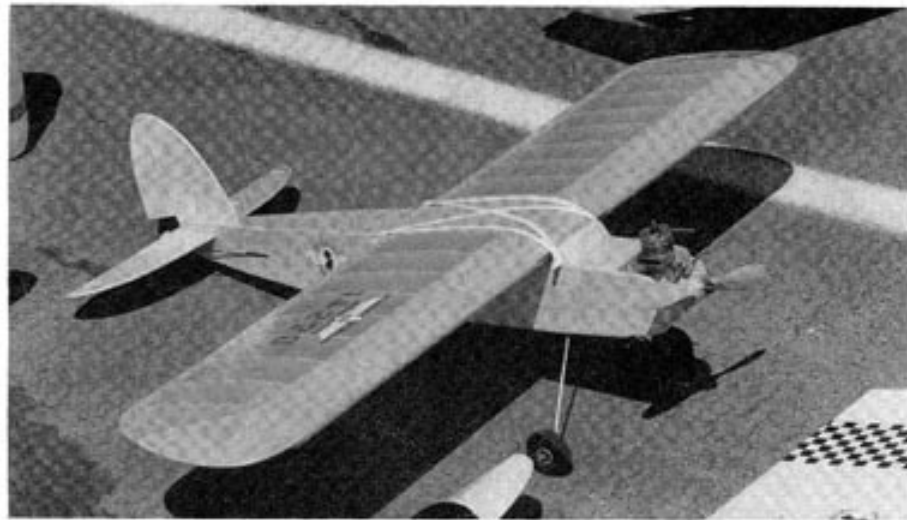




No you can't put tuned pipes and foam wings on this one! But you can put all the nostalgic effort of dope finishes and Duco cement into the Box Car Chief. It represents another more carefree time of Stunt.

An Old Time Stunt Classic: Box Car Chief

By Mike Keville

Walter Ricks would be proud to see this recreation of his 1947 stunt design.

Nope, it's not an R/C trainer; it's a Controline Stunt ship, and an absolute delight to fly in the increasingly popular Old-Time Stunt (OTS) event.

Despite the fact that it's quite homely, the little Box Car Chief is a welcome sight among all the usual Ringmasters, Barnstormers and All Americans at the OTS circle. It's quite capable of performing the OTS ('51-'52 AMA) pattern as long as the speed is around 60-65 MPH. Wingspan is 42 inches and the area is about 385 square inches.

Designed around 1947 by Bob Smith (perhaps jointly with other members of the Los Angeles "Smog Cutters") the model is a full-stunt evolution of the earlier flat-bottom wing Box Car and smaller Box Car Dinky, sometimes called the Junior. Kitted by the Ricks Model Co. of Los Angeles, the plan showed a Super Cyclone ignition engine as power. A 3/4-page ad for the "new" Box Car Chief appeared in the December 1947 M.A.N., page 71. Thanks to John Miske, the "Godfather of Old-Time Stunt", for assisting with the history here.

The model in the photos was kitted for me by a friend in California and built following our move to Arizona. Although the original kit plan was used as a guide, several liberties were taken to increase structural strength and to accommodate the "modern" engine, a 1950-vintage Fox .29 (4-bolt head and sand-cast case). I added a spar-doubler at the wing center, center-section sheeting, 1/32-inch ply

fuselage doublers and an additional fuselage former (F-5) to support a pushrod guide, and a couple other items to increase strength and safety. These modifications are permitted by the OTS rules. You must, however, retain the original airfoil(s), moments and landing gear



One nice feature of a two-piece stunt ship is easy access to the bellcrank. Note both the ample holes for the leadouts and the plywood doubler which tapers all the way back to the wing's trailing edge.

location.

What I did *not* do was use modern materials. Preferring to enjoy this hobby in a sort of Time Warp (as do many others), I like to use traditional materials. Mine was assembled with Duco cement, covered with Japanese tissue and finished with Randolph dope. It has cloth hinges, solid leadouts, and — thanks to John Miske — a '50s-style AMA decal on the wing.

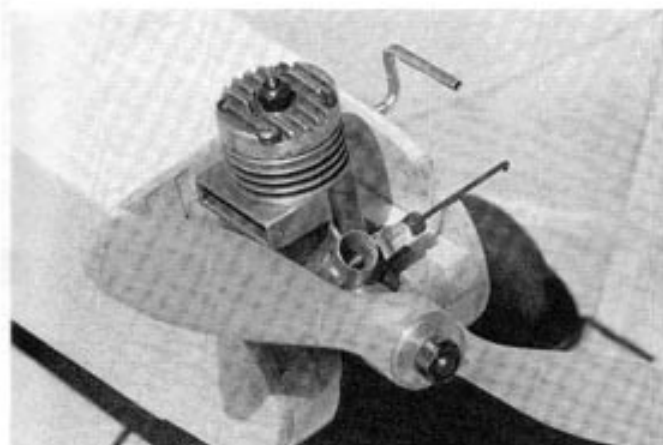
The model has been bumped, thumped and dumped and is as sound as the yen. That is, it's as strong as if it'd been built with CyA, epoxy, and other modern (read "expensive") foof. It takes a bit longer this way, but the aromas and ambience are pure Nostalgia. And besides, I like to chew glue off my fingers. The "Vintage"/"Classic" crowd thinks "foam" is something found on the head of a beer, and "tuned pipes" refer to recently-serviced church organs. (Whoops! I just remembered who edits this magazine...).

Keep this one under wraps. Tell your Stunt-flying buddies you're building a two-piece model (it's true: note the dowels for the rubber-band wing hold-downs!). Paint one purple and call it "Amazing Grapes"; I don't care. Just try one. They're fun.

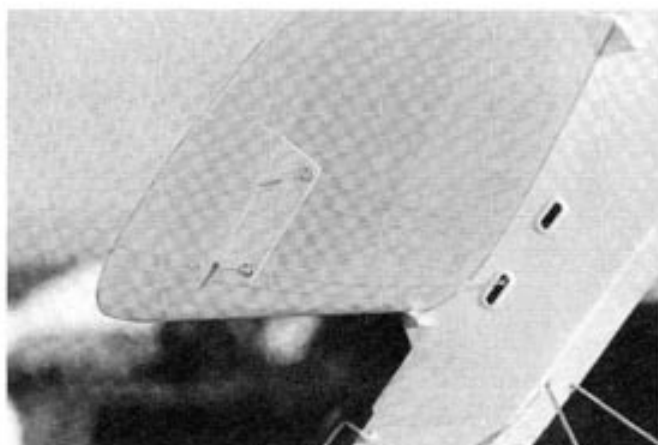
With a few notable exceptions, today's so-called hobby shops don't carry Controline materials and equipment, so you'll probably have to mail-order most of your supplies. Try SIG, Lone Star or Superior (Taibi) for wood. The first two can supply everything else as well. Everything, that is, except the custom-size fuel tank. This must be hand-made if you want enough fuel to complete the OTS pattern. It measures 2 3/4 inches long, 2 1/2 inches wide and 1-inch high. I used a rectangular (no "wedge") tank custom-made by local expert Larry Foster.

Checking the plan, you'll notice the spacing of the engine mounts. To accommodate the smaller Fox (or other current glow engine) additional lengths of 3/8 x 1/2 inch maple stock are added to the main bearers. Two 4-40 bolts, one on either side of the engine mounting bolts, help secure these after they've been cemented in place.

Routing the pushrod was something of a



Stuck up in the nose is one of those "new-fangled" Fox .29s from 1950 (above left). Note the doubled engine bearers to fit the smaller powerplant.



Adjustable leadouts? Not on this ship (above right). The leadouts slip through simple grommets on a fixed ply plate in the wing.

chore. It starts high and ends low, but you have a large boxy fuselage to work in, and there are no tight fits. You might choose to run the pushrod to a horn on top of the elevator and use the front leadout for "up". Just be certain to install some sort of sturdy pushrod guide inside the fuselage. Mine is $\frac{1}{4}$ inch square hard balsa ("R/C density") with wire joiners wrapped and cemented at both ends. The support consists of two pieces of $\frac{1}{4} \times \frac{1}{8}$ inch above and below, and two astride the pushrod. So far so good...

As you're probably a lot smarter than I am ("Bet on it", says my wife JoAnn), I won't insult your intelligence by writing out step-by-step assembly instructions. The plan says it all. You can fake the rest. Just be sure to keep the tail end light.

The critical aspect (if there is one) is the cutout for the wing saddle. This must be exact, so begin by cutting your wing rib template as a guide. Select equal-density balsa for the fuselage sides to help minimize bow-

ing in either direction. Strengthen the area around the $\frac{1}{8}$ inch plywood bellcrank mount with lengths of triangular balsa stock, or fasten it to the engine mounts with small wood screws in addition to the Ambroid, Duco, or (if you must) epoxy.

Use sturdy landing gear wire, $\frac{1}{8}$ -inch diameter minimum. These old-timers tend to bounce a lot. Just ask anyone who's judged my landings. The gear can be fastened to its plywood former (F-3) with J-bolts or wrapped copper wire.

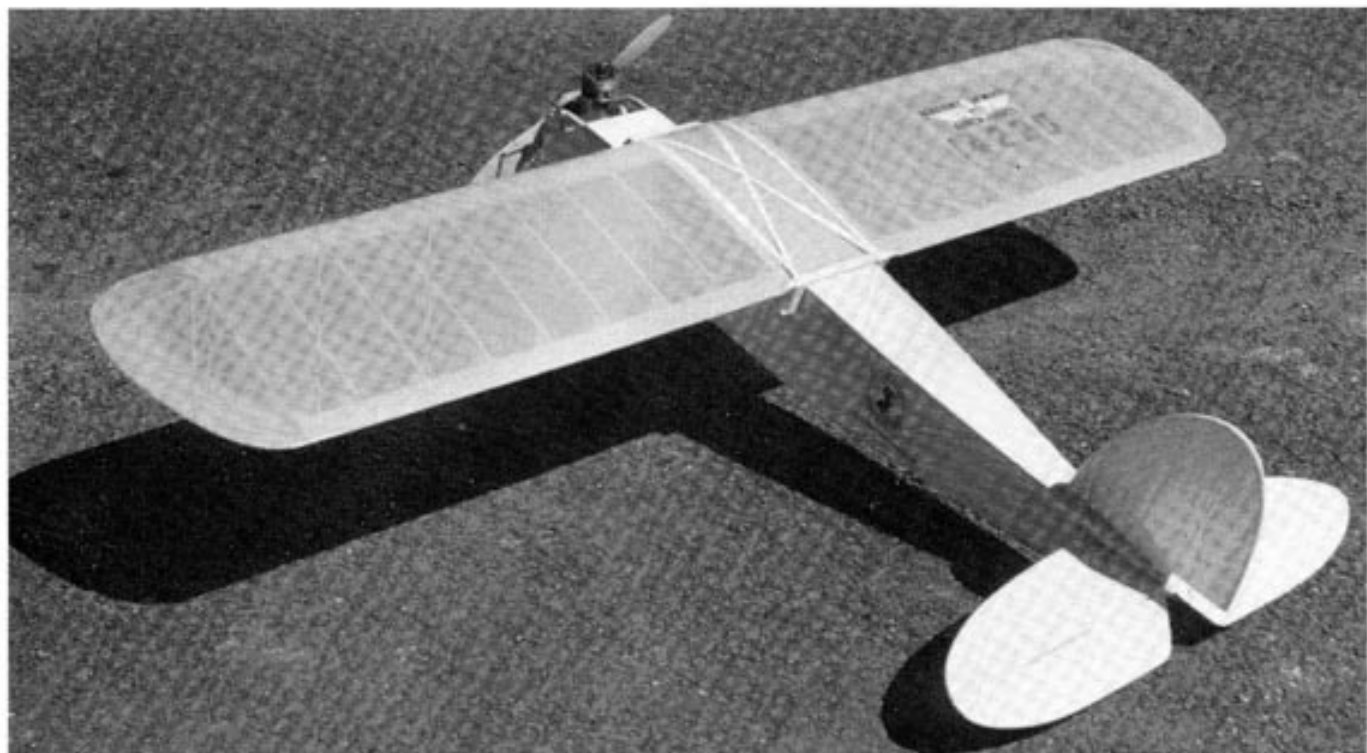
There's not a whole lot to say about the tail surfaces. Be sure to notch the fuselage sides for the stabilizer at zero incidence, relative to the chordline of the wing ribs. Offset the vertical fin about $\frac{1}{4}$ to $\frac{3}{8}$ inch.

The wing is assembled by first shaping the $\frac{3}{8} \times 1$ -inch trailing edge then fastening it to a flat surface. Add the center ribs, which are undercut $\frac{1}{16}$ inch on both surfaces to accept the center-section sheeting, the tip ribs and then the leading edge. Block everything true

and square, then add all remaining ribs, spars and sheeting.

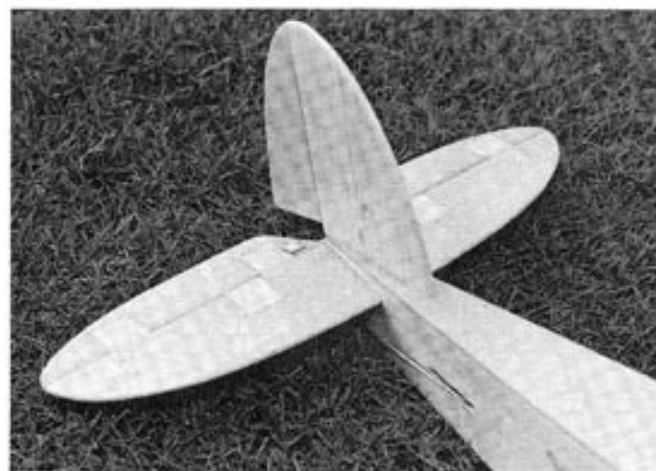
Flip it over, block it in place, and add the bottom (or top) spar and sheeting. Cement the plywood leadout guide (bushed holes) to the proper rib, then add a scrap balsa, false rib around it to attach and support the covering. Add the tip pieces and braces. Note that the tip weight box out there, too.

Cover the wing with tissue, silkspan or silk — anything but mylar film. To prevent the TE and LE from being crushed by the frequently-changed hold-down bands, add a plywood TE brace and a length of wire to the LE, both at the center section. Purchase a hefty supply of good $\frac{1}{4}$ -inch rubber bands and change them before every flight. (Close your eyes and imagine the wing popping free at the top of a Vertical Eight. Guaranteed to amuse the spectators). Be sure to make the loops in the ends of your leadouts small enough to fit through the bushed openings in the leadout guide.

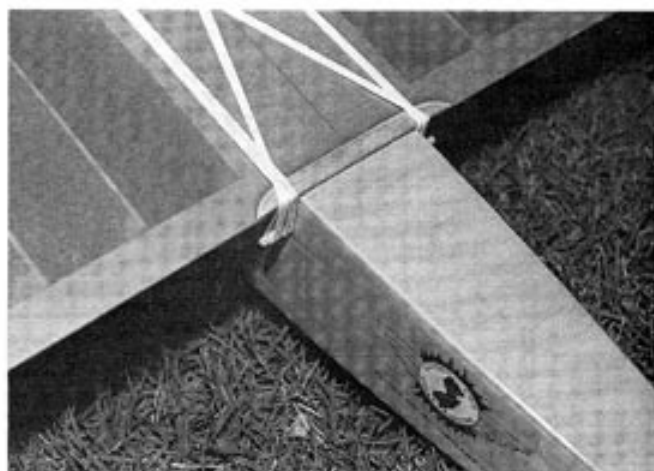


Basking in the bright Southwest sun, Mike's Box Car Chief faithfully recreates the outlines of the original 1947 model.

Box Car Chief



There's not much to say about the tail (above left) except to keep the stab at 0° incidence and offset the rudder by 1/4 to 3/8 inch. It's a not bad idea—in fact,



it's a pretty good one—to put a ply doubler along the top of the trailing edge center section to keep the rubber bands from crushing it.

Assemble everything and balance it on the front leadout or wing spar. The model in the photos needed one ounce of lead up front. Control is positive; the model turns tightly, and until I slowed down the controls a bit, flew about like a *VooDoo*. Don't try to float it in on landing. That forward-placed gear makes the model act like a kangaroo. Come in at a fairly high rate of speed, "drive" it on, and hold it there with a touch of "Down" elevator until it drops the tailskid.

A word or two about the Old-Time Stunt event: it's been written before, but what it is, is "Stunt Without the Ulcers". Today's state-of-the-art Precision Aerobatics machines are extremely efficient at their task. But, for the most part, are as unique as today's cars. For instance: which excites you more, a 1991 Chevy or a 1948 Mercury? At the local airport, would you rather see another Cessna 172 or a Ryan ST? It's that sort of thing. Oh sure, we compete, and we do try to win, but it's more fun looking at the other guys' models and admiring the way things used to be done before the foam'n'fiberglass era. There is a growing trend toward Things From Simpler Times: back when it was alright to burn the leaves, but not the flag. The increasing popularity of OTS, and its cousin, Nostalgia Stunt, reflects this.

Now, if the *Box Car Chief* is just too homely for you (Someone once said, "Beauty is in the eye of the beholder, but Ugly goes clear to the bone!"), try another design. Plans, and some fine kits, are available for many of the vintage C/L Stunt designs. You'd be amazed at the number of R/C flyers who're coming back to C/L because of this event. Even today's C/L Stunt "stars" fly OTS: PAMPA (Precision Aerobatics Model Pilots Association) President Ted Fancher was heard to say, "Some of my best friends... are OTS flyers." (That was just before he won the event at the Vintage Stunt Championships for the second year in a row!)

Plans are everywhere. Of course, I'd be pleased if you built one of these (so would Carstens). Two good sources for OTS plans are John Miske, 415 Clifton Blvd., Clifton, NJ 07013, and Tom Dixon, Suite 401, 1938 Peachtree Rd., Atlanta, GA 30309. There are others, too.

For information on kits, plans, contests, etc., join PAMPA. Annual dues are \$15.00.

You'll receive the bi-monthly "Stunt News" which features probably more than its share of OTS information. Send your name, address, phone(s) and AMA number to the Membership Secretary: Charles Pate, 2106 Fernwood Drive, Nashville, TN 37216. (Non-US memberships are welcome. Due to increased postage costs, annual dues for foreign members are US-\$25.00).

If you have any questions on this design, or just want to discuss the Good Old Days — silk-and-dope, "PowerMist", Navy Base Nats, etc. — or want more information on the annual "Vintage Stunt Championships", I can be found at 6109 E. Ivyglen, Mesa, AZ 85205.

When your *Box Car Chief* is complete, how about sending me a photo or two? 



There's certainly something beautiful here and it isn't the plane! That's Mike's daughter, Michelle, 14, helping dad's plane cool off in the 111° heat of Phoenix. Michelle's a good C/L pilot in her own right.