This was our fifth time entering the M2 class in ARRL DX ssb. John, W6LD, and Chad ,WE9V, arrived the Monday before the contest to set up the station and Chris, N6WM, and Mike, K9NW, arrived the following Thursday and Friday, respectively. We had a strong team with 3 of the 4 members having participated in prior winning M2 efforts from the station.

The station set-up was: 1) a K4/KPA1500 on the left side of the main operating table connected to the main transmit antennas through the Six-Pak antenna switches for Run 1: 2) a K3/P3/Alpha 91b on the back operating table connected to the main transmit antennas through the Six-Pak antenna switches for Run 2; and 3) a K3/P3/Alpha 91b on the right side of the main operating table connected to tri-bander (old Cushcraft A3S) temporarily set up at 30' height 600' away in the Cunucu and a 40/80 meter fan a dipole temporarily set up 400' away in the Cunucu for the In-Band S&P station (with switching between the tri-bander and fan dipole via a remote Ameritron switch located at the base of the fan dipole). The hardware lock-out between Run 1 and the In-Band S&P station was an EA4TX box with back up from the DXLog software lock-out.

We were excited about this set-up as it was our first time running high power with 10 through 80 meters full multiplex In-Band S&P capability. It was also our first time with the 400' of ½" Heliax to the remote antennas in place to reduce losses.

The In-Band station performed well; however, we find that in-band capability is less of a differentiator in phone contests than in cw. When we used this set-up in the low power M-S category in CQ WW cw last Fall, it was more productive, but, in that instance, we the challenge was our weak S&P signal as a result of low power and high losses over 650' of old RG8U type coax. We look forward to using this set up again in a future HP cw contest, perhaps WPX cw in May.

In our prior M2 ARRL DX ssb efforts, we've averaged just shy of 13K Qs (excluding the year when 10 meters only opened briefly on the second day yielding 550 Qs as contrasted with the 3000+ Qs typical for that band in years of better propagation). We ended up this year almost 15% below that average. We attribute the shortfall primarily to high noise levels.

Monitoring band conditions before the contest, we noted unusually high noise levels which peaked in the direction of NAmerica. We optimistically hoped they would subside for the contest but they did not and high noise levels plagued us throughout the contest. We knew we were in trouble with we found that the noise was 10db over 9 on 15 meters at the start of the contest and we felt that nevertheless one of the stations had to start there. The result was a 200 Q first hour as contrasted with 330-360 Qs in the first hour on 15 in prior efforts.

Five hours into the contest, we were already almost 500 Qs behind our pace in prior contests. We ended up with the noise blankers engaged throughout the weekend (which is always bad because it is a trade-off between noise suppression and distortion) and, while the noise level with the noise blankers engaged was generally not as bad as 15 meters at the outset, it was almost always at least S5-6 on the high bands. Our apologies to all the stations who had to provide us repeats or who we lost under the S5-6 noise threshold and were unable to complete the contact. The noise was very fatiguing and consistently chipped away at our rates hour after hour.

Post contest we did some rough analysis of the noise sources. There seem to be multiple sources, almost certainly line noise, that are intermittent and therefore going to be difficult to resolve. Several power poles about 1000' away in the 180-190 degree and 150 degree directions seem to be likely culprits. The line noise seems to have gotten worse over the years as the islands power distribution system has aged. We've been told that the power company is in the process of replacing the entire system but this is going to be a multi-year project and means it is unlikely we'd be able to get their attention to make any interim repairs. Fortunately, the noise is significantly less when beaming Europe. That may cause us to favor EU a bit more in international contests for the next couple of years, at least whenever these high noise levels are present.

We experienced a couple of equipment issues during the contest that cost us some Qs but nothing compared with the high noise levels. Some of that might have been avoided if we'd vetted the set up more thoroughly prior to the contest.

Outside the contest, we found time to make some repairs and upgrades to the station. The 400' run of ½" Heliax out into the Cunucu should dramatically reduce losses for the temporary antennas we now routinely install to support operations involving multiple transmitters. In addition, the failed EastUSA Beverage was repaired and some not-so-obvious issues with the K9AY 2x8 receive antenna switch which were reducing the effectiveness of two Beverages were identified (and a temporary work-around was implemented, with the plan is to bring the switch back to the US for repair over the summer).

We also had some time to enjoy socializing with friends on the island, including Jean-Pierre, P43A, and his wife, Cris, P43C, as well as Lissandro, P43L.

Also outside the contest, WE9V operated the station on digital modes intensively. He was active on all bands 10-160, often with 3 stations running concurrently, and managed to make 33.4K contacts during the visit.

As always, thanks to everyone who called in to give us a Q, with special thanks to those who moved for a second or third contact. Also, congratulations to the PJ4G M2 team on neighboring Bonaire on their excellent results.

John, W6LD, on half of the P40L team (WE9V, K9NW and N6WM)

Station:

Towers and antennas:

3 permanent towers on a 100x100' lot:

- Rohn 45 tower (66'):
    - Single boom 2-element shortened 40m interlaced with 4-element 20m (68') (JK2040, long-boom version)
    - 80m Inverted-V (65')
    - 160m Double-L center-fed vertical dipole (65')

- North Rohn 25 tower (56'):
    - Single boom 5-element 15 interlaced with 6-element 10 (58') (JK1015 configured for dual feed)

- South Rohn 25 tower (45.5'):
    - Tri-bander (JK Mid-tri)

Temporary antennas for In-Band S&P:

- Cushcaft A3S ~600' from xmit antennas
- 40/80 fan dipole with 40' apex ~400' from xmit antennas

Receiving antennas: 4 Beverages controlled by K9AY 2x8 switchbox: J

- A/West-US (800')
- East US (500')
- EU (800')
- East-West (AF and OC) (350')

Rigs: Run 1: K4D; Run 2: K3/P3; In-Band S&P: K3/P3
Amplifiers: KPA1500, Alpha 86 and Alpha 91b
Computers/lock-out: 3 computers running DXLog.net; EA4TX lock-out