How the %^&* can you tell if that station is operating standard FT8, Fox & Hounds or MSVH??   N6MW 10/17/23

First, by gentlemen's agreement (and you know how well that works) rare DX and DXpeditions should not be operating F/H or MSVH in the standard FT8 frequencies.

DXpeditions often announce their planned FT8 frequencies and mode on their website.

WSJT-X has its invented F/H mode, sometimes just called the DXpedition mode.
When used, you (as the Hound) **MUST** select that mode for your WSJT-X settings.
File/settings/advanced/special operating activity/Hound. If you do not, you will never work that station using F/H! *

The DX station may be using F/H IF:
  a) Often the DX station will showing two or more active 50 Hz wide **streams** (or "slots" or frequencies) spaced at 60 Hz in the waterfall. However, one stream is possible under F/H. Weak signals may decode but still not be obvious in the waterfall. Here is a **F/H example** where E51JAN calls 2 station back to back in time on the same stream (328 Hz). Here he is using only a single stream. Note there is a calling station inappropriately just above. One stream F/H may be appropriate under weak signal conditions. Then the only indication may be that it is F/H is that the caller responds on the Fox transmitting frequency (stream).
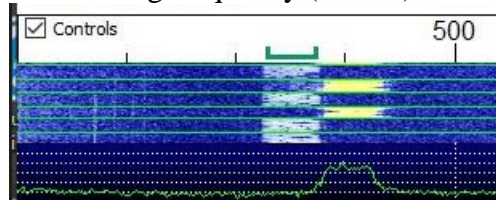

```
193000 -10 -0.1  328 ~  NV4G RR73; K5EK <E51JAN> +14
193030  -7 -0.1  328 ~  K5EK RR73; WJ0T <E51JAN> +16
```

At 193000 and also 30 E51JAN responds to two stations on the same frequency, one with a 73 and one with a report. This feature is **only possible in F/H** with WSJT-X.

HOWEVER, under F/H the DX station may also get responses from two stations at the same time but in different stream like this. Here E6AM was probably using 3 streams.


```
201615  -3  0.1  305 ~  E6AM W4FZ R-10
201615   5  0.1  426 ~  E6AM K5NZ R-03
```
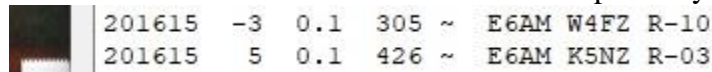
This might not be a F/H response, but some other multi-stream mode so you can't tell for sure it is F/H. However the response frequencies separation of 120 Hz (2X60) suggests it is not likely MSHV but F/H.

  b) The (alert) Hound stations are largely calling him above 1000 Hz.
This is because Fox will only respond to callers there. **

  c) The DX station is transmitting below 900 Hz AND when he selects a calling station above 1000 Hz, that station is forced to QSY by the receiving software to transmit its response on a frequency below 1000. If you are able to copy both stations, it will be clear that the Hound station's frequency has been moved to a lower frequency. Furthermore, that Hound's receiving station's TX frequency will not automatically return to the original one above 1000 Hz.

JTDX is a near-clone of WSJT-X but it has this difference for F/H. When the DX station responds to two stations in the same stream, the two are displayed on two successive lines in the Band Activity window showing the same time and same frequency. Here is an F/H example from https://www.dxmaps.com/FT8_How.html.

MSHV is software that is said to be useful for smaller DXpeditions. It also allows multiple streams but differs from F/H in these ways. 1) There are no restrictions on transmit frequencies for either the DX station or the receiving stations so it functions with WSJT-X in the normal FT8 mode. It is thus possible to transmit on the DX station's frequency - this is generally regarded as antithetical to the ham spirit and may get you yelled at. 2) Only one station can be responded to on any stream in a 15 sec time slot but different stations can be responded to at the same time using the different streams, so it may not be as fast as F/H depending on conditions. To repeat from above, this response sequence could be from either F/H or MSHV but the response frequencies separation of 120 Hz (2X60) suggests it is not likely MSHV.

A fake example response to a MSHV station would probably look more like
201615   -3 0.1 890 OH0O W4FZ R-10
201615   5 0.1 1407 OH0O K5NZ R-12

* WSJT-X may request that you provide a F/H setting that allows your response frequency to be moved but for many radios this is handled automatically by the software.

** Note that when DX FT8 stations are spotted, the spotter specifies a frequency. This is sometimes not fully obvious - for example, 21085.4 ft8 f/h. This is usually taken to mean that the relevant 3000 Hz FT8 bandwidth is from 21085-21088 and that the spotted station is 400 Hz from the bottom, so the Hounds should be transmitting above 21086 (+1000 Hz) given that F/H mode is correct. Thus you should tune your RX to 21085 on USB. Sometimes spotters just give a frequency as an integer number of kHz (such as 21085) so then this is likely at the bottom of the 3000 Hz band.
It is common for spotters to claim the mode is MSHV when it is really F/H, or the opposite. In their defense, it can sometimes be hard to tell without some observation time for clues.