

## Product Review

# Phoenix Classic EP Basic Trainer

by  
David Hipperson.



Although I haven't flown a basic trainer type for quite some time I was enthusiastic to try the Phoenix Models Classic EP when it was offered. I wanted to see how it measured up against the Rainbow from the same company as I personally rate that model as being one of the best all round sport models I've ever come across. Having set such a high standard I wondered where this manufacturer could go next.

There are those of us who bemoan the apparent decline in building skills among aeromodellers (yes, I'm one) but it's hardly surprising to find modellers choosing ARFs when the quality continues to rise at the current rate. The Classic EP is a prime example being beautifully presented with all major components separately bagged and placed within individual sections in the box. If this one doesn't get to you undamaged then nothing will. The colouring is bright with the upper and lower surfaces very clearly differentiated which is ideal for a trainer and I have to admit that very few people I know could achieve such a first rate finish. The internal structure is light yet robust and at first inspection all of the accessories appeared to be of uniformly high quality.

This aircraft looks much the same as any other .40 size trainer you are likely to

see at your local flying field the difference being of course that this model is specifically designed for electric power. Though electric flight has grown at an astounding rate over the past few years it still has, to some degree, retained an aura of a black art to many flyers. Undoubtedly models such as the well known Rainbow mentioned above have helped to bridge the gap between electric and IC power in what I usually refer to as conventional size models but as far as I'm aware there have been very few dedicated trainers in this size and certainly none quite as well thought out as the Classic EP.

As examples of this there is a good sized hatch with a simple but positive sprung latch under the nose for battery access. Inside you will find a robust battery tray complete with Velcro type retaining straps. The motor mount while basic is quite capable of accepting a variety of motors if you don't wish to purchase the pre-packaged motor/ESC/prop that Model Engines can supply specifically for the Classic EP. The one supplied with this aircraft was labelled PKA02 and contained a Himark 3526/830 motor, SJ 45 amp ESC and an APC 'E' 10 X 7 prop (more on this package later). Further good thinking appears to have gone into the design because it can make use of

standard size servos and being realistic this is what the novice is likely to get with that first radio.

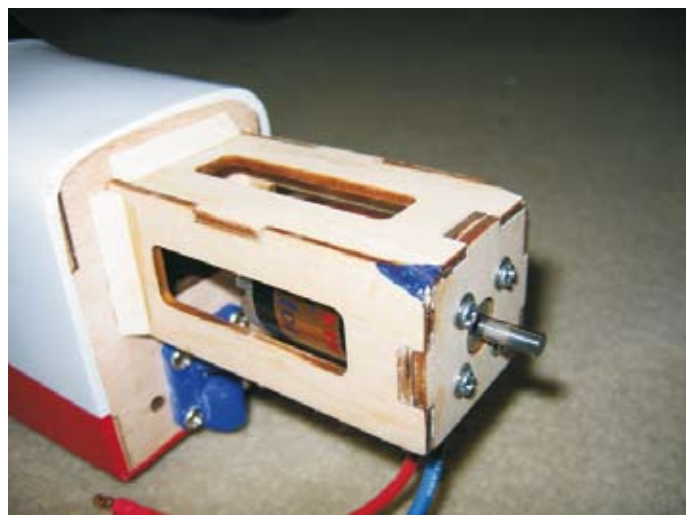
So let's get to look at the model in more detail. The wingspan is 1420mm (55.9in), length is 1070mm (42.1in) while weight is stated to be somewhere between 1700 to 2000 grams. As to the power the box top calls for use of the Himark 3526/830 Kv (rpm per volt) outrunner operating off either a 3S or 4S Lipo pack of 3200 – 4800mAh. It is suggested that one uses a 3S for sport and training while the 4S will offer greater performance presumably for aerobatics which all sounds about right.

The instructions are, by and large, well thought out and illustrated but to be frank I would have liked to have seen a little more detail. A manufacturer should assume that when marketing what purports to be a basic trainer that there will be some for whom this is their first R/C model and that they may not have ready access to help or advice. Typically this lack of information will be noted when constructing the motor mount, I can accept that it may be obvious but where one might have 400+ watts on tap that sort of power isn't to be taken lightly so any chance of mistake should be eliminated.

Furthermore I did feel that there were several areas in the construction process where some thought needed to be applied as well as access to a reasonable set of tools. As an example the beautifully moulded glass cowl needs to be ground or cut away on the lower face to clear the nose leg. Certainly there is enough work required that one cannot consider the Classic EP similar to a "clip together and fly" parkflyer.

### ASSEMBLY

Even at the most leisurely rate many will have the model ready for flight in about six to ten hours so here are just a few points for those beginners. Do assemble that motor box using epoxy. I actually used the thirty minute variety and make use of all of the



External stiffening triangle stock can be seen as can the blue marking where material was removed to improve cowl fit.



Extra vent added to cowl to flow air over ESC.

pre-cut triangle stock to reinforce it. One of the photos shows the external triangles but the internal triangles are just as important. I also shaved away just a tad from the upper front corners (see the area marked in blue) as this allowed the cowl to fit a little better. When joining the wings ensure that you remove the film overlap that wraps over the centre ribs before gluing. Check everything twice then epoxy. Using a stick make certain that you get some epoxy down inside the wing joiner boxes as well as a decent smear over the joiner itself. Like the motor mount this is a very critical part of the aeroplane. Assemble, check the accuracy of the wing alignment and if necessary use some masking tape to hold it all together until set.

When removing the film from the tail surfaces prior to joining to the fuselage try to avoid cutting into the base wood. Using a new, sharp blade just stroke gently through the film then peel it away the section to be removed. Remember that sound glue joints will keep the tail on your model. Oh yes! I also found that one needs to just notch the bottom of the fin in two places in order for it to fit down snugly over the internal fuselage members.

I found that there was some binding of the elevator pushrod on the review model due to a tightish curve just inside the rear fuselage but after getting the pushrod set to length a very slight kink in the rod just on that curve eliminated the problem.

Where I did experience some difficulty was in balancing the model. I set it up exactly as per the instructions and using all the recommended gear. Even with the largest 3S 4800 mAh pack in place (my heaviest) the model was still a touch tail heavy. This was corrected by the addition of a spinner and a little weight attached to the motor box but this represents more thought on the part of the beginner regarding a very critical phase.

#### POWER PACKAGE

Motor manufacturers are continually blamed for making motor designations hard to understand. This makes it difficult for the newcomer to electrics (experienced flyer or not) to comprehend what is on offer and what he/she should buy. Model Engines have overcome this with the PKA02 package which presents us with a good outrunner motor, ESC and prop.

Prior to putting one in the Classic EP I've been using a Himark 3526/830 for a while and it works very well indeed approximately in the .40 class if one tries to equate with IC. It handles both 3S and 4S

Lipo packs and will spin anything from a 9 X 4.5 up to a 12 X 6 with ease (psssst – I've even used a 13 X 6 on mine!) . The SJ 45 amp ESC is equally good and has the ability to handle up to 6S.

I have not tried it on that sort of voltage but it certainly works smoothly in a very linear fashion on both 3 and 4S cell packs with BEC operating. I think the 10 X 7 prop is meant for use with 4S packs and I might recommend to the beginner who is using the recommended 3S that they consider the purchase of a larger prop to make best use of the lower voltage and to this end the early test flights used an APC 'E' 11 X 8.5.

#### FLYING

As you might guess the test day was grey overcast with the odd patch of watery sunlight trying to push through and the breeze gusted across the field turbulent as it chopped over the trees, perfect!

The model had been set up with basic equipment all the way through with a Hitec Laser 6 transmitter, 555 receiver and HS 422 standard size servos. No cheating here as this could be just the sort of gear a beginner might have. The range check proved everything was working well with a good fifty plus metres range motor running or not.



Happy pilot – model in one piece.

Deep breath, point it into wind and open the throttle. The Classic leapt away down the strip tracking dead true with no rudder input at all. I held it down deliberately for about fifty metres or so but with a sniff of up elevator it pulled up and away very strongly. Luckily it was pretty well in trim but a click or two of left aileron made it spot on however it was immediately noticeable that although very stable and tolerant this is a responsive model both in roll and pitch so for any beginner low rates would definitely be the order of the day. The model is quite happy being flown on aileron/elevator with no necessity to mix in rudder which is a good thing as far as my beliefs go for this sort of trainer.

The 3S pack gave heaps of power and in the form it could fly just as quickly as any .40 powered equivalent. Certainly there is sufficient performance for all basic aerobatics you might wish to carry out when you get to that stage. On the ground the wheels are a bit clattery but once airborne the model was incredibly quiet undoubtedly a result of a smooth motor, quiet prop and relatively solid airframe but it really is the next best thing to silent with only a slight prop hum.

That buffeting breeze hardly affected the model at all and this has to be a good thing although the turbulence at low level still made the approach and landing interesting but that is no fault of the aircraft. Nevertheless it was possible to put it down gently



Not one of my landings but a shot to show that underside colour scheme – honest!

and still roll out straight.

Increasing breeze made it sensible to call a halt on that day but I intend to fly this model on a variety of props as well as a 4S pack and I shall report on this in the Flying Electrics column as I go.

#### CONCLUSIONS

The Phoenix Classic EP does exactly what I believe it sets out to do and that is to provide an electric trainer that exactly parallels current thinking (no pun!) in IC powered trainers. It does however perform in an exemplary fashion and despite any small criticisms I might have had at the construction phase these are soon forgotten

in use. At the start of this review I said that I wanted to compare this aircraft with the Rainbow so this is how I feel. The Rainbow flies very much like an old timer with ailerons feeling very “light” in the air. The Classic EP is significantly more positive, due in part to the extra weight, but this plus the power on tap allow it to cope with almost any conditions in which the novice might fly. It is solid and smooth in the air and the fairly thick semi-symmetrical wing section not only makes it easy to slow down and predictable in the stall but able to handle basic aerobatics with ease.

In judging the Classic EP one also has to look at both the package and the price. I am told that the Classic is likely to retail at a very competitive price which will, no doubt, appeal to the beginner. My local model shop, Wingspan Hobbies in Lilydale, had one in stock at a price including the PKA 02 power package at a price less than a number of other comparable size ARFs in the shop. It was mildly disappointing however, that in such a complete kit I had to add my own spinner.

It is always easy to be critical and equally difficult, when one has some experience, to put one’s self into the place of a beginner but the Classic EP fills a gap in the market perfectly. The name ‘Classic’ is well chosen as I think this model could be with us for some time and deservedly so.

The Classic EP trainer is distributed to hobby shops by Model Engines Australia tel; 03 8793 5555 [www.modelengines.com.au](http://www.modelengines.com.au)

Coming in through the turbulence but still rock steady.

