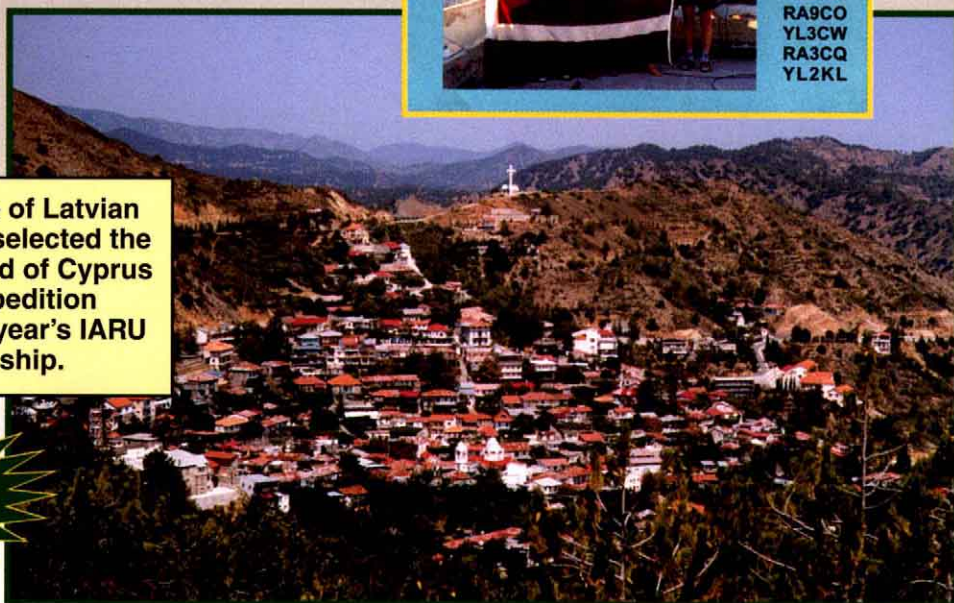


- H20A—The 1999 IARU HF Championship from Cyprus
- OH0Z, OH0AW—Building a Single Op Super Station on Aland Islands
- Being “Rare” from the Center of Europe—4U1VIC
- *NCJ Profiles:*  
W4MYA



A determined group of Latvian and Russian hams selected the Mediterranean island of Cyprus as their contest DXpedition destination for last year's IARU HF World Championship.

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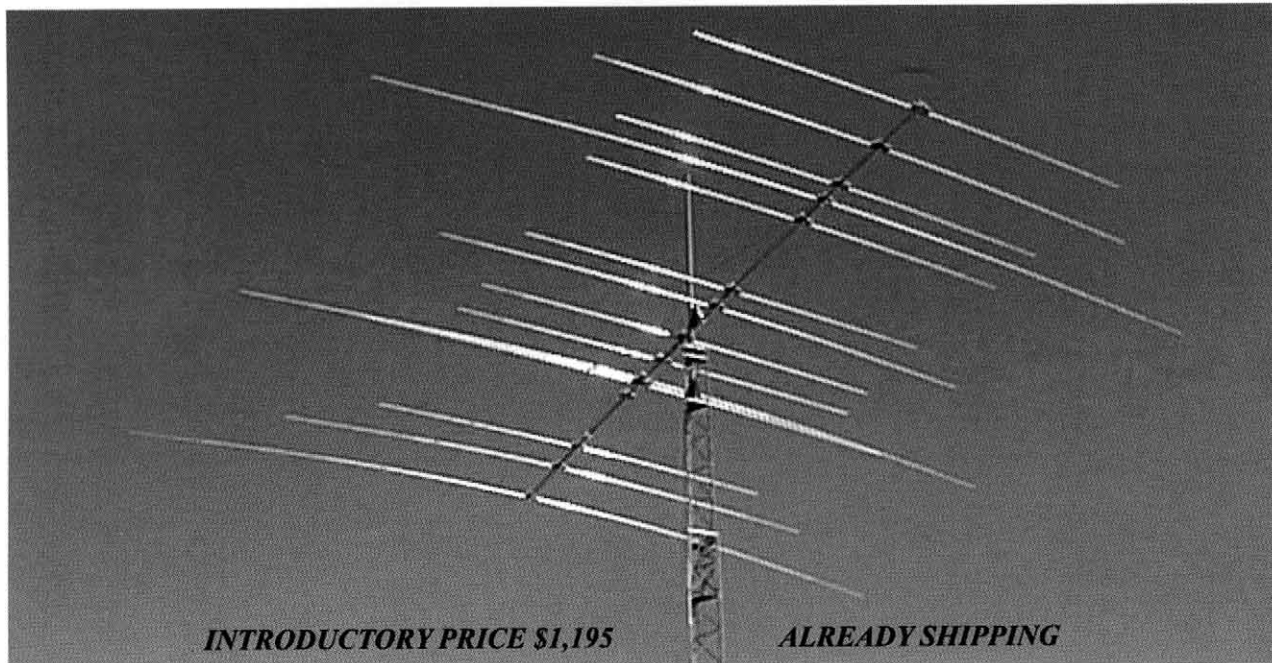


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By the time most of you read this, WRTC2000 will be history. As I write this, I wish I could look out into the future and see how the actual competition turns out amongst the competitors. That I cannot do—but what I can do with absolute certainty is know that all the participants—competitors, judges, organizers, support staff, station owners and those just there for the fun—had a great time and made memories that will last a lifetime. Any time that so many passion-filled individuals are gathered in one spot on the Earth, magic is going to be made for the enjoyment of all. And who but some of the best of the best Amateur Radio contesters carry more fire in their gut? Not many, I suspect.

## Dayton

Dayton Hamvention 2000, like WRTC2000, served as a fantastic opportunity for contesters to converge in one spot and pool their energy for the mutual enjoyment of all. Doug, K1DG, assembled a full day of contest-oriented presentations for Dayton that proved to be quite educational and most certainly entertaining. Most of the contesters present at the Hamvention also shared a lot of laughs at the Contest Dinner Saturday night. John, K1AR, kept the anarchy element reasonably under control... except when he himself was the instigator of the trouble! After all, contesters know that the man with the microphone is in charge of the mob.

## The CQ Magazine Contester Hall of Fame Welcomes Tree, N6TR

Those attending the Contest dinner got to see one of our most accomplished and widely liked contesters, Tree, N6TR, inducted into the CQ Magazine Contester Hall of Fame. Dick, N6AA, and Trey, N5KO, provided the pre-induction roasting over the coals and Bob, K3EST, as usual, had the honor of actually proclaiming the induction. Congratulations Tree, from all of us, and thank you for the many things that you have done for contesting.

## The Good, The Bad and The Ugly... at Dayton

I always enjoy meeting for the first time face to face a contester that I have swapped exchanges with over the years. Sometimes I am incredibly surprised and sometimes I find my "image" of the person was dead on. Since not every contester can make it to Dayton to experience the in-person meetings, we can thank Tom, K8CX, for making it possible to "see" the gang through his magnificently handled camera. Do yourself a favor and check out his Web site <http://hamgallery.com>.

He also sent along a few "exclusives" for us to publish in the NCJ—we will get them in here soon.

## NCJ Contests Results

Our Contest Managers were really challenged compiling the results for the NAQP and Sprint winter contests. Entries were up and format changes apparently tossed in an additional disruption factor. You will find this issue missing the NAQP Phone results for those reasons. We will be posting the Winter 2000 NAQP Phone results on our Web site <http://www.ncjweb.com> as soon as possible. The full write-up will appear in the September/October issue of the NCJ.

## Back to Real Time

Now I need to slip back into real time and get busy packing for WRTC2000. See ya in the piles!

## Our Cover

H20A's contest station location for the 1999 IARU HF World Championship was "Jack's Hotel"—a mountainside lodge on the outskirts of Pedhoulas on the Mediterranean island of Cyprus. Vilnis Vosekalns, YL2KF, shares his story of the adventures of the Latvian and Russian hams that pulled together to make their dreams of a Cyprus contest DXpedition—from 3-point Asia—a reality. ■

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# H20A—The 1999 IARU HF Championship from Cyprus

Vilnis Vosekalns, YL2KF  
salaca@asson.apollo.lv

*Cyprus?!*

*Yes—the island in the Mediterranean—it's in Asia.*

*Perfect!*

Our group of Latvian radio amateurs was daydreaming about a good place to travel to for the IARU HF Championship. Cyprus is perfectly positioned to allow an operation to harvest tons of high-point-value European contacts. Besides, Cyprus is much closer to the equator (read—*much warmer*) than Latvia.

Yes, Cyprus. An island blessed by the sun—located in the warm waters of the Mediterranean—and a country with a long, fascinating history. Cyprus is like a beautiful and tempting woman—she entices everyone who comes near her. This is an island one can easily fall in love with and remain in love with long after you have returned home.

## The Dream

One member of our group is an “old man” who participates in most of the contests—Girts, YL2KL (also YL8M). Thanks mostly to his stubborn persistence, this almost lunatic plan became a reality—we assembled a group of contesters and traveled to Cyprus for the 1999 IARU HF Championship. This was an especially impressive accomplishment when you consider the state of the Latvian economy.

It has to be admitted that there is a lack of financial resources in Latvia. As always, money can be a major stumbling block for a DXpedition. We owe a special thanks to *Latvijas Mobilais Telefons*. This company helped cover the cost of our airline tickets. The rest we scratched together ourselves.

Here is the list of the dreamers: me—Vilnis Vosekalns, YL2KF; Girts Budis, YL2KL; Juris Petersons, YL2GM; Valerijs (Valery) Sincovs, YL3CW; Jack Shahov, YL2KA; and Girt's old “buddies” from previous H20A operations—Igor Mihejev, RZ3BW; and Igor Ustimenko, RA3CQ. Later Dimitri (Dima) Krjukov, RA9CO (who likes islands in the south—such as VP5, just to mention one), joined the group.

For some of these operators, it would be their first exposure to the southern sun. Others were more fortunate in that respect. At least not all of us would pass out from heat stroke at the same time!

## Finding a QTH

The first group—both Igors from Moscow, Jack and I—arrived in Cyprus a

week ahead of the remaining team members. We transported two amplifiers, reserve transceivers, some of the antennas and a collection of other important “junk.” Our main objective was to locate a good place to operate from.

Using a strange “car rental rebate coupon,” a jeep without a roof, but with a cargo area in the back, was secured.

There is still considerable British influence in Cyprus. They drive on the left-hand side of the road. All the rental vehicles in Cyprus have a red license

plate on the front. To the locals, this means “Watch out, this vehicle may occasionally be driven on the wrong side of the road!”

Hoping to find an operating location at a high elevation, we scoured all the upper reaches of the Trodos Mountains around Mount Olympus. These areas average around 1950 meters above sea level.

This region is beautiful. There are no factories, just the natural mountain environment. We saw mountains, mountains and more mountains—all colored in the shades of the copper that lies beneath them.

We came across what looked like a super location—a large, abandoned baronial-looking hotel that resembled a castle built in Middle Ages. Unfortunately, we couldn't get access. Neither diplomatic nor any other means proved successful. Oh well, there was no electricity available there anyway.

We soon found a suitable alternative: a small hotel in the town of Pedoulas, located 1200 meters above sea level. The entire town is situated on a northern-facing slope, a perfect configuration for our needs.

There's an impressive Greek Orthodox cathedral located in the center of the town, and there's a big, illuminated cross



Our T-Shirt.



Before contest planning. Girt (sitting with pen), Jack and Dimitri.



at the top of the mountain. The town has a long history—dating back to around 1474.

There is a mountain spring, which probably was one of the reasons this area was first settled. Today the water is bottled.

The hotel we selected is called Jack's Hotel. It has five stories, a flat-roof, not many guests, an understanding proprietor and friendly hotel employees. We found out later that the water there also comes from the mountain spring. This resulted in considerable savings in our drinking water expenses, and this allowed us to put more Cypriot pounds to better use—pints of *KEO* beer.

The hotel was not expensive and the arrangements included three meals a day. The RF path to the north was open and clear.

### Antennas, Antennas

Many antennas were required for our planned operation. We put up sloping dipoles for 160, 80 and 40 meters and a DX-77 vertical. The highest degree of heroism during this phase of setup was displayed while accessing the private, undeveloped and overgrown property adjacent to the hotel. In shorts and shoes of questionable utility, we found our mobility through the brush, with its stinging thistles, was considerably impaired.

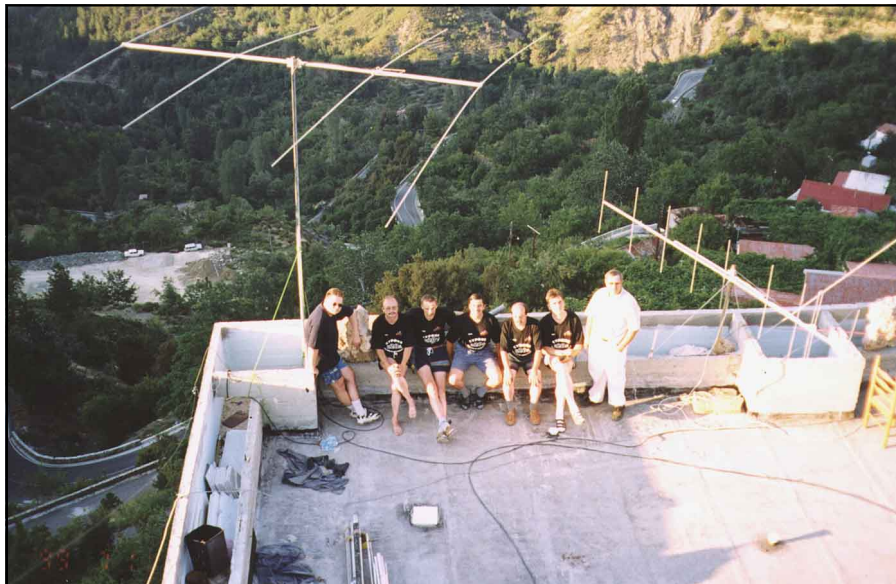
To us, who are more familiar with the pine trees at home, it seemed as though everything was stinging our feet, hands and other parts of the body.

The locals warned us about snakes. We didn't see any, but we did see big lizards—about 30 cm long and very fast. They might have been dangerous creatures, but none of us knew for sure. Be it as it may, the lizards we saw looked well fed—judging from their ground-scraping bellies.

One difficult part of our antenna project was putting up the 2-element 10-, 15- and 20-meter quad. This went painfully slow due to the hot sun (it should be noted that the air temperature was ranging between 38 and 40 C), the lack of suitable places to tie down guys and the heavy hardware. During this operation Jack suffered a scrape on his head and several painful scratches between his sandal straps and on the upper parts of his feet.

Shortly after we finished setting up those antennas, the second group—Juris, Vilnis, Girts and Dimitri, arrived with the main transceivers, more antennas, and other odds and ends. We repaired an old GAP Voyager we had from a previous expedition and put up a Mosley TA-33-M with a rotator.

It was difficult to situate all the various antennas. There was limited room on the roof and access to the area down-slope from the hotel was difficult.



The roof of Jack's Hotel provided a convenient location for setting up some of our antennas.



Our 2-element 10-, 15-, and 20-meter quad.

Mostly due to Valery's childhood-learned stone-throwing skills—the sloper lower ends were located a good distance away from the hotel. We did suffer from a chronic shortage of Dacron line though; the local stores were sold out.

The number of people actually needed as operators during the contest itself is pretty low. When you consider the need to put up antennas swiftly and the transportation of all the equipment to and from the airport, the large number of members

in our group was essential for the support of an operation as big as ours.

### Setting Up the Station

The operating position was set up in a rather small hotel room. The amplifier was set up on the balcony.

Our primary transceiver was Girt's IC-775DSP. As he unpacked it he proudly said, "This box hears everything!" Our high expectations quickly turned to anxiety when nothing was heard when the radio was switched on. After removing the transceiver's covers, we soon discovered that a filter had been shaken out of its socket. Fixing the problem was easy.

We also ran into problems with our IC-756 transceiver. It was completely "dead." It turned out to be a similar mechanical problem—a transistor had vibrated out of its mounting. Luckily that was all the equipment trouble we experienced. We agreed that we needed to pack additional repair items on future operations. We were lucky this time around...

Our ACOM-2000A amplifier was "just the ticket" for smooth operations. We put it out on the balcony and forgot it—remote operation. No need to give it beer. Just keep feeding it good Cypriot 240 V/ 50 Hz electricity. They use two types of wall receptacles: 5A with three round connections, and 13A with three square connections—UK style.

Surprisingly, there was no noticeable voltage fluctuation, considering where we were. The ACOM-2000A linear amp shifts bands automatically; the coax does not have to be swapped around. We also had an IC-PW1 amp, but it does not switch the antennas automatically. We

used a remote control switch that transmits commands via the coax cable.

We had brought along CW memory keyers but we didn't use them. Everyone relied on their speedy fingers. We used VOX on SSB (we forgot to bring footswitches!). This caused a handful of "colorful" comments to be accidentally transmitted.

### Contest Operations

A few words about our team members. Not all of them are "super operators" or big contesters. However, the sum total of the team's effort speaks for itself.

Under normal circumstances, it takes only a few good operators to run a 24-hour operation. Each has his own task tailored to his abilities and desires; each is responsible for part of the operation. It must be emphasized that placing additional workload on these individuals can prove costly when the score is finalized. Our main operators were Girts, YL2KL; Igor, RZ3BW; and Valery, YL3CW. The job of overall operational coordination fell to Juris, YL2GM. The other members of the team mingled mostly at the alternate operating position, with the main load being carried by Dimitri, RA9CO. However, there was very little activity at the alternate position due to inter-station interference.

Valery worked SSB so fast that there was very little heard in between transmissions. And with Girts on CW it was even worse; nothing could be heard by the alternate station—the antennas were too close to each other, and the receiver was completely swamped.

It appears we had too few 160-meter contacts, but we just didn't hear any other stations. Also 40 meters remained quite unworked. Ten meters was lively, with funny-sounding H2Q signals coming from the other side of the mountain. P3A came booming in on all bands. They are located close by on the northern coast.

We heard our friend Oleg, YL3DW, who should have been there with us, beautifully. It is interesting to hear the voice of Roman, UP5P, who is better known to many as a RTTY operator. And so on and so on we worked familiar and not so familiar calls.

We used the 2-meter packet cluster extensively even though it was not connected to the CT network (we lacked a spare com port on the laptop). The laptop keyboard sometimes felt very small, but we had no other equipment. We tried to rent a PC locally, but the rental price was nearly as much as the cost of a new PC.

Finally, the contest ended, but there was still the big job looming ahead! Everything had to be disassembled and transported away; and there was little time to do it—some of the guys had to board a plane for Moscow Monday

evening. Others were scheduled to leave Wednesday evening.

Part of the equipment was left in Cyprus; the rest came home with the operators. Monday afternoon found everything collected and packed. Poor Jack skinned his head a *second* time. Dimitri rented another car so we could all get to Limassol in one trip.

### Post Contest Tourism—a Visit to Limassol

We enjoyed a good dinner in one of the local restaurants and then headed off in a western direction towards Limassol. Along the way, we arrived at a rather nice beach with a small bar nearby and warm Mediterranean water and big waves. We stopped to enjoy some more *KEO* beer—it tasted especially good after all the work we'd done taking the stations down. Everyone finally started feeling better.

Igor found the old Kurion Amphitheater nearby. Imagine walking on a colorful mosaic floor made of little bits of stone arranged in fantastically beautiful patterns, or walking down the steps to the center of the amphitheater. Our voices sounded as if they were coming from a Heil microphone. All of this wonderful acoustical engineering designed into a structure that had a sign indicating it was built in the 2<sup>nd</sup> millenium before our era.

Not everything in the area was that old. The old town grew over hundreds of years, and it is so large that you can drive around in it. We know too little about the local history and culture. Perhaps this place of ancient wonders could hold answers to some of the many questions we have about the past...

Igor "aggressively" steered the car between wine and tangerine fields in the direction of Limassol possibly feeling more fortified by the *KEO* beer. It appeared that he had finally found the knack to keeping the car on the left side

of the road. He even demonstrated some of the passing maneuvers he picked up from the Muscovite car enthusiasts.

We soon arrived in Limassol, where we noticed that the local motorists were sympathetically observing our still developing driving skills. Young men, sitting on powerful choppers, seemed to smile their approval.

Evening had arrived and the heat of the day had diminished. Everyone—locals and visitors alike—were out on the streets. On both sides of the main street one can find anything they desire. "Souvenirs?"—please; "you want beer?"—please; "you want...?"—thank you, nothing. Also—"please don't touch anything."

The last heroic deed of the trip occurred that evening—well, actually rather late that night. We were roaming the streets of Limassol. A disco bar bouncer, big shoulders and all muscle, was daring us to approach him, suddenly he recognized Girts! No problem, the man was a soccer fan.

Still later, we ran into an old acquaintance, a taxi driver. He promised to help us out with a small van for the trip to the airport. Our departure time was rapidly approaching.

We remain sad today because we could not accomplish everything during that long night of celebrating. We later realized what we *didn't* enjoy—the tasty Cypriot Muscat wine! Ech, we should have had that instead of the beer!

So, thankfully something remains to be discovered for our next adventure, something to draw us back. Cyprus—a land to fall in love with, or the land to love?

We went there to be in Asia and to be a top team in the IARU Contest. We posted an H20A score of 4,515 QSOs and 5,530,716 points. We met our goals, but we shall return again to continue on our quest to be Number One!

(Translation from Latvian by George Liepins, KE4HW/YL3HT.) ■

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# Radiosporting Team OH0Z, OH0AW—Building a Single Op Super Station on Aland Islands

Ari Korhonen, OH1EH  
ari.korhonen@kolumbus.fi

Perennially, the OH guys have traveled south in search of good propagation. This is especially true during the sunspot minimums, when Finland ranks among the worst places on the Earth to operate from. But now that the sunspots are back again, good scores are also possible from these parts.

So there we were, the three of us—OH1EH, OH1JT and OH2MAM—wondering *where do we go next?* With the solar flux climbing steadily, we really didn't want to miss any action. It was back in 1997 when the idea was born, "Go West, young men!" In our case this meant the Aland Islands, OH0. At that time we also founded the *Radiosporting Team* and began a full court press to locate a good OH0 location.

## Finding the QTH

During one of our several trips to OH0 we got together with some enthusiastic young VHF/UHF contesters, who called themselves the *Alandia Contest Team*. These guys have an excellent hilltop location with clear takeoff angles in all directions. Using the OH0AB call sign, they had already established their position as a real force in the VHF/UHF circles, so the QTH was working well. Luckily they didn't mind having a couple of HF towers added to their hilltop. In no time a partnership was born!

## Aland Islands—A Unique Archipelago

The islands that form the Aland archipelago started to rise from the sea some 10,000 years ago. The first inhabitants were fishermen and seal hunters. Nowadays the Aland archipelago

consists of 6,500 islands belonging to Finland and Sweden.

The capital, the maritime town of Mariehamn, is situated in the southern part of the main island. Aland is demilitarized and has a unique autonomy with representation in the Finnish Parliament. Aland has had its own flag since 1954 and its own postage stamps since 1984. The Aland Islands are at their best in the summer with the greatest hours of sunshine in the north—making them a very popular holiday destination.

## Putting up the Station

When we started, there was nothing but a rocky hilltop. All we had to do was to get building permits, build a ham shack, hook up electricity, erect two rotating towers, etc, etc. Sounds easy on paper, but it's a bit more complicated in real life! This is where the local help (the OH0AB guys) was extremely valuable and saved us a lot of time and expense. Finally, after several trips during the spring and summer of 1998, the station was operational. The smoke-test was the SACCW in September 1998, where OH1JT, operating as OH0AW, out-distanced the competition by a clear margin!

## The Antenna System at OH0Z/OH0AW

The antenna system consists of two rotating towers with no less than 9 Yagis on them, all designed and manufactured by Finnish Antenna Ltd. Due to the geology of the island, the towers are anchored in solid rock. Digging holes just wasn't an option—we drilled into the granite instead.

The system consists of Tower #1: 140

feet tall with 4 stacked tribanders and 2 over 2 Yagis for 40 meters; and Tower #2: 100 feet tall with 2 stacked tribanders and a 2-element Yagi for 40 meters.

Why did we pick *tribanders* for our stacks? Good question! We wanted the antenna system to be as simple as possible, given a certain desired level of performance. One should understand that these antennas are located on a hilltop near the water's edge and the winds are often extremely strong. The tribanders we use are relatively small, thus making them easier to handle and repair, if needed. Extensive computer studies by OH1JT showed that a good level of performance is possible by stacking enough of those antennas—and that's exactly what we did.

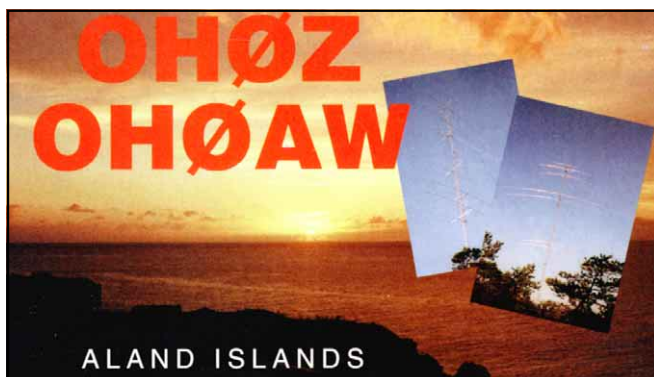
Another reason why we chose tribanders was to avoid the serious interactions that can result from stacking several monobanders close together.

We have two different tribander stacks, one on each tower. We wanted to be able to beam two directions simultaneously, eg USA/EU or USA/JA. A Finnish Antenna Ltd switchbox inside the shack controls the different antenna combinations.

We also have 40-meter Yagis on separate towers for the same reason—to cover two directions simultaneously. This usually means keeping one antenna system on DX and the second one on Europe for running the EU boys and also to keep our frequency clear!

## Operating from OH0

Being at a rare location obviously offers some advantages. Since there are typically only one or two OH0 stations active during the contests, we are a new



The OH0Z QSL card. (Photos by Jukka, OH2MAM)



OH0Z station owner-partners from left to right: Ari, OH1EH; Jukka, OH2MAM, and Juha, OH1JT.

multiplier for most people. Besides helping to create pileups, this makes moving multipliers extremely easy.

Propagation-wise, being at 60 degrees north latitude and very close to (or even inside) the auroral zone, life can sometimes be very difficult. When Mother Nature's big attenuator—the Aurora—is active, we might as well QSY to the nearest bar. The bands are just about dead.

During a sunspot maximum, however, excellent scores are possible from this location, even the European Top Honors, if propagation is ideal. When that happens, 20 meters is open to the US for several hours both nights of the contest and JAs are easily workable in the mornings on 10 and 15 meters. Sometimes it's even possible to run the US on 40 meters, but that requires above normal propagation and good antennas.

### First Overseas Guest Operator— K7BV

While we were quietly building the station, I mentioned the project to Dennis, K7BV. I asked him if he would care to visit our country and then go to the Aland Islands to operate our new station. He e-mailed that he would love to come and operate in the 1999 CQ WPX CW contest.

Dennis arrived in Helsinki with his wife a week before the contest—but didn't stay around long to socialize. He quickly departed via helicopter with Seppo, OH1VR; Pasi, OH1MM; and Lars, OH0RJ, for Market Reef (OJ0). Dennis indicated he wanted to "limber up his fingers a bit" before the contest. I think he just can't get enough pileups... he wore a shirt while operating the contest that said "Pileup Piggy."

My wife Katarina and I picked him up when he returned from the reef. He looked like a battered wreck—and smelled just as bad—after only sleeping about 15 out of the last 120 hours. I tried to talk him out of operating the contest



**A crane lifting the 140-foot rotating tower with OH1EH and OH1JT along for the ride.**

and simply going to bed—he was sick with a terrible cold and talked in raspy whispers. Katarina, a nurse, took charge of him and selected some proper medication.

### WPX CW '99

*Dennis Motschenbacher, K7BV*

I am embarrassed to admit that what Ari says in true. BUT, I did take a short five-hour nap before I rushed off to operate this fantastic station that my new friends had build.

It was an incredible experience to be operating from such a rare multiplier with such impressive antennas. I am more accustomed to a low tribander under such circumstances.

Thankfully, the conditions were fairly good during the contest—though 10 never opened. I was able to generate some fantastic pileups while feeding both of those 100-foot plus towers loaded with triband stacks. Of course, I had no reference point to draw on to tell me if I was doing okay or not—so I just kept grinding out the QSOs. I was too brain-dead from the OJ0 adventure to do anything particularly clever so I just sat on a frequency and let the gang come to this beacon in the midnight sun.

And they did. The contest ended at 3 AM Monday morning in that part of the world. As the orange of the rising Arctic sun lit the clouds in the skies over the Aland Islands, I closed the contest with 3,045 Qs and over 800 multipliers—a new Scandinavian record. As proud of that record as I am, I must humbly give the overwhelming majority of the credit to Ari, Juha, Jukka and OH0Z.

Their design assumptions were verified with my operation. Following my departure, they have since gone on to make their mark in nearly every major contest.

*Thanks, Guys!*



**The view from the base of the 140-footer.**



**Juha, OH1JT, drilling a hole for a 12-inch bolt.**



# Being “Rare” from the Center of Europe—4U1VIC

Heinrich “Hein” Langkopf, DL2OBF  
[Heinrich.Langkopf@t-online.de](mailto:Heinrich.Langkopf@t-online.de)

A little known multiplier located in the center of Europe has been participating in almost every CQ WW Contest over the last decade: 4U1VIC from Vienna, the capital city of Austria. 4U1VIC counts as a separate multiplier because it is on the Worked All Europe (WAE) list of countries. The WAE list is the original basis for a series of awards sponsored by the German national radio club, the DARC (*Deutscher Amateur Radio Club*). Therefore, in the CQ World Wide DX Contest—and in several others—being a “WAE country” also means being a multiplier, even though some of them (including 4U1VIC) do not appear on the DXCC list.

Since Vienna is located only a few hundred miles from the German border, 4U1VIC is often visited by various groups of German operators. Most of these groups compete in the M/S categories.

## The Location

4U1VIC (Vienna International Center) is located on the top (29<sup>th</sup>) floor of one of the two buildings in Europe that house important departments of the United Nations. The following organizations are based there:

International Atomic Energy Agency (IAEA)

Comprehensive Nuclear Test-Ban Treaty Organization (CTBTO)

United Nations Industrial Development Organization (UNIDO)

UN High Commissioner for Refugees (UNHCR)

United Nations Special Coordinator in the Occupied Territories (UNSCO)

United Nations International Drug Control Program (UNDCP)

The most active members of the VIARC, the radio club of the United Nations in Vienna, are John Oakberg, NK4N/OE3JOS—the station manager for 4U1VIC; Richard Olsen, K7AWD—president of the VIARC; and Jun Tanaka, JH4RHF (a member of the ZL9CI crew). All three do a great job in assisting visiting contesters. Due to the very strict security regulations inside the Vienna International Center, one VIARC club member must always be present when visitors are operating the station. This requirement presents a significant challenge for the members who, of course, also have family and job responsibilities.

## “Field Day”—*Inside a Building*—for the 1999 CQ WW SSB Contest

The main challenge when contesting from 4U1VIC is the time limitations for antenna work. The only permanent antenna installed on the roof is an R5 vertical. All other antennas must be installed immediately before—and taken down immediately after—each operation.

Imagine having to start the assembly of your antenna system only eight hours (after work inside the Vienna International Center ends late Friday afternoon) before the start of the CQ World Wide DX Contest. For our 10-man team, this

meant a lot of planning and hard work.

We managed to put up and test two beams, two verticals and five wire antennas (they work great at 140 meters above the ground) before the start of the contest. Since the space between the antennas is limited, band-pass filters are a must when operating M/S from this station.

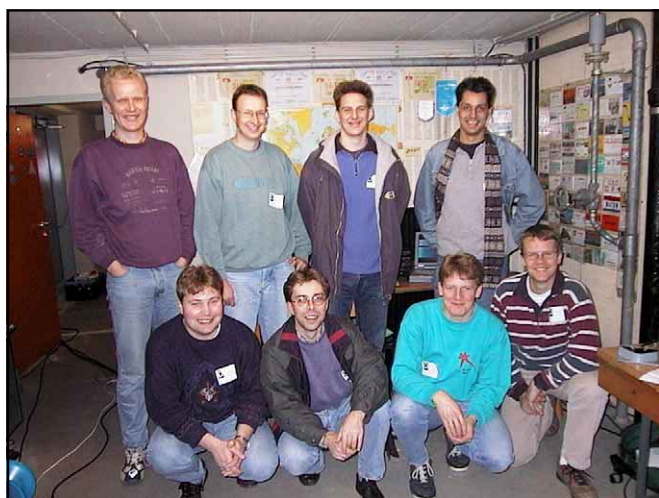
Besides the antenna work, we also had to set up the operating positions and the logging and packet radio networks. Everything was ready to go about 30 minutes before the starting signal. We then took some time for a short break out on the roof of the building where we enjoyed the view from above the magically illuminated city—with its famous landmarks such as the St Stephens Cathedral and the Giant Ferris Wheel in the Prater.

After that, the first shift went to work—the remaining team members went to sleep.

## Strategy

We divided the team into three shifts: one worked nights, one worked mornings and the third operated in the afternoons. The advantage of this strategy is that each operator experiences similar conditions and band openings twice and also enjoys a predictable sleeping schedule over the entire weekend.

The only critical shift was the first one—the starters also had to participate in the pre-contest antenna and equip-



Front row (left to right): Mathias, DL4OCL; Dieter, DL3KDV; Bernd, DL9YAJ; Pekka, OH2TA. Back row (standing, left to right): Hein, DL2OBF; Fred, DL2MEH; Jörn, DF6VP; and Carsten, DL1EFD. Two other group members—Britt, DL6BCF, and Jun, JH4RHF, are not shown.



The 4U1VIC antenna farm is located on the roof of the Vienna International Center. The only permanent amateur antenna is an R5 vertical. Any additional antennas must be installed immediately before—and taken down immediately after—each operation.

ment work. They were further taxed as one of them had spent the night before on the motorway driving to Vienna. The starting shift was shortened a bit to compensate.

Having three persons present in the shack at all times was an absolute necessity. In addition to the "Run" and "Multiplier" guys, we used a third operator who was busy with maintenance work, checking the information on the DX-cluster and scouting the other bands from a separate receive-only position. He was also available—should the need arise—as a replacement operator.

Individuals were assigned to the three shifts based on their experience with the different bands, their sleeping habits, their travel time and, of course, according to their native language. It was amazing to listen to Jun, JH4RHF, operating the first morning, speaking almost entirely Japanese for one hour while working 270 stations on 10 meters.

### The "After-Contest" Challenge

As mentioned above, everything had to be dismantled and packed immediately after the contest (2 AM local time). This work was completed in about two hours. We then headed for a famous burger restaurant to hold our formal closing dinner. (It is impossible to find anything else open at 4 o'clock in the morning—even in the capital city of Austria.) There we expressed our gratitude to Jun and began plans for the year ahead.

After that we simply walked back across the street and went directly to bed. The traditional accommodations for visiting contesters at 4U1VIC is strategically located—directly between the shack and that famous burger restaurant. The operator with the shortest post-contest recovery period was Jun. He was back at his own apartment by 6 AM, barely two hours before the start of his workweek.

### Results

Is it really necessary to write a lot about statistics and scores in a contest, where a single operator completed more than 10,000 contacts and where old world records seemed to be worth almost nothing? I don't think so. Anyway, we managed to triple the existing M/S SSB record from 4U1VIC and posted a claimed score of about 10.3M points. This will hopefully be enough to make it into the "European Top Ten Box."

The operators of 4U1VIC during the 1999 CQ World Wide DX SSB Contest were JH4RHF, OH2TA, DF6VP, DL1EFD, DL2MEH, DL2OBF, DL3KDV, DL4OCL, DL6BCF and DL9YAJ. All QSLs for this contest operation should be sent via the OE QSL Bureau. ■

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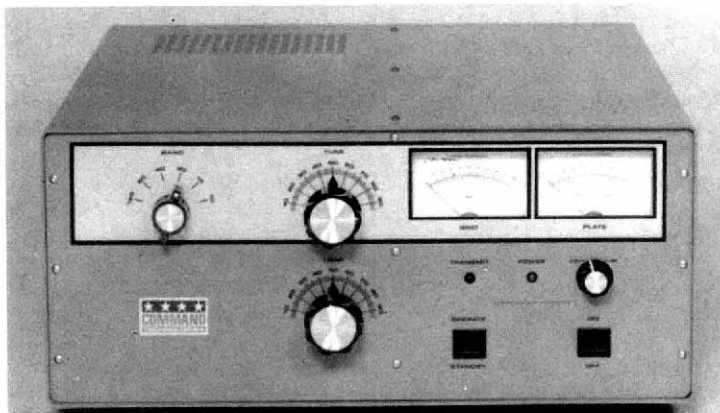


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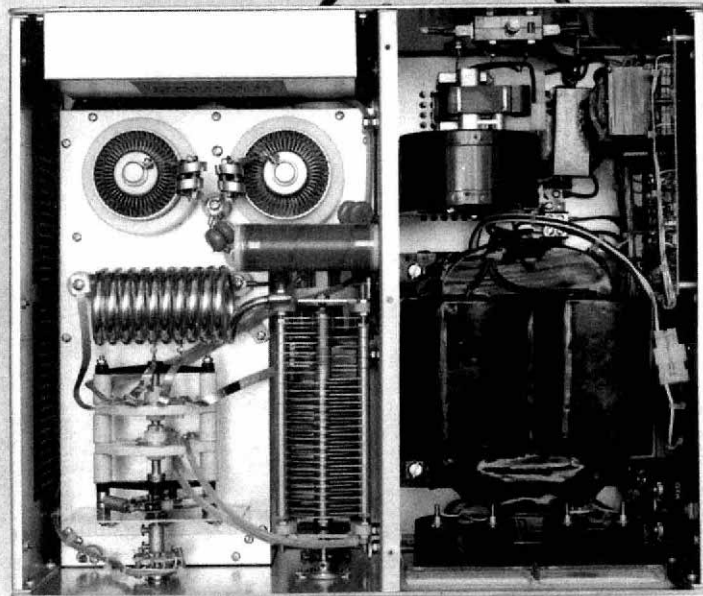
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# The Monoband Log-Cell Yagi Revisited—Part 4: V-ing the Log-Cell Yagi Elements

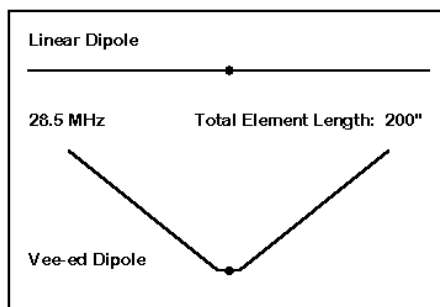
One perennial design feature of log-cell Yagis has been the use of elements that form a forward **v**. Perhaps the chief proponent of this design feature has been Zimmer, K4JZB, in his 1983 *CQ* articles on log-cell Yagis, although the idea reappears from time to time in related contexts.<sup>1</sup> For one 5-element version of the antenna, the text claims a 16 dB gain, although the frame of reference for the gain figure is not given.

All of the designs that we have explored in the first three parts of this series have used linear elements. Given the widespread repute of **v**-ed elements to improve gain, directivity or other aspects of beam performance, it may be useful to explore the matter further. Since **v**-ed elements present no challenges to the limits of *NEC*, we may use this modeling software to develop some appropriate comparisons between various types of antennas using linear and **v**-ed elements.

## The V-ed Dipole

In order to understand the performance of **v**-ed beams, we should begin with the **v**-ed dipole, that is, a dipole that is bent forward from linear by a certain number of degrees on each side of center. **Figure 1** shows the general outline of the models used in this exercise. A standard 200-inch dipole length is used throughout, with 1-inch aluminum tubing as the material. The model uses a short, 3-segment, linear wire at the center of the antenna in order to provide the feedpoint segment with equal length segments on either side.

<sup>1</sup>Robert F. Zimmer, K4JZB, "Development and Construction of 'V' Beam Antennas," *CQ*, Aug, 1983, pp 28-32; and "Three Experimental Antennas for 15 Meters," *CQ*, Jan, 1983, pp 44-45.



**Figure 1**—General outlines of linear and horizontally **v**-ed dipoles.

The degree of **v**-ing refers to the angle made on each side of the antenna relative to a line that would represent a linear element. Hence, 10 degrees of **v**-ing would bend each side of the dipole 10 degrees forward of the linear line. None of the angles used in this test presses any *NEC* limitation for accuracy of results.

**Table 1** provides an indication of what occurs when a dipole element is **v**-ed forward. The free-space gain of the antenna decreases for each level of **v**-ing. As well, the feedpoint impedance decreases. Perhaps most significantly, the front-to-side ratio also decreases. **Figure 2** compares the free-space azimuth patterns of a linear and a 40-degree **v**-ed dipole and graphically

illustrates the reduction in side rejection for the **v**-ed version.

When used as an inverted-**v** antenna with the legs angled downward, the reduced side rejection is sometimes listed as an advantage, despite the reduction in broadside gain. However, when the dipole is **v**-ed horizontally, nothing is gained by way of directivity or other effect that might be useful in a multi-element beam antenna. Since all of the designs that we shall consider use the  $\frac{1}{2}\lambda$  dipole as their starting point, we should not have any expectations that **v**-ing the elements will yield added performance in any particular area.

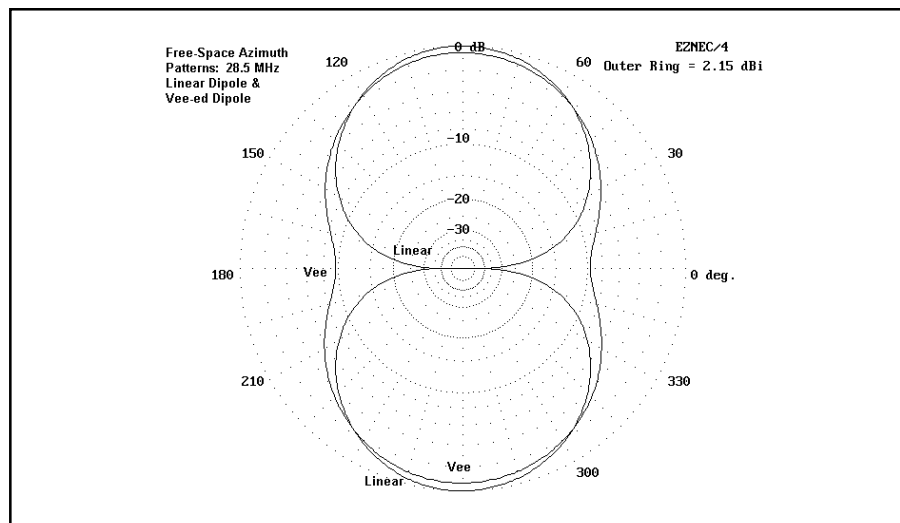
Perhaps what lies behind the idea that **v**-ing elements may yield added performance is the concept of the **v**-beam, a

**Table 1**  
Gain, front-to-side ratio and impedance of dipoles at various degrees of **v**-ing.

Forward Angle (degrees)*	Free-Space Gain (dBi)	Front-to-Side Ratio (dB)	Feedpoint Impedance ( $R + jX \Omega$ )
0 (linear)	2.15	>30	$77 + j18$
10	2.12	21	$76 + j17$
20	2.02	15	$70 + j15$
30	1.85	12	$62 + j10$
40	1.62	9	$50 + j2$
50	1.37	7	$37 - j8$

Note: The total length of the 1-inch diameter aluminum dipole element is 200 inches to yield a feedpoint impedance close to resonance at 28.5 MHz when each side is bent forward 40 degrees from linear. See **Figure 1** for the general outline of the test model.

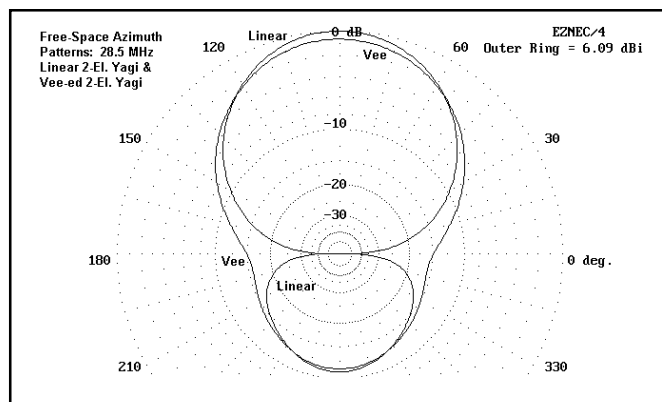
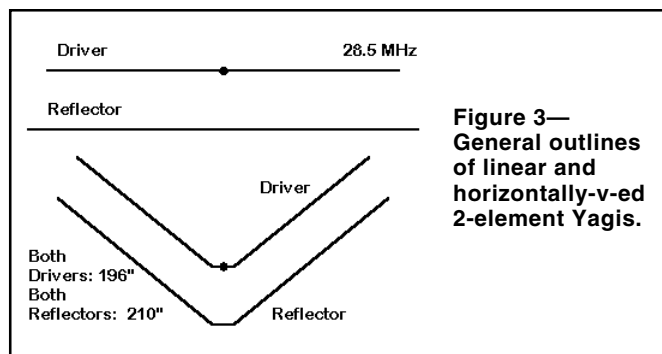
\* Relative to a linear dipole.



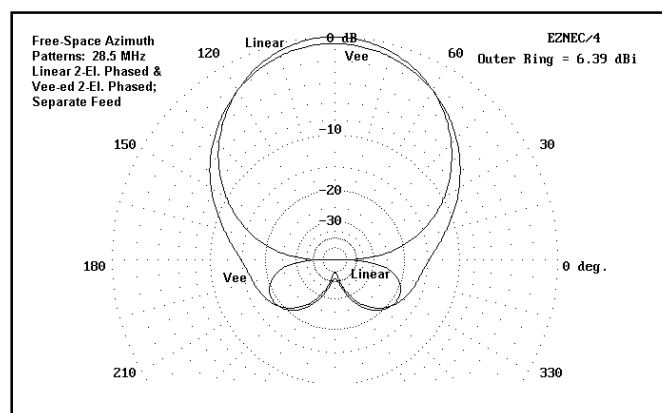
**Figure 2**—Free-space azimuth patterns for linear and **v**-ed dipoles at 28.5 MHz.

very old and simple antenna design. However, the **v**-beam is always many wavelengths long and produces many lobes and nulls. When the designer chooses the proper angle between the elements, the main lobes combine to form a single very strong bi-directional lobe set along the line bisecting the angle between wires. There will almost always be lesser lobes and nulls to the sides, that is, roughly broadside to the wires. If one terminates each of the far ends of the **v** with resistors to ground, then the **v**-beam develops a unidirectional pattern.

However, the  $\frac{1}{2}\lambda$  dipole develops only a single lobe at right angles to the wire, resulting in a bi-directional pattern. There are no lobes at angles away from broadside that may combine into a single stronger lobe. The dipole lobes can only be distorted from their shape when produced by a linear wire.



**Figure 4—**Free-space azimuth patterns for linear and v-ed 2-element Yagis at 28.5 MHz.



**Figure 5—**Free-space azimuth patterns for linear and v-ed 2-element phased arrays at 28.5 MHz, using separate feeds for each element.

## 2-Element V-ed Beams

Rather than leave the subject with only the dipole as an indicator of the performance of **v**-ed antenna arrays, let's look at a few beam designs, beginning with 2 elements. Throughout, we shall bend the elements forward 40 degrees as a standard level of **v**-ing. **Figure 3** shows the general outline of linear and **v** Yagis using a driver and reflector in each case. The driver length is 196 inches for both antennas, and the reflector is 210 inches long. Element spacing is 48 inches. The **v**-ed version of the antenna shows a feedpoint impedance of  $23 + j4 \Omega$  at 28.5 MHz, close to resonance. When stretched to linear shape, the impedance rises to  $36 + j30 \Omega$ .

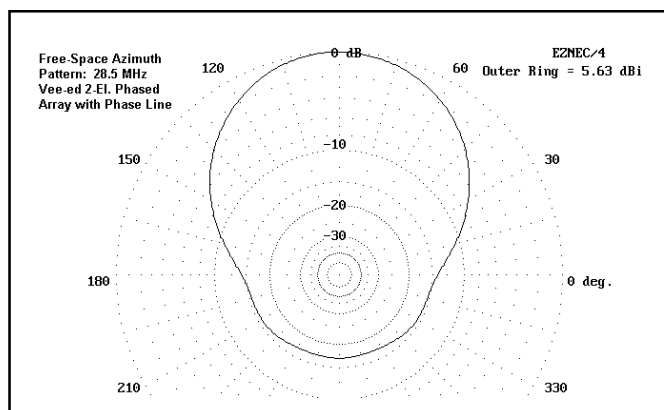
**Figure 4** provides comparative free-space azimuth patterns for the two versions of the Yagi. The **v**-ed version has a free-space gain of only 5.45 dBi compared to the linear version gain of 6.09 dBi. Both antennas have front-to-back ratios of about 10.8 dB, but the **v** shows far less side rejection than the linear antenna. This result is, of course, consistent with the results of our dipole test.

Since our ultimate goal is to evaluate **v**-ed element use in log-cell Yagis, we may revise the outline in **Figure 3** to provide each element with a separate feed point. In this manner, we may directly control the relative current magnitude and phasing on each element. Let's try this experiment to see if **v**-elements promise any improved performance when independently phased.

When independently phased for a maximum rear null, the **v**-ed version shows a free-space forward gain just below 5.9 dBi when the rear element is set at a relative current magnitude of 0.94 and a phase of 141 degrees (with the forward element set to a magnitude of 1.0 at a phase angle of zero degrees). For a maximum null to the rear, the comparable linear rear element must be set at a current magnitude of 0.98 with a phase angle of 139 degrees. Under these conditions, the linear phased array shows a forward gain of nearly 6.4 dBi. **Figure 5** shows free-space azimuth patterns that illustrate the pattern differences. Besides the  $\frac{1}{2}$ -dB gain differential, the low side rejection of the **v** version is clearly evident.

There are no simple means of obtaining the optimal phasing conditions for the **v**-ed phased array. The closest that I have come is the use of a 35- $\Omega$  phasing line from one element to the next. Higher values of phase-line characteristic impedance yield lower performance figures. However, unlike available lines, the modeled line required a velocity factor of 1.0, with lesser values producing poorer results. **Figure 6** shows the resulting free-space azimuth pattern, which has a forward gain of just over 5.6 dBi and a front-to-back ratio of just under 17 dB.

All-in-all, we must account the results of our attempt to **v** 2-



**Figure 6—**Free-space azimuth patterns for a v-ed 2-element phased array at 28.5 MHz, using a phasing line between elements.



element arrays a disappointment. However, the results should not be surprising, since such arrays depend for their performance directly upon the dipoles that compose them.

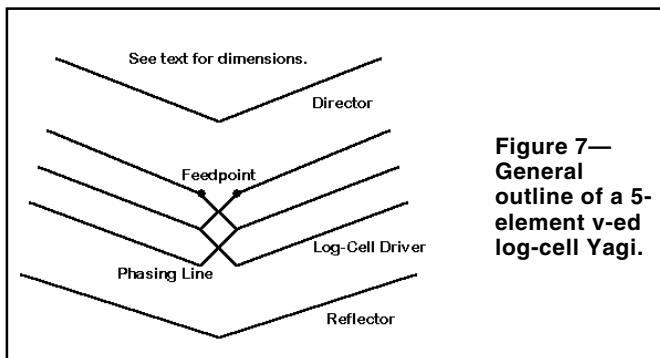
### The V-ed Log-Cell Yagi

The results of our experiments with 2-element parasitic and phased arrays unfortunately do not bode well for the performance of v-ed log-cell Yagis. However, with a multi-element cell and additional parasitic elements, we cannot dismiss the possibility of superior v performance without suitable testing. Therefore, I have taken one of Zimmer's designs—a 5-element log-cell Yagi—and developed both linear and v-ed models. The general outline of the v-ed version appears in **Figure 7**.

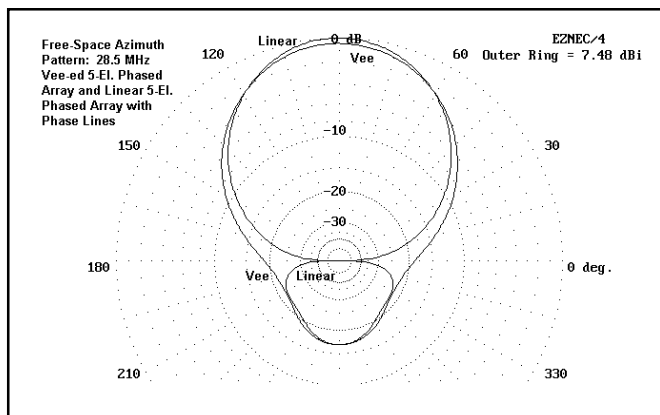
The reflector for each model is 211.5 inches long and placed 48 inches behind the 3-element log-cell. Working from the rear forward, the cell elements are 201 inches, 198.8 inches and 196.6 inches, each spaced 24 inches from the next. The director is placed 48 inches forward of the cell and is 187.6 inches long. The phase-line characteristic impedance producing the most usable results was 200 Ω.

**Figure 8** shows free-space azimuth patterns for the linear and the v-ed versions of this antenna. The linear version is virtually identical to the 5-element log-cell Yagi examined in **Part 3** of this series. Once more, the v-ed version of the antenna shows lower gain with a reduced front-to-side ratio.

For the v-ed log-cell Yagi, the relative current magnitude and phasing on the three driven elements at 28.5 MHz with the 200-Ω phasing line—from front to rear—was 0.87 at 15.9 degrees, 0.52 at 147.2 degrees and 0.32 at 171.4 degrees. These values offer us one more experimental possibility.



**Figure 7—**General outline of a 5-element v-ed log-cell Yagi.



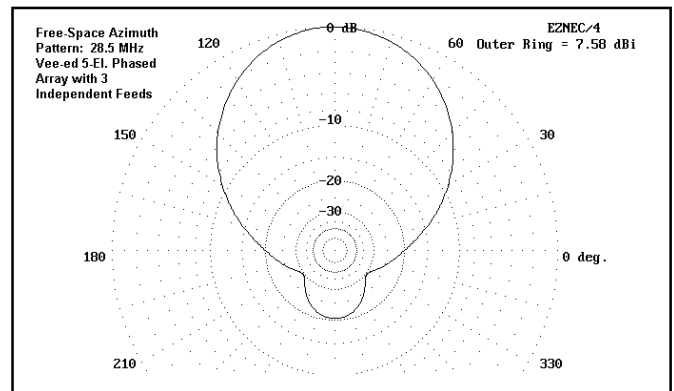
**Figure 8—**Free-space azimuth patterns for linear and v-ed 5-element log-cell Yagis at 28.5 MHz, using 200-Ω phase lines between driver cell elements.

Suppose we separately feed each element of the log cell and optimize the current magnitude and phasing on each element. For example, if we set the forward element at a magnitude of 0.7 and a phase angle of 20 degrees, the middle element at 0.67 at 145 degrees, and the rear element at 0.4 at 169 degrees, we can increase both the gain and the front-to-back ratio of the array. The resulting free-space azimuth pattern appears in **Figure 9**.

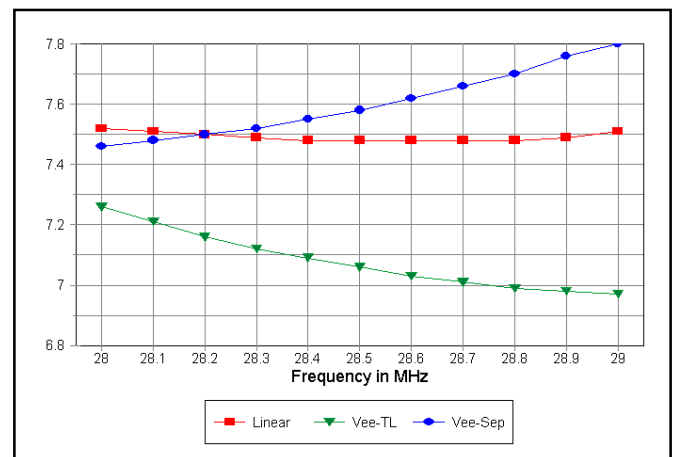
For a further comparison across the first MHz of 10 meters, we can plot the free-space gain values of the linear and 200-Ω phase-line v array against the v array with separately fed driver elements. **Figure 10** shows the results. The linear array exceeds the gain of the phase-line-fed v array by an average of 1/2-dB. The hypothetical separately-fed array has slightly more gain than the linear array.

In **Figure 11**, we can see the potential front-to-back values for each antenna, with the linear and phase-line-fed v-ed array having quite similar values. The hypothetical array using separately fed driver elements is potentially capable of considerably better front-to-back performance.

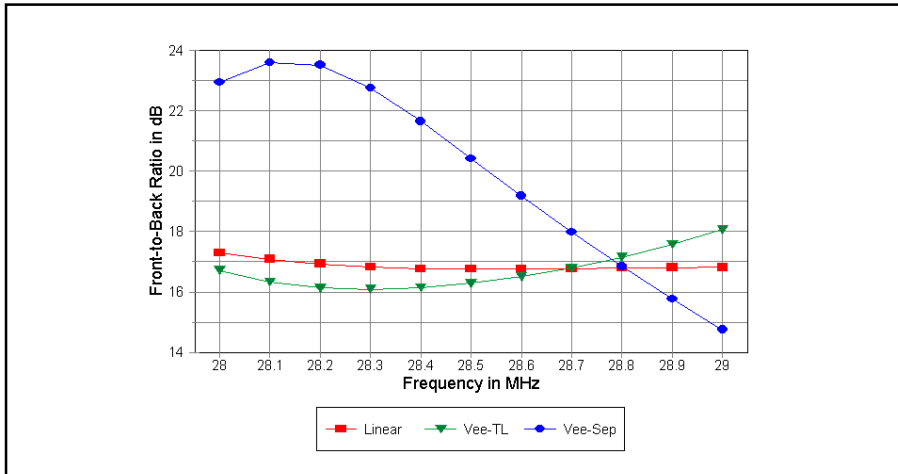
The difficulty with both the phase-line-fed v array and the alternative with separately fed drivers is feeding the system. The v-ed array with a phase line shows a tendency toward rapid feedpoint impedance changes, ranging from 50 Ω at 28 MHz down to about 10 Ω at 29 MHz. Indeed, experiments that varied the spacing of the reflector and the director failed to come up with a relatively constant feedpoint impedance



**Figure 9—**Free-space azimuth patterns for a v-ed 5-element log-cell Yagi at 28.5 MHz, using separate feeds for each element.



**Figure 10—**Free-space gain from 28-29 MHz of log-cell Yagis: linear, v-ed with a phase line, and v-ed with separate feeds.



**Figure 11—Front-to-back ratio from 28-29 MHz of log-cell Yagis: linear, v-ed with a phase line and v-ed with separate feeds.**

for the first MHz of 10 meters. The smooth 50-Ω direct feed obtained by the linear model (which was far from the best of the log-cell Yagis examined in Part 3) is wholly absent from the v-ed model. Hence, the v-ed model with a phasing line would be useful for only a narrow operating bandwidth.

With separate feed for each driver element, the problem becomes insurmountable for the average amateur con-

struction project. I know of no practical way to effect separate feeds for each element short of phasing networks for each element. The builder would also need the ability to measure currents and phase angles to a degree of precision beyond most ham shops.

**The Bottom Line**

In the entire set of experiments reported here—plus a considerable num-

ber of other models—v-ing elements of 1/2-λ-based arrays has proven to be an exercise in futility. Throughout, the v-ed versions always exhibited lower gain and reduced side rejection relative to comparable arrays using linear elements. The comparative azimuth patterns shown in this final part of the series are truly representative of the total collection of v-ed models run.

Since each v-ed model shows its heritage in the v-ed dipole, we may take the performance of that basic antenna in comparison to a linear dipole as correctly indicative of the performance reduction likely to occur in any v-ed array when set over and against a comparable array of linear elements. This note, of course, applies only to arrays based upon the 1/2-λ dipole. As we noted at the very beginning, multi-wavelength v-beams are another matter entirely.

The myth of the v-ed element array of 1/2-λ elements has perhaps persisted too long in amateur circles. I hope these notes help dispel it to some degree. More to the point, if a monoband log-cell Yagi is the design of choice to meet a given set of operating needs, then the best of the linear element log-cell Yagis examined in Part 3 will likely always be a better selection than a v-ed counterpart. ■

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# NCJ Profiles

## Mr. Virginia—Bob Morris, W4MYA

H. Ward Silver, N0AX  
hwardsil@wolffenet.com

I'll tell you, it's a rare domestic contest that I don't put W4MYA in the log. As a matter of fact, when I'm faced with pulling a call out of a huge mess and I only get "...YA" or "...4M..."—or the like—W4MYA is on the top of my mental super-check partial list. More often than not, I've contacted the ever-present Virginian station of Robert Morris, W4MYA.

Bob is somewhat unusual among contesters these days—he has resisted the urge to get a snazzy vanity call, and has remained in the VA section as W4MYA for the past 41 years. He was first licensed in West Virginia as KN8NNC. His dad was transferred to Richmond in 1959.

"Charlie Larus, K4AL (SK), gave me the Conditional exam. When the envelope came from the FCC I was delighted to be 13 years old with the call W4MYA. Incentive licensing necessitated upgrading, but I never changed calls. Thirty-five years with AT&T has been very good to me; I have never had to move to keep my many jobs."

"My Elmer was my Dad (also a Silent Key now). He got KN8NND at the same time I was licensed. Dad was also the Scout Master of the Boy Scout troop I was in. I can remember stringing wire from tent to tent and using a J38, a buzzer and batteries to practice CW on camping trips to earn a merit badge."

Bob's transition to contesting occurred with the referral of a friend. "In 1969 I met up with Jack Reichart (now N4RV). He was in Engineering at AT&T and I was in the local maintenance work force. We got on the topic of radio and then contesting. He invited me up to operate with him on 20 meters at W3MSK. WOW, what a turn-on! High antennas, racks of amplifiers, S-Lines. The crew was W3AZD on 10 meters, K3EST on 15, N4RV on 20, W3TMZ on 40, K3ZO on 80 and W4IN on 160 meters. That really planted the seed—one day I wanted to have a station like *that*."

It took a while for that seed to flower. "My first piece of equipment was a BC-779 receiver with a transmitter that was borrowed from Charlie on the weekends—a DX-20 with several crystals. I used to marvel at the DX Steve Rice, KN8LOU (now K8SR), worked with his tower and beam on 15 meters—a band I did not get on until way later."

One thing about contesters is that we have long memories. When we get together with one of our old buddies, it's like only a few days have passed. "Another



**Bob operating 20-meters during the WPX SSB 2000.**

person to marvel at was Dave Ellis, KN8MBH (now WA8WV)—I always did have trouble with his call back then. He was a terrific CW op. I finally caught up with Dave last year and we talked (after 30+ years) about contesting, etc, and he came here to operate in the ARRL CW DX contest. Great to have him, he had a good time and did a great job."

Contesting also brings us together to form some great clubs. "In the '80s the Central Virginia Contest Club was formed. We contested from KX4S and W4DR's homes back then—mostly M/S and a couple of tries at M/M. Our biggest problem was that the 10- and 15-meter antennas were on a common tower/rotator and the 40- and 20-meter antennas were mounted on a second common tower/rotator."

"I can remember using the idiot wheel to try to figure out if the 40-meter beam was pointed to Europe and at the same time wondering which direction we should be pointing the 20-meter antenna to get a signal towards VK. We beat W3LPL once, but of course that was the first year he had any antennas up. No one from around here has come close since."

Fulfilling the dream that had formed in 1969, Bob has put together a formidable contest station in the rolling hills of Goochland County. "In 1989 I purchased a house on five acres. The members of the Central Virginia Contest Club spent months building what is here now. KB4DI, WK4Y, W4HJ, N4EHJ and W4HZ were the steady weekend contributors as the tower and ground crews."

"The highest point is 365 feet ASL. When you get above the treetops all you see is horizon. The lot is 215 feet by 1050 feet, stretching out along 30 and 210 degree bearings, so the seven towers almost line up from front to back."

"The original shack was a 14 × 20-foot outbuilding about fifty feet from the house. After the first several attempts at M/M from the 'shack,' I could tell we were improving when we began to beat Fred Laun, K3ZO's, single-op scores."

"Then my sights were set on the big M/M's. We started showing up in the Top Ten, but with about half of the winner's score. As of last year I have a new 24 × 30-foot shack attached to the house—no more having to go out into the elements. The immediate effect was that we are now closer to two-thirds of the bigger M/M scores and looking to increase that percentage."

The southeastern US isn't known for being the best spot for operating either domestic or DX contests from, even though many of the top DXCC spots are held by calls from the fourth district. Given the difficulties of geography, staying competitive takes extra effort. "Number one is to be loud and number two is to make noise. On 75/80 meters the ultimate antennas seem to be quad loops and a vertical array. Quad loops have served me well. Mine are diamond-shaped. Get the top as high as possible (mine are 135 feet) and pull out the center to get a good diamond. I have consistently seen a 10-dB difference between the NE/SW and NW/SE loops."

"On 20, 15 and 10 meters, stacks with a StackMatch is the way to go. I went from a single 7-element Yagi at 145 feet to a 3-stack of a 7-element over a 5-element at 65 feet over another 5-element at 35 feet. The two lower antennas are fixed towards Europe. This made a tremendous difference in the signal strengths from Europe and I'm able to beam in two directions. It's a very effective combination."

"It's still very difficult to get operators to make a full weekend commitment. When there is no second op on 15 or 20 meters, I will take my 4/4 stack, a 4-element on the second tower and a TH7 on a third tower, run them into a StackMatch box and have the ability to beam in three different directions at once. Like it has been said many times before, you can't have too many antennas at different heights."

Trying to summarize Bob's current and future station is like trying to condense the Sears catalog.

There are one or two radios for every band from 160 meters through 70 cm—a mixed lot dominated by an FT-1000MP and TS-930/940 rigs. There's a variety

of amplifiers including home-brew and commercials, with the venerable L4B being the most popular of the HF set, and a Johnson Thunderbolt 6N2 lurking on VHF. "I pick up a piece here, a piece there," he says.

The antenna farm sports an even more extensive list. Suffice it to say that with seven towers, there are very many "L's" in the description of the aluminum trove at W4MYA. Notable components include a big set of 400-foot beverage antennas spaced 30 to 50 degrees around the compass for 80 and 160 meters. The 40-meter stack is an imposing 3/3 stack at 120 feet and 65 feet on a Trylon 120-foot tower. One tower of note is a 64-foot Rohn HDBX once owned by W4XR of Frankford Radio Club fame.

The fourteen shack PCs are all 486 units networked on a coaxial LAN and running CT9.50. Bob wrangles the quarter-million contest QSOs with DX4WIN.

Future plans include repairing all the antennas in the list with "broke" written next to them and optimizing the 10-meter skyhooks. Three more towers are in the works along with quad arrays for 80 meters to Europe. I'd love to see an aerial shot of that hilltop—it must look like an aluminum pincushion!

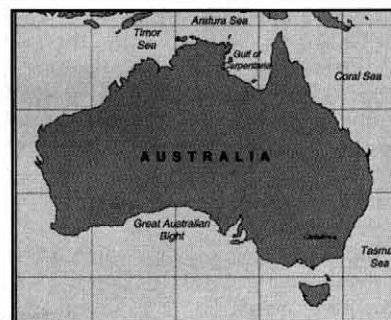
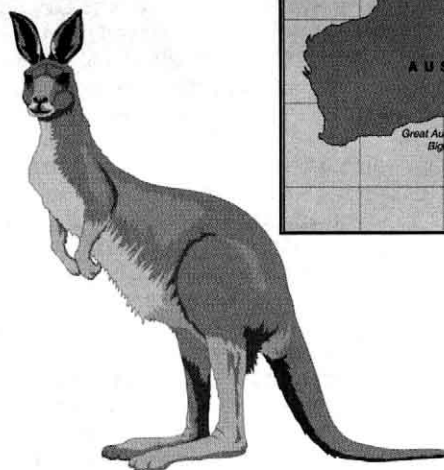
A love for equipment aside, enthusiasm is what keeps us in the game, whether at a big setup like Bob's or a modest station like the vast majority of contestants. This is the common thread. "First of all I love to work stations contest style, one after the other. The thrill is not knowing who or what part of the world will call next. I remember in one WPX contest having JY1 call me on 20 meters. I got totally flustered! The best contests are those where everyone works everyone else. CQWW and WPX are my favorites."

"I think that with the restructuring, we will see more people involved in con-

testing. It will favor the SSB portions, of course, but I think there are a lot of Technician and Technician Plus hams out there who will now be interested in participating on the HF bands. To me this just means more and more QSOs and better rates. I foresee a time when scores will be posted on the Internet in real-time—as a contest is going on. I really don't see a problem with being able to post scores within one or two hours after the contest ends. The software keeps getting better and better."

I consider Bob a contest "maven"—one who is experienced and knowledgeable. "Another type of 'maven' is a fellow club member—someone who greets me by name or says 'Good to see you again.' The camaraderie of the team allows us to do the best possible job with what we have, working stations on all six bands." Who says contesting is a solitary sport? ■

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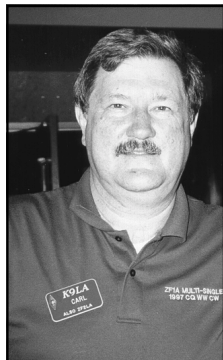
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## The Statistical Nature of Propagation Predictions

Every once in a while I hear or read a comment about propagation predictions not being accurate. Although there are conditions under which predictions truly fall apart (the best example being high latitude propagation under disturbed geomagnetic



K9LA

field activity), most of the time I think the real problem is a lack of understanding of the statistical nature of propagation predictions. Let's take a look at this, with the ultimate goal of formulating a general rule of thumb to apply to the outputs of our propagation prediction programs.

The starting point is the model of the ionosphere. Many years of ionosonde measurements have resulted in a collection of critical frequency data for the E region ( $f_oE$ ), the  $F_1$  region ( $f_oF_1$ ) and the  $F_2$  region ( $f_oF_2$ ).

The model of the ionosphere is a monthly model, as it correlates monthly median ionospheric parameters to the SSN (*smoothed sunspot number*) of the desired month. So we'll be dealing with data in a given month. To keep this analysis from getting too long, we'll only look at  $f_oF_2$  data. The concepts we'll apply are also valid for the E region and the  $F_1$  region.

Let's assume that we want to predict the  $F_2$  region MUF (*maximum usable frequency*) over a 3500 km single-hop path at 0100Z for the month of November at an SSN of 25. What we need is the  $f_oF_2$  data for the midpoint of the path for November at 0100Z with an SSN of 25.

**Table 1**  
An example of the daily  $f_oF_2$  data (in MHz) for a hypothetical path midpoint location during the month of November at 0100Z and an SSN of 25.

4.5	6.6	7.4
4.9	6.7	7.6
5.2	7.8	7.7
5.5	6.9	7.8
5.7	6.9	8.0
5.9	7.0	8.1
6.1	7.1	8.3
6.2	7.1	8.7
6.3	7.2	8.9
6.5	7.3	9.3

This data consists of  $f_oF_2$  values for each day of the month, so we have 30 pieces of data. In numerical order from lowest to highest (not sequential day order), the  $f_oF_2$  data might look like that presented in **Table 1**.

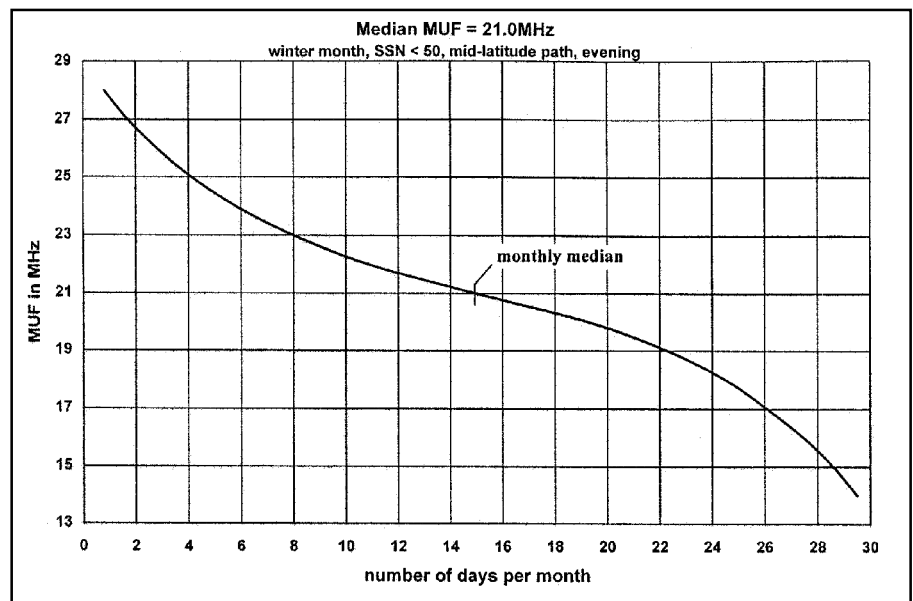
Now the job is to characterize this data. It should be obvious that you can't simply say that  $f_oF_2$  is X, because the data is "all over the map" during the month. That's because on any given day at 0100Z in a November with a SSN = 25,  $f_oF_2$  could be from a low of 4.5 MHz to a high of 9.3 MHz for this specific path. That's quite a spread, and shows how variable the ionosphere can be on a daily basis. Since we can't characterize it in terms of an absolute, we have to characterize it in terms of a value on how many days of the month. This is done by defining the median value, determining the upper and lower deciles and assuming an appropriate distribution.

The median value is that value that has half of the data below it and half of the data above it. In other words, on half the days of the month the actual  $f_oF_2$  will be below the predicted median value and on the other half of the days of the month the actual  $f_oF_2$  will be above the predicted median value. For the  $f_oF_2$  data given, the median is 7.0 MHz. That's about 21.0 MHz in terms of a median MUF (the MUF for a 3500 km single-hop is about 3 times  $f_oF_2$ ). The median MUF is one of the two basic outputs of a

propagation prediction. *IONCAP*, *MINIPROP* and the other programs give the median MUF in either tabular format or graphical format.

The upper and lower deciles tell how much the actual MUF may vary about the median. They are the "10% of the days" point and the "90% of the days" point. Tables of MUF variability in terms of the upper decile and lower decile were developed from all the data, and are based on SSN, season, path latitude and time. **Figure 1** shows us what we get if we apply those parameters to our 21.0 MHz median MUF for a winter month, an SSN less than 50, a mid-latitude path and in the evening. Understanding this plot is essential to understanding propagation predictions.

Note that there is nothing absolute in Figure 1. The only way to state anything about the graph is in terms of the number of days it should occur during the month. For example, the MUF should be at least high enough for 10 meters (28 MHz) on 1 day of the month. It should be high enough for 12 meters (24.9 MHz) on 4 days of the month. It should be high enough for 15 meters (21.0 MHz) on 15 days of the month. It should be high enough for 17 meters (18.1 MHz) on 24 days of the month. It should be high enough for 20 meters (14 MHz) on all the days of the month. If you require communications every day, then 20 meters would be your workhorse band. If you plan to



**Figure 1**—The variability of Maximum Usable Frequency (MUF).



contest on 10 meters, then you hope that the one day of the month that the MUF reaches 10 meters will be on the contest weekend.

Figure 1 also shows where the parameter FDAYS comes from that IONCAP reports. For example, IONCAP would report an FDAYS value of 0.03 (1 divided by 30) for 10 meters, an FDAYS value of 0.13 (4 divided by 30) for 12 meters, an FDAYS value of 0.50 (15 divided by 30) for 15 meters, etc. MINIPROP calls this AVAILABILITY, puts it into one of four groups, and uses the letters A, B, C and D instead of an actual number. In summary, FDAYS or AVAILABILITY tells you the probability of a band being open in terms of how many days of the month.

As I mentioned in my May/June column, the predictions in the ARRL Antenna Book CD do not give the FDAYS—it's assumed that the band is open (FDAYS assumed to be very high). With regard to MUF, in general this assumption gets you in trouble on the higher bands at the lower SSN levels. For example, the prediction for 6Y to Zone 4 for 10 meters for December at Very Low SSN gives S9 signal strengths from 1500 to 1900Z, but the FDAYS (which is not given) is around 0.30 for these hours. This means 10 meters will only be open on about 9 days of the month at these times. If you're not aware of this, you could be very disappointed and would accuse the Antenna Book prediction of being wrong.

Let me reiterate what I said last month about this, though—for our Amateur Radio operations I think it's better to predict an opening and not have it happen than to not predict an opening and have it happen.

Just because the FDAYS is high and the signal strength is high doesn't assure a QSO, either. For example, the lower bands usually have FDAYS very high (as the MUF is usually high enough), but QRM and QRN can keep you from making a QSO even though the predicted signal strength is high, too.

Speaking of signal strength, the median signal strength is the other basic output from a propagation prediction. In a similar manner, the same analysis for a median signal strength of S6 under the same conditions of Figure 1 would result in Figure 2. IONCAP, MINIPROP and the other programs also give the median signal strength in either tabular format or graphical format. It also is in terms of the number of days in the month, and—as can be seen from the figure—its spread can be considerable.

The conditions for Figure 1 and 2 are typical of the variability for a winter month, an SSN less than 50, a mid-latitude path and an evening time. Under other conditions the variability could

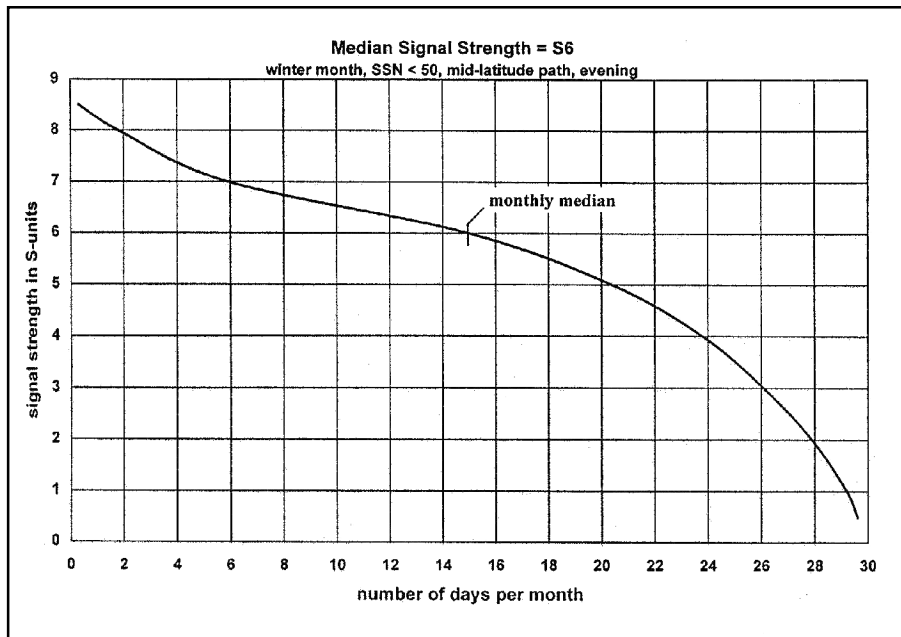


Figure 2—The variability of the signal strength.

be more (in general, high latitude paths) or less (in general, low latitude paths).


From these two figures we can come up with a general rule of thumb to apply to the median MUF and median signal strength outputs of your predictions to account for the variability.

For the MUF, if the band closest to the predicted median MUF is open on any given day of the month, check the next higher band, too. If the band closest to the predicted median MUF is not open on any given day of the month, check the next lower band. My guess is that this is probably something you

do naturally anyway.

For the signal strength, we can say that the signal strength should be within several S-units of the predicted median value on any given day of the month (if the band is open).

Armed with this understanding of the day-to-day variability of the ionosphere and this very general rule, I hope your predictions make more sense now. I won't claim that this will allow you to do any better in your contesting and DXing efforts, but it may save you some frustration when interpreting the results of propagation prediction programs. ■



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# Contest Calendar

Compiled by Bruce Horn, WA7BNM  
bhorn@hornucopia.com

Here's the list of major contests to help you plan your contesting activity through October 2000. The Web version of this calendar is updated more frequently and lists contests for the next 12 months. It can be found at <http://www.hornucopia.com/contestcal/>.

Please note that the SEANET Contest is combined into a single contest for both CW/SSB this year. State QSO party fans should also be aware of date changes for the Oregon, Georgia and Texas QSO parties, as well as the return of the Louisiana QSO Party.

As usual, please notify me of any corrections or additions to this calendar. I can be contacted at my callbook address or via e-mail at [bhorn@hornucopia.com](mailto:bhorn@hornucopia.com). Good luck and have fun!

## July 2000

RAC Canada Day Contest 0000Z-2359Z, Jul 1  
Venezuelan Ind. Day Contest, SSB 0000Z, Jul 1 to 2400Z, Jul 2  
MI QRP Club July 4th CW Sprint 2300Z, Jul 4 to 0300Z, Jul 5  
IARU HF World Championship 1200Z, Jul 8 to 1200Z, Jul 9  
WRTC2000 1200Z, Jul 8 to 1200Z, Jul 9  
CQ Worldwide VHF Contest 1800Z, Jul 8 to 2100Z, Jul 9  
QRP ARCI Summer Homebrew Sprint 2000Z-2400Z, Jul 9  
Pacific 160-Meter Contest 0700Z-2330Z, Jul 15  
North American QSO Party, RTTY 1800Z, Jul 15 to 0600Z, Jul 16  
Six Club Sprint 2300Z, Jul 15 to 0400Z, Jul 16  
Colombian Ind. Day Contest 0000Z-2400Z, Jul 16  
Georgia QSO Party 1800Z, Jul 22 to 0359Z, Jul 23 and 1400Z-2359Z, Jul 23  
Venezuelan Ind. Day Contest, CW 0000Z, Jul 29 to 2400Z, Jul 30  
Russian RTTY WW Contest 0000Z, Jul 29 to 2400Z, Jul 30  
IOTA Contest 1200Z, Jul 29 to 1200Z, Jul 30

## August 2000

10-10 Int. Summer Contest, SSB 0001Z, Aug 5 to 2400Z, Aug 6  
European HF Championship 1000Z-2200Z, Aug 5  
North American QSO Party, CW 1800Z, Aug 5 to 0600Z, Aug 6  
ARRL UHF Contest 1800Z, Aug 5 to 1800Z, Aug 6  
YO DX HF Contest 0000Z-2000Z, Aug 6  
QRP ARCI Summer Daze SSB Sprint 2000Z-2400Z, Aug 6  
WAE DX Contest, CW 0000Z, Aug 12 to 2400Z, Aug 13  
W/VE Islands Contest 1600Z, Aug 12 to 2359Z, Aug 13  
Maryland-DC QSO Party 1600Z, Aug 12 to 0400Z, Aug 13 and 1600Z-2300Z, Aug 13  
SARTG WW RTTY Contest 0000Z-0800Z and 1600Z-2400Z, Aug 19 and 0800Z-1600Z, Aug 20  
ARRL 10 GHz Cumulative Contest and 0800-2000 local, Aug 20 0800-2000 local, Aug 19  
Keyman's Club of Japan Contest 1200Z, Aug 19 to 1200Z, Aug 20  
SEANET WW DX Contest, CW/SSB 1200Z, Aug 19 to 1200Z, Aug 20  
Oregon QSO Party 1400Z, Aug 19 to 0400Z, Aug 20  
North American QSO Party, SSB 1800Z, Aug 19 to 0600Z, Aug 20  
New Jersey QSO Party 2000Z, Aug 19 to 0700Z, Aug 20 and 1300Z, Aug 20 to 0200Z, Aug 21  
TOEC WW Grid Contest, CW 1200Z, Aug 26 to 1200Z, Aug 27  
SCC RTTY Championship 1200Z, Aug 26 to 1200Z, Aug 27  
Ohio QSO Party 1600Z, Aug 26 to 0400Z, Aug 27

## September 2000

All Asian DX Contest, SSB 0000Z, Sep 2 to 2400Z, Sep 3

IARU Region 1 Field Day, SSB 1500Z, Sep 2 to 1500Z, Sep 3  
Panama Anniversary Contest 0001Z-2359Z, Sep 3  
MI QRP Club Labor Day CW Sprint 2300Z, Sep 4 to 0300Z, Sep 5  
WAE DX Contest, SSB 0000Z, Sep 9 to 2400Z, Sep 10  
IRCC Bison Stampede (Indiana QP) 1800Z, Sep 9 to 0200Z, Sep 10  
ARRL September VHF QSO Party 1800Z, Sep 9 to 0300Z, Sep 11  
North American Sprint, CW 0000Z-0400Z, Sep 10  
YLRL Howdy Days 1400Z, Sep 15 to 0200Z, Sep 17  
Air Force Anniversary QSO Party 0001Z, Sep 16 to 0700Z, Sep 17  
ARRL 10 GHz Cumulative Contest 0800-2000 local Sep 16 and 0800-2000 local Sep 17  
Scandinavian Activity Contest, CW 1200Z, Sep 16 to 1200Z, Sep 17  
Washington State Salmon Run 1600Z, Sep 16 to 0700Z, Sep 17 and 1600Z-2400Z, Sep 17  
QCWA QSO Party 1800Z, Sep 16 to 1800Z, Sep 17  
North American Sprint, SSB 0000Z-0400Z, Sep 17  
CQ/RJ Worldwide DX Contest, RTTY 0000Z, Sep 23 to 2400Z, Sep 24  
Scandinavian Activity Contest, SSB 1200Z, Sep 23 to 1200Z, Sep 24  
Panama Radio Club Contest 1200Z-2359Z, Sep 23  
2000 6-Meter Activity Contest 1800Z-2200Z, Sep 26  
Louisiana QSO Party 0000Z-2400Z, Sep 30  
Texas QSO Party 1400Z, Sep 30 to 0500Z, Oct 1 and 1400Z-2000Z, Oct 1

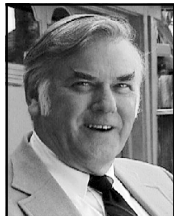
## October 2000

RSGB 21/28 MHz Contest, SSB 0700Z-1900Z, Oct 1  
VK/ZL/Oceania Contest, Phone 1000Z, Oct 7 to 1000Z, Oct 8  
EU Autumn Sprint, SSB 1500Z-1859Z, Oct 7  
California QSO Party 1600Z, Oct 7 to 2200Z, Oct 8  
Iberoamericano Contest 0000Z, Oct 7 to 2000Z, Oct 8  
10-10 Day Sprint 0001Z-2400Z, Oct 10  
VK/ZL/Oceania Contest, CW 1000Z, Oct 14 to 1000Z, Oct 15  
YLRL Anniversary Party, CW 1400Z, Oct 14 to 0200Z, Oct 16  
EU Autumn Sprint, CW 1500Z-1859Z, Oct 14  
Pennsylvania QSO Party 1600Z, Oct 14 to 0500Z, Oct 15 and 1300Z-2200Z, Oct 15  
FISTS Fall Sprint 1700Z-2100Z, Oct 14  
Asia-Pacific Sprint, CW 0000Z-0200Z, Oct 15  
North American Sprint, RTTY 0000Z-0400Z, Oct 15  
RSGB 21/28 MHz Contest, CW 0700Z-1900Z, Oct 15  
JARTS WW RTTY Contest 0000Z, Oct 21 to 2400Z, Oct 22  
Rhode Island QSO Party 0000Z, Oct 21 to 2400Z, Oct 22  
QRP ARCI Fall QSO Party 1200Z, Oct 21 to 2400Z, Oct 22  
Worked All Germany Contest 1500Z, Oct 21 to 1500Z, Oct 22  
2000 6-Meter Activity Contest 1800Z-2200Z, Oct 24  
CQ Worldwide DX Contest, SSB 0000Z, Oct 28 to 2400Z, Oct 29  
10-10 Int. Fall Contest, CW 0001Z, Oct 28 to 2400Z, Oct 29  
YLRL Anniversary Party, SSB 1400Z, Oct 28 to 0200Z, Oct 30

## Sending In Your Logs

The more I read through the current rules of the various international contests the more it becomes apparent that their sponsors are uniformly insisting that

W5ASP



### 1999 All Asian DX Contest

Call	Band	QSOs	Mults	Score
<b>CW</b>				
<b>USA</b>				
WA6FGV	21	268	101	27068
NA2X	21	98	65	6370
W7/JR1NKN	21	58	43	2494
W0TIV	21	35	27	945
W3FQE	21	32	27	864
W1WMH	21	17	17	289
K3ZO	M	777	268	208236
K3WW	M	600	203	121800
WN6K	M	512	203	103936
K1KI	M	513	202	103626
K5HP	M	414	175	72450
W7HS	M	213	173	36849
K4BAI	M	263	138	36294
AK1N	M	253	133	33649
NA2M	M	149	97	14453
N4BP	M	151	79	11929
N6JM	M	120	90	10800
WO4O	M	117	76	8892
W1FJ	M	110	79	8690
WT8P	M	100	77	7700
W8ELL	M	91	72	6552
N2UN	M	86	61	5246
N4MM	M	76	60	4560
N4XR/1	M	73	52	3796
W0RXL	M	60	53	3180
WO9S	M	60	41	2460
WA2VQV	M	44	33	1452
W2EZ	M	16	13	208
K4UK	M	15	12	180
K5VG	M	13	9	117
K6III	MM	224	106	23744
<b>Canada</b>				
VY2MGY/3	14	17	2	34
VE7VF	21	267	101	26967
VE3HX	21	87	57	4959
VA3UZ	21	19	14	266
VE1ZJ	M	334	161	53774
<b>Phone</b>				
Call	Band	QSOs	Mults	Score
<b>USA</b>				
WA6FGV	21	339	106	35934
W6VNR	21	137	59	8083
WO4O	21	16	13	208
W7/JR1NKN	21	2	2	4
K3ZO	M	633	252	159516
NA2M	M	54	49	2646
K4IU	M	38	30	1140
K0DAT	M	16	6	96
K3WW	MM	183	111	20313
<b>Canada</b>				
VE1JX	M	210	115	24150
VE7XO	M	69	55	3795

the entries be submitted in digital form. Paper logs are still accepted—but reluctantly, and the practice is certainly not encouraged. Right now they are taking logs in just about any of the various formats provided by the more popular logging programs. In a couple of cases they are actually making available free software with which to log their contest.

Mailing in the digital log on diskette is the usual suggestion. In addition there is an increasing number of e-mail addresses being listed for those who prefer that route. In most cases there is an added benefit in using electronic mail in that an automatic acknowledgement is sent upon receipt. Most stateside contesters have already come to expect such arrangements. It's encouraging to see that the international contest community is together on this.

As many of you are aware, there is currently a concerted effort being made by the two major contest sponsors in the states, the ARRL and the CQ contest organization, to put into place a standard format for log submission. The purpose of this standard is to expedite the entry of data into the sponsor's contest database with the elimination of the errors that accompany manual data entry. The creators of the various contest logging programs have incorporated this standard format into their software. For those using the current releases of these programs, the entire process is transparent. Push the right button and out pops the log in the right format.

Those of you who have operated the international contests covered in this col-

### 1999 VK/ZL/OCEANIA Contest

Call Score

#### North America

<b>CW</b>	
K3ZO	2889
K4IU	1400
W7HS	1386
N6ZZ	1056
N7DR	897
K5AM	576
VE4MF	138
W8IQ	108
W7DRA	9

#### Phone

K3ZO	4530
N6ZZ	960
N4MM	224

### 1999 ARI International DX Contest

Call	Class	QSOs	Mults	Score
N4BP	SO-CW	488	191	461216
K3WW	SO-CW	377	187	422974
N4AF	SO-CW	204	129	168102
K2SX	SO-CW	211	117	146844
KM5G	SO-CW	209	113	140768
AB2E	SO-CW	138	91	53984
WA2VQV	SO-CW	34	32	8640
K3WWP	SO-CW	5	5	215
WA3DMH	SO-SSB	46	35	10106
N8WTH	SO-SSB	20	18	3210
N2LQQ	SO-SSB	8	8	253
N8II	SO-MIX	124	81	61590
N6RT	SO-MIX	32	12	1248
VE3ZT	SO-MIX	40	30	4719

### Upcoming International Contests

RAC Canada Day Contest	01-Jul-00
Venezuela SSB Contest	01-Jul-00
IARU HF Contest	08-Jul-00
SEANET DX Contest CW	15-Jul-00
Columbian Independence Contest	16-Jul-00
Venezuela CW Contest	22-Jul-00
R5GB IOTA Contest	29-Jul-00
YO Romanian DX Contest	06-Aug-00
WAEDC European DX Contest CW	12-Aug-00
Keyman's Club Japan CW Contest	19-Aug-00
SEANET DX Contest Phone	19-Aug-00
Top of Europe World Wide Grid Contest	26-Aug-00
All Asian DX Contest SSB	02-Sep-00
LZ Bulgarian DX Contest	02-Sep-00
Panama Anniversary Contest	03-Sep-00
WAEDC European DX Contest Phone	09-Sep-00
Scandinavian Activity Contest CW	16-Sep-00
Scandinavian Activity Contest Phone	23-Sep-00

Note: With few exceptions logs and summary sheets must be postmarked within 30 days of the contest.



### 1999 SP-DX Contest

Call	Class	Score	QSOs	Points	Mults
<b>USA</b>					
K3WW	SOMB-MIX	28800	194	576	50
NO9E	SOMB-MIX	6624	69	207	32
NJ6P	SOMB-MIX	810	18	54	15
W4MOT	SOMB-CW	28764	204	612	47
AB2E	SOMB-CW	27048	184	552	49
KM5G	SOMB-CW	4452	53	159	28
W8RSW	SOMB-CW	3150	70	210	15
W2EZ	SOMB-CW	252	12	36	7
AB5KP	SOMB-SSB	975	25	75	13
N2LLM	SO-14-MIX	3408	71	213	16
W9ZEN	SO-14-MIX	1260	30	90	14
K1QM	SO-14-MIX	126	7	21	6
W1END	SO-14-CW	1440	32	96	15
KE1DZ	SO-14-SSB	7968	166	498	16
N4MM	SO-14-SSB	168	8	24	7
K1CC	SO-21-MIX	11040	230	690	16
K2YJL	SO-21-CW	1287	33	99	13
N6KUZ	SO-21-SSB	144	8	24	6
<b>Canada</b>					
VE3PND	SOMB-MIX	5265	65	195	27
VE3QAA	SOMB-CW	30600	204	612	50
VE3KZ	SOMB-CW	18630	136	405	46
VE3UOL	SOMB-CW	5304	68	204	26
VE3ZT	SOMB-CW	855	15	45	19
VA3KA	SOMB-SSB	2016	42	126	16
VA3ECH	SO-14-SSB	216	9	27	8

### 1999 OK/OM DX Contest

Claimed Scores			
Call	Score	Call	Score
<b>AB</b>			
K3ZO	245,364	<b>SB 20</b>	
K3WW	80,256	K9MOT	507
K4BHI	53,436	VE1KB	432
W4OEL	51,408	W1END	432
W2CVW	46,053	VE4IM	27
K4AO	45,588		
N4MM	10,560	<b>SB 40</b>	
WA1LWS	2,754	KA7T	1,404
N6ZZ	147	K9MOT	243
K8UCL	75	VE1KB	12
<b>SB 10</b>			
K6EID	8,970		
W1END	1,800		
VE1KB	1,728		
K9MOT	768		
<b>SB 15</b>			
VA3UZ	6,450		
K9MOT	2,349		
W1END	1,725		
VE4IM	675		
K8UCL	75		
VE1KB	27		

umn are certainly aware that the major logging programs specifically include some of these contests and, with a little "tinkering," can be used for others. As a result your logs are available in digital format, as requested by the contest sponsor, and it's a simple task to "send 'em in" either on disk or via e-mail.

And herein arises a possible dilemma. Is this new Standard Format going to be acceptable for international contests? While I have seen nothing in print so far, I think it is inevitable that this same standard will be adopted worldwide. Although the "not invented here syndrome" prevails in many human endeavors, Amateur Radio may be blessed with a common acceptance of progress no matter where it originates.

So my advice is to prepare your logs for international contests just as you will be doing for domestic events. And whenever you can, take advantage of the e-mail submission route. It certainly will simplify everyone's life, reduce the hassle of "sending in the log" and keep the fun foremost in your contesting.

For those of you who might have missed it, Bruce, WA7BNM, whose *Contest Calendar* regularly appears in the *NCJ*, maintains not only our Web site—<http://www.ncjweb.com>—but also an excellent Web site of his own—<http://www.hornucopia.com/contestcal/index.html>—that offers extensive information on all contests. And that is exactly where you can find all those neat log submission e-mail addresses I was talking about. See... the *NCJ* family provides for your every contesting need... well almost.

## *K0XG Systems.*

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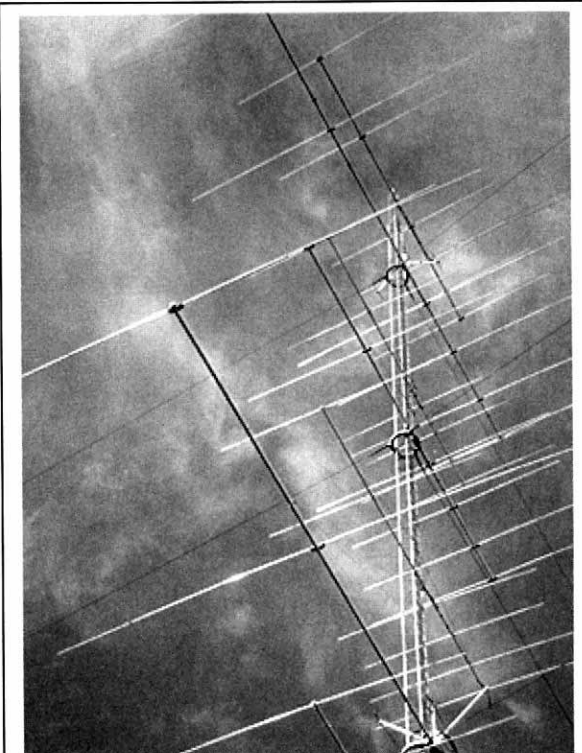
Rotating tower parts for both HF and VHF applications.

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Elevated rotors.

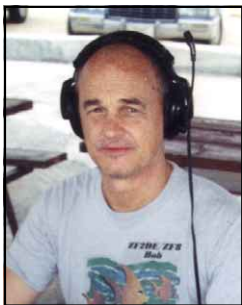
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I was both surprised and honored when Ron, KU7Y, asked me if I would take over as the *Contesting for Fun* columnist. Ron and I have had several contest connections over the past few months—which is perhaps why he thought of me when the time came to “turn over the reins.”



N4BP

Back in September of '99, he somehow conned me into entering the *NCJ* Sprint operating QRP. This turned into a very educational experience—I had never seriously entered this event before.

In October, Ron and I, along with N8ET, N0UR and K0FRP, formed the “Aluminum Kings” to compete as a team in the QRP ARCI Fall QSO Party. We made over 13 million points and, although this has not yet been confirmed, we believe we set a new team record.

In December, Ron somehow convinced me to bang my head repeatedly against a brick wall by entering the ARRL 160-Meter Contest running QRP! That

bit of fun, I may choose *not* to repeat...

Although this column has previously dealt primarily with QRP operating, my objective is to make the only guideline for topics “Fun.” This works out perfectly for me. I enjoy participating in QRP events but I run high power in most of the major contests such as CQWW, ARRL DX, Sweepstakes, etc.

This brings me to the point of begging for your help. If you’ve recently participated in a contest operation where the emphasis was on “Fun,” I need to hear from you. This is your opportunity to get your story in print in a national publication. Please contact me at [n4bp@bc.seflin.org](mailto:n4bp@bc.seflin.org). If you’re one of the few left without e-mail access, please write me at:

Bob Patten, N4BP  
2841 NW 112 Terrace  
Plantation, FL 33323

Bruce, W4OV, and Julio, WD4JR, are a couple of guys who really know how to combine contesting with fun. They have participated in quite a few DXpeditions together and have always combined scuba diving with whatever contest DXpedition they were participating in. I was lucky enough to join the two of them on Little Cayman a couple of years ago

for the HF Radiosport. When we were down there, I tagged along with them to “Bloody Bay Wall” and did some snorkeling while they did their 100-foot plus tank dives.

Other trips with Bruce included a Field Day at Fort Jefferson in the Dry Tortugas (Florida) during which we dove on a wrecked sailboat several hundred feet off Garden Key.

We also got together for a February “Field Day” called the “Freeze Your B—Off.” For the FYBO, we lugged a table and two chairs, a TS-130V, a trap vertical and a marine battery up a commercial TV tower. At 550 feet, we set up a station on a platform that encircles the tower and fastened the “vertical” horizontally on a railing. Even running just 5 W, our transmitting range was quite good (we were heard in KL7). Unfortunately, our reception was poor due to the many RF sources on the tower.

Two years ago, Bruce and I drove over 700 miles through 21 Florida counties to participate in the revival of the Florida QSO Party.

This past February—while I went to the Bahamas—Bruce and Julio—along with another US ham, two Canadian hams and a German ham—flew to St Kitts for the ARRL DX CW Contest. Here is Bruce’s account of that trip.

## 2000 ARRL DX Contest Fun from St Kitts—V47C

by Bruce Phegley, V47OV/W4OV

### Our Caribbean Destination

Officially named St Christopher and with a sister island Nevis, St Kitts is located in a group of islands in the northern Leeward Islands of the Eastern Caribbean. St Kitts became the first British settlement in the West Indies in 1623. Soon it developed into an important colony with a large sugar industry—built on the labor of African slaves.

For a time the area was shared with France, but that ended in 1783 when it became a British colony.

In 1983 St Kitts and Nevis became an independent nation. Sugar cane is still an important product there; some of it is used to make rum.

St Kitt’s geography is widely varied, ranging from mountainous rain forest—that supplies an abundance of water to the villages—to desert. Golf, tennis, horseback riding, mountain climbing, cricket as well as fishing, scuba diving

and beach parties are just a few of the popular recreational activities.

A combination of island exploration, scuba diving and ham radio can turn a contest DXpedition into a fun adventure. Let’s face it, winning contests is great, but it doesn’t pay much! Why kill yourself?

### Gathering Up the Right Equipment and Personnel

The members of our group were myself—Bruce Phegley, V47OV/W4OV—and Julio Ripoll, V47CC/WD4JR, from Florida; Joe Adams, V47CA/VE3BW, and Norm Sanger, V47GS/VE3VFR, from Ontario, Canada; Bob Andersohn, V47CX/K0CCX from St Louis, Missouri; and Markus Hammelmann, V47CAX/DK5AX from Germany.

This international mix of skills and personalities combined to form a team that provided loads of laughs and a truly enjoyable contesting DXpedition experience.

For equipment we took a couple of

ICOM IC-706s, a Mosley Mini 33, an AL-811H amplifier, a compact vertical, a lightweight fiberglass mast with a loop antenna, a balloon vertical for 160 meters and a couple of notebook computers.

With six people, it was easy to split up and transport this load. The antennas fit inside a canvas ski bag. Sports equipment bags were packed with gear and checked as baggage. Some people did seem a bit puzzled when they spotted us in the airport carrying a ski bag and traveling towards St Kitts, a place where the temperature never, ever, dips below 70 degrees Fahrenheit.

### Up and Running

Shortly after we arrived at our hotel and set up our beam antenna, a group of tourists gathered and asked us if we were talking to the cruise ship that had just pulled into the harbor. Our antenna was pointed directly at it.

We split up the contest operating time



into 4-hour shifts. We dedicated one radio to contesting and set the other one up for operating the WARC bands. ICE filters were used on each to avoid interference problems.

We brought along a helium balloon to support our 160-meter antenna. Unfortunately it broke loose and flew away early Saturday morning during a brief storm. We figure that the 151 QSOs we collected with it cost about \$1 each—considering the cost of the balloon and the helium.

We replaced it with an inverted L. We lashed a 2x4 mast to one of the hotel's upstairs railings and hoisted up a wire. From there we strung the horizontal section off in a northerly direction to a bougainvillea bush in a lot next door. We worked the wire against the radials that remained from the ill-fated balloon antenna.

This antenna also worked well on 40 and 80 meters.

We can't say who was operating at the time, but somewhere along the line our antenna tuner developed a carbon path and started to arc over. My toothbrush and a little toothpaste solved that problem. The only way to get all the carbon out of my toothbrush was to brush my teeth vigorously and rinse!

Even though we were not using a particularly rare or exotic call, the pileups were terrific and a blast to wade through. For some, I guess we may have been a new band country. For others, I am sure, it was just the irresistible challenge of breaking through the huge pileup.

NA and our computer-controlled IC-706 got along almost perfectly. Some of our operators reported that the amplifier relay was a little slow though. It occasionally truncated the first character on receive—sometimes a K sounded more like an A or a W sounded like an M.

The NA software made it easy to log and respond to the calls. Just trying to keep the pileup under control is another one of the fun things about being the DX.

Some of our guys felt that the operating before and after the contest was the most enjoyable part. We had our WARC band station set up in another room and connected to our all-band loop antenna. We were especially popular on 17 meters and logged several hundred QSOs on that band.

### Island Adventures

The people of St Kitts are super friendly. It is no problem to have a great time—as long as you are in “...no hurry, Mon!” This island (as is the case with most of the others in the Caribbean) is run on “island time.” No one seems to be in a rush to get anything done.

We toured the island, visited the fortress at Brimstone Hill and ate at various local places. We drank the local *Carib* beer and the *Ting* grapefruit drink that's



The V47C QSL Card.



The sun sets behind our tribander.

made right there on the island.

We rented a moped and toured the remote scenic southern end of the island. Scuba diving trips were fun and we had a chance to mingle with some of the other tourists. The weather was great, the food was good and the people at the hotel were very accommodating with all of our antenna requests.

### Heading Home

Another interesting event occurred as we were departing. While boarding the Super ATR 60-seat aircraft, Bob suddenly realized that he did not have his camera. While the plane was taxiing out

to the runway, he remembered where he left it—at the gate!

We spoke with the flight attendant. She had the pilot turn around and return to the boarding area! The camera was handed up to the pilot through the cockpit window and it was quickly delivered to Bob. This resulted in a spirited round of applause from the other passengers. I am sure this sort of thing does not happen in many other places.

A future trip is sure to be planned that will certainly include invitations to all of the St Kitt's team members. We hope to work you from our next destination!

73, Bruce W4OV/V47OV

Now, did that adventure sound like fun or what! I look forward to joining forces again with these individuals sometime in the future.

Field Day 2000 is now history. While exercising your group's ability to function in an emergency setting, I trust you also enjoyed having a chance to get together with friends for some super outdoor fun.

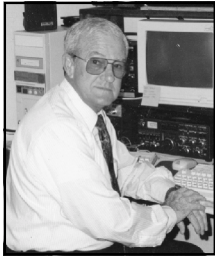
My group, the Guano Reef Bashful Perverts, once again participated QRP from the Florida Keys. This year we ran an Elecraft K2 from a marine battery and radiated our RF from a trapped vertical sitting on a seawall just inches above the waters of the Gulf of Mexico. For me, our Field Day is the premier “Fun” event of the year!

Once again, please contact me if you have an interesting—and Fun—contesting story to tell. As the new columnist for *Contesting for Fun*, I'm counting on you folks to help me share with others the “enjoyable side” of contesting.

73, Bob Patten, N4BP



Greetings, RTTY Contesters. If you missed the *NCJ* RTTY Sprint in March, you missed a good one. With close to 100 entrants eagerly showing up for the inaugural running of this fun event, there was a lot of dial twisting and band changing going on. Entrants who were at first reluctant to



K7WM

enter due to the seemingly complex rules quickly found themselves immensely enjoying the format of this contest.

But don't worry if you missed the March event—the second of these biannual Sprints will be held in October, giving everyone the opportunity to put their battle plan for frequency changing and band hopping to the test. Rules for the Sprint can be found [elsewhere](#) in this issue and on the *NCJ* Web site <http://www.ncjweb.com/>. Dick, N1RCT, also posts the rules on his “All Things RTTY Web site” [http://](http://www.megalink.net/~n1rct)

[www.megalink.net/~n1rct](http://www.megalink.net/~n1rct).

The results of the first *NCJ* RTTY Sprint will appear in the next issue.

Our guest columnist this month is Eddie, W6/G0AZT, who has kindly offered to provide some details about what it takes to do a contest from a DX location. Eddie also likes to twist the dials and occasionally let the smoke out. He is an avid Contestator and DXer and really doesn't need any introduction. If you've operated RTTY for over 30 days, you've probably already worked him from somewhere...

## The 1999 CQ/RJ RTTY WW DX Contest from Benin

by Ed Schneider, W6/G0AZT

I had no intention of going anywhere for the 1999 CQ/RJ RTTY WW DX Contest, having been to Aruba with Ray, WF1B, and his wife Suzanne for 1998's world-record-breaking Multi single low power effort as P40RY. However, in July my 90-year-old mother decided that she wanted me to visit. Now, going across the pond without doing a contest is not my idea of fun—so I began planning.

Knowing that the new kid on the block, Jacob, P43P, was bound to enter and HC8 had already been taken, I knew that I had to plan on operating from somewhere relatively rare and worth 3 points per Q to have any chance of an outright win in my class. 8R was an option, but having to cart all the equipment down there on my own did not appeal to my 10-stone weakling, bad advertisement for Charles Atlas's exercise program, body.

What about Africa? There are not too many RTTY Big Guns operating from that part of the globe. I sent a quick e-mail to Peter, TY1PS, asking if he, his lovely wife Bibi and their 3 kids would object to me dropping in again and eating all their fresh papaya, mango and pineapple fruit salad, and playing contest. I received a “come on back, stay longer this time, bring swimming trunks and a sense of humor, no problem” reply.

### Travel and Licensing Arrangements

Immediate plans for air travel were made and my visa renewal went into the mail. I chose to take American Airlines from SFO to JFK. (I needed 6000 more miles to be eligible to get a free flight to the 2000 Dayton Hamvention.)

For the portion of the flight from JFK to

*Paré* and onward to Benin I booked on Air France. Their food service is much better, the female flight attendants are *muy bueno* and I could even smoke on the Paris to Benin leg.

Seeing as I still had quite a few QSL cards left over from our 1996 M/S Benin effort with Ray; Glenn, W6OTC and ex-“five volts” (KE6FV), I requested TY1RY again. I faxed Peter the old license, which he took to the appropriate authorities. They just signed and date stamped it without any fee.

### Station Planning

More e-mails to Peter requesting information on the state of his antennas, rigs, etc, left me with two options.

OPTION ONE: Operate from Peter's QTH located 200 yards from the sea. There is usually a nice breeze to keep the malarial mosquitoes at bay—but no A/C, no TH7DX or tower. The tower had to be taken down (before it fell down) due to extensive saltwater corrosion. Also the 2-element 40-meter beam attached to a pole on the side of his house no longer rotated and there was an “open” in the feedline.

OPTION TWO: Operate from Peter's office in Cotonu with my own room and no sea breeze—but working A/C! There is a rotatable 10-30-meter log periodic at about 60 feet. There is also a second tower with a 2 GHz beam used for a direct Internet link via satellite. The second tower had plenty of room for a 40-meter beam.

Initially I preferred Peter's QTH—in spite of the antenna problems.

I had a word with Glenn, W6OTC, and he kindly offered to let me borrow the Force-12 C4 that we used in 1996. The

original boxes, however, were in very bad condition. Glenn ordered replacements. Unfortunately the boxes were far too flimsy, in my opinion, to withstand heavy-handed airline baggage handlers and the rigors of a round trip of nearly 20,000 miles.

Peter also reminded me that Air Afrique, who handles Air France's interests in Benin, would almost certainly charge heavily for excess baggage. At the last minute I decided on OPTION TWO.

I arrived in Benin late in the afternoon on Wednesday, complete with all of my luggage. I was met by Peter, TY1PS, in his brand new Toyota 4x4. He had just picked up from the dealer on his way to the airport.

### Putting It All Together

When we arrived at his home we immediately surveyed the antenna and rig situation and made arrangements for a work party to be available first thing Thursday morning. They would remove the 40-meter beam from his house and transport it into town.

The “open” was easy to find. When we took the antenna down, we discovered that the feedline was no longer attached to the driven element! Removing the two elements from the boom was not a problem—naturally, the u-bolts broke. Due to the huge amount of corrosion, it was not practical nor wise to attempt to dismantle the actual elements into manageable sections for fear of completely destroying them. Both x-hats had already fallen apart. We decided to transport the boom and both elements as complete units.

Anyone who has seen a 402-CD on

the ground will confirm that it is a fairly large chunk of aluminum! Somehow the work party guys managed to transport the whole thing on a small truck to the office site without sideswiping pedestrians, motorcyclists or other highway obstructions—and there were many enroute!

Once we got it to the site, we further evaluated its condition. There was extensive corrosion at many of the element joints and the four X-hats had corroded beyond recognition.

I immediately assigned one of the younger work party members the job of checking for continuity at each joint. This youngster had never even seen an ohmmeter, let alone handled one, but after some quick instruction he soon became known as “Mr Continuity.” When he found a high resistance, he drilled a hole on either side of the joint, made up a metal strap and—using self-tapping screws—made a solid electrical connection.

Meanwhile, I was digging around in Peter’s numerous equipment storage rooms and came across a couple of small VHF/UHF beams that used solid aluminum rods as elements—ideal material for manufacturing new X-hats!

With Peter’s permission we cannibalized them for parts and built four “like new” X-hats. Then, after touring downtown Cotonu for a few hours looking for the right sized U-bolts, we began reassembling the 402-CD. Peter’s driver did a wonderful job of locating the dozen much-needed clamps. (They are readily available there, *if* you know where to find them.)

While all this antenna work was going on, Peter had set up two stations consisting of Yaesu System 600 commercial HF rigs, two computers with WF1B logging software, various TNCs including a HAL PCI 3000, a PTC-II, my PK-232 and a JPS NIR-10. Unfortunately his FT-1000 had met an untimely end due to rust indigestion.

The station setup was configured such that if one rig or computer died in the early hours of the morning, I would not have to call Peter for assistance. Mind you, he told me in no uncertain terms that if I *did* call him, he would not come anyway! Everything was tested thoroughly, the JRL solid state amplifier produced a good kW and, despite the rat’s nest of cabling, no RFI problems were encountered.

Friday came far too quickly. The 40-meter beam was ready to be manually hauled up the second tower by two of the antenna-erecting specialists in the work party. Due to the challenges presented by numerous guy wires, commercial wire antennas for Peter’s business, and huge palm and fir trees

obstructing the ascent, twilight was soon upon us. The “conversation” between Peter, the work force boss, the climbers and me could undoubtedly be heard for a few city blocks. Eventually, by the light of flashlights, the beam was clamped to the tower and fixed towards the USA.

Zero-hour was fast approaching and I was still lacking an 80-meter antenna. I had brought a ready-made G5RV with me. A suitable tree was selected and one end of the 102-foot wire was attached. The tower with the log periodic on it would support the other end. To reach the tower, however, the wire had to pass over the main 220 V ac power lines coming onto the property. I asked Peter if he knew whether those two lines had good insulation. His reply, “I don’t know—just throw the antenna across them but stand well back. Don’t worry, I have a standby generator if we need it.”

Luckily the power lines WERE well insulated and the G5RV was in position in a matter of minutes without plunging half the city into darkness. (Please don’t try this at home, kids!—*WM*)

There were six hours to go before start time. I was prepared to do some serious contesting. Food and coffee were in place, a mattress was ready on the floor in case I needed forty winks sometime during the next 48 hours, and a carton of cigarettes and a huge ashtray completed the requirements.

### Contest Action

Deciding which band to start on is always a problem when operating from a part of the world one is not familiar with—propagation wise. I chose 20 meters and at 0000Z, my first CQ was answered by HK3BZO. *Five minutes later*, my next contact was with K8AA for a triple mult. Had I chosen the wrong band?

The wonders of Packet and Internet spotting produced a short run of US stations before the band died. After an hour, a QSY to 40 meters produced a fair run of European and US stations.

I very quickly learned that the System 600 was not designed for digital pileups. The rig had no selectable AGC and soon got swamped by the many callers. On a few occasions I just had to QSY—I could not print anything other than “TY1RY de \$\*7b^.” (Why do so many digital ops insist on sending the DX’s call sign first, rather than just theirs? The DX already knows his call and really would prefer to have the calling station’s call sign.)

I was thankfully kept fairly busy for the entire 48 hours, only stopping for a quick snack, sandbox visits, ashtray emptying and two one-hour periods of sleep.

80 meters was a disaster. I netted only one contact, TY1PS (yes—Peter!). On

the other hand 10 and 15 were tremendous. The log periodic and a kW sure helped. Post-contest comments confirmed that I was plenty loud enough into the States. The LPDA antenna was rarely moved from the EU/USA heading, working US states being of prime importance in the CQ WW.

With this in mind, for a time I wondered why the JAs were not their normal S9 that I’m used to when operating from W6 land. It took me a while to figure out that the path from TY to JA is NOT the same beam heading as from W6 to JA. Duhhh.

On one occasion I was digging through a big pileup and I kept seeing “de TY\*% pse K.” I mentioned to Peter that I thought someone was pirating my call sign. Glancing across the shack, I noticed that Peter had a huge sarcastic grin on his face. I then realized that HE was calling me from the standby rig and using one of the commercial antennas! I think that proves how insensitive these rigs were. Here I was pumping 1000 W into the log periodic and he was exactly on my frequency with the other rig and this scenario didn’t blow the front end out of either rig.

On his way in to work one morning, Peter arrived in the shack and, without looking at the rig, remarked that I was on 40 meters. I asked how he could tell. “Well, I listen to shortwave radio on the way to work and from three blocks away the car radio would go deaf every time you transmitted.” Fearing local reprisals, I suggested that I should get off 40 meters pronto. “Don’t worry,” he replied, “with the towers and antennas all over the place, most of the local people think this is an embassy compound.”

### The End Result

I had set a target of 2000 contacts, but ended up with 1988 in the contest log. I missed DE, MT, NV, ND and SD, but I did work 93 DXCC countries. I will proudly accept the African plaque sponsored by Doug, N6TQS, and a new SOAB high power record of 2.9k+.

My thanks to all those who helped make this operation possible, with special thanks to Peter, TY1PS, his wife Bibi, their three children and the Benin PTT. Also thanks to American Airlines and Air France—who were kind enough to make an equal number of landings and take-offs with me on board.

Please send QSL cards direct only to PO Box 5194, Richmond, CA 94805, USA.

73, Eddie, G0AZT (TY1RY, ZF1RY, P40RY, 8R1TT, guest op in 1996 at 3V8BB, etc)

That’s all for this issue. Hope to see all of you in the contests and pileups.

Wayne, K7WM

## WA8WZG—a VHF “Clean Sweep”!

Over the past few years there have been a few dominant figures and groups on the VHF Contesting scene. Only one operator has accomplished the “Clean Sweep”—winning the January, June and September ARRL VHF contests as a Single op—Tom Whitted, WA8WZG. Tom, who holds an Extra Class ticket as



**N0JK using his backup radio—an MFJ-9406—to operate 6 meters from Don Barclay’s (KH8/N5OLS) shack in American Samoa.**

well as the First Class FCC ‘phone license with radar endorsement, recently hosted an all-band multioperator effort in the 1999 January VHF Sweepstakes from his station in EN81 that made major news!

Operated by a seasoned crew and taking advantage of “over the water” tropo paths to Chicago and Buffalo, Tom’s station posted a phenomenal score of 790k+ points that was a new all-time January SS Multi-op record. The WA8WZG 1999 contest crew, better known as the “BF the B Boys” consisted of WA8WZG, N2CEI, WA8RJF, W5LUA, W5ZN, Sandra (CT and computer support) and Jody (logistics and support).

The 1999 WA8WZG contest station consisted of legal limit power on 50 MHz, 144 MHz, 222 MHz and 432 MHz.

Power levels used on other bands were:

903 MHz	300 W
1296 MHz	200 W
2304 MHz	50 W
3.4 GHz	25 W
5.7 GHz	45 W
10 GHz	6 W
24 GHz	5 mW

The WA8WZG antennas consisted of:  
4 × 4 at 110 feet on 50 MHz  
2 × 18xx M<sup>2</sup> at 100 feet on 144 MHz  
4 × 16 at 90 feet on 222 MHz  
4 × 25 at 110 feet on 432 MHz  
2 × 45 at 118 feet on 903 MHz  
2 × 55 at 123 feet on 1296 MHz  
76-element *Blow Torch* at 128 feet on 2304 MHz

4-foot dish at 95 feet on 3.4 GHz and 5.7 GHz  
3-foot dish at 95 feet on 10 GHz

The 24-GHz station was a portable setup on a 3-foot tripod. The EME station consisted of a 5-meter dish with 250 W on 1296 MHz and 80 W on 2304 MHz.

(We wish to extend our thanks to WA8WZG and the *VHF Journal* of the

Rochester VHF Group for providing background information for this article)

### Microwave Migration

Tom’s superb station shows how the “state of the art” has progressed in VHF contesting. It was not many years ago when the top scoring stations operated just 50, 144 and 432 MHz. Nowadays, to compete with the top dogs a VHF contest station must cover 50 to 2304 MHz and the microwave bands up to 24 GHz and EME! Over the years, the microwave bands have become more and more important in the achievement of winning scores.

Adding one or more microwave bands to your station can help your score as well. There is still time before the September VHF QSO Party to do just that!

It is easier now to get on microwaves with the availability of kits such as the Down East Microwave 10 GHz transverter. Some VHF clubs, such as the Rochester VHF Group, hold construction classes and seminars for building microwave transverters. The VHF conferences, such as those held by the East, West Coast, Southeastern and Central States VHF Societies are good sources of information on microwave gear.

The 34<sup>th</sup> Annual Central States VHF Society Conference July 20-22, 2000 in Winnipeg, Manitoba, Canada will feature a program by Paul, W0UC titled “*How to Be Competitive in VHF/UHF Contests*.” (I will give a summary of his program in a future column.) I will also be on the program, presenting “*KH8/N0JK April 2000 6-Meter DXpedition to American Samoa*.”

### E<sub>s</sub>-F<sub>2</sub> Links—A Path to 6-Meter DX Mults in the September VHF QSO Party?

There were 6-meter F<sub>2</sub> openings dur-



**Tom Whitted, WA8WZG, in EN81, uses this impressive collection of antennas—and more—to cover every**

ing the September 1999 VHF QSO Party—but they were limited to the southern tier states such as Florida, Texas, California and Arizona. This year could be different. Why? An E<sub>s</sub>-F<sub>2</sub> link!

During the first half of May 2000 there were numerous E<sub>s</sub>-F<sub>2</sub> and E<sub>s</sub>-TEP openings to South America and the South Pacific from much of the US and eastern Canada. On May 1 from 2100 to 0000Z loud CEs, CXs, LUs and PYs QSOed stations from New England to the Midwest. Bruce, K2RTH in Miami told me “What is really amazing is that you were working those guys probably on double-hop E<sub>s</sub> to TEP/F<sub>2</sub>. I don’t ever remember hearing signals like that here before. They were all S9 plus 20 and above.”

I ran 10 W on 6 meters into a 2-meter 5/8-wave whip antenna and managed to work LU2FFD (FF97) with 59 reports both ways—and LU6DRV (GF05) around 2320Z. I heard no other signals on the band while working Argentina—the first E<sub>s</sub> hop landed in the Gulf of Mexico.

There has been 6-meter E<sub>s</sub> during past September VHF QSO Party contests. If E<sub>s</sub> occurs to the south this year, it could link up with the daily F<sub>2</sub> or TEP propagation from the Caribbean to South America. The prime time for these “linked” openings appears to be 2100 to 0000Z. Stations in New England or the upper Midwest may hear stations in Florida or Texas working South America on E<sub>s</sub> before they hear the DX.

If the first E<sub>s</sub> hop lands in water, the DX may be the only signals you hear. CQing and listening towards South America and monitoring for beacons may be productive during the late afternoon. If a big solar storm occurs like the one that happened on April 7, South America and the Pacific will pop in on regular F<sub>2</sub>. The equinoxes are the best time for aurora and solar disturbances.

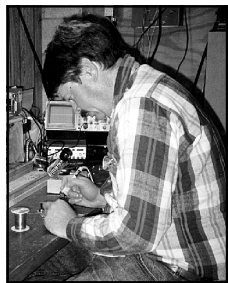
I operated the first week of April from American Samoa on 6-meters. I stayed with Don Barclay, KH8/N5OLS. My main 6-meter radio failed the first day I was there. Fortunately I had brought along an MFJ-9406 as a backup. I used it to make 266 QSOs in over 28 countries including JY9NX in Jordan! The lesson learned from this experience applies to both contesting and DXpedition operating—plan for equipment failure and have backup radios and plans!

There are pictures and commentary about my 6-meter activity from American Samoa at <http://communities.msn.com/6MDX>. ■



## State QSO Parties—Part 1

State QSO parties are not the biggest contests around, but they have some unique qualities and offer unique opportunities. These can also be lots of fun! This installment of CTT&T takes a look at state QSO parties.



W9XT

### Why Operate State QSO Parties?

WA3SES and others operate their home state QSO parties. It is a good chance to meet your relatively local friends on the air. If you now live in another part of the country, it's also a good way to say "Hi" to the gang back home. I look forward to working K6NA—originally from Wisconsin—each year during the Wisconsin QSO Party (WIQP).

QSO parties tend to be more low-key than the big contests, as noted by N0AX. The pace is often slower and friendlier. Because they are more laid back, QSO parties are also a good way to train new operators, noted several readers.

N0AX says that state QSO parties are a good way to finish up your 5BWAS or for county hunting. WA3SES and K7SV mention trying to earn a "clean sweep" by making a contact with every California county in the California QSO Party.

Smaller stations can compete effectively in QSO parties. Small antenna systems work great for the local contacts. Several readers mentioned that low antennas are very effective, and some have even installed low dipoles especially for stateside contests. Another advantage is that you are only competing against others from your state. Except for a few large states, there is little propagation difference between contestants.

You can find a QSO party on just about every weekend that there is not a major contest. This gives you a lot of good opportunities to check out station improvements. The California QSO Party is an especially good chance to give your station a pre-season checkout, since it's just a few weeks before CQ WW.

Another reason to operate QSO parties is that some are offering prizes such as T-shirts in addition to the usual certificates. Others are awarding edible prizes that feature the state's best known products. The California QSO Party (CQP)

has awarded bottles of wine to high scorers. The Salmon Run (Washington State's QSO party) awards smoked salmon, and the Wisconsin QSO Party sends out the world's best cheese. You would have the start of a nice dinner party if you could win each of these!

### Operating

The object of a QSO party is to work stations in the target state. Generally the multipliers for out-of-state participants are the counties of the host state. In-state stations work in-state counties and other states for multipliers. Because of this, there are really two contests, one for in-state contestants, and one for everyone else.

If you operate from outside the target area you will probably spend most of your time S&P'ing for stations to work. If you are in the target state, you will want to spend a lot of your time calling CQ according to K4BAI, W5ASP and others. Most of the out-of-state contestants will be looking for your CQ.

Because you will be spending so much time calling CQ, you could miss multipliers that are also mostly calling CQ. W4AU and W5ASP suggest that QSO parties are a good time to try two-radio operating.

If your call does not reflect your region, you may want to tailor your CQs so potential contacts will know you are a good contact. If I was operating the CQP, I would make my CQs something like "CQ California QSO Party from Whiskey Nine X-ray Tango in LA County." You can also say something like "all calls are welcome."

One can get some good rates calling CQ from the target in the larger QSO parties, notes AD6E. That is a major reason he favors the CQP. During the WIQP, the top stations average close to 100 QSOs/hour for the entire 7-hour event. From my station, I am lucky to get even one or two hours with rates this high in one of the major contests.

One thing you have to keep in mind when calling CQ in a QSO party is that most of your out-of-state contacts will not be actively participating in the contest. They will just be tuning around the band and come across you. They will listen to you for a while before deciding to call you or continue tuning. If you come on too "hard-core" contestant," you may turn them off, suggests WU4G.

Many of the non-contesting contacts will ask you for things like your name, 10-10 number, the color of your cat, etc.

It's best to be friendly and give them whatever they ask for. Remember, other potential contacts are probably listening, deciding if they should give you a call. The trick is to keep the contact short without turning them off.

While out-of-state contestants will spend most of their time answering CQs from the target state, K1KY and others suggest occasional CQs. K1KY has found it more effective to call "CQ <State>" rather than "CQ Contest." This cuts down on calls from other states, which don't count.

Be sure to read the rules carefully before the start of the contest. Rules vary from QSO party to QSO party. Some QSO parties have different points for CW and phone contacts. Pennsylvania gives more points for 80 and 160-meter QSOs. The Illinois and other QSO parties allow mobiles to park on county lines, allowing the contact to count 2 or more times. Be sure you don't miss any points because you didn't know the rules!

W5ASP suggests planning ahead for your logging program. The most popular logging programs are starting to add support for some of the larger QSO parties. Check to make sure that the one you plan to operate is covered. Also check out the Web sites. Often they will have support files for the logging program or even complete logging programs.

One downside of QSO parties is that rag chewers and other non-contesters will give you more grief than in major contests, observes K5RT. Jammers are more likely to just disappear during the big contests.

### Bands

Since the in-state contestants want to work each other for QSO and county multipliers, the low bands will be very important. If you are in or near the target state, you will want to plan on spending a lot of time on 80 and 40 meters.

VHF and UHF may also be helpful in populated areas according to K1KY. Tom also suggests staying near the published frequencies. Still, Tom recommends occasional tunes across the band because there may be a juicy multiplier hiding someplace.

K3ANS notes that he works most of his PA counties in the Pennsylvania QSO Party on 40 and 75, but most of the ARRL sections on 20, and 10 meters during the high parts of the sunspot cycle. Bill says that 15 meters rarely produces many QSOs.

Bill goes on to say that the participants seem to move in waves in the PA QSO Party. They start on 40 SSB at noon local time Saturday and stay for the first couple of hours before moving to 40 CW. Later in the afternoon they move up to the higher bands. As evening arrives they move to 40, 80 and even 160 meters, both modes. The contest stops at midnight, but resumes in the morning, mostly on 80/75 meters. From there activity quickly moves to the higher bands as they open.

WU4G usually operates only in his state's QSO party, Virginia. His strategy is similar to what he uses in a DX contest—get on the highest band open to a major population center and run, run, run.

The Wisconsin QSO Party starts at noon on Sunday, and only lasts seven hours. Most ops start on either 40 or 75 phone. For some reason, the popular starting band seems to change every few years. I don't have an explanation for that, so I am prepared to quickly change in case I guess wrong. After a couple of hours, activity moves up to 20 and maybe 10 if conditions are good enough. Later in the afternoon, activity starts moving down the bands again with increasing activity on CW.

Because band selection can be so important, W5ASP suggests coming up with a good operating plan. Joe recommends going over previous years' logs as well as old SS, WPX, and NAQP logs to see when you have propagation to the target state. Since you probably won't spend the entire weekend operating a QSO Party, block out operating periods that you think will be most productive.

We are out of space for this issue already and we have not even touched on one of the most unique and important parts of QSO parties—mobile stations! Working the mobile stations is critical for fixed stations, and operating a mobile effort is a challenge. If you have comments regarding mobile stations in state QSO parties, or other tips for QSO parties not covered yet, please send them along for next time.

As usual, this column only works because of the tips and comments sent in by readers. This time, a big thanks go out to AD6E, K1KY, K3ANS, K3WW, K4BAI, K5RT, K7SV, K9ZM, N6MU, W1NN, WA3SES, W4AU, WU4G and W5ASP.

#### Topic for September - October 2000 (Deadline July 5, 2000)

*State QSO Parties - Part 2—Strategies for operating mobiles and working the mobiles.*

Send in your ideas on these subjects or suggestions for future topics. You can use the following routes: Mail—3310 Bonnie Lane, Slinger, WI 53086. E-mail—[w9xt@qth.com](mailto:w9xt@qth.com). Be sure to get them to me by the deadline. ■

## DXpedition Destinations

Sean Kutzko, KX9X  
[kx9x@uiuc.edu](mailto:kx9x@uiuc.edu)

Hello again, Contesters! We've had a fun summer so far with some great conditions and lots of time to repair and upgrade our stations. Now it's time to think ahead to the upcoming contest season. I freely admit that this month's column is aimed toward the North American readers of the *NCJ*; my apologies to our international friends.

One of the biggest contests of the season is the ARRL Sweepstakes in November. One of the toughest sections to work in the contest is the Yukon Territories. We all know that VY1JA has done his best to provide us with that rare multiplier, but the demand remains high.

Many contesters, myself included, have pondered operating from the Yukon to provide that multiplier to the masses. Now you have a fully-equipped station waiting for you, thanks to the Yukon Amateur Radio Association (YARA). Their club station, VY1DX,



KX9X

is available for rent.

VY1DX is located in a mobile home about 5 kilometers outside of Whitehorse. The station consists of a Yaesu FT-767, an amplifier and a computer running CT contesting software. The antennas include a Hy-gain TH6DXX at 60 feet, a delta loop for 40 meters and an inverted-V for 80 meters. There is another tribander on a separate tower at 30 feet, but it is currently in need of repair. The club also has 2-meter and 70 cm gear available.

The facilities are rugged. The club site has heat, but no running water (you will need to bring your own water). Electricity is available, and there's auxiliary power in case you need it. Sleeping space is provided, but you will need to bring your own sleeping bags. An electric stove inside works nicely for cooking. When nature calls, the outhouse is nearby.

Ron McFadyen, VY1RM, is the President of YARA. He would be happy to help you with your visit to the club. "...You can use the 'DX' call sign for simplicity, and visiting Americans can operate within the Canadian band plan. It's not necessary to get special permission to operate in Canada [for Americans]."

Ron does mention that they do require guests to become "Honorary Members" of YARA to use the club. "It helps pay for electricity and heat," he says. All funds go to the YARA club account, so your stay would most likely help them pay for maintenance and upkeep of the station.

There are lots of other activities in Whitehorse. For further information on the Yukon, log onto the Web and visit <http://www.touryukon.com>.

You can also visit the YARA Web site at <http://www.yara.yk.ca>. Be sure to click on the "contest calendar" link.

If you feel up to the challenge of operating from "way up there," drop Ron a line. He can be reached via e-mail at [VY1RM@hotmail.com](mailto:VY1RM@hotmail.com).

Thanks for reading! I'm always on the hunt for more information on rental QTHs around the world. Please let me know if you have anything to offer. If you are looking for a place to operate from, be sure to visit the QTH Rental List at <http://hobbes.ncsa.uiuc.edu/sean/qthlist.html>.

73 es see you from the Other Side.  
Sean, KX9X ■



The operating position at VY1DX.



The trailer "shack" of VY1DX. The TX6DXX is visible on the 60-foot tower.

# Results, February 2000

## NCJ CW Sprint

Mark Obermann, AG9A  
HAMAG9A@aol.com

One look at these results is all you need to confirm that February's CW Sprint was all you thought it was—and *more!* Twenty-nine State, Province and North American records fell—along with *all* of the other overall records.

After losing "top dog" title last September to K1TO, N5TJ brushed his key off, turned on the amplifier and picked up where he left off a few years ago. It took just this one try to reclaim the CW Sprint title and record. Only one QSO and one multiplier separated N21C's score from Jeff's.

N6RT, piloting W6EEN, used his eleventh place finish in September as motivation to achieve an impressive third place finish. This is the first time Doug has broken into the Top Ten.

N6TR operated W7AT and picked up fourth place. Incredibly, the top four scorers broke the still warm CW Sprint record set by K1TO last September. Midwest operators saw fellow ops N9RV and W4PA climb into the middle spots while K5ZD ended up being the sole East Coast station to make the Top Ten.

K4FXN nudged past W4OC, AD5Q and K1HT to take first place among low power entrants. KG5U ran QRP power and nearly broke into the low power Top Ten with his impressive effort. Running QRP in this contest is not for the weak of heart.

From overseas, N5KO at HC8N sounded and performed like a local. His score is truly amazing considering his QTH was at the Equator—his is the largest score ever submitted from outside North America. ZS and UA9 were represented for the first time and HP1AC created some excitement with the first entry from Panama. Quite a few North American countries were on the air for the contest.

Looking at the band numbers reveals quite a lot about how the contest played in the different parts of the country.

Stations in the West and Southwest generated very high 20-meter QSO totals with K6LL logging 178 of them on 20 meters alone! This number is indicative of the very high activity and the long band opening they experienced. The top stations managed similarly high QSO totals on 40 meters. To top it off, most stations hit 80 meters at about 0300Z with many of them putting 80 to 100 more QSOs into the log during this last hour alone.

The Midwest and East Coast band distributions were more evenly spread

### Sprint Tip

It's important that exchanges are confirmed by both stations. This is all too easy to forget when you are trying to dump your call in at the end of what you may think is a completed QSO. Please remember to give the other stations a chance to acknowledge that they have all the information they need before you jump in.

out—they were not able to match the huge 20-meter totals of those to the south and west. Operators on the East Coast went as far as saying conditions were relatively poor for them.

In an effort to maximize their scores, an interesting strategy adopted by many stations in the Midwest has been to start the contest on 40 rather than 20 meters. Why do this? Normally, by the time they typically switched to 40 meters in the past, the band had become too long for nearby stations to work each other.

Getting on 40 earlier allowed close-in stations to work each other while the band was still relatively short. After about fifteen minutes, the switch was made to 20 meters and the rest of the band changes are more normal.

Ironically, the stations starting the contest on 20 meters may also benefit from this strategy as the band is a bit less crowded at the beginning. This theoretically should translate into more QSOs. When the Midwest crowd comes down to 20 from 40 meters, they are now fresh game.

The net result is that everyone might be enjoying some benefit. In any case, the strategy does add yet another dimension to an already interesting contest.

Many records were broken, primarily on the strength of the large number of multipliers available. With the upsurge in activity, QSO totals increased as well.

The total number of entries increased markedly, breaking the previous record by nearly 20 logs.

The oldest state records to topple were

### Sprint-Related Web Sites

For Sprint Rules and contest dates, visit the *NCJ* Web site at <http://www.ncjweb.com>. The list of submitted logs can also be found there. Many other *NCJ* and contesting related topics are also covered.

Seasoned veterans, as well as those interested in trying the Sprint for the first time, should check out N6TR's Sprint Survival Web Page, <http://jzap.com/n6tr/sprint.html>. Here you'll find an explanation of the exchanges along with some examples. It's loaded with good information, advice and contest strategies.

### Guidelines for Log Submissions

Please carefully read the rules for submission that are posted on the *NCJ* Web site, <http://www.ncjweb.com>.

Please submit both a log and summary sheet with your entry. Any format created by the popular logging programs is acceptable. E-mail your logs to [cwsprint@ncjweb.com](mailto:cwsprint@ncjweb.com) or send in your disk with the required information. An acknowledgement message will be sent to all e-mail submitters. Those sending disks can provide an SASE or stamped QSL card for confirmation. Feedback on log accuracy is available via e-mail (send your request to [cwsprint@ncjweb.com](mailto:cwsprint@ncjweb.com)) or mail us an SASE once the results have been published.

Remember the following when submitting your log:

- All log-related issues *must* be stated in the summary sheet. Comments included within the log will *not* be read.
- Clearly indicate your power level in the summary sheet. If you operated as a guest op from another station, please include this information in the summary.
- An electronic log is the preferred method of entry. If you logged by paper, please convert the log into an electronic format before sending it in. All logs are fully checked.
- All e-mail entries should be sent to [cwsprint@ncjweb.com](mailto:cwsprint@ncjweb.com) only. (Check the Sprint Rules for any changes to these guidelines.)



## February 2000 CW Sprint—A Tribute to Bip

On February 2<sup>nd</sup>, we lost a true gentleman and a contesting friend. This, of course, was Wilbur Bachman, W6BIP—affectionately known as “Bip” throughout the contest community. W6BIP made it into thousands of logs over the years. Out of respect and admiration, the name Bip resounded everywhere on the evening of the February 2000 CW Sprint.

Here are some personal tributes to the man we called Bip.

I had the opportunity to meet Bip way back in the '70s, when a business trip stranded me in San Francisco in November. Since I was a card-carrying NCCC member at the time (long story), I showed up at a meeting and asked if anyone needed an operator for the Phone Sweepstakes. Bip stepped right up and offered me a seat at his multi-op, which I accepted. Some WA6 guy was the other op.

I rolled out a 130-something first hour from that shack in the kitchen—Bip was very impressed. He couldn't stop talking about it. Anyway, we hit it off pretty well, and I tried to call him whenever I was in the San Francisco area.

Most of you worked me during one or more of the February Sprints when I was in San Francisco on business. A quick call to Bip got me a seat for the afternoon.

He had a modest station in a very modest house on a city lot in no-kidding downtown San Francisco. His lot couldn't have been more than 60 feet wide, and maybe only 50. The wire over the freeway was a thing to behold, as was the 2-element 40-meter beam with the last 10 feet of each element made of wire and hanging down so as to not cross his neighbor's lot when he turned it. But, man, what a signal from that city hilltop!

I recall putting quite a scare into the local boys in the Sprints from there, keeping right up with them until the change to 80, where Bip's station just kind of ran out of gas. (Or maybe it was me!)

He was a tinkerer right out of Central Casting. The CW-sending call sign badge, the homemade memory keyer with automatic serial numbers (yep Tree, '70s-vintage), and his articles and talks on RFI/TVI showed that even way into retirement, he had the mind and spark of the engineer.

Bip lived a rich and full life... radio and his family were the centerpieces, and he was clearly passionate about both.

When 'AR introduced him at the Contest Dinner in Dayton a couple of years ago, he got a standing ovation... everyone in the room had worked him, and I daresay he had been a multiplier for all of them in Sweepstakes at one time or another.

When I get old, being like Bip would not be too bad a thing...—*Doug, K1DG*

In an era when hams were viewed by many as nerds and a bit weird, Bip was a “ham's ham.” Licensed in 1928 as a teenager in San Francisco, he would talk ham radio to anyone who would listen.

For a number of years he operated from a small rented house on a 20-acre hilltop owned by the City of San Francisco, where he had erected six V-beams, each “a city block long.” Needless to say, he was king of the hill and he loved to tell the stories.

Marriage, a family and the city development of the property eventually forced him to move to a smaller (but still hilltop) location in San Francisco.

Bip kept his station in the kitchen, the theory being it kept him close to his family. As his oldest son Bob, K6DJC, memorialized “there was high voltage everywhere; it's amazing we didn't kill ourselves.” This included a pair of 304TL's, as I remember, with an open tap HV transformer that was adjusted by moving an alligator clip and tuned for proper tube color. Years later Bip finally resorted to buying a Henry.

Bip was active in every Sweepstakes and ARRL DX Contest since their inception until just the last couple of years. For years W6BIP was your only contact in the SF Section.

He got many a ham started through the San Francisco Radio Club and the South Peninsula Amateur Radio Klub (*SPARK*), including his XYL of 56 years, Elsie, WA6GQC; sons Bob, K6DJC, and Larry, KA6EZR. Daughters Gloria and Helen and youngest son Don somehow managed to “avoid the persuasion.”

Bip was also a pioneer in eliminating interference to electronic devices. Someplace in our shack, almost all of us have a ferrite rod that we got from him. His neighbor of 40-some years proudly states that he has 12 such rods in his house all personally installed by Bip.—*Ken, K6DB*

I operated from W6BIP's during the early '90s for CW Sweepstakes and the CQP. In the November 1993 CW Sweepstakes, Bip and I did a multi-op. Bip was “only” 82 back then. Those of you who have been to Bip's station know that he had a CW memory keyer that predated the Accu-Keyer/Memory. The thing worked, and even generated incremental serial numbers. But it was only programmed to go up to 999 QSOs—in 20 years of use he had never exceeded that limit. Around 4 PM that Sunday, I hit QSO number 1000 and had to use the regular electronic keyer to fill in the numbers for the rest of the contest! Bip was absolutely overjoyed that we had done so well. We ended up with 1046 QSOs and a Sweep, which is pretty respectable for a small tribander, a bare bones 2-element 40-meter Yagi, and 700 W.

Bip was unique—they don't make 'em like that anymore. I will miss him.—*Scott, W6CT*

Though I don't have my old logs, I expect W6BIP was one of my first contest QSO's with California, when I was K2EIU in New York back in the mid '50s.

His signal from the hill overlooking San Francisco Bay was always a band-opener, a beacon to start activity on the higher bands, as a contest hit Sunday morning. I worked him during my college days at W2SZ in the late '50s, and K3EIU/5 during my USAF days, in the '60s, and of course since 1972 or so when I first met him in person at an NCDXC meeting.

In the CD parties and Sweepstakes, I would seldom miss the SF multiplier, thanks to Bip.—*Ken, N6RO*

Bip's first year as a ham was 1928: Holding to the truest spirit of the hobby, Bip died at age 88, with 73 years as a ham.

73/88 to you, Bip.—*Bill, N6ZFO*

in AR, WV and ID, which had stood since 1982. A big thanks goes to those coordinating teams, new Sprint operators and the continuing grass roots post-card campaign to invite more casual contesters into the Sprint.

All of the increased activity helped the SCCC #1 and Dead Lizard teams to smash the old team scoring record on the way to first and second place re-

spectively. NCCC #1 took third and Mad River put together a nice fourth place finish. Twenty-four teams pre-registered for the February event.

It has been gratifying to see the quality of the CW Sprint steadily improve. The increased participation, greater team activity and higher scores are a direct result of this.

The standards of contesting excel-

lence, which the founding fathers of the Sprints foresaw, are becoming reality.

Despite the increasing number of new participants and the continuing advancement of the log checking process, logs have gotten significantly cleaner. The proof is in the extensive Golden Log listing found in these results.

While many of us dream of making it into the Top Ten box, a position in the

Golden Log box shares much of the esteem of the Top Ten. Even newcomers to the contest can strive to submit an error-free log and attain instant recognition and respect from the other participants.

A special thanks to N6TR for his continuing support of the Sprint log checking process with his extraordinary code-smithing.

We are knocking on the door of 400 QSOs. Who will be the first to do it? See you September 10<sup>th</sup> (UTC).

### Soapbox

The contest was a lot of fun! (fast-paced, but fun).—AA6W. Personal best! Thought I would make 300 for the first time, but faded at the end. Nice to hear Bip from the East Coast also.—AE6Y. Great contest despite marginal conditions. May W6BIP rest in peace.—AF5Z. My best CW Sprint yet! Tried to spend more time on 20 and 40 and it cost me in mults. Mults heard but not worked: SC, VE6, KP4—never heard RI, VT, IA, KS, MO, VE4. Worked KL9, HP, HC8, ZF, ZS. Tnx to all for the Qs.—K0OU. Not a bad Sprint, but I seemed to have the usual problems: too many unanswered CQs, got beaten out too often, and some mults were elusive. I started on 40 (first 16 minutes), but it didn't seem to help much.—K1HT. Actually, this was my 2<sup>nd</sup> "Sprint" of the day. Departed Memphis at 2 PM, arrived at the station 5:44 PM—ready to go at 5:55. I played on 40 meters during my travels and worked many Sprinters who were warming up. A new personal best for me.—K1KY. It was great to hear so many stations honoring Bip, W6BIP. He was a true gentleman and a legend in contesting. CW Sweepstakes will never be the same.—K2UA. Thanks to Jim, WA3FET, for the use of the station. Who will be the first to break 400?—KB3AFT. West Virginia contesters combined our efforts into the "MOUNTAIN EARS" team to make WV mult available and promote the Sprint. Couldn't figure out why nobody would call me after answering a CQ. Not until about an hour into it, I realized I needed to END the QSO by sending my call, instead of sending my call earlier in the exchange!—K3JT. Still have not gotten the hang of this contest. Had fun though.—K3WU.

Missed my own section (KY). The Sprint is a tough contest when running low power.—K4FXN. Nice to work Bip almost everywhere; a great tribute. Many really big scores this time out—congratulations to all for getting the activity levels up. I can almost taste 300 QSOs in this maddening event. CU next time!—K4RO. Strange start on 20 meters and another rough band change from 20 to 40. 80 was great, and quiet for the first time in a long time.—K5GN. Many thanks to N5TW for use of his great station. This was my second entry—I made 50% more QSOs and nearly doubled my score from the fall!—K5PI.

A personal best in the midst of better personal bests. My thanks to Phil, K6RC,

### Top 10

	Scores	Band	Changes	QSOS	Lost	00Z	01Z	02Z	03Z
N5TJ	19812		26	1		110	95	85	92
N2IC	19380		30	0		102	90	90	99
W6EEN	19227		52	0		99	93	91	94
W7AT	18870		4	3		97	98	88	92
K5GN	18668		38	6		98	77	99	91
N9RV	18550		17	5		105	75	79	97
W4PA	18356		101	1		92	93	83	86
N6MJ	18309		4	1		104	91	80	86
K6LL	18200		2	0		109	84	89	82
K5ZD	17100		85	2		96	79	89	80

### Top 10 Scores

N5TJ	19812
N2IC	19380
W6EEN	19227
W7AT	18870
K5GN	18668
N9RV	18550
W4PA	18356
N6MJ	18309
K6LL	18200
K5ZD	17100

### Top 10 QSOs

N5TJ	381
N2IC	380
W6EEN	377
W7AT	370
K6LL	364
K5GN	359
N6MJ	359
W4PA	353
N9RV	350
N5RZ	347

### Top 10 Mults

K9AA	55
N9RV	53
W9RE	53
N5TJ	52
K5GN	52
W4PA	52
N6ZZ	52
K9XD	52
HC8N	52
Many	51

### Golden Logs (>100 QSOs)

N2IC	380
W6EEN	377
K6LL	364
N2RM	324
K6NA	312
K1ZZ	309
NT1N	306
NA4K	277
K4NO	273
N8EA	273
K1HT	249
K8JM	234
KL9A	202
N6NF	192
K4MX	190

### Top 10 Low Power

K4FXN	11232
W4OC	11044
AD5Q	11008
K1HT	10956
K6ZH	10516
N8NA	10388
K9MMS	10320
N8AA	10199
W8MJ	10045
N6PN	9933

### Top 10 QRP

KG5U	9588
K6III	6579

### Top 10 Band Changes

N6ZZ	104
W4PA	101
N2NT	100
K9XD	94
K5ZD	85
W5WMMU	76
K9AA	67
W6EEN	52
KW8N	40
K5GN	38

### Team Scores

SCCC #1	DLCSCW	NCCC #1	MRRC
W6EEN 19227	N2IC 19380	N6TV 16464	K9NW 15500
N6MJ 18309	K9XD 16900	VA7RR 15168	KW8N 14229
K6LL 18200	K9AA 16610	N6RO 14536	W8AV 13900
N6ZZ 16692	W9RE 15317	K7BV 14500	KU8E 13550
N6VR 15650	NT1N 15300	K6XX 14444	N8EA 13104
W6UE 15190	WD0T 15168	AE6Y 14308	K8JM 11700
N6CW 15168	K0RF 14168	K6GV 12240	K4MA 10944
K6NA 14664	WB0O 13959	N6PN 9933	W8MJ 10045
AC6T 12848	KA9FOX 13550	AJ6V 9768	K9TM 5694
K6LA 12103	K9ZO 11500	N6IJ 8624	Total 108666
Total 158051	Total 151852	Total 129985	

### 5. YCCC #1

(K5ZD, K1KI, K1ZZ, W1WEF, K1DG, K1HT, N2MG, K1RO, AA1SU, K1NU) ....	100744
6. NCC (N9RV, K3LR, K3CR, VE3EJ, K2UA, N8AA, NI3S) .....	90141
7. TCGA (W4PA, K4RO, K4WX, K1KY, N4CW, K3WU, WO4O, KOEJ, N4KN) .....	87454
8. NTCC (N5TJ, N5RZ, K5OT, N8SM, K5KA, N5NJ) .....	85479
9. FRCD (N2NT, K3WW, N2RM, AA3B, W2GD, W2LE) .....	78261
10. RDO (W7AT, K7NT, W7WA, K17Y, KL9A, W7YAQ) .....	77740
11. TDXS (K5GN, K5NZ, AD5Q, N7FO, KG5U, KU7Y, WA8GHZ) .....	75547
12. SECC (K4BAI, K4NO, AA4GA, W4OC, W0RTT, W4AU, K4QPL, K8GT) .....	74494
13. SMC #1 (K0OU, K9BGL, K9MMS, WX9U, N9SD, WT9U, W0UY) .....	65376
14. SCCC #2 (K6ZZ, K6ZH, W7RF, K6AM, N6BM, W6TK) .....	56273
15. NCCC #2 (W6OAT, K7NV, NI6T, K6CTA, KF6ZWZ, AA6W) .....	49526
16. ME (WA8WV, K3JT, K8KFJ, KG8GW) .....	33883
17. MWA (N0AT, NA0N, K0AD, AC0W) .....	31940
18. AP (K5PI, AF5Z, KE5C) .....	24661
19. FCG (N4BP) .....	12384
20. SMC #2 (WI9WI, K9KM) .....	12348
21. NCCC #3 (K6III, N6ZFO) .....	9909
22. AB (VE6EX) .....	9804
23. YCCC #2 (K1OA, WO1N, K1TS) .....	3609
24. TCGA #2 (WK2G, N9GG) .....	3519

for use of his newly refurbished antenna system.—*K6GV*. On a personal best pace, I had to quit at 0300Z to go see Crosby, Stills, Nash & Young at the Staples Center. It was worth it.—*K6LA*. Missed part of the contest due to visiting my wife in the hospital, and fielding telephone calls from people inquiring about her status (she is recovering).—*K6NA*. My personal best for CW; in fact I made only 3 less than last weekend's 251 Qs on SSB. BUT where were the multipliers? Geez, I didn't work Maryland, for heaven's sake! First time out with computer fully integrated with the radio—MUCH better!—*K6ZH*. First time over 300, like a lot of folks. Had several periods of brain fade in the first 90 minutes, so I know if I can overcome that, I can do better. It seems like if the contest's pitch becomes too fevered, I lose rate, and I do best when things are a little off from the maximum frantic. Maybe that is my frantic... (I'm sure it would help if I got my station fixed and got on the air occasionally.) Seemed to hit my stride when I went to 40 at 0144Z, and didn't really want to go to 80. Went to 80 at 0309Z, then back to 40 at 0319Z, then back to 80 for good at 0330Z. Two radios may have helped during this period. The BARC club station was working very well and I felt loud the whole time. Thanks, Tree! Gee, what a neat club!—*K7NT*. Loud is good in the Sprints but my station is rarely loud. However, I'd rather be in the Sprints than lying on a beach in Fiji with a semi-clad native girl. Well, almost!!! Many thanks once again for the sponsorship. The ops were super and the activity was great.—*K8KFJ*. Blew up the amp 42 minutes into the contest. I was on a roll... just a few behind the winners up to that point. First time over 300 QSOs on CW. Pleased with the mult total, although the Q total probably would have been better if the amp didn't blow up. Thanks to WE9V and Shirm for letting me invade their home again! Chad's 2 stack of those crappy KT34XAs sure work well for not having any F to B :-).—*K9AA*. Awesome!!—*K9NW*. First Sprint. Never before have I seen CW ops run off RTTY ops!—*KE5C*. Thanks to Ken, K7ZUM, for the use of the station. Much better than my own station. This is probably a new personal high score for me. Once again happy to be part of the RDO team.—*K17Y*. Personal best, but still can't wait to do this from the states! (AK is painful)—*KL9A*. This is my last sprint from this QTH and I thought I'd run a full 100 W instead of QRP. What a difference! People could hear me for a change. Now I have to find something else for an excuse! No 80-meter antenna—and that hurt. Thanks to all for making this last one a very fun one for me!—*KU7Y*. Way too many dupes. I am tempted to quit logging on paper for CW Sprint.—*KW8N*. Wish the Sprint method was used in more contests so that one could practice more often.—*N5NJ*. Activity was outstanding. I still have to find an antenna that works on 80 meters.—*N5RZ*. First attempt at CW Sprint. Could not get into a decent rhythm even after

2½ hours.—*N5UM*. First time over 300 Qs! Fantastic conditions on all bands. Heard NE, VE1 and VE6 but my timing was off.—*N6VR*. Missed the first 10 minutes of the contest due to a computer swap.—*N6TV*. N6ZFO may be the only entrant to spend the 2<sup>nd</sup> half of the Sprint taking tango lessons with XYL. It was an honor to use the handle Bip for this, my first, Sprint.—*N6ZFO*. Spent too much time playing the second radio—104 band changes. Probably not the best strategy for the Sprint.—*N6ZZ*. I had to dig the 20-meter beam out of the ice and snow in the front lawn to hoist it up into the trees, then thaw out my fingers in time to start.—*N8NA*. 25 W into mobile antennas—the car was parked outside.—*N9GG*. Terrific fun!—*NI6T*. This was my first NA Sprint. I did fairly good for not having done this contest before. I finally started getting the hang of it and worked a ton of people, right at the end (wrong time to do that). I am sure that next Sprint I will be knowing what to do at the beginning of the contest, and my score/Qs will be much higher!! Age 15 years old.—*NW7DX*. I've got to spend more time with the simulator before the next CW Sprint. Is the average CW speed increasing or are my reflexes getting slower? Who would have thought so many parents would name their kids Bip?—*W0UY*. Either conditions were awful or my antennas were pointing at Europe!—*W1WEF*. Flu bug hit me a few hours before the contest and maybe I just should have gone to bed... but conditions were too good and I stuck it out with all too frequent trips across the shack to the "facilities"; I'm glad that they were close... Felt pretty comfortable when I "got in the groove." Congratulations to the guys with the big numbers; this is one contest that really separates the men from the boys. Maybe next time I'll have a crack at beating 300 Qs.—*W4AU*. I was bummed that I missed the Top Ten by one spot in the last Sprint. Hopefully I made up for it this time!—*N6RT* (at *W6EEN*). Long live CW but this is always a challenge for me. Operated about 3 hours. I still haven't found the groove on CW Sprint, but I will see you next time.—*W6TK*. Started reconfiguring the usual two station HF setups at W6UE for SO2R about 9:30 Saturday morning. Around noon I discovered that the 80-meter station was QRMing the 40-meter station. Thinking it was the close proximity of the 80-meter dipole to the 2-element 40, I tried tuning up our 75-meter inverted V on 80 CW (it's on a different tower). Tried on old Dentron tuner, but it started flashing over at about 600 W, so I drove home and grabbed my trusty old Ten-Tec 229. By 2 PM I had everything hooked up, but I was still getting QRM on 40 from the 80-meter station. All the coaxial stubs and ICE bandpass filters that I tried didn't seem to help either. My second harmonic sounded real dirty, so I began to suspect some kind of rectification. Finally I got smart and unplugged the remote coax switch for the 80 meter antenna. This killed the 40-meter

QRM, but left me with only the 75-meter inverted-V. Just after 2 PM I headed up to the roof with bypass caps and soldering iron in hand. By 3 PM I had all the control lines to the ICE remote switch bypassed. Arrgh, still no better. Wait, if I grab the rack handle on the control box, the QRM goes down. One hour to go before the contest and I am taking apart the control box. It's 3:35 PM as I solder in the last bypass capacitor and button up the control box. Double aarrgh, still no better! Okay, how about a short ground strap to the station monitor (it should be at RF ground by virtue of the coax cables). Bingo, QRM is gone with 15 minutes to spare. Just enough time to go to the bathroom and warm up a little. Gee I'm tired! Get N5NU on the hook at 23:59:30, okay AS AS AS 00:00 N5NU W6UE #1 Mike CA. Okay here we go for another 4 hours of arm flailing, adrenal pumping, chaotic action. 03:59:55 N2NT 313 Mike CA W6UE. It's over, time to come out of the hypnotic trance—hey, I finally broke 300 QSOs—cool! Now to just figure out how the winners are making 15 more QSOS an hour than me (I wonder if they remember the contest?).—*W4EF* (at *W6UE*). Golly, this is a frustrating contest!—*W7YAQ*. First time ever over 100 QSOs in the CW Sprint.—*WA7BNM*. Thanks to Jim, KF0FN, for allowing me to operate. This station is a work in progress with much progress to go yet. It was a lot of fun, hope to see you in the next one. God Bless all.—*WD0T*. Wow, tCWsend speed is what, 40 WPM?—*WO1N*. Knew and announced the possibility that this may be a part-time effort. Sorry I couldn't play longer and contribute more. Really missed all the fun that I'm sure was had by others on 80 meters. Think I would've had well over 200 Qs with full playtime.—*WO4O*. Made two personal goals (barely—assuming my logs don't get trashed). Over 200 Qs and over 10k points! It's always good fun!—*WO7Y*.

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#### Team Key

AB	Alberta Clippers
AP	Austin Powers
DLCSCW	Dead Lizards Can't Send CW
FCG	Florida Contest Group
FRC	FRC Domestic
ME	Mountain Ears
MRRC	Mad River Radio Club
MWA	Minnesota Wireless Association
NCC	North Coast Contesters
NCCC #1	No. California Contest Club #1
NCCC #2	No. California Contest Club #2
NCCC #3	No. California Contest Club #3
NTCC	North Texas Contest Club
RDO	Rush Drake Orchestra
SCCC #1	So. California Contest Club #1
SCCC #2	So. California Contest Club #2
SECC	South East Contest Club
SMC #1	Society of Midwest Contesters #1
SMC #2	Society of Midwest Contesters #2
TCGA	Tenn. Contest Group Amigos
TCGA #2	Tenn. Contest Group Amigos II
TDXS	Texas DX Society
YCCC #1	Yankee Clipper Contest Club #1
YCCC #2	Yankee Clipper Contest Club #2

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**Scores**

Call	Name	QTH	20	40	80	QSO	Mults	Score	Team	Call	Name	QTH	20	40	80	QSO	Mults	Score	Team
K5ZD	Bip	MA	126	139	77	342	50	17100	YCCC#1	N5NJ	*Bob	TX	65	111	19	195	45	8775	NTCC
K1KI	Tom	CT	137	116	71	324	50	16200	YCCC#1	N5UM	*Al	TX	50	87	3	140	42	5880	
K1ZZ	Dave	CT	108	103	98	309	50	15450	YCCC#1	WA8GHZ*	Jack	TX	24	45	1	70	31	2170	TDXS
NT1N	Dave	CT	127	120	59	306	50	15300	DLCSCW	KE5C	*John	TX	0	44	5	49	20	980	AP
W1WEF	Jack	CT	122	94	69	285	51	14535	YCCC#1	W5NR	Art	TX	3	7	3	13	12	156	
K1DG	Bip	NH	126	98	70	294	47	13818	YCCC#1										
K1HT	*Dave	MA	95	97	57	249	44	10956	YCCC#1	W6EEN	Doug	CA	147	142	88	377	51	19227	SCCC#1
K1RO	*Mark	NH	36	39	19	94	37	3478	YCCC#1	(N6RT)									
K1PQS	Geo	ME	10	61	28	99	35	3465		N6MJ	Dan	CA	155	126	78	359	51	18309	SCCC#1
AA1SU	*Paul	VT	26	26	36	88	29	2552	YCCC#1	N6TV	Bip	CA	147	130	59	336	49	16464	NCCC#1
K1OA	*Scott	MA	54	25	0	79	30	2370	YCCC#2	N6VR	Ray	CA	135	122	56	313	50	15650	SCCC#1
K1NU	*Len	MA	27	23	9	59	25	1475	YCCC#1	W6UE	Mike	CA	138	114	58	310	49	15190	SCCC#1
WO1N	*Ken	MA	22	26	2	50	21	1050	YCCC#2	(W4EF)									
K1TS	*Marc	MA	21	0	0	21	9	189	YCCC#2	N6CW	Terry	CA	135	132	49	316	48	15168	SCCC#1
										K6NA	Glen	CA	110	130	72	312	47	14664	SCCC#1
N2NT	Andy	NJ	138	128	71	337	50	16850	FRCD	N6RO	Bip	CA	138	124	54	316	46	14536	NCCC#1
N2RM	John	NJ	129	98	97	324	48	15552	FRCD	W6OAT	Bip	CA	137	125	34	296	49	14504	NCCC#2
(N2NC)										K6XX	Bip	CA	133	124	57	314	46	14444	NCCC#1
W2GD	John	NJ	94	125	69	288	48	13824	FRCD	AE6Y	Bip	CA	140	101	51	292	49	14308	NCCC#1
K2UA	Bip	NY	94	101	79	274	46	12604	NCC	AC6T	Steve	CA	136	108	48	292	44	12848	SCCC#1
N2MG	Mike	NY	59	38	43	140	37	5180	YCCC#1	K6GV	Bip	CA	103	107	45	255	48	12240	NCCC#1
N2ED	*Ed	NJ	45	47	22	114	35	3990		K6LA	Ken	CA	152	93	2	247	49	12103	SCCC#1
WK2G	*Joe	NJ	55	36	0	91	34	3094	TCGA#2	K6ZZ	Bob	CA	101	76	44	221	49	10829	SCCC#2
W2LE	Paul	NJ	33	35	0	68	32	2176	FRCD	K6ZH	*Jim	CA	123	89	27	239	44	10516	SCCC#2
										NI6T	Bip	CA	116	71	45	232	44	10208	NCCC#2
K3WW	Chas	PA	118	113	87	318	50	15900	FRCD	N6PN	*Matt	CA	106	93	32	231	43	9933	NCCC#1
K3LR	Tim	PA	123	120	77	320	49	15680	NCC	W7RF	Dan	CA	92	92	20	204	48	9792	SCCC#2
K3CR	Jim	PA	120	111	57	288	51	14688	NCC	AJ6V	Bip	CA	109	76	37	222	44	9768	NCCC#1
(KB3AFT)										K6AM	*John	CA	123	63	34	220	44	9680	SCCC#2
AA3B	Bud	PA	104	121	72	297	47	13959	FRCD	K6CTA	Bip	CA	125	73	22	220	43	9460	NCCC#2
N8NA	*Karl	DE	70	64	78	212	49	10388		N6IJ	*Bip	CA	87	89	20	196	44	8624	NCCC#1
WA3HAE	*Keith	PA	80	70	45	195	47	9165		(AE0M)									
K3WU	Jim	PA	52	96	52	200	44	8800	TCGA	N6NF	Tom	CA	115	51	26	192	43	8256	
NI3S	*Ty	PA	31	53	36	120	41	4920	NCC	N6BM	Don	CA	86	71	33	190	42	7980	SCCC#2
N9GG	*Bob	DE	11	8	6	25	17	425	TCGA#2	W6TK	*Dick	CA	84	71	23	178	42	7476	SCCC#2
										K6III	**Bip	CA	98	36	19	153	43	6579	NCCC#3
W4PA	Scott	TN	114	156	83	353	52	18356	TCGA	WA7BNM*	Bruce	CA	72	47	12	131	43	5633	
K4RO	Kirk	TN	76	118	99	293	50	14650	TCGA	KF6ZWZ	Bip	CA	49	48	27	124	36	4464	NCCC#2
K4WX	Don	TN	99	120	85	304	48	14592	TCGA	K6DB	Bip	CA	58	50	6	114	35	3990	
K1KY	Tom	TN	87	110	81	278	51	14178	TCGA	N6ZFO	*Bip	CA	83	7	0	90	37	3330	NCCC#3
N4AF	Al	NC	86	99	98	283	49	13867		N6TW	*Larry	CA	35	41	5	81	32	2592	
NA4K	Steve	TN	85	120	72	277	50	13850		AA6W	*Bip	CA	0	30	0	30	18	540	NCCC#2
K4BAI	John	GA	88	104	90	282	48	13536	SECC										
K4NO	Greg	AL	95	110	68	273	47	12831	SECC	W7AT	Bip	OR	148	133	89	370	51	18870	RDO
AA4GA	Lee	GA	109	88	69	266	48	12768	SECC	(N6TR)									
N4BP	Bob	FL	138	120	0	258	48	12384	FCG	K6LL	Dave	AZ	178	144	42	364	50	18200	SCCC#1
N4CW	Bert	NC	93	102	57	252	49	12348	TCGA	K4XU	Dick	OR	157	113	64	334	50	16700	
K4FXN	*Dan	KY	66	85	83	234	48	11232		K7NT	Mike	OR	128	128	50	306	49	14994	RDO
W4OC	*Don	SC	91	97	63	251	44	11044	SECC	K7BV	Bip	NV	106	141	43	290	50	14500	NCCC#1
K4MA	Gary	NC	70	100	58	228	48	10944	MRRC	W7WA	Dan	WA	143	102	39	284	46	13064	RDO
(W2CS)										KI7Y	Jim	OR	143	92	17	252	49	12348	RDO
K4MX	*Jeri	VA	51	68	71	190	47	8930		W7ZRC	Rod	ID	123	107	44	274	45	12330	
W4NZ	Ted	TN	72	97	28	197	45	8865		N7FO	Oz	AZ	117	79	35	231	47	10857	TDXS
W4AU	John	VA	73	80	48	201	41	8241	SECC	(KN5H)									
K4QPL	*Jim	NC	35	68	38	141	38	5358	SECC	K7NV	Bip	NV	105	78	42	225	46	10350	NCCC#2
W4NTI	*Dan	AL	8	74	32	114	36	4104		KL9A	Jim	AK	139	63	0	202	47	9494	RDO
WO4O	*Ric	TN	43	57	0	100	35	3500	TCGA	KU7Y	*Ron	NV	88	116	0	204	45	9180	TDXS
K4AMC	Jim	TN	47	39	0	86	28	2408		W7YAQ	*Bob	OR	96	56	43	195	46	8970	RDO
K0EJ	Mark	TN	0	40	0	40	23	920	TCGA	WO7Y	*Tom	ID	77	100	17	194	45	8730	
N4KN	*Ira	TN	0	11	0	11	10	110	TCGA	NW7DX	*Ben	WA	77	77	11	165	42	6930	
										W7YS	*Bill	AZ	0	70	0	70	31	2170	
N5TJ	Jeff	TX	148	137	96	381	52	19812	NTCC	AB7RW	*Phil	WA	41	0	0	41	28	1148	
K5GN	Dave	TX	159	125	75	359	52	18668	TDXS	W7/	*Zuo	WA	36	0	0	36	19	684	
N6ZZ	Phil	NM	149	123	49	321	52	16692	SCCC#1	JR1NKN									
N5RZ	Gator	TX	164	120	63	347	48	16656	NTCC	KW8N	Bob	OH	99	110	70	279	51	14229	MRRC
WQ5L	Ray	MS	123	136	58	317	49	15533		W8AV	Doug	OH	78	109	91	278	50	13900	MRRC
K5OT	Larry	TX	127	126	61	314	48	15072	NTCC	(K4LT)									
K5NZ	Mike	TX	145	126	35	306	46	14076	TDXS	KU8E	Jeff	OH	82	102	87	271	50	13550	MRRC
K5PI	Rob	TX	110	118	70	298	47	14006	AP	N8EA	Joe	MI	102	109	62	273	48	13104	MRRC
K5GO	Stan	AR	81	117	80	278	50	13900		K8JM	John	MI	71	100	63	234	50	11700	MRRC
N8SM	Steve	TX	75	131	71	277	48	13296	NTCC	WA8WV	Dave	WV	68	102	77	247	47	11609	ME
W5WMU	Pat	LA	115	97	54	266	49	13034		K3JT	Terry	WV	95	64	56	215	48	10320	ME
K5WA	Bob	TX	103	114	57	274	47	12878		N8AA	*John	OH	75	87	55	217	47	10199	NCC
K5KA	Ken	OK	88	107	63	258	46												

Call	Name	QTH	20	40	80	QSO	Mults	Score	Team	Call	Name	QTH	20	40	80	QSO	Mults	Score	Team
N9RV	Pat	IN	119	135	96	350	53	18550	NCC	NA0N	*Pat	MN	39	92	73	204	43	8772	MWA
K9XD	Dave	IL	105	135	85	325	52	16900	DLCSCW	K0AD	Al	MN	67	96	55	218	40	8720	MWA
(AG9A)										W0ETT	*Ken	CO	102	63	24	189	46	8694	
K9AA	Paul	WI	94	139	69	302	55	16610	DLCSCW	W0RTT	*Pete	CO	96	78	36	210	41	8610	SECC
(K9PG)										W0UY	*Tom	KS	65	58	32	155	42	6510	SMC#1
K9NW	Mike	IN	91	117	102	310	50	15500	MRRRC	AC0W	*Bill	MN	12	31	5	48	28	1344	MWA
W9RE	Mike	IN	98	95	96	289	53	15317	DLCSCW	VA7RR	Gary	VE7	151	128	37	316	48	15168	NCCC#1
KA9FOX	Scott	WI	62	132	77	271	50	13550	DLCSCW	VE3EJ	John	VE3	90	93	87	270	50	13500	NCC
K9BGL	Karl	IL	101	103	61	265	45	11925	SMC#1	VE6EX	Dan	VE6	149	63	16	228	43	9804	AB
K9ZO	Ralph	IL	82	103	65	250	46	11500	DLCSCW	VE5SF	*Sam	VE5	89	104	10	203	41	8323	
K9MMS	*Gary	IL	93	73	49	215	48	10320	SMC#1	VA3UA	*Alex	VE3	19	19	12	50	22	1100	
WX9U	Phil	IL	33	104	60	197	46	9062	SMC#1	VY1JA	J0	VE8	36	0	0	36	22	792	
KG9X	Fred	IL	59	82	59	200	44	8800		VE7IN	Earl	VE7	4	13	0	17	14	238	
N9SD	*Scott	WI	42	115	50	207	40	8280	SMC#1	HP1AC	*Cam	HP	50	14	0	64	30	1920	
WI9WI	Smoky	WI	58	69	55	182	43	7826	SMC#2	HC8N	Trey	HC8	142	121	4	271	52	14092	
WT9U	*Jim	IN	50	42	69	161	44	7084	SMC#1	(N5KO)									
K9KM	*Howie	IL	28	64	27	119	38	4522	SMC#2	ZS1ESC	Dick	ZS	51	0	0	51	18	918	
N2IC	Steve	CO	159	132	89	380	51	19380	DLCSCW	(N6AA)									
WD0T	Todd	SD	110	134	72	316	48	15168	DLCSCW	RU0SN	Sam	UA9	15	0	0	15	13	195	
K0RF	Chuck	CO	120	101	87	308	46	14168	DLCSCW										
WB0O	Bill	ND	111	107	79	297	47	13959	DLCSCW										
N0AT	Ron	MN	69	125	79	273	48	13104	MWA										
K0OU	Steve	MO	85	138	48	271	45	12195	SMC#1										

\*Denotes 150 W or less

\*\*Denotes 5 W or less

### NCJ CW Sprint Records—Through February 2000

QTH	Date	Call	QSO	Mults	Score	QTH	Date	Call	QSO	Mults	Score
CO	2/00	N2IC	380	51	19380	WV	2/00	WA8WV	247	47	11609
IA	2/98	N0NI (AG9A op)	321	46	14766	IL	2/00	K9XD (AG9A op)	325	52	16900
KS	9/82	K0VBU	231	42	9702	IN	2/00	N9RV	350	53	18550
MN	2/00	N0AT	273	48	13104	WI	2/00	K9AA (K9PG)	302	55	16610
MO	9/96	K4VX/0 (WX3N op)	332	46	15272	VE1	2/88	VO1QU	143	33	4719
NE	2/91	KV0I	204	34	6936	VE2	9/88	VE2ZP	214	41	8774
ND	2/00	WB0O	297	47	13959	VE3	2/00	VE3EJ	270	50	13500
SD	2/00	WD0T	316	48	15168	VE4	9/93	VE4VV	237	40	9480
CT	2/99	K1KI	362	49	17738	VE5	2/99	VE5MX	216	43	9288
MA	2/00	K5ZD	342	50	17100	VE6	2/00	VE6EX	228	43	9804
ME	9/88	K1KI	218	41	8938	VE7	2/00	VA7RR	316	48	15168
NH	2/00	K1DG	294	47	13818	VY1	2/00	VY1JA	36	22	792
RI	2/90	K1IU	236	44	10384	C6	2/99	C6AKP	21	14	294
VT	9/99	W2GD	258	46	11868	HH	9/96	HH2AW	139	33	4587
NJ	2/00	N2NT	337	50	16850	HI8	2/91	HI8DMX	40	19	2430
NY	9/80	N2NT	319	42	13398	HP	2/00	HP1AC	64	30	1920
DE	9/89	KN5H/3	272	46	12512	VP2E	2/96	VP2E/KI4HN	68	30	2040
MD	9/89	W3LPL	310	47	14570	VP9	2/85	W6OAT/VP9	202	31	6262
PA	2/00	K3WW	318	50	15900	V4	2/96	V40Z (AA7VB)	54	23	1242
AL	2/00	K4NO	273	47	12831	XE	9/90	XE2XA (WN4KKN op)	305	47	14335
FL	9/99	K1TO	354	53	18762	ZF	9/92	ZF2KI (K1KI op)	251	49	12299
GA	9/99	K4AAA (W4AN)	353	51	18003	4U1	2/85	4U1UN (W2TO op)	70	23	1610
KY	9/98	K4LT	281	44	12364	8P	2/96	8P9EN	10	8	80
NC	2/99	N4AF	310	46	14260	CT	9/98	CT1BOH	225	40	9000
SC	9/99	W4OC	255	46	11730	EA8	2/94	EA1AK/EA8	36	21	756
TN	2/00	W4PA	353	52	18356	F	9/90	F/N6TR	196	38	7448
VA	9/89	KT3Y/4	296	48	14208	G	2/98	G4BUO	101	29	2929
AR	2/00	K5GO	278	50	13900	HC8	2/00	HC8N (N5KO)	271	52	14092
LA	2/95	W5WMU (K5GA op)	306	48	14688	I	9/98	IK0HBN	100	35	3500
MS	2/00	WQ5L	317	49	15533	JA	2/91	7J1AAI	13	9	117
NM	9/99	N6ZZ	331	51	16881	KH6	9/81	KH6NO	121	30	3630
OK	9/89	KM5H	289	49	14161	LY	9/99	LY2BTA	59	240	1416
TX	2/00	N5TJ	381	52	19812	OH	9/98	OH1NOA	56	22	1232
CA	2/00	W6EEN (N6RT op)	377	51	19227	PY	9/80	PY8ZPJ	29	14	406
AK	2/00	KL9A	202	47	9494	VK	9/94	VK5GN (N6AA)	48	22	1056
AZ	2/00	K6LL	364	50	18200	UA9	2/00	RU0SN	15	13	195
ID	2/00	W7ZRC	274	45	12330	ZD8	9/90	ZD8Z (N6TJ)	228	43	9804
MT	2/98	K7BG	273	43	11739	ZS	2/00	ZS1ESC (N6AA)	51	18	918
NV	2/00	K7BV	290	50	14500						
OR	2/00	W7AT (N6TR op)	370	51	18870						
UT	9/91	K6XO/7	263	44	11572						
WA	2/92	K7SS	329	42	13818						
WY	9/99	K7KU (N2IC op)	312	48	14976						
MI	2/00	N8EA	273	48	13104						
OH	9/91	K3UA/8	322	45	14490						

Highest score: 2/00 N5TJ 19812

Highest multiplier: 2/00 K9AA (K9PG) 55

Highest QSO total: 2/00 N5TJ 381

Logs received: 2/00 182

Number logs >= 300: 2/00 38

Number Golden Logs: 2/00 15

Highest team score: 2/00 SCCC #1 158051

# Results, February 2000

## NCJ Phone Sprint

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The millennium celebrations which marked December 31, 1999 apparently carried over into the February 2000 Phone Sprint. Fireworks, celebrations, and a series of "firsts," occurred both in December and in February.

Eighteen years have passed since the first Phone Sprint was run in September 1982. There have been 36 contests marked by conditions good and bad, high sunspots and low, ice storms and sunny skies, short skip and long. Usually, with that much history, domestic contest records don't change often and, when they do, the changes are usually incremental. Not this time.

Thanks in very large part to the efforts of K9PG (see his sidebar), the scores and activity in February 2000 represent almost a watershed in the history of the Phone Sprint. Over 20 records of one sort or another were set—most convincingly. Much of this write-up will be spent on reviewing the records set during the February 2000 Phone Sprint.

First, we received 127 logs from 47 different areas. The log total ties the record set in 1992 while the number of different areas easily surpasses the old mark of 40.

Sixteen State/Province records were set. There are so many of them, a chart is in order.

Take a few minutes to study the *New Versus Old Records* table. It's obvious that the old records were not broken incrementally, they were broken almost exponentially. There are stories behind every score. Let me point out just a few.

In the table, the old records averaged 13276 points. On average, the new mark was 2761 points higher. That's a 21% score improvement. Goodness!

The upper Midwest was one great place to be. Each of the states in 9-land now sports a new scoring mark as do two states in 8-land. The nines were particularly record-prone.

Two entrants in WI broke the old record (WE9V and KA9FOX), two did it in IL (K9XD and AG9A) and three did it in IN (W9RE, K9NW and N9RV). Two of the states in 3-land also had new marks set. Each of these records is partially due to the 40-meter start chronicled by K9PG in the sidebar.

TN was another state where multiple persons broke the old mark. K4WX was on the top of the stack in TN breaking his old mark (he's ex-N4ZZ). He was joined by K0EJ and K1KY. Of particular note, K0EJ broke the old record while running low power.

One record was broken that was set in the very first Phone Sprint—the record in WV. In fact, six new records broke marks which were at least ten years old.

One old record that was smashed was in Ohio. Bob, KW8N, broke his own 13-year-old record by almost 25%. In and of itself, that's a huge jump. It's even more amazing when you consider that Bob competes at a very high level every time he gets into this contest. To put it mildly, Bob has a reasonable idea of what he's doing and he hasn't been sitting on his mike for the last 13 years. He's won this contest twice before and has been in the Top Ten 27 out of 36 times, including 10 out of the last 11 contests (that's an absolutely mind-boggling track record). Here's someone who is extremely competitive, who enters almost every contest, who set the record 13 years ago, and then, when he does set a new mark, he breaks his old record

by 36 QSOs and 6 multipliers. That's phenomenal.

The new CA record is also impressive. In virtually every contest, a CA station or two or three is in the Top Ten. There are often 20 entrants from the Golden State. Yet the old record took over 10 years to break, and when it fell, the new mark is an increase of over 7%.

As I said, there are many stories behind the many new records—NT1N setting a new mark in yet another state; a first-time entry from stalwart VY1JA, fill

### Top 10 QSOs

KW8N	366
K9XD	356
K6LL	345
N6MJ	344
W9RE	343
WE9V	332
K4XS	331
K3CR	330
W7WA	327
NT1N	325

### Top 10 Multipliers

K9XD	58
K6LL	57
KW8N	57
K4XS	56
N6MJ	56
NT1N	55
K3CR	55
NR6O	55
W5WMU	54
K5OT	54
K6RO	54
W7WA	54

### Golden Logs

(Logs over 50 QSOs with no score reduction)

K3CR	330 QSOs
W6EU	275 QSOs
KR6RF	230 QSOs
K0EJ	226 QSOs

### Top 10 Scores

Call	Score	Band Changes	QSOs Lost
KW8N	20862	65	3
K9XD	20648	55	1
K6LL	19665	2	8
N6MJ	19264	2	3
K4XS	18536	21	3
K3CR	18150	32	0
NT1N	17875	7	7
W7WA	17658	10	5
WE9V	17596	3	2
W9RE	17150	11	3

### Top 10 Low Power Scores

Call	Score	Band Changes	QSOs Lost
K6ZH	12393	10	8
WA7BNM	12296	2	1
K0EJ	11300	5	0
N9SD	10904	5	4
VE5SF	10608	1	4
K5KA	10516	2	2
W8MJ	10164	17	4
N8AA	9898	20	3
N8EA	9618	4	1
W0UY	9568	9	3

### New Versus Old Records

Area	Call	New Record	Call	Old Record	Points	Percent
CT	NT1N	17875	W1WEF	15066 (Feb '89)	2809	18.6%
VT	KK1L	12672	KK1L	9374 (Sep '99)	3298	35.1%
MD	K3MM	14637	KM3T	14444 (Sep '87)	193	1.3%
PA	K3CR	18150	K5ZD	16677 (Feb '92)	1473	8.8%
AL	K4NO	12576	KE4GY	8987 (Sep '95)	3589	39.9%
NC	K4MA	13700	AA4NC	12788 (Feb '92)	1088	8.5%
TN	K4WX	14739	N4ZZ	10836 (Feb '89)	3903	36.0%
CA	N6MJ	19264	N6BT	17898 (Sep '89)	1366	7.6%
AZ	K6LL	19665	K6LL	18150 (Sep '97)	1515	8.3%
OH	KW8N	20862	KW8N	16830 (Sep '87)	4032	24.0%
WV	K3JT	11172	N8II	9956 (Sep '82)	1216	12.2%
IN	W9RE	17150	W9RE	14945 (Sep '87)	2205	14.8%
IL	K9XD	20648	AG9A	15550 (Sep '94)	5098	32.8%
WI	WE9V	17596	KA9FOX	14308 (Sep '95)	3288	23.0%
VE6	VE6EX	9751	VE6GK	3330 (Feb '93)	6421	192.8%
VE8	VY1JA	1152	no entry	N/A		



ing the last blank spot in the US and Canada; K3JT getting on for just a few Qs and not being able to stop—and on and on and on. Congratulations to all the record setters. Let's do it again next time.

Moving to the Top Ten, KW8N took the brass ring with the second highest score ever recorded. He also had a high band change number, as usual. Note that a high number of band changes nowadays suggests effective use of a two radio strategy—a strategy possibly more important in the East than in the West. Half of the Top Ten stations were in the Upper Midwest—an unusually high number. Did the 40-meter start have something to do with it? Nonetheless, the geographic map was well represented in the Top Ten, with stations from California to Connecticut and from Florida to Washington.

As a whole, scores in the Top Ten increased dramatically. W9RE in the tenth spot had 17150 points, a score which would have WON 26 of the previous 35 Phone Sprints. The average Top Ten score of 18740 (!) was higher than ever before and such a score would have won in all but four prior contests.

Among low power enthusiasts, K6ZH led a pack of seven contestants reporting more than 10k points. Normally, we're lucky if one LP entrant breaks the magic 10k barrier (only once has there been two in one contest). Similar to the high power gang, the LP tenth place finisher would have won the category about 70% of the time in past contests. Note that fifth place finisher VE5SF posted a great score without the use of 80 meters (that's why he only had one band change).

In the club competition, the Midwest (not surprisingly) was the birthplace of the winning club. Members of the Society of Midwest Contesters have been the nucleus of multiple team entries over multiple years. Often their highest placing team has been named Dead Lizards Can't Talk (a name that, I'm sure, was derived in a Dayton contest suite haze). The last time DLCT took the top club position was September 1995. So this year, they changed their tactics. As K9NW so aptly put it: "after further review, dead lizards CAN talk." It obviously worked. Not only did DLCT finish first, they set a new club record, breaking the old mark set in September 1989. Four team members finished in the Top Ten. Congratulations. The other SMC entries finished in sixth, ninth, thirteenth and sixteenth.

After finishing first eight times in a row, the Southern California Contest Club took second place with a score that would have won the contest in any other year except this one and September 1989. Don't cry big crocodile tears for them though; their string of consecutive

## WOW! What a Contest!

By Paul Gentry, K9PG

In the January/February 2000 NCJ, my contesting mentor Dave Patton, NT1N, wrote a short article in the CW Sprint results entitled *My Best Sprint?* Well, this SSB Sprint was most definitely *My Best Sprint!*

One of the biggest problems that I often face in the SSB Sprint is that I can never seem to get off to a big start. The perennial Top Ten guys often have first hours over 100, mainly on 20 meters. I've never come close to a 100-hour in any Sprint—ever.

Over the last few years, I have tried to get a group of people from the Midwest to start the Sprint on 40 meters in an attempt to work each other before the band goes long. It has worked with moderate success—there just haven't been a lot of people to work on 40 meters because most of them are on 20 meters. However, this time I put a lot of time and effort into getting more activity on for the contest in general with an emphasis on the 40-meter start.

I hounded several dozen members of my contest club and asked several other Sprinters elsewhere to do the same with their clubs. Judging by the huge increase in scores this time around, I'd say that it paid off!

I set a goal of  $325 \times 50$ . If I got close to that, I'd be happy. I never thought that I'd end up with  $357 \times 58!$  My strategy was to spend as much time as possible on 40 meters at the start. My thinking was that no matter when I end up QSYing to 20 meters, when I did I'd be fresh meat, so the longer I spend on 40, the better. I had 29 Qs logged after the first 10 minutes ranging from W0UY in KS, K4WX in TN and AC0W in MN, to NT1N in CT—and the reliable VT mult, KK1L. N8NA also showed up handing out the DE mult! Starting on 40 meters really paid off! It was really hopping at the start and there was activity on 40 throughout the entire contest!

I left 40 meters for the first time at 0011Z with 31 Qs in the log, all but 2 were on 40. I spent the next 25 minutes on 20 meters, then went back and forth between 20 and 40 meters for the remainder of the first hour.

At 0100Z, I had 115 Qs in the log, 42 on 40 meters and 73 on 20 meters. This is by far the best start that I've ever had. The rest of the contest was relatively uneventful for me other than having some good mults call in as well as finding some on the second radio. My next three hours were 77, 73 and 93. The last hour of 93 seemed to be a bit above average.

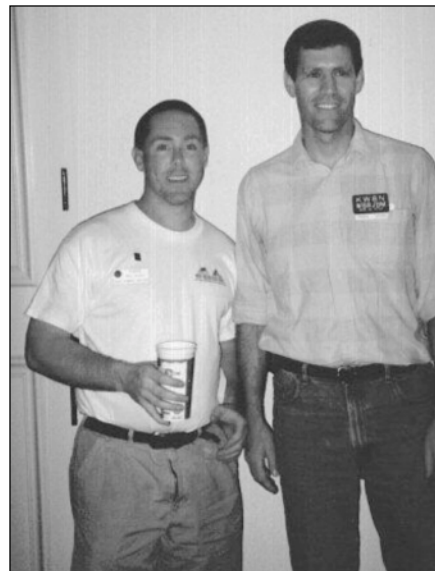
Activity was way up and there was someone on from every State and Province, except VE2. Where were you, Serge? Our friend VY1JA also made a showing. Thanks, J! With all the DX mults on, there were about 70 possible mults available!

Without question, what made this the best Sprint of my brief contesting tenure was the great jump-start I got on 40 meters. It also helped everyone else from the Midwest to the East Coast including the winner, KW8N. Bob and I were within one QSO of each other ten minutes into the contest. His last 43 minutes must have been killer—I was 7 QSOs ahead of him at 0317Z. Kudos to Bob.

There were also all kinds of state records shattered. Many ops who set new records started on 40 meters. They tell me that the start they got off to on 40 meters helped them greatly! Could these guys and others in the Midwest and on the East Coast have done as well as they did if they didn't start on 40? It's tough to say. However, organizing a start on 40 meters with this many people has never been done before and you certainly can't argue with the fact that it worked!

We'll be doing the same thing for both modes in September. If you were one of the guys that got on 40 meters at the start this time, how about doing it again? If you are one of the guys who didn't start on 40 this time, how about giving it a shot! You might be pleasantly surprised like we all were!

See you on 40 meters at 0001Z on Sept 17!



Paul Gentry, K9PG, and Bob Hayes, KW8N

victories is twice as long as anyone else's. September would be a nice time to start another string, don't you think?

Perennial entrants NCCC and MRRC took third and fourth. The Tennessee Contest Group was big enough to field two teams this year (as did SCCC). Congratulations and thanks to all the club entries.

To finish up the record machine, other records set included: most multipliers (58); 19 entrants with 300 QSOs or more; and 43 persons with 50 or more multipliers.

Finally, from "The Twilight Zone" department, there was a veritable plethora of "sixteens" in this contest. To wit: there were 16 team entries, 16 State/Province records were set, 16 contestants had over 16k points, and a 16k score would have won the contest 16 times in the past. Makes you wonder.

### Soapbox

This was my second Phone Sprint and I did 60 more Qs than my first.—*AE6Y*. Maybe I should use a name other than my own unless my fellow contesters learn how to spell my Japanese name.—*AJ3M*. Special thanks to K9PG for drumming up a lot of activity for this one. It made it the most fun Sprint of all time.—*KW8N*. A personal high in both Qs and mults.—*K0OU*. Only was on for an hour and a half. Missed a lot of fun this time.—*K1HT*. Can I just go get all my teeth pulled next time?—*K1KY*. The 40-meter start was fantastic.—*K3CR*. Maybe someday I'll have a competitive score.—*K3JT* (a new record seems competitive, Ed.) The great thing about contesting is learning while having fun.—*K4OOO*. First time over 300 Qs!—*K6RO*. It was an experience. Something like entering the Kentucky Derby on a Shetland pony.—*NX9T*. Always a fun contest though tough in the low power, no beams category—*K7ZO*. I made a few Qs on 20 with the beam on the ground, buried in 1 foot of snow, before I figured out that my dipole in the air would be a better antenna.—*N8NA*. I am amazed at the result. It would not have been possible without starting on 40 meters.—*K9XD*. It was great once I got started. I understand why Lee says it raises his blood pressure.—*KE4YBS*. What a great contest!—*KE9NA*. My first Sprint. What a blast.—*KG9X*. I'm not sure my learning curve is steep enough, but I'll be back.—*KR4QI*. Sprints render all other contests useless. Now if we can extend it to 24 hours, eliminate the high-power category and only permit one transmitter, we'd really be on to something.—*N7RX*. My first try. Was interrupted by the new baby (she was 3 weeks old) and dinner.—*VE7TLL*. Happy to work W0BR for the KS mult. This may be the first time I have done that in a Sprint.—*W0UY* (KS). I love the 4 hour format.—*W4NF*. Got my radio back from repair Friday afternoon and it worked okay. Forty minutes into the contest it quit hearing, so I banged on it and it heard again. After doing that 20 or 30 times it quit entirely.—*W6AQ*. QRP is for the birds in this test.—*W9WI* (QRP). Finished with personal bests in mults and score.—*WA7BNM*. First time over 300 Qs.—*WE9V*.

### Club Competition

<i>Dead Lizards CAN Talk</i>	<i>Southern California Contest Club #1</i>	<i>Northern California Contest Club</i>	<i>Mad River Radio Club</i>
K9XD 20648	K6LL 19665	NR6O 16500	KU8E 15600
K3CR 18150	N6MJ 19264	K5RC 14210	K9TM 14739
WE9V 17596	K6RO 16794	W6EU 14025	K3MM 14637
W9RE 17150	K6LA 16536	AE6Y 13034	ND8DX 12138
AG9A 16380	N6ED 15900	W6YX 13005	W8MJ 10164
K9NW 16224	W6TK 14204	KR6RF 11040	N8EA 9618
N9RV 15810	W7WW 13300	KA6BIM 9000	WD8S 6670
KA9FOX 15198	WA7BNM 12296	K6EP 4674	K8GT 2079
K9ZO 14681	K6AM 6440	<i>Total</i> 95488	AA8U 144
K8DX 14535	<i>Total</i> 134399		<i>Total</i> 85789
<i>Total</i> 166372			

5. Tennessee Contest Group Alpha (K4WX, K4MA, W4MR, K0EJ, K1KY, K4OOO, KE4YBS, K4BEV) ..... 71725
6. SMC & Company (NT1N, K0OU, K9BGL, W0UY, WT9U, KL9A) ..... 70882
7. SCCC #2 (W6UE, K6ZH, K6NA, N6RT, W6AQ, N6VR, N6TW) ..... 48240
8. Southeast Contest Club (K4NO, W4WA, W4OC, W4NTI) ..... 35126
9. Society of Midwest Contesters #1 (KE9NA, N9SD, WO9S, W9GIG) ..... 34076
10. Florida Contest Group (K4XS, WC4E) ..... 28564
11. Texas DX Society (W5ASP, KG5U) ..... 25920
12. Rush Drake Orchestra (W7WA, K17Y) ..... 24038
13. SMC #2 (K9MMS, KE0FT, K0SN) ..... 15088
14. Alberta Clippers (VE6EX, VE6FU) ..... 12796
15. TCG Beta (W9WI) ..... 2079
16. SMC #3 (K9PW) ..... 372

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**Scores**

Call	Name	QTH	20	40	80	QSO	Mult	Score	Team	Call	Name	QTH	20	40	80	QSO	Mult	Score	Team
NT1N	Dave	CT	141	119	65	325	55	17875	SMC&Co	N7RX	*Neal	OR	95	71	15	181	45	8145	
KK1L	Ron	VT	96	95	73	264	48	12672		K7ZO	*Scott	ID	100	47	27	174	44	7656	
K5ZD	Randy	MA	62	101	37	200	45	9000		K17Y	*Jim	OR	88	57	0	145	44	6380	RDrakeO
K1HT	*Dave	MA	0	64	32	96	35	3360		KW7N	*Steve	ID	50	33	0	83	34	2822	
WO1N	*Ken	MA	19	0	18	37	24	888		K7LR	Bob	MT	23	0	0	23	12	322	
										W7/JR1NKN									
NI2P	*Leon	NY	63	57	21	141	42	5922			*Zuo	WA	4	0	0	4	3	12	
K3CR	Jim	PA	117	137	76	330	55	18150	DLCT	KW8N	Bob	OH	142	144	80	366	57	20862	
K3MM	Ty	MD	107	109	71	287	51	14637	MRRRC	KU8E	Jeff	OH	91	129	80	300	52	15600	MRRRC
AJ3M	Masa	MD	84	77	37	198	50	9900		K9TM	Bob	OH	98	127	64	289	51	14739	MRRRC
WA3HAE	*Keith	PA	63	65	38	166	47	7802		K8DX	Scott	OH	107	102	76	285	51	14535	DLCT
N8NA	*Karl	DE	27	74	33	134	38	5092		ND8DX	Ed	OH	73	97	68	238	51	12138	MRRRC
K4XS	Bill	FL	169	102	60	331	56	18536	FLContest	K3JT	Terry	WV	74	102	52	228	49	11172	
K4WX	Don	TN	100	116	73	289	51	14739	TCG A	W8MJ	*Ken	MI	69	113	49	231	44	10164	MRRRC
K4MA	Jim	NC	106	107	61	274	50	13700	TCG A	N8AA	*John	OH	92	74	36	202	49	9898	
K4NO	Greg	AL	86	121	55	262	48	12576	SECC	N8EA	*Joe	MI	74	93	62	229	42	9618	MRRRC
W4MR	Mark	NC	101	106	40	247	49	12103	TCG A	WD8S	*Mike	MI	52	77	16	145	46	6670	MRRRC
K0EJ	*Mark	TN	67	109	50	226	50	11300	TCG A	W8NJH	*Rod	OH	20	82	0	102	37	3774	
K1KY	Tom	TN	86	91	43	220	51	11220	TCG A	K8LN	John	OH	33	37	19	89	29	2581	
W4WA	Ron	GA	91	74	43	208	49	10192	SECC	K8GT	*Gerry	MI	21	42	0	63	33	2079	MRRRC
WC4E	Jeff	FL	58	90	70	218	46	10028	FLContest	AA8U	*Ugly	MI	4	12	0	16	9	144	MRRRC
W4OC	*Don	SC	90	84	26	200	47	9400	SECC	K8MR	Jim	OH	0	11	0	11	8	88	
W4NF	Jack	VA	64	77	48	189	49	9261		K9XD	Dave	IL	120	153	83	356	58	20648	DLCT
NX9T	*Jeff	NC	71	110	2	183	50	9150		WE9V	Chad	WI	109	142	81	332	53	17596	DLCT
N4CW	Bert	NC	78	92	8	178	42	7476		W9RE	Mike	IN	115	126	102	343	50	17150	DLCT
KR4QI	Steve	AL	57	64	34	155	41	6355		AG9A	Mark	IL	103	141	71	315	52	16380	DLCT
K4OOO	*Larry	TN	54	29	16	99	35	3465	TCG A	K9NW	Mike	IN	107	124	81	312	52	16224	DLCT
W4ATL	*Roger	GA	0	71	28	99	35	3465		N9RV	Pat	IN	98	124	88	310	51	15810	DLCT
W4NTI	*Dan	AL	30	32	25	87	34	2958	SECC	KA9FOX	Scott	WI	99	104	95	298	51	15198	DLCT
KE4YBS	*Gail	TN	27	35	16	78	37	2886	TCG A	K9ZO	Ralph	IL	95	100	82	277	53	14681	DLCT
K4BEV	Don	TN	48	20	0	68	34	2312	TCG A	KE9NA	John	IL	85	108	58	251	48	12048	SMC #1
W9WI	*Doug	TN	20	33	10	63	33	2079	TCGBeta	K9BGL	Karl	IL	89	94	69	252	47	11844	SMC&Co
K4IU	Fred	KY	45	0	0	45	21	945		N9SD	*Scott	WI	75	106	51	232	47	10904	SMC #1
W5WMU	Pat	LA	149	106	46	301	54	16254		WO9S	Jon	IL	86	89	33	208	48	9984	SMC #1
K5OT	Larry	TX	105	128	50	283	54	15282		WT9U	*Jim	IN	58	87	55	200	45	9000	SMC&Co
W5ASP	Joe	TX	140	74	42	256	51	13056	TDXS	K9MMS	*Gary	IL	68	70	40	178	41	7298	SMC #2
KG5U	Dale	TX	152	81	35	268	48	12864	TDXS	KG9X	*Fred	IL	59	80	25	164	42	6888	
K5KA	*Ken	OK	87	94	58	239	44	10516		K9WX	Tim	IN	47	62	15	124	37	4588	
K5AM	Mark	NM	94	77	44	215	42	9030		K0SN	*Tom	WI	38	47	0	85	38	3230	SMC #2
N5ER	John	AR	78	44	36	158	46	7268		W9GIG	Dick	IL	15	21	21	57	20	1140	SMC #1
N6ZZ	Phil	NM	28	75	47	150	36	5400		K9PW	Peter	IL	0	31	0	31	12	372	SMC #3
WM9M	Tom	LA	49	0	0	49	22	1078		K0OU	Steve	MO	91	125	63	279	49	13671	SMC&Co
W5WZ	Scott	LA	11	0	0	11	9	99		W0UY	*Tom	KS	100	79	29	208	46	9568	SMC&Co
N6MJ	Dan	CA	152	131	61	344	56	19264	SCCC #1	AC0W	Bill	MN	37	80	34	151	44	6644	
K6RO	Larry	CA	168	105	38	311	54	16794	SCCC #1	N7IV	*Joe	ND	102	39	0	141	40	5640	
K6LA	Ken	CA	162	106	44	312	53	16536	SCCC #1	KE0FT	*John	IA	29	85	0	114	40	4560	SMC #2
NR6O	Ken	CA	125	122	53	300	55	16500	NCCC	K0UK	Bill	CO	10	6	0	16	13	208	
N6ED	Ed	CA	164	93	43	300	53	15900	SCCC #1	VE9WH	*Jim	VE1	65	59	15	139	44	6116	
W6TK	Dick	CA	131	102	35	268	53	14204	SCCC #1	VE3ZT	*Paul	VE3	18	38	5	61	31	1891	
W6EU	Jim	CA	136	120	19	275	51	14025	NCCC	VE4XT	*Bart	VE4	71	78	1	150	46	6900	
AE6Y	Andy	CA	136	85	45	266	49	13034	NCCC	VE5SF	*Sam	VE5	110	111	0	221	48	10608	
W6YX	Mike	CA	117	112	26	255	51	13005	NCCC	VE6EX	Dan	VE6	142	57	0	199	49	9751	AlbClip
W6UE	Al	CA	132	72	36	240	52	12480	SCCC #2	VE6FU	*Dave	VE6	64	23	0	87	35	3045	AlbClip
K6ZH	*Jim	CA	129	80	34	243	51	12393	SCCC #2	VE7IN	Earl	VE7	104	79	21	204	46	9384	
WA7BNM	*Bruce	CA	127	79	26	232	53	12296	SCCC #1	VE7KED	Ian	VE7	106	0	0	106	38	4028	
KR6RF	Ron	CA	112	94	24	230	48	11040	NCCC	VE7TLL	Terry	VE7	82	9	9	100	35	3500	
KA6BIM	Dave	CA	135	45	0	180	50	9000	NCCC	VY1JA	J	VE8	40	7	1	48	24	1152	
K6NA	Glen	CA	35	69	60	164	40	6560	SCCC #2										
K6AM	*John	CA	108	24	8	140	46	6440	SCCC #1										
N6RT	*Doug	CA	54	54	21	129	41	5289	SCCC #2										
W6AQ	*Dave	CA	59	52	12	123	41	5043	SCCC #2										
K6EP	Eric	CA	77	29	8	114	41	4674	NCCC										
WA6DLM	Jim	CA	80	29	4	113	39	4407											
N6VR	Ray	CA	52	31	30	113	37	4181	SCCC #2										
N6TW	*Larry	CA	46	22	6	74	31	2294	SCCC #2										
AB6ED	John	CA	28	13	0	41	23	1066											
K6LL	Dave	AZ	174	110	61	345	57	19665	SCCC #1										
W7WA	Dan	WA	200	94	33	327	54	17658	RDrakeO										
K5RC	Tom	NV	132	109	49	290	49	14210	NCCC										
W7WW	Dave	AZ	127	94	45	266	50	13300	SCCC #1										
KL9A	Frank	AK	166	25	0	194	46	8924	SMC&Co										
AL7IF	Lou	AK	169	0	0	169	51	8619											

\*Denotes Low Power Entry

Guest Operators:

KB3AFT at K3CR, K17WX at W4MR, N6EE at KR6RF, N6RO at NR6O, AA6RX at W6UE, N7MH at W6YX, K9PG at K9XD.

Host stations:

N1MEZ for KK1L, K9RS for AG9A, WA3FET for K3CR, NO9Z for K9ZO.



# Results, January 2000 NAQP CW Contest

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Well, the new "Contest Millenium" started off nicely with the January running of the NAQP CW Contest. The January 2000 NAQP CW Contest was the first major contest in Y2K and it seemed everyone wanted to play this time. Participation was the highest it has ever been and many records were broken. Over 125,000 QSOs were logged by the 300 entrants submitting logs this time. Judging from the log check data-

base, over 1,200 stations were active in the contest.

Taking top honors for the first time was Doug, N6RT, operator at W6EEN. Doug produced the second highest score ever in the NAQP CW Contest and did so with an amazingly high accuracy rate of 99.6%. He also set a record for the most multipliers worked by a Single Op with 286. Wow, FB job Doug!

Trey, N5KO; Dan, N6MJ (ex AD6DO);

and Dave, K6LL, placed second, third and forth respectively with excellent scores of their own. As a matter of fact, the top 5 Single Op scores place among the top 10 highest scores ever—a testimonial to the increased activity this time around.

Winning the Multi-Two category this time was the team of K0RF and N0HF. Even though no new records were set, competition was fierce with 8 stations

## Top Score Breakdowns

Call	Score	QSOs	Mults	160M	80M	40M	20M	15M	10M	Team
<b>Single Op Breakdowns</b>										
W6EEN (N6RT)	302302	1057	286	57/27	181/47	266/54	191/55	204/54	158/49	SCCC #1
N5KO @W6NL	290904	1054	276	34/15	110/39	239/57	227/58	231/56	213/51	NCCC #1
N6MJ	261040	1040	251	31/11	122/43	244/51	244/54	245/50	154/42	SCCC #1
K6LL	249500	998	250	15/8	87/37	235/51	231/54	230/52	200/48	SCCC #1
N2NC @N2NT	243275	925	263	90/31	169/45	238/52	202/52	154/50	72/33	FRC Dom A
N9RV	240300	900	267	151/43	218/48	164/48	199/52	90/42	78/34	
K5RC	237226	902	263	44/21	122/40	197/48	190/52	155/53	194/49	NCCC #1
N6RO	228564	907	252	49/24	68/26	190/49	194/53	224/50	182/50	NCCC #1
W4PA @K4JNY	222396	862	258	103/36	198/45	207/50	183/51	94/43	77/33	TCG #1
W4AN (K4BAI)	208502	742	281	90/33	135/46	180/52	166/56	100/52	71/42	SECC #1

## Multi-Two Breakdowns

K0RF	412993	1439	287	129/40	264/51	328/52	330/54	237/51	151/39
W5NN	389070	1310	297	128/41	234/49	366/55	289/57	178/52	115/43
K5ZD	371424	1272	292	97/33	249/53	288/54	296/56	214/54	128/42

## Team Scores

NCCC #1		SCCC #1		TCG #1	
N5KO @W6NL	290904	W6EEN (N6RT)	302302	W4PA @K4JNY	222396
K5RC	237489	N6MJ	261040	K4WX	189645
N6RO	228564	K6LL	249500	K1KY	162564
ZF2NT	200158	K6AM	101928	K4AO	139728
K6AW @K6DB	<u>195536</u>	XE2MX (XE2/N6KI)	<u>95200</u>	W9WI	<u>135450</u>
Total	1152651	Total	1009970	Total	849783

4. Minnesota Wireless Association #1 (N0AT, CG4VV, K0SR, NA0N, K0AD).....	774442	18. Northern California Contest Club #2 (K7NV, K6CTA, WA6O, K6EP).....	346636
5. South East Contest Club #1 (W4AN, K4NO, W4OC, K9AY, K4MA).....	755217	19. Ozark Contest Club #1 (AB5SE, W5YM, K5LG).....	324972
6. Rush Drake (N0AX, N7OU, W7NX, KI7Y, K7AW).....	703891	20. Florida Contest Group #1 (N4BP, WD4AHZ).....	308772
7. FRC Domestic A (N2NC, AA3B, K3WW, K2PS).....	699014	21. North Texas Contest Club #3 (N5YA, K5RT, N5KM).....	260735
8. Society of Midwest Contesters #1 (K9AA, KJ9C, N9CO, K9XD, W9RE).....	626734	22. PVRC-NC (N4CW, WJ9B, KF4OAD, NT4D).....	257512
9. North Texas Contest Club #1 (K5OT, W0UO, W5FO, N5QQ).....	571241	23. Minnesota Wireless Association #2 (KT0R, N0IJ, AC0W).....	226252
10. Tennessee Contest Group #2 (K3WU, WO4O, NN4T, N4VI, NY4N).....	518850	24. Society of Midwest Contesters #3 (K9IG, N9SD, WD0T).....	143084
11. South East Contest Club #2 (VE3EJ, K4OGG, K9TM, AA4S).....	518392	25. Southern California Contest Club #2 (KQ6ES, N6BM).....	134434
12. North Texas Contest Club #2 (W5ER, W5GN, K5WO, N5NJ, N5KB).....	491290	26. South East Contest Club #4 (W4WA, KU8E/M, AA4LR, K4TW).....	125118
13. Tennessee Contest Group #3 (K0EJ, NA4K, K4RO, K4BEV, K4AMC).....	479416	27. GRVARS (K9WA, KE0FT, NE0P).....	114910
14. Society of Midwest Contesters #2 (N9FH, WT9U, W0UY, WE9V, W9SMC).....	436492	28. Ozark Contest Club #2 (W5KI, KJ5WX, W5RL).....	109517
15. South East Contest Club #3 (K5IID, K4IQJ, AA8U, K2UFT, W4NTI).....	407996	29. Zion Park (WA7LNW, W8EQA).....	108450
16. Weekend Warriors (K3CR, WA3HAE, KB3A).....	381657	30. Tennessee Contest Group #4 (N4KN, KE4OAR, W4TYU, AC4ZD).....	91114
17. Team Mississippi (WQ5L, W5XX, KB5IXI, AC5SU, N5JGK).....	380410	31. FRC Domestic B (K2BM, N2ATX, K3VA).....	58971
		32. Florida Contest Group #2 (KN4Y, WC4E).....	53078
		33. Society of Midwest Contesters #4 (WI9WI, KE9I, KC9TV).....	48794
		34. QRP Swat (K3WWP, K8UCL).....	43288
		35. Society of Midwest Contesters #5 (WV9T, K9KM).....	37553
		36. Tennessee Contest Group #5 (N9GG, N4PQV, N5NW, KE4YBS).....	10330

making over 900 QSOs each. Larry, K6RO, and I teamed up for the first time in the Multi-Two category and thought we did pretty well, at least until the other scores came in!

Team Competition was great with 36 teams of 2 to 5 operators submitting logs. The number 1 position turned out to be a SCCC versus NCCC shootout

with the NCCC ending up on top. Both teams scored over 1 million points, a first in the CW NAQP. The Tennessee Contest Group placed third with an amazing 850k points as well. The Tennessee Contest Group, South East Contest Club and Society of Midwest Contesters should all be commended on their ability to generate four or more teams, bolster-

ing both activity and scores. Keep up the good work guys.

That's it for this edition. When planning for the August contests, please remember to get your teams pre-registered, remind everyone to submit their logs, read through the rules and pass the word on the new power limit of 100 W!

### Single Operator Scores

Call	QSOs	Mults	Score	Section	Team	Call	QSOs	Mults	Score	Section	Team
K1VUT	792	217	171864	MA		K4IQJ	520	194	100880	AL	SECC #3
W1FJ	695	206	143170	MA		W4WA	474	196	92904	GA	SECC #4
KB1EAX (WA1LNP)	659	207	136413	NH		K2UFT	441	174	76734	GA	SECC #3
K1HT	451	181	81631	MA		AA4S	411	168	69048	NC	SECC #2
KK1L	387	169	65403	VT		K4MA	403	160	64480	NC	SECC #1
NY1S	375	160	60000	ME		KG4BIG	392	164	64288	KY	
K1PQS	253	134	33902	ME		K4OAO	354	148	52392	VA	
AB1BX	294	104	30576	RI		N4DU	344	152	52288	GA	
AA1CA*	235	107	25145	NH		K4WI	296	149	44104	AL	
K1QM	199	106	21094	MA		K4QPL	355	120	42600	NC	
N1MD	155	99	15345	CT		N4ZI	319	124	39556	TN	
WA1WFH	74	31	2294	MA		N4KN	303	123	37269	TN	TCG #4
N2NC @N2NT	925	263	243275	NJ	FRC Dom A	K4FU	238	152	36176	KY	
N2CU	635	206	130810	NY		K4BEV	251	138	34638	TN	TCG #3
K2PS	593	201	119193	NJ	FRC Dom A	W4NTI	270	121	32670	AL	SECC #3
W5KI	400	167	66800	NJ	OCC #2	KN4Y	278	109	30302	FL	FCG #2
K2ONP	316	155	48980	NY		KU8E/M	250	111	27750	GA	SECC #4
K2BM	293	140	41020	NJ	FRC Dom B	K4AMC	225	112	25200	TN	TCG #3
K1JT	258	130	33540	NJ		WC4E	219	104	22776	FL	FCG #2
WZ2T*	174	86	14964	NY		KE4OAR	196	108	21168	TN	TCG #4
W2LE	150	85	12750	NJ		W4TYU	205	97	19885	TN	TCG #4
WA2VQV	150	70	10500	NJ		W4NZ	196	74	14504	TN	
N2ATX	145	71	10295	NJ	FRC Dom B	AC4ZD	156	82	12792	TN	TCG #4
N2VPK*	128	73	9344	NY		K3CQ	135	76	10260	TN	
WA2BQI*	65	31	2015	NY		KF4OAD	139	70	9730	NC	PVRC-NC
K2VS	37	20	740	NJ		K4IU	128	58	7424	KY	
K3CR (KB3AFT)	796	255	202980	PA	Weekend Warriors	KC3QU	113	56	6328	AL	
AA3B	769	234	179946	PA	FRC Dom A	K0COP	100	61	6100	SC	
K3WU	713	221	157573	PA	TCG #2	NT4D	100	56	5600	NC	PVRC-NC
K3WW	696	225	156600	PA	FRC Dom A	AA4LR	75	46	3450	GA	SECC #4
WA3HAE	584	196	114464	PA	Weekend Warriors	N4PQV	65	44	2860	TN	TCG #5
WF3M	539	187	100793	PA		WB2NYM	51	35	1785	GA	
NY3M	503	189	95067	MD		K4TW	39	26	1014	GA	SECC #4
WA3SES	491	180	88380	PA		N5NW*	39	22	858	TN	TCG #5
N8NA	419	167	69973	DE		KE4YBS	9	7	63	TN	TCG #5
KB3A	409	157	64213	PA	Weekend Warriors	NA5B (W5AO)	781	225	175725	OK	
K3WWP*	308	124	38192	PA	QRP Swat	WQ5L @N5FG	752	231	173712	MS	Team MS
NA3V	266	131	34846	PA		K5OT	755	226	170630	TX	NTCC #1
W3BBO*	257	117	30069	PA		K5NA	694	238	165172	TX	
K3VA	132	58	7656	PA	FRC Dom B	W5ER	718	225	161550	TX	NTCC #2
N9GG	111	59	6549	DE	TCG #5	W5WMU	666	233	155178	LA	
N3PUR	64	37	2368	PA		W0UO	706	218	153908	TX	NTCC #1
W4PA @K4JNY	862	258	222396	TN	TCG #1	K5TQ	700	213	149100	NM	
W4AN (K4BAI)	742	281	208502	GA	SECC #1	W5XX	637	232	147784	MS	Team MS
K4WX	807	235	189645	TN	TCG #1	N5YA (N5UM)	692	206	142552	TX	NTCC #3
N4BP	788	228	179664	FL	FCG #1	N5UL	620	214	132680	NM	
K4NO	704	252	177408	AL	SECC #1	K5KA	624	210	131040	OK	
W4OC	714	231	164934	SC	SECC #1	W5GN	648	198	128304	TX	NTCC #2
K1KY	713	228	162564	TN	TCG #1	W5FO	619	205	126895	TX	NTCC #1
K0EJ	712	217	154504	TN	TCG #3	N5QQ	624	192	119808	TX	NTCC #1
K7SV	651	232	151032	VA		AB5SE @N5ZS	574	208	119392	AR	OCC #1
NA4K	667	222	148074	TN	TCG #3	K5WO	632	185	116920	TX	NTCC #2
K9AY	633	221	139893	GA	SECC #1	K5WA	545	200	109000	TX	
K4AO	656	213	139728	KY	TCG #1	W5YM (AC5RR)	544	192	104448	AR	OCC #1
K4OGG	693	196	135828	GA	SECC #2	K5LG	524	193	101132	AR	OCC #1
N4CW	642	211	135462	NC	PVRC-NC	K5RT	513	191	97983	TX	NTCC #3
W9WI	630	215	135450	TN	TCG #1	N5RG	507	177	89739	TX	
WD4AHZ	609	212	129108	FL	FCG #1	WA5JWU	465	189	87885	LA	
WO4O	603	213	128439	TN	TCG #2	N5NJ	392	156	61152	TX	NTCC #2
W4AU	640	185	118400	VA		K5RX	346	142	49132	TX	
K4RO	585	200	117000	TN	TCG #3	KJ5WX	290	140	40600	AR	OCC #2
WJ9B	580	184	106720	NC	PVRC-NC	K5RA	268	139	37252	TX	
NW6S	527	198	104346	NC		K0CIE	268	124	33232	OK	
NN4T	547	190	103930	TN	TCG #2	KB5IXI	259	122	31598	MS	Team MS
AA4NN	539	191	102949	SC		AC5SU	231	116	26796	MS	Team MS
						NY4N	228	112	25536	MS	TCG #2
						N5LZ	210	114	23940	TX	
						N5KB	198	118	23364	TX	NTCC #2
						WK5K	198	117	23166	TX	

Call	QSOs	Mults	Score	Section	Team	Call	QSOs	Mults	Score	Section	Team
N5KM	200	101	20200	TX	NTCC #3	K9JWI	325	131	42575	IN	
NO5W	221	83	18343	TX		WE9V	275	132	36300	WI	SMC #2
W5NR	106	56	5936	TX		WI9WI	266	110	29260	WI	SMC #4
WD9FJL	74	53	3922	NM		N9NT	212	103	21836	IL	
W5RL	73	29	2117	AR	OCC #2	WV9T	182	119	21658	IL	SMC #5
N5AF	49	23	1127	TX		W9SMC (K9GY)	208	96	19968	IL	SMC #2
WA8GHZ	37	28	1036	TX		K9KM	187	85	15895	IL	SMC #5
KD5EDO	37	20	740	TX		KE9I	201	79	15879	IN	SMC #4
N5JGK	26	20	520	MS	Team MS	K9UQN	165	77	12705	IL	
W6EEN (N6RT)	1057	286	302302	CA	SCCC #1	N9MZP*	110	57	6270	IL	
N5KO @W6NL	1054	276	290904	CA	NCCC #1	K9OSC	140	41	5740	WI	
N6MJ	1040	251	261040	CA	SCCC #1	AA9KH	120	43	5160	IL	
N6RO	907	252	228564	CA	NCCC #1	K9OT	75	49	3675	WI	
K6AW @K6DB	808	242	195536	CA	NCCC #1	KC9TV	85	43	3655	IN	SMC #4
W6YX (N7MH)	704	214	150656	CA		N0AT	822	224	184128	MN	MWA #1
N6NF	705	213	150165	CA		N0AV	701	243	170343	IA	
K6CTA	591	190	112290	CA	NCCC #2	K0SR	694	223	154762	MN	MWA #1
K6AM	548	186	101928	CA	SCCC #1	NA0N	686	198	135828	MN	MWA #1
K6ZM (K6WG)	535	190	101650	CA		K0OU	631	213	134403	MO	
KQ6ES	413	166	68558	CA	SCCC #2	K0AD	650	195	126750	MN	MWA #1
WA6O	485	137	66445	CA	NCCC #2	KT0R	593	208	123344	MN	MWA #2
N6BM	383	172	65876	CA	SCCC #2	N0AC @WA0ROI	546	205	111930	IA	
K6III*	238	105	24990	CA		W0UY	543	192	104256	KS	SMC #2
N6TW	209	103	21527	CA		N4VI	601	172	103372	CO	TCG #2
W6TK	196	88	17248	CA		K0RC	504	181	91224	MN	
K6EP	128	80	10240	CA	NCCC #2	N0IJ	442	182	80444	MN	MWA #2
W6ZL	101	50	5050	CA		KN0V	337	142	47854	MN	
N6ER	90	53	4770	CA		K0DI	361	132	47652	NE	
K6ZCL	84	55	4620	CA		KE0FT	298	154	45892	IA	GRVARS
W6MVW	40	25	1000	CA		W0ETT	344	127	43688	CO	
K6LL	998	250	249500	AZ	SCCC #1	AC0W	208	108	22464	MN	MWA #2
K5RC	903	263	237489	NV	NCCC #1	WD0T	180	100	18000	SD	SMC #3
N0AX	762	248	188976	WA	Rush Drake	K0NY	177	85	15045	MN	
N7OU	816	220	179520	OR	Rush Drake	KI0MB	168	85	14280	MO	
K7NV	707	223	157661	NV	NCCC #2	N9HDE	159	74	11766	MO	
NG7M @W7CT	714	220	157080	UT		K0OAL	155	39	6045	NE	
W7NX	654	194	126876	OR	Rush Drake	NE0P	86	55	4730	IA	GRVARS
K4XU	620	202	125240	OR		K0RI	88	52	4576	CO	
KI7Y	563	197	110911	OR	Rush Drake	WD0FLJ	60	35	2100	MO	
K7AW (K5ZM)	498	196	97608	OR	Rush Drake	WA0OTV	23	15	345	MO	
NW7DX	502	170	85340	WA		VE5MX	789	249	196461	SK	
WA7LNV	471	174	81954	UT	Zion Park	VE3EJ	755	254	191770	ON	SECC #2
W7ZRC	475	164	77900	ID		CG4VV	762	227	172974	MB	MWA #1
N7XJ*	350	151	52850	UT		VA3UZ	624	221	137904	ON	
KL9A	354	132	46728	AK		VE3OI	626	217	135842	ON	
K7RE*	306	136	41616	AZ		VE5SF	564	198	111672	SK	
K7ON	299	106	31694	AZ		VE6EPK	427	175	74725	AB	
AB7RW	223	119	26537	WA		VE2AWR	427	160	68320	QC	
W8EQA	276	96	26496	UT	Zion Park	VE3ZT	305	143	43615	ON	
K9TM	618	197	121746	OH	SECC #2	VE4YU	194	112	21728	MB	
K5IID	543	200	108600	WV	SECC #3	VE3KP	182	102	18564	ON	
WA8WV	544	199	108256	WV		VE6EX	166	66	10956	AB	
N8BJQ	550	194	106700	OH		VE3WZ*	127	70	8890	ON	
W8CAR	531	197	104607	OH		VE3IAY	132	50	6600	ON	
AA8U	474	188	89112	MI	SECC #3	VE3VV	95	63	5985	ON	
K8JM	476	186	88536	MI		VE3VIG	56	26	1456	ON	
KG8GW	503	152	76456	WV		VA3IX	44	22	968	ON	
K8IR	372	161	59892	MI		VE2/LU7DW	20	17	340	QC	
NU8Z	378	151	57078	MI		ZF2NT	841	238	200158	ZF	NCCC #1
K8KFJ	318	115	36570	WV		XE2MX (XE2/N6KI)	560	170	95200	XE	SCCC #1
WT8P	236	100	23600	OH		3E2K	131	83	10873	HP	
K8CV	146	85	12410	MI		EA8CN	269	118	31742	DX	
KC8FXR	151	77	11627	MI		<b>Multi-Two Scores</b>					
K8UCL*	98	52	5096	OH	QRP Swat	Call	QSOs	Mults	Score	Section	
N8CQA*	84	41	3444	MI		K0RF (+ N0HF)	1439	287	412993	CO	
W8IQ*	59	41	2419	OH		W5NN (K5NZ, K5GA)	1310	297	389070	TX	
KB8PGW	45	31	1395	MI		K5ZD (+ K6LA)	1272	292	371424	MA	
W8MHB	17	10	170	OH		N5TW	1059	264	279576	TX	
N9RV	900	267	240300	IN		(+ AF5Z, K5PI, N5IW, K5LN)					
N9FH	731	218	159358	WI	SMC #2	K6RO (+ K6ZZ)	1118	241	269438	CA	
K9AA (K9PG)	626	243	152118	IL	SMC #1	W1CX	1081	246	265926	VT	
K9OM	664	223	148072	IL		(+ AB1T, KM1Z, N2EA)					
KJ9C	672	220	147840	IN	SMC #1	K9LU	959	232	222488	IL	
K0SN	648	196	127008	WI		(+ K9JE, K9MMS, WA9TPQ)					
N9CO	610	208	126880	IL	SMC #1	KL7RA (+ AL7IF)	907	194	175958	AK	
WT9U	598	195	116610	IN	SMC #2	K8MAD (K8MR, K8CC)	74	56	4144	OH	
K9XD (K9YO)	542	188	101896	IL	SMC #1	<b>Check Logs</b>					
W9RE	490	200	98000	IN	SMC #1	WA2BMH					
K9IG	422	184	77648	IN	SMC #3						
K9WA	392	164	64288	IL	GRVARS						
N9SD	354	134	47436	WI	SMC #3						

\*Denotes a QRP entry



# Phone Sprint Records— Through February 2000

Compiled by Rick Niswander, K7GM

Area	Call	Score	Date
CT	NT1N	17875	Feb '00
MA	K1AR	13770	Sept '83
ME	NY1E	3745	Sept '89
NH	K1ZO	7308	Sept '99
RI	K1IU	9541	Sept '92
VT	KK1L	12672	Feb '00
NJ	KZ2S	11970	Feb '90
NY	N2BA	13524	Sept '89
DE	WN3K	7830	Sept '93
MD	K3MM	14637	Feb '00
PA	K3CR	18150	Feb '00
AL	K4NO	12576	Feb '00
FL	K4XS	19133	Feb '92
GA	N4RJ	17334	Sept '89
KY	K3LR	11438	Sept '82
NC	K4MA	13700	Feb '00
SC	AA4V	11684	Feb '90
TN	K4WX	14739	Feb '00
VA	W3YY	13050	Sept '89
AR	AB5SE	9288	Sept '98
LA	K5GA	16324	Sept '89
MS	W5VSZ	11520	Sept '91
NM	K9RS	18126	Sept '94
OK	N5CG	13244	Feb '92
TX	K5RX	18600	Sept '87
CA	N6MJ	19264	Feb '00
AZ	K6LL	19665	Feb '00
ID	W7ZRC	10648	Sept '91
MT	N7ML	13254	Sept '95
NV	K13V	16536	Sept '93
OR	N6TR	20328	Sept '93
UT	K6XO	11400	Sept '92
WA	K7SS	25593	Feb '93
WY	N7NG	11703	Feb '89
KL7	NL7GP	15402	Sept '93
MI	KN8P	11172	Sept '84
OH	KW8N	20862	Feb '00
WV	K3JT	11172	Feb '00
IN	W9RE	17150	Feb '00
IL	K9XD	20648	Feb '00
WI	WE9V	17596	Feb '00
CO	N2IC	18564	Sept '89
IA	K0LUZ	9324	Sept '84
KS	WA0TKJ	10880	Sept '82
MN	N0AT	12502	Sept '91
MO	WO0G	16562	Sept '89
ND	WB0O	14996	Sept '94
NE	KV0I	12549	Sept '89
SD	WD0T	13294	Sept '95
VE1	VE9HF	7728	Sept '94
VE2	VE2ZP	273	Feb '91
VE3	VE3FU	4824	Sept '99
VE4	VE4VV	12285	Sept '94
VE5	VE5MX	12330	Feb '99
VE6	VE6EX	9751	Feb '00
VE7	VE7NTT	19992	Sept '93
VE8	VY1JA	1152	Feb '00
AF			
ZD8	ZD8Z	9460	Sept '94
AS			
JA	7J1AAI	275	Feb '92
UA0	RA0FF	12	Feb '97
4X	4X3DIG	80	Sept '99
EU			
EA	EA3BOX	2208	Feb '91
GM	GM0ECO	1232	Sept '92
NA			
C6A	K9VV/C6A	1512	Sept '96
VP5	VP5VEP	168	Sept '91
TG	TG9AJR	2720	Feb '92
XE	XE1/NV1P	9020	Feb '92
ZF	ZF2NE/8	3135	Sept '90
OC			
KH6	KH6GMP	104	Sept '93
SA			
PY	PY5EG	16280	Feb '88
Other			
MM	K5LZO/MM	435	Sept '90

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# 2000-2001 NCJ Sprints

## Rules for CW, SSB and RTTY

### Contest Managers:

CW—Mark Obermann, AG9A,

[cwsprint@ncjweb.com](mailto:cwsprint@ncjweb.com)

SSB—Rick Niswander, K7GM,

[ssbsprint@ncjweb.com](mailto:ssbsprint@ncjweb.com)

RTTY—Wayne Matlock, K7WM,

[rttysprint@ncjweb.com](mailto:rttysprint@ncjweb.com)

**1. Eligibility:** Any licensed radio amateur may enter.

**2. Object:** To work as many North American stations (and/or other stations if you are in North America) as possible during the contest.

**3. Entry Classification:** Single operator only. Use of helpers or spotting nets is not permitted.

### 4. Contest Periods:

#### September 2000 Contests:

CW: 0000Z - 0400Z September 10, 2000

SSB: 0000Z - 0400Z September 17, 2000

RTTY: 0000Z - 0400Z October 15, 2000

#### February 2001 Contests:

SSB: 0000Z - 0400Z February 4, 2001

CW: 0000Z - 0400Z February 11, 2001

RTTY: 0000Z - 0400Z March 11, 2001

These are entirely separate four-hour Sprints. An entrant may submit scores for one or more Sprints, but he may not combine his scores. Note that the CW Sprint is first in September and second in February.

**5. Mode:** CW only in CW Sprints, Phone only in Phone Sprints, RTTY only in RTTY Sprints.

**6. Bands:** 80, 40 and 20 meters only. Suggested frequencies are around 3540, 7040 and 14040 kHz on CW; 3850, 7225 and 14275 kHz on Phone; and 3580, 7080 and 14080 kHz on RTTY. You may work the same station once per band.

Note: For RTTY only, the same station can be worked multiple times provided 3 contacts separate the contact in both logs, regardless of band.

**7. Exchange:** To have a valid exchange, you must send all of the following information: the other station's call, your call, your serial number, your name and your location (State, Province or Country). For example:

N6TR DE K7GM 154 RICK NC K  
K7GM NR 122 TREE OR DE N6TR K

To help you further understand the exchange and the Sprint in general, check out <http://jzap.com/n6tr/sprint.html>

**8. Valid Contact:** A valid contact consists of a complete, correctly copied and logged two-way exchange between a North American station and another station. Proper logging requires including the time of each contact. Serial numbers must begin with serial number one (1) and must be sequential thereafter.

Regardless of the number of licensed call signs issued to a given operator, one and only one call sign shall be utilized during the contest by that operator.

**9. North American Station:** Defined by the rules of the CQ WW DX Contests.

**10. Scoring:** Multiply total valid contacts by the sum of US States, Canadian Provinces and other North American Countries to get final score (do not count USA and Canada as countries). KH6 is not counted as a State and is not a North American country (but counts for QSO credit). The eight Canadian multipliers are Maritime (VE1, VO1 and VO2), VE2 through VE7, and Yukon-NWT (VY1 and VE8). Non-North American countries do not count as multipliers, but do count for QSO credit for North American stations.

**11. Special QSY Rule:** If any station solicits a call (by sending CQ, QRZ?, "going up 5 kHz," or any other means of soliciting a response), he is permitted to work only one station in response to that solicitation. He must thereafter move at least 1 kHz before he works any other station, or at least 5 kHz before he again solicits other calls. Once a station is required to QSY, that station is not allowed to make another QSO on the vacated frequency until or unless at least one subsequent QSO is made on a new frequency at least 1 kHz or 5 kHz (as appropriate) from the vacated frequency.

**12. Additional Rules:** Simultaneous transmission on more than one frequency is prohibited. All contacts must be sent and received using means requiring real-time human intervention, detection and initiation.

### 13. Reporting:

Send CW logs to: Mark Obermann, AG9A, 6713 Forestview Lane, Niles, IL 60714 USA; [cwsprint@ncjweb.com](mailto:cwsprint@ncjweb.com).

Send phone logs to: Rick Niswander, K7GM, PO Box 2701, Greenville, NC 27836 USA; [ssbsprint@ncjweb.com](mailto:ssbsprint@ncjweb.com).

Send RTTY logs to: Wayne Matlock, K7WM, Rt 2, Box 102, Cibola, AZ 85328 USA; [rttysprint@ncjweb.com](mailto:rttysprint@ncjweb.com).

Entries must be received no later than 30 days after the Sprint to be eligible for trophies and awards. All logs containing more than 50 QSOs, which were generated with a computer program, must be submitted on a 3.5-inch floppy disk or via e-mail.

An entry consists of (1) a summary sheet showing the number of valid contacts by band, total contacts, total multipliers, total score, name, call sign and address of the operator, station call sign and station location, whether low power (150 W or less) was used, and name

used; (2) a complete legible log of all contacts (including dupes marked as such) with indication by numbered sequence of each multiplier claimed. Logs, summary sheets and check sheets may be home-made or patterned after those published periodically in the *NCJ* or available from the contest coordinators listed above.

You are encouraged to send your log in computer readable form, either by diskette or by e-mail. If your log is submitted by diskette, the output from any of the popular logging programs is appropriate. Electronic summary sheets are required in case of electronic submission. If you are submitting your log by e-mail, send your logs to the addresses given above.

**14. Team Competition:** Team competition is limited to a maximum of 10 operators as a single entry unit. Groups having more than ten team members may submit more than one team entry. Pre-Contest Requirement: To qualify as a team entry, the name, call sign of each operator, and call sign of the station operated (if the operator is a guest at a station other than his own, e.g. W6AQ operated by WA6OTU), must be registered with AG9A for the CW Sprints, K7GM for the Phone Sprints, or K7WM for the RTTY Sprints. The team registration information must be in written, telegraphic, spoken or electronic form, and must be received before the start of the Sprint.

Submission by e-mail to the appropriate address listed above is a valid means of submission, as is a telephone call. There are neither distance limitations nor meeting requirements for a team entry. The only requirement is pre-registration of the team.

**15. Penalties and Disqualification:** For each unmarked duplicate QSO, you lose that contact plus an additional three contacts. For each QSO for which you are not in the other station's log, you lose that QSO plus an additional one contact. For each QSO for which the log data is incorrectly copied in any respect, you lose that contact. Entries with score reductions in excess of 5 percent may be disqualified. Any entry also may be disqualified for illegibility, illegal or unethical operation. Such disqualification is at the discretion of the *NCJ* Contest Review Committee.

**16. Awards:** A trophy or plaque will be awarded to the highest scoring entrant. Certificates of merit will be awarded to the highest scoring entrant from each USA or Canadian call district and other country, to each of the ten highest scoring entrants, to each member of the winning team, and to the highest scoring entrant on each team.

(Revised June 4, 2000) ■

# 2000-2001 North American QSO Party (NAQP) Rules for SSB, CW and RTTY

## Contest Managers:

CW—Bob Selbrede, K6ZZ,  
[cwnaqp@ncjweb.com](mailto:cwnaqp@ncjweb.com)  
SSB—Bruce Horn, WA7BNM,  
[ssbnaqp@ncjweb.com](mailto:ssbnaqp@ncjweb.com)  
RTTY—Ron Stailey, K5DJ,  
[rttynaqp@ncjweb.com](mailto:rttynaqp@ncjweb.com)

**1. Eligibility:** Any licensed radio amateur may enter.

**2. Object:** To work as many North American stations as possible during the contest period.

**3. North American Station:** Defined by the rules of the CQWW DX Contests with the addition of KH6.

### 4. Contest periods:

#### July 2000 Contest:

RTTY: Third full weekend in July (1800Z July 15 to 0600Z July 16, 2000)

#### August 2000 Contests:

CW: First full weekend in August (1800Z August 5 to 0600Z August 6, 2000)

SSB: Third full weekend in August (1800Z August 19 to 0600Z August 20, 2000)

#### January 2001 Contests:

CW: Second full weekend in January (1800Z January 13 to 0600Z January 14, 2001)

SSB: Third full weekend in January (1800Z January 20 to 0600Z January 21, 2000)

### 5. Entry Classification:

#### a. Single Operator:

i. One person performs all transmitting, receiving, spotting and logging functions as well as equipment and antenna adjustments.

ii. Use of helpers or spotting nets is not permitted.

iii. Only one transmitted signal allowed at a time.

iv. May operate 10 out of the 12 hours of the contest. Off times must be at least 30 minutes in length.

#### b. Multi-Operator Two-Transmitter:

i. More than one person performs transmitting, receiving and logging functions, etc.

ii. A maximum of two transmitted signals at any given time, each on a different band. Both transmitters may work any and all stations.

iii. Shall keep a separate log for each transmitter.

iv. Each transmitter must have at least 10 minutes between band changes.

v. May operate for the entire 12 hours of the contest.

**6. Output Power:** Output power must be limited to 100 W for eligible entries. Use of external amplifiers capable of more than 100 W output is not allowed.

**7. Mode:** CW only in CW parties, SSB only in phone parties, RTTY only in RTTY parties.

**8. Bands:** 160, 80, 40, 20, 15, 10 meters only, except no 160 meters for the RTTY contest. You may work a station once per band. Suggested frequencies are 1815, 3535, 7035, 14035, 21035 and 28035 kHz (35 kHz up from band edge for Novice/Tech) on CW; 1865, 3850, 7225, 14250, 21300, 28500 kHz (28450 for Novice/Tech) on SSB; and

**9. Exchange:** Operator name and station location (State, Province or Country) for North American stations; operator name only for non-North American stations. If the name sent is changed during the contest, as sometimes happens with multi-operator stations, the name used for each QSO must be clearly identified in the log.

**10. Multipliers:** Are US States (including KH6 and KL7), Canadian Provinces/Territories (British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Quebec, New Brunswick, Nova Scotia, PEI, Labrador, Yukon, NWT and Nunavut) and other North American countries. Newfoundland counts as Labrador, and District of Columbia counts as Maryland.

Non-North American countries, maritime mobiles and aeronautical mobiles do not count as multipliers, but may be worked for QSO credit.

**11. Valid Contact:** A valid contact consists of a complete, correctly copied and legibly logged two-way exchange between a North American station and any other station.

Proper logging requires including the time in UTC and band for each contact. Regardless of the number of licensed

call signs issued to a given operator, one and only one call sign shall be utilized during the contest by that operator.

**12. Scoring:** Multiply total valid contacts by the sum of the number of multipliers worked on each band.

**13. Team Competition:** You may wish to form a team with fellow NAQP participants. If so, your team must consist of 2 to 5 single operator stations whose individual scores are combined to produce a team score. Although clubs or other groups having more than 5 members may form multiple teams, there is no distance or meeting requirements for a team entry.

Teams must be registered with the appropriate contest manager prior to the start of the contest. Team registration information must be in written form (mail or e-mail) and must include the name, call sign of the operator, and the call sign of the station operated if the operator is a guest at a station other than his own (eg WF1B op at K1NG). Use the log submission addresses given below for team registration notification.

**14. Log Submission:** Entries must be postmarked no later than 30 days after the contest to be eligible for awards. All logs containing more than 200 QSOs, which were generated with a computer program, must be submitted on a 3.5-inch floppy disk or via e-mail. If paper logs are submitted, please submit originals. Sample log sheets and a summary sheet may be obtained with an SASE to the appropriate contest manager. These forms are also available on the NCJ Web site.

A proper entry consists of: (1) a summary sheet showing the number of valid contacts and multipliers by band, total contacts and multipliers, total score, team name (if applicable), power output, name, call sign and address of the operator, station call sign and exchange (name and

Mode	Category	Sponsor
CW	Single Op, North America	Florida Contest Group
CW	Multi-Op, North America	Texas DX Society
SSB	Single Op, North America	South East Contest Club
SSB	Multi-Op, North America	Tennessee Contest Group
Combined	Single Op, North America	Southern California Contest Club (CW/SSB)
RTTY	Single Op, North America	Glenn Vinson, W6OTC
RTTY	Single Op, DX	Will Angenent, K6NDV
RTTY	Multi-Op, North America	RTTY by WF1B
RTTY	Multi-Op, DX	Writelog for Windows
RTTY	Best name in North America (name must be rated PG and contain no more than 10 letters)	Eddie Schneider, W6/G0AZT



location) sent during the contest; and (2) a complete legible log of all contacts.

Logs and summary sheets submitted on floppy disk or via e-mail must be in ASCII text format. Name your files with your call sign (ie yourcall.SUM and yourcall.LOG). Please do not send binary files produced by a contest logging program (ie yourcall.BIN, yourcall.QDF, etc.). Use of the Cabrillo log format for electronic log submissions is encouraged and may be required in the future.

Send CW logs to: Bob Selbrede, K6ZZ, 6200 Natoma Ave, Mojave, CA 93501 USA; [cwnaqp@ncjweb.com](mailto:cwnaqp@ncjweb.com)

Send SSB logs to: Bruce Horn, WA7BNM, 4225 Farmdale Ave, Studio City, CA 91604 USA; [ssbnaqp@ncjweb.com](mailto:ssbnaqp@ncjweb.com)

Send RTTY logs to: Ron Stailey, K5DJ, 504 Dove Haven Dr, Round Rock, TX 78664 USA; [rttynaqp@ncjweb.com](mailto:rttynaqp@ncjweb.com)

**15. Disqualifications:** Entries with score reductions greater than 5 percent may be disqualified. Any entry may be disqualified for illegibility, illegal or unethical operation. Such disqualification is at the discretion of the contest manager.

**16. Awards:** Plaques will be awarded for the high score in each of the categories given below. If a plaque is not sponsored, the winner may purchase it. Certificates of merit will be awarded to the highest scoring entrant with at least 200 QSOs from each state, province or North American country. Certificates of merit will also be awarded to the overall second and third place finishers in the multi-operator category for each mode. (Revised March 12, 2000) ■

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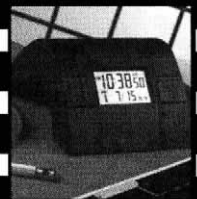
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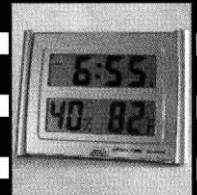
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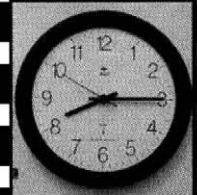
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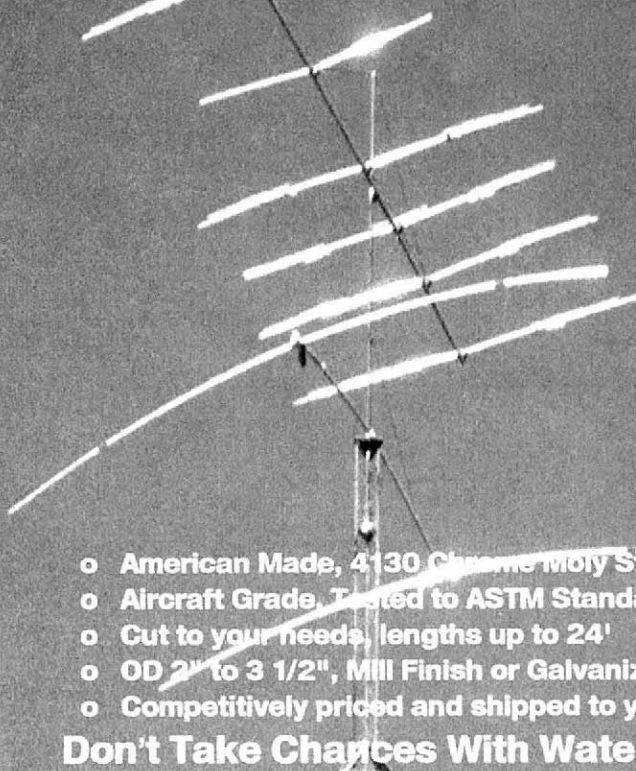
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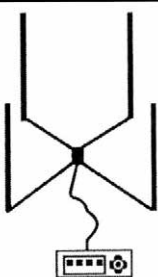
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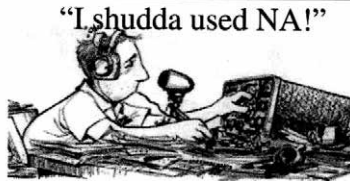
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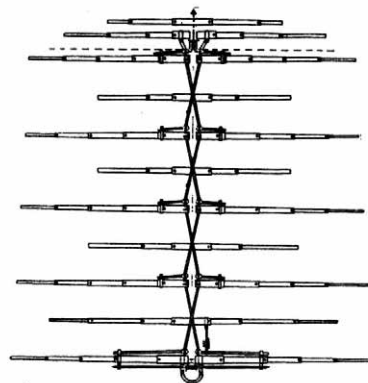
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# CABLE X-PERTS, INC.



# Look Closely. It's a 1kW Contest Station

ICOM IC-756PRO & IC-PW1: All Mode, HF / 6M, Desktop Size



**PC Ready!**  
Options required for PC operation:  
**CT-17** Ct-V level converter  
Third party serial cable with pins 1-8 & 20  
Third party software

## "TRANSPARENT" OPERATION

Set the entire, compact 'PW1 right on a desktop, or remote the 'PW1 body to a nearby location. The best in solid state makes for powerful performance and low maintenance.

13.8 (w) x 10.6 (h) x 14.9 (d) in  
350 (w) x 269 (h) x 378 (d) mm  
55 lb, 2 oz / 25 kg



## IC-756PRO AND IC-PW1: A FULL GALLON HF / 6M DESKTOP STATION THAT'LL REALLY TAKE YOU PLACES

You and ICOM create the competitive edge with this 100% duty cycle desktop station. The IC-756PRO is a contester's dream, with 32-bit DSP, dual watch, memory keyer, spectrum scope, and much more.

Control your contest frequency with the IC-PW1. This 1 kW powerhouse sports a remotable control head, auto antenna tuner, simultaneous multi-variable analog metering, 4 antenna connectors, and, of course, much more.



Get in on the fun. Contact your authorized ICOM dealer or call for free brochures: **425-450-6088**

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