

Ion Hardware Setup & Calibration

(Marco or Customer)

- 1) Remove slit lamp oculars via thumb-screw.
- 2) Mount Ion to slit lamp and secure with thumb-screw. Use screw driver if necessary.
- 3) Mount oculars to Ion and secure with supplied thumb screw.
- 4) Plug in included power adapter into outlet on back of stand (first choice) or any nearby power outlet near where Ion is installed.
- 5) Mount, using supplied Velcro strips, the Bluetooth Box to back of Stand or nearby the above power adapter.
- 6) Connect Bluetooth (BT) box to the USB port labeled "1A" on the Power Adapter via supplied USB cable. This provides power to BT Box. Verify the light on side of BT Box is on/red.
- 7) Connect Foot Pedal or Joystick Cable (Marco Slit Lamp only) to Bluetooth box.
 - a) Joystick Cable (Marco Slit Lamp only) 1) Connect cable to back of Slit Lamp (SL) Power Supply (3-pin connector), located under SL table top. Run cable down SL arm and plug into BT Box (per #5 above). 2) Change switch under SL base to "T" by tilting SL forward and reaching under left side and changing switch position. (FYI, one position will allow SL to boost light to max "B" (default) and other position will allow joystick Trigger "T" to capture image with Ion). See below.



- b) <u>Foot Pedal Cable</u> (All other Slit Lamp Models) Plug end of Foot Pedal cable into port on BT Box (per #5 above). Locate Foot Pedal between chair/stand.
- 8) **Mount the iPhone to lon (**with the Home circular button & power connector to the right) by pressing the back of the top lever and tilting the iPhone from bottom to top, fitting securely under the lever and releasw lever.
- 9) Connect 10ft Lightening cable to iPhone 6+/6S+. Use wire-ties to "neatly" hold cable to slit lamp, slit lamp arm/stand and run it down and connect to the USB port labeled "2.4A" on Power Adapter (Step 4 above).



10) Par-focal Ion with the individual Slit Lamp. The last step in the installation process is to set the Ion's focus to match what the user sees through the slit lamp. Knowing that ALL SLIT LAMPS ARE NOT CREATED EQUAL, each Ion installation must be "checked and verified by the following procedure. Ion's are shipped from the factory and QC's to match an "average" slit lamp optics. Since Ion's will be installed on various makes and models, some new, some very old, it is VERY important that they be verified on each users make/model slit lamp. Also, since each user is required to set their slit lamp oculars to neutralize their individual prescription, we must then set Ion to match these results on the Ion/iPhone screen. This par-focal process requires the use of the "Aiming Post" (Focus Rod) that is shipped with every slit lamp. Here is the 2-minute process:

<u>Step #1</u>

- a) Install the Focus Rod into the mounting hole, making sure the correct surface is facing forward.
- b) Set the Slit Lamp (SL) to its highest magnification.
- c) Set the SL aperture and brightness accordingly with the light source off to a 90 degree angle, scrapping the light across the focus rod surface.
- d) Adjust each ocular individually to bring the focus rod into its sharpest focus in order to par-focal the user to the slit lamp. Note the numerical value on each ocular.

<u>Step #2</u>

- e) Open the Ion App, locate and touch the Focus Icon to open the Focus "slider". Slide (with finger) the green "Focus" slider up/down to match the focus on the iPhone screen, to what you observe in the oculars of the SL.
- f) The goal is to make the Ion/iPhone screen match what is in oculars.
- g) Write down the value that is next to the slider. The focus scale is from 0.00 to 1.00. The Ion optics, from the factory, are set to 0.60 the sliding scale. This should be appropriate for most slit lamps. Acceptable range is +/- .05 (0.55-0.65). If your Ion par-focal results are outside this range, please set your value in the "Focus Position" field in the Setup/Advanced Menu, under Camera Defaults. (Setup>Advanced (Basic)>Camera Defaults>Focus Position=enter new value. Make sure you use the existing format (i.e. 0._ (your value).
- h) In order for the new value to be accepted, the App must be closed by double tapping the round "home button" on the iPhone and swiping up to close the App. Re-launch the App and check the value was accepted under the "Focus Icon" on Home Screen.



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