

VIDEO INSTANT REPLAYER P-20HD

Version 1.2 and later

Startup Guide



What you can do with the P-20HD

Slow-motion replay

During video recording, you can select a scene and replay it in slow motion. This is ideal for live events and sports broadcasting.

Composite the video from multiple cameras, and capture and replay it

Two HDMI inputs are provided. You can composite the two video signals (PinP or SPLIT), and record and replay the result.

Extended recording to SD card

As storage media, this unit uses easily-available SD cards (commercially available), and the recording format is H.264, allowing extended recording to an SD card.

All actions necessary for replay can be controlled using just the unit itself

In addition to buttons, jog shuttle dial, and lever, an LCD display is also provided, so that the unit itself supports all operations needed for replay.

Title and caption compositing

A specified still image title can be shown superimposed on the video, or you can layer an individual still image on the live input video or the replay video.

PDF Manual (download from the Web)

Details on operations and menu lists are provided in "Reference Manual" (PDF).

Downloading

1. Enter the following URL in your computer.
<https://proav.roland.com/manuals/>
2. Choose "P-20HD."



Checking the Included Items

Check that all of the included items are present. If any of the included items are missing, contact your dealer.

- P-20HD unit
- AC adaptor
- Power cord
- Startup Guide (this document)
- Leaflet "USING THE UNIT SAFELY"

Before using the unit, ensure that its system program is at the most recent version.

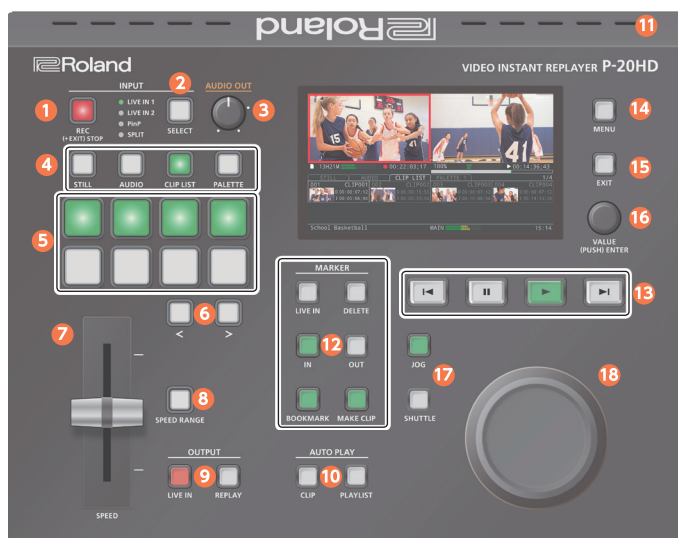
For information on available upgrades for the system program, see the Roland website (<https://proav.roland.com/>).

You can check the system program version by Pressing the [MENU] button → "SYSTEM" → "VERSION."

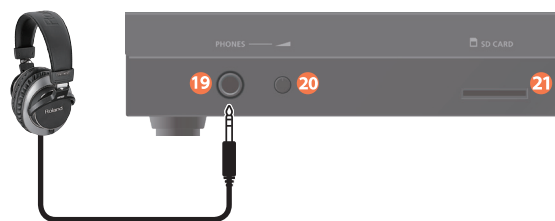
Before using this unit, carefully read "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (leaflet "USING THE UNIT SAFELY" and Startup Guide (p. 11)). After reading, keep the document(s) where it will be available for immediate reference.

Panel Descriptions

Top Panel / Front Panel



Front Panel



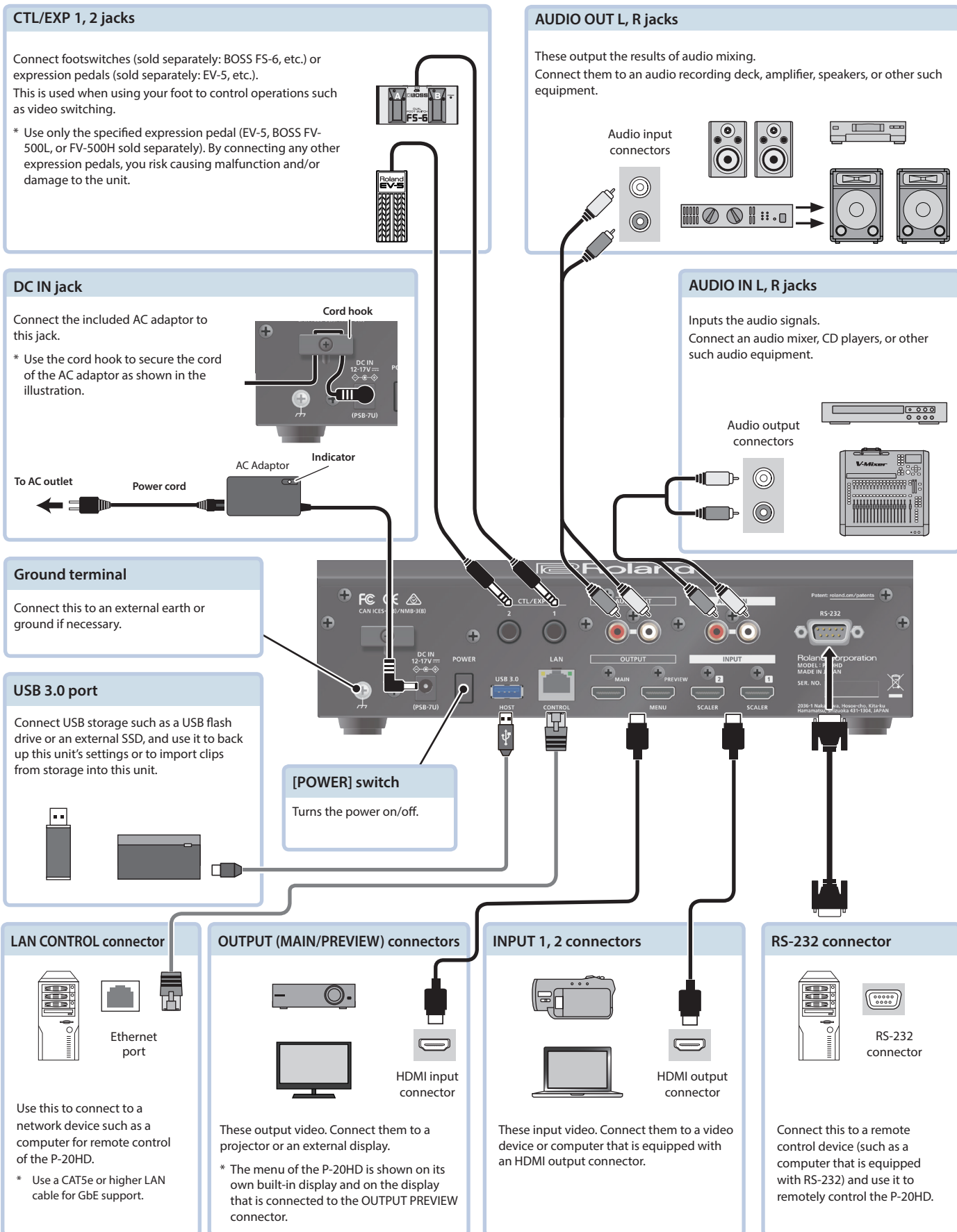
Name	Explanation
19 PHONES jack	You can connect a set of headphones here.
20 [PHONES] knob	Adjusts the volume of the headphones.
21 SD card slot	Insert an SD card here.

Name	Explanation
INPUT section	
1 [REC] button	Starts or stops video recording. Lit Video recording in progress Unlit Video recording stopped
2 [SELECT] button	Switches the input video (LIVE IN 1/LIVE IN 2/ PinP/SPLIT). The LED of the selected input is lit.
3 [AUDIO OUT] knob	Adjusts the output volume.
PAD section	
4 [STILL] button	Switches the pad functions to select still image clips.
[AUDIO] button	Switches the pad functions to select audio clips.
[CLIP LIST] button	Switches the pad functions to select video clips.
[PALETTE] button	Switches the pad functions to select video clips inside of a palette.
5 Pad [1]–[8]	Selects the clip (video/still image/audio) assigned to each pad.
6 [<] / [>] button	Switch between pages of pads.
7 [SPEED] lever	Adjusts the playback speed.
8 [SPEED RANGE] button	Switches the range of speed adjusted by the [SPEED] lever.
OUTPUT section	
9 [LIVE IN] button	Outputs the video of the live input bus.
[REPLAY] button	Outputs the video of the replay bus.
AUTO PLAY section	
10 [CLIP] button	Plays back the clip.
[PLAYLIST] button	Plays back the play list.
11 Cooling vent	Heat from inside the P-20HD is exhausted here. * Do not block the cooling vent. If the cooling vent is blocked, the internal temperature will rise, and the heat might cause malfunctions.

Name	Explanation
MARKER section	
[LIVE IN] button	Switches the marker reference time. Lit LIVE IN time Unlit REPLAY time
[DELETE] button	Deletes a bookmark.
12 [IN] / [OUT] button	Sets the clip's start time (IN point) and end time (OUT point).
[BOOKMARK] button	Sets a bookmark in the file.
[MAKE CLIP] button	Creates a clip whose OUT point is the moment at which you press the button.
TRANSPORT section	
13 [II] button	Pauses the video and audio of the replay bus. Video Paused Sound Muted
[▶] button	Plays the video and audio of the replay bus.
[◀] / [▶] button	Jumps to the next bookmark (previous bookmark).
14 [MENU] button	Shows or hides the menu.
15 [EXIT] button	Exits a menu level or cancels an operation.
16 [VALUE] knob (ENTER)	Turning Selects a menu item or edit a value. Pressing Confirms a selected menu item or an edited setting. Alternatively, execute an operation.
JOG SHUTTLE section	
17 [JOG] button	Sets the [JOG/SHUTTLE] dial to jog mode. (p. 8)
[SHUTTLE] button	Sets the [JOG/SHUTTLE] dial to shuttle mode. (p. 8)
18 [JOG/SHUTTLE] dial	Adjusts the playback speed in jog mode or shuttle mode.

Rear Panel (Connecting Your Equipment)

- * To prevent malfunction and equipment failure, always turn down the volume, and turn off all the units before making any connections.
- * Be sure to use cables and adaptor plugs with the proper connectors matching those of the other devices you are using.
- * Before disconnecting an SD card or a USB flash drive while the power is on, be sure to perform the Eject operation.



- English
- 日本語
- Deutsch
- Français
- Italiano
- Español
- Português

Getting Ready

About SD Cards

You cannot use the features of the P-20HD without inserting an SD card, except for making menu settings.

You must insert an SD card before use.

Cards that can be used with the P-20HD



The P-20HD supports SDXC cards.

Depending on the manufacturer or type of SD card, some cards might not work correctly for video or audio recording on the P-20HD.

For the latest information on cards that are known to work, refer to the Roland support page.

<https://roland.cm/p-20hd>



NOTE

Before using a commercially available SD card with the P-20HD, you must first format it as described in "Formatting an SD Card" (p. 4).

Inserting an SD Card

1. Insert the SD card into the SD card slot until you hear it click into place.

NOTE

When inserting an SD card, take care that it is oriented correctly, and push it all the way in. Do not use excessive force.



Formatting an SD Card

1. Select [MENU] button → "SD Card/USB Memory" → "SD Card" → "Format," and then press the [VALUE] knob.

A confirmation message appears.

2. Select "OK" and then press the [VALUE] knob to confirm.

The SD card is formatted.

NOTE

Formatting erases all data (recorded video and audio data) on the SD card.

Removing an SD Card

1. Select [MENU] button → "SD Card/USB Memory" → "SD Card" → "Eject," and then press the [VALUE] knob.

The screen indicates "The SD Card is safe to remove," and it is now safe to remove the card.

2. Press the SD card inward.

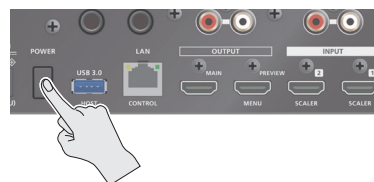
3. Grasp the SD card and pull it toward yourself.

Turning the Power On/Off

- * After making connections correctly (p. 3), you must use the following procedure to turn the power on. Using an incorrect procedure might cause faulty operation or malfunction.
- * Before turning the power on/off, minimize the volume. Even if the volume is minimized, you might hear a sound when turning the power on/off, but this is not a malfunction.
- * When turning the power off, you must perform the shutdown operation.
- * This unit is not designed for continuous operation over long periods of time (one month or longer). If you want to use this unit over long periods of time, cycle the power periodically.

Turning the power on

1. Make sure all devices are turned off.
2. Turn on the [POWER] switch on the P-20HD to turn on the power.



3. Power-on the source devices.

Turn on the power of source devices such as video cameras that are connected to the P-20HD's input connectors.

4. Power-on the output devices.

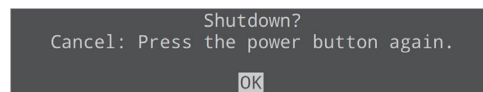
Turn on the power of devices such as projectors that are connected to the P-20HD's output connectors.

Turning the power off

1. Turn off the power in the sequence of first the output equipment, and then the sources.

2. Turn the P-20HD's [POWER] switch off.

The SHUTDOWN screen appears.



3. Press the [VALUE] knob to complete the shutdown.

If you decide to cancel, press the [POWER] switch once again.

About the Auto Off function

The power to the P-20HD turns off automatically when all of the following states persist for 240 minutes (Auto Off function).

- No operation performed on the P-20HD
- No audio or video input
- No equipment is connected to the OUTPUT connectors

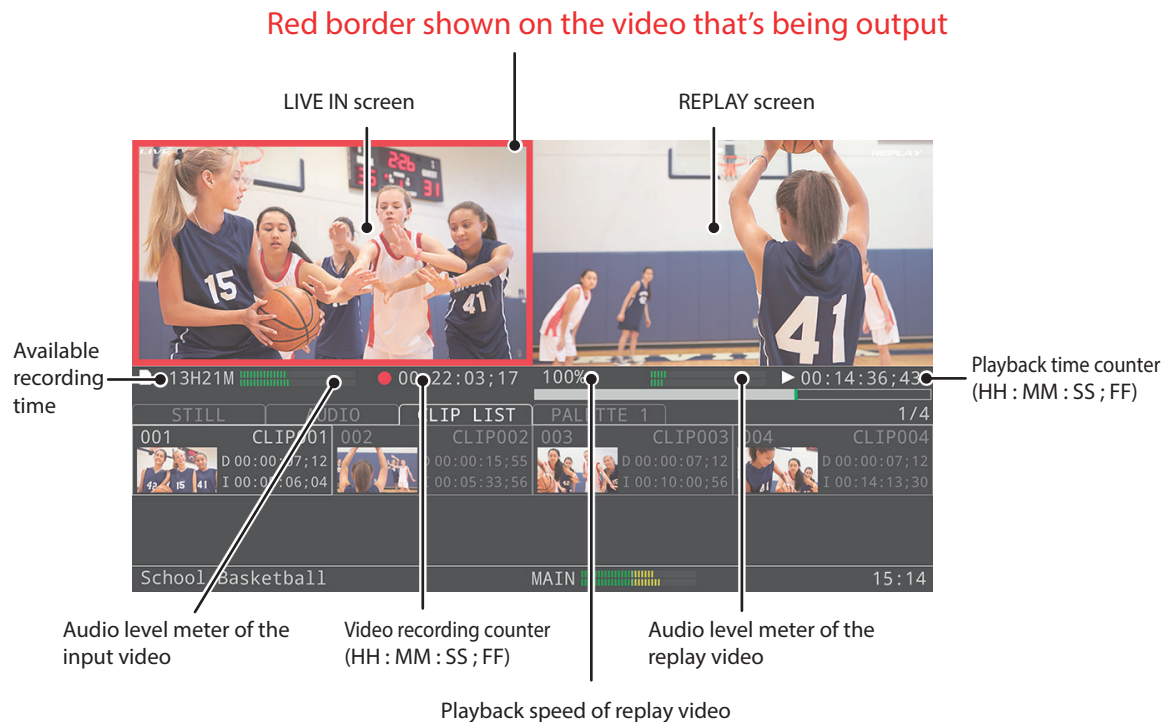
If you do not want the power to be turned off automatically, disengage the Auto Off function. "System menu" → set "Auto Off" to "Off."

* Unsaved data is lost when the power turns off. Before turning the power off, save the data that you want to keep.

* To restore power, turn the power on again.

Main Screen

This is the main screen of the P-20HD.

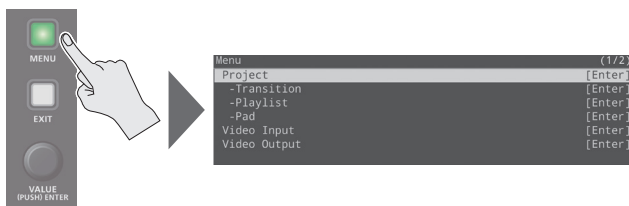


Using the Menus

This explains how to display menus and make settings for video and for the P-20HD itself.

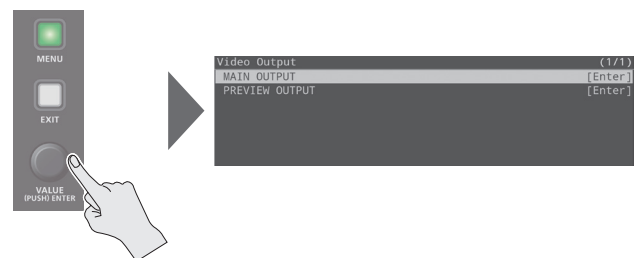
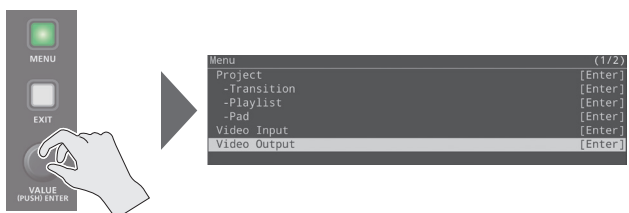
* The menu is also shown on the display that is connected to the OUTPUT PREVIEW connector.

1. Press the [MENU] button to display the menu.



The [MENU] button lights up, the menu categories are displayed.

2. Turn the [VALUE] knob to select a category, and press the [VALUE] knob to confirm.



The menu for the selected category is displayed.

3. Turn the [VALUE] knob to select a menu item, then press the [VALUE] knob to confirm.

The cursor moves to the setting value.

- If the menu item is located at a deeper level, repeat step 3.
- Pressing the [EXIT] button moves you back one level higher.

4. Turn the [VALUE] knob to change the value of the setting.

- By turning the [VALUE] knob while pressing it, you can change the value more greatly.
- Pressing and holding the [VALUE] knob returns the current menu item you're setting to its default value.

5. Press the [VALUE] knob to apply the setting.

The cursor returns to the menu item.

6. Press the [MENU] button to quit the menu.

English

日本語

Deutsch

Français

Italiano

Español

Português

Creating a Project

Video-recorded clips and clips that you imported from an external source are saved on the SD card in units called “projects.” A project lets you create and manage “clips” which are specific regions that you cut out of a recorded video, and “play lists” which consecutively play back multiple clips in a specified order.

After powering-on the P-20HD, you will either create a new project or open a previously-created project before you start working.

Creating a New Project

Here’s how to create a new project.

1. Select [MENU] button → “PROJECT” → “New,” and then press the [VALUE] knob.

The New Project screen appears.



2. Set the parameters as necessary.

In this example, we’ll create the project with the default settings unchanged.

3. Select “CREATE,” and then press the [VALUE] knob to confirm.

A new project is created, and you return to the main screen.

MEMO

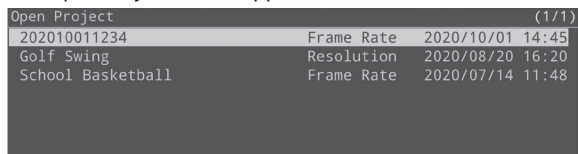
Since a project is saved automatically, there’s no need to execute a save operation.

Opening a Previously-Created Project

When you open a previously-created project, the current project is switched.

1. Select [MENU] button → “Project” → “Open,” and then press the [VALUE] knob.

The Open Project screen appears.



2. Select the project that you want to open, and then press the [VALUE] knob.

A confirmation dialog box appears.

If you want to cancel, press the [EXIT] button.

3. Press the [VALUE] knob.

The selected project opens, and you return to the main screen.

An Overview of the P-20HD

Project

On the P-20HD, a project is used for managing material (unprocessed content) and operation-related settings as a unit.

Clip

This is a unit of playback over a specified range of time. There are three kinds of clips: video, still images and audio.

Clip List

This is a place where all materials are stored, including the video clips within a project. Create your video clips by setting the time ranges from recording data. The video clips you create are registered in the clip list. Add these clips from the clip list to the palette as necessary to manage and play them back.

Recording Data

This is the video data you’ve recorded.

Even if video recording is stopped, you can simply start recording again to create a continuous block of data. Create your video clips by entering the IN and OUT points of the recording data.

Palette

This is a collection of video clips provided for you to group together or play back in continuous order in a playlist. Eight palettes are available for each project.

Page

Each type of clip is grouped into units of eight within the material storage area. These units are respectively called “pages.”

- You can have up to 64 clips in a palette, meaning a maximum of eight pages.
- You can store up to 512 clips in the clip list, meaning a maximum of 64 pages.
- Up to 16 audio or still image clips can be stored, which is two pages.

Audio

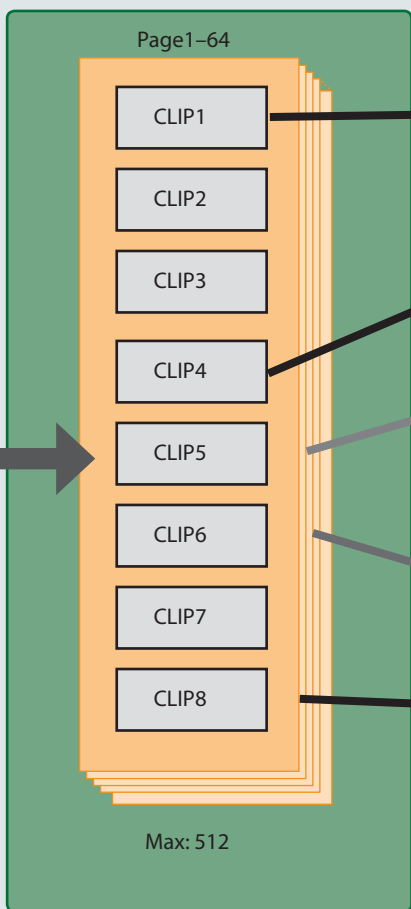
This is where audio clips are stored. You can import up to 16 audio files.

Still

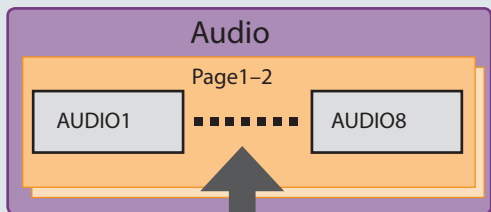
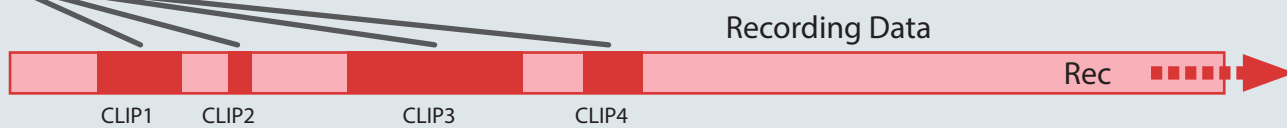
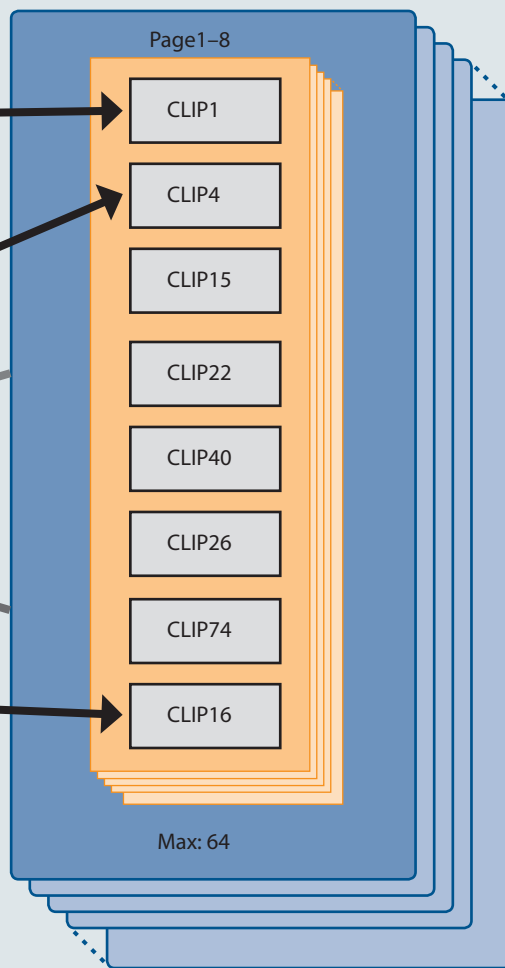
This is where still image clips are stored. You can import up to 16 still image files.

Project

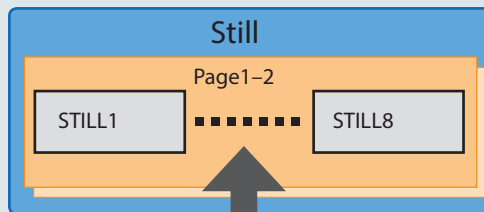
Clip List



Palette1-8



Import



Import

- English
- 日本語
- Deutsch
- Français
- Italiano
- Español
- Português

Video Operations

Recording and Playback

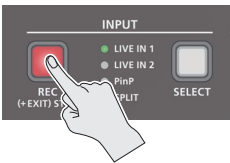
You can play back a previously recorded video while the P-20HD is recording (chase play).

1. Press the [INPUT SELECT] button to select the input.

Note that the video of the selected input is shown in the upper left of the built-in display and of the OUTPUT PREVIEW.



2. Press the [REC] button.



The P-20HD starts recording video to the SD card.

Approximately one second after video recording starts, the recorded video (replay video) plays in the upper right of the built-in display and of the OUTPUT PREVIEW.

MEMO

- When you want to stop chase play, press the [||] button.
- When you want to resume playback, press the [▶] button.

3. Hold down the [EXIT] button and press the [REC] button.

Video recording stops.

When video recording stops, playback temporarily stops as well, but the unit then immediately returns to a state in which playback is available.

NOTE

Never remove the SD card during video recording or playback.

Changing the Playback Speed

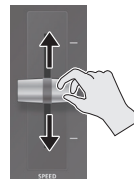
You can use the [SPEED] lever and the [JOG/SHUTTLE] dial to change the playback speed of chase play.

MEMO

Within the video-recorded file, you can freely play back the desired time, as long as you do not reach the time that is currently being video-recorded.

[SPEED] lever

Move the [SPEED] lever forward or backward to change the playback speed.



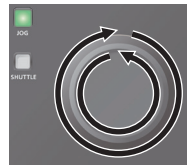
NOTE

If you change the playback speed, the video's audio is not played back.

[JOG/SHUTTLE] dial

When using this, you can switch between jog mode (frame advance) and shuttle mode (speed change). To use jog mode, press the [JOG] button to make it light. To use shuttle mode, press the [SHUTTLE] button to make it light.

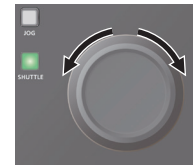
JOG mode



Pauses the instant you turn the dial, and advances by frame.

Clockwise	Frame advance forward
Counter-clockwise	Frame advance reverse

SHUTTLE mode



Changes the playback speed according to the angle to which you move the dial.

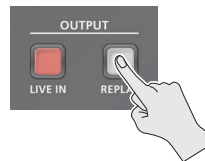
To the right	Play forward
To the left	Play in reverse
Press dial	Cancel mode

* If the [JOG] button and [SHUTTLE] button are both unlit, operating the dial has no effect.

Switching the Video Output

The P-20HD lets you seamlessly switch the output between the input video (live in) and the playback video (replay).

1. Press the OUTPUT [LIVE IN] button or the OUTPUT [REPLAY] button to select the video that you want to output.



Button	Explanation
OUTPUT [LIVE IN] button	The video of the live input bus is output from the OUTPUT MAIN connector.
OUTPUT [REPLAY] button	The video of the replay bus is output from the OUTPUT MAIN connector.

* When switching, you can apply effects such as mix or wipe. For details, refer to "Reference Manual" (PDF).

Using Clips

Clips that you create can be used as material for replay.

You can specify a region within a video that is being recorded and turn it into a clip. By creating clips of highlight scenes from recorded video, you can play back specified video clips at whatever timing you like.

Creating a Clip

1. Make sure that the MARKER [LIVE IN] button is unlit.



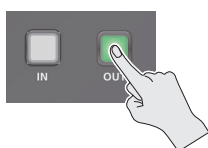
2. The playback operation moves the marker to the beginning of the clip.

3. Press the MARKER [IN] button.



The time at which you press the button is set as the start point of the clip, and the [OUT] button lights.

4. Move to the end point of the clip, and press the MARKER [OUT] button.



The clip is created.

The created clip is registered in the clip list.

NOTE

- You can't create a clip that's shorter than one second. If the IN/OUT interval is less than one second, pressing the [OUT] button does not create a clip. If the [OUT] button is lit, you can create a clip.
- In one second of video, there are only approximately 3 to 5 frames at which you can set a marker such as the IN point and OUT point. Since a clip's IN point and OUT point are rounded to those times, there might be a slight difference from the times that you specify.

MEMO

- If the MARKER [LIVE IN] button is lit, the clip is created based on the live input time (the time that is currently being video-recorded).
- If you press the [EXIT] button while the MARKER [OUT] button is blinking, the IN point is cancelled.

Creating a clip with one touch

You can also create a clip by simply specifying the OUT point.

1. Make sure that the MARKER [LIVE IN] button is unlit.

2. Activate replay playback, and press the MARKER [MAKE CLIP] button at the time that you want to specify as the end point of the clip.

A seven-second clip is created with the OUT point as the time at which you pressed the button.

MEMO

- You can change the length of the clip that is created (default: 7 seconds). For details, refer to "Reference Manual" (PDF).
- If the MARKER [LIVE IN] button is lit, a clip is created with the live in time (the current time of recording) as the OUT point.

Playing a Clip

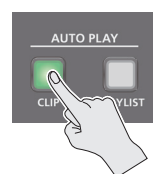
1. Press the [CLIP LIST] button.



The CLIP LIST screen is shown in the lower half of the built-in display.

2. In the clip list, use the [VALUE] knob to select the clip that you want to play back.

3. Press the AUTO PLAY [CLIP] button.



The output switches to replay, and the clip plays back.

When the clip finished playing back, the output automatically returns to the prior state (live in or replay).

MEMO

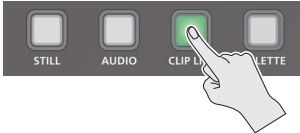
- By pressing a pad [1]–[8] you can jump to the beginning of the corresponding clip in the built-in display.
- By pressing the [<] / [>] buttons you can switch the scope of clips that are shown in the built-in display.

Using Palettes

You can consecutively play back the clips that are placed in a palette (Play list playback).

Registering Clips in the Palette

1. Press the [CLIP LIST] button.



2. Select a clip and press the [VALUE] knob.

The CLIP MENU screen appears.



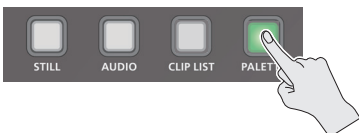
3. Select "Add To PALETTE," and then press the [VALUE] knob.

The [PALETTE] button and pads [1]–[8] blink.

4. Press the pad of the same number as the palette in which you want to register it. (To register a clip in palette 3, press pad [3].)

The clip is registered in the palette.

5. Press the [PALETTE] button.



The PALETTE screen appears in the lower half of the built-in display.

6. Hold down the [PALETTE] button and press the pad that you pressed in step 4.

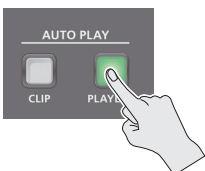
You switch to the palette in which you registered the clip earlier.

MEMO

Operations for playing back a clip in the PALETTE screen are the same as in the CLIP LIST screen.

Using Play List Playback

1. Access the CLIP LIST (PALETTE) screen by pressing the [CLIP LIST] button (or by holding down the [PALETTE] button and pressing a pad [1]–[8]).
2. Press the AUTO PLAY [PLAYLIST] button.



The clips in the palette play consecutively from the first one registered to the last clip.

MEMO

During play list playback, you can apply an effect when switching between clips. For details, refer to "Reference Manual" (PDF).

Using Audio and Still Images

On the P-20HD, you can import audio files or still image files that you created on a computer, and use them as material.

The imported audio or still images can be played back by pressing a pad.

MEMO

For each project, you can import up to 16 audio files and up to 16 still image files.

Importing Audio or Still Images

Prepare audio or still image files on your computer, and save them to a USB flash drive or other storage device.

1. Connect the storage device containing the files to the USB port.
2. Press the [AUDIO] button or the [STILL] button.
The AUDIO screen (STILL screen) appears in the lower half of the built-in display.
3. Turn the [VALUE] knob to move the cursor, and specify the clip into which you want to import the audio (or still image).
4. Press the [VALUE] knob.
The MENU screen appears.
5. Select "Import" and then press the [VALUE] knob.
The IMPORT screen appears.
6. Select the device connected to the USB port, then select the file that you want to import, and then press the [VALUE] knob.
A confirmation dialog box appears.
If you want to cancel, press the [EXIT] button.
7. Press the [VALUE] knob.
The import is executed, and the audio files (still images files) are shown in the screen.

Playing Audio or Still Images

1. Press the [AUDIO] button (or [STILL] button).
2. Press the pad [1]–[8] corresponding to the position of the audio (or still image) that you want to play.
The audio file (still image file) plays.

MEMO

- From the AUDIO screen (STILL screen) menu, you can individually adjust settings such as loops and volume.

USING THE UNIT SAFELY

WARNING

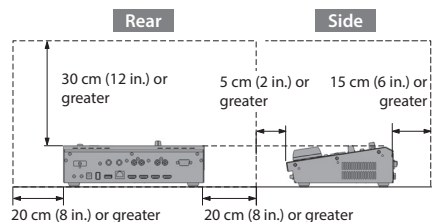
Concerning the Auto Off function

The power to this unit will be turned off automatically after a predetermined amount of time has passed since it was last used for playing music, or its buttons or controls were operated (Auto Off function). If you do not want the power to be turned off automatically, disengage the Auto Off function (p. 4).



Secure a sufficient amount of space at the setup location

Since this unit normally emits a slight amount of heat, make sure to secure sufficient space around it, as shown below.



WARNING

Use only the supplied AC adaptor and the correct voltage

Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock.



Use only the supplied power cord

Use only the attached power cord. Also, the supplied power cord must not be used with any other device.



Handle lithium batteries carefully

- Lithium batteries must never be recharged, heated, taken apart, or thrown into a fire or water.
- Keep lithium batteries out of reach of small children. If a child has accidentally swallowed a battery, see a doctor immediately.
- Never expose lithium batteries to excessive heat such as sunshine, fire or the like.



CAUTION

Handle the ground terminal carefully

If you remove the screw from the ground terminal, be sure to replace it; don't leave it lying around where it could accidentally be swallowed by small children. When refastening the screw, make that it is firmly fastened, so it won't come loose.



IMPORTANT NOTES

Power Supply

- Place the AC adaptor so the side with the indicator faces upwards. The indicator will light when you plug the AC adaptor into an AC outlet.

Placement

- Depending on the material and temperature of the surface on which you place the unit, its rubber feet may discolor or mar the surface.

Repairs and Data

- Before sending the unit away for repairs, be sure to make a backup of the data stored within it; or you may prefer to write down the needed information. Although we will do our utmost to preserve the data stored in your unit when we carry out repairs, in some cases, such as when the memory section is physically damaged, restoration of the stored content may be impossible. Roland assumes no liability concerning the restoration of any stored content that has been lost.

About the Internal Battery

- The time is stored and maintained in this unit even when the power is turned off. If the internal battery loses power, the following message is shown on the display. If you see the message "BATTERY ERROR," contact a Roland service center or an official Roland dealer for service. For a list of Roland service centers and official Roland dealers, refer to the Roland website.

BATTERY ERROR


Additional Precautions

- Any data stored within the unit can be lost as the result of equipment failure, incorrect operation, etc. To protect yourself against the irretrievable loss of data, try to make a habit of creating regular backups of the data you've stored in the unit.
- The manufacturer accepts no responsibility for recovery of stored content that might be lost, including video or audio data, nor for compensation of any such loss.
- Never strike or apply strong pressure to the display.
- When disposing of the packing carton or cushioning material in which this unit was packed, you must observe the waste disposal regulations that apply to your locality.
- Use only the specified expression pedal. By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.
- This unit allows you to switch images at high speed. For some people, viewing such images can cause headache, nausea, or other discomfort. Do not use this unit to create video that might cause these types of health problems. Roland Corporation will accept no responsibility for any such health problems that may occur in yourself or in viewers.
- Do not use connection cables that contain a built-in resistor.
- The nameplate is displayed on the bottom of unit.
- This document explains the specifications of the product at the time that the document was issued. For the latest information, refer to the Roland website.

Using External Memories

- Please observe the following precautions when handling external memory devices. Also, make sure to carefully observe all the precautions that were supplied with the external memory device.
 - Do not remove the device while reading/writing is in progress.
 - To prevent damage from static electricity, discharge all static electricity from your person before handling the device.

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