

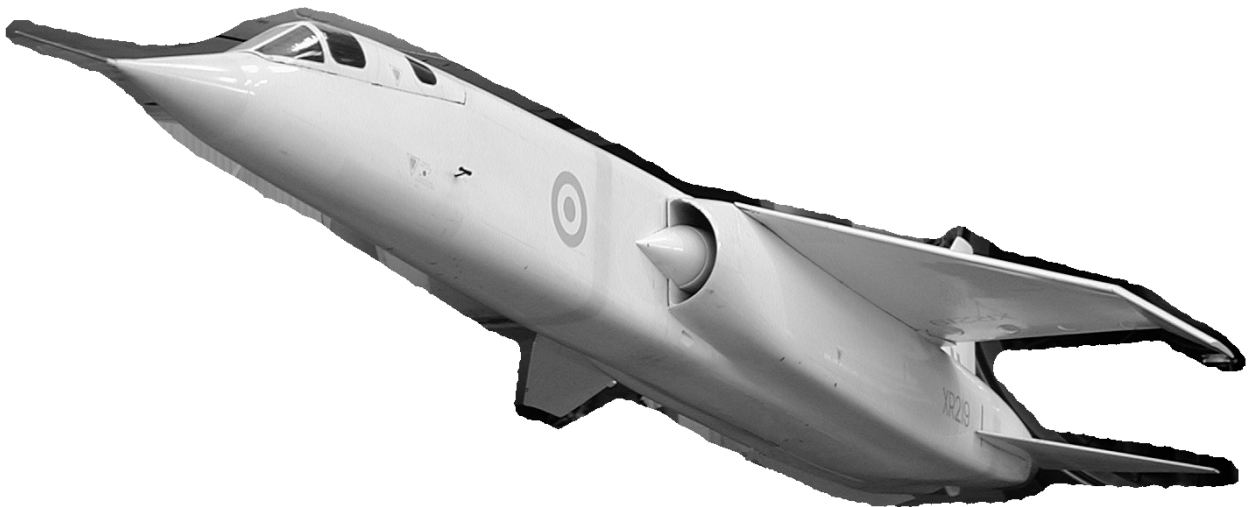
# Biggles News - 2015

## Contributions from Biggles and non-Biggle flyers...

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- Roger Heap - Biggles League results etc.
- John Oulds - for his F1H plan
- John Cooper - for field survey ideas and 'food for thought' suggestions
- Gordon Warburton - remote DT, with commercial radio parts
- Andy Crisp - for two F1A plans
- Steve Brewer - reflections on '14 and GPS with Smartphones
- 

## *Biggles Members for 2014...*

Dave Brawn, Steve Brewer, Neil Cliff, John Cooper, Andy Crisp, Mike Evatt, Roger Heap, Sam Heap, Brian Lavis, Chris Parry, James Steers, Noel Parry, Trevor Payne, Chris Strachan and Peter Tomlinson.



## *Roger Heap writes...*

It's not aeromodelling, but here is a picture of the B.A.C. TSR2 jet. I used to see it flying about, some fifty years ago during '64/'65. There were always a pair of Lightnings nearby. Quite an exciting sight for an impressionable lad! After many years of ground-breaking work, - after just six months of flight testing, - this sleek and stylish aeroplane was grounded by the government and the whole project was cancelled. What a shame!

# Biggles News - 2015

## The Biggles League 2014

### F1H

Gary Madelin won just about everything! The exception was at the '14 Nationals, where, hampered by a sore knee, he tripped over a runway light and spoiled what might have been a 100% record. His year was topped by a big win in the (F1H) Euro Challenge against top quality competition. A very special year.

### F1J

Now that 1/2A has been excluded, only the Nationals managed to attract more than six entries. Eleven flyers managed to gain points overall. Slight doubt over top place was dismissed at the Midland Gala with a win by Mick Lester, who took the F1J trophy home again! A big 'thank you' to him for refurbishing the trophy.

<b>F1H</b>		18 April [Fri.]	24/25 /26 May	5/6 June	15 June	19 July [Sat]	26/27 July	10 Aug	30 Aug [Sat]	25 Oct	<b>F1J</b>		6 April	24/25 /26 May	26/27 July	30 Aug [Sat]	14 Sept	28 Sept	25 Oct	
Position / Flyer	Biggles points	Northern Gala	* BMFA Nats *	* Oxford MFC Rally*	4th Area	Southern Area Gala	London Gala	6th Area	* Southern Gala *	Midland Gala	Position / Flyer	Biggles points	3rd Area	# BMFA Nats.#	# London Gala #	# Southern Gala #	7th Area	## Equinox Cup ##	# Midland Gala #	
1	G. Madelin	42	9	9	9	6			9		1	M. Lester	25		3	6	6	4	3	6
2	J. Cooper	30	6	9	6		5		4	3	=2	P. Watson	17	9	4			4	4	
3	B. Lavis	23	4	2	3	2	5		2	9	=2	S. Dixon	17	4		4	6	1	4	
4	R. Heap	20	3	6	4	3	2		1	4	4	P. Chapman	14	6				6	2	
5	C. Parry	17	2				3		6	6	=5	P. Tribe	6	6						
6	M. Gibbs	10		1				6	3		=5	T. Payne	6				3		3	
7	D. Cox	9			6	3					7	R. Vaughan	5	2		3				
8	J. Gibbs (J)	5		4	1						8	K. Faux	3		3					
=9	A. Cameron	4				4					=9	P. Routledge	2				2			
=9	S. Heap (J)	4	1	3							=9	B. Aslett	2					2		
=9	G. Olds	4			4						11	F. Chilton	1	1						
=9	T. White	4						4												
=13	S. Brewer	3		2			1													
=13	G. Hart	3						3												
=13	S. Darmon	3		1						2										
16	D. Etherington	2				2														
17	N. Parry	1								1										
F1H Euro Challenge nominated venues *marked*.		N. Luffenham	Barkston Heath	Port Meadow, Wolvercote, Oxford	Area Venues	Odham	Salisbury Plain	Area Venues	Salisbury Plain	North Luffenham	F1J Euro Challenge nominated venues #marked#.		Area Venues	Barkston Heath	Salisbury Plain	Salisbury Plain	Area Venues	## Salisbury Plain ##	North Luffenham	

F1H and F1J will continue unchanged in 2015. Venues and dates are published at :-  
<http://www.bigglesleague.highsociety.org/results.html>

# Biggles News - 2015

My own 2014 season was rather mixed. Limited success with straight tow models was small compensation for rather disappointing F1H results. The '13/'14 models just didn't work as well as expected, so I have made two new wings for old fuselages. Both are parallel chord, one a little higher aspect ratio than the other, both with 0.4mm ply 'D' box skins. We'll see! My home-made Yagi (for hand-held receivers) that was detailed in last year's News, has proved very useful. Using left-over alloy tubes, I was also able to sharpen up my Biotrack receiver front/back ratio using a new front element.



Adventures during the year seemed to involve a lot of trees! I don't remember finding - and helping retrieve, quite so many before! On Salisbury Plain, I discovered a quiet valley smothered in wild flowers. There was a lake, trees, and birds were busy scooping insects off the water. It was a beautiful and tranquil spot, and totally unexpected. I'll take my camera next time! I did manage to catch this snap of Peter Lang and his car after he went 'off route'!

Scanning the airwaves, I heard aeromodelling getting a mention on the Salisbury Plain Danger Area, radio bulletin on 122.75mhz!

Someone asked me how I made up the ends of my sleeved lines. I use about 3 metres of sleeve at the bottom and about a 1/3 of a metre at the top. The whole thing needs to be 'snugged up' a little from that seen in the picture. A simple knot stopper at the ends of the (white) line and a half-hitch or two in the end of the (orange) sleeve stops the line escaping, and more hitches lock it to the ring. It's quick and simple to make and secure. A half-hitch in the other end of the sleeve locks it and the line together, and the knot indicates how much line is left on the ground. The sleeve will fray a little beyond the knots, but that's ok. Stuff suitable to use as sleeving, can be found in a variety of colours in hardware shops, ships chandlers - and I even found some dayglo 'parashery' in a local haberdashery!



*Roger Heap*

# Biggles News - 2015

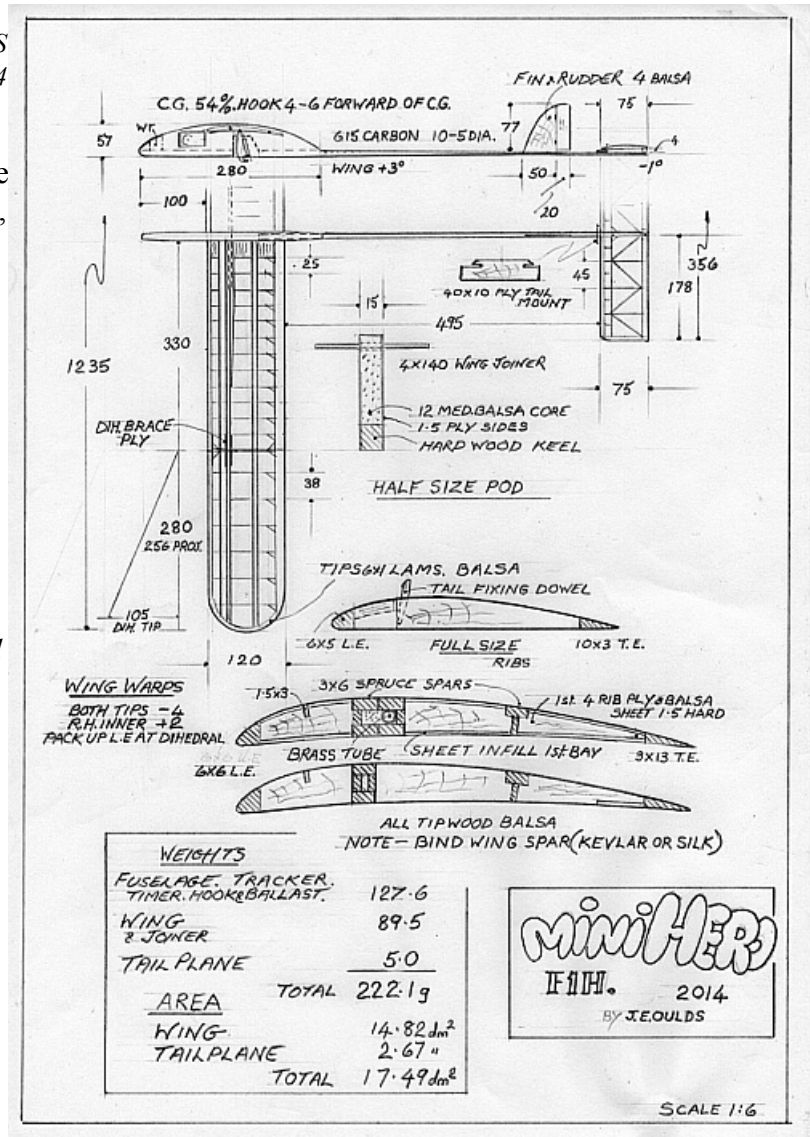
**F1H #Mini Hero#** by J.E.OULDS  
14-7-14

The Mini Hero dates from the late 1980's and has been flown with some success at Little Rissington, Odiham, Salisbury Plain & Port Meadow.

## Construction / Flying

The drawing shows a carbon/fibreglass boom, but the fuselage could be made entirely of balsa and spruce. The wing is very strong with a bound mainspar. Lighter wood should be used in the tips. The C.G., wing and tailplane should be as shown on the plan, setting 4mm wash-out in the tips and 2mm wash-in, on the right inner panel. The whole wing is finished in doped tissue and the tail-plane in Mylar. Use very small rudder adjustments as F1H models are very sensitive.

Circle tow hooks and timers are obtainable from M. Woodhouse of [Free Flight Supplies](#).



# Biggles News - 2015

*John Cooper writes...*

## Where can we play with our toys (sorry, models!)?

2014 has been a bit of a disaster from a competition free flight flying site point of view with both Church Fenton and Barkston lost to us as regular sites. For those of us in the East of England this now just leaves North Luffenham, with Salisbury Plain further afield (only really viable for two day events) and Sculthorpe on a very few occasions.

During an impromptu chat at Luffenham (on a very windy day when flying seemed undesirable) a well known free flihter made the point to me that there are plenty of open sites that exist, it was just a case of looking for them and then getting permission to use them. So began a search, the theoretical part of which has been done and which MAY have revealed suitable sites for trimming in East Anglia.

What do we need for a trimming site? I set my benchmark as sites that are at least a quarter mile square, with no power/phone lines, with nothing above the size of small bushes on it, with no significant obstacles (roads, houses, factories, woods etc.) around the edges and preferably not being used for arable farming.

My plan (yes, I sort of had one) was:

- a) To initially use Google Earth to survey the area around my house (about a 20 mile radius of Ipswich). This did show a number of areas that looked suitable (it is generally quite easy to tell the difference between grassland and crops on Google Earth). I visited them all over the summer, but no luck. A couple were cropped and the two best looking options were securely fenced off as part of military and government areas. OK – this didn't work for me, but it only took a few evenings of browsing and a couple of afternoons driving, hence it's worth trying if you want to find a local trimming site.
- b) A more scientific version of the above, but covering a larger area and concentrating on Common Land. (A word of warning here, the term Common Land doesn't automatically mean that the public can just wander around on it! A lot of it is now owned and used for example as golf courses and nature reserves.) There is a Register of Common Land in England (<http://common-land.com/>) that is searchable by town, county etc. Suffolk for example has around 200 sites listed, varying from roadside verges up to areas about half the size of North Luffenham. Against each site there is a list of details about the site, including acreage, and a link to [Streetmap.com](http://Streetmap.com) (from which you can then compare with a Google Earth view). I would suggest that 40 acres is the smallest site worth looking at, but see later re linked sites. The bad news is that the underlying data is about 30 years old (hence the golf courses and nature reserves that now exist). Several of the linked areas of land are split into multiple entries - i.e. you might find (say) 4 areas of Common Land for the same village suffixed, East, West, South, North etc., in reality they often join together and could therefore be of a sensible combined size. As with a) this hasn't produced an abundance of sites for my personal use. It did identify about 20 potential sites but, after visiting, the only usable ones were too near the coast and a bit marshy.....

# Biggles News - 2015

c) The most scientific approach?! Whilst browsing the Internet for b) I came across mention of Open Access Land on the Natural England website. (<https://www.gov.uk/government/organisations/natural-england/>). This led me to several websites explaining the Open Access Land concept. In essence it is land that the public can use for most recreational purposes, but vehicular access, riding a bike, camping and organised games are barred. I haven't yet found any reference to Open Access Land and Aeromodelling, but one of the Open Access sites that I found said that kite flying was OK. Based on this I'd guess that trimming rubber and glider on such land is OK (and most of it is remote enough that we probably wouldn't get noticed!). Power might be more dubious as the noise could attract unwanted attention.

The landowners can apply restrictions to access at certain times of the year, the most significant from our viewpoint is probably a bar on access in the summer due to bird nesting.

How do we identify such land? Local Councils are meant to have definitive maps covering their area and there is a searchable national website (but it was too slow to load to be of any use for widespread searching). Luckily an old fashioned paper solution exists. The latest versions of the OS Explorer 1:25000 maps (identified by orange covers) show all Open Access land, identified by a pink edging to the green surface colour. The symbols on the green area gives an indication of the type of surface e.g. grassland, trees etc.

A quick wander into WH Smiths allowed me to quickly peruse 6 local OS maps – the 4 covering areas nearest to me were rejected (as having minimal marked land, or only having sites already checked out under a) and b)). Maps 226 (Ely and Newmarket) and 229 (Thetford Forest and the Brecks) did however both show quite a lot of Open Access land and were thus purchased. A more detailed analysis at home and follow up comparison with Google Earth, revealed about 15 sites worth a visit to see if they are usable. I had hoped to do this before this newsletter and report results, but other things have got in the way so far.

I realise that the above approach sounds time consuming and is a bit like trying to find a needle in a haystack, but I only need to find one local trimming site to be a happy person!

Other possible solutions that I've heard of are to join your local full size gliding club (if it has a large enough site). Most gliding clubs only operate on 2 or 3 days a week and, once a member, you may be able to use the site on non gliding days. I know that Russell Peers and John Carter do this at one site and Ken Faux uses another (although they did insist upon RDT being used). I understand that the Norwich flyers are currently testing out the Norfolk gliding club site.

As a final 'food for thought' question / approach. What is the most expensive part of Free Flight? Not the models (unless you buy a lot) but the cost of travel to contests and trimming days. I reckon that a trip to Luffenham or Lodge Farm costs me £40 to £50. For this I probably average 4 to 6 flights per day – say £10 a flight. Two weeks at Lost Hills costs about £1000- (even paying a full air fare) providing two of you go to share motel and rental car costs. For this you'll probably get 12 flyable days at 20+ flights a day – i.e. £4 per flight. On a £ per trimming flight basis therefore - it's almost certainly cheaper than multiple trips to North Luffenham or Lodge Farm. Might be difficult to sell to your significant other though!

Enjoy your 2015 flying, here's hoping for calm weather and no rain.

*John Cooper*



# Biggles News - 2015

## RADIO DT ARTICLE - by [Gordon Warburton](#)

Unlike many free flight flyers, I didn't start flying free flight aircraft until later on in my modelling life. I wanted to fly electric powered radio control models and taught myself to fly R/C in a local park. My electric models moved from small hand-launched sports models up to a quarter scale radio controlled Sopwith Pup; that was 20 years ago.

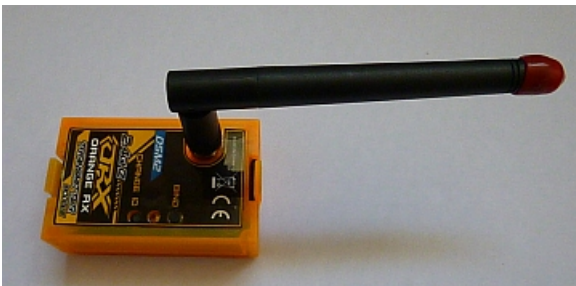
My free flight modelling was mostly small rubber - mini-vintage - but when the FFTC announced that radio DT would be allowed in all free flight classes I immediately became interested. But, I didn't feel like paying out the prices being asked for commercially made equipment!

Having a background in electronics, I wasn't daunted by the challenge of producing my own system. Some flying friends in one of the clubs I belong to had already started experimenting converting old single channel radio equipment to 2.4 GHz so enabling more than one model to be flown at a time - something not possible in the old single channel days.

I started by using an idea they came up with, modifying a commercially built 2.4 GHz module intended to convert a 35 mHz transmitter to 2.4 GHz, and making a unit to add to a module that would provide the necessary signal to operate a servo on the aircraft.

The heart of the transmitter is an 'Orange' 2.4 GHz transmitter module sold to convert Futaba 35 mHz transmitters to 2.4 GHz. The module is available from Hobby King, part number SKU:917000069 with a price that seems to vary between £17.00 and £25.00.

Using this module means there is no problem with frequency clashes.

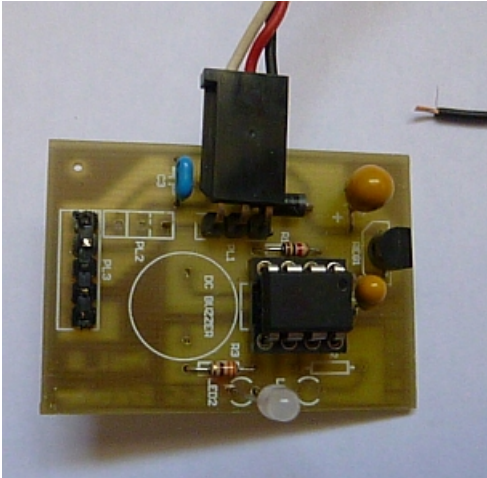


The 2.4 GHz module.

The next thing required is something to send pulses to the transmitter module to operate the DT servo. I have produced my own boards but fortunately, the person who produces the single channel equipment is offering to make these boards specifically for radio DT. These are complete with all components and the programmed PIC (micro processor) for approx. £15.50. The only extras to buy are - a push button, an on-off switch and a battery. Two LiPo cells or one 9 volt PP3 battery will do - all obtainable from Maplins. The 'single channel unit' just plugs into the back of the TX module.

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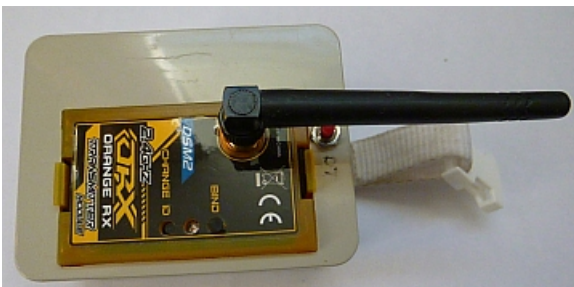


The board complete with the programmed PIC. The three connections are red/black - supply voltage, and white/black - connected to the push button. (To operate the DT.)



All the parts (less case and battery) to complete a transmitter. 2.4 GHz module, PIC board, power switch and push button.

Below is the boxed DT transmitter unit, made up of the 2.4 GHz transmitter module and the 'single channel board'. The box is obtainable from Maplin. (Project box - 80x60x40 - code N23HG.) I just had to add the on/off switch and the (DT) push button, plus a battery and wiring.

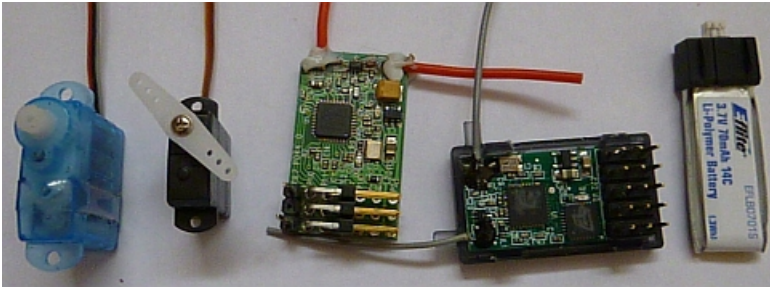


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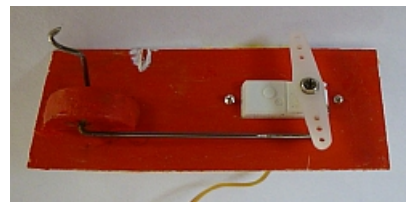
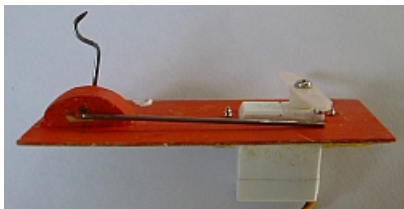
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Any Spectrum/Orange receiver DSR compatible receiver will be suitable for the airborne equipment. I have found the 'Orange' RX 410X receiver has given me sufficient range and with the case removed weighs only 2.7 gr. The receiver will work on a single cell LiPo. The servos I use are lightweight (1.7gr). There are many available but beware that the socket might not be compatible with JR/Futaba plugs. Either an adaptor will be required or the socket changed and slightly heavier servos can also be bought..



Items for the airborne RDT system. Left side – 7 gm servo, 1.7 gm servo, 'Orange' receiver 2.4 gm, Spectrum 5 receiver 2.8 gm, 70 mAh lipo cell 2.6 gm. Using the 1.7 gm servo and 2.4 gm receiver the weight with battery is 6.7 gm plus wire.

Because lightweight servos do not have much torque, I use a 'mousetrap' system (below) to release the DT cord. Simply looping the DT cord over the servo arm means the servo is constantly trying to work against the pull, so drawing a much higher current than the 'mousetrap' release. It's not much of a problem with an electric model and high power batteries.

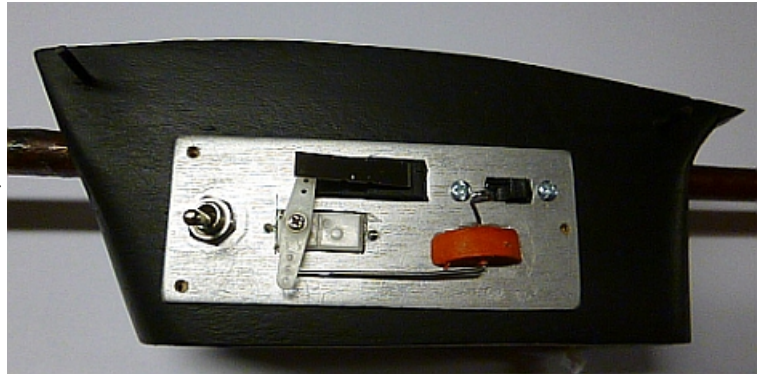


Above, the simple 'mousetrap' system on a plate – very little force is placed on the servo.

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# Biggles News - 2015

The PIC can be programmed to provide motor stop plus DT for E36 and BMFA/F1Q models. For example, on the first press, the servo is programmed to move 45 degrees one way for motor stop. On the second press, the servo moves 45 degrees the other way and releases the DT arm.



On the right is a DT/motor stop method I used in my E30 model. The motor microswitch is released and locked in the 'off' position by the servo arm. When the servo cycles in the other direction, the 'mousetrap' DT is released. Once stopped, the motor can not be reset to run again without using the transmitter to reset the servo arm.

## Some words of caution.

The receiver and transmitter need to be 'bound' together - where the 'bound' receiver can only respond to signals from its own transmitter. Full instructions are included with the transmitter module. Do this binding at home; it is just possible that while binding your receiver on the field someone else could be doing the same thing and the things get mixed up!

It is worthwhile to do a range check before launching your prize model into the air. Instructions for range checking are also included in the module instructions.

There is no indication on the transmitter for when the battery is getting low – make sure the LiPo's are fully charged before flying and/or check the PP3 battery voltage is OK.

The small servos have delicate interiors and the servo arm should not be turned by hand.

Some suppliers of radio equipment and electronic components are:-

[hobbyking.com](http://hobbyking.com) – radio equipment.

[esr.co.uk](http://esr.co.uk) – electronic components.

[cpc.co.uk](http://cpc.co.uk) – electronic components.

If anyone has experience of producing their own printed circuit boards I can let them have details of my smaller transmitter - it does mean removing the case from the transmitter module and also making your own board for the PIC.

Gordon Warburton 2014

# Biggles News - 2015

Andy Crisp writes...

**OXFORD MODEL FLYING CLUB**  
**FREE FLIGHT RALLY 2015**

PORT MEADOW, WOLVERCOTE, OXFORD  
SATURDAY 20<sup>th</sup> JUNE & SUNDAY 21<sup>st</sup> JUNE

Saturday - starting at 6.30 P.M.  
champagne fly-offs - FIG, FIH, H.L.G/cata

Sunday - starting at 10.00 a.m.

FIG (CAH)	}	5 flights, in rounds - flown from line
FIH (A1)		
E30/P30/CO <sub>2</sub> (comb)		
VINTAGE RUBBER (34" max span)	}	3 flights - no rounds from line
* VINTAGE/CLASSIC Glider (comb.)		
† TAIL-LESS (R+G comb.)		
‡ Hi-start GLIDER (36" max span)	}	- 7 flights
H.L.G/Catapult (comb - from "box")		

All TOWLINES 50 metres  
\* Vintage gliders 10 sec flight bonus  
‡ Launching line - 30m inc. 7.5m rubber

NO streamers on poles, thermistors, bubbles etc  
NO i/c POWERED MODELS TO BE FLOWN  
ALL FLIERS MUST BE INSURED

CONTACT: ANDREW CRISP      Telephone: 01865 553800  
1 GROVE STREET  
SUMMERTOWN  
OXFORD OX2 7JT

"Below are a couple of plans for the next Biggles Newsletter. Both had quite a bit of flying on Port Meadow in early 2014."

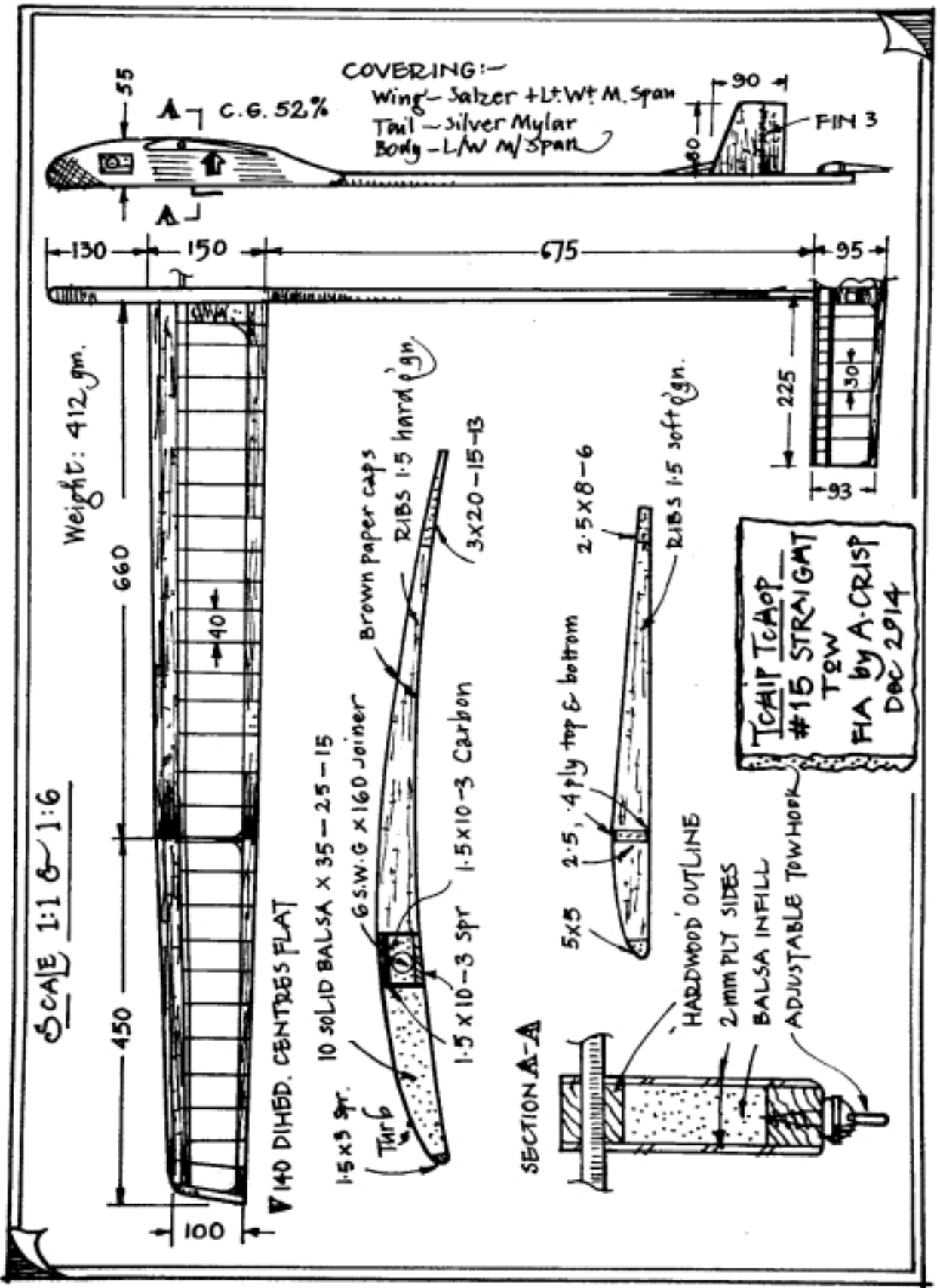
'Tchip Tchop #15' is a straight crib of Victor Tchop's 1987 and 1988 World and Euro champion simplified to suit my own limited constructional ability.

'Blue Note #14' is similarly a paraphrase of a typical M&K long model, but with a glass covered balsa D-box to simplify things. It's stiff enough for my modest launches.

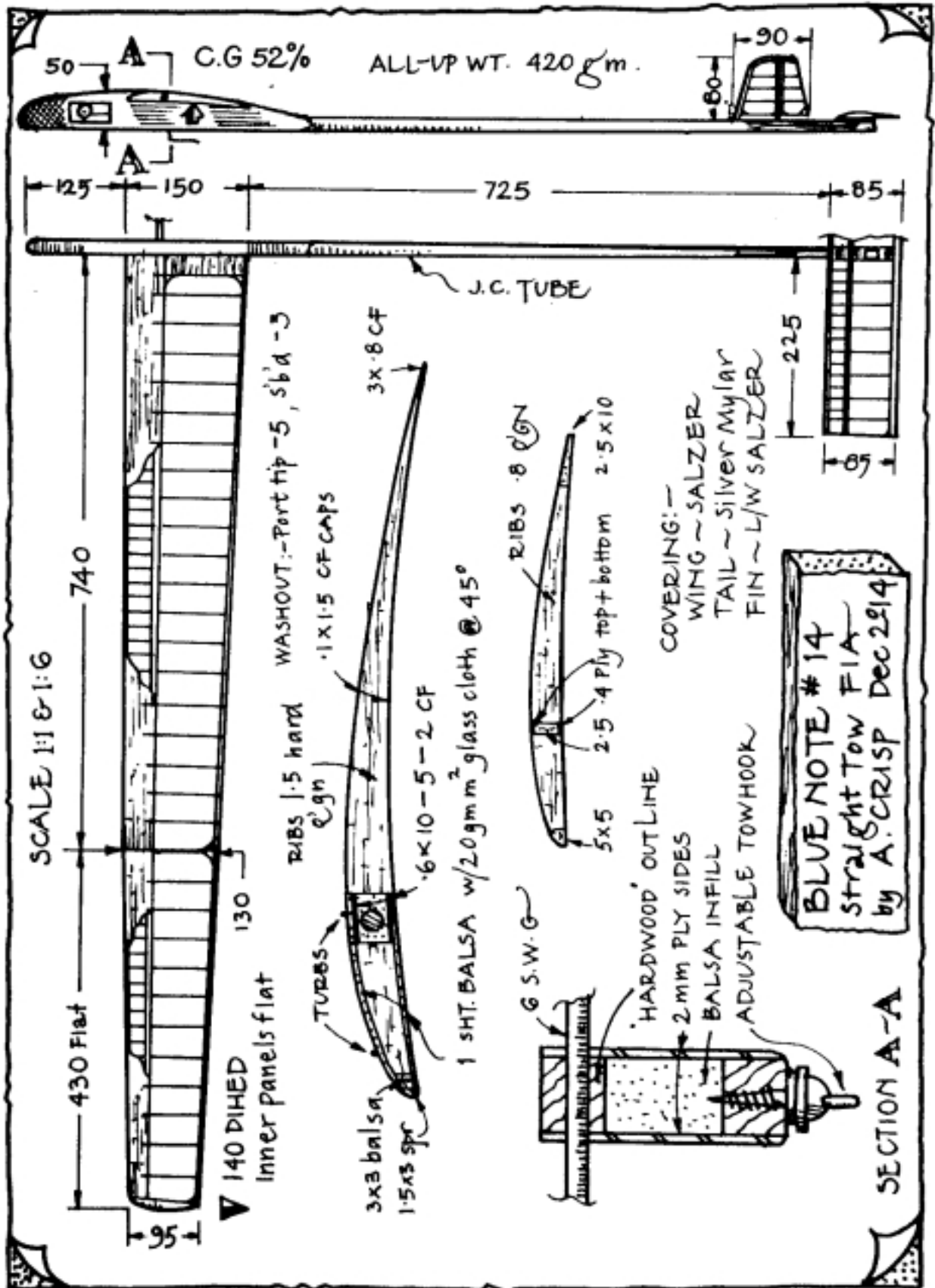
The reason behind these models is that from a 75m. line they should be in the same height band as what I have seen from a typical British bunter and thus stand a reasonable chance in B.M.F.A. Glider.

Andrew Crisp

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# Biggles News - 2015

## Reflections... by Steve Brewer

2014 felt like a bit of a non-event for me from an aeromodelling perspective. Various life events occurred that took up the majority of my time. Positives being our second daughter arriving in March and building an extension to our home. On the down side the extension being built about 12 weeks later than planned meant walls were being knocked down during a 2 week visit by foreign relatives, not forgetting a bit of a health scare, thankfully nothing serious.

Despite this there were still a few highlights from the seasons flying; the most memorable has to be winning HLG at the Nationals. My first HLG contest was at the Nationals in 1994 and despite placing on occasion I'd never managed to lift the trophy until last year. Requiring a last flight max to win in the final minutes of the contest was to put it mildly, a testing experience. The thermal of thermals arrived in the nick of time and Disco Volante No2 soared away on a long DT for a flight of 2 ½ minutes, just to make sure! Another point of interest must be the experimental competition flown at Luffenham towards the back end of the season. HLG/CLG being flown in short rounds with a 2 minute launch window made for an enjoyable and very close contest. The cakes at the prize giving went down well too.

Looking forward, 2015 will hopefully be more productive. No new models have been built as yet although that will need to change now that daughter no1 (aged 8) is a fully paid up BMFA member. The plan is start with 12" CLGs flown on reduced catapults.

## GPS Smartphones for Retrieval

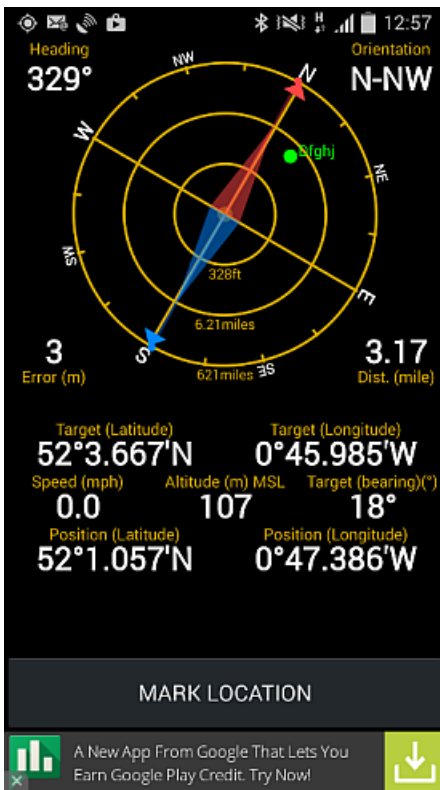
For a number of years I've been an avid smartphone user, initially with a Nokia N95 running the Symbian OS which despite having an integrated GPS receiver never really seemed that intuitive to use. Most GPS applications I found were of little use to any serious outdoor pursuit type, let alone a free flight aeromodeller. Switching to Android about 5 years ago brought a leap in capability and since then I've quickly integrated these powerful devices into my day to day life and have found the GPS applications very useful for sporting activities too. The value added to my other hobby, cycling through the Strava GPS sports tracker application has been amazing and applications providing simple cycle computer displays and road map navigation have proven very useful at times. Carrying a powerful computer in your pocket has also opened up possibilities in Free Flight. Instead of buying a dedicated GPS device for retrieval I've simply downloaded a number of applications until I found one that met my needs.

Early attempts at finding an application focused on ones with map functionality. The free version of an application called Alpine Quest was combined with 1:25000 OS type mapping generated from open source maps on the internet looked promising. This allowed the projection of a bearing by simply dragging your finger across the screen until you found a suitable feature such as a road or footpath on the desired line. Multiple waypoints could also be stored along that or other lines if desired. After spending hours generating maps of the areas surrounding our regular flying sites I never ended up using the app in anger. I found the interface became more difficult to use and features seemed to be moved or removed from the free version as later versions of the software were released.

A work colleague and geocaching enthusiast then recommended another free application called GPS Status and Toolbox. This is a simple application that provides very basic GPS functionality such as displaying location, bearing and altitude and uses the internal accelerometer functionality of the phone to determine orientation. Critically it allows you to enter a waypoint or target into the application memory and then displays the bearing and distance to that target. Quite simply I use the application to show an accurate back bearing to the launch point from your "downwind" GPS fixed position. I've used this method to find models at longer range after leaving the flying field and also at shorter ranges. The most recent example being a tracker-less 30" discuss glider in chest deep grass on the undulating terrain of Salisbury Plain when using landmarks in a valley was impossible.

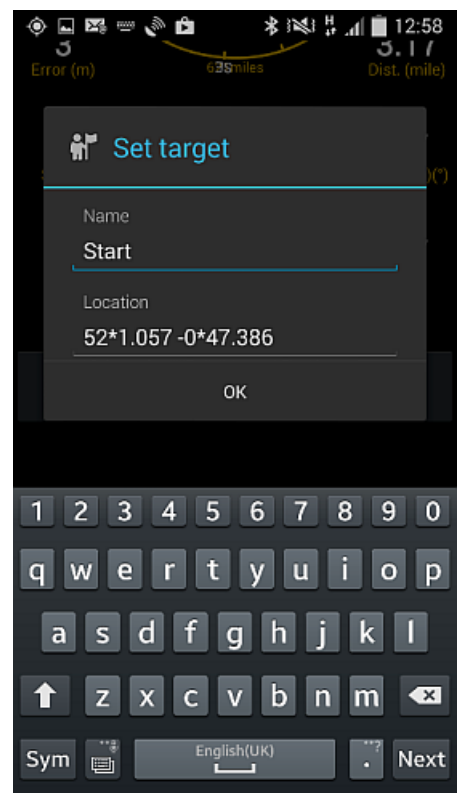
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In the following example a fictitious flight has been launched from outside the main entrance of the office where I work.



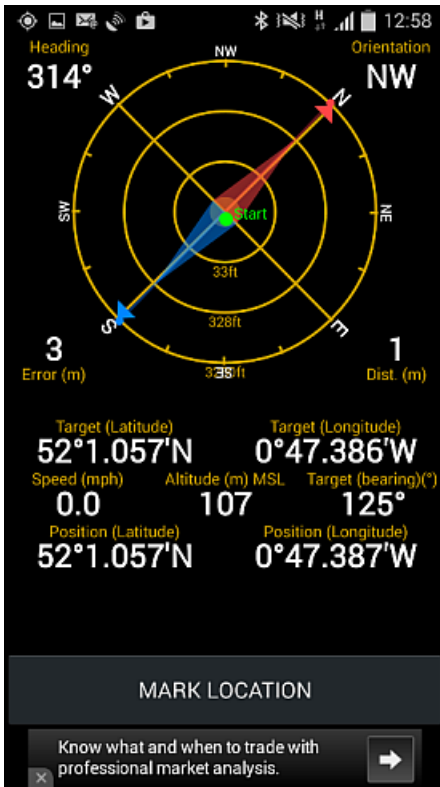
Here is the application “Radar” screen with a previously stored and unrelated waypoint called “Dfghj”.

My current position which is also the launch point is saved to the phone memory as a waypoint named “Start” by pressing “MARK LOCATION” (above). This point now becomes the back bearing target.





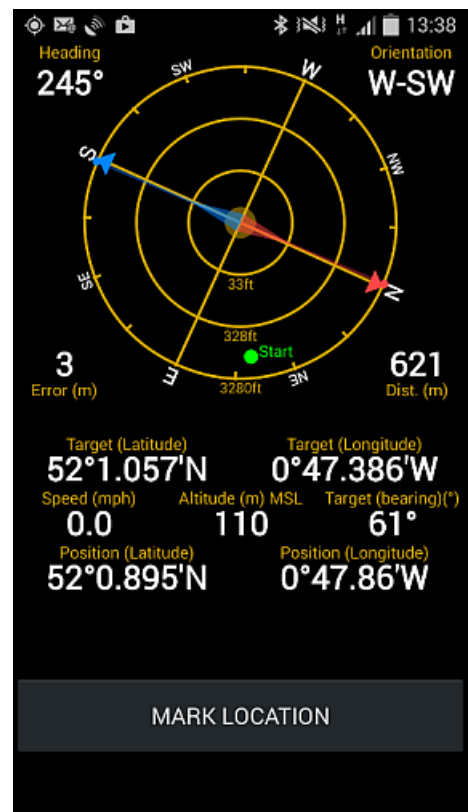
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Here is the target waypoint set - while still standing (directly on it) at the launch point! A compass bearing to the model's landing point of 241 degrees has already been taken with a sighting compass.

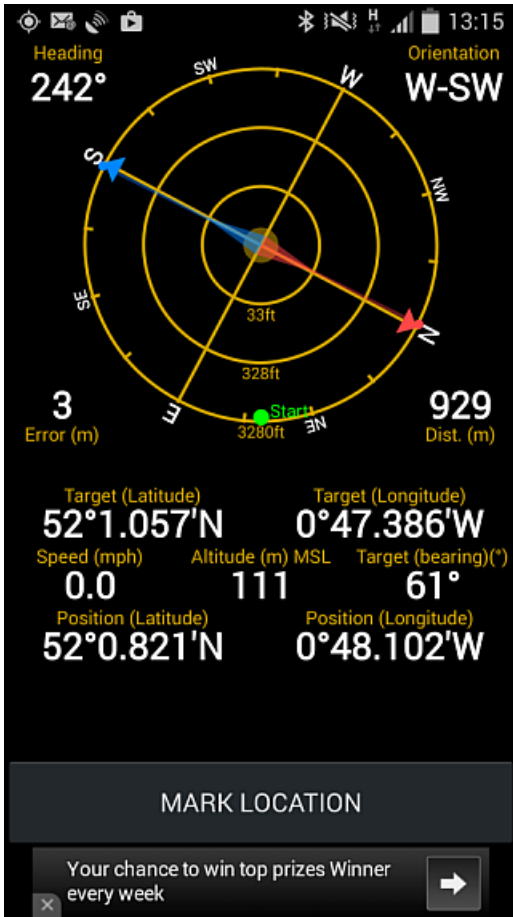
Walking the line towards the downwind model, a check is taken to ensure I am still on the correct line. Here, the "Target (bearing)" or back bearing to the 'Start' point is 61 degrees at a distance of 621 meters.

*(241deg. minus 180deg. = 61deg.)*





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Continuing along the same line another check is taken to ensure that the bearing to the launch point is the same. In this instance I am now 929 meters from the launch point still on a bearing of 61 degrees.

The process can be used as a simple check to ensure you are on the correct line or used to negotiate common obstacles requiring a deviation off line such as a river or wood. If flight duration and wind speed are used to estimate distance to the landing point then the Dist. readout could also prove useful.

If you can put up with the occasional advert appearing at the bottom of the screen then this application can convert your Android smartphone into a basic handheld GPS at no extra cost. The free version limits you to one active waypoint but a paid version is also available which I understand removes the adverts and enables the storing of multiple waypoints. Using the method explained above means that only one waypoint is required so the free version has proved to be sufficient.

The main issue I've found while using GPS on a phone for prolonged periods is battery depletion especially if you make or receive phone calls on the same day. I have however used continual GPS tracking for a full days cycling on numerous occasions with the phone screen off and have not fully drained the battery. The GPS Status application has various power saving facilities enabled by default for example disabling GPS while the screen is locked and also allowing the screen timeout to lock the phone automatically after a period of inactivity. My preferred approach is to only open the application when necessary e.g. to get a fix and mark the start point and then exit the application and lock the phone. This saves battery until you need to get another fix to check that you are still on the correct line. This should mean that a fully charged phone should easily last long enough for a day's flying. In addition to these battery conserving methods I also have an inexpensive USB power pack that can act as an emergency battery charger on the field and as yet an unused solar powered battery pack/charger which can be left on charge on the car dashboard for emergencies. This should prove particularly useful when away from mains power for a couple of days when camping at the Nationals for example.

I'm sure other applications are available that would do a similar or better job than "GPS Status and Toolbox", I just haven't managed to find one yet.

*Steve Brewer*