

**UNCLE LES** 

GOVERNMENT AIRCRAFT FACTORY  
**NOMAD series.**  
Australian light transport aircraft.



**1/72 scale**

# Here we go again

*Well, a potted history is in order, both of the plane and of the model.*

The Nomad was developed by the Government Aircraft Factory from the late 1960s to help provide the facility with work after construction of licence built Mirage jet fighters was completed, and to offer a new rugged STOL utility transport suited to both military and civil operators both here and abroad.

The Nomad included features such as a retractable undercarriage, two Allison 250 turboprops, a braced high mounted wing with full span double slotted Fowler flaps and a squared sided fuselage. The first flight of the prototype Nomad N2 occurred on 23 July 1971. A second prototype first flew on 5 December that year. Having attained certification the first deliveries of the production N22 began in 1975 and a number of versions were forthcoming including the Missionmaster, Searchmaster, Surveymaster, Floatmaster, Commuterliner, Cargomaster and the Medicmaster. (*Even a Battlemaster but that's another story.*)

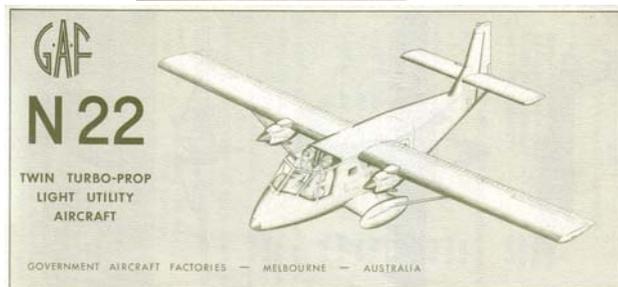
A chequered career was to follow and Nomad production ceased in 1984 with 172 airframes having been produced. It could be said that mismanagement by the Australian government departments entrusted with its development were as much to blame for any shortcomings as any faults with the aircraft itself.

GAF was renamed ASTA (Aerospace Technologies of Australia) and twelve years later was acquired by Rockwell and hence subsequently inherited by Boeing late that year. Maintenance responsibilities for the remaining 54 airframes still in service around the world has been acquired by a local aircraft manufacturing firm and when I'm given the all clear I'll update this paragraph!

The kit itself has been a labour of love for me for over 15 years since meeting up with Fred H at Hearn's and seeing his remarkable scratch built N22. I argued that plasticard beats a Matchbox Do28 and the argument rages on!!! Since having been released back then it has been, sold out, shelved, recast, released, sold out, plagiarized, retooled, sold out and so on. This release sees me trying my damndest to keep it going with as much info as I can cram in and with as much scope to be able to model any of the N series variants in 1/72 (and 1/48 but that's another kit).

What are you waiting for, get stuck into it!

Leslie Applebee 15 Jan 2008  
Just prior to leaving Newport for good  
and relocating the family to take up  
residence in Lara.



**NOMAD 22**



*...and for the technically minded I've extrapolated some data from a copy of the CAA certificate of type approval 73-1 for ASTA dated 13May1992...*

## Powerplants

Two Allison 250B17B,C or E turboprops driving three blade Hartzell HC-A3VF propellers

## Performance

Typical cruising speed 164kt with a structural max of 196kt but frankly as long as it gets me there and doesn't go into a flat spin I'm not that fussed.. Service ceiling N22B 21000ft, N24A 20000ft or possibly 27000 ft, again it depends on where the information is coming from but the certification says quite sensibly 15000ft depending on crew oxygen requirements. If it's really bothering you just call Air Safaris as they are more than qualified to answer this conundrum from first hand experience!

## Weights

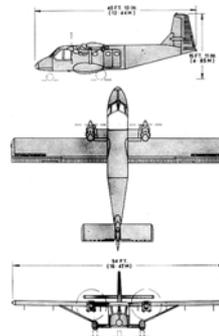
It all depends on aircraft configuration, but for, say an N22B in transport mode, 3878kg max.

## Dimensions

N24 & N22 - Wing span 16.52 (differs according to source, 16.46m is however the prototype wing span) height 5.52m  
N22 length 12.56m  
N24 length 14.34m

## Capacity

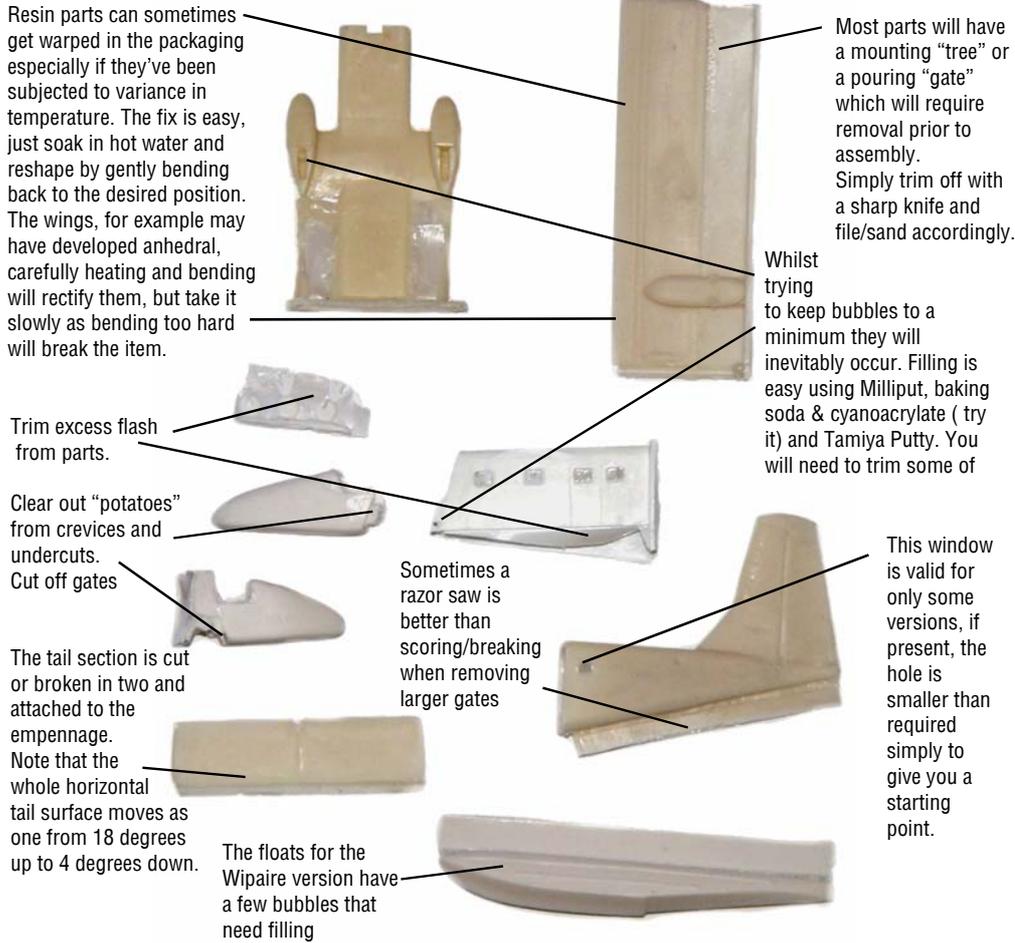
Accommodation for two pilots although certificated for single pilot operation. Seating in main cabin at two abreast for 12 (N22) or 16 (N24). Searchmaster B patrol aircraft is fitted with a Bendix RDR 1400 search radar and has a normal crew of four. The more sophisticated Searchmaster L has a Litton LASR (AN/APS504) search radar with 360 degree coverage in an undernose radar.



# What to expect with this kit.

There are a number of variations to this kit with an inventory for each on the following pages. What is displayed here is a general view of some of the major components and some information that is preferential for you to know before commencing construction, especially if you're not terribly au fait with resin kits.

The materials used in production for this kit are various grades of polyurethane resin for the major components, PVCs or acetate sheet for the clear parts, ABS plastic card and some polystyrene struts. Cyanoacrylate is recommended for adhesion of all components other than the clear parts where PVA glue is recommended. The decals supplied in this kit are relative to the particular version depicted on the box-art and individual instructions are included with the sheet.



**REMEMBER—SAFETY FIRST:**

When sanding resin if at all possible do so in a tub of water to minimize dust becoming airborne—avoid inhalation of resin dust as it is harmful to your lungs. Be careful when using cyanoacrylate that you don't stick your pinkies together and sharp knives cut flesh easier than plastic—you get the picture..

# Assembly for basic N22 variants

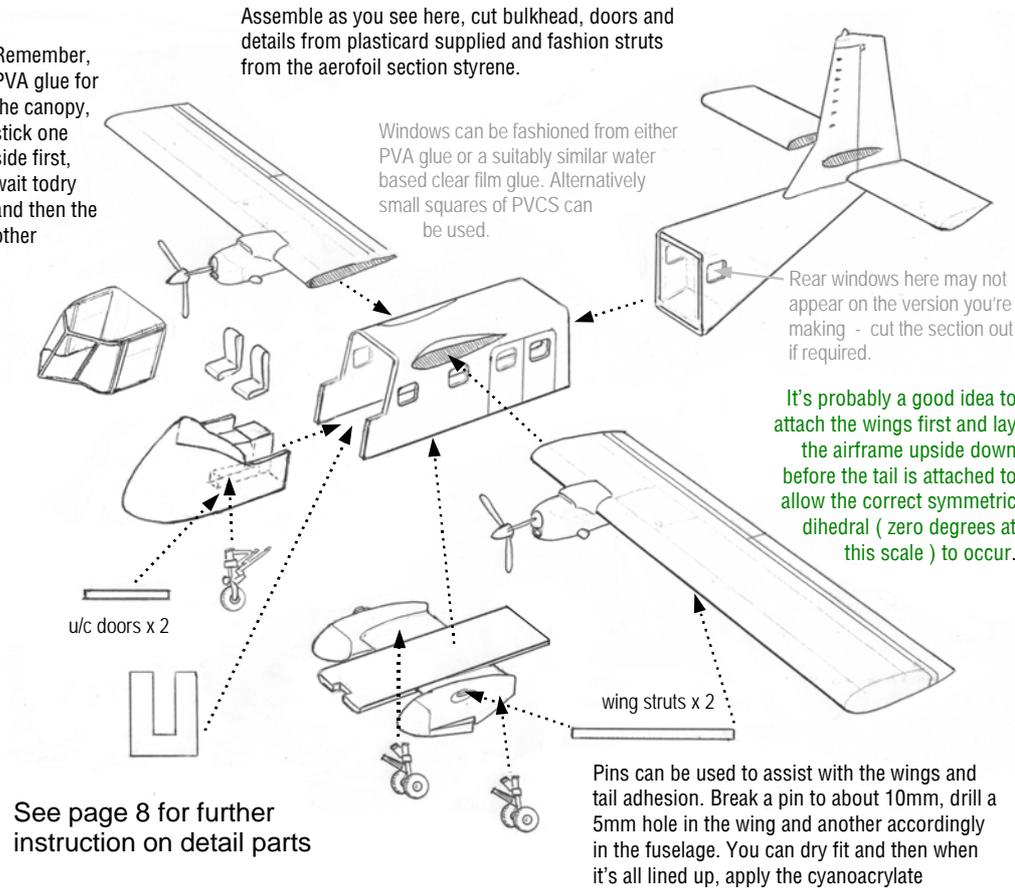
Remember, PVA glue for the canopy, stick one side first, wait today and then the other

Assemble as you see here, cut bulkhead, doors and details from plasticard supplied and fashion struts from the aerofoil section styrene.

Windows can be fashioned from either PVA glue or a suitably similar water based clear film glue. Alternatively small squares of PVCS can be used.

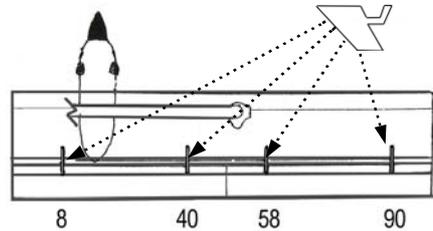
Rear windows here may not appear on the version you're making - cut the section out if required.

It's probably a good idea to attach the wings first and lay the airframe upside down before the tail is attached to allow the correct symmetric dihedral ( zero degrees at this scale ) to occur.



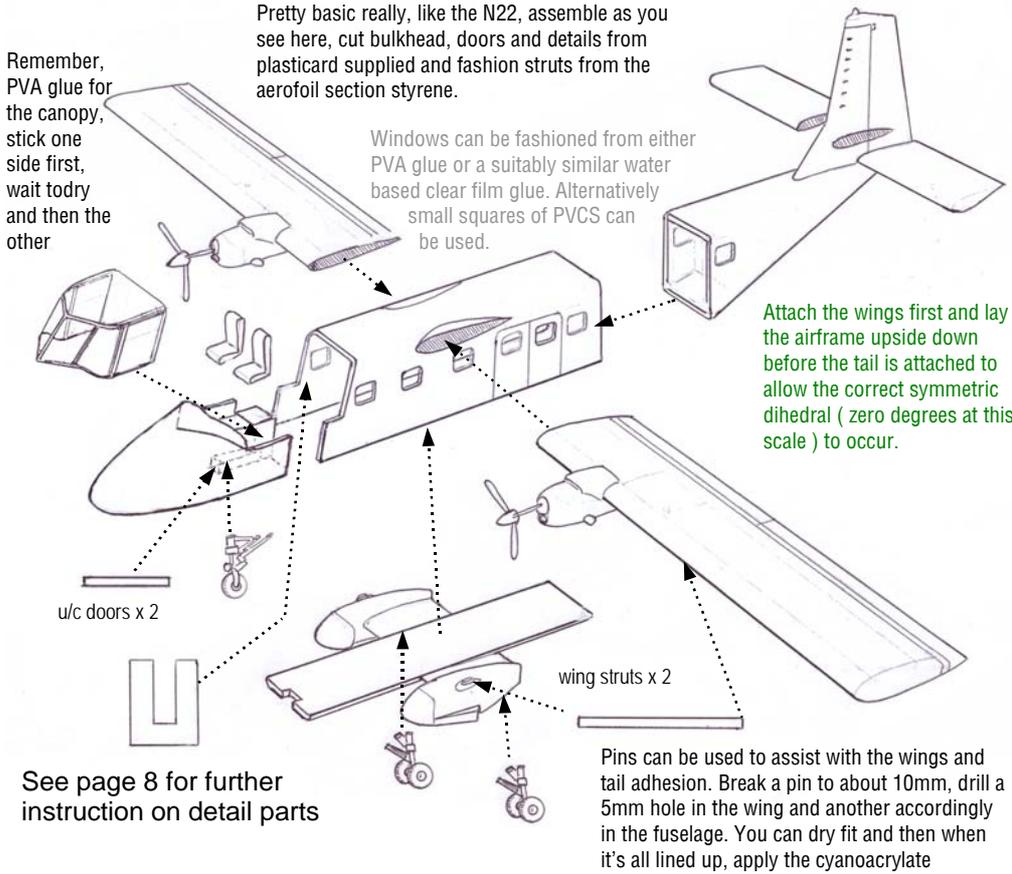
The Fowler flap hinges are found on a resin sprue and there should be some extras included just in case you make a boo boo. You'll need to have 4 for each wing.

0 10 20 30 40 mm



Flap hinge position in mm from wing root. This is the same for all versions. There's a mass balance on the wing tip

# Assembly for basic N24 variants



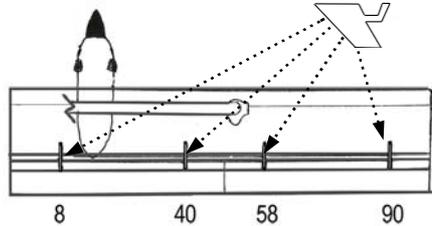
0 10 20 30 40 mm



Various steps and aeriels



The Fowler flap hinges are found on a resin sprue and there should be some extras included just in case you make a boo boo. You'll need to have 4 for each wing.



Flap hinge position in mm from wing root. This is the same for all versions. There's a mass balance on the wing tip

# Assembly for advanced N22 variants

Remember, PVA glue for the canopy, stick one side first, wait today and then the other

Much the same as the basic N22, assemble as you see here, cut bulkhead, doors and details from plasticard supplied and fashion struts from the aerofoil section styrene. Add either the Searchmaster L or B nose add on as required.

Windows can be fashioned from either PVA glue or a suitably similar water based clear film glue. Alternatively small squares of PVCS can be used.

Some advanced versions have bubble windows here or behind the cockpit. There will be a couple of bubble windows provided in the kit if it's an advanced version. As always, check your references first.

*Read about attaching the wings on the previous page*

?  
Big nose or droopy jaw, it's your call!

u/c doors x 2

wing struts x 2

See page 8 for further instruction on detail parts

Pins can be used to assist with the wings and tail adhesion. Break a pin to about 10mm, drill a 5mm hole in the wing and another accordingly in the fuselage. You can dry fit and then when it's all lined up, apply the cyanoacrylate

0 10 20 30 40 mm



1 x Rear cockpit bulkhead

20 x 15mm

Various steps and aerals



2 x Undercarriage doors 20mm

2 x wing struts 40mm from aerofoil strut provided



*If you fancy doing a Surveymaster then you'll need to stick a chupa chup stick or a cotton bud stalk approx 60mm from the tail line with a wad at the end. There's a colour sideview on page 14*

*Refer to previous pages for flap hinge positioning information.*

# Assembly for floatmaster variant

This one's the tough one. Like the N22, assemble as you see here, cut bulkhead, doors and details from plasticard supplied and fashion struts from the aerofoil section styrene. BUT, there's a bunch of struts to get right so we'll try to cover it as best as I can.

Remember, PVA glue for the canopy, stick one side first, wait today and then the other

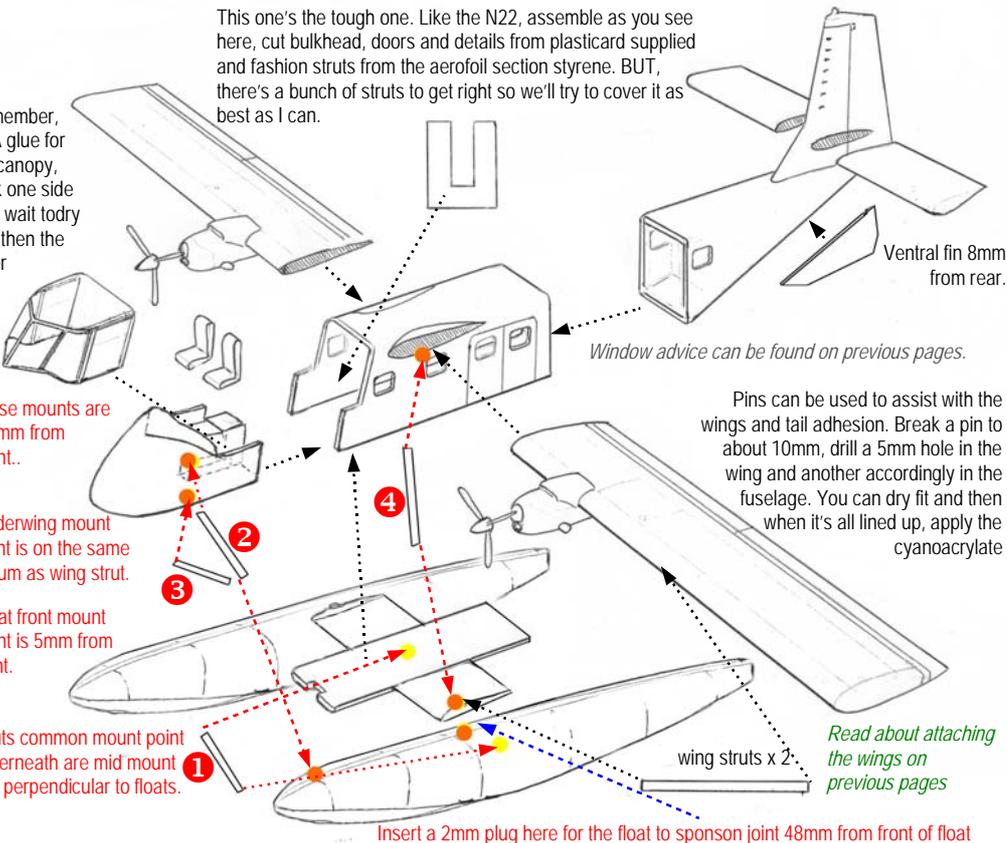
Nose mounts are 18mm from front..

Underwing mount point is on the same datum as wing strut.

Float front mount point is 5mm from front.

Struts common mount point underneath are mid mount and perpendicular to floats.

Float attachments shown on one side only—orange dots show approximate mounting points, yellow means underneath.



Window advice can be found on previous pages.

Pins can be used to assist with the wings and tail adhesion. Break a pin to about 10mm, drill a 5mm hole in the wing and another accordingly in the fuselage. You can dry fit and then when it's all lined up, apply the cyanoacrylate

Read about attaching the wings on previous pages

Insert a 2mm plug here for the float to sponson joint 48mm from front of float

Refer to previous pages for flap hinge positioning

0 10 20 30 40 mm



1 x Rear cockpit bulkhead  
20 x 15mm



2 x 15mm struts under fuselage to side centre of float. **1**  
2 x 16mm struts upper front fuselage to front of float. **2**  
2 x 11mm struts lower front fuselage to front of float. **3**

2 x Undercarriage doors 20mm

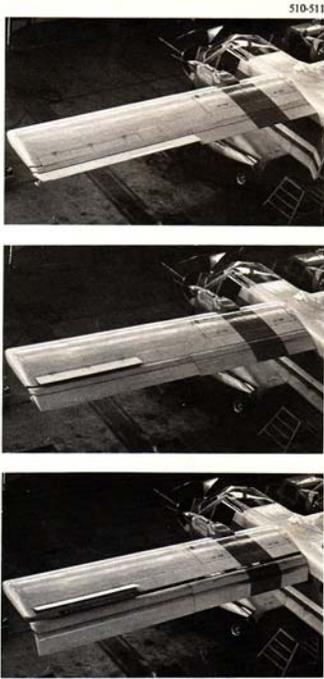
2 x 22mm struts upper sponson to underwing fuselage intersection. **4**

2 x wing struts 40mm from aerofoil strut provided

See page 8 for further instruction on detail parts, page 14 for a suggested scheme and page 16 for some front on detail shots



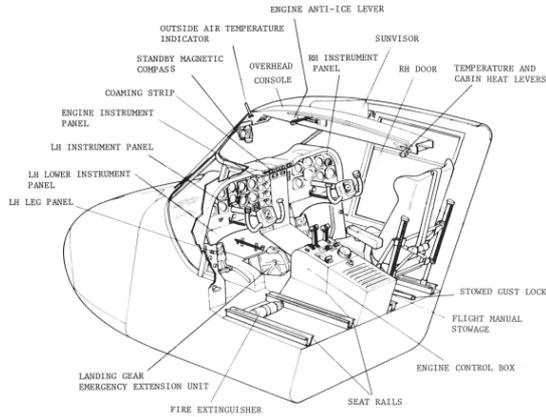
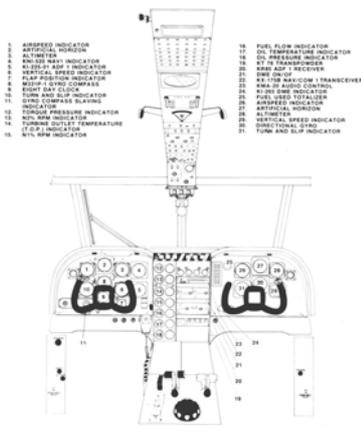
# A little more detail..



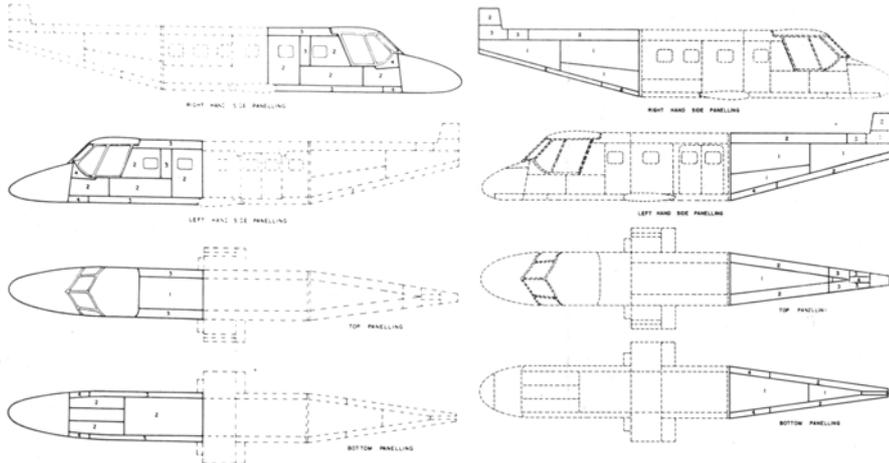
The transfer of lateral control from conventional ailerons to slot-lip ailerons is shown in this sequence of photographs. In each case full left roll is being applied. Flaps are selected up in the first picture and the slot-lip ailerons remain closed. With partial flap, centre, both ailerons are in use, but with full flap selected roll control is entirely by means of the slot-lips. Details of the interconnection mechanism are shown on the cutaway drawing

Even though the wings are moulded as single pieces the more adventurous of you may wish to carve out some fowler flaps and some ailerons— here's a series of photos from an old magazine to help.

Some cockpit detail and instrumentation drawings are presented here for your edification also.



Skin panelling details for both N22 & N24 in case you wish to get scribing.



# Colour schemes.

N22B-4 VH-AUH Nomad Demonstrator Paris Air Show 1975  
This camouflage scheme was applied in an apparent effort to attract either colonial desert or middle eastern interest ??



N22B-131M A18-314 Missionmaster Australian Army  
Oakey QLD 1983.  
This aircraft became P-829 of the Indonesian Navy a decade later.



N22B-90M A18-314 Missionmaster  
ARDU ( Aircraft Research & Development Unit )  
RAAF Edinburgh SA 1990  
This aircraft became a training aid in 1991



N22SB-143 Searchmaster B P2-016 Papua New Guinea Defence Force  
Port Moresby 1984



# Colour schemes.



N22B-103 National Safety Council of Australia  
Essendon Vic, 1984

N22S-92 VH-CEI Searchmaster L  
Australian Customs / Coastwatch contract.  
Essendon, Victoria 1988



N22S-84 VH-CEK Searchmaster L  
Australian Customs / Coastwatch contract.  
Karratha, WA. 1995



Geoff Hearn provided this view of VH-CEI with a variation on the scheme seen above with "H.C.Sleigh Aviation" emblazoned on the side and a logo on the tail. Note that the radome is black at this time in the aircraft's career.



## Colour schemes.

N24A-72 PH-HAL Holland Aerolines Rotterdam NL 1985.

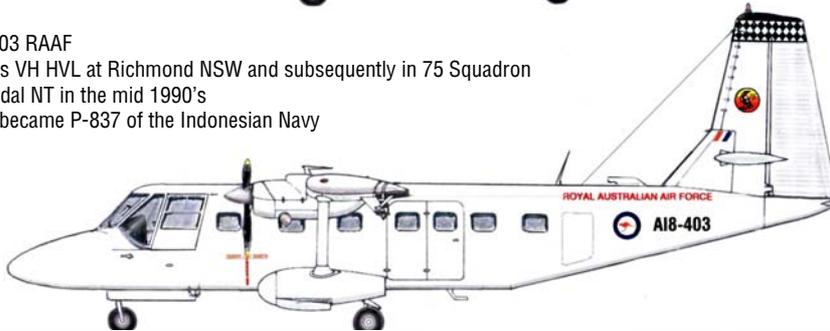
Interesting note is that PH-HAG, another N24, carried the name "Holland Airlines" as opposed to "Aerolines"



N24A-135 A18-403 RAAF

Prior to delivery as VH HVL at Richmond NSW and subsequently in 75 Squadron RAAF livery at Tindal NT in the mid 1990's

This aircraft later became P-837 of the Indonesian Navy



N24A-139 A18-405 in Australian Army camouflage markings.

Oakey QLD 1995

This aircraft later became P-839 of the Indonesian Defence Force



# Colour schemes.

N22B-22 220th Airlift Wing Philippine Air Force Manilla 1977.  
This was one of the first export Missionmasters having been acquired by the Phil AF in 1976.



Official badge of 201 Squadron Dolphin Gang courtesy of Tony Rigby.  
A rarity indeed...



N22B-150 BL9-14/26 46134 461 Sqn 46 Wing RTAFB Pitsanuloke / Bangkok 2004.  
This low visibility scheme was not common as the RTAF usually operated SEA pattern camouflaged Nomads very similar to their Philippine Air Force counterparts as seen in this photo on the right of VH-UUZ prior to delivery.



There's a rumour with no hard evidence to back it up of the RTAF operating a Missionmaster with a minigun mounted in the port doorway. This is the only photo I could find of an RTAF machine with something suspicious poking out the side. Now there's some

Update :  
The minigun is a definite thing having viewed photos of the real deal.  
They're a bit grainy to reproduce here but it exists alright.

# Colour schemes.

N24A-139 A18-405 in its final guise as Indonesian Navy  
(Tentara Nasional Indonesia Angkatan Laut ) P-837, Surabaya Indonesia 1998



N22F-61 Floatmaster N59365 Minnesota USA 1979.  
This version employs the "Wipline" float conversion kit and various liveries seen on these types have been Barrier Reef Airways, Alimediterranean, Aquatic Air, Nautilus Aviation and even Nutrimetics Corporation !

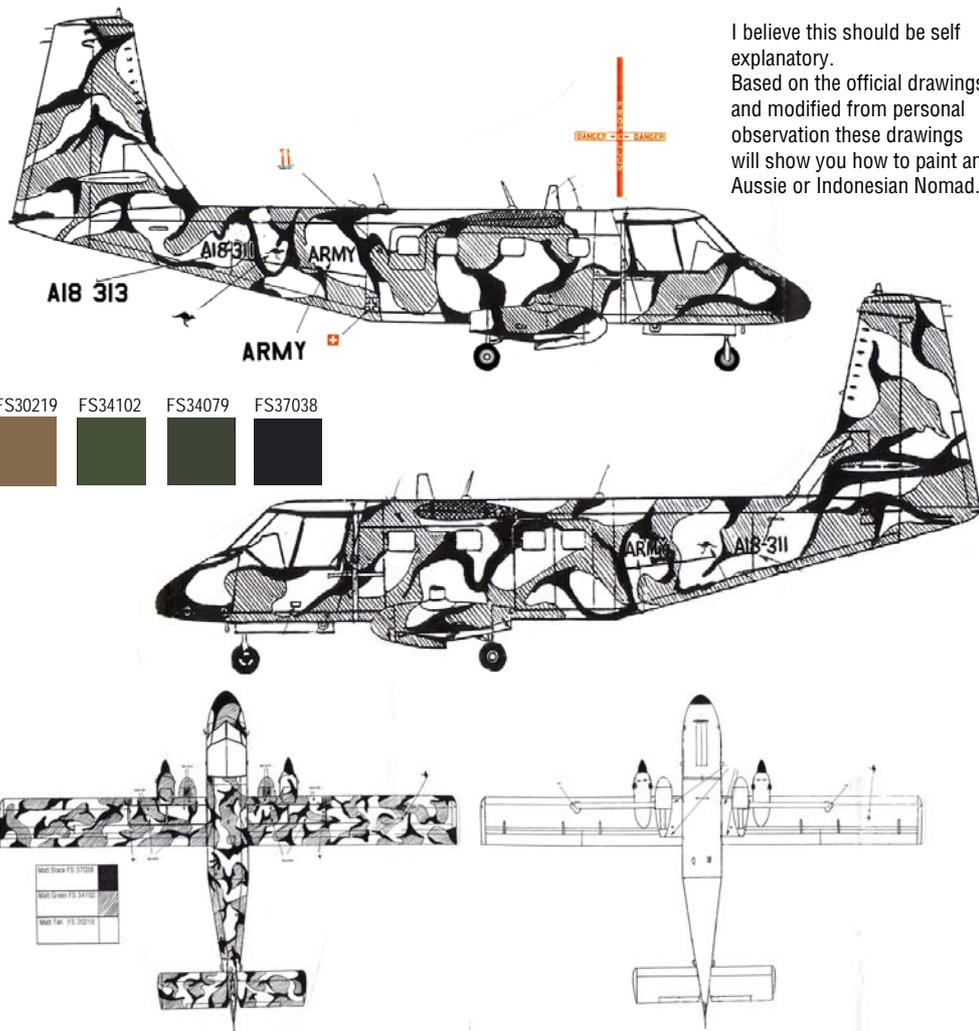


N22B-58 Surveymaster VH-FZP. Geosearch  
Jandakot WA 1977.

This aircraft was withdrawn from service in 1982 and the fuselage was acquired by the Australian Aviation Museum in Bankstown NSW where today its fuselage has been transformed into VH-AAM, an educational device on a trailer for mobile display. These photos on the right were taken on a recent visit.



# Three tone DSTO MRL scheme plan views.



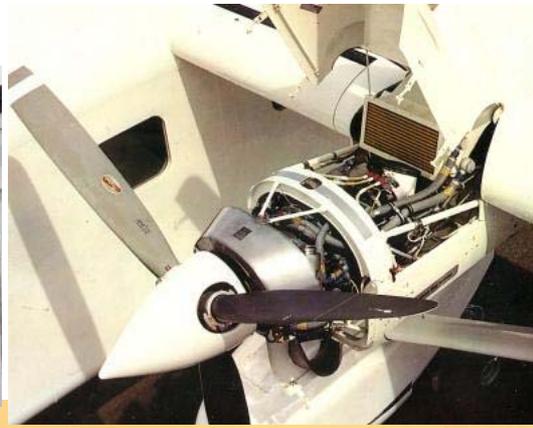
I believe this should be self explanatory. Based on the official drawings and modified from personal observation these drawings will show you how to paint an Aussie or Indonesian Nomad.

Nothing to do with the above camouflage scheme, I just wanted to share this one with you all. It's taken from a Koku Fan magazine and it depicts a Japanese N24A operated by Nagasaki Koku. Nomads were operated in all parts of the world and as of today there are 54 airframes still flying. Try and read the caption on the photo for a little Jingles!

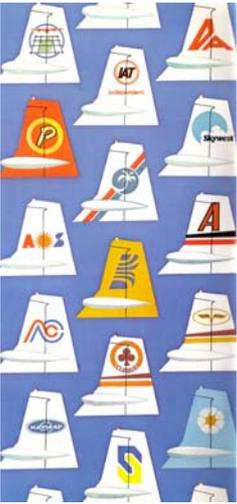


Nagasaki Koku's GAF Nomad N24A gained the Japanese registration JA8827, 30 Jan., at Chofu. (K. Takeda)

# Nomad potpourri



# Park your ar... have a seat...

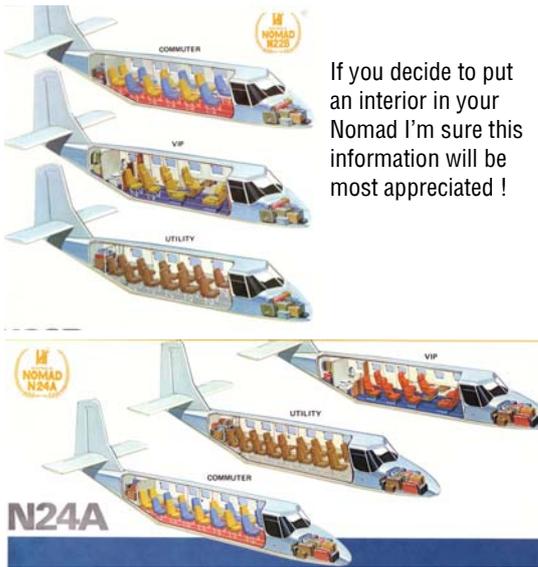


Well, if you like bright colours and flashy graphics this page is for you.

Seen here are some diagrams showing seating arrangements and included at no extra cost are some tail designs that answer the question I've had so often when viewing b&w photos from magazines depicting Nomads where they don't tell you what the colours are !

Apologies if the pics are a bit small but I'm trying to cram in as much as I can wit the space I've allowed myself.

If you decide to put an interior in your Nomad I'm sure this information will be most appreciated !



## 12 Pax layout flexibility

Although a pure STOL thoroughbred, the N22B has earned as many dollars on 5,000 ft. plus concrete runways as in spartan bush services. Operationally, one of the most capable aircraft in its class ever designed. But for its 12 passengers a different airplane, totally appealing, totally comfortable, commercially sound, a fact endorsed by operators around the world. The ideal size "step-up" from old generation 7 to 9 seat piston powered airplanes. Inside, unprecedented passenger comfort, "airline" standard for the passenger. Outside, uncompromisingly tough and purposeful. Capable of anything from inter-city commuter shuttles to unbelievable STOL movements from minimal airstrips.

## 16 Pax Commuterliner

Stretched. Commuter dedicated. All the hard-learned design and maintenance features of the N22B plus the low seat/mile figures resulting from boosting capacity by a third with 98 per cent spares commonality with the N22B.

Gross weight UP - 9400 lbs (4265 kg). Now 16 passengers, baggage volume UP 50% all with substantially unchanged direct operating costs. More seat miles per lb. of fuel. Revenue UP by 33 percent.







# Have a seat... again

## Common to N22B and N24A Airline standards of passenger comfort in short haul services

Nomad interiors offer true airline standard comfort. Nomad is at the forefront of cubic space per passenger — 26 cubic feet (0.72 cu. m) on the N24A — a figure unmatched by any other airplane in its class. Reliable and effective heating and ventilation. Partition separating the passenger cabin from the flight deck. Nineteen inch (48.0 cm) seat cushions, allowing generous aisle space and a comfortable 30 inch (76.20 cm) seat pitch. Wide view windows and an easy-boarding airstair, standard on the N24A. A compact "hook on" utility step, or the airstair, is optional for N22B. Add to these the legendary cabin quietness due to the low-vibration turboprops and you have the airplane that sets the standard for passenger appeal in commuter airlines. A variety of seats through Utility, Commuter, Cross Country and VIP are available.



1. VIP seat with back recline.
2. Commuter seat, fixed legs, cloth upholstered with single aisle armrest.
3. Cross Country seat — wider than Commuter seat with twin armrests.
4. Utility seat — folds to 19" x 19" x 10" (48 cm x 48 cm x 25 cm) — vinyl covered.

Thanks to Fred Harris for being the driving force behind this project *and* providing me with ample reference material, the late Kevin Kerle for his many photos and wise words, Richard Hourigan for his continued support and guidance, Geoff Hearn for coming up with some excellent reference at the eleventh hour, the chaps at IPMS for adding to the available data, Tony Rigby for some invaluable assistance and Graeme Morgan for being there then and now.

I am also indebted to a man who left me his entire collection of Nomad related newspaper clippings many years ago whose name and address details I misplaced and subsequently can't thank properly.

If you wish to berate Uncle Les for gross modelling atrocities, send him cheery words to help him along or if you need spares for the kit you've just purchased please direct your enquiries to either:

[uncleles@tpg.com.au](mailto:uncleles@tpg.com.au)