

## LWDH Option

### Lock Wire and Drilled Hardware Option for Foveal Mounts: Installation Manual

## FOVEAL SYSTEMS

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### ***READ ME FIRST***

This option adds steps to the installation procedures found in the

#### **Foveal Camera Mount Installation Manual.**

Reading through this manual first, and then the other manual should make the overall installation process clearer.

In any case, read both manuals before installing your first Foveal Camera Mount with the LWDH.

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**Contact Me If You Have Any Questions, Comments or Suggestions.**

# 1. Overview

The **Foveal Rigid Camera Mounts** and **Foveal Fine-adjustment Camera Mounts** are finely adjustable camera mounts for small-to-medium sized "box" cameras, camera enclosures and other instruments (such as lasers). They allow each position of the pan, tilt and, in some models, roll axes to be locked down so they cannot be casually changed, either deliberately or accidentally. The **Rigid Mounts** are intended for environments where they will be subjected to extreme bumps or twisting forces. The **Fine-adjustment Mounts** are less expensive and less robust 2-axis mount designed for less demanding environments. See:

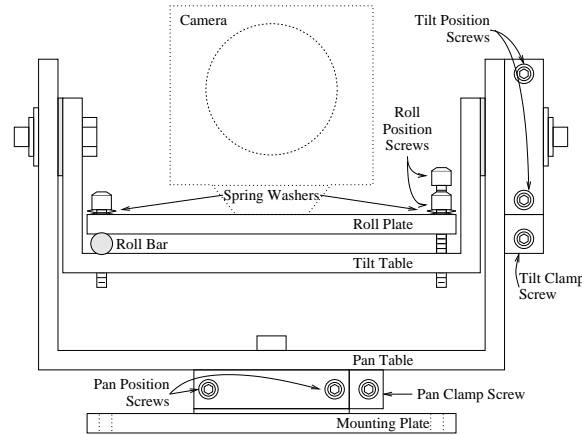
[http://www.Foveal.com/rigid\\_mount.html](http://www.Foveal.com/rigid_mount.html)  
[http://www.Foveal.com/fine\\_mount.html](http://www.Foveal.com/fine_mount.html)

However, we are not sure the adjustments would hold if they were subjected to frequent or constant vibration, so we optionally build the mounts with drilled Position Screws and provide Lock Wire so the adjustments can be double locked.

This manual illustrates how to use Lock Wire to ensure the mount is double locked,

A by-product of installing Lock Wire is that it leaves a highly visible and easily inspectable indication that the screws in question are secured and not easily changed.

**Figure 1-1** and **Figure 1-2** labels the various parts of the Rigid and Fine-adjustment Mounts before the Lock Wire option is added.



**Figure 1-1.** Front View of a Rigid 3-Axis Mount



**Figure 1-2.** Front View of FM1\_2a and FM3\_2a Fine-adjustment 2-Axis Mounts

## 2. Double Locking the Pan and Tilt Adjustments with Lock Wire

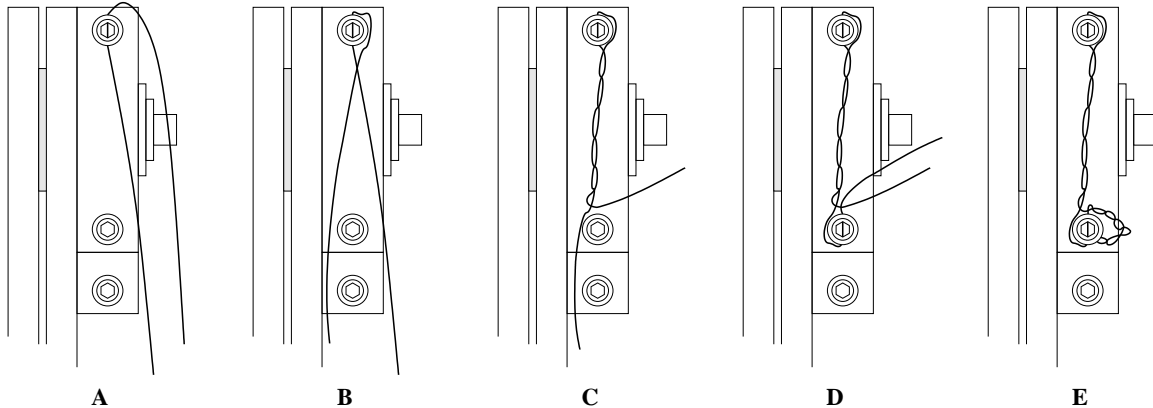
**Caution: The Lock Wire is sharp!**

**The Lock Wire should be cut with wire cutters, not scissors.**

Notice that each Position Screw has a pair of small holes drilled in the side of the socket head.

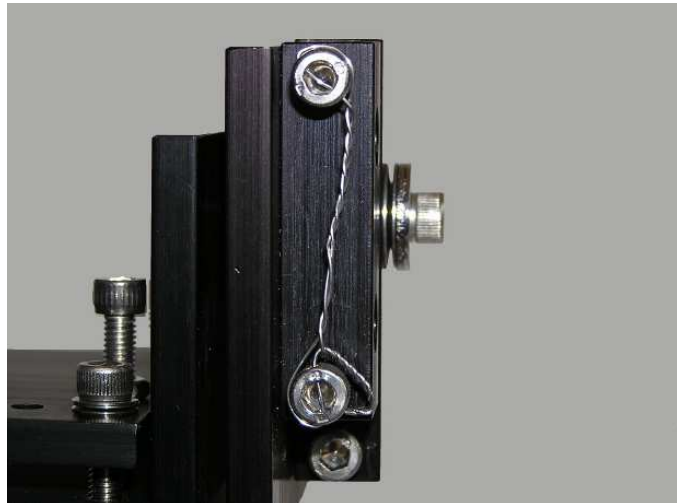
**Do not thread the Lock Wire through these holes yet.**

Adjust the Mount as described in the **Foveal Camera Mount Installation Manual**.



**Figure 2-1.** Steps in Lock Wiring of Tilt Position Screws

- After each pair of Position Screws is set, thread a 7 inch length of Lock Wire through the two holes drilled in the head of one of the Position Screws, as shown in **Figure 2-1, A and B**.  
Note that the drilled holes in the Position Screws can be in any position.  
The goal is to resist the counter-clockwise loosening of the Position Screws.  
**We will install the Lock Wire so as to oppose that loosening.**
- Using needle nose or flat nose pliers, twist the Lock Wire against itself, forming a braid.
- Twist the wires most of the way towards the other Position Screw. **Figure 2-1 C**.
- Dress the braid so one strand of the Lock Wire will oppose the loosening of the Position Screw, and thread it through the drilled Position Screw. **Figure 2-1 D**.
- Twist the remaining strands of Lock Wire together.
- Leaving about ½ inch of braid, cut the excess Lock Wire off. "Hide" the cut end, which is usually sharp, under the screw head. See **Figure 2-1 E** and **Figure 2-2**.
- Notice that the Lock Wire resists the counter-clockwise loosening of both Position Screws.



**Figure 2-2.** Tilt Position Screws with Lock Wire