



24 Evoness SRL

Str. Bega Nr. 6
400601 Cluj-Napoca
Romania

Tel.: +40 744 539702

E-mail: videocapture@tehnicavizuala.ro

Website: www.tehnicavizuala.ro

Roland P-20HD

Video Recorder & Player & Instant Replayer



Until now, creating slow-motion instant replays in live sports productions has required an arsenal of complicated and expensive gear - and the knowledge to run it all. Roland's P-20HD changes all that, providing an affordable and easy-to-use solution that lets you bring pro replay capabilities to any production setup. Offering seamless integration with most Roland A/V switchers and HDMI camcorders and cameras, the P-20HD transforms everyday sports video productions into edge-of-seat fan experiences.

System Program **Version 1.2**

The P-20HD continues to evolve with the Version 1.2 update, adding 1080i output, MP4 file export, control by V-60HD, USB Keyboard, external footswitches, LAN, and RS-232, and more improvement. Version 1.2 is a free, user-installable update for all P-20HD owners.

[Get Version 1.2](#)

<https://proav.roland.com/global/products/p-20hd/downloads/>



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FEATURES

- ✓ Compact, portable, and reliable hardware design
- ✓ Intuitive controls for single-operator sports production
- ✓ Integrated color LCD for preview monitoring
- ✓ Simultaneous recording and playback
- ✓ Slow-motion instant replay and variable speed playback
- ✓ Clip playlist builder for creating highlight reels
- ✓ Capture long events to low cost and widely available SD cards
- ✓ Ideal for Sports, eSports, and Sports Training

Record and Replay at the Same Time

The P-20HD records directly to high-capacity SD cards, which are widely available and easy to swap out. And as you cue up and replay clips, the game keeps recording in the background, with no gaps in the action. The SD card also holds logos, sponsor graphics, and other still images. Images can be recalled on cue and layered on top of the recorded clips or displayed at full HD resolution. Add a jingle, music clip, or voiceover file to the SD card and playback on cue to bring excitement to the highlight reels, pump up the crowd or share a sponsor's message.

**The P-20HD can not import video files.*





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Take Sports Production to the Next Level

When watching a sporting event live or on a broadcast stream, today's audiences expect the high production values they see when watching pro teams on network TV. With the P-20HD, adding the magic of instant replay to your workflow has never been more simple and affordable. Using intuitive controls and the integrated color LCD, you can easily cue up replays of important action to let fans relive the moment, either on your streaming feed or live event screens—or both at once.

Sports



School Sports



Gaming Streaming



Coaching



Plays Well with Others

The P-20HD can be seamlessly inserted into a variety of workflows. Use it on its own, or upstream or downstream of any Roland video switcher. Connect two cameras and switch/composite between sources to capture them for replay. Both HDMI inputs feature built-in scalars, providing worry-free connectivity with nearly any video source.

Switch Between Live Inputs and Instant Replay



HDMI 1



HDMI 2



REC



Output



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One Person Operation

A pro sports network broadcast has a dedicated team that handles replay duties. With the P-20HD, a single operator can easily mark, cue, and replay clips while managing other elements of a production. Simply register events as clips with button taps while recording, and then instantly play them back with dedicated panel switches. **Version 1.2** USB Keyboard, BOSS footswitch and expression pedal provide you to execute different switcher commands more easily.



Built-In Preview Monitor

With its onboard color display, the P-20HD makes it simple to manage and execute your workflow in real time. In recording view, the screen shows the current video input, plus critical SD card information like recording duration, remaining storage space, and available time. And in playback view, you can display cropped previews of all video clips for live replay or compilation into playlists.





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Direct-Access Controls

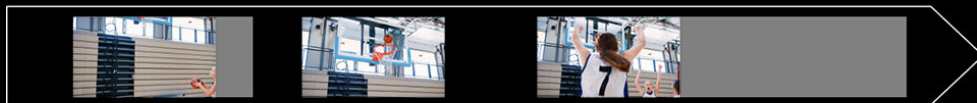
Filled with single-task hardware controls, the P-20HD provides a hands-on experience that lets you get the job done with zero frustration. Dedicated transport buttons include play, pause, forward, rewind, mark in, and mark out. A jog/shuttle wheel with optical encoding provides precise, fluid control to scrub clips for replay and editing, while the T-bar lets you adjust playback speed. Engaging the Speed Range function provides ultra-fine control, perfect for focusing in on tight action and contested plays.



Create Highlight and Training Reels

After the action's over, use the media playlist builder to aggregate clips into curated pro videos, ready for distribution and sharing on your favorite platform. Celebrate the best moments of a game on social media, or distribute practice and training sessions to coaches and players for further evaluation.

Playlist for Highlight Reels



Video Input Signal / Recorded File



Clip



Clip



Clip



Playlist



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Superb Audio Quality

The P-20HD features the high-quality sound processing that Roland is famous for. Stereo audio I/O is supported via embedded HDMI and analog RCA jacks, and there's a convenient headphones jack for signal monitoring. Onboard EQ, limiter, and delay effects are also available to enhance the sound and eliminate audio and video sync issues.



Universal File Compatibility

The P-20HD records natively in H.264*, one of the most universally supported file formats available. H.264 maintains high quality even at low bit rates, providing excellent video at reduced file sizes. All of the most popular online video platforms accept H.264 format, letting you upload files created on the P-20HD with no conversion steps in-between. **Version 1.2** The P-20HD exports projects and clips in MP4 file format.

**For maximum recording stability, the P-20HD automatically divides the recording file every three minutes.*

P-20HD Recording Times

SD CARD CAPACITY	RECORDING TIME
16GB	2 hours 50min
32GB	5 hours 45min
64GB	11 hours 30min
128GB	23 hours 00min
256GB	46 hours 00min
512GB	92 hours 00min

**The recording times listed above are approximate. They may differ depending on the condition of the card. If some still or audio files are imported, the total recording time may be less than these listed times.*

**Up to 12 hours of video can be recorded per project.*



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Visually Engage With Fans

Draw lines or diagram the trajectory of the action to help fans analyze the play and help make commentary easier to understand. Draw with various colors, and shapes, even control the playback speed of the video. Beginning with version 1.10, real-time annotation over video is economical, and simple with the P-20HD and a connected Wacom Tablet*.

*1 Compatible pen tablet models are [HERE](#)

*2 P-20HD can not record the annotation itself

See Live Annotation Example



A Winning Workflow Combination

Pairing the P-20HD with the advanced Roland V-60HD* video switcher creates a complete broadcast switching and playback solution that's ready to handle most any local production. Using one of the V-60HD's HDMI outputs, you can route any input source—including SDI—to the P-20HD for recording and instant replay.

Version 1.2 Replaying the current clip of P-20HD and switching input of V-60HD synchronizes via RS-232.





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SPECIFICATIONS

VIDEO

Video Processing

4:2:2 (Y/Pb/Pr), 8-bit

Input Connectors

INPUT 1--2: HDMI type A x 2
* Multi-format Supported

Output Connectors

MAIN: HDMI type A
* Multi-format Supported

PREVIEW: HDMI type A

Input Formats

720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p,
SVGA (800 x 600/60Hz), XGA (1024 x 768/60Hz),
WXGA (1280 x 800/60Hz), FWXGA (1366 x 768/60Hz),
SXGA (1280 x 1024/60Hz), SXGA+ (1400 x 1050/60Hz),
UXGA (1600 x 1200/60Hz), WUXGA (1920 x 1200/60Hz)

* The refresh rate is the maximum value of each resolution.

* Conforms to CEA-861-E, VESA DMT Version 1.0 Revision 11.

* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz).

* 1920 x 1200/60 Hz: Reduced blanking

Output Formats

MAIN:

720/59.94p, 720/50p, 1080/59.94i, 1080/50i, 1080/59.94p, 1080/50p

* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz).

PREVIEW:

1080/59.94p, 1080/50p

* The video signal frame rate can be selected at the SYSTEM menu (59.94 Hz or 50 Hz).

Still Image:

Bitmap File (.bmp) 1920 x 1080 pixels, 24-bit color, uncompressed.

PNG File (.png) 1920 x 1080 pixels (480 x 270 pixels for title image), 24-bit color, 8-bits alpha channel.

* It can be stored up to 16 files in each Projects.

* It can be stored one title image each for LIVE IN and REPLAY bus.

Recording mode

Instant Replay Mode

file format: MPEG2-TS

CODEC: H.264 High@L.4.1 10Mbps 8bit 4:2:0

AAC LC 128kbps, 48kHz, 16bit stereo

recording mode: resolution priority, framerate priority

* It can be selected at project settings.

Recording media

SD/SDHC/SDXC card



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Video Effects

Composition: PinP, SPLIT
Transition: CUT, MIX, WIPE
Other: Flip horizontal, Still Image Playback, Test pattern output, Annotation

AUDIO

Audio Processing

Sample rate: 24 bits/48 kHz

Audio formats

Linear PCM, 24 bits/48 kHz, 2ch

Input Connectors

INPUT 1--2: HDMI Type A x 2
AUDIO IN: RCA phono type

Output Connectors

MAIN OUT: HDMI Type A
PREVIEW OUT: HDMI Type A
AUDIO OUT: RCA phono type
PHONES: Stereo 1/4-inch phone type

Input Level

AUDIO IN: -10 dBu (Maximum: +8 dBu)

Input Impedance

AUDIO IN: 15 k ohms

Output Level

AUDIO OUT: -10 dBu (Maximum: +8 dBu)
PHONES: 92 mW + 92 mW (32 ohms)

Output Impedance

AUDIO OUT: 1 k ohm
PHONES: 10 ohms

Audio Effects

Delay, High pass filter, Compressor, Noise gate, Equalizer, Limiter, Test tone output

Audio Player

File format: WAV (Linear PCM, 48kHz/48kHz, 16bit, stereo)
* It can be stored up to 16 files in each Projects.



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Other Connectors

USB HOST port: USB A type (For USB flash drive, Wacom tablet, USB keyboard)
LAN port: RJ-45, 1000BASE-T (For remote control, FTP)
RS-232 connector: DB-9 type (Male, for remote control, switcher control)
CTL/EXP 1, 2: 1/4-inch TRS phone type
DC IN

Other Functions

Panel lock function
EDID Emulator
Export recording files (mp4)
Export and Import project archive files

Display

4.3 inches TFT Color LCD: 480 x 272 dots

Power Supply

AC adaptor

Current Draw

3 A

Power Consumption

36 W

Operation Temperature

+0 to +40 degrees Celsius
+32 to +104 degrees Fahrenheit

Dimensions

265 (W) x 216 (D) x 87 (H) mm
10-7/16 (W) x 8-9/16 (D) x 3-7/16 (H) inches

Weight (excluding AC adaptor)

2.1 kg
4 lbs 11 oz

Accessories

Owner's Manual
AC adaptor
Power cord

* 0 dBu = 0.775 Vrms