

GARY I was a Christmas present for my boy. It was designed with four things in mind. First of all, I was almost broke (aren't we all at Christmas time?) and my boy wanted an R/C airplane he could fly without having to worry about extensive repairs in case of pilot error. It had to control well (hence, the short tail moment and rugged fuselage). It had to be cheap (under \$2.00 for the airplane, a little scrounging may turn up second hand single channel tone receiver and an escapement for about \$15.00). It had to fly with an engine or without an engine, in case he got tired of flipping props or couldn't afford to buy an engine and fuel. So, keeping all these things in mind, GARY I began to take shape.

An old .049 engine was placed on a removable mount, on top of the wing over the C.G., so that with the engine and mount removed, the plane could be flown as a towline or slope soaring glider. With the engine and mount rubber banded on, the plane gets upstairs in a hurry. For gentle flying an .049 is a little too much power, and I recommend an .020 instead.

In line with keeping the cost and building time down, an old free flight wing was repaired and used. The wing was an A-1 Nordic glider wing donated by David Frerk, an avid free flight man who generously gives me his obsolete airplanes in return for some equally obsolete money. However, most of the time he conveniently forgets about collecting the money. So fellas, here is a chance to patch up those old free flight wings and put them to good use. If you don't have a free flight wing, find a friend who has. There are a lot of them around. Free flight guys aren't half bad at all, you know. As for the fuselage, pylon and tail, they were very carefully and scientifically designed. Well, almost. I sketched the fuselage side and tail freehand on a  $\frac{3}{32}$ " x 3" sheet of balsa with a ballpoint pen and then cut them out with an X-acto knife. The side was then placed over another  $\frac{3}{32}$ " x 3" piece of balsa and the second side cut out by tracing around the first side with the knife. The pylon was sketched out on a  $\frac{1}{8}$ " scrap of 5 ply plywood. Incidentally, you'll save your plans if you trace the parts onto some tracing vellum and then tack the vellum to the balsa. Cut through the vellum and balsa together. You'll get a more accurate part that way and don't forget to use a steel straight edge when cutting on a straight line.

The entire fuselage and tail were built in one evening. Plenty of room is available, enough for even the superhet single channel systems. The construction is so simple, I don't think it is necessary to go into details. I believe the plans are self explanatory. The top curve of the fuselage may be modified to accept the airfoil of any Nordic A-1 wing (or wing of similar area) you may want to use. For those of you without any A-1 wings in your stable, the plan for a flat bottom wing of the same area is illustrated. The engine pylon is held on with rubber bands, hence the rails along the side of the pylon mount to keep the bands from slipping off. Notice the mounting of the tow hook on the bottom of the airplane; this may be moved forward or aft to provide the best towing point. The position that is shown on the plans provided the best towing point on the original airplane.

A 3 volt single channel receiver and an O.S. push-pull type escapement with one loop of  $\frac{1}{4}$  inch rubber were originally used in GARY I. Since additional weight will have to be added to the nose of GARY I to bring the C.G. within limits, double up on the battery pack. I soldered 4 pencells in series-parallel to provide extra weight up front and have the added bonus of extra long battery life. The same set of batteries have been used for over 3 months now. When soldering to Eveready pencells, be sure to remove the stamped sheet metal disc on the negative end and solder directly to the lead case. If GARY I is your first R/C airplane, don't forget to find an experienced R/C man to check out your radio gear, show you how to tune it, range check it and teach you how to fly it safely. His help will enable you to get hundreds of successful flights. There is no substitute for experience, no matter how many how-to-do-it articles you have read. Any R/C type will be tickled pink to help you get GARY I into the air.

Most of the flights of GARY I have been as a glider. No trim adjustments were found necessary to fly the airplane in either configuration. Again David Frerk came to the forefront when he loaned me his tow line and reel and taught me how to tow up a 15 ounce airplane. Please build it lighter; I am sure you can. He would launch the plane for me and I would run like I had my tail feathers on fire. Believe me when I say, don't attempt to fly this thing as a glider on a calm day, you just

can't run fast enough. Unlike most single channel airplanes, this one loves a little wind, and so will you when it takes the plane up like a kite. In a wind GARY I gets on top of the line in a real hurry. Everyone who has seen it has been surprised at how fast it goes up. It sure saves on shoe leather and a pounding heart for us old, out-of-condition, stand-in-one-place R/C'ers. The thin airfoil gives good penetration and adequate rudder throw ensures excellent turning qualities to keep the plane close, even in a stiff wind, so tow it up with as long a line as you can handle. Dave Frerk's tow line is 160 feet so that was as high as I towed it for the first couple of dozen flights; however, the plane is capable of handling much more line, possibly as much as 500 feet. Three hundred feet of line is about the most I have flown it so far. Just play the line out and tow the plane like you would a kite. It will get way up there, then when you're in position, let the line go slack and the flag on the end of the line will drag the loop off the hook. Be sure to use a nice large loop and a light tow line.

When GARY I soars around with your son (or you) guiding it round and round till it settles gently, we hope, to the ground, you'll understand why I think there is nothing like it in the world. I know it is certainly a relaxing change of pace for the multi man. Try GARY I; I'm sure you'll get as much enjoyment out of flying on a togetherness basis as we do.

By the way, those of you sharpies who noticed I mentioned my boy Gary pushed the toggle switch to the left twice, and once to the right, will point out that "to a single channel receiver, it doesn't make any difference which way the switch is pushed." Very true, but to a seven year old boy it makes more sense that he pushes the toggle to the left to make the plane go left and he pushes it to the right to make the plane go right. Simple but very effective. He very seldom misses a control and never (almost never) gets confused. Of course you don't have to use a 12 channel transmitter; a single channel transmitter would do the job equally well I'm sure! I do recommend a toggle switch instead of a pushbutton. We think it is easier and more positive to keep track of what you're doing.

See you at the flying field, and may all your prangs be little ones.