AV CONTROL CENTER

C-V770
C-V700
C-V550
C-V500

INSTRUCTION MANUAL

KENWOOD CORPORATION

This manual contains instructions for four models. Model availability and features (functions) may differ depending on country and sales area.
Before applying power

Caution: Read this section carefully to ensure safe operation.

Units are designed for operation as follows.

*AC voltage selection

The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following diagram.

Note:
Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

Safety precautions

Caution: Read this section carefully to ensure safe operation.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the authorized person or company receiving the unit can file a claim against the carrier for shipping damage. We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Accessories

FM radio antenna
AM radio antenna
Graphical Remote Control Unit
Case (x2)
*AC plug adapter (x2)
Microphone (x2)
Loop antenna stand (x1)
Battery (x1)/AAA (x4)
*Use to adapt the plug of the power cord to the shape of the wall outlet. Accessory only for regions where use is necessary.
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Caution: Read the pages marked ![] carefully to ensure safe operation.

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Special features

True home theater sound

Dolby Digital (AC-3)

The DOLBY DIGITAL (AC-3) mode lets you enjoy full digital surround from software processed in the Dolby Digital (AC-3) format. Dolby Digital (AC-3) provides up to 5.1 channels of independent digital audio for better sound quality and more powerful presence than conventional Dolby Surround.

Dolby Pro Logic & Dolby 3 Stereo

This surround system reproduces theater-like surround sound from video software marked [DOLBY SURROUND].

The PRO LOGIC mode uses the built-in adaptive matrix circuit to steer the Left, Center, Right and Surround channel audio signals. The 3 STEREO mode will redirect the surround signal to the front left and right speakers when only the front left and center speakers are used.

New DSP surround modes

The DSP (Digital Signal Processor) unit used for this AV CONTROL CENTER incorporates a variety of high-quality adjustable sounds like "ARENA", "JAZZ CLUB", "STADIUM", "CATHEDRAL" and "THEATER", to add the "presence" associated with an arena, jazz club or stadium (etc) to the original signal. It is compatible with almost any kind of program source.

Graphical Remote Control unit "GRC"

The GRC unit incorporates a large-screen LCD which displays key icons and parameters. The LCD also shows information on the operating modes of the main unit.

To improve the operability, frequently used icons are located in the higher hierarchy in the LCD display and icons which are associated between each other are shown on the same screen.

The GRC unit is a multi-function remote control unit which can be programmed to control AV components from other manufacturers than KENWOOD.

ONE TOUCH OPERATION

Simply pressing the play key of the CD player or cassette deck turns the system on and starts playback.

How to use this manual

In this manual, the operating procedures are described on the left half of each page and the supplementary explanation, display information and other notes on each step are described on the right half.

(Example of instructions in this manual)

Operating procedure steps (Left half)  Supplementary explanation (Right half)

1. Select the DSP surround mode.

Main unit key to be used  Graphical remote control key to be used  Icon selection  Press ENTER key.

Main unit  Supplementary explanation for the main unit operation

Step No.

1. Select DSP.

DSP Mode

(C-V770, C-V700 only)

Supplementary explanation for the graphical remote control operation

In case the design of an operation key on the main unit differs between the C-V770/V700 and the C-V550/V500, this manual describes the key using the key name in place of using illustration.
Connection of audio components (CD player, cassette deck, power amplifier)

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

Do not plug in the power lead until all connections are completed.

Malfunction of microcomputer

If operation is not possible or erroneous display appears even though all connections have been made properly, reset the microcomputer referring to "In case of difficulty".

Analog disc turntable (with built-in equalizer amp)

Voice-activation microphone

Shape of AC outlet

- U.S.A., Canada, and China
- Australia
- Other countries

To wall AC outlet

The connected components shown here are given as examples because the available models vary depending on marketing areas.

Also connect the system control cords when the KENWOOD Audio Component System "SERIES 21" is connected.

*1 Power amplifier

*1 For the connection and operation procedures of the power amplifier and speakers, refer to the instruction manual of the power amplifier (M-A300 or M-A100).

*2 Cassette deck 2

*2 Do not connect system control cord to the cassette deck connected to the TAPE 2 (MONITOR) jacks.

*2 The VOICE ACTIVATE jack is provided for only C-V770.

Caution regarding placement

(Except for U.S.A. and Canada)

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.

Left and right panels: 10 cm
Rear panel: 10 cm
Top panel: 50 cm
Connection of video components (LD player, VCR, cable/satellite tuner, DVD)

FM DE-EMPHASIS / CHANNEL SPACE switch
(Except for U.S.A., Canada and Australia)

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, when you moved from area 1 to area 2 or vice versa, desired reception of AM / FM broadcasts is not expected. In this case, change the FM DE-EMPHASIS / CHANNEL SPACE setting in accordance with the area corresponding to the table. The FM DE-EMPHASIS is switched over at the same time.

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

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<th>Area</th>
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<th>FM DE-EMPHASIS</th>
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<td>1 U.S.A., Canada, Hawaii, South American countries</td>
<td>FM: 100kHz AM: 10kHz</td>
<td>75 μs</td>
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<tr>
<td>2 Other countries</td>
<td>FM: 50kHz AM: 9kHz</td>
<td>50 μs</td>
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The connected components are given as examples because the available models vary depending on marketing areas.
Digital connections

Make connections as shown below.
The digital in jacks can accept either Dolby Digital (AC-3) or PCM signals (the input signal type is detected automatically).
When connecting the related system components, be sure to also refer to the instruction manuals supplied with the components you are connecting.
Do not connect the power cord to a wall outlet until all connections are completed.

Connect components capable of outputting Dolby Digital (AC-3) or standard PCM format digital signals.

For C.V500
To connect an LD player with a DIGITAL RF OUT.
Connect the LD player to the KENWOOD RF digital demodulator (DEM-999D).
Then connect the demodulator to the AC-3 AUDIO INPUT DIGITAL IN.
Connect the video signal and analog audio signals to LD jacks (See "Connection of video components:"

AC-3 RF Demodulator DEM-999D

1 POWER indicator
Lights red when the power switch 2 is set to ON.
2 LOCK indicator
Lights when an AC-3 RF signal is input to the AC-3 RF INPUT jack.
3 AC-3 DIGITAL OUTPUT (coaxial)
Connect this jack to the LD AC-3 AUDIO INPUT jack on your AV CONTROL CENTER.
Inputs AC-3 coaxial digital signals when the POWER 4 is set to ON and an AC-3 RF signal is input to the AC-3 RF INPUT jack.

4 AC-3 RF INPUT
Connect this jack to the AC-3 RF OUTPUT jack on your LD player.

5 POWER switch
Use to switch the power ON/OFF

6 DC IN (12V) jack
Connect this jack and inlet power cord to the AC adapter supplied with your demodulator. Connect the power cord to a wall outlet after completing all of the other connections.

Place the power supply away from the demodulator, AV CONTROL CENTER, and any antennas.
About the system control connections

When this unit is connected to KENWOOD audio component system “SERIES 21”, also connect them through the system control cords to allow system-control operations between components.

Connection example

1. Do not connect the SERIES 21 components to other system components using system control cords.
2. Do not connect system control cords to any components other than those specified by KENWOOD, as this could damage your equipment.
3. Be sure the system control plugs are inserted all the way into the system-control terminals.

About the system control operations

Available operations when SERIES 21 components are connected through system control cords

Remote Control
Lets you operate source components with the system remote supplied with this unit.

Automatic Operation
When you start playback from a source component, the input selector on this unit switches to that component automatically. (Except TAPE 2)

Synchronized Recording
Lets you synchronize recording with the start of playback when recording from CD or LD.

Connection of flat-cable connector

Inserting the connector
Push the connector straight into the socket until the tabs snap to indicate the mating.

Removing the connector
Pull and hold the two ends of the connector, and pull straight outward.

Notes:
1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect a power source which is larger than that indicated on the socket at the rear of the unit.
4. If the system control cords or audio cords are not connected properly, the remote control or automatic operation between system components will not work properly.
**Connection of antenna**

**Connection method to each antenna terminal**

1. Push lever.
2. Insert cord.
3. Return lever.

**AM loop antenna connection**

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord and set it to a direction which provides the best reception.

**FM indoor antenna connection**

The supplied antenna is for indoor use only. For stable signal reception we recommend using an outdoor antenna. Remove the indoor antenna if you connect one outdoors.

**FM outdoor antenna connection**

Lead the 75 ohm coaxial cable connected to the FM outdoor antenna into the room and connect it to the FM 75 Ω terminal.
Controls and indicators

Opening/closing the door (C-V770, C-V700)

When opening or closing the door, be careful not to catch your finger in the door. Otherwise there is a risk of injury.

Changing the input selection display (AUTO key)

1. To change the TAPE 1 display to MD display
   - Select “TAPE 1” with the INPUT SELECTOR.
   - Press and hold the AUTO key for more than 2 seconds, until “MD” is displayed.
   - Each press switches the indication.
     - TAPE1 → MD

2. To change the DVD display to the 6ch INPUT display
   - Select “DVD” with the INPUT SELECTOR.
   - Press and hold the AUTO key for more than 2 seconds, until “6 ch INPUT” is displayed.
   - Each press switches the indication.
     - DVD-A → 6ch INPUT

Switching the display mode (DISPLAY key)

Use the following procedure to change the display mode.
- Press the DISPLAY key (remote control only).
- Each press switches the indication.

- INPUT SELECTOR display
- 2 DOLBY/DSP display
- 3 STEREO display
- Time display

- The time display is displayed for only 5 seconds, after which the INPUT SELECTOR display appears automatically.
- The display of 2 is not shown during SOURCE DIRECT and 6ch INPUT operations.

To make the system control operation, the input selection display should be switched according to the actually connected components.

About the system control connections

- With the C-V770 and C-V500, the switching of 1 is not available. The DVD is set in place.
For C-V770, C-V700

The keys which have the same names as the controls on the remote control unit provide the same functions as them.

1) I/O (ON/STANDBY) key
   Press to switch between ON and STANDBY

2) Indicator
   (C-V770)
   VOICE ACTIVATE indicator
   Lights to indicate an occurrence of voice activation
   (C-V770)
   STANDBY indicator
   Lights to indicate stand-by mode

3) Remote sensor

4) TIMER SET key
   Press to set the timer function

5) CLOCK key
   Press to set the clock

6) VOICE ACTIVATE ON/OFF key
   (C-V770 only)
   Press to switch the voice-activation operation ON and OFF

7) VOICE ACTIVATE SET key
   (C-V770 only)
   Press to record words for use in voice activation

8) STEREO key

9) DSP key

10) DOLBY key

11) MODE key

12) MULTI CONTROL keys

13) GRC transmitter
    Outputs the signals transmitted to the Graphic Remote Control

14) PHONES jack
    For use in headphone listening

15) INPUT SELECTOR key
    Press to select the input

16) TAPE 2 (MONITOR) key
    For use in monitoring of recording, etc

17) TIMER MODE key
    Press to switch the timer modes

18) S.DIRECT key
    Press to switch the Source Direct function which allows to reproduce the source with a better quality

19) A.MEMO key
    Press when using the auto memory function

20) AUTO key
    Press to select the tuning mode
    The auto tuning or manual tuning mode can be selected
    Pressing and holding this key for more than 2 seconds changes the TAPE 1 input display to MD display or the DVD-A input display to FM INPU display

21) BAND key
    Press to switch the broadcasting band

22) TUNING keys (V, A)
    Press to select the radio station to be received
    These keys are also used in the clock adjustment and timer operations

23) OPEN/CLOSE key

24) VOLUME CONTROL knob

STANDBY mode indication

While stand-by mode is indicated, a small amount of power is supplied to the system to back up the memory. In this mode, the system can be turned ON by remote control.

With the C-V770, stand-by mode is indicated by the display panel. The system is in stand-by mode when the display shows the clock display.
The keys which have the same names as the controls on the remote control unit provide the same functions as them.

1. POWER
(ON/STANDBY) key
(U.S.A. and Canada)
Press to switch between ON and STANDBY.
2. I/O (ON/STANDBY) key
Press to switch between ON and STANDBY.
3. STANDBY indicator
4. Remote sensor
5. GRC transmitter
Outputs the signal transmitted to the Graphical Remote Control.
6. PHONES ( )
For use in telephone listening.
7. INPUT SELECTOR key
Press to select the input.
8. TAPE 2 (MONITOR) key
For use in monitoring of recording, etc.
9. CLOCK key
Press to set the clock.
10. TIMER MODE key
Press to switch the timer modes.
11. TIMER SET key
Press to set the timer function.
12. AUTO key
Press to select the tuning mode. The auto tuning or manual tuning mode can be selected. The input selection display of a source can be switched to another by pressing and holding the AUTO key for more than 2 seconds.
13. A.MEMO key
Press when using the auto memory function.
14. BAND key
Press to switch the broadcasting band.
15. TUNING keys ( V, V)
Press to select the radio station to be received.
These keys are also used in the clock adjustment and timer operations.
16. MODE key
Press to switch various setting modes.
17. MULTI CONTROL keys
Press to select various setting modes.
18. VOLUME CONTROL knob

**STANDBY mode indication**

While standby mode is indicated, a small amount of power is supplied to the system to back up the memory. In this mode, the system can be turned ON by remote control.
Setup of the Graphical Remote Control (GRC) unit

Controls and indicators

The Graphical Remote Control (GRC) unit provided with the AV CONTROL CENTER can also control KENWOOD cassette decks, CD player and LD player which are connected to it through system control cords. For details of the controllable functions, refer to the instruction manuals of these components.

Model: GRC-100
Infrared system

Perform "Model Type Setup" of the GRC before using it.

Segment screen

1. Segment screen
   - This area displays the fixed icons.

2. Return icon
   - Select to return to the previous display.

3. Main Menu icon
   - Select to change the input source or select Main Menu 2.

4. Cable TV icon
   - Select to control the cable TV.

5. Satellite Tuner icon
   - Select to control the satellite tuner.

6. CD icon
   - Select to control the CD player.

7. TV icon
   - Select to control the TV.

8. Tuner icon
   - Select to control the tuner.

9. VCR 1 icon
   - Select to control VCR 1.

10. LD icon
    - Select to control the LD player.

11. VCR 2 icon
    - Select to control VCR 2.

12. Tape 1 icon
    - Select to control cassette deck 1.

13. Tape A icon
    - Select to control cassette deck A.

14. Tape B icon
    - Select to control cassette deck B.

15. Set Up icon
    - Select to make setup operations.

16. Input Source icon
    - Select to switch the input source.

17. Sound icon
    - Select to control the sound-related functions.

18. Confirm icon
    - Select to confirm a setting, etc.

- The input source can be selected using icon 9 or 10.
- Icons 9 to 12 are used to select the component to be controlled.

Menu screen

19. Menu screen
    - This area displays the control key icons and level information.

20. Mode display
    - The above indication indicates the setup mode.

21. CD icon
    - Select to set up the CD player.

22. Reset icon
    - Select to return to the "Model Type Setup" menu screen.

Operation keys

23. Joystick key
    - Not used in selecting icons.

24. ENTER key
    - Press to enter a selection.

25. VOLUME (UP) control key
    - Press to increase the volume level.

26. VOLUME (DOWN) control key
    - Press to decrease the volume level.

27. I/ (ON/STANDBY) key
    - Press to switch the AV CONTROL CENTER and the components connected to it through system control cords between ON and STANDBY.

Approximate operating range

Remote sensor

1. The supplied batteries are intended for use in operation check. Therefore, their lives may be shorter than ordinary batteries.
2. When the remote-controllable distance gets shorter than before, replace all four batteries with new ones.
3. Malfunction may occur if direct sunlight or the light of a high-frequency lighting fixture enters the remote sensor. In such a case, change the system installation position to prevent the malfunction.
4. The GRC display may show erroneous information when the GRC unit is operated from outside the specified range.
Setting up the GRC according to your AV CONTROL CENTER (Model Type Setup)

Perform the following procedure after inserting batteries for the first time and every time after changing them.

**Preparation**

- Press the POWER or 1/0 (ON/STANDBY) key of the main unit to the ON mode.

**Model Type Setup (GRC setup procedure)**

1. **Loading batteries**
   - Remove the cover.
   - Insert batteries.
   - Close the cover.
   - Insert four AAA-size (LR03/UM-4) batteries as indicated by the polarity marking.
   - To maintain the memory of the settings you made before, complete the battery replacement operation within 30 seconds.
   - The procedure on the left should also be performed when replacing the GRC (a measure against malfunction). However, in this case, wait for about five minutes after removing the batteries and before reinserting them.

2. **Check the display.**
   - The “Model Type Setup” screen appears.

3. **Move the cursor to the Model type icon matching the AV CONTROL CENTER.**
   - Identify the model type.
   - Use the tab on the right.
   - Move the cursor.
   - It can be moved in 8 directions depending on how you press the joystick key.
   - The icon on which the cursor is moved blinks in reverse video.

4. **Enter the selection.**
   - Press the ENTER key.

---

**Caution in battery replacement**

- Insert four AAA-size (LR03/UM-4) batteries as indicated by the polarity marking.
- To maintain the memory of the settings you made before, complete the battery replacement operation within 30 seconds.
- The procedure on the left should also be performed when replacing the GRC (a measure against malfunction). However, in this case, wait for about five minutes after removing the batteries and before reinserting them.

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**AV CONTROL CENTER**
- Model

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**GRC “Model Type Setup” icon**

- C-V100
- C-V150
- C-V300
- C-V350
- C-V500
- C-V550
- C-V700
- C-V750
- C-V770

**To change Model Type Setup**

1. **Select Set Up.**
2. **Press the ENTER key.**
3. **Select Reset.**
4. **Press the ENTER key.**
5. **Perform the setup procedure from step “2 Check the display.”**

- The above operation clears all of the previously made settings and all settings are performed from step 1 of the setup procedure again.
Setting up the GRC according to the option components (Set Up)

The following procedures prepare the GRC for operating the components connected through system control cords. Make sure that these components are connected through system control cords.

- If you proceed to the following "Set Up" operation immediately after steps 1 to 3 of "Mode Type Setup (GRC setup procedure)" on page 61, start operation with step 2. Select the "CD" icon in the "Set Up CD" procedure.

**Set Up CD**
Setup of GRC according to the CD player in use

1. Select the "Set Up" icon.
2. Press the "ENTER" key to enter the selection.
3. Select the "CD" icon.
4. Press the "ENTER" key to enter the selection.
5. Select the "Single" icon.

- Select "Single", "Dual", "Carousel" or "Change" according to the connected CD player type.
6. Press the "ENTER" key to enter the selection.
7. Select the "Main Menu" icon.
8. Press the "ENTER" key to enter the selection.

- Icon "!" appears at the moment the setup has completed.

**Set Up Tape 1**
Setup of GRC according to the cassette deck in use

1. Select the "Set Up" icon.
2. Press the "ENTER" key to enter the selection.
3. Select the "Tape 1" icon.
4. Press the "ENTER" key to enter the selection.
5. Select the "Dual" icon.

- Select "Dual" or "Single" according to the connected cassette deck type.
6. Press the "ENTER" key to enter the selection.
7. Select the "Main Menu" icon.
8. Press the "ENTER" key to enter the selection.

- Icon "!" appears at the moment the setup has completed.

**Set Up LD**
Setup of GRC according to the LD player in use

1. Select the "Set Up" icon.
2. Press the "ENTER" key to enter the selection.
3. Select the "LD" icon.
4. Press the "ENTER" key to enter the selection.
5. Select the "System Control" icon.

- Select "System Control" or "LD" according to the connected LD player type.
6. Press the "ENTER" key to enter the selection.
7. Select the "Main Menu" icon.
8. Press the "ENTER" key to enter the selection.

- Icon "!" appears at the moment the setup has completed.

---

In the operations of the GRC (Graphical Remote Control unit), proceed to each step within 10 seconds after the previous step. The display disappears in 10 seconds.

♫ To resume GRC display, move the Joystick key in any directions
Setting up the GRC according to other components

The GRC can also be used to remote control other components which are not connected through system control cords. To control another component, it is required to register the setup code corresponding to it beforehand.

Registering setup codes for VCR 1

1. Find the setup code of the component to be registered by referring to the setup code chart in this manual.

2. Enter the setup code.

<table>
<thead>
<tr>
<th>Steps</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Select the &quot;Set Up&quot; icon.</td>
</tr>
<tr>
<td>1</td>
<td>Enter the selection (by pressing the &quot;ENTER&quot; key)</td>
</tr>
<tr>
<td>2</td>
<td>Select the &quot;VCR 1&quot; icon.</td>
</tr>
<tr>
<td>3</td>
<td>Enter the selection (by pressing the &quot;ENTER&quot; key)</td>
</tr>
<tr>
<td>4</td>
<td>Enter the setup code.</td>
</tr>
<tr>
<td>5</td>
<td>Select the &quot;Set&quot; icon.</td>
</tr>
<tr>
<td>6</td>
<td>Enter the selection (by pressing the &quot;ENTER&quot; key)</td>
</tr>
</tbody>
</table>

Check the operation of the component.

- Display the operation screen of the component to be checked.
- Turn on the component from the GRC and confirm the actual component.
- If there is more than one setup code, input each code to see which one turns the power on. That will be the correct code for your component.

Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.)

With some models, be sure to keep the ENTER key pressed for a while.

Use the numeric keys as shown below.

Entry examples:
- 431 ...... 4 ENTER 3 ENTER 1 ENTER
- 400 ...... 4 ENTER 0 ENTER 0 ENTER

- When a code which is not shown in the setup code chart is entered, the entered code disappears automatically

Registering setup codes of other components

The procedure of steps 1 and 2 to 6 of "Registering setup code for VCR 1" also allows to register the components listed below to remote control them from the GRC.

- Registering setup code for VCR 2
- Registering setup code for TV
- Registering setup code for CABLE
- Registering setup code for SATELLITE
- Registering setup code for LD player (IR)
Remote control of components from the GRC

Controlling the AV CONTROL CENTER

The operations required to remote control the AV CONTROL CENTER includes the INPUT SELECTOR selection, display mode selection, stereo selection and so on. The following procedures show how to remote control the basic operations of the GRC.

Operation examples

Switching the INPUT SELECTOR (Selecting the CD input)

1. Select the “Main Menu” icon in the fixed segment screen by operating the joystick.
2. Press the “ENTER” key to enter the selection.
3. Select the “CD” icon with the joystick.
4. Press the “ENTER” key to enter the selection.
5. The input source is switched to “CD”.

Other input than CD can be selected in step 3.

Switching the display mode of the AV CONTROL CENTER

1. Select the “Main Menu” icon in the fixed segment screen by operating the joystick.
2. Press the “ENTER” key to enter the selection.
3. Select the “Main Menu” icon again.
4. Press the “ENTER” key to enter the selection.
5. Select the “Display” icon.
6. Press the “ENTER” key to enter the selection.
7. Each press of the “ENTER” key switches the display mode.

Selecting the stereo mode

1. Select the “Sound” icon in the fixed segment screen by operating the joystick.
2. Press the “ENTER” key to enter the selection.
3. Select the “STEREO” icon with the joystick.
4. Press the “ENTER” key to enter the selection.
5. It is also possible to select the “STEREO” or “Source Direct” icon in step 3.

Controlling the components connected through system control cords

When a CD player, cassette deck and/or LD player are connected with the AV CONTROL CENTER through system control cords, their system control operations are possible from the GRC.

**Preparations**
- System control connection
- Model Type Setup
- Setup of source components

**Operating the tuner**
1. Select the "Tuner" input.
2. Display the tuner operation menu.
3. Select the icon to be operated.
4. Enter the selection by pressing the "ENTER" key.

- After selecting the icon, press the "ENTER" key to enter the selection.
- Any of the keys which can control the tuner can be selected.

**Operating the CD player**
1. Select the "CD" input.
2. Display the CD operation menu.
3. Select the icon to be operated.
4. Enter the selection by pressing the "ENTER" key.

- Any of the CD player operation keys can be selected.
- The menu display shown on the left is an example which appears with a simple CD player.
- For the operation of the CD player, also read the instruction manual of the CD player.
Operating the cassette deck

1. Select the "Tape 1" input.

2. Display the cassette deck operation menu.

3. Select the icon to be operated.

4. Enter the selection by pressing the "ENTER" key.

- The procedure on the left is an example assuming that "Dual" has been selected in the "Setup" operation.
- If "Single" has been selected in the "Setup" operation, the "Tape 1" icon is displayed.
- Any of the cassette deck operation keys can be selected.
- For the operation of the cassette deck, also read the instruction manual of the cassette deck.

Operating the LD player

1. Select the "LD" input.

2. Display the LD player operation menu.

3. Select the icon to be operated.

4. Enter the selection by pressing the "ENTER" key.

- Any of the LD player operation keys can be selected.
- The procedure on the left is an example assuming that "System Control" has been selected in the "Setup" operation.
- For the operation of the LD player, also read the instruction manual of the LD player.
# Convenient functions

## One-touch operation and easy operation features

*(CD player, cassette deck and LD player)*

When the system is in standby mode, the operations as described below are possible provided that the associated components are connected through system control cords.

### Preparations

- Ensure that system control cords are connected.
- Set the power switch of the cassette deck and LD player to the ON position.
- Set the power switch of the power amplifier to the ON position.
- Load the source component with the software to be played.
- Press the POWER or [i/0] key of the AV CONTROL CENTER to put it to standby mode.

<table>
<thead>
<tr>
<th>Function available with the play key operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press the play key.</td>
</tr>
<tr>
<td>The system is switched from standby mode to ON mode.</td>
</tr>
<tr>
<td>The input selector is switched automatically.</td>
</tr>
<tr>
<td>Playback starts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Function available with the eject key operation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Press the eject key.</td>
</tr>
<tr>
<td>The system is switched from standby mode to ON mode.</td>
</tr>
<tr>
<td>The tray panel of the source component opens.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operation available by switching the input selector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the desired input with the input selector.</td>
</tr>
<tr>
<td>The selected source component starts to play.</td>
</tr>
</tbody>
</table>

- Use the main unit keys for operation
- The clock information is displayed in standby mode. *(CV-773)*
- The STANDBY indicator lights. *(CV-700/CV-550/CV-500)*

- CD player and cassette deck
- This operation is not available from the eject key of a double cassette deck
- Turn on the system before switching the input selector.
- This operation is available when the CD, TAPE 1 or LD input is selected.
System component startup by voice activation (C-V770 only)

When the VOICE ACTIVATE ON/OFF key is set to ON, talking a previously recorded word into the exclusive microphone switches the system components from standby mode to ON mode.
The voice activation can use either the preset word ("KENWOOD") (spoken by any person) or the desired words recorded by the user (spoken by a specific person(s)).

Starting the system components by voice activation (by any person)

Preparation for voice activation (when the system is to be activated by speaking “KENWOOD”)

- Load the CD player or LD player with the software to be played.

Operation for voice activation of system components (by any person)

- The voice is recognized by word "KENWOOD" spoken by any person.
- If both the CD player and LD player have been connected, the CD player is given the preference.

Auto power-save

When the system has been started up by voice activation, it will return to standby mode by automatically taking the following steps.

- The system components are started up by voice activation.
- After the CD or LD playback completed, the system has remained in stop mode for about 30 minutes.
- The system returns automatically to standby mode.
The voice activation setting function allows the user to record desired words for use in voice activation. The user can switch the system from standby mode to ON mode by speaking the recorded words. However, note that voice activation using preset "KENWOOD" is not possible when the user's words are recorded for voice activation.

**Recording the user's own voice for voice activation (by specific person)**

One as well as more than one word can be recorded for use in voice activation.

1. Press the VOICE ACTIVATE SET key to ON.

   ![VOICE ACTIVATE SET key](image)

2. The indicator lights in amber.

   ![Indicator lights in amber](image)

3. Record voice (words).

   ![Recording](image)

   The indicator goes out during recording.

   When desired words are input into the exclusive microphone, in less than 2 seconds.

4. Repeat steps 2 and 3 until "RECORD OK" is displayed.

   Repeat 3 times or more.

5. Now the recording is completed.

   ![Recording completed](image)

   The indicator lights in green.

   ![Indicator lights in green](image)

   - Up to 5 words can be recorded provided that they are spoken in less than about 12 seconds. If a long word is recorded, the total number of words which can be recorded may become less than 5.
   - Either one user can record up to 5 words or up to 5 users can record one word per person.
   - If more than the specified number of words are recorded, the words recorded earlier are overwritten by newly recorded words in the order they were recorded.
   - "RECORD" is displayed to indicate the status in which voice recording is possible. "RECORD OK" is displayed when recording has completed successfully.
   - Repeat steps 1 to 5 if you want to record another word.

**To erase the recorded voice**

1. Press and hold the VOICE ACTIVATE SET key for more than 5 seconds.

2. The entire recorded voice is erased.

**Starting the system by voice activation using the recorded words (by specific person)**

**Preparation for voice activation operation**

1. Ensure that the exclusive microphone is connected.

2. Press the POWER or I/0 (ON/STANDBY) key to ON mode.

3. Press the OPEN/CLOSE key to open the door.

4. Press the VOICE ACTIVATE ON/OFF key to ON (so that the indicator lights in green).

5. Close the door.

6. Press the POWER or I/0 (ON/STANDBY) key to STANDBY mode (so that the display shows the clock information).

**Operation for voice activation of system components (by specific person)**

1. Speak the recorded words into the exclusive microphone.

2. The system components are switched from standby mode to ON mode. The input selection is switched to CD or LD, and the corresponding component starts playback.

   - If both the CD player and LD player have been connected, the CD player is given the precedence.
   - The auto power-save operation also occurs after the system components are turned ON by means of voice activation by specific person.

**Note for voice activation recording**

The words for use in voice activation should be recorded in an quiet environment. Correct recording may sometimes be impossible in a noisy environment. When using the voice activation function, too, adjust the microphone position so that it does not pick up noise.
Playing music

The following procedure allows to play a CD or cassette tape.

**Preparations**
- Connect components as described in "System connection".
- Complete "Setup of the Graphical Remote Control (GRC) unit."

1. **Press the ON/STANDBY key to ON.**

2. **Select the input source.**

3. **Play the selected source.**

4. **Adjust the volume.**

- Load the CD player or cassette deck with the software to be played.
- Read the instruction manuals of the associated components.

With main unit operation, the input sources are switched as shown below:

- 1 VCR
- 2 AUX
- 3 TAPE 1 / MD *1
- 4 TUNER (frequency display)
- 5 CD
- 6 DVD-D
- 7 DVD-A / 6ch INPUT *2
- 8 LD-D
- 9 LD-A
- 10 CABLE / SAT

**1:** To change the TAPE 1 display to MD display
**2:** To change the DVD-A display to the 6ch INPUT display

To enable system-control operation, the setup information should be set according to the actually connected components.

- Note for using the 6ch INPUT
- Step 2 can be omitted if the easy operation feature is available.

**One-touch operation**

Pressing the play key of the CD player or cassette deck starts up the system automatically and starts playback. When this operation is used, steps 1 and 2 can be omitted.

- The time taken till the volume level is displayed is variable depending on the current operating condition.
- Rotating the VOLUME CONTROL at a higher speed increases the amount of volume change (AI VOLUME function).
- The sound of input source cannot be listened to while TAPE 2 (MONITOR) is ON.
Adjusting the tone

1. Select STEREO.
   - IC-770C, IC-770 only

2. Select the BASS or TREBLE adjustment.

3. Adjust the selected item.
   - Bass: +8dB
   - Treble: -8dB

Each press of the MODE key switches the adjustment item as shown below:
- 1 BASS: Tone, Bass
- 2 TREBLE: Tone, Treble
- L-------R: Balance
- SW ch: Subwoofer
- INPUT: Input level

The adjustment menu appears.

Setup Tone/Balance
- Bass: +8dB
- Treble: -8dB
- L-------R

- Display when BASS is selected
- The level value changes

- The level can be adjusted between -8 and +8 in steps of 2
- The tone cannot be adjusted when the input selector is set to 6cm INPUT or the AC/3 indicator is displayed.

Adjusting the left/right sound balance

1. Select STEREO.
   - IC-770C, IC-770 only

2. Select the Balance adjustment.

3. Adjust the selected item.
   - To decrease left channel level
   - To decrease right channel level

Each press of the MODE key switches the adjustment item as shown below:
- 1 BASS: Tone, Bass
- 2 TREBLE: Tone, Treble
- L-------R: Balance
- SW ch: Subwoofer
- INPUT: Input level

- If you proceed to this procedure immediately after that for "Adjusting the tone", you can use the same menu on the GRC.

Position of the left speaker
- Indicates the center

Position of the right speaker
- Indicates the balance setting
Sound adjustment functions

Source Direct playback

This feature allows you to play the source signal with high quality by passing it only through the minimum required circuitry.

1. Select the playback source.
2. Select SOURCE DIRECT.
3. Playback the source.

Lights up

- During Source Direct playback, the tone controls, BASS, and PHASE are canceled.
- The Source Direct playback is canceled when any key associated with the surround play is pressed.
- The Source Direct playback is not possible when the input selector is set to INPUT or during Dolby Pro Logic playback.

To cancel

Select the Source Direct (S.DIRECT) again.

To listen through headphones

1. Plug headphones.
2. Adjust the volume.

- The speaker sound is defeated at the moment headphones are inserted into the PHONES jack.
- If headphones are plugged in during surround play, the mode is automatically switched to the STEREO mode.
- If they are plugged in during 6ch INPUT play, only the front L, C, and RCH will be played.
- The previous status resumes at the moment headphones are unplugged.
- If headphones are plugged in during test tone output, the test tone output stops.

To mute sound temporarily

Press the MUTE key again.
When recording sound with a recorder component of KENWOOD, synchro recording is possible by setting the INPUT SELECTOR to select TAPE1 or MD according to the connected component.

To record a music source

1. Select the source to be recorded.
   - Press the [VCR], [AUX], [TAPE1/MD], [TUNER], [CD], [DVD], [DVD-A/6ch INPUT], [LD-D], [LD-A], or [CABLE/SAT] button.

2. Put the cassette deck in record-pause mode.

3. Play the source and start recording.

Notes for using the LD, DVD or 6ch INPUT source

When LD, DVD or 6ch INPUT is selected as the input source, the operation is subjected to the following restrictions.

Restrictions with LD and DVD:
1. Both audio and video can be recorded if the source uses analog audio.
2. Audio recording is not available if the source uses digital audio.
   - However, audio recording is possible if the analog input of the source is available when the analog input jacks of the DVD are connected to the FRONT audio input jacks of the AV CONTROLS CENTER and the DVD outputs analog audio signals.
3. The TAPE 2 (MONITOR) function is not available with the digital input.

Restrictions with 6ch INPUT:
1. The played audio cannot be recorded.
2. The monitor function cannot be activated by pressing the TAPE 2 (MONITOR) key.
3. Surround play, its adjustment, STEREO mode play, tone adjustment and Source Direct play are not available.

Regarding TAPE 2 (MONITOR)

A cassette deck or graphic equalizer can be connected to this unit's TAPE 2 (MONITOR) terminals. If you connect a graphic equalizer, turn the TAPE 2 (MONITOR) key ON. If you connect a 3-head cassette deck, you can monitor the source sound, or the sound being recorded, while recording. Pressing the TAPE 2 (MONITOR) key allows you to compare the recorded sound and the source sound. Refer to the operating manual for the component you connected for further details.
Receiving broadcast station

1 Select the TUNER input.

Main unit

GRC

Tuner

2 Select the broadcast band.

Main unit

GRC

Band

3 Select the tuning method.

Main unit

GRC

Auto

4 Select a station.

Main unit

GRC

To increase or decrease frequency

Press TUNING Up or Down key.
Use the operating procedure on this page to store stations automatically in preset memory. Up to 40 stations can be preset and received with a simple key operation.

**Storing stations automatically in preset memory (AUTO MEMORY)**

The following procedure allows to select broadcast stations and store them in the preset memory (up to 40 stations can be preset).

1. **Set the INPUT SELECTOR to “TUNER”**.

   ![INPUT SELECTOR](image)

   Main unit
   
   Each press switches the indication.
   
<table>
<thead>
<tr>
<th>Main unit</th>
<th>Frequency display</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. VCR</td>
<td></td>
</tr>
<tr>
<td>2. AUX</td>
<td></td>
</tr>
<tr>
<td>3. TAPE 1 / MD</td>
<td>89.00 MHz</td>
</tr>
<tr>
<td>4. TUNER (frequency display)</td>
<td></td>
</tr>
<tr>
<td>5. CD</td>
<td></td>
</tr>
<tr>
<td>6. DVD-D</td>
<td></td>
</tr>
<tr>
<td>7. DVD-A / 6ch INPUT</td>
<td></td>
</tr>
<tr>
<td>8. LD-D</td>
<td></td>
</tr>
<tr>
<td>9. LD-A</td>
<td></td>
</tr>
<tr>
<td>10. CABLE / SAT</td>
<td></td>
</tr>
</tbody>
</table>

   The previously tuned frequency is displayed.

2. **Set the receiving band**.

   ![BAND SELECTOR](image)

   Each press switches the indication.

<table>
<thead>
<tr>
<th>Main unit</th>
<th>Frequency display</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. FM</td>
<td></td>
</tr>
<tr>
<td>2. AM</td>
<td></td>
</tr>
</tbody>
</table>

   The “FM” or “AM” indicator should light.

3. **Preset radio stations by AUTO MEMORY**.

   ![A MEMO SELECTOR](image)

   Main unit
   
   The stations which are received are stored in order beginning from preset channels “01” (up to 40 stations can be preset).

   When the receiving band selected in step 2 include no more than 40 stations, stations in other bands than it will be preset after them.

**Receiving a preset station**

```
<table>
<thead>
<tr>
<th>GRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
</tr>
<tr>
<td>456</td>
</tr>
<tr>
<td>789</td>
</tr>
<tr>
<td>0+10</td>
</tr>
</tbody>
</table>
```

Enter the preset number (max. 40) of the desired station.

- Press numeric keys in the order as described below:
  - To enter “15” ....... +10  +5  +0
  - To enter “20” ....... +10  +10  +0
  - If you commit a mistake in entering the digit of 10, press the +10 key several times to return to the original display and re-enter the preset number from the beginning.

```
Preset No.
15 89.00 MHz
```
The AUTO MEMORY function stores radio stations starting with preset channels number 1 by giving priority to the stations of the band being selected. In consequence, if you want to preset the stations in other bands than the selected band, first execute the AUTO MEMORY operation then preset other desired stations manually in preset channels left idle after the stations preset by Auto Memory.

**Preparation**

- Select the TUNER input.
- Display the Tuner operation menu.

---

**Storing radio stations manually in preset memory**

1. Select the receiving band.
2. Select a station or frequency.
3. Press the Memory key during receiving a station.

**Memory / 10key Pad**

Press to step within 10 sec. (if more than 10 sec. have elapsed press the Memory key again.)

- Select one of the preset numbers from 1 to 40.

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | +10 |

**Receiving a preset station**

- Press the numeric keys in the following order:
  - To store in “15” ....... 1 +10 ENTR 5 ENTR
  - To store in “20” ....... 1 +10 +10 ENTR 0 ENTR

- If a station is stored in a preset number which has already stored a station memory under 1, the previous memory is replaced by the new memory content.

**Receiving all preset stations in order (P. CALL)**

- Every time the key is pressed, the next station in the order of the preset number is received.

**When you press P.Call key,**

- Press -
- 1-2-3-38-39-40

**When you press P.Call key,**

- Press -
- 1-2-3-38-39-40

If the key is held pressed ............ Preset stations will be received successively for about half a second each.
This AV CONTROL CENTER incorporates 4 different sound modes to let you enjoy surround sound with a wide variety of program sources. The Dolby Digital (AC-3) and Dolby Pro Logic surround sound let you enjoy theater-like surround effects when you play Dolby Digital (AC-3) and Dolby Surround program sources (like Laserdiscs and DVDs). Dolby 3 Stereo creates a panoramic frontal sound field. The Digital Signal Processing (DSP) modes let you create a variety of different sonic environments from almost any type of program source.

To obtain the best possible surround sound, be sure to complete "Setup for surround play" before using the surround modes.

## Sound modes

### Dolby Digital (AC-3)

The Dolby Digital (AC-3) surround format lets you enjoy up to 5.1 channels of digital surround sound from Dolby Digital (AC-3) program sources (such as Laserdisc software marked [FLD]). Compared with previous Dolby surround, Dolby Digital (AC-3) provides even better sound quality, greater spatial accuracy, and a wider dynamic range.

**Note**

Although a full set of speakers (front left, right, and center, surround left and right, and a subwoofer) is required for true 6.1 channel Dolby Digital (AC-3) surround sound, this AV CONTROL CENTER lets you enjoy Dolby Digital (AC-3) (and Dolby Pro Logic) program sources, even if you connect only the front speakers.

*LFE = Low Frequency Effects. This channel carries separate non-directional bass signals to the subwoofer for more dynamic deep bass sound effects.

Although only Dolby Digital (AC-3) soundtracks incorporate a separate low frequency channel, connecting a subwoofer will also improve deep bass performance in other surround modes.

### Dolby Pro Logic

Dolby Pro Logic is a specially encoded 2 channel surround format designed to provide theater-like surround sound from Dolby Surround encoded sources (such as video and Laserdisc software marked [DOLBY SURROUND]). This AV CONTROL CENTER is equipped with a Dolby Pro Logic surround decoder to let you enjoy the wide variety of currently available Dolby Surround home video software.

### Dolby 3 Stereo

Dolby 3 Stereo is available for systems that do not have surround speakers. When in the Dolby 3 Stereo mode, the surround information is redirected to the front left and right speakers. This mode is designed for use with Dolby Surround program sources, but can also improve sound field unity for programs that are not Dolby Surround encoded. Dialog positioning and sound image definition, however, may not be as accurate when used with programs that are not Dolby Surround encoded.

*Optional in this mode.
**DSP mode**

The DSP mode lets you add the atmosphere of an arena, jazz club, or stadium to almost any type of program source. These modes are particularly effective when used with stereo program sources, like CD, televison, and FM radio. You might enjoy trying the STADIUM or ARENA mode the next time you watch a concert or sporting event.

The WALL parameter lets you adjust the “brightness” of the sonic environment according to your preference.

The ROOM SIZE parameter lets you adjust the size of the sonic environment according to your preference.

The EFFECT level lets you adjust the “presence” of the sonic environment according to your preference.

The DSP mode will produce a stereo-like surround effect from monaural sources but there will be some reduction in the presence of the atmosphere (arena or stadium feel).

---

**Recommended speaker installation**

It is recommended that the surround speakers are installed straight to the left and right of the listening position or slightly behind, at a height of about 1 meter higher than the listener’s ears.

---

**What is DSP?**

The DSP stands for Digital Signal Processor. In the DSP presence mode, the reverberation components (elements of sound echoed in various spaces) which determine the feeling of presence are created by digital processing by the DSP without spoiling the sound quality.
The feeling of presence in the surround effects can be improved by performing the following adjustment procedure according to the speaker system and listening room environment in use.

Once they are adjusted, re-adjustment is not necessary even after the surround mode is switched to other modes.

Adjustment sequence

Balance adjustment → Adjustment with test tone → Delay time adjustment

Setup for surround play

1 Select the Dolby mode.

2 Adjust the balance. “L———R”

- Select the Dolby mode according to the playback source and component in use.
- The AC-3 mode can be used when the Dolby Digital's gain is available.
- Switching is not possible when the 6ch INPUT is used.

Select an icon.
(The displayed icons may be variable depending on the mode.)

- Each press switches the selected items as shown below:
  1. BASS: Tone, Bass
  2. TREBLE: Tone, Treble
  3. L———R: Balance
  4. C ch: Center speaker
  5. SR ch: Surround speaker, Right
  6. SL ch: Surround speaker, Left
  7. SW ch: Subwoofer
  8. DELAY: Delays time
  9. INPUT: Input level

- Adjustment items 5, 6, and 8 are not allowed in the 2 STEREO mode.
- The adjusted items which can be selected with 6ch INPUT are 3, 4, 5, 6, and 7, in this sequence.
- Those which can be selected when SOURCE DIRECT is ON are 7 and 8.

If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered. The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.
How to calculate the proper delay time

Assuming that the distance from the front speakers is A meters and that from the surround speakers is B meters:

What is delay time?

The sound entering the ears include the direct sound coming from the sound source and the indirect sounds reflected from the walls, floor, ceiling, etc. The indirect sounds are delayed because they travel a longer distance required for reflection before they reach the ears. The delay time is the difference in time between the direct sound and indirect sounds.

3 Adjust the level from each speaker. "Test Tone"

Main unit

1. Output the "Test Tone" (Remote control only)

**Test Tone**

- Adjust the levels of the other speakers than the front speakers (left, right).
- [Injector] Volume level of the speakers

2. Quit the speaker level adjustment.

4 Adjust the delay time. "DELAY"

Main unit

1. Select the Delay Time adjustment display.

**Delay Time**

- Adjust the Delay Time.

2. Quit the delay time adjustment.

Delay Time: 20ms
Dolby Digital (AC-3) can be used when playing DVD or LD software bearing the mark and Dolby Digital (AC-3) format digital broadcasts (etc.). Dolby Pro Logic and Dolby 3 Stereo can be used when playing video, DVD, or LD software bearing the mark. DSP modes can be used with any source except Dolby Digital.

Be sure to complete “Set up for surround play” before using any of these surround modes.

Sound may not be reproduced when the input signal and Dolby mode are selected improperly.
How to select the digital input, analog input and Dolby mode.

---

**Surround play**

1. **Select the desired mode.**

   - **Main unit**
   - **GRC**

   ![Diagram of main unit and GRC controls]

   - **A To select a Dolby mode:**
     - Dolby mode
     - PRO LOGIC

   - **B To select the DSP mode:**
     - DSP mode
     - CATHEDRAL

   ![Diagram of DSP mode selection]

2. **Play video software.**

3. **Adjust the sound level.**

   **To end surround play**

   - **Main unit**
   - **STEREO**

   ![Diagram of STEREO mode selection]

   **When the source is other than Dolby Digital (AC-3)**

   - **STEREO**

   ![Diagram of STEREO mode selection]

   **During playback of Dolby Digital (AC-3) compatible software**

   ![Diagram of Dolby Digital (AC-3) playback]

---

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### Surround play of LD or DVD

#### INPUT selector operation

<table>
<thead>
<tr>
<th>Main unit</th>
<th>GRC (Operation 1)</th>
<th>GRC (Operation 2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DVD-D : DVD Digital</td>
<td>LD-D : LD Digital</td>
<td>With (Operation 2), the Digital and Analog can be switched every time the ENTER key is pressed after selecting &quot;DVD&quot; or &quot;LD&quot;.</td>
</tr>
<tr>
<td>DVD-A : DVD Analogue</td>
<td>LD-A : LD Analogue</td>
<td></td>
</tr>
</tbody>
</table>

#### Dolby mode selection

**Surround play of digital input: C-V500**

<table>
<thead>
<tr>
<th>INPUT selector</th>
<th>DVD-D</th>
<th>LD-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-3 AUDIO INPUT (Rear panel)</td>
<td>DIGITAL INPUT</td>
<td>DIGITAL INPUT</td>
</tr>
<tr>
<td>Input signal</td>
<td>Dolby Digital (AC-3)</td>
<td>PCM</td>
</tr>
<tr>
<td>Dolby mode (display)</td>
<td>AC-3 (Dolby Digital)</td>
<td>1 PRO LOGIC</td>
</tr>
<tr>
<td></td>
<td>(Dolby Digital)</td>
<td>2 3 STEREO (DSP)</td>
</tr>
</tbody>
</table>

**Surround play of digital input: C-V770/C-V700/C-V550**

<table>
<thead>
<tr>
<th>INPUT selector</th>
<th>DVD-D</th>
<th>LD-D</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC-3 AUDIO INPUT (Rear panel)</td>
<td>DIGITAL INPUT</td>
<td>RF INPUT</td>
</tr>
<tr>
<td>Input signal</td>
<td>Dolby Digital (AC-3)</td>
<td>PCM</td>
</tr>
<tr>
<td>Dolby mode (display)</td>
<td>AC-3 (Dolby Digital)</td>
<td>1 PRO LOGIC</td>
</tr>
<tr>
<td></td>
<td>(Dolby Digital)</td>
<td>2 3 STEREO (DSP)</td>
</tr>
</tbody>
</table>

**Surround play of analog input**

<table>
<thead>
<tr>
<th>INPUT selector</th>
<th>DVD-A</th>
<th>LD-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONNECTION (Rear panel)</td>
<td>DVD (FRONT L/R)</td>
<td>LD (L/R)</td>
</tr>
<tr>
<td>Input signal</td>
<td>Analogue</td>
<td>Analogue</td>
</tr>
<tr>
<td>Dolby mode (display)</td>
<td>PRO LOGIC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 3 STEREO (DSP)</td>
<td></td>
</tr>
</tbody>
</table>
The setup for surround play can also be performed by listening to actual music instead of the test tone. Use the following procedure to adjust surround play while listening to music.

**Preparations**
- Select the Dolby mode according to the played source and component in use.
- Play video software marked  or  on the TV or AV.

**Setup for surround play** (while listening to music)

1. **Select the Dolby mode.**

   - **Main unit**: 
     - GRC
   - **Display**: Dolby mode
   - **PRO LOGIC**: Dolby Pro Logic
   - **3 STEREO**: Dolby 3 Stereo
   - **AC-3**: Dolby Digital (AC-3)

2. **Adjust the adjustment item.**

   - **Main unit**: 
     - GRC
     - **Mode**: 
     - **Sound**: 
     - **Speaker Level**: 

   - **Display**: 
     - **BASS**: Tone, Bass
     - **TREBLE**: Tone, Treble
     - **L - - - R**: Balance
     - **C ch**: Center speaker
     - **S R ch**: Surround speaker, Right
     - **S L ch**: Surround speaker, Left
     - **S W ch**: Subwoofer
     - **DELAY**: Delay time
     - **INPUT**: Input level

   - Adjustment items 0, 1, and 2 are not required in the 3 STEREO mode.

If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.

The display on the GRC disappears if no key on the GRC has been pressed for about 10 seconds.

**Setup Sound**
- **Test Tone**
- **Delay Time**
- **Speaker Level**
- **Input Level**

**Setup Tone/Balance**
- **Bass**
- **Treble**

**Setup Speaker Level**
- **Center**
- **Sub W**
- **Surr.L**
- **Surr.R**

- With the GRC, the adjustment items shown in a single menu can be adjusted at once. (The adjustment steps 0, 1, and 2 or steps 3, 6, 4, and 5 are provided in a single menu so they can be adjusted successively without changing the menu screen.)
3 Adjust the Bass tone level. "BASS"

Main unit

GRC

1. Confirm the display.
   (Select icon as required)
   - Tone/Balance
     - Enter

2. Adjust the level as required.
   - Bass +8dB

   MULTI CONTROL
   LEVEL Up/Down
   To decrease
   To increase

   CENTER

3. Go to adjustment step "2".
   - Select the step icon


4 Adjust the Treble tone level. "TREBLE"

Main unit

GRC

1. Confirm the display.
   (Select icon as required)

2. Adjust the level as required.
   - Treble -3dB

   MULTI CONTROL
   LEVEL Up/Down
   To decrease
   To increase

   CENTER

3. Go to adjustment step "2".
   - Select the step icon


5 Adjust the balance. "L---R"

Main unit

GRC

1. Confirm the display.
   (Select icon as required)

2. Adjust the levels of the front speakers (Left, Right) so that they sound identical.
   - L --- R

   MULTI CONTROL
   LEVEL Up/Down
   To decrease
   To increase

   CENTER

3. Go to adjustment step "2".
   - Select the step icon


def Ambience effects

C.-770/C.-500/C-7650/C-9500 (B&W)
6 Adjust the center speaker level. "Cch"

Main unit

1. Confirm the display.
   (Select icon as required)
   **Speaker Level**

2. Adjust the level as required.

   - Press MULTI CONTROL LEVEL up or down key
   - To decrease
   - To increase

   **Center**
   +10dB

3. Go to adjustment step "2".
   Select the step "2" icon

---

7 Adjust the right surround speaker level. "SRch"

Main unit

1. Confirm the display.
   (Select icon as required)

2. Adjust the level as required.

   - Press MULTI CONTROL LEVEL up or down key
   - To decrease
   - To increase

   **Surr.R**
   -5dB

3. Go to adjustment step "1".
   Select the step "1" icon

---

8 Adjust the left surround speaker level. "SLch"

Main unit

1. Confirm the display.
   (Select icon as required)

2. Adjust the level as required.

   - Press MULTI CONTROL LEVEL up or down key
   - To decrease
   - To increase

   **Surr.L**
   -10dB

3. Go to adjustment step "1".
   Select the step "1" icon
9 Adjust the subwoofer level. “SWch”

Main unit

1. Confirm the Subwoofer adjustment display.
   (Select icon as required)
2. Adjust the level as required
   - Press MULTI CONTROL LEVEL (to increase)
   - Press MULTI CONTROL LEVEL (to decrease)
3. Go to adjustment step “D”.

To skip an adjustment item

Main unit

- When an adjustment item is not required to be adjusted, press the MODE key to go to the next adjustment step
- Select only the icons of the adjustment items which require adjustment

10 Adjust the delay time. “DELAY”

Main unit

1. Confirm the display.
   (Select icon as required)
2. Adjust the delay time.
   - Press MULTI CONTROL LEVEL (to decrease)
   - Press MULTI CONTROL LEVEL (to increase)
3. Go to adjustment step “G”.

11 Adjust the input level. “INPUT”

Main unit

1. Confirm the display.
   (Select icon as required)
2. Set the input level.
   - Press MULTI CONTROL LEVEL (to adjust)
3. Each press changes the level.

To quit the setup operation:

Main menu
Setup of other speakers than those used by system SERIES 21

The following setup operation is not required if the speakers provided with KENWOOD system SERIES 21 are used. The following procedure is necessary when other speakers than those provided with system SERIES 21 or used or when you do not want to output sound from speakers. After “Setup of the speaker sizes and speaker ON/OFF”, execute the “Setup for surround play” (②) again.

Setup of the speaker sizes and speaker ON/OFF

1 Select the speaker setup mode.

Main unit

GRC

Pressing the MODE button for more than 2 sec.

2 Set up the subwoofer, “SW”

Main unit

GRC

① Select ON or OFF.
(Select icons)

Press MULTI CONTROL LEVEL Down key.

Sub W

On

Each press changes the setup.

② Go to adjustment step “③”.
Select the step “②” icon.

3 Set the front speaker size, “F”

Main unit

GRC

① Select LARGE or SMALL.
(Select icons)

Press MULTI CONTROL LEVEL Down key.

Front

Small

Each press changes the setup.

② Go to adjustment step “③”.
Select the step “②” icon.

Main unit

Procedure
Press and hold the MODE key for more than 2 sec.
Press the MULTI CONTROL LEVEL UP key repeatedly to switch the setup contents as the next step.

- Subwoofer ON/OFF setup
- Front speaker size setup
- Center speaker size setup
- Surround speaker size setup

Press the MODE key to adapt setup in the figure.

Main unit

Each press of the MULTI CONTROL LEVEL DOWN key switches the Subwoofer ON and OFF

GRC

Each press of the ENTER key switches the Subwoofer on and off.

- SW OFF Subwoofer Off
- SW ON Subwoofer On

- When “SW” is set to OFF, “F” is automatically set to “LARGE”.

Main unit

Each press of the MULTI CONTROL LEVEL DOWN key switches the Front speaker size

GRC

Each press of the ENTER key switches the Front Speakers as shown below.

- F LARGE Setup for large-sized front speakers
- F SMALL Setup for small-sized front speakers

- When “SW” is set to ON and “F” is set to SMALL, “C” and “S” are not automatically SMALL even if they have been set to LARGE.
# Set the Center Speaker Size "C"

<table>
<thead>
<tr>
<th>Main unit</th>
<th>GRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Select LARGE, SMALL or OFF. (Select icon)</td>
<td></td>
</tr>
<tr>
<td>Center</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td></td>
</tr>
</tbody>
</table>

- Press: **MULTI CONTROL LEVEL DOWN**<br>
  - Each press changes the setup.

- **Go to adjustment step "C".**
  - Select the step "C" icon.

# Set the Surround Speaker Size "S"

<table>
<thead>
<tr>
<th>Main unit</th>
<th>GRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Select LARGE, SMALL or OFF. (Select icon)</td>
<td></td>
</tr>
<tr>
<td>Surr.</td>
<td></td>
</tr>
<tr>
<td>Small</td>
<td></td>
</tr>
</tbody>
</table>

- Press: **MULTI CONTROL LEVEL DOWN**<br>
  - Each press changes the setup.

- **Go to adjustment step "C".**
  - Select the step "C" icon.

---

### To quit the setup operation:

<table>
<thead>
<tr>
<th>Main unit</th>
<th>GRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODE</td>
<td></td>
</tr>
</tbody>
</table>

Select **CONFIRM**

- **ENTER**

---

### Notes for surround play

- When the surround speakers are set to OFF in the middle of Dolby Pro Logic mode, this is automatically switched to the Dolby 3 Stereo mode.

- When the center speaker is set to OFF in the middle of 3 STEREO mode, it is automatically switched to the normal STEREO mode.
Setup of the surround effect parameters (DSP)

1. Select the DSP surround mode.

- This can be selected when the input signal is other than Disco, Drama, and SACD.

   Main unit
   - Each press switches the indication:
     - 1 ARENA
     - JAZZ CLUB
     - STADIUM
     - CATHEDRAL
     - THEATER

2. Select the adjustment parameter.

- The effects of adjustments are applied equally to sound fields 1 to 4.
- Switching is not possible when the 6ch. INPUT is used.

   Main unit
   - Each press switches the adjustment parameter:
     - EFFECT
     - WALL
     - ROOM
     - BASS
     - TREBLE
     - L . . . . . R
     - Cch
     - SRch
     - SSLch
     - SWch
     - INPUT

3. Adjust the effect level. "EFFECT"

- The EFFECT level can be adjusted between 1 and 5.
4 Set the WALL type. "WALL"

Main unit

1. Confirm "WALL" adjustment display.
2. Select the type.

Press
MULTI CONTROL
LEVEL Up or Down key.

Enter the setup.

Wall Type

[Soft Med Hard]

Select the step "[Med]"

Go to adjustment step [3].

5 Set the ROOM size. "ROOM"

Main unit

1. Confirm "ROOM" adjustment display.
2. Select the size.

Press
MULTI CONTROL
LEVEL Up or Down key.

Enter the setup.

Room Size

[Sml Med Lrg]

Go to adjustment step [4].

Main unit

- Each press of the key switches the type setup as shown below.

S ↔ M ↔ H
(SOFT) (MEDIUM) (HARD)

- Each press of the key switches the size setup as shown below.

S ↔ M ↔ L
(SMALL) (MEDIUM) (LARGE)

To quit the setup mode in the middle:
If no key has been pressed for about 5 seconds, the setup display disappears and the display returns to the status before the setup mode was entered.

Setup/adjustment operations [5] to [9] are to be performed only when required.
The operations are identical to those in "Setup for surround play while listening to music".

To return the GRC display to the Main Menu:

Main unit

- If no key on the main unit has been pressed for about 5 seconds, the display on the main unit disappears and it returns to the status before the setup mode was entered.
- The display on the GRC disappears if no key on the GRC has been pressed.
Clock adjustment

This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.

The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged in again. In such a case, adjust the clock again.

1 Activate the clock adjustment mode.

Main unit

Enter the adjustment mode.
Press CLOCK key

Example: Adjustment to 8:15

2 Enter the hour.

Main unit

Set the "hour".
Press TUNING key,Up key To increase the figure
Down key To decrease the figure
Enter it.
Press CLOCK key

The time is represented in 24-hour AM/PM method.
Press the CLOCK key. The hour is entered and the minute display starts to blink.

3 Enter the minute.

Main unit

Set the "minute".
Press TUNING key,Up key To increase the figure
Down key To decrease the figure
Enter it.
Press CLOCK key

If you make a mistake, instant from the beginning.
To adjust correct time, press the CLOCK key at the same moment as a time announcement.

Displaying the Time

The displayed information can be switched every time the Display icon is selected.

Each press switches the indication
1 Input selection display
2 DOLBY/DSP/STEREO display
3 Clock display (about 5 seconds)
Timer operation

Two 24-hour timer systems (TIMER 1, TIMER 2) (which can be used every day) and a sleep timer system (which works only once) are available.

In each of TIMER 1 and TIMER 2, the timer data including the operating period and played contents can be set and selected to be activated or not as required.

Timer reservation is possible for the two types TIMER 1 and TIMER 2 at the same time.
- Please make reservations with an interval of at least one minute, so that the operation times of TIMER 1 and TIMER 2 do not overlap.

Timer playback, timer recording (TIMER 1, TIMER 2)
With each of the two timer programs, a selected source can be played and timer broadcasts can be recorded in the previous selected period.

Sleep timer
The unit is set to STANDBY mode automatically after the specified period has elapsed.

Timer programming

1. Make preparations for the play (recording).
   - To listen to radio
     The station should be preset before timer programming. 29-30
   - To listen to CD
     Insert a disc. Program playback is not possible.
   - To listen to tape
     Insert a tape. Program playback is not possible.
   - To listen to LD
     Insert a disc.
   - For broadcast recordings
     Make preparations for recording.

2. Adjust the listening volume.

   Main unit
   ![Volume Control]

   - The VOLUME CONTROL should be set to the desired volume while the unit is ON.

3. Set the POWER or 1/ (ON/STANDBY) switch to STANDBY.

   Main unit
   ![Power Button]

4. Select a TIMER No.

   Main unit
   - Press TIMER MODE to.
   - Select the timer number.
   - Press immediately after selection.

Each press of the key switches the TIMER numbers as follows:
- 1: TIMER 1
- 2: TIMER 2
- 3: TIMER 1.2
- 4: OFF

- The selected TIMER No. lights.
- If a previously programmed TIMER No. is selected, the contents will be replaced by the new contents programmed.
- The timer programming operation is not possible when TIMER 1.2
5 Enter the ON time (Hour).

Main unit

0 Set the "hour".

Press TUNING key
Up key: To increase the figure
Down key: To decrease the figure

Press TIMER SET key

0 Enter it.

6 Enter the On time (Minute).

Main unit

0 Set the "minute".

Press TUNING key
Up key: To increase the figure
Down key: To decrease the figure

Press TIMER SET key

0 Enter it.

7 Enter the OFF time (Hour).

Main unit

0 Set the "hour".

Press TUNING key
Up key: To increase the figure
Down key: To decrease the figure

Press TIMER SET key

0 Enter it.

8 Enter the OFF time (Minute).

Main unit

0 Set the "minute".

Press TUNING key
Up key: To increase the figure
Down key: To decrease the figure

Press TIMER SET key

0 Enter it.

Timer operation

- If you make a mistake, restart from step 4.
- After entering the figure of "hour", with the procedure in step 4, enter the figure of "minute" using the same procedure.
- If you make a mistake, restart from step 4.
- After entering the figure of "hour", with the procedure in step 4, enter the figure of "minute" using the same procedure.
- If you make a mistake, restart from step 4.
Make the desired reservation.

For timer playback

1. Select the mode.
   - Press TUNING UP or DOWN key.
   - Select "PLAY" (Each press alternates them)
   - PLAY: At the ON time, playback starts
   - REC

2. Select the input source.
   - Press TUNING UP or DOWN key.
   - Select the source to be played.
   - (Each press switches the following):
     - TUNER
     - CD
     - LD-D
     - LD-A
     - TAPE1 / MD
     - DVD-D
     - DVD-A / 6ch INPUT

3. Select the broadcast station (only when TUNER is selected above).
   - Press TUNING UP or DOWN key.
   - Select the preset station No.

4. Enter it.
   - Press TIMER SET key.
   - The station to be received with timer must be preset beforehand.

Timer recording of broadcasts

1. Select the mode.
   - Press TUNING UP or DOWN key.
   - Select "REC".
   - PLAY
   - REC

2. Enter it.
   - Press TIMER SET key.

3. Select the broadcast station.
   - Press TUNING UP or DOWN key.

4. Enter it.
   - Press TIMER SET key.

Activating the timer

1. Select the TIMER No. to be used.

- Press TIMER MODE key.

Each press of the key switches the TIMER numbers as follows:
- TIMER 1: Execution of timer 1 only.
- TIMER 2: Execution of timer 2 only.
- TIMER 1, 2: Execution of timers 1 and 2
- TIMER OFF

- The selected TIMER No. lights.
- The timer will not function unless a TIMER No. is selected.
**Check the reservation content.**

Select the TIMER number to be checked.

Press TIMER MODE key

---

**When timer operation is not required**

Press so that all TIMER No. indicators are OFF.

Press TIMER MODE key

---

**To set the same timer program again**

Press so that the desired TIMER No. indicators light.

Press TIMER MODE key

---

**Sleep timer**

Setting the number of minutes until the unit is put to standby mode.

1. Switch the unit from STANDBY mode to ON mode.
2. Set the time.
   - Main Menu
   - Main Menu
   - Sleep

---

**Timer operation**

The reservation contents cannot be cleared. The contents are deleted only when they are changed.

Each press of the key switches the TIMER numbers as follows:

1. TIMER 1: Contents of the timer 1 are displayed.
2. TIMER 2: Contents of the timer 2 are displayed.
3. TIMER 1, 2: Contents of the timer 1 and timer 2 are displayed.
4. TIMER OFF: No timer operation is carried out.

- The reserved contents will be displayed for 2 seconds per item. After that, the previous display content appears again.

**To change the reserved contents**

Restart the procedure of "Timer programming" from the beginning.

---

Each press of the key switches the TIMER numbers as follows:

1. TIMER 1: Only timer 1 is carried out.
2. TIMER 2: Only timer 2 is carried out.
3. TIMER 1, 2: Both timers 1 and 2 are carried out.
4. TIMER OFF: No timer operation is carried out.

- The reservation contents are held in memory.

---

Each press of the key switches the TIMER numbers as follows:

1. TIMER 1: Only timer 1 is carried out.
2. TIMER 2: Only timer 2 is carried out.
3. TIMER 1, 2: Both timers 1 and 2 are carried out.
4. TIMER OFF: No timer operation is carried out.

- Also prepare the disc or tape and adjust the listening volume.

---

- This unit is turned STANDBY automatically after the set time has elapsed.
- The remaining sleep time can be displayed by selecting the Sleep icon while the SLEEP indicator is lit.

- Each press decreases the time by 10 minutes. The maximum time that can be set is 90 minutes.

90→80→70→60→50→40→30→20→10→Cancel→90→80...

Lights up

<table>
<thead>
<tr>
<th>SLEEP 90</th>
</tr>
</thead>
</table>

**To cancel**

Turn STANDBY or select "Sleep" icon repeatedly until the sleep time is cancelled.
### VCR Set up codes

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<td>SNELLY</td>
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<td>018.030.062.113</td>
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<td>STARGATE</td>
<td>039.055</td>
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<td>STARGUEST</td>
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<td>SYLVANIA</td>
<td>016</td>
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<td>TANDY</td>
<td>273</td>
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<td>TATUNG</td>
<td>112</td>
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<tr>
<td>TEKNIKA</td>
<td>161</td>
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<tr>
<td>TELECAPTION</td>
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<td>TELEVIEW</td>
<td>055</td>
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<tr>
<td>TEXSCAN</td>
<td>016.111</td>
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<tr>
<td>TOCOV</td>
<td>027.028.074</td>
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<td>TOSHIBA</td>
<td>015</td>
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<td>TV66</td>
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<td>UNITED ARTIST</td>
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<td>UNITED CABLE</td>
<td>018</td>
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<td>UNIVERSAL</td>
<td>054.092.093.168.205,</td>
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<td>222.237</td>
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<td>VIDEOWAY</td>
<td>265</td>
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<td>VIDTECH</td>
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<td>VIEWSTAR</td>
<td>042.075.078.225.273,</td>
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<td></td>
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<tr>
<td>ZENITH</td>
<td>015.069</td>
</tr>
<tr>
<td>ZENETEK</td>
<td>415</td>
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</table>
### LD Set up codes

<table>
<thead>
<tr>
<th>Maker</th>
<th>Set up codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIWA</td>
<td>218</td>
</tr>
<tr>
<td>CARVER</td>
<td>079</td>
</tr>
<tr>
<td>DENON</td>
<td>187</td>
</tr>
<tr>
<td>FUNAI</td>
<td>218</td>
</tr>
<tr>
<td>KENWOOD</td>
<td>273</td>
</tr>
<tr>
<td>MAGNAVOX</td>
<td>232, 256</td>
</tr>
<tr>
<td>MARANTZ</td>
<td>079</td>
</tr>
<tr>
<td>MITSUBISHI</td>
<td>074</td>
</tr>
<tr>
<td>NAD</td>
<td>074</td>
</tr>
<tr>
<td>PANASONIC</td>
<td>219</td>
</tr>
<tr>
<td>PHILIPS</td>
<td>079</td>
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<tr>
<td>PIONEER</td>
<td>074</td>
</tr>
<tr>
<td>QUASAR</td>
<td>219</td>
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<tr>
<td>RCA</td>
<td>366</td>
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<tr>
<td>REALISTIC</td>
<td>218</td>
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<tr>
<td>SHARP</td>
<td>016</td>
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<tr>
<td>SONY</td>
<td>208, 216</td>
</tr>
<tr>
<td>YAMAHA</td>
<td>232</td>
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</table>

### Satellite Set up codes

<table>
<thead>
<tr>
<th>Maker</th>
<th>Set up codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIRDVIEW</td>
<td>060</td>
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<tr>
<td>CHANNEL MASTER</td>
<td>033</td>
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<tr>
<td>CHAPARRAL</td>
<td>068</td>
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<tr>
<td>CITOH</td>
<td>179</td>
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<tr>
<td>DRAKE</td>
<td>333, 079</td>
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<tr>
<td>ECHOSTAR</td>
<td>163, 174, 233, 284, 295</td>
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<tr>
<td>GENERAL ELECTRIC</td>
<td>063, 065</td>
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<td>MACOM</td>
<td>033, 065</td>
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<td>MEMOREX</td>
<td>284</td>
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<td>PROSAT</td>
<td>173</td>
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<tr>
<td>RCA</td>
<td>581</td>
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<tr>
<td>REALISTIC</td>
<td>067</td>
</tr>
<tr>
<td>STS</td>
<td>052</td>
</tr>
<tr>
<td>UNIDEN</td>
<td>067, 089, 091</td>
</tr>
<tr>
<td>ZENITH</td>
<td>079</td>
</tr>
</tbody>
</table>
For C-V770

Audio section

Total harmonic distortion (1 kHz, 1V) ........................................... 0.01 %
Signal to noise ratio (IF/66) ...................................................... 98 dB
Input sensitivity / impedance CD .................................................. 200 mV / 47kΩ
    Tone controls
        BASS ........................................................... ± 8 dB (at 100 Hz)
        TREBLE ....................................................... ± 8 dB (at 10 kHz)
Output level / impedance TAPE REC ........................................... 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs (composite) ............................................. 1 Vp-p/75 Ω

Digital section

Sampling frequency ....................................................... 32 kHz, 44.1 kHz, 48 kHz
Digital input
    (coaxial) ....................................................................... 0.5 Vp-p/75 Ω
Digital RF input
    (coaxial) ....................................................................... 50 mVp-p~200 mVp-p

FM Tuner section

Tuning frequency range ............................................. 87.5 MHz~108 MHz
Usable sensitivity MONO ...................................................... 1.6 μV (at 75 Ω) / 15.2 dBf
    (75 kHz dev., S/NAD 30 dB)
50dB quieting sensitivity STEREO ........................................... 31.6 μV (at 75 Ω) / 41.2 dBf
    (75 kHz dev.)
Signal to noise ratio (1 kHz, 75 kHz dev.)
    MONO ........................................................................ 75 dB (65.2 dBf input)
    STEREO ..................................................................... 68 dB (65.2 dBf input)
Selectivity (IF ± 400 kHz) ...................................................... 50 dB
Stereo separation (1 kHz) ...................................................... 40 dB
Frequency response .................................................... 30 Hz~15 kHz, ± 0.5 dB, - 3.0 dB

AM Tuner section

Tuning frequency range ............................................ (9 kHz) 531 kHz ~ 1,602 kHz
    (10 kHz) 530 kHz ~ 1,610 kHz
Usable sensitivity
    (30% mod., S/N 20 dB) ........................................... 16 μV / (600 V/m)
Signal to noise ratio (at 30% mod. 1mV input) ....................... 48 dB

General

Power consumption .................................................. 35 W
    AC outlet
    UN SWITCHED ......................................................... 2: (Total 100 W max)
Dimensions ................................................................. W:400 mm
                                                H:105 mm
                                                D:382 mm
Weight (net) ................................................................. 5.2 kg

For C-V700

Audio section

Total harmonic distortion (1 kHz, 1V) ........................................... 0.01 %
Signal to noise ratio (IF/66) ...................................................... 98 dB
Input sensitivity / impedance CD ................................................ 200 mV / 47kΩ
    Tone controls
        BASS ........................................................... ± 8 dB (at 100 Hz)
        TREBLE ....................................................... ± 8 dB (at 10 kHz)
Output level / impedance TAPE REC ........................................... 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs (composite) ............................................. 1 Vp-p/75 Ω

Digital section

Sampling frequency ....................................................... 32 kHz, 44.1 kHz, 48 kHz
Digital input
    (coaxial) ....................................................................... 0.5 Vp-p/75 Ω
Digital RF input
    (coaxial) ....................................................................... 50 mVp-p~200 mVp-p

FM Tuner section

Tuning frequency range ............................................. 87.5 MHz~108 MHz
Usable sensitivity MONO ...................................................... 1.6 μV (at 75 Ω) / 15.2 dBf
    (75 kHz dev., S/NAD 30 dB)
50dB quieting sensitivity STEREO ........................................... 31.6 μV (at 75 Ω) / 41.2 dBf
    (75 kHz dev.)
Signal to noise ratio (1 kHz, 75 kHz dev.)
    MONO ........................................................................ 75 dB (65.2 dBf input)
    STEREO ..................................................................... 68 dB (65.2 dBf input)
Selectivity (IF ± 400 kHz) ...................................................... 50 dB
Stereo separation (1 kHz) ...................................................... 40 dB
Frequency response .................................................... 30 Hz~15 kHz, ± 0.5 dB, - 3.0 dB

AM Tuner section

Tuning frequency range ............................................ (9 kHz) 531 kHz ~ 1,602 kHz
    (10 kHz) 530 kHz ~ 1,610 kHz
Usable sensitivity
    (30% mod., S/N 20 dB) ........................................... 16 μV / (600 V/m)
Signal to noise ratio (at 30% mod. 1mV input) ....................... 48 dB

General

Power consumption .................................................. 35 W
    AC outlet
    UN SWITCHED ......................................................... 2: (Total 100 W max)
Dimensions ................................................................. W:400 mm
                                                H:105 mm
                                                D:382 mm
Weight (net) ................................................................. 5.2 kg
Caution: Read this page carefully to ensure safe operation.

For C-V550

Audio section

Total harmonic distortion (1 kHz, 1V) ................................................................. 0.01 %
Signal to noise ratio (IHIF 66) ................................................................. 98 dB
Input sensitivity / impedance
CD ............................................. 200 mV / 47kΩ
tone controls
BASS ............................................. ± 8 dB (at 100 Hz)
TREBLE ............................................. ± 8 dB (at 10 kHz)
Output level / impedance
TAPE REC ............................................. 200 mV / 1 kΩ

Video section

VIDEO inputs / outputs
(composite) ............................................. 1 Vp-p/75 Ω

Digital section

Sampling frequency ................................................................. 32 kHz, 44.1 kHz, 48 kHz
digital input
(coaxial) ............................................. 0.5 Vp-p/75 Ω
digital RF input
(coaxial) ............................................. 50 mVp-p–200 mVp-p

FM Tuner section

Tuning frequency range ................................................................. 87.5 MHz–108 MHz
Useable sensitivity
MONO ............................................. 1.6 μV (at 75 Ω) / 15.2 dBf
(75 kHz dev., SINAD, 30 dB)
50dB quieting sensitivity
STEREO ............................................. 31.6 μV (at 75 Ω) / 41.2 dBf
(75 kHz dev.)
Signal to noise ratio (1 kHz, 75 kHz dev.)
MONO ............................................. 75 dB (65.2 dBf input)
STEREO ............................................. 68 dB (65.2 dBf input)
Selectivity (IHIF = 400 kHz) ................................................................. 50 dB
Stereo separation (1 kHz) ................................................................. 40 dB
Frequency response ................................................................. 30 Hz–15 kHz, ± 0.5 dB, – 3.0 dB

AM Tuner section

Tuning frequency range ................................................................. (9 kHz) 531 kHz – 1,602 kHz
(10 kHz) 530 kHz – 1,610 kHz
Useable sensitivity
(30% mod., S/N 20 dB) ............................................. 16 μV / (600 μV / m)
Signal to noise ratio
(at 30% mod, 1mV input) ................................................................. 48 dB

General

Power consumption ................................................................. 35 W
AC outlet
UN SWITCHED ................................................................. 2: (Total 100 W max)
(Australia 1: (100 W max))
Dimensions ................................................................. H: 105 mm
W: 400 mm
D: 382 mm
Weight (net) ................................................................. 4.4 kg

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 degree C).
## For C-V500 (U.S.A. and Canada)

### Audio section

- **Total harmonic distortion (1 kHz, 1V):** 0.01%
- **Signal to noise ratio (IHIF 66):**
  - CD: 98 dB
  - TV: 8 dB (at 100 Hz)
  - TREBLE: 8 dB (at 10 kHz)
- **Input sensitivity / impedance:**
  - CD: 200 mV / 47kΩ
- **Tone controls:**
  - BASS: ± 8 dB (at 100 Hz)
  - TREBLE: ± 8 dB (at 10 kHz)
- **Output level / impedance:**
  - TAPE REC: 200 mV / 1 kΩ

### Video section

- **VIDEO inputs / outputs (composite):** 1 Vp-p/75Ω

### Digital section

- **Sampling frequency:** 32 kHz, 44.1 kHz, 48 kHz
- **Digital input (coaxial):** 0.5 Vp-p/75Ω

### FM Tuner section

- **Tuning frequency range:** 87.5 MHz - 108 MHz
- **Usable sensitivity:**
  - MONO: 1.6 µV (at 75 Ω) / 15.2 dBf
    - (75 kHz dev., SINAD: 30 dB)
  - STEREO: 31.6 µV (at 75 Ω) / 41.2 dBf
    - (75 kHz dev.)
- **Signal to noise ratio (1 kHz, 75 kHz dev.):**
  - MONO: 75 dB (65.2 dBf input)
  - STEREO: 68 dB (65.2 dBf input)
- **Selectivity (IHIF ± 400 kHz):** 70 dB
- **Stereo separation (1 kHz):** 40 dB
- **Frequency response:** 30 Hz - 15 kHz, ± 0.5 dB, -3.0 dB

### AM Tuner section

- **Tuning frequency range:** 530 kHz - 1700 kHz
- **Usable sensitivity:**
  - (30% mod., S/N 20 dB): 16 µV / (600 µV / m)
- **Signal to noise ratio:**
  - (at 30% mod., 1mV input): 48 dB

### General

- **Power consumption:** 35 W
- **AC outlet:** 2 (Total 100 W max)
- **Dimensions:**
  - W: 400 mm (15-3/4")
  - H: 105 mm (4-1/8")
  - D: 382 mm (15-1/16")
- **Weight (net):** 4.4 kg (9.7 lb)

---

1. KENWOOD follows a policy of continuous advancements in development. For this reason, specifications may be changed without notice.
2. Full performance may not be exhibited in extremely cold locations (below 0 deg. C).

## For C-V500 (Other countries)

### Audio section

- **Total harmonic distortion (1 kHz, 1V):** 0.01%
- **Signal to noise ratio (IHIF 66):**
  - CD: 98 dB
- **Input sensitivity / impedance:**
  - CD: 200 mV / 47kΩ
- **Tone controls:**
  - BASS: ± 8 dB (at 100 Hz)
  - TREBLE: ± 8 dB (at 10 kHz)
- **Output level / impedance:**
  - TAPE REC: 200 mV / 1 kΩ

### Video section

- **VIDEO inputs / outputs (composite):**

### Digital section

- **Sampling frequency:** 32 kHz, 44.1 kHz, 48 kHz
- **Digital input (coaxial):** 0.5 Vp-p/75Ω

### FM Tuner section

- **Tuning frequency range:** 87.5 MHz - 108 MHz
- **Usable sensitivity:**
  - MONO: 1.6 µV (at 75 Ω) / 15.2 dBf
    - (75 kHz dev., SINAD: 30 dB)
  - STEREO: 31.6 µV (at 75 Ω) / 41.2 dBf
    - (75 kHz dev.)
- **Signal to noise ratio (1 kHz, 75 kHz dev.):**
  - MONO: 75 dB (65.2 dBf input)
  - STEREO: 68 dB (65.2 dBf input)
- **Selectivity (IHIF ± 400 kHz):** 70 dB
- **Stereo separation (1 kHz):** 40 dB
- **Frequency response:** 30 Hz - 15 kHz, ± 0.5 dB, -3.0 dB

### AM Tuner section

- **Tuning frequency range:** 9 kHz - 1,602 kHz
  - (10 kHz) 530 kHz - 1,610 kHz
- **Usable sensitivity:**
  - (30% mod., S/N 20 dB): 16 µV / (600 µV / m)
- **Signal to noise ratio:**
  - (at 30% mod., 1mV input): 48 dB

### General

- **Power consumption:** 35 W
- **AC outlet:** 2 (Total 100 W max)
- **Dimensions:**
  - W: 400 mm (15-3/4")
  - H: 105 mm (4-1/8")
  - D: 382 mm (15-1/16")
- **Weight (net):** 4.4 kg
## Case of Difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

### How to reset the microcomputer

The microcomputer may malfunction (impossibility of operation, erroneous display, etc.) when the power cord is unplugged and plugged in again while the unit is in ON mode with the I/O key pressed or due to other external causes. In this case, execute the procedure on the right to reset the microcomputer and return the unit to the normal condition.

- Unplug the power cord from the wall outlet.
- While pressing and holding the POWER or I/O (ON/STANDBY) key, plug the AC cord into the wall outlet again.
- Resetting the microcomputer clears the memory you intended and returns it to the initial condition of when the unit left the factory.

### Amplifier

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sound is not output or the volume level is low.</td>
<td>Connection cords are unplugged from the jacks.</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>MUTE</strong> is <strong>ON</strong>.</td>
<td>Connect them properly referring to &quot;System connections&quot;.</td>
</tr>
<tr>
<td></td>
<td>The <strong>MUTE</strong> ON indicator is blinking.</td>
<td>Press the <strong>MUTE</strong> key to OFF.</td>
</tr>
<tr>
<td></td>
<td>The <strong>TAPE 2</strong> (MONITOR) key is set to <strong>ON</strong>.</td>
<td>Set the <strong>TAPE 2</strong> (MONITOR) key to <strong>OFF</strong>.</td>
</tr>
<tr>
<td></td>
<td>The selected surround mode does not match the input signal.</td>
<td>Set the surround mode according to the input signal.</td>
</tr>
<tr>
<td><strong>&quot;PROTECT&quot;</strong> blinks and sound is not output.</td>
<td>Speaker cords are short or open.</td>
<td>Unplug the AC cord, remove the short or open cord, and plug the AC cord again.</td>
</tr>
<tr>
<td>Sound is not output from one of the speakers.</td>
<td>The <strong>BALANCE</strong> control is set to an extreme position.</td>
<td>Adjust the Left/Right balance.</td>
</tr>
<tr>
<td>Sound is not output from the surround speaker and/or center speaker, or their sound is very small.</td>
<td>The surround speaker cords and/or center speaker cord are disconnected.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The surround play modes have been engaged.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The surround and center speaker levels are set to the minimum positions.</td>
<td></td>
</tr>
<tr>
<td>System control is not available when <strong>TAPE 1</strong> or <strong>MD</strong> is selected.</td>
<td><strong>&quot;TAPE 1&quot;</strong> or <strong>&quot;MD&quot;</strong> is not displayed.</td>
<td></td>
</tr>
<tr>
<td>System control is not available when <strong>DVD</strong> or <strong>8ch INPUT</strong> is selected.</td>
<td><strong>&quot;DVD&quot;</strong> or <strong>&quot;8ch INPUT&quot;</strong> is not displayed.</td>
<td></td>
</tr>
<tr>
<td>System control is impossible.</td>
<td>System control cords are connected incorrectly.</td>
<td>Connect them correctly by referring to &quot;System connection&quot;.</td>
</tr>
</tbody>
</table>

### Tuner

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio stations cannot be received.</td>
<td>No antenna is connected.</td>
<td>Connect an antenna.</td>
</tr>
<tr>
<td></td>
<td>The broadcast band is not set properly.</td>
<td>Set the broadcast band properly.</td>
</tr>
<tr>
<td></td>
<td>The frequency of the desired station is not tuned.</td>
<td>Tune the frequency of the desired station.</td>
</tr>
<tr>
<td>Interference.</td>
<td>Noise due to ignition noise or an automobile.</td>
<td>Install the outdoor antenna away from the road.</td>
</tr>
<tr>
<td></td>
<td>Noise due to an influence from an electric appliance.</td>
<td>Turn off the power to the appliance.</td>
</tr>
<tr>
<td></td>
<td>Noise due to a nearby TV set.</td>
<td>Install the antenna farther away from the TV set.</td>
</tr>
<tr>
<td>A station which was preset cannot be received by pressing the corresponding numeric key.</td>
<td>The preset memory was cleared because the power cord had been unplugged for a long period of time.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The <strong>TUNER</strong> input is not selected.</td>
<td>Preset the stations by auto memory again.</td>
</tr>
<tr>
<td></td>
<td>Select the <strong>TUNER</strong> input.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Do not use contact cleaning agents because they could cause a malfunction. Be specifically careful against using contact cleaning agents containing oil, since they may deform the plastic components.
Remote control unit

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote control operation is not possible.</td>
<td>Batteries are exhausted</td>
<td>Replace with new batteries</td>
</tr>
<tr>
<td>The remote control unit is too far away from the main system; controlling angle is too large; or there is an obstacle in between.</td>
<td></td>
<td>Operate the remote control unit within the controllable range.</td>
</tr>
<tr>
<td>The audio cords and system control cords are not connected properly.</td>
<td>The source component to be operated does not contain the tape or disc.</td>
<td>Connect properly referring to &quot;System connection&quot;.</td>
</tr>
<tr>
<td>The GRG screen is not displayed.</td>
<td>Batteries are removed while something is displayed.</td>
<td>Replace with new batteries.</td>
</tr>
<tr>
<td>The GRG display is abnormal.</td>
<td>Batteries are removed while something is displayed.</td>
<td>Remove and replace batteries after the information display has appeared.</td>
</tr>
</tbody>
</table>

Set up code chart

Although each setup code is designed to work with a number of different models, certain codes may not work with some models. (Also, certain codes may only operate some of the functions available on a given model.) With some models, be sure to keep the ENTER key pressed for a while.

Memory backup function

Please note that the following items will be deleted from this unit's memory if the power cord is disconnected from the AC outlet for approximately three days.

- The input selection is cleared and the TUNER input is selected.
- The volume setting is cleared and the volume is set to -65 dB.
- The audio and band settings are cleared and the FM band is selected.
- The frequency setting is cleared and 87.5 MHz is selected.
- The preset station memory is cleared.
- The audio and band settings are cleared and the selection by non-specified person is set.
- The system settings is changed and reset to the initial condition.
- The clock and timer setting is canceled and the clock display shows AM 12:00 which is blinking.

For the U.S.A.

FCC WARNING

This equipment generates or uses radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications. If it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For the U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and in particular, states that the cable ground shall be connected to the grounding system of the building, as close to the point of entrance as practical.