HITACHI Inspire the Next



UltraVision HDTV Monitors

1.5" UltraThin Liquid Crystal Display
Anthracite Pearl Crystal Frame
1920 x 1080p 120Hz PictureMaster[™] VI with Reel 120[™]
(1) HDMI[™] (V.1.3 with CEC) Input; (1) RGB D-sub15 Input with Audio

Operating Guide

Model Name UT37V702 UT42V702 UT47V702

READ THE ENCLOSED INSTRUCTIONS CAREFULLY. KEEP THIS OPERATING GUIDE FOR FUTURE REFERENCE. Record the serial number of your monitor for future reference. SERIAL NO. _____

This serial number is located on the back and right side of the monitor. ANY QUESTION ABOUT THIS PRODUCT PLEASE CONTACT 800-Hitachi



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IMPORTANT SAFETY INSTRUCTIONS

SAFETY POINTS YOU SHOULD KNOW ABOUT YOUR HITACHI LCD MONITOR

Our reputation has been built on the quality, performance, and ease of service of Hitachi LCD Monitors.

Safety is also foremost in our minds in the design of these units. To help you operate these products properly, this section illustrates safety tips which will be of benefit to you. Please read it carefully and apply the knowledge you obtain from it to the proper operation of your Hitachi LCD Monitor.

Please fill out your warranty card and mail it to Hitachi. This will enable Hitachi to notify you promptly in the improbable event that a safety problem should be discovered in your product model. Model and serial numbers are indicated on back side and right side of the LCD Monitor.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

READ BEFORE OPERATING EQUIPMENT

Follow all warnings and instructions marked on this LCD Monitor.

- 1. Read these instructions.
- 2. Keep these instructions.
- 3. Heed all warnings.
- 4. Follow all instructions.
- 5. Do not use this apparatus near water.
- 6. Clean only with a dry cloth.
- 7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11. Only use the attachments/accessories specified by the manufacturer.
- 12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 13. Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of a sufficient magnitude to constitute a risk of electric shock to a person.

The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

- 15. Monitors and Televisions are designed to comply with the recommended safety standards for tilt and stability. Do not apply excessive pulling force to the front, or top, of the cabinet which could cause the product to overturn resulting in product damage and/or personal injury.
- 16. Follow instructions for wall, shelf or ceiling mounting as recommended by the manufacturer.
- 17. An outdoor antenna should not be located in the vicinity of overhead power lines or other electrical circuits.
- 18. If an outside antenna is connected to the receiver and the monitor be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding for the mast and supporting structure, grounding of the leadin wire to an antenna discharge unit, size of grounding connectors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

NOTE

To the CATV system installer: This reminder is provided to call the CATV system installer's attention to Article 820-44 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.



IMPORTANT SAFETY INSTRUCTIONS (continued)

Warning



- To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture.
- The LCD Monitor should not be exposed to dripping or splashing and objects filled with liquids, such as vases, should not be placed on the Monitor.
- This apparatus shall be connected to a mains socket outlet with a protective earthing connection.
- The mains plug is used as the disconnect device and shall remain readily operable.

If problems occur during installation or operation of the product, before calling for technical support or service technicians, please read "TROUBLESHOOTING" ($43 \sim 45$) to determine the symptoms.

If serious problems occur (such as smoke or an abnormal odor from the unit), turn off the main power, unplug the power cord, and then, contact 800-HITACHI immediately.

Lead/Mercury Notice



This product contains lead and one or more non-replaceable mercury backlights. Do not put in trash. Recycle or dispose of according to applicable laws. For product recycling and disposal information, contact your local government agency or visit www.eiae.org (in USA) or www.epsc.ca (in Canada). **FOR MORE INFORMATION, CALL 800-HITACHI.**

FEDERAL COMMUNICATIONS COMMISSION NOTICE

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 generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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:

- If the Monitor is connected with a Set Top Box or TV Receiver, reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the 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/television technician for help.

Declaration of Conformity

This device complies with part15 of the FCC Rules. Operation is subject to the following two conditions :

(1) This device may not cause harmful interference and (2) This device must accept any interference received, including interference that may cause undesired operation.

For questions regarding this declaration, contact:

Hitachi Home Electronics (America), Inc. 900 Hitachi Way Chula Vista, CA 91914-3556 Tel. 800-448-2244 (800-HITACHI) ATTN: Customer Relations

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi Home Electronics (America), Inc. may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

INDUSTRY CANADA AGENCY REGULATORY INFORMATION

This class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations. This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

INTRODUCTION

cover page of this manual.

Thank you for purchasing the Hitachi 1.5 LCD Monitor. We hope that you will enjoy the outstanding performance of this product.

This LCD Monitor has been designed to comply with international standards. However, it could cause personal injury and property damage if improperly handled. In order to prevent potential danger and obtain maximum benefit from your set, please read this operating guide carefully before operating this product and observe the following instructions when installing, operating, and cleaning the product. To ensure proper operation, please read and follow ALL the instructions, especially the "IMPORTANT SAFETY INSTRUCTIONS" and "SAFETY PRECAUTIONS". Keep this manual for future reference and record the serial number of your set in the space provided on the front

About This Manual

- The information in this manual is subject to change without notice.
- This manual has been produced with the utmost care. If you have any comments or questions regarding this manual, please contact your local dealer or our Customer Service Center.
- Before operating the set, please fully understand the prerequisites such as specifications or constraints for the hardware and software. Hitachi is not responsible and accept no liability for any loss, damage or injury as a result of misuse.
- Reproduction, copying, utilization, modification and/or transmission in whole or in part of this manual are prohibited except by prior written consent.
- All other products and company names used in this manual are trademarks or registered trademarks of their respective owners.

Trademark Credits

- VGA and XGA are trademarks of International Business Machines Corporation.
- VESA is a registered trademark of the Video Electronics Standard Association.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Even if no special note has been made of company or product trademarks, these trademarks have been fully respected.

Software

It is illegal for you to alter, decompile, disassemble, decrypt, or otherwise reverse-engineer the software installed in this product.

Features

- UltraVision 37", 42" and 47" HDTV Monitors
- 1.5" UltraThin Liquid Crystal Display
- Wide Viewing Angle IPS (In-Plane Switching) Technology
- Picture Enhancement: Smooth Motion Film process
- High Resolution Progressive Display 1920(H) x 1080(V)
- High Efficiency EEFL (External Electrode Fluorescent Lamp) BackLight
- (1) HDMI[™] (V.1.3 with CEC) Input
- (1) RGB D-sub15 Input with Audio
- Preprogrammed Remote Control
- Easy-to-use Multi-Language On-Screen Display
- High Quality Audio System with 4 Drivers
- High Efficiency Display with Power Saving Features

SAFETY PRECAUTIONS

For your safety, please read the following precautions carefully before using this product. Improper use would cause serious personal injury and/or damage to your property or the product.

Explanation of the Symbols

The following are the symbols used in this manual and affixed to the unit itself. Please fully understand the meanings of the symbols before reading the instructions in this section.

A WARNING	Never ignore the instruction. There are risks of serious or fatal injury to the user.
A CAUTION	Do not ignore the instruction. There are risks of personal injury and/or property damage.

Other Symbols		
	The triangle with illustration is intended to alert the users that there are risks of fire, explosion, or high temperature if the product is handled improperly. Each illustration within the triangle specifies the contents in detail. (The figure on the left is an example.)	
	The circle with diagonal line and illustration indicates a prohibited action (the symbol to the left indicates that dismantling is prohibited).	
0=Ç;	This symbol indicates a compulsory action. The contents are clearly indicated in or adjacent to an illustration (the symbol to the left indicates that the power plug should be disconnected from the power outlet).	

There is a risk of fire, electric shock, or serious injury.	
If serious problems occur, unplug the power cord immediately.	
Serious problems such as:	
 Smoke, abnormal odor or noise emitted from the product. 	\Rightarrow
 No picture, no sound or distorted picture on the display. 	
 Foreign matter (such as water, metals etc.) entered the unit. 	Disconnect th
Do not continue using the product under these abnormal conditions.	plug from the
Turn off the main power, unplug the power cord, and contact 800-HITACHI immediately.	power outlet
For your safety, never try to repair the product yourself.	
. De net elleur linuide er env fereinn metter (evek ee metele er flemmekle iteme) te enter the unit	
 Do not allow liquids or any foreign matter (such as metals or flammable items) to enter the unit. If this does occur, turn off the main power, unplug the power cord, and contact 800-HITACHI immediately. 	
Exercise special caution when young children are around the unit.	
Do not remove covers, or modify the product.	
• High-voltage components are installed inside of the unit. Removing covers can expose you to high	(N)
-voltage electric shock, and other hazardous conditions.	
 Contact 800-HITACHI to perform servicing such as inspection, adjustment or repair work. 	Do not dismantle.

WARNING

There is a risk of fire, electric shock or serious injury.

Install the unit in a proper location where it does not expose anyone to danger.

• If you bump against the edges of the unit, you could be injured.

Do not rest weight on top of the unit.

Objects such as

- Liquid containers (vase, fish tank, flowerpot, cosmetics or liquid medicine).
- If water or any liquid spills onto the unit, it may cause short-circuiting and result in fire or electric shock. If this occurs, turn off the main power, unplug the power cord, and contact **800-HITACHI** immediately.
- Do not rest anything heavy on top of the unit.
- Do not climb on or hang from the unit.
- Do not allow your pets to get on top of the unit

Do not install the unit in an unsuitable location.

This could cause a malfunction or in extreme cases danger of electric shock. Locations where high
moisture is likely, such as bathrooms or shower rooms, close to windows, or outside where rain, snow
or other inclement conditions could occur, should be avoided. Please also avoid installing the unit in a
location where fumes from hot springs could come into contact with it.

Unplug the unit in the event of a lightning storm.

• To reduce the risk of electric shock, do not touch the product when lightning occurs.

Do not do anything that may damage the power cord.

- Do not damage, modify, twist, forcibly bend, heat, or pull excessively on the power cord.
- Do not place heavy objects (including the unit itself) on top of the power cord.
- If the power cord is damaged, contact 800-HITACHI for repairs or exchange.

Use only with designated power supply voltage.

• To prevent the risk of fire and electric shock, operate the product only with the power supply voltage indicated on the unit.

Be careful not to drop or allow any impact to affect the unit.

- Take extra care while moving the unit.
- There is no protection glass on the surface of the LCD panel. Therefore do not press the panel surface with your fingers or hands. Also do not hit any objects against the monitor. These actions would damage the LCD cells or the panel surface and could cause failure or personal injury.
- In the event that you drop the unit or the cabinet is damaged, turn off the main power, unplug the power cord and contact **800-HITACHI** immediately.
- Continuing use of the product under the above conditions may cause fire or electric shock.

■ Clean dust or metals from on or around the pins of the power plug regularly.

• Continuing use of the product under the above conditions may cause fire or electric shock.

• Always unplug the power cord first, then clean the pins using a dry cloth.

Do not place the unit on an unstable surface.

Unstable surfaces such as:

- Tilted surface or shaky shelving, table, stand or trolley.
- If the unit falls down, this could cause personal injury.

6















ACAUTION



• Do not dispose of used batteries as domestic waste. Dispose of them in accordance with the local regulations.

ACAUTION

Do not install the unit in locations where it will be subjected to high temperature.

This could damage the cabinet or components of the product.

- Do not install near any heat sources such as radiators, heating grilles, stoves, or other apparatus that produce heat.
- Keep the unit out of direct sunlight. Otherwise the resulting increase in temperature of the unit may cause a malfunction.

Viewing Advice

- The lighting of the environment in which the product is used should be appropriate. Too bright/dark environments are not good for your eyes.
- Take time to relax your eyes occasionally.
- When you use the product, view from a distance equal to 3 to 7 times the height of the screen. This is the best viewing distance in order to protect your eyes against eyestrain. Example: (3X)= approx: 1.5m (4'), (7X)= approx: 3.5m (9').
- Adjust the volume to an appropriate level, especially during night time.

Transporting the product

- When the product needs to be transported due to moving or repair, use the carton box and buffer material that came with the product.
- Always transport the product upright; otherwise this could damage the LCD panel.
- · Avoid laying the product down on its face or back.
- Avoid vibrations. If the product "must" be transported laying on its face, be sure to provide soft cushioning material.

Keep radios away from the unit while in use.

The unit is designed to meet the international EMI standards to prevent radio interference. However, the unit may generate noise in the radio.

- If noise is heard on the radio, please try the following actions.
 - Adjust the direction of the radio antenna in order not to receive interference from the unit.
- · Keep the radio away from the unit.

Infrared communication devices

 Infrared communication devices such as cordless microphones or cordless headphones may not operate properly around the unit. This is because of communication failure. Please note that this is not a malfunction.

When you dispose of the product at the end of its service lifetime, follow the regulations in your residential area.
 For more information, contact the local authority or the dealer where you purchased the product.

Cleaning and Maintenance

Please make sure to unplug the power cord before cleaning the unit.

How to clean the LCD panel of the unit.

- Wipe the panel with a lint-free and dry cloth in order to prevent damage to the panel surface.
- Do not use a chemical cloth or cleaners. Depending on the ingredients, these may cause discoloration and damage to the panel surface.
- Do not wipe with a rough cloth or rub hard. This may damage the panel surface.
- In case of greasy dirt such as fingerprints, wipe the panel surface with a lint-free cloth moistened with a diluted neutral detergent solution (dilute 1 part of detergent to 100 parts of water), and then wipe with a soft and dry cloth.
- Do not use a spray cleaner. This could cause a malfunction.

How to clean the cabinet of the unit.

- The following may cause cracking, deformation and peeling of paint.
 - Do not wipe the cabinet with benzene, thinners and other chemical products.
 - Do not spray volatile solutions such as insecticide over the cabinet.
- Do not leave the cabinet in prolonged contact with plastic or rubber materials.
- Do not use a chemical cloth, cleaner or wax. Depending on the ingredients, these may cause cracking and deformation.
- Use a lint-free cloth (e.g. cloth for cleaning glasses) to clean the cabinet and control panel of the unit. In case of the excessive dirt, wipe with a soft cloth moistened with a diluted neutral detergent solution and then wipe with a soft and dry cloth.
- Never use the following detergents. They could cause cracking, discoloration and scratching.
- · Acidic/alkaline detergents, alcoholic detergents, abrasive cleaners, soap powder, OA cleaner, car wax, glass cleaner, etc.

Main Unit Installation

When installing the main unit, be sure to use the specified mounting units in order to obtain maximum performance and maintain safety.

Hitachi assumes no responsibility nor liability for personal injuries or property damage caused by use of other mounting units or improper installation.

With respect to installation instructions, please read each user manual for the respective mounting units: for Tabletop Setup, Floor Stand Setup, Wall Mounting, and Ceiling Mounting.

If using Wall or Ceiling Mounting units, contact your local dealer and ask for an approved installation specialist to set up the unit. Never attempt to install it yourself. That could cause injury or damage.

Please leave adequate space around the unit in order to avoid increasing the internal temperature. Make sure not to block any ventilation holes. Do not install the unit in a small space such as inside a cabinet, closet or box without adequate ventilation. Leave at least 10cm (4") of clearance from each side of the unit and 30cm (1') from the top of the unit to ceiling.



Anti-tumble Measures

Install in a stable location and take safety precautions against overturning.



Securing to ceiling or wall

Use the specified mounting unit to secure the set to a ceiling. For Wall Mounting setup please refer to page (1). For Floor Stand setup please refer to page (1).

NOTE

- For more information regarding mounting of the unit, please contact 800-HITACHI.
- Please install the unit in a proper location where it does not expose anyone to the danger of bumping themselves (for example their hands, head or face, etc) against the edges of the unit and causing personal injury.

Child Safety Notice

CHILD SAFETY: It Makes A Difference How and Where You Use Your Flat Panel Display

Congratulations on your purchase! As you enjoy your new product, please keep these safety tips in mind:



THE ISSUE

- The home theater entertainment experience is a growing trend and larger flat displays are popular purchases. However, flat panel displays are not always supported on the proper stands or installed according to the manufacturer's recommendations.
- Flat Panel displays that are inappropriately situated on dresser, bookcases, shelves, desks, speakers, chest or carts may fall over and cause injury.

HITACHI CARES!

• The consumer electronics industry is committed to making home entertainment enjoyable and safe.

TUNE INTO SAFETY

- One size does NOT fit all. Follow the manufacturer's recommendations for the safe installation and use of your flat panel display.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don't allow children to climb on or play with furniture and television sets.
- Don't place flat panel displays on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger than life" flat panel display. Care should be taken to place or install the display where it cannot be pushed, pulled over, or knocked down.
- Care should be taken to route all cords and cables connected to the flat panel display so that they cannot be pulled or grabed by curious children.

WALL MOUNTING: IF YOU DECIDE TO WALL MOUNT YOUR FLAT PANEL DISPLAY, ALWAYS:

- Use a mount that has been recommended by the display manufacturer and/or listed by an independent laboratory (such as UL, CSA, ETL).
- Follow all instructions supplied by the display and wall mount manufacturers.
- If you have any doubts about your ability to safely install your flat panel display, contact your retailer about professional installation.
- Make sure that the wall where you are mounting the display is appropriate. Some wall mounts are not designed to be mounted to walls with steel studs or old cinder block construction. If you are unsure, contact a professional installer.
- A minimum of two people are required for installation. Flat panel displays can be heavy.





Wall Mount Setup



Although this LCD Monitor can be installed using a variety of third party wall mounting brackets/devices, such third party brackets/devices have not been tested or approved by Hitachi for use or compatibility with this LCD Monitor. Accordingly, Hitachi accepts no responsability or liability for any injuries or property damage resulting from the use of such third party brackets/devices. Hitachi strongly advises that any installation of this LCD Monitor using wall mounting brackets/devices be performed only by a qualified and experienced television installation technician who has completed a thorough evaluation of:

a) the weight-bearing strength and stability of the intended wall mount surface; and

b) the weight-bearing strength and compatibility of the intended wall mount brackets/device.

Floor Stand Setup



with other floor stands could cause instability and possible injury.

ENGLISH

QUICK START GUIDE

For more information on connecting and using your monitor, please be sure to read all instructions in this user manual.



QUICK START GUIDE (continued)



COMPONENT NAMES

Main Unit

Front Panel



Rear Panel



*This drawing shows UT37V702

Please refer to **18 21** for detailed information regarding the connections.

COMPONENT NAMES (continued)

Remote Control

In addition to controlling all of the functions on your Hitachi UT LCD Monitor, the new remote control is designed to operate different types of devices, such as, DVD players, Cable Boxes, Set-Top-Boxes, Satellite Receivers, VCR's, PVR's and AVR's. The remote control must be programmed to control the chosen device. Please refer to pages 25 ~ 28 for external device programming setup.



- Pressing any button will illuminate the backlight for 4 seconds.
- TV Mode is used for LCD Monitor. Please notice that NOT all keys are available for this LCD Monitor, the only working keys are the ones marked as **Monitor** in parenthesis, since other ones are available when equipped with Hitachi Set-Top-Box and Monitor is used as a TV.
- For the Record button there is a feature for safety; so this key have to be press twice in order to start recording.

PREPARATION

Remote Control Battery Installation

The remote control operates on 2 "AAA" batteries.

1. Open the battery compartment cover

• Push and pull open the battery compartment cover on the backside in the direction of the arrow, and remove the cover.

2. Install the batteries

• Install 2 "AAA" batteries (included) making sure the polarities match the indication inside the compartment.

3. Close the battery compartment cover

• Make sure the tabs rest in the corresponding holes and push down the compartment cover until it clicks shut.



Handling the Remote Control

Use the remote control within a distance of about 5m (16') from the front of the unit's remote control sensor and within an angle of about 30 degrees on both sides.



CAUTION

Risk of corrosion or battery leakage. Tampering with batteries may result in physical injury and/or property damage including fire.

- Never mix used and new batteries in the device.
- Replace all the batteries in the device at the same time.
- Remove the batteries if the remote control is not going to be used for an extended period of time.

To avoid possible malfunction, read the following instructions and handle the remote control correctly.

- Do not drop or allow impact to affect the remote control.
- Do not spill water or any liquid on the remote control.
- Do not place the remote control on a wet surface.
- Do not place the remote control under direct sunlight or near sources of excessive heat.

Caution When Moving the Main Unit

Whenever the unit is moved, two people are required to transport it safely.





The unit is suitable for various kinds of connections. Make a connection in the following steps. Be sure to turn off the main power first when connecting external equipment.

- **1.** Connect power cord to the rear panel.
- 2. Connect your external equipment (if any) to the unit.
- 3. Attach cushion, secure with clamps and fit terminal cover.
- 4. Connect the power plug to the wall socket.

1. Connect Power Cord to the Rear Panel

Connect the power cord to the unit.

Do not connect the power plug to the wall socket until all other connections are completed.

2. Connect your Equipment to the Monitor

Connecting to Equipment Having HDMI or DVI Output Terminals

The HDMI terminal can be connected to devices with HDMI output.

If the external device has a DVI output, this can be connected using the HDMI-DVI cable. If the HDMI-DVI cable is used, connect analog audio signal to the **PC (RGB)/DVI Analog Audio Input** terminal.

Please be sure to attach the supplied cushion around the HDMI cable when connecting. See 20.



🖾 Information

The HDMI (High Definition Multimedia Interface) is a multimedia I/O (Input/Output) interface. Only one cable is used to transmit all video/audio/control signals, thus facilitating easy connection. Moreover, the digital signals can produce high quality data without any degradation.

P If your external device has an HDMI terminal, HDMI connection is recommended for higher quality picture and sound.

NOTE

• PC (RGB)/DVI analog audio input terminal

This terminal can be used in either one of the following cases only. The external device is connected to the PC Connection

terminal of the unit. The DVI output of an external device is connected to the HDMI terminal using the HDMI-DVI cable.

Make sure that the video and audio terminals are connected to the same external device.

For details of the output format of an external device, refer to "Recommended Signal List" on [49].



CONNECTION (continued)

2. Connect your Equipment to the Monitor (continued)

Connecting to Equipment Having a HDMI Output Terminal

HDMI-Interfaced System

With "HDMI Control" function, you can interface the connected equipment through the HDMI terminal automatically if the connected equipment meets an industry standard "HDMI CEC (Consumer Electronics Control)". Please check if the connected equipment supports HDMI CEC before using this function. 這 Function

1. Press the button.

2. Select "Function" menu.

MENU

- 3. Select "HDMI Control".
- 4. Select "Auto Input Change" or "System Standby".

Auto Input Chango	Off	Condition : while the monitor is in Standby mode. When the connected equipment starts (such as DVD	
Auto Input Change On		playback and Disc insertion), the monitor is automatically turned On and switches the picture and audio to HDMI input.	
System Standby	Off	Condition : while the monitor is On. When the monitor is switched off or set to Standby mode, the	
	On	connected equipment is also turned off or in Standby mode,	
AV Center Control	Off	Selecting On will activate AV Center OSD interface, in case	
	On	you purchased the optional Hitachi A/V Center.	

NOTE If the HDMI-DVI cable is used, this HDMI-interfaced system is not available.

Game Mode

During TV game play, by pressing "On" you can reduce the time-lag of speed on the moving image. MENU

- 1. Press the button.
- 2. Select "Picture" menu.
- 3. Select "Game Mode".



HDMI Control Auto Input Change

System Standby

AV Center Control

Select Select Exit

Off

Off On

Connecting to Equipment Having Video Output Terminals

The unit can be connected to equipments having video output using the optional D-sub 15 pin - composite cable.



NOTE

• About the connection of D-sub 15 pin, see 13 for details.

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CONNECTION (continued)

2. Connect your Equipment to the Monitor (continued)

Connecting to a PC

The **PC connection** terminal (D-sub 15 pin) + the **PC (RGB)/DVI Analog Audio Input** terminal are connected to the PC, allowing an analog RGB signal.



NOTE

• About the connection of D-sub 15 pin, see **13** for details.

3. Attach Cushion, Secure with Clamps and Fit Terminal Cover



CONNECTION (continued)

3. Attach Cushion, Secure with Clamps and Fit Terminal Cover (continued)



4. Connect the Power Plug into the Wall Socket

Connect the power cord after completing all other connections. (For some countries the type of plug is different that depicted.)



ACAUTION

- Use only the power cord provided.
- Do not use a power supply voltage other than that indicated (AC120, 60Hz). It may cause fire or electric shock.
- For the LCD monitor, a three-core power cord with a ground terminal is used for efficiency protection. Always be sure to connect the power cord to a three-pin grounded outlet and make sure that the cord is properly grounded. If you use a power source converter plug, use an outlet with a ground terminal and screw down the ground line.
- Ensure that both ends of the power cord are easily accessible.
- If you have to change the power cord, please use a certified power cord that meets your region's safety standards.

Power On/Off

Turn On the power of the unit.

• To turn On the power to the unit:

- 1. Press the Main Power switch on the unit.
 - The Indicating Lamp illuminates in Green, and the Illumination Lamp turns Blue. The image will display on screen.
- 2. Once the Main Power switch is on, you can turn On/Off by pressing the Power (On/Off) button on the remote control.

• To turn Off the power to the unit:

- 1. Press the Power (On/Off) button on the remote control.
 - The image disappears from the screen. The Indicating Lamp turns **Red** (Standby mode), and the Illumination Lamp turns off.
- **2.** Press the **Main Power** switch on the unit to completely turn Off the power to the unit.

NOTE

• While the Indicating Lamp illuminates in Red (Standby mode), you can turn On/Off by pressing the **Power (On/Off)** button on the remote control.



Power On/Off button



The Indicating Lamp/Illumination Lamp Status

Indicating Lamp	Illumination Lamp	Power Status	Remark
Off	_	Off	-
Red	-	Standby mode	-
Green	Blue	On	-
Orange	_	Power Save mode	Refer to 42 and 43 for the condition.
Blinking Green	Blue	On	Receiving Remote Control signal

NOTE

- After turning On, it takes about 6 seconds until the monitor starts up. Please note that buttons on the remote control and the unit (such as the Power button) do not work during this period of time.
- If power is interrupted during use of the unit, to avoid sudden surges of electricity when the power comes back on, turn off the main power to the unit before leaving home.

[•] If the image does not appear on the screen at all, or if there is any problem with it, see "TROUBLESHOOTING" on 43~45. This may help you to solve the problems.

BASIC OPERATION (continued)

Volume Up/Down

- **1.** To increase the sound volume, press the **Volume Up** button on the remote control or control panel.
 - The Volume Indicator value on the screen will shift to the right.
- **2.** To decrease the sound volume, press the **Volume Down** button on the remote control or control panel.
 - The Volume Indicator value on the screen will shift to the left.

Mute

- **1.** To mute sounds, press the \underbrace{MUTE} button on the remote control.
 - The sound of the unit is temporarily turned Off.
 - The color of the Volume Indicator will turn into **grey** while muting the volume.
- **2.** To turn the sound back on, press the <u>MUTE</u> button again, or press the **Volume Up** button on either the remote control or control panel.
 - The color of the Volume Indicator will turn back to blue.

NOTE

• You can decrease the volume by pressing the **Volume Down** button while the sound is muted.



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Volume Up/Down button

Volume Up/Down

button

BASIC OPERATION (continued)

Input Switching to HDMI and RGB

By pressing the **Input Select** button **INPUT**, you can switch the input to display the image outputting from the external equipment connected to each terminal (HDMI and RGB (/Composite)).

<From Remote Control>

• Press the INPUT button on the remote control.

Each time this button is pressed, the screen displays the corresponding mode in the following sequence.

HDMI — RGB (/Composite) -

• Press the RGB or HDMI button to directly select the input mode.

<From Control panel>

The Input modes can also be switched using the Input Select button on the control panel.

Each time this button is pressed, the screen displays the corresponding mode in the following sequence.

HDMI — RGB (/Composite)

NOTE Switching between RGB and Composite Mode

When pressing RGB button, you will see the image from either RGB or Composite mode. You can set up the mode in advance if necessary.

- 1. Press MENU button in RGB or Composite mode.
- 2. Select "Setup" menu.
- 3. Select "RGB input".
 - Select "Composite" to display the image from a video source via the optional D-sub 15 pin composite cable
 - Select "RGB" to display the image from PC.

See 38 and 39 for details of "RGB input" menu.

Input Signal Screen Display

The input signal status can be displayed on the screen by pressing the The display will go out in approximately 6 seconds.

button on the remote control.

INFO



Menu button -MENU INFO Input Select 5 button **RGB** Input Select button . INPUT ASPECT P.MODE FAV CH RGB HDMI HDMI Input Select button

MUTE





SETUP OPERATION

How to Use the Remote to Control your External Devices

OPERATING THE PRECODED FUNCTIONS FOR YOUR EXTERNAL DEVICES.

The new remote control is designed to operate different types of VCRs, cable boxes, set-top-boxes, satellite receivers, DVD players, and other audio/video equipment. You must first program the remote to match the remote system of your external equipment (refer to pages $29 \sim 30$ for precodes).

EXTERNAL DEVICE CONTROL SETUP PROCEDURE

- 1. Turn on your external device.
- 2. Select the desired device mode DVD, PVR/VCR, SAT/CBL or AVR by pressing the corresponding device button.
- Hold down the device button (DVD, PVR/VCR, SAT/CBL or AVR) on the remote and enter the four digit preset code that matches your device as shown on pages 29 ~ 30.
- 4. Release the device button.
- 5. If done correctly, the device LED indicator will blink 3 times to confirm proper setup.
- 6. The remote will now control the desired device.

SETUP EXAMPLE (Hitachi Cable Box with precode 0003)

- 1. Turn ON your Cable box.
- 2. Select Cable mode by using your SAT/CBL button to position the LED indicator on SAT/CBL.
- 3. Hold down the SAT/CBL button on the remote and press the numbers 0, 0, 0 and 3.
- 4. Release the SAT/CBL button.
- 5. The indicator light will flash 3 times if the code was accepted.
- 6. Aim the remote at the cable box and press the POWER button. The remote will turn off your cable box when the correct four digit preset code is entered. When this occurs, the remote control is programmed for your cable box. If the cable box does not turn off, try a different four digit preset code.
- 7. The remote will now control your Cable box.

Repeat the same procedure for your set-top-box or satellite receiver (select SAT/CBL), your DVD (select DVD), your VCR/PVR(select VCR/PVR), or your AVR (select AVR).



Remote Control Backlight Feature

When you press any remote control button, the buttons will light up. The illumination will light a few seconds during this time. The buttons will appear to light if the room is dark.

Disabling Remote Control Backlight Feature

- 1. Place the RC in TV mode.
- 2. Press and HOLD the TV mode key.
- 3. While holding the TV mode key enter ASPECT, MUTE in sequence.
- To re-enable the backlight feature do steps 1~3 again (these steps toggle the Backlight Feature on and off, default is ON).

NOTE

• If your external device cannot be operated after performing the above procedures, your external device code has not been precoded into the remote.

• In the unlikely event that your external device cannot be operated after performing the above procedures, please consult your external device operating guide.

• The remote control will remember the codes you have programmed even after the batteries are removed from the remote control. To reset all programmed codes to factory default place remote control in TV mode, then press and hold TV mode key and enter "9", "8", "1" in sequence.

How to Use the Remote to Control your External Devices





NOTE

• Refer to the operating guide of the Cable Box for operation of the buttons exclusively for the Cable Box.

① PRECODED CABLE BOX buttons

These buttons transmit the chosen precoded cable codes :

-Power	-Cursor & OK	-Number PAD
-Menu	-Info	-Enter
-Return	-Channel Up & Down	-Fav CH
-Guide	-Dash(-)	-Color Buttons
-Last CH		

2 EXCLUSIVE TV mode (Monitor) buttons

These buttons are for operating the TV :			
-P. Mode	-HDMI	-Input	
-Aspect	-Vol Up & Down		
-RGB	-Mute		



MY SET-TOP-BOX/SATELLITE RECEIVER CODE IS:_____

NOTE

• Refer to the operating guide of the Set-Top-Box/Satellite Receiver for operation of the buttons exclusively for the Set-Top-Box/Satellite Receiver.

① PRECODED SET-TOP-BOX/SATELLITE buttons These buttons transmit the chosen precoded STB/Satellite codes :

-Power	-Cursor & OK	-Number PAD
-Menu	-Info	-Enter
-Return	-Channel Up & Down	-Fav CH
-Guide	-Dash(-)	-Color Buttons
-Last CH		

2 EXCLUSIVE TV mode (Monitor) buttons

These buttons are for operating the TV :			
-P. Mode	-HDMI	-Input	
-Aspect	-Vol Up & Down		
-RGB	-Mute		

ENGLISH

How to Use the Remote to Control your External Devices



MY DVD PLAYER CODE IS:_

NOTE

• Refer to the operating guide of the DVD Player for operation of the buttons exclusively for the DVD Player.

① PRECODED DVD buttons

These buttons transmit the chosen precoded $\ensuremath{\mathsf{DVD}}$ codes :

-Power	-Cursor & OK	-Play, Stop, Pause,
-Menu	-Info	RWD, FWD, Skip
-Return	-Number PAD	RWD, Skip FWD, Rec
-Guide	-Dash(-)	-Enter

② EXCLUSIVE TV mode (Monitor) buttons These buttons are for operating the TV : D. Mode

-P. Mode	-HDMI	-Input
-Aspect	-Vol Up & Down	
-RGB	-Mute	

MY VCR/PVR CODE IS:_____

NOTE

• Refer to the operating guide of the VCR/PVR for operation of the buttons exclusively for the VCR/PVR.

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① PRECODED VCR/PVR buttons

These buttons transmit the chosen precoded VCR/PVR codes :

-Power	-Cursor & OK	-Record
-Menu	-Channel Up & Down	-Play, Stop,
-Return	-Number PAD	Pause, RWD, FWD, Skip
-Info	-Last CH	(FWD,RWD)
-Guide	-FAV CH	

2 EXCLUSIVE TV mode (Monitor) buttons

These butto	ons are for operating the	e TV :
-P. Mode	-HDMI	-Input
-Aspect	-Vol Up & Down	
-RGB	-Mute	

How to Use the Remote to Control your External Devices



MY AUDIO/VIDEO RECEIVER (AVR) CODE IS:_____

NOTE

• Refer to the operating guide of the AVR for operation of the buttons exclusively for the AVR.

① PRECODED AVR buttons

nsmit the chosen prec	oded cable codes :
Channel Up & Down	-Input
Vol Up & Down	-Mute
Menu	-Return
(Channel Up & Down Vol Up & Down

② EXCLUSIVE TV mode buttons

These buttons	s are for operating	g the TV :
-P. Mode	-HDMI	-Info
-Aspect	-RGB	

Remote Control Codes

CABLE Brand	CODES	CROSSDIGITAL		ADVENTURA ADYSON	0037,0240,0000	INSTANT REPLAY	0035	QUARTZ	0035,0047,0046
A-MARK	0008,0144	DIRECTV	1377,0392,0566 0639,1639,1142	AIKO	0072 0278	ITT NOKIA	0240,0041	QUASAR	0035,0162,0002 1162
ABC	0237,0003,0008		0247,0749,1749	AIWA	0037,0000,0124	JANEIL	0240	RADIOSHACK	0035,0162,0037
ACCUPHASE	0003		0819,1856,1076	AKAI	0041,0175	JENSEN JVC	0067,0041		0048,0047,0240 0000,0104,0046
ACORN	0237		1108,0099,1109 1392,1414,1442	ALBA ALIENWARE	0209,0072,0278 1972	KEC	0067,0041,1162 0037,0278		1037,1162
ACTION	0237		1443,1609,1640	ALLEGRO	0039	KENWOOD	0067,0041,0038	RADIX	0037
ACTIVE	0237	DISH	1505,1005,0775	AMERICA ACTION		KLH	0046 0072	RANDEX RCA	0037 0060,0035,0048
ADB	2092,2586	NETWORK SYSTEM	1170,1775	AMERICAN HIGH	0035,0081 0000	KODAK	0035,0037	110/1	0240,0045,0000
ARCHER	0237	DISHPRO	1505,1005,0775	ASHA	0240	KTV	0000		0042,0065,0105 0880
BCC	0276	Diorni i to	1775	ASTRA	0035,0081	LG	0037,0240,0038	REALISTIC	0035,0162,0037
BRITISH	0003	ECHOSTAR	1505,1005,0775	AUDIOVOX	0000	LINKSYS	1037 1972		0048,0047,0240
TELECOM CENTURY	0008		1170,1775	AVIS BEAUMARK	0000,0072 0240	LLOYD'S	0240,0000,0072		0000,0104,0121 0278,0046,0065
DIGEO	1187,2187	EXPRESSVU	0775,1775	BELL & HOWELL	0035,0048,0039		0038		1162
DIGI	0637	FORTEC STAR	1821		0000,0104,0046 0479	LOEWE LOGIK	0081 0240,0000,0072	REPLAY TV	0614,0616
DIRECTOR	0476	FUNAI	1377	BROKSONIC	0479 0184,0121,0209	LUMATRON	0278	RICAVISION RUNCO	1972 0039
DUMONT	0637	GE GENERAL	0392,0566 0869		0002,0479	LUXOR	0046	SAMSUNG	0060.0240.0045
FOSGATE	0276	INSTRUMENTS	0809	CALIX CANDLE	0037 0037,0038	LXI	0037,0000,0042 0067		0000,0038,0432
GE	0144	GOI	0775,1775	CANON	0037,0038	M ELECTRONIC		SAMTRON	0739 0240
GENERAL	0476,0810,0276	HITACHI	0749,0819,1250	CAPEHART	0002	MAGNASONIC	0037,0240,0000	SANKY	0048,0039
INSTRUMENT	0003	HOUSTON	0775	CARRERA	0240	MAGNAVOX	0072,0278 0035,0037,0048	SANSUI	0240,0000,0067
GIBRALTER	0003	HTS	0775,1775	CARVER CCE	0035,0081 0072,0278		0039,0081,0240		0209,0041,0072 0002,0479
GOLDSTAR	0144	HUGHES	1142,0749,1749	CINERAL	0278		0000,0563,0618 1593	SANYO	0047,0240,0000
HITACHI	0003,0008	NETWORK SYSTEMS	1442,1443	CITIZEN	0035,0037,0240	MAGNIN	0240		0104,0046,0159 0479
INSIGHT	0476,0810	INNOVA	0099		0000,0209,0278 0479	MARANTZ	0035,0081,0038	SCOTT	0184,0045,0121
JERROLD	0476,0810,0276 0003	JERROLD	0869	CLASSIC	0037	MARTA	0037		0043
MEMOREX	0000	JVC	0775,1170,1775	COLORTYME	0060,0035,0045	MATSUI MATSUSHITA	0037,0209 0035,0162,0081	SEARS	0060,0035,0162 0037,0048,0039
MITSUBISHI	0003	LG	1414	COLT	0278 0000,0072		1162		0037,0048,0039
MOTOROLA	1376,0476,0810	MAGNAVOX	0722	CRAIG	0037,0047,0240	MEDIA CENTER	1972		0000,0042,0104
	0276,1187,1254	MCINTOSH	0869		0072	PC MEI	0035		0067,0043,0209 0041,0072,0046
	1106	MITSUBISHI	0749	CRITERION CROSLEY	0000,0072 0035,0081,0000	MEMOREX	0035,0162,0037		0065,0105
NOVA VISION	0008	MOTOROLA	0869,0856	CROWN	0072,0278		0048,0039,0047	SHARP	0048,0047,0032 0000,0065,0848
NOVAPLEX	0008	NETSAT	0099	CURTIS MATHES	0060,0035,0162		0240,0000,0104 0209,0072,0278	SHINTOM	0039,0240,0000
NSC	0637	NEXT LEVEL	0869		0240,0000,0041 0278,0432		0046,0479,1037		0072
PACE	1877,0877,0237 0008	PANASONIC	0247,0701	CYBERNEX	0240	METZ	1162 0037	SHOGUN	0240
PANASONIC	0000,0008,0144	PANSAT	1807	CYBERPOWER	1972	MGA	0060,0240,0043	SIEMENS SIGNATURE	0037,0104 0060,0035,0037
PANTHER	0637	PHILIPS	1142,0749,1749	DAEWOO	0037,0045,0278 0046	MGN	0240	ololu li olice	0048,0000,0046
PARAGON	0000,0008,0525		0775,0819,1076 0722,0099,1442	DAYTRON	0037,0278	TECHNOLOGY MICROSOFT	1972	SINGER	0065,0479 0037,0240,0072
PENNEY	0000,0637	PIONEER	1142,1442	DELL	1972	MIDLAND	0240	SONIC BLUE	0614,0616
PHILIPS	1305,0317	PRIMESTAR	0869	DENON DERWENT	0081,0042 0041	MIND	1972	SONOGRAPHE	0046
PIONEER	1877,0877,0144	PROSCAN RADIOSHACK	0392,0566 0566,0775,0869	DIRECTV	0739	MINOLTA	0042,0105	SONY	0035,0047,0032
	0533	RCA	0392,0566,1142	DUAL	0000	MITSUBISHI	0060,0048,0047 0000,0042,0067		0033,0000,0067 0046,0636,1032
PULSAR	0000		0775,0855,0143	DURABRAND	0039,0038		0043,0041		1972
QUASAR	0000	SAMSUNG	1392,1442 1377,1142,1276	DYNATECH ELECTROHOME	0240,0000 0060,0037,0240	MOTOROLA MOVIE WALKER	0035,0048	SOUNDMASTER STACK 9	0000 1972
REGAL	0276	0, 1100110	1108,1109,1442		0000,0043,0209	MTC	0240,0000,0072	STS	0042,0105
RUNCO	0000	SKY	1609 0856,0099	ELECTROPHONIC		MTX	0000	SV2000	0000,0072
SAMSUNG	0003,0144	SONY	0639,1639,1640	EMERALD EMEREX	0184,0121 0032	MULTITECH	0039,0000,0072	SVA	0000
SASKTEL SCIENTIFIC	1737 1877,0877,0477	STAR CHOICE	0869	EMERSON	0032,0184,0240	NAD NEC	0240,0104 0104,0067,0041	SYLVANIA	0035,0081,0000 0043,1593
ATLANTA	0237,0003,0000	STAR TRAK	0869		0000,0121,0043	NEO	0038	SYMPHONIC	0240,0000,0002
	0008	THOMSON TIVO	0392,0566 1142,1442,1443		0209,0002,0278 0479,1593	NEW TECH	0072	SYSTEMAX	1593 1972
SONY	1006	TOSHIBA	0749,1749,0790	FISHER	0039,0047,0000	NIKKO NIKKODO	0037,0278 0037,0278	TAGAR SYSTEMS	
SPRUCER	0144	ULTIMATE TV	1392,1640	F 11.0	0104,0046	NISHI	0240	TANDY	0000,0104
STARCOM	0003	ULTRASAT UNIDEN	1806	FUJI FUJITSU	0035,0033 0000	NIVEUS MEDIA	1972	TASHIKO	0037
STORM	0637	VOOM	0722 0869	FUNAI	0037,0000,0072	NOBLEX	0240	TATUNG	0048,0081,0000 0067,0041
SUPERCABLE	0276	ZENITH	0856,1856,1810	0400400	0278,1593	NORTHGATE OLYMPUS	1972 0035,0162,0104	TEAC	0000,0067,0041
TORX	0003		00050	GARRARD GATEWAY	0000 1972	ONKYO	0222	TECHNICS	0035,0162,0037
TOSHIBA	0000	SAT/PVR COMBO	CODES	GE	0060,0035,0048	OPTIMUS	1062,0035,0162	TEKNIKA	0000 0035,0037,0000
UNITED CABLE		BELL	0775,1170	051404	0240,0000,0065		0037,0048,0047 0240,0000,0104	TELECORDER	0240
ELECTRONICS	0276,0003,0008	EXPRESSVU DIRECT TV	1377,0392,0639	GEMINI GENEXXA	0060 0037,0000,0278		0432,1048,1162	TELEFUNKEN	0041
VIDEOWAY	0000	DIRECTIV	1142,1076,0099	GO VIDEO	0240,0432,0526	ORION	0184,0240,0000 0104,0121,0209	TEVION THOMAS	0479 0000,0002
ZENITH	0000,0525		1392,1442,1443		0614		0002,0278,0479	THOMAS	0060,0002
		DISH	1640 1505.0775	GOLDSTAR	0035,0037,0039 0000,0278,0038	PANAMA	0035	TISONIC	0278
CABLE/PVR	CODES	NETWORK	1505,0775	GOODMANS	0037,0081,0000	PANASONIC	1062,0035,0162 0000,0225,0614	TIVO	0618,0636,0739
COMBO		SYSTEM	1505 0775		0072,0278		0616,1162	ТМК	1337 0240,0000
DIGEO	1187,2187	DISH PRO ECHOSTAR	1505,0775 1505,0775,1170	GRADIENTE GRANADA	0000 0081,0042	PENNEY	0035,0162,0037	TNIX	0037
GENERAL INSTRUMENTS	0810	EXPRESSVU	0775	GRUNDIG	0081		0047,0081,0240 0000,0042,0067	TOCOM	0240
JERROLD	0810	HUGHES	1142,1442,1443	HARLEY DAVISON	0000		0038	TOSHIBA	0240,0045,0000 0043,0209,0041
MOTOROLA	1376,0810,1187	NETWORK SYSTEMS		HARMAN/	0081,0038	PENTAX	0042,0065,0105		1008,1972,1988
MOTOROLA	1106	JVC	1170	KARDON HARVARD	0072	PHILCO	0035,0081,0000 0209,0479	TOSONIC	0278
PACE	1877,0237	MOTOROLA	0869	HARWOOD	0072	PHILIPS	0035,0162,0048	TOTEVISION TOUCH	0037,0240 1972
PIONEER	1877,0877	PHILIPS	1142,1442	HEADQUARTER	0046		0081,0045,0000	TRIX	0037
SASKTEL	1737	PROSCAN RCA	0392 1392	HEWLETT PACKARD	1972		0209,0616,0618 0739,1081,1181	ULTRA	0045,0278
SCIENTIFIC	1877,0877	SAMSUNG	1442	HI-Q	0035,0047,0000	PILOT	0037	UNITECH	0240
ATLANTA		SONY	0639,1640	HITACHI	0035,0037,0045	PIONEER	0162,0081,0042	VECTOR VECTOR	0045 0184,0038
SONY	1006	STAR CHOICE	0869		0000,0042,0041 0065,0105	POLK AUDIO	0067,1337 0081	RESEARCH	0000,0000
SUPERCABLE	0276	TIVO ZENITH	1142,1442,1443 1810	HOWARD	1972	PORTLAND	0278	VEXTRA	0072
	00050			COMPUTERS		PRESIDIAN	1593	VICTOR VIDEO	0067,0041 0045
SATELLITE BRAND	CODES	VCR Brand	CODES	HP HUGHES	1972 0042,0739		0240	CONCEPTS	0040
(Set Top Box)		A-MARK	0037,0240,0000 0278,0046	NETWORK	0042,0139	PROSCAN PROTEC	0060 0000,0072	VIDEOMAGIC	0037
BELL	0775,1170	ABS	1972	SYSTEMS	0700 4707 4000	PROTECH	0072	VIDEOSONIC VIEWSONIC	0240,0000,0072
EXPRESSVU	0040	ACCURIAN	0000	HUMAX HUSH	0739,1797,1988 1972	PULSAR	0039,0240,0278	VIEWSONIC	1972 0000
	0216	ADMIRAL	0060,0048,0039			PULSER	0240	VOODOO	1972
CHAPARRAL			0047.0104.0209	HYTEK	0047,0000,0072	QUARTER	0046		1072
COOLSAT	1806,2147		0047,0104,0209 0065,0479	IBUYPOWER	1972	QUARTER	0046		1072

Remote Control Codes

WARDS	0060,0035,0037 0048,0047,0081 0033,0240,0045 0000,0042,0043
	0041,0072,0036
WHITE	0479,0065,0046 0000,0209,0072
WESTINGHOUSE	0278,0479
WORLD	0209,0002,0479
XR-100	0035,0240,0000 0072
VANAALIA	
YAMAHA	0041,0038
ZENITH	0037,0039,0033 0000,0209,0041
	0278,0479,1139
ZT GROUP	1972
PVR Brand	CODES
ABS	1972
ALIENWARE	1972
CYBERPOWER	1972
DELL	1972
DIRECTV	0739
GATEWAY	1972
GO VIDEO	0614
HEWLETT PACKARD	1972
HOWARD	1972
COMPUTERS	1072
HP	1972
HUGHES	0739
NETWORK	
SYSTEMS	
HUMAX	0739,1797,1988
HUSH	1972
IBUYPOWER	192
LINKSYS	1972
MEDIA CENTER	1972
PC	1070
MICROSOFT	1972
	1972
NIVEUS MEDIA	1972
NORTHGATE	1972
PANASONIC	0614,0616
PHILIPS	0618,0739
PIONEER	1337
RCA	0880
REPLAY TV	0614,0616
SAMSUNG	0739
SONIC BLUE	0614,0616
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STACK 9	1972
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STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO	1972 1972 1972 0618,0636,0739 1337
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DES/PVR	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DBS/PVR COMBO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DBS/PVR COMBO DIRECTV	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 CODES 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0772 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 0739 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 0739 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO DVD/PVR COMBO COMBOR COMBOR COMBOR COMECR	1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 0739 0739 0739 0739 0739 0739 0739
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STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739 0739 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO TOSHIBA	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO TOSHIBA DVD Brand	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 1972 0739 0739 0739 0739 0739 0739 0739 0739
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO DVD Brand 3D LAB	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 0739 0739 0739 0739 0739 0739 0739
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STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO DVD Brand 3D LAB	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 0750 0750 0750 0750 0750 0750 0750 0750
STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/VR COMBO HUMAX PIONEER RCA SYLVANIA TIVO TOSHIBA DD LAB ACCURIAN ACOUSTIC SOLUTIONS ADCOM	1972 1972 1972 1972 0618,0636,0739 1337 1008,1972,1988 1972 1972 1972 0739 000 1337 1008,1988 0503,0539 0675,1416 0730 0730 0739 0739 0000 1337 1008 1988 0503,0539 0675,1416 0730 0739
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STACK 9 SYSTEMAX TAGAR SYSTEMS TIVO TOSHIBA TOUCH VIEWSONIC VOODOO ZT GROUP DIRECTV HUGHES NETWORK SYSTEMS PHILIPS SAMSUNG TIVO DVD/PVR COMBO HUMAX PIONEER RCA SYLVANIA TIVO TOSHIBA DVD Brand 3D LAB ACCURIAN ACOUSTIC SOLUTIONS ADCOM AFREEY	1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 1972 CODES 0739 0730 073
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ALCO ALLEGRO

0790 0869

037	AMPHION	0872
)81)45	MEDIA WORKS	0070
)43	AMW	0872
)38	APEX DIGITAL	0533,0672,10
)46)72	ARRGO	1056,1061 1023
	ASPIRE	1023
179	DIGITAL	1100
000	AUDIOVOX	0790
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133	B & K	0655,0662
)33)41	BBK	1224
139	BEL CANTO	1571
	DESIGN	
	BLUE PARADE	0571
	BLUE SKY	0695
	BROKSONIC	0695
	CALIFORNIA AUDIO LABS	0490
	CELESTIAL	1020
	CENTREX	0672
	CINEA	0831
	CINEVISION	0876,0833,08
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	CLAIRTONE	0571
	COBY	0778,0852,10
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000	CURTIS	1087
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	DURABRAND	1127
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	EMERSON	1003,2116
	ENTERPRISE	0591,0675
739	ENTIVO	0503,0539
	ENZER	0770
988	FISHER	1919
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	GRADIENTE	0490
	GRUNDIG	0539,0705
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	LG	0591,0741,08

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0872 0533,0672,1020 1056,1061 1023	LOEWE LOGIX MAGNASONIC MAGNAVOX
1168	MALATA MARANTZ
0790 0730 0655,0662	MCINTOSH
1224 1571	MICROSOFT MINATO MITSUBISHI
0571 0695 0695 0490	MUSTEK MYRAD NAD NAIKO
1020 0672	NEC NEXXTECH NINTAUS NORCENT
0831 0876,0833,0869 1003,0695,1277	ONKYO OPPO
1587,2116 0571 0778,0852,1077	OPTIMUS PALSONIC PANASONIC
1086,1107,1165 1177,1351	PHILCO
0831 0503,0539 1087	
0816,0874,1023	PIANODISC PIONEER
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0675 1127	ROTEL SAMPO SAMSUNG
0521 1003,2116	
0591,0675 0503,0539	SANSUI SANYO
0770 1919 0675	SCHNEIDER SCHWAIGER SENSORY SCIE SHARP
1073,1077,1158 0522,0815 0573,0744,0715	SHERWOOD
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0490 0539,0705 0582,0702	SYLVANIA SYMPHONIC TAG MCLAREN
0831 0573,0664,1919	TATUNG TEAC TECHNICS
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0695 1423 0558,0623,0867	TIVO TOSHIBA
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1127 0591,0741,0869	VIZIO

	1058,1158,1416 1440 0741
	0783 0675 0503,0539,0646
	0675,1354,1506 1159 0503,0539,0646
	0675,1354,1506 1533,1273
	0695,0831,1270 2213 0522,2083
	0752 1521,0521 0730
	0894 0741 0770
	0785,0869 1402
	1051 1003,0872,1107 1265
	0503,0627,1769 0575,1224,1525 2185
	0571 0672,0852 0503,0490,0571
	0703,1641,1762 0675
	0503,0539,0646 0675,1267,1340 1354,2056,2084
	1024 0525,0571,0142 0631,1571
	1020,1061,1086 0539 0770
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	0672 0522 0778
	0741 0571 0522,0571,0790
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	0869 1360 0623,1178
	0698,0752 0490,0573,0744
	0199,0820,1044 1075,2069 0695
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ENCE	0752 1158 0630,0675,0752
	1256 0633,0770,1043
	1077 0533 0784
IIC	0730 0573,0715,0783 0869,1099
	0869,1099 0533,1533,0864 1033,1070,1431 1516,1536
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	0894 0770 0571,0790
	0490,0703 0770 0720
-	0730 0571 0522
	1503 0503,0573,0539
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	0770 0730
EPTS	0591 0503,0539
	1064,1226 0790 1064,1226

VOCOPRO	1360
XBOX	0522,2083
YAMAHA	0490,0539,0545 0497
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ZENITH	0503,0591,0741 0869
ZEUS	0784
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BLU-RAY DISC	CODES
LG PANASONIC	0741 1641
PHILIPS	2084
PIONEER	0142
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PANASONIC PHILIPS	0490 1340
PIONEER	0631
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SHARP SONY	1256 1033,1070,1536
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MICROSOFT ONKYO	2083 1769
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TOSHIBA XBOX	1769 2083
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AIWA	1405,0189,0121 1243,1388,1641
ALCO	1390
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ARCAM AUDIOTRONIC	1189 1189
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B & K BOSE BRIX	1390 0820,0840
B & K BOSE BRIX CAIRN CARVER	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES DELPHI	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES DELPHI DENON ELECTROHOME	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 2026
B & K BOSE BRIX CARVA CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 2026 0189 0189,0891,1304
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON	1390 0820,0840 0639,1253,1933 1602 0189 1188,0189,0121 0014 1414 1360,0121,1142 1306 2026 0189
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 2026 0189 0189,0891,1304 1306 0228 1030,2169
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 2026 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI	1390 0820,0840 0639,1253,1933 1602 0189 1189,0189,0121 0014 1414 1360,0121,1142 1306 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG	1390 0820,0840 0639,1253,1933 1602 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 2197
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO	1390 0820,0840 0639,1253,1933 1602 0189 0189 0141 1414 1360,0121,1142 1306 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 2197 0189 0189 1497
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLIN LIN LIN LIQUID VIDEO MAGNAVOX	1390 0820,0840 0639,1253,1933 1602 0189 0189 0189,0189,0121 0014 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1300 1570,1569 1390,1569 1390,1569 1390,1569 1390,1569 1390,1569 1390,1569 1390,1569 1390,1428 1497 2197 0189 1497 1189,1269,0189 1266,1514
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO	1390 0820,0840 0639,1253,1933 1602 0189 0189 0141 1414 1360,0121,1142 1306 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 2197 0189 1497 1497 1189,1269,0189 1266,1514 1189,1269,0189
B & K BOSE BRIX CAIRN CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLIN LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA	1390 0820,0840 0639,1253,1933 1602 0189 0189 0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1569 1390,1569 1497 2197 0189 1497 1189,1269,0189 1266,1514 1189,1269,0189 189,1269,0189
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LIG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD	1390 0820,0840 0639,1253,1933 1602 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 0189 1497 0189 1497 1189,1269,0189 1266,1514 1189,1269,0189 1393 1393
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI IINSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLIN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI	1390 0820,0840 0639,1253,1933 1602 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 0189 1497 0189 1497 1189,1269,0189 1266,1514 1189,1269,0189 1393 1393
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B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI ONKYO OPTIMUS	1390 0820,0840 0639,1253,1933 1602 0189 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1497 2197 0189 0097,155 0842,1298,1320 1805 1023,0014,0121 0670
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI ONKYO OPTIMUS ORITRON	1390 0820,0840 0639,1253,1933 1602 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 0189 1497 0189 1497 0189 1266,1514 1189,1269,0189 1266,1514 1189,1269,0189 1393 1393 1383 0097,1555 0842,1298,1320 1805 0033,0014,0121 0670 1497
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B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI ONKYO OPTIMUS ORITRON	1390 0820,0840 0639,1253,1933 1602 1189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1058,1374,1495 1811 1390 1570,1569 1390,1428 1497 1390,1428 1497 1390,1428 1497 1390,1428 1497 1189,1269,0189 1266,1514 1189,1269,0189 1393 1189 0097,1555 0842,1298,1320 1805 1023,0014,0121 0670 1497 1306,1518,1288 1316,1548,1633 1763,1764,2967 1189,1269,0189 1306,1518,1288 1316,1548,1633 1763,1764,2967 189,1269,0189 136,1548,1638 136,1548,1548 136,1548,1548 136,1548,1548 136,1548,1548 136,1548,1548 136,1548,1548 136,
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B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI ONKYO OPTIMUS ORITRON PANASONIC PHILIPS PIONEER	1390 0820,0840 0639,1253,1933 1602 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1030,2169 0842,1298,1320 1805 1030,2169 0842,1298,1320 1805 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390,1428 1497 1189,1269,0189 1393 1189 1097,1555 0842,1298,1320 0805 1023,0014,0121 0670 1497 1308,1518,1288 1363,1548,1633 1763,1764,2967 189,1269,0189 0805 1023,0014,0121 0670 1497 1308,1518,1288 1316,1548,1633 1763,1764,2967 189,1269,0189 0891,1266 0031,1268 081,1268,0189 081,1268 081,1268,0189 081,1268 0031,1268
B & K BOSE BRIX CARVER CURTIS MATHES DELPHI DENON ELECTROHOME GRUNDIG HARMAN/ KARDON HITACHI INSIGNIA INTEGRA JBL JVC KAWASAKI KENWOOD KLH KOSS LG LINN LIQUID VIDEO MAGNAVOX MARANTZ MICROMEGA MITSUBISHI MYRAD NAKAMICHI ONKYO OPTIMUS ORITRON PANASONIC	1390 0820,0840 0639,1253,1933 1602 0189 0189,0189,0121 0014 1414 1360,0121,1142 1306 0189 0189,0891,1304 1306 0228 1030,2169 0842,1298,1320 1805 1306 1306 1306 1306 1306 1309 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1570,1569 1390 1497 1189,1269,0189 0891 1189,0189 0891 1189,0189 1393 1189 0097,155 0842,1298,1320 1805 1023,0014,0121 0670 1497 1308,1518,1288 1316,1548,1633 1763,1764,2967 1189,1266,0189 136,1518,1288 136,1548,1633 1763,1764,2967 1189,1266,0189 189,1266 189 189 189 192 189 192 192 192 192 192 192 192 19

RCA REALISTIC REVOX SAMSUNG SANCEAN SANSUI SHERWOOD SIRIUS SONY	1023,1609,1390 1609,0121 0189 1304,1500,1868 2185 1189,0189 1913 1602,1811 1058,1441,1258 1759,1622,1406 1558,1658,1758
SOUNDESIGN STEREOPHONICS TEAC TECHNICS THORENS TOSHIBA VENTURER WARDS XM YAMAHA	1858 0670 1023 1390 1308,1518,1633 1189 0842,1788 1390 0189,0014 1406,1414 1023,0176,1176 1276,1331,1815 2061
AUDIO	CODES
AMPLIFIER Brand ADCOM BOSE CARVER CARY AUDIO	0577,1100 0674 0892 1879
DESIGN CLASSE FLEXTRONICS HALCRO HARMAN/ KARDON	1461 1879 1934 0892
KRELL LEFT COAST LEXICON MARANTZ MARK LEVINSON PARASOUND PHILIPS POLK AUDIO PRIMARE YAMAHA	1837 0892 1145,1802 0892 1483 1934 0892 0892 1395 0354
TELEVISION HITACHI	CODES 1445,1643,2143
	2243

How to Use the On-Screen Display (OSD) System

You can use the On-Screen Display system to access the various kinds of the features and functions.

Basic Operation MENU

- 1. Press the <a>button on the remote control or the Menu button on the control panel of the unit. The Main Menu is displayed on the screen as shown on the right.
- To select the item, press the button.
 The selected item will be highlighted in Yellow.
- Press the or button to set your selection.
 The selected menu page will be displayed on the screen.
- **4.** Use the 🖢 button to choose the item on the menu page.
 - Press the $[\circ K]$ button to set your selection.
- 5. Use the → button to adjust the item values or choose options.
 Press the ok button to set your selection.
- 6. To exit from the menu, press the or the from the menu.

NOTE

- The OSD menu screen will be closed automatically when no operation has been made for about one minute.
- If the item on the menu is shown in gray, it means that it cannot be selected or adjusted.

Select Language

Select the language from the list so that the OSD menu can be displayed in the selected language. The default setting is English (US).

• How to set Language

- 1. Enter the "Language" menu from the Main Menu.
- Select your preferred language from the list using the button.
 The selected item will be highlighted in Yellow.
- 3. Press the or button to set your selection. The mark on the left turns into a double circle when the selection is fixed.
- **4.** Press the button to exit from the entire OSD menu.







Main Menu List

			Menu	Page
Picture Mode			Select between 3 picture modes according to the lighting condition.	
	Contrast		Adjust to increase or decrease the picture contrast.	33
	Brightness		Adjust to brighten or darken the picture.	33
	Color		Adjust to increase or decrease the color density.	33
	Sharpness		Adjust to sharpen or soften the picture.	33
	Tint		Adjust to obtain natural skin color.	33
	Color Temperature		Select between 3 settings according to your preferred color tone.	33
	Back Light		Adjust to increase or decrease the brightness of back light on LCD panel.	33
	Reset		Reset each item on the menu screen to the factory setting.	33
Picture (HDMI/Composite)	Deep Color		Enhance the color depth of picture.	34
	Contrast Mode		Select between 3 contrast modes to suit your preference.	34
	3D Color Management		Adjust the suitable tint, color density, and brightness on image.	34
	Black Enhancement		Adjust the black level compensation.	34
	DNR		Reduce noise for picture signal.	35
	MPEG NR		Reduce mosquito noise in the picture.	35
	Cross Color NR		Reduce noise caused by color mixture of adjacent pixels.	35
	Game Mode		Reduce the time-lag of speed on the moving image during TV game play.	19
	Film Mode		Adjust to make the moving image smooth.	36
	3D Comb Filter		Reduce the color blurring to reproduce purer color.	34
	Reset		Reset each item on the menu screen to the factory setting.	34
	Color Temp. Adjust		Set specific adjustment in each of 3 color temperature modes.	34
	Contrast		Adjust to increase or decrease the picture contast.	38
	Brightness		Adjust to brighten or darken the picture.	38
	Color		Adjust to increase or decrease the color density.	38
Picture(RGB)	Tint		Adjust to obtain natural skin color.	38
	Color Temperature		Select between 3 settings according to your preferred color tone.	38
	Color Temp. Adjust		Set specific adjustment in each of 3 color temperature modes.	38
	Back Light		Adjust to increase or decrease the brightness of back light on LCD panel.	38
	Reset		Reset each item on the menu screen to the factory setting.	38
	Treble		Adjust to increase or decrease the level of treble. (-15~+15)	-
	Bass		Adjust to increase or decrease the level of bass. (-15~+15)	-
	Balance		Adjust the balance of sound from the bottom right and left speakers. (-10~+10)	-
	Surround		Select surround-sound. (Off/On)	-
Audio	Bass Boost		Enhance bass sounds. (Off/On)	-
	Clear Voice		Select clearer and more realistic sounds. (Off/On)	-
	Perfect Volume		Adjust sound volume appropriately. (Off/On)	-
	Speakers		Select if using internal speakers. (Off/On)	-
	Reset		Reset each item on the menu screen to the factory setting.	-
	System		This function is not available.	-
		Auto Input Change	In response to the connected equipment (such as DVD) through HDMI cable, the monitor is automatically turned On and switched to HDMI input.	19
Function	HDMI Control	System Standby	In response to the monitor, the connected equipment (such as DVD) through HDMI cable is automatically turned Off (standby mode).	19
		AV Center Control	Selecting On will activate AV Center OSD interface, in case you purchased the optional Hitachi A/V Center.	19
	Video Power Save		Save power consumption when no signal can be input in HDMI/Composite input mode.	42
Setup (HDMI/Composite)	RGB Input		Select the effective signal.	37
	Color System		Select color system.	37
Setup(RGB)	Auto Adjust		Adjust Horizontal Position, Vertical Position, Horizontal Clock, and Clock Phase automatically.	39
	Horizontal Position		Adjust the display position horizontally.	39
	Vertical Position		Adjust the display position vertically.	39
	Horizontal Clock		Minimize the vertical stripes on the screen.	39
	Clock Phase		Minimize the blurring of the letters and stripes on horizontal row.	39
	Reset		Reset each item on the menu screen to the factory setting.	39
	Frequency Display		Set On for PC signal frequency information to be displayed on the Input Signal Screen	39
	WXGA Mode		Display. Select the resolution when WXGA signal is received.	39
	RGB Input		Select the effective signal.	39
Language	-			31

INOTE • The picture settings can be stored for each of inputs except "Picture Mode".

Watching Images from HDMI/Composite Input

- 1. Connect to external equipment. (See 18 and 19 for details.)
- 2. Press the HDMI or (INPUT) button to switch to HDMI mode.
- Press the RGB or NPUT button to switch to Composite mode.

3. Press the 🔳 button.

Setting Picture Adjustment

You can adjust the display condition such as color settings. Select **"Picture"** from Menu list.



Selected Item	S	Setup hint	
	Dynamic	You can make the best selection from 3 modes depending on the lighting condition and intended use.	
Picture Mode	Natural	Dynamic: Suitable for brighter conditions.	
	Cinema	Natural : Suitable for normal lighting conditions. Cinema : Suitable for watching movies.	
Contrast	-31~+31 (+32~+40)	 This adjusts the contrast to meet the surrounding brightness by using the button. The maximum value is extended up to [+40] by pressing the button for more than 2 seconds at [+31]. The value between [+32] ~ [+40] appears in magenta. This is the special feature for dark images, so it is recommended to set the value less than [+31] under normal conditions. 	
Brightness	-31~+31	Adjust brightness according to personal preference by using the button.	
Color	-31~+31	Adjust color according to personal preference by using the button.	
Sharpness	-15~+15	Preferred sharpness can be adjusted by pressing the button for softer image or the button for sharper image.	
Tint	-31~+31	Pressing the button enhances red and weakens green, while pressing the button weakens red and enhances green. The setup hint is to adjust for realistic skin color.	
	Cool	You can select from 3 settings depending on the color	
Color Temperature	Normal	 condition using the ▶ button. This function is not available when "Deep Color" is "On" 	
	Warm	in HDMI mode.	
Back Light	-20~+20	Adjust the brightness of the Back Light for maximum visibility.	
Reset		Each item on this menu screen can be restored to the factory settings by pressing the \bigcirc^{K} button.	

Watching Images from HDMI/Composite Input (continued)

Setting Picture Adjustment (continued)

Selected Items			Setup hint	
Deep Color	p Color Off		Enhance the color depth of picture during HDMI input.	
	Dynamic		It allows you to choose from 3 modes. Dynamic: Sharpen the gradation to improve the contrast feeling. Normal : Improve the contrast feeling to reproduce a faithful gradation. Linear : Reproduce as faithful gradation as possible. • This function is not available when "Deep Color" is "On" in HDMI mode.	
Contrast Mode	Normal			
	Linear			
3D Color Management	Off		 On : It automatically adjusts the suitable tint, color density, and brightness on images. Off : Set it off if the image does not look natural. This function is not available when "Deep Color" is "On" in HDMI mode. 	
	On			
	Off		Adjusts the black level compensation. This function is not available when "Deep Color" is "On" in HDMI mode. 	
Black Enhancement	Low			
	Middle			
	High			
	Off		This function is available only if D-sub 15 pin - composite cable is used.	
	Low		This reduces the dot and color blurring in minute scales so that it can reproduce purer color.This is not available for NTSC4.43, PAL60, SECAM, PAL-N and PAL-M system.	
3D Comb Filter	Middle			
		High	This is available only when receiving NTSC3.58/PAL composite signal.	
Reset			Each item on this menu screen can be restored to the factory settings by pressing the $$ button.	
		Amplitude	On: When you want to set specific adjustments in each of the 3	
		Red	Color Temperature modes. You can adjust on the Amplitude and Cut Off. The settings reflect on the Color Temperature.	
		Green	Amplitude: Subdue the colors (Red/Green/Blue) on the	
		Blue	brighter parts (-63~0). Cut Off : Subdue the colors (Red/Green/Blue) on the darker	
	On	Cut Off	parts (-31~+31).	
Color Temp. Adjust		Red	Reset (Available when On): Select to restore amplitude and Cut	
		Green	Off adjustments to default settings by pressing the \bigcirc button.	
		Blue	Off: Remains as default softing	
		Reset	Off: Remains as default setting.	
	Off		 This function is not available when "Deep Color" is "On" in HDMI mode. 	

Watching Images from HDMI/Composite Input (continued)

Reducing Noise

You can reduce the unwanted picture noise. Select **"Picture"** from the Menu list.

■ Picture Deep color Contrast Mode 3D Color Management Black Enhancement DNR MPEG NR Cross Color NR Game Mode Film Mode 3D Comb Filter Reset ♦ Select OK Set ⓒ•	Dynamic Off Normal Off Off Off Off Off Off Off Off Reset Reset Return
---	--

Selected Item	S	Setup hint	
	Off		
DNR	Low	This is a poise reduction system for picture signals	
DINK	Middle	This is a noise reduction system for picture signals.	
	High		
	Off		
MPEG NR	Low	This is a noise reduction system for MPEG picture signa (e.g. against mosquito noise and block noise.)	
	High	(e.g. againet mooquite helee and block helee.)	
	Off	This reduces noise caused by color mixture of adjacent	
Cross Color NR	Low	pixels. This is not available when "Game Mode" is On.	
	High		
Watching Images from HDMI/Composite Input (continued)

Making the Moving Image Smooth

Using this function helps to make the moving image smooth. Select **"Picture"** from the Menu list.

Picture Deep color Contrast Mode 3D Color Management Black Enhancement DNR MPEG NR Cross Color NR <u>Game Mode</u> Film Mode 3D Comb Filter Reset ♦ Select OK Set ₹	Dynamic Off Normal Off Off Off Off Off Off Off Reset Return

Selected Item	S	Setup hint
	Off	This helps to make the moving image smooth. Original : Automatically identifies the source of movie (3:2 pulldown, 2:2 pulldown) and faithfully reproduces
	Original	the original film images. Smooth1: Automatically identifies the source of movie (3:2 pulldown, 2:2 pulldown) and reproduces the smooth motion. Smooth2: Reproduces the clear moving image when the
Film Mode	Smooth1	
	Smooth2	input signal is 50Hz or 60 Hz. Off: Set to Off if the image does not look natural. This is not available in the following cases. • OSD is displayed. • "Game Mode" is On.

INOTE → About "Film Mode"

• The image might not look natural depending on the image contents.

Phenomena such as

- ① When switched to the subtitles of a film or images, the image displays fine horizontal streak lines.
- When switched to scenes such as commercial and animation, the image displays fine horizontal streak lines.
 When displaying a ticker or subtitle, the text on the image becomes rough (aliasing).
- When watching the image in Composite mode, which is connected to any external equipment, the OSD of external equipment displays fine horizontal streak lines.

These phenomena occur due to the method of converting the image. Please note that this is not a malfunction. In the event that this is disturbing, please set to Off.

In addition, the effect of this menu might vary depending on the aspect setting (See 40).

Also, this might be ineffective depending on the scene of the image.

Watching Images from HDMI/Composite Input (continued)

Advanced Setting

Select "Setup" from the Menu list.



Selected Items		Setup hint
Video Power Save	Off	See 42 for details.
Video Power Save	On	
RGB Input	RGB	Select the effective signal.
	Composite	
	Auto	
	PAL	This function is available only if D-sub 15 pin - composite cable is used.
	SECAM	
Color System	NTSC 4.43	Selects the color system depending on the input signal.
Color System	NTSC 3.58	 Generally, select [Auto] to receive all signals. If the input signal has too much noise, the signal level is
	PAL60	too low or the operation is unstable in [Auto], select the
	PAL-M	system according to the color system of the input signal.Composite input only.
	PAL-N	

INOTE Watching through the optional D-sub 15 pin - composite cable

If your external equipments do not have an HDMI terminal or a DVI terminal,

you can watch images from your external equipments through the optional D-sub 15 pin - composite cable.

1. Connect to your external equipment with the optional D-sub 15 pin - composite cable. (See **19**.)

2. Switch to RGB input by pressing the (RGB) or (INPUT) button.

3. Press the 🕞 button and select "Setup" from the menu list.

4. Then you can select "Composite" in "RGB Input".

NOTE Checking Software Version	🔍 Setup
 The Software Version is displayed on Setup(HDMI/Composite) menu. 	Video Power Save Off RGB Input Composite Color System Auto
Software Version ———	VCXXX-XXX XX-X
	♦ Select ◆ On/Off 2 ● Return

Viewing Images from a PC

1. Connect to the PC. (See **20** for details of connection to PCs.)

2. Switch to RGB input by pressing the \bigcirc RGB or \bigcirc button.

3. If necessary select "RGB" option under "Setup/RGB Input" menu.

4. Press the 🕞 button.

MENU

Setting Picture Adjustment

You can adjust the display condition such as position adjustment and color settings.

① Picture Menu

Select "Picture" from the Menu list.

Selected Items			Setup hint
Contrast		-31~+31 (+32~+40)	 This adjusts the contrast to meet the surrounding brightness using the → button. The maximum value is extended up to [+40] by pressing the → button for more than 2 seconds at [+31]. Values between [+32] ~ [+40] appear in magenta. This is the special feature for dark images, so it is recommended to set the value less than [+31] under normal conditions.
Brightness		-31~+31	Adjust the brightness according to personal preference using the button.
Color		-31~+31	Adjust the color according to personal preference using the button.
Tint		-31~+31	Pressing the button enhances red and weakens green, while pressing the button weakens red and enhances green. These adjustments are for realistic skin color.
		Cool	
Color Temperature	Normal		You can select from 3 settings with the 🕶 button.
	Warm		
Color Temp. Adjust	On	Amplitude Red Green Blue Cut Off Red Green Blue Reset	 On: When you want to set specific adjustments in each of the 3 color temperature modes. You can adjust the Amplitude and Cut Off. The settings reflect on the Color Temperature. Amplitude: Subdues the colors (Red, Green, Blue) on the brighter parts (-63~0). Cut Off : Subdues the colors (Red, Green, Blue) on the darker parts (-31~+31). Reset (Available when On): Select to restore amplitude and Cut Off adjustments to default settings by pressing the or button. Off: Remains as default setting.
Back Light		-20~+20	Adjusts the brightness of Back Light for maximum visibility.
Reset			Each item in the Picture Menu can be restored to the factory setting by pressing the $\bigcirc K$ button.

Picture
 Contrast +31
 Brightness -31
 Color 0
 Tint +31
 Color Temperature Color Temperature Color Temp. Adjust Back Light +20
 Reset Reset
 \$ Select OK Set © Return

Viewing Images from a PC (continued)

Setting Picture Adjustment (continued)

② Setup Menu

Select "Setup" from the Menu list.



Selected Item	s	Setup hint
Auto Adjust		 Adjusts Horizontal Position, Vertical Position, Horizontal Clock, and Clock Phase automatically. Select "Adjust" then press the or button to start automatic adjustment as necessary. The message "Auto Adjusting" is displayed. The image might not be adjusted to its optimum condition depending on the types of signals. In that case, adjust each item manually.
Horizontal Position	-63~+63	Adjusts the display position horizontally.When the value exceeds a possible range, it will be displayed in magenta.
Vertical Position	-31~+31	Adjusts the display position vertically.When the value exceeds a possible range, it will be displayed in magenta.
Horizontal Clock	-31~+31	Minimizes vertical stripes on the screen.
Clock Phase 0~+63		 Minimizes the blurring of letters and stripes on horizontal row. Be sure to adjust Horizontal Clock before adjusting Clock Phase. When the value exceeds a possible range, it will be displayed in magenta.
Reset		Each item in Setup Menu can be restored to the factory setting by pressing the $\[or \]$ button.

Advanced Setting

Select "Setup" from the Menu list and skip to the second page.



Selected Items		Setup hint
	Off	Set to On for PC signal frequency information to be
Frequency Display	On	displayed on the Input Signal Screen Display.
	Off	
WXGA Mode	1280X768	Selects the resolution when a WXGA signal is received.
	1360X768	
RGB Input	RGB	Selects the effective signal. Refer to 24 and 38 for details.
	Composite	

FUNCTIONS

Aspect Switching

Each time the (ASPECT) button of the remote control is pressed, the screen display aspect is switched in sequence, and the status will be displayed at the bottom of the screen.

HDMI/Composite Signal Input

Display Aspect

Watching Standard Definition Pictures (480i, 480p, 576i, 576p, Composite)

+4:3 → Panoramic 1 → Panoramic 2 → Zoom 1 -Full < Zoom 2 <</p>

Watching High Definition Pictures (720p, 1080i, 1080p)

Full 1 → Full 2 → Zoom →

You can display the image at its optimum condition by selecting display aspect depending on the current output image as shown below.

Input Signal	Display Screen	Display Aspect	To display suitable screen as follows.
When Watchi	ng Standard D	efinition Pictu	res:
		4:3	Plays a 4:3 image on screen faithfully. Blanking occurs on both sides.
(4:3 Signal)		Panoramic 1	Plays a 4:3 image which enlarges horizontal and vertical size of the middle in equal scales, and displays both sides appearing much wider.
(ne eignal)		Panoramic 2	The vertical size of Panoramic1 is reduced so that you can see the whole image, including any subtitles, that might otherwise not be fully visible on the screen.
(Vista)		Zoom 1	Plays a 16:9 image in 4:3 frame (Vista aspect) faithfully. *In some cases, slight blanking may remain at the top and bottom.
○ ○ ○ ○ ○ (Cinema)		Zoom 2	Plays a 21:9 image in 4:3 frame (Cinema aspect) expanding vertically. *In some cases, slight blanking may remain at the top and bottom.
(Squeeze)		Full	Plays a 4:3 image faithfully in the standard vertical size and horizontally squeezed.
When Watchi	ng High Definit	tion Pictures:	
		Full 1	Plays a 16:9 image faithfully showing 95% of the size.
(16:9 Signal)		Full 2	Plays a 16:9 image faithfully showing 100% of the size. *In some cases, the screen display has unnecessary blanking or noise at the edges.
(4:3 Image in 16:9 Frame)		Zoom	Plays a 4:3 image in 16:9 frame by enlarging a 4:3 image to fill the 16:9 screen.

INPUT ASPECT P.MODE FAV CH

RGB HDMI

• 11 ► •

Aspect button -

FUNCTIONS (continued)

Aspect Switching (continued)

HDMI/Composite Signal Input (continued)

Position Adjustment

Vertical picture position can be adjusted for **Panoramic 1**, **Zoom 1** and **Zoom 2** mode as follows.

1. Press the **[+]** button while operating the picture aspect display.

- 2. "Position" display will appear.
- **3.** Adjust the position using the **\$** button.

The adjustment ranges of each picture aspect are as shown below.

Display Aspect	Adjustable Range	
Panoramic 1	-12~+12	,
Zoom 1, Zoom 2	-31~+31	



ACAUTION

Using a wide-screen monitor

- The monitor has a screen mode selection feature. If an incompatible screen mode is selected to play certain software, such as a TV program, the image would appear different from the original. Take this into consideration when making screen mode choices.
- Use of the wide feature displaying enlarged pictures in coffee shops, hotel and other establishments for commercial or public viewing purposes could infringe on the copyright holder's rights, which are protected by Copyright Law.
- When a normal 4:3 image (not wide screen) is displayed over the entire screen in the Panoramic mode, the peripheral image may disappear partly and/or appear distorted in some cases. Use 4:3 mode to view the image reflecting the original intention.

RGB Signal Input

Display Aspect

You can select a suitable aspect depending on the resolution.

* Real mode gives the image with same shapes as that of a computer monitor (neither compression nor stretching).

ResolutionInput signalFull displayCircular displayDisplayFullNormalReal*640 X 480 (VGA)
800 X 600 (SVGA)
1024 X 768 (XGA)
1280 X 1024 (SXGA)Image: Constraint of the second seco

Display Area Selection Diagram

42

FUNCTIONS (continued)

Power Save Mode

When HDMI/Composite Input is Selected

You are provided the function to save power consumption when no signal is detected in the HDMI/Composite input. Set to On in "Video Power Save" from the Setup Menu, which leads to the power save mode. MENU

1.	Press	the	
	F1622	uie	I

- button when in HDMI/Composite mode.
- 2. Select the "Setup" menu and press the or button.
- 3. Select "Video Power Save".

Video Power Save	Off
video Fowel Save	On

When no signa	al is detected	When signal is input during
Condition	Indicating Lamp	On in "Video Power Save"
Power Save	Orange	Turns On automatically.

When RGB Input is Selected

When the unit is connected to a VESA DPMS computer, the Power Save mode (Operation mode : Off) can be set to be activated automatically when the computer is not being used, in order to reduce the power consumption of the unit.

BCB owno oignol	Horizontal	Yes	No	Yes	No
RGB sync signal	Vertical	Yes	Yes No No		No
PC signal		Active (normal display)	Blank (no display)		
Operation mode		On	Off		
Indicating lamp		Lights green	Lights orange		je

• To return to operating status, operate the personal computer, or press either the Input Select button on the control panel or the (INPUT) or (RGB) button on the remote control.

🔧 Setup	
Video Power Save	Off
RGB Input	RGB
Color System	Auto
♦ Select ◆ On/Off	් 🕞 Return

TROUBLESHOOTING

About LCD Display Technology

The following are common phenomena occurring when viewing LCD display devices due to its characteristics. Please note that these are not malfunctions.

Defective Spots on Panel

The LCD panel is manufactured with high-precision technology. However, there might be some spots that are not illuminated, or are brighter than others, or are in different colors, etc.

Surface on Panel

The LCD panel displays images by the fluorescent lamps internally. This can raise the temperature of the display surface.

In addition, do not allow any heavy impact to the front of the panel because the LCD panel is made of high precision glass.

Use Under Low Temperature Conditions

Because of the structural characteristics of the LCD panel, the response speed of the LCD panel becomes slower when the ambient temperature becomes too low. In some cases, this may result in a residual image. The residual image will disappear of its own accord as the temperature rises again to a normal level.

Before calling a service technician, check the following tables first. If the problem cannot be solved with the suggested procedures, contact **800-HITACHI**. For your safety, NEVER try to repair the product yourself.

When the Following Messages Appear on the Screen

Message	Condition / Action	Page
Power Save	Power Save This indicates it is in Power Save mode. (in HDMI/RGB mode) This message appears 5 seconds before Power Save mode starts. The indicating lamp lights in orange.	
No Sync. Signal	 The unit cannot detect any signals from any input terminals. Check if the cable is connected correctly and firmly. Check if the power of any external equipment is ON. Check if the input selection matches the connection terminal. Check if the PC is in Power Save mode or not. 	18~21 42
Invalid Scan Freq.	The unit receives unsupported signals. Check if the cable is connected correctly and firmly. Check if the input signal is compatible with the specification of the monitor. 	46, 49
Not Available	This shows when the selected operation is not available.	
Auto Adjusting	This indicates that it is in the process of auto adjusting. (in RGB mode)	39

Symptom and Checklist

Symptoms		Checklist	Page
• No picture - no sound		 Ensure the Main Switch is On. Check the Indicating lamp status (Off, Red, Green, or Orange). Check the connection of the power cord and/or other cables. Check if the power of the unit or external equipment is ON. Check if the correct mode is selected. Check if the unit is in "Standby mode" or "Power Save mode". Adjust the values in "Picture menu" and "Audio menu". 	18 ~ 22 24, 44
Multiple images-normal sound		 Check the connections to external equipment. 	18~21
Intermittent interference	مدیمہ بر مر بر مرد مرد مرد مرد مرد مرد مرد مرد	 Check if the source of interference is shielded correctly. Move these kinds of electrical devices away from the unit. 	

Symptom and Checklist (continued)

Symptoms	Checklist	Page
Normal picture, but no sound	 Check the volume level. Check audio settings on HDMI source must be set to PCM. Check if the MUTE button has been pressed or not. Check the connections to external equipment. Check if input signal is HDMI or DVI by pressing button, remember DVI audio must be input by separate. 	23
No picture - normal sound	Check the value level of "Brightness" and "Contrast" in "Picture Menu".	33, 38
• The remote control does not work.	 Check if the batteries are installed correctly. The batteries might be exhausted. Replace them with new ones. Remove all obstructions from in front of the sensor window on the unit. Check if the buttons on the control panel are working. 	<u>[16], [17]</u>
• Only some buttons work on the remote control.	This is normal, some buttons are intended to use with optional Hitachi Set- Top Box	16
 Picture Frezze and/or the buttons on both the remote control and control panel do not work. 	 Unplug and connect after 5 minutes the power cord or turn Main switch Off and On after 5 minutes. Hold down the Reset button on the control panel for over a second. 	15
Normal picture but no color-normal sound	Check the connections to external equipment.	18~21
• No picture The Indicating lamp \rightarrow Off	 Check if the power cord is plugged into the socket securely. Check if the main switch is on. 	21, 22
 No picture The Indicating lamp → Orange It means that the unit is in "Power Save mode". 	 Check if all the cables to external equipment are connected correctly and securely. Check if the power to the external equipment is ON. Check if the HDMI mode has been selected correctly. Check if the PC is in Power Save mode or not. Refer to "Power Save Mode" and "When the Following Messages Appears on the Screen". 	42
 No picture The indicating lamp → Green 	 Check if the signal cable is connected correctly and securely. Adjust the level of Brightness and Contrast lower. 	18~21
 The top of the unit and surface of the panel heat up. 	 This may occur if you use the unit for a long time. Turn off the main power to the unit for a while. Please note that this is not a malfunction. 	
 Some screen display aspects are not possible. 	• Check the signal status by pressing the button on the remote control. The available screen display aspect is different depending on the current signal status.	24 40 , 41
 Image cannot be displayed from HDMI input. 		
 The image and audio are mismatched when in RGB or HDMI-DVI mode. 	Check if the PC (RGB)/DVI analog audio input terminal is connected to the same external device.	18, 20
 Some digital programming looks blurry during fast changing scenes 	• This is normal and its due regular digital compression scheme, please note this is not a malfunction.	

ENGLISH

TROUBLESHOOTING (continued)

Symptom and Checklist (continued)

Symptoms		Checklist	Page
 The image on the screen is moving in an oblique direction. (RGB input mode only) 		 Adjust "Horizontal Clock" and "Clock Phase". 	39
 The coarse vertical stripes can be seen in full-display mode. (RGB input mode only) 		 Adjust "Horizontal Clock". 	39
• Part of the image is missing. (RGB input mode only)		• Try "Auto Adjust".	39
 The horizontal stripes are moving vertically with flickering screen. (RGB input mode only) 		• Check the signal status of the PC by pressing the button on the remote control to check if the input signal of the displayed image is compatible with the specification of the unit.	24 , 46 49
 When the characters are displayed on the whole screen, the vertical stripes appear and some of the characters are blurred. (RGB input mode only) 	ABCDEFGHIJ abcdefgA8CDEFGabcd ABCDEFGHIJ abcdefgA8CDEFGabcd	 Try "Auto Adjust". If the display condition is not improved with "Auto Adjust", adjust "Horizontal Clock". 	39
 When the letter string is displayed in full-screen, all of the characters on the screen are blurred. (RGB input mode only) 	ABCDEFGHIJ abcdefgABCDEFGabcd ABCDEFGHIJ abcdefgABCDEFGabcd	 Try "Auto Adjust". If the condition is not improved with "Auto Adjust", adjust "Clock Phase" until you get the clearest image. 	39
 When small patterns are displayed on the screen, the entire screen is flickering. (RGB input mode only) 	***	 Try "Auto Adjust". If the condition is not improved with "Auto Adjust", adjust "Clock Phase" until you get a flicker-free display. 	39
 Image cannot be displayed in the correct position. (RGB input mode only) 		• Press the button to check if the input signal of the displayed image is compatible with the specification of the unit.	24, 46 49

PRODUCT SPECIFICATIONS

SPECIFICATION						
Panel	Display dimensions	Approx. 37 inches measured diagonal (32 5/16 (H) x 18 1/8 (V) in) Approx. 941 mm measured diagonal (820 (H) x 461 (V) mm)	Approx. 42 inches measured diagonal (36 3/4 (H) x 20 3/4 (V) in) Approx. 1068 mm measured diagonal (931 (H) x 524 (V) mm)			
	Resolution	1920 (H) x 1080 (V) pixels	1920 (H) x 1080 (V) pixels			
	Pixel Pitch	0.43(H) x 0.43(V) mm.	0.48(H) x 0.48(V) mm.			
Net dimensions		including Stand: 936(W)x657(H)x310(D) mm 36 7/8(W) x 25 7/8(H) x 12 3/16(D) in excluding Stand: 936(W)x607(H)x40(D) mm 36 7/8(W) x 23 7/8(H) x 1 9/16(D) in	including Stand: 1037(W) x 728(H) x 310(D) mm 40 13/16(W) x 28 11/16(H) x 12 3/16(D) in excluding Stand: 1037(W) x 678(H) x 40(D) mm 40 13/16(W) x 26 11/16(H) x 1 9/16(D) in			
Net weight		including Stand: 17.4 kg/38.3 lb excluding Stand: 14.6 kg/32.2 lb	including Stand: 20.9 kg/46.1 lb excluding Stand: 18 kg/39.7 lb			
Ambient	Temperature	Operating : 5°C to 35°C, Storage : 0°C to 40°C				
conditions	Relative humidity	Operating : 20% to 80%, Storage : 20% to 90%	o (non-condensing)			
Power supply		AC120V, 60Hz				
Power consump	tion/ at standby	177 W, 1.7 A/< 0.5 W	243 W, 2.3 A/< 0.5 W			
Audio output		speaker 6W + 6W				
FCC Class		B for Consumer Use				
(HDMI input)						
Input terminals		HDMI : HDMI input terminal Audio input terminal (Mini-pin)*				
Input signals		HDMI: VGA/60, 480i, 576i, 480p, 576p, 720p/50, 720p/60, 1080i/50, 1080i/60, 1080p/50, 1080p/60, 1080p/24				
(RGB/Composite	input)					
Input terminals		Analog RGB input terminal (D-sub 15 pin) Audio input terminal (Mini-pin)*				
Input signals		0.7 Vp-p, analog RGB (Recommended Signal) Composite video: PAL, SECAM, NTSC3.58, NTSC4.43, PAL60, PAL-M, PAL-N				
Sync signals		H/V separate, TTL level [$2K\Omega$]				

• The unit takes at least 30 minutes to attain the status of optimal picture quality.

* This analog audio input terminal can be used for PC (RGB) or HDMI-DVI.

PRODUCT SPECIFICATIONS

SPECIFICATION					
Panel	Display dimensions	Approx. 47 inches measured diagonal (40 15/16 (H) x 23 1/16 (V) in) Approx. 1194 mm measured diagonal (1040 (H) x 585 (V) mm)			
	Resolution	1920 (H) x 1080 (V) pixels			
	Pixel Pitch	0.5415(H) x 0.5415(V) mm.			
Net dimensions		including Stand: 1145.7(W) x 794.9(H) x 310(D) mm / 45 1/8(W) x 31 5/16(H) x 12 3/16(D) in excluding Stand: 1145.7(W) x 744.8(H) x 40(D) mm / 45 1/8(W) x 29 5/16(H) x 1 9/16(D) in			
Net weight		including Stand: 24.8 kg/54.6 lb excluding Stand: 21.9 kg/48.2 lb			
Ambient	Temperature	Operating : 5°C to 35°C, Storage : 0°C to 40°C			
conditions	Relative humidity	Operating : 20% to 80%, Storage : 20% to 90% (non-condensing)			
Power supply		AC120V, 60Hz			
Power consum	otion/ at standby	275 W, 2.4 A/< 0.5 W			
Audio output		speaker 6W + 6W			
FCC Class		B for Consumer Use			
(HDMI input)					
Input terminals		HDMI : HDMI input terminal Audio input terminal (Mini-pin)*			
Input signals		HDMI: VGA/60, 480i, 576i, 480p, 576p, 720p/50, 720p/60, 1080i/50, 1080i/60, 1080p/50, 1080p/60, 1080p/24			
(RGB/Composite	input)				
Input terminals		Analog RGB input terminal (D-sub 15 pin) Audio input terminal (Mini-pin)*			
Input signals		0.7 Vp-p, analog RGB (Recommended Signal) Composite video: PAL, SECAM, NTSC3.58, NTSC4.43, PAL60, PAL-M, PAL-N			
Sync signals		H/V separate, TTL level [2KΩ]			

• The unit takes at least 30 minutes to attain the status of optimal picture quality.

* This analog audio input terminal can be used for PC (RGB) or HDMI-DVI.

PRODUCT SPECIFICATIONS (continued)

Signal Input

RGB terminal (D-sub 15 pin connector)

Pin	Input signal			
1	R			
2	G/Composite			
3	В			
4	No connection			
5	GND			
6	R.GND			
7	G.GND/Composite			
8	B.GND			
9	+5V			
10	GND			
11	No connection			
12	[SDA]			
13	H.sync			
14	V.sync.			
15	[SCL]			



HDMI connector pin specifications

Pin	Input signal	Pin	Input signal
1	1 TMDS Data2+		TMDS Clock Shield
2	TMDS Data2 Shield	12	TMDS Clock-
3	TMDS Data2-	13	CEC
4	4 TMDS Data1+		Reserved(N.C. on device)
5	TMDS Data1 Shield	15	SCL
6	TMDS Data1-	16	SDA
7	7 TMDS Data0+		DDC/CEC Ground
8	TMDS Data0 Shield	18	+5V Power
9	TMDS Data0-	19	Hot Plug Detect
10	TMDS Clock+		



PRODUCT SPECIFICATIONS (continued)

Recommended Signal List

With HDMI input

	Signal mode			Horizontal	Dot clock	
No.	Signal Name	Resolution	Vertical frequency (Hz)	frequency (kHz)	frequency (MHz)	Remarks
1	VGA	640 X 480	59.94	31.47	25.18	CEA-861D
2	576i	720(1440) X 576	50.00	15.63	27.00	CEA-861D
3	480i	720(1440) X 480	59.94	15.73	27.00	CEA-861D
4	576p	720 X 576	50.00	31.25	27.00	CEA-861D
5	480p	720 X 480	59.94	31.47	27.00	CEA-861D
6	1080i/50	1920 X 1080	50.00	28.13	74.25	CEA-861D
7	1080i/60	1920 X 1080	60.00	33.75	74.25	CEA-861D
8	720p/50	1280 X 720	50.00	37.50	74.25	CEA-861D
9	720p/60	1280 X 720	60.00	45.00	74.25	CEA-861D
10	1080p/50	1920 X 1080	50.00	56.25	148.50	CEA-861D
11	1080p/60	1920 X 1080	60.00	67.50	148.50	CEA-861D
12	1080p/24	1920 X 1080	24.00	27.00	74.25	CEA-861D

With RGB input

Timing Name	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Frequency (MHz)	Sync Polarity (H/V)	Remarks
640 x 400 @ 70Hz	31.469	70.086	25.175	- / +	VGA
640 x 480 @ 60Hz	31.469	59.940	25.175	- / -	VGA
800 x 600 @ 60Hz	37.879	60.317	40.000	+ / +	VESA
1024 x 768 @ 60Hz	48.363	60.004	65.000	- / -	VESA
1280 x 768 @ 60Hz	47.776	59.870	79.500	- / +	VESA / WXGA Mode : 1280x768
1280 x 1024 @ 60Hz	63.981	60.020	108.00	+ / +	VESA
1360 x 768 @ 60Hz	47.712	60.015	85.500	+ / +	VESA / WXGA Mode : 1360x768

• The type of video board or the connecting cable used may not allow for correct displays adjustment of Horizontal Position, Vertical Position, Horizontal Clock and Clock Phase.

• The unit differentiates the signal modes according to the horizontal and vertical frequencies and the horizontal and vertical sync signal polarities. Note that different signals having all these elements alike may be handled as the same signal.

Dimensions 37"

Unit: Inch/(mm)









Dimensions 42"

Unit: Inch/(mm)

1-3/8 (35.0) Min 1-9/16 (39.9) Max

12-3/16 (310)







Dimensions 47"

19-12/16 (502)







Unit: Inch/(mm)

SERVICE INFORMATION

800.HITACHI (800.448.2244)

Operational, hook up and warranty questions for your product.

Monday ~ Sunday 8:00 am - 8:30 pm CST

www.hitachi.us/tv

HITACHI HOME ELECTRONICS (AMERICA), INC.

HITACHI has made every effort to assure you hours of trouble free operation from your Hitachi product. Should you require service assistance with OPERATIONAL, HOOK UP, TECHNICAL ASSISTANCE OR WARRANTY SUPPORT, please contact our Support Hotline at 800. HITACHI (800.448.2244).

Our Support Hotline will provide you with the assistance you need and if necessary the location of the nearest Authorized Service Facility in your area. Please present proof of purchase and/or delivery receipts to the Hitachi Authorized Service Facility and service will be rendered in accordance with the terms of the limited warranty as stated on your warranty card or operating guide.

Hitachi Home Electronics (America), Inc. Customer Service Support PO Box 3900 Peoria, IL 61612 customerservice.ce@hhea.hitachi.com



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HITACHI HOME ELECTRONICS (CANADA)

Should you have any questions regarding warranty, service, operation or technical assistance, please contact:

In Canada: 800.HITACHI (800.448.2244)

 Monday~ Friday
 9:00 am - 7:00 pm EST

 Saturday
 9:00 am - 5:00 pm EST

Pour de plus amples renseignements sur le service durant la période couverte par la garantie, sur le fonctionnement ou pour de l'assistance technique communiquez avec:

Au Canada: 800.HITACHI (800.448.2244)

Lundi~ Vendredi	9:00 am - 7:00 pm L'EST
Samedi	9:00 am - 5:00 pm L'EST

Hitachi Home Electronics (Canada) Customer Service Support PO Box 3900 Peoria, IL 61612

Customer Record

The MODEL NAME and SERIAL NUMBER of this product is located on the backcover and also on the RIGHT SIDE of the set. Please follow the next steps to find this information and then record it in the space provided below for use in case you call 800.HITACHI, they will require this information in order to give you the proper support.

- Look on the right side of the set
- Locate the label where it shows the information related to MODEL NAME and SERIAL #.
- 800.HITACHI will require this information in order to give you the proper support regarding your questions.



Model Name_____

LIMITED WARRANTY

Congratulations on your purchase of a new Hitachi display product.

Register your product online at www.hitachi.us/tv or mail the included warranty registration card:



SERVICE LOCATION: In-home warranty service, which includes either in-home repair or free pick-up and delivery (at Hitachi's option), applies to all Hitachi Products except: (i) 26-inch and smaller LCD Flat Panel Televisions or LCD Flat Panel Monitors; (ii) Products located outside the U.S.A. or Puerto Rico; (iii) Products located more than seventy-five (75) driving miles from Hitachi's nearest Authorized Service Facility. If the foregoing clauses (i), (ii), (iii) apply, then the Product owner will be responsible for bringing/delivering the Product to a Hitachi Authorized Service Facility and, following warranty service, retrieving the Product from such Authorized Service Facility.

Please call 800-HITACHI (800-448-2244) for operational, hook up, warranty questions or the location of your

Hitachi's website features a wealth of information on Hitachi products and technologies, as well as downloadable

SERIAL NO.

STATE

DATE OF PURCHASE

Support and Contact/Warranty Registration



Hitachi is a proud supporter of the Certified Service Center program. Businesses who display the CSC certification mark have demonstrated that they operate in accordance with the high standards of professionalism prescribed by the Consortium for Certified Service Centers.

IMPORTANT:

Before using or installing your Product, please complete this form and attach your sales receipt and retain them for your records. This will help facilitate proper warranty coverage.

Warranty Limitations

This Hitachi Limited Warranty does not cover:

- A. Any Product that has been modified or repaired in a manner not previously authorized by Hitachi in writing.
- B. Any Product whose serial number has been removed, altered, replaced, defaced or rendered illegible.

www.hitachi.us/tv

MODEL NO.

CITY

DEALER NAME

DEALER ADDRESS

- C. Any defect, malfunction, or failure caused by or resulting from improper or unauthorized service, maintenance or repair.
- D. Damage resulting from abuse, misuse, mishandling, neglect or damage caused by exposure to hostile operating environments such as areas containing dust and/or smoke.
- E. Damage caused by power surges, accidents, natural disasters or any other events or circumstances outside Hitachi's control.
- F. Any Product used in any manner inconsistent with the acceptable set-up, usage, safety or installation configurations identified in the Product's Operating Guide.
- G. Any Product used for purposes or applications, or subjected to operating conditions, other than those identified as acceptable in the Product's Operating Guide.
- H. Product repairs (including any product whose case has been opened), or part replacements provided or installed, by any person other than an Authorized Hitachi Service Facility Representative.

nearest Hitachi Authorized Service Facility or Parts Distributor.

Visit our website and register your product online:

To register your new Hitachi display product online, go to:

operating guides and other useful information.

- I. Improper uncrating, set-up or installation or any misadjustments caused by user-operated controls.
- J. Any labor or costs associated with removing the Product from a custom cabinet or other specialized product installation that impedes direct and
- immediate removal of the Product from the owner's premises (must be arranged and paid by the owner). K. Product cabinets, cabinet parts, knobs, batteries or accessories.
- K. Product cabinets, cabinet parts, knobs, batteries or accessories.
- L. Product screens that have been cleaned by any method other than as specified in the Product's Operating Guide.
 M. Normal usage, degraded brightness caused by backlight aging and/or cell defects or ordinary wear and tear, including, without limitation, scratches or marks on the Product's screen, cabinet or the appearance of bright or dark screen pixels.
- N. Any Product returned for service that is damaged due to improper packaging, mishandling or shipping. (IMPORTANT: When shipping any Product to a Hitachi Authorized Service Centers, Product owner must package it securely in the original shipping container or its equivalent to prevent damage. The Product must be returned with the shipping charges prepaid and proof of purchases included in the shipping container. Failure to properly package such product during such shipment will void all warranties.)
- O. Any Product purchased or serviced outside the United States of America and Puerto Rico.
- P. Any Product that has been used for commercial purposes.

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