

Sunrise EP



Terry Moore describes his findings with this 1 metre span sports and elementary pattern ship from The Wings Maker

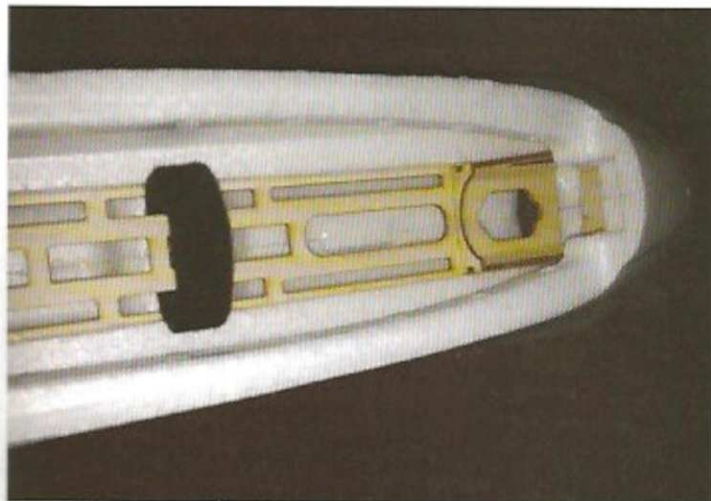
The reason for buying this kit was a natural progression through foam built models, starting with a used FreeAir Blast, that seemed to be very popular in our club, and encouraged a more adventurous style of flying, the consequences of which were the occasional 'bounce' on the ground, but nothing particularly disastrous.

I then sold this on, replacing it with a Top Models Sputnik, which seemed to better match my style of flying; i.e. amateurish F3A open aerobatics, but still a profile foam model, albeit quite expensive for rough finished sheets of foam and lengths of carbon fibre, etc.

Approaching the new flying season, I was looking for a replacement, able to use the same size batteries, but with more



The box as the lid is removed and the model is revealed



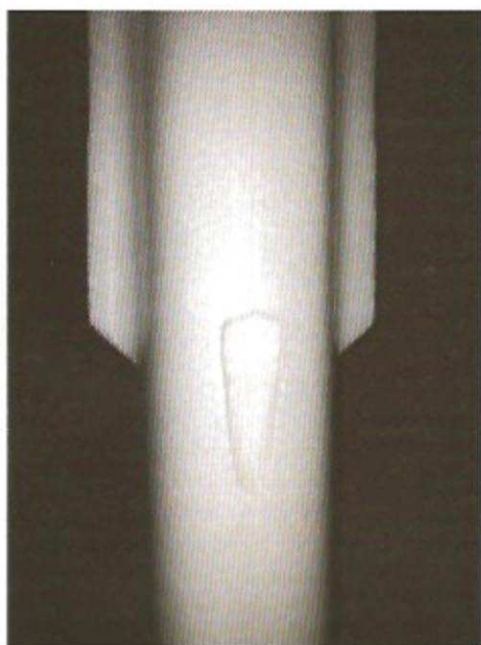
Ply motor mount and battery tray



Moulded-in wing root reinforced for carbon spar and recessed for lugs of wing panels



Head on view of motor mounting ring, pre-drilled to suit recommended motor



Moulded-in air outlet vent to fuselage underside



Aileron servo connected, included tape reinforces hinge line

shape to it. I surfed through several websites before happening upon this model.

Reading several (mainly US based) forums, indicated a general satisfaction with the Sunrise EP, and so I phoned the UK suppliers Steve Webb Models for a chat. They couldn't have been more helpful, freely discussed several alternatives, but ultimately the Sunrise seemed to best suit my requirements.

And so the order was placed, with the kit arriving less than 48 hours later, doubly contained in stout cardboard boxes.

Sunrise EP Main Features

- Symmetrical aerofoil wings with precision control surfaces for F3A manoeuvres.
- Durable foam construction takes care of unintentional touchdowns.
- Powerful outrunner motor (optional) enhances vertical aerobatic performance.
- Kit and pre-assembled combo version available.

The Kit

The actual box has the model's data printed on a colourful face sheet, which illustrates box colour options (black combination or pink combination); I had chosen black.

All the contents were suitably separated into sealed clear plastic bags, properly secured in place, with no transit damage, the moulded foam parts having a very good smooth surface finish.

The kit contents were very, very comprehensive, even including a folding propeller/spinner assembly, elastic bands to secure across

the wing tongues, even short lengths of fuel tubing for sealing clevises, swing keepers, etc., two large sheets of self-adhesive decals, the usual pushrods, clevises, swing keepers, screws, etc.

Assembly

The kit is so prefabricated it cannot justify the use of the word 'build', more like to 'assemble'.

The instructions are well written, easy to understand and follow. The sequence of the instructions is logical and was followed by me but for a couple of exceptions. These were:

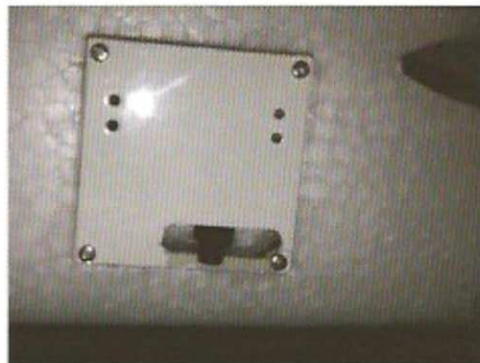
- As each component part was completed the decals were attached, rather than wait until final assembly
- I trial fitted the wings to check accuracy of alignment, before fitting the tail surfaces
- I used foam friendly cyano, with zapper to build up a shallow fillet for the tailplane, and similar without fillet for the sub-fin/rudder assembly, rather than epoxy as recommended, (due to forums advising a tendency towards tail heaviness)
- I struggled to easily fit the motor, due to my less than child size fingers, and struggled even more to fit the ESC in the position as shown, and finally fitted it to the starboard side of the fuselage alongside the battery tray
- Because the model was going to stay assembled, I used a 1/16" piece of ply to bridge across and screwed to the wing tongues inside the fuselage, rather than the elastic bands as provided
- I used 3S-2100 (35C) batteries, rather than the 3S-1800 (15C) as recommended, because these were the only 3S size in my hangar



Ply servo cover frames are pre-drilled



Tail wheel fixed before fitting rudder in place



Rudder servo fixed ready to connect up



View of contrasting undersides



The scheme is easy to orientate against a contrasting blue sky

Fitting Out

My radio gear is Futaba 2.4 GHz FASST, and so the R617FS receiver was fitted at the rear of the battery tray immediately in front of the wing tongues.

I used the recommended KM0283010 outrunner motor, an EMAX 30 amp ESC, Tower Pro SG92R servos and recommended prop adaptor, all again from Steve Webb Models and delivered within 48 hours of ordering.

As previously mentioned, fitting of the ESC proved difficult, probably because I use gold plated bullet connectors to the motor. I also found it fiddly to use the moulded plastic brackets for servos and fitted them with double-sided servo tape to the supplied servo covers.

The overall weight ready to fly, with my larger battery (adding an extra 67 g) came out at 810 g, as opposed to the specified 760 g, however as a result of the larger battery I was able to balance the model at the recommended 95 mm back from the wing root leading edge, without ballast.

My power setup gave 240 watts and 20 amps current draw from a fresh battery.

Flight Test

After a lay off due to wet weather, a suitable day arrived. At our field (grass runway) I deliberated whether to hand launch or not, but decided to take-off from the less than ideal grass surface.

I need not have worried; the small-wheeled undercarriage coped well – the model being airborne in about 15 metres. Climb-out was brisk, trim adjustment negligible, and cruising speed was fast enough on a little over half throttle.

Tracking in the vertical is straight, confirming the accuracy of the built-in side thrust. Loops, inside and out, show no signs of screwing out, and the model balanced okay laterally. Continuous rolls are axial, but slight differential is needed, and knife-edge flight needs elevator coupling programmed out.

Inverted flight needed minimal down elevator, indicating the C of G was correct.

The model handles a moderate wind, and is very smooth through aerobatics, but can also be flown low and slow in lazy eights, and on the approach, with no tendency to flick out, or drop a wing.

I only increased the rudder throw, to assist in knife-edge and stall turns the remaining throws being as the manual.

Summary

In my opinion this is a very comprehensive kit. All-in-all, excellent value for money and a good 'hack' aerobatic model for practising aeros with no vices. **Q&EFI**

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Flight International

Specification

INFORMATION

Name: Sunrise EP – Black or Pink colour (Kit*) (GM040XM)

Manufacturer: The Wings Maker

Distributor: Steve Webb Models

Price UK: £59.99 ARTF

£139.99 (GM040P) (Pre-assembled – requires 4-channel radio, 20 A brushless ESC, 3 cells 11.1 V 15C 1800 mAh LiPo battery and charger)

Model Type: Sports aerobatic/pattern trainer

Test Motor: Brushless Outrunner Motor 28/30 (KM0283010)

ESC: 30 A+ brushless

Battery: 3S (11.1 V) 1800 mAh 15C LiPo

Power output: with 3S 2100 (35C) and supplied propeller = 240 W/20 A

Construction: ARTF: Moulded EPO foam

*KIT ADDITIONAL REQUIREMENTS

Min. 4-channel radio

Brushless Outrunner Motor (see INFO)

ESC (see INFO)

Suitable LiPo battery (see INFO)

4x micro servos (TWM SV2031)

Propeller adaptor (TWM HW2340100)

Suitable charger

SPECIFICATIONS

Wingspan: 39.5"/1000 mm

Wing Area: 292 sq in/dm²

Length: 40.5"/1030 mm

Flying Weight: 27 oz/760 g (28.57 oz/810 g finished)



About to take-off in relatively long grass is no problem

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Steve Webb Models
www.stevewebb.co.uk
01928 735225/735252