

PEAK OF FLIGHT

NEWSLETTER

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IN THIS ISSUE

Model Rocket Tips: Part 1



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Model Rocket Tips: Part 1

By Chris Michielssen

Tim asked me to put together two articles made up of Tips from my Model Rocket Building Blog. If you follow the blog, some of these tips might look familiar. Who knows, you might pick up something new or be reminded of an idea you haven't thought of for a while.

Years ago Estes sent out the Model Rocket News to its active customers.

I always looked forward to seeing "The Idea Box" page (Figure 1). Rocketeers from around the country sent in their building and launching tips. I still use some of those ideas today. Here's a few new updated ideas that never quite made it to the pages of the out of production Model Rocket News.



Figure 1: The Idea Box newsletter

3/16" to 1/8" LAUNCH ROD ADAPTER

I have a few BT-60 rockets outfitted with 24mm engine mounts and 3/16" launch lugs. For schoolyard launches I could fly these models with 18mm B and C engines off my smaller 1/8" launch rod.



Figure 2: 3/16" to 1/8" launch rod adapter

You can make a simple 1/8" launch rod adapter by simply friction fitting a 1/8" launch lug into the 3/16" lug with a few wraps of masking tape (Figure 2).

The 1/8" lug doesn't have to fit in too tightly, use just enough tape so it is pressed in place with moderate resistance. After flight you can remove the smaller lug with a 3/16" dowel.

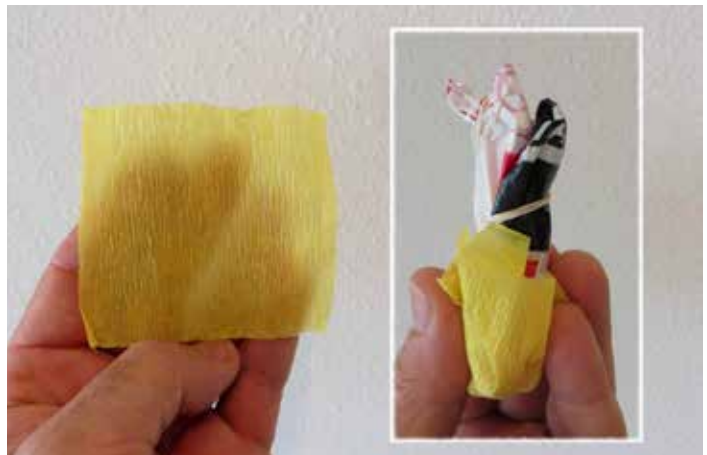


Figure 3: Extra wadding protection

EXTRA WADDING PROTECTION

Parachute wadding has always been a gamble. Everybody gets melted spots now and then. For a little more insurance against a melted chute, wrap a smaller wadding square around the lower end of your rolled parachute.

Note this is a smaller square of wadding, cut down from a standard 4 1/2" square. You'll

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Continued on page 3

PEAK OF FLIGHT

Model Rocket Tips: Part 1

Continued from page 2

want a piece about 3 1/4" square so it'll peel away from the parachute at ejection. A full size wadding square might stay wrapped around the chute and prevent it from opening (**Figure 3, Page 2**).



Figure 4: Using the launch lug to start your sticker wrap

Sometimes the ends of printed patterns won't match up. When your rocket is sitting on the launcher, the launch rod will hide any mismatched wrap. The pre-flight pictures you take won't show the seam or the bad wrap!

The same thing goes for water slide decals. Start the roll patterns on the back side (launch lug side) of the rocket. This wouldn't apply to the roll



Figure 5: Another example of using the launch lug to align your wrap and hide potential overlap

HIDING STICKER WRAP OVERLAP

When your sport model has peel and stick wraps, plan ahead.

Start and finish your wraps in line with the launch lug (**Figures 4 & 5**). Sometimes the ends of printed patterns

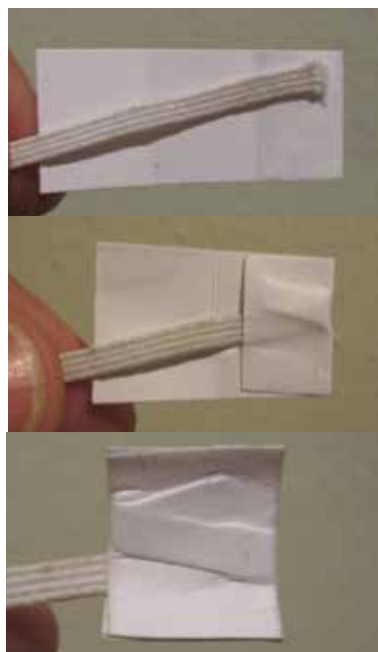


Figure 6: Flatten a tri-fold shock cord mount by gluing the shock cord at an angle

cord as shown will result in a flatter mount (**Figure 6**). By the last fold, the shock cord ends up side by side and spread out over the inside body tube wall.

LINING UP DECALS DOWN A BODY TUBE



Figure 7: Use an aluminum angle to align your decals

You can line up a vertical decal straight down the body tube using the same aluminum angle used to draw fin gluing lines.

Apply a wet decal then, lightly set the angle over the decal's printed baseline (**Figure 7**). Set the angle down gently; water-slide decals are delicate and can be scratched or torn.

Continued on page 4

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PEAK OF FLIGHT

Model Rocket Tips: Part 1

Continued from page 3



Figure 8: Peel tape at an angle

by pulling it back, folded over itself and away from the mask line. I use clear Scotch Tape for masking, a tip picked up in an earlier issue of the Peak Of Flight (<https://www.apogeerockets.com/education/downloads/Newsletter281.pdf>). Clean, sharp mask lines are possible only over well filled, smooth surfaces.

A BETTER SHOCK CORD KNOT

I've been looking for a better Kevlar to elastic knot for some time. Simply joining the two lines with an tight overhand knot (Quest style) can put tight bends and more stress on the cords.

The step by step images (**Figure 9**) show how to join two overhand loop knots. The interlocking loops spread out the stress at ejection and make for easier replacement if needed.

Many instructions recommend using glue to "set" a knot. However, a well tied and correct knot shouldn't come undone or loosen by itself. Never, ever use CA or Super Glues on a knot. The capillary action of thin CA glue will run up the line which will harden it and make the cords brittle.

PULLING UP MASKING TAPE

After spraying the second color coat, lift masking tape by slowly pulling it off at an angle as shown (**Figure 8**). The tape is lifted

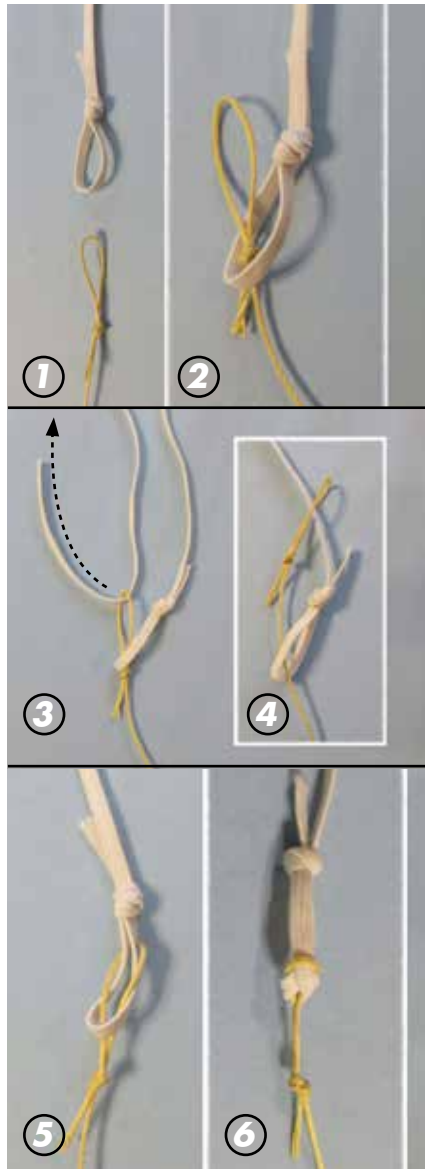


Figure 9: Step by step directions showing how to join two overhand loop knots

CLEANING UP PAINT OVER-SPRAY

Even with careful masking, you can still end up with some over-spray. Before the paint has fully dried and set, you can remove the unwanted paint with the new Mr. Clean style Magic Erasers (**Figure 10, Page 5**).

Wet the eraser and squeeze out the excess water. Lightly rub the over-spray paint to remove it. Take it slow, the eraser might also remove some of the first color underneath. The second picture shows the before and after results.

I've also used Goo Gone to remove paint over-

Continued on page 5



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PEAK OF FLIGHT

Model Rocket Tips: Part 1

Continued from page 4

spray. The Goo Gone is a stronger solvent than the Magic Eraser so use caution.



Figure 10: Use a Magic Eraser to clean up overspray

About The Author:

Chris Michielssen is an avid builder and flyer of low power model rockets. He produces Odd'l Rockets and accessories, available from Apogee Rockets.

His building blog: www.modelrocketbuilding.blogspot.com is followed by 700 people each day worldwide.

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