

# My First Phone Contest Without A Microphone

By  
“Rick” Hilding, K6VVA

A few weeks after I got back on HF in November, 2003 (after 30 years away from DXing and contesting), a weird throat infection I'd never experienced kept me from participating in a Phone contest in early December. Not sure I would ever recover (but if I did), I resolved to finding a way to somehow insure that should this ever happen again, at least I could operate in a Phone contest even without a microphone. Bizarre? Yes, but not really. A secondary motivation was that I realized that this could also be a way for any mute hams to be able to work a Phone contest (even if with someone else's voice), and that I would donate any prerecorded voice files I might make to such fellow hams for use.

In order to minimize a “Robotic” sound as much as possible, I realized until ultra-sophisticated voice technology would become cost-effective for such ham radio use, that this would require pre-recording the full callsigns of as many contest-specific participants as possible, as well as a range of full serial numbers for a contest like the ARRL Sweepstakes. After pestering the major contest logging software authors for many months, I was grateful that Wayne, W5XD, finally incorporated the necessary working capabilities to do fullcallsign.wav files in WriteLog. This included his addition of my enhancement request for an additional 10 SSB (Phone) message slots, which would also be necessary as a minimum to make things work half way decently.

## Good Intentions

Unfortunately, my plan to complete what would be a monster recording and editing task in advance of the 2004 SS was interrupted by business matters and spending too much time dabbling in other contests I had never operated in before like the Sprint, NAQP, etc. So much for the controllable part of my personal time-management prior to SS.

As the 2004 Phone SS rapidly approached, a derivation of my previous throat infection unexpectedly returned on the tail end of a bad cold that hit the day before the CW SS. Horrors! In the frenzy of other Phone SS equipment related problems including the special VOX activated external audio device necessary to make even partial voice automation work the way I wanted (and popping “Horse Pills” and antibiotics from the throat doctor), my voice was simply not going to work well enough by the start of the contest to go “live”. So I decided to take the Robotic approach with previously recorded “test” files of individual letters and numbers, in spite of the roughness and regardless of how much possible embarrassment might result. I simply could not let my fellow NCCC brethren down by not operating at all and not turning in at least some kind of score for the club SS goal. Doing something was deemed better than doing nothing, even if I might become the laughing stock of the contest community.

Having previously done some very “tight” trimming of my test prerecorded .wav files, it wasn't discovered until a few days before the Phone SS that the VOX audio device had an extra delay on the front end, which slightly clipped off part of the audio. Horrors again, but “onward”. I had also decided to concurrently try and tackle both SO2R and Packet which I had never used before. This was a big mistake, which only compounded other technical problems (not to mention QLF by the operator). Due to an unresolved problem with the WriteLog audio handling for SO2R with my intended special external switching “Black Box”, that part at least bit the dust after hours of frustration, and I ended up using a single TS-870S and my AL-80B.

## A Change In Plans

My original plan was to operate the Phone SS from the N6IJ club station facilities near Monterey, where I at least had the use of a PRO67-C at 60 feet and 75m Inverted Vee at 50 feet with a clear shot. But since I was “supposed” to take several hours off Saturday Night to make a token appearance at my local industry association banquet, I opted to be K6VVA on Saturday from home and then go to N6IJ on Sunday with my little TS-480S and 2<sup>nd</sup> AL-80B. In the thick of SS Saturday night, I ended up playing hooky from the banquet and ate contest junk food which hacking away in the contest. Fortunately, my associates are still speaking to me.

My current QTH and antenna setup is not a contester’s paradise. I am located down in a very small valley with big hills several blocks away, although have a partial opening toward the East Coast. One of my fellow NCCC members did a terrain analysis for me, and added a comment to the terrain graph he emailed saying: “Move!”.

So, with an A3 tribander at 30 feet on a slip-up mast, 40m Inverted Vee with the apex at 30 feet, and a Carolina Windom/Inverted Vee on 80m with the apex at 42 feet up in a tree, I was “loaded for bear”. Oops...I had forgotten that in the Phone SS, the “big signals” rule especially on 20, 40 and 75m. This made for an even more challenging test to operate a Phone contest without a microphone from a “Little Pistol Contest Station”. Yet, this scenario will hopefully be an encouragement to other non-Super Stations who may want to make a whack at this stuff.

## Mr. Murphy Appears

Due to my notebook computer (and the audio output line) being about one inch from my AL-80B amplifier, I never did get Packet working due effectively due to the RF constantly cutting off the dial-up connection to my ISP. Had it worked AOK, I’m sure I could have possibly made a Clean Sweep. The constant attempts to reconnect during contest exchanges yielded the modem squawking sound in my on-air audio which was most UN-cool. The RF was also causing unwelcomed irregularities with my special push-button control panel for the WriteLog individual .wav file messages. So instead of “Roger” or sending the exchange, etc., what would result was “CQ Contest”, etc. How embarrassing this was at times. I had just hooked everything up the night before the contest, so all the RF problems were not able to get resolved before the checkered flag dropped. Of course, sometimes the automation operator pushed the wrong button too. In the heat of the battle, I found myself mistyping too often, and a new quest will be to find a more tactile mini-keyboard. My apologies to all who had to endure all forms of QLF.

Early Saturday evening, for some reason audio stopped being transmitted from my TS-870S. Horrors again. After much frustration, I turned the rig off and back on, and the audio resumed. Bizarre. “Mr. Murphy” was visiting. I would have do this every 3 or 4 QSOs which was highly irritating, not to mention the on-air QLF. Then I discovered I could bang on the rig which yielded faster results than the off/on method. Unfortunately, the frequent cutting in and out of the transmit audio created more on-air caused some requests for repeats. Gheeezzz. Well, this was a real-world “test drive”, right? Definitely. I did feel bad at times because I couldn’t tell people on the other end what was happening.

Then lo and behold, when I tried to QSO & log the first portable station with a “/” in the callsign window, an error dialog box appeared and wreaked havoc. Finally, I figured out doing a CTRL + ENTER without a “/” in the callsign would log the QSO, and then I’d send the S&P Exchange .wav and stop after the QSO to manually edit the entry and put the “/” back in. I didn’t fully read

the error message until the third time it happened, which is when I felt like crawling into a hole ( I hadn't thought about recording a "slash.wav" file for portable station callsigns).

### **Biggest Delivery Problem**

In an attempt to tighten up the number .wav files, I had over-trimmed and in hindsight could have put a little more spacing between the number.wav files. This was the most frequent request for any type of repeats (surprisingly there were not that many). However, with certain combinations of numbers, there was more difficulty which did present problems with a few QSOs. Pre-recording a range of fullserialnumber.wav files just right will eliminate the problem.

### **Robot-2-Robot Contest Intercourse**

One of my fellow NCCC members, Garry, NI6T (of K5K/Kingman Reef, etc. fame), purposefully turned on his "Robot" (full voice automation) to work me. His number.wav file delivery and spacing came across very well (I was momentarily envious). Could this have possibly been the first fully Robotic (non-microphone or live voice at all) "Contest Intercourse" (QSO) between two stations? A "Worked All Robots Award" for the future comes to mind. An "almost" Robot-2-Robot QSO occurred with another fellow NCCCer, Andy, AE6Y (P40Y/P49Y, etc.). Although he initially called me with his live voice, the rest was all automated, and his number.wav file delivery was also good.

### **Test Results**

The non-spectacular results for slightly under 13 hours of being "Mr. Robotic" were 527 QSOs and 73 Multipliers from my "Little Pistol Contest Station". I got real beat up on 40/75m the last few hours of QRV. However, in spite of various problems, I still consider it a successful "test". I took copious notes for post-contest reflection and future corrective actions. And, my favorite Contest Club (I was a Co-Founder of the NCCC) got some extra points for the club's SS goal.

I looked forward to more "mikeless" operating from N6IJ on Sunday, because I knew I could separate the amplifier considerably from the computer, audio & USB cables. This would hopefully resolve some of the technical non-operator QLF problems. Earlier in the week, it turned out that I needed a second VOX audio device for my TS-480S to take to IJ, because the internal jumper settings were different. I had one Fed-X'd, and everything thoroughly working for the portable setup by Friday Night and then packed up for the Sunday morning QSY. There was no reason to suspect any problems with this setup the next day at N6IJ. Wrong assumption.

### **Another Change In Plans**

On 3 hours of sleep, I drove down to N6IJ only to find that when I got everything hooked up, it didn't work. No audio to the TXRX. Horrors again. That #&^! Mr. Murphy sure gets around. After setup and troubleshooting time (plus many inappropriate verbalizations) and inability to solve the problem, I was ready to just "pack it in" and go back home to bed for some needed sleep. Fortunately, after not having to use my voice at all on Saturday, and the Boy Scout Motto (I put my headset mike in the car "just in case" before leaving), I decided to give it a try "live" as Norway SIX Indiana Jones (those phonetics brought a lot of chuckles and humorous responses). I simply did not want to wimp out on my fellow NCCCers and go home QSO-less.

As luck would have it, I made it through the first hour, but my throat was getting a bit hoarse. I took a 5 to 10 minute break and decided to go-for-it again. Miraculously, I was able to keep

going in spite of not have the use of .wav files or a DVK, and must have called CQ Contest live at least 10,000 times (or so it felt) until 7PM. That pizza I ate on the drive home was sure good.

### **Mikeless Control Console** (a/k/a “The Locust Contest Mission Control Center”)

I hate using multiple CTRL, ALT or SHIFT plus some other key combinations, because it’s too easy for my big fingers to slip to an adjacent key. I also hate reaching up to push low lying Function keys on a keyboard, and I definitely hate using a mouse. So to more easily activate the individual message.wav files, I programmed several new banks of X-Keys like I use with TR, but specific to the SS Contest. These are mounted at about a 45 degree angle right on the external mini-keyboard for easier visibility and for activation. I have a separate keypad off to the left of the mini-keyboard which I piggy-backed on top of the notebook computer. The buttons are highly multi-color coded (I love colors). I was equipped to only have to push ONE button to do each of the following without hardly having to take my fingers off the keyboard (see photo):

1. NTR – I activate this button with my middle finger straightforward, which minimizes wrist movement that contributes to carpal tunnel when using the regular ENTER key on a keyboard. In CQ mode, this sends the exchange. When the QSO information is complete, it logs the QSO and sends the “TNX + K6VVA + CONTEST” .wav files.
2. S&P EXC – Sends my full SS contest exchange (I set this up separately to be able to either include the other station’s call or not). The Prec, Call, Check & Section are in one non-Robotic .wav file
3. HIS CALL – Sends the other stations call .wav files (Robotic this go ‘round)
4. MY NR# – Sends my SS Serial Number .wav files only (Robotic this go ‘round)
5. MY PREC – Sends my SS Precedence .wav file only (non-Robotic)
6. MY CALL – Sends my Callsign .wav file only (non-Robotic)
7. MY CHK – Sends my SS Check .wav file only (non-Robotic)
8. MY SEC – Sends my SS Section .wav file only (non-Robotic)
9. CQ – Sends my SS CQ .wav file only (non-Robotic)
10. TEST – Sends “Contest” .wav file only (non-Robotic)
11. AUTO ON - Turns ON Auto CQ (“Timed CQ” in WriteLog)
12. AUTO OFF – Turns OFF Auto CQ
13. AGN??? – Sends “Again?” .wav file only (non-Robotic)
14. QRZ – Sends “QRZ?” .wav file only (non-Robotic)
15. ROGER – Sends “Roger” .wav file only (non-Robotic) – pushed 3 times yields “Roger, Roger, Roger ☺ ... Temporarily used RIG keys (below)

16. QRL – Sends “Is this frequency in use?” .wav file only (No, I didn’t forget this one & used it a lot!!!)
  17. UR CALL – Sends “Your Call?” .wav file only (non-Robotic)
  18. UR NUMBER – Sends “Your Number?” .wav file only (non-Robotic)
  19. UR PRECEDENCE – Sends “Your Precedence?” .wav file only (non-Robotic)
  20. UR CHECK – Sends “Your Check?” .wav file only (non-Robotic)
  21. BAND DWN – Changes band DOWN with one button
  22. BAND UP – Changes band UP with one button
  23. RIG #1 – To swap rigs/SO2R (not used)
  24. RIG #2 – To swap rigs/SO2R (not used)
  25. (NCCC Specific Key) – Sends our Club Motto .wav file (non-Robotic) - Hey...I gotta have some fun once in a while ☺
  26. WIPE QSO – Clears a QSO but with ONE button push instead of ALT + W
  27. WIND SWAP – Toggles between windows on the desktop with ONE button push instead of having to use ALT + ESC
  28. SHOW SPOTS – A ONE button Macro to show packet spots (only effective Sunday)
  29. GRAB SPOT – A ONE button Macro to grab a packet spot (only effective Sunday)
  30. POST SPOT – A ONE button Macro to post a packet spot (did I tell you I hate using a Mouse?)
  31. SAVE – A ONE button macro to do File | Save As **WITHOUT** a mouse (did I mention that I hate using a mouse?)
  32. ESC – A nice big RED button with white letters that is easy to punch during times of “Panic” ☺
- + MULTI-PEDAL FOOTSWITCH – X-Keys USB device for:  
“CQ Contest + MY CALL” (and) “MY CALL”

Some of the above keys were initially duplicated in several locations and will be replaced with other functionalities. I’ll spare the lengthy description of why some will remain duplicated. As God is my witness, due to the RF problems, sometimes the X-Keys buttons “did their own thing” mostly like because of RF affecting the USB and additional PS/2 keyboard cabling for my X-Keys which were laying right behind the computer. I cringed at each of these auto-technical QLF moments which still reflected upon the operator. What a humbling way to learn what does not work.

## Needed Additions & Enhancements

By taking the big plunge to operate my first Phone contest without a mike (Saturday as K6VVA), this proved extremely useful in discovering that the following additions and enhancements (more individual .wav file triggering field capabilities in WriteLog) are critical to really operating effectively as a fully “automated” mikeless station. I’m sure more will be identified in the future. For brevity, I won’t go into a lengthy explanation of why some are necessary, because they should be self-explanatory.

1. (.wav file) – “Negative” (For NOT my Call, NR, Prec, Chk, Sec)
2. (.wav file) – “Okay?” (or) “QSL?”
3. (.wav file) – “Is your call...” (Used BEFORE the HIS CALL key)
4. (.wav file) – “Who’s the...” (Ditto, but for partial calls)
5. (.wav file) – “...Is that right?” (Ditto, but used AFTER the HIS CALL key)
6. (.wav file) - “Sorry, QRM, please repeat ALL.”
7. (.wav file) - “Sorry, too weak OM, let’s try later.”
8. (.wav file) – “Ooops, sorry...good luck!” - Used when calling a Dupe ☺
9. (.wav file) – “I’ve been on this frequency for <insert time .wav>, OM...Please QSY!”  
(Or: “This is MY RUN FREQUENCY...Please QSY!”)
10. (.wav file) – “Please clear or reset your RIT/XIT, OM and try again...you're off frequency!” Then, AutoPlay the QRZ + MyCall+"Contest" .wav file  
(Hey...why not help a fellow contester out instead of just adjusting MY RIT control (and then possibly forgetting about it when S&Ping?))
11. (.wav file) – “QRZ the station tuning up on MY Frequency?”
12. (.wav file) - "Sorry, I'm not using a mike...this is all automated...please look me up on QRZ.COM and send me your question in an email...TNX :-)" - (In response to ANY non-contest exchange question.)
13. (.wav file) – A full explanation .wav of the SS Exchange format (maybe separate detail files for NR, PREC, CHK, SEC) – Man is this one needed for no mike QRV.
14. (.wav file) – “Anyone, anywhere” (with desperation sounding voice)
15. (.wav file) – “You don’t have to be officially in the contest to work me!” (pleading voice)
16. (.wav file) – “Please repeat your call Phonetically, OM”
17. (.wav file) – “If you keep jamming me, OM, I’ll hunt you down and castrate you!” (well, maybe I can skip this one.)

## **Interesting Comments**

I wrote down many of the on-air comments received during exchanges, and they were mostly positive. The biggest problem was with the too tightly tweaked serial number files.

“Hope your throat gets better” (Hey, TNX, OM!)

“That’s the weirdest thing I’ve ever heard!”

“What was that?” (Two contesters to each other on “MY” Frequency)

“Is there a human being in the room?”

“That's kinda cool.”

“You've got a good voice recorder there.”

“It sounds Awesome...have fun.”

“ Sounds AOK...not bad!”

“Is that a Robot or are you watching a movie?”

“I like your little machine...it sounds good!”

“Nice computer!”

“That sounds terrible!” (Like, “DUH!” ... No wonder, my Modem was squawking in the Audio path as my Exchange .wav files were being sent & sometimes audio distortion due to RF & proximity to amp & all Audio/USB cables ;-)

A mega-apology to the K5TR op who must have asked me for about 10 repeats of the serial number. Unfortunately, the combination of my overly trimmed number files for that serial number did sound like crap. It was either then or another time that a kind soul came on frequency and said “He sent you number <blah>”. Tnx again, Mr. Good Samaritan!

## **What I Learned**

1. You CAN operate a Phone contest without a microphone!
2. Second, “stuff happens” and Mr. Murphy seems to like Contesters!
3. The Boy Scout Motto is a good admonition. Now to extend it to EVERY piece of gear.
4. Learning to be “flexible” is sometimes “forced” education.
5. Trying to implement a lot of new stuff right before a contest is very UN-cool.
6. New insights were gained for future fine-tuning and tweaking of pre-recorded .wav files.
7. “Nothing Is Impossible!”

## Conclusion

Some people thought I was whacked-out months ago about wanting to do a Phone contest entirely without a mike. As much as I often wanted to say “bite me”, that’s OK, this is not for everyone. But when you can’t speak (for whatever reason), it IS a way to still operate in a Phone contest and make more than a handful of QSOs even from a “Little Pistol Contest Station”. Based upon my first experience, I see how things can be substantially improved in the future.

It will require more logging software enhancements and certainly the use of pre-recorded fullcallsign.wav and fullserialnumber.wav files in order to reduce the “Robotness” to a minimum. One interesting result of my Saturday K6VVA mikeless experience is that I did not feel tired or blown out from screaming into a microphone for hours.

In consideration of the Boy Scout Motto, at least having mikeless capabilities can come in handy for times when live voices either give out or need a rest during a contest. One very well known super contester commented in a forum post that he had to stop operating for hours because his voice gave out, and almost chucked in the rest of the contest. How about “Robot To The Rescue” time? IMHO, a full “Robot” should be in every Phone contester’s First Aid kit and can be a restful option during late night “grind it out” hours, as well as a practical way to conserve energy as well as one’s voice as needed.

Hmmm...I wonder what W4KFC, W9IOP and other great CW contest ops of the past would have said in the 1960’s if someone told them that almost all CW contesters would some day end up using a computer to work an entire contest without a key paddle? But a “Phone” contest?

As much as I’m still tempted to say “bite me” to the scoffers, I won’t. Things are not perfected yet. Believe it or not, I’m actually looking forward to my next Robot-2-Robot Intercourse!!! If I was QRV as a total “Robot” from P5/K6VVA, would anyone really complain? I doubt it. ☺

---

*Rick Hilding, K6VVA, is a Co-Founder of the Northern California Contest Club and Ex-FOC #845. He is also a Ventriloquist, Musician, Songwriter, member of the Screen Actors Guild and the voice of ‘Markinson’ in Sony Playstation’s successful ‘Syphon Filter’ game.*