



Issue No3

Autumn /Winter 2005

Hello Everybody and Happy new year.

Welcome to the 3rd edition of the magazine for the cloudhopper.org forum. As you can see the monthly bit has been left off because with the trip to Metz France and a couple of events here in the UK, there just wasn't time for doing the magazine.....so in true "cop out" style, I've decided to do an Autumn / Winter special.



As you can see, even your Editor has at last free flown his Colt 31A hopper. This jpeg was from the recent Harvest Moon meet at Savernake forest Wiltshire....but more on the event later.

Content

In this edition we have for you details on:

1. Ed Speak- More ramblings from your editor!

2. Essential Extras - Nothing to report this time around as no-one has suggested anything to feature.
3. The features section.
 - Andre Van Wyk's thoughts on hopper developments
 - My hopper Choice- How and why I chose what I did.
 - Skychariots - A review of them including a closer look at a 1980's T&C owned by the Balloon Preservation Group
4. Updates on the website.
5. More sightings on the gallery pages at the website.
6. Manufacturer Updates/ News/ Event Details.
7. For sale section.

Ed Speak- By Steve Roake

Hello again folks, third issue and yes information is beginning to dry up. I Took the safe option of combining the last few months into one but basically I need more of your input to get some stuff together for each edition. But first, following the discovery of Malcolm White's first ever Irish Hopper last newsletter, I am delighted to welcome the man himself to our list .Not only does it spread the message about our group further, but also adds Ireland to the ever increasing list of countries served by our small but growing community .

Most European pilots headed off to Metz France in July for the Pilatre-de-Roiere, festival a very successful event which has now happened ten times. The hopper community was there in force but not many hoppers were on show, with only two spotted and two duo chariots. More on Metz later. However, safety is always the first thought at any event and Sarah lyth (features again), and her group of friends unfortunately suffered a road accident and were

hospitalized. Luckily all walked away from the overturned vehicle relatively unscathed, and are healing wellthe car was less fortunate and may not make it.

As I always say on the yahogroup list, this magazine will live and die by your input or lack of it. Some of you voiced concerns as to how we will fill monthly issues. The simple answer is this, should there be no content then the issue will be small, if nothing is received then nothing will be put out. However , the mailing list is going great and membership now stands at 154 which is very healthy, so welcome to the newcomers one and all .Please feel free to contribute to the debates and offer your own experiences for the rest of us.

Features This month

Andre Van Wyk's- Personal thoughts on hopper developments

The Holiday on Ice theme for 1988 was Around the World in 80 Days. The Swiss promoters thought it be a good idea to use hoppers in their marketing campaign. Well, I've never flown a hopper before but the financial package was good so I accepted. I'll tell more about the thrills and spills that accompanied this campaign.

I enjoyed flying the hopper but did not like the T&C Mk 1 bottom end at all. Hanging in a very uncomfortable harness, unable to tilt your head up to see where the pilot light is in case of a failure, two aluminum brackets waiting to tear your ears off or break your collarbone on landing and a limited fuel supply did not appeal to me. I stayed away from hoppers for the next 10 years.

I bought an Airtour 31 from Pete Bish and borrowed a Cameron bottom end from a friend. This bottom end was a great improvement on the old T&C. Although you were more comfortable sitting in a chair and not hanging in a harness, it still had its shortcomings. It was still

very difficult to look up to the burner but the feature that almost gave me a heart attack was the twist grip for the burner.

Helena, my partner, although not a balloon pilot yet, also wanted to try it out. I only had one tetherline so I tied the one end to one of the karabiners (big mistake) and the other end to the vehicle. A few quick instructions and she lifted off. As she lifted off the bottom end rotated and the tetherline twisted around the frame and over the cable that leads to the twist grip opening the burner. She went up and up and up until the tether line was as tight as piano string and still the burner was going. Not knowing what the problem was I tried to shout instructions to her. She kept her cool and just pulled the ripline. Close to the ground the tetherline released and the burner stopped. I was shaken. Helena? More determined to get her balloon license.

After attending the One Man Meet in 2000 with an Airtour 31 and a small basket, I bought a T&C hopper burner of which the tank has been removed and the harness lost. I saw a photo of the new T&C bottom end with the two tubes running down from the burner and I realized that that design has solved a lot of problems. I bolted my vintage hopper burner to a piece of boarding with an empty 20 litre drum as chair. The big think has started. The birth of the Customcraft hopper bottom end was inevitable.

I decided to cut the 50mm tube below the burner just before the bend, fit a valve inside the tube and weld to 30mm tube bends to the 50mm. Unfortunately, after cutting the 50mm tube I realized that this thin wall tube would not take the eccentric load of pilot and maybe 80 litre tank that will be transferred to this tube. So this tube was completely removed and replaced with a thicker wall tube. A standard T&C Magnum burner block was slightly machined to fit inside. Standard Hokey valve and Cameron vaporizer was used for the pilot light. The stem to the pepperpot I had to machine to fit into the limited space. The Piezo lighter comes from a T&C Mk 4 burner. So all parts, although some slightly modified, come from Cameron/T&C.

The bottom U-frame fits into the top two tubes and fixed with Pip pins. This allows you to dismantle the entire frame for easy transport and can accommodate any size tank.

Conrad, my son, got hold of a paramotor seat and set out to make a seat for the hopper bottom end that would be as comfortable as a paramotor seat. He achieved this and more. Underneath the seat he fitted a pouch in which to store the envelope bag. On the side of the seat are several pockets for radio, lighter, mobile phone etc. etc. All in all the Customcraft Mk 1 hopper bottom end turned out to be what I wanted and as a bonus, the complete bottom end weighs only 16kg or about the same weight as a Lindstrand hopper burner without frame and seat and cost about half the price of a T&C or Lindstrand bottom end. Not bad.

The only problem we had with the Mk 1 was that the vaporizer tended to freeze up so I fitted the original vapour pilot light to it as well. This freezing is a common thing with Cameron burners fitted with the local manufactured vaporizers. They solved the problem by introducing a copper shaft fitted close to the vaporizer and the top end in the pilot light flame.

The Customcraft Mk2 bottom end saw a few improvements. A cowburner was fitted and the stem between the pepperpot and the vaporizer was machined out copper. This acts as heat transfer and the problem of the freezing pilot light was solved.

My Mk 1 bottom end has now done more than 60 flights in four different countries.

So far four Mk 2 have been build. Paul Bailey and Paul Stapely each owes one here in the UK, Conrad has one in South Africa and one is currently been tested in the USA.

Paul Bailey needed an envelope. He got tired of borrowing my Airtour 31 so I sat down and designed a vertical cut flat gore 25. We collected all the balloon material off-cuts from the workshop and bought a couple of hundred meters more from Pete Bish. With no colour scheme in mind we cut the panels and just sewn them together as they come. Conrad was not impressed with this burst of colours and suggested I apply for registration marks G-PUKE. Paul Bailey suggested G-SICK. I got G-CCKZ. Coming from South Africa maybe not so nice. Read fast and replace Charley, Charley with Custom Craft. It sounds like **C**ustom **C**raft **K**ill a **Z**ulu.

Surprise, surprise, everyone liked my multicoloured hopper. Paul Bailey however decided to have a 25 in his company colours, red and black. The Bailey dump valve for performance cars are world-wide used. He decided on registration marks G-DUMP.

A feature on the Customcraft hopper envelope is the two riplines. Hopper pilots know that very often when you come in for a landing the ripline would be behind the pilot so you first have to turn yourself around to get hold of the ripline, and then turn yourself to face the right direction for landing. When you pull the ripline on landing you tend to turn yourself around again, away from landing position.

To solve this problem we fitted two pulleys, one directly opposite the other. The ripline has a knot and a wooden bead approximately one meter below each pulley. So whichever way you face the ripline is always within reach.

The next step was the fan. No use you have a balloon that fits inside the boot of your car and a massive fan you need a trailer for. The result, a 2.5hp multi-blade fan. Small enough to fit with your kit in the boot of your car and still powerful enough to inflate a 42.

After my visit to the One Man Meet in 2000, I mentioned the need for a small lightweight basket to Conrad. He left for South Africa to fly the game reserves during the UK winter season. While there, he built a 42 envelope for himself. On his return to the UK he asked me to build a lightweight mini-burner for his 42 while he builds the light weight basket I've mentioned. The basket complete with poles, pole covers and burner frame weighs only 30kg. The mini-burner turned out to be as powerful as the old T&C hopper burner but quitter and weighing only 8kg.

When Ian Chadwick saw Conrad's basket he immediately ordered one. Pete Bish wanted a basket even smaller which he can take with him on his world tours. After a bit of head scratching we build a basket 80cm x 60cm x 1m high. The sides each have an opening of 30cm from the floor to the top frame. Two Worthington tanks then hook on each side on a bracket welded to the bottom frame and strapped snugly into the openings. The openings save weight. Handy

pockets on the tank covers face to the inside of the basket for storage. The basket complete with poles, pole covers and burner frame weighs less than 20kg.

Regards

Andre



Andre's Unique Baskets: Mark one on the Left and Mark 2 on the RHS.

My Hopper and How I chose the final selection-Steve Roake

Flying a Lindstrand 90 balloon, the skeptics amongst you will say it was a forgone conclusion that I'd buy from the same manufacturer, however you'd be wrong to think that because with a Colt 31A envelope (with turning vents) I was keen to explore all the possibilities where the bottom end was concerned.

Being of an Engineering background, I also wanted the facts as far as I could get them and soon discovered that weight is paramount- particularly as I weigh 98kgs myself(Fat git!). Therefore in my quest for knowledge I contacted all three (Lindstrand, Cameron and Ultramagic Balloons Ltd) of the

manufacturers for their product information and most importantly all up weights. The one criteria that above all else I wanted was cost effectiveness and ability to use any of my own equipment where possible. Ultramagic were first to reply, and having seen close up the new Duo chariot, and understanding the idea behind a Fuel tank with two different leveled dip tubes and supplies (like a motorcycle tank reserve switch), felt interested but a bit miffed that my tanks wouldn't be part of the kit if I went this way. Therefore unfortunately with an all up weight higher than the other two systems and the need to buy a dedicated tank for the system, this combined price and weight consideration ruled this one out of the running. The weight differential was only around 9kgs but as weight is King in hopping and surprisingly the whole system worked out more expensive than the opposition, it had to go!

Next into the frame was the latest from Cameron Balloons Ltd, with their latest chariot which features a rather comfortable Hang glider based seat arrangement and two useful mirrors to gauge the fuel contents with. This set up utilizes any tank that you want to use so once again fitted my criteria, and so long as the price was competitive I would be happy to buy one of these. The only down side to this system in my opinion would be the transportation of the bottom end which I believed had no dedicated storage bags. (I like to keep my kit tidy when not in use).

Finally the mark 2 Lindstrand cloudhopper bottom end which again has the ability to use any cylinder, thus utilization of my existing tanks wouldn't be a problem. Weight came in at equal bottom (along with the Cameron at 9kg for the burner and 13kgs for the frame) which with their tailored bags for both the frame and the burner tipped the balance. Having bought from Lindstrands

before, I managed to secure a reasonable discount on list price for the bottom end and thus in reality the decision made itself. As you can see below, when new these things are a work of art.



I was also fortunate that a couple of list members had previously contacted the manufacturer regarding a burner flame pattern problem, and so when I took delivery of my bottom end, I had the adapted jet sizes that concentrate the pattern better already fitted. For those of you with mark 2's, it involves blanking off some of the holes in the ring and increasing some of the inner holes to 1.5. The following jpeg should show you the new arrangement quite clearly.



Some three holes to the left hand side are clearly bigger than the others with the next four blanked off. Of note also is the fact that because my Colt 31A has turning vents, the plate that normally spins on bearings is clamped fast in this application.

So that was my choice, and I will keep you up to date with progress as and when it happens but as you could see from the jpeg at the start of this edition, free flying has taken place.

Skychariots

Skychariots have been around for ages and there are quite a few in circulation with some fine examples still flying regularly. The benefit of this application compared to the hopper arrangement I described earlier is that the tank is an integral part of the system, usually placed below the seat with a sump guard protecting the tank and effectively giving more hardware to keep

the pilot safe when landing. Skychariots also use spacer poles to mount the burner on a fixed framework with a gimbaled mount for good directional control of the flame pattern. The other benefit of this style of system is that you can clearly see the fuel contents gauge and that you can mount your instruments as usual on the poles. The beautiful example shown below is a Thunder and Colt Mk2 skychariot and has just been sold via the Zebedee list.



It is interesting to compare the more modern type of skychariot with an earlier design, in this case the Thunder skychariot from around 1982 and a fine example owned by the (BPG), Balloon Preservation Group, and for a short while in my care earlier this year. The whole thing is more agricultural in its design as too be expected and whilst I'm sure on a nice day would fly lovely, I didn't trust myself with it, not convincing myself to be able to relight should I have pilot light failure. The nice little feature on this example is the secondary tank for inflating off (with approximately 15% of the Worthington main tanks fuel capacity). This is fed via its own dedicated fuel line so I guess in a crisis you could use it as a reserve tank.



I did hope for more features on skychariots with some detailed analysis of how they fly (naturally they use turning vents in the envelope) but unfortunately the promised articles did not arrive. However, do check out a great site by Keith Sproul at www.skychariot.com for more information on charioting, including his own home built duo chariot design.

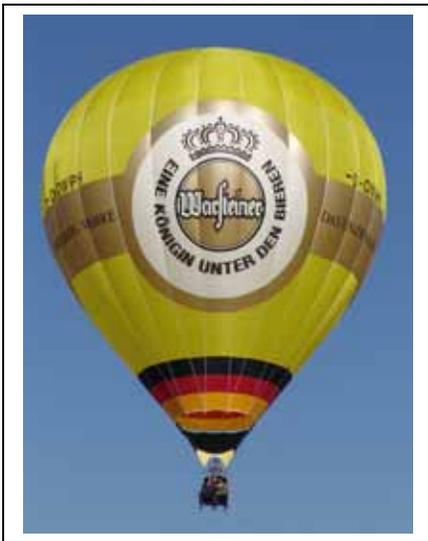
[Updates from the website](#)

Well to be precise, there are none to speak of at the moment. With the untimely death of Paul lattimore (my website technical expert and HTML man), there has been no input into changing the website detail. I have asked for help from someone with a technical expertise to aid the development of the website, but realistically without the offer from Erik Jan Doorneward would have nothing to go forward with.

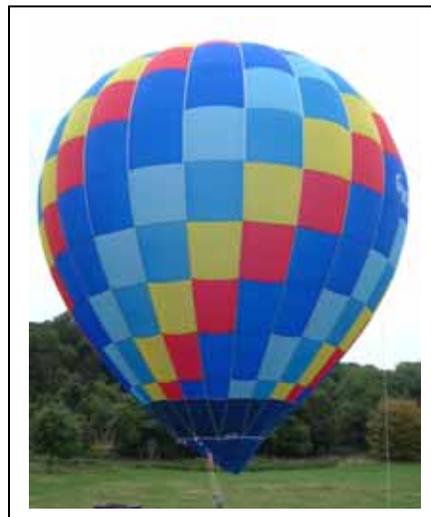
I f we collectively are going to continue trying to grow our hopper community then clearly this issue will need addressing, and whilst Erik has offered to help, he is very busy, and alternative offers and perhaps a shared control of the site may be the way forward. Anyone offering constructive help please contact me directly.

Gallery pages

A selection of new duo chariots and hoppers that have recently been constructed .



Ultramagic M-42 D-OWPH
C/n 11 for Germany



G-I HOP Cameron Z-31
C/n 10782 for Neil Robertson



Malcolm White's new
Lindstrand 31 EI -DJZ
c/n 1035



Another Cameron Z-31
This time for Andrew Holly
G-CDFI c/n 10655

Manufacturer News / Event Details

Information from this summers Metz festival from the Kubicek dealer for France Francois Treuil, suggests that the manufacturer is at this moment prototype constructing its first hopper design around a 31,000 ft size envelope. The advantage of a Kubicek design (which would use polyester instead of Nylon) , apart from the very reasonable costs , (currently a 42,000 envelope is marketed at a little over £4000), would be the ability of being able to put more heat into the envelope and the claimed longer lifetime of the polyester envelopes. Having contacted the UK dealer Chrispin Williams for a further update and conformation of the production of hopper envelopes , I am still awaiting further information on this new development.

As an side, I would say that I have now secured some swatches of kubicek material and will be independently testing the material against reference Nylons from other manufacturers at my workplace using industry rated testing gear and will bring

you further information as to how it measures up in a future issue.

Harvest Moon Festival

Here in the UK, the governing body of the sport, the BBAC held a fortieth anniversary event to celebrate at Savernake Forrest near Hungerford in Wiltshire on the Saturday 24th September. This was a glorious day which started around 7am with fine light winds and a fair turnout of hoppers joined in with the fun. Whilst slightly apprehensive about freeflying my Colt 31A for the first time, even your editor joined in with the flying taking an interesting first foray of 45 mins and to be fair probably missed the best of the morning slot, but never the less learned a fair amount about how not to land my hopper, nearly breaking my ankle on the first approach (forgetting to align the bottom end with the turning vents prior to the approach and nearly arriving dead on line at about 8 knots), followed by a second approach into a tree lined valley where it picked up noticeably (opting out too early) and then making a good landing on the third attempt into a cut stubble field. However, all the senses were heightened and the immense satisfaction of finally "going for it" and getting one in overtook all the drama from the flight. I flew with Kevin Tanner in his LBL 25A for company and enjoyed it thoroughly. Lee Hooper was also flying the ex Benedryl Cameron Z-31 during the event G-CBLN , but probably the crowd enjoyed most Kubicek dealer Chrispin Williams outings of two older Colt hoppers G-MLGL which apparently is a class record holding Colt 21A, and also very rarely seen G-BVKX which is a Colt 14A. Both went for a short hop across the launch field. As you can see below from the selection chosen , a good day was had by all .



Colt 21A G-MLGL



G-CBLN Cameron Z-31



Colt 14A G-BVKX

Next Issue

In the next edition of the newsletter, I will be looking into the following items

- 1, The Annual One Man Meet -held in Wales in 2005
- 2, My home made Instrument Pod - a hopper first.
- 3, Website News- updates -So long as there are some
- 4, The details of our 2nd Hopper Meet to be held at Missenden Buckinghamshire (1st May bank holiday weekend)
- 5, A report from Chateau D'oex Swiss balloon meet
- 6,And any other rubbish that I can glean from the I cicle balloon meet and exhibition .

All that remains as we near the anniversary of two years for the cloudhoppers@yahoogroups mailing list is to wish you all Happy new year and safe flying.

Steve

All articles for inclusion in future issues, please forward to the editor at Information@cloudhoppers.org and all feedback good, bad or indifferent will be welcome. In future we might even run a letters/email section.

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