

Smoke Trials 5

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Last of the Summer Whine

No, not the wonderfully evocative sound of a de Havilland Ghost turbo jet powering the Vampire we saw at Old Warden recently. (If this were not enough, it was followed by two Gnats and a Hunter!). Nor am I referring to the noise made by small EDF Powered 'jet planes', to which, in the absence of Rapiers, some apostates (or should that be 'jetexpostates'?), are turning. It is now possible, they tell me, to make a 'Jetex 50' size model with little compromise to the accuracy of intakes and jet pipes, and, with the latest generation of micro ducted fans, speed controllers and batteries, achieve a good performance. These models deserve our serious consideration, and Steve Bage will I hope soon be able to tell us all about them.

No, the lament I have is that though newly retired, and with a nice workshop just to make toys for the first time in my life, I appear to be spending less time modelling than ever before! How can this be? Perhaps it's a lack of urgency – no targets being set by a boss – that is responsible for my poor building progress. Or is it depression over the non-availability of Rapiers? If we hear better news soon, this might stimulate me to have our aged puss surgically removed from my lap, leave the comfort of the fireside, and finish the Hawker Hunter, Bell X-1 E, Twizzler and (confession time) actually start the large Skyleada Vulcan.

Left: Last 'jet action' of the season, and if we don't get any new motors, possibly for some time? Model jets seen at Middle Wallop photos courtesy James Parry.

Top, Nick Peppiat's L2-powered Saab J-29 Tunnan; **next,** Nick's Shenyang J-2; **next,** Mark Ordish's Flitzer climbing way; **bottom,** Derek Knight's Swift.

Perhaps recalling the last meetings of 2009 will inspire us all. The weather, somewhat unhelpful since midsummer, redeemed itself at Middle Wallop in September. James Parry writes: "There was a slight breeze all morning; clouds then built up and we thought it highly likely it would rain, but it cleared, and by mid afternoon we enjoyed an almost flat calm and blue skies". Nick Peppiat's Tunnan is, James believes, an enlarged version of Mike Stuart's design. So this model flies beautifully in three versions – small (Mike's original for L1), medium (for L2) and large (Mikes 'BFT (big fat Tunnan) for L3. Of Nick's beautifully finished MiG 15 (the archetypal KK kit design finished in Chinese colours) James writes: "It performed the most perfect flight – absolutely outstanding, so good that those around stopped what they were doing and watched, and when it landed all gave a rousing cheer and clapped. Of course, the shame was that no one took a photo during the flight".



Howard Metcalfe was also there: "The turn out was down quite a bit, but it was a very good day. I saw Mark's Flitzer and Nick's Bell XS-1 and Tunnan only at a distance, and, with no Rapiers left, I enjoyed the calm to trim my Staggerwing [built from Rich Weber's pseudo-dimer plan]. This managed a one minute flight, landing only 10 yards away, and, with the last flight of the day, a one minute 52 sec flight from 12000 turns. Other than turning a bit tight it looked lovely up there.



I had a nice long chat with Phil Smith and his son Collin, whose Jedelsky-winged Veron Min-o-jet flew beautifully with an L2. Collin had a simple igniter consisting of an L-shaped piece of wire Gaffer taped to the barrel of a cheapo lighter with a card collar to shield the flame from the wind. It was failing to light his late 2008 vintage L2s though, as they were 'popping back' and going out.

I also had fun helping Derek Knight reassemble and fly his EDF Baradour (the electrics needed a bit of re-plumbing). This time out it was without 'Rocket Assist', so Derek was hand launching it. The sound was much better than I had anticipated, being quite an aggressive howl, not as out of place on a jet as others I have heard. It looked superb throughout the flight: the climb out was straight and steep, and then it settled into a fast banked right turn at a good height".

Above: the shape of photos to come in 'Smoke Trials' if we can't get any Rapiers?
Top: Howard's beautiful rubber powered Staggewing, with authentic background courtesy John Miller Crawford; **below:** Derek's impressive EDF Baradour, here with its Rapier powered trolley.

Peterborough Flying Aces, which I love, as it's such a friendly competition with a plethora of prizes and good company, had less favourable weather. Despite the blustery conditions the turn out was good, with a pleasing number of Rapier fliers in Authentic Jet Scale, profile Jet Scale and Jetex/Rapier duration. There were thermals around – Mike Stuart lost his Space jet – and I chickened out of entering my Flying Wing. Andy Sephton's L2 powered profile Jaguar and Bob Short's profile Swift were both making excellent flights, though for me Andre Bird's X-13 was even more entertaining on an L2 HP. Sadly, André hadn't entered the competition, so it was left to Andy Sephton and Simon Firth with his Bill Dean Skyraj to take top honours in profile scale.

The proper scale models seemed more affected by the conditions, but what was nice was that competitors (and even the judge), were sharing the last of their motors to help others achieve that 'perfect' flight. It was a shame that Andy Blackwell's PAA Loader powered Skyray, now resplendent in grey paint and authentic decals, never made a complete flight. Andy blames the extra weight of the paint, but it may be that the Jetex pellets just needed drying out (see last month). His normally oh-so-reliable Bell X 1-E also didn't like the turbulence, and arrived on the ground with the motor fizzing. This cost him landing points and this year he had to be content with third place. Though my Avro Arrow coped with the conditions well, its normal flight performance was curtailed, so I lost out to Mike Stuart's Skyleada Mystère which put in a fine 28-second bouncy flight for first place. Still, to come second to Mike is no disgrace!

The weather at Old Warden a week later was a little better, at least on the Saturday, if lacking quite the halcyonicity we had been promised. As at MW, attendance seemed down: the field was quite sparsely populated and we were without Andy Blackwell and André Bird. They missed a good, if cruelly curtailed, day. The quite frequent thermals killed the wind when they arrived, and gave some wonderful flights – but, as Chris Strachan observed, in these variable conditions one risked losing the model either by being blown by the NE wind into the trees, or upwards! Jet action was provided by me, Andy Sephton, Meredith Evans, Chris Richards and Mike Stuart. My Wrens and Sharkies generally went well, though they could be caught out several times by (a) the unexpected vigour of my (donated) eight year old L1s, (b) the turbulence coming off the hedge and trees. Thank goodness for cyano glue which kept these simple profile models flying. The perspicacious Chris Strachan, noting my difficulties, remarked that according to my articles (which I am gratified he reads) both these aeroplanes *never* gave any trouble. Hmmm ... a trifle unfair given the conditions, but it just goes to prove the universal truth that 'Exaggeration is endemic to the art of writing'!



The wind had abated by mid afternoon and Chris Richards, having broken his Yak 9, brought out his L3 powered MiG 29 (left), which then made the flight of the day (if not the year). It went way up, climbing in wide circles, glided for a long time and still landed in the field. Amazing! Mike's Mystère and Tunnan put in some good flights, and around four O'clock I tried my MiG 15 and Skyrocket. The 2002 vintage L2s, though, proved quite feeble, giving only extended glides. The Jetex powered Sharky, however, made a great sortie, the 50B making a wonderful sound – hissing as opposed to the 'phut phut' of a Rapier – and leaving little smoke. This flight quite made up for the earlier frustrations of the weekend, one of which was that we had to finish flying at five o'clock, just as conditions were becoming perfect, when some selfish person wanted to land his full size toy aeroplane.

Sunday was cold and windy. I left early after chewing the fat with old flyers and giving the vendors' stalls a really good going over.

Apropos Chris's 'semi-profile' Depron/balsa MiG 29, Chris has prepared meticulous drawings, so please ask if you would like copies. It is a more forgiving model than George Milner Smith's handsome AM design, which, to my shame, I still find all but intractable, even with washout, a rearward CG and a large thrust tab to damp any power stall.

Having recommended 'try Jetex' to readers, I am gratified to learn that quite a few folk are doing just that, even to the extent of planning expeditions into their lofts in search of long lost motors and accessories, and importuning their clubmates for any Jetex related paraphernalia they may have kept from their disreputable youth. Walter Snowdon and his mate have no less than *five* Jetex models raring to go. Walter, who last played with Jetex some fifty years ago, began his email to me on an upbeat note: "I had a bit of luck on the Jetex front. Norman, an old modelling friend from the early fifties, joined our club recently and it transpired that he had some Jetex 'bits' [!] in his scrap box. We did a swap (he was in need of a 27meg radio). Yesterday his 'bits' arrived: two Jetex 50s in good condition, an unused atom 35, two full tins of 50 fuel and one of 35 fuel, two packets of washers and gauzes plus loose bits and pieces! Everything comes to him who waits".

But there were frustrations before Walter could take his Jetex Javelin and Swift to the flying field, and Walter discovered a problem different from those we already know about like cracked fuses, damp pellets, corroded cases, and substandard washers. He continued his email: "The fuse just fizzles in a half-hearted way and stops burning when it reaches the nozzle. Is it too old and could fifty years of storage have ruined it? Also, the Atom 35 pellets fit their motor perfectly, but the 50 pellets appear to have expanded and won't fit the casings, being at least the external diameter of the casing. I asked Norman if he had replenished the jetex fuel tins with some other brand, but this would of course been over 50 years ago and he couldn't remember! Any suggestions?"

Problems with fuses were addressed last month, but the problem of grossly oversize pellets is a real puzzle and a new one on me, as all mine, however stored, and of whatever vintage, have never swollen to the extent that they do not, with a bit of brute force and ignorance, fit the appropriate motor. Walter adds that cleaning the motors (which with his experience he had of course done properly) hadn't helped. It will be remembered that Sherlock Holmes, when faced with a conundrum beyond his powers of deduction, turned to Mycroft; so I turned to Andy Blackwell. This was, for Andy, more of a single Woodbine, rather than a 'three pipe', problem, and after some cogitation he replied, "What you may have is the Japanese Tiger "A" fuel, which was marketed in Australia under the 'Aero-flyte name' and had 'Jet-X' on the box. The pellets are of a red hue, finely grained and could have a hole at one end for the fuse. Not only are they longer than any ICI or Sebel pellets they are also of a marginally larger bore than Jetex or V max pellets". It would be fascinating if Walter has inadvertently ended up with some (very desirable) Tiger fuel. As to these beautifully crafted Japanese motors, the Tiger A and the larger Tiger B, a proper description (and evaluation) of these must await a future article.

However, one observation is pertinent: the formulation of the Tiger pellets was able to circumvent the original ICI patents, and was, according to Bert Judge, his starting point for the development of Sebel's own formulation. It would be interesting to know if Tiger pellets burn as hot as Sebel (or V-max pellets, (which John Emmet points out, have potassium nitrate, not ammonium nitrate as oxidiser). If so, how does the thin alloy (not steel) of the Tiger motors differ from that of the Jetmaster or 50B so that it can withstand these higher temperatures? Some experimentation is called for!



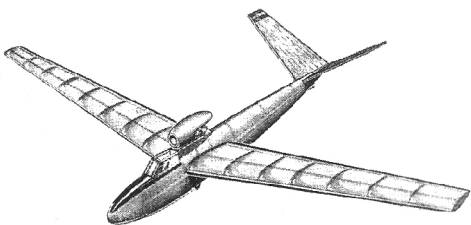
There still appear to be supplies of Jetex fuel on eBay. Jay Cresswell is very keen to fly Jetex, and purchased these unusual tins at a very reasonable price. It was a revelation that Graupner were associated with Jetex – and note the importers has, with typical Teutonic efficiency, rebadged the tins. I would love to know if they produced any kits of their own; given their reputation, any Graupner Jetex model (say a Horten 229 or Me P1101) would be very desirable indeed!



Peter Coombe, too, has been having some difficulties with the Jetex 50 he borrowed to power his beautiful F-84 Thunderjet (left). It will be remembered that the *Aeromodeller*, having given what they called their 'T' jet' too many coats of dope, failed with this one, ((*Jet*) *X Files* 21), so I was very interested in how Peter would get on with his test flights.

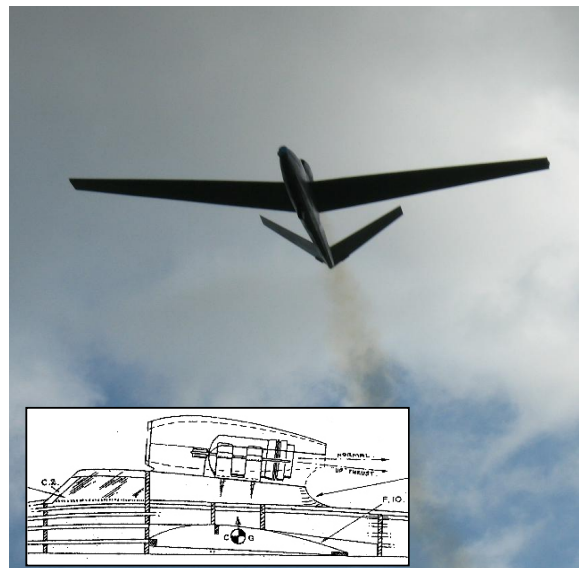
He writes: "The Thunderjet reminds me of a boyhood spent near a USAAF airfield, where F84s were constantly overhead. Mine was built from the Veron plan, with a few extra stringers on the front third of fuselage and wings partially sheeted with $\frac{1}{64}$ " balsa. After a minimum of (non-shrink) dope it was sprayed with one coat of matt white Humbrol and just enough matt silver mixed with a dash of white to finish [an interesting wrinkle]. The insignia were computer generated and printed on water slide paper, plus a bit of Letraset. Weight with empty Jetex is a fraction over 1 oz [half the weight of *AM*'s example!]. After the loan of an original Jetex 50 – a ribbed one – I was able to attempt powered flight. Glide tests were quite good – strangely, it glides much better with the knock-off balsa tip tanks than without – although there was a tendency to bank to the right as speed decayed which I didn't fully cure. Time for some thrust ... not too successful, as the fuse kept crumbling and the fuel only lasted about three seconds (no, I wasn't using Red Spot). On the third attempt, there were the beginnings of a good flight, but again, a very short motor run. I Then noticed that the case had split in three places. If Paul, who loaned me the motor, does not kill me, I will track down a 50C and try again".

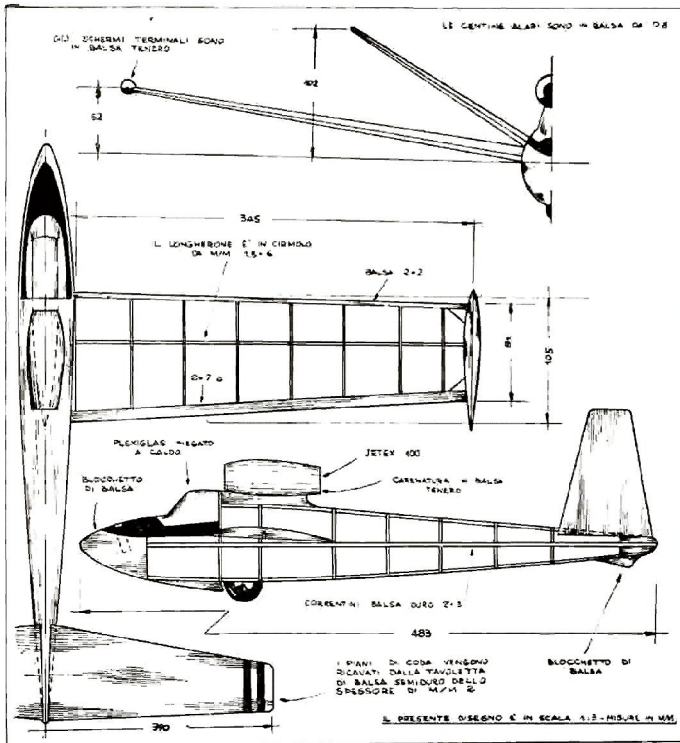
The Veron F-84 was quite large (18" span), and the 50C may well suit it better than the original 50. As to the ruined motor, I wonder if Peter wasn't using Sebel pellets in his 1950 motor, which would at least explain the split case, if not all of the greatly curtailed burn time. I haven't had a problem with old fuel burning a lot faster than spec: if pellets were being consumed at 2-3 times the normal rate this would generate a lot more thrust and heat (and damage the case), but it beats me how, chemically, how this could happen.



Be that as it may, it is good to see one of Phil Smith's Jetex models back in the air, however briefly. The Fougou Cyclone (left) is another of Phil's classic designs, and one which has, at least in recent times, acquired a reputation of being difficult to trim. But Ronny Gosselin, of the *Escadrille Harfung* in Ontario has succeeded admirably where others have failed (see below).

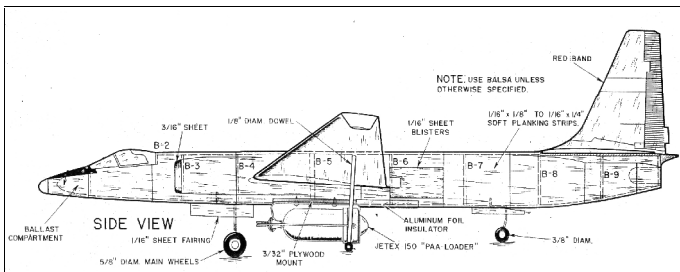
Ronny writes; "Built from a Replikit some time ago, it was fine for accuracy etc, but I would now put in some wood to connect the two wing halves before covering. But I did add gussets at the wing root and install a small brass ring at the rear of the engine pod, (which was turned on a lathe) to get it thin and strong. The model was a bit difficult to trim and took a lot of abuse whilst trimming, but survived it very well. We now know it needs downthrust, which should make it easier for anyone else to trim!" Yes indeed! Down thrust (front of motor down) may be required because the Cyclone is missing the heavier Jetex 50 (or 100). Phil's plan shows provision only for upthrust (see detail from plan insert right).



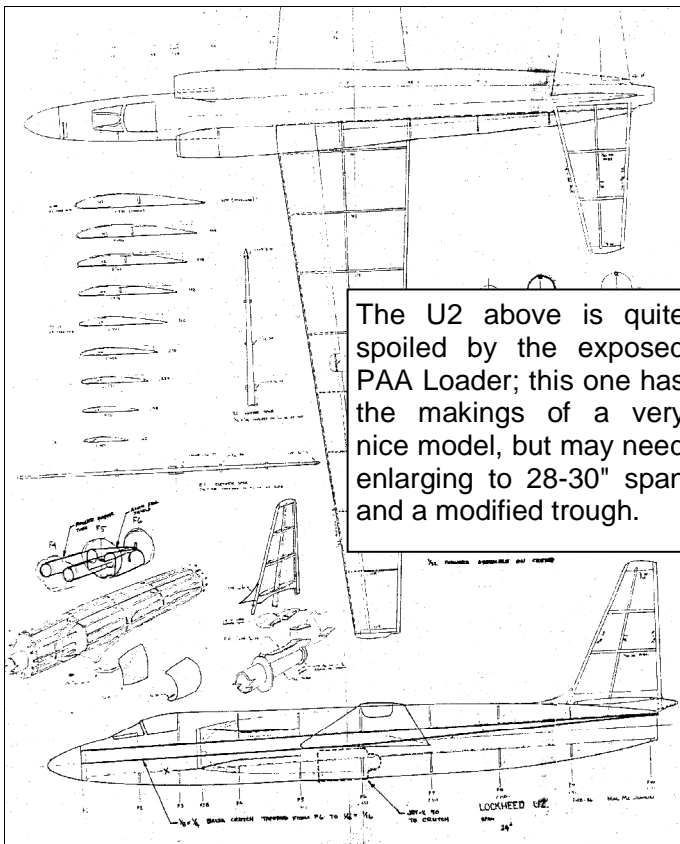


I'm not sure if the Replikit is still available, but the plan can be bought from Uncle Phil and the model now attempted with confidence if (a) it is built at the original size (30") – the tricky ones were I think built smaller than 90% of the plan and could well have been overpowered; (b) one powers it with an original Jetex motor or builds in downthrust for that L2.

Alternatively you could try a different design: the plan on the left was first published in *L'Aquilone* by one Giancarlo Fifi in 1952. Whilst not a patch on the Veron product, it is a nice period piece with many similarities. Note the somewhat exaggerated dihedral. It is of 28" span, but only a Jetex 100 is specified. I wonder if the tip blocks improve the glide?



Given the success with the Cyclone, perhaps it is time to look again at another model of similar planform that has hitherto been considered 'tricky to trim': the Lockheed U-2. Chris Strachan had a very nice (and accurate) O/D some time ago that was, alas, a 'waster of Rapiers', prone to turning first this way and then the other, never reaching the stratosphere or even above tree height ((*Jet*) X Files 6).



There are a number 'period' plans of this iconic aeroplane, including a really rather nice one for PAA Loader with a planked fuselage and a partially sheeted wing that looks adequately stiff. Unfortunately, it is spoiled by a very exposed motor (middle left). The best design, (bottom left), from Alan Hunt's collection, was published in the US, but I have no details of the designer, year of publication, etc – can any reader can help? The span is only 24", a trifle small, and the wing structure looks a little flimsy. But the motor is hidden in a deep trough which is (a nice touch) fed by the air intakes. All it needs is enlarging to perhaps 30", adequate dihedral, and the all important downthrust, which could be provided by modifying the trough to provide downthrust. Worth a try!