



A Low Cost Hi-Start

by Mario Russo

Just a variation of David's slingshot. It's an easy route to thermal country. How to make a line is outlined here.

This article is devoted to the construction of a simple Hi-Start for a price of under \$15.00. In my opinion it will offer performance comparable to any Hi-Start system on the market today and at just about half the price. This launching system is for reasonably heavy duty work and is sufficient for launching gliders in the three to five lb. weight range.

Due to the increased popularity of sail-plane flying, there have been many articles written on the technique of using and launching Gliders with such a unit. However, to my knowledge, there haven't been any good outlines dealing with the construction and location of all the components of a low-cost Hi-Start system.

The most important consideration of course is the rubber. The rubber length suggested is 100 feet with a 1/4" outer diameter and a 1/16" wall thickness of pure latex. It can be purchased through any surgical supply house. Look in the yellow pages under surgical supplies and before buying please shop around. I had the prices range from a low of \$8.30 to as high as \$40.00 for the same rubber.

Once the rubber has been obtained, you're home free. Go to the hardware store and pick up one 18" crowbar, one 3/16"x2" FLYING MODELS

eyebolt and 1 foot of threaded rod or 3/16"x 2" bolts with heads cut off and trimmed to 1 1/4" lengths of thread.

The rubber as you might find out isn't necessarily all in one piece. While you may be lucky, don't be discouraged if you end up with several assorted lengths, they can be spliced if need be with no ill effects. Mine ended up with four splices and it still works extremely well.

Take the rod or bolts and cut them into 1 1/4" lengths, making certain the edges are ground down smooth. Insert these where the rubber is to be spliced. Next measure a 4" length of #22 wire and fold in half and wrap it once around the rubber near the splice, twisting the ends until they break. The idea of this is that as the wire tightens around the rubber it depresses it into the threads of the rod for slip-proof results. Follow this with a strip of masking tape and wrap it around each such joint as the area where the wire ends break tend to be sharp.

You should now have a continuous 100 foot length of surgical rubber with two open ends. One will simply be tied directly to the head of the crowbar with a secure enough knot of your choice. The opposite end will have the eyebolt connected to it.

Cut down the shaft to 1" and follow the same procedure as in putting the spliced joints together per the drawing.

Two #1 fishing snap swivels are required. Connect one to the eyebolt and tie 100 yards of at least 50 lb. test monofilament fishing line to the other end. Take the other swivel and tie it to the other end of the line. This will connect to the parachute. The chute aids in releasing the line from the model, as a visual reference and in drifting the line down in a line with the wind.

The parachute itself can be easily made out of light-weight cotton by observing the drawing details. Flip-top type can tabs may be used for rings. The shrouds are created out of strong twine and tied to the rings.

The set-up of the Hi-Start is explained in the sketches, but it isn't complete until you have a metal reel which will hold it in neat order for storage and operation. The reel can be had free at any electrical supply outlet where a lot of bulk wire is sold. Once their reels are empty they simply throw them out.

Occasional washing of rubber and storage in a cool, dry place will insure seasons of good operation at a very low cost.