# **PRO-1120HD PRO-920HD**

# ELITE







Register Your Product on WWW.pioneerelectronics.com

# **IMPORTANT**



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 sufficient magnitude to constitute a risk of electric shock to persons.



CAUTION:

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

# **IMPORTANT SAFETY INSTRUCTIONS**

- 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 dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 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.
- 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 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.

## Note to CATV system installer.

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, 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.

**WARNING:** THE APPARATUS IS NOT WATER-PROOFS, TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE AND DO NOT PUT ANY WATER SOURCE NEAR THIS APPARATUS, SUCH AS VASE, FLOWER POT, COSMET-ICS CONTAINER AND MEDICINE BOTTLE ETC.

**WARNING:** Handling the cord on this product or cords associated with accessories sold with the product will expose you to lead, a chemical known to the State of California and other governmental entities to cause cancer and birth defects or other reproductive harm. *Wash hands after handling.* 

**NOTE:** This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment 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:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

# Information to User

Alteration or modifications carried out without appropriate authorization may invalidate the user's right to operate the equipment.

# [For Canadian model]

This Class B digital apparatus complies with Canadian ICES-003.

# CAUTION:

This product satisfies FCC regulations when shielded cables and connectors are used to connect the unit to other equipment. To prevent electromagnetic interference with electric appliances such as radios and televisions, use shielded cables and connectors for connections.

# FEDERAL COMMUNICATIONS COMMISSION DECLARATION OF CONFORMITY

This device complies with part 15 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.

Product Name: Plasma Display System (Plasma Display) (Media Receiver) Model Number: **PRO-1120HD** PRO-920HD (PRO-505PU) (PRO-435PU) (PRO-R05U) (PRO-R05U) Product Category: Class B Personal Computers & Peripherals Responsible Party Name: PIONEER ELECTRONICS (USA), INC., Customer Support Div. Address: P.O. BOX 1760, LONG BEACH, CA., 90801-1760 U.S.A. Phone: (800) 421-1625 For Business Customer URL http://www.PioneerUSA.com

**IMPORTANT NOTICE:** The serial number for this equipment is located on the rear panel. Please write this serial number on your enclosed warranty card and keep it in a secure area. This is for your security.

**WARNING:** Be sure to plug this equipment into a grounding-type AC outlet.

# Thank you for buying this Pioneer product.

Please read through these operating instructions so you will know how to operate your model properly. After you have finished reading the instructions, put them away in a safe place for future reference.

In some countries or regions, the shape of the power plug and power outlet may sometimes differ from that shown in the explanatory drawings. However the method of connecting and operating the unit is the same.

# **01 Important User Guidance Information**

#### **02 Safety Precautions**

#### **03 Operational Precautions**

## **04 Supplied Accessories**

Plasma Display	1	1
Media Receiver		

# **05 Part Names**

Plasma Display	1	2
Media Receiver	1	2
Remote control unit	1	4

## **06 Preparation**

Installing the Plasma Display	15
Installing the Media Receiver	16
Installing the Media Receiver vertically	16
Connecting the system cable	
Routing cables	
Preparing the remote control unit	
Inserting batteries	
Cautions regarding batteries	
Allowed operation range of the remote	
control unit	20
Cautions regarding the remote control unit	
Cable connections for watching digital and/or	
conventional TV channels	21
Connecting VHF/UHF antennas and a Cable	
Converter	21
Cable connections for watching digital	
TV channels over air (VHF/UHF)	21
Connecting VHF/UHF antennas	
Switching between antenna A and B	
Inserting the cable card	
Connecting the power cord	

#### **07 Basic Operations**

Turning on the power (Standby)	24
Turning off the power (Standby)	24
Watching TV channels	25
Selecting the antenna	25
Changing channels	25
Changing the volume and sound	26
Viewing a channel banner	26
Using the POD service	27
Changing the language	27
Setting MTS/SAP mode	27

Using the multiscreen functions	28
Splitting the screen	28
Freezing images	29

#### **08 Menu Setup**

Menu configuration	. 30
AV mode menus	
PC mode menus	. 30
Menu operations	. 30

## **09 Tuner Setup**

Setting up TV channels	.31
Using Auto Channel Preset	
Setting for skipping unwanted channels	. 31
Setting up TV channels manually	
Naming TV channels	
Checking signal strength	
Checking the Cable Card ID	
Enabling data acquisition	
Parental Control	
Changing the password	
Clearing the password	
Activating the Parental Control	. 34
Setting the voluntary movie rating system	
(MPAA)	. 34
Setting the TV ratings	
Setting the TV Parental Guidelines (TV Guidelines)	. 35
Blocking Not Rated TV programs	. 35
Canadian rating systems	. 36
Setting Canadian English ratings	
Setting Canadian French ratings	. 37
Temporarily deactivating the Parental Control	. 37
Setting your favorite channels	. 37
Setting up closed captions	. 37
Activating the closed caption	
Selecting the type of conventional closed captions .	
Selecting digital closed captions	. 38
Selecting digital closed caption parameters	
Clock Setting	

# Contents

# **10 Adjustments and Settings**

Sleep Timer	40
AV Selection	
Picture adjustments	
Pro Adjust	41
Color Management	42
Sound adjustments	43
FOCUS	43
Front Surround	43
Power Control	44
Energy Save	44
No Signal off (AV mode only)	44
No Operation off (AV mode only)	44
Power Management (PC mode only)	44
Adjusting image positions (AV mode only)	45
Adjusting image positions and clock automatically	
(PC mode only)	45
Adjusting image positions and clock manually	
(PC mode only)	45
Selecting a screen size	46
Changing the brightness at both sides of the screen	
(Side Mask)	
Language setting	47

# **11 Timer Presetting**

Presetting TV programs using the timer	3
Priority rules for overlapped presettings	9

# 12 Enjoying through External Equipment

Watching a DVD image	50
Connecting a DVD player	
Displaying a DVD image	
Watching a VCR image	
Connecting a VCR	
Displaying a VCR image	
Using HDMI Input	
Connecting HDMI equipment	51
Enjoying a game console or watching camcorder	
images	52
Connecting a game console or camcorder	
Displaying an image of the game console or	
camcorder	52
Recording digital TV programs using a VCR or	
DVD recorder	52
Avoiding unwanted feedback	52
Connecting a recorder	

Connecting other audio equipment	53
Connecting an AV receiver	53
Watching a D-VHS image	
What is i.LINK?	
Which i.LINK devices are connectable?	
What can be recorded through i.LINK?	
Connecting D-VHS recorders	54
When connecting a single D-VHS recorder	54
When connecting two D-VHS recorders	
Displaying a D-VHS image	
Useful and important notification	
Setting up for controlling a D-VHS recorder	
Editing the i.LINK list	56
Setting up for i.LINK standby	57
Operating the control panel screen	57
Watching an image from a personal computer	
Connecting a personal computer	
Displaying an image from a personal computer	
Computer compatibility chart	
Connecting the VCR controller	59
The lists of controllable recording	
equipment manufactures	60
Connecting control cords	
About SR+	61

# **13 Useful Remote Control Features**

...

Ð

Learning function of the remote control unit	62
Using the learning function	62
Presetting manufacture codes	62
Manufacture codes	63
Using the remote control unit to control other	
devices	64
Receiver control buttons	64
Cable control buttons	65
SAT control buttons	
VCR control buttons	67
DVD/DVR control buttons	

# 14 Appendix

Iroubleshooting	 69
Specifications	 79

In order to obtain maximum enjoyment from this Pioneer PureVision PRO-1120HD/PRO-920HD Plasma Display System, please first read this information carefully.

With the Pioneer PureVision PRO-1120HD/PRO-920HD, you can be assured of a high quality Plasma Display System with longlife and high reliability. To achieve images of exceptional quality, this Pioneer Plasma Display System incorporates state-of-theart design and construction, as well as very precise and highly advanced technology.

The Pioneer PureVision PRO-1120HD/PRO-920HD incorporates the latest in color filter technology – 1<sup>st</sup> Surface Pure Color Filter. This improves the color / picture reproduction of these models as compared to previous models. It also eliminates the need for a physical glass panel to be placed in front of the plasma panel, which furthers Pioneer's continued goal of reducing environmental waste in consumer electronics, now during the manufacturing process and in the future during the recycling process.

Over the course of its lifetime, the luminosity of the Pioneer PRO-1120HD/PRO-920HD Plasma Display System will diminish very slowly, such as with all phosphor-based screens (for example, a traditional tube-type television). To enjoy beautiful and bright images on your Pioneer Plasma Display System for many years to come, please carefully read and follow the usage guidelines below.

#### **U**sage guidelines

All phosphor-based screens (including conventional tube-type televisions) can be affected by displaying static images for a prolonged period. Plasma Display Systems are no exception to this rule. After-image and permanent effects on the screen can be avoided by taking some basic precautions. By following the recommendations listed below, you can ensure longer and satisfactory results from your plasma:

- Whenever possible, avoid frequently displaying the same image or virtually still moving pictures (e.g. closed-captioned images or video game images which have static portions).
- Avoid viewing the On Screen Display for extended periods, from a DVD player, VCR, and all other components.
- Do not leave the same picture freeze-framed or paused continuously over a long period of time, when using the still picture mode from a TV, VCR, DVD player or any other component.
- Images which have both very bright areas and very dark areas side by side should not be displayed for a prolonged period of time.
- When playing a game, the "GAME" mode setting within "AV Selection" is strongly recommended. However, please limit its use to less than 2 hours at a time.
- After playing a game, or displaying a PC image or any still image, it is best to view a normal moving picture in the "WIDE" or "FULL" screen setting for over 3 times longer than the previous still/moving image.
- After using the Plasma Display System, always switch the display to "STANDBY" mode.

#### Installation guidelines

The Pioneer PureVision PRO-1120HD/PRO-920HD Plasma Display System incorporates a very thin design. To ensure safety, please take the proper measures to mount or install the Plasma Display, in order to prevent the unit from tipping over in the event of vibration or accidental movement.

This product should be installed by using only parts and accessories designed by PIONEER. Use of accessories other than the PIONEER stand or installation bracket may result in instability, and could cause injury. For custom installation, please consult the dealer where the unit was purchased. To ensure correct installation, experienced and qualified experts must install the unit. PIONEER will not be held responsible for accident or damage caused by the use of parts and accessories manufactured by other companies.

To avoid malfunction and overheating when installing, make sure that the vents on the main unit are not blocked. To ensure proper heat emission:

- Distance the unit slightly from other equipment, walls, etc. For the minimum space required around the unit, see pages 15 to 16.
- Do not fit the unit inside narrow spaces where ventilation is poor.
- Do not cover with a cloth, etc.
- Clean the vents on the sides and rear of the unit to remove dust build-up by using a vacuum cleaner set to its lowest suction setting.
- Do not place the product on a carpet or blanket.
- Do not leave the product tilted over except the case of vertical installation of the Media Receiver.
- Do not reverse the product.

Using the unit without proper ventilation may cause the internal temperature to rise, and could result in possible malfunction. When the surrounding or internal temperature exceeds a certain degree, the display will automatically power off in order to cool the internal electronics and prevent a hazardous occurrence.

Malfunction can be caused by many factors: inappropriate installation site, improper assembly/installation/mounting, improper operation of or modifications made to this product. However, PIONEER cannot be held responsible for accidents or malfunction caused by the above.

# 💋 ΝΟΤΕ

The following are typical effects and characteristics of a phosphor-based matrix display and as such, are not covered by the manufacturer's limited warranties:

- Permanent residual images upon the phosphors of the panel.
- The existence of a minute number of inactive light cells.
- Panel generated sounds, examples: Fan motor noise, and electrical circuit humming / glass panel buzzing

# 

# Panel sticking and after-image lag

• Displaying the same images such as still images for a long time may cause after-image lagging. This may occur in the following two cases.

# 1. After-image lagging due to remaining electric load

When image patterns with very high peak luminance are displayed more than 1 minute, after-image lagging may occur due to the remaining electric load. The after-images remaining on the screen will disappear when moving images are displayed. The time for the after-images to disappear depends on the luminance of the still images and the time they had been displayed.

# 2. After-image (lag image) due to burning

Avoid displaying the same image on the Plasma Display continuously over a long period of time. If the same image is displayed continuously for several hours, or for shorter periods of time over several days, a permanent after-image may remain on the screen due to burning of the fluorescent materials. Such images may become less noticeable if moving images are later displayed, but they will not disappear completely.

• The Energy save function can be set to help prevent damage from screen burning (see page 44).

# About operations through i.LINK

PIONEER shall not always assure normal video/audio recording or playback when a D-VHS is operated through i.LINK.

# 

DO NOT PLACE THIS PRODUCT ON AN UNSTABLE CART, STAND, TRIPOD, BRACKET, OR TABLE. THE PRODUCT MAY FALL, CAUSING SERIOUS PERSONAL INJURY AND SERIOUS DAMAGE TO THE PRODUCT. USE ONLY WITH A CART, STAND, TRIPOD, BRACKET, OR TABLE RECOMMENDED BY THE MANUFACTURER, OR SOLD WITH THE PRODUCT. FOLLOW THE MANUFACTURE'S INSTRUCTIONS WHEN INSTALLING THE PRODUCT AND USE MOUNTING ACCESSORIES RECOMMENDED BY THE MANUFACTURER.

A PRODUCT AND CART COMBINATION SHOULD BE MOVED WITH THE CARE. QUICK STOPS, EXCESSIVE FORCE, AND UNEVEN SURFACES MAY CAUSE THE PRODUCT AND CART COMBINATION TO OVERTURN.



01

Electricity is used to perform many useful functions, but it can also cause personal injuries and property damage if improperly handled. This product has been engineered and manufactured with the highest priority on safety. However, improper use can result in electric shock and/or fire. In order to prevent potential danger, please observe the following instructions when installing, operating and cleaning the product. To ensure your safety and prolong the service life of your product, please read the following precautions carefully before using the product.

- 1. Read instructions—All operating instructions must be read and understood before the product is operated.
- 2. Keep this manual in a safe place—These safety and operating instructions must be kept in a safe place for future reference.
- 3. Observe warnings—All warnings on the product and in the instructions must be observed closely.
- 4. Follow instructions—All operating instructions must be followed.
- 5. Cleaning—Unplug the power cord from the AC outlet before cleaning the product. Use a damp cloth to clean the product. Do not use liquid cleaners or aerosol cleaners.
- 6. Attachments—Do not use attachments not recommended by the manufacturer. Use of inadequate attachments can result in accidents.
- 7. Water and moisture—Do not use the product near water, such as bathtub, washbasin, kitchen sink and laundry tub, swimming pool and in a wet basement.
- 8. Stand—Do not place the product on an unstable cart, stand, tripod or table. Placing the product on an unstable base can cause the product to fall, resulting in serious personal injuries as well as damage to the product. Use only a cart, stand, tripod, bracket or table recommended by the manufacturer or sold with the product. When mounting the product on a wall, be sure to follow the manufacturer's instructions. Use only the manufacturer.
- 9. When relocating the product placed on a cart, it must be moved with utmost care. Sudden stops, excessive force and uneven floor surface can cause the product to fall from the cart.



- 10. Ventilation—The vents and other openings in the cabinet are designed for ventilation. Do not cover or block these vents and openings since insufficient ventilation can cause overheating and/or shorten the life of the product. Do not place the product on a bed, sofa, rug or other similar surface, since they can block ventilation openings. This product is not designed for built-in installation; do not place the product in an enclosed place such as a bookcase or rack, unless proper ventilation is provided or the manufacturer's instructions are followed.
- 11. Power source—This product must operate on a power source specified on the specification label. If you are not sure of the type of power supply used in your home, consult your dealer or local power company.
- 12. Power cord protection—The power cords must be routed properly to prevent people from stepping on them or objects from resting on them. Check the cords at the plugs and product.

- 13. The plasma Display used in this product is made of glass. Therefore, it can break when the product is dropped or applied with impact. Be careful not to be injured by broken glass pieces in case the plasma Display breaks.
- 14. Overloading—Do not overload AC outlets or extension cords. Overloading can cause fire or electric shock.
- 15. Entering of objects and liquids—Never insert an object into the product through vents or openings. High voltage flows in the product, and inserting an object can cause electric shock and/or short internal parts. For the same reason, do not spill water or liquid on the product.
- 16. Servicing—Do not attempt to service the product yourself. Removing covers can expose you to high voltage and other dangerous conditions. Request a qualified service person to perform servicing.
- 17. Repair—If any of the following conditions occurs, unplug the power cord from the AC outlet, and request a qualified service person to perform repairs.
  - a. When the power cord or plug is damaged.
  - b. When a liquid was spilled on the product or when objects have fallen into the product.
  - c. When the product has been exposed to rain or water.
  - d. When the product does not operate properly as described in the operating instructions.
     Do not touch the controls other than those described in the operating instructions. Improper adjustment of controls not described in the instructions can cause damage, which often requires extensive adjustment work
  - e. When the product has been dropped or damaged.

by a qualified technician.

- f. When the product displays an abnormal condition. Any noticeable abnormality in the product indicates that the product needs servicing.
- 18. Replacement parts—In case the product needs replacement parts, make sure that the service person uses replacement parts specified by the manufacturer, or those with the same characteristics and performance as the original parts. Use of unauthorized parts can result in fire, electric shock and/or other danger.
- 19. Safety checks—Upon completion of service or repair work, request the service technician to perform safety checks to ensure that the product is in proper operating condition.
- 20. Wall or ceiling mounting—When mounting the product on a wall or ceiling, be sure to install the product according to the method recommended by the manufacturer.
- 21. Heat sources—Keep the product away from heat sources such as radiators, heaters, stoves and other heat- generating products (including amplifiers).
- 22. Unplug the power cord from the AC outlet before installing the speakers.
- 23. Never expose the screen of the Plasma Display to a strong impact, for example, by hitting it. The screen may be broken, resulting in fire or personal injury.
- 24. Do not expose the Plasma Display to direct sunlight for a long period of time. The optical characteristics of the front protection panel changes, resulting in discoloration or warp.
- 25. The Plasma Display weighs about 32.8 kg (72.3 lbs.) for the PRO-505PU and about 26.8 kg (59.1 lbs.) for the PRO-435PU. Because it has small depth and is unstable, unpack, carry, and install the product with one more person at least and use the handles.

# **Installation Precautions**

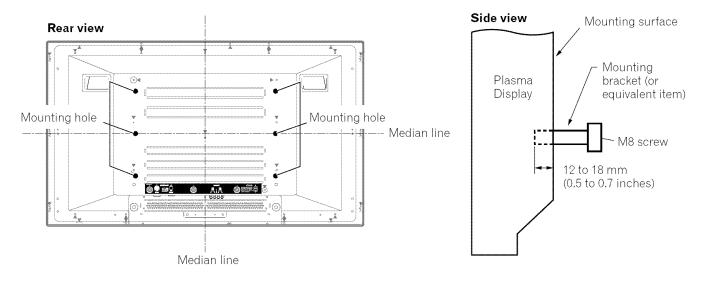
Observe the following precautions when installing with any items such as the optional stand.

#### When using the optional stand, brackets, or equivalent items

- Ask your dealer to perform the installation.
- Be sure to use the supplied bolts.
- For details, see the instruction manual that comes with the optional stand (or equivalent items).

#### When using other items

- Consult your dealer.
- The following six mounting holes can be used for the installation:



# 

- Be sure to use four or more mounting holes symmetrical to the vertical and horizontal median lines.
- Use M8 screws, which go 12 to 18 mm (0.5 to 0.7 inches) in depth from the mounting surface of the Plasma Display. See the side view above.
- Be careful not to block the ventilation opening at the rear of the Plasma Display.
- Be sure to install the Plasma Display on a flat surface because it contains glass.
- The screw holes other than the above are to be used only for the specified products. Never use them for mounting non-specified products.
- Do not mount or remove the Plasma Display to or from the stand, with speakers attached.

# **ΝΟΤΕ**

- It is strongly recommended to use the optional PIONEER mounting products.
- PIONEER shall not be liable for any personal injury or product damage that results from the use of mounting items other than the optional PIONEER products.

02

En

# 

PIONEER bears no responsibility for any damages arising from incorrect use of the product by you or other people, malfunctions when in use, other product related problems, and use of the product except in cases where the company must be liable.

# **Plasma Display protection function**

When still images (such as photos and computer images) stay on the screen for an extended period of time, the screen will be slightly dimmed. This is because the protection function of the Plasma Display automatically adjusts the brightness to protect the screen when detecting still images; so this does not designate malfunction. The screen is dimmed when a still image is detected for about three minutes.

## **Infrared** rays

The Plasma Display releases infrared rays because of its characteristics. Depending on how the Plasma Display is in use, the remote controls of nearby equipment may be adversely affected or wireless headphones using infrared rays are interfered by noise. If this is the case, place that equipment at a location where its remote control sensor is not affected.

## **Radio interference**

While this product meets the required specifications, it emits a small amount of noise. If you place such equipment as an AM radio, personal computer, and VCR close to this product, that equipment may be interfered. If this happens, place that equipment far enough from this product.

## Fan motor noise

When ambient temperature of the Media Receiver becomes high, the rotation speed of the cooling fan motor increases. This may make you feel that the fan motor is noisy at such an occasion.

The fan motor keeps running until the power cord of the Media Receiver is removed from a wall outlet.

# Do not attach such items as labels and tape to the product.

• This may result in the discoloration or scratch of the cabinet.

## When not using the product for a long period of time

• If you do not use the product for a long period of time, the functions of the product may be adversely affected. Switch on and run the product occasionally.

#### Condensation

• Condensation may take place on the surface or inside of the product when the product is rapidly moved from a cold place to a warm place or just after a heater is switched on in winter morning, for example. When condensation takes place, do not switch on the product and wait until condensation disappears. Using the product with condensation may result in malfunction.

#### **Cleaning the screen**

- When cleaning the screen of this product, gently wipe it with a soft dry cloth; the supplied cleaning cloth or other similar cloths (e.g., cotton and flannel). If you use a hard cloth or rub the screen hard, the surface of the screen will be scratched.
- If you clean the surface of the screen with a wet cloth, water droplets on the surface may enter into the product, resulting in malfunction.

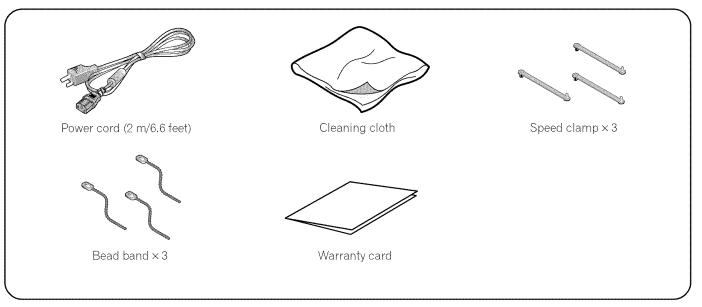
#### **Cleaning the cabinet**

- When cleaning the cabinet of this product, gently wipe it with a soft dry cloth; the supplied cleaning cloth or other similar cloths (e.g., cotton and flannel). If you use a hard cloth or rub the cabinet hard, the surface of the cabinet will be scratched.
- The cabinet of this product is mostly composed of plastic. Do not use chemicals such as benzine or thinner to clean the cabinet. Using these chemicals may result in quality deterioration or coating removal.
- Do not expose the product to volatile gas or fluid such as pesticide. Do not make the product contact with rubber or vinyl products for a long period of time. The effect of plasticizer in the plastic may result in quality deterioration or coating removal.
- If you clean the surface of the cabinet with a wet cloth, water droplets on the surface may enter into the product, resulting in malfunction.

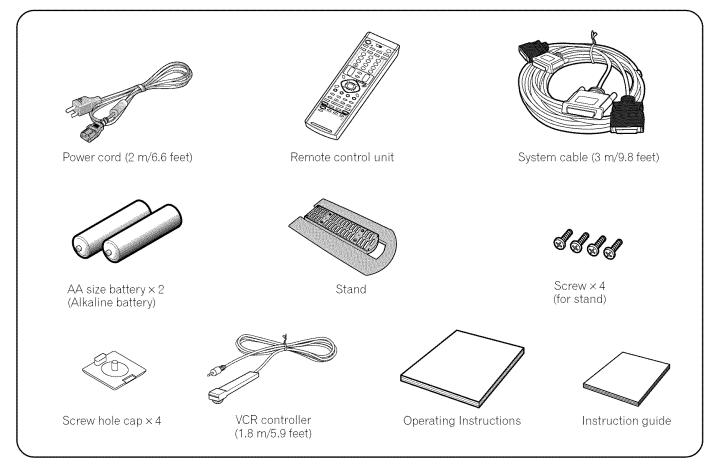
## Handles at the rear of the Plasma Display

- Do not remove the handles from the rear of the Plasma Display.
- When moving the Plasma Display, ask another person for help and use the handles attached to the rear of the Plasma Display. Do not move the Plasma Display by holding only a single handle. Use the handles as shown.
- Do not use the handles to hang the product when installing or carrying the product, for example. Do not use the handles for the purpose of preventing the product from tilting over.

# **Plasma Display**



# **Media Receiver**

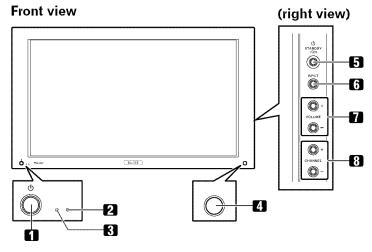


# 💋 ΝΟΤΕ

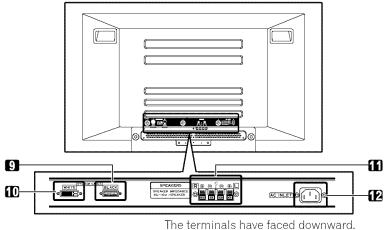
• Always use the power cord supplied with the Plasma Display and the one supplied with the Media Receiver for each respective unit.

English

# **Plasma Display**



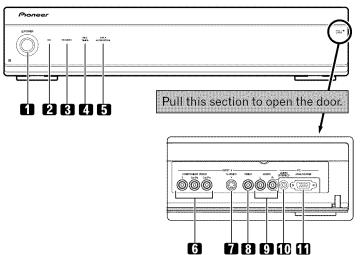
**Rear view** 



- 1 ① button
- 2 STANDBY indicator Lights red when the unit is standby mode. (page 24)
- 3 POWER ON indicator Lights green when the Plasma Display is operating. (page 24)
- 4 Remote control sensor
- 5 STANDBY/ON button
- 6 INPUT button
- 7 VOLUME +/- buttons
- 8 CHANNEL +/- buttons
- 9 SYSTEM CABLE terminal (BLACK)
- 10 SYSTEM CABLE terminal (WHITE)
- 11 SPEAKER (right/left) terminals
- 12 AC INLET terminal

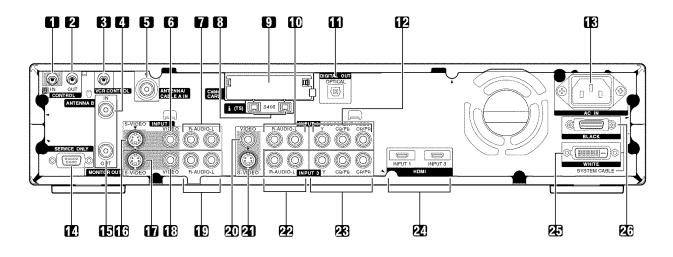
# Media Receiver

## Front view



- 1 **POWER** button
- 2 POWER ON indicator
- 3 STANDBY indicator
- 4 REC TIMER indicator
- 5 DATA ACQUISITION indicator
- 6 INPUT 4 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
- 7 INPUT 4 terminal (S-VIDEO)
- 8 INPUT 4 terminal (VIDEO)
- 9 INPUT 4 terminals (AUDIO)
- 10 PC INPUT terminal (AUDIO)
- 11 PC INPUT terminal (ANALOG RGB)

# Rear view

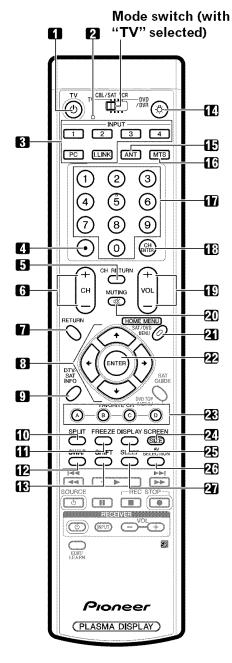


- 1 CONTROL IN terminal
- 2 CONTROL OUT terminal
- 3 VCR CONTROL terminal
- 4 ANTENNA B IN terminal
- 5 ANTENNA/CABLE A IN terminal
- 6 INPUT 2 terminal (VIDEO)
- 7 INPUT 2 terminals (AUDIO)
- 8 i.LINK terminals
- 9 Cable CARD slot
- 10 INPUT 1 terminals (AUDIO)
- 11 DIGITAL OUT terminal (OPTICAL)
- 12 INPUT 1 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
- 13 AC IN terminal

- 14 RS-232C terminal (used for factory setup)
- **15** ANTENNA B OUT terminal
- 16 INPUT 2 terminal (S-VIDEO)
- 17 MONITOR OUT terminal (S-VIDEO)
- 18 MONITOR OUT terminal (VIDEO)
- 19 MONITOR OUT terminals (AUDIO)
- 20 INPUT 1 terminal (VIDEO)
- **21** INPUT 1 terminal (S-VIDEO)
- 22 INPUT 3 terminals (AUDIO)
- 23 INPUT 3 terminals (COMPONENT VIDEO: Y, CB/PB, CR/PR)
- 24 HDMI terminals (INPUT1/INPUT3)
- 25 SYSTEM CABLE terminal (WHITE)
- 26 SYSTEM CABLE terminal (BLACK)

English

# Remote control unit



# With the mode switch set to TV

- 1 **TV** <sup>(</sup>): Turns on the power to the Plasma Display or places it into standby mode.
- 2 Transmission confirmation LED
- 3 INPUT: Selects an input source of the Plasma Display. (INPUT 1, INPUT 2, INPUT 3, INPUT 4, PC, i.LINK)
- 4 •(dot): Enters a dot.
- 5 CH RETURN: Returns to the previous channel.

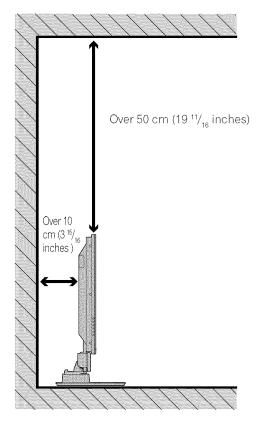
- 6 CH +/-: Selects the channel.
- 7 **RETURN**: Returns to the previous menu screen.
- 8 ↑/↓/↓/→: Selects a desired item on the menu screen.
- 9 DTV INFO: Shows more information on DTV programs.
- **10 SPLIT**: Switches the screen mode among 2screen, picture-in-picture, and single-screen.
- **11 FREEZE**: Freezes a frame from a moving image. Press again to cancel the function.
- **12 SWAP**: Switches between the two screens when in the 2-screen or picture-in-picture mode.
- **13 SHIFT**: Moves the location of the small screen when in the picture-in-picture mode.
- 14 ☆:When pressed, all buttons on the remote control unit will light. The lighting will turn off if no operations are performed within about 5 seconds. This button is used for performing operations in dark places.
- **15 ANT**: Selects the antenna (A, B). See pages 21 and 22 for details.
- 16 MTS: Selects the MTS/SAP.
- **17 0 9**: Selects the channel.
- 18 CH ENTER: Executes a channel number.
- **19 VOL +/-**: Sets the volume.
- 20 🗱 MUTING: Mutes the sound.
- 21 HOME MENU: Displays the menu screen.
- 22 ENTER: Executes a command.
- 23 FAVORITE CH (A, B, C, D): Selects any of the four preset channels. See page 37 for details to set the FAVORITE CH. While watching, you can toggle the set channels by pressing A, B, C and D.
- 24 SCREEN SIZE: Selects the screen size.
- 25 **DISPLAY**: Displays the channel information.
- 26 AV SELECTION: Selects audio and video settings. (AV mode: STANDARD, DYNAMIC, MOVIE, GAME, USER. PC mode: STANDARD, USER.)
- 27 SLEEP: Sets the sleep timer.

# **Μ**ΝΟΤΕ

- When using the remote control unit, point it at the Plasma Display.
- · See pages 62 to 68 for operating buttons not listed on this page.

English

# Installing the Plasma Display



# Locating

- Avoid direct sunlight. Maintain adequate ventilation.
- The length of the system cable used to connect the Plasma Display and the Media Receiver is about 3 m (9.8 feet).
- Because the Plasma Display is heavy, be sure to have someone help you when moving it.

# 

• If you place anything on the top of the Media Receiver it will not receive enough ventilation and will not operate properly.

# 🖉 ΝΟΤΕ

• Allow enough space around the upper and back parts when installing to ensure ventilation around the backside.

# Using the optional PIONEER stand

For details on installation, refer to the instruction manual supplied with the stand.



• This product may be used only with model PDK-1012 stand. Use with other stands may result in instability causing possible injury.

# Using the optional PIONEER speakers

For details on installation, refer to the instruction manual supplied with the speaker.

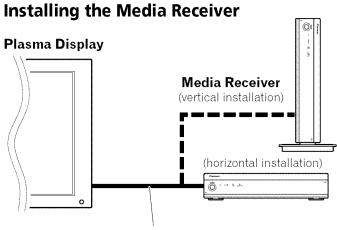


# **Operating Environment**

Operating environment temperature and humidity:  $+0^\circ C$  to  $+40^\circ C$  (+32°F to  $+104^\circ F);$  less than 85% RH (cooling vents not blocked)

Avoid installing at the following locations:

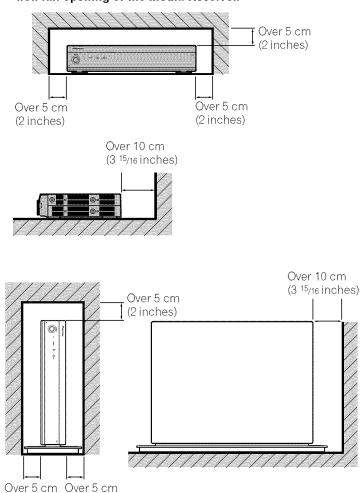
- Under direct exposure to sunlight
- Under strong artificial light
- In high humidity
- Poorly ventilated



System cable (approx. 3 m/9.8 feet)

# 

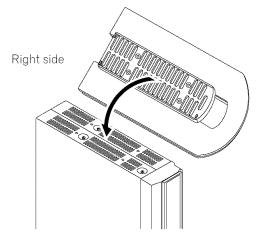
- Do not place a VCR or any other device on the top of the Media Receiver.
- When installing, allow enough space on the sides and above the Media Receiver.
- Do not block the side cooling vents or the rear ventilation fan opening of the Media Receiver.



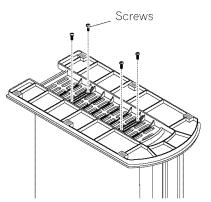
#### Installing the Media Receiver vertically

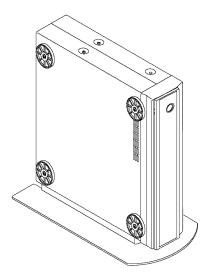
You can use the supplied stand to install the Media Receiver vertically.

1. Insert the stand into the side of the Media Receiver.



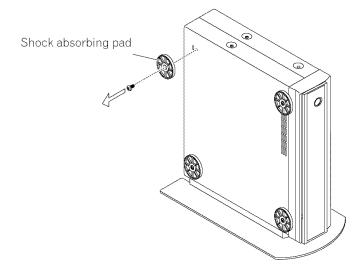
2. Secure the stand with the supplied screws.





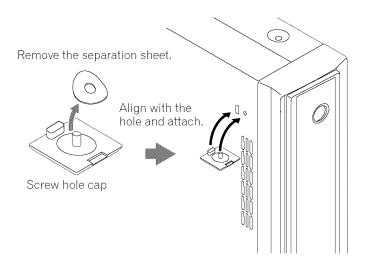
(2 inches) (2 inches)

3. Remove the shock absorbing pads.



Keep the shock absorbing pads and screws. They are required when you place the Media Receiver in the horizontal position.

# 4. Plug the screw holes using the supplied caps.



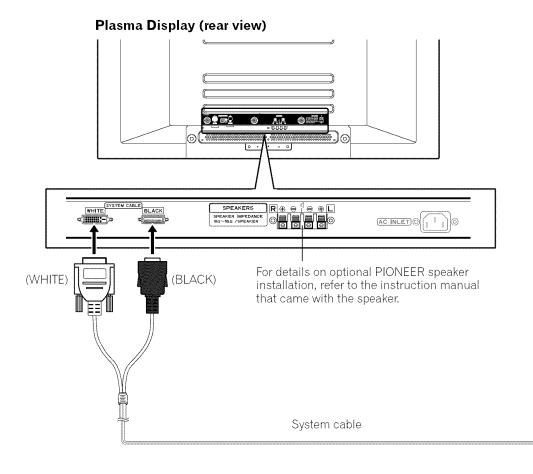
# 

• When you have installed the Media Receiver vertically, be sure to use the supplied stand. If you place the unit directly on the floor, the cooling vents will be blocked, resulting in mechanical failure.

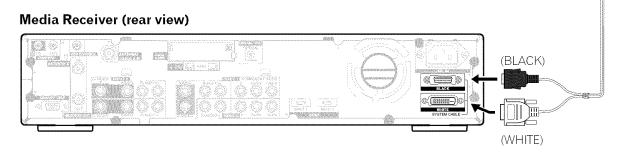
06

# Connecting the system cable

## Connecting the system cable to the Plasma Display



#### Connecting the system cable to the Media Receiver

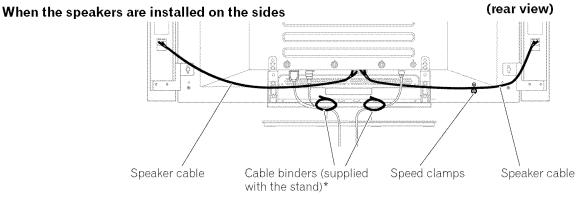


# 

• THESE SPEAKER TERMINALS CAN BE APPLIED WITH HAZARDOUS VOLTAGE WHEN YOU CONNECT OR DIS-CONNECT THE SPEAKER CABLES. TO PREVENT THE RISK OF ELECTRIC SHOCK, DO NOT TOUCH UNINSULATED PARTS BEFORE DISCONNECTING THE POWER CORD.

# **Routing cables**

Speed clamps and bead bands are supplied for bunching cables. Once properly bunched, follow the steps below to route the cables.

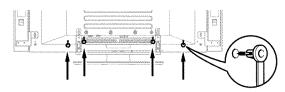


\* Cable binder

Using the cable binders supplied with the stand, put the speaker and system cables together so that the cables are invisible from the front. At that time be careful not to apply any force to the connection sections of the cables.

## Attaching speed clamps to the main unit

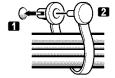
Attach the speed clamps using the 4 holes marked with  $\mathbf{1}$  below, depending on your routing system.



#### Attaching and removing speed clamps

Insert [1] into an appropriate hole on the rear of the Plasma Display and snap [2] into the back of [1] to lock the clamp. Speed clamps are designed to be difficult to undo once in place. Please attach them carefully.

Use pliers to twist the clamp 90°, pulling outward. The clamp may deteriorate over time and become damaged if removed.





06

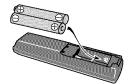
# Preparing the remote control unit

#### **Inserting batteries**

1 Open the battery cover.



2 Insert the supplied two AA size batteries.



- The battery polarities must correspond with the (+) and (-) indicators in the battery compartment.
- 3 Close the battery cover.



#### **Cautions regarding batteries**

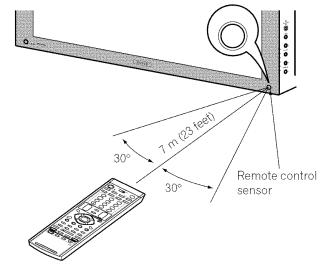
- The remote control unit cannot operate the system if the batteries in the unit are empty. When this happens, replace the batteries with new ones.
- Do not use manganese batteries. When you replace the batteries, use alkaline ones.
- Do not mix batteries of different types. Different types of batteries have different characteristics.
- Do not mix old and new batteries. Mixing old and new batteries can shorten the life of new batteries or cause chemical leakage in old batteries.
- Do not leave dead batteries in the remote control unit; chemical leakage will occur. If you find any chemical leakage, wipe thoroughly with a cloth.
- The batteries supplied with this product may have a shorter life expectancy due to storage conditions.
- If you will not use the remote control unit for an extended period of time, remove the batteries from it.

# 

• WHEN DISPOSING OF USED BATTERIES, BE SURE TO COMPLY WITH GOVERNMENT REGULATIONS AND ENVIRONMENTAL PROTECTION GUIDELINES THAT APPLY IN YOUR COUNTRY OR AREA.

# Allowed operation range of the remote control unit

Operate the remote control unit while pointing it toward the remote control sensor located at the bottom right of the front panel of the Plasma Display. The distance from the remote control sensor must be within 7 m (23 feet) and the angle relative to the sensor must be within 30 degrees in the right or left direction.



#### Cautions regarding the remote control unit

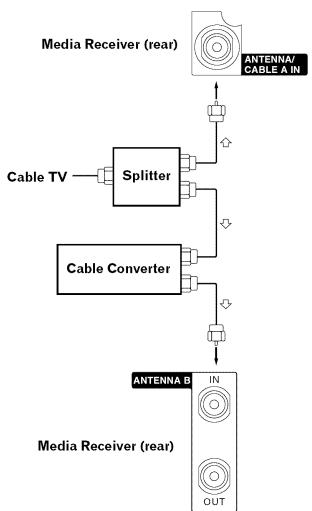
- Do not expose the remote control unit to shock, liquid, or high humidity.
- Do not place the remote control unit under direct sunlight; the unit may deform.
- The remote control unit may not work properly if the remote sensor window of the Plasma Display is under direct sunlight or strong lighting. In such case, change the angle of the lighting or Plasma Display, or operate the remote control unit closer to the remote sensor window.
- When any obstacle exists between the remote control unit and the remote control sensor, the remote control unit may not function.
- As the batteries become empty, the remote control unit can function within a shorter distance from the remote control sensor. Replace the batteries with new ones if necessary.
- The Plasma Display emits very weak infrared rays from its screen. If you place such equipment operated through infrared remote control as a VCR nearby, that equipment may not receive commands from its remote control unit properly or entirely. If this is the case, place that equipment at a location far enough from the Plasma Display.
- Depending on the installation environment, infrared rays from the Plasma Display may not allow this system to properly receive commands from the remote control unit or may shorten allowable distances between the remote control unit and the remote control sensor. The strength of infrared rays emitted from the screen differs, depending on images displayed on the screen.

# English

# Cable connections for watching digital and/or conventional TV channels

This system is equipped with two terminals for inputting TV broadcasting signals: ANTENNA/CABLE A IN and ANTENNA B. The ANTENNA/CABLE A IN terminal accepts both digital and conventional TV broadcasting signals while the ANTENNA B terminal accepts only conventional TV broadcasting signals. When using a cable TV to watch digital and/or conventional TV channels, connect to the ANTENNA/CABLE A IN terminal as shown. In addition, you may connect an antenna to the ANTENNA B terminal as shown; use an outdoor antenna to enjoy clearer pictures. If your outdoor uses a 75-ohm coaxial cable with an F-type connector, plug it into the antenna terminal at the rear of the Media Receiver.

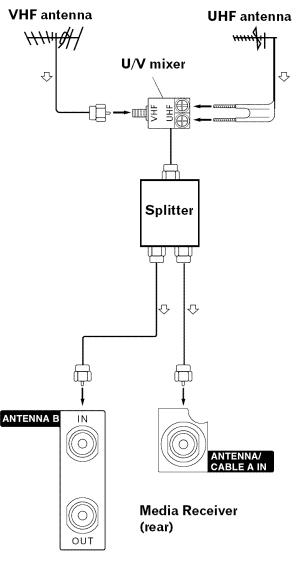
# Connecting VHF/UHF antennas and a Cable Converter



# Cable connections for watching digital TV channels over air (VHF/UHF)

If using VHF and UHF antennas to watch digital TV channels, connect the coaxial cables as shown.

# **Connecting VHF/UHF antennas**



<sup>💋</sup> ΝΟΤΕ

• Be sure to connect coaxial cables as shown above. Signal reception may fail if not properly connected.

# **ΝΟΤΕ**

• Be sure to connect coaxial cables as shown above. Signal reception may fail if not properly connected.

# Switching between antenna A and B

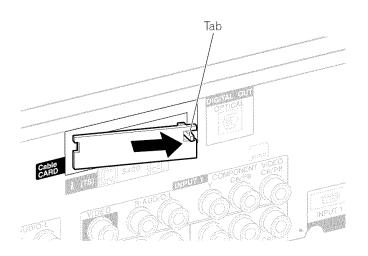
To watch broadcasts via the two antennas, you can select it by pressing **ANT** on the remote control unit.

- While watching a broadcast, press **ANT** to view the image received from the other antenna.
- Pressing ANT while watching in the 2-screen mode (TV image and video image) with TV selected will display the TV image of the other antenna.
- Pressing **ANT** while watching in the 2-screen mode with two TV images displayed will not have any effect.
- Pressing ANT while watching in the 2-screen mode with two video images displayed will switch the selected screen to a TV image.

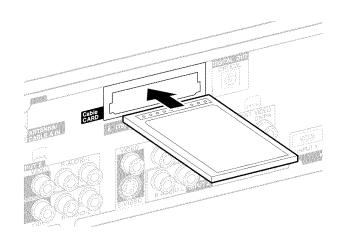
# Inserting the cable card

The Media Receiver is equipped with a slot for inserting a cable card. When you are watching digital and/or High Definition TV channels over cable, the card allows you to use the POD service provided by the cable TV company; the POD stands for Point of Deployment. This service presents various types of useful information, using HTML text.

- 1 Confirm that the ANTENNA/CABLE A IN terminal has been connected with the coaxial cable from the Cable Converter. See page 21.
- 2 Hold the tab of the slot cover on the rear of the Media Receiver, and remove the cover while releasing the tab's latch.



3 Insert the specified cable card into the Cable CARD slot as far as it goes.



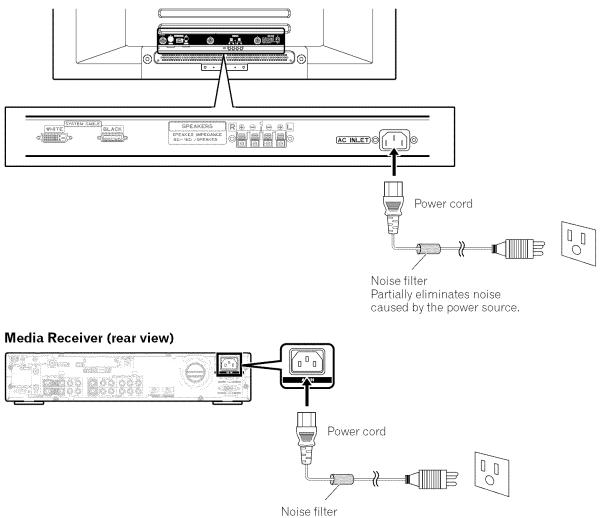


- Be sure to insert only the specified cable card.
- Do not insert a PCMCIA card.

# Connecting the power cord

Connect the power cord after all component connections have been completed.

# Plasma Display (rear view)



Partially eliminates noise caused by the power source.

# 

- Use only the supplied power cord.
- Be sure to use the specified power supply voltage; neglecting this can result in fire or electric shock.
- For the Plasma Display System, a three-core power cord with a ground terminal is used for efficiency protection. Always connect the power cord to a three-pronged outlet and make sure that the cord is properly grounded.



- Always turn off the power of the Plasma Display and Media Receiver when connecting the power cords.
- Disconnect the power cord from the power outlet when the Plasma Display System is not going to be used for a long period of time.

# Turning on the power (Standby)

- 1 Press 也 on the Plasma Display if the STANDBY indicator is off.
  - The STANDBY indicator on the Plasma Display lights up red.
- 2 Confirm that the STANDBY indicators light up red, and then press **TV** () on the remote control unit or **STANDBY/ON** on the Plasma Display or **POWER** on the Media Receiver to turn the system on.
  - The POWER ON indicators on the Plasma Display and Media Receiver light up green.

# 🖉 ΝΟΤΕ

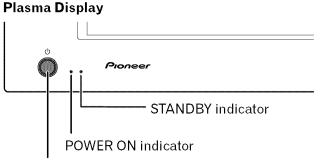
 In this manual, "system" means the Plasma Display Panel and Media Receiver.

# Turning off the power (Standby)

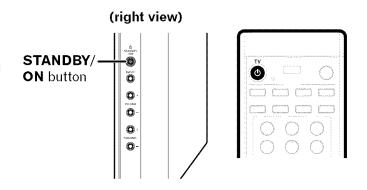
- 1 Press **TV** () on the remote control unit or **STANDBY/ON** on the Plasma Display or **POWER** on the Media Receiver.
  - The system enters the standby mode and the image on the screen disappears.
  - Both STANDBY indicators light up red.
  - It is recommended to place the system into the standby mode by pressing **TV** () on the remote control unit. This allows the system to automatically receive digital TV program information in the standby mode.

# 🖉 ΝΟΤΕ

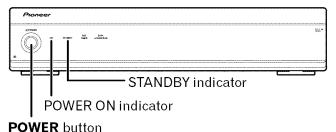
If you are not going to use this system for a long period of time, press
 O on the Plasma Display and remove the power cord from the power outlet.



心 button



## **Media Receiver**



# Plasma Display/Media Receiver status indicators

Indicator Status			System Status	
Plasma	Plasma Display Media Receiver		Receiver	
POWER ON	STANDBY	POWER ON	STANDBY	
۲		۲	*	Power to the Plasma Display and Media Receiver is off. Or the power cords have been disconnected.
*	0	×	*	Power to the system is on.
0	×	*		The system is in the standby mode.
٢	ی Flashing	۵	۶	The power cord has been disconnected from the Media Receiver.
٠	-	<b>@</b>	نې∹ Flashing	Power to the Plasma Display is off. Or the power cord has been disconnected from the Plasma Display.

For other than the above, see "Troubleshooting" on page 69.

# Watching TV channels

Unless you set up TV channels that you can watch under the current conditions, you cannot tune in those channels. For the procedure, see "Setting up TV channels" on page 31.

# **ΝΟΤΕ**

 When watching a digital TV program, you may see emergency alert messages scrolling at the top of the screen. Those messages are broadcasted by TV stations as necessary when in emergency situations.

## Selecting the antenna

After confirming that the Mode switch on the remote control unit has been set to "TV", press **ANT** on the remote control unit to select antenna A or B.

• Make this selection depending on the connections to the antenna input terminals on the Media Receiver (page 21).

## **Changing channels**

To increase the channel number, press **CH** + on the remote control unit. To decrease the channel number, press **CH** –.

- CHANNEL +/- on the Plasma Display operates the same as CH +/- on the remote control unit.
- Press CH RETURN to switch the currently tuned channel to the previously tuned channel.
   Press CH RETURN again to restore the currently tuned

channel.

#### Using 0 - 9 and • (dot) on the remote control unit

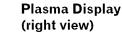
Select channels directly by pressing buttons  ${\bf 0}$  to  ${\bf 9}.$  To select subchannels, also use the  ${\bf \bullet}$  (dot) button.

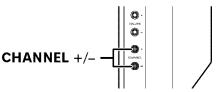
# EXAMPLE

- To select channel 5 (1-digit channel), press 5.
- To select channel 25 (2-digit channel), press 2 then 5.
- To select channel 125 (3-digit channel), press 1, 2, then 5.
- To select subchannel 10.01, press 1, 0, (dot), 0, then 1.
- To select subchannel 10.001 (for the cable TV), press 1, 0,
  (dot), 0, 0, then 1.

# **ΝΟΤΕ**

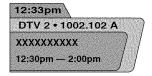
- After entering a channel or subchannel number, you may press **CH ENTER** to tune in the channel more quickly.
- Each time you change a channel, such a channel banner appears that shows information about the currently selected channel. To clear the channel banner, press **DTV INFO**. For more information about the channel banner, see "Viewing a channel banner" on page 26.







#### Channel banner



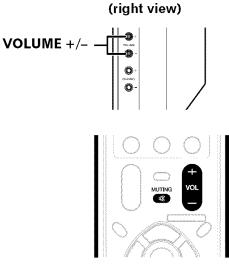
English

#### Changing the volume and sound

To increase the volume, press **VOL +** on the remote control unit. To decrease the volume, press **VOL -**.

- VOLUME +/- on the Plasma Display operates the same as VOL +/- on the remote control unit.
- To mute the sound output, press MUTING. "IX" appears on the screen. To quit muting, press MUTING again. Pressing VOL + also quits muting.

#### **Plasma Display**



#### Volume adjustment

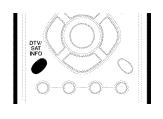


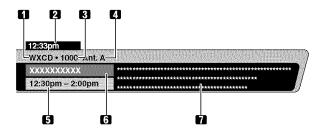




#### Viewing a channel banner

While watching a digital TV program, pressing **DTV INFO** causes the following banner to appear. Pressing **DTV INFO** again causes the banner to disappear.





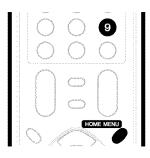
- 1 Station name
- 2 Current time
- 3 Channel number
- 4 Input (Ant. A or Ant. B)
- 5 Program time schedule
- 6 Program title
- 7 TV rating and program description (This may be unavailable for some programs.)

# 🖉 ΝΟΤΕ

- The above information is not displayed if not included in broadcast signals.
- If "
   <sup>\*</sup>
   <sup>\*</sup>
   is shown at the bottom right of the channel banner containing
   program description, press
   *↑ •* to scroll the program description.

# Using the POD service

If you have watched digital and/or High Definition TV channels over cable, you can use the POD service provided by the cable TV company. This service presents various types of useful information, using HTML text.



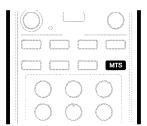
Press HOME MENU, 9, 9, then 9 to view the POD display.

# **ΝΟΤΕ**

• If you have enabled data acquisition using the menu, POD information is automatically acquired even when the system is in the standby mode. See page 32.

# Changing the language

If you have selected a digital TV program that provides multilanguage services, you can switch among the languages by pressing **MTS** on the remote control unit.



Each time you press MTS, the language switches.

# 💋 ΝΟΤΕ

- Switchable languages differ depending on the current broadcast.
- If the language selected through language setting is available when the channel or program is changed, you will hear that language.

# Setting MTS/SAP mode

When watching conventional TV programs, you may enjoy stereo sound and/or Secondary Audio Programs (SAP), using the Multi-channel Television Sound (MTS) function.

#### Stereo broadcasts

You can enjoy, for example, sports, shows, and concerts in dynamic stereo sound.

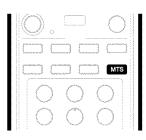
## SAP broadcasts

MAIN sound: The normal program soundtrack (either in mono or stereo).

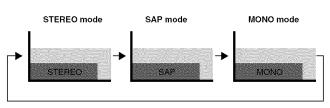
SAP sound: Listen to second language, supplementary commentary and other information. (SAP is mono sound.)

# 🖉 ΝΟΤΕ

- Conventional TV channels in this manual designate TV channels that are received through the conventional VHF/UHF frequencies or conventional cable TV channels.
- When stereo sound is difficult to hear, you may manually switch to the MONO mode to obtain clearer sound.
- Once the MONO mode is selected, the Plasma Display System sound remains mono even if the system receives a stereo broadcast. You must reselect the STEREO mode if you want to hear stereo sound again.
- Selecting MTS while the input source is INPUT 1 to 4 or PC does not change the type of sound. In this case, sound is determined by the video source.



Each time you press **MTS**, MTS toggles as shown below.



# ΝΟΤΕ

In each of the MTS/SAP modes selected using the MTS button, the display changes depending on broadcasting signals being received.

# When receiving STEREO sound signals



In STEREO mode



In SAP mode



In MONO mode

# When receiving MAIN + SAP sound signals



In STEREO mode



In SAP mode



In MONO mode

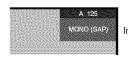
## When receiving STEREO + SAP sound signals



In STEREO mode



In SAP mode



In MONO mode

#### When receiving MONO sound signals



In STEREO mode



In SAP mode



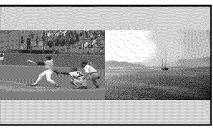
In MONO mode

# Using the multiscreen functions

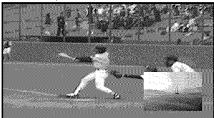
## Splitting the screen

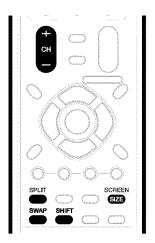
Use the following procedure to select the 2-screen or picture-inpicture mode.

2-screen



#### Picture-in-picture

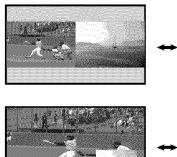


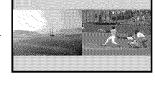


 Press SPLIT to select the display mode.
 Each time you press SPLIT, the display mode is switched among 2-screen, picture-in-picture, and single-screen.

# **Basic Operations**

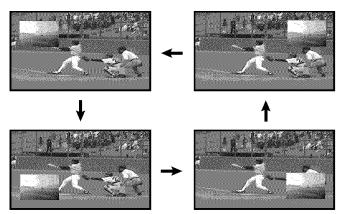
 In 2-screen or picture-in-picture mode, press SWAP to switch the position of the 2 screens shown.
 Left screen is the active screen which will be indicated by ")". The user is allowed to operate picture and sound.







- In 2-screen mode, press **SCREEN SIZE** to change the size of the left screen.
- In picture-in-picture mode, press **SHIFT** to move the position of the small screen in anti-clockwise.



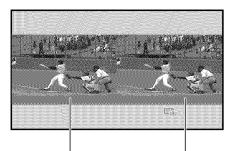
- 2 To select the desired input source, press the appropriate input source button.
  - If watching TV programs, press **CH** +/- to change the channel.

# NOTE

- The multiscreen function cannot display images from the same input source at the same time. If you make such an attempt, a warning message appears.
- When you press **HOME MENU** or **DTV INFO**, the single-screen mode is restored and the corresponding menu is displayed.
- When the two screens show the same analog broadcasting coming through antenna A and B, the picture quality may differ between the two screens.

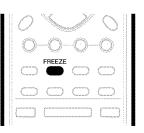
#### **Freezing images**

Use the following procedure to capture and freeze one frame from a moving image that you are watching.



Normal image

Still image



#### 1 Press FREEZE.

- A still image appears on the right screen while a moving image is shown on the left screen.
- 2 Press FREEZE again to cancel the function.

# 💋 ΝΟΤΕ

- With the screen split, any image cannot be frozen.
- When this function is not available, a warning message appears.

# Menu configuration

## AV mode menus

Home Menu	Item	Page
Picture	AV Selection	40
	Contrast	41
	Brightness	41
	Color	41
	Tint	41
	Sharpness	41
	Pro Adjust	41
	Reset	41

Sound	Treble	43
	Bass	43
	Balance	43
	Reset	43
	FOCUS	43
	Front Surround	43

Power Control	Energy Save	44
	No Signal off	44
	No Operation off	44

	Sleep Timer		40
--	-------------	--	----

Option	Position	45
	Side Mask	47
	HDMI Input	51, 52
	Monitor Out	52, 53
	Digital Audio Out	54
	Language	47

Tuner Setup	Channel Setup	31, 32
	Parental Control	33-37
	Favorites	37
	Closed Captions	37-39
	Recorder Setup	56-57
	Clock	39
Timers		48, 49

## PC mode menus

Home Menu	Item	Page
Picture	AV Selection	40
	Contrast	41
	Brightness	41
	Red	41
	Green	41
	Blue	41
	Reset	41

Sound	Treble	43
	Bass	43
	Balance	43
	Reset	43
	FOCUS	43
	Front Surround	43

Power Control	Energy Save	44
	Power Management	44

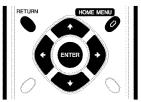
Sleep Tillel	—	40
Option	Auto Setup	45
	Manual Setup	45

40

# **Menu operations**

Sleen Timor

The following describes the typical procedure for setting up the menus. For the actual procedures, see the appropriate pages that describe individual functions.



- 1 Press HOME MENU.
- **2** Press  $\neq/ \neq$  to select a menu item, and then press **ENTER**.
- 3 Repeat step 2 until you access the desired submenu item.
  - The number of menu layers differs depending on menu items.
  - If you select "Tuner Setup" or "Timers", a menu bar appears at the bottom of the screen. To select a submenu item on the bar, press
- 4 Press ←/→ to select an option (or parameter), and then press ENTER.
  - For some menu items, press 4/4 instead of 4/4.
- 5 Press HOME MENU to exit the menu.

## 🖉 ΝΟΤΕ

• You can return to the upper menu levels by pressing **RETURN**.

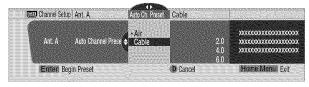
# Setting up TV channels

This section describes how to search and set up TV channels that you can watch under the current conditions. Unless you set up TV channels using Auto Channel Preset, you may not be able to tune in those channels.

# **Using Auto Channel Preset**

Auto Channel Preset automatically searches and sets up TV channels.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". ( $\bigstar$ / $\bigstar$  then ENTER)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Ant. A" or "Ant. B". (♠/✦ then ENTER)
- 5 Select "Auto Channel Preset". (↑/↓ then ENTER)
- 6 Select "Air" or "Cable". (↑/↓ then ENTER)



• Channel search automatically starts.



- To quit Auto Channel Preset halfway, press D.
- 7 After Auto Channel Preset has been finished, press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

• When using the Cable Converter, you may need to manually add Cable Converter output channels.

# Setting for skipping unwanted channels

From among TV channels searched and set up using Auto Channel Preset, you can select channels to be skipped when **CH +/–** are operated.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Ant. A" or "Ant. B". (↑/↓ then ENTER)
- 5 Select "Channel Keep/Skip". (↑/↓ then ENTER)
- 6 Select a channel to be skipped. ( $\uparrow/\downarrow$  then **ENTER**)



- For the skipped channel, a check mark disappears.
- 7 Press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

- To restore skipped channels, use the above procedure except that you select a skipped channel in step 6.
- When using the Cable Converter, you may need to manually add Cable Converter output channels.

# Setting up TV channels manually

This section describes how to manually set up TV channels that have not been set up by Auto Channel Preset.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (**↑**/**↓** then **ENTER**)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Ant. A" or "Ant. B". (♠/✦ then ENTER)
- 5 Select "Add Channel". (↑/↓ then ENTER)
- 6 Select a channel number to be added. ( $\bigstar$ / $\bigstar$  then ENTER)
  - You can also use buttons 0 9 to enter a channel number.

			000000000000000000000000000000000000000
Ant A	Add Channel	<ul> <li>0000000</li> </ul>	
All A	мий опринны	1	000000000000000000000000000000000000000

- After **ENTER** has been pressed, a confirmation screen appears.
- 7 Press A to complete the setup processing.
- 8 Press HOME MENU to exit the menu.

#### Naming TV channels

You can name TV channels that you have set up for antenna B. This may help you easily identify the channels during selections.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Ant. B". (↑/↓ then ENTER)
- 5 Select "Name Channel". (↑/↓ then ENTER)
- 6 Select a channel. (↑/↓ then ENTER)
  - You can also use buttons 0 9 to enter a channel number.

		A	000000000000000000000000000000000000000
Ant. B	Name Channel		000000000000000000000000000000000000000
		N	000000000000000000000000000000000000000

- 7 Enter up to 7 alphanumeric characters using  $\bigstar/\bigstar$ ,  $\bigstar/\bigstar$ , and **ENTER**.
  - To clear the last character, press B.



- 8 Press A.
- 9 Press HOME MENU to exit the menu.

## **Checking signal strength**

When you have selected antenna A, you can check the current channel's signal strength. You may use this function when receiving a channel through a VHF/UHF antenna.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Ant. A". (↑/↓ then ENTER)
- 5 Select "Signal Strength". (↑/↓ then ENTER)



- Adjust the direction of the antenna so that the current signal strength reaches as close to the maximum signal strength as possible.
- 6 Press HOME MENU to exit the menu.

#### **Checking the Cable Card ID**

The Media Receiver has a slot for a cable card that is used for managing your information by the cable TV company. The following procedure allows you to check your Cable Card ID and the Host ID.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (**↑**/**↓** then **ENTER**)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "POD ID". (♠/♣)
- The Host ID and Cable Card ID appear.
- 5 Press HOME MENU to exit the menu.

#### **Enabling data acquisition**

Use this function to enable the system to automatically acquire information about digital TV programs even when in the standby mode.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Channel Setup". (←/→ then ENTER)
- 4 Select "Data Acqu". (↑/↓ then ENTER)
- 5 Select "Enabled". (↑/↓ then ENTER)
- 6 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

• The **DATA ACQUISITION** indicator on the front of the Media Receiver lights while data is being acquired.

# **Parental Control**

With the Parental Control, parents can prevent their children from watching inappropriate TV programs, VCR or DVD contents. When an attempt is made to watch a program (or content) blocked by parents, the Plasma Display shows nothing but a message. The Parental Control functions for both conventional and digital TV channels.

In the U.S. three rating systems have been provided: the TV ratings, TV Parental Guidelines, and movie ratings. Movie ratings are provided by the Motion Picture Association of America (MPAA) and are used for original movies not edited for television.

For the rating system in Canada, see pages 36 and 37.

#### Voluntary movie rating system (MPAA)

	Rating	Description
	G	General audiences. All ages admitted.
	PG	Parental guidance suggested. Some material may not be suitable for children.
	PG-13	Parents strongly cautioned. Some material may be inappropriate for children under 13.
Age-Base	R	Restricted. Under 17 requires accompanying parent or adult guardian (age varies in some jurisdictions).
	NC-17	No one 17 and under admitted.
	Adult	A rating that has now been superseded by NC-17.
	NR	Not rated.

# 💋 NOTE

• The voluntary movie rating system only uses an age-based rating.

# **TV** ratings

	Rating	Description
	TV-Y	All children
	TV-Y7	Children 7 and above
Age-Base	TV-G	General audiences
	TV-PG	Parental guidance suggested
	TV-14	Parents strongly cautioned
	TV-MA	Mature audiences only

# **TV Parental Guidelines**

		Content				
	Rating	FV (Fantasy violence)	V (Violence)	S (Sexual situations)	L (Adult language)	D (Sexually suggestive dialog)
Age-Base	TV-Y (All children)					01
	TV-Y7 (Directed to older children)	Х				
	TV-G (General audience)					
	TV-PG (Parental guidance suggested)		Х	Х	Х	Х
	TV-14 (Parents strongly cautioned)		Х	X	Х	Х
	TV-MA (Mature audience only)		Х	X	Х	

X: Content rating can be set.

## Changing the password

Using a password prevents other persons from changing Parental Control settings. A default password (1234) has been set before shipment. Use the following procedure to change the password.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (**↑**/**↓** then **ENTER**)
- **3** Select "Parental Control". (**←**/**→** then **ENTER**)
- 4 Select "Password". (**↑**/**↓** then **ENTER**)
- 5 Select "Change Password". (↑/↓ then ENTER)

🔂 Parental Control	Password	
Password	Change Password	X0000000000000000000000000000000000000
		(Home Menu) Exit

- 6 Enter the current 4-digit password, using buttons 0 9.
- 7 Enter a 4-digit password to be newly set, using buttons
   0 9.
- 8 Enter the same password that you have entered in step 7.A confirmation screen appears.
- 9 Press A.
- 10 Press HOME MENU to exit the menu.



• Take a note of the newly set password and keep it handy.

09

#### Clearing the password

Use the following procedure to clear the password.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "Password". (↑/↓ then ENTER)
- 5 Select "Clear Password". (↑/↓ then ENTER)



- 6 Enter the current 4-digit password, using buttons 0 9.
  A confirmation screen appears.
- 7 Press A.
- 8 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

 The above procedure will reset the password to the factory default (1234).

#### Activating the Parental Control

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "Status". (**↑**/**↓** then **ENTER**)
- 5 Select "On". (**↑**/**↓** then **ENTER**)
  - The password entry screen appears. Enter your 4-digit password using buttons 0 – 9.
- 6 Press HOME MENU to exit the menu.

# **ΝΟΤΕ**

 If you select "Off" in step 5, then select "Reset on Startup" or "Don't Reset". With "Reset on Startup" selected, the Parental Control is automatically activated when the power to the system is turned off and on. With "Don't Reset" selected, the Parental Control remains off when the power to the system is off and on.

# Setting the voluntary movie rating system (MPAA)

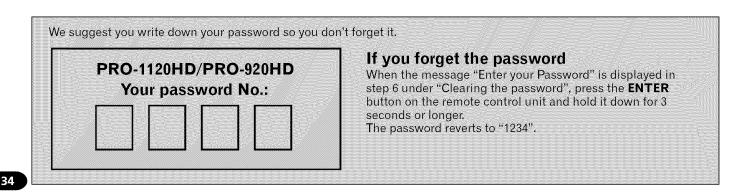
- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- **3** Select "Parental Control". (←/→ then ENTER)
- 4 Select "MPAA Ratings". (↑/↓ then ENTER)
- 5 Select the desired rating and change the setting. (↑/↓ then ENTER)



- The password entry screen appears. Enter your 4-digit password using buttons 0 – 9.
- Each time you press ENTER, the setting is switched.
- A lock icon appears beside the blocked rating.
- <u>All the ratings have been unblocked before shipment.</u>
- 6 Press HOME MENU to exit the menu.

## 🖉 ΝΟΤΕ

 Blocking a rating causes more severe ratings to be automatically blocked as well. Likewise, unblocking a rating causes less severe ratings to be automatically unblocked.



# Setting the TV ratings

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "TV Ratings". (↑/↓ then ENTER)
- 5 Select the desired rating and change the setting. (↑/↓ then ENTER)



- The password entry screen appears. Enter your 4-digit password using buttons 0 9.
- Each time you press ENTER, the setting is switched.
- A lock icon appears beside the blocked rating.
- All the ratings have been unblocked before shipment.
- 6 Press HOME MENU to exit the menu.

# **ΝΟΤΕ**

 Blocking a rating causes more severe ratings to be automatically blocked as well. Likewise, unblocking a rating causes less severe ratings to be automatically unblocked.

# Setting the TV Parental Guidelines (TV Guidelines)

#### 1 Press HOME MENU.

- 2 Select "Tuner Setup". (♠/✦ then ENTER)
- **3** Select "Parental Control". (**♦**/**♦** then **ENTER**)
- 4 Select "TV Parental Guidelines". (↑/↓ then ENTER)
- 5 Select the desired rating and change the setting. (↑/↓ then ENTER)



- The password entry screen appears. Enter your 4-digit password using buttons 0 – 9.
- Each time you press ENTER, the setting is switched.
- A lock icon appears beside the blocked rating.
- <u>All the ratings have been unblocked before shipment.</u>
- 6 Press HOME MENU to exit the menu.

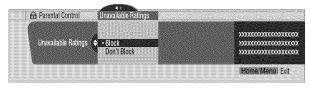
# NOTE

• Blocking a rating causes more severe ratings to be automatically blocked as well. Likewise, unblocking a rating causes less severe ratings to be automatically unblocked.

## **Blocking Not Rated TV programs**

Use the following procedure to block TV programs whose rating information is unavailable.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "Unavailable Ratings". (↑/↓ then ENTER)
- 5 Select "Block" or "Don't Block". (↑/↓ then ENTER)



- The password entry screen appears. Enter your 4-digit password using buttons **0 9**.
- The factory default is "Don't Block".
- 6 Press HOME MENU to exit the menu.

09

## **Canadian rating systems**

In Canada you can choose the Canadian English ratings or the Canadian French ratings. These ratings are based on the Canadian Radio-Television and Telecommunications Commission (CRTC) policy.

## **Canadian English ratings**

	Rating	Description	
Age-Base	E	Exempt: Includes news, sports, documenta- ries and other information programming; talk shows, music videos, and variety programming.	
	с	Children: Intended for younger children under the age of 8 years. Pays careful attention to themes that could threaten their sense of security and well-being.	
	C8+	Children over 8 years old: Contains no portrayal of violence as the preferred, acceptable, or only way to resolve conflict; nor encourage children to imitate dangerous acts which they may see on the screen.	
	G	General: Considered acceptable for all age groups. Appropriate viewing for the entire family, contains very little violence, physical, verbal or emotional.	
	PG	Parental Guidance: Intended for a general audience, but may not be suitable for younger children (under the age of 8) because it could contain controversial themes or issues.	
	14+	Over 14 Years: Could contain themes where violence is one of the dominant elements of the storyline, but it must be integral to the development of plot or character. Language usage could be profane and nudity present within the context of the theme.	
	18+	Adults: Intended for viewers 18 years and older and might contain depictions of violence, which while related to the develop- ment of plot, character or themes, are intended for adult viewing. Could contain graphic language and portrayals of sex and nudity.	

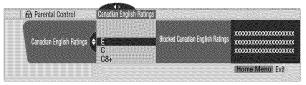
# **Canadian French ratings**

	Rating	Description		
	E	Exempt programming.		
Age-Base	G	General: All ages and children, contains minimal direct violence, but may be integrated into the plot in a humorous or unrealistic manner.		
	8ans+	General but inadvisable for young children: May be viewed by a wide public audience, but could contain scenes disturbing to children under eight who cannot distinguish between imaginary and real situations. Recommended for viewing with parent.		
	13 ans+	Over 13 years: Could contain scenes of frequent violent scenes and therefore recommended for viewing with parent.		
	16ans+	Over 16 years: Could contain frequent violent scenes and intense violence.		
	18ans+	Over 18 years: Only for adult viewing. Could contain frequent violent scenes and extreme violence.		

#### **Setting Canadian English ratings**

#### 1 Press HOME MENU.

- 2 Select "Tuner Setup". (**↑**/**↓** then **ENTER**)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "Canadian English Ratings". (↑/↓ then ENTER)
- 5 Select the desired rating and change the setting. (↑/↓ then ENTER)



- The password entry screen appears. Enter your 4-digit password using buttons 0 – 9.
- Each time you press **ENTER**, the setting is switched.
- A lock icon appears beside the blocked rating.
- All the ratings have been unblocked before shipment.
- 6 Press HOME MENU to exit the menu.

# Setting Canadian French ratings

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Parental Control". (←/→ then ENTER)
- 4 Select "Canadian French Ratings". (↑/↓ then ENTER)
- 5 Select the desired rating and change the setting. (↑/↓ then ENTER)

Canadian French Ratings	Canadian French Ratings	E G 8 ans+ 13 ans+ 16 ans+ 18	
			Home Menu, Exit

- The password entry screen appears. Enter your 4-digit password using buttons **0 9**.
- Each time you press **ENTER**, the setting is switched.
- A lock icon appears beside the blocked rating.
- All the ratings have been unblocked before shipment.
- 6 Press HOME MENU to exit the menu.

# Temporarily deactivating the Parental Control

When the Parental Control is working and censors a blocked TV program (or content), the Plasma Display shows nothing but a message.

The method for temporarily deactivating the Parental Control differs, depending on the currently selected input source.

# Antenna A, antenna B, or i.LINK:

Press  $\ensuremath{\textbf{ENTER}}$  and then enter your 4-digit password.



• The password entry screen stays only for one minute. After the screen disappears, pressing **ENTER** causes it to appear again.

# Input 1 – 4:

Enter your 4-digit password. You need not press **ENTER** first, pressing **ENTER** causes the password entry screen to disappear.



- The above password entry screen will also be shown during 2-screen mode, picture-in-picture, and while freezing an image.
- The password entry screen stays only for one minute. After the screen disappears, pressing **ENTER** causes it to appear again.

# Setting your favorite channels

Set up to 10 TV channels to each of the four color buttons on the remote control unit (40 channels in total). You can then quickly select from only your favorite channels.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (♠/✦ then ENTER)
- 3 Select "Favorites". (←/→ then ENTER)
- 4 Select a color button (A, B, C, D). ( $\bigstar$ / $\bigstar$  then ENTER)
- 5 Select a TV channel to be registered. (↑/↓ then ENTER)



- A star appears beside the favorite channels currently selected.
- To register another TV channel under the same color button, repeat step 5. To register another TV channel under a different color button, repeat steps 4 and 5.
- 6 Press HOME MENU to exit the menu.

# Setting up closed captions

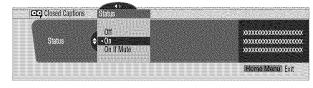
Your Plasma Display System is equipped with an internal closed caption decoder. Closed caption allows you to view conversations, narration, and sound effects in TV programs and home videos as subtitles on your Plasma Display screen.

You may enjoy digital closed captions when watching digital TV programs. Digital closed captions allow you to change parameters such as fonts and colors.

• Not all programs and videos offer closed caption. Please look for the "[CC]" symbol to ensure that captions will be shown.

### Activating the closed caption

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Closed Captions". (←/→ then ENTER)
- 4 Select "Status". (**↑**/**↓** then **ENTER**)
- 5 Select "On" or "On If Mute". (**↑**/**↓** then **ENTER**)



ltem	Description
Off	Does not show closed captions.
(factory default)	l de la construcción de la constru
On	Always shows closed captions.
On If Mute	Shows closed captions only while sound is being muted.

#### 6 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

 For MONITOR OUT, only conventional closed caption signals are output; digital closed caption signals are not output.

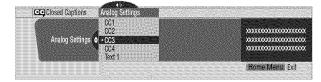
# Selecting the type of conventional closed captions

Select the type of conventional closed captions that you will watch after tuning to a conventional TV channel. This selection also becomes effective when a selected digital TV program provides only conventional closed captions.

- "CC1", "CC2", "CC3", or "CC4" displays subtitles of TV dramas and news programs while allowing a full view of the picture.
- "Text1", "Text2", "Text3", or "Text4" superimposes on the picture other information (e.g. TV guide, weather) that is independent of the TV in progress.

#### 1 Press HOME MENU.

- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Closed Captions". (←/→ then ENTER)
- 4 Select "Analog Settings". (**↑**/**↓** then **ENTER**)
- 5 Select the desired closed caption. (4/4 then **ENTER**)



- The factory default is "CC1".
- 6 Press HOME MENU to exit the menu.

#### Selecting digital closed captions

Use the following procedure to select digital closed captions.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Closed Captions". (←/→ then ENTER)
- 4 Select "Digital Settings". (↑/↓ then ENTER)
- 5 Select "Digital Service". (↑/↓ then ENTER)
- 6 Select the desired closed caption. (↑/↓ then ENTER)

000000000000000000000000000000000000000
200000000000000000000000000000000000000
200000000000000000000000000000000000000

• The factory default is "Service 1".

7 Press HOME MENU to exit the menu.

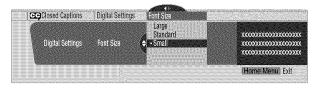
## 🖉 ΝΟΤΕ

• The Primary Caption Service is usually offered for Service 1, and the Secondary Language Service is usually offered for Service 2 if these services are available.

#### Selecting digital closed caption parameters

Use the following procedure to change such parameters of digital closed captions as font size, font type, foreground and background colors.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- **3** Select "Closed Captions". (**♦**/**♦** then **ENTER**)
- **4** Select "Digital Settings". (**↑**/**↓** then **ENTER**)
- 5 Select "Font Size", "Font", or any other item. (↑/↓ then ENTER)
- **6** Select the desired parameter. ( $\uparrow/\downarrow$  then **ENTER**)



- 7 Repeat steps 5 and 6 as necessary. ( $\leftarrow$ ,  $\leftarrow$ / $\leftarrow$ )
- 8 Press HOME MENU to exit the menu.

The following table shows the parameters selectable for each item.

Item	Selection	
Font Size	Auto/Large/ Standard/Small	
Font <sup>1</sup>	Auto/ Font 1/ Font 2/ <b>Font 3</b> / Font 4/ Font 5/ Font 6/ Font 7	
Font Color	Auto/ Black/ <b>White</b> / Red/ Green/ Blue/ Yellow/ Magenta/ Cyan	
Font Opacity	Auto/ <b>Solid</b> / Transparent/ Translucent/ Flashing	
Background Color	Auto/ <b>Black</b> / White/ Red/ Green/ Blue/ Yellow/ Magenta/ Cyan	
Background Opacity	Auto/ Solid/ Transparent/ Translucent	

<sup>1</sup> Font 1 (monospaced with serifs)/ Font 2 (proportionally spaced with serifs)/ Font 3 (monospaced without serifs)/ Font 4 (proportionally spaced without serifs)/ Font 5 (casual font)/ Font 6 (cursive font)/ Font 7 (small capitals font)

With "Auto" selected, parameters specified by the provider are used; if not specified by the provider, the bolded default parameters are used. If you select parameters other than "Auto", the selected parameters are used regardless of provider's specifications.

# **Clock Setting**

With "Auto Set" selected for Clock Setting, the system acquires and sets time information automatically. You can also manually set the correct time. If you disconnect the power cord from the power outlet or power blackout occurs, the set time is cleared.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Clock". (←/→ then ENTER)
- 4 Select "Time Zone". (↑/↓ then ENTER)
- 5 Select a time zone for your area. (4/4 then **ENTER**)

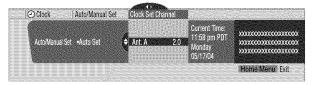


6 Select "D.S.T." (←, ←/→, then ENTER)

- 7 Select "Applies" or "Does Not Apply". (↑/↓ then ENTER)
   Make this selection, depending on whether summer
  - Make this selection, depending on whether summer time is employed in your area.



- 8 Select "Auto/Manual Set". (←, ←/→, then ENTER)
- 9 Select "Auto Set" or "Manual Set". (↑/↓ then ENTER)
- 10 If you select "Auto Set", select an antenna (A or B) and a channel number using **↑**/**↓** and **ENTER**.



The date and time will be automatically corrected using data from the selected channel.

 If you color! "Manual Set" manually set the date and

If you select "Manual Set", manually set the date and time using 4/4, 4/4 and ENTER.

	- 4	Current Time:	*****
Auto/Manual Set: +Manual Set	¢ 3 /17/04 11:58pm	11.58 pm PDT	200000000000000000000000000000000000000
	5	MODDAY DE (17/04	200000000000000000000000000000000000000

**11** Press **HOME MENU** to exit the menu.

# 💋 ΝΟΤΕ

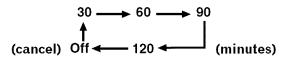
- When the time has not been set, the REC TIMER indicator on the front of the Media Receiver blinks.
- When the time has not yet been set, you cannot view channel banner information, use auto channel select, and preset TV programs for recording.

# **Sleep Timer**

When the selected time elapses, the Sleep Timer automatically places the system into the standby mode.

 $\label{eq:press} \textbf{SLEEP} \text{ to select the desired time.}$ 

- The timer starts counting.
- Each time you press **SLEEP**, the selection is switched as below:



• The factory default is "Off".

# 🖉 ΝΟΤΕ

- To cancel the Sleep Timer, select "Off" by pressing **SLEEP**.
- Five minutes before the selected time elapses, the remaining time appears every minute.

You can also use the menu to set the Sleep Timer.

- 1 Press HOME MENU.
- 2 Select "Sleep Timer". (↑/↓ then ENTER)
- 3 Select the desired time. ( $\uparrow/\downarrow$  then **ENTER**)
- 4 Press HOME MENU to exit the menu.

# **AV Selection**

Select from the five viewing options, depending on the current environment (e.g., room brightness), the type of the current TV program, or the type of images input from external equipment.

#### 1 Press AV SELECTION.

- The current AV Selection mode appears.
- 2 Press **AV SELECTION** again before the displayed mode disappears.
  - For AV source, the mode is switched in the order; STANDARD, DYNAMIC, MOVIE, GAME, then USER.
  - For PC source, the mode is switched between STANDARD and USER.

You can also use the menu to change the options.

- 1 Press HOME MENU.
- 2 Select "Picture". (↑/↓ then ENTER)
- 3 Select "AV Selection". (↑/↓ then ENTER)
- 4 Select the desired option. ( $\bigstar$ / $\bigstar$  then **ENTER**)

AV Selection	
STANDARD	
DYNAMIC	
MOVIE	
GAME	

#### For AV source

Item	Description
STANDARD	For a highly defined image in a normally bright room
DYNAMIC	For a very sharp image with the maximum contrast This mode does not allow manual image quality adjustment.
MOVIE	For a movie
GAME	Lowers image brightness for easier viewing.
USER	Allows the user to customize settings as desired. You can set the mode for each input source.

#### For PC source

ltem	Description
STANDARD (factory default)	For a highly defined image in a normally bright room
USER	Allows the user to customize settings as desired. You can set the mode for each input source.

5 Press HOME MENU to exit the menu.

# **Picture adjustments**

Adjust the picture to your preference for the chosen AV Selection option (except DYNAMIC).

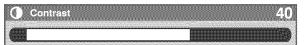
- 1 Press HOME MENU.
- 2 Select "Picture". (↑/↓ then ENTER)
- **3** Select an item to be adjusted. ( $\uparrow/\downarrow$  then **ENTER**)

AV Selection		STANDAR	D
Contrast	0	40	
Brightness	¢	0	
Color	3	0	en personanian an angeographia
Tint	<u></u>	0	oor on other second
Sharpness	D	0	
Pro Adjust			<b>&gt;&gt;&gt;</b>

For PC source, the following screen appears:

AV Selection		STANDA	RD	
Contrast	U I	40		uuiti Wata
Brightness	Ó.	0	lister sikenson Grad Second	accii Sacci
Red	R	0	ning samun Marin ang samuna	
Green	G	0		11111 12175
Blue	B	0		itter inter
Reset				

4 Select the desired level. ( $\leftarrow/\rightarrow$  then ENTER)



- When an adjustment screen is in display, you can also change an item to be adjusted, by pressing ↑/↓.
- 5 Press HOME MENU to exit the menu.

### For AV source

Item	🗲 button	→ button
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Color	For less color intensity	For more color intensity
Tint	Skin tones become purplish	Skin tones become greenish
Sharpness	For less sharpness	For more sharpness

#### For PC source

Item	🕈 button	→ button
Contrast	For less contrast	For more contrast
Brightness	For less brightness	For more brightness
Red	For weaker red	For stronger red
Green	For weaker green	For stronger green
Blue	For weaker blue	For stronger blue

# 🖉 ΝΟΤΕ

- To make settings for "PureCinema", "Color Temp", "MPEG NR", "DNR", "CTI", and "DRE", select "Pro Adjust" in step 3, and then press ENTER. For the subsequent procedures, see "Pro Adjust".
- To restore the factory defaults for all the items, press ↑/↓ to select "Reset" in step 3, and then press ENTER. A confirmation screen appears. Press ↑/↓ to select "Yes", and then press ENTER.

### **Pro Adjust**

This system provides various advanced functions for optimizing the picture quality.

- 1 Press HOME MENU.
- 2 Select "Picture". (**↑**/**↓** then **ENTER**)
- 3 Select "Pro Adjust". (↑/↓ then ENTER)
- 4 Select an item to be adjusted. ( $\uparrow/\downarrow$  then ENTER)
  - You can select "PureCinema", "Color Temp", "MPEG NR", "DNR", "CTI", or "DRE".
- 5 Select the desired parameter. (↑/↓ then ENTER)
   For the selectable parameters, see the table.

#### PureCinema

Automatically detects a film-based source (originally encoded at 24 frames/second), analyzes it, then recreates each still film frame for high-definition picture quality.

Selections	Off	Deactivates the PureCinema.
	Standard	Produces smooth and vivid moving images (film specific) by automatically detecting recorded image information when displaying DVD or 1080i HDTV images (e.g., movies) having 24 frames per second.
	ADV	Produces smooth and quality moving images (as shown on theater screens) by converting to 72 Hz when displaying DVD images (e.g., movies) having 24 frames per second.
Remark	You cannot select "Standard" when 480p or 720p signals are being input.	

10

#### Color Temp

Adjusts the color temperature, resulting in a better white balance.

Selections	High	White with bluish tone
	Mid-High	Intermediate tone between High and Mid
	Mid	Natural tone
	Mid-Low	Intermediate tone between High and Low
	Low	White with reddish toneMid-Low
	Manual	Allows you to manually adjust the color temperature. Use the following procedure.

- Select "Manual", and then press and hold ENTER for more than three seconds to display the manual adjustment screen.
- ② Select an item to be adjusted. (4/4 then **ENTER**)
- (3) Select the desired level. ( $\checkmark$  + then **ENTER**)

ltem	🕈 button	➔ button
R High	For weaker red	For stronger red
G High	For weaker green	For stronger green
B High	For weaker blue	For stronger blue
R Low	For weaker red	For stronger red
G Low	For weaker green	For stronger green
B Low	For weaker blue	For stronger blue

- To perform adjustment for another item, press **RETURN**, and then repeat steps (2) and (3).
- ④ Press HOME MENU to exit the menu.

#### MPEG NR

Eliminates mosquito noise from video images when a digital TV channel is watched or a DVD is played, resulting in noise-free images.

Selections	Off	Deactivates the MPEG NR.	
	High	Enhanced MPEG NR	
	Mid	Standard MPEG NR	_
	Low	Moderate MPEG NR	

#### DNR

Eliminates video noise for clean crisp images. The DNR stands for Digital Noise Reduction.

Selections	Off	Deactivates the DNR.
	High	Enhanced DNR
	Mid	Standard DNR
	Low	Moderate DNR

#### CTI

Provides images with clearer color contours. The CTI stands for Color Transient Improvement.

Selections	Off	Deactivates the CTI.
	On	Activates the CTI.

#### DRE

Adjusts dark and bright portions on images so that the contrast between brightness and darkness becomes clearer.

Selections	Off	Deactivates the DRE.	
	High	Enhanced DRE	
	Mid	Standard DRE	
	Low	Moderate DRE	

#### **Color Management**

Adjusts the hue for each basic color. Use the following procedure.

- ① Select an item to be adjusted. ( $\bigstar$ / $\bigstar$  then ENTER)
- 2 Select the desired level. (4/)

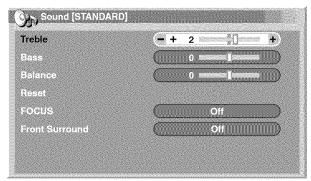
ltem	🗲 button	➔ button
Red	Closer to magenta	Closer to yellow
Yellow	Closer to red	Closer to green
Green	Closer to yellow	Closer to cyan
Cyan	Closer to green	Closer to blue
Blue	Closer to cyan	Closer to magenta
Magenta	Closer to blue	Closer to red

- To perform adjustment for another item, press **RETURN**, and then repeat steps **1** and **2**.
- ③ Press HOME MENU to exit the menu.

# Sound adjustments

Adjust the sound to your preference for the chosen AV Selection option. See page 40.

- 1 Press HOME MENU.
- 2 Select "Sound". (↑/↓ then ENTER)
- **3** Select an item to be adjusted. (4/4)
- 4 Select the desired level.  $(\bigstar/ \rightarrow)$



ltem	♦ button	→ button
Treble	For weaker treble	For stronger treble
Bass	For weaker bass	For stronger bass
Balance	Decreases audio from the right speaker	Decreases audio from the left speaker

## 5 Press HOME MENU to exit the menu.

# **ΝΟΤΕ**

• To restore the factory defaults for all the items, press ↑/↓ to select "Reset" in step 3, and then press ENTER. A confirmation screen appears. Press ↑/↓ to select "Yes", and then press ENTER.

# FOCUS

This shifts the sound coming direction (sound images) upward and produces clear sound contours.

- 1 Press HOME MENU.
- 2 Select "Sound". (↑/↓ then ENTER)
- 3 Select "FOCUS". (↑/↓)
- 4 Select the desired parameter.  $(\checkmark/\rightarrow)$

Item	Description
Off (factory default)	Deactivates the FOCUS.
On	Activates the FOCUS.

5 Press HOME MENU to exit the menu.

### **Front Surround**

This provides three-dimensional sound effects and/or deep, rich bass.

- 1 Press HOME MENU.
- 2 Select "Sound". (↑/↓ then ENTER)
- 3 Select "Front Surround". (↑/↓)
- 4 Select the desired parameter.  $(\checkmark)$

Item	Description
Off	Deactivates both the SRS and TruBass.
SRS	Reproduces highly effective three- dimensional sound.
TruBass (factory default)	Provides deep, rich bass using a new technology.
TruBass + SRS	Provides both TruBass and SRS effects.

## 5 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

- **SRS()** (WOW) designates a status where the FOCUS is on and TruBass + SRS has been selected for Front Surround.
- SRSCO is a trademark of SRS Labs, Inc.
- WOW technology is incorporated under license from SRS Labs, Inc.

## Power Control

Power Control provides convenient functions for power saving.

#### **Energy Save**

You can save power consumption by decreasing the picture brightness. When you need not watch the screen and want to enjoy only audio, you can also deactivate the screen.

- 1 Press HOME MENU.
- 2 Select "Power Control". (↑/↓ then ENTER)
- 3 Select "Energy Save". (↑/↓ then ENTER)
- 4 Select "Save" or "Picture Off". (↑/↓ then ENTER)

ltem	Description
Standard (factory default)	Does not decrease picture brightness.
Save	Decreases picture brightness to save power.
Picture Off	Deactivates the screen to save power. To restore the screen display, press any button other than <b>VOL</b> +/- and <b>MUTING</b> . This setting is not memorized by the system.

#### 5 Press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

 You can also select this function using the Home menu when the input source is a PC.

# No Signal off (AV mode only)

The system will be automatically placed into the standby mode if no signal is received for 15 minutes.

- 1 Press HOME MENU.
- 2 Select "Power Control". (↑/↓ then ENTER)
- 3 Select "No Signal off". (↑/↓ then ENTER)
- 4 Select "Enable". (↑/↓ then ENTER)

ltem	Description
Disable (factory default)	Does not place the system into the standby mode.
Enable	Places the system into the standby mode if no signal is received for 15 minutes.

#### 5 Press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

- Five minutes before the system is placed into the standby mode, a message appears every minute.
- The system may not be placed into the standby mode when noise signals are present at the Media Receiver after a TV program finishes.

#### No Operation off (AV mode only)

The system will be automatically placed into the standby mode when no operation is performed for three hours.

#### 1 Press HOME MENU.

- 2 Select "Power Control". (↑/↓ then ENTER)
- 3 Select "No Operation off". (↑/↓ then ENTER)
- 4 Select "Enable". (**↑**/**↓** then **ENTER**)

Item	Description
Disable (factory default)	Does not place the system into the standby mode.
Enable	Places the system into the standby mode if no operation is performed for three hours.

5 Press HOME MENU to exit the menu.

# 🖉 NOTE

• Five minutes before the system is placed into the standby mode, a message appears every minute.

### Power Management (PC mode only)

The system will be automatically placed into the standby mode when no signal is received from the personal computer.

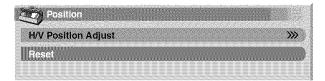
- 1 Press HOME MENU.
- 2 Select "Power Control". (↑/↓ then ENTER)
- 3 Select "Power Management". (↑/↓ then ENTER)
- 4 Select "Mode1" or "Mode2". (**↑**/**↓** then **ENTER**)

ltem	Description
Off (factory default)	No power management
Mode1	<ul> <li>Places the system into the standby mode when no signal is received from the personal computer for eight minutes.</li> <li>Even when you start using the computer and a signal is received again, the system stays off.</li> <li>The system is switched on again by pressing STANDBY/ON on the Plasma Display or TV () on the remote control unit.</li> </ul>
Mode2	<ul> <li>Places the system into the standby mode when no signal is received for eight seconds.</li> <li>When you start using the computer and a signal is received again, the system is switched on.</li> <li>The system is switched on again by pressing STANDBY/ON on the Plasma Display or TV ⇔ on the remote control unit.</li> </ul>

5 Press HOME MENU to exit the menu.

Adjust the horizontal and vertical positions of images on the Plasma Display.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Position". (↑/↓ then ENTER)
- 4 Select "H/V Position Adjust". (↑/↓ then ENTER)



- 5 Adjust the vertical position (↑/↓) or horizontal position (↓/↓).
- 6 Press HOME MENU to exit the menu.

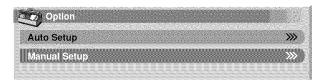
# 💋 ΝΟΤΕ

- To restore the factory defaults for all the items, press ↑/↓ to select "Reset" in step 4, and then press **ENTER**. A confirmation screen appears. Press ↑/↓ to select "Yes", and then press **ENTER**.
- · Adjustments are stored separately according to input source.

# Adjusting image positions and clock automatically (PC mode only)

Use Auto Setup to automatically adjust positions and clock of images coming from a personal computer.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Auto Setup". (↑/↓ then ENTER)



Auto Setup starts.

4 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

- When Auto Setup is finished, "Auto Setup completed." appears.
- Even when "Auto Setup completed." appears, Auto Setup may have failed, depending on conditions.
- Auto Setup may fail with a PC image composed of similar patterns or monochrome. If not successful, change the PC image and try again.
- Be sure to connect the computer to the Media Receiver and switch it on before starting Auto Setup.

# Adjusting image positions and clock manually (PC mode only)

Usually you can easily adjust the positions and clock of images using Auto Setup. Use Manual Setup to optimize the positions and clock of images when necessary.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Manual Setup". (↑/↓ then ENTER)
- 4 Select an item to be adjusted. (**↑**/**↓** then **ENTER**)

Manual Setup	anna an	
H/V Position Adjust		»»
Clock	0	
Phase	0	
Reset		

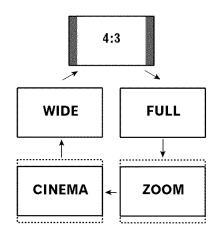
- **5** Perform adjustment. ( $\bigstar$ / $\bigstar$  and  $\bigstar$ / $\bigstar$ )
  - Use ↑/↓ only when you adjust the vertical position after selecting "H/V Position Adjust".
- 6 Press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

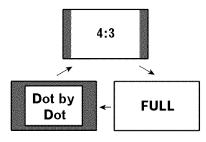
• To restore the factory defaults for all the items, press ↑/↓ to select "Reset" in step 4, and then press ENTER. A confirmation screen appears. Press ↑/↓ to select "Yes", and then press ENTER.

10

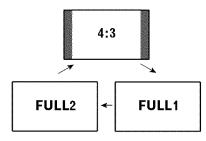
## AV mode



## PC mode except for XGA signals



### PC mode for XGA signals



# Selecting a screen size

In single-screen mode, press **SCREEN SIZE** to change the size of the screen from among the selectable options for the type of video signals currently received.

• The selectable screen sizes differ depending on the types of input signals.

## AV mode

ltem	Description
4:3	For 4:3 "standard" pictures. A side bar appears on each side.
FULL	For 16:9 squeeze pictures.
ZOOM	For 16:9 letterbox pictures. Bars may appear on the top and bottom with some programs.
CINEMA	For 14:9 letterbox pictures. Bars may appear on the top and bottom on some programs.
WIDE	In this mode pictures are progressively stretched toward each side of the screen.

#### PC mode except for XGA signals

ltem	Description
4:3	Fills the screen without altering the input signal aspect ratio.
FULL	Full 16:9 screen display
Dot by Dot	Matches input signal with same number of screen pixels.

#### PC mode for XGA signals

(Ex. 1024 × 768 input at PRO-1120HD)

ltem	Description
4:3	Matches input signal with the same number of screen pixels. Optimized for $1024 \times 768$ display
FULL1	Full 16:9 screen display Optimized for 1024 × 768 display
FULL2	For wide signal display Use when displaying 1280 $ imes$ 768 signal resolution.

# 🖉 NOTE

- In 2-screen mode, press **SCREEN SIZE** to change the size of left screen.
- The PC mode above is for the PRO-1120HD. For the PRO-920HD the number of panel pixels is different, so signal processing and actual viewing conditions will vary slightly.
- While watching High Definition TV broadcasting, pressing **SCREEN SIZE** switches between FULL and WIDE.
- If you watch High Definition TV broadcasting with WIDE selected, part of the screen (e.g., images, graphic interface) can be missed. If this is the case, select FULL.

# Changing the brightness at both sides of the screen (Side Mask)

With the 4:3 screen size selected for the AV mode, you can change the brightness of the gray side masks that appear at both sides of the screen.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Side Mask". (↑/↓ then ENTER)
- 4 Select the desired parameter. ( $\uparrow/\downarrow$  then **ENTER**)

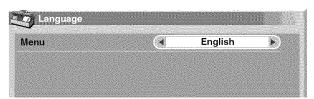
Item	Description
Fixed (factory default)	Always sets the same brightness for the gray side masks.
Auto	Adjusts the brightness of the gray side masks according to the brightness of images.

5 Press HOME MENU to exit the menu.

# Language setting

You can select a language to be used for on-screen display such as menus from among three languages: English, French, and Spanish.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Language". (↑/↓ then ENTER)
- 4 Select a language. (←/→)



5 Press HOME MENU to exit the menu.

10

# Presetting TV programs using the timer

Using the menu, you can easily preset TV programs for watching later (auto channel select), recording with a D-VHS recorder, or recording via the supplied VCR controller.

With the power to the system left on, the Auto Channel Preset automatically selects the preset TV program when its on-air time comes. Then you will not miss an important TV program when you are enjoying another TV program.

For the connections with a D-VHS recorder, see pages 54 and 55. For the connections with the supplied VCR controller, see page 59.

# 💋 ΝΟΤΕ

• You can make up to 32 presettings in total.

- In steps 4 to 8, you can also press ←/→ to move the cursor.
- 1 Press HOME MENU.
- 2 Select "Timers". (↑/↓ then ENTER)
- 3 Select a list number. ( $\uparrow/\downarrow$  then ENTER)



#### 4 Specify a date. ( $\uparrow/\downarrow$ then **ENTER**)

• The selections include the days of the week (e.g., Mondays), "Weekdays", "Weekends", and "Everyday". Selecting one of these will cause the timer to activate periodically.

🕤 Timers	Day(s)	Start/End Times Ch	annel	Recording Devic	8
40	Mon. 5/17 Tue 5/18 ♦ Wed. 5/19 Thu. 5/20 Fri. 5/21	9.58p - 10:58p - A	2.0	None	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
🚯 New 1	Fimer	B Suspend Timer	(Q)	Clear Timer	Home Menu, Exit

5 Specify the start and end times. (↑/↓ then ENTER for each field)



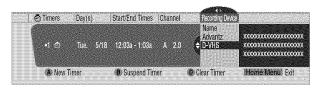
6 Select antenna A or B. (↑/↓ then ENTER)

🖨 Timers	Dav(s)	Start/End Times	Channal	Recording Devic	a
·1.0		3:58p - 10:58p -		Nore	
A Nev	Timer	(B) Suspend Tin	ner 🔘	Clear Timer	Home Menul Exit

7 Specify a channel number. (↑/↓ then ENTER for each digit)



- 8 Select a recording device. (**↑**/**↓** then **ENTER**)
  - To preset for auto channel select, select "None".



#### 9 Press HOME MENU to exit the menu.

An alarm screen appears slightly before the preset timer is activated. If watching a TV channel through antenna A or B in a single-screen mode, the screen allows you to cancel the presetting by pressing **D**.

O Timer Ale	nt		
The Following	timer is about to begin.		
Sun. 1/0-12:0	0 am – 12.00 am		
Ant, A 0.0			
A Accept	🗘 Cancel Timer		

The icons beside the list numbers have the following meanings.

lcon	Meaning
	Preset for recording; no conflicts with other timers exist.
₫	Preset for auto channel select; no conflicts with other timers exist.
<b>NREC</b>	Preset for recording; conflicts with other timers exist.
$\otimes$	Preset for auto channel select; conflicts with other timers exist.
<b>I</b> REC	Preset for recording; the timer start has been delayed.
	Preset for auto channel select; the timer start has been delayed.

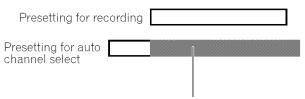
# **ΝΟΤΕ**

- If you set a timer to record a future digital program on a VCR, you must first turn off Parental Control. Otherwise, you will record only a black screen. See "Temporarily deactivating the Parental Control" on page 37.
- To change the TV program presetting, repeat the above procedure. To cancel the presetting, press **D** after selecting a list number in step 4.
- Switch on the recording equipment at least 30 seconds before the start of the preset program; otherwise recording will not be executed.
- When presetting for recording, finish the operations two minutes (one minute for auto channel select) before the start of the program; otherwise presetting may fail.
- Auto channel select is not executed when the system is in the standby mode.
- Recording is not executed if recordable D-VHS tape is not present in the D-VHS recorder when the preset program starts. This is also true when a specified D-VHS recorder is not in connection.
- For recording with a VCR, confirm that the video output terminals on the Media Receiver have been connected to the signal input terminals on the VCR.
- Presettings become ineffective if the start time and the end time are identical.

# **Priority rules for overlapped presettings**

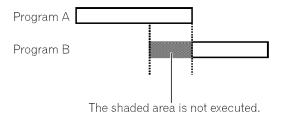
When preset TV programs are overlapped, the following three rules are used to determine a higher priority. If more than one of the three rules are met, the rules are applied in the order; 1, 2, then 3.

**Rule 1:** Presetting for recording is given a higher priority over presetting for auto channel select.



The shaded area is not executed.

**Rule 2:** If two presettings are overlapped, presetting with earlier start time is given a higher priority. If two presettings are sequential, the last portion of the first program may not be recorded for 60 seconds (or less) because recording of the second program is started at the exact start time.



Rule 3: If presettings at the same start time are overlapped, presetting with a higher list number is given a higher priority.

You can connect many types of external equipment to your Plasma Display System, like a DVD player, VCR, personal computer, game console, and camcorder.

To view images coming from external equipment, select the input source using the **INPUT** buttons on the remote control (page 14) or the **INPUT** button on the Plasma Display.

# 

• To protect all equipment, always turn off the system before connecting to a DVD player, VCR, personal computer, game console, camcorder, or other external equipment.

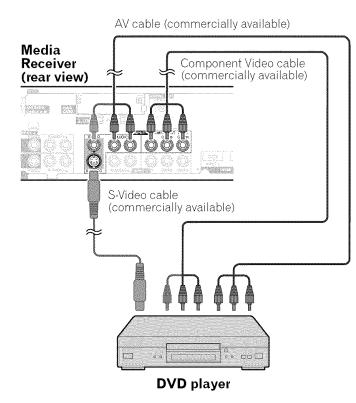
# 💋 ΝΟΤΕ

 Refer to the relevant instruction manual (DVD player, personal computer, etc.) carefully before making connections.

# Watching a DVD image

## **Connecting a DVD player**

Use the INPUT 1 terminals when connecting a DVD player and other audiovisual equipment.



## **Displaying a DVD image**

To watch a DVD image, press **INPUT 1** on the remote control unit or press **INPUT** on the Plasma Display to select INPUT1.

Ø	NOTE	

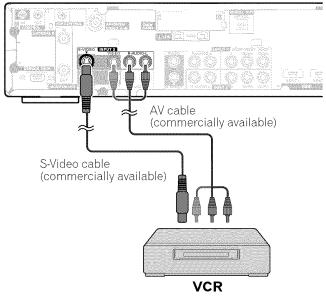
- Refer to your DVD player instruction manual for the signal type.
- The INPUT 1 terminals are checked for cable connections in the order where; 1) Component Video, 2) S-Video, 3) Video.
- Connect external equipment to only terminals that are to be actually used.
- You can also use the INPUT 3 terminals when connecting only with the Component Video output terminals on a DVD player.

# Watching a VCR image

# Connecting a VCR

Use the INPUT 2 terminals when connecting a VCR and other audiovisual equipment.

# Media Receiver (rear view)



# **Displaying a VCR image**

To watch a VCR image, press **INPUT 2** on the remote control unit or press **INPUT** on the Plasma Display to select INPUT2.

# 💋 ΝΟΤΕ

- The INPUT 2 terminals are checked for cable connections in the order where; 1) S-Video, 2) Video.
- Connect external equipment to only terminals that are to be actually used.

# **Using HDMI Input**

The INPUT 1 and INPUT 3 terminals include HDMI terminals to which digital video and audio signals can be input. To use the HDMI terminal, activate the terminal and specify the types of video and audio signals to be received from the connected equipment. For the types of these signals, see the operation manual that came with the connected equipment.

Before starting the menu, press **INPUT 1** (or **INPUT 3**) on the remote control unit or press **INPUT** on the Plasma Display to select INPUT 1 (or INPUT 3).

#### Input signal correlation table

1920\*1080i@59.94/60Hz

720\*480p@59.94/60Hz

1280\*720p@59.94/60Hz

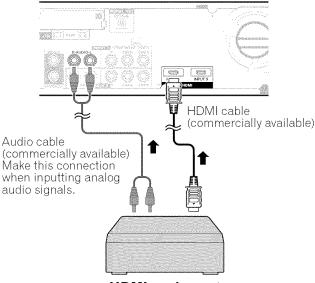
720(1440)\*480i@59.94/60Hz

# 🖉 ΝΟΤΕ

• PC signals are not supported.

# **Connecting HDMI equipment**

## Media Receiver (rear view)



**HDMI** equipment

## To activate the HDMI terminal:

### 1 Press HOME MENU.

- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "HDMI Input". (↑/↓ then ENTER)
- 4 Select "Setting". (**↑**/**↓** then **ENTER**)
- **5** Select "Enable". ( $\bigstar$ / $\bigstar$  then **ENTER**)

ltem	Description
Disable (factory default	Deactivates the HDMI terminal. )
Enable	Activates the HDMI terminal.

6 Press HOME MENU to exit the menu.

### To specify the type of digital video signals:

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "HDMI Input". (↑/↓ then ENTER)
- 4 Select "Video". (↑/↓ then ENTER)
- 5 Select the type of digital video signals. (↑/↓ then ENTER)
  - If you select "Auto", an attempt will be made to identify the type of digital video signals when digital video signals are received.

ltem	Description
Auto (factory default)	Automatically identifies input digital video signals.
Color-1	Digital Component Video signals (4:2:2) locked
Color-2	Digital Component Video signals (4:4:4) locked
Color-3	Digital RGB signals locked

#### 6 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

- If you select a parameter other than "Auto", make such a setting that results in natural color.
- If no image appears, specify another digital video signal type.
- For the digital video signal types to be specified, check the operation manual that came with the connected equipment.

# To specify the type of audio signals:

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "HDMI Input". (↑/↓ then ENTER)
- 4 Select "Audio". (↑/↓ then ENTER)
- 5 Select the type of audio signals. ( $\bigstar/ \bigstar$  then **ENTER**)
  - If you select "Auto", an attempt will be made to identify the type of audio signals when audio signals are received.

English

ltem	Description
Auto (factory default)	Automatically identifies input audio signals.
Digital	Accepts digital audio signals.
Analog	Accepts analog audio signals.

## 6 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

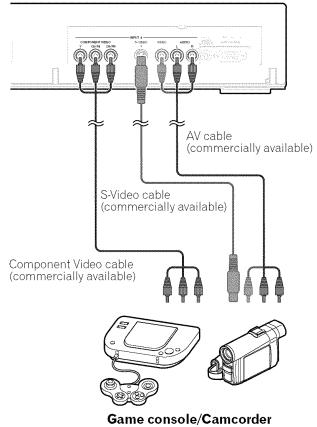
- If no sound is output, specify another audio signal type.
- For the audio signal types to be specified, check the operation manual that came with the connected equipment.
- Depending on the equipment to be connected, you also need to connect analog audio cables.

# Enjoying a game console or watching camcorder images

# Connecting a game console or camcorder

Use the INPUT 4 terminals to connect a game console, camcorder and other audiovisual equipment.

# Media Receiver (front view)



# 🖉 ΝΟΤΕ

- The INPUT 4 terminals are checked for cable connections in the order where; 1) Component Video, 2) S-Video, 3) Video.
- Connect external equipment to only terminals that are to be actually used.

# Displaying an image of the game console or camcorder

To watch an image coming from the game console or camcorder, press **INPUT 4** on the remote control unit or press **INPUT** on the Plasma Display to select INPUT4.

# Recording digital TV programs using a VCR or DVD recorder

If you connect recording equipment such as a VCR or DVD recorder to the MONITOR OUT terminals on the rear of the Media Receiver, you can record, for example, digital TV programs using the recording equipment.

You can also record digital TV programs more easily by using the supplied VCR controller. Connect the VCR controller to the VCR control terminal on the rear of the Media Receiver and then position the controller so that its light emitting section faces the remote control sensor on the recording equipment. For more information, see page 59.

# Avoiding unwanted feedback

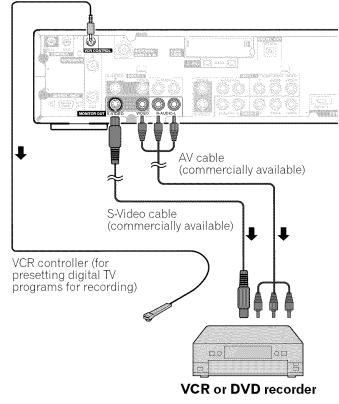
You can prevent unwanted feedback from adversely affecting the quality of images. Specify the output terminal whose output is to be inhibited.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Monitor Out". (↑/↓ then ENTER)
- 4 Select "INPUT1 Prohibit", "INPUT2 Prohibit", "INPUT3 Prohibit", or "INPUT4 Prohibit". (↑/↓ then ENTER)
- 5 Press HOME MENU to exit the menu.

English

# Connecting a recorder

# Media Receiver (rear view)



# 🖉 ΝΟΤΕ

- About the MONITOR OUT terminals
  - The MONITOR OUT terminals cannot output the following signals:
  - 1 Video signals input from the COMPONENT VIDEO terminal
  - 2 Video signals from a personal computer
  - 3 S-Video signals when a conventional TV channel is being received
  - **4** S-Video signals when Video signals (INPUT 1, 2, and 4) are being input
  - 5 Digital video and audio signals from the HDMI terminals
- When watching images played back on a VCR or DVD recorder connected to the MONITOR OUT terminals, select an input source (e.g., TV channel reception) on the recording equipment other than external input sources. Selecting an external input source may result in distorted images or noise.
- Analog broadcasting signals are not sent to the MONITOR OUT (S-VIDEO) terminal. This is also true of composite signals coming from INPUT 1, 2, or 4.

# Connecting other audio equipment

The digital audio output terminal (optical) on this system can output Dolby Digital signals. Using an optical digital cable, connect an AV receiver to the digital audio output terminal (optical) on the rear of the Media Receiver. This allows audio such as digital TV broadcasting to be played in high quality.

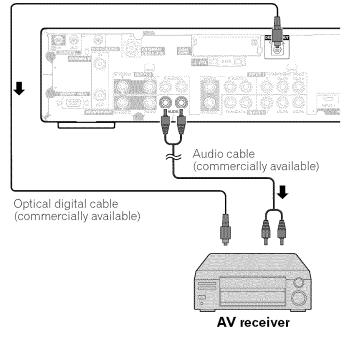
If your AV receiver does not have a digital audio input terminal (optical), connect the MONITOR OUT terminals (AUDIO) on the rear of the Media Receiver to the audio input terminals on the AV receiver.

# 🖉 ΝΟΤΕ

• When using the digital audio output terminal (optical), you need to make settings depending on your AV receiver. For more information, see the instruction manual that came with the AV receiver.

# **Connecting an AV receiver**

## Media Receiver (rear view)



#### Switching the optical audio signal type

Set up for the DIGITAL AUDIO output terminal (OPTICAL), depending on your AV receiver.

- 1 Press HOME MENU.
- 2 Select "Option". (↑/↓ then ENTER)
- 3 Select "Digital Audio Out". (↑/↓ then ENTER)
- 4 Select "Dolby Digital" or "PCM". (♠/✦ then ENTER)

ltem	Description
PCM (factory default)	Always outputs in the PCM format regardless of the types of signals.
Dolby Digital	For Dolby Digital encoded signals, outputs in the Dolby Digital format. For PCM encoded signals, outputs in the PCM format.

5 Press HOME MENU to exit the menu.

# Watching a D-VHS image

#### What is i.LINK?

i.LINK is a digital serial interface for handling digital video, digital audio, and other data in two directions. i.LINK is Sony's term for the IEEE 1394 data transport bus. Digital AV equipment compatible with i.LINK can be connected using a single i.LINK cable. The i.LINK interface allows this PDP system to control one of up to two i.LINK compatible devices (in connection) that can be identified.

### Which i.LINK devices are connectable?

For i.LINK devices, this system supports only D-VHS recorders. The i.LINK terminals on this system cannot be connected with other equipment such as DVD recorders, digital video cameras, personal computers, and PC peripheral devices because of differences in the specifications.

#### What can be recorded through i.LINK?

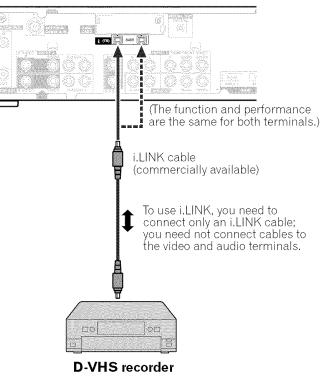
With D-VHS recorders connected to this system through i.LINK, you can record only digital TV programs. You cannot record conventional TV channels nor contents coming from external input sources and personal computers.

#### **Connecting D-VHS recorders**

Use the i.LINK terminals when connecting D-VHS recorders.

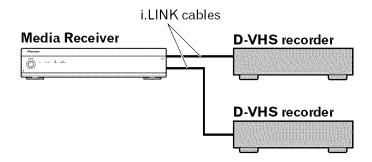
#### When connecting a single D-VHS recorder

#### Media Receiver (rear view)



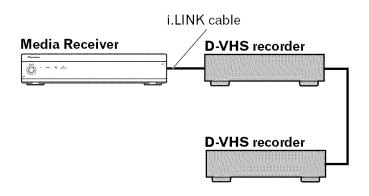
#### When connecting two D-VHS recorders

You can connect two D-VHS recorders directly to the i.LINK terminals on the rear of the Media Receiver.



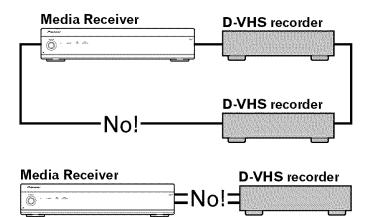
English

Using i.LINK cables you can also connect up to two D-VHS recorders in a daisy chain.



# Precautions about i.LINK connections

- Use S400 i.LINK cables that have 4-pin plugs and are shorter than 3.5 m (11.48 feet).
- Some i.LINK devices cannot relay data when their power is off.
- Do not make the following loop connections:



# Displaying a D-VHS image

To watch a D-VHS image, press **i.LINK** on the remote control unit or press **INPUT** on the Plasma Display to select i.LINK.

# **Useful and important notification**

## **Useful information**

- D-VHS recorders connected through i.LINK can play back digital TV programs recorded using this system.
- D-VHS recorders connected through i.LINK can record only digital TV programs. Using i.LINK, those recorders cannot record conventional TV channels nor contents coming from external input sources.
- This system can be simultaneously connected with up to two D-VHS recorders that support i.LINK. You can control one of these D-VHS recorders (basic functions only).
- Some D-VHS recorders connected through i.LINK may not allow this system to control through the control panel screen or to display images and output sound.
- To record digital TV programs using connected D-VHS recorders, use D-VHS tape. You cannot use VHS tape nor S-VHS tape.
- Some D-VHS recorders connected though i.LINK may not allow this system to play back images and sound recorded on VHS tape, S-VHS tape, or (if with analog signals) D-VHS tape. If this is the case, connect the analog output terminals on the D-VHS recorder to INPUT 1, 2, 3, or 4 terminals on this system. See page 50.
- This system supports the Digital Transmission Content Protection (DTCP) technology. The DTCP is a copy protection technology that presents data coding and device authentication.
- i.LINK may not allow copy-restricted video, audio, and other data to be copied from one i.LINK device to another. It also may not allow video, audio, and other data to be transferred with equipment that does not support the DTCP.

# Precautions

- While one D-VHS recorder connected through i.LINK is recording or playing back, do not switch on or off the other connected D-VHS recorder (not in use) or do not connect or disconnect the i.LINK cable from that D-VHS recorder. Doing so can result in image and sound interruption.
- Some D-VHS recorders that support i.LINK cannot relay data when their power is off. Check the instruction manual that came with your D-VHS recorder. This system allows you to change the setting for data relay in the standby mode. See "Setting up for i.LINK standby" on page 57.

## Setting up for controlling a D-VHS recorder

You can operate the connected D-VHS recorder from the Plasma Display that shows the control panel screen. After making the connections, use the menu to specify the model of the D-VHS recorder to be operated. You can operate only a single D-VHS recorder from the Plasma Display.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Recorder Setup". (←/→ then ENTER)
- 4 Select "i.LINK Setup". (**↑**/**↓** then **ENTER**)
- 5 Select "i.LINK List". (↑/↓ then ENTER)
- 6 Select the D-VHS recorder model to be operated.
   (↑/↓ then ENTER)



7 Press A to select "Connect".

## 8 Press HOME MENU to exit the menu.

# 💋 ΝΟΤΕ

- The following information appears at the right end of the i.LINK list to indicate the connection status of the D-VHS recorders:
- Control: Data connection with the D-VHS recorder has been established and the recorder is ready for control.
- Link: The D-VHS recorder has been physically connected, and can be controlled if it is selected for control.

Currently not physically connected

• When connected to any device other than a D-VHS, the device is not listed in the i.LINK List.

#### Editing the i.LINK list

The i.LINK list shows all devices connected through i.LINK interfaces. In this list, you can change the name or order of devices or delete device information.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (↑/↓ then ENTER)
- 3 Select "Recorder Setup". (←/→ then ENTER)
- 4 Select "i.LINK Setup". (↑/↓ then ENTER)
- 5 Select "i.LINK List". (**↑**/**↓** then **ENTER**)
- 6 Select the desired device.  $(\bigstar/\bigstar)$



The following procedure differs depending on what you want to perform.

#### To change the name of a device:

- 7 Press B to select "Rename".
- 8 Enter up to 7 characters using 4/4, 4/4, and ENTER.

(C)	New Name: D-VH	S	
	ABCDEF		000000000000000000000000000000000000000
I.LINK Setup I.LINK List	A K L M N O P	QRST	000000000000000000000000000000000000000
	5 6 7 8 9 0	1 2 3 4	200000000000000000000000000000000000000
		& SPACE	
A Accept	B Clear	© Cancel	Home Menul Exit

#### 9 Press A.

10 Press HOME MENU to exit the menu.

#### To change the order of devices:

- 7 Press C to select "Move".
- 8 Select the new desired position. (↑/↓ then ENTER)
   The selected device is moved to the selected position.
- 9 Press HOME MENU to exit the menu.

### To delete information about a device:

- 7 Press D to select "Delete".
  - A confirmation message appears.
  - A warning message appears if the selected device has been preset for recording with the timer or if its power is on. If this is the case, you cannot delete the device that you have selected.
- 8 Press A to execute the deletion.
- 9 Press HOME MENU to exit the menu.

# Setting up for i.LINK standby

Use the following procedure to enable data transfer between multiple i.LINK devices even when the system is in the standby mode.

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". ( $\bigstar$ / $\bigstar$  then ENTER)
- 3 Select "Recorder Setup". (←/→ then ENTER)
- 4 Select "i.LINK Setup". (♠/✦ then ENTER)
- 5 Select "i.LINK Standby". (↑/↓ then ENTER)
- 6 Select "Enable". ( $\uparrow/\downarrow$  then ENTER)
- 7 Press HOME MENU to exit the menu.

# NOTE

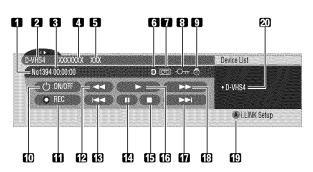
• With "Enable" selected, the system relays data between multiple i.LINK devices even when in the standby mode; the i.LINK circuits are energized in that mode.

# In standby mode



# Operating the control panel screen

The control panel screen appears when you press **i.LINK**. It disappears when you press **i.LINK** again. To select a button on the control panel screen, press  $\bigstar$  or  $\bigstar$ , and then press **ENTER** on the remote control.



- 1 Shows the current status of the D-VHS recorder.
- 2 Shows the name of the currently selected device.
- **3** Shows counter time output by the D-VHS recorder.
- 4 Shows the manufacture name of the D-VHS recorder to be operated.
- **5** Shows the model name of the D-VHS recorder to be operated.
- 6 Shows the type of inserted video tape; D for D-VHS, S for S-VHS, and no display for VHS.
- 7 Appears when any tape has been inserted.
- 8 Appears when the inserted tape has been write protected. The inserted tape cannot be used for recording when this indicator appears.
- **9** Appears when the D-VHS recorder has been preset for recording and is in the standby mode.
- **10** Switches on and off the D-VHS recorder.
- 11 Starts recording.
- **12** Rewinds to the start of the current program.
- **13** Rewinds the tape.
- **14** Pauses the tape.
- **15** Stops the current tape motion.
- **16** Starts playing back.
- **17** Forwards to the start of the next program.
- **18** Forwards the tape.
- **19** Exits the control panel screen and displays the i.LINK Setup menu.
- 20 Allows you to change the D-VHS recorder to be operated. After pressing this button, press ↑/↓ to select the desired model from the list, and then press ENTER.

# 💋 ΝΟΤΕ

- If no i.LINK device has been connected, "No i.LINK devices are connected." appears. If this is the case, connect i.LINK devices.
- If none of the connected equipment has been supported for control, you cannot execute control.



# Watching an image from a personal computer

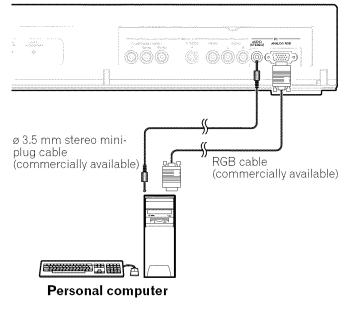
#### **Connecting a personal computer**

Use the PC terminals to connect a personal computer.

# 💋 ΝΟΤΕ

- The PC input terminals are DDC2B-compatible.
- Plug & Play may not correctly function, depending on personal computers in use.

## Media Receiver (front view)



# Displaying an image from a personal computer

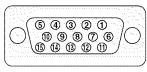
When connecting to a personal computer, the input signal type is automatically identified. If the personal computer image does not come in clearly, you may need to use Auto Setup in the menu. See page 45.

To watch an image coming from the personal computer, press **PC** on the remote control unit or press **INPUT** on the Plasma Display to select "PC".

# 💋 ΝΟΤΕ

• The PC terminals cannot be used for audiovisual equipment.

## Signal names for 15-pin mini D-sub connecter



#### (front view)

Pin No.	Signal name
1	R
2	G
3	В
4	Not connected
5	Not connected
6	GND (ground)
7	GND (ground)
8	GND (ground)
9	+5V
10	GND (ground)
11	Not connected
12	SDA
13	HD
14	VD
15	SCL

# 🖉 ΝΟΤΕ

 A Macintosh adaptor may be required for use with some Macintosh computers.

# **Computer compatibility chart**

Resolution	Frequency	Remarks
720 × 400	70 Hz	
640 × 480	60 Hz	
	65 Hz	Macintosh 13" (67 Hz)
	72 Hz	
	75 Hz	
800 × 600	56 Hz	
	60 Hz	
	72 Hz	
	75 Hz	
832 × 624	74.5 Hz	Macintosh 16"
1024 × 768	60 Hz	
	70 Hz	
	75 Hz	Macintosh 19"
1280 × 768	56 Hz	
	60 Hz	
	70 Hz	

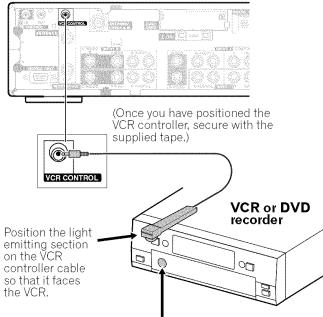
# **Connecting the VCR controller**

Connect the supplied VCR controller to the Media Receiver. This allows you to preset digital TV programs for recording; see page 48. When the specified time comes, the system in the standby mode is automatically switched on and the specified TV program is recorded using the connected VCR or DVD recorder.

# 💋 ΝΟΤΕ

- Make sure to leave the VCR power on when presetting TV programs for recording with the VCR controller.
- Be sure to firmly connect the VCR controller to the VCR control terminal on the rear of the Media Receiver. If you have mistakenly connected it to the CONTROL IN or CONTROL OUT terminal, remote control or other operations may be disabled.

# Media Receiver (rear view)



Remote control sensor

Use the following procedure to set the manufacture of the recording equipment:

- 1 Press HOME MENU.
- 2 Select "Tuner Setup". (**↑**/**↓** then **ENTER**)
- 3 Select "Recorder Setup". (←/→ then ENTER)
- 4 Select "VCR Setup". (♠/✦ then ENTER)
- 5 Select the manufacture of the recording equipment.
   (↑/↓ then ENTER)

Recorder Setup	VCR Setup	
VCR Setup		
		Home Menul Exit

- The screen for recording test appears.
- 6 Check that the power to the recording equipment is on, and insert tape into the slot.
  - Insert tape you think it all right to erase its contents. The contents will be erased because Rec and Stop codes are output in the test.
  - Check that the light emitting section on the VCR controller cable faces the recording equipment.
- 7 Press A to execute recording test.
  - If the recording equipment fails to start and stop recording, check and change the specified recording equipment manufacture.
- 8 Press A to select "Yes, Store Setting".
- 9 Press HOME MENU to exit the menu.

# 🖉 ΝΟΤΕ

- Even if you correctly specify the manufacture of the recording equipment, control of some models may be disabled.
- Perform the recording test when the recording equipment is not in recording standby or is not recording.
- The recording test takes approximately 10 seconds.
- The PIONEER has been set as the factory default.

# The lists of controllable recording equipment manufactures

Manufacture	Manufacture	Manufacture	Manufacture
Admiral	Harley Davidson	Philco	Toshiba
Advantz	Harman/Kardon	Philips	Totevision
Adventura	Harwood	Pilot	Unitech
Aiko	Headquarter	Pioneer	Vector
Aiwa	Hitachi	Portland	Vector Research
Akai	JVC	Profitronic	Video Concepts
American High	Jensen	Proscan	Videosonic
Asha	KEC	Protec	Wards
Audiovox	KLH	Pulsar	White Westinghouse
Beaumark	Kenwood	Quarter	XR-1000
Bell & Howell	Kodak	Quartz	Yamaha
Broksonic	LXI	Quasar	Zenith
CCE	Lloyd's	RCA	Some modes of the listed
Calix	Logik	Radio Shack	manufactures may not allow
Canon	MEI	Radix	control through the VCR
Capehart	MGA	Randex	
Carver	MGN Technology	Realistic	
Cineral	MTC	Ricoh	
Citizen	Magnasonic	Runco	
Colt	Magnavox	STS	
Craig	Magnin	Salora	
Curtis Mathes	Marantz	Samsung	
Cybernex	Marta	Sanky	
Daewoo	Matsushita	Sansui	
Daytron	Memorex	Sanyo	
Denon	Minolta	Scott	
Dynatech	Mitsubishi	Sears	
Electrohome	Motorola	Semp	
Electrophonic	Multitech	Sharp	
Emerex	NAD	Shintom	
Emerson	NEC	Shogun	
Fisher	Nikko	Singer	
Fuji	Nikon	Sony	
Funai	Noblex	Sylvania	
GE	Olympus	Symphonic	
Garrard	Optimus	ТМК	
Go Video	Optonica	Tatung	
GoldStar	Orion	Teac	
Gradiente	Panasonic	Technics	
Grundig	Penney	Teknika	
HI-Q	Pentax	Thomas	

English

# **Connecting control cords**

Connect control cords between the Media Receiver and other PIONEER equipment having the Sile logo. You can then operate the connected equipment by sending commands from its remote control unit to the remote control sensor on the Media Receiver.

After the CONTROL IN terminals have been connected, the remote control sensors on the connected equipment do not accept commands from the remote control units. Face the remote control units to the remote control sensor on the Plasma Display when operating the connected equipment.

# 💋 ΝΟΤΕ

- Make sure that the power is turned off when making connections.
- Complete all component connections before making control cord connections.

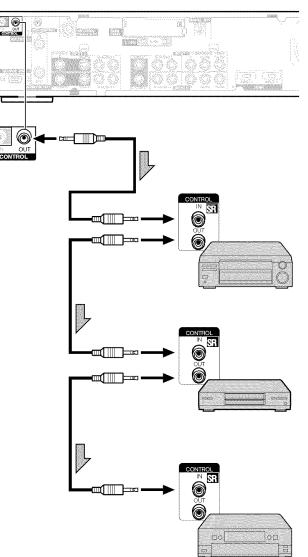
# About SR+

The CONTROL OUT terminal on the rear of the Media Receiver supports **SR+** that allows linked operations with a PIONEER AV receiver. **SR+** presents functions such as the input switch linkage operation function and the DSP surround mode display function. For more information, see the instruction manual that came with the PIONEER AV receiver supporting **SR+**.

# 🖉 ΝΟΤΕ

• While in connection through **SR+**, the volume on this system is temporarily minimized.

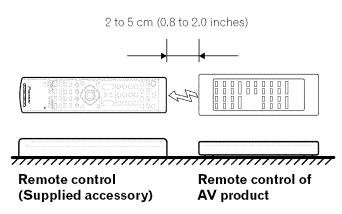
# Media Receiver (rear view)



The control cables (commercially available) are mono sound cables with mini plugs (no resistance).

# Learning function of the remote control unit

You can operate the connected AV products (AV Receiver, Cable Box, SAT tuner, VCR, DVD, DVD recorder, LD) using the learning function of your remote control unit. This remote control unit has a function that can memorize each remote control code.



## Using the learning function

- 1 Slide the **Mode switch** to match the device whose remote control signal you want to be learned.
- 2 Press EDIT/LEARN and 2 at the same time.•The LED flashes.
- **3** Press a button to be learned.
  - The LED lights up.
  - For the functions that can be learned, see pages 64 to 68.
  - When learning is finished, the LED starts flashing again.
- 4 Press EDIT/LEARN again to exit the Learn mode.

# 🖉 ΝΟΤΕ

- To exit the Learn mode halfway, press EDIT/LEARN again.
- If the **Mode switch** selection is changed when in the Learn mode, the Learn mode is cancelled.
- If no operation is performed for more than one minute, the Learn mode is cancelled.
- It takes about 2 seconds to finish code transmission. Do not interrupt it halfway. Wait until the LED flashes again.

**VOL +** (RECEIVER section) at the same time.

## Presetting manufacture codes

- 1 Slide the **Mode switch** to match the device to which you want to preset the remote control signal.
- 2 Press EDIT/LEARN and 1 at the same time.The LED flashes.
- **3** Press **0 9** to enter the manufacture code. See page 63.
  - Preset mode is finished once the LED no longer lights up.



- To exit the Edit mode halfway, press EDIT/LEARN again.
- If the **Mode switch** selection is changed when in the Edit mode, the Edit mode is cancelled.
- If no operation is performed for more than one minute, the Edit mode is cancelled.
- When you enter a code not listed, the LED flashes quickly.
- If the table on page 63 does not include your desired manufacturer or the remote control does not work, you can make the memory learn its signal by the Learn mode.
- The initial mode is "000" (PIONEER).

# **Useful Remote Control Features**

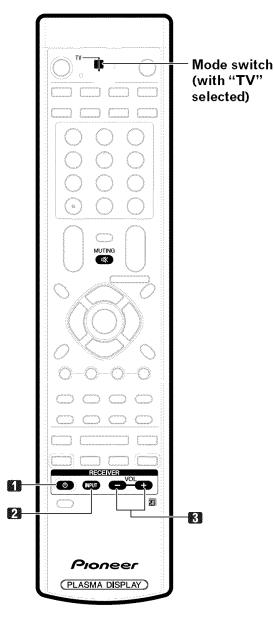
# Manufacture codes

	CABLE/SAT	VCR	DVD/DVR
000	PIONEER1 (CABLE)	PIONEER	PIONEER(DVD)
001	PIONEER2(CABLE)	FISHER	PANASONIC(DVD)
002	JERROLD1 (CABLE)	FISHER2	SAMSUNG(DVD)
003	JERROLD2 (CABLE)	FISHER3	SONY(DVD)
004	JERROLD3 (CABLE)	GOLDSTAR	TOSHIBA(DVD)
005	JERROLD4 (CABLE)	HITACHI	IVC(DVD)
006	JERROLD5 (CABLE)	HITACHI2	PIONEER(DVD-RECORDER)
007	JERROLD6 (CABLE)	HITACHI3	PIONEER2(DVD-RECORDER)
008	JERROLD7 (CABLE)	MAGNAVOX2	PIONEER3 (DVD-RECORDER)
009	JERROLD8 (CABLE)	MITSUBISHI	PANASONIC(DVD-RECORDER)
010	JERROLD9 (CABLE)	MITSUBISHI2	PANASONIC2 (DVD-RECORDER)
011	JERROLD 10 (CABLE)	MITSUBISHI3	PANASONIC3 (DVD-RECORDER)
012	S.A.1 (CABLE)	MITSUBISHI4	PHILIPS(DVD-RECORDER)
013	S.A.2 (CABLE)	MITSUBISHI5	SHARP(DVD-RECORDER)
014	S.A.3 (CABLE)	MITSUBISHI6	SHARP2(DVD-RECORDER)
015	S.A.4(CABLE)	PANASONIC	TOSHIBA(DVD-RECORDER)
015	ZENITH1 (CABLE)	PANASONIC2	TOSHIBA2(DVD-RECORDER)
017	ZENITH2(CABLE)	PANASONICZ PANASONIC3	TOSTIBAZ (DYD-RECORDER)
018	ZENITH2 (CABLE)	RCA	
010	ZENITTS (CADLE)	RCA2	
019	PIONEER(SAT)	RCA3	PIONEER(LD)
020	· · · /	SANYO	KENWOOD(LD)
	RCA1(SAT)		( )
022 023	RCA2(SAT) SONY(SAT)	SANYO2	PANASONIC1 (LD)
	SUNT(SAT)	SANYO3	PANASONIC2(LD)
024		SHARP	PHILIPS(LD)
025		SHARP2	RCA(LD)
026		SHARP3	SONY(MDP)
027		SONY (BETA)	SONY(LD)
028		SONY(VHS)	
029		SONY (8mm)	
030		TOSHIBA	
031		JVC	
032		JVC2	
033		JVC3	
034		JVC4	
035		JVC5	
036		ZENITH	
037		MITSUBISHI(J-3)	
038		SHARP(J-2)	
039		PANASONIC(J-3)	
040		TOSHIBA(J-3)	
041		GRANDIENTE	
042		AKAI	
043		PIONEER2	
044		SANYO4	
045		MATSUI	
046		AIWA	
047		ALBA81	
048		BUSH	
049		THOMSON	
050		BAIRD	
051		TELEFUNKEN	
052		ALBA	

CABLE/SAT	VCR DVD/DVR
053	Grundig1
054	Grundig2
055	Grundig3
056	SONY2
057	SONY3
058	SONY4
059	RCA4
060	PHILIPS
061	PHILIPS2
062	PHILIPS3
063	PHILIPS4
064	PHILIPS5
065	PHILIPS6
066	SAMSUNG
067	SAMSUNG2
068	SAMSUNG3
069	SAMSUNG4
070	SAMSUNG5
071	SAMSUNG6
072	MARANTZ
073	MARANTZ2
074	GE
075	GE2
076	GE3
077	ҮАМАНА
078	YAMAHA2
079	YAMAHA3
080	ҮАМАНА4
081	CURTIS_MATHIS
082	CURTIS_MATHIS2
083	CURTIS_MATHIS3
084	FUNAI
085	ADMIRAL
086	KENWOOD
087	KENWOOD2
088	KENWOOD3
089	NEC
090	NEC2
091	NEC3
092	NEC4
093	WARDS
094	WARDS2
095	WARDS3
096	WARDS4
097	MEMOREX
098	MEMOREX2
099	JC_PENNY
100	JC_PENNY2
101	JC_PENNY3
102	JC_PENNY4
103	JC_PENNY5
104	JC_PENNY6

13

# Using the remote control unit to control other devices



## **Receiver control buttons**

When a Pioneer receiver is connected to the display, the receiver can be operated using buttons **1** to **3**.

When a non-Pioneer receiver is connected to the display, the signals for **1** to **3** must first be learned before operating. See page 62.

- 1 RECEIVER () (STANDBY/ON)
  - Turns the receiver power on and off.
- 2 **RECEIVER INPUT** Selects the input source connected to the receiver.
- 3 RECEIVER VOL +/-Adjusts the receiver volume level. Press VOL + to increase the volume and VOL - to decrease it.

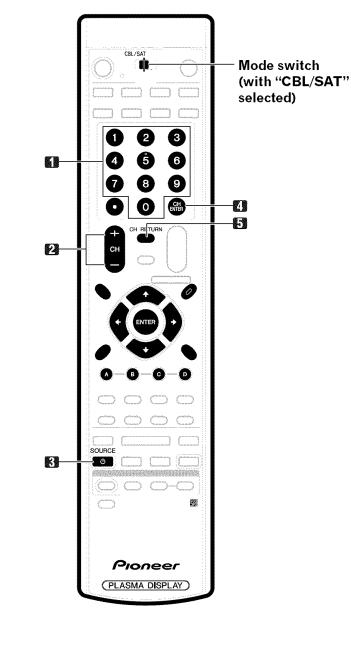
# 🖉 NOTE

## ・(RECEIVER) 🕸 MUTING

Allows the remote control unit to learn receiver's mute signal. Use this button when the mode switch is set to a position other than TV.

• The color-highlighted buttons on the remote control can learn the control signal from another device's remote control.

English



# **Cable control buttons**

When the **Mode switch** is set to CBL/SAT, the cable converter connected to the display can be operated using **1** to **5**.

Cable converters made by other manufacturers and not preset can also be operated using the remote control unit if **1** to **5** have learned the functions. See page 62.

## 1 0 - 9

Press a button (or buttons) that corresponds to the channel that you want to watch.

### 2 CH +/-

Press CH + or CH – to tune in a higher or lower channel.

# 3 SOURCE 🕛

Turns the cable converter power on and off.

### 4 CH ENTER \*

Fix the selected channel with the direct channel selection buttons.

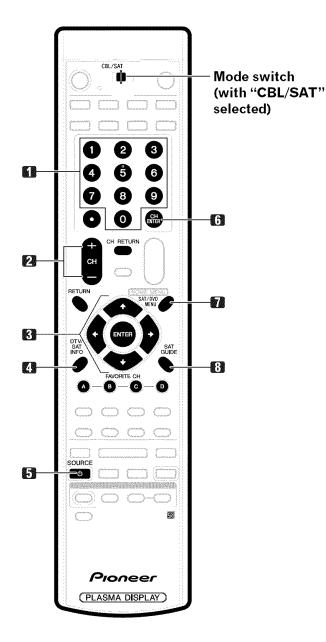
## 5 CH RETURN \*

Press to switch between the current channel and the channel you were watching immediately before.

\* Some manufacturers do not preset **CH ENTER** and **CH RETURN**. Use these buttons to learn if necessary.

# 💋 ΝΟΤΕ

- CABLE and SAT cannot be selected at the same time.
- The color-highlighted buttons on the remote control can learn the control signal from another device's remote control.



### **SAT control buttons**

When the SAT is preset by the learning function of the remote control, the remote control unit buttons will function as shown below.

• When the **Mode switch** is set to CBL/SAT, satellite broadcast tuners made by other manufacturers and not preset can also be operated with the remote control unit if **1** to **8** have learned the functions. See page 62.

#### 1 0 - 9

Press a button (or buttons) that corresponds to the channel that you wish to watch.

#### 2 CH +/-

Press **CH +** or **CH** – to tune in a higher or lower channel.

#### 3 ENTER, **↑/↓**/**↓**/

ENTER: Press to activate the selected function.
 ↑/↓/↓→: Press the button to select items on the SAT GUIDE screen or SAT MENU screen.

## 4 SAT INFO

When this button is pressed, information on satellite broadcasting will appear.

• Use this button to learn if necessary.

#### 5 SOURCE ()

Turns the Satellite broadcast tuner power on and off.

#### **6 CHENTER**

Fix the selected channel with the direct channel selection buttons.

Use this button to learn if necessary.

#### 7 SAT MENU

When this button is pressed, the satellite broadcasting menu screen will appear.

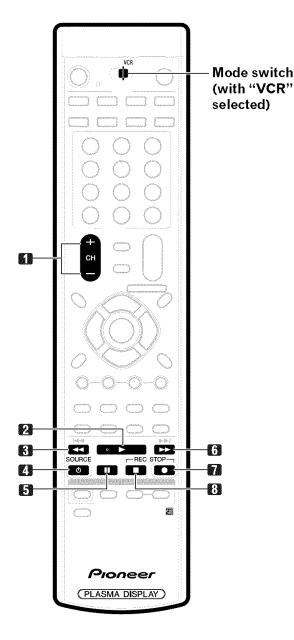
#### 8 SAT GUIDE

When this button is pressed, the satellite broadcasting guide screen will appear.

# 🖉 ΝΟΤΕ

- CABLE and SAT cannot be selected at the same time.
- The color-highlighted buttons on the remote control can learn the control signal from another device's remote control.

English



# VCR control buttons

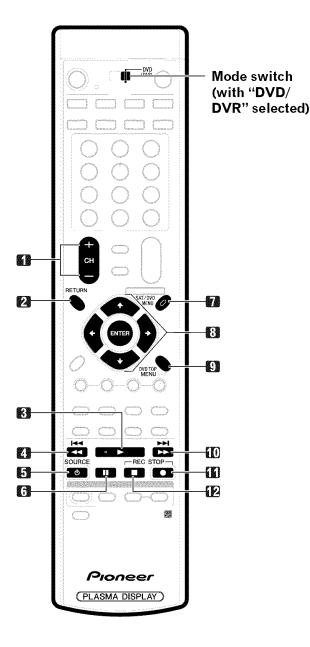
When the VCR is preset by the learning function of the remote control, the remote control unit buttons will function as follows when the **Mode switch** of the remote control unit is set to VCR.

- When the input selector button having the same number as the input terminal connecting the VCR is pressed, the VCR can be operated using **1** to **8**.
- VCR made by other manufacturers and not preset can also be operated using the remote control unit if **1** to **8** have learned the functions. See page 62.
- 1 CH +/-Press to select the channel of the TV tuner on the VCR.
- 2 ► (PLAY) Selects playback.
- 3 ◄< (REW) Rewinds the tape and allows picture search.
- 4 SOURCE (1) Turns the power of the VCR on and off.
- 5 II (PAUSE/STILL) Sets pauses and still pictures.
- 6 ►► (FF) Rapidly advances the tape and allows picture search.
- 7 (REC) Starts recording.
- 8 🔳 (STOP)
  - Stop tape transport.



• The color-highlighted buttons on the remote control can learn the control signal from another device's remote control.

En



## **DVD/DVR** control buttons

When the DVD/DVR is preset by the learning function of the remote control, the remote control unit buttons will function as follows when the **Mode switch** of the remote control unit is set to DVD/DVR.

- When the input selector button having the same number as the input terminal connecting a DVD player or DVD recorder is pressed, these players can be operated using **1** to **12**.
- DVD players or DVD recorders made by other manufacturers and not preset can also be operated using the remote control unit if **1** to **12** have learned the functions. See page 62.

### 1 CH +/- (DVD recorder only)

Press to change the channel of the tuner built in the DVD recorder.

#### 2 RETURN

When the DVD menu is in display, press to restore the immediately previous screen.

- 3 ► (PLAY)
- Selects playback. 4 ◀◀ (SCAN)/I◀◀ (CHAPTER SEARCH)

Continue pressing to go backward. Pressing quickly once takes you to the start of the chapter currently playing. Each time you press it, you move back to the start of the previous chapter.

#### 5 SOURCE ()

Turns the power of the DVD player or DVD recorder on and off.

#### 6 II (PAUSE/STILL)

Sets pauses and still pictures.

7 SAT/DVD MENU (DVD, DVD recorder)

When this button is pressed, the DVD menu will appear.

- 8 ENTER, **↑**/**↓**/**↓**/**↓** (DVD, DVD recorder)
  - ENTER: Press to activate the selected function.
     ↑/↓/↓: Press the button to select items on the DVD MENU screen.
- 9 DVD TOP MENU (DVD, DVD recorder) When this button is pressed, the DVD top menu will appear.

#### 10 ►► (SCAN)/►►I (CHAPTER SEARCH)

Continue pressing for fast forward. Pressing quickly once takes you to the start of the next chapter. Each time you press it, you move ahead to the start of the next chapter.

# 11 • (REC)

Starts recording.

## 12 🔳 (STOP)

Playback stops when pressing once. With some DVD players or DVD recorders, pressing the button twice may open the disc tray.

#### 11, 12 REC STOP

Press and hold  $\bullet$ , and then press this button to stop recording. This operation is true of only Pioneer DVD recorders.

# 🖉 NOTE

- The DVD player or DVD recorder cannot be selected at the same time.
- The color-highlighted buttons on the remote control can learn the control signal from another device's remote control.

# Troubleshooting

Problem	Possible Solution
• No power.	<ul> <li>Make sure the Plasma Display and the Media Receiver are connected correctly. (See page 18.)</li> <li>Is the power cord disconnected? (See page 23.)</li> <li>Has the main power been turned on? (See page 24.)</li> <li>Check if you pressed TV () on the remote control unit. (See page 24.)</li> <li>If the indicator on the system lights up red, press TV ().</li> </ul>
• Green and red rectangles appear on the screen alternately.	• Check if the system cable has been disconnected or almost disconnected? (See page 18.)
• The system cannot be operated.	• External influences such as lightning, static electricity, etc., may cause improper operation. In this case, operate the system after first turning the power of the Plasma Display and the Media Receiver, or unplugging the power cord and re-plugging it in after 1 or 2 minutes.
• Remote control unit does not operate.	<ul> <li>Is the Mode switch set correctly? Slide it to the TV setting position. (See page 14.)</li> <li>Are batteries inserted with polarity (+, -) aligned? (See page 20.)</li> <li>Are batteries worn out? (Replace with new batteries.) (See page 20.)</li> <li>Operate the remote control unit while pointing it toward the remote control sensor on the Plasma Display. (See page 20.)</li> <li>Are you using it under strong or fluorescent lighting?</li> <li>Is a fluorescent light illuminated near the remote control sensor?</li> </ul>
• No image and audio is presented.	<ul> <li>Check if the input source for video or PC has been unintentionally selected although you want to watch a TV channel. (See page 25.)</li> <li>Check if you have activated the Parental Control function. (See page 33.) Enter a password to temporarily cancel the Parental Control function. (See page 37.)</li> </ul>
• No picture.	<ul> <li>Is connection to other components correct? (See pages 50 to 58.)</li> <li>Is a non-compatible PC signal being input? (See page 58.)</li> <li>Is picture adjustment correct? (See page 41.)</li> </ul>
• Audio is output but no image is presented.	• Check if you have selected "Picture Off" for Energy Save. With this option selected, the screen is deactivated; only audio is output. To restore the screen display, press any button other than <b>VOL</b> +/- and <b>MUTING</b> . (See page 44.)
<ul> <li>Images are presented but no audio is output.</li> </ul>	<ul> <li>Check if you have selected the minimum volume. (See page 26.)</li> <li>Check if you have muted sound. (See page 26.)</li> <li>When using a video or PC input source, check that the audio terminal is also in connection. (See pages 50 to 54 and 58.)</li> </ul>
<ul><li>Sound is reversed between the right and left.</li><li>Sound is output from only a single speaker.</li></ul>	<ul> <li>Check if the speaker cable connections have been reversed between the right and left or if the speaker cable from either speaker has been disconnected. (See pages 12 and 18.)</li> <li>Has the balance been correctly adjusted? (See page 43.)</li> </ul>
• Picture is cut off.	<ul> <li>Is the image position correct? (See page 45.)</li> <li>Has the correct screen size been selected? (See page 46.)</li> </ul>
<ul> <li>Strange color, light color, dark or color misalignment.</li> </ul>	<ul> <li>Adjust the picture tone. (See page 41.)</li> <li>Is the room too bright? The picture may look dark in a room that is too bright.</li> </ul>
• Power is suddenly turned off.	<ul> <li>Is the sleep timer set? (See page 40.)</li> <li>Check the power control setting. (See page 44.)</li> <li>The system's internal temperature has increased. Remove any objects blocking vent or clean. (See pages 15 and 16.)</li> </ul>
Panel sounds / noises	• Panel generated sounds, examples: Fan motor noise, Electrical Circuit Humming / Glass Panel buzzing are normal operation of a phosphor-based matrix display.

Code	Message	Check
SD04	Powering off. Internal temperature too high. Check temperature around PDP.	Check if the ambient temperature of the Plasma Display is high.
SD05	Powering off. Internal protection circuits activated, Is there a short in speaker cable?	Check the speaker cable connections between the Plasma Display and the speakers.
SD11	Powering off. Internal temperature too high. Check temperature around media receiver.	Check if the ambient temperature of the Media Receiver is high.

14

The video program that you watch may be high definition (HD) or standard definition (SD). This Plasma Display is designed to scale to each type of definition properly. If the video program's definition type changes while a menu window is displayed on the screen (for example: HD $\rightarrow$ SD or SD $\rightarrow$ HD), the menu size may temporarily shrink or enlarge until the scaling is completed. This may happen, for example, when you switch between television and an external digital video recorder (D-VHS), or when your recorded program switches between different definition types, while the on-screen menu is being shown.

If this happens, the menu will return to its normal size after two to three seconds. This action is normal, and does not indicate a problem with your Plasma Display system.

English

# Appendix

# This product in part uses "OpenSSL" software.

# To the extent the OpenSSL software is being used, the following notification applies:

Copyright (c) 1998-2004 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (http://www.openssl.org/)"
- 4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact openssl-core@openssl.org.
- 5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
- 6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (http://www.openssl.org/)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT "AS IS" AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

# Original SSLeay License

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com)

All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com). The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are aheared to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, Ihash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- 1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
- 2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- 3. All advertising materials mentioning features or use of this software must display the following acknowledgement: "This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)" The word 'cryptographic' can be left out if the rouines from the library being used are not cryptographic related :-).
- 4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publically available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

#### **Linux Source Notice**

The Pioneer Plasma Television integrated with the Media Receiver in part is powered by utilizes the Linux operation system. The machine readable copy of the corresponding source code is available for the cost of distribution. To obtain a copy, please visit http://www.pioneerelectronics.com/ for more information.

#### **GNU General Public License**

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

59 Temple Place - Suite 330, Boston, MA 02111-1307, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Library General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

#### **GNU General Public License**

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
  - b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
  - c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License.

# Appendix

(Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

- You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:
  - a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
  - c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License.

However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

- 5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
- 6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.
- 7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

## **NO WARRANTY**

- 11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. END OF TERMS AND CONDITIONS

### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and an idea of what it does.>

Copyright (C) yyyy name of author

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 59 Temple Place - Suite 330, Boston, MA 02111-1307, USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type 'show w'. This is free software, and you are welcome to redistribute it under certain conditions; type 'show c' for details.

The hypothetical commands 'show w' and 'show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than 'show w' and 'show c'; they could even be mouse-clicks or menu items—whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program 'Gnomovision' (which makes passes at compilers) written by James Hacker.

signature of Ty Coon, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

# **GNU Lesser General Public License**

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

59 Temple Place, Suite 330, Boston, MA 02111-1307, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software—to make sure the software is free for all its users. This license, the Lesser General Public License, applies to some specially designated software packages—typically libraries—of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder.

Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library.

A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

## **GNU Lesser General Public License**

TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

- 2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:
  - a) The modified work must itself be a software library.
  - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
  - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
  - d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.) These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy. This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License. However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

# Appendix

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License.

Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

- 7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
  - a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.
  - b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.
- 8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
- 9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.
- 10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.
- 11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all.

For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

----

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

- 12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
- 13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

## **NO WARRANTY**

- 15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY. TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.
- 16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. END OF TERMS AND CONDITIONS

#### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and an idea of what it does.>

Copyright (C) year name of author

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307, USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

# Specifications

ltem	50"Plasma Display, Model: PRO-505PU	43″ Plasma Display, Model: PRO-435PU	
Number of Pixels	1280 × 768 pixels	$1024 \times 768$ pixels	
Audio Amplifier 13 W + 13 W (1 kHz, 10 %, 8 Ω)		13 W + 13 W (1 kHz, 10 %, 8 Ω)	
Surround System	SRS/FOCUS/TruBass	SRS/FOCUS/TruBass	
Power Requirement 120 V AC, 60 Hz, 363 W (0.2 W Standby)		120 V AC, 60 Hz, 298 W (0.2 W Standby)	
Dimensions	1270 (W) × 737 (H) × 93 (D) mm (50 (W) × 29 (H) × 3 <sup>11</sup> /16 (D) inches)	1120 (W) × 652 (H) × 93 (D) mm (44 $\frac{1}{8}$ (W) × 25 $\frac{11}{16}$ (H) × 3 $\frac{11}{16}$ (D) inches)	
Weight	32.8 kg (72.3 lbs.)	26.8 kg (59.1 lbs.)	

Item			Media Receiver, Model: PRO-R05U
Reception System	ı (Digital)		ATSC Digital TV system
	Circuit type		8VSB/64QAM/256QAM/QPSK demodulation
	Tuner	VHF/UHF	VHF 2–13ch, UHF 14–69ch
		CATV	2-135ch
	Audio f	ormat	Dolby Digital
Reception System	ı (Analog	)	American TV standard NTSC system
	Circuit	type	Video signal detection PLL full synchronous detection, PLL digital synthesizer system
	Tuner	VHF/UHF	VHF 2–13ch, UHF 14–69ch
		CATV	ANTENNA/CABLE A IN: 1–135ch Cable: 1–125ch
	Audio n	nultiplex	BTSC system
Terminals	Rear	ANTENNA/CABLE A IN	75 $\Omega$ UNBAL, F Type for DTV/VHF/UHF/CATV in
		ANTENNA B	75 $\Omega$ UNBAL, F Type for VHF/UHF/CATV in Loop out
		i.LINK (TS)	S400 (2)
		INPUT 1	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in, HDMI in
		INPUT 2	S-VIDEO in, VIDEO in, AUDIO in
		INPUT 3	COMPONENT VIDEO in, AUDIO in, HDMI in
		Monitor Out	S-VIDEO out, VIDEO out, AUDIO out
		Digital Audio Output	Optical (1)
		VCR Control Output	1
		CONTROL IN	1
		CONTROL OUT	1
		Cable CARD	Point of Deployment
	Front	INPUT 4	COMPONENT VIDEO in, S-VIDEO in, VIDEO in, AUDIO in
		PC	Analog RGB in, AUDIO in
OSD			English/French/Spanish
Power Requiremen	nt		120 V AC, 60 Hz, 43.3 W (31 W Standby)
Dimensions			420 (W) × 90 (H) × 295 (D) mm (16 <sup>9</sup> / <sub>16</sub> (W) × 3 <sup>9</sup> / <sub>16</sub> (H) × 11 <sup>10</sup> / <sub>16</sub> (D) inches)
Weight			5.8 kg (12.8 lbs.)

• Design and specifications are subject to change without notice.

14

#### Trademarks

- FOCUS, WOW, SRS and ()\* symbol are trademarks of SRS Labs, Inc.
   FOCUS and WOW technologies are incorporated under license from SRS Labs, Inc.
- Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.
- HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.
- This product includes FontAvenue® fonts licensed by NEC Corporation. FontAvenue is a registered trademark of NEC Corporation.
- "i.LINK" and the "i.LINK" logo are trademarks.
- DDC is a registered trademark of Video Electronics Standards Association.
- CableCARD is a trademark of Cable Television Laboratories, Inc.
- The names of the companies or institutions are trademarks or registered trademarks of the respective companies or institutions.

#### **C**opyright protection

• This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited consumer uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.





## Printed on recycled paper Imprimé sur papier recyclé

Authorized Independent Service	ervice in the U.S.A. and you wish to locate the nearest Pioneer vice Company, or if you wish to purchase replacement parts, operating a, or accessories, please call the number shown below.
	8 0 0 - 4 2 1 - 1 6 2 5
Please do not ship your proc above listed number for assi	luct to Pioneer without first calling the Customer Support Division at the stance.
	Pioneer Electronics (USA) Inc. Customer Support Division P.O. BOX 1760, Long Beach, CA 90801-1760, U.S.A.
For warranty information ple	ase see the Limited Warranty sheet included with your product.
to locate the nearest Pionee	ervice in Canada, please contact a Pioneer Canadian Authorized Dealer r Authorized Service Company in Canada. the Customer Satisfaction Department at the following address:
	Pioneer Electronics of Canada, Inc. Customer Satisfaction Department 300 Allstate Parkway, Markham, Ontario L3R OP2 (905)479-4411 1(877)283-5901
For warranty information ple	ase see the Limited Warranty sheet included with your product.
Canada pour obtenir le nom	au Canada, veuillez vous adresser à un distributeur autorisé Pioneer du du Centre de Service Autorisé Pioneer le plus près de chez-vous. Vous rvice à la clientèle de Pioneer:
Pour obtenir des renseignem restreinte qui accompagne le	Pioneer Électroniques du Canada, Inc. Service à la clientèle 300, Allstate Parkway, Markham, Ontario L3R OP2 (905)479-4411 1(877)283-5901 ments sur la garantie, veuillez vous reporter au feuillet sur la garantie produit. Sotap enfr

Published by Pioneer Corporation. Copyright © 2004 Pioneer Corporation. All rights reserved.

#### **PIONEER CORPORATION**

4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC.
P.O. BOX 1540, Long Beach, California 90810-1540, U.S.A. TEL: (800) 421-1404
PIONEER ELECTRONICS OF CANADA, INC.
300 Allstate Parkway, Markham, Ontario L3R OP2, Canada TEL: 1-877-283-5901
PIONEER EUROPE NV
Haven 1087, Keetberglaan 1, B-9120 Melsele, Belgium TEL: 03/570.05.11
PIONEER ELECTRONICS ASIACENTRE PTE. LTD.
253 Alexandra Road, #04-01, Singapore 159936 TEL: 65-6472-7555
PIONEER ELECTRONICS AUSTRALIA PTY. LTD.
178-184 Boundary Road, Braeside, Victoria 3195, Australia, TEL: (03) 9586-6300
PIONEER ELECTRONICS DE MEXICO S.A. DE C.V.
Blvd.Manuel Avila Camacho 138 10 piso Col.Lomas de Chapultepec, Mexico, D.F. 11000 TEL: 55-9178-4270

K002\_A\_En