



Old number eight gets off easily, making good headway, yet not climbing at unrealistic angle. Landings are the cat's whiskers. It's a long lasting ship, too.

DAREDEVIL

For fun or sport, this Half-A free flight is unbeatable. It is a composite of many real ships, with Goodyear racer features. Changes were made wherever performance would benefit.



Looks like a long-winged team racer. Good finish, covering, plus applecheek cowls, sheet-metal gear make it look like million bucks. Jobs like this don't come in kits so give yourself building treat.

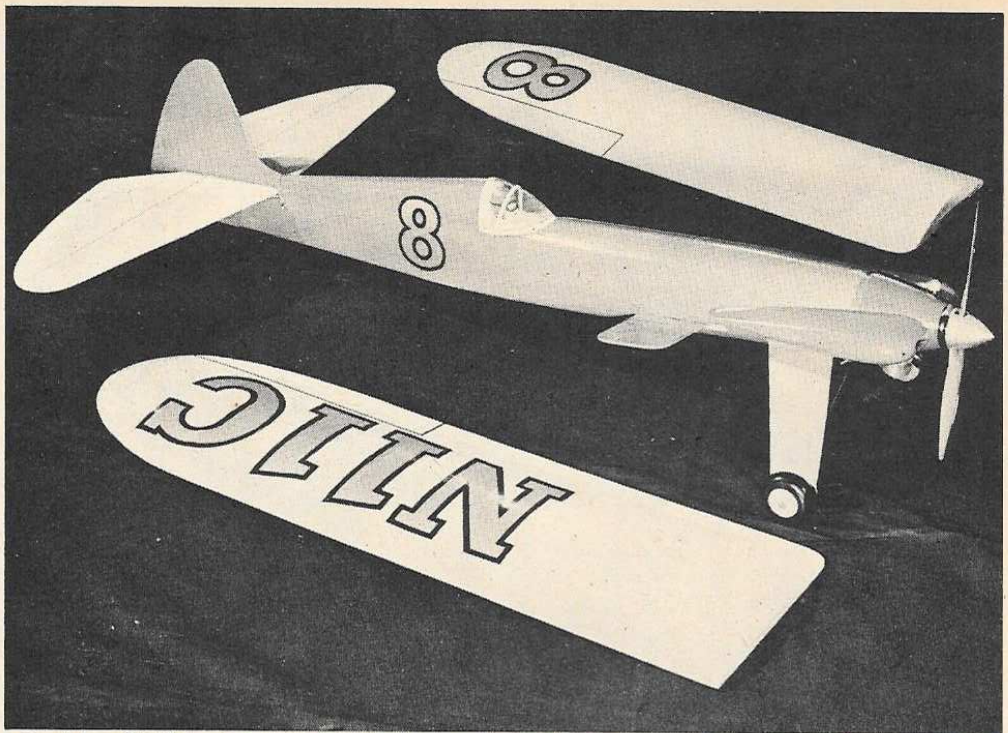
by DICK EALY

► *Daredevil* is a low-winged, semi-scale, Goodyear Racer, adapted to free flight Half-A gas motors. Build this 40" free flight sport racer for realistic appearance and smooth flying. In days of rubber power you were quite a sport to build and fly a low-winged craft as torque was such a hindrance. The new Half-A gas motors are ideal for our purpose as they have low-pitched props and give little trouble as compared with that found in rubber. If you're anxious to build a low-wing and see how much of a daredevil you are, let's get started on construction.

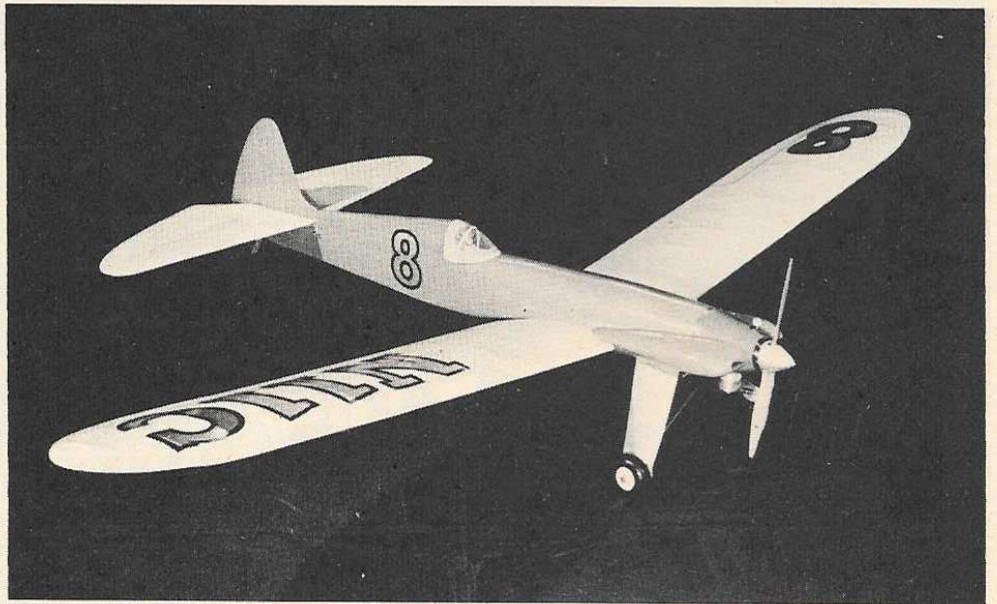
Cut fuselage side panels from 1/16" hard sheet balsa. Note that these taper from B to A. Next cut B, C, D, E, F, G, and H bulkheads from 1/16" medium sheet balsa and cut 3/16" hard balsa bulkhead behind firewall A. Build fuselage inverted, cementing all bulkheads back to E in place. When cement dries,

crack sides aft of E by running razor blade halfway through first. Pull sides together at rear and cement. Then cement main bulkheads F, G, and H in place, and follow by cementing upper bulkheads E, F, G, and H. Cement 1/16" x 1/8" balsa stringer to them as shown. Bend 1/32" soft sheet balsa (soaked in hot water) over and hold in place with gauze or pins until dry. This piece should be lapped over main side panel and trimmed after drying as it will shrink. Cement it in place last. Cement 1/16" hard sheet balsa bottom from E to rear end and trim edges when dry. Cement 1/16" hard sheet balsa floor between C and E. Note it is placed between the sides. Now cement 3/16" hard sheet balsa reinforcements inside fuselage side panels between B and C. Cement two 3/8" soft sheet balsa sides from A to E in place. Cement top cowl 9/16" x 2-1/4" x 10-3/4" soft balsa to fuselage. Tack cement 3/8" soft balsa bottom as it is removed later. Now cut out 1/16" mahogany plywood firewall and attach tin nut-plate to backside with metal screw or 2-56MS. Make two dural cowl clips as shown and attach to firewall with metal screws. Use sandpaper block to smooth fuselage face and put in one degree left-thrust but no down-thrust. Then cement firewall in place.

Carve profile and then plan view shown. Round corners. Sand fuselage smooth with 2/0 paper and #400. Remove soft balsa bottom. Make landing gear as shown and attach to 1/16" plywood with four 2-56MS. Slide gear and mount assembly up between sides and bulkheads A and B; cement well. Make 1/8" plywood mahogany tongue for wings, leaving splice off temporarily. Cut slots through soft fuselage side panels at an angle to correspond with that of tongue. Slide tongue in place. The tighter the fit, the better. Now cement hardwood splice on bottom of tongue and cover bottom of fuselage by cementing soft balsa bottom on permanently. Note that splice is rounded on sides so tongue will give in event of wingtip hitting ground. The tongue will produce 3-1/4" dihedral at each tip. Cement 1/16" medium sheet balsa tail platform on fuselage. Insert 3/32" dowel as shown. Make 1/16" wire tailskid and cement to fuselage, using silk over it for reinforcement. Add balsa fairing to skid. The .049 *Torpedo* motor was used to power original model; any other .049 motor may be used. A *Wasp* gas tank makes an excellent motor mount by hack-sawing off the portion that fits into crankcase. File *Torpedo* mounting flange holes to fit *Wasp* tank holes and attach motor with 4-48MS to firewall. A piece of pine block can be substituted for an engine mount. Carve center engine cowl from (Continued on page 44)



Good free flight sport designs have got to be able to take it. If you hit ground with this one, wings slide off tongues in fuselage, no damage results. The landing gear will take any amount of beating.



Excellent proportions, sound design, make this low wing as stable as any high wings you have been flying. The *Torp* tank projects but other tanks can be worked out, and any of the small engines OK.



Terrific power of the modern Half-A "mill" is made controllable, flight rendered realistic by use of ample moment arms and "stretched out" lines. Despite all this, construction is not too difficult.

TOP FLITE
MODELS INC.

New! 3 JIGTIME JETS



ACTUALLY
REACH SPEEDS
OVER 50 M. P. H!



ONLY
25¢
EACH



SEE THEM AT YOUR DEALER—NOW
TOP FLITE Models • Chicago

NOW • The Famous
**U.S. ARMY
JEEP**

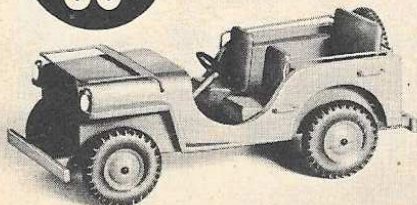
*Simplified Parts
Anyone can Assemble*

Be "out in front" with this clever ACE Army Jeep—it's a honey! You'll want an ACE Civilian Jeep kit, too! With simplified parts, mostly ready-shaped, and easy-to-follow plans, anyone can put these kits together. The price is only 60c per kit.

ACE "U.S. Army Jeep" KIT No. 242
ACE "Civilian Jeep" KIT No. 246

AT ALL MODEL AND
HOBBY SHOPS

KIT
COMPLETE
60¢



Daredevil

(Continued from page 12)

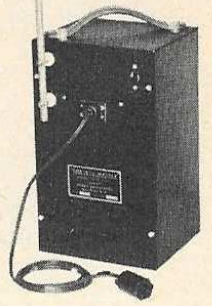
soft balsa 2" x 2" x 1-15/16" and hollow to 1/16" thickness wall with Exacto gouge. If you have an electric power tool, a rounded burr will also do a fast, neat job. Cut hole necessary in cowl to let it slide back over engine. Remove cowl and attach *Torpedo* gas tank to firewall with metal screw. Again make cutout in bottom of cowl to let it slide back to proper position over firewall. The cowl is attached by drilling through both cowl and clip with 1/16" drill, then inserting sheet metal screws. Carve two identical balsa cylinder cowls as shown and hollow to 1/8" thickness with gouge. Cement 1/8" balsa nut plate to fuselage on both sides. Drill 1/8" hole through cowl for 3/32" I.D. tube bushings which are cemented in place to cowl. Now drill 3/32" through tube for locating center of nut and remove cowl. Drill 5/32" hole in these same 3/32" holes and force nut into hole, adding cement to retain it.

Cement two pieces of soft sheet balsa 3/16" x 3" x 1/16" together and let dry; then cut to outline as shown. Cut holes on both sides and sand frame. Notch tail at both tips and center to receive main spar 1/16" x 3/16" x 1/4" hard balsa. Cement ribs made of 1/16" x 3/16" balsa stock in place. Use 2/0 sandpaper block to round leading and trailing edges. Finish with #400 paper. Make 1/16" quarter-grain sheet rudder.

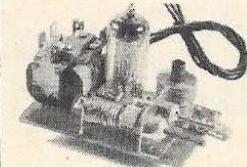
RADIO CONTROL ITEMS by "CONTROL MASTER"

TRANSMITTER Operating on the "Examination Free" frequency the transmitter is completely wired and tested. A type 3D6 tube is used, wired as a pentode to keep the crystal current at a minimum. Power input is 4.5 Watts with 180 volts on the plate. A full quarter wave antenna is included. The key has a positive snap action that indicates clearly when it is on. With heavy duty batteries installed the life is about the same as shelf life.

The entire unit is housed in a sturdy metal cabinet measuring 12"H. x 7"W. x 6" Deep.
Transmitter Type 27X. List \$29.50
Batteries Required
1 1/2 V. - Filaments — 180V. - Plate



RECEIVER This is a HARD TUBE receiver tuned to 27.255Mc. It uses a type 1S4 tube with either 60 or 67 1/2 volts on the plate and 1 1/2 volts on the filaments. The plate current drain is about 2.2ma. or 2.7ma. depending upon the plate voltage used. The receiver can be mounted by the four corners or laid flat against the fire wall. Extremely rugged construction. Sizes 2 7/8" x 1 7/8" x 2 1/2" high. Weight 4 oz. Receiver Type 27RH. List \$19.95 (wired & tested)



Batteries Required
1 1/2 V. Filaments — 60-67 1/2 - Plate

FIELD STRENGTH METER This meter is the perfect checker of radio equipment. The field strength meter checks the output of the transmitter. The O-3ma. meter checks the receiver and the O-30ma. checks the transmitter drain. It's small compact size makes for easy carrying to the field. Sizes 4" x 4" x 2".

Field Strength Meter Type FS3 List \$15.95
No Batteries Required



If Dealer Cannot Supply, Send Check Or P. O. Money Order To:

HOBBY ENTERPRISES

74 NORTH PARK AVENUE

BAY SHORE, NEW YORK

FOR RC FANS

THIS MONTH'S SPECIAL

- ESSCO SUPER III, TOPS IN RECEIVERS**, 3 new subminiature inexpensive high efficiency tubes in modern circuit, low battery drain with reliable long distance relay action. Suitable for any type of control. Completed unit with tubes & relay..... \$24.95
- ESSCO SUPER II**, a new 2 tube reliable receiver at single tube price, complete with relay.... 19.95
- SIMPLE SINGLE**, Mac's new 3S4 hard tube receiver at a kit price, complete with relay.. 12.95
Parts package to build your own..... 9.95
- THE LORENZ RECEIVER PARTS PACKAGE**, complete with tubes & Sigma 5F (special) relay 13.95
- MILLER RECEIVER PARTS PACKAGE**, all parts, tube & SIGMA 4F relay..... 11.95
- AIR TRAILS PI-27 RECEIVER PARTS PACKAGE**, includes every item needed w/tube and 4F relay..... 13.95
- ESSCO SUPER X**, our own new "HIGH POWER" SPECIAL, 2 tube circuit, full 5 watt input. Easier to adjust than single tube jobs. You can always bring them back with this set. Complete with tubes, antenna and cabinet.... 27.95
- AIR TRAILS PLAN R-101 TRANSMITTER PARTS PACKAGE**, all parts, tube, crystal antenna, & remote keying button..... 14.95
- AIR TRAILS MAC II, 2 TUBE 5 WATT TRANSMITTER**, complete unit in new standard metal case with meter antenna, remote keying button & power supply (or batteries) nothing else to buy..... 32.95
- COMING SOON—RELAYTROL**—Available July 1—Combination Sensitive Receiver Relay—Escapement Saves weight, components, batteries, money.
- SPECIAL LIGHTWEIGHT SIGMA 5F**, 5000 ohm coil, all the 5F features retained, approx. same weight as SIGMA 4F. Delivery from stock, bargain priced at..... \$ 5.95
- SIGMA 4F**, 8000 ohm, new mfrd..... 7.00
- GENERAL ELECTRIC MINIATURE**, 10,000 ohm SPNG contacts, swell for hard tube sets \$2.45, SPNO contacts..... 1.95
- CRYSTALS**, 27.255 mc./0.04% tol, PETERSEN Z9A with ceramic plug-in socket..... 4.95
- ALNICO 5 DISC MAGNET**, 1" dia. x 1/4" thk with ctr hole, ideal for proportional rudder control 1.25
- WHIP ANTENNA**, 3 tapered threaded sections, 9 1/2 ft. long with top of cabinet base mount. Will boost your power..... 2.95
- 6 VOLT DYNAMOTOR**, delivers 180 volt/50 ma. PM field requires low battery current..... 6.95
- 6 VOLT DYNAMOTOR**, delivers 180 V/50ma & 250 V/125 ma. our biggest bargain..... 11.95
- 12 VOLT VIBRATORPAC**, for operation from new model cars with 12 volt battery, delivers 250 V/40 ma..... 7.95

GOOD TUBE BUYS

RK-61	\$3.45	XFG-1	\$3.35	154	\$1.35
354	1.25	3V4	1.15	3D6 2 for	1.95
3A4	1.00	3A5	1.35	155	1.10

MONEY BACK GUARANTEE ON ALL ITEMS
Save C.O.D. Fees, Incl. Postage, Excess Refunded
Minimum Order—\$3.00, Please
Special Bonus—2 lb Hookup Wire Kit Free \$5 Order
ELECTRONIC SPECIALTY SUPPLY CO.
58 WALKER STREET, NYC 13, N. Y. WALKER 5-8187

Make 20 wing ribs of 1/16" medium quarter-grain balsa. Notch trailing edges with file. Taper main spar at tips as shown. Pin spars down and cement ribs in place. Bend one piece of bamboo 1/16" thick by 1/4" or 3/8" wide over candle flame. Split to 3/32" thickness for two identical tips. Notch leading and trailing edges and cement tips in place. Add ribs R2 and R1. Remove lower 1/4" of main spar at center to allow for plywood sandwich. Cement bottom piece of 1/16" plywood on top. Cement 3/8" sheet soft balsa fillers as shown on top. Carve airfoil to fit inner rib and round the leading edge. Sand with 2/0 paper on block followed by #400 paper. Bevel ends of wings to fit fuselage when placed on tongue.

Brush one coat of clear STA on fuselage. Sand with #400 paper. Cover fuselage with small panels of white Jap tissue, using clear STA for adhesive. Brush on three coats of

Testors sealer, sanding between coats with #400 paper. Fuselage is painted with three coats of red STA, some thinner added. Cover rudder as done on fuselage. Cover tail surface with tissue and clear STA for adhesive. Dope down edges after trimming. Shrink tissue with water. Dyed clear STA dope was used on original.

Here is a weight saving trick used by contest fliers. About five teaspoons of aniline yellow dye is placed in a four-ounce bottle of STA thinner and shaken. Pour the dyed thinner into dope. Do not pour all dope as bottom portion will make a freckled paint job. A sprayed dye job is something that sparkles and stands out over other contest fliers. Three coats brushed on will do a good job. Warp 1/4" wash-in on left wing only. Dope tail surface.

Cement rudder on fuselage with one degree right. The rudder should be in same line as motor thrust. Carve soft balsa fillers to fair in fuselage along rudder out of 1/4" soft sheet balsa. Paint red. Hinge line of tail and ailerons are represented by 1/16" stripes of black Trim Film decal. A two-inch racing number decal is on each side of fuselage. This same number is located on upper left wingtip and lower right tip. It is 3-1/2" high. License number is 3-1/2" high, NIIC decals, and on upper right and lower left wings. Slide wings on tongue and hold in place with rubber band around fuselage bottom. Attach tail surfaces with rubber. To keep tail keyed in place, cement four 1/16" sq. x 3/16" soft balsa cleats under tail next to platform. Attach center and cylinder cowls, prop, spinner. Last, carve balsa pilot and cut plastic canopy from five-inch bubble canopy. Cement in place. Add 1/16" white paper strips as shown. Total weight, 11 oz. Area, 192 sq.

Model should balance two inches back of leading edge. Wings can be slid fore and aft for field adjustment. If ship is still nose or tail heavy, add clay to balance. Hand glide before flying. Model glides and flies in left circles. Do not attempt full power until plane is adjusted properly.

HOT SHOT POWER PAC

for
Quick, Dependable Starts



COMPLETE WITH CHARGER

only **\$6.95**

F.O.B. KENOSHA

SHIPPING
WT. 5 LBS.

Here's a storage battery built like an automobile power unit—engineered just for model airplane starting. 4" x 6 1/2" by 6 1/2" high. Storage compartment big enough to hold 1/2 pint gas can, tools and extra props. Handy handle. Hard rubber case. 5 full plates.

HOTTER GLOW OR SPARK...

Makes starting easier because excess fuel is readily burned out.

TRUE DEPENDABILITY...

Every time you go out to fly you have a fully charged battery.

BATTERY CHARGER INCL.

For simple no-cost charging.

LONG LIFE...

Will last up to 10 years with proper care.

**FULLY GUARANTEED
SEE YOUR DEALER!**

If he can't supply, order direct on five day trial, money-back guarantee. Send \$5.00 now, pay balance C.O.D.

Send Hot Shot Power Pacs today to:

Name

Address

GREAT LAKES BATTERY CO.
DEPT. 27—KENOSHA, WISCONSIN

Books that will help you build better planes



Birds and Planes

HOW THEY FLY

By *John Lewellen*

With pictures by *Ava Morgan*

Here is a fascinating picture of what makes a flying machine tick—whether it's made by man or nature. 114 pictures and a fun-to-read text tell you all about the structure of bird and plane wings, gliding and wing-flapping flight, propeller-driven planes and jets, the theories of air pressure, the application of Bernoulli's principle, the use of ailerons, and the influence of weather. All details are clearly explained, giving you valuable tips on how to build better planes. You can do lots more with your models when you understand from this fascinating book exactly *why* planes fly.

\$2.00

Experiments with Airplane Instruments

By *Nelson F. Beeler* and *Franklyn M. Branley*

66 illustrations by *Leopold London*

Now you can make a working model of a pressure gauge from handy things such as a soda straw, adhesive tape, cardboard, and thread, and this wonderful book with 16 easy-to-do, exciting experiments shows you just how. Besides that, you can learn all about the altimeter, compass, air-speed indicator, temperature gauge, tachometer, instrument landing system, and lots more. It's right up to the minute with a reproduction of the latest F84 Thunderjet panel. Here's your chance to find out all about the insides of a plane and to make model plane instruments that work perfectly from material you can pick up around the house.

66 diagrams. \$2.50

Send for your own books today and have more fun building your models!

Order from your bookstore, or
THOMAS Y. CROWELL COMPANY, Dept. MA-7
432 Fourth Avenue, New York 16, N. Y.

Please send me my copy of

- BIRDS AND PLANES @ \$2.00
 EXPERIMENTS WITH AIRPLANE INSTRUMENTS @ \$2.50

I enclose a check or money order for _____ and will receive my books postage free.

Name

Address

City.....Zone.....State.....