

All the engine-starting equipment is positioned in exactly the right location to avoid the dangers of cords wrapping up in a prop—or the Tx being stepped on.

# Flight Assistant 530

If you've outgrown your present flight box and are tired of trying to cram 15 pounds of "stuff" into a 10-pound container to lug out to the flight line, then this may be the box you've been looking for. ■ James E. Gilgenbach

THERE IS NOTHING quite as dispiriting, disenchanting, discouraging, disquieting, disappointing, and disheartening as the realization that you forgot a tool or model aircraft accessory after you have driven over 20 miles from your home to the club flying field. Other situations which are frustrating include:

1) Carrying a heavy flight box from the

car way out to the middle of the flying field while, at the same time, trying to carry your plane.

2) Getting the glow plug cord or starter cord caught in a running prop (dangerous, to boot).

3) Catching your car upholstery or clothing on protrusions from your flight box.

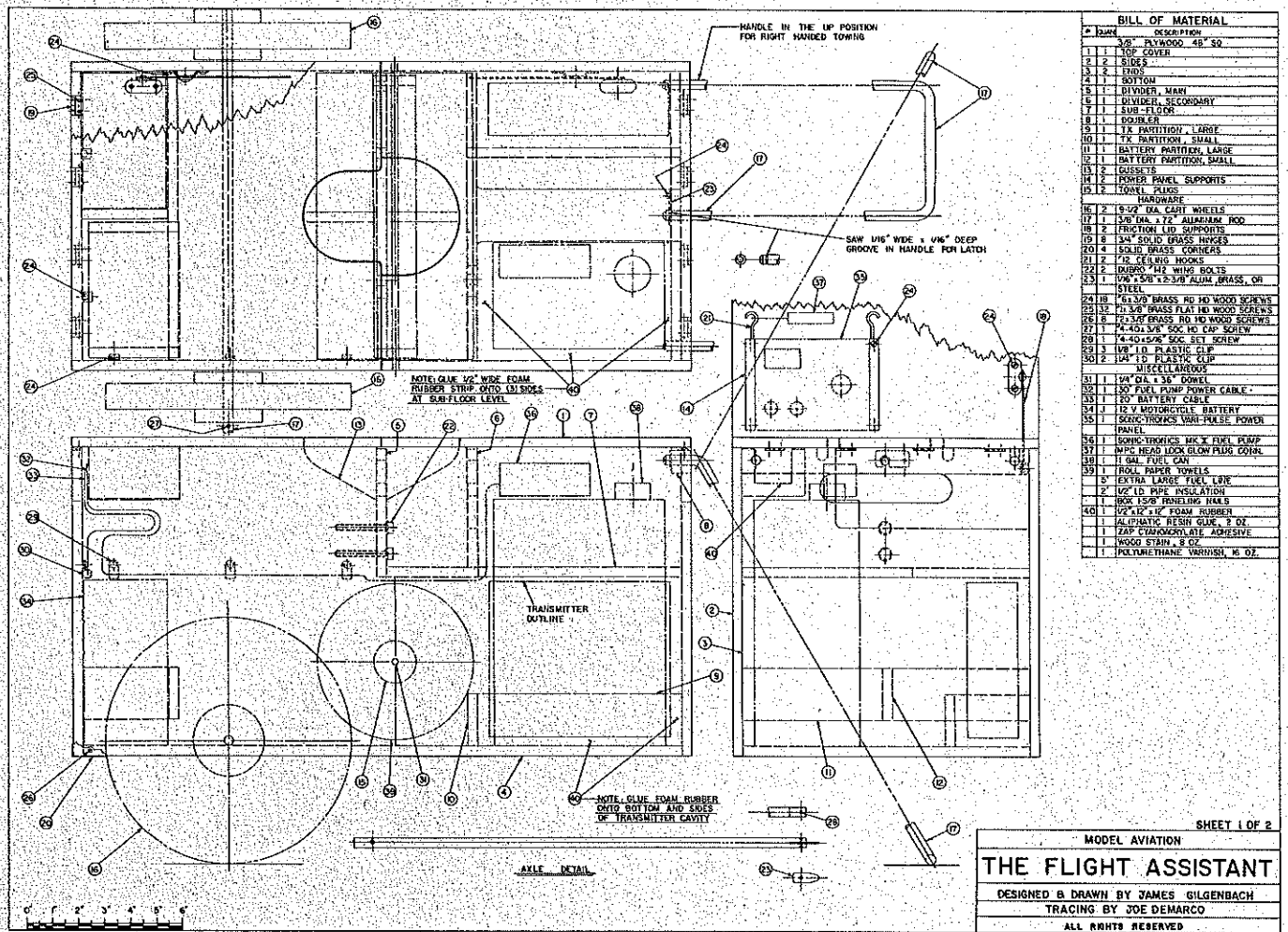
4) Banging your transmitter because it

was mounted on the *outside* of your flight box.

5) Stepping on your transmitter while it was lying on the ground because you had no other place to put it while starting your engine.

6) Digging through a box filled with junk trying to find a specific tool.

After 25 years of putting up with these



things, I finally decided that I was going to attack the problem head on. I would design a flight box which would minimize my frustrations and thereby prolong my life (if what modern doctors and psychiatrists say is true).

I have been so satisfied with the final design that I just had to share it with all the modelers who have endured the same agonies.

Before I started designing, I listed all the features I wanted in the perfect flight box. They were:

- 1) Simple design. I didn't want all kinds of complicated parts and assembly procedures.
- 2) Clean exterior. The box had to hold all the necessary accessories without any pro-

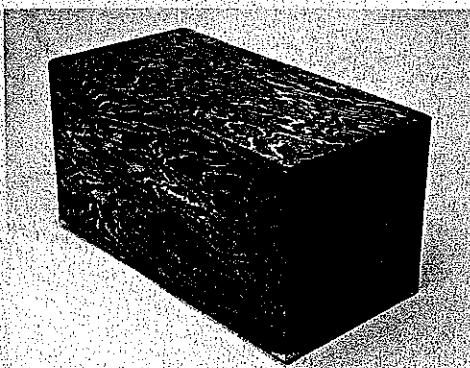
trusions when taken in and out of my car.

3) Easy transporting. Why carry a flight box when you can pull it around on wheels? With the handle and wheels removed and stored in the box, it should be carried just like a case of drink bottles (something many of you probably can identify with).

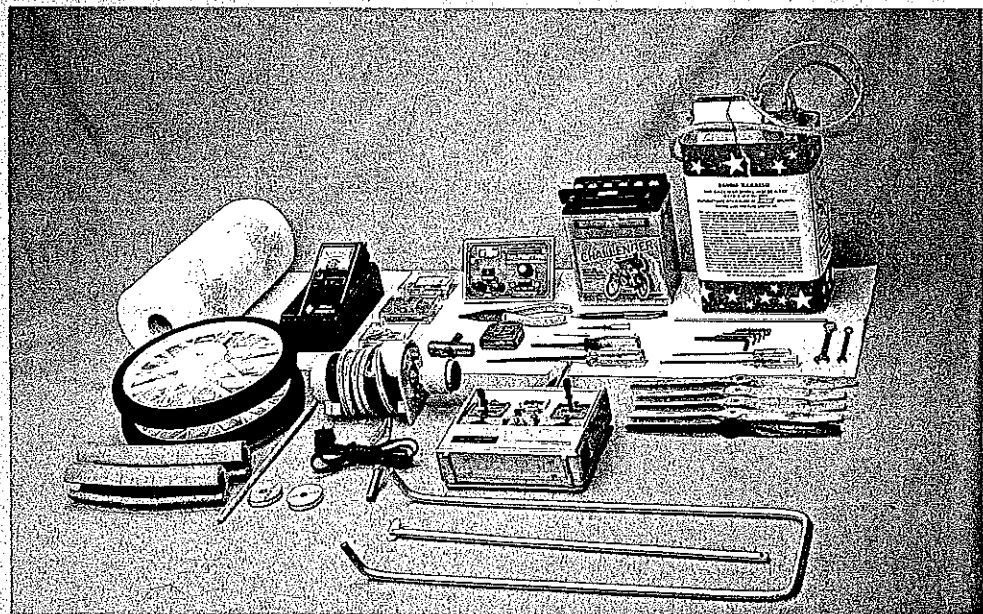
4) Adequate capacity. The ideal box should hold the 12V battery, electric starter,

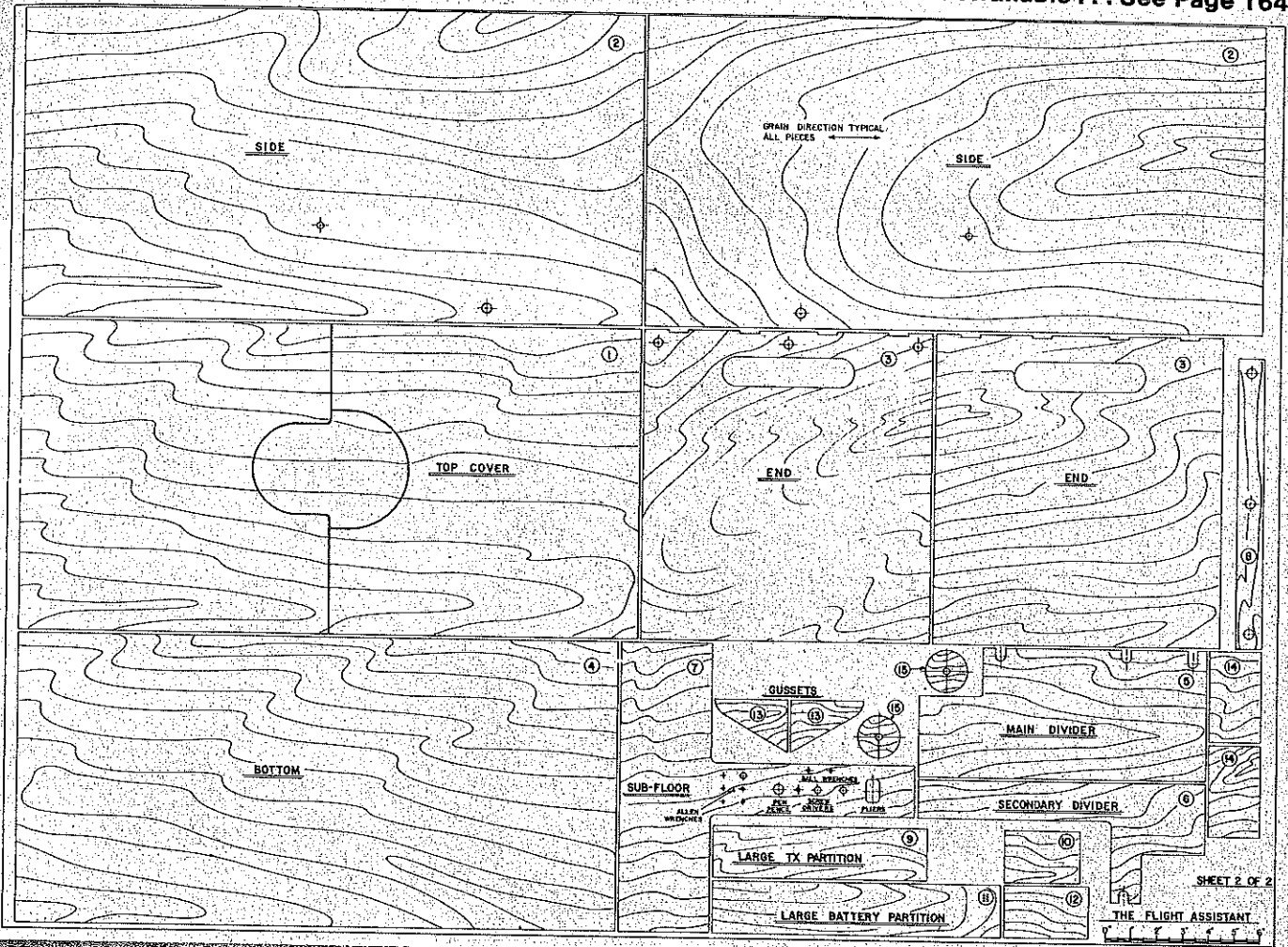
power panel, electric fuel pump, transmitter, paper towel roll, one-gallon fuel can, tachometer, spare props, tools (such as Allen wrenches, ball wrenches, screwdrivers, needle-nose pliers, four-way wrench, and miscellaneous parts such as glow plugs, rubberbands, etc.), and the handle, wheels, and axle.

*Continued on page 161*

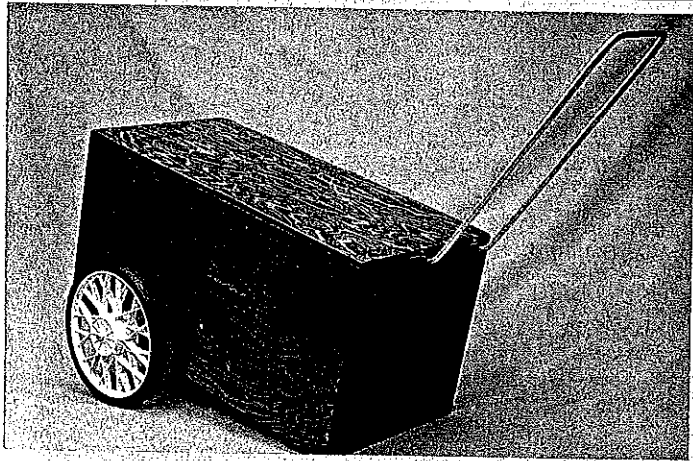


Left: With a place inside the box for everything and everything in its place, there is nothing protruding to damage your car's upholstery. At the same time, better protection is provided for the transmitter. Right: Here's the complete collection of goodies our author carries in his flight box. The two small plywood discs should be tack-glued to the inside ends of the paper towel roll to make it fit the dispenser.

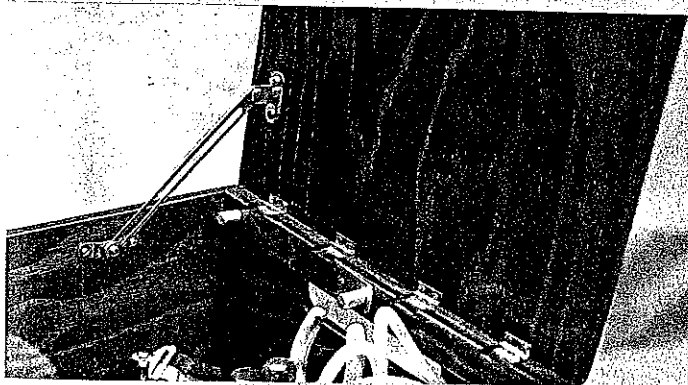




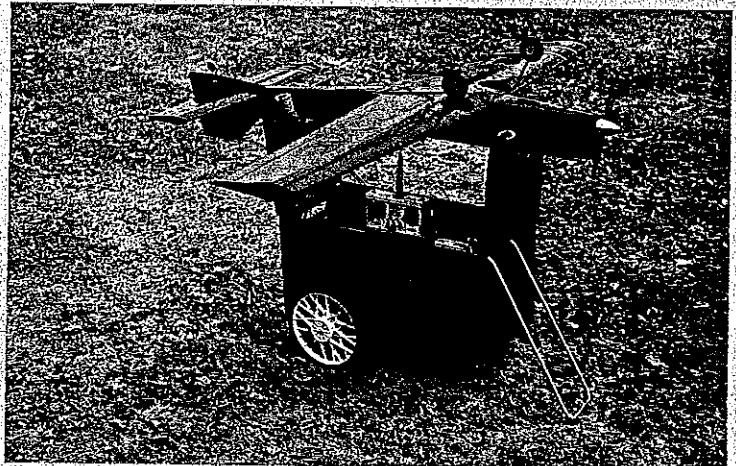
SHEET 2 OF 2



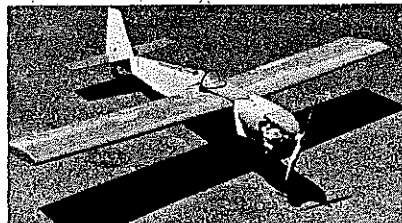
Left: With the wheels and handle installed, the flight assistant is ready to be towed to the flight line. As shown here, the handle is offset for right-handed use. Above: For storage, the handle and axle are set into grooves just below the covers and just above the fuel can. Note center cover section which is glued to the main divider.



Above: A swinging clip locks the handle in place. The lid supports should be mounted so that the covers will open approximately 5° past vertical. Right: The cutouts in the covers have pipe insulation inserts that allow them to cradle the model for assembly at the field.

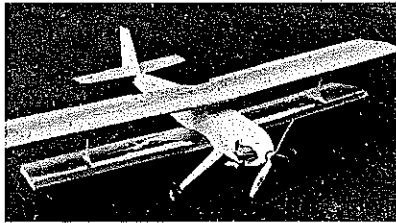




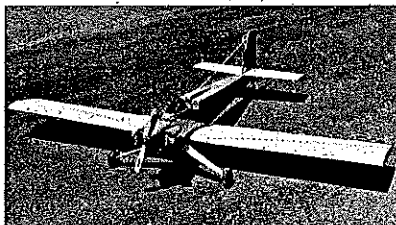


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# HOYER HOBBIES

Apply the first coat of polyurethane varnish, and let it dry thoroughly. Finish-sand the polyurethane with 320-grit paper, and apply a second coat. When the box is dry, install all the hardware and covers. To ensure that the small hinge screws will hold, squirt some Zap-A-Gap into the screw holes before assembly.

Cut and slit the pipe insulation material for the airplane support slots in the cover. Cut and Zap-glu the foam rubber into the transmitter and fuel can cavities. Mount the handle, axle, and wheels to ensure that they fit properly. You may have to trim excessive polyurethane from the mounting holes.

The first time you use your Flight Assistant at the flying field, be prepared to endure the jealous remarks of your fellow modelers. You will find, however, that after the first barrage of snide remarks (referring to your laziness and lack of strength to carry your own flight box wherever you go), your friends will start asking such questions as: "Where did you get the plans?" "How long did it take you to build it?" "How about building me one?"

## Jr. Clipper/Mathews

*Continued from page 90*

and blind nuts. *Do not mount the engine with screws!* Fabricate Jigs 1 and 2 directly over the drawing. Part FB is 1/16 ply and should be drilled to accept the already-bent landing gear unit.

Place the left frame over the plan, and weight it down. Install the two jigs in their appropriate slots, checking for absolute squareness in both planes. A carpenter's square or a 90° triangle should be used to check for squareness in each step of the assembly.

CyA-glu the jigs to the left side, then place the right side over them. Again check the alignment. When satisfied, CyA-glu the right side to the jigs.

Pull the tail posts together and hold with clothespins while again checking for squareness, then CyA-glu them together. Cut the cross braces in pairs using the top view as a guide. Install them, working from the front to the back. This technique will produce a

well-aligned fuselage box every time.

Remove the box from the building board, and install the firewall with the aid of the top view as a guide. The landing gear must now be installed, followed by Bulkheads C and D. Finish the fuselage by adding the front sheeting and nose blocks; sand the unit to a nice contour.

**Radio installation.** The prototype model came out slightly under 18 oz. with a 100 mAh battery, indicating that use of micro servos is not a must. Our servos were mounted to the Lite Ply rails with servo tape. If the wood is first hardened with an application of CyA, the tape will stick without pulling loose from the wood grain.

The plan details a simple, lightweight pushrod system. (Unfortunately, available flex-rods are not light enough for use with this type of model.) With the elevator horn buried, one needs to be very careful to set the servo end Z-bend for neutral before placing it permanently. Some adjustment, of course, is available by positioning the servo.

We placed the 225 mAh battery against the firewall, the Royal Vanguard receiver wrapped in foam immediately behind it, and the servos almost directly under the center of gravity (CG). No ballast was required with this setup.

Control surface throws on a model such as this with a wide speed differential from power on to power off are mostly a matter of pilot skill. Should you have a dual-rate system for elevator and rudder, use minimal throws in power, then switch to much higher throws for the glide. Ours is set up

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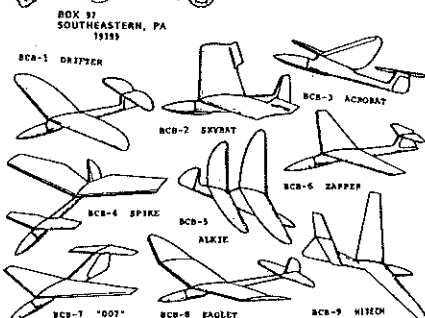
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