

The RST System and Other Kinds of Useful Signal Reports

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Story County Amateur Radio Club

Preview

- RST System -- Readability, Strength, Tone
 - QSL Cards
 - contesting
- Digital modes / software
 - RSQ -- Quality
- Plain Language
- miscellany
- on repeaters

UR5RGC To radio SV1DPI



Date	Time	Band	Mode	Report
	GMT	MHz	Two-way	RST/RS
<u>24/11.02</u>	<u>20.35</u>	<u>7</u>	<u>CW</u> <u>SSB</u> <u>AM</u>	<u>59</u>

TX/RX _____ Ant. _____
Remarks _____
73! Op. Leey
PSE-QSL-TNX ~~XXXXXXXXXXXXXXXXXXXX~~ via buro
Zone 16 QTH Chernigov Region (Obl.) CR

Изд. № 4/о—272а Зак. в 1387 МФОП.

RST in general

- Readability, Strength, Tone
- Reported as 3 numbers for CW (or just 2 for voice)
- 1-5, 1-9, 1-9 scales
- one of the most fundamental aspects of what we're doing
- developed in the 1930s, modified over the years somewhat
- a bit of structure to the report
- a more uniform way to relay details
- facilitates improvements to stations

Readability

- how easy or difficult to correctly copy the information being sent
- in a Morse code transmission, readability refers to how easy or difficult it is to distinguish each of the characters in the text of the message being sent
- in a voice transmission, readability refers to how easy or difficult it is for each spoken word to be understood correctly

Readability

1. Unreadable
2. Barely readable, occasional words distinguishable
3. Readable with considerable difficulty
4. Readable with practically no difficulty
5. Perfectly readable

Strength

- how powerful the received signal is at the receiving location
- Although an accurate signal strength meter can determine a quantitative value for signal strength, in practice this portion of the RST code is a qualitative assessment, often made based on the S meter of the radio receiver at the location of signal reception
- For a quantitative assessment, quality HF receivers are calibrated so that S9 on the S-meter corresponds to a signal of 50 μV at the antenna standard terminal impedance 50 ohms
- may also use a signal strength of "20 to 60 over 9", or "+20 to +60 over 9." This is in reference to a signal that exceeds S9 on a signal meter on a HF receiver

Strength

1. Faint—signals barely perceptible
2. Very weak signals
3. Weak signals
4. Fair signals
5. Fairly good signals
6. Good signals
7. Moderately strong signals
8. Strong signals
9. Extremely strong signals



Tone

- Tone only pertains to Morse code and other digital transmission modes and is therefore omitted during voice operations
- With modern technology, imperfections in the quality of transmitters' digital modulation severe enough to be detected by human ears are rare

Tone

1. Sixty cycle AC or less, very rough and broad
2. Very rough AC, very harsh and broad
3. Rough AC tone, rectified but not filtered
4. Rough note, some trace of filtering
5. Filtered rectified AC but strongly ripple-modulated
6. Filtered tone, definite trace of ripple modulation
7. Near pure tone, trace of ripple modulation
8. Near perfect tone, slight trace of modulation
9. Perfect tone, no trace of ripple or modulation of any kind

Digital Modes

- FT8 -- dB column -- SNR value, but based on specific bandwidth and detection calculations
- WSPR -- weak signal propagation reporter
- RSQ system

Plain Language and Prowords

- LOUD -- Your signal is very strong
 - GOOD -- Your signal strength is good
 - WEAK -- Your signal strength is weak
 - VERY WEAK -- Your signal strength is very weak
 - FADING -- At times your signal strength fades, such that continuous reception cannot be relied upon
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- CLEAR -- The quality of your transmission is excellent
 - READABLE -- The quality of your transmission is satisfactory
 - UNREADABLE -- The quality of your transmission is so bad that I cannot read you
 - DISTORTED -- Having trouble reading you due to interference
 - WITH INTERFERENCE -- Having trouble reading you due to interference
 - INTERMITTENT -- Having trouble reading you because your signal is intermittent

Miscellany

- 10-1 -- signal weak
- 10-2 -- signal good
- 10-9 -- repeat or say again
- how do you read?
- how do you hear?
- how copy?
- say again?
- QRM -- noise, manmade
- QRN -- noise, natural
- QSA -- signal strength
- QSB -- signal fading
- QRK -- signal intelligibility

On repeaters

- signal is good but audio is low
- full quieting
- static
- picket fencing
- fluttering

- quiet
- has a hum
- overdriven

Questions

