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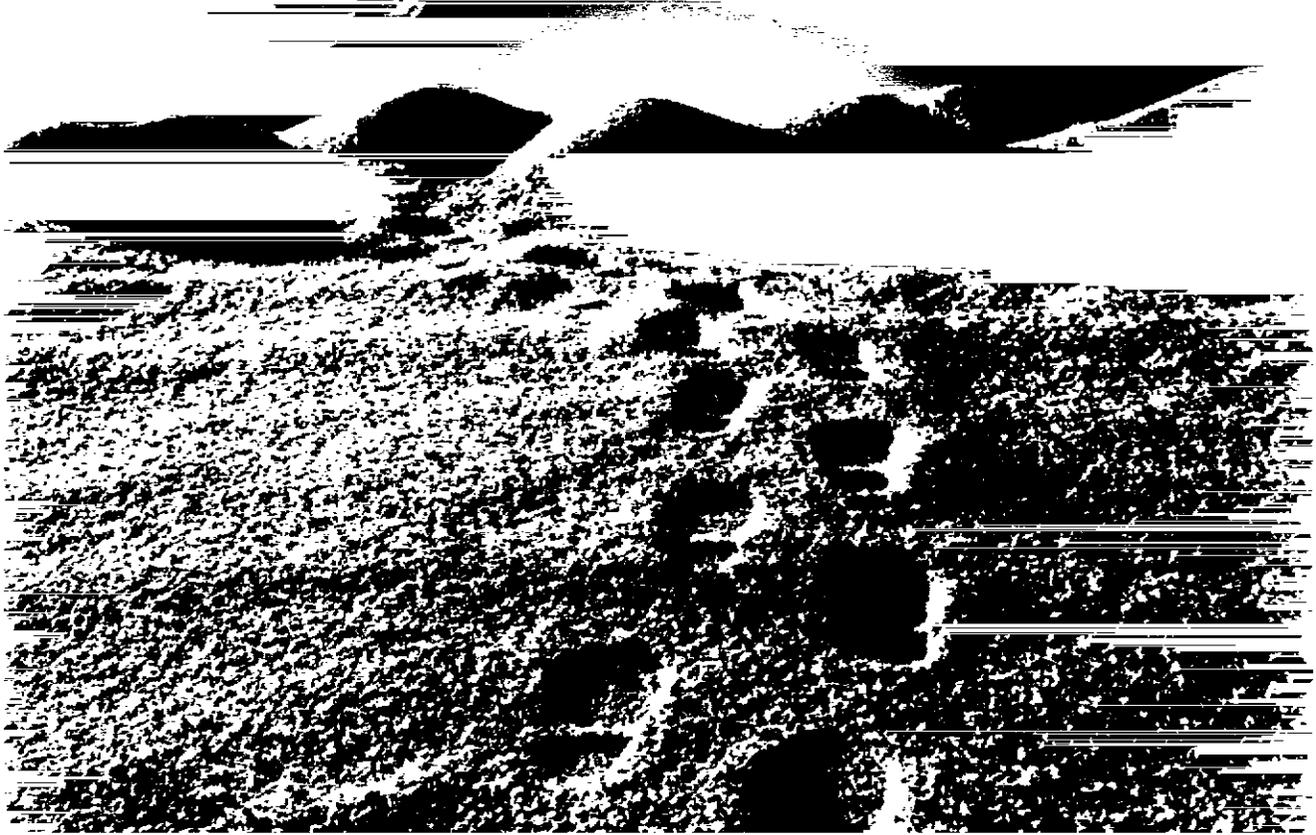
Model No. **VA**

Operating Instructions

Read these instructions completely before operating product.

REDACTED

Welcome to the Panasonic REFA world...



What is the R·E·A·L™ Interactive Multiplayer™ ?



It's a 3DO™ CD player.

With this player you can enjoy the unprecedented action and realism of 3DO-formatted software. A full line-up of games and other software is available.

3DO-formatted CDs not worded "Features full screen display for use with any 3DO™ System", "Features full screen display for use with any 3DO™ PAL System", or "The title displays in a letterbox format on the 3DO PAL system" may not necessarily operate normally. For best results, always use the 3DO™ CD worded any of descriptions.



It's a digital audio CD player.

You can use the unit as a digital audio CD player if you connect it to your existing audio equipment.

You can also use any CDG source (Audio+Graphics) which bears (GRAPHICS) mark.

It's a photo CD player.

If you have photo CDs, you can also use the unit as a photo CD player. It's great for business presentations and home slide show parties as well.

(CD: Compact Disc)

Special Features:

32-bit RISC CPU

Graphics power of up to 16-million colours

64-million pixel per second animation

Full-screen, full-colour digital video

CD-quality stereo sound

Double-speed CD-ROM disc drive

Two expansion ports

3DO, the 3DO logo, and Interactive Multiplayer are trademarks of The 3DO Company

Panasonic is a registered trademark and REAL is a trademark of Matsushita Electric Industrial Co., Ltd.

Warning

FOR YOUR SAFETY PLEASE READ THE FOLLOWING TEXT CAREFULLY

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 3 amp fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 3 amps and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local Panasonic Dealer.

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.

THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.

If a new plug is to be fitted please observe the wiring code as shown below.

If in any doubt please consult a qualified electrician.

Important

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

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured **BLUE** must be connected to the terminal in the plug which is marked with the letter **N** or coloured **BLACK**.

The wire which is coloured **BROWN** must be connected to the terminal in the plug which is marked with the letter **L** or coloured **RED**.

Under no circumstances should either of these wires be connected to the earth terminal of the three pin plug, marked with the letter **E** or the Earth Symbol .

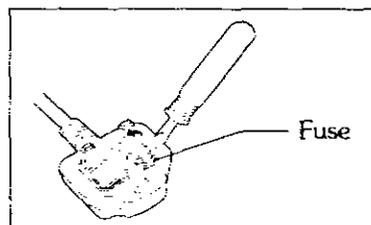
■ How to replace the fuse

Open the fuse compartment with a screwdriver and replace the fuse.

This equipment is produced to BS800/1983.

The unit is in the standby condition when the AC power supply cord is connected.

The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.



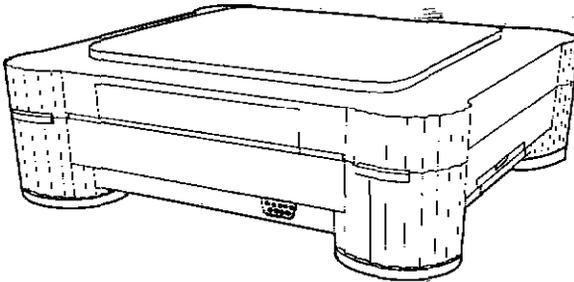
This unit employs a lithium battery for back-up of the memory if a power failure occurs, but this battery will no longer provide that back-up if it becomes weak. The battery is not RECHARGEABLE. If battery replacement is necessary, consult with the store where the unit was purchased, or any store where Panasonic products are sold, or an authorized Service Center. This battery must only be replaced by suitably qualified service personnel.

WARNING

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

CAUTION

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.



DANGER: Visible laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.

(inside of product)

CLASS 1 LASER PRODUCT
LASER KLASSE 1

Precautions and Warnings

Before using this unit, be sure to read these precautions and warnings.

Place on a Flat, Level Surface

Do not place the unit on top of an unstable TV set (cart, table, etc.) where it would be prone to fall. Also, be sure not to mount it on a wall or ceiling.

Water and Moisture

Do not use this unit near water or - for example, near a bath tub, wash bowl, in a wet basement, etc. If this unit is moved suddenly from a cold to a warm location, water vapor may condense in this unit.

Environment

Do not use or store the unit in locations exposed to heat, direct sunlight, extreme cold, excessive smoke, dust, high humidity.

Keep Magnets Away

Keep the unit away from equipment or devices that generate strong magnetism.

Ventilation

Ventilation openings are provided in this unit to prevent overheating. Do not block or cover these holes with a wall, cloth or paper.

Stacking

Do not place heavy objects (TV, etc.) on top of the unit. Never allow anyone to stand or sit on this unit.

No Object Inside

Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.

Power Sources

This unit is designed to operate on AC 230 - 240 V 50 Hz only.

This unit should be operated only from the type of power source indicated on the rating label. If you are not sure of the type of power supply for your home, consult your product dealer or local power company.

Lightning

For added protection for this unit during 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.

Medical Precautions

1. Physical activities involving regular repeated movements of the wrists, hands and/or fingers may possibly cause repetitive strain injury. Such injury may also affect muscles in the arms, wrists, hands, fingers, shoulders and neck, chest and abdomen, and the legs and back.
2. There have been reports that some people may experience epileptic symptoms or even seizures while concentrating on flashing lights. It is possible that persons with no previous epileptic experiences may, nevertheless, have an undetected condition. To avoid a possible medical problem, if you have an epileptic condition, consult your physician before playing video games or any other visually intensive software products.

To avoid either of these situations, and as sound practice, if you should use this equipment for an extended period of time, it is suggested that you take periodic breaks of 10-15 minutes each hour. Unit should be used in a brightly lit room. Operating in a close distance to the TV should be avoided.

In any event, stop using the Interactive Multiplayer and consult your physician if you detect involuntary muscle movements (such as twitching), altered vision, mental or visual confusion, convulsions, muscular pain, numbness of fingers, palms or other areas.

Playing CD Precautions

Be careful that your fingers or any other articles do not get caught in the tray mechanism.

Avoid shock or movement of player during operation. This may cause CD to skip.

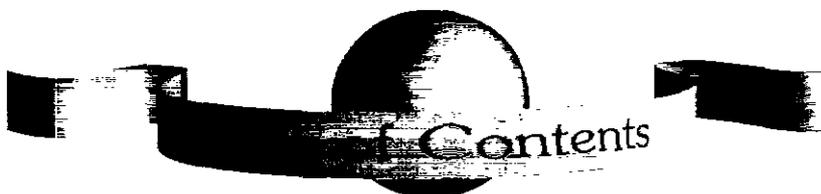
In case of malfunction, before contacting service, please turn player off then on, and retry CD.

Headphone Usage Precautions

When connecting the headphones, lower the volume of the television and the control pad. Also avoid listening through headphones for prolonged periods of time to prevent hearing damage.

Input is designed for stereo connection.

To avoid causing damage to the control pad, do not use monaural headphone.



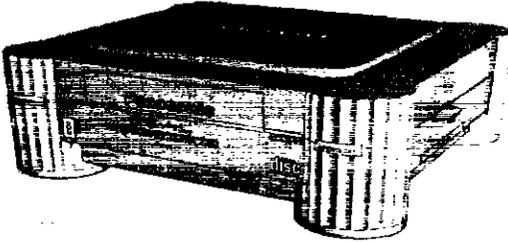
9	Overview
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15	Connection to a TV with an Audio/Video In Socket (Monaural)
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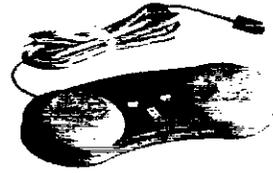
Overview

Unpacking

Please check the contents for these items.



Player (1)



3DO Control Pad (1)
Can also be purchased separately (model FZ-JP1X).



AV Cable (1)



RCA to 21-pin Adaptor (1)



RF Cable with Switch Box (1)



Operating Instructions (1)



Servicentre and Guarantee Sheet (1)
Panasonic 3DO Owners Registration
Card (1)

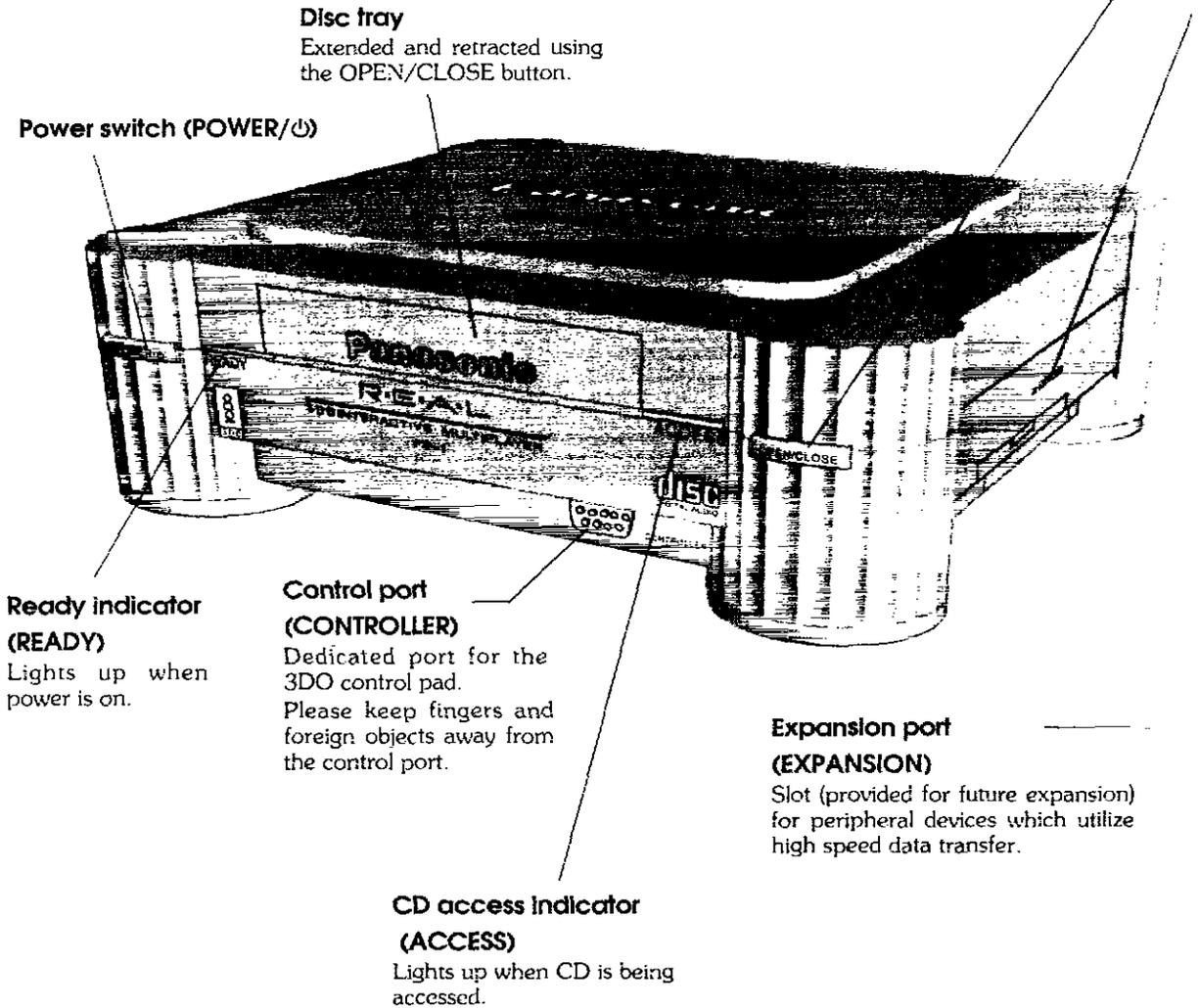


Sampler CD
(Demonstration CD)

Controls and Sockets Layout



Front View



Disc tray
Extended and retracted using the OPEN/CLOSE button.

Power switch (POWER/ON)

Ready indicator (READY)
Lights up when power is on.

Control port (CONTROLLER)
Dedicated port for the 3DO control pad. Please keep fingers and foreign objects away from the control port.

CD access indicator (ACCESS)
Lights up when CD is being accessed.

Expansion port (EXPANSION)
Slot (provided for future expansion) for peripheral devices which utilize high speed data transfer.

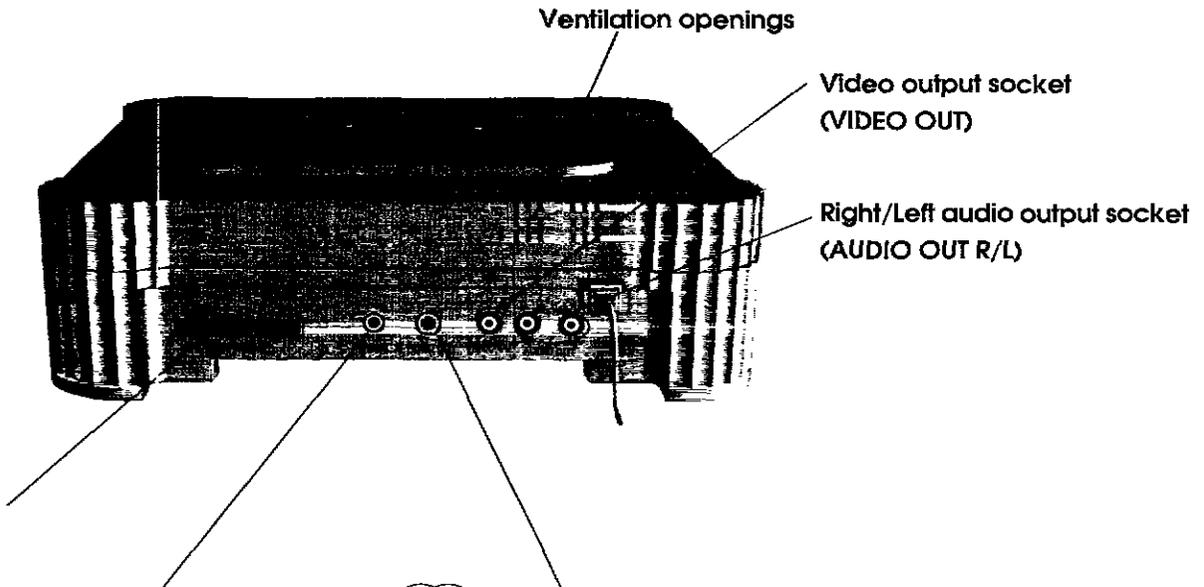
Disc tray open/close button (OPEN/CLOSE)

AV expansion slot (AV-EXPANSION)

When the cover is opened, an AV expansion slot (provided for Video CD adaptor) can be found.



Rear View



RF output socket (RF OUT) P 16

When connecting with a television which does not have an audio/video socket, the provided RF cable is used.

S-video output socket

(S-VIDEO OUT) P 14

When using a television which supports S-video, connecting a S-video cable sold separately results in a sharper picture.



3DO Control Pad

The functions performed by the buttons on the control pad differ depending on the type of CD being used.

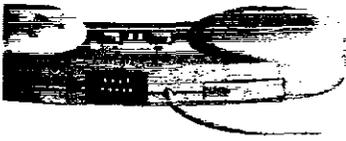
For a specific usage, please refer to the following sections:

3DO CD  P 23 Audio CD  P 25
(CDG CD) Photo CD  P 33

Control port (EXTENSION)

More than one person can play if you connect a separately sold control pad to this port.

Please keep fingers and foreign objects away from this port. When not in use, please keep the extension control port cover in place.  P 24



Connector

Connected to the player unit.



Left shift button (L)

Right shift button (R)



Directional pad
X button (X )

A, B and C buttons
(A, B, C)

Stereo Headphone socket (PHONES)
Headphones, when used, are connected to this socket.  P 27

Volume (VOL )
Used to adjust the volume when you are using headphones.
Phones level: MIN  MAX

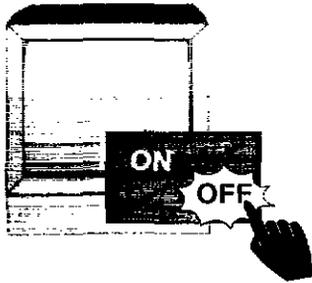
Play/Pause button (P )



Connection

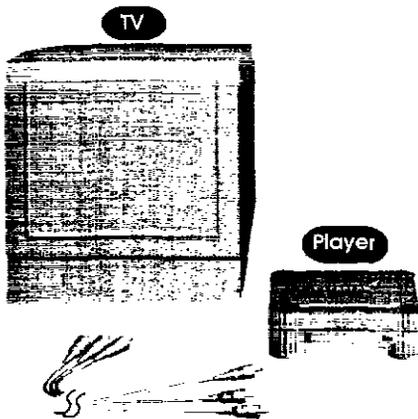
Connection Procedure

1



Be sure to turn off the power to your television set before connecting the player. If other video and stereo systems are connected to the television, turn off the power to these equipments as well.

2



Connect the player to the television. The connection procedure differs depending on the type of television you own. Refer to the page which corresponds with your television.

P 14

Television with stereo audio/video connectors

P 15

Television with monaural audio/video connectors

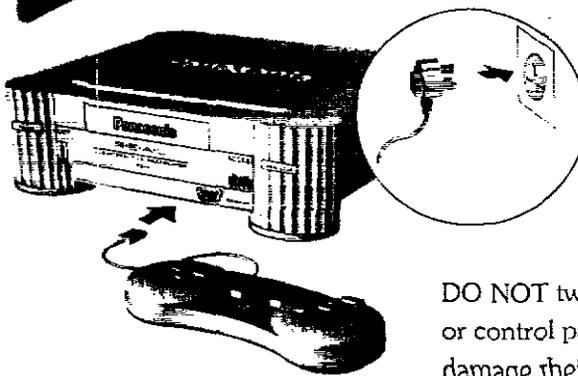
P 16

Television without audio/video connectors



DO NOT use your player with a projection TV.
(See Precaution Instructions)

3



Connect the provided control pad to the player.

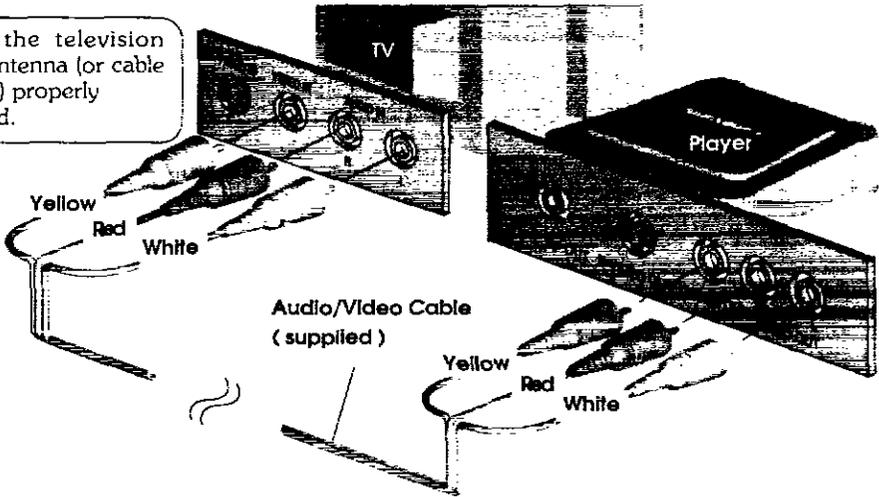
Plug the AC power cord into a household AC outlet (AC 230~240V/50Hz).

DO NOT twist or pull connection cables, AC power cord or control pad's cable connector forcefully. Doing so may damage their connections.

Connection to a TV with an Audio/Video In Socket (Stereo)

Connect the provided audio/video cable as shown in the diagram.

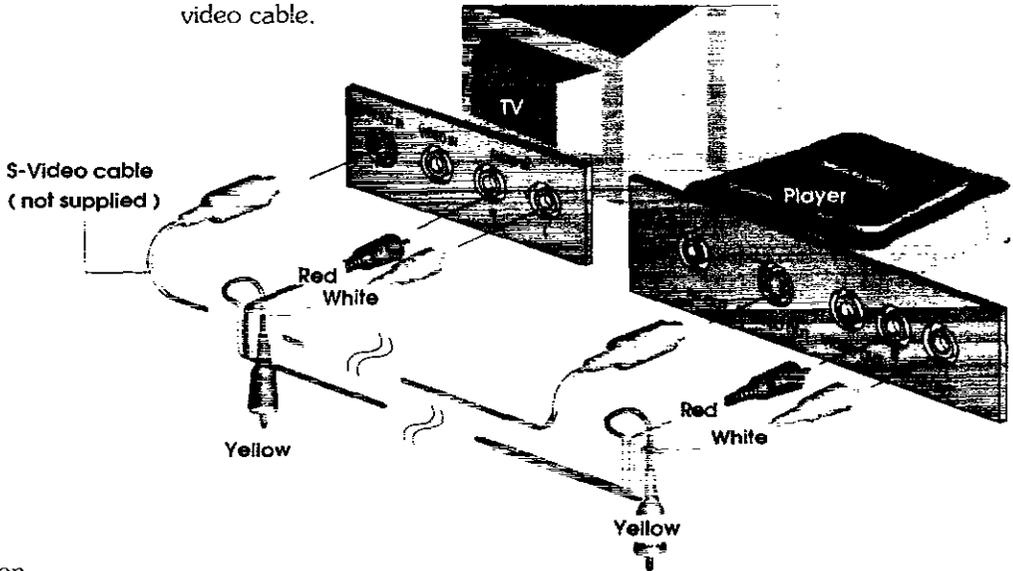
Connect the television with the antenna (or cable TV source) properly beforehand.



Televisions with an S-video Terminal

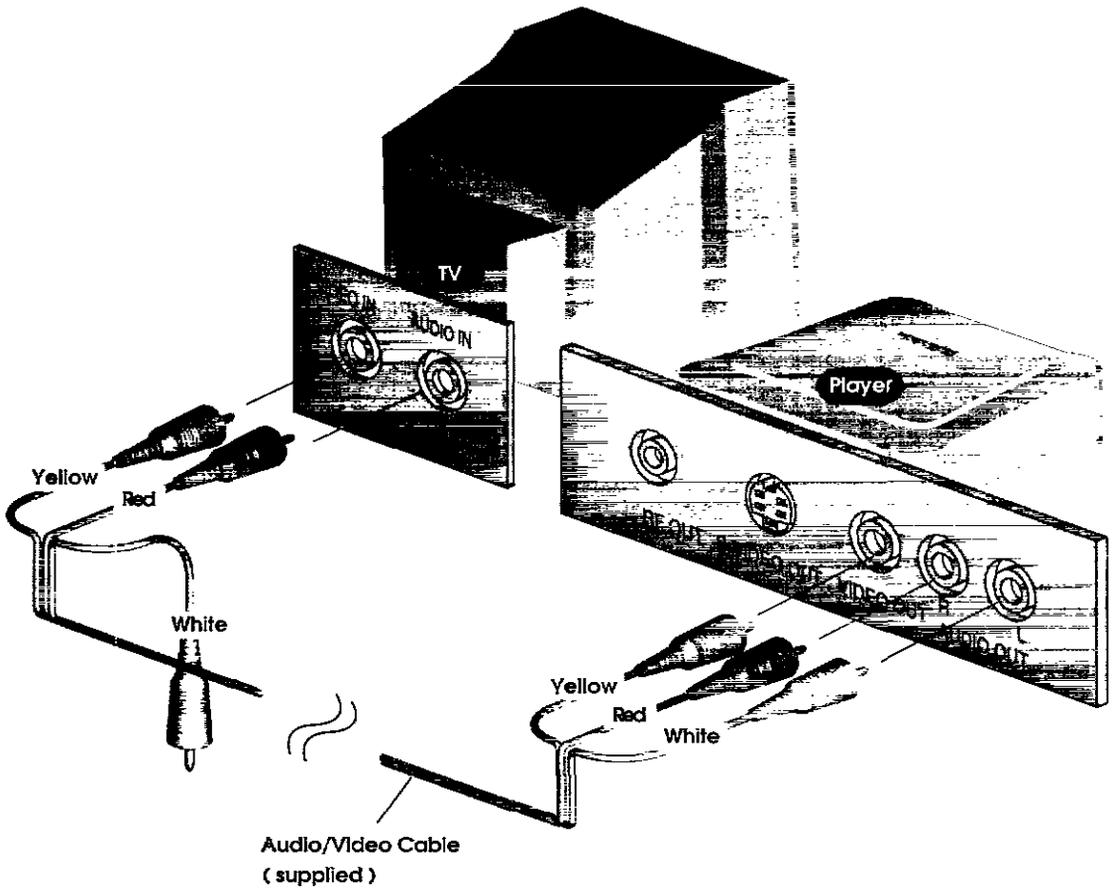
If your television has an S-video terminal, you can enjoy an even sharper picture by using a separately sold S-video cable.

Connect the provided audio/video cable and a separately sold S-video cable as shown in the diagram. It is not necessary to connect the (yellow) video cable.



Connection to a TV with an Audio/Video In Socket (Monaural)

Connect the provided audio/video cable as shown in the diagram.
On the TV side, only connect either the left or right socket.

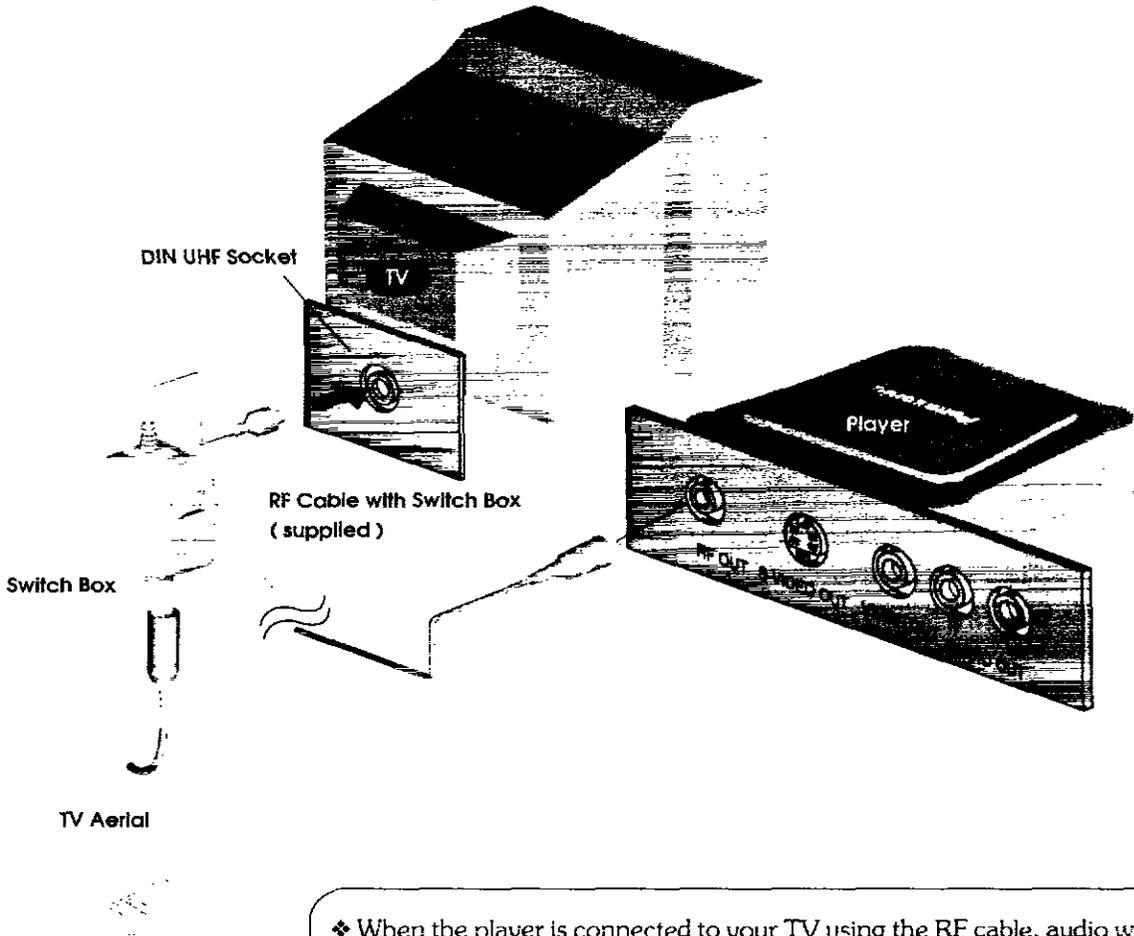


Stereo sound can be played monaurally but, depending on the CD, there may be instances in which this sound may not play correctly. If this problem occurs, then the unit must be set for monaural use from the audio programming screen. **P 28** — **P 30**

Connection to a TV without Audio/Video In Socket

Connect the provided RF cable as shown in the diagram.

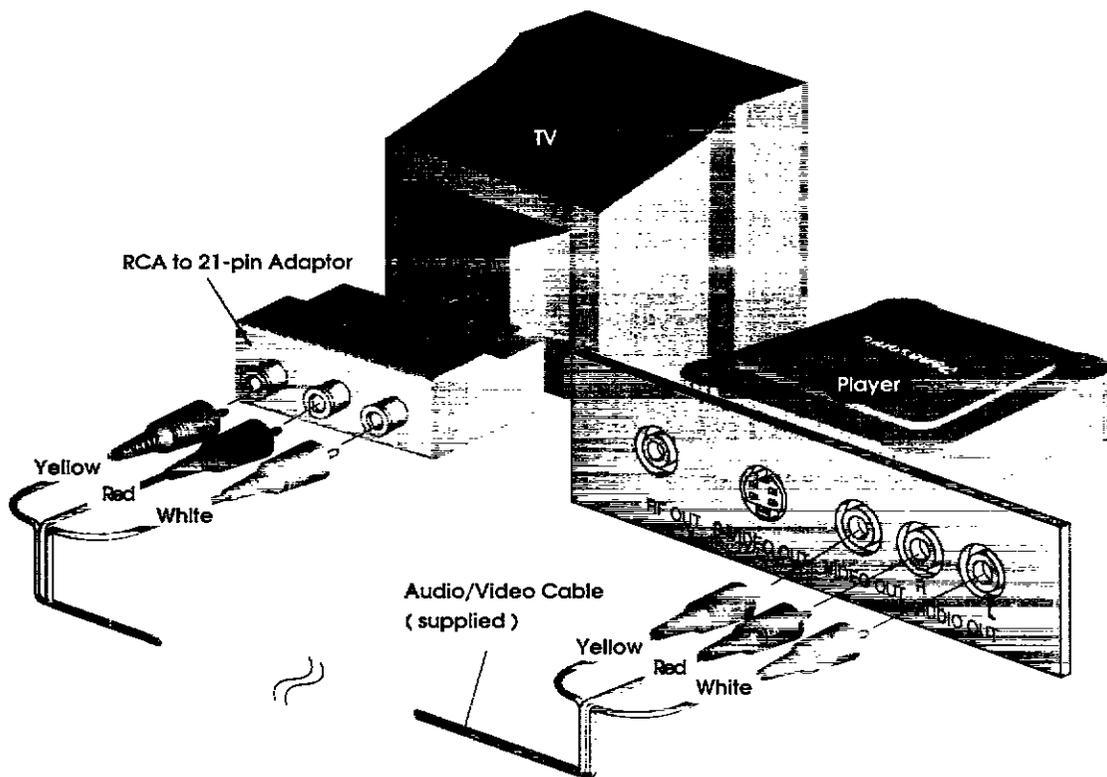
Tune your TV to receive channel 21. Refer to the operating instructions of your TV for details.



- ❖ When the player is connected to your TV using the RF cable, audio will be monaural even if the TV is capable of stereo reception.
- ❖ RF cable with switch box has auto switching function for signal from TV aerial or player. To watch TV, the player must be switched off.

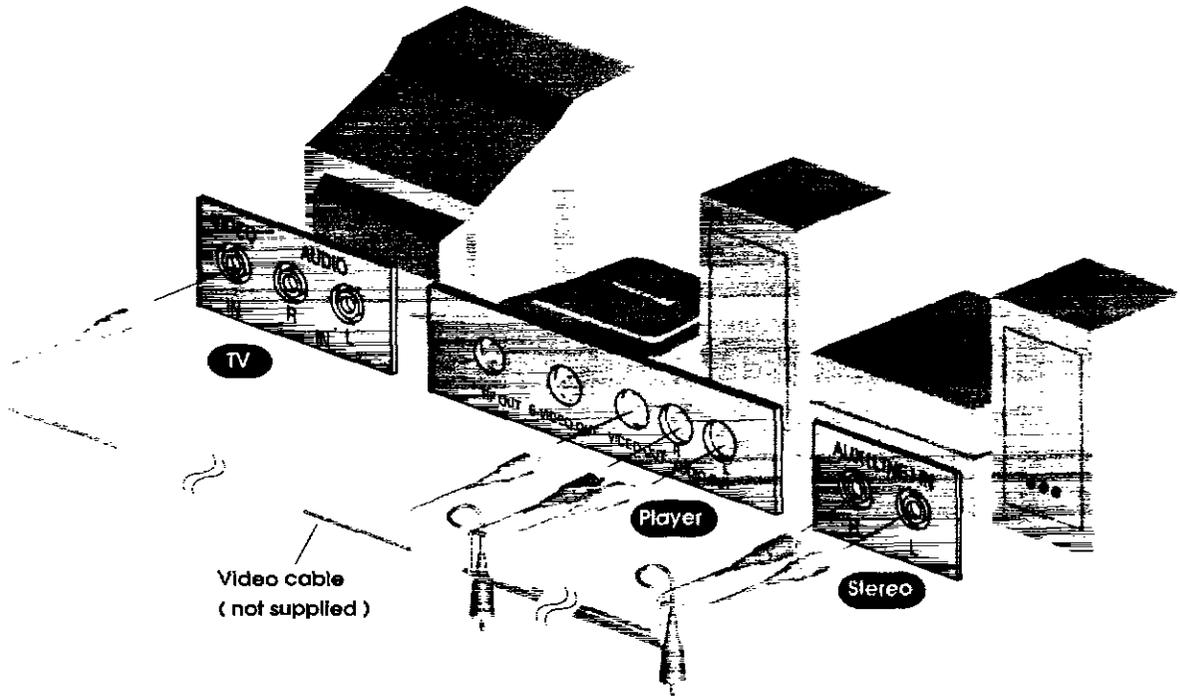
Connection to a TV with RCA to 21-pin Adaptor

Connect the provided RCA to 21-pin adaptor as shown in the diagram.



Connection to a TV and Stereo System

In this example, sound is output to a stereo system and video is output and into a television with an audio/video in socket.



Referring to the operating instructions for your television, stereo system and antenna (cable TV source).

The above illustration demonstrates just one such example.

Warning



Unauthorized exchanging and/or copying of copyrighted recordings may constitute copyright infringement.



Operation

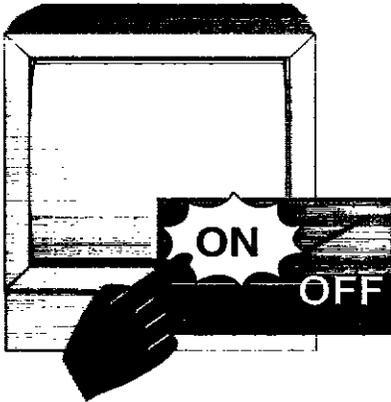
Now that the "REAL" player is connected, let's move right to actual use.
The player can support the following types of CDs.
For more details, please refer to these sections:

3DO CD  P 23

Audio CD  P 25
(CDG CD)

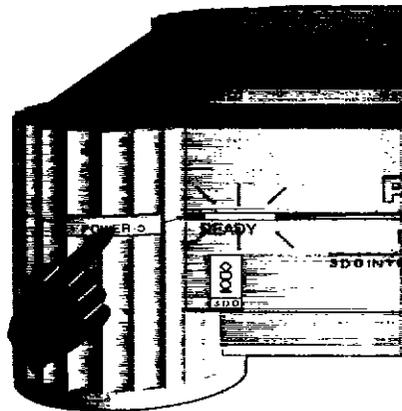
Photo CD  P 33

1



Turn the television's power on. Select AV or RF input, depending on the type of connection you made as shown on pages 14 to 18.

2



Turn on the player's power. This will cause the READY indicator to light up (in red).

The unit is in the standby condition when the AC power supply cord is connected. The primary circuit is always "live" as long as the power cord is connected to an electrical outlet.

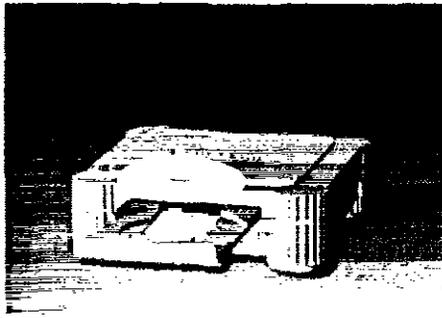
3

The opening screen appears (about fifteen seconds after the power is turned on) after a few sequences of screen.



If a CD is not inserted in the player, then the opening screen is followed by the screen below.

Press the OPEN/CLOSE button to open the disc tray.



If the unit is left without a CD inserted (for about ten seconds), another opening screen begins, and this screen is displayed until a CD is inserted. If the A button on the control pad is pressed, the sound for this demonstration screen can be muted.

If a CD is already inserted, then the screen corresponding with that CD appears in place of the above opening screen.

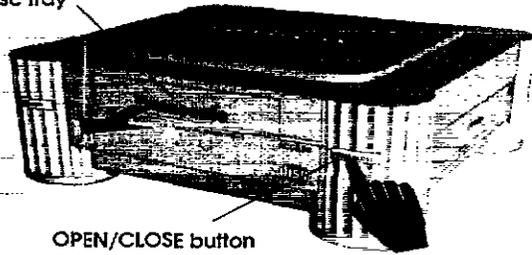
The type of CD is recognized automatically.

3DO CD  P 23 Audio CD  P 25
(CDG CD) Photo CD  P 33



Inserting a Compact Disc

Disc tray



OPEN/CLOSE button

Press the **OPEN/CLOSE** button on open the disc tray.

Label must face upward



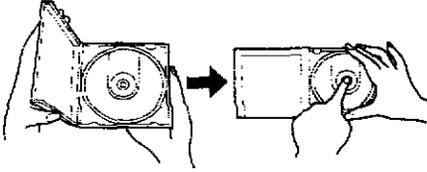
Insert the CD with the label facing upward.

Using the unit with an improperly inserted CD can result in damage to the CD or to the unit itself.

Press the **OPEN/CLOSE** button to close the disc tray.

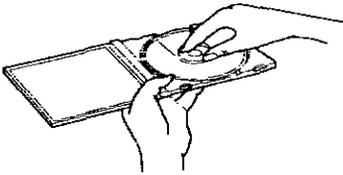


Compact Disc Usage Precautions

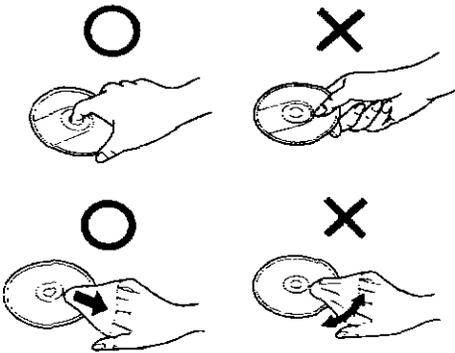


To open the case, gently press both sides of its top.

To remove the CD from the case, press the centre holder and lift the CD, holding by the edges.



To return the CD to the case, insert the CD with the label facing upward, and press downward at the centre.



Hold CD by the edges so the surface is not soiled with fingerprints. Fingerprints, dirt, and scratches can cause skipping and distortion.

If the surface is soiled, wipe gently with a soft, damp cloth (dampened with water only). Always move the cloth directly outward from the centre of the CD, not in a circular motion as with standard phonograph records.

DO NOT use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.

If the CD is brought from a cold to a warm environment, moisture may form on the disc. Wipe this moisture off with a soft, dry, lint-free cloth before using the CD.

DO NOT write on the surface of the CD with a ball-point pen or other writing instrument.

Be sure to store CDs in their cases to protect them from dust, scratches, and warping. **DO NOT** place or store CDs in the following places:

- ❖ Locations exposed to direct sunlight, humid or dusty locations.
- ❖ Locations directly exposed to a heat outlet or heating device.
- ❖ In the glove compartment or on the parcel shelf of a car.



Using 3DO™ CDs

3DO-formatted CDs not worded "Features full screen display for use with any 3DO™ System", "Features full screen display for use with any 3DO™ PAL System", or "The title displays in a letterbox format on the 3DO PAL system" may not necessarily operate normally. For best results, always use the 3DO™ CD worded any of descriptions.

Upon inserting a 3DO CD, the application software contained therein starts automatically.

The operation is controlled entirely through the use of a control pad. The buttons on the controller function differently depending on the CD's software. Refer to the manual provided with the 3DO CD.



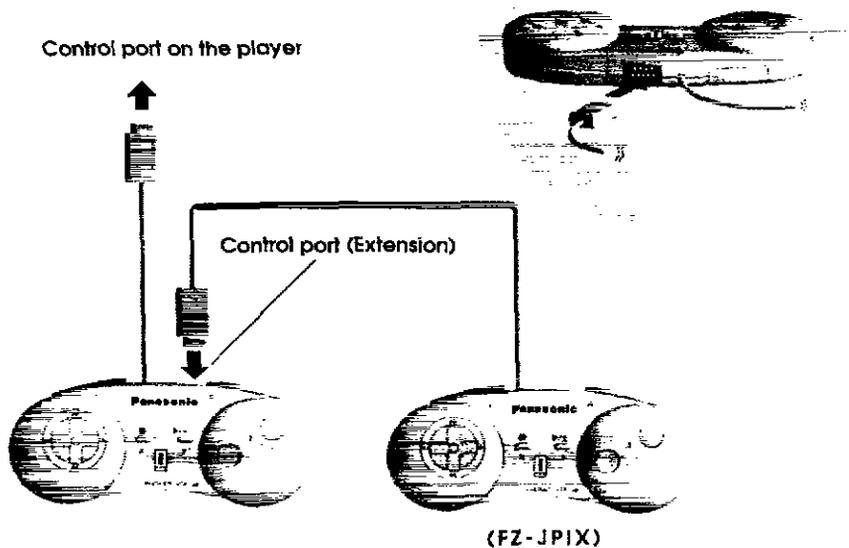


Control Pad Expansion

Certain 3DO software products allow use by more than one person. In these instances, optional control pads (sold separately) can be added.

Connect the optional control pads as shown in the diagram.

(Max : 8 control pads)



Warning



Please keep fingers and foreign objects away from the control port on the control pad. When not in use, please keep the control port cover in place.



Using Audio CDs

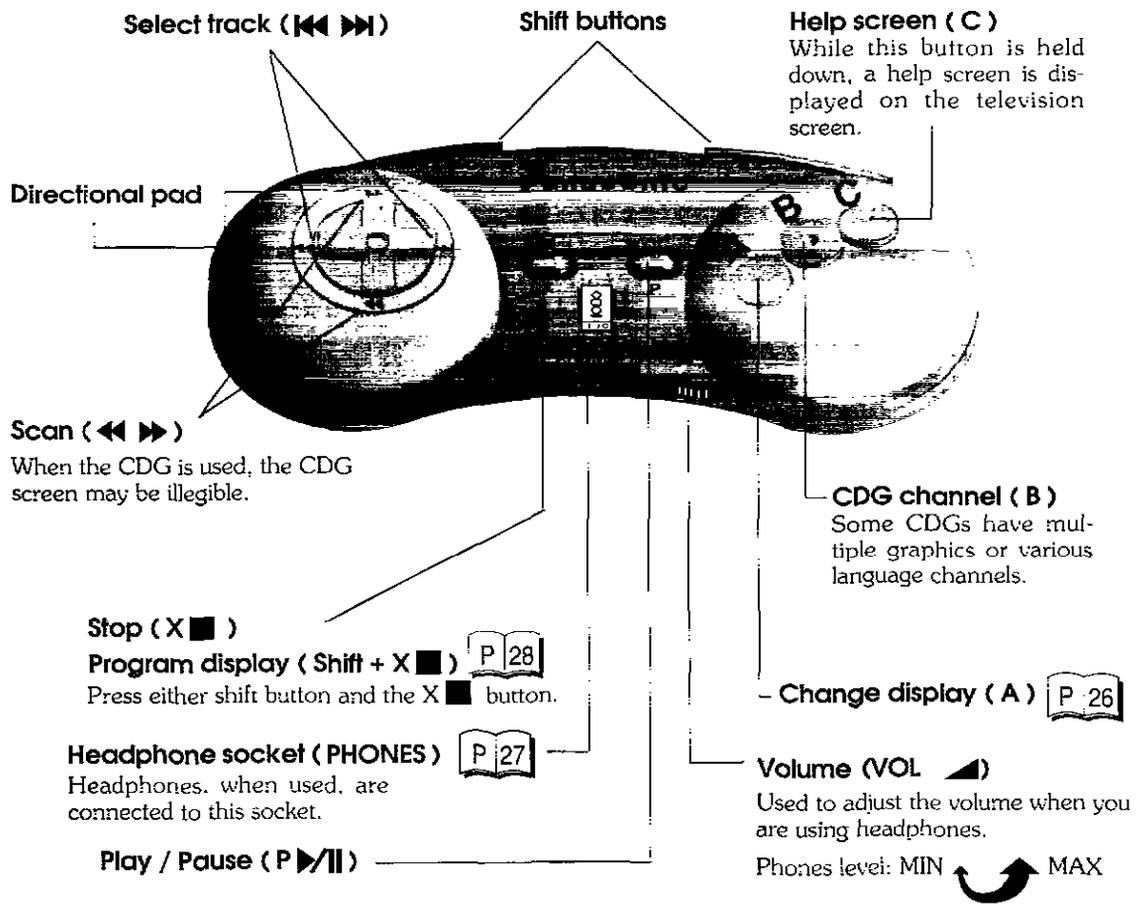
Basic Operation

Audio CDs on which  appears can be used with this unit. All operations other than power on/off and disc tray open/close are performed using the 3DO control pad.

CDG CDs on which  appears can be also used with this unit. This unit does not support CD-EG (CD Extended Graphics).



3DO Control Pad





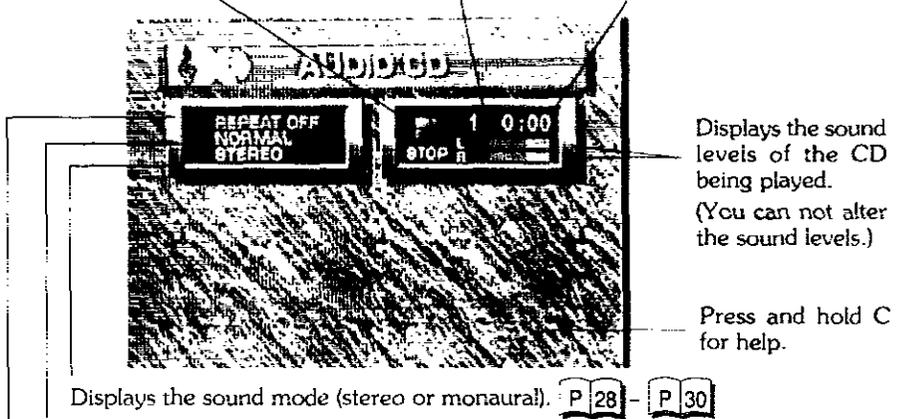
Main Screen

When an audio CD is inserted, the following main screen appears.

Displays an indicator related to the control pad button pressed.

Displays the number of the track in progress.

Displays the elapsed time of the track in progress.



Displays the sound levels of the CD being played.
(You can not alter the sound levels.)

Press and hold C for help.

Displays the sound mode (stereo or monaural). P 28 - P 30

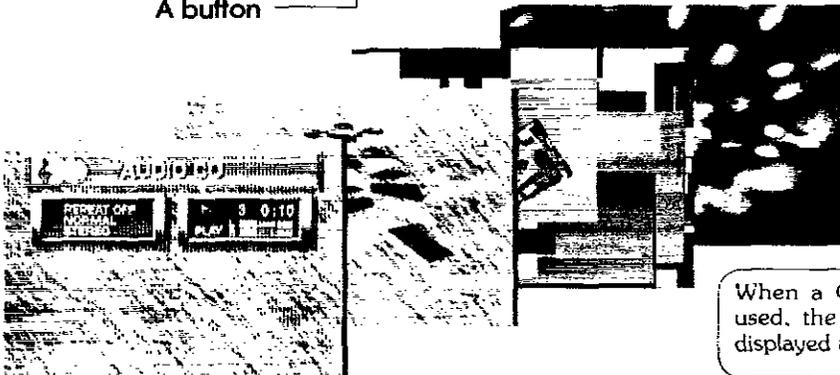
Displays the specified playback mode: normal play, program play, or random play. P 28 - P 30

Displays whether repeat play is on or off. P 28 - P 30



A button

The screen displayed on the TV can be switched using the A button.

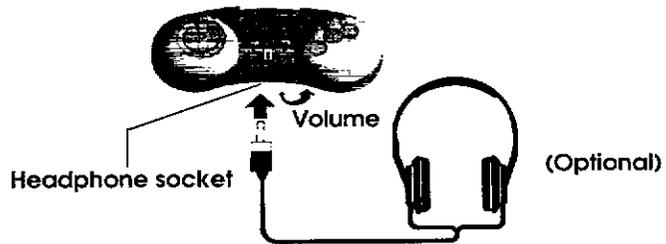


When a CDG compact disc is used, the CDG screen may be displayed as well.



Listening with Headphones

To listen with headphones, connect them to the control pad's stereo headphone socket.



**Plug type : Small stereo plug
(M3 type)**

Programme Play

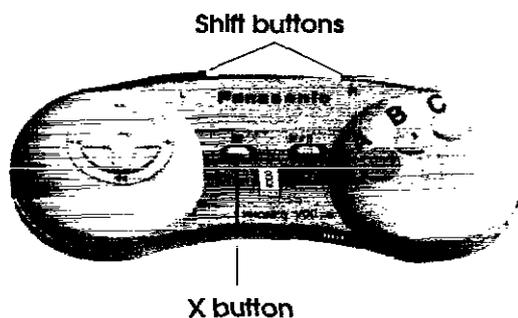
Programme play for audio CDs (including CDG) offers the following features.

- ❖ Up to 99 tracks per CD can be played in any order you desire. In addition, the programme you create is automatically stored, and is then automatically retrieved whenever you subsequently insert the same CD.
- ❖ Settings for random play, repeat play, and sound mode (stereo or monaural) can all be specified.



Accessing the Programming Screen

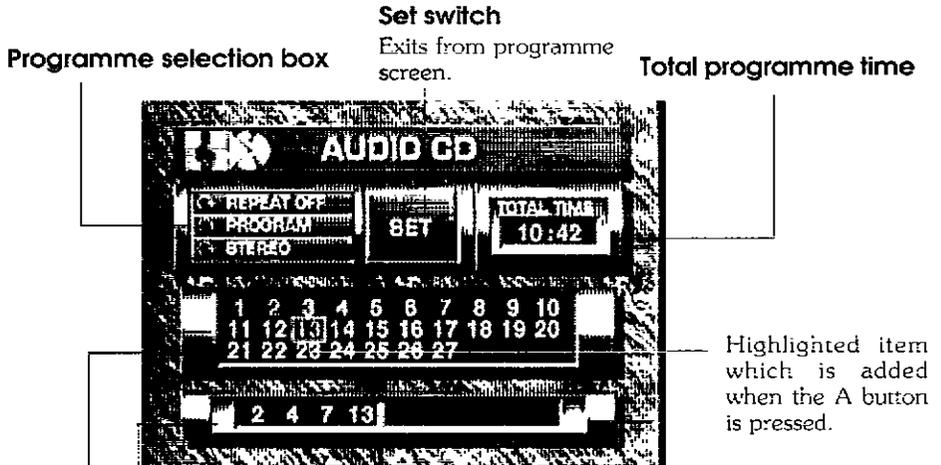
Holding down either shift button and then pressing the X button to switch between programming screen and main screen.



Entering the programming screen will cause the CD to stop playing.

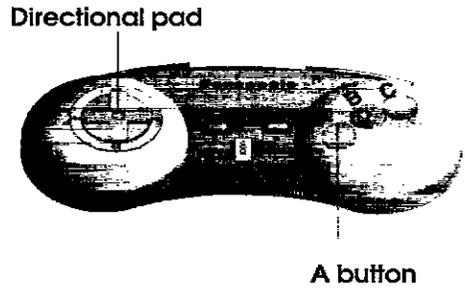
The following programming screen appears on the TV.

The  symbol indicates that by pressing the A button you can cycle through the choices for that programme type.



Programme box
Programme box does not appear if the programme selection box is set to "Normal" or "Random."

Track select box

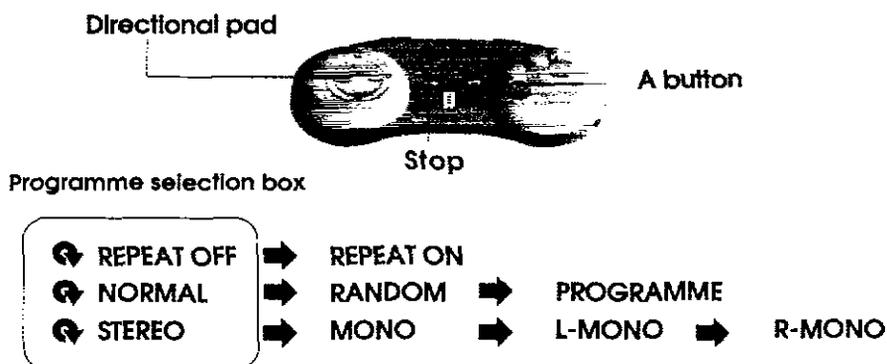


Directional pad : Moves the cursor box.
A button : Selects the item.



Programme selection

Programme settings can be specified from the programme selection box in the upper left portion of the screen. Using the directional pad, move the cursor box to the programme selection box, and select the desired setting with the A button. The menu below is available, with the various programme selections taking the form of multiple selection type.



REPEAT OFF Stop after playing once.

REPEAT ON Play repeatedly until the stop (X■) button is pressed.

NORMAL Play the CD in the normal order.

RANDOM Play in random order.

PROGRAM Play in the programmed order.

STEREO Play in stereo.

MONO Output both left- and right-side sounds monaurally to the left and right side.

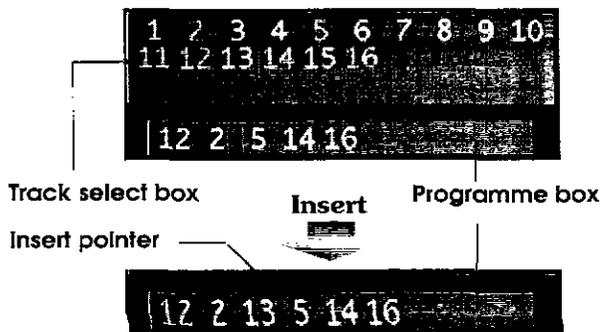
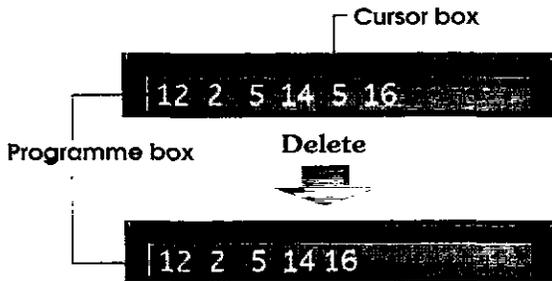
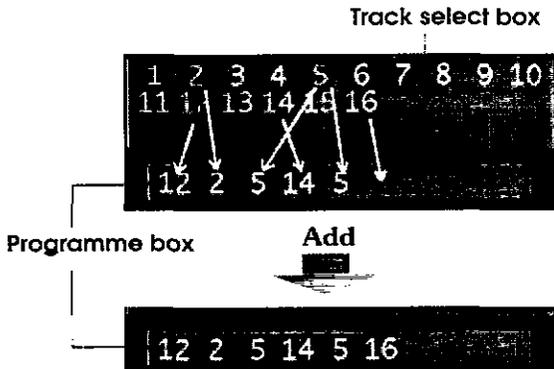
L-MONO Output only left-side sounds monaurally to the left and right side.

R-MONO Output only right-side sounds monaurally to the left and right side.

SET Return to the main screen.



Programming Method



From the track select box, select the track number to be programmed and press the A button.

Directional pad



A button

The track number selected in the programme box is displayed.

After programming is completed, make sure that the programme selection box has been set to "PROGRAMME." Move the cursor box to "SET" and press the A button.

Deleting a track :

Using directional pad, move the cursor box to the track in the programme box at which is to be deleted, then press the A button.

Inserting a track :

Using directional pad, move the cursor box to the track in the programme box at which the insertion is to be performed.

When the cursor box is moved with the directional pad from the programme box to the track select box, the insert pointer appears in the programme box.

From the track select box, select the track number to be inserted and press the A button. The selected track number is inserted at the position of the insert pointer.



Programme Save / Recall

Programmes created are automatically saved in the unit's internal SRAM (static random access memory). As a result, a programme is then automatically retrieved whenever you subsequently insert the same CD.

Programmes can be created which contain up to 99 tracks for a CD, but there is a limit to the number of programmes which can be stored. Assuming that an average of 20 tracks are programmed for each CD, it is possible to automatically store the programmes for approximately 80 discs.

Programmes not only remember which tracks were selected, they also remember if random mode, normal mode, or programme mode was selected, if repeat on or repeat off was selected, and if stereo or mono was selected.

When the memory becomes full, previously entered programmes are automatically erased in order starting with those used least frequently.



Using Photo CDs

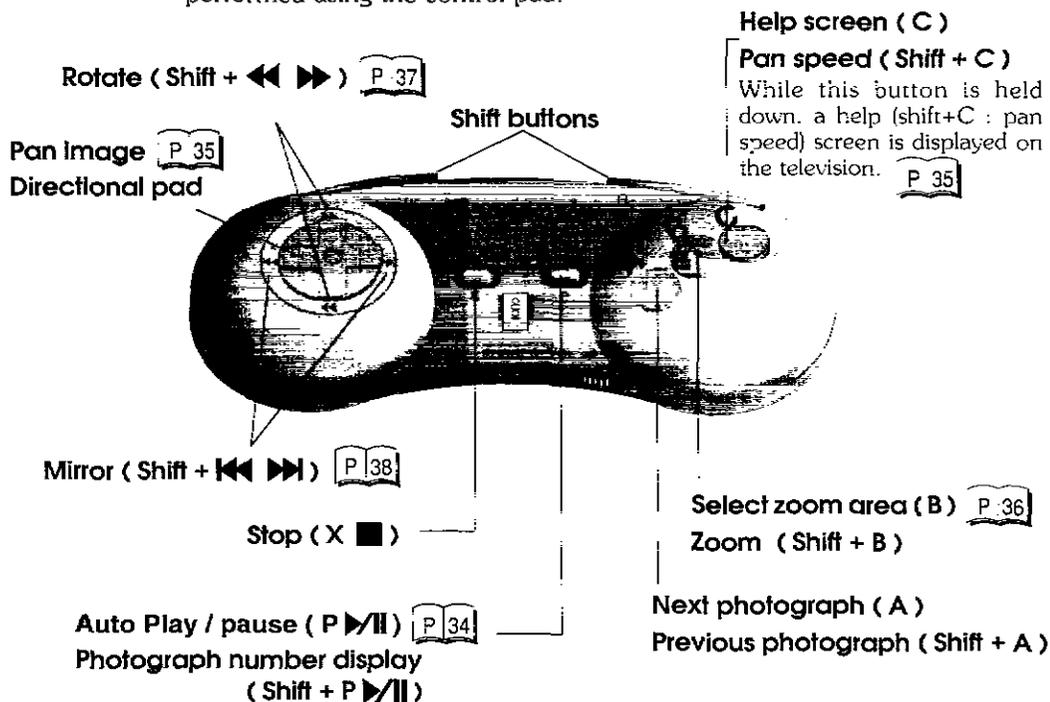
Basic Operation

Using just the film negatives, data for up to 100 photographs can be stored on a CD. Discs created in this fashion are referred to as photo CDs, and the photos contained therein can be displayed on a television screen using the "REAL" player.



3DO Control Pad

All operations other than power on/off and disc tray open/close are performed using the control pad.

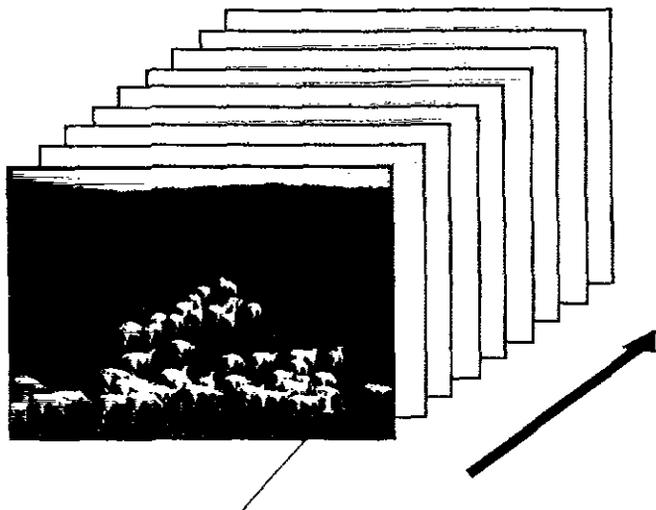


(Shift + A) means that you should hold down either shift button and then press the A button.



Flipping through Photographs in Order

Upon inserting a photo CD, data for the first photograph is displayed. You can then flip through the photographs in order using the A button. If the P button is pressed, the photographs are flipped through automatically.



If either shift button is held down and the P button is pressed, the photograph number is displayed. (Pressing it again causes the photograph number to disappear.)

Go to next photograph
(A button)



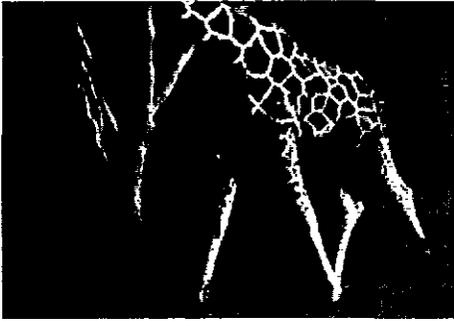
Auto play
(P button)

Holding down either shift button and then pressing the A button skips back to the previous photograph.



Pan Function

Photographs can be panned up, down, left, or right.



Move in the direction you would like to display using the directional pad.

Directional pad



Panning is still possible even while in the middle of a zoom.



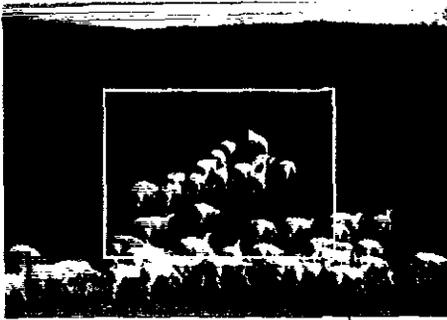
It is also possible to change the panning speed. If you hold down either shift button and then hold down the C button, the level display shown below is displayed, and the panning speed can be modified.





Zoom Function

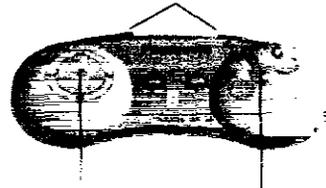
Using the zoom frame, you can specify the location of the zoom and then enlarge that location.



Zoom frame

Press the **B** button to display the zoom frame. Then use the directional pad to move the zoom frame to the location which you would like to enlarge.

Shift buttons



Directional pad
(Pan)

B button



Hold either shift button and then press the **B** button to expand the photograph based on the zoom frame.

By repeatedly pressing the **B** button, you can change the size of the zoom frame such that the displayed zoom frame can be enlarged for the photograph currently being displayed.

When the zoom mode is first activated, the enlarged picture may appear very blocky. In a few seconds the picture quality will start to be improved.

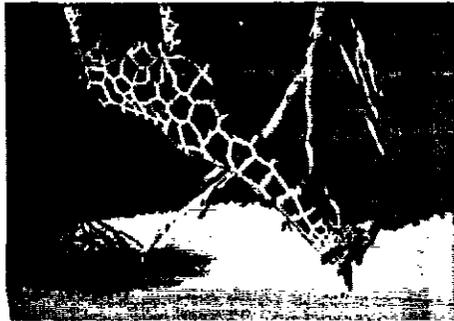
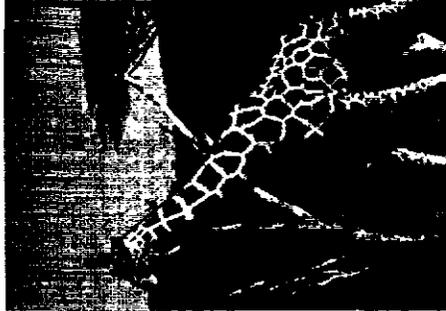
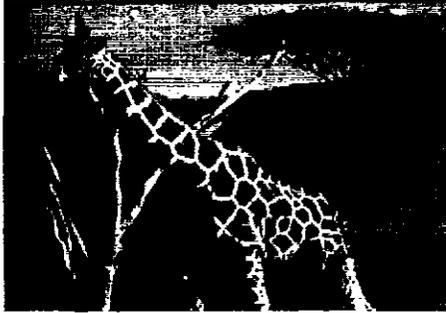


If, while the zoom frame is not being displayed, you hold down either shift buttons and then press the **B** button, the photograph is displayed in its smallest possible size.

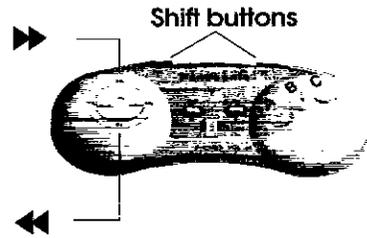


Rotate Function

You can rotate photographs counterclockwise by 90 degrees at a time.



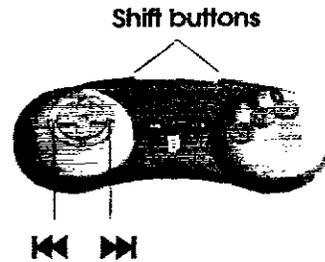
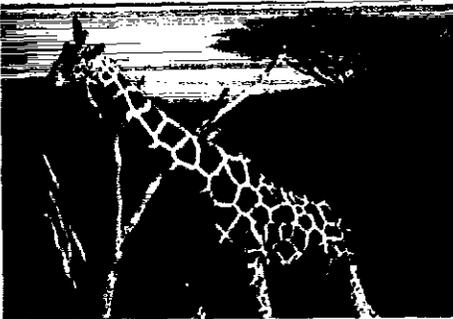
While holding down either shift buttons, press ◀◀ or ▶▶ directional pad.



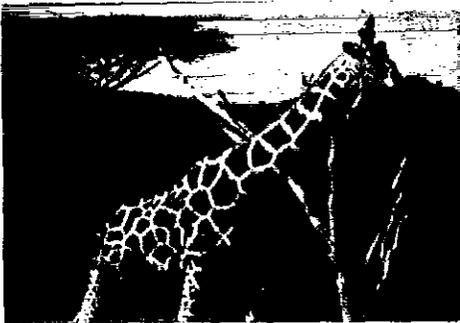


Mirror Function

It is possible to display the mirror images of photographs, inverting them across a vertical axis.



While holding down either of the shift buttons, press ◀◀ or ▶▶ directional pad.





Troubleshooting

Please read the items below before requesting service.



The player will not power up.

- ❖ Is the power cord plugged into the AC wall outlet properly?
- ❖ Check mains plug fuse.



No picture appears on the television screen.

- ❖ Is the power to the player and the television turned on?
- ❖ Are the player and television, and the television and aerial, connected properly?

Connection methods vary based on the type of television, so refer to the "Connection" page and make sure that there are no loose, missing, or wrong connections.  P 13 -  P 8



The disc tray doesn't close even when OPEN/CLOSE is pressed.

- ❖ Is the disc properly positioned in the disc tray?



The disc doesn't play.

- ❖ Is the disc upside down? Be sure the label is facing upward.
- ❖ Does the disc comply with the specified standards?
- ❖ Has moisture condensed in the unit? If so, switch the unit on and allow it to dry for about one hour before use.
- ❖ Is the disc dirty? If so, wipe it off with a soft cloth.
- ❖ Is the disc damaged or warped? If so, it cannot be used.



The demonstration screen is displayed, but no further operation is possible.

- ❖ Is a disc inserted?
- ❖ If a disc is inserted, press the P (Start) button on the control pad.



The picture is not centred.

- ❖ Is the disc correct software?

Please check that you are using the correct software.  P 3



Interference on picture

- ❖ Player must be kept away from television set.
- ❖ Disconnect aerial from switching box.



The picture is fine, but there is no sound.

- ❖ Are the player and television connected properly? [P 13](#) - [P 18](#)
- ❖ Is the television's volume at its minimum or mute setting?
Adjust the volume to a comfortable level.



There is something wrong with the sound (e.g., it can only be heard on one channel).

- ❖ Are the audio/video cables connected properly? [P 13](#) - [P 18](#)
- ❖ For monaural televisions, based on the type of CD being used, the sound output setting may have to be specified. Sound output settings are explained in the program play section of "Using Audio CDs." [P 28](#)



The picture quality is poor.

- ❖ Are the player and television connected properly? [P 13](#) - [P 18](#)
- ❖ Are the television settings (brightness, contrast, vertical sync, horizontal sync, etc.) adjusted properly?



The edges of the television screen become cut off, distorted, etc.

- ❖ This may occur depending on the characteristics of the television or type of software.

If any problems persist despite having followed the troubleshooting steps, discontinue use and disconnect the unit from the AC outlet, and then contact a Panasonic service centre.

This unit is a precision instrument, so please do not take it apart or attempt to repair or service it yourself, and reconstruct it yourself

For software assistance (i.e.: game support, hints, etc.) please consult to the software manufacturer.



Specifications

CPU		32-bit RISC processor ARM60 (12.5 MHz)
Memory	RAM/VRAM	3 MB └ 2 MB: Main-RAM └ 1 MB: VRAM
	SRAM	32 KB (Battery back up)
	ROM	1 MB
DSP		Original 16-bit digital signal processor
Video/Audio	Video output	Composite video, PAL S-Video, PAL RF Video, PAL-I, channel 21
	Resolution	768 (H)×576 (V) dots (Inside 384×288 dots)
	Colors	Max. 16.7 Million / Std. 32k (Pixel clock: 12.3 MHz)
	Audio	Stereo 16-bit PCM (Sampling: 44.1 kHz)
Storage	CD-ROM drive	Size: 12 and 8 cm (CD single) Double Speed CD-ROM Drive (Read Buffer: 32 KB)
I/O Port	Control port	Low speed I/O: Dsub-9 pin×1 Daisy-chain system
	Expansion port	High speed I/O: 30 pin×1
	AV Expansion port	High speed AV-I/O (Video CD adaptor) : 68 pin×1
System	System dimensions (W×D×H)	284×268×88 mm (11.2×10.6×3.5 inch)
	Weight	2.9 kg (6.4 lbs.)
	Power requirement	230~240 V AC
	Power consumption	30 W
Indicator	Power indicator	Red-LED×1
	CD-access indicator	Green-LED×1
Temperature	Operating	10 °C to 30 °C (50 °F to 86 °F)
	Storage	-20 °C to 60 °C (-4 °F to 140 °F) (When packed for shipment)

Specifications are subject to change without notice.

Weight and dimensions are approximate.

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