Linking the FT-891 to the Control Box Using hub4com

An alternative to using VSPE software is *hub4com* (so**urceforge.net/projects/com0com/files/hub4com/2.1.0.0**). Although *hub4com* is a free alternative to *VSPE*, the drawback is that it is not as simple as *VSPE* to use. To my knowledge *hub4com* will only run under the Windows command line interpreter (Command Prompt). At first, when typing in the *hub4com* command line you’ll have the impression of going back in time, but it’s for a good cause.

*Hub4com* is a Windows application that is part of the null modem emulator software *com0com*, an open source virtual serial port driver for Windows. It’s available freely under GPL license. *Hub4com* is a part of *com0com*, but is distributed separately.

*Hub4com* can be used for sharing, joining, and redirecting ports (virtual or real ports). With *hub4com* you’ll be able to receive data from one port and send it to another port and vice versa. That is exactly the feature that we need to communicate between the FT-891 and our own control box through a PC.

Download the latest version of *hub4com* (which in my case was version 2.1.0.0). Unzip hub4com-2.1.0.0.zip, preferably to an empty directory of your choosing. The downloaded zip file should have the followings files in it:

com2tcp.bat

com2tcp-rfc2217.bat

hub4com.exe

multiplexer.bat

ReadMe.txt

Hub4com.exe is the only file that you’ll need. All the other ones can be discarded or deleted.

In the Windows Search window ( bottom left of screen ) type in “cmd” and then the Enter key. You’ll end up somewhere on your PC with a black background screen. Take note of the directory where you’ve just landed. This is the actual Command Prompt default directory of your PC. For the time being, this is where the *hub4com.exe* program should be transferred.

Prior to running *hub4com.exe* make sure :

- The Arduino board was uploaded with the FT-891\_control\_box200.ino file

- The FT-891 rig is turned on and is connected to your PC via USB cable.

- The control box is connected to your PC via USB cable.

For the next and last step, you’ll have to provide *hub4com* the specific serial port number of the FT-891 enhanced port and the control box (Arduino board) port.

Assuming that your respective port numbers for the FT-891 and control box are COM 5 and COM 12, here is what the *hub4com* command line would look like.

.\hub4com --baud=9600 –no-default-fc-route=All:All --octs=off --route=All:All \\.\COM12 \\.\COM5

If you press Enter, both ports will be linked. The FT-891 and the control box will communicate with each other. Don't turn *hub4.com* off otherwise you’ll cut the link. Note: to leave Command Prompt mode just type in ”exit” and then Enter, or press alt + F4, or press ctrl-C.

If your *hub4com* command line was successful, you should see the following message on your screen.

COM12 Open("\\.\COM12", baud=9600, data=8, parity=no, stop=1, octs=off, odsr=off, ox=off, ix=off, idsr=off, ito=0) - OK

COM5 Open("\\.\COM5", baud=9600, data=8, parity=no, stop=1, octs=off, odsr=off, ox=off, ix=off, idsr=off, ito=0) - OK

Route data COM5(1) --> COM12(0)

Route data COM12(0) --> COM5(1)

No route for flow control

Started COM12(0)

Started COM5(1)

Instead of typing that *hub4com* command line every time, create a batch file with a plain text editor like Windows 10 Wordpad or Notepad. Put that command line in a newly created file and save it with a name of your choosing and with a .bat extension. This new file [your-filename].bat will have to be saved to the same directory where *hub4com* is located e.g (your default Command Prompt (cmd) directory).

A common mistake is to use word processor software instead of a plain text editor. There must be no special characters in your command line. Another common mistake is that a .txt extension is used instead of .bat extension.

From now on, to link your serial ports you’ll only need to type the name of this [your-filename].bat file and press Enter.

At this point, you have modified the *hub4com* command line to reflect your serial ports. You ran *hub4com* and pressed Enter. The control box is linked to the FT-891 rig.

Figure: Here is how to get to the Windows 10 Command Prompt on your PC by typing in “cmd” in the Search bar. Take note of the directory where you’ve just landed. This is the actual Command Prompt default directory of your PC.