OFFSET GUIDE FOR WORKING FO/W7GJ and TX7MB ON 6M EME

As you know, if CAT control is used with WSJT-X, changing the TX OFFSET in FT8 mode automatically adjusts the transmitter frequency to ensure that the audio offset selected is within the transmitter audio filters and between 1500 and 2000 Hz so there will not be any audio harmonics transmitted. This makes it very simple to choose a clear offset frequency and spread out across the Wide Graph bandpass when using FT8 mode.

However, because there are optional wider bandwidths available in Q65 mode, there currently is no such automatic flexibility when using Q65-60A mode in WSJT-X Version 2.5.0,. The only way EME stations can safely "spread out" when calling a DX station is to operate SPLIT mode with their transmitter, and manually select a transmit frequency that will result in an apparent TX Offset to everyone on their receivers.

When I am on the upcoming 6m EME DXpedition, I intend to transmit on 50.190 with a default TX Offset of 1500 Hz, and I will be monitoring from 100 to 2700 Hz on the Wide Graph. Unless otherwise announced, I will be using an Airspy R2 SDR receiver, which allows me to receive equally well over that range. I also have confirmed that Q65-60A will automatically try to decode any callers within that bandpass range. Therefore, I request that callers spread out between 100 and 2700 Hz and coordinate your frequencies using the ON4KST EME CHAT page, as in past 6m EME DXpeditions. I hope the following chart will make it easier for callers to figure out how to spread out. And once you have started to transmit in a spot, please NEVER change your transmit frequency, because if I decode you once on that frequency, I will be looking for you there when I try to answer you!

Ideally, everyone would be spaced at 200 Hz intervals to ensure separation even though our calibrations may differ slightly and Doppler shift will also play a role in signal positions. Remember that your signal will be Doppler shifted UP approximately 100 Hz during your moonrise and shifted DOWN approximately 100 Hz during moonset. Your precise Doppler shift, as well as that of the DX station, are shown in the "Astronomical Data" screen that you use for aiming at the moon. As a practical matter, I suspect that it will be possible to decode signals that are more closely spaced than 200 Hz.

Those of you familiar with JT65 will recall how we used to talk about "DF", or audio offsets compared to the default audio frequency. In the following table, I have assumed that all callers will also use the default audio TX Offset of 1500 Hz and simply set their transmitter frequencies to achieve the apparent offsets shown. Note that Q65-60A does allow for a large number of callers, even if they are well spaced out!

Please also remember to follow the EME DXpedition procedure for Q65 as explained on my website.
I look forward to putting many of you in the log from both DXCC's of the Austral and Marquesas Islands.
Thanks for your help and effort in making this Q65 EME DXpedition a successful demonstration of what can be done with Q65-60A!
GL and VY 73!

Lance W7GJ
29 September, 2021

OFFSET GUIDE FOR Q65-60A in WSJT-X VERSION 2.5.0

(Assuming W7GJ on 50.190.0 MHz with default audio TX setting of 1500 Hz)

APPARENT WIDE GRAPH TX OFFSET	WIDE GRAPH "DF" FROM 1500	XMTR SPLIT TX FREQ
100	-1400	50188.6
200	-1300	50188.7
300	-1200	50188.8
400	-1100	50188.9
500	-1000	50189.0
600	-900	50189.1
700	-800	50189.2
800	-700	50189.3
900	-600	50189.4
1000	-500	50189.5
1100	-400	50189.6
1200	-300	50189.7
1300	-200	50189.8
1400	-100	50189.9
1500	0	50190.0
1600	+100	50190.1
1700	+200	50190.2
1800	+300	50190.3
1900	+400	50190.4
2000	+500	50190.5
2100	+600	50190.6
2200	+700	50190.7
2300	+800	50190.8
2400	+900	50190.9
2500	+1000	50191.0
2600	+1100	50191.1
2700	+1200	50191.2