

# SYNRAD Technical Bulletin

# 0006

Technical Issue: Mounting Firestar f-Series f201 and f400 Lasers

Date: 20 October 2005

## Description:

We have discovered that some customers are using more than three fasteners to mount Firestar f201 and f400 lasers. These lasers are designed so that three fasteners, one at each mounting location, will properly secure the laser in any application. Using two or more fasteners per mounting location will stress the laser chassis, resulting in damage to the laser. Follow the steps below to ensure that your laser is correctly mounted.

## Mount f201 / f400 Laser From Above

**Note:** Refer to f201 or f400 Outline and Mounting drawings for hole placement and dimensions.

- 1 **f201:** Drill and tap three M8×1.25 or 5/16–18 UNC holes in your mounting surface. These holes must correspond with the thru holes in the laser's baseplate (labeled 'A' in Figure 1).

**f400:** Drill and tap three M10×1.5 or 3/8–16 UNC holes into your mounting surface. These holes must correspond with the thru holes in the laser's baseplate (labeled 'A' in Figure 1).

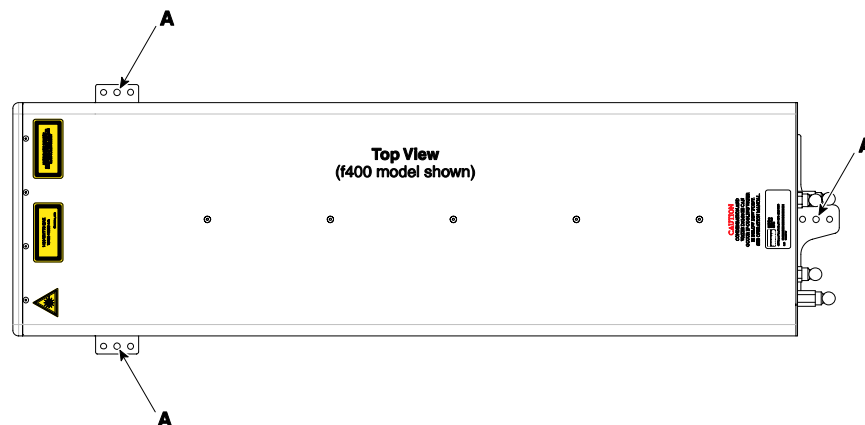
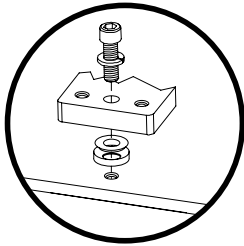


Figure 1

- 2 Assemble the three spherical washer sets (included in the laser's ship kit) as detailed in the Outline and Mounting drawing.
- 3 Place the spherical washers over the threaded holes in your mounting surface.

- 4 Carefully place the laser on the spherical washers so that each thru hole in the laser mount aligns with the spherical washer and threaded mounting hole. See Figure 2.



Insert metric or SAE fastener thru laser mount and spherical washer set into threaded mounting plate

Figure 2

- 5 Insert the appropriate metric or standard fastener through the laser base plate and spherical washer set into the threaded hole of the mounting surface.
- 6 **f201:** Turn screws by hand until the threads engage and then torque to a value of 12 Nm for metric fasteners or 13 lb/ft for standard UNC fasteners. Do not overtighten.  
**f400:** Turn screws by hand until the threads engage and then torque to a value of 24 Nm for metric fasteners or 23 lb/ft for standard UNC fasteners. Do not overtighten.

Mount f201 / f400 Laser From Below

**Note:** Refer to f201 or f400 Outline and Mounting drawings for hole placement and dimensions.

- 1 **f201:** Drill three 8.5 mm or 0.332” holes in your mounting surface. These holes must correspond with the threaded holes in the laser’s base plate (labeled ‘M’ for metric and ‘S’ for standard in Figure 3).
- f400:** Drill three 10.5 mm or 0.413” holes in your mounting surface. These holes must correspond with the threaded holes in the laser’s base plate (labeled ‘M’ for metric and ‘S’ for standard in Figure 3).

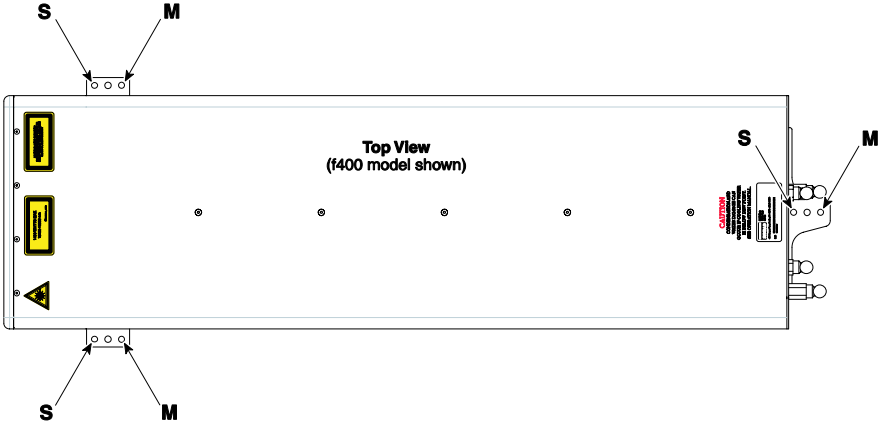
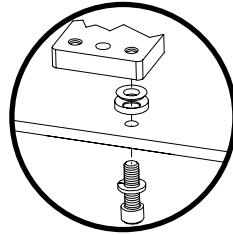


Figure 3

- 2 Assemble the three spherical washer sets (included in the laser's ship kit) as detailed in the Outline and Mounting drawing.
- 3 Place the spherical washers over the drilled holes in your mounting surface.
- 4 Carefully place the laser on the spherical washers so that each threaded hole ('M' or 'S') in the laser mount aligns with the spherical washer and drilled mounting hole. See Figure 4.

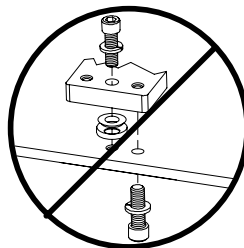


Insert metric or SAE fastener thru mounting plate and spherical washer set into threaded metric or SAE hole in laser mount

**Figure 4**

- 5 Insert the appropriate metric or standard fastener through the mounting surface and spherical washer set into the metric or standard threaded hole of the laser base plate.
- 6 **f201:** Turn screws by hand until the threads engage and then torque to a value of 12 Nm for metric fasteners or 13 lb/ft for standard UNC fasteners. Do not overtighten.  
**f400:** Turn screws by hand until the threads engage and then torque to a value of 24 Nm for metric fasteners or 23 lb/ft for standard UNC fasteners. Do not overtighten.

**Important Note:** As shown in Figure 5, DO NOT use more than one fastener per mounting location. Using two or more fasteners per mounting tab will cause damage to the laser; use only one fastener per location to mount the laser.



Do not use more than one fastener per mounting foot. Doing so will damage the laser

**Figure 5**

For further information contact SYNRAD at 1.800.796.7231; outside the U.S., dial +1.425.349.3500 or fax us at +1.425.349.3667.