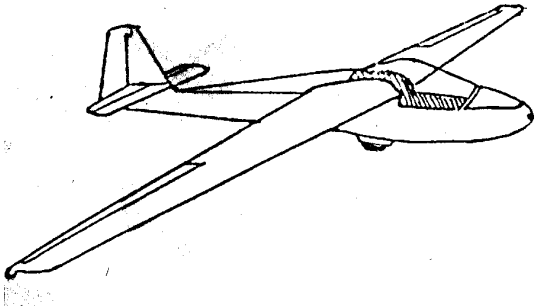


The HOMEBUILT SAILPLANE
ASSOCIATION

P.O.Box 503
LOXTON,5333
Sth Australia
AUSTRALIA.

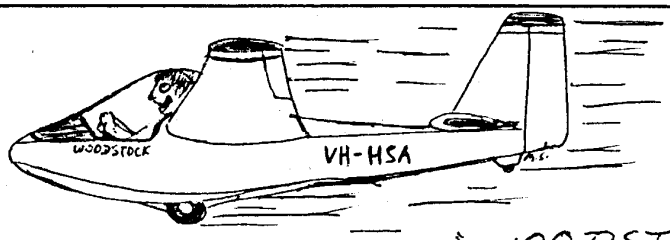
No 5 - Sep - 95.
(a bit early!)

EDITORS CORNER

G'Day all, well here we are again,the first thing that I think needs to be noted is the very genorous donation of $100.00 to the HSA by one of our members,namely one **Alvin Petersen** of Emerald in Victoria,Alvin has donated the money to be used for Trophys for our first regatta in January, he will not be able to attend this time but still wished to help out where he could,I feel sure that you all agree with me in saying we are very grateful to him for his donation,it will be put to good use in January.
Alvin feels it is good when people "have a go",really enjoy what they are doing,follow their dreams and finally pass on their Knowledge and enthusiasm to others,I fully agree,so thanks mate.

OK,Thanks to everyone that wrote in with encouriging words about the newsletters,I must sort of be on the right track,this is good!!,HA,HA,I've also had some comments on my prowess at SPELLING, a computer with a SPELL CHECKER would be a good idea,I agree fully,problem is I want to get my WOODSTOCK in the air this lifetime, and I'm afraid that won't happen if I buy all these fancy "gadgets", so I'm afraid that all I can offer you is to say please re-read the little article that I wrote about my spelling in ISSUE No-1, it says it all!

Also this issue is an article by John Stockwell on his WOODSTOCK project,if you recall John is building it in the **middle of Hong Kong(!),in a flat(!!) on the 15th floor(!!!)** I will photocopie the entire article as it makes for good reading,worth the wait, take special note of his novel method for checking the Vario and Alt,it's origional! All the pictures are from John as well,thanks.
On the regatta scene so far we have Gary Sunderland bringing his MOBA,Peter Raphael and possibly co owner/builder,Terry Whitford bringing their WOODSTOCK,rumors are floating around that a MONERAI may attend,there is a HP-14V,which is based at Arrarat, and my little NYMPH,which although not a homebuilt,is still of comparable performance to mix in well,so,if you have any ideas that you want to see happen in January,let me know,if you want to bring your partly finished project along,no worries,if you wish to contact the secetary of the Grampians soaring club for any direct imfo,here's the PH No/name:Ray Martin,Ph-(053) 4525 56, as I get updates for accomidation etc,I will put it in the news letter.
The article from Gary Sunderlands series,"Hammer and Soar",this time will be on first flights,it's something that we all eagerly await,but it's a good idea to heed the words of wisdom from Gary.
OK,I'll get off so you can get on with it. o~4



"WOODSTOCK"
12m

Builder Profile

Our member profile this month is about Dave Donald,Dave resides in Redbank Plains in Queensland.
It appears to me that Dave is fairly keen builder,he has completed a Monerai(VH-XOY), and is now doing a DUSTER.
Dave bought the MONERAI from Brian Redman of Aspley in Brisbane who had begun the project,when Dave recieved it,the wings were bonded and the fuselarge truss was welded Dave made the comment that the old saying "the last 10% takes 90% of the time" rang true,he spent 400-500 hrs to complete the Monerai,only to find out that when he hopped into it,he couldn't get full control movement!!,Dave said that he sold the glider and the tears havn't stopped flowing since,the only help is that Geoff Pratt of Cairns purchaced the Monerai and flys it wings off and loves it.

An example of this is Geoff went to Warick for a two seater and sports class comp which is run on a fun basis with Dave acting as his crew.
Geoff set out on task in the Monerai,he became "Geographically embarassed" on the way home and outlanded only 12km out from the airfield--after having flown approx 350km in the **homebuilt** with a glide of 28:1.
Geoffs last ten flights in the Monerai have all been in excess of three hours each.
I tend to agree with Dave when he say's that some people think you need at LEAST 35:1 to be able to go cross country!!!

Dave has gotten the "building bug" again,he had built the Monerai,helped with a Rutan Long Eze(power plane,canard,glass/compisite) and felt it was time to explore the other building method--WOOD.
Dave placed an add in AG around November 94,and had two responses,one was from a bloke in Sydney with a partly built BG-12 which is in the "boat" stage and still required some work for $2000,the second was for a DUSTER in Sydney as well.
The Duster has the longerons cut,centre keel made,spars cut and heaps of other bits and pieces and enough ply to finish the job,Dave purchased this sight unseen.
Dave also chased around and purchased the wreck of another Duster that crashed near Adelaide a few years ago,he plans to use as many fittings etc from this machine(after--checking them out) and install them in the new Duster,this should save allot of time, at this stage,Dave has the Fuselarge jigged up,longerons and bulkheads are installed, he will skin the fuselarge next.

Dave hopes to have the project finished for a regatta in 1996/7(Xmas next year).
As you can see,Dave likes to build! what can I say but GO FOR IT!!!!!!!!!!!!!!!

Dave also also said that if anyone is building a MONEARAI,feel free to contact him for any advice or assistance,Dave can be contacted on Ph-078-143 886,or at 6 Tania st, Redbank Plains,Qld,4300.
Also Dave said that "killrust"have a one tin primer/top coat suitable for painting 4130 steel,the colour "pewter" is just like Lycoming grey and is perfect for sticks, rudder pedals etc and is around $9.00 a tin,availabe from your local hardware store,-Mitre 10 is where his came from.

As is my normal call,sit your self down,write me a letter and let us all know what you are up to,after all, my input is only as good as what I recieve.-ED.

CLASSIFIEDS

One only,4" Libelle style main wheel plus tyre,$250,ph Dave Donald on 078-143 886,or see adress in above article.

CHEROKEE 2 VH-GLV, restored as NEW,red and white,enclosed trailer,audio Vario,recoverd in "Stits",30 yrl completed plus fresh Form-2,Please make an offer as this aircraft needs a home,
Contact Garry Morgan at P.O.Box 722,SUTHERLAND, 2232.

ED's note-this aircraft was originally built as a homebuilt for the Renmark Gliding Club in Sth Aust.

MEMBER FEEDBACK

Alvin Petersen wrote me a letter which I recieved the other day,I would like to thank Alvin and the other members who put notes in with their renewals,this is the sort of thing that I need from members,FEEDBACK,after all,I'm no journalistic expert(then--again, they say "X" is an unknown factor,and "spert" is a drip under pressure),anyway, my output is only as good as your input,so please keep it in mind.
Alvin writes in response to Gary Sunderlands letter in the last issue,Alvin comments that we are right on with the FUN FLYING theme,but asks "are there any pilots that do not glide for the fun of it?,He says that he could not imagine someone being dragged kicking and screaming and strapped into a glider and being ordered to go and aviate!!! What we do as individuals might be diffrent,but in the end I'm sure we all do it for the fun and enjoyment of it,Flying that is!
I(ed) think that Alvins comments are fair and true,I can't ever remember being forced to get in my glider and go flying!,still I think that we,the HSA still need to promote fun cheap type of flying and get it back down to a grass roots level,something that is more readdally available to the man in the street so to speak.

Alvin reported a while ago that he wished to build a winch,he tells me that it coming along OK,he has secured a 360 Hemi V8 and a auto trans for it,he will be using rope instead of wire for launching due to the safety aspect and ease of use of the rope system,he feels sure that wire will be a thing of the past once the useage of the rope system is futher understood,anyway,he will keep us updated as it progress's.

PW-5 Feedback

Alvin also had some comments on the PW-5,he feels that this glider in kit form would be a good idea(**More on this subject later in this issue-ED)**
He feels that it might be an advantage if a firm number ofof orders for this sailplane could be obtained in Australia,then a better price may possiblly be negotiated to get a batch of kits imported here,this has definite possibilitys as if you wish to import something into Australia,you pay for the CONTAINER space,not whats inside it,(someone--correct me if I'm wrong)so it would make the import cost's reduce a fair amount as the kit owners could share the cost's of frieght.
Alvin says that anything that makes flying more affordable and encorages more people to take part is a good thing.
The added bonus is that your investment will not be superceded for at least 15 years!

PW-5 - Late update - Price in the A$37,000 bracket, + fitting out + finishing — Mike Burns.
*depends on Dollar value + method of freighting.

You have probally read the exellent article on this aircraft in the June issue of Aust Gliding(RE PW-5's in New Zealand) it almost makes you want to go and buy one straight away,anyway,I have a couple of up dates on the possible production of kits for this aircraft,the manufacturer of the PW-5 is not intrested in producing kits or providing moulds to other manufacturers,however,a firm in the U.S.A. is intending to produce kits,"Alliance Airworks" plans to sell the first twenty aircraft for the price of US$14,500, the company can be contacted on PHONE No-(415) 299-9207, I presume that is the local No in the U.S.A.,the other option is to contact Mr David Habercom, who is the President of the World Class Soaring Assoc,for further imfo,David can be contacted at 8727 Aragon Lane,Knoxville,TN,37923,U.S.A.
Thanks to Gary Sunderland and "Sailplane Builder" for the above imfo)

MORE NEW MEMBERS

Two more new members have joined our little group,

Stephen Mitchell,Castle Hill,NSW(see next issue for Builder Profile on Steve)

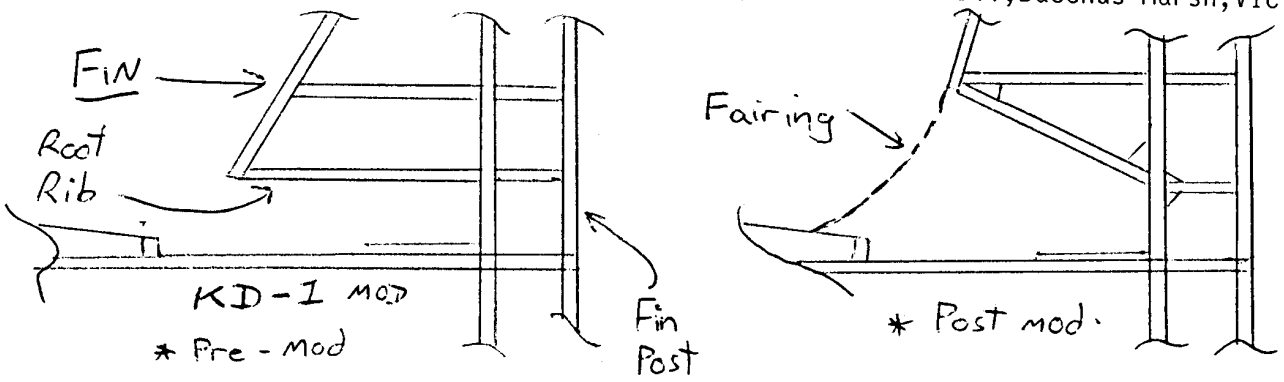
Machiko Tomiya,Chiba,Japan,(Machiko is our first member from Japan)

I would like to welcome you two to our group,as I always say,if you have something you would like to send in,feel free to do so,it's your newsletter.

DESIGN AND DEVELOPMENT update.

Gary Sunderland (D+D Committee) has passed on a notice to anyone building a WOODSTOCK, who may be incorparating the "Removable Tailplane Mod"(Dwg-KD-1).
It seems that a builder has encounterd a clearance problem in the KD-1 drawings.
The Fin Leading Edge prevents the tailplane being lifted sufficiant to allow the tail-plane to be lifted clear of the fittings.

In Gary's opinion,the best way to fix this problem will be to increase the size of the opening by slanting the Leading Edge Fin root rib(see drawings).
Gary will modify the drawings ASAP.
Evidently,this problem has been overcome before as at least one WOODSTOCK is flying with the KD-1 mod built in.
Gary ask's could builders **PLEASE** let him know of any problems and/or good results!!!!!
Gary sez:ENGINEERS ARE LIKE MUSHROOMS,IF THEY ARE KEPT IN THE DARK.
Any comments,please send to Gary Sunderland,70 Underbank Blv,Bacchus Marsh,VIC,3340.



"NEW"(mabye old to) SPIN RECOVERY TECHNIQUE: (while in the circut area)

If a spin is inadvertently entered,recovery is as follows:1.Apply full oppisite eyeball, 2. ease head forward until spinning stops.3.centralise beer glass and recover station on bar stool.4.resume normal approach to glass.

NEW MEMBERS -"2"

We have a couple of new members to our group,they are:

Chris Kennedy from Ipswitch,Chris is building a BG 12-16,which is nearly finished.

Jean Paul(John Paul) Goisot from Edwardstown,he plans to build a self launch glider, see article later.

Welcome to the group fella's,and as I always say, if you wish to send in a letter on your projects or dreams,we would love to hear from you.

A QUOTE:

From one of our members comes this request to Australian Gliding:

"Do you think there is a way that AG could give us some space in the magazine,because I'm sick of reading about **comps,and megabuck carbon fibre overcasts."**

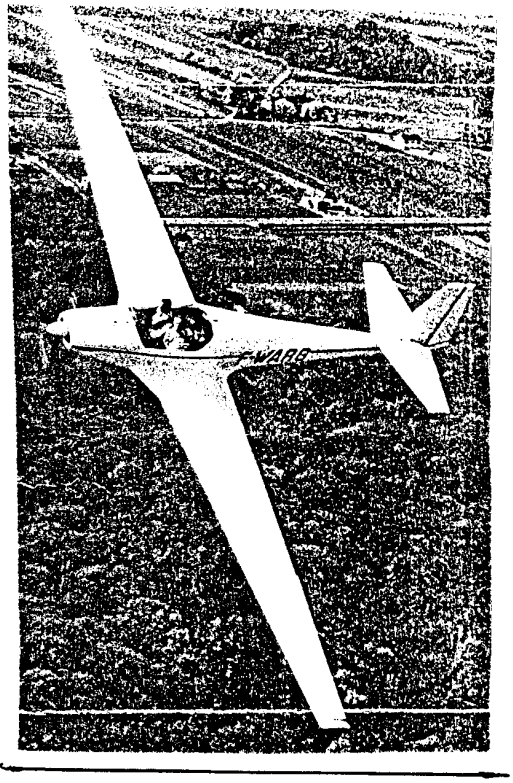
It is worth thinking about,as we need to spread the message far and wide,so if someone can come up with something,and has the time to do something,let me know.
I do send a copy of our newsletter to the editor of AG so thats a start.
(I would like to thank Noel Mattews(ED-A.G.) for his assistance to date ED)

FROM A NEW MEMBER

Jean Paul Goisot from Edwardstown has just joined us,he plans to use the HSA services extensively and also wish's to be of use to other members if they so desire,his occupational fields are in accounting,taxation consultant,finance advisor and buisness orginisation,he also has backgrounds as a qualified engineer,pilot,observer and aerial photgrapher/navigator etc.
Jean Paul(John Paul) is working on a project to build a self launch glider,possibly a Fournier R.F. 9 or 5 as these are easily constructed in wood/fabric.

His aim is to establish a group or a club with the purpose of building/flying the motorglider as a group effort,shareing the cost's and advantages of the club type scene,as this idea is only just taking shape,John Paul would like to hear from anyone who may be intrested in such a venture as all ideas/surgestions are welcome.
You can contact him at 59 Raglan Ave,EDWARDSTOWN,S.A.5039 or PH-(08) 297 5563.

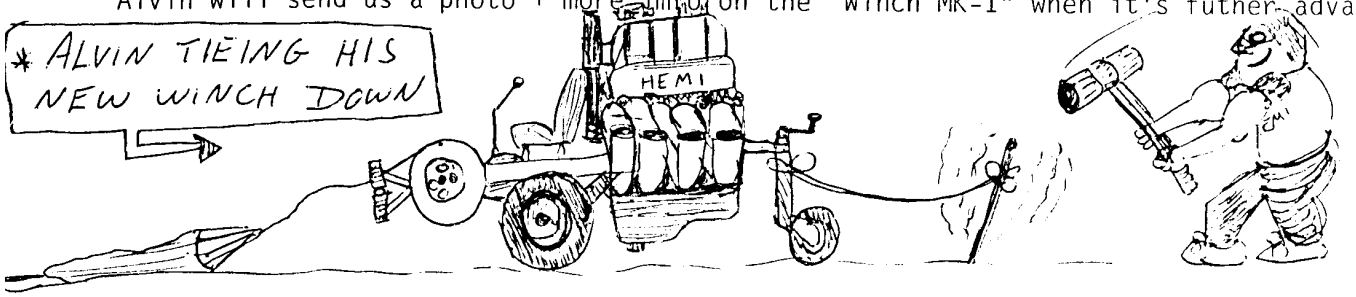
FOURNIER R.F. 10 MOTOPLANEUR



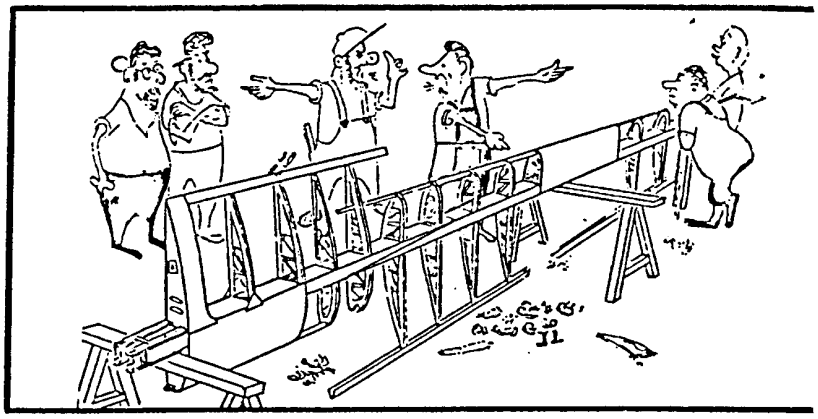
THIS is your editor at the moment,trying to learn a new langage for my job,go to work,build a glider,fly my Nymph, train for an Instructor rating,do this newsletter cook and clean up after myself,fix my stupid car, help out my mates,look after my trusty dog,do more study for my inspector rating,write letters all over the world and try to not look stressed out.
Yes,life is pure bliss!!

EXTRA BIT ON ALVIN'S WINCH

Another update from our prolific winch builder,he's rounded up a diff out of a four ton truck and about 12 feet of chasis,the chasis will be made into a trailer,the diff and engine will be mounted on top of the chasis along with a small control cabin.
Alvin has ordered 3.2 km of 10mm rope(!!!!)so the winch will have 1.6 km of rope on each drum.The South Gippsland Gliding Club of which he is a member,use this rope with great succsess,Alvin still has to sort out the rope spreaders for the drums which will be about 24" wide so it's important that the rope is laid out evenly accross the drum.
Alvin will send us a photo + more info on the "Winch MK-1" when it's futher advanced.



FIRST FLIGHTS



HAMMER & SOAR
by Gary Sunderland

If you have built your own sailplane you will probably want to do the test flights. Many builders do so quite adequately.

This may be alright provided you have several hundred hours of experience in sailplanes and are in current practice. By current practice, I mean something like 50 hours soaring a year and not just the absolute minimum required by your club to remain on the solo list.

In addition, you should have some experience in the type or at least in a sailplane with similar handling characteristics.

Small sailplanes have light control forces and are very responsive. A small sailplane can be a very different proposition from the normal club solo machine unless your club operates an Arrow, Salto or Kingfisher.

If you have spent most of your time lately in building rather than flying, then the first flights should be made by someone else.

The requirements for test pilots are laid down in the GFA Manual OPS 20.5.4 and I would strongly recommend that first flights should be carried out only by a person appointed by the CTO/Ops to test prototype sailplanes.

Assuming that the new sailplane has been subjected to all the final airworthiness inspections and tests, including a duplicate inspection of controls and a weighing, then it is now ready for the test pilot to check it out.

Even if the test pilot is the builder, he should methodically conduct a pre-flight inspection, as for any flight, but paying particular attention to small details which might affect the operation of the sailplane. Remember, this is a test flight, so increase your chances of success by careful preparation.

The first step is to check the loading of the sailplane and add ballast if necessary to get the centre of gravity somewhere in the middle of its range.

Preferably, ballast weights should be bolted securely to the structure rather than just tied down. Remember Murphy's second law: "If things can go wrong, they probably will."

Familiarise yourself with the limitations and peculiarities of the glider. All of the placards may not be installed but with a few pieces of masking tape and a pen you can have the necessary reminders in place. Your parachute should be freshly packed. You may have to use it!

Stand well back from the glider with controls set central and check that the wings appear equal incidence tip to tip. Also check that the fin is upright and the tailplane level.

Have someone hold a profile board or straight-edge to check that the wing and tailplane incidence look about right. This is no joke. We once had an aircraft flying for six months before anyone noticed that the tailplane was at minus 8° to the wing instead of minus 4°.

Next, check the controls very carefully for full and free movement. Expect to find something wrong here. It is a very rare new sailplane that does not contain a few faults. Make sure there is plenty of clearance on all control rods and, if in doubt, get the builder to work with a knife or chisel to remove excess material.

Check that the airbrakes and other controls still operate properly when a representative air load is applied to them. Check also for friction. It is normal to have some bearings affected by paint. Clean these, and recoat with grease.

Check that control surface gaps are neither too large nor too tight. Large gaps can cause control problems. If gap seals are fitted, make sure these are not too tight or too stiff. Check that the release functions properly, especially under load.

There are two schools of thought about the initial flight. I subscribe to the belief that you should plan for a high aerotow right from the start, rather than a series of "hops". If you plan on a high flight and experience trouble in the early stages of the launch, there is no problem in abandoning the launch.

A high tow, something like 6000 feet, will provide plenty of time to get to know the sailplane before you have to attempt a landing.

Make sure all other conditions are in your favour. The wind should be on the nose and reasonably strong. There should be adequate strip length and safe landing fields available on the route out.

The tow pilot should be experienced and adequately briefed. If things are not perfect, be prepared to wait another day. Don't be pressured into flying.

During the initial stages of the tow, exercise the elevators, rudder and ailerons to check response. If these are operating correctly, continue to the top of the launch.

After release, check that all controls are functioning properly, then try a few gentle turns and then a gentle straight stall. Now try a "landing" at height to ensure that the spoilers or brakes have no peculiarities.

By now we know that the aircraft will fly and we are still at 5000 feet. There is time to relax and enjoy flying your new machine, while keeping well within the flight envelope.

The investigation of stalls and high speed characteristics can wait for another day, and will be the subject of another article in this series.

* Remember the HSA Regatta *
if you're coming and want
a seat at the Dinner Sater-
* -day evening, let me know.
Any idea's etc are also
more than welcome.
* Remember - Jan 4-7 *
1996 *

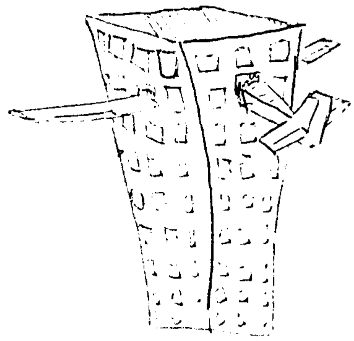
HONG KONG SPECIAL -

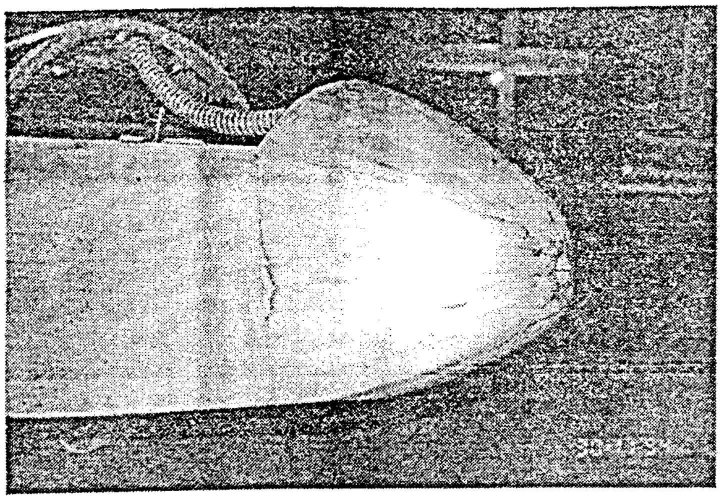
"THE 15th FLOOR" - JOHN STOCKWELL'S "WOODSTOCK"

You also asked some time ago for a personality profile. I'm English, married to the most understanding woman you'll ever meet, a grandad, and have been gliding since 1960 with about 600 hours. After serving in the RAF as a navigator I continued with British Aerospace until 1990 when I found myself grounded and then took up this desk job in Hong Kong with the Civil Aviation Department. A latent insanity that has existed for years came to its head 4 years ago when I started my Woody.

So to my Woody, plans No 551. We're almost there, yep, 4 years without a lounge, and a flat without soardust is almost in sight. I've promised my long suffering spouse we can plan a Christmas dinner this year. No harm in planning is there, and she's used to my promises on Woody's finish date!!

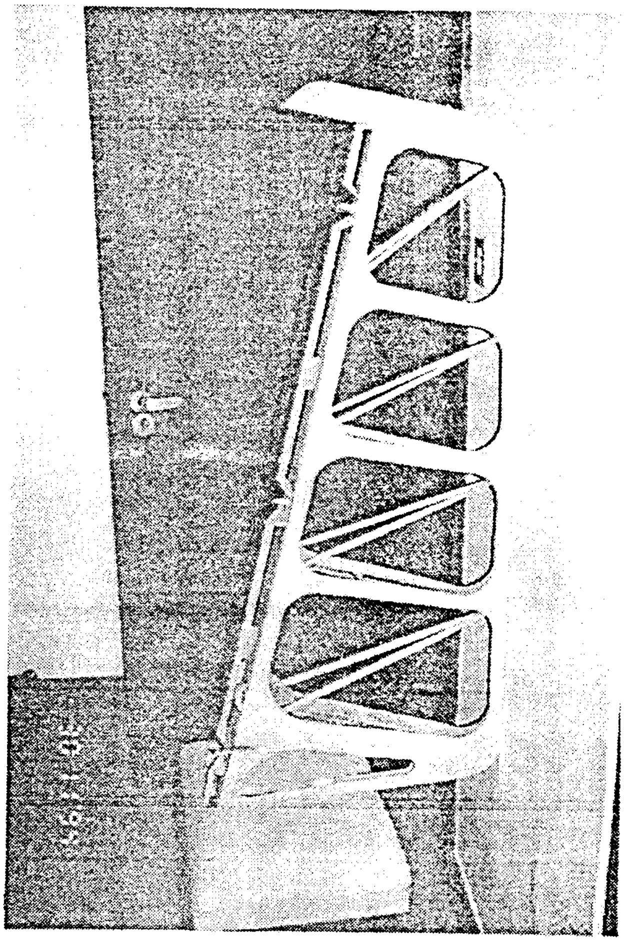
THE '15th FLOOR' - CON'T





Cold molded plywood nose cone- Stockwell Woodstock.

* THESE 2 PHOTO'S CORTSY - "SAIL PLANE" BUILDER.



Air seal framework for fin gap- Stockwell Woodstock.

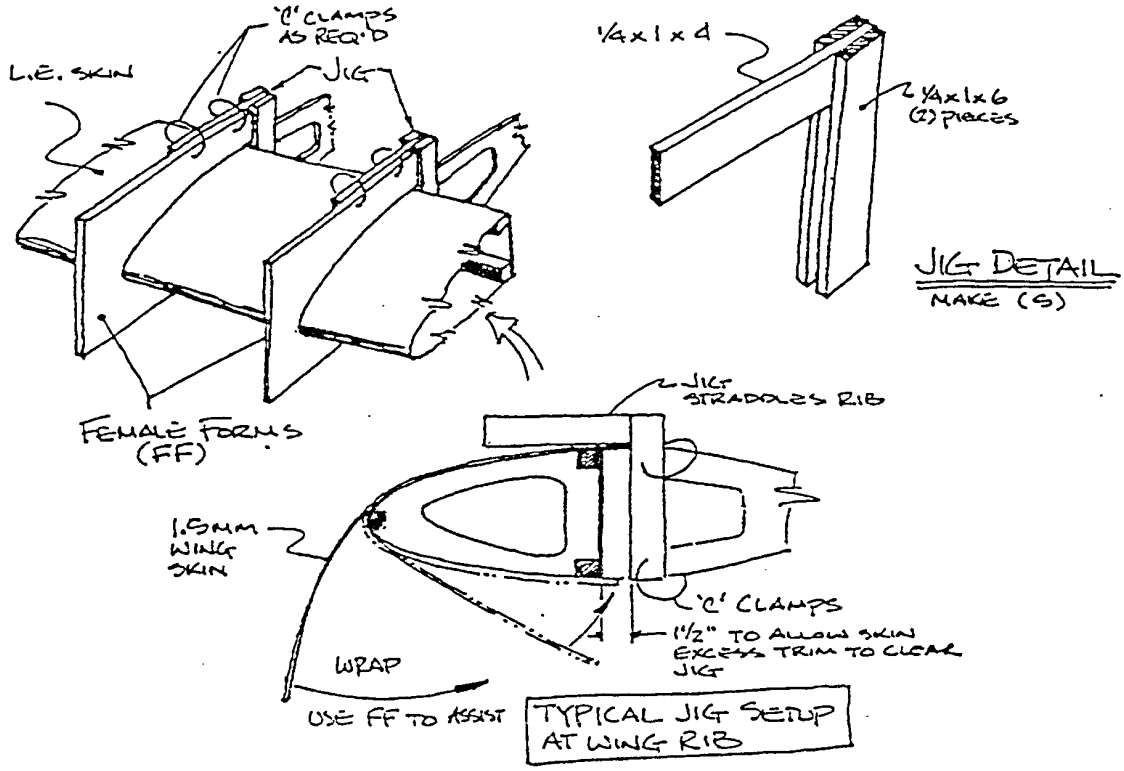
<u>Construction is finished</u> (except for the canopy frame). One wing, the tail and rudder are covered in Ceconite 104 and looking really good. I approached the covering with some trepidation but really I needn't have worried as it went on as smooth as silk (What a dreadfull pun). Unfortunately though, progress will slow over the next few months as we've visitors and a holiday in the UK and it will be September before the next hurdle (Finishing in System 3) is tackled. To get where I am has taken 1550 **work** hours and goodness only knows how many contemplation hours with a beer in hand. (Thats my way of thinking things ten times and actioning them once). A sobering thought (and by golly I need them occasionally), I could have assembled 3 Falcons in this time.!

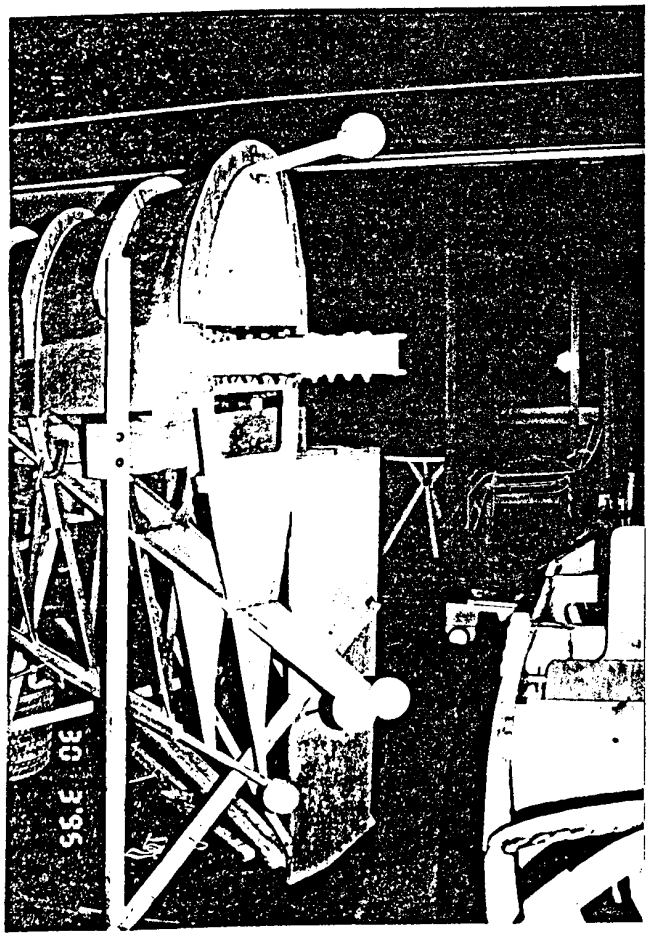
My Woody's been mainly built to plan, but I thought you may be interested in a bit of a breakdown on the small changes I've incorporated and the slight problems I encountered. So I'll walk round and pick things out. If anybody wants greater details, drop me a line.

The wings are to plan except that at the tips I dropped rib #20 at the LE as per the TE so that I can bolt a replaceable aluminium or nylon protective ground running strip the width of the tip. I made a change in skinning 1.5mm between ribs #1 and #4, in that I scarfed top and bottom on the spar rather than on the LE which I thought would make for a smoother line. Getting the 1.5mm ply to bend around the LE and have 100% glue contact with the ribs was the only real problem I had in construction. After my fist attempt (a failure) I sat back, had a few beers, which worked well, and came up with the following solution which I will go into detail as it makes the job so quick, easy and a first class finished product.

1. From scrap ply make 5 jigs. (See fig drawn by Clint Brooks).

2. Each of these jigs is then clamped to a rib so that there is about 1 1/2" from the spar face not flush as in the diagram, and there is a 1.5mm gap between the 1/4" ply and the spar top.





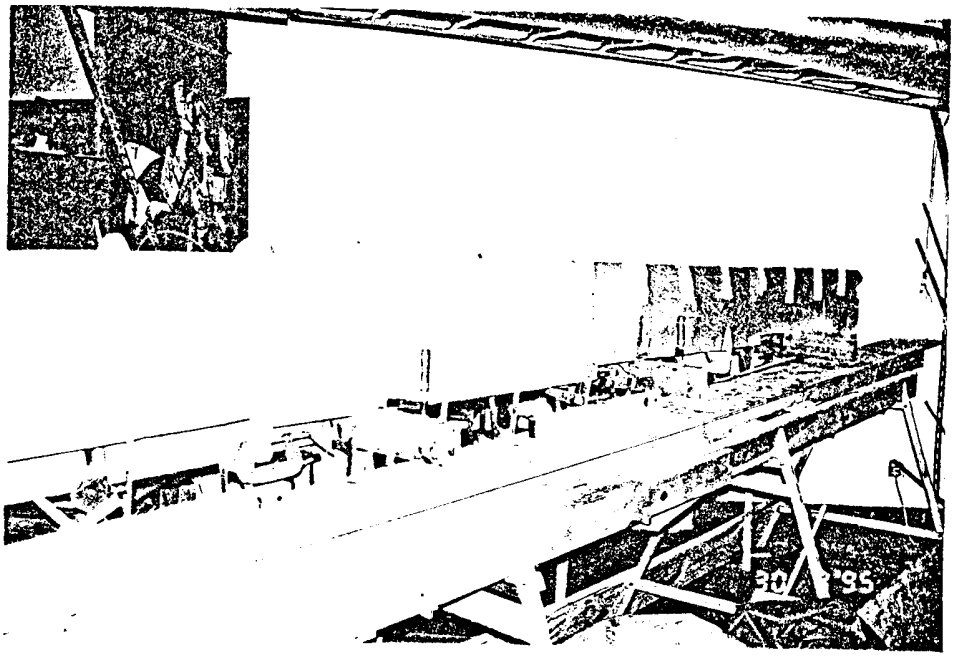
3. Again from reasonable thickness (at least 3/8") scrap ply cut out a female form (FF) for each of the 5 ribs in the area to be skinned (Allow for the 1.5mm ply).

4. Cut 1.5mm ply to approximate size, and thoroughly soak in boiling water until really plyable.

5. Place the 1.5mm ply in the gap between the jig and the spar and gently bend the ply around the ribs using the FFs to assist and then clamp the two end FFs in place.

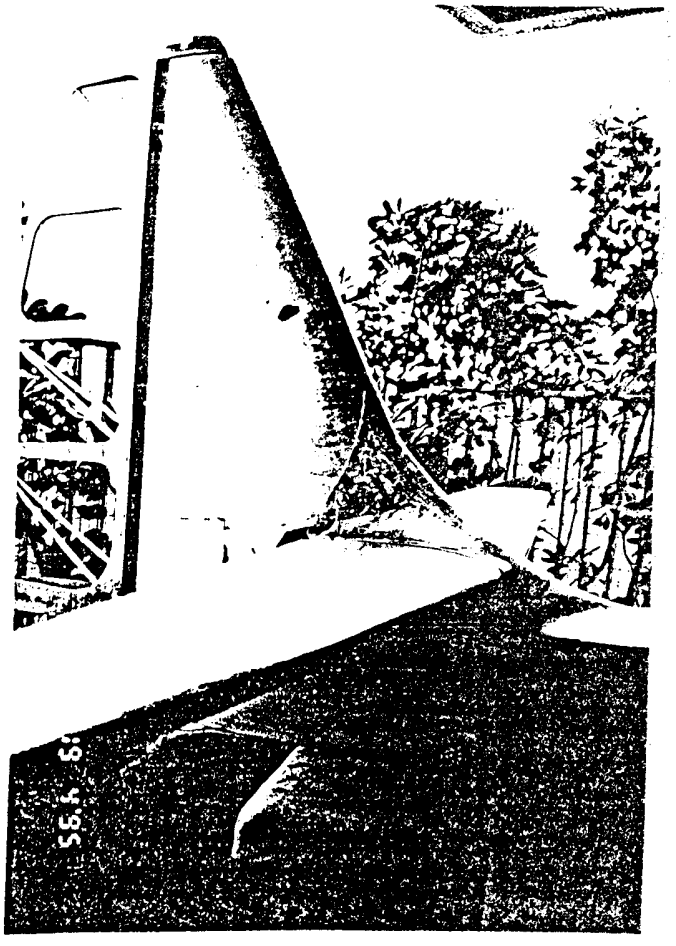
6. When absolutely dry, at least 24 hours, mark the inside glue lines with a pencil, trim the ends, put two brads in the LE to use as a key, remove, scarf and varnish inside.

7. Glue to the spar and LE using 5/16" staples at about 2" intervals still using the FFs to maintain good contact around the ribs.



Before I move on, I laid a two core electric cable from the root to tip in the port wing, so that I can in future install a remote controlled camera if I desire (my mods on rib #20 will help).

Continuing my walk around, I'm now at the back of the fuselage looking at the gap between the fin and rudder, here I've improved the sealing by copying a suggestion in the EAA magazine "Sport Aviation". I've also incorporated the removable tailplane modification approved by the Australian GFA who were kind enough to send me the plans, for a small fee. I found I had to make several changes from these plans as I guess the designer drew them in retrospect, but its all done now, secure and stable. Forward of the tail I built up the fuselage with balsa and then shaped to make a smooth contour into the fin. After which I moulded a fibreglass fairing to fit which goes snugly under the tail LE and bolts into the fin sides.



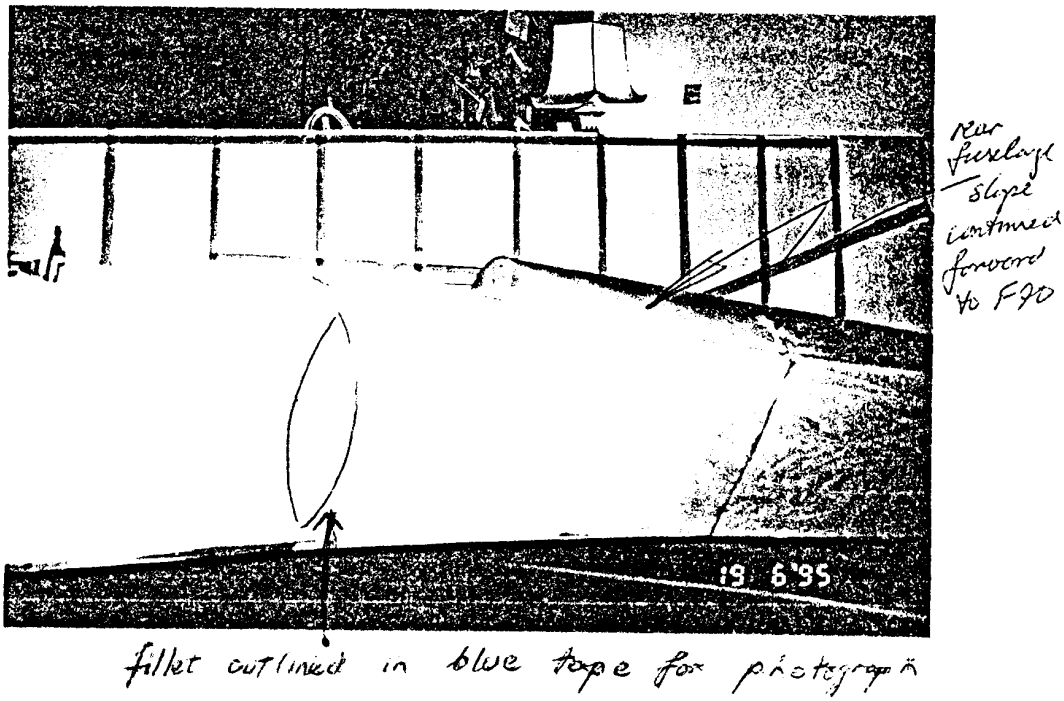
At the rear, inside, there are two extra small pulleys to deflect the rudder cables as per the GFA drawing. Additionally I wasn't happy about the long runs of unsupported cable in the rear fuselage so I made additional fairleads on each frame for control cables and the static pressure line.

Moving forward a little to F90 where I made the only modification that is slightly "structural". I continued the curved top surface of the rear fuselage forward to F90 and then dropped the sides of F90 half way down to improve stiffness. I tried to work out the best direction to lay the rear 2.00mm ply to get the maximum stiffness as no guidance was given, and as a consequence I have a pretty solid rear fuselage. I think now is a good time for a few words on fuselage skinning as Jim made it sound to simple, and simple it aint.

I started as suggested by Jim which was OK at the rear but became progressively more difficult approaching the centre of the fuselage.

However much you soak 2mm ply it only willingly bends in one direction. Consequently I skinned from the rear as follows:

F204 to F157
F157 to F110
F110 to F79 . this being the really tricky area. I made an elongated fillet from 1.5mm ply in which I made very long scarfs on the inside so that the edges were very flexible. After gluing a bit of filler was required to make a very smooth contoured finish.
F79 to F54
F54 to F30
F30 to F15
F15 to F0 these last two for reasons of running short of 2mm ply rather than for bending reasons.

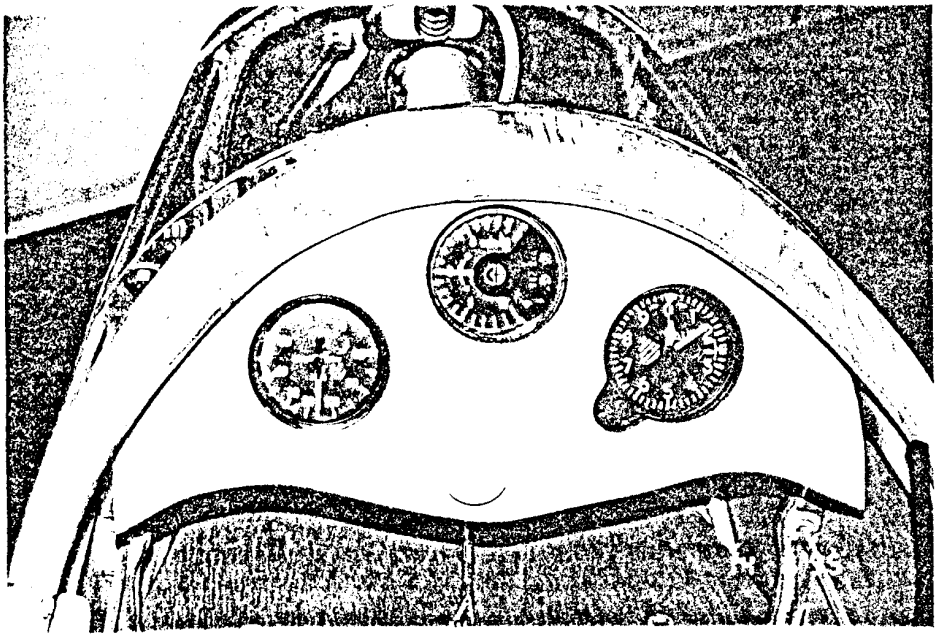


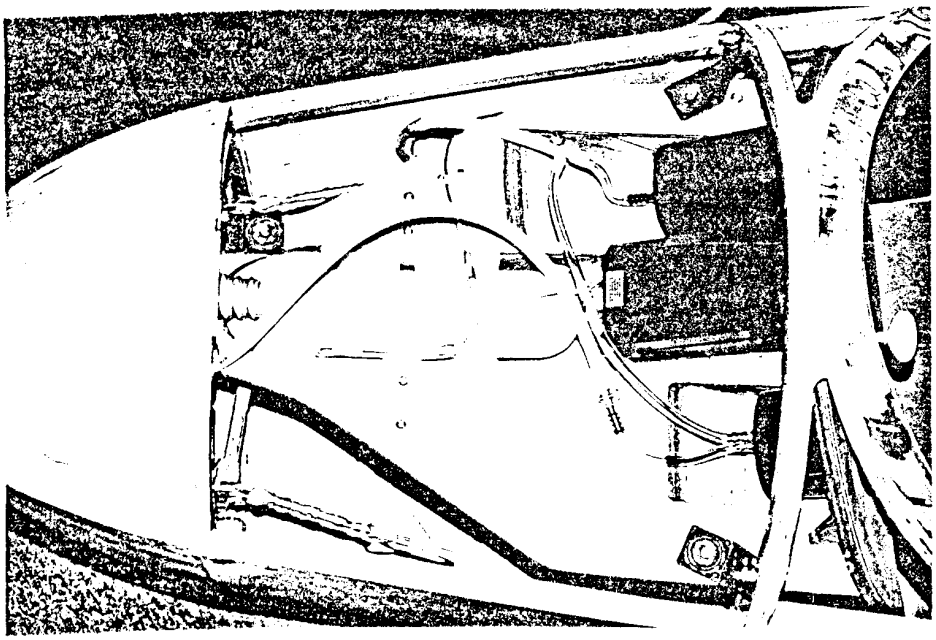
fillet outlined in blue tape for photograph

The keel caused another beer stop. No way could I get3/8 ply to bend and conform with all the frames. Solution, a piece of 1/8 ply soaked and clamped to dry, then glued in place. A second laminated to it and finally a third. Easy, lovely line and a very strong keel (15 ply).

A few years ago I saw Les Squires's Woodstock when I was on holiday at Lake Keepit and have copied , with modifications, his nose cone made from 1.5mm laminated ply. This is excellent, and so much easier than fibreglass. I made a male form from foam approximately 3/16" under the size shown on the plan, and chopped off the front 2". At each corner I inserted a 1/4"ply former from front to rear and the glued a 2" balsa block on the front to replace the foam I'd chopped off. I then cross laminated scrap ply strips using a maximum strip width of about 3/4", with the final laminations running fore and aft for appearances sake. I must have used thousands of staples making this. Between each layer I sanded smooth. Throughout the glider I have used T88, a two part epoxy but here I found that I was getting ridges when I sanded, so I switched for the final laminations to a waterproof woodworkers adhesive with better results. When I had finished I drilled a hole through for the aluminium tube of the pitot assembly. The end result was a very strong nosecone with nice contours which I easily scarfed into the fuselage.

Inside the cockpit I seem to be changing things continuosly with cardboard mock ups galore. I didn't like Jims instrument panel or his seat arrangements and have changed both to fit one pilot (ME). I spent a lot of time using my car seat, deck chairs etc to get the right angle and position that suited and have ended up with a solid back seat which folds forward out of the way for rigging, and a wooden instrument panel. My panel is basic, Altimeter, ASI and Cambridge CAV II variometer with the bottle behind the panel and using static pressure instead of TE. Power for the CAV II is from a motor cycle battery under the floor forward of F16, and I've hidden the Master power switch and fuse behind the panel.





As a sideline, to prove the system I checked out the panel in the lift. Altimeter OK, and the CAVII gave 4kts indicated against my calculated of 3.86.

For a radio I have a Delcom 360 portable which I have located on the RHS to the rear of F30 with an upholstered hole in the floor in which the radio just sits with the speaker / mike clipped to the 1.5mm gussett.

To accommodate the Tost release I made two brackets and inserted it all, just next to the forward elevator pulley (An extremely tight fit) with the cable going vertical then via a pulley under the instrument panel to a knob in the panel centre.

Now lets see, what have I forgotten?

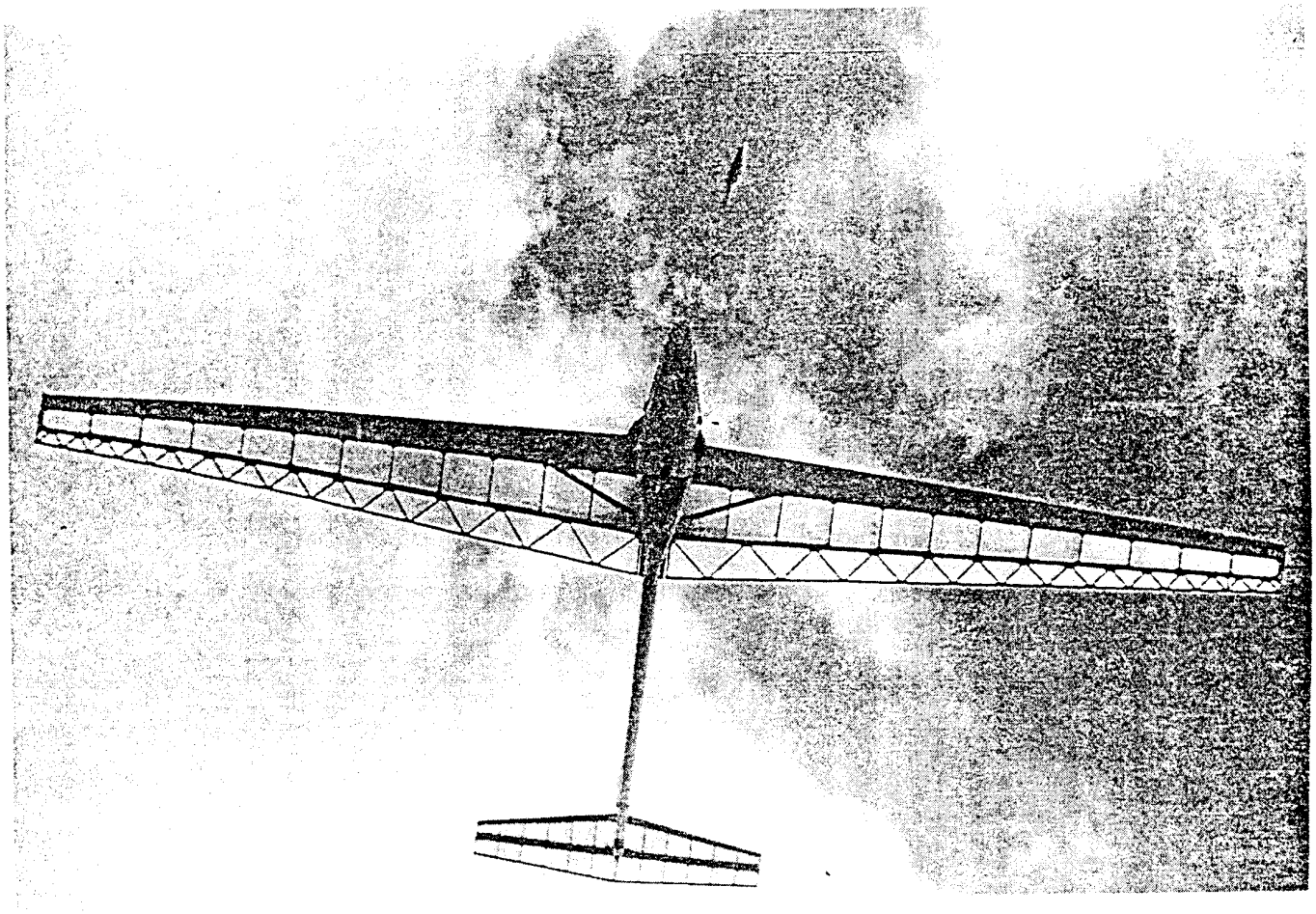
Oh yes the canopy. Not made yet but I have purchased a moulded 1/8" thick cap.

For anyone interested the supplier was FoxLite Inc. 8300 Dayton Road, Fairborn. OH 45324. Phone 513 864 1966 or fax 513 864 7010. They charged me US$50 for tooling and US$50 for the cap which I think was pretty reasonable and if anybody is interested my order reference was sales order 20572. The canopy frame is now the only construction oustanding.

A few words on hinges. I have used extruded alumium hinges throughout. I dont like the idea of bending the pin after assembly as I think it puts an unnecessary strain on the assembly and makes it impossible to withdraw the pin at a later date. Instead I made my hinge pins with a right angled bend and a handle of about 1 1/4" in length. After assembly this could be locked by a small piece of alumium and a wood screw, but I'm of the opinion that locking is unecessary with the extruded stuff.

Thanks to John for this article - next one is a report on getting it down from 15 floors up!

"CARBON DRAGON" - Photo from "Sailplane Builder"



Gary Osoba on tow with the sun shining through the translucent wings of the prototype Carbon Dragon. Note the smooth aerodynamics of everything put Gary's elbows sticking out of the cockpit. Part of the pleasure of the Carbon Dragon is the ample elbow room.

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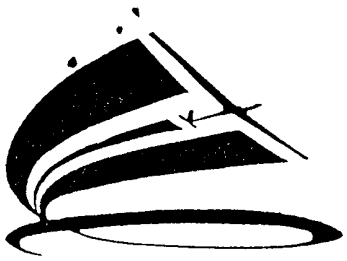
Thats it for now people, see ya next time — Mark



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