

## J5T + J5HKT – One more time, but, ...

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So, we went back a second time to Guinea Bissau. It was a natural choice, given the severe travel restrictions posed by the COVID pandemic, the fact that this country offers a relatively safe destination and the circumstance that we still had a valid license (expiring at the end of 2021). At the beginning of June, after a short meeting of the Team, a decision to this end was taken.

It was the first operation without our dear friend Marcello IK2DIA, whom we lost 2020 December. He was the natural assistant to Silvano I2YSB during the preparatory phase, when long and meticulous checks and tests of each component of our equipment was mandatory. He'll be greatly missed.

Having already operated from Bubaque island in 2017 did not spare us bureaucratic burdens. We checked the sanitary situation, decided about precautions to take and on the day before leaving we were all tested for COVID. We were ready and eager to go, looking forward to an easy replay of our past experience. It turned out that it was not going to be a downhill ride.



Let us first describe our ups and downs, leaving technical aspects and results for later.

The Team, composed of: Silvano I2YSB, Stefano IK2HKT, Angelo IK2CKR, Franco I1FQH, Tony I2PJA and Vinicio IK2CIO (Mac JA3USA, Gino IK2RZP and Alfeo I1HJT could not join us this time) left Malpensa airport on October 8, 2021. Our equipment, 15 crates plus personal luggage, added up to a total of about 400kg. After a stopover at Casablanca, Morocco, we flew to Bissau where we landed at 01:30 AM on the following day. After customs checks and 2h 30' by fast motorboat we arrived in Bubaque at dawn. Mr Gilles, an old acquaintance from the previous expedition and manager of the Kasa Africana resort, welcomed us at the arrival.

There, the first of many surprises was awaiting us. We had been assured about the power being available at the resort 24/7 (the island has no electricity), but Murphy had intervened the day before causing a severe fault of the of the main 50kW generator. The electrician could not come for the following three days and the only way out was using the spare generator, inadequate for the combined load of the hotel plus our radio equipment. Unnecessary services, including air conditioning, were switched off, but this allowed for only 50% of the needed power. What a great start!



In a tense mood we started setting up antennas, laying down coax cables (special thanks to Messi & Paoloni for providing first-class cables) and the station radios.

During summer Stefano IK2HKT had spent long days setting up and checking stations and computers, organizing an intranet connection between all PCs as well as the correct operation of the online log. He was unaware, however, that a “heavy” Windows 10 update was lurking, ready to create havoc in the whole setup after packing up, just a few days before departure. On booting, all PCs began a long process of downloading and update of the Operating System, which blocked all computers for several hours. At the end of the update, the intranet did not work anymore, as was happening for many Windows users around the world. We were in a panic: Stefano was lost and Vinicio, despite a ten-year experience in the field, was lost too.

Constancy and determination finally paid off, and we managed to revive - in between crashes - the intranet network running FT8 (N1MM was flatly inoperative). With the existing powerline restrictions, we started our activity with all four stations on FT8 and no more than 200W output per station. At the same time, we were completing the antenna setup, with 2 Spiderbeams for 10 to 20 m, 1 Yagi for 10 to 20 m, 2 verticals 40 and 80 m, one vertical for 160 m, a delta loop for 30 m, a Yagi for 6 and a short multiband vertical as a backup. In addition, we had a receiving antenna, a Diamond loop for the lower bands.





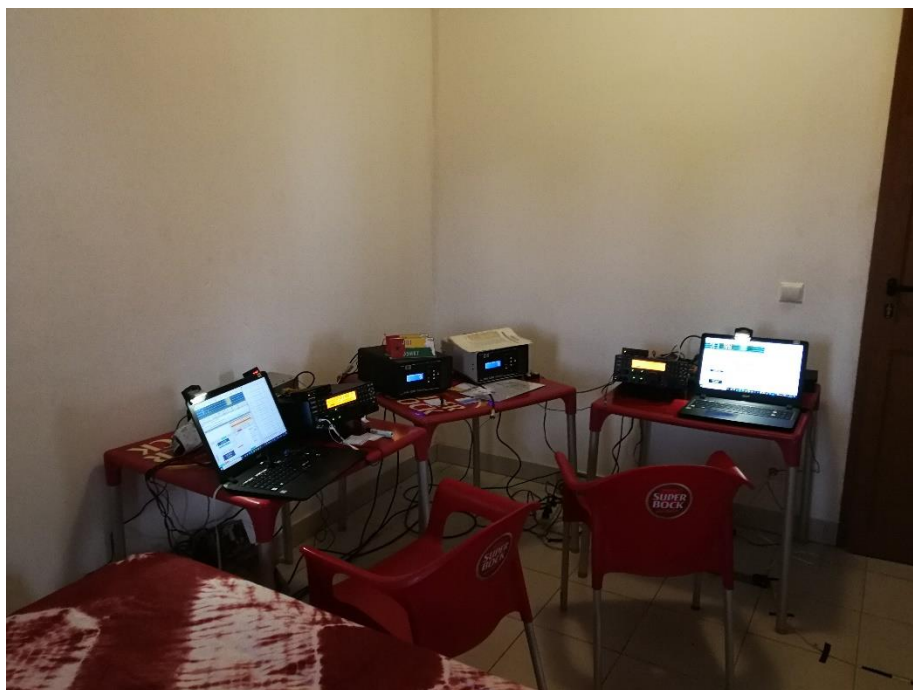
After 3 days of depression, the electrician finally showed up and through several hours of hard work we could finally get back on the air in full glory. In the same period Stefano and Vinicio worked out the Windows 10 issue, even though repeated crashes affected for days the online log. All in all, the system refresh times were as expected (once per minute for CW, SSB and RTTY, and once in 7 minutes for FT8).



As expected, further drawbacks popped up. On the very first CW QSO on 160m, the amplifier quit with a loud bang. Luckily enough, the problem was confined to the filters bank, so we transferred the injured linear to the SSB station, which would never operate on this band. Swapping amplifiers with the CW station put everything back in working order. This issue was hardly over, and something else – inexplicably – happened. One of the four K3s decided to supply no more than 10W (the 100W finals were out). We inspected the radio, but we could not find the cause of the problem. As a consequence, we were forced to use the station at half power because of the insufficient drive, with the amplifier output topping at 250W for the entire expedition. Not a big issue on the higher bands, but a serious hindrance on the lower bands during the night. We ended up using this station on FT8, a mode for which low-power QSOs are the norm.

What else could happen? No sweat, electronics ready to break abounded and the next piece of equipment was a 5 GHz Access Point, used to link the CW station to the others. It could have been a voltage spike or RF leak, the Access Point quit and no reset helped, but we had a spare one and presto! the system was back on the air. Score one more!

Five nights later, in the peak of a 40m FT8 and 160m CW pileup, everything went suddenly dead, with the SWR soaring to the sky. We immediately thought: *somebody is stealing our cables!* Not exactly: a diligent farmer had squeezed and flattened them under his cart, as evidenced by marks and notches on the same cables made by its wheels. Once more, we could replace the cables by spares: just imagine the excitement in the deep of the night and in total darkness.



Some problems arose from the weather, which offered heat, humidity and frequent thunderstorms in various combinations. The CW station was favored because of the air-conditioned room, whereas the SSB station had no such facility and during the day reached 38°C, hardly a bearable climate. With the door open, myriads of insects were our companions. We are used to Africa, but in the current health situation we did not dare running the risk of stings. Franco I1FQH offered to use his own room for the SSB station. In the end, because of the limited space available, I2PJA accepted to sleep for a few days with 2 linears, 2 radios and 4 PCs always on in his room (but at least with air conditioning).

Before proceeding to the operations on various bands and modes, we should mention the last of this almost inexhaustible series of problems: we suffered from noise, but rather than in the night, it was during the day! Whoever has been following us in our expeditions knows that we were always plagued in the night by the noise generated by the ever-present raging LED lights. This time it was the contrary. With lighting lamps on, everything was quiet and we could hear also the weakest of signals. During the day, on the contrary, the noise could peak up to S9. The solution seemed simple: let's keep the lamps on! Well, not so simple: the LED lamps were out of our control, and even out of control by the hotel personnel, since they were solar-powered units of public property. Most likely the noise was generated by the inverters which charged the batteries during the day (and were off during the night). As a result, we made intensive use of the K3 Noise Blanker, rather effective but not a real solution. Each day, before dinner, Tony I2PJA and Stefano IK2HKT showed up with rolling eyes from the continuous “gggrrrrr” growling noise in their ears throughout the whole day.



In all this, the IDT team spirit never failed, and the result of our hard work is given below:

BAND	QSOs J5T	QSOs J5HKT	TOTAL
6		285	285
10	5492	1917	7409
12	5316	2721	8037
15	9384	3354	12738
17	7494	3696	11190
20	7335	3985	11320
30	1819	5570	7389
40	2608	5033	7641
80	820	3132	3952
160	260	1214	1474
<b>TOTAL</b>	<b>40530</b>	<b>30907</b>	<b>71437</b>

Given the situation, we feel very satisfied when considering that in 2017 the total score amounted to 63636 contacts. Keep in mind that the QSO total for FT8 does not include dupes. All the better, since we have less than 20 dupes over 30907 contacts. This should be stressed, since WSJT-x writes up to 4 times the same call in the log by repeating the RR73 string, following repeated reports by the correspondent. This is very relevant in the QSO statistics (we know of DX activities having logged the same station up to 10 times in FT8 on the same band ... an easy way to achieve record numbers!).



The statistics show that the number of unique calls is very high, when compared to other recent Dxpeditons. We have 24465 unique calls for our two calls combined; when merged, they provide a grand total of 20154 uniques: a fraction of 28.2% of the grand total, quite an achievement. The summary table is as follows:

#### ITALY

QSO TOTAL.....10205  
 UNIQUES FT8..... 841  
 UNIQUES OTHER MODES..... 1957



## USA

QSO TOTAL.....15226  
UNIQUES FT8..... 2113  
UNIQUES OTHER MODES..... 4054

## JAPAN

QSO TOTAL.....5986  
UNIQUES FT8.....1323  
UNIQUES OTHER MODES..... 916

The above numbers seem to indicate that about one out of two stations operates on FT8 only, with the exception of Jas, for which this rises to two out of three. Mac JA3USA interpreted this difference already at the time of our previous expedition as a consequence of difficulties of Japanese OMs with English, low-power radios and a widespread neglect of/inability with CW.

This last experience strengthened our belief that often “empty bands” do not arise from lack of active hams or propagation effects, but mostly from a reduced propensity to operate on CW and SSB. To support this view, we hardly had “dead times” on FT8, whereas CQ calls without replies were quite frequent on other modes.



On the subject of Japanese stations, this time we had a very special help: JA3USA himself! Unable to join us due to COVID restrictions, we enrolled him as Far East pilot. Given his experience and performing station, we could check LP and SP propagation at dawn and dusk by a simple WhatsApp message (at times we dragged him out of bed). If we could not establish a contact with his monobanders and full legal limit, we better had to switch to other bands. By the same token we discovered in this way, on several occasions, very interesting openings, mostly via LP. Thank you Mac, even though our preference was to have you with us!

Propagation wise, we confirm that the solar activity is now definitely improving. We did not have yet long openings with exceptional signals on the high bands but, in comparison with previous expeditions, both 10 and 12m were reasonably alive. Not so on 6m, where the first day looked very promising, but later the numbers became marginal.

In this Dxpedition the lion's share was taken by the 15m band, which supports the considerations above. Having reached almost 13,000 QSOs on this band, which lies around the midpoint of our HF spectrum, looks very promising. Clearly, both 17m and 20m were also very good and productive.

The difference between J5T and J5HKT on the low bands is almost pitiless, but one must take into consideration the daily thunderstorm activity which affected our operations on the low bands. QRN often reached S9+20db, conditions in which only FT8 could be used. Also, we remind the reader that our 2017 Expedition was dedicated to the lower bands; this had probably the effect to motivate many stations to operate now on the higher bands, leaving FT8 operations just for obtaining a New One on this mode. As far as we are concerned, we prefer by a large operating CW and SSB, much more rewarding with direct personal contact with the correspondent and a more gratifying experience ham wise. However, we have to serve a vast community with diverse ham interests.



Before departure, we had received a vast number of requests and urging in support of FT8. We tried to operate in a balanced way, except for the very first days when circumstances were out of our control. It is useless to operate on FT8 when 10m are open with S9 signals; on the contrary it is useless to spend hours on 160m CW when, on FT8, many more QSOs become possible.

We also tried briefly RTTY but, besides a handful of unshakeable operators fond of this mode, all other calls were already worked on FT8. We believe that this mode will disappear from Dxpeditons or reduce to a minimum, given that for DXCC it is equivalent to FT8 (digital mode).

A final consideration about handling of pileups: we often operated simplex on the higher bands, which produced important QSO rates when compared with split mode. Obviously, the operator must choose the right moment for changing style, taking propagation into account. Most OM's behaved surprisingly well, following our instructions; Stefano IK2HKT, notoriously sharp in this respect, was forced to scold the correspondents only few times. Very rewarding for us.

Our YouTube channel offers many videos recorded during the Dxpedition at the address [https://www.youtube.com/channel/UCMrjtqyWuM4mu0-6T\\_bLjZg/playlists](https://www.youtube.com/channel/UCMrjtqyWuM4mu0-6T_bLjZg/playlists)



Our next Expedition will be another “second time” undertaking. We shall go back to the Central African Republic and we are already receiving requests for FT8. We plan for the same strategy as from Guinea-Bissau, trying to serve as many as possible including those requesting 60m (unavailable in J5) and satellite (QO100), hardware and logistics permitting. It will then be a full-immersion expedition, which should take place in the first half of 2022.

Finally, a last accident: on arrival, Angelo’s (IK2CKR) son showed up with a car plus a luggage cart for all our equipment and baggage. When ready to leave with loading finished, the starter of the car quit, so that the engine had to be ignited by push-start.

We had left the island on Friday afternoon and we got finally home in the evening of the following Sunday. Tired, but happy for having resumed our African wandering, with sadness for missing our friend Marcello, having run some risks, and we all said to ourselves “Fine this time, let’s go ahead for the next”. We are already preparing the antenna for 60m.

See you soon from TL8AA + TL8ZZ.

The Italian Dxpedition Team



**J5T**  
CW - SSB - RTTY

**J5HKT**  
FT8

**Guinea Bissau**

October 2021

**Bubaque island**

Iota AF-020  
CQ Zone: 35  
ITU: 46

**D.A.E.**

Operation: October 9, 2021 16:31 UTC - October 22, 2021 11:37 UTC, 13 days (307 hours total)  
 Comments: J5T (CW-SSB-RTTY) - J5HKT (FT8). Second trip of this team to Bubaque Island AF-020 after 2017.  
 Operators: I1FQH I2PJA I2YSB (Team Leader) IK2CIO IK2CKR IK2HKT

QSOs:	Total QSOs	Uniques	Uniques %	QSOs/day	QSOs/hour
	71,437	20,154	28.2 %	5,583	233

per Band:	160m	80m	40m	30m	20m	17m	15m	12m	10m	6m
	1,474	3,952	7,641	7,389	11,320	11,190	12,738	8,037	7,409	285

per Mode:	CW	Phone	Digital
	21,149	18,944	31,344