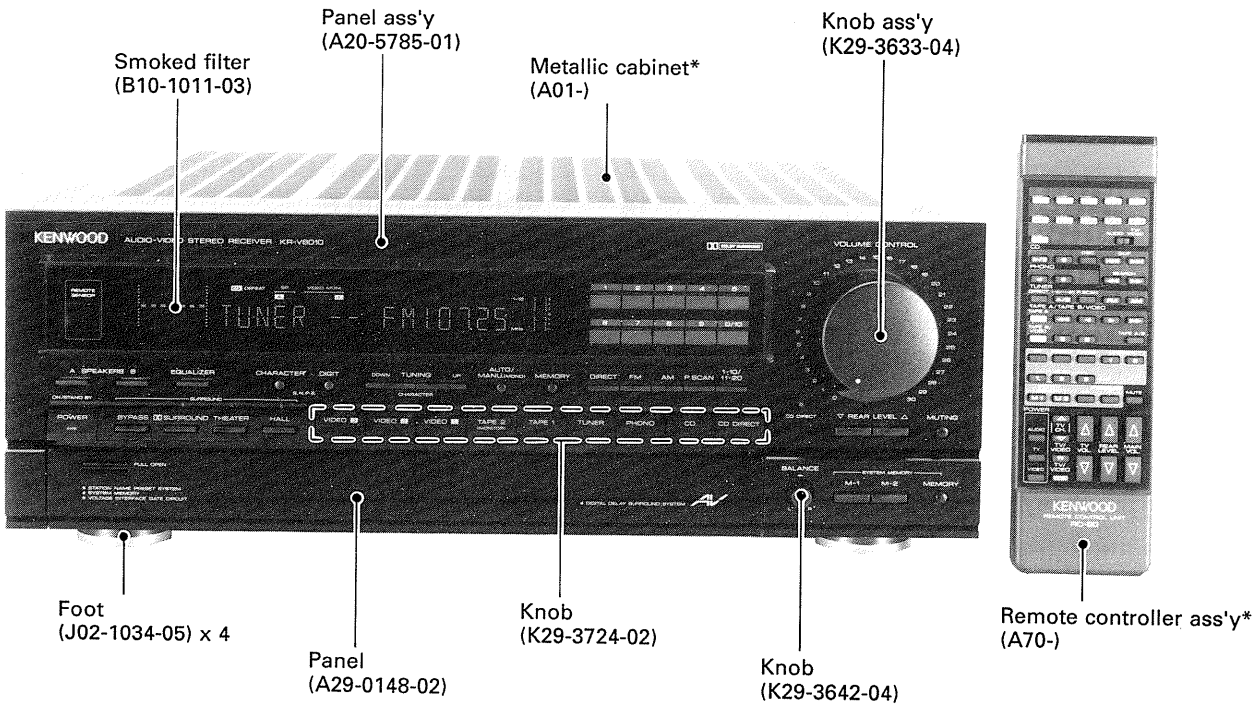
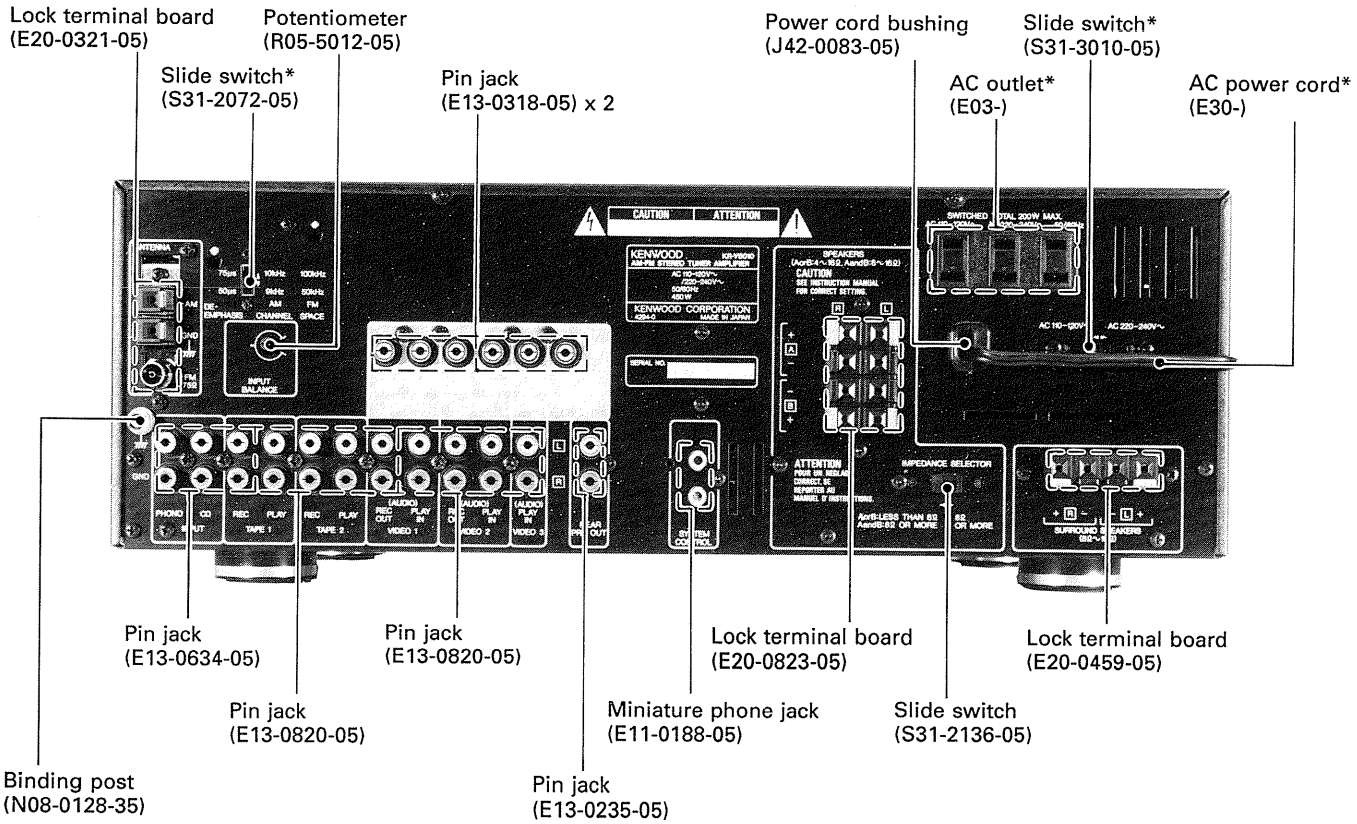
AUDIO / VIDEO STEREO RECEIVER

KR-V8010

SERVICE MANUAL

KENWOOD





*** Refer to parts list on page 87.**

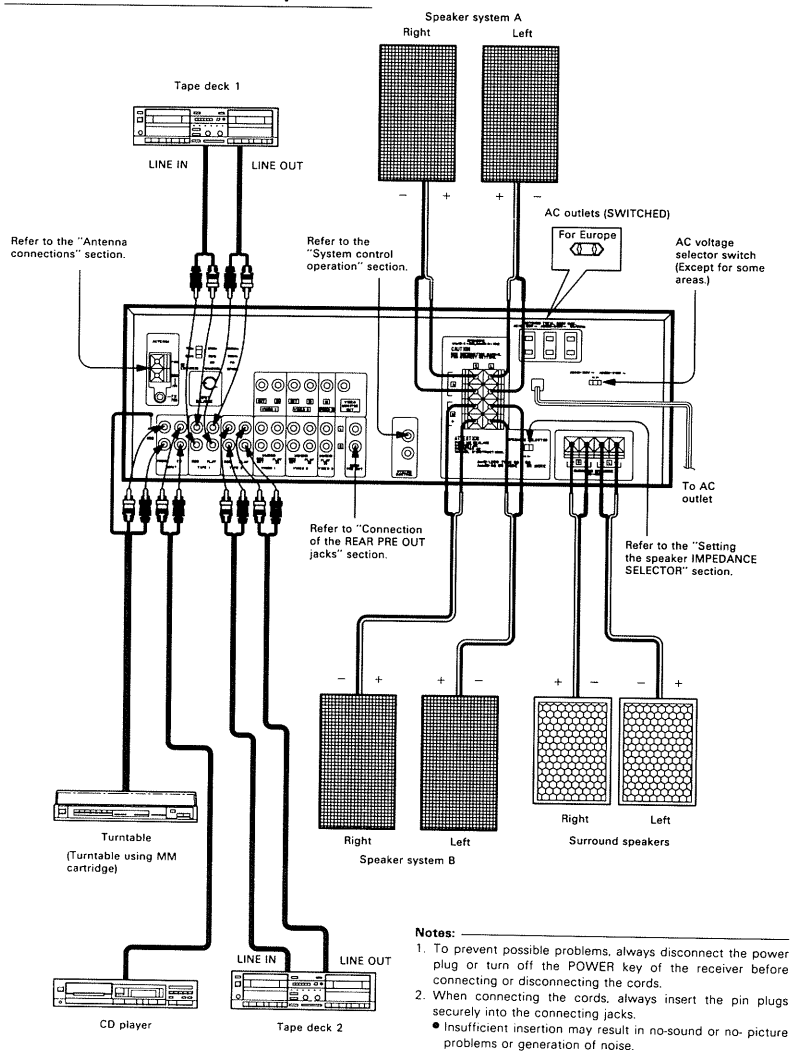
CONTENTS

Unit name	Japan made	Singapore made
Tuner unit	X05-3810-10 : K,P	X05-3530-11 : K,P
	X05-3810-81 : U,UE	X05-3530-82 : U,UE
	X05-3812-71 : E	X05-3532-72 : E
Pre amp unit	X08-2330-11 : K	X08-2300-11 : K
	X08-2331-02 : P	X08-2301-02 : P
	X08-2330-82 : U,UE	X08-2300-82 : U,UE
	X08-2332-71 : E	X08-2302-71 : E
Audio unit	X09-2850-11 : K,U,UE	X09-2930-11 : K,U,UE
	X09-2851-02 : P	X09-2931-02 : P
	X09-2852-71 : E	X09-2932-71 : E
Display unit	X14-2560-11 : K,P,U,UE	X14-2700-11 : K,P,U,UE
	X14-2562-71 : E	X14-2702-71 : E
Main amp unit	X89-1090-11 : K,U,UE	X89-1100-11 : K,U,UE
	X89-1091-02 : P	X89-1101-02 : P
	X89-1092-71 : E	X89-1102-71 : E

System connections

Make connections as shown in the diagram below.
When connecting the related system components, refer also to the instruction manuals of the related components.

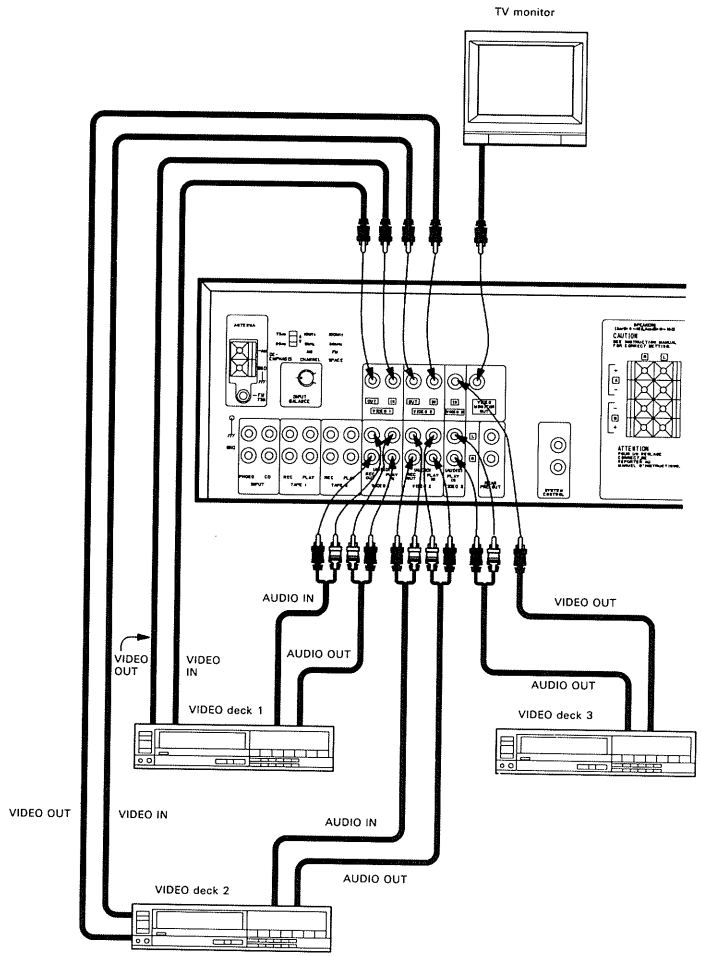
Connection of audio components



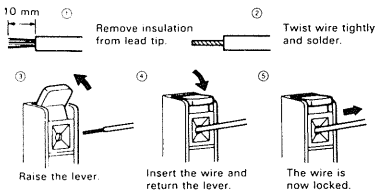
Notes:

1. To prevent possible problems, always disconnect the power plug or turn off the POWER key of the receiver before connecting or disconnecting the cords.
2. When connecting the cords, always insert the pin plugs securely into the connecting jacks.
   - Insufficient insertion may result in no-sound or no- picture problems or generation of noise.

Connection of video components



Speaker connections



Speaker lead connection

WARNING

Particular attention must be given to making good electrical contact at the receiver output and speaker terminals.
Poor or loose connections can cause sparking or burning at the terminals because of the very high power that the receiver can deliver. Follow these steps carefully.

■ Connecting the front speakers

Connect speakers rated at 4 ohm or more to the SPEAKERS terminals.

1. Connect the left speaker to the L speaker terminals on the rear of the receiver and the right speaker to the R terminals.
2. Connect each cable as shown in the illustration, taking care that the wires do not make contact with other terminals.

Notes:

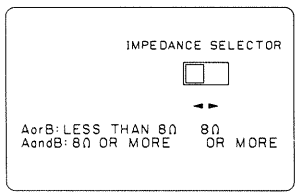
1. Take care so as not to short the positive (+) and negative (−) speaker cords.
2. If the left and right speakers, or positive and negative cables, are connected the wrong way, the reproduced sound may be unclear, with ambiguous location of the musical instruments etc. To avoid this, pay attention to the left and right and positive and negative indications when connecting the speakers.

When using the speaker A or speaker B separately

Speaker impedance	Selector position	
4Ω, 6Ω	A or B: LESS THAN 8Ω	□□
8Ω, 16Ω	8Ω OR MORE	□□

When using the speakers A and B simultaneously

Speaker impedance	Selector position	
8Ω, 16Ω	A and B: 8Ω OR MORE	□□



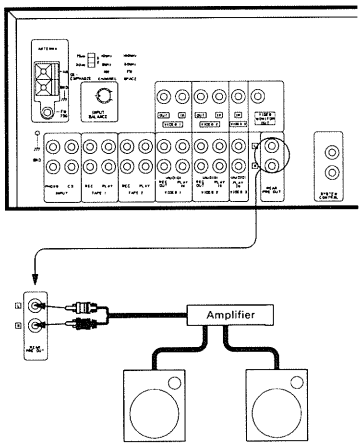
■ Setting the speaker IMPEDANCE SELECTOR

When connecting the speakers to the speaker terminals, set the IMPEDANCE SELECTOR switch according to the table on the left.

- When the IMPEDANCE SELECTOR switch is set to "8 Ω OR MORE", it is impossible to use the A and B speakers at the same time.
  Therefore, when using the speakers A and B simultaneously, be sure to set the IMPEDANCE SELECTOR switch to the "A and B: 8 Ω OR MORE" position.

Notes:

1. During speaker system connection and operation of the speaker IMPEDANCE SELECTOR, set the POWER key to OFF.
2. Check that the connected lead wires of the speaker systems do not contact with other jacks or terminals.



SURROUND SPEAKERS

■ SURROUND SPEAKER terminals

Connect speakers having an impedance of between 8 ohms and 16 ohms, and place them to the left and right behind the listening position.

■ Connection of the REAR PRE OUT jacks

The Surround sound can be enjoyed sufficiently with the built-in amplifier. However when more power is required for Surround sound, use these jacks for an amplifier to drive the Surround Speakers.
Connect these jacks to the AUX jacks, etc. of the amplifier for Surround Speakers, using the audio connection cord.

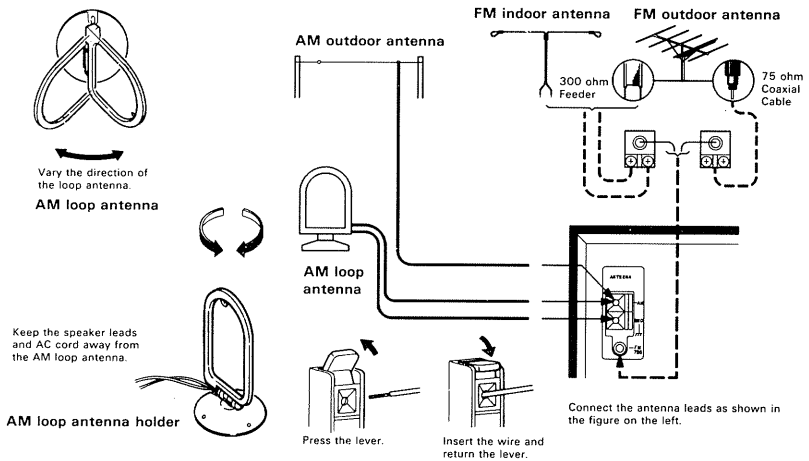
■ AC outlets

The AC outlets on the rear panel may be used to supply power to other components in the system, such as turntables, tape decks, etc. Never connect equipment whose power consumption exceeds the maximum value shown at each outlet. (In Europe, do not connect a main amplifier or similar component to any of the AC outlets.)
SWITCHED outlets:
These outlets supply power only when the unit is turned on. The maximum total capacity is 200 watts. (100 W in Europe.)

■ Ground

For maximum safety and minimum interference connect the GND terminal to a good earth ground if practicable. A good earth ground is a cold water pipe or a metal stake driven into moist earth. However, never use a gas pipe for this purpose.

Antenna connections



■ AM antennas

AM loop antenna

Attach the AM loop antenna to the supplied loop antenna stand and place it on a shelf, etc., or install it on the rack or wall with screws.
Rotate the AM loop antenna to the right or left for best reception.

Note:
Do not place the AM loop antenna directly on the unit. As this unit employs computing devices, placing the AM loop antenna on the unit may result in noise generation. Place the AM loop antenna away from the unit.

AM outdoor antenna

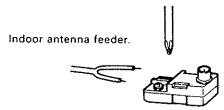
In steel buildings or at a great distance form the transmitter, it may be necessary to install an outside long wire antenna.
The end of this wire should be stripped of insulation and connected to the AM terminal. At this time, keep the loop antenna connected.

■ FM antennas

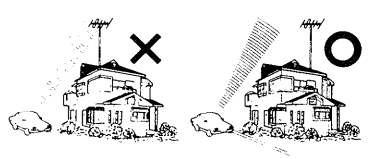
FM indoor antenna

Connect the T-shaped indoor antenna (supplied) to the 75 ohm FM ANTENNA terminal with the 75 ohm/300 ohm antenna adaptor as shown in the Antenna connections diagram. Spread the two arms that form the top of the "T" horizontally and hold them against convenient wall surfaces.
Try several locations for best results with your favorite stations. Tape the antenna in place where the best compromise is found between listening results and appearance.

Connection of the 75 ohm/300 ohm antenna adaptor



Loosen the screws with a screwdriver. Insert the antenna feeder under the screw heads and tighten the screws firmly.



- To minimize auto-ignition noise, locate the antenna as far from heavy traffic as possible.
- Keep the feeder or coaxial calbe as short as possible. Do not bundle or roll up excess cable.
- The antenna should be at least two meters (6.6 feet) from reinforced concrete walls or metal structures.

FM outdoor antenna setting

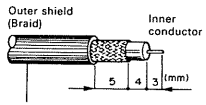
FM outdoor antenna

Be sure to use an outdoor FM antenna to receive good sound quality FM broadcasts with a minimum of noise. When connecting an outdoor antenna to the antenna terminals of this unit, use a 75 ohm/300 ohm antenna adaptor connected to the coaxial cable as illustrated. The 75 ohm/300 ohm antenna adaptor is supplied with this unit. Be sure to connect the coaxial cable to the adaptor as instructed below.

Note:
An FM outdoor antenna can be connected to the receiver with either a 75 ohm coaxial cable or a 300 ohm ribbon feeder. For proper connection, carefully read the instruction manual provided with outdoor antenna.

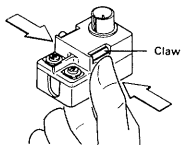
■ 75 ohm coaxial cable connection (Follow the order of numbers.)

① Arrange the coaxial cable as illustrated.

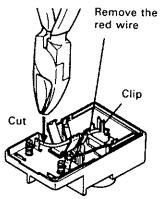


RG-6 (5C-2V) or RG-59 (3C-2V)

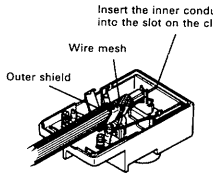
② Open the 75 ohm/300 ohm antenna adaptor cover.
Press the claws in the direction of the arrows with the fingers to release the lock and pull out the cover.



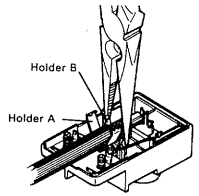
③ Cut off the red wire and remove it from the clip.



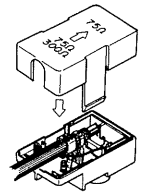
④ Connect the processed coaxial cable to 75 ohm/300 ohm antenna adaptor as shown below.



⑤ Secure the holders A and B.

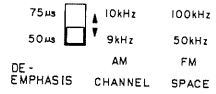


⑥ Close the cover.



	Area	Channel Space Frq.	FM DE-EMPHASIS
1.	U.S.A. Canada, Hawaii and Guam	FM: 100 kHz AM: 10 kHz	75 μs
2.	European countries and Far East countries	FM: 50 kHz AM: 9 kHz	50 μs

FM DE-EMPHASIS/CHANNEL SPACE table



■ FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas.)

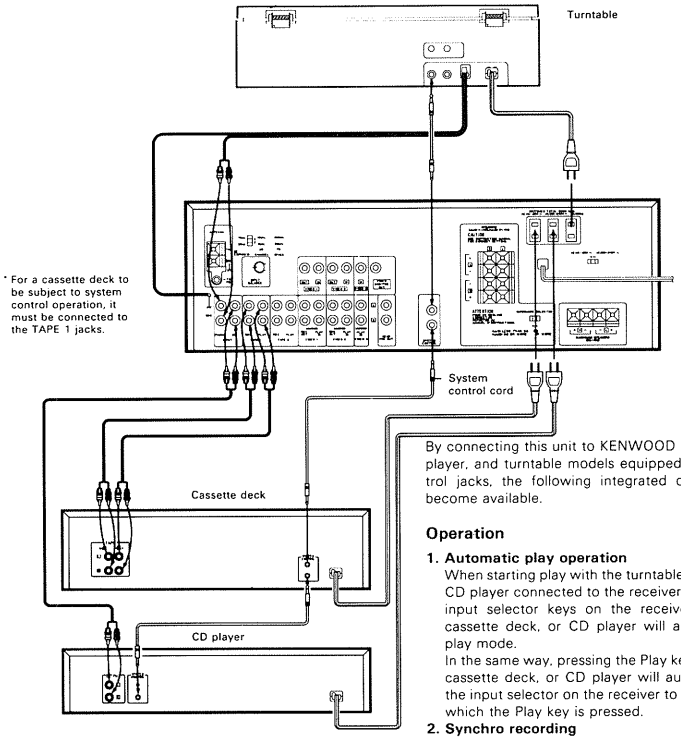
The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used (for instance, if you move from area 1 to area 2 or vice versa), desired reception of AM/FM broadcasts cannot be expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table on the left.
The FM DE-EMPHASIS setting is switched over at the same time.

Note:
When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.

System control operation

Connection

Using the system control cords provided with KENWOOD system component models, make connections as shown below.



■ Connection of the audio cords and system control cord

Make sure that the audio cords are connected correctly right and left as in the figure.

If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

(For connections of the audio cords, refer to the "System connections" diagram.)

By connecting this unit to KENWOOD cassette deck, CD player, and turntable models equipped with system control jacks, the following integrated operation features become available.

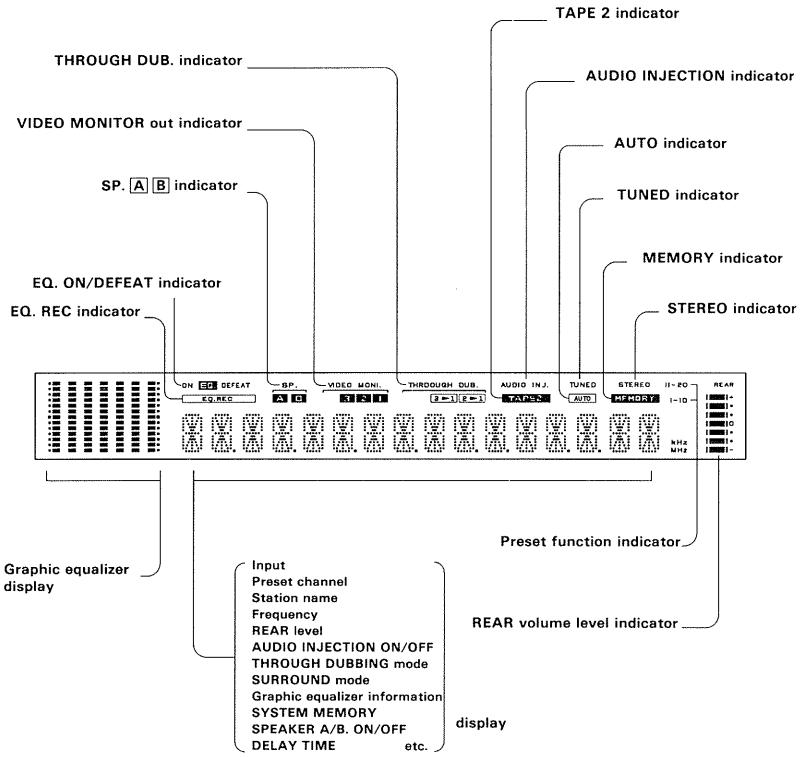
Operation

1. **Automatic play operation**
   When starting play with the turntable, cassette deck, or CD player connected to the receiver, press the desired input selector keys on the receiver. The turntable, cassette deck, or CD player will automatically enter play mode.
   In the same way, pressing the Play key of the turntable, cassette deck, or CD player will automatically switch the input selector on the receiver to the component on which the Play key is pressed.
2. **Synchro recording**
   To record the sound from the CD player or turntable onto a tape with the cassette deck, press the CD or PHONO of the input selector keys and load a CD or record. Set the cassette deck to rec pause mode, then press the PLAY (START) key of the CD player or turntable. The cassette deck will start recording automatically, synchronized with the CD player or turntable starting play.
3. **Remote control**
   The remote control unit provided with this unit, to which a KENWOOD system turntable, cassette deck, or CD player is connected, is equipped with related control keys. The related components can be controlled using these keys.

Note:
During recording with a cassette deck, the input selector on the receiver is fixed at the source from which the recording is made, by the system control circuit. At this time, pressing any of the input selector keys has no effect.

Controls and indicators

Display section



REMOTE SENSOR
Point the supplied remote control unit towards this sensor and operate.

SPEAKERS A and B keys
Selects the speaker system to be used for listening.
The speaker system being used is shown on the display.

POWER key
Switches the power ON/STANDBY.

Power stand-by indicator
This indicator lights if the power cord is plugged into the AC outlet. It is lit to show that the POWER key on the front panel or the POWER key on the remote control unit can be activated.

PHONES jack
This jack accepts the standard stereo headphone plug. When you wish to listen through headphones alone, set the SPEAKERS keys (A and B) both to the OFF position.

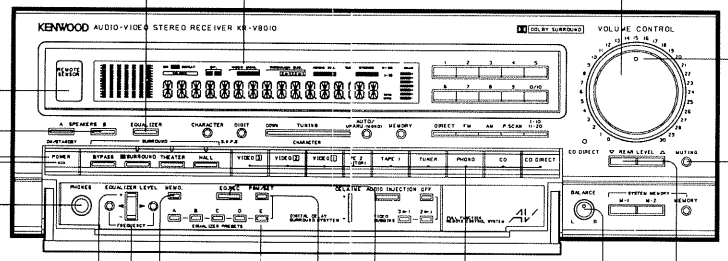
EQUALIZER LEVEL control keys
Adjust these keys up and down to equalize the sound level of the indicated frequencies with in a range of ±12 dB.

EQUALIZER FREQUENCY keys
These keys are used to select the equalizing frequency among 60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, and 15 kHz.

Equalizer preset MEMO. key
This key is used to store an equalizer pattern the PGM PRESET memory.

EQUALIZER key
Press this key to ON and the frequency characteristics of the sound will be modified by the graphic equalizer.
In the DEFEAT position, the frequency characteristics remain unchanged.

Display section



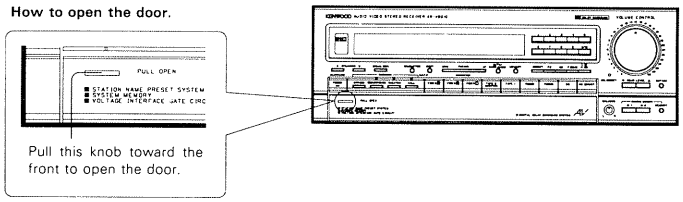
EQUALIZER PRESETS (A ~ E) keys
Use these keys to store equalizer patterns in memory or to recall them.

Equalizer preset mode key (PGM/SET)
Each time this key is pressed, the recall mode of the equalizer preset patterns alternates between PGM (user programmed patterns) and SET (factory preset patterns.)

Input selector keys
Select the input source.

EQ. REC key
Used when recording a source to a tape deck through the graphic equalizer.

How to open the door.



VOLUME CONTROL knob
This control adjusts the left- and right-channel volume levels simultaneously. Set it for the desired listening level.

Point indicator
This indicator blinks when the power is turned ON, muting is activated and when the volume control is adjusted with the remote control.

MUTING key
When the muting key is pressed, the point indicator in the VOLUME CONTROL knob blinks, and the overall listening sound level is reduced.
When the key is pressed again, the listening level is restored to same level as before.

REAR LEVEL control keys
Adjusts front/rear balancing when surround speakers are used. The control range is +20, −50 dB of the front speaker level.

BALANCE control knob
Adjust the left and right volume balance.

Controls and indicators

TUNING/CHARACTER keys
Used to change the frequency. Pressing the UP side will advance to a higher frequency and pressing the DOWN side will move to a lower frequency.
In the station name input mode, this key is used to select the characters.

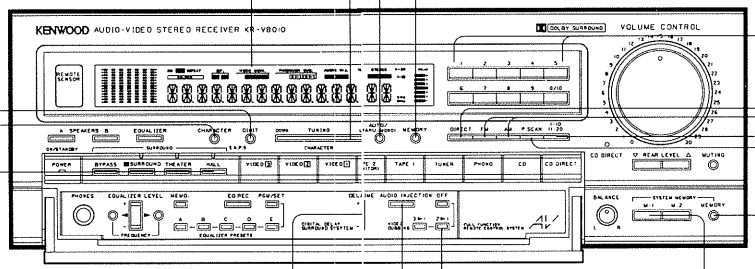
AUTO/MANU. (MONO) key
Press this key to select the tuning mode between AUTO or MANUAL. In MANUAL mode, FM stereo broadcasts are received in monaural.

Numeric (1 ~ 0/10) keys
Use these keys to:
1) input directly the digits of frequencies, or
2) store and recall fequencies in the preset channels.

Display section

MEMORY key
When this key is pressed, the MEMORY indicator lights and the unit stands by for entry of a preset station number.

DIRECT key
Used to tune to a station directly. Input the desired frequency with the numeric keys after pressing the DIRECT key.



Band selector (AM, FM) keys
Press to select the receiving band.

DIGIT key
In the station name input mode, pressing this key advances the column after a character is selected with the TUNING/CHARACTER UP/DOWN key. When this operation is repeated four times the station name input mode is automatically released.

Preset function (1-10/11-20) key
Used to select the 1-10 or 11-20 preset channel setting. In either FM or AM mode, 20 stations can be preset at random as each setting ("1-10" or "11-20") can contain 10 preset stations. Indicator "1-10" lights when the "1-10" setting is used, and indicator "11-20" lights when the "11-20" setting is used.

CHARACTER key
Press this key to activate the station name input mode.

PRESET SCAN key
Use this key for preset channel scanning.
When a frequency stored in the preset memory is being received, pressing this key shifts reception to the next frequency stored in the preset memory.

SURROUND keys
Press any of these keys to select the required SURROUND mode. When the Surround sound is not required, press the BYPASS key to set to the BYPASS mode.

VIDEO DUBBING keys
Press any of these keys when dubbing the video program sourceregardless of the input source selected by the input selector key.

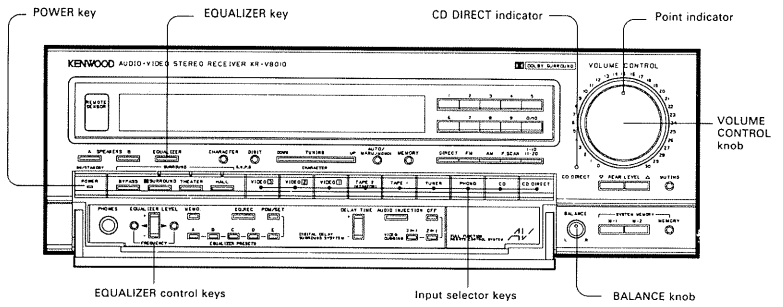
System MEMORY key
This key is used to store the current playing condition in memory.

DELAY TIME keys
With the SURROUND mode activated, select the required delay time using these keys.

AUDIO INJECTION key
Press this key ON when it is necessary to replace the sound of VCR with that of an AUDIO source during video dubbing.

SYSTEM MEMORY channel keys (M-1/M-2)
Two memory groups can be used with the System Memory feature.

Operating instructions



POWER switch stand-by
A small amount of current is retained to support the memory and remote control sensor function when the POWER is switched OFF. This is known as the standby mode. POWER may be switched ON/OFF by the remote control unit.

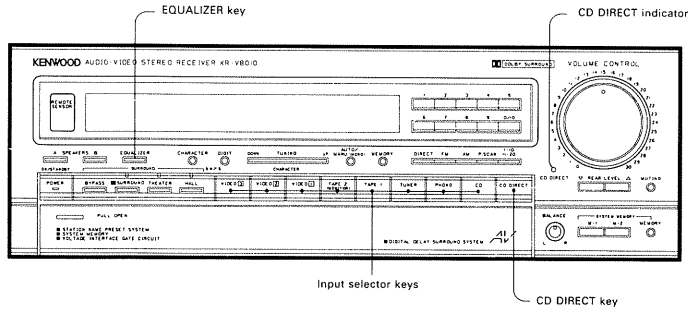
The standby indicator on the front panel remains lit while the power plug of the receiver is connected to the AC outlet.
If this set is not used for a long time, the power cord should be disconnected from the AC outlet.

To mute the sound temporarily
Press the MUTE key.
- The point indicator blinks, and the output is muted.
- When the MUTE key is pressed again, the muting is canceled, the point indicator lights steadily and the previous output level is resumed.
  The mute mode can also be released by changing the output level using the remote control unit.
- The point indicator also blinks (for approx. 4 seconds) when the muting functions is engaged immediately after the power is turned ON.

■ Basic operation

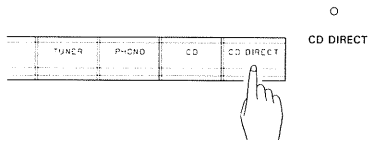
1. Press the POWER key to ON.
   - The display lights and the unit becomes operative.
   - Pressing the key again switches the power OFF.
2. Press one of the input selector keys to select the input source to be played.
   - If a System Control cord has been connected to the selected source component, it starts play automatically due the Automatic Play operation feature.
   - With the Automatic Play operation feature, when one of the source components is started to be played, the corresponding input selector is automatically switched for the source.
   - The selected input source is shown on the display.
3. If automatic play operation using the System Control cords has not been set, start playing the source component selected.
4. Adjust the output level with the VOLUME CONTROL knob.
   - When one of the MAIN VOL. keys on the remote control unit is pressed, the point indicator blinks and the VOLUME CONTROL knob is rotated.
5. Adjust the balance of the left and right output levels with the BALANCE knob.
6. Adjust the tone referring to the description in the "Graphic equalizer" section.
   - The graphic equalizer effect can be switched ON/DEFEAT by pressing the EQUALIZER key.

Notes:
1. The CD DIRECT key should usually be set to OFF (with the indicator not lit).
2. When the TAPE-2 selector switch is set to ON, the input source selected with the input selector keys cannot be heard from the speakers. To listen to a source other than tape deck 2, be sure to set the TAPE-2 selector key to OFF.



■ Operations using CD DIRECT key

To enjoy more pure and high-quality sound of Compact Discs:
1. Press the CD key.
2. Press the CD DIRECT key.



3. Play the CD player.
   - The CD DIRECT key is given priority over the setting of the input selector keys.
   - The graphic equalizer cannot be used while the CD DIRECT key is ON.
   - To cancel the CD DIRECT input, press the CD DIRECT key again or press one of the input selector keys (except CD and TAPE 2 keys). The input will be switched to the source indicated on the display.

Note:
When the CD DIRECT key is pressed in one of the Surround modes (DD SURROUND, THEATER or HALL SURROUND), the unit enters the Bypass mode.

■ To record an input source

1. Select the source to be recorded with the input selector keys.
2. Play the source.
3. Set tape deck 1 and/or tape deck 2 to record mode.

Note:
When a tape deck is connected to this unit with a System Control cord, all of the input selector keys are disabled during recording and do not function until recording is finished. This will prevent the recording from being interrupted.

■ Tape dubbing

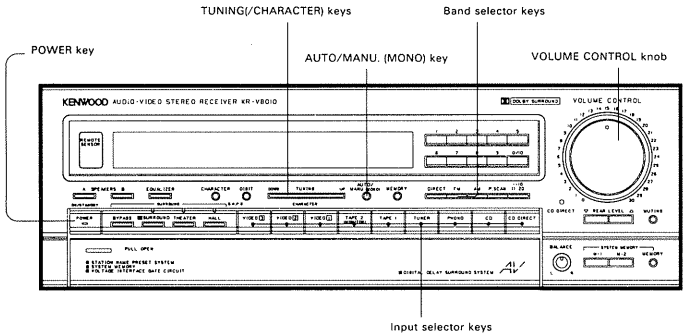
Tape recordings may be duplicated (dubbed) easily using two tape decks connected to the TAPE 1 and 2 jacks.

For example:
(TAPE 1 to 2):
1. Connect two tape decks to the TAPE 1 and TAPE 2 jacks.
2. Press the TAPE 1 key.
3. Play back the recorded tape and adjust the recording levels before starting tape dubbing.

(TAPE 2 to 1):
1. Press the TAPE 2 key.
2. Press a key other than TAPE 1 of the input selector keys such as CD.
3. Play back the recorded tape and adjust the recording levels before starting tape dubbing.
4. Do not press the TAPE 1 key during recording with tape deck 1.

Note:
Adjust recording levels on the deck that is making the copy using that deck's operating controls.

Listening to broadcasts



■ To listen to radio broadcasts

1. Press the POWER key to ON.
2. Press the TUNER input selector key.
3. Press the AM or FM band selector key.
4. Tune in the desired broadcasting station according to the instructions in the "Tuning methods" section below.
   - During tuning, sound is not heard because the muting circuit is activated. The sound will be heard suddenly as soon as a station is received,so be careful in setting the sound volume level.
5. When the desired station is received, adjust the volume with the VOLUME CONTROL knob.

■ Tuning methods

Auto tuning

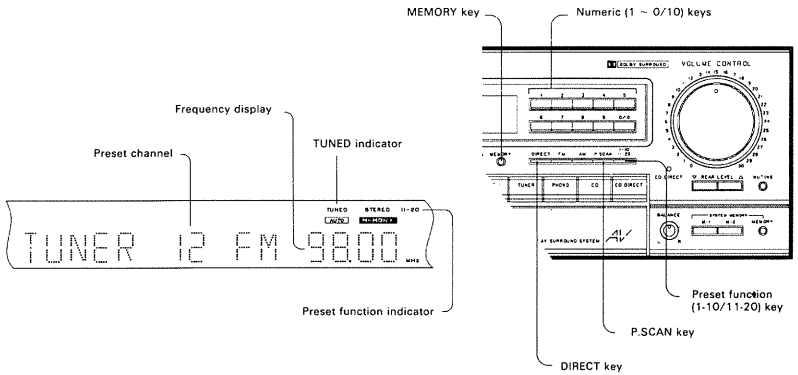
When the TUNING key is pressed, broadcast frequencies are scanned automatically in the upward or downward direction until a station is located and tuned in. The stereo/monaural FM reception mode is set automatically according to the station.

1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator lights.
2. Press the UP or DOWN segment of the TUNING key.
   - Pressing the UP segment scans broadcast frequencies by varying the displayed frequencies in the upward direction, and pressing the DOWN segment scans by varying the frequencies in the downward direction.
   - When a broadcasting station is received, the frequency display freezes and indicates the frequency of the received station.
3. If the received station is not the desired station, press the same segment of the TUNING key again.
   - Repeat this until the desired station is received.

Manual tuning

Stations with weak signal strength cannot be received by auto tuning. In such cases, tune in the desired station by manual tuning. The station will be received in monaural mode (monaural mode is resistant to noise).

1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator is off.
2. Press the UP or DOWN segment of the TUNING key.
   - Every time the TUNING key is pressed, the displayed frequency varies by one step in the direction indicated by the pressed segment.
   - Holding the TUNING key depressed varies the displayed frequency continuously.
3. When the frequency of the desired station is tuned in, release the TUNING key.
   - Noise may be heard if the tuned frequency is not precisely the same as the frequency of the station. In such cases, press the UP or DOWN segment of the TUNING key to adjust the tuning precisely.



Direct tuning

This method allows the desired frequency to be entered directly using the numeric keys, without using the TUNING key.

1. Press the DIRECT key.
2. Enter the frequency of the desired station with the numeric keys.
   - When all of the digits of the frequency have been entered, the station is automatically received.
   - If the entered frequency is not in the receivable frequency range, message "CAN NOT TUNE" is displayed for 5 seconds, and the last station received is received again.

■ Preset tuning

By storing the frequencies of broadcasting stations in the preset channels according to the instructions in the "To preset station frequencies" section, any of the preset stations can be received by one-touch operation.

1. Press the preset function key to select "1-10" or "11-20".
2. Press the numeric key corresponding to the preset channel of the desired station.
   - The display shows the frequency of that station, and the station is received.

■ Preset Scan

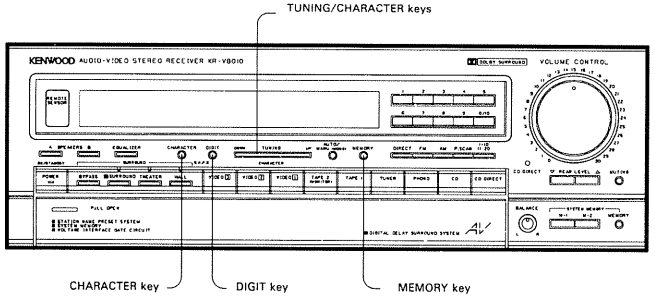
This function allows the preset stations stored in the preset channels to be received in sequence for 5 seconds each.

1. Press the P.SCAN key.
   - The frequency of each preset station is received for 5 seconds in sequence. A preset channel in which no station has been preset is skipped, and the scan operation moves to the next preset channel.
2. To stop Preset Scan, press the P.SCAN key again.
   - The preset station being received when the key is pressed is received continuously.

■ To preset station frequencies

1. Press the band selector key for the desired band (FM or AM).
2. Tune in the desired station following the instructions in the "Tuning methods" section.
3. Press the preset function key to select the 1-10 or 11-20 preset channel range.
4. Press the MEMORY key.
   - The MEMORY indicator on the display lights.
5. Within 5 seconds after pressing the MEMORY key, press the numeric key (1 to 0/10) corresponding to the preset channel in which the frequency is to be stored.
   - If a frequency has already been stored under the selected preset channel, the previously-stored frequency will be replaced by the new frequency.
6. Preset all desired frequencies by repeating steps 1 to 5 above.
   - When preset channels 1 to 10 have become full, press the preset function (1-10/11-20) key again to select the 11-20 range.

This unit allows both the frequencies and the names of broadcasting stations to be preset. When a station is recalled by preset tuning, the display shows both the frequency and the name of the station. (S.N.P.S.)

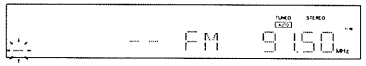


Selection of display characters with the TUNING/CHARACTER key

Every time the UP segment of the TUNING/CHARACTER key is pressed, the displayed character is varied in the following order:

→ A → B → C ··· Z ··· 0 → 1 → 2 → 3 ····· 9 →
Blank

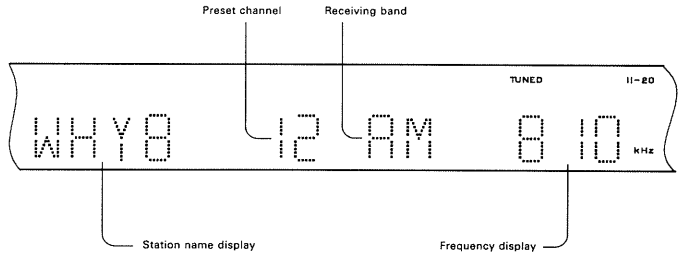
(Pressing the DOWN segment varies the displayed character in the reverse order.)

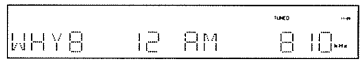


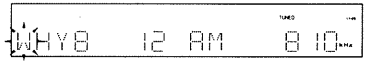
■ To preset station names and frequencies

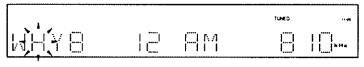
Example 1: To preset the 91.50 MHz FM broadcast frequency and its station name "WNY" in preset chanel number 2.

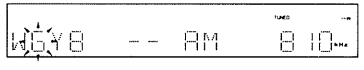
1. Tune to 91.50 MHz FM.
2. Press the CHARACTER key.
3. Press the TUNING/CHARACTER key to select "W".
4. Press the DIGIT key to set the character and move to the next location.
5. Press the TUNING/CHARACTER key to select "N".
6. Press the DIGIT key.
7. Press the TUNING/CHARACTER key to select "Y".
8. Since the fourth column should be left blank, press the DIGIT key twice or press the CHARACTER key.
9. Press the MEMORY key.
10. Press numeric key "2" to select preset channel 2.

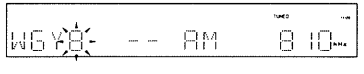


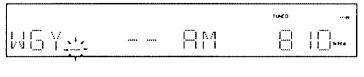


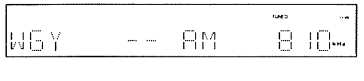












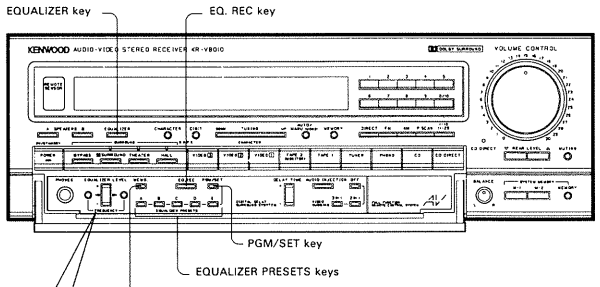
■ To change a preset station name

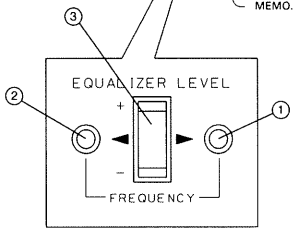
Example 2: To change the name of the 810 kHz AM broadcasting station stored in preset channel number 12 from "WHY8" to "WGY"

1. Recall preset channel number 12 with the preset function key and numeric key "2" according to the instructions in the "Preset tuning" section.
2. Press the CHARACTER key.
3. Press the DIGIT key to move to the first character location to be changed.
4. Press the TUNING/CHARACTER key to select "G".
5. Press the DIGIT key twice.
6. Press the TUNING/CHARACTER key to select a blank.
7. Press the DIGIT key or the CHARACTER key.
8. Press the MEMORY key.
9. Press numeric key "2" to select preset channel number 12.

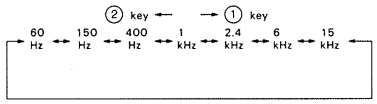
Graphic equalizer operation

This unit incorporates a high-performance 7-band stereo graphic equalizer. The graphic equalizer is equipped with memory for storing equalizer patterns created by the user, as well as for storing factory-preset patterns which can be recalled easily to provide equalizing effects suitable for various types of music.





EQUALIZER control keys
(Press the FREQUENCY keys ①, ② to select the frequency to be equalized.)



Sequential change of equalizer frequency

■ To listen music processed by the graphic equalizer

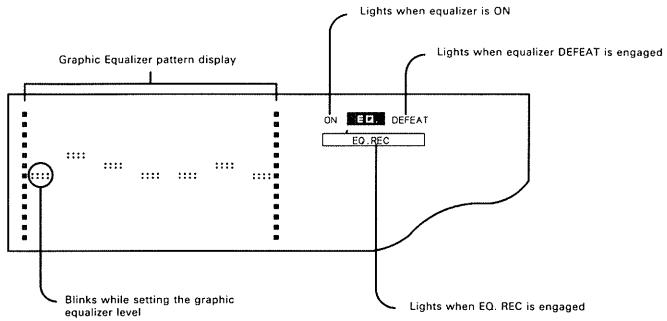
1. Press the EQUALIZER key.
   - The [ON EQ.] indicator lights.
2. Press the FREQUENCY ① or ② key shown in the figure on the left to select the required frequency to be equalized.
   - The frequency selected will appear in the display for 5 seconds.
   - The ":::::" indication on the graphic equalizer display blinks.
   - Each time the FREQUENCY ① or ② key is pressed, the frequency is changed sequentially as shown in the table on the left.
3. Press the EQUALIZER LEVEL key ③ shown in the figure on the left to set to the required level for the selected frequency.
   - Pressing the EQUALIZER LEVEL + key increases the level of the selected frequency in +2 dB steps up to +12 dB.
   - Pressing the EQUALIZER LEVEL − key decreases the level of the selected frequency in −2 dB steps up to −12 dB.
4. Repeat the operation in steps 2 and 3 to set the equalizer pattern as desired.
   - It is also possible to select a preset equalizer pattern by pressing one of the EQUALIZER PRESETS keys (A ~ E).
5. To defeat the equalizer effect, press the EQUALIZER key again.
   - The [EQ. DEFEAT] indicator lights.

■ Equalizer recording

With this unit, sound processed by the graphic equalizer can be recorded through the TAPE-1 output.

1. Press the EQ.REC key.
   - The [EQ. REC] indicator lights.
2. Start recording on the TAPE 1 tape deck.
   - When the EQ. REC key is pressed again, the [EQ. REC] indicator goes off and normal (unprocessed) sound is output.

Note:
Equalizer recording is not possible with the TAPE-2 output.



■ Preset equalizer memory and its applications

Five equalizer patterns are permanently preset in the memory of this unit for easy recalling at any time.

1. Press the PGM/SET key to SET.
   - The "EQ. SET-□" indication appears in the display for 5 seconds.
2. Press one of the EQUALIZER PRESETS keys (A ~ E).
   - The recalled equalizer pattern is displayed.

Characteristics of the "SET" preset patterns
A: For solid and punchy sound.
B: For effective reproduction of dynamic movie sound.
C: For easy-listening background music.
D: For music sound reproduction with a live, "being-there" feeling.
E: For realistically reproducing vocal music.

■ To store user-programmed equalizer patterns in memory

Up to five equalizer patterns created by the user can be stored in memory for recalling at any time.

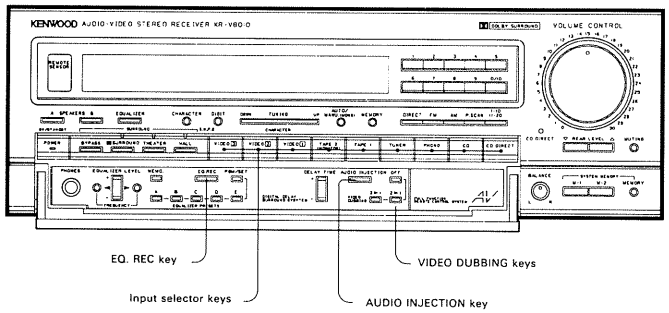
1. Set the desired pattern with the equalizer control keys.
2. Press the PGM/SET key to PGM.
   - The "EQ. PGM-□" indication appears in the display for 5 seconds.
3. Press the MEMO. key.
   - The [MEMORY] indicator lights.
   - The "EQ. PGM-□" indication appears in the display.
4. Within 5 seconds, press any of the EQUALIZER PRESETS keys A to E.

■ To recall user-programmed equalizer patterns from memory

1. Press the PGM/SET key to PGM.
   - The "EQ. PGM-□" indication appears in the display for 5 seconds.
2. Press one of the EQUALIZER PRESETS keys (A ~ E).
   - The recalled equalizer pattern is displayed.

One of characters A to E is displayed inside "□".

Playing video sources



■ To play a video source

(For Surround playback, refer to "Surround effects" on page 28.)

1. Press the POWER key to ON.
2. Switch on the power of the monitor TV connected to the MONITOR OUT jack.
3. Select the playback source with the input selector keys.
4. Play the video component.
5. The video is reproduced on the monitor TV, and the audio is reproduced through the speakers.

■ Dubbing between two VCRs

Video dubbing can be performed while listening to any desired source.
With this receiver, through dubbing from VCR 2 or VCR 3 to VCR 1 is possible.

To dub through from VCR2 (or VCR 3) to VCR1:

1. Press the VIDEO DUBBING [2 ▶ 1] (or [3 ▶ 1]) key.
   • The [THROUGH DUB. 2 ▶ 1] (or [THROUGH DUB. 3 ▶ 1]) indicator lights.
2. Set the VCR 1 to the recording mode.
3. Set the VCR 2 (or VCR3) to the playback mode.

To stop through dubbing or after dubbing is finished:

Press the VIDEO DUBBING [OFF] key.
• When through dubbing is not required, be sure to set to the OFF mode.

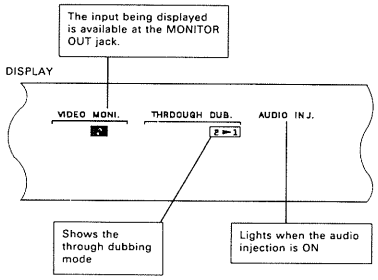
Note:
The audio injection does not function during through dubbing mode.

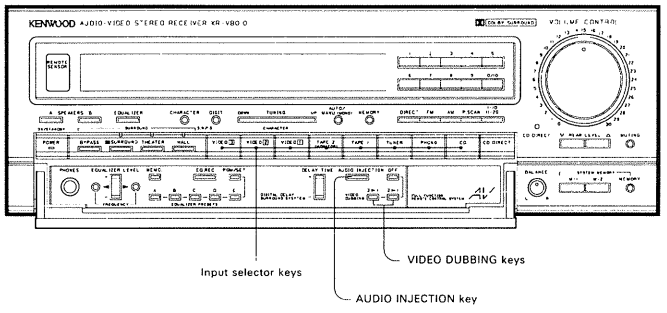
■ Audio injection

During video dubbing, the sound from the VCR can be replaced with sound from any desired audio source without affecting the picture.
In addition, the graphic equalizer effect can be applied to the recorded audio source.

1. Press the AUDIO INJECTION key so that the [AUDIO INJ.] indicator lights.
2. Select the desired audio source for Audio injection with the input selector keys.
3. When equalizer compensation is required when recording a desired audio source with audio injection ON, press the EQ. REC key.
   • The [EQ. REC] indicator lights up.
   • Set the equalizer controls as desired.
4. Operate each VCR for dubbing.

Note:
The audio injection does not function during through dubbing mode.





Example of video dubbing operation

■ To record with VCR1

When audio injection is not required (Through dubbing):

1. Press the required VIDEO DUBBING key ([2 ▶ 1] or [3 ▶ 1]).
2. Set the VCR1 to the recording mode.
3. Set the playback VCR (VCR2 or VCR3) to the playback mode.

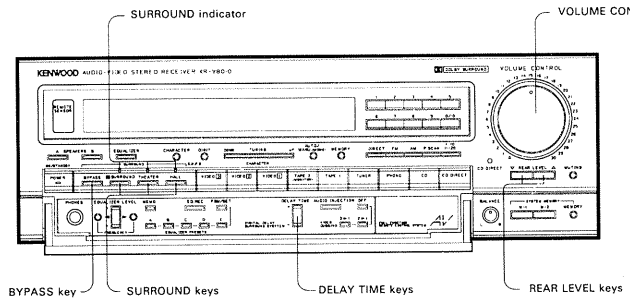
When audio injection is required:

1. Press the VIDEO DUBBING [OFF] key.
2. Select the playback VCR with the input selector keys.
3. Set the AUDIO INJECTION to ON.
4. Select the the audio source to be injected using the input selector keys.
5. Set the VCR1 to the recording mode.
6. Play the required VCR and audio source component.

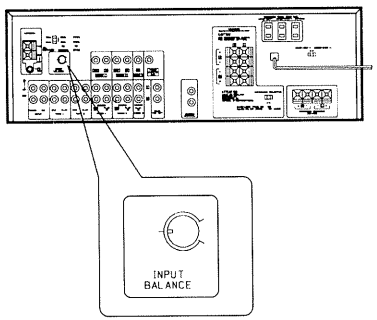
■ To record with VCR2

1. Press the VIDEO DUBBING [OFF] key.
2. Select the playback VCR with the input selector.
   (When Audio Injection is required)
   (3) Set the AUDIO INJECTION to ON.
   (4) Select the audio source used for audio injection with the input selector.
3. Set the VCR2 to the recording mode.
4. Start playing the playback VCR.
   (When the audio injection is ON, also play the audio source component.)

Surround effects



■ To adjust the input level



1. Press the ▯▯ SURROUND key.
   - The "DOLBY SURROUND" indication appears in the display.
2. Using the SPEAKER key, set the front speakers to OFF.
3. Play the monaural source.
4. Adjust the INPUT BALANCE knob so that the output level of the rear speakers becomes minimum.

■ Delay time adjustment

The output signal from the rear speakers is delayed slightly than that of front speakers for each Surround mode separately. The delay time can be adjusted as desired separately for the ▯▯ SURROUND and THEATER SURROUND modes. The delay time of the HALL SURROUND mode is fixed at 30 ms and cannot be adjusted.

1. Press the ▯▯ SURROUND or THEATER key.
2. Adjust the delay time using the DELAY TIME keys.
   - For the ▯▯ SURROUND mode, the delay time can be adjusted between 15 ms and 30 ms in 1.5 ms steps.
   - For the THEATER SURROUND mode, the delay time can be adjusted between 0 ms and 30 ms in 1.5 ms steps.

■ To play sound with the Surround effect

1. Set the SURROUND key to ON.
   - The selected Surround mode indicator lights.
2. Select the source to be played with the surround sound effect, and play it.
3. Adjust the volume level and balance between the front speakers and the rear speakers by controlling the REAR LEVEL control keys.
   - The VOLUME CONTROL allows you to increase or decrease the volume level for both the front and rear channels simultaneously.
   - The REAR LEVEL control range is +20, −50 dB of the front speaker level.

■ To release the Surround mode

Press the BYPASS key.

- Be sure to set the BYPASS mode when the Surround effect is not required.

■ Note on the Surround mode

The reason why the sound you experience in concert halls or stadiums is so real and live is that the sound reaching your ears comes not only from the front but also from the surroundings. To reproduce sound with an effect as close as possible to a "live" atmosphere, this unit is provided with the Dolby ▯▯ SURROUND mode.
In this unit, the THEATER Surround mode and the HALL Surround mode are provided as the KENWOOD exclusive Surround modes, other than the DOLBY Surround mode.

Dolby Surround mode

Video softwares marked with ▯▯ DOLBY SURROUND are encoded with Dolby Surround information. This unit incorporates a Dolby Surround decoder for playing such video tapes with a sound effect similar to that experienced in movie theaters.

THEATER Surround mode

This mode provides the three-dimensional effect like a movie theater. With this mode, you can enjoy the Surround sound effect similar to the Dolby Surround sound even when the video programs which is not encoded with the Dolby Surround is used.

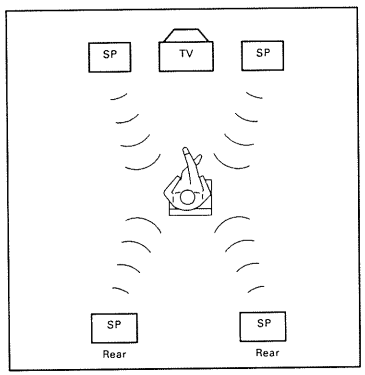
HALL Surround mode

This mode provides the natural reverberation effect. When used with the normal source, you can enjoy the being-there feeling or "presence" as in the hall.

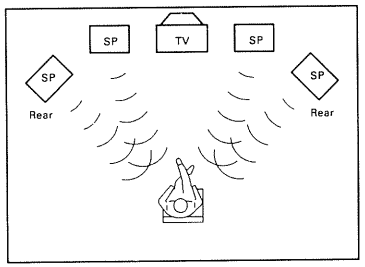
■ Arranging the speakers

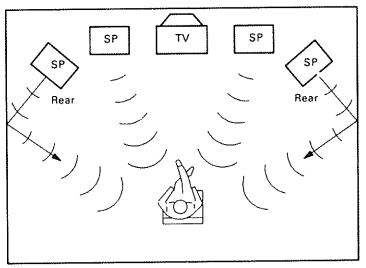
A variety of rear speaker arrangement patterns are possible according to room size, layout, reverberation characteristics, and other factors.
The arrangement patterns given here are typical examples for providing an effective Surround atmosphere. These examples are only suggestions. Arrange the speakers according to your individual taste.

Standard arrangement



Arranging four speakers in front
(Not recommended for Dolby Surround applications.)



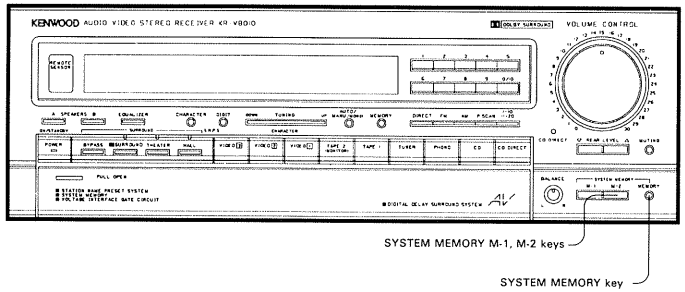


If the left and right walls are made of a hard material such as concrete, facing the rear (Surround) speakers towards the walls may give better effect.

System memory

The required playback condition can be stored in memory for each music source (tape, compact disc, phonograph record (disc), or broadcasting program), so that the same balance (between front and rear channels), and the same equalizer pattern, etc. can be recalled at any time instantly.
Two types of settings can be stored in memory, and by pressing the appropriate SYSTEM MEMORY (M-1 or M-2) key you can recall the preset sound field condition instantly.

Stored contents:
The stored contents in the System Memory are as follows:
- Input source (CD, PHONO, TUNER, TAPE, VIDEO, etc.) (including TAPE 2)
- Preset channel in the TUNER position
- Audio injection
- EQUALIZER key setting (ON/DEFEAT)
- EQ. REC key setting (ON/OFF)
- Preset channel of the equalizer pattern
- SURROUND setting (ON/OFF)
- SURROUND mode
- DELAY TIME
- Rear level
- Video monitor out
- SPEAKERS A, B
- CD DIRECT ON/OFF



■ How to preset the System Memory

1. Set the playback conditions as desired.
   - When selecting the tuner or equalizer, be sure to designate the preset channel.
2. Press the SYSTEM MEMORY key.
   - The MEMORY indicator lights and the "SYSTEM MEMORY _" indication appears in the display (for 5 seconds).
   - If the "CAN NOT MEMORIZE" indication is displayed, the tuner frequency or equalizer pattern will not be preset in memory.
     After presetting the playback condition for each channel, press the MEMORY key again.

Note:
If the contents of a preset channel is changed after being designated as the tuner or equalizer section channel for System Memory, the contents of the System Memory channel will also be changed.

■ How to recall System Memory

1. Press the M-1 or M-2 key.
   - The display shows "SYSTEM MEMORY 1" or "SYSTEM MEMORY 2" for about 2 second, and the settings of each section are changed to the preset contents.
2. Readjust the setting of each section as required.
   - When PHONO is selected as the input source, with a system-controlled turntable connected, the turntable will automatically start playing by recalling the System Memory. Therefore, be sure to set a record on the platter of the turntable before activating the System Memory function.
   - In the same way, when a system-controlled tape deck or CD player is connected to this unit, the tape deck or CD player can be started automatically by activating the System Memory function.

Remote control operation

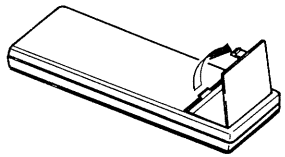
■ Operations

1. Connect the power plug of the receiver to an AC outlet.
   - The receiver enters the power standby mode and the power standby indicator lights.
2. Press the POWER key of the remote control unit or the POWER key of the receiver.
   - The receiver enters the power ON mode.
3. The various functions of the receiver can be operated with the keys of the remote control unit.

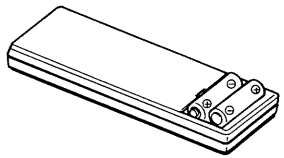
Note for remote control operation
After pressing one of the operation keys, when the next operation is required, press the next operation key firmly after an approx. 1 second interval.
If the next operation key is pressed immediately after the previous key, misoperation may result.

■ Installing the batteries in the remote control unit

1. Remove the battery compartment cover.



2. Insert two size "AA" (R6) batteries confirming the correct polarity and close the cover in its place.

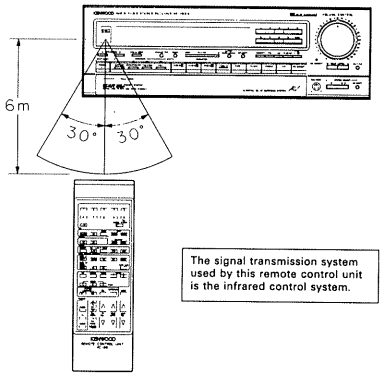


Note:
The provided batteries are to be used for checking the operation of the remote control unit, and they may have a short life. When the remote unit becomes effective only for short distances or does not operate properly, replace the batteries with two new batteries.

■ Operating range of the remote control unit

The operating range of the remote control unit may differ according to temperature, humidity, or using conditions, however, it is defined approximately as shown in the figure below:

For controlling audio

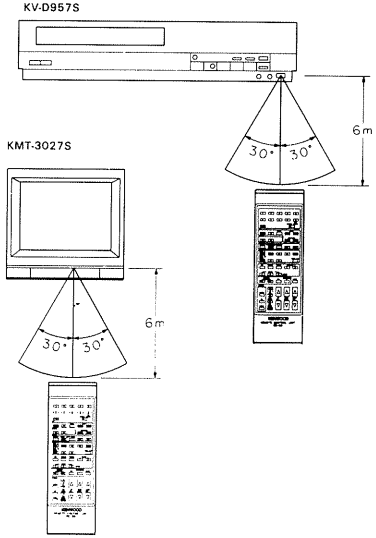


The signal transmission system used by this remote control unit is the infrared control system.

For controlling TV and VIDEO sets (U.S.A. and military models)

KV-D957S

KMT-3027S



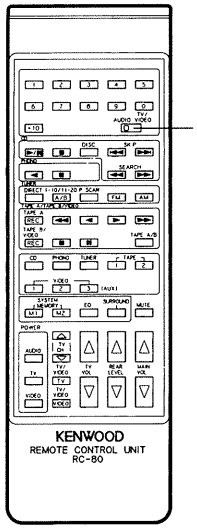
Key functions when remotely controlling KENWOOD audio components which are connected via System Control cords or KENWOOD VCR/TV.

If any of the following KENWOOD component models is used, this remote control unit cannot be used to control the CD manual search function or to make entries with the numeric keys (1 to 0 and +10):

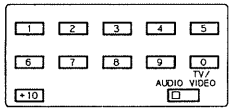
DP-M97, DP-57, DP-47

Remote control unit (U.S.A and military models)

RC-80

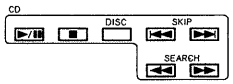


■ Numeric keys (1 to 0, +10)



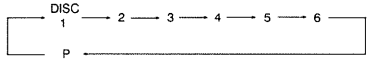
1. When the CD or TUNER input selector key is selected, these keys can be used in place of the numeric keys on the CD*player or receiver, respectively.
   - The AUDIO-TV/VIDEO switch on the RC-80 must be set to AUDIO.
   - The +10 key is used exclusively with the CD player.
2. When the AUDIO-TV/VIDEO switch is set to TV/VIDEO, the numeric keys can be used in place of the TV channel select keys.

■ CD player control keys



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

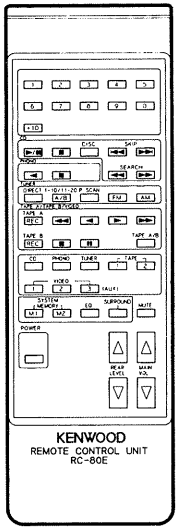
The DISC key is for use exclusively with a multiple CD player. Pressing the DISC key allows one of DISC 1 to DISC 6 to be selected in the following cycle.



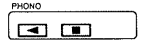
(DP-M6010 only)

Remote control unit (Canada and Europe models)

RC-80E

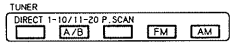


■ Turntable (PHONO) control keys



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

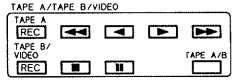
■ TUNER control keys



These keys allow the same operations as the keys with the same names on the receiver.

■ TAPE deck control keys

When the AUDIO-TV/VIDEO switch is set to AUDIO. (RC-80)

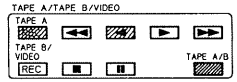


Except for the REC keys, the object of the tape deck control keys is alternated between the TAPE A and TAPE B decks every time the TAPE A/B key is pressed.
The REC keys operate as specialized keys for TAPE A and TAPE B (TAPE B/VIDEO).

Note:
When it is necessary to press the fast forward key after the rewind key, be sure to press the stop key before pressing the fast forward key.

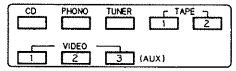
■ VIDEO deck control keys (RC-80)

When the AUDIO-TV/VIDEO switch is set to TV/VIDEO:



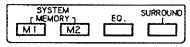
The tape deck control keys except those marked ▨ can be used as the VIDEO deck control keys.

■ Input selector keys

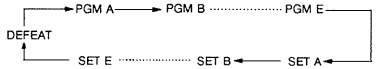


These keys have the same functions as the input selector keys on the receiver.

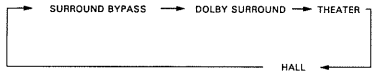
■ Equalizer/Surround/System memory keys



Every time the EQ key is pressed, the equalizer of this unit can be switched ON/DEFEAT or ten preset equalizer patterns can be changed over in the following cycle.

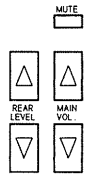


Each time the SURROUND key is pressed, the Surround mode will be changed in sequence or can be turned ON/OFF as shown in the figure below.



The SYSTEM MEMORY keys have the same functions as the keys with the same name on the front panel of the receiver.

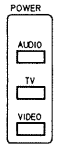
■ Volume level keys



MAIN VOL keys:
Pressing the △ key rotates the VOLUME CONTROL on the main body of the unit clockwise to increase the volume, and pressing the ▽ key rotates it counterclockwise to decrease the volume.
REAR LEVEL keys: MUTE key:
These keys have the same functions as the keys with the same names on the receiver.

■ POWER keys

[RC-80]

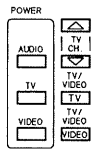


AUDIO key:
Switches the power of the receiver to ON/STAND-BY (OFF).
TV key:
Switches the power of the TV set to ON/STAND-BY (OFF).
VIDEO key:
Swithces the power of the video deck to ON/STAND-BY (OFF).

[RC-80E]

POWER key:
Switches the power of the receiver to ON/STAND-BY (OFF).

■ TV/VIDEO control keys (RC-80 only)

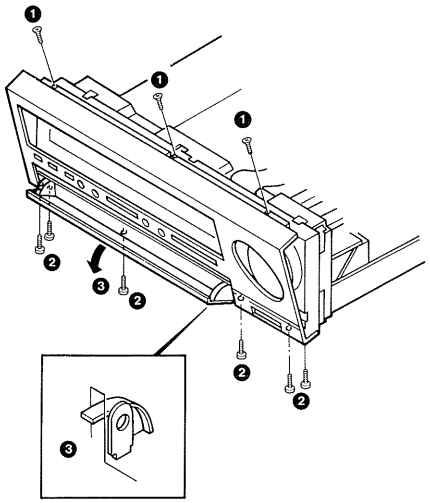


TV VOL keys:
Pressing the △ key increases the volume of the TV set, and pressing the ▽ key decreases it.
TV CH keys:
Pressing the △ key shifts the channel tuned on the TV set upward, and pressing the ▽ key shifts it downward.
TV/VIDEO TV key:
Every time this key is pressed, the input to the TV set is switched between the TV signal and the external video signal.
TV/VIDEO VIDEO key:
Every time this key is pressed, the output from the video deck is switched between the TV channel RF output and video output.

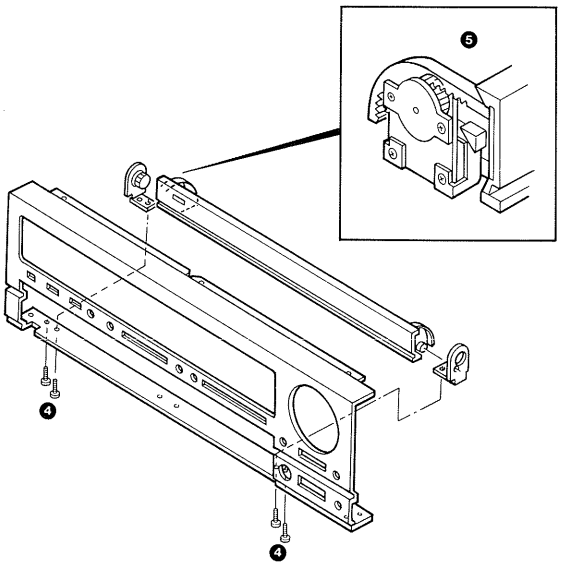
DISASSEMBLY FOR REPAIR

1. Removing the front panel ass'y

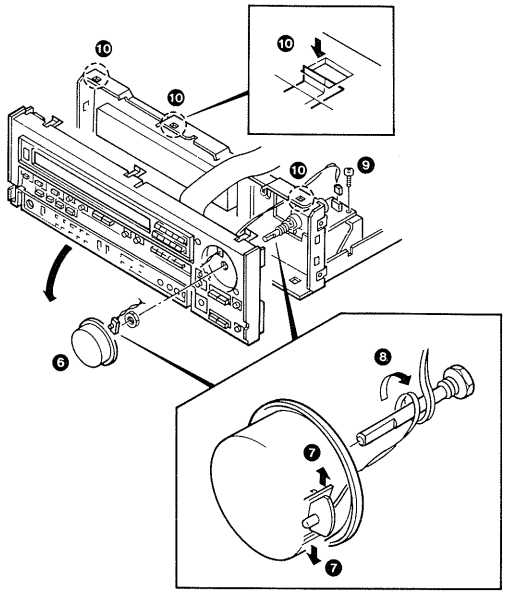
1. Remove the three screws in the upper side (❶).
2. Remove the six screws in the lower side (❷).
3. When removing, do not hit the damper (❸).



4. Remove the four screws (❹).
5. When installing, put gears into alignment as shown (❺).



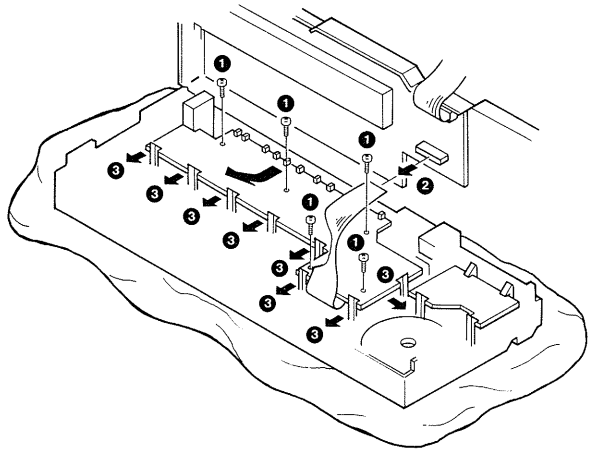
6. Detach the knob and its accompanying nut (❻).
7. Disconnect the LED VOL. board (❼).
8. When installing the knob, rotate the VOL. clockwise and set the cord as shown (❽).
9. When disconnecting the (X14-) (D/6) board, remove the one screw and disconnect the connector (❾).
10. Undo the three catches (❿).



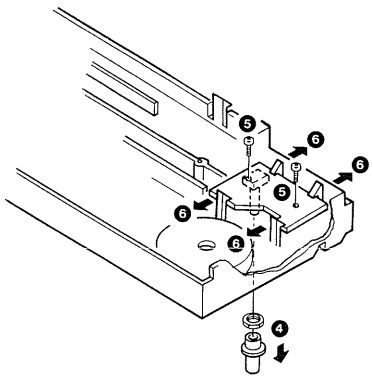
DISASSEMBLY FOR REPAIR

2. Removing the PC boards

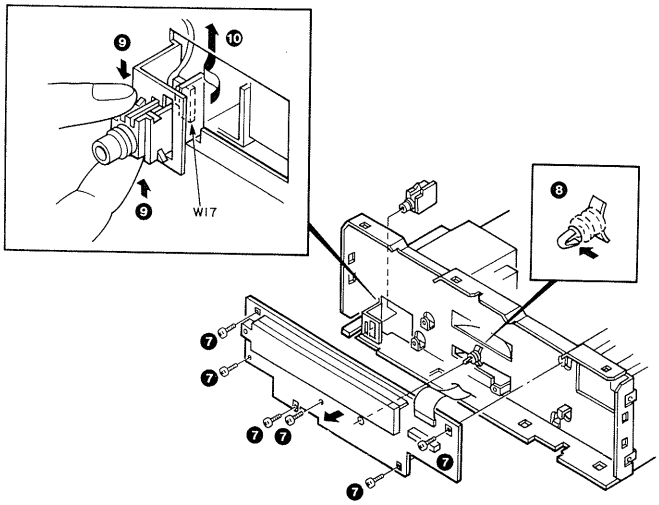
1. Remove the five screws (❶).
2. Disconnect the connector (❷).
3. Undo the eight catches (❸).



4. Detach the knob and its accompanying nut (❹).
5. Remove the two screws (❺).
6. Undo the four catches (❻).



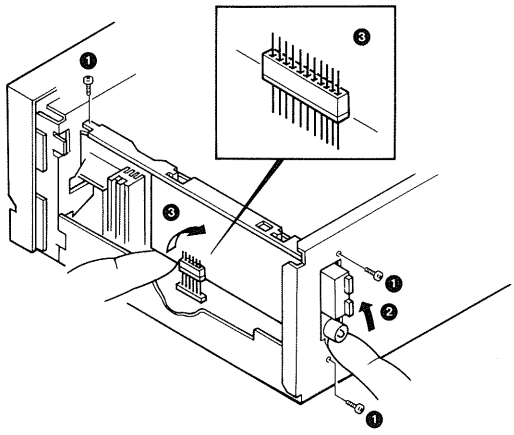
7. Remove the six screws (❼).
8. Detach the unit holder (❽).
9. Push the upper and lower catches (❾), then disconnect cord W17 pulling it lightly in the direction of the arrow (❿).



DISASSEMBLY FOR REPAIR

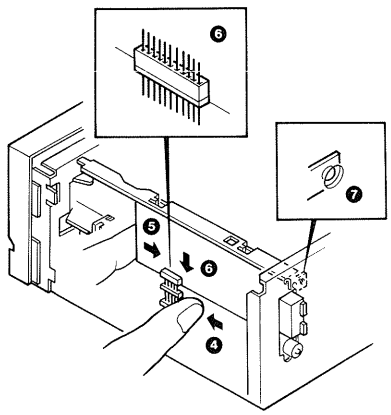
3. Removing the (X05-) (A/2) board

1. Remove the three screws (❶).
2. While pressing the ANT terminal (❷), disconnect the connector (❸).



4. Installing the (X05-) (A/2) board

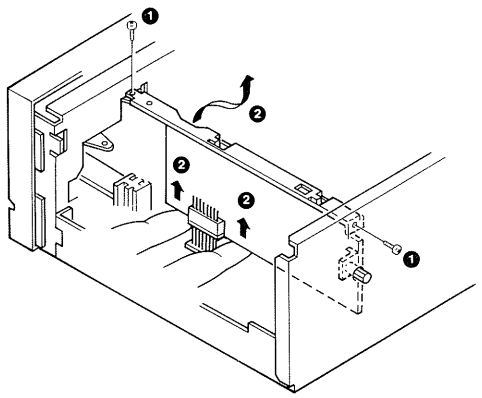
3. Place the board, and push the connector (❹).
4. Push the board (❺).
5. Put connector pins in alignment, then push the board from above (❻).
6. Set it to the recession (❼).



DISASSEMBLY FOR REPAIR

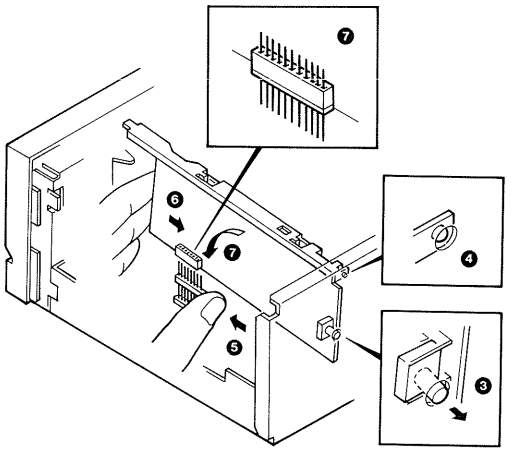
5. Removing the (X08-) (A/7) board

1. Remove the two screws (❶).
2. Disconnect the connector (❷).

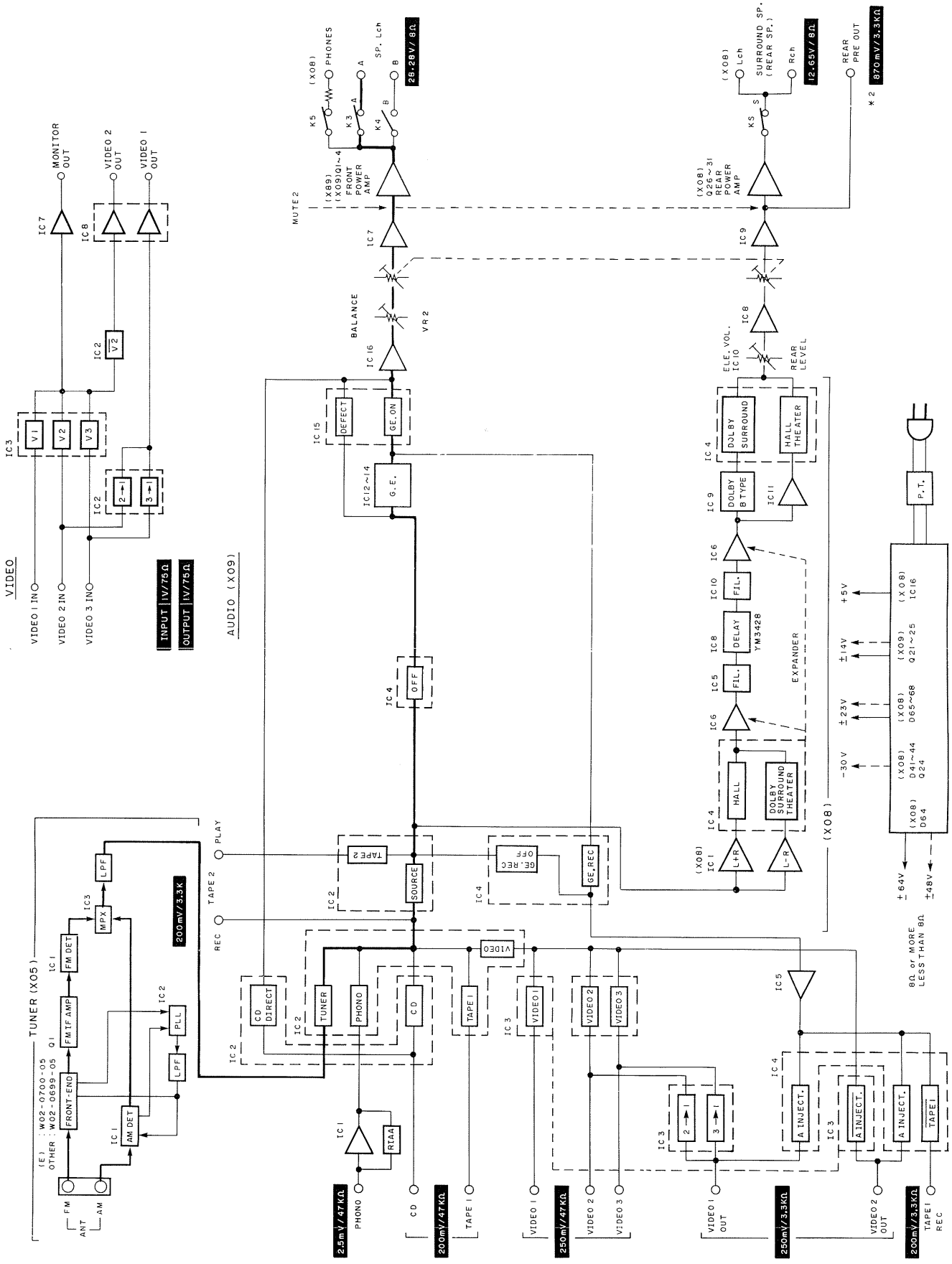


6. Installing the (X08-) (A/7) board

3. Insert the knob (❸).
4. Set it to the recession (❹).
5. Push the connector (❺).
6. Push the board (❻).
7. Put connector pins in alignment, then push the board from above (❼).



BLOCK DIAGRAM



CIRCUIT DESCRIPTION

1. Description of components

1-1. TUNER UNIT (X05-381X-XX) 0-10 : K,P 0-81 : U,UE 2-71 : E (JAPAN MADE)
(X05-353X-XX) 0-11 : K,P 0-82 : U,UE 2-72 : E (SINGAPORE MADE)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compativility
Q1	2SC1923(R,O)	FM IF amplifier	
Q2	2SC945(A)(Q,P)	LPF (Low Pss Filter)	Compatible with 2SC1740S(Q,R).
Q3	2SC1845(F,E)	LPF (Low Pss Filter)	
Q4	2SC945(A)(Q,P)	Buffer amplifier	For the E version only. Compatible with 2SC1740S(Q,R).
Q5, 6	2SC945(A)(Q,P)	Emphasis select	75μs when ON, 50μs when OFF. For the U, UE version only. Compatible with 2SC1740S(Q,R).
Q7, 8	2SA733(A)(Q,P)	+B power supply select	Q7 : FM +B (ON in FM mode), Q8 : AM +B (ON in AM mode). Compatible with 2SA933S(Q,R).
IC1	LA1265	FM IF/AM detection	
IC2	LM7001	PLL (Phase Locked Loop)	
IC3	AN7470	MPX (Multiplexer)	

1-2. PRE AMPLIFIER UNIT (X08-233X-XX) 0-11 : K 1-02 : P 0-82 : U,UE 2-71 : E (JAPAN MADE)
(X08-230X-XX) 0-11 : K 1-02 : P 0-82 : U,UE 2-71 : E (SINGAPORE MADE)

Ref. No	Parts No.	Use/Function	Operation/Condition/Compatibility
Q6 ~ 8		VIDEO 75Ω buffer	
Q21	2SD1302(S,T)	Relay drive	For the power relay.
Q22	2SC945(A)(Q,P)	CE control	Compatible with 2SC1740S(Q,R).
Q23	2SA733(A)(Q,P)	Filament ON/OFF	Compatible with 2SA933S(Q,R).
Q24	2SB722(Q,P)	Constant voltage circuit	For the –30V power supply.
Q25	2SA922(F,E)	Impedance detector	4Ω/8Ω detect.
Q26, 27	2SA922(F,E)	Referential amplifier	
Q28	2SC1845(F,E)	Pre drive	
Q29	2SC4137	Bias compensation	
Q30	2SD1893	Final transistor	
Q31	2SB1253	Final transistor	
Q32	2SC1845(F,E)	Current limiter	
Q33	2SA733(A)(Q,P)	Protection	Signal. Compatible with 2SA933S(Q,R).
Q34	2SC945(A)(Q,P)	Relay drive	Surround SP. Compatible with 2SC1740S(Q,R).
Q35	2SC945(A)(Q,P)	Relay drive	Speaker A. Compatible with 2SC1740S(Q,R).
Q36	2SC945(A)(Q,P)	Relay drive	Speaker B. Compatible with 2SC1740S(Q,R).
Q37	2SC945(A)(Q,P)	Relay drive	Phones. Compatible with 2SC1740S(Q,R).
IC1	NJM2058D	Buffer amplifier	
IC4	TC9162N	Analog switch array	
IC5	NJM4565L	LPF	7kHz low pass filter.
IC6	μPC1571C	Analog compounder	
IC8	YM3428	Digital delay	
IC9	LA2730	Dolby B type NR IC	
IC10	NJM072BL	LPF	7kHz low pass filter.
IC11	NJM4565L	Buffer amplifier	For the output.
IC13~15	NJM2246L	VIDEO selector	This selector have a 6dB amplifier.
IC16	μPC7805HF	Constant voltage circuit	For the +5V power supply.

CIRCUIT DESCRIPTION

1-3. AUDIO UNIT (X09-285X-XX) 0-11 : K,U,UE 1-02 : P 2-71 : E (JAPAN MADE)
(X09-293X-XX) 0-11 : K,U,UE 1-02 : P 2-71 : E (SINGAPORE MADE)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
Q1, 2	2SC2922*5	Main amplifier final stage	
Q3, 4	2SA1216*5	Main amplifier final stage	
Q5, 6	2SC4137	Bias compensation	
Q7, 8	2SC2878(B)	Muting	
Q9, 10	2SC2878(B)	Muting	For the main input.
Q11, 13	2SC2878(B)	Muting	For the rear input.
Q12, 14	2SC2878(B)	Muting	For the center input.
Q21	2SD1266	Constant voltage circuit	For the +15V power supply.
Q22	2SC945(A)(Q,P)	Constant voltage circuit	For the +15V power supply. Compatible with 2SC1740S(Q,R).
Q23, 24	2SD1266	Constant voltage circuit	For the –15V power supply.
Q25	2SA733(A)(Q,P)	Constant voltage circuit	For the –15V power supply. Compatible with 2SA933S(Q,R).
Q26	2SC945(A)(Q,P)	Constant voltage circuit	For the +15V power supply. Compatible with 2SC1740S(Q,R).
Q27	2SA733(A)(Q,P)	Constant voltage circuit	For the –15V power supply. Compatible with 2SA933S(Q,R).
Q28	2SD1266	Constant voltage circuit	For the motor VR +12V power supply.
Q29	2SC2003(L,K)	Ripple filter	For the tuner +5V.
Q30	2SA733(A)(Q,P)	Muting control	High mute. Compatible with 2SA933S(Q,R).
Q32	2SA733(A)(Q,P)	Muting control	Low mute. Compatible with 2SA933S(Q,R).
Q34, 35	2SA945(A)(Q,P)	IC control	For the IC15. Compatible with 2SC1740S(Q,R).
Q36, 37	2SA733(A)(Q,P)	IC control	For the IC15. Compatible with 2SA933S(Q,R).
Q38	2SA733(A)(Q,P)	Muting control	Low mute. Compatible with 2SA933S(Q,R).
IC1	μPC4570C-A	Phono equalizer amplifier	
IC2	TC9164N	Input select	
IC3, 4	TC9163N	Input select	
IC5	NJM4558D	Buffer amplifier	For the REC OUT signal.
IC6, 7	μPC4570C-A	Buffer amplifier	
IC8, 9	NJM4558D	Buffer amplifier	
IC10	TC9176P	Electronic volume	Rear center volume.
IC11	NJM4558D	Buffer amplifier	For the electronic volume.
IC12	LC7522	Electronic volume array	For the GE (Graphic equalizer) volume.
IC13, 14	M5229P	OP amplifier	For the GE.
IC15	LC4966	Selector	GE ON/OFF.

CIRCUIT DESCRIPTION

1-4. DISPLAY UNIT (X14-256X-XX) 0-11 : K,P,U,UE 2-71 : E (JAPAN MADE)
(X14-270X-XX) 0-11 : K,P,U,UE 2-71 : E (SINGAPORE MADE)

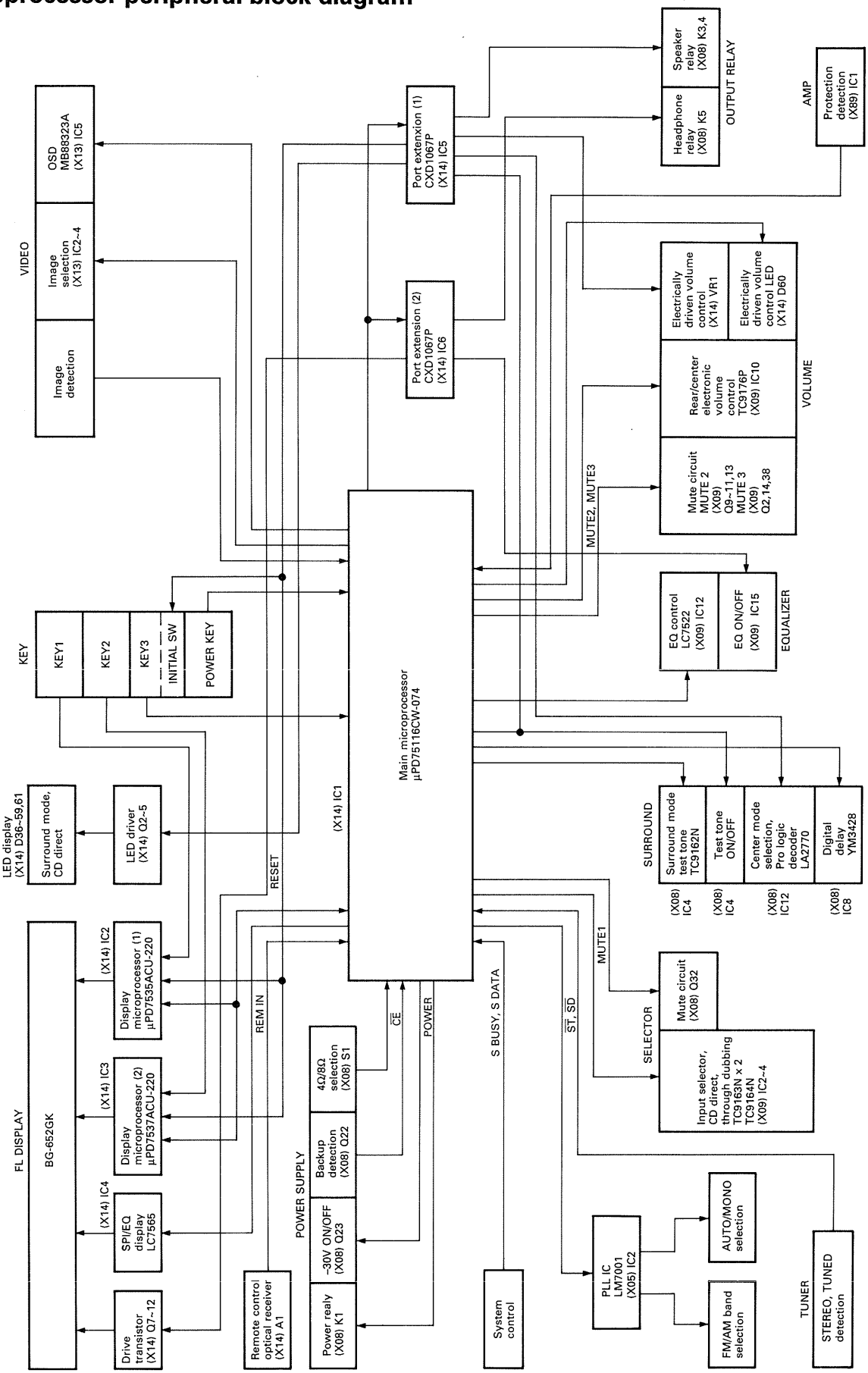
Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
Q1	2SC945(A)(Q,P)	Reset circuit	Compatible with 2SC1740S(Q,R).
Q2	2SC945(A)(Q,P)	LED driver circuit	Dolby pro logic. Compatible with 2SC1740S(Q,R).
Q3	2SC945(A)(Q,P)	LED driver circuit	Theater. Compatible with 2SC1740S(Q,R).
Q4	2SC945(A)(Q,P)	LED driver circuit	Hall. Compatible with 2SC1740S(Q,R).
Q5	2SC945(A)(Q,P)	LED driver circuit	CD direct. Compatible with 2SC1740S(Q,R).
Q6	2SC945(A)(Q,P)	LED driver circuit	Volume. Compatible with 2SC1740S(Q,R).
Q7	2SA733(A)(Q,P)	FIP dirver	Equalizer "ON". Compatible wuth 2SA933S(Q,R).
Q8	2SA733(A)(Q,P)	FIP driver	Video monitor "4". Compatible with 2SA933S(Q,R).
Q9	2SA733(A)(Q,P)	FIP driver	Video monitor "3". Compatible with 2SA933S(Q,R).
Q10	2SA733(A)(Q,P)	FIP driver	"CENTER". Compatible with 2SA933S(Q,R).
Q11	2SA733(A)(Q,P)	FIP dirver	"REAR". Compatible with 2SA933S(Q,R).
Q12	2SC945(A)(Q,P)	FIP driver	FIP grid current buffer. Compatible with2SC1740S(Q,R).
Q13, 14	DTC124ES	FIP driver	FIP grid current buffer.
IC1	μPD75116CW-074	Microprocessor	Main microprocessor.
IC2, 3	μPD7537ACU-220	Microprocessor	Sub microprocessor, FIP driver and key loading.
IC4	LC7565	FIP driver	GE, spectrum analyzer and rear/center volume level diaplsy driver.
IC5, 6	CXD1067P	I/O port	FIP/LED/Relay driver. For the volume motor and pro logic IC control.
IC7	LB1641	Motor driver	

1-5. MAIN AMPLIFIER UNIT (X89-109X-XX) 0-11 : K,U,UE 1-02 : P 2-71 : E (JAPAN MADE)
(X89-110X-XX) 0-11 : K,U,UE 1-02 : P 2-71 : E (SINGAPORE MADE)

Ref. No.	Parts No.	Use/Function	Operation/Condition/Compatibility
Q1~4	2SC1845(F,E)	1st stage voltage amp	
Q5~8	2SC945(A)(Q,P)	1st stage cascode amp	Compatible with 2SC1740S(Q,R).
Q9~12	2SC1845(F,E)	2nd stage voltage amp	
Q13~16	2SA1123(R,S)	3rd stage voltage amp	
Q17, 18	2SA1123(R,S)	3rd stage cascode amp	
Q19, 20	2SC2631(R,S)	3rd stage current mirror	
Q21, 22	2SC3944(Q,R)	Power amplifier driver	
Q23, 24	2SA1535(Q,R)	Power amplifier driver	
Q25, 26	2SC2631(R,S)	Protector, current detector	Positive (+) side.
Q27, 28	2SA992(F,E)	Protector, current detector	Negative (–) side.
Q29	2SA992(F,E)	Protector	Transmits the current detected signal to IC1.
IC1	μPC1237HA	Protector	Relay drive.

CIRCUIT DESCRIPTION

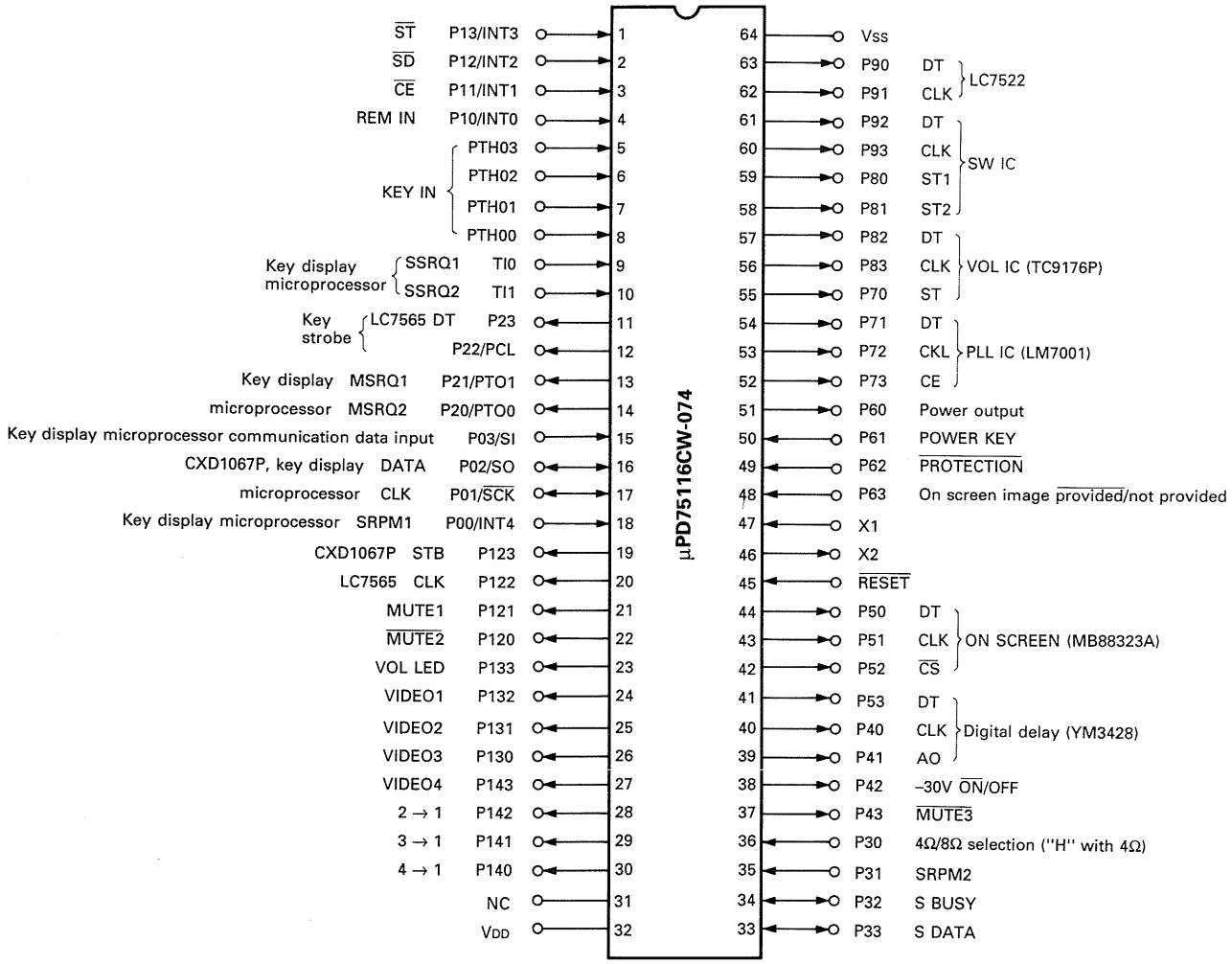
2. Microprocessor peripheral block diagram



CIRCUIT DESCRIPTION

3. Main microprocessor : μPD75116CW-074 (X14- : IC1)

3-1. Terminal connection diagram



3-2. Key matrix

O / I	P22 (57)	P23 (56)	INISW1	INISW2
PTH03 (5)		CD DIRECT	SPI 0 : Not provided 1 : Provided	Upper limit of reception of AM 10kHz. 0 : 1610kHz 1 : 1700kHz
PTH02 (6)	REAR LEVEL DOWN	M-1	SURROUND TYPE 0 : DOLBY 1 : PRO LOGIC	JBAND 0 : Not provided 1 : Provided
PTH01 (7)	REAR LEVEL UP	M-2	Remote control selection 0 : Unified 1 : Learning	VIDEO INPUT 0 : System 3 1 : Sustem 4
PTH00 (8)	MUTE	SYSTEM MEMORY	–	IBAND 0 : K 1 : E

Tact switch — Initial setting diode matrix

CIRCUIT DESCRIPTION

3-3. Explanation of terminals

Pin No.	Pin name	I/O	Symbol	Description
1	P13/INT3	I	$\overline{ST}$	Stereo signal input pin. With the TUNER position. with the selector set at "TUNER", when this pin is "L", "STEREO" is displayed.
2	P12/INT2	I	$\overline{SD}$	Broadcasr station existence.nonexistence detection signal input pin, which is used for auto tuning or programmed scan. At "L", "TUNED" is displayed. "H" : With station, "L" : Without station.
3	P11/INT1	I	$\overline{CE}$	Backup detection pin. At "L", the backup mode is engaged to stop the clock.
4	P10/INT0	I	REM IN	Pin to input the signal resultant from detecting the remote control signal. Normally or when reading leader codes, the level is detected. When reading data codes, an interrupt is applied at its fall for detection.
5~8	PTH03~PTH00	I	KEY IN	Microprocessor key matrix signal input pins. Normally "L" (Threshold voltage > V_{DD} x 7.5/16) (Exchange time = 32.3µs)
9	TI0	I	SSRQ1	Pin to input the communication request signal from display microprocessor (1). Normally "L", and "H" with communication request (when a pertinent key of display microprocessor (1) is pressed.)
10	TI1	I	SSRQ2	Pin to input the communication request signal from display microprocessor (2). Normally "L", and "H" with communication request (when a pertinent key of display microprocessor (2) is pressed.)
11	P23	O (CMOS)	LC7565 DT Key strobe	Pin to output the DT signal to graphic equalizer IC LC7565. Main microprocessor key matrix strobe signal pin. Normally "L", and "H" when key is taken in.
12	P22/PCL	O (CMOS)	Key strobe	Main microprocessor key matrix strobe signal pin. Normally "L", and "H" when key is taken in.
13	P21/PTO1	O (CMOS)	MSRQ1	Pin to output the communication request signal from the main microprocessor to display microprocessor (1). Normally "L", and "H" with communication request (per 8 bits.) During power ON, pulse is output to transfer display data at all times. (Refer to the communication format for between master and slave.)
14	P20/PTO0	O (CMOS)	MSRQ2	Pin to output the communication request signal from the main microprocessor ro display microprocessor (2). Same as MSRQ1 for the rest.
15	P03/SI	I		Display microprocessor (1), (2) communication data input pin, to which the status data of the key matrix of each display microprocessor is input.
16	P02/SO	I/O		Data output pin of port extension IC CXD1067P and display microprocessors (1) and (2).
17	P01/$\overline{SCK}$	I/O		Clock output pin of port extension IC CXD1067P and display microprocessors (1) and (2). Normally "H". During power ON, pulse is output to transfer display data at all times.
18	P00/INT4	I	SRPM1	Pin to input the communication acknowledge signal from display microprocessor (1).
19	P123	O (N-ch open drain)	CXD1067P STB	Port extension IC CXD1067P latch signal output pin. Normally "L", and latch at "H".
20	P122	O (N-ch open drain)	LC7565 CLK	Pin to output the clock signal to graphic equalizer display IC LC7565. Normally "L".
21	P121	O (N-ch open drain)	MUTE1	Pin to output a muting signal in input selection or during tuner scanning, etc. Normally "L", and active "H".
22	P120	O (N-ch open drain)	$\overline{MUTE2}$	Pin to output a muting signal for audio muting or for such a selection as TAPE2 ON/OFF, EQ ON/OFF, EQ REC ON/OFF, etc. Normally "L", and active "H".
23	P133	O (N-ch open drain)	VOL LED	Electrically driven volume control point indicator. Normally "H" (LED lights ON.) LED lights ON 4sec at power ON and flickers in ON/OFF interval of 500msec during muting. LED flickers in ON/OFF intervals of 64msec while volume is turned up or down by an electrically driven volume control from the remote control.

CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Symbol	Description
24~26	P132~P130	O (N-ch open drain)	VIDEO1~VIDEO3	Pins to control the video monitor and the video REC output of VIDEO1/ VIDEO2. Through dubbing is also involved.
27	P143		VIDEO4	
28	P142		2 → 1	
29	P141		3 → 1	
30	P140		4 → 1	

Status			Port status						
Model	Video monitor	Through dubbing status	VIDEO1	VIDEO2	VIDEO3	VIDEO4	2 → 1	3 → 1	4 → 1
KR-V9010	VIDEO1	OFF	0	1	1	1	1	1	1
		2 → 1	0	1	1	1	0	1	1
		3 → 1	0	1	1	1	1	0	1
		4 → 1	0	1	1	1	1	1	0
	VIDEO2	OFF	1	0	1	1	0	1	1
		2 → 1	1	0	1	1	0	1	1
		3 → 1	1	0	1	1	1	0	1
		4 → 1	1	0	1	1	1	1	0
	VIDEO3	OFF	1	1	0	1	1	0	1
		2 → 1	1	1	0	1	0	1	1
		3 → 1	1	1	0	1	1	0	1
		4 → 1	1	1	0	1	1	1	0
	VIDEO4	OFF	1	1	1	0	1	1	0
		2 → 1	1	1	1	0	0	1	1
		3 → 1	1	1	1	0	1	0	1
		4 → 1	1	1	1	0	1	1	0
KR-V8010	VIDEO1	OFF	1	0	0	0	0	0	1
		2 → 1	1	0	0	0	1	0	0
		3 → 1	1	0	0	0	0	1	0
	VIDEO2	OFF	0	1	0	0	0	0	1
		2 → 1	0	1	0	0	1	0	0
		3 → 1	0	1	0	0	0	1	0
	VIDEO3	OFF	0	0	1	0	0	0	1
		2 → 1	0	0	1	0	1	0	0
		3 → 1	0	0	1	0	0	1	0

31	NC			
32	V_{DD}			Microprocessor power supply pin.
33	P33	I/O (CMOS)	SDATA	System serial communication DATA signal I/O pin. Normally, input mode is engaged. Only when serial data is output, output mode is engaged.
34	P32	I/O (CMOS)	SBUSY	System serial communication BUSY signal I/O pin. Normally, input mode is engaged. Only when serial data is output, output mode is engaged.
35	P31	I	SRPM2	Pin to input the communication acknowledge signal from display microprocessor (2).
36	P30	I	4Ω/8Ω selection	Transformer tap selection switch input pin. "H" : 4Ω, "L" : 8Ω
37	P43	O (CMOS)	$\overline{\text{MUTE3}}$	CENTER REC OUT muting pin. Only for Normal or Wide mode of PRO LOGIC. Normally "L". Pulse is output in such a selection as TAPE2 ON/OFF, EQ ON/ OFF, etc.
38	P42	O (CMOS)	–30V $\overline{\text{ON}}$/OFF	Pin to output the control signal to turn ON/OFF –30V of FL power to light the EQ/SPI display and other sections of the FL display concurrently. AN "H" signal is output about 500ms later after the power supply pin becomes "H".
39	P41	O (CMOS)	YM3428 AO	Digital delay IC YM3428 control signal output pins.
40	P40		YM3428 CLK	
41	P53		YM3428 DT	

CIRCUIT DESCRIPTION

Pin No.	Pin name	I/O	Symbol	Description
42	P52	O (CMOS)	MB88323A $\overline{CS}$	OSD IC MB88323A control signal output pins.
43	P51		MB88323A CLK	
44	P50		MB88323A DT	
45	$\overline{RESET}$			Microprocessor reset input pin. Normally "H".
46	X2	O		System clock oscillation pins (4.194MHz).
47	X1	I		
48	P63	I		OSD video signal existence/nonexistence detection input pin. "H" : Nonexistence, "L" : Existence. At "H" (nonexistence), the screen goes blue.
49	P62	I	$\overline{PROTECTION}$	Pin to input the protection signal detection when speaker is shorted. During power ON, when this pin becomes "L", the speaker relay is turned off and "PROTECTION" is displayed. At this time, any other key than the power key is invalid.
50	P61	I	POWER KEY	Power key input pin. "H" with key ON.
51	P60	O (CMOS)	POWER	Power relay control output pin. "H" : Power ON, "L" : Power OFF.
52	P73	O (CMOS)	LM7001 CE	PLL IC LM7001 control signal output pins.
53	P72		LM7001 CLK	
54	P71		LM7001 DT	
55	P70	O (CMOS)	TC9176P ST	Electronic volume control IC TC9176P control signal output pins.
56	P83		TC9176P CLK	
57	P82		TC9176P DT	
58	P81	O (CMOS)	ST2	Function switch IC control signal output pins. One TC9162N, one TC9164N and two TC9163N's are controlled by these four pins. CLK and DT are common to each IC. ST1 is used for TC9162N, TC9163N's and TC9164N. ST2 is used for TC9163N (IC4).
59	P80		ST1	
60	P93		CLK	
61	P92		DT	
62	P91	O (CMOS)	LC7522 CLK	EQ IC LC7522 control signal output pins.
63	P90		LC7522 DT	
64	Vss			GND pin.

3-4. Port extension IC : CXD1067P (X14- : IC5, 6)

• Pin assignment of IC5

Output pins	P1 (1)	P2 (2)	P3 (3)	P4 (4)	P5 (5)	P6 (6)
Description	Speaker A relay	Speaker B relay	Electrically driven volume control volume up	Electrically driven volume control volume down	INI SW1 display micro-processor reset	INI SW2
Output pins	P7 (7)	P8 (8)	P9 (9)	P10 (11)	P11 (12)	P12 (13)
Description	Rear speaker relay	TEST TONE ON/OFF	CENTER ON/OFF	NORMAL MODE	WIDE MODE	–

• Pin assignment of IC6

Output pins	P1 (1)	P2 (2)	P3 (3)	P4 (4)	P5 (5)	P6 (6)
Description	FL "V4" display	FL "V3" display	FL "ON" display	FL "CENTER" display	FL "REAR" display	Headphone realy
Output pins	P7 (7)	P8 (8)	P9 (9)	P10 (11)	P11 (12)	P12 (13)
Description	EQ OFF	EQ ON	DOLBY PRO LOGIC LED	THEATER LED	HALL LED	CD DIRECT LED

CIRCUIT DESCRIPTION

• Explanation of terminals (IC5)

Pin No.	Pin name	I/O	Symbol	Description
1	P1	O	SPA	Speaker relay A control pin. ON : "H", OFF : "L"
2	P2	O	SPB	Speaker relay B control pin. ON " "H", OFF : "L"
3	P3	O	VOL UP	Electrically driven volume control volume up signal. Active "H"
4	P4	O	VOL DOWN	Electrically driven volume control volume down signal. Actve "H"
5	P5	O	INISW1	Initial setting switch take-in strobe signal. Display microprocessor reset signal (Temporarily "H" at power ON).
6	P6	O	INISW2	Initial setting switch take-in strobe signal.
7	P7	O	REAR SP	Rear speaker relay control signal. ON : "H", OFF : "L"
8	P8	O	TEST TONE $\overline{ON}$/OFF	PRO LOGIC test tone ON/OFF control signal. ON : "L", OFF : "H"
9	P9	O	CENTER $\overline{ON}$/OFF	Three pins P9~P11 make outputs as follows, according to the internal CENTER mode status of the microprocessor with power ON independent of a SURROUND mode or the status of the SURROUND bypass.
11	P10	O	NORMAL	
12	P11	O	WIDE	
13	P12	O		Unused.

CENTER mode \ Pin	NORMAL	WIDE	CENTER OFF
NORMAL	1	0	0
WIDE	0	1	0
PHANTOM	0	0	0
CENTER OFF	0	0	1

• Explanation of terminals (IC6)

Pin No.	Pin name	I/O	Symbol	Description
1	P1	O	V4	FL static display control pin. "H" : Goes out, "L" : Lights on.
2	P2	O	V3	
3	P3	O	ON	
4	P4	O	CENTER	
5	P5	O	REAR	
6	P6	O	HEADPHONE	Headphone relay control pin. ON : "H", OFF : "L"
7	P7	O	EQ OFF	EQ ON/OFF control pin.
8	P8	O	EQ ON	
9	P9	O	DOLBY PRO LOGIC	LED display pins. "H" : Lights on, "L" : Goes out
11	P10	O	THEATER	
12	P11	O	HALL	
13	P12	O	CD DIRECT	

Status \ Pin	EQ OFF	EQ ON
EQ OFF	1	0
EQ ON	0	1
CD DIRECT ON	0	0

CIRCUIT DESCRIPTION

3-5. Switch IC : TC9164N, TC9163N (X09- : IC2 ~ 3), TC9162N (X08- : IC4)

• Assignment

SW pins / IC	S1	S2	S3	S4	S5	S6	S7	S8
TC9164N (ST1) (X09-) IC2	VIDEO	TUNER	TAPE1	PHONO	$\overline{\text{TAPE2}}$	TAPE2	CD	CD DIRECT
TC9163N (ST1) (X09-) IC3	4 → 1	3 → 1	2 → 1	VIDEO4	VIDEO3	VIDEO2	VIDEO1	$\overline{\text{V2 AI}}$
TC9163N (ST2) (X09-) IC4	HALL	PRO LOGIC	$\overline{\text{PRO LOGIC}}$	$\overline{\text{TAPE1}}$	V2 AI	V1 AI	EQ REC	$\overline{\text{EQ REC}}$

• TC9162N control

Status		L							R						
		S1	S2	S3	S4	S5	S6	S7	S1	S2	S3	S4	S5	S6	S7
TEST TONE ON	L ch (L)	O	–	–	O	–	–	–	–	O	O	–	O	–	–
	C ch (L+R)	O	–	–	O	–	–	–	–	O	–	O	–	O	O
	R ch (R)	O	–	–	O	–	–	–	–	O	O	–	–	–	O
	S ch (L–R)	O	–	–	O	–	–	O	–	O	–	O	O	–	O
KR-V9010 SURROUND	PRO ROGIC	–	O	–	O	–	–	O	O	–	–	–	–	–	–
	THEATER	–	–	O	–	–	O	–	–	–	–	–	–	–	–
	HALL	–	–	O	–	O	–	–	–	–	–	–	–	–	–
KR-V8010 SURROUND	DOLBY	–	–	–	O	–	O	–	–	–	–	–	–	–	–
	THEATER	–	–	O	–	–	O	–	–	–	–	–	–	–	–
	HALL	–	–	O	–	O	–	–	–	–	–	–	–	–	–
SURROUND BYPASS		–	–	–	–	–	–	–	–	–	–	–	–	–	–

O : SW ON, – : SW OPEN

3-6. PLL IC : LM7001 (X05- : IC2) port assignment

	BO1 (2)	BO3 (9)
FM	1	0
AM	0	1
Other than tuner	0	0

	BO2 (8)
AUTO	0
MONO	1

0 : Short 1 : Open

3-7. GE VR : LC7522 (X09- : IC12) control

S pin (13) = VEE
f1 = 60Hz ... f7 = 15kHz

3-8. EQ/SPI display IC : LC7565 (X14- : IC4) control

S1 pin (15) = VSS
S2 pin (16) = VSS
f1 = 60Hz ... f7 = 15kHz

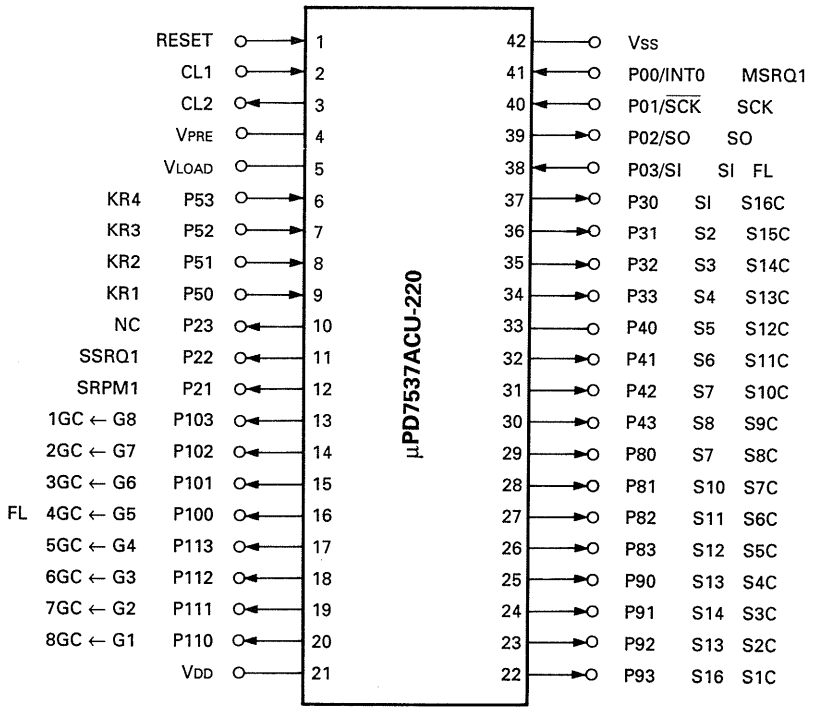
3-9. Electronic volume control : TC9176P (X09- : IC10) control

R side : Rear volume
L side : Center volume

CIRCUIT DESCRIPTION

4. Sub microprocessor (1) : μPD7537ACU-220 (X14- : IC2)

4-1. Terminal connection diagram



4-2. Key matrix (KEY1)

O / I	G1 P110 (20)	G2 P111 (19)	G3 P112 (18)	G4 P113 (17)	G5 P100 (16)	G6 P101 (15)	G7 P102 (14)	G8 P103 (13)
KR1 P50 (9)	EQ B	EQ C	EQ D	EQ f UP	EQ A	EQ DOWN	–	EQ f DOWN
KR2 P51 (8)	–	–	VIDEO4 (VIDEO3)	DOLBY PRO LOGIC (DOLBY)	HALL	SURROUND BYPASS	THEATER	SP A
KR3 P52 (7)	EQ MEMORY	SPI/EQ	EQ REC ON/OFF	EQ ON/DEFEAT	EQ UP	SP B	CHARACTER	DIRECT
KR4 P53 (6)	6	1	–	TUNING DOWN	AUTO/MANU.	TUNING UP	DIGIT	TUNER MEMORY

( ) for KR-V8010

CIRCUIT DESCRIPTION

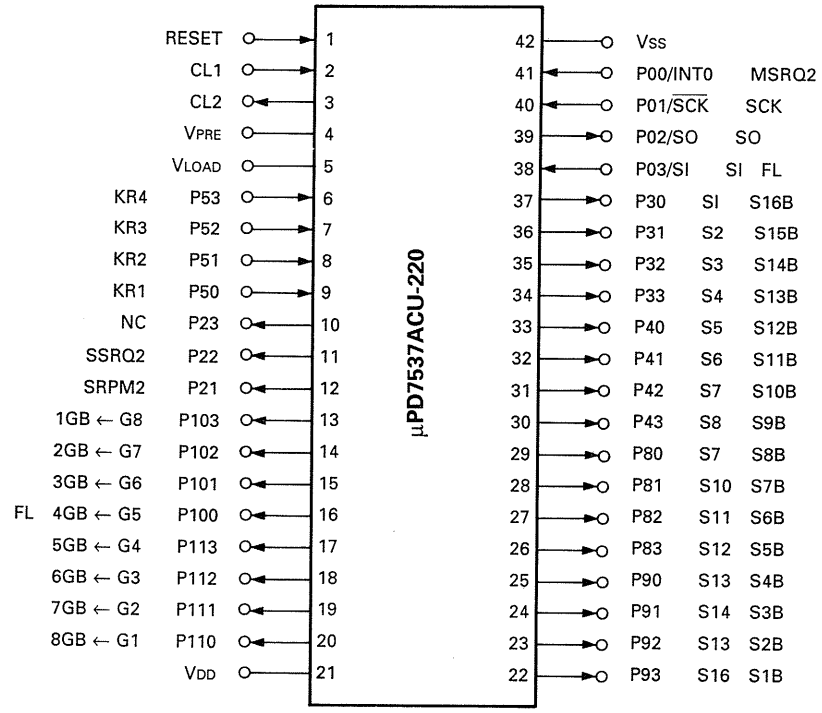
4-3. Explanation of terminals

Pin No.	Pin name	I/O	Symbol	Description
1	RESET	I		Display microprocessor reset pin. Reset is applied by the INISW1 of extension IC CXD1057P which is controlled by the main microprocessor.
2	CL1	I		Display microprocessor system clock oscillation pins (600kHz).
3	CL2	O		
4	VPRE			Display pin predriver power supply pin.
5	VLOAD			Display pin load power supply pin (–30V).
6~9	P53~P50	I	KR4~KR1	Key matrix return signal input pins.
10	P23	O	NC	Unused pin, which should be open.
11	P22	O	SSRQ1	Pin to output the communication request signal from the display microprocessor to the main microprocessor. Normally "L", and "H" with communication request (when a pertinent key of display microprocessor is pressed).
12	P21	O	SRPM1	Pin to input the communication acknowledge signal from the display microprocessor to the main microprocessor (per 8-bits).
13~16	P103~P100	O (P-ch open drain, mask option, built-in resistor)	G8~G5	FL grid control signal output pins (1GC~8GC of FL tube).
17~20	P113~P110		G4~G1	
21	VDD			Power supply pin (+5V).
22~25	P93~P90	O (P-ch open drain, mask option, built-in resistor)	S16~S13	FL segment control signal output pins (S1C~S16C of FL tube).
26~29	P83~P80		S12~S9	
30~33	P43~P40		S8~S5	
34~37	P33~P30		S4~S1	
38	P03/SI	I	SI	Pin to input the signal of communication with main microprocessor (display data input).
39	P02/SO	O	SO	Pin to output the signal of communication with main microprocessor (key data output).
40	P01/SCK	I	SCK	Pin to input the clock for communication with main microprocessor.
41	P00/INT0	I	MSRQ1	Pin to input the communication request signal from main microprocessor (per 8-bits).
42	VSS			GND pin.

CIRCUIT DESCRIPTION

5. Sub microprocessor (2) : μPD7537ACU-220 (X14- : IC3)

5-1. Terminal connection diagram



5-2. Key matrix (KEY2)

O / I	G1 P110 (20)	G2 P111 (19)	G3 P112 (18)	G4 P113 (17)	G5 P100 (16)	G6 P101 (15)	G7 P102 (14)	G8 P103 (13)
KR1 P50 (9)	CD (CD DIRECT)	2 → 1	PHONO (CD)	TUNER (PHONO)	TPE1 (TUNER)	0/10	1-10/11-20	5
KR2 P51 (8)	DELAY TIME DOWN	3 → 1	VIDEO1 (TAPE2)	THROUGH DUBBING OFF	TAPE2 (TAPE1)	9	P.SCAN	4
KR3 P52 (7)	CENTER DOWN	4 → 1	VIDEO3 (VIDEO2)	AUDIO INJECTION	VIDEO2 (VIDEO1)	8	AM	3
KR4 P53 (6)	CENTER MODE	CENTER UP	PGM/SET	DELAY TIME UP	EQ E	7	FM	2

( ) for KR-V8010

CIRCUIT DESCRIPTION

5-3. Explanation of terminals

Pin No.	Pin name	I/O	Symbol	Description
1	RESET	I		Display microprocessor reset pin. Reset is applied by the INISW1 of extension IC CXD1057P which is controlled by the main microprocessor.
2	CL1	I		Display microprocessor system clock oscillation pins (600kHz).
3	CL2	O		
4	VPRE			Display pin predriver power supply pin.
5	VLOAD			Display pin load power supply pin (–30V).
6~9	P53~P50	I	KR4~KR1	Key matrix return signal input pins.
10	P23	O	NC	Unused pin, which should be open.
11	P22	O	SSRQ2	Pin to output the communication request signal from the display microprocessor to the main microprocessor. Normally "L", and "H" with communication request (when a pertinent key of display microprocessor is pressed).
12	P21	O	SRPM2	Pin to input the communication acknowledge signal from the display microprocessor to the main microprocessor (per 8-bits).
13~16	P103~P100	O (P-ch open drain, mask option, built-in resistor)	G8~G5	FL grid control signal output pins (1GB~8GB of FL tube).
17~20	P113~P110		G4~G1	
21	VDD			Power supply pin (+5V).
22~25	P93~P90	O (P-ch open drain, mask option, built-in resistor)	S16~S13	FL segment control signal output pins (S1B~S16B of FL tube).
26~29	P83~P80		S12~S9	
30~33	P43~P40		S8~S5	
34~37	P33~P30		S4~S1	
38	P03/SI	I	SI	Pin to input the signal of communication with main microprocessor (display data input).
39	P02/SO	O	SO	Pin to output the signal of communication with main microprocessor (key data output).
40	P01/SCK	I	SCK	Pin to input the clock for communication with main microprocessor.
41	P00/INT0	I	MSRQ2	Pin to input the communication request signal from main microprocessor (per 8-bits).
42	VSS			GND pin.

CIRCUIT DESCRIPTION

6. Test mode

6-1. Setting by key on this unit itself

- **Initial setting function**
  1) Setting method
     While pressing the SYSTEM MEMORY key, plug in the power.
  2) Contents
     Every function is set to the initial status.
- **Test mode setting**
  1) Setting method
     While pressing the M1 key, plug in the power.
  2) Canceling method
     Plug out the power, then plug in the power again. In this case, however, the tuner's test frequency EQ memory is held.
  3) Contents
     · Tuner frequencies are set as follows

Destination / Channel	K	E
1	FM 87.5MHz	FM 87.5MHz
2	FM 89.1MHz	FM 89.1MHz
3	FM 90.0MHz	FM 90.0MHz
4	FM 92.0MHz	FM 92.0MHz
5	FM 94.0MHz	FM 94.0MHz
6	FM 98.0MHz	FM 98.0MHz
7	FM 100.1MHz	FM 100.1MHz
8	FM 102.0MHz	FM 102.0MHz
9	FM 106.0MHz	FM 106.0MHz
10	FM 108.0MHz	FM 108.0MHz
11	AM 530.0kHz	AM 531.0kHz
12	AM 630.0kHz	AM 630.0kHz
13	AM 990.0kHz	AM 990.0kHz
14	AM 1440.0kHz	AM 1440.0kHz
15	AM 1610.0kHz	AM 1602.0kHz
16	AM (1700.0kHz)	

1700kHz is set only with the WIDE mode.

· EQ PGM memory setting
  B : All max.
  C : All min.
· FL and LEDs all light
  However, the spectrum analyzer display, through dubbing display and rear/center display sections do not light.
  This all lighting is canceled by operating an other key on this unit itself than the POWER key.
· Rear and center speaker volume up/down operation
  3 points of +20dB, 0dB and –50dB
· Delay time up/down operation
  With DOLBY SURROUND, 3 points of 30.0ms, 22.5ms and 15.0ms.
  With THEATER SURROUND, 3 points of 30.0ms, 15.0ms and 0ms.
· EQ level up/down operation
  3 points of +12dB, 0dB and –12dB.

CIRCUIT DESCRIPTION

7. Compressor/Expandor IC : μPC1571C (X08- : IC6)

7-1. Analog converter circuit

The S/N ratio is lowered due to the digital delay circuit. To offset this, a noise reduction is applied.

The signal is compressed down to half the dynamic range by the compressor circuit and is passed through a digital delay circuit. After that, it is expanded to twice by the expandor circuit to ensure the original dynamic range.

The μPC1571C is a high-performance integrated circuit capable of constituting a high-percision analog converter by a lesser number of externally connected components.

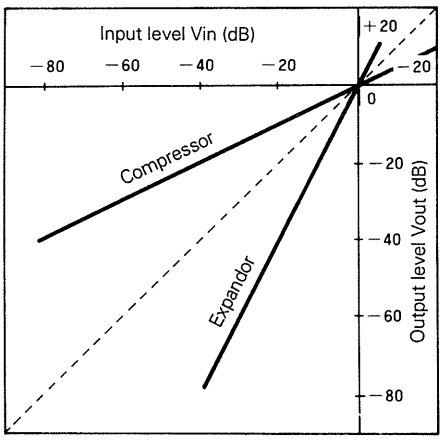
Incorporated within one paciage are a reference voltage circuit and a two-fold operation amplifier, gain cell and rectifier.

This IC can be applied to a limiter, a voltage controlled amplifier, an ordinary home-use device noise reduction circuit, etc., including a compandor as in a telephone system.

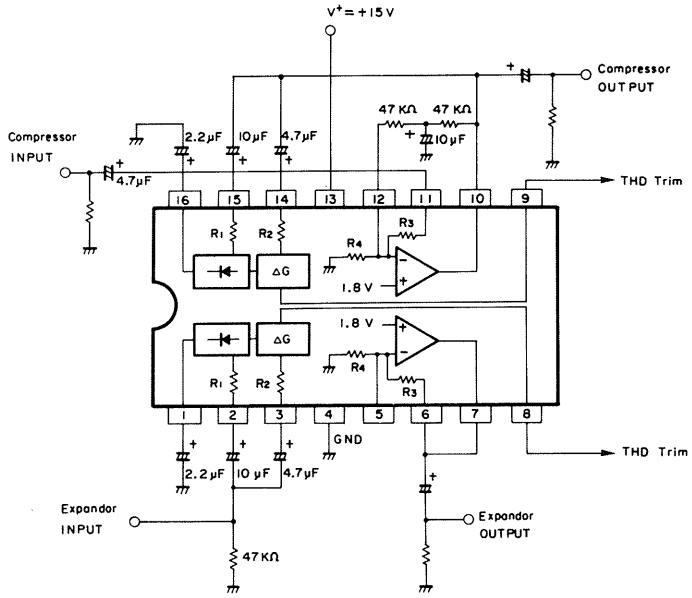
7-2. Features

- Operation on single power, +6V to +16V
- With built-in identical circuits of 2 channels, a compandor can be formed by one package.
- Dynamic range, approx. 70dB
- Distortion rate adjustable

7-3. Standard transfer characteristics



7-4. Standard application circuit example

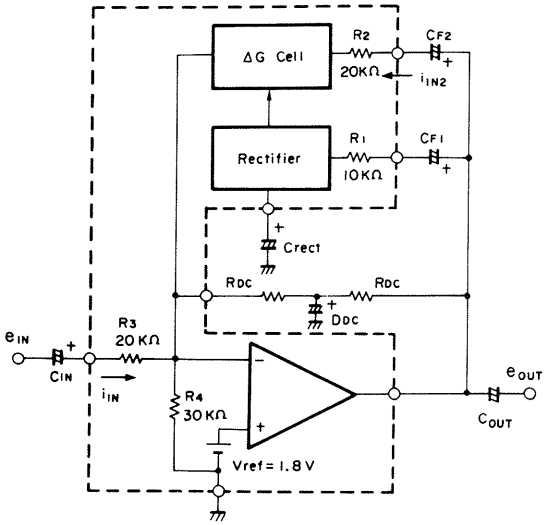


7-5. Description of terminals

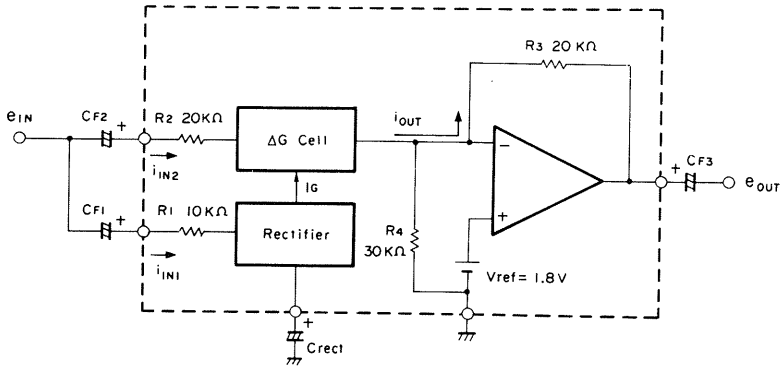
Pin No.	Function	Pin No.	Function
1	Crect1	9	THD Trim 2
2	Rect IN 1	10	OUT 2
3	ΔG Cell IN 1	11	R3 2
4	GND	12	I1 2
5	I1 1	13	Vcc
6	R3 1	14	ΔG Cell IN 2
7	OUT 1	15	Rect IN 2
8	THD Trim 1	16	Crect2

CIRCUIT DESCRIPTION

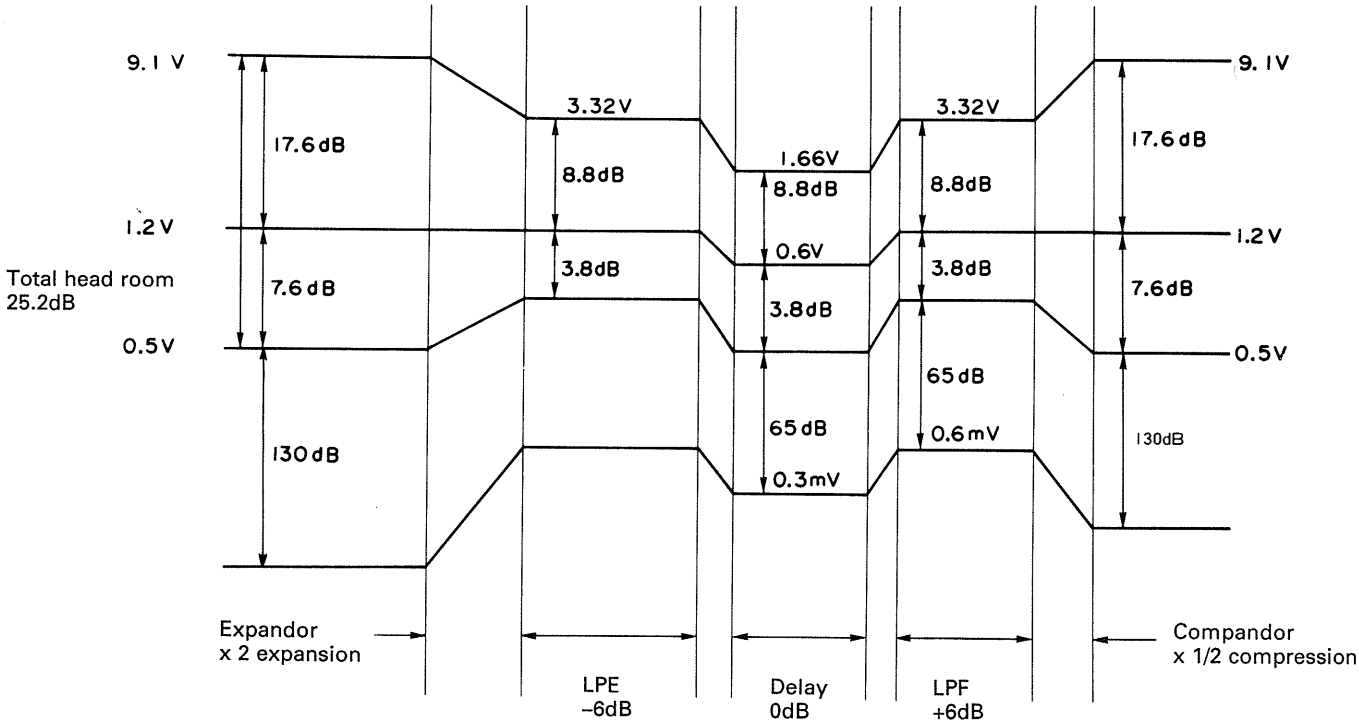
7-6. Compressor application circuit example



7-7. Operation as an expandor



7-8. Theoretical values of head room and noise level with compressor/expandor circuit



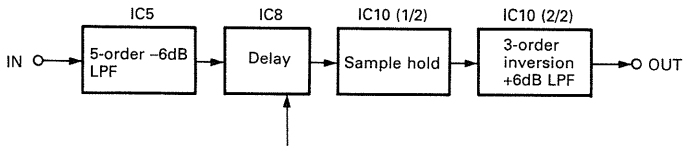
CIRCUIT DESCRIPTION

8. Digital delay : YM3428 (X08- : IC8)

8-1. Outline

IC8, a one-chip delay with one input system and two output systems, is controlled by all microprocessor serial data. Its inside is of a 14-bit configuration, and a PCM modulation is used.

In this unit, one input system and one output system are used, upon which PRO LOGIC, THEATER ot HALL the rear speaker output is emitted as a selay output from IC10 (2/2).



8-2. Function outline

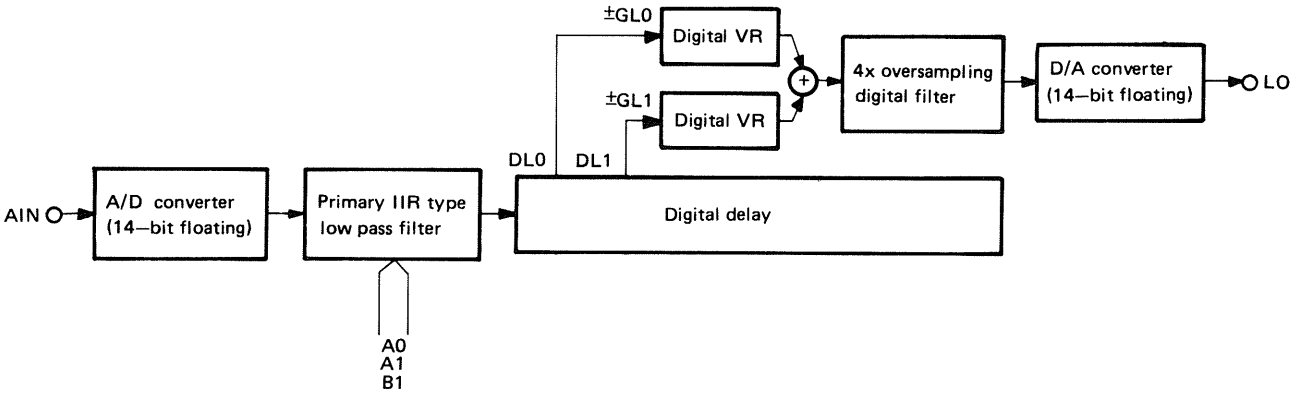
As shown in the internal process flow of figure, the analog signal input from pin AIN is converted into a digital form of floating 14-bit at a sampling rate os 24.9kHz by an A/D converter operating in a 14-bit floating manner and is entered to the promary IIR type low pass filter on the next stage. (Concerning this filter, its cutogg frequency can be controlled by the entry of coefficients to registers A0, A1 and B1 from a microprocessor connected.)

The digital delay unit, an RAM with four output taps, permits selection between tap positions by registers DL0, DL1, DR0 and DR1.

The respective outputs of these four taps are entered to their corresponding digital volume units, where are in turn subject to a digital attenuation process on coefficients of volume registers CL0, CL1 CR0 and CR1. Subsequently, in adder circuits, they undergo an addition process of L0 + L1 and R0 + R1 and are input to quadruple oversampling digital filters, in which loopback noises occurring in D/A conversion outputs are then attenuated with a reject band property of about –25dB, thus helping the externally connected low pass filters. The digital input to a D/A converter receives a quadruple sampling rate of 99.4kHz.

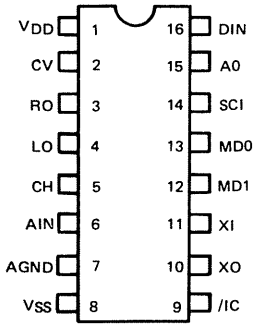
As regards the actuality of this digital processing system, a DSP process is made by an ROM type program within an LSI.

For preset modes, necessary parameters are put in a ROM in order to obtain carefully intended characteristics without intry of coefficients from a personal computer.

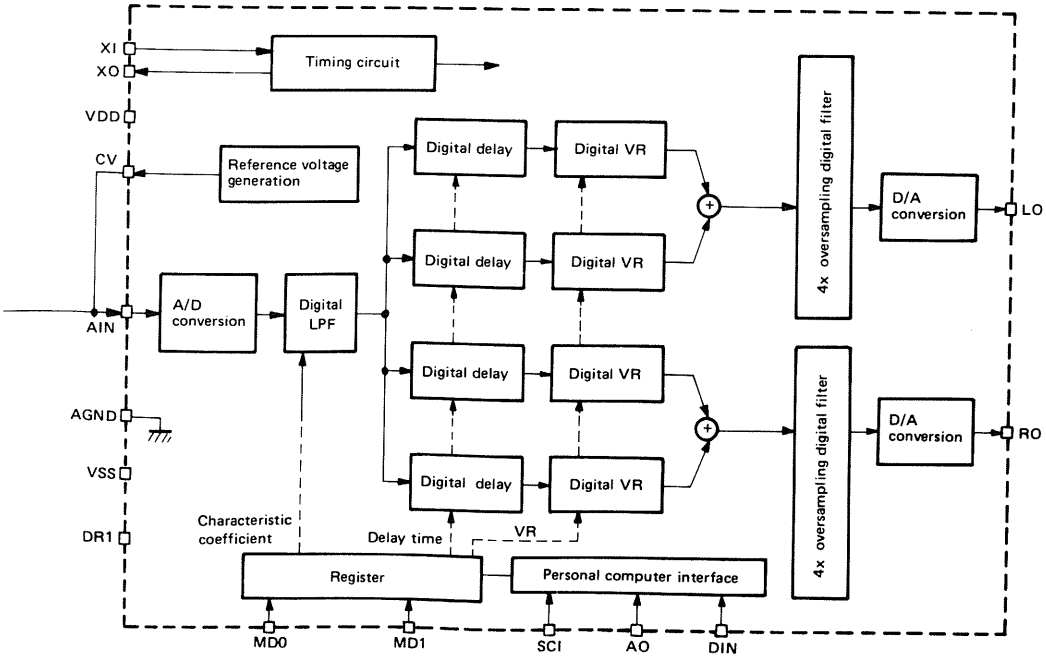


CIRCUIT DESCRIPTION

8-3. Terminal connection diagram



8-4. Block diagram



8-5. Explanation of terminals

Pin No.	Pin name	I/O	Description
1	VDD	–	+5V current.
2	CV	O	A/D conversion reference voltage (+2.5V) output pin.
3	RO	O	R-ch output pin (D/A conversion analog output).
4	LO	O	L-ch output pin (D/A conversion analog output).
5	CH	O	Sample-hold capacitor external connection pin.
6	AIN	I	Analog signal input pin (input with the reference of the CV voltage).
7	AGND	–	Grounding pin of A/D and D/A converter sections (Needs to be connected with Vss outside).
8	Vss	–	System grounding pin of digital system and the LSI.
9	/IC	*I	Reset pin.
10	XO	O	X'tal oscillator connection pins.
11	XI	I	(XI is the clock input pin when personal computer is used.)
12	MD1	*I	Mode setting pins.
13	MD0	*I	
14	SCI	I	Data shift clock input pin when personal computer is used.
15	AO	I	Address/data identification signal input pin when personal computer is used.
16	DIN	I	Data input pin when personal computer is used.

Any pin marked with * has a pull-up resistor connected.

CIRCUIT DESCRIPTION

9. Dolby B type noise reduction : LA2730 (X08- : IC9)

9-1. Outline

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

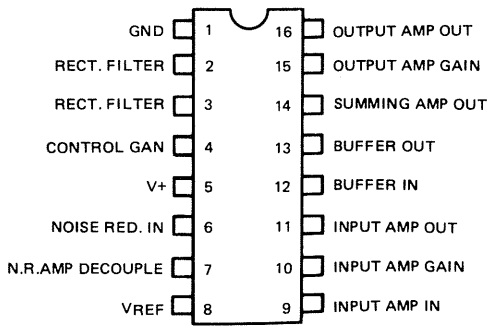
With 500mV = 0dB at Dolby level point 6, a gain control is made by IC6 in IN so as to obtain the same level as in OUT so that IN is of 500mV = 0dB.

Table shows input vs. output characteristics.

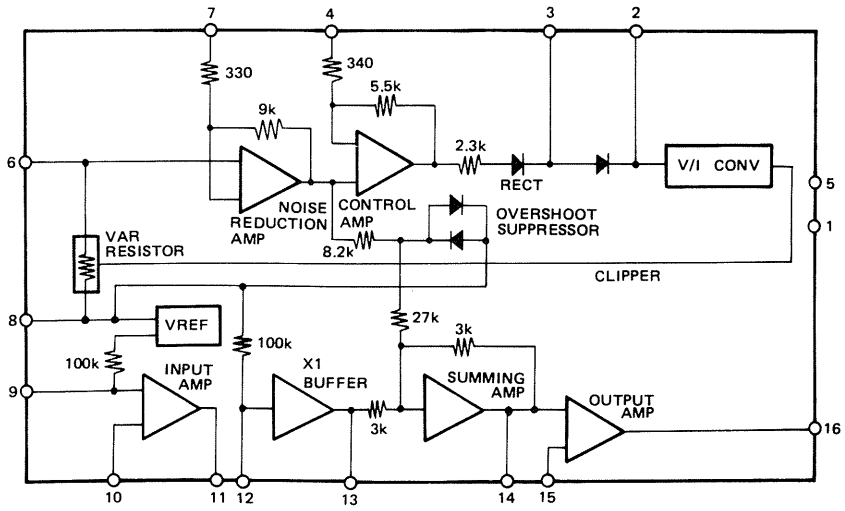
9-2. Modified B type processor decode characteristics

Hz / dB	100	200	500	700	1.0K	1.4k	2.0k	3.0k	5.0k	7.0k	10.0k
0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
–5	0.0	0.0	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1	–0.1
–10	0.0	0.0	–0.3	–0.4	–0.4	–0.4	–0.3	–0.3	–0.3	–0.3	–0.3
–15	0.0	0.0	–0.8	–1.1	–1.4	–1.3	–1.2	–0.9	–0.7	–0.7	–0.7
–20	0.0	0.0	–0.8	–1.6	–2.4	–3.0	–3.0	–2.4	–1.7	–1.5	–1.4
–25	0.0	0.0	–0.9	–1.7	–2.8	–3.8	–4.6	–4.9	–4.1	–3.4	–2.9
–30	0.0	0.0	–1.0	–1.7	–2.9	–4.0	–5.0	–5.4	–5.4	–5.6	–5.2
–35	0.0	0.0	–1.0	–1.7	–2.9	–4.0	–5.0	–5.5	–5.6	–5.8	–5.7
–40	0.0	0.0	–1.0	–1.7	–2.9	–4.0	–5.0	–5.5	–5.7	–5.8	–5.8

9-3. Terminal connection diagram



9-4. Block diagram



ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	TUNER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION			SELECTOR: FM				
1	DETECTOR	(A) 98.0MHz 1kHz, ±75kHz dev 60dBμ(ANT input)	Connect a DC voltmeter between TP3 and TP4.	AUTO or MONO 98.0MHz	L4 (X05-)	0V	(a)
2	DISTORTION (MONO)	(C) 98.0MHz 1kHz, ±68.25kHz dev Selector:L or R Pilot:±6.75kHz dev 60dBμ(ANT input)	(B)	98.0MHz	L5 (X05-)	Minimum distortion.	
3	VCO	(A) 98.0MHz 0 dev 100dBμ(ANT input)	Connect a frequency counter between TP5 and GND.	AUTO 98.0MHz	VR3 (X05-)	19.00kHz	(b)
4	DISTORTION (STEREO)	(C) 98.0MHz 1kHz, ±68.25kHz dev Selector:L or R Pilot:±6.75kHz dev 60dBμ(ANT input)	(B)	98.0MHz	IFT (Front end)	Minimum distortion.	
5	SEPARATION (E Type)	(C) 98.0MHz Stereo signal 60dBμ(ANT input)	(B)	AUTO 98.0MHz	VR4 (X05-)	Minimum crosstalk.	
6	TUNING LEVEL	(A) 98.0MHz 0 dev 14dBμ(ANT input) 75Ω	(B)	AUTO or MONO 98.0MHz	VR1 (X05-)	Adjust VR1 and stop at the point where FL1(TUNED) goes on.	
AM SECTION			Keep the AM loop antenna installed. SELECTOR: AM				
(1)	BAND EDGE (Low)	–	Connect a DC voltmeter between TP1(GND) and TP2.	–	L9 (X05-)	1.5V	(c)
(2)	BAND EDGE (High)	–	Connect a DC voltmeter between TP1(GND) and TP2.	–	TC2 (X05-)	8.0V	(c)
Repeat alignments (1) and (2) several times.							
(3)	RF ALIGNMENT (1)	(D) 600kHz 20dBμ(ANT input)	(B)	–	L8 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
(4)	RF ALIGNMENT (2)	(D) 1400kHz 20dBμ(ANT input)	(B)	–	TC1 (X05-)	Maximum amplitude and symmetry of the oscilloscope display.	
Repeat alignments (3) and (4) several times.							
(5)	IF TRANSFORMER	(D) 1000kHz 20dBμ(ANT input)	(B)	–	L10 (X05-)	Maximum amplitud and symmetry of the oscilloscope display.	
(6)	TUNING LEVEL	(D) 1000kHz 36dBμ(ANT input)	(B)	–	VR2 (X05-)	Adjust VR2 and stop at the point where FL1(TUNED) goes on.	
AUDIO SECTION							
[1]	IDLE CURRENT	–	(E) Connect a DC voltmeter across CP1(L) CP2(R)	Volume: 0	VR1(L) VR2(R) (X89-)	10mV	(d)

REGLAGE

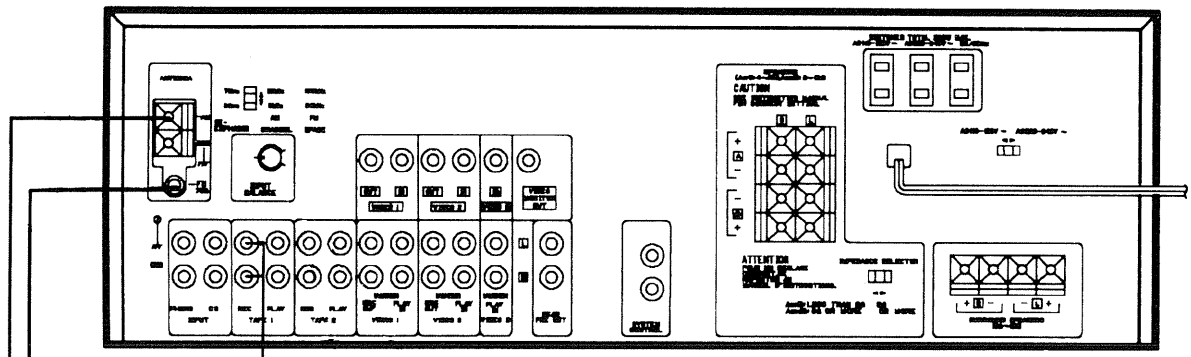
N°	ITEM	REGLAGE DE L'ENTREE	REGLAGE DE LA SORTIE	REGLAGE DU TUNER	POINT DE L'ALIGNEMENT	ALIGNER POUR	FIG.
SECTION MF			SELECTEUR : FM				
1	DETECTEUR	(A) 98,0MHz 1kHz.±75kHz dév 60dBμ(Entrée ANT)	Relier un voltmètre CC entre les TP3 et TP4.	AUTO ou MONO 98,0MHz	L4 (X05-)	0V	(a)
2	DISTORSION (MONO)	(C) 98,0MHz 1kHz.68,25kHz dév Selection:l ou R Signal pilote: ±6,75kHz dév 60dBμ(Entrée ANT)	(B)	98,0MHz	L5 (X05-)	Distorsion minimale.	
3	OSCILLATEUR CONTROLE PAR LA TENSION	(A) 98,0MHz 0 dév 100dBμ(Entrée ANT)	Relier un compteur de fréquence entre les TP5 et GND.	AUTO 98,0MHz	VR3 (X05-)	19,00kHz	(b)
4	DISTORSION (STEREO)	(C) 98,0MHz 1kHz.68,25kHz dév Selection:l ou R Signal pilote: ±6,75kHz dév 60dBμ(Entrée ANT)	(B)	98,0MHz	Tête H.F. IFT (X05-)	Distorsion minimale.	
5	SEPARATION (E type)	(C) 98,0MHz Signal stéréo 60dBμ(Entrée ANT)	(B)	AUTO 98,0MHz	VR4 (X05-)	Diaphonie minimale.	
6	NIVEAU D'ACCORDER	(A) 98,0MHz 0 dév – 14dBμ(Entrée ANT) 75Ω	(B)	AUTO ou MONO 98,0MHz	VR1 (X05-)	Ajuster VR1 et arrêter le mouvement de VR1 au moment où le FL1(TUNED)s'allume.	
SECTION MA			Laisser l'antenne bouche MA installée. SELECTEUR: AM				
(1)	BORD DE BANDE (Bas)	–	Relier un voltmètre entre les TP1(GND) et TP2.	–	L9 (X05-)	1,5V	(c)
(2)	BORD DE BANDE (Haut)	–	Relier un voltmètre entre les TP1(GND) et TP2.	–	TC2 (X05-)	8,0V	(c)
Répéter les points (1) et (2) plusieurs fois.							
(3)	ALIGNEMENT H.T. (1)	(D) 600kHz 20dBμ(Entrée ANT)	(B)	–	L8 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(4)	ALIGNEMENT H.T. (2)	(D) 1400kHz 20dBμ(Entrée ANT)	(B)	–	TC1 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
Répéter les points (3) et (4) plusieurs fois.							
(5)	TRANSFORMATEUR F.I.	(D) 1000kHz 20dBμ(Entrée ANT)	(B)	–	L10 (X05-)	Amplitude et symétrie maximale de l'affichage de l'oscilloscope.	
(6)	NIVEAU D'ACCORDER	(A) 1000kHz 36dBμ(Entrée ANT)	–	–	VR2 (X05-)	Ajuster VR2 et arrêter le mouvement de VR2 au moment où le FL1(TUNED)s'allume.	
SECTION AUDIO							
[1]	COURANA DE POLAR'SATION	–	(E) Connecter un voltmètre CC sur CP1(L) CP2(R)	Volume: 0	VR1(G) VR2(D) (X89-)	10mV	(d)

ABGLEICH

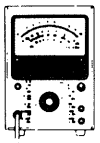
NR.	GEGENSTAND	EINGANGS-EINSTELLUNG	AUSGANGS-EINSTELLUNG	TUNER-EINSTELLUNG	ABGLEICH-PUNKTE	ABGLEICHEN FÜR	ABB.
UKW-EMPFANGSABTEILUNG			WÄHLER: FM				
1	DETEKTOR	(A) 98,0MHz 1kHz.±75kHz Hub 60dBμ(ANT-Eingang)	Einen Gleichspannungs-messer zwischen TP3 und TP4 anschließen.	AUTO oder MONO 98,0MHz	L4 (X05-)	0V	(a)
2	KLIRRFAKTOR (MONO)	(C) 98,0MHz 1kHz.±68,25kHz Hub Wähler: L oder R Pilotten: ±6,75kHz Hub 60dBμ(ANT-Eingang)	(B)	98,0MHz	L5 (X05-)	Minimal Klirrfaktor.	
3	SPANNUNGS-GEREGELTER OSZILLATOR	(A) 98,0MHz 0 Hub 100dBμ(ANT-Eingang)	Einen Frequenzzähler zwischen TP5 und GND anschließen.	AUTO 98,0MHz	VR3 (X05-)	19,00kHz	(b)
4	KLIRRFAKTOR (STEREO)	(C) 98,0MHz 1kHz.±68,25kHz Hub Wähler: L oder R Pilotten: ±6,75kHz Hub 60dBμ(ANT-Eingang)	(B)	98,0MHz	Frontend IFT (X05-)	Minimal Klirrfaktor.	
5	STEREO KANAL TRENNUNG (E Type)	(C) 98,0MHz Stereo Signal 60dBμ(ANT-Eingang)	(B)	AUTO 98,0MHz	VR4 (X05-)	Minimal Klirrfaktor.	
6	ABSTIMM PEGEL	(A) 98,0MHz 0 Hub – 14dBμ(ANT-Eingang) 75Ω	(B)	AUTO oder MONO 98,0MHz	VR1 (X05-)	Den Pegel wiederstand aufdrehen, und dem VR1 Halt geben wobei den FL1(TUNED) anzeiger leuchtet wird.	
MW-EMPFANGSABTEILUNG			Die MW-Rahmenantenne angebracht lassen.		WÄHLER: AM		
(1)	BANDKANTE (Niedrig)	–	Einen Gleichspannungs-messer zwischen TP1(GND) und TP2 anschließen.	–	L9 (X05-)	1,5V	(c)
(2)	BANDKANTE (Hoch)	–	Einen Gleichspannungs-messer zwischen TP1(GND) und TP2 anschließen.	–	TC2 (X05-)	8,0V	(c)
Abstimmungen (1) und (2) mehrere Male wiederholen.							
(3)	HF-ABGLEICH (1)	(D) 600kHz 20dBμ(ANT-Eingang)	(B)	–	L8 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(4)	HF-ABGLEICH (2)	(D) 1400kHz 20dBμ(ANT-Eingang)	(B)	–	TC1 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
Abstimmungen (3) und (4) mehrere Male wiederholen.							
(5)	ZF-UBERTRAGER	(D) 1000kHz 20dBμ(ANT-Eingang)	(B)	–	L10 (X05-)	Maximal Amplitude und Symmetrie des Oszilloskopbildes.	
(6)	ABSTIMM PEGEL	(A) 1000kHz 36dBμ(ANT-Eingang)	–	–	VR2 (X05-)	Den Pegel wiederstand aufdrehen, und dem VR2 Halt geben wobei den FL1(TUNED) anzeiger leuchtet wird.	
AUDIO-ABTEILUNG							
[1]	LEERLAUFSTROM	–	(E) Einen Gleichspannungs-messer über CP1(L) CP2(R) anschließen.	Volume: 0	VR1(L) VR2(R) (X89-)	10mV	(d)

ADJUSTMENT/REGLAGE/ABGLEICH

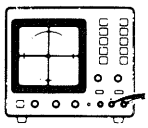
System connections/Raccordements du système/System-Anschlusse



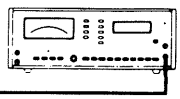
AC voltmeter
Voltmètre CA
Wechselspannungsmesser



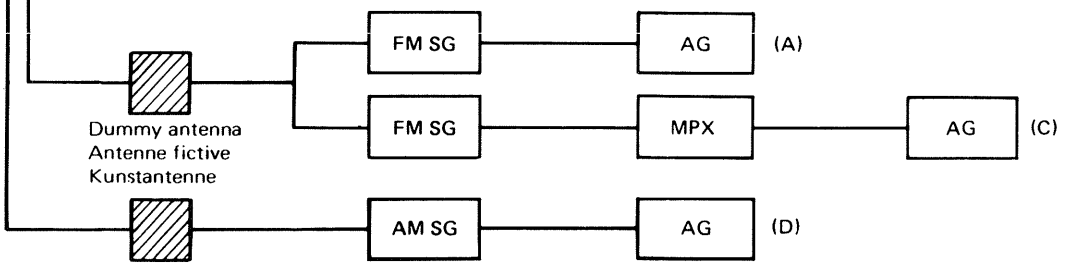
Oscilloscope
Oscilloscope
Oszilloskop



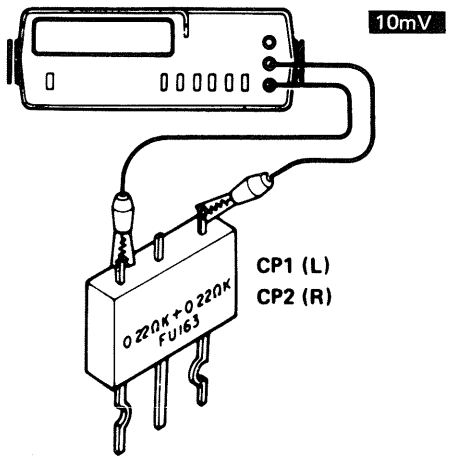
Distortion meter
Distorsiomètre
Klirrfaktormesser



(B)

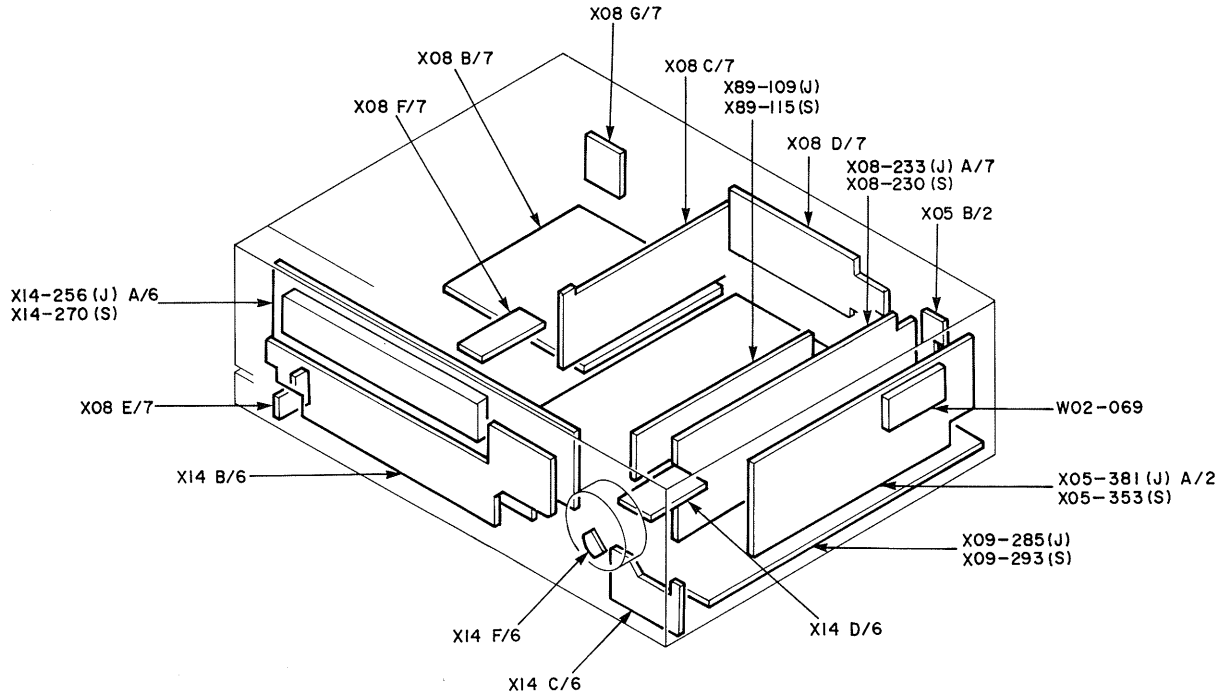


DC voltmeter
Voltmètre de CC
Gleichspannungsmesser



(E)

PERSPECTIVE OF PC VOARDS



VOLTAGE TABLE

(X05-)

IC1

1~3	2.36V
4	0V
5	9.2V
6	9.15V
7	9.13V
8	4.27V
9	3.45V
10	3.26V
11	1.26V
12	1.48V
13,14	0.26V
15	2.39V
16	1.45V
17	6.79V
18,19	0.05V
20,21	3.95V
22	2.83V

IC2

1	0.75V
2	1.64V
6	0.07V
7	11.16V
8	0.01V
9	0.2V
10	0.06V
11	2.8V
12,13	5.16V
14	2.05V
15	1.16V
16	0V

IC3

1	10.6V
2	2.57V
3	5.85V
4,5	8.52V
6,7	2.79V
8	0V
9	5.1V
10,11	2.55V
12	2.54V
13,14	2.56V
15	3.19V
16	2.5V

	B	C	E
Q1	2.4V	8.8V	1.7V
Q2	0.6V	1.9V	–
Q3	1.2V	1.9V	0.6V
Q7	10.5V	11V	11V
Q8	11.2V	0.07V	11V

(X08-)

	B	C	E
Q6~8	3.3V	0V	4.0V
Q21	0.6V	0V	–
Q22	0.4V	5.5V	–
Q23	5.2V	–30.3V	5.6V
Q24	–30.3V	–35.1V	–29.7V
Q26	0V	27.4V	0.6V
Q27	0V	–28V	0.6V
Q28	27.4V	–1.2V	–27.6V
Q29	–	–	–1.2V
Q30	1.2V	28.4V	0V
Q31	–1.2V	–28.6V	0V
Q32	12.7V	12.7V	–17.7V
Q33	13V	0V	13.1V
Q34~37	–	ON : 0.1V OFF : 28.3V	–

(X08-)

IC1

1~3	0V
4	15V
5~10	0V
11	–15V
12~14	0V

IC4

1	–15V
2~5	0V
6	0.4V
7~27	0V
28	15V

IC5

1~3	0V
4	–15V
5~7	0V
8	15V

IC6

1	0.9V
2,3	1.8V
4	0V
5	1.8V
6,7	6.7V
8,9	1.8V
10	8.0V
11,12	1.8V
13	15V
14,15	1.8V
16	0.9V

IC8

1	4.9V
2~6	2.4V
7,8	0V
9	4.9V
10	2.2V
11	2.3V
12~15	0V
16	4.9V

IC9

1	0V
2	6.1V
3	6.2V
4	6.6V
5	14V
6	6.3V
7,8	6.4V
9~11	0V
12~14	6.3V
15,16	5.7V

IC10

1~3	2.4V
4	–15V
5~7	0V
8	15V

IC11

1~3	6.7V
4	–15V
5~7	6.2V
8	15V

IC13

1	3.8V
2	0V
3	3.9V
4	2.7V
5	3.8V
6	8.9V
7	3.3V
8	0V

IC14

1	3.8V
2	0V
3	3.9V
4	0V
5,6	3.8V
7	3.3V
8	0V

IC15

1	3.8V
2	0V
3	3.9V
4	0V
5	3.8V
6	3.9V
7	3.3V
8	0V

IC16

1	11.6V
2	5.6V
3	0.6V

(X09-)

IC1,5~9,11

1~3	0V
4	–15.3V
5~7	0V
8	14.9V

IC2~4

1	–15.3V
2~27	0V
28	14.9V

IC10

1	–15.3V
2~15	0V
16	14.9V

IC12

1	6.7V
2~9	0V
10~14	–6.7V
15	5.2V
16~28	0V

IC13,14

1~17	0V
18	14.9V
19	0V
20	–15.3V

IC15

1~4	0V
5~7	–15.3V
8~11	0V
12~14	14.9V

	B	C	E
Q1,2	0V	–	0V
Q3,4	–	–	0V
Q5,6	–0.6V	1.1V	–1.1V
Q7,8	–15V	–	0V
Q9,10	–7.5V	–	0V
Q11	–	–7.5V	–
Q12	–7.5V	–	–
Q13	–	–	–7.5V
Q14	–7.5V	–	–
Q21	15.6V	22V	15V
Q22	16.2V	22	15.6V
Q23	–	–15.3V	–
Q24	–	–	–21.2V
Q25	–	–	–15.3V
Q26	15V	16.2V	14.4V
Q27	–0.6V	–15.8V	–
Q28	13.4V	22V	12.8V
Q29	–	14.9V	–
Q30	0V	–15V	0V
Q32	–17.7V	–7.5V	4.4V
Q34	0V	15V	–
Q35	0.7V	0V	–
Q36	15V	–15.2V	15V
Q37	0V	15V	15V
Q38	2.8V	3.4V	3.4V

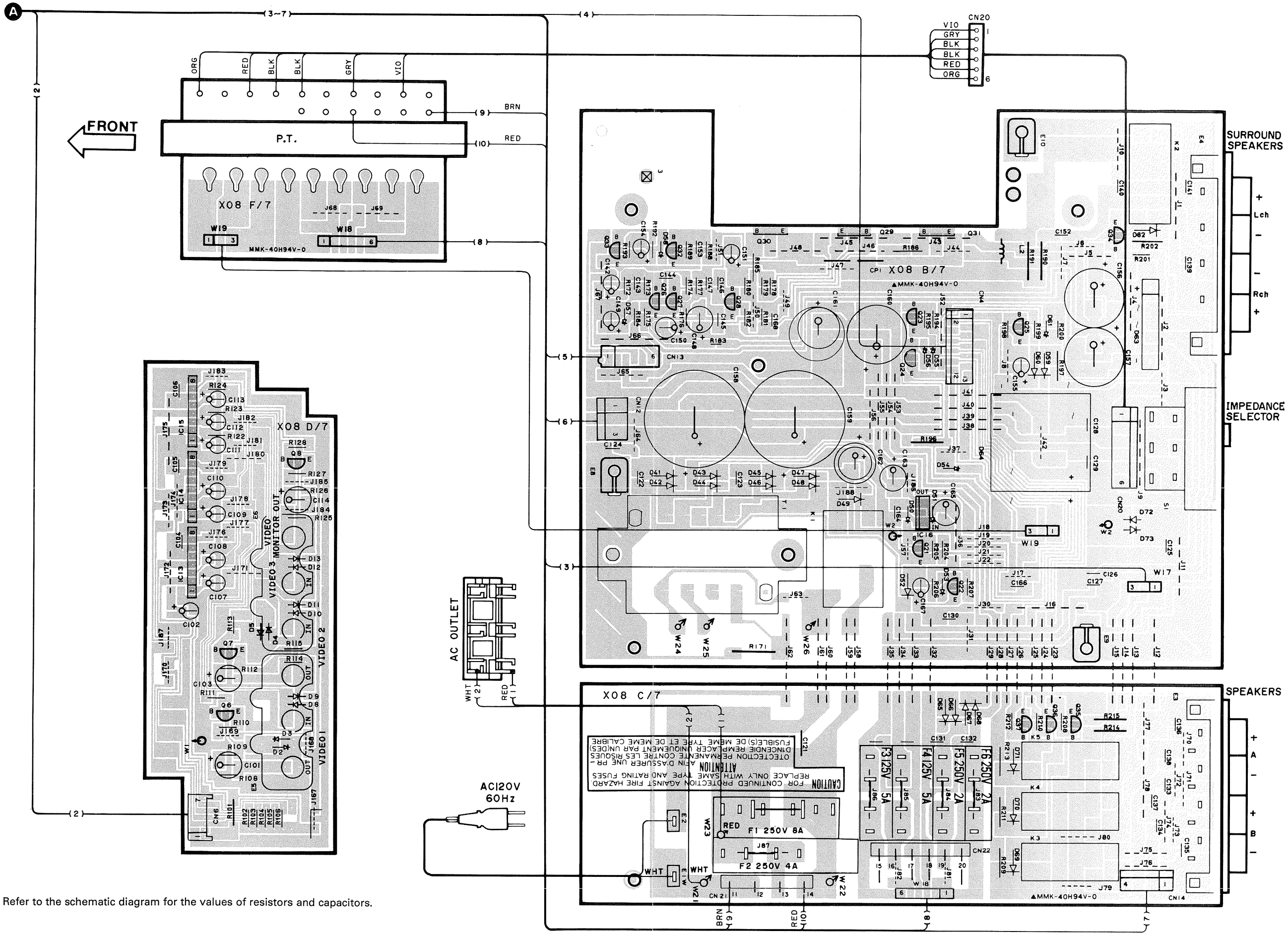
(X89-)

IC1

1~3	0V
4	1.4V
6	0.7V
7	2.2V
8	3.4V

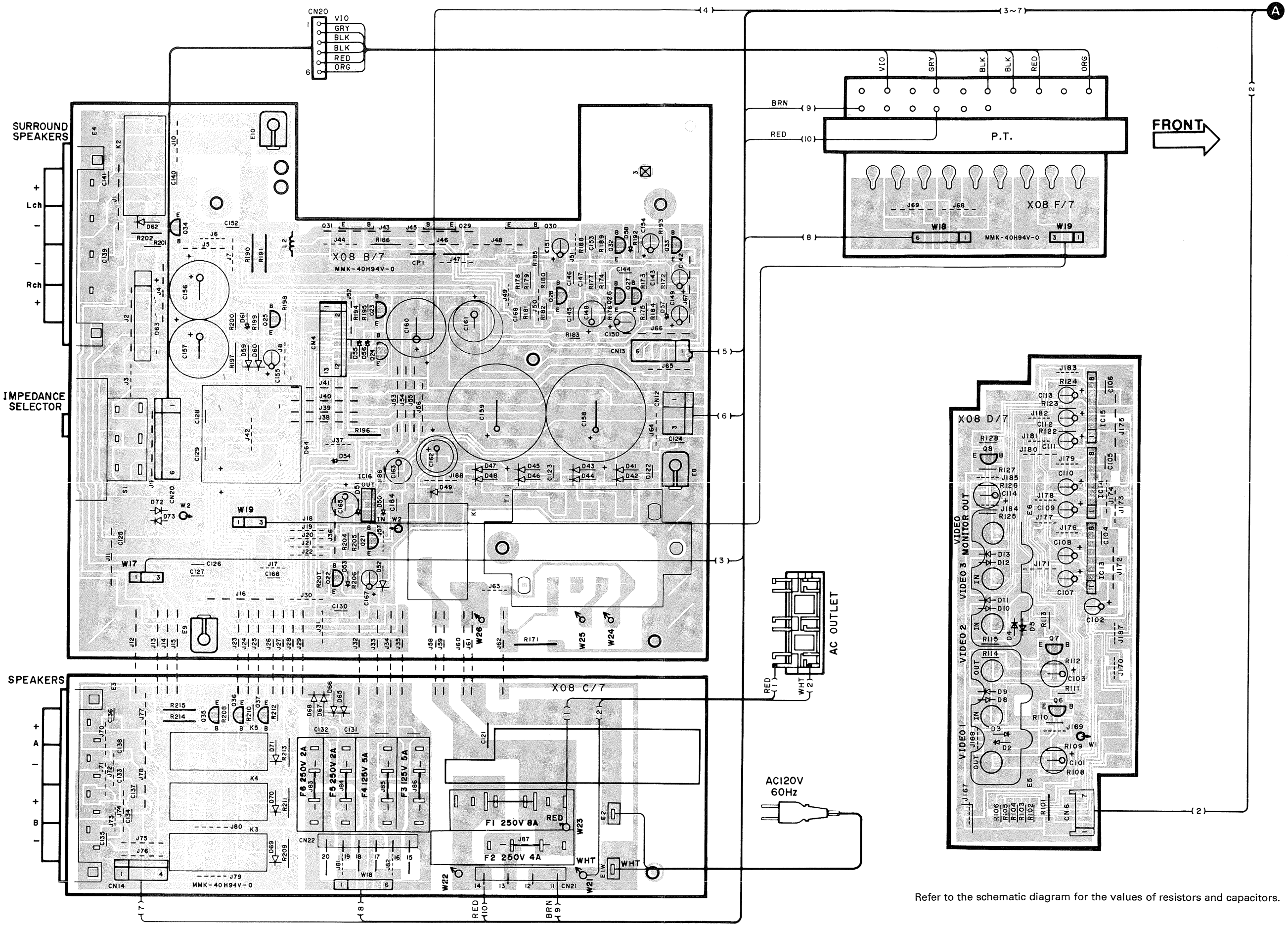
	B	C	E
Q1	0V	3.3V	–0.6V
Q2	–	3.3V	–
Q3	0V	3.3V	–0.6V
Q4	0V	–	–
Q5~7	3.9V	14.6V	3.3V
Q8	3.9V	14.6V	–
Q9	14.6V	A–3.0V	14V
Q10	–	A–3.0V	14V
Q11,12	14.6V	A–3.0V	14V
Q13	A–3.0V	2.2V	A–2.5V
Q14	A–3.0V	0.7V	A–2.5V
Q15	A–3.0V	1.1V	A–2.5V
Q16	–	–	A–2.5V
Q17,18	–	B+2.5V	0.7V
Q19,20	B+2.5V	–1.1V	B+2.5V
Q21,22	1.1V	–	0.6V
Q23,24	–1.1V	–	–0.6V
Q25,26	0V	A–1.3V	0V
Q27,28	0V	–1.0V	0V
Q29	A–1.3V	0V	A-1.3V

PC BOARD (COMPONENT SIDE VIEW)



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

PC BOARD (FOIL SIDE VIEW)



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

KR-V8010 KR-V8010

EXPLODED VIEW

Ⓐ			: N08-0128-35
Ⓑ			: N09-1445-05
C	Ø3x8	(Bi-Tap) BLK	: N89-3008-45
D	M2.6x4	BLK	: N30-2604-45
E	Ø3x8	(Bi-Tap)	: N89-3008-46
F	Ø4x8	(Bi-Tap) BLK	: N89-4008-45
G	M3x4	BLK	: N30-3004-45
Ⓗ			: N09-0333-05

1	2	3	4	5
S1	S2	S3	S4	S5

6	7	8	9	0/10
S6	S7	S8	S9	S10

SPEAKERS A	SPEAKERS B	EQUALIZER
S4	S23	S22

CHARACTER	DIGIT	TUNING DOWN	TUNING UP	AUTO/MANU.	MEMORY	DIRECT	FM	AM	P. SCAN	1-10/11-20
S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11

POWER	BYPASS	PRO. LOGIC	THEATER	HALL	VIDEO 4	VIDEO 3	VIDEO 2	VIDEO 1	TAPE 2	TAPE 1	TUNER	PHONO	CD
S25	S26	S27	S28	S29	S53	S54	S55	S56	S57	S58	S59	S60	S61

EQUALIZER LEVER ▲	MEMO.	EQ./SPI.	EQ. REC	PGM/SET
S32	S34	S35	S36	S37

EQUALIZER LEVER ◀	EQUALIZER LEVER ▶	EQUALIZER LEVER ▼	EQUALIZER PRESET A	B	C	D	E
S30	S33	S31	S38	S39	S40	S41	S42

DELAY ▲TIME	AUDIO INJECTION	OFF
S46	S48	S49

▼	3▶1	2▶1
S47	S51	S50

REAR LEVEL ▽	REAR LEVEL △	MUTING
S63	S64	S65

BALANCE	M-1	M-2	MEMORY
VR2	S66	S67	S68

SYSTEM MEMORY

SURROUND SPEAKERS	IMPEDANCE SELECTOR
E4	S1

SYSTEM CONTROL
E6

REAR PRE OUT	VIDEO 3	VIDEO 2	VIDEO 1	TAPE 2	TAPE 1	CD	PHONO
E4	E3	E2	E1				

VIDEO 1	VIDEO 2	VIDEO 3	MONITOR OUT
E5			E6

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

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	Destination 仕向	Remarks 備考
			KR-V8010 (J : Japan made, S : Singapore made)			
1	1A	*	A01-1750-01	METALLIC CABINET		S
1	1A	*	A01-1806-01	METALLIC CABINET		
3	3A	*	A20-5785-01	PANEL ASSY		
4	2C	*	A22-1093-02	SUB PANEL		
5	3A	*	A29-0148-02	PANEL		
6	2A	*	A33-0113-04	REFLECTOR		
7	1B		A70-0260-05	REMOTE CONTROLLER ASSY	KUUE	
7	1B		A70-0261-05	REMOTE CONTROLLER ASSY	PE	
8	1A		A09-0088-08	BATTERY COVER		
12	2A	*	B01-0437-02	PANEL ESCUTCHEON ASSY		
13	3A	*	B03-2560-03	DRESSING PLATE		
14	3A	*	B07-1884-02	ESCUTCHEON		
16	2C	*	B10-1011-03	SMOKED FILTER		
17	3A		B12-0048-04	INDICATOR		
18	2A	*	B12-0123-04	INDICATOR		
19	2A	*	B12-0124-04	INDICATOR		
-			B08-9063-04	INDICATOR		
-			B46-0092-03	WARRANTY CARD	K	
-			B46-0094-03	WARRANTY CARD	UUE	
-			B46-0095-03	WARRANTY CARD	UUE	
-			B46-0121-03	WARRANTY CARD	P	
-			B46-0122-13	WARRANTY CARD	E	
-		*	B50-9514-00	INSTRUCTION MANUAL	KPUUE	
-		*	B50-9853-00	INSTRUCTION MANUAL	PE	
-		*	B50-9854-00	INSTRUCTION MANUAL	E	
-			B58-0223-04	CAUTION CARD (PRE-SET 120V)	U	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	UE	
-			B58-0803-13	CAUTION CARD	E	
20	3A	*	D39-0200-05	DAMPER		
⚠ 23	1D		E03-0055-05	AC OUTLET	E	
⚠ 23	1D		E03-0086-05	AC OUTLET	KPUUE	
⚠ 24	1D		E30-0459-05	AC POWER CORD	E	
⚠ 24	1D		E30-0812-05	AC POWER CORD	UUE	
⚠ 24	1D		E30-0974-05	AC POWER CORD	KP	
30	3B		F19-1006-04	BLIND PLATE		
-		*	H01-8456-04	ITEM CARTON CASE		
-		*	H10-3805-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H10-3806-02	POLYSTYRENE FOAMED FIXTURE		
-		*	H11-0028-04	POLYSTYRENE FOAMED BOARD		
-		*	H12-2061-04	PACKING FIXTURE		
-		*	H13-0026-04	CARTON BOARD		
-			H25-0181-04	PROTECTION BAG (150X260X0.05)		
-			H25-0225-04	PROTECTION BAG (850X450X0.03)		
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
34	3C,3D		J02-1034-05	FOOT		
35	1B		J19-2815-04	ANTENNA HOLDER		
⚠ 36	1D		J42-0083-05	POWER CORD BUSHING		
38	2A	*	J21-5495-04	MOUNTING HARDWARE ASSY		
40	3B	*	K29-3633-04	KNOB ASSY		
41	3B	*	K29-3642-04	KNOB		
42		*	K29-3724-02	KNOB		

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

⚠ indicates safety critical components.

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⚠ 46	1B	*	L01-8631-05	POWER TRANSFORMER	K	
⚠ 46	1B	*	L01-8632-05	POWER TRANSFORMER	E	
⚠ 46	1B	*	L01-8635-05	POWER TRANSFORMER	UUE	
⚠ 46	1B	*	L01-8637-05	POWER TRANSFORMER	P	
A			N08-0128-35	BINDING POST		
B	2A		N09-1445-05	SET SCREW (M3X8)		
C	1D,2A		N89-3008-45	BINDING HEAD TAPTITE SCREW		
D	1D		N30-2604-45	PAN HEAD MACHINE SCREW	UUE	
E	1C,1D		N89-3008-46	BINDING HEAD TAPTITE SCREW		
F	1A,1B		N89-4008-45	BINDING HEAD TAPTITE SCREW		
G	3A		N30-3004-45	PAN HEAD MACHINE SCREW		
I	3A	*	N09-2704-05	TAPTITE SCREW		
56	1B		T90-0132-05	T TYPE ANTENNA		
57	1B		T90-0173-05	LOOP ANTENNA		
58	1B	*	T90-0177-05	ANTENNA ADAPTOR		
			TUNER UNIT (X05-3810-10) : J (X05-3530-11) : S			
C1 ,2			CK45FF1H103Z	CERAMIC 0.010UF Z		
C3			CC93FCH1H391J	CERAMIC 390PF J		
C4			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C5			CE04KW1V100M	ELECTRO 10UF 35WV		
C6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7			CK45FF1H223Z	CERAMIC 0.022UF Z		
C8 ,9			CK45FF1H103Z	CERAMIC 0.010UF Z		
C10			CK45FF1H223Z	CERAMIC 0.022UF Z		
C11 ,12			CK45FF1H103Z	CERAMIC 0.010UF Z		
C13 -15			CE04KW1C470M	ELECTRO 47UF 16WV		
C16			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C17			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C18			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C19			CF92FV1H223J	MF 0.022UF J		
C20			CF92FV1H273J	MF 0.027UF J		
C21			CK45FF1H223Z	CERAMIC 0.022UF Z		
C22			CC45FSL1H101J	CERAMIC 100PF J		
C23			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C24			CF92FV1H273J	MF 0.027UF J		
C25			CC45FCH1H220J	CERAMIC 22PF J		
C26			CK45FF1H103Z	CERAMIC 0.010UF Z		
C27			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C28			CC45FCH1H220J	CERAMIC 22PF J		
C29 -31			CC45FSL1H101J	CERAMIC 100PF J		
C32			CK45FF1H103Z	CERAMIC 0.010UF Z		
C33 ,34			CF92FV1H682J	MF 6800PF J	E	
C35			CC93FCH1H471J	CERAMIC 470PF J		
C36 ,37			CF92FV1H273J	MF 0.027UF J	UUE	
C36 ,37			CF92FV1H433J	MF 0.043UF J	KP	
C38 ,39			CF92FV1H153J	MF 0.015UF J	UUE	
C40			CE04KW1H3R3M	ELECTRO 3.3UF 50WV		
C41 -43			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C44			CK45FB1H471K	CERAMIC 470PF K		
C45			CF92FV1H473J	MF 0.047UF J		
C46			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C47			CE04KW1C470M	ELECTRO 47UF 16WV	E	
C48			CE04KW1V100M	ELECTRO 10UF 35WV		
C49			CE04KW1C470M	ELECTRO 47UF 16WV		

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C50 ,51			CE04KW1C220M	ELECTRO 22UF 16WV	E	
C52 ,53			CC45FSL1H151J	CERAMIC 150PF J	KPUUE	
C52 ,53			CF92FV1H122J	MF 1200PF J	E	
C54			CC45FSL1H151J	CERAMIC 150PF J	E	
TC1 ,2			C05-0303-05	CERAMIC TRIMMER CAPACITOR(20PF		
E2	2D		E20-0321-05	LOCK TERMINAL BOARD		
CF1 ,2			L72-0531-05	CERAMIC FILTER	KPUUE	
CF1 ,2			L72-0536-05	CERAMIC FILTER	E	
CF3			L72-0099-05	CERAMIC FILTER		
CF4			L72-0096-05	CERAMIC FILTER		
L1			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L2			L40-1021-14	SMALL FIXED INDUCTOR(1.0MH,K)		
L3			L40-1092-17	SMALL FIXED INDUCTOR(1UH,M)		
L4		*	L30-0484-05	FM IFT		
L5		*	L30-0485-05	FM IFT		
L6			L79-0125-05	LC FILTER	E	
L7			L79-0739-05	LC FILTER	E	
L8			L31-0509-05	MW-RF COIL		
L9			L32-0277-15	MW OSCILLATING COIL		
L10			L30-0362-05	AM IFT		
X1			L77-1122-05	CRYSTAL RESONATOR		
R14			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R22 ,23			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
R24			RD14GB2E221J	FL-PROOF RD 220 J 1/4W		
R45			RD14GB2E101J	FL-PROOF RD 100 J 1/4W	E	
R53			RD14GB2E330J	FL-PROOF RD 33 J 1/4W		
VR1			R12-3130-05	TRIMMING POT.(33K)		
VR2			R12-3126-05	TRIMMING POT.(10K)		
VR3			R12-1089-05	TRIMMING POT.(4.7K)		
VR4			R12-6016-05	TRIMMING POT.(330K)	E	
VR4			R12-8015-05	TRIMMING POT.(1M)	KPUUE	
S1			S31-2072-05	SLIDE SWITCH	UUE	
D1 ,2			HSS104	DIODE		
D1 ,2			1SS133	DIODE		
D3			HZS5.1N(B2)	ZENER DIODE		
D3			RD5.1ES(B2)	ZENER DIODE		
D4 -6			HSS104	DIODE		
D4 -6			1SS133	DIODE		
D7			KV1236(Z2)	VARIABLE CAPACITANCE DIODE		
IC1			LA1265	IC(FM/AM TUNER)		
IC2			LM7001	IC(PLL FREQUENCY SYNTHESIZER)		
IC3			AN7470	IC(FM MPX)		
Q1			2SC1923(R,O)	TRANSISTOR		
Q2			2SC1740S(Q,R)	TRANSISTOR		
Q2			2SC945(A)(Q,P)	TRANSISTOR		
Q3			2SC1845(F,E)	TRANSISTOR		
Q4			2SC1740S(Q,R)	TRANSISTOR	E	
Q4			2SC945(A)(Q,P)	TRANSISTOR	E	
Q5 ,6			2SC1740S(Q,R)	TRANSISTOR	UUE	
Q5 ,6			2SC945(A)(Q,P)	TRANSISTOR	UUE	
Q7 ,8			2SA733(A)(Q,P)	TRANSISTOR		
Q7 ,8			2SA933S(Q,R)	TRANSISTOR		
66	2D		W02-0699-05	FM FRONT-END ASSY	KPUUE	

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66	2D		W02-0700-05	FM FRONT-END ASSY		E	
PRE AMPLIFIER UNIT (X08-2330-11) : J (X08-2300-11) : S							
C34			CF92FV1H472J	MF	4700PF	J	
C35			CF92FV1H333J	MF	0.033UF	J	
C36			CE04KW1C470M	ELECTRO	47UF	16WV	
C37			CE04KW1C220M	ELECTRO	22UF	16WV	
C38			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C39			CF92FV1H104J	MF	0.10UF	J	
C40			CF92FV1H334J	MF	0.33UF	J	
C41			CE04KW1C101M	ELECTRO	100UF	16WV	
C42			CF92FV1H273J	MF	0.027UF	J	
C43			CF92FV1H682J	MF	6800PF	J	
C44			CC45FSL1H180J	CERAMIC	18PF	J	
C45			CE04KW1V4R7M	ELECTRO	4.7UF	35WV	
C46			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C47			C90-1352-05	NP-ELEC	4.7UF	25WV	
C48			CC45FSL1H221J	CERAMIC	220PF	J	
C49			CF92FV1H472J	MF	4700PF	J	
C50			CF92FV1H682J	MF	6800PF	J	
C51			CC45FSL1H100D	CERAMIC	10PF	D	
C52 -54			CC45FSL1H101J	CERAMIC	100PF	J	
C55 ,56			CE04KW1V100M	ELECTRO	10UF	35WV	
C57			CE04KW1HR22M	ELECTRO	0.22UF	50WV	
C58			CE04KW1C470M	ELECTRO	47UF	16WV	
C59 ,60			CE04KW1A101M	ELECTRO	100UF	10WV	
C61			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C62			CE04KW1V100M	ELECTRO	10UF	35WV	
C63			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C64			CC45FSL1H101J	CERAMIC	100PF	J	
C65			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C66			CE04KW1HR22M	ELECTRO	0.22UF	50WV	
C67			CE04KW1C470M	ELECTRO	47UF	16WV	
C68		*	CC93FCH1H152J	CERAMIC	1500PF	J	
C69			CE04KW1V4R7M	ELECTRO	4.7UF	35WV	
C70 -72			CC45FSL1H101J	CERAMIC	100PF	J	
C73			C90-1352-05	NP-ELEC	4.7UF	25WV	
C74			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C75 -77			CC45FSL1H101J	CERAMIC	100PF	J	
C78			CF92FV1H153J	MF	0.015UF	J	
C79			CF92FV1H392J	MF	3900PF	J	
C80 ,81			CK45FB1H821K	CERAMIC	820PF	K	
C82			CF92FV1H392J	MF	3900PF	J	
C83			CF92FV1H153J	MF	0.015UF	J	
C84 ,85			CC45FSL1H101J	CERAMIC	100PF	J	
C86 ,87			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C94 ,95			CE04KW1H010M	ELECTRO	1.0UF	50WV	
C101			CE04KW0J471M	ELECTRO	470UF	6.3WV	
C102			CE04KW1C331M	ELECTRO	330UF	16WV	
C103			CE04KW0J471M	ELECTRO	470UF	6.3WV	
C104-106			CK45FF1H103Z	CERAMIC	0.010UF	Z	
C107-113			CE04KW1A101M	ELECTRO	100UF	10WV	
C114			CE04KW0J471M	ELECTRO	470UF	6.3WV	
C115			CE04KW1H010M	ELECTRO	1.0UF	50WV	
⚠ C121			C91-0023-05	CERAMIC	0.01UF	AC250V	UUE

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⚠	C121			C91-0647-05	CERAMIC 0.01UF P	KPE	
	C122-132			CK45FF1H103Z	CERAMIC 0.010UF Z	E	
	C122,123			CK45FF1H103Z	CERAMIC 0.010UF Z	KPUUE	
	C126-129			CK45FF1H103Z	CERAMIC 0.010UF Z	KPUUE	
	C131,132			CK45FF1H103Z	CERAMIC 0.010UF Z	KPUUE	
	C133			CK45FF1H472Z	CERAMIC 4700PF Z	E	
	C134			CK45FB1H561K	CERAMIC 560PF K	E	
	C135,136			CK45FF1H472Z	CERAMIC 4700PF Z	E	
	C137			CK45FB1H561K	CERAMIC 560PF K	E	
	C138,139			CK45FF1H472Z	CERAMIC 4700PF Z	E	
	C140			CK45FB1H561K	CERAMIC 560PF K	E	
	C141			CK45FF1H472Z	CERAMIC 4700PF Z	E	
	C142			CE04KW1H010M	ELECTRO 1.0UF 50WV		
	C143			CK45FF1H472Z	CERAMIC 4700PF Z		
	C144			CC45FSL1H101J	CERAMIC 100PF J	E	
	C145		*	CC45FSL1H070C	CERAMIC 7.0PF C		
	C146			CC45FSL1H820J	CERAMIC 82PF J		
	C148			CE04KW1H470M	ELECTRO 47UF 50WV		
	C149			CE04KW1C470M	ELECTRO 47UF 16WV		
	C150			CE04KW1A101M	ELECTRO 100UF 10WV		
	C151			CE04KW1H220M	ELECTRO 22UF 50WV		
	C152			CF92FV1H473J	MF 0.047UF J		
	C153			CK45FB1H222K	CERAMIC 2200PF K		
	C154			CE04KW1E330M	ELECTRO 33UF 25WV		
	C155			CE04KW2A010M	ELECTRO 1.0UF 100WV		
	C156,157			C90-1745-05	ELECTRO 300UF 42WV		
	C158,159			C90-1318-05	ELECTRO 7500UF 80WV		
	C160			C90-1745-05	ELECTRO 300UF 42WV		
	C161			CE04KW1V102M	ELECTRO 1000UF 35WV		
	C162			CE04KW1E471M	ELECTRO 470UF 25WV		
	C163			CE04KW1J470M	ELECTRO 47UF 63WV		
	C164			CK45FF1H103Z	CERAMIC 0.010UF Z		
	C165			CE04KW1A101M	ELECTRO 100UF 10WV		
	C167			CE04KW2A010M	ELECTRO 1.0UF 100WV		
	C168			CK45FB1H222K	CERAMIC 2200PF K		
	E3	1C		E20-0823-05	LOCK TERMINAL BOARD(8P)		
	E4	1C		E20-0459-05	LOCK TERMINAL BOARD		
	E5 ,6	1D		E13-0318-05	PIN JACK (3P)		
	E7	2C		E11-0162-05	PHONE JACK (3P)		
⚠	F1			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	E	
⚠	F1			F05-7026-05	FUSE (UL) (250V 7A)	KP	
	F1 ,2			F06-4029-05	FUSE (250V 4A)	UUE	
⚠	F2			F05-2525-05	FUSE (SEMKO) (250V T2.5A)	E	
	F3 ,4			F04-5022-05	FUSE (UL) (125V 5A)	KP	
⚠	F3 ,4			F05-3121-05	FUSE (SEMKO) (250V T3.15A)	E	
	F5 ,6		*	F04-2025-05	FUSE (UL) (250V 2A)	P	
⚠	F5 ,6			F06-2021-05	FUSE (SEMKO) (250V T2A)	E	
	80	1C		J13-0041-05	FUSE CLIP	KP	
	80	1C		J13-0054-05	FUSE CLIP		
	L1			L40-2291-17	SMALL FIXED INDUCTOR		
	L2			L39-0085-05	PHASE-COMPENSATION COIL		
	T1		*	L01-8911-05	POWER TRANSFORMER	KP	
	T1		*	L01-8912-05	POWER TRANSFORMER	E	
	T1		*	L01-8914-05	POWER TRANSFORMER	UUE	

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	X1			L78-0255-15	RESONATOR		
				N89-3010-46	BINDING HEAD TAPTITE SCREW		
	H	1C		N09-0333-05	TAPPING SCREW (3X12)		
	CP1			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
	R10			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R101			RD14AB2E470J	FL-PROOF RD 47 J 1/4W		
	R171			R92-0173-05	RC 2.2M M 1/2W	KP	
	R183			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R185			RD14GB2E101J	FL-PROOF RD 100 J 1/4W		
	R186			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R190			RS14DB3A4R7J	FL-PROOF RS 4.7 J 1W		
	R191			RS14KB3A4R7J	FL-PROOF RS 4.7 J 1W		
	R196			RS14DB3A472J	FL-PROOF RS 4.7K J 1W		
	R197			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R202			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R209			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R211			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R213			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
	R214			RS14DB3A561J	FL-PROOF RS 560 J 1W		
	R215			RS14KB3A561J	FL-PROOF RS 560 J 1W		
	VR2			R05-5012-05	POTENTIOMETER		
⚠	K1			S51-1036-05	MAGNETIC RELAY		
	K2 -5			S51-2078-05	MAGNETIC RELAY		
	S1			S31-2136-05	SLIDE SWITCH (POWER TYPE)		
⚠	S2			S31-3010-05	SLIDE SWITCH	UUE	
	D1 -5			HSS104	DIODE		
	D1 -5			1SS133	DIODE		
	D9			HSS104	DIODE		
	D9			1SS133	DIODE		
	D11			HSS104	DIODE		
	D11			1SS133	DIODE		
	D13			HSS104	DIODE		
	D13			1SS133	DIODE		
	D41 -49			S5566B	DIODE		
	D50 ,51			HSS104A	DIODE		
	D50 ,51			1SS131	DIODE		
	D52			S5566B	DIODE		
	D53			HSS104A	DIODE		
	D53			1SS131	DIODE		
	D54			HZS6.8N(B2)	ZENER DIODE		
	D54			RD6.8ES(B2)	ZENER DIODE		
	D55 ,56			HZS18N(B)	ZENER DIODE		
	D55 ,56			RD18ES(B)	ZENER DIODE		
	D57			HZS13N(B2)	ZENER DIODE		
	D57			RD13ES(B2)	ZENER DIODE		
	D58			HSS104A	DIODE		
	D58			1SS131	DIODE		
	D59 ,60			S5566B	DIODE		
	D61			HZS5.1N(B2)	ZENER DIODE		
	D61			RD5.1ES(B2)	ZENER DIODE		
	D62			S5566B	DIODE		
	D63			D3SBA20F03	DIODE		
	D63			RBV-402LFA	DIODE		

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D64			D5FB20*1	DIODE		
D65 -71			S5566B	DIODE		
D72 ,73			HSS104	DIODE		
D72 ,73			1SS133	DIODE		
IC1			NJM2058D	IC(OP AMP X4)		
IC4			TC9162N	IC(ANALOG SWITCH ARRAY)		
IC5			NJM4565L	IC		
IC6			UPC1571C	IC(NOISE SUPPRESSOR)		
IC7			NJM78L05A	IC(VOLTAGE REGULATOR/ +5V)		
IC8			YM3428	IC		
IC9			LA2730	IC(DOLBY SYSTEM)		
IC10		*	NJM072BL	IC(OP AMP)		
IC11			NJM4565L	IC		
IC13-15			NJM2246L	IC(VIDEO SW)		
IC16			UPC7805HF	IC(VOLTAGE REGULATOR/ +5V)		
Q6 -8			2SA999(E,F)	TRANSISTOR		
Q21			2SD1302(S,T)	TRANSISTOR		
Q22			2SC1740S(Q,R)	TRANSISTOR		
Q22			2SC945(A)(Q,P)	TRANSISTOR		
Q23			2SA733(A)(Q,P)	TRANSISTOR		
Q23			2SA933S(Q,R)	TRANSISTOR		
Q24			2SB772(Q,P)	TRANSISTOR		
Q25 -27			2SA992(F,E)	TRANSISTOR		
Q28			2SC1845(F,E)	TRANSISTOR		
Q29			2SC4137	TRANSISTOR		
Q30		*	2SD1893	TRANSISTOR		
Q31		*	2SB1253	TRANSISTOR		
Q32			2SC1845(F,E)	TRANSISTOR		
Q33			2SA733(A)(Q,P)	TRANSISTOR		
Q33			2SA933S(Q,R)	TRANSISTOR		
Q34 -37			2SC1740S(Q,R)	TRANSISTOR		
Q34 -37			2SC945(A)(Q,P)	TRANSISTOR		
AUDIO UNIT (X09-2850-11) : J (X09-2930-11) : S						
C3 ,4			CE04KW1V100M	ELECTRO 10UF 35WV		
C5 ,6			CC45FSL1H221J	CERAMIC 220PF J		
C7 ,8			CK45FB1H222K	CERAMIC 2200PF K	E	
C9 ,10			CE04KW1A101M	ELECTRO 100UF 10WV		
C11 ,12			CF92FV1H123J	MF 0.012UF J		
C13 ,14			CF92FV1H332J	MF 3300PF J		
C15 ,16			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C17 -36			CK45FB1H471K	CERAMIC 470PF K		
C39 ,40			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C43 ,44			CE04KW1V100M	ELECTRO 10UF 35WV		
C45 ,46			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C49 ,50			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C51 ,52			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C55 ,56			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C57 ,58			CF92FV1H104J	MF 0.10UF J		
C59 ,60			CC45FSL1H220J	CERAMIC 22PF J		
C61 ,62			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C63 ,64			CF92FV1H104J	MF 0.10UF J		
C65 ,66			CK45FB1H471K	CERAMIC 470PF K		
C67 ,68			CC45FSL1H220J	CERAMIC 22PF J	E	
C71 ,72			CE04KW1H010M	ELECTRO 1.0UF 50WV		

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C73 ,74			CK45FB1H471K	CERAMIC 470PF K		
C75 ,76			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C77 ,78			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C79 ,80			CF92FV1H124J	MF 0.12UF J		
C81 ,82			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C83 ,84			C91-0692-05	CERAMIC 0.047UF K		
C85 ,86			CE04KW1HR33M	ELECTRO 0.33UF 50WV		
C87 ,88			C91-0682-05	CERAMIC 0.018UF K		
C89 ,90			CF92FV1H124J	MF 0.12UF J		
C91 ,92			C91-0674-05	CERAMIC 0.0082UF K		
C93 ,94		*	C91-0694-05	CERAMIC 0.056UF K		
C95 ,96		*	C91-0662-05	CERAMIC 0.0027UF K		
C97 ,98			C91-0682-05	CERAMIC 0.018UF K		
C99 ,100			C91-0656-05	CERAMIC 0.0015UF K		
C101,102			C91-0674-05	CERAMIC 0.0082UF K		
C103,104			CK45FB1H471K	CERAMIC 470PF K		
C111			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C115			CC45FSL1H101J	CERAMIC 100PF J		
C117			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C119			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C123			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C125			CE04KW1HR47M	ELECTRO 0.47UF 50WV		
C129			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C131			CK45FB1H471K	CERAMIC 470PF K		
C151			CE04KW1E101M	ELECTRO 100UF 25WV		
C152			CE04KW1E470M	ELECTRO 47UF 25WV		
C153			CE04KW1C470M	ELECTRO 47UF 16WV		
C155			CK45FB1H102K	CERAMIC 1000PF K		
C156,157			CE04KW1C470M	ELECTRO 47UF 16WV		
C158,159			CE04KW1C101M	ELECTRO 100UF 16WV		
C160			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C161			CE04KW1C470M	ELECTRO 47UF 16WV		
C162			CE04KW1V100M	ELECTRO 10UF 35WV		
C164			CE04KW1C470M	ELECTRO 47UF 16WV		
C165			CK45FB1H471K	CERAMIC 470PF K		
C166			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C167-169			CK45FF1H472Z	CERAMIC 4700PF Z		
C170,171			CK45FB1H102K	CERAMIC 1000PF K		
C172			C90-1455-05	NP-ELEC 0.1UF 50WV		
C176			CK45FF1H103Z	CERAMIC 0.010UF Z		
C177			CK45FB1H471K	CERAMIC 470PF K		
C178			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C179			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C182			CK45FF1H472Z	CERAMIC 4700PF Z		
C183			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C184			CK45FB1H471K	CERAMIC 470PF K		
C186			CE04KW1V100M	ELECTRO 10UF 35WV		
C187,188			CC45FSL1H221J	CERAMIC 220PF J		
C189-192			CE04KW1V100M	ELECTRO 10UF 35WV		
C195,196			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C198			CK45FB1H102K	CERAMIC 1000PF K		
C199,200			CF92FV1H472J	MF 4700PF J	E	
C201			CE04KW1H010M	ELECTRO 1.0UF 50WV		
CN10			E10-0408-05	FLAT CABLE CONNECTOR		

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E1	2D		E13-0634-05	PIN JACK (6P)		
E2 ,3	2D		E13-0820-05	PIN JACK (8P)		
E4	2D		E13-0235-05	PIN JACK (2P)		
E6	2C		E11-0188-05	MINIATURE PHONE JACK		
L1 ,2			L39-0085-05	PHASE-COMPENSATION COIL		
			N35-3008-46	BINDING HEAD MACHINE SCREW		
			N89-3008-45	BINDING HEAD TAPTITE SCREW		
			N89-3008-46	BINDING HEAD TAPTITE SCREW		
H	1C		N09-0333-05	TAPPING SCREW (3X12)		
CP1 ,2			R90-0187-05	MULTI-COMP 0.22X2 K 5W		
R91 ,92			RS14KB3D4R7J	FL-PROOF RS 4.7 J 2W		
R93 ,94			RS14KB3A4R7J	FL-PROOF RS 4.7 J 1W		
R182,183			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R231,232			RD14AB2E471J	FL-PROOF RD 470 J 1/4W		
R250,251			RS14KB3D100J	FL-PROOF RS 10 J 2W	E	
D51		*	HZS15N(B1)	ZENER DIODE		
D51			HZS15N(B2)	ZENER DIODE		
D51		*	RD15ES(B1)	ZENER DIODE		
D51			RD15ES(B2)	ZENER DIODE		
D52			HZS5.1N(B2)	ZENER DIODE		
D52			RD5.1ES(B2)	ZENER DIODE		
D53 ,54			HZS6.8N(B2)	ZENER DIODE		
D53 ,54			RD6.8ES(B2)	ZENER DIODE		
D55			HZS13N(B2)	ZENER DIODE		
D55			RD13ES(B2)	ZENER DIODE		
D56 -69			HSS104	DIODE		
D56 -69			1SS133	DIODE		
D71 ,72			HSS104	DIODE		
D71 ,72			1SS133	DIODE		
D73			HSS104A	DIODE		
D73			1SS131	DIODE		
D78			HSS104A	DIODE		
D78			1SS131	DIODE		
D83			HZS5.1N(B2)	ZENER DIODE		
D83			RD5.1ES(B2)	ZENER DIODE		
D84 ,85			HZS4.7N(B)	ZENER DIODE		
D84 ,85			RD4.7ES(B)	ZENER DIODE		
D86 ,87			HSS104	DIODE		
D86 ,87			1SS133	DIODE		
IC1			UPC4570C-A	IC(OP AMP X2)		
IC2			TC9164N	IC(16CH BILATERAL SELECTOR SW)		
IC3 ,4			TC9163N	IC(BILATERAL SWITCH X16)		
IC5			NJM4558D	IC(OP AMP X2)		
IC6 ,7			UPC4570C-A	IC(OP AMP X2)		
IC8 ,9			NJM4558D	IC(OP AMP X2)		
IC10			TC9176P	IC(2CH ELECTRONIC VOLUME)		
IC11			NJM4558D	IC(OP AMP X2)		
IC12			LC7522	IC(7CH GRAPHIC EQUALIZER)		
IC13,14			M5229P	IC(7CH GRAPHIC EQUALIZER)		
IC15			LC4966	IC(CMOS LOGIC BILATERAL SW)		
Q1 ,2			2SD1718*5	TRANSISTOR		
Q3 ,4			2SB1163*5	TRANSISTOR		
Q5 ,6			2SC4137	TRANSISTOR		

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Q7 -11			2SC2878(B)	TRANSISTOR		
Q13			2SC2878(B)	TRANSISTOR		
Q21			2SD1266	TRANSISTOR		
Q22			2SC1740S(Q,R)	TRANSISTOR		
Q22			2SC945(A)(Q,P)	TRANSISTOR		
Q23 ,24			2SD1266	TRANSISTOR		
Q25			2SA733(A)(Q,P)	TRANSISTOR		
Q25			2SA933S(Q,R)	TRANSISTOR		
Q26			2SC1740S(Q,R)	TRANSISTOR		
Q26			2SC945(A)(Q,P)	TRANSISTOR		
Q27			2SA733(A)(Q,P)	TRANSISTOR		
Q27			2SA933S(Q,R)	TRANSISTOR		
Q28			2SD1266	TRANSISTOR		
Q29			2SC2003(L,K)	TRANSISTOR		
Q30			2SA733(A)(Q,P)	TRANSISTOR		
Q30			2SA933S(Q,R)	TRANSISTOR		
Q32			2SA733(A)(Q,P)	TRANSISTOR		
Q32			2SA933S(Q,R)	TRANSISTOR		
Q34 ,35			2SC1740S(Q,R)	TRANSISTOR		
Q34 ,35			2SC945(A)(Q,P)	TRANSISTOR		
Q36 -38			2SA733(A)(Q,P)	TRANSISTOR		
Q36 -38			2SA933S(Q,R)	TRANSISTOR		
DISPLAY UNIT (X14-2560-11) : J (X14-2700-11) : S						
D56 -59			B30-1012-05	LED(SLP-981C-50)		
D60 ,61			B30-0431-05	LED(LN21CPH)		
C1			C91-0928-05	BACKUP C 0.047F 5.5WV		
C2			CE04KW1A101M	ELECTRO 100UF 10WV		
C3			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C4 ,5			CC45FSL1H101J	CERAMIC 100PF J		
C6			CE04KW1C101M	ELECTRO 100UF 16WV		
C7			CE04KW1A101M	ELECTRO 100UF 10WV		
C8 ,9			CC45FSL1H330J	CERAMIC 33PF J		
C10			CK45FB1H102K	CERAMIC 1000PF K		
C11			CE04KW1C101M	ELECTRO 100UF 16WV		
C12			CE04KW1A101M	ELECTRO 100UF 10WV		
C14 ,15			CC45FSL1H101J	CERAMIC 100PF J		
C16 ,17			CC45FSL1H330J	CERAMIC 33PF J		
C18			CK45FB1H102K	CERAMIC 1000PF K		
C19 ,20			CE04KW1A101M	ELECTRO 100UF 10WV		
C23			CE04KW1A101M	ELECTRO 100UF 10WV		
C46			CK45FF1H223Z	CERAMIC 0.022UF Z		
C47 ,48			CF92FV1H104J	MF 0.10UF J		
C49			C90-1333-05	NP-ELEC 22UF 10WV		
C50 ,51			CK45FB1H102K	CERAMIC 1000PF K		
C52			CE04KW1C101M	ELECTRO 100UF 16WV		
C54			CK45FF1H223Z	CERAMIC 0.022UF Z		
C55 ,56			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C57 ,58			CK45FF1H103Z	CERAMIC 0.010UF Z		
CN8			E10-0509-05	FLAT CABLE CONNECTOR		
E8,9,10			J11-0098-05	WIRE CLAMPER		
X1			L78-0209-05	RESONATOR (4.194MHZ)		
X2 ,3			L78-0239-05	RESONATOR		

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CP1		*	R90-0844-05	MULTI-COMP 1000PX2		
CP2		*	R90-0849-05	MULTI-COMP 1KX5 J 1/6W		
CP3		*	R90-0841-05	MULTI-COMP 510KX8 J 1/6W		
CP4			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP5		*	R90-0837-05	COMPOSITE ELEMENTS		
CP6			R90-0802-05	MULTI-COMP 100KX10 J 1/4W		
CP7		*	R90-0845-05	MULTI-COMP 1000PX2 +0 .01		
CP8			R90-0810-05	MULTIPLE RESISTOR		
CP9		*	R90-0842-05	MULTI-COMP 1000PX4		
CP10			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP11		*	R90-0843-05	MULTI-COMP 1000PX3		
CP12			R90-0810-05	MULTIPLE RESISTOR		
CP13		*	R90-0842-05	MULTI-COMP 1000PX4		
CP14			R90-0482-05	MULTI-COMP 100KX4 J 1/6W		
CP15		*	R90-0843-05	MULTI-COMP 1000PX3		
CP16			R90-0483-05	MULTI-COMP 100KX13 J 1/6W		
CP17			R90-0493-05	MULTI-COMP 100KX9 J 1/6W		
CP22		*	R90-0838-05	COMPOSITE ELEMENTS		
CP23			R90-0492-05	MULTI-COMP 100KX8 J 1/6W		
R118			RD14AB2E100J	FL-PROOF RD 10 J 1/4W		
R124		*	RD14AB2E3R9J	FL-PROOF RD 3.9 J 1/4W		
VR1		*	R29-5027-05	POTENTIOMETER		
VR2		*	R10-5032-05	POTENTIOMETER		
S1 -34			S40-1064-05	PUSH SWITCH		
S36 -42			S40-1064-05	PUSH SWITCH		
S46 -51			S40-1064-05	PUSH SWITCH		
S53 -61			S40-1064-05	PUSH SWITCH		
S63 -68			S40-1064-05	PUSH SWITCH		
D1 -10			HSS104	DIODE		
D1 -10			1SS133	DIODE		
D13			HSS104	DIODE	KPUUE	
D13			1SS133	DIODE	KPUUE	
D19 -23			HSS104	DIODE	E	
D19 -23			1SS133	DIODE	E	
D20 -23			HSS104	DIODE	KPUUE	
D20 -23			1SS133	DIODE	KPUUE	
D24			HZS10N(B2)	ZENER DIODE		
D24			RD10ES(B2)	ZENER DIODE		
D25 -30			HSS104	DIODE		
D25 -30			1SS133	DIODE		
D40 -55			HSS104	DIODE		
D40 -55			1SS133	DIODE		
D63 -67			HSS104	DIODE		
D63 -67			1SS133	DIODE		
D68			HZS5.1N(B2)	ZENER DIODE		
D68			RD5.1ES(B2)	ZENER DIODE		
D71			HSS104	DIODE		
D71			1SS133	DIODE		
D74			HSS104	DIODE		
D74			1SS133	DIODE		
D77 -79			HSS104	DIODE		
D77 -79			1SS133	DIODE		
D82			HSS104	DIODE		
D82			1SS133	DIODE		

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FL1		*	BG-652GK	FLUORESCENT INDICATOR TUBE		
IC1		*	UPD75116CW-074	IC(MICROPROCESSOR)		
IC2 ,3		*	UPD7537ACU-220	IC(MICROPROCESSOR)		
IC4			LC7565	IC(GRAPHIC EQ FL DISPLAY DR)		
IC5 ,6			CXD1067P	IC(SERIAL-PARALLEL CONVERTER)		
IC7			LB1641	IC(MOTOR DRIVER)		
Q1 -6			2SC1740S(Q,R)	TRANSISTOR		
Q1 -6			2SC945(A)(Q,P)	TRANSISTOR		
Q7			2SA733(A)(Q,P)	TRANSISTOR		
Q7			2SA933S(Q,R)	TRANSISTOR		
Q8			2SA733(A)(Q,P)	TRANSISTOR		
Q8			2SA933S(Q,R)	TRANSISTOR		
Q9			2SA733(A)(Q,P)	TRANSISTOR		
Q9			2SA933S(Q,R)	TRANSISTOR		
Q10			2SA733(A)(Q,P)	TRANSISTOR		
Q10			2SA933S(Q,R)	TRANSISTOR		
Q11			2SA733(A)(Q,P)	TRANSISTOR		
Q11			2SA933S(Q,R)	TRANSISTOR		
Q12			2SC1740S(Q,R)	TRANSISTOR		
Q12			2SC945(A)(Q,P)	TRANSISTOR		
Q13 ,14			DTC124ES	DIGITAL TRANSISTOR		
A1			W02-0975-05	ELECTRIC CIRCUIT MODULE		
MAIN AMPLIFIER UNIT (X89-1090-11) : J (X89-1100-11) S						
C1 ,2			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C5 ,6			CE04KW1C101M	ELECTRO 100UF 16WV		
C7 ,8			CF92FV1H113J	MF 0.011UF J		
C9 ,10			CC45FSL1H470J	CERAMIC 47PF J		
C9 ,10			CC45FSL1H680J	CERAMIC 68PF J	KPUUE E	
C13 ,14			CC45FSL1H470J	CERAMIC 47PF J		
C15 ,16			CC45FSL1H221J	CERAMIC 220PF J	KPUUE	
C15 ,16			CK45FB1H391K	CERAMIC 390PF K	E	
C17 ,18			CE04KW2A470M	ELECTRO 47UF 100WV		
C19 -22			CK45FF1H103Z	CERAMIC 0.010UF Z		
C23			C90-1333-05	NP-ELEC 22UF 10WV		
C24			CE04KW1C220M	ELECTRO 22UF 16WV		
C26			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C27 ,28			CC45FSL1H330J	CERAMIC 33PF J	E	
C29 ,30			CE04KW1C220M	ELECTRO 22UF 16WV		
R19 -22			RD14AB2E122J	FL-PROOF RD 1.2K J 1/4W		
R23 ,24			RD14AB2E181J	FL-PROOF RD 180 J 1/4W		
R29 -32			RD14AB2E221J	FL-PROOF RD 220 J 1/4W		
R39 -42			RD14AB2E220J	FL-PROOF RD 22 J 1/4W	KPUUE	
R39 ,40			RD14AB2E220J	FL-PROOF RD 22 J 1/4W	E	
R41 ,42			RD14AB2E4R7J	FL-PROOF RD 4.7 J 1/4W	E	
R43 -46			RD14AB2E221J	FL-PROOF RD 220 J 1/4W		
R47 -50			RD14AB2E2R2J	FL-PROOF RD 2.2 J 1/4W		
R51			RD14AB2E220J	FL-PROOF RD 22 J 1/4W		
R52			RD14AB2E100J	FL-PROOF RD 10 J 1/4W		
R61			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
R64			RD14AB2E101J	FL-PROOF RD 100 J 1/4W		
VR1 ,2			R12-1070-05	TRIMMING POT.(1K)		
D1 ,2			HZS5.1N(B2)	ZENER DIODE		
D1 ,2			RD5.1ES(B2)	ZENER DIODE		

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D3 ,4			HSS104	DIODE		
D3 ,4			1SS133	DIODE		
D5 -8			HSS104A	DIODE		
D5 -8			1SS131	DIODE		
D9 ,10			HSS104A	DIODE		
D9 ,10			1SS131	DIODE		
IC1			UPC1237HA	IC(POWER AMP)		
Q1 -4			2SC1845(F,E)	TRANSISTOR		
Q5 -8			2SC1740S(Q,R)	TRANSISTOR		
Q5 -8			2SC945(A)(Q,P)	TRANSISTOR		
Q9 -12			2SC1845(F,E)	TRANSISTOR		
Q13 -18			2SA1123(R,S)	TRANSISTOR		
Q19 ,20			2SC2631(R,S)	TRANSISTOR		
Q21 ,22			2SC3944(Q,R)	TRANSISTOR		
Q23 ,24			2SA1535(Q,R)	TRANSISTOR		
Q25 ,26			2SC2631(R,S)	TRANSISTOR		
Q27 -29			2SA992(F,E)	TRANSISTOR		

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KR-V8010

SPECIFICATIONS

AUDIO SECTION

Rated Power Output (Except for Europe)

100 watts per channel minimum RMS, both channels driven at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.008% total harmonic distortion. (FTC)

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

Maximum continuous output power (For Europe)
(IEC) from 63 Hz to 12,500 Hz
0.7% T.H.D. at 8 ohms ..... 110 W + 110 W
(DIN) 1,000 Hz at 4 ohms ..... 100 W + 100 W
Total Harmonic Distortion
(1 kHz, 8 ohms) 0.003%
Input Sensitivity/Impedance
PHONO (MM) ..... 2.5 mV/47 kohms
CD, TAPE ..... 200 mV/47 kohms
VIDEO ..... 250 mV/47 kohms
Frequency Response
CD, TAPE, VIDEO ..... 10 Hz – 100 kHz +0 dB −3 dB

Signal-to-Noise Ratio (IHF-A)
PHONO (MM) ..... 79 dB
CD, TAPE ..... 100 dB
VIDEO ..... 90 dB
Graphic Equalizer
Center Frequencies ..... 60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz
Control Range ..... ±12 dB

VIDEO SECTION

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

FM TUNER SECTION

Tuning Frequency Range ..... 87.5 MHz – 108 MHz
Antenna Impedance ..... 75 ohms unbalanced
Sensitivity ..... IHF .... 10.8 dBf (0.95 μV at 75 ohms)
DIN (MONO) ..... 1.1 μV
(STEREO) ..... 40 μV
Signal-to-Noise Ratio at 65 dBf (IHF)
MONO ..... 80 dB
STEREO ..... 74 dB
Total Harmonic Distortion at 1,000 Hz
MONO 0.1%
STEREO 0.2%
Frequency Response ..... 30 Hz – 15 kHz +0.5 dB −2.0 dB

Stereo Separation ..... (IHF) ..... 50 dB at 1 kHz
(DIN) ..... 40 dB at 1 kHz

AM TUNER SECTION

Tuning Frequency Range
530 kHz – 1,610 kHz
(with the AM tuning interval set at 10 kHz)
531 kHz – 1,602 kHz
(with the AM tuning interval set at 9 kHz)
Usable Sensitivity ..... 10 μV/(400 μV/m)
Signal-to-Noise Ratio ..... 50 dB
Total Harmonic Distortion 0.3%
Selectivity ..... 25 dB

GENERAL

Power Consumption 4.5A
...USA and Canada Models/450 W...Others
Dimensions ..... 440 (W) × 162 (H) × 420 (D) mm
(17-5/16") × (6-3/8") × (16-9/16")
Weight (Net) ..... 12.5 kg (27.6 lb)

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

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

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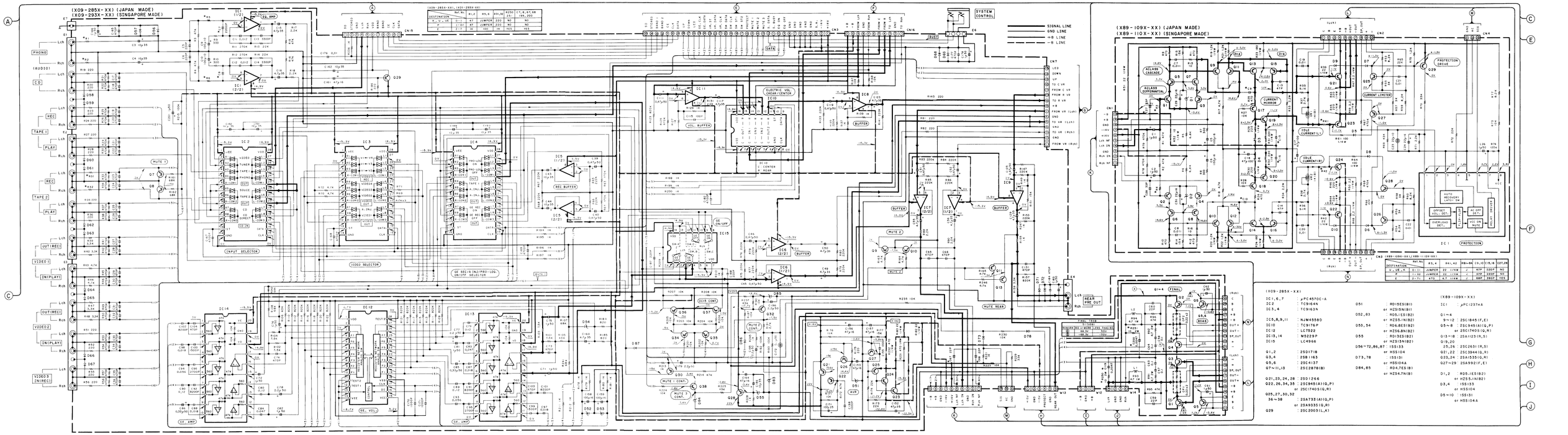

2SA1123 2SC2003
2SA733(A) 2SC2631
2SA992 2SC2878
2SC1845 2SC945(A)

2SA933S
2SC1740S

2SD1266

2SC4137

2SA1535
2SC3944

2SD1718
2SB1163

M5229P

TC9176P

LC7522

LC4966

μPC4570C-A

NJM4558D

μPC1237HA

TC9163N
TC9164N

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

- DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.
- Les tensions c.c. doivent être measurées 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 Voltmeter gemessen. Dabei schwanken die Meßwerte aufgrund von Unterschieden zwischen einzelnen instrumenten oder Geräten u.U. geringfügig.

Y05-2440-11

KR-V8010

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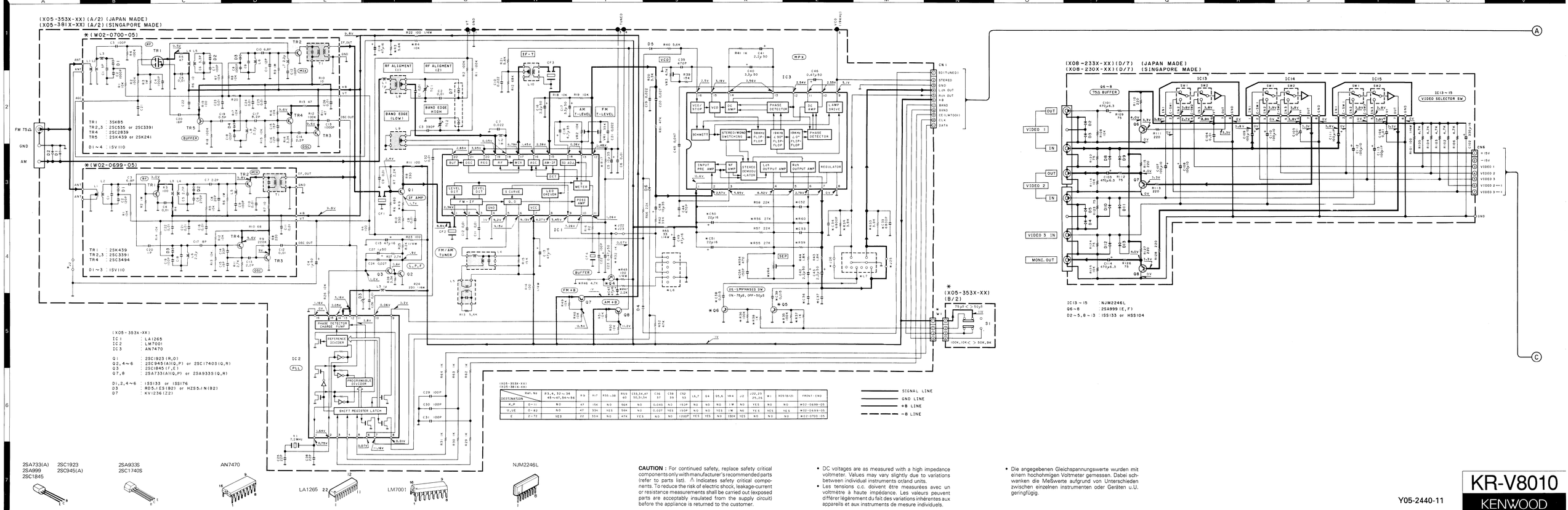

(X05-353X-XX) (X05-381X-XX)	Ref. No	R3,4, 32~34 45~47,54~56	R9	R17	R35~38	R59 60	C33,34,47 50,51,54	C36 37	C38 39	C52 53	L6,7	Q4	Q5,6	VR4	J2	J22,23 25,26	W1	X05(B/2)	FRONT-END
DESTINATION																			
K,P	0~11	NO	47	15K	NO	56K	NO	0.047	NO	150P	NO	NO	NO	1M	NO	YES	NO	NO	W02-0699-05
U,UE	0~82	NO	47	33K	YES	56K	NO	0.027	YES	150P	NO	NO	YES	1M	NO	YES	YES	YES	W02-0699-05
E	2~72	YES	22	33K	NO	47K	YES	NO	NO	1200P	YES	YES	NO	150K	YES	NO	NO	NO	W02-0700-05

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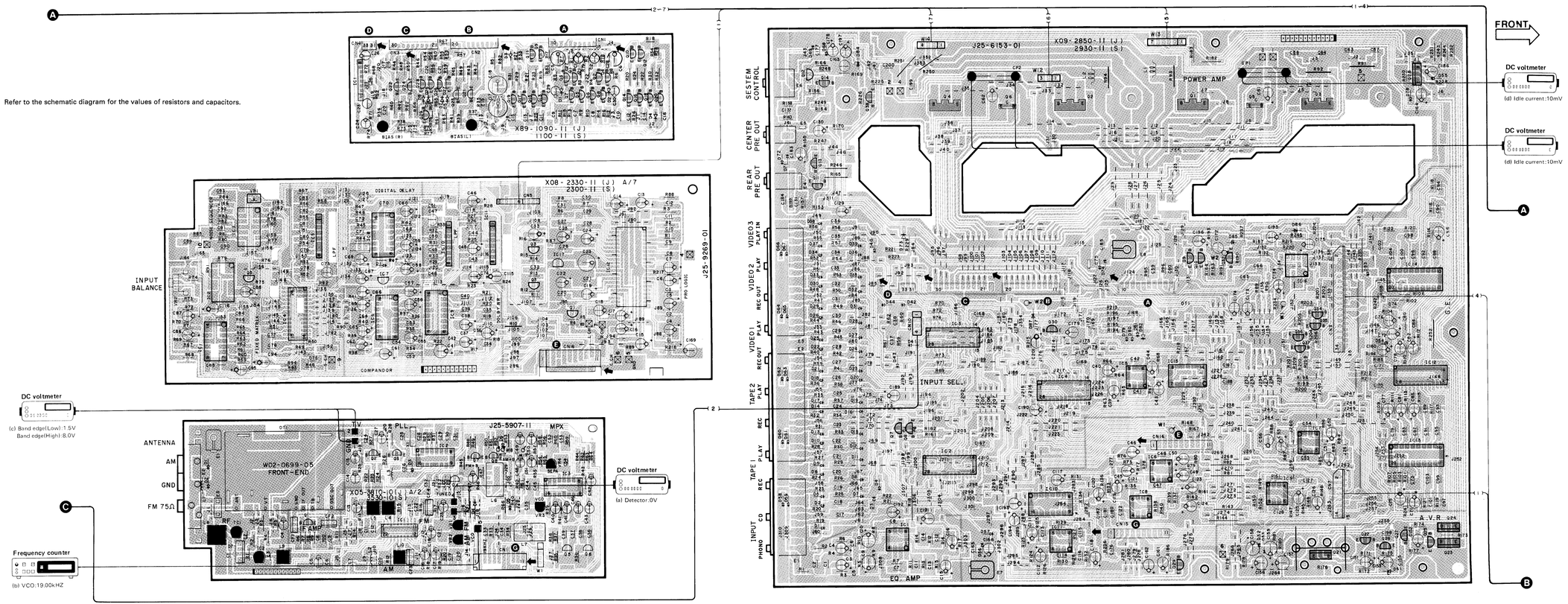
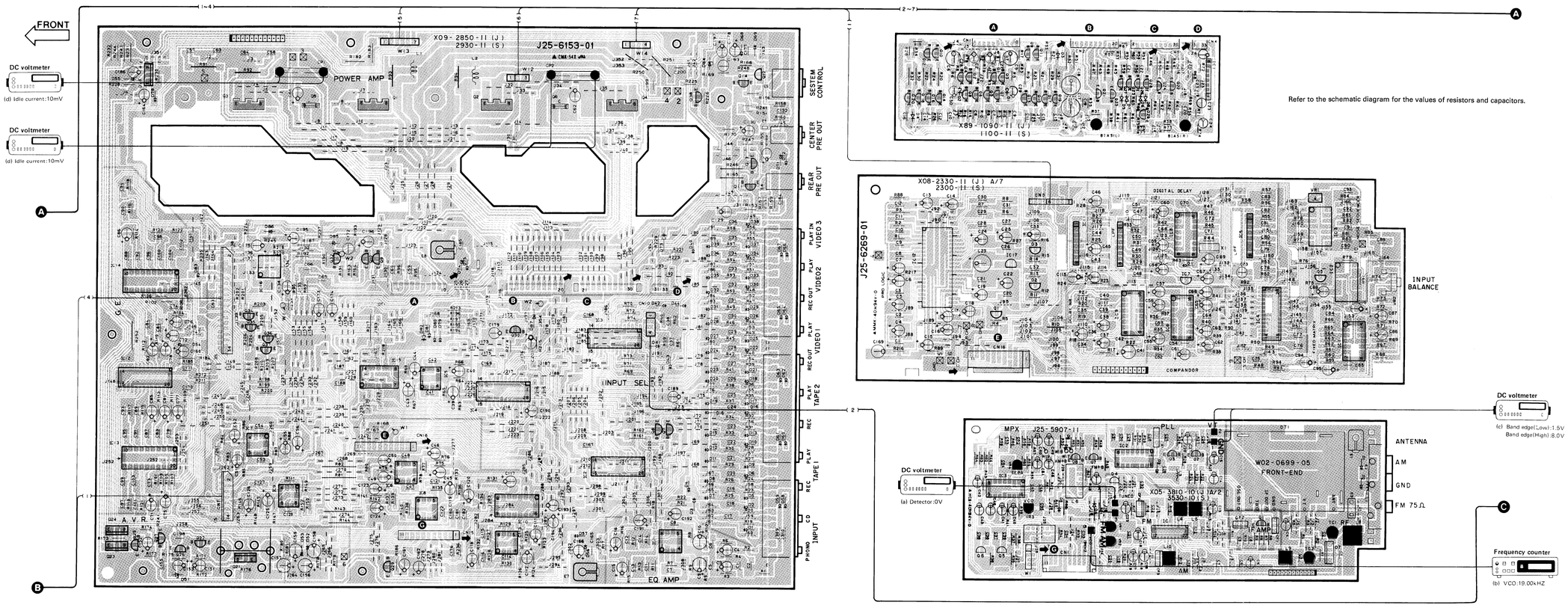
PC BOARD (FOIL SIDE VIEW)

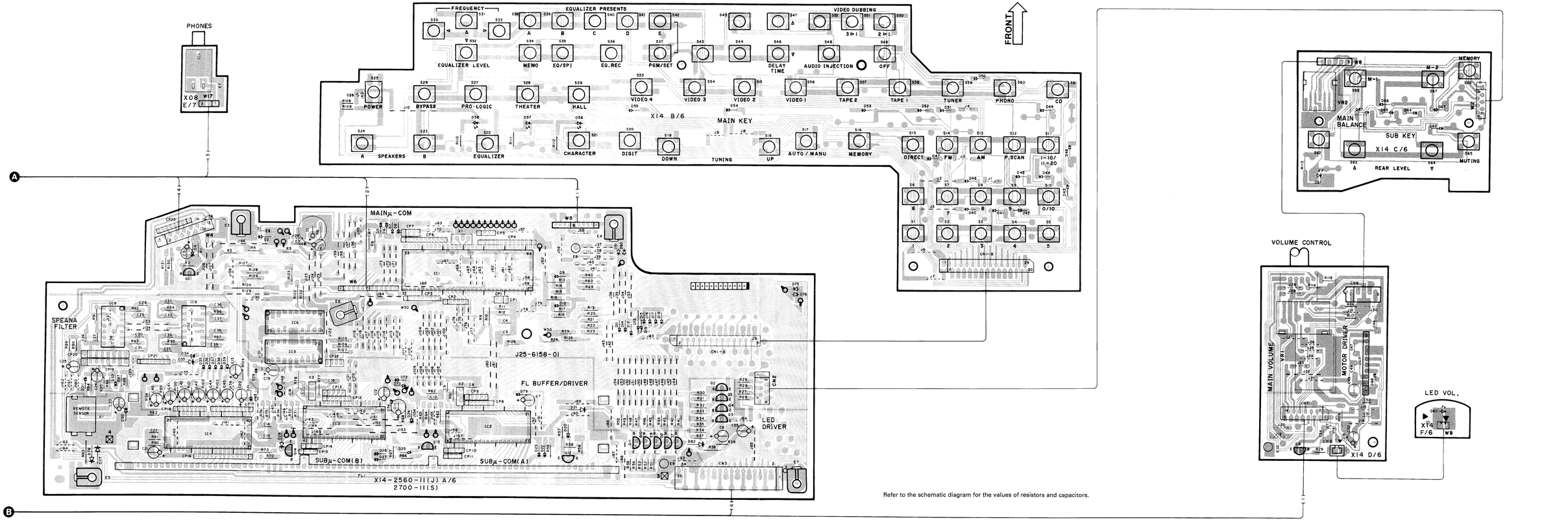
Refer to the schematic diagram for the values of resistors and capacitors.



PC BOARD (COMPONENT SIDE VIEW)

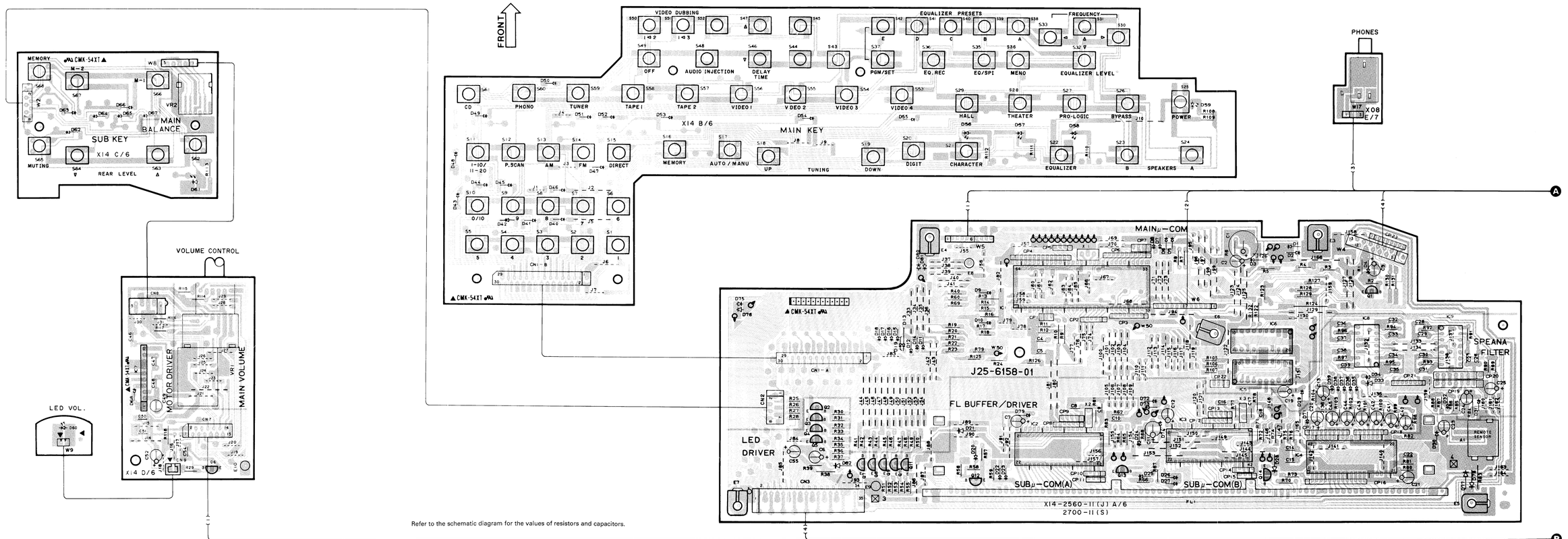


PC BOARD (FOIL SIDE VIEW)



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

PC BOARD (COMPONENT SIDE VIEW)



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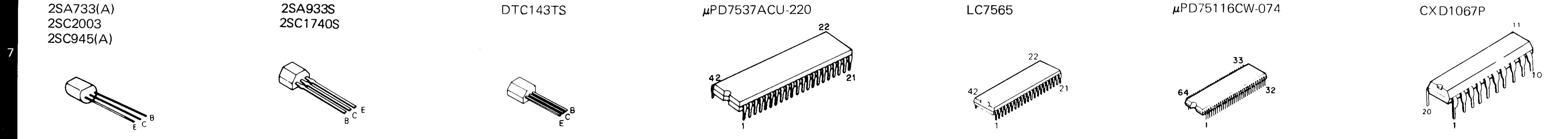

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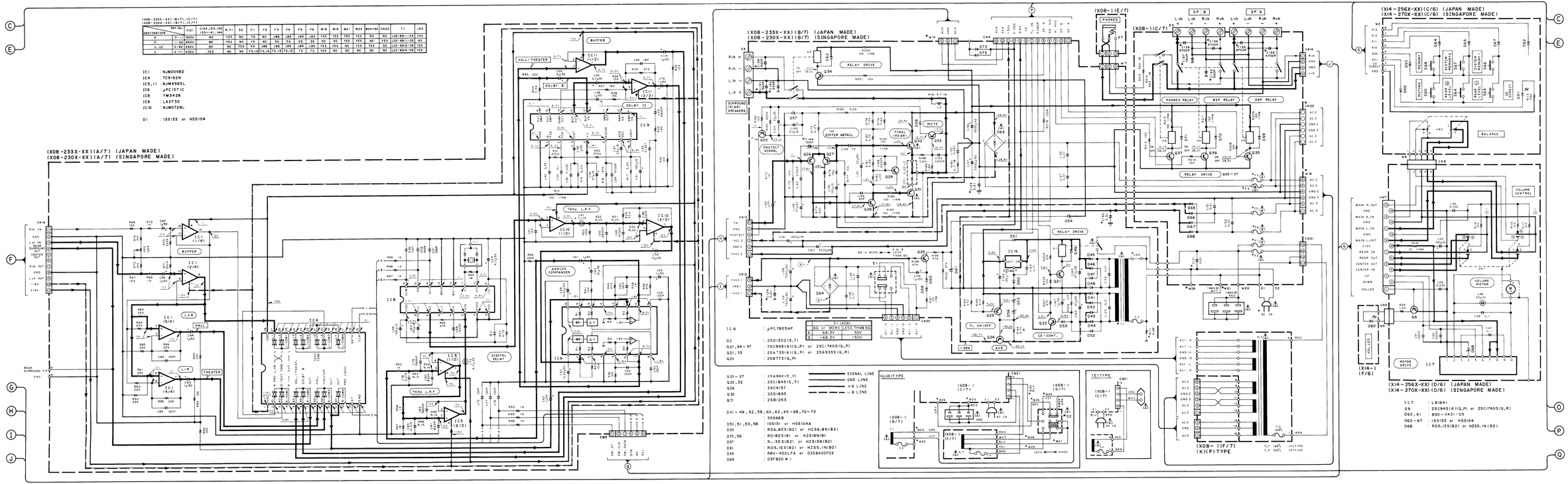

2SA733(A) 2SA992 2SC1845 | 2SC945(A) 2SD1302 | 2SA933S 2SC1740S | 2SB772 | 2SC4137 | 2SD1893 2SB1253 | TC9162N | LA2730 | NJM2058D | μPC7805HF | YM3428 μPC1571C | LB1641 | NJM072BL | NJM4565L

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