Vantage PSU-1 Instructions for Use

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture. To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only. Do not block ventilation openings.

Connecting

On the PSU main unit the connectors are located on the back. On the PSU monitor the connectors are located on the right side.
1. Connect the PSU touch screen monitor with the monitor cable to the 18-pin Lemo connector of the PSU main unit.
2. Connect the video signal from the camera to the BNC input *CAM A*.
3. If using a second camera on the set please connect this to the BNC input *CAM B.*
4. Connect sound *to AUDIO IN.*
5. Connect loudspeakers to the *AUDIO OUT* socket.
6. Connect additional monitors to one of the BNC outputs *VIDEO OUT*.
7. For automatic recording (of camera A and/or camera B) use a PSU Shutter Pilot Box at the camera. The Box will transmit the Shutter Pilot thru the BNC cable to the PSU.
8. If you want to transmit the Shutter Pilot using radio transmitters use one separate transmitter for the video image and one for the Shutter Pilot. Connect the second transmitter to the separate 2-pin Lemo Shutter Pilot socket.
9. Plug the power cable into the *230 VOLTS* mains power socket.

Starting the PSU

Press the *POWER* button. The small red LED on the PSU monitor shows that the unit is loading. After 120 seconds it will turn off and the LCD touch screen monitor will start working. Linux is a very safe operating system therefore the loading time can take a while since Linux is doing several tests very carefully.

Input Selector

To screen different sources you can use the four input buttons *CAM A, CAM B, CAM A+B* and *DISC*. *CAM A+B* will show both video images side by side. *DISC* will screen the already recorded takes. The selected source will be shown by the indicator on the upper right corner of the screen. The *HAWK* button (if installed) will switch the PSU monitor into anamorphic mode to view anamorphic squeezed shots.

TV-Out Switch

By pressing the *TV-OUT* switch you can activate the two BNC *VIDEO OUT* sockets to view the image on additional monitors. Both sockets are delivering the same signal.

Time-Display & Take-Display

The *Time-Display* shows the running time of the selected take. Press the *Time-Display* to switch to reverse mode (counting backwards).
The *Take-Info* is displayed right under the *Time-Display*. It shows recording date and recording time as well as the shot time and the screen time (the screen time differs from the recording time if a playback speed is selected higher or lower than 25 fps). By pressing this two lines the *Take-Info* will switch into the *System-Info* displaying number of recorded takes, number of hidden takes, number of short takes, free disc capacity in hours /minutes, total shot time and total screen time as well as visible screen time. The visible screen time is the total time of all takes which are not hidden. If you want to dub all this takes, this time informs you how long this will take.
Under this two lines you can see the capacity LED which informs you about free capacity of the disc. It will turn into yellow color when the disc is getting full.
Check for sufficient free capacity before recording!

Recording Shots

Press *REC* to start recording the screened shot. Use the *STOP* button to stop the recording. The takes will be numbered chronological beginning with take 1. You have to select *CAM A* or *CAM B* before recording.

Recording Shots with Shutter Pilot

To use this functions your camera(s) have to be equipped with a Vantage Sutter Pilot Box.
By starting the camera the PSU will automatically record the video input as well as the speed information of one or both cameras. The takes will be numbered chronological beginning with take 1. You can stop the automatic recording of one shot by pressing the *STOP* button for more than 0.8 seconds. The next take will be again recorded automatically. If you do not want automatic recording remove the Shutter Pilot Box from the camera.
This function works with the following cameras: Arricam ST & LT, Arriflex 535, 535B, 435, 35-3, 35-2C with Cinematography Motor Base, Moviecam Compact & SL. Panavision cameras on request.

Playback Shots

To playback a shot press *PLAY*. The PSU will show the shot as it was recorded from the video assist (25 fps). To play the shot reverse press *REV*. To navigate within the shot use the *SLOW* buttons or the *NAVIGATOR* button. To play the complete disc press *PLAY* or *REV* twice, the PSU will switch to continuous mode (take after take). *PAUSE* will stop the playback similar to "stop" on a video recorder. The position within the take will be captured for continuing the playback later at the same point. The *STOP* button will stop the playback and "rewind" the take.

Playback Shots recorded with Shutter Pilot

At shots recorded with Shutter Pilot a yellow *ORIGINAL CAMERA SPEED* button will appear under the *Fps-Display* automatically. To playback this shot press *PLAY*. The PSU will show the shot in its original speed as it would be projected after developing the negative (if the camera was ramped during the shot to high speed the final slow motion will be shown automatically). To deactivate the original speed function press *ORIGINAL CAMERA SPEED*. The PSU will playback the shot at 25 fps now. Press *ORIGINAL CAMERA SPEED* again to return to the original speed feature (the original recorded speed of a take will always be captured together with the take on the PSU for future use). To play the shot reverse press *REV*. To navigate within the shot use the *SLOW* buttons as well as the *NAVIGATOR* button. To play the complete disc press *PLAY* or *REV* twice, the PSU will switch to continuous mode (take after take). *PAUSE* will stop the playback similar to "stop" on a video recorder. The position within the take will be captured for continuing the playback. The *STOP* button will stop the playback and "rewind" the take.

Change Playback Speed

To change the playback speed of the selected take use the +/- buttons under the *Fps-Display*. By pressing the *Fps-Display* the numeric buttons will appear and allow faster entering of the playback speed (the first three buttons are pre selected buttons for various camera speeds - see USER SETTINGS). After entering a speed higher than 25 fps, the PSU will interpolate the additional frames to simulate a smooth high speed playback. To allow manual playback speed changing of takes which have been recorded with original camera speed deactivate the *ORIGINAL CAMREA SPEED* function by pressing this yellow button.

Ramping

To enter a ramp (speed change within a take) press the *RAMP* button and the ramp menu will appear. Select the points within the take where the speed should change with the *PLAY*, *SLOW* or *NAVIGATOR* buttons. With the *SLOW* buttons you can move the point slightly. Press *SET* on the ramp menu. The point will be stored and listed on the *Ramp-Display*. By pressing on this listed points you can select them (the selected point will headlined with a blue layer) and change the camera speed by using +/- buttons (see CHANGE PLAYBACK SPEED) or move this point again by using the *SLOW* (or *PLAY*) button.
The graphic ramp simulation (which appears on the screen) will help you to program the required ramp. After putting all points and speeds together press *APPLY* to activate the ramp. The PSU will calculate the ramp and will be ready for playback. If the ramp is already calculated you can press *EDIT* to adjust it again. By pressing *DELETE* you are deleting the marked point within the ramp. Pressing *DELETE* for 2 seconds you are deleting all points of a ramp.

Selecting Takes

Use the *SKIP* buttons to select takes. The *Take-Display* will show the number of the take which is selected. Pressing the *Take-Display* the PSU will show all recorded takes as icons (the takes are marked with different colors similar the different cameras, e.g. red for camera A). Press on one of these icons to select a take directly. If there are more than 36 takes recorded use the button *NEXT TAKES* to show a second table

of take icons an so on. You can also enter a take number with the numeric buttons. There will be a preview of the take. Press *OK* to select the take or ← to correct the entered take number.

Hiding Takes

This feature will help you to "clean" the PSU without deleting any take. Press the *Take-Display*. Press *HIDE/RECOVER*. To hide a take press its icon. Press it again to recover it. The buttons *HIDE ALL, SHOW ALL, INVERT SELECTION* assisting this process.

Deleting Takes

Press *DELETE* to get the *Delete-Menu*.
To delete a certain take press *DELETE TAKE …. w*hile this take is selected. After entering the security code for single-deleting the take will be deleted entirely.
To delete more takes press *DELETE MORE TAKES.* You can select the takes in the *take-menu*. After entering the security code for multi-deleting all selected takes will be deleted. You can stop the deleting process by pressing *STOP DISC DELETION* to safe takes which are not yet deleted. (The system will start to delete at the lowest take number).
To delete the entire DISC press *DELETE DISC*. After entering the security code for disc-deleting the DISC will be deleted entirely. You can stop the deleting process by pressing *STOP DISC DELETION* to safe takes which are not yet deleted. (The system will start to delete at the lowest take number).

Overlay

By pressing the *OVERLAY* button the PSU will store the displayed video frame. Moving now the connected camera or switching to a different input you can compare the new frame with the stored one.

Picture Settings

Press *SETTINGS* and select *PICTURE*.
In the *PICTURE SETTINGS* menu you can select the following functions: black & white, mirror X, mirror Y, inverse, mask- or zoom-feature for both camera inputs individually.
Zoom & Mask
You can mask the outside of a frame. Press the LCD screen where the mask should begin. Move your finger to the lower corner of the opposite side. The mask will appear. Use the *MASK OFF* button to remove the mask. Pressing the *MASK OFF* button again will put the mask again onto the screen. Selecting *ZOOM* in the *PICTURE SETTINGS* menu will replace the mask feature by a zoom feature which works similar. If you want to store a selected mask of zoom deactivate both functions by pressing their buttons in the picture menu again.

Audio Settings

Press *SETTINGS* and select *AUDIO*.
If a audio signal is lined up to the PSU it will be recorded automatically. Audio playback will be available at 24/25 fps only. In the *AUDIO SETTINGS* menu you can select the volume of the headphones.

User Settings

Press *SETTINGS* and select *USER*.
In the *USER SETTINGS* menu you can select the *short-takes-function*, the *fps-short-cuts*, the *second-unit-function*.
The *short-takes-function* allows to select the minimum time of the takes which have to be recorded. This means if you select e.g. 4 seconds every take shorter than 4 seconds will be not shown. This feature is ideal to avoid automatic (shutter pilot controlled) recording of gate checks etc. If you select 0.0 seconds all takes will be shown again. You can not loose any take since the PSU is recording all of them. This function is only controlling if short takes are shown or not. It can be selected at any time. Take numbers will disappear and will return when the *short-takes-function* is switched back to 0.0.
The *fps-short-cuts* allows to pre-set the three upper buttons in the numeric display (see CHANGE PLAYBACK SPEED). Enter the camera speeds with which you are working during the day. This makes it easy to select this speed later when viewing the shots.
The *second-unit-function* is needed when working with three or four cameras and two PSU systems on the set. You can switch the second PSU to the CAM C + CAM D. It will label both video streams accordingly.

Full Screen

Press *FULL SCREEN* to enlarge the video picture(s) to the full size of the monitor. A reduced number of functions (*PLAY, PAUSE*, etc.) is still available as well as all three displays (*TAKE, TIME, FPS*). Press *FULL SCREEN* again to get back to the standard mode.

Quitting the PSU

Press *EXIT* to shut down the PSU. The dialog "Do you really want to quit the PSU" appears. Press *YES*. The PSU will shut down. **WARNING! Disconnect the PSU from mains power only after shut-down process is fully finished (fans are switching off)!**

SPECIFICATIONS

Power requirements	220 to 240 V AC, 50/60 Hz
Power consumption	about 1.5 A max. at 25° C 240 V AC
Operating temperature	5°C to 35°C (41° F to 95°F)
Operating humidity	20 % to 80 %
Dimensions PSU main unit (w/h/d)	435 x 260 x 460 mm
Mass PSU main unit	24.5 Kg
Dimensions PSU monitor (w/h/d)	350 x 410 x 80 mm
Mass PSU monitor	8 Kg
Disc Capacity	approx. 4 h
Max. Playback Speed	425 fps

Input connectors

CAM A / CAM B	each BNC Composite 75 ohms terminated 1 Vpp
SHUTTER PILOT A / B	each LEMO TTL 5V
AUDIO IN	XLR 0 dBm

Output Connectors

VIDEO OUT	BNC Composite 75 ohms terminated 1 Vpp
VIDEO OUT	BNC Composite 75 ohms terminated 1 Vpp
AUDIO OUT	XLR 0 dBm

Supplied accessories
18-Pin PSU monitor cable 2 meters, Mains power cable 2 meters
Monitor holder

Optional accessories
18-Pin PSU monitor cables 4 & 8 meters, Shutter Pilot Box
Monitor table base, Monitor sunshade

Described Software version PSU-1.2
Design and specifications are subject to change without notice.
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