

Regulatory and Safety Compliance Guide

Safety Instructions

(Please read the appropriate section that corresponds to the marking on your Samsung product before attempting to install the product.)



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



This symbol indicated high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.



This symbol alerts you that important literature concerning operation and maintenance has been included with this product.

- ☛ The slots and openings in the cabinet and in the back or bottom are provided for necessary ventilation. To ensure reliable operation of this apparatus, and to protect it from overheating, these slots and openings must never be blocked or covered.
 - Do not cover the slots and openings with a cloth or other materials.
 - Do not block the slots and openings by placing this apparatus on a bed, sofa, rug or other similar surface.
 - Do not place this apparatus in a confined space, such as a bookcase, or built-in cabinet, unless proper ventilations is provided.
- ☛ Do not place this apparatus near or over a radiator or heat register, or where it is exposed to direct sunlight.
- ☛ Do not place the sources of heat on this apparatus, such as a candle, ash tray, incense or other similar material.
- ☛ Do not place a water containing vessel on this apparatus, as this can result in a risk of fire or electric shock.
- ☛ Do not expose this apparatus to rain or place it near water(near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool etc.). If this appratus accidentally gets wet, unplug it and contact an authorizrdr dealer immediately. You can clean this apparatus with damp cloth when necessary, but be sure to unplug the apparatus first.
- ☛ Do not expose this apparatus set to extreme temperature conditions or to extreme humidity conditions.
- ☛ This appratus use batteries. In your community there might be regulations that require you to dispose these batteries properly under environmental considerations. Please contact your local authorities for disposal or recycling information.
- ☛ To cut off the power source, unplug this apparatus from the wall outlet.
- ☛ Do not overload wall outlets, extension cords or convenience receptacles beyond their capacity, since this can result in fire or electric shock.
- ☛ Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
- ☛ To protect this apparatus from a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the set due to lightning and power line surges.
- ☛ Before connecting the AC power cord to the DC adapter outlet, make sure the voltage designation of the DC adapter corresponds the the local electrical supply.
- ☛ Never insert anything metallic into this appratus openings. Doing so many create the danger of electric shock.
- ☛ To avoid electric shock, never touch the inside of this apparatus. Only a qualified technician should open this apparatus's case.
- ☛ Be sure to hold the plug, not the cord, when disconnecting this apparatus from an electric socket.
- ☛ Locate this apparatus near an easily acessible AC outlet.
- ☛ If this appratus does not operate normally - in particular, if there are any unusual sounds or smells coming from it - unplug it immediately and contact an authorized dealer or service center.
- ☛ Unplug this apparatus from the AC outlet before any service.

Regulatory Compliance Statements

Your Samsung product is marked to indicate its compliance class:

- Federal Communications Commission (FCC) - USA
- Industry Canada Equipment Standard for Digital Equipment (ICES-003) - Canada
- Voluntary Control Council for Interference (VCCI) - Japan
- Bureau of Standards Metrology and Inspection (BSMI) - Taiwan
- Ministry of Information and Communication (MIC) - Republic of Korea
- Italian Post Ministry (Homologation) - Italy

FCC Information

FCC Class A Notice

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.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Class B Notice

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.

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.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. If necessary, consult with your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office. Washington, DC 20402, Stock Number 004-000-00345-4.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD.

America QA Lab of Samsung

3351 Michelson Drive

Suite #290, Irvine, CA92612 USA

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product. Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.

For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type(parallel blades) plug cap. For 240 Volt applications use only UL Listed detachable power supply cord with NEMA configuration 6015P type(tandem blades) plug cap.

This television receiver provides display of television closed captioning in accordance with Section 15.119 of the FCC rules.(TV broadcast receivers with picture screens 13 inches or larger in diameter models only)

ICES-003 Class A Notice - Avis NMB-003, Classe A

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

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

ICES-003 Class B Notice - Avis NMB-003, Classe B

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

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

VCCI Class A Notice

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI Class B Notice

この装置は、情報処理装置等電波障害自主規制協議会(VCCI)の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。

BSMI Class A Notice

The following statement is applicable to products shipped to Taiwan and marked as Class A on the product compliance label.

警告使用者:

這是甲類資訊類產品, 在居住環境中使用時, 可能會造成射頻干擾, 在這種情況下, 使用者會被要求採取某些適當的對策。

European Notice(Europe Only)

Products with the CE marking comply with the EMC Directive(89/336/EEC), (92/31/EEC), (93/68/EEC) and the Low Voltage Directive(73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022: Radio Frequency Interference
- EN55024: Electromagnetic Immunity of Information Technology Equipment
- EN61000-3-2: Power Line Harmonics
- EN61000-3-3: Voltage Fluctuations
- EN55013: Radio disturbance characteristics of broadcast receivers and associated equipments
- EN55020: Electromagnetic immunity of broadcast receivers and associated equipments

European Class A Warning

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.(Class A product only)

정보통신기기 A급 기기(MIC Class A Notice)

이 기기는 업무용으로 전자파적합등록을 한 기기이오니 판매자 또는 사용자는 이 점을 주의하시기 바라며 만약 잘못 판매 또는 구입하였을 때에는 가정용으로 교환하시기 바랍니다.

정보통신기기 B급 기기(MIC Class B Notice)

이 기기는 가정용으로 전자파적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Italian Homologation Notice

Questo apparecchio e fabbricato in conformita al D.M.28.08.95 n.548
ed in particolare a quanto specificato nell Art.2, comma 1.

Questo apparecchio e fabbricato nella U.E. in conformita al D.M.28.08.95 n.548
Art.2, comma 1 ed al D.M.26.03.92 Art.1

-. For products produced in countries except European Community

Questo apparecchio e fabbricato in conformita al D.M.28.08.95 n.548
ed in particolare a quanto specificato nell Art.2, comma 1.

-. For products produced in European Community

Questo apparecchio e fabbricato nella U.E. in conformita al D.M.28.08.95 n.548
Art.2, comma 1 ed al D.M.26.03.92 Art.1

Important Safety Instructions(TV Only)

- 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.
- 8) Do not install near any heat sources such as radiators, heat registers, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with 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.



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

This symbol indicates high voltage is present inside. It is dangerous to make any kind of contact with any inside part of this product.	
This symbol alerts you that important literature concerning operation and maintenance has been included with this product.	

Warning: To prevent damage which may result in fire or electric shock hazard, do not expose this appliance to rain or moisture.

(EPA applied model only)
As an ENERGY STAR Partner, Samsung has determined that this product or product models meets the ENERGY STAR guidelines for energy efficiency.

■ Optional ■

Do not place the apparatus in a rack or bookcase. Ensure that there is adequate ventilation and that you've followed that manufacturer's instructions for mounting.
(For PDP or Projection TV apparatus)

If you place the apparatus in a rack or bookcase, ensure that there is adequate ventilation and that you've followed the manufacturer's instructions.

Wiring the Mains Power Supply Plug(UK Only)

IMPORTANT NOTICE

The mains lead on this equipment is supplied with a moulded plug incorporating a fuse. The value of the fuse is indicated on the pin face of the plug and, if it requires replacing, a fuse approved to BS 1362 of the same rating must be used.

Never use the plug with the fuse cover omitted if the cover is detachable. If a replacement fuse cover is required, it must be of the same colour as the pin face of the plug. Replacement covers are available from your dealer.

If the fitted plug is not suitable for the power points in your house or the cable is not long enough to reach a power point, you should obtain a suitable safety approved extension lead or consult your dealer for assistance.

However, if there is no alternative to cut off the plug, remove the fuse and then safely dispose of the plug. Do NOT connect the plug to a mains socket as there is a risk of shock hazard from the bared flexible cord.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

BLUE - NEUTRAL BROWN - LIVE

As these colours may not correspond to the coloured markings identifying the terminals in your plug, proceed as follows:

The wire coloured BLUE must be connected to the terminal marked with the letter N or coloured BLUE or BLACK.

The wire coloured BROWN must be connected to the terminal marked with the letter L or coloured BROWN or RED.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL, WHICH IS MARKED WITH THE LETTER E OR BY THE EARTH SYMBOL , OR COLOURED GREEN OR GREEN AND YELLOW.

Russia Only - PCT Notice



MPR II Compliance

TCO'95-Ecological requirements for personal computers (TCO'95 applied model only)

TCO'99-Ecological requirements for personal computers (TCO'99 applied model only)

TCO'03-Ecological requirements for personal computers (TCO'03 applied model only)

TCO'03 Recycling Information (TCO'03 applied model only)

Medical Requirement (Medical applied model only)

✦ MPR II Compliance

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

✦ TCO'95-Ecological requirements for personal computers (TCO'95 applied model only)



AB general requirements

AB2 Written Eco-document accompanying the products

Congratulations! You have just purchased a TCO'95 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and to the further development of environmentally-adapted electronic products.

Why do we have environmentally-labelled monitors?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem as far as monitors and other electronic equipment are concerned is that environmentally harmful substances are used both in the products and during their manufacture. Since it has not been possible so far for the majority of electronic equipment to be recycled in a satisfactory way, most of these potentially damaging substances sooner or later enter Nature.

There are also other characteristics of a monitor, such as energy consumption levels, that are important from both the working and natural environment viewpoints. Since all types of conventional electricity generation have a negative effect on the environment (acidic and climate-influencing emissions, radioactive waste, etc.) it is vital to conserve energy. Electronic equipment in offices consumes an enormous amount of energy, since it is often routinely left running continuously.

What does labelling involve?

This product meets the requirements for the TCO'95 scheme, which provides for international environmental labelling of monitors. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Naturskyddsforeningen (The Swedish Society for Nature Conservation) and NUTEK (The National Board for Industrial and Technical Development in Sweden).

The requirements cover a wide range of issues: environment, ergonomics, usability, emission of electrical and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands concern among other things restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons), and chlorinated solvents. The product must be prepared for recycling and the manufacturer is obliged to have an environmental plan, which must be adhered to in each country where the company conducts its operations policy. The energy requirements include a demand that the monitor after a certain period of inactivity shall reduce its power consumption to a lower level, in one or more stages. The length of time to reactivate the monitor shall be reasonable for the user.

reduction of electric and magnetic fields, along with physical and visual ergonomics and good usability.

TCO Development Unit 1996-11-29

On the page this folder you will find a brief summary of the environmental requirements met by this product.

The complete environmental criteria document may be ordered from:

TCO Development Unit

S-11494 Stockholm

Sweden

Fax: +46 8 782 92 07

E-mail (Internet): development@tco.se

Current information regarding TCO'95-approved and labelled products may also be obtained via the Internet, using the address:

<http://www.tco-info.com/>

TCO'95 is a co-operative project between (3 logos)

Environmental Requirements

Brominated flame retardants are present in printed circuit boards, cables, wires, casings and housings. In turn, they delay the spread of fire. Up to thirty percent of the plastic in a computer casing can consist of flame retardant substances. These are related to another group of environmental toxins, PCBs, which are suspected to give rise to similar harm, including reproductive damage in fish eating birds and mammals, due to the bioaccumulative processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

TCO'95 demand requires that plastic components weighing more than 25 grams must not contain organically bound chlorine and bromine.

Lead

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning.

TCO'95 requirement Permits the inclusion of lead since no replacement has yet been developed.

Cadmium

Cadmium is present in rechargeable batteries and in the colour generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses.

TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of cadmium. The colour-generating layers of display screens must not contain any cadmium.

Mercury

Mercury is sometimes found in batteries, relays and switches. Mercury damages the nervous system and is toxic in high doses.

TCO'95 requirement states that batteries may not contain more than 25 ppm (parts per million) of mercury. It also demands that no mercury is present in any of the electrical or electronics

components concerned with the display unit.

CFCs (freons)

CFCs (freons) are sometimes used for washing printed circuit boards and in the manufacturing of expanded foam for packaging. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on Earth of ultraviolet light with consequent increased risks of skin cancer (malignant melanoma).

The relevant TCO'95 requirement: Neither CFCs nor HCFCs may be used during the manufacturing of the product or its packaging.



Congratulations!

You have just purchased a TCO'99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

This product meets the requirements for the TCO'99 scheme which provides for an international environmental and quality labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO(The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen(The Swedish Society for Nature Conservation), Statens Energimyndighet(The Swedish National Energy Administration) and SEMKO AB.

The requirements cover a wide range of issues: environment, ergonomics, usability, reduction of electric and magnetic fields, energy consumption and electrical safety.

Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

What does labelling involve?

The environmental demands have been developed by Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation). These demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs(freons)and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Below you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden
Fax: +46 8 782 92 07
Email (Internet): development@tco.se

Current information regarding TCO'99 approved and labelled products may also be obtained via the Internet, using the address: <http://www.tco-info.com/>

Environmental requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO'99 demands require that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO'99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit. There is however one exception. Mercury is, for the time being, permitted in the back light system of flat panel monitors as today there is no commercially available alternative. TCO aims on removing this exception when a Mercury free alternative is available.

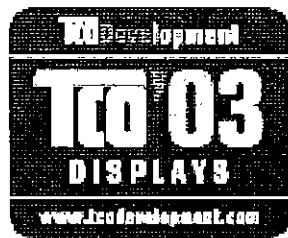
CFCs (freons)

The relevant TCO'99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO'99 requirement permits the inclusion of lead since no replacement has yet been developed.

✦ TCO'03-Ecological requirements for personal computers (TCO'03 applied model only)



Congratulations!

The display you have just purchased carries the TCO'03 Displays label. This means that your display is designed, manufactured and tested according to some of the strictest quality and environmental requirements in the world. This makes for a high performance product, designed with the user in focus that also minimizes the impact on our natural environment.

Some of the features of the TCO'03 Display requirements:

Ergonomics

Good visual ergonomics and image quality in order to improve the working environment for the user and to reduce sight and strain problems. Important parameters are luminance, contrast, resolution, reflectance, colour rendition and image stability.

Energy

Energy-saving mode after a certain time – beneficial both for the user and the environment
Electrical safety

Emissions

- Electromagnetic fields
- Noise emissions

Ecology

- The product must be prepared for recycling and the manufacturer must have a certified environmental management system such as EMAS or ISO 14 000
- Restrictions on
 - chlorinated and brominated flame retardants and polymers
 - heavy metals such as cadmium, mercury and lead.

The requirements included in this label have been developed by TCO Development in cooperation with scientists, experts, users as well as manufacturers all over the world. Since the end of the 1980s TCO has been involved in influencing the development of IT equipment in a more user-friendly direction. Our labelling system started with displays in 1992 and is now requested by users and IT-manufacturers all over the world.

For more information, Please visit
www.tcodevelopment.com

♣ TCO'03 Recycling Information (TCO'03 applied model only)

[European Residents Only]

For recycling information for TCO'03 certified monitors, for the residents in the following countries, please contact the company corresponding to your region of residence. For those who reside in other countries, please contact a nearest local Samsung dealer for recycling information for the products to be treated in environmentally acceptable way.

	[U.S.A. Residents Only]	[European Residents Only]		
	U.S.A.	SWEDEN	NORWAY	GERMANY
COMPANY	Solid Waste Transfer & Recycling Inc	ELKRETSSEN	Elektronikkretur AS	vfw AG
ADDRESS	442 Frclinghuysen Ave Newark, NJ 07114	ELKRETSSEN Box 1357, 111 83 Stockholm Barnhusgatan 3, 4 tr.	6454 Elterstad 0602 Oslo Fyrstikkalln 3B	Max Plank Strasse 42 50858 Collogne Germany
TELEPHONE	973-565-0181	08-545 212 90	23 06 07 40	49 0 2234 9587 - 0
FAX	Fax: 973-565-9485	08-545 212 99	23 06 07 41	
E-MAIL	none	info@el-kretsen.se	adm@elektronikkretur.no	vfw.info@vfw-ag.de
HOME PAGE	http://www.bcua.org/SolidWaste_Disposal.htm	http://www.el-kretsen.se/	http://www.elretur.no/	

♣ Medical Requirement (Medical applied model only)



Classifications:

In accordance with UL 2601-1/IEC 60601-1, the product is classified as Continuous duty Class I equipment, which is not protected against ingress of liquids. The product is not suitable for use in the presence of a flammable anaesthetic mixture with air or with oxygen or nitrous oxide.

EMC

This equipment has been tested and found to comply with the limits for medical devices to the IEC 601-1-2:1994. These limits are designed to provide reasonable protection against harmful radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to other devices in the vicinity. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to other devices, 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 device.
- Increase the separation between the equipment.
- Connect the equipment into an outlet on a circuit different from that to which the other device(s) are connected.
- Consult the manufacturer or field service technician for help.

Video In / RS 232 / Video Out

Accessories equipment connected to the analog and digital interfaces must be certified to the respective IEC standards (i.e. IEC 950 for data processing equipment and IEC 601-1 for medical equipment.) Furthermore all configurations shall comply with the system standard IEC 601-1-1. Everybody who connects additional equipment to the signal input part or signal output part configures a medical system, and is therefore, responsible that the system complies with the requirements of the system standard IEC 601-1-1. If in doubt, consult the technical services department or your local representative.

Transport and Storage Limitations:

Temperature Range of -40°C to +70°C

Relative Humidity of 10 -95%, non-condensing

* Bio-accumulative is defined as substances which accumulate within living organisms.

** Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

SAMSUNG

PLASMA DISPLAY

Owner's Instructions
SPP4231

SAMSUNG

1-800-SAMSUNG (1-800-726-7864)

Samsung Electronics America
Service Division
400 Valley Road, Suite 201
Mount Arlington, NJ 07856
www.samsungusa.com

Samsung Electronics Canada Inc.
Samsung Customer Care
7037 Financial Drive
Mississauga, Ontario
L5N 6R3
www.samsung.ca



BN68-00631A-00

Important Warranty Information Regarding Television Format Viewing

Wide screen format PDP Displays (16:9 the aspect ratio of the screen width to height) are primarily designed to view wide screen format full motion video. The images displayed on them should primarily be in the wide screen (16:9 ratio format), or expanded to fill the screen if your model offers this feature and the images are constantly moving. Displaying stationary graphics and images on screen, such as the dark side-bars on nonexpanded standard format television video and programming, should be limited to no more than 5% of the total television viewing per week.

Additionally, viewing other stationary images and text such as stock market reports, video game displays, station logos, web sites or computer graphics and patterns, should be limited as described above for all televisions. **Displaying stationary images that exceed the above guidelines can cause uneven aging of PDP Displays that leave subtle, but permanent burned-in ghost images in the PDP picture. To avoid this, vary the programming and images, and primarily display full screen moving images, not stationary patterns or dark bars.** On PDP models that offer picture sizing features, use these controls to view different formats as a full screen picture.

Be careful in the selection and duration of television formats used for viewing. Uneven PDP aging as a result of format selection and use, as well as burned-in images, are not covered by your Samsung limited warranty.

User Instructions

Screen Image retention

Do not display a still image (such as on a video game or when hooking up a PC to this PDP) on the plasma display panel for more than several minutes as it can cause screen image retention. This image retention is also known as "screen burn". To avoid such image retention, refer to page 40 of this manual to reduce the degree of brightness and contrast of this screen when displaying a still image.

Cell Defect

The plasma display panel consists of fine cells. Although the panels are produced with more than 99.9 percent active cells, there may be some cells that do not produce light or remain lit.

Altitude

The PDP will not operate normally at altitudes above 6500 ft.

Warranty

Warranty does not cover any damage caused by image retention. Burn-in is not covered by the warranty.

Plasma Display

Table of Contents

General Information		Channel Control	
Your New Plasma Display Panel	6	Fine Tuning Channels	64
Remote Control Buttons	8		
Wall Installation Instructions	10	Connecting a PC and Operation	
How to assemble the Stand Base	14	Connection a PC	66
Connecting Speakers	15	Adjusting the PC Screen	70
		Changing the Position of the Image	71
Connections		Picture Quality Adjustment	72
Connecting VHF and UHF Antennas	18	Information	75
Connecting Cable TV	19		
Connecting a VCR	21	Time Setting	
Connecting a Camcorder	22	Setting the Clock	78
Connecting a DVD Player	23	Setting the Sleep Timer	79
Connecting a DTV Receiver	24	Setting the Timers	80
Operation		Function Description	
Turning the PDP On and Off	26	Selecting a Menu Language	84
Play & Play Feature	28	Digital Noise Reduction	85
Memorizing the Channels	31	Selecting the Film Mode	86
Viewing an External Signal Source	36	Setting the Melody Sound	87
		Setting the Blue Screen	88
Picture Control		Viewing Closed Captions	89
Customizing the Picture	40	Using the V-Chip	90
Using Automatic Picture Settings	41		
Selecting the Color Tone	42	Appendix	
DNLe (Digital Natural Image engine)	43	Troubleshooting	98
Changing the Screen Size	44	Care and Maintenance	99
Freezing the Picture	46	Specifications	100
Viewing the Picture-in-Picture	47		
Selecting a Signal Source (Antenna or Cable) by FP	52		
Sound Control			
Customizing the Sound	56		
Using Automatic Sound Settings	57		
Choosing a Multi-Channel Sound (MIS) Soundcheck	58		
Using the Auto Volume	59		
Setting the TruSurround XT	60		
Selecting the Internal Mute	61		

P L A S M A D I S P L A Y P A N E L

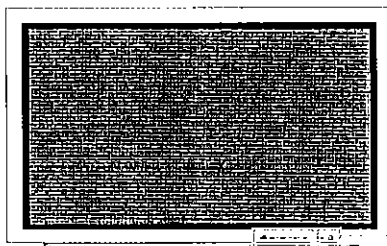
General Information

Your New Plasma Display Panel	. 6
Remote Control Buttons	. 8
Wall Installation Instructions	. 10
How to assemble the Stand Base	. 14



Your New Plasma Display Panel

Front Panel



SOURCE/ENTER button

Press to display all of the available video sources (i.e., TV, AV, S-Video, Component, PC, DVI). Press to confirm a selection.

MENU button

Displays the main on screen menu and exit.

VOL(+/-) button

Press to increase or decrease the volume. Also used to select or output items on the on screen menu.

CH(↔) button

Press CH↔ or CH↔ to change Channels. Also used to move up or down in the Onscreen menu.

I / O

Press to turn the PDP on and off.

Power Indicator

Power Off: Red
Power On: Off
Timer On: Green

Remote Control Signal Receiver

Aim the remote control towards this spot on the PDP.

Checking Accessories

Once you have unpacked your PDP, check to make sure that you have all the parts shown here. If any piece is missing or broken, call your dealer.



Owner's Instruction Manual (EN29-00031A)



Remote Control (EN29-00037A) AAA Batteries (420) (EN29-00038)



Power Cord (EN29-00031A)



Antenna Cable (EN29-00030A)



Speaker Cables (EN29-00030A)

Sold Separately



S-Video Cable



DVI Cable



Component Cables (YCA)



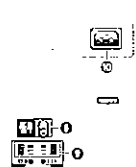
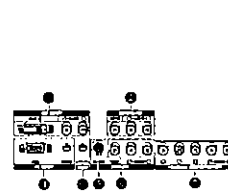
PC Cable



PC Audio Cable

Plasma Display

Rear Panel



1 DVI INPUT

Connect to the video output jack for device with DVI output.

2 MONITOR OUT (VIDEO / L-AUDIO-R)

Outputs for external devices

3 PC INPUT (RGB IN / AUDIO)

Connect to the video and audio output jack on your PC.

4 ONLY FOR SERVICE

Connector for service only.

5 S-VIDEO

Video and audio inputs for external devices with an S-Video output, such as a camcorder or VCR.

6 AV (VIDEO / L-AUDIO-R)

Video and audio inputs for external devices, such as a camcorder or VCR.

7 COMPONENT

Video (Y/Pb/Pr) and audio (L/AUDIO R) inputs for Component.

8 ANT IN VHF/UHF (75Ω)

75Ω Coaxial connector for Antenna/Cable Network.

9 EXT SPEAKER (8Ω)

Connectors for external speakers.

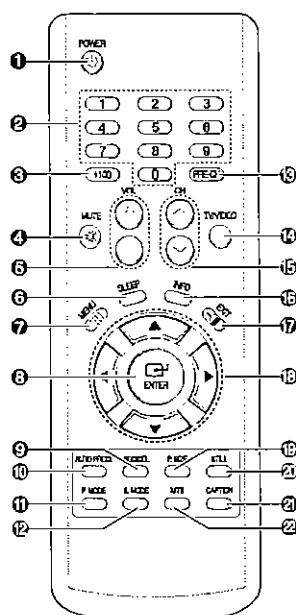
10 POWER IN

Connect the supplied power cord.



Remote Control Buttons

Remote Control



Plasma Display

- 1 **POWER** button
Turns the PDP on and off.
- 2 **Number buttons**
- 3 **+100** button
Press to select channels over 100. For example, to select channel 121, press "+100", then press "2" and "1".
- 4 **MUTE** button
Press to mute the PDP sound.
- 5 **VOL (Volume) buttons**
Use it to adjust volume.
- 6 **SLEEP** button
Press to select a preset time interval for automatic shut-off.
- 7 **MENU** button
Displays the main on-screen menu.
- 8 **ENTER** button
Confirms a selection.
- 9 **ADD/DEL** button
Press to add or delete channels in the TV's memory.
- 10 **AUTO PROG.** button
The TV automatically cycles through all of the available channels and stores them in memory.
- 11 **P.MODE** button
Adjust the PDP picture by selecting one of the preset factory settings [or select your personal, customized picture settings].
- 12 **S. MODE** button
Select Sound effect.
- 13 **PRE-CH** button
Tunes to the previous channel.
- 14 **TV/VIDEO** button
Press to display all of the available video sources (i.e., Video, S-Video, Component, PC, DVI).
- 15 **CH (Channel) buttons**
Use it to switch channels.
- 16 **INFO** button
Press to display information on the PDP screen.
- 17 **EXIT** button
Press to exit the menu.
- 18 **Up/Down Left/Right** buttons
Control the cursor in the menu.
- 19 **P. SIZE** button
Select Picture size.
- 20 **STILL** button
Press to pause the current screen.
- 21 **CAPTION** button
Controls the caption decoder.
- 22 **MTS** button
Press to choose stereo, mono or Separate Audio Program (SAP broadcast).

Installing the Batteries in Your Remote Control

- 1 Slide the back cover to open the battery compartment of the remote control.
- 2 Install two AAA size batteries. Make sure to match the "+" and "-" ends of the batteries with the diagram inside the compartment.
- 3 Slide the cover back into place.

- **Remote Control Operation Range.**
- You can use your remote control within a distance of 23 feet and an angle of 30 degrees from the left and right sides of the PDP's remote control receiver.



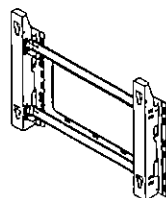
Wall Installation Instructions

Installation Notes

- 1 Do not install the PDP on any place other than vertical walls.
- 2 To protect the performance of the PDP and prevent troubles, avoid the followings:
 - Do not install next to smoke and fire detectors.
 - Do not install in an area subjected to vibration or high voltage.
 - Do not install near or around any heating apparatus.
- 3 Use only recommended parts and components.

Mounting Kits

Wall Mount Bracket



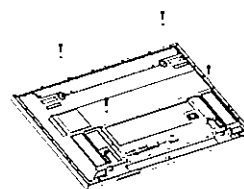
Plastic Hanger : 4 EA



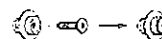
Screws : 4 EA

Fixing the PDP panel to the wall attachment panel bracket

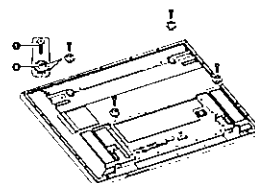
- 1 Remove the screws from the back of the PDP.



- 2 Use the screws and assemble the plastic hanger.
 - Please ask the installers to install the wall mount bracket.
 - Please be sure to check if the plastic hanger is completely secured on both the left and right side after hanging the PDP on the wall mount bracket.
 - Please avoid catching your fingers while installing and adjusting the angle.
 - Please lightly secure the wall mount bracket to the wall to avoid injury from a falling PDP.

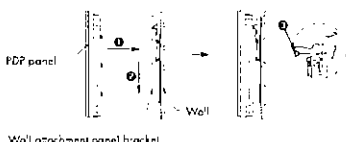


- 3 Tighten the screws of the plastic hanger to the back side of the PDP.



Plasma Display

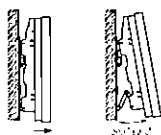
- 4 Put the 4 pegs on the PDP in the grooves of the wall mount bracket and pull down on the PDP (1) to secure it to the wall mount bracket (2). Tighten the screws as shown (3) so that the PDP cannot be separated from wall mount bracket.



Connecting External Devices to the PDP

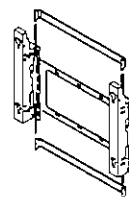
To connect external devices such as a DVD or a Home Theater System to the PDP, please refer to following instructions:

- Be sure to remove the safety pins underneath the PDP.
 - If the safety pins are not removed, the angle cannot be adjusted. Any attempt to do so may cause damage to the PDP.
- Pull out the bottom of the PDP (which has been attached to the Wall Mount Bracket) in the direction indicated by the arrows (refer to the illustration) until it clicks.
 - Using the PDP After Connecting External Devices, Be sure to secure the PDP by inserting the 2 safety pins after readjusting the angle of the PDP to 0°.
 - For safety, be sure to secure the PDP using the safety pins. If the safety pins are not used, the PDP may fall, causing serious injury.



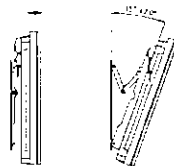
How to Adjust Mounting Angle

Factory default



The wall mount bracket is delivered separately. Please tighten the captive screw in the direction of the arrow after assembling the bracket.

Changing the angle

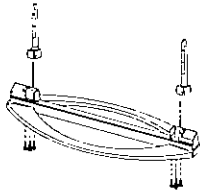


- Secure the PDP to the wall mount bracket. (Please refer to the following instructions.)
- Set the angle by pulling the upper end of the PDP attached to bracket in the direction of the arrow.
- The angle can be adjusted from 0° to 15° by ±2°.

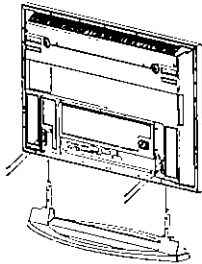


How to assemble the Stand-Base

- 1 Assemble two support pins with the stand base and firmly secure both sides of the support pins using 8 screws provided.



- 2 Assemble the PDP with the stand and firmly secure the PDP using 4 screws provided.

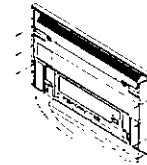


➤ Two or more people should carry the PDP. Never lay the PDP on the floor because of possible damage to the screen. Always store the PDP upright.

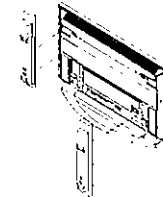


Plasma Display Connecting Speakers

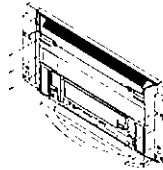
- 1 Remove the screws on the rear of the PDP.



- 2 Hang the two "T" shaped hangers on the square holes on the rear of the PDP.

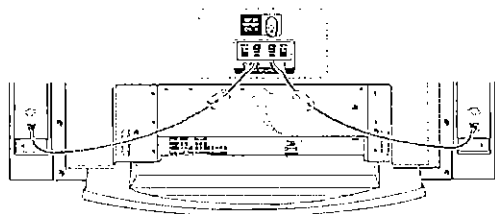


- 3 Tighten the PDP and the speaker bracket using the screws removed from the PDP.



➤ When moving your PDP do NOT hold the speaker connected to your PDP. It may damage the bracket clamping the speaker and your PDP together and result in a drop of your PDP and a risk of personal damage and injury.

Connect the speaker audio cable to the external speaker output jack on the rear of the PDP matching the "+" and "-" ends of the cable with the diagram on the PDP.



- The speaker **MUST** have a power handling capacity of 10 watts minimum (Impedance 8Ω).
- When you connect the speaker wire to the external speaker output connector, first bend the speaker wire around the ferrite core to secure it.

Ferrite Cores

The ferrite cores are used to attenuate undesired signals. When connecting cables, attach one of these ferrite cores to the cable near the connector.



P L A S M A D I S P L A Y P A N E L

Connections

Connecting VHF and UHF Antennas	18
Connecting Cable TV	19
Connecting a VCR	21
Connecting a Camcorder	22
Connecting a DVD Player	23
Connecting a DTV Receiver	24

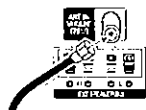


Connecting VHF and UHF Antennas

Antennas with 75-ohm Round Leads

If your antenna looks like this:  it has 75-ohm round leads.

- 1 Plug the antenna lead into the VHF/UHF terminal on the PDP.
Use the Antenna Cable, an accessory included in the product package.



Plasma Display

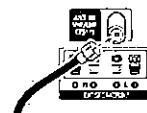


Connecting Cable TV

You can connect different cable systems to your PDP, including cable without a cable box, and cable with a cable box that descrambles some or all channels.

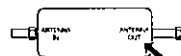
Cable without a Cable Box

- 1 Plug the incoming cable into the VHF/UHF terminal on the PDP.
Use the Antenna Cable, an accessory included in the product package.



Cable with a Cable Box that Descrambles All Channels.

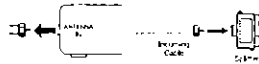
- 1 Find the cable connected to the ANTENNA OUT terminal on your cable box. This terminal might be labeled "ANT OUT", "VHF OUT" or simply "OUT".
- 2 Connect the cable to the VHF/UHF terminal on the PDP.
Use the Antenna Cable, an accessory included in the product package.



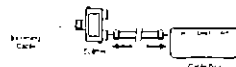
Cable with a Cable Box that Descrambles Some (But Not All) Channels

To complete this connection you will need a two-way splitter, an RF (A/B) switch, and four coaxial cables (which you can buy from your Samsung dealer or any electronics store).

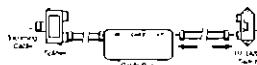
- 1 Find and disconnect the cable that is connected to the ANTENNA IN terminal of your cable box. This terminal might be labeled "ANT IN", "VHF IN" or simply "IN". Connect this cable to a two-way splitter.



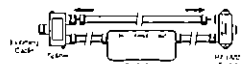
- 2 Connect a coaxial cable between an OUTPUT terminal of the splitter and the IN terminal of the cable box.



- 3 Connect a coaxial cable between the ANTENNA OUT terminal of the cable box and the B-IN terminal of the A/B switch.



- 4 Connect a coaxial cable between the ANTENNA OUT terminal of the cable box and the B-IN terminal of the A/B switch.



- 5 Connect the last coaxial cable between the OUT terminal of the RF (A/B) switch and the VHF/UHF terminal on the PDP.

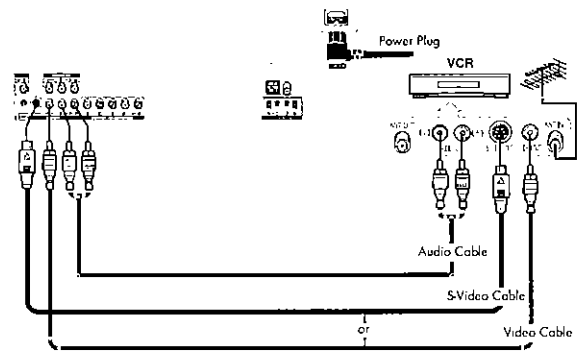


After you've made this connection, set the A/B switch to the "A" position for normal viewing. Set the A/B switch to the "B" position to view scrambled channels. (When you set the A/B switch to "B", you will need to tune your Set-Top Box to the cable box's output channel, which is usually channel 3 or 4.)

Plasma Display Connecting a VCR

Connecting a VCR to the Video or S-Video/Audio jack

PDP



How to Connect

Connect the Video/Audio cables between the AUDIO (L/R)/VIDEO jacks on the PDP and AUDIO/VIDEO OUT jacks on the VCR. (Note: For better video, you can use an S-Video cable.)

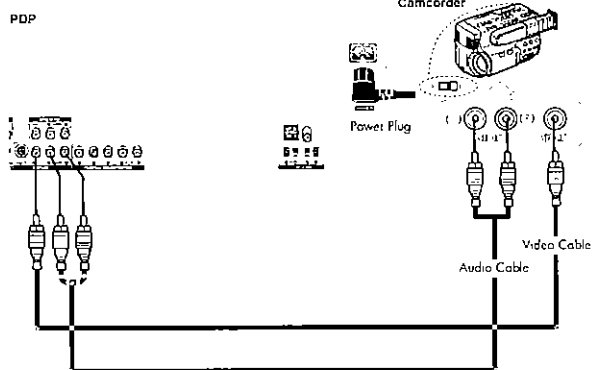
Videotape Playback:

1. Turn on your PDP.
2. Press the TV/VIDEO button to select "Video" or "S-Video".
3. Turn on your VCR, insert a videotape and press the play button.



Connecting a Camcorder

Viewing camcorder tapes



How to Connect

Connect a Video/Audio cable between the AUDIO(L/R)/VIDEO jacks on the PDP and the VIDEO/AUDIO OUTPUT jacks on the camcorder.

Viewing Tapes

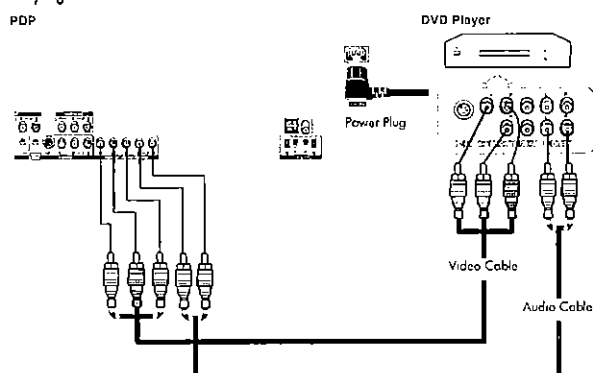
1. Turn on your PDP.
2. Press the TV/VIDEO button to select the "Video".
3. Turn on your camcorder and set it to Video Mode. (For details, refer to your camcorder Owner's instructions.)
4. Set the IN/OUT switch on your camcorder to OUT.
5. Insert the tape into the camcorder and press the Play button.



Plasma Display Connecting a DVD Player (480i, 480p)

This PDP displays the optimum picture in 720p mode.

Playing DVD



How to Connect

1. Connect a Video Cable between the Y, Pb, Pr (COMPONENT) input jacks on the PDP and Y/Pb/Pr output jacks on the DVD player.
2. Connect a Audio Cable between the AUDIO L/R (COMPONENT) input jacks on the PDP and the AUDIO OUT jacks on the DVD player.

To Play DVD:

1. Turn on your PDP.
2. Press the TV/VIDEO button to select "COMPONENT".
3. Turn on your DVD player, insert a DVD disc and press the Play button.
 - For an explanation of Component video, see your DVD owner's instructions.

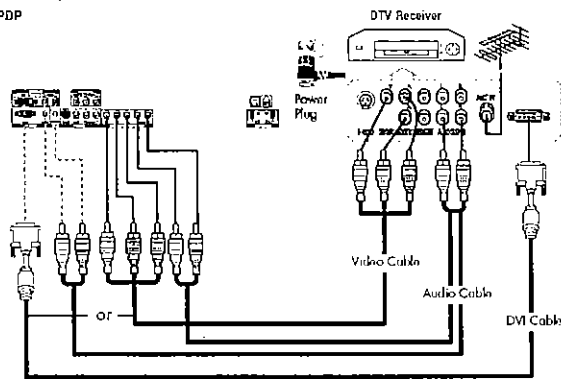


Connecting a DTV Receiver (480p, 720p, 1080i)

This PDP displays the optimum picture in 720p mode.

Watching DTV

PDP



Use a DVI-D connection cable (sold separately)

How to Connect

1. Connect the cable or antenna to the antenna input jack on the DTV.
2. Connect a Video cable between the Y, Pb, Pr (COMPONENT) or DVI jack on the PDP and the Y, Pb, Pr (VIDEO OUTPUT JACKS) on the DTV receiver.
3. Connect an Audio cable between the COMPONENT (L/R AUDIO) or DVI jacks on the PDP and the AUDIO OUTPUT jacks on the DTV.

To Watch DTV:

1. Turn on your PDP.
2. Press the TV/VIDEO button to select "COMPONENT" or "DVI".
3. Turn on your DTV receiver.
 - For an explanation of Component video, see your DTV receiver owner's instructions.

P L A S M A D I S P L A Y P A N E L

Operation



Tuning the PDP On and Off	26
Plug & Play Feature	28
Memorizing the Channels	31
Viewing an External Signal Source	36

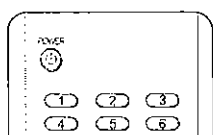
Plasma Display



Turning the PDP On and Off

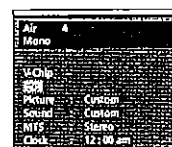
Turning the PDP On and Off

Press the POWER button on the remote control. The PDP will be turned on and you will be ready to use its features. You can also use the POWER (I/O) button on the front of the PDP.



Displaying Status Information

Press the INFO button on the remote control. The PDP will display the Picture mode, Sound mode, MTS, Caption, and Clock.

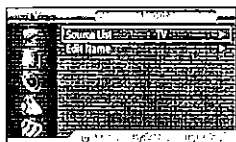


Viewing the Menus and Displays

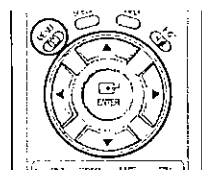
Your PDP has a simple, easy-to-use menu system that appears on the PDP screen. This system makes it convenient and fast to use features on the PDP. Your PDP also lets you display the status of many of your PDP's features.

Viewing the Menus

- 1 With the power on, press the MENU button on the remote control. The main menu appears on the screen. The Input menu is selected.



- 2 Press the ▲ or ▼ buttons to move items in the menu. Press the ◀/▶/ENTER buttons to display, change, or use the selected items. Press the ENTER (□) button to enter items in the menu. On screen menus disappear from the screen automatically after about thirty seconds, or you can press the MENU or EXIT button on your remote control to exit the menu.





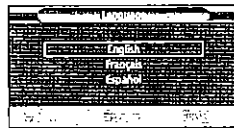
Plug & Play Feature

When the television is initially powered ON, several basic customer settings proceed automatically and subsequently. The following settings are available.

- 1 If the television is in Standby mode, press the POWER button on the remote control.
 - The message Plug & Play is displayed. If it does for a little while, and then the language menu is automatically displayed.



- 2 Select the appropriate language by pressing the ▲ or ▼ button.
 - The message Antenna input check is displayed.

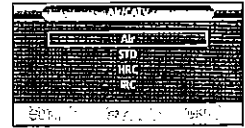


- 3 Press the ENTER button to confirm your choice.



- 4 Press the ENTER button.

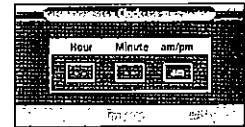
- 5 Select the correct signal source (Air, STD, HRC and IRC), then press the ENTER button.



- 6 To start the search, press the ENTER button.
 - The search will proceed automatically. Channels are sorted and stored in an order which reflects the position in the frequency range (with lowest first and highest last). When it has finished, the Clock Set menu is displayed.
 - To stop the search before it has finished or return to normal viewing, press the MENU button.



- 7 Press the ENTER button. Press the ◀ or ▶ button to move to the Hour, Minute, or am/pm. Set the Hour, Minute, or am/pm by pressing the ▲ or ▼ button.



- 8 When it has finished, the message Enjoy Your Watching is displayed, and then the channel which has been stored will be activated.



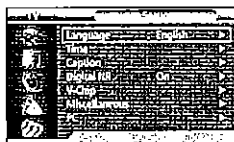
Plasma Display



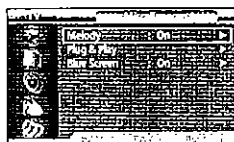
Plug & Play Feature (continued)

If you want to reset this feature...

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Miscellaneous", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Plug & Play", then press the ENTER button.



- 4 For further details on how to set, refer to the previous page.



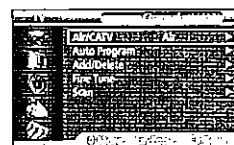
Plasma Display Memorizing the Channels

Your PDP can memorize and store all of the available channels for both "off-air" (antenna) and cable channels. After the available channels are memorized, use the CH ▲ and CH ▼ buttons to scan through the channels. This eliminates the need to change channels by entering the channel digits. There are three steps for memorizing channels: selecting a broadcast source, memorizing the channels (automatic) and adding and deleting channels (manual).

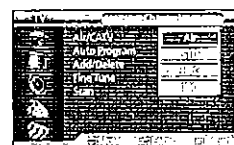
Selecting the Video Signal-source

Before your television can begin memorizing the available channels, you must specify the type of signal source that is connected to the PDP (i.e., an antenna or a cable system).

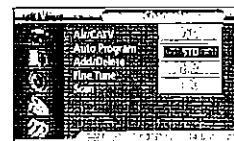
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.



- 2 Press the ENTER button to select "Air/CATV".



- 3 Press the ▲ or ▼ button to select "Air", "STD", "HRC" or "IRC".
 - If you are connected to an antenna, leave "Air" displayed. If you connected cable, press the ▲ or ▼ button to display the type of cable system: "STD", "HRC" or "IRC". (If you are not sure which type of cable system you have, contact your cable company).



- 4 Press the MENU button to exit.

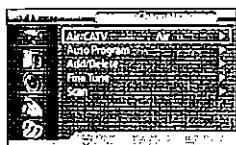
Note

- STD, HRC and IRC identify various types of cable TV systems. Contact your local cable company to identify the type of cable system that exists in your particular area. At this point the signal source has been selected. Proceed to "Storing Channels in Memory" (Next page)

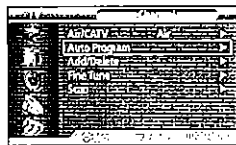
Plasma Display

Storing Channels in Memory (Automatic Method)

- 1 First, select the correct signal source (Air, STD, HRC and IRC). See steps on previous page. Press the MENU button. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Auto Program", then press the ENTER button.
➤ Quick way to access the Automatic Channel Setting: Just press the "AUTO PROG" button on the remote control.



- 3 Press the ENTER button. The PDP will begin memorizing all of the available channels. After all the available channels are stored, the Auto program menu reappears. Press the ENTER button to stop.



Note

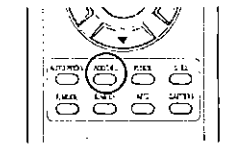
- The PDP automatically cycles through all of the available channels and stores them in memory. This takes about one to two minutes.

Adding and Erasing Channels (Manual Method)

- 1 Use the number buttons to directly select the channel that will be added or erased.
Ex) Channel "4"



- 2 Press the ADD/DEL button, then press the ENTER button. Repeatedly pressing this button will alternate between "Add" and "Erase".



- 3 Press the MENU button to exit.

Note

- You can view any channel (including an erased channel) by using the number buttons on the remote control.

Plasma Display

To View Memorized Channel (PIP Mode)

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Scan", then press the ENTER button. Only the memorized channels are chosen.



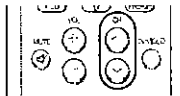
- 3 Press the MENU button to stop.

Changing Channels

Using the Channel Buttons

Press the CH+ or CH- button to change channels.

When you press the CH+ or CH- button, the PDP changes channels in sequence. You will see all the channels that the PDP has memorized. (The PDP must have memorized at least three channels.) You will not see channels that were either erased or not memorized.



Directly Accessing Channels

Press the number buttons to go directly to a channel. For example, to select channel 27, press "2" then "7". The TV will change channels when you press the second number.

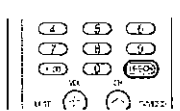
When you use the number buttons, you can directly select channels that were either erased or not memorized. To change to single-digit channels (0-9) faster, press "0" before the single digit. (For channel "4" press "0", then "4".)



Using the PRE-CH button to select the previous channel

Press the PRE-CH button. The TV will switch to the last channel viewed.

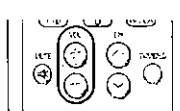
To quickly switch between two channels that are far apart, tune to one channel, then use the number button to select the second channel. Then, use the PRE-CH button to quickly alternate between them.



Adjusting the Volume

Using the Volume Buttons

Press the VOL+ or VOL- button to increase or decrease the volume.

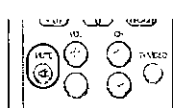


Using Mute

Using the MUTE Buttons

At any time, you can temporarily cut off the sound using the MUTE button.

- 1 Press the MUTE button and the sound cuts off. The word "Mute" will appear in the lower-left corner of the screen.



- 2 To turn mute off, press the MUTE button again, or simply press the VOL+ or VOL- button.





Viewing an External Signal Source

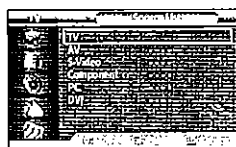
Use the remote control to switch between viewing signals from connected equipment, such as VCRs, DVD, Set-Top box and the TV source (broadcast or cable).

Setting the Signal Source

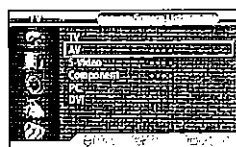
- 1 Press the MENU button. Press the ENTER button to select "Input".



- 2 Press the ENTER button to select "Source List".



- 3 Press the ▲ or ▼ button to select signal source, then press the ENTER button.



Notes

- When you connect equipment to the FDP, you can choose between the following sets of jacks: AV, S-Video, Component, Monitor OUT, PC or DVI on the FDP's rear panel.

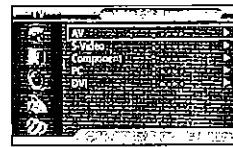
Plasma Display

Assigning Names to External input mode

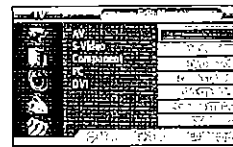
- 1 Press the MENU button. Press the ENTER button to select "Input".



- 2 Press the ▲ or ▼ button to select "Edit Name", then press the ENTER button.



- 3 Press the ENTER button.
 - Press the ▲ or ▼ button to select external device: VCR, DVD, Cable STB, HD STB, Satellite STB, AV Receiver, DVD Receiver, Game, Camcorder, DVD Combo, DHR or PC.
 - Set other signal sources (AV, S-Video, Component, PC or DVI) using the same method as listed above.



- 4 Press the MENU button to exit.

Notes

- DHR : DVD HDD Recorder

Picture Control



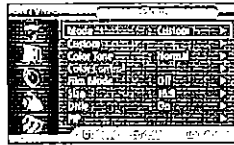
Customizing the Picture	40
Using Automatic Picture Settings	41
Selecting the Color Tone	42
DNLe (Digital Natural Image engine)	43
Changing the Screen Size	44
Freezing the Picture	46
Viewing the Picture-in-Picture	47
Selecting a Signal Source (Antenna or Cable) for PIP	52



Customizing the Picture

You can use the on-screen menus to change the Contrast, Brightness, Sharpness, Color, and Tint settings of your PDP.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Custom", then press the ENTER button. You will also see the items "Contrast", "Brightness", "Sharpness", "Color" and "Tint".



- 3 Press the ▲ or ▼ button to select the item you wish to change, then press the ENTER button. Press the ◀ or ▶ button to change the value of the item.



- 4 Press the MENU button to exit.

Note

- In the PC/DVI mode, you can't adjust the Color and Tint.

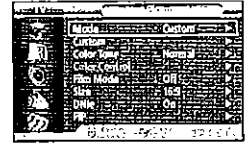


Plasma Display Using Automatic Picture Settings

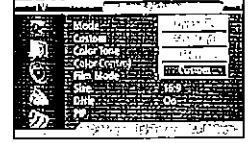
Your PDP has automatic picture settings that allow you to adjust the video display easily.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.

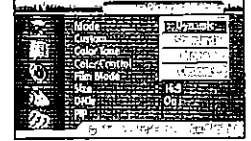
- On the way to enter the picture setting, just press the "F1000L" button on the remote control.



- 2 Press the ENTER button to select "Mode".



- 3 Press the ▲ or ▼ button to select "Dynamic", "Standard", "Movie", or "Custom" picture setting.
 - You can select "Entertain", "Internet", "Text", or "Custom" in PC/DVI mode.

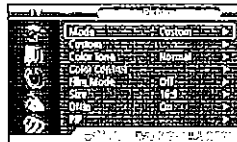


- 4 Press the MENU button to exit.

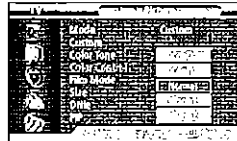


Selecting the Color Tone

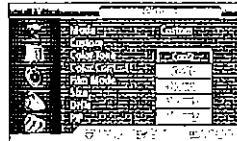
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Color Tone", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Cool2", "Cool1", "Normal", "Warm1" or "Warm2".
 - You can select "Custom", "Cool", "Normal" or "Warm" in PC mode.
 - You can select "Cool", "Normal" or "Warm" in DVI mode.



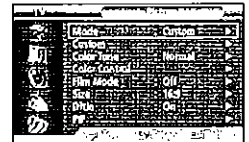
- 4 Press the MENU button to exit.



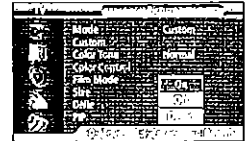
Plasma Display DNIe (Digital Natural Image engine)

Samsung's New Technology brings you more detailed images with contrast, white enhancement and 3D noise reduction

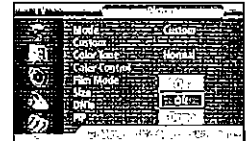
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "DNIe", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "On", "Off" or "Demo".
 - On : Switches on the DNIe mode.
 - Off : Switches off the DNIe mode.
 - Demo : The screen before applying DNIe appears on the right and the screen after applying DNIe appears on the left.



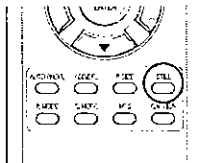
- 4 Press the MENU button to exit.



Freezing the Picture

Still

Press the STILL button on the remote control to freeze a moving picture. Press again to cancel.



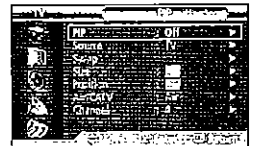
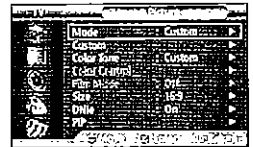
Plasma Display Viewing the Picture-in-Picture

Selecting the PIP Screen

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.
- 2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.
- 3 Press the ENTER button, then press the ▲ or ▼ button to select "On". The PIP image will appear in the corner of the screen.
 - Pressing the ▲ or ▼ button will alternate between "On" and "Off".

Note

- Check if the V-Chip Lock (refer to page 90) is ON if the PIP On/Off will not function. PIP does not function when the V-Chip Lock is set to On. Change the setting to Off and try it again.



- 4 Press the MENU button to exit.

PIP Settings

○ : PIP and Swap Operate
X : PIP doesn't Operate

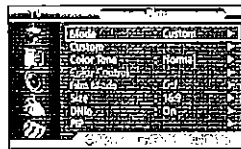
Main screen \ PIP screen	TV	AV	S-VHS	Comp480i	Comp480p	DVI	PC
TV	X	X	X	X	○	○	○
AV	X	X	X	X	○	○	○
S-VHS	X	X	X	X	○	○	○
Comp480i	X	X	X	X	X	X	X
Comp480p	○	○	○	X	X	X	X
DVI	○	○	○	X	X	X	X
PC	○	○	○	X	X	X	X

Plasma Display

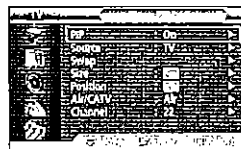
Selecting an External Signal

You can use PIP to view a signal from an external source, such as a VCR.

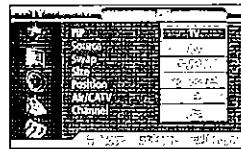
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Source", then press the ENTER button.



- 4 Press the ▲ or ▼ button to cycle through all of the available signal sources: "TV", "AV", "S-Video", "Component", "PC" and "DVI".

The signal from these inputs will not appear if you have not connected any equipment to the PDP's respective input jacks.

- 5 Press the MENU button to exit.

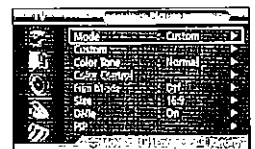


Note

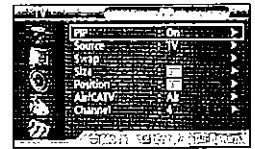
- The PIP function operates in Wide screen.
- Using Multi-Screen in the Normal or Zoom screen will change the size of the main screen to Wide screen.

Swapping the Contents of the PIP Image and Main Image

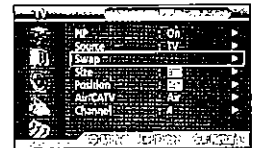
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Swap", then press the ENTER button.
 - The image in the PIP window will appear on the main screen, and vice versa.



- 4 Press the MENU button to exit.

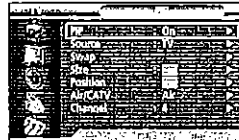
Plasma Display

Changing the Size of the PIP Window

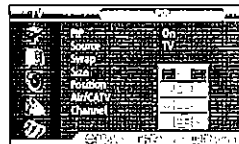
1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



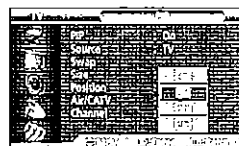
2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Size", then press the ENTER button.



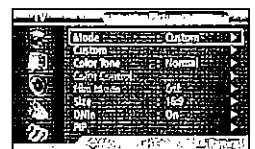
4 Press the ▲ or ▼ button to select option you want, then press the ENTER button.



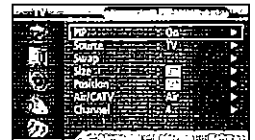
5 Press the MENU button to exit.

Changing the Location of the PIP Image

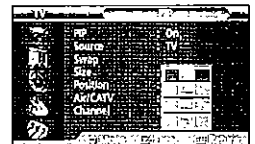
1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Position", then press the ENTER button.



4 Press the ▲ or ▼ button to select PIP position you want, then press the ENTER button.



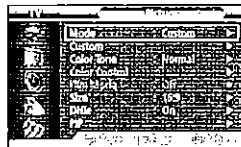
5 Press the MENU button to exit.



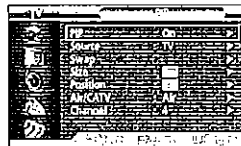
Selecting a Signal Source (Antenna or Cable) for PIP

If the PIP source is TV during PIP ON, you can select the broadcasting source of PIP picture separately from the main picture.

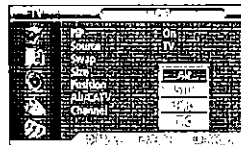
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



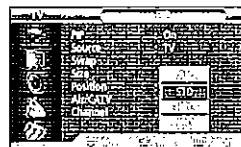
- 2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Air/CATV", then press the ENTER button.



- 4 If an antenna is connected, the setting is "Air". If a Cable TV system is providing the signal, press the ▲ or ▼ button until the appropriate type of cable system is selected ("STD" or "IRC").

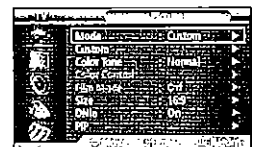


- 5 Press the MENU button to exit the menu.

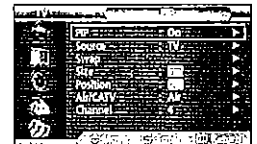
Plasma Display

Changing the PIP Channel

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



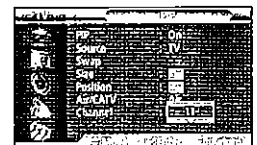
- 2 Press the ▲ or ▼ button to select "PIP", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Channel", then press the ENTER button.



- 4 Press the ▲ or ▼ button to change the channel that appears in the PIP window.



- 5 Press the MENU button to exit.

Sound Control

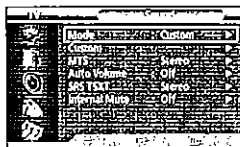


Customizing the Sound	56
Using Automatic Sound Settings	57
Choosing a Multi-Channel Sound (MTS) Soundtrack	58
Using the Auto Volume	59
Setting the TruSurround XT	60
Selecting the Internal Mute	61

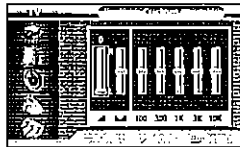


Customizing the Sound

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Custom", then press the ENTER button.



- 3 Select the option (volume, balance, equalizer) to be adjusted by pressing the ◀ or ▶ button. Press the ▲ or ▼ button to reach the required setting.

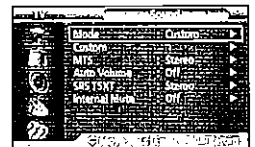
- 4 Press the MENU button to exit.

➤ If you make any changes to the equalizer settings, the sound Mode is automatically switched to the custom.

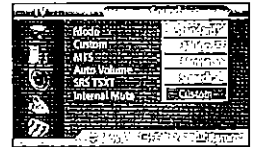


Plasma Display Using Automatic Sound Settings

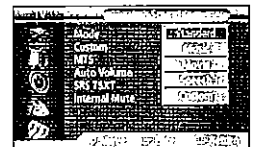
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.



- 2 Press the ENTER button to select "Mode".



- 3 Press the ▲ or ▼ button to select "Standard", "Music", "Movie", "Speech" or "Custom" sound setting, then press the ENTER button.



- 4 Press the MENU button to exit.



Choosing a Multi-Channel Sound (MTS) Soundtrack

Depending on the particular program being broadcast, you can listen to stereo, mono, or a Separate Audio Program. (SAP audio is usually a foreign-language translation. Sometimes SAP has unrelated information like news or weather.)

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.

➤ Quick way to access the MTS menu: Just press the "MTS" button on the remote control.

- 2 Press the ▲ or ▼ button to select "MTS", then press the ENTER button.

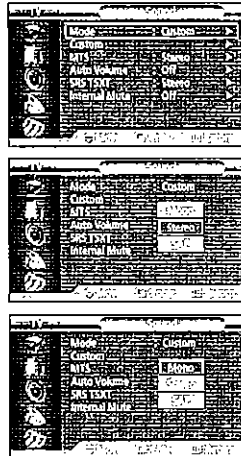
- 3 Press the ▲ or ▼ button to select "Mono", "Stereo" or "SAP", then press the ENTER button.

- 4 Press the MENU button to exit.

- Choose **Stereo** for channels that are broadcasting in stereo.
- Choose **Mono** for channels that are broadcasting in mono, or if you are having difficulty receiving a stereo signal.
- Choose **SAP** to listen to the Separate Audio Program, which is usually a foreign-language translation.

Note

- The MTS function operates in TV mode only.



Plasma Display Using the Auto Volume

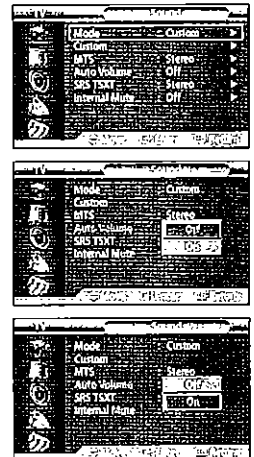
Each broadcasting station has its own signal conditions, which can make it necessary to adjust the volume every time the channel is changed. "Auto volume" lets you automatically adjust the volume of the desired channel by lowering the sound output when the modulation signal is high or by raising the sound output when the modulation signal is low.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.

- 2 Press the ▲ or ▼ button to select "Auto Volume", then press the ENTER button.

- 3 Press the ▲ or ▼ button to select "On", then press the ENTER button.
 - Pressing the ▲ or ▼ button will alternate between "On" and "Off".

- 4 Press the MENU button to exit.

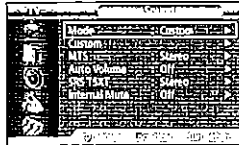




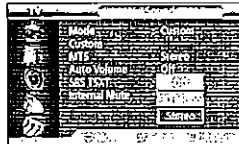
Setting the TruSurround XT

TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers. Trusurround delivers a compelling, virtual surround sound experience through any two-speaker playback system, including internal television speakers. It is fully compatible with all multichannel formats.

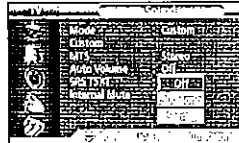
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "SRS TSXT", then press the ENTER button.



- 3 Press the ▲ or ▼ button to change the setting [Off, 3D Mono or Stereo], then press the ENTER button.



- 4 Press the MENU button to exit.

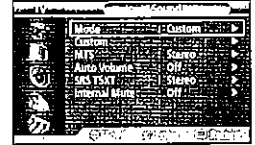
➤ TruSurround XT, SRS and (SRS) Symbol are trademarks of SRS Labs, Inc. TruSurround XT technology is incorporated under license from SRS Labs, Inc.



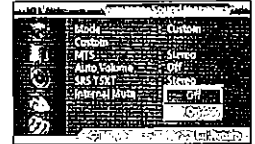
Plasma Display Selecting the Internal Mute

If you want to hear the sound through separate speakers, cancel the internal amplifier.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Sound", then press the ENTER button.

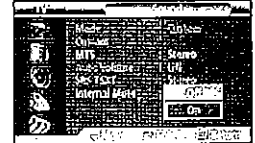


- 2 Press the ▲ or ▼ button to select "Internal Mute", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "On", then press the ENTER button.

• Pressing the ▲ or ▼ button will alternate between "On" and "Off".



- 4 Press the MENU button to exit.



P L A S M A D I S P L A Y P A N E L

Channel Control



Fine Tuning Channel's

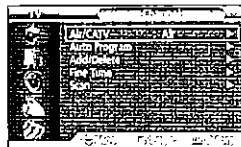
64



Fine Tuning Channels

Use fine tuning to manually adjust a particular channel for optimal reception.

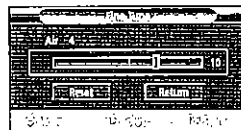
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Channel", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Fine Tune", then press the ENTER button.



- 3 Press the ◀ or ▶ button to adjust the line tuning



- 4 To store the fine tuning setting in the TV's memory, press the ENTER button. (A star icon(*) will appear.) To reset the line tuning to "0", press the ▼ button to select "Reset", then press the ENTER button



- 5 Press the MENU button to exit.

PLASMA DISPLAY PANEL

Connecting a PC and Operation



Connecting a PC	66
Adjusting the PC Screen	70
Changing the Position of the Image	71
Picture Quality Adjustment	72
Information	75

Plasma Display



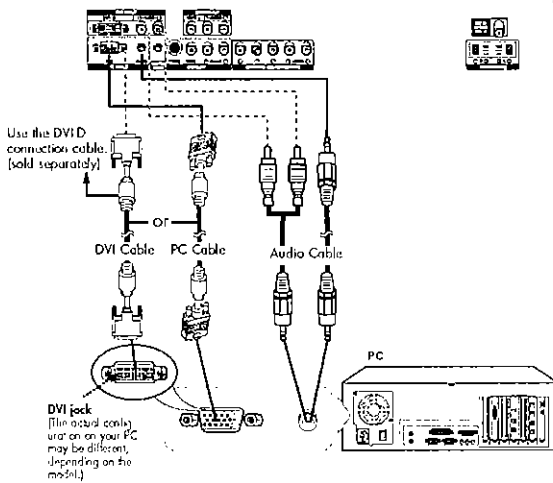
Connecting a PC

Connection to a Macintosh computer may require an adapter.

PDP



Power Plug



Connecting a PC to the PDP

1. Connect a PC (15pin) cable between the PC Output jack (or DVI jack) on the PC and the RGB IN (or DVI IN) Input jack (15p D-SUB) on the PDP.
 2. Connect a Audio cable between the Audio (RGB or DVI) on the PC and the Audio L/R (RGB or DVI) input jacks on the PDP.
- To watch the PC screen:
1. Turn on your PDP.
 2. Press the TV/VIDEO button on the remote control or SOURCE button on the front panel to select "PC".
 3. Turn on PC and check for PC system requirements. (Refer to pages 68 and 69 for PC system requirements.)
 4. Adjust the PC screen. (Refer to pages 70 and 75.)

Pin Configuration

D-Sub Cable

• 15Pin Signal Cable (based on protruded pin)

Pin No.	PC IN	PC OUT
1	Red (R)	Red (R)
2	Green (G)	Green (G)
3	Blue (B)	Blue (B)
4	Grounding	Grounding
5	Grounding (DDC)	Grounding (DDC)
6	Red (R) Grounding	Red (R) Grounding
7	Green (G) Grounding	Green (G) Grounding
8	Blue (B) Grounding	Blue (B) Grounding
9	Reserved	Reserved
10	Sync Grounding	Sync Grounding
11	Grounding	Grounding
12	Clock (CLK)	Clock (CLK)
13	Horizontal sync	Horizontal sync
14	Vertical sync	Vertical sync
15	Clock (DDC)	Clock (DDC)

DVI-D Cable (Digital-Only Connector)



Pin No.	Signal Assignment	Pin No.	Signal Assignment
1	T.M.D.S. Data0+	13	T.M.D.S. Data0-
2	T.M.D.S. Data0+	14	Hot Plug Detect
3	T.M.D.S. Data0+ Shield	15	Hot Plug Detect
4	T.M.D.S. Data0+	16	T.M.D.S. Data0-
5	T.M.D.S. Data0+	17	T.M.D.S. Data0-
6	DDC Clock	18	T.M.D.S. Data0+
7	DDC Data	19	T.M.D.S. Data0+ Shield
8	No Connect	20	T.M.D.S. Data0-
9	T.M.D.S. Data1+	21	T.M.D.S. Data1-
10	T.M.D.S. Data1+	22	T.M.D.S. Clock Shield
11	T.M.D.S. Data1+ Shield	23	T.M.D.S. Clock
12	T.M.D.S. Data1-	24	T.M.D.S. Clock

Setting up Your PDP (Plug and Play)

Our adoption of the new VESA® Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your monitor in a Plug and Play compatible system, without the usual setup hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This monitor automatically tells the PC system its Extended Display Identification data (EDID) using Display Data Channel (DDC) protocols.

Plasma Display

How to Set up Your PC Software (Windows only)

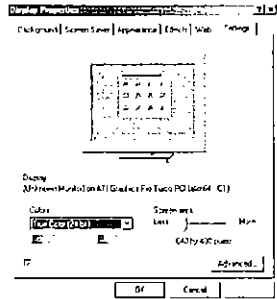
The Windows display settings for a typical computer are shown below. However, the actual screens on your PC will probably be different, depending upon your particular version of Windows and your particular video card. But even if your actual screens look different, the same, basic set-up information will apply in almost all cases. (If not, contact your computer manufacturer or Samsung Dealer.)



On the windows screen, select in the following sequence : Start → Settings → Control Panel.



When the control panel screen appears, click on "Display" and a display dialog-box will appear.



Select the "Settings" tab in the display dialog-box.

The two key variables that apply to the PDP-PC interface are "resolution" and "colors". The correct settings for these two variables are:

- Size (sometimes called "resolution") 640 x 480 pixels.
- Color: "32-bit" color Shown at left is a typical screen for "Display" dialog box.

If a vertical-frequency option exists on your display settings dialog box, the correct value is "60" or "60 Hz". Otherwise, just click "OK" and exit the dialog box.

Continued .

Notes:

Both screen position and size will vary, depending on the type of PC monitor and its resolution. The table below shows all of the display modes that are supported.

Video Signal	Resolution (Dot X Line)	Vertical Frequency(Hz)	Horizontal Frequency(KHz)	Vertical Polarity	Horizontal Polarity
IBM PC / AT Compatible	640 X 350	70.086	31.469	N	P
	640 X 400	85.080	37.861	N	P
	640 X 400	85.080	37.861	P	N
	720 X 400	70.087	31.469	P	N
	720 X 400	85.039	37.927	P	N
	640 X 480	59.940	31.469	N	N
		72.809	37.861	N	N
		75.000	37.500	N	N
		85.061	43.269	N	N
	800 X 600	56.250	35.156	N/P	N/P
		60.317	37.897	P	P
		72.188	48.077	P	P
		75.000	48.875	P	P
		85.061	53.674	P	P
	848 X 480	60.000	29.838	nVidia chipset	
		72.000	36.072		
		75.000	37.650		
	1024 X 768	60.004	48.363	N	N
		70.069	56.476	N	N
		75.029	60.023	P	P
		84.997	63.677	P	P

- The interlace mode is not supported.
- The PDP operates abnormally if a non-standard video format is selected.
- This sheet conforms to IBM/VESA regulations and is prepared on the basis of Analog Input.
- The DVI Mode is supported same as above table.

Notes:

- When this PDP is used as a PC display, 32-bit color is supported.
- Depending on the manufacturer, your PC display screen might appear different. (and depending on your particular version of Windows.) Check your PC instruction book for information about connecting your PC to a PDP.
- If a vertical and horizontal frequency-select mode exists, select 60Hz (vertical) and 31.5kHz (horizontal).
- In some cases, abnormal signals (such as stripes) might appear on the screen when the PC power is turned off (or if the PC is disconnected). If so, press the TV/VIDEO button on the remote control or SOURCE button on the front panel to enter the VIDEO mode. Also, make sure that the PC is connected.
- Connect only a PC monitor to the monitor output port while viewing the PC screen. (Otherwise, random signals might appear).



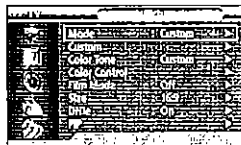
Adjusting the PC Screen

Adjusting the R.G.B

Preset:

- Press the TV/VIDEO button to select "PC"

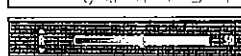
1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



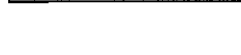
2 Press the ▲ or ▼ button to select "Color Control", then press the ENTER button. The "Color Control" is available only when "Color Tone" is set in the custom mode.



3 Press the ▲ or ▼ button to select the item you want to change, then press the ENTER button. Press the ◀ or ▶ button to change the value of the item, using the on-screen gauge as your guide.



4 Press the MENU button to exit.



Plasma Display Changing the Position of the Image

After connecting the PDP to your PC, adjust the position of the screen if it is not well-aligned.

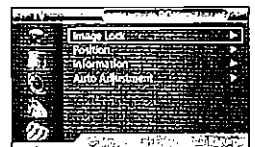
Preset:

- Press the TV/VIDEO button to select "PC"

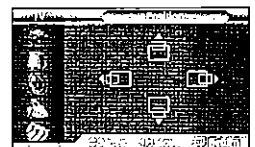
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



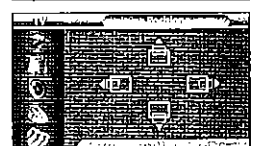
2 Press the ▲ or ▼ button to select "PC", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Position", then press the ENTER button.



4 Adjust the position of screen by pressing the ▲/▼/◀/▶ button.



5 Press the MENU button to exit.



Picture Quality Adjustment

Picture Automatic Adjustment

Preset:

- Press the TV/VIDEO button to select "PC".

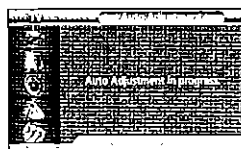
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



2 Press the ▲ or ▼ button to select "PC", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Auto Adjustment", then press the ENTER button. The message "Auto Adjustment in progress" appears on the screen and the picture adjustments are automatically activated.



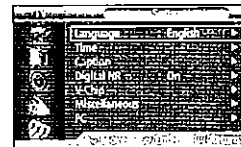
4 Press the MENU button to exit.

Coarse Adjustment

Preset:

- Press the TV/VIDEO button to select "PC".

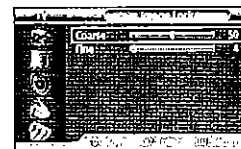
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



2 Press the ▲ or ▼ button to select "PC", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Image Lock", then press the ENTER button.



4 Press the ENTER button to select "Coarse".
Remove picture noise (vertical stripes) on the screen by pressing the ◀ or ▶ button. [If Coarse is not set properly, vertical stripes will appear on the screen.]



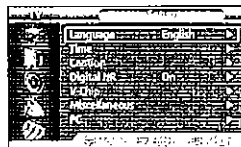
5 Press the MENU button to exit.

Fine Tuning (Fine)

Preset:

- Press the TV/VIDEO button to select "PC".

1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



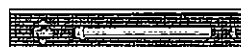
2 Press the ▲ or ▼ button to select "PC", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Image Lock", then press the ENTER button.



4 Press the ▲ or ▼ button to select "Fine", then press the ENTER button. Remove picture noise on the screen by pressing the ◀ or ▶ button. (If Fine is not set properly, noise will appear on the screen.)



5 Press the MENU button to exit.

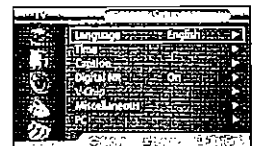
Plasma Display Information



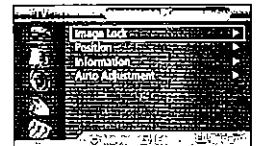
Preset:

- Press the TV/VIDEO button to select "PC".

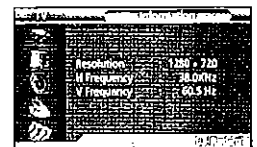
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



2 Press the ▲ or ▼ button to select "PC", then press the ENTER button.



3 Press the ▲ or ▼ button to select "Information", then press the ENTER button. The vertical, horizontal frequencies and resolution appear.



4 Press the MENU button to exit.

Time Setting

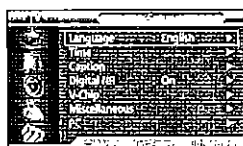


Setting the Clock	78
Setting the Sleep Timer	79
Setting the Timers	80



Setting the Clock

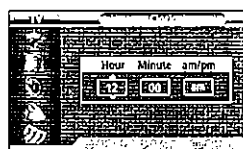
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



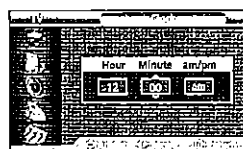
- 2 Press the ▲ or ▼ button to select "Time", then press the ENTER button.



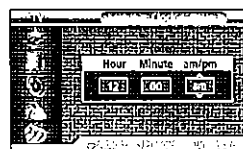
- 3 Press the ENTER button to select "Clock". Press the ▲ or ▼ button to select correct hour.



- 4 Press the ► button to select "Minute", then press the ▲ or ▼ button to select correct minute.



- 5 Press the ► button to select "am/pm.", then press the ▲ or ▼ button to select the proper time of day (am or pm).



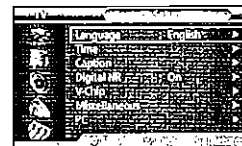
- 6 Press the MENU button to exit.



Plasma Display Setting the Sleep Timer

You can set your PDP to automatically turn off after a preset interval.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.

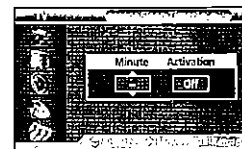


► Quick way to access the sleep timer setting: Just press the "SLEEP" button on the remote control!

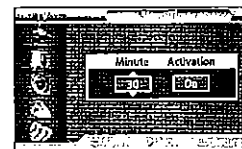
- 2 Press the ▲ or ▼ button to select "Time", then press the ENTER button.



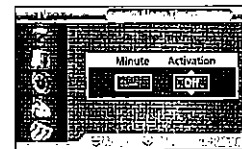
- 3 Press the ▲ or ▼ button to select "Sleep Timer", then press the ENTER button.



- 4 Press the ▲ or ▼ button to select the time interval for the PDP to stay on. The interval ranges from 30 to 180 minutes.



- 5 Press the ► button to select "Activation", then press the ▲ or ▼ button to select "On" or "Off".



- 6 Press the MENU button to exit.



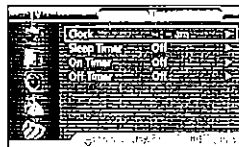
Setting the Timers

This PDP can be set to turn on or off automatically at specific times that you choose. Before using the timers, you must set the PDP's clock, as described previously.

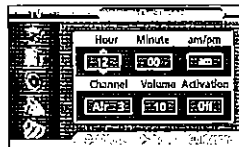
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



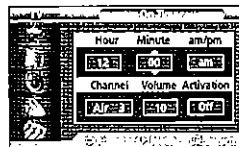
- 2 Press the ▲ or ▼ button to select "Time", then press the ENTER button.



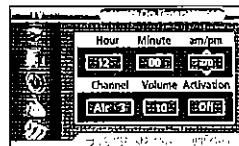
- 3 Press the ▲ or ▼ button to select "On Timer", then press the ENTER button. Press the ► button to select "Hour", then press the ▲ or ▼ button to select correct hour.



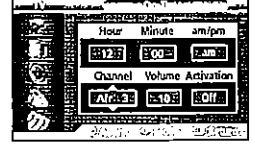
- 4 Press the ► button to select "Minute.", then press the ▲ or ▼ button to select correct minute.



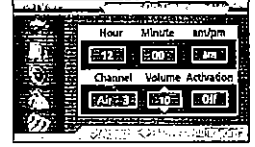
- 5 Press the ► button to select "am/pm", then press the ▲ or ▼ button to select the proper time of day (am or pm).



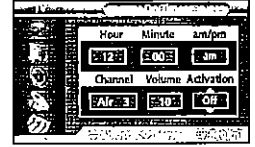
- 6 Press the ► button to select "Channel", then press the ▲ or ▼ button to select the channel you want when PDP turns on.



- 7 Press the ► button to select "Volume", then press the ▲ or ▼ button to select the volume level you want when PDP turns on.



- 8 Press the ► button to select "Activation", then press the ▲ or ▼ button to select "On" or "Off".



- 9 If you want to set Off Timer, press the ▲ or ▼ button to select "Off Timer". Set the "Off Timer" just as you set "On Timer".

- 10 Press the MENU button to exit.



Function Description



Selecting a Menu Language	84
Digital Noise Reduction	85
Selecting the Film Mode	86
Selecting the Melody Sound	87
Selecting the Blue Screen	88
Viewing Closed Captions	89
Using the V-Chip	90



Selecting a Menu Language

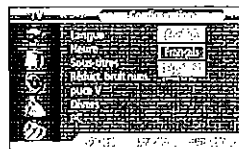
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



2 Press the ENTER button to select "Language".



3 Press the ▲ or ▼ button to select the appropriate language: "English", "Français" or "Español".



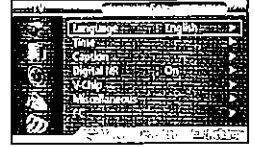
4 Press the MENU button to exit.



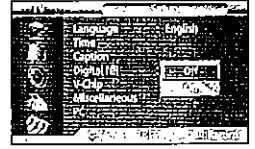
Plasma Display Digital Noise Reduction

If the broadcast signal received by your TV is weak, you can activate the Digital Noise Reduction feature to help reduce any static and ghosting that may appear on the screen.

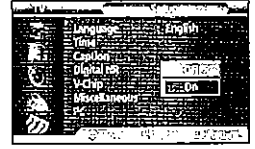
1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



2 Press the ▲ or ▼ button to select "Digital NR", then press the ENTER button.



3 Press the ▲ or ▼ button to select "On" or "Off", then press the ENTER button.



4 Press the MENU button to exit.

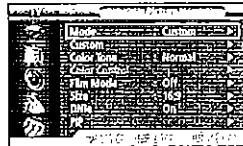


Selecting the Film Mode

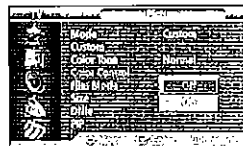
On: Automatically senses and processes film signals from all sources and adjusts the picture for optimum quality.

Off: Switches off the Film mode.

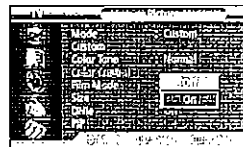
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Picture", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Film Mode", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "On" or "Off", then press the ENTER button.



- 4 Press the MENU button to exit

Note

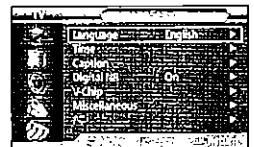
- Film mode is supported in TV, Video, S-Video and Component 480i.



Plasma Display Setting the Melody Sound

You can hear clear melody sound when the television is powered on or off.

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Miscellaneous", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Melody", press the ENTER button.



- 4 Press the ▲ or ▼ button to change the setting (On or Off)

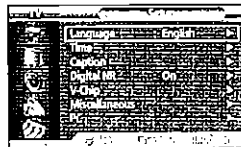




Setting the Blue Screen

If no signal is being received or the signal is very weak, a blue screen automatically replaces the noisy picture background. If you wish to continue viewing the poor picture, you must set the "Blue Screen" mode to "Off".

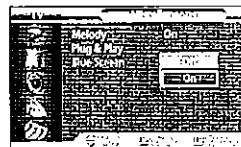
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "Miscellaneous", then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Blue Screen", then press the ENTER button.



- 4 Press the ▲ or ▼ button to change the setting. (On or Off).

► Blue Screen is engaged when no signal from the external device in the External Mode, regardless of the Blue Screen Setting.



Plasma Display

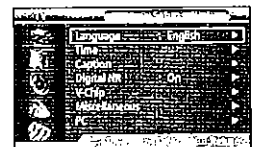


Viewing Closed Captions

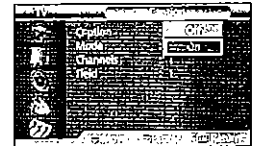
Your TV decodes and displays the closed captions that are broadcast with certain TV shows. These captions are usually subtitles for the hearing impaired or foreign language translations. All VCRs record the closed caption signal from television programs, so home-recorded video tapes also provide closed captions. Most prerecorded commercial video tapes provide closed captions as well. Check for the closed caption symbol in your television schedule and on the tape's packaging: [CC]

Note: The Caption feature does not work with DVD or DTV signals.

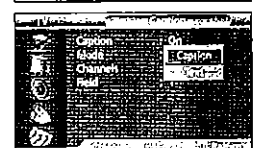
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button. Press the ▲ or ▼ button to select "Caption", then press the ENTER button.



- 2 Press the ENTER button to select "Caption". Press the ▲ or ▼ button to turn closed caption on/off, then press the ENTER button.



- 3 Press the ▲ or ▼ button to select "Mode", then press the ENTER button. Press the ▲ or ▼ button to select "Text" or "Caption", then press the ENTER button.



- 4 Depending on the particular broadcast, it might be necessary to make changes to "Channels" and "Field". Press the ▲ / ▼ / ◀ / ▶ button to make the changes. (Follow the same procedure as in steps 3 above.)



- 5 Press the MENU button to exit.

Note

- Different channels and fields display different information. Field 2 carries additional information that supplements the information in Field 1. (For example, Channel 1 may have subtitles in English, while Channel 2 has subtitles in Spanish.)



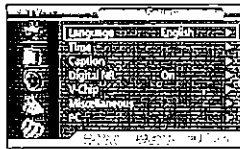
Using the V-Chip

The V-Chip feature automatically locks out programs that are deemed inappropriate for children. The user must enter a PIN (personal ID number) before any of the V-Chip restrictions are set up or changed.

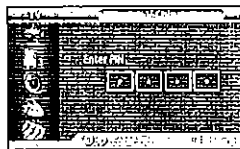
Note: When the V-chip feature is activated, the PIP and auto channel program features do not function.

Setting Up Your Personal ID Number (PIN)

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.

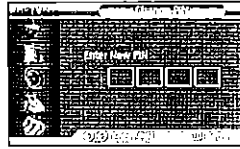


- 2 Press the ▲ or ▼ button to select "V-Chip", then press the ENTER button. The message "Enter PIN" will appear. Enter your 4-digit PIN number.



Note: The default PIN number of a new TV set is "0-0-0-0".

- 3 The "V-Chip" screen will appear. Press the ▲ or ▼ button to select "Change PIN", then press the ENTER button.



- 4 The Change pin screen will appear. Choose any 4-digits for your PIN and enter them. As soon as the 4 digits are entered, the "Confirm New PIN" screen appears. Re-enter the same 4 digits. When the Confirm screen disappears, your PIN has been memorized.



- 5 Press the MENU button to exit.

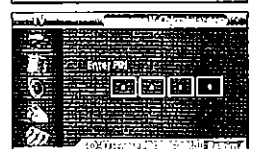
Note
If you forget the PIN, press the remote-control buttons in the following sequence, which resets the pin to 0-0-0-0: Power Off → Mute → 8 → 2 → 4 → Power On.

How to Enable/Disable the V-Chip

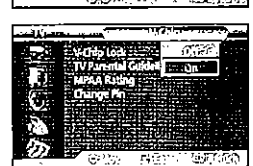
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "V-Chip", then press the ENTER button. The message "Enter Pin" will appear. Enter your 4-digit PIN number.



- 3 The "V-Chip" screen will appear. To enable the V-Chip feature, press the ENTER button so that the "V-Chip Lock" held is "On". (Pressing the ▲ or ▼ button will alternate between "On" and "Off".)



- 4 Press the MENU button to exit.

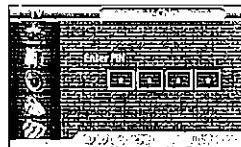
How to Set up Restrictions using the "TV guidelines"

First, set up a personal identification number (PIN), and enable the VChip. (See previous section.) Parental restrictions can be set up using either of two methods: The TV guidelines or the MPAA rating.

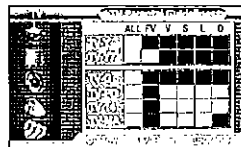
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "V-Chip", then press the ENTER button. The message "Enter PIN" will appear. Enter your 4-digit PIN number.



- 3 The "VChip" screen will appear. Press the ▲ or ▼ button to select "TV Parental Guidelines", then press the ENTER button.

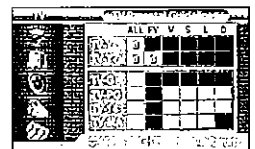


- 4 The "TV Parental Guidelines" screen will appear. Press the ▲ or ▼ button to select one of the six age-based categories:

TVY	Young children
TVY7	Children 7 and over
TVG	General audience
TVPG	Parental guidance
TV14	Viewers 14 and over
TVMA	Mature audience



- 5 At this point, one of the TV Ratings is selected. Press the ENTER button. Depending on your existing setup, a symbol "D" will be selected. (Blank = Unblocked, D = Blocked)



While "D" is selected, press the ▲ or ▼ button to block the category. To select a different TV Rating, press the ▲ or ▼ button and then repeat the process.

Note 1: The TVY7, TVPG, TV14 and TVMA have additional options. See the next step to change any of the following sub-ratings:

FV: Fantasy violence
D: Sexually Suggestive Dialog
L: Adult Language
S: Sexual situation
V: Violence

Note 2: The VChip will automatically block certain categories that are "more restrictive". For example, if you block "TVY" category, then TVY7 will automatically be blocked. Similarly, if you block the TVG category, then all the categories in the "young adult" group will be blocked (TVG, TVPG, TV14 and TVMA). The sub-ratings (D, L, S, V) work together similarly. (See next section.)

- 6 How to set the FV, D, L, S and V sub-ratings. First, select one of these TV Ratings: TVY7, TVPG, TV14 or TVMA (See Step 4, on previous page).

Next, while the TV Rating is selected, repeatedly press the ENTER button. This will cycle through the available sub-ratings (FV, L, S, D or V).

A symbol "D" will be displayed for each sub-rating.

While "D" is selected, press the ▲, ▼, ◀, or ▶ button to change the sub-rating.

To select a different TV Rating, press the ▲ or ▼ button and then repeat the process.

Note: The Vchip will automatically block certain categories that are "More restrictive". For example, if you block "L" sub-rating in TVPG, then the "L" sub-ratings in TV14 and TVMA will automatically be blocked.

- 7 Press the MENU button to clear all the screens. (Or proceed to the next section, and set up additional restrictions based on the MPAA codes).

Note:
• These categories consist of two separate groups: TVY and TVY7 (young children through age 7), and TVG through TVMA (everybody else).

The restrictions for these two groups work independently: If a household includes very young children as well as young adults, the TV guidelines must be set up separately for each age group. (See next step.)

Plasma Display

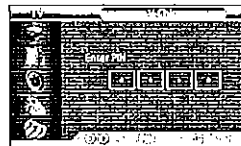
How to Set up Restrictions using the MPAA Ratings: G, PG, PG-13, R, NC-17, X

The MPAA rating system uses the Motion Picture Association of America (MPAA) system, and its main application is for movies. When the VChip lock is on, the TV will automatically block any programs that are coded with objectionable ratings (either MPAA or TV Ratings).

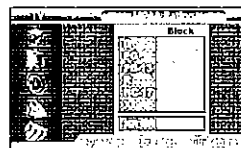
- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.



- 2 Press the ▲ or ▼ button to select "VChip", then press the ENTER button. The message "Enter Pin" will appear. Enter your 4 digit PIN number.



- 3 The "VChip" screen will appear. Press the ▲ or ▼ button to select "MPAA Rating", then press the ENTER button.



- 4 The "MPAA Rating" screen will appear. Repeatedly press the ▲ or ▼ button to select a particular MPAA category. Pressing the ▲ or ▼ button will cycle through the MPAA categories:

G	General audience (no restrictions)
PG	Parental guidance suggested
PG-13	(PG-13) Parents strongly cautioned
R	Restricted. Children under 17 should be accompanied by an adult
NC-17	No children under age 17
X	(Adults only)
NR	Not rated

While a particular category is selected, press the ▲ or ▼ button to activate it. A selected symbol "⏏" will be displayed. Press the ▲ or ▼ button to select "⏏". Note: The VChip will automatically block any category that is "more restrictive". For example, if you block the "PG-13" category, then "R", "NC-17" and "X" will automatically be blocked also.

How to Reset the TV after the V-Chip Blocks a Channel ("Emergency Escape")

If the TV is tuned to a restricted channel, the V-Chip will block it. The screen will go blank and the following message will appear: "This channel is blocked by V-Chip".

To resume normal viewing, tune to a different channel using the number buttons. Under certain conditions (depending on the rating of the local TV programs) the V-Chip might lock out all the channels. In this case, use the V-Chip function for an "emergency escape".

- 1 Press the MENU button. Press the ▲ or ▼ button to select "Setup", then press the ENTER button.
- 2 Press the ▲ or ▼ button to select "VChip", then press the ENTER button.
- 3 Enter your PIN number, and press the ► button to temporarily disable the V-Chip Lock.

Appendix

Troubleshooting	..	98
Care and Maintenance	..	99
Specifications	..	100



Troubleshooting

Before you call a service technician, please scan this list of problems and possible solutions. It may save you time and money.

Problem	Possible Solution
Poor picture.	Check all wire connections.
Your Remote control does not operate the PDP.	Press the "TV/VIDEO" button to put your remote control in the "TV" mode.
The PDP won't turn on.	Check if the power plug is connected.
There is no screen image.	Check to see that both the PDP and the source are plugged in and turned on.
The image is too light or too dark.	Adjust the Brightness or Contrast settings.
The image is too large or too small.	Adjust the Size settings.



Plasma Display Care and Maintenance

With proper care, your PDP will give you many years of service. Please follow these guidelines to get the maximum performance from your PDP.

Identifying Problems

- Do not put the PDP near extremely hot, cold, humid or dusty places.
- Do not put the PDP near appliances that create magnetic fields.
- Keep the ventilation openings clear.
- Do not place the PDP on a rough and slanted surface, such as cloth or paper.

Liquids

- Do not place liquids near or on the PDP.

Cabinet

- Never open the cabinet or touch the parts inside.
- Wipe your PDP with a clean, dry cloth. Never use water, cleaning fluids, wax, or chemicals.
- Do not put heavy objects on top of the cabinet.

Temperature

- If your PDP is suddenly moved from a cold to a warm place, unplug the power cord for at least two hours so that moisture that may have formed inside the unit can dry completely.



Specifications

Exterior design and product specifications are subject to change without prior notice to improve the performance of this product.

This PDP applies to Class B digital device.

[Note: Class B system is for home use.]

This PDP has been registered for residential use in terms of EMI. So it can be used in all areas as well as residential areas.

Type No.	NS42D4	
Model	SP24231	
Dimensions	Display	1028 [W] X 864 [D] X 632.5 [H] mm
	Remote Control	55 [W] X 21 [D] X 160 [H] mm
Weight	Display	30kg[without stand]
	Remote Control	110g[including batteries]
Voltage	120V~, 60Hz	
Power Consumption	330 W	
Number of Pixels	1024[<i>r</i>] x 768[<i>r</i>]	
Screen Size	107 Cm/42 inches	
ANTENNA input	VHF, UHF (75Ω unbalanced)	
VIDEO input	AV	
	S-VIDEO	
	COMPONENT - 480i / 480p / 720p / 1080i	
	RGB - PC DSub 15P	
	DVI	
AUDIO Input	AV/S-VIDEO	
	COMPONENT	
	PC	
	DVI	
AUDIO output	15W+15W (8 Ω) - Internal Speaker	



Memo

Plasma Display





Memo



Memo

Plasma Display

