#### **About VFR Models**

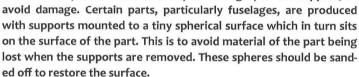
VFR Models was established to provide models of general aviation civilian aircraft in 1:72 scale, aircraft which are highly underrepresented by mainstream kit manufacturers. Using 3D printers, we are able to manufacture model kits of unusual subjects in low volumes and even to special order.

### 3D Printing

Although there are several types of 3D printing, our kits are printed using DLP (Digital Light Processing) Resin Printing. A Ultra Violet-activated resin is cured in thin (0.03mm) layers by shining UV through a mono LCD screen which masks the areas not being cured. The results are highly accurate parts which, although not yet matching the finish of injection moulded or high quality resin moulded parts, provide an excellent basis for an intermediate modeller to produce an accurate model.

## Making a 3D printed kit

The resin parts have been cured in the printer and then exposed to additional UV after cleaning (post curing). Inspecting the parts of your kit, you will notice the parts are mounted on supports. These are used in the printing process and are designed to be easily broken free. For larger parts it may be possible to do this with fingers, however we recommend using sprue cutters, especially with smaller parts where the part is a similar size (and strength) to the support, to



You will also notice there are fine but visible layers on the surface of most parts. Where desired, these can be sanded down easily with medium and fine grade sandpaper. The resin sands very easily and a polished surface can be achieved. As with all resin, the particles must not be inhaled, and the modeller should wear a mask and wet sand to minimise dust. The resin is also very easy to re-scribe, and any lost panel detail can be restored.

For attachment of parts, cyanoacrylate (superglue) should be used. Clear parts are made from vac-formed PETG, need to be trimmed to shape with a scalpel, and can be attached with canopy glue. The resin should take all common types of model paint.

The majority of our models have tricycle landing gear and require weight to sit correctly. All models have hollow nose/cowl sections to place this weight, however due to the small size of the models space is limited. We highly recommend tungsten putty, available from fishing retailers, as this will allow you to pack in the most weight in the space.

#### Our decals

The decals provided with the kit have been made on a laser printer. These are printed on one continuous piece of waterslide film and need to be cut to exact size before soaking and applying. They perform much the same as screen printed decals, however they can suffer if wrinkled as cracks may appear when smoothed out. If you have any problems, please get in touch.

vfrmodels@gmail.com

www.vfrmodels.co.uk



# Beagle B.121 Pup



It is inevitably the case that many new aircraft types do not become commercially successful, but this is often not because of any fundamental shortcoming of design.

Such is the case with the Beagle Pup, an

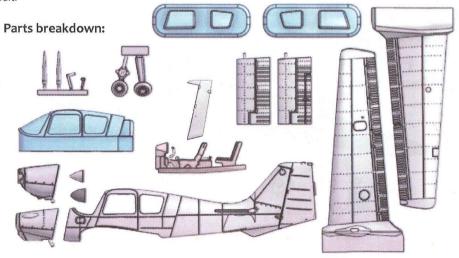
attractive and excellently performing single engined aircraft originating from the UK in the late 1960s.

Beagle Aircraft (an approximate acronym of British Executive & General Aviation Limited) was formed in 1960 by Peter Masefield, formerly of Bristol Aircraft, and amalgamated the Auster and Miles companies respectively. Although ambitious, the company failed to manage properly the costs of manufacturing, and in under a decade, the company went into administration.

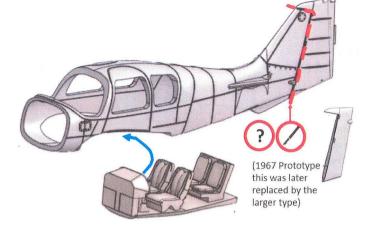
The Pup was the final design completed and manufactured by Beagle. The prototype Series 1 with a 100hp Continental O-200 engine first flew on 8 April 1967. The more powerful Series 2, with a 150hp Lycoming O-320 and revised cowling, followed in October, and the 160hp Series 3 in 1968. Depending on power the aircraft is fitted out with 2, 3 or 4 seats. A roomy cockpit is provided with stick control, and entry is by 2 car-style doors. Handling is often compared favourably to contemporaries such as the Piper Cherokee.

The Pup is often described as over-engineered, with extensive riveting and overlapped panels. As such manufacture was labour intensive, with cost of production double the sales price, and it became clear by 1969 that the Pup would not be viable. In spite of healthy orders, production ceased after some 150 Pups had been completed, although more would be completed later from unfinished airframes. From the Pup, Beagle had also developed the Bulldog; this was ultimately manufactured by Scottish Aviation and served as the RAF's primary trainer for 25 years.

The Pup is a rare sight in the sky, however in 2020 the original prototype, G-AVDF, was returned to flight by a group of enthusiasts after a restoration period of 6 years, one of very few surviving flying prototypes of any aircraft.







# 2.

