HELICOPTER LIFE

www.helicopterlife.com

AUTUMN 2012 / £3.99

now including gyroplanes

HELICOPTER LIFE *is the* HIGH LIFE

HELICOPTER LIFE

AUTUMN 2012

COVER STORY

Show & Tell Guide

15th September - 16th September 2012.
HELI CHALLENGE
Wolverhampton Airport Limited
Wolverhampton
Halfpenny Green Airport
www.helichallenge.org

24 September - 30 September 2012
NATIONAL AIR AMBULANCE WEEK
Telephone: 07817 536440
www.dsairambulance.org.uk

6 November - 8 November 2012
THE DUBAI HELISHOW
Contact: Julia Cuthbert
Mediac Communications and Exhibitions - UK
E-mail: mediac@emirates.net.ae
http://www.dubaihelicoptershow.com

24 April - 27 April 2013
AERO FRIEDRICHSHAFEN
www.aero-expo.com
+49 (0)7541 708367
bettina.daurer@messe-fn.de

5 March - 7 March 2013
HAI HELIEXPO
Las Vegas, Nevada
http://www.rotor.org/Events/HELIEXPO2013.aspx

31 May - 2 June 2013
AEROEXPO (UK)
Sywell Aerodrome
Northamptonshire
for more information contact
Paddy Casey on +44 (0)20 8255 4218

9 May - 11 May 2013
EUROPEAN HELICOPTER SHOW (EHS)
Hradch Kralove LKRK
Czech Republic
0044 208 549 3917
Email: alex@avbuyer.com
Astrid Ayling
Tel: 0044 208 549 5024
Email: astrid@avbuyer.com

24 September - 26 September 2013
HELITECH
Duxford near Cambridge, UK
http://www.helitechevents.com/

HELICOPTER LIFE

AUTUMN 2012

COVER PHOTOGRAPH
AS350 crossing Lake Nugardi in Kenya courtesy of KIDL Helicopters.
Inset: Giraffe by Gerald Cheyne

HELICOPTER **LIFE** is published quarterly by FlyFizzi Ltd.
59 Great Ormond Street
London, WC1N-3HZ.

ISSN 1743-1042.

The Editor's Letter

There are apparently 250 fewer helicopters in private hands in the United Kingdom and Ireland than there were in 2008. Many schools say helicopter training is down by half, some are even closing their helicopter sections, and there is a noticeable decrease in the number of helicopter hours flown. It might be that helicopter general aviation would wither away and that helicopter flying would become the perogative of the mega-rich were it not for inventors like Marcelle Nino and his Kiss helicopter.

Nino, like Bruno Guimbal, who featured in the last issue of Helicopter Life, and Frank Robinson in the 1970s, is an enthusiast, an engineer, a racer and someone who passionately believes in the dream of the light helicopter, the everyman helicopter and the future of General Aviation. He has created the KISS helicopter and is looking at the potential for many more. Thomas Skamlijic went to Italy to visit his Fama Helicopter Company and to fly this unusual looking small helicopter.

There are some exceptions to the general aviation downturn in Europe and the USA, one of these is the Midlands in Great Britain, which according to the Office of Regional Statistics, now has 6% of the UK's GVA (gross value), which it attributes to the area's greater dependance on manufacturing. The result of this is that helicopter training in this area is also doing rather better than in other areas of the UK.

One surprising victim of the recession is the helicopter route from Cornwall to the Scilly Isles which is due to close on 1st November 2012. This ferry service has been in operation for forty-nine years and flown more than 2.5 million hours. MD Tony Jones spoke of his sorrow, not just at the end of this historic business but for the people of Cornwall and the employees, who have lost a wonderful service and whose numbers will now be added to the unemployed. The helicopter service was an employer in Cornwall, one of the poorest areas of Great Britain. Average earnings in Cornwall are 25% below the rest of the country.

At the time of going to press we heard several rumours about potential start-ups to replace the helicopter service but nothing certain.

However, in sectors of the commercial helicopter industry there is good growth. The oil and gas industry is expanding again and supporting helicopter companies in the North Sea are now vigorously recruiting pilots. New oil wells have been found west of the Shetland Islands and millions of pounds worth of investment has already been made. Helicopter Life went to Scatsta Airfield on the Shetland mainland to visit Bristow Helicopters and to see their oil support industry.

The Shetlands were also famous in the Second World War for the 'Shetland Bus' which took agents in and out of German occupied Norway. This was made into a movie in 1954 starring Leif Larsen, a Norwegian sailor who took part in the real operation. It is reputed to be being rewritten as a modern movie.

Other important helicopter work in the Shetlands includes search and rescue, these helicopters fly from Sumburgh Airfield near Lerwick, the capital. This, of course, is very significant at the moment with the UK SAR-H long term contract once again coming up for tender.

Three companies, Bristow, Bond Offshore and CHC Scotia are shortlisted for the £2 -3 Billion contract which will be divided into three 'Lots' and will be announced in early 2013. The three 'Lots' cover all the Search and Rescue areas in the United Kingdom and companies will be allocated the contracts on either an

Photograph Bryn Elliot

'all three' basis or in separate lots of one and two. The contract will start in 2018, although the results of the bidding process should be known by the Spring of 2013. From July 2013 until the start of the permanent contract SAR will be covered by the interim GAP SAR project.

Kenya again features highly in this issue of Helicopter Life as, in spite of its decrease in tourism, it is a growing area for helicopter use. This is partly because geological studies have shown the liklihood of oil in the northern parts of Kenya and there is consequently a lot of research there, partly because helicopters are used in the burgeoning film industry in Kenya and partly because of the poor infrastructure and dangerous roads, which have led to the use of helicopters to avoid trouble. As we saw in previous issues the latter was also the case in Sao Paulo in Brazil.

London Air Ambulance is trialing a new scanner which can 'see' inside the patient and help with diagnosis. See page 11 for details of the way things are changing in medicine.

For the future Bell Helicopters has a new distributor in the UK, Heli Charter at Manston. See the winter issue of Helicopter Life for the Bell 407GX test flight.

Joint Helicopter Pilots

A Netherlands organisation to promote helicopter awareness

Gerben van Beek

gives a pictorial view of their safety day

Joint Helicopter Pilots (JHP) is an organisation for helicopter pilots in The Netherlands. They create various events to bring helicopter pilots together, and provide usful helicopter-relevant information through their web site, including links to EHEST (European Helicopter Safety Team) safety material.

On 18-Jun-2012 JHP arranged a special helicopter safety and rescue event. As they state on their web site:

"Rescue teams in the Netherlands (outside airports) do very little training with civil helicopters. As a helicopter pilot or passenger you hope to never have a need for fire brigade, police or ambulance, but, should it be necessary, then it is vital that they know how they can best assist you."

With this in mind, Joint Helicopter Pilots invited a training team from the Fire Brigade to come and see how it was done and together they prepared a number of scenarios. These included: how to evacuate passengers from a helicopter filled with smoke, how to evacuate a helicopter with rotors turning, how to approach a helicopter and switch off electricity and so forth. Both the fire brigade and the pilots were really enthusiastic about the event, especially as they received information about various helicopter types that were not well known to them.

Flying Crackers

Scillies Goodbye

After 49 years of service the Scilly Isles helicopter service has come to an end. British International Helicopters confirmed it is to close its domestic helicopter passenger route between Penzance and the Isles of Scilly, effective 1 November 2012.

The company will honour all customer flights booked up until 31 October 2012. Anyone with a flight booked after 1 November will be

given a full refund. The closure of the heliport will affect employees and the company has entered a formal redundancy consultation process.

MD Tony Jones, said: "This is an extremely sad announcement for BIH, its employees and its customers - in fact the whole of West Cornwall and the Isles of Scilly. Unfortunately we had no alternative."

The decision to close the route was finally triggered by legal action taken by Tesco and two private individuals. These legal actions challenge the process undertaken by Cornwall Council and Secretary of State when planning permission was granted.

These legal challenges at this very late stage of the planning process have prevented BIH from completing the sale of the land to Sainsbury's and created too many uncertainties for the passenger service to continue. BIH has repeatedly stated publicly that the land needed to be sold in a reasonable time frame to release the capital required to continue the service.

The planning application for the redevelopment of the heliport site was submitted in March 2010 and in October 2011 Cornwall Council's Strategic Planning Committee voted to consent planning permission for a store, Park & Ride and business units. The decision was then referred to the Secretary of State as a matter of course. However a challenge was made to that decision which resulted in a delay of six months which BIH could ill-afford.

BIH remained committed to finding a suitable relocation site in West Cornwall. However, at the end of 2011 BIH reluctantly withdrew their application to relocate the heliport to St Erth on the back of mounting public and stakeholder pressure. This application cost over £300,000.

Since starting this process in 2010, financial pressure on the company has been compounded by the falling number of air passenger visitors to the Isles of Scilly. At the same time the majority of costs have risen.

Taking all these factors into account, BIH has no alternative other than to close the route from 1 November 2012. From that date the heliport will be safely secured for the indeterminate future.

Southend New Lounge

London's newest international airport continues to extend and improve upon excellent service and quality products with an all-new bar and executive lounge in the passenger terminal, opened before

the 2012 London Games.

The executive lounge, branded 'Stobart First Class Lounge' offers executive and luxury services to passengers, with complimentary WiFi, iPad stations, daily newspapers and magazines, hot and cold drinks (alcoholic and non-alcoholic) and snacks, as well as luxurious seating, massage chairs and 24 hour television news. The lounge welcomes Gold Circle Club Passengers, Business Class & Flex Fare Passengers (Aer Lingus), and Priority Pass Members, or, for an entry fee of £18.95, passengers can access the lounge by paying upon entry or via annual membership.

Lakers Bar, situated on the upper floor of the departure lounge and named after founding father of accessible air travel Freddy Laker (who launched his fledgling business at London Southend Airport in 1949), is open daily for passengers flying from the airport.

FB Heliservices to Albania

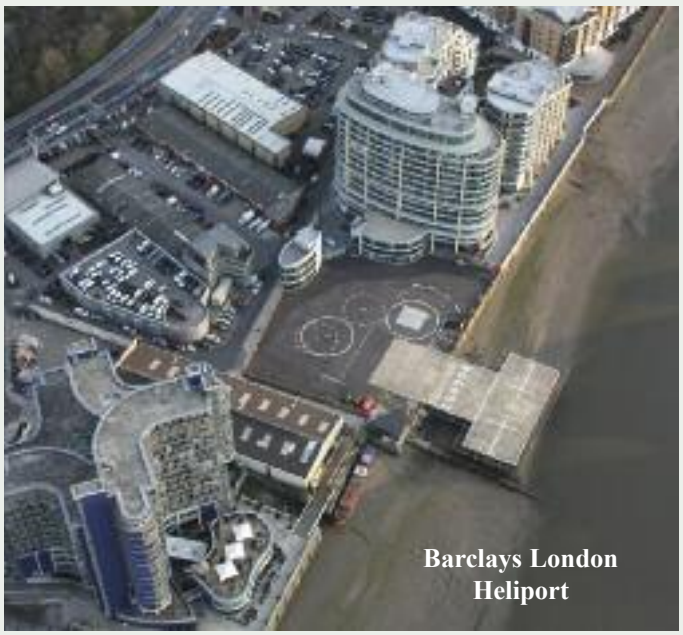
Cobham Aviation Services joint venture FB Heliservices has been awarded a two year contract to provide helicopter flying training to the Albanian Ministry of Defence. FB Heliservices will provide a series of courses which will provide multi-engine type conversion, glass cockpit familiarisation, instrument flying and Search And Rescue training to 12 Albanian Air

PHOTOGRAPH GEORGINA HUNTER-JONES AND STOBART AVIATION

Force pilots and SAR training only to four helicopter crew members.
Training will be delivered on a combination of the FB Heliservices Agusta A109 and Bell 412 HAR2 aircraft. These courses are designed to provide essential training for the pilots and crew before they operate newly delivered Cougar helicopters to the Albanian Air Force. The courses will take place over the period of July 2012 to June 2014.
This contract is the first between the Albanian Ministry of Defence and a British company.

Barclays London Heliport

The Barclays London Heliport reported a notable increase in activity in the week before the Games, a 63% increase in what is normally the quieter 'holiday season' period. The heliport welcomed new visitors, including Games sponsors and corporates who were taking advantage of the fact that the heliport is the only central London landing site permitted for private and chartered helicopter use during the Games.
In June, London Oxford Airport announced new



Barclays London Heliport

incentives to halve landing fees for jets and helicopters when London Heliport originated or destined aircraft interline with jets utilising London Oxford Airport.
We all were waiting to see what the 'Olympics effect' was going to be this summer, and despite the fact that many UK-based owners of aircraft booked their annual vacations or temporarily migrated overseas over the period, some putting their business jets in for maintenance, this has been compensated for by new, first time users who have come away with a positive impression about Oxford Airport and London Heliport," said James Dillon-Godfray, Business Development Director. "Furthermore, we are still seeing that the majority of operators at both airports are booking merely a day or two ahead of schedule, so no real change in their habits."

Local Area Flying for Battersea Heliport

A 6-month trial of London Heliport Local Flying Area (LFA) began on 1 December 2011. The aim of the trial was to allow 'Battersea Tower' to autonomously issue clearances to and from the south/southeast of the heliport independently from London Terminal Control. The trial period was extended by one month; the applicable procedures have been further extended to 31 August 2012 pending the LFA's permanent

establishment.
UK AIP Supplement 029/2011 states that the weather minima for the LFA are equal to the heliport weather minima detailed at AD 3-EGLW-1-5. EGLW AD3.21 states that 'For inbound and departing helicopters, the weather minima for the London Heliport are a reported Heliport meteorological visibility of 1000 m or greater and a cloud ceiling of 600 ft agl or greater'. Whilst this is appropriate for operations immediately in the vicinity of the Heliport it is not considered to be so for the remainder of the LFA. Therefore the in-flight visibility for the LFA will be 3 km; this is consistent with the arrangements for the Denham, Fairoaks and White Waltham LFAs. The LFA will be depicted on Edition 15 of 1:50000 chart 'London Helicopter Routes in the London Control Zone', to be published on 20 September 2012. The LFA will not be depicted on other VFR charts.
LFA procedures will be incorporated into the UK AIP on 18 October 2012 (AIRAC 11/2012), on which date UK AIP Supplement 029/2011 will be withdrawn.

Photographs courtesy of Georgina Hunter-Jones

Letters to the Editor

59 Great Ormond Street, London WC1N-3HZ, England.
Telephone: 020-7430-2384, Email: editor@helicopterlife.com.
Please include your name, and email or phone.

Atlas Heights?

Dear Editor,

I wanted to write to you about my experience with Atlas Control during the Olympics, not as a complaint but more as a way of pointing out, should the CAA considering implementing such proceedures again, that they need to be better thought through!

I registered for the service. No problem so far. Then I tried filing my flight plan. There were oddities here - for example a Bell 206 is a B06; why? My flight plan was rejected because I put in too many - or was it not enough - spaces. After three goes and a very helpful man on the telephone it finally went through.

A couple of days later I initiated the flight - by which I mean I called Atlas on the radio from my private site - and, as expected, could not get through: we live in the hills! Once airborne I called again. This time I got through. However, when I gave my code phrase they did not recognise it. They told me not to enter controlled airspace until they had located the problem - this was clearly impossible as my site is within the restricted zone. I explained and they told me to carry on. After perhaps 15 minutes Atlas located the problem and explained:

When my rejected flight plan had been cancelled the number that attached to it had not. Consequently, when my improved flight plan had been accepted it carried the number of the rejected flight plan, which had then been texted to me, while Atlas itself had received, or generated perhaps, a new number not given to me. (As Danny Kaye would have said the vessel with the pestle was the pestle with the vessel!)

It did not matter, of course, and as we now know the Olympics, (totally brilliant though it was for anyone not Australian!) actually reduced the tourist numbers. If the skies were as empty as the roads, quite likely considering the weather, the recession and the Olympics, I doubt Atlas had much to do. Lucky old Atlas, only hope they didn't get too bored and had plenty of time to watch us winning all those medals!

Best wishes,

John Martin

New planes, new logo, same MAF

Dear Georgina

This year, MAF has taken delivery of several Cessna 182s with a converted SMA Diesel engine.

With Avgas supplies being limited in many countries where we work, the small diesel-powered Cessna will be more cost-effective and means that vital flights will not be hindered waiting on supplies of Avgas.

The diesel powered C182 was trialled last year in our operation in Western Democratic Republic of Congo and has proved to be a very welcome addition to MAF's worldwide fleet of 135+ light aircraft. This year, the Chad and Madagascar operations have also received the aircraft, with a further two heading to Angola.

As well as being more fuel efficient, the small plane will help provide travel for smaller local and national groups and missionaries while still being able to deal with the rough and rugged terrain in which we operate.

This year, as we look to new ways of operating, MAF groups worldwide have chosen a new common identity – enabling us to share resources as well as a common look in all countries where we operate. The new look was unveiled on 15th August 2012.

As we look to the future, we have new planes, a new look but the same vision – to use aircraft for good – to reach isolated people in need across the developing world. Reaching isolated people and places with vital help and hope, MAF operates a fleet of 135+ light aircraft in more than 30 countries in the developing world: Places where road travel is not possible due to huge distance, insecurity, poor or undeveloped infrastructure.

For more information about our work;
www.maf-uk.org

Best wishes,

Emma Stewart

London Air Ambulance Trials New Portable Scanner

Five portable, pocket-sized visualization devices that can help physicians identify fluid presence as well as other life threatening conditions are being trialed by London's Air Ambulance charity.

For an eight week period, GE Healthcare's Vscan, roughly the footprint of a smartphone, and housing ultrasound technology, will enable London's Air Ambulance team to visually and non-invasively inspect the inside of patient's body prior to transport, assessing the presence of fluid, and potentially speeding up clinical decisions and enhancing survival prospects.

The Vscan is intended by London's Air Ambulance to be used for FAST scanning (focused assessment with sonography in trauma), a technique used in emergency medicine to quickly assess the presence of fluid (blood) in the abdomen, pelvis and pericardium – the outer covering sac of the heart. Such a build-up of fluid (a possible risk after a blunt trauma injury) can cause cardiac tamponade, or compression of the heart, an emergency condition that often requires emergency surgery.

Currently, London's Air Ambulance clinicians rely on clinical assessment rather than imaging to detect cardiac tamponade, or palpation (feeling for abdominal distension) to detect internal bleeding. Vscan enables visual assessment of internal fluid from ruptured organs or major blood vessels, even before clinical signs typically appear, and can therefore be used to help evaluate how severe the internal bleeding is.

Professor David Lockey, Research and Development Lead for London's Air Ambulance, explains: "London's Air Ambulance prides itself on delivering medical innovation to increase the survival and recovery of its patients. Vscan should enable our team to make faster and more accurate clinical decisions – when time is of the essence. We have used portable ultrasound devices before but the size and image quality provided by the Vscan has the potential to make a difference to our patients."

London's Air Ambulance experienced increased demand during the Olympic Games and again during the Paralympic Games period when London saw a significant increase in foreign visitors.

New Technology for the iPad

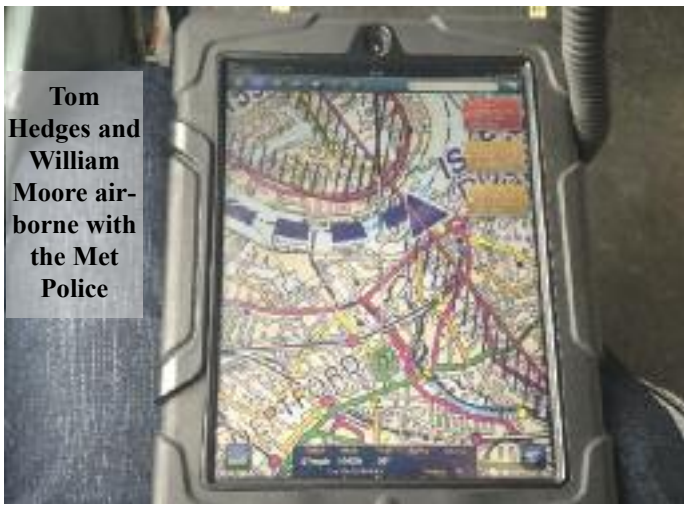
RunwayHD from Airbox Aero

RunwayHD is the latest piece of software to come from Airbox Aero and I was given the ipad version to test. To use this software you will need either the ipad2 or the ipad3 but you must have the 3G version as that is the one with the GPS in it. The product is touch-screen with overhead pulldown menus. It does also run on the iphone if you need a back-up or just because you have an iphone and not an ipad.

As it happened, I started testing the software just before the Olympics and this was particularly useful as not only did the helicopter package come with Olympic airspace alerts, but when flying in the local area of airfields which, like Denham for example, were on the edge of the Prohibited Area but had a specially designated local flying area, I could draw the boundaries on the map and thus be certain I would not stray outside their edges. This also led to a slightly more relaxed ATC service!

One very good thing about the Airbox software is that it runs on CAA maps, which is not true of all the competitors, and that you can change between various map sizes. You can increase the size by pulling the screen, as on most apple products, or you can go into the pull-down menu and decide which map you would prefer. I also liked the short and easily understood instructor video for moments when the intuitive software was not intuitive enough for me.

With the RunwayHD software you can either plan a route from your current position (the software knows where you are) or from somewhere else. The simplest



Tom Hedges and William Moore airborne with the Met Police

Flying through the prohibited zone

Photograph courtesy of Airbox Aero

method is from your current position and to do this you just touch the screen where you want to go and then set up the route using the overhead icons. Alternatively, you can plan a route from a distant airfield. To do this you have to delete any routes from the current position, then put the place you want to plan from in the search box, and click on the starred aircraft. To put in the destination aircraft you put that name in the search box and again click on the starred aircraft. Once the route is set up you will need to delete your current position, however, if you don't the software simply gives you a different coloured route back to the current position, and, of course, when you move to the new airport the software will too.

You can also set up a course with multiple waypoints, although at first this is a bit complicated giving you lines from one place to another across the screen, once you have finished plotting the route, however, the software sorts it out and gives you a complete picture for each leg.

iPad versus the big screens

Nice things about the software include information about an airfield when you touch the screen, and details of its approach and landing patterns. Weather and NOTAMs can also be brought up on the screen, although I prefer words for the weather rather than pictograms I can see that this is a shorter way of seeing the weather and easier to read in the air than a large amount of writing.

There is also a scratch pad for writing down frequencies, airfield data and so forth which you can use without a pen and which works very well - I liked that feature more than pads where the keyboard flips up as it is much easier to write longhand while bouncing around in the air than type on the keyboard.

There was, however, one I did not like so much as the rest of the software, this was the use of icons instead of labels in the pull-down menu, which I do not find intuitive - but this is only a personal taste.

William Moore, the designer, flies himself and reads the pilot's forums and so is very aware of what users are saying about his product, and willing to correct faults. Even in the short time I have had Runway it has had at least one update, and I gather from other users that Runway has got a lot better in the last year. Worth trying.

Mancunian

Sven Atkin visits the new Manchester Heliport

Photographs by Sven Atkin

Way

An exciting new heliport has opened in the North West of England. City Heliport is part of City Airport, formerly known as Barton Aerodrome. I was fortunate enough to be invited to and shown around the Heliport by Kay Nugent, City Airport and Heliport's General Manager and Tracy Williams, the Admin and Finance Manager.

It was officially opened on 1st March 2012 and is situated at the Western side of the airport next to Greater Manchester Police Air Support Group's facility. The buildings were formerly leased by the University of Manchester for wind tunnel testing and research into supersonic flight. The building was used to house wind tunnels and turbine test equipment. Since then, the buildings have been transformed into a dedicated premium helicopter facility and business centre, perfectly suited

Cardinal S-76s being towed into the hangar

for VIPs and corporate operations. It offers a very professional, discrete and secure environment.

The Heliport has a dedicated passenger departure lounge with refreshment facilities, widescreen television and free Wi Fi available. There are 13 small self contained offices, located upstairs above the main hangar. These are available for hire on a short or long term basis. These are ideal for start-up or small businesses looking for a corporate and professional environment for growth.

The hangar itself is surprisingly large and I was amazed at how small the two helicopters inside looked in comparison. The two aircraft there at the time were, a Sikorsky S-76C (G-PACO) operated by Cardinal Helicopters and a privately owned Bell 430 (N5120). These, being fair sized machines in the corporate class of helicopters, gave an excellent illustration of the space inside the hangar. Two other privately owned helicopters have now been hangared at City Heliport: a Hughes 369HS (G-LEEJ) and a Bell Jet Ranger II (G-JTBX).

During my visit, I was joined by Andy Cunningham, one of the two receptionists, who showed me the external features of City Heliport. The apron is spotless and FOD checks are always completed prior to an aircraft arriving. Helicopters are marshalled in on arrival to ensure optimum positioning for taking on fuel or whilst waiting for their passengers. Future plans may include extending the apron to accommodate up to 7 helicopters, depending on size.

The Heliport is equipped with its own fuelling facility with Jet A1 fuel which can be obtained by prior arrangement when booking in.

There is an annex to the right and attached to the main hangar which is being refurbished to accommodate more helicopters. This will also be available for use once the work is completed.

One of the bigger helicopters to visit City Heliport, was a Sikorsky S-92 (G-LAWX) owned and operated by Air Harrods. Nick Duriez, City Airport's Operations Manager gave me access to witness the arrival of this unique aircraft. The helicopter carried the backstage crew for a prominent pop band for their two gigs at Manchester City's football stadium. The S-92 was easily accommodated and took on fuel quickly while it waited for its passengers to return later in the evening.

Vehicles are allowed access to airside, by prior arrangement, to pick up passengers. There is limited car parking at City Heliport and is operated on a first come, first served basis.

I predict this superb new facility is going to become a major hub for helicopter operations in the North West and will become very popular because of its central geographical location, with the possibility of serving helicopters travelling from all parts of the country.

If pilots or clients wish to use the Heliport they should book through the main ATC at City Airport on 0161 789 1362.

City Airport and Heliport are on the A57 Liverpool Road, Manchester, Great Manchester, M30 7RU.

Vehicles collecting passengers

Air Harrods Sikorsky S-92 landing at the heliport

Further information can be found on the following websites :-

www.cityairportandheliport.com

www.cardinal.im Helicopter Charter Service.

Acknowledgements

I would like to thank Kay Nugent, Tracy Williams and Andy Cunningham for showing me all that City Heliport has to offer, answering my questions and providing a warm welcome with excellent coffee and biscuits. Thanks also go to Nick Duriez for allowing me airside access and the photographic opportunity.

Andy Cunningham handler and refueller

The large hangar has room for many helicopters

Around the World

Eurocopter X3 Grand Tour

Eurocopter has completed its highly successful seven-week X3 demonstration tour in the United States, enabling a full range of civil and military operators to witness and experience the revolutionary flight characteristics of this high-speed, long-range hybrid helicopter.

During its U.S. tour, the X3 made appearances in four states from Texas to Virginia – logging more than 55 hours performed by the Eurocopter test crew, along with opportunities for 47 guest pilots to take the controls for a first-hand appreciation of this aircraft's excellent flight qualities, maneuverability and outstanding acceleration/deceleration capabilities.

Among the X3's flight characteristics praised by these pilots were its excellent stability and low vibration level, the impressive acceleration and deceleration, the capability to make steep descents while controlling the speed, the aircraft's capacity to hover nose-down or nose-up, and its ability to be flown throughout the entire flight envelope with the autopilot off.

Flying presentations throughout the X3 tour were performed by Eurocopter experimental test pilot Hervé Jammayrac, accompanied by flight test engineers Daniel Semioli and Dominique Fournier, along with project and technical team members.

HADT-1 First Flight

Under the control of test-pilot Stéphane Lignier, in spite of poor weather, the three-blade turbine-engined two-seater made fifteen take-offs and a series of hover-taxy manoeuvres in ground effect. The flights demonstrated the aircraft complies with previous technical forecasts

The HAD company will now conduct flight trials leading to DGAC / CNSK certification, aiming to CS 27. HAD will also build two further pre-production aircraft and implement the industrial resources for series production.In this development framework, the HAD company is looking for financial partners to participate in this industrialization which looks promising.

Embraer Jet Flies on Sugarcane fuel

An Embraer 195 made a demonstration flight tin July using an innovative, renewable jet fuel produced from Brazilian sugarcane.

Kamov Ka32A11BC delivery

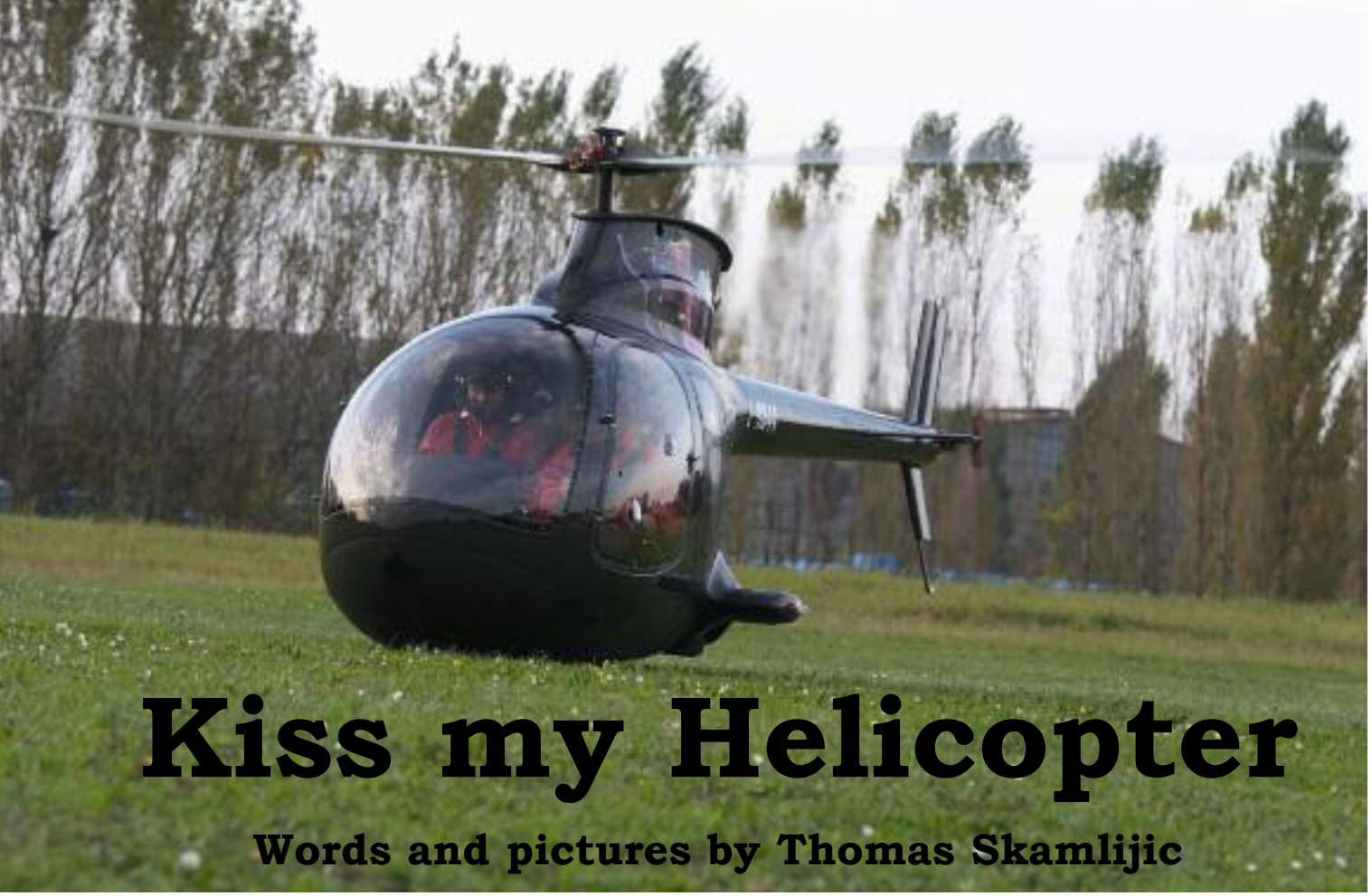
Russian Helicopters, announces the early completion of its contact to supply five search-and-rescue helicopters to the Russian Emergencies Ministry (EMERCOM).

The Ka-32A11BCs were delivered six months ahead of the schedule agreed under the contract signed with the Ministry in 2009.

It is planned that the helicopters will be used for patrolling the main road between Moscow and St. Petersburg as part of the Ministry's road-safety programme for Russia's federal highways.

Russian Helicopters and the Emergencies Ministry's Aviation Administration in 2009 signed a supply agreement under which the Company will supply helicopters to create an integrated road-safety system involving air-borne search-and-rescue and medical units and helicopter-based first-aid brigades. In total, the Ministry's Aviation Administration may acquire 62 light and 123 medium helicopters.

Experts say that the Ka-32A11BC is one of the best helicopters for search-and-rescue and fire-fighting operations anywhere in the world. On 19 June, Ka-32As and an Mi-26T belonging to the Ministry and fitted with external water discharge units were instrumental in effectively and rapidly localising and extinguishing a large fire across an area of about 1,000 sq m in northern Moscow.



Kiss my Helicopter

Words and pictures by Thomas Skamlijic

There are many reasons to travel to Maranello in Italy. For some it is the small red cars named Ferrari, others visit that area because the best Aceto di Balsamico tradizionale are made here and close by is Parma which is famous for ham. Still others want to visit Lamborghini in Sant Agata and Ducati or the fashion week in Bologna. But since you read as far as this line I think, what you are really interested in is helicopters. Probably the name Solignano di Castelvetro does not ring any bells with you but it will, as in that small town just 5 km from Maranello Nino Fama´s helicopter company is located. So if you want to visit Nino (something I can highly recommend) but your family is a bit underenthusiastic about such a prospect tell them about the food, fashion, cars and bikes that would come with such a visit.

Nino Fama the designer and builder of the KISS helicopter is an accomplished sidecar-cross biker who has won many championships. But having fun with three wheels was not enough for him, so he got into Formula 3000 racing and here as a driver and teammanager/owner he won championships many times over. As you can imagine, once involved in racing you learn a lot about aerodynamics and how to quickly improve aerodynamics or make special parts. But Nino's expertise is not only from this, his interest in technical things started when he was five years old. Even at that age he was always experimenting, developing and improving things. Thanks to this background, Nino has a profound knowledge of and feel for technical stuff.

Nino was always interested in helicopters. He started by helping others to build kit helicopters, then, gradually, an idea emerged - to design and build his dream helicopter. The reason behind this idea was simple; there was nothing on the market (at least in the financially accessible market) that really satisfied his lust for performance or that fulfilled his demand for the highest possible safety standards. So, he designed his own helicopter. From his racing background he knew that only simple stuff really works day in day out, so his top priority during the design process was to keep everything as simple as possible. Keeping the complexity down on a helicopter is a very challenging task in itself, but Nino would not only settle for that, he wanted also a helicopter that is easy for the pilot to fly.

Human beings are not perfect and a preflight check done without the necessary attention to detail can lead to disaster. So, Nino thought of ways to solve that problem. This entailed about fifteen sensors located in and on different places throughout the helicopter. These sensors transmit their findings to an electronic brain which alerts the pilot. For example, the fuselage/structure of the helicopter is a mixture of carbon composite parts and a steel tube frame. The steel tube frame is filled with NOx

Maranello Nino designed KISS as his dream helicopter. It can be landed wheels up in case of emergency without doing damage.

(nitrogen oxide) and, should a leak occur owing to a hair line crack, a sensor will inform the e-brain of the problem immediately. A very neat feature indeed.

Designing a helicopter from scratch is a very challenging task and the question has to be asked, is it really necessary to start from scratch. Nino, however, had an extensive background knowledge of the CH-7, Mini 500, Rotorway, Robinson and Enstrom helicopters, so he took the best of these helicopters and put all the good stuff into his KISS helicopter.

Some time ago, Nino equipped a Rotorway Exec helicopter with a Solar T62 turbine and the results have been really promising. Because of this experience Nino did not look for a piston engine since he was determined from the beginning that his helicopter had to have a turbine engine. Turbines are light, very powerful and reliable but they do demand attention. So, in order to keep it stupidly simple for the pilot, Nino developed a FADEC system that manages the turbine. So, you just start the engine, engage the FADEC and then stop worrying about the engine, it's that simple.

Even though the current Solar T-62 works perfectly Nino is busily developing his own turbine, which will put out more power, will run on many different fuels - from olive oil to JP (jet propellant) plus will have reduced fuel consumption. The first flight of that turbine will be about one year in the future.

Incidentally, the Solar T62's full name is the Titan

HOTOGRAPHS COURTESY OF TOMMASAO MUNFORTI

KISS is available with skids or retractable gear

Retracable gear increases the speed by 15 km/hr

Gas Turbine and it is an APU that on the Chinook helicopter drives an alternator.

A primary design driver was safety and, not content with making KISS safe in an ordinary sense i.e. making sure that the autorotation is easy on the pilot, Nino is developing a 'Ballistic Recovery System' for the KISS helicopter. Work is quite well advanced and when ready this will be a first in the helicopter world.

Situational awareness and exact knowledge of the current position is crucial in helicopter operations. Nino has ascertained that the view from the cockpit is excellent and the engine and flight parameters are displayed to the pilot via a big 12" screen. He has used an EFIS BioFly product (Blue EFIS SVS Syntetic Vision) that was specifically adapted to his requirements. To bring up the different pages (navigation, engine parameters, artificial horizon) of the EFIS you press the buttons 2, 3, 4 on top of the cyclic stick. All very convenient.

One feature I particularly liked, that the IAS (indicated airpeed) is in km/h and RoC/RoD (rate of climb and descent) is in m/sec. It was about time that someone decided to go for SI Units and not to cling to stone age measurements and guess what the helicopter does not complain! However, should you be emotionally attached to the stone age units of kts and fpm there are ways to fulfill your wishes….

The 12" screen is a very nice feature and from what I saw during the flights with the KISS, readability was not a problem.

A set of traditional steam gauges and warning lights complements the EFIS, so in case the e-brain is not in the mood to cooperate you will be able to fly on the traditional instruments alone.

One instrument on the dashboard will certainly catch your eye; the 'Peso Piloti' - the pilot's weight.

Nino explained that depending on the weight of the pilot(s) the stick position is sometimes a little bit uncomfortable. As he wanted the stick to remain always very much in the middle position he devised a system to change the centre of gravity (CofG) in order to keep the stick in the middle. In order to change the CoG, hydraulic fluid is moved into the vertical fin. A maximum of 14 kg can be moved into the fin if the Peso Piloti is higher than 180 kg.

The KISS is equipped with a retractable landing gear. The retraction mechanism is simple and, so far, has never failed. The switch to activate retraction or extension of the landing gear is located on the collective. Should you forget to lower the wheels, you can do a wheels up landing without causing any harm to the helicopter (you will sit noticeably lower though and, naturally, Nino made sure that the EFIS warns you of an impending gear up landing). Another advantage of the retractable wheels is that you can ground taxi, this may be necessary if the landing spot is covered with rocks as the chances are that you can put down wheels a lot easier than skids. Thus, you can have the KISS helicopter either with traditional skids or wheels but with the lower weight of the skids you get a lower cruise speed (about 15 km/h less).

The two aluminum rotor blades do fly low, which is good when you want to visually check them but means you should keep a careful eye on interested onlookers. Main rotor RPM is 535 and the tail rotor turns at 2,850 RPM. Nino contemplated composite blades but for the moment has decided against.

The rotor head is a creation. Take a little bit of each of the rotor heads of the CH-7, the Enstrom and the Bell 206 Jet Ranger, let Nino do the job and you have a new rotor head. From what I could see and feel during the flight tests, it works very well.

The walk-round is quickly accomplished since everything that needs checking is at eye level and with the e-brain taking care of the inner workings of the helicopter it's time to go flying.

The KISS available for this flight was I-9844. That's the first KISS helicopter Nino built and it has clocked up 500 hrs. Being a prototype of course means it is a little bit overweight and since flight testing usually results in some changes to the airframe and elsewhere, the finish is not completely faultless. Some of the conveniences of a production helicopter are also missing on I-9844.

Getting in and out of the KISS is very easy. A four point harness holds you in place. Stick and collective fall easily into hand and the view from the cockpit is excellent.

The pedals are adjustable and the back cushion of the seat can be removed and exchanged easily. Finding a comfortable seating position on longer flights will not be a problem. What you feel immediately is space, in this cockpit you have room to move and with 1.25m the cockpit is wider than the 1.24 m of the R44.

Master Switch, on the overhead console, ON, battery ON, the EFIS comes to live and the e-brain starts the self check. We put the Bluetooth headsets on, which by the way is an excellent pick, as when you need to exit a cockpit in a hurry, the cord of a normal headset can get in your way. It's just another small thing that demonstrates Nino´s attention to detail and safety.

Starting the Solar T-62: First Starter ON and hold the starter in this position until turbine RPM shows 12%, then engage the FADEC and then hold the starter engaged until 22% when you open the fuel, release the starter button and roll the throttle up to maximum. Immediately you hear the typical whine of a turbine and whether you roll the throttle slowly or quickly up to the maximum does not matter, the FADEC takes care of the engine. EGT should not go beyond 590°c. Wait a little bit for the turbine to stabilize at 100 to 102% and we are ready to go.

Maranello Nino next to his KISS helicoper

Switching off the engine is even easier: roll the throttle back to zero and when the turbine RPM reaches 50% close the fuel, wait for 37%, FADEC off and that's it. Another neat thing with this turbine is that there is no cooling down period as in the C-250 turbines. So you are not wasting precious fuel when on ground with the engine running idle to cool down. Speaking of fuel, on an average cruise flight at 160 km/h the engine needs about 45 lts./hr. With a fuel tank of 150 lts. you can plan trips of almost 500 km (and with the generous luggage compartment you will be able to bring more than a toothbrush and a credit card on board).

Quickly flipping through the different pages of the EFIS we check for warnings from the e-brain but there was nothing, so we are safe to fly. 90% torque brought us up into the air and we immediately headed towards Nino's private airfield. Climb torque was 85 % and at a speed of 45 km/h RoC was about 5 m/sec. For you to put that into perspective OAT was 15° C and our weight was pretty close to the maximum of 450 kg. Nino later told me the maximum RoC is about 11 m/s and that the torque meter is a bit on the high side, so the actual torque is lower than you will read in this report. Another side note, if you prefer to fly in the experimental class the MTOW is 780 kg, so there is some growth potential built into that helicopter. Please take into consideration that we are speaking here about the rules and regulations that apply in Italy.

Nino was at the controls, I follow him through and feel nothing extraordinary. Nino brought the KISS to a hover stop and gave me the controls telling me "best is, to do nothing". Aha, ok so I take the controls and slowly move the stick forward. The Kiss responds and we slowly hover taxi forward. Let's stop that motion, so stick back and since the KISS responded only slowly I pull back the stick a bit more and all of a sudden I need to move the stick really fast forward and whoa I immediately understood why Nino told me best is to do nothing. The time lag between stick input and reaction of the KISS is such that if you are used to flying a R22 or other bigger helicopters you will have to pay attention to that trait. Do not get me wrong, this time lag thing is not good or bad it is just different to what we are used to. I tried for about five more minutes and saw that Nino was more and more relaxed and that after a few more minutes Nino told me, ok, you have it. Great, now we can start doing stuff.

KISS comes with FADEC and EFIS

Tail rotor on the work bench

We start with a typical traffic circuit. There was nothing remarkably different here as the KISS behaves very much like a R22 apart from the climb speed which was 45 km/h. We left the traffic circuit for a short cruise, here 95 % torque gave us a speed of 170 km/h. The cruise flight was very comfortable up to about 160 km/h as the vibration level was low. Going faster did increase the vibration level a bit. Nino explained that the rotor blades have been worked on extensively during the testing process, therefore the vibration level in this KISS certainly is not representative of the vibration level in a production KISS.

Quickly banking left and right up to 45° was no problem at all and flying full circles (L/R) at 35° without height loss was accomplished with minimal effort. A climbing and descending turn at 100 km/h was easy, as was keeping the altitude and heading when changing the speed from 160 km/h to 60 km/h and up to 160 km/h again. We headed home for an autorotation. Nino did the first autorotation with an entry speed of 80 km/h and we came down with a RoD of about 7 m/sec. Rotor RPM was always in the green and remarkably stable. He made a gentle flare, added power and we were on the way up again.

Now you are in autorotation mode and this time it is for real. You are coming down and busily searching for a place to put down the KISS 209, do you really want to worry about the wheels? Certainly not! So what do you do? Nino decided that when you have a real autorotation the chances are high that you will put down the collective fully, so when the collective is fully down a microswitch is activated and the wheels come down automatically. From what I saw during the autorotations we did, that set up really works well.

To demonstrate how easy the KISS is on the pilot Nino rolled off the throttle during our departure when torque was about 95 % and we climbed with about 4 m/sec. The ensuing yaw was easily corrected with pedal and collective down brought rotor RPM up to the top of the allowable RPM band. This was quite an impressive demonstration! As you know the R22 autorotation is a lot more demanding.

Next, I took the controls for sideways and backwards flight. I did not really push the KISS to its limits but according to EFIS-GPS our ground speed was 17 km/h left, right and back and, even so, I did not get the impression that the KISS was at all stressed.

At the edges of the airfield I saw a few poles about 1 m high and very nicely distanced from each other, we had a short slalom course. When I asked Nino whether that would be a good idea he immediately pulled the collective to speed up, then he pulled the KISS up into a steep climb, followed by a tight turn and a dive into the slalom course. Banking hard left and right we raced through the course. Passing the last pole Nino pulled the KISS into a very tight turn and we raced through the slalom course in opposite direction. Yes, it was low level flight and yes, it was just plain FUN but be very very careful if you try that with your own whirly bird!

Next on my agenda was pole dancing. In case you think this is just fooling around, google ADS-33 and you will find that a similar pirouette maneuver is used to check the ability to control the rotorcraft simultaneously in the pitch, roll, yaw and heave axis. So, turn the nose of the KISS exactly onto the pole and then keep the nose pointed that way, while you circle the pole. Of course you have to keep the distance from the pole and terra firma constant. And, to add fun to that exercise, do that quickly (be very cautious if you try this yourself). I have to admit that my maneuver was not too smooth but still

acceptable. It certainly was not the helicopters fault as Nino clearly demonstrated when he took over the controls!

A quick spot turn left and right later, I discovered a nice big tree which could be used to check the vertical performance of the KISS. The task is to keep the nose pointed exactly at the trunk of the tree and pull the collective a bit more forcefully (do not try this at home!) and, when you reach the top of the tree, briskly lower the collective to stop the upward motion and yes you have to keep the nose pointed all the time exactly onto the trunk of tree, then down again without letting the nose yaw away from the target. The military calls this a rapid unmask/remask maneuver. Although Nino does not intend to put rockets or guns on his ship, that maneuver allows you to check the handling characteristics of the helicopter i.e. how difficult is it to keep the nose pointed the right way, how difficult is it to stop the upward motion of the helicopter (the heave damping). My try at this maneuver was ok, Nino's try was very good and he evidently needed fewer corrections with the stick, collective or pedals, than I did. Generally speaking the KISS behaved really well during these maneuvers.

A few traffic circuits later it was time to head home. The approach is flown at 45 km/h and it was easy to line up precisely. Keeping approach speed and RoD constant was no problem either. However, Nino took over for the last few meters as the approach ends in a pretty tight spot, he landed very smoothly.

Probably you realise that I was seriously impressed with this KISS and in case you start to contemplate things, bear in mind that the KISS is available ready-made only. At the moment production rate is one per month and next year it will be two per month. Nino has already had a few orders but he will only gradually increase the production rate as he wants to make sure that everything is perfect.

Maintenance: all the small stuff can be done by you. There will be the obligation to do a 500 hr check either in the factory or at the dealer near you. Currently Nino is in discussion with interested parties in order to widen the network of dealers for his KISS helicopter. For the current state of affairs check Nino´s website.

TBO for the Solar T-62 is 1,000 hrs and Nino estimates that the overhaul cost will be about EUR 15,000. TBO for the rotor blades is 1,000 hrs and estimated overhaul cost is about EUR 7,000. If you factor-in everything, the maintenance costs will be around 36 Euros per hour.

Overall then, the KISS 209M is a very fine helicopter, it offers lots of turbine power (did I mention that I never felt the KISS is underpowered?) And lots of fun

Nino is researching his own engine

(once you have mastered the time-lag thing) at a very reasonable price. For some users, the fact that it is not a fully certified helicopter may well be deal-breaker but for anyone else, it's worth a very serious look.

Explanation of the name KISS 209 M:

KISS is Keep It Stupidly Simple. 209 stands for 2009, that year saw the first flight of the KISS. M is for wheels and the KISS 209 MS will be the name for the KISS with skids.

www.famahelicopters.com

Specifications

Empty Weight (skids)	283 kg	634.9 lbs
Empty Weight (gear retractable)	308 kg	679 lbs
MTOW	450 kg	992 lbs
Length	8,22 m	323.62"
Hight	2.50 m	98.42"
Cockpit width	1.25 m	49.21"
Cockpit height (inside)	1.28 m	50.39"
Baggage compartment	98x53x30cm	38.58"x20.86"x11.81"
Main Rotor	7.7 m	303.14"
Tail Rotor	1.26 m	49.80"
Fuel	150 Lts.	40 USG
Vne	215 km/h	115 kts
Max Speed (landing gear)	195 km/h	105 kts
Max Speed (skids)	180 km/h	97 kts
Cruise speed @ 85% (landing gear)	185 km/h	100 kts
Cruise speed @ 85% (skids)	168 km/h	90 kts
Max. RoC	11 m/s	2.100 fpm
Hover ceiling IGE	3.800 m	12.467 ft
Hover ceiling OGE	3.100 m	10.170 ft
Range	3 hrs	
Seats	2	
Turbine Engine (Solar T-62)	162 hp	
Price (skids)	€ 135.000,00 (ex. VAT)	
Price (landing gear retractable)	€ 145.000,00 (ex. VAT)	

Helicopters support Shetland

Georgina Hunter-Jones flies from Scatsta Airfield on the Shetlands

The Shetland Islands are on the 60th degree of latitude and some 200 miles north of the northern coast of Scotland, they are part of the British Isles but are geographically closer to Bergen in Norway than Edinburgh or London. There are more than 100 island but only 16 are inhabited and the population ranges from 20 people on Papa Stour, on the west side, to 22,500 on the mainland. Historically, thanks to its climate and geographical position, these small islands survived on sheep production, pony breeding, fishing


HDA
ristow

and some agriculture. Then, in the 1970s, oil was discovered in the islands and the story of the islands changed dramatically.

Along with the discovery and production of oil came the growing use of helicopters, first with Bell 47, then Chinooks (although Chinooks had a short life in the Shetlands after a 1986 crash led to oil workers losing faith in the aircraft) Sikorsky S61s, Bell 212s, AS330 Pumas, EC225 Super Pumas and later Sikorsky S92s. Helicopters made it possible to transport workers out to the oil-rigs, platforms and support ships, as well as being involved with further exploration and maintenance. Without helicopters the same level of production would have been impossible and the population growth much smaller.

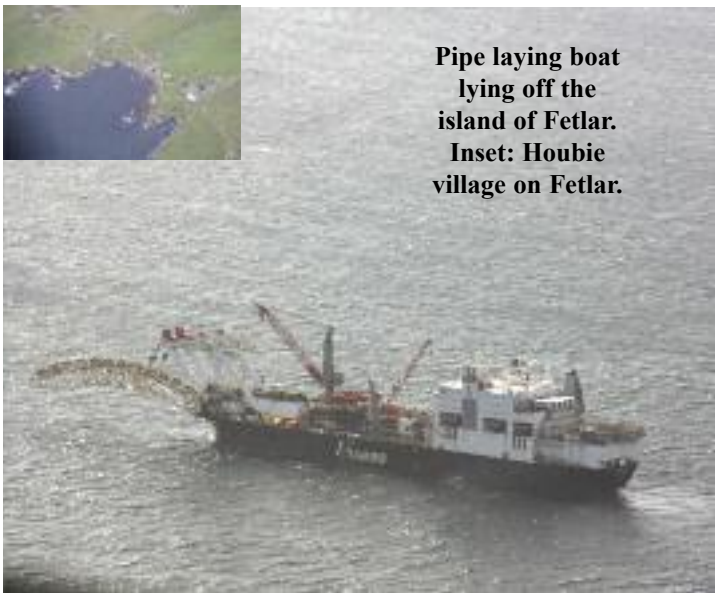
Much of the helicopter transport to the oil platforms goes through Aberdeen but there is also a thriving airport at Scatsta north of the main island of the Shetlands where many of the helicopter companies have a base.

Scatsta was originally an RAF airfield and was built in 1938, along with the seaplane base of Sullum Voe. Scatsta Airfield was abandoned in 1948, but when the oil was discovered off the Shetlands the airfield was rebuilt and the terminal updated, it was finished in 1975. Between 1973 and 1982, the area around Scatsta airfield was one of the biggest construction sites of the world as Sullum Voe was adapted to make it a base capable of receiving all the oil from the local fields that was then to be sent in tankers around the world. Almost 6,000 people were at that time employed in creating the oil terminal and its support industry. However, once the construction was finished the number of flights decreased and for a while it was mooted that the airfield might close. This did not happen and instead, in 1996, the runway was lengthened to allow larger aircraft to land at Scatsta. There are now on average 20 flights a day from Aberdeen and Lerwick bringing in oil workers and officials from the various oil companies.

Now in 2012, the airfield is building a new terminal because there has also been further exploration on the west side of the Shetlands and the oil company Total has invested £500 million in its new plant at Sullom Voe, which is to open in 2014 and there is a projected increase in numbers through the airfield. BP has also put in tremendous investment to the west of Shetlands and is looking at the reuse of many of the older platforms, while decommissioning some of the less effective ones.

I visited Bristow Helicopters at Scatsta in August. Bristow Helicopters fly Sikorsky S92s and AS330 Pumas, and EC225 Super Pumas and I was flown out to the an oil platform on the edge of the Norwegian border by Captain Lionel Coleman and co-pilot SFO Luke Bullough in a Sikorsky S92. The S92 carries 19 passengers (the maximum allowed without a hostess). It is a very stable machine, having active vibration control, highly reliable and good in the high winds that dominate this part of the country. The S92 has flown in winds in excess of 70 knots, but 60 knots is the wind limit of the oil platforms, as higher winds are considered dangerous for the workers, who are not allowed to climb outside rigging in winds above 60 knots. Various rigs and platform will have lower wind landing limits depending on the position of various rig obstacles and the direction of the prevailing wind. In case of poor visibility and low cloud the S92 has GPS approach patterns that allow descent down to the company minimum of 200 feet. (Is this correct?) There are no landing instruments on the rigs and platforms themselves, and helicopters do not shut down on the platforms unless

Bristow has some eighty plus pilots and engineers based at Scatsta Airfield. Inset: S92 panel



Pipe laying boat lying off the island of Fetlar. Inset: Houbie village on Fetlar.

there is an emergency.

The flight from Scatsta to the majority of the platforms takes about 50 minutes, and is regulated to avoid flying over the islands at levels below 2000 feet. We flew out at 3000 feet and back at 2000, but this can be varied by ATC needs. There are three main air traffic control stations en-route including Bergen in Norway and the flight is under radar control throughout. In spite of the active vibration control system there is all the noise and vibration you would expect of a large helicopter, but the headsets were very good. Although the S92 is the successor to the S61 there are no remaining analogue instruments and the panel is entirely made up of flat screens, which include a very efficient weather radar variable from half a mile to 25 miles. Pilots take turns in flying out P1 to the rigs and back and flying left and right seats. Once the helicopter has landed on the platform one of the pilots gets out and stays on the landing platform watching the 'sensitive' parts of the helicopter until they are ready to depart. This is a safety precaution to ensure no one walks into the blades.

Bristow has about eighteen flights a day from Scatsta to various oil related sites, and works for seven of the eight oil companies based in the Shetlands. Work for the helicopters includes offshore support, flare-tip changes, exploration for new sites and production. There are around fifty pilots employed at Scatsta, plus some forty engineers and around fifteen permanent staff, 50% of whom will be on site and any time. The airfield itself has more than one hundred employees doing fire-fighting, fuelling, rescue and air traffic control duties, as well as handling and security staff. So clearly they are a significant employer on the islands.

Other aviation around the islands includes a search and rescue base down at Sumburgh, on the Shetland mainland, also using Sikorsky S92s. The island of Unst had an RAF base called Saxa Vorde, which was used in the Second World War, and continued as a radar base until its closure in 2006. It led to a large population growing up in the island, which has around 600 inhabitants, and some oddities, like a mast for the Orange mobile phone company (Vodafone is dominant in the other islands) which had an RAF contract. The former airbase is now being redeveloped as holiday homes for the growing wild life and tourism projects in the Shetlands.

Many of the islands also have small airfields, which were used by Logan Air before the ferries took most of the inter-island trade. Most of these small strips no longer have fire cover and are only occasionally used, mostly by private traffic.

The Shetland Islands, northern frontier of the United Kingdom

Many of the oil platforms are located close to the Norwegian border

Loading the passengers

Beth Howarth, Duty Operations Controller

Shetland ponies at the Fetlar ferry terminal

Oil terminal and boat near Brae on the northern shore of the Shetland mainland

Sikorsky S92 Specifications

Crew:	2 (pilot, co-pilot)
Capacity:	19 passengers
Length:	56 ft 2 in (17.10 m)
Rotor diameter:	56 ft 4 in (17.17 m)
Height:	15 ft 5 in (4.71 m)
Disc area:	2,492.3 ft² (231.54 m²)
Empty weight:	15,500 lb (7,030 kg)
Loaded weight:	26,500 lb (12,020 kg)
Max. takeoff weight:	26,500 lb (12,020 kg)
Powerplant:	2 × General Electric CT7-8A turboshaft 2,520 shp (1,879 kW) each
Fuselage length:	56 ft 2 in (17.1 m)
Fuselage width:	17 ft 3 in (5.26 m)
Rotor systems:	4 blades on main rotor
Cabin dimensions:	20 ft long by 6.6 ft tall [42]

Performance

Maximum speed:	165 knots (190 mph, 306 km/h)
Cruise speed:	151 kt, 174 mph (280 km/h)
Range:	539 nmi (999 km)
Service ceiling:	14,000 ft (4,270 m)

The Shetland Bus

The Shetland Bus was a group of Special Operations operatives who formed a rescue link beteween the Shetland Islands and Nazi occupied Norway from 1940 to 1945.

The group was originally started using small fishing boats in 1940, but in 1942 became the Norwegian Naval Independent Unit as it became more professional. In 1943 it became part of the Norweigian Navy.

During 1940 skippers of the small fishing boats were employed to take agents and weapons, radios and supplies in and out of Norway, and to bring out Norwegians who feared for their lives from the Germans. The fishermen were based on the island of Lunna Ness where the locals were working men known not to gossip or ask too many questions!

Early in 1941, it was decided to take the Shetland Bus under the wing of the British Army and organization was given to Major Leslie H Mitchell and Lieutenant David Howarth, who used Flemington House in Wiesdale as their headquarters.

In 1943, it was decided that the fishing boats were too slow and the unit was given submarine chasers powered by two 1,200 hp diesel engines, with a top speed of 22 knots.

By the time the group was disbanded they had made 198 trips, transported 192 agents, 383 tonnes of weapons and supplies and brought out 373 refugees. Forty three crewmen lost their lives.

Goodbye Kiel

Arjan Dijksterhuis on the MFG-5 pull-out from Kiel-Holtenau

The relocation of Marineflieger Geschwader 5 to Nordholz Air Base is on schedule. Nordholz Air Base is already the base of Marineflieger Geschwader 3, operating the P-3C Orion, Dornier Do-228 and the Sea Lynx helicopters. To mark the pull-out, an official day was organized in June at Kiel-Holtenau.

There was a SAR display by a Kiel-based SeaKing that had been given a special livery to mark the end of military operations at Kiel-Holtenau. The city of Kiel's skyline was painted in black on both sides of the fuselage and special orange paint was used to create a sunset look with an ever changing colour depending on the angle. "Goodbye Kiel' was clearly visible underneath the fuselage.

A very unusual visitor was a CH-146 Griffon of the Royal Canadian Air Force. The CH-146 is operated by 424 (Search and Rescue/Transport) Squadron based at Trenton, Canada. The helicopter was flown in by C-17 Globemaster at Hamburg-Fuhlsbüttel, the rotor blades were reattached and it flew on to Kiel-Holtenau. The Griffon stayed at Kiel-Holtenau for eight days and practiced a variety of missions together with the home based Sea Kings Mk41s of Marineflieger Geschwader 5.

Another helicopter that received a lot of the attention from military personnel was the NH-90 from Holzdorf operated by Hubschraubergeschwader 64. This is the only squadron within the German air force that operates helicopters. The first NH-90 for the air force arrived on 1st of October 2010 at Holzdorf. A variant of the NH-90 (MH-90) might replace the ageing fleet of Sea King helicopters. A version of the S-92 Helibus, the MH-92, is preferred by many but the decision is still pending.

Russian built helicopters were present in the form of a rare Mi-14PL from the Polish Navy and a Lithuanian Mi-8T, a regular during past SAR Meets.

A Dutch Lynx helicopter from the Defence Helicopter Command (DHC) still wearing navy titles, was present. This was slightly remarkable as there were then only three Dutch Lynx helicopters left in airworthy condition. This particular helicopter, serial 261, just returned form its last mission onboard the supply ship HNMLS Amsterdam in the Caribbean for counternarcotics operations and coast guard duties and received special markings.

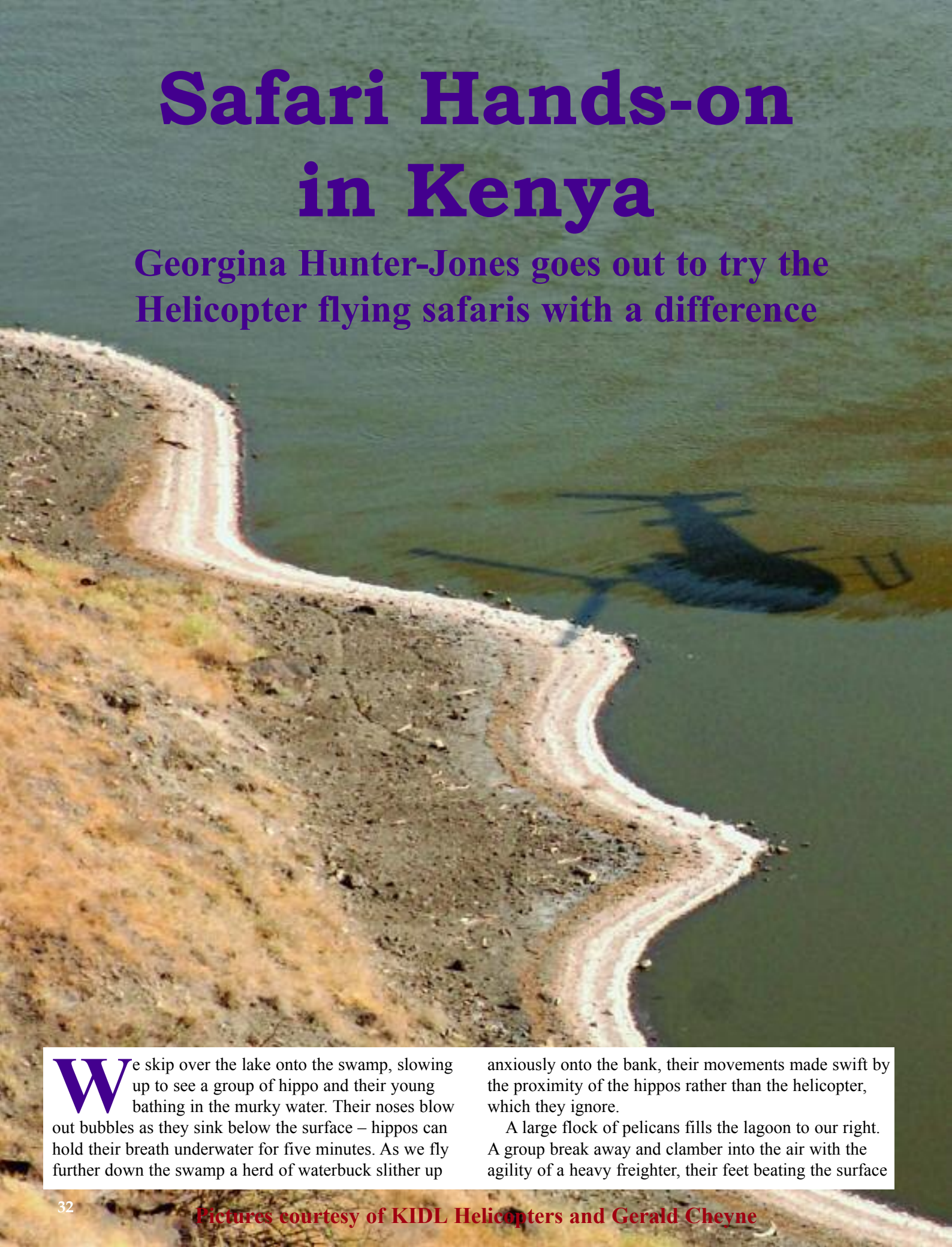
German military helicopters present were three Bo-105Ps, including two with a special livery, an EC135 and four UH-1D Hueys (just try to imagine the sound when the four Hueys left for their homebases!) The Bundespolizei participated with an AS.332L2 Cougar and a Danish company, Bel Air, showed up with an AW139.

A Royal Navy Type 23 frigate, the HMS St. Albans, was anchored in the harbour nearby with a Royal Navy Merlin HM1 embarked on deck. It did not fly to the airfield due to official commitments during the Kieler Woche.

The history of the airport goes back to 1913 when a provisory runway was made. Ninety-nine years later the military use of the airport ends and Kiel-Holtenau remains a civil airport. Thank you and goodbye Kiel!

Safari Hands-on in Kenya

Georgina Hunter-Jones goes out to try the Helicopter flying safaris with a difference



We skip over the lake onto the swamp, slowing up to see a group of hippo and their young bathing in the murky water. Their noses blow out bubbles as they sink below the surface – hippos can hold their breath underwater for five minutes. As we fly further down the swamp a herd of waterbuck slither up anxiously onto the bank, their movements made swift by the proximity of the hippos rather than the helicopter, which they ignore.

A large flock of pelicans fills the lagoon to our right. A group break away and clamber into the air with the agility of a heavy freighter, their feet beating the surface

Pictures courtesy of KIDL Helicopters and Gerald Cheyne

Hippos in Lake Naivasha
Inset: water buck in the swamp

of the water in an attempt to get lift. Suddenly they achieve the ground cushion and become pilots as sleek as swans, their long wings allowing them to glide for long periods between flaps in spite of their heavy bodies. In the back my friends watch mesmerized by the unusual sights.

Reluctantly, I turn the AS350B3 Squirrel away from the lake and across the clear plastic bunkers of the flower farms nestling in the Aberdare Mountains, as we aim for our final night stop; Loisaba Lodge in Laikipia.

I am able to fly myself thanks to the company KIDL Helicopters, the brainchild of Marco Brighetti. Marco realised that pilots would like hands-on time out in the Kenyan bush and is hiring out his B3 Squirrel to suitably rated pilots to be flown with a safety pilots on an itinerary of the pilots choosing. He already has an AOC for flying passengers but is now broadening his portfolio to allow hands- on flying in the right conditions.

Apart from the obvious attraction of flying in the stunning and varied Kenyan countryside, there are other reasons why the helicopter is the perfect vehicle for this type of tourism. Firstly, you can see the animals, birds and the local environment at a different angle from those using ground transport; high enough not to scare the animals, but low enough to see the details.

Secondly, you have the freedom to go anywhere. In Kenya, like the UK, a helicopter can land anywhere with landowner's permission. This means that you can land out in the bush, or at a lodge or campsite or even simply at a friend's house, an airfield or a helipad.

Thirdly, and perhaps most importantly, this is hassle-free travelling in a country with terrible roads, crowds of cars and other vehicles and little or no train transport. In many ways if aviation is freedom in Kenya, then helicopters are the eagles of the sky.

Our trip started in Karen with a visit to the racecourse. Racing has itself become an endangered species in Kenya and whilst in the past there were many racecourses, now Karen is the only one left.

From Karen we flew across the Ngong Mountains and the ridge onto the Rift Valley and into the plains. We crossed Lake Magadi, famous for its pink flamingos and its soda plant. After watching the flamingos swarm and resettle we flew across the wildlands, awestruck by the variety of the landscape and the indigenous animals and birds. Our flight continued on into the more cultivated areas where the Maasai tend their cattle in bomas and out wandering through the tundra.

Pink flamingos over the soda water of Lake Magardi

Our destination on this first day was the Mara Naboisho conservancy area, in the Maasai Mara, where we were staying at the tented camp of Ol Seki, an area particularly popular because it is at the centre of the migration of the Wildebeest from the Maasai Mara to the Serengeti.

Ol Seki was originally started in 2005 by Sue Allen and changed hands a couple of times before being bought by Hemingways. Hemingways started with one hotel in Watamu and now have three including one in Nairobi. Ol Seki Mara Camp offers six luxury 'Nina' tents, each with a 270 degree panoramic view of the famous Maasai Mara, and two suite-tents with an accompanying drawing room and balcony area over the conservancy. Traditional colonial décor is mixed with comfortable modern amenities, thus inside the tents there are powerful hot water showers laid out on traditional wood floors.

We spend the rest of the day on the conservancy, watching grazing herds of giraffe and zebra, jostling lion cubs and delicate antelope, surrounded by birds and plants.

After sundowners we are driving back in the truck with the spotlight shinning when we come upon a cheetah hunting for prey, her long sleek back illuminated by our lights. She ignores us and crouches, watching a Thompson Gazelle ahead. He quivers, instincitvely aware of the danger. Then suddenly breaks and runs, she follows, only to stop dead a moment later. We watch puzzled. Had our lights confused the cheetah. What would stop her mid-flight? Then a hyena limps past and we understand. A cheetah will not fight a hyena but the hyena will scavenge away her prey; making the attack pointless. The cheetah sits down and awaits a better time.

We go back to a scrumptious dinner including delicately cooked tuna with fruit and vegetables from the locality.

The next day, after a night in the honest luxury of the tented camp, we get back into the helicopter and fly over

Survival techniques: learning which plants are safe and nutritous. Inset: Cactus fruit

Survival tracking: lion tracks in the sand. Inset: owner of the tracks?

PHOTOGRAPHS BCOURTESY OF KIDL HELICOPTERS AND GERALD CHEYNE

to Enkipia on the edge of the Mara Triangle. Here we see hippos bathing with their pups, before driving into the park itself to watch the progress of a herd of elephant, a lion protecting his cubs and a leopard reclining in a tree, antelopes, birds and even the Crested Crane, the national bird of Uganda.

When the animals go to rest, in the hot part of the day, we avoid the heat and stickiness by getting back into the helicopter and flying on to Lake Naivasha. We lunch at the Sopa Conference Hotel. This hotel was where the Kenya Peace Deal between the Lou and the Kikuyu was signed in 2008.

After this we take a boat ride on Lake Naivasha before visiting the flower farm of Lamorna, which exports to British supermarkets and the Dutch auctions. It is owned and run by agricultural engineer Fiona Coulson. (See page 66 for pictures).

We spend the night on the shores of Lake Naivasha, listening to the hyenas, the cicadas, frogs and the calls of the Go Away birds. In the morning we noticed an aardvark hole near the helicopter. These holes are dug out by the aardvarks but later used by warthogs for protection from predators.

Early in the morning we fly to Nanyuki for fuel. Those lodges that have regular helicopter input have their own fuel barrels, but most do not and, although this can be ordered if necessary, it is just as easy to pop in to the small and attractive airfield en route.

From Nanyuki we fly across the Solio Reserve where we see rhino in small groups. Closer inspection shows they are the endangered black rhino that Solio has helped to preserve with their breeding pro-

Elephants have a gestation period of 640 days

Warthogs live up to 15 years old and can run at 30 mph

The contrasting landscape is one of the attractions of flying helicopters in Kenya. Insert: boma

Different landing techniques also need to be learnt

Tented suite at Ol Seki, Hemingway
insert: master bedroom

gramme. Solio have successful conservation programmes for both black and white rhino which have significantly increased the population.

We continue over the Aberdare Mountains to Loisaba Lodge where we will spend our next night.

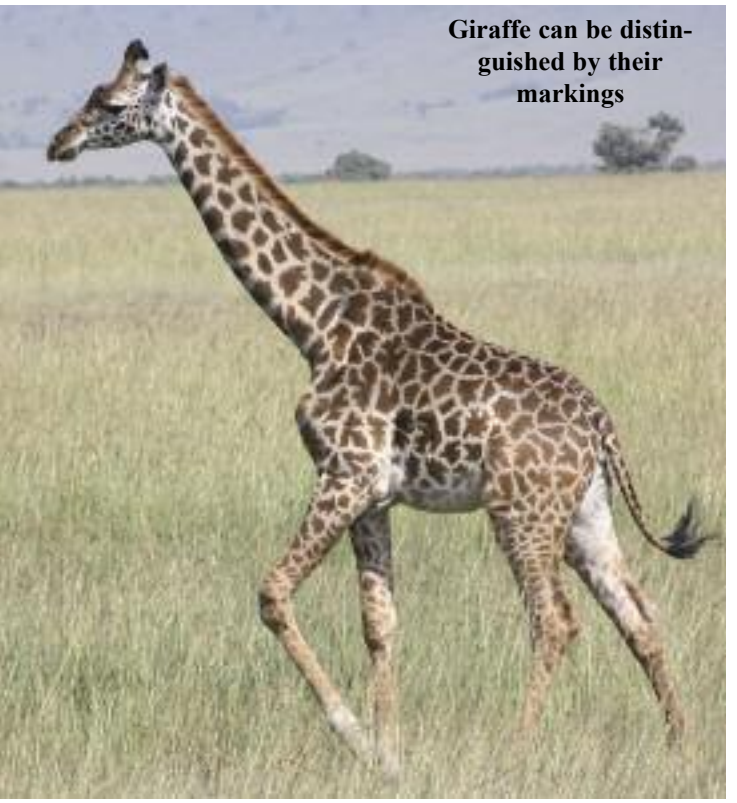
The landing site at Loisaba Lodge is a tight little pinnacle with a barrel of fuel sharing the space. A fun challenge and a nice test of skill. A landrover is already waiting to take us to our rooms when we land.

Loisaba Lodge, as well as being one of the oldest lodges in Kenya is involved in many wildlife and community projects including the AWF's conservation enterprise program that runs the Koija Starbeds as a commercial project supporting conservation ideals. (See http://www.loisaba.com/star_beds.php). Loisaba are also involved in the Laikipia Predator Project which uses radio tracking techniques including radio collars on lions to get information about their habitat and activities that would otherwise be unobtainable.

Pelicans fly like swans but lift with the agility of a juggernaut!

Cheetah hunting for game

Back in Karen on the last day of our trip, we take a helicopter transfer to the airport, avoiding the increasingly difficult and dangerous traffic on Nairobi's roads. Our trip has convinced us of the worth of the helicopter in Kenya and particularly the AS350B3, an excellent machine for dusty African conditions. It is a powerful and roomy helicopter, perfect for flying at over 6,000 feet in hot temperatures. It has a huge front window brilliant for viewing game and wide tough skids for landing. It is an adaptable machine and can, if necessary, run the engine on kerosene should avtur be unavailable.



Giraffe can be distinguished by their markings

Safari lodge at Loisaba in Laikipia

Tracking lions using radio collars and aerials


WINGS FOR WARRIORS

Wings 4 Warriors

Text by Georgina Hunter-Jones

Photographs by Gerald Cheyne

If Douglas Bader were alive today he would not only have been the patron of Wings 4 Warriors he would have been actively promoting it. This is a charity that aims to give severely wounded servicemen a chance to get back into the workforce as helicopter pilots and a charity to give hope in forlorn times.

Wings 4 Warriors was started after a chance meeting between Sergeant Billy Sewell, an amputee and serious casualty of the Afghan War, and a businessman called Mr Radcliffe. Sewell sat next to Radcliffe on a plane and talked about his injuries and his longing to be a helicopter pilot, while Radcliffe talked about his son's career as a helicopter pilot and instructor.

"I would love to be a helicopter pilot," said Billy.

"Perhaps," said father Radcliffe, having a moment of inspiration rather like Cinderella's fairy godmother "you can."

Now, eighteen months later, not only is Billy an instructor pilot on helicopters but the charity Wings 4 Warriors has taken on its fourth injured serviceman to train.

Billy Sewell did his first flight with Mark Radcliffe, son of the businessman, and was sent to train in Florida at Cloud 9, run by Geoff Painter, who has featured in these pages before. The success in raising funds for Billy led Mark Radcliffe to establish Wings 4 Warriors in August 2011 as an ongoing charity and a school to help servicemen train to become helicopter pilots. The first students of the school, in January 2012, were Matt Bryant and Alex Robotham, both like Billy Sewell ex marines and both severely injured in Afghanistan.

"When a soldier is injured," explains Mark Radcliffe, now a director of the charity, "his physical injuries have a mental effect leading to depression and loss of interest in life. This can lead to a severe downward spiral which has no bottom."

Radcliffe, Sewell and his whole family saw the difference that having something to aim for had on Billy Sewell when he came for his first air experience lesson. His wife Emma says, "helicopter flying gave us back my husband and the father of our two beautiful kids."

Radcliffe understands this, which is why he started the

charity. He says: “if you want to make a real difference you have to make a consolidated effort.”

“It is not just air experience,” he explains, “or even getting a private licence, (which really will do these guys no good) but getting a full commercial licence with ordinary, not adapted, machines so that they can get a competitive job in the normal aviation world. That is what makes the difference.”

The problem, as with all charities and particularly in recessionary times, is funding. Radcliffe is currently the only instructor and he gives his time pro-bono, but he is a young man and will at some point also have to be paid for his work. Then there is the cost of running the helicopters. The Poppy Factory, the charity that makes the poppies for Remembrance Day, has paid for five PPLs a year, but after that the guys need the money for further training plus hour building and experience to get them to commercial level. The Hasler Company, the rehabilitation wing of the Royal Marines, has been extremely helpful, as have Help the Heroes. All the guys learning to fly do fund-raising themselves on a small scale and the charity has four trustees, all of whom are involved in trying to raise money, but there is no doubt training from scratch to commercial level is expensive.

“We will probably only train five or so guys a year,” says Radcliffe. “It is no use flooding the market with newly trained CPLs, I need to know they can get a job or there is no point training them.”

Matt Bryant and Alec Robotham are two pilots who have just achieved their PPLs and are now studying for the ATPLs and hour building. Both were in the Royal Marines and were medically discharged.

Bryant entered the Marines at 17 years old in 2007. He came from Cornwall and wanted to travel, have adventures and make a difference. He was immediately posted to Afghanistan and two days before the end of his tour was shot by the Taliban while trying to help his wounded section commander to safety. The bullets went into his arm and destroyed both nerves and tissue, leaving him pumping out blood. He was dragged away by his colleagues and piled on to a US Sea Hawk helicopter, which luckily for him carried blood. There was also a medic on board. He then started a journey that finally had him rehabilitating in Selly Oaks. However, his rehabilitation was complicated by relapses as he had picked up an infection in a ditch in Afghanistan, which slowed down his recovery. Eventually, however, he was well enough to go back to work in the Marines, but only in a desk job. He was severely disappointed.

Bryant says. “I’d always wanted to be a Marine, that was all I ever wanted.”

He soon realised that this, however, was not the life he wanted, that he still craved frontline action, and so he was medically discharged and moved to Hasler Company for advice. Hasler Company were looking at suitable candidates to go to Wings 4 Warriors and Bryant was selected from a group of ten. He says: “I suddenly found I had a goal and that made me happier than I had been since the accident.”

Alec Robotham also entered the Marines at a young age, but after injury returned to active service at the age of twenty-one. Unlike Bryant, he did not go straight to Afghanistan but did jungle training in Borneo and sea training in the Mediterranean, which meant that he was more experienced by the time he arrived in Afghanistan in April 2010. He was posted to Sangin province and had what he describes as a rough tour of duty in the Summer of 2010, with soaring temperatures and constant aggression from the Taliban.

Robotham was on foot patrol in the middle of a group of colleagues when an elderly man approached them. Having already dealt with the elderly man in the past they felt no need to search him, which sadly turned out to be a mistake. The old man passed Robotham and then detonated himself, sending ball bearings into the younger man. Robotham says, “if I hadn’t been wearing a bulky communications packs I would be dead, it took the blast for my upper body, while my legs were peppered with bearings.”

Luckily, they were only 300 metres from base and a

What the future may hold for the trainees.

Jackal vehicle was sent for him, a helicopter took him to Camp Bastion and a C17 flew him on to Birmingham. There was a 90% chance he would lose his legs, but thanks to the speed of his rescue and the skill of the medics he kept his legs, albeit with many operations and a lot of pain.

Like Bryant he too found himself at Hasler Company looking for retraining. They offered him lots of courses but none seemed suitable until, as if by fate, he found Wings 4 Warriors. "As soon as I lifted off in the helicopter," Robotham says, "I knew this was what I wanted. I had always wanted to do something with aviation, aircrew or something, as I would never have the money to be a pilot. I feel I am really lucky to have been able to get helicopter training."

Most people would not consider this particular path to helicopter flying lucky, but Robotham is an optimist.

The third trainee at Wings 4 Warriors has just started his course. He is Steve Monteith (Monty) from the Highlanders and at 30 is slightly older than the other two guys. He went to Sandhurst in 2002 and had been out in Bosnia and Germany before being sent to Iraq in 2006.

Monteith was on a patrol which he describes as "routine, casual contact with intelligence" when he was hit by a roadside bomb.

"We were walking towards a local police station and there were some small rocks thrown at us and some harassing fire, when the IED went off."

His translator was killed but Monteith was the only other injury. He had the unusual experience of calling in his own extraction! He was picked up by a Merlin MERT (Medical Emergency Response Team) helicopter, which had blood on board. He thought he was going to lose his left arm but although he lost nerves and blood the arm could be saved. After innumerable operations he ended up in rehabilitation in Hedley Court.

Monteith, like the other guys, had extensive surgery and also developed an infection. After considerable rehabilitation he was considered fit enough to stay in the army and was sent to Afghanistan in 2009, where he was given a desk job. However, his arm injury flared up again and he was sent back to the UK for more surgery, something that exacerbated the infection and actually set back his recovery. He was eventually also medically discharged and set about looking for another career.

In November 2011, Monteith was on a Battleback riding course when he bumped into a guy who had been to Aerobility. Aerobility is a charity that teaches on fixed wing aircraft leading to commercial aeroplane flying. Montheith was about to start a PPL on aeroplanes when, through a CAA surgeon, he met Radcliffe from Wings 4 Warriors. Radcliffe advised him to continue on the aeroplane and then move to helicopters as any time in the air helps towards overall experience. This he did, arriving at Goodwood to start at Wings for Warriors in summer 2012. He was, at the time of writing, half way through his PPL.

To qualify for Wings 4 Warriors all the candidates must be able to pass a Class One medical, they must have been medically discharged from the services and they must have the right kind of attitude and outlook to make a successful commercial pilot.

"I cannot stress enough," says Radliffe, "that this is a career path that takes real dedication."

For further information or a chance to help Wings 4 Warriors see the website:
http://www.wings4warriors.org.uk/

Left to right:
Steve Monteith
Alec Robotham
Matt Bryant
Mark Radcliffe
(instructor)

Hot Blade 2012

Alan Norris visits the European Defence Agency training programme

Following months of political diplomacy and debate between the State of Maracate and its neighbour, the State of Kopami the European task force stationed in the country are called to action when insurgent groups cross the border along the Idrasse peninsula. A Belgium A109B helicopter, acting as forward air controller at the scene of the hostilities, calls for a pair of German Air Force CH-53G helicopters carrying troops to be dispatched to the area. Two Royal Netherlands Air Force Chinooks carrying vehicles to support the troops are already on the way to the scene.

This was just one of the scenarios acted out during the recent multinational helicopter exercise held in Europe, Hot Blade 2012. Hosted by Portugal it was the largest helicopter exercise ever staged in Europe and organised by the European Defence Agency (EDA), based in Brussels, under the overall theme of hot, high and dusty conditions.

A broad range of operational tasks were practiced over the 14 day exercise, based on recent operations and missions in Afghanistan and Libya, with over 2500 personnel and equipment from all three branches of the military from seven countries taking part. The exercise also took place in parallel with a scenario designed to test planners and crews in realistic pressurised conditions. Based in the fictional Idrasse Peninsula, where an EU Force were tasked with maintaining security for a number of humanitarian activities, along with suppressing illegal armed groups and deterring territorial incursions by a neighbouring state.

The exercise was based out of Ovar Air Base near Porto and took place across a training area roughly equivalent to half of Portugal's landmass. The Portuguese military provided the largest proportion of the assets required to support a military exercise of this size with the Air Force providing EH101 Merlin helicopters operating alongside F-16 fighters and C-130 transport aircraft. The air force also set up a tactical air control command centre and supplied troops acting as a force protection unit. The Portuguese Army contributed a Quick Response Brigade while the Portuguese Navy supplied Special Operations Forces personnel.

Over 23 helicopters took part in Hot Blade drawing on a variety of helicopter assets from six European nations. The German Air Force, who has only recently received helicopters from the German Army Aviation under a defence review, supplied four heavy lift CH-53G helicopters. The Belgian Air Component provided four Agusta A109B helicopters in the Forward Air Control role, the Netherlands Defence Helicopter Command a pair of AS532 Cougars and CH-47D Chinooks and the Austrian Armed Forces, who provided the largest of the

European helicopter contingent, with five Agusta Bell 212 helicopters.

The Finnish Helicopter Battalion sent three NH90 TT from the Special Forces Utti Jaeger Regiment. This was first time the Finnish crews had operated their NH90s in a hot and dusty environment, far removed from the snowy conditions they normally experience. With a number of the countries taking part in Hot Blade considering deploying the NH90 to Afghanistan, the exercise was also an opportunity to evaluate the effects of a hot and dusty environment on the helicopter type.

Finnish helicopter crews are very experienced at operating the NH90TTH in snowy conditions, whiteouts are a common experience in their flying, so, during Hot Blade the crews were able to apply their normal flying techniques to the dusty conditions. When the helicopter lands in white flat snow the white surface and the downwash blowing the loose snow means both the pilot and loadmaster often have no reference points. In dusty conditions, the Finish crews said, they found at least some reference points during landing, and consequently felt that brown-out landings were easier than in snow. This is because the down wash created a clear area directly below the helicopter that the loadmaster could use as a reference point.

One of the primary objectives of the exercise was to test the logistics of working together and so many of the participating military used the operation as an opportunity to move their aircraft and support equipment by a combination of sea, land and air. The German military decided on a huge logistic operation, transporting two

Finnish helicopter crews could take their experience in whiteout conditions and apply it to the dusty conditions here

23 helicopters from 6 European nations took part in the exercise

Crews have been able to use the expertize learnt here in Afghanistan

CH-53G helicopters, along with ground vehicles and equipment by sea. A task only previously undertaken once, twenty years ago. Although the sea journey from Hamburg to Aveiro took four days, in less than five hours after unloading the first CH-53G it lifted off and had departed for Ovar air base. Despite having significant numbers of helicopters in the European military inventory successive operations have often been short of helicopter support. Many of the 1700 helicopters across Europe are un-available during a major crisis for two reasons: firstly some crews have not been trained to fly in the demanding desert or mountainous terrain: secondly some helicopters are not technically equipped for these harsh environments. The EDA is now focusing its main efforts on the training element of this issue with its Helicopter Training Program.

The EDA was established in 2004 by the European Union Council of Ministers with the aim of supporting member states to pool and share assets and resources thus enhancing their military capabilities. In 2009, the Helicopter Training Program was approved to develop, consolidate and share their best practices. Hot Blade was the latest in a series of helicopter exercises, held in France, Spain and Italy over the last three years.

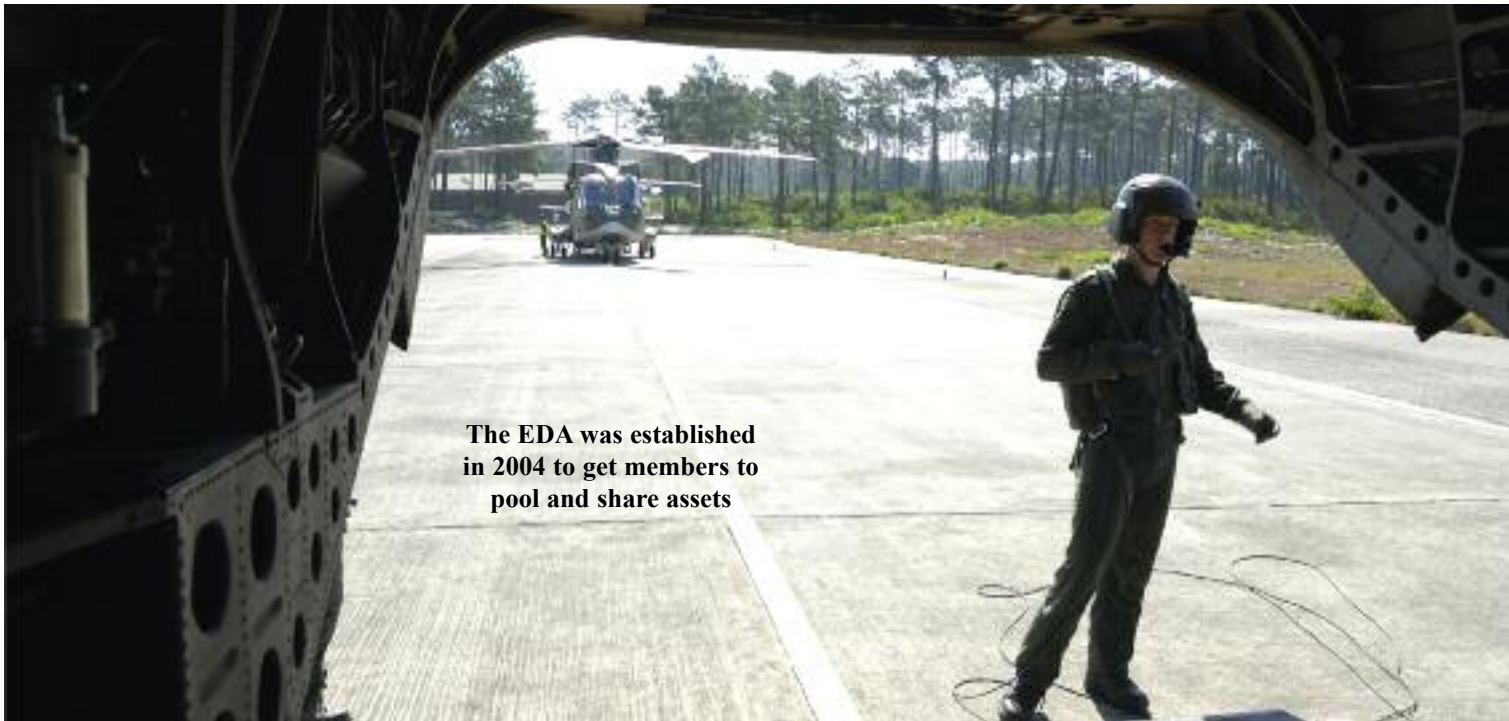
Royal Air Force Wing Commander Andy Grey, EDA Helicopter project Manager, said “We know we are reaching our target audience and they are participating, the interest by member states is growing and growing quite fast, our first exercise only had eight helicopters taking part. We continue to develop the program from exercise to exercise making them more focused and complex to reflect the needs of the member states”.

The overall programme now has 72 helicopters, 152 crews and 1800 personnel

Crews learn to fly in demanding desert or mountainous terrain as well as their own environments

Wg. Cdr. Grey explained that the overall program now has 72 helicopters, 152 crews and over 1800 personnel. Since 2009 over 50% of the crews have been able to use their expertise on deployments to Afghanistan. The training program has also involved the creation of the Helicopter Tactics course in the UK, work to harmonize helicopter flying training across participating Member States and experimentation with distributed simulator training.

During the 14 days of the exercise, the helicopters flew over 700 flying hours, in more than 300 sorties, showing that Hot Blade 2012 has built on the lessons learned from previous successful EDA exercises. It was a great opportunity to test and stretch crews who learnt to work together under operational pressure and the EDA is already preparing for the next exercise in Belgium this September. With the breadth and variety of air assets across Europe and with continued financial support from Luxembourg the future of the Helicopter Training Program looks like it will continue to deliver.



The EDA was established in 2004 to get members to pool and share assets

Learning to Fly in South Africa

Malvina Nicca

For the last five years I had been talking about getting my helicopter licence. Occasional trial lessons in UK and California had confirmed my love for flying helicopters, but I didn't find the time for my favoured destination: Canada.

Since I spend a good part of the year in Johannesburg for my job, one fine day I compared flying schools in the area and got started at ATS flying school in Grand Central. Unlike FAR with a so called add-on, South African Regulations only give low credit for fixed wing experience - for a PPL (H) the minimum of 50 hours is not reduced at all. Yet attractive prices meant the total budget for my PPL was still below alternatives in Europe.

On my first flight I got a general introduction to the area. Grand Central airport is very close to Johannesburg International (OR Tambo), despite this procedures are very simple, with designated VFR routes for crossings if one desires to add a challenge. The area offers beautiful landscapes, Hartbeespoort Dam and the Magaliesberg mountains are within easy reach.

An advantage of South Africa, certainly compared to England, is reliable weather. Flying in December meant early mornings with blue skies and magnificent visibility, with thunderstorms almost every afternoon. In winter time the air so dry you won't spot a cloud for weeks.

By the nature of its location on the eastern plateau of South Africa, all training is 'high altitude'. Grand Central airfield is at 5500ft, so flying at limited performance becomes everyday experience, and watching gauges a good habit.

Not uncommon for a fixed wing pilot, I had a bit of a fight with the pedals - which to my dismay had nothing to do with turns, but now related to power changes. How do you get rid of such 'bad' habits?

Auto-rotations were a bit like throwing oneself at the ground at a very high rate of descent, to miss it barely with the aid of engine power. My instructor on the other hand explained that it was much safer to have an engine failure in a helicopter than a fixed wing, since you don't need a runway but just a space the size of the helicopter itself. My impression is that, at least on the R22, you need a lot of practice before that size landing field will suffice.

As far as written exams are concerned, unfortunately none of my JAA licence was credited. I have taken exams in a number of countries - these were by far the most difficult. Certainly above average PPL requirement, at times exams seemed to question knowledge of exact phrases used in textbooks rather than understanding of the matter.

Written exams are taken online, linked directly with the CAA and supervised not only by the flying school but also recorded on camera which leaves no leeway for cheating. An exam once failed cannot be written until 3 days later, so if you're in a hurry it's worth preparing well.

Learning about aerodynamics, I remember reading a phrase 'this effect is not yet fully understood' – sums it up for me! Lots of studying later all written exams were

Malvina with her instructor Ivan Van Rooyen

tackled and my planning of what I thought would be the final challenge could begin.

By May, weather was blue skies for the final hours before my checkride, offering pure fun flying around Hartbeespoort Dam and Magaliesburg mountains. I treated myself to a flight on the Alouette II, an amazing aircraft in the ATS fleet which is advertised as low price turbine rating.

Once I had completed the checkride and all documents signed I raced to the CAA to get my licence, unaware of the adventure which lay ahead of me.

Before taking on my case, ATS flying school had wisely contacted the CAA to confirm if any of my JAA licence would reduce the requirement for written exams. The reply was that the UK JAA radio licence would be accepted, but all other exams had to be written.

As briefed, I went to pick up my licence a few hours after handing in the forms, only to be told 'the radio licence could not be accepted after all, but language proficiency was ok'. Knowing that I was leaving the next day with no certain date of return, I already gave up on the exciting idea of holding proof of my achievement anytime soon.

Back at the flying school, the surprise was moderate as CAA statements seem to prove unreliable on occasion. But they helped me find a solution: if I could write the exam immediately (no time to get nervous, right?) and take the result to the CAA, there might still be a chance of getting the licence.

Indeed, two hours later I was back at the CAA office with all documents for a SA radio licence. A very kind woman took my documents and asked me to wait, gesturing that she would be back soon.

Some time later she waved me to the desk. The look on her face gave me a premonition that I would not like what was going to happen. She said: 'radio licence is fine, but there is a problem with the language proficiency'. By now I was determined not to leave without my licence, and some arguing later it was accepted that 'proficient' did indeed correspond to a 'level 6' and I am finally proud owner of a PPL(H)!

JAA Conversion

Adding PPL(H) to my JAA licence was simple, though I may have been lucky with the choice of flying schools. Phoenix Helicopters in Goodwood already had experience with conversion from South African licence, which comprised of passing the skills test and two written exams.

The biggest difference turned out to be auto-rotations, which I had previously been taught under very realistic scenarios, occasionally even un-announced. Lowering the collective gently before the throttle is rolled off as taught at Phoenix simplified the exercise greatly, especially on the R22 where one has to react very quickly to an engine failure.

Added bonus of flying in Goodwood was a flight to Amberley castle… Does it get better than that?

First Solo at Grand Central airport

Amberley Castle in West Sussex

Son of my Father

Words and pictures by Thomas Skamlijic

At Aero 2010 in Friedrichshafen I detected a helicopter which looked very much like a Rotorway helicopter (maybe a little bit more elegant though) and having flown such a helicopter some time ago I had not much interest in having a closer look. But when I passed by somehow I detected that the exhaust pipe had more the size of a stove pipe. Now, this got my interest and I tried to find a sales person of that company Alpi Aviation which for the time being I only knew as producer of the Pioneer aircraft. I found Corrado Rusalen, the chief test pilot of Alpi Aviation, who gave me a few details on the helicopter and we decided that I could join him for a flight and some more information on the Syton.

So, in 2011 I find myself on a small airfield a few km north of Venice and I am about to fly the Syton AH 130 Ultra Light Helicopter. My pilot for these flights is Erich Kustatscher a very very experienced Ultra Light and Helicopter Instructor who has 600 hours on the Syton. The Syton is used as a trainer and, of course, for pleasure flights.

During the walk around Eric explains the details of the Syton. The Syton may look a little bit like the Rotorway but has nothing to do with the Rotorway. It has a differ-

Photographs courtesy of Reg Austin

Syton ne Rotorway

ent rotor head, different rotor blades and a T-62 Solar turbine to turn the rotors. (The Solar T62 Titan Gas Turbineis an APU which drives the alternator on the Chinook.) Of the 160 available hp only 130 hp are used. I detect that the exhaust is turned to the right to provide some additional anti torque force. So evidently the rotor turns the right way. The structure of the Syton is a stainless steel tube frame covered by carbon composite material with a very nice finish. The tubes are filled with an inert gas so should a hair line crack develop the pressure in the tube will be lost and of course a gauge in the cockpit will show that problem.

To make life easy for the pilot there is a FADEC to run the turbine. Since the Syton is a very modern helicopter a governor takes care of rotor rpm.

The typical walk around is standard and apart from checking the tension on the belts that drive the tail rotor absolutely nothing unusual or extraordinary to check. Actually the belt that drives the tail rotor is divided into three belts. You need to check the tension on the belts one and three, the tension on belt number two is automatically adjusted. The tail rotor is not the standard tail

The left cyclic has a governor switch to control the turbine but there is no baggage room and it is cramped inside

rotor as Alpi Aviation designed a new one which is aerodynamically more efficient than the standard. Eric was the first to get this new tail rotor for his Syton and according to Eric it is excellent. So far he has not suffered from Loss of Tail Rotor Effectiveness or tail rotor stall or anything similar. As I was about to find out this tail rotor is extraordinary. If you check the website of Piloter you will find a video that shows pretty well how effective the tail rotor is!

Access to the rotor head is facilitated by a step on the skid. Personally I would prefer another foot step a little bit higher in order to get little bit closer to the rotor head for checking purposes. Nothing to detect so next to check are the rotor blades but once more everything is perfectly fine.

The two aluminum rotor blades fly a little bit low, which is good when you want to visually check them but a careful eye on interested onlookers is advisable. Main rotor RPM is 535 and the tail rotor turns at 2.700 RPM.

It's time to get into the cockpit. To enter the cockpit no special physical abilities are required. The doors can be removed should you require the windy feeling of a convertible (the maximum speed then is reduced to 140 km/h). Three levers need to be turned to lock the door. In case you wonder whether this really is a good in particular when you have to leave the cockpit in a hurry Eric assures me that the door can be pushed out even if all the levers have been used to lock the door.

PIC is on the left as the cyclic on the left features the beeper to adjust the turbine RPM up or down. Additionally the radios and the landing light can be operated from the left. Between the two seats is the knob to adjust the friction of the collective. The friction of the cyclic cannot be adjusted (but that's not really an issue). Right in front of the friction knob you will find the red fuel shut off lever (pull it out and fuel is off, shove it in and the fuel will flow).

The seats are very comfortable but these seats are made by Eric as the ones Alpi Aviation provided were absolutely horrible. Under the seats there is a very small compartment that will gladly accept a credit card and a toothbrush but not much else. Since the Syton does not have a dedicated luggage compartment it would make sense to use the room under the seats in the same way as Frank Robinson did on the R-22 and R-44. Its not going to be a lot of luggage room but a lot more than now is available.

A 4-point harness holds you in place and the cyclic and collective fall easily into hand. The pedals are perfectly positioned in length (at least for me) however to make flying a little bit more comfortable the spacing between the pedals should be increased a bit. Size wise the cockpit is about the same as the R-22 which insures a really close relationship with you instructor.

The view from the cockpit is excellent and the dashboard features all the usual warning lights, gauges plus one instrument which shows the turbine rpm in percentages. Interestingly enough the torque gauge is positioned

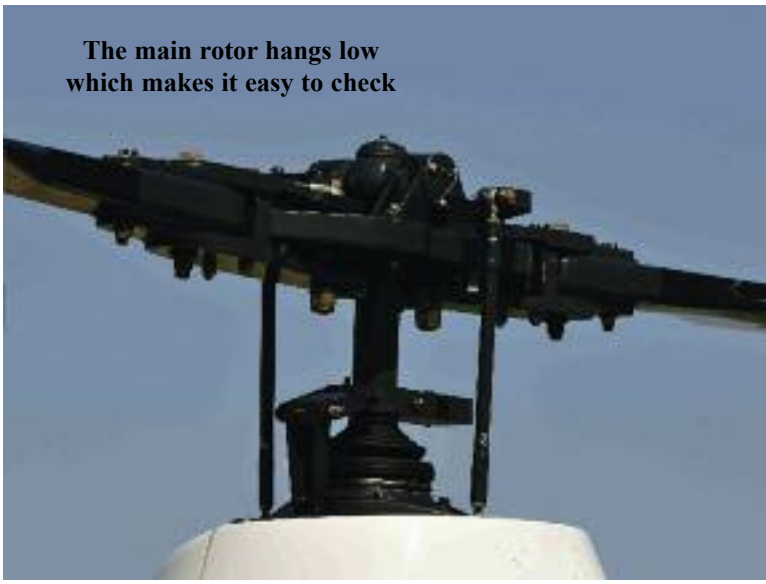
in the very low left hand corner of the dashboard. Personally I do not like this arrangement since you will be required to have a look deep down into the cockpit, to see the torque indication, probably at the time when your eyes should really be out of the cockpit. Eric knows about that and teaches his students to feel where the collective is positioned for a typical hover and then not to pull more collective. This power management technique should work quite fine for probably all of the helicoptering you will do in this helicopter. Just for info 85% torque is enough for a nice hover and hover power is usually quite ok as climb and cruise power.

Start up: Master Switch On, Igition On (FADEC is already on and the governor as well) and hold the switch, turbine spools up and with the rpm at 10% Eric releases the ignition switch for about a second and then re-engages the ignition and immediately the typical turbine whine can be heard. Next important rpm is 25% when you let go the ignition switch and open the fuel. With the turbine rpm at 50% the main rotor starts to turn. Roll the throttle up to maximum and keep an eye on EGT. Although FADEC takes care it is good to see the EGT remains in the green (it was about 510° and max would be 590°). We waited a little bit for the turbine to stabilize at 102% and just for info, from Master On to ready for takeoff was a lot less than a minute.

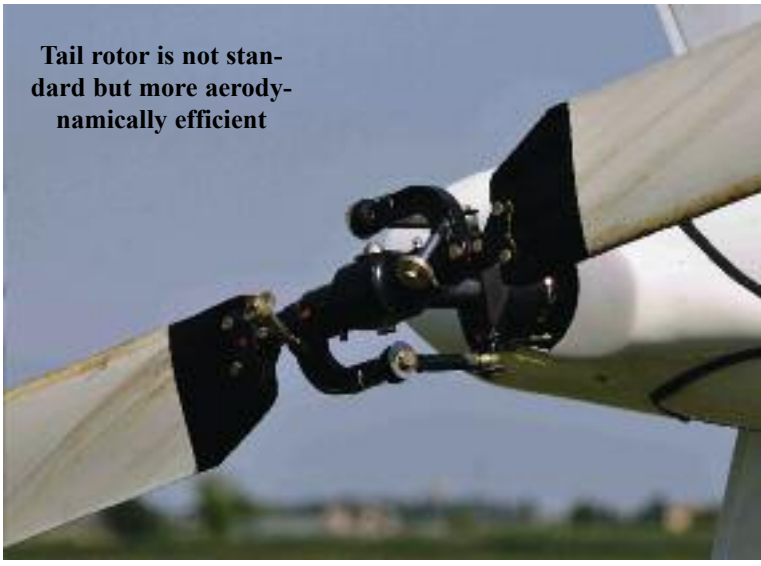
A quick radio call later I pull slowly collective and very gently lift off. As promised 85% was enough to get us airborne (just for info, we were probably a little bit overweight, OAT 29° C and the wind was 15 kts with gusts up to 25 kts). Did the right turning rotor make any difference for me? No, absolutely not!

We start with a typical traffic circuit. I turn the Syton 90° left and accelerate to about 100 km/h when I gradually ease back the cyclic stick and we begin our climb to altitude with an indicated RoC of a 800 to 900 FPM. A climb speed of 80 km/h will result in a Ro C of 1.200 FPM. Nothing really of importance to tell as the Syton behaves very much like a R-22. We leave the traffic circuit for a short cruise flight. 95 % torque yielded a speed of 160 km/h. The cruise flight was very comfortable up to that speed as the vibration level was low. Going faster increased the vibration level a bit and when IAS was at 200 km/h the Syton "told" me in no uncertain terms (vibration level increased a lot) that it was time to stop pushing even faster. By the way Eric imposed a Vne of 200 km/h for all flight school operations.

Quickly banking left and right up to 45° was no problem at all and flying full circles (L/R) at 35° without height loss was accomplished with minimal effort. A climbing and descending turn at 100 km/h was easy, as was keeping the altitude and heading when changing the speed from 160 km/h to 60 km/h and up to 160 km/h



The main rotor hangs low which makes it easy to check



Tail rotor is not standard but more aerodynamically efficient

Console needs some changes

again. What I really liked was that the Syton reacts very quickly to each cyclic input and can be controlled very precisely. The Syton is very agile yet stable enough for relaxed flying. In short flying the Syton really is great fun.

Although the stick forces are a little bit higher than on the R-22, I think they are really just about right for this kind of helicopter. These higher stick forces will make it a lot easier for student pilots to come to grips with the handling peculiarities of a helicopter as that urge to over control will be 'naturally' reduced.

Let's head home for an autorotation. We start with a high hover vertical autorotation and our RoD is pegged at 2.000 FPM. Increase the speed to about 80 or 100 km/h and the RoD will decrease to something in the vicinity of 1.800 FPM. A massive flare brings rotor rpm to the upper end of the allowable RPM range, collective and a little bit of stick forward brought the Syton into a level attitude then pull collective to cushion the landing and a full touchdown autorotation is complete. Rotor RPM was always in the green and remarkably stable. The hover autorotation is a non event.

Next we do some sideways and backwards flight. All of these maneuvers can be flown with ease and although we did not push it to the max due to the gusty wind, we achieved some impressive sideways speed without any tail rotor problems. Flight backwards was easy as well and when Eric took over he went even faster backwards and then gradually pulled the Syton up into a climb with a gently increasing nose down attitude, so that we hung there with the nose pointing down pretty steeply. The Syton did not complain.

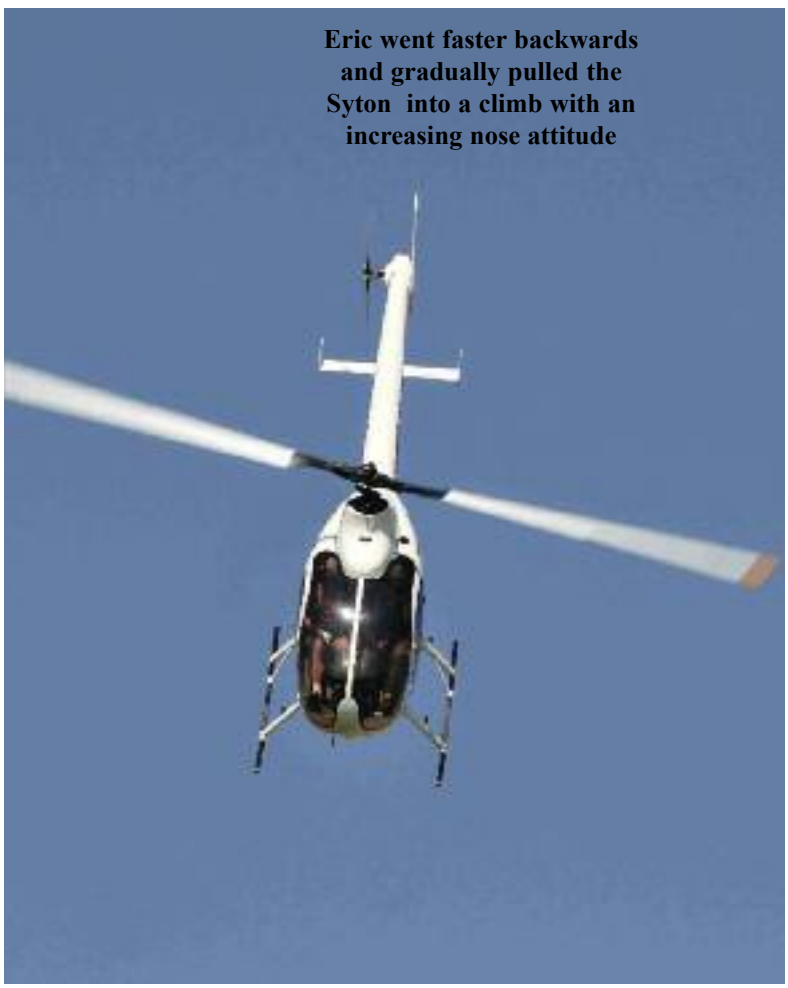
From this position we very quickly accelerated and with a quickstop we arrive at the intended spot (all of that was a nonevent).

It's Time for a tail rotor failure in hover. Eric pushes the left pedal almost to the max and the ensuing yaw rate is pretty impressive. I estimated about 2 seconds for a full 360°. I quickly close the throttle and the following landing was accomplished with ease.

With the runway markers lined up so well and so clearly visible it was time for a slalom. We race through the course and it is just plain fun how precisely the Syton could be maneuvered through the course. Next was the gipsy roll, so flying a straight line from one end of the airfield to the other while continuously turning the nose of the Syton through 360°. Although not totally happy with the looks of my maneuver, I was quite astonished how easily this could be done. More time on type will certainly help but fortunately the Syton helped me not to embarrass myself too much. Eric evidently liked that maneuver and showed me how to do this maneuver with a higher speed and a faster turn rate.

Eric showed me another nice maneuver. Instead of flying a straight line fly a circle while continuously turning the nose through 360°. I was just amazed how smoothly Eric did this maneuver, as my try on this looked very different. Flying a circle with the nose pointed all the time at the center of the circle is fine but you can do the same thing with the tail pointing to the center of the circle. The nose will be racked rather steeply into the air and you will be amazed how quickly the circle can be flown during that maneuver. When we did these maneuvers doors off, I was very happy to hold on to the collective and cyclic, as I really had the impression that the wind in the cockpit would blow me out of the cockpit. As you can imagine all these maneuvers require lots of tail rotor authority and what I can tell you the Syton never showed any signs of LTE (loss of tail rotor authority) or tail rotor stall.

With all these test successfully completed I did a few more normal, some less normal and some really steep approaches and no matter what I did the Syton made all the maneuvering very easy on me. Adjusting the flight path or the RoD can be done without fuss and evidently the available power and quick reaction of the Syton to collective or cyclic inputs will help you doing all maneuvers in a safe manner.



Eric went faster backwards and gradually pulled the Syton into a climb with an increasing nose attitude

Some additional points:

Endurance of the helicopter is about 1.5 hrs which should be good enough for 250 km based on a fuel flow of about 50 lts./hr. With the optional fuel tank you can extend flight time to 2.5 hrs.

The turbine TBO is 2.000 hrs. The main rotor gear box oil needs to be changed every 500 hrs. Eric tells me that in his Syton the oil change revealed that the oil would have been good for at least another 500 hrs. The tail rotor drive belts need to be exchanged every 300 hrs and when this was done it was found that the belts were as good as new. The clutch was inspected every 300 hrs revealing no need for further action and generally speaking the Syton was very operator friendly.

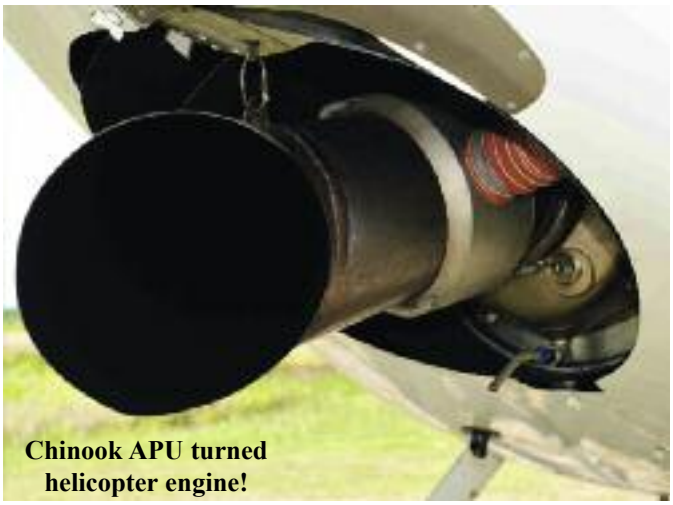
Some points that have to be addressed:

Handling wise the helicopter there is not much to improve. However what should be improved is what is called creature comfort. The size of the cockpit should be increased to give the pilots a little bit more breathing space. Endowed with power to spare the additional drag of the bigger cockpit should not reduce the performance figures in any way. The vibration level should be reduced, in particular when flying at 200 km/h. The Syton has the necessary power to fly at that speed but the vibration level simply is too high to enjoy flight at that speed. On the other hand, in case you are not sure about the quality of the work of your dentist, this might be a way to check the quality of the tooth fillings. At the moment there is no luggage room available, which certainly is not state of the art. With regard to gauges, to have a digital readout of the turbine RPM is certainly a cool thing but grown up helicopters have the rotor RPM and the turbine RPM in one instrument making it possible for the pilot to check both numbers in one easy scan. As indicated the torque meter is a little bit low on the dash board. Helicopters are flown eyes out and therefore vital instruments need to be in or at least close to the line of sight. The torque indicator, a vital instrument, needs to be positioned a lot higher up the dashboard.

Conclusion:

The Syton really is a lot of fun and from what I saw and experienced I was quite impressed. In case you are impressed as well and are considering a closer look into the details of the Syton I need to tell you this. When you buy a helicopter you are buying a package. It's not only the hardware that is important, it is also the software i.e. support by the factory also known as customer care. With regard to customer care Alpi Aviation needs to improve a lot. When preparing for this article I phoned Alpi Aviation four times to get answers to questions like, will there be a glass cockpit available, what further plans do you have with the Syton, what kind of tests did Alpi aviation subject the helicopter to, what is the current price of the Syton, what does AH-130 stand for - could it be Attack Helicopter or is it Available Hours! When and why did Alpi Aviation decide to move into helicopter manufacturing and so on. The person at Alpi promised to call me back, well I am still waiting. Then I asked an Italian speaking friend to phone them. He is still waiting the call back!. Of course I sent them all my questions via email as well. All in all 3 times and guess what, I am still waiting for a reply. From what I did and saw during the flights with the Syton and what Eric told me, the helicopter itself is a convincing proposition, however I am a lot less convinced about Alpi Aviation´s customer care.

Many thanks to Erich Kustatscher who showed me what can be done with the Syton and many thanks to him as well for remaining with me in the cockpit when I tried to do the same very interesting maneuvers myself.



Chinook APU turned helicopter engine!

Syton Specifications

Length: 8,84 m
Width: 1,60 m
Hight: 2,40 m
Rotor diameter: 7,63 m
Weight empty: 290 kg
MTOW: 580 kg
Payload: 270 kg
PAX: 2
Fuel: 90 Ltr.
Powerplant: Solar T-62
Power: 160 hp derated to 130 hp
Fuelflow: 50 Ltr/Std
V-NE: 113,5 Kts
V-Cruise: 86 Kts
Range: ca 270 km
Service Ceiling: 3.800 m
Hover in Ground effect (IGE): 2.800 m
Hover out of Ground effect (OGE): 1.800 m

Around the World

Dancopter EC225 for Blueway Group

Photograph Anthony Pecchi courtesy of Eurocopter

Eurocopter will have provided the Northern European helicopter operator Blueway Group with a total of four new EC225s by the end of 2012. Two of these helicopters are already in service for crew change operations on the Danish continental shelf. The third aircraft was delivered today during a ceremony at Eurocopter's facilities in Marignane while the final helicopter is to be handed over before the end of the year.

The new EC225s in offshore crew change configuration are operated out of Esbjerg, Denmark, by DanCopter, a 100% owned subsidiary of Blueway Group in the frame of a contract awarded by the Danish company Maersk Oil & Gas, which began on July 1 of this year.

The addition of these 19-passenger EC225 helicopters to Blueway's offshore fleet, which has previously been comprised of medium sized helicopters in the 11 to 13 seat range, including Eurocopter's EC155, marks the beginning of the company's operations in the heavy segment.

Multiflight flies Olympic Winners Home

Multiflight was delighted to fly brothers Alistair and Jonathan Brownlee back to Yorkshire after they took Olympic triathlon gold and bronze.

Multiflight flew brothers Alistair and Jonathan from London to Leeds aboard one of its charter Dauphin helicopters where a crowd of people were waiting to welcome them back home to Yorkshire. Steve Borrowdale, Multiflight Managing Director, said "They have made Yorkshire and the UK proud and it was great to see them with their Olympic medals and to welcome them back.

Photographs by Anthony Pecchi and Multiflight

Farnborough Air Show 2012 & new Bell Helicopter Dealer for the UK

Farnborough 2012 was a very quiet show but with some good aerobatic displays including the Red Arrows with the Vulcan bomber.

AgustaWestland, who delivered their fifth AW159, gave a good formation display with three different sizes from their helicopter stable.

Virgin Galactic unveiled their latest Space Jet at Farnborough. Richard Branson announced that four private companies have already put down deposits as future LauncherOne customer and, he revealed, the company has now accepted deposits for suborbital flights on SpaceShipTwo from 529 future astronauts, a number greater than the total count of people who have been to space throughout human history.

HeliCharter at Manston were confirmed as the Bell Helicopters UK dealer.

Photographs Courtesy of Georgina Hunter-Jones and Eurocopter

French DGA second NH90 NATO NFH

The French DGA armament procurement agency has taken delivery of its second NH90 Tactical Transport Helicopter (TTH) and seventh NH90 NATO Frigate Helicopter (NFH), marking an important step forward in the largest European helicopter program launched to date.

The NH90 TTH delivered to the DGA will be handed over to the French Army Air Corps for use in training the first aircrews at the French Armed Forces Training Center (CFIA), located at Le Cannet des Maures. It is the 100th NH90 TTH delivered to date.

The French Navy NH90 NFH helicopters – designated the Caïman – represent an important element in the combat system for the service's anti-aircraft defense frigates and multi-mission frigates. This seventh-delivered NH90 NFH will become part of the initial ship-based group based on the Aquitaine multi-mission frigate by 2013.

BOOK REVIEW

You Can't Park There!

The Highs and Lows of an Air Ambulance Doctor

Tony Bleetman

Ebury Press
£11.95
www.eburypublishing.co.uk

As soon as I saw the cover of Tony Bleetman's You Can't Park There, I knew it was going to be funny. However, what I had not realised was that the book (witten about the Air Ambulance Doctor service in Bristol, UK) was also going to be extremely interesting and informative and that Dr Bleetman would be able to describe complicated medical procedures in simple and understandable language while making the whole book entertaining and thought provoking.

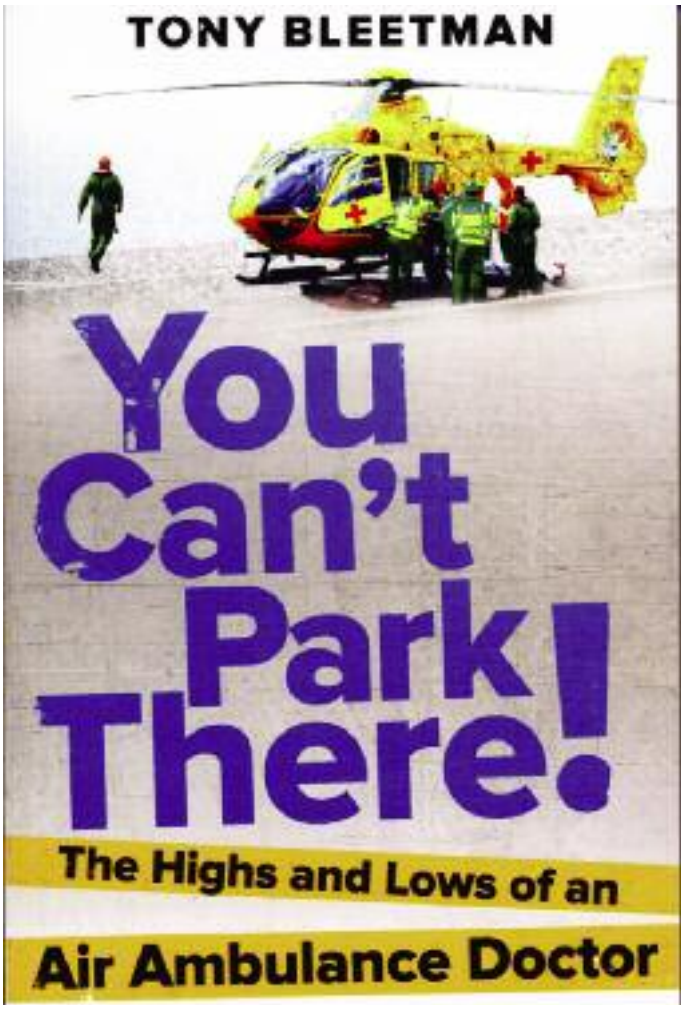
The book has three main themes: the importance of a full medical service as part of the air ambulance, not just paramedics, but a team that makes it possible to recreate a virtual on-site surgical environment; the value of a first rate, fast and well equipped helicopter; and the necessity of public understanding and involvement in the use of charity-funded medical flying services.

On public involvement, he writes about two occasions (probably only a selection of the whole) when the air ambulance's attempt to save lives was hampered by the very people he had come to help; relatives of the patient. One of these is a tattooed biker, the other a titled lady, and both behaved appallingly, with a rudeness and arrogance that can only be explained by the stress of the moment, and their own fears. There were also some good chapters about the PR that doctors, paramedics and pilots have to do to keep the finances of a voluntary organisation going: these include events as a DJ, talks, parties and even a session as not a completely full Monty.

There are some very interesting points concerning which type of helicopter is used, whether skids or wheels are preferable, and the use of the helicopter as a post-event de-stress tool! Bleetman is himself a fixed and aerobatic pilot.

There is also a fascinating breadth of information about the type of drugs used and their effects, with stories to illustrate this use. For example, a vet whose leg was broken by one of her own patients. After Dr Bleetman had examined her, she and the doctor discussed the right quantities of ketamine (the shut-the-f**k-up drug) for her to take before reducing her fracture, this was something she understood well as horses and humans take the same relative quantities.

In 2006, Dr Bleetman and his crew won the Vodafone



National Life Saver Bravery Award for saving the life of a girl in a car crash. His details on the reality of the rescue behind the hype is quite unexpected, not least the input and in some respects output of the fire service.

There are also some very sad stories, some that make you laugh and several which should make young pilots think before they go off for a spate of low level aerobatics.

It is an entertaining and fascinating book, it made me think about the service on offer, the use of volunteers (the doctors are not paid for their time) andl his take on the politics of the service and between the various HEMS companies. My only caveat is that I felt Ebury Press could have done with a bit of editing. However, it is still a good book and worth reading.

CAA Legislation Changes
concerning helicopters and gyroplanes

SN-2012/012 Revised Introduction of Visual Flight Rules (VFR) at Night in the UK
The purpose of this Safety Notice is to give details of the postponed introduction of VFR at night. It also contains the responses to the comments received in response to SN-2012/007.
http://www.caa.co.uk/application.aspx?catid=33&pagetype=65&appid=11&mode=detail&id=5057

EASA AD 2012-0144E: Eurocopter EC 225 helicopters: Main Rotor Drive - Epicyclic Module/ Chip Detection System - Check
This AD is issued in accordance with EC 1702/2003, Part 21A.3B. In accordance with EC 2042/2003 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [EC 2042/2003 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [EC 216/2008, Article 14(4) exemption].
http://www.caa.co.uk/docs/33/20120801EASAAD20120144E.pdf

CAP 553, British Civil Airworthiness Requirements, Transition Arrangements Following Implementation of BCAR Section A, Issue 7
This Information Notice provides further information regarding the implementation of changes made to CAP 553, BCAR Section A at Issue 7 and any action required by organisations that may be affected by these changes. It includes details of the transition arrangements relating to the introduction of a non-expiring Certificate of Airworthiness and a National Airworthiness Review Certificate and changes to maintenance organisation approvals.
http://www.caa.co.uk/docs/33/20120718CAP553%20BCAR%20A.pdf

Helicopter Emergency Medical Service (HEMS) Operations at Night in Accordance with a JAR-OPS 3 HEMS Approval
Applicable to operators conducting night public transport HEMS operations within the UK in accordance with a JAR-OPS 3 HEMS approval, to direct them to comply with additional requirements.
http://www.caa.co.uk/docs/33/SafetyDirective2012001.pdf

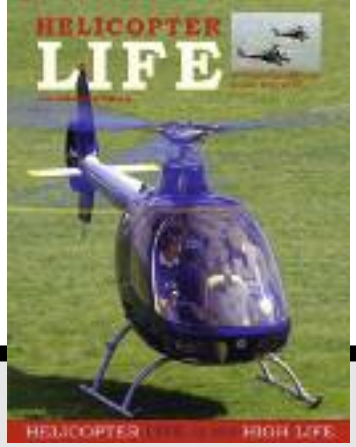
N-2012/103: Aerodrome and Air Traffic Standards Division of the CAA's Safety Regulation Group
This Information Notice is to inform Aerodrome Licence Holders and providers of Air Navigation Services of the outcome of the review and the consequent changes within AATSD.
http://www.caa.co.uk/docs/33/InformationNotice2012103.pdf

IN-2012/109: Rescue and Fire Fighting Service Live Fire Training Rigs
This Information Notice refers to HSE advice on the background, relevant standards and precautions to be taken when using the rigs, and supersedes IN-2011/104.
http://www.hse.gov.uk/services/fire/live-fire-training-rigs.htm

CAP 804: Flight Crew Licensing: Mandatory Requirements, Policy and Guidance
UK requirements for pilot licensing and also a guide to the new European Flight Crew Licensing requirements. Effective on 17 September 2012; LASORS will be withdrawn from that date. NB: The CAA has announced a new date for implementation of European Regulations for flight crew licensing in the UK. Reference to 1 July 2012 should now read as 17 September 2012.
http://www.caa.co.uk/docs/33/CAP804rfs.pdf

CAP 553, British Civil Airworthiness Requirements, Transition Arrangements Following Implementation of BCAR Section A, Issue 7
Information regarding the implementation of changes made to CAP 553, BCAR Section A at Issue 7 and any action required by affected organisations. Includes details of the transition arrangements relating to the introduction of a non-expiring Certificate of Airworthiness and a National Airworthiness Review Certificate and changes to maintenance organisation approvals.
http://www.caa.co.uk/docs/33/20120718CAP553%20BCAR%20A.pdf

Helicopters Flying for Public Transport at Night
Exemption to allow HEMS and PAOC helicopters to land at and take off from places at night which do not have adequate lighting and do not meet the requirement of Article 209(2) of the ANO 2009, providing that the helicopter itself has adequate lighting.
http://www.caa.co.uk/docs/33/ORS4_922.pdf



www.helicopterlife.com

HELICOPTER
LIFE

Savings Certificate

YES PLEASE ! Send me two full years -
8 exciting issues - of
HELICOPTER LIFE

☐ **2 Years (8 issues) only £22.00 (30% savings)**

☐ I prefer 1 Year (4 issues) only £14.00 (15% savings)

*Please add **£8** for each **foreign** order and prepay in **UK** funds.*

YOUR NAME:

Name _____
(PLEASE PRINT)
Address _____
City _____ Postcode _____

GIFT FOR:

Name _____
(PLEASE PRINT)
Address _____
City _____ Postcode _____

SEND ALSO TO:

Name _____
(PLEASE PRINT)
Address _____
City _____ Postcode _____

☐ Payment enclosed (Make cheques out to **Helicopter Life**)

Send form and cheque to:
HELICOPTER **LIFE** Magazine
59 Great Ormond Street, London WC1N 3HZ, England

Savings are off the £3.99 per issue price.
Please allow 6-8 weeks to receive your first issue.

HELICOPTER LIFE *is the* HIGH LIFE

Autumn at Fly Fizzi Books

A selection of books are available from Fly Fizzi books, including:

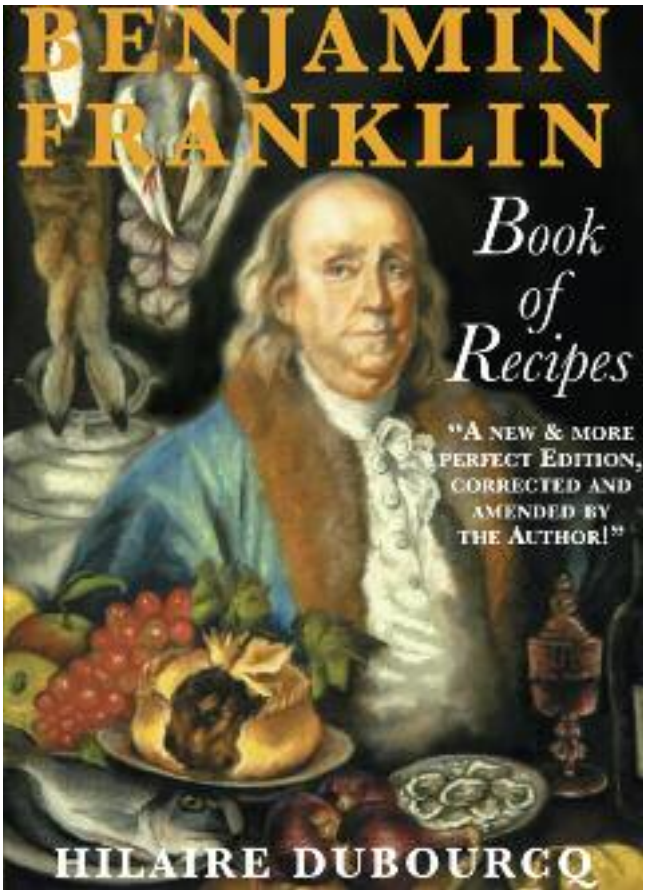
Benjamin Franklin Book of Recipes
half cookbook, half historical, sometimes whimsical, information

Atlantic Warrior
Peckham Diamonds
Dear Best Mother

and

many children's books

www.flyfizzi.co.uk



HelicopterLife Training and more

To place an advert call Sue or email advertising@helicopterlife.com
see also http://www.helicopterlife.com/advertising.html

Helibus Driver

by Ralph Arnesen

It took a while to get a job in Norway. After flying for 4 years in Indonesia I had had enough and I was now married, so I needed a job where I could come home often. My wife and I went to Texas where I took the ATPL on a Bell 206 and then travelled across the U.S. looking for work. In Utah we made a U turn and headed home to New York. I managed to get a job in the city flying tourist, news media, and incubator babies. The maintenance was poor and the working conditions worst, after two months I had enough. I called the chief pilot for Helikopter Service in Stavanger, Norway almost every week and in the end he gave in and hired me. This was in 1977.

After a short interview I was told that three of us new hires were to attend the S-61 ground school at British Airways Helicopters in Aberdeen, Scotland. That was a start, we then did the training at Forus, the main base. The instrument part was where I needed extra time and got ten hours more before being released for line duties, I'm a slow learner.

This was in October and the weather is not kind on the west coast of Norway at that time, the low pressure systems seem to get closer together and the days are shorter so a lot of the flying is at night. I was glad to be flying in an aircraft that took the weather so well but, on the down side, it had very little power left over if you lost an engine.

The first winter was a steep learning curve, every flight was planned with a point of no return and point of equal time, and if the winds turned out to be different from the plan there was not a lot of fuel to spare. At this time our navigation back-up was the Consol system set up by the Germans in WW2 to bomb England, a system of dots and dashes from a transmitter on the coast south of Stavanger. Later we would get Omega and GPS. The early Pumas had Decca Doppler. We did a radio check every 30 miles on the HF radio which worked most times or got a relay from another aircraft. Traffic separation was a thousand feet between the incoming and outgoing aircraft, who were using the same track to Ekofisk oil field. In fact, you hardly ever saw another aircraft until GPS began to be used and then the height separation was increased due to the rapid changes in barometric pressure that could occur.

The prices of houses in Stavanger at that time and even today were more than I could pay, so we decided to move to Bergen, about 80 miles up the coast. The base was smaller and a new oil field was being opened up. This was the start of the Condeep platforms. These platforms sat on the sea floor and had an arrangement of tanks that covered about ten acres. The whole structure was made of concrete reinforced by steel. Two or three legs came up above the surface and the frame made a base for the living quarters, drilling, and production modules. Somewhere on the living quarter module sat the helideck, where we landed.

The Statfjord Alpha was the first of this type in Norwegian waters but just over the border the English had built Condeeps a few years before. Since this type was new in Norway it was put together on site, the concrete substructure was towed out and settled into the sea bed, then the modules were added by huge crane barges.

One of the barges I visited had a lifting capacity of 120,000 tonnes, a working deck of 9,000 square meters, and living quarters for 800 people. In 1977, the cranes might have been a little smaller. However, when building

PHOTOGRAPH COURTESY RALPH ARNESEN


Stratfjord Alpha


The Chinook crowd

the Stat A there were three hotel ships to house the workers doing the completion work. These ships had the helidecks on the bows which made landing on them in 40 knots of wind a little tricky. We had pitch and roll limits which were fair but the heave of the vessel was the one that could be a problem, you didn't want to be coming down when the ship was coming up.

We had a serious incident when a S-61 landed on a diving vessel which had been in hard weather for a few days. The pitching was pretty bad but within limits. The aircraft landed and the doors opened for the passengers to disembark. The co-pilot was handing out the luggage when the aircraft slid backwards until the tail wheel caught in the safety net. The captain tried to compensate by pushing the cyclic forward which brought the blades down so far it took the top of the cockpit off, along with the throttles and what ever else was up there. He now had blood dripping in his eyes and could not see or move his hands from the controls to wipe the blood. The situation was desperate, they tied the helicopter down and managed to get the captain out and then let the helicopter run till it stopped due to fuel. When the weather settled the helicopter was put on a supply boat and sent to land.

The S-61 was a good aircraft but after 13 years and 7000 hours I needed a change so I applied for the Chinook. HS had bought three but sold one to Donald Trump to use as a transport helicopter flying gamblers in to Atlantic City in New Jersey. The other two were put on contract with Phillips Petroleum.

When the Chinooks were put into use there were forty-four seats, but after a serious incident the two aircraft were grounded for a year and the seating was reduced to forty with extra emergency exits.

I loved this machine. Every take-off you were given a cup of coffee and a snack. It flew beautifully and carried seven tonnes of fuel. We could now use Amsterdam as an alternate if the weather was bad in Stavanger. The normal schedule was to take-off at 10am and return at 1400 and we normally did one flight a day. We were a small group and the chief pilot for the Chinook program made us feel like we were special. And we were.

We started to get requests for heavy lifting jobs in the mountains. These jobs involved carrying hydro-electric equipment, earth moving equipment, plastic slurry pipe. Some jobs were done gratis but were considered to be good as training.

Do you know what it is like to try to hover over a barge and pick up a portacabin, wild west?

The Chinook is creating 90 to 120 knots of down draft and the barge is pushed all over the place, lesson learned. We flew to Sweden to mount air conditioning modules on the roof of a factory. But the most demanding were the flare tip changes

The flare tip is at the top of a pipe which is meant to get rid of gas. Normally it burns off the extra gas at a slow rate, this damages the tip and every few years it has to be replaced. The expensive option is to wait for a crane barge to be available. What we did was arrive after a team had purged the gas from the pipe, loosened the bolts holding the pipe and attatch a wire for us to pick it off. With the Chinook we had to install a hover flag to fly on. At 400 feet over the water there are few if any references. After the pipe was inspected again it was time to set the new flare tip on. This is done using a system that pulls the load and the helicopter down, the flare tip is locked into place using a winch with a half tonne pull and the flange of the tip is pulled into place and secured temporarily. The helicopter is then free to go. The whole operation takes between 5 and 10 minutes, planning and documenting takes a few weeks. Unfortunately, the Chinooks were sold and the docking system became history when the vertical reference technique came into being.

All good things must come to an end and so I was checked out on the Super Puma L, L1, and the L2. These were good aircraft but not like the Chinook.

Accident Reports

Boeing Vertol CH-47D Chinook HC2,ZA720
Airbus A300-605R, TC-MNV

The crew of the A300 were cleared to depart from RAF Brize Norton on a Malby Standard Instrument Departure (SID), which required them to climb to FL080. The departure clearance was issued on the ground radio frequency. When the crew changed to the tower frequency a Climb-out Restriction (COR) of 2,200 ft on the airfield QNH was imposed by ATC, to provide vertical separation from a military Chinook helicopter in the holding pattern above the airfield. The COR instruction, which was not standard RT phraseology, was misinterpreted by the A300 crew. The A300 aircraft did not level off at 2,200 ft after departure and climbed through the level of the Chinook. The returns from the two aircraft were seen to merge on the ATC radar display. The A300 crew received a TCAS Resolution Advisory (RA), which they followed.

According to TCAS data from the A300, the minimum lateral separation between the A300 and the Chinook was 0.11 nm and the minimum vertical separation was 496 ft. Two Safety Recommendations are made with the intention of preventing similar incidents in the future.

Bell 206L-4 Longranger 1V, GPTOO

The pilot carried out a precautionary landing at London City Airport, after the onset of vibration during the cruise. Examination revealed that a bolt, securing balance weight assemblies to a tail rotor blade, had failed due to the formation of a crack in the bolt shank which propagated in fatigue. The helicopter manufacturer confirmed that this was the first reported occurrence of this nature relating to this design of tail rotor system.

EC120B Colibri, GFEDA

The helicopter was hover taxiing towards its allocated landing pad beside a hangar. The wind at the time was described as north-easterly at 9 kt, gusting to 21 kt. The pilot stated that as he approached the landing pad he applied left yaw pedal to turn left. The helicopter responded but continued to turn beyond the desired heading. The pilot applied right pedal in an attempt to stop the turn, but the helicopter continued to rotate at an increasing rate until control was lost. The right skid contacted the ground, causing the helicopter to roll onto its right side and the main rotors to strike the ground. When the helicopter came to rest, the pilot applied the rotor brake and fuel shutoff lever before jettisoning the front left door and assisting his passengers.

The pilot believed the initial left turn had allowed the helicopter's tail to be pushed by the wind, rotating it further and more rapidly than intended. He applied insufficient right yaw pedal to compensate, allowing the rate of turn to accelerate sufficiently for control to be lost.

The pilot was 32 years old and had 126 hours of which 41 were on type.

MD900 Explorer, GSASH

On lifting to the hover, the downwash from the helicopter pushed one parked light aircraft into another.

The helicopter, an Air Ambulance, was on a routine positioning flight from Leeds Bradford Airport to Bagby Airfield, North yorkshire. It had been positioned, by ground handling staff, on a designated helicopter landing spot which was 18 m away from, and upwind of, the West Apron on which several light aircraft were parked. Shortly after the pilot lifted the helicopter into the hover, the downwash caused a parked light aircraft to begin moving. After the parked aircraft had turned through 180°, its port wing wedged under the wing of an aircraft parked next to it, causing minor damage to both aircraft. The pilot, and the Duty Airside Safety Unit officer who attended the incident, both reported that none of the light aircraft on the West Apron were chocked at the time of the incident.

Since this incident, aircraft parking arrangements at Leeds Bradford Airport have been reviewed and air ambulance helicopters no longer use the West Apron area.

Magni M24C gyroplane, GORDW

The pilot had converted to gyroplanes from fixed wing types. The airfield has a hard runway, 06/24 to either side was 12 m strips of compacted earth suitable for gyroplane operations. The pilot had flown about 30 hrs P1 on the type before the accident flight, including about 15 hrs in G-ORDW. The flight was his first with a passenger. The weather was suitable, cloud at about 2,500 ft and a surface wind from about 200° at 5 to 8 kt. The aircraft completed an uneventful flight of about an hour and the pilot returned to the airfield. The wind was blowing at approximately 40° to the runway centreline, the pilot planned to land directly into wind, across the runway and compacted ground strips.

On the first approach the pilot realised he would land long so flew a go-around. On the second approach, the expected touchdown was at the beginning of the hard runway and the pilot reduced engine power to idle for landing. He became aware that the aircraft was drifting

right. As the aircraft crossed the runway edge and just a few feet above it, the pilot applied left rudder to correct the drift, and the aircraft yawed left, placing it sideways on to its direction of travel.
The pilot applied right rudder and full power with the intention of going around, but as well as yawing right, the aircraft also rolled right and the right main wheel struck the runway surface, causing the aircraft to roll over onto its right side. The rotor blades and propeller struck the grass, the nose and nosewheel made contact with the runway. The aircraft then rotated. After confirming that his passenger was not seriously injured, the pilot secured the aircraft.
In a candid report, the pilot offered an analysis of the event. He felt that the decision to land at an angle to the runway was sound, given the suitability of the surface and the gyroplane's ability to stop very quickly after touchdown. He thought the wind had changed in direction, or that his second approach had not been directly into wind, causing the right drift.
Application of left rudder to correct the drift had been incorrect, and the pilot was aware that he should have applied left cyclic control instead. The decision to go-around had been taken just a little too late. On application of go-around power, the aircraft would yaw left and roll to the right, requiring right rudder and left cyclic to correct. The pilot recalled already having right rudder applied to correct the drift, but thought that he had not applied left cyclic to correct the expected right roll.
The pilot was 62 and had 238 hours, 91 were on type.

Magnic M24C gyroplane, G-CGRT

The pilot had performed a series of short takeoffs and landings on a clear day with a 20 kt headwind on the runway in use. On his fourth takeoff, during a normal rotor pre-rotation procedure, with the stick full back, the rotor rpm rose to 230 rpm but the aircraft's nose lifted. The aircraft pitched rearward and the tail castor contacted the ground. It then lifted approximately three feet and began rolling to the left. The pilot attempted to recover by pushing the stick forward, applying full power and full right stick.
Despite this attempt, the aircraft gained 10 kt forward speed, continued to roll left and impacted a ploughed field to the left of the runway. The aircraft ended up on its side but the pilot, who was wearing a helmet and full harness, was uninjured. He assessed that the cause of the accident was due to a sudden increase in wind speed during the pre-rotation of the main rotor. The forecast was for an increase in wind strength with reported conditions as gusty, increasing throughout the day to 60 kt.

Instructor's comments
The pilot's instructor commented that although the pilot had experienced flying in strong winds on a different gyroplane model, it was his first time flying the M24C in such conditions. He also stated that the rearward movement of the stick, rotor rpm, strong wind and low aircraft weight would have caused the aircraft to lift off. Additionally he noted that the normal takeoff rotor speed is 300 rpm and at 220 rpm the directional control from the main rotor is limited. Therefore the aircraft's response to stick inputs made by the pilot would also have been less effective.The pilot was 74 years old and had 2870 hours with 31 on type.

Magni M24C Orion gyroplane, GCGTI

The pilot departed old Sarum Airfield for a local flight in his M24C gyroplane and shortly after it became airborne the 'gull-wing' door was seen to open to the horizontal position. The pilot made a radio call that he had a problem with the door and intended to return to the airfield. The aircraft continued around the circuit until the end of the downwind leg, where the pilot appeared to position the aircraft to land in a field. At the end of the flight the engine noise was heard to reduce and the aircraft was seen to roll to the left before it crashed into the field and caught fire. The investigation established that at the start of the flight the pilot's door appeared to be closed but the latching mechanism had not locked the door in the closed position. As a result of the accident many safety actions have been taken. The pilot was 51with 150 hours.

Robinson R22 Beta, GFIRS

In the final stages of an approach to a hotel helipad the pilot was unable to stop a right yaw, and the helicopter completed several rotations with decaying main rotor rpm before impacting the ground. The helicopter suffered severe damage and was largely consumed in a subsequent fire. The two occupants suffered minor injuries.
Post accident discussion considered that as the helicopter slowed, there would have been an increasing power requirement, possibly rapid, as translational lift was lost. The cause of the initial right yaw is not certain but may have been aggravated by main rotor vortices blowing onto the tail rotor as the aircraft turned slightly right to approach the pad, placing the relative wind from forward and to the left of the helicopter. Equally, the pilot may have been slow to apply left yaw pedal as power was increased. Whatever the precise combination of factors, it is likely that the pilot's low overall experience level and lack of recency contributed to the loss of control.

Lamorna Limited Flowers

Pictures by Gerald Cheyne

Flowers have for a long time been an important export in the Kenyan economy, helicopters are a newer but growing mode of transport. While helicopters are not used to carry flowers on an industrial scale, on a smaller scale a rose arriving by helicopter has a unique appeal.