

# Skyline



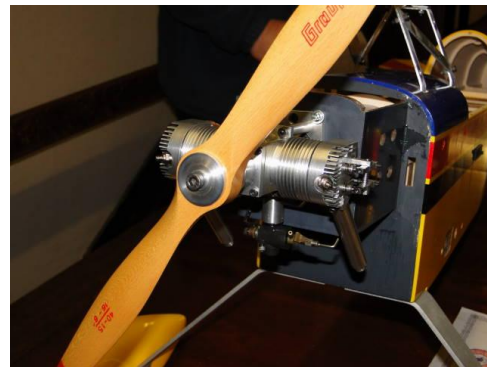
## Sedgemoor RC Flying Club – Newsletter August 2010

Edited by: [jeff.cosford@tiscali.co.uk](mailto:jeff.cosford@tiscali.co.uk)

### Editorial

*We have just completed the third of four fun competitions this year. What has been pleasing is that many flyers are showing improved control and accuracy at each event. There is no doubt that these events improve your flying!*

*The next one is Sunday 10<sup>th</sup> October, from 10am. Mike is running this one. See you there.*



### Club Calendar

October 2nd / 3rd	No Flying – NSA
Fun Comp 4	Sun 10 <sup>th</sup> Oct (reserve Sun 17 <sup>th</sup> Oct)



Steve Fish's Typhoon.

### Craftsmans Cup

This was held on 31<sup>st</sup> March. I am sure those of us who build rather than just fly ARTF's are more likely to retain our interest. And here on display were some great examples. Third was Steve Tossell, second Steve Fish, winner Kevin Krott for his magnificent own designed and built twin cylinder four stroke.



Steve Tossell's Corsair



Kevin receives his award from Ian Russell



Roger Moore, fresh from his A Certificate success, tries his hand at the limbo

Here are the Fun Fly Competition Results for the year so far. – from Pete Ross

17 April 2010 Fun Fly													
Name	Plane	Pylon Race	Points	Climb & Glide	Points	Egg Landing	Points	Touch & Goes	Points	Loops	Points	Total Points	Position
Jeff Cosford	Fusion	38.30	4	240.10	4	1.00	2	25	4	32	3	17	1
Pete Ross	Limbo Dancer	49.69	2	98.49	1	0.75	3	12	2	34	4	12	2
John Bransgrove	Limbo Dancer	41.07	3	237.47	3	4.00	1	15	3	23	2	12	3
Tony Englander	Limbo Dancer	52.55	1	132.00	2	0.50	4	1	1	-	1	9	4

17 April 2010 Sport Planes													
Name	Plane	Pylon Race	Points	Climb & Glide	Points	Egg Landing	Points	Touch & Goes	Points	Loops	Points	Total Points	Position
Tony Englander	Extra 260 E	49.89	3	146.00	5	7	5	13	6	16	6	25	1
Phil Wilson	Funtana (E)	36.80	6	195.20	6	7	5	7	3	11	5	25	2
Steve Fish	Extra	42.36	5	103.66	4	7	5	10	5	10	4	23	3
Jeff Cosford	Extra 260 E	44.50	4	80.00	3	11	1	15	7	21	7	22	4=
Geoff	Easy Glider	67.29	1	277.00	7	3	7	7	3	10	4	22	4=
Steve Fish	Denight	32.89	7	-	1	4	6	10	5	9	1	20	6
Mike Fish	Skystar	65.27	2	70.00	2	8	2	4	1	10	4	11	7

13 June 2010 Fun Fly													
Name	Plane	9 Manoeuv	Points	Touch & Go	Points	Climb & Glide	Points	Limbo	Points	Time & Spot	Points	Total Points	Position
Tony Englander	Limbo Dancer			53.00	58	259	100			99	27	186	3
Pete Ross	Limbo Dancer	29.00	76	60.00	52	191	74	55	45	46	59	305	2
Jeff Cosford	Limbo Dancer	22.00	100	31.00	100	216	83	25	100	27	100	483	1

13 June 2010 Sport Planes													
Name	Plane	Pylon Race	Points	Touch & Go	Points	Climb & Glide	Points	Limbo	Points	Time & Spot	Points	Total Points	Position
Kevin Trott	Sunbeam	118.00	69	57.00	46	87	43	88	53	33	45	257	6
Kevin Trott	Pico Jet	92.00	89			151	75	71	66	27	56	286	4
Steve Fish	Extra 300	82.00	100	41.00	63	115	57	71	66	61	25	311	2
Steve Fish	Denight Special	83.00	99									99	9
Pete Ross	Extra 260	107.00	77	42.00	62	124	61	87	54	54	28	282	5
Jeff Cosford	Extra 260	96.00	85	26.00	100	122	60	47	100	15	100	446	1
Geoff Portlock	Cessna 177	95.00	86	47.00	55	83	41					183	7
Geoff Portlock	Edge 540							64	73	94	16	89	10
Tony Englander	Extra 260	118.00	69									69	12
Mike Fish	Sky Star	230.00	36	71.00	37	83	41	166	28	59	25	167	8
Jim Exon	Fun Jet	90.00	91			202	100	70	67	46	33	291	3
Malcolm Bray	Trainer			79.00	33	96	48					80	11
Malcolm Bray	Fokker					81	40					40	13

August 2010 Fun Fly													
Name	Plane	9 Manoeuv	Points	Touch & Go	Points	Climb & Glide	Points	Limbo	Points	Time & Spot	Points	Total Points	Position
Jeff Cosford	Limbo Dancer	26.00	100.00	39.07	100.00	196	78.94	52	100.00	14.70	100.00	478.94	1
Pete Ross	Limbo Dancer	49.80	52.21	96.80	40.36	114	45.84	117	44.78	21.27	69.11	252.30	3
Rob Bevan	Limbo Dancer	36.90	70.46	74.86	52.19	248	100.00	89	58.38	23.76	61.87	372.44	2
												-	

August 2010 Sport Planes													
Name	Plane	Pylon Race	Points	Touch & Go	Points	Climb & Glide	Points	Limbo	Points	Time & Spot	Points	Total Points	Position
Steve Fish	Sky Star	48.200	77.97	60.69	68.15	89.38	49.87	38.53	79.94	7.20	89.44	365.36	3
Steve Fish	Extra 300	37.580	100.00	60.78	68.05	171.48	95.67	38.69	79.61	6.44	100.00	443.33	1
Mike Fish	Sky Star	59.100	63.59	103.78	39.85	99.90	55.74	82.29	37.43	6.52	98.77	295.38	6
Dave Wood	Wot 4	40.430	92.95	82.86	49.92	179.24	100.00	91.53	33.65	16.32	39.46	315.98	5
Jeff Cosford	Interceptor	54.200	69.34	41.36	100.00	165.78	92.49	30.80	100.00	10.63	60.58	422.41	2
Roger	Boomerang	50.300	74.71	-	-	99.41	55.46	146.87	20.97	19.06	33.79	184.93	8
Rob Bevan	Extra 260	44.830	83.83	52.61	78.62	141.89	79.16	48.36	63.69	22.80	28.25	333.54	4
Malcolm Bray	Wot Trainer	57.330	65.55	121.55	34.03	93.73	52.29	-	-	-	-	151.87	9
Pete Ross	Extra 260	43.660	86.07	90.70	45.60	98.73	55.08	53.40	57.68	26.20	24.58	269.02	7
Phil				96.26	42.97	59.13	32.99	87.27	35.29	25.64	25.12	136.37	10

## The Rules and Constitution

A reminder to use the pilots' boxes. They are there to keep pilots away from and upwind of the pits, and grouped together. The drawing of the flying field is attached in the separate file.

## Wanted

Wanted, low wing model for advanced training, anything considered - Paul Hodgkins, tel 07812 909187

## For Sale

Jim, who lives at Pedwell, is selling this plane:



"It's a Pitts Special and needs a 120 or a 150 IC engine. Model Discounts sold it when new. It doesn't look like it has ever flown. It was a prototype model designed by Falcon Aviation. There was around 12 produced. The quality of the build/finish are to a high standard. £110." tel:01458 210207.

That's all, Jeff

*But for those who receive Skyline electronically, here are some extracts from Aeromodeller in 1944, which Rob Bevan found in an old house.*



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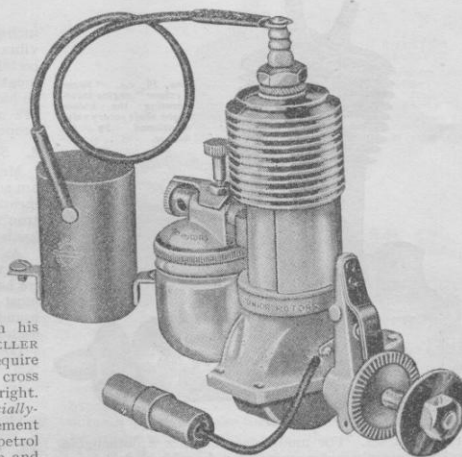
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# "PETROL VAPOUR"

BY "C · E · B."

The "BROWN JUNIOR '39 B" as mentioned below. For many years one of the best known Class C American Engines.



MR. SPAREY'S remarks in connection with his engine in the May issue of the AEROMODELLER have brought out some further points that I feel require clearing up, for it is evident that we are still at cross purposes in a few details which I hope I can set aright.

Like Dr. Forster, I am very keen that the *commercially-produced engine* after the war shall be a real improvement and a success from the user's point of view. If the petrol movement is to be really popular, simple, reliable and cheap engines designed as aero engines must be easily obtainable.

Mr. Sparey, in the articles on his engine design, first of all used arguments that suited an engine for amateur construction. Later he said that his engine was for commercial production. The result has therefore become a little confusing, for some features, such as detachable heads, are more desirable when one considers an engine for amateur construction.

In my discussions I am only considering the *commercially obtainable engine*, which can be bought complete and ready to run, because I feel that if we are to attract large numbers to the hobby, it is the engine that can be bought "over the counter" that matters. There are comparatively few individuals who have the facilities or the experience to make an engine for themselves. I believe that Dr. Forster views the subject from the same angle.

Mr. Westbury for many years has studied and produced engines that suit the amateur constructor, and there is always a very sound practical reason for anything that he incorporates in his designs. His 5 c.c. "Kestrel" is an excellent example of this.

But let us get quite clear the different objects in view when we are contemplating an engine that the amateur is to construct as opposed to one that is going into quantity production. In the first case machining and other points crop up that must suit the very limited facilities that the average amateur possesses. These are of paramount importance, and a study of Mr. Westbury's designs are an education in this respect.

In the second case we can ask for slightly different features if the firm that intends to produce the engine is prepared to lay down a fair number of engines and the plant to produce them.

In the past many British commercially-produced engines have actually been made under amateur conditions of plant, etc., and have, therefore, been limited in scope of design.

Let us now take the points still not quite clear and raised by Mr. Sparey in the discussions that have taken place between himself, Dr. Forster and myself.

## 1. The Disc Valve.

I certainly do not condemn the disc valve. I have used engines with this fitting on record-holding models, both in the air and on the water. I merely state that the hollow crank shaft rotary valve *has been proved* very satisfactory by "The Baby Cyclone" and the "Phantom" (*i.e.*, the 6 c.c. and the 4 c.c. size). When one finds a "good thing" that has proved its value and is an easily manufactured item, it is worth considering for one's ideal design. This type of valve makes for a compact engine, too.

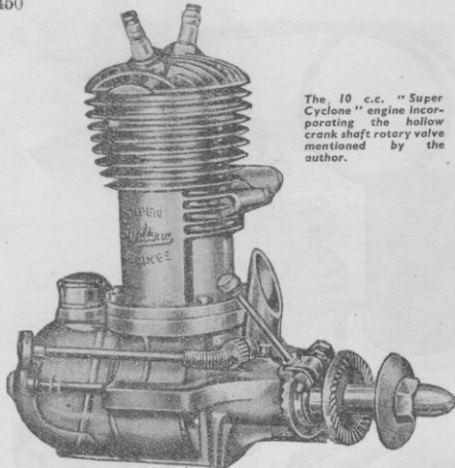
Mr. Sparey champions the disc valve because it suits amateur construction; but I have already explained that this is not what I am after, and I believe that he is now also after the commercially-produced engine. Nevertheless, I have a perfectly open mind about the use of a disc valve on a commercial engine, and there is absolutely no reason why it should not be a success, provided end-play through wear is looked after in the design, and losses through friction are not unduly permitted.

I am personally highly satisfied with the hollow crankshaft valve because of its practical results, and can see no advantage in changing it. It is efficient and stands up to wear if properly designed. It also makes for a compact engine layout, which helps in the matter of mounting the engine in the model. In practice we have to admit that "The Baby Cyclone" has been one of the best 6 c.c. engines, and it is well worth careful study. I had the first "Baby Cyclone" to reach this country some years ago (in 1934 or 1935, as far as I can remember) and that engine was not successful. The makers, however, very soon got over their troubles.

## 2. Detachable Heads.

From the commercially-constructed-engine-point-of-view, is the detachable head worth while? (Agreed, that for the amateur-constructed engine it is necessary.)

The "Brown Junior" has proved that the cylinder and head in one is most reliable. It saves a possible source of leakage, and it saves a number of small studs and the necessary screw cutting, and the novice has no



The 10 c.c. "Super Cyclone" engine incorporating the hollow crank shaft rotary valve mentioned by the author.

fitting troubles. For model aero engines a detachable head is certainly not required for de-coking, as I have already explained in my last discussion. The fewer joints we have on a two-stroke the better.

Let me clearly state that I do not "condemn" the detachable head, as Mr. Sparey states. I merely say that it is unnecessary, and I do not want it on my commercially-produced engine. I cannot see that it has any advantages. On the other hand, it may have disadvantages, such as leaks and fitting troubles for the mechanically ignorant. Therefore, why use it—unless the methods of construction by the firm making the engine find it desirable, or it helps to obtain some other feature of design that the designer feels is really worth incorporating, such as the fitting of a sleeve in an alloy-combined crankcase and cylinder casting.

Probably all readers sufficiently interested to discuss the design of a model engine are very well aware of the necessity of the correct method of tightening down a cylinder head, as detailed by Mr. Sparey. But is the complete novice? And if we are catering for the novice why trouble him with the difficulty if it can be avoided?

### 3. Contact Breaker.

I am very glad that Mr. Sparey has decided to change his contact breaker on the lines suggested. Incidentally, one might say here, apropos of contact breakers in general, that I have come to the conclusion that contact breakers with enclosed points look nice but are a very mixed blessing. *Even when we do at last get the points placed in a position away from oil that is flung from the main bearing by centrifugal force, we shall still frequently want to examine and clean the points.* Those that are open for inspection and cleaning save a lot of trouble. On one make of engine with very neatly enclosed points, one has to take off the propeller every time one wishes to service the points or check up on them. Besides appearance, the only good features about enclosed points on a model aero engine is that grit is often kept away from the contact breaker in the event of a crash. In actual practice give me points that I can see and get at quickly!

I do not like a long control lever bent back, as suggested by Mr. Sparey, because the weight of a long lever is

inclined to upset adjustments and settings, through vibration; therefore, the bevel pinion and rack has certain advantages. If some other more simple arrangement can be devised to obtain the same result, then let us have it, but do let us keep away from long bent levers. We must, however, have controls well away from the propeller on our post-war engines.

### 4. Simplicity.

Mr. Sparey is hardly fair to me in assuming that I am so ill-informed as to think that "simplicity" merely means "the fewer number of parts there are, the less trouble there will be." All but the very uninformed know that there is more in it than that!

As we are trying to clarify misconceptions, let me say that what I mean by advocating simplicity is that when we have decided what is really necessary to produce the most suitable design for the job, we should then cast round in our minds for ways and means to simplify each component part so that it requires:

- (1) As little machining as possible in order to reduce production costs.
- (2) Be simple and easy for the novice to operate and maintain.
- (3) Have as few working parts as is possible to produce the desired result, *i.e.*, an engine with the following features—easy starting, consistent running without variation in power output, freedom from damage, long life without wear and easy to mount.

He who adds any unnecessary complications to obtain these results is not likely to make much of a name for himself as a model aero engine manufacturer.

As a case in point, the little 98 c.c. two-stroke auto-cycle engines as fitted to the "airborne motor cycles," have a simple petrol lubrication system that in practice works very well, even under severe cross country conditions. It would be quite ridiculous to alter this simple system to a complicated system of dry sump lubrication involving two oil pumps, a separate oil tank and its oil pipes, when the present simple system does the job with a minimum of snags and weight. In the same way, if two parts will do the job as well as twelve parts, it is absurd to use twelve parts. However well designed and made those twelve parts are, the fact remains there are twelve possible chances of failure in this "chancy" world, and there are twelve parts to wear and eventually be replaced. There are also twelve parts to make.

I repeat, and I hope I shall not be misunderstood this time, the more simple we can make our model aero engines, *provided they do the job we require*, the cheaper and easier they will be for the unmechanically-minded novice to operate. The result will be increased sales through recommendations by satisfied owners.

Simplicity is an art and not easily acquired: it requires a lot of thought and experience, whether it be in public speaking, painting a picture, a golf swing, or preparing plans for an invasion of a continent!

### 5. Upright or Inverted Engines.

Although I personally like an inverted engine as it naturally fits into model design better, and Dr. Forster is quite adamant about it, I do not feel we can force the inverted engine on buyers. Different people want to install their engines in different ways.

An engine manufacturer would be wise to produce two versions I feel—an upright engine and an inverted one—but there is no doubt that *each version must be designed so that the fuel level alters as little as possible during flight, either due to change in attitude of the model*

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or to the gradual exhaustion of fuel, and the engine must be compact in order to make mounting easy.

I think that a sort of Gallop Poll as suggested by Mr. Sparey might produce a misleading picture, because up to now the number of people in this country who have experience of model aero engines is comparatively small, and that we must also consider the great numbers of potential post war buyers, who would naturally not enter the poll now with any practical knowledge. No, I think the real answer is that we must offer a soundly designed upright engine as well as a soundly designed inverted engine.

If a clever designer can produce an engine incorporating all the ideals we require, that can be used upright or inverted, so much the better. But it is not an easy task, as Mr. Sparey rightly says, although I do not consider it at all impossible.

In conclusion, may I say that I wish Mr. Sparey every success in his engine venture, and may it prove what we modellers really want. It is excellent to see someone who is thinking of putting an engine on the market really taking the trouble to thrash out the debatable points. I was delighted to see the particulars, in the June issue, of his revised engine, and also that a résumé of the whole discussion is to be made by Mr. D. A. Russell in an early issue.

It is only through these discussions that we shall improve our model aero engine and so help to make the petrol movement really popular.

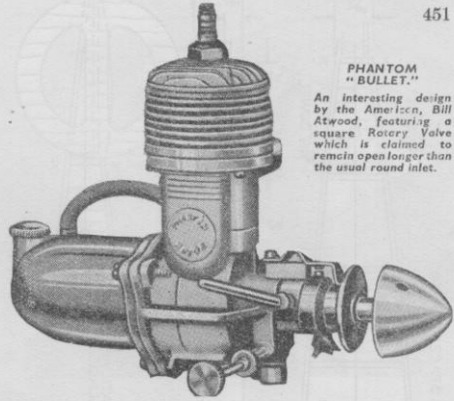
P.S.—Since writing the above reply to Mr. Sparey's article, description of his Horizontal Single-Cylinder Engine has appeared in the pages of the AEROMODELLER.

The general conception of his new design seems an answer to most of the aeromodellist's requirements.

I do not think that Mr. Sparey need worry about the change in weight of the petrol in actual practice or any reasonable sized model.

I hope that he will provide for the second sparking plug as suggested. It will balance the appearance of the engine, and can be carried as a spare for rapid test purposes on the field.

One feels a little doubtful about his sleeve-valve, but that should not discourage Mr. Sparey from trying it



PHANTOM "BULLET." An interesting design by the American, Bill Atwood, featuring a square Rotary Valve which is claimed to remain open longer than the usual round inlet.

out. If it is a success it will be very neat; if it is not a success, it will not be difficult to incorporate the more usual hollow crankshaft type of valve into his design; actually it might make for checking production. I hope he will eventually include a ball-thrust race.

It is excellent to see that at last an engine has been designed with its ignition points out of the way of the oil that is flung out from the main bearing by centrifugal force. Both Dr. Forster and I have been pegging away at this point for a long time. I can foresee a certain amount of oil being blown back by the propeller on to the points, but a small shield should avoid this trouble.

I am disappointed to see the long ignition lever. It is simple, but its weight will tend to vibrate and alter the adjustment. If it must be retained perhaps a retaining ratchet might be fitted.

Anyway, Mr. Sparey is to be congratulated on a very promising layout, and I hope he will let me try out one of the early production engines!

Shades of Dr. Forster!!! . . . It seems a pity that the sleek lines of this excellent scale model, by American modeller Bob Smurith-walta, are spoilt by the upright engine mounting.

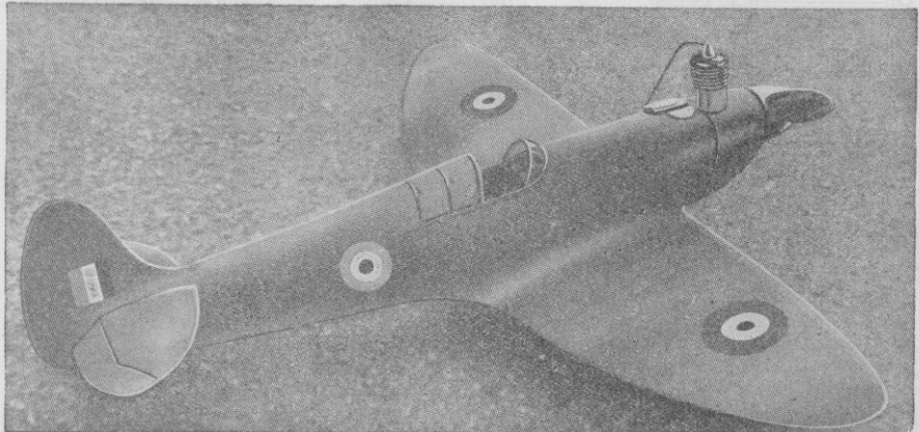


Photo by courtesy of Model Airplane News.