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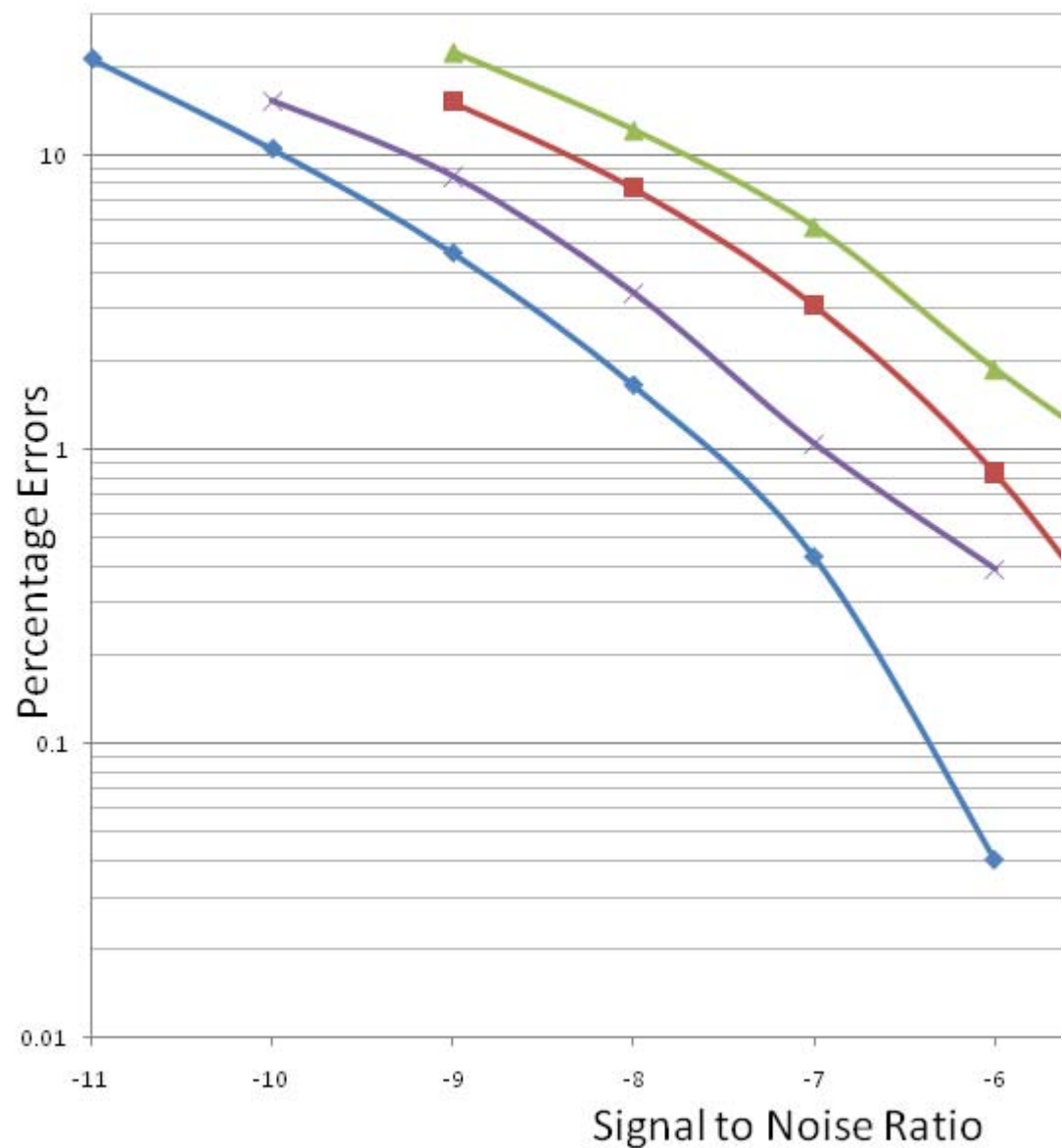
Do RTTY programs differ in their performance?

Again, this is not intended to be a polemical discussion. If you have suggestions about how I might improve my testing methods, I would appreciate your comments.

RTTY capability is important to me

During my ham career I have tried to improve my RTTY reception. I started with an AEA PK-232 which did a pretty good job, especially after modifying the board to 170 hz shift. Later I purchased a Hal ST-6000 and later a ST-8000. Then MMTTY came along and I had to explain to my wife why those expensive boxes were in a cabinet in the basement. But during a recent QSO a ham commented that the software I was using was not very sensitive. I decided I needed to find out if he was correct and whether there were significant differences in the packages. Here is what I found.

Sensitivity of RTTY Softw



How were the tests done?

- A 2300 character [text file](#) of ham calls was created.
- The text file was fed into *MMTTY* to generate a wave file of about 10.5 minutes with several seconds of "diddles" before the text began. Standard RTTY audio frequencies were used (2125/170).
- *Virtual Audio Cable* was used for all audio connections so the testing is independent of the quality of any physical sound card.
- The recording and playback was done in *Audacity*.
- *PathSim*, from AE4JY, requires a 16 bit, 8 khz mono wave file as its input and exports a similar file after adding noise to the signal.

- The 8 khz wave files from *PathSim* were loaded into *Audacity* and resampled to convert them to 11.025 khz sampling rate with its high-quality sinc interpolation with triangle high-quality dither.
- Parameters on each software package were set as a ham might change them during a QSO when he was experiencing difficulty copying the other stations. As each program was used, I set that process to "High Priority" in *Windows XP*. I saw no evidence that the performance was limited by CPU availability for either the RTTY program or *Audacity*.
- Unshift On Space was turned on.
- AFC was used in a trial run to check the tuning and then turned off when data was collected.
- The text resulting from the tests was pasted into [RttyCompare from VE3NEA](#) which compares the received text to the expected text and calculates the number of errors. Alex's work with *RttyCompare* essentially drew a map showing how to do this experiment. His data also called my attention to *TrueTTY*.

TrueTTY 2.76.2 -- Used the "Optimal" filter setting.

MixW2 2.16 -- Used the "2 Filter" setting

MMTTY 1.66G -- Used the default conditions -- no band pass filter or notch

MMTTY with *WinWarbler* 6.6.2 front end using the *WinWarbler* Hyper Sensitive profile with notch and band pass filter

I am more familiar with certain of these programs than others so I may have erred in finding the optimal settings. But I would be interested in how I might modify my procedure to gain more meaningful results. Also, these results include no attempt to simulate the many insults a signal suffers during its trip through the ionosphere.

So which RTTY software should I use?

There are many reasons to choose a RTTY package other than sensitivity. One of the most important is how it interfaces with the logging software. But this data may be starting point for finding a software tool that meets your particular needs.