

AM-FM STEREO RECEIVER

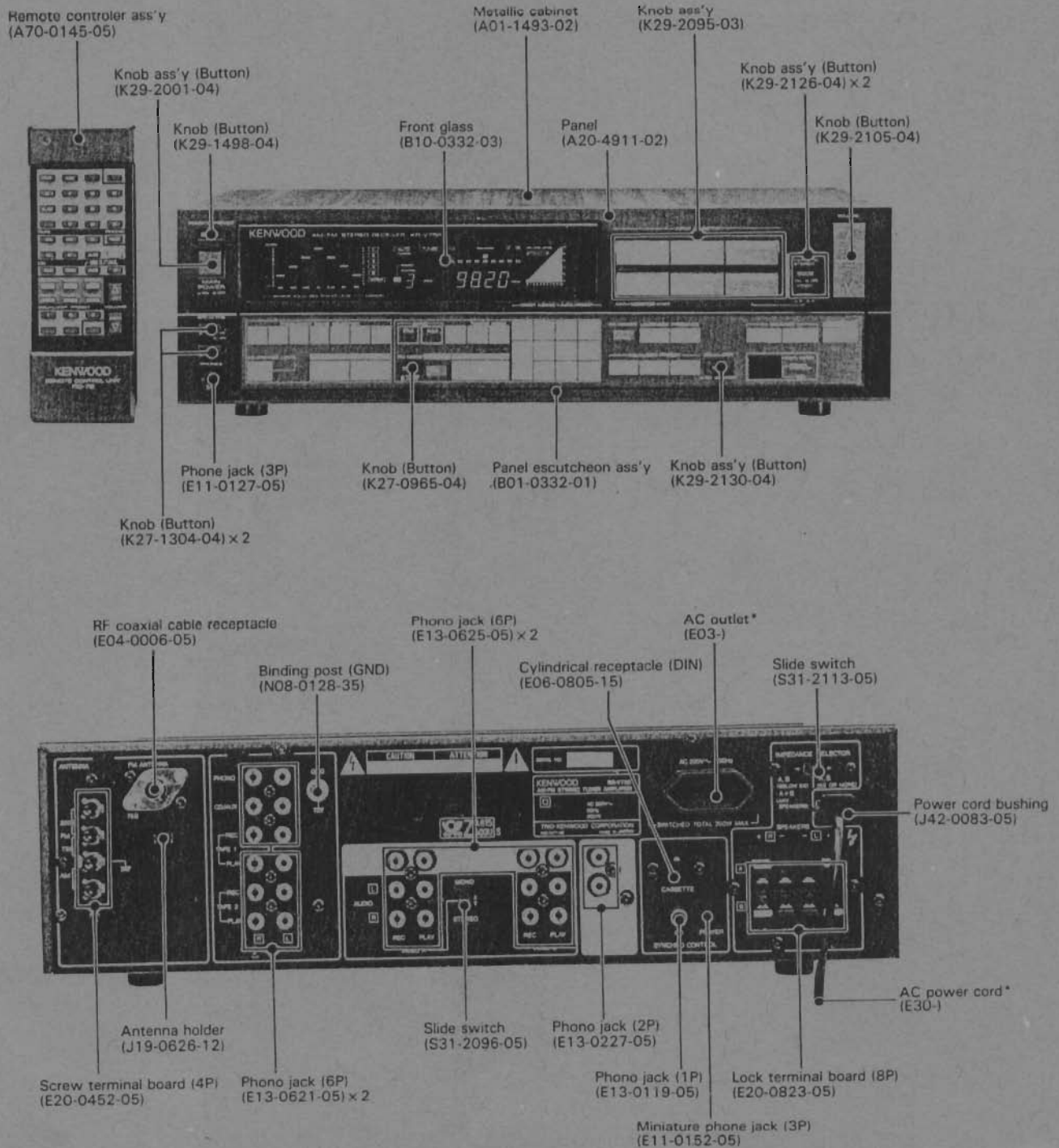
KR-V75R

SERVICE MANUAL

KENWOOD

KENWOOD CORPORATION

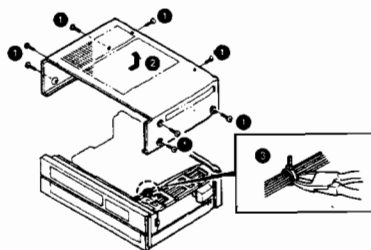
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* Refer to Parts List on page 38.

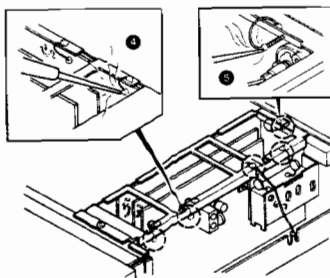
DISASSEMBLY FOR REPAIR

1. Remove 8 screws and remove the metallic cabinet (1), (2).
2. Cut the wire bands.

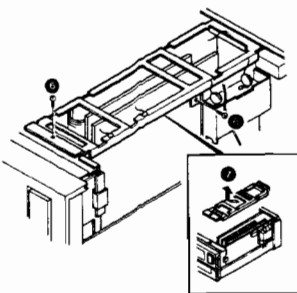


E-type only

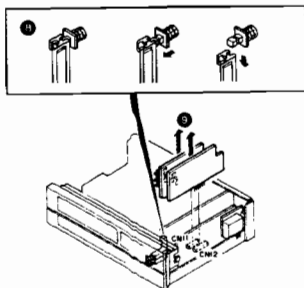
3. Unsolder by pass capacitor lead and ground lead from the frame (4), (5).



4. Remove 2 screws (6).
Slide out the frame as shown by the arrow (7).

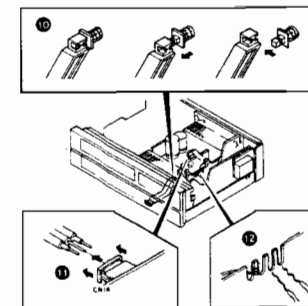


5. Take the knob joints from the SYNTHETIC STEREO, VIDEO switches by following procedures (8).
 - a. Pull out the knob joint frontward till it stops.
 - b. Slide the knob joint downward so that the switch shaft can be relieved from the cut part of the knob joint.
6. Pull out the video control pcb (X14-1790-11) (A/2) and receiver pcb (X14-1780-11) (D/5) (9).



DISASSEMBLY FOR REPAIR

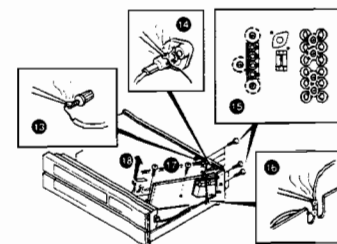
7. Take the knob joints from the EQUALIZER switches by following procedures (10).
 - a. Pull out the knob joint frontward till it stops.
 - b. Slide the knob joint downward so that the switch shaft can be relieved from the cut part of the knob joint.
8. Disconnect the parallel cord from receive pcb (X14-1780-11) (A/5) to power amp pcb (X07-2300-11) (B/6) (11).
9. Unwrap the ground lead from the receiver pcb (X14-1780-11) (A/5) (12).



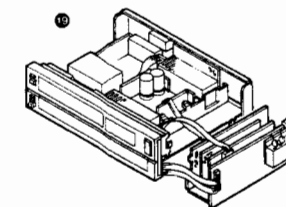
10. Unsolder the ground lead to the GND terminal (13).

E-type only

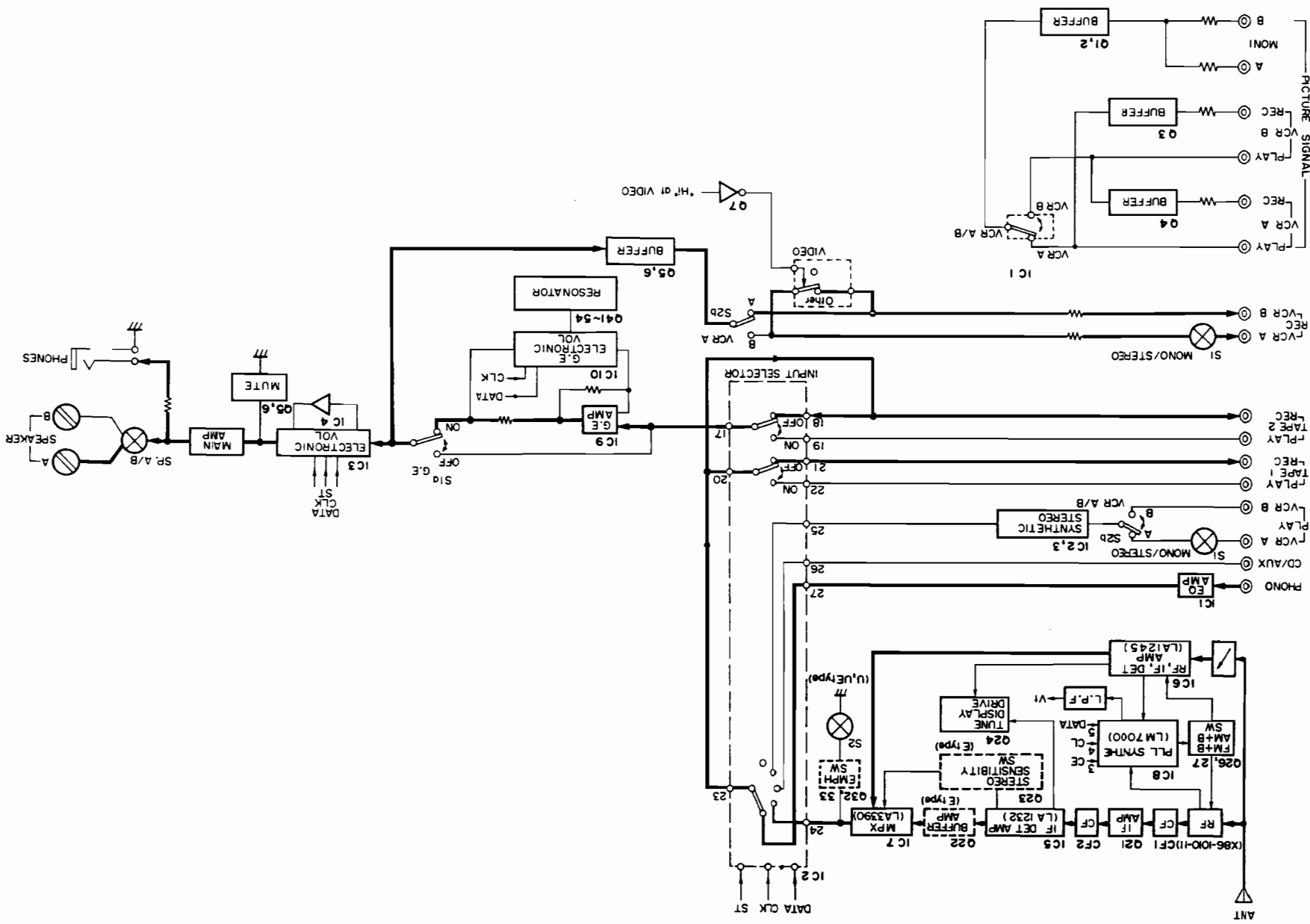
11. Unsolder the ground lead to coaxial connector (14).
12. Remove 7 screws retaining the antenna terminal and phono jacks (15).
13. Unsolder the ground lead from the receiver pcb (X14-1780-11) (C/5) (16).
14. Remove 2 screws retaining the receiver pcb (X14-1780-11) (B/5) (17). This receiver pcb will be called mother pcb hereinafter.
15. Disconnect coaxial cable from coaxial receptacle. Lift the front side of the mother pcb and take it out to the side (18).



16. Plug in the video control pcb (X14-1790-11) (D/5), once taken out in step 6, back to the mother pcb.
17. The KR-V75R can be checked at this condition by grounding the ground leads which were taken off from the chassis.
18. The parallel cords disconnected in step 8 is a signal line to the power amp pcb (19).



BLOCK DIAGRAM



KR-V75R

CIRCUIT DESCRIPTION

Power amplifier unit (X07-2300-11)

Components	Functions	Operations
IC1	Speaker protection/Relay driver	
IC2	Remote control sig. receiver	
Q1 ~ Q4	Power amplifier (1st diff. AMP)	
Q5 ~ Q8	Power amplifier (2nd diff. AMP)	
Q9 ~ Q12	Power amplifier (3rd diff. AMP)	
Q13, 14	Clamper	
Q15, 16	Constant current load	
Q17 ~ Q20	Power amplifier (Bias)	
Q21 ~ Q24	Power amplifier (Driver stage)	
Q25 ~ Q28	Power amplifier (Final stage)	
Q29, 30	Power limiter detection	
Q31, 32	Overload detection	
Q33	Power limiter	
Q34 ~ Q36	+ 14 V AVR	
Q37 ~ Q40	+ 5 V AVR	Q39 detects POWER_DOWN
Q41 ~ Q44	- 14 V AVR	
Q45 ~ Q46	- 20 V AVR	
Q47	- 30 V AVR	
Q48, 49	+ 5 V AVR for remote control function	
Q50 ~ Q52	Power supply relay (K2) driver	

Display unit (X14-1770-11)

Components	Functions	Operations
IC1	Micro processor	
IC2	Graphic equalizer display	BPF outputs conv. for dynamic display
IC3, 4	BCD to decade decoder	Extends signal output line
Q1	Fip driver (tuned)	
Q2	Fip driver (stereo)	
Q3	Fip driver (defeat)	
Q4	MUT 2 sig.	Outputs for muting when VOL is mini.
Q5 ~ Q9	Fip driver	
Q10 ~ Q15	STROBE/DATA/CLK control	

VIDEO control unit (X14-1790-11)

Components	Functions	Operations
IC1	Picture sig. selecting	
IC2, 3	Synthetic stereo	Buffer amplifier/3 BPF
IC4	REC sig. (Audio) selecting	
Q1 ~ Q4	Buffer amplifier (Picture sig.)	
Q5, 6	Buffer amplifier (Audio sig.)	
Q7	Inverter	

CIRCUIT DESCRIPTION

Receiver unit (X14-1780-11)

Components	Functions	Operations																
IC1	EQ amplifier																	
IC2	Input selecting	Phono/CD/VCR/TUNER																
IC3	Electronic volume																	
IC4	Buffer amplifier																	
IC5	FM IF/DET																	
IC6	AM RF/MIX/IF/DET																	
IC7	FM MPX																	
IC8	PLL synthesizer																	
IC9	Buffer amplifier (Graphic equalizer)																	
IC10	Electronic volume for Graphic equalizer																	
IC11 (1/2)	Mixing amplifier																	
(2/2)	B.P.F																	
IC12-IC14	B.P.F																	
Q5-Q7	Muting (Audio sig.)																	
Q21	FM 1st IF																	
Q22	Buffer amplifier																	
Q23	Stereo sensitivity SW																	
Q24	Tuning display drive																	
Q26, 27	+ B AM/FM switching	<table border="1"> <tr> <td colspan="2">Tr</td> <td>Q26</td> <td>Q27</td> </tr> <tr> <td>MODE</td> <td></td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>AM</td> <td></td> <td>OFF</td> <td>ON</td> </tr> <tr> <td>FM</td> <td></td> <td>ON</td> <td>OFF</td> </tr> </table>	Tr		Q26	Q27	MODE		OFF	ON	AM		OFF	ON	FM		ON	OFF
Tr		Q26	Q27															
MODE		OFF	ON															
AM		OFF	ON															
FM		ON	OFF															
Q28, 29	LPF (PLL synthesizer)																	
Q30	Ripple filter																	
Q31	+ 5 Volt AVR																	
Q32, 33	Emphasis selecting																	
Q41	Simulated inductor																	
Q55, 56	Clamper	Generats reference voltage.																

CIRCUIT DESCRIPTION

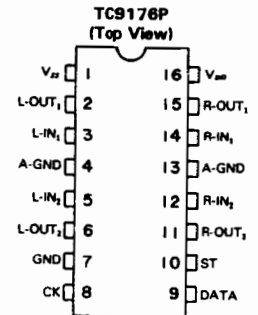
Electronic volume: IC3 (TC9176P)

The TC9176P is an electronic volume specially developed for audio equipment.

The volume and balance can be controlled by inputting external serial data.

- Volume control possible in 40 steps; 0 dB to -76 dB in 2 dB steps plus -∞.
- Built-in L and R channel volumes can be controlled independently, making possible the balance control function.

Pin configuration



Functions of terminals (TC9176P)

No.	Symbol	Functions	Remarks
2 15	L-OUT1 R-OUT1	10 dB step attenuator output. Signals applied to IN are attenuated into 8 steps; from 0 to -70 dB in 10 dB steps.	(L/R) 2/15
3 14	L-IN1 R-IN1	10 dB step attenuator input	3/14
4 13	A-GND	AC ground terminals	4/13
5 12	L-IN2 R-IN2	2 dB attenuator input	5/12
6 11	L-OUT2 R-OUT2	2 dB attenuator output Signals applied to IN are attenuated in 5 steps; from 0 to 8 dB in 2 dB steps	6/11
9	DATA	Attenuation/channel selection data input. The 20 bit data is input with the CK signal	Low threshold input inverter
8	CK	Clock input Clock input is used to fetch the data input from the DATA terminal.	- do -
10	ST	Strobe input The attenuation/channel selection data input from the DATA and CK terminals are latched when the level of this terminal becomes "H". Old data is not changed when "H" level is not applied to this terminal.	- do -
16 7 1	V _{cc} GND V _{ss}	(+) power supply terminal Ground terminal (-) power supply terminal	

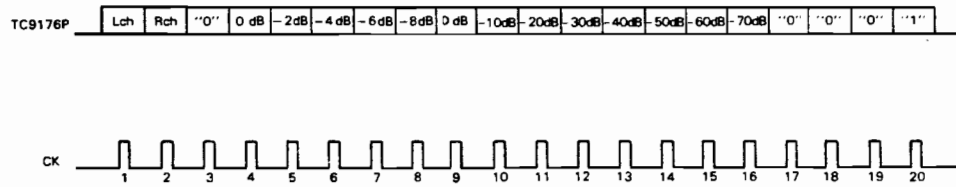
CIRCUIT DESCRIPTION

Operation description

Setting the amount of attenuation

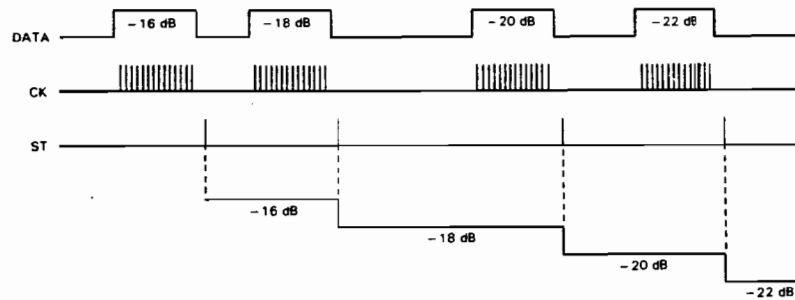
Desired attenuation data can be input to the TC9176P via the DATA, CK and ST terminals. This data consists of 20 bits.

(As the TC9176P is not provided with loudness control, the level of the 3rd bit is always "L".)



For example, when a data (11001000001000000001) is input, the amount of attenuation is -22 dB. Data bits 1 and 2 are used to select the L and R channels. With the TC9176P, the 3rd bit is always "0". Bits 4 to 8 sets the 2 dB step attenuator and bits 9 to 16 sets the 10 dB step attenuator.

Bits 17 to 20 are chip select bits. With the TC9176P, selection is performed by (0001) and it is not operative with bits other than (0001). -∞ attenuation refers to the data for -78 dB. Consequently, one step above -∞ is -76 dB. All changes to newly input data are synchronized with the rises of ST signal.

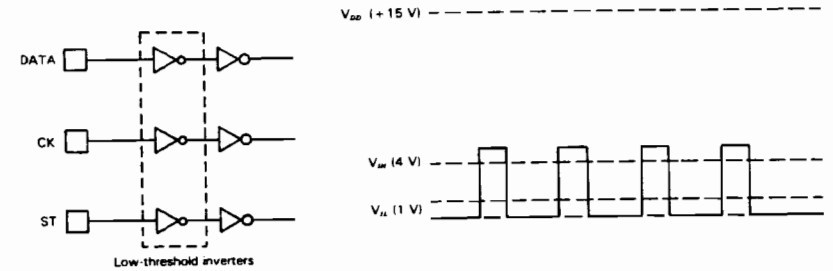


CIRCUIT DESCRIPTION

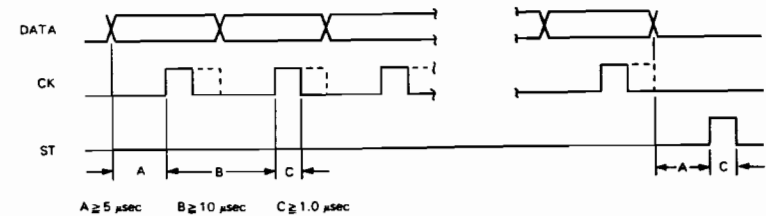
DATA, CK and ST inputs

Although the TC9176P usually operates on two power supplies (+) and (-), the DATA, CK and ST inputs are operated only with the (+) power supply because it incorporates a level shifter.

The input inverters for these three input terminals have low input threshold voltages and operate on the 5 V logic level.



DATA, CK and ST are input at timings shown below.



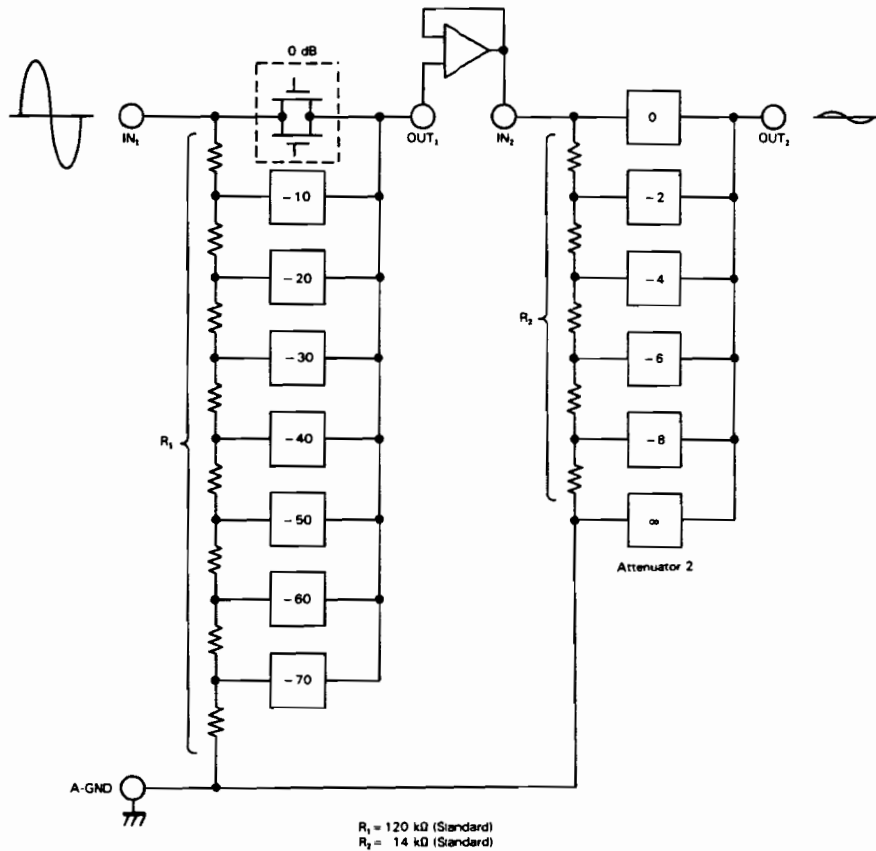
CIRCUIT DESCRIPTION

Attenuators

The attenuator section consists of diffused resistor arrays and analog switches. Attenuator 1 allows attenuation from 0 to 70 dB in 10 dB

steps and Attenuator 2 attenuation from 0 to 8 dB in 2 dB steps. Together, a total attenuation from 0 to 76 dB is possible in 2 dB steps.

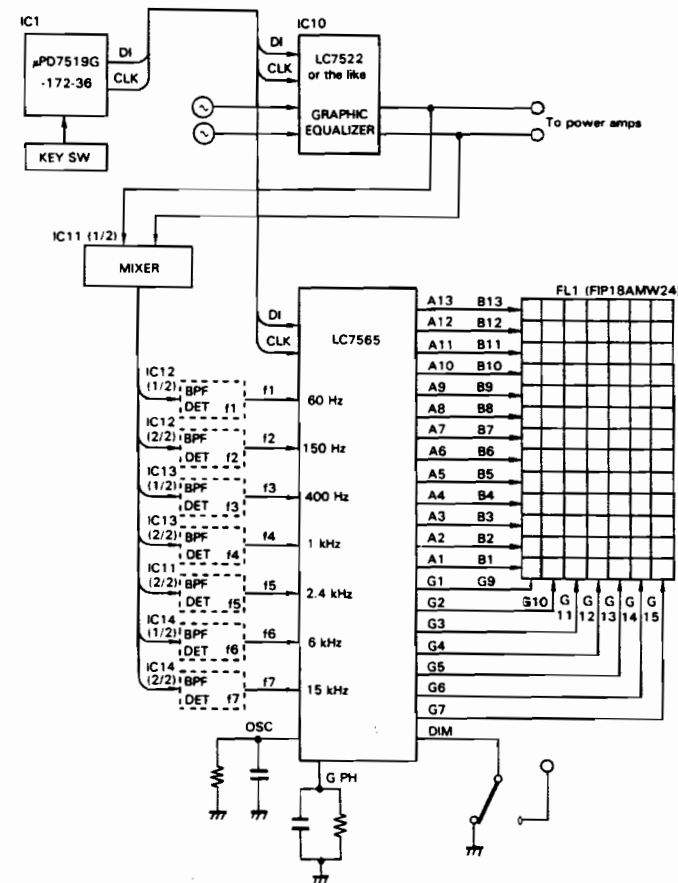
Data Codes



CIRCUIT DESCRIPTION

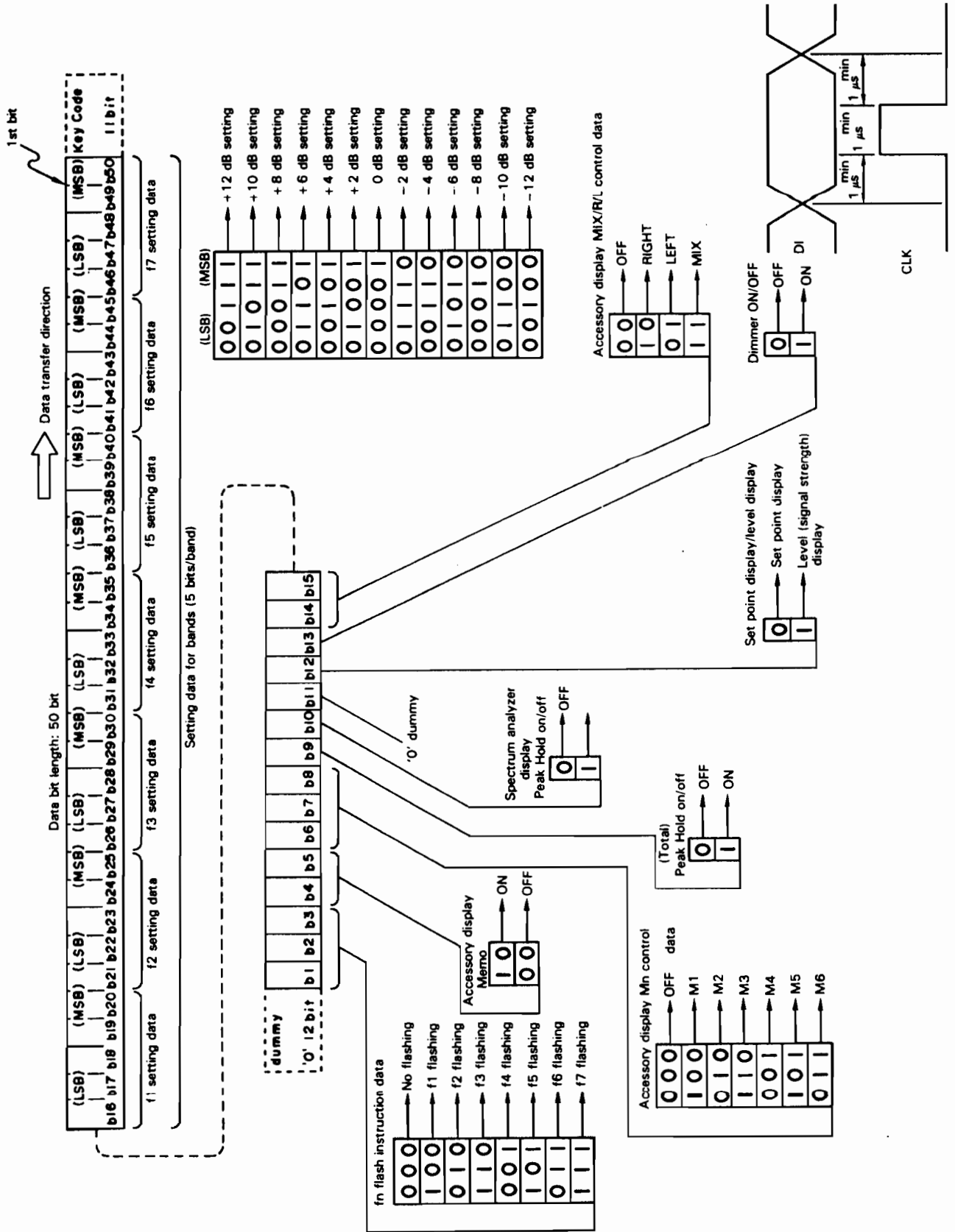
FLT Driver: IC 2 (LC7565)

Fluorescent display tube driver for display of graphic equalizer LC7522



CIRCUIT DESCRIPTION

Data codes



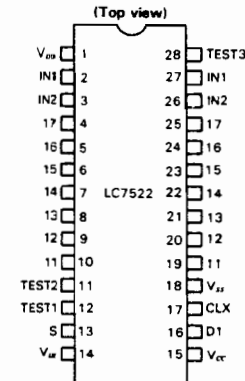
CIRCUIT DESCRIPTION

Description of terminals

Name	Pin No.	Type	Description																																																																		
V _{cc}	42		• Power supply terminal, +5 V type																																																																		
V _{ss}	19		• Power supply terminal, GND																																																																		
DI	17		• CPU data input terminal • Schmitt inverter type																																																																		
CLK	18		• CPU CLK signal input terminal • Schmitt inverter type																																																																		
S1	15		<ul style="list-style-type: none"> Selection terminal when more than one chip (max. 4 chips) are used. <table border="1"> <thead> <tr> <th>S2</th> <th>S1</th> <th colspan="10">Key code</th> <th>Last bit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1</td> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td><td>1</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>1</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td> </tr> </tbody> </table>	S2	S1	Key code										Last bit	1	1	1	1	1	1	1	1	0	0	1	0	1	1	1	0	1	1	1	1	1	0	0	1	0	1	0	0	1	1	1	1	1	1	0	0	1	0	0	1	0	0	1	1	1	1	1	0	0	1	0	0	0
S2	S1			Key code										Last bit																																																							
1	1	1	1	1	1	1	1	0	0	1	0	1	1																																																								
1	0	1	1	1	1	1	0	0	1	0	1	0																																																									
0	1	1	1	1	1	1	0	0	1	0	0	1																																																									
0	0	1	1	1	1	1	0	0	1	0	0	0																																																									
S2	16	Table S1=S2="0"																																																																			
G.PH	21		• Connection terminal for C and R which determine the peak hold reset time of graphic equalizer's spectrum analyzer display																																																																		
T.PH	22		• Connection terminal for C and R which determine the peak hold reset time of total display (Not connected)																																																																		
DIM	32		• Terminal for direct drive of IC (when it is not controlled by the CPU) and for dimmer control • Dimmer ON by "1", OFF by "0"																																																																		
I1 - I7, T	31 - 25, 24		• Input terminal for audio signal rectifier voltage																																																																		
OSC	20		• Open-drain type output buffer • Connection terminal for external C and R for the oscillator																																																																		
A1 - A13	2 - 14		<ul style="list-style-type: none"> Open-drain driver Anode drive 																																																																		
G1 - G9	41 - 33			<ul style="list-style-type: none"> Open-drain driver Grid drive 																																																																	


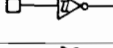
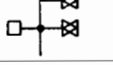
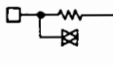
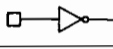
Graphic equalizer; IC10 (LC7522)

Pin configuration

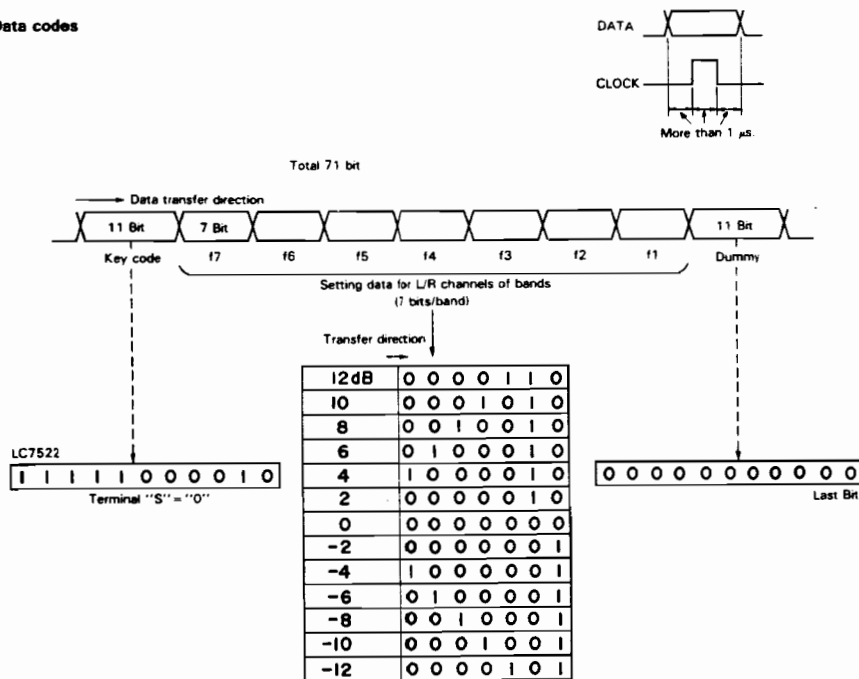


CIRCUIT DESCRIPTION

Description of terminals

Name	Type	Description
V _{DD}		Power supply terminal +7 V (typ.) audio signal power supply
V _{SS} , V _{SS}		Power supply terminal 0 V
V _{CC}		Power supply terminal +5 V (typ.)
DI		<ul style="list-style-type: none"> CPU data input terminal Schmitt inverter type
CLK		<ul style="list-style-type: none"> CPU clock signal input terminal Schmitt inverter type
IN1 IN2		<ul style="list-style-type: none"> Audio signal input terminals IN1 is normally connected with the inverted input of the op-amp IN2 normally connected with the non-inverted input of the op-amp Separately provided for L and R
f1 - f7		<ul style="list-style-type: none"> BPF connection terminals f1 to f7 x L/R = Total 14 terminals
S		<ul style="list-style-type: none"> Selection terminal for two-chip operation Key code 7C2 with input "0" - Connected to V_{SS}
TEST1 TEST2 TEST3		<ul style="list-style-type: none"> Terminals for IC internal testing Set to GND

Data codes



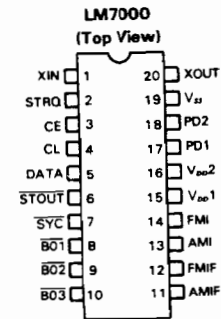
CIRCUIT DESCRIPTION

PLL Frequency synthesizer for electronic tuning; IC8 (LM7000)

Pin configuration

Features

- High-speed program divider with possibility of direct dividing of FM band VCO.
- 7 reference frequencies: 100, 50, 25, 10, 9, 5 and 1 kHz
- Band switching output (3-bit)
- Clock output for controller (400 kHz)
- Timebase output for clock (8 Hz)
- Serial data input (via CE, CL and DATA terminals)
- IF counter circuit built in
 - FM : ±10 kHz
 - MW/SW : ±3 kHz
 - LW : ±0.6 kHz

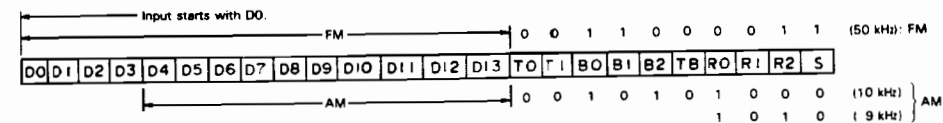
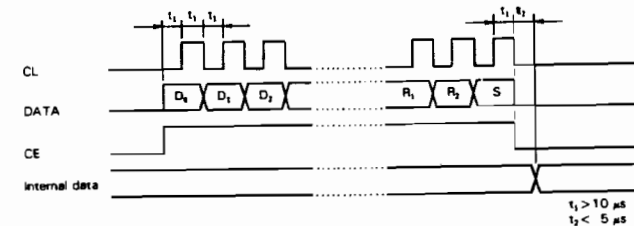


Description of terminals

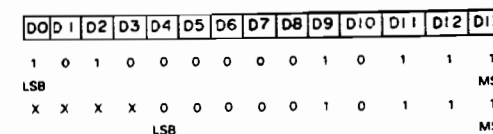
- SYC : Clock for controller (400 kHz)
- XIN, XOUT : X'tal OSC (7.2 MHz)
Feedback resistor attached externally
- FMI, AMI : Local oscillator signal inputs
- CE, CL, DATA : Data inputs
- B01, B02, B03 : Band data outputs
B01 can be assigned for timebase output (8 Hz)

- STRQ : IF counting request input
- STOUT : Auto-search stop signal output
- V_{DD1}, V_{DD2}, V_{SS} : Power supplies (V_{DD2} is the backup power supply.)
- AMIF, FMIF : IF signal inputs
- PD1, PD2 : Charge pump outputs

Data inputs



- D0 (LSB) - D13 (MSB): Dividing number data
FMI: D0/D13
AMI: D4/D13



Number of FMI dividing = 14853

Number of AMI dividing = 928

CIRCUIT DESCRIPTION

2) T0, T1: For testing (0,0) of LSI.

3) B0 to B2, TB: Band data.
Timebase data

Input				Output		
B0	B1	B2	TB	B01	B02	B03
0	0	0	0	*	*	*
0	0	1	0	0	0	1
0	1	0	0	0	1	0
0	1	1	0	0	1	1
1	0	0	0	1	0	0
1	0	1	0	1	0	1
1	1	0	0	1	1	0
1	1	1	0	1	1	1
0	0	0	1	TB	*	*
X	1	0	1	TB	1	0
X	0	1	1	TB	0	1
X	1	1	1	TB	1	1

— AM (9 kHz)
— FM (50 kHz)

* : Determined by R0 to R2.
X : Either
TB : 8 Hz

4) R0 to R2: Reference frequency data

R0	R1	R2	fref	B01	B02	B03	IF counting
0	0	0	100 kHz	1	1	0	10.7 MHz ± 10 kHz
0	0	1	50 kHz	1	1	0	
0	1	0	25 kHz	1	1	0	
0	1	1	5 kHz	0	0	1	450 kHz ± 3 kHz
1	0	0	10 kHz	1	0	1	
1	0	1	9 kHz	1	0	1	
1	1	0	1 kHz	0	1	1	450 kHz ± 0.6 kHz
1	1	1	5 kHz	0	0	1	450 kHz ± 3 kHz

Note: When B0 to B2 = 0

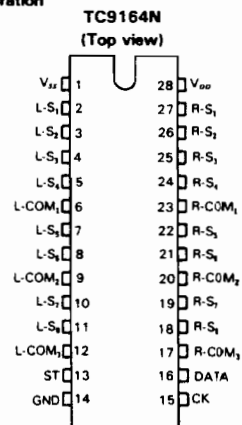
S1 S: Dividing select data
1: FM
0: AM

High-voltage resistant analog function switch array: IC2 (TC9164N)

The TC9164N is an analog switch array resistant to high voltages. Control of analog switches is possible by inputting specified serial data.

Analog switches can be controlled independently so the switch array can cover a wide range of operations according to its external connection.

Pin configuration



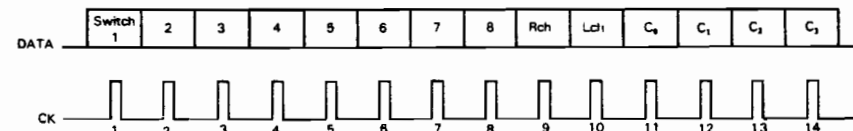
CIRCUIT DESCRIPTION

Operation description

Data input

Analog switches of the TC9164N can be controlled as desired by inputting specified data to the DATA, CK and ST terminals.

The data is composed of 14 bits and the composition is as shown below.



Bits 1 to 8 correspond to analog switches 1 to 8: Set the bits of the switches to turn ON to level "1". Bits 9 and 10 are the L/R channel selector bits: As channels can be selected by setting these bits to level "1", channels can be selected simultaneously ("11", "11") or independently ("11", "00" or "00", "11").

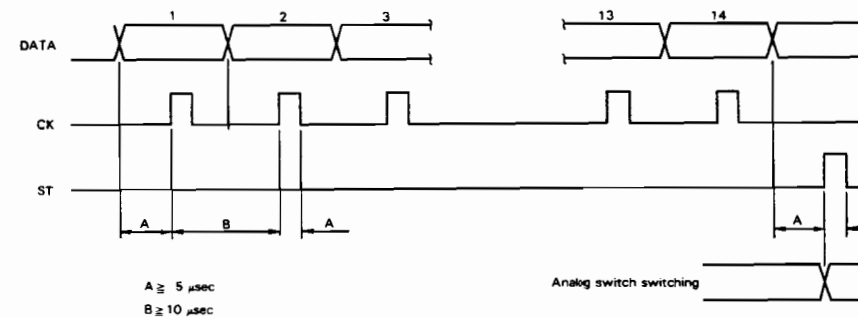
Bits 11 to 14 are code bits used for selecting chips.

Codes are specified as shown below.

	C9	C1	C2	C3
TC9164N	0	1	0	0

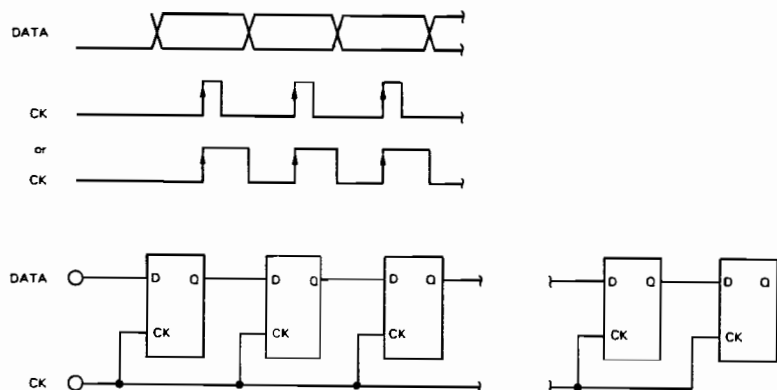
Timings of DATA, CK and ST

The DATA, CK and ST timings are input to the conditions shown below.



CIRCUIT DESCRIPTION

The DATA inputs are input in sequence to the internal shift register at the rises of the CK inputs.



The final ST signal is used to transfer the input data from the shift register to latch circuit, and data is updated from old data to new data.

CIRCUIT DESCRIPTION

Key matrix distribution

The key matrix uses the outputs obtained from the microprocessor's port outputs using 4 to 10 decoders (Q₀

-Q₉) and the microprocessor's output ports for the strobe signals, and four return signal ports are used to make the matrix.

OUTPUT INPUT	P10 (20)	P11 (21)	P12 (22)	P13 (23)
Q ₀	0	4	8	FM
Q ₁	1	5	9	AM
Q ₂	2	6	DOWN	MEMORY
Q ₃	3	7	UP	AUTO/MANUAL
Q ₄	GE MEMORY	GE I4	**	GE A
Q ₅	GE I1	GE I5	GE 1	GE B
Q ₆	GE I2	GE I6	GE 2	GE DOWN
Q ₇	GE I3	GE I7	GE 3	GE UP
Q ₈	POWER	TAPE1	VOL DOWN	DIRECT
Q ₉	PHONO	TAPE2	VOL UP	PRESET SCAN
P30 (59)	TUNER	VIDEO	BAL R	PRESET FUNCTION A/B
P31 (60)	AUX/CD	MUTE	BAL L	
P32 (61)	*REMOTE CONTROL or NOT	*[J] DESTINATION	*BAND 0	*BAND 1

- Numbers inside () are the pin Nos. of the microprocessor.
- Switches are momentary switches except those marked.
 - * which are diode switches.
- KEY input levels are Active High.
- • • EQ/ANALYZER ON/OFF SW: (KR-V125R and KR-V95R).
- • EQ/POWER LEVEL ON/OFF SW: (Except KR-V75R)

Description of key matrix

Functions of initial setting diode matrix

The initial setting diode matrix includes the following four types of data, which are read at the time of reset.

- (1) Remote controlled or not
 - 0: Not remote controlled. Resetting always leads to the power ON status.
 - 1: Remote control function used. Resetting leads to the previous power status. The initial condition is the power OFF status.

- (2) [J] destination
 - 0: Destination is other than [J] so switches BAND0 and BAND1 are effective.
 - 1: Destination is set for [J] so switches BAND0 and BAND1 are ineffective.
- (3) BAND0, BAND1
 - Effective for models with destinations other than for [J], so that the FM and AM channel spaces can be set

The reception conditions of different models with different destinations are shown below.

Band	Destination J	Band 0	Band 1	Reception Frequency Range	Channel Space	Reference Frequency	Intermediate Frequency
FM	0	0	—	87.5 ~ 108.0 MHz	100 kHz	50 kHz	10.7 kHz
	0	1	—	87.5 ~ 108.0 MHz	50 kHz	50 kHz	10.7 MHz
	1	—	—	76.0 ~ 90.0 MHz	100 kHz	50 kHz	~ 10.7 MHz
AM	0	—	0	530 ~ 1610 kHz	10 kHz	10 kHz	450 kHz
	0	—	1	531 ~ 1602 kHz	9 kHz	9 kHz	450 kHz
	1	—	—	531 ~ 1602 kHz	9 kHz	9 kHz	450 kHz

CIRCUIT DESCRIPTION

• Functions of momentary switches

Symbols	Functions
POWER	<p>Receiver system power supply ON/OFF key. Power ON/OFF is inverted each time this key is pressed and the POWER terminal (pin 13) is turned ON/OFF. At initial power switching (when the main power switch is set to ON after connecting the power plug), operation starts with the Power OFF status (KR-V125R/V95R/V75R).</p> <p>The initial Power ON status condition is as follows.</p> <ul style="list-style-type: none"> • Input selector: TUNER • Tuner condition: FM lowest value, MANUAL Tuning, all preset memories at the FM lowest value • Volume: -56 dB • Balance: Center • Graphic equalizer memories: All flat = ± 0 dB <p>In the Power ON status, all keys (including remote control) are acceptable. In the power OFF status, only the POWER key is acceptable and other keys are not acceptable. After this, last statuses (statuses previous to switching power OFF) are recalled by the Power ON statuses. When the Input Selector was set to PHONO before switching power OFF, it becomes PHONO when power is next switched ON. When the volume was -40 dB, it also becomes -40 dB.</p>
PHONO TUNER AUX/CD TAPE 1 VIDEO	<p>Input selector keys. Pressing one of these keys switches the position and the input selector character display as shown below is displayed, except that frequency is displayed when TUNER is selected.</p> <p>The input selector key is invalid when the key the same as the current position is pressed. Muting signal (MUTE 1) is output during switching when the key operation is valid.</p> <p>TAPE 1 is treated as one of sources. The TAPE 1 REC switch is OFF in the TAPE 1 position and ON in other positions.</p> <pre> P H O N O T U N E R A U X / C D T A P E 1 V I D E O </pre>
TAPE 2	<p>TAPE 2 is initially set to MONITOR. Switching between SOURCE/MONITOR is possible using this key. Muting signal (MUTE 2) is output during switching. The TAPE 2's PLAY switch is OFF and REC switch is ON in SOURCE mode. The PLAY switch is ON and REC switch is OFF in MONITOR mode.</p> <p>The Input selector uses an analog function switch array IC TC9164N, the switch location of which is as shown below. (Refer to page 17)</p>
VOL UP VOL DOWN	<p>These are the audio volume UP/DOWN keys. The volume control is performed by electronic volume IC TC9176P, which is controlled by the microprocessor. The volume is variable in 40 2-dB steps by pressing the VOL UP or VOL DOWN key (-∞, -76 to -0 dB).</p> <p>When power is switched ON, -56 dB is output as the initial value. The attenuation is increased or decreased by each press of the VOL UP or VOL DOWN key.</p> <p>When a key is held pressed for more than approx. 0.5 sec, the amount of attenuation is varied until the key is released at a speed of approx. 120 ms/step. However, the attenuation does not vary when the VOL MAX value (-0 dB) is reached in UP operation or when the VOL MIN value (-∞ dB) is reached in DOWN operation.</p> <p>The value of attenuation is displayed digitally during the VOL UP/DOWN key operations.</p> <p style="text-align: center;">- 3 3 3 8</p> <p>However, during direct input, auto-scanning and preset scanning, the frequency display is given priority and the value of attenuation is not displayed. The volume is also displayed permanently by the 11-point bar graph displays.</p>
MUTE	<p>The audio volume can be temporarily reduced by -20 dB from the current position by pressing this key. Setting and release of MUTING (-20 dB) is performed with this key and release is not possible even by switching power ON/OFF, etc. MUTING (-20 dB) is performed by electronic volume IC TC9176P which varies the output data. The MUTING (-20 dB) display blinks during this mode.</p>
BAL R BAL L	<p>These are the balance control keys. Each of the L and R keys internally has a 4-bit, 10-step counter, which counts up/down when the key is pressed. The electronic volume data is elaborated using the counter value and output to control electronic volume IC TC9176P. 21 balance positions are provided.</p> <p>Each press of the BAL R/L key shifts the balance position by one step. When a key is held pressed for approx. more than 0.5 sec, the positions are scanned at a speed of approx. 300 ms/step until it stops when the R or L end position is reached.</p>
GE UP GE DOWN	<p>These keys are used to set the boost, cut, etc. of the graphic equalizer. These keys are valid only when the graphic equalizer display is flashing after GE keys f1 (60 Hz) to f7 (15 kHz) have been operated. The graphic equalizer level can be varied in 13 2 dB steps between MAX +12 dB and MIN -12 dB. This operation is performed using graphic equalizer/spectrum analyzer display IC LC7565 and graphic equalizer IC LC7522.</p> <p>Each press of a key varies the level of the graphic equalizer for the specified frequency band by 1 step. When the key is held pressed for approx. more than 0.5 sec, the level is varied UP or DOWN at a speed of 120 ms/step.</p>

CIRCUIT DESCRIPTION

Symbols	Functions																								
GE f1 (60 Hz) GE f2 (150 Hz) GE f3 (400 Hz) GE f4 (1 kHz) GE f5 (2.4 kHz) GE f6 (6 kHz) GE f7 (15 kHz)	<p>These keys are used to select the frequency bands of the graphic equalizer when setting its levels. When any of these keys is pressed, the display changes to the graphic equalizer display even during spectrum analyzer display, with the graphic equalizer display corresponding to the frequency band selected flashing to indicate that the graphic equalizer can be operated. If the GE UP or DOWN key is not pressed for approx. 5 seconds, flashing stops and the display is changed to the ordinary graphic equalizer display.</p>																								
GE MEMORY	<p>This key is used to write the graphic equalizer condition in the graphic equalizer memory. When this key is pressed, "MEMORY" lights, "◀" on the side of the GE 1 to 3 displays flashes, and graphic equalizer memory storage becomes possible.</p> <p>This condition lasts for approx. 5 sec and the current graphic equalizer condition can be stored in the specified memory by pressing one of GE 1 to 3 keys during this period. This key is valid only during graphic equalizer display mode.</p>																								
GE 1 GE 2 GE 3	<p>These graphic equalizer preset keys correspond to the three programmable graphic equalizer memories and are used for write and read operations of graphic equalizer memories.</p> <ul style="list-style-type: none"> • For programming, press the GE MEMORY key, then press one of the GE 1 to 3 keys within approx. 5 sec (while "MEMORY" is lit and "◀" is flashing). The current graphic equalizer condition is written in the graphic equalizer memory corresponding to the key selected. • For recalling, press one of the GE 1 to 3 keys. The corresponding graphic equalizer condition will be recalled. In either cases, if normal display mode is set for the spectrum analyzer display, graphic equalizer display lasts for approx. 5 sec, after which the spectrum analyzer display resumes. 																								
GE A GE B	<p>Used to recall the graphic equalizer's preset memories. Pressing one of these keys recalls the corresponding graphic equalizer condition.</p> <p>The condition of the preset memories is as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Frequency band Preset memory</th> <th>f1</th> <th>f2</th> <th>f3</th> <th>f4</th> <th>f5</th> <th>f6</th> <th>f7</th> </tr> </thead> <tbody> <tr> <td>GE A (Loudness)</td> <td>+4dB</td> <td>+2dB</td> <td>± 0dB</td> <td>-2dB</td> <td>-2dB</td> <td>± 0dB</td> <td>+2dB</td> </tr> <tr> <td>GE B (Presence)</td> <td>+2dB</td> <td>± 0dB</td> <td>-2dB</td> <td>+2dB</td> <td>+4dB</td> <td>± 0dB</td> <td>-2dB</td> </tr> </tbody> </table>	Frequency band Preset memory	f1	f2	f3	f4	f5	f6	f7	GE A (Loudness)	+4dB	+2dB	± 0 dB	-2dB	-2dB	± 0 dB	+2dB	GE B (Presence)	+2dB	± 0 dB	-2dB	+2dB	+4dB	± 0 dB	-2dB
Frequency band Preset memory	f1	f2	f3	f4	f5	f6	f7																		
GE A (Loudness)	+4dB	+2dB	± 0 dB	-2dB	-2dB	± 0 dB	+2dB																		
GE B (Presence)	+2dB	± 0 dB	-2dB	+2dB	+4dB	± 0 dB	-2dB																		
Spectrum analyzer ON/OFF (EQ/ANALYZER) (KR-V125R V95R)	<p>This key switches between the spectrum analyzer and graphic equalizer display modes. When the key is pressed, the spectrum analyzer display is changed to graphic equalizer display and graphic equalizer display is changed to spectrum analyzer display. The graphic equalizer operation ready status is released and changed to the spectrum display by this key. When the graphic equalizer display has been displayed by recalling a graphic equalizer memory, the condition before the recall is displayed; the graphic display is not changed when the previous condition was graphic display and is changed to spectrum analyzer display when the previous condition was spectrum analyzer display.</p>																								
EQ/POWER LEVEL (KR-V75R)	<p>This key switches between the graphic equalizer and power level display modes.</p> <p>When this key is pressed, the graphic equalizer display is changed to power level display and power level display is changed to graphic equalizer display. The graphic equalizer operation ready status is released and changed to the power level display by this key. When the graphic equalizer has been displayed by recalling a graphic equalizer memory, the condition before the recall is displayed; the graphic equalizer display is not changed when the previous condition was graphic equalizer display and is changed to power level display when the previous condition was power level display.</p>																								
0, 1, 2, 3, 4, 5, 6, 7, 8, 9	<p>Digit keys, preset channel memory programming keys and recall keys.</p> <ol style="list-style-type: none"> (1) Operation as digit keys. Input the frequency using these keys in the direct frequency input operation. (2) Operation as preset channel memory keys. Each of these keys corresponds to two preset channel memories. The two memories are distributed by the A and B preset functions. <ul style="list-style-type: none"> • Programming. Within approx. 5 sec of pressing the MEMORY key, select A or B using the Preset Function key, then press one of keys 0 to 9. The frequency being tuned in is programmed in the memory corresponding to the key pressed. • Recalling. By combination of keys 0 to 9 and the Preset Function key, a preset memory corresponding to the selected keys is recalled. 																								

CIRCUIT DESCRIPTION

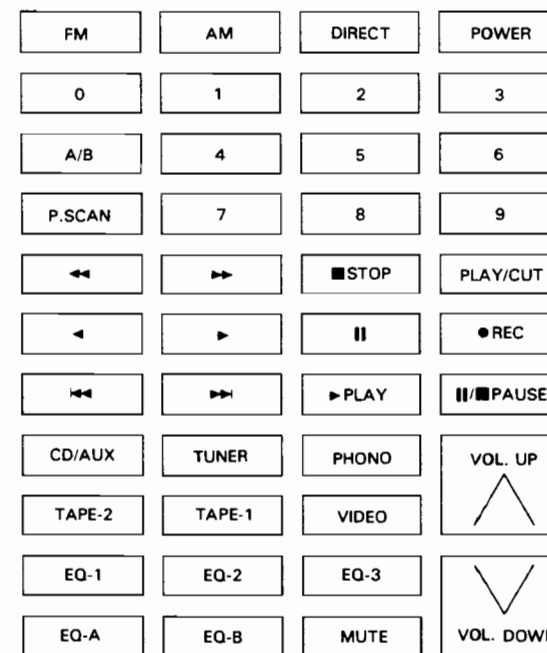
Symbols	Functions
UP DOWN	When these auto/manual tuning keys are pressed, the following operations are performed. These keys are valid only with the TUNER position of the Input Selector. (1) When the AUTO/MANUAL switch (Tuning mode) is set to AUTO, pressing the UP key scans the frequency upward in sawtooth wave mode and pressing the DOWN key scans it downward. When the input level at the SD terminal (pin 10) becomes Low at this time, frequency scanning is stopped and auto-tuning is stopped. (2) When the AUTO/MANUAL switch is set to MANUAL, pressing the UP or DOWN key changes the tuning frequency by one step (channel space) up or down. When a key is held depressed for more than approx. 0.5 sec, the frequency is scanned up/down at a speed of 125 ms/step until the key is released. At band edges, tuning is interrupted for approx. 0.5 sec.
FM AM	FM/AM band switching keys. When one of the keys is pressed, the reception band is switched to the corresponding band, at the last frequency, which is the frequency the unit was tuned in the last time the band was selected. This key is valid only in the TUNER position and is invalid when the key the same as the present band is pressed.
MEMORY	Used to program a new frequency in the preset channel memory. Within 5 sec of pressing this key, select A or B of the Preset Function key, then press one of the 10 digit keys so that the frequency being tuned in is programmed in the preset channel memory corresponding to the keys pressed. However, this key is valid only in the TUNER position.
AUTO/MANUAL	Tuning mode switching keys. The modes are alternated each time this key is pressed. When this key is pressed during auto-tuning, autotuning stops and the unit enters manual tuning mode. This key is valid only in the TUNER position.
PRESET FUNCTION A/B	Preset mode A/B switching key. Used in combination with 10 digit keys to program or recall a preset channel memory. This key is valid only in the TUNER position.
DIRECT	Direct frequency input mode selection key. To tune into a frequency by inputting its value with the 10 digit keys, first press this key, then input the frequency data using the 10 digit keys. This mode is released when no key has been operated for approx. 5 sec. This key is valid only in the TUNER position.
PRESET SCAN	Preset scanning operation key. Pressing this key scans preset channel memory to the next memory when a preset channel has presently been received, and starts preset channel memory scanning from Channel A-0 when a preset channel is not being received presently. Channel A-9 is followed by B-0 and, after B-1, B-2, ..., B-8, B-9 is followed by A-0. This key is valid only in the TUNER position.

CIRCUIT DESCRIPTION

Functions of remote control keys

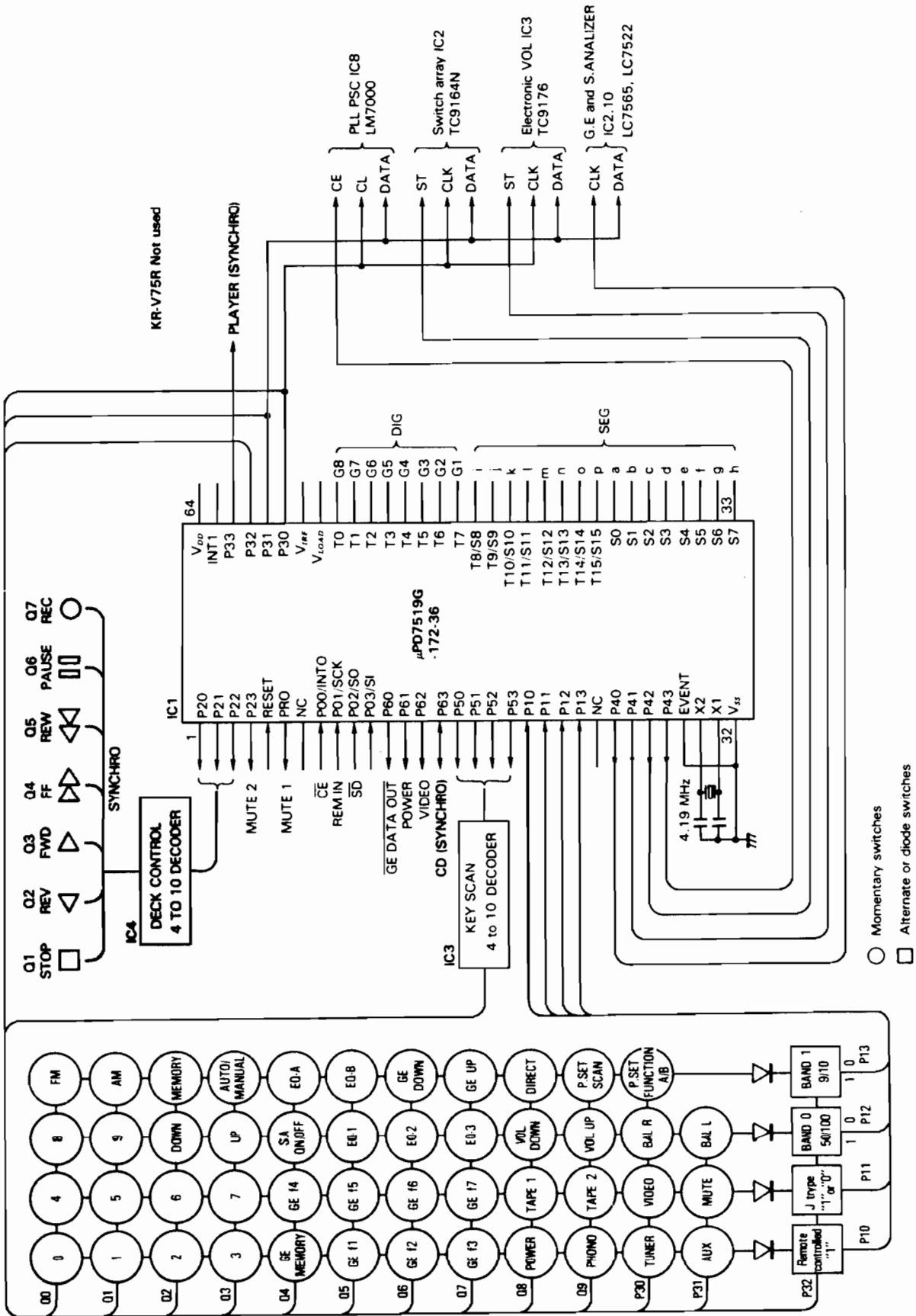
Keys on the remote control unit are arranged as shown below. Almost all keys are found on the key matrix on the main body and have exactly the same functions as the keys

on it. The remote control unit is also provided with operation keys for the tape deck, turntable and CD player connected to the receiver. Their functions are described below.



Symbols	Functions
PLAY/CUT	Turntable control key. Each press of this key reverses the High/Low level at the PLAYER terminal (pin 62). The turntable performs PLAY the operation at the rise and CUT operation at the fall of the pulse.
Left arrow, Right arrow, PAUSE, REC, STOP	Tape deck control keys. When one of these keys is pressed, the code for signal output is output from the terminal corresponding to the key. Refer to the "Description of terminals" related to pins 1 to 3.
Left arrow, Right arrow, PLAY, PAUSE	CD player control keys. Communication with the microprocessor of the CD player is performed via the CD terminal (pin 15) by pressing this key. Refer to the description on CD communication processing.

CIRCUIT DESCRIPTION



CIRCUIT DESCRIPTION

Description of terminals: IC1 (μ PD7519G-172-36) microprocessor

Pin No.	Symbols	I/O	Names	Functions																																													
1 - 3	P20 - P22	O	TAPE DECK CONTROL OUT	<p>Signals for tape deck control from the remote control unit. Tape deck control signals are generated by decoding signals from these three terminals. The IC4 (μPD4028BC) decoder is used and the connection between P20 to P22 and the decoder is:</p> <p>P20 - A, P21 - B, P22 - C</p> <table border="1"> <thead> <tr> <th>P22(C)</th> <th>P21(B)</th> <th>P22(A)</th> <th>Terminal becoming High</th> <th>Instruction to deck</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>0</td> <td>None</td> <td>None</td> </tr> <tr> <td>0</td> <td>0</td> <td>1</td> <td>Q₁</td> <td>STOP (■)</td> </tr> <tr> <td>0</td> <td>1</td> <td>0</td> <td>Q₂</td> <td>PLAY (◀)</td> </tr> <tr> <td>0</td> <td>1</td> <td>1</td> <td>Q₃</td> <td>PLAY (▶)</td> </tr> <tr> <td>1</td> <td>0</td> <td>0</td> <td>Q₄</td> <td>FF (▶▶)</td> </tr> <tr> <td>1</td> <td>0</td> <td>1</td> <td>Q₅</td> <td>REW (◀◀)</td> </tr> <tr> <td>1</td> <td>1</td> <td>0</td> <td>Q₆</td> <td>PAUSE ()</td> </tr> <tr> <td>1</td> <td>1</td> <td>1</td> <td>Q₇</td> <td>REC (●)</td> </tr> </tbody> </table> <p>Instructions to the tape deck are sent when the decoder output terminal becomes High for 100 ms.</p>	P22(C)	P21(B)	P22(A)	Terminal becoming High	Instruction to deck	0	0	0	None	None	0	0	1	Q ₁	STOP (■)	0	1	0	Q ₂	PLAY (◀)	0	1	1	Q ₃	PLAY (▶)	1	0	0	Q ₄	FF (▶▶)	1	0	1	Q ₅	REW (◀◀)	1	1	0	Q ₆	PAUSE ()	1	1	1	Q ₇	REC (●)
P22(C)	P21(B)	P22(A)	Terminal becoming High	Instruction to deck																																													
0	0	0	None	None																																													
0	0	1	Q ₁	STOP (■)																																													
0	1	0	Q ₂	PLAY (◀)																																													
0	1	1	Q ₃	PLAY (▶)																																													
1	0	0	Q ₄	FF (▶▶)																																													
1	0	1	Q ₅	REW (◀◀)																																													
1	1	0	Q ₆	PAUSE ()																																													
1	1	1	Q ₇	REC (●)																																													
4	P23	O	MUTE2	Muting signal for switching TAPE2 between SOURCE/MONITOR. Normally Low and Active High.																																													
5				Reset input terminal.																																													
6	PPO	O	MUTE1	Muting signal for Input Selector switching and tuner. Normally Low and Active High.																																													
7	NC																																																
8	P00/INTO	I	CE	<p>Backup detection terminal. Timing chart is as shown below.</p> <p>When Main Power is ON: Reset is high, CE is low, V_{cc} is high.</p> <p>When Main Power is OFF: Reset is low, CE is high, V_{cc} is low.</p>																																													
9	P01/SCK	I	REM IN	Remote control signal input terminal (Active Low) to be connected with the output of μ PC1474HA. Remote control transmission IC μ PD6102G is used.																																													
10	P02/ISO	I	SD	Station detection signal in auto-tuning, etc. High: No station Low: Station detected																																													

CIRCUIT DESCRIPTION

Description of terminals

Pin No.	Symbols	I/O	Names	Functions
11	P03/SI	I		Non-used input ports. Set either to Low or High level
12	P60	O	GE DATA OUT	Signal for preventing the P31 and P30 (key scan) signals, which are always output, being supplied to LC7522. This becomes Low only when data is written in LC7522 (GE IC).
13	P61	O	POWER	Power remote control output terminal (Active High). High (Power ON) and Low (Power OFF) are alternated each time the REMOTE POWER key is pressed
14	P62	O	VIDEO	High in the VIDEO position, Low in other positions
15	P63	I/O	CD	Port used for communication with the microprocessor of the CD player for its remote control
16 - 19	P50 - P53	O		Output ports for the 4 to 10 decoder IC3 (μ PD40288C). Output key strobe signals
20 - 23	P10 - P13	I		Key matrix return signal input terminals
24	NC			
25	P40	O		CLK terminal control port used when writing data (with serial input) in the graphic equalizer IC (LC7522) or graphic equalizer/spectrum analyzer display IC (LC7565). Refer to the documents describing LC7522 and LC7565
26	P41	O		Electronic volume IC (TC9176P) ST terminal control port. Normally High so that the P31 and P30 (key scan) signals, which are always output, are not supplied to TC9176P. Becomes Low only when writing data, after which the terminal level is raised. The ST signal is generated using this rise
27	P42	O		Switch array IC (TC9167N) control port. Normally High so that the P31 and P30 (key scan) signals, which are always output, are not supplied to TC9164N. Becomes Low only when writing data, after which the terminal level is raised. The ST signal is generated using this rise
28	P43	O		PLL IC (LM7000) CE terminal control port. Normally Low and High when writing data. Refer to the documents describing LM7000
29	EVENT	I		Non-used input terminals. Set either to Low or High level
30, 31	X2, X1			System clock signal oscillation terminal. 4.19 MHz
32	VSS			GND terminal
33 - 40 41 - 48	S7 - S0 S15 - S8	O	SEG	FL display segment control terminals.
49 - 56	T1 - T	O	DIG	FL display digit control terminals.
57	V _{LOAD}			FL display drive power supply (-30 V)
58	V _{PRE}			Power supply for the pre-driver of FL display driver
59	P30	O		<ul style="list-style-type: none"> Key strobe signal terminal CLK terminal for writing data (serial input) in LM7000, TC9164N, TC9176P, LC7522 and LC7565

CIRCUIT DESCRIPTION

Description of terminals

Pin No.	Symbols	I/O	Names	Functions
60	P31	O		<ul style="list-style-type: none"> Key strobe signal terminal. DATA terminal for writing data (serial input) in LM7000, TC9164N, TC9176P, LC7522 and LC7565.
61	P32	O		Key strobe signal terminal
62	P33	O		Turntable remote control terminal PLAY at rise and CUT at fall
63	INT1	I		Non-used input terminal. Set either to Low or High level.
64	V _{DD}			Power supply terminal

Display tube drive

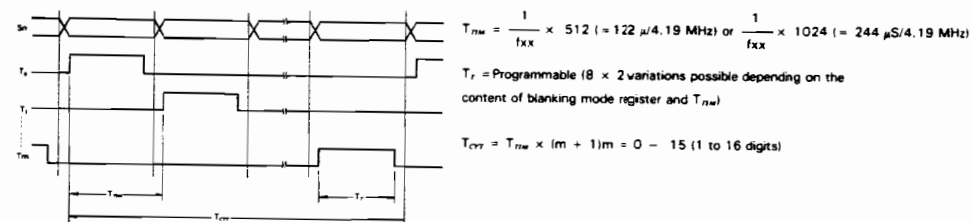
The display tubes use FIP18AMW24 and are driven by spectrum analyzer/graphic equalizer IC2 LC7565 and this microprocessor.

Refer also to the item describing the display tubes.

- Graphic equalizer/spectrum analyzer display section (9G to 15G)
Spectrum analyzer/graphic equalizer IC LC7565 is used.
- Frequency and other item display section
This section is driven by the display output terminals of this microprocessor μ PD7519G.

The duty ratio is 1/11.4 and scanning frequency is determined by connecting a C and R to the IC. The IC drives directly the display which has 8 digits and 13 segments

Waveforms of FIP display output



Display mode register DM = 7: 16 segment mode
Timing signal Tn, Active High

Timing mode register TM = 7: 8-digit display

Blanking mode register BM = 5: ϕ FIP/2 operation
Timing signal cut width 4/16

Clock frequency: 4.19 MHz

$T_{nm} = 244 \mu\text{s}$
 $T_r = 183 \mu\text{s}$
 Blanking frequency = 61 μs
 $T_{crr} = 1952 \mu\text{s}$
 Scanning frequency = 512 Hz
 Duty = 1:10.67

Although display tubes are normally driven directly, direct drive of 1G, 2G, 6G, 7G and 8G from the display terminal is not possible because the current is insufficient due to the wide surface of the grids. A driver buffer is added for them.

The following values can be read from the conditions above.

ADJUSTMENT

No.	ITEM	INPLT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
F M SECTION Unless otherwise specified, the individual switches should be set as following: SELECTOR: FM MODE: AUTO							
1	BAND EDGE (1)	-	Connect a DC voltmeter between TPS and TP9.	87.5MHz	(X86-101) L8	2.5V	(a)
2	BAND EDGE (2)	-	Connect a DC voltmeter between TPS and TP9.	108MHz	(X86-101) TC1	8.0V	(a)
Repeat alignments 1 and 2 several times.							
3	RF ALIGNMENT	(A) 98.0MHz 1kHz, ±75kHz dev	(B)	MODE: MONO 98.0MHz	(X86-101) L2,4 (L5)	Maximum amplitude and symmetry of the oscilloscope display.	
4	DISCRIMINATOR (1)	(A) 98.0MHz 1kHz, ±75kHz dev 60dB (ANT input)	Connect a DC voltmeter between TP11 and TP12.	MODE: MONO 98.0MHz	(X14-178) T1	0V	(b)
5	DISCRIMINATOR (2)	(A) 98.0MHz 1kHz, ±75kHz dev 60dB (ANT input)	(B)	MODE: MONO 98.0MHz	(X14-178) T2	Minimum distortion.	
6	VCO	(A) 98.0MHz 0 dev 60dB (ANT input)	Connect a 330kΩ resistor to TP13. Connect a frequency counter to the resistor via an AC voltmeter.	98.0MHz	(X14-178) VR2	76.00kHz	(c)
7	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±68.25kHz dev Selector: L or R Pilot ±6.75kHz dev 60dB (ANT input)	(B)	98.0MHz	(X86-101) L7	Minimum distortion.	
8	SEPARATION (E type)	(C) 98.0MHz 1kHz, ±40kHz dev Selector: L or R Pilot: 6kHz de 60dB (ANT input)	(B)	98.0MHz	(X14-178) VR3	Minimum crosstalk.	
A M SECTION Keep the AM loop antenna installed. SELECTOR: AM							
(1)	BAND EDGE (1)	-	Connect a DC voltmeter between TP8 and TP9.	530kHz (531kHz)	(X14-178) L4	1.5V	(a)
(2)	BAND EDGE (2)	-	Connect a DC voltmeter between TPS and TP9.	1610kHz (1602kHz)	(X14-178) TC2	8.0V	(a)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 600kHz 400Hz, 30% mod	(B)	600kHz	(X14-178) L5	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1400kHz 400Hz, 30% mod	(B)	1400kHz	(X14-178) TC1	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
A U D I O SECTION							
①	IDLE CURRENT	-	Connect a DC voltmeter across CP1 (CP2).	VOLUME: -∞	(X07-230) VR1 (L) VR2 (R)	15μV	(e)

ADJUSTMENT/REGLAGES/ABGLEICH

TEST INSTRUMENT

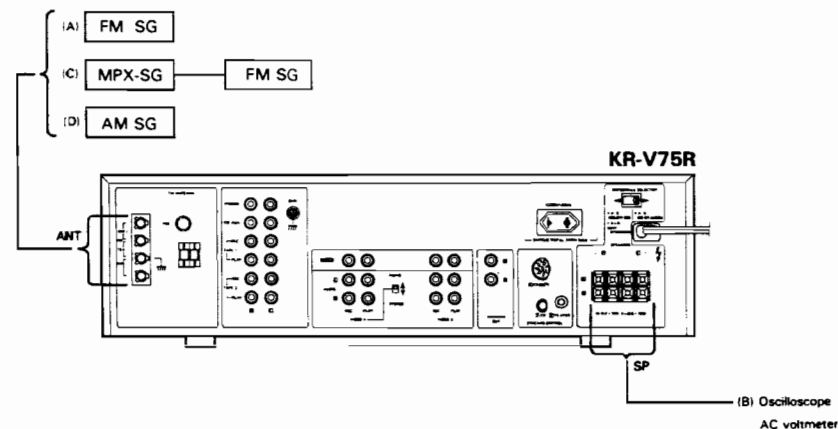
Oscilloscope
AM signal generator
FM signal generator
SDK signal generator
Audio generator
AC voltmeter
FM multiplex generator
Frequency counter
DC voltmeter
Distortion meter
Dummy antenna

APPAREILLAGE

Oscilloscope
Générateur MA
Générateur MF
Générateur SDK
Générateur audio fréquences
Voltmètre CA
Générateur multiplex stéréo
Fréquence-mètre
Voltmètre CC
Distorsiomètre
Antenne fictive

PRÜFINSTRUMENTE

Oszilloskop SCOPE
MW-Signalgenerator AM-SG
UKW-Signalgenerator FM-SG
SDK-Signalgenerator SDK-SG
NF-Signalgenerator AG
Wechselspannungsmesser
UKW-Multiplexgenerator FM-MPX
Frequenzzähler
Gleichspannungsmesser
Klirrfaktometer
Artennennachbildung



REGLAGES

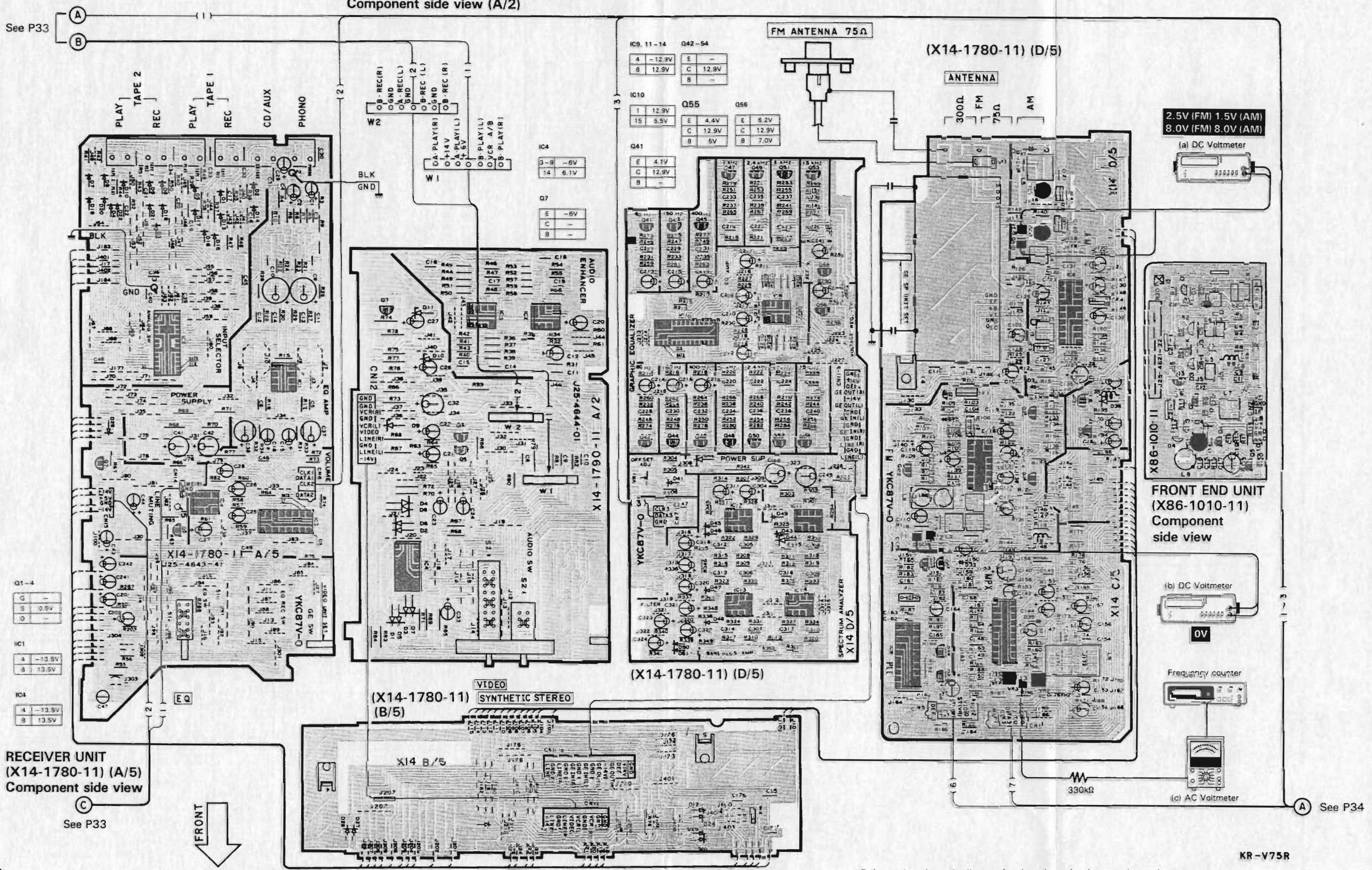
ABGLEICH

N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF Sauf en cas d'indications spéciales, régler chaque condensateur comme suit: SELECTEUR: FM MODE: AUTO							
1	BORD DE BANDE (1)	-	Connecter un voltmètre CC entre les TP8 et TP9.	87,5MHz	(X86-101) L8	2,5V	(a)
2	BORD DE BANDE (2)	-	Connecter un voltmètre CC entre les TP8 et TP9.	108MHz	(X86-101) TC1	8,0V	(a)
Répéter les points 1 et 2 plusieurs fois.							
3	ALIGNEMENT HT	(A) 98,0MHz 1kHz, ±75kHz dev	(B)	MODE: MONO 98,0MHz	(X86-101) L2,4 (L5)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
4	DISCRIMINATEUR (1)	(A) 98,0MHz 1kHz, ±75kHz dev 60dB(Entrée ANT)	Connecter un voltmètre CC entre les TP11 et TP12.	MODE: MONO 98,0MHz	(X14-178) T1	0 V	(b)
5	DISCRIMINATEUR (2)	(A) 98,0MHz 1kHz, ±75kHz dev 60dB(Entrée ANT)	(B)	MODE: MONO 98,0MHz	(X14-178) T2	Distorsion minimale.	
6	VCO	(A) 98,0MHz 0 dev 60dB(Entrée ANT)	Connecter une résistance de 330kΩ à TP13. Recorder un compteur de fréquence à une résistance par l'intermédiaire d'un voltmètre CA.	98,0MHz	(X14-178) VR2	76,00kHz	(c)
7	DISTORSION (STEREO)	(C) 98,0MHz 1kHz, ±8,25kHz dev Signal pilote: ±8,75kHz dev 60dB(Entrée ANT)	(B)	98,0MHz	(X86-101) L7	Distorsion minimale.	
8	SEPARATION (E type)	(C) 98,0MHz 1kHz, ±40kHz dev Signal pilote: ±6kHz dev 60dB(Entrée ANT)	(B)	98,0MHz	(X14-178) VR3	Diaphone minimale.	
SECTION MA Laisser l'antenne bouchée MA installée. SELECTEUR: AM							
(1)	BORD DE BANDE	-	Connecter un voltmètre CC entre les TP72 et TP73.	530kHz (531kHz)	(X14-178) L4	1,5V	(a)
(2)	BORD DE BANDE	-	Connecter un voltmètre CC entre les TP72 et TP73.	1610kHz (1602kHz)	(X14-178) TC2	8,0V	(a)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT HT (1)	(D) 600kHz 400Hz, 30% mod	(B)	600kHz	(X14-178) L5	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT HT (2)	(D) 1400kHz 400Hz, 30% mod	(B)	1400kHz	(X14-178) TC1	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							
SECTION AUDIO							
①	REGLAGE DU COURANT DE POLARISATION	-	Connecter un voltmètre CC sur CP1 (CP2).	VOLUME: -∞	(X07-230) VR1 (C) VR2 (D)	18mV	(e)

NR.	BEZUGSSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFAANGSABTEILUNG Außer wenn anders angegeben, die verschiedenen Schalter wie folgt einstellen: SELECTOR: FM MODE: AUTO							
1	BANDKANTE (1)	-	Einen Gleichspannungsmesser zwischen TP8 und TP9 anschließen.	87,5MHz	(X86-101) L8	2,5V	(a)
2	BANDKANTE (2)	-	Einen Gleichspannungsmesser zwischen TP8 und TP9 anschließen.	108MHz	(X86-101) TC1	8,0V	(a)
Abstimmungen 1 und 2 mehrere Male wiederholen.							
3	EMPFANGS-BEREICH-ABSTIMMUNGEN	(A) 98,0MHz 1kHz, ±75kHz Hub	(B)	MODE: MONO 98,0MHz	(X86-101) L2,4 (L5)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
4	DISKRIMINATOR (1)	(A) 98,0MHz 1kHz, ±75kHz Hub 60dB(ANT-Eingang)	Einen Gleichspannungsmesser zwischen TP11 und TP12 anschließen.	MODE: MONO 98,0MHz	(X14-178) T1	0 V	(b)
5	DISKRIMINATOR (2)	(A) 98,0MHz 1kHz, ±75kHz Hub 60dB(ANT-Eingang)	(B)	MODE: MONO 98,0MHz	(X14-178) T2	Minimaler Klirrfaktor.	
6	SPANNUNGS-REGELTER OZILLATOR	(A) 98,0MHz 0 Hub 60dB(ANT-Eingang)	Einen 330kΩ Widerstand zu TP13 anschließen. Einen Frequenzzähler über einen Wechselspannungsmesser an den Widerstand anschließen.	98,0MHz	(X14-178) VR2	76,00kHz	(c)
7	KLIRRFaktor (STEREO)	(C) 98,0MHz 1kHz, ±8,25kHz Hub Wahler: L oder R Piloten: ±8,75kHz Hub 60dB(ANT-Eingang)	(B)	98,0MHz	(X86-101) L7	Minimaler Klirrfaktor.	
8	STEREO KANAL TRENNLUNG (E type)	(C) 98,0MHz 1kHz, ±40kHz Hub Wahler: L oder R Piloten: ±6kHz Hub 60dB(ANT-Eingang)	(B)	98,0MHz	(X14-178) VR3	Minimales Übersprechen.	
MW-EMPFAANGSABTEILUNG Die MW-Rahmantenne angebracht lassen. SELECTOR: AM							
(1)	BANDKANTE (1)	-	Einen Gleichspannungsmesser zwischen TP8 und TP9 anschließen.	530kHz (531kHz)	(X14-178) L4	1,5V	(a)
(2)	BANDKANTE (2)	-	Einen Gleichspannungsmesser zwischen TP72 und TP73 anschließen.	1610kHz (1602kHz)	(X14-178) TC2	8,0V	(a)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (1)	(D) 600kHz 400Hz, 30% mod	(B)	600kHz	(X14-178) L5	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1400kHz 400Hz, 30% mod	(B)	1400kHz	(X14-178) TC1	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							
AUDIO-EMPFAANGSABTEILUNG							
①	LEERLAUFSTROM	-	Einen Gleichspannungsmesser über CP1 (CP2) anschließen.	VOLUME: -∞	(X07-230) VR1 (L) VR2 (R)	18mV	(e)

PC BOARD

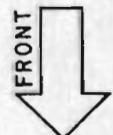
VIDEO CONTROL UNIT (X14-1790-11)
Component side view (A/2)



See P33

RECEIVER UNIT
(X14-1780-11) (A/5)
Component side view

See P33



2.5V (FM) 1.5V (AM)
8.0V (FM) 8.0V (AM)

(a) DC Voltmeter

FRONT END UNIT
(X86-1010-11)
Component side view

(b) DC Voltmeter

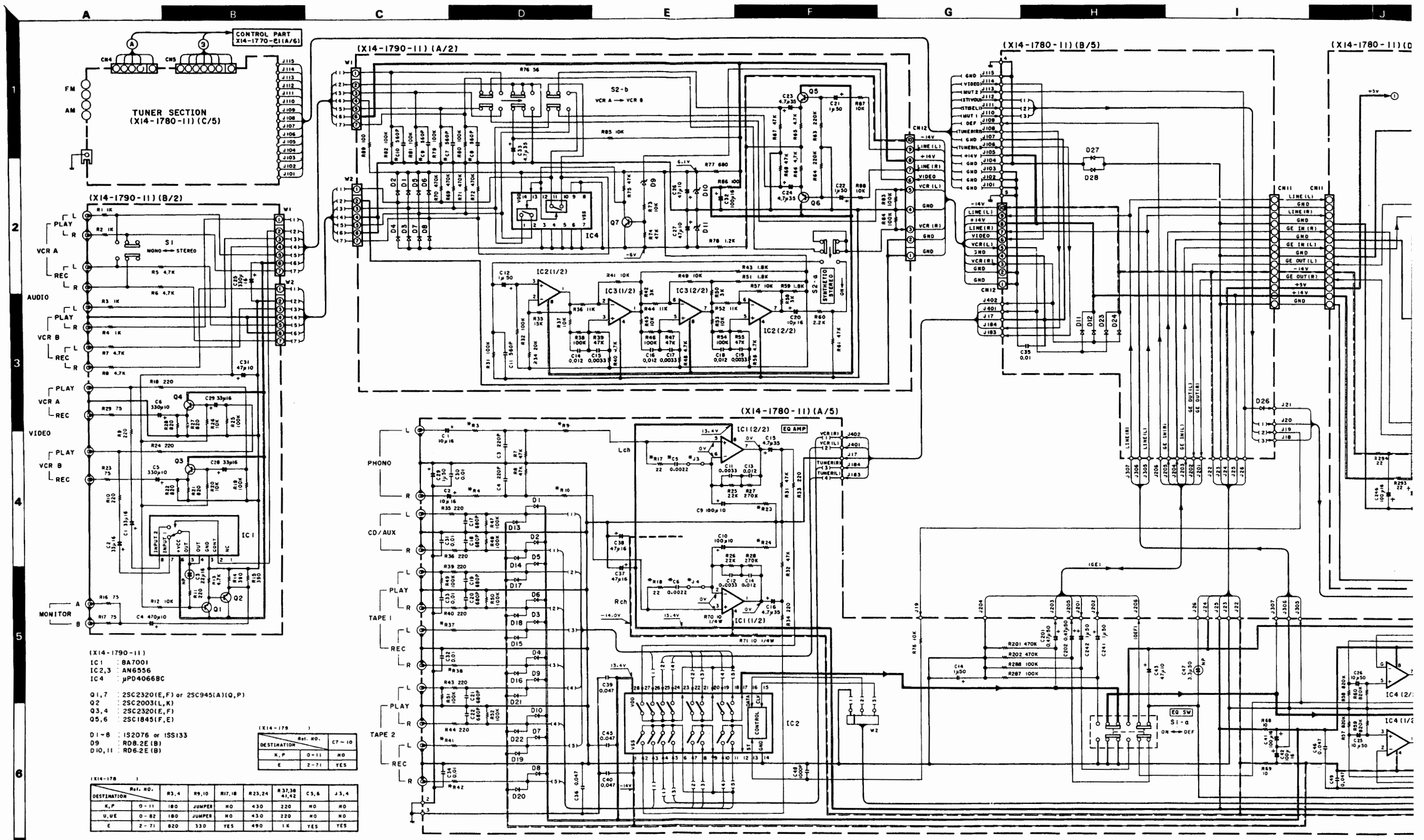
0V

Frequency counter

(c) AC Voltmeter

See P34

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



- (X14-1790-11)
 IC1 : BA7001
 IC2,3 : AN6556
 IC4 : μ PD4066BC
- Q1,7 : 2SC2320(E,F) or 2SC945(A)(Q,P)
 Q2 : 2SC2003(L,K)
 Q3,4 : 2SC2320(E,F)
 Q5,6 : 2SC1845(F,E)

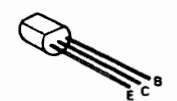
(X14-179)

DESTINATION	REL. NO.	C7-10
K,P	0-11	NO
E	2-71	YES

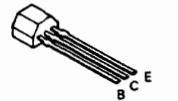
(X14-178)

DESTINATION	REL. NO.	R3,4	R9,10	R17,18	R23,24	R37,38	C5,6	J3,4
K,P	0-11	180	JUMPER	NO	430	220	NO	NO
U,VE	0-82	180	JUMPER	NO	430	220	NO	NO
E	2-71	820	330	YES	490	1K	YES	YES

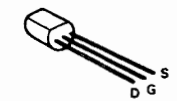
2SA733 (A)
 2SC1845
 2SC2003
 2SC945 (A)
 2SC2320



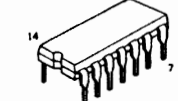
2SA933S
 2SC1740S



2SK163



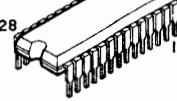
μ PD4066BC



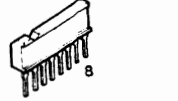
AN6556
 AN6556F



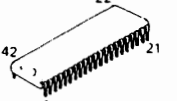
BA7001



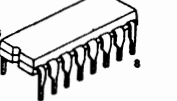
TC9164N



LC7522



TC9176P

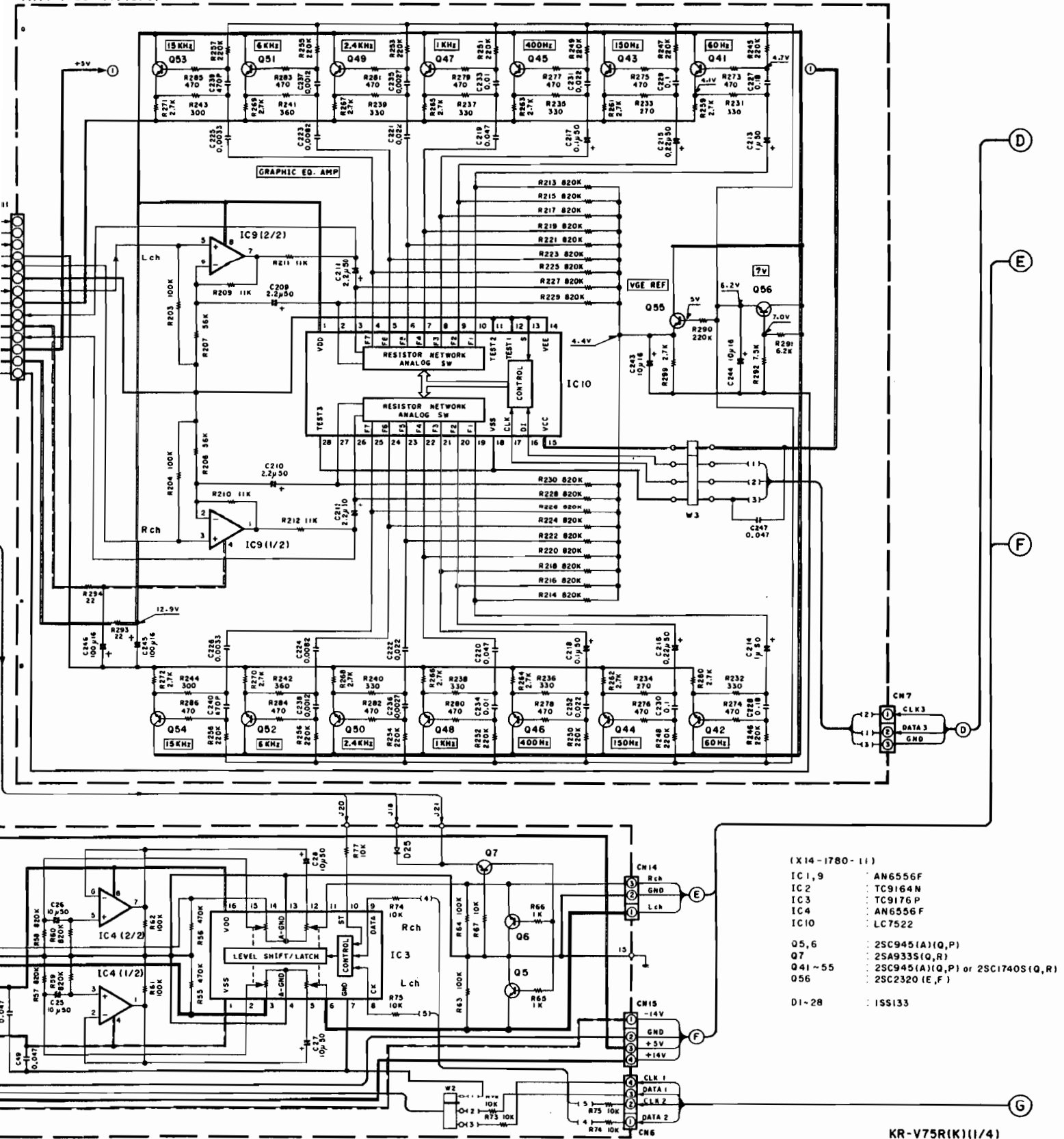


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

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 angegeben einem hochot Dabei schwach sieden zwis Geräten u.U. ge

(X14-1780-11) (D/5)



- (X14-1780-11)
- IC 1, 9 : AN6556F
 - IC 2 : TC9164N
 - IC 3 : TC9176P
 - IC 4 : AN6556F
 - IC10 : LC7522
 - Q5, 6 : 2SC945(A)(Q,P)
 - Q7 : 2SA933S(Q,R)
 - Q41 ~ 55 : 2SC945(A)(Q,P) or 2SC1740S(Q,R)
 - Q56 : 2SC2320 (E,F)
 - D1-28 : ISS133

KR-V75R(K)(1/4)

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.

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



A

B

C

D

E

(X07-2300-11) (B/6)

(X07-2300-11) (A/6)

PRE AMP PART
X14-1780-11(A/5)
CN14

PRE AMP PART
X14-1780-11(A/5)
CN15

(X07-2300-11)

IC 1

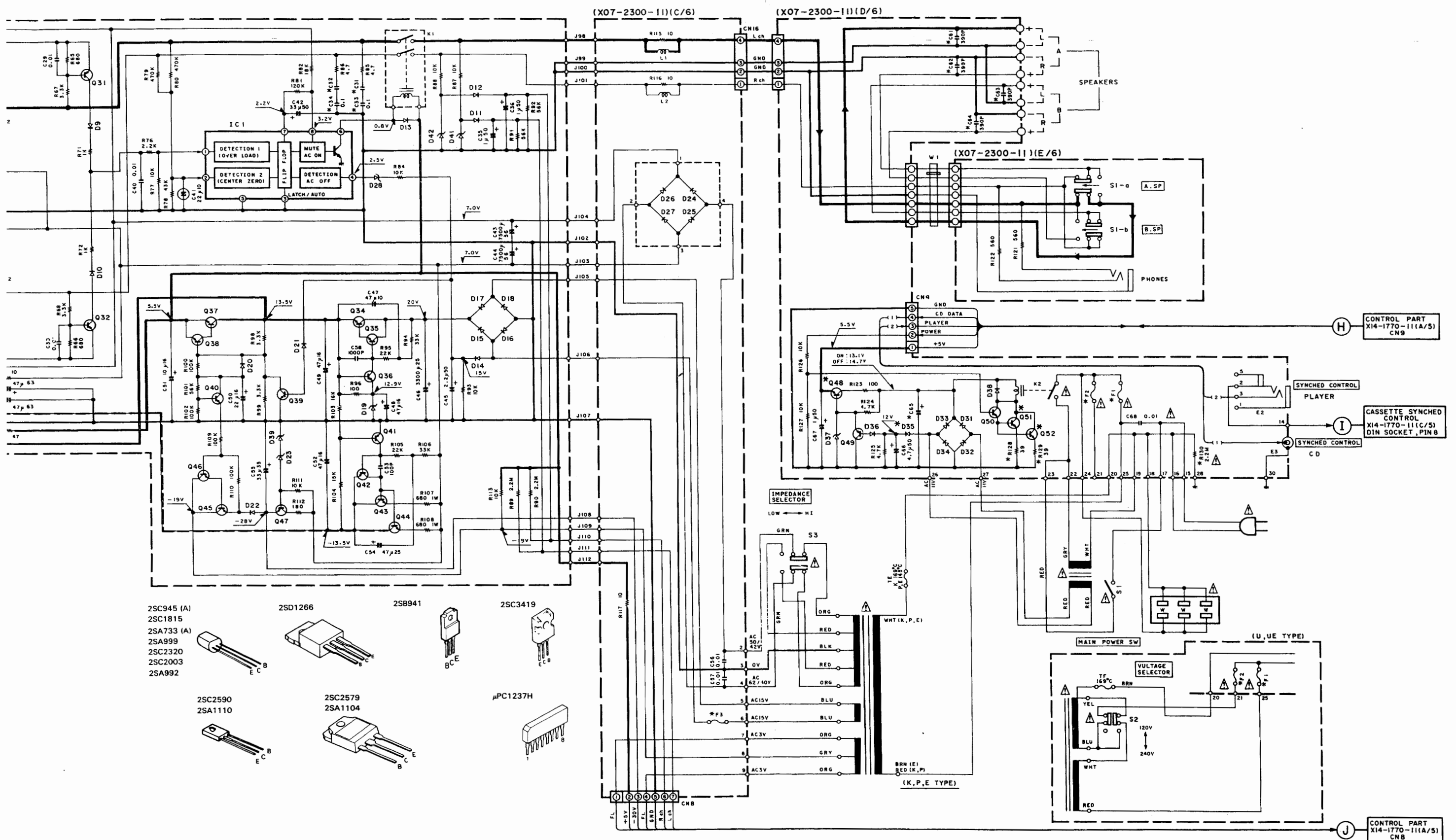
: μ PC1237H

- Q1 ~ 8 : 2SC945(A)(Q, P)
- Q35, 36, 38, 46, 50 : 2SC945(A)(Q, P) or 2SC2320(E, F)
- Q9 ~ 14, 31, 32 : 2SA992(F, E)
- Q15, 16 : 2SC1845(F, E)
- Q17, 18 : 2SC3419
- Q19, 20, 39 ~ 42, 49 : 2SA733(A)(Q, P) or 2SA999(E, F)
- Q21, 22 : 2SC2590(Q, R, S)
- Q23, 24 : 2SA1110(Q, R, S)
- Q25, 26 : 2SC2579 * 5(I, O, P)
- Q27, 28 : 2SA1104 * 5(I, O, P)
- Q34, 43, 44 : 2SD1266(Q, P)
- Q37, 45 : 2SC2003(L, K)
- Q47 : 2SB941(R, Q)
- Q48, 51 : *
- Q52 : 2SD1266(Q, P)
- Q50 : 2SC2320(E, F) or 2SC945(A)(Q, P)

- D1, 2, 20, 21 : ISS133
- D9 ~ 12, 14, 35, 36 : ISS178
- D13, 15 ~ 18, 31 ~ 34, 38 : DSM1A1
- D19 : RD13ES(B2)
- D22 : RD8.2ES(B)
- D23, 39 : RD15ES(B)
- D24 ~ 27 : GP25DL
- D28 : RD5.1ES(B)
- D37 : RD6.2ES(B2)
- D41, 42 : RD5.6ES(B2)

(X07-2300-11)

DESTINATION	Ref. No.	R15,14	R15,16	R19,20	R73	R128	R129	R130	C5,6	C15,16	C31,32	C33,34	C61-64	C65	Q48,51	Q52	F1	F2	F3	J44,54,89,93
K,P	0-1	330	5K	JUMPER	22	JUMPER	NO	YES	NO	IP	0.047	NO	NO	470pF	28C2003(L,K)	NO	6A	NO	1.5A	YES
U,UE	0-82	330	5K	JUMPER	22	59	YES	NO	NO	IP	0.047	NO	NO	330pF	2SD1266(Q,P)	YES	3A	YES	1.5A	NO
E	2-71	300	47K	330	10	JUMPER	NO	NO	YES	6P	0.1	YES	YES	470pF	28C2003(L,K)	NO	T3.15A	NO	T1.6A	NO



- 2SC945 (A)
- 2SC1815
- 2SA733 (A)
- 2SA999
- 2SC2320
- 2SC2003
- 2SA992
- 2SC2590
- 2SA1110
- 2SD1266
- 2SB941
- 2SC3419
- μPC1237H
- 2SC2579
- 2SA1104

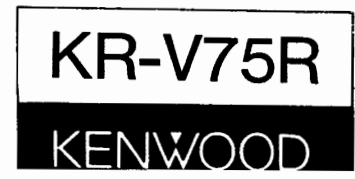
DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

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.

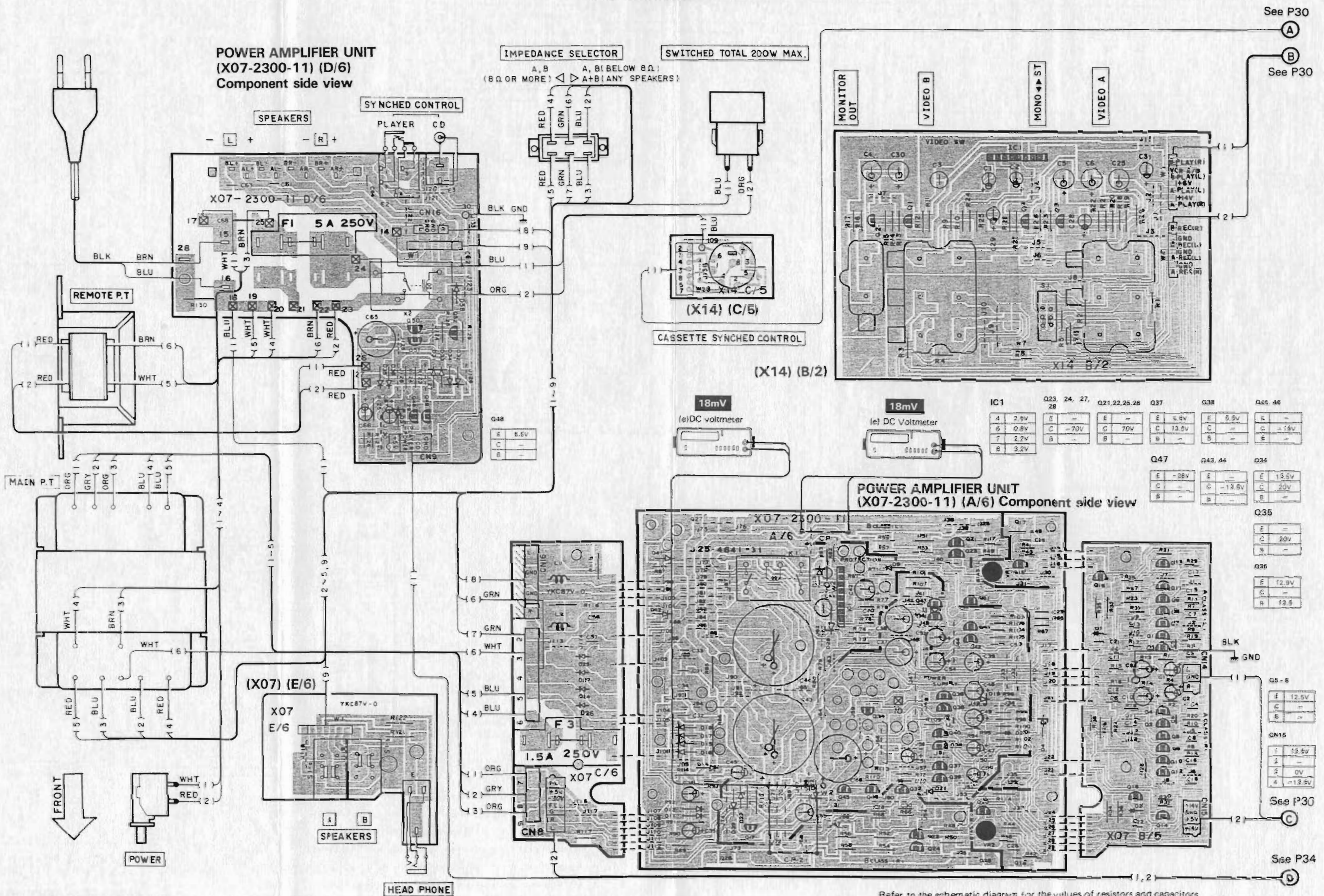
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). **⚠** Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

KR-V75R (K)(2/4)



KR-V75R KR-V75R

PC BOARD

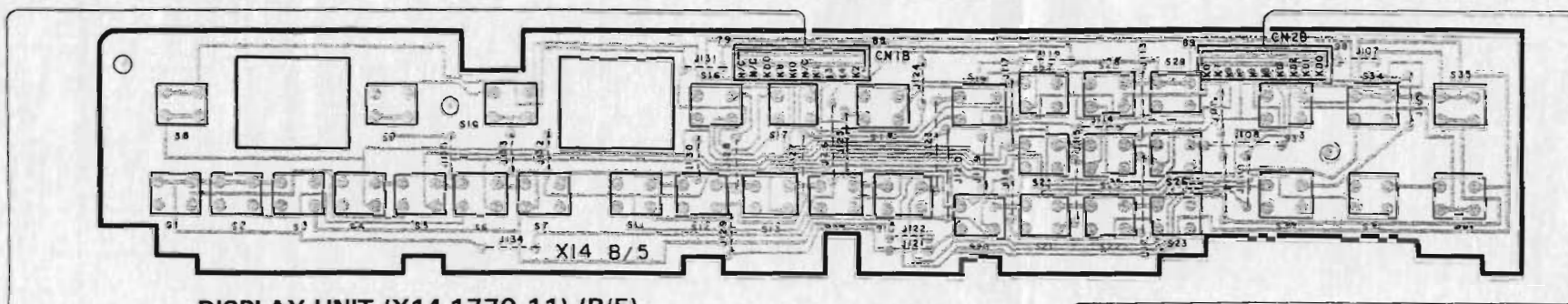


Refer to the schematic diagram for the values of resistors and capacitors.

KR-V75R KR-V75R

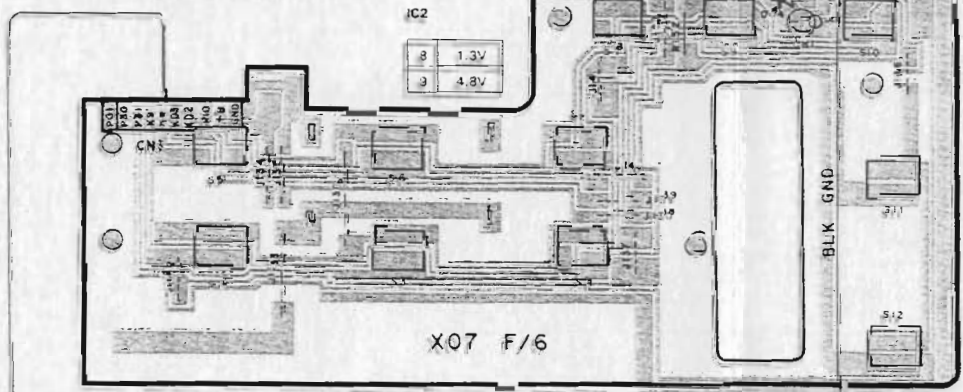
PC BOARD

FRONT PANNEL



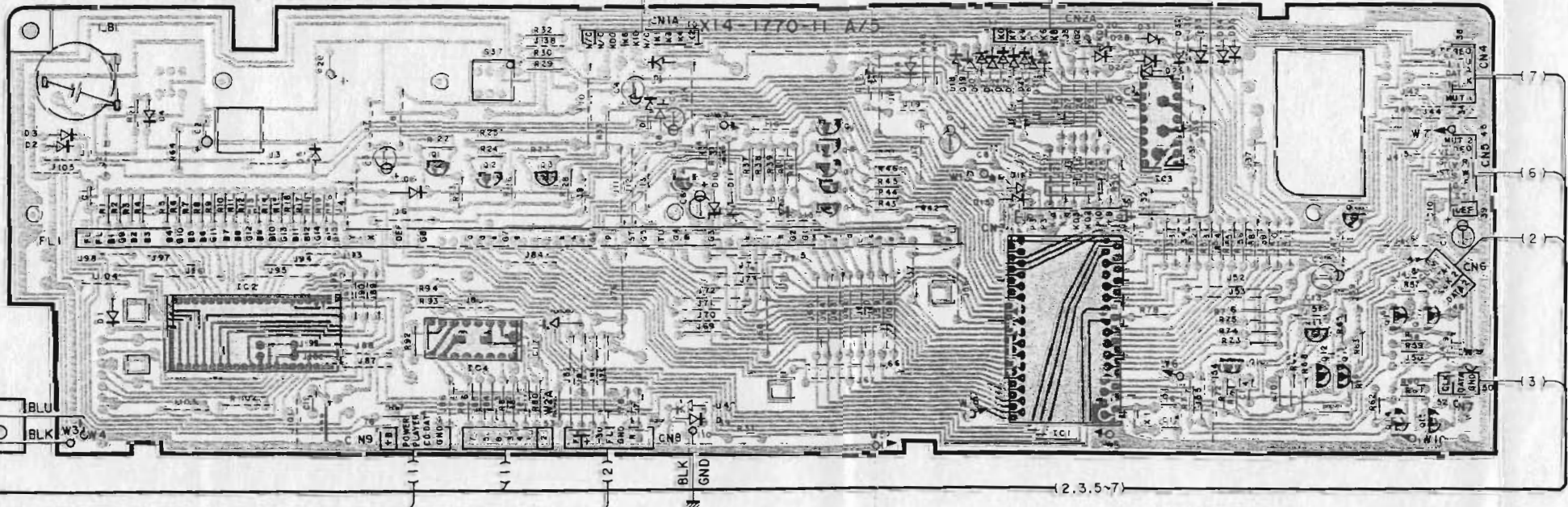
DISPLAY UNIT (X14-1770-11) (B/5)

POWER AMPLIFIER UNIT
(X07-2300-11) (F/6)
Component side view



IC1	IC2	CN8	C5-9	Q4
57 -28V	42 5V	55 -28V	E -	E -28V
58 -4.5V	CN9	54 5.6V	C 5V	C -
64 5V			B -	B -
	67 5.5			

DISPLAY UNIT
(X14-1770-11) (A/5) Foil side view

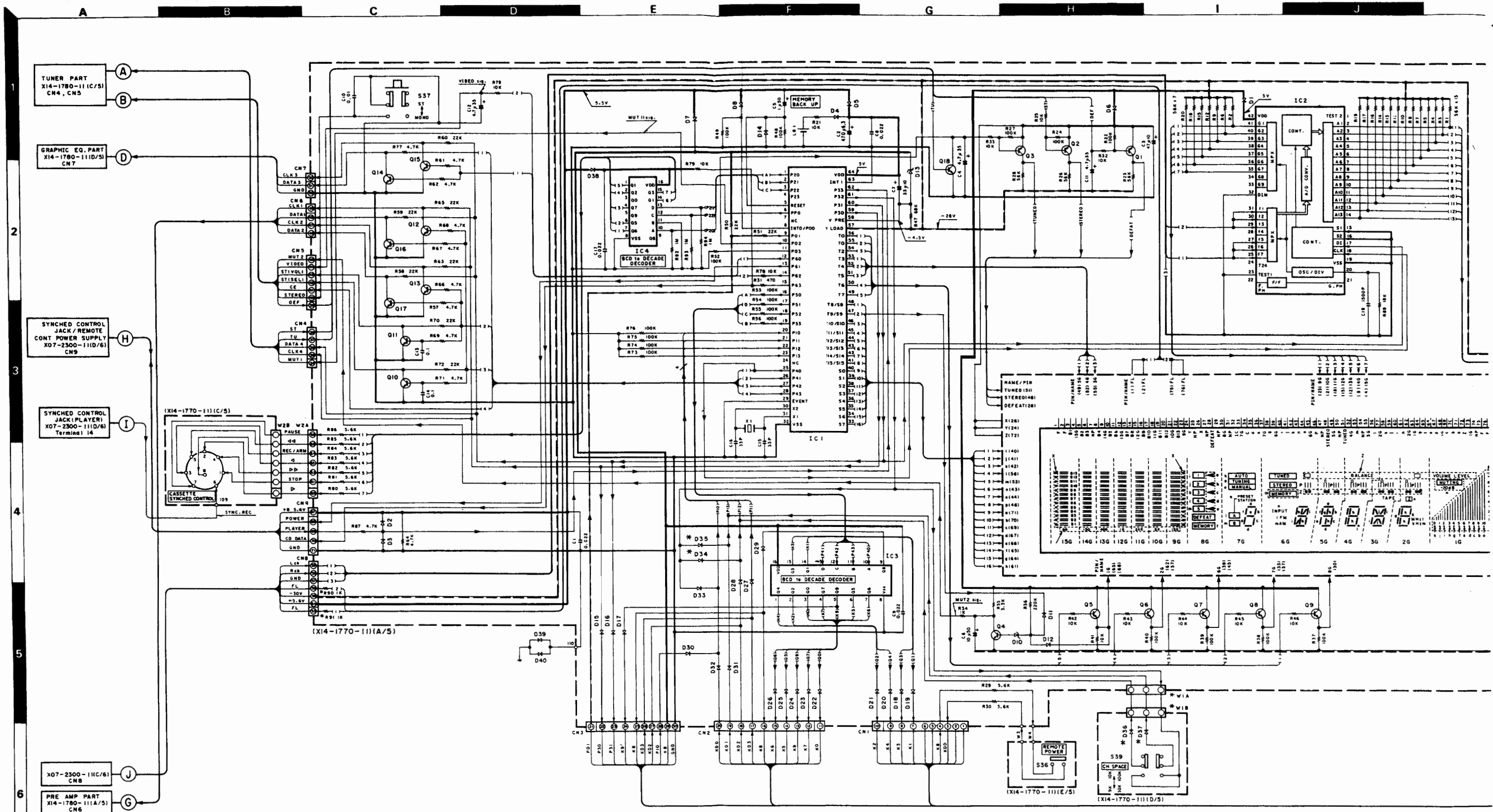


See P30

See P33

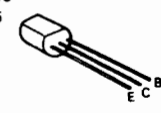
KR-V75R

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

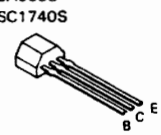


- (A) TUNER PART X14-1780-111(C/S) CN4, CN5
- (D) GRAPHIC EQ. PART X14-1780-111(D/S) CN7
- (H) SYNCHRONIZED CONTROL JACK/REMOTE CONT. POWER SUPPLY X07-2300-111(D/6) CN9
- (I) SYNCHRONIZED CONTROL JACK(PLAYER) X07-2300-111(D/6) Terminal 14
- (J) X07-2300-111(C/6) CN8
- (G) PRE AMP PART X14-1780-111(A/S) CN6

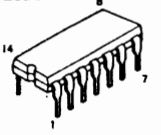
2SA733 (A)
2SC1845
2SC945



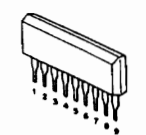
2SA933S
2SC1740S



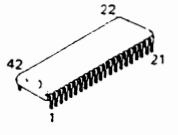
μPD4028BC



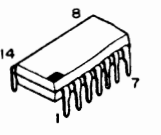
μPC1474HA



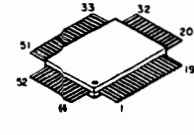
LC7565



MB84028BM



μPD7519G-172-36



DC voltages are as measured with a multimeter. Values may vary between individual instruments.

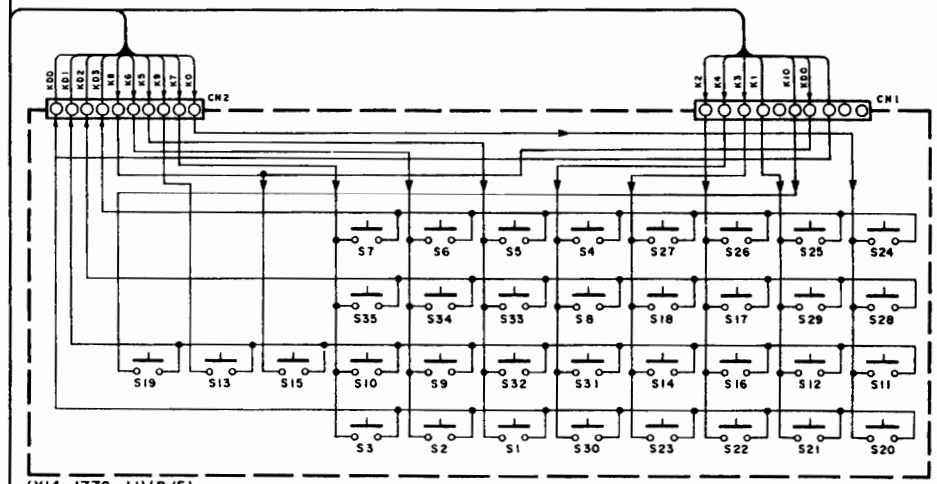
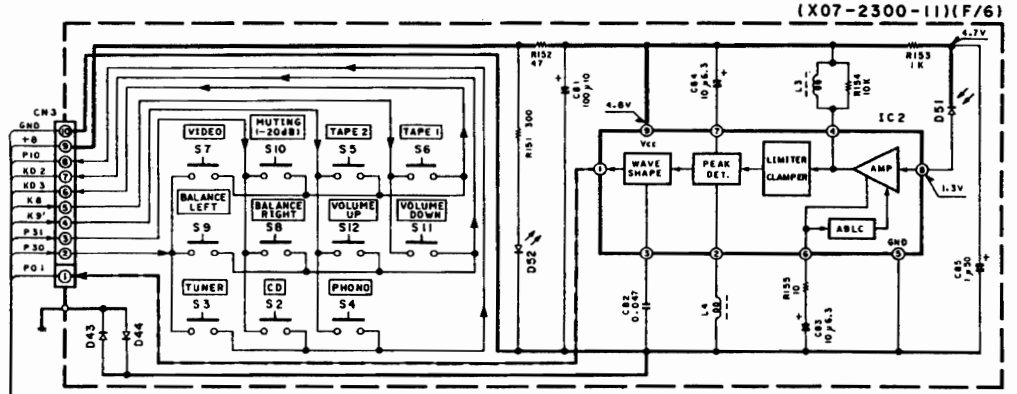
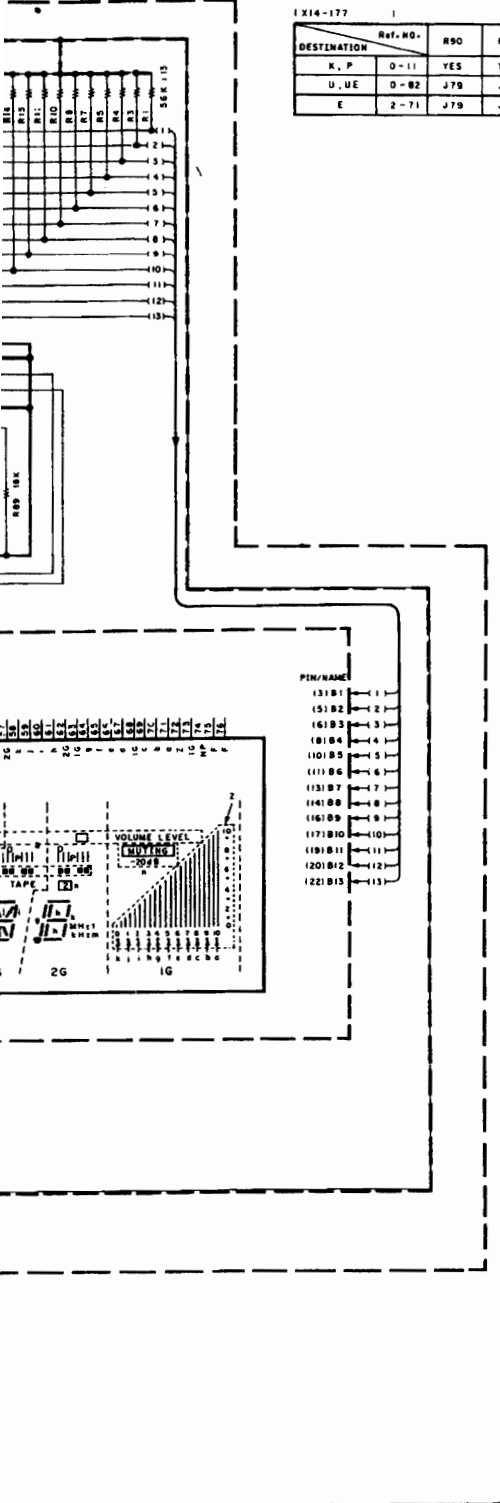
Les tensions c.c. doivent être mesurées à haute impédance. Les valeurs peuvent varier d'un appareil à l'autre et d'un instrument à l'autre.

Die angegebenen Gleichspannungen sind mit einem hochohmigen Voltmeter zu messen. Dabei schwanken die Werte zwischen den einzelnen Geräten u.U. geringfügig.

IX14-177		Ref. NO.	R90	R91	D34	D35	D36	D37	J37	S38	W1A	W1B
K, P	D-11	YES	YES	NO	NO	NO	NO	NO	NO	NO	NO	NO
U, UE	D-82	J79	J82	NO	NO	YES	YES	YES	YES	YES	YES	YES
E	2-71	J79	J82	YES	YES	NO	NO	NO	NO	NO	NO	NO

- (X14-1770-11)
- IC1 : μ PD75196-172-36
 - IC2 : LC7565
 - IC3, 4 : MB840288M or μ PD40288C
 - Q1-3 : 2SA933S(Q,R) or 2SA733(A)(Q,P)
 - Q4 : 2SC1845(F,E)
 - Q5-17 : 2SC1740S(Q,R) or 2SC945(A)(Q,P)
 - Q18 : 2SC945(A),(Q,P)
 - D1-9, 14-40 : ISS133
 - D10 : RD20E(B)
 - D11, 12 : ISS131
 - D13 : RD10E(B)

- (X07-2300-11)(F/6)
- IC2 : μ PC1474HA
 - D43, 44 : ISS133
 - D51 : PH302B
 - D52 : B30-1012-05



(X14-1770-11)(B/5)

KR-V75R (K) (3/4)

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.



A

B

C

D

E

1
2

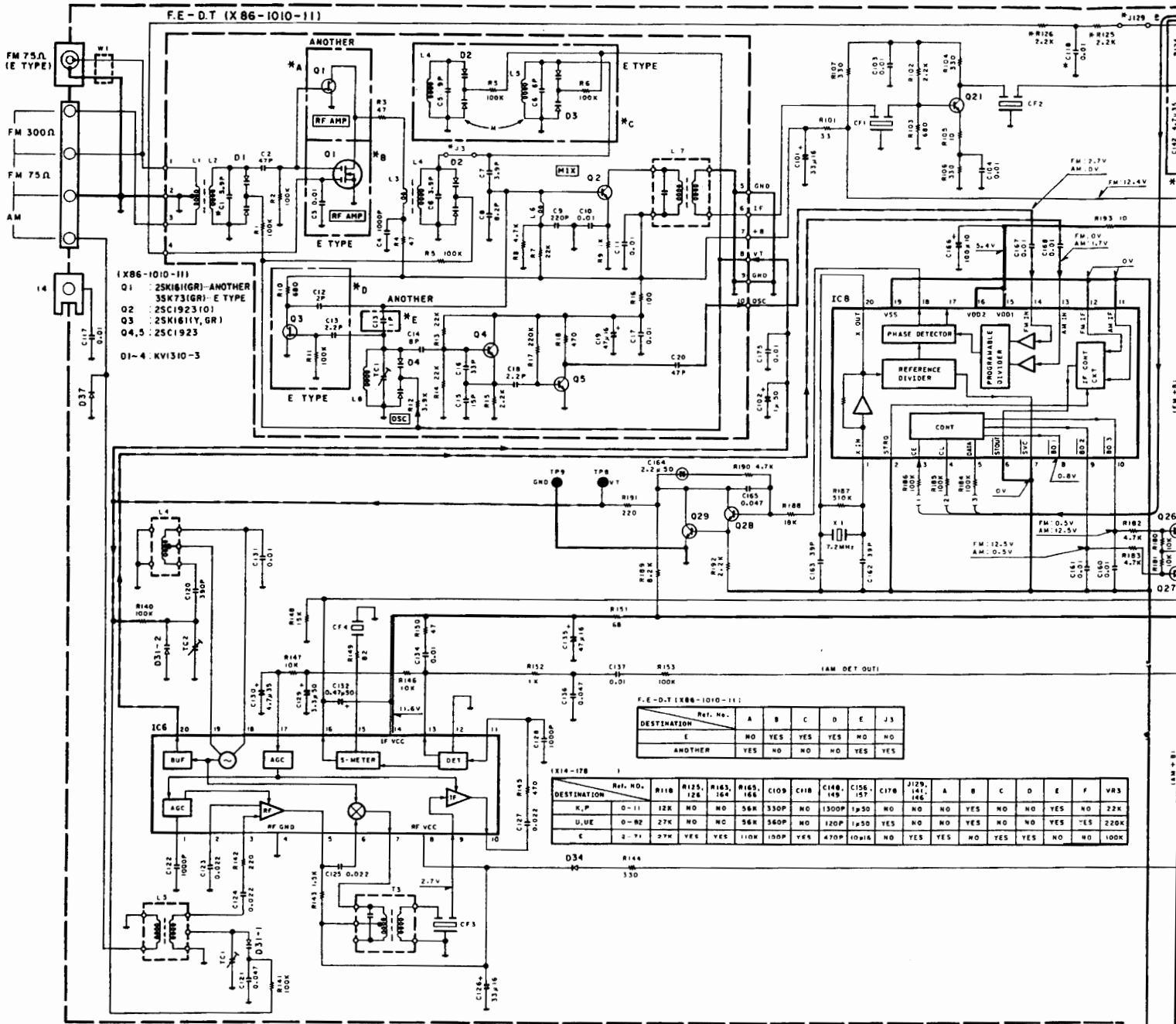
3

4

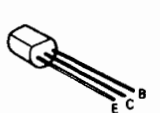
5

6

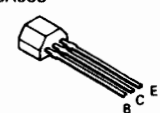
7



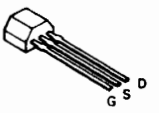
- 2SC1815
- 2SC1923
- 2SC2003
- 2SC945 (A)
- 2SA733 (A)



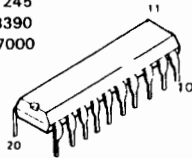
- 2SC1740S
- 2SA985S



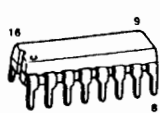
- 2SK161



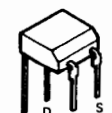
- LA1245
- LA3390
- LM7000



- LA1232



- 3SK73

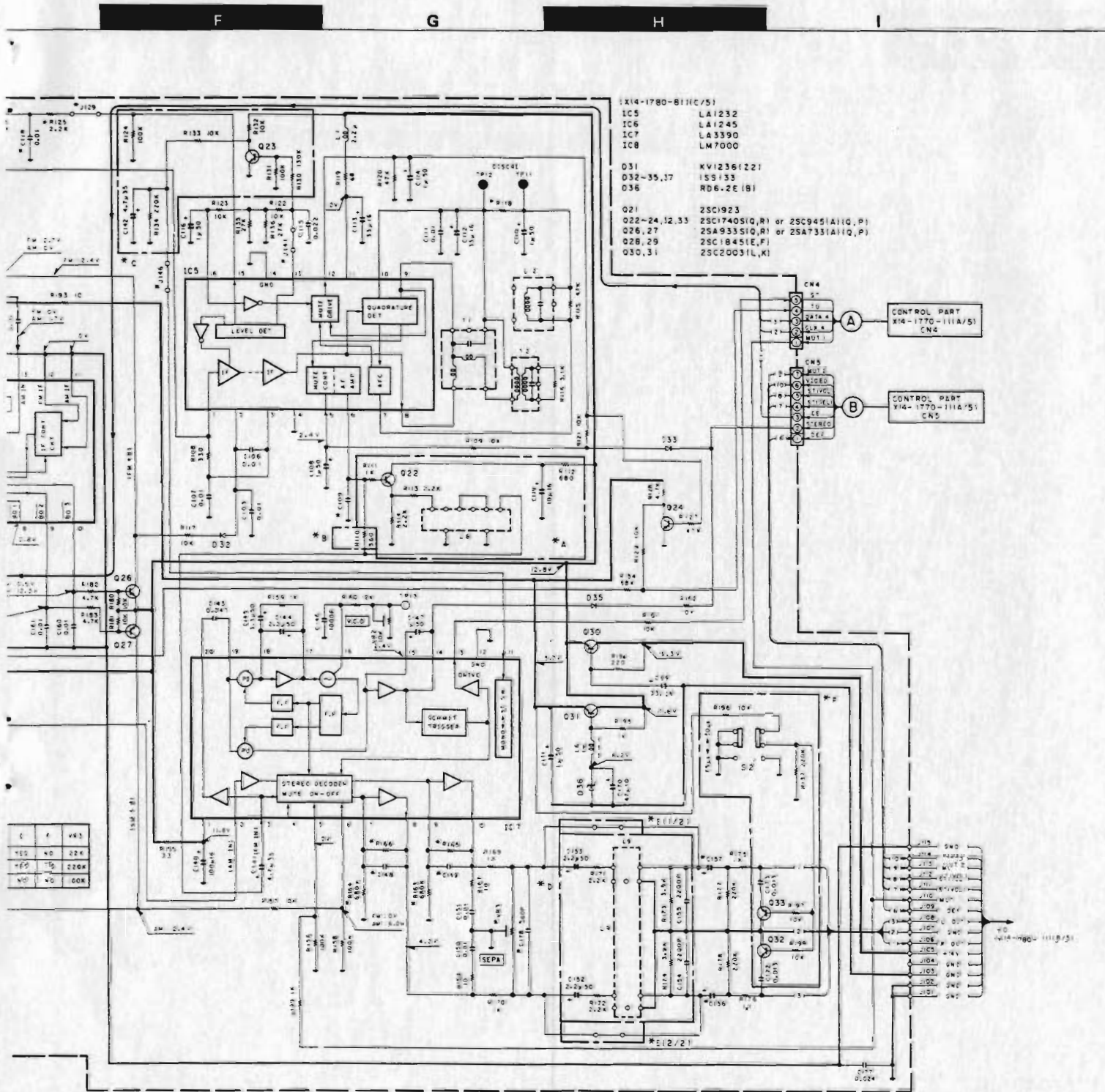


DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

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

Die angegebenen Gleichspannungen sind mit einem hochohmigen Spannungsmessgerät gemessen. Die Werte können leicht zwischen den einzelnen Geräten u.U. geringfügig abweichen.

KR-V75R



KR-V75R(K)(4/4)

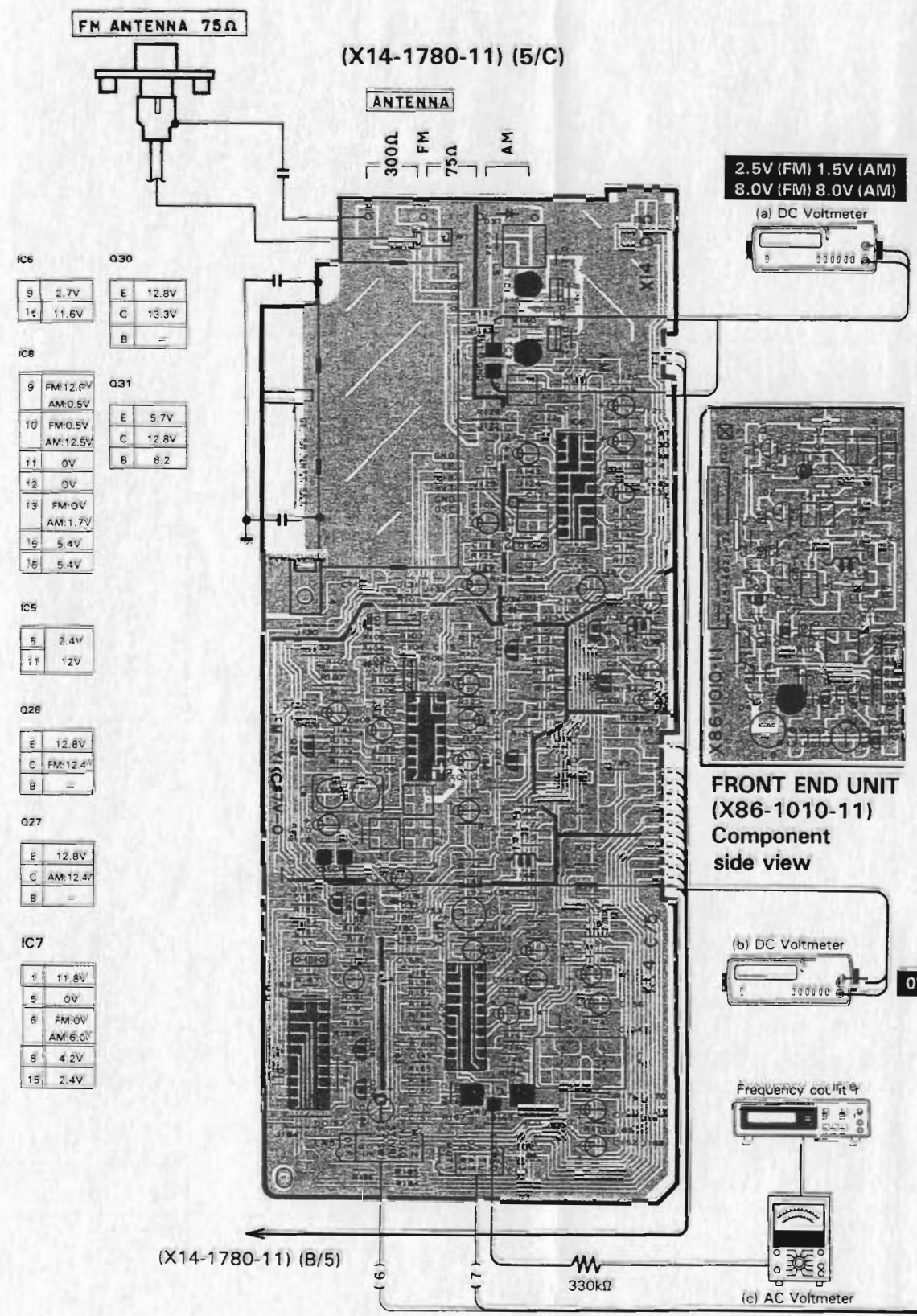
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably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

gegebenen Gleichspannungswerte wurden mit hochohmigen Spannungsmesser gemessen, wannem die Meßwerte aufgrund von Unterschieden zwischen einzelnen Instrumenten oder d.U. geringfügig.

KR-V75R

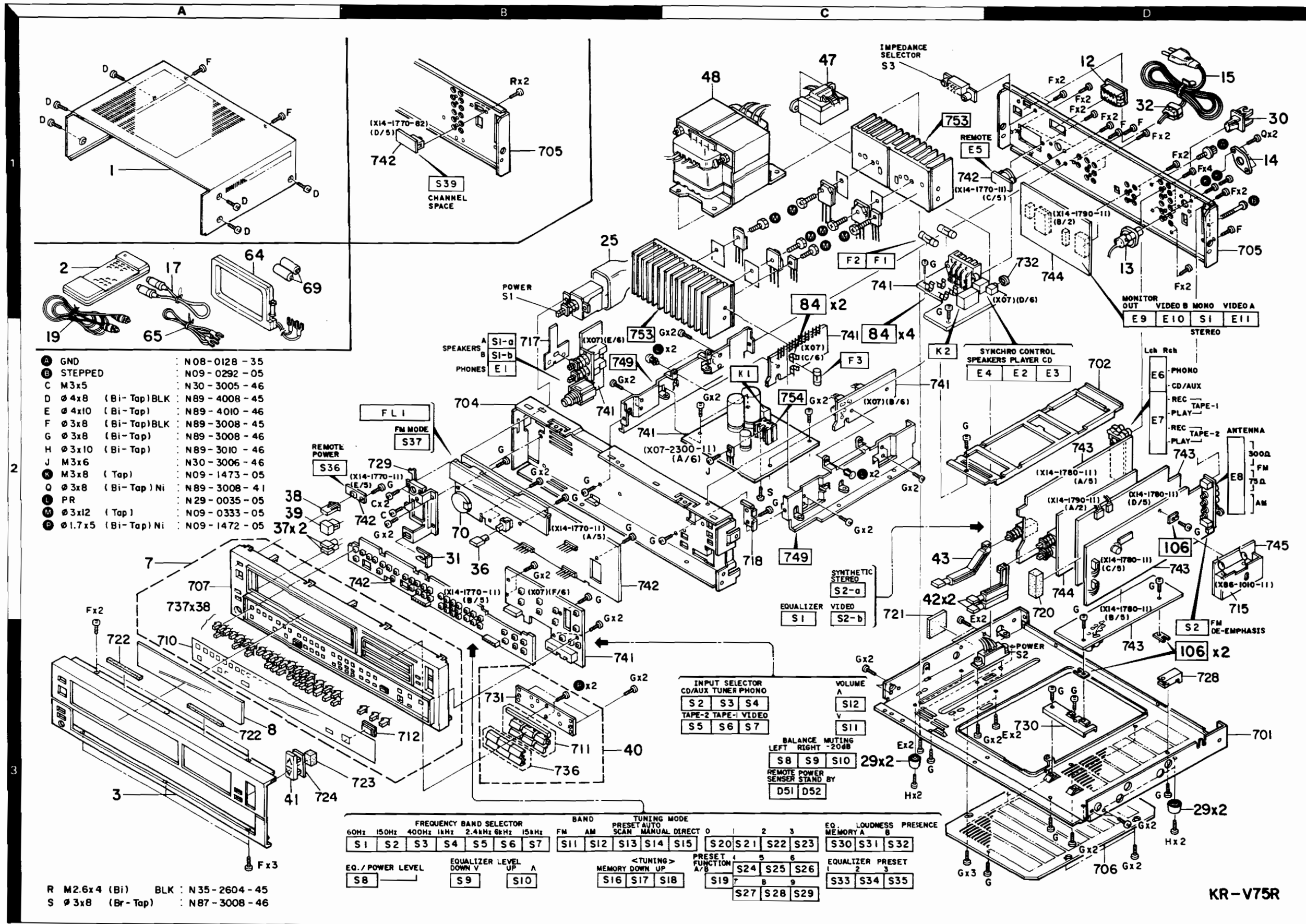
KENWOOD

PC BOARD



KR-V75R KR-V75R

EXPLODED VIEW



- GND N08-0128-35
- STEPPED N09-0292-05
- M3x5 N30-3005-46
- D 4x8 (Bi-Tap) BLK N89-4008-45
- E 4x10 (Bi-Tap) N89-4010-46
- F 3x8 (Bi-Tap) BLK N89-3008-45
- G 3x8 (Bi-Tap) N89-3008-46
- H 3x10 (Bi-Tap) N89-3010-46
- J M3x6 N30-3006-46
- K M3x8 (Tap) N09-1473-05
- L 3x8 (Bi-Tap) Ni N89-3008-41
- M PR N29-0035-05
- N 3x12 (Tap) N09-0333-05
- O 1.7x5 (Bi-Tap) Ni N09-1472-05

FREQUENCY BAND SELECTOR							BAND					TUNING MODE				EQ. LOUDNESS PRESENCE					
60Hz	150Hz	400Hz	1kHz	2.4kHz	6kHz	15kHz	FM	AM	PRESET	SCAN	AUTO	MANUAL	DIRECT	0	1	2	3	MEMORY A	B		
S1	S2	S3	S4	S5	S6	S7	S11	S12	S13	S14	S15	S20	S21	S22	S23	S30	S31	S32			
EQ./POWER LEVEL							EQUALIZER LEVEL		<TUNING>				PRESET FUNCTION			EQUALIZER PRESET					
S8							S9		S16				S17			S18			S19		
							UP		MEMORY DOWN				A/B			1			2		
							A		S17				S18			S19			S24		
							DOWN		S16				S17			S18			S19		
							V		S16				S17			S18			S19		
							A		S16				S17			S18			S19		

R M2.6x4 (Bi) BLK : N35-2604-45
 S 3x8 (Br-Tap) : N87-3008-46

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

KR-V75R

KR-V75R KR-V75R

PARTS LIST

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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
KR-V75R						
1	1A	*	A01-1493-02	METALLIC CABINET		
2	1A	*	A70-0145-05	REMOTE CONTROLLER ASSY		
3	3A	*	A20-4911-02	PANEL		
7	2A	*	B01-0332-01	PANEL ESCUTCHEON ASSY		
8	3A	*	B10-0842-03	FRONT GLASS (DISPLAY)		
			B46-0092-03	WARRANTY CARD	K	
			B46-0094-03	WARRANTY CARD	UJE	
			B46-0095-03	WARRANTY CARD	UJE	
			B46-0121-03	WARRANTY CARD	P	
			B46-0122-13	WARRANTY CARD	E	
		*	B50-6474-00	INSTRUCTION MANUAL(ENGLISH)	K	
		*	B50-6475-00	INSTRUCTION MANUAL(ENG,FRE)	P	
		*	B50-6476-00	INSTRUCTION MANUAL(ENGLISH)	UJE	
		*	B50-6477-00	INSTRUCTION MANUAL(G,F,D)	E	
			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
			B58-0269-04	CAUTION CARD	K	
			B58-0513-04	CAUTION CARD (PRESET220-240)	UJE	
		*	B58-0803-03	CAUTION CARD	E	
			B59-0092-00	SERVICE DIRECTORY	UJE	
△ 12	1D		E03-0055-05	AC OUTLET	E	
△ 12	1D		E03-0075-05	AC OUTLET	UJE	
△ 12	1D		E03-0086-05	AC OUTLET	KP	
△ 13	1D		E04-0006-05	RF COAXIAL CABLE RECEPTACLE	E	
△ 14	1D		E29-0130-04	LEAD PLATE	E	
△ 15	1D		E30-0459-05	AC POWER CORD (CEE,2.5A)	E	
△ 15	1D		E30-0812-05	AC POWER CORD (7A)	UJE	
△ 15	1D		E30-0974-05	AC POWER CORD (UL,CSA)	KP	
17	1A		E30-0950-05	CORD WITH DIN CONNECTOR(8P)		
19	2A		E30-1360-05	AUDIO CORD (1P)		
25	1B		F29-0067-05	INSULATING COVER	E	
		*	H01-7279-04	ITEM CARTON CASE		
		*	H10-3322-02	POLYSTYRENE FRAMED FIXTURE		
		*	H10-3323-02	POLYSTYRENE FRAMED FIXTURE		
			H25-0181-04	PROTECTION BAG (150X260X0.05)		
			H25-0224-04	PROTECTION BAG (800X400)		
			H25-0232-04	PROTECTION BAG (235X350)		
29	3C,3D		J02-0126-05	FOOT		
30	1D		J19-0626-12	ANTENNA HOLDER		
31	2B		J21-3326-05	JACK MOUNTING HARDWARE		
△ 32	1D		J42-0083-05	POWER CORD BUSHING		
			J61-0307-05	WIRE BAND		
36	2B		K27-0965-04	KNOB (BUTTON) FM MODE		
37	2A		K27-1304-04	KNOB (BUTTON) SPEAKERS		
38	2A		K29-1498-04	KNOB (BUTTON) REMOTE POWER		
39	2A		K29-2001-04	KNOB ASSY(BUTTON)MAIN POWER		
40	3B		K29-2095-03	KNOB ASSY (SELECTOR)		
41	3A		K29-2105-04	KNOB (BUTTON) MAIN VOLUME		
42	2C		K29-2126-04	KNOB ASSY(BUTTON)SYNTHESIZER		
43	2C		K29-2130-04	KNOB ASSY(BUTTON)EQUALIZER		
△ 47	1C		L01-6681-05	POWER TRANSFORMER(REMOTE)	YP	

E: Scandinavia & Europe H:Audio Club K:USA P:Canada W:Europe

T:England U:PX(Far East, Hawaii)

UJE:AAFES(Europe) X:Australia M:Other Areas

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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
△ 47	1C		L01-6682-05	POWER TRANSFORMER(REMOTE)	E	
△ 47	1C		L01-7172-05	POWER TRANSFORMER(REMOTE)	UJE	
△ 48	1C	*	L01-7231-05	POWER TRANSFORMER(MAIN)	K	
△ 48	1C	*	L01-7232-05	POWER TRANSFORMER(MAIN)	E	
△ 48	1C	*	L01-7235-05	POWER TRANSFORMER(MAIN)	UJE	
△ 48	1C	*	L01-7237-05	POWER TRANSFORMER(MAIN)	P	
A	1D		N08-0128-35	BINDING POST (GND)		
B	1D		N09-0292-05	STEPPED SCREW (Ø3X19)		
K	1D		N09-1473-05	TAPPING SCREW (M3X8)	E	
P	3B		N09-1472-05	TAPTITE SCREW (Ø1.7X5)		
△ S1	1B		S40-1073-05	PUSH SWITCH (MAIN POWER)		
△ S2	3D		S31-2053-05	SLIDE SWITCH (POWER TYPE)	UJE	
△ S3	1C		S31-2113-05	SLIDE SWITCH		
64	1A		T90-0104-25	LOOP ANTENNA		
65	2A		T90-0132-05	T TYPE ANTENNA		
69	1A		W09-0022-05	BATTERY		
70	2B	*	W09-0031-05	BATTERY (LITHIUM3V, 180MAH)		
POWER AMPLIFIER UNIT (X07-2300-11)						
D52	3C		B30-1012-05	LED(SLP-981C-50)PSWBR STAND BY		
C1	.2		CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C3	.4		CC45FSL1H470J	CERAMIC 47PF J		
C5	.6		CC45FSL1H121J	CERAMIC 120PF J	E	
C7	.8		CF92FV1H682J	MF 6800PF J		
C9	.10		CE04KW1A101M	ELECTRO 100UF 10WV		
C11	.12		CC45FSL1H120J	CERAMIC 12PF J		
C13	.14		CC45FSL1H220J	CERAMIC 22PF J		
C15	.16		CC45FSL1H010C	CERAMIC 1.0PF C	KPUJE	
C15	.16		CC45FSL1H060D	CERAMIC 6.0PF D	E	
C17	.18		CC45FSL1H330J	CERAMIC 33PF J		
C21	.22		CC45FSL1H221J	CERAMIC 220PF J		
C25	.26		CC45FSL1H101J	CERAMIC 100PF J		
C29	.30		C91-0769-05	CERAMIC 0.01UF M		
C31	.34		CF92FV1H104J	MF 0.10UF J	E	
C31	.32		CF92FV1H473J	MF 0.047UF J	KPUJE	
C35	.36		CE04KW1H010M	ELECTRO 1.0UF 50WV		
C37	.38		CE04KW1J470M	ELECTRO 47UF 63WV		
C40		*	CK45FF1H103Z	CERAMIC 0.010UF Z		
C41			C90-1333-05	NP-ELEC 10UF 25WV		
C42			CE04KW1H330M	ELECTRO 33UF 50WV		
C43	.44		C90-0538-05	ELECTRO 7500UF 56WV		
C45			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C46			CE04KW1E332M	ELECTRO 3300UF 25WV		
C47			CE04KW1A470M	ELECTRO 47UF 10WV		
C48	.49		CE04KW1C470M	ELECTRO 47UF 16WV		
C50			CE04KW1C220M	ELECTRO 22UF 16WV		
C51			CE04KW1H100M	ELECTRO 10UF 50WV		
C52			CE04KW1C470M	ELECTRO 47UF 16WV		
C53			C91-0745-05	CERAMIC 100PF K		
C54			CE04KW1E470M	ELECTRO 47UF 25WV		
C55			CE04KW1V330M	ELECTRO 33UF 35WV		
C56	.57		CK45FF1H103Z	CERAMIC 0.010UF Z		
C58			CK45B1H102K	CERAMIC 1000PF K		

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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	Destination 仕向	Re- marks 備考
C61 -64			CK45FB1H6B1K	CERAMIC 680PF K	E	
C65			CE04KW1C471M	ELECTRO 470UF 16MV	KPE	
C65			CE04KW1V331M	ELECTRO 330UF 35MV	UUE	
C66			CE04KW1H4R7M	ELECTRO 4.7UF 50MV		
C67			CE04KW1H010M	ELECTRO 1.0UF 50MV		
Δ C68			C91-0023-05	CERAMIC 0.01UF AC250V	UUE	
Δ C68			C91-0647-05	CERAMIC 0.01UF P	KPE	
C81			CE04KW1A101M	ELECTRO 100UF 10MV		
C82			CK45FF1H473Z	CERAMIC 0.047UF Z		
C83 ,B4			CE04JW0J100M	ELECTRO 10UF 6.3MV		
C85			CE04JW1H010M	ELECTRO 1.0UF 50MV		
E1	2B		E11-0127-05	PHONE JACK (3P)		
E2	2D		E11-0152-05	MINIATURE PHONE JACK (3P) PLAYER		
E3	2D		E13-0119-05	PHONE JACK (1P) CD		
E4	2D		E20-0823-05	LOCK TERMINAL BOARD (8P) SPKR		
Δ F1	1C		F05-3121-05	FUSE (SEMKS) (250V T3.15A)	E	
Δ F1	1C		F05-6027-05	FUSE (UL) (250V 6A)	KP	
Δ F1 ,2	1C		F05-3022-05	FUSE (250V 3A)	UUE	
Δ F3	2C		F05-1521-05	FUSE (250V 1.5A)	UUE	
Δ F3	2C		F05-1623-05	FUSE (SEMKS) (250V T1.6A)	E	
Δ F3	2C		F06-1521-05	FUSE (UL) (250V 1.5A)	KP	
B4	1C		J13-0041-05	FUSE CLIP	KPUUE	
B4	2C		J13-0054-05	FUSE CLIP	E	
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
L3 ,4			L39-0123-05	PEAKING COIL		
L	2B,2C		N29-0035-05	PUSH RIVET (3.5X5.5)		
M	1C		N09-0333-05	TAPPING SCREW (7/32X12)		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R23 -26			RD14AB2E102J	FL-PROOF RD 1.0K J 1/4W		
R27 ,28			RD14AB2E161J	FL-PROOF RD 160 J 1/4W		
R33 -36			RD14AB2E221J	FL-PROOF RD 220 J 1/4W		
R47 -50			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R51 -54			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R55 -58			RD14AB2E221J	FL-PROOF RD 220 J 1/4W		
R73			RD14AB2E220J	FL-PROOF RD 22 J 1/4W	KPUUE	
R73 ,74			RD14AB2E100J	FL-PROOF RD 10 J 1/4W	E	
R74			RD14AB2E100J	FL-PROOF RD 10 J 1/4W	KPUUE	
R85 ,86			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R107,108			RS14DB3A6B1J	FL-PROOF RS 680 J 1W		
R112			RS14DB3A1B1J	FL-PROOF RS 180 J 1W		
R114			RD14AB2E470J	FL-PROOF RD 47 J 1/4W		
R115,116			RS14DB3A100J	FL-PROOF RS 100 J 1W		
R117			RD14AB2E100J	FL-PROOF RD 10 J 1/4W		
R121,122			RS14DB3A561J	FL-PROOF RS 560 J 1W		
R123			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
R128,129			RD14AB2E390J	FL-PROOF RD 39 J 1/4W	UUE	
R130			R92-0173-05	RC 2.2M M 1/2W	KP	
R152			RD14AB2E470J	FL-PROOF RD 47 J 1/4W		
VR1 ,2		*	R12-0093-05	TRIMMING PST. (330) BIAS		
K1	2C		SS1-2045-05	MAGNETIC RELAY		
K2	2C		SS1-1036-05	MAGNETIC RELAY		

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S1 S2 -12	2B 3B		S42-2130-05 S40-1064-05	MULTIPLE PUSH SWITCH(SPEAKERS) PUSH SWITCH(CD/AUX, TUNER, ETC.)		
D1 +2 D9 -12 D13 D14 D15 -18			1SS133 1SS178 DSM1A1 1SS178 DSM1A1	DIODE DIODE DIODE DIODE DIODE		
D19 D20 +21 D22 D23 D24 -27			RD13ES(B2) 1SS133 * RDB. 2ES(B) RD15ES(B) GP25DL	ZENER DIODE DIODE ZENER DIODE ZENER DIODE DIODE		
D28 D31 -34 D35 +36 D37 D38		*	RDS. 1ES(B) DSM1A1 1SS178 RD6. 2ES(B2) DSM1A1	ZENER DIODE DIODE DIODE ZENER DIODE DIODE		
D39 D41 +42 D43 +44 D51 IC1			RD15ES(B) RDS. 6ES(B2) 1SS133 PH302B UPC1237H	ZENER DIODE ZENER DIODE DIODE PHOTO DIODE IC(PROTECTION)		
IC2 Q1 -8 Q9 -14 Q15 +16 Q17 +18			UPC1474HA 2SC945(A)(Q,P) 2SA992(F,E) 2SC1845(F,E) 2SC3419	IC(REMOTE CONTROLLER PREAMP) TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q19 +20 Q19 +20 Q21 +22 Q23 +24 Q25 +26			2SA733(A)(Q,P) 2SA999(E,F) 2SC2590(O,R,S) 2SA1110(O,R,S) 2SC2579+5(B,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q27 +28 Q31 +32 Q34 Q35 +36 Q35 +36			2SA1104+5(B,P) 2SA992(F,E) 2SD1266(O,P) 2SC2320(E,F) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q37 Q38 Q38 Q39 -42 Q39 -42			2SC2003(L,K) 2SC2320(E,F) 2SC945(A)(Q,P) 2SA733(A)(Q,P) 2SA999(E,F)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q43 +44 Q45 Q46 Q46 Q47			2SD1266(O,P) 2SC2003(L,K) 2SC2320(E,F) 2SC945(A)(Q,P) * 2SB941(R,Q)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q48 Q48 Q49 Q49 Q50 Q50 Q51			2SC2003(L,K) 2SD1266(O,P) 2SA733(A)(Q,P) 2SA999(E,F) 2SC2320(E,F) 2SC945(A)(Q,P) 2SC2003(L,K)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	KPE UJE KPE	

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Q51 +52			2SD1266(O,P)	TRANSISTOR		UJE
DISPLAY UNIT (X14-1770-11)						
C1 C2 C3 C4 C5		*	CK45FF1H223Z CE04DWOJ471M CE04W1A470M CE04W1V4R7M CE04W1H010M	CERAMIC ELECTRO ELECTRO ELECTRO ELECTRO		
C6 C7 C8 +9 C10 C11 +12			CE04W1H100M CE04W1A330M CK45FF1H223Z CK45FF1H103Z CE04FW1V4R7M	ELECTRO ELECTRO CERAMIC CERAMIC ELECTRO		
C13 +14 C15 +16 C17 C19			CF92FV1H104J CC45FL1H330J CK45FF1H223Z CK45FB1H152K	MF CERAMIC CERAMIC CERAMIC		
E5	1C		EO6-0805-15	CYLINDRICAL RECEPTACLE (DIN)		
X1		*	L78-0207-05	RESONATOR (4.194MHZ)		
S1 -36 S37 S39	3B, 3C 2B 1B	*	S40-1064-05 S40-2343-05 S31-2072-05	PUSH SWITCH PUSH SWITCH (FM MODE) SLIDE SWITCH (CHANNEL SPACE)		UJE
D1 -9 D10 D11 +12 D13 D14 -33		*	1SS133 RD20E(B) 1SS133 RD10E(B) 1SS133	DIODE ZENER DIODE DIODE ZENER DIODE DIODE		KPUJE
D14 -35 D36 -40 D38 -40 FL1 IC1			1SS133 1SS133 1SS133 * FIP18AMW24 * UPD75196-172-36	DIODE DIODE DIODE FLUORESCENT INDICATOR TUBE IC(MICROPROCESSOR)		E UJE KPE
IC2 IC3 +4 IC3 +4 Q1 -3 Q1 -3 Q1 -3		*	LC7565 MB840288M UPD40288C 2SA733(A)(Q,P) 2SA933S(O,R)	IC(GRAPHIC EQ FL DISPLAY DR) IC(BCD-T8-DECIMAL DECODER) IC(BCD-T8-DECIMAL DECODER) TRANSISTOR TRANSISTOR		
Q4 Q5 -17 Q5 -17 Q18			2SC1845(F,E) 2SC1740S(O,R) 2SC945(A)(Q,P) 2SC945(A)(Q,P)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
RECEIVER UNIT (X14-1780-11)						
C1 +2 C3 +4 C5 +6 C9 +10 C11 +12			CE04FW1C100M C91-0749-05 CF92FV1H222J CE04FW1A101M CF92FV1H332J	ELECTRO CERAMIC MF ELECTRO MF		E
C13 +14 C15 +16 C17 -22 C25 -28 C29		*	CF92FV1H123J CE04FW1V4R7M * C91-0755-05 CE04FW1H100M CE04FW1H010M	MF ELECTRO CERAMIC ELECTRO ELECTRO		
C30 -35			C91-0769-05	CERAMIC		

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C36			CK45FF1H473Z	CERAMIC 0.047UF Z		
C37 .38			CE04FW1C470M	ELECTR0 47UF 16WV		
C39 .40			CK45FF1H473Z	CERAMIC 0.047UF Z		
C41 .42			CE04FW1C101M	ELECTR0 100UF 16WV		
C43			CE04FW1A470M	ELECTR0 47UF 10WV		
C44			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C45 .46			CK45FF1H473Z	CERAMIC 0.047UF Z		
C47			CE04HW1H3R3M	NP-ELEC 3.3UF 50WV		
C48			CK45FB1H102K	CERAMIC 1000PF K		
C49			CK45FF1H473Z	CERAMIC 0.047UF Z		
C101			CE04FW1C330M	ELECTR0 33UF 16WV		
C102			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C103-107			C91-0769-05	CERAMIC 0.01UF M		
C108			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C109			C91-0745-05	CERAMIC 100PF K	E	
C109		*	C91-0751-05	CERAMIC 330PF K	KP	
C109		*	C91-0754-05	CERAMIC 560PF K	UJE	
C110			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C111			C91-0769-05	CERAMIC 0.01UF M		
C112-113			CE04FW1C330M	ELECTR0 33UF 16WV		
C114			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C115			CK45FF1H223Z	CERAMIC 0.022UF Z		
C116			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C117			C91-0769-05	CERAMIC 0.01UF M	KPUJE	
C117-118			C91-0769-05	CERAMIC 0.01UF M	E	
C119			CE04FW1C100M	ELECTR0 10UF 16WV	E	
C120			0009FS1H391JY0	POLYSTY 390PF J		
C121			CK45FF1H473Z	CERAMIC 0.047UF Z		
C122			C91-0757-05	CERAMIC 0.001UF K		
C123-125			CK45FF1H223Z	CERAMIC 0.022UF Z		
C126			CE04FW1C330M	ELECTR0 33UF 16WV		
C127			CK45FF1H223Z	CERAMIC 0.022UF Z		
C128			C91-0757-05	CERAMIC 0.001UF K		
C129			CE04FW1H3R3M	ELECTR0 3.3UF 50WV		
C130			CE04FW1V4R7M	ELECTR0 4.7UF 35WV		
C131			C91-0769-05	CERAMIC 0.01UF M		
C132			CE04FW1HR47M	ELECTR0 0.47UF 50WV		
C133			CK45F1H103Z	CERAMIC 0.010UF Z	E	
C134			C91-0769-05	CERAMIC 0.01UF M		
C135			CE04FW1C470M	ELECTR0 47UF 16WV		
C136			CF92FV1H473J	MF 0.047UF J		
C137			CF92FV1H103J	MF 0.010UF J		
C138-139			CK45F1H103Z	CERAMIC 0.010UF Z	E	
C140			CE04FW1C101M	ELECTR0 100UF 16WV		
C141			CE04FW1V4R7M	ELECTR0 4.7UF 35WV	KPUJE	
C141-142			CE04FW1V4R7M	ELECTR0 4.7UF 35WV	E	
C143			CF92FV1H473J	MF 0.047UF J		
C144			CE04FW1H2R2M	ELECTR0 2.2UF 50WV		
C145			CE04FW1H3R3M	ELECTR0 3.3UF 50WV		
C146			0009FS1H102JY0	POLYSTY 1000PF J		
C147			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C148-149			CC45FSL1H121J	CERAMIC 120PF J	UJE	
C148-149			CF92FV1H132J	MF 1300PF J	KP	
C148-149		*	CK45FB1H471K	CERAMIC 470PF K	E	
C150-151			C91-0769-05	CERAMIC 0.01UF M		

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C152,153			CE04FW1H2R2M	ELECTR0 2.2UF 50WV		
C154,155			CF92FV1H222J	MF 2200PF J		
C156-157			CE04FW1C100M	ELECTR0 100UF 16WV		
C156,157			CE04FW1H010M	ELECTR0 1.0UF 50WV		KPUJE
C158-159			CK45F1H103Z	CERAMIC 0.010UF Z		E
C160,161			C91-0769-05	CERAMIC 0.01UF M		
C162-163			CC45FCH1H390J	CERAMIC 39PF J		
C164			CE04HW1H2R2M	NP-ELEC 2.2UF 50WV		
C165			CF92FV1H473J	MF 0.047UF J		
C166			CE04FW1A101M	ELECTR0 100UF 10WV		
C167,168			C91-0769-05	CERAMIC 0.01UF M		
C169			CE04FW1C330M	ELECTR0 33UF 16WV		
C170			CE04FW1A470M	ELECTR0 47UF 10WV		
C171			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C172,173		*	CF92FV1H133J	MF 0.013UF J	UJE	
C175			C91-0769-05	CERAMIC 0.01UF M		
C176-177			CF92FV1H243J	MF 0.024UF J		UJE
C178		*	C91-0754-05	CERAMIC 560PF K	UJE	
C179			CK45FF1H103Z	CERAMIC 0.010UF Z		
C201,202			CE04FW1HR47M	ELECTR0 0.47UF 50WV		
C209-212			CE04FW1H2R2M	ELECTR0 2.2UF 50WV		
C213,214			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C215,216			CE04FW1HR22M	ELECTR0 0.22UF 50WV		
C217,218			CE04FW1HOR1M	ELECTR0 0.1UF 50WV		
C219,220			CF92FV1H473J	MF 0.047UF J		
C221,222			CF92FV1H223J	MF 0.022UF J		
C223,224			CF92FV1H222J	MF 8200PF J		
C225,226			CF92FV1H332J	MF 3300PF J		
C227,228			CF92FV1H184J	MF 0.18UF J		
C229,230			CF92FV1H104J	MF 0.10UF J		
C231,232			CF92FV1H223J	MF 0.022UF J		
C233,234			CF92FV1H103J	MF 0.010UF J		
C235,236			CF92FV1H272J	MF 2700PF J		
C237,238			CF92FV1H122J	MF 1200PF J		
C239,240			CK45FB1H471K	CERAMIC 470PF K		
C241,242			CE04FW1H010M	ELECTR0 1.0UF 50WV		
C243,244			CE04FW1C100M	ELECTR0 10UF 16WV		
C245,246			CE04FW1C101M	ELECTR0 100UF 16WV		
C247			CK45FF1H473Z	CERAMIC 0.047UF Z		
TC1 .2			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF)		
106	2D,3D		E23-0125-05	TERMINAL (GND)		
E6 .7	2D		E13-0621-05	PHONE JACK(6P) AUDIO INPUT		
E8	2D		E20-0452-05	SCREW TERMINAL BOARD(4P)ANT.		
CF1 .2			L72-0140-05	CERAMIC FILTER		KPUJE
CF1 .2			L72-0190-05	CERAMIC FILTER		E
CF3			L72-0099-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1			L40-2292-14	SMALL FIXED INDUCTOR(2.2UH.M)		
L2		*	L39-0128-05	PEAKING COIL		
L3			L40-2292-14	SMALL FIXED INDUCTOR(2.2UH.M)		E
L4			L32-0277-15	MW OSCILLATING COIL		
L5			L31-0509-05	MW-RF COIL		
L6			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH.K)		
L7			L40-2292-12	SMALL FIXED INDUCTOR(2.2UH.M)		E

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L8			L79-0125-05	LC FILTER	E	
L9			L79-0154-05	LC FILTER	E	
T1		*	L30-0437-05	FM IFT		
T2		*	L30-0438-05	FM IFT		
T3			L30-0362-05	AM IFT		
X1			L77-0578-05	CRYSTAL RESONATOR(7.2MHZ)		
R68 -71			RD14GB2E100J	FL-PROOF RD 10 J 1/4W		
R101			RD14GB2E330J	FL-PROOF RD 33 J 1/4W	KPUUE	
R101			RD14GB2E680J	FL-PROOF RD 68 J 1/4W	E	
R119			RD14AB2E680J	FL-PROOF RD 68 J 1/4W	E	
R151			RD14AB2E680J	FL-PROOF RD 68 J 1/4W	E	
R155			RD14GB2E330J	FL-PROOF RD 33 J 1/4W	E	
R293-294			RD14GB2E220J	FL-PROOF RD 22 J 1/4W		
VR2			R12-3076-05	TRIMMING PNT. (10K) VCR		
VR3			R12-3077-05	TRIMMING PNT. (22K) SEPARATION	KP	
VR3			R12-3079-05	TRIMMING PNT. (47K) SEPARATION	UUE	
VR3			R12-5046-05	TRIMMING PNT. (100K)SEPARATION	E	
S1	2C		S40-4066-05	PUSH SWITCH (E0)		
S2	2D		S31-2075-05	SLIDE SWITCH (FM DE-EMPHASIS)	UUE	
D1 -28			1SS133	DIODE		
D31			KV1236(Z2)	VARIABLE CAPACITANCE DIODE		
D32 -35			1SS133	DIODE		
D36			RD6.2E(B)	ZENER DIODE		
D37			1SS133	DIODE		
IC1			AN6556F	IC(OP AMP X2)		
IC2		*	TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3			TC9176P	IC(2CH ELECTRONIC VOLUME)		
IC4			AN6556F	IC(OP AMP X2)		
IC5		*	LA1232	IC(FM IF/DETECTION)		
IC6			LA1245	IC(AM)		
IC7			LA3390	IC(FM MPX)		
IC8			LM7000	IC(PLL FREQUENCY SYNTHESIZER)		
IC9			AN6556	IC(OP AMP X2)		
IC10		*	LC7522	IC(7CH GRAPHIC EQUALIZER)		
Q5 -6			2SC945(A)(O,P)	TRANSISTOR		
Q6			2SA733(A)(O,P)	TRANSISTOR		
Q7			2SA933S(O,R)	TRANSISTOR		
Q21			2SC1923	TRANSISTOR		
Q22 -24			2SC1740S(O,R)	TRANSISTOR	E	
Q22 -24			2SC945(A)(O,P)	TRANSISTOR	E	
Q24			2SC1740S(O,R)	TRANSISTOR	KPUUE	
Q24			2SC945(A)(O,P)	TRANSISTOR	KPUUE	
Q26 +27			2SA733(A)(O,P)	TRANSISTOR		
Q26 +27			2SA933S(O,R)	TRANSISTOR		
Q28 +29			2SC1845(F,E)	TRANSISTOR		
Q30 +31			2SC2003(L,K)	TRANSISTOR		
Q32 +33			2SC1740S(O,R)	TRANSISTOR	UUE	
Q32 +33			2SC945(A)(O,P)	TRANSISTOR	UUE	
Q41 -55			2SC1740S(O,R)	TRANSISTOR		
Q41 -55			2SC945(A)(O,P)	TRANSISTOR		
Q56			2SC2320(E,F)	TRANSISTOR		

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VIDEO CONTROL UNIT (X14-1790-11)						
C1 +2			CE04FW1C330M	ELECTRO 33UF 16WV		
C3			CE04HW1C220M	NP-ELEC 22UF 16WV		
C4		*	CE04DW1A471M	ELECTRO 47UF 10WV		
C5 +6		*	CE04DW1A331M	ELECTRO 33UF 10WV		
C7 -11			CK45FB1H561K	CERAMIC 560PF K	E	
C11			CK45FB1H561K	CERAMIC 560PF K		KPUUE
C12			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C14			CF92FV1H123J	MF 0.012UF J		
C15			CF92FV1H332J	MF 3300PF J		
C16			CF92FV1H123J	MF 0.012UF J		
C17			CF92FV1H332J	MF 3300PF J		
C18			CF92FV1H123J	MF 0.012UF J		
C19			CF92FV1H332J	MF 3300PF J		
C20			CE04FW1C100M	ELECTRO 10UF 16WV		
C21 +22			CE04FW1H010M	ELECTRO 1.0UF 50WV		
C23 +24			CE04FW1V477M	ELECTRO 4.7UF 35WV		
C25		*	CE04DW1C331M	ELECTRO 330UF 16WV		
C26 +27			CE04FW1A470M	ELECTRO 47UF 10WV		
C28 +29			CE04FW1C330M	ELECTRO 33UF 16WV		
C31			CE04FW1A470M	ELECTRO 47UF 10WV		
C32			CE04FW1C101M	ELECTRO 100UF 16WV		
C33			CE04FW1V477M	ELECTRO 4.7UF 35WV		
E9	1D		E13-0227-05	PHONE JACK(2P) MONITOR OUT		
E10 +11	1D		E13-0625-05	PHONE JACK(6P) VIDEO		
R76			RD14GB2E560J	FL-PROOF RD 56 J 1/4W		
R86			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R89			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
S1	1D	*	S31-2076-05	SLIDE SWITCH (MONO/STEREO)		
S2	2D	*	S42-2131-05	MULT. PUSH SWITCH(FM)		
D1 -8			1SS133	DIODE		
D1 -8			1S2076	DIODE		
D9			RD6.2E(B)	ZENER DIODE		
D10 +11			RD6.2E(B)	ZENER DIODE		
IC1			BA7001	IC(SWITCHER FOR VCR)		
IC2 +3			AN6556	IC(OP AMP X2)		
IC4			UPD4066BC	IC(BILATERAL SWITCH X4)		
Q1			2SC2320(E,F)	TRANSISTOR		
Q1			2SC945(A)(O,P)	TRANSISTOR		
Q2			2SC2003(L,K)	TRANSISTOR		
Q3 +4			2SC2320(E,F)	TRANSISTOR		
Q5 +6			2SC1845(F,E)	TRANSISTOR		
Q7			2SC2320(E,F)	TRANSISTOR		
Q7			2SC945(A)(O,P)	TRANSISTOR		
FRONT-END UNIT (X86-1010-11)						
C1		*	C91-0713-05	CERAMIC 2.2PF K	E	
C1		*	C91-0716-05	CERAMIC 3.9PF K	E	KPUUE
C2			CC45FSL1H150J	CERAMIC 15PF J	E	
C2			CC45FSL1H470J	CERAMIC 47PF J	E	KPUUE
C3			C91-0769-05	CERAMIC 0.01UF M	E	
C4			CK45F1H103Z	CERAMIC 0.010UF Z	E	
C4			C91-0757-05	CERAMIC 0.001UF K	E	KPUUE

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C5		*	CC45FSL1H090D	CERAMIC 9.0PF D	E	
C6	.7		CC45FSL1H060D	CERAMIC 6.0PF D	E	
C7		*	C91-0716-05	CERAMIC 3.9PF K	KPULE	
C8		*	C91-0716-05	CERAMIC 3.9PF K	E	
		*	C91-0720-05	CERAMIC 8.2PF K		
C9			C91-0749-05	CERAMIC 220PF K		
C10	.11		C91-0769-05	CERAMIC 0.01UF M		
C12			CC45FSL1H020C	CERAMIC 2.0PF C	E	
C13			C91-0709-05	CERAMIC 1PF M	KPULE	
C13		*	C91-0713-05	CERAMIC 2.2PF K	E	
C14		*	CC45FUJ1H080D	CERAMIC 8.0PF D		
C15		*	C91-0725-05	CERAMIC 15PF J		
C16			C91-0733-05	CERAMIC 33PF J		
C17			C91-0769-05	CERAMIC 0.01UF M		
C18		*	C91-0713-05	CERAMIC 2.2PF K		
C19			CE04FW1C470M	ELECTRO 47UF 16WV		
C20			CC45FSL1H470J	CERAMIC 47PF J		
C21			C91-0769-05	CERAMIC 0.01UF M	E	
TC1			C05-0302-05	CERAMIC TRIMMER CAPACITOR(11PF)		
L1			L31-0512-05	FM-RF COIL		
L2			L31-0513-05	FM-RF COIL		
L3			L31-0515-05	FM-RF COIL		
L4	.5		L31-0514-05	FM-RF COIL	KPULE	
L4			L31-0514-05	FM-RF COIL	E	
L6			L40-1092-14	SMALL FIXED INDUCTOR(1UH,M)		
L7		*	L30-0427-05	FM IFT		
L8		*	L32-0318-05	FM OSCILLATING COIL		
L9			L40-1092-14	SMALL FIXED INDUCTOR(1UH,M)	E	
R16			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
D1	.4		KV1310-4	VARIABLE CAPACITANCE DIODE	E	
D1		.2		KV1310-3	VARIABLE CAPACITANCE DIODE	KPULE
D4			KV1310-3	VARIABLE CAPACITANCE DIODE	KPULE	
Q1			2SK161(GR)	FET	KPULE	
Q1			3SK73(GR)	FET	E	
Q2			2SC1923(Q)	TRANSISTOR		
Q3			2SK161(Y,GR)	FET	E	
Q4	.5		2SC1923	TRANSISTOR		

E: Scandinavia & Europe H: Audio Club K: USA P: Canada W: Europe
T: England U: PX(Far East, Hawaii)
UE: AAFES(Europe) X: Australia M: Other Areas

⚠ indicates safety critical components.

SPECIFICATIONS

KR-V75R
AUDIO SECTION
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 0.008 % total harmonic distortion

73 watts per channel minimum RMS, both channel driven at 8 ohms at 1 kHz with no more than 0.008 % total harmonic distortion

Total Harmonic Distortion
(20 Hz-20,000 Hz,
8 ohms) 0.008 % at 70 W
(1 kHz, 8 ohms) 0.002 % at 70 W

Inter modulation Distortion 0.008 % at 70 W

Input Sensitivity/Impedance
PHONO (MM) 2.5 mV/47 kohms
CD/AUX, TAPE, VIDEO 150 mV/47 kohms

Frequency Response
PHONO (RIAA standard
Curve) 20 Hz-20,000 Hz ... ±0.5 dB
TAPE, CD/AUX 10 Hz-100,000 Hz ... +0 dB,
-3 dB

Signal to Noise Ratio
PHONO (MM) 73 dB
CD/AUX, TAPE, VIDEO 100 dB

Graphic Equalizer
Center Frequency 60 Hz, 150 Hz, 400 Hz, 1 kHz,
2.4 kHz, 6 kHz, 15 kHz
Control Range ±12 dB

VIDEO SECTION
Inputs VIDEO 1,2 1 Vp-p, 75 ohms unbalanced
Output VIDEO 1,2 1 Vp-p, 75 ohms unbalanced
MONITOR VIDEO
OUT 1 Vp-p, 75 ohms unbalanced

FM TUNER SECTION
Tuning Frequency Range 87.5 MHz-108 MHz
Antenna Impedance 300 ohms balanced & 75
ohms unbalanced
Usable Sensitivity 10.8 dBf (1.9 μV)

50 dB Quieting Sensitivity
MONO 14.2 dBf (2.8 μV)
STEREO 36.8 dBf (38 μV)

Signal to Noise Ratio at 65 dBf
MONO 80 dB
STEREO 72 dB

Total Harmonic Distortion at 1,000 Hz
MONO 0.07 %
STEREO 0.1 %

Frequency Response 30 Hz-15,000 Hz +0.5 dB,
-2 dB

Stereo Separation 50 dB at 1,000 Hz
Selectivity 55 dB at 400 kHz

Capture Ratio 1.0 dB
Image Rejection Ratio 38 dB
IF Rejection Ratio 80 dB
Spurious Rejection Ratio 75 dB
AM Suppression Ratio 72 dB

AM TUNER SECTION

Tuning Range
530 kHz-1,810 kHz
(with the AM tuning interval set at 10 kHz)

Usable Sensitivity 10 μV (400 μV/m)
Signal to Noise Ratio 50 dB
Total Harmonic Distortion 0.3 %
Selectivity 25 dB

GENERAL
Power Requirement 60 Hz, 120 V
Power Consumption 3.0 A
AC Outlet Switched x 3 (200 W)
Dimensions 420(W) x 128.5(H) x 321(D)mm
(16-9/16" x 5-1/6" x 12-5/8")
Weight (Net) 8.8 kg (19.4 lb)

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

Kenwood poursuit une politique de progrès constants en ce qui concerne le développement. Pour cette raison, les spécifications sont sujettes à modifications sans préavis.

Kenwood strebt ständige Verbesserungen in der Entwicklung an. Daher bleiben Änderungen der technischen Daten jederzeit vorbehalten.