

CHASING THE MORNING SUN

By Manuel Queiroz



The weather had been gloriously bright with a light headwind, there were several large CBs but they were all clear of my track. People in Penang were very polite and extremely helpful. Not having a customs general declaration did not endear me to the authorities, but they did their best to comply with their requirements and my need to get some food and rest. Despite having mineral water in large amounts and some cereal bars during all flights, a proper meal was always something to look forward to.

The route from Penang to Manila took first the general line of the Malaysian /Thai border for some 130nm over some sleepy and misty mountains full of eastern mystery, with the remaining 1200nm being over the South China Sea. Again the weather was glorious despite some

headwind, and the arrival in Manila over the bay looked quite impressive. Having to go and meet the local officialdom in a deserted and remote apron was less impressive, and the subsequent taxi to the hanger was even worse as it was by then dark and the taxiways were neither illuminated nor hardly marked due to the weather bleaching out the guide lines. Not a pleasant experience compounded by a failed link in the tailwheel steering and having to abuse the brakes to steer. This abuse led to the port calliper seal failing, and that was replaced by the local maintenance engineers the following day, along with a 50 hour service.

In Manila the hotel was good, but the constant efforts of people trying to get as much money as possible out of you by whatever means wasn't. To cap it all I was given a bill for over US\$2,000, not including

AT LAST IT HAPPENED! The long five years of planning and three years of actually working on the aircraft to make it the ultimate cross-country machine, did come to fruition and I have flown around the world!

As some will recall, the details of the preparation were published in *Popular Flying* January 2006, but it now seems appropriate to review this with the benefit of hindsight.

Following the reviewing of life priorities after the cancer episode had taken place, it was a case of setting a feasible plan to make it really happen. Optimism was not balanced by realism, so this plan changed and lurched a great deal as time went by – possibly leading some to think that it was a self generating, self justifying plan to kid myself about undertaking such a task. It never was that. It was a question of achieving a level of preparation to promote self-preservation.

Once ready for the task ahead, G-GDRV had a fuel endurance of up to 19 hours, it was strengthened for the extra 25% maximum weight, had a fixed coarse pitch metal propeller to chew its way through tropical rain, an HF radio for long range communications, a few aerodynamic tweaks to improve the fast cruise to 170Kts, comfort facility for the shorter range pilot, a couple of GPSs to find where to go and a VOR with localiser to find the pot of gold at the end of the track.

All this couldn't have happened without the participation of PFA Engineering. The subject of the need to have the system we have, as opposed to the experimental set up of the USA, has been the subject of a lot of recent controversy and it probably is worth adding to that with my own view:

The PFA is entrusted with the handling of our type of aeroplanes by the CAA and

is charged with approving all engineering aspects of these machines. This approval carries a huge responsibility regarding the integrity of the design and its execution, therefore it is essential that PFA Engineering doesn't place itself into a position of liability that could be disastrous for all concerned. Looking at it with a slight Gallic flavour, if someone is going to stick out their neck, they better make sure something is going to stop Madame Guillotine's blade! If the PFA should or not have to be in that position is another matter for another time.

I must confess my understanding of the PFA position wasn't good, therefore my voice was often heard with heavy criticism for the length of time and the difficulty of carrying out the necessary mods, particularly considering how easy it all appears to happen elsewhere. I now must put the record straight and say that PFA Engineering did all they could to help G-GDRV become the only British-registered homebuilt to ever go around the world. Their enthusiasm for the project ensured that solutions were found to the obstacles that littered the way to give G-RV its permit.

The finishing touches involved completing the route planning along with the clearances for all the airspaces to be crossed. I initially tried to handle this myself, but it is very complex and extremely difficult to find out exactly who to contact in some of the countries involved. Ultimately I handed the problem to a specialist company.

It was nearly time to don the survival equipment consisting of a life-jacket and a personal EPIRB 406MHz with built-in GPS, and a single seat liferaft. The use of an immersion suit was to be confined to the crossing of the Atlantic.

The morning of the 28th February 2006 saw a beautiful sunrise in Gloucester and a splendid send-off from family and friends. It was an ideal start to the journey that had taken so long to prepare.

Chasing the Morning Sun was on!

The destination for the first day was Luqa in Malta. Problems due to a cold front moving across France required a last minute re-routing towards the French west coast. This made the flight possible despite icing almost to the ground. A 40 plus knot tailwind along the Mediterranean often gave a ground speed of 199Kts after Perpignan, and this contributed to an average speed of 162Kts for the actual distance flown. A nice way to start! An efficient handling agent sorted the formalities and gave me the opportunity to be introduced to the handling fees at international airports...



The Malta coastline hoves into view at the end of the first leg.

The following day saw another early start towards the first waypoint on Crete and onto what was hoped to be a scenic flight past the sights of ancient Egypt. Egyptian ATC had different ideas and the eventual

clearance to go through the desert with a moderate sand storm made sure that the planned sights were unseen. Luxor was finally reached and the number of vehicles dedicated to my arrival gave a justified apprehension about high fees. Before boarding an enormous airport bus, G-GDRV was clumsily refuelled, even the cockpit ended up with AVGAS in it. The stay in the Hilton hotel was pleasant enough, despite experiencing difficulties with computer facilities to print the next route from my planning software. Old fashioned pen and paper came to the rescue.

Leaving Egypt heading towards Muscat saw the continuation of a lot of sand up to around 10,000'. This was a great shame as the mountains and the magnificence of the desert was breathtaking. ATC in Saudi Arabia was capable of outdoing their Egyptian counterparts in sending G-GDRV all over the desert, so calculating and re-calculating routes became a way of spending a lot of the time over Saudi. After entering UAE airspace, ATC was a lot more helpful. The mountains of Oman were particularly spectacular and the flight parallel to the coast revealed a beautiful country.

Muscat, a land of astonishing opulence, was to be the first place where I spent more than one night. On arrival, there was a waiting message stating that the clearance for Vietnam was subject to a minimum en-route altitude of 26,000' - some re-planning had to take place! The planning software did help an awful lot to review the situation and at the end of the day I had a new track via Penang in Malaysia to resume the original route in Manila, Philippines.

The destination for the following day was Colombo, 1700 nautical miles away. As the start from Muscat was delayed, this resulted in arriving in Colombo at the end

of the afternoon along with the inevitable thunderstorms. The noise of the rain going through what appeared a less black part of the sky was amazing – the sound of the engine actually got completely drowned out by the roar of the water hitting the aircraft. It served to prove that the time spent in making the canopy water tight was time well spent. Colombo and its people were marvellously welcoming. The first refuelling from barrels with a hand pump out of the back of a pick-up took place here.

The spectacle of the Sri Lankan mountains with the sun rising through a misty dawn was a most inspiring start of the journey across the opening of the Bay of Bengal. Passing the peninsula of Aceh after six and half flying hours, I couldn't help myself wondering at the immense power of the 2004 tsunami that did that same journey in the opposite direction in about a third of the time.



The Bendix SkyMap graphically shows Manuel's track across the South China Sea.

fuel and maintenance, just for the privilege of using the airport!

Leaving two days later for Guam, the same rendezvous on the same deserted apron took place, this time with shady characters without customs uniforms. The weather forecast for the flight only related to tidal information and wave heights around the coast, as well as mud slides! As I had some meteorological information from the internet, I just accepted the clearance and was glad to leave. At last the crossing of the mighty Pacific Ocean had commenced.

The flight to Guam started with a magnificent view of the hills to the east of the airport, it is a beautiful landscape and I am sure that there is a lot more to the Philippines than my unfortunate experiences revealed.

The actual flight was again quite uneventful and the HF radio coverage was carried out by San Francisco radio, which was surprising as California is over 5,000nm away. This was later explained to me by the fact that there is a relay station in Guam! Being an American territory, Guam has all the security aspects of the parent country, complete with security metal detectors going into the island.

The early part of the flight from Guam to Bonriki was through an area with a lot of static electricity and the witnessing of sparks jumping from a canopy reinforcement right in the pilot's field of vision was far from relaxing.

This flight of 1833nm, preceded what was to be the longest leg of the whole flight so this was the time to make sure that all the calculations about range were really going to work.

Along the route there are two runway equipped islands, reasonably evenly spaced, and that should have made things a little more relaxed. It didn't! The last third of the journey was quite nerve wracking, looking at three empty tanks and lowering gauges in the remaining two with lots of Pacific left and the last possible stepping stone being left well behind a wall of CBs from the tropical convergence. The calculations were right, it was the unfamiliar picture of the fuel gauges that was causing the anxiety.

The fuel that had been shipped well in advance to Bonriki especially for G-GDRV, took three days to get to the airport from the other end of the island, some 20 odd miles away. The weather forecast was promised for the evening before the departure and never arrived. The internet provided some limited information and due



The liferaft can be seen stowed on top of the 160 lbs. fuel tank that fills the passenger compartment.

Elliot Atkins

to previous success, I wasn't concerned about the weather. There was going to be opportunity to re-think that optimism!

After a pre-flight check in the early hours of the morning with an ambient temperature in the high twenties Celsius, the longest stretch was starting – 2072nm to Honolulu – without any stepping stones.

The crossing of the date line threw my sense of timing completely. Having a watch reading local and UTC times simultaneously didn't stop the confusion but at least allowed some correct answers. Due to not carrying oxygen, my altitude was limited to an indicated FL100; this is reasonable in the standard atmosphere but

in the tropics the temperature can be sufficiently high to change the situation by quite large margins. On several occasions the pressure altitude was nearly 13,000' with FL100 indicated. On some legs a degree of mild hypoxia was apparent.

The perfect weather for the great bulk of the flight changed completely some 250nm from Honolulu and those last miles to Hawaii were quite hard work. Listening to all manner of large aircraft being diverted around storm cells was quite disturbing. The eventual sighting of runway 04R at Honolulu International was spectacular, with Pearl Harbour to the left and the longest leg of the journey behind. Aloha!



Philly the mascot navigating to Guam.



G-GDRV parked at Hilo waiting for an improvement in the weather before departing for San Jose, California

It turned out that Hawaii was having the worst weather for 20 years, and the forecast was not good. While there, a couple of dams burst on two different islands and a few people were killed by direct consequence of the weather, including the crew of an air ambulance. Of the many places where I thought problems with the weather could arise, Hawaii was not one of them. One consequence of this major delay was that the overall world record for the around the world flight was now decidedly out of reach. There were a few short breaks in the weather, not enough to go to California, but sufficient to reposition to Hilo in the Big Island and overfly the active volcano.

After a week of making the best possible use of the USA Flight Information Centre (FIC) with what must be the best weather service in the world, a window showed up to allow the crossing to California.

It wasn't an easy 2025nm. In fact it was the most difficult part of the whole flight, the low pressure system was worse than anticipated and the freezing levels were as low as forecast. The experience of ice in an aircraft without de-icing equipment 1000nm from the nearest land is not a pleasant one. Descending was the only solution, even if descending over the Pacific wasn't my idea of fun. When the Californian coast came into view, this misty image became the most beautiful sight in the whole world. The flight ended up at a very upmarket GA centre complete with red carpet (yes, literally)!

Trying to leave San Jose for Abilene in Texas, brought one of the more exciting moments of the whole adventure. Taking off from the airport, which is totally surrounded by the city in all directions for quite a few miles, the engine developed a severe misfire. A landing on the remaining runway was just possible, followed by standing on the brakes to avoid going through the barriers at the end. After a lot of fruitless investigating, it was back to the power checks at the hold. The previous problem was found to be simply carburettor icing.

All these checks wasted a lot of time, so the flight for the day was going to be only some two hours down the original track, stopping at Apple Valley in the Mojave desert. Oceans are a great challenge but one wave is much the same as another wave - here the contrast between the Californian valley, the Sierra Nevada and the Mojave desert (complete with Mojave airport and Edwards Air Base) was breathtaking. Landing in Apple Valley was a good lesson about density altitude (3000', 25C) and heavily loaded aeroplanes.

Taking off from Apple Valley to Abilene saw a good demonstration of how well the Unicom frequency arrangement can work, everybody knew where everybody else was, with no tower overseeing the reasonably dense traffic. This flight was full of dramatic natural beauty through the Mojave desert, Arizona, New Mexico and Texas. The help I received in Abilene was beyond all possible expectations, help with maintenance, social hospitality, flight planning and financial assistance was all done with a dimension in keeping

with the Texan outlook. If this typical of the EAA Chapters, then we have a long way to go with our Struts to match their sense of unity.

The crossing of Texas, Louisiana, Mississippi, Alabama and Georgia on the way to Savannah, gave a fantastic demonstration of the diversity of the US. The stay in Savannah was mainly remarkable for the lack of occasion to visit the historic city, and computer problems. The flight north to Bangor had the start delayed because of the poor computers, plus an uncharacteristic ATC misplacing of my flight plan. The routing around the very security sensitive Washington area, the view of Manhattan, the affluent coastal towns, and the pine forests of the north, all made for a first class viewing of that part of the world.

With the ever helpful and efficient aid of the FIC in Bangor, the obvious window to cross the Atlantic to the Azores was going to be in two days after arriving there, which gave the opportunity to have the starboard brake attended to, as it had started to develop a leak. It also allowed repositioning to Halifax NS to give a small reduction in distance.

An early arrival in Halifax gave the chance of organising the day with an early meal with three ferry pilots going the same way, prior to a good rest for a very early departure. After checking the aircraft by the light of a small torch, it was time for a big disappointment - the attitude indicator (AI) was not working correctly, no matter what I tried. The decision to throw away the crossing wasn't easy.



Manuel crosses the mighty Mississippi on the way to Savannah, South Carolina.

➤ A used AI was eventually purchased for the price of two new ones, but the next opportunity of going across the Atlantic was forecast for five days later. This gave time to do the 'touristy thing' around the area, which I found to be of a rugged beauty, but I imagine life can be quite hard during the winter. The maritime museum was most interesting, one of the main themes being the Titanic, as that disaster took place not far from here and there are a number of relics salvaged from the sinking ship.

The weather across the Atlantic did open as forecast, not quite as good as it had promised five days previously, but good enough to go, at least good enough if the forecast for Santa Maria was to materialise. Some three hours into the crossing, the 'new' AI started to tilt right over and became useless! After much agonising over which decision to take, I chose to carry on, and about one hour and a half later, the AI went to the opposite bank and eventually sorted itself to a slight right bank that I could live with. A few manoeuvres at random intervals did show that it was being consistent and that did improve my optimism, even if not my reliance on the apparently recovered instrument. The weather continued much as forecast including a cold front system that wasn't too difficult to cross. The weather in Santa Maria, on the other hand, didn't improve as forecast and it had a crosswind of 20kts gusting 25kts with the horrendous turbulence that Santa Maria has a reputation for. It was the most difficult landing of the whole journey.

The following day started with dismal weather of low cloud, wind and rain. The postponement of departing by 24 hours was compensated by having the local TV reporter and his family being the perfect hosts and showing me the island with all its beauty. The forecast had a low pressure system just touching the island and lying to the north-east, covering the first quarter of the route to the mainland. A track to the south-east, followed by a turn towards Lisbon, was planned to avoid the worst of the weather. Only some low cloud and rain in the south-east leg spoiled an otherwise good crossing. The actual landing in Portugal was at Cascais, the GA airfield for Lisbon, where my brother collected and entertained me for the evening, including some rich Portuguese food that my insides can no longer cope with. The following morning was not going to be the time to fly back home, in fact it wasn't the time to fly anywhere! At around mid-day, I was feeling sufficiently recovered to fly some of

the way, so La Rochelle became the destination for the day.

The flight across Portugal and Spain was carried out in fairly cloudy weather but after crossing a weak front in northern Spain, it was blue skies to La Rochelle. This stop was particularly inspiring, as the beauty of the place combined with a beautiful clear night became the ideal environment to take stock of the last weeks.

The last leg was about to start! This was a momentous occasion, an occasion that demanded a great deal of concentration not to allow the whirlwind of emotions and avalanche of thoughts to distract from the main task.

The crossing of a cold front over the flat country of northern France was the only obstacle worth mentioning on the way to runway 27 at Gloucestershire Airport. The actual arrival, with a fantastic number of people waiting for me, was splendid. The realisation that I had gone all the way and it was over, that I was home with my family was just too emotional to take in.

The other notable achievements were piloting the only British registered homebuilt to ever



circumnavigate the Earth and becoming one out of only sixty pilots in the whole world to ever go around the Earth solo in a single engine aircraft.

So I did it, I actually achieved what I had set to do all those years ago. I think I made a reasonable job of promoting the message of cancer not being necessarily the end of the line, and that Cancer Research UK does need your help - after all you might be next. I didn't raise the sums that I had hoped for, we just have to hope that the promotion of the cause will continue to do that.

Out of the fight against obstacles along the way and against the fears of my own there's another new message that emerges from these extraordinary 39 days: Don't let life go by without realising your dreams, life is not a rehearsal! ■

The numbers relating to the flight were:

Distance actually flown	43,533 Km (23,506Nm)
Total flying time	162 Hours
Speed for time in the air	268 Km/h (145Kts)
Distance for record	40,744 Km (22,000Nm)
Speed for record	43.2 Km/h (23.3Kts)
Distance flown over the sea	29000 Km (15,659Nm)

The records attained in the class were:

1	British national record for circumnavigation
2 - 9	World speed records over recognised courses
	Gloucester to Manila, Philippines
	Manila to Honolulu, Hawaii
	Hilo, Hawaii to Bangor, Maine
	Halifax, Nova Scotia to Cascais, Portugal
	Gloucester to Luqa, Malta
	Muscat, Oman to Colombo, Sri Lanka
	Hilo, Hawaii to San Jose, California
	Halifax, Nova Scotia to Santa Maria, Azores
	Santa Maria to Cascais

The world speed records are subject to FAI ratification.