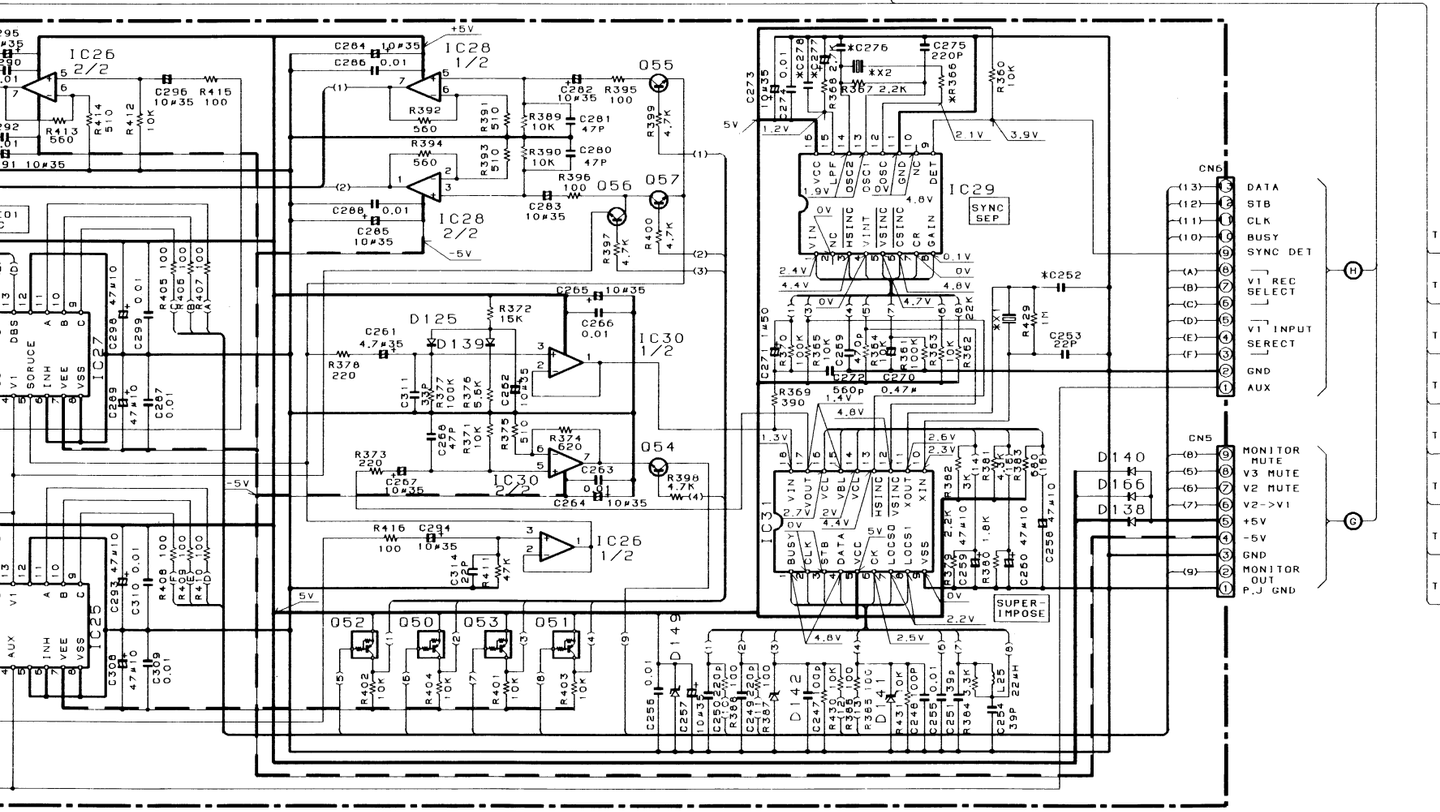
Q52 Q50 Q53 Q51

R402 10K R404 10K R401 10K R403 10K

D149 D142 D141

C255 0.01 C257 10#35 C250 22P C249 22P C247 100P C248 100P C245 0.01 C255 0.01 C256 39P C254 0.01 C253 39P R431 10K R432 10K R433 10K R434 10K R435 100 R436 100 R437 100 R438 100 R439 100 R440 100 R441 100 R442 100 R443 100 R444 100 R445 100 R446 100 R447 100 R448 100 R449 100 R450 100 R451 100 R452 100 R453 100 R454 100 R455 100 R456 100 R457 100 R458 100 R459 100 R460 100 R461 100 R462 100 R463 100 R464 100 R465 100 R466 100 R467 100 R468 100 R469 100 R470 100 R471 100 R472 100 R473 100 R474 100 R475 100 R476 100 R477 100 R478 100 R479 100 R480 100 R481 100 R482 100 R483 100 R484 100 R485 100 R486 100 R487 100 R488 100 R489 100 R490 100 R491 100 R492 100 R493 100 R494 100 R495 100 R496 100 R497 100 R498 100 R499 100 R500 100 R501 100 R502 100 R503 100 R504 100 R505 100 R506 100 R507 100 R508 100 R509 100 R510 100 R511 100 R512 100 R513 100 R514 100 R515 100 R516 100 R517 100 R518 100 R519 100 R520 100 R521 100 R522 100 R523 100 R524 100 R525 100 R526 100 R527 100 R528 100 R529 100 R530 100 R531 100 R532 100 R533 100 R534 100 R535 100 R536 100 R537 100 R538 100 R539 100 R540 100 R541 100 R542 100 R543 100 R544 100 R545 100 R546 100 R547 100 R548 100 R549 100 R550 100 R551 100 R552 100 R553 100 R554 100 R555 100 R556 100 R557 100 R558 100 R559 100 R560 100 R561 100 R562 100 R563 100 R564 100 R565 100 R566 100 R567 100 R568 100 R569 100 R570 100 R571 100 R572 100 R573 100 R574 100 R575 100 R576 100 R577 100 R578 100 R579 100 R580 100 R581 100 R582 100 R583 100 R584 100 R585 100 R586 100 R587 100 R588 100 R589 100 R590 100 R591 100 R592 100 R593 100 R594 100 R595 100 R596 100 R597 100 R598 100 R599 100 R600 100 R601 100 R602 100 R603 100 R604 100 R605 100 R606 100 R607 100 R608 100 R609 100 R610 100 R611 100 R612 100 R613 100 R614 100 R615 100 R616 100 R617 100 R618 100 R619 100 R620 100 R621 100 R622 100 R623 100 R624 100 R625 100 R626 100 R627 100 R628 100 R629 100 R630 100 R631 100 R632 100 R633 100 R634 100 R635 100 R636 100 R637 100 R638 100 R639 100 R640 100 R641 100 R642 100 R643 100 R644 100 R645 100 R646 100 R647 100 R648 100 R649 100 R650 100 R651 100 R652 100 R653 100 R654 100 R655 100 R656 100 R657 100 R658 100 R659 100 R660 100 R661 100 R662 100 R663 100 R664 100 R665 100 R666 100 R667 100 R668 100 R669 100 R670 100 R671 100 R672 100 R673 100 R674 100 R675 100 R676 100 R677 100 R678 100 R679 100 R680 100 R681 100 R682 100 R683 100 R684 100 R685 100 R686 100 R687 100 R688 100 R689 100 R690 100 R691 100 R692 100 R693 100 R694 100 R695 100 R696 100 R697 100 R698 100 R699 100 R700 100 R701 100 R702 100 R703 100 R704 100 R705 100 R706 100 R707 100 R708 100 R709 100 R710 100 R711 100 R712 100 R713 100 R714 100 R715 100 R716 100 R717 100 R718 100 R719 100 R720 100 R721 100 R722 100 R723 100 R724 100 R725 100 R726 100 R727 100 R728 100 R729 100 R730 100 R731 100 R732 100 R733 100 R734 100 R735 100 R736 100 R737 100 R738 100 R739 100 R740 100 R741 100 R742 100 R743 100 R744 100 R745 100 R746 100 R747 100 R748 100 R749 100 R750 100 R751 100 R752 100 R753 100 R754 100 R755 100 R756 100 R757 100 R758 100 R759 100 R760 100 R761 100 R762 100 R763 100 R764 100 R765 100 R766 100 R767 100 R768 100 R769 100 R770 100 R771 100 R772 100 R773 100 R774 100 R775 100 R776 100 R777 100 R778 100 R779 100 R780 100 R781 100 R782 100 R783 100 R784 100 R785 100 R786 100 R787 100 R788 100 R789 100 R790 100 R791 100 R792 100 R793 100 R794 100 R795 100 R796 100 R797 100 R798 100 R799 100 R800 100 R801 100 R802 100 R803 100 R804 100 R805 100 R806 100 R807 100 R808 100 R809 100 R810 100 R811 100 R812 100 R813 100 R814 100 R815 100 R816 100 R817 100 R818 100 R819 100 R820 100 R821 100 R822 100 R823 100 R824 100 R825 100 R826 100 R827 100 R828 100 R829 100 R830 100 R831 100 R832 100 R833 100 R834 100 R835 100 R836 100 R837 100 R838 100 R839 100 R840 100 R841 100 R842 100 R843 100 R844 100 R845 100 R846 100 R847 100 R848 100 R849 100 R850 100 R851 100 R852 100 R853 100 R854 100 R855 100 R856 100 R857 100 R858 100 R859 100 R860 100 R861 100 R862 100 R863 100 R864 100 R865 100 R866 100 R867 100 R868 100 R869 100 R870 100 R871 100 R872 100 R873 100 R874 100 R875 100 R876 100 R877 100 R878 100 R879 100 R880 100 R881 100 R882 100 R883 100 R884 100 R885 100 R886 100 R887 100 R888 100 R889 100 R890 100 R891 100 R892 100 R893 100 R894 100 R895 100 R896 100 R897 100 R898 100 R899 100 R900 100 R901 100 R902 100 R903 100 R904 100 R905 100 R906 100 R907 100 R908 100 R909 100 R910 100 R911 100 R912 100 R913 100 R914 100 R915 100 R916 100 R917 100 R918 100 R919 100 R920 100 R921 100 R922 100 R923 100 R924 100 R925 100 R926 100 R927 100 R928 100 R929 100 R930 100 R931 100 R932 100 R933 100 R934 100 R935 100 R936 100 R937 100 R938 100 R939 100 R940 100 R941 100 R942 100 R943 100 R944 100 R945 100 R946 100 R947 100 R948 100 R949 100 R950 100 R951 100 R952 100 R953 100 R954 100 R955 100 R956 100 R957 100 R958 100 R959 100 R960 100 R961 100 R962 100 R963 100 R964 100 R965 100 R966 100 R967 100 R968 100 R969 100 R970 100 R971 100 R972 100 R973 100 R974 100 R975 100 R976 100 R977 100 R978 100 R979 100 R980 100 R981 100 R982 100 R983 100 R984 100 R985 100 R986 100 R987 100 R988 100 R989 100 R990 100 R991 100 R992 100 R993 100 R994 100 R995 100 R996 100 R997 100 R998 100 R999 100 R1000 100





D51~57, 61~67 : 1SS133 or HSS104
100~125, 128, 129
138~140, 143~148
150~166
D141, 142, 149 : RD5.1ES (B) or HZS5.1N (B)

Q1~4, 54~57, 64, 65 : 2SC2878 (B)
Q11 : DTC124ES or UN4212
Q12, 50~53, 66 : DTA124ES or UN4112
Q58~63 : 2SC3311A (Q, R) or 2SC2458 (Y, GR)

IC1 : UPC4570C-A
IC2, 7 : LC7821N
IC3~6 : NJM4565D-D or NJM4560D-A
IC8 : LC7822N
IC20, 22 : LC7823N
IC21, 23, 24, 26 28, 30 : MC14577AP
IC25, 27 : TC40518P
IC29 : MM1067XD
IC31 : UPD6450X-514

COUNTRY ABB. / Ref.NO		C252	C276	C277	C278	R366	X1	X2
OTHER AREAS (M) AAFES, PX (Y) CANADA (P)	0-00	18P	3300P	2.2	0.022	390	L77-1182-05 (14.318180MHZ)	L78-0272-05 (504KHZ)
ENGLAND (T) EUROPE (E)	2-71	15P	4700P	1	0.047	220	L77-2107-05 (17.734475MHZ)	L78-0300-05 (500KHZ)

2SA1123
2SA954
2SA992
2SC1845
2SC2003
2SC2631
2SC2878

2SD1266

DTA124ES
DTC124ES
UN4112
2SA1048
2SC1740S
2SC2458

2SA1693LC
2SC4466LC

2SC4137

2SB1470*5
2SD2222*5

2SD2061

UN4212 2SA1309A
UN4219 2SC3311A

NJM4558D
NJM4560D-A
UPC1093J

NJM4565D-D

TC74HCU04AP
TC74HC74AP

LA2730
MM1067XD

TC4051BP
TC9213P

TA8409S

M6M80041P
UPC4570C-A

MC14577A

NJU3711D

UPC78L05J

TA78L005AP

2SK152

SM5840EP

LC7821N
LC7822N

SM5851AF

TC9162N

PCM1700U

UPD75216ACW-C60
UPD75216ACW-C89

LC83010N

TA7805S
TA7815S

UPC7908HF
UPC7915HF

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.

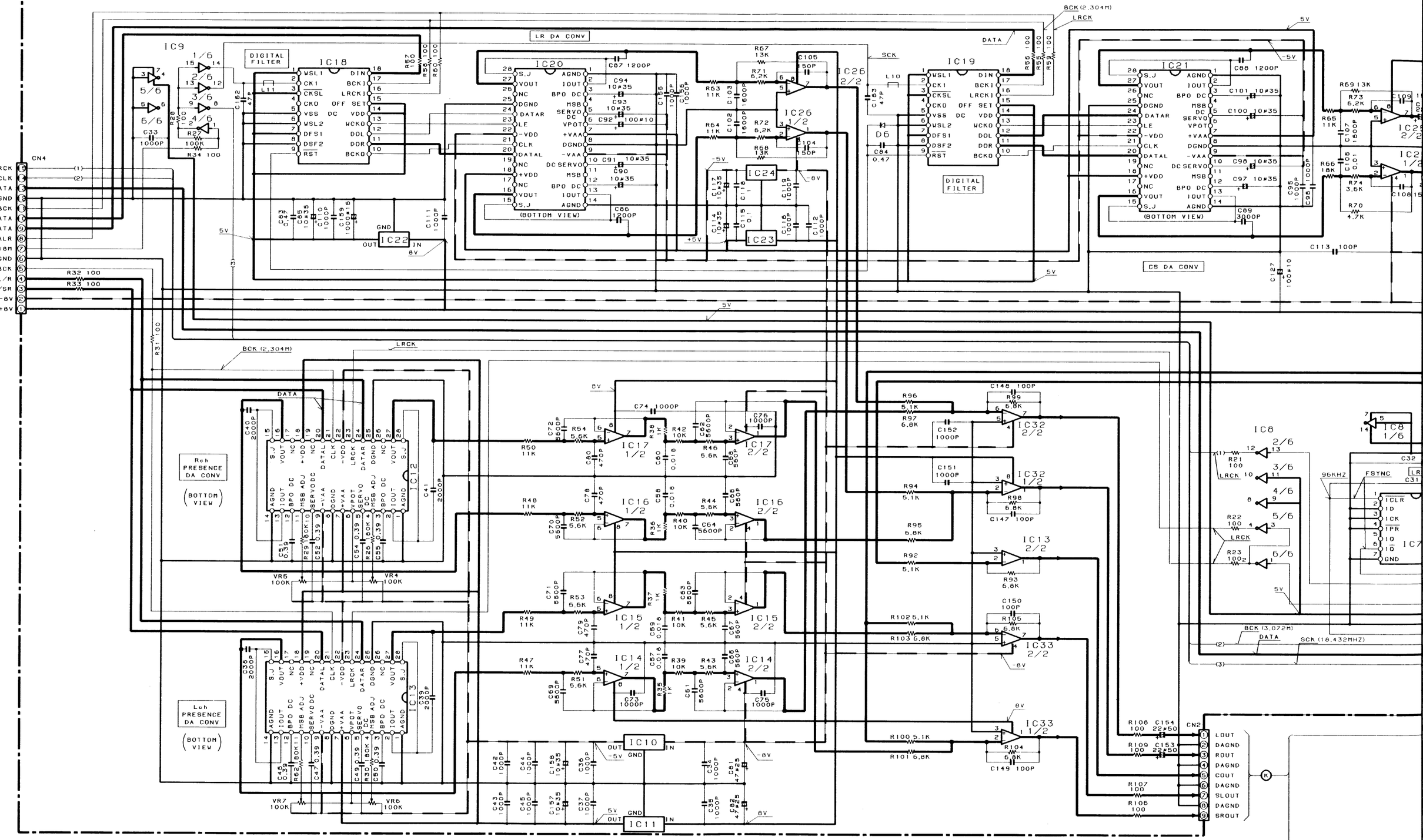
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser ohne Eingangssignal gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

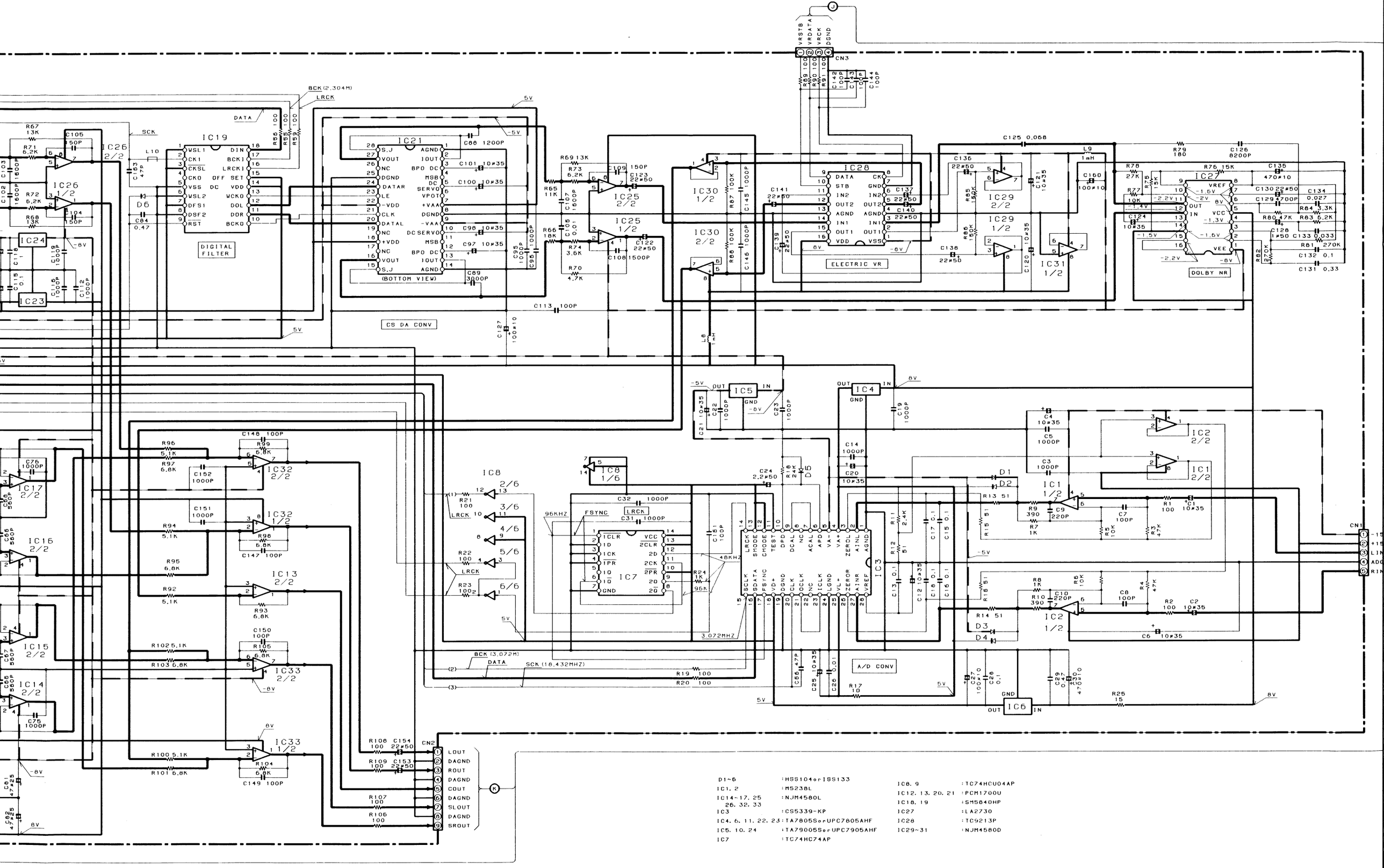
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

KA-V8500

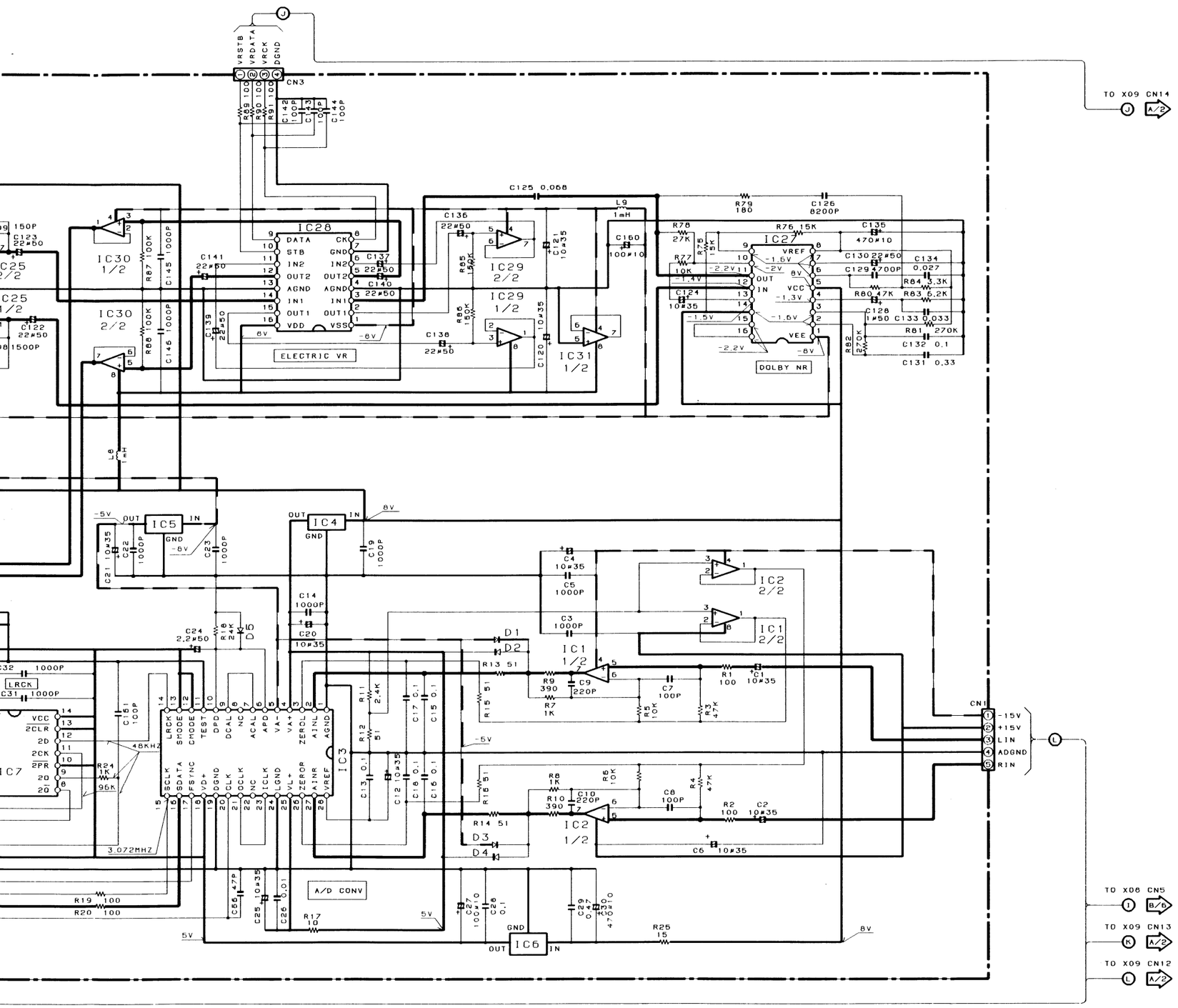
KENWOOD

X08-2490-00 A/6





D1~6	:HSS104orISS133	IC8. 9	:TC74HCU04AP
IC1. 2	:M5238L	IC12. 13. 20. 21	:PCM1700U
IC14~17. 25 26. 32. 33	:NJM4580L	IC18. 19	:SM5840HP
IC3	:CS5339-KP	IC27	:LA2730
IC4. 6. 11. 22. 23	:TA7805SorUPC7805AHF	IC28	:TC9213P
IC5. 10. 24	:TA79005SorUPC7905AHF	IC29~31	:NJM4580D
IC7	:TC74HC74AP		



D1~6	: HSS104 or 1SS133	IC8, 9	: TC74HCU04AP
IC1, 2	: M5238L	IC12, 13, 20, 21	: PCM1700U
IC14~17, 25 26, 32, 33	: NJM4560L	IC18, 19	: SM5840HP
IC3	: CS5339-KP	IC27	: LA2730
IC4, 6, 11, 22, 23	: TA7805S or UPC7805AHF	IC28	: TC9213P
IC5, 10, 24	: TA7900S or UPC7905AHF	IC29~31	: NJM4580D
IC7	: TC74HC74AP		

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KA-V8500

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X08-2490-00 B/6

IC40 1/6 2/6 3/6 4/6 5/6 6/6

IC34 IC35 IC36 IC37 IC38 IC39 IC40 IC41

Q1 Q2 Q3 Q4 Q5

X1 18.432MHz

OSC

AVR

DSP

RAM

DIGITAL PRO LOGIC

IC38 (BOTTOM VIEW)

CN5 CN6 CN7 CN8

TO X08 CN4

LRCK (48K)

BCK (3.072H)

DATA

BCK (2.304M)

SCK (18.432M)

IC37 IC36 IC35 RAM RAM

C182 1000P C181 10#50 C180 1000P C179 10#50 C188 1000P C191 10#50

IC39

IC38 (BOTTOM VIEW)

DIGITAL PRO LOGIC

CN6

CN10 X08 C/6

CN9

J2 J1 VH1 D35 D36

C1ch CENT SPEA C2ch Lch FRON SPEAK Rch

CN12 X08 E/6

CN11

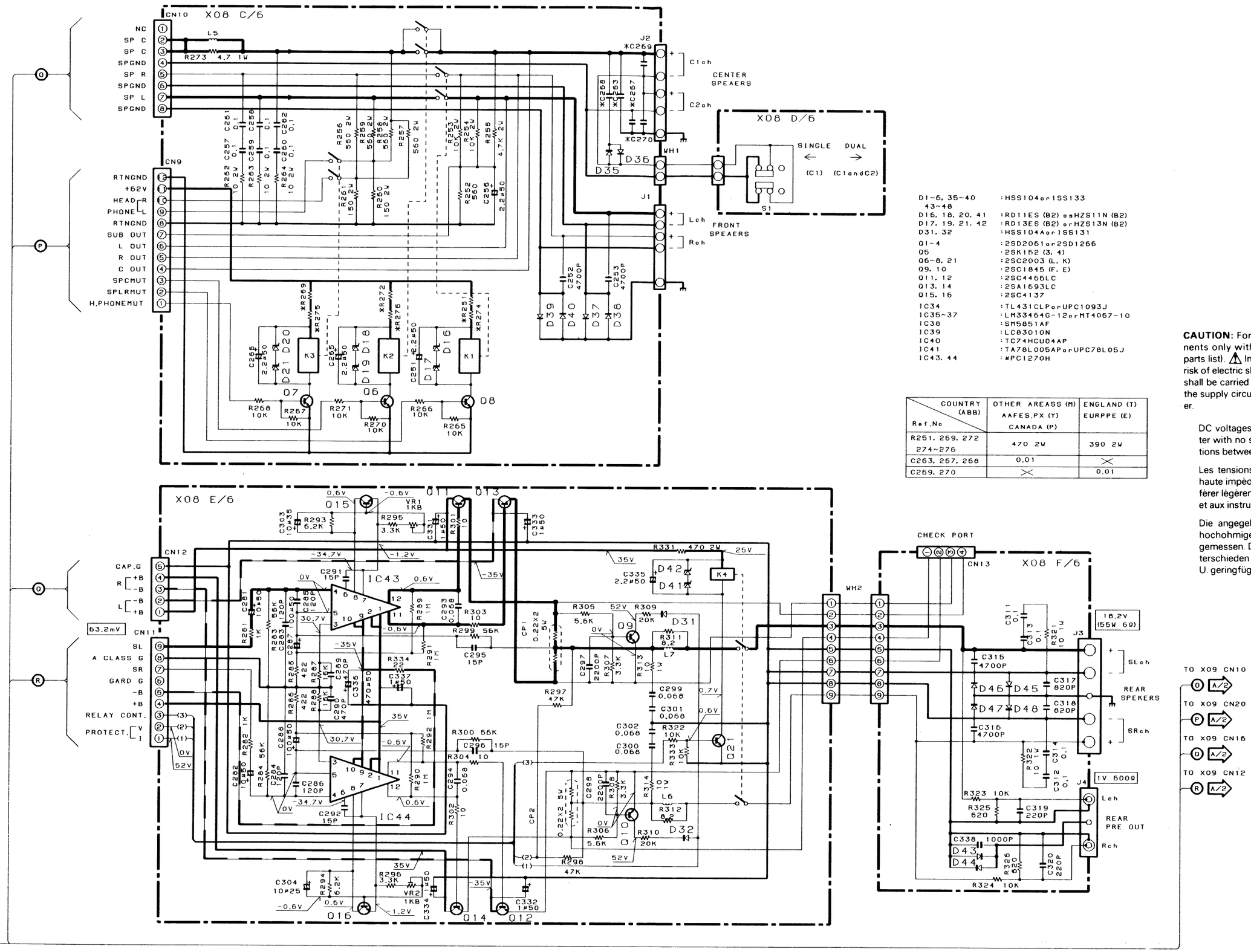
IC43 IC44

Q1 Q2 Q3 Q4 Q5 Q6 Q7 Q8 Q9 Q10 Q11 Q12 Q13 Q14 Q15 Q16

D16 D17 D18 D19 D20 D21 D31 D32 D36 D37 D38 D39 D40 D41 D42

K1 K2 K3 K4

L5 L6 L7



D1~6, 35~40 43~48	:HSS104 or 1SS133
D16, 18, 20, 41	:RD11ES (B2) or HZS11N (B2)
D17, 19, 21, 42	:RD13ES (B2) or HZS13N (B2)
D31, 32	:HSS104A or 1SS131
Q1~4	:2SD2061 or 2SD1266
Q5	:2SK152 (3, 4)
Q6~8, 21	:2SC2003 (L, K)
Q9, 10	:2SC1845 (F, E)
Q11, 12	:2SC4466LC
Q13, 14	:2SA1693LC
Q15, 16	:2SC4137
IC34	:TL431CLP or UPC1093J
IC35~37	:LM33464G-12 or MT4067-10
IC38	:SM5851AF
IC39	:LC83010N
IC40	:TC74HCU04AP
IC41	:TA78L005AP or UPC78L05J
IC43, 44	:#PC1270H

Ref.No \ COUNTRY (ABB)	OTHER AREASS (M) AAFES,PX (Y) CANADA (P)	ENGLAND (T) EURPPE (E)
R251, 269, 272 274~276	470 2W	390 2W
C263, 267, 268	0.01	×
C269, 270	×	0.01

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.

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KA-V8500
KENWOOD

09-349X-XX
A/2

X85-1190-06

SUB μ-COM.

15V AVR

FUNCTION SW

POWER RELAY

VIDEO

CENTER

L

R

FIRST OFF/PROTECT

SPEAKER SWITCH

BYPASS SWITCH

HEAD PHONE

AV AUX

COMPO

SITE

MAIN

SUBIMPOSE

NPC

SANYO

for TONE

D1. 2. 3. 6 : 1SS131 or HSS104A
D4. 12~19 : S5688B
D5 : RD15JS (B) or HZS15S (B
D7 : RD4.7ES (B) or HZS4.7N
D8. 9. 20~27 : 1SS133 or HSS104
Q1. 2. 10 : 2SC4137 F19 (V, W)
Q3. 4. 11 : 2SD2222*5
Q5. 6. 12 : 2SB1470*5
Q7. 8. 13 : 2SC1645 (F. E)
21, 22 : 2SA992 (F. E)
IC1, 5 : TA7815S or #PC7815AHF

X85-1190-06

CP5 100K*4

BYPASS SWITCH

15V AVR

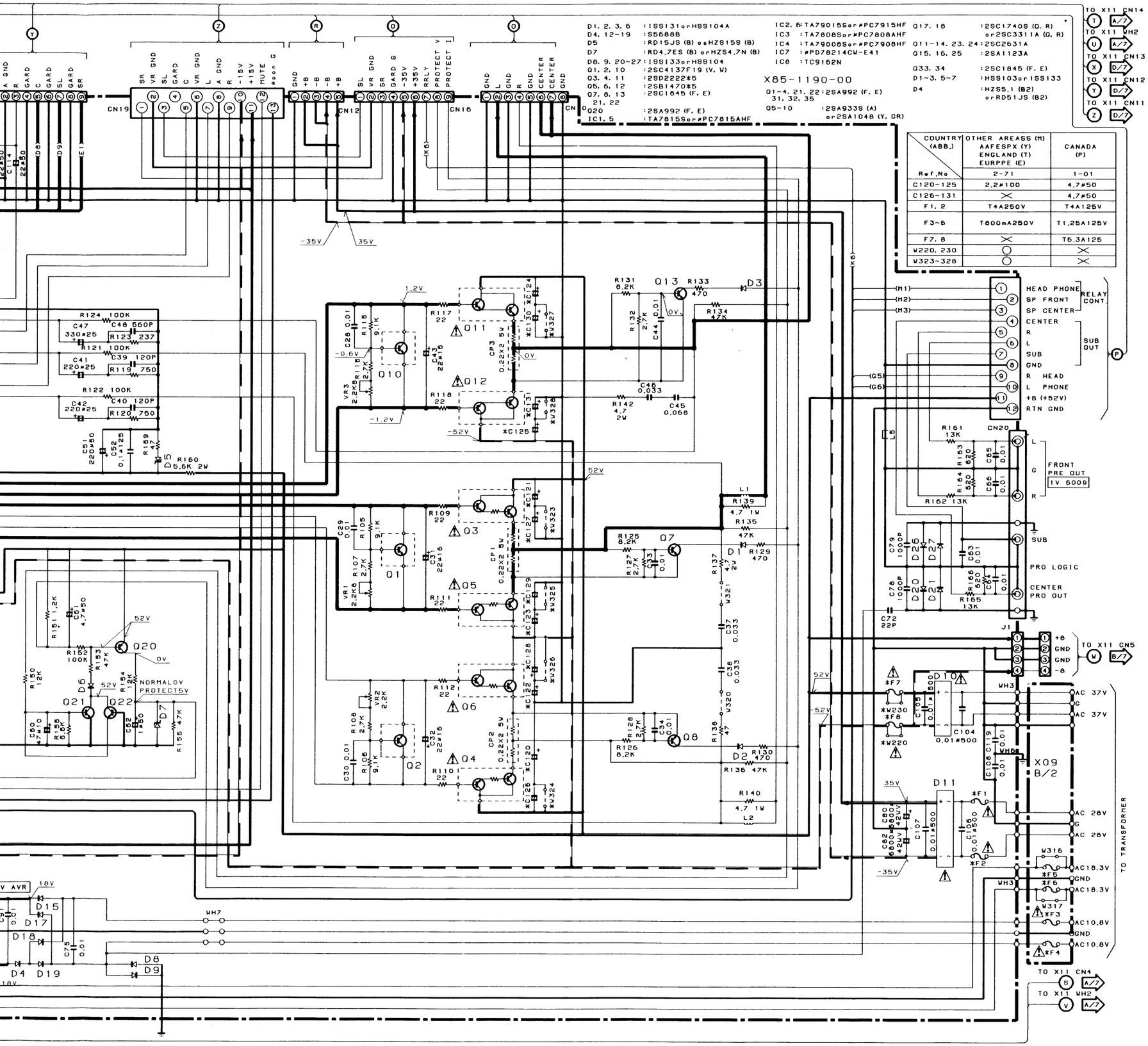
8V AVR

NORMAL 0V PROTECT 5V

FUNCTION SW

POWER RELAY

VIDEO



COUNTRY (ABB.) / Ref.No	OTHER AREASS (M) AAFESPX (Y) ENGLAND (T) EURPPE (E)	CANADA (P)
	2-71	1-01
C120~125	2.2*100	4.7*50
C126~131	×	4.7*50
F1, 2	T4A250V	T4A125V
F3~5	T800mA250V	T1.25A125V
F7, 8	×	T6.3A125
W220, 230	○	×
W323~328	○	×

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 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. geringfügig.

KA-V8500

KENWOOD

X11-319X-XX A/7

ED1

SPEAKERS | MOVIE 1 | MOVIE 2 | MOVIE 3 | ARENA | OPERA | CATHEDRAL
FRONT | JASS CLUB | STADIUM | NORMAL | WIDE | PHANOM
L R C | CINEMA SCREEN
REAR
L R 1 2 3
ms dB

MAIN μ-COM *IC4

IC1 :NJM4558D
IC2 :TA8409S
IC3. 7 :NJM4565D-D or NJM4560D-A
IC4 :μPD75216ACW-C60 or C89
IC5 :NJU3711D
IC6 :M6M80041P

Q1. 3 :2SB1370 (E. F. G)
Q2 :2SD2061 (E. F. G)
Q4 :2SA954 (L. K)
Q5. 14 :DTA113ZS or UN4119
Q6~10 :2SC2878 (B)
Q11 :DTA124ES or UN4112
Q12. 15 :DTC124ES or UN4212

Q13. 16 :2SC2458 (Y. GR) or2SC3311A (O. R)
Q17 :DTC113ZS or UN4219
Q18 :2SA1048 (Y. GR) or2SA1309A (O. R)
D1~8. 65. 70 :S5688B
D9 :RD6.8ES (B2) orHZS6.8N (B2)
D10. 12. 28. 50 :RD5.1ES (B2) orHZS5.1N (B2)
D13~27. 29~49 61~64. 66~69 :1SS133 or HSS104
D51 :1SS131 or HSS104A
D52~60 :B30-1012-05

			C81	C83	D17	F1	F2	F3	CN7. 8	CN9. 10	S11	S12	WH7. 8 10~13	WH9	
CANADA	P	1-01	0.01 250	×	×	6A 125V	×	×	×	×	×	×	×	×	E03
AAFES. PX	Y	2-91	0.01 250	×	×	T4A 250V	T4A 250V	×	×	×	O	S62-0001-05	O	×	E03
OTHER ARESS	M	0-21	×	0.01 250	×	T4A 250V	T4A 250V	×	O	×	O	S31-2322-05	O	O	E03
ENGLAND	T	0-51	×	0.01 250	O	T4A 250V	×	×	×	×	×	×	×	×	E03
EUROPE	E	2-71	×	0.01 250	O	T4A 250V	×	T2.5A 250V	×	O	×	×	×	×	E03

CK | CL | CM | CN | CO | CP | CQ | CR | CS | CT | CU

ED1

E 1 | MOVIE 2 | MOVIE 3 | ARENA | OPERA | CATHEDRAL
CLUB | STADIUM | NORMAL | WIDE | PHANOM
EMA
EEN
3
ms
dB
9G 8G 7G 6G 5G 4G 3G 2G 1G

MAIN μ-COM
*IC4
VDD VPRE VLOAD RESET I/O STB TSTART IMPCS EEPCS
RESENCE EPDI RED EPCLK EPDO TSY READY IRIAL BUSY DATA H MODE OWER ROT MPOSE BUSY RST SC SS

R135 100 R136 100 R161 100 R117 100 R116 100 R115 100 R114 100 R113 100 R110 47K
CP1 100KX7 D67 R105 D45 D46
C50 0.01 C51 1*35 R106 10 C52 0.047*50 C93 0.0047
D28 R109 68K R108 100K Q14 Q15 R70 750 R71 47K R72 4.7K R69 330 D56 POWER
D60 R65 390 SORROUND
D59 R66 390 3 STEREO
D58 R67 390 DSP
D57 R68 390 DSP LOGIC
D54 R69 390 AUDIO INJECTION
D53 R90 390 CD REC
D52 R91 390 SOUREC DIRECT
D55 R92 390 SPEAKERS
IC5 P3 VDD P4 P2 P5 P1 VSS CLR P6 STB P7 CLK P8 DATA
C19 1000P C53 0.01 C66 0.01 R158 1K
I/O PORT
(P32. 33) (P01. 31~35 41. 42)
5.6V 9.1V -32V AC4.9V
WH19 BUSY DATA μCOM GND +5.6V +9.1V -32V AC AC

WH17 C GND Y GND COMPOSITE +5.6V -5V
WH16
CN4
R L GND HEAD PHONE
C GND Y GND COMPOSITE +5.6V -5V AV AUX
+5V μ-COM G FOR SUB μ-COM
BUSY DI CLK DETSY IMPCS SCKMTO DTMTD TREADY TRED SRST TSTART PROTECT S IMPOSE
STANBY LED
-15V +15V FOR TONE
TO X09 CN15

X11 C/7
CN2 INPUT SEL +24V GND -24V SUB μ-COM POWER +5.6V VIDEO GND -5V
D2 C17 0.01 C11 470*35 C12 470*35 C18 0.01 D1
Q17 Q5 +9.1V R163 100 2W D7 D65 C20 0.01 D3 C21 0.01 D4 R4 82 1W C2 2200*16 C1 1000*16 C22 0.01 D5 C23 0.01 D6
R8 100 C7 0.047 Q1 R15 330 D10 IC1 1/2
C13 22*16 C4 470*6.3 D11 R13 9.1K R9 2.2K R11 2.4K R10 2.2K R12 2K
D12 IC1 2/2 C3 330*6.3 R14 9.1K C6 0.047 Q2 R16 330 R165 120 2W
D70 R7 4.7K -5.6V -9.1V
CN1 AC AC FL -32V RESET +9.1V μ-COM +5.6V GND DATA BUSY
C9 0.035 R3 10K D9 R6 24K Q4 C10 470*50 C67 0.01*500 R5 2.7K Q3 D8 -41V
R1 430 R2 430 AC4.9V
C14 220P C15 220P
J4 D13 D14 C16 470P
J2 J3
WH18
240V-120V *S11 X11 G/7 *W104 *W105 BACK UP TRANS T1
SYSTEM CONTROL

WH21 D61 D62 D16 0.001 PHONES J5
WH16 L GND R L3 C64 0.001P C65 1000P
AV AUX S-VIDEO J7 VIDEO L AUDIO R

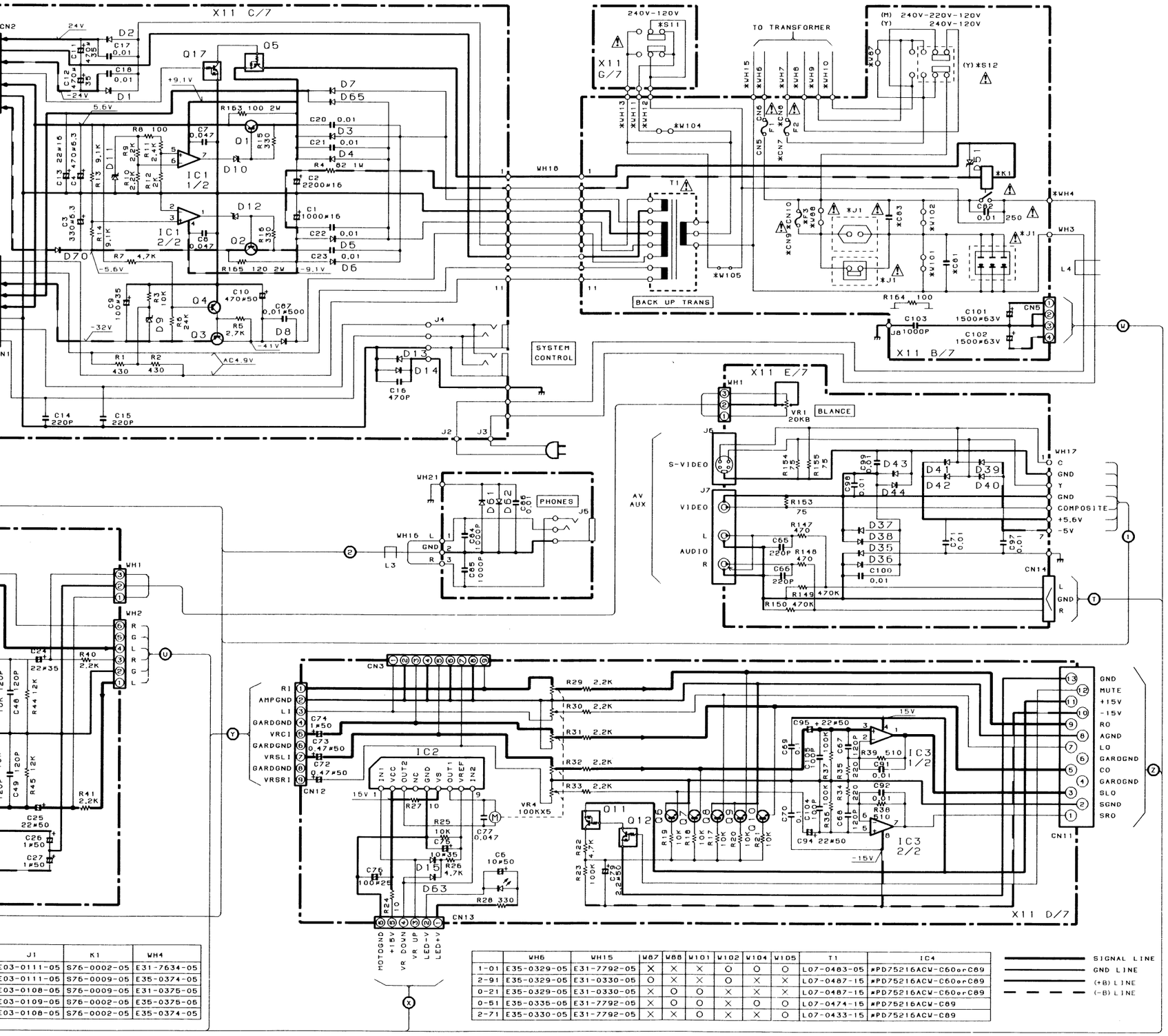
WH1 WH2 R G L R G L
TONE
R54 1.8K C86 22*50 R52 390 C34 22*50 C37 0.047 TREBLE VR2 5KB 1/2 BASS VR3 5KB 1/2 C32 22*50 R50 390 R46 1.5K C28 1*50 C30 1*50 C42 120P C24 22*35 R40 2.2K
R56 1.6K R58 3.3K R59 3.3K R57 1.6K C46 1000P C47 1000P C40 120P R42 10K C48 120P R44 12K
C33 22*50 R53 390 C31 1*50 C43 120P R43 10K C49 120P R45 12K R41 2.2K
C25 22*50 C26 1*50 C27 1*50 C29 1*50 C35 22*50 C38 0.047 R61 390 R55 1.6K C89 22*50 R156 22K C45 560P R157 22K C44 560P R60 390 C39 0.047 R63 390 C35 0.047 R51 390 C36 0.047 R64 390 R62 390 C37 0.047
IC7 1/2 IC7 2/2 15V -15V

CN3 R1 AMPGND L1 GARDGND VRC1 GARDGND VRSL1 GARDGND VRSR1 CN12
R29 2.2K R30 2.2K R31 2.2K R32 2.2K R33 2.2K
IC2 IN1 VCC OUT2 NC GND VS OUT1 VREF IN2
15V 1 R27 10 C77 0.047 VR4 100KX5
R25 10K C75 10*35 R26 4.7K C6 10*50 R28 330
C76 100*25 D15 D63 R24 10
Q11 Q12 R19 10K R18 10K R17 10K R20 10K R21 10K R22 4.7K R23 100K C60 2.2*50
CN13 MOTGND +15V VR DOWN VR UP LED-V LED+V

2SC2458 (Y, GR) or2SC3311A (Q, R)
DTC113ZS or UN4219
2SA1048 (Y, GR) or2SA1309A (Q, R)
55686B
RD6.8ES (B2) orHZS6.8N (B2)
RD5.1ES (B2) orHZS5.1N (B2)
SS133 or HSS104
SS131 or HSS104A
330-1012-05

			C81	C83	D17	F1	F2	F3	CN7. 8	CN9. 10	S11	S12	WH7. 8 10~13	WH9	J1	K1	WH4
CANADA	P	1-01	0.01 250	×	×	6A 125V	×	×	×	×	×	×	×	×	E03-0111-05	S76-0002-05	E31-7634-05
AAFES. PX	Y	2-91	0.01 250	×	×	T4A 250V	T4A 250V	×	×	×	O	S62-0001-05	O	×	E03-0111-05	S76-0009-05	E35-0374-05
OTHER ARESS	M	0-21	×	0.01 250	×	T4A 250V	T4A 250V	×	O	×	O	S31-2322-05	O	O	E03-0108-05	S76-0009-05	E31-0375-05
ENGLAND	T	0-51	×	0.01 250	O	T4A 250V	×	×	O	×	×	×	×	×	E03-0109-05	S76-0002-05	E35-0375-05
EUROPE	E	2-71	×	0.01 250	O	T4A 250V	×	T2.5A 250V	×	O	×	×	×	×	E03-0108-05	S76-0002-05	E35-0374-05

	WH6	WH15	W87	W88	W101	W102	W104
1-01	E35-0329-05	E31-7792-05	×	×	×	O	O
2-91	E35-0329-05	E31-0330-05	O	×	×	O	×
0-21	E35-0329-05	E31-0330-05	×	O	O	×	×
0-51	E35-0335-06	E31-7792-05	×	O	O	×	O
2-71	E35-0330-05	E31-7792-05	×	×	O	×	×



J1	K1	WH4
E03-0111-05	S76-0002-05	E31-7634-05
E03-0111-05	S76-0009-05	E35-0374-05
E03-0108-05	S76-0009-05	E31-0375-05
E03-0109-05	S76-0002-05	E35-0375-05
E03-0108-05	S76-0002-05	E35-0374-05

	WH6	WH15	W87	W88	W101	W102	W104	W105	T1	IC4
1-01	E35-0329-05	E31-7792-05	X	X	X	O	O	O	L07-0463-05	μPD75216ACW-C60or C89
2-91	E35-0329-05	E31-0330-05	O	X	X	O	O	X	L07-0487-15	μPD75216ACW-C60or C89
0-21	E35-0329-05	E31-0330-05	X	O	O	X	X	X	L07-0487-15	μPD75216ACW-C60or C89
0-51	E35-0335-05	E31-7792-05	X	O	O	X	O	O	L07-0474-15	μPD75216ACW-C89
2-71	E35-0330-05	E31-7792-05	X	X	O	X	X	O	L07-0433-15	μPD75216ACW-C89

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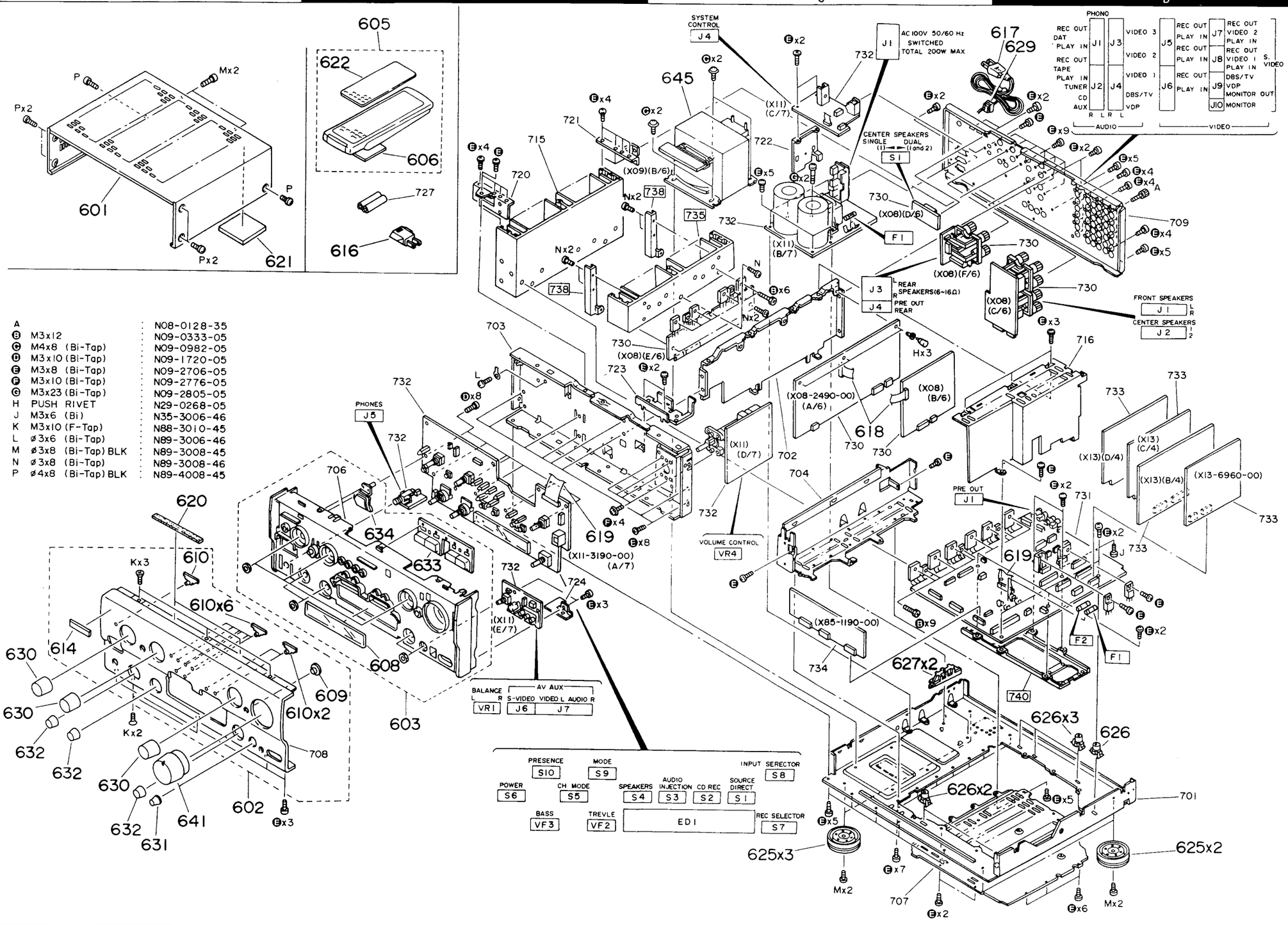
KA-V8500

KENWOOD

KA-V8500 KA-V8500

EXPLODED VIEW



A		N08-0128-35
B	M3x12	N09-0333-05
C	M4x8 (Bi-Tap)	N09-0982-05
D	M3x10 (Bi-Tap)	N09-1720-05
E	M3x8 (Bi-Tap)	N09-2706-05
F	M3x10 (Bi-Tap)	N09-2776-05
G	M3x23 (Bi-Tap)	N09-2805-05
H	PUSH RIVET	N29-0268-05
J	M3x6 (Bi)	N35-3006-46
K	M3x10 (F-Tap)	N88-3010-45
L	ø3x6 (Bi-Tap)	N89-3006-46
M	ø3x8 (Bi-Tap) BLK	N89-3008-45
N	ø3x8 (Bi-Tap)	N89-3008-46
P	ø4x8 (Bi-Tap) BLK	N89-4008-45

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

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

No.1

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
			KA-V8500			
601	1A	*	A01-1994-01	METALLIC CABINET		
602	3A	*	A60-0152-02	PANEL ASSY		
603	3B	*	A22-1529-12	SUB PANEL ASSY		
605	1B	*	A70-0570-05	REMOTE CONTROLLER ASSY		
606	1B		A09-0086-08	BATTERY COVER		
608	3B	*	B10-1894-04	FRONT GLASS		
609	3A		B11-0237-14	COLOR FILTER		
610	2A,3A	*	B12-0193-04	INDICATOR		
614	3A		B43-0287-04	KENWOOD BADGE		
-			B46-0094-03	WARRANTY CARD	Y	
-			B46-0095-03	WARRANTY CARD	Y	
-			B46-0121-13	WARRANTY CARD	P	
-		*	B46-0122-23	WARRANTY CARD	E	
-			B46-0143-13	WARRANTY CARD	T	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-		*	B60-0649-00	INSTRUCTION MANUAL(ENGLISH)		
-		*	B60-0651-00	INSTRUCTION MANUAL(DUT,ITA)	E	
-		*	B60-0658-00	INSTRUCTION MANUAL(GER,FRN)	EP	
-		*	B60-0659-00	INSTRUCTION MANUAL(SPA,CHI)	M	
⚠ 616	1B		E03-0115-05	AC PLUG ADAPTER	M	
⚠ 617	1D		E30-0459-05	AC POWER CORD	ME	
⚠ 617	1D		E30-0685-05	AC POWER CORD	Y	
⚠ 617	1D		E30-0974-05	AC POWER CORD	P	
⚠ 617	1D		E30-1416-05	AC POWER CORD	T	
618	2C		E35-0009-05	FLAT CABLE 15P(X08CN4-X08CN5)		
619	2B,2D	*	E35-0239-05	FLAT CABLE 27P(X09CN15-X11CN4)		
620	2A		G11-0191-04	SOFT TAPE (90X5X2.5)		
621	1A	*	G11-2109-14	CUSHION		
622	1B		G16-0756-08	REMOTE CONTROL UNIT ENTRYSHEET		
		*	H50-0186-04	ITEM CARTON CASE		
-		*	H10-5226-02	POLYSTYRENE FOAMED FIXTURE L		
-		*	H10-5227-02	POLYSTYRENE FOAMED FIXTURE R		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	MYEP	
-			H25-0319-04	PROTECTION BAG (850X450X0.03)	MYEP	
-			H25-0654-04	PROTECTION BAG (0225 PRINTED)	T	
-			H25-0657-04	PROTECTION BAG (0232 PRINTED)	T	
625	3C,3D		J02-1072-05	FOOT		
626	3C,3D		J19-3179-05	UNIT HOLDER		
627	3C		J19-3314-04	HOLDER		
⚠ 629	1D		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		
630	3A	*	K29-4312-04	KNOB PRESENCE,MODE,INPUTSELECT	OR	
631	3A	*	K29-4313-04	KNOB BALANCE		
632	3A	*	K29-4314-04	KNOB BASS,TREBLE,VIDEO REC		
633	2B	*	K29-4315-03	KNOB SPEAKERS,CD REC		
634	2B	*	K29-4317-04	KNOB POWER		
641	3A	*	K29-4340-04	KNOB VOLUME CONTROL		
⚠ 645	1C	*	L07-0430-05	POWER TRANSFORMER	T	
⚠ 645	1C	*	L07-0431-05	POWER TRANSFORMER	E	
⚠ 645	1C	*	L07-0436-05	POWER TRANSPORMER	M	
645	1C	*	L07-0484-05	POWER TRANSFORMER	P	

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

SURROUN UNIT

Unit No	Destination
X08-2490-00	M,Y,T,E,P

AUDIO UNIT

X09-3491-01	P
X09-3492-71	M,Y,T,E

CONTROL UNIT

X11-3190-21	M
X11-3190-51	T
X11-3192-01	P
X11-3192-71	E
X11-3192-91	Y

ACCESSORY UNIT

X13-6960-00	M,Y,P
X13-6962-71	T,E

MAIN AMPLIFIER UNIT

X85-1190-06	M,Y,T,E,P

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

No.2

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
645	1C	*	L07-0488-05	POWER TRANSFORMER	Y	
-		*	L92-0035-05	FERRITE CORE		
-		*	L92-0036-05	FERRITE CORE		
A	1D		N08-0128-35	BINDING POST (EARTH)		
B	2C		N09-0333-05	TAPPING SCREW (3X12)		
C	1C		N09-0982-05	TAPTITE SCREW (M4X8,+TP)		
D	2B		N09-1720-05	TAPTITE SCREW (3X10)		
E	1B		N09-2706-05	TAPTITE SCREW		
F	2B		N09-2776-05	SEMS (TAPTITE SCREW)		
G	1C		N09-2805-05	TAPTITE SCREW		
H	2C		N29-0268-05	PUSH RIVET		
K	3A		N88-3010-45	FLAT HEAD TAPTITE SCREW		
L	2B		N89-3006-46	BINDING HEAD TAPTITE SCREW		
M	1A,3D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
P	1A		N89-4008-45	BINDING HEAD TAPTITE SCREW		
			SURROUND UNIT (X08-2490-00)			
C1 ,2			C90-1794-05	ELECTRO 10UF 35WV		
C3			CK45FB1H102K	CERAMIC 1000PF K		
C4			CE04KW1V100M	ELECTRO 10UF 35WV		
C5			CK45FB1H102K	CERAMIC 1000PF K		
C6			CE04KW1V100M	ELECTRO 10UF 35WV		
C7 ,8			CF92FV1H101K	MF 100PF K		
C9 ,10			CF92FV1H221K	MF 220PF K		
C12			CE04KW1V100M	ELECTRO 10UF 35WV		
C13			CF92FV1H104J	MF 0.10UF J		
C14			CK45FB1H102K	CERAMIC 1000PF K		
C15 -18			CF92FV1H104J	MF 0.10UF J		
C19			CK45FB1H102K	CERAMIC 1000PF K		
C20 ,21			CE04KW1V100M	ELECTRO 10UF 35WV		
C22 ,23			CK45FB1H102K	CERAMIC 1000PF K		
C24			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C25			CE04KW1V100M	ELECTRO 10UF 35WV		
C26			CF92FV1H103J	MF 0.010UF J		
C27			CE04KW1A101M	ELECTRO 100UF 10WV		
C28			CF92FV1H104J	MF 0.10UF J		
C29			CF92FV1H474J	MF 0.47UF J		
C30			CE04KW1A471M	ELECTRO 470UF 10WV		
C31 -37			CK45FB1H102K	CERAMIC 1000PF K		
C38 -41			CF92FV1H202J	MF 2000PF J		
C42 -45			CK45FB1H102K	CERAMIC 1000PF K		
C46 ,47			CF92FV1H394J	MF 0.39UF J		
C49 -52			CF92FV1H394J	MF 0.39UF J		
C54 ,55			CF92FV1H394J	MF 0.39UF J		
C56			CC45FSL1H470J	CERAMIC 47PF J		
C57 -60			CF92FV1H183J	MF 0.018UF J		
C61 -64			CF92FV1H562J	MF 5600PF J		
C65 -68			CF92FV1H561J	MF 560PF J		
C69 -72			CF92FV1H562J	MF 5600PF J		
C73 -76			CK45FB1H102K	CERAMIC 1000PF K		
C77 -80			CF92FV1H471J	MF 470PF J		
C81 ,82			CE04KW1E470M	ELECTRO 47UF 25WV		
C83 ,84			CF92FV1H474J	MF 0.47UF J		
C85			CE04KW1V100M	ELECTRO 10UF 35WV		
C86 -88			CF92FV1H122J	MF 1200PF J		

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No.3

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C89			CF92FV1H302J	MF 3000PF J		
C90 ,91			CE04KW1V100M	ELECTRO 10UF 35WV		
C92			CE04KW1A101M	ELECTRO 100UF 10WV		
C93 ,94			CE04KW1V100M	ELECTRO 10UF 35WV		
C95 ,96			CK45FB1H102K	CERAMIC 1000PF K		
C97 ,98			CE04KW1V100M	ELECTRO 10UF 35WV		
C100,101			CE04KW1V100M	ELECTRO 10UF 35WV		
C102,103			CF92FV1H162J	MF 1600PF J		
C104,105			CF92FV1H151K	MF 150PF K		
C106			CF92FV1H103J	MF 0.010UF J		
C107			CF92FV1H162J	MF 1600PF J		
C108			CF92FV1H152J	MF 1500PF J		
C109			CF92FV1H151K	MF 150PF K		
C110-113			CK45FB1H102K	CERAMIC 1000PF K		
C114			CE04KW1V100M	ELECTRO 10UF 35WV		
C115,116			CK45FB1H102K	CERAMIC 1000PF K		
C117			CE04KW1V100M	ELECTRO 10UF 35WV		
C118,119			CK45FB1H102K	CERAMIC 1000PF K		
C120,121			CE04KW1V100M	ELECTRO 10UF 35WV		
C122,123			CE04KW1H220M	ELECTRO 22UF 50WV		
C124			CE04KW1V100M	ELECTRO 10UF 35WV		
C125			CF92FV1H683J	MF 0.06BUF J		
C126			CF92FV1H822J	MF 8200PF J		
C127			CE04KW1A101M	ELECTRO 100UF 10WV		
C128			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C129			CF92FV1H472J	MF 4700PF J		
C130			CE04KW1H220M	ELECTRO 22UF 50WV		
C131			CF92FV1H334J	MF 0.33UF J		
C132			CF92FV1H104J	MF 0.10UF J		
C133			CF92FV1H333J	MF 0.033UF J		
C134			CF92FV1H273J	MF 0.027UF J		
C135			CE04KW1A471M	ELECTRO 470UF 10WV		
C136-141			CE04KW1H220M	ELECTRO 22UF 50WV		
C142-144			CC45FSL1H101J	CERAMIC 100PF J		
C145,146			CK45FB1H102K	CERAMIC 1000PF K		
C147-150			CF92FV1H101K	MF 100PF K		
C151,152			CK45FB1H102K	CERAMIC 1000PF K		
C153,154			CE04KW1H220M	ELECTRO 22UF 50WV		
C155,156			CK45FB1H102K	CERAMIC 1000PF K		
C157,158			CE04KW1V100M	ELECTRO 10UF 35WV		
C159			CE04KW1C102M	ELECTRO 1000UF 16WV		
C160			CE04KW1A101M	ELECTRO 100UF 10WV		
C161			CC45FSL1H101J	CERAMIC 100PF J		
C162,163			CC45FSL1H470J	CERAMIC 47PF J		
C179			CE04KW1H220M	ELECTRO 22UF 50WV		
C180			CK45FB1H102K	CERAMIC 1000PF K		
C181			CE04KW1H220M	ELECTRO 22UF 50WV		
C182			CK45FB1H102K	CERAMIC 1000PF K		
C183			CE04KW1H220M	ELECTRO 22UF 50WV		
C184			CK45FB1H102K	CERAMIC 1000PF K		
C185			CE04KW1H220M	ELECTRO 22UF 50WV		
C186			CK45FB1H102K	CERAMIC 1000PF K		
C187			CE04KW1A471M	ELECTRO 470UF 10WV		
C188,189			CK45FB1H102K	CERAMIC 1000PF K		
C190,191			CE04KW1H220M	ELECTRO 22UF 50WV		

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PARTS LIST KA-V8500

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No.4

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C192			CC45FSL1H220J	CERAMIC 22PF J		
C193-195			CC45FSL1H470J	CERAMIC 47PF J		
C196			CF92FV1H104J	MF 0.10UF J		
C197			CE04KW1E470M	ELECTRO 47UF 25WV		
C198,199			CK45FB1H102K	CERAMIC 1000PF K		
C200			CE04KW1V100M	ELECTRO 10UF 35WV		
C201			CK45FB1H102K	CERAMIC 1000PF K		
C202			CC45FSL1H470J	CERAMIC 47PF J		
C203,204			CC45FSL1H331J	CERAMIC 330PF J		
C205			CE04KW1E470M	ELECTRO 47UF 25WV		
C206			CE04KW1C471M	ELECTRO 470UF 16WV		
C208			CC45FSL1H101J	CERAMIC 100PF J		
C251			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C252,253			CF92FV1H472J	MF 4700PF J		
C256			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C257-262			CF92FV1H104J	MF 0.10UF J		
C263			CF92FV1H103J	MF 0.010UF J		
C265,266			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C267,268			CF92FV1H103J	MF 0.010UF J		
C281,282			CE04KW1H100M	ELECTRO 10UF 50WV		
C283,284			CF92FV1H121K	MF 120PF K		
C285,286			CC45FSL1H121J	CERAMIC 120PF J		
C287,288			CE04KW1H101M	ELECTRO 100UF 50WV		
C289,290			CK45FB1H471K	CERAMIC 470PF K		
C291,292			CC45FSL1H150J	CERAMIC 15PF J		
C293,294			CF92FV1H683J	MF 0.068UF J		
C295,296			CC45FSL1H150J	CERAMIC 15PF J		
C297,298			CK45FB1H222K	CERAMIC 2200PF K		
C299-302			CF92FV1H683J	MF 0.068UF J		
C303,304			CE04KW1V100M	ELECTRO 10UF 35WV		
C311-314			CF92FV1H104J	MF 0.10UF J		
C315,316			CF92FV1H472J	MF 4700PF J		
C317,318			CF92FV1H821J	MF 820PF J		
C319,320			CC45FSL1H221J	CERAMIC 220PF J		
C331-334			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C335			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C336			CE04KW1H471M	ELECTRO 470UF 50WV		
C337			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C338			CK45FB1H102K	CERAMIC 1000PF K		
J1 ,2		*	E70-0010-05	SCREW TERMINAL BOARD F-SPEAKER		
J3		*	E70-0009-05	SCREW TERMINAL BOARD R-SPEAKER		
J4		*	E63-0044-05	PHONO JACK REAR PREOUT		
L4			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L5 -7			L39-0085-05	PHASE-COMPENSATION COIL		
L8 ,9			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
X1			L77-1185-05	CRYSTAL RESONATOR 18.432MHz		
B	1C		N09-0333-05	TAPPING SCREW (3X12)		
J	2C		N35-3008-46	BINDING HEAD MACHIN SCREW		
N	1B,1C		N89-3008-46	BINDING HEAD TAPTITE SCREW		
CP1 ,2			R90-0B26-05	MULTI-COMP 0.22X2 J 5W		
R25			RD14AB2E150JTS	FL-PROOF RD 15 J 1/4W		
R190,191			RS14DB3D6B0JTE	FL-PROOF RS 6B J 2W		
R208			RS14DB3D6B0JTE	FL-PROOF RS 6B J 2W		
R209			RD14AB2E221JTS	FL-PROOF RD 220 J 1/4W		

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No.5

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
R210			RS14KB3A2R7JTE	FL-PROOF RS 2.7 J 1W		
R251			RS14DB3D391JTE	FL-PROOF RS 390 J 2W	TE	
R251			RS14DB3D471JTE	FL-PROOF RS 470 J 2W	MYP	
R253,254		*	RS14DB3D103JTE	FL-PROOF RS 10K J 2W		
R255		*	RS14DB3D472JTE	FL-PROOF RS 4.7K J 2W		
R256-259			RS14DB3D561JTE	FL-PROOF RS 560 J 2W		
R260,261			RS14DB3D151JTE	FL-PROOF RS 150 J 2W		
R262-264			RS14DB3D100JTE	FL-PROOF RS 10 J 2W		
R269			RS14DB3D391JTE	FL-PROOF RS 390 J 2W	TE	
R269			RS14DB3D471JTE	FL-PROOF RS 470 J 2W	MYP	
R272			RS14DB3D391JTE	FL-PROOF RS 390 J 2W	TE	
R272			RS14DB3D471JTE	FL-PROOF RS 470 J 2W	MYP	
R273		*	RS14DB3A4R7JTE	FL-PROOF RS 4.7 J 1W		
R274-276			RS14DB3D391JTE	FL-PROOF RS 390 J 2W	TE	
R274-276			RS14DB3D471JTE	FL-PROOF RS 470 J 2W	MYP	
R285,286			RN14BK2C4220FTS	RN 422.0 F 1/6W		
R301-304		*	RD14AB2E100JTS	FL-PROOF RD 10 J 1/4W		
R311,312			RD14AB2E8R2JTS	FL-PROOF RD 8.2 J 1/4W		
R313,314			RS14DB3A100JTE	FL-PROOF RS 10 J 1W		
R321,322			RS14DB3A100JTE	FL-PROOF RS 10 J 1W		
R331			RS14DB3D471JTE	FL-PROOF RS 470 J 2W		
R334			RD14AB2E220JTS	FL-PROOF RD 22 J 1/4W		
VR1 ,2			R12-1084-05	TRIM POT 1K		
VR3 -7			R12-5422-05	TRIMMING POT		
K1 ,2			S51-2092-05	MAGNETIC RELAY		
K3			S51-2090-05	MICRO SWITCH		
K3 ,4			S76-0005-05	MAGNETIC RELAY		
K4			S76-0005-05	MAGNETIC RELAY		
⚠ S1			S31-2128-05	SLIDE SWITCH S-SPEAKER SELECT		
D1 -6			HSS104	DIODE		
D1 -6			1SS133	DIODE		
D16			HZS11N(B2)	ZENER DIODE		
D16			RD11ES(B2)	ZENER DIODE		
D17			HZS13N(B2)	ZENER DIODE		
D17			RD13ES(B2)	ZENER DIODE		
D18			HZS11N(B2)	ZENER DIODE		
D18			RD11ES(B2)	ZENER DIODE		
D19			HZS13N(B2)	ZENER DIODE		
D19			RD13ES(B2)	ZENER DIODE		
D20			HZS11N(B2)	ZENER DIODE		
D20			RD11ES(B2)	ZENER DIODE		
D21			HZS13N(B2)	ZENER DIODE		
D21			RD13ES(B2)	ZENER DIODE		
D31 ,32			HSS104A	DIODE		
D31 ,32			1SS131	DIODE		
D41			HZS11N(B2)	ZENER DIODE		
D41			RD11ES(B2)	ZENER DIODE		
D42			HZS13N(B2)	ZENER DIODE		
D42			RD13ES(B2)	ZENER DIODE		
D43 ,44			HSS104	DIODE		
D43 ,44			1SS133	DIODE		
IC1 ,2			M5238L	IC(DUAL OP AMP)		
IC3			CS5339-KP	IC(A/D CONVERTER)		
IC4			TA7805S	IC(VOLTAGE REGULATOR/ +5V)		

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No.6

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
IC4			UPC7805AHF	IC(VOLTAGE REGULATOR)		
IC5			TA79005S	IC(VOLTAGE REGULATOR)		
IC5		*	UPC7905AHF	IC(VOLTAGE REGULATOR/ -5V)		
IC6			TA7805S	IC(VOLTAGE REGULATOR/ +5V)		
IC6			UPC7805AHF	IC(VOLTAGE REGULATOR)		
IC7			TC74HC74AP	IC(DUAL D-TYPE FLIP FLOP)		
IC8 ,9			TC74HCU04AP	IC(CMOS INVERTER)		
IC10			TA79005S	IC(VOLTAGE REGULATOR)		
IC10		*	UPC7905AHF	IC(VOLTAGE REGULATOR/ -5V)		
IC11			TA7805S	IC(VOLTAGE REGULATOR/ +5V)		
IC11			UPC7805AHF	IC(VOLTAGE REGULATOR)		
IC12,13			PCM1700U	IC(D/A CONVETER)		
IC14-17			NJM4580L	IC(OP AMP)		
IC18,19			SM5840EP	IC(DIGITAL FILTER)		
IC20,21			PCM1700U	IC(D/A CONVETER)		
IC22,23			TA7805S	IC(VOLTAGE REGULATOR/ +5V)		
IC22,23			UPC7805AHF	IC(VOLTAGE REGULATOR)		
IC24			TA79005S	IC(VOLTAGE REGULATOR)		
IC24		*	UPC7905AHF	IC(VOLTAGE REGULATOR/ -5V)		
IC25,26			NJM4580L	IC(OP AMP)		
IC27			LA2730	IC(DOLBY SYSTEM)		
IC28			TC9213P	IC(2CH ELECTRONIC VOLUME)		
IC29-31			NJM4580D	IC(OP AMP X2)		
IC32,33			NJM4580L	IC(OP AMP)		
IC34			TL431CLP	IC(REGULATOR)		
IC34			UPC1093J	IC(REGULATOR)		
IC35-37			LM33464G-12	IC(D RAM)		
IC35-37			MT4067-10	IC(64KX4 DYNAMIC RAM)		
IC38		*	SM5851AF	IC(DIGITAL SIGNAL PROCESSOR)		
IC39			LC83010N	IC(DIGITAL SIGNAL PROCESSOR)		
IC40			TC74HCU04AP	IC(CMOS INVERTER)		
IC41			TA78L005AP	IC(VOLTAGE REGULATOR/ +5V)		
IC41			UPC78L05J	IC(VOLTAGE REGULATOR/ +5V)		
IC43,44			UPC1270H	IC(POWER AMP DRIVER)		
Q1 -4			2SD1266	TRANSISTOR		
Q1 -4			2SD2061	TRANSISTOR		
Q5			2SK152(3,4)	FET		
Q6 -8			2SC2003(L,K)	TRANSISTOR		
Q9 ,10			2SC1845(F,E)	TRANSISTOR		
Q11 ,12			2SC4466LC	TRANSISTOR		
Q13 ,14			2SA1693LC	TRANSISTOR		
Q15 ,16			2SC4137	TRANSISTOR		
Q21			2SC2003(L,K)	TRANSISTOR		
AUDIO UNIT (X09-3491-01:P,2-71:M,Y,T,E)						
C1			CE04KW1A470M	ELECTRO 47UF 10WV		
C2 ,3			CK45FF1H103Z	CERAMIC 0.010UF Z		
C4			CF92FV1H101K	MF 100PF K		
C28 -30			CF92FV1H103J	MF 0.010UF J		
C31 ,32			CE04KW1C220M	ELECTRO 22UF 16WV		
C33 ,34			CF92FV1H103J	MF 0.010UF J		
C35 -38			CF92FV1H683J	MF 0.068UF J		
C39 ,40			CF92FV1H121K	MF 120PF K		
C41 ,42			CE04KW1E221M	ELECTRO 220UF 25WV		
C43			CE04KW1C220M	ELECTRO 22UF 16WV		

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No.7

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
C44			CF92FV1H103J	MF 0.010UF J		
C45 ,46			CF92FV1H683J	MF 0.068UF J		
C47			CE04KW1C331M	ELECTRO 330UF 16WV		
C48			CF92FV1H561J	MF 560PF J		
C51		*	C90-1927-05	ELECTRO 220UF 50WV		
C52		*	C91-1445-05	POLYPRO 0.10UF K		
C60			CE04KW1A470M	ELECTRO 47UF 10WV		
C61			CE04KW1H4R7M	ELECTRO 4.7UF 50WV		
C62			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C63 -66			CF92FV1H103J	MF 0.010UF J		
C70			CF92FV1H103J	MF 0.010UF J		
C73 ,74			CF92FV1H102J	MF 1000PF J		
C75			CF92FV1H103J	MF 0.010UF J		
C76 -79			CF92FV1H102J	MF 1000PF J		
C80 ,81			C90-1233-05	ELECTRO 6800UF 42WV		
C82 ,83			CE04KW1E102M	ELECTRO 1000UF 25WV		
C84 ,85			CE04KW1C222M	ELECTRO 2200UF 16WV		
C86 ,87			CE04KW1C101M	ELECTRO 100UF 16WV		
C88 ,89			CE04KW1A102M	ELECTRO 1000UF 10WV		
C90 ,91			CF92FV1H103J	MF 0.010UF J		
C92 -95			CF92FV1H102J	MF 1000PF J		
C96 ,97			CE04KW1C101M	ELECTRO 100UF 16WV		
C98 -101			CF92FV1H102J	MF 1000PF J		
C102,103			CE04KW1A101M	ELECTRO 100UF 10WV		
C104-107			CK45FB2H103P	CERAMIC 0.010UF P		
C108			CF92FV1H103J	MF 0.010UF J		
C109,110			CF92FV1H102J	MF 1000PF J		
C111-114			CE04KW1H220M	ELECTRO 22UF 50WV		
C115,116			CF92FV1H102J	MF 1000PF J		
C117,118			CF92FV1H221K	MF 220PF K		
C119			CF92FV1H103J	MF 0.010UF J		
C120-125			CE04KW2A2R2M	ELECTRO 2.2UF 100WV	MYTE	
C120-131			CE04KW1H4R7M	ELECTRO 4.7UF 50WV	P	
J1			B13-1403-05	PHONO JACK F-PREOUT,PROLOGIC		
F1 ,2			F05-4025-05	FUSE (SEMKO) (250V T4A)	MYTE	
F1 ,2			F05-4028-05	FUSE (UL)	P	
F3 -6			F53-0015-05	FUSE(SEMKO)	MYTE	
F3 -6			F53-0031-05	FUSE(UL)	P	
F7 ,8		*	F53-0038-05	FUSE(UL)	P	
CN21-24			J13-0075-05	FUSE CLIP		
J4 -7			J11-0098-05	WIRE CLAMPER		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
L4			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L5			L92-0017-05	FERRITE CORE		
X1			L78-0277-05	RESONATOR 4.19MHz		
J	2D		N35-3008-46	BINDING HEAD MACHIN SCREW		
M	2D		N89-3008-45	BINDING HEAD TAPTITE SCREW		
N	2D		N89-3008-46	BINDING HEAD TAPTITE SCREW		
CP1 -3			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
CP4			R90-0487-05	MULTI-COMP 47KX4 J 1/6W		
CP5 ,6			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP7 ,8		*	R90-0885-05	MULTIPLE RESISTOR		
R109,110			RD14AB2E220JTS	FL-PROOF RD 22 J 1/4W		

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No.8

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
R111			RD14GB2E220JTS	FL-PROOF RD 22 J 1/4W		
R112			RD14AB2E220JTS	FL-PROOF RD 22 J 1/4W		
R117,118			RD14AB2E220JTS	FL-PROOF RD 22 J 1/4W		
R119,120		*	RN14BK2C7500FTS	RN 750.0 F 1/6W		
R123			RN14BK2C2370FTS	RN 237.0 F 1/6W		
R137,138			RS14DB3D4R7JTE	FL-PROOF RS 4.7 J 2W		
R139,140		*	RS14DB3A4R7JTE	FL-PROOF RS 4.7 J 1W		
R142			RS14DB3D4R7JTE	FL-PROOF RS 4.7 J 2W		
R159		*	RN14BK2E47R0FTS	RN 47.0 F 1/4W		
R160		*	RS14DB3D562JTE	FL-PROOF RS 5.6K J 2W		
R180-181			RS14DB3D820JTE	FL-PROOF RS 82 J 2W		
R182			RS14DB3D101JTE	FL-PROOF RS 100 J 2W		
VR1 -3		*	R12-1617-05	TRIMMING POT.(470)		
D1 -3			HSS104A	DIODE		
D1 -3			1SS131	DIODE		
D4			S5688B	DIODE		
D5			HZS15S(B)	ZENER DIODE		
D5			RD15JS(B)	ZENER DIODE		
D6			HSS104A	DIODE		
D6			1SS131	DIODE		
D7			HZS4.7N(B)	ZENER DIODE		
D7			RD4.7ES(B)	ZENER DIODE		
D8 ,9			HSS104	DIODE		
D8 ,9			1SS133	DIODE		
D10			D5FB20*1	DIODE		
D11			D3SBA20F03	DIODE		
D12 -19			S5688B	DIODE		
D20 -27			HSS104	DIODE		
D20 -27			1SS133	DIODE		
IC1			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
IC1		*	UPC7815AHF	IC(VOLTAGE REGULATOR/+15V)		
IC2			TA79015S	IC(VOLTAGE REGULATOR/ -15V)		
IC2			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC3			TA7808S	IC(VOLTAGE REGULATOR/ +8V)		
IC3			UPC7808AHF	IC(VOLTAGE REGULATOR)		
IC4			TA79008S	IC(VOLTAGE REGULATOR)		
IC4			UPC7908HF	IC(VOLTAGE REGULATOR/ -8V/1A)		
IC5			TA7815S	IC(VOLTAGE REGULATOR/ +15V)		
IC5		*	UPC7815AHF	IC(VOLTAGE REGULATOR/+15V)		
IC6			TA79015S	IC(VOLTAGE REGULATOR/ -15V)		
IC6			UPC7915HF	IC(VOLTAGE REGULATOR/ -15V)		
IC7		*	UPD78214CW-E41	IC(MICRO PROCESSOR)		
IC8			TC9162N	IC(ANALOG SWITCH ARRAY)		
Q1 ,2			2SC4137F19(V,W)	TRANSISTOR		
Q3 ,4			2SD2222*5	TRANSISTOR		
Q5 ,6			2SB1470*5	TRANSISTOR		
Q7 ,8			2SC1845(F,E)	TRANSISTOR		
Q10			2SC4137F19(V,W)	TRANSISTOR		
Q11			2SD2222*5	TRANSISTOR		
Q12			2SB1470*5	TRANSISTOR		
Q13			2SC1845(F,E)	TRANSISTOR		
Q20			2SA992(F,E)	TRANSISTOR		
Q21 ,22			2SC1845(F,E)	TRANSISTOR		

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No.9

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名/規格	Destination 仕向	Remarks 備考
CONTROL UNIT (X11-3190-21:M,0-51:T,1-01:P,2-71:E,2-91:Y)						
D52 -60			B30-1012-05	LED(SLP-981C-50)		
C1			CE04KW1C102M	ELECTRO 1000UF 16WV		
C2			CE04KW1C222M	ELECTRO 2200UF 16WV		
C3			CE04KW0J331M	ELECTRO 330UF 6.3WV		
C4			CE04KW0J471M	ELECTRO 470UF 6.3WV		
C6			CE04KW1V100M	ELECTRO 10UF 35WV		
C7 ,8			CK45FF1H473Z	CERAMIC 0.047UF Z		
C9			CE04KW1V101M	ELECTRO 100UF 35WV		
C10			CE04KW1H471M	ELECTRO 470UF 50WV		
C11 ,12			CE04KW1V471M	ELECTRO 470UF 35WV		
C13			CE04KW1C220M	ELECTRO 22UF 16WV		
C14 ,15			CC45FSL1H221J	CERAMIC 220PF J		
C16			CK45FB1H471K	CERAMIC 470PF K		
C17 ,18			CK45FF1H103Z	CERAMIC 0.010UF Z		
C19			CK45FB1H102K	CERAMIC 1000PF K		
C20 -23			CK45FF1H103Z	CERAMIC 0.010UF Z		
C24 ,25			CE04KW1H220M	ELECTRO 22UF 50WV		
C26 -31			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C32 -35			CE04KW1H220M	ELECTRO 22UF 50WV		
C36 -39			CF92FV1H473J	MF 0.047UF J		
C40 -43			CF92FV1H121K	MF 120PF K		
C44 ,45			CF92FV1H561J	MF 560PF J		
C46 ,47			CF92FV1H102J	MF 1000PF J		
C48 ,49			CF92FV1H121K	MF 120PF K		
C50			C91-0769-05	CERAMIC 0.01UF K		
C51		*	C90-3244-05	ELECTRO 1.0UF 50WV		
C52			C90-1827-05	BACKUP 0.047F 5.5WV		
C53			CK45FF1H103Z	CERAMIC 0.010UF Z		
C54			CE04KW1A101M	ELECTRO 100UF 10WV		
C55 -58			CK45FF1H223Z	CERAMIC 0.022UF Z		
C59			CK45FF1H103Z	CERAMIC 0.010UF Z		
C60 ,61			CK45FF1H223Z	CERAMIC 0.022UF Z		
C62			CK45FF1H103Z	CERAMIC 0.010UF Z		
C63			CE04KW1A101M	ELECTRO 100UF 10WV		
C64			CF92FV1H474J	MF 0.47UF J		
C65 ,66			CF92FV1H221K	MF 220PF K		
C67 ,68			CC45FSL1H121J	CERAMIC 120PF J		
C69 ,70			CF92FV1H104J	MF 0.10UF J		
C71			CK45FF1H103Z	CERAMIC 0.010UF Z		
C72 ,73			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C74			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C75			CE04KW1V100M	ELECTRO 10UF 35WV		
C76			CE04KW1E101M	ELECTRO 100UF 25WV		
C77			CK45FF1H473Z	CERAMIC 0.047UF Z		
C79			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C80			CK45FF1H103Z	CERAMIC 0.010UF Z		
⚠C82 ,83			C91-1439-05	FILM 0.01UF 250VAC		
⚠C82 ,83			C91-1443-05	FILM 0.01UF 250VAC		
C84 ,85			CF92FV1H102J	MF 1000PF J		
C86			CK45FF1H103Z	CERAMIC 0.010UF Z		
C87			CK45FB2H103P	CERAMIC 0.010UF P		
C88 ,89			CE04KW1H220M	ELECTRO 22UF 50WV		

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No.10

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
C91 ,92			CK45FF1H103Z	CERAMIC 0.010UF Z		
C93			CK45FF1H473Z	CERAMIC 0.047UF Z		
C94 ,95			CE04KW1H220M	ELECTRO 22UF 50WV		
C97 ,98			CK45FF1H103Z	CERAMIC 0.010UF Z		
C99			C91-0769-05	CERAMIC 0.01UF K		
C100			CK45FF1H103Z	CERAMIC 0.010UF Z		
C101,102		*	C90-1954-05	ELECTRO 15000UF 63WV		
⚠ J1			E03-0108-05	AC OUTLET	ME	
⚠ J1			E03-0109-05	AC OUTLET	T	
⚠ J1			E03-0111-05	AC OUTLET	YP	
J4			E11-0188-05	MINIATURE PHONE JACK SYNCRO		
J5			E11-0208-05	PHONE JACK PHONES		
J6			E06-0410-05	CYLINDRICAL RECEPTACLE S-VIDEO		
J7		*	E63-0032-05	PHONO JACK VIDEO/PLAY		
⚠ F1			F05-4025-05	FUSE (SEMKO) (250V T4A)	TE	
⚠ F1			F05-6029-05	FUSE (UL)	P	
⚠ F1 ,2			F05-4025-05	FUSE (SEMKO) (250V T4A)	MY	
⚠ F3			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
-			J11-0098-05	WIRE CLAMPER		
CN5 -8			J13-0075-05	FUSE CLIP	MY	
CN5 ,6			J13-0075-05	FUSE CLIP	TEP	
CN9 ,10			J13-0075-05	FUSE CLIP	E	
			L92-0028-05	FERRITE CORE		
L1 ,2			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
⚠ T1		*	L07-0433-05	POWER TRANSFORMER	E	
⚠ T1		*	L07-0474-05	POWER TRANSFORMER	T	
⚠ T1		*	L07-0483-05	POWER TRANSFORMER	P	
⚠ T1		*	L07-0487-05	POWER TRANSFORMER	MY	
X1			L78-0267-05	RESONATOR 4.19MHz		
J	2B		N35-3008-46	BINDING HEAD MACHIN SCREW		
CP1			R90-0803-05	MULTI-COMP 100KX7 J 1/4W		
R4		*	RS14KB3A820JTE	FL-PROOF RS 82 J 1W		
R24			RD14GB2E100JTS	FL-PROOF RD 10 J 1/4W		
R27			RD14GB2E100JTS	FL-PROOF RD 10 J 1/4W		
R163		*	RS14KB3D101JTE	FL-PROOF RS 100 J 2W		
R165		*	RS14KB3D121JTE	FL-PROOF RS 120 J 2W		
VR1		*	R05-3023-05	POTENTIOMETER 20KB BALANCE		
VR2 ,3		*	R06-2026-05	POTENTIOMETER 5KBX2 BASS,TREBL		
VR4		*	R29-5061-05	POTENTIOMETER 100AX5 VOLUME		
⚠ K1			S76-0002-05	MAGNETIC RELAY	TEP	
K1			S76-0009-05	MAGNETIC RELAY	MY	
S1 -6			S40-1064-05	PUSH SWITCH		
S7		*	S60-0011-05	ROTARY SWITCH VIDEO1/REC		
⚠ S11			S31-2128-05	SLIDE SWITCH VOLTAGE SELECTOR	MY	
S12			S31-2136-05	SLIDE SWITCH VOLTAGE SELECTOR	Y	
⚠ S12			S31-2322-05	SLIDE SWITCH VOLTAGE SELECTOR	M	
S8 -10			T99-0509-05	ROTARY ENCODER INPUT,MODE,PRES		
D1 -8			S5688B	DIODE		
D9			HZS6.8N(B2)	ZENER DIODE		
D9			RD6.8ES(B2)	ZENER DIODE		
D10			HZS5.1N(B2)	ZENER DIODE		

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No.11

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
D10			RD5.1ES(B2)	ZENER DIODE		
D11			HZS5.1S(B2)	ZENER DIODE		
D11			RD5.1JS(B2)	ZENER DIODE		
D12			HZS5.1N(B2)	ZENER DIODE		
D12			RD5.1ES(B2)	ZENER DIODE		
D13 -16			HSS104	DIODE	MYP	
D13 -16			1SS133	DIODE	MYP	
D13 -27			HSS104	DIODE	TE	
D13 -27			1SS133	DIODE	TE	
D18 -27			HSS104	DIODE	MYP	
D18 -27			1SS133	DIODE	MYP	
D28			HZS5.1N(B2)	ZENER DIODE		
D28			RD5.1ES(B2)	ZENER DIODE		
D29 -49			HSS104	DIODE		
D29 -49			1SS133	DIODE		
D50			HZS5.1N(B2)	ZENER DIODE		
D50			RD5.1ES(B2)	ZENER DIODE		
D51			HSS104A	DIODE		
D51			1SS131	DIODE		
D61 -64			HSS104	DIODE		
D61 -64			1SS133	DIODE		
D65			S5688B	DIODE		
D66 -69			HSS104	DIODE		
D66 -69			1SS133	DIODE		
D70			S5688B	DIODE		
ED1		*	FIP12BTM7	FLUORESCENT INDICATOR TUBE		
IC1			NJM4558D	IC(OP AMP X2)		
IC2			TA8409S	IC(MOTOR CONTROL)		
IC3			NJM4560D-A	IC(OP AMPX2)		
IC3			NJM4565D-D	IC(OP AMP X2)		
IC4		*	UPD75216ACW-C60	IC(MICROPROCESSOR)	MYP	
IC4		*	UPD75216ACW-C89	IC(MICROPROCESSOR)	TE	
IC4		*	UPD75216ACW-C89	IC(MICROPROCESSOR)	MYP	
IC5		*	NJU3711D	IC(8BIT I/O EXPANDER)		
IC6			M6M80041P	IC(EP ROM)		
IC7			NJM4560D-A	IC(OP AMPX2)		
IC7			NJM4565D-D	IC(OP AMP X2)		
Q1		*	2SB1370(E,F,G)	TRANSISTOR		
Q2		*	2SD2061(E,F,G)	TRANSISTOR		
Q3		*	2SB1370(E,F,G)	TRANSISTOR		
Q4			2SA954(L,K)	TRANSISTOR		
Q5			DTA113ZS	DIGITAL TRANSISTOR		
Q5			UN4119	TRANSISTOR		
Q6 -10			2SC2878(B)	TRANSISTOR		
Q11			DTA124ES	DIGITAL TRANSISTOR		
Q11			UN4112	TRANSISTOR		
Q12			DTC124ES	DIGITAL TRANSISTOR		
Q12			UN4212	TRANSISTOR		
Q13			2SC2458(Y,GR)	TRANSISTOR		
Q13			2SC3311A(Q,R)	TRANSISTOR		
Q14			DTA113ZS	DIGITAL TRANSISTOR		
Q14			UN4119	TRANSISTOR		
Q15			DTC124ES	DIGITAL TRANSISTOR		
Q15			UN4212	TRANSISTOR		
Q16			2SC2458(Y,GR)	TRANSISTOR		

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No.12

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
Q16			2SC3311A(Q,R)	TRANSISTOR				
Q17			DTC113ZS	DIGITAL TRANSISTOR				
Q17			UN4219	TRANSISTOR				
Q18			2SA1048(Y,GR)	TRANSISTOR				
Q18			2SA1309A(Q,R)	TRANSISTOR				
A1			W02-0975-05	ELECTRIC CIRCUIT MODULE				
ACCESSORY UNIT (X13-6960-00:M,Y,P,2-71:T,E)								
C1 ,2			CE04KW1V100M	ELECTRO	10UF	35WV		
C3 ,4			CF92FV1H102J	MF	1000PF	J		
C5 ,6			CF92FV1H123J	MF	0.012UF	J		
C7 ,8			CF92FV1H332J	MF	3300PF	J		
C9 ,10			CF92FV1H101K	MF	100PF	K		
C13 ,14			CF92FV1H182J	MF	1800PF	J		
C15 ,16			CE04KW0J331M	ELECTRO	330UF	6.3WV		
C17 ,18			CE04KW1V100M	ELECTRO	10UF	35WV		
C19 ,20			CF92FV1H102J	MF	1000PF	J		
C21 ,22			CC45FSL1H101J	CERAMIC	100PF	J		
C23 -36			CC45FSL1H221J	CERAMIC	220PF	J		
C41 ,42			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C43 ,44			CC45FSL1H221J	CERAMIC	220PF	J		
C51 ,52			CE04KW1H220M	ELECTRO	22UF	50WV		
C53 ,54			CF92FV1H221K	MF	220PF	K		
C55 ,56			C90-1921-05	ELECTRO	22UF	25WV		
C57 ,58			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C59 ,60			CC45FSL1H221J	CERAMIC	220PF	J		
C63 ,64			CE04KW1H2R2M	ELECTRO	2.2UF	50WV		
C65 ,66			CC45FSL1H221J	CERAMIC	220PF	J		
C71 -86			CC45FSL1H221J	CERAMIC	220PF	J		
C101-104			CK45FB1H102K	CERAMIC	1000PF	K		
C105			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C106,107			CF92FV1H104J	MF	0.10UF	J		
C111-114			CK45FB1H102K	CERAMIC	1000PF	K		
C115			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C118-121			CE04KW1H101M	ELECTRO	100UF	50WV		
C122-129			CK45FB1H102K	CERAMIC	1000PF	K		
C201-204			CK45FB1H102K	CERAMIC	1000PF	K		
C205,206			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C207			CE04KW1A470M	ELECTRO	47UF	10WV		
C208			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C210			CE04KW1A470M	ELECTRO	47UF	10WV		
C211,212			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C213,214			CE04KW1A470M	ELECTRO	47UF	10WV		
C215-217			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C218,219			CE04KW1V100M	ELECTRO	10UF	35WV		
C220			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C222			CC45FSL1H100D	CERAMIC	10PF	D		
C223			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C224			CE04KW1V100M	ELECTRO	10UF	35WV		
C226			CE04KW1V100M	ELECTRO	10UF	35WV		
C229			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C230			CE04KW1V100M	ELECTRO	10UF	35WV		
C231			CC45FSL1H470J	CERAMIC	47PF	J		
C233-235			CE04KW1V100M	ELECTRO	10UF	35WV		
C236			CK45FF1H103Z	CERAMIC	0.010UF	Z		

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No.13

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格			Destination 仕向	Remarks 備考
C237			CC45FSL1H100D	CERAMIC	10PF	D		
C238			CC45FSL1H470J	CERAMIC	47PF	J		
C239			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C240-242			CE04KW1V100M	ELECTRO	10UF	35WV		
C243			CK45FB1H102K	CERAMIC	1000PF	K		
C244			CE04KW1V100M	ELECTRO	10UF	35WV		
C245,246			CC45FSL1H470J	CERAMIC	47PF	J		
C247,248			CC45FSL1H101J	CERAMIC	100PF	J		
C249,250			CC45FSL1H221J	CERAMIC	220PF	J		
C251			CC45FSL1H390J	CERAMIC	39PF	J		
C252			CC45FSL1H150J	CERAMIC	15PF	J	TE	
C252			CC45FSL1H180J	CERAMIC	18PF	J	MYP	
C253			CC45FSL1H220J	CERAMIC	22PF	J		
C254			CC45FSL1H390J	CERAMIC	39PF	J		
C255,256			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C257			CE04KW1V100M	ELECTRO	10UF	35WV		
C258-260			CE04KW1A470M	ELECTRO	47UF	10WV		
C261			CE04KW1V4R7M	ELECTRO	4.7UF	35WV		
C262			CE04KW1V100M	ELECTRO	10UF	35WV		
C263			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C264,265			CE04KW1V100M	ELECTRO	10UF	35WV		
C266			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C267			CE04KW1V100M	ELECTRO	10UF	35WV		
C268			CC45FSL1H470J	CERAMIC	47PF	J		
C269			CK45FB1H471K	CERAMIC	470PF	K		
C270			CE04KW1HR47M	ELECTRO	0.47UF	50WV		
C271			CE04KW1H010M	ELECTRO	1.0UF	50WV		
C272			CK45FB1H561K	CERAMIC	560PF	K		
C273			CE04KW1V100M	ELECTRO	10UF	35WV		
C274			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C275			CC45FSL1H221J	CERAMIC	220PF	J		
C276			CF92FV1H122J	MF	1200PF	J	TE	
C276			CF92FV1H332J	MF	3300PF	J	MYP	
C277			CE04KW1H2R2M	ELECTRO	2.2UF	50WV	MYP	
C277			CE04KW1V010M	ELECTRO	1.0UF	35WV	TE	
C278			CF92FV1H223J	MF	0.022UF	J	MYP	
C278			CF92FV1H473J	MF	0.047UF	J	TE	
C280,281			CC45FSL1H470J	CERAMIC	47PF	J		
C282-285			CE04KW1V100M	ELECTRO	10UF	35WV		
C286-288			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C289			CE04KW1A470M	ELECTRO	47UF	10WV		
C290			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C291			CE04KW1V100M	ELECTRO	10UF	35WV		
C292			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C293			CE04KW1A470M	ELECTRO	47UF	10WV		
C294-296			CE04KW1V100M	ELECTRO	10UF	35WV		
C298			CE04KW1A470M	ELECTRO	47UF	10WV		
C299			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C300-307			CK45FB1H102K	CERAMIC	1000PF	K		
C308			CE04KW1A470M	ELECTRO	47UF	10WV		
C309,310			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C311			CC45FSL1H330J	CERAMIC	33PF	J		
C312,313			CK45FF1H103Z	CERAMIC	0.010UF	Z		
C314			CC45FSL1H220J	CERAMIC	22PF	J		

L:Scandinavia K:USA P:Canada
Y:PX(Far East, Hawaii) T:England E:Europe
Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

No.14

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
J1 -4			E13-0827-05	PHONO JACK(8P) AUDIO		
J5 ,6			E13-1402-05	PHONO JACK(4P) VIDEO		
J7 ,8			E06-0408-05	CYLINDRICAL RECEPTACLE S-VIDEO		
J9			E06-0409-05	CYLINDRICAL RECEPTACLE VDP		
J10			E13-0192-05	PHONO JACK(1P) MONITER OUT		
L25			L40-2201-17	SMALL FIXED INDUCTOR(22UH,K)		
X1			L77-1182-05	CRYSTAL RESONATOR 14.318180MHz	MYP	
X1		*	L77-2107-05	CRYSTAL RESONATOR 17.734475MHz	TE	
X2			L78-0272-05	RESONATOR 503.5kHz	MYP	
X2		*	L78-0300-05	RESONATOR 15.680kHz	TE	
R201,202			RD14GB2E4R7JTS	FL-PROOF RD 4.7 J 1/4W		
D51 -57			HSS104	DIODE		
D51 -57			1SS133	DIODE		
D61 -67			HSS104	DIODE		
D61 -67			1SS133	DIODE		
D100-125			HSS104	DIODE		
D100-125			1SS133	DIODE		
D128,129			HSS104	DIODE		
D128,129			1SS133	DIODE		
D138-140			HSS104	DIODE		
D138-140			1SS133	DIODE		
D141,142			HZS5.1N(B)	ZENER DIODE		
D141,142			RD5.1ES(B)	ZENER DIODE		
D143-148			HSS104	DIODE		
D143-148			1SS133	DIODE		
D149			HZS5.1N(B)	ZENER DIODE		
D149			RD5.1ES(B)	ZENER DIODE		
D150-166			HSS104	DIODE		
D150-166			1SS133	DIODE		
IC1			UPC4570C-A	IC(OP AMP X2)		
IC2			LC7821N	IC(FUNCTION CONTROL SWITCH)		
IC3 -6			NJM4560D-A	IC(OP AMPX2)		
IC3 -6			NJM4565D-D	IC(OP AMP X2)		
IC7			LC7821N	IC(FUNCTION CONTROL SWITCH)		
IC8			LC7822N	IC(FUNCTION CONTROL SWITCH)		
IC20		*	LC7823N	IC(FUNCTION CONTROL SWITCH)		
IC21			MC14577A	IC(DUAL VIDEO AMP)		
IC22		*	LC7823N	IC(FUNCTION CONTROL SWITCH)		
IC23 24			MC14577A	IC(DUAL VIDEO AMP)		
IC25			TC4051BP	IC(8CH MPX/ DE-MPX)		
IC26			MC14577A	IC(DUAL VIDEO AMP)		
IC27			TC4051BP	IC(8CH MPX/ DE-MPX)		
IC28			MC14577A	IC(DUAL VIDEO AMP)		
IC29		*	MM1067XD	IC(SYNC SEPARATION)		
IC30			MC14577A	IC(DUAL VIDEO AMP)		
IC31		*	UPD6450CX-514	IC		
Q1 -4			2SC2878(B)	TRANSISTOR		
Q11			DTC124ES	DIGITAL TRANSISTOR		
Q11			UN4212	TRANSISTOR		
Q12			DTA124ES	DIGITAL TRANSISTOR		
Q12			UN4112	TRANSISTOR		
Q50 -53			DTA124ES	DIGITAL TRANSISTOR		
Q50 -53			UN4112	TRANSISTOR		
Q54 -57			2SC2878(B)	TRANSISTOR		

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⚠ indicates safety critical components.

× New Parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.
Teile ohne Parts No. werden nicht geliefert.

No.15

Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名／規格	Destination 仕向	Remarks 備考
Q58 -63			2SC2458(Y,GR)	TRANSISTOR		
Q58 -63			2SC3311A(Q,R)	TRANSISTOR		
Q64 ,65			2SC2878(B)	TRANSISTOR		
Q66			DTA124ES	DIGITAL TRANSISTOR		
Q66			UN4112	TRANSISTOR		
MAIN AMPLIFIER UNIT (X85-1190-06)						
C1 ,2			CE04KW1H220M	ELECTRO 22UF 50WV		
C3 -6			CC45FSL1H101J	CERAMIC 100PF J		
C13 -16			CC45FSL1H470J	CERAMIC 47PF J		
C17 ,18			CC45FSL1H221J	CERAMIC 220PF J		
C19 ,20			CC45FSL1H070D	CERAMIC 7.0PF D		
C21			CE04KW1J470M	ELECTRO 47UF 63WV		
C22			CE04DW1J101M	ELECTRO 100UF 63WV		
C24			CE04KW1E330M	ELECTRO 33UF 25WV		
C25 ,26			CC45FSL1H101J	CERAMIC 100PF J		
C31			CE04KW1H220M	ELECTRO 22UF 50WV		
C32 ,33			CC45FSL1H101J	CERAMIC 100PF J		
C35			CC45FSL1H470J	CERAMIC 47PF J		
C36			CC45FSL1H221J	CERAMIC 220PF J		
C37			CC45FSL1H020C	CERAMIC 2.0PF C		
C38			CC45FSL1H470J	CERAMIC 47PF J		
C51 ,52			CE04KW1J100M	ELECTRO 10UF 63WV		
R19 ,20			RD14NB2E151J	RD 150 J 1/4W		
R27 -30			RD14NB2E221J	RD 220 J 1/4W		
R31 ,32			RD14NB2E470J	RD 47 J 1/4W		
R47			RD14NB2E151J	RD 150 J 1/4W		
R51 ,52			RD14NB2E221J	RD 220 J 1/4W		
D1 ,2			HSS104	DIODE		
D1 ,2			1SS133	DIODE		
D6			HSS104	DIODE		
D6			1SS133	DIODE		
Q1 -4			2SA992(F,B)	TRANSISTOR		
Q11 -14			2SC2631(R,S)	TRANSISTOR		
Q15 ,16			2SA1123(R,S)	TRANSISTOR		
Q17			2SC1740S(Q,R)	TRANSISTOR		
Q17			2SC3311A(Q,R)	TRANSISTOR		
Q21 ,22			2SA992(F,B)	TRANSISTOR		
Q23 ,24			2SC2631(R,S)	TRANSISTOR		
Q25			2SA1123(R,S)	TRANSISTOR		

L:Scandinavia K:USA P:Canada
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Y:AAFES(Europe) X:Australia M:Other Areas

⚠ indicates safety critical components.

SPECIFICATIONS

(For other countries)

AUDIO section

STEREO MODE

Continuous rated power output (FTC)

75 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.08 % total harmonic distortion.

[SURROUND MODE]

Continuous rated power output
- **Front (1kHz, 0.2 % T.H.D. at 8Ω). 65 W + 65 W**
- **Center (1kHz, 0.2 % T.H.D. at 8Ω). 65 W**
- **Rear (1kHz, 0.2 % T.H.D. at 8Ω). 25 W + 25 W**

Total harmonic distortion
- **0.08 % (20 Hz – 20 kHz, 80 W, 8Ω)**
- **0.02 % (1 kHz, 80 W, 8Ω)**

Frequency response
- **LINE (CD, TUNER, AUX, TAPE) ..... 5 Hz – 100 kHz, +0 dB, −3dB**

PHONO 'RIAA' response ..... 20 Hz – 20 kHz, +0 dB, −0.3 dB

Maximum input level
- **PHONO (MM).....110 mV, 0.08 % T.H.D. at 1 kHz**

Signal to noise ratio
- **PHONO (MM).....78 dB (IHF'66)/79 dB (IHF'78)**
- **LINE (CD, TUNER, AUX, TAPE) ..... 100 dB(IHF'66)/84 dB (IHF'78)**

Input sensitivity/Impedance
- **PHONO (MM).....2.5 mV/ 47 kΩ**
- **LINE (CD, TUNER, AUX, TAPE) ....200 mV/47 kΩ**

Tone control
- **BASS ..... ±10 dB (at 100Hz)**
- **TREBLE ..... ±10 dB (at 10kHz)**

Output level/Impedance
- **TAPE REC ..... 200 mV/470 Ω**
- **PREOUT ..... 1 V/600 Ω**
- **Center channel preout ..... 1 V/600 Ω**
- **Rear channel preout ..... 1 V/600 Ω**
- **SUB WOOFER PREOUT ..... 1 V/600 Ω**

VIDEO section

Television format ..... NTSC

Input level/Impedance
- **VIDEO (composite) 1Vp-p/75Ω**
  - **Input (VDP, DBS/TV, AV AUX, VIDEO 1, VIDEO 2, VIDEO 3)**
- **S-VIDEO (Luminance signal) 1Vp-p/75Ω**
  - **(Chrominance signal) 0.286Vp-p/75Ω**
  - **Input (VDP, DBS/TV, AV AUX, VIDEO 1, VIDEO 2)**

Output level/Impedance
- **VIDEO (composite) 1Vp-p/75Ω**
  - **Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2, VIDEO 3)**
- **S-VIDEO (Luminance signal) 1Vp-p/75Ω**
  - **(Chrominance signal) 0.286Vp-p/75Ω**
  - **Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2)**

GENERAL

Power consumption ..... 370 W (IEC)
AC outlet
- **SWITCHED ..... 200 W max.**

Dimensions ..... W: 440 mm (17-5/16")
H : 162 mm (6-3/8")
D : 432 mm (17")

Weight (Net) ..... 16.0 kg (35.3 lb)

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

KA-V8500

SPECIFICATIONS

(For the U.S.A. and Canada)

AUDIO section

Continuous rated power output (FTC)

80 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.08 % total harmonic distortion.

[SURROUND MODE]

Continuous rated power output
Front

70 watts per channel minimum RMS, both channels driven, at 8 Ω 1 kHz with no more than 0.2 % total harmonic distortion.

Center

70 watts per channel minimum RMS, both channels driven, at 8 Ω 1 kHz with no more than 0.2 % total harmonic distortion.

Rear

30 watts per channel minimum RMS, both channels driven, at 8 Ω 1 kHz with no more than 0.2 % total harmonic distortion.

Total harmonic distortion
0.08 % (20 Hz-20 kHz, 80 W, 8Ω)
0.02 % (1 kHz, 80 W, 8Ω)

Frequency response
LINE (CD, TUNER, AUX)
.....5 Hz – 100 kHz, +0 dB, −3 dB

PHONO 'RIAA' response
.....20 Hz – 20 kHz, +0.3 dB, −0.3 dB

Maximum input level
PHONO (MM)....110 mV, 0.08 % T.H.D. at 1 kHz

Signal to noise ratio
PHONO (MM).....78 dB (IHF'66)/79 dB (IHF'78)
LINE (CD, TUNER, AUX)
..... 100 dB(IHF'66)/84 dB (IHF'78)

Input sensitivity/Impedance
PHONO (MM).....2.5 mV/ 47 kΩ
LINE (CD, TUNER, AUX, TAPE) ...200 mV/47 kΩ

Tone control
BASS ..... ±10 dB (at 100Hz)
TREBLE ..... ±10 dB (at 10kHz)

Output level/Impedance
TAPE REC ..... 200 mV/470 Ω
PREOUT ..... 1 V/600 Ω
Center channel preout ..... 1 V/600 Ω
Rear channel preout ..... 1 V/600 Ω
SUB WOOFER PREOUT ..... 1 V/600 Ω

VIDEO section

Television format ..... NTSC

Input level/Impedance

VIDEO (composite) 1Vp-p/75Ω
Input (VDP, DBS/TV, AV AUX, VIDEO 1 VIDEO 2, VIDEO 3)

S-VIDEO (Luminance signal) 1Vp-p/75Ω
(Chrominance signal) 0.286Vp-p/75Ω
Input (VDP, DBS/TV, AV AUX, VIDEO 1, VIDEO 2)

Output level/Impedance
VIDEO (composite) 1Vp-p/75Ω
Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2, VIDEO 3)
S-VIDEO (Luminance signal) 1Vp-p/75Ω
(Chrominance signal) 0.286Vp-p/75Ω
Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2)

GENERAL

Power consumption ..... 4.2 A (For U.S.A. and Canada)
AC outlets
SWITCHED ..... 3: (For the U.S.A.: Total 200 W max.)
(For Canada: Total 200 W, 1.7A max.)
Dimensions ..... W: 440 mm (17-5/16")
H : 162 mm (6-3/8")
D : 432 mm (17")
Weight (Net) ..... 16.0 kg (35.3 lb)

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

SPECIFICATIONS

Specifications (For U.K. and Europe)

AUDIO section

Continuous rated power output (FTC)

55 watts per channel minimum RMS, both channels driven, at 8 Ω from 20 Hz to 20,000 Hz with no more than 0.08 % total harmonic distortion.

(DIN) 1kHz, at 8 Ω ..... 55 W + 55W
at 4 Ω ..... 85 W + 85W

(IEC/NF) From 63Hz to 12,500Hz,
0.7 % T.H.D. at 8 Ω ..... 55 W + 55W
at 4 Ω ..... 80 W + 80W

[SURROUND MODE]

Continuous rated power output (IHF'66)
Front (1kHz, 0.2 % T.H.D. at 8Ω). 45 W + 45 W
Center (1kHz, 0.2 % T.H.D. at 8Ω). 45 W
Rear (1kHz, 0.2 % T.H.D. at 8Ω). 28 W + 28 W

Total harmonic distortion
0.08 % (20 Hz – 20 kHz, 55 W, 8Ω)
0.04 % (1 kHz, 55 W, 8Ω)

Frequency response
LINE (CD, TUNER, AUX, TAPE)
..... 100 Hz – 100 kHz, +0 dB, −3dB

PHONO 'RIAA' response ..... 20 Hz – 20 kHz, +0.3 dB, −0.3 dB

Maximum input level
PHONO (MM)..... 110 mV, 0.08 % T.H.D. at 1 kHz

Signal to noise ratio
PHONO (MM)..... 78 dB (IHF'66)/79 dB (IHF'78)
LINE (CD, TUNER, AUX, TAPE)
..... 100 dB (IHF'66)/84 dB (IHF'78)
PHONO (MM)..... 59 dB (DIN, 50 mW output)
LINE (CD, TUNER, AUX, TAPE)
..... 61 dB (DIN, 50 mW output)

Input sensitivity/Impedance
PHONO (MM)..... 2.5 mV/ 47 kΩ
LINE (CD, TUNER, AUX, TAPE).... 200 mV/47 kΩ

Tone control
BASS ..... ±10 dB (at 100Hz)
TREBLE ..... ±10 dB (at 10kHz)

Output level/Impedance
TAPE REC ..... 200 mV/470 Ω
PREOUT ..... 1 V/600 Ω
Center channel preout ..... 1 V/600 Ω
Rear channel preout ..... 1 V/600 Ω
SUB WOOFER PREOUT ..... 1 V/600 Ω

VIDEO section

Television format ..... PALL

Input level/Impedance
VIDEO (composite) 1Vp-p/75Ω
Input (VDP, DBS/TV, AV AUX, VIDEO 1 VIDEO 2, VIDEO 3)

S-VIDEO (Luminance signal) 1Vp-p/75Ω
(Chrominance signal) 0.286Vp-p/75Ω
Input (VDP, DBS/TV, AV AUX, VIDEO 1, VIDEO 2)

Output level/Impedance
VIDEO (composite) 1Vp-p/75Ω
Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2, VIDEO 3)
S-VIDEO (Luminance signal) 1Vp-p/75Ω
(Chrominance signal) 0.286Vp-p/75Ω
Output (VDP, DBS/TV, AV AUX, MONITOR, VIDEO 1, VIDEO 2)

GENERAL

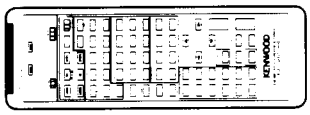
Power consumption ..... 370 W (IEC)
AC outlet
SWITCHED ..... 200 W max.
Dimensions ..... W: 440 mm (17-5/16")
H : 162 mm (6-3/8")
D : 432 mm (17")
Weight (Net) ..... 16.0 kg (35.3 lb)

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

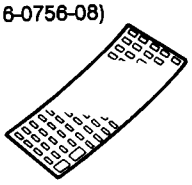
KA-V8500

Accessories

- Remote control unit ... 1
  (A70-0570-05)
  (A09-0086-08):Battery cover

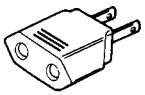


- Remote control unit entry sheet ... 1
  (G16-0756-08)



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

- AC plug adaptor ... 1
  (Except for some areas.)
  For the unit with a European AC plug in areas other than Europe.
  (E03-0115-05)



Instruction manual
B60-0649-00 English
B60-0651-00 DUT,ITA E
B60-0658-00 GER,FRA E,P
B60-0659-00 SPA,CHI M

Item carton case
H50-0186-04

Polysteren formed fixtune
H10-5226-02 L
H10-5227-02 R

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