

SPECIFICATIONS

AUDIO section

Rated power output (FRONT)

105 watts per channel minimum RMS, both channels driven, at 8 ohms, from 20 Hz to 20 kHz with no more than 0.05% total harmonic distortion. (FTC)

Rated power output (REAR)

20 watts per channel minimum RMS, both channels driven, at 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion.

Dynamic power

Per channel at 2 ohms 240 W
Per channel at 4 ohms 215 W
Per channel at 8 ohms 145 W

Total harmonic distortion distortion (LINE input to SPEAKER output)

Rated output power at 8 ohms, 20 Hz-20,000 Hz 0.05%
1/2 Rated output power at 8 ohms, 20 Hz-20,000 Hz 0.05%
Rated output power at 8 ohms, 1 kHz 0.003%

Frequency response

LINE to SPEAKER 10 Hz to 100 kHz $\pm 0. - 3$ dB
PHONO "RIAA" response
PHONO (MM) input 20 Hz to 20 kHz ± 0.5 dB

Signal to noise ratio
PHONO (MM) (IHF-A) 78 dB (for 2.5 mV input) (IHF'66)
TUNER/AUX/TAPE/CD/VIDEO (IHF-A) (IHF'66) 100 dB (for 150 mV input)
PHONO (MM) (IHF-A) 79 dB
TUNER/AUX/TAPE/CD/VIDEO (IHF-A) 83 dB

Tone control

Bass ± 10 dB (at 100 Hz)
Treble ± 10 dB (at 10 kHz)
Damping factor 150 (50 Hz at 8 ohms)
Input sensitivity/impedance
PHONO (MM) 2.5 mV, 47 kohms
TUNER/AUX/TAPE/CD/VIDEO 150 mV, 47 kohms
PHONO maximum input level (PHONO to TAPE REC) MM at 1 kHz, 0.05% T.H.D. 135 mV

Video section

Television format NISC
Rated input 1 Vp-p, 75 ohms
Rated output 1 Vp-p, 75 ohms

General

Power consumption 3.3 A (USA & Canada)
340 W (other countries)
Dimensions
W: 440 mm (17-3/8")
H: 164 mm (6-7/16")
D: 428 mm (16-7/8")
Weight (Net) 15.5 kg (34.1 lbs)

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

KENWOOD CORPORATION

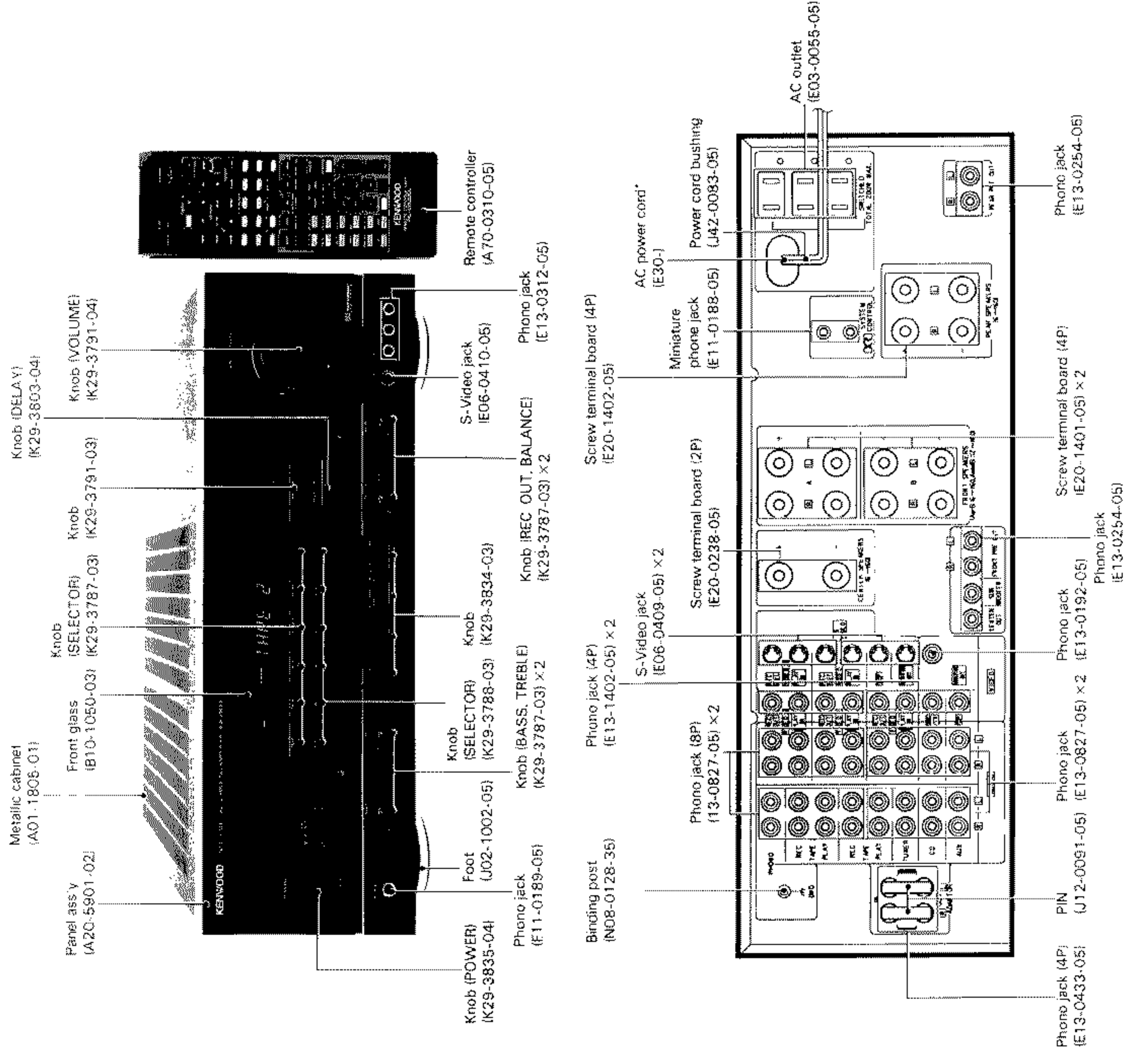
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Note:
Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on the Europe (E) standard, and provides information on regional circuit modification through use of alternate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

STEREO AMPLIFIER KA-V6000

SERVICE MANUAL

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* Refer to parts list on page 59.

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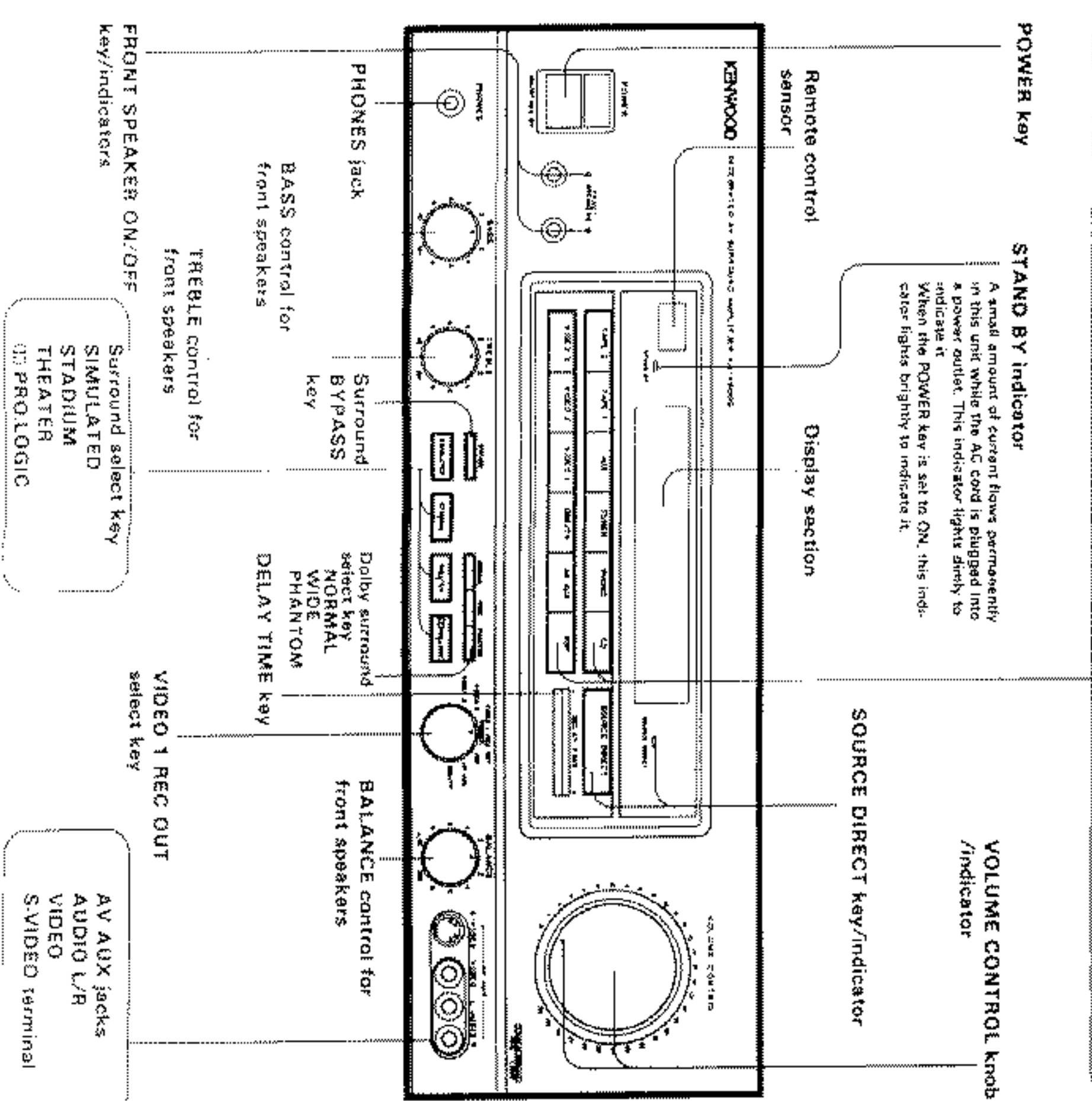
DISASSEMBLY FOR REPAIR

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CONTROL AND INDICATORS

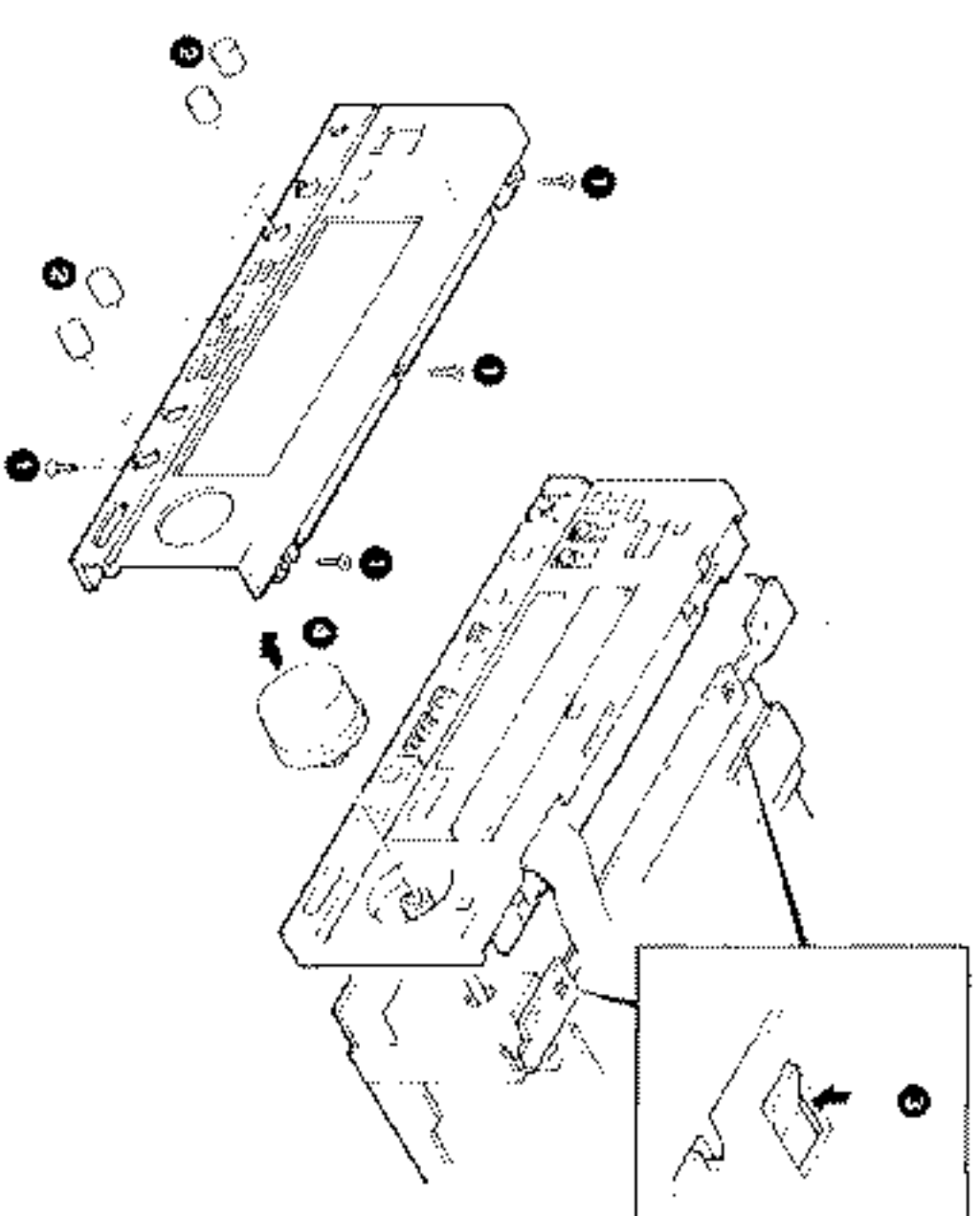
Input selector keys
Audio input selector keys
CD: For listening to CDs.
PHONO: For listening to records.
TUNER: For listening to radio broadcasts.
AUX: For listening to the component connected to the AUX jacks on the rear panel.
TAPE1: For listening to the tape deck connected to the TAPE1 jacks on the rear panel.
TAPE2: For listening to the tape deck connected to the TAPE2 jacks on the rear panel.

Video input selector keys
VDP: For playing the component connected to the VDP jacks on the rear panel.
AV/AUX: For playing the auxiliary video component connected to the AV/AUX VIDEO jacks on the rear panel.
DBS/TV: For operating a DBS tuner or TV tuner.
VIDEO1: For playing VCR 1.
VIDEO2: For playing VCR 2.
VIDEO3(S): For playing VCR 3.

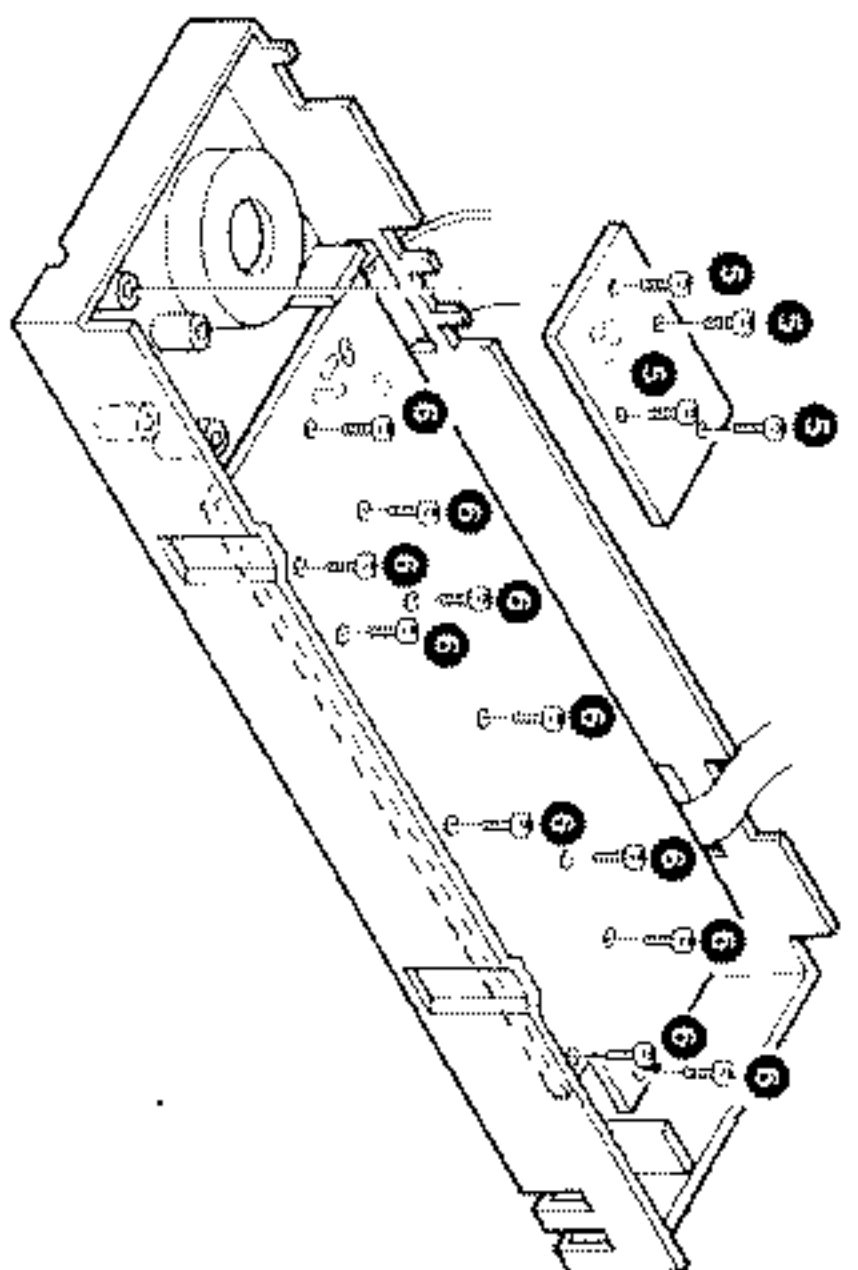


Disassembly for Repair

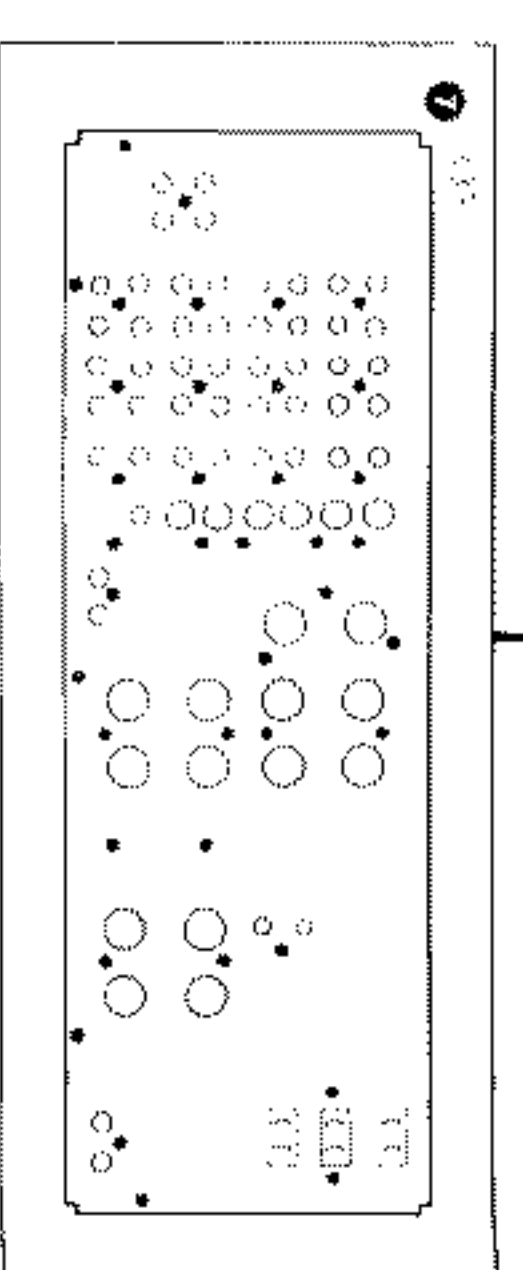
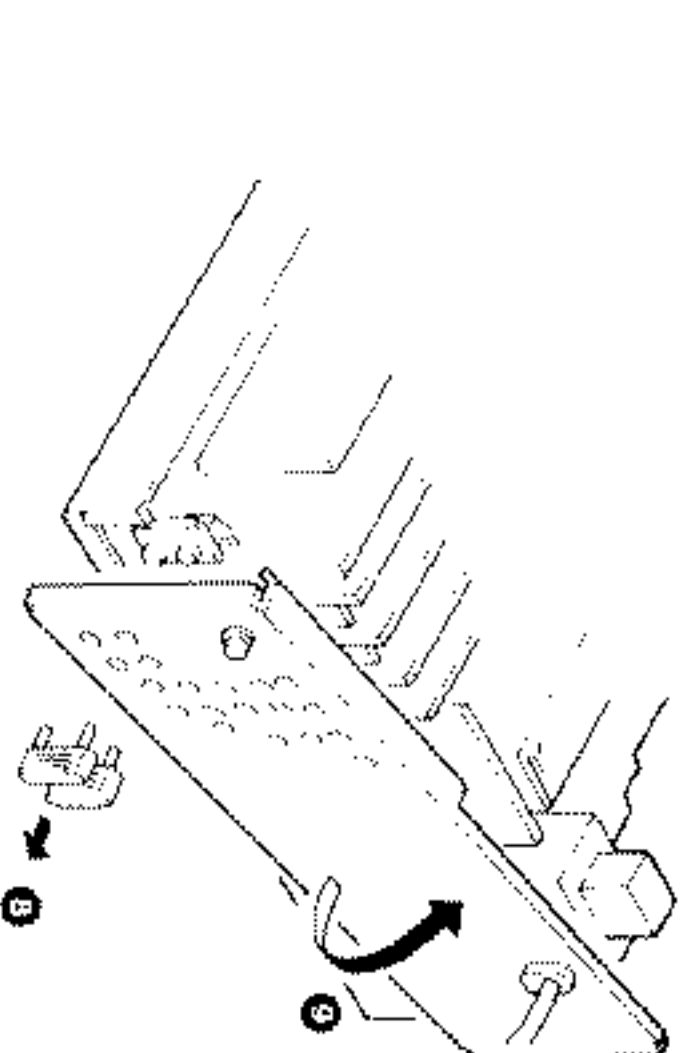
- 1) Remove the 8 screws 1
 - 2) Detach the knob 2
 - 3) Undo the 4 catches 3
 - 4) Detach the knob 4
- * When 1 cannot be detached, force it out from the rear using a straight-edged screwdriver.



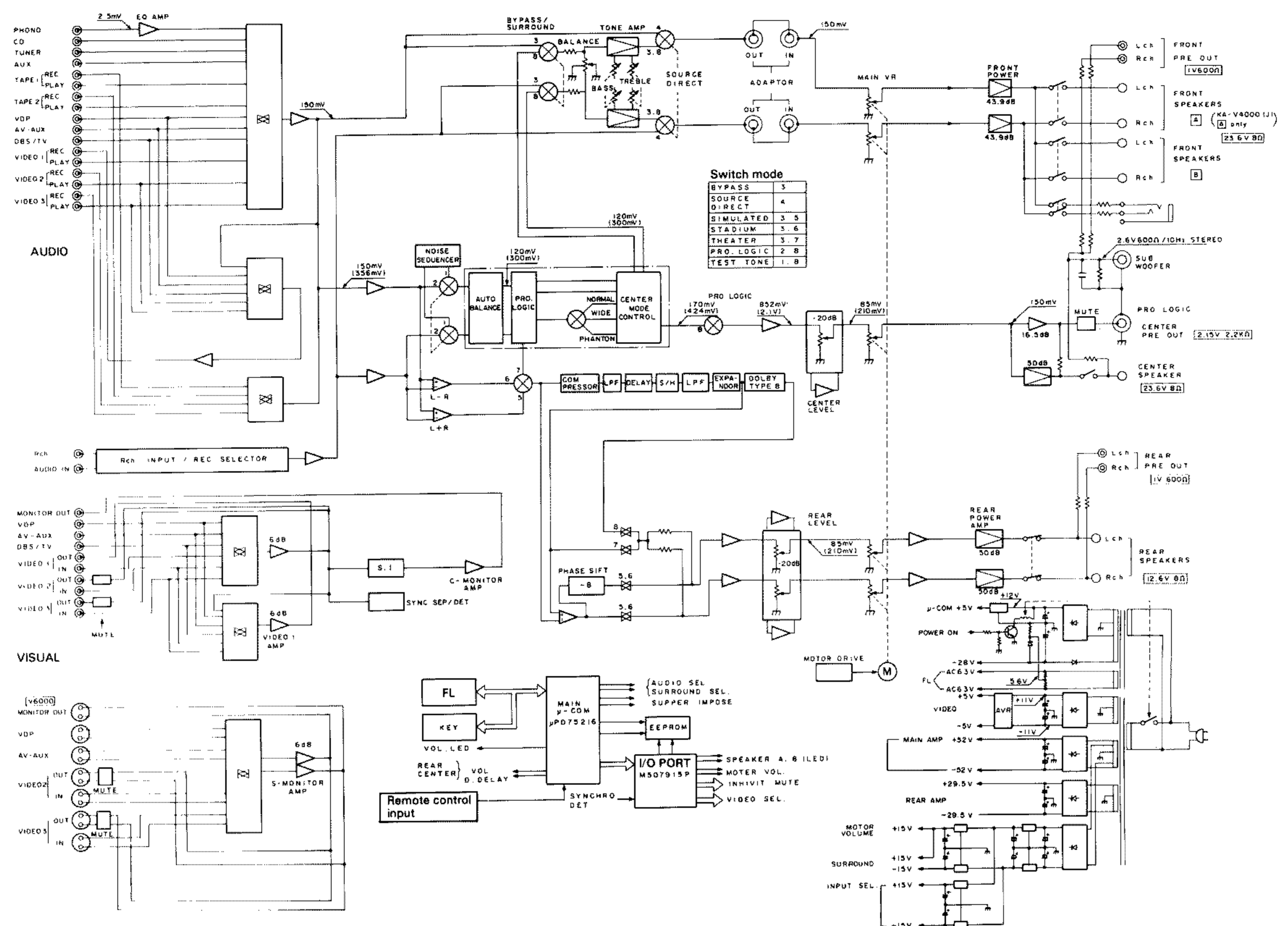
- 5) Remove the 4 screws 5
- 6) Remove the 11 screws 6



- 7) Remove the 38 screws 7
- 8) Take out the pin 8
- 9) Detach the rear panel in the direction of an arrow 9

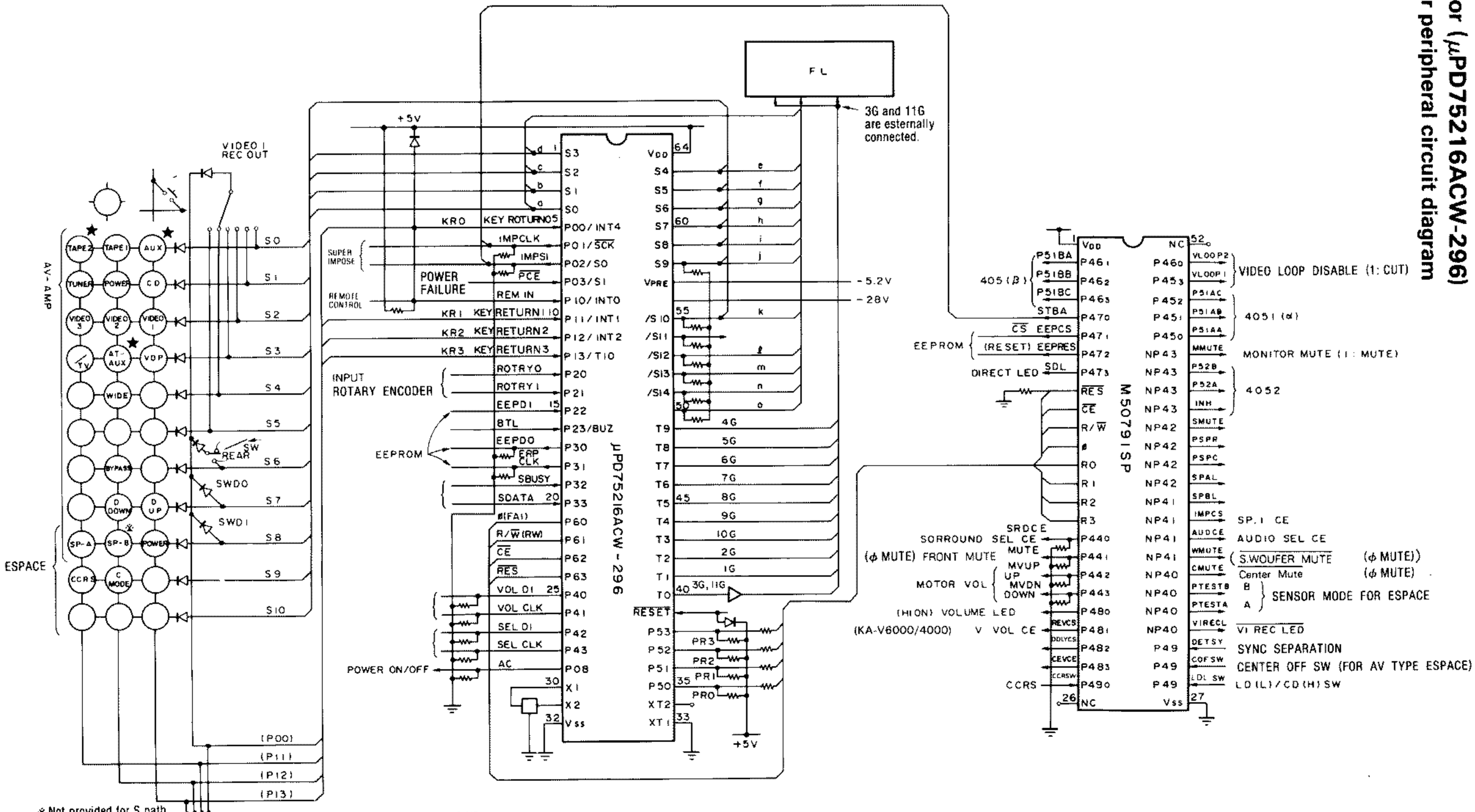


BLOCK DIAGRAM



CIRCUIT DESCRIPTION

Microprocessor (μPD75216ACW-296)
Microprocessor peripheral circuit diagram



- ✱ Not provided for S path
 - * Provided only for ESPACE
 - ★ Not provided for KA-V4000
- | | | |
|--------------|--------------|--------------|
| ESPACE II | SWD 1 | SWD φ |
| KA-V6000 | Not provided | Not provided |
| KA-V4000 (J) | Not provided | Provided |
| KA-V4000 | Provided | Not provided |
| | Provided | Provided |

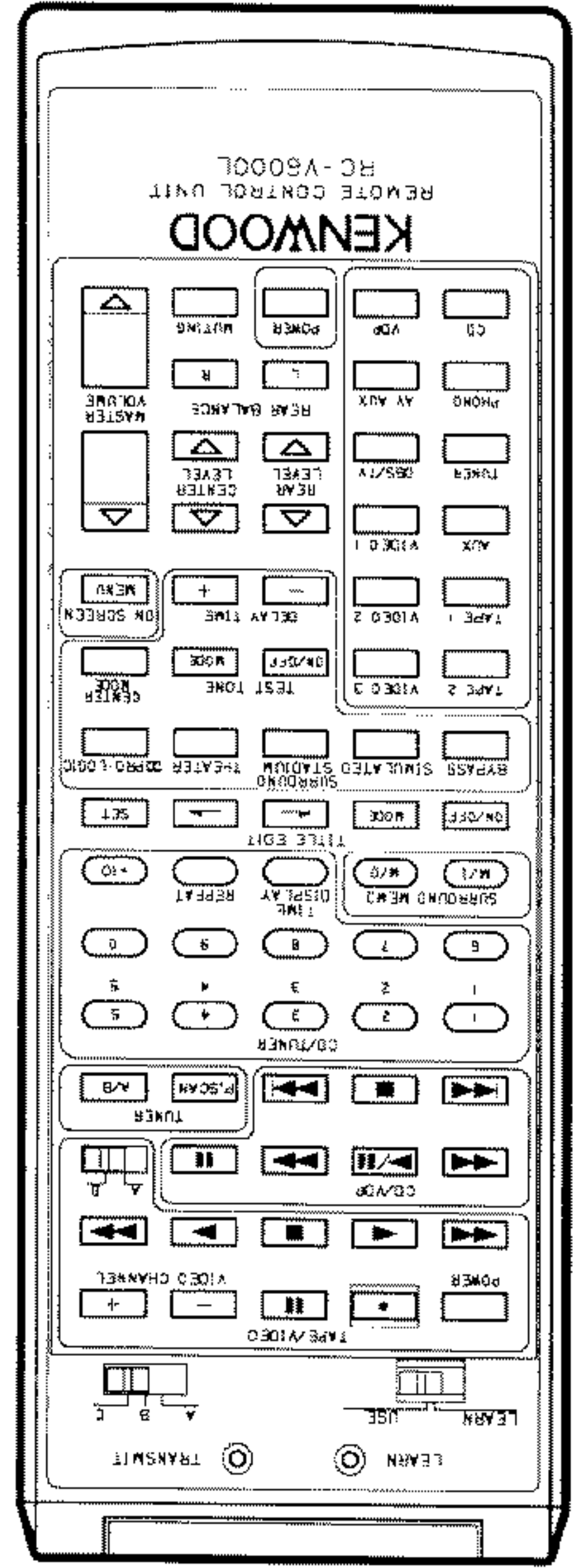
CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Name	Description
51	V _{DD}	0	VLOOP2	Video loop inhibit (for VIDEO 3) (1: Cut)
46	P46 ₁	0	P51B4	4051 (beta) control output
3	P46 ₂	0	P51B8	4051 (beta) control output
4	P46 ₃	0	P51B0	4051 (beta) control output
5	P47 ₁	0	STBA	EEPROM chip select output
6	P47 ₂	0	EEPCS	EEPROM chip select output
7	P47 ₃	0	EEPRES	EEPROM reset output
8	P47 ₄	0	SDL	Source direct LED output (1: ON)
9	RES	1	RES	Reset input
10	CE	1	CE	Chip enable
11	R/W	1	R/W	Read/write
12	0	1	0	Timing clock
13-16	R ₀ -R ₃	I/O	#PD75216ACW P50-P53: Data	#PD75216ACW P50-P53: Data
17	P44 ₁	0	SRDCE	Surround selector IC (TC9162/63) chip enable
18	P44 ₂	0	FMUTE	Front mute (0: Mute)
19	P44 ₃	0	MVUP	Motor volume up output
20	P44 ₄	0	MVDN	Motor volume down output
21	P48 ₁	0	VOLL	Volume LED (1: ON)
22	P48 ₂	0	REVCE	Rear volume control chip enable (KA-V6000/V4000)
23	P48 ₃	0	DLVCS	Digital delay IC (YM3428) chip select output
24	P48 ₄	0	CEVCE	Center/rear volume control chip enable
25	P49 ₁	1	CCRSIN	CCRS input
26	NC	—	NC	NC
27	V _{SS}	—	V _{SS}	V _{SS}
28	P49 ₂	1	LDSW	CD (balanced/LD (unbalanced) SW input
29	P49 ₃	1	COFSW	Center Off SW input
30	P49 ₄	1	DETSY	Superimpose external/internal sync detection
31	P40 ₁	0	VI REC	VIDEO 1 REC LED
32	P40 ₂	0	PTESTA	Center mode selection output
33	P40 ₃	0	PTESTB	Center mode selection output
34	P40 ₄	0	CMUTE	Center mute output (0: Mute)
35	P41 ₁	0	WMUTE	Sub-woofer mute output (0: Mute)
36	P41 ₂	0	AUDCE	Audio selector (LC7821/22) chip enable
37	P41 ₃	0	IMPSC	Superimpose chip select output
38	P41 ₄	0	SPBL	Pro-logic and other selections
39	P42 ₁	0	SPAL	Speaker A relay and LED output
40	P42 ₂	0	SPPC	Center speaker relay output
41	P42 ₃	0	PPSPR	Rear speaker relay output
42	P42 ₄	0	SMUTE	Rear mute output (0: Mute)
43	P43 ₁	0	INH	4052 inhibit output
44, 45	P43 ₂ , P43 ₃	0	P52A, P52B	4052 control output
46	P43 ₄	0	MMUTE	Monitor mute (1: Mute)
47-49	P45 ₁ -P45 ₃	0	P51A-PS1AC	4051 (alpha) control signal
50	P45 ₄	0	VLOOP1	Video loop inhibit (for VIDEO 2) (1: Cut)
52	NC	—	NC	NC

CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Name	Description
1	S0	0	Segment d	FL segment signal
2	S2	0	Segment c	FL segment signal
3	S1	0	Segment b	FL segment signal
4	S4	0	Segment a	FL segment signal
5	P00/NT4	1	KR0	Key Return 0
6	P01/sck	0	IMPCLK	Serial clock for superimpose and CXD1067
7	P02/SO	0	IMPSSI	Serial data for superimpose and CXD1067
8	P03/SI	1	PCE	Power failure detection (0: Power failure)
9	P10/NT0	1	REMIM	Remote control input (interrupt)
10	P11/NT1	1	KR1	Key Return 1
11	P12/NT2	1	KR2	Key Return 2
12	P13/NT0	1	KR3	Key Return 3
13	P20	1	ROTR0	Rotary encoder input 0
14	P21	1	ROTR1	Rotary encoder input 1
15	P22	1	EEP-DI	EEPROM serial data input
16	P23/BUZ	1	BTL	BTL SW input
17	P30	0	EEP-DO	EEPROM serial data output
18	P31	0	EEPCLK	EEPROM serial clock
19	P32	I/O	SBUSY	External serial communication busy signal
20	P33	I/O	SDATA	External serial communication data signal
21	P60	0	0	Extension I/O (M50791SP) control signal
22	P61	0	R/W	Extension I/O (M50791SP) control signal
23	P62	0	CE	Extension I/O (M50791SP) control signal
24	P63	0	RES	Extension I/O (M50791SP) control signal
25	P40	0	VOLDI	Serial data for digital delay, rear volume and center volume
26	P41	0	VOLCLK	Serial clock for digital delay, rear volume and center volume
27	P42	0	SELDI	Serial data for audio (LC7821/22) and surround (TC9162/63)
28	P43	0	SECLK	Serial clock for audio (LC7821/22) and surround (TC9162/63)
29	PQ0	0	AC	Power ON/OFF relay control (1: ON)
30	X1	—	—	Microprocessor system clock oscillation pin
31	X2	—	—	Microprocessor system clock oscillation pin
32	V _{SS}	—	—	GND
33	XT1	—	—	Microprocessor subclock oscillation pin (unused)
34	XT2	—	—	Microprocessor subclock oscillation pin (unused)
35	P50	0	P50	Extension I/O (M50791SP) data signal
36	P51	0	P51	Extension I/O (M50791SP) data signal
37	P52	0	P52	Extension I/O (M50791SP) data signal
38	P53	0	P53	Extension I/O (M50791SP) data signal
39	RESET	—	—	Reset input
40	T0	0	3G, 11G	FL digit signal
41	T1	0	1G	FL digit signal
42	T2	0	1G	FL digit signal
43	T3	0	10G	FL digit signal
44	T4	0	9G	FL digit signal
45	T5	0	8G	FL digit signal

CIRCUIT DESCRIPTION



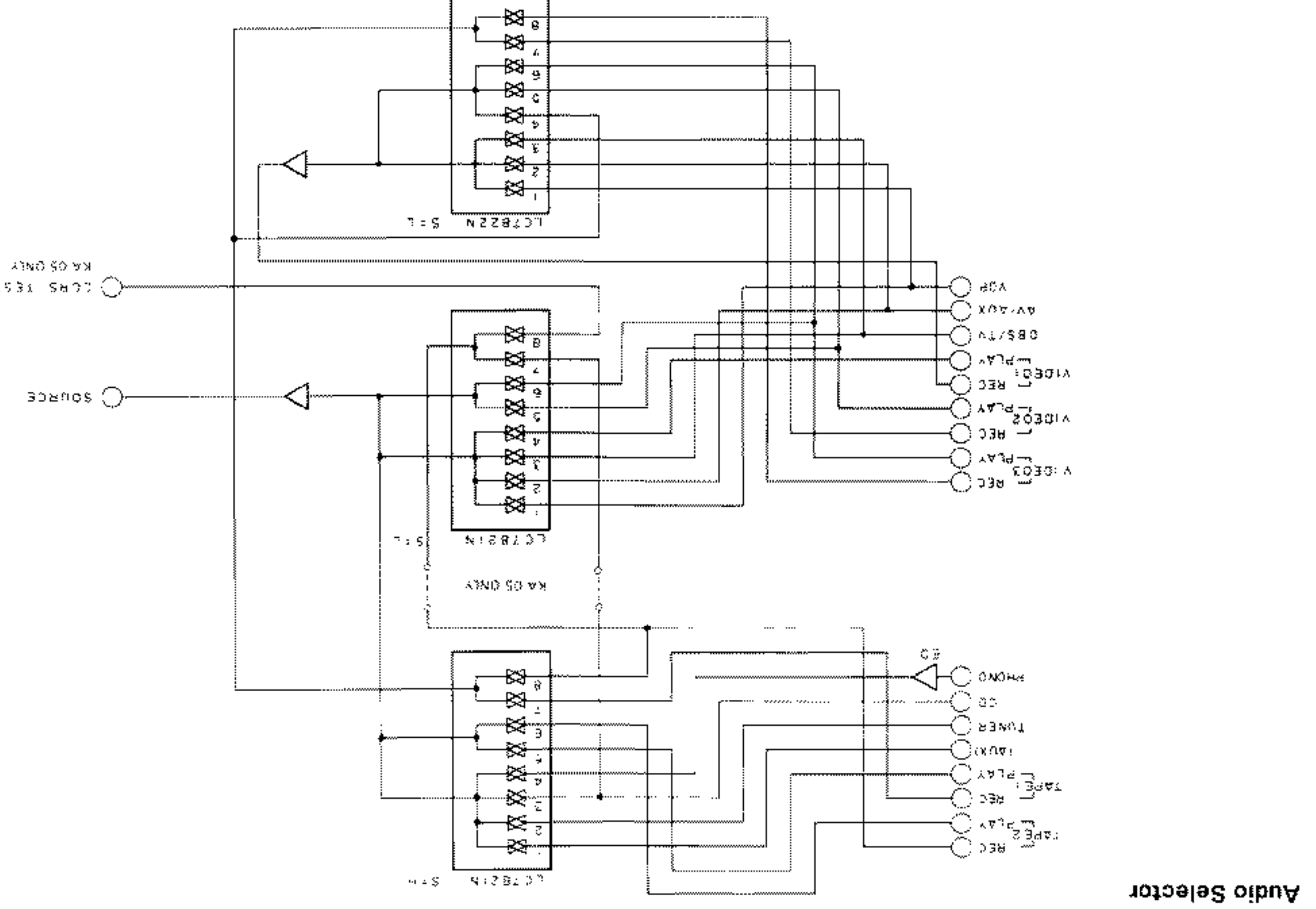
■ To clear the whole of the programmed (saved) contents

1. Set the LEARN/USE switch to LEARN.
2. Press one of the "learning" keys.
3. Remove the battery case cover on the rear of the remote control unit.
4. Press the Reset key inside the battery case with a ball-point pen tip, etc.

CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Name	Description
46	T6	0	7G	FL digit signal
47	T7	0	6G	FL digit signal
48	T8	0	5G	FL digit signal
49	T9	0	4G	FL digit signal
50	T10/PH3/S15	0	Segment o	FL segment signal
51	T11/PH2/S14	0	Segment n	FL segment signal
52	T12/PH1/S13	0	Segment m	FL segment signal
53	T13/PH0/S12	0	Segment l	FL segment signal
54	T14/S11	0	Unused	FL segment signal
55	T15/S10	0	Segment k	FL segment signal
56	V _{LOAD}	—	—	-28 V
57	V _{POS}	—	—	-5.2 V
58	S9	0	Segment j	FL segment signal
59	S8	0	Segment i	FL segment signal
60	S7	0	Segment h	FL segment signal
61	S6	0	Segment g	FL segment signal
62	S5	0	Segment f	FL segment signal
63	S4	0	Segment e	FL segment signal
64	V _{DD}	—	—	+5.0 V

CIRCUIT DESCRIPTION



Audio Selector

[1] Loop Inhibit Display

At this time, no special display is made because a loop is inhibited.

1-1) The input selected is not output to REC OUT. Example: TAPE2, TAPE2, VIDEO3, VIDEO2, VIDEO1 REC to VIDEO3, VIDEO1 is selected as input. (No special order)

1-2) With VIDEO1 REC OUT as source and VIDEO2 as input. (No special order)

2-2) In VIDEO1 REC to VIDEO3, VIDEO1 is selected as input. (No special order)

2-1) In VIDEO1 REC to VIDEO2, VIDEO1 is selected as input. (No special order)

Note: In a loop of the above item 2-1) or 2-2), even when VIDEO1 REC OUT is set to VIDEO2 or VIDEO3, even during the preceding dubbing VIDEO3 even during the preceding dubbing from VIDEO1 to VIDEO2 or VIDEO3, REC OUT of VIDEO1 to VIDEO2 or VIDEO3 is inhibited, and thus VIDEO1 REC OUT is always given priority.

[2] Loop taking place with two units

At this time, the INPUT SELECTOR display portion of the FL display flickers. (FL display 12)

For KA-05, when the REC OUT SELECTOR display is engaged in the FL display, the REC OUT SELECTOR display flickers. (FL display 13)

Case where a loop is inhibited VIDEO1 - VIDEO2 or VIDEO 3

On Loop Inhibit Display

At this time, no special display is made because a loop is inhibited.

2-1) In VIDEO1 REC to VIDEO2, VIDEO1 is selected as input. (No special order)

2-2) In VIDEO1 REC to VIDEO3, VIDEO1 is selected as input. (No special order)

Note: In a loop of the above item 2-1) or 2-2), even when VIDEO1 REC OUT is set to VIDEO2 or VIDEO3, even during the preceding dubbing VIDEO3 even during the preceding dubbing from VIDEO1 to VIDEO2 or VIDEO3, REC OUT of VIDEO1 to VIDEO2 or VIDEO3 is inhibited, and thus VIDEO1 REC OUT is always given priority.

CIRCUIT DESCRIPTION

- 1) INPUT SELECTOR
 - 2) REC OUT VIDEO1
 - 3) SOURCE (ESPACE ONLY)
 - 4) SURROUND MODE
 - 5) PRO-LOGIC
 - 6) REAR/CENTER LEVEL
 - 7) SURROUND MEMORY
 - 8) SURROUND MEMORY
 - 9) REAL LEVEL AND DELAY
 - 10) SPEAKERS A/B
 - 11) PRO-LOGIC TEST
 - 12) POWER MODE
 - 13) ON-SCREEN DISPLAY (Information)
- IN: Pressing the CD key, plug in AC. OUT: Unplug AC or perform the following operation. In a mode other than where the FL tube display is all lit, set the POWER key to OFF.
- Contents: PHANTOM
- When the test mode is entered, the FL tube display is all lit. Cancel the all-lit FL tube display by the POWER key.
- (ii) In the test mode, the following operations are different from normal.
- Rear and center volume: Only 2 points of MIN and MAX.
 - Rear balance: Only 3 points of L-ch, center and R-ch.
 - Delay time: PRO-LOGIC... Only 3 points of 15 msec, 21 msec and 30 msec.
 - THEATER... Only 3 points of 0 msec, 15 msec and 30 msec.
 - Test tone: At the time of the test tone mode, mode changes to subsequent modes automatically at intervals of 2 seconds (L-ch - C-Ch - R-ch - S-ch (in Normal/Wide mode) or Front - Rear (in Phantom mode)).
- (3) Controlled Ics
- LC7821/22
µPD4051/52
TC9102/63
TC9167P
YM3428
CXD1067P (ESPACE ONLY)
M50355
M50791SP
LA2770
M6M80021P
TC9215 (ESPACE ONLY)

Note: In a case where the backup of the microprocessor is cut off simply, EEPROM is not all-cleared. Therefore, at the time of production or when EEPROM is reinstalled, be sure to this initialize operation.

(1) Initial Settings

OUT: Perform the usual operation.

Contents: Perform the settings in "1. Initial Settings", and at the same time all-clear EEPROM.

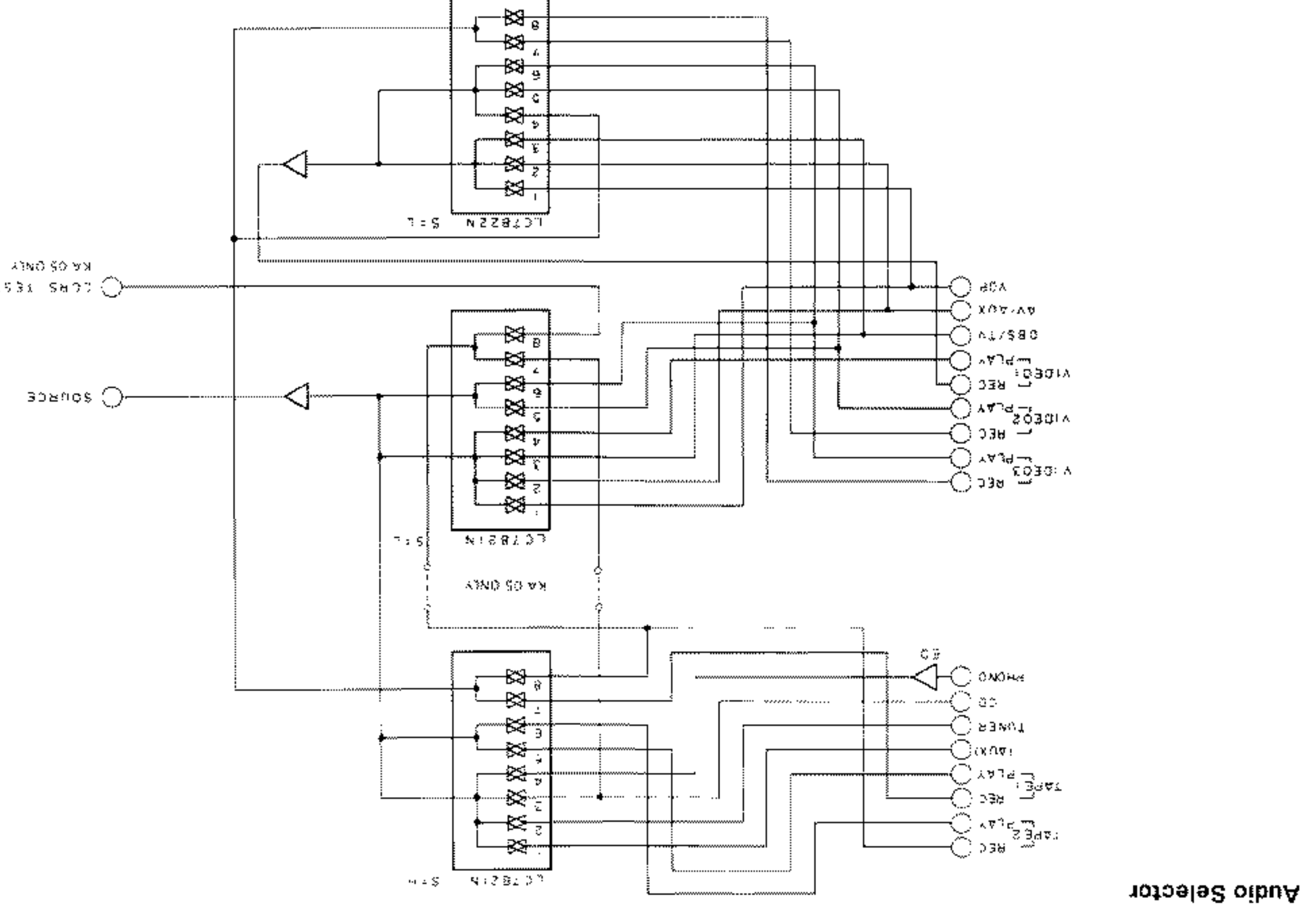
(2) Test mode

IN: Pressing the CD key, plug in AC. OUT: Unplug AC or perform the following operation.

(3) Controlled Ics

LC7821/22
µPD4051/52
TC9102/63
TC9167P
YM3428
CXD1067P (ESPACE ONLY)
M50355
M50791SP
LA2770
M6M80021P
TC9215 (ESPACE ONLY)

CIRCUIT DESCRIPTION



Function Switch

[1] Loop Inhibit Display

At this time, no special display is made because a loop is inhibited.

2-1) In VIDEO1 REC to VIDEO2, VIDEO1 is selected as input. (No special order)

2-2) In VIDEO1 REC to VIDEO3, VIDEO1 is selected as input. (No special order)

Note: In a loop of the above item 2-1) or 2-2), even when VIDEO1 REC OUT is set to VIDEO2 or VIDEO3, even during the preceding dubbing VIDEO3 even during the preceding dubbing from VIDEO1 to VIDEO2 or VIDEO3, REC OUT of VIDEO1 to VIDEO2 or VIDEO3 is inhibited, and thus VIDEO1 REC OUT is always given priority.

[2] Loop taking place with two units

At this time, the INPUT SELECTOR display portion of the FL display flickers. (FL display 12)

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Case where a loop is inhibited VIDEO1 - VIDEO2 or VIDEO 3

On Loop Inhibit Display

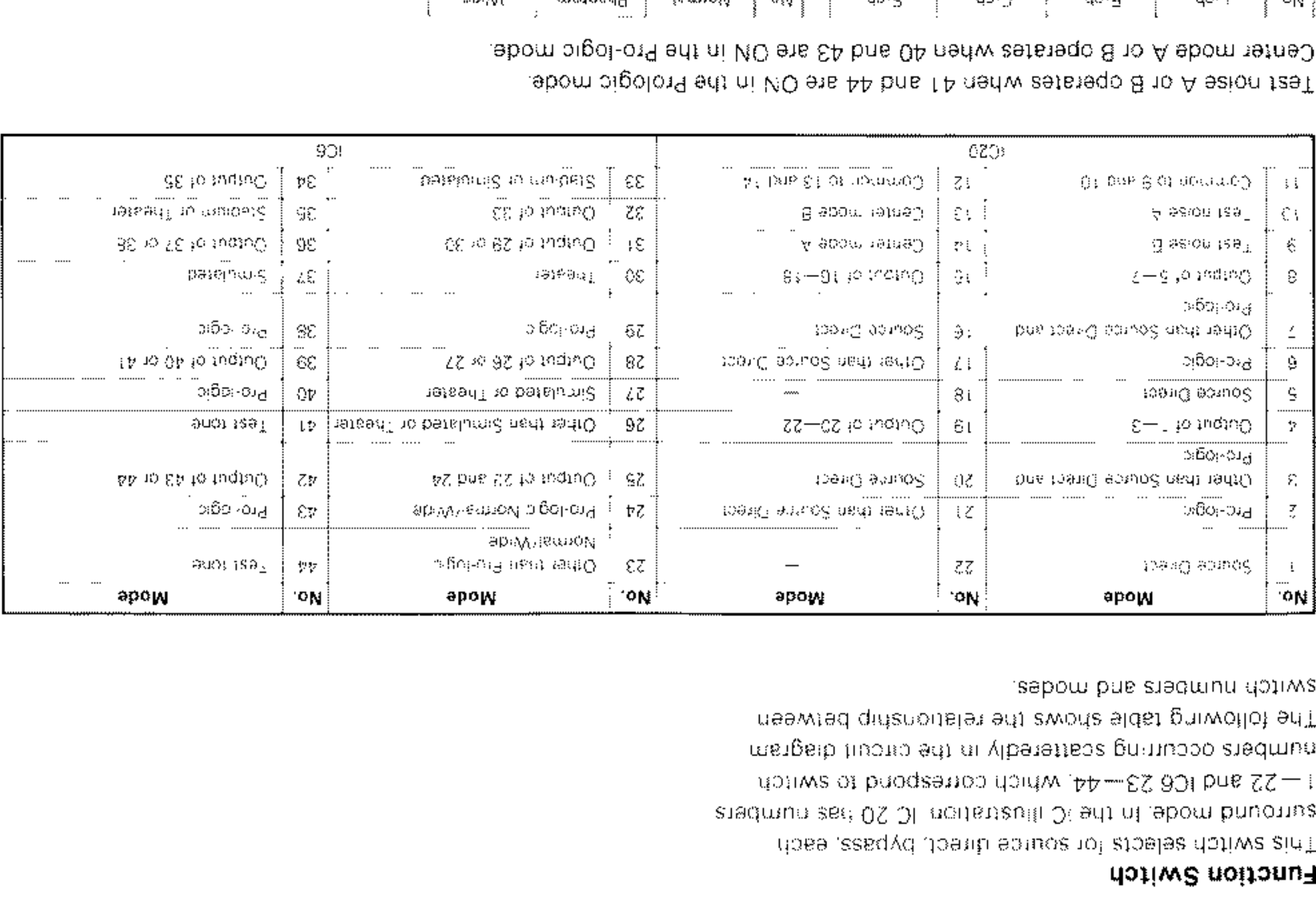
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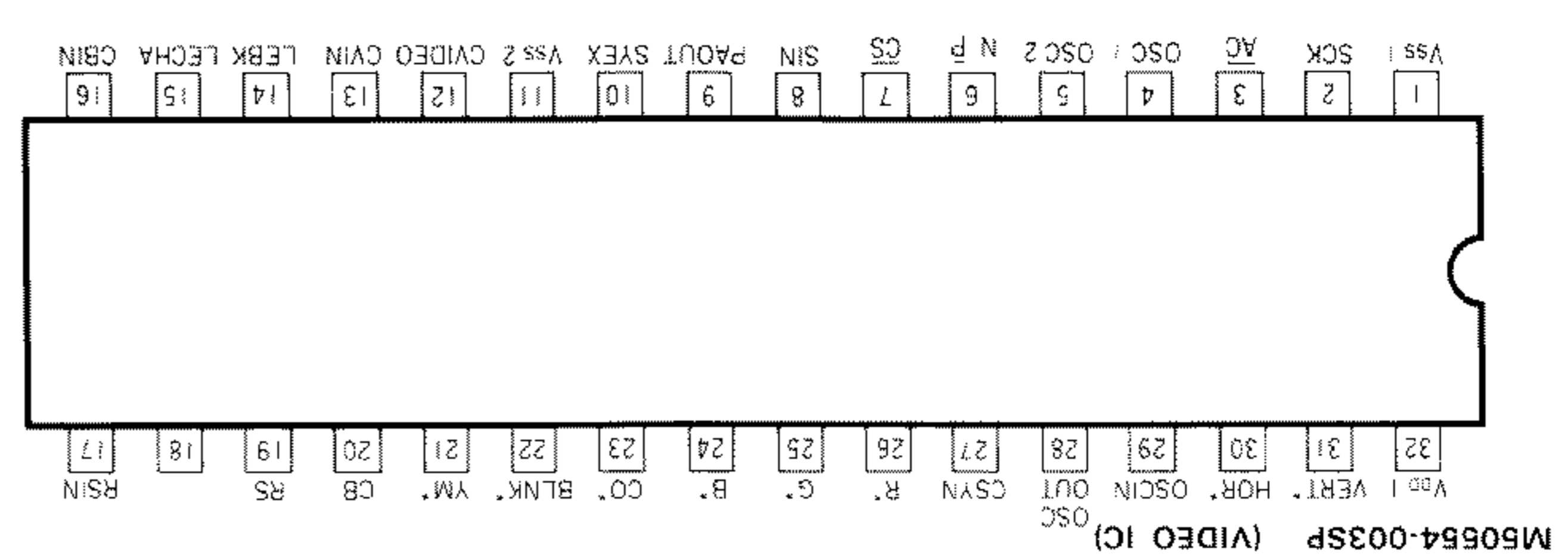
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CIRCUIT DESCRIPTION

TYPE CODE	AMP I		TUNER		PLAYER		CD		DECK A		DECK B		AMP II		REMOTE CONTROL		FUNCTION CODE	
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F		
0	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	POWER ON	TEST
1	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
2	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
3	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
4	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
5	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
6	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
7	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
8	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
9	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
A	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
B	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
C	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
D	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
E	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST
F	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	SEL. TUNER	TEST

- 1 - ROXY ONLY
- 2 - SYSCON ONLY
- 3 - RECEIVER ONLY
- 4 - SC-800 ONLY
- 5 - AV AMP (KA-V1000R) ONLY
- 6 - ES-SPACE ONLY
- 8 - ROXY8
- 9 - AV AMP (CONCEPT)
- 10 - RECEIVER ONLY
- 11 - ROXY 9

Pin No.	Pin Name	Name	Description
1	V _{SS1}	Ground pin	Pin to ground the digital system. Connected to GND.
2	SCK	Serial clock input	When CS is "L", serial data of SIN is input at the use of SCK. Hysteresis input and built-in pull-up resistor.
3	AC	Auto clear input	At "L", resets the C internal circuit. Hysteresis input and built-in pull-up resistor.
4	OSC1	Oscillator circuit external	Pin to connect the display oscillator circuit externally. Standard oscillation frequency of about 7 MHz.
5	OSC2	NTSC/PAL select	Pin to select the NTSC or PAL sync signal generator. At "L", generates the NTSC sync signal, and at "H", the PAL sync signal. Built-in pull-up resistor.
6	N/P	Chip select input	Chip select pin, which is made "L" for serial data transfer. Built-in pull-up resistor.
7	CS	Serial data input	Pin to input data and address serially for display control register and display data memory. Built-in pull-up resistor.
8	SIN	Parity output	Odd parity output pin. Built-in error detection of one word of SIN mode, and at "L", internal sync signals. At "H", provides the external sync signal.
9	PAOUT	Sync signal select	Pin to select between external sync and internal sync signals. At "L", provides the external sync mode, and at "H", internal sync mode. Built-in pull-up resistor.
10	SYEX	Ground pin	Pin to ground the analog system. Connected to GND.
11	V ₁₂	Composite video output	Pin to output the composite video signal of 2 V _{pp} . When superimposing, the character output, etc. is superimposed on this composite video signal. When superimposing, the character output, etc. is superimposed on this composite video signal.
12	VIDEO	Composite video input	Pin to input the composite video signal. When superimposing, the character output, etc. is superimposed on this composite video signal.
13	CVIN	LEBK	Character level input. Pin to input the character level signal. When superimposing, the character output, etc. is superimposed on this composite video signal.
14	LEBK	LEBKA	Character level input. Pin to input the character level signal. When superimposing, the character output, etc. is superimposed on this composite video signal.
15	LEBKA	LEBKA	Character level input. Pin to input the character level signal. When superimposing, the character output, etc. is superimposed on this composite video signal.
16	LEBKA	LEBKA	Character level input. Pin to input the character level signal. When superimposing, the character output, etc. is superimposed on this composite video signal.



CIRCUIT DESCRIPTION

KA-V6000

Pin No.	Pin Name	Name	Description
16	CRIN	Color burst signal input	The CR output is converted to the color burst signal level. At video signal by an externally connected circuit, after which it is input.
17	RSIN	Character background input	The RS output is converted to the chroma signal level of video signal by an externally connected circuit, after which it is input.
18	V ₁₂	Power supply pin	Average system power supply pin. Connected to -5 V.
19	RS	Character background	Character background output for character background timing. A signal is output with a phase angle with color burst signal (CR). Amplitude 5 V.
20	CB	Color burst signal	Pin to output the color burst signal. 3.58 MHz for NTSC and 4.43 MHz for PAL. Amplitude 5 V.
21	VH	Luminance signal	Pin to output the luminance signal. Polarity can be selected upon determination of character ROM output.
22	BLNK	Character background	Pin to output the character background signal. Polarity can be selected upon determination of character ROM output.
23	CC	Character output	Pin to output the character signal. Polarity can be selected upon determination of character ROM output.
24	B	Blue output	Pin to output the blue component. Polarity can be selected upon determination of character ROM output.
25	G	Green output	Pin to output the green component. Polarity can be selected upon determination of character ROM output.
26	R	Red output	Pin to output the red component. Polarity can be selected upon determination of character ROM output.
27	CSYN	Composite sync	Pin to output the NTSC or PAL composite sync signal. Negative polarity and amplitude 5 V.
28	OSCOUT	Sync signal generate	Pin to connect the sync signal generate oscillation circuit externally. Oscillation frequency of 4.32 MHz for NTSC and 17.73 MHz for PAL.
29	OSCIN	Sync signal generate	Pin to connect the sync signal generate oscillation circuit externally. Oscillation frequency of 4.32 MHz for NTSC and 17.73 MHz for PAL.
30	HOB	Horizontal sync	Pin to input the horizontal sync signal. Hysteresis input. Polarity can be selected upon determination of character ROM.
31	VERT	Vertical sync	Pin to input the vertical sync signal. Hysteresis input. Polarity can be selected upon determination of character ROM.
32	V _{CC}	Power supply pin	Digital system power supply pin. Connected to +5 V.

CIRCUIT DESCRIPTION

KA-V6000

Operation

Title Edit Function

Owing to this function, a device connected as input can be registered up to 8 characters, and five surround titles in surround memory, each up to 16 characters. For operation, the following keys on the remote control are used in any case.

In addition, total 79 kinds of registered characters (refer to the character table) are subject to searching in a sequence to follow:

1. Press the [ON/OFF] key.

On this screen, the input of the select key of an input model to be subject to modification or of the surround memory select key (1 to 5) of a surround memory to be subject to modification is waited for. Unless the key is pressed within about 15 seconds, auto reset is performed. In this situation, even when the [ON/OFF] key is pressed, reset is performed.

2. Press an input select key or surround memory select key (1 to 5). (E.g., press the VIDEO 1 or 1 key.)

The following display will appear

* TITLE EDIT *
 MODEL NAME PRESET
 Character
 CD
 * DP-70 *

1 2 3 4 5

For this, remote control keys are made use of: M/1 M/0

Surround Memory Registration and Call Method

1. When the [M/1] key is pressed, a display as shown below appears, in which situation numeral keys to serve as surround memory select keys, are shown below. Unless entry is made within 5 seconds, reset is made.

Surround Memo Number to save.

1 2 3 4 5

2. On the above display, when one of surround memory select keys 1 to 5 is pressed (e.g., 1), a display as shown below appears, in which situation such pieces of information as surround mode, delay time, center level, rear level and rear balance are memorized in the surround memory selected. However, when the bypass mode is engaged, no registration is possible. Therefore, a display as shown below appears to warn.

Cannot save
 Surround Memo.

3. When the wanted character is discovered, press the [SET] key. At this point, the character is registered, and the character changing position shifts to right one character width. When it is necessary to move the character changing position to left or right, press the [MODE] key.

4. On the screen, the display "Character" will change to "Position". In this situation, each time the [←] or [→] key is pressed, a character searching is made counterclockwise. When the [←] key is pressed, a character searching is made clockwise as shown below, while "flickers" for a blank and "flickers" for a character position is indicated by flickering of the character. In the above situation, perform modification character by character. The character changing position is indicated by flickering of the character.

When the [←] key is pressed, a character searching is made clockwise as shown below, while "flickers" for a blank and "flickers" for a character position is indicated by flickering of the character.

When the [→] key is pressed, a character searching is made counterclockwise.

When the [SET] key is pressed, the character is registered, and the character changing position shifts to right one character width.

When it is necessary to move the character changing position to left or right, press the [MODE] key.

On the screen, the display "Character" will change to "Position". In this situation, each time the [←] or [→] key is pressed, a character searching is made counterclockwise.

When the [←] key is pressed, a character searching is made clockwise as shown below, while "flickers" for a blank and "flickers" for a character position is indicated by flickering of the character.

In the above situation, perform modification character by character. The character changing position is indicated by flickering of the character.

* TITLE EDIT *
 SURROUND TITLE LIST
 MEMO 1
 * TOP G... *

CIRCUIT DESCRIPTION

KA-V6000

<Registration Method>

1. When the [M/1] key is pressed, a display as shown below appears, in which situation numeral keys to serve as surround memory select keys, are shown below. Unless entry is made within 5 seconds, reset is made.

Surround Memo Number to save.

1 2 3 4 5

2. On the above display, when one of surround memory select keys 1 to 5 is pressed (e.g., 1), a display as shown below appears, in which situation such pieces of information as title, surround mode, delay time, center level, rear level, rear balance, etc. are displayed from the surround memory in request.

* Crocodile Dandy *
 DOLBY PRO LOGIC MODE (WIDE)
 DELAY TIME 16.5ms
 CENTER LEVEL - 18dB
 BALANCE - 20dB

<Call Method>

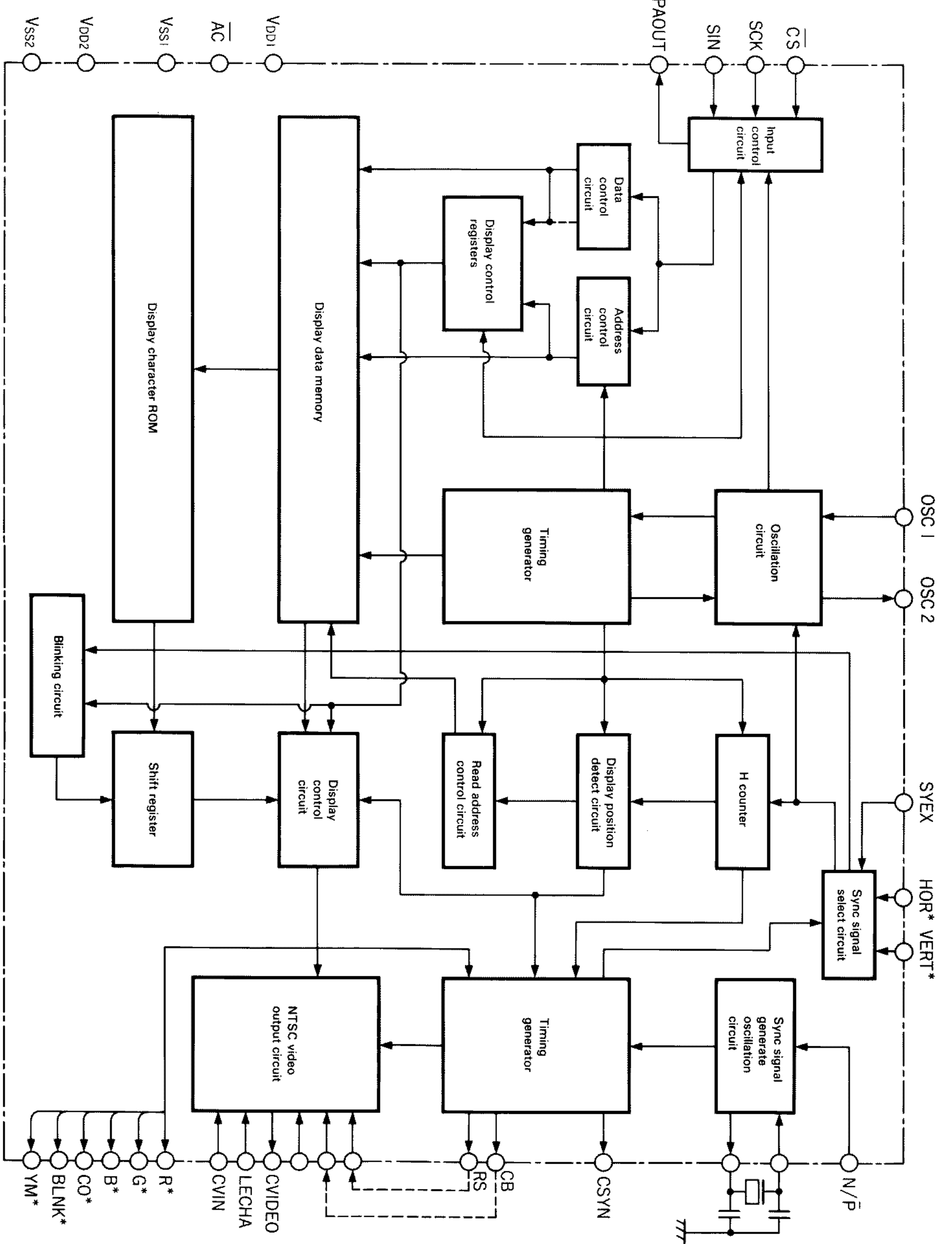
1. When the [M/0] key is pressed, a display as shown below appears, in which situation titles of surround memories are displayed and the input of surround memory select key 1 to 5 is waited for.

Please Select

1 * Crocodile Dandy *
 2 * TOP GUNS *
 3 * * * * *
 4 * * * * *
 5 * * * * *

CIRCUIT DESCRIPTION

KA-V6000



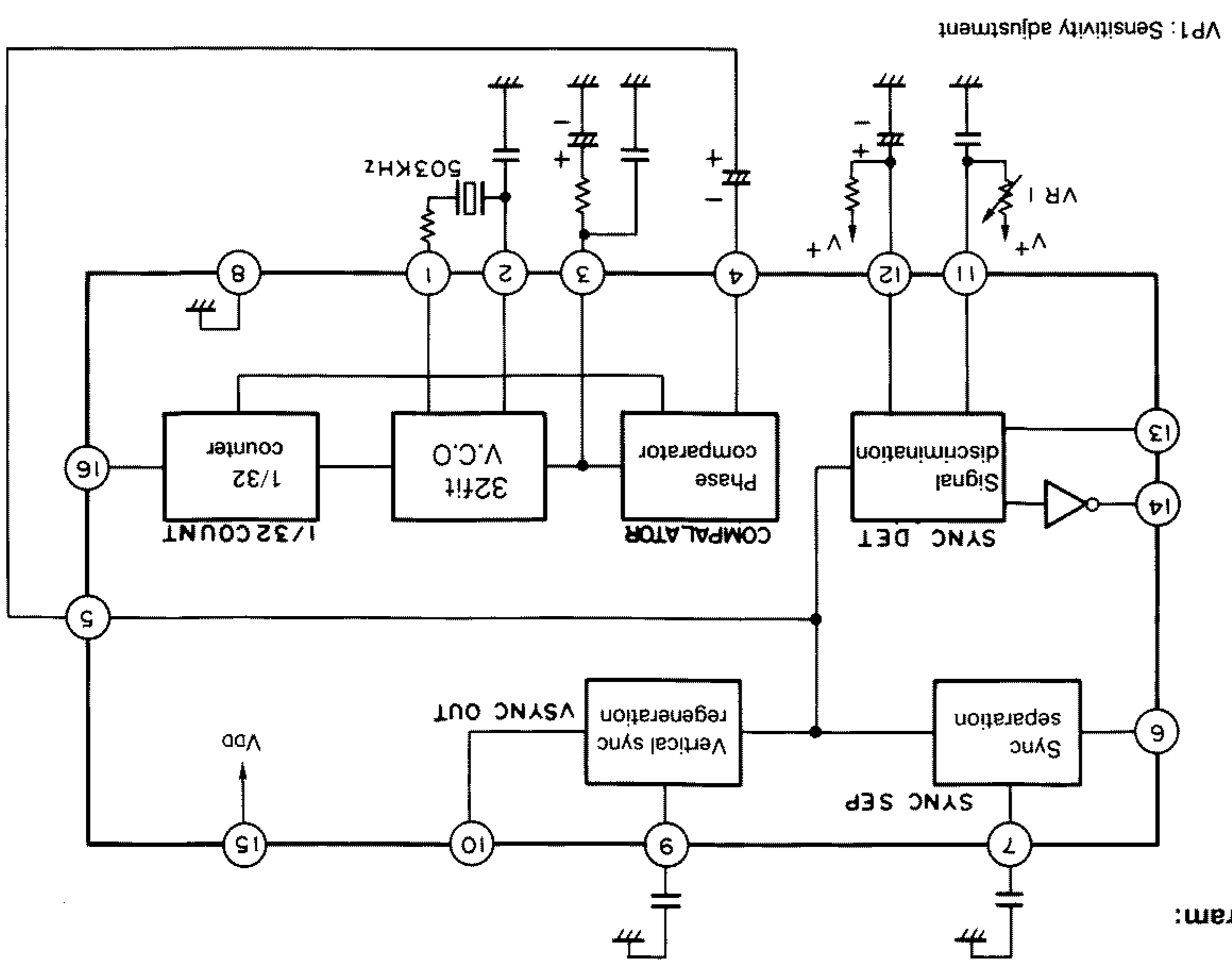
10. Block Diagram (32-pin)

CIRCUIT DESCRIPTION

KA-V6000

Pin functions:

- 16 AFC OUT
- 15 VDD
- 14 Sync. Det
- 13 Sync. Det
- 12 M.M. smoothing
- 11 M.M. time constant setting
- 10 Vsync OUT
- 9 Vertical sync regeneration filter
- 8 GND
- 7 Sync separation low pass filter
- 6 Video INP
- 5 Comp. Sync. OUT
- 4 Comp. Sync. INP
- 3 VCO filter
- 2 VCO oscillation frequency setting



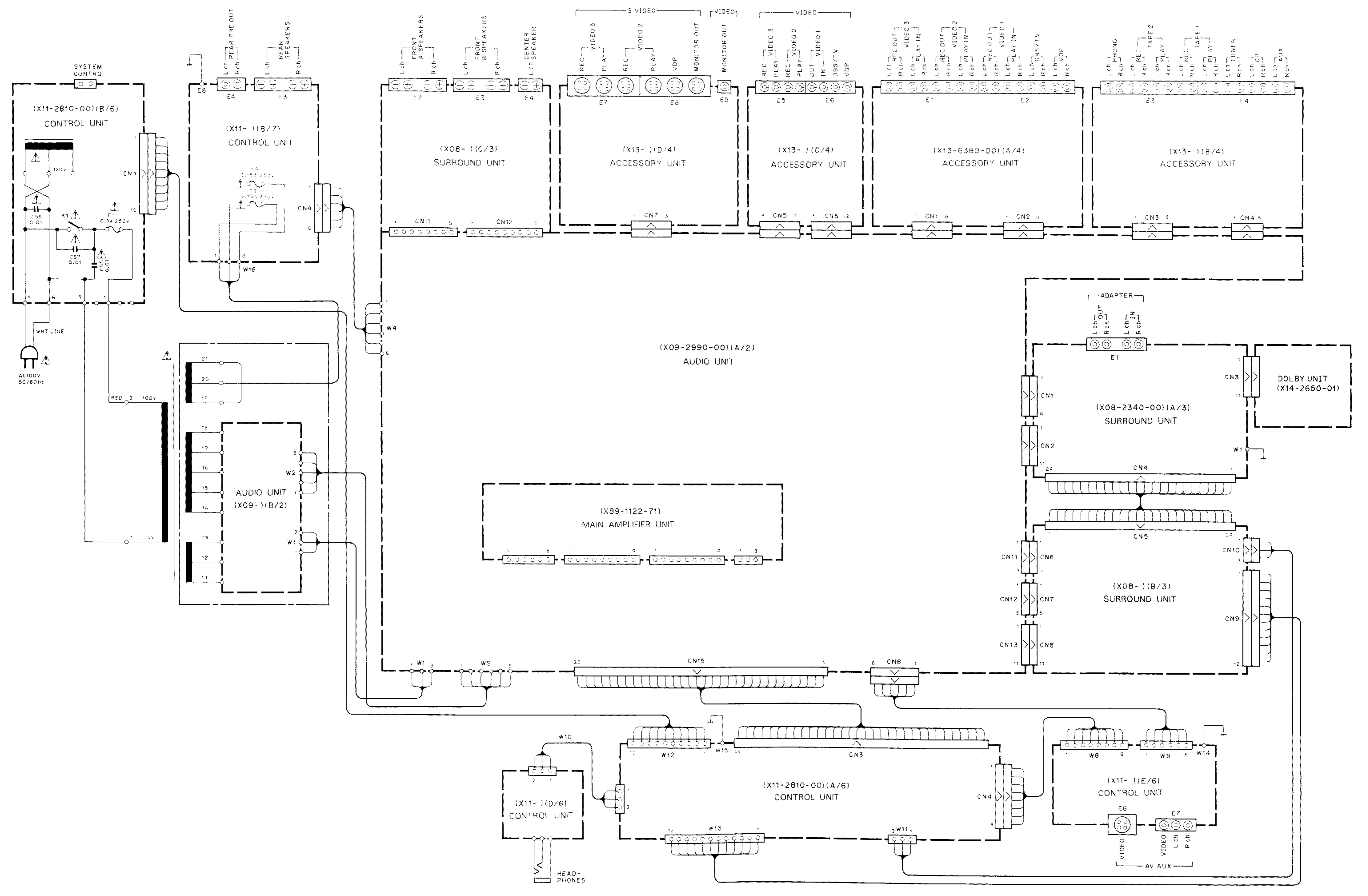
Block Diagram: NJM2229S (Sync Detect IC)

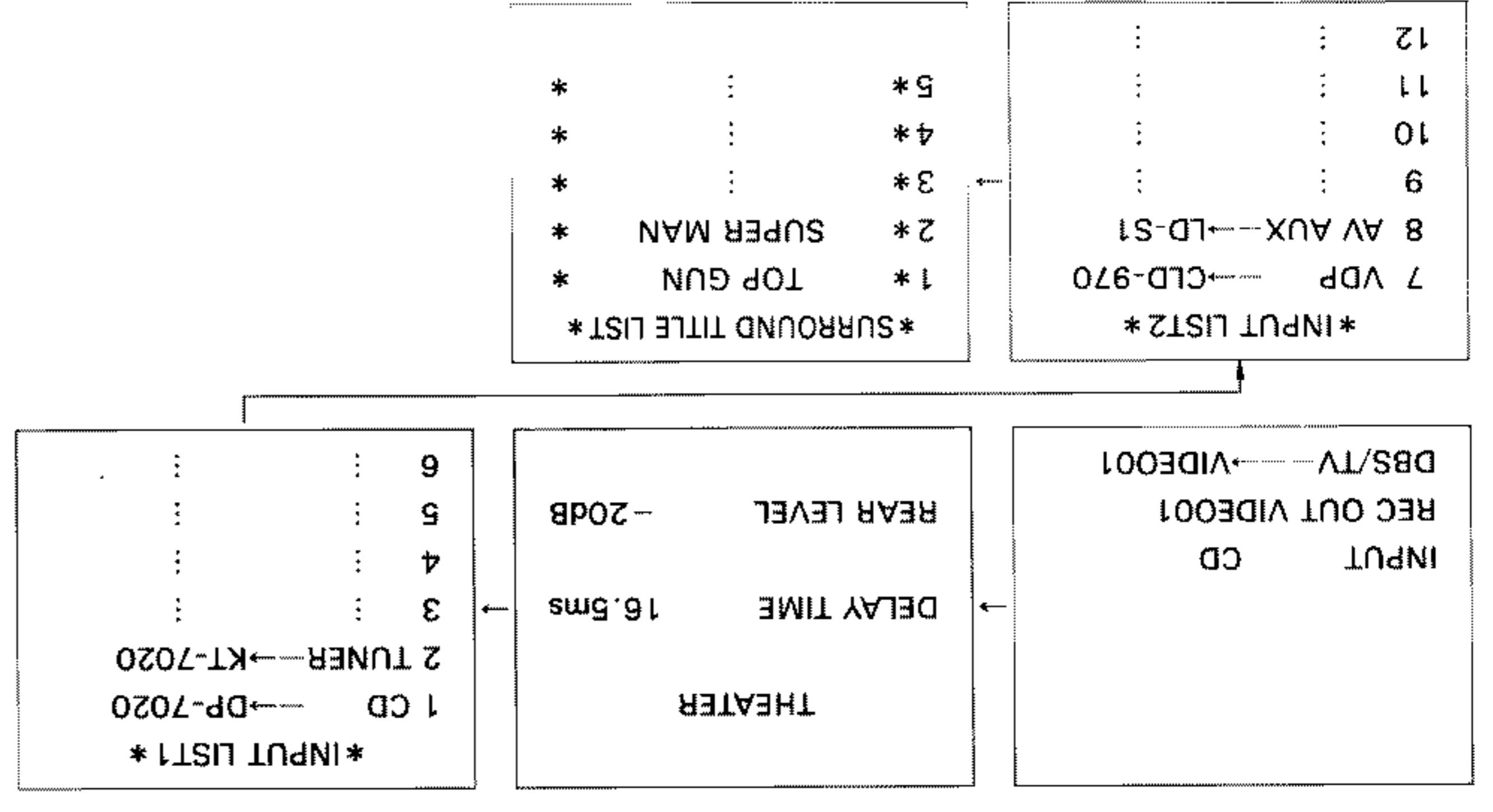
CIRCUIT DESCRIPTION

KA-V6000

KA-V6000 KA-V6000

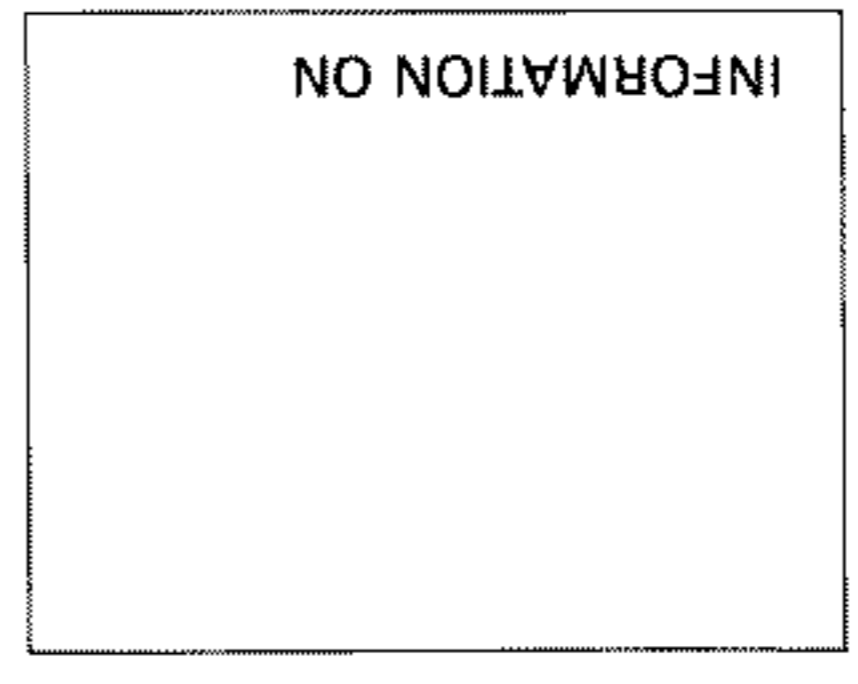
WIRING DIAGRAM





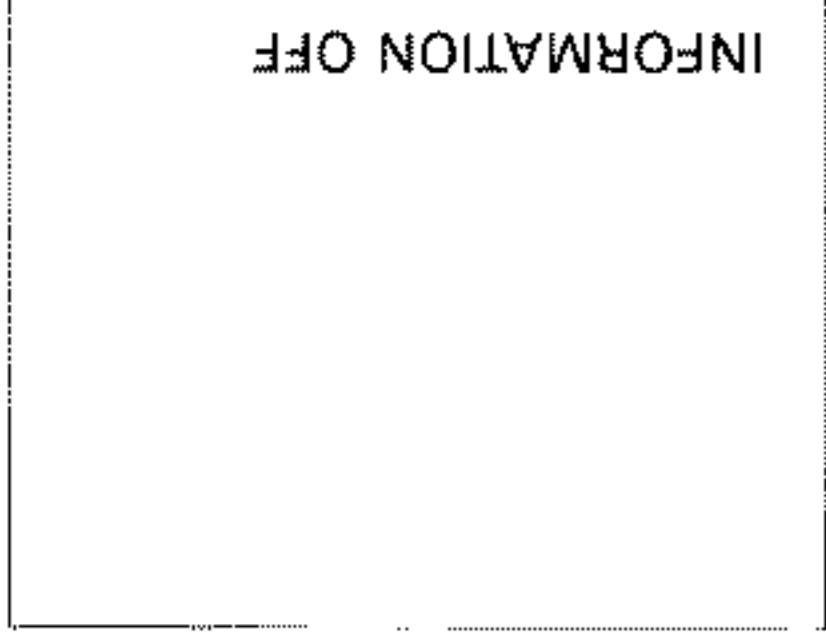
2. On the above screen display (for 1.5 seconds), each time the [MENU] key is further pressed, one of the following five displays appears and finally the display of the next item 3 appears.

1. On the normal screen mode, press the [MENU] key. A display as shown on the right is made for 1 second, after which character display is enabled.



<Operation Method >
 In addition, a selection as to whether or not character display is made on the TV screen is made by this [MENU] key.
 By the [MENU] key of the remote control, such contents as current amplifier selector setting, surround mode, entry list, surround memory title list, etc. are displayed to check.
 On the normal screen mode, press the [MENU] key. A display as shown on the right is made for 1 second, after which character display is enabled.

About On-Screen Background Color
 In the internal mode (without video signal input), the following colors appear:
 1. Input selector display: green
 Audio system: green
 Visual system: blue
 2. REC OUT VIDEO1 display: pink
 Menu: yellow
 3. Title edit: black and dark blue
 4. Title edit: black and dark blue
 (In the external mode, black remains)
 5. Pro-logic test mode: dark blue



3. During an above display "SURROUND TITLE LIST", when the [MENU] key is further pressed, a display as shown on the right is made for 1.5 seconds. From this time, character display is disabled, and not enabled until the [MENU] key is pressed once again.

CIRCUIT DESCRIPTION

KA-V6000

KA-V6000

CIRCUIT DESCRIPTION

1. Mute (Q1~5): Mute with a signal-GND shunting U1 for L-ch, Q2 for R-ch, Q3 for C-ch, Q4 for S-Lch, Q5 for SR ch
 2. Protection relay driver (Q6): Q6 turns ON at power ON or in abnormal operation of power amplifier
 3. Relay driver (Q7~9): delayed signal for Simulated or Stadium mode
 4. Noise generation (IC1): Relay ON/OFF by signal from microprocessor response of 1/4s output
 3/4, 4/4 +14 dB amplification, the final stage of sound output
 14. Dolby B noise reduction decoder (IC11): Noise reduction for surround output in Pro-logic mode
 Lesser variation in comparison with Dolby B of cassette deck.
 Approx. 5 dB improved at 10 kHz for -40 dB on 300 mV reference
 15. Inverting amplifier, adder (IC12): 1/2. Amplification to input of IC1, 0.17-time inversion
 2/2. Addition of output of IC11
 16. Center preset volume control (IC13): Sets the level by serial data from microprocessor in Pro-logic Normal or Wide mode.
 Pins 2 to 6 are not used.
 17. Impedance shifter (IC14): Voltage-follower for IC13 and IC15. Its purpose is impedance conversion.
 18. Rear preset volume control (IC15): Sets the level by serial data from microprocessor in a surround mode.
 19. Regulator (IC16): +5 V power supply for IC9
 20. Rear buffer amplifier (IC17): Prevents noise ingress by lowered impedance owing to long transmission path running up to the rear power amplifier
 Voltage follower
 21. Tone amplifier (IC18): Tone control amplifier
 22. Motor driver (IC19): Volume up/down control by two controls from microprocessor. The motor is a motor VR (VR2)
 23. Analog switch (IC20): By serial data from microprocessor, selects between L-ch, R-ch audio signals of the Straight, Bypass and Pro-logic
 Pins 10, 12 and 7 are substituted as expansion outputs to the microprocessor. Pins 0, 2, 3 and 4 are either output sampling or 3rd-order low pass filter to cut more than 7 kHz
 3/4 IC9 D/A converter output sampling
 4. 3rd-order low pass filter to cut more than 7 kHz

Encode mode	A	B	State
Center	+15 V	0 V	0 V
L-ch	+15 V	0 V	0 V
R-ch	+15 V	0 V	0 V
Surround	+15 V	-15 V	0 V

1. Dolby System integrated circuit (IC1): For Logic selection. A control of NORMAL, WIDE, PHANTOM, C-OFF of select on and also each SW transistor are carried out with MODE for a surround

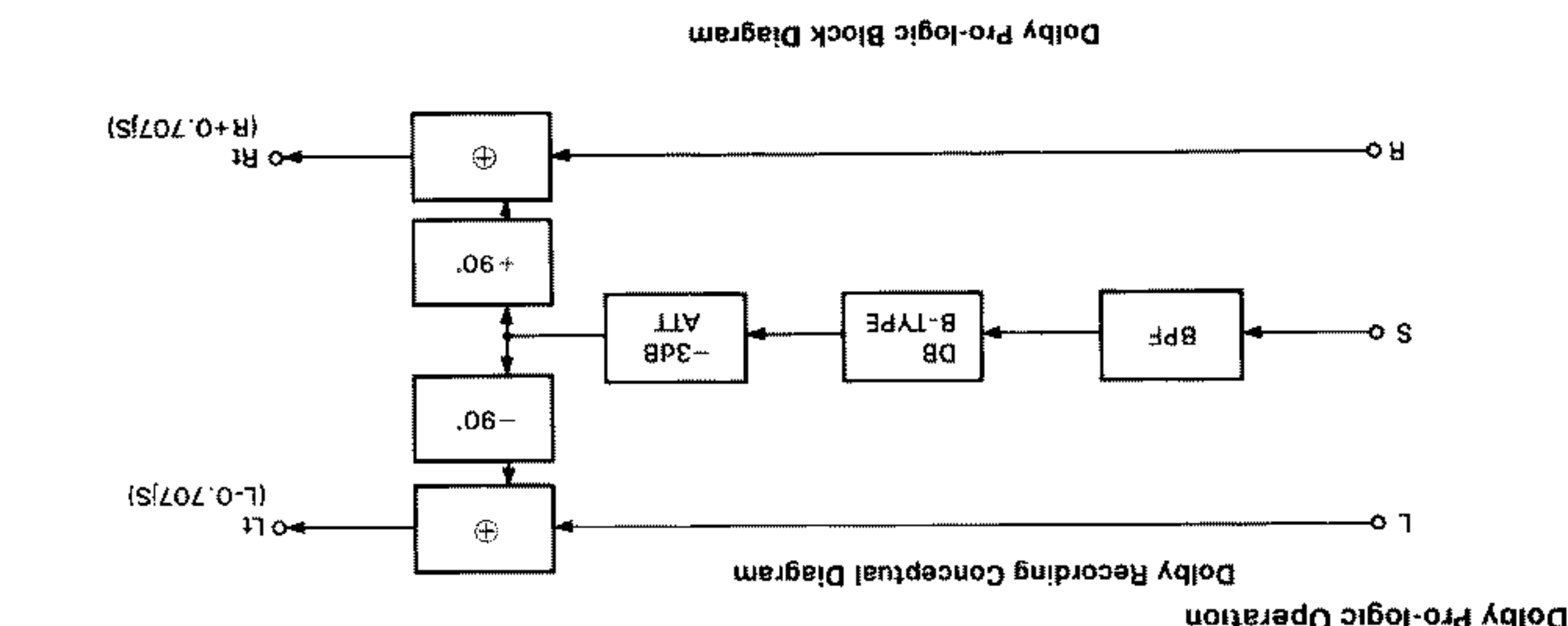
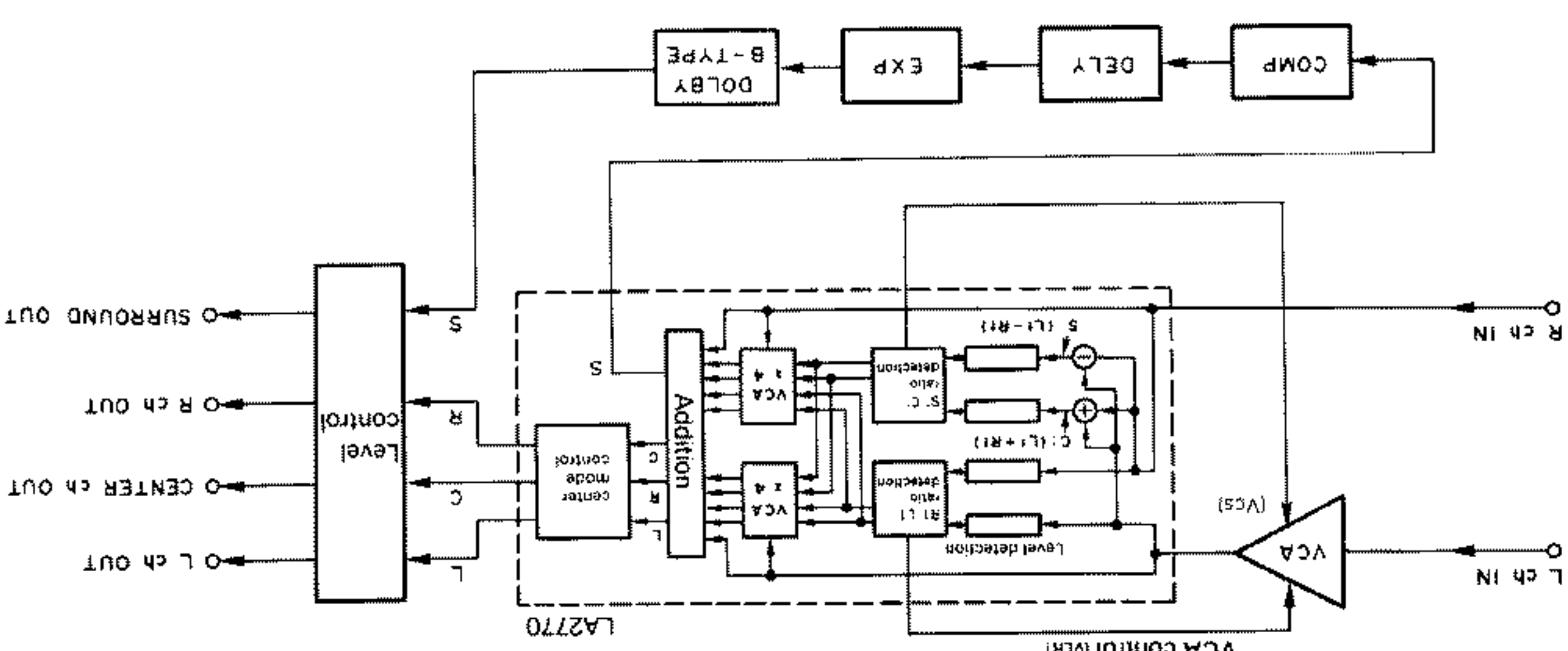
Terminal	A	B
1	L	L
2	L	L
3	L	L
4	L	L
5	L	L
6	L	L
7	L	L
8	L	L
9	L	L
10	L	L
11	L	L
12	L	L
13	L	L
14	L	L
15	L	L
16	L	L
17	L	L
18	L	L
19	L	L
20	L	L
21	L	L
22	L	L
23	L	L
24	L	L
25	L	L
26	L	L
27	L	L
28	L	L
29	L	L
30	L	L

3. Detection amplifier for VLR, VCS, (IC3): A DC level of LA2270 (Lch, Rch) and C, S detect be amplified
 4. VCA control (IC4): A control of CS is carried out
 5. VCA (IC5): A level of Lch is controlled
 6. SW transistor. (Q1): NORMAL MODE selection. When base voltage become (H) by an input signal from IC1, NORMAL MODE becomes ON
 (Q2): WIDE MODE selection. When base voltage become (H) by an input signal from IC1, WIDE MODE becomes ON
 (Q3): NORMAL (CENTER off) MODE a selection becomes ON
 When base voltage become (H) by an input signal from IC1, NORMAL (CENTER off) MODE becomes ON
 (Q4): Center level detection. A control of CS is carried out
 (Q5): Center level control. When a center level became (H) a gate becomes ON

CIRCUIT DESCRIPTION

KA-V6000

KA-V6000



Outline:
LA2770 Monolithic Linear Integrated Decoder
Dolby Pro-logic Surround Matrix Decoder

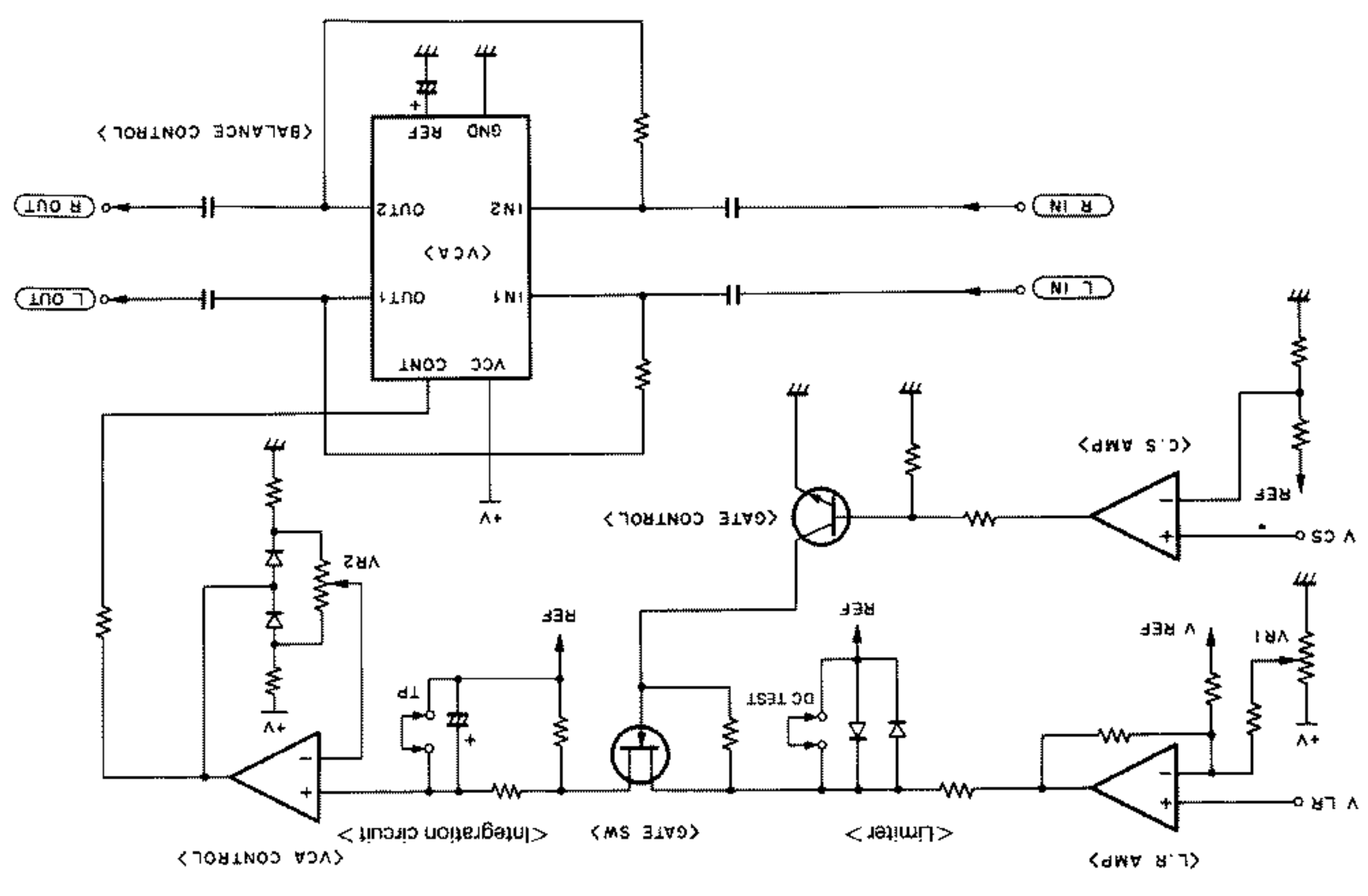
Features:

- Every feature of adaptive matrix (input buffer, BPF, full-wave rectifier, log-difference amplifier, threshold switch, dual time constant, polarity splitter, VCA, combining network) is contained.
- Center mode selection (Normal/Phantom/Wide)
- Center ON/OFF selection
- SUR OFF mode

The two channel inputs subjected to Dolby surround encoding are decoded into four channel signals of L-ch, C-ch, R-ch and S-ch. A perfect Dolby pro-logic surround decoder can be constituted owing to a combination with an input balancer noise sequencer, delay circuit, 7 kHz low pass filter, modified Dolby NR, and output master level control.

CIRCUIT DESCRIPTION

KA-V6000



Auto Balance Operation (x14-2650-00)

To the pin 32 of IC1, VLR (L/R DC level) is output and to the pin 17, Vcs (center surround DC level). The auto balance circuit is controlled by these voltages. VLR, the front L/R level balance voltage, is identical with the reference voltage when L-ch and R-ch are the same in voltage level. The former voltage is subject to averaging in an integration circuit and comparison with the reference voltage. Then, the difference voltage serves for VCA control.

However, it is when Vcs is higher than Vref, i.e. when L-R level is given that the control voltage passes the FET gate. Namely, when the L-ch and R-ch signals are in phase and the same in level, the auto balance circuit operates.

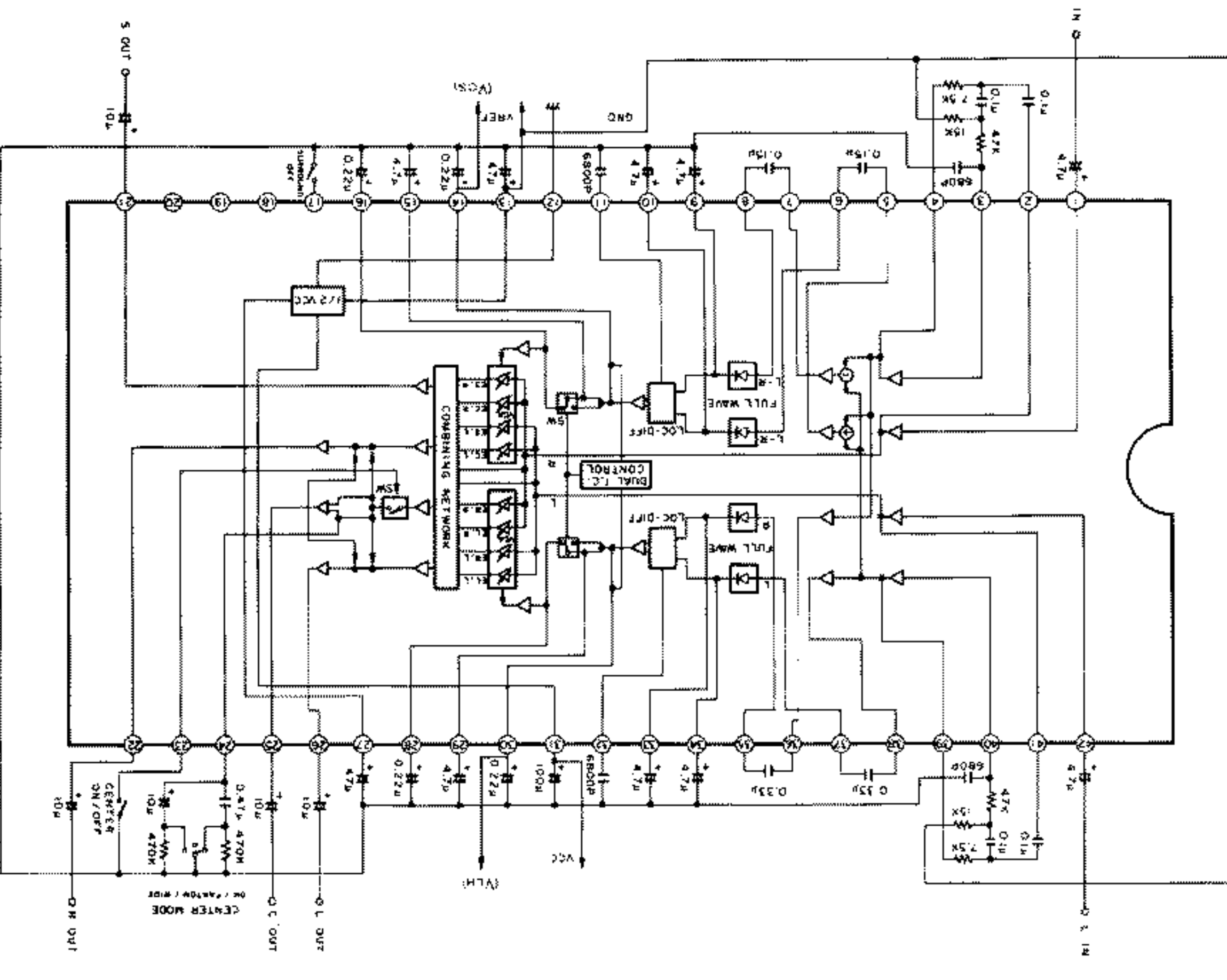
In addition, the VCA control level is regulated to ± 3 dB. The L-ch only can be controlled.

CIRCUIT DESCRIPTION

KA-V6000

Pin No.	Description	Pin No.	Description
1	R-ch input	22	R-ch output
2	R-ch input amplifier output	23	Center ON/OFF switch (GND: OFF)
3	R-ch control signal BPF input	24	Center mode switch (ON/Phantom/Wide)
4	R-ch control signal BPF output	25	C-ch output
5	C-ch control signal output	26	L-ch output
6	C-ch control signal input	27	1/2 Vcc (AC GND)
7	S-ch control signal output	28	R/L-ch time-constant (f) setting capacitor
8	S-ch control signal input	29	R/L-ch time-constant (SI) setting capacitor
9	S-ch full-wave rectification output	30	R/L-ch dual time-constant timing setting capacitor
10	C-ch full-wave rectification output	31	Vcc
11	S-ch log-difference amplifier input capacitor	32	R/L-ch log-difference amplifier input capacitor
12	GND	33	R-ch full-wave rectification output
13	V ref (1/2 Vcc)	34	L-ch full-wave rectification output
14	S/C-ch dual time-constant timing setting capacitor	35	R-ch control signal input
15	S/C-ch time-constant (SI) setting capacitor	36	L-ch control signal output
16	S/C-ch time-constant (f) setting capacitor	37	L-ch control signal input
17	Surround OFF (L-ch/C-ch/R-ch steering mode switch (GND: OFF))	38	L-ch control signal output
18	NC	39	L-ch control signal BPF output
19	NC	40	L-ch control signal BPF input
20	NC	41	L-ch input amplifier output
21	S-ch output	42	L-ch input

LA2770 Pin Functions



CIRCUIT DESCRIPTION

KA-V6000

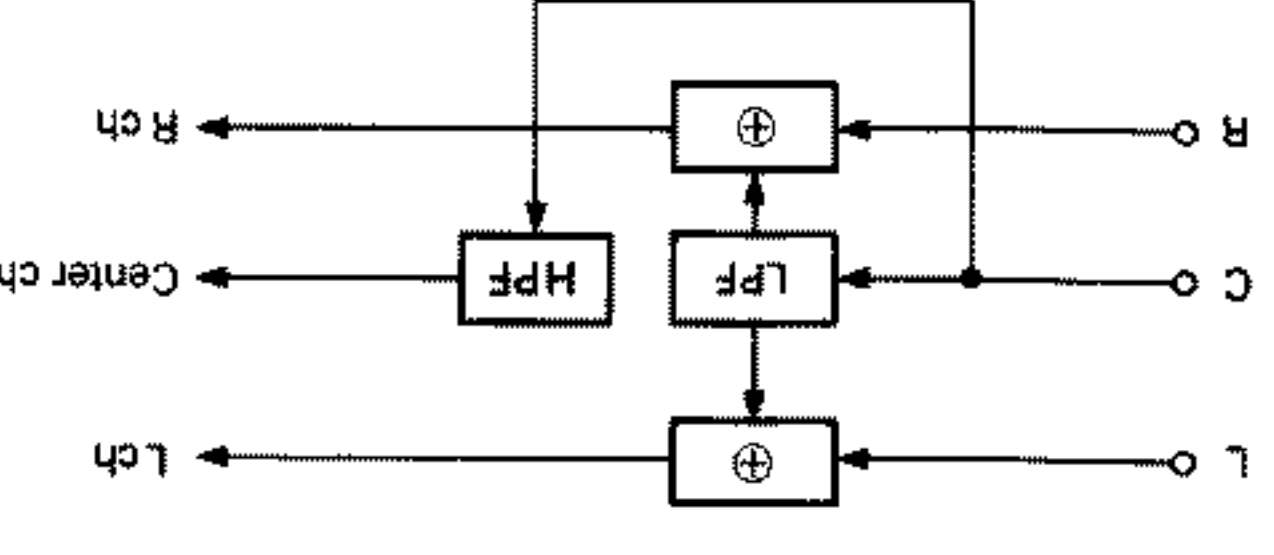
Center Mode Control

(1) **Normal Mode**
 Much of low-frequency monaural components is given sounds will be heard from the center speaker. At this time, the use of a low-diameter speaker for center may results in insufficient low-frequency sound. To avoid this, low-frequency components of less than 100 Hz are divided to the left and right channels from the center channel.

(2) **Wide mode**
 Without the application of the process of the normal mode, the C-ch and L-ch and R-ch signals are output as they are. For this reason, the center speaker needs to emit sufficient low-frequency sounds. In addition, in use of a sub-woofer system, the normal mode is engaged.

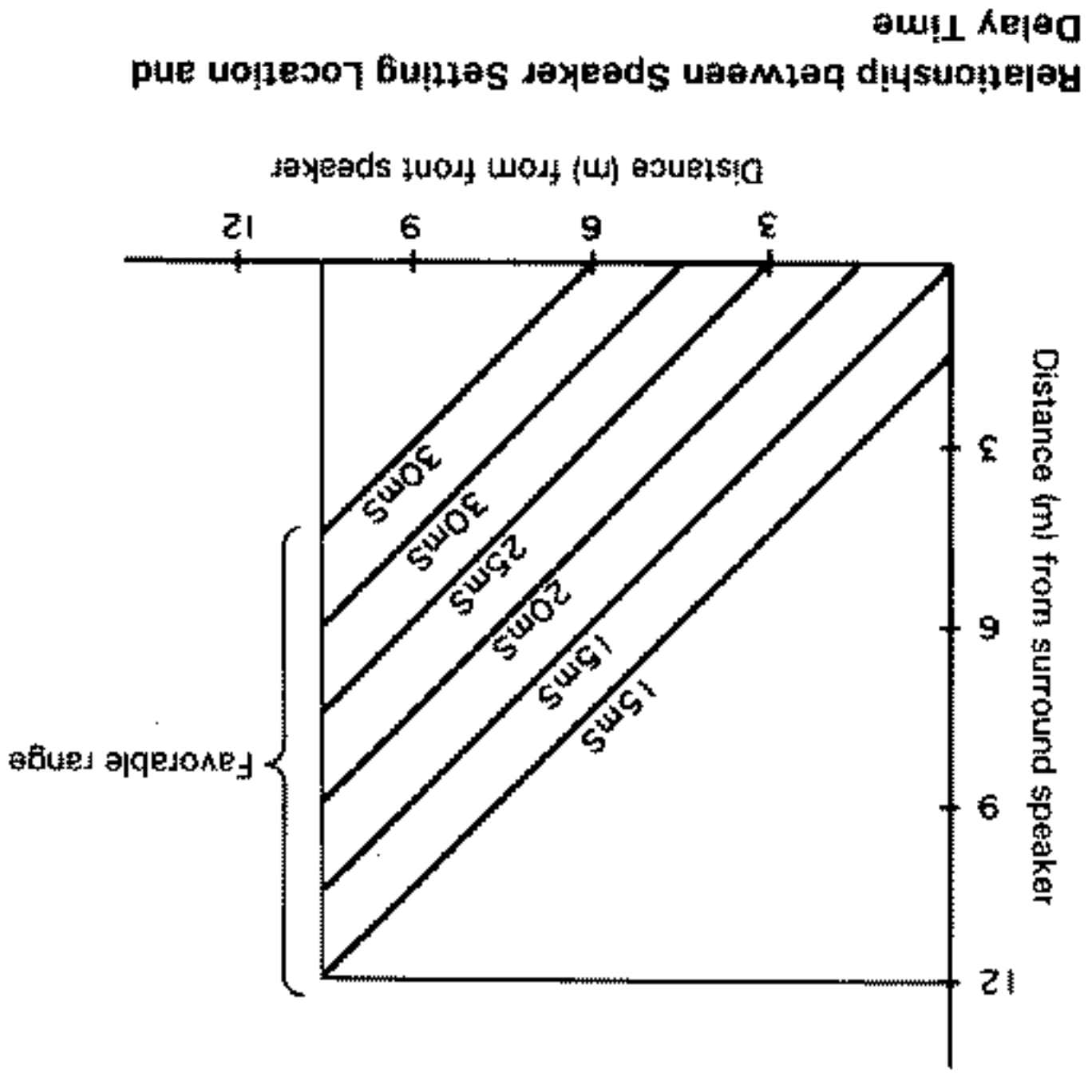
(3) **Phantom mode**
 Without the center speaker, the C-ch component is divided by two to the left and right channels.

(4) **Center OFF**
 The center channel is only set OFF and no other process is performed. Therefore, a monaural sound is not emitted from any channel. This mode is used for testing such as level check, etc.



CIRCUIT DESCRIPTION

KA-V6000



KA-V6000

ADJUSTMENT/REGLAGE/ABGLEICH

ADJUSTMENT

NO.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	AMPLIFIER ALIGNMENT POINTS	ALIGN FOR FIG.
1	CURRENT	Blank signal to LIN	X89-1122-70	VOLUME: 0 V1 (L) V2 (R)	(a)
2	AUTO BALANCE and level signal to LIN	Input a same phase signal (TP7) and RIN (TP6).		Align VR2 so that the difference between LOUT (TP13) and ROUT (TP12) is minimum.	
3	ALIGNMENT (200 mV, 1 kHz)	Record a DC voltmeter between TP10 and TP11.		Align VR1 so that the voltmeter pointer deflection is minimum.	
4		Remove the pin jumper between TP8 and TP9 and check that the voltmeter readings at pins ② and ③ do not change.		Check	

REGLAGE

N°	ARTICLE	REGLAGES ENTREE	REGLAGES SORTIE	AMPLIFICATEUR POINTS D'ALIGNEMENT	ALIGNER SUR FIG.
1	COURANT DE SIGNAL	Raccorder un voltmètre aux deux extrémités de CP1 et CP2.	X89-1122-70	VOLUME: 0 VR1 (L) VR2 (R)	(a)
2	ALIGNEMENT	Entrer un signal de référence sur LIN (TP7) et sur RIN (TP6). Raccorder un voltmètre CA entre LOUT (TP13) et ROUT (TP12).		Ajuster VR2 de telle sorte à obtenir une écartance de lecture minimum sur le voltmètre.	
3	REGLAGE AUTOMATIQUE (200 mV, 1 kHz)	Raccorder un voltmètre CC entre TP10 et TP11.		Ajuster VR1 de telle sorte à obtenir une déviation minimum de l'aiguille du voltmètre.	
4		Enlever la fiche volante entre TP8 et TP9 et vérifier que l'indication du voltmètre aux points ② et ③ ne change pas.		Vérifier	

ABGLEICH

Nr.	GEGENSTAND	EMSTELLUNGEN	AUSGANGS-EINSTELLUNGEN	VERSTÄRKER-EINSTELLUNGEN	ABGLEICH-PUNKTE	ABB.
1	AUTOSTANDARD	NETZSTROM EIN LAUTSPRECHER B REC OUT: AUS SELECT: PHONO	Einem Gleichspannungsmesser zwischen den beiden Enden von CP1 und CP2 anschließen.	VOLUME: 0 VR1 (L) VR2 (R)	(a)	
2	AUTOMATISCHE ABGLEICH-REGELUNG	Ein Gleichphasen- und Regelsignal in LIN (TP7) und RIN (TP6) eingeben.	Ein Wechselspannungsmesser zwischen LOUT (TP13) und ROUT (TP12) anschließen.	VR2 darf abgelesen werden der Unterschied in den Messwerten der beiden Spannungsmesser zwischen TP12 und TP13 minimal ist.	VR1 darf abgelesen werden der Spannungsmesser zwischen TP10 und TP11 zwischen TP10 und TP11 anschließen. Einem Gleichspannungsmesser (200 mV, 1 kHz) angeschlossen.	
3	ABSTIMMUNG (200 mV, 1 kHz)	Raccorder un voltmètre CC entre TP10 et TP11.		Ajuster VR1 de telle sorte à obtenir une déviation minimum de l'aiguille du voltmètre.		
4		Enlever la fiche volante entre TP8 et TP9 et vérifier que l'indication du voltmètre aux points ② et ③ ne change pas.		Vérifier		

KA-V6000

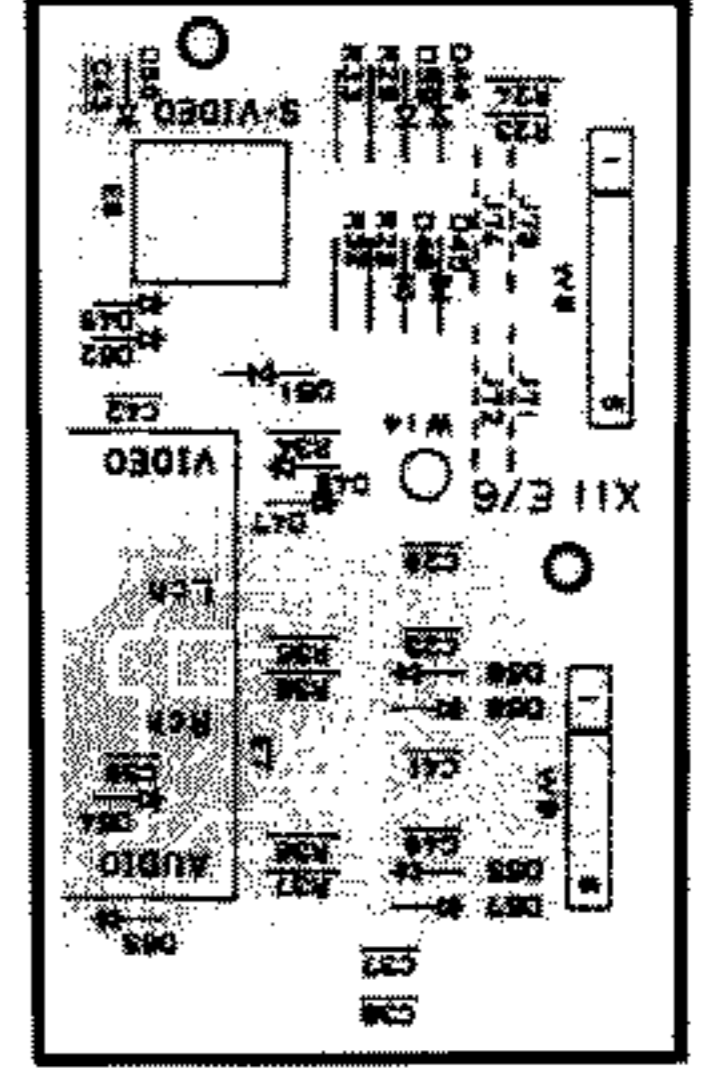
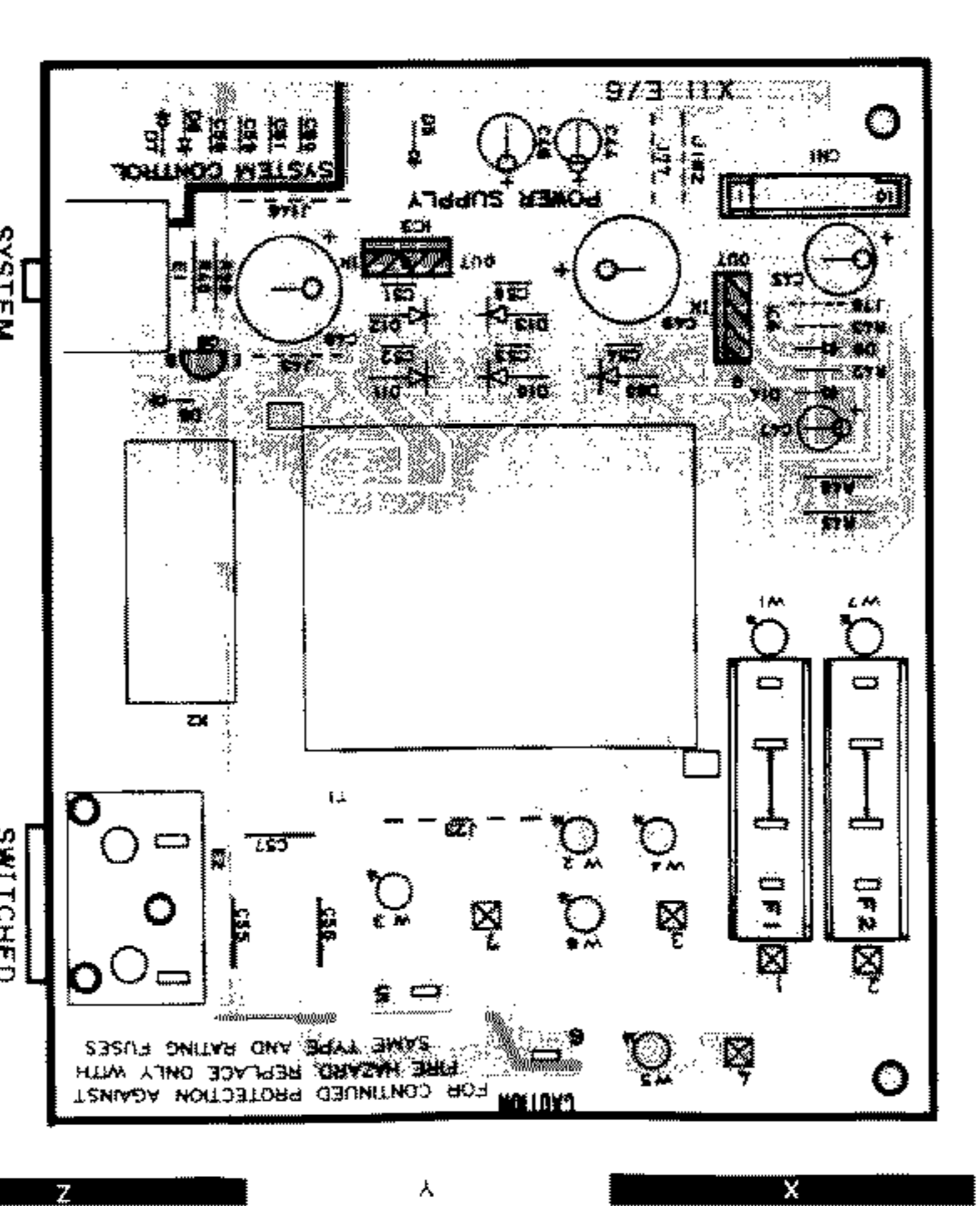
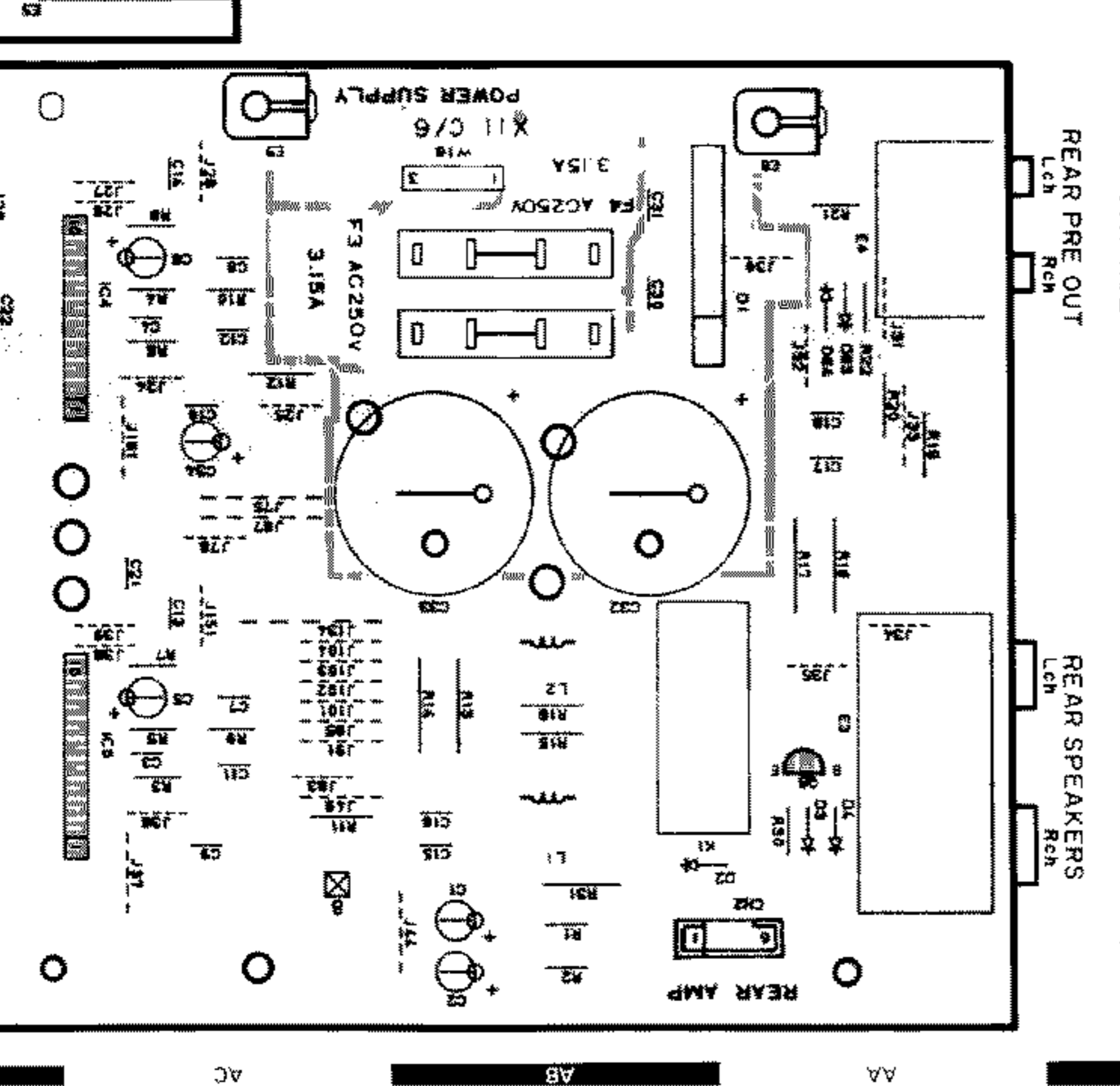
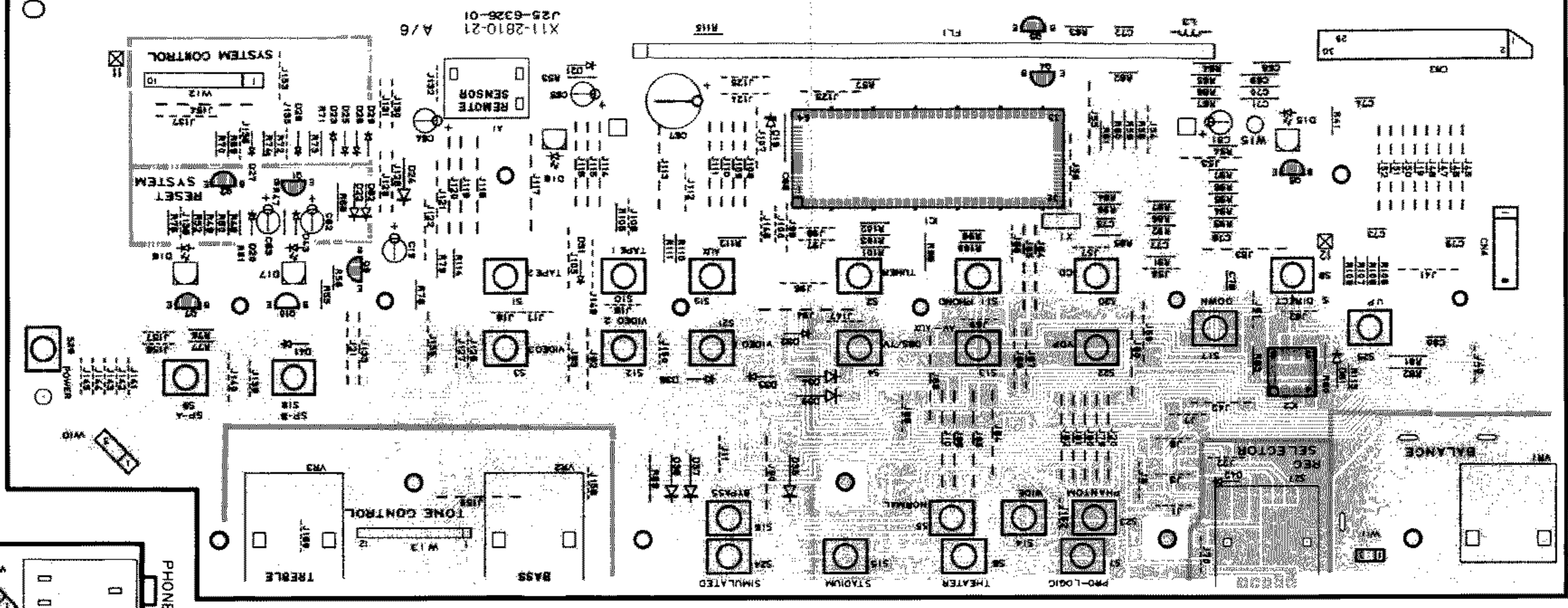
PARTS LIST

Les articles non mentionnés dans le Parts No. ne sont pas fournis.
Parts without Parts No. are not supplied.
* New Parts

Ref. No.	位置	部品番号	部品名/規格	Description	Position
C3	4	CF92FV1H101K	MF	100PF	K
C7	8	CF92FV1H101K	MF	100PF	K
C9	10	CC45FSLIH220J	CERAMIC	22PF	J
C11	12	CC45FSLIH101J	CERAMIC	100PF	J
C13	14	CC45FSLIH221J	CERAMIC	220PF	J
C15	16	CE04KW1V100M	ELECTRO	10UF 35WV	
C19		CE04KW1J470M	ELECTRO	47UF 63WV	
C20		CE04KW1J221M	ELECTRO	22UF 63WV	
C23		CE04KW1E470M	ELECTRO	47UF 25WV	
R13	14	RD14A82B221JTS	FL-PROOF RD	220	J 1/4W
R17	18	RD14A82B47JTS	FL-PROOF RD	47	J 1/4W
R27	30	RD14A82B47JTS	FL-PROOF RD	47	J 1/4W
R31	34	RD14A82B221JTS	FL-PROOF RD	220	J 1/4W
R35	38	RD14A82B2R2JTS	FL-PROOF RD	2.2	J 1/4W
R45	46	RD14A82B220JTS	FL-PROOF RD	22	J 1/4W
VR1	2	R12-1070-05	TRIMMING POT. (1X)		
D1	2	HSS104	DIODE		
D1	2	1SS133	DIODE		
Q1	4	ZSA992(F,E)	TRANSISTOR		
Q5	8	ZSA992(F,E)	TRANSISTOR		
Q9	10	ZSA992(F,E)	TRANSISTOR		
Q11	12	ZSC2590	TRANSISTOR		
Q13	14	ZSA1110	TRANSISTOR		
Q19	14	ZSC945(A)(Q,P)	TRANSISTOR		

△ indicates safety critical components.

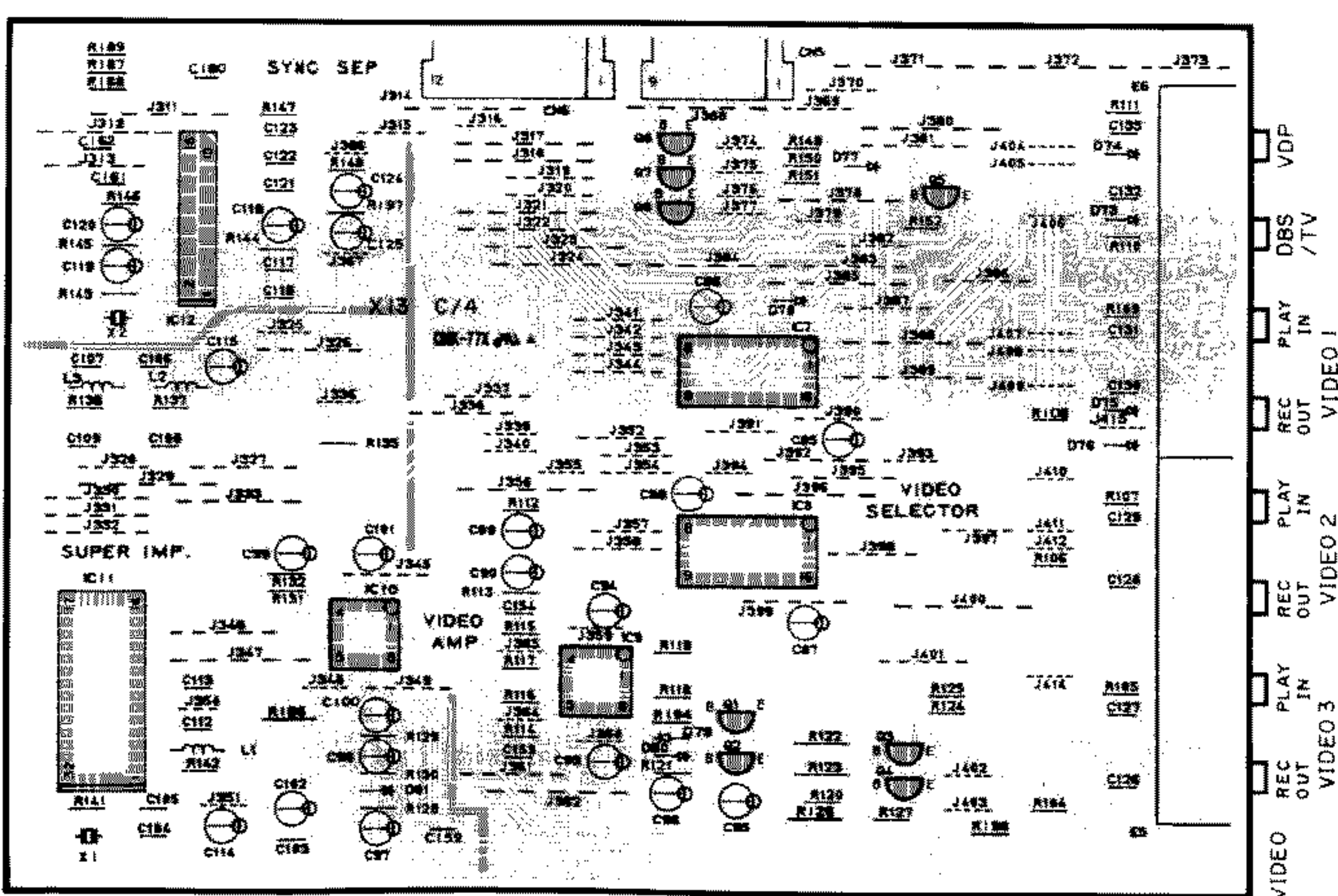
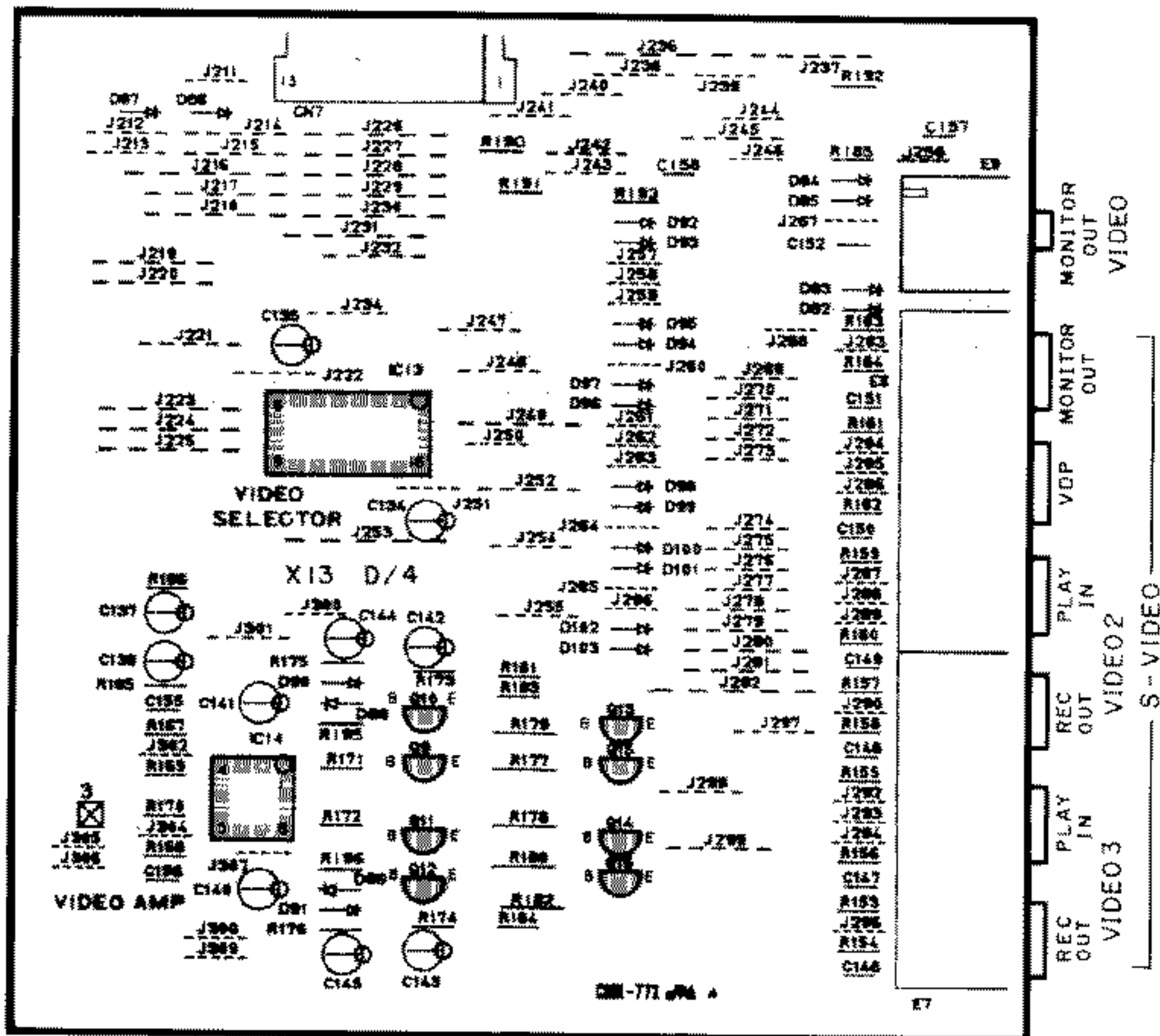
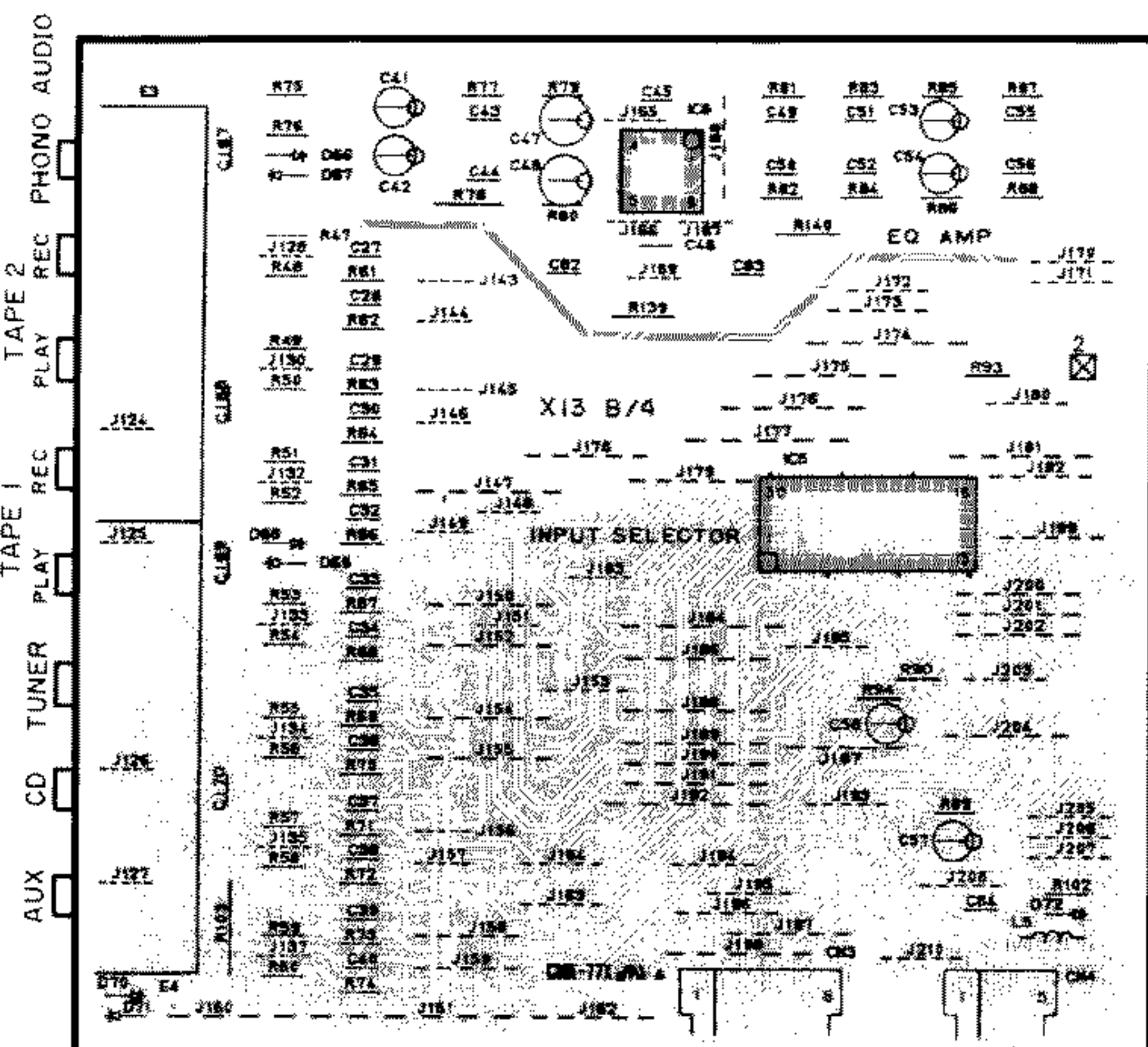
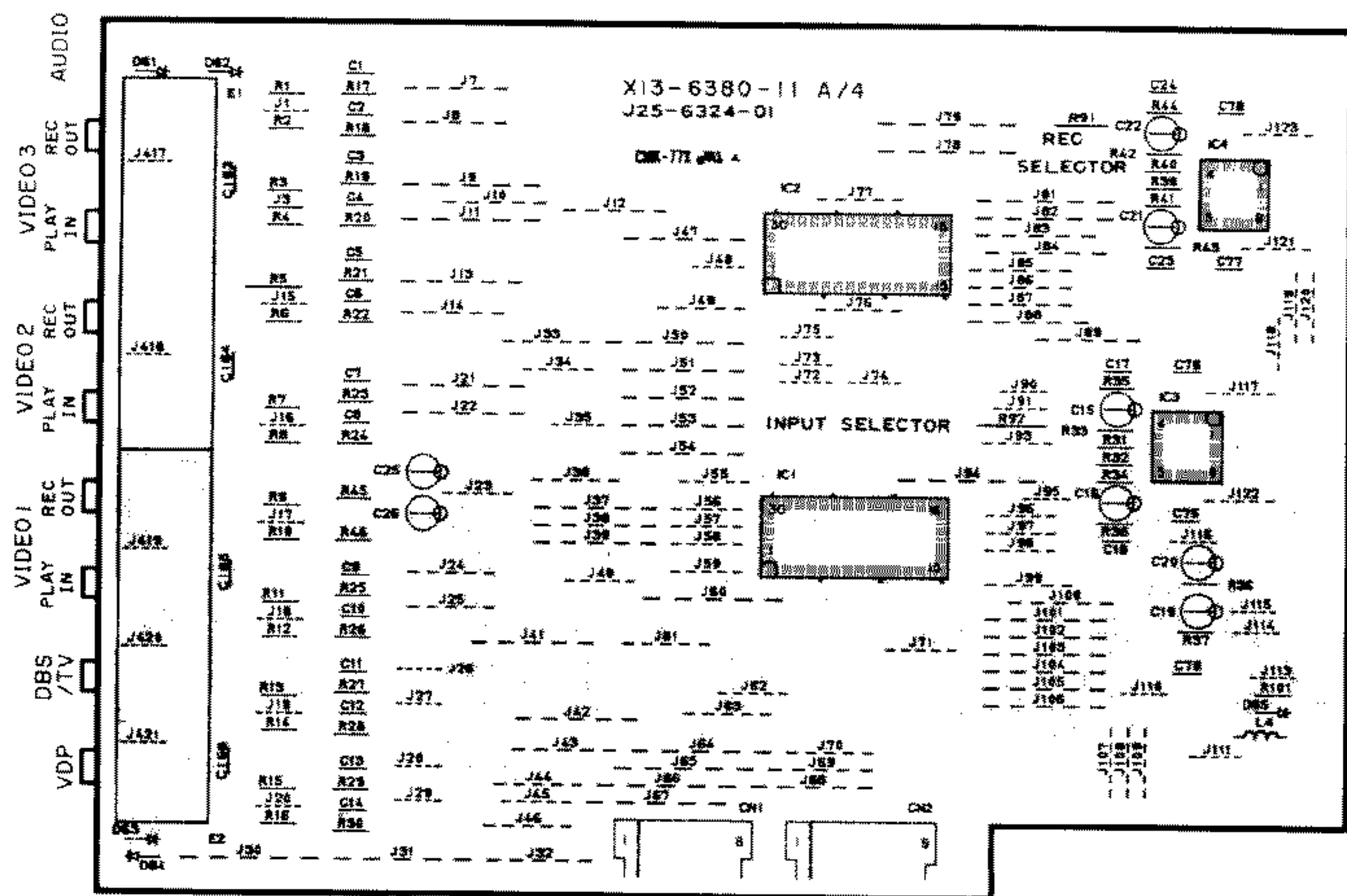
E: Scandinavia & Europe K: USA
U: Pacific East Hawaii T: England M: Other Areas
F: Canada
X: Australia
UE: Africa(Europe)



PC BOARD CONTROL UNIT

AA AB AC AD V W X Y Z

PC BOARD ACCESSORY UNIT



37

38

Indicates safety critical components.

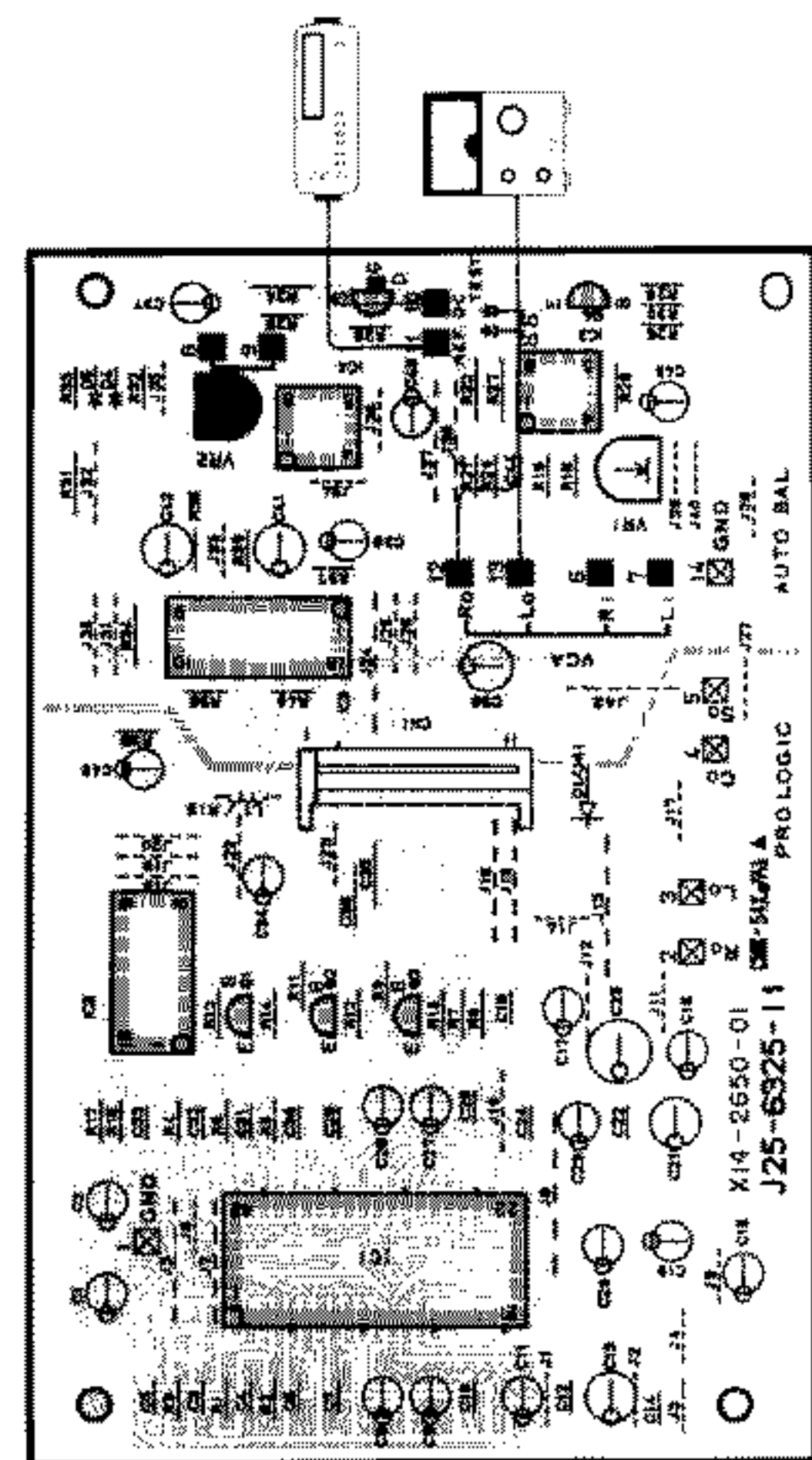
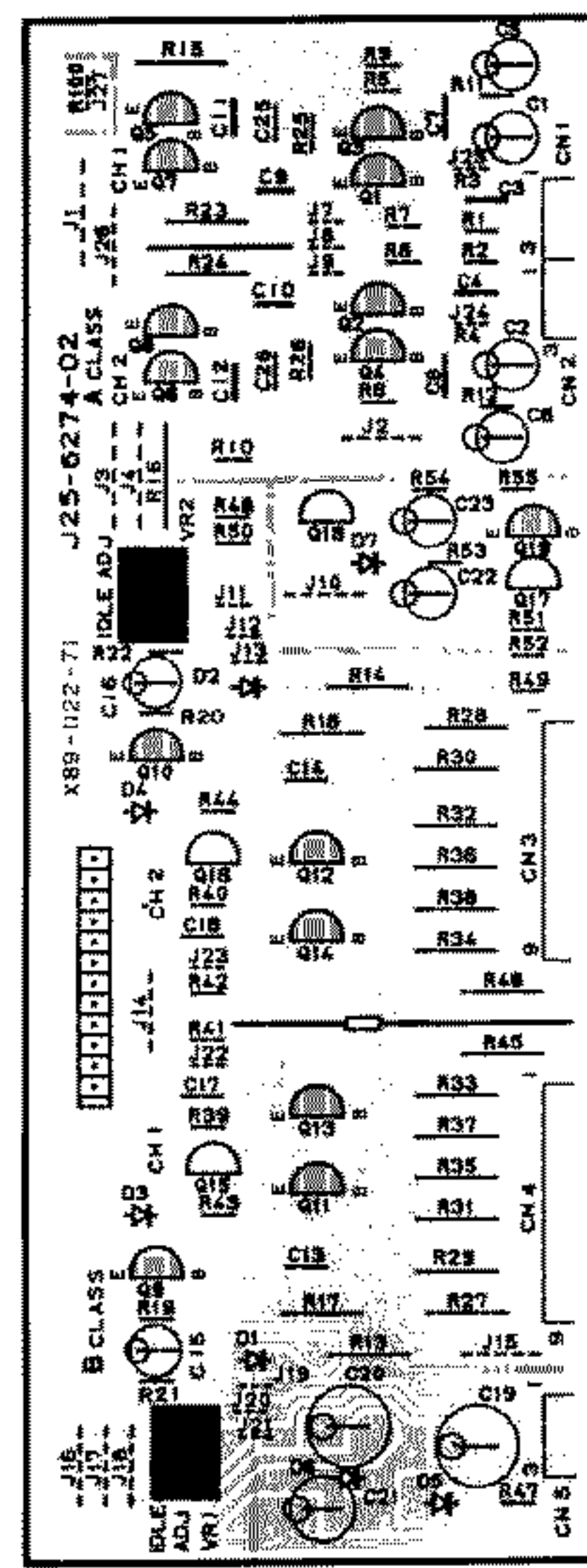
E: Scandinavia & Europe K: USA
 U: Pacific East (Hawaii) T: England M: Other Areas
 U: Americas (Europe) X: Australia
 P: Canada

Ref. No.	Parts No.	Description	Dest. Re-
R102-106	R92-0219-05	FUSE RESIST 10	G 1/4M
R95	R014A2E151JTS	FL-PROOF RD 150	J 1/4M
R96	R014A2E331JTS	FL-PROOF RD 330	J 1/4M
CP3 1	R90-0493-05	MULTI-COMP 100KX9	J 1/6M
CP1 2	R90-0851-05	MULTIPLE RESISTOR	
L1	L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)	
E4	E20-0238-05	SCREW TERMINAL BOARD(2P)	
E2 3	E20-1401-05	SCREW TERMINAL BOARD(4P)	
EN4 5	E10-2403-05	FLAT CABLE CONNECTOR	
C178	CF92FV1H473J	NP-ELEC 3.3UF 50WV	J
C171, 172	CF92FV1H473J	MF 0.047UF J	J
C158, 159	CE91-0745-05	CERAMIC 100PF K	
C156, 157	CE04KW1V100M	ELECTRO 10UF 35WV	J
C154	CE04KW1H220M	ELECTRO 22UF 50WV	J
C155	CE04KW1H220M	ELECTRO 22UF 50WV	J
C145, 146	CE04KW1C101M	ELECTRO 100UF 16WV	J
C149	CE04KW1C101M	ELECTRO 100UF 16WV	J
C147, 148	CE04KW1H220M	ELECTRO 22UF 50WV	J
C143, 144	CE04KW1V100M	ELECTRO 10UF 35WV	J
C139-142	CE04KW1H220M	ELECTRO 22UF 50WV	J
C135-138	CE04KW1H220M	ELECTRO 22UF 50WV	J
C131-134	CE04KW1H010M	ELECTRO 1.0UF 50WV	J
C129, 130	CF92FV1H561J	MF 560PF J	J
C127, 128	CE04KW1H220M	ELECTRO 22UF 50WV	J
C121-126	CF92FV1H121K	MF 120PF K	
C107, 108	CE04KW1A470M	ELECTRO 47UF 10WV	J
C105, 106	CE04KW1H2R2M	ELECTRO 2.2UF 50WV	J
C104	CE04KW1C470M	ELECTRO 47UF 16WV	J
C103	CE04KW1H220M	ELECTRO 22UF 50WV	J
C102	CE04KW1H2R2M	ELECTRO 2.2UF 50WV	J
C101	CF92FV1H121K	MF 120PF K	
C99	CE04KW1V100M	ELECTRO 10UF 35WV	J
C98	CF92FV1H221K	MF 220PF K	
C96, 97	CE04KW1H220M	ELECTRO 22UF 50WV	J
C94, 95	CE04KW1V100M	ELECTRO 10UF 35WV	J
C93	CE04KW1C470M	ELECTRO 47UF 16WV	J
C91, 92	CE04KW1H03Z	CERAMIC 0.010UF Z	
C90	CF92FV1H334J	MF 0.33UF J	J
C89	CF92FV1H04J	MF 0.10UF J	J
C88	CE04KW1V100M	ELECTRO 10UF 35WV	J
C87	CF92FV1H473J	MF 0.047UF J	J
C86	CF92FV1H473J	MF 0.047UF J	J
C85	CF92FV1H223J	MF 0.027UF J	J
C84	CF92FV1H223J	MF 0.027UF J	J
C83	CF92FV1H473J	MF 0.047UF J	J
C82	CE04KW1H2R2M	ELECTRO 2.2UF 50WV	J
C80, 81	CE04KW1C101M	ELECTRO 100UF 16WV	J

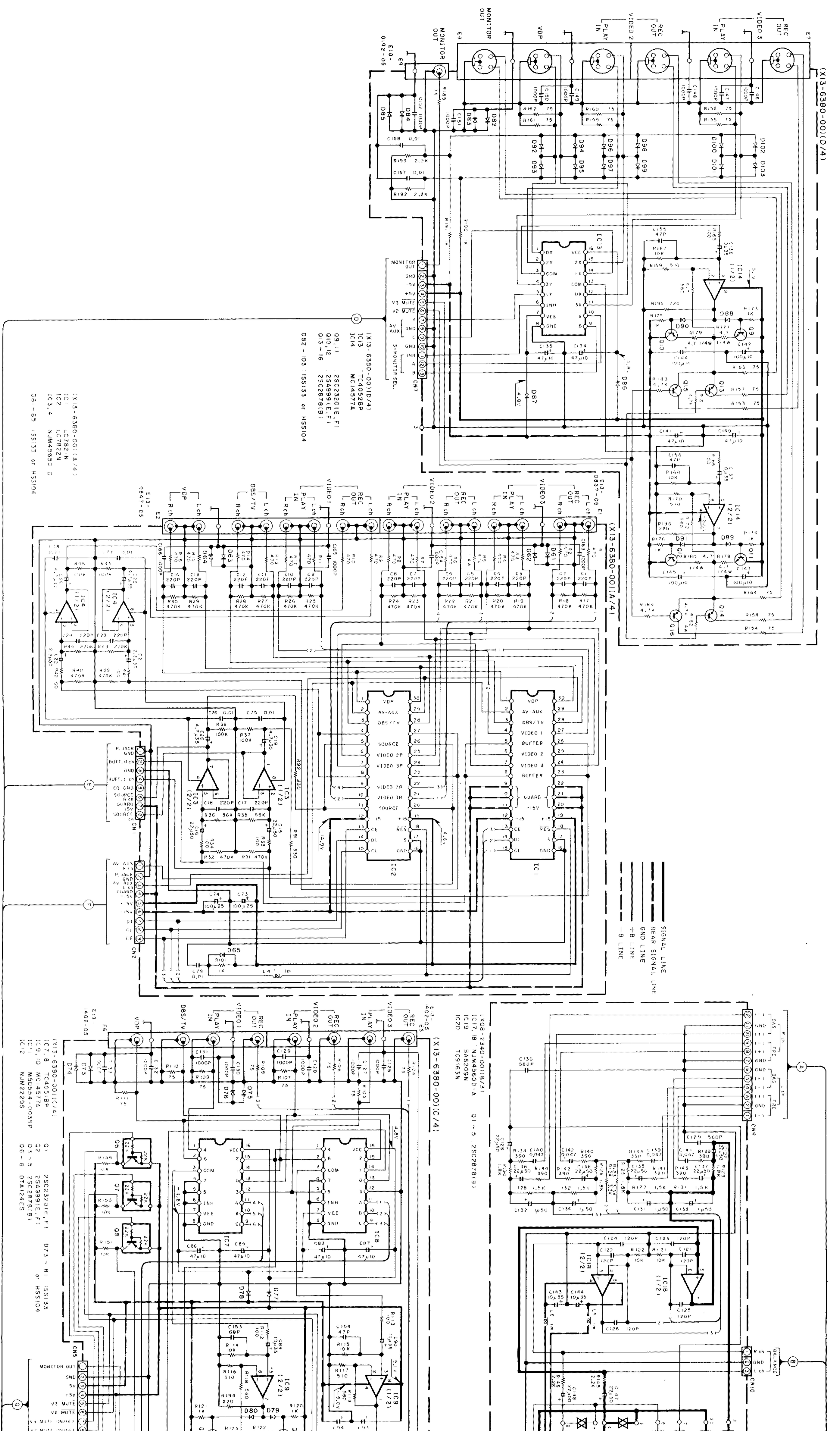
PARTS LIST

* New Parts
 Parts without Part No. are not supplied.
 Les articles sans numéro de pièce ne sont pas fournis.
 Teile ohne Parts No. werden nicht geliefert.

PC BOARD



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



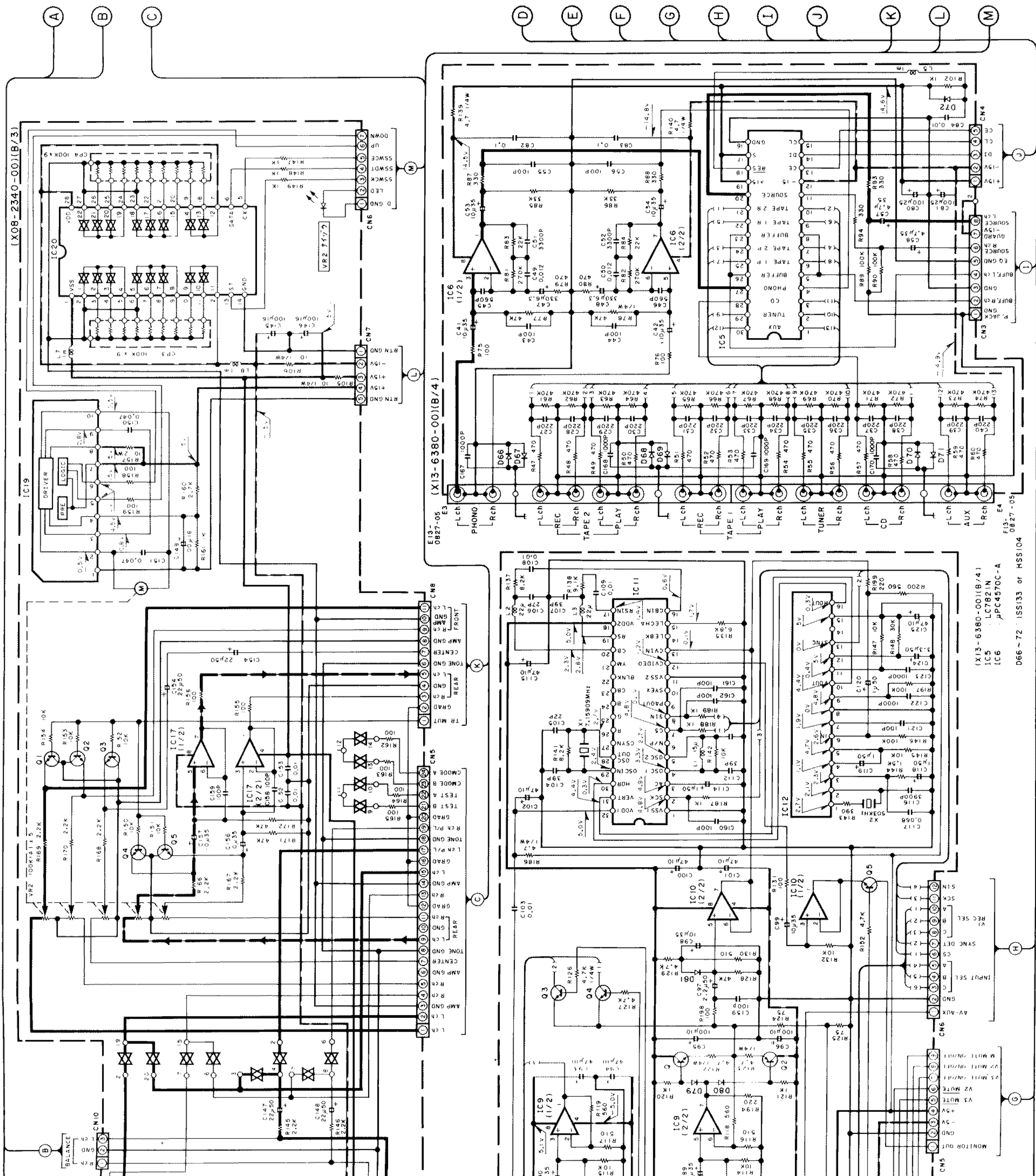
(X13-6380-001A/4)
 IC1 LC7821N
 IC2 LC7822N
 IC3,4 NJM4550D-D
 DB1-65 1SS133 or HSS104

(X13-6380-001B/3)
 IC1 TC4052BP
 IC2 25C2301E, F1
 IC3 25C2301E, F1
 IC4 MC14577A
 DB2-103 1SS133 or HSS104

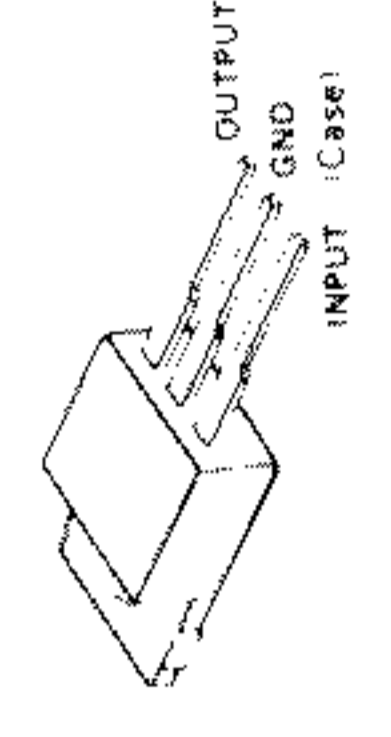
(X13-6380-001C/4)
 IC1,2 25C2301E, F1
 IC3,4 MC14577A
 IC5,6 NJM4550D-D
 IC7,8 TC4051BP
 IC9,10 MC14577A
 IC11 M50554-0035P
 IC12 DT1A24ES
 Q1 25C2301E, F1
 Q2 25C2301E, F1
 Q3-5 25C2301E, F1
 Q6-8 DT1A24ES

(X13-6380-001D/4)
 IC1 25C2301E, F1
 IC2 25C2301E, F1
 IC3 25C2301E, F1
 IC4 MC14577A
 IC5 25C2301E, F1
 IC6 25C2301E, F1
 IC7 25C2301E, F1
 IC8 MC14577A
 IC9 25C2301E, F1
 IC10 25C2301E, F1
 IC11 M50554-0035P
 IC12 DT1A24ES
 Q1 25C2301E, F1
 Q2 25C2301E, F1
 Q3-5 25C2301E, F1
 Q6-8 DT1A24ES

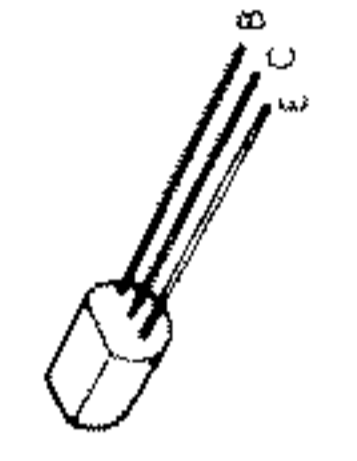
Q P R S T U



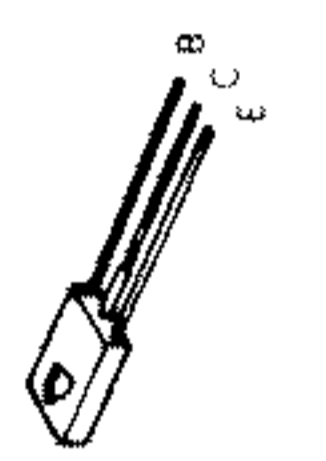
NE571N
UPC7918HF
YM3428



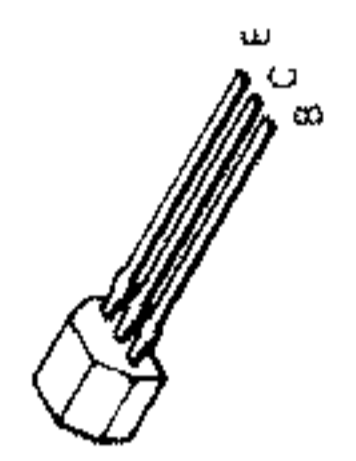
2SA733(A)
2SA954
2SA992
2SA999
2SC1845
2SC2003
2SC2320
2SC2878
2SC945(A)



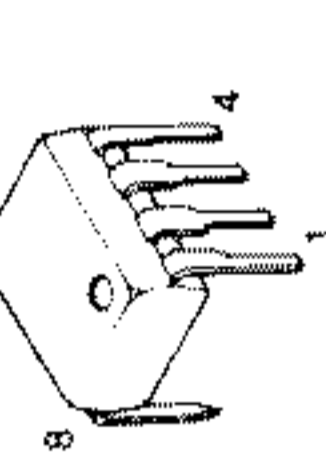
2SA1110
2SC2590



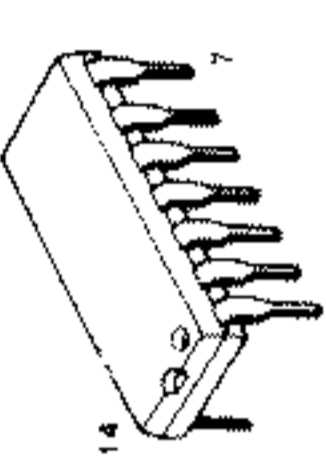
DTA114ES
DTA124ES
2SA933S
2SC1740S



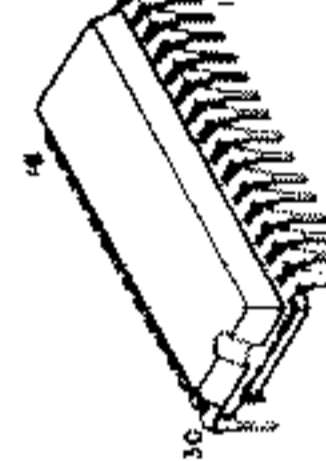
NJM4560D-A



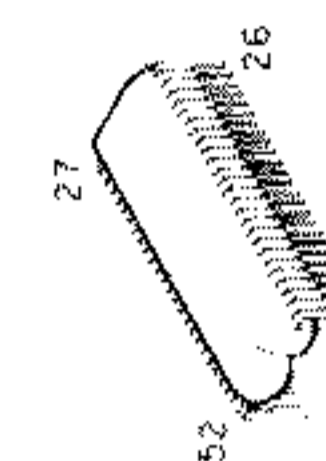
NJM2058D



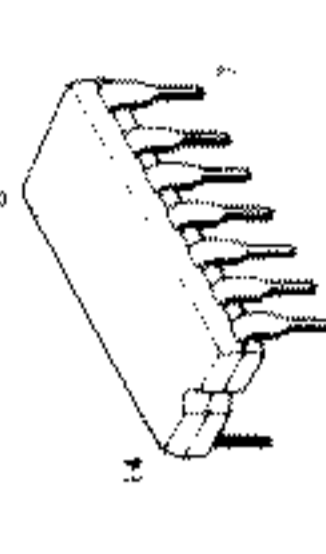
LC7821N
LC7822N



M50791SP



TC4011UBP



TAY7629P
TC4051BP
TC4052BP
TC9176P



NJM2229S



NJM4565D-D
UPC4072C
UPC4570-A



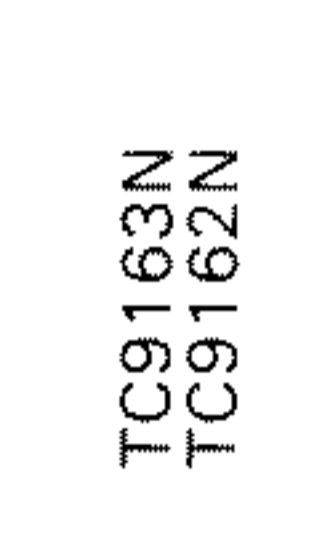
UPC1237HA



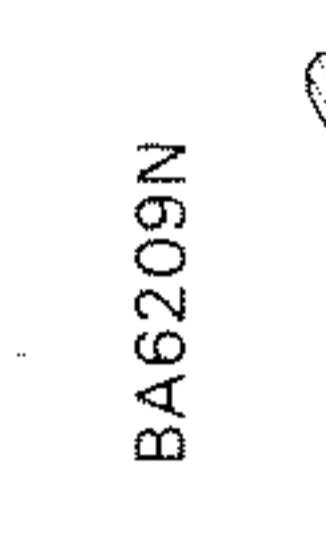
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AN7815F
AN7818F
UPC7015HF
UPC7815HF
UPC7818HF



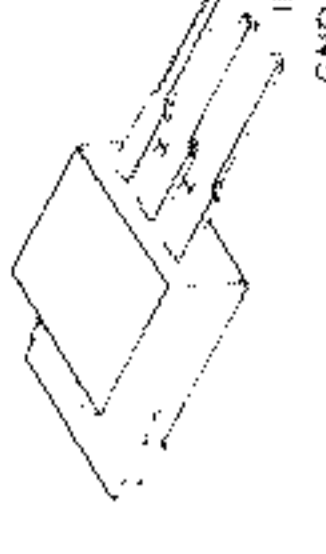
TC9163N
TC9162N



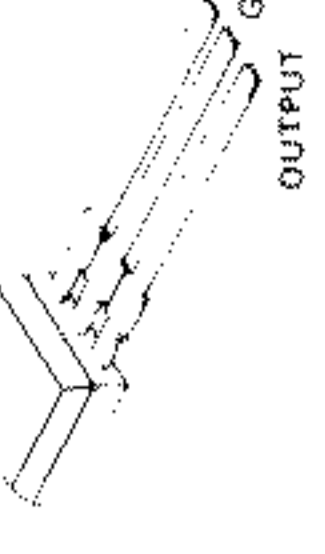
BA6209N



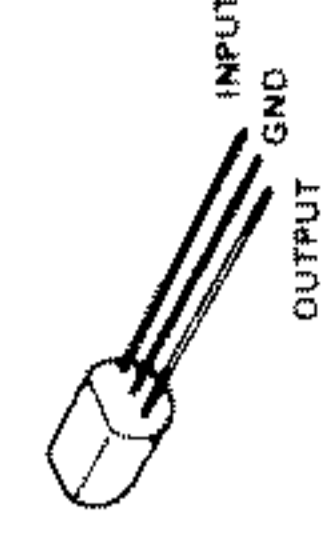
AN7905F



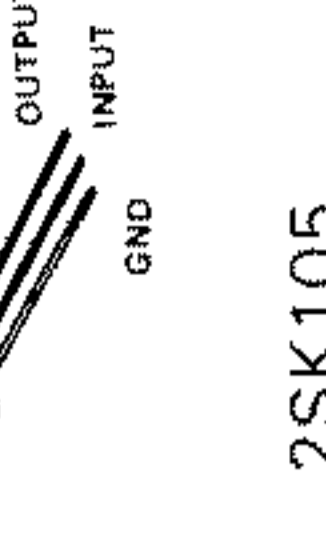
UPC78L05J
UPC78L12J



NJM78L05A
NJM78L15A
TA78L005AP



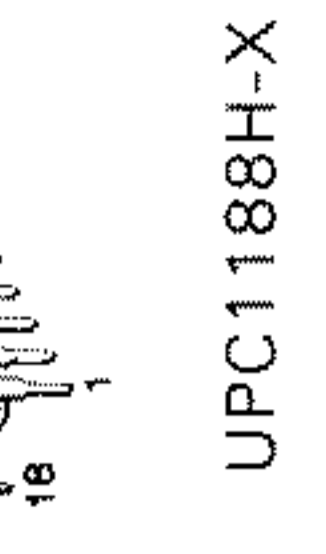
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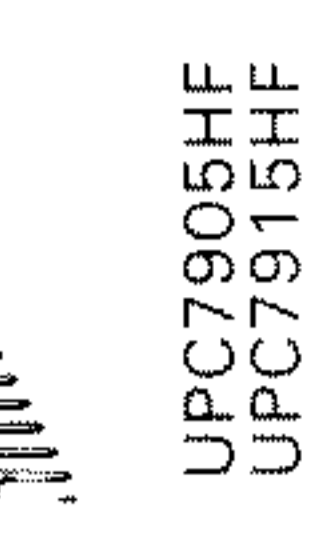
2SK105
2SK163



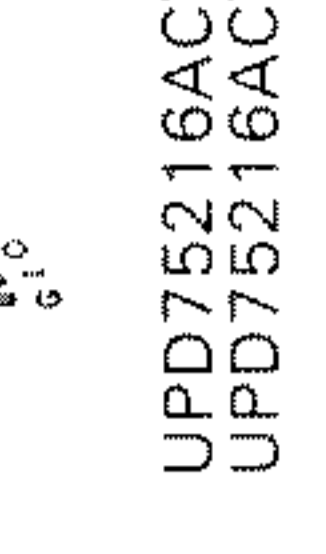
TDA1074A



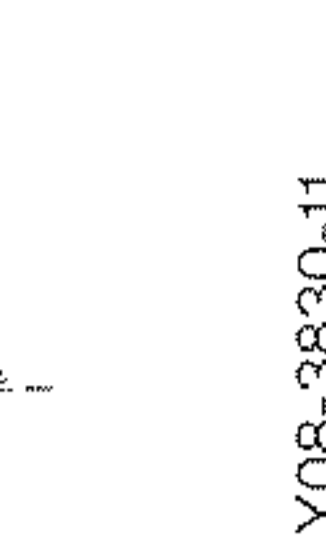
UPC1188H-X



UPC7905HF
UPC7915HF



UPD75216ACW-A13
UPD75216ACW-296

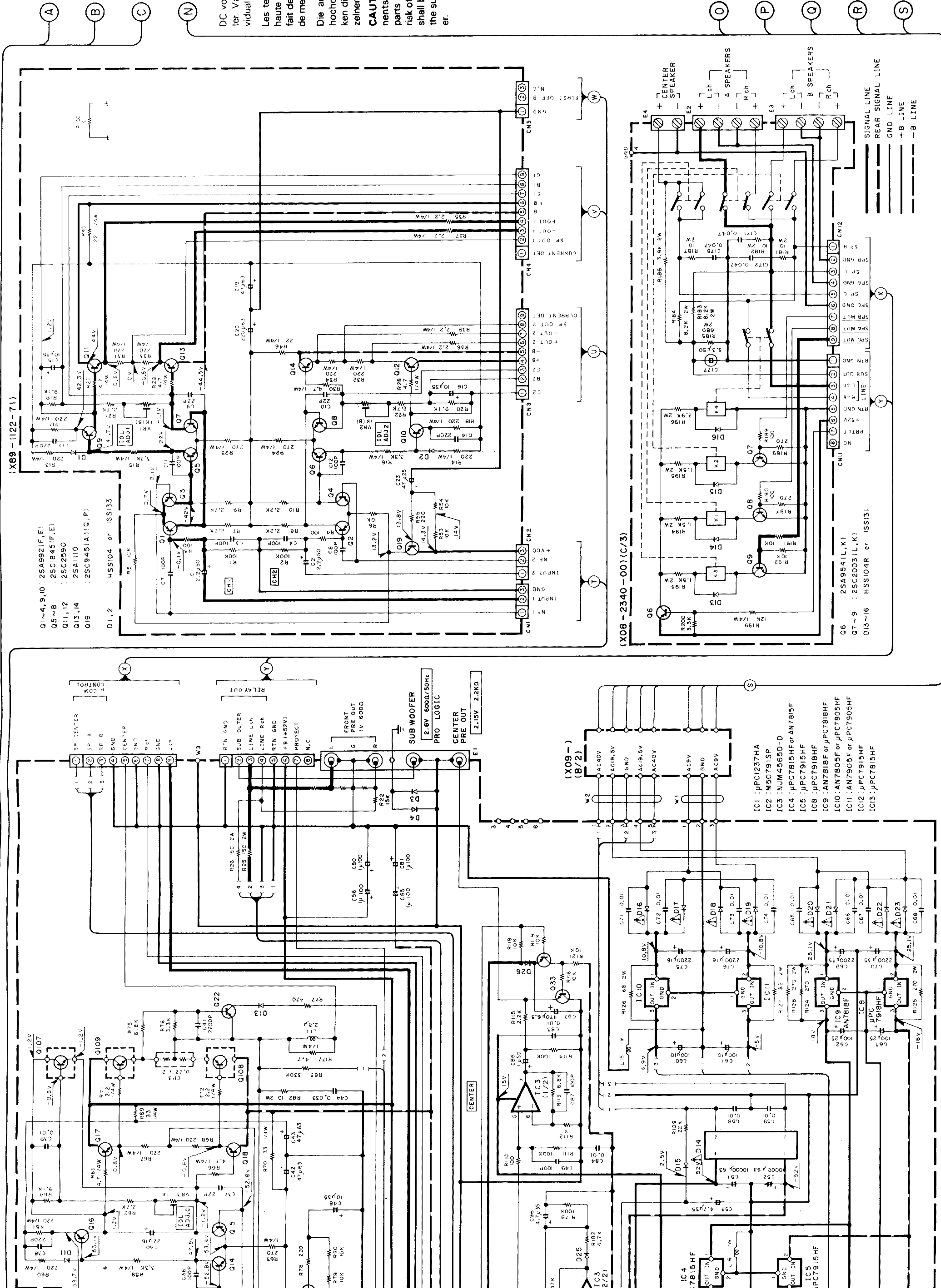


CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

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

DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or units.

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



- Q1~4, 9, 10 : 2SA992(F, E)
- Q5~8 : 2SC1845(F, E)
- Q11, 12 : 2SC2590
- Q13, 14 : 2SA1110
- Q19 : 2SC945(L, G, P)
- D1, 2 : HSS104 or ISS133

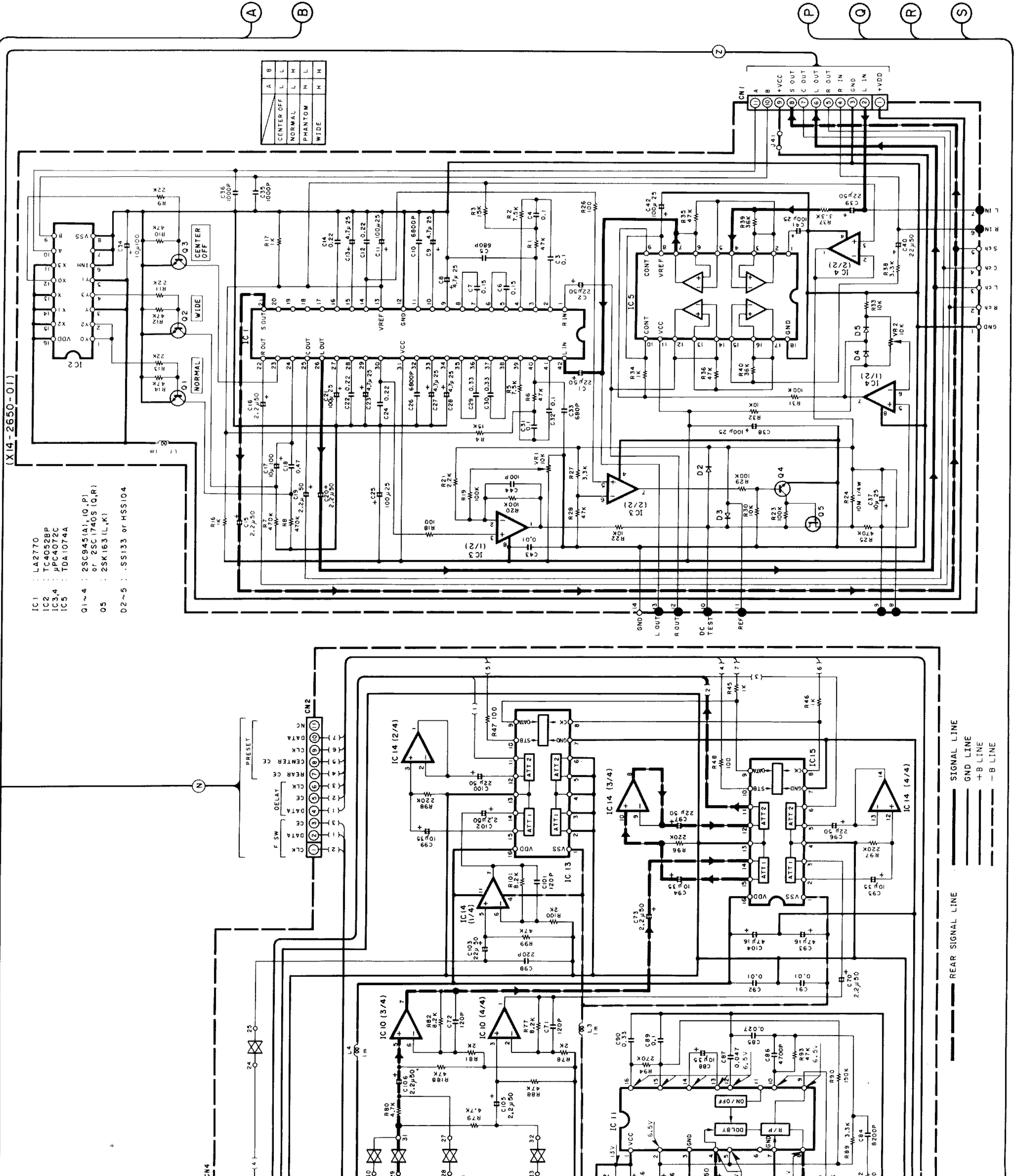
- IC1 : μPC1237HA
- IC2 : μ5079ISP
- IC3 : NJM45680-D
- IC4 : μPC7815HF or AN7815F
- IC5 : μPC7915HF
- IC8 : μPC7918HF
- IC9 : AN7818F or μPC7818HF
- IC10 : AN7805F or μPC7805HF
- IC11 : AN7905F or μPC7905HF
- IC12 : μPC7915HF
- IC13 : μPC7815HF

DC voltages are as measured with a high impedance voltmeter. 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. 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 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). **Δ** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



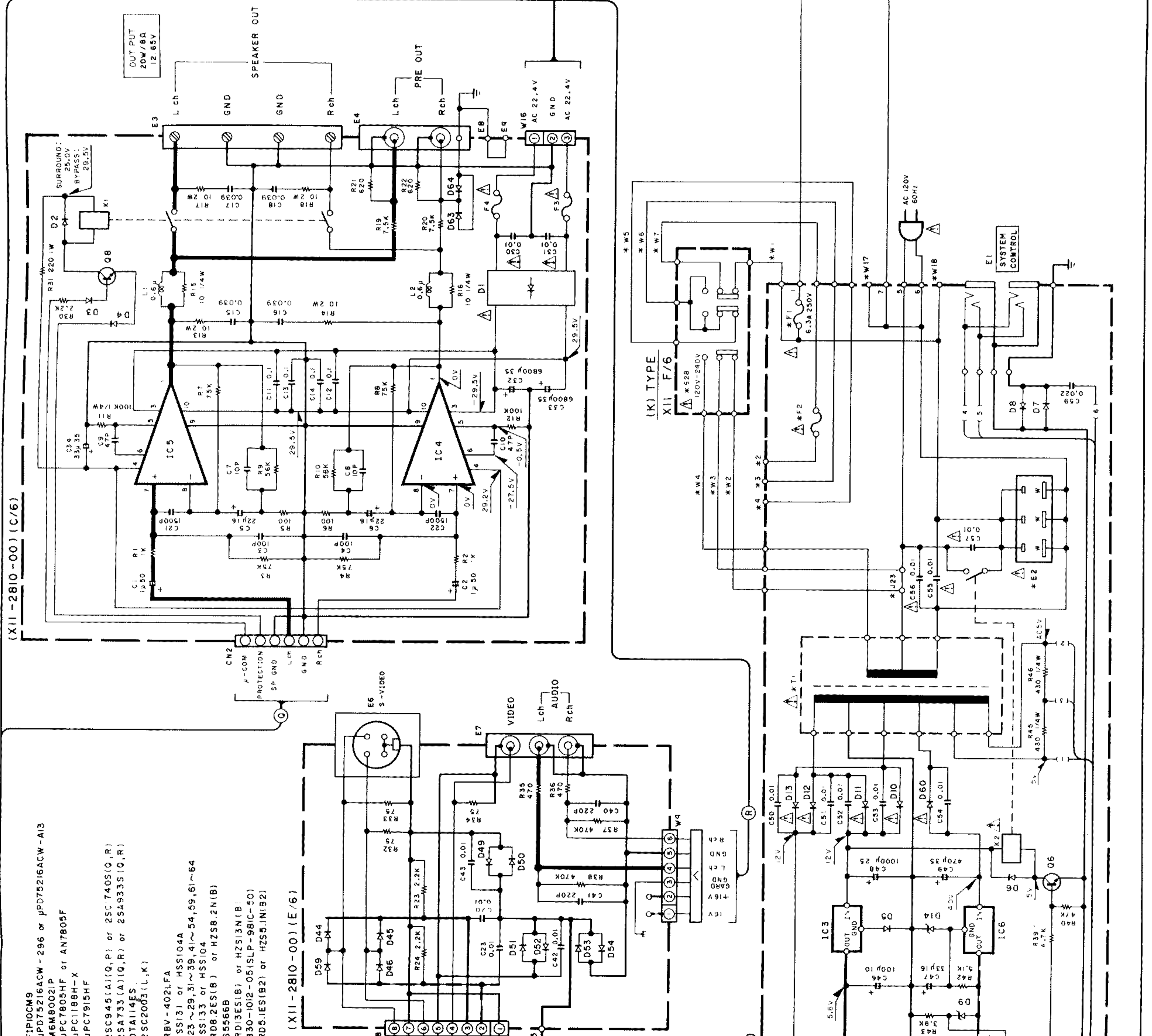
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or and units.

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

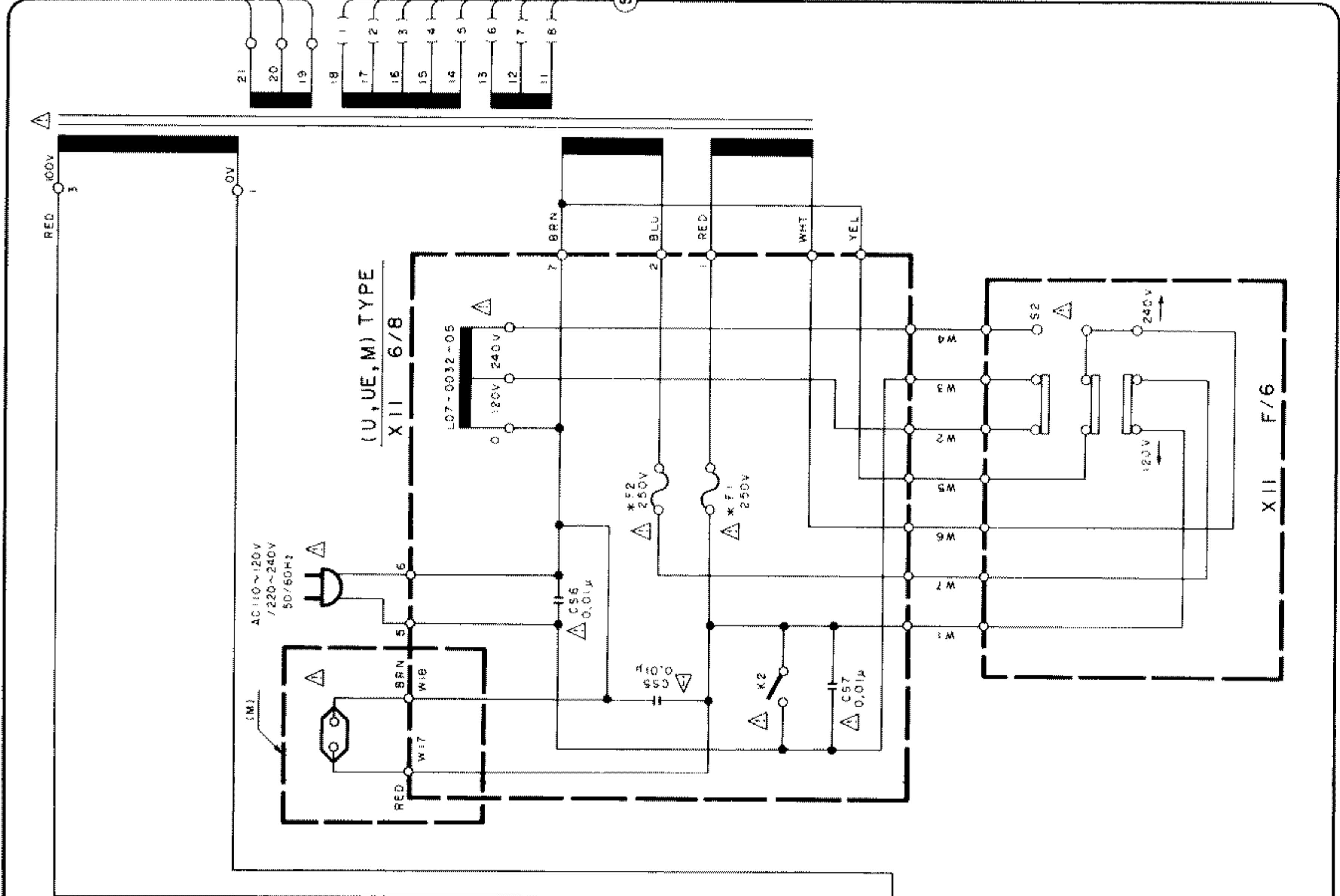
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.

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.

TP10CM9
 JPD75216ACW - 296 or JPD75216ACW - A13
 M46M8002IP
 JPC7805HF or AN7805F
 JPC1188H-X
 JPC7915HF
 JSC9451A1(Q,P) or 25C7405(O,R)
 SAT733(A)(Q,R) or 25A933S(O,R)
 TAI14ES
 SSC2005(L,K)
 RBV-402LFA
 SS131 or HSS104A
 23~29,31~39,41~54,59,61~64
 SS133 or HSS104
 RD82ES(B) or HZ58.2N(B)
 SS5566B
 D013ES(B) or HZ513N(B)
 330-1012-05(SLP-98(C-30)
 105.1ES(B2) or HZ55.1N(B2)

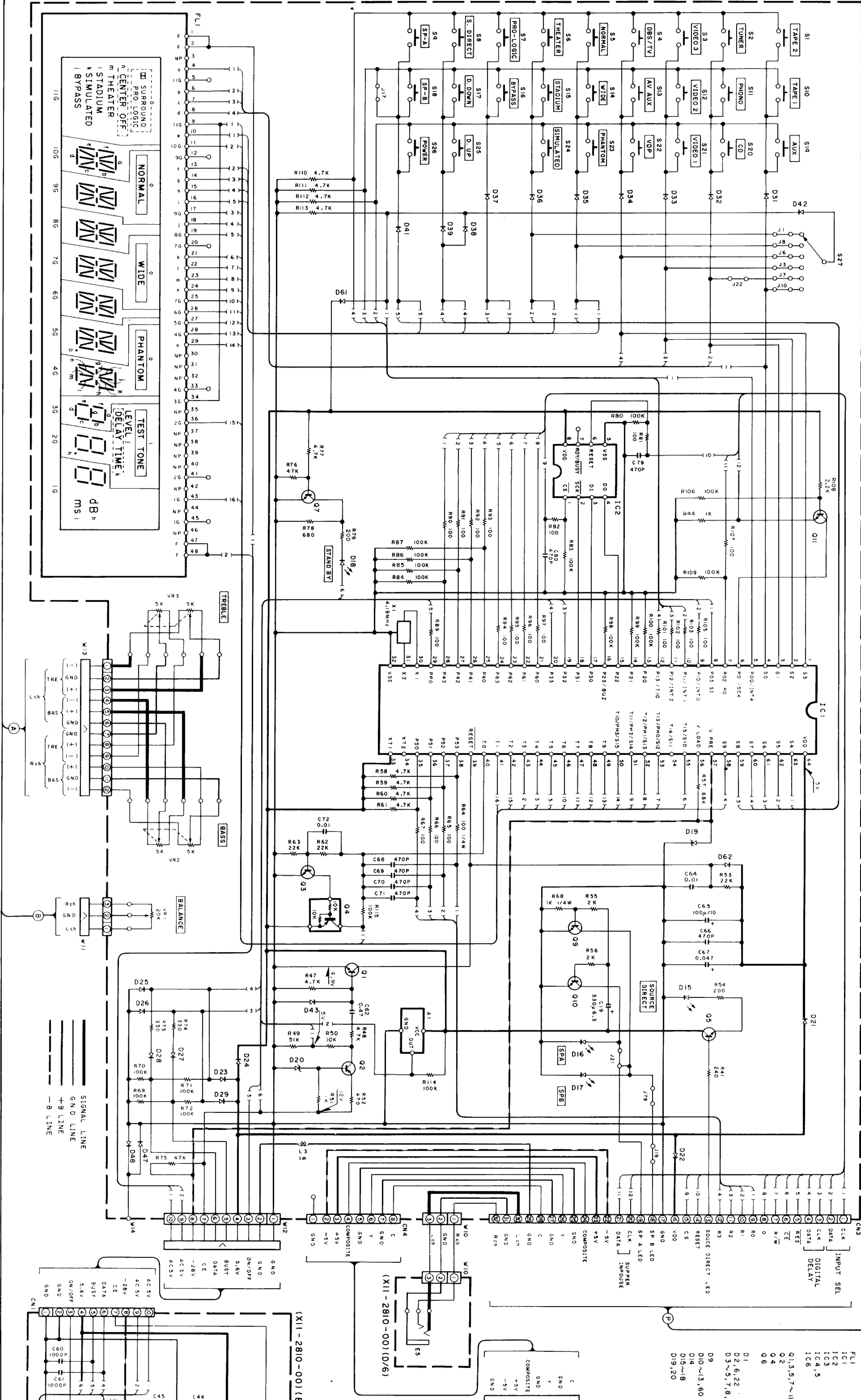


DESTINATION	T1	S28	E2	J23	W1-7	W7	W8	Term no.	POWEP	TRANS	F	F2	F3	F4
K	LO7-0073-05	ND	YES	YES	NO	YES	NC	NC	LC	8941-05	6A	NC	3A	
M	LO7-0032-05	YES	NC	NC	YES	NC	NC	YES	LC	8945-05	3.5A	3.5A	T3-5A	
V, VE	LO7-0032-05	YES	NC	NC	YES	NC	NC	YES	LC	8945-05	3.5A	3.5A	T3-5A	



DC voltages are as measured with a high impedance voltmeter. 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. Les valeurs peuvent différer légèrement du fait des variations inhérentes aux appareils et aux instruments de mesure individuels.

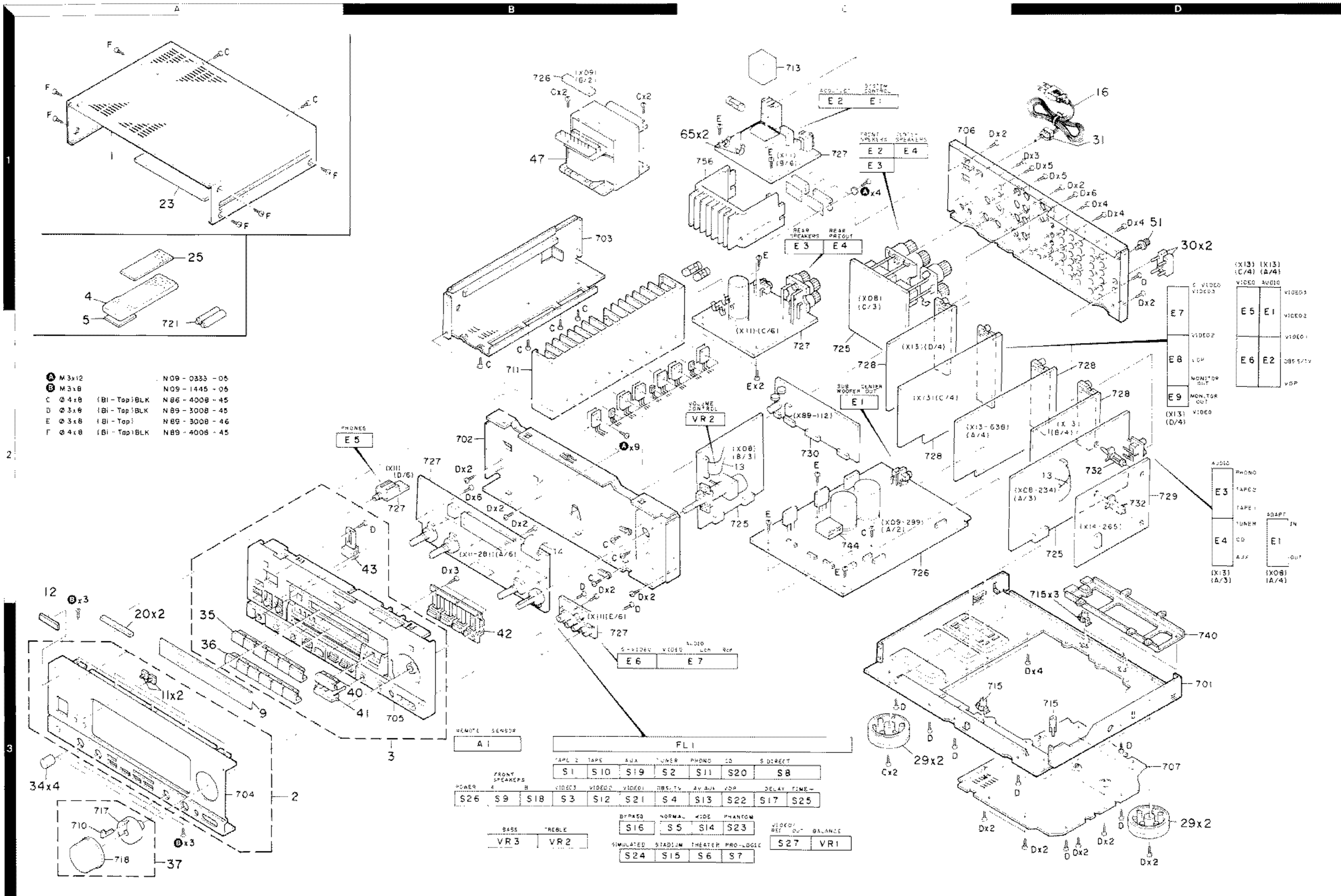
Die angegebenen Gleichspannungswerte wurden mit einem hochohmigen Spannungsmesser gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder Geräten u. U. geringfügig.
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurement shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.



BM
BN
BO
BP
BQ
BR
BS
BT
BU
BV

KA-V6000 KA-V6000

EXPLODED VIEW



57

分解番号700番以降の部品は修理用部品として在庫していません。

58

△ indicates safety critical components

E: Scandinavia & Europe K: USA
 F: Canada
 U: (For East Hawaii) T: England M: Other Areas
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60

△ indicates safety critical components

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59

Ref. No.	Part No.	Description	Address	Position
Q107	2S017178D*5	TRANSISTOR		*
Q108	2S011628D*5	TRANSISTOR		*
SURROUND UNIT (X08-2340-00)				
C1	4	ELECTRO		
C7	18	ELECTRO		
C11	12	ELECTRO		
C13	16	ELECTRO		
C17	10	ELECTRO		
C18	10	ELECTRO		
C19	10	ELECTRO		
C20	10	ELECTRO		
C21	22	ELECTRO		
C22	10	ELECTRO		
C23	26	ELECTRO		
C27	28	ELECTRO		
C29	30	ELECTRO		
C30	10	ELECTRO		
C31	10	ELECTRO		
C32	10	ELECTRO		
C33	10	ELECTRO		
C34	10	ELECTRO		
C37	16W	ELECTRO		
C38	10	ELECTRO		
C39	10	ELECTRO		
C40	41	ELECTRO		
C42	41	ELECTRO		
C43	45	ELECTRO		
C44	45	ELECTRO		
C46	48	ELECTRO		
C47	48	ELECTRO		
C49	48	ELECTRO		
C50	50	ELECTRO		
C51	50	ELECTRO		
C52	53	ELECTRO		
C54	53	ELECTRO		
C55	53	ELECTRO		
C56	53	ELECTRO		
C57	53	ELECTRO		
C58	53	ELECTRO		
C59	53	ELECTRO		
C60	53	ELECTRO		
C61	53	ELECTRO		
C62	53	ELECTRO		
C63	53	ELECTRO		
C64	53	ELECTRO		
C65	53	ELECTRO		
C66	53	ELECTRO		
C67	53	ELECTRO		
C68	53	ELECTRO		
C69	53	ELECTRO		
C70	53	ELECTRO		
C71	53	ELECTRO		
C72	53	ELECTRO		
C73	53	ELECTRO		
C74	53	ELECTRO		
C75	53	ELECTRO		
C76	53	ELECTRO		
C77	53	ELECTRO		
C78	53	ELECTRO		
C79	53	ELECTRO		

PARTS LIST

KA-V6000 KA-V6000

PARTS LIST

Ref. No.	Part No.	Description	Address	Position
1	A01-1805-01	METALLIC CABINET		*
2	A20-5901-02	PANEL ASSY		*
3	A22-1134-02	SUB PANEL ASSY		*
4	A70-0310-05	BATTERY CASE		*
5	A09-0086-08	BATTERY CASE		*
9	810-1050-03	FRONT GLASS		*
11	B12-0048-04	INDICATOR		SA
12	B43-0287-04	KENWOOD BADGE		SA
13	B46-0092-03	WARRANTY CARD		
14	B46-0094-03	WARRANTY CARD		
15	B46-0095-03	WARRANTY CARD		
16	B46-0096-03	WARRANTY CARD		
17	B46-0097-03	WARRANTY CARD		
18	B46-0098-03	WARRANTY CARD		
19	B46-0099-03	WARRANTY CARD		
20	G11-1400-04	SOFT TAPE		*
21	G11-1400-04	SOFT TAPE		*
22	G11-1400-04	SOFT TAPE		*
23	G11-1400-04	SOFT TAPE		*
24	G11-1400-04	SOFT TAPE		*
25	G16-0735-08	WRITING SEBT		SA
26	G16-0735-08	WRITING SEBT		SA
27	K29-3794-03	DIRECT		SA
28	K29-3794-03	DIRECT		SA
29	K29-3794-03	DIRECT		SA
30	K29-3794-03	DIRECT		SA
31	K29-3794-03	DIRECT		SA
32	K29-3794-03	DIRECT		SA
33	K29-3794-03	DIRECT		SA
34	K29-3794-03	DIRECT		SA
35	K29-3794-03	DIRECT		SA
36	K29-3794-03	DIRECT		SA
37	K29-3794-03	DIRECT		SA
38	K29-3794-03	DIRECT		SA
39	K29-3794-03	DIRECT		SA
40	K29-3794-03	DIRECT		SA
41	K29-3794-03	DIRECT		SA
42	K29-3794-03	DIRECT		SA
43	K29-3794-03	DIRECT		SA
44	K29-3794-03	DIRECT		SA
45	K29-3794-03	DIRECT		SA
46	K29-3794-03	DIRECT		SA
47	K29-3794-03	DIRECT		SA
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77	K29-3794-03	DIRECT		SA
78	K29-3794-03	DIRECT		SA
79	K29-3794-03	DIRECT		SA
80	K29-3794-03	DIRECT		SA
81	K29-3794-03	DIRECT		SA
82	K29-3794-03	DIRECT		SA
83	K29-3794-03	DIRECT		SA
84	K29-3794-03	DIRECT		SA
85	K29-3794-03	DIRECT		SA
86	K29-3794-03	DIRECT		SA
87	K29-3794-03	DIRECT		SA
88	K29-3794-03	DIRECT		SA
89	K29-3794-03	DIRECT		SA
90	K29-3794-03	DIRECT		SA
91	K29-3794-03	DIRECT		SA
92	K29-3794-03	DIRECT		SA
93	K29-3794-03	DIRECT		SA
94	K29-3794-03	DIRECT		SA
95	K29-3794-03	DIRECT		SA
96	K29-3794-03	DIRECT		SA
97	K29-3794-03	DIRECT		SA
98	K29-3794-03	DIRECT		SA
99	K29-3794-03	DIRECT		SA
100	K29-3794-03	DIRECT		SA

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

E: Scandinavia & Europe K: USA
F: Canada
U: P.K.(Far East, Hawaii) T: England M: Other Areas
UE: AAFES(Europe) X: Australia

Table with columns: Ref. No., Address, Parts No., Description, and national marks. Includes sub-sections for MAIN AMPLIFIER UNIT (X89-1122-71) and DOLBY UNIT (X14-2650-01).

* New Parts
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PARTS LIST

KA-V6000

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Table with columns: Ref. No., Address, Parts No., Description, and national marks. Includes sub-sections for AUDIO UNIT (X09-2990-11) and MAIN AMPLIFIER UNIT (X89-1122-71).

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PARTS LIST

KA-V6000

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PARTS LIST

KA-V6

E: Scandinavia & Europe K: USA
F: Canada
U: P.K.(Far East, Hawaii) T: England M: Other Areas
UE: AAFES(Europe) X: Australia

Table with columns: Ref. No., Address, Parts No., Description, and national marks. Includes sub-sections for AUDIO UNIT (X09-2990-11) and MAIN AMPLIFIER UNIT (X89-1122-71).

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PARTS LIST

KA-V

U: P (Far East, Hawaii) T: England M: Other Areas
UE: A (Europe) X: Australia
P: Canada

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UE: A (Europe) X: Australia
P: Canada

Table with columns: Ref. No., Address, Parts No., Description, Dest. Re- nation marks. Includes parts like TRANSISTOR, IC(VOLTAGE REGULATOR), and FL-PROOF RS.

PARTS LIST

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P: Canada

Table with columns: Ref. No., Address, Parts No., Description, Dest. Re- nation marks. Includes parts like TRANSISTOR, IC(VOLTAGE REGULATOR), and CONTROL UNIT.

PARTS LIST

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P: Canada

Table with columns: Ref. No., Address, Parts No., Description, Dest. Re- nation marks. Includes parts like TRANSISTOR, IC(VOLTAGE REGULATOR), and PHASE-COMPENSATION COIL.

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Table with columns: Ref. No., Address, Parts No., Description, Dest. Re- nation marks. Includes parts like TRANSISTOR, IC(VOLTAGE REGULATOR), and ACCESSORY UNIT.

PARTS LIST

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