HU3

Useful shortcuts, menu items, and adjustments

Soft Reset – Resets HU3 settings to default values. De-selects lens, ring, camera, etc.

- Power on HU3 while holding Iris Reset. HU3 SW V2.186 and newer flashes "Soft Reset DONE" upon power-up, while earlier versions don't have a visual indication.

System Menu – displays current firmware version installed on HU3.

- To access: Menu > System > Enter. The SW version is displayed.
- Version 2.xx and above are the current, 10-point focus mapping system. Versions 1.xx have the legacy 6-point focus mapping system. See Updating Software section for important information about software updates and lens mapping.

Service Menu – displays digital Focus, Iris, and Zoom positions on HU3 display.

- To access: Menu > System > Enter > Right-Right-Up (on arrow keys). The screen shows Focus, Iris, and Zoom with digital readouts of each position. The numbers should move from 00000 to 65535 as each channel is moved from end to end.

Clear Lens Calibrations – lets user delete all lenses and their calibrations from lens list.

- To access: Menu > System > Enter > Right-Right-Down (on arrow keys) > Next.

Focus Knob Calibration – lets user re-calibrate end limits of focus knob.

- Ensure Lens Mapping is turned OFF before calibrating knob.
- The Focus readout in the **Service Menu** should read 00000 on the infinity side, and 65535 (within 30 counts or so) on the close focus side.
- To access: Go to **Service Menu**, then press Right arrow key once more.
    - Rotate focus knob counter-clockwise to mechanical end stop (infinity side) and press Enter (silver button). Rotate knob to other end stop and press Enter. The screen should say 65535. The calibration is not set until you press Save.

Zoom Offset Zeroing – eliminates digital offset that can cause zoom motor creep when Micro Force is attached to an HU3.

- Power on HU3. Plug in Micro Force to HU3, and press and hold Zoom Set and Reset buttons together on HU3 for 3 seconds. These buttons are labeled "s" and "r" and located in the inset labeled "Z" on the lower left of the HU3 front face.

Setting up a Custom Mode – lets the user assign the knob, slider, or Micro Force to control Focus, Iris, Zoom, AUX (MDR-3 only) or any combination of them.

- To access:
    - HU3 v2.14 and older: Menu > Mode > Choose > Custom > OK. Custom should appear next to Mode in the Menu. To assign, press Set-Up.
    - HU3 v2.15 and newer: Menu > Mode > Set-up.
- When using the HU3 (for Focus) with a single channel Focus/Iris unit that is controlling Iris, setting up a custom mode on the HU3 with Iris OFF will prevent the HU3 from transmitting Iris information. This way, if the single channel loses signal, the Iris motor will stay put, as opposed to snapping to the position set with the HU3 Iris slider.

Changing Focus Ring LED Brightness

- Set LEDs to ON or cover light sensor with finger so LEDs are lit up.
- On main HU3 screen (with FShow, Signal Strength, etc), the up/down arrows control LED brightness when they are lit. Performing HU3 soft reset resets LEDs to max brightness.

Troubleshooting Procedures and Tips

Problem: Iris motor jitters

- Check other motors – do Focus or Zoom jitter as well? If so, problem likely related to wireless issues:
    - Change channels – if previously on even channel number, switch to odd channel (and vice versa).
    - Swap out MDR/HU3 and see if issues persist.
- If only Iris jitters while other motors are smooth:
    - Go into HU3 service menu as detailed above.
    - Observe Iris counts. It is normal for the count to fluctuate up to 20 at a time. The motor should not move during these fluctuations, however.
        - Do the Iris counts jump more than 20 at a time when the motor jitters?
            - Switch MDR to cable mode. If Iris counts continue to jump (the motor will not move because the wireless is off), the problem is in the HU3 iris slider circuitry and the unit should be sent in for service.
            - If Iris counts stop jumping when MDR is in cable mode, the problem is related to the radio board on the MDR, which needs to be serviced by us.

Problem: Zoom motor creeps when used with HU3

- Zero zoom offset (see procedure above).
- Micro Force Null Adjustments (Micro Force additions coming soon).

Problem: Focus motor doesn't reach end of lens, reverses direction and/or spins wildly

- Focus knob calibration (see above).
- Does the problem only happen with Lens Mapping ON?
    - If yes, make sure software is up to date (at least above v2.12).
        - Likely due to a bad mapping of the lens. See Lens Mapping section for more information and suggestions (coming soon).
    - If the problem continues even with Lens Mapping OFF, re-calibrate focus knob.
- Make sure SW is updated to latest version (check website for latest version), but definitely at least above v2.12.
- Check motor in different port on MDR to see if motor malfunctions on Iris or Zoom.

Problem: The focus jitters or jumps at certain points on the lens

- Can also be caused by bad Lens Mapping – check if motor movement is smooth with Lens Mapping OFF.
- If motor jumps in same spot on Lens every time, it's likely that the Focus encoder inside the knob needs to be cleaned, which has to be done in-house by us.

- Wireless interference/range issues can cause motor jitter. To check for this:
    - See if Iris or Zoom also jitter. If they do, then the problem is a wireless issue.
    - Set up a custom mode on the HU3 where the Iris slider or Micro Force controls the Focus channel. If the motor movement is smooth, then there is a problem with the Focus knob itself on the HU3, and the unit should be sent in for repair.

Problem: The Focus knob drag needs adjusting

- Please download the tension adjust guide here: http://prestoncinema.com/Manuals/HU3_Focus_Knob_Tension.pdf

Problem: Iris slider doesn't reach end limits

- Calibrate Iris slider range (requires opening the HU3 and the use of a .050" flat-head screwdriver to adjust two potentiometers.
    - Open **Service Menu** and observe Iris counts at each end of slider. Bottom end should read 00000 and top end should read 65535.
    - Open back of HU3 and locate VR2 and VR3 adjustment pots on bottom of board near eyebolt.
    - Set Iris slider against bottom end stop. Push slider up from end stop a couple mm (to have a small amount of room before mechanical end stop). Adjust VR3 (it says Iris Offset on board next to VR3) until Iris counts in **Service Menu** read 00000.
    - Set Iris slider against top end stop. Back slider off from end stop a couple mm, as before. Adjust VR2 (it says Iris Scale on the board next to VR2) until the Iris counts in **Service Menu** read 65535.
    - VR2 and VR3 can affect each other, so you may have to adjust each a few times before both ends match the limits correctly.

Problem: Trouble with run/stop on film cameras

- What camera is selected in HU3? Menu > Camera > Choose. Make sure appropriate camera is selected if controlling film camera. Any time you are not using a film camera or do not need to control the speed of a film camera through the HU3, set the HU3 to AATON 35 in the Camera selection menu. If problems still persist:
    - Hold Reset button on MDR down for 10 seconds to clear out any previously stored camera settings.
    - MDR camera port could be malfunctioning – try MDR with different camera (preferably digital camera like Alexa or RED Epic).
- Check camera cables from MDR to camera – certain film cameras require special cables/interfaces to run properly. For instance, the Panavision Millenium XL requires a special Y-cable for run/stop which is different from the typical PV run/stop cable we sell.

Updating Software on the HU3

- Notes about software versions and lens mapping:
  - Versions 1.36 and below have the legacy (6-point) lens mapping. Versions 2.00 and above have the current 10-point lens mapping system, along with a new file system to store the lenses by focal length and serial number.
  - When updating an HU3 from v1.xx to v2.xx, all lens calibration data will be erased. If we do that update here in house, we can flash over the lens names (but not any calibrations) to the new software version so you do not have to enter them manually. You will still need to re-calibrate all lenses with the new system.
  - All updates from one v2.xx to another v2.xx do not alter any lens information.
- Necessary items: Serial to USB adapter (see list of recommended adapters at http://prestoncinema.com/downloads.html). Serial to LEMO cable from us (#4538). Download the installer for the latest SW version for PC or Mac from http://prestoncinema.com/downloads.html. Connect the USB-Serial adapter, install the necessary drivers for it to work properly, and start up the HU3 updater program. The HU3 should still be disconnected from the computer at this point.
- Procedure: Power down HU3 if it is on. Hold Iris Set button while powering HU3 on. The display reads “Ready to Load.” Connect the Serial to LEMO cable from USB-Serial adapter to the HU3. The updater program should recognize that the HU3 was plugged in, and ask if you would like to update the software. Click yes and wait for the update to complete.