

# Beginning the RTTY Roundup

## Digital Radiosporting Experience

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Everyone wants to take a little bit of the mystery out of digital contesting. This short article will attempt to provide you with some insights to the Roundup as well as some tools to get you started in digital contesting.

Radiosport is fun! While some of you may think many of those who enter contests are over the top, most contesters are average hams chasing some DX, working some states, or just exercising the equipment.

Here's how to get started. Let's start with a short list of what you need. You'll need a computer that runs Windows (WinXP is recommended) although there is Apple software out there. A computer sound card is needed and logging software for the contest. I will talk about two programs here. One is free (N1MM Logger - [pages.ctime.net/n1mm](http://pages.ctime.net/n1mm)) and the other (Writelog - [www.writelog.com](http://www.writelog.com)) is \$30. Both are in wide use and both are excellent. Support for N1MM logger is available via a Yahoo group Web site listed on the N1MM home page.

Both programs require MMTTY, a free RTTY encoding and decoding program, called a "RTTY engine." ([mmhamsoft.amateur-radio.ca](http://mmhamsoft.amateur-radio.ca)). MMTTY uses the sound card and allows the logging software to operate using RTTY. This used to be done with standalone demodulators or terminal units and some RTTY contesters still use them. My favorite link on MMTTY setup is [www.aa5au.com/rtty.html](http://www.aa5au.com/rtty.html). Don AA5AU, is a good friend, a contest buddy, and a RTTY Guru.

Don runs a great RTTY Web site with plenty of information on getting started. For example, [www.aa5au.com/gettingstarted/rtty\\_start8.htm](http://www.aa5au.com/gettingstarted/rtty_start8.htm) is a great page on hookup issues. You can also learn about using COM ports for FSK modulation and USB-to-serial adapters are discussed.

Now comes the easy part -- hooking up the soundcard from the computer to your radio. Don shows one way that you can do it at

**[www.aa5au.com/rttyinterface.html](http://www.aa5au.com/rttyinterface.html)**. Here is a sound card to radio interface that I currently use -- **[www.w5bbr.com/soundbd.html](http://www.w5bbr.com/soundbd.html)**. Commercial interfaces are available from vendors such as Mountain West Radio (**[www.westmountainradio.com](http://www.westmountainradio.com)**) and more are listed in QST. I can tell you that easy is not always bad, but I do like to build.

I do use opto-isolators instead of transistors these days. Suitable devices are 4N28, ECG 3084 or Radio Shack #901-1617. The opto-isolator gives you better protection in case of failure of the transistor. I built my interface in a little box similar Don's RTTY interface. I added the audio interfaces in the same box so I have Audio-In, Audio-out, CW, PTT, and FSK. Mine interface serial, but there are also ways to hook up to USB ports. I added some additional matching using isolation transformers from **[www.buxcomm.com](http://www.buxcomm.com)**, a site with lots of useful information.

Here is a very nice diagram (**[www.ik3qar.it/rtty/1](http://www.ik3qar.it/rtty/1)**) for another RTTY interface that includes Line-in and Line-out audio levels along with PTT and FSK. This site describes a sound card to receiver cable with a 10:1 attenuator --

**[www.patmedia.net/ralphmilnes/soundcardpacket/1cablerx.htm](http://www.patmedia.net/ralphmilnes/soundcardpacket/1cablerx.htm)**.

This interface is the only tough part. Ask around your radio club as there are a lot of guys that can help. The RTTY email list (**[lists.contesting.com/mailman/listinfo/RTTY](mailto:lists.contesting.com/mailman/listinfo/RTTY)**) is also a great place to ask questions.

So we now have the radio hooked to the software! Find a RTTY contest weekend and you can get started. There should be plenty of signals to copy. Use narrow 500 Hz or 250 Hz IF filters. The narrower the better during the crowded contest bands. Copy RTTY signals in the FSK or RTTY position on your radio or LSB if you don't have either of those. Tuning indicators are built into the MMTTY program. They are pretty good at helping you center the RTTY signal quickly.

The most common problem in RTTY contesting is transmitting "upside down." That means that the two mark and space tones are reversed. Radios usually have an adjustment for this in the switch settings and/or software setup. Ask the very first guy you work if you're upside down. NCCC has an on-the-air practice session, usually the Thursday prior to the RTTY Roundup. This is a good time to get your software setup and make sure everything is running smoothly.

No discussion on RTTY is complete without mentioning heat. Heat is to RTTY what noise is to SSB. Use extra fans on your amplifier. I always use an

extra muffin fan sucking air out through a top vent. If the amplifier has side holes, I orient the fan to push air into the amplifier. In particular the transmitter tank circuits rarely get quite enough airflow for a RTTY contest. Even though the duty cycle will be far below 50% as you will spend more time listening than transmitting, in a typical contest things still get hot. I even put an extra muffin fan on the back of my amplifier to move the air around a bit more. It never hurts to have more airflow.

So now you have the "stuff" working. One of the best ways to get involved with RTTY contesting is to find a friend and do it together. Share experiences, learn together and expand your skills and most of all the fun and enjoyment as you do RTTY radiosporting events.

Lets talk a little about the RTTY Roundup itself. RTTY Roundup is not a DX contest and it's not Sweepstakes. You can't just sit and call CQ because this is a contest with unlimited multipliers. Multipliers count only once, not once per band. That means that all you need is a decent tri-bander and a couple of wires and you're good to go.

The secret is to get the most multipliers while working rate for the entire contest. This is where the strategy comes into play. It's different for stations on the East Coast than the West Coast, yet unlike most contests RTTY Roundup can be and has been won from both coasts. As the sunspot cycle moves so will your strategy change, so it's a little different each year. I've written an article on RTTY Roundup strategy at **[www.arrl.org/members-only/contests/results/2005/RTTY/sb3.html](http://www.arrl.org/members-only/contests/results/2005/RTTY/sb3.html)**.

Get your European multipliers when you can if you're west of the East Coast and north of the southern states. Work JA's, Down Under, and the Pacific on Saturday as they will be very scarce Sunday.

Generally work the highest band that is open. One trick I sometimes use is to "save a band" (don't operate much on that band) for the end of the contest so you will be "hot" on one band toward the end.

Most of the time you can do quite well by following my two simple RTTY Roundup rules or adages. Keep your fanny in the chair and keep RF going out the antenna!

The contest has a six-hour sleep period. Are RTTY guys old or do I just feel that way? We need our sleep! There is some flexibility built in, just in case you have problems, so two rest periods are allowed.

There are High and Low Power and Single and Multi-Operator classes in each category. Multi-operator stations can also use packet.

It's easy to have a blast and that is one reason why RTTY contests continue to grow -- nearly everyone is having fun! Get on next year and join in the excitement. Learn the game and enjoy it each year.