LEO BODNAR
ELECTRONICS

4K Lag Tester
Quick Start Guide

Thank you for purchasing a Leo Bodnar Electronics 4K Lag Tester.

Contents

1 x 4K Lag Tester.
1 x 3m USB A-B Cable.

Description

The Leo Bodnar 4K Lag Tester allows a user to see the propagation delay from signals on a HDMI source to the moment they are displayed in light from the screen. This is a valuable measurement for people when this value is critical in such settings as gaming, medical professions and television production.

Getting Started

To get started with this device simply plug in a USB cable and HDMI cable to a display. Please note the device is shipped set to output 3840x2160p60, if your device does not support this frequency you will need to adjust the resolution using the downloadable config application from the product page's downloads tab:

https://www.leobodnar.com/shop/index.php?main_page=product_info&cPath=137&products_id=317

Measuring Lag

1. Plug the HDMI cable into the HDMI port on the monitor or television. Please note that this may be a specific port for 4K resolutions.
2. Plug in the USB cable into a power port, USB portable power supply or computer.
3. Wait for the lag measuring screen to appear with its 3 flashing bars alongside the left.
4. Place the device over the flashing bar you wish to measure, use the target to help align the sensor directly over the bar.
5. The display lag will then be displayed on screen.
6. Leave the device for a few seconds to confirm the reading is stable. See below if the reading drifts.
7. Record the lag measurement.

Hints and Tips

The lag measurement will most likely differ between the three bars. This will depend on how your display creates the image. We recommended taking an average of all three values, which should be equivalent to using the centre bar.

What to do if your reading drifts

If you find that the reading is not stable, this could be because of one of the following problems.

There is a picture in picture display, on screen menu, other form of device generated video.
The frame rate is converted to a native frame rate for the display to display the images, this can happen when testing non- standard rates, like 24fps.
The display does not lock to its video input, this is very rare, but can occur.

Device Update Bootloader and Firmware Update

To update the device, download the update utility from the product page and run the HDMI4k_FirmwareUpdater.exe file.

1. Press "Activate Bootloader", the device will reset and re-appear as a "Bootloader" in the upload utility.
2. Press Load Firmware, this will then take 3-4 minutes to load the firmware on to the device.

For more help and additional formats and resolution, contact support@leobodnar.com