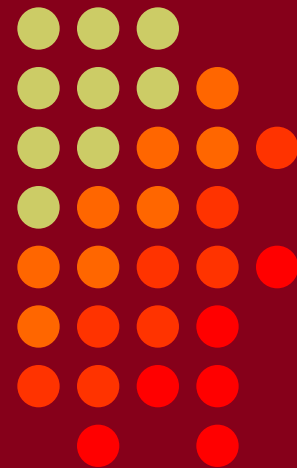


# Contest Tips for Little Pistols

Collected Wisdom and Lessons Learned  
K2YWE (K3AU)



• **CTU** •  
**CONTEST**  
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# Agenda

- What's this about?
- Who is K2YWE?
- Elements of Success
- Preparation
- Contest Basics (refresher)
- Strategy
- Station Considerations
- Antennas
- Software
- My favorite Software Features
- Operating Tips and 'Best Practices'
- About SO2R
- Conclusion
- Appendix A - Best Practices Collection
- Appendix B – Selected Loggers

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# What's this about?

*Ways modest stations can improve their scores*



- **Objective**

- Improved Scores for Little Pistols

- **Intended Audience**

- Modest HF stations, especially low power
- But - principles & most tips apply universally

- **How?**

- Make the most with what you have
- Adopt successful operating practices

# Who am I?

*Licensed in 1956 . . . always a little pistol*



- **Licensed 1956 in White Plains, NY**
- **Mostly CW, very little contesting until 1995**
- **1995 Field day with W3LPL, K3MM, and K3RA**
  - Got 'hooked' on contesting, joined PVRC
  - A few years education at W3LPL MM
- **Contesting from home since**
  - Occasional Op at MM stations too
- **Modest 100W home station**
- **Continue to learn from good Ops**
- **Moderate Success (K2YWE/K3AU)**
  - Top ten (up to 2<sup>nd</sup>) US & World finishes, Regional firsts





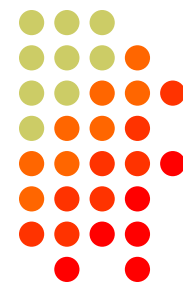
# Elements of Success

*Same principles that apply to most successful endeavors*



- **The Right Frame of Mind**
- **Preparation**
- **Attention to Detail**
- **Practice**
- **Improvement and Learning**
- **Perseverance**

# The Right Frame of Mind



**Don't forget it is a competition**

'it's a jungle out there' . . . de N6TR

**You will not be alone**

' . . . contesting skill includes the ability to tolerate high levels of QRM, and if you can't do that, you might as well hang it up.' . . . de K3ZO

**Think Big**

'If you think and act like you're a big dog, you will convince most of the pack that you are, although you may get bitten once in a while.' . . . de K2YWE

**QRL!**



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# Preparation

*'Now the general who wins a battle makes many calculations in his temple ere the battle is fought. The general who loses a battle makes but few calculations beforehand.' . . . Sun Tzu*



- **Have a strategy – write it down**
  - Provides baseline guidance
  - Try to optimize within your constraints
  - Modify as needed in 'battle'
- **Reassess your strategy during the contest**
  - Expect to change the details
  - Take big departures only if you have good reason to, like one or more of your assumptions is wrong



# Preparation

*Get your act in order before the performance*



- **Check your set-up well before the start**

- Antennas, Hardware, Software, support files
- Set appropriate software defaults
- Provide enough time for fixing any problems



**INS Key is sticking!**

- **Be well rested for the contest**

- **Listen day(s) before to get a feel for Condx**

- **Have a simple means to restart software**

- What did I call this file . . . ?
- Re-use the same name for the current contest files. Rename after the contest





# Review of Contest Basics

*It's all about accuracy and Q's & Mults*

- Rules are published well in advance
- Valid contacts exchange two-way information
  - Contest rules define the specific information
- Final score is composed of two pieces
  - **QSO points** – Based on number of valid contacts
    - Points per contact may vary
  - **Multipliers** – Based on a unique characteristic
    - Usually location - State, Country, Zone, Grid
  - Total Score is **QSO points times Multipliers**
  - Same station may provide multiple Qs or Mults
    - QSO's on different bands or modes may each count

31	W6IXB	59	59	SCV
32	W5AFX	59	59	STX

	Q	Z	C	D
160	0	0	0	0
80	0	0	0	0
40	0	0	0	0
30	0	0	0	0
20	2	1	1	0
17	0	0	0	0
15	0	0	0	0
12	0	0	0	0
10	0	0	0	0
6	0	0	0	0
2	0	0	0	0
SAT	0	0	0	0
ALL	2	1	1	0



# High Level Thoughts

*Some reasoning to frame the problem*



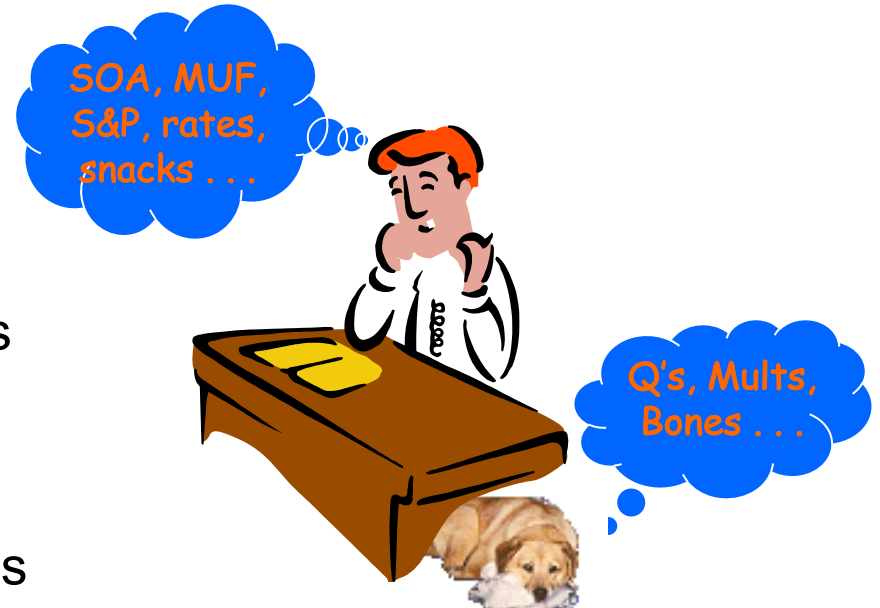
- **Q's fuel the engine, Mults provide the turbo boost**
  - Both are important
- **More Q's are key to producing higher scores**
- **Operating Time is fixed, thus Rate must go up!**
- **Rate Drivers**
  - Being Heard and Hearing others
    - At fixed power level, this mainly means better Antennas
  - Operating Efficiency - Less wasted time in & between QSOs
    - Look to Operating Practices and Shack Arrangement
  - Attracting the other stations
    - Operating Practices
  - Successful Running is part of rate generation

# Strategy

*Having a game plan pays off during the contest*



- **Class Selection**
- **Band(s), modes, assistance, number of Ops, ...**
  - Leverage your strengths
- **Bands and Modes**
  - Which, when?
- **Propagation**
  - What's best for Q's and Mults
- **ON/OFF times selection**
  - Time limits
  - Meals, sleep, 'real life' periods
  - Operation
  - Run vs. S&P, Rates, Speeds and Timing

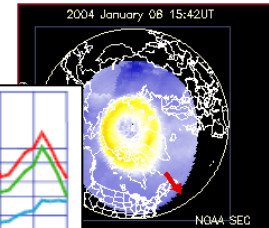
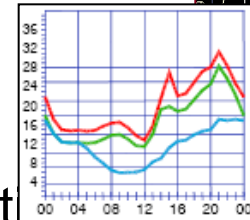


# Strategy

*Remember that maximizing Q's is primary to success*



- **Focus on making the most Q's**
  - Block out expected S&P and Run times, ground rules
  - Balance with periodic short checks for Mults
- **Base primarily on expected Propagation**
  - Range of prediction tools are available
    - 'Rules of Thumb'
    - QST or CQ tables – simplest
    - Models – better
  - Temper predictions with your own observations
  - Gray Line info can help, especially on 160m and 80m
- **Allow for time-of-day considerations**
  - What's going on outside your area



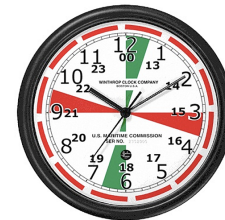
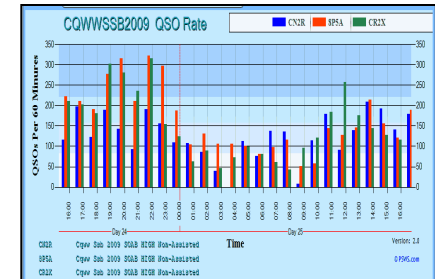


# ON/OFF Times

*Make the best use of your time*



- **Choose OFF times at lowest expected Q rates**
  - Base on your own or other stations' history
  - Don't forget minimum OFF time rules
- **Ensure using your full time allotment**
- **Allow possibility you may want a late slot**
  - Don't get caught short of time at the end
  - I usually leave a late half-hour insurance slot
  - It's tricky, considering the statement above
- **Sync with your personal needs (of course)**





# Rates Rules

*Setting Rate Rules helps you achieve QSO goals*

- **Set an average rate you want to achieve**
  - (Total Q's) / (Operating Hrs)
- **Set minimum rates you'll accept**
  - Acceptable rate will vary over the contest period
- **Include minimum rates in your Strategy**
- **Make a *change* if you *drop* below the Rate**

<u>1,000/24 = 40</u>	
00-04Z	60
04-08Z	45
08-12Z	30
12-16Z	40
16-20Z	50
20-24Z	25

Rates		
Last 10 QSO	Rate =	35.1
Last 100 QSO	Rate =	21.3
Mult worth	45.1	minutes
Rates for all bands		
Time ON:	9.8	hours
Time OFF:	2.3	hours

- Change Freq, Band, Mode
- Swap Running and S&P
- Chase some Mults
- Change your Shirt
- ***Change Something!***

# Practice

*It may not make you perfect, but it will make you better!*



- **Be thoroughly familiar with your software**

- A contest is **not** the time for **first trial**
- **Gain** familiarity in day-to-day use
- **Exploit** helpful features
- Try different modes
- Modify settings to suit your style



**Contest Hound  
Practices Win-Test**

- **Be comfortable with Run techniques**

- **Practice** with a simulator (Morse Runner)
- Try to operate 'run style' (5NN MD DAN BK . . . TU)
- Pick a day with a good conditions on your best band
- Use the **Best Practices** mentioned later in this presentation

# Station Improvements

*Put method behind your madness*



- **Assess Station Strengths and Weaknesses**
  - Take **band by band inventory** *based on performance history*
- **Attack Weaknesses with biggest payoffs first**
  - Incrementally **fill in the holes**
  - Expect Antennas to rank high
  - Don't forget to pick 'low hanging fruit'
- **Assess your Operating Practices**
  - Bounce your operation against the **Best Practices** (later)
  - Adjust accordingly
- **Improved Antennas & Running payoff most**
  - But **every** improvement counts – **they all add up**

# My Experience

*Performance improved with incremental changes*



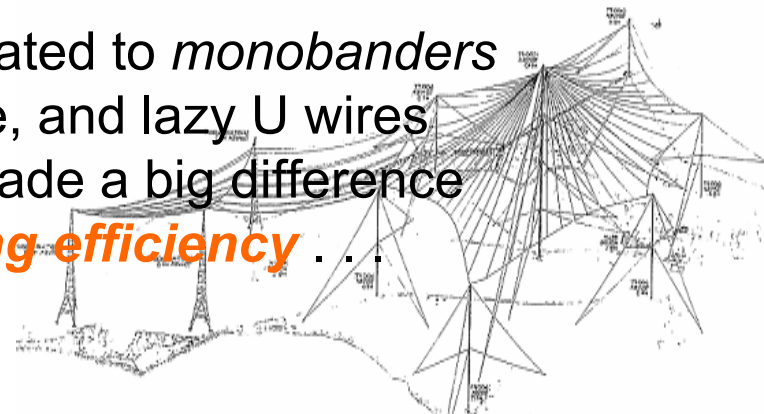
## ● Operation

- Exploited software features (Bandmap, SCP, ...)
- Discovered and incrementally adopted **Best Practices**
- Started Running
  - Had assumed not possible for Little Pistol
  - Running rates improved with experience
  - Learned when and when not to try running



## ● Station

- Improved antennas – eventually migrated to *monobanders*
  - Not exotic – Delta loop, bent dipole, and lazy U wires
  - Added low small triband Yagi\* - made a big difference
- Made shack mods for better **operating efficiency** . . .



# Operating Efficiency



No Help!



Mic Prop



Footswitch & Prop



Boom Mic & Footswitch





# Station Improvements K2YWE

*Improvements aimed at higher rates*



- **Footswitch**
  - SSB - Frees hands for keyboard use
  - CW - Quick T/R transition without listening to QSK noise
- **Boom or Headset Mic**
  - Less fatigue, **freedom** to move, respond to local 'QRM'
- **Antenna Switching**
  - **Quicker** band changes. Connector Swaps -> Switches -> SixPack
- **Added and Improved Antennas**
  - More chances to sustain Run, snag S&P Q's with less calls
  - More '**second tier**' QSOs
- **Rearranged Equipment**
  - More **efficient**, quicker, easier operation

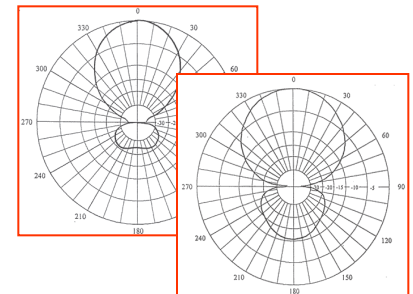


# Antenna Improvements

*Be innovative within your constraints*



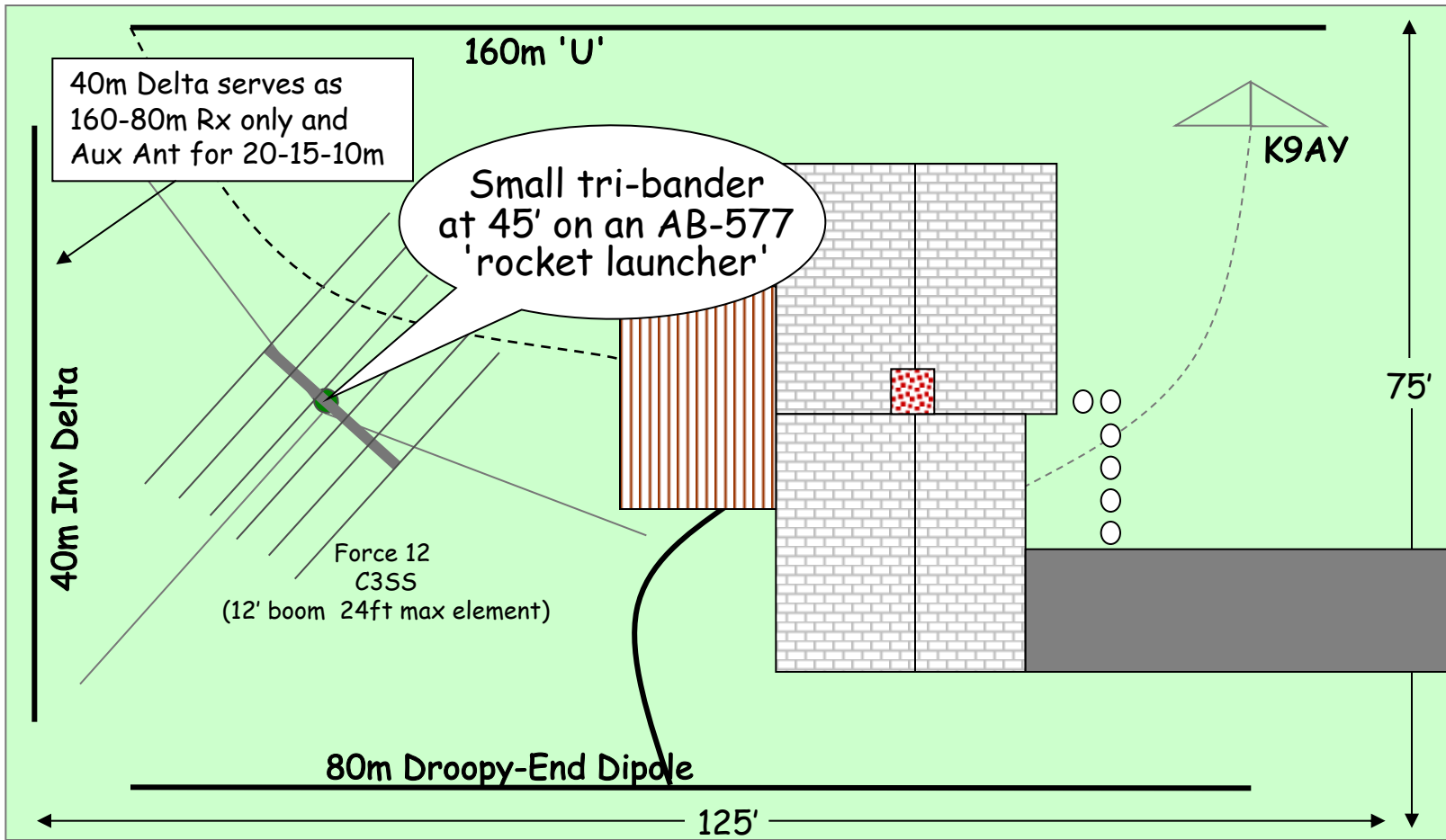
- What **assets** exist to hang antennas on?
- Use all the property lines to full advantage
- Add/change antenna to help your **weakest band**
- Try to design a system using **monobanders**
- Consider fixed antenna with gain to high QSO area
- Enable a **new band**, like 160m
  - New Mults and more Q's during slow times
- Put up even a minimal **Yagi** if possible





# Antenna Farmette (K2YWE)

*Squeezed in three wire monobanders and a 12' tribander*



# Software (S/W)

*Use a contest-oriented program set up to facilitate high rates*



- **Use the Radio and Keying interfaces**
  - Build or buy and integrate them if you haven't already
  - Make sustaining high rates much more possible
- **Recommended S/W Setup (CT keywords SHOWN)**
  - WORKDUPES
  - CORRECT call signs
  - Super Check Partial
  - Stop on auto CQ
  - BANDMAP & ANNOUNCE Windows
  - RATE Window
  - SCP Window
  - SCORE Window
- **Spotting Network?**
  - It's a strategic decision
  - Can be a valuable asset, especially in S&P
  - Does not alleviate you from **confirming** all entries
  - Be careful **not** to get too caught up in **chasing Mults**

# Typical Logger Screen (N1MM)

Contest loggers provide tactical information and control



The screenshot displays the N1MM contest logger interface, which is divided into several functional windows:

- Telnet Window:** Shows the connection to DXC.K1TTT.NET with a 60-minute timeout. It lists received packets and their details, including call signs, times, and frequencies.
- Info - K2YWE:** Displays exchange information for K2YWE, including rates (1 mult = 2.0 Q's) and a goal of 56.
- Score - 32 Points:** Shows the current score and a table of logged contacts with columns for Band, Mode, QSOs, Pts, and Mult.
- Manual - A:** Displays the current frequency (14021.34) and mode (CW).
- Check - Mult:** Shows a list of mults (160, 80, 40, 30, 17, 15, 12, 10) and their corresponding Qs (20).
- Available - 15 Mults 16 Qs of 19 total spots:** A table showing available mults and their corresponding Qs.
- 14021.34 CW Manual - A:** A detailed window for the current frequency, showing a list of contacts and their details.



# Software Features Most Useful to Me

# Rate (N1MM and CT screens)

*QSO Rate provides feedback on how you are doing*



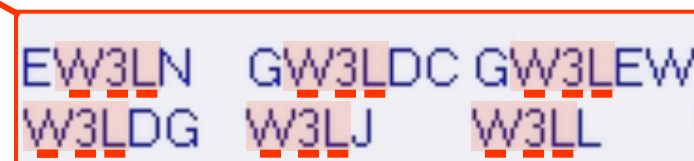
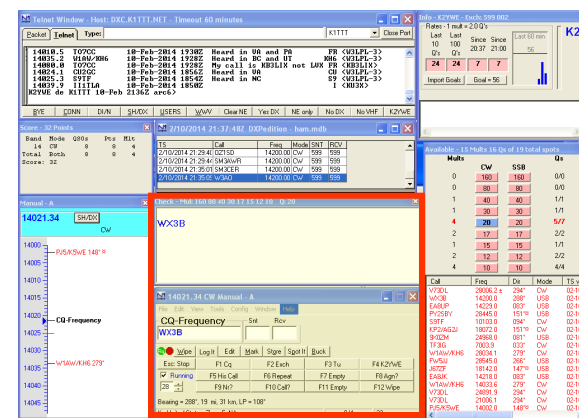
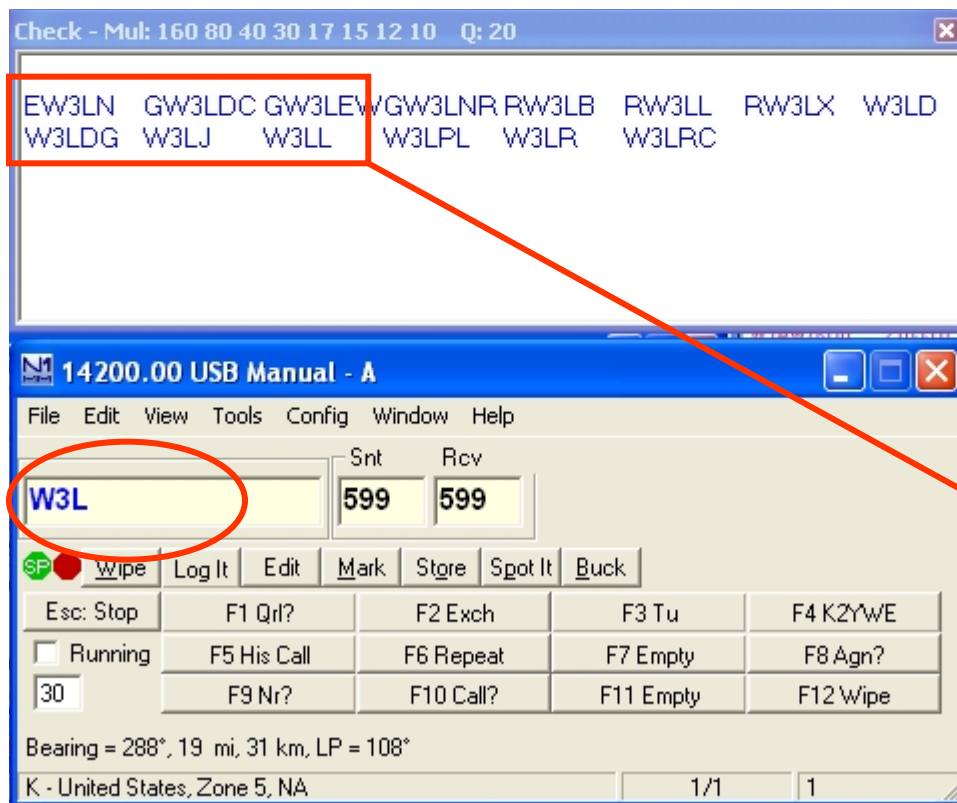
**Rates**

Last 10 QSO Rate = 55.1  
Last 100 QSO Rate = 35.3  
Mult worth 35.1 minutes  
Rates for all bands  
Time ON: 9.8 hours  
Time OFF: 2.3 hours

- **Helps check performance against expectations**
  - Remember about setting **Rate Goals**?
- **Aids in making S&P/Run and band decisions**

# Super Check Partial (N1MM screen)

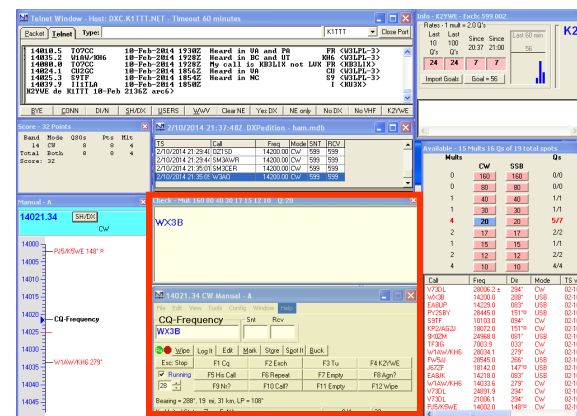
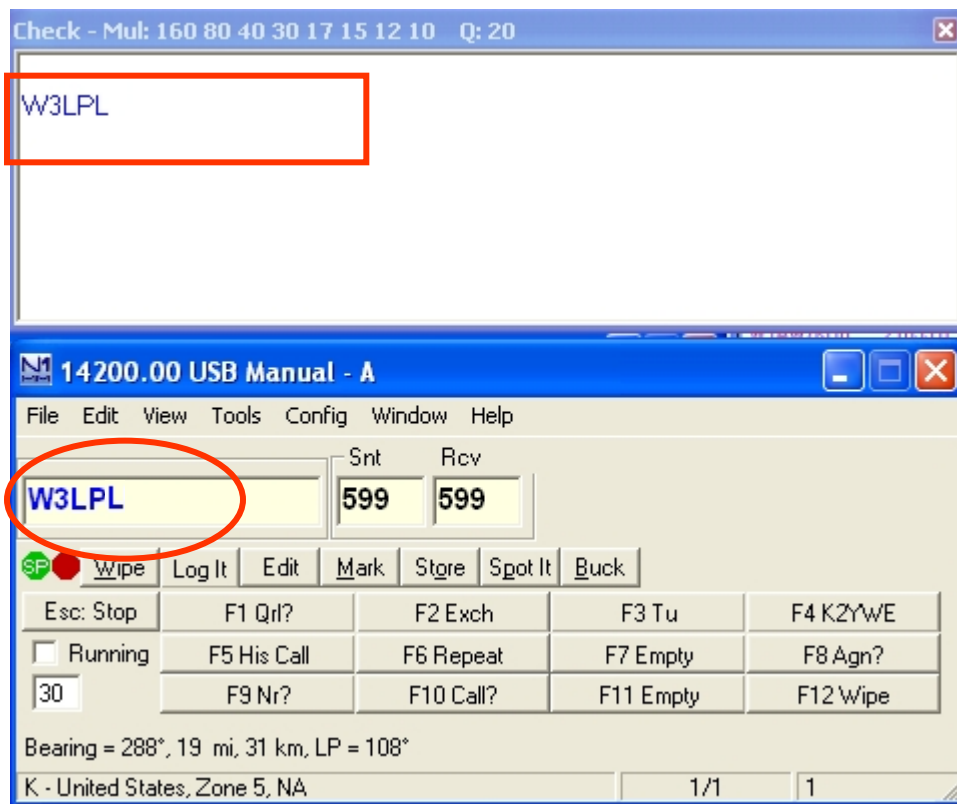
*Call fragments yield possible known contesters callsigns*



**Matches callsign fragments against database created from recent contest logs and current logged contacts . . . *anywhere in the callsign***

# Super Check Partial (N1MM screen)

*Call fragments yield possible known contesters callsigns*



**More letters narrow the possibilities, but . . .**

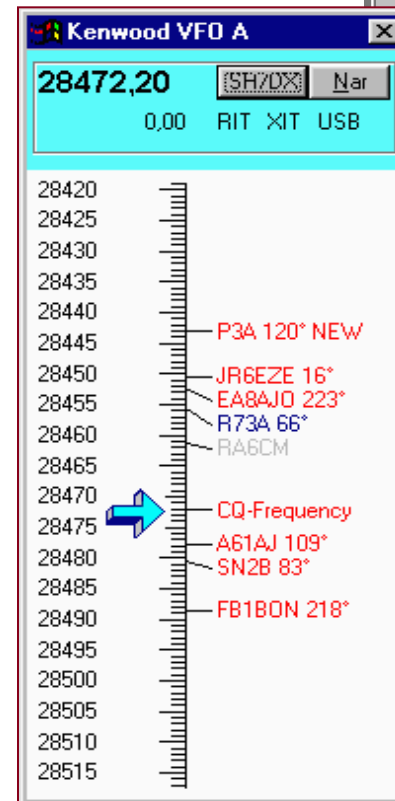
*Log only what you copy – SCP is just a guess!*



# Bandmap (CT and N1MM screens shown)

*The bandmap saves time in Search & Pounce mode*

- Shows who is spotted on what frequency, if worked before, if needed Q or Mult
  - Data is entered by hand or automatically from spots
  - Map updates periodically to expunge stale data
- Useful for Dupe or 'check later,' even if unassisted



14001.6	W3LPL	2109
14002.2	KC1XX	* 2110
14003.5	N7XM	# 1947
14005.0	K0DX	2104
14005.4	K3RA	2123
14007.3	N4CW	2124
14010.7	K2YWE	* 2113
14018.4	WQ6AQQ	# 2112
14013.2	K5TR	* 2115
14014.1	N6RO	* 2115
14019.8	K1EA	2117
14023.9	W3GR	1954



# Available Mults & Qs (N1MM screen)

*Available Mults & Qs aids in band change decisions*



- **Band-by-band info on number of new & worked Mults and Qs spotted**
  - Supplements propagation info
- **'Point and shoot' listing of spots**
  - Jump to spot if interfaced with radio

Available - 78 Mults 99 Qs of 136 total spots

Mults		Qs
7	160	8/8
11	80	14/14
29	40	33/33
13	20	20/20
4	15	6/6
14	10	18/18

Call	Freq	Dir	Mode	TS
R6AP	10113.0	033°...	CW	02-21
R22FIS	7026.5	015°...	CW	02-21
SP4NKS	10114.0	016°...	CW	02-21
YQ8ANT	7005.0	025°...	CW	02-21
IK4IDF	10143.0	015°	RTTY	02-21
ON7DU	10105.2	004°...	CW	02-21
SM7DVA	1837.0	011°...	CW	02-21
OM4ADX	3584.4	016°...	RTTY	02-21
RQ22OG	7011.5	015°...	CW	02-21
8J6KKC/6	7015.4	041°...	CW	02-21
I1ULJ/8	10109.5	015°...	CW	02-21
CT3FT	7007.0	336°...	CW	02-21
LA8FTA	7032.2	007°...	CW	02-21
EA7CJJK	14018.0	357°...	CW	02-21
EA3JJ	14014.0	357°...	CW	02-21
J28NC	18102.0	075°	PSK125	02-21
OK1DEC	3556.9	014°...	CW	02-21
G4MLW	18085.1	001°...	CW	02-21
EA1IBH	14020.2	357°...	CW	02-21
G0NXA	14024.6	001°...	CW	02-21
EA3PP	10104.0	357°...	CW	02-21

# Tips and Best Practices



# Some CW Tips

*Don't let code speed keep you from enjoying CW contests*



- **Do not be intimidated by code too fast for you to copy**
  - Start with the slower stations higher in the band
  - Don't worry if you have to hear a call several times to get it
  - As the contest goes on you will improve!
- **Try moving frequency a bit if you can't seem to be heard**
  - Often receiver bandwidths in a crowded band are set very narrow
  - Spotted frequencies put everyone on the same frequency
- **Call CQ high in the band at a speed comfortable for you**
- **It's sometimes OK to send QRS**
  - When your CQ gets answered too QRQ (you can also ignore)
  - During S&P when the CQing station has 'run dry'

# Some Phone Tips

*Apply these basic Phone tips for starters*



- **Use conventional or unmistakable phonetics**
  - 'Duck Soup' are poor phonetics for 'D S'
  - Use Standard or 'Common Use' phonetics (countries, cities . ..)
- **Maintain a 'friendly sense of urgency' in your QSOs**
  - Chattiness will slow your rate and lose you contacts
- **Do not be intimidated by stations talking fast or unintelligibly**
  - Firmly ask until you get all the exchange info. Use 'again?'
  - It is usually better to ask for one piece of missing info at a time
- **Listen to what's on your frequency when calling split**
  - If you can hear it, you can better time your call or defer until later

# Best Practices Basics - Overall

## Overall



- **Every point counts!**

- There's **no** such thing as '**not worthwhile**'
- When really slow, call for 'anybody'

Band	Mode	QSOs	Pts	Mlt
1.8	CW	86	0	0
1.8	LSB	1	0	0
3.5	CW	167	0	0
3.5	LSB	39	0	0
3.5	PHON	3	0	0
7	CW	233	0	0
7	LSB	40	0	0
7	PHON	10	0	0
7	RTTY	1	0	0
10	CW	71	0	0
14	CW	318	9	4
14	PHON	9	0	0
14	RTTY	9	0	0
14	USB	54	0	0
18	CW	82	0	0
18	USB	15	0	0
21	CW	266	0	0
21	PHON	19	0	0
21	RTTY	6	0	0
21	USB	34	0	0
24	CW	68	0	0
24	RTTY	1	0	0
24	USB	15	0	0
28	CW	217	0	0
28	PHON	29	0	0
28	RTTY	16	0	0
28	USB	28	0	0
50	CW	3	0	0
50	USB	1	0	0

- **A rule of thumb strategy**

- **Work bands that may close first.** Move with propagation
- This often means 10-15-20 in a.m. then 40-80-160 later on
- **Try running** rather than chasing spots when high bands are open
- Chase the Mults when 20 has slowed, but 40 hasn't opened yet.

- **Keep multipliers in mind**

- **'Move' Multipliers** if you can do so efficiently
- Have frequencies on each band set up for quick jaunt
- **Balance** the effect on **rate** & total score when chasing Mults

Band	QSO	Rate	Mlt
160	0	0	0
80	0	0	0
40	0	0	0
20	0	0	0
15	0	0	0
12	0	0	0
10	0	0	0
8	0	0	0
5	0	0	0
2	0	0	0
SST	0	0	0
ALL	1	1	0

QSO's per Mlt: 0.5  
Current QSO RATE

# Best Practices Basics - Overall

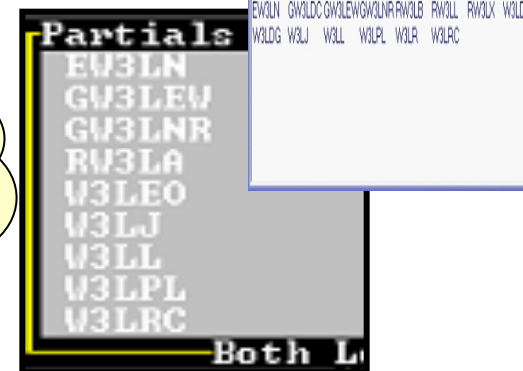
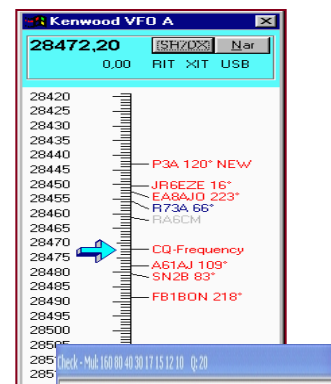
## Overall - continued



- **Verify the callsign of the station you're working**
  - BV6U and 5C8N are not real callsigns (6V6U and HC8N)  
Don't log them that way
- **Always HEAR the call the station is signing and log what you hear**



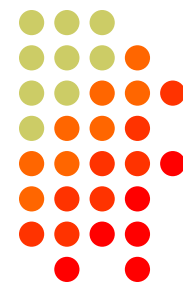
*You mean  
that's a  
busted call?*





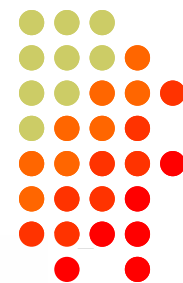
# Best Practices Basics - Overall

*Overall - continued*



- **S&P rates can be very high early in the contest**
  - **Everyone** is 'fresh meat' for you.
  - You can quickly hop from station to station with little fear of Dupes
  - You are usually safe to call first and then fill-in the call
- **Use early S&P to find a spot to CQ**
  - You can maintain a **high rate** while **searching for** a **clear** spot
  - It beats the alternative of establishing a frequency before the Test
- **Be sure to try CQing late in the contest**
  - You will **be fresh meat** to many that have been CQing all along
- **Repeat only what is missing when asked for a fill**
  - Repeating known parts **wastes time** and possible 'clear times'
- **QRL? . . .**

# Do you really want to ask QRL?



*'Can anyone honestly believe that there is a single KHz anywhere in the relevant portion of the 20 meter band that is NOT in use somewhere in the world during the CQWW?'*  
... de K3ZO

to QRL OR NOT

to QRL, THAT IS

THE

to QRL OR NOT  
to QRL, THAT IS  
THE QUESTION...

## One Approach . . .

- Pick a 'clear' spot and CQ without 'QRL?'
  - You will only invite others to take the frequency by asking QRL?
  - You'll find out quickly if the Freq is in use by calling a short CQ.
  - ***This is controversial.*** Many hams feel that not asking is rude.  
***You Decide.*** Use 'QRL?' if you have doubts or are thin-skinned!



# Best Practices

## General



- **Use K3ZO's 'Rule of TWICE'**
  - If you can't get a station **after calling TWICE, move on**
  - If he doesn't ID after transmitting TWICE, move on
  - Modify 'TWICE' as sensible for your station and circumstances
- **Don't waste time repeatedly calling DX that has moderate signals when the band is otherwise quiet from their area**
  - They are probably '**opening the band**' with lots of ERP
- **Enable and use the band map in your logging software**
  - Us for **dupes and 'call later' in S&P** as well as for new Mults and Q's
- **Insist on fills until you get all the info.**
  - **Don't log** the QSO **without complete info**. 'Sorry, No QSO'
- **Be mindful of SSB signal bandwidth**
  - Be far enough from strong runner not to be covered by an **unheard pileup**

# Best Practices . . .

## *Running*



- **Call CQ when the band is active**
  - If **CONDX** are **good** for your station
  - If you can find a frequency and hold it
- **CQ when bands are dead for the day or worked out**
- **Use the widest IF bandwidth you can stand**
  - Less chance to miss **off-freq callers**, especially on CW
- **Use only a quick 'thanks' if stations are waiting**
  - **They know your call.** Don't waste time on it.
  - Throw in your call every few Q's for newcomers or if none waiting
- **Always work Dupes (set software to allow it)**
  - You **might not be in his log** and it's usually **quickest**

# Best Practices . . .

*Running - continued*



- **Send out a full exchange with a partial call**
  - Most **Ops will correct you**, many without a missing a beat
  - Fix the entry during his transmission
- **Send the **corrected** call as part of your 'bye message**
  - **Enable call sign correction** in your software
- **Don't break a run to pull one station through**
  - **Your rate will suffer** if you take too long
  - You will drive away impatient waiting stations
- **If you can't drag a call through after trying TWICE, ignore him and **start calling CQ again****
  - This is part of K3ZO's 'Rule of TWICE'

# Best Practices . . .

*Running - continued*



- **Speed up if your run is being sustained**
  - This is especially true in contests like SS where the exchange includes your call sign.
  - **Slow back down again** appropriately
- **Hit the SEND key as soon as the call is in your head**
  - **Finish typing** in the log **while the exchange is sent**
  - Some programs can do this automatically after  $n$  characters
- **Move Multipliers to other bands if you have the time**
  - **Picking frequencies** in advance makes it easier to jump

# Best Practices . . .

*Running - continued*



- If another station calls CQ on your frequency, try **'QRL'** or **'Frequency in use, please QSY'**
- Don't engage in extended frequency fights
  - If **QRL/QSY fails**, it almost always pays to **move**
  - Sometimes you can move up or down a bit to lessen the QRM and still hang on to 'your' frequency
- **NEVER NEVER NEVER** acknowledge a 'jammer'
  - **NEVER**. Just keep your pace, and **don't change** your tone of voice on phone or even synchronize your calls to his QRM.
  - Often throwing in a few fake Q's will discourage the jammer

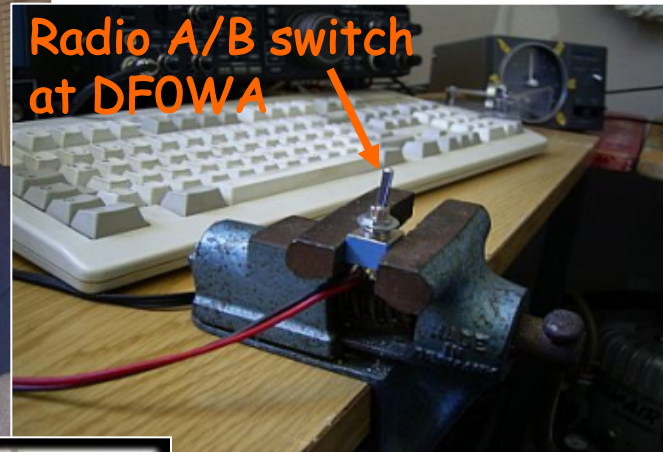
*The Complete Best Practices Collection  
appears in Appendix A*

# A Word About SO2R [single op 2 radio]

*Everyone has their own idea of an efficient SO2R layout . . .*



K1PT SO2R Setup  
two computers



Radio A/B switch  
at DF0WA



An earlier two radio setup  
(no PC)



N6TR one computer  
no box (TRlog)

# A Word About SO2R

*Save SO2R until other improvements are nearly exhausted*



- It's easy for SO2R to be a **distraction**
- **KISS** (Keep It Simple Stupid) is key
  - Start with a **simple to use** setup
  - Use SO2R only when things are **slow**
    - CQ A - S&P B or Alternate CQs
    - Modify your setup and operation with experience
- **Most top Ops swear by it**
  - **Potential** to add significantly to your score
- **Some don't use it at all**

*I'm at level one – a few SO2R Q's per contest - dbz*



# Internet Links

*Here are a few of the many available resources*



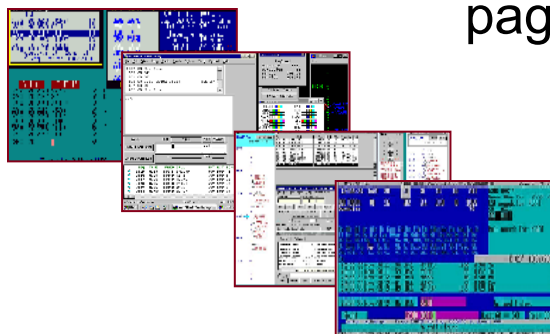
## ● Contest Organizations, Calendars, Info, & Sponsors

- WA7BNM Calendar  [hornucopia.com/contestcal](http://hornucopia.com/contestcal)
- SM3CER Calendar  [sk3bg.se/contest](http://sk3bg.se/contest)
- Contesting.com  [contesting.com](http://contesting.com)
- National Contest Journal (NAQP ...)  [ncjweb.com](http://ncjweb.com)
- ARRL (Sweepstakes, Field Day, DX ...)  [arrl.org](http://arrl.org)
- CQ Magazine (CQWW, WPX ...)  [cq-amateur-radio.com](http://cq-amateur-radio.com)

## ● Popular Contest Logging Programs

*Treated in Appendix B*

- N1MM [pages.cthome.net/n1mm/](http://pages.cthome.net/n1mm/)
- Win-Test [win-test.com](http://win-test.com)
- Writelog [writelog.com](http://writelog.com)
- TR Log, TR4W [tr4w.com](http://tr4w.com)
- CT & CTWin [k1ea.com](http://k1ea.com)



# Conclusion

*Little Pistols with modest stations can successfully compete*



- **Prepare and pay attention to detail**
  - Remember **Sun Tzu**
- **Strategies are important**
  - Pick and **plan** your contests. Use the plan for guidance
- **Adopt proven practices**
  - Try the **Best Practices**. Keep what works for you
- **Run, big dog, run**
  - Try to **Run** if at all possible
- **Start now to make incremental improvements**
  - Make a **list** and work it down
- **There are lots of resources for help**

*‘ It’s not the size of your station, it’s how you use it! ‘*

# Best Practices

## Appendix A

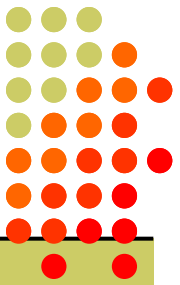


K2YWE  
0 of 9



# Best Practices

## Appendix A



K2YWE  
1 of 9

### Best Practice

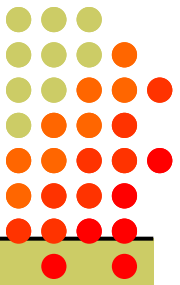
### Rationale

#### General Operating

<ul style="list-style-type: none"><li>• Assume a big dog attitude</li></ul>	<ul style="list-style-type: none"><li>• If you act like a big dog, most will believe you. If they bite back painfully, you can find other turf.</li></ul>
<ul style="list-style-type: none"><li>• Maintain an “friendly sense of urgency” in your QSOs</li></ul>	<ul style="list-style-type: none"><li>• Chattiness will slow your rate and lose you contacts</li></ul>
<ul style="list-style-type: none"><li>• Always work Dupes</li><li>• Set your software accordingly</li></ul>	<ul style="list-style-type: none"><li>• You may <i>not</i> be in <i>their</i> log</li><li>• It usually takes more time to rebuff than work</li></ul>
<ul style="list-style-type: none"><li>• Enable and use the Bandmap feature of your logging software even if you are not Assisted.</li><li>• The Bandmap allows you to enter stations yourself on the fly</li></ul>	<ul style="list-style-type: none"><li>• If you need to check back later, the Bandmap will have the call sign and frequency noted for you</li><li>• You’ll waste less S&amp;P time on waiting for station ID or on calling Dupes</li></ul>

# Best Practices

## Appendix A



K2YWE  
2 of 9

### Best Practice

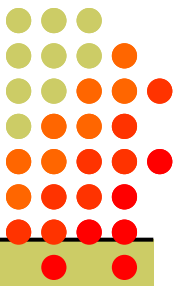
### Rationale

#### General Operating - continued

<ul style="list-style-type: none"><li>• In general, use K3ZO's 'Rule of TWICE'</li><li>• Modify 'TWICE' to suit your station capabilities and contest situation:</li><li>• If you can't get a station after calling him TWICE, move on</li><li>• If the station doesn't ID after transmitting TWICE, move on</li></ul>	<ul style="list-style-type: none"><li>• Your time can be better spent increasing your rate</li><li>• A multiplier can quickly become worth less than the QSOs lost trying</li><li>• You can put his frequency into the Bandmap to check back later</li></ul>
<ul style="list-style-type: none"><li>• Try moving frequency a bit if you don't seem to be heard</li></ul>	<ul style="list-style-type: none"><li>• Often receiver bandwidths in a crowded band are set very narrow</li></ul>

# Best Practices

## Appendix A



K2YWE  
3 of 9

### Best Practice

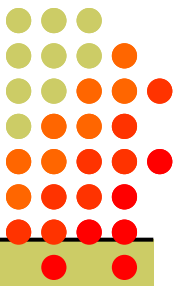
### Rationale

#### General Operating - continued

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Do not waste time repeatedly calling DX stations that have moderate signals when the band is otherwise quiet from their part of the world</li><li>• This is likely to happen when big guns are just 'opening the band' or 'keeping it open'</li><li>• Try another time</li></ul>      | <ul style="list-style-type: none"><li>• Many stations running high power will be heard when propagation is poor, but will not hear you despite elaborate antennas</li><li>• Remember that 1.5kW vs. 100W is roughly the difference between S-7 and S-3. These are the guys that are S9 or more under better conditions.</li></ul> |
| <ul style="list-style-type: none"><li>• Send only the missing or wrong part when asked for a correction (FILL)</li><li>• The response to K3? would be 'ABC' (a few times if needed) not all of 'K3ABC' since K3 wasn't in question</li><li>• Similarly in SS if queried for your CK, don't send the entire exchange</li></ul> | <ul style="list-style-type: none"><li>• Time spent sending known information is wasted.</li><li>• You may squander a clear interval or QSB peak on resending known info<br/>The time spent sending known info may be a missed opportunity for the Fill to be heard</li></ul>  |

# Best Practices

## Appendix A



K2YWE  
4 of 9

### Best Practice

### Rationale

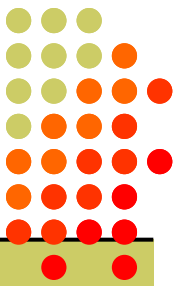
#### Running

<ul style="list-style-type: none"><li>• Call CQ when the band is active if you are able to find and hold a frequency</li></ul>	<ul style="list-style-type: none"><li>• You will usually beat your S&amp;P rate</li><li>• An exception is the start of the contest when everyone is 'fresh meat' for you and your S&amp;P rate can be very high</li></ul>
<ul style="list-style-type: none"><li>• Call CQ when the bands are dead for the day or worked out near the end of the contest</li></ul>	<ul style="list-style-type: none"><li>• That's when the stations that have been CQing will S&amp;P for 'fresh meat'</li></ul>
<ul style="list-style-type: none"><li>• Consider <i>not</i> asking if the frequency is busy before CQing. You'll find out soon enough if it is.</li><li>• <i>Do ask if you're uncomfortable not asking</i></li></ul>	<ul style="list-style-type: none"><li>• QRL? is an announcement to others that it's clear at your end</li><li>• Someone else may jump in and CQ</li></ul>



# Best Practices

## Appendix A



K2YWE  
5 of 9

### Best Practice

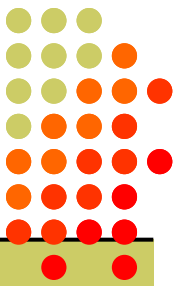
### Rationale

#### Running - continued

<ul style="list-style-type: none"><li>• Use the widest receiver bandwidth you can stand</li></ul>	<ul style="list-style-type: none"><li>• Less chance to miss off-frequency callers, especially on CW</li></ul>
<ul style="list-style-type: none"><li>• If another station calls CQ on your freq and fails to respond to your QRL-QSY message, carry on for a while to see if he leaves. But, don't do this for very long</li></ul>	<ul style="list-style-type: none"><li>• Even though he is not hearing you, if you are being heard by others he may not get many responses and might give up quickly. No one likes to waste time</li></ul>
<ul style="list-style-type: none"><li>• Don't engage in long frequency fights. Try 'QRL' or 'frequency in Use, QSY.' If that fails, it almost always pays to move.</li><li>• Sometimes you can move up or down a bit in order to lessen the QRM and still hang on to "your" frequency</li></ul>	<ul style="list-style-type: none"><li>• It costs you QSO time</li><li>• You may be in QRM at the other end</li></ul>

# Best Practices

## Appendix A



K2YWE  
6 of 9

### Best Practice

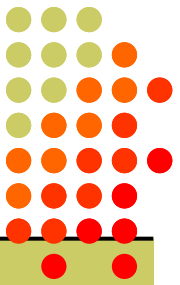
### Rationale

#### Running - continued

<ul style="list-style-type: none"><li>• Don't break a run to pull one station through</li></ul>	<ul style="list-style-type: none"><li>• Your rate will suffer if you take long</li><li>• You will drive away impatient waiting stations</li></ul>
<ul style="list-style-type: none"><li>• If you can't drag a station's call through after trying TWICE, ignore him and start calling CQ again</li><li>• This is part of K3ZO's /Rule of TWICE./ Modify TWICE to suit your station capabilities and contest circumstances</li></ul>	<ul style="list-style-type: none"><li>• Running has to do with how fast you can accurately get Q's into the log. You don't want your rate to slow or waiting callers to lose interest</li><li>• Equally important, on a crowded band you must transmit often to keep "your" frequency clear</li></ul>
<ul style="list-style-type: none"><li>• Speed up if your run is being sustained. This is especially true in contests like SS where the exchange includes your call sign.</li></ul>	<ul style="list-style-type: none"><li>• Waiting callers likely have your info</li><li>• More stations will be inclined to wait</li><li>• Your rate will go up with speed</li></ul>

# Best Practices

## Appendix A



K2YWE  
7 of 9

### Best Practice

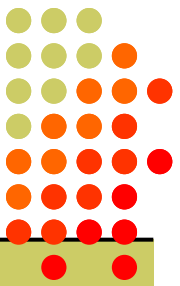
### Rationale

#### Running - continued

<ul style="list-style-type: none"><li>• Use only a quick “Thanks” or “TU” without your call sign or QRZ if you heard multiple callers.</li><li>• Throw in your call every few Q’s for new listeners.</li><li>• Keep it up until there are no more responses, then build back to your “full” QRZ message and CQ.</li><li>• If you get no responses after just ‘Thanks’, try only your call and ‘TEST’ before resuming a full CQ</li></ul>	<ul style="list-style-type: none"><li>• Most waiting stations will know your call. Don’t waste time on it.</li><li>• Minimizing the time stations have to wait for you will help to keep the impatient ones hanging around and will increase your QSO rate.</li><li>• Less experienced contesters may not realize you are waiting for them. “TEST” will alert them you are ready for another station to call</li></ul>
<ul style="list-style-type: none"><li>• Send any call you have corrected as part of your goodbye message</li><li>• Enable call sign correction in your software on CW</li></ul>	<ul style="list-style-type: none"><li>• Stations want assurance that you have them correctly. This will keep them from asking QSL? It might also save your from a mistake</li></ul>

# Best Practices

## Appendix A



K2YWE  
8 of 9

### Best Practice

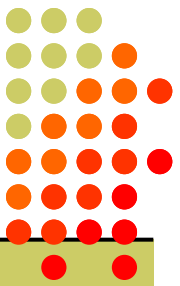
### Rationale

#### Running - continued

<ul style="list-style-type: none"><li>• When the call sign of a responder is questionable, send a complete exchange using the questionable call. Correct it during his exchange.</li><li>• You can use SCP to help guess incomplete calls on the first round</li><li>• <i>Make sure</i> you have it right before you let him go</li></ul>	<ul style="list-style-type: none"><li>• Nearly all contest stations will correct you on their transmission, good Ops without missing a beat</li><li>• It saves an extra exchange devoted only to getting the callsign right</li><li>• You can revert to “normal” fill-in procedures if this practice fails</li></ul>
<ul style="list-style-type: none"><li>• Maintain an “friendly sense of urgency” in your QSOs</li></ul>	<ul style="list-style-type: none"><li>• Chattiness will slow your rate and lose you contacts</li></ul>
<ul style="list-style-type: none"><li>• Move Multipliers if you have the time (a slow run)</li><li>• Pick frequencies in advance. Give up if you don’t connect in a short while</li></ul>	<ul style="list-style-type: none"><li>• It’s a quick way to gain band-Mults.</li><li>• Many Ops will go with you</li><li>• You probably won’t make the Q if you don’t connect quickly</li></ul>

# Best Practices

## Appendix A



K2YWE  
9 of 9

### Best Practice

### Rationale

#### Running - continued

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• Hit the Send key as soon as the call is in your head, and finish typing it into the log during your outgoing exchange transmission</li></ul> <p>Some software can be set to do this after <math>n</math> callsign keystrokes (TR4W and N1MM, for example)</p> | <ul style="list-style-type: none"><li>• If your fingers are like mine, they slightly lag my brain and I am still typing when the other station stops sending.</li><li>• This practice reduces the lag between when the other station finishes calling and when you respond, increasing your rate</li></ul> |
| <ul style="list-style-type: none"><li>• NEVER NEVER NEVER acknowledge a 'jammer.' NEVER!</li><li>• Just keep your pace, and don't change your tone of voice on phone or even synchronize your calls to his QRM</li></ul>  | <ul style="list-style-type: none"><li>• With no response to his jamming, he can't be sure he is even bothering you, and it isn't 'fun' for him if he doesn't get a reaction</li></ul>  |

# Selected Contest Loggers Appx B



# Popular Contest Loggers

*Similar capabilities with varying implementations*

Appx B



- **All run under Windows OS**
- **Need varying amounts of learning to fully utilize**
  - **N1MM (Free)**
    - Most popular Win logger. Continuous cooperative development
  - **Win-Test (\$)**
    - Many features and options. Easy transition for CT users
  - **Writelog (\$)**
    - Popular Windows full-featured contest program
  - **TR4W (Free)**
    - Very flexible. Behavior taken from popular TR DOS program
  - **CTWin (Free)** – Granddaddy of them all
    - Windows character mode version of DOS program



# Popular Contest Loggers

Appx B

*Facilitate operating, logging, and exploiting opportunities*



- **Contesting-specific with advanced features**

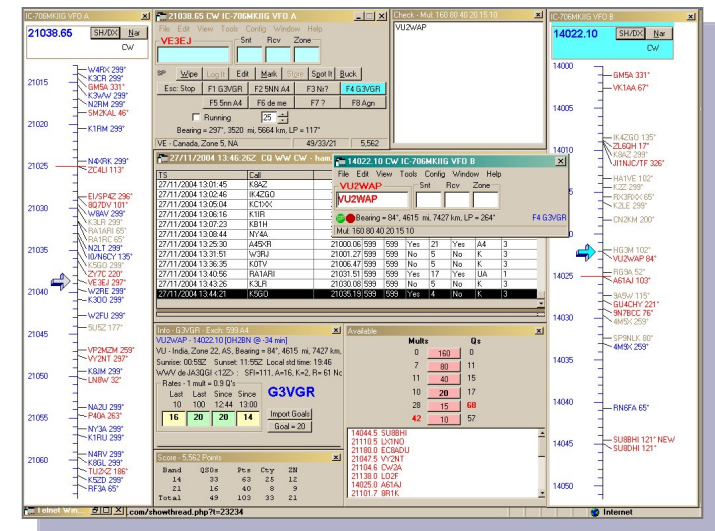
- Band Maps with S&P “point & shoot”
- SO2R Support (and Multi)
- Spotting through a Telnet connection
- Radio, CW & voice keying, and rotator Interfaces
- Sound card support
- Most provide sound card voice keyer
- Some provide sound card Receive recording
- Some support external voice keyer control
- Varying levels of RTTY and other digital mode support
- Most generate and read digital modes using the sound card
- Some provide only logging functions



# N1MM by N1MM et. al. (N1MM, N2AMG, K3CT, N2IC, NA3M)

*Newest and most popular Windows contest logger*

- **Cooperative project with multiple participants/coders**
  - Over 200,000 lines of code and growing
  - Mainly Visual Basic & Access
  - Large user community
- **Requires fast machine and substantial RAM**
- **Multiple Configurable Windows**
  - 110 supported contests
- **Allows User-Defined contests**
  - Sound card voice keyer
- **Pre-record files**
- **RS-232, Parallel, USB support**
- **Free**

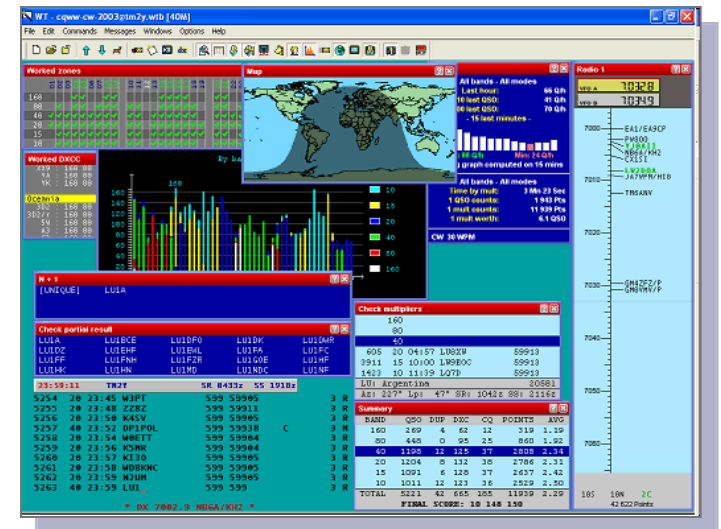


# Win-Test by F5MZN

*Mature written-for-Windows high performance logger*



- Efficient with minimal processing and memory needs
- Strong CT keystroke emulation
- Over 100 supported contests
- Sound card voice keyer
  - Built-in editor
- RS-232, Parallel, USB support
- ~\$70 (50€)
  - Proceeds support Radio Amateur Club de Kourou contest activities, including FY5KE (French Guiana)

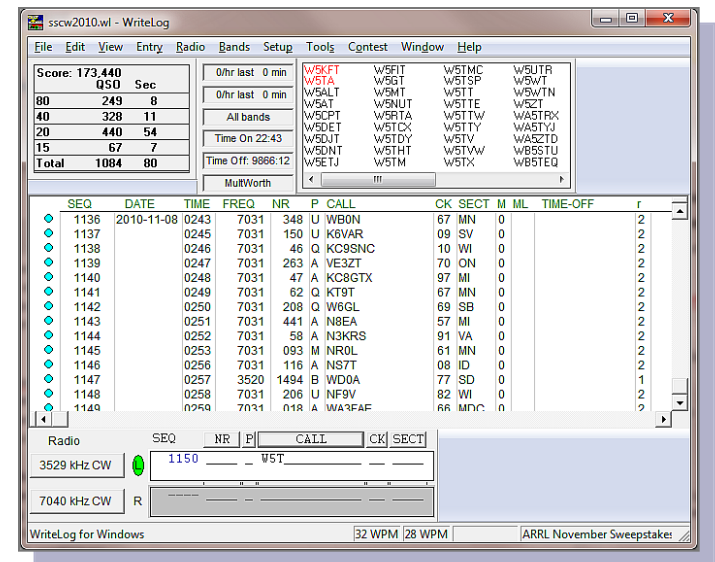


# Writelog by Contesting Software, LLC

*Mature written-for-Windows high performance logger*



- Efficient with minimal processing and memory needs
- Single Main Window
- 110 supported contests
  - Also GP logging
- Sound card voice
  - On-the-fly recording
- RS-232, Parallel, USB support
- \$30 (incl 1 yr updates)
  - Previous version @ \$18

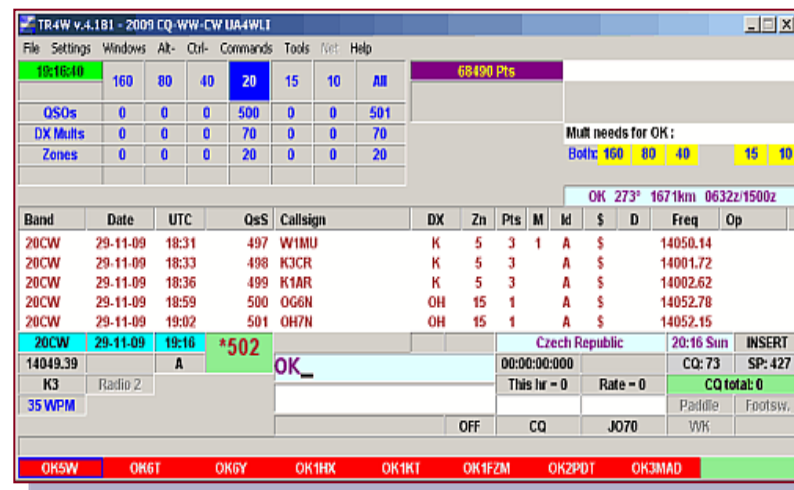


# TR4W by UA4WLI

*Win version of mature world-class adaptive contest logger*

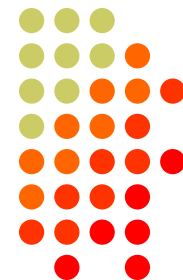


- Small and fast 100% Windows API code
  - Only 100,000 lines of code in 160KB of memory
- Substantially same features as DOS TRlog by N6TR
  - N6TR provided TRlog source code as basis
  - Continuously adding more features
- Over 140 supported contests
- S&P/Run Mode Adaptive
- Sound card voice keyer
  - Flexible functionality
- RS-232, LPT, USB support
  - USB I/O includes log backup
- Free!



# CTWin by K1EA

*Win version of first serious contest logger, still in use*



- **Windows character mode. Minimal system needs**
- Same features as original premier CT logger
  - Includes extensive set of utilities
- Support files actively maintained by AD1C & WA1Z
  - No longer supported by K1EA
  - User Group support
- All major contests and a few others
  - No new contests, no changes
  - Limited user-defined contest capability
- RS-232 and LPT I/O
  - USB only with converter
- Controls some voice keyers
- Free!



Not recommended for new starts  
because new contests are not being added.  
but  
Good if you have old computer hardware.  
Good to know as guest Op in existing station.



# N3FJP by N3FJP [Info Only – Not Recommended]

*Basic contest logger – Lacks important functionality*

- Recently re-written in C#.NET (was VB6)
- Single resizable Main Window
- 52+ supported contests (31 +21 State QPs and more)
- Sound card voice
- RS-232, Parallel, USB support
- **No Band Map**, Limited Spot Window
  - No dupe or mult indicators . . .
- **Limited Partial Call Check – Only dupes**
- **No SO2R support**
- \$49 all programs or
  - \$ 9 each contest separately



Not recommended for serious contesting  
because of lack of important features