

**CLASSROOM TRAINING MANUAL
PREPARED FOR ST. MARYS
CITY SCHOOL DISTRICT
INCLUDES DVD, PROJECTOR,
CLASSROOM SOUND, INTERACTIVE
WHITEBOARD**

PRESENTED BY
CRT TECHNOLOGIES

937-222-9840

WWW.CRTECHCORP.COM



Introduction

Congratulations and thank you for purchasing the Atlas Sound Model AL2430-2PH Wireless Classroom Sound Reinforcement System. This new and innovative professional grade audio system has been designed from the ground up to include unique features required for delivering clear and concise audio to the classroom.

Features

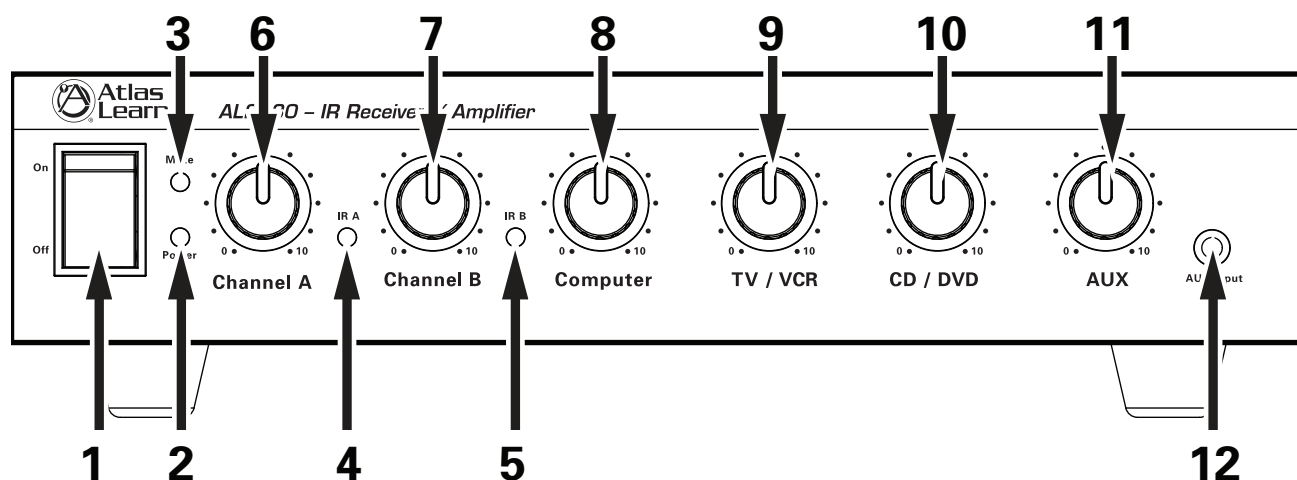
- Works in Conjunction with Secondary Systems to Provide Enhanced Classroom Security
- Provides Excellent Infrared Wireless Sound Reinforcement
- Easily Integrates Into Any Classroom
- Keeps Teachers' Voices Healthy and Sustainable
- 30 Watts Output at 8Ω, 25V, and 70.7V
- 6 Input Mixer with Priority Page Override
- Patent Pending Pole Mount Design
- Unique Handheld / Lanyard / Body Pack Transmitter Microphone
- System and Microphone Volume Controlled via Transmitter

Applications

The Atlas Learn AL2430 system is an in-classroom sound reinforcement solution designed for use in K-12 and higher education facilities or where a room constrained public address system is required. This complete audio enrichment package consists of amplifier / receiver, wireless microphones, and docking station designed to allow the teacher and students to walk freely around the room with the infrared microphones / system control units and project their voices through installed speakers.



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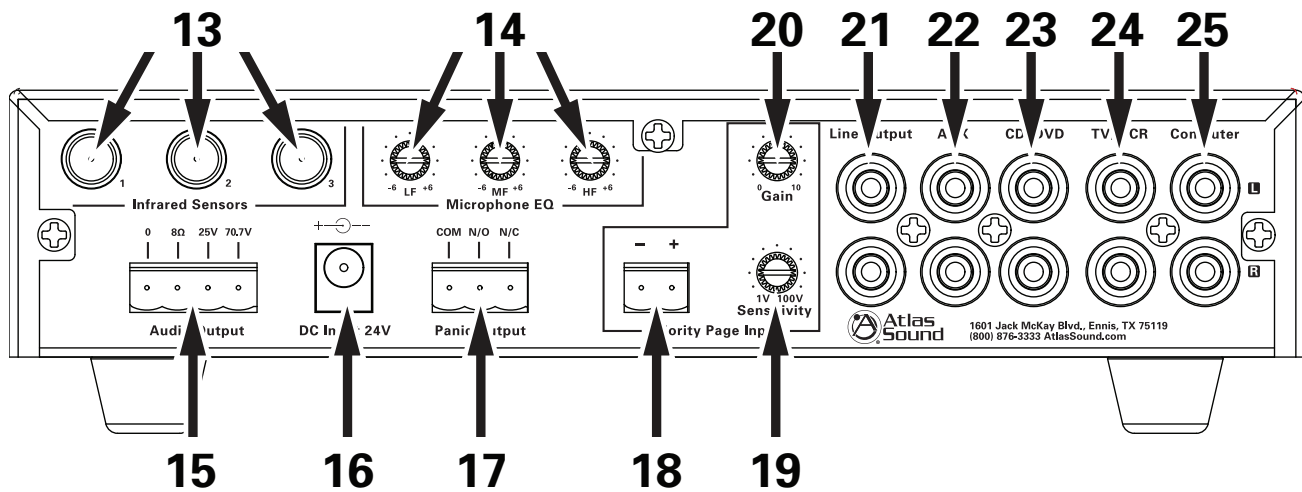


AL2430 Front Panel Description

1. **Power Switch**
This toggle switch applies power to the AL2430.
2. **Power LED**
This LED will illuminate when the AL2430 is turned on.
3. **Mute LED**
This LED will illuminate when the AL2430 source inputs are muted using MODE 2 of the AL-PH microphone.
(See page 9 for details)
4. **IR A LED**
This LED will illuminate when an active AL-PH microphone is set to Channel A.
5. **IR B LED**
This LED will illuminate when an active AL-PH microphone is set to Channel B.
6. **Channel A**
The gain for Mic Channel A is controlled by this rotary control.
7. **Channel B**
The gain for Mic Channel B is controlled by this rotary control.
8. **Computer**
The gain for the Computer input is controlled by this rotary control.
9. **TV / VCR**
The gain for the TV / VCR input is controlled by this rotary control.
10. **CD / DVD**
The gain for the CD / DVD input is controlled by this rotary control.
11. **AUX**
The gain for the AUX Input is controlled by this rotary control.
12. **AUX Input**
This 3.5mm input jack provides unbalance stereo summing inputs from iPods™ / MP3 players and overrides the input of the rear panel AUX input.

**Atlas
Learn**

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AL2430 Rear Panel Description

13. Infrared Sensors

These three "F" type connectors are for input of the AL-IRDS antennas.

14. Microphone EQ

These three rotary controls provide equalization of the wireless microphones. This 3 band EQ is centered at 100Hz, 3kHz, and 10KHz.

15. Audio Output

For loudspeaker connections, connect using the following information or proceed to the setup section for typical wiring diagrams.

COM - Speaker common or negative connection

8Ω - Connect to direct coupled loudspeakers

25V - Connect to transformer coupled, 25V loudspeakers with a total load impedance of no less than 20.8Ω.

70V - Connect to transformer coupled, 70.7V loudspeakers with a total load impedance of no less than 167Ω.

16. DC Input 24V

AL2430 power supply input.

(NOTE: Use only supplied power supply)

17. Panic Output

This SPDT relay output is controlled via the PANIC button on the wireless microphones (See page 9 for details).

18. Priority Page Input

This input accepts line or speaker level input to allow an external source to override the audio output of the AL2430.

19. Priority Page Sensitivity

This rotary control is used to set the input sensitivity of the Priority Page Input.

20. Priority Page Gain

Sets audio gain for the Priority Page Input.

21. Line Output

This unbalanced output can be used to feed the AL2430 mix bus to additional amplifiers or recording devices.

22. AUX Input

This dual RCA summing input is used for the input of auxiliary audio sources like FM tuners.

23. CD / DVD

This dual RCA summing input is used for the audio input of CD or DVD Players.

24. TV / VCR

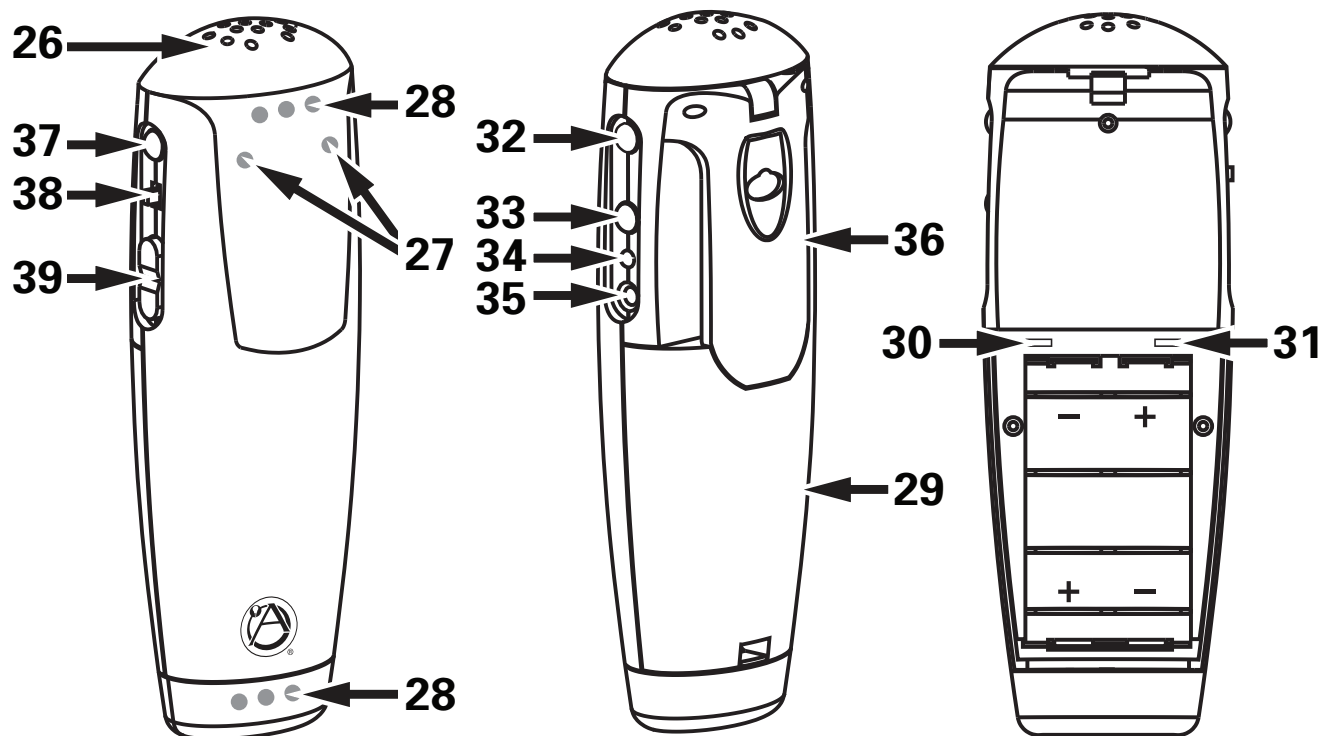
This dual RCA summing input is used for the audio input of TVs or VCRs.

25. Computer

This dual RCA summing input is for audio from a computer sound card and is overridden by the front panel 3.5mm input.



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**AL-PH Wireless Microphone Description****26. Microphone**

High quality internal microphone is used when the unit is in the handheld or lapel configuration.

27. Mode LEDs

These two LEDs indicate the current mode of the AL-PH. (See page 9 for details)

28. IR LEDs

These separate clusters of IR LEDs ensure quality communications with an AL-IRDS regardless of which configuration the AL-PH microphone is in.

29. Battery Cover

Conceals two "AA" rechargeable batteries, IR channel switch and Lockout mode switch.

30. IR Channel Switch

This slide switch sets the microphone channel "A" or "B".

31. Lockout Switch

When this switch is set to the Lockout mode the unit works as a microphone only, no operation buttons function. Also referred to as "Student Mode".

32. Panic Button

Used in conjunction with the Mode button. A signal is sent to the AL2430 Receiver / Amplifier to close the "Panic" relay that sends a message to an external source, like a school's paging system.

33. Mute Button

Depressing this button in Mode 1 mutes the Microphone output of the AL2430 Receiver / Amplifier. Depressing this button in Mode 2 mutes the multimedia output of the AL2430

34. Power LED

Displays the battery power of the AL-PH. Green indicates good battery power. Red indicates Low battery power. Off indicates the Microphone is turned off.

35. Headset Microphone Input

3.5mm jack for connection of the optional AL-HSM headset microphone. When connected the internal microphone is disabled.

36. Belt Clip/Lanyard Clip

Used to attached AL-PH to belt for Headset configuration or to the included Lanyard for a lapel configuration.

37. Mode Button

Used to switch the AL-PH from Mode 1 or Mode 2 (See page 9 for detailed operation of Modes).

38. Power Button

When the AL-PH is Off holding this button for 3 seconds will turn the unit on. In the On mode holding this button for 3 seconds will turn the unit Off.

39. Volume Button

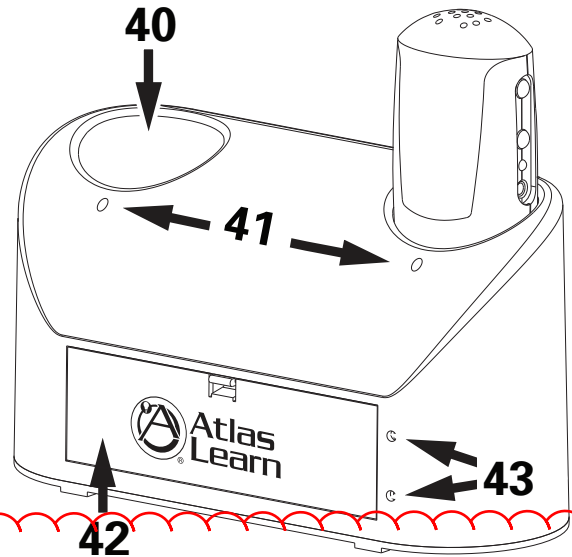
Depressing the UP or DOWN button in Mode 1 will raise or lower the microphone volume, Depressing the UP or DOWN button in Mode 2 will raise or lower the multimedia volume.





AL-DOCK Description

40. **Microphone Charging Receptacles**
Holds the Microphones in place while charging.
The microphones can be placed in forwards or backwards.
41. **Microphone Charging LEDs**
These LEDs indicate the current charging status of each receptacle:
Red = Charging,
Green = Charged.
42. **Battery Cover**
This provides a charging location for four additional AA size batteries.
43. **Additional Battery Charging LEDs**
These two LEDs indicate the current charging status of the additional battery charging locations:
RED = Charging
GREEN = Charged.



AL2430-2PH Function Description

The versatile AL-PH Microphone performs the functions of a wireless microphone and a system remote control. It can be used as a Handheld Microphone, a Lapel Microphone with included Lanyard(AL-LANYARD), or a Belt Pack Microphone with optional AL-HSM headset. Each AL-PH has a switch located under the battery door used to set its IR Channel to either A or B. One AL-PH must be set to Channel A and the other AL-PH must be set to Channel B. The system will not function properly if there are two AL-PHs set to the same IR channel.

Also located under the battery door is the LOCKOUT switch. When this is engaged all function buttons are disabled and the unit can be used as a microphone only.

The AL-PH can be set in two different modes that effect the control it has over the AL2430 system.

Mode 1:

- The right side blue LED will be illuminated
- Volume UP / DOWN buttons will control the microphone volume
- The Mute button mutes the microphone

Mode 2:

- Both blue LEDs will be illuminated
- Volume UP / DOWN buttons will control the multimedia inputs on the AL2430 Receiver / Amplifier
- Mute button will mute the multimedia inputs on the AL2430 Receiver / Amplifier

Power and Panic buttons function as described below regardless of microphones mode setting.

The Power button needs to be pressed for three seconds to turn the unit on or off.

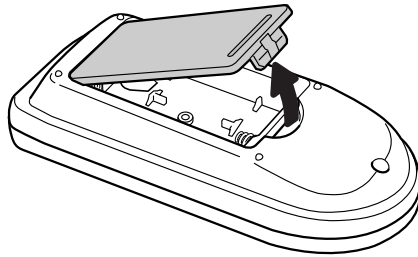


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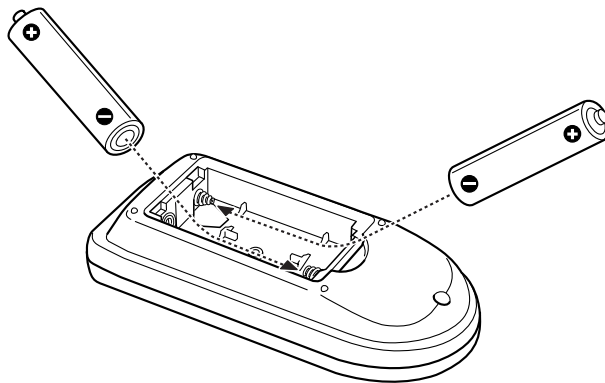
Replacing the Batteries

The remote control uses two AA alkaline batteries. Follow these steps when you need to replace them:

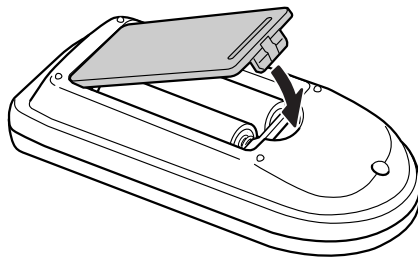
1. Press in the tab to remove the battery cover.




2. Remove the old batteries, then insert the new ones as shown.



3. Replace the battery cover. (It should click into place.)



note

The remote control automatically shuts off when it detects a button being pressed more than 30 seconds. This conserves battery life. It can be helpful, for example, when the remote is in a carrying case and the  Power button is accidentally pushed.

caution

When replacing batteries, take the following precautions:

- *Replace the batteries as soon as they run out. If a battery leaks, wipe away battery fluid with a soft cloth. If fluid gets on your hands, wash them immediately.*
- *Do not expose batteries to heat or flame.*
- *Dispose of used batteries according to local regulations.*
- *Remove the batteries if you won't be using the remote control for a long period of time.*

- **Zoom**

Displays images using the full width of the projection area and maintains the aspect ratio of the image. 4:3 ratio images are cut off on the top and bottom.

- **Full**

Displays images using the full width of the projection area, but does not retain the aspect ratio. 4:3 ratio images are elongated horizontally.

- **Through**

Displays images as is (aspect ratio and resolution are maintained). Black bands appear if the resolution is 1280 × 800 or less; images are cut off if the resolution is over 1280 × 800.

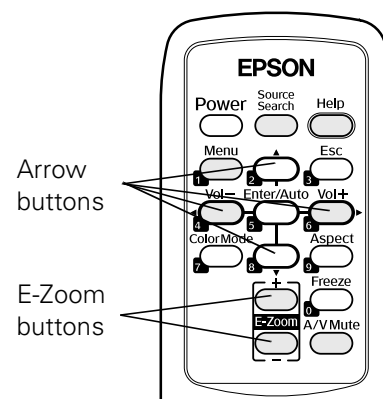
Press the **Aspect** button repeatedly to cycle through the available options.

You can also change the aspect ratio using the projector's Signal menu. See page 58 for details.

Zooming Your Image

Follow these steps to zoom in on a portion of the image:

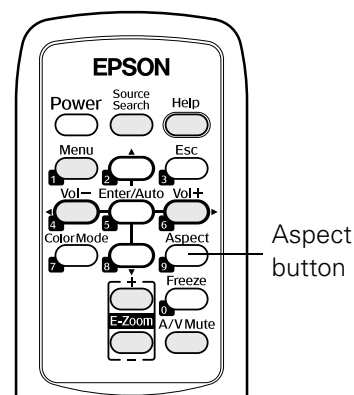
1. Press the **E-Zoom +** button on the remote control.
You see a crosshair indicating the center of the zoom-in area.
2. Use the four “arrow” buttons on the remote control to position the crosshair in the area you want to enlarge.
3. Continue pressing the **E-Zoom +** button to enlarge the selected area up to 4 times.
4. While the image is enlarged, you can:
 - Use the arrow buttons to pan about.
 - Press the **E-Zoom –** button to zoom out.
5. When you’re done, press the **ESC** button to return to the original size.

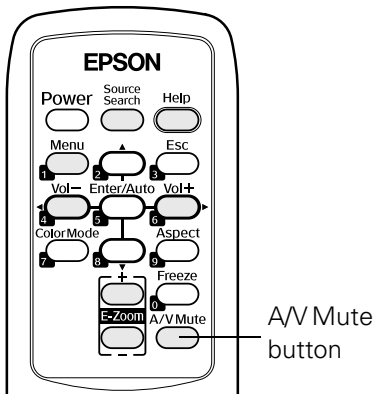


Changing the Image's Aspect Ratio

You can use the **Aspect** button on the remote control to change the aspect (width to height) ratio, depending on the input signal.

- **Auto** (video images only)
Automatically sets the aspect ratio according to the input signal. 4:3 ratio images display at 4:3, squeeze-recorded signals display at 16:9, and letterbox signals display at **Zoom** ratio (described below).
- **Normal**
Displays images using the full projection area and maintains the aspect ratio of the image. 4:3 ratio images project with black bands on the sides, 16:9 images project with black bands on the top and bottom, and 16:10 images use the entire projection area.
- **16:9**
Converts the aspect ratio of the image to 16:9. 4:3 ratio images are elongated horizontally to fit.





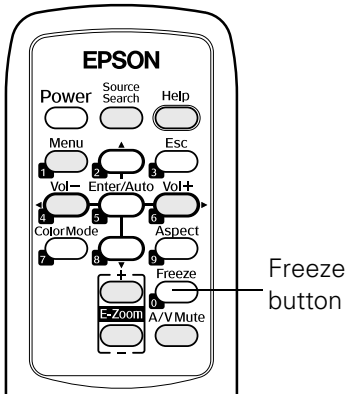
Turning Off the Picture and Sound

Press the **A/V Mute** button on the remote control to turn off the image and sound and darken your screen. This is useful if you want to temporarily re-direct your audience's attention without the distraction of a bright screen.

To turn off the picture and sound, press the **A/V Mute** button. The screen goes dark.

To turn the image and sound back on, press the button again.

You can create an image, such as a company logo or a picture, to display on the screen whenever you press the **A/V Mute** button. See page 67 for more information.



Stopping Action

Press the **Freeze** button to stop the action in your video or computer image and keep the current image on the screen. The sound will continue, however. Also, because the source continues to transmit signals, you won't resume the action from the point you paused it.

To restart the action, press the **Freeze** button again.

Adjusting the Color Mode

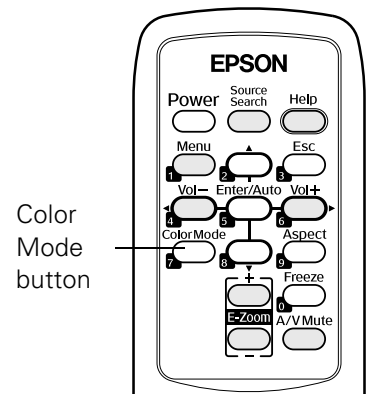
You may want to adjust the color mode to select a different setting that is appropriate for the image you're projecting and the environment in which you're projecting it. Press the **Color Mode** button on the remote control.

If you're projecting computer or RGB video images, the default color mode is **Presentation**, which is appropriate for full-color presentations in bright rooms.

The following table lists the color modes available.

Color mode	Description
Dynamic	Use for projecting the brightest picture.
Presentation	Use when you're projecting a full-color presentation in a bright room.
Theatre	Use when projecting movies in a dark room.
Photo	Best for projecting still images with vivid color in a bright room (computer input only).
Sports	Best for projecting TV programs in a bright room (component, composite, or S-Video input only).
sRGB	Use when projecting computer images conforming to the sRGB color standard.
Blackboard	Choose this fixed color mode when you need to project against a green blackboard.
Whiteboard	Choose this fixed color mode when you need to project against a whiteboard.

You can also use the projector menu system to change the color mode in the Image menu (see page 57).

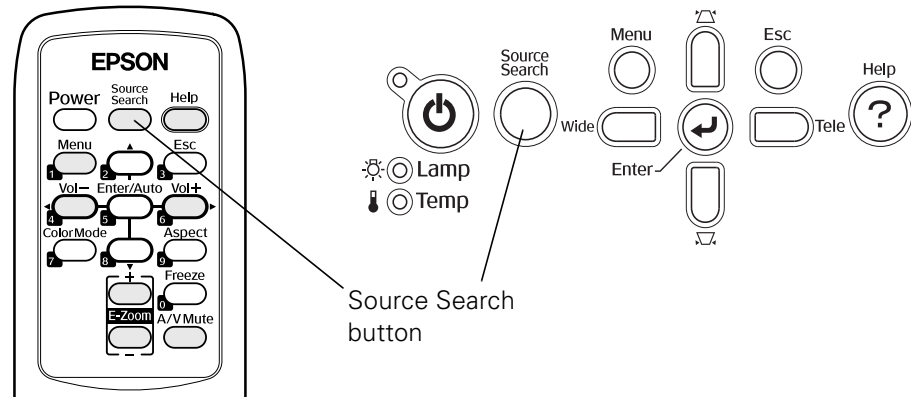


Controlling the Picture and Sound

You can use the remote control to select your source, adjust the colors, temporarily turn off the picture and sound, freeze the action, or zoom in on the picture. Make sure you have set up your projector and connected any equipment as described in Chapter 1.

Switching Between Picture Sources

If you've connected your projector to more than one computer and/or video source, you can use the **Source Search** button on the projector or remote control to switch between the different sources.



After you select a source, the screen goes dark for a moment before the image appears. The name of the selected source (such as **Computer1** or **S-Video**) appears briefly on the screen.

3

Using the Remote Control

The remote control lets you access your projector's features from anywhere in the room—up to 20 feet (6 m) away. For example, you can turn the projector on and off, freeze the presentation, zoom in on a portion of your image, and access the menu system. (The projector menus let you adjust many projector settings; see Chapter 4.)

When using the remote control, stand within 20 feet (6 m) of the projector. Point the remote control either at the front or back of the projector or at the screen (the projector's front sensor can detect signals bounced off the screen). Press the button for the function you want to use.

This chapter covers the following information:


- Controlling the picture and sound
- Replacing the remote control batteries


Watching Television

This DVD recorder has a tuner which allows it to directly receive and record analog and terrestrial digital channels. High Definition (HD) programming is “down-converted” and recorded in Standard Definition (SD).

Preparation:

Turn on the television and select the appropriate video input to suit the connections to this unit (Example: AV input).

- 1  to turn the unit on.
– “HELLO” appears on the unit's display.

- 2  to select desired channel.

You can also select channels with the numbered buttons.

• To directly enter channels for analog and digital broadcasts:

Antenna Mode:	Cable TV Mode:
e.g., “3”: [0] → [3] → [OK]	e.g., “5”: [0] → [0] → [5] → [OK]
“13”: [1] → [3] → [OK]	“15”: [0] → [1] → [5] → [OK]

• To enter the sub channel number for a digital broadcast:

Antenna Mode:	Cable TV Mode:
e.g., “3-1”: [3] → [-] → [1] → [OK]	e.g., “1-1”: [1] → [-] → [1] → [OK]
“13-1”: [1] → [3] → [1] → [OK]	“15-1”: [1] → [5] → [-] → [1] → [OK]

The hyphen appears automatically on “Antenna Mode” if you enter two numbers.

To set Favorite Channels

You can define a Favorite list containing your favorite channels only. (Up to 30 channels)

1. After selecting the desired channel to set
Press [SUB MENU].
2. Press [▲, ▼] to select “Set Favorite”, then press [OK].
3. Press [▲, ▼] to select the position on the list, then press [OK].
–Press [◀, ▶] to change between pages.
–You can also select a list number (1-9 and 0) with the numbered buttons.

To delete the favorite channels registered

Press [▲, ▼] to select the channel on the list, then press [OK].

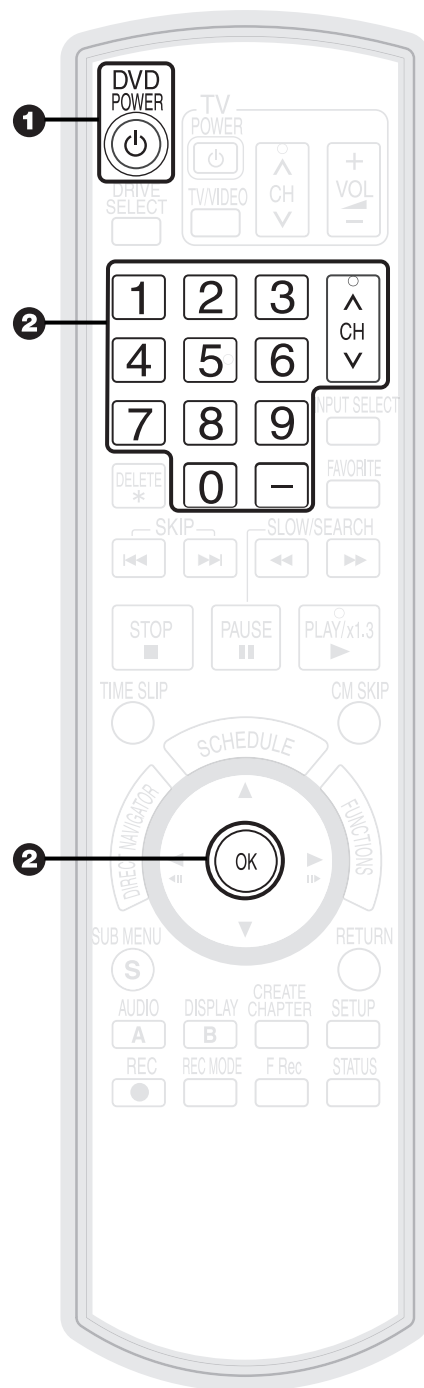
To select a channel from the Favorite list

1. Press [FAVORITE].
2. Press [▲, ▼] to select a channel, then press [OK].
–Press [◀, ▶] to change between pages.
–You can also select a channel with the numbered buttons.



Notes

- It is possible to select a channel from the Favorite list for instant or scheduled recording (→ 17, 18).
- If you set “Surf Mode” to “Favorite” (→ 47), then only the Favorite channels can be selected using [CH ▲, ▼].
- You can register channels in the Favorite list from Channel Setting list (→ 46, Setting favorite channels).



Notes

- This unit can receive most Basic Cable television channels. It can not receive Premium Services that require additional fees or a separate decoder.
- This unit can receive music channels from digital broadcasters, but you cannot record them. Data broadcasts are not for viewing or recording.
- Multi-channel surround broadcast is output in stereo (on 2 channels).



Tips

- To zoom in on video
1. Press [SUB MENU].
 2. Press [▲, ▼] to select “Zoom In”, then press [OK].

Playback


Preparation:


Turn on the television and select the appropriate video input to suit the connections to this unit (Example: AV input).


Playing Discs

Refer to “Advanced Playback” (→26, 27) for detailed information on playback.

RAM -R -R DL -RW(V) +R +R DL +RW DVD-V -RW(VR) CD

- 1  to turn the unit on.
– “HELLO” appears on the unit’s display.

- 2  to open the tray (Button located on the upper front of the unit).
– Insert a disc.

- 3  – The tray closes and play begins.

Stopping Play

Press [■ STOP].

- The stopped position is memorized. (Resume play function)
- The stopped position is cleared when you press [■ STOP] two or more times, or press [▲ OPEN/CLOSE].

Pausing Play

Press [⏸ PAUSE].

- Press again to restart play.



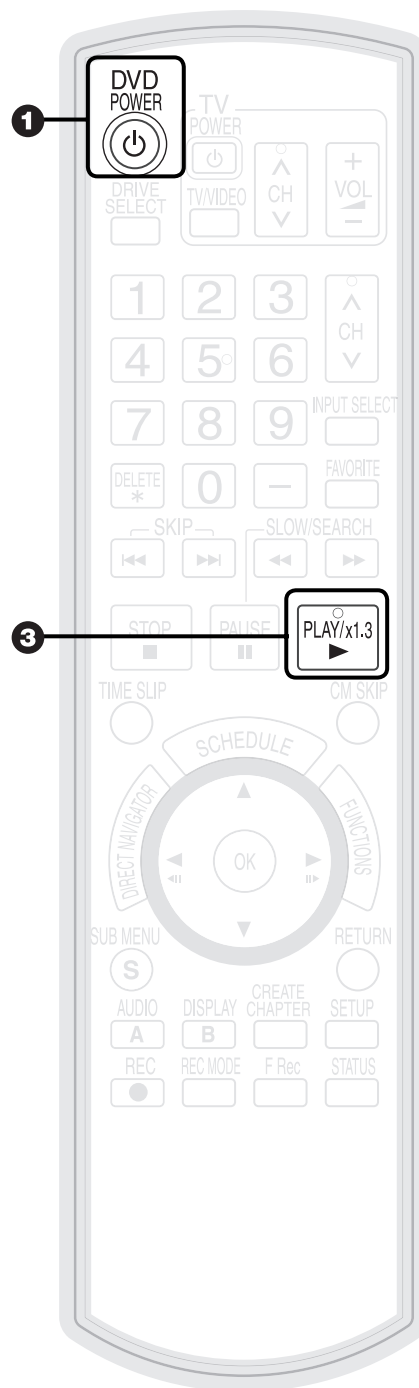
Tips

Icons such as “**RAM**” indicate usable discs. Refer to pages 62 and 63.



Notes

- **RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)**
Playback starts from the most recent recording.
- **DVD-V CD**
Playback starts from the beginning of the disc.
- **DivX**
DivX Menu screen appears (→ 29).
- The unit takes some time to read the disc before play starts.
- Discs continue to rotate while menus are displayed. Press [■ STOP] when you finish to preserve the unit’s motor and your television screen.




Recording Television Programs


Refer to “Important Notes for Recording” (→ 20) and “Advanced Recording” (→ 21 to 23) for detailed information on recording.

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**

Preparation:

- Turn on the television and select the appropriate video input to suit the connections to this unit (Example: AV input).
- **RAM** If the disc is protected, release protection (→ 44).

1  to turn the unit on.
– “HELLO” appears on the unit’s display.

2  to open the tray (Button located on the upper front of the unit).
– Insert a disc with enough remaining blank space and press [▲ OPEN/CLOSE] again to close the tray.

3  to select desired channel.


Antenna Mode:
e.g. channel 4-2



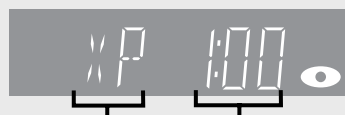
Cable TV Mode:
e.g. channel 102-45




- To select with the numbered buttons (→ 15).
- When no channel setting is performed on the unit and broadcast is recorded directly from the cable box or satellite receiver, select a channel on the connected equipment and press [INPUT SELECT] to select “IN1” or “IN2”.

4  to select the recording mode.

- Recording mode should be determined by program length and available time on the disc (→ 21).



Recording mode Remaining time

5  to start recording.

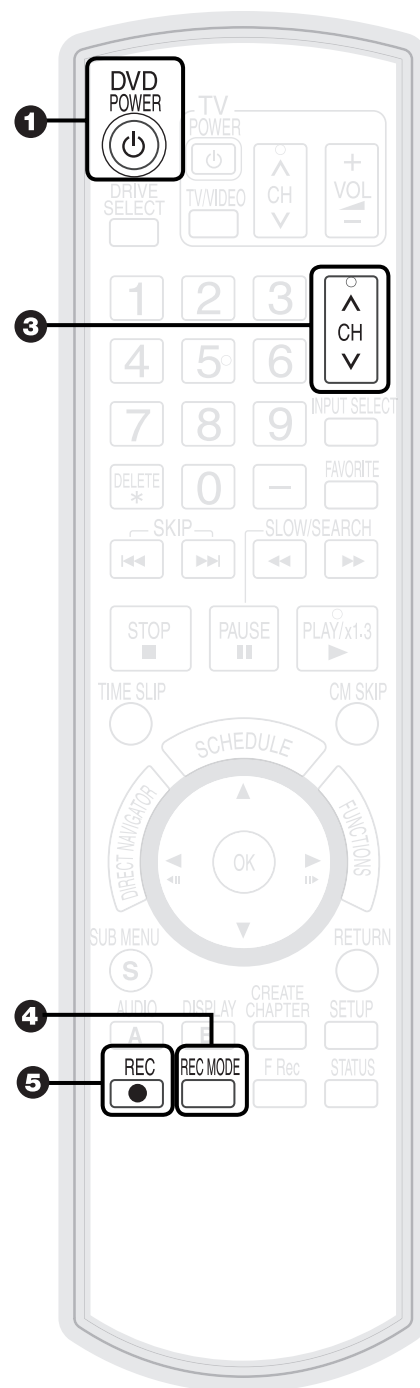


Pausing Recording

Press [■ PAUSE].
– Press again to restart recording.

Stopping Recording

Press [■ STOP].



Tips

Icons such as “**RAM**” indicate usable discs. Refer to pages 62 and 63.



Notes

- **-R -R DL -RW(V) +R +R DL +RW**
It takes about 30 seconds for the unit to complete recording management information after recording finishes.
- You cannot change the channel or recording mode during recording.

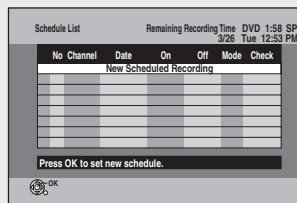
Scheduled Recording

Refer to “Advanced Scheduled Recording” (→ 23, 24) for detailed information on scheduled recording.

RAM -R -R DL -RW(V) +R +R DL +RW

Preparation:

- Turn on the television and select the appropriate video input to suit the connections to this unit (Example: AV input).
- **RAM** If the disc is protected, release protection (→ 44).
- Insert a disc with enough remaining blank space.
- Confirm that the clock on the unit's display is set to the correct time.
- If connected via a cable box or satellite receiver, set channel on that equipment before scheduled recording starts.



2 ▲, ▼ to select “New Scheduled Recording”, then



3 ◀, ▶ to move through the items and ▲, ▼ to set the items.

Channel/Input – TV Station/External Input

To select a favorite channel

(To set Favorite Channels, see page 15.)

1. Press [SUB MENU].

2. Press [▲, ▼] to select “Change Surf Mode”, then press [OK].

3. Press [▲, ▼] to select “Favorite”, then press [OK].

Date/Frequency – You can set a daily or weekly program.

On (start time) / Off (end time)

– Hold button to change in 30-minute increments.

Mode

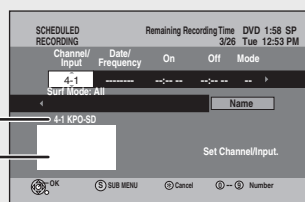
– Recording mode, see page 21

Name

– Press [OK], see page 33.

Channel, Caption

Preview of selected channel



To delete all items

1. Press [SUB MENU].

2. Press [▲, ▼] to select “Delete”, then press [OK].

4 – Repeat steps 2–4 to program other recordings.

5 when you have finished programming.

– “⏻” lights on the unit's display.

– Scheduled recording can be started only when the unit is turned off.



Tips

Icons such as “**RAM**” indicate usable discs. Refer to pages 62 and 63.

Notes

To prevent recording errors

- Set a scheduled recording period slightly longer than the actual program (to make sure the program is recorded in full).
- Be sure to perform step 5 before the scheduled recording time. When the unit is turned off, “⏻” lights on the unit's display to indicate scheduled recording standby has been activated.
- “⏻” flashes when the unit cannot go to scheduled recording standby. (e.g., a recordable disc is not in the disc tray) It does not flash if Quick Start is off.
- When scheduled recordings are set to start one immediately after another, the unit cannot record the beginning of the later program.
- If two scheduled recording times overlap the recording that started first always has priority. The second recording will start only after the first recording has finished.
- If two starting times is the same the recording that programmed later always has priority.
- Depending on the Daylight Savings Time (DST) settings for this unit, scheduled recordings may be affected when the seasons change.

Deleting Recordings


Important: Once deleted, contents cannot be recovered.

Preparation:


- Turn on the television and select the appropriate video input to suit the connections to this unit (Example: AV input).
- Insert the disc containing the recording to be deleted.
- **RAM** If the disc is protected, release protection (→ 44).

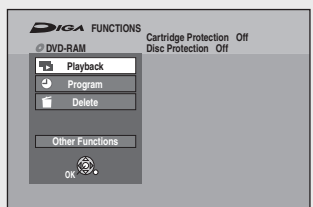
Delete Navigator


RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**

- 1  to select the DVD drive.

With the unit stopped

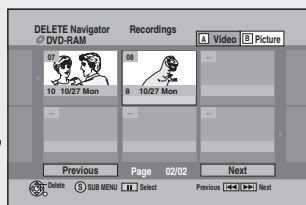
- 2 

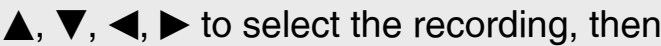



- 3  to select "Delete", then



RAM When the Album View screen is displayed, press **A** to switch to the Recordings screen.



- 4  to select the recording, then 

- 5  to select "Delete", then 

Tips







To return to the previous screen
Press [RETURN].



To view other pages

Press [, , , ,] to select "Previous" or "Next", then press [OK].

• You can also press [, ,] to view other pages.

Multiple editing

Select with [, , , ,], then press [, ,] PAUSE]. (Repeat.)

• A checkmark appears. Press [, ,] PAUSE] again to cancel.

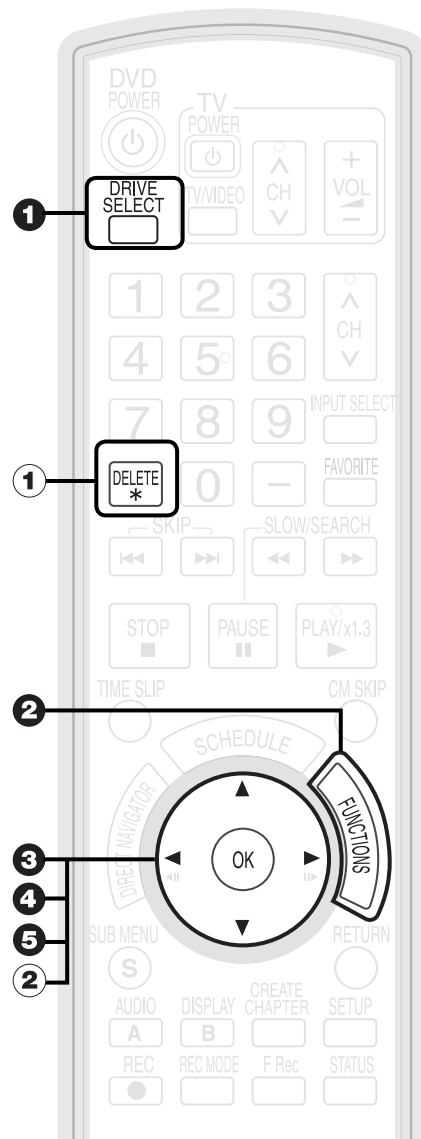
Delete Recordings During Playback

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**

- 1 During playback



- 2  to select "Delete", then 



Notes

- You cannot delete while recording.
- **+R +R DL +RW** Even if you have set protection on other equipment, such recordings are deleted.



Tips

- Icons such as "**RAM**" indicate usable discs. Refer to pages 62 and 63.
- **RAM** Deleting an item increases the available disc space, for the amount of space taken up by the item being deleted.
- **-R -R DL +R +R DL** Available disc space does not increase after deletion.
- **-RW(V) +RW** Available disc space increases when you delete the last recording (the recording space may increase slightly when other recordings are deleted).

Important Notes for Recording

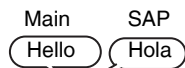
Recording of multilingual broadcasts

Analog broadcasts:

RAM

Both Main and SAP are recorded.

You can change the audio during playback (→ 27, Changing Audio during Playback).



- If you record from external equipment (→ 24) Select both "Main" and "SAP" on the external equipment.



-R -R DL -RW(V) +R +R DL +RW

Select the Main or SAP audio before recording.

[→ 51, Multi-channel TV Sound (Analog)]

The selected audio only is recorded.

Main



- If you record from external equipment (→ 24) Select "Main" or "SAP" on the external equipment.

Digital broadcasts:

Press [AUDIO] to switch audio. (→ 22)

The selected audio only is recorded.

Recording of Widescreen broadcasts

RAM

Recorded in 16:9 aspect (Widescreen)



-R -R DL -RW(V) +R +R DL +RW

Recorded in 4:3 aspect



- If you have a regular 4:3 aspect TV and you receive 16:9 aspect images from a digital broadcast, they will appear in the letterbox format (→ 77, Letterbox).

Copy-once Recording

- It is not possible to record digital broadcasts that allow "One time only recording" onto DVD-R, DVD-R DL, DVD-RW, +R, +R DL, +RW or 8 cm (3") DVD-RAM discs. Use the CPRM (→ 77) compatible DVD-RAM.

RAM CPRM compatible discs only

- When purchasing discs, check that they support CPRM.

-R -R DL -RW(V) +R +R DL +RW

12 cm (5")



Yes



No

Playing the disc on other DVD players

-R -R DL -RW(V) +R +R DL

The disc must be finalized after recording (→ 45).

All DVD-R, etc. discs recorded on this unit must be finalized before they can be played on other DVD players. Once finalized DVD-R, etc. become "read-only" and can no longer be used for recording. DVD-RW can be reused after finalizing.

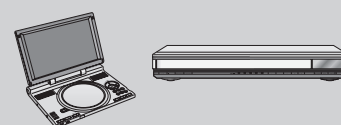
Whether DL discs recorded on this unit can be played on other DVD Players will depend entirely on the capabilities of that player. 100 % compatibility is not guaranteed to.



Record to DVD-R, etc.

Finalize

Play on other DVD equipment



+RW We recommend you create the menu before playing a +RW disc on other equipment (→ 45).

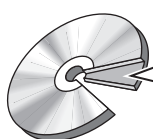
RAM DVD-RAM can be played back on Panasonic DVD recorders and DVD-RAM compatible DVD players.

Recording to DVD-R DL and +R DL

DVD-R DL and +R DL discs have two layers of recording surface on one side.

- **-R DL** Recordings are divided when recording changes from the first layer to the second. Some images and audio may be lost at this point.
- **+R DL** Recordings continue through the layer change with only a slight pause similar to what you will see with commercial DVD-Video discs. Any recording exceeding 8 hours in length is automatically divided whether a layer change is required or not.

DVD-R DL



(Disc inner side)

The second layer

The available space

Recording 3

The first layer

Recording 1

Recording 2

(Disc outer side)

Recording/Playback direction

Layer change: Recording divided, some images and audio lost.

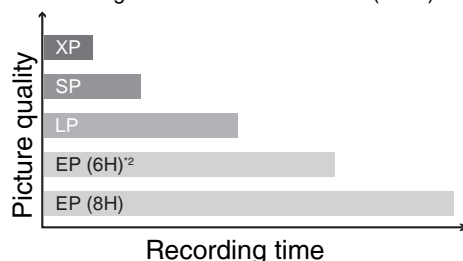
Recording Modes and Estimated Disc Recording Time

Recording Mode	DVD-RAM		DVD-R, DVD-RW, +R, +RW (4.7 GB)	DVD-R DL ^{*3} , +R DL ^{*3} (8.5 GB)
	Single-sided (4.7 GB)	Double-sided ^{*1} (9.4 GB)		
XP (High quality)	1 hour	2 hours	1 hour	1 hour 45 minutes
SP (Standard play)	2 hours	4 hours	2 hours	3 hours 35 minutes
LP (Long play)	4 hours	8 hours	4 hours	7 hours 10 minutes
EP (Extra long play)	8 (6 ^{*2}) hours	16 (12 ^{*2}) hours	8 (6 ^{*2}) hours	14 hours 20 minutes (10 hours 45 minutes ^{*2})
FR (Flexible Recording)	8 hours maximum	8 hours maximum for one side	8 hours maximum	14 hours 20 minutes maximum

*1 It is not possible to record or play continuously from one side of a double sided disc to the other.

*2 When "Recording Time in EP Mode" has been set to "EP-Extended Play (6H)" in the Setup menu (→ 50)
The sound quality is better when using "EP-Extended Play (6H)" than when using "EP-Extended Play (8H)".

*3 Refer to "Recording to DVD-R DL and +R DL" (→ 20).



Notes

- This unit uses variable bit rate (VBR) recording which varies the amount of data recorded to suit the images, so actual recording times and remaining recording times shown by the unit will be different. (-R DL +R DL) The difference will be especially noticeable.) Use a disc with plenty of remaining time to be sure.
- When recording to DVD-RAM using EP (8H) mode, play may not be possible on DVD players, even if they are compatible with DVD-RAM. In this case use EP (6H) mode.

When the format confirmation screen is displayed

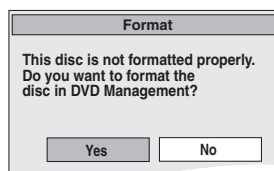
Important:

Formatting permanently deletes all disc contents (including computer data), regardless of protection status of disc.

RAM -RW(V) +RW

The following screen may appear when inserting a new disc, etc.

Only format the disc if you intend to use it for recording. Do not format if you intend to view pre-recorded material from the disc.



◀ to select "Yes", then OK



Tips

- Refer to "Formatting Discs or Cards" (→ 44) for more detail of formatting.
- It will take several minutes to format the disc. (DVD-RAM may take up to a maximum of 70 minutes.)

• FR (Flexible recording mode)

Using "Flexible Recording" is convenient in these kinds of situations:

- When the amount of free space on the disc makes selecting an appropriate recording mode difficult
- When you want to record a long program with the best picture quality possible e.g., Recording a 90 minutes program to 4.7 GB DVD-RAM disc:
- If you select XP mode, the program will not fit on one disc.



A second disc is necessary for 30 minutes of the program.

- If you select SP mode, the program will fit on one disc.



However there will be 30 minutes remaining disc space.

- If you select "Flexible Recording" the program will fit on one disc perfectly.



You can set FR mode when programming scheduled recordings (→ 18) and flexible recording (→ 22).



Tips

Maximum number of recordings to a disc

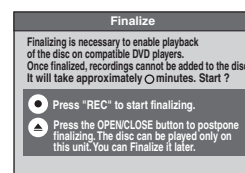
RAM -R -R DL -RW(V) 99 recordings on a disc

+R +R DL +RW 49 recordings on a disc

When removing a Recorded Disc

-R -R DL -RW(V) +R +R DL

After recording, if you press [▲ OPEN/CLOSE] to eject the disc, the following screen may appear.



REC to start finalizing.

or
▲ OPEN/CLOSE to eject the disc without finalizing.



Notes

You cannot stop finalizing once you have started it.



Tips

- If you want to provide the disc with a name or set play menu select, select "Disc Name" (→ 44) or "Playback will start with:" (→ 45) in "DVD Management" before finalizing.
- Refer to "Finalizing" (→ 45) for more detail of finalizing.
- It will take a few minutes to finalize the disc. (Some discs may take up to a maximum of 60 minutes.)

Advanced Recording

Selecting Audio Channels to record

Refer to “Recording of multilingual broadcasts” for detailed information (→ 20).

When receiving an analog broadcast

-R -R DL -RW(V) +R +R DL +RW

Select the audio (Main or SAP) in “Multi-channel TV Sound (Analog)” in the Setup menu (→ 51).

RAM

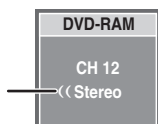
AUDIO **A** to select the audio.

Stereo → SAP → Mono

Changing during recording changes the recorded sound.

Stereo:	Main audio (stereo) If the broadcast is “Mono+SAP”, audio will be monaural even if you select Stereo mode.
SAP:	Secondary audio program (SAP). When you record SAP, main audio is also recorded. In such cases, recorded SAP and main audio become monaural.
Mono:	Main audio (monaural). Select “Mono” if reception is poor during a stereo broadcast.

e.g., “Stereo” is selected
“(” appears when the unit is receiving the audio type you selected.



Notes

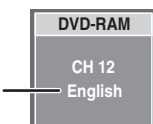
You cannot change the audio type in the following case.

- While a disc other than DVD-RAM is inserted when selecting an analog broadcast

When receiving a digital broadcast

AUDIO **A** to select the audio.

e.g., “English” is selected



Notes

- You cannot change the audio type in the following case.
 - When there is no choice of languages in a digital broadcast
- Before scheduled recording of a digital broadcast with more than one language channel, set the language in “Multi-channel TV Sound (Digital)” in the Setup menu (→ 51).
- When broadcast offers no language data, such displays as “Audio 1 of 3” may appear. In such cases, recording may not be possible in the language selected through the “Multi-channel TV Sound (Digital)” in the Setup menu (→ 51).

Specifying the Recording Time

RAM -R -R DL -RW(V) +R +R DL +RW

This function allows specifying the length of recording time up to 4 hours.

During recording

REC repeatedly until the desired time is reached.

- The recording time and the unit’s display change as follows:

Counter (Cancel) → OFF 0:30 → OFF 1:00
 OFF 4:00 ← OFF 3:00 ← OFF 2:00 ← OFF 1:30



Notes

- This function does not work during scheduled recording or Flexible Recording.
- Recording stops and the set time is cleared if you press [■ STOP].
- The unit turns off automatically when the time to stop recording is reached as long as you do not operate the unit.

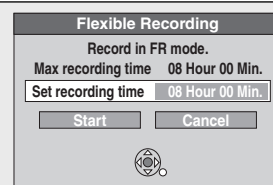
Flexible Recording

RAM -R -R DL -RW(V) +R +R DL +RW

The unit sets the best possible picture quality that fits the recording within the remaining disc space.

The recording mode becomes FR mode. Refer to “FR (Flexible Recording)” (→ 21).

1 With the unit stopped



2 ◀, ▶ to select “Hour” and “Min.” and ▲, ▼ to set the recording time.

3 When you want to start recording

▲, ▼, ▶, ◀ to select “Start”, then



- Recording starts.



Tips

To exit the screen

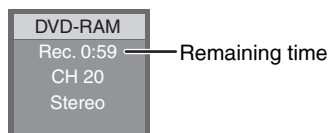
Press [RETURN].

To stop recording partway

Press [■ STOP].

To show the remaining recording time

Press [STATUS] to show the remaining recording time.




Playing while you are recording

Chasing Playback

RAM

Allows playback from the beginning of what you are recording.

When recording to DVD-RAM

 (at least 20 seconds after recording starts)

- If the “Status Messages” in the Setup menu is set to “Automatic” (→ 52), both the “Play” and “Rec.” indicators will be displayed on the status message screen for several seconds.



Tips

To stop play

Press [■ STOP] once.

To stop recording

Press [■ STOP] at least 2 seconds after chasing playback stops.

Simultaneous Record and Playback

RAM

Allows playback of a previous recording, while recording something else.

1 When recording to DVD-RAM



2 ▲, ▼, ◀, ▶ to select the recording to play, then 

- If the “Status Messages” in the Setup menu is set to “Automatic” (→ 52), both the play and rec indicators will be displayed on the status message screen for several seconds.



Tips

To stop play

Press [■ STOP].

To exit the DIRECT NAVIGATOR screen

Press [DIRECT NAVIGATOR].

To stop recording

After play stops

1. Press [DIRECT NAVIGATOR] to exit the screen.
2. Press [■ STOP].





Notes


- During playing while you are recording, you cannot edit or delete recordings.
- Closed captions will not appear during simultaneous recording and playback.
- Use caution while operating the controls for playback. Pressing [■ STOP] when the recording device is selected will cancel the recording in progress.

Advanced Scheduled Recording

To cancel a scheduled recording in progress

1  to select the DVD drive.

2  – Confirmation screen appears.

3 ◀ to select “Stop recording”, then 




Notes



Recording stops and ‘one-time’ programs are deleted from the Schedule List. Programs scheduled to record ‘Daily’ and ‘Weekly’ remain on the Schedule List and are set to begin at the next scheduled time.




Check, Change, or Delete Programs

The scheduled recording list can be viewed even when the unit is in “recording standby” mode.


1  – See “Tips” (→ 24) for explanation of icons displayed.

2 ▲, ▼ to select the program.

3a  to modify the program.
▲, ▼, ◀, ▶ to make changes, then 

3b  or
SUB MENU , then  to delete.

- You cannot delete programs that are currently recording.

4  – “⏻” lights on the unit’s display.



Notes

- If the program schedule is changed by the TV station, then this unit will not be able to detect the change.
- The password screen appears when setting parental ratings (→47). Unless you enter the correct password, recording the program with parental ratings may fail.

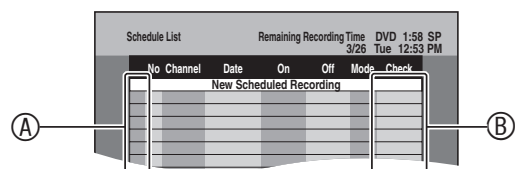
Continued on next page.

Advanced Scheduled Recording



Tips

You can enter up to 16 programs a month in advance.



Ⓐ Schedule List screen icons

- : Currently recording
- ⌂: Programs are overlapped. Recording of the program with the later start time starts when the earlier program finishes recording.
- ⊖: You stopped a weekly or daily scheduled recording. The icon disappears when the next scheduled recording starts.
- ⓧ: The disc was full. (not enough space)
- Ⓜ: The TV program may not be recorded due to copy-protect or ratings.
- ⓧ: Recording stopped (Dirty disc, etc.)
- PGI**: Recording may become impossible when a wrong password is entered through the unit's parental rating setting procedure.

Ⓑ Check

OK: Recordable

- (Date): The last day of daily or weekly recording
 !: It may not be possible to record because:
- the disc is write-protected.
 - there is no more space left.
 - the number of possible recordings has reached its maximum.

Overlap: When the date and time overlap with another scheduled recording, only a part of the program can be recorded.

To release the unit from recording standby (Before recording starts)

DVD
POWER



– The unit turns on and “⌂” on the unit's display goes out.

Be sure to press [⏻ DVD POWER] to return the unit to standby mode before the scheduled recording time. Scheduled recording will work only if “⌂” is displayed.

Recording from an External Device

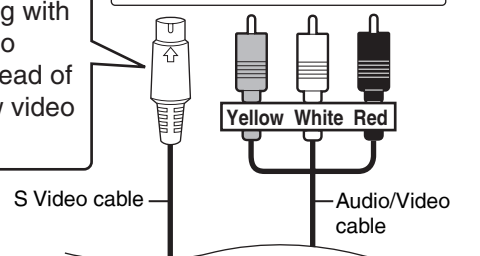
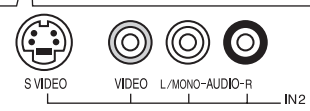
Recording from a VCR, etc.

Connect cables while the power to both the unit and the external device is off.

Front of the unit



You can get a sharper, clearer picture by connecting with an S Video cable instead of the yellow video cable.



RAM -R -R DL -RW(V) +R +R DL +RW

Preparation:

- Turn on the unit and connected equipment.
- **RAM** If the disc is protected, release protection (→ 44).
- When recording multilingual broadcasts (→ 20)

1 Insert a disc.

2 to select the recording mode (→ 21).

3

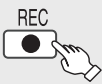
Input Select	
1	TV
2	IN1
3	IN2
4	DV
OK	

4 ▲, ▼ to select “IN1” or “IN2”, then



- Back Panel inputs are IN1.
- Front Panel inputs are IN2.

5 Start play on the external device.

6  to start recording the program from an external device.

Tips

- You can also connect to the IN1 on the rear.
- If the external equipment only has a single audio output connect it to the L/MONO (white) IN2 terminal.

To skip unwanted parts

Press [PAUSE] to pause recording. (Press again to restart recording.)

To stop recording

Press [STOP].

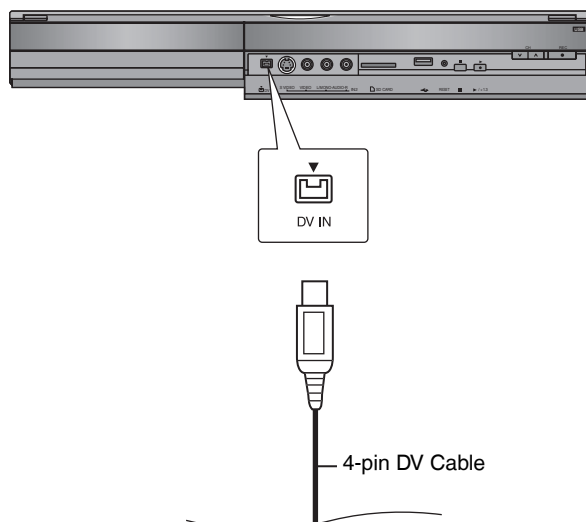
Notes

If video is copied from another piece of equipment to this unit, then the video quality will be degraded.

Recording from a DV Camcorder

Connect the cable while the power to both the unit and the external device is off.

Front of the unit

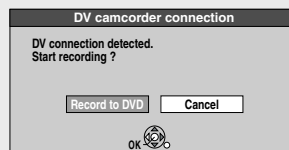


RAM -R -R DL -RW(V) +R +R DL +RW

Preparation:

- Turn on the unit.
- Insert a disc with enough remaining blank space.
- **RAM** If the disc is protected, release protection (→ 44).



1 Turn ON the DV equipment and pause play where you want to begin recording.




When “DV camcorder connection” screen does not appear

After performing step 1 (→ above).

1. Press [DRIVE SELECT] to select the DVD drive.
2. With the unit stopped
Press [FUNCTIONS].
3. Press [▲, ▼] to select “Other Functions” then press [OK].
4. Press [▲, ▼] to select “DV Camcorder Rec.” then press [OK].
You can proceed to step 3 (→ below).

2  to select “Record to DVD”, then press .

3  to select the recording mode (→ 21).

4  to select “Rec.”, then .



Notes

- If the desired audio is not recorded, select the kind of audio for “Select Audio Channel For DV Input” in the Setup menu (→ 52).
- **RAM** Programs are recorded as a single item; breaks in the images create chapters.
- Compatibility with video camcorders from other manufacturers is not guaranteed.
- It is not possible to operate the unit from the connected DV equipment.
- The DV equipment name may not be shown correctly.
- Date and time information is not recorded, even if displayed on the camcorder.
- The DV IN terminal is not meant to be connected to a computer.
- This unit uses a 4-pin “DV IN” connector;
Your DV camcorder may use a 4-pin or 6-pin external connector. Please consult your DV camcorder’s manufacturer to confirm correct external connection.
- You cannot record discs and play discs simultaneously.
- If video is copied from another piece of equipment to this unit, then the video quality will be degraded.



Tips

When recording finishes

The confirmation screen appears.

Press [OK] to finish DV camcorder recording.

To stop recording

Press [STOP].

The confirmation screen appears. Press [OK].

- If the DV camcorder recording function does not work properly, check the connections and DV equipment settings, and turn the unit off and back on. If that does not work, follow the instructions for “Recording from a VCR, etc.” (→ 24).

Advanced Playback

Zoom in on video

1 During playback

SUB MENU



2 To zoom in:

▲, ▼ to select "Zoom In", then



Tips

To return the picture to its original size

Press [▲, ▼] to select "Zoom out" in step 2, then press [OK].

Menu Screens on the TV

DVD-V

Generally, menu screens that appear on the TV may be navigated as follows:

▲, ▼, ◀, ▶ to select an item, then



You can sometimes use the numbered buttons to select an item.



Tips

To return to the menu screen

Press [DIRECT NAVIGATOR].



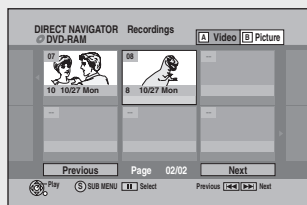
Notes

If "O" appears on the TV, the operation is prohibited by the unit or disc.

Selecting Recordings to Play

RAM -R -R DL -RW(V) +R +R DL +RW -RW(VR)

1



RAM When the Album View screen is displayed, press [A] to switch to the Recordings screen.

2

▲, ▼, ◀, ▶ to select the recording you want to watch, then



Tips

To select the recording with the numbered buttons

e.g., "5": [0] → [5]

"15": [1] → [5]

To view other pages

Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK].

– You can also press [◀◀, ▶▶] to view other pages.

To exit the DIRECT NAVIGATOR screen

Press [DIRECT NAVIGATOR].

DIRECT NAVIGATOR screen icons

- Protected.
- Not recorded due to recording protection (Digital broadcasts, etc.)
- It cannot be played because data is damaged.
- Currently recording.
- "One time only recording" restriction (→ 77, CPRM)

Search

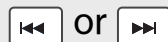
During playback



- There are 5 search speeds. Each press increases the search speed.
- Press [▶ PLAY] to restart normal playback.

Skip

During playback or while paused



- Each press increases the number of skips.
- **DivX**: Backward direction [◀◀] only.
Press [◀◀] to return only to the beginning of the program being played back.

Direct Play

During playback, you can access specific recordings or scenes through direct entry of the numbered buttons.



e.g., "5": [0] → [5]
"15": [1] → [5]



MP3
e.g., "5": [0] → [0] → [5]
"15": [0] → [1] → [5]



JPEG
e.g., "5": [0] → [0] → [0] → [5]
"15": [0] → [0] → [1] → [5]



Tips


Depending on the disc, some operations may not be possible.

Quick View (Play x1.3)

RAM

Allows you to increase the play speed slightly without distorting the audio.

During playback



 (Press and hold.)


– Press again to return to normal speed.

Slow-motion Play

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**
DVD-V **-RW(VR)**

While paused

 or 

- There are 5 slow-motion speeds. Each press increases the speed.
- Press  **PLAY** to restart normal playback.



Notes


If continued for approx. 5 minutes, slow-motion play pauses automatically (except **DVD-V**).

Frame-by-Frame Viewing

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW**
DVD-V **-RW(VR)**

While paused



- Each press shows the next or previous frame.
- Press and hold to advance or reverse frame-by-frame in succession.
- Press  **PLAY** to restart normal playback.

Time Slip

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **-RW(VR)**
 Use to skip in 1-minute or 10-minute increments.

1 During playback

TIME SLIP



2 ▲, ▼ to select the time, then



- Each press of ▲ or ▼ advances the interval by 1 minute (press and hold for 10-minute intervals).

CM Skip

RAM **-R** **-R DL** **-RW(V)** **+R** **+R DL** **+RW** **-RW(VR)**

Skips 1-minute forward with each press.

During playback





Create Chapters

RAM

During playback



Tips

You can skip to the start of a chapter by pressing [, ].



Tips

Depending on the disc, some operations may not be possible.

Changing Audio during Playback

AUDIO

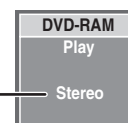


to select the audio.

Available audio will differ based on disc type.
See below.

RAM **-RW(VR)** and DivX
 Stereo → Mono L → Mono R

e.g.: **RAM**
 “Stereo” is
 selected.



RAM **-RW(VR)** When playing an analog multilingual broadcast, you can choose between Main Audio and SAP Audio.

Main Audio ↔ SAP Audio

DVD-V

This allows you to change items like the audio channel number and the soundtrack language (→ 42).

Soundtrack  1 ENG  Digital 3/2.1ch

e.g., English is the selected language.



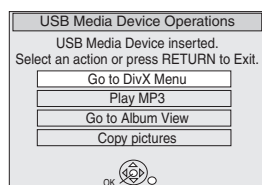
Notes

If you cannot change the audio type when you have used only an optical digital audio cable for connection, set “Dolby Digital” to “PCM” (→ 52). Alternatively, you may connect to an amplifier or system component with an audio cable and change the input on the amplifier or system component to suit the connection (→ 60).

Playing MP3s

-R -R DL CD USB

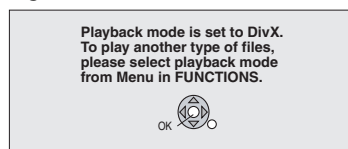
USB The screen shown below may be displayed when you insert a USB memory (→ 7).




Press [▲, ▼] to select "Play MP3", then press [OK].
You can proceed to step 3 (→ below).

-R -R DL CD The screen shown below is displayed when you insert a disc containing MP3 files, DivX video contents and still pictures (JPEG).

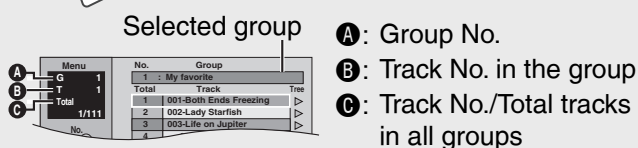
e.g.,




1. Press [OK] to exit the screen.
2. Press [FUNCTIONS].
3. Press [▲, ▼] to select "Menu", then press [OK].
4. Press [▲, ▼] to select "MP3 Music", then press [OK].
You can proceed to step 3 (→ below).

1  **to select the DVD or USB drive.**

2  **Track list is shown.**



– When the DivX or JPEG Menu is displayed, perform steps 1–4 in "To select file type" on the right column selecting "MP3 Music" in step 4 to change the playback mode.

3  **▲, ▼ to select a track, then to play.**

- "—" indicates the track currently playing.



Tips

To select file type

1. Press [RETURN].
2. Press [FUNCTIONS].
3. Press [▲, ▼] to select "Menu", then press [OK].
4. Press [▲, ▼] to select "MP3 Music", then press [OK].

To stop playing

Press [■ STOP].

To exit the menu screen

Press [DIRECT NAVIGATOR].

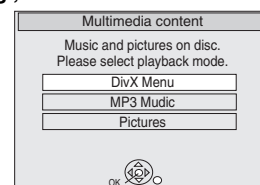
To view other pages

Press [◀, ▶].

To select the track with the numbered buttons

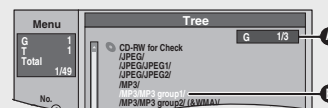
e.g., "5": [0] → [0] → [5]
"15": [0] → [1] → [5]

e.g.,




Using the Tree Screen to Find a Group

- 1** From the track list
▶ while a track is highlighted to display the tree screen.



- A:** Selected Group No. /Total Group No.
If the group has no compatible track, "--" is displayed as the group number.
- B:** Selected Group

- 2**  **▲, ▼ to select a group, then**
– The track list for the selected group appears.



Notes

- When there is a large amount of still picture data etc. within an MP3 file, play may not be possible.
- You cannot operate the scroll bar that appears in the tree screen.



Tips

To return to the track list

Press [RETURN].

Playing DivX

-R -R DL CD USB


You can play CD-R/CD-RW, DVD-R, DVD-R DL discs and USB memories which contain DivX video contents that have been recorded on a computer.

USB When you insert a USB memory, the menu screen appears (→ 28, left column).

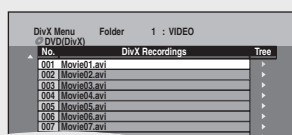
Press [▲, ▼] to select "Go to DivX Menu", then press [OK]. You can proceed to step 3 (→ below).

-R -R DL CD When you insert a disc containing MP3 files, DivX video contents and still pictures (JPEG), the files selection screen appears (→ 28, left column).


Press [OK]. You can proceed to step 3 (→ below).

- 1  to select the DVD or USB drive.

2  DivX file list is shown.



- When the MP3 or JPEG Menu is displayed, perform steps 1–4 in "To select file type" on the upper Tips on page 28 selecting "DivX Menu" in step 4 to change the playback mode.

- 3  ▲, ▼ to select the recording, then

Notes

- Picture sizes set at the time of recording may prevent the unit from showing pictures in the proper aspect ratio. You may be able to adjust the aspect ratio through the TV.
- Successive play is not available.

Tips

To view other pages

Press [◀◀, ▶▶].

To stop playing

Press [■ STOP].

To exit the menu screen


Press [DIRECT NAVIGATOR].

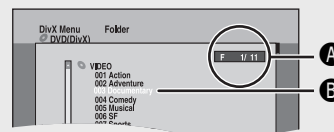
To select the recording with the numbered buttons

e.g., "5": [0] → [0] → [5]
"15": [0] → [1] → [5]



Using the Tree Screen to Find a Folder

From the DivX file list

- 1  while a recording is highlighted to display the tree screen.



- A: Selected folder No./Total folder No. including DivX recording
- B: Selected folder

- 2  ▲, ▼ to select a folder, then  OK
- The file list for the folder appears.



Notes

You cannot operate the scroll bar that appears in the tree screen.



Tips

To return to the previous screen

Press [RETURN].

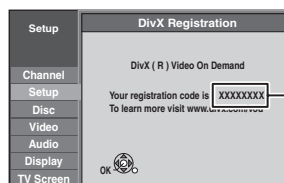
Regarding DivX VOD content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the online instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

Display the unit's registration code

(→ 49, "DivX Registration" in the "Setup" menu)



8 alphanumeric characters

- After playing DivX VOD content for the first time, a new registration code is then displayed in "DivX Registration". Do not use this registration code to purchase or rent DivX VOD content. If you use this code to purchase (rent) DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased (rented) using the old code.
- If you purchase or rent DivX VOD content using a registration code different from this unit's code, you will not be able to play that content. ("Authorization Error." is displayed.)

Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ("Rental Expired." is displayed.)

When playing this content

- **The number of remaining plays is reduced by one if:**

- you press [⏻ DVD POWER].
- you press [■ STOP].
- you press [◀◀].
- you press [◀◀, ▶▶] etc. and arrive at the end of the content or the start of the content being played.
- you press [DRIVE SELECT] to change the drive.
- you press [DIRECT NAVIGATOR].

- Resume play function does not work.

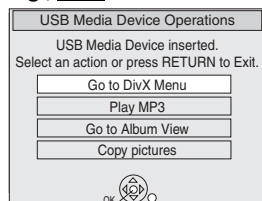
Playing Still Pictures (JPEG)

RAM -R -R DL CD SD USB

Still pictures (JPEG) recorded on DVD-RAM, DVD-R, DVD-R DL, CD-R/RW, SD Memory Cards or USB memory can be played on this unit.

SD USB The screen shown below may be displayed when you insert an SD card or USB memory (→ 7).

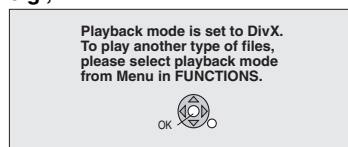
e.g., **USB**



Press [▲, ▼] to select "Go to Album View", then press [OK]. You can proceed to step 3 (→ below).


-R -R DL CD The screen shown below is displayed when you insert a disc containing MP3 files, DivX video contents and still pictures (JPEG).


e.g.,

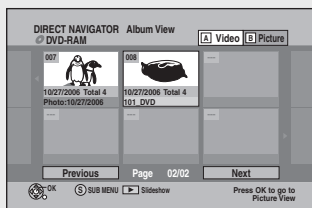


1. Press [OK] to exit the screen.
2. Press [FUNCTIONS].
3. Press [▲, ▼] to select "Menu", then press [OK].
4. Press [▲, ▼] to select "Pictures", then press [OK].


You can proceed to step 3 (→ below).

1  to select the drive (DVD, SD or USB).


2  Album View screen



- **RAM** When the Recordings screen is displayed, press **B** to switch to the Album View screen.
- **-R -R DL CD USB** When the DivX or MP3 Menu is displayed, perform steps 1–4 in "To select file type" on the upper Tips on page 28 selecting "Pictures" in step 4 to change the playback mode.

3 ▲, ▼, ◀, ▶ to select an album, then 

– The Picture (JPEG) View screen appears.

4 ▲, ▼, ◀, ▶ to select a picture, then  to view.



Notes

- You can use 8 MB to 2 GB SD memory cards, 4 GB, 8 GB and 16 GB SDHC memory cards (→ 64).
- Still pictures cannot be played during recording.
- Thumbnails for large JPEG files and images with aspect ratios other than 4:3 may not display.



Tips

To stop viewing a picture
Press [■ STOP].

To exit the menu screen
Press [DIRECT NAVIGATOR].

To view other pages
Press [▲, ▼, ◀, ▶] to select "Previous" or "Next", then press [OK]. You can also press [◀◀, ▶▶] to view other pages.

To select the still picture with the numbered buttons


Album


e.g., "5": [0] → [0] → [5]
"15": [0] → [1] → [5]

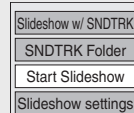
Still picture

e.g., "5": [0] → [0] → [0] → [5]
"15": [0] → [0] → [1] → [5]

Slideshow

1 From the Album View screen
▲, ▼, ◀, ▶ to select an album, then 

2 ▲, ▼ to select "Start Slideshow", then 



Tips

To stop the Slideshow
Press [■ STOP].

To change Slideshow settings

1. In step 2 above, press [▲, ▼] to select "Slideshow settings", then press [OK].
2. Press [▲, ▼] to select each item.

Slide Interval

- Press [◀, ▶] to select desired interval (0 to 99 seconds), then press [OK].

Repeat Play

- Press [◀, ▶] to select "On" or "Off", then press [OK].

SNDTRK Instruction

If you select "On", then a screen will be displayed showing the operations for a slideshow with soundtrack when a slideshow is played.


- Press [◀, ▶] to select "On" or "Off", then press [OK].


Slideshow with soundtrack

It is possible to play MP3 music recorded on a USB memory during a Slideshow.

Preparation:

Insert a USB memory containing MP3 files.

- From the Album View screen
▲, ▼, ◀, ▶ to select an album,
then  

- ▲, ▼ to select
“Slideshow w/ SNDTRK”,
then 

Slideshow w/ SNDTRK
SNDTRK Folder






Tips


To select an MP3 folder to be played

- In step 2 above, press [▲, ▼] to select “SNDTRK Folder”, then press [OK].
- Press [◀, ▶] to select the folder, then press [OK].

Rotate Pictures

- While playing a picture
 

- ▲, ▼ to select “Rotate Right” or “Rotate Left”,
then 

Control Panel
FUNCTIONS
Rotate Right
Rotate Left
Zoom In




Notes


To return the picture to its original position


Press [▲, ▼] to select the opposite rotation in step 2, then press [OK].

- Rotation information will not be stored.
 - **-R -R DL CD** Still pictures
 - When disc or album is protected
 - When played on other equipment
 - When copying pictures

Zoom

- While playing a picture
 

- To zoom in
▲, ▼ to select “Zoom In”, then 

Control Panel
FUNCTIONS
Rotate Right
Rotate Left
Zoom In




Notes

To return the picture to its original size

Press [▲, ▼] to select “Zoom out” in step 2, then press [OK].

- When zooming in, the still picture may be cut off.
- “Zoom In” information is not stored.
- “Zoom In” and “Zoom out” do not work with images that have a resolution larger than 640 x 480 pixels.

Picture Properties

While playing a picture

STATUS



twice to display picture properties.

Shooting Date

11/30 12:03 AM
Date 11/26/2006 0002/0030

STATUS



again to exit.




Notes

Depending on the camera or editing software, shooting dates may not be displayed correctly.

Playing Playlists

RAM -RW(VR)

You cannot create or edit playlists on this unit. However, you can play a playlist that has been created or edited on other equipment.


1  to select the DVD drive.

2 With the unit stopped




3 ▲, ▼ to select “Other Functions” then 

4 ▲, ▼ to select “Playlists”, then 


5 ▲, ▼, ◀, ▶ to select the playlist to play, then 

Playlist Properties/View Chapters



Perform steps 1–4 above.

5 ▲, ▼, ◀, ▶ to select the playlist, then 

To show playlist properties

6a ▲, ▼ to select “Properties”, then 
– Playlist information (e.g., length and date) is shown.

To view chapters

6b 1. ▲, ▼ to select “View Chapters”, then 
2. ▲, ▼, ◀, ▶ to select the chapter, then 



Tips

To return to the playlist screen

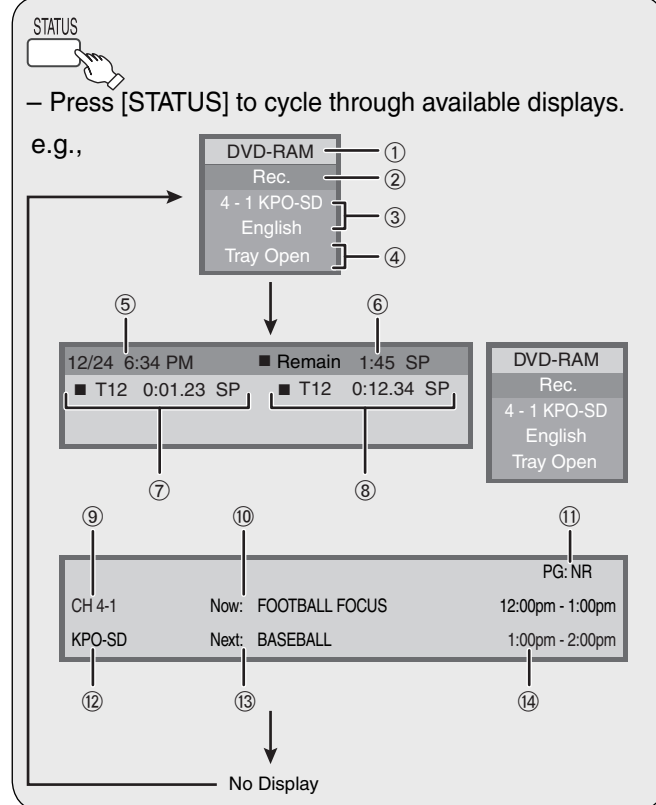
Press [SUB MENU], then select “View Playlists” and press [OK].

To view other pages

Press [◀◀, ▶▶].

Status Messages

The following messages and displays appear to let you know what operations are being performed and the status of the unit.























Display examples

- ① Current media
- ② Shows current recording or play status
- ③ Channel information
- ④ Status of the other drive
- ⑤ The current date and time
- ⑥ Remaining recording time and recording mode (e.g.: “1:45 SP” indicates 1 hour and 45 minutes in SP mode)
 - Disc remaining time may slightly differ between different models.
- ⑦ Elapsed play time/Recording mode
- ⑧ Elapsed recording time and recording mode

Only displayed when receiving a digital broadcast:

- ⑨ Channel
- ⑩ Current program
- ⑪ Parental Rating of the program (→ 47)
- ⑫ Channel caption
- ⑬ Next program
- ⑭ Start and finish times of the program

	Toggles "projection mode" on / off. The first use starts the on-screen alignment (calibration) process.
	Goes to the previous PowerPoint slide or PgUp.
	Goes to the next PowerPoint slide or PgDn.
	Displays the on-screen keyboard.
	Toggles between writing and cursor control.
	Displays all pen, highlighter, and eraser size and color options.
	
	The current pen color.
	
	
	
	The current pen width.
	
	Sets the pen to a solid line.
	Sets the pen to a dashed line.
	Narrow eraser width using the stylus.
	Large eraser width using the stylus.
	Clears all the writing.
	Prints a copy of the whiteboard.
	Saves a copy of the whiteboard contents into the MyDocuments folder (or where configured) as a new image.

The PolyVision driver runs unobtrusively in the background whenever your computer is on. For information about configuring PolyVision driver options, refer to “Configuring PolyVision driver options” on page 35.

Preparing to use ēno

ēno is ready to use after you:

- add batteries to the stylus
- pair the stylus Bluetooth signal with a computer that has the PolyVision driver installed (refer to “Install the PolyVision driver” on page 17)
- connect a projector to the computer

Add batteries

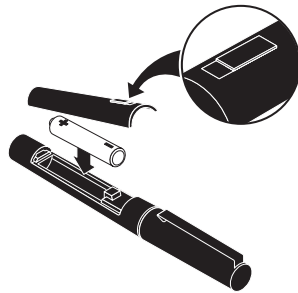
The ēno stylus and eraser require batteries.

Install the ēno stylus battery

The ēno stylus requires one AAA battery (provided).

To install the battery:

1. Open the battery compartment.



2. Insert the battery.
3. Replace the battery compartment lid.

Power on and off the stylus

To turn the ēno stylus on and off:

- Remove and replace the stylus cap.

NOTE:

When the stylus is not in use, replace the cap to extend battery life. Refer to “Replacing the ėno stylus batteries” on page 46 for information about battery life.

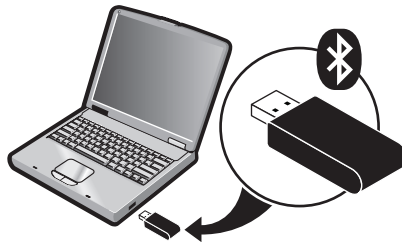
Pair the ėno stylus Bluetooth signal with your computer

ėno interacts with your computer via the ėno stylus, which is a Bluetooth device. As with all Bluetooth devices, the ėno stylus must be paired with the computer that it interacts with.

ėno includes a USB Bluetooth adapter that automatically provides Bluetooth capability to any computer. You can use the PolyVision Bluetooth adapter with ėno regardless of whether your computer already includes Bluetooth capability.

To install the Bluetooth adapter:

1. Turn on your computer.
2. Plug the PolyVision Bluetooth adapter into any available USB port on the computer and leave it there.



The PolyVision driver that you installed on the computer includes built-in features that makes it easy to pair the stylus with the computer regardless of whether you are using the PolyVision Bluetooth adapter or if you want to use your computer's built-in Windows, Linux or Apple Bluetooth capability.

To automatically pair your ėno stylus using the PolyVision driver:

1. On your computer, click the PolyVision driver icon in your system tray (Windows or Linux) or menu extras (Macintosh).
2. Choose “Configure the PolyVision driver” from the menu.

3. Click the “Hardware” tab.
4. Turn on the ēno stylus by removing the cap then click “Pair Stylus.” Pairing proceeds automatically for most computers. If you have a Macintosh with operating system 10.4 or higher, follow the steps you see on the screen. If you use Linux, you are asked to enter the stylus passcode, which is “0109”

**NOTE:**

If you want to use a third-party Bluetooth product on your computer to pair with the ēno stylus, use the instructions provided by your product and refer to “Appendix 1: ēno Bluetooth pairing options” on page 53. The stylus is identified as device ADP-301.

Unpairing the ēno stylus

The ēno stylus Bluetooth signal pairs with only one computer (or one Bluetooth receiver) at a time. To use the ēno stylus with a different computer that is in the same room, you need to unpair it from the original computer.

If the stylus is paired to a computer that has the PolyVision Bluetooth adapter is plugged in, or if the computer uses built-in Windows Bluetooth capability, you can unpair the stylus using the PolyVision driver.

To unpair the ēno stylus from the computer using the PolyVision driver:

1. On the paired computer, click the PolyVision driver icon in the system tray.

- 2. Choose “Configure the PolyVision driver” from the menu.
- 3. Click the “Hardware” tab.
- 4. Turn on the ēno stylus by removing the cap.
- 5. Select the ēno stylus in the list of pens in the “Hardware” tab.
- 6. Click “Remove Stylus.”

NOTE:

If you use a Macintosh or Linux, remove the stylus as you would remove any Bluetooth device.

If you are using third-party Bluetooth capability, unpair the stylus using instructions provided by your product. The stylus is listed as device ADP-301.

After you unpair the stylus from one computer you can pair it with another computer that has the PolyVision driver installed.

LED status summary

The LED indicator on the ēno stylus provides status information about wireless communication between the stylus and computer, assuming that batteries are installed.

LED	Condition
Blinks every five seconds	Low Battery
Three quick pulses repeated three times	Hardware Error, Bluetooth Connection Error, or Bluetooth Pairing Error
Off	Ready for use
On	Attempting Bluetooth pairing or connection with your computer

Getting started in projection mode

To set up the projector and get started projecting your computer:

1. Locate your projector's video cable and connect it to the video port of your computer.
2. Connect the other end of the video cable to your projector.
3. Connect the projector's power cord to an outlet.
4. Turn on the projector and focus your computer screen squarely onto your whiteboard. The projected image does not need to fill the white area.

To align the projected image with the ēno whiteboard:

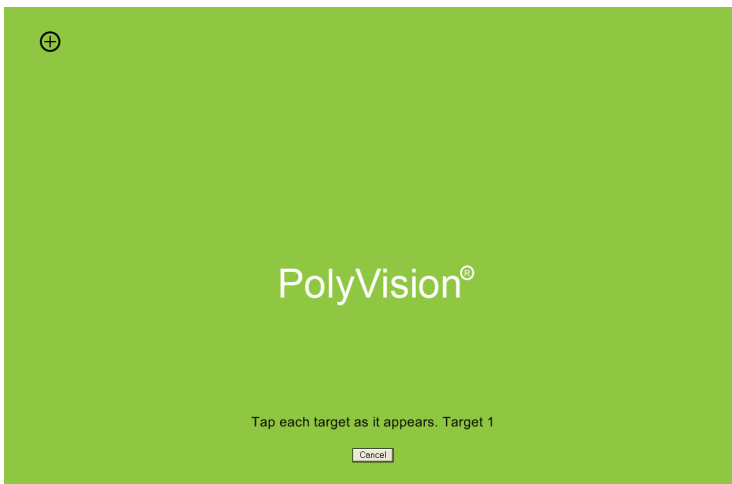


1. Assure that the projected image fits within the whiteboard frame.
2. Tap the projection mode icon on the control strip one time.

NOTE:

If this is the first use of the ēno whiteboard, if the computer has just rebooted, or if the PolyVision driver has just been launched, then tap the whiteboard instead of the projection mode control icon.

The alignment window shown below projects from the computer to the whiteboard.



3. Using the ēno stylus, touch each target projected on the whiteboard, following instructions you see on the board.

When alignment is complete, you are ready to begin interacting with your computer.

The alignment between your projector and the PolyVision driver is important. PolyVision offers three levels of alignment: good, better, best. The default is “better” alignment. If you need to change the correspondence between the position of the cursor and the point of contact when you tap the whiteboard, refer to “Choosing alignment accuracy” on page 42.

To exit projection mode:

- Tap the projection mode control icon again.

Using ěno interactive whiteboards

Get started using ěno interactive whiteboards

PolyVision makes it easy to install the PolyVision driver and add Bluetooth capability to any computer so it can interact with the ěno whiteboard. Everything you need is provided with the ěno whiteboard.

To get started using your ěno interactive whiteboard:

1. Make sure the computer and projector are connected and turned on. (Refer to "Getting started in projection mode" on page 24.)
2. Make sure the latest version of the PolyVision driver is installed on the computer. ěno requires PolyVision driver 1.8 or later. (Refer to "Install the PolyVision driver" on page 17 and "Checking for updates" on page 44.)
3. Remove the stylus cap to turn it on. (Refer to "Power on and off the stylus" on page 20.)
4. Make sure the stylus has a Bluetooth connection to the computer. (Refer to "Pair the ěno stylus Bluetooth signal with your computer" on page 21.)
5. Tap the projection mode control icon. (Refer to "Getting started in projection mode" on page 24.)

NOTE:





















If this is the first use of the ěno whiteboard, if the computer has just rebooted, or if the PolyVision driver has just been launched, then tap the whiteboard instead of the projection mode control icon.

6. To toggle the stylus between pen and cursor functions, tap the pen/cursor control icon. (Refer to "ěno interactive whiteboard control icons" on page 28.)
7. To write or draw, tap a pen color control icon and write on the ěno whiteboard. (Refer to "Writing and erasing with the ěno stylus" on page 30.)
8. To erase, tap an eraser control icon and erase. (Refer to "Writing and erasing with the ěno stylus" on page 30.)
9. To print a copy using the printer connected to the computer, tap the print control con. (Refer to "Printing and saving" on page 31.)

10. To save a copy as a file in the computer "My Documents" folder, tap the save control icon. (Refer to "Printing and saving" on page 31.)
11. To type, tap the keyboard control icon and tap the on-screen keyboard. (Refer to "Using the on-screen keyboard" on page 29.)

ēno interactive whiteboard control icons

ēno control icons that you tap with the ēno stylus are described below.

	Toggles between writing and cursor control.
	Goes to the previous PowerPoint slide or PgUp.
	Goes to the next PowerPoint slide or PgDn.
	Displays the on-screen keyboard.
	Displays all pen, highlighter, and eraser size and color options.
	
	
	The current pen color.
	
	
	The current pen width.
	
	Sets the pen to a solid line.
	Sets the pen to a dashed line.
	Narrow eraser width using the stylus.
	Large eraser width using the stylus.
	Clears all the writing.
	Prints a copy of the whiteboard.
	Saves a copy of the whiteboard contents as a file in the My Documents folder (or where configured).
	Toggles “projection mode” on / off. The first use starts the on-screen alignment (calibration) process.

Control icon options

You can access the functions of the control icons in two ways:

- by tapping the control icons with the stylus
- by configuring the PolyVision driver to project the control icons in a movable window that you tap with the stylus (Refer to "Using on-screen tools" on page 43.)

Cursor control using the ēno stylus

The ēno stylus functions as both a pen and a cursor.

To toggle the stylus between pen and cursor functions:

- Tap the Pen/Cursor control icon with the stylus.

While using the stylus to control the computer:

- To click, tap once.
- To double-click, tap twice rapidly.
- For a right-click (Windows) or control-click (Macintosh), hold the stylus (without moving it) on the display for one second.
- To page up or down through a document, tap the left or right arrow control icon.

Using the on-screen keyboard

While using your computer, you can enter text using the computer operating system's built-in on-screen keyboard. The on-screen keyboard appears in an interactive window that you can move to a convenient location and tap keys to enter text at the location of the cursor. To use your operating system's on-screen keyboard:

NOTE:

Macintosh computers require that the operating system's on-screen keyboard is enabled first, before it can be recognized by the PolyVision driver.

1. Tap the Keyboard control icon.
2. Tap at the location where you want to move the cursor for entering text.

3. To enter text, tap keys on the on-screen keyboard.
4. To move the keyboard, drag the title bar to another location.
5. To close the keyboard, tap the “close” button at the upper corner of the window or tap keyboard again.

Writing and erasing with the ēno stylus

When you write on the ēno whiteboard with the stylus in projection mode, the “ink” is projected from the computer to the whiteboard. To write on the ēno whiteboard with the stylus:

1. Tap the Pen/Cursor icon to toggle between writing or cursor control.
2. Choose a pen color or pen width by tapping a control icon.
3. Write with the stylus anywhere on the whiteboard.

NOTE:

For optimum performance, hold the stylus at a slight angle (not 90 degrees from the board) and with the LED on the stylus facing up toward the ceiling.

To erase:

1. Tap the wide or narrow eraser control icon.
2. Swipe over the items you want to erase.

Or,

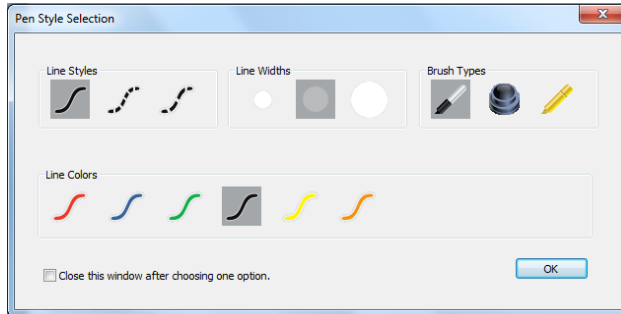
1. Tap the Erase All control icon to erase all writing.

NOTE:

The PolyVision driver enables you to configure the red control icon to function as the spotlight or reveal feature rather than as the red ink color. To change the function of the red control icon, refer to "Spotlight and reveal options" on page 32.

Changing the pen style

The pen style palette provides a selection of pen, eraser and highlighter styles.



To choose a pen, eraser, or highlighter from the pen palette:

1. Tap the Pen Style control icon.
2. Tap an option to select it.
3. Begin writing on the whiteboard.

You can drag the palette window to any convenient location.

To close the pen palette:

- Click “OK.” Alternatively, click to add a check mark beside “Close this window after choosing one option” so the window closes automatically after your click a pen style option.

Printing and saving

To preserve and distribute your work, you can print or save a snapshot of the whiteboard.

To print:

- Tap the Print control icon. The PolyVision driver sends a snapshot to the printer connected to the computer.

To save a snapshot in a graphics file on your computer:

- Tap the Save control icon.

A snapshot file is added to the computer in the "My Documents" folder (Windows) or "Documents" folder (Macintosh or Linux). You can change the default file type and destination. (Refer to "Save options" on page 37.)

Spotlight and reveal options

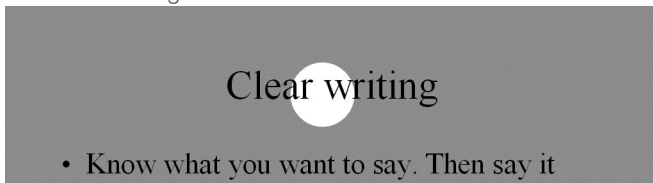
The red pen color control icon has three possible functions which you can configure:

- red pen color for writing
- spotlight
- reveal

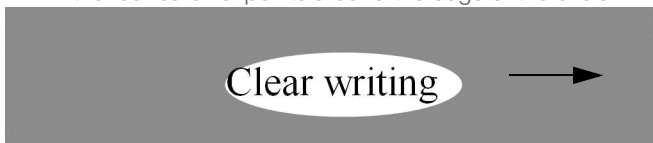
Spotlighting your work

To use the spotlight:

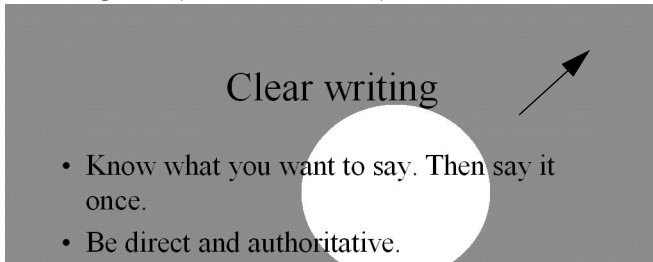
1. Configure the red pen color for the spotlight option. (Refer to "Projection options" on page 40.)
2. Tap the red control icon. The screen becomes grayed except one circle of light.



3. Drag the spotlight around the screen to focus attention on that portion of the screen.
4. To re-shape the spotlight into an ellipse, drag the circle from any of the four cardinal points around the edge of the circle.



5. To enlarge or shrink the circle, drag it from any point around the edge except the four cardinal points.



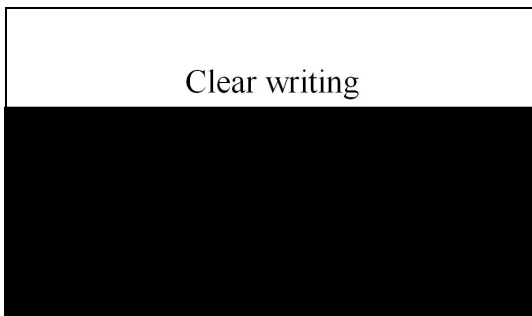
To remove the spotlight:

- Tap the red control icon again.

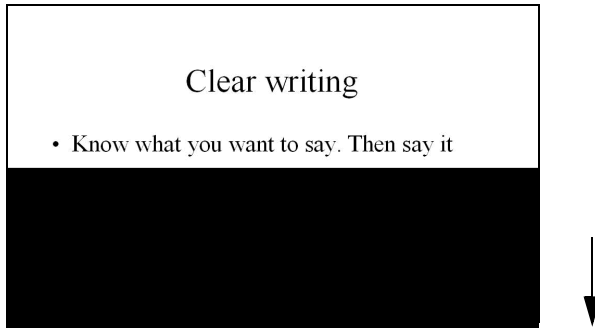
Revealing your work

To use the reveal tool:

1. Configure the red pen color for the reveal option. (Refer to "Projection options" on page 40.)
2. Tap the red control icon. The screen becomes black except one strip at the top.



3. Drag the strip up, down, left or right to reveal more of the screen.



To reveal the entire screen and continue your presentation:

- Tap the red control icon again.

Opening a blank window for writing

If you prefer to write on a blank window rather than writing over the projected computer desktop, you can display up to four additional blank windows for writing.

To display a blank window for writing:

- Choose the Previous (left) arrow. You can choose Previous up to four times to open up to four blank windows.

To return to the projected computer desktop:

- Choose the Next (right) arrow until the computer desktop appears.

The PolyVision driver

The PolyVision driver is always available and running in the background after you install it on your computer.

Configuring PolyVision driver options

The PolyVision driver is ready to use as soon as it is installed. You can change the default options at any time.

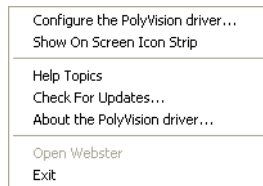
To configure PolyVision driver options:

1. Click the PolyVision driver icon in the system tray (Windows or Linux) or menu extras (Macintosh).



PolyVision driver icon

2. The PolyVision driver menu appears.



3. Choose "Configure the PolyVision driver."

To view configuration options, click an item along the left edge of the window. Each window includes:

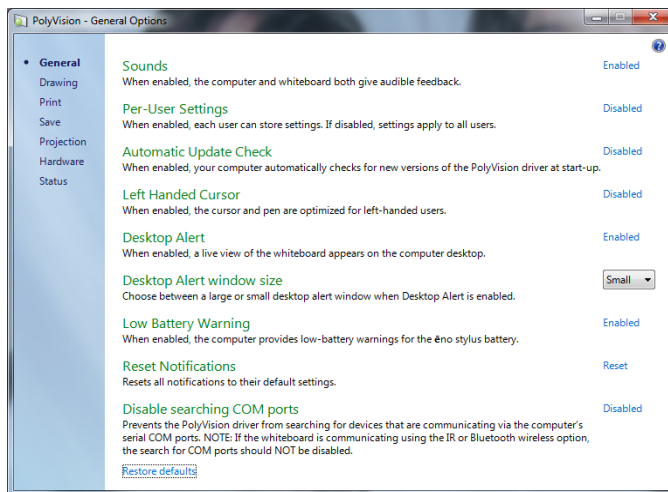
"?" icon: Click to view help information.

"Restore Defaults": Click "Restore Defaults" to restore factory defaults.

General options

To configure general options:

- Click “General”. You see the following options:



“Sounds”: Enable or disable sounds from your computer or PolyVision product that indicate system status.

“Per-User Settings”: When enabled, this option saves settings for individual users. When disabled, settings apply to all users.

“Automatic Update Check”: Enable or disable the PolyVision driver to connect automatically to the PolyVision web site to check for driver updates.

“Left Handed Cursor”: Enable or disable the left-handed cursor.

“Desktop Alert”: Enable this option to see an alert window appear on your computer desktop while you write or draw on the PolyVision product. The alert window shows what you are drawing. As soon as you stop drawing, the window fades off.

“Desktop Alert window size”: Choose between a large or small desktop alert window when Desktop Alert is enabled.

“Low Battery Warning”: Enable the PolyVision driver to display a warning on your computer desktop when the éno stylus battery is getting low.

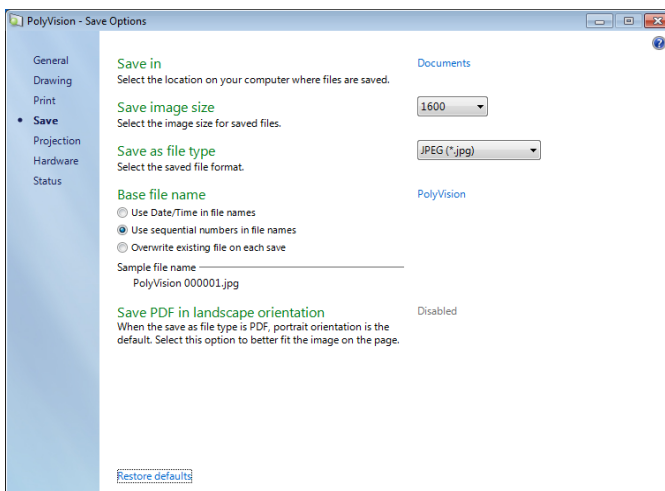
“Reset Notifications”: If a user disables Print and Save notifications, click this option to reset and enable them again.

“Disable searching COM ports”: Prevents the PolyVision driver from searching for devices that are communicating via the computer's serial COM ports. NOTE: If the whiteboard is communicating using the IR or Bluetooth wireless option, the search for COM ports should NOT be disabled.

Save options

To configure Save options:

- Click “Save”. You see these options:



“Save in”: Specify the directory where snapshot files are saved. By default, snapshot files are saved to your “My Documents” (Windows) or “Documents” (Macintosh or Linux) folder.

“Save image size”: Specify the width (in pixels) of the image that is created when you save. (The height is automatically determined by your whiteboard size.) Options include 2560, 2048, 1600, 1280, 1024, 800, and “Monitor Resolution” which saves images set to the width of your monitor.

“Save as file type”: Specify the format of the snapshot file saved on your computer when you save an image. Options include PDF, JPEG, TIFF,

PNG, or BMP. In Windows, you can also save as GIF. On a Macintosh, you can also save as PICT, Photoshop, SGI, TGA, and Quicktime Image formats. By default, snapshot files are saved in JPG format (Windows) or PDF (Macintosh).

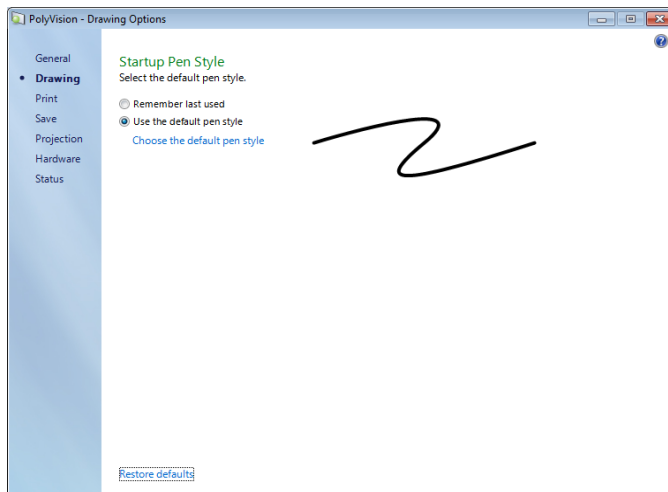
“Base file name”: Specify the name of the snapshot files saved on your computer when you save an image from your PolyVision product. Click the existing base file name to enter a new file name. Check boxes enable you to add a date/time stamp to the base filename, to add a sequential number to the base file name, and to overwrite the existing file each time you save.

“Save PDF in landscape mode”: Enable to save PDF files in landscape orientation.

Draw options

To configure pen options:

- Click “Drawing.” You see these options:



“Startup Pen Style”: Specify the pen style that is used when the PolyVision driver launches on your computer.

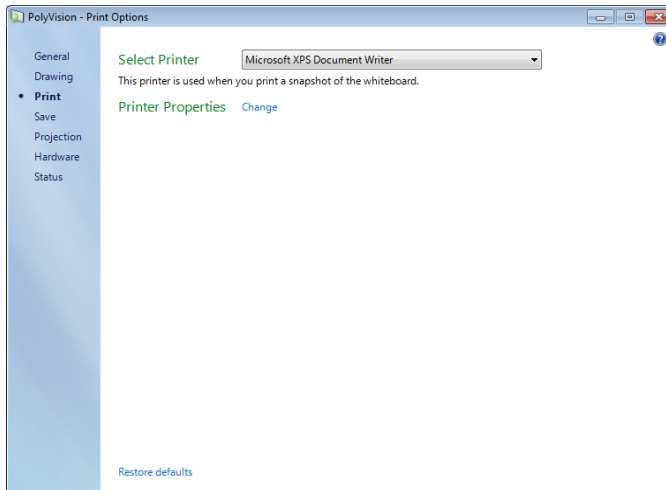
“Remember last used”: The PolyVision driver remembers the last active pen style and uses it when the program is next launched.

“Use the default pen style”: The factory default pen style is a medium black line. Click “Select the default pen style” to select a new default pen style.

Print options

To configure print options:

- Click “Print.” You see these options:

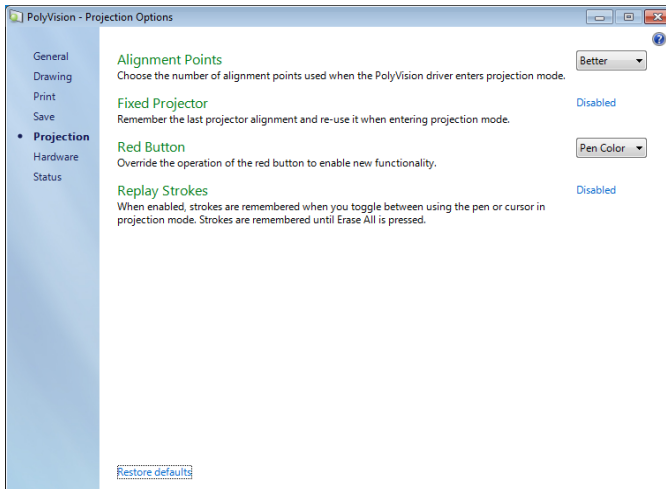


“Select Printer”: Specify the printer used when you print a snapshot. The drop-down list includes printers currently installed on your computer. You can click “Change” to specify options for the selected printer. By default, the computer default printer is used.

Projection options

To configure projection alignment options that apply when your device enters projection mode:

- Click “Projection.” You see these options:



“Alignment Points”: Choose between three levels of projection alignment: good, better, and best. The more points you choose, the more accurately the cursor will be controlled from the whiteboard in projection mode.

“Fixed projector”: If your whiteboard and projector remain in the same positions, check this box to use the same projection alignment each time. No alignment screen displays when you enter projection mode if this box is checked.

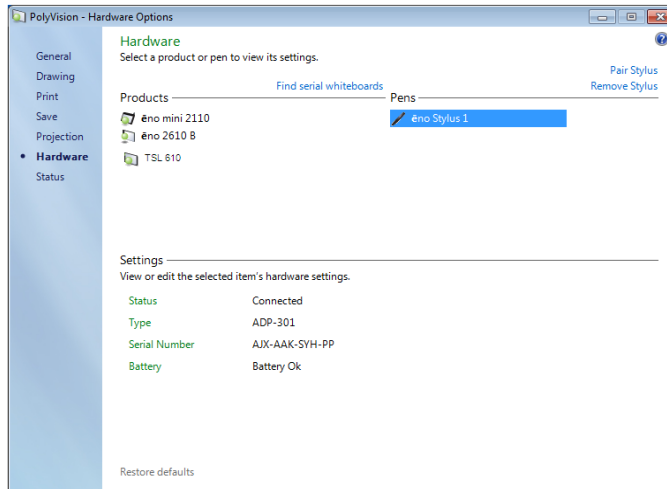
“Red Button”: Choose an option from the drop-down list to change the function of the Red ink color. Options are: “Pen Color” for drawing with red ink; “Spotlight” for focusing attention on one part of the screen using a spotlight that you can drag around the screen; or “Reveal” for gradually revealing screen contents from top to bottom. Refer to "Spotlight and reveal options" on page 32.

“Replay Strokes”: When enabled, pen strokes are remembered when you switch from pen mode to cursor mode, and back to pen mode. Pen strokes accumulate until you erase all.

Hardware options

To view the PolyVision hardware products communicating with the computer:

- Click “Hardware.”



To view and change settings for a PolyVision product:

- Select a product or pen to view or edit its settings in the lower section of the window. Settings that you can edit are highlighted.

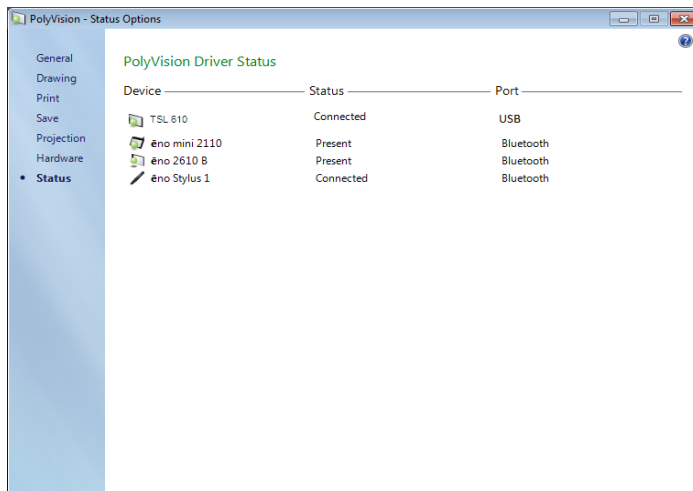
“Pair Stylus”: Click to initiate automatic Bluetooth pairing between the computer and an eno stylus. If the stylus is listed, it is already paired with the computer.

“Remove Stylus”: Click to stop Bluetooth communication between a stylus and the computer it is paired with. For example, if you want to use the stylus with another computer in the same room, first click “remove Stylus” to unpair the stylus from the original computer, then pair it with the computer you want to use.

“Find serial whiteboard”: If your device is not listed, click “Find serial whiteboard.” If your device is still not listed, there is a problem with your Bluetooth registration.

Status of the PolyVision driver

The Status option provides a live view of all PolyVision products communicating with the computer and their current status.



PolyVision products shown in gray are installed and communicating with the computer, but are inactive or in a “sleep” mode. The status information is updated when a change occurs.

Choosing alignment accuracy

The alignment between your projector and the PolyVision product is important. PolyVision offers three levels of alignment: good, better, best. The default is “better” alignment.

You might need to use more or fewer alignment points to improve the correspondence between the position of the computer cursor and the point of contact when you tap the PolyVision product. (Some video projectors, for instance, do not produce a linear display when projection with keystone correction is used.)

To change the number of alignment points:

1. Click the PolyVision driver icon in your computer system menu bar or system tray (refer to “Configuring PolyVision driver options” on page 35).

2. Click “Projection.”
3. Choose the alignment type from the drop-down list.

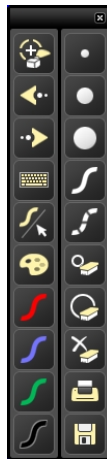
Proceed as usual to enter projection mode or to re-align while in projection mode. Follow the alignment instructions that are projected from the computer on your PolyVision product.

Using on-screen tools

You can operate your interactive product using on-screen tools that appear in a window you can drag to a convenient location while you work.

To use on-screen tools:

1. Click the PolyVision driver icon in the system tray (Window or Linux) or menu extras (Macintosh). The PolyVision driver menu appears.
2. Choose “Show On Screen Icon Strip” from the menu to toggle on and off the display of a functional on-screen tool window.



Getting help

Choose “Help Topics” from the PolyVision driver menu for information about using PolyVision products.

Checking for updates

PolyVision driver updates are available via the Internet. Registered users receive notice when updates are available. The PolyVision driver can check for updates automatically (refer to "General options" on page 36) or you can check for updates at any time.

To update the PolyVision driver:

1. Click the PolyVision driver icon in the system tray (Windows or Linux) or menu extras (Macintosh). The PolyVision driver menu appears.
2. Choose "Check for Updates" from the menu when your computer is connected to the Internet. A system check reveals whether the version number available on the web agrees with the version installed on your system. If the version numbers are not the same, you can choose to initiate the download and automatic installation of the update. You can also enable automatic updates (refer to "General options" on page 36).

Exiting the PolyVision driver

To shut down the PolyVision driver:

1. Click the PolyVision driver icon in the system tray (Windows or Linux) or menu extras (Macintosh). The PolyVision driver menu appears.
2. Choose "Exit" (Windows or Linux) or "Quit" (Macintosh) from the menu. The PolyVision driver closes.

To resume:

- **Windows:** choose "PolyVision driver" from the Start/Programs/PolyVision menu.
- **Linux:** choose "PolyVision" and "PolyVision driver" from the Applications menu.
- **Macintosh:** double-click "PolyVision driver" in the Applications folder.

To uninstall the PolyVision driver in Windows

To uninstall the PolyVision driver in Windows:

1. Click "Start" at the lower left corner of the task bar.
2. Choose "All Programs" from the menu.

3. Choose “PolyVision driver” from the menu.
4. Choose “Remove the PolyVision driver.”

To uninstall the PolyVision driver on a Macintosh

To uninstall the PolyVision driver using a Macintosh:

1. Navigate to “Applications” and then to “PolyVision.”
2. Launch “PolyVision driver Uninstaller.app.”
3. Follow the prompts as directed.

To uninstall the PolyVision driver using Linux

To uninstall the PolyVision driver using Linux:

1. In a terminal window, enter:
`sudo /usr/bin/PolyVision/PolyVisionDriver/uninstall`
2. Enter your root password.
3. Click “Yes.” The **Uninstall Complete** dialog appears.

Care and maintenance

ēno maintenance

Replacing the ēno stylus batteries

When the stylus is not in use, replace the cap to extend battery life.

The computer which is paired with your stylus provides on-screen warnings when:

- the ēno stylus battery is low, to remind you to replace the battery
- the stylus has been idle for five minutes, to remind you to replace the cap

Note that NiMH rechargeable batteries are not suitable for the ēno stylus. Lithium batteries give the longest life.

Replacing the ēno stylus tip

To replace the ēno stylus tip:

1. Remove the existing stylus tip by pulling it out.
2. Firmly push the replacement tip into the stylus until it snaps into place.

How to obtain replacement parts

Replacement parts are available directly from PolyVision. Call 1.800.620.7659 (POLY) in the USA, 678.542.3100 from elsewhere in North America, or +32 (0)89 32 31 30 in Europe. You can also send e-mail to info@polyvision.com.

Summer maintenance

- Make sure that the Bluetooth adapter and stylus are stored in the accessory case.
- Tape a sign to top frame of any interactive whiteboards to say:
 - This board is not a marker board.

- Do not wash the board. Clean ONLY with a soft dampened cloth.
- Back up your work. Any files you have created or images stored on your computer should be saved onto disk, USB drive, or network server. Coordinate storage of data with your IT Department.

When preparing for Fall classes:

- Test this product early in the Fall preparation process. Connect the computer to the Internet so that the PolyVision driver can acquire automatic software updates that may have been issued during the Summer break.
- If you are unable to acquire any released software updates, please request your IT Department to provide you with support early in the back-to-school process.
- Testing the product well before it is needed assures that there is time for any technical support you may need as well as time for you to try out new practices.
- Toll free technical support: 1.800.620.7659

Technical support

If reviewing the above sections fails to resolve your hardware or driver problem, contact PolyVision USA Technical Support:

- Phone: 1.800.620.7659 (POLY), 678.542.3100
24-hour support Monday through Friday.
- E-mail: support@polyvision.com
- Internet: www.polyvision.com

Or, outside the USA contact PolyVision Europe/Asia Technical Support:

- Phone: +32 (0)89 32 31 30
- E-mail: business.center@polyvision.com
- Internet: www.polyvision.com

Compliance

FCC compliance

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 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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

CE compliance

ēno has been tested and found to comply with safety, radiation, and immunity standards defined in:

2006/95/EC Low Voltage Directive
EN60950-1:2001 (Safety)