

The Tower Launcher A Competitive Edge

By Stuart Powley

Anyone who has been involved in competition for any length of time is probably familiar with the tower launcher. The idea of the launcher is, of course, to reduce the drag of the model by eliminating those pesky launch lugs. There are many other ways to do this, but the tower launcher offers the plus of allowing passive launch systems on your models. In other words, once you have your tower built, you don't need to build anything special on your models to use it. Just leave off the launch lug and you are ready to go.

The problem comes in, however, when you finally decide to bite the bullet and build one. Although by the time you decide this you have probably seen quite a few towers, it is often difficult to remember just what those towers were made out of, and even how they were made in the first place. This problem causes many people to give up at once, and go back to relying on other people to bring their towers to launches.

Perhaps the root of this whole problem is the fact that many different methods and materials are used in tower construction. It is rare to see two home-grown towers that are exactly the same. Even prefabricated towers (very nice but rather expensive) may differ slightly because of material availability.

These tower plans are, therefore, a general guide rather than a list of hard and fast rules. If, for any reason, you cannot build any

part of the plans exactly, don't worry about it. Use a method and material that is comfortable for you.

The story of Ace Disaster Company's tower begins in Fort Worth. At a competition there (in which the need for our own tower was once again being kicked around) John Dyer found a 10 inch (inside diameter) two and a half foot long section of PVC out in the field.

Rights to sections of the pipe were quickly handed out, and we had one of the more difficult to come by parts of our tower. The pipe was later sawed into one and a half inch wide rings and passed out to various people, who made various towers. This is but one tower's story.

The gathering of other materials was actually fairly quick. These materials include:

3- three foot sections of angled metal (90%)

1- nine foot section of 1/2 inch of electrical metallic tubing (EMT) to be sawed into three foot sections.

12- 1/8 inch X 1, 1/2 inch bolts

6- 1/8 inch X 6 inch bolts

30- 1/8 inch nuts

6- 1/8 inch wing nuts

1 old camera tri-pod

These materials can be found just about anywhere for around 20 dollars or so.

I wish I could say that construction is easy, and provides no hassels at all. I would, however, be being untruthful. I can go so far as to say that construction is *relatively* easy, if you have the proper tools and time.

You have to be rather handy with a drill and vice. There are no less than 36 holes to be drilled through PVC, EMT and angeled metal. Drilling on a curved

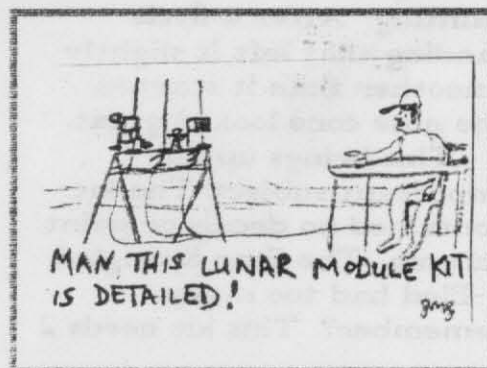
surface can be rather tricky, so take your time and be careful. You also have to make sure that all of the holes you drill are straight. If any of them are even a little off, the alignment of the tower will be so bad that you can't use it. Remember, all of the holes should be drilled with an attitude of 90% to the center of the tower.

After you get all of those wonderful holes drilled, the only other step is bolting it together. The only problem I ran into was tightening the bolts on the inside of the EMT. I accomplished this feat by using a metal pencil to hold the bolt on the inside of the EMT while I tightened the bolt down. It worked fairly well.

The illustrations will show you how everything goes together and where everything goes. You should not have much trouble following the instructions. Like I said before, if you run into a situation where you can't get a certain part or you think another technique will work better, go ahead and change the plans. It won't hurt at all.

What you should end up with is a sturdy tower that will give you many years of service. Our tower has been thrown and bumped around many times, and has never been damaged in any way.

Have fun and happy building!



ACE'S TOWER

