

## RST Signal Reports

KM77TMS 2 Apr. 2021

**This is KM77TMS.** A reference for tonight's training material is the ARRL's R-T-S System info at [arrl.org/quick-reference-operating-aids](http://arrl.org/quick-reference-operating-aids). The r-s-t system is used by radio hobbyists to exchange information about the quality of signals received. The system describes a received voice signal using the r and t parts of the system. The t part of the system is basically used for Morse Code signals. The upcoming club ShakeOut exercise will experiment with the r and s parts of this three unit system, so listen up. This training will go up on the website.

The r-s-t code was developed back in 1934 and a similar code was adopted by the International Telecommunications union radio Regulations in 1938. That is, it has been in use a long time.

**R** stands for Readability. When a voice communication is received it is judge according to a 5 level system. 1 level signals are unreadable, 2 level signals are barely readable with just occasional words being distinguishable. That is a message at the 2 level is not understandable. A 3 level voice signal is readable with considerable difficulty. That is, if the sender sends it multiple times, its words can eventually be understood in correct order. A 4 level voice signal is readable with little difficulty. A 5 level voice is easily readable. When I use this system, I and many others frequently use only its upper three levels. That is respectively, easily readable, a little difficult, considerably difficult, or not adequate.

**S** stands for signal strength. When a voice signal is rated S1 it is faint and barely perceptible. 2 level strength is very weak. A 3 level strength is weak. A 4 level signal is fair. A 5 is fairly good. A 6 is good. A 7 is moderately strong. An 8 is strong. A 9 is extremely strong. If your radio has a meter, sometimes you will see very strong signals pushing that meter to 10 over the 9 or even higher. Here I think the system gets too complicated for most hams. I observe most turning to their radio's meter for quick simplification. I recommend that. Otherwise I simplify things to an extremely strong 9, a strong 8, a good 6, a weak 4, and things below not very useful.

Often you will hear radio operators tell their buddy that he is 5 9. That, is he has a perfectly readable and extremely strong signal. Or he might just get a 4 8, or occasionally a 3 7, etc. Or, you may hear hams reading their meter as 10 or 20 over 9. If you get very lucky like I did a few weeks back, you may hear at Japan station at 30 over. There was a pile-up occurring trying to get to that station. DXers – that is, long distance communicators –use simplifications of this system regularly because a signal report is normally a critical part of the information exchange that is required to claim a contact -- especially a contest contact. Both stations have to exchange this r-s information successfully and get that recording the same in each of their logs which are sometimes used to verify the contact – especially if there is a question if it occurred. Similarly, EM comms need accurate logs and good signal reports to deal with issues that may arise. There are multiple signal systems and jargon. DX'ers have done a good job of choosing one that has been in wide use and slight adaptation since the 30's.

In the upcoming 2021 Salt Lake City portion of the April ShakeOut exercise, some of us will be in various locations identifying ourselves and attempting to contact other stations. We all should note our locations and our signal reports in our logs, in addition to passing other needed traffic. If you are fortunate enough to have a radio which has a meter, you will probably find it useful. If you don't have one, try applying the traditional s and r scales. And Good Luck.  
This is KM77TMS. Are there any questions or comments on today's training?