

The BARTG guide to starting with JT65A on the HF bands – Phil, GU0SUP

This is not intended to be a step-by-step guide all the way through downloading and setting everything up. This information is readily covered on many websites already, and we only aim to add to the information already available. If you don't have access to the internet, then JT65A is probably not for you, as you will need accurate timing on your PC, and this is probably best derived from an internet source.

Please start by reading "**The Complete Bozo's Guide to HF JT65A**" by Andy K3UK. This will help you to get things set up and working before you progress to the actual QSO stage.

<http://www.obriensweb.com/bozoguidejt65a.htm>

We will assume that you have followed the advice on this page, and have entered your own settings.

If you are using a PC with more than one soundcard, and you have a version of WSJT that has Spectran as a standalone program, then you will need to download the latest version of WSJT.

<http://physics.princeton.edu/pulsar/K1JT/>

There appears to be a problem if you have the older version of WSJT and two soundcards. You will possibly find that if you choose the soundcard connected to your rig, then you are not copying any data. Try choosing the other soundcard and see if that works. If it does, then it is because there seems to be a problem with the way Windows maps the cards. This is cured in the latest version with the addition of a third DOS window that opens.

PLEASE NOTE: You cannot close this DOS window. Doing so will close the whole WSJT program.

In this window, you will see a list of the available sound channels.

You should see something like this:

WSJT Version.....

```
-----  
Audio      Input      Output      Device name  
Device     Channels   Channels  
-----  
0          2          0          Microsoft Sound Mapper – Input  
1          2          0          Creative Sound Blaster PCI  
2          2          0          Realtek AC97 Audio  
3          0          2          Microsoft Sound Mapper – Output  
4          0          2          Realtek AC97 Audio  
5          0          2          Creative Sound Blaster PCI
```

Default Input: 0 Output: 3

Requested Input: 1 Output: 5

Opening device 1 for input, 5 for output.

Audio streams running normally.

Warning: interrupt service interval 3891 ms.

You need to note which ones you will be using for the input and output. You then enter these numbers into the OPTIONS area in the main WSJT window.

Click on SETUP, then OPTIONS (or press F2), and under the left-hand "station parameters", you will see Audio In and Audio Out. Enter the numbers for the soundcard you are using.

You will also need to ensure that your PC clock is set accurately – and this means within one second.

The first step is to find some JT65A signals and just copy what is going on. This will familiarise you with the process.

The easiest place to find JT65A signals is around 14.075MHz.

On the main WSJT window, right click on the TOL setting to get it to 600.

Make sure that FREEZE is unchecked.

This means that you have a “wide filter” and could copy more than one signal.

If you do hear some JT65A, then try and tune it so that the tones start at 0 and go up to the right in the SpecJT window.

If you now double-click on the left-hand line in the SpecJT window, you should see that TOL reduces to 50, and that FREEZE is now checked.

Effectively, you have just tightened up the filters and netted on to the signal.

This will also cause WSJT to decode the signal immediately.

To properly net on the signal if it is not at the ZERO position, you have to click on the TxDF box. This will then accurately net on to the signal.

There may be implications in transmitting too far away from the ZERO point, in the same way there are potential problems if you transmit PSK with too high or too low a tone.

Try playing around with these settings and note what happens. Anything you can do to make yourself familiar with the way things work will pay dividends later on.

Each “over” lasts one minute, from 00 to 59 seconds. In that period, transmission generally starts around 04 seconds, and stops around 47 seconds past the minute. Decoding then begins at around the 52 second mark.

It is quite frustrating to see a nice CQ call, and you respond to it, only to realise afterwards that you are not netted on to the signal.

If you miss it this time round, you will have to wait another two minutes before you can try again, as the CQ'er will wait for the next minute, then transmit again on the second minute.

So, let's assume you are seeing a signal, and it decodes fully, showing you CQ GU0SUP IN89.

You only have a couple of seconds to react to this, so click on the callsign in the main window, and enter his locator if necessary. Then make sure that the radio-button next to Tx1 is checked, then quickly click on AUTO IS OFF, which will turn RED, and say AUTO IS ON. Now, around 04 seconds past the minute, your rig will go to transmit, and you will call the station.

Double clicking on the callsign in the main WSJT window sometimes automatically puts the program into AUTO IS ON, and things will go from there. However, this doesn't always happen, so be prepared to use the manual method!

If he does come back to you, you need to be prepared, so click the radio-button next to Tx2, or your next transmission will be the same as the last.

Here, there are two possibilities:

1. He come back to you. In this case, you are already set up for AUTO, so do nothing more. You will transmit automatically.
2. He goes back to someone else. In this instance, you will need to quickly turn AUTO off.

If you decide not to transmit, then you can click on TxStop to stop the transmission immediately.

Let us assume he does come back to you. As AUTO is on, everything that happens will happen automatically, other than you will need to check the next radio-button down after each message has been sent.

Sometimes, you might see the same message repeated. This could be that the other person has either forgotten to click on the next message, or he didn't hear your response. Either way, go back to the previous message and send that again too.

You will sometimes notice that in the Tx5 text, instead of just 73, some folk will enter 73 BEST-8 which means your best transmission was -8dB in the noise.

Another thing to note is that the tones sent out with Tx1 and TX2 are wide, and consist of several tones. TX3 to Tx5 are just two alternating tones.

At the end of Tx5, you have completed your QSO.

Quite what OOO is in relation to RST we don't know. Frequently, signals that are S9 on the rig's meter will show up as -8dB.

However, one distinct advantage of JT65A is that signals that are all but inaudible, and way too weak for RTTY, can be decoded. Signals that are down as far as -28dB can be decoded happily, and contact can be made with such weak signals, which is (after all) what WSJT is about!

The next problem is how to log JT65A contacts in your electronic log.

You can't enter "OOO" as per the software, so do you just put the usual 599?

One would have to assume that the 599 is better, but it isn't really what you received.

Currently, the latest ADIF formats do not handle JT65A as a mode, but that is out of the scope of this guide.

Quite why there is so much JT65A on 20m is a puzzle, as many contacts would be made quite easily with RTTY or PSK.

Perhaps JT65A would be a useful mode on 10m, especially with the current solar indices!

If this guide raises questions for you, then please check out some of the links and documentation suggested in the Bozo's Guide.

BARTG have only provided a little extra information not covered in the Bozo's Guide, and also seems to be missing in the WSJT helpfiles.