

About the Hawk™

The AMROCS Hawk was released in their first catalog in 1965. Upon first glance, it looks like the Estes Falcon and was heavily influenced by it. The changes were the elimination of 1/16" balsa to give it more strength and durability and changing to a metric body tube and a hollow hardwood nose cone. The lead weight was eliminated due to the weight of the nose cone. Instructions were added to modify it for NAR competition. The Hawk was catalog #K-6 and was introduced at a price of \$.75 or 3 for \$2.00.

The Semroc Retro-Repro™ Hawk™ uses laser-cut balsa fins and a precision turned balsa nose cone. The keel is made of basswood for a sturdy build. This kit has just recently been upgraded with a 13mm motor mount that gets ejected and returned by streamer to make it NAR Competition Certified, and the airframe has been set up with tabs and slots for easier construction.

About AMROCS

AMROCS was one of the small model rocket companies that started during the early days. It was founded in 1965 by Lyndsay Audin as Advanced Model Rocket Systems (AMROCS) and was a division of Rocket Supply Company in Tappan, New York.

AMROCS released five model rocket kits in their first catalog in 1965, including a three-stage model and two gliders. Their Accelerometer kit was the first commercial accelerometer designed for model rockets. They had plans to release their own line of model rocket engines that were to be an improvement over the private label Estes line they were selling.

In 1970, the AMROCS line was incorporated into the Space Age Industries line. SAI was founded at the same time by Tag Powell as a division of Mini-Wheels of Edison, New Jersey. The line was expanded to fifteen models, keeping the Accelerometer kit and adding the Blinking Beacon. In 1972, SAI ceased its operations.

What is a Retro-Repro™?

A Retro-Repro is a retro reproduction of an out-of-production model rocket kit. It is a close approximation of a full scale model of an early historically significant model rocket kit from one of the many companies that pioneered the hobby over the past half century. A Retro-Repro is not a true clone or identical copy of the original. It incorporates improvements using modern technology, while keeping the flavor and build appeal of the early kits.

December 8, 2008, April 19, 2015, March 6, 2017, January 15, 2018

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SEMROC HAWK™ BOOST GLIDER

Classic 1965
Retro Reproduction

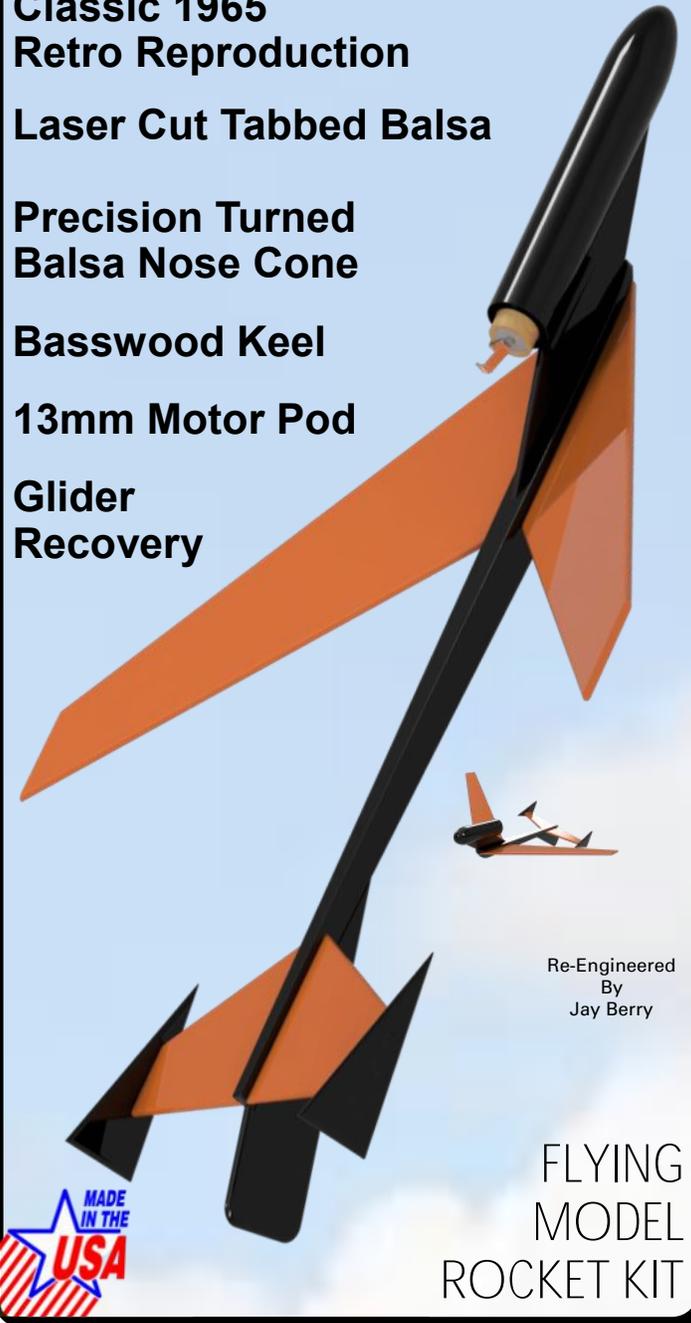
Laser Cut Tabbed Balsa

Precision Turned
Balsa Nose Cone

Basswood Keel

13mm Motor Pod

Glider
Recovery



Re-Engineered
By
Jay Berry

FLYING
MODEL
ROCKET KIT

Made in the U.S.A by Semroc - Dayton, Ohio

HAWK™ Kit No. KV-65

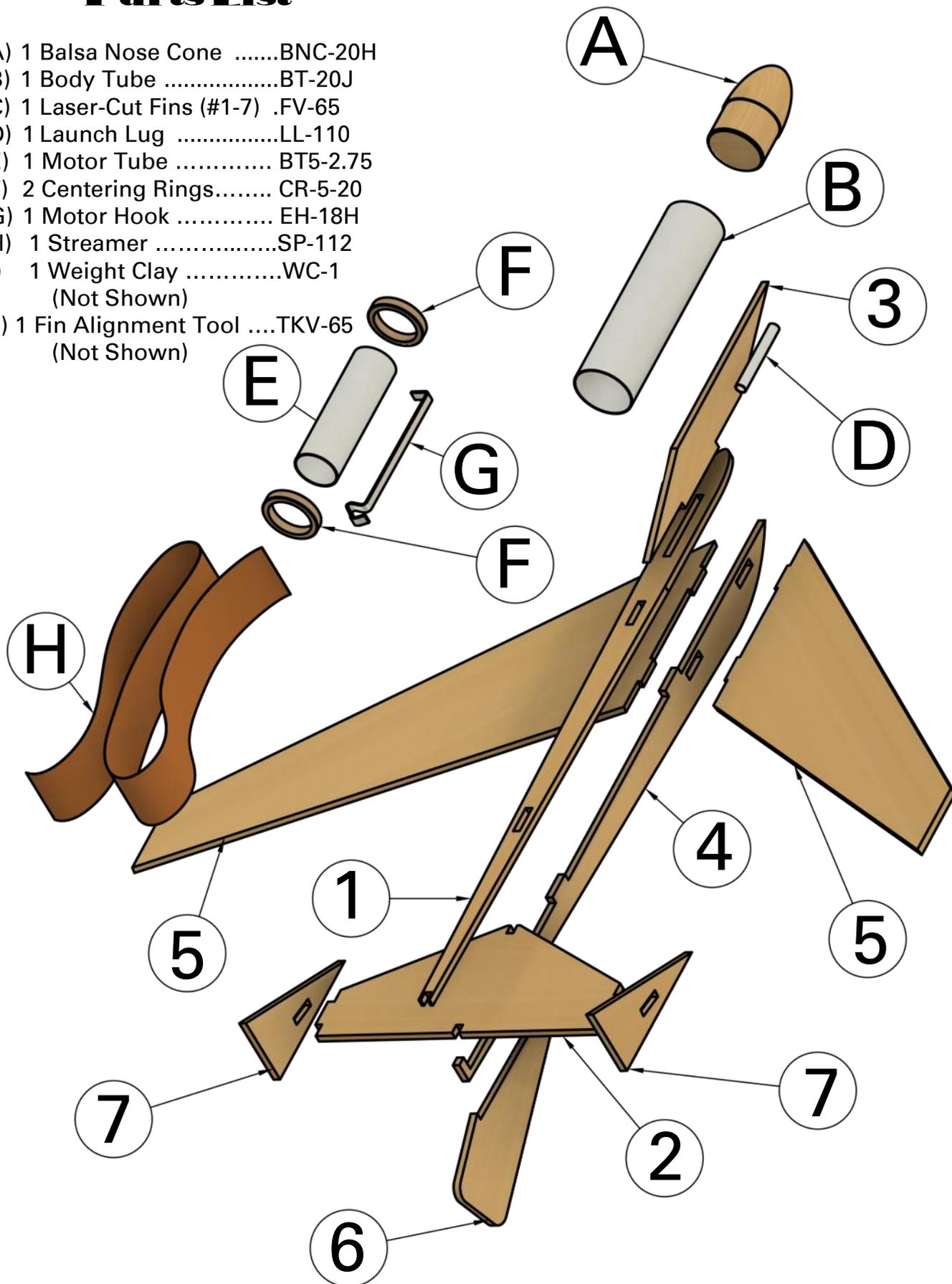
Specifications	Engine	Approx. Altitude
Body Diameter: .736" (1.87 cm)	1/2A3-2T	125'
Length 12.4" (50.2 cm)	A10-3T	250'
Fin Span 8.8" (41.1 cm)		
Net Weight 0.5 oz. (14.2 g)		

Skill Level 2

EXPLODED

Parts List

- A) 1 Balsa Nose ConeBNC-20H
- B) 1 Body TubeBT-20J
- C) 1 Laser-Cut Fins (#1-7) .FV-65
- D) 1 Launch LugLL-110
- E) 1 Motor Tube BT5-2.75
- F) 2 Centering Rings..... CR-5-20
- G) 1 Motor Hook EH-18H
- H) 1 StreamerSP-112
- I) 1 Weight ClayWC-1
(Not Shown)
- J) 1 Fin Alignment ToolTKV-65
(Not Shown)



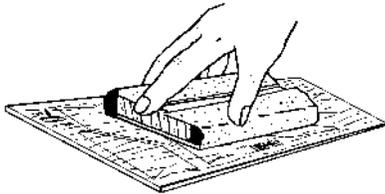
TOOLS NEEDED

You will need the following tools to assemble your Hawk Glider kit. A Pencil, a Ruler, White or Wood Glue, Some 220 grit Sandpaper, Masking Tape, Knife, Wax Paper, and Colored Markers or Paint.

ASSEMBLY

1. These instructions are presented in a logical order to help you put your Hawk™ together quickly and efficiently. Check off each step as you complete it and we hope you enjoy putting this kit together.

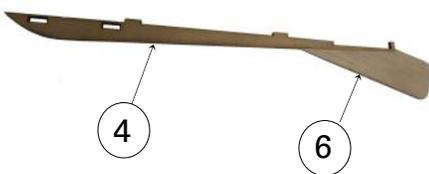
2. There are two different sheets of laser-cut fins. Use the exploded view to identify the parts that are called out in these instructions. Lightly sand each side of each of the laser-cut fin sheets. Carefully push the laser-cut fins from their sheet. Start at one point on each fin and slowly and gently work around the fin.



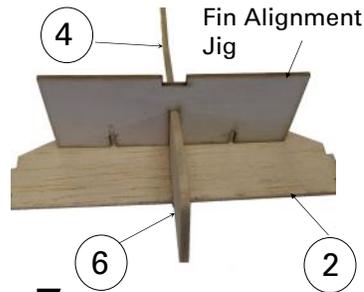
3. Sand each fin edge to remove the hold-in tabs as shown below.



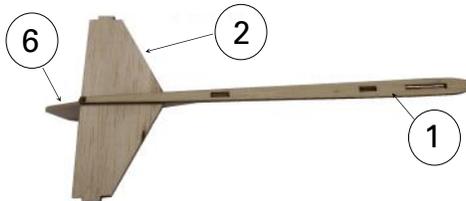
5. Glue the Rudder (6) to the lower edge of the Basswood Keel (4) at the small end of the Keel. Make sure they are glued so that they are flat.



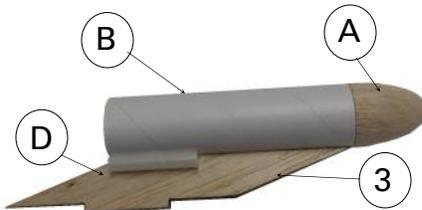
6. Glue the Stabilizer (2) to the Keel (4) between the tabs on the side opposite the Rudder (6). Use the Alignment Jig to keep the Stabilizer Square with the Rudder.



7. Turn the assembly over and glue the fuselage top (1) over the tabs and stabilizer as shown.



8. Draw a line on the Body Tube (B) the length of the tube. Use a door jamb or an angle to get a straight line. Using the line, glue the pylon (3) to the Body Tube (B). Insert the Nose Cone (A) in the top of the Body Tube and check for fit. Sand it if necessary. Remove and glue in place. Glue the Launch Lug (D) to the joint between the Pylon (3) and Body Tube, even with the end opposite the Nose Cone.



9. Glue the Pylon and engine mount assembly to the top of the fuselage assembly. Center it on the top of the fuselage and even with the front. Allow to dry, checking that the engine mount is in exact alignment with the fuselage.



10. In preparation to installing the wings, invert the Fuselage/Pylon assembly and support the stabilizer end on the Fin Alignment Tool. The Body Tube should be flush with the table.



11. Attach the wings (5) to the Keel by gluing the tabs in the slots and resting the wing on the Fuselage top. Support the wings in place and make sure the tips just touch the table. View the assembly from the front and make sure both wings form a symmetrical pattern and the pylon is vertical. Some masking tape at the tips of the wings will help support them while they dry.



12. Glue the two Stabilizer Tips (7) to the ends of the Stabilizer using the tabs provided. Allow to dry.



13. Run a thin fillet of glue along all the joints. Do not add too much or the increase in weight will affect the performance. After all the glue is dry, sand all the edges round on all balsa parts, except the main wings. Sand them to an airfoil shape for best results.

MOTOR POD ASSEMBLY

- 14.** Make a mark on the 13mm Motor Mount Tube (E) 1/2" from each end.



- 15.** Make a notch in one of the CR 5-20 Centering Rings about 1/8" wide and half the thickness of the centering ring so that it will look like the picture below. This is so it will be able to slide over the Motor Hook in the next step.



- 16.** Insert the Motor Hook into the slot in the 13mm Motor Tube with the curved end toward the longer end of the tube. Slide the Centering Ring you notched in the previous step over the Motor hook stopping just past the line marked on the tube. Slide the other Centering Ring on the other end, again aligning it with the mark. Add Glue Fillets to both sides of the Centering Rings keeping the glue off of the Motor Hook and the outside of the Centering Rings. Set aside to dry.

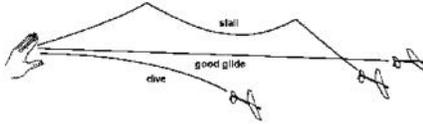


- 17.** After the glue has dried, using masking tape, attach the Streamer to the motor tube between the Centering Rings. When attaching the Streamer, wrap tape around the Tube and the Motor Hook also.



GLIDE TESTING

- 18.** Before the first flight of your Hawk, you will need to do some Glide Testing. With the motor pod removed, gently throw your Hawk and see how it flies. If it Dives, it means it is Nose heavy and needs some weight added to the tail. If it Stalls, it needs weight added near the Nose. You can add weight by using small amounts of the included Clay and sticking it to the glider.



You also want it to turn a little one way or the other so that it will make a circle as it comes down. That way you don't have to go so far to recover it.

FINISHING

- 19.** A glider needs very little finishing. For most gliders, the additional weight from paint will cause them to not glide well. A very light coat of paint or magic markers will give the best results. Re-trim the glide after applying any paint!

FLIGHT PREPPING

- 20.** If the Hawk™ was constructed properly, it will fly perfectly straight during boost. Start with a 1/2A3-2 engine and check that it is aligned properly. If it arcs over during boost, check for alignment problems and fix them before flying with a larger engine.

- 21.** Wrap the streamer around the middle of the mini motor adaptor.

- 22.** Insert a 1/2A3-2 motor into the motor tube and make sure it is locked in by the motor hook. Insert the motor tube into the body tube making sure the streamer does not get caught between the centering rings and the body tube.

- 23.** Refer to the model rocket engine manufacturer's instructions to complete the engine prepping. Different engines have different igniters and methods of hooking them up to the launch controllers. Use a dowel or some other support to keep the clips from catching on the glider after ignition.

- 24.** Carefully check all parts of your rocket before each flight as a part of your pre-flight checklist. Launch the Hawk™ from a 1/8" diameter by 36" long launch rod.

This completes the
assembly of your
HAWK
BOOST GLIDER