Great Planes Cirrus SR22T

A new civilian aircraft model that is perfect for your first scale job!

By Christopher Ferrari & Vic Macaluso

PHOTOGRAPHY: VIC MACALUSO & SAL CALVAGNA

By now you've looked at the byline and probably said to yourself, "Oh no, not him again!" Yup, it's me again, but with a new control over the superlatives and hyperenthusiasm. I promise, it's just about the product!

I've done many product reviews on these pages and with very few exceptions, they've all been well designed, constructed, and presented in a way that have made most modelers comfortable with their purchases and skill levels. This model by Great Planes is no exception to that concept.

Before we get to the airframe, however, just a few words about the equipment and accessories supplied with this review. Having reviewed many of their products in the past, it's good to see that Great Planes continues to take pride in the products they put on the market. That also applies to the products they sell from other manufacturers. Taken one at a time, let's discuss each of them briefly.

The servos supplied for this review are Futaba S3004s and S3115s. The S3004s are their standard servos with a ball bearing output shaft with 44.4 ounces of torque at 4.8V. They are ideal in size and torque for this model. The S3115s were selected because of their smaller size, micro, to fit in the very thin wing section as well as their light weight, .60 ounce, again due to the thin wing section and very high aspect ratio (less weight out on the wing to create unwanted inertia in turns and rolls).

All of the servo extensions, Y harnesses, and switch harness with charging jack were also Futaba. As with all of Futaba's products, they were of very high quality and more than adequate for the job.

The battery supplied is a Hydrimax Ultra 1600 mAh Ni-MH sub C four-cell pack.

Slightly overkill for this model but you'll never have to worry about running down your pack in a normal flying session. Again, another good choice.

AT A GLANCE

Type:	R/C scale
Construction:	balsa, plywood and fiberglass
Wing span:	69 inches
Wing area:	493 sq. in.
Airfoil:	semi-symmetrical
Length:	47.75 inches
Weight:	7.5–8.25 pounds
Wing loading:	35–39 oz./sq.ft.
Engine:	O.S. 55AX two-stroke
Prop:	12–6
Radio:	6-channel
Servos:	3 standard and 2 micro
Manufacturer:	**Great Planes** **Dist. by: Hobbico** P.O. Box 9021 Champaign, IL 61826 217-398-3630 www.greatplanes.com

The entire contents of the box **(above left)** are individually bagged and protected in shipping from the warehouse to your work shop. All of the goodies **(above right)** that were supplied for this review are those outlined within the instruction manual.

Next we get to the engine supplied for the purpose of this review, the O.S. Max .55AX. This is a high performance, two-stroke engine designed for sport and aerobatic models. The power output of this engine is very surprising and moves the model along to the limits of its design. More about that later.

Right out of the box, this engine started and ran like one that is well broken in. While O.S. suggests a very short and simple break-in, running it slightly rich the first several flights was all that was necessary to achieve full power output and the rated rpm. While it seems that the Cirrus *SR22T* was designed around this engine, any of the current .40 to .55 two-stroke engines on the market will do well in this model.

Should you decide to go electric, the assembly manual has a whole section dedicated to the correct equipment and installation, but that is outside the scope of this review. Just know the model was designed for either power.

As is typical of all of the Great Planes models, the assembly manual covers all aspects of not only the construction of this model, but all aspects of safety, and flight planning. Following this manual from page one to the very last page will not only guarantee a model you'll be proud of, but you'll also get a good understanding of building and flying in general. A very nice feature of the manual is that each step is presented in a logical order, so that there is never a going back to redo any step up to that point. Another nice feature of the manual is that each step has check off boxes. If there are two boxes, you do the step twice. When you reach page 31, you're ready to fly.

If you're familiar with the Great Planes *Lancair*, the .60 to .90 high performance civilian sport model of several years ago, you might think that this is just a smaller copy of that model but you would be wrong. Trust me, it's not. Although it has much of the look and features of the *Lancair*, the Cirrus *SR22T* is a different model in many ways.

First, the entire top of the cabin area from the firewall to behind the rear windows is removable as a one-piece hatch. While this gives you total access to any and all components, it also makes installation of the servos and radio equipment easy, yet it in no way compromises the strength of the fuselage.

The model is constructed with what I'll call a "hybrid-composite" structure. The fuselage, minus the cabin top, is a one-piece fiberglass molding that is extremely light, yet very strong. The compound curves and lines of the fuselage give it strength without internal formers being necessary behind the cabin. This makes balancing a non-issue. As you can see from the photos, all of the internal structure is designed to accommodate all of the necessary equipment without any unnecessary wood being used. All of this internal structure is of very good quality light ply. All of the necessary servo holes and lightening holes have been drilled and precut making installation easy and foolproof.

The finish and trim on the fuselage is just about perfect. Whatever top coat is used looks almost hand rubbed to a high gloss. This being a mass produced product, a hand rubbed finish is not possible, but the overall appearance here is just as good.

As with the fuselage, the rudder is also prefinished fiberglass and is factory attached. Hinges on the rudder as well as those on the flaps and ailerons are permanently glued in place at the factory, however it is always a good practice, to give a good tug on each surface to insure continued attachment. The manual also suggests this.

The wings, stab, and elevators are built up in the normal fashion and are balsa sheeted. Judging from the light weight and size of the components, very light 1/16-inch sheeting was used. These components are then covered with brilliant white MonoKote film. The elevators are the only flying surfaces that need to be hinged by the builder. Pin-type hinges work well here and the holes are pre-drilled at the factory so there is no guess work involved.

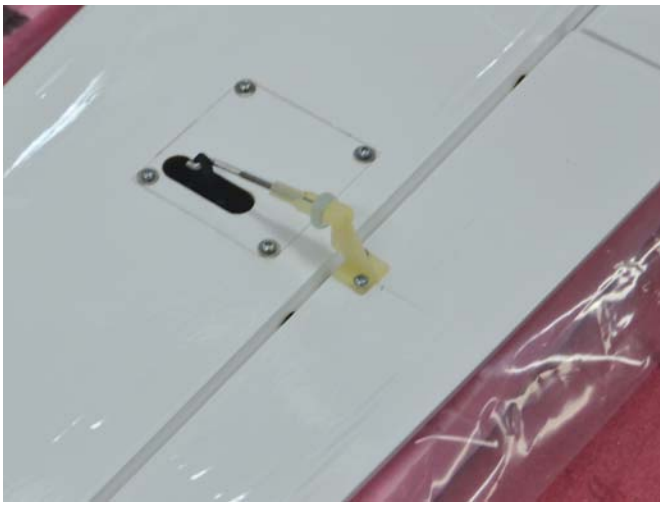
Installation of the wing servos is a very easy task thanks to the pre-installed pull strings to pull the servo leads through the wing. This really saves a lot of time due to the tight dimensions of the wing. Landing gear components are well made, strong, easy to install, and are finished to the same high quality as the rest of the model.

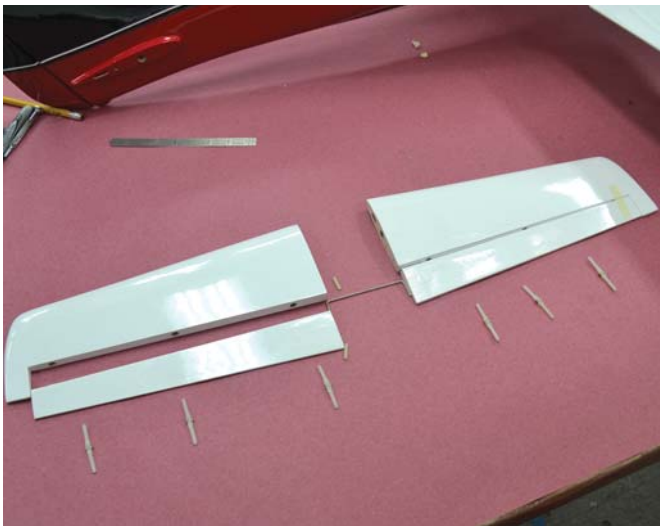
As you can see from the photos my grandson, Christopher, actually did 95% of the as-

With the exception of the elevator, all of the flight surface hinges are preinstalled. Here Chris **(above left)** makes sure the flaps are secure. Because of the model's airfoil, micro servos are used on the flaps and aileron surfaces. Futaba S3115 servos **(above right)** were used in the review model.

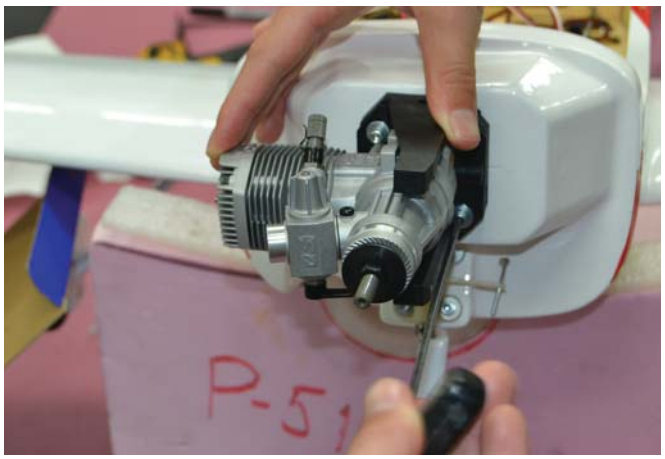
Great Planes Cirrus SR22T

The main gear once installed sits flush into the wing giving the model a sleek look like its full-size counterpart. Chris is threading the mounting holes **(above left)** before installing the main gear. Main gear installed **(above right)** along with the flap and aileron servos. The aileron control horn installed **(below left)**. Pay close attention to both the alignment to the servo horn as well as the hard point within the surface before drilling and subsequently attaching the control horn. Although the *SR22T* is a .40 size plane, it still has a wing span that is close to six feet. Realizing that not everyone has a van or truck, Great Planes designed the model to have a two-piece wing. Simply connect the aileron and flap servos **(below right)**, slide the wing onto the carbon rod and secure with the thumb bolt.





The horizontal stabilizer and elevators are the only flight surfaces that are not pre-hinged; however, holes are pre-drilled and pin-type hinges **(above left)** are supplied with the kit. The horizontal stabilizer simply slides into the fiberglass fuselage with an aluminum tube-type spar **(above right)** for perfect alignment.



The *SR22T* can be powered by either electric or glow. For the purpose of this review, Hobbico sent an O.S. 55AX two-stroke **(above left).** The engine later proved to be more than sufficient to pull the model along. A nice added scale bonus is the addition of the navigation and landing lights. The lights can be set up to turn on independently on a spare channel and are easily seen **(above right)** in the daytime as well as in the shop.

sembly of this model and gained more valuable experience in using hand tools and how to properly set up an R/C model. My only "hands on" work on this model was to perform the actual drilling and mounting of the engine. Chris did the rest. This attests to the well planned assembly sequence and the design of the model.

Hardware supplied with this model is typical of most high quality ARFs on the market today and is well sized for each purpose. The only problem we had with the hardware was when Chris stripped the threads on one of the wheel collars for the nose gear assembly. I think this was due more to his inexperience rather than the quality of the part.

I've saved what I think is the coolest scale feature of this model for last. The navigation and landing lights on this model are prewired and installed at the factory and can be plugged into a separate receiver channel. This allows the lights to be switched on and off at any time during the flight from the transmitter. They can be easily seen in bright sunlight but *really* stand out at dusk. To date, we haven't quite gotten the nerve to fly in total darkness, but it is a comin'.

The manual states clear instructions on the flight setup and control throws for the plane and these must be followed closely. For my initial flight, I chose to fly on the low rates as outlined within the manual and as a result was rewarded with a relatively uneventful take off and climb out. A couple clicks of up trim on the elevator and a click or two of left aileron had the plane straight and level at three-quarter throttle.

A word about the first takeoff; during the initial acceleration the plane didn't want to rotate at first and subsequently jumped into the air. This was due to the fact that I was flying off a grass surface and the wheels are fairly small. Combined with the wheel pants and the tall grass, this allowed a bit of drag on the main gear and was forcing the nose down during acceleration. An addition of about 15 degrees of flap during takeoff corrected most of this tendency. Takeoff from a hard surface or really short grass should eliminate this tendency.

Once trimmed the plane was very easy to fly and Chris had no trouble with basic maneuvers. The Cirrus *SR22T* is a very clean model and really wants to move out at full throttle. Go for it! One item I noticed at full throttle was a slight tail wiggle especially into the wind. This had no effect on the overall performance of the plane. In fact the plane showed no bad tendencies at all. I think this might be due to the very high aspect ratio wing, but again had no effect on the overall performance.

The Cirrus *SR22T* is a very clean design and wants to keep flying even at slow speed. The high aspect ratio wing and generous washout in the upswept wing tips make this plane a pleasure to land and if you've never flown with flaps before, then this is the perfect model to learn with.

When slowed down to landing speeds, there is no tendency to balloon up even with full flaps applied. With full flaps the model can be slowed to almost walking speed with no tendency to tip stall.

There is just no drama associated with any part of the flight envelope. It's just important that you remember that the *SR22T* really moves at full throttle and that left hand stick doesn't have to be pushed all the way forward!

From the initial box opening to the flight line, the model was ready in less than a week of evenings, with much of that time spent instructing Christopher on how to properly use tools.

The Cirrus *SR22T* is an excellent choice for the intermediate builder and pilot and should be considered a solid consideration for the new flier's next plane. Safe flying!

PHOTO: SAL CALVAGNA

Now that is a smile of accomplishment! Chris **(at left)** had a lot of fun doing the assembly of the *SR22T*, now he is ready for the maiden flight. Once in the air **(above)**, the model *SR22T* behaves much like a sport plane without any bad habits.