

## **LBS gear at ZF1A by Daniel Craig N6MJ**

The antenna set up at ZF1A is very simple for 10-40. There is 1 tribander (C3S), 1 tribander with a 40m add on (Pro67), and 1 log periodic antenna. All 3 of these antennas are on 3 separate towers, and are not at optimum heights to be “stacked” in the traditional sense. The log periodic is at 100ft, and is generally the best antenna mostly due to its height. Up until now, we were only able to use the log on one band at a time, and we had no options to split direction.

After CQWW CW 2017, it became apparent that this set up was not quite enough to compete on the world stage as some of my competition had improved their stations as well. It would be nice to put up a bunch of stacked mono band yagis, but this was not an option. So after consulting with K6AM, we decided the best way to proceed was to get some triplexers, quadplexers, stack matches and filters. This set up would allow us to use any of the of the antennas on any of the bands at the same time. This is a huge upgrade. We purchased all these items from LBS Low Band Systems. RA6LBS was able to work with us to customize exactly what we needed for our station.

The station now consists of the following:

1 Triplexer for the C3S

2 Quadplexers for the Pro 67 and the Log Periodic

4 3 position stack matches (40m currently only has 2 antennas, but if we ever expand to 3 it will be available)

1 band pass filter for each band, 10 – 15 – 20 – 40

We have now used this set up with great success in both the ARRL CW and ARRL SSB contest. From ZF, the East Coast is at about 10 degrees, and the West Coast is at about 310 degrees. In the past, we would have to split the difference and just have 1 antenna pointed at approximately 335 degrees. This worked ok as the antennas are pretty broad. However with this new set up, for the entire contest we were able to have 1 antenna directly at the east coast and 1 directly at the West coast. I felt much louder to both coasts and I feel that the score was better than it would have been without being able to split direction.

This set up will be even more beneficial in a DX contest. From ZF there are many hours when the bands are open to both EU and JA at the same time, and it will be great to be able to have the 3<sup>rd</sup> antenna pointed at either Africa, South America or South Pacific. These areas have always been off the back/side of the antennas and now I can beam directly at them. This should increase my multiplier total and allow me to produce a better score than I could have in the past. Also, during the EU runs for example, I will now be able to use the Log Periodic on 2 bands at once. This antenna is several DB louder than either of the other 2 antennas. After testing on both modes, there is zero interstation interference while using the Log or the Pro, and a small amount of hash when transmitting on the C3S on 20m. The C3 is right outside the shack and the antenna is usually pointed right at the shack so it's

not surprising there is some interference. The easy way around this is if I am using the C3 on 20, I can just use the Pro as the 2<sup>nd</sup> antenna on 15 or 10 and there is zero interference.

Obviously, if money was no object and space was unlimited, a station with stacks of mono band yagis will always be louder than a station like this. However when space is limited and monobanders are not an option this is a great alternative to bring your station to the next level.

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