



FC Mount 808 Mounting & Modification Instruction

- 1) Since there are only 2 fasteners securing the FC Mount 808 (FCM808) to your rocket, we suggest mounting with the screws penetrating the body wall into a bulkhead, or at least some backing material to increase the grip length of the screw threads.

The provided mounting holes are sized and countersunk for #4 flathead screws:

- a. Two #4 x 5/8" flathead sheet metal screws are provided with the 808#8 mount. These should be long enough to penetrate most body tubes and engage a wooden or plastic bulkhead behind the tube wall.
- b. For particularly high-G launches or unusually thick body tube walls, $\frac{3}{4}$ " screws might be substituted for deeper penetration into the bulkhead.
- c. If mounting only into the body tube wall, $\frac{1}{2}$ " screws could be used (remember that the length of flathead screws is specified as the total overall length of the fastener, NOT the length under the head of the screw);
- d. Body tube and bulkhead material will determine whether sheet metal or machine screws should be used.

- 2) Dry fit the FCM808 to your rocket's body tube to check outside diameter (OD) match:

- a. Each FCM808 is manufactured to a standard nominal OD (PML phenolic body tube). Actual tube ODs vary from manufacturer to manufacturer, across different tube materials, and as a result of tube strengthening and finishing operations;
- b. You can more closely fit your FCM808 to a specific body tube by wrapping a sheet of sandpaper around the tube and sanding the mount to match the curve.
- c. **NOTE: Do not sand the FCM808 in a way that removes material from the center of the curve on the back of the mount – removal of an excess amount there will result in the DVR Holdown Screw protruding from the back curve of the FCM808 and scratching or damaging your rocket.**
- d. Since the exact fit of the FCM808 to the rocket does not materially affect its performance in flight, and if you have multiple rockets of the same nominal OD, you may wish to shape the back of the FCM808 to a profile that is an average of those multiple actual ODs.

- 3) The FCM808 is easily mounted to the outside of your rocket's body tube using two screws. No pilot hole is necessary in most phenolic or similar materials, though pilot holes may make the mounting task easier. Drill pilot holes only one at a time to ease the alignment task and prevent unnecessary penetrations in the rocket body.
 - a. Place the FCM808 on the main rocket body tube along its longitudinal axis on a radial well clear of:
 - i. Launch lugs or buttons;
 - ii. Protrusions such as fins below the DVR in its view field;
 - iii. Any altimeter or other body tube venting penetrations. In particular, the FCM808 should be mounted well BELOW any altimeter vents.
 - b. You might wish to use double-sided tape to test your proposed mounting position for a satisfactory view field – temporarily mount the FCM808, insert and secure your DVR 808, shoot a few seconds of video, then view the result on a computer per the DVR User Manual;
 - c. If needed, reposition the unit and repeat step b. When you are satisfied with your chosen mounting position:
 - i. If you are using pilot holes, mark for one of them and drill it;
 - ii. Install one mounting fastener finger tight;
 - iii. Mark for the second pilot hole or fastener and repeat steps i. and ii;
 - iv. Tighten both fastener, keeping in mind what kind of material you are mounting into;
- 4) To insert your DVR 808 into the FC Mount 808:
 - a. Remove the keychain from the DVR keychain loop;
 - b. Screw the provided #4-40 pan head machine thread DVR Holddown Screw through the keychain loop even with the back of the DVR. The screw will engage the rubber coating on the DVR but will not damage the underlying plastic.
 - c. Insert the lens end of the DVR into the bottom cup of the FCM808 cavity with the buttons facing outward from the rocket body;
 - d. Swing the DVR 808 fully back into the FCM808, pressing the DVR fully down and into the cup, so that the keychain loop is pressed against the mounting boss on the back of the mount cavity. The fit will be quite snug, to prevent unwanted vibration of the system during flight. The Holddown Screw should now line up with the hole through the back of the mount;

- e. Tighten the DVR Holddown Screw so that the DVR is firmly secured against the mounting boss behind the keychain loop. Over-tightening may result in cracking or breaking the keychain loop, so just snug the loop against the boss.
- 5) When removing the DVR 808 from the FCM808, it may help to leave the DVR Holddown Screw partially threaded through the keychain loop such that it will not hit the FCM808 top fairing when the DVR is swung out from the mount cavity by pulling on the screw. Once the DVR is swung clear of the top fairing, the screw can be used to pull the DVR up from the bottom of the mount.
- 6) You can use the features of your DVR 808 to:
- a. Record an audio note of each pre-flight setup, field conditions, or other associated sounds;
 - b. Snap a shot of the filled out Flight Card;
 - c. Record video or stills of the field, the launch pad, or even the crowd before mounting your rocket on the launch rod or rail for flight;
 - d. Record post-flight observations or notes.
- 7) Flight Commander Systems will welcome any comments or suggestions you wish to make about the FC Mount 808 and its performance on your rockets! Just send us a comment from the Contact page at: flightcommandersystems.com.

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