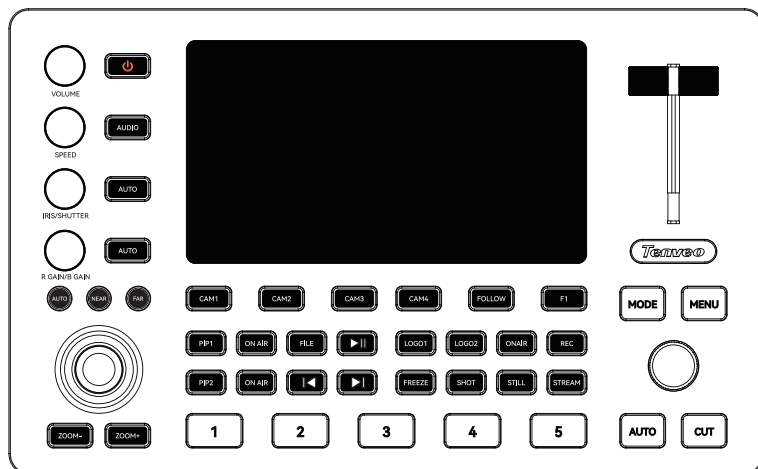


PC500

User Manual



V1.0

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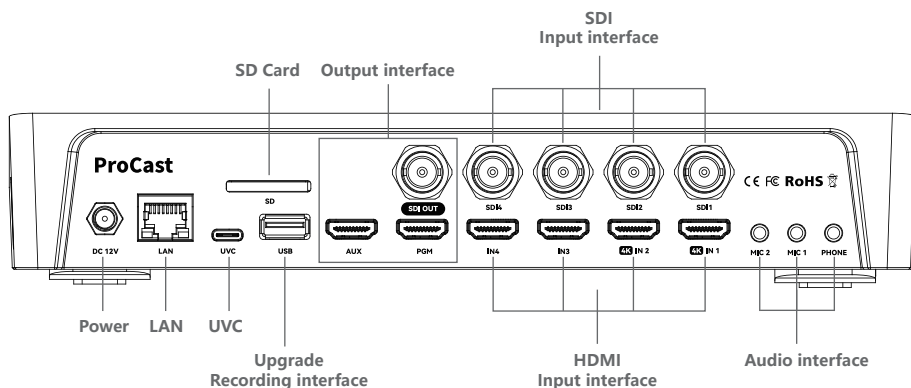
1. Quick Guide

The PC500 is a professional live streaming switcher with a 5.5-inch FHD screen.

- Inputs: Supports 4-channel flexible inputs—4 SDI and 4 HDMI (the first two HDMI inputs support HDMI2.0 with 4K). NDI input is also supported.
- Outputs: Features two HDMI outputs and one SDI output. All outputs can be customized as input channel/PST/PGM/MV.
- Audio: Supports two external audio inputs. You can monitor the mixed audio or input audio channel in real time by PHONE audio jack.
- Streaming: When connecting the device to a PC via the UVC port, the real-time audio and video signals can be transmitted to the computer for live streaming through the UVC interface. Users can also stream directly via Ethernet using the stream key and URL.

When using the UVC interface, the PC500 will be recognized as an HD webcam by the computer, automatically supporting MJPEG and YUY2 formats (USB2.0 defaults to MJPEG/USB3.0 defaults to YUY2). YUY2 format will offer superior image quality and higher decoding performance and is recommended.

Additional convenient features include PTZ camera control, scene presets, one-click chroma key, transition effects, audio mixing and monitoring, and recording—making the PC500 an all-in-one professional device for live streaming and recording.



2. Panel Operations

2.1 Video Section

2.1.1 PIP Layers

- PC500 provides two PIP layers.
- To preview PIP1/2 in PST, press the “PIP1/2” button (LED stays on). Press again to flash, opening layer settings for position and size adjustment for PIP.
- Switch input sources by numerical button, adjust PIP layer size with the knob, and move the layer with the left joystick.
- Press “ON AIR” to sync PIP1/2 layers from PST to PGM.



2.1.2 Logo Control

- Two logos can be added simultaneously (LOGO1 and LOGO2).
- When LOGO1/2 LED is steady, logo appears in PST; When LOGO1 or LOGO2 is in a flashing state, the position of the LOGO can be moved via the joystick, and the LOGO size can be configured by knob.
- Press “ON AIR” to sync flashing logo to PGM.



2.1.3 Media Source

- Playback/switch/pause videos or images.
- Long press “FILE” to toggle between video and image modes.
- ① Video mode plays files in the “video rec” folder.
- ② Image mode plays images in the “images” folder (When you need the pictures to switch in order, the naming method of the pictures can refer to the naming method of computer documents).
- Short press “FILE” to quickly enter the playlist to select source for media playback. Long press to show playback bar. You can adjust the start position by knob and lick knob to play video.

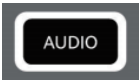


2.2 Auxiliary Functions

2.2.1 Power Button: Click to power on. Short press 2 seconds to lock/unlock keys. Long press 5 seconds to shut down device.



2.2.2 Audio Shortcut: Short press to access the audio menu.



2.2.3 Freeze/Shot Buttons: "FREEZE" freezes all current video in MV and PGM. "SHOT" captures a screenshot of the current PGM video. (Please insert USB disk or SD card to store the captured image)



2.2.4 Record/Stream Buttons: Short press to start/stop recording or streaming (wait for REC LED to turn off before unplugging storage). Recommended file systems: NTFS or exFAT.



2.2.5 The following figure shows the background image button. Short press to call up the background image in the main interface PAT.



2.2.6 PTZ Control: CAM1–CAM4 buttons directly call the aiming PTZ camera for control. When FOLLOW button is selected, the PTZ cam on PGM main layer will be selected automatically for control. F1 button is the PTZ cruise button. Save the cruise track in the PTZ menu of PC500. After saved, press F1 and then select the corresponding cruise position number to recall the cruise path.



2.2.7 The following are the source selection buttons 1-5, and the MODE button is used for mode switching. When the MODE button is green, it indicates T-Bar mode. In T-Bar mode, selecting sources 1-5 will first take effect in PST. When a source button is green, it means the source is currently in PST; when red, it indicates it is in PGM. To switch to PGM, use the AUTO button, CUT button, or by pushing the T-Bar. The AUTO button switches with transition effects, while the CUT button switches directly without effects. When the MODE button is red, it indicates Quick Switch mode, where pressing the corresponding source button directly applies the source to PGM.



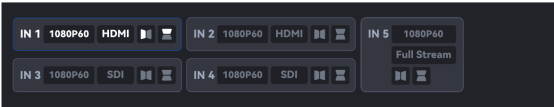
2.2.8 The figure below shows the Menu button. Pressing the MENU button from the main interface will give you access to the menu. Within the detailed menu, the MENU button can function as the Back button. In the main interface, long press MENU (When it is flashing) can trigger input view on screen. You can get the full screen view of input, select the number keys to preview the signal source in full screen in this state, push MODE to back to MV. Click MENU again to exit input view function.



3. Menu Functions

3.1 Input

- Choose between SDI or HDMI. Display current input resolution.
- In5 can be USB camera, pull stream, or MEDIA.
- Horizontal/vertical flipping is supported on each input.



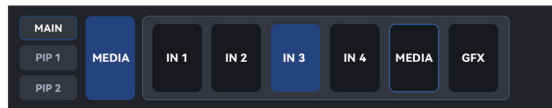
3.2 Output

- Set AUX and PGM outputs individually as Multiview or a single signal.
- Select output frame rate and rotate AUX output for portrait mode (90°/270°).

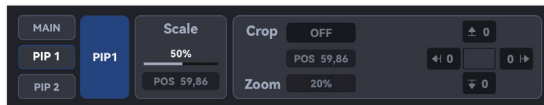


3.3 Layers

3.3.1 Assign input sources to MAIN and PIP layers.



3.3.2 Scale or crop PIP layers. Adjust scale and crop size via knob.

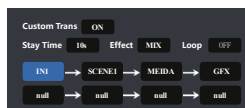


3.4 Effects

3.4.1 Choose from 30 built-in transition effects. Adjust duration, edge blending, FTB time and DIP color. The PGM screen will go black when press FTB. For DIP transitions, you can select the transition color or background using the knob and joystick on the second page.

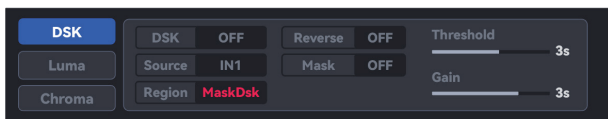


3.4.2 The Custom Transition Sequencer allows you to pre-program up to eight scenes and have them transition automatically in sequence. Use the knob to select input source from 1-5 /GFX/Scene 1-5. When the custom transition is enabled, the first set source will directly displayed on the PGM and start transition automatically.

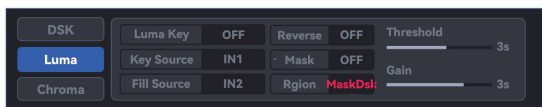


3.5 Keying

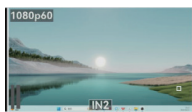
- DSK (Downstream Key): First, turn on the DSK cutout. After turning it on, press the knob to confirm, and then use the knob to select the source you want to cut out, adjust the threshold and gain according to the cropping effect, and turn on the DSK switch after clipping; Reverse represents reversing and swapping with the current cutout color value; Masks and mask regions represent the image within the region for cutout, and no settings are made outside the region. The size of the region can be enlarged or reduced using a knob, and the position can be adjusted by moving the joystick. After setting the corresponding parameters, you need to press the knob to confirm the settings. Once the keying settings are complete, you can use CUT button to switch the keyed layer to the PGM output. The bottom layer can be switched using AUTO button or T-bar. When you need to turn off DSK keying, you must first use CUT button to switch the DSK layer in PGM to PST, and then turn off DSK keying.



- **Luma Key:** First, turn on the Luma Key. After turning it on, press the knob to confirm, select the source for keying, then choose a different fill source to cover the areas removed. Adjust the threshold and gain to fine-tune the effect, using the knobs for more precise control. Reverse represents reversing and swapping with the current cutout color value; Masks and mask regions represent the image within the region for cutout, and no settings are made outside the region. The size of the region can be enlarged or reduced using a knob, and the position can be adjusted by moving the joystick. After setting the corresponding parameters, you need to press the knob to confirm. When the cutout is set, the cutout effect will be applied in PST. At this time, you can switch the bottom layer in PST by switching the numeric keypad, that is, switch the background layer after cutout. After setting the cutout in PST, you can switch to PGM by AUTO, CUT or T-bar. When you need to turn it off, you also need to switch to PST first and then turn off the cutout.



- **Chroma Key:** First, turn on the Chroma Key. After turning it on, press the knob to confirm, select the layer to key out via the knob. There are two modes for chroma keying: color picking and color selection. In color picking mode, a color picker box will appear on the input source. You can use the joystick to control the picker box to select the color for keying. In color selection mode, you can manually pick a color for keying using the knob and joystick. Masks and mask regions represent the image within the region for cutout. The size of the region can be enlarged or reduced using a knob, and the position can be adjusted by moving the joystick. After setting the corresponding parameters, you need to press the knob to confirm. When the cutout is set, the cutout effect will be applied in PST. At this time, you can switch the bottom layer in PST by switching the numeric keypad, that is, switch the background layer after cutout. After setting the cutout in PST, you can switch to PGM by AUTO, CUT or T-bar. When you need to turn it off, you also need to switch to PST first and then turn off the cutout.



3.6 Audio

● In the audio menu, you can set the volume, audio delay, and audio mode for each input source. There are three audio states for the signal source: ON, AFV, and OFF. Select the audio channel you want to modify using the knob. After selection, you can directly press the VOLUME knob to switch modes, or you can press the knob to select the audio channel and then move the joystick left and right to select the volume, audio delay, and audio mode. After the joystick is selected, all adjustments are made using the knob. On the main interface, a short press of the VOLUME knob can mute and restore the audio with one click.

ON: Mixed the audio channel. Set the channel as ON. The audio will always be audible.

AFV: Audio follows video. The audio will always follow the PGM video source.

OFF: Audio muted even if source is active in PGM.



3.7 Scene

3.7.1 PC500 supports 12 preset scenes and 5 customized scenes. Long press knob to save current PST scene; short press to recall.

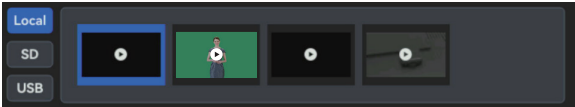


3.7.2 Supports multi-window merging with different sources on each window. You could select the number, position of windows in the merge mode, and the position where the window appear, and you can select different signal sources for each window. (Note: The same signal source cannot be selected repeatedly for the small window in the merge mode, otherwise the signal source will be occupied and will only appear in one of the windows)



3.8 Media Pool

3.8.1 Configure media input source. Under the current menu, you can select video signals from different storage devices. Choose USB or SD card when load media file from storage. To load media, please plug USB or SD card to device, the device will create images/logos/video-rec folder. The video playback materials are stored in the "video-rec" folder. Vide support h.264 codec with mp4, fls, ts format. Video resolution within 1080P60.



For the fifth video channel, you can choose whether to switch back to PST after playback. When this mode is enabled, the video on the fifth channel will automatically return to PST after playing in PGM.

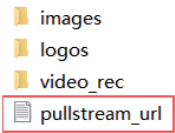


3.8.2 Connect USB cameras and choose supported resolutions.

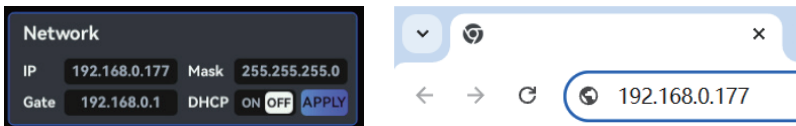


3.8.3 Import pull stream URLs via web or storage device(USB or SD card).

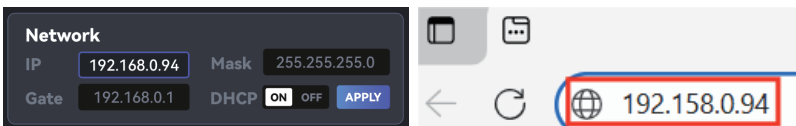
- Storage device filling: After inserting the storage device into the video switcher, a document named "pullstream_url" will be generated. Then, copy the streaming URL into this document and save it. Once the storage device is connected to the video switcher, the streaming URL can be read from this document.



- Webpage filling: Before entering the webpage, the video switcher and the computer need to be in the same network segment. They can be directly connected to the computer through the video switcher or both can be connected to the same LAN:
 ① Direct connection can be achieved by modifying the gateway of the video switcher or computer to ensure keeping the same gateway. After modification, enter the IP address of the video switcher in the address bar of the browser to access the webpage. If the video switcher can set the IP address to 192.168.0.177, mask to 255.255.255.0, and gateway to 192.168.0.1 in the system settings, then apply it. The IP address on the computer side can be set to 192.168.0. XX, and the last digit should be different from 177. Then enter 192.168.0.177 in the browser to enter the webpage. After entering the webpage, fill in the streaming code in the media menu.

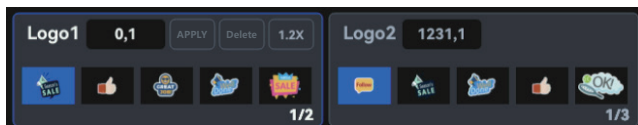


② If both are connected to the same LAN, the video switcher needs to first connect to the network cable of the LAN, and then turn on the DHCP in the network set by the system. At this time, the LAN will assign an IP address within the LAN to the video switcher. The computer and the video switcher need to be connected to the same LAN. After connecting, enter the DHCP of the video switcher in the browser and obtain the IP address to enter.



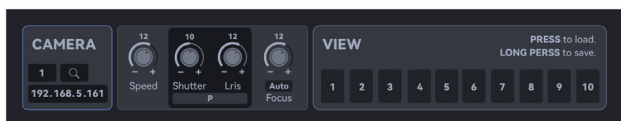
3.9 Image

The image menu allows for the selection and import of LOGO and background image materials; Select a specific application that needs to be applied LOGO or background image, click the knob to choose to apply the current LOGO or delete it, or select the magnification factor of the current LOGO; At the end of the logo, the logo imported from the USB or SD card can be loaded. (When you need to import a new logo or background image, simply insert the storage device into the video switcher, and the storage device will automatically generate the corresponding folder. Simply place the materials that need to be imported in the corresponding folder and choose to load them to import. The background image is placed in the images folder, image size should within 1920x1080, the format is PNG, the image arrangement and naming are consistent with the computer; the logo that needs to be imported is placed in the logos folder, logo size should within 960x540, logo support PGN format.)



3.10 PTZ Control

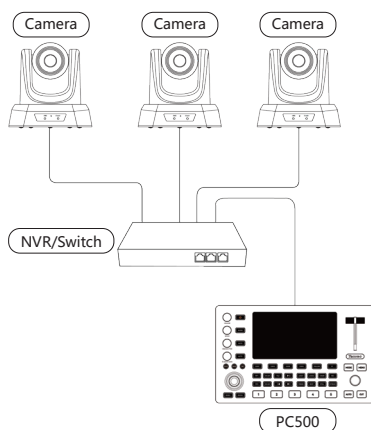
3.10.1 The PC500 supports the control of up to four PTZ (pan/tilt/zoom) cameras simultaneously over the network. Once cameras are properly connected, press the magnifier/search icon to automatically detect PTZ cameras on the same LAN and add them by selecting their IP address.



3.10.2

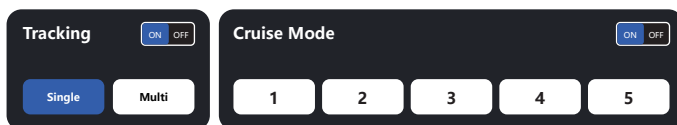
● Camera Selection and Joystick Operation

- ① Use the CAM1–CAM4 buttons to select the desired camera. When the button LED is steady, that camera is active and can be controlled by the joystick.
- ② The FOLLOW button enables “Follow Control”. When FOLLOW is active and the selected PTZ camera is displayed in PGM, you can control it directly without having to reselect the camera number.
- ③ The F1 button recalls pre-saved PTZ cruise paths. Press F1, then the numeric key (1–5) to trigger the stored trace.



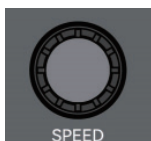
- PTZ Presets and Cruise Paths

- ① In the PTZ menu (page 2), you can trigger AI tracking on PTZ camera from PC500. (Only the PTZ from Tenveo support).
- ② In the PTZ menu (page 2), you can save and recall up to five cruise paths.
- ③ Select a cruise number, press the knob, and follow the on-screen instructions to record the camera's movement path. Press the knob again to save.
- ④ Once saved, you can recall a cruise path by pressing F1 and then the corresponding number key.



- Camera Adjustment Controls

- ① Speed: Adjusts the pan/tilt movement speed of the PTZ camera.



- ② IRIS/SHUTTER: Adjust exposure settings. Short-press the AUTO key to toggle automatic exposure on/off. In manual mode, short-press the IRIS/SHUTTER knob to switch between aperture and shutter for manual adjustment.



- ③ R-GAIN / B-GAIN: Adjust red and blue gain. Short-press the AUTO key to toggle automatic color gain on/off. In manual mode, short-press the knob to switch between red gain and blue gain for manual adjustment.



④ Auto/Manual Focus: When the AUTO key is illuminated, focus is automatic. When off, use the NEAR and FAR buttons to manually adjust focus.



⑤ Pan/Tilt/Zoom

A. Use the joystick to control pan and tilt.

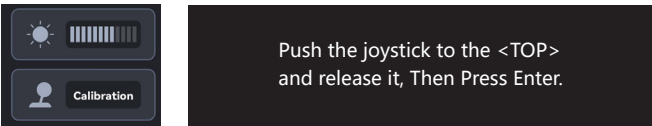
B. Use the ZOOM- and ZOOM+ buttons below the joystick to control zoom in and out.



3.11 System Settings

3.11.1 System settings include network settings, time, streaming bitrate/frame rate, recording format, and device information.

3.11.2 Joystick Calibration: Follow prompts to do joystick correction.

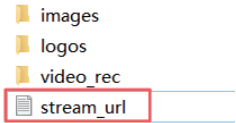


3.11.3 IP Configuration: DHCP auto or manual input via joystick and knob.

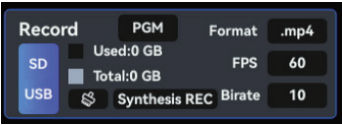


3.11.4 Web Access: After connecting to the LAN, in Settings Network, set DHCP to ON and click Apply. At this time, the LAN will assign an IP address to the video switcher. After obtaining an IP address, open a browser and enter the IP address of the video switcher in the navigation bar to enter the webpage of the video switcher (the computer and video switcher need to be connected to the same network). On the webpage, you can fill in the streaming address and click SAVE on the webpage to synchronize it to the live streaming platform. The streaming and recording streams can be set separately. (You can refer to section 3.8.3 to fill in the streaming address on the webpage)

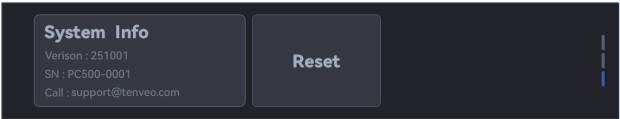
3.11.5 Streaming URL Import: The filling of the streaming address can also be imported through a USB disk or SD card. After the storage device is inserted into the video switcher, a file named stream_url will be generated. Then, the streaming address can be copied into the document and saved. When the storage device is inserted into the video switcher, the streaming address can be read.



3.11.6 Recording Settings: Select format (MP4/TS/FLV), frame rate (24/25/30/50/60 fps), bitrate (5-30 Mbps) and channels. At the top of the recording menu, you can select the recording channel, which can be confirmed and switched by clicking the knob. At the bottom, You can set merge recording or split record. Split recording will divide the rec file by 3h automatically, while merge recording will only create one rec file. After setting the recording parameters, press REC button to start recording.



3.11.7 At the end of the System Settings, you can view the product serial number and firmware version, as well as perform a reset operation on the video switcher.



Safety Instructions

Ignoring these precautions may result in personal injury or death, damage to the equipment, data loss, degraded performance, or other unpredictable outcomes.

- To avoid serious injury from electric shock, disconnect the power cord from the device before moving it.
- Before use, ensure that the power supply voltage is within the appropriate range for the product. Failure to do so may result in unexpected damage, performance degradation, or other unpredictable issues.
- Do not use loose or damaged power outlets, and avoid touching power outlets with wet hands, as this may lead to electric shock or fire.
- If you hear unusual noises from the power cord or power connector, immediately unplug the power cord and contact your sales representative. Otherwise, there is a risk of fire or electric shock.
- If foreign objects or liquids enter the product, or if cleaning is required, disconnect the power cord and any other cables from the device to avoid electric shock, fire, or damage to the product.
- If the power cord is damaged, do not attempt to repair it yourself. Please contact a qualified technician or dealer for assistance.

Due to ongoing product updates, the user manual you have may differ from the actual product. The latest version of the user manual can be downloaded from the official Tenveo website. This manual was last updated on December 16, 2025.