



More views of the mock-up. Note the ejector seats are a very simplified affair.



For more information on how Uncle Les made his kit go to

<http://uncleles.net/2015/11/21/172-ca31-cacs-little-advanced-trainer-proposal-of-the-60s/>

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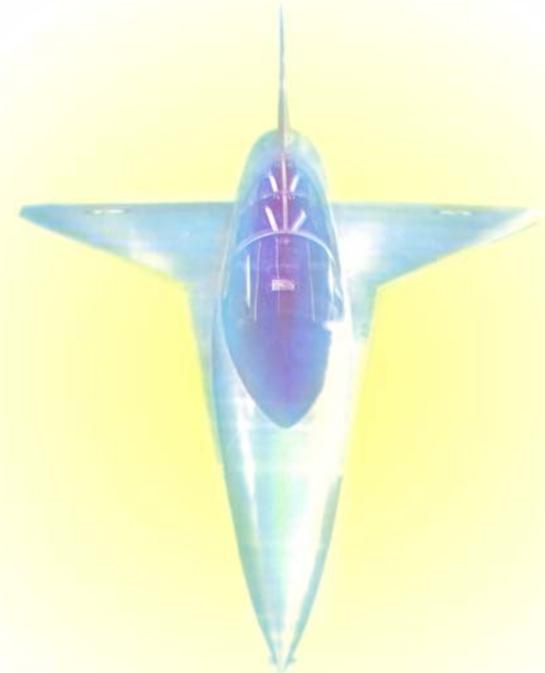
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COMMONWEALTH AIRCRAFT CORPORATION

CA-31

PROPOSED AUSTRALIAN SUPERSONIC TRAINER



Another classic Australian aeronautical “nearly made it” from the same folk who didn’t bring you half a dozen other aircraft that Uncle Les will cover in the near future ! If you think that Luft46 has all the bizarre designs wait until you see some of the home-grown products !

1/72 scale

Why an advanced trainer indeed !

It happened one winter's evening, rugged up in front of the fire going through some old Aircraft mags as is my want when I chanced upon an article in the September 1967 issue of "Aircraft" on the CA-31 Supersonic trainer. (I was actually looking for some more info on the single engined N22 Nomad proposal for the reference guide I'm putting together , but I digress,) I looked at this diminutive aircraft and was immediately struck with the same intrigue mixed with sorrow I feel when I thumb through "Project Cancelled", the wonderful book by Derek Woods (ISBN 1 85488 026 8—put it on your Christmas list NOW) on the British Government's ineptitude towards aircraft research and production from the 40's to the 60's. It becomes apparent when one reads literature on the subject of aircraft research, development and production in this country that up to the 70's we had a world class industry that became stifled by government hampering and the general pandering to foreign influences. (Some would point out that the rot set in decades earlier !)

This aircraft represents an asset that would have provided sub to supersonic training capability for conversion to the Mirage from Vampires and the like. The relationship with the Delta shaped Mirage becomes obvious when you look at the general arrangement—it's almost a 2/3 scale model of a Mirage ! This aircraft could also have been a minor ground support craft fulfilling a similar role that the Aermacchi MB326 eventually took on.

This project like so many others was scrapped in favour of either a foreign design or, in this case, nothing at all.

Fate being what it is, after the masters were completed for this model the real aircraft mockup turned up at Moorabbin Air Museum so a trip there is recommended to gather further reference. The Ballarat Air Museum has another example of one of the lost designs similar to the CA.31, but that's another story.

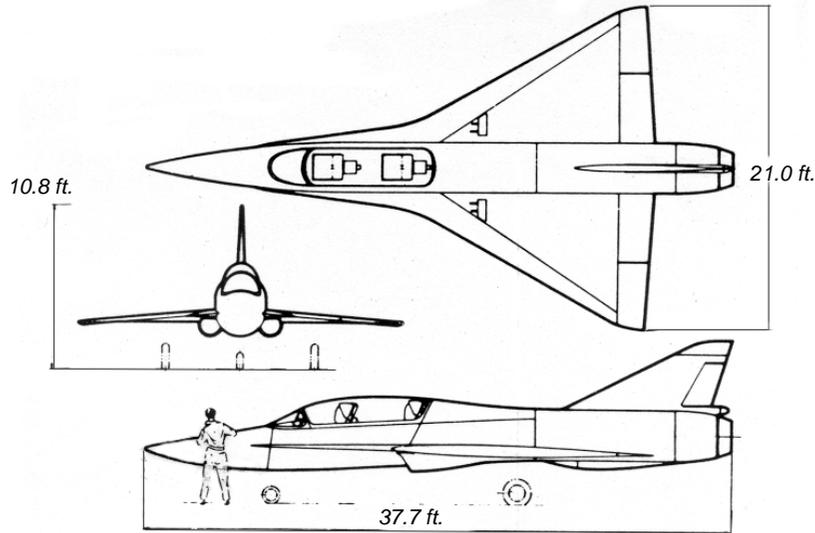
This model is an attempt to capture the basic shape of the design in 1/72 and to allow a modeller with a fair amount of skill, create a "whatif" Australian style. Uncle Les wishes you all the best and reminds you to have fun.



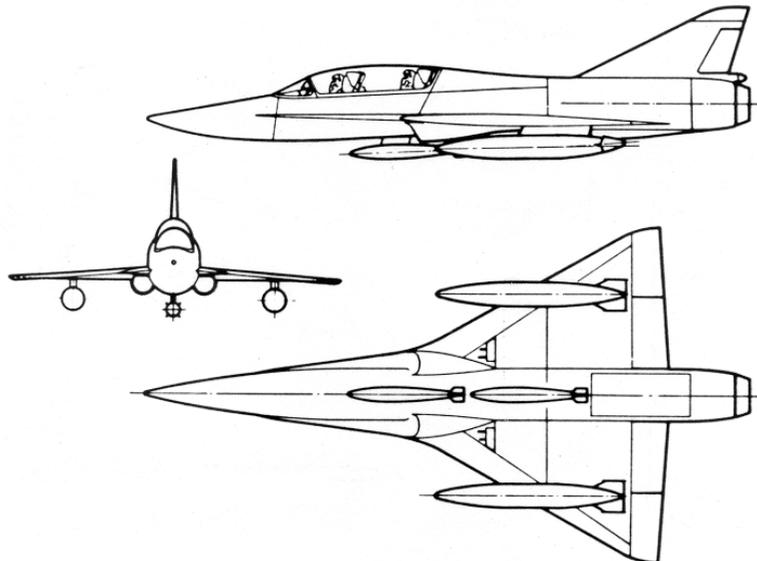
Views of the mockup taken at the Avalon Air Show, February 17 2001. Note the fairing and the shape of the tail cone.

Here's what you get in the kit.

All of these parts will need trimming from their bases.



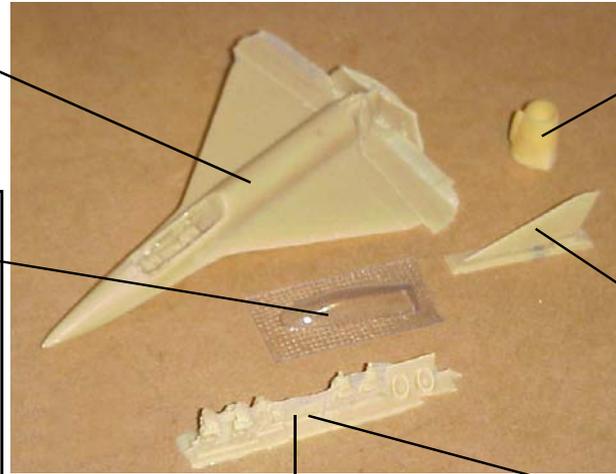
More views of various sub-types of the same project.
CA.31 Operational Trainer, Rolls Royce Adour RB.172 configured clean above and for ground attack below with 2 x 750lb Napalm & 2 x 500lb HE Bombs.



The main fuselage/wing section .

The clear PVCs canopy has been vac-formed and will require careful trimming to get it in place correctly. If you're modelling with canopy open it hinges from the starboard side.

I recommend PVA glue as it dries clear without fogging.

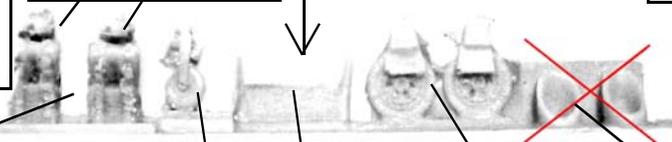


The tail cone is cemented on with the fairing facing upwards.

The tail unit will sit cleanly (after trimming) on the top of the rear fuselage. Check drawings for correct alignment.

This tree contains all the fiddly bits and there will be spares in the kit just in case.

Use a small loop of fuse-wire to simulate the ejection handles



The ejection seats are only the backs as the bases exist already in the cockpit tub. The actual mockup has very bland seats with cushions so go check out the Moorabbin Museum if you want to make that example. The seat with instrument panel on the back is the back seat.

Front u/c door.

Main u/c

Front oleo with wheel.

These intakes have been superseded in later versions by being moulded integrally

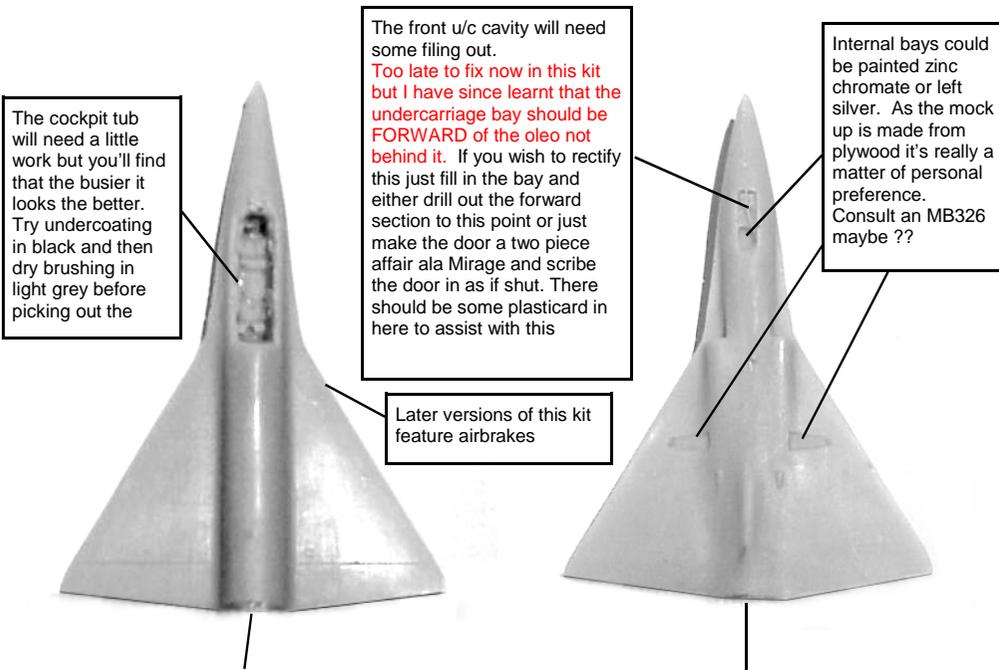
Some of the pitfalls in this kit will be some air bubbles and possibly some "potatoes" here and there.
Uncle Les apologizes for any inconvenience but this is a limited resin model kit guys and a little work will be expected from your end of the deal ! (I have since improved techniques so later issues should be superior to older ones—nonetheless there'll still be plenty for the modeller to do !)

There will also be some sprue and plasticard in there somewhere too to fashion the u/c door if the resin one doesn't survive and also to make joysticks etc.

I recommend a little Tamiya, Milliput or Squadron putty be on hand !

Upper view after removal of base.

Lower view after removal of base.



Attach the tail cone after sanding down flat and use the drawings on the following pages for positioning. Note that the fairing on the model is based on one of the proposals and doesn't match the airframe currently at Moorabbin which has a sloped fairing as found in CAC drawing 39 for the CA-31 project. This can be achieved by filing down sufficiently.

When attaching the tail cone use a little cyanoacrylate (superglue) and try the baking soda trick. That is, after attaching the cone, sprinkle a little baking soda over the interface and it will accelerate the cyanoacrylate tending to fill the gap instantaneously. A couple of applications and any gaps will be filled ready for sanding.

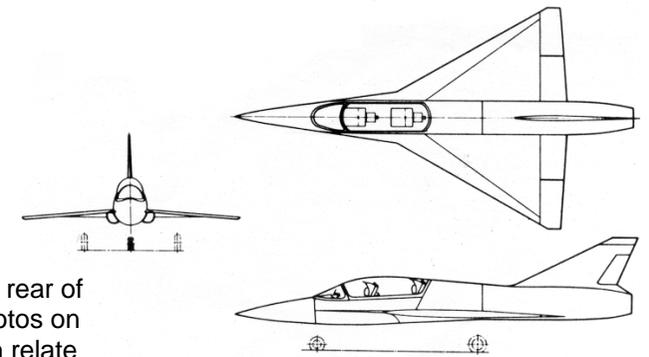
After getting the fuselage/tail sorted out cement the empennage on the upper fuselage and allow to dry. Before attaching any fiddly bits (undercarriage etc) make sure the fuselage has been sufficiently filled, checked and smoothed down ready for eventual painting.

The ejection seats can be fitted now and cockpit details ratified. Lots of black, lots of dry brushing in grey, lots of pinpointing with white, red and yellow !

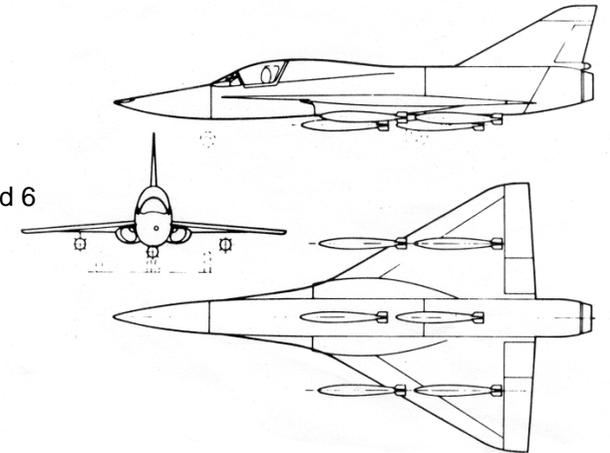
The canopy can be trimmed and attached at this point.

The wheels can be attached at this juncture and I would suggest consulting the positioning as outlined in the scale drawing on the next page. Depending on the version of the kit there may be alternative metal undercarriage parts included. This is very much a "whatif" scenario so variation on the undercarriage is really up to you.

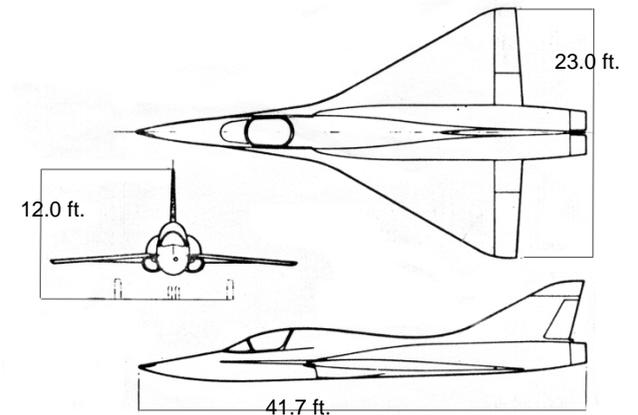
There is a decal sheet included with a range of numbers and codes. These are laser copied and will need to be cut out separately for application. I recommend using on a gloss surface (future polish etc) with copious application of decal softener during and afterwards.



Slightly different fairing at rear of empennage. Note the photos on the following pages which relate more to this version.



Here's the close support version with single seat and 6 x 500lb HE Bombs.



Here's the CA.31 Operational Trainer/ Close support version utilizing two General Electric J.85 Engines

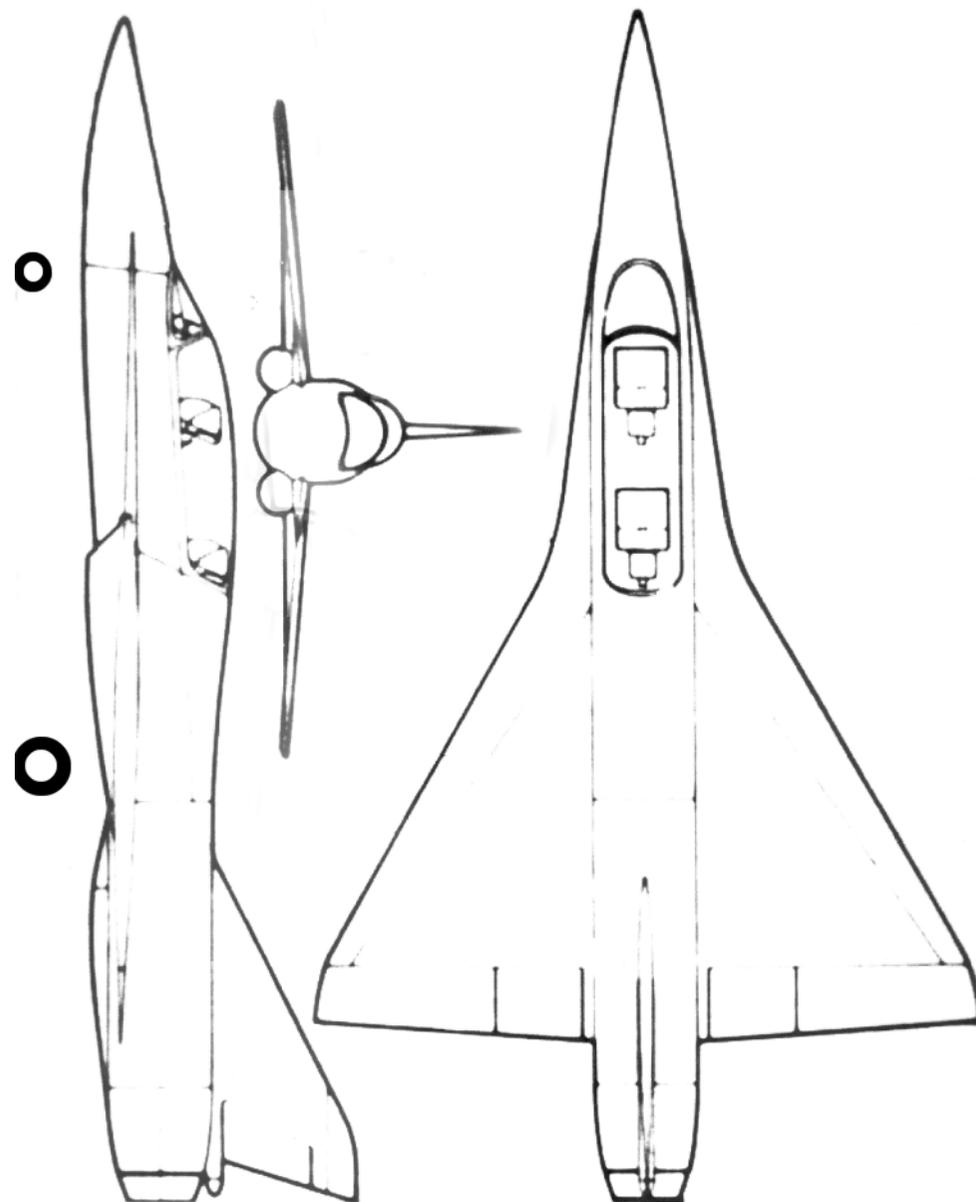


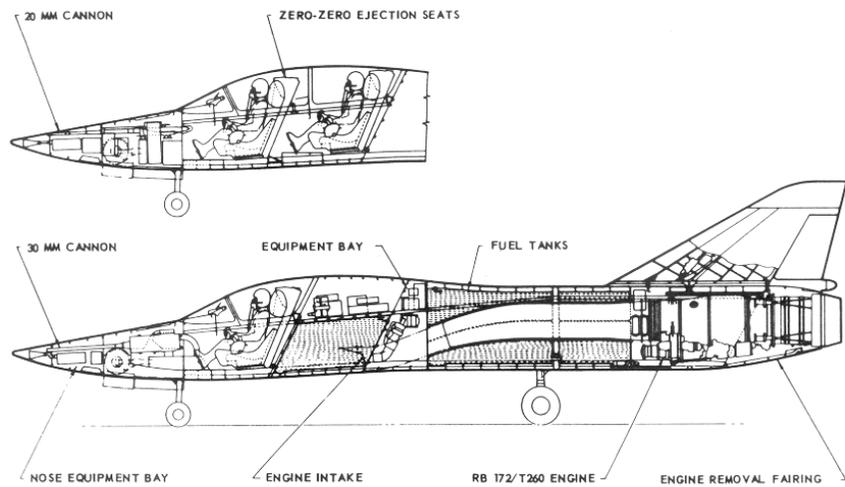
IMPORTANT ADDENDUM:

From version 1.7 onwards these kits will include a new revised tailcone and some extra elevons as I wasn't happy with the way the trailing edges came out in this latest release. The cost of total mould renewal is prohibitive so I've compromised by including some extra "moving parts" - you might want to "drop the flaps" as it were !

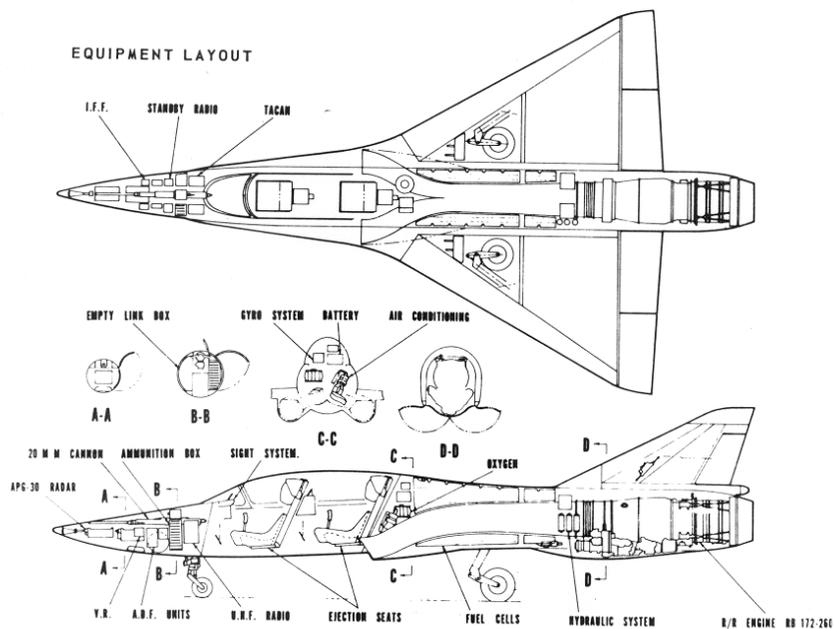


If the printing worked out properly this drawing should be 1/72 and you can use it to line things up if necessary.





Here's some internal sectional views you can use for any further detail work.



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Views of a couple of Uncle Les's completed models made from this kit.. The schemes are of my impression on what might have been.



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