



Ole Virginia Hams



"Worldwide Friendship Through Amateur Radio"

WELCOME TO THE WONDERFUL WORLD OF

JT65-HF

JT65-HF is an amateur radio digital mode written by W6CQZ. It is an extremely efficient weak-signal mode – it is possible to decode signals you simply cannot hear with your ears in audio and can barely see on your waterfall display.

JT65-HF is so labeled because it sends 65 discrete audio tones, spread out over 175Hz of bandwidth. The “JT” part comes from the original creator’s name, Joe Taylor (K1JT) - the 1993 winner of the Nobel Prize in Physics, and the author of the excellent HSMS and EME software known as WSJT.

JT65a-HF freq (USB only)					
1838 to	1840	160 meters	18102 to	18104	17 meters
3576 to	3578	80 meters	21076 to	21078	15 meters
7076 to	7078	40 meters	24917 to	24919	12 meters
~10138 to	~10140	30 meters	28076 to	28078	10 meters
14076 to	14078	20 meters	50076 to	50078	6 meters

JT65 is a tightly structured protocol with a severely limited set of structured messages and a limited 'free text' message type limited to 13 characters in length.

In any one-minute period you may send any one of the structured message types, 13 characters of text or any one of the 3 shorthand messages.

Nothing more, nothing less !

JT65 is not a free form data transmission protocol like most other modes we use. Each transmitted 'frame' is of a fixed length, starting and ending at a predefined time. By using this restrictive timing arrangement and a fixed frame length it becomes possible to achieve some “signal gain” by knowing when and where to look for signals.

Transmissions begin at precisely 1 second into a new minute and end precisely 46.811 seconds later.

Each QSO takes six (6) minutes to complete.

A transmitted message (frame) will convey 72 bits of user information with an additional 306 bits of error correction data (FEC) for a total of 378 bits.

That’s more FEC data being transmitted in each frame than it is user payload data !

Its timing, modulation method and heavy FEC that allows it to work so well at very low signal levels.

Within that frame of 72 data-bits you may send any one of the set of structured messages, a 13 character free form text message, or any one of the 3 shorthand messages.

WHAT you need:

HF Transceiver:

Computer with:

JT65-HF.exe software

JT-ALERT.exe software

SP TimeSync.exe software

PC to Soundcard interface