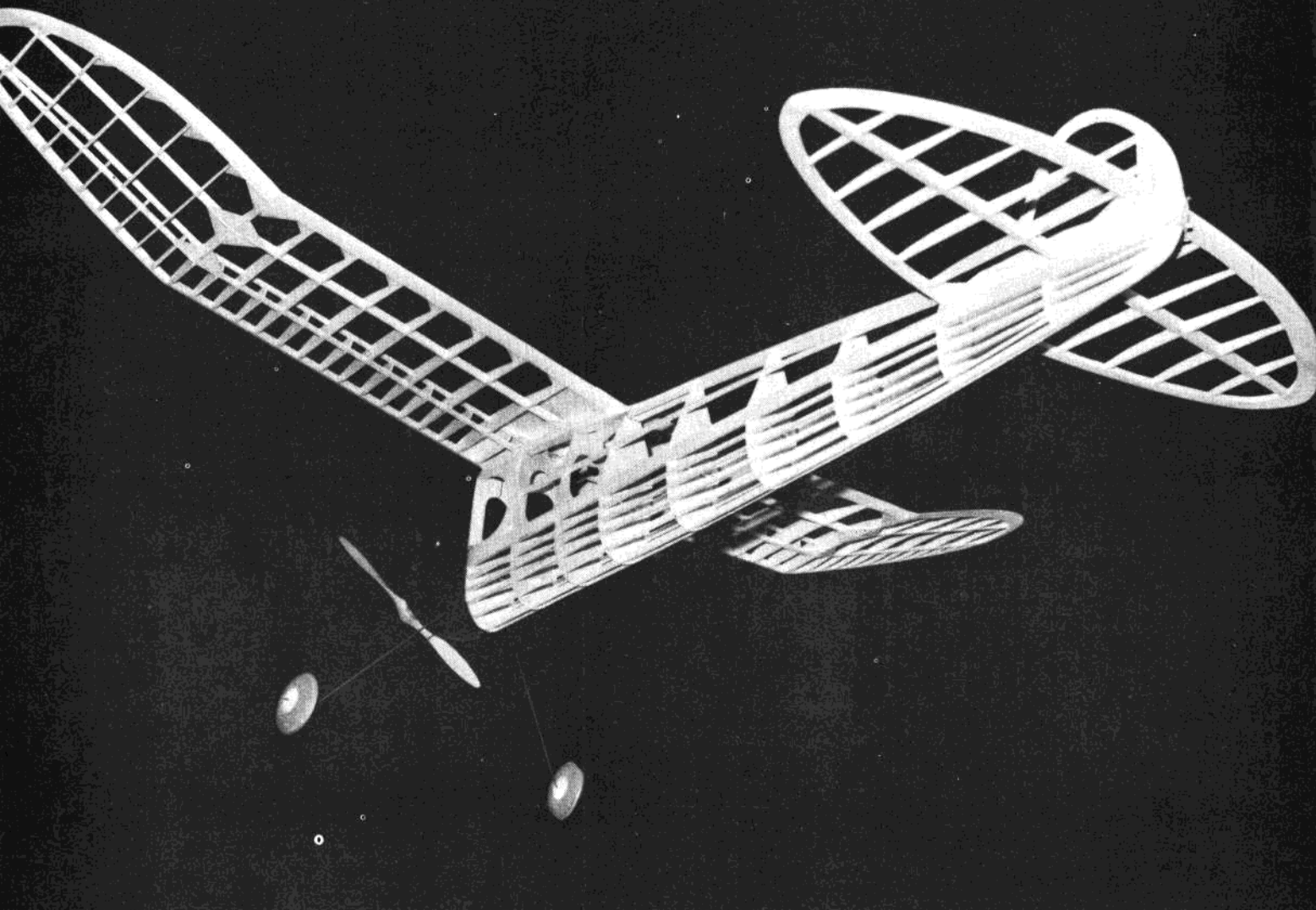


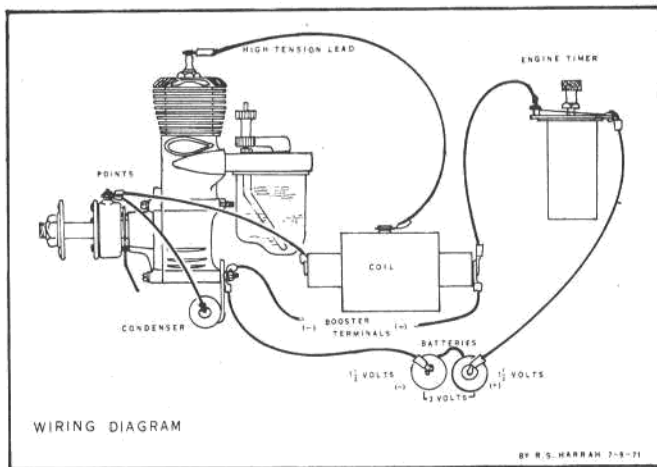
brooklyn

VIVELL-POWERED OLD-TIMER IS STRAIGHT
OUT OF A RECENTLY FOUND ANTIQUE KIT.
PLANS DRAWN FOR SCRATCH BUILDING.



dodger

by ROBERT HARRAH



In 1941, Sal Taibi designed this plane and named it "The Cadet." That same year Brooklyn went crazy when the "Bums" won the pennant. The Brooklyn manufacturer, H & F Model Airplane Co., decided to capitalize on the Dodgers' triumphant year by changing the name of the plane to "The Brooklyn Dodger."

This Old-Timer has a list of winners too long to mention and is still winning. Sal still flies one at all contests he enters, along with his famous Starduster 900.

The revised version has maintained all of the aerodynamic qualities of the original. The only major change is the addition of a DT (dethermalizer) and there are some minor structural changes as well. The Old-Timer that may seem so foreign to the modern builder is really not quite so outdated. This became especially noticeable when an effort was made to update what Sal had done thirty years ago.

Although it is no longer produced, I was fortunate to find one of the original kits which I used as a guide and then repacked for the collectors. This kit, complete except for the power system, was packed during World War II. The patriotic packaging—red, white and blue with a flag printed on the box—was a common practice during those years, as were the red fiberboard for the firewall instead of plywood, and corks substituted for the metal caps on the dope, glue and colored dope bottles. In this respect one could refer to that period as the good-old-days.

It may be that the old-timers are more aware of these changes, but I can remember how many *Liberty* magazines and others that had to be sold to buy a kit and engine. They sold for 5 cents and our profit was 1½ cents. When the end of each week came we would add up our pennies, go to the model shop and drool over the items we were saving towards, and then go out and sell a little harder. After

all was saved and the last penny counted out we would treasure every piece and part of our purchase. Then came the big disappointment—the kit wasn't complete, so we would sell some more to buy the extras. Maybe this is one of the reasons, besides its graceful and majestic flight, why an old-time plane is looked upon with such reverence.

The other great disappointment of those days was the fly-away, unless it was at a contest and we won. I often wonder why none of us were smart enough to invent a DT. We used to brag how we would never build a kit. We felt we had to design and scratch build in order to be a real modeler. (There was some merit to this, but I think it was partly a defense because we couldn't afford a large kit.) Most of us in my area won our first big kits and new motors by placing with our scratch-built rubber models in contests. I still remember my first. It was on a foggy morning at Point Mugu (now Port Hueneme) and I won a Huskie Jr., class A engine and a class A Skyrocket Kit. And do you know what? I wasn't the least bit ashamed to build that kit.

Since this kit is not available I hope you are not ashamed to build a scratch-built. Before construction starts, better plan to do some searching at your local hobby dealer if you are going to use an ignition system and do not already have one. The wiring diagram shows all necessary parts. The Austin timer and battery case is still in production, the coil is still being made and condensers of the old type (Ford 11A18801) are plentiful. I like the new lighter types that are available at local electronic or radio supply houses—for small engines, 23-and-under, (6PS-P10±.1 10% 600DC). The original design of this ship was as a class B and C. The Ohlsson 23 was recommended for class B, but it was generally

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An Old-Timer is a sport model by today's standards of performance. Maybe this explains their renewed popularity.

Brooklyn Dodger (continued from page 17)

accepted as not quite enough for good performance. The Forrester 29 was the one most accepted; for sport flying either of these plus many others will work well. I have been using the Vivell 35 because they are quite common and easy starting. In fact, there should be quite a few new or near-new available. Precaution should be taken if you are venturing into the ignition engine field for the first time. There are a lot of good engines available and good guys who will help you. However, beware of what is known as the horse trader. Parts are around for most engines, but be on guard against the engine without points.

When planning your engine mounting, 29's-and-under perform well with a little left thrust. The 35 needed about five degrees left. The fuel usually used by most old-timers is three parts white (unleaded asoline to one part SAE 70 lubrication oil (available at motorcycle repair shops). For new engines castor oil can be added for better lubrication, and to preserve the engine a little better. Either can be added at contests for easier starting and a few more rpm's. Modern fuels will ruin your engine unless it has been converted to "glow." Should you desire to put in a glow-type engine, a standard 15 will be more than enough and a hot 09 will do a good job.

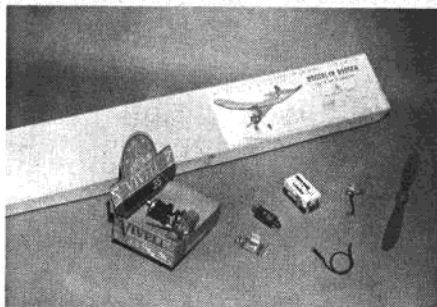
The competitive builder, picking his wood, can keep the weight to about 26 to 27 oz. The Vivell version shown came out at 30 oz. The weight of a glow version will be much less and every effort should be made to keep the back portion of the plane as light as possible. A lot of things make a plane fly and a light plane can make some poor designs fly; however, nothing can make a heavy plane fly well. As a very general rule the following helps as a starter: short motor run (10-15 sec.) glow-type free flight should be seven oz. per sq. ft. of wing area or less (for this model it would mean a total weight of 23 oz. or less; the 20 to 25 sec. motor run for ignition-type engine should be 8 oz. per sq. ft. or less (or 27.5 oz. or less); in the case of the "C" version, which means a heavier engine, nine oz. per sq. ft. or less (or 29.75 oz. or less).

There are many lighter planes per square foot of wing area that are floaters and there are glider types that are heavier per square foot, designed for penetration. These are only meant to be guidelines to start with, and will produce respected planes that can be competitive and the top performing sport type. One thing most everyone agrees on is that sandpaper helps the plane fly better! So shape and sand all parts as shown on plans.

Construction

A good flat working area (approximately 30 x 45") with a Celotex or similar top, pins, a few rubber bands to use as clamps, X-acto saw, some sharp blades and you are ready to go. Your plans can be protected by a waxed paper covering. Use whatever glue is your favorite. I used Ambroid because it would be more compatible with Silkspan and dope. Water-base glues are good also, especially if you plan to MonoKote.

Cutting out all parts accurately is well worth the extra time spent. Parts that don't fit look badly, are structurally weak and waste time trying to make do. I like to cut a little at a time, mostly while the glued parts



Dodger was a Sal Taibi design whose recommended engine was an ignition 35. A 19 would be a glow equivalent.

are drying, so I don't get tired of cutting and become careless.

This is a fun design. Crutch-type construction is one of the quickest, but demands that you start right. The key is to build the crutch first, being very exact. When thoroughly dry, all formers can be added, making sure they are perpendicular (90 degrees) to the crutch. The top and bottom longerons can now be added. Recheck alignment again and put in stringers, cabin top and engine mountings. The cowling can be made from a solid block or built up as desired. Follow the plans for dowel placements and landing gear. The timer, battery coil and condenser areas used are shown. These were established after the model was complete to prevent adding any weight to the nose or tail. There is plenty of room to shift weight around, so I would suggest the same for you. The only modern changes made to the fuselage were wrapping the coil and batteries in foam instead of anchoring solid, and adding the DT fuse tube.

The undercambered wing is of standard construction and aerodynamically the same as the original. I used and recommend using spruce spars. I also used larger gussets and placed them flush with the top of the rib—to strengthen and minimize warps, and particularly to help stop the common downward warping of the trailing edge that is hard to prevent on undercambered wings. The angular-type reinforcement at the dihedral and polyhedral joints is something I have been doing for many years and I do not understand why more do not use it. Spar bracing helps—adds tremendous strength, because of compound bracing, and holds down warping.

The sequence I used for building is as follows. First layout leading, trailing and tip edges, then glue in ribs. When dry, glue in bottom spars using shims or wedges to hold in place (made out of scrap), then add riblets and top spars. Add bracing and dihedral and be a little modern by taping and epoxying the joints. Sheet in center for strength when hold-down rubber bands are attached.

Stab and rudder are as shown on plan. The only precaution I use in elliptical-type construction is making sure all joints match and are well-glued (one of the best safeguards against warp). Spars should be shaped ahead of time to give good sanding guide. Ribs are better oversized, as it is easier to sand off than add on. The plan shows 3/8" sheet used for leading edges—later kits used 1/4" (the latter preferred by Sal Taibi).

After each unit is completed, they are joined as shown. The gap or angle allowed for the DT is 45 degrees. This is more than enough, (usually 42 or 43 degrees is optimum), but allows for a few degrees of up elevator trim if needed. A stop anchor has

been incorporated on the DT because the unit may overpop on this type of design even though there is a stop. Enough rubber band tension should be used to just slightly lift the unit in a parallel position. Make sure the keeper band around the fuse holds the tail pops to safely drop out of a thermal. This can be hard to adjust, as a slight movement will not get the plane out of a strong thermal. Therefore, I try to allow the plane to come down with as much speed and as steep as I think it can structurally stand at impact. Usually a steep drop with a slight spiral is preferred. To save the plane, I like to short fuse during trim flights as well as short motor run. I have seen many make a short motor run test and lose their plane out of sight because the DT wasn't adjusted.

It is quite a problem today to choose a covering, as there are so many. The originals used Silkspan and bamboo paper. Silk is a bit stronger and Jap tissue is a bit touchy if you can get it. MonoKote-type coverings have been accepted in most Old-Timer meets. I was able to find some old colored Silkspan, and so I used that. The trim pattern in the pictures is the same as the original and the color was white with red trim.

Flying

The center of gravity was not called out on the original, but it has been generally accepted to be 50%. As with most Old-Timers, adjustments during test glides are very important. Always glide with the nose slightly down and try to be at flying speed—a pretty good run. I prefer to ROG old-timers, advancing the throttle only enough to get it up. I then advance throttle a little each test while make thrust first and then trim adjustments.

Please remember to light the fuse so you do not have a fly-away. This has been one of the great Old-Timers and hope you enjoy it as much as I have.