Report – expeditions to Niue and South Cook Islands

Expedition objectives:

- To conduct as many calls as possible with unique call signs;

- To pay special attention to European stations;

- To take advantage of good propagation on the higher HF bands;

Introduction

The idea of an expedition to Niue was first conceived in late 2022. However, after seeing the length of the flights and the time needed for broadcasting, we decided to extend our stay from Niue to include the South Cook Islands.

We applied for licenses for Niue requesting the following signs: E6AF, for Janusz SP6FIH, and E6CI, for Leszek SP6CIK. We received approval, and the licences were to be issued upon our arrival in Niue, after payment of the appropriate fees. Unfortunately, the signs we requested were not confirmed.

We also applied for licenses for South Cook (E51CIK for SP6CIK and E51WEG for SP9FIH). It was confirmed very quickly that we would receive the requested signs, and that the licenses would be issued upon arrival at Rarotonga.

After ordering flights and cabins, we proceeded to prepare the equipment. The total weight of our luggage was more than 79 kg: in addition to radios, amplifiers and antennas, our gear included more than 100 meters of coaxial cables, band filters, an antenna analyzer and laptops for logging communications.

We left Opole on March 21 at 7:00 a.m. for the airport in Warsaw, from where we flew to Dubai, and then, after a several hour wait, to Auckland, New Zealand, where we waited for the week's only flight to Niue. Here the situation was a little tense, as we did not receive approval to fly until about two hours before the plane took off, due to Niue Covid-19 regulations.

Niue

Upon arrival in Niue on Friday, March 24 (local time), we immediately went to get our licenses' unfortunately, however, the licenses (with the signs E6AF and E6CI) were not issued until Monday. In addition, upon arrival, we had to perform a self-test for Covid-19, and then report to the hospital a few days later for a PCR test.

While waiting, we began installing antennas. Janusz E6AF mounted the antennas: VDA at 15m and 10m and GP at 20m.

Janusz E6AF (SP9FIH) with the 15m and 10m VDA antenna

Leszek E6CI installed the 17m and 12m square and 40m and 30m GP antennas.

E6CI (SP6CIK)17m and 12m antenna.

On March 28, 2023, 01:27 UTC, we began work on the bands later than planned. Janusz E6AF worked on 20, 15 and 10m on SSB, FT8 and RTTY. He used an Icom 7300 transceiver with an Expert 1.3K-FA amplifier.

Leszek E6CI (SP6CIK) at the operator position

Leszek E6CI worked on 40, 30, 17 and 12m with CW and FT8 emissions. He used an Elecraft K3 TRX with an Expert 1.3 - FA amplifier.

The bands from 17 to 10m worked best. Conditions for working with Europe (e.g., DL, G and SP) were difficult, as the signals ran through the vicinity of the North Pole. We tried to work as much as possible and we think ham radio operators from all over the world heard us often on the bands.

	Band [m]							Together
	40	30	20	17	15	12	10	
CW	133	138		1541		1522		**3334**
FT8	2571	2213	2479	5092	6848	5533	5781	**30517**
RTTY					38			**38**
SSB				66	4494	193	3086	**7839**
Total	**2704**	**2351**	**2479**	**6699**	**11380**	**7248**	**8867**	**41728**

Table 1: Summary of contacts made on individual bands and modes

A short summary of the operations on Niue, from March 28, 2023 01:27 UTC to April 9, 2023 23:45 UTC: 13 days (310 hours total)

Total QSOs	Uniques	Uniques %	QSOs/day	QSOs/hour
41728	15458	37.0%	3231	134,61

Table 2: Total number of QSOs, uniques, and average numbers of QSOs per day and hour.

With The Fed. Rep. of Germany conducted 2120 contacts with 804 different stations.

South Cook

After completing operations in Niue, we returned to New Zealand for one day, and then flew on to Rarotonga Island in the South Cook Islands. We arrived in Rarotonga on May 12 (local time) and, as in Niue, immediately went to get our licenses. Unfortunately, the person issuing the licenses was absent and we received the licenses a day later with the requested E51CIK and E51WEG marks.

After installing the antennas, we were able to start working on the bands. Janusz E51WAG used the following antennas: VDA at 17m and 12m and GP at 40m and 30m. Leszek E51CIK used VDA at 15m and 20m and the GP at 20m. The radio equipment and amplifiers were identical to those on Niue.

Leszek E51CIK (SP6CIK) and Janusz E6AF (SP9FIH) at the VDA antenna at 17m and 12m.

Janusz E51WEG (SP9FIH) at the operator position. E51CIK took the photo.

Propagation conditions were marginally worse than Niue until March 24, when there was practically a propagation collapse. Operators conducted several hundred QSOs per day. It was virtually impossible to conduct communications with Europe.

	Band [m]							Together
	40	30	20	17	15	12	10	
CW			1978		2545		1118	**5641**
FT8	926	2865	4900	5498	6434	5868	4454	**30945**
SSB				2949	275	2497	52	**5773**
Total	**926**	**2865**	**6878**	**8447**	**9254**	**8365**	**5624**	**42359**

Table 3: Summary of contacts made on individual bands and modes

A brief summary of the operation on Niue, which lasted from April 13, 2023 04:53 UTC to April 27, 2023 23:59: 15 days (355 hours total).

Total QSOs	Uniques	Uniques %	QSOs/day	QSOs/hour
42359	15402	36.4%	2864	119

Table 4: Total number of QSOs, uniques, and average numbers of QSOs per day and hour.

With the Fed. Rep. of Germany conducted 2467 contacts with 884 different stations.

Summary

The expeditions to Niue and South Cook resulted in a total of 84,087 QSOs during 28 days of work on the amateur bands. However, as the openings were so short, despite there being a lot of interest in European station communications, not all stations were able to conduct communications on the bands they needed.

Like many other expeditions, we urge you not to repeat communications with the same mode on the same band: this takes time away from other stations hunting for ATNO. We also urge you not to call out while responding to other stations: this extends the communication time, which can otherwise be used for a new station.

Leszek SP6CIK, Janusz SP9FIH