

The T32C DXpedition to Kiritimati



Standing L-R: DG1CMZ, W3EF, G3UML, G4FAL, G3RWL, Pete the Penguin ex VP8ORK, G3SVK, G3WGN, DK1II, G3UNA, F2JD, G3WPH, EI5DI, N6HC, G00PB and GM3POI. Sitting L-R: PA3EWP, ON7RU, G0VJG, G4DRS, DK7YY, EI9FBB, KG4UVU, G4LDL, N6OX, G3XTT, G4TSH, MDOCCCE, G7VJR, FM5CD, G3NUG, G3USR, G4IUF, G3SVL, G4AXX, G3WGV, G3YBY, GU4YOX and W5FT.

“It was like a month-long contest in an English gentleman’s club.” Ian, G3YBY

WHY KIRITIMATI? *Club Log* [1] showed Eastern Kiribati (Kiritimati) T32 as 36th most wanted DXCC entity by European operators and 61st most wanted worldwide. It was even more sought after on the LF bands. The 2010 *DX Magazine* most wanted survey showed the following for Eastern Kiribati:

Worldwide ranking:

Mixed modes - #78 (2009 - #91)

Europe ranking:

Mixed modes - #37 (2009 - #47)

Kiritimati or Christmas Island is a Pacific Ocean atoll in the Northern Line Islands and is part of the Republic of Kiribati. It should not be confused with an island of the same name (VK9/X) in the Indian Ocean. It lies 232km north of the Equator, 6,700km from Sydney and 5,360km from San Francisco. It is in the world's farthest forward time zone – at UTC + 14 – and is the first inhabited place on Earth to experience the New Year. The entire island is a wildlife sanctuary and access to five particularly sensitive areas is restricted. It is perhaps best known for the nuclear tests conducted in the region by the UK in the late 1950s and by the USA in 1962. The island's

runway was kept in good repair as a back-up for the space shuttle and there are regular flights from Honolulu. The main source of income nowadays is tourism, mainly for bone fishing (Albula Vulpes) in the saltwater lagoon.

The name 'Kiritimati' is a rather straightforward translation of the English word 'Christmas' into Gilbertese – where the 'ti' combination is pronounced 's' – as in the English word 'nation'.

FSDXA. The Five Star DXers Association (FSDXA) was formed by the team members who organised the 9MOC DXpedition in 1998. The seven founder members also organised the record-breaking D68C Comoros DXpedition in 2001 (over 168,000 contacts, a staggering 70% increase over the previous DXpedition record). This team subsequently organised the 3B9C (Rodrigues) DXpedition in 2004 and 3B7C (Saint Brandon) in 2007. Saint Brandon was an invaluable proving ground for much of what we would do on Kiritimati as it was the first time we had been so far from medical and logistical support and the first time we had had to rely on generator power.

EARLY PLANNING. Planning started in May 2009. We had always had in mind putting on a really sizeable DXpedition from the Pacific targeted particularly at Europe and at UK stations – as many have so much trouble working with the Pacific because of constraints on antennas. In 1998, Trish, my XYL, and I went on a cruise from Hawaii to French Polynesia and the cruise ship stopped at Kiritimati. I had heard about the Captain Cook Hotel (CCH) as being a good site for a DXpedition, so I hitched a lift there. It was indeed an excellent site with a long north-east facing beach, ideal for Europe and North America. Asia could be worked with antennas looking down the beach to the north-west. At this time we were writing our book *DXpeditioning Behind the Scenes* [2] and there is a great circle map based on T32 on page 43 of that book.

Our next three DXpeditions were all in the Indian Ocean. We learnt a lot and developed a strategy of operating for a lengthy period – three to four weeks – trying to work a very large number of unique callsigns.

For a successful DXpedition, we needed somewhere that was reasonably rare, particularly



“Phoenix arises from the ashes, again.”

“This is not a sprint, it is a marathon.”

in Europe, had a sea-front location facing north-east, enough accommodation for a team of up to 40, could receive a 20 foot container and was a fly-in location or involved a relatively short sea journey. This was a tough challenge!

We looked at the Australs, Marquesas and Niue as well as Kiritimati. We quickly ruled out the Marquesas as they were too mountainous and lacked many of the facilities we needed.

SITE SURVEYS. Don, G3BJ and Hilary, G4JKS visited two islands in the Australs and Niue in quick succession. These met several of our criteria but did not have the beach front locations or accommodation that we would need. Kiritimati was looking promising so Don, G3BJ and I flew there in January 2010 to make a site survey.

The CCH ticked the boxes; the hotel management were extremely welcoming, the runway was being re-laid and there was every likelihood of Air Pacific opening up a new route using a 737. We met the port manager who showed us the container facilities – so far, so good. We had read on the web that there was a container service once a month from Tarawa, the capital of Kiribati, some 3,312km from Kiritimati, and asked to see the log of ship arrivals – there was, in fact, an irregular three monthly service. Don't believe everything you read on the web! We met as many senior officials as we could on the island and an action plan developed. We would go to Kiritimati in October 2011 and would ship the container to Tarawa at least six months ahead of the team's arrival.

OUR OBJECTIVES. This would be a major effort with a target of more than 150,000 QSOs. Given the remoteness of the location and uncertainty about propagation during the sunspot cycle, 3½ weeks of operation was planned including 4 full weekends. There were to be up to 15 stations active around the clock. October was chosen as the optimum time of the year for HF propagation to the major centres of amateur radio activity.

We had multiple objectives but the principal ones were to offer DXers worldwide the chance to make at least one contact with this remote DXCC entity, however modest their station, while at the same time allowing more serious DXers the opportunity to complete new band-slots. The team would make a particular effort to focus on Europe and the US East Coast. We would aim to operate to the highest standards and to make the operation as inclusive as possible by way of its interactive website.

We would attempt to contact 40,000 unique stations, a real challenge. In the case of stations in the UK, we would attempt to contact between

1,000 and 2,000 different stations, another major challenge from the Pacific. Openings to Europe would be short so we would be very disciplined in exploiting these openings (short path and long path) whenever we could.

To cover all of the band openings, with multiple stations on most bands, we calculated that a team of close to 40 operators would be needed. As taking five weeks off work and away from home would have presented problems to many potential team members, we used FSDXA's tried and tested approach of having three groups of operators; those who stay on the island for the whole four weeks, those who come for the first two weeks only and those who come for the second two weeks only. These were referred to as 'Extended', 'H1' and 'H2' respectively.

We agreed to follow our usual policy regarding individual payments. All members of the DXpedition would be asked to pay an amount to cover their own travel expenses, their accommodation and food on the island as well as making a contribution to the logistics costs.

WORK STARTS IN EARNEST. A number of tasks were allocated to team members (team leaders' names are in brackets).

- We rebuilt our database of DX clubs throughout the world whose support we would be seeking by way of sponsorship (Neville, G3NUG)
- We drafted our brochure to be mailed to prospective sponsors (Don, G3XTT)
- We negotiated sponsorship arrangements with our Global Sponsor, Yaesu, and with our Major Corporate Sponsors, Martin Lynch & Sons, Nevada Radio and RedWeb Technologies (Neville, G3NUG)
- We built a website, www.t32c.com, using new technology that was easy to edit (Mike, G3WPH)
- We entered into contracts with Frontiers Inc (for the Air Pacific flights and the CCH booking), with the Ohana West in Waikiki, Honolulu for our stop-overs and the insurance for the container. We also obtained the T32C licence (Don, G3BJ)
- The antenna team got to work on the antenna scheme (Don, G3XTT)
- The RF team worked on station design (Tony, GOOPB)
- The power team specified the power system (Bob, GU4YOX)



The 737 flies in over the salt water lagoon.

- Technology plans were developed and our *StarSoftware* suite was enhanced (John, G3WGV)
- Our treasurer set up a new accounting and forecasting system and we agreed a package for participants following soundings regarding affordability (Gordon, G3USR)
- Invitations were then sent out to potential team members and the response was overwhelming – let's go for it, they said! (Neville, G3NUG)
- The sponsorship drive got underway with the brochure and full details of the operation (including the financials) were e-mailed to over 250 clubs throughout the world (Neville, G3NUG)
- Plans for team logistics were developed (Bob, MDOCCE)
- The team manual was drafted (Don, G3XTT)
- As all these activities were proceeding we developed the logistics plan – the most important part of any DXpedition (Chris, G3SVL).

We were allocated the callsign T32C. The 'C' in the callsign stands for CDXC, the club from which FSDXA was formed [3]. It is also a reminder of the group's previously successful operations as 9MOC, D68C, 3B9C and 3B7C.

At this stage we planned to take 16 of the new Yaesu FT-5000 transceivers, 16 VL-1000 linear amplifiers and many Yagis and VDAs (vertical dipole arrays) together with 5.3km of coax, 16.9km of radial wire, 20+ computers and two large 10.5kVA generators.

Everything continued to go to plan with Keith, G3WRO, our logistics consultant, making a huge contribution regarding the shipping of the container on the scheduled routes. All the kit was collected from Nevada Radio in Portsmouth (our thanks to Mike, G3SED for storing our kit and allowing us to invade his premises), the container was loaded from a 953-line item inventory and it left Southampton on 27 February for the Pacific. We were asked by the authorities on Kiritimati to ship the container to Fiji rather than to Tarawa 'as a regular and more reliable service was to be introduced'. The container arrived in Fiji on 29 April.

SHIPPING CONTAINERS. There are principally two types of route for shipping containers, let's

call these primary and secondary. Primary routes are those used by the world's major shipping companies and these are the routes followed by the major container ships. Examples: Felixstowe to Mauritius, Southampton to Singapore, Singapore to Fiji.

A contract is formalised between the shipper (in our case FSDXA) and the shipping company concerned. This is arranged by an agent and a Bill of Lading is issued when the ship sails that details the routing, container contents etc and ETAs on route and at the final destination. This process is fairly straightforward and shipping times are reasonably accurate. The contract is complete when the shipper's agent at the destination claims the container by producing the Original Bill of Lading that will have been couriered to him.

Secondary routes are the real challenge (this is when we are on our own and in the lap of the Pacific gods) and are covered by a separate contract again involving a Bill of Lading. Examples: Mauritius to Rodrigues, Fiji to Kiritimati, Fiji to Tarawa, Tarawa to Kiritimati.

In these cases, a local agent is employed. He receives the container from the primary agent and his job is then to find a ship to take the container to the final or intermediate destination. It is essential to build in large amounts of slack to cover this stage and to research schedules as carefully as possible, history of sailings etc. But there are no guarantees until the container is loaded onto the ship and a Bill of Lading issued. Even then, these ships sometimes break down and return to port. (Two of the ships that normally cover the Tarawa - Kiritimati run were in dry dock in Fiji at this time.) The ships used at this stage are typically rust buckets, large barges and old freighters that one sees all over the world.

CONTAINER ISSUES EMERGE. Our expectation was that the container would be shipped from Fiji to Kiritimati in June with an early July arrival date. But then the various agents concerned started to report slippages. We made numerous phone calls and sent many e-mails to Fiji to various agents and to the owner of the ship concerned. It became clear that we were getting misleading answers. At this stage, we sought the help of a local amateur, Michael, 3D2MP, and we asked him to meet the various parties concerned to find out exactly what was happening.

Michael did a wonderful job in establishing the truth – the ship owner did not have a full load for Kiritimati and in any case had planned another charter to Nauru in August. Chris, G3SVL and I agreed that the Fiji to Kiritimati charter was unlikely to happen. It never did!

We then searched for other ways to get the container to Kiritimati and made contact with Manikaoti Timeon, the Permanent Secretary (PS) on Kiritimati who is also the chairman of the CCH. He was extremely helpful and advised us that the *MV Matangare* was becoming available and that it should sail from Tarawa

to Kiritimati in the first week of September. So with the help of our agent in Fiji, we shipped the container to Tarawa. The estimated journey time was 10 days, the actual time 20 days! This small ship, the *MV Maona Raoi*, trundled its way to Tarawa, stopping at Tuvalu and Nauru.

Meanwhile the *MV Matangare* was being loaded at Tarawa with food that was desperately needed on Kiritimati and on nearby Fanning Island. The authorities in Tarawa wanted the ship to sail (not unreasonably) with or without our container. The PS persuaded them to keep the ship in port to await the container. At one stage, we even discussed part-funding an aircraft charter from Honolulu to Kiritimati with the food that was desperately needed on the island. We gained commitments from several team members to part-fund this charter.

PLAN B. In the event, these efforts failed. The Cabinet of the Kiribati Government ruled that the *MV Matangare* must sail – which it did! Our container arrived in Tarawa a few days later. What next? The PS worked hard for us and found an ocean-going landing craft that would take our container and some heavy plant to the island to arrive in mid-September. There was great relief all round. We developed Plan B based on the assumption that the container would arrive no later than four days after the main team. Yaesu responded wonderfully to our request to borrow five FT-450D transceivers. We developed a plan to get us on air for the four days with limited kit and told the team about Plan B on 12 September.

PLAN C. Then, on 14 September, we heard the really bad news. The ocean going landing craft had broken down and would have to be towed to Fiji for repairs. Result – no container, so we developed Plan C. Cancel? – No way! Postpone? – No way! We decided to make this DXpedition happen even without the six tonnes of kit in the container.

A call to Yaesu, our Global Sponsor, on 14 September got us back on track when they immediately agreed to loan us a further five FT-450D transceivers and switch-mode power supplies. Chris rebuilt the inventory, setting out what we needed to borrow or buy in the UK, Honolulu and on Kiritimati. We identified a large number of sources, having decided to use fibreglass poles (as many as we could find!) with vertical dipoles or groundplanes very close to the sea.

On Friday 16 September we told the team about the container and Plan C and that the DXpedition was on, regardless. We then thought we should be able to make at least 100,000 QSOs and perhaps beat our St Brandon figure of 137,000. There was an outside chance we could make our published target of 150,000.



It wasn't all radio. Bob, N6OX caught this 80lb tuna.

THE TEAM

Neville, G3NUG (Team Leader)	Mike, G3WPH
Chris, G3SVL (Co-Leader)	Don, G3XTT
John, G3WGV (Co-Leader)	Ian, G3YBY
Michael, DG1CMZ	Mark, G4AXX
Franz, DK1II	John, G4DRS
Falk, DK7YY	Nick, G4FAL
Paul, EI5DI	Mike, G4IUF
Dave, EI9FBB	Tony, G4LDL
Gerard, F2JD	Justin, G4TSH
Michel, FM5CD	Michael, G7VJR
Tony, G0OPB	Clive, GM3POI
Nobby, G0VJG	Bob, GU4YOX
Richard, G3RWL	Paul, KG4UVU
Fred, G3SVK	Bob, MD0CCE
Laurie, G3UML	Arnie, N6HC
David, G3UNA	Bob, N6OX
Gordon, G3USR	Frank, ON7RU
Dave, G3WGN	Ronald, PA3EWP
	Mauri, W3E
	Paul, WF5T

RECORDS BROKEN

Total QSOs	213,169
Total Uniques	48,914
CW QSOs	102,216
SSB QSOs	88,416
RTTY QSOs	19,225
10.1MHz QSOs	16,398
21.0MHz QSOs	35,489
24.9MHz QSOs	25,265
North America QSOs	109,327
Oceania QSOs	4,214

A full breakdown of our results is shown on our website [2].

The response from the team and indeed from the amateur radio community was tremendous and we had many offers of kit. Mike, G3SED of Nevada provided a mass of low-loss Aircell 7 coax; Martin, G4HKS of ML&S offered us some linears. In a few



The 17m 4-element array at sunrise.

days we got commitments from everyone to bring all the kit we needed. The main team flew out on Sunday 25 September, just eleven days after we heard that the container would not reach the island. I left seven days ahead of the rest of the group with the advance party – we had a shopping spree in Waikiki and then flew to the island to get the Captain Cook Hotel ready for the influx. That's another story!

There was around one tonne of baggage flying around the world to Honolulu and then onwards via Air Pacific to Kiritimati. We made excellent deals with the airlines to reduce our excess baggage costs.

SET UP. The whole team worked very hard on the island – there were huge numbers of plugs to be fitted to coax and cables and real issues to be solved setting up the stations with different microHams and very different transceivers from those originally planned. A completely integrated IT network was built from scratch – a fabulous achievement. There was much to do on the power side too. We went on the air almost exactly at the time planned two years earlier so that we could get four full weekends of activity.

THE OPERATION. The operation went very smoothly indeed bearing in mind the situation we had faced just three weeks previously.

John, G3WGV had developed a new operator and station scheduling system – *StarSchedule* (SS) – and this worked like a dream. Two of us scheduled the 60 four-hour slots for the 27 operators two days in advance. This task took around one hour. SS is designed to ensure a fair allocation of slots for everyone and ensures that everyone has adequate time to sleep. In the third and fourth weeks of the DXpedition we started to chase the various records and we planned the schedule to achieve these.

We participated in the Oceania DX SSB contest during the first weekend of our operation. The SSB contesters had great time and our claimed score is four times greater than the previous record. It was great hearing so many 160m SSB contacts being made with stations thousands of miles away.

The arrival of the H2 (second half) team gave the operation a real boost and those on the extended package had a day off visiting

the local town Ronton and seeing the power station (with its one rather old generator), the library, the hospital and Tov, T32TV. We all then went to the inland bathing lagoon and had a swim and a few beers – this was a valuable break for those who had set up the stations and then operated continuously for around 11 days.

The CCH met every request we made. Meal times were adjusted to our shift patterns and hot coffee was available from 3am onwards for those starting on the 4am shift. The hotel carpenter made many stakes for us and fabricated a mast for the 6m beam.

The 6m EME operation was fun to watch. Just how that small FT-450D transceiver heard those weak signals undetectable by the human ear I shall never understand. Our main problem was, in fact, our lack of power when transmitting. But we made EME QSOs with the US and Europe. There were quite a few firsts on terrestrial 6m too.

Every day there were always tasks to do and our team of willing volunteers always stepped forward to help. Additional elements were added to the verticals, the Beverages needed constant attention, additional radials had to be laid out and all the antennas needed checking regularly for salt intrusion. We kept building new antennas until we ran out of coax! To quote Don, G3XTT, "To the outside world the operation glided along like a swan. On site we were paddling very hard indeed."

Every day we held a team meeting at 1.30pm for those not operating – this enabled us to get feedback from team members regarding matters such as inter-station interference. We also gave regular updates on progress towards various records.

FSDXA has various very straightforward operating standards that are set out in the team manual. Everyone played ball. There were one or two instances of anonymous operating and working by numbers but these didn't last long!

On the final day we closed our last stations just 15 hours before we were due to leave the CCH. We tidied up the site very thoroughly and then had a most enjoyable farewell dinner with some excellent local entertainment.

Even when we closed down with 213,000 QSOs in the log there were still many calling. We were pleased to break so many records, a result beyond our wildest dreams. We worked nearly 49,000 uniques and gave many a new one. We also worked over 1,400 different UK stations. One CDXC member remarked before we went that he would eat his hat if we worked 1,000 unique UK stations. I have a suitable straw hat that I will bring to the next CDXC dinner!

BEST MEMORIES. What are my best memories of the T32C DXpedition?

- A wonderful team of 38 great guys, all as keen as mustard to get on with

the job. There was great camaraderie; everyone was hugely supportive.

- The incredible response from the team and the amateur radio community when we announced that our container would not get to the island.
- The outstanding support from Yaesu and from all our other sponsors.
- The superb hospitality at the CCH. Nothing was too much trouble for the staff with their delightful smiles.
- The huge pile-ups that went on and on and were pretty well behaved.
- The sound performance of the FT-450D transceiver, a delightful, compact and relatively inexpensive unit.
- Working 49,000 uniques with many reporting an all-time new one and breaking ten records.
- Making several firsts on 6m – EME and terrestrial.
- The delightful climate – very warm and sunny with little rain.
- A day off fishing and catching a 48lb tuna.
- The co-operation of officials on the island – the PS, Immigration, Customs, Air Pacific, etc.

And, finally:

- Delivering an excellent result after a few little local difficulties.

We were pleased to present:

- To Tov, T32TV: an FT-450D transceiver and power supply on behalf of Yaesu; a computer and lots of coax and cable from FSDXA.
- To the local hospital: nearly all our very comprehensive medical kit. Many team members donated their kits too.
- To the CCH: a large quantity of coax for visiting DXpeditioners (and masses of 110V electrical kit and internet cable).

In addition, Bob, GU4YOX, who holds a senior position at Guernsey Electricity, is considering planning a charitable initiative on behalf of the Company to send a shipping container of used electrical switchgear, transformers and metering equipment etc to the island. There is a huge shortage of such kit on the island and their electricity generation and distribution infrastructure needs further enhancement.

Our sincere thanks to all those who supported us - Corporate, Club and Individual. There are far too many to list here but they are all listed on our website.

Will there be another FSDXA DXpedition? You bet there will!

WEBSEARCH

- [1] Club Log: www.clublog.org
- [2] *DXpeditioning Behind the Scenes* - signed copies available from the T32C online shop, www.t32c.com
- [3] CDXC: www.cdxc.org.uk.

Photographs by Paul O'Kane, EI5DI and Ian McCarthy, G3YBY.