

# 3B6RF, an expedition to Agalega...

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## The island Agalega...

Agalega (IOTA AF-001) 10°22 ' S, 56°36 ' E, Grid Locator LH89, is situated in the Indian Ocean and belongs to Mauritius. Agalega consists of two islands, the North and the South islands.

The North Island is 12.5 km long and 1.5 km wide. The South Island extends over 7 km in length and is 4.5 km wide. Approximately 350 people live on the islands. The climate is tropical, hot, and humid. We found mangroves, conifers, and coconut palms. Despite a rich variety of sea creatures, only a few types of animals can be found on the island - some birds, the black ibis - found only on Agalega - and land crabs. The official language on the islands is English, but Creole and French are widely spoken. The dominant religion is Roman Catholic.

## The preparations...

During the St. Brandon expedition in 1998, we decided to organize an expedition to Agalega. We chose autumn 2000 as a good time. In the autumn the conditions for propagation from the Indian Ocean to the USA are the best, plus the low bands are not as noisy as during other times of the year.

The team leader of the 3B7RF expedition, Karl, HB9JAI, stated at that time that he would do his best to obtain the radio license and landing permission on the island, but he could not do more, as team leader. Hans-Peter, HB9BXE, an experienced contester, DXer, and a man with extensive travel experience - he had already crossed Africa by automobile, and from Switzerland to the Indian subcontinent and return, among other formidable journeys - agreed to take over as the expedition chief. All 3B7 members living in Switzerland were enthusiastically ready to help.

In August 1999, the 3B7 crew met in Gisikon, near Luzern, for the first 3B6 meeting. Hans-Peter had prepared a possible concept. The basic idea was not to exactly reproduce the St. Brandon expedition - new guidelines should be set. The following criteria were considered:

- To give a good opportunity to the amateurs living in North America, by judicious use of the short window openings.
- The use of as many stations as possible.
- Creation of a good PR concept to obtain sponsorship and funds.
- To operate as many bands and modes as possible, including 6 metres and satellite.
- To try and break the barrier of 100,000 QSOs, with an activity of 15 days minimum.

We decided to work with six HF stations, a 6 metre station, and a satellite station. Five of the nine 3B7 members agreed to be included also with the new project. The foundation for a new Swiss expedition was laid, and we needed now to look for new members having the necessary funds, sufficient holidays for the long period, and good operating expertise. Furthermore, they should be able to work well within a team under improvised conditions. We found that it was difficult to find many operators who could fulfill all the criteria. From seriously interested hams, we required a written biography detailing the extent of their amateur activity. These documents provided the information for our group to make the decision whom to select. The team was formed slowly. Unfortunately, the expedition had to be cancelled just three days before departure of the crew, due to changed political

conditions in Mauritius. This was a very bitter and heavy blow to absorb by the core team, which had carried out so much preliminary planning, organizing, and other detailed work.

In order not to have to return sponsor contributions, material, and equipment, we chose a new date for the expedition of 1 May 2001. The supply ship from Mauritius to Agalega travels two times per year: once in May and again in October, because during these times no heavy storms are expected. This decision had other consequences. Half of the Swiss crew could not make a promise for this revised date of the expedition. Also several foreign members were not able to accommodate the change. Due to these difficulties, we decided to reduce the total time of the expedition to three weeks. With a renewed call to the international DX community, new members were sought. Recruiting of a balanced crew was very important, and this task became complex and time consuming.

Many of the crew members met near Basel a few weeks before the start of the expedition, primarily to set up, test, and coordinate the most important antennas. It was a rainy, cold day, which made our work more difficult. Good comradeship and the will to carry out good works were our motivating factors. Everything went very well. The preadjusted antennas were marked, packed, and stored, ready to be sent on the long journey to Agalega.

Karl, HB9JAI, kept in contact with the responsible persons in Mauritius, to guarantee landing permission and the license for our radio operation from Agalega. All our crew members were provided with a clear and comprehensive "Operator's Manual," which contained information on all the necessary preparations (vaccinations and medical statements), operating procedures, and the objectives of the expedition. The manual also contained all addresses and further information about the expedition in order to prepare each operator as well as possible. We surely felt that every crew member was ready, and that we had planned for every possible situation that could arise.

### **The long journey to the island...**

The date for the expedition was planned for the end of April, in order to reach the ship "Pride of Mauritius," departing from Mauritius on 1 May 2001 to 3B6-Agalega. All crew members had organized their vacations and taken the necessary precautions. Then a new disappointment came. We were informed that the "Pride" had already left for Agalega on 17 April, and we must look immediately for new alternatives! A Transall airplane or a large Katamaran were the possibilities, but for various reasons, neither was available. It seemed that the 1000 km distance between Mauritius and Agalega had become the toughest nut to crack for this expedition. The only airplane from Mauritius to 3B6 could carry a maximum of five passengers only, and not our 2500 kg of freight.

A small preliminary group had traveled to Mauritius one week early for final preparations, to buy food stuff and other local goods, and to organize all transportation details for the rest of the crew to Agalega. The only remaining alternative was to fly commercially up to the Seychelles - S7 - and from there by small Beechcrafts back down to 3B6. This alternative had financial consequences which remain to be solved. The advance crew, in contact with the core team back in Switzerland, decided on this route of travel, even with the new unplanned additional cost of US \$30,000 — believing that the DX community would respect the decision. It was hard work and a difficult experience for the advance team. Meanwhile, the remaining crew members were preparing themselves and their personal luggage (23 kg including sleeping tent) and traveling to Zurich, well prepared for the expedition and the takeoff to Mauritius.

### **The crew flies to Mauritius...**

After all the different disappointments, especially the delay since last October, we looked forward to April 28, our actual departure day. During the previous week, the Swiss core

group had endured substantial work and enormous pressure in preparing goods and the logistics, so that we all could arrive in time at the final site in technical readiness.

We crew members, many knowing one another only from the photos on our homepage, or from the meeting in Basel, met at Terminal B in the Zürich Airport. At 2100 HB time, we all brought our luggage and completed check-in at the special group counter. Everything ran smoothly according to plan, and at 2240 the Air Mauritius Airbus took off - the Agalega expedition had started for us all!

The next morning, after 11 hours flying time, we landed safely at Plaisance Airport, near the southeast shore of the island of Mauritius. We passed Immigration and Customs inspection without delay, took our luggage to the reception hall, and met the advance team members: Christine-HB9BQW, Hans-Peter-HB9BXE, Karl-HB9JAI, Jacques-F6HMJ, and Jacky-3B8CF. The 21-member team was now complete and together for the first time!

We also were greeted by Mr Nasir Gopol. Nasir is the former Director of the Mauritius OI DC (Outer Island Development Corporation - which oversees all of the "other" islands of Mauritius). Naturally, this had put Nasir in a unique position to assist us during the past three years, in all phases of the planning and logistics of our operation. We then took this opportunity to take a photograph to show the DX world that the crew was complete and ready, and prepared to adapt to the heat and unusual climate to give our best efforts.

After loading our suitcases, a bus brought us through fields of sugar cane and palms across and over the beautiful green island to the capital Port Louis, on the northwest side of the island. At the Hotel Saint George we took our rooms and rested a bit from the long overnight journey.

At 1800 3B8 time, the crew met in the conference room for a first briefing. Our people on Mauritius had in the meantime already received the green light from flight operators at S7, for the trip to Agalega from the Seychelles. We had the impression that all was arranged for us, and that the hard work and diplomacy by Nasir, our contact man in 3B8, and Karl-HB9JAI, had paid off, and we would arrive soon on Agalega Island. It would still take slightly more time than we had originally planned, but "we will arrive on Agalega for sure, we have to work hard, and to believe in this goal" was the message given by Nasir during his speech.

Before falling asleep, I had a good feeling, and I was thinking, "everything takes its time according to the style and customs in this part of the world, but here are people working hard to help us, and who know how to accomplish our goals." I was pleased to be part of this crew.

We woke up to a wonderful morning. We left the hotel by bus for a sightseeing tour around Mauritius. We visited scenic lookout points on the island, mostly of volcanic origin; the markets; the National Park; and other points of interest. We came in personal contact and got a little involved in the life of this lively population formed of many different races.

Back in the hotel we heard more news about the expedition and the program for the next day. We had training lessons in the use of the CT log program on the laptop computers, and discussed other important details. We would leave the next day for the Seychelles. Due to the small aircraft we would take from S7 to Agalega, we had to reduce our luggage to the absolute minimum. All items not absolutely necessary, must be left in the hotel in Port Louis. Nasir oriented us about the "rules" in our dealings and relations with the local population of Agalega Island. In an optimistic mood, we then retired to our rooms to prepare our luggage for the next day's journey to Mahé, the main island of the Seychelles.

**A new departure, the Seychelles...**

Today, 1 May, is a general holiday in Mauritius, and we hoped that it really was the beginning of the actual expedition for us. The weight of the crew had to be controlled so that no person had more than 100 kg, including himself and his luggage. After lunch we crossed the island again back to the Mauritius airport, ready to head for our next target, the airport on Mahé Island in the Seychelles.

The two tons of our Ham Radio material and equipment, and our food bought in the local supermarkets, accompanied us on the same Air Seychelles commercial flight. Nasir also came with us on the two-hour flight to Mahé. When we arrived at Mahé, we took rooms in the Reef Hotel, which was near the airport. Most of the ladies working at the reception here didn't seem as friendly or efficient as the Mauritian people were.

Nasir and Karl immediately got on the telephones and continued to organize our transfer to Agalega. Time for crew meetings. We learned that it was 95% certain that Air Seychelles would get permission from the OICD of Mauritius to land on Agalega Island. Each ringing of the telephone strained our nerves and got the pulses beating stronger. We had a second backup plan in mind also, but we hoped that it would not be necessary, because our journey might then become even MORE complicated and expensive. So all we could do between the meetings was to cool down at the beach. At least we had something nice to do while waiting.

We filled the second day with a very beautiful sightseeing trip around Mahé Island. The route took us into the botanical gardens. Here we saw beautiful rare flowers and plants and animals, including the famous giant turtles/tortoises. Naturally also the enormous "Coco de Mer" impressed us, a special version of the coconut that grows in the Seychelles Islands. The discoverers of the Island found these nuts in the sea, at the beaches of Mahé, thus the name. They floated to the Mahé beaches from the neighboring islands of Praslin and La Digue, which are the primary source of the Coco de Mer palm trees. Our route continued to the northeast, around the north cape, and the east coast of the main island. All in all, in addition to the nice trip, today's journey was also meaningful and useful, as have been our other times spent together, as good times for our large crew to become more acquainted with each other. This undoubtedly would help us when we got down to our main "job" on Agalega Island.

Karl and Nasir did not accompany us on the Island tour. They worked diligently all day long to confirm our ongoing travel plans, and the logistics for clearing our equipment and material through customs (again) as quickly as possible. The intended flight to 3B6 would be an international flight, and therefore required permission from the 3B8 aviation authority. To our disappointment (again), the 3B8 authorities refused our landing permission, supposedly because of the bad condition of the landing runway on Agalega. No VIP connections could help, as nobody in the 3B8 government would take the responsibility for the status of the runway and for these flights. So Nasir and Karl met with the Chief of the Seychelles IDC (Island Development Corporation) to try and find another way to get us to Agalega.

Fortunately they were able to devise another plan. We would go by special chartered airplane to the Seychelles island of Coetivy (45 minutes flight), and then from Coetivy Island via cargo ship to 3B6. Coetivy is 400 km south of Mahé, and then it is another 400 km down to Agalega. Unfortunately, this meant even more expense for travel!

### Departure to the last stage...

Friday morning we again packed our suitcases - which actually never were completely unpacked - and we headed to the Mahé airfield. We were finally VERY glad to start the last stage of our journey to Agalega.

A Beechcraft 1900D plane with 12 seats was chartered. It was large enough to take our entire crew plus personal luggage, using two flights back and forth. Our cargo had left Mahé by ship the night before. After the airport departure tax of US \$40 per person was paid and our passports stamped, we flew to the island of Coetivy, the nearest island to Agalega.

The Coetivy runway crosses the entire width, bisecting this long, but relatively narrow island, where shrimps and prawns are commercially produced. No tourist facilities are available. We were transported by pickup trucks across the island, where the 32 metre long "Lady Esme," a cargo ship built in 1954, was waiting for us 500 metres off the coast, along with our cargo. We had to go to the ship in small boats due to the shallow waters surrounding Coetivy, and shortly before 1700 local time the anchors were raised, and it was full speed ahead toward Agalega - at 17 km/hour! Derek-G3KHZ, remarked that since his departure from home, exactly one week had passed.

We were very hungry, because we had had nothing to eat since breakfast. We took to the small passenger-sleeping cabins, some of us had to share the crew's cabin, and some had to sleep outside on the deck. Soon our crew met on deck to leave Coetivy Island behind. It was time to eat, and the cook served us with a nice meal of fish and rice. But the meal did not stay very long in several of our crew's stomachs. The seas were a bit rough, and many of us got very seasick after a short time, and that put us back into a quiet corner and the bunks, where we spent the clear, starry night.

For most of us, dry bread and some tea were sufficient for calming down our stomachs the next morning. Even this simple food seemed very good at that time. For most of the day we enjoyed watching the colorful flying fish alongside the ship, and most of us felt a lot better.

After 23 hours on the ship we saw land, Agalega Island. Our target was finally visible, just a small green mark on the horizon. Approximately an hour later, the ship anchored, and the long-awaited main part of our expedition could begin.

We were brought to the landing pier at the north end of the North Island in small boats. The first group to touch the land consisted of Hans-Peter, Karl, Jacky, and Hermann-HB9CRV. Their function was to search as quickly as possible for a suitable area for the work tents and the antennas. They did not find a good place, as had been intended, at the beach, but instead in the proximity of the village, six km south of our landing point. Our first contact with the local population consisted of a warm welcome with fresh coconut milk.

The ship was unloaded. Our crew and material were transported to the selected area by the island taxi. The sky looked quite dark; strong rain could fall at any moment. It was time to erect first the living tents and the material storage tent under the coconut palms, to protect against the burning sunshine during the day. But nothing happened with our freight, as there was no available transportation or workers to deliver it to our living/operating area. It soon became evident to us that we could not expect to do anything with it that evening.

The biggest and best surprise was a new guest house in the village where we could take showers. The kitchen that had been arranged to provide for our cooking facilities was in the island manager's house. That first evening we were invited by the island manager for

dinner, and slowly we began to understand that nobody knew what it was to hurry or rush on this Island, and especially because of the fact that nobody even knew what these foreign people wanted to do here!

During the night it rained cats and dogs. Rene, HB9BQI, and others could not sleep too well, as their thoughts were with all that cargo lying out in the rain. We were unlucky with this situation.

The next morning at 1000, a tractor and trailer delivered the first load of our goods to the camp, and at this moment the next tropical rain started. The rain continued throughout most of the day. We were getting wet, we were tired and exhausted, but at last we were on Agalega, and somehow we had managed all the problems up until now!!!

## **Agalega....**

### **The installation starts...**

On Sunday, 6 May – in a heavy tropical rain, which did not seem to stop - we began to set up the operating tents for the stations, and the crew tent (mess hall). Then we started assembling and erecting antennas, first the Force12 type C-3S for 10 m, 15 m, and 20 m; and the operating stations, consisting of YAESU transceivers FT1000MP, linears VL 1000, and laptop computers. Two stations were installed in each operating tent.

The generators, powered by diesel motors, were filled with oil, directly connected to the diesel fuel barrels, and started. At about 1200 GMT the first station was completed, the first QSO with our head pilot, Sigi, HB9DLE, took place, and our activity "**Agalega on the Air**" had begun! This was the beginning of an intensive event created by comprehensive and precise planning.

Concurrently with the first two SSB and two CW stations in operation, we started erecting the rest of the antennas, e.g. the Force12 type WARC 2/2, in order to also be QRV as soon as possible on the other bands and operating modes of RTTY/ PSK, 160 m, FM, and satellite.

### **Our operating concept...**

Our target concept was friendly operating; everyone should have a chance to contact 3B6RF-Agalega, whether QRP, QSH, QRS, etc. In addition, the operators on the stations should also have fun during their work. We believed that by respecting these two points, it would automatically follow that the operating and the working down of the pileups should be a good experience for all.

Each of our operators had the possibility to choose the operating mode, and time of day or night which he liked to operate, during his two daily shifts of four hours at the station. He would enter his name in the work plan in our office tent. This plan was to insure that two stations didn't operate on the same frequency at the same time. A daily operating plan was prepared, showing the frequency and beam heading and mode for each station. This system would guarantee that every DX window, especially to the USA was used. Also, to ensure that all operators had these instructions during their shift, small cards were prepared in the office tent to cover all the instructions on the daily shift plan, so that the operator had them handy at all times. During the shift, the operators noted special conditions, unforeseen occurrences, or any other events worth mentioning, and brought the card back to the office after the shift. This information served again as input for new frequency planning for the next 24 hours.

The system worked very well. In a very few cases we had to request operators to take an extra work shift. All this was done to try and reach our goal of contacting as many stations from the Americas as possible. Most of the frequency planning was delegated to Steve, N3SL. As an American, he had the best experience and knowledge of when the USA could be worked from here. During openings to NA, all stations were requested to direct their antennas that way, in order to serve this part of the world with QSOs and show our colleagues in the USA that we were working strictly according to our target.

The 3<sup>rd</sup> day, the following stations and equipment were on the air in full service:

**Two SSB stations FT1000MP transceiver with linear and:**

- Two Force 12 antennas C-3S for 10 m, 15 m and 20 m.
- One Force 12 antenna WARC for 12 m and 17 m.
- One Titanex V 80 for 80 m and.
- One Loop antenna for 40 m.

All antennas operated perfectly, with the exception of the WARC beam, on which an element was assembled incorrectly. After correction, this antenna then showed an SWR < 1:1.5.

It was an exhilarating feeling to sit at the station and hear the pileups and to appreciate them. It is not always so easy as it looks when sitting at home in a comfortable chair following a proficient DX operator. To work down the pileup was sometimes a difficult job, and it kept you on your toes to jump from one QRG to another, to try and log as many stations as possible. Some of us, not having previously had this experience, had to learn it "on the job." It was also a very special feeling to work a good friend several thousand km away. The most difficult and time-consuming tasks on SSB were to detect stations' call signs if they did not use the standard phonetics, or send their complete call sign. Virtually every CW station sent the complete call sign, but not the SSB stations.

**Two CW Stations FT1000MP transceiver with linear and the following antennas:**

- Two Force 12 C-3S for 10 m, 15 m, and 20 m.
  - One Force 12 C-3S for 12 m and 17 m.
  - One Titanex V30 for 30 m with two elevated radials.
- The Titanex for 30 m was equipped with two elevated radials and worked without problems
- SWR < 1:1.4. Due to the bad ground conditions more radials would have given better results, nevertheless our signals were received well by US west coast stations. In the morning, K6GNX, our American pilot, certified our signals at 579 on 30 m (using an average power output here of 500 watts).

**One CW Station FT1000MP transceiver with linear for 80 m to 10 m with:**

- One full size loop antenna for 80 m and 40 m (2 lambda).
- One HF6V vertical antenna for 10 m to 40 m.

These antennas operated to our full satisfaction and resulted in good signals on both 80 m and 40 m.

**One CW Station FT1000MP transceiver with linear for 160 m, low bands, RTTY/ PSK and SSTV with also:**

- One Titanex V160E
- One Penant antenna by K6SE with 10 db amplifier
- One Force 12 C-3S for 10 m, 15 m, and 20 m

We had to solve several problems with the Titanex V160E. Fortunately, we had a good manual. The antenna tuner connections were not soldered, and they are quite massive, so it was not an easy job to fix them with a small soldering iron. But Rene, our electrical and

watchmaker expert, managed it. A further problem was that the power supply unit was missing. We found another one, but it caused strong noise on 160 m. This operation did show clearly that an increased number of radials substantially improved the efficiency and performance of the antenna. The Penant antenna, and a replacement for the noisy power supply, reduced the noise greatly, and helped to improve the received signals. Our RTTY and PSK operation were reduced because of a technical problem with the transceiver. Unfortunately, we were not able to solve this technical problem, even with sharp thinking on the site. This is the reason for the small number of QSOs in the PSK31 mode.

On SSTV - Mode we used:

- Computer: Toshiba Celeron 400MHz, 64MB RAM, SoundBlaster compatible
- Software: Mscan v.3.12 (Windows 98)

After having previously configured the FT-1000MP for operating SSTV, we started our activity on 10 May. We tried 14 MHz first, however, we had problems with HF transmitting signal distortions, mainly due to the other 3B6RF transmitters operating on the same band. We decided to change to 21 MHz, and we had no problems there.

This mode is very time consuming - each transmission takes one minute and 50 seconds - we had asked the calling stations to send only a 40-second part of their picture (SSTV info on our web page), but only a few operators complied. Some stations even sent additional pictures with best wishes and equipment description! For better reception, we used a 2.5 KHz split and SSB calling methods.

During our second day of activity - 12 May - we again operated on 21 MHz, receiving strong signals from Europe and Japan.

**One full satellite station FT847 transceiver**, also with:

- One 9-element Tonna yagi for 2 m (RX SAT).
- One 21-element Tonna yagi for 70 cm (TX SAT).

Bernhard, DJ5MN, provided us with the 2 m and 70 cm antennas from Tonna for the satellite operation. Their operation was outstanding. Both antennas were installed on a common mast. To decouple them, the 2 m RX Yagi was installed horizontally, and the 70 cm TX Yagi vertically. The length of the feed cables was 15 m. For receiving, a GaAs FET preamplifier was used. This was very important, and was responsible for the good results. The adjusting of the antennas was managed by hand. This involved quite a bit of manual work, since the antenna was set up away from the station tent.

**One station FT 847 transceiver for 6 m and 10 m FM** with:

- One 6-element yagi antenna (Wimo).
- One Sommer vertical antenna type T25

For tactical and technical reasons, we decided to install the T25 vertical for 10 m FM, and not the planned wire yagi. This selection proved to be good - the T25 produced enormous signals in Europe (marginally over S9).

Unfortunately, we did not have such good conditions with other areas. Our partners in VK, and we ourselves, all had troubles on 29 MHz with many intruders from BY, UA9, and from ship and CB users. They regularly covered the entire area 29,000-29,600 KHz. Therefore, it was often not easy to identify the Amateur stations calling.

Even so, from all over we received very positive messages regarding this operating mode. For many Hams, an FM QSO with 3B6RF was their first FM QSO, and for some it was even their first QSO with 3B6. They preferred this mode instead of competing in the enormous SSB pileups, and often we heard "thanks for the new one."



## General remarks...

### Transceiver, output stages, units, accessories...

The YAESU transceivers and linears normally ran extremely well and problem-free; we had a problem with only one transceiver. These linears, which are self-tuning, can be highly recommended, a feature which is favorable more for contests. The transceivers fulfilled their expectations, although the built-in tuners balked when the SWR was too high.

The Force 12 antennas were very well marked, and therefore the assembly went smoothly. The only thing complicating their use was the riveting. Perhaps Force 12 should think about offering a so-called "expedition" version without riveting, as Titanex is doing.

The BIMEX - generator units ran perfectly the entire time without interruption, and the fuel consumption, fed directly from the barrels, was very low. They were started once at the beginning of the DXpedition, and switched off at the end - that was it.

We used "one-sided" headphones; they cannot be recommended, as in our case the noise from the second station in the same tent was too strong.

Our well-prepared transmitting/receiving filters for each band did not function satisfactorily in all cases. At certain times, the interference from our own other stations (CW to SSB, SSB to CW, RTTY to CW, etc) required the operators to change bands and/or direction of the antennas, even though our antennas were usually at least 200 metres apart, and sometimes much more.

CW was the most efficient mode. We were able to make more than 200 CW QSOs per hour at times, but the counter very rarely reached 150 QSO's per hour in SSB mode.

What we learned about discipline on Agalega: We found that the Hams from the USA were the most disciplined. The Hams from Japan lost some of their discipline from three years ago. When we operated from St. Brandon, they were surely the most disciplined; when asking for JA3XXX, **only** JA3XXX came back!!! From Agalega, this wasn't always the case. Even when we insisted on NA/SA only, some JA stations kept calling - have they been listening too much to the Europeans?

The discipline of the EU Hams was, in most cases, better than we expected, but we noticed that there are still a few who should conform with the "etiquette" of DXing. When the calling stations followed the instructions of our operators, we found that we could also work EU in a satisfying and efficient manner.

### Propagation...

Each evening a new operating plan was prepared for each of the six HF stations. At all times, priority was given to North American openings, especially trying long path to the western parts of the US and Canada. The latest Windows version of W6EL software was used, but we also confirmed predictions using a copy of "PP" brought by Cedric, HB9HFN.

Solar numbers were not very good, and the K index was above 4 for several of the operating days. No matter what the programs predicted, there was no substitute for being on the air for the unexpected. Our very first night of operating had 10 metres open around the world until after 0200 local.

In the initial days of the expedition, following the band plan was made more difficult by the huge pileups and lack of cooperation by various operators when asked to QRX. This

gradually improved as the pileups were worked down. Only the discipline of the operators made it possible for us to work into the western U.S. at the predicted times. The path to W6/W7 is exactly the path to most of EU. During the short path times (approximately 02-08 local) Europe was understandably well over S9. However, when they did QRX for the Americas, the propagation indeed was there, although most of the Midwest to west coast US/VE was only S2-4. Long path to the west coast showed very short openings.

We often would be working LP, observe it to turn off like a light switch, only to have a new opening within 10-15 minutes. Again, discipline within the DX community played a large part in the success or failure of working into the western US.

Low band propagation was a disappointment. We really had hoped for far more 160/80/40 metre QSOs, but the K index pretty much made 160 m useless beyond EU and the Middle East. However, towards the end of the expedition, better solar conditions allowed several NA and SA hams to make it into the 160 m log. Forty metre CW finally opened up to the Americas on the next to last evening of operation, allowing many Central and South Americans, as well as coast-to-coast US/VE to make it into the log.

Reviewing the DX cluster spots and comments on the web page should erase anyone's doubts that we weren't trying for W6/W7/W0! There are literally hundreds of spots with comments of "NA/SA only" or "W6/W7 only."

### **OBSERVATIONS OF A CW OP...**

Clearly, CW is the mode of choice for putting QSOs in the logs. My first shift on CW was exactly as I'd be told it would be. I called CQ, and then sat there for about two minutes in awe of the sounds from around the world. I actually took off the filters, opening up the FT1000 front end to 2.5 KHz so I could pick out the really strong "top layer." Only after about an hour could I begin using filters and moving up the receive range to pick out individual calls. The rate meter was always above 160/hour, and crossed the 200/hour point often. The best single shift I had was the first 20 metre CW shift during NA/SA short path. That was truly amazing, with 684 QSOs in 4 hours. One of the nice things about working NA, especially, is that the calls generally are short: far more four-letter calls than anywhere else in the world. The JA pile ups were never-ending. And it is very true that the JA's are the politest of the areas, often "too polite!" If I sent "JA8AAA 5NN" and heard nothing, I'd resend it. Again, I'd hear nothing. I would then send "QRZ" - and out would jump "JA9AAA" - who had not responded when I sent "JA8"! (not the real calls, just an example).

Europe was not as unruly as I had read and heard from previous expeditions, but certainly there are a few who need to learn pile up etiquette. A not uncommon problem, with our operating limited to 35 wpm, was the Ham who could not copy his own call at that speed. Operators need to learn to recognize their own call on CW. The very worst example required me to go to 12 wpm before the DXer recognized his callsign!

The US/VE pileups basically were very well behaved - often times equal to those of Japan. As mentioned above, however, the short calls added to high QSO rates, and the pileup was much more behaved when QSOs were going fast. Evidently far less frustration for those on the other end!

I did listen in "dual" mode much of the time and heard many police and jammers. However, rather than shift frequency, I simply kept going, since there were so many callers. I do not think the frequency police or jammers affected rates, although I'm certain they made it impossible for many of the stations to stay in the pileups. Jamming in the QSX range was rare and generally useless, as I simply continued up the band. If someone figured out my operating habit, I just changed it, or went back to the beginning of the listening window.

Jamming within the QSO range is a totally useless tactic.

Even until the very last shift I worked, the rush of the pileups was incredible, and something I won't soon forget! (N3SL)

### Statistics...

The internationally configured 3B6RF team, consisting of one woman and 20 men from nine different countries, made 64,239 QSOs in 8½ days, on the bands from 160 m to 6 m, and the satellite. This averages 7558 QSOs per day, which we feel is a good result and can be compared with the best expeditions of the past.

We activated virtually all operating modes, SSB and CW of course, plus SSTV, RTTY, PSK31, satellite and FM. Because of this, additional resources were used up, thus reducing the total number of QSOs made.

Band	SSB	CW	FM	RTTY	SSTV	PSK 31	Total
160	0	227	0	0	0	0	227
80	145	1047	0	0	0	0	1192
40	107	3206	0	0	0	0	3313
30	0	3881	0	0	0	0	3881
20	6870	5961	0	72	6	7	12916
17	2661	4910	0	0	0	0	7571
15	7762	9139	0	885	62	0	17848
12	2027	4357	0	0	0	0	6384
10	5012	4240	1058	0	0	0	10310
6	82	365	0	0	0	0	447
SAT	124	26	0	0	0	0	150
<b>ALL</b>	<b>24790</b>	<b>37359</b>	<b>1058</b>	<b>957</b>	<b>68</b>	<b>7</b>	<b>64239</b>

The number of QSOs per continent is as follows:

EU	NA	SA	AF	AS	OC	Total	Total
35169	15130	750	513	12016	661	64239	QSO
54.7	23.6	1.2	0.8	18.7	1.0	100.0%	%

One of our targets was to make 25% of our contacts with stations in NA and SA. The crew is very pleased that we have been able, by using every means possible, to work so many stations from the Americas. A list showing the QSOs with the different US call areas, is shown below.

W0	W1	W2	W3	W4	W5	W6	W7	W8	W9	Total
954	1347	1732	1355	2658	1556	997	695	1483	1244	14021
6.8	9.6	12.4	9.7	19.0	11.1	7.1	5.0	10.6	8.9	100%

### Camp, material and logistics...

**Material and logistics...**

Besides the technical equipment and systems, we had to arrange for their transportation, care, and use. Not including all the personal luggage, approximately 2.5 tons of material - stations and antennas, power supplies (diesel generators and fueling system), cables and accessories, tents for the crew, tables and chairs and material for the office, some music CD's, as well as toilet equipment - had to be transported to the island.

All material was packed into 35 cardboard crates and plastic tubes. Everything was transported by air freight to Mauritius. The weight of all the packing had to be kept as low as possible. We decided to use glued cardboard crates, which are adapted to the international air freight rules, are readily available, and not very expensive. Our original plan was to have to reload only one time, in Mauritius, to the ship to Agalega and back. If we would have suspected that our freight must be reloaded **12 times**, and had to endure being left unprotected overnight in the rain, we would have chosen stronger and more durable materials, i.e. wooden boxes!

The specifications of the tents were critical. After much investigation, we found tents 3 m x 3 m square, manufactured from dark blue, durable fabric. They served our purpose well. In addition, a materials tent 3 m x 4 m, and a crew tent 3 m x 6 m were used.

On Agalega, we also had to solve a few transportation problems, and the weather did not always show its best side. Tropical rains got the cardboard crates wet, and we had quite a task to dry them - and to KEEP them dry - and even made some repairs - so that all the same cartons could be used for the return transportation.

**Camp and meals...**

We had originally planned that the social life of the crew would take place in the camp. But everyone also took advantage of the new guest house of the OIDC, to take a shower and relax. It was one km away from our camp.

The large crew or restaurant tent formed the central meeting point. The personal sleeping tents were set up in a semi-circle in the shadows of the surrounding coconut palms. Two mobile camping toilets in small tents saved having to always hike one km to the guest house. We also put up some solar showers – hanging in trees - for a quick wash in the camp.

Two women living on Agalega cooked our meals in the house of the island manager. Christine and Jacques discussed the menu each day with the cooks, and handed over our food to be cooked. They controlled the processes in the kitchen and accompanied the meals to the camp. The meals, plates, and utensils were transported in cardboard boxes to the restaurant tent. The meals were good, usually with rice, pasta, potato stock, corned beef, chicken meat, pieces of fish, with tomatoes or carrot/cabbage salad. Every two days they baked fresh bread for us.

In the morning, thermal jugs with hot water were brought for the preparation of Nescafé or tea. Many times the meals arrived late, creating problems for the operators having to leave for the next shift.

We had an excellent camping life, where a military knife was very useful, and a good flashlight also was indispensable.

**Last day on Agalega...**

The 9<sup>th</sup> day our exercise came to the end. Overnight the weather became worse - stormy rains hit the tents. That evening we celebrated QSO number 60,000; we knew that this was our last night as 3B6RF. But the bad weather kept us awake.

A hard day awaited us. According to our schedule, we would close down at 0900 Agalega time (0500 GMT). That gave us only six hours to disassemble and pack the entire camp. Our ship, the Lady Esme, had already anchored at 2000, ready to take us and our cargo back to Coetivy Island in the Seychelles. We had planned to leave early the next day. The dismantling of the antennas began at 0800, while two SSB and two CW stations remained in full operation. The low band antennas were not needed any longer. The 40 m delta loop, V80 Titanex GP, Bitternut HF6V, and V30 GP Titanex were taken down quickly and stowed in the appropriate PVC tubes. The teams for the disassembly had been determined the day before.

At 0900 exactly (0500 GMT), Christine-HB9BQW, and Hans-Peter-HB9BXE made the last QSOs: Christine with 9A2TU on SSB, and Hans-Peter with EA3URE on CW, both on 20 m. This was a memorable moment, because now we had made 64,239 QSOs in the extremely short time of 8 1/2 days; a considerable performance by the 21 operators, especially considering all the problems that we had encountered.

One Force 12 beam after another was disassembled and divided into its individual parts. The bad weather didn't disturb us. Each antenna was packed as small as possible, with the smaller elements placed inside the larger ones, all controlled by a team leader, and then delivered to the packing team.

As soon as a crate was completed, it was sealed and labeled with the new return address, and placed together with the previously packed boxes. At 1300, the local tractor with trailer rolled up, and took the first load to the landing pier, 6 km away. We are very grateful to the Agalega OI DC for making the tractor and driver available to us.

While the antennas were being dismantled, the generators also were shut down and prepared for the trip back - oil discharge, diesel fuel lines detached, and packed for the transport.

Then assistance from an unexpected source arrived - the Agalega Police jeep transported the transceivers and linears from the operating tents to the camp for us. This was a great help, because the tents were up to 200m apart, and the complete spread from the RTTY/low band tent to the camp amounted to 800 metres.

Around 1550 local time, the last cardboard crate was closed. But the tractor was missing! Just before 1600 - the normal work quitting time of the local people - it showed up.

Suddenly the tractor driver didn't seem to understand French or English, and his unhappy face spoke volumes. He didn't want to take the last remaining freight and drive it to the landing pier - but after a long and arduous discussion, he was finally persuaded to take the freight and the generators to the ship-loading area.

With much physical effort, and helpful assistance from the National Coast Guard, the generators were packed into the crates and covered. Madhu, from the weather station, was also present, and forecast further rains for the night. Fortunately the cyclone previously forecast, had passed by us, and we experienced only a few harmless winds.

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That last evening we again were guests of the OI DC. It seemed a bit strange for us to sit on real chairs at real tables and take our evening meal. We were all tired and ready to go to sleep early. Our departure was planned for 0730; but a further challenge awaited us.

### **The return journey...**

The return journey home would be the same as we came. The only minor differences were that the seas were nice and calm on the ship journey back to Coetivy Island, and we had two Beechcraft planes to take us to Mahé from Coetivy - instead of the "shuttle" with one plane that we had to do the first time.

So - back on the main island of the Seychelles - we appreciated sleeping in a bed again, and having breakfast in a comfortable armchair, with papaya, pineapple, fruit salad, bacon, sausage, different bread, etc, etc, etc. One learned to appreciate the "small" things again. And we already began talking about the work we still had ahead of us - the storage of materials, reports to be written, photos to collect, QSLs to prepare, etc, etc. But we also had a few hours to relax and take a last swim in the Indian Ocean next door. We all had tanned (or burned) from the sun on Agalega. At a festive evening meal, Hans-Peter presented a quite remarkable personal crafted "QSL" to each crew member, as a gift and memory of our unforgettable expedition. Thanks, Hans-Peter, you always thought of every detail!

At 1100 the next day, we loaded the bus and headed toward the Mahé airport to fly back to Mauritius. We bid "Good bye" to the Seychelles with mixed emotions. It had been an unexpected pleasure to visit such a beautiful region of the world, but the detour here did reduce the overall effectiveness of our mission.

Back on Mauritius we had a superb last evening. During a wonderful meal, Karl, Hans-Peter, and Nasir held a review of our past days. We presented some gifts to Nasir – without his diplomatic and profound support, our expedition would have not been possible. There is no possible way that anyone can overestimate his valuable services. We even gave him our mascot, the toy fox, 3B6 Radio Fox - which accompanied us and watched over us in the office tent during the DXpedition. In the best comradeship, with music and singing - also accompanied by one of our local guests who had helped us during the 3B7 DXpedition - and with happy dancing, we spent the last evening before flying home. The phrase came to my mind - **"It is wonderful being abroad, as long as there is a homeland, where somebody is waiting for me."**

The next morning, we met at 0700 for breakfast, then finished packing our suitcases, and loaded the bus for the last time. It was strangely quiet in the bus while crossing over Mauritius Island (again), and many thoughts were in everyone's minds - a lot had happened between our first, and now our 4<sup>th</sup> and last, crossing between Hotel Saint George in Port Louis, and Mauritius International Airport at Plaisance.

The time passed quickly during the approximately 11 hours flight and landing in Zürich. We were barely at the gate when we were welcomed by Kurt-HB9MX, the President of the Swiss DX Foundation, at the head of the exit ramp immediately as we left the airplane. It turns out that HB9JNJ is a security policeman at Zürich Airport, and he not only allowed Kurt to come and greet us as we left the plane, but he personally escorted our group directly to the luggage delivery area, bypassing the passport control - real VIP treatment! We suspect maybe he was so nice to us, because he was in our 3B6RF log one time! Needless to say, we were all happy to be back, all healthy and in good condition, and to be able to take our family members and friends into our arms.

One last photo with the Agalega "3B6RF Expedition" banner was made, and the time came to say "Good bye." People who had not known each other one month ago, had become firm friends, perhaps for life. We hope to be able to welcome each other soon again, and - who knows - perhaps to be together again someday on an expedition to some "HUHU" Island - but that is another story! The reception group and crew became smaller and smaller as people drifted away for the last leg of their personal journeys home - and finally only myself, Steve-N3SL, and Ken-HB9DOT, were left, and we headed for home too.

### **The common target...**

Our team consisted of Hams from 9 different nations with different mentalities. When planning this expedition, we also ascertained that to operate with so many different people

together on a remote island over a long time, under not really favorable conditions, would be an experiment in life, not just Ham Radio. Remember - the entire crew was together for the first time, only when we arrived on Mauritius Island. The many foreigners had not been involved in any of the preliminary preparations and planning for the DXpedition

Today we look back and reflect with satisfaction that we were a good and genuine team. During the entire expedition and trip, we never exchanged harsh words, and we were always able to solve the many, many problems that came up.

We believe that despite all the unfortunate circumstances, delays, and difficulties that arose, we attained our goals, and we are content, satisfied, and happy with our efforts and accomplishments..

## Thanks...

The success of this expedition is a result of the help of many persons and organizations noted in the following. We would like to extend the heart-felt thanks from all our crew members to:

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Fred-HB9AAQ