

Krautprojekt 1/15

1/72 Arado 232 “ Tausendfüßler”

using Mach 2 and Airmodel kits

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History

The Arado 232 was an extraordinary aircraft, designed in 1939 specifically as a battlefield transport, and incorporating many of the features of today’s military transport aircraft: high wing with “travelling” flaps giving STOL capability, multi-wheel undercarriage suitable for unprepared landing grounds, low box-like fuselage with rear ramp horizontal loading capability and boom-mounted tail unit well clear of the loading area. The layout reminds me of the Blackburn Beverley. About 20 Ar 232s were built. Worth modelling, but despite its interesting and innovative design only two scale models have been released.

The kits

My heart sank when I learned they were a 1972 Airmodel Vacuform and (Groan) a Mach 2 injection moulded kit from 1993.

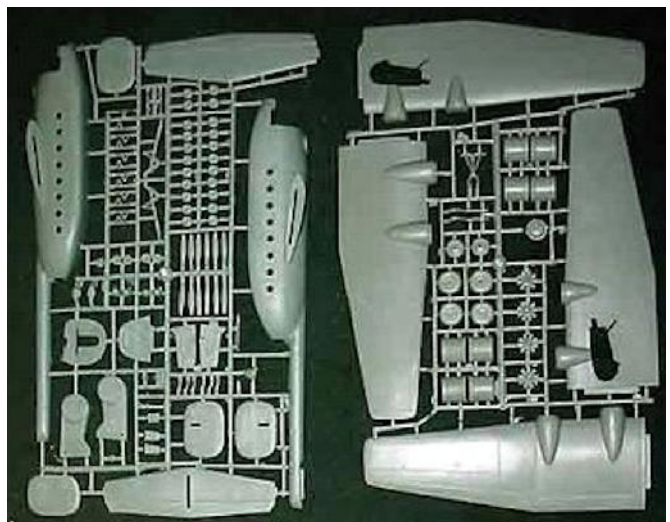


Airmodel

Looking at the kits on the internet I conceived a plan to use parts of each kit for the model and bought both – the Airmodel came from Germany and the Mach 2 from Mr. Wong.

Most of the model would be the Mach 2 kit. The overall shape is reasonable, but the cockpit is fictional, the cargo bay is closed and has no interior detail, the transparencies hopeless and the multiwheel undercarriage woeful. Mobsters may recall the “Ten-cent test” from the build of the Mach 2 RB- 57F. Applying this test to the sprues means only the major parts of the Mach 2 kit will be of use.

These do not fit together without a big cleanup – as in life, there are many sink holes to fill. The nosewheel needs to be drastically modified to match the scale drawings and the cockpit interior needs to be built from scratch.



Mach 2

The Airmodel kit has mediocre vacuform transparencies that you can at least see through, and its injection- moulded bogies and wheels are much better than those of the Mach 2 kit. It has nacelles and props for both the twin-engined “A” version and the four-engined “B” version. These aren’t very good, but the nacelles are better than those from Mach 2 in that they are cylindrical, they have oil cooler intakes beneath the cowlings and the plastic is thin enough to accommodate scale Bramo 323s.

Airmodel also provide some useful scale drawings and a piece of advice that may have come to Herr Schaedler from Pythagoras: *“The last, and probably most useful instruction, is to summon all available patience and work slowly to obtain a finished product that you can be proud of.”*

As well as the kits I bought some aftermarket Bramo 323 engines, 3.5m VDM props for Ju 88s and replacement machine guns (MG131, MG 81Z) for the hopeless kit items.

It’s worth checking manupedia.com.es for a

partial Ar 232 build by Manuel Conde – who really goes to town on the interior. Check David Myrha’s Ar 232 monograph too - it contains a lot of padding but does have good technical drawings and interior photos.

Recalling his actions regarding Bold Halifax, I called Pythagoras for guidance - a recorded message said his office was closed until the Equinox. I took this to mean I could proceed.

Construction

The pictures show the initial stages.



Nosewheel strut fixed with oleo and forward bulkhead added. Undercoat RLM 02

The Airmodel bogies fit with help from some Evergreen I-beam and strip styrene. The forward part of the loading ramp was removed and the rear portholes filled. The forward door was relocated about 5mm aft of its indicated position (so the passengers don’t get chopped in half by the No. 2 prop) and a porthole was added opposite. Bulkheads and internal detail were added to the cargo bay and rear part of the cockpit. Before closing up the fuselage the nosewheel strut needs to be shortened and an oleo was added from tube.

After the fuselage halves were joined it was time to tidy up the turret ring, make the upper hatch and cut a hole for the *Peilgeräte* antenna (made from clear plastic and strips of bare metal foil) aft of the hatch. Access to the cargo bay via the loading ramp leaves little headroom so the rearmost part of the fuselage floor forms a flap that folds up when the ramp is down. The floor was replaced by plastic sheet and the flap cut out according to the plans and pics in David Myrha’s book and still pictures from a film made by the Russians of a crash-landed Ar 232.

I took the opportunity to attach the flying surfaces. The tailplane was squonk and had to be levelled with plastic shims. The wings sort of fitted but were also a bit squonk and required a through and through brass rod to level them. Lots of putty and plastic shims followed, with much sanding and



Forward door and slot cut for undercarriage bay from fuselage. Rear portholes filled



Airmodel bogies with lots of Evergreen strip

Evergreen strips and tiles detail the cargo bay



application of the miraculous Tamiya grey primer, which hides a multitude of sins. This process, as remarked by Admiral Parmenter, is *very good for you*.

After a bit of practice making gun turrets from scratch for Bold Halifax, the forward turret was a snap using the Airmodel vacform and the Aires MG131 with the handle from one of the kit MGs.

The engines supply light relief. The Mach 2 engines fail the ten cent test spectacularly and the replacements from Engines'n'Things are pretty good. They were attached directly to the wing nacelle fronts – the last 4mm was cut off from each engine. The assembled Airmodel cowlings were slipped over the engines and secured.

The Mach 2 spinners were assembled and reshaped, the recesses for the blades drilled out and the blades from the Aires Ju 88 props fitted in. Fine solder wire was used to make the pitch change collars. There is not much to see of the engines once the props are in place.



Props under construction

Once this was done the next job is to scratchbuild the cockpit.

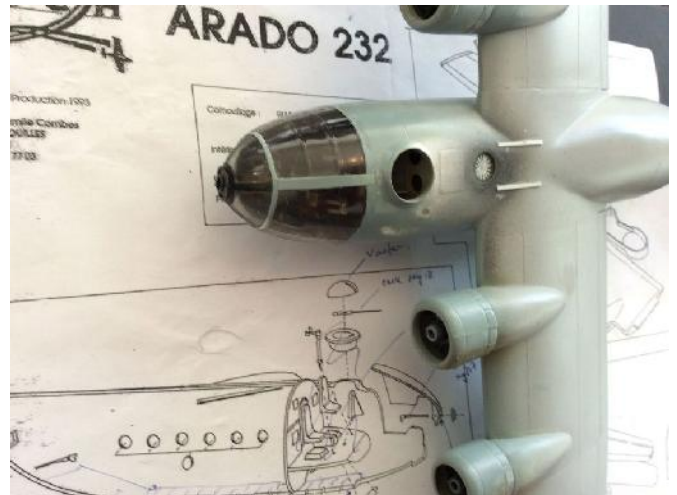
This is a picture of Manuel Conde's Ar 232 cockpit from his website. I couldn't do this



Engines in place, cockpit under construction

The base of the turret, forward cockpit floor, instrument consoles and seats were from sheet plastic. The control columns were plastic rod and brass wire. Details for the consoles, seat belts and rudder pedals were from generic photoetch with decals for the instruments. The MG 81Z is Eduard Brassin.

The Mach 2 canopy is the usual epic fail so I used the Airmodel canopy which is a two part vacuform. It was persuaded into place with some reshaping of the lower nose. Framing was made from plastic strip.



Canopy installed and framed with plastic strip

The machine has ten bogies under the fuselage, meaning 20 wheels and 40 hub faces to paint. Each hub is about 4mm diameter so this is an unpleasant prospect.

The wheels are semigloss black and tyres matt tyre black. I spray painted the wheels and hubs a semigloss black, then used a leather punch to make 4mm discs from a strip of masking tape. I stuck the masks to the hubs and sprayed the tyres black. It worked nicely.

To get the bogie wheels to line up I followed

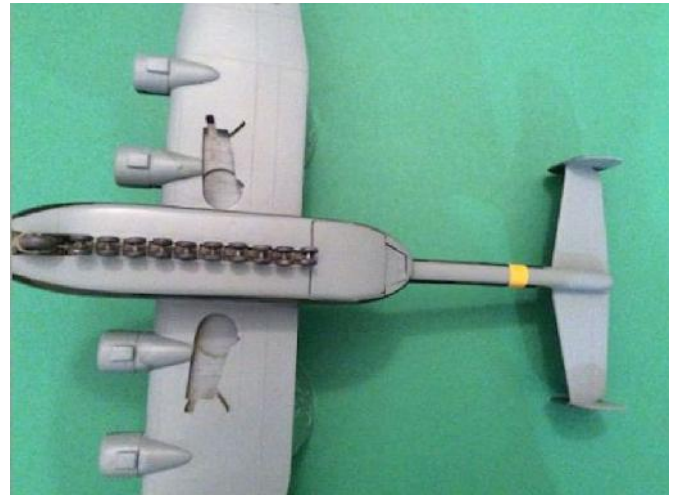
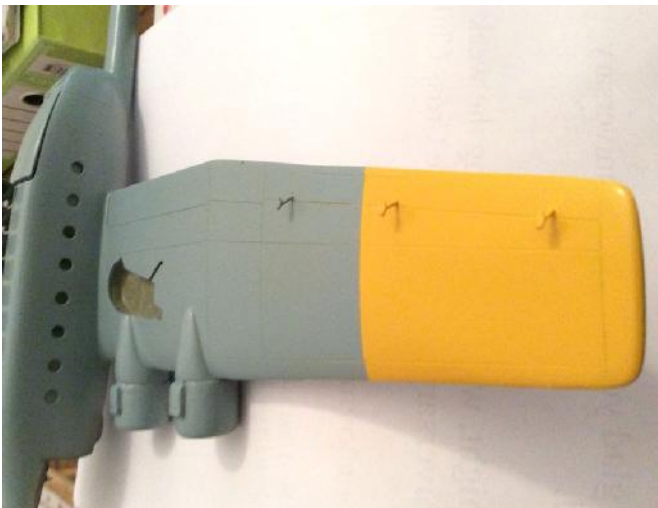


Lots of wheels

the President's advice and fixed the front and rear wheels first. The remaining 16 wheels were held in place against a ruler and liquid cement applied. When this was done they check out well against a flat surface. Unfortunately the attachments are not secure and individual bogies kept falling off and getting traumatised. In the end all the bogie wheels were removed and the remaining undercarriage legs were realigned and levelled with a flat file. New bogies made with plastic rod and the modified Mach 2 wheels were Araldited into place. (The Mach 2 wheels no longer resemble their initial state on the sprues.)

The main undercarriage doesn't quite fit – if installed as per instructions the legs are too short, the wing will tilt and one or other mainwheel will not touch the ground. Bugger. I replaced the upper undercarriage legs with plastic tube and slid the lower legs up and down within the tubes until the model sat level on all 23 wheels. Liquid cement was then brushed into the mountings to secure the legs.

Aileron mass balances from sesame seeds



Underside after painting and retrieving lost bogie wheels

Before painting anything else I made aileron mass balances using plastic rod and sesame seeds. This is possibly a first in modelling.



Fresh out of the paint shop

Paint and Decal

By now I had had enough of this caper and painted the beast with 70/71 uppersurfaces and 65 undersides. A fair bit of the wing can be seen in some photos in Myrha's book and these were used to

All the wheels touch the ground





Finished

draw out the camouflage pattern. The rest is an educated guess.

The markings are for the aircraft captured from *Transportfliegerstaffel 5* (14/TG 5) coded J4+UH so some of the Mach 2 decals could be used. These are OK. The rest of the decals were released from their dungeon or printed on BMF clear decal sheets from my computer.

As a final touch I used PVA to make the small windows in the fuselage.

I intend to fit the aircraft on a diorama base with some Krauts driving a *Kubelwagen* down the ramp.

A similar project for the Ju 52 is next. Mach 2 and Airmodel have each issued not very good 1/72 kits of this aircraft.

Philosophical Evaluation

This took four months to do. Pythagoras arrived at the shed after his study tour of the pyramids, just as the leaves on the nearby elm trees were turning gold. As I was securing the last of the bogie wheels, he silently picked up a golden leaf from the ground, examined it closely, then allowed it to fall. At the same time the bogie fell from the fuselage and rolled away, irretrievably, under the bench somewhere. As I scrambled about hopelessly on the bare concrete floor I fancied I saw a wry grin crossing his face before he strode away. He knew what I had learned, and what I have yet to learn.

