

Grob Tutor G115



Seagull is a manufacturer that prides itself on offering something refreshingly different, indeed its new Tutor is a case in point

Years ago, as an air cadet, I took an air experience flight in a DH Chipmunk, however today's cadets go up in one of these, the G115 or Tutor T1 as the MOD call it. Replacing the Bulldog in 1999, it's made by Grob in Germany and is an all-composite machine, Grob boasting that the carbon-fibre structure is both maintenance and corrosion free. It's powered by a 180hp Lycoming, seats two and is capable of basic aerobatics. Seems familiar? Well you may have seen a few T1s parked on the tarmac at Barkston Heath last time you visited. Interestingly, most are owned by private industry and contracted to the MOD, which explains the civilian registration on Seagull's new release.

Spanning 67" (1700mm), the model is just over 1/6-scale and an all-balsa / ply creation.



Looks pretty doesn't it? It's certainly nice to see something we know and love receiving the ARTF treatment.



The pilots could be better so I'm sure many will be tempted by after-market examples.

It's typical 'Seagull' in every respect so the Oracover finished main assemblies are nicely done and supplemented by a comprehensive hardware pack that includes a tank, spinner and pilot figures. Although Seagull suggests a .72 - .82 four-stroke or a .45 - .55 two-stroke, in line with its other recent releases, this one too is supplied with an outrunner stand-off and employs a large removable top hatch that makes battery access easy and electricity a practical power source.

HEAD SCRATCHER

I'll come back to the motor but let's start with assembly. My thoughts about the Tutor echo those I had in relation to Seagull's MXS-R a few months ago. Basically, the main bits go together well however some of the fixtures and fittings can result in a bit of head scratching. Once again things aren't helped by an instruction manual that's often vague or, at times, just incorrect. Incidentally, the manual is a cheap black and white copy with



Mini units suit the laser-cut aileron mounts. In the best Seagull tradition the horns are threaded bolts.



As is often the case, the nose leg was a bit of a trial!



A full decal set lends a convincing finish to the Tutor.



I toyed with opening up the lower vent but the top two provide plenty of cooling air to my ESC. As you can see, prop clearance isn't a problem.



The sundry aerials and antenna look good but fix them well or you'll be gluing one or other back on after every flying session.

photos that are difficult to interpret, so it's best to download the colour version at www.jperkinsdistribution.co.uk. If you're thinking of building one, then, note the following:

- Control surface horns come in the form of tried and tested threaded bolts. Despite what the manual says, two sets for elevator are included and from those remaining I allocated the longer to the rudder. Be aware also that you'll need to trim the rudder horn to ensure it doesn't foul the elevator.
- Be very careful when locating the pre-cut control horn holes under the flap covering – two are located on each flap which is a way of ensuring that one servo can be reversed, if desired, and the two linked using a Y-lead.
- The nose leg will keep you busy. The step instructions hide the fact that the wheel fork must be separated and then re-joined to sandwich the spat. Not mentioned, either, is the fact that you'll need to cut a small hole to accept the tiny lug (that locks the fork) in the top of the spat. The nose wheel is retained by a collet each side and although it'll seem as if you're using collets designated for the main wheels and that the kit is two collets short, don't worry, in practice there isn't enough room for two collets in the main spats. Instead, the wheel here can slide in against the locking nut. Note, also, that a metal nose leg steering arm is illustrated yet you'll find a plastic example in the box.

- Staying with the main wheels, the manual doesn't mention the fact that you'll need to trim some 13mm from the main gear axles. Oh and don't forget to place the circular ply washers (not 'blocks' as the manual calls them) up against the inside of the spat.
- The angle of the main wheel spats is set for you thanks to a channel in the spat. This angle does seem at odds with the nose leg spat but I've left mine unaltered so you can appreciate the result.
- Visible only from the front, my cowl seemed to have gained a slight twist during production. Accordingly, I found it impossible to match up the cowl trim lines with those on the fuselage, so some spare matching stick-on trim came to the rescue.
- Seagull suggests mating the twin elevator pushrods using a metal joiner block. This means that elevator integrity is reliant on single grub screws. It's an unsatisfactory situation in my humble opinion so I used cyano secured collets.

SERVO STUFF

Sport digital servos fill my model. You'd expect the wing servo cut-outs to be suitable for standard units but it's a thin-ish wing so the hatch cover bearers are arranged to accept minis. Alas, trimming these ply arms to accept a standard servo would leave too little material so, I'm afraid, powerful minis it has to be. Annoyingly, although intended for standard units, the fuselage servo apertures

are fractionally too small (for Futaba and Hitec) yet easy enough to trim.

POWERING UP

If you're intending to fit an i.c. engine then head straight towards those at the top of the suggested range – a .46 two-stroke would be barely sufficient to fly this model convincingly. It was leccy for me though, particularly as a Power 46 outrunner needed a home.

Seagull suggests that the model requires four Li-Po cells, although the power system recommendation is vague. Pushing the Power 46 towards performance at the top of its range I eventually settled on five cells with a 13 x 8 prop helping to generate 900 watts and 50 amps peak. Although I rarely require full throttle, this is just right and, arguably, the perfect amount of power for this 8.5 lb model.

Power to the receiver follows my favourite 'Li-Fe direct' method wherein a two-cell Rx pack delivers via a heavy duty switch harness.

The suggest C of G at 80mm back from the leading edge at the root works perfectly well, although the 600g 5s packs I use do pitch the model fractionally nose heavy which, of course, isn't a problem. Get it at 80mm and you can fly with confidence, indeed I've had no reason to deviate from this throughout the test flights.

In model form this is an aeroplane for good intermediate pilots so the higher of the recommended control throw settings can be used from the start, although I've softened elevator and rudder with 20% exponential.



The large roundel outer has been added in black trim rather than blue. You'll be hard pressed to notice though.



Seagull's Tutor flies really very well and easily manages to reproduce the graceful aerobatics of the full-size.

ALL UP

It's fair to say that I did have a few nagging doubts about this model before the first flight. More than a few! Hyperventilation my clubmates called it, or something like that. I had good reason for, simply stated, it doesn't feel light. The designers clearly didn't have weight saving at the top of their agenda. Why, even the canopy hatch piece and those solid resin pilots bring some 13oz to the party and a quick look at the numbers was doing little to arrest those concerns. For example, my wing loading figure is well beyond 30oz, 35 to be precise; that's quite a lot isn't it?

It's easy to over-think things though. Sometimes you've just got to fly the thing and hope the designers were model flyers. In this case, fortunately, it turns out they were and very good designers, too. Perhaps I should have taken comfort from that markedly undercambered wing? Anyway, I needn't have



With a blue star on their helmets this pair must be on an air force exchange visit. I wouldn't blame anyone for fitting better examples.



The main spats are robust enough as spats go but their angle, directed by a moulded channel, doesn't seem right.

worried, suffice to say the model flies really very well indeed and I'm genuinely pleased with it.

I'm getting ahead of myself though, let's run through a flight. The take-off sequence will require a little rudder to hold the line and the nose will rise to signal when a squeeze of

elevator is required. Some trikes need a real lump of elevator but that's not required here although, depending on the powerplant, the ground run will be longer than the average club aerobat.

This model tracks very well and aileron response is predictable and positive. The slow speed handling belies the figures. The machine stalls at a point that shouldn't intrude in normal flight or during take-offs and landings, so if you accidentally find it then, I'm afraid to say, you were asking for trouble. The flaps are superb, They're not necessary for take-off but I always use them for landing and, when deployed at 30-degrees, the resulting pitch change is almost negligible, no elevator mixing being required.

In a hobby where prowess is measured by an ability to complete a rolling circle and other exotica, it's refreshing to return to basic manoeuvres with a scale-like model and do them really well. Aerobatically the model should be flown gently so as to emulate the graceful performance of the full-size. Here, then, inverted flight feels rock-steady and needs just a breath of 'down' at the suggested C of G, and while some may feel the aileron rates need maximising so as to add a bit of sparkle, in some ways it's quite nice to really work those rolls for a change rather than just banging the stick over.

The Grob loves loops and tracks a smooth vertical line that would be the envy of some



The wingtip lights are dummies although it would be possible to add your own LEDs if so desired.

aerobats. The knife-edge is a surprise too and requires far less coupling than you'd assume and nothing that can't be managed at the Tx.

Stall turns will need full rudder – a bit more than the 20 – 25mm suggested, in fact, although in so doing it'll make sense to soften with expo so as to reduce steering sensitivity on the ground, especially when taking off. I love the way the model really does emulate the graceful flicks and spins of the full-size machine, recovery from which is straightforward.

The landing process is simplicity itself. As I say, I tend to deploy about 30 degrees of flap and then just bring the Grob in, balancing elevator and throttle. The glide isn't bad at all, although needless to say, a cut 'n' glide really isn't advisable. Forget three-pointers, a modest flare brings nose up and the main wheels down first before the sprung nose leg touches. Endurance from a 4500mAh 5s pack is a good ten minutes.



Flap deployment seems to produce very little, if any, pitch response at the suggested C of G.



T1 A1

What's important is that my scale and semi-scale models fly like the real thing. They need to fly like the big ones and it's this aspect that has impressed me most about Seagull's Grob. I always study YouTube footage of the real thing as a way of seeing both how a model should fly and the aerobatic manoeuvres the machine is capable of. Here, then, I've been surprised at how closely this model's flying characteristics emulate the full-size. This isn't a perfect example of the

ARTF kit by any stretch of the imagination. Those main spats are incorrectly angled, the outer underside roundel is black not blue and a fair bit of head scratching punctuated the assembly process. That said, none of the challenges are beyond the average ARTF assembler and, overall, this really is a lovely aeroplane – a model for the connoisseur, one who wants a machine that looks good in the air, flies well and can perform graceful aerobatics just like the real thing. Ha, 35oz eh! What do I know?

Remember to trim the rudder bolt horn so it doesn't impede the elevator.

DATAFILE

Name:	Grob Tutor G115
Model type:	Semi-scale sport
Manufactured by:	Seagull
UK distributor:	J. Perkins Distribution jperkinsdistribution.co.uk
RRP:	£209.99
Wingspan:	66.9" (1700mm)
Fuselage length:	48.6" (1235mm)
Wing area:	548.7 sq. in.
Wing loading:	35 oz / sq. ft.
All-up weight:	8.5 lbs
Suggested engine:	.46 – .55 two-stroke .72 – .82 four-stroke
Power system:	E-flite Power 46 outrunner; 60 amp ESC; 13 x 6.5 prop; 5s 4500mAh Li-Po
Functions (servos):	Aileron (2); flap (2); rudder (1); elevator (1); throttle (via ESC)

A small LED landing light is supplied and can be fitted in the nose, although you'll struggle to see it in bright conditions.



You'll find this a perfectly safe machine when flown sensibly.

