



Caribbean Contesting Consortium
Signal Point PJ2T

2012 Station Manager Report

Jeff Maass K8ND
May 2011 – May 2012



PJ9JT
CURACAO, NETHERLANDS ANTILLES

STATION	DATE	GMT	RST	BAND	2 WAY
JOHN H. THOMPSON, W1BIH, BOX 1, TORRINGTON, CT. 06790 TNX QSL					

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Photos by Geoff Howard W0CG/PJ2DX, Jeff Maass K8ND, & Jim Galm W8WTS



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PJ2T Station Status Overview

The 2011-12 year at Signal Point was characterized by continuing mature change – the completion of our transition new and more standardized equipment.

We have 10 good transceivers, 7 full power amps (and 2 nearly so), 6 new computers, 7 older computers that still work fine, 8 flat screen monitors, a large collection of accessories, sufficient spare parts and tubes, and lots of tools and additional equipment.

Once again, failures affecting contest operations were rare. The FT-2000 transceivers have been holding up well so far. There were some failures of amplifiers, but these were almost always startup failures after long periods of downtime.

The lack of failures and our well-stocked spares shelves have allowed us to grow the Station Fund balance, with a bit over \$8000 available as of this writing.

The issue that has risen to the top of concerns is the condition of the Europe tower. New inspections have revealed some areas of serious rust hidden under tape and at the connection point of feedlines and accessories, some leaving holes completely through the legs of the Rohn 55. While troubling, Rohn 55 is a very strong tower design, and it is not clear to what degree these problems cannot be adequately handled by the application of reinforcing splints. This will require some evaluation by a 3rd party tower expert and discussions among the CCC membership, and is discussed in the “Towers” section of this report.

This issue is preventing some investment of Club resources – time and money – in several projects and investments that could help to improve contest scores. It is important to move forward quickly on defining the required investment in this safety and maintenance issue so that it does not tie up resources for an unnecessarily long period of time.



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LOSSES THIS YEAR

In July 2011, long-time PJ2T QSL Manager Scott Lehman N9AG became a Silent Key in July. Scott had been keeping an account of excess Green Stamps and IRCs received with QSL requests, and with his passing his estate transferred in excess of \$3700 (\$3241 cash and \$500 in IRCs) to the CCC Treasury. Joe Arcure W3HMK was recruited as our new QSL Manager, and assisted with the sale of the IRCs.

In late March, John Thompson W1BIH/PJ9JT became a Silent key at age 97. From 1971 until 2000, John owned the Signal Point house and hosted many world-class contest operations.

TRANSCEIVERS

The three FT-2000 transceivers on the island have been operating without problems.

The software (Main and DSP) were updated on one or two of the three FT-2000 at Signal Point, but the online records claim that the software versions in the three do not match, as shown below.

FT-2000 #1	Main 11.29	DSP 1.51	Station 2
FT-2000 #2	Main 11.53	DSP 1.49	Station 4
FT-2000 #3	Main 11.54	DSP 1.51	Station 1
LATEST	Main 11.54	DSP 1.56	

We should assure that all radios have the latest versions installed prior to the start of the next contest season.

AMPLIFIERS

The amplifiers at the station should be reliably capable of 1500W output for the 48 hours of a contest. We have 9 amplifiers at Signal Point, seven of which meet that requirement.

The Ameritron AL-1200 amplifiers continue to hold up well. We are still in need of a spare 3CX1200A7 tube or two, and are keeping our eyes out for any possible listings.

The Ten Tec Titan I (3CX800A7 x 2) continues to perk along.



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AMPLIFIERS (Cont'd)

The Titan III (4CX800A x 2) amplifier suffered a failure in March when powered-up after an extended downtime, with an HV arc blowing one primary fuse. The left tube chimney is arcing to the case. We are seeking replacement chimneys.

The Cary LK-800 (3CPX800A7 x 2) amplifier suffered a relay failure in October. The replacement relay required (K2 on the QSK board) was found to be out of production, and difficult to find. We found a couple and snapped them up! The LK-800 is fully operational .

Two Alpha 76CA amplifiers are also still in functional condition for backup use, with a number of spare 8874 tubes on the shelf. These are not full-power amplifiers.

Wayne K8LEE has provided a kW 6-meter amplifier, an Alpha 76 with the two 8874 tubes replaced by a single 3CX800A7 tube. It is presently awaiting repairs, as needed part(s) were not available during Wayne's latest visit.

COMPUTERS

The switch to modern computers is complete, with six (6) new Dell PCs (PC30 – PC35) running Windows 7 in place at Signal Point. Donations from two members (W9VA and one who prefers to remain anonymous) made possible the completion of this important upgrade without drawing-down the Station Fund balance.

These PCs, like all modern PCs, have no serial or parallel ports. Where a serial interface is needed (as with rig control), we are using Keyspan USA-19HS USB-to-serial adapters, which have proven very reliable.

With the donation of two 20-inch displays by N0YY, all four stations now have reasonably sized displays!





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ANTENNAS

Most of the yagis are still in good shape following the major maintenance project of a few years ago. However, we suffered three major failures of antennas in the past year.

The Europe 20m yagi suddenly developed a very high SWR during CQWW SSB. After a long troubleshooting effort by W0CG and W8WTS, they determined that deteriorated weatherproofing at the beta match feedpoint had rendered the connection highly resistive. The fix required sliding the antenna seven feet toward the tower, cleaning and replacing the hardware, and leaving it unsealed for the future. Geoff declares Jim's effort in this "heroic".

The USA 15m yagi suffered a catastrophic failure of the feedpoint connector, with the center conductor separated. The connector was replaced and re-sealed.

The CL-33 tribander (our only rotatable antenna on 20-15-10) has suffered burned-out traps. Attempts to repair it with available parts has failed: new traps are available for ~\$400.





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TOWERS

While the painting of the towers has continued, there have been some “stealth” problems developing under tape wraps and antenna/accessory mounting points. This year, Geoff has become very concerned about the condition of the Europe tower (100-foot Rohn 55). The cause is our old “honorary CCC member” rust.

The worst of these is shown below, before and after sanding. There are other areas.



These areas of weakness have been reinforced with ‘leg splints’ provided by Jerry WB9Z. Geoff has assembled a proposed “decision tree” on how to deal with the condition of the Europe tower. This process is shown on the following page.

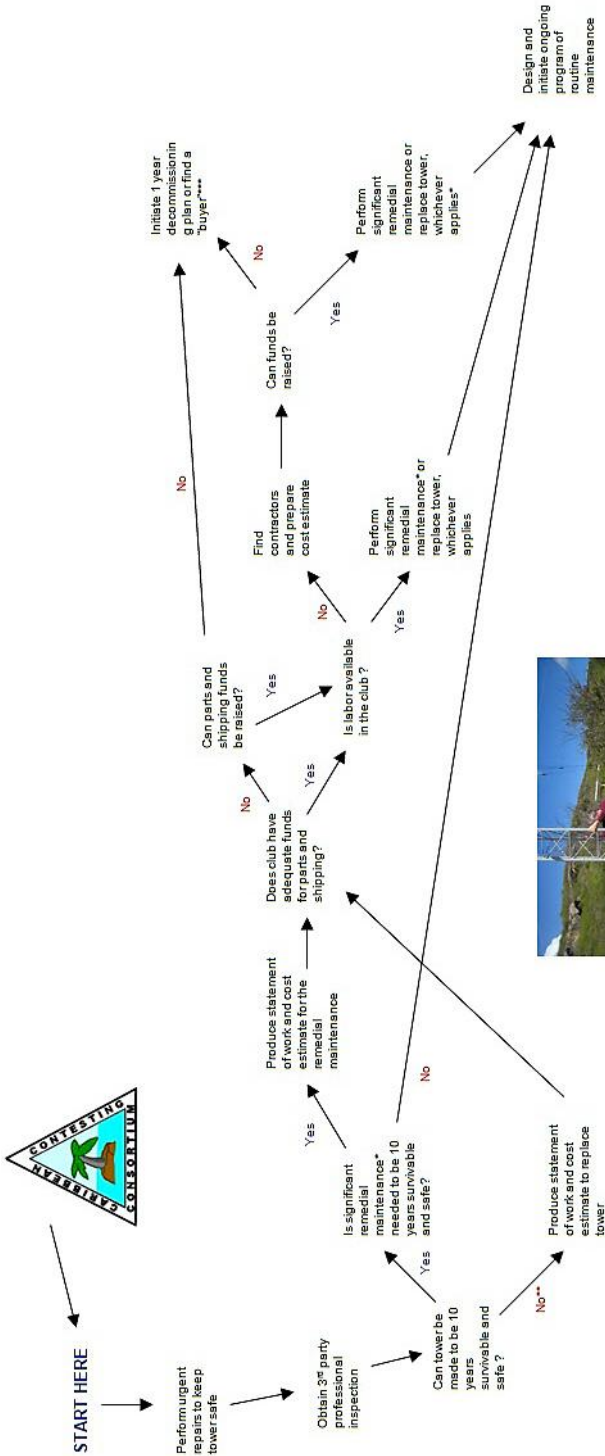




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PJ2T Europe Tower
Decision Guide for Multi-Year Disposition of
100 Foot Rohn 55 Tower
WOCG – 20 March 2012

Notes:

* Significant remedial maintenance* means replacement of certain guy components, rotor plates, mast, or near total sanding of selected sections.

** It's so bad that it can't be fixed and/or is now or soon will be unsafe.

**** "Buyer" means that a key person or group with significant resources would take over the station but not purchase it, retaining present CCC members until we attrit. CG continues to own and control the real estate.



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TOWERS (Cont'd)

The next step required to determine the path to be taken is the inspection of the tower condition by an expert 3rd party tower person, who can evaluate the state of the tower and judge how urgent our response needs to be. We have had early discussions with John W2GD/P40W, who is an expert tower-rigger who already travels to the area a few times a year, and who is familiar with the specific corrosion issues in the Caribbean.

Additionally, corrosion/rust has been found during inspections of tape-wrapped guy deadends and turnbuckles. The last of these were inspected and replaced/reworked during this year.





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PJ2T CW SKIMMER SERVER & ON-SITE CW SKIMMERS

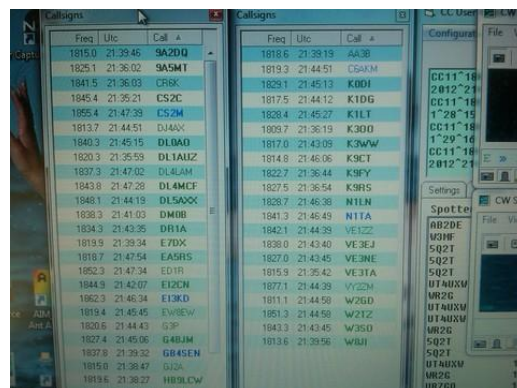
The PJ2T CW Skimmer Server installed at the VERONA club station PJ2A in Willemstad recorded CW spots of 1,038,405 stations between 27 May 2011 and 10 May 2012! These spots are available via telnet, and are also reported on the Reverse Beacon Network: <http://www.reversebeacon.net/dxsd1.php?f=0&c=PJ2T&t=de>.

The Skimmer Server PC experienced frequent losses of access to the Internet during the first 1+ year of operation, apparently due to the router provided by VERONA. This problem ceased when VERONA moved their D-Star system (which shared the network link) to another site.

The PJ2T CW Skimmer Server remains nearly deaf on 160 and 80 meters. For normal operation, we have configured this Skimmer Server to monitor the CW portions of the following seven bands: 40, 30, 20, 17, 15, 12, 10.

Jim W8WTS, Jean-Claude PJ2BVU, and Jeff K8ND are serving as SysOps. We are able to manage the Skimmer Server PC and receiver hardware using Windows Remote Desktop capability from our homes. Jean-Claude has direct access to the hardware at the VERONA station at any time.

In addition to the PJ2T CW Skimmer Server in Willemstad, we will continue to deploy CW Skimmers on-site at the PJ2T station during CW contests where they make sense (traditionally CQWW CW and CQWW 160 CW), using SDR-IQ receivers provided by K8ND and W8WTS. These SDR-IQ receivers can be made available to any contest Team that would like to deploy them for other contests, although the hardware is not stored at Signal Point. Contact K8ND for information. These on-site skimmers can use the receiving antennas (Beverages and DX Engineering 4-Square) for much better performance on the low bands (160, 80, and 40) than can be expected from the PJ2T Skimmer Server.





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PJ2T Station Changes and Improvements 2011-12

- June New club entity “Curacao Contesting Club (CCC)” incorporated on Curacao as a step towards a permanent issue of the PJ2T call to Signal Point.
- Purchased another AL-1200 (#4) amplifier.
- The last four of six new Dell PCs were purchased and configured.
- July New webcam purchased for Signal Point.
- August For the first time, Radio Inspectors from Bureau Telecommunicatie, along with PJ2VD, came to Signal Point for an inspection. KD4D and his XYL were at the site to host them, and no problems were reported.
- September Yaesu included a photo of the PJ2T 2009 CQWW SSB Team on the cover of a DXCC countries list published as a pull-out in QST, and also available a hamfest handout.
- October K6AM fabricated and provided all of the custom cables, circuits and switch boxes for the flexible station re-design he provided last year.
- K6AM drafted a schematic for the AL-1200 amplifier (#4) purchased earlier this year. It is much more easily read than that provided in the manual.
- 15-Meter yagi feed failed, with broken female connector. Replaced and yagi re-installed.
- November W0CG observed that we needed a solder-sucker for repairs. By CQWW CW, there were no fewer than six in the tools closet!
- N0YY donated two new 20-inch flat-screen monitors, to be used at Stations 3 & 4.
- Installed a new 2 TB (Terabyte) network-connected disk drive for backup use.
- LK-800, failed since October, repaired with new relay and general cleanup.
- Installed new Bandmaster III band decoder at Station 1, replacing the decoder there previously, which required interface with a parallel port. New PCs do not have parallel ports.
- The Europe 20m yagi started showing high SWR during CQWW SSB, and became useless. W0CG and W8WTS extensively troubleshooted and repaired it, finding a bad connection at the beta rod.



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PJ2T Station Changes and Improvements 2011-12 (Cont'd)

November (Cont'd)

The CL-33 tribander had fried traps, and W0NB, N0YY, K8LEE, and WI9WI assembled working traps from spare parts on-site. The fix did not last, and that tribander is presently inoperative.

A temperature-controlled solder station was donated by Rick N0YY.

December W0CG has begun finding even more problem spots on the Europe tower, with rust which had been hidden by tape and hardware. Sanding to bare metal, painting, and splints applied.

During ARRL 10-Meter Contest, a two-radio switching scheme was implemented.

6-meter kW amp provided by K8LEE has failed, and Wayne troubleshoot. Repairs still TBD.

W0CG found severely rusted turnbuckle and deadend on one of the Europe tower guys. Replaced, and all other turnbuckles cleaned and re-sealed.

Parts for tower-leg splints primed and painted.

WB9Z fabricated and donated four sets of Rohn 55 leg splints.

March Purchased \$735 worth of tower parts for Rohn 55 (Europe tower).

Titan III amp blew up on initial power-up following W0CG arrival in late march, and is currently inoperative, with arcing across a tube chimney.

April W0CG published a "decision tree" diagram, showing a proposed decision making process for determining how to deal with the deteriorating state of the Europe tower.

Initial discussions held with John W2GD/P40W about the possibility of him filling the "3rd party inspection" role.





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PJ2T House Improvements 2011-12

Although not directly related to the Station Committee, these enhancements to the house over the past year are listed here for convenience.

1. New Moen faucet in kitchen;
2. New refrigerator in kitchen;
3. Watercolor by N1ZZ hung in East bedroom;
4. Additional set of keys made and labeled by Goose W8AV;
5. New griddle replaces the old.
6. Tile repaired in East bedroom.
7. Toilet shutoff valve replaced, East bedroom.
8. Cable TV cabling extended to the East bedroom.
9. Sink installed at outdoor shower East of the house.
10. The shack air conditioner failed (defrost thermostat) in January, and was fixed in February.
11. Much tree trimming has become necessary with increased rain on Curacao this year, and has been done.
12. Repaired blinds in sunroom, which were somehow damaged in December.
13. Evicted tightly-packed insects from interior of recessed lighting, rendering it effective again.
14. Geoff sealed ~15% of the roof hardware sealed with high-tech tape. The remaining work will be done on future trips.





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Station Enhancement / Project Ideas for 2011-12

1. Upgrade internal software (Main and DSP) in all FT-2000 transceivers to most recent versions.
2. Have 3rd party inspection of Europe tower performed; determine maintenance plan.
3. Fix/replace CL-33 tribander.
4. Purchase and deploy 4O3A High-Power Triplexer for Ridge Tribander (and CL-33?).
5. Add automated bandpass filter switching to Stations 3 and 4.
6. Add second LCD display to Stations 1 and 2 to provide additional display “real estate”.
7. Add directive 80m antenna to enhance signal to USA/JA.
8. Add a 40-meter antenna for backup.
9. Buy another spare 3CX1200A7 tube for AL-1200 amps.
10. Replace 160-meter inverted-L feedline (RG-8X) with RG-213.
11. Re-locate the DX Engineering 4-Square bases to re-point the array correctly.
12. Add a new fixed-direction tribander, pointed at VK/ZL/South Pacific.
13. Replace very ancient 10-MB/s network switch with “Gigabit” switch/router.
14. Assemble enhanced AC Power Transformer console / furniture.
(http://www.k8nd.com/Radio/PJ2T_AC_SYS.pdf)
15. Standardized voice keyer installation at each station.
16. Install equipment shelving over radios.
17. Permanently install K6AM “multiplier operator” switches at each station.
18. Install HV modifications on all AL-1200 amplifiers. Install supplemental filament transformers in two newest AL-1200.
19. Install third tube socket and parasitic suppressor in LK-800 and add third tune.
20. Prepare comprehensive PowerPoint presentation on how to run the station.
21. Tower Projects / Maintenance
 - a) Continue painting schedule;
 - b) Maintain & re-coat the WARC antenna concrete base.



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