

BLACKHAWK 24MM

Wildman Rocketry is pleased to introduce the Carbon Fiber BlackHawk 24. Finally an extreme performance rocket designed for low cost mid-power motors.

Made of Spiral wound carbon fiber. The ultimate for a light weight strong airframe. Complimented by a 5 to 1 conical nose cone that allows tracking signals to pass through it.

Designed to fly on black powder motors as small as an Estes D or up to one of the new monster size 24mm 6-grain motors. If you can "stuff it in the pipe" this tiny powerhouse of a rocket will flex its carbon muscles and take you to....well...the sky is the limit!



Once again the design team at Wildman Rocketry, the leader in high performance, has brought you the latest in leading edge technology!

BlackHawk 24

24mm spiral wound carbon fiber airframe.

Fin guides.

Pro-Line High temp
black epoxy.

5 to1 conical NC.

3 carbon plate fins.

1inch coupler.

12in. TopFlite chute.

10ft Kevlar shock cord.



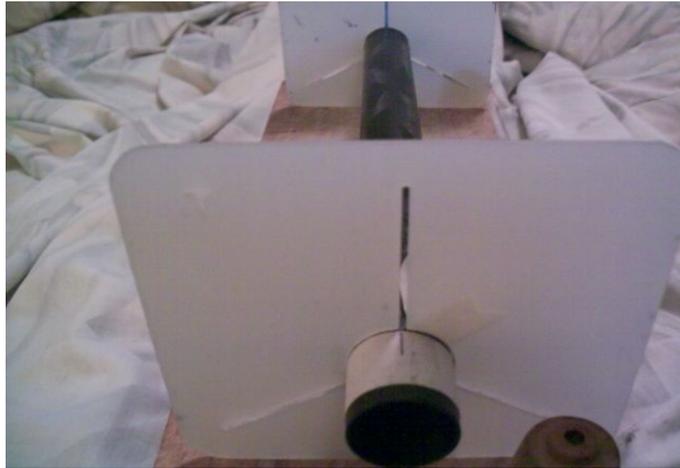
Read instructions completely, then come back and begin!

Best viewed with Adobe reader set at 100%.

Wrap tape around tube 1inch from rear.



Test fit alignment guide to airframe, make sure fins will slide into slots easily. Sand guide where needed.



Slide fin guide on airframe up to tape, then using small tabs of tape, attach to tube to prevent movement. Mark 3 lines on tape at fin positions.



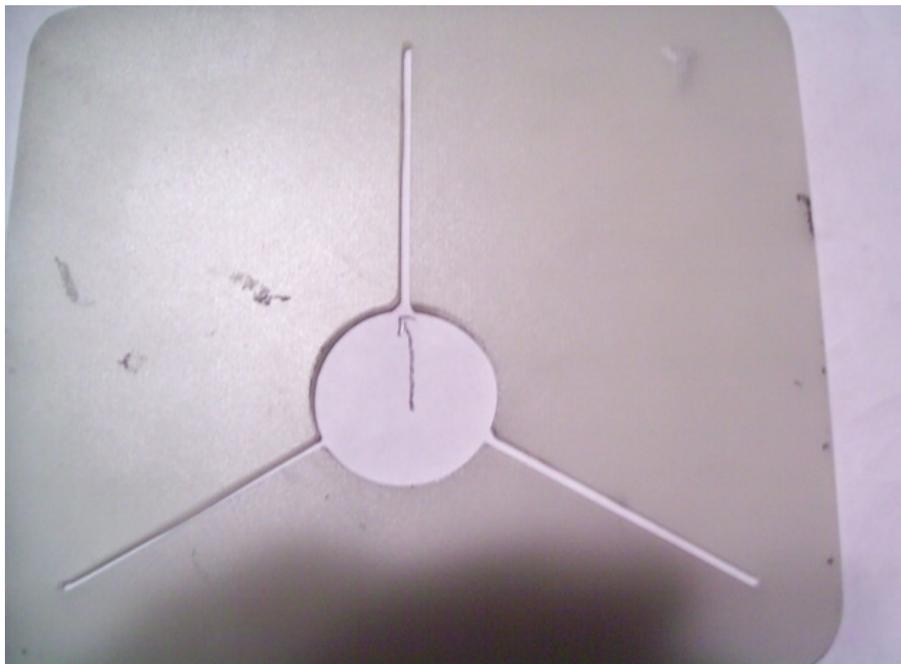
Remove guide, extend lines onto airframe, from marks on tape, at least as long as fins. Sand with 60-80 grit on each side of fin line 1/4inch for glue adhesion when tacking and filleting fins. If you plan on clear coating the carbon tube, tape the airframe to protect it during sanding.

Take care not to damage marks on tape, you will need to re-draw lines after sanding to reposition both guides.



Bevel fins if you desire, front and rear edges, leaving tip square.

Sand with 60-80 grit, on each side of all 3 fins approximately $\frac{1}{4}$ inch up from root [bottom] for fillet adhesion.



Tip: Sand off corners of guide where it meets tube. Will prevent gluing it to tube when tacking on fins. Small amount of glue will squish out from under fin when pressed down. Do this to all 6 sides and glue won't stick to guide.

There is a small mark on the top left of fin guide, it's a "T" for top. Orient your guide this way when using.



If you have not remarked your lines on tube, do so now.

The high temperature Pro-line epoxy is mixed 5.5 parts resin to 1 part hardener by weight. A small accurate scale is needed to measure correctly.

For tacking the fins on 1/2 gram hardener plus 2.75 grams resin will suffice. If you feel uncomfortable mixing this small amount, you can use JB Weld for tacking the fins on. You will put a small bead of epoxy on fin edge to tack it in.



First decide whether you wish to do **one at a time**, [recommended for beginners] or all three at once. If you wish to tack one fin at a time.....Slide rear guide into position about an inch from rear of fin position and tape so it cannot move.



Place thin bead of epoxy on bottom of fin, take care not to get it on the sides, slip rear of fin into rear guide, aligning it with line on tube and press tight to tube. Slip front guide over fin tip making sure it also is on line. Let cure then do the remaining 2 fins.

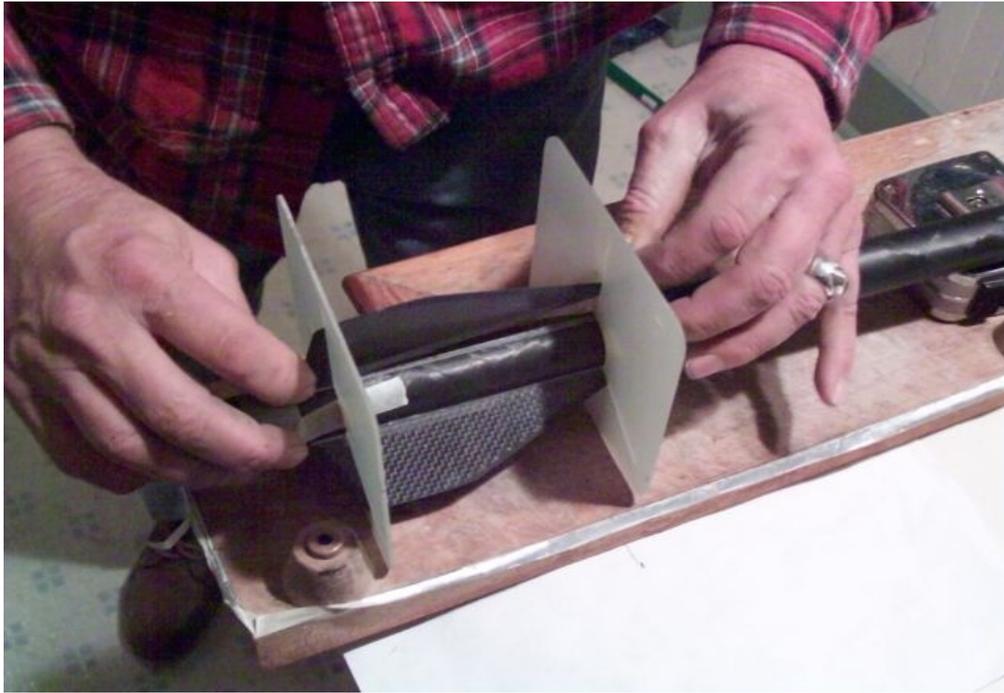
If you wish to tack all 3 at once: Tape both guides into position on the airframe, they must not move once you begin and rotate the tube. Do a dry run with all 3 fins, making sure they slip easily into the slots. Number each fin and slot as you fit them. Sand slots if need be. It always seems to work better this way!



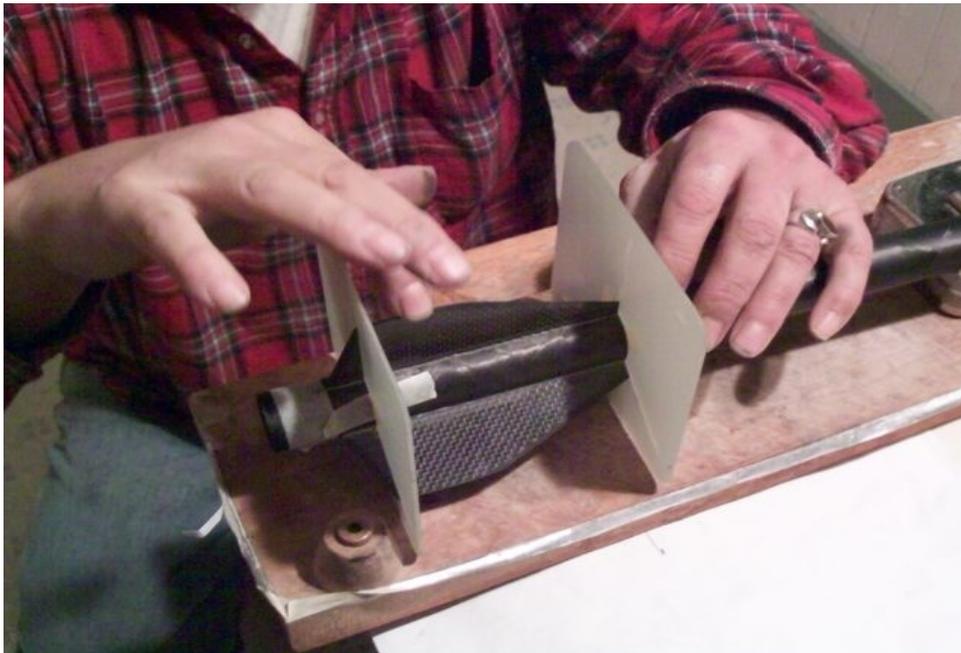
Apply thin bead of epoxy to bottom of fin and slip it into front guide at a down angle, going past the rear guide. Don't let the fin touch tube yet!



With one hand holding fin in front of guide, use other hand to grab fin between guides. Slide fin through rear guide and position above line.



Keep front of fin up and lower back onto line, into proper location.



Working from rear to front, press down into position. Not too hard, but firmly, you do not want to push out all the epoxy from under the fin. Rotate guide and repeat for 2nd and 3rd fin.



Cut off 4-5in. of shock cord to make a loop in nose cone for recovery attachment.



Glue to each side of nose cone with left over epoxy from last step or mix up new batch and complete. Set aside and allow to cure.



2 ways to install your kevlar shock cord to be shown. There are many other ways, use your own. First as simple as filing a small notch on the inside of coupler and gluing shockcord on. Then slide coupler into airframe 1/2 way and glue . OR make or purchase a 24mm bulkplate for coupler. Drill several small holes and one large enough to pass the shockcord through.



Glue BP on the coupler. Pass shockcord through large hole, tie knot. Drill 5/32 hole in airframe, located a few inches higher than length of longest motor to be flown. Push assembly into airframe with dowel, past hole. Insert rivet and pull coupler with shockcord up to rivet. This installation doubles as a baffle and can be removed for servicing.

Rail buttons or ¼ launch lug should be mounted: rear of airframe and 2-3in. in front of fin . A small rocket capable of this level of performance begs to be Tower launched.



Attach shockcord to nose cone. Tie Topflite parachute 2ft from NC.

Congratulations your finished!

Take the Oath and become a Wildman.

.....THE WILDMAN OATH.....

UPON COMPLETION OF THIS ROCKET AT THE FIRST FULL MOON YOU MUST:

PLACE YOUR WILDMAN OUTSIDE IN THE MOON LIGHT AND CRISN IT WITH A BEER OR A SHOT.[OR SODA POP IF YOUR UNDER AGE] REPEAT THE FOLLOWING WORDS WITH PRIDE AND DIGNITY, WHILE WATCHING THE MOONBEAMS DANCE ON YOUR FINS.

THIS IS MY WILDMAN ROCKET. THERE IS NO OTHER LIKE IT. I HAVE BUILT THIS ROCKET, AND PART OF ME LEAVES THE EARTH EVERY TIME IT FLIES. OTHERS MAY POSSES ONE, BUT NONE ARE LIKE THIS ONE; IT WILL FLY HIGHER AND FASTER THAN ANY OTHER.

I HAVE MET THIS CHALLENGE, BUILT THIS ROCKET, I AM NOW ONE OF THE ELITE FEW. I WILL WALK TO THE PADS WITH MY HEAD HELD HIGH, A NEW SPIRIT IN MY STEP, CONVICTION IN MY HEART.

IF I SEE ANOTHER WILDMAN BROTHER, I WILL TREAT HIM WITH RESPECT.

I WILL BE COMPELLED TO GREET HIM WITH THOSE HOLY WORDS, PASSED DOWN THROUGH TIME, TEMPERED FROM THE SPARKS AND FIRE OF COUNTLESS SKIDMARK MOTORS .

UTTERED AT THE HOLIEST OF EVENTS BY OUR FEARLESS LEADER ,THE WILDMAN HIMSELF.

..... “WANNA DRAG RACE IT?”.....

I WILL ALWAYS STRIVE TO STUFF THE LARGEST MOTOR THAT I CAN IN THE PIPE. I WILL FLY WITH OUT FEAR. NEVER REFUSE THE CHALLENGE. I WILL DANCE WITH DELIGHT AT THE OPPORTUNITY TO DRAG RACE MULTIPLE WILDMAN BROTHERS AT ALL EVENTS.

I SHALL NOT FRET OVER WHAT OTHERS MAY THINK, I AM A WILDMAN I AM FREE FROM THE FEARS OF SCRATCHED PAINT, DIRTY FINS, ROAD RASH ON AIRFRAMES, CATCHY PHRASES AND FUNNY NAMED ROCKETS .

NOW I AM A WILDMAN

I HAVE MY WILDMAN ROCKET, I WILL“ JUST FLY IT”

ALTIMETER OR CAVEMAN STYLEIT MATTERS NOT, “JUST FLY IT”

NAKED OR PAINTED.....“JUST FLY IT.”

MY FLYING SPIRIT HAS NOW BEEN FREED .

..... “SEMPER FLY”.....