

Construction Notes for ERC01 de Havilland Beaver Remote Control Electric Kit
by Gene Turk

The photos provided to you by Leo Fleishman are of my 6th Easy Built Models Beaver. I have built 2 for glow power (.30 Wankel powered) and 4 electric powered. My latest one is controlled by a Hitec 6-channel radio utilizing throttle, rudder and elevator control. The plane is powered by an Electrify T-600GD system. This is a 600 size brushed motor of the can style with a gearbox of 2.5 to 1 ratio with an APC 11 x 7 inch prop. I am using 8 cell nickel metal hydride battery packs that range from 2200 mAh to 3300 mAh capacity. The speed controller is an Electrify model C-35 of 35 amp rating.

The motor will draw 19 to 21 amps under full load. After take off, I am able to throttle back to about 75% and fly for up to 12 minutes on the larger 3300 mAh pack. With the present setup, the plane balanced at 30% of the cord back from the leading edge without the need to add weight in the nose or tail. I used standard size Hitec servos in the fuselage for the rudder and elevator control. The servos are mounted on two hardwood pieces 1/4" x 3/8" running 90° to the fuselage length, glued to 3/8" square balsa runners along the inside of the fuselage, just below the window frames.

The builder has a few options to mount the motor. He can build a plywood semi-circle nest to support the motor diameter and then glue two 1/4" diameter dowels under the nest. Glue the nest assembly to a 1/8" thick firewall, and then secure the motor/gearbox assembly to the nest with #64 rubber bands. My present Beaver utilized a top clamp style mount. I glued a piece of 3/8" thick plywood about 2" x 3" to the firewall with plywood triangle supports on each side. I then formed a piece of .015 thick brass (or you can use aluminum) around the motor diameter. I centered the motor on the plywood mount and glued a piece of 3/8" square plywood near the sides of the motor on to the plywood. From there, simply place the clamp on top of the motor and drill 4 small holes (2 per side) and screw the clamp tight on to the mount. This is a simple and light mount that allows easy removal of the motor, if needed. See diagram below.

If the builder chooses to use a brushless motor with lithium polymer batteries, I would suggest a unit of approximately 250 watts rating while using a 3 cell LiPo pack (11.1 volts). Most likely, weight would need to be added to the nose.

All my Beavers were covered with Monokote. This is an excellent flying plane and is very stable. I have flown mine in winds up to 22 mph with no problems.

Editors Note: Mr. Turk invites questions from fellow builders. Call him at 920-922-5511

MOTOR MOUNT

