

"Firing up" with chief mechanic Cal Jr. as the anchor man. That's a Berkeley 27 mc. transmitter at the left. Can't you imagine some of the C/L fans thinking to themselves, "What a control line it would make!" But R/C for us!

# JERSEY LIGHTNIN'

By S. CALHOUN SMITH

Cal decided to have himself some fun with a radio-controlled model which closely follows the Goodyear-Continental racers. Scoots like scalded cat!

■ You should hear the comments when this ship appears on the field: "Where are the control lines?" or "Pretty big team racer, ain't it?" Then when the gang finds out it is an R/C job they just kinda shake their heads, mutter a bit and walk away. But they come back in a hurry when this baby gets airborne and roars off like a scalded cat.

Seriously, though, after watching lots of R/C flying, putting in considerable time ourselves on blip-button-flying the typical high-wing R/C design we decided on a design that more closely approached our favorite full-size airplane—the Continental (Goodyear) Racer.

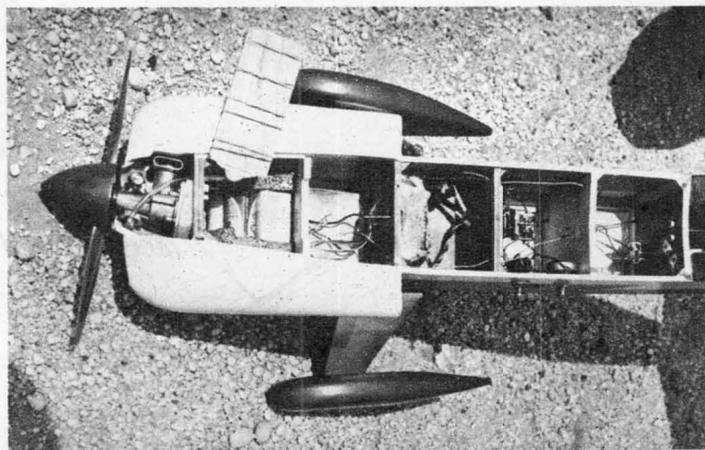
The design you see here is the result. Numerous flights have de-bugged it to the point where flying leaves little to be desired. The ship is fast, climbs steadily and has just enough lateral stability to hold altitude when blipped around a turn. Hold the full rudder on and it starts down after about 180 deg. of turn and builds up speed quickly for looping and other stunts. Recovery is good and steady climb grabs back altitude easily. Glide is fast, so fly this job with plenty of open space.

Bucking a 20-25 mph wind with a conventional R/C job is sort of like flying a helicopter in hovering flight, and since the wind is no respecter of

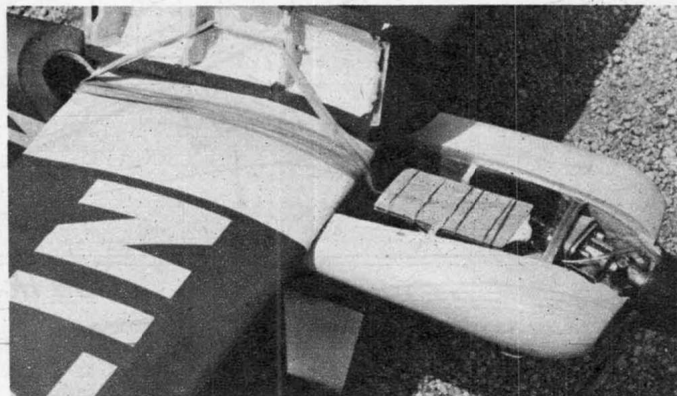
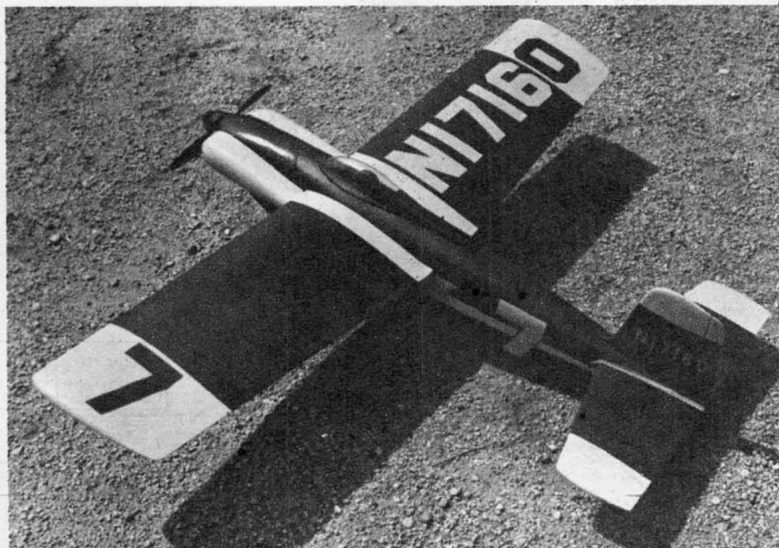
R/C flyers, we put enough power in this bomb to take care of windy weather flying. Of course if it's going to fly fast, chances are you'll bend up the airplane more frequently, so construction is extra rugged. Liberal doses of our favorite ingredients, plywood and Weldwood, were applied with good crash-proofing results.

Except for the shoulder wing and relatively high power, *Jersey Lightnin'* follows typical R/C configuration. Span is 52", aspect ratio 5 to 1 with 500 sq. in. area, airfoil is 10% thickness. Tail moment is 45% of wing span, stab area 25%, fin area is 7%. Nose moment is nearly equal to mean chord. Dihedral is 4 deg. and wing, tail incidence difference is 3 deg. Strong left turn and stall tendencies showed up immediately on test hops. Downthrust and right thrust were added on successive flights until smooth straight climb resulted. Thrust offset required became quite large, 6 deg. down and 8 deg. right with the K&B .19 engine swinging a 10D-3½P prop. Weight came to 4 lbs., 6 oz.—pretty heavy, so wing loading is 14 oz./100 sq. in. or 20 oz./sq. ft. A few test hops were made with an Arden .19 up front and ship flew well but a K&B .19 was later used for greater speed.

Radio gear is home-built 27 mc. two-tuber, with Sigma relay on Lord mount. Battery (Continued on page 57)



The works!—above. K&B .19 with offset thrust mount pad and pressure tank. Batteries are packed in sponge rubber. Receiver mounted on sponge rubber. Relay on Lord mount, other plumbing and escapement in position ready to go. Top hold-down is rubber bands over dowel in top, then over fuselage pegs.



# POLK'S FOR LATEST IN RADIO CONTROL



## RADIO CONTROL UNIT, TUNED REED, 3 CHANNELS

Incorporating reed unit giving output for three separate channels. The channels can operate either escapement and/or electric motors. HARD Valves with a life of over 3,000 hours are used throughout. Complete with antenna.  
Postage & Ins. 25c

**\$115.00**

**REED UNIT**—Supplied in three different frequency ranges which, when combined, will give up to nine channels. Diagram of suitable transmitter and receiver also supplied to enable construction of own equipment.  
Weight 1 1/2 ozs.

**\$19.95**

Postage & Ins. 50c

## SIGMA 4F 8000 OHM RELAY

Now available, new, factory set and guaranteed.

Postage & Ins. 25c

**\$7.00**

## E.D. POLARIZED RELAY

Polarized by high flux double magnet system and incorporates fully balanced leaf armature. Unaffected by vibration and capable of operating on current changes of under 1 m/a.  
Weight 7/8 oz.

Postage & Ins. 25c

**\$7.50**

## FLY BALL ACTUATOR

No sequence to remember. Proportional action with pulse control. Continuous operation — no rubber to wind! Develops 6 oz. pull on 3 volts. Easy to install, for small or large aircraft.

**\$7.50** plus 25c pp.

## FREQUENCY METER

A "must" item. Can be used with any set. Shows if you're on correct 27.255 MC/S frequency. Also indicates "Top" output. Complete with instructions, ready for use.  
P.P. & Ins. 25c

**\$2.00**

## E.D. MARK III ESCAPEMENT

100% reliability due to robust and accurate construction of claw and rotor. Special double winding and current-saving device increases battery life, a feature first developed by E. D. Weighs only 3/4 oz. Uses 3 pan cells.

**\$5.95**

Postage & Ins. 25c

## FENNERS-PIKE SERVO UNIT

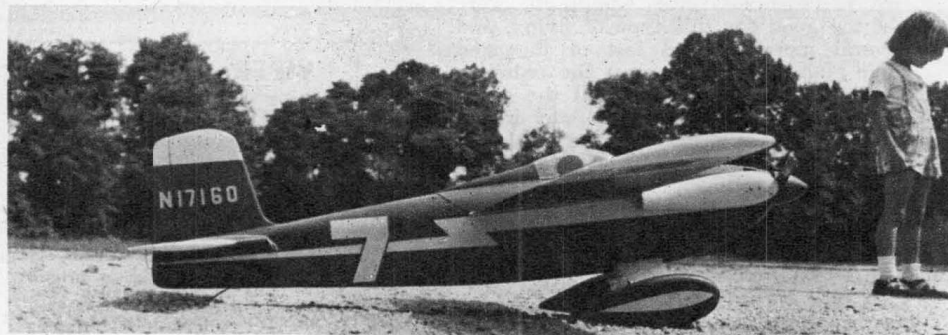
World Patents Pending

COMING SOON! True proportional steering control. Operates rudder plus additional control on secondary circuit—both on single channel. Shock resisting, works with any existing receiver. Wt. 2 1/2 ozs. Send S. A. E. for details!

## CLOCKWORK ESCAPEMENT

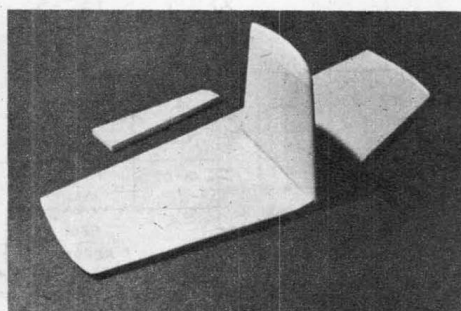
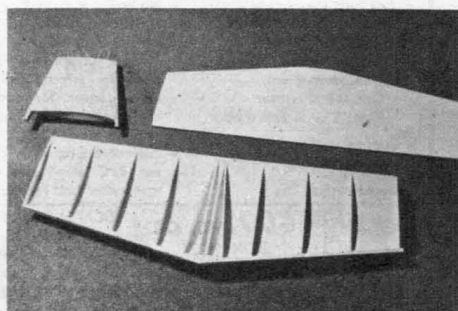
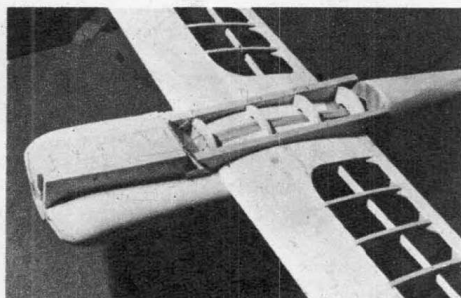
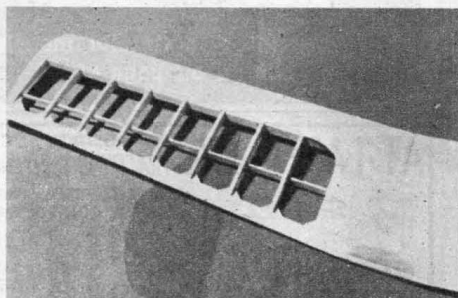
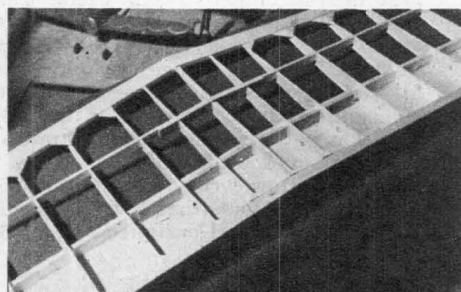
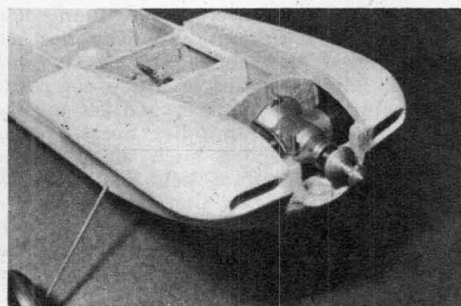
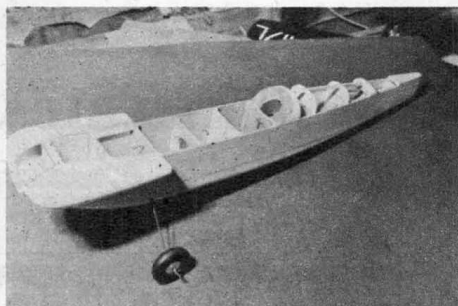
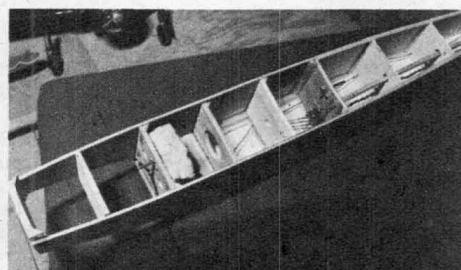
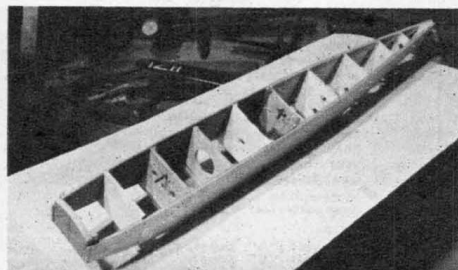
— Ideal for marine use, self powered with an enclosed spring wound motor. For 2 or 4 position operation. Weight: 3 ozs.

**\$11.50** Postage & Ins. 50c



# JERSEY LIGHTNIN'

Construction Sequence Photos of Cal Smith's R/C Racer



POLK'S MODEL CRAFT HOBBIES, Inc.  
314 5th Ave. (32nd), Dept. A13, NYC 1

# Jersey Lightnin'

complement uses medium cells because nose weight is needed. A powerful escapement such as the E.D. Mk. III with plenty of rubber for driving power and higher operating voltages is required because of the high air loads imposed.

If you do not want to tangle with the fast flying yet, we would recommend substituting a .14 or .15 size engine; this would tame her down a bit, but the nose would be lighter so ballast would have to be carried or the nose lengthened. If you build for the smaller engine the structure could stand lightening somewhat. Use thinner plywood bulkheads and cut lightening holes in plywood doublers and formers.

Construction follows conventional methods and the photos show the main features. Cut out plywood fuselage side doublers and join to balsa fuselage sides with Weldwood. Cut out firewall and all formers. The plywood floor between formers 3 and 4 can be used if you wish to try an aluminum sheet Cessna type landing gear. If wire gear is used, this floor can be omitted. The fuselage sides are parallel at formers 3, 4 and 5, so these formers are put in place first, then tail and nose formers added, working towards ends from the center.

Use Weldwood wherever hardwoods join, cement on balsa joints. Be sure to cut holes for wires, torque rod and escapement rubber in the formers before adding to fuselage structure. No drawings are shown for formers 7, 8, 9, 10 since they are rectangular in shape and can be made directly from plan top and side views. Add 1/8" sq. long-irons and 1/8" sq. uprights at former side joints. Start putting the hardware into fuselage structure before enclosing top or bottom. Run antenna wire through formers

## Jersey Lightnin' Construction Photos

(These supplementary captions refer to the pictures on P. 56, the sequence being from left to right.)

- 1 and 2. Cut out fuselage sides and doublers and glue together. Mark former positions on sides, then join starting with formers 3, 4 and 5. Add rudder drive before enclosing.
3. Add 1/4" sq. to bottom and plank with 1/16" sheet. Carve lower cowling and engine fairing blocks. Hollow, then glue in place. Build up turtledeck structure at tail.
4. Nose detail showing 3/16" sheet along inside top edge of engine fairing. Note cut-out portion for engine cylinder. Lower nose also filled to fair into spinner backplate.
5. Wing panels are built over plan. Pin down L.E., rear spar and T.E. Add ribs, front spar and gussets. Sheet cover leading edge before removing from work board. Omit rib #1.
6. Join wing panels with 3/4" plywood joiners at L.E., front and rear spars. Add double rib #1, gussets, then plank center section with 1/16" sheet both top and bottom out to rib #3.
7. Complete wing by adding cap strips and T.E. stiffener. Add tip blocks and carve L.E. and T.E. to final shape. Sand smooth and clear-dope before covering with silk or Nylon.
8. Fasten wing down on fuselage and cut top cowling blocks to fit engine fairing section and top of wing. Built up structure shown here, but block construction is easier.
9. "Fireball" construction of tail surfaces. Ribs are first cemented to wing skin and L.E. added. Then other wing skin is cemented down. Note method of pinning skin to ribs on fin.
10. Tails completed, tip block glued in place and carved to shape. Fin cemented to stab. Rudder is carved from block, fastened to fin with tubing and wire.

from receiver compartment. Add escapement and torque rod. Fasten wing hold-down wires with L.G. plates and bolts. Landing gear can be bent to shape and fastened with eye or "J" bolts.

Work can now proceed on fuselage top and bottom. Add 3/4" square strips along bottom edges and carve to side profile. Plank fuselage bottom with 1/16" sheet with grain running cross-ships. Turtledeck can be built up with solid blocks at wing trailing edge and stab leading edge cut at 45 deg. angle. Plywood facing is cemented over the blocks. Add formers and backbone. Planking is 3/32" thick strips or sheet formed wet and rolled to fit. Add lower nose block, rough-carve to outside shape and then hollow to about 3/4" thick behind firewall.

Engine fairing blocks are cut to shape and hollowed out as shown. Add 3/16" sheet along fuselage top edge from spinner to

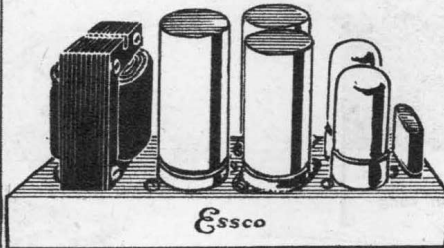


**SANTA SAYS... FOR A LONG REMEMBERED GIFT**  
**BUY R/C PARTS FROM**  
**EsSCO**  
**GIVE SOMETHING DIFFERENT**  
**this CHRISTMAS**  
**GIVE THE LATEST**  
**IN RADIO CONTROL EQUIPMENT**

**TOPS IN QUALITY AT DOWN TO EARTH PRICES**

Make EsSCO Your R/C Materials Headquarters—Check this Listing and be Convinced

**INTRODUCING—SOMETHING NEW ★ ★ ★**  
**COMPACT 2 VOLT POWER SUPPLY.** Delivers 150 volts at 35 ma. Suitable for MAC II & other sets. COMPLETE KIT OF PARTS & CIRCUIT DIAGRAM..... \$ 9.95  
**WITH DRILLED CHASSIS** (has space for 2 tube transmitter) IDEAL FOUNDATION UNIT FOR HI POWER TRANSMITTER..... 11.95



GOOD TUBE BUYS			
SPECIAL 3D6.....	2 for \$1.95, 3 for \$2.50		
SPECIAL PRICES ON RAYTHEON HEARING AID TYPE TUBES			
RK-61 \$3.45	KF-1 \$3.35	154	\$1.35
354 .90	3V4 .90	1V5	1.95
3A4 1.00	3A5 1.50	155	1.10
CRYSTALS, 27,255 mc./0.04% tol. PETERSEN Z9A with ceramic plug-in sockets..... 4.95			
SIGMA 4F RELAY COILS, 3000 & 10,000 ohm. fine for repairing those defective relays..... 1.25			
OSR TYPE QUENCH COILS for the MILLER, MAC's S & other hard tube receivers..... 1.85			
COMPONENT BUYS			
MINIATURE 25,000 & 10,000 ohm potentiometers..... .45			
CERAMIC TRIMMER CONDS. 4-30, 7-45 mmf. .... .45			
RECEIVER PLATE COIL, low loss with iron core slug, 25, wound for Lorenz..... .65			
CLOSED CIRCUIT METER JACK..... .30			
OPEN CIRCUIT METER JACK..... .25			
STANDARD PHONE PLUG..... .35			
PHONE PLUG & SOCKET for meters, pair, AIR TYPE VARIABLE CONDENSERS, 15, 25, 50 mmf. any type, screw-driver shaft..... .45			
REMOTE PUSH BUTTON KEYING SWITCH..... .45			
MINIATURE TUBE SOCKET, wafer type..... .10			
SUBMINIATURE TUBE SOCKETS..... .15			
FLEA-CLIPS 25 for..... .50			
HEARING AID TYPE BYPASS CONDENSERS, all values..... .15			
CERAMIC BYPASS CONDENSERS, all values..... .10			
HIGHEST GRADE 1/2 watt carbon resistors..... .10			
LINEN BASE BAKELITE BOARDS for all receivers, special type with order 2.5. Drilled boards for LORENZ, MILLER, and MAC's SIMPLE/SINGLE..... 1.00			
FLEAWEIGHT HOOKUP WIRE, 25 ft. of 5 assorted colors stranded, with plastic insul. .... .25			

**SPECIALS FOR THIS MONTH**  
**SIGMA 4F 8000 ohm relays, \$7.00 list price, special with LORD SHOCK MOUNT "ESSCO VMA" A NEW ECONOMICAL PRECISION METER TEST SET, 4 ranges, 0-5 & 0-50 ma., 0-5 & 0-50 volts. COMPLETED UNIT, not a kit..... 8.95**

MINIATURE 2 1/2 oz. sensitive 10,000 ohms, adjustable to 1.7 ma pull-in & 1.3 dropout. Normally closed SP contact, ideal for hard-tube receivers.....	\$ 1.75
SPECIAL 2 VOLT VIBRATORS for PE-157.....	1.25
WILLARD BB-54 2 volt cells.....	2.95
WILLARD NT-8 Six volt storage battery \$2.75 ea 2/.....	5.00
6 VOLT DYNAMOTOR, delivers 250 V/50 ma. FM field allows low battery drain.....	6.95
COMBINATION FIELD STRENGTH METER TEST SET KIT.....	9.95
MAC'S COMBO FSM TEST SET, Complete kit of parts includes special 1% tol. resistors & new 6 position switch with 0-1 ma meter range.....	14.95

FOR FAST, INTELLIGENT, FRIENDLY SERVICE ON RADIO CONTROL "CALL ON ESSCO"

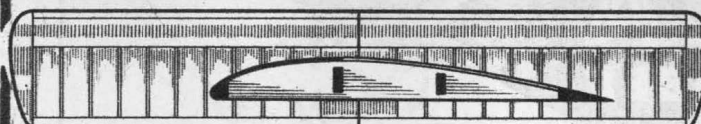
**ELECTRONIC SPECIALTY SUPPLY CO.**

58 WALKER STREET

NEW YORK CITY 13, N. Y.

TEL. WALKER 5-8187

## SPECIAL!! R/C WING-STAB KITS!!



SPAN	CHORD	STAB	PRICE	P.P.
60"	10"	25%	3.95	.50
50"	9"	28%	2.95	.35
42"	7"	30%	1.95	.25

Now you can build your dream R/Cs without going through the time consuming wing and stab roadblock. Let your imagination loose on fuselage designs, and build your surfaces from WING-STAB kits. The short building time will actually be fun! Ribs are die-cut, and edges shaped. . . . JASCO balsa stock for durability. . . . WING-STAB kits can only be had by direct mail. (Please include postage.) This is a test project. Give it a try and build several sets. You will have what you want, and will save money at the same time.

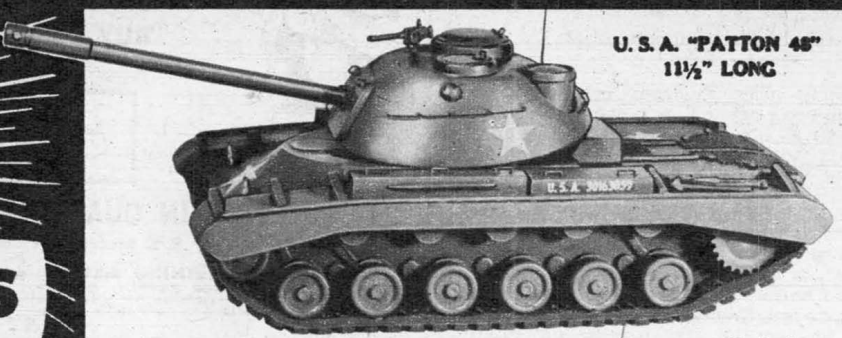


1953 YEAR BOOK  
 Only \$1.00 P.P. Now  
 is the time to find out  
 what makes them fly!

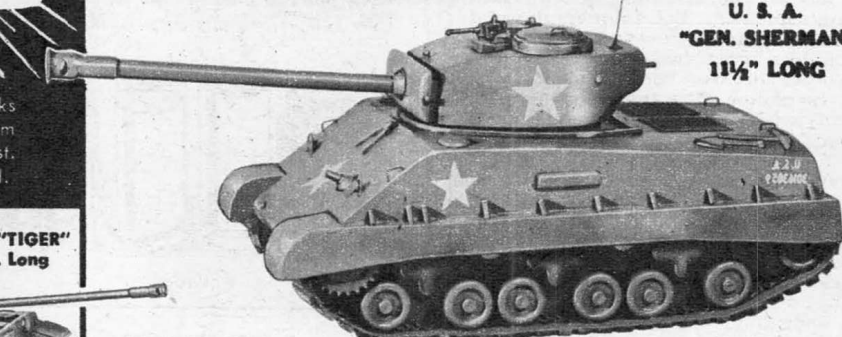
**MODEL AIRCRAFT CONTROL CO. Box 333 Sta. D New York 3, N. Y.**

# MERCO Announces NEW BATTLE TANKS

HERE ARE 2 MORE "big name" Korean battletanks by Merco. "Gen. Sherman" which did so much to stem the Red advance and "Patton 48"—USA's very latest. Considered the fastest medium battletank in the world.



U.S.A. "PATTON 48"  
11½" LONG



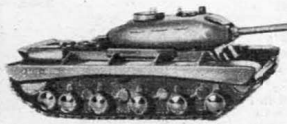
U.S.A.  
"GEN. SHERMAN"  
11½" LONG



12-in. Long  
U.S.A. T-41 "BULLDOG"



GERMAN "TIGER"  
12-in. Long



RUSSIAN "STALIN"  
14½-in. Long



U.S.A.  
Gen. PATTON  
13-in. Long

**\$2.95 EACH**  
PLUS 25¢ POSTAGE

## With the ROTATING "ACTION" GUN TURRET

ALL 6 MODELS are designed from info supplied by U. S. Army Ordnance. Simple construction from full-size plans. SCALE: 1-inch equals 2¼ feet.

**FEATURES**— Completely Pre-Fabricated • Die-Cut Balsa Parts • Rotating Turret • Formed Bogie Wheels Lights • Die-Cast Guns • Metal Air Vents and Grab Irons • Plastic Parts • All Balsa Blocks Contour Shaped Shovel and Pick Axe • Colored Decals • Full-Size Plans Instructions • Photos.

**SCALE  
AUTHENTIC  
EASY-TO-BUILD  
\$2.95 EACH  
PLUS 25¢ POSTAGE**

Now Available at All Leading Dealers. If Out of Stock Order Direct

**MERCURY MODEL**

920-A12, UTICA AVE.  
BROOKLYN 3, N. Y.

# 1/2" A FLYING SCALE MODELS \$2.95 Each

COMPLETE WITH  
Redi-Carved & Hollowed Fuselage

P-51, Vo. Corsair, F.W. 190  
TYPHOON, ZERO, SPITFIRE

Accurate 1/2" scale reproductions... finest of their kind! Average wing span 18". Super-detailed 'cinch to follow' plans; cut-to-shape Wings, Stabs & Rudder plus All Hardware! Value plus!

# STUKA DIVE BOMBER

1/2" scale reproduction with cut to shape wings, stabs and rudder. Plus all hardware \$3.50 detailed plans for a really fine model 23½" wing span,

# Consolidated

3087 3rd Ave. (AT-1253),  
New York 56, N. Y.

Send Postcard for 16 Page Circular



former 3 to back up the top curve of the fairing block. Fuel-proof inside of fairing and enclose fuselage side surface before cementing fairing permanently in place. Fill in engine section sides ahead of firewall with ¼" sheet and ½" sq. in lower corners to build up nose to match spinner backplate. This area will then have to be hollowed to clear engine. The dummy carburetor scoop on the bottom cowl is added next. This block could be faced with an aluminum strip to prevent marring up the bottom on those hard landings.

The upper nose cowling and top over the wing can be built after the wing is in place so that a good fit will result. Lay aside the fuselage and proceed with the wing. Cut out wing ribs from 1/8" sheet and taper spars as shown. Build directly over plan, pinning leading and trailing edges and rear spar in place. Add ribs, then gusset as shown. Omit both No. 1 ribs until panels are joined. Add leading edge covering and cap strips before removing wing panels from work board. When dry take up from board and join panels with plywood spar joiners. Complete covering top and bottom of center section with 1/16" sheet.

Carve leading and trailing edges to shape, add tip blocks and carve. Inset ¼" x ½" pine strip at trailing edge. Retain thickness out to rib 3. This serves as stiffener for T.E. when wing rides against plywood former on turtledeck. The wing can be sanded smooth and given a coat of clear dope preparatory to covering.

With wing completed it can be mounted on fuselage and top cowling pieces completed. The top section over the wing was built up on the original model but plans show more easily carved block construction. Cut nose cowling to fit over firewall and between engine fairing blocks. Add plywood plate at 45 deg. slant at wing leading edge. Put down block over wing and rough-carve whole top section. When satisfied with fit over wing and nose remove pieces, complete carving and hollow to about ¼" thickness.

Top hold-down can be rubber bands over wing pins, and engine bolts behind firewall.

# Lil SCRAPPER

Control-line  
sport flyer  
Class 1/2A  
14" span



# \$150



Featuring • Partially assembled • Precision die cut parts  
• Prime grade balsa • Easiest to assemble—easier to fly

## Famous PDQ CLOWNS

DESIGNED BY  
MATT KANIA

**BABY CLOWN**  
CLASS A  
\$1.50

**FLYING CLOWN**  
CLASS AB  
\$1.95

**SUPER CLOWN**  
CLASS BC  
\$2.95

PDQ PRODUCTS CO.  
MILLVILLE, NEW JERSEY

AT YOUR  
DEALER

# AIRPORT MODELS CO.

MILLVILLE  
NEW JERSEY

MFG. & SOLD BY PDQ PRODUCTS CO.

Key top to turtledeck and nose cowling for proper alignment.

Tail surfaces are of "Fireball" wing construction and the same ribs are used for stab and fin. Cut out skin to outline and lay out rib positions in pencil. Cement ribs and  $\frac{1}{4}$ " sq. leading edge in place, then add other skin. Make a shallow razor cut along center line so that skin will make taper to tips O.K. Check alignment by sighting spanwise while adding second skin. Fin is made in the same manner as stab. Let leading edge and hinge post protrude for joining through stab skin. Cement fin in place on stab and add fairing block at leading edge to match turtle deck contour. Rudder is carved from  $\frac{1}{2}$ " sheet and fastened to fin with wire and tube hinges. Key stab to fuselage.

All wood surfaces can now be given final sanding. Cover wood surfaces of fuselage and tails with lightweight Silkspan. The wing is covered with silk or Nylon. Clear dope covered surfaces with several coats before using colored dope. Naturally, fuel proof dopes should be used throughout. Original model was finished in red and cream, but suit yourself on the paint job.



"Hey, George, do you want a real swell dog that's fond of model planes too?"

# POWER

to do the things you want to,

"The Finest  
Money Can Buy!"



NEW  
LOW  
PRICE,

AT YOUR  
DEALERS

ONLY  
\$11.20

Write for

literature.

FIRST IN QUALITY

AT LOWEST COST!

## get the most for your Dollar!

FORSTER BROTHERS, 82 E. LANARK AVE., LANARK, ILL.  
WHERE QUALITY COMES FIRST

Can I Afford Specialized Education?



**YES!  
YOU  
CAN**

AT

**NORTHROP AERONAUTICAL  
INSTITUTE, because**

**WE HELP YOU**

- by low tuition cost
- by easy pay-as-you-learn plan
- by intensive training which shortens the time spent in school
- by assisting you to secure part-time employment at good wages
- by assisting you to secure permanent employment after graduation

NOTE: The Demand for Northrop Graduates exceeds the supply.

You can't afford to settle for less than a Successful Career in Aviation for which the following Northrop Courses prepare you:

**AERONAUTICAL ENGINEERING TECHNOLOGY**—Internationally recognized Engineering Training.

**AIRCRAFT MAINTENANCE ENGINEERING TECHNOLOGY**—Combining features of Engineering and Maintenance Courses.

**MASTER AIRCRAFT AND ENGINE MECHANIC**—Leads to A & E Certificate of CAA.

**JET ENGINE OVERHAUL AND MAINTENANCE**—Jet engine training has now become a specialty.

Fill in and mail coupon below for FREE CATALOG. Do it now. No obligation.

**ATTENTION KOREA VETERANS** Northrop Aeronautical Institute is fully approved for your training and for all other veteran training.



**Northrop**  
Aeronautical Institute  
An Accredited Technical Institute  
1133 W. Arbor Vitae Street  
Inglewood 1, California

**MAIL COUPON FOR FULL INFORMATION**

**NORTHROP AERONAUTICAL INSTITUTE** 8N17  
1133 W. Arbor Vitae Street, Inglewood 1, California

Please send me immediately the Northrop catalog, employment data, and schedule of class starting dates. I am interested in:

- Aeronautical Engineering Technology  
 Aircraft Maintenance Engineering Technology  
 Master Aircraft and Engine Mechanic  
 Jet Engine Overhaul and Maintenance

Name \_\_\_\_\_ Age \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_

Veterans: Check here  for Special Veteran Training Information.

Pants can be added after test flying is completed, but keeping them on in flight and still having them "knock-offable" in hard landings is a problem. We are not very satisfied with the system used, so if you can come up with better one, more power to you. The pants are a sandwich of two layers of 1/4" plywood with a balsa core. The wheel is spaced on the axle with soldered washers and the inside plywood surface of the part is notched so that pant slides down over the wheel. A dummy strut of 1/32" aluminum is bolted to the inside of the pant and bent to lie flat along the wire strut up to fuselage side. Where sheet aluminum touches fuselage the end is bent over and this tab is notched to go over gear wire. A small wood screw through the tab holds the aluminum to the fuselage bottom. A better system might be a combination Cessna type aluminum plate gear bolted to fuselage bottom with wire axle through lower ends. Pants could be bolted to aluminum plate.

To complete the model a few items remain. The K&B .19 is fitted for radial mounting by adding a 1/8" thick aluminum plate over the rear crankcase cover. Cut four bolts 1/8" longer than regular rear cover, retaining bolts to mount the radial plate. These can be countersunk in the radial plate if desired.

Because of large right thrust offset it was necessary to add a hardwood mounting pad between the firewall and the engine. This can be cut from 1/2" thick pine and beveled to the angle shown in the top view. Drill to match radial mount-holes. The angle shown is 8 deg., but since each model will fly differently thrust offset may have to be changed. It is a simple matter to shave the face of the wood mount pad to make this adjustment. Jim Walker regulator and pressure tank are used and regulator is mounted under crankshaft with fuel line passing through firewall to pressure tank.

Battery complement is packed in sponge rubber immediately behind firewall. Receiver is mounted flat against a 1" thick sponge rubber pad behind former 3. Four hooks are placed in outer corners of former 3, and rubber bands criss-crossed diagonally over receiver and rubber hold rig.

A Sigma relay is mounted on a Lord mount bolted to a removable 1/8" plywood plate behind former 4. DPST switch pot and meter plug-in are mounted in left fuselage side between former 4 and 5.

With ship completed and all gear installed, check for C.G. location as indicated on the plans. Try to retain wing tail and incidence as shown and shift batteries to get proper C.G. location. Make a series of hand-launched glides to check this. Check also for any glide turn tendencies; straight flight is wanted, so remove any warps that may cause turn. First power flights should be throttled down and of short duration. Rudder travel should be limited to about 1/8" in each direction. This can be opened up to about 1/4" later.

**Bill of Materials**

6 1/16"x3"x36", wing covering, fuselage bottom. 2 1/16"x6"x36", tail skins. 1 3/32"x3"x36", turtledeck covering. 10 1/8"x3"x36", ribs, formers, sides. 3 1/16"x1 1/4"x36", rib caps. 4 1/8" sq.x36", longerons and uprights. 1 1/4" sq.x36", tail leading edge. 2 1/8"x1 1/2"x36", rear spars. 2 1/4"x3/4"x36", front spars. 2 1/4"x1"x36", wing trailing edges. 2 1/2"x5/8"x36", wing leading edges. 1 1/2" sq.x20", tail tip. 1 3/4" sq.x36", fuselage bottom. 1 1" sq.x18", wing tip.

Blocks: 1 1/8"x3"x18", pants core. 2 1/2"x2 1/2"x20", engine fairings. 2"x4"x36", fuselage top and bottom cowl.

Hardwood: 1/4" dia., 18" cedar arrow, torque rod. 4"x44" of 1/16" plywood, sides and formers. 12"x12" of 1/8" plywood, formers, joiners, pants. 4"x12" of 1/4" plywood, firewall, formers.

Wire: 1/8" dia.x24" wire, landing gear, wing hooks. 3/64" dia.x18" wire, rudder drive, linkage.

Miscellaneous: 2 1/4" dia. Froom Spinner, 3" dia. Veco wheels, 10" bubble canopy, three eye or "J" bolts, two landing gear mount plates, 1" Lord mount, 1 doz. 4-40 bolts and nuts, R/C receiver, relay, escapement, batteries, switch, pot., meter plug as required, four sheets lightweight Silkspan 1 1/3 yards silk or Nylon, four 4 oz. clear dope, four 4 oz. red dope, cement, Weld-wood glue.

**OHLSSON**  
*Gold Seal* **FUEL**

**2**  
entirely **NEW**  
**FORMULAS:**

✓ **OHLSSON GOLD SEAL**  
for 1/2A Engines

✓ **OHLSSON GOLD SEAL**  
"200" for Engines  
above 1/2A class

**OHLSSON GOLD SEAL FUELS** are the finest that have ever been formulated for model engines. In addition to Methanol, Nitroparaffins and high grade lubricants—new and advanced additives *not found in any other fuels* are included. These new additives, included in all Gold Seal fuels, increase performance and R.P.M.'s while reducing engine wear to an absolute minimum. Continuous use of Ohlsson fuels will prevent the formation of Varnish, Gums, Sludge or Carbon in your engine.

Ohlsson Manufacturing Company which produces Ohlsson Gold Seal Fuels has no connection with any other firm.

Half Pints 55c  
Pints 95c



**OHLSSON MANUFACTURING COMPANY**  
1547 West Sixteenth St., Long Beach 13, Calif.

**HAW-KI**  
**HOBBY SUPPLY CO.**  
**WHOLESALE ONLY**

ALL NATIONALLY ADVERTISED  
MAKES

- ★ **MODEL AIRPLANES**
- ★ **RACE CARS**
- ★ **RAILROAD EQPT.**
- ★ **CRAFTS AND TOYS**

**WRITE**

Today on your  
business letterhead  
for current catalog.

**PROMPT  
SPEEDY  
DELIVERY**



**HAW-KI HOBBY SUPPLY CO.**  
DEPT. AT-3 523 WEST 4TH  
Davenport, Iowa