

POWER AMPLIFIER

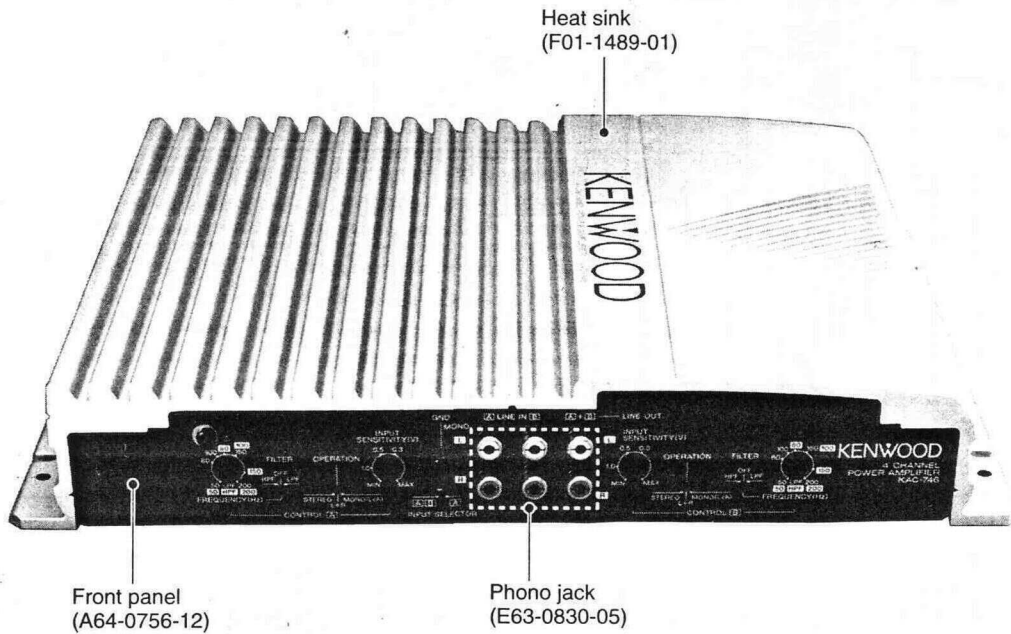
KAC-746 SUPPLEMENT

SERVICE MANUAL

KENWOOD

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B51-7243-00 (K) 1787

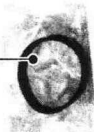
Service manual titled KAC-746 (B51-7018-00) was once published except for European market in 1996. This service manual (B51-7243-00) is published because KAC-746 has been also begun to sell in Europe from 1998. Therefore **this service manual (B51-7243-00) only mentions on KAC-746 which is sold in Europe.**



Screw set (N99-1587-05)



Rubber tube assy (W01-0748-05)



Terminal set (W01-0745-05)



DC cord assy (E30-4323-15)



CONTENTS / CONNECTION

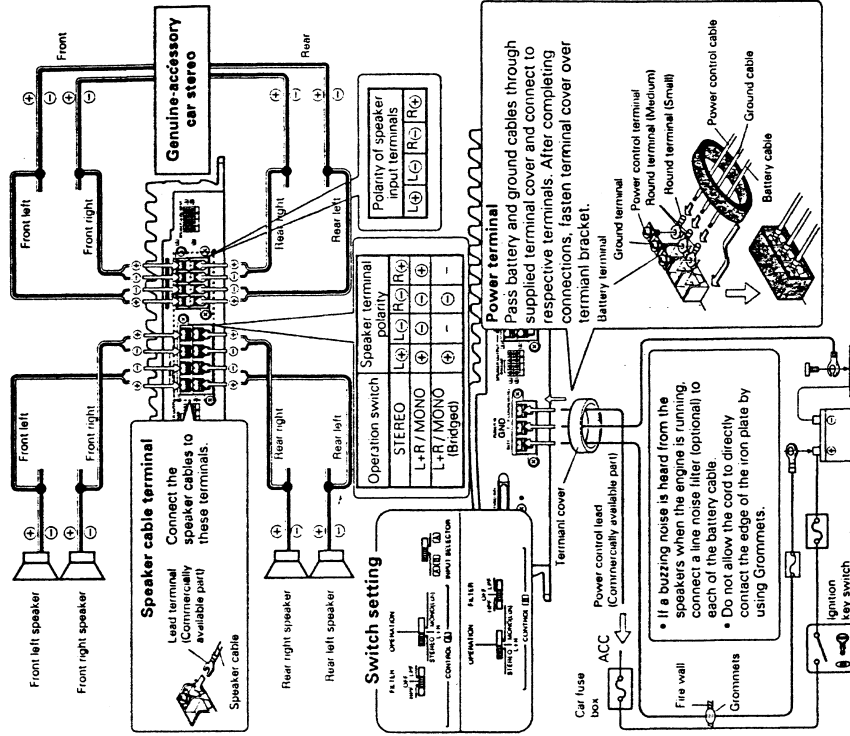
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CONNECTION

Speaker level input connection (KAC-746)

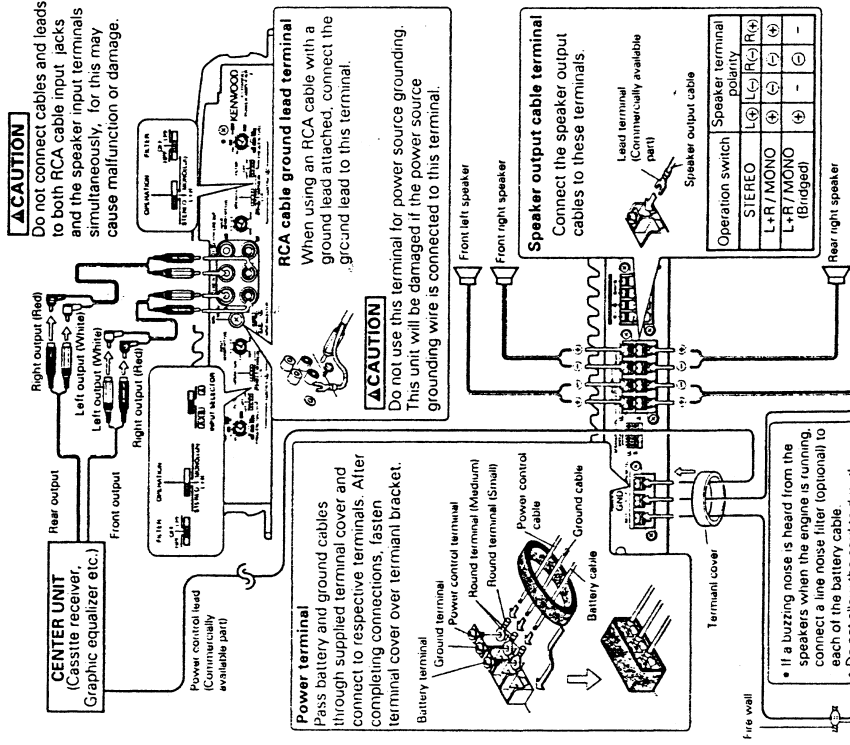


CAUTION

- The genuine-accessory car stereo shall have a maximum power output of no more than 25 W.
- Do not connect the speaker output leads from a power amplifier (Optional) to the speaker input terminals of this unit, for this may cause malfunction or damage.
- Do not connect cables and leads to both RCA cable input jacks and the speaker input terminals simultaneously, for this may cause malfunction or damage.
- Connect the power control lead to a power supply which can be turned ON/OFF by the ignition key switch (ACC line).

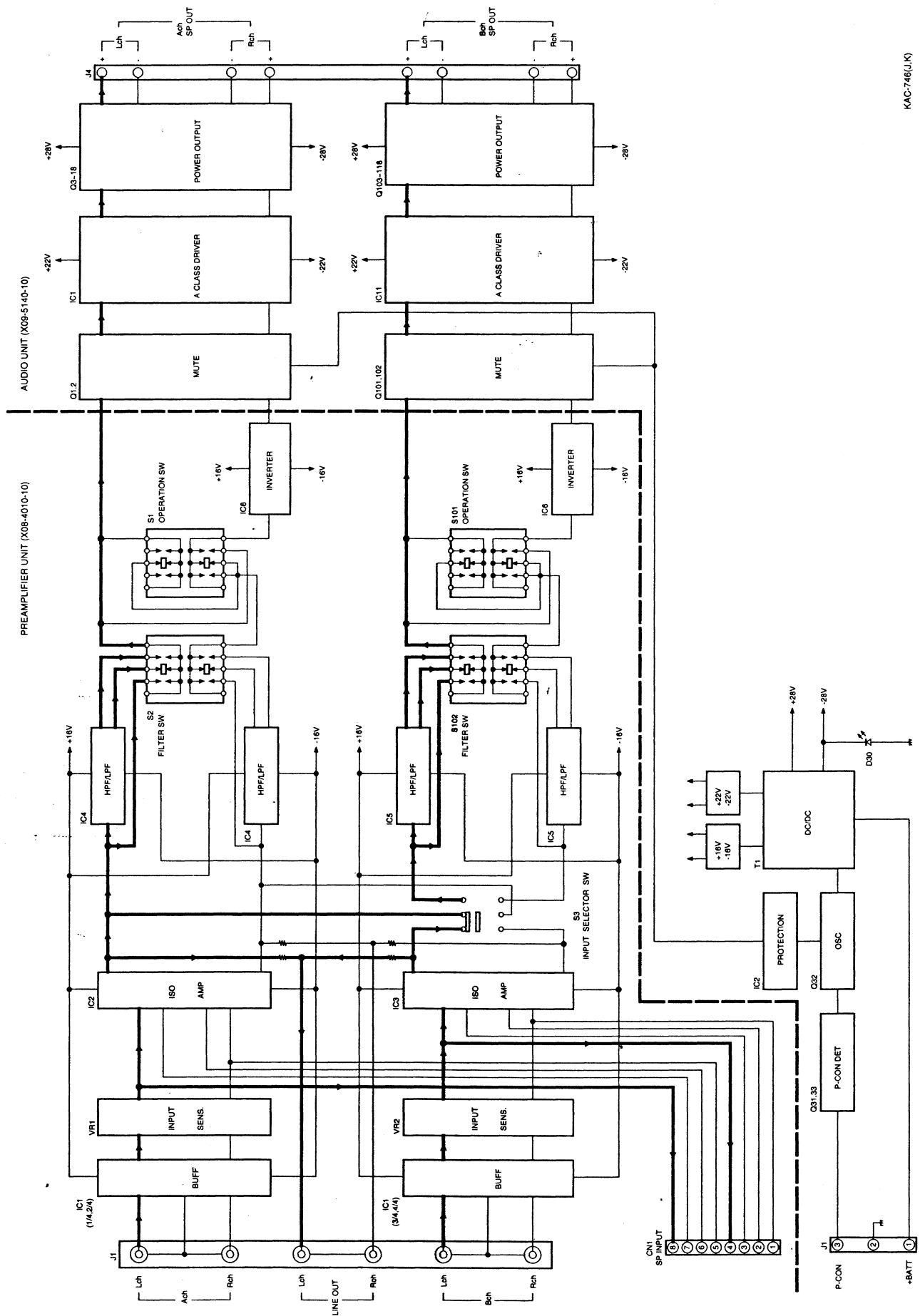
With this connection, shock noise may be generated when the power of the genuine-accessory car stereo is switched ON/OFF.

Connection (KAC-746)



KAC-746

BLOCK DIAGRAM



KAC-746(J,K)

COMPONENTS DESCRIPTION

PREAMPLIFIER UNIT (X08-4010-10)		
Ref. No.	Use and Function	Operation and Condition
IC1	INPUT BUFFER	6 dB amplification of input signal.
IC2,3	ISOLATION AMP	Elimination of car noise interfered in the amp input.
IC4,5	LPF, HPF	IC4, 5 (1/4, 4/4) form the LPF and IC4, 5 (2/4, 3/4) form the HPF.
IC6	INVERTER CIRCUIT	Inverter for the bridge.

AUDIO UNIT (X09-5140-10)		
Ref. No.	Use and Function	Operation and Condition
Q1 2, 101, 102	MUTE	Reduces the shock noise when P-CON is switched ON/OFF.
Q2 6, 105, 106	BIAS	
Q3 4, 103, 104	BIAS	
Q7 8, 107, 108	TEMP COMPENSATION	Detects the heat sink temperature and prevents drift in bias voltage.
Q9, 10, 109, 110	POWERAMP DRIVE	
Q11, 12, 111, 112	POWERAMP DRIVE	
Q13, 14, 113, 114	POWER STAGE	
Q15, 16, 115, 116	POWER STAGE	
Q17, 18, 117, 118	OVER-CURRENT PROTECTION	Detects over current and stops the operation of IC2.
Q21 ~ 24	SWITCHING POWER STAGE	
Q25, 26	SWITCHING DRIVE	
Q27, 28	SWITCHING DRIVE	
Q31	P-CON ON DETECT	Detects P-CON ON and turns Q32 ON.
Q33	P-CON ON DETECT	Detects P-CON ON/OFF and turns Q34 ON/OFF.
Q32	POWERSWITCH	Supply power to IC2.
Q34	MUTE DRIVE	Drives the muting transistor.
IC1, 11	VOLTAGE AMP STAGE	
IC2	SWITCHING REGULATOR	Oscillator for DC/DC converter.

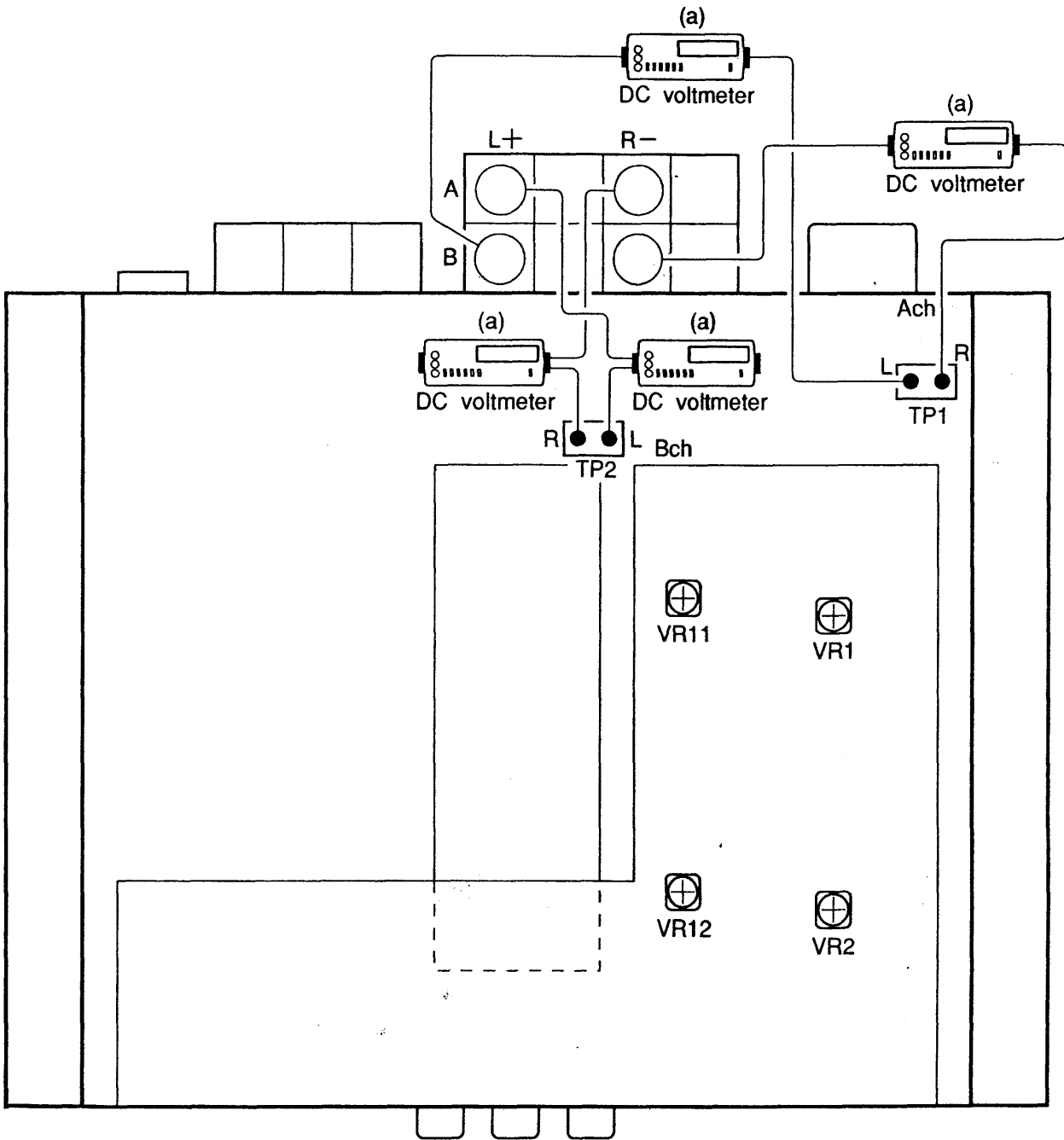
ADJUSTMENT

No.	Item	Input Setting	Output Setting	Amp Setting	Adjustment Point	Adjustment Method	Fig.
Connect the cassette receiver, etc.							
1	Idle current	-	Connect a DC voltmeter between SP-OUT L+/R-.	VOLUME: 0	(A) VR1 (Lch) VR2 (Rch) (B) VR11 (Lch) VR12 (Rch)	5.5mV after sufficient aging.	(a)

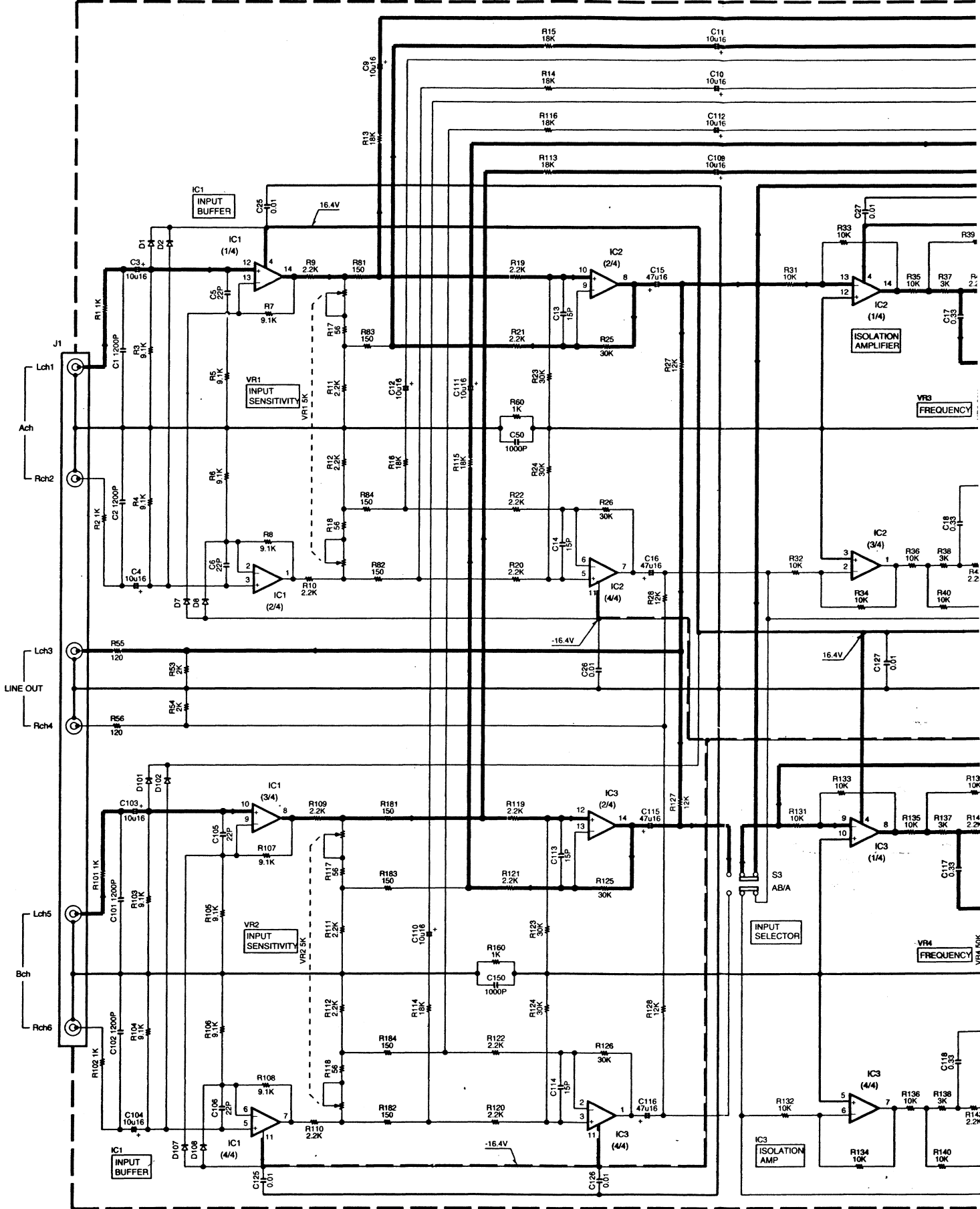
EINSTELLUNGEN

Nr.	Gegenstand	Eingangseinstellung	Ausgangseinstellung	Verstärkereinstellung	Einstellpunkt	Einstellmethode	Abb.
Das Kassettengerät, den Empfänger usw. anschliessen.							
1	Idle current	-	Ein Gleichstrom-Voltmeter zwischen TP-1/TP2 und SP-OUT L+/R- anschliessen.	-	(A) VR1 (Lch) VR2 (Rch) (B) VR11 (Lch) VR12 (Rch)	5,5 mV nach ausreichender Alterung.	(a)

ADJUSTMENT

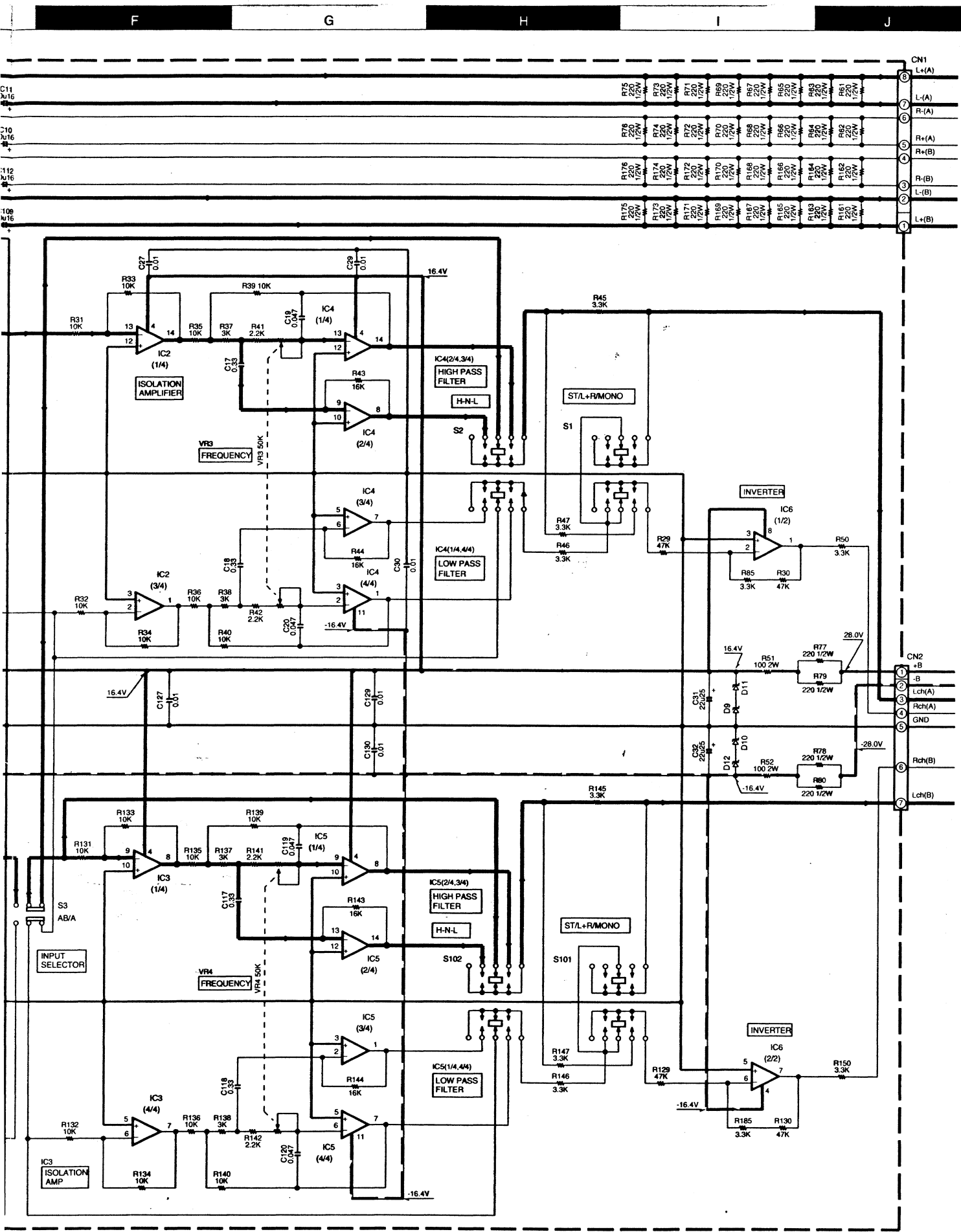


PREAMPLIFIER UNIT (X08-4010-10)



- IC1-5 : UPC4574C
- IC6 : NUM4565D
- D1,2,7,8,101,102,107,108 : 1SS131
- D9-12 : RD8.2J(S)(B)

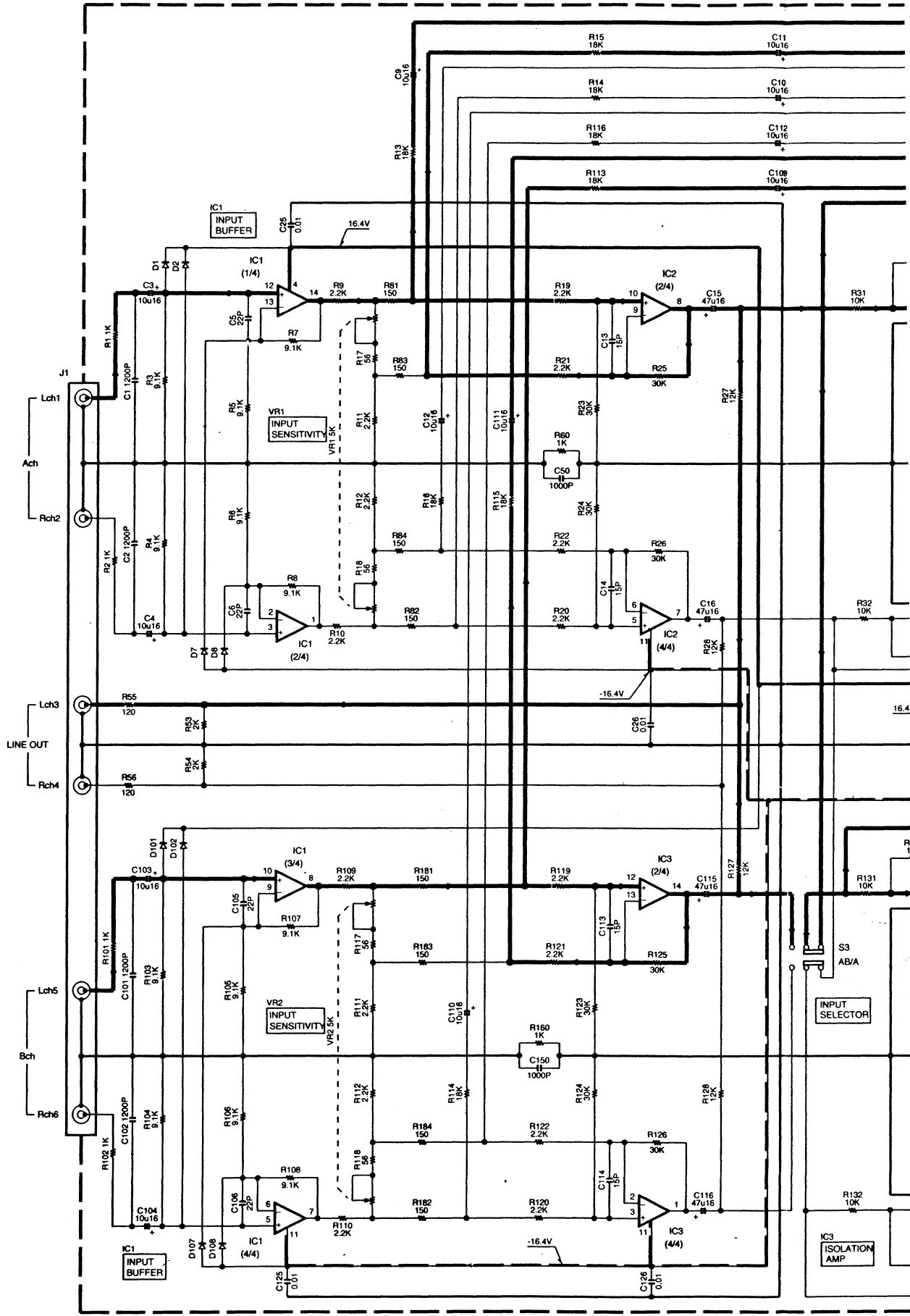
CAUTION: For continued safety, replace safety critical components only with manufacturer (refer to parts list). Δ indicates safety critical components. For continued protection against with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or re shall be carried out (exposed parts are acceptably insulated from the supply circuit) before to the customer.



critical components only with manufacturer's recommended parts
 ponents. For continued protection against risk of fire, replace only
 risk of electric shock, leakage-current or resistance measurements
 y insulated from the supply circuit) before the appliance is returned

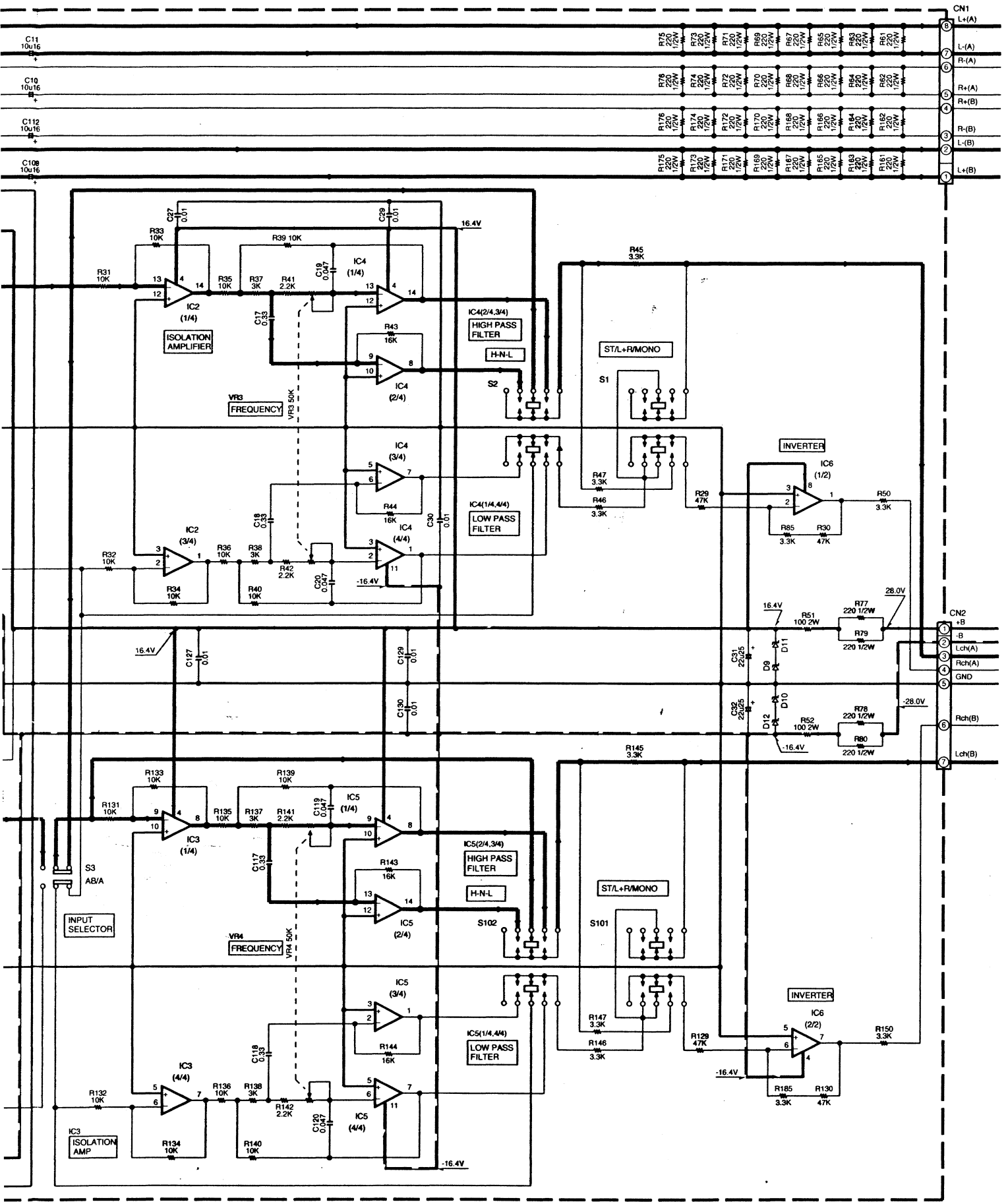
The DC voltage is an actual reading measured with a high impedance type volt-
 meter with no signal input. The measurement value may vary depending on the
 measuring instruments used or on the product.

PREAMPLIFIER UNIT (X08-4010-10)



IC1-5 : UPC4574C
 IC6 : NJM4565D
 D1,2,7,8,101,102,107,108 : 1SS131
 D9-12 : RD8.2JS(B)

CAUTION: For continued safety, replace safety critical components (refer to parts list). Δ indicates safety critical components. For continued safety, use same type and rating fuse(s). To reduce the risk of electric shock, the unit shall be carried out (exposed parts are acceptably insulated from the unit to the customer).



afety critical components only with manufacturer's recommended parts
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The DC voltage is an actual reading measured with a high impedance type volt-
 meter with no signal input. The measurement value may vary depending on the
 measuring instruments used or on the product.

KAC-746

SPECIFICATIONS

Specifications subject to change without notice.

Audio section

Max power output (4 Ω)	
4 Channel mode	70 W x 4
3 Channel mode	70W x 2 + 200 W x 1
2 Channel mode	200 W x 2
Rated power output (4 Ω)	
4 Channel mode (20 Hz ~ 20 kHz, less than 0.08% THD)	35 W x 4
3 Channel mode (1 kHz, 0.08% THD) + (1 kHz, 0.8% THD)	35W x 2 +100 W x 1
2 Channel mode (1 kHz, 0.8% THD)	100 W x 2
Rated power output (2 Ω)	
4 Channel mode (1 kHz, 0.8% THD)	50 W x 4
Frequency response (+0, -1 dB)	5 Hz ~ 50 kHz
Signal to noise Ratio	100 dB
Sensitivity (MAX) (rated output)	0.15 V
Sensitivity (MIN) (rated output)	4.0 V
Input Impedance	10 k Ω
Low pass filter (12 dB/oct.) (Variable)	50 ~ 200 Hz
High pass filter (12 dB/oct.) (Variable)	50 ~ 200 Hz

General

Operating voltage (11 ~ 16 V allowable)	14.4 V
Current consumption (1 kHz, 10% THD)	28 A
Dimensions(W x H x D)	290 x 52 x 230 mm (11-7/16 x 2-1/16 x 9-1/16 in.)
Weight	3.1 kg (6.8 lb)

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

Note:

Component and circuitry are subject to modification to insure best operation under differing local conditions. This manual is based on 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.

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