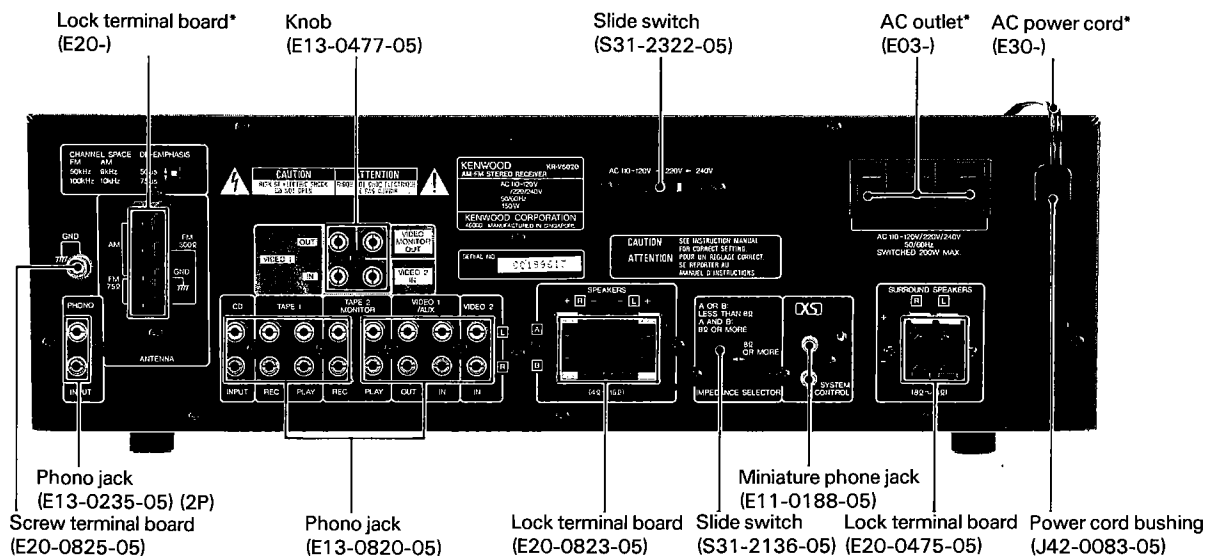
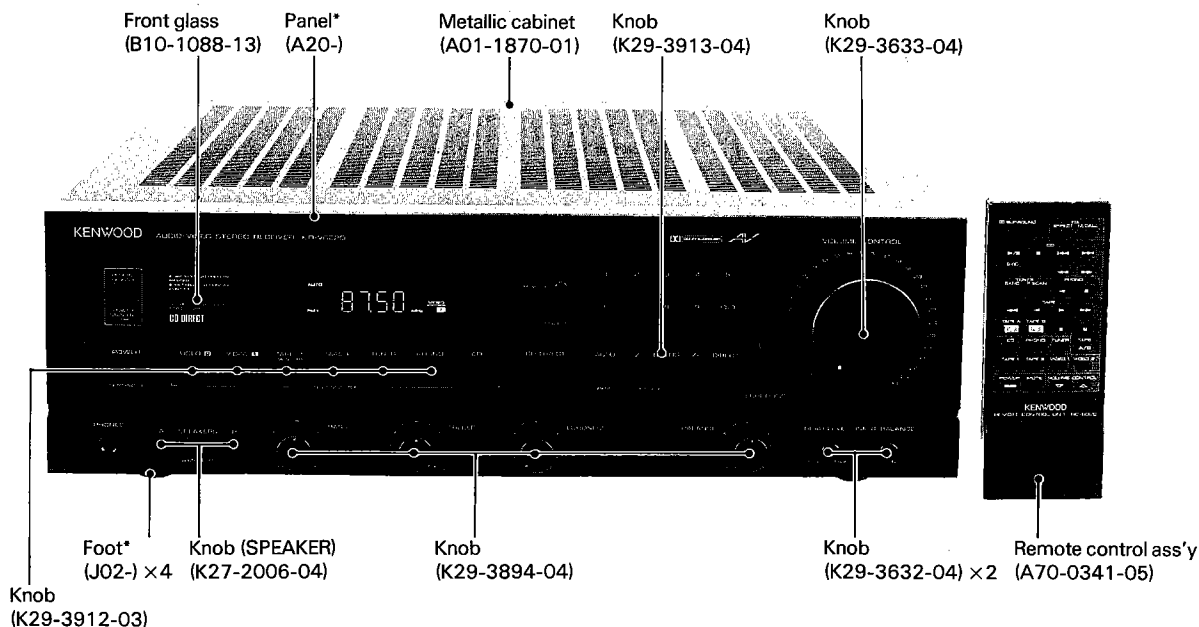


KR-V6020

SERVICE MANUAL

KENWOOD

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B51-4142-00(S)2393

* Refer to parts list on page 36.

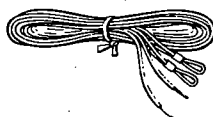
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CIRCUIT DESCRIPTION	8	PARTS LIST	36
ADJUSTMENT	15	SPECIFICATIONS	Back cover

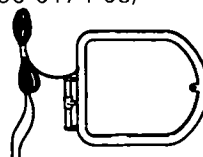
ACCESSORIES

Accessories

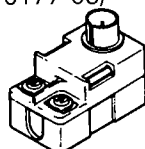
FM indoor antenna..... 1
(T90-0175-05)



AM loop antenna..... 1
(T90-0174-05)



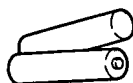
75 ohm/300 ohm
antenna adaptor..... 1
(For Europe)
(T90-0177-05)



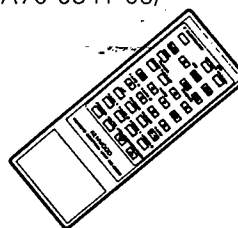
Loop antenna holder .. 1
(J19-2815-04)



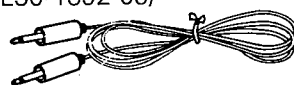
Batteries ("AA" or
"R6")..... 2



Remote control unit ... 1
(A70-0341-05)



System control cord... 3
(For Europe)
(E30-0977-05)
(E30-1392-05)

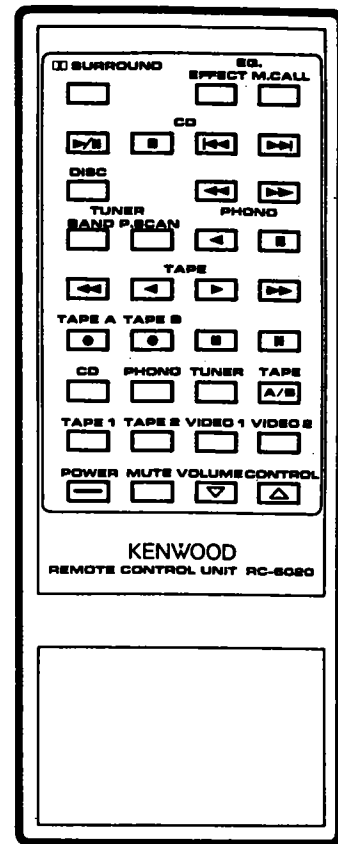


REMOTE CONTROL OPERATION

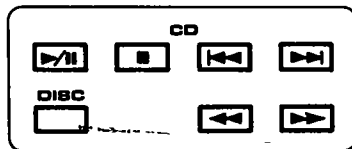
Caution in remote control

- In case any of the following models is used, the CD manual search cannot be operated from this remote control unit:
DP-M97, DP-57, DP-47
- If the CD player is not equipped with the System control jack, it cannot be operated properly from this remote control unit.
In such a case, please use the remote control unit provided with the CD player.

Remote control unit

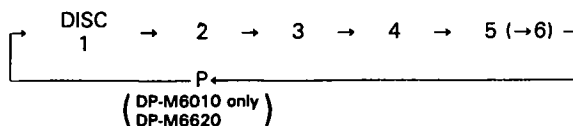


■ CD player control keys



These keys allow the same operations as the keys with the same names on the CD player.

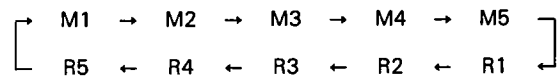
The DISC key is for use exclusively with a multiple CD player. Pressing the DISC key allows one of DISC 1 to DISC 6 to be selected in the following cycle.



■ Equalizer/Surround key



The EQ. keys allow the same operations as the keys with the Graphic equalizer.



- Each press of the M.CALL key changes the contents as shown above.

The main body is not equipped with the ☐ Surround function.

Therefore, the ☐ SURROUND key causes no effect even when it is pressed. (for Europe)

■ Turntable (PHONO) control keys



The play (◀) and Stop (■) keys are provided.

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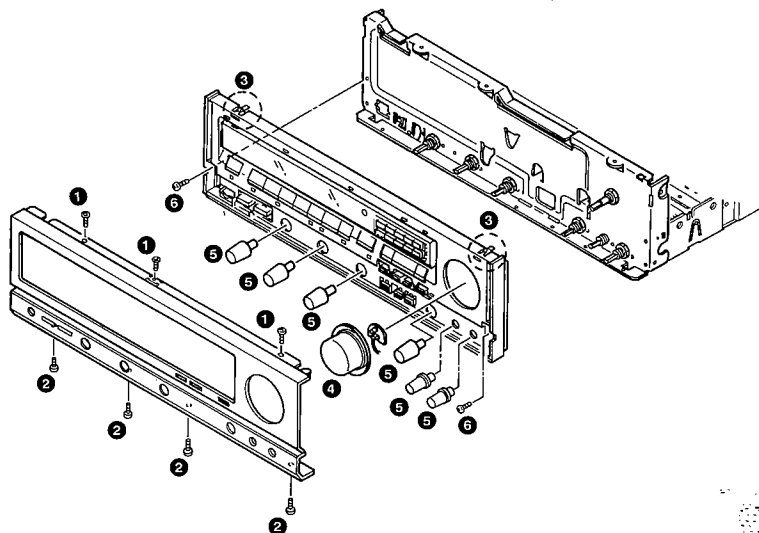
DISASSEMBLY FOR REPAIR

Note: Remove the case before starting.

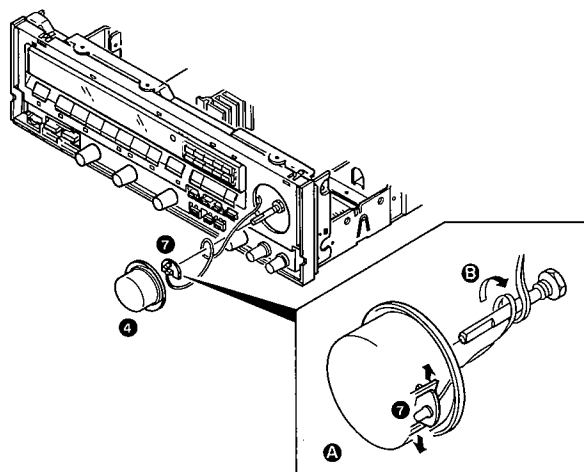
Remove the two screws from the notch-type bottom plate inside the tuner-amplifier. One of them must be removed after removing the surround PC board (X08).

Removing the front panel and sub-panel

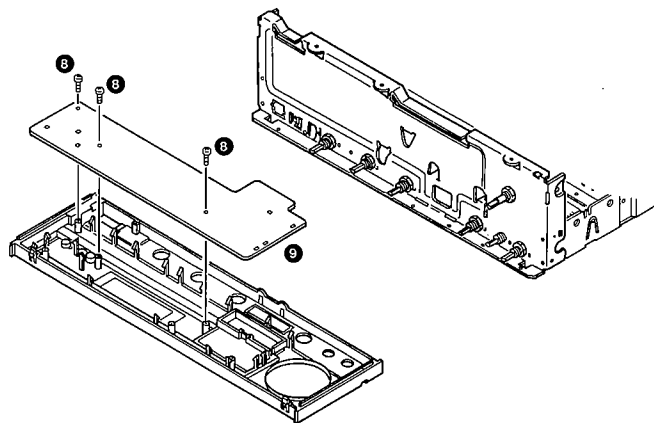
1. Remove the three screws **1** at the top, the three screws **2** at the bottom, and the two claws **3**, then remove the front panel.
2. Remove the MAIN VR **4** and each knob **5**, remove the four right and left screws **6**, then remove the subpanel.



3. Remove the LED PC board **7** on the inside of the MAIN VR **4**.
- Removing the MAIN VR knob.
Turn the MIN VR shaft fully clockwise **A**.
Wind the lead around the shaft two and a half turns **B**. Fix the LED PC board inside the knob, and fit the knob.

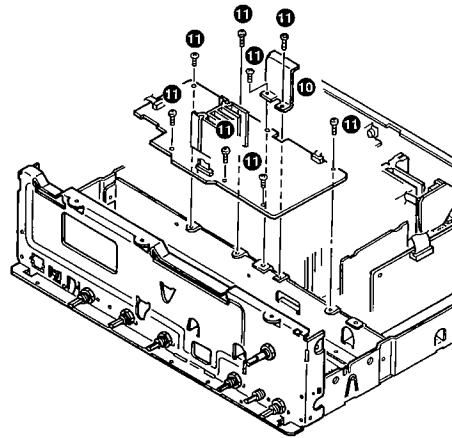


4. With the front panel held as shown in the figure, remove the screw **8**, then remove the display PC board **9**.

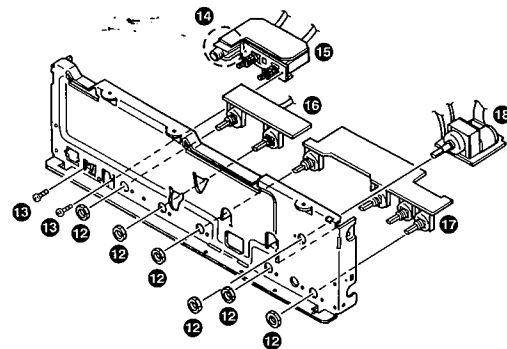


DISASSEMBLY FOR REPAIR

5. Remove the heat sink and X08 PC board fitting **10** , remove the eight screws **11** , then remove the surround PC board.



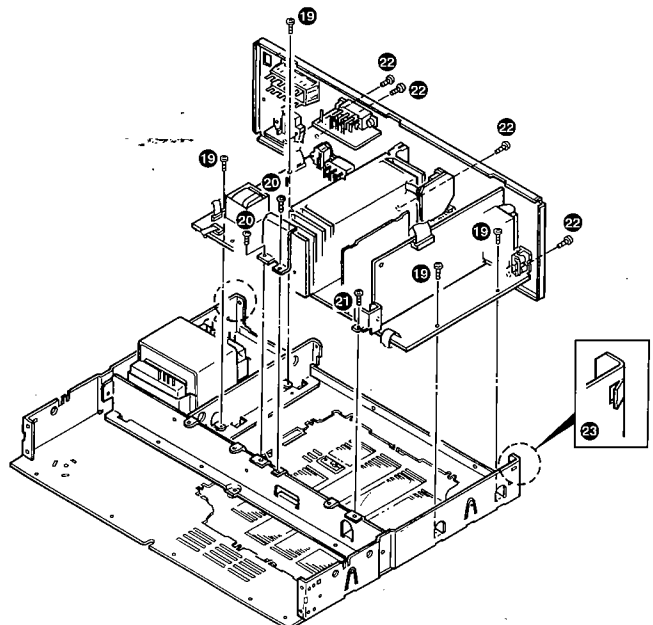
6. Remove the five nuts **12** and two screws **13** , push the claw **12** of the phone jack, then remove the head-phone SP switch **14** , the TONE VR, LOUD CONTROL BALANCE VR **15** , and MAIN VR **16** PC boards.



Removing the main PC board

7. Remove the four screws **17** holding the X09 PC board
8. Remove the two screws **18** holding the L fitting of the heat sink.
9. Remove the one screw **19** holding the tuner PC board fitting.
10. Remove the seven screws **20** holding the rear panel.
11. Remove the rear panel with the X09 board while holding the claw **21** at the side of the rear panel with a flat-bladed screwdriver.

To remove the claw **22** of the rear panel from the side frame, raise and remove the rear panel from the bottom frame.

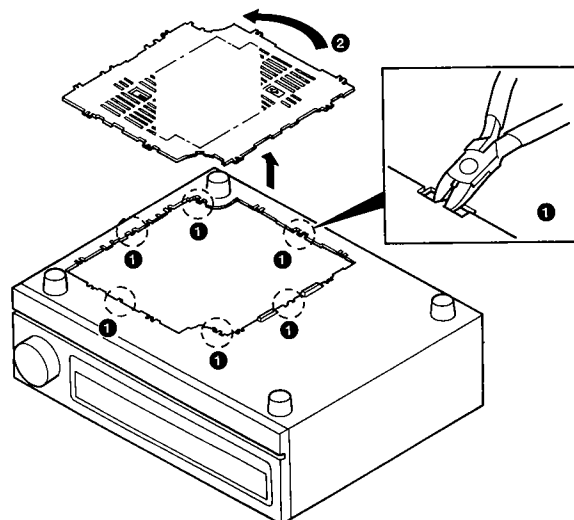


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DISASSEMBLY FOR REPAIR

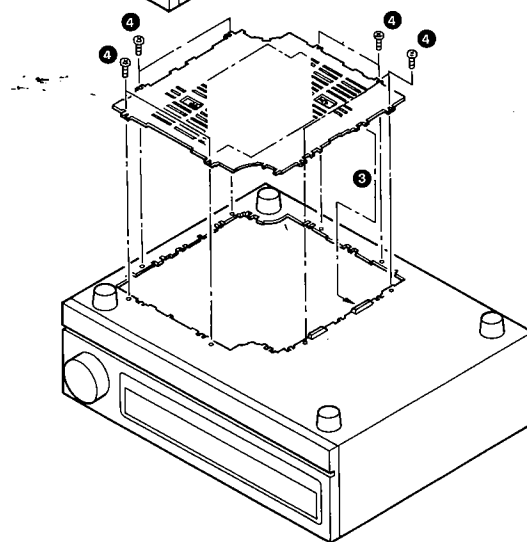
How to remove the repairing chassis

- 1 Cut the 6 parts ① of the repairing chassis. Remove the repairing chassis from main chassis.

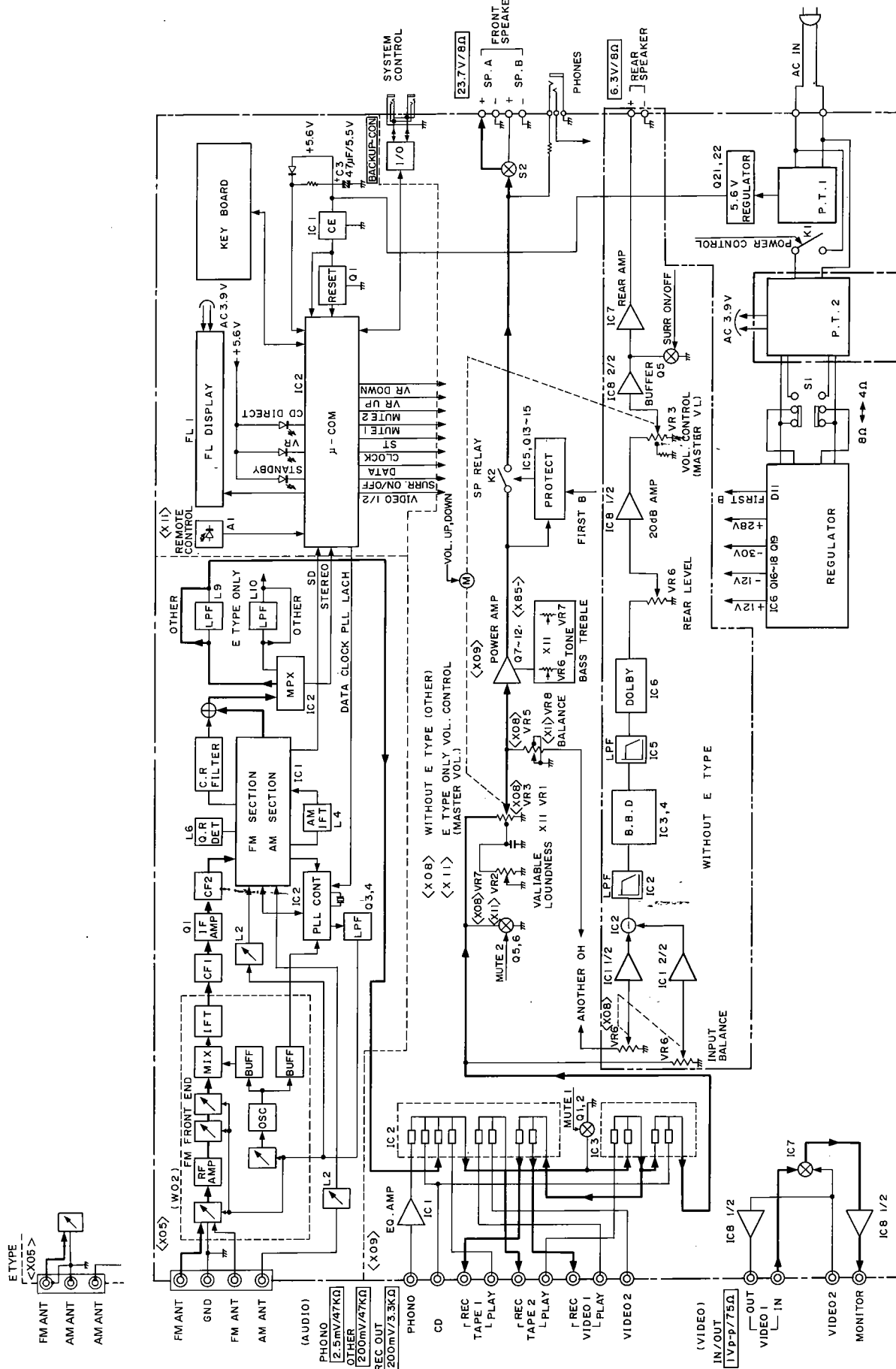


After repair

- 2 Turn the repairing chassis 180 degrees in the arrow direction ②.
- 3 Insert the 2 claws ③ into main chassis.
- 4 Lock to the main chassis by 8 screws (M3 × 6) ④.



BLOCK DIAGRAM



KR-V6020

CIRCUIT DESCRIPTION

TUNER UNIT (X05-3900-10)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	LA1255	FM/AM system IC	FM IF amplification/detection/control, AM mixing IF amplification/detection
IC2	AN7470	PLL synthesizer IC	PLL electronic tuning
IC3	LM7001	MPX IC	MPX demodulation
Q1	2SC1923 (R, Q)	FM IF Amp	10.7 MHz amplification
Q3	2SC945(A) (Q, P) 2SC1740S (QO, R)	LPF	PLL low-pass filter
Q4	2SC1845 (F, E)	LPF	PLL low-pass filter
Q7	2SC845(A) (Q, P) 2SC1740S (Q, R)	Buffer	L6 buffer E type only
Q8	2SA733(A) (Q, P) 2SA933 (Q, R)	FM +B control	Electronic switch
Q9	2SA733(A) (Q, P) 2SA933 (Q, R)	AM +B control	Electronic switch
Q11, 12	2SC945(A) (Q, P) 2SC1740S (Q, R)	Emphasis switch	On: 75 μ s; off 50 μ s M type only

AUDIO UNIT (X08-2470-10)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	NJM45580 M5218P	Buffer amplifier	
IC2 (1, 2, 3)	NJM45580 M5218P	Drive AMP	
IC2 (5, 6, 7)		7 kHz LPF	
IC3	MN3101	BBD clock pulses generator/driver	Generation of clock signal and VG power for IC4 MN3007.
IC4	MN3007	Low noise BBD for analog signal delay	Delay time: 20 ms. Delay of audio signal.
IC5	NJM45580 M5218P	7 kHz LPF	
IC6	LA2730	Modified DOLBY B noise reduction	Decoding of Dolby B encoded Signals.
IC7	TA8200AH	Rear signal amplifier	6.32 V output for input Sensitivity 126 mV input.
IC8 (1, 2, 3)	NJM45580 M5218P	Buffer amplifier	
IC8 (5, 6, 7)		amplifier (15 dB)	
Q1, Q2, Q3	2SC945(A) (Q, P) 2SC1740S (Q, R)	IC7 ON/OFF logic circuit	When FB and SURROUND ON/OFF go high, Q1 and Q2 turn on, Q3 turns off, and pin 11 of IC7 goes high. IC7 enters the operating state.
Q4	2SA733(A) (Q, P) 2SA933S (Q, R)	Mute control	
Q5	2SC2878(B)	Mute	
Q6	2SO1266(O, P)	Discharge control	If the C44 voltage is 6.8 V or higher when the power is switched off, C44 is discharged via 47 Ω (R67).

CIRCUIT DESCRIPTION

DOLBY SURROUND UNIT (X09-3070-10)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	NJM45580-A	PHONO EQ Amp	
IC2	TC9164N	Input selector	Switches the input according to data from microprocessor IC2 pins 19, 20 and 21.
IC3	TC9162N		
IC4	TA8409S	Potentiometer motor driver	Drives the motor forward or backward according to the signals from microprocessor IC2 pins 1 and 63.
IC5	μPC1237HA	Protection	Deenergizes the output relay when the center voltage is shifted by DC when an excessive load is applied.
IC6	μPC7512HF	+12 V regulator	+12 V constant-voltage circuit
IC7	LVA5215	Video input selector	Switches the monitor output signal between Video 1 and 2 by microprocessor IC2 pin 23 (VIDEO1/2).
IC8		Video amplifier	Amplifies the video signal by 6 dB.
Q1, Q2	2SC2878(B)	Selector mute	Turns on to prevent shock noise when the selector is switched.
Q3	2SA733(A) (Q, P) 2SA933S (Q, R)	Mute drive	Turned on by the signal from, <X11> microprocessor IC2 pin 25 (MUTE1) to drive Q1 and Q2.
Q4	2SA733(A) (Q, P) 2SA933S (Q, R)	Mute drive	Turned on by the signal from microprocessor IC2 pin 26 (MUTE2) to drive Q5 and Q6.
Q5, 6	2SC2878(B)	Main amplifier MUTE	Turns on when the selector is switched, CD DIRECT and TAPE2 are switched, and muting is effective.
Q7, 8	2SC4137 (V, W)	Class B stage temperature compensation	Temperature compensation of the quiescent current of the final transistor
Q9, 10	2SB1490*5, 2SB1492*5	Final stage	
Q11, 12	2SO2250*5, 2SO225*5		
Q13, 14	2SC1845 (F, E)	Current detection transistor	Detects the final stage current and drives the protection circuit if an excessive load is applied.
Q15	2SA992 (F, E)	Protection drive	Turned on by the signal from Q13 and Q14; drives IC5.
Q16, 17, 18	2SA733(A) (Q, P) 2SA933S (Q, P)	-12 V regulator	-12 V constant-voltage circuit
Q19	2SB941	-30 V regulator	-30 V constant-voltage circuit
Q20, 21	2SD1266	+5 V regulator	+5 V constant-voltage circuit
Q22	2SC2320 (F, E)	Power relay drive	Turned on by the signal from microprocessor IC2 pin 24 (POWER); activates the relay.

DISPLAY UNIT (X11-2830-10)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
IC1	RST529C	μ-Com reset signal	Goes low momentarily when the power is switched on.
IC2	CXP5016-520S	μ-Com	
Q1	2SC945(A) (Q, P) 2SC1740S (Q, R)	μ-Com reset	Outputs a low when the IC1 output goes high.
Q2	2SA733(A) (Q, P) 2SA933 (Q, R)	Ch-SPACE SW	Off (B-High): Ch-SPACE (FM) 100 kHz, (AM) 10 kHz On (B-Low): Ch-SPACE (FM) 50 kHz, (AM) 9 kHz. (M-type only)

<DT> (X85-1170-04)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
Q1~4	2SA992 (F, E)	Differential amplifier, first stage	
Q5~8	2SC1845 (F, E)	Differential amplifier, second stage	
Q9, 10	2SA992 (F, E)	Current mirror	
Q11	2SC945(A) (Q, P) 2SC1740S (Q, R)	+12 V constant voltage	
Q12, 13	2SC945(A) (Q, P) 2SC1740S (Q, R)	Protection	

CIRCUIT DESCRIPTION

1-1. Initial Setting

1) Function initial setting

Last channel memory FM : 87.5MHz
 AM (K) : 530kHz
 AM (E) : 531kHz
 Tuning mode Auto
 Band FM1
 Input selector Tuner
 Video monitor VIDEO 1
 Dolby surround (without E TYPE) OFF
 CD DIRECT OFF
 TAPE 2 monitor OFF
 Muting OFF
 Power OFF

Frequency memorized for each PRESET channel when the memory is cleared (Test frequency)

BAND	FM1		FM2		AM	
ch	K	E	K	E	K	E
1	87.5MHz	87.5MHz	87.5MHz	87.5MHz	530KHz	531KHz
2	89.1	89.1	//	//	630	630
3	90.0	90.0	//	//	990	990
4	92.0	92.0	//	//	1440	1440
5	94.0	94.0	//	//	1610	1602
6	98.0	98.0	//	//	1700*	531
7	100.1	100.1	//	//	530	531
8	102.0	102.0	//	//	530	531
9	106.0	106.0	//	//	530	531
10	108.0	108.0	//	//	530	531

* 1700 kHz is set for WIDE only.

2) Microprocessor output port initial setting

Any figure in () is a pin number.

SURROUND MUTE (17) L
 VOL. LED (18) L
 VIDEO T/2 (23) L
 POWER (24) L
 MUTE 1 (25) H
 MUTE 2 (26) H
 CDDL (27) H
 VOL. DOWN (1) L
 VOL. UP (63) L

The initial setting is performed in a following event :

1. When backup memory data is destroyed when reset is applied to the microprocessor.
2. When the power cord is plugged in to the AC wall outlet while pressing the TUNER key.

1-2. Test Mode Setting

1) Method of entering the test mode

1. While pressing the CD key, plug the power cord to the AC wall outlet. When the test mode is entered, the FL tube display all lights.

2) Method of canceling the test mode

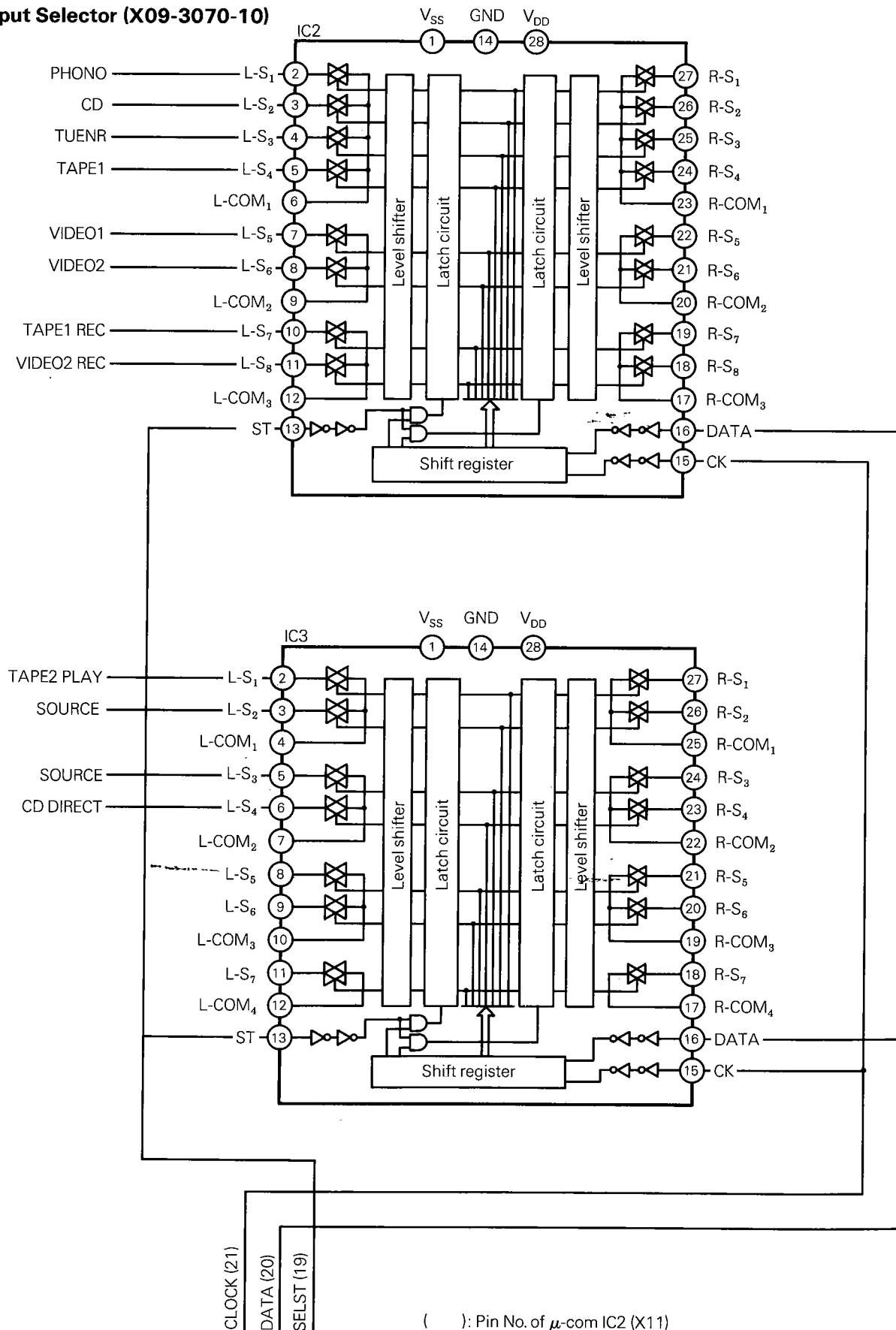
1. Unplug the power cord from the AC wall outlet once.
2. Send the reset signal to the RESET pin or some other means to reset the microprocessor.

3) Contents of test mode

1. When the test mode is entered, the FL tube display all lights. This all lighting continues unless a effective remote control serial code or the test mode is canceled.
2. The test frequency is stored in memory for each preset channel. (For each frequency to be stored in memory, refer to its associated listing.)
3. The test mode is different from the normal mode in the following operations:
 - When the tuner UP or DOWN key is pressed when a mode other than TUNER has been selected, the potentiometer is increased or decreased. Once one of these keys has been pressed, the operation continues even if the key is released. It stops automatically if the AUTO or POWER key is pressed or if the AUTO or POWER key is not pressed for 16 seconds.

CIRCUIT DESCRIPTION

2. Input Selector (X09-3070-10)

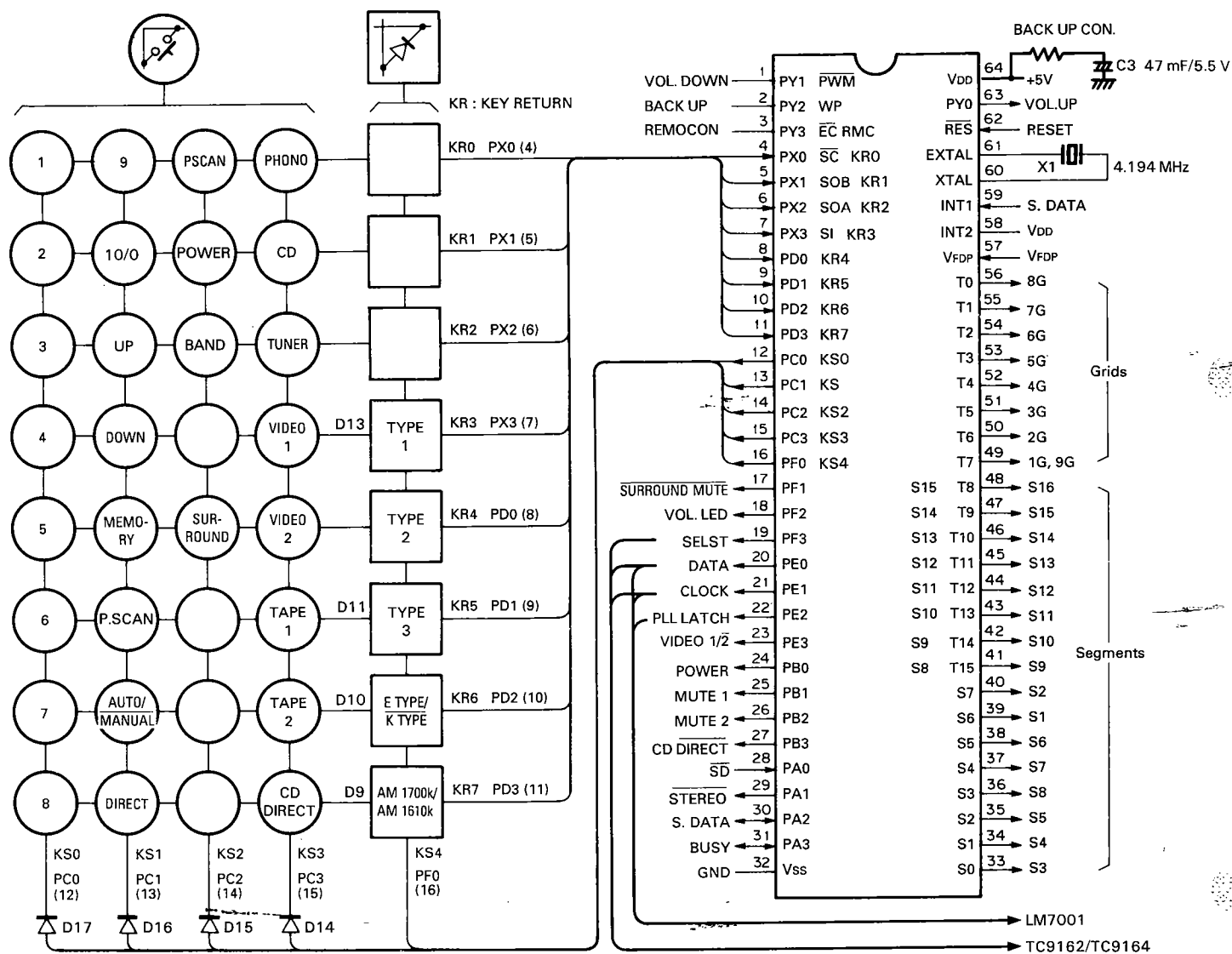


KR-V6020

CIRCUIT DESCRIPTION

3. CXP5016-520S: Receiver microprocessor (X11-28XX-XX : IC2)

3-1. Key matrix connections



3-2. Setting of destinations, models and specifications depending upon diode key matrix

The setting of destinations, models and specifications is made according to the initial set diode key matrix. In the following, "1" means "with diodes" and "0", "without diodes".

1) Model Set SW

Model set SW			MODEL	Function				
TYPE 1	TYPE 2	TYPE 3		TUNER BAND	DOLBY SURROUND	VOL. CONT with Moter	Switched VIDEO1, 2	REMOCON
0	0	1	KR-V6020 (OTHER)	FM, AM	Provided	Provided	Provided	Provided
1	0	1	KR-V6020 (E TYPE)	↑	Not provided	↑	↑	↑
—	1	0	KR-A5520, A5020	↑	↑	↑	Not provided	↑
0	0	0	KR-A4020	FM1, FM2, AM	↑	Not provided	↑	Not provided

CIRCUIT DESCRIPTION

2) Destination set SW: E type/K type

Destination set SW	Destination	BAND	Reception frequency band	Channel space	Reference frequency
0	K	FM	87.5~108.0 MHz	100 kHz	50 kHz
		AM	530~1610 kHz 530~1700 kHz	10 kHz	10 kHz
1	E	FM	87.5~108.0 MHz	50 kHz	50 kHz
		AM	531~1602 kHz	9 kHz	9 kHz

3) Specification set SW: AM1700k/AM1610k

With destination set SW at "0": Effective only for K type

Specification set SW	AM reception frequency band
0	530~1610 kHz
1	530~1700 kHz

Pin description

Pin No.	Pin name	I/O	Name	Function
1	PY1	O	VRDOWN	Potentiometer down operation control. High: V down Low: Normal state
2	PY2	I	BACKUP	Backup (AC outlet off) detection. High: Normal state Low: AC outlet off When the power is switched on, high is input. When low is input, the microprocessor stops clock generation and enters the backup state. When the signal changes from low to high, the backup state changes to the normal state.
3	RMC	I	REMOCON	REMOCON signal input. active Low
4~11	PX0~PX3 PD0~PD3	I	KR0~KR7	KEY RETURN signal input. High: There is input. Low: There is no input.
12~16	PC0~PC3 PF0	O	KS0~KS4	KEY SCAN signal output. Normally high is output. Key scan is performed when KEY is ON.
17	PF1	O	SMUTE	SURROUND effect audio signal output ON/OFF control. High: output ON Low: output OFF
18	PF2	O	VOLLED	Volume LED signal output. High: OFF Low: ON
19	PF3	O	SELST	Data latch signal output to TC9162/TC9164. Data is latched on the rising edge.
20	PE0	O	DATA	LM7001(PLL IC) TC9162/TC9164 (selector IC) control serial data output. Data is latched on the rising edge of the clock.
21	PE1	O	CLOCK	LM7001, TC9162/TC9164 control serial data transfer shift clock output. Data is latched on the rising edge of the clock.
22	PE2	O	PLLLT	CE signal output to LM7001. When the signal is high, LM7001 is enabled.
23	PE3	O	PVID12	VIDEO signal switching control. High: VIDEO 2 Low: VIDEO 1
24	PB0	O	POWER	Power supply circuit relay on/off control. High: ON Low: OFF
25	PB1	O	MUTE 1	TAPE 2 REC OUT mute control. High: MUTE OFF Low: MUTE ON
26	PB2	O	MUTE 2	LINE OUT mute control. High: MUTE OFF Low: MUTE ON
27	PB3	O	CDDL	CD DIRECT LED signal output. High: OFF Low: ON
28	PA0	I	SD	Tuner tuned detection. High: NO SIGNAL Low: TUNED
29	PA1	I	STEREO	Tuner FM stereo detection. High: MONO Low: Stereo
30	PA2	I/O	SDATA	This pin and serial data pin 59 are shorted.
31	PA3	I/O	BUSY	Serial busy signal input/output.
32	Vss	—	GND	GND.
33~48	S0~S15	O	Sa~So, Sr	Fluorescent display segment drive signal output.
49~51	T7~T5	O	—	N.C.
52~56	T4~T0	O	G5~G1	Fluorescent display digit drive signal output.
57	V _{FDP}	—	V _{FDP}	Fluorescent display output driver circuit power supply.
58	INT2	I	—	Unused pin. This pin and GND are shorted.
59	INT1	I	SDATA	This pin and serial data input pin 30 are shorted.
60	XTAL	O	XTAL	Clock generation circuit output.
61	EXTAL	I	EXTAL	Clock generation circuit input.
62	RST	I	RESET	Reset signal input.
63	PY0	O	VRUP	Volume up operation control. High: UP Low: Normal state
64	V _{DD}	—	V _{DD}	+5 V power supply.

CIRCUIT DESCRIPTION

4. Dolby B type noise reduction

: LA2730 (X08-247X-XX : IC6)

4-1. Outline

This noise reduction circuit is completely different from Dolby B for cassette decks in respect to frequency characteristic.

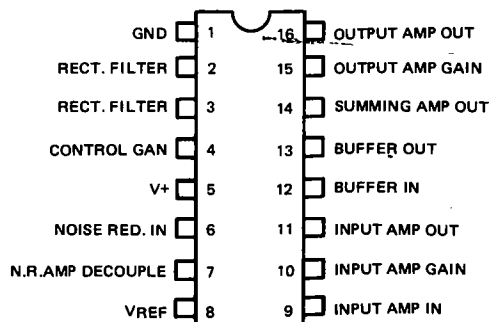
With 500mV = 0dB at Dolby level point 6, a gain control is made by IC6 in IN so as to obtain the same level as in OUT so that IN is of 500mV = 0dB.

Table shows input vs. output characteristics.

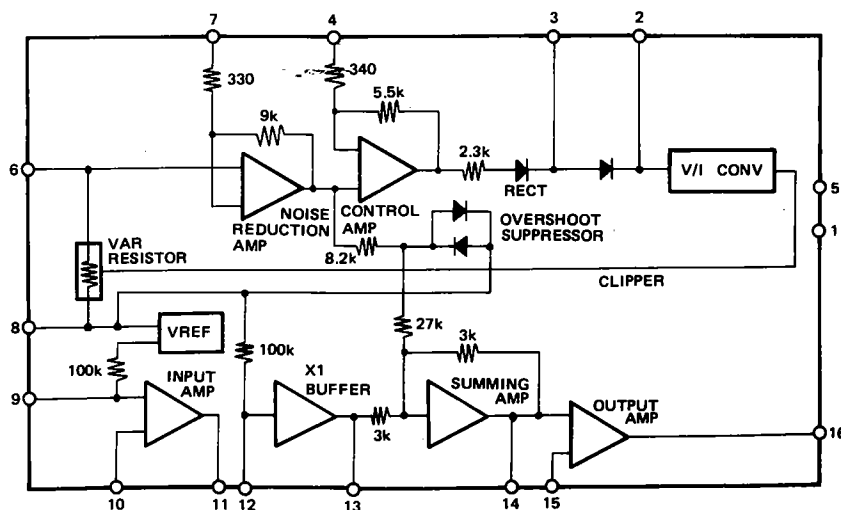
4-2. Modified B type processor decode characteristics

Hz	100	200	500	700	1.0K	1.4k	2.0k	3.0k	5.0k	7.0k	10.0k
dB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
-5	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
-10	0.0	0.0	-0.3	-0.4	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3
-15	0.0	0.0	-0.8	-1.1	-1.4	-1.3	-1.2	-0.9	-0.7	-0.7	-0.7
-20	0.0	0.0	-0.8	-1.6	-2.4	-3.0	-3.0	-2.4	-1.7	-1.5	-1.4
-25	0.0	0.0	-0.9	-1.7	-2.8	-3.8	-4.6	-4.9	-4.1	-3.4	-2.9
-30	0.0	0.0	-1.0	-1.7	-2.9	-4.0	-5.0	-5.4	-5.4	-5.6	-5.2
-35	0.0	0.0	-1.0	-1.7	-2.9	-4.0	-5.0	-5.5	-5.6	-5.8	-5.7
-40	0.0	0.0	-1.0	-1.7	-2.9	-4.0	-5.0	-5.5	-5.7	-5.8	-5.8

4-3. Terminal connection diagram



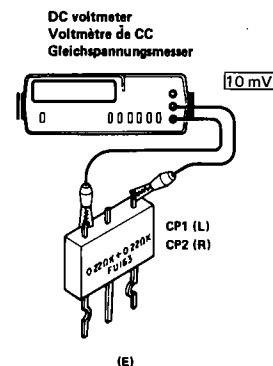
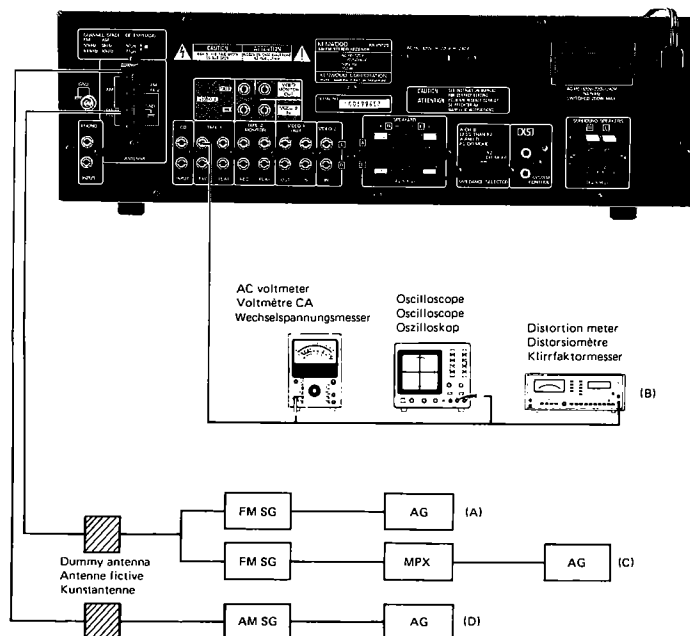
4-4. Block diagram



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION SELECTOR: FM							
1	DETECTOR	(A) 98.0 MHz 1 kHz, ± 75 kHz dev 60 dB μ (ANT input)	Connect a DC voltmeter between TP3 and TP4.	AUTO or MONO 98.0 MHz	L6 (X05-)	0 V	(a)
2	VCO	(A) 98.0 MHz 0 dev 60 dB μ (ANT input)	Connect a frequency counter between TP6 and TP5 (GND).	AUTO 98.0 MHz	VR 2 (X05-)	19.00 kHz	(b)
3	DISTORTION (STEREO)	(C) 98.0 MHz 1 kHz, ± 68.25 kHz dev Selector: L or R Pilot: ± 6.75 kHz dev 60 dB μ (ANT input)	(B)	98.0 MHz	IFT (Front end)	Minimum distortion (L or R)	
4	SEPARATION (E type)	(C) 98.0 MHz Stereo signal 60 dB μ (ANT input)	(B)	AUTO 98.0 MHz	VR3 (X05-)	Minimum crosstalk	
5	TUNING LEVEL	(A) 98.0 MHz 0 dev 18 dB μ (ANT input)	(B)	AUTO or MONO 98.0 MHz	VR1 (X05-)	Adjust VR1 and stop at the point where FL1 (TUNED) goes on.	
AM SECTION Keep the AM loop antenna installed. SELECTOR: AM							
(1)	TUNING LEVEL	(D) 1000 (999) kHz 26 dB μ (ANT input)	(B)	—	VR4 (X05-)	Adjust VR4 and stop at the point where FL1 (TUNED) goes on.	
AUDIO SECTION							
(1)	IDLE CURRENT	—	(E) Connect a DC voltmeter across CP1(L) CP2 (R)	Volume: 0	VR7 (L) VR8 (R) VR6 (REAR) (X09)	10 mV	
(2)	DOLBY SURROUND CENTER ADJUSTMENT	(F) Connect an AG (1 kHz) to CD/AUX jack (L or R).	Connect an oscilloscope between TP3 and GND.	Main volume: 0 Increase the input level until the waveform clips.	VR1 (X08-)	Adjust so that the upper and lower waveform clips becomes symmetrical.	
(3)	DOLBY SURROUND CLOCK LEAKAGE ADJUSTMENT	(F) Cut off the input signal level.	Connect an oscilloscope between TP5 and GND.	—	VR2 (X08-)	Adjust so that the height of the clock frequency (several 10 kHz) becomes minimum.	

System connections/Raccordements du système/System-Anschlusse



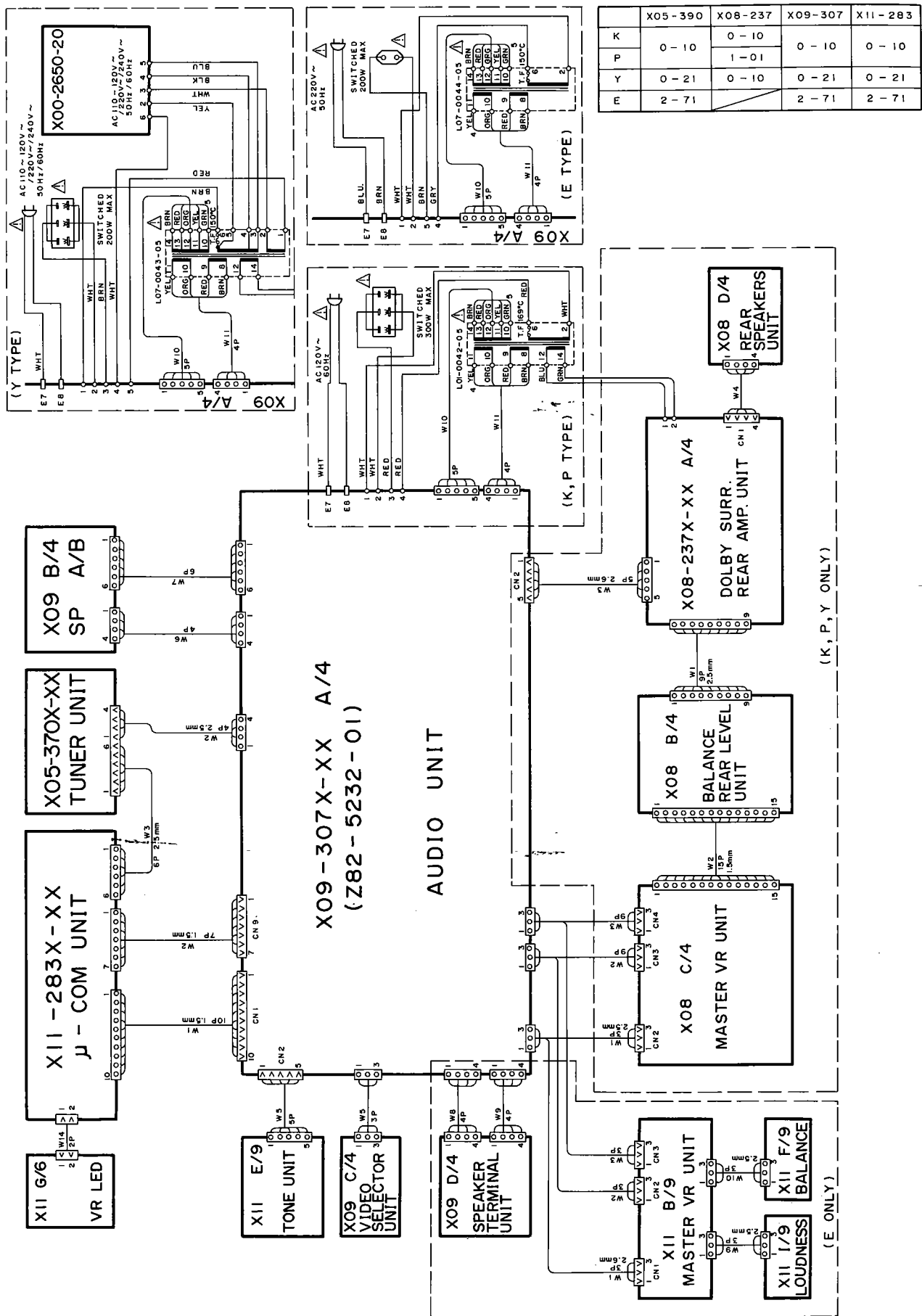
REGLAGE

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF SELECTEUR: FM							
1	DETECTEUR	(A) 98,0 MHz 1 kHz, ± 75 kHz dév 60 dB μ (Entrée ANT)	Relier un voltmètre CC entre les TP3 et TP4.	AUTO ou MONO 98,0 MHz	L6 (X05-)	0 V	(a)
2	OSCILLATEUR CONTROLE PAR LA TENSION	(A) 98,0 MHz 0 dév 60 dB μ (Entrée ANT)	Relier un compteur de fréquence entre les TP6 et TP5 (GND).	AUTO 98,0 MHz	VR2 (X05-)	19,00 kHz	(b)
3	DISTORSION (STEREO)	(C) 98,0 MHz 1 kHz, $\pm 68,25$ kHz dév Selection: L ou R Signal pilote: $\pm 6,75$ kHz dév 60 dB μ (Entrée ANT)	(B)	98,0 MHz	Tête H.F. IFT	Distorsion minimale. (L ou R)	
4	SEPARATION (E type)	(C) 98,0 MHz Signal stéréo 60 dB μ (Entrée ANT)	(B)	AUTO 98,0 MHz	VR3 (X05-)	Diaphonie minimale.	
5	NIVEAU D'ACCORDER	(A) 98,0 MHz 0 dév — 18 dB μ (Entrée ANT)	(B)	AUTO ou MONO 98,0 MHz	VR1 (X05-)	Ajuster VR1 et arrêter le mouvement de VR1 au moment où le FL1 (TUNED) s'allume.	
SECTION MA Laisser l'antenne bouche MA installée. SELECTEUR: AM							
(1)	NIVEAU D'ACCORDER	(D) 1000 (999) kHz 26 dB μ (Entrée ANT)	—	—	VR4 (X05-)	Ajuster VR4 et arrêter le mouvement de VR4 au moment où le FL1 (TUNED) s'allume.	
SECTION AUDIO							
(1)	COURANA DE POLARISATION	—	(E) Connecter un voltmètre CC sur CP1 (L) CP2 (R)	Volume: 0	VR7 (G) VR8 (D) VR6 (REAR) (X09-)	10 mV	
(2)	AJUSTEMENT CENTRAL DE L'ENVIRONNEMENT DOLBY	(F) Relier un AG (1 kHz) au CD/AUX prise (L ou R).	Relier un oscilloscope entre les TP3 et GND.	Volume principal: 0 Augmenter le niveau d'entrée jusqu'à ce que la forme d'onde s'écrête.	VR1 (X08-)	Ajuster pour que les écretements des formes d'onde supérieure et inférieure soient symétriques.	
(3)	AJUSTEMENT DE FUITE DE L'HORLOGE DE L'ENVIRONNEMENT DOLBY	(F) Couper le niveau de signal d'entrée.	Relier un oscilloscope entre les TP5 et GND.	—	VR2 (X08-)	Ajuster pour que la hauteur de la fréquence de l'horloge (plusieurs dizaines de 10 kHz) devienne minimum.	

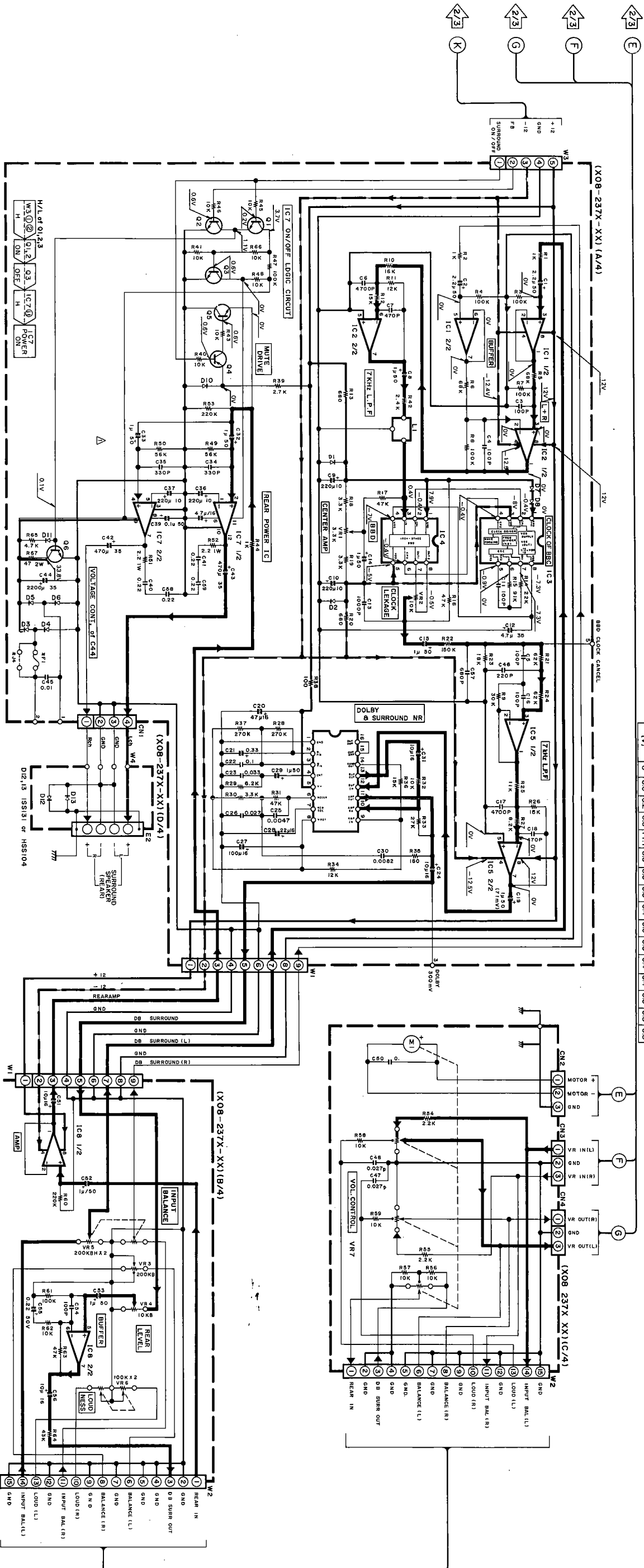
ADJUSTMENT

NR.	GEGENSTAND	EINGANGSEINSTELLUNG	AUSGANGSEINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPfangsABTEILUNG		WÄHLER: FM					
1	DETEKTOR	(A) 98,0 MHz 1 kHz, ± 75 kHz Hub 60 dB μ (ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP3 und TP4 anschließen.	AUTO oder MONO 98,0 MHz	L6 (X05-)	0 V	(a)
2	SPANNUNGS-GEREGELTER OSZILLATOR	(A) 98,0 MHz 0 Hub 60 dB μ (ANT-Eingang)	Einen Frequenzzähler zwischen TP6 und TP5 (GND) anschließen.	AUTO 98,0 MHz	VR2 (X05-)	19,00 kHz	(b)
3	KLIRRFAKTOR (STEREO)	(C) 98,0 MHz 1 kHz, $\pm 68,25$ kHz Hub Wähler: L oder R Pilotten: $\pm 6,75$ kHz Hub 60 dB μ (ANT-Eingang)	(B) _L	98,0 MHz	Frontend IFT	Minimal Klirrfaktor. (L oder R)	
4	STEREO KANAL TRENNUNG (E Type)	(C) 98,0 MHz Stereo Signal 60 dB μ (ANT-Eingang)	(B)	AUTO 98,0 MHz	VR3 (X05-)	Minimal Klirrfaktor.	
5	ABSTIMM PEGEL	(A) 98,0 MHz 0 Hub — 18 dB μ (ANT-Eingang)	(B)	AUTO oder MONO 98,0 MHz	VR1 (X05-)	Den Pegel widerstand aufdrehen, und dem VR1 Halt geben wobei den FL1 (TUNED) anzeiger leuchtet wird.	
MW-EMPfangsABTEILUNG		Die MW-Rahmenantenne angebracht lassen. WÄHLER: AM					
(1)	ABSTIMM PEGEL	(D) 1000 (999) kHz 26 dB μ (ANT-Eingang)	—	—	VR4 (X05-)	Den Pegel widerstand aufdrehen, und dem VR4 Halt geben wobei den FL1 (TUNED) anzeiger leuchtet wird.	
AUDIO-ABTEILUNG							
(1)	LEERLAUFSTROM	—	(E) Einen Gleichspannungsmesser über CP1(L) CP2(R) anschließen.	Volume: 0	VR7 (L) VR8 (R) VR6 (REAR) (X09-)	10 mV	
(2)	MITTEL-EINSTELLUNG DES DOLBY-RAUMKLANGS	(F) Einen AG (1 kHz) zu CD/AUX Buchse anschließen. (L oder R)	Einen Oszilloskop zwischen TP3 und GND anschließen.	Hauptlautstärke: 0 Den Eingangspegel erhöhen, bis die Wellenform abgeschnitten wird.	VR1 (X08-)	So einstellen, daß die Abschnidung der oberen und unteren Wellenform symmetrisch wird.	
(3)	TAKTSTREUUNG-EINSTELLUNG DES DOLBY-RAUMKLANGS	(F) Den Eingangs-signalpegel abschniden.	Einen Oszilloskop zwischen TP5 und GND anschließen.	—	VR2 (X08-)	So einstellen, daß die Höhe der Taktfrequenz (einige 10 kHz) minimal wird.	

DIAGRAM



PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
[V]	0	60	02	06	11	63	63	63	64	59	58	64	64	63	58	58



EXPLODED VIEW

KR-V6020

KR-V6020

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参照番号	位置	部品番号	部品名 / 規格	仕	備考

KR-V6020

601	1A	A01-1870-01	METALLIC CABINET	KPY	
602	2A	A20-5984-02	PANEL	E	
602	2A	A20-5985-02	PANEL	E	
603	1A, 2B	A22-1163-02	SUB PANEL ASSY	E	
605	1A	A70-0341-05	REMOTE CONTROLLER ASSY	E	
606	1A	A09-0087-08	BATTERY COVER	E	
609	1A, 2A	B10-1088-13	FRONT GLASS	E	
610	2A	B43-0287-04	KENWOOD BADGE	E	
		B46-0092-03	WARRANTY CARD	E	
		B46-0094-03	WARRANTY CARD	E	
		B46-0095-03	WARRANTY CARD	E	
		B46-0121-03	WARRANTY CARD	E	
		B46-0122-13	WARRANTY CARD	E	
		B50-7882-00	INSTRUCTION MANUAL (ENGLISH)	E	
		B50-7883-00	INSTRUCTION MANUAL (FRENCH)	E	
		B50-7884-00	INSTRUCTION MANUAL (FR, GE, DU)	E	
		B58-0513-04	CAUTION CARD	E	
		B58-0803-13	CAUTION CARD (PRESET220-240)	E	
613	1C	E03-0055-05	AC OUTLET	KPY	
613	1C	E03-0086-05	AC POWER CORD	E	
615	1C	E30-0459-05	AC POWER CORD	E	
615	1C	E30-0812-05	AC POWER CORD	KP	
615	1C	E30-0974-05	AC POWER CORD	KP	
616	1A	E30-0977-05	CORD WITH PLUG	E	
617	1A, 1B	E30-1392-05	CORD WITH PLUG	E	
		H01-8769-04	ITEM CARTON CASE	KPY	
		H01-8770-04	ITEM CARTON CASE	E	
		H10-3950-02	POLYSTYRENE FOAMED FIXTURE	E	
		H10-3951-02	POLYSTYRENE FOAMED FIXTURE	E	
		H25-0181-04	PROTECTION BAG (150X260X0.05)	E	
		H25-0225-04	PROTECTION BAG (850X450X0.03)	E	
		H25-0232-04	PROTECTION BAG (235X350X0.03)	E	
620	2C	J02-1013-05	FOOT	KPY	
620	2C	J02-1034-05	FOOT	E	
621	1A	J19-2815-04	ANTENNA HOLDER	E	
623	2C	J19-3179-05	UNIT HOLDER	E	
624	1C	J42-0083-05	POWER CORD BUSHING	E	
		J61-0307-05	WIRE BAND	E	
625	2A	K29-2006-04	KNOB (BUTTON) (SPEAKER)	KPY	
626	2A	K29-3632-04	KNOB (REAR LEVEL, INPUT BALANCE)	KPY	
627	2A	K29-3633-04	KNOB ASSY (VOLUME CONTROL)	KPY	
628	2A	K29-3894-04	KNOB (BASS, TREBLE, LOUDNESS, BAL)	KPY	
629	2B	K29-3913-04	KNOB (TUNING)	KPY	
630	1A, 2A	K29-3912-03	KNOB (INPUT SELECTOR)	KPY	
633	1B, 2B	L07-0042-05	POWER TRANSFORMER	KP	
633	1B, 2B	L07-0043-05	POWER TRANSFORMER	E	
633	1B, 2B	L07-0044-05	POWER TRANSFORMER	E	
635	1C	N08-0128-35	BINDING POST (EARTH)	E	
A	1A, 1C	N89-3008-45	BINDING HEAD TAPITE SCREW	E	

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕 向	Re- marks 備考
B C F H	1B, 2B 2B 2A 2A		N89-3008-46 N89-4008-46 N09-1445-05 N89-3006-46	BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW SET SCREW (M3X8) BINDING HEAD TAPTITE SCREW		
640 641 642	1B 1B 1A, 1B		T90-0174-05 T90-0175-05 T90-0177-05	LOOP ANTENNA T TYPE ANTENNA ANTENNA ADAPTOR	E	
POWER SUPPLY UNIT (X00-2650-20)						
△ S1		*	S31-2322-05	SLIDE SWITCH (VOLTAGE SELECT)	Y	
TUNER UNIT (X05-3900-10: K, P, 0-21: Y, 2-71: E)						
C1 C2 C3 C4 C5			CE04LW1H010M CE04LW1C470M CF92FV1H273J CE04LW1H010M CE04LW1C470M	ELECTRO 1.0UF 50WV ELECTRO 47UF 16WV MF 0.027UF J ELECTRO 1.0UF 50WV ELECTRO 47UF 16WV		
C6 ,7 C9 C16 C17 C18			CK45FF1H103Z CK45FF1H223Z CK45FF1H223Z CE04LW1H2R2M CE04LW1V4R7M	CERAMIC 0.010UF Z CERAMIC 0.022UF Z CERAMIC 0.022UF Z ELECTRO 2.2UF 50WV ELECTRO 4.7UF 35WV		
C19 C20 C21 C22 C23			CK45FF1H223Z CE04LW1H3R3M CK45FF1H103Z CK45FF1H223Z CE04LW1V100M	CERAMIC 0.022UF Z ELECTRO 3.3UF 50WV CERAMIC 0.010UF Z CERAMIC 0.022UF Z ELECTRO 10UF 35WV		
C24 C25 C26 C27 C28			CK45FF1H223Z CF92FV1H153J CE04LW1V100M CE04LW1HR47M C91-0769-05	CERAMIC 0.022UF Z MF 0.015UF J ELECTRO 10UF 35WV ELECTRO 0.47UF 50WV CERAMIC 0.01UF M		
C29 ,30 C31 C32 C33 C34			CK45FF1H103Z CC45FSL1H101J C91-0769-05 CE04LW1C470M CK45FB1H471K	CERAMIC 0.010UF Z CERAMIC 100PF J CERAMIC 0.01UF M ELECTRO 47UF 16WV CERAMIC 470PF K	E	
C35 C36 C37 C38 C39			CC45FSL1H121J CC45FSL1H271J CF92FV1H152J CF92FV1H132J CC93FCH1H471J	CERAMIC 120PF J CERAMIC 270PF J MF 1500PF J MF 1300PF J CERAMIC 470PF J	E E E E E	
C40 C41 C42 C43 C44			CE04LW1H2R2M CE04LW1H3R3M CE04LW1HR47M CF92FV1H473J CK45FB1H471K	ELECTRO 2.2UF 50WV ELECTRO 3.3UF 50WV ELECTRO 0.47UF 50WV MF 0.047UF J CERAMIC 470PF K		
C45 C46 ,47 C46 ,47 C48 C49			C91-0769-05 CC45FSL1H151J CK45FB1H102K CE04LW1C101M CC45FSL1H221J	CERAMIC 0.01UF M CERAMIC 150PF J CERAMIC 1000PF K ELECTRO 100UF 16WV CERAMIC 220PF J	KPY E E	
C50 ,51 C50 ,51 C52 ,53 C54 ,55			CE04LW1H010M CE04LW1H2R2M CF92FV1H752J CF92FV1H153J	ELECTRO 1.0UF 50WV ELECTRO 2.2UF 50WV MF 7500PF J MF 0.015UF J	KPY E Y Y	

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Ref. No. 参照番号	Address 位置	New Parts 新	Parts No. 部品番号	Description 部品名 / 規格	Desti- nation 仕向	Re- marks 備考
C54 ,55 C54 ,55 C56 C57 C58 ,59			CF92FV1H223J CF92FV1H472J CK45FF1H103Z CE04LW1C470M CC45FCH1H220J	MF 0.022UF J MF 4700PF J CERAMIC 0.010UF Z ELECTRO 47UF 16WV CERAMIC 22PF J	KP E	
C60 -62 C63 C64 ,65			CC45FSL1H101J CK45FF1H103Z CE04LW1C220M	CERAMIC 100PF J CERAMIC 0.010UF Z ELECTRO 22UF 16WV	E	
E1 E1			E20-0321-05 E20-0476-05	LOCK TERMINAL BOARD (ANTENNA) LOCK TERMINAL BOARD (ANTENNA)	E KPY	
CF1 ,2 CF1 ,2 CF3 L1 L2			L72-0531-05 L72-0536-05 L72-0096-05 L40-1091-17 L39-0189-05	CERAMIC FILTER CERAMIC FILTER CERAMIC FILTER SMALL FIXED INDUCTOR COMBINATION COIL	KPY E	
L4 L6 L7 L8 L9 ,10			L30-0454-15 L30-0439-25 L40-5625-29 L40-6825-29 L79-0790-05	AM IFT FM IFT SMALL FIXED INDUCTOR(5.6MH,J) SMALL FIXED INDUCTOR(6.8MH,J) LC FILTER	E E E	
X1			L77-1122-05	CRYSTAL RESONATOR		
R6 R10 R36 R51 R69			RD14NB2E101J RD14NB2E101J RD14NB2E101J RD14NB2E101J RD14NB2E221J	RD 100 J 1/4W RD 100 J 1/4W RD 100 J 1/4W RD 100 J 1/4W RD 220 J 1/4W		
VR1 VR2 VR3 VR4			R12-3130-05 R12-1089-05 R12-5060-05 R12-3126-05	TRIMMING POT.(33K) TRIM POT. 4.7K TRIMMING POT.(220K) TRIM POT. 10K	E	
S1			S31-2132-05	SLIDE SWITCH (DE-EMPHASIS)	Y	
D1 ,2 D1 ,2 D10 D10 D11 ,12			HSS104 1SS133 HZS5.1N(B2) RD5.1ES(B2) HSS104	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		
D11 ,12 IC1 IC2 IC3 Q1			1SS133 LA1265 AN7470 LM7001 2SC1923(R,0)	DIODE IC(FM/AM TUNER) IC(FM MPX) IC(PLL FREQUENCY SYNTHESIZER) TRANSISTOR		
Q3 Q3 Q4 Q7 Q7			2SC1740S(Q,R) 2SC945(A)(Q,P) 2SC1845(F,E) 2SC1740S(Q,R) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	E E	
Q8 ,9 Q8 ,9 Q11 ,12 Q11 ,12			2SA733(A)(Q,P) 2SA933S(Q,R) 2SC1740S(Q,R) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	Y Y	
			W02-1041-05 W02-1042-05	FM FRONT-END ASSY FM FRONT-END ASSY	E KPY	

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PRE-AMPLIFIER UNIT (X08-2370-10: K, Y, 1-01: P)						
C1 ,2			CE04LW1H2R2M	ELECTR0 2.2UF 50WV	KPY	
C3 -5			CC45FSL1H101J	CERAMIC 100PF J	KPY	
C6			C91-0668-05	CERAMIC 0.0047UF K	KPY	
C7			CK45FB1H471K	CERAMIC 470PF K	KPY	
C8			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C9 ,10			CE04LW1A221M	ELECTR0 220UF 10WV	KPY	
C11			CC45FSL1H101J	CERAMIC 100PF J	KPY	
C12			CE04LW1V4R7M	ELECTR0 4.7UF 35WV	KPY	
C13			C91-0652-05	CERAMIC 0.001UF K	KPY	
C14 ,15			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C16			CC45FSL1H101J	CERAMIC 100PF J	KPY	
C17			C91-0668-05	CERAMIC 0.0047UF K	KPY	
C18			CK45FB1H471K	CERAMIC 470PF K	KPY	
C19			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C20			CE04LW1C470M	ELECTR0 47UF 16WV	KPY	
C21			CE04LW1HR33M	ELECTR0 0.33UF 50WV	KPY	
C22			CF92FV1H104J	MF 0.10UF J	KPY	
C23			C91-0688-05	CERAMIC 0.033UF K	KPY	
C24			CE04LW1C100M	ELECTR0 10UF 16WV	KPY	
C25			C91-0668-05	CERAMIC 0.0047UF K	KPY	
C26			C91-0686-05	CERAMIC 0.027UF K	KPY	
C27			CE04LW1C101M	ELECTR0 100UF 16WV	KPY	
C28			CE04LW1C220M	ELECTR0 22UF 16WV	KPY	
C29			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C30			C91-0674-05	CERAMIC 0.0082UF K	KPY	
C31			CE04LW1C100M	ELECTR0 10UF 16WV	KPY	
C32 ,33			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C34 ,35			CC45FSL1H331J	CERAMIC 330PF J	KPY	
C36 ,37			CE04LW1A221M	ELECTR0 220UF 10WV	KPY	
C38			CE04LW1C470M	ELECTR0 47UF 16WV	KPY	
C39			CE04LW1H0R1M	ELECTR0 0.1UF 50WV	KPY	
C40 ,41			CF92FV1H224J	MF 0.22UF J	KPY	
C42 ,43			CE04LW1V471M	ELECTR0 470UF 35WV	KPY	
C44			CE04LW1V222M	ELECTR0 2200UF 35WV	KPY	
C45			CK45FF1H103Z	CERAMIC 0.010UF Z	KPY	
C46			CC45FSL1H221J	CERAMIC 220PF J	KPY	
C47 ,48			CF92FV1H273J	MF 0.027UF J	KPY	
C49			C90-1353-05	NP-ELEC 10UF 25WV	KPY	
C50			CF92FV1H104J	MF 0.10UF J	KPY	
C51			CE04LW1C100M	ELECTR0 10UF 16WV	KPY	
C52 ,53			CE04LW1H010M	ELECTR0 1.0UF 50WV	KPY	
C54			CC45FSL1H101J	CERAMIC 100PF J	KPY	
C55			CE04LW1HR22M	ELECTR0 0.22UF 50WV	KPY	
C56			CE04LW1C100M	ELECTR0 10UF 16WV	KPY	
C57			CK45FB1H681K	CERAMIC 680PF K	KPY	
C58 ,59			CF92FV1H224J	MF 0.22UF J	KPY	
E2			E20-0475-05	LOCK TERMINAL BOARD	KPY	
F1		*	F06-2525-05	FUSE (UL) (250V 2.5A)	P	
CN5 ,6			J13-0075-05	FUSE CLIP	P	
L1			L79-0720-05	LC FILTER	KPY	

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A D	2B 2B		N89-3008-45 N09-0333-05	BINDING HEAD TAPTITE SCREW TAPPING SCREW (3X12)	KPY KPYP	
R13			RD14NB2E681J	RD 680 J 1/4W	KPY	
R20			RD14NB2E681J	RD 680 J 1/4W	KPY	
R38			RD14NB2E101J	RD 100 J 1/4W	KPY	
R51 ,52			RS14KB3A2R2J	FL-PROOF RS 2.2 J 1W	KPY	
R67			RS14KB3D470J	FL-PROOF RS 47 J 2W	KPY	
VR1			R12-1087-05	TRIMMING POT.(3.3K)	KPY	
VR2			R12-3126-05	TRIM POT. 10K	KPY	
VR3			R01-5052-05	POTENTIOMETER(200K)	KPY	
VR4		*	R01-3050-05	POTENTIOMETER	KPY	
VR5		*	R06-5196-05	POTENTIOMETER(200K X2)	KPY	
VR6		*	R06-5195-05	POTENTIOMETER	KPY	
VR7		*	R29-5039-05	POTENTIOMETER(100K X3)	KPY	
D1 ,2			HZS8.2N(B2)	ZENER DIODE	KPY	
D1 ,2			RD8.2ES(B2)	ZENER DIODE	KPY	
D3 -6			S5566B	DIODE	KPY	
D7 ,8			HSS104	DIODE	KPY	
D7 ,8			ISS133	DIODE	KPY	
D10			HZS3.3N(B2)	ZENER DIODE	KPY	
D10			RD3.3ES(B2)	ZENER DIODE	KPY	
D11			HZS6.8N(B2)	ZENER DIODE	KPY	
D11			RD6.8ES(B2)	ZENER DIODE	KPY	
D12 ,13			HSS104	DIODE	KPY	
D12 ,13			ISS133	DIODE	KPY	
IC1 ,2			M5218P	IC(OP AMP X2)	KPY	
IC1 ,2			NJM4558D	IC(OP AMP X2)	KPY	
IC3			MN3101	IC(BBD CLOCK DRIVER)	KPY	
IC4			MN3007	IC(BBD)	KPY	
IC5			M5218P	IC(OP AMP X2)	KPY	
IC5			NJM4558D	IC(OP AMP X2)	KPY	
IC6			LA2730	IC(DOLBY SYSTEM)	KPY	
IC7			TA8200AH	IC(AF POWER AMPLIFIER)	KPY	
IC8			M5218P	IC(OP AMP X2)	KPY	
IC8			NJM4558D	IC(OP AMP X2)	KPY	
Q1 -3			2SC1740S(Q,R)	TRANSISTOR	KPY	
Q1 -3			2SC945(A)(Q,P)	TRANSISTOR	KPY	
Q4			2SA733(A)(Q,P)	TRANSISTOR	KPY	
Q4			2SA933S(Q,R)	TRANSISTOR	KPY	
Q5			2SC2878(B)	TRANSISTOR	KPY	
Q6			2SD1266(Q,P)	TRANSISTOR	KPY	
AUDIO UNIT (X09-3070-10: K, P, 0-21: Y, 2-71: E)						
C1 ,2			CE04LW1V100M	ELECTRO 10UF 35WV		
C3 ,4			CC45FSL1H221J	CERAMIC 220PF J		
C5 ,6			CE04LW1A101M	ELECTRO 100UF 10WV		
C7 ,8			CK45FB1H102K	CERAMIC 1000PF K		
C9 ,10			CF92FV1H123J	MF 0.012UF J		
C11 ,12			CF92FV1H332J	MF 3300PF J		
C13 ,14			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C15 -20			CC45FSL1H221J	CERAMIC 220PF J	E	
C21 ,22			CE04LW1V220M	ELECTRO 22UF 35WV		
C23 ,24			CK45FF1H103Z	CERAMIC 0.010UF Z		
C25 ,26			CK45FB1H222K	CERAMIC 2200PF K		

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C27			CF92FV1H473J	MF 0.047UF J	KPY	
C27 -30			CF92FV1H104J	MF 0.10UF J	E	
C30			CF92FV1H473J	MF 0.047UF J	KPY	
C31 -36			CK45FF1H472Z	CERAMIC 4700PF Z	E	
C37 ,38			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C39			CE04LW1C101M	ELECTRO 100UF 16WV		
C40 ,41			CE04LW1V100M	ELECTRO 10UF 35WV		
C42 ,43			CK45FF1H103Z	CERAMIC 0.010UF Z		
C44			CE04LW1C220M	ELECTRO 22UF 16WV		
C45			C90-1333-05	NP-ELEC 22UF 10WV		
C46			CE04LW1C330M	ELECTRO 33UF 16WV		
C47		*	CE04LW1J4R7M	ELECTRO 4.7UF 63WV		
C50			CE04LW1C470M	ELECTRO 47UF 16WV		
C51			CE04LW1H220M	ELECTRO 22UF 50WV	KPY	
C52			CK45FB1H102K	CERAMIC 1000PF K	KPY	
C53			CE04LW1C470M	ELECTRO 47UF 16WV		
C54			CE04LW1E102M	ELECTRO 1000UF 25WV		
C55 ,56			CF92FV1H104J	MF 0.10UF J		
C57			CE04LW1H101M	ELECTRO 100UF 50WV		
C58			CE04LW1H100M	ELECTRO 10UF 50WV		
C59			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C60 ,61			C90-1778-05	ELECTRO 5600UF 63WV		
C62 ,63			CK45FF1H103Z	CERAMIC 0.010UF Z		
C64 ,65			CE04LW1V100M	ELECTRO 10UF 35WV		
C66			CE04EW1E471M	ELECTRO 470UF 25WV	KPE	
C66			CE04LW1V471M	ELECTRO 470UF 35WV	Y	
C67			CK45FF1H103Z	CERAMIC 0.010UF Z		
C68			C91-0647-05	CERAMIC 0.01UF P	YE	
C68			C91-0971-05	FILM 0.01UF 250WV	KP	
C69			CK45FF1H223Z	CERAMIC 0.022UF Z		
C71			CK45FF1H103Z	CERAMIC 0.010UF Z	KPY	
C71 -73			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
C74			CK45FF1H472Z	CERAMIC 4700PF Z		
C78 ,79			CK45FB1H102K	CERAMIC 1000PF K	E	
C80 -83			CE04LW1A101M	ELECTRO 100UF 10WV		
C84 ,85			CE04LW1A471M	ELECTRO 470UF 10WV		
C86			CE04LW1C101M	ELECTRO 100UF 16WV		
E1			E13-0235-05	PHONE JACK (2P)		
E2 ,3			E13-0820-05	PHONE JACK		
E5			E20-0823-05	LOCK TERMINAL BOARD(8P)	KPY	
E6			E11-0188-05	MINIATURE PHONE JACK		
E10			E13-0477-05	PHONE JACK		
E11			E11-0162-05	PHONE JACK (3P)	KPY	
E11			E11-0189-05	PHONE JACK	E	
E14			E20-0825-05	SCREW TERMINAL BOARD(8P)	E	
F1			F05-4028-05	FUSE (UL)	KP	
F1			F06-2021-05	FUSE (SEMKO) (250V T2A)	E	
F1 ,2			F06-2021-05	FUSE (SEMKO) (250V T2A)	Y	
F2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
F3			F06-1022-05	FUSE (SEMKO) (250V T1A)	YE	
CN5 -10			J13-0075-05	FUSE CLIP	YE	
CN5 ,6			J13-0075-05	FUSE CLIP	KP	
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		

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△ T1			L01-7651-05	POWER TRANSFORMER	KP	
△ T1			L01-7652-05	POWER TRANSFORMER	E	
△ T1			L01-7658-05	POWER TRANSFORMER	Y	
A	1C		N89-3008-45	BINDING HEAD TAPTITE SCREW		
E	1C		N09-1236-05	TAPPING SCREW (3X16)		
G	1B		N35-3008-46	BINDING HEAD MACHINE SCREW		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R55 -58			RD14NB2E470J	RD 47 J 1/4W		
R65 ,66			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W	E	
R91			RS14KB3D332J	FL-PROOF RS 3.3K J 2W	KPY	
R91			RS14KB3D561J	FL-PROOF RS 560 J 2W		
R98			RS14KB3D182J	FL-PROOF RS 1.8K J 2W	KPY	
R99			RS14KB3A222J	FL-PROOF RS 2.2K J 1W		
R100			RD14NB2E100J	RD 10 J 1/4W		
R101			RS14KB3D151J	FL-PROOF RS 150 J 2W		
R103			RD14NB2E101J	RD 100 J 1/4W		
R109			R92-0173-05	RC 2.2M M 1/2W	KP	
R112,113			RS14KB3A561J	FL-PROOF RS 560 J 1W		
R114			RS14KB3A181J	FL-PROOF RS 180 J 1W		
R125			RD14NB2E100J	RD 10 J 1/4W		
VR1 ,2			R12-1083-05	TRIM POT. 1K		
△ K1			S51-1052-05	MAGNETIC RELAY		
K2		*	S51-2093-05	MAGNETIC RELAY		
S1			S31-2136-05	SLIDE SWITCH (POWER TYPE)		
S2		*	S42-2175-05	MULTIPLE PUSH SWITCH		
D1 ,2			HSS104A	DIODE		
D1 ,2			1SS131	DIODE		
D3			HZS3.9N(B2)	ZENER DIODE		
D3			RD3.9ES(B2)	ZENER DIODE		
D4 -7			S5566B	DIODE		
D8			HZS30N(B)	ZENER DIODE		
D8			RD30ES(B)	ZENER DIODE		
D9			S5566B	DIODE	E	
D10			HZS6.2N(B2)	ZENER DIODE	E	
D10			RD6.2ES(B2)	ZENER DIODE		
D11			RBV-602LFA	DIODE		
D12 -16			S5566B	DIODE		
D17			HZS6.2N(B2)	ZENER DIODE		
D17			RD6.2ES(B2)	ZENER DIODE		
D18 ,19			HSS104	DIODE		
D18 ,19			1SS133	DIODE		
D20			S5566B	DIODE		
D21 -32			HSS104	DIODE	KPE	
D21 -32			1SS133	DIODE	KPE	
D21 -34			HSS104	DIODE	Y	
D21 -34			1SS133	DIODE	Y	
D35			HZS6.2N(B2)	ZENER DIODE	E	
D35			RD6.2ES(B2)	ZENER DIODE	E	
IC1			NJM4558D-A	IC(OP AMP X2)		
IC2			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3			TC9162N	IC(ANALOG SWITCH ARRAY)		
IC4			TA8409S	IC(MOTOR CONTROL)		
IC5			UPC1237HA	IC(POWER AMP)		
IC6			UPC7812HF	IC(VOLTAGE REGULATOR/ +12V)		

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IC7		*	LVA521S	IC(VIDEO SWITCH)		
IC8			MC14577A	IC		
Q1 ,2			2SC2878(B)	TRANSISTOR		
Q3 ,4			2SA733(A)(Q,P)	TRANSISTOR		
Q3 ,4			2SA933S(Q,R)	TRANSISTOR		
Q5 ,6			2SC2878(B)	TRANSISTOR		
Q7 ,8			2SC4137(V,W)	TRANSISTOR		
Q9 ,10		*	2SB1490*5	TRANSISTOR		
Q11 ,12		*	2SD2250*5	TRANSISTOR		
Q13 ,14			2SC1845(F,E)	TRANSISTOR		
Q15			2SA992(F,E)	TRANSISTOR		
Q16 ,17			2SA733(A)(Q,P)	TRANSISTOR	KPY	
Q16 ,17			2SA933S(Q,R)	TRANSISTOR	KPY	
Q18			2SD1266	TRANSISTOR	KPY	
Q19			2SB941	TRANSISTOR		
Q20			2SD1266	TRANSISTOR	KPE	
Q20 -22			2SD1266	TRANSISTOR	Y	
Q22			2SC2320(E,F)	TRANSISTOR	KPE	
CONTROL UNIT (X11-2830-10: K, P, 0-21: Y, 2-71: E)						
D8		*	B30-1291-05	LED		
D20		*	B30-1291-05	LED		
D23		*	B30-1291-05	LED		
C1			CK45FB1H561K	CERAMIC 560PF K		
C2			C91-0769-05	CERAMIC 0.01UF M		
C3		*	C90-1827-05	BACKUP 0.047F 5.5WV		
C4			CE04LW1A101M	ELECTRO 100UF 10WV		
C5			CK45FF1H103Z	CERAMIC 0.010UF Z		
C6			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C7			CE04LW1HR47M	ELECTRO 0.47UF 50WV		
C8			CK45FF1H103Z	CERAMIC 0.010UF Z		
C12 ,13			CF92FV1H273J	MF 0.027UF J	E	
C14			C90-1353-05	NP-ELEC 10UF 25WV	E	
C15			CF92FV1H104J	MF 0.10UF J	E	
C38 ,39			CF92FV1H822J	MF 8200PF J		
C40 ,41			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C42 ,43			CF92FV1H153J	MF 0.015UF J		
C44 ,45			CC45FSL1H220J	CERAMIC 22PF J		
C46 ,47			CF92FV1H683J	MF 0.068UF J		
C48 ,49			CC45FSL1H101J	CERAMIC 100PF J		
C50 ,51			CF92FV1H333J	MF 0.033UF J		
X1			L78-0209-05	RESONATOR (4.194MHZ)		
CP1			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP2			R90-0492-05	MULTI-COMP 100KX8 J 1/6W		
VR1		*	R29-5040-05	POTENTIOMETER(100K X2)	E	
VR2		*	R06-5195-05	POTENTIOMETER	E	
VR6 ,7			R06-5138-05	POTENTIOMETER(100KX2)		
VR8			R01-5052-05	POTENTIOMETER(200K)	E	
S1 -18			S40-1064-05	PUSH SWITCH	E	
S1 -27			S40-1064-05	PUSH SWITCH	KPY	
S20 -27			S40-1064-05	PUSH SWITCH	E	
D1			HZS8.2N(B2)	ZENER DIODE		
D1			RD8.2ES(B2)	ZENER DIODE		

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D2 -7 D2 -7 D10 ,11 D10 ,11 D11			HSS104 1SS133 HSS104 1SS133 HSS104	DIODE DIODE DIODE DIODE DIODE	E E KPY	
D11 D13 -19 D13 -19 D14 -19 D14 -19			1SS133 HSS104 1SS133 HSS104 1SS133	DIODE DIODE DIODE DIODE DIODE	KPY E E KPY KPY	
D22 D22 FL1 IC1 IC2			HSS104 1SS133 CPF5426GR PST529C * CXP5016-520S	DIODE DIODE FLUORESCENT INDICATOR TUBE IC(SYSTEM RESET) IC(4BIT MICROCOMPUTER)		
Q1 Q1 Q2 Q2			2SC1740S(Q,R) 2SC945(A)(Q,P) 2SA733(A)(Q,P) 2SA933S(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	Y Y	
A1 A1			W02-0975-05 W02-1043-05	ELECTRIC CIRCUIT MODULE OPTIC RECEIVING MODULE		
MAIN AMPLIFIER UNIT (X85-1170-04)						
C1 ,2 C3 ,4 C5 ,6 C7 ,8 C9 ,10			CE04LW1H010M CC45FSL1H221J CE04LW1C470M CC45FSL1H680J CC45FSL1H040C	ELECTRO 1.0UF 50WV CERAMIC 220PF J ELECTRO 47UF 16WV CERAMIC 68PF J CERAMIC 4.0PF C		
C11 -14 C15 ,16 C17 C18			CC45FSL1H680J CC45FSL1H221J * CE04LW1J4R7M CE04LW1J470M	CERAMIC 68PF J CERAMIC 220PF J ELECTRO 4.7UF 63WV ELECTRO 47UF 63WV		
R15 ,16 R21 -24 R25 R26			RD14GB2E271J RD14GB2E221J RD14GB2E470J RD14GB2E101J	FL-PROOF RD 270 J 1/4W FL-PROOF RD 220 J 1/4W FL-PROOF RD 47 J 1/4W FL-PROOF RD 100 J 1/4W		
D1 ,2 D1 ,2 Q1 -4 Q5 -8 Q9 ,10			HSS104 1SS133 2SA992(F,E) 2SC1845(F,E) 2SA992(F,E)	DIODE DIODE TRANSISTOR TRANSISTOR TRANSISTOR		

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KR-V6020

SPECIFICATIONS

AUDIO SECTION

Rated Power Output

70 watts per channel minimum RMS, both channel driven at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.08% total harmonic distortion. (FTC)

(Rear)

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

Maximum continuous output power

(IEC) from 63 Hz to 12,500 Hz

0.7% T.H.D. at 8 ohms 75 W + 75 W

(DIN) 1,000 Hz at 8 ohms 75 W + 75 W

Total Harmonic Distortion

(1 kHz, 8 ohms) 0.01% at 70 W

Input Sensitivity/Impedance

PHONO (MM) 2.5 mV/47 kohms

CD, AUX, TAPE, VIDEO 200 mV/47 kohms

Frequency Response

CD 10 Hz ~ 50 kHz +0 dB
-3 dB

Signal-to-Noise Ratio (IHF-A)

PHONO (MM) 78 dB for 5 mV input (IHF-66)

CD, AUX, TAPE, VIDEO 100 dB for 200 mV input

Tone Controls

BASS ± 10 dB at 100 Hz

TREBLE ± 10 dB at 10 kHz

VIDEO SECTION

Inputs/Outputs VIDEO 1 Vp-p, 75 ohms unbalanced

Note :

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

Note:

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

FM TUNER SECTION

Tuning Frequency Range 87.5 MHz ~ 108 MHz

Antenna Impedance 300 ohms balanced &
75 ohms unbalanced

Sensitivity

IHF 10.8 dBf (0.95 μ V)

DIN (MONO) 1.1 μ V

(STEREO) 40 μ V

Signal-to-Noise Ratio at 65 dBf (IHF)

MONO 79 dB

STEREO 73 dB

Total Harmonic Distortion at 1,000 Hz (IHF)

MONO 0.3%

STEREO 0.5%

Total Harmonic Distortion at 1,000 Hz (DIN)

MONO 0.3%

STEREO 0.4%

Frequency Response 30 Hz ~ 15 kHz +0.5 dB
-2 dB

Stereo Separation (IHF) 45 dB at 1 kHz

(DIN) 40 dB at 1 kHz

AM TUNER SECTION

Tuning Frequency Range

530 kHz ~ 1,610 kHz

(with the AM tuning interval set at 10 kHz)

531 kHz ~ 1,602 kHz

(with the AM tuning interval set at 9 kHz)

Usable Sensitivity 12 μ V/(400 μ V/m)

Signal-to-Noise Ratio 50 dB

Total Harmonic Distortion 0.5%

Selectivity 23 dB

GENERAL

Power Consumption 2.8 A....USA and Canada Model/
170 W....Others

Dimensions 440 (W) x 147 (H) x 350 (D) mm
(17-5/16") x (5-13/16") x (13-3/4")

Weight (Net) 9.2 kg (20.2 lb)

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