



# 14 - 26 March 2017

<http://www.lral.lv/s21zed/index.html>

## Preparations

### 1. Acquiring the license

In the end of 2016 I received question from previous DXpedition EP2A members – what are the plans for next DXpedition?

At that time I already had some ideas on where to go next and one of those options was Bangladesh, Nr.56 in the most wanted DX list. After doing some research on how to acquire license, I submitted first request for license on 6th of January. Three weeks passed and there was no response so I called them by phone and it turned out that they never received my papers. We talked and I decided to visit them in person a week later to discuss and receive the license.

Together with xyl Zigrida we planned our trip and flew to Dhaka. For the possible QTH I had in mind to look for a place near Kuakata in the South of Bangladesh. It had to be outside the city to have less radio interference and more space for building antennas. I also wanted it to be close to the sea. The plan was to travel from Dhaka to Kuakata by a rented car, but after realizing the different traffic culture, we quickly changed our minds and used public transportation.

On the first evening of our travel we met with Syed S21ED and Anup S21TV in Dhaka. Syed offered to be our guide during our stay in Bangladesh. First thing next morning we visited the Bangladesh Telecommunication Regulatory Commission (BTRC) and met with the officials to discuss and hand in documents for license. I asked for callsign with one letter suffix, however all of them were taken. Also I got informed about special regulations that foreign operators can receive callsign only for 7 days and this



*First meeting – Me Yuris YL2GM, xYL Zigrida, Syed S21ED and Anup S21TV*

is the reason why we had to operate with two callsigns. You can get license for a longer time, but it has to be arranged through embassy and it takes much time. We scheduled our next meeting after five days to find out what callsigns could be assigned.

Next morning we sailed with a small ferry from Dhaka to Barisal and from there drove by bus to Kuakata - the city called Kingdom of the Oceans Daughter. We visited our planned QTH – hotel with small cottages and big field next to them for antennas and the sea just couple hundred meters away.



*Meeting with BTRC representatives*



Bangladesh has a lot of natural historic beauties and one of them is The Bay of Bengal which is situated in the south of Bangladesh with many beautiful sea beaches, e.g. Cox's Bazar sea beach, Kuakata sea beach, Patenga Sea beach and many more. You will be entertained to see the white sandy beaches and blue sky, the sunrise and sunset looks unbelievable. The next place must to visit in Bangladesh is Sundarbans forest – the largest mangrove forest with one of the biggest wildlife in the World.

After four days travel we returned to capital city Dhaka and right away visited BTRC, where I received vocal confirmation about two callsigns S21GM and S21KW and that the written form (license) will be issued only 2 days before operation. We also discussed the issues regarding equipment.

Just two weeks after our first publication about DXpedition I received email from BTRC, stating that we won't be able to use previously desired callsigns because foreign amateurs can only get callsigns with three letter suffixes starting with letter Z.

## 2. The team

The most important and complicated task for organizing expeditions is completing the team. This time we had some new members: Kaspars YL3AIW, Ingus YL2TW and Igor UT5UJO. Unfortunately, because of health issues we had to go without Larry YL3CW and Andrey UX1UF could not join us because of work.



*From left side: Oleg US7UX, Igor UT5UJO, Dimitry UT7UJ, Sasha UT7UV, Anup S21TV, Syed S21ED, Yuris YL2GM, Ingus YL2TW and Kaspars YL3AIW.*

## 3. Equipment and antennas

Three weeks before DXpedition I flew to Kiev and met with Ukrainian team members. We discussed expedition equipment, antennas and other issues.

I also met with local hams, where I had the opportunity to talk about our previous DXpedition EP2A and our next project S21. After my presentation RigExpert founder Serge UX1UA gave me their newest antenna analyzer „AA-55 ZOOM” as a gift and support to



our DXpeditions. This new analyzer is a perfect tool for antenna tuning and it helped us significantly.

In addition to this trip I also brought two baggage's of antenna equipment to manage logistics. However, we still had some problems with baggage limitations later, in flight from Kiev to Dhaka Turkish Airlines permitted only 20kg baggage per person and for every additional kg the cost was 21\$. I turned to Turkish Airlines affiliate in Riga with baggage sponsorship request for DXpedition but without any success, because the flight is from Kiev not Riga, and after looking for affiliate in Ukraine, it turned out that there is none. So I had to make a decision to limit team's personal baggage to minimum.

For this expedition we had two separate position in our QTH and we used IC-7300 and that was a great choice, they operated very well especially in RTTY and SSB modes. On low bands and CW we preferred Elecraft K3. As power amplifiers we used SPE Expert 1,3k-FA that is the best option for expeditions. For receiving we used 250m Beverage that gave good results on 80 and 160m.

#### 4. Travel to Bangladesh (QTH)

In early in the morning on March 13<sup>th</sup> we landed in Dhaka airport. Nobody waited for us there and we could not get visas because we didn't have hotel reservations on hands. After 4 hours of waiting Syed (S21ED) arrived straight from the BTRC with a permission letter and we finally could receive our visas. Further formalities went down smooth without any setbacks.

Then we went to Syed's S21ED brothers' apartment where we waited for bus to Kuakata that was scheduled for 18:30 that day. The city was in peak hour and we arrived to the bus station with more than 1-hour delay. Anyway, everything was solved, we contacted transportation company and they waited for us. Then in a very comfortable ride we



drove all night for ~400km and we had to take 2 ferry rafts to cross water. All team had a good night sleep during the night trip and we didn't see much around. Next morning around 09:00 we arrived in Kuakata.

In Kuakata's bus station we were warmly welcomed by my friends and acquaintances I met in Bangladesh during my previous visit in January 2017. Also 7 bicycle carts waited us there, we loaded our equipment and boarded them to head for QTH – Cinderella resort. After 6km drive we arrived at the resort and we were welcomed with nice breakfast. After meal and morning coffee we started setting up antennas and made first radio check.

## **DXpedition diary**

Day 1: First installed antenna was Spiderbeam, followed by 4SQ on 40m and 30m. First QSO was made by Dmitry UT7UJ on 40m. During the rest of the day we worked on 160/80m antenna. The field where we built it was soaking wet after rainfalls and full of puddles with mud so that was quite challenging. We also made a mistake that we set up the 160/80m antenna in a place where a local rancher pastures his cows and goats and they liked to walk over the radials.



*Dimitry UT7UJ*

Day 2: The 2<sup>nd</sup> station was planned to be set up during the first night, however, our plans had to be changed because the land owner had flown to Canada and he didn't have left any note to those who were there. Anyway, next morning we started with common breakfast and after that I and Syed S21ED went to look for another place for 2<sup>nd</sup> position. We visited multiple hotels and houses but most of them had problems with fields for antennas and power. After finding suitable place I, Ingus YL2TW and Sasha UT7UV took all equipment and went to

build 2<sup>nd</sup> position. In the evening we had set up Spiderbeam and RA6LBS vertical 160-30m so the 2<sup>nd</sup> position could start to operate. First communications were made on SSB and RTTY.

Right after that we received bad news – 160/80m antenna in the 1<sup>st</sup> position had disappeared. It turned out that one of the rancher's cows had run into the cables and teared down the antenna to the ground. It was already dark so we decided to repair and place it closer to our position in the morning. During the following night we operated without 160/80m.

Day 3-4: In the morning we carried out our plans regarding 160/80 vertical and we also put up rope perimeter in order to limit any movement around the antennas.

Later in the evening it started to rain and the intensity got stronger and stronger until it was so intense that we had some minor flood in our house. Wind gusts were pretty intense also and during the night one of our Spiderbeams binding wires ripped apart and the pole bended. We didn't stop operating because we had extra emergency three-bander 14/21/28. In the morning rain stopped and in 2 hours we managed to fix the Spiderbeam.



2<sup>nd</sup> position operated on SSB and RTTY. We did what we could and what was within our influence regarding low bands. We put a lot of intention for NA, but the propagation was bad. Every morning and evening we were on 14 Mc for NA.

Last day: In the morning Dmitry/UT7UJ managed to work W8LRL on top-band, which was our only QSO with North America on 160m. Long distance QSOs on 160 and 80m bands would not be possible without beverage antennas.

After that we took down antennas, packed and had farewell dinner in Cinderella hotel, which was our home for the last 2 weeks.



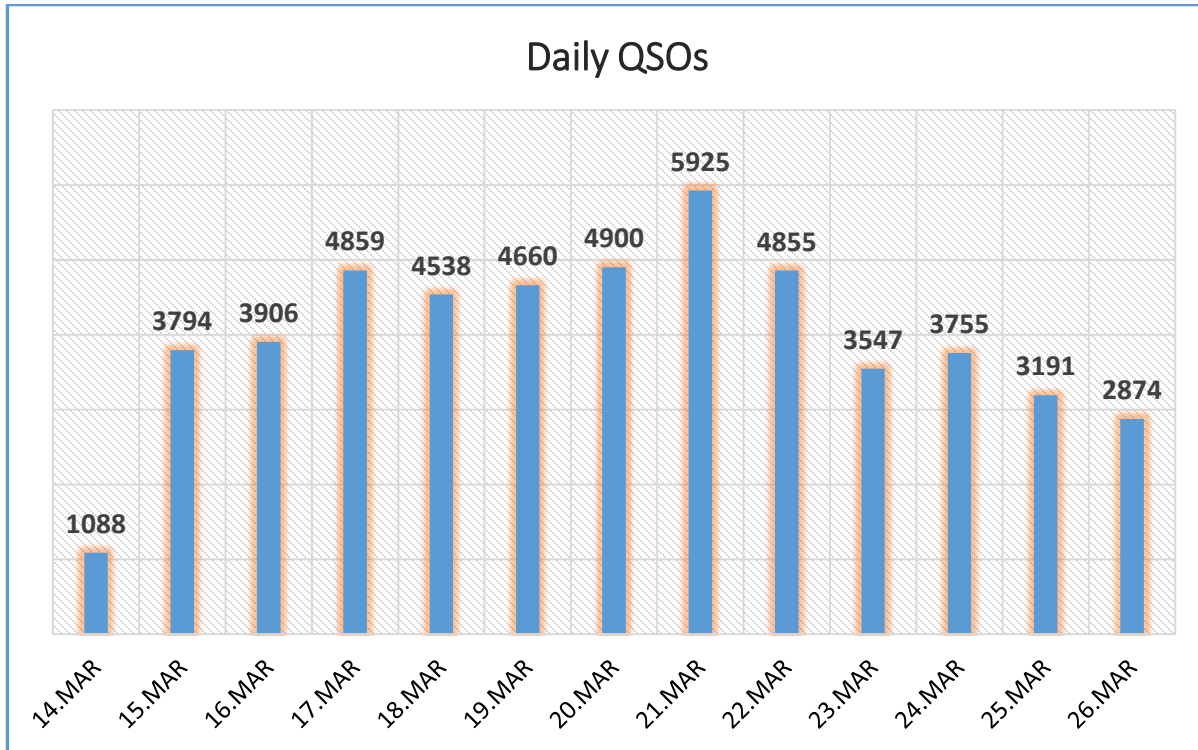
*Kaspars YL3AIW*

# Summary

## 1. Statistics

Most QSOs during this expedition (more than 10 000) were made by Kaspars YL3AIW so this time the “CW machine” title went to him.

Total DXpedition QSOs – 51 892.



Band/Mode breakdown S21ZED

Band	PH	CW	RTTY	Total	Total %
160	0	322	0	322	0.015
80	0	1393	0	1393	0.063
40	468	4100	0	4568	0.208
30	0	2768	106	2874	0.131
20	886	2146	122	3154	0.144
17	776	2891	0	3667	0.167
15	955	2794	543	4292	0.196
12	284	858	0	1142	0.052
10	251	280	0	531	0.024
<b>Totals</b>	<b>3620</b>	<b>17552</b>	<b>771</b>	<b>21943</b>	

Band/Mode breakdown S21ZEE

Band	PH	CW	RTTY	Total	Total %
160	0	582	0	582	0.019
80	0	2006	0	2006	0.067
40	354	3968	670	4992	0.166
30	0	2776	152	2928	0.078
20	1245	3334	1246	5825	0.194
17	1362	3878	837	6077	0.203
15	1555	3086	925	5566	0.186
12	425	794	1	1220	0.041
10	204	469	119	792	0.026
<b>Totals</b>	<b>5145</b>	<b>20893</b>	<b>3950</b>	<b>29988</b>	

**DXCC by Band/Mode breakdown S21ZED**

Band	PH	CW	RTTY	Total
160	0	44	0	44
80	0	74	0	74
40	53	97	0	98
30	0	90	19	90
20	53	66	26	74
17	55	77	0	80
15	60	74	36	81
12	27	38	0	41
10	11	12	0	15
<b>Totals</b>	<b>87</b>	<b>114</b>	<b>40</b>	<b>119</b>

**DXCC by Band/Mode breakdown S21ZEE**

Band	PH	CW	RTTY	Total
160	0	44	0	44
80	0	74	0	74
40	45	91	54	92
30	0	79	28	81
20	72	90	68	100
17	63	91	59	95
15	68	85	51	92
12	13	34	1	37
10	10	16	6	17
<b>Totals</b>	<b>90</b>	<b>118</b>	<b>74</b>	<b>128</b>

**Continent by Mode S21ZED**

Band	PH	CW	RTTY	Total	Total %
AF	19	50	0	69	0.3%
AN	0	0	0	0	0.0%
AS	1900	6608	451	8959	40.8%
EU	1622	9795	314	11731	53.5%
NA	15	856	0	871	4.0%
OC	50	157	6	213	1.0%
SA	14	86	0	100	0.5%
<b>Totals</b>	<b>3620</b>	<b>17552</b>	<b>771</b>	<b>21943</b>	

**Continent by Mode S21ZEE**

Band	PH	CW	RTTY	Total	Total %
AF	16	91	11	118	0.4%
AN	0	2	0	2	0.0%
AS	2117	5968	1465	9550	31.8%
EU	2846	13565	2281	18692	62.3%
NA	91	966	162	1219	4.1%
OC	65	150	19	234	0.8%
SA	10	151	12	173	0.6%
<b>Totals</b>	<b>5145</b>	<b>20893</b>	<b>3950</b>	<b>29988</b>	

**Continent by Band S21ZED**

Band	160	80	40	30	20	17	15	12	10	Total	Total %
AF	1	5	25	13	11	4	8	2	0	69	0.3%
AN	0	0	0	0	0	0	0	0	0	0	0.0%
AS	80	470	1223	1052	1536	1678	1517	888	515	8959	40.8%
EU	240	872	2991	1461	1255	1940	2731	237	4	11731	53.5%
NA	0	30	230	300	307	3	1	0	0	871	4.0%
OC	1	6	32	31	41	41	34	15	12	213	1.0%
SA	0	10	67	17	4	1	1	0	0	100	0.5%
<b>Totals</b>	<b>322</b>	<b>1393</b>	<b>4568</b>	<b>2874</b>	<b>3154</b>	<b>3667</b>	<b>4292</b>	<b>1142</b>	<b>531</b>	<b>21943</b>	

**Continent by Band S21ZEE**

Band	160	80	40	30	20	17	15	12	10	Total	Total %
AF	3	8	19	12	38	21	15	2	0	118	0.4%
AN	0	0	0	1	0	1	0	0	0	2	0.0%
AS	154	526	1339	689	1303	1794	2048	103	684	9550	31.8%
EU	423	1383	3380	2067	3689	4053	3415	184	98	18692	62.3%
NA	1	60	145	119	727	160	7	0	0	1219	4.1%
OC	1	13	30	23	49	41	52	19	6	234	0.8%
SA	0	16	79	17	19	7	29	2	4	173	0.6%
<b>Totals</b>	<b>582</b>	<b>2006</b>	<b>4992</b>	<b>2928</b>	<b>5825</b>	<b>6077</b>	<b>5566</b>	<b>1220</b>	<b>792</b>	<b>29988</b>	



## 2. S21ZED/S21ZEE QSL cards



□ S21ZED □ S21ZEE



**QTH:**  
Kuakata  
Bangladesh  
**CQ Zone 22**  
**ITU Zone 41**  
**Loc. NL51bt**

Operators: YL2GM, YL2TW, YL3AIW, UT7UJ, US7UX, UT7UV, UT5UJO, S21ED, S21TV  
TNX QSL via YL2GN

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### 3. Lessons learned

We have to pay more attention to equipment preparation and tuning before the expedition in order to avoid interference between stations.

Also for this expedition I acquired used laptops for each station and we had some performance issues. For next expedition new computers is going to be priority.

We also need to take into account equipment transportation limitations and plan accordingly: firstly it's not always possible to take all bandpass filters with us because of their size; secondly coaxial cables RF240LTA are pretty heavy – 800m are approximately 36kg. Also radial wires for verticals – transformer wires  $d=0,7\text{mm}$  approximately 1km are significant in weight. I see two options here – seek for lighter equipment and/or different transportation options regarding their limitations.

And finally, the most important lesson I had to learn once more – not to publish any information about expedition prior it starts. Again we had some problems because of this. I will think more on this issue and how to do this in future, however I ask you to be understanding in case the information on next expedition will be published just on the starting day.



#### 4. Hams with Hearts program

S21ZED/S21ZEE team participated in INDEXA`s organized humanitarian aid program “Hams With Hearts”  
<http://indexa.org/hamswithaheart.html>

Through our website we invited radio amateurs to support this project and in total we raised 390 EUR (412 USD) for this event. Most generous supporter was INDEXA with 300 USD.

With the help of local HAM`s – Syed S21ED and Anup S21TV we bought exercise books, writing-materials and sports equipment for pupils in Kuakata and Dhaka.

Thanks to everyone who supported this project and helped to make happy more than 250 little hearts and 3 schools in Bangladesh.



*With pupils and teachers in Kuakata`s school*

## 5. Conclusion

DXpedition S21ZED/S21ZEE is completed. It was my second expedition I organized after EP2A in 2016. Propagation was worse and it was difficult to work with American stations.

Because of special Bangladesh state regulations we had to use two callsigns and other than that everything went down smooth, thanks to Syed S21ED and Anup S21TV. Without their help this would not be possible.

In our team we have real men ready for action and new adventures. I am willing to go with them to any place in the World. Thank you team! And thanks to team support who stayed at home!

Thanks to everyone who supported and followed us in our DXpedition journey to Bangladesh.

What will be our next DXpedition will show time, please be understanding that the news about next DXpedition may just appear on the day it starts to operate.

In addition, next year 2018 is Latvia`s 100 years anniversary and we will organize radio amateur event, more information about this event later.

All information and pictures from S21ZED/S21ZEE you can see on our webpage <http://www.lral.lv/s21zed/index.html>

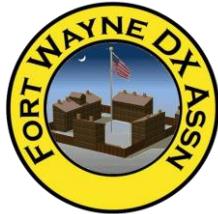
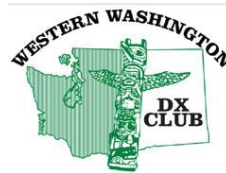
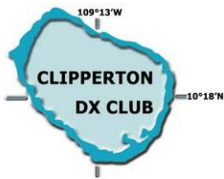
73, Yuris /YL2GM/

# Our supporters

## Clubs and associations



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## Equipment and corporates

**Madara '89**



## Individual supporters 50\$+

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\*Full list of supporters published on expedition website [http://www.lral.lv/s21zed/sup\\_ind.html](http://www.lral.lv/s21zed/sup_ind.html)