

Addendum for Eggtimer Rocketry Ham (70cm) Products

The Eggtimer TRS GPS/Flight Computer and the matching Eggfinder LCD Receiver are now available on the 70cm Ham band, as an ordering option. (You can not use a 900 MHz unit on 70cm, the radio modules are custom tuned for the band). There are several advantages to using the 70cm band over the standard 900 MHz band (or in the EU/UK, 869 MHz).

- Increased range – You can expect about twice the range, or over 50,000', for the same 100 mW output power as the 900 MHz TRS.
- Versus 250mW or higher-power 900 MHz units, the 100 mW TRS will get you enough range for almost all HPR projects with less power, which means a smaller battery and/or longer battery life.
- More channels – There are 300 channels available over a 30 MHz spectrum (subject to the restrictions of your local band plan, of course).
- Your TRS sends out the call sign during transmissions, so it is fully Ham compliant.

Note: Use of 70cm Eggtimer Rocketry products REQUIRES a valid FCC Amateur (“HAM”) Radio license, or internationally the equivalent thereof. You MUST provide us a valid Ham call sign, issued by the FCC or the appropriate international licensing body in order to purchase these products from us.

Note also that use of these products implies that you have a working knowledge of your local radio spectrum regulations, and the customary usage allocation of those frequencies commonly referred to as a “band plan”. We strongly suggest that if you do not know which 70cm frequencies are available for use at your launch site that you find the local ARRL chapter (US) or the international equivalent for guidance. YOU are responsible for using this product within the bounds of the laws and customs that govern radio use... that’s what your license is for.

The default as-shipped frequency for 70cm Eggtimer Rocketry products is 433.000 MHz. This frequency is fairly compatible with the band plans almost everywhere in the world, however we STRONGLY recommend that you do NOT keep it on the default. We recommend the use of frequency boards at your club’s site in order to prevent possible conflicts... you do NOT want to lose your rocket because you were “looking” at somebody else’s rocket on the same frequency, and you definitely do NOT want to be “the guy” that made somebody else lose THEIR rocket.

Eggtimer TRS Changes

Hardware:

The 70cm Eggtimer TRS is shipped with a stubby “rubber duckie” antenna and a RP-SMA board-edge connector, rather than the wire antenna. This is because a wire antenna would be almost 7” long, which may very well be too long for the nose cone of many projects. As a side benefit, it provides additional gain over the wire antenna... about 1 dB, which doesn’t sound like much but every bit helps. Please follow the instructions in the Eggtimer TRS Assembly Guide for directions on installing the RP-SMA connector.

Software:

Note: Support for the 70cm band requires firmware 2.10 or higher, and is NOT available on the earlier "A" version of the Eggtimer TRS boards, since it must be ordered on 70cm. It is possible (but not trivial) to change your TRS to 70cm... contact us for details if you're interested.

The primary difference between the 900 MHz version of the TRS and the 70cm version is in the frequency selection screen (ctrl-F from the terminal Main Menu). The TRS can be programmed with a base frequency of 420 MHz through 449 MHz, with a secondary step of 100 KHz (0-900 KHz by 100). This gives you a range of 420.000-449.900 MHz, in 100 KHz steps.

The TRS sends out your call sign in between GPS data transmissions. To program it, you enter your call sign in the Device Name field on the frequency selection screen. There are also a few extra bytes that you can use if you need to otherwise identify your TRS.

Eggfinder LCD Receiver Changes

Hardware:

The 70cm Eggfinder LCD is shipped with a "rubber duckie" antenna and a matching RP-SMA board edge connector, instead of the wire antenna. It provides additional gain over the wire antenna, and is roughly equivalent to the 3 dB antenna that we sell for the 900 MHz unit. Please follow the directions for installing the RP-SMA connector in the Eggfinder LCD Assembly and User's Guide.

Software:

Note: Support for the 70cm band requires firmware 1.12a or higher, and the 70cm ordering option. It is possible (but not trivial) to change your existing LCD receiver from 900 MHz to 70cm... contact us for details if you're interested.

The only noticeable difference in the software is that the programming screen now has a frequency range of 420-449 MHz instead of 909-925 MHz (for the NA version), and instead of the "ID" screen there's a "100K" screen which ranges from 0-9. Of course, your startup-frequency will be displayed appropriately.