



Issue Number 23

February 2008

Hi Folks.

February already done with and it seems that now is the time of year that we all decide where our season goes and what events we will look forward to being part of, with a chance to look forward rather than grimace at how bad winter weather typically has been.

For me, February is a chance to fit into the newsletter the things that there just wasn't space for in January. Occasionally a product appears that is fun shows up, and for you this month I have one of these that could put some fun into our activities and help give an appreciation to those who never get a chance to experience the joys of hopping.

My Christmas treat to myself was an Oregon scientific ATC2K, and I offer it as an item you might consider as great value for money and a lot of fun in assisting pushing back the boundaries of our sport whilst still being inexpensive.

### Contents

In this 23rd issue I have for your consideration the following;

- 1, Ed Speak- Chit chat from your editor's perspective.
- 2, The Features Section-featuring the following:
  - Malcolm White reviews the January record attempts.
  - Pieter kooistra reports in from Ice & Fire, Mauterndorf Austria.

- The Oregon Scientific ATC2K - a Christmas Goody!
- 3. Updates for the Newsletter/Website/ Forum talk
- 4. Homebuilt Section -
  - Greg Winker is back with another instalment on building his Tetrahedron Hopper.
- 5. Gallery Pages- Another mixed choice of hoppers selected by your editor for inclusion.
- 6, Manufacturer News / Events / Updates
  - Details and Dates for the 4th Solo Meet.
- 7, For Sale /Wanted Section
- 8, Last and not least. HB-QAB

### **1, Ed Speak by Steve Roake -**

I am constantly amazed by the exposure that our form of flying is now generating around the world. The current advertising campaign for Landrovers Freelander 2 has given us substantial coverage with the mark, acknowledging the skills needed to fly hoppers and freely allowing associated credit on cloudhopping to be distributed. Since the forum was initiated in January 2004, the growth rate of membership to our fold has accelerated with more and more enquiries and uptake by new owners both with new and second hand equipment becoming attractive. Lots of older machines are being returned to flying condition and equipment previously only flown in the mid eighties are being renovated and Found, may appear at festivals around the country shortly.

Dragoljub Zamurovic, our Serbian member who flies YU-AOL, an Ultramagic 31 Solo, has recently caused a real stir on the forum by flying his hopper with a paramotor engine on his back .if you haven't seen his antics yet, check out his flight on the link below.

<http://youtube.com/user/mzamur>

## **2, The Features Section-**

**Malcolm White reviews the January record attempts, with extracts taken from his website.**

### **24th January 2008 - Female AX3 and AX4 Altitude Record attempts**

Early in 2007, a Japanese female balloon pilot, Minako Inoue, broke Pauline Baker's AX-4 duration record, with a flight of 7 hours 4 minutes, reducing Pauline's count of World Records to seven. The Irish team once again returned to Italy in January 2008 to attempt records in a number of categories, including gaining back the record that was broken in 2007. We took 5 balloons with us to Italy, including a slightly larger balloon that would carry two people, sat side-by-side in comfortable seats. The plan was to head to Mondovi, in the Piemonte region of northern Italy, where the geography is excellent with a huge wide-open valley where weather conditions are favourable for balloon flying 300 days a year.

We arrived in Mondovi on the 9th January, just two days after the annual balloon meet in Mondovi was held. Another reason that Mondovi was chosen was that not only did Pauline's piloting tutor, Giovanni Aimo, live in the town, but so did Paolo Bonanno, probably the highest regarded hot air balloon burner designer and builder in the world. Paolo was commissioned to build us a new burner for the new record attempts as the burner was seen as being the weakest link in the previous attempts in early 2007, despite still winning the records that were attempted. The plan was to carry out some test flights and maybe attempt a duration record if the conditions were cold enough. Sadly, the conditions in the region were very mild, meaning that a change in strategy had to be adopted. Despite the mild weather, three test flights were carried out and a number of modifications made in preparation for the real thing.

On the 18th January, the team travelled up to Switzerland to participate in the 30th Chateau D'Oex Balloon Festival. Similar mild conditions were experienced in Chateau D'Oex, with no fresh snow falling during the week, but excellent flying conditions were had on all but one day. The conditions were still not cold enough to attempt any sensible duration flights. With

this in mind, we closely monitored the conditions in Mondovi with the hope of returning there to attempt an altitude flight in one of the balloons. There was a high pressure forecast over the region on Thursday 24th January with little wind at any altitude, although with mild conditions on the surface (+10 deg C). It was decided to head back to Mondovi on the 23rd and make an attempt at the AX-3 altitude world record in the Colt 21A EI-DZA. With the mild conditions, the temperatures at altitude were a little high to expect to break the general record of 20,036 feet, set by Coy Foster in 1986 but the female record of 9,679 feet, set way back in 1965, the oldest hot air balloon record on the books, was achievable, as was the record in the next higher category of AX-4 of 12,545 feet, set in 1980. The freezing level on the day was at around 10,000 feet, very high for January.

Due to the small size of the 21A, it was elected to have a larger balloon fly alongside, piloted by Paolo Bonanno, that could carry the transponder and VHF radios. At around noon, we travelled to the airfield at S. Albano. A few miles to the north of Mondovi and nearer Cuneo airport. Calls were made to Cuneo and Turin to file flight plans and gain permission to exceed the Class G airspace ceiling of 3,500 feet. Both parties were happy to grant permission, but the airspace clearance had already been granted to the military. Several calls to the military were greeted with a firm 'NO'. It was suggested that Paolo speak directly with the Colonel and, following his lunch, he finally granted his permission for a slot after 14:00hrs when conditions were even warmer!

The two balloons were prepared and inflated. The 21A was flown with the lightweight Boland basket, Cameron mini-Mk4 burner and two 60 litre titanium tanks, one with 30% content for the landing phase. As a weight reduction measure, the support poles for the burner were plastic wiring conduit, much lighter than their regular solid nylon counterpart! A Flytec 3040, with envelope temperature sender, was attached to the balloon, although earlier tests in Paulo's workshop questioned the accuracy of this device. A test rig was built to test the sender against an engineering thermocouple and the Flytec always managed to read extremely low (100 deg vs. 125 deg and 150 deg vs. 190 deg).

At 14:30, Paolo launched with Pauline shortly behind. Frequent calls were made to Pauline to report on envelope temperature as she was climbing at

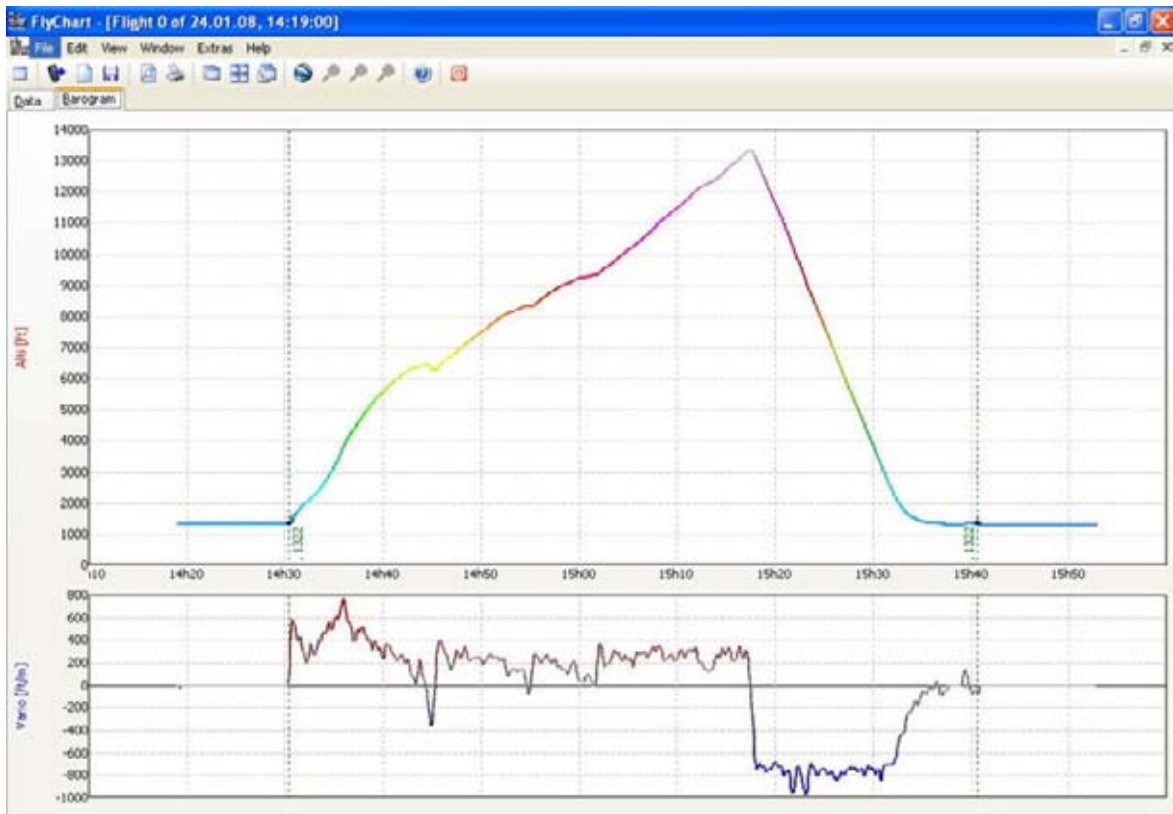
500 feet per minute in the early stages. Due to the mild conditions, the envelope temperature was higher than was comfortable, so Pauline was requested to slow the climb. Despite a climb of 750 fpm at one stage, when Paolo ascended to within inches of Pauline's basket, her climb rate was slowed to around 200 fpm where a stable envelope temperature could be found, taking into account possible errors in the reported temperature. Due to the slow climb, and the mild conditions, Pauline's fuel tank started to register before reaching 10,000 feet.



As it was clearly not possible to attain 21,000 feet (we had been given clearance to 22,000 feet) it was decided to climb to a comfortable margin to break the AX-3 and AX-4 female altitude records and then descend. The FAI requirements are to exceed the previous record by 3% on altitude

flights (1% on distance and duration). At 13,350 feet, Pauline started her descent, dropping at around 8-900 feet per minute before levelling off just above the surface. Despite the climb to over 13,000 feet, the two balloons landed 30 feet apart, less than half a mile from where they took off.

We would like to express our sincere thanks to a number of people who provided assistance for our trip to Italy - FAI-appointed observers Oscar Lombardo and Edmondo Bongioanni, burner guru Paolo Bonanno and his lovely wife, Nicole, the Aero Club D'Italia, the National Aero Club of Ireland, the Irish Aviation Authority and the rest of the ground team, namely Mary Baker, Giovanni Aimò, Paolo Oggioni and Monica, Bubba and the ATC staff at Turin and Cuneo airports. Lastly, we would like to thank Ashley and Timmy Donovan of Sean's Bar in Ireland who provided sponsorship for the trip.



The team returned to Chateau D'Oex, where the rest of the week had light winds in the valley, giving us the opportunity to fly each day for fun.

The plan is now to head out to Alaska at the end of February 2008, where surface temperatures are expected to be around -25 to -30 deg C, much more suitable for record attempts. Watch this space!

Malcolm White

**Mauterndorf Reviewed -Steve Roake with assistance from Peter Kooistra and Bennie Bros.**

Mauterndorf in Austria is the venue of a brilliantly organised meet called "Ice and Fire" by Markus Haggenev. The opportunity to fly distance from this venue coupled with an ability to loiter in the host valley leads to a variety of possible flying opportunities.



*Pieter kooistra in PH-PUK Colt 31A in Mauterndorf (jpeg supplied by P.Kooistra)*



For 2008 with plenty of snow in the region, this event fared better than most with plenty of flying for the forty odd entrants. Filmsmoos in the next valley only achieved two free flights in the whole week and whilst the weather wasn't great for long distance flying, and having a total of five hoppers present , those who had them played within the valleys with tethering also evident both at the customary Nightglow and during the week.

The valley that Mauterndorf is situated within is much more sympathetic towards flying than Chateau D'oex or Filmsmoos which are tighter and therefore technically more difficult to fly.



*Lindstrand 25A G-CDAD loitering over the airfield at Mauterndorf (jpeg by Marcel Van Breden and Peter Kelder).*



Pieter Kooistra who visits this meet annually from Holland, informed me that there were probably five flyable days during the week, and whilst longer distance flying may have been precluded, he saw five hoppers active during the time there (presumably the fifth one belonged to Steve Burden-Ed?), all taking advantage of the conditions to get some flying done.

I would just like to thank Bennie Bros for his help with this feature. Bennie chased for me some jpegs that were used on his excellent newsletter site [www.ballooningpictures.com](http://www.ballooningpictures.com) where he featured an article from Marcel Van Breden and Peter Kelden in Dutch, but agreed to get copies for me to use here with the owner's permission and I liked the idea of using shots with landscapes for a change to get atmosphere of the surroundings.



*Free flying near the village is G-CEFB Ultramagic H-31(jpeg by Marcel van Breden and Peter Kelder).*

Editors' note- I know we have spoken on this subject, but wouldn't it be great to get together and have a winter hopper meet along the lines spoken about previously by Richard Sargeant- anyone got any good ideas? Please let's hear them for consideration.



*Steve Lacey's G-LELE Lindstrand hopper tethers in the winter sunshine-(jpeg by Marcel Van Breden / Peter Kelder).*

## The Oregon Scientific ATC2K- camcorder

One of the main drawbacks of flying a cloudhopper is that you have no real way of expressing all the attributes of the flight besides the worlds you find to try and relate to your audience. Even the most articulate of people find that they end up feeling that the explanation of the experience is woefully short of the real life experience.

Andy Doggett (my crewmate and list member), discovered a product that could help change the shortfall and possibly help share the experiences to a wider audience. The Oregon Scientific ATC2K camcorder comes with a memory card up to 2 GB size and with it the possibility of up to 1 hours recording ability. Having discovered the camera, and then watching exciting videos on YouTube, it dawned on me that if mounted to the bottom end of the hopper or via the head strap, I could potentially show people



*My Christmas Gadget - The Oregon Scientific ATC2K -only £80.*

how the flight was for me and share the footage. The great thing about the ATC2K (or ATC2000), is that it is totally self-

contained, waterproof and easy to use with a low purchase price. I paid via Ebay under £80-00 all in for the equipment and suggest it could be a great tool for other pilots to enjoy. If we have sufficient interest with these type of cameras potentially, we could make up some great explanatory footage for sharing.

So this was my Christmas Gadget and I hope you all think about getting one too, together we can have some fun with these. Various mounts and fixings come with the kit and all I need now is the weather and experiences with which to hone the filming.

### **3, Updates to the website / Newsletter/ Forum Topics**

Plenty of activity on the forum again this month with two topics of particular popularity amongst the many and varied posts. The most interesting has to be our Serbian friend, Dragoljub Zamurovic, who has posted a great video (with the link highlighted earlier), of his first flight in the Ultramagic Solo with a paramotor engine strapped to his back. Dragoljub tells us his directional control is still utilising the turning vents on the hopper. The second subject (which I have to be honest and say I wasn't aware of the validity or not), is about trying to use a hopper in competition flying in America. The main thing for me is that you all continue to express yourselves which is precisely what a forum is for and I am tremendously pleased to see levels increase month on month.

With regard to newsletter/ website updates, I am always open to suggestions on how to improve what content we have and would welcome your inputs to any suggestions on how to improve what we already have. My good friend Les Hancock, tells me he is devising some great software for the new improved website which is taking a long time but when completed will enable me to place

updated data directly onto the site myself which should enable us to have greater flexibility and more frequent content changes.

#### **4, Homebuilt section**

Greg Winker returns with the next part of his project.

**Building a Cloudhopper**-by Greg Winker.

#### **Part 6 - The Bottom End**

The commercially available bottom ends from Lindstrand and Cameron are nice. Really, really nice. Unfortunately for me, they're a bit pricy - at least to someone who's trying to stick to a homebuilder's budget. I could save up to buy one of these beauties, but I don't want to wait that long to start flying my hopper. So rather than put things off until I can afford the best, I'm going to start out with a low cost solution - a tank rider set up. I can always come around later and upgrade to first class.

[Important Note: When Graham Bell's hopper came on the market, I lost control and purchased it, mainly to get a hold of one of these beautiful bottom ends. In spite of this significant development and to remain true to the idea of a complete homebuilt hopper, I'm going ahead and building the tank rider set up. Based on the type of flying I expect to do, I can see opportunities to use it from time to time.]

One of the US balloon manufacturers - Aerostar Balloons (aka Raven Industries) - sold balloons with custom fabricated 20 gallon horizontal stainless steel tanks. These tanks are commonly available on the secondary market for a few hundred dollars. The minimalist's response to a basket is to simply cable up one of

these to a load ring and sit on it. For those of us with poor balance, adding a safety harness is a good idea to keep from falling off.

Unfortunately, these tanks only come in a 20 gallon version. From what I've been able to tell, that's a lot of fuel for a hopper. Even worse, when the tank is full, it weighs about 125 lbs. That increases the difficulty of hauling it around too. Fortunately for me, I know people who like to tinker. My friend Guy Gauthier at Balloon Repairs of East Texas took one of these 20 gallon propane tanks cut a 9½" slice out of it and welded it back together. This resulted in a 15 gallon tank with an empty weight of 30½ lbs. Fully fuelled, it comes in at 95 lbs. That's a 30lb. improvement. Plus with the smaller size, it's more convenient to transport and hopefully, more a reflection of how much fuel I'll need for a typical flight.

So what are the important bits in a tank rider set up? Here's what I ended up using:

- Propane tank
- Heat tape
- Insulation
- Tank cover
- Suspension cables
- Load ring
- Burner
- Fuel hose
- Safety Harness
- Cup holder



*Custom hopper tank and all the fixing's -jpeg by Greg Winker*

Now that I have completed the project, I can tell you there's not much to it. I put the whole thing together in just a few hours time. Rather than go through a series of tedious and monotonous steps describing how to build one of these, I think a few well done photos of the project should work just fine. So here we go with a detailed look at the completed tank rider bottom end:





*Jpeg of the entire set up- (all jpegs by Greg Winker).*



*Tank cover front*



*Tank cover rear*



*Detailed look at cable attachments bottom*



*Detailed look at cable attachments top*



*Ride 'em cowboy! Greg riding in the garage (Does he look happy or what? -ED! Must be because the work is done!)*

Bottom End - Time to complete - 5 hours

With this task completed, we are nearing the end of our project.

Coming up next - Certification

Many thanks to Greg for the update and great jpegs.

## **5. Gallery Pages.**

This section is the Editor's choice of new and older jpegs.



*Slightly more Faded than I remember, G-SEAT Colt 42A is making a comeback thanks to Dave Such who will give us more details of its' return in next month's newsletter. (Jpeg D. Such)*



*Please remind me! Whose lovely hopper is this?*



If your hopper /Duo picture has yet to feature in this section of the Gallery pages, send me a jpeg of approx 600kb size for future inclusion. Usual address [Steve.roake@ntlworld.com](mailto:Steve.roake@ntlworld.com)

## 6, Manufacturer News /Events /Updates



Once again I have been in touch with Colin Wolstenholme at Cameron Balloons Limited for the most up to date information on subjects close to our hearts. On the forthcoming latest version of the Cameron hopper base unit, Colin is understandably reticent to make claims that may not be backed up in the fullness of time but was moved to say that the design has now reached prototyping stage with (and I stress this is only a possibility) a chance of the prototype being at the solo meet, that Colin is planning to attend himself. I am reliably informed that the blade suitable for the Cameron Hopper fan as a replacement for the current in efficient Egg-Whisk currently supplied with the 3.5hp engine will also be present. If you care to look for me at the event I will be testing it out on my Colt 31A. Personally, I can't wait for this as two weeks ago I inflated my hopper using my fan and words cannot describe how bad the current performance is particularly when Klein fans are maximising performance out of smaller engines. Third and final enquiry to Colin related to previously talked about plastic cylinders that may appear in the future. Current position is that they exist in 40litre format with a view to producing 70litre versions. What Cameron Balloons are stalling at with their production is the manufacturer's insistence that they buy 5000 first off which in today's economic climate is hard to justify naturally.



## The Solo Meet (2008)

The fourth annual Solo Meet held by Black Horse Balloon Club is scheduled for the first weekend in May over that bank holiday. I am already receiving greater interest for it this year compared to previous events with at least two/possibly three new hopper s who have not entered before confirming to me their interest in attending. We are trying to make this event even better and should the weather be as glorious as in previous years, a good deal of flying should take place. For entry forms which include a reduced price entry form previous entrants who reuse their maps from previous years see the website.

[www.solomeet.wanadoo.co.uk](http://www.solomeet.wanadoo.co.uk).

All we need is your participation and some nice weather and we should have a great time.

## 7, For Sale /Wanted section

With both Lee Hooper successfully selling his hopper to Paulo Oggioni in Italy and John Tyrrell moving on his hopper bottom end, this section is currently empty and awaits your adverts.

As a reminder , all we ask for you advertising you sales items is that you donate up to and not more than £20-00 for advertising both here and on the forum . All donations are subject to you achieving sales as a direct response to our collective efforts.

We only can improve with your donations assisting our growth and I trust that all who said they would donate will do so!  
HINT HINT to those who said they would!

## And Finally



Sent in by Mark Stelling HB-QAB is a Lindstrand 31A belonging to Stefan Zeberli of Hohenzelg Switzerland and believed photographed at the recent Carpineti meet in Italy. Anyone know him? As he isn't a member yet!

Membership (current to end of February 2008) stands at a very healthy 351. Please keep putting the word about, we only thrive by growth and your inclusion of articles and projects.

All articles for inclusion in future issues will be gratefully received by your editor. Please forward them to [steve.roake@ntlworld.com](mailto:steve.roake@ntlworld.com) and feedback good, bad or indifferent is always welcome. Views aired by contributors may not be those of the Editor

Safe flying

Steve Roake.

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