



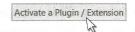
LASR Advanced Camera Extension

Setup: (Internet Connection Required)

1. Open LASR, and click on the "Plugins and Extensions" button.



2. Click on "Activate a Plugin / Extension"



3. Enter the Activation Code shown below, and click "OK".*





- **4.** LASR will prompt you to download and install an additional piece of software. Follow the on-screen instructions. **
- 5. Plug the LASR Advanced Camera into a USB port on your computer.
- 6. Re-open LASR if necessary, and click on the "Plugins and Extensions" button.
- 7. Turn the "On / Off" switch for your newly activated extension to "On".
- **8.** You can then go into settings and change the resolution mode of the camera for your preferred usage (standard/high resolution for infrared, or high frame rate for recoil)

Resolution: Normal Quality *Recommended Higher Quality High Framerate (for recoil kits) Timer O Normal Quality *Recommended

More Information:

- Click on the "Information" link next to the on/off switch for the extension to go to the tutorial for this extension, where you can find more info on how this extension works and what it does.
- * Just like plugins, the LASR Extensions are permanently tied to the software license they are activated on, meaning they will move with your license to a different computer. After moving, the additional software can be re-installed by clicking on "Complete Installation" in the "Plugins and Extensions" dialog.
- ** If the installation was not successful, or you accidentally uninstall the software, you can repeat the installation by clicking on "Complete Installation" next to the on/off switch for the extension. If this is not shown, then the installation was successful.

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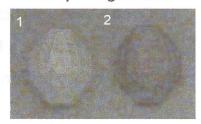
Camera Troubleshooting

Gain issues:

The LASR Advanced Camera is not built for low-light conditions, and can have gain issues if used in very low lighting. This is especially true when used in the high-frame-rate setting, as 200 FPS requires good lighting.

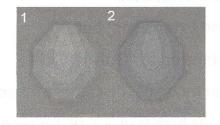
If you are seeing small flashes, speckles, and general inconsistent fuzziness in the camera feed, you may need to increase your lighting, as this can interfere with shot detection.

Example of gain issue:



Infrared Interference:

Example of infrared "wash out":



The LASR Advanced Camera can see infrared light so that it can detect infrared lasers. A side effect of this is that the camera feed can be degraded by infrared interference.

Symptoms: Strange blue or red tint to camera image, extremely "washed out" details and colors. Light that is visible to the camera, but not the naked eye.

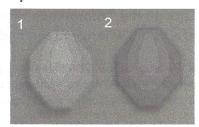
Remedy: Infrared interference can affect shot detection, and should be avoided or removed if it is causing issues. Sources of infrared light can include remote controls, certain types of heaters, natural light (sun/moon), and older incandescent light bulbs (Flourescents, CFLs, and LEDs are fine).

General Image Quality:

The LASR Advanced Camera utilizes a manual focus lens, which can be adjusted by rotating the lens. Be careful not to tighten the lens too much or remove it, as doing so may damage the camera.

For infrared, there is a "high" resolution setting that will improve the camera image, but will put more demand on your computer. The high-frame-rate setting for recoil may show some image degredation, but crystal clear images are neither required or expected with this setting.

Example of a normal camera image:



If you need assistance, please contact LASR Team LLC for support

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