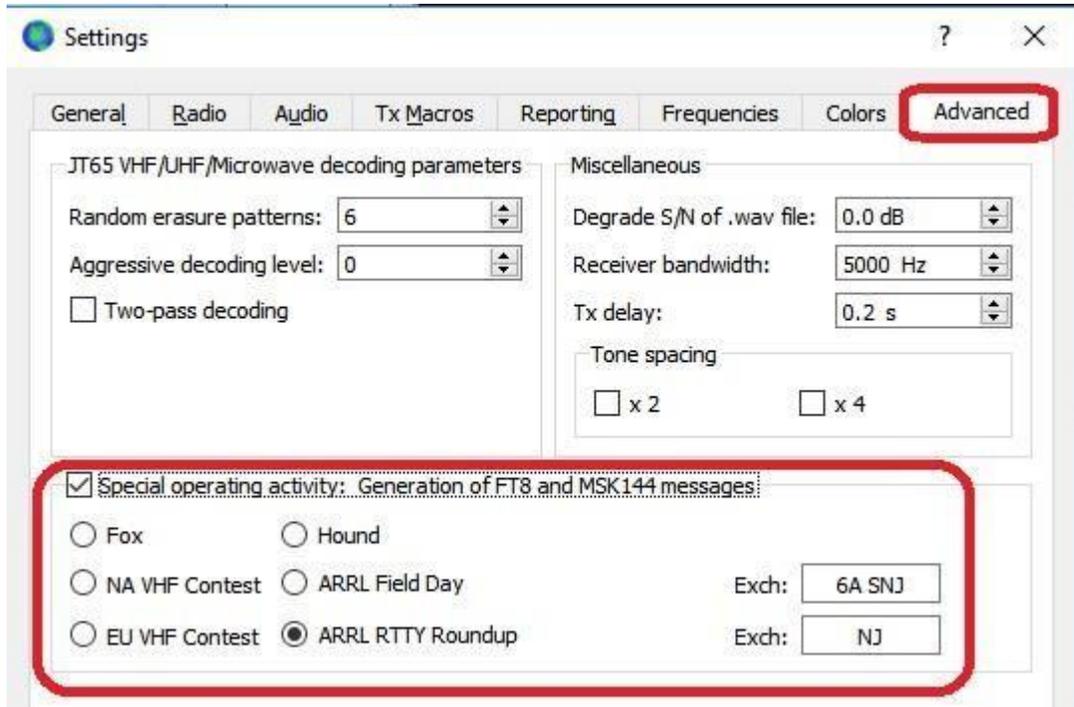


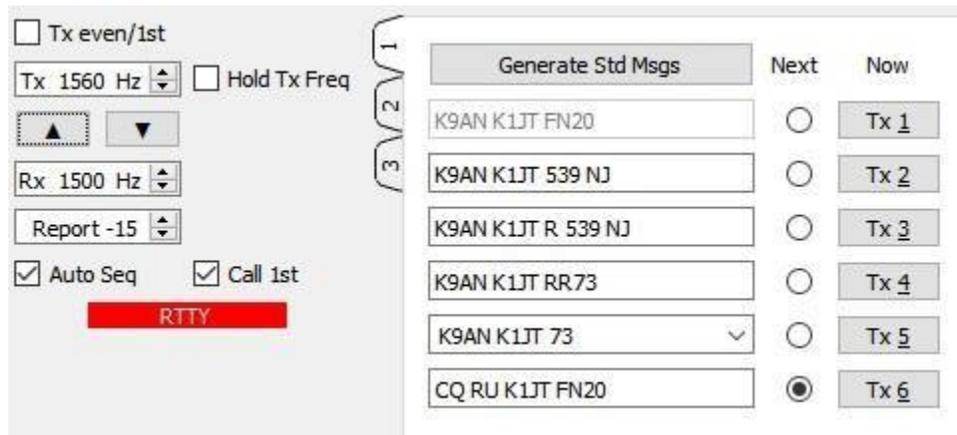
Setting the contest mode

Special Operating Activities: Generation of default messages for **Fox, Hound, NA VHF Contest, EU VHF Contest, ARRL Field Day, and ARRL RTTY Roundup** can be activated through selections on the **Settings | Advanced** tab:



Be sure to enter your relevant exchange information. For **ARRL Field Day**, enter your operating Class and ARRL/RAC section; for **ARRL RTTY Roundup**, enter your state or province. Use “DX” for section, state, or province if you are not in the US or Canada.

When one of the special operating activities has been selected a red-highlighted message appears on the *WSJT-X* main window, as shown here for RTTY Roundup:



Be aware that *WSJT-X 2.0* currently lacks many features found in mature contesting software: dupe checking, display of QSO rate, multipliers, cumulative score, etc. Such features will be added in due course, some of them based on using *WSJT-X 2.0* together with contesting software *N1MM+*.

WSJT-X 2.0 supports a number of new formats for structured messages. Some examples of valid FT8 and MSK144 exchanges follow, grouped according to standard usage in minimal QSOs for the special operating activities:

NA VHF Contest

CQ TEST K1ABC/R FN42
K1ABC/R W9XYZ EN37
W9XYZ K1ABC/R R FN42
K1ABC/R W9XYZ RR73

ARRL Field Day

CQ FD K1ABC FN42
K1ABC W9XYZ 6A WI
W9XYZ K1ABC R 2B EMA
K1ABC W9XYZ RR73

Compound or Nonstandard Callsigns

CQ PJ4/K1ABC
<PJ4/K1ABC> W9XYZ
W9XYZ <PJ4/K1ABC> +03
<PJ4/K1ABC> W9XYZ R-08
<W9XYZ> PJ4/K1ABC RRR
PJ4/K1ABC <W9XYZ> 73

EU VHF Contest

CQ TEST G4ABC/P
G4ABC/P PA9XYZ JO22
PA9XYZ 570123 IO91NP
G4ABC/P R 580071 JO22DB
PA9XYZ G4ABC/P RR73

ARRL RTTY Roundup

CQ RU K1ABC FN42
K1ABC W9XYZ 579 WI
W9XYZ K1ABC R 589 MA
K1ABC W9XYZ RR73
K1ABC G3AAA 559 0013
TU; G3AAA K1ABC R 569 MA
K1ABC G3AAA RR73

FT8 DXpedition Mode

CQ KH1/KH7Z
KH7Z K1ABC FN42
KH7Z W9XYZ EN37
K1ABC KH7Z -13
KH7Z K1ABC R-11
K1ABC RR73; W9XYZ <KH1/KH7Z> -17
KH7Z W9XYZ R-16

Details Concerning the New Message Formats

1. CQ messages may contain an optional second word with up to four letters — “CQ TEST”, “CQ FD”, etc. — followed by a standard callsign and 4-character grid locator, or a nonstandard callsign and no locator. In MSK144 mode a second word with three decimal digits, as in “CQ 285 K1ABC FN42”, is permissible and has the automatic-QSY implication described in the present (v1.9.1) *WSJT-X User Guide*.
2. As in *WSJT-X* v1.x and in modes other than FT8 and MSK144, the most common standard messages contain two callsigns and a grid locator, signal report, RRR, RR73, or 73. An optional “R” (for acknowledgment) may appear before the locator or signal report. In *WSJT-X 2.0* either or both of the callsigns may be appended by /R (indicating Rover status) or /P (portable).
3. The third message shown above in the **EU VHF Contest** group includes a 6-digit integer and a 6-character grid locator. The example number conveys a signal report “57” and a QSO serial number “0123”. Signal reports range from 52 to 59; they are generated automatically based on received signal-to-noise ratio using a 6 dB per S-unit scale starting at –24 dB. Serial numbers may range from 0001 to 4095.

4. S/N (dB) and RST

S/N (dB)	RST
≤ -19	529
-18 to -13	539
-12 to -7	549
-6 to -1	559
0 to 5	569
6 to 11	579
12 to 17	589
≥ 18	599

5. The **ARRL Field Day** exchange includes number of transmitters (1-32), operating class (A-F), and ARRL/RAC Section. DX stations send “DX” for section.
6. The RTTY Roundup exchange includes a 3-digit signal report in RST format (529 through 599) followed by US state, Canadian province, or QSO serial number for non-US/Canadian stations. Serial numbers may range from 0001 to 7999. As illustrated in one example shown above, for the **ARRL RTTY Roundup** messages in this format may be preceded by “TU;” — thereby thanking a previous QSO partner while simultaneously responding to another caller. A userconvenience feature for using this message type is planned for a future revision.
7. Compound and nonstandard callsigns such as PJ4/K1ABC or YW18FIFA are automatically recognized and handled using special message formats. One such callsign and one standard callsign may appear in most messages, provided that one of them is enclosed in <...> angle brackets. If the message includes a grid locator or numerical signal report, the brackets must enclose the compound or nonstandard callsign; otherwise the brackets may be around either call. Angle brackets imply that the enclosed callsign is not transmitted in full, but rather as a hash code with a smaller number of bits. Receiving stations will display the full nonstandard callsign provided that it has been received in full in the recent past. These restrictions are honored automatically by the algorithm that generates default messages for minimal QSOs. For FT8 and MSk144 there is no longer a distinction between “Type 1” and “Type 2” compound callsigns; all nonstandard calls are treated identically. Except for the special cases involving /P or /R, *WSJT-X 2.0* offers no support for two nonstandard callsigns to work each other.
8. Standard messages in the **NA VHF Contest** format are the same as those required for the Makrothen RTTY Contest. Thus, if the Makrothen sponsors decide to offer an FT8 contest the necessary support is already provided.

Comparison with WSJT-X v1.9.1: Earlier versions of *WSJT-X* could lead to confusion when one station enabled **NA VHF Contest** mode and the QSO partner did not. Grid locators might then be displayed as that of the antipode location on Earth and signal reports might be received when not expected, confusing the auto-sequencing logic. Other problems existed for those using /R (rover) callsigns. None of these problems is present in *WSJT-X 2.0*. When a casual operator happens upon a station transmitting messages in **NA VHF Contest** format, the QSO will proceed without complication: all messages will be decoded and sequenced correctly with no special user action. You will no longer see odd grid locators from the antipodes, and you may append the /R suffix to any standard callsign.

When a casual operator receives a message addressed to him/herself in the special **EU VHF Contest** format, *WSJT-X 2.0* recognizes the need to enable these messages and makes the necessary change automatically. Casual operators who decode a contest-type message formatted for **ARRL Field Day** or **ARRL RTTY Roundup** will be prompted to check the relevant box so that they can transmit the required exchanges.

Other program enhancements: *WSJT-X 2.0* has several other new features and capabilities. The WSPR decoder has better sensitivity by about 1 dB. Color highlighting of decoded messages provides worked-before status for callsigns, grid locators, DXCC entities, continents, CQ Zones, ITU zones on a “by band” and “by mode” basis, and for stations that have uploaded their logs to Logbook of the World (LoTW) within a specified time interval. The necessary information from LoTW is automatically downloaded from the ARRL web site.
