

TechnoFix UK

Instructions for use: CAT/CI-V, CW, programming cables

This document contains three sections:

1. Instructions for CAT & CI-V cables
2. Instructions for CW Keying cables
3. Instructions for programming cables

These instructions assume you have already installed any required drivers for your operating system and identified the correct COM port. Please refer to:

<http://technofix.uk/help>

There are many diverse uses for our cables and a huge range of software available. Therefore these instructions can only serve as a general guide. For more detailed instructions for your application, we suggest you search the web or contact the supplier of the software you wish to use.

In case of difficulty, please contact us at:

support@technofix.co.uk

1. CAT & CI-V cable instructions

Connecting the cable to your radio

The cable can now be connected to your radio. Here are a few examples of which connector to use:

Kenwood TS-480 TS-570 TS-870 TS-2000 - *COM* socket
TS-450S TS-690S TS-790S TS-850S TS-950S – *ACC1* socket
(On the TS-450S/690S the ACC1 socket is on the left side panel of the case)

Yaesu - *CAT* socket, except:
FT-100 – *Band Data* pigtail
FT-817 – *ACC* socket
FT-857/897 – *CAT/Linear* socket

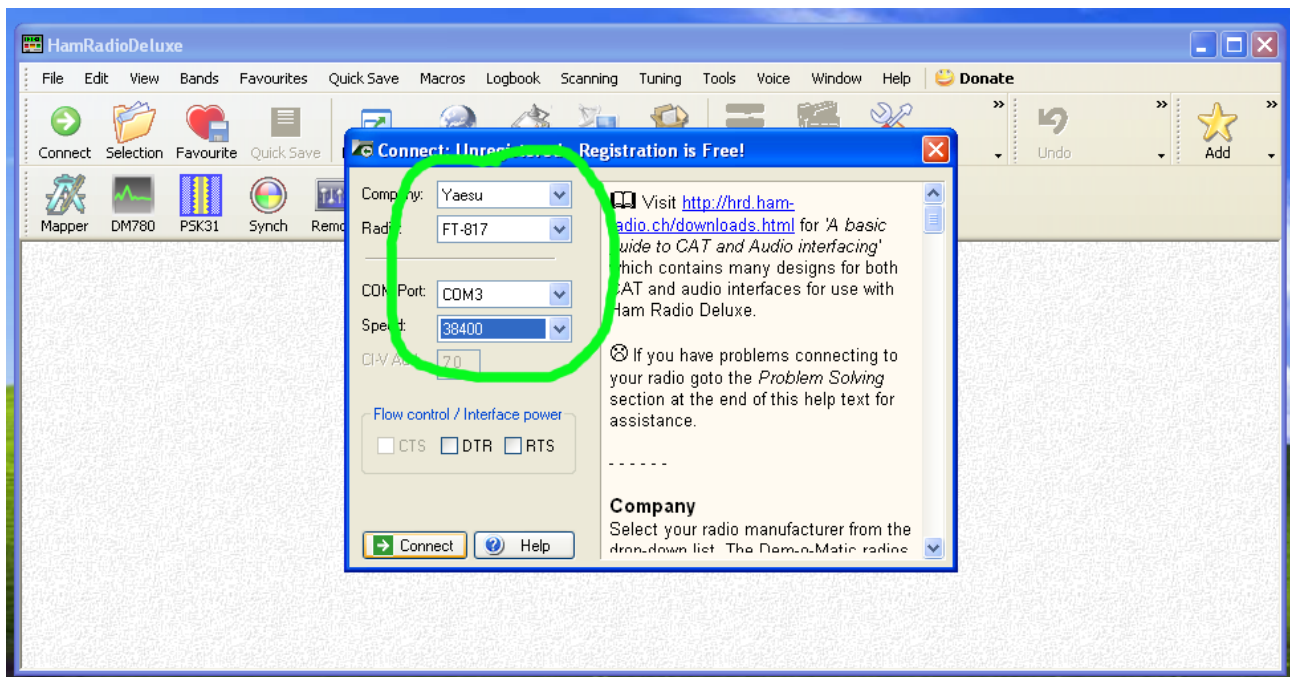
Warning!! For Yaesu FT-100 FT-817 FT-857 FT-897. If you plug the cable into the DATA socket by mistake, you will bend the pins on the plug.

Icom – *CI-V* socket

TenTec - *Serial Data* socket

Establishing communication

When you start your chosen software, you can use auto-detect if available, or enter the port and speed manually.



In the example above, we have selected COM3 and a speed of 38400. The speed should be set to match the CAT speed for your radio.

Example radio menu items to check for correct data settings:

Kenwood TS-480, 870, 2000 - baud rate Menu item 56
TS-570 - baud rate Menu item 35

Yaesu FT-100 – baud rate fixed at 4800
FT-450 - CAT RATE & CAT RTS enable
FT-817 - Menu item 14, CAT RATE
FT-840 - baud rate fixed at 4800
FT-857 & FT-897 – Menu item 19, CAT RATE. Set Menu item 20, CAT/LIN/TUN, to CAT
FT-920 - baud rate fixed at 4800
FT-950 - GENERAL menu group, 026 GENE CAT BPS, 028 GENE CAT RTS enable
FT-1000MP (inc. Mk V) - baud rate fixed at 4800
FT-2000 - GENERAL menu group, 027 GEnE CAT BPS, 029 GEnE CAT RTS enable
FT-9000 - GENERAL menu group, 030 CAT RATE

FT-847 - baud rate Menu item 56 (default 4800)

Note for FT-847: It is not possible to engage the CAT System when the FC-20 Automatic Antenna Tuner is in use. Please disconnect the FC-20 Control Cable from the TUNER jack on the rear panel of the FT-847 prior to commencing CAT System control of the FT-847.

Icom - The CI-V address and baud rate settings need to match those of your radio. The software may suggest default values. On some radios these settings can be changed via menu items.

Please consult the radio manufacturer's manual if you need more information, or if your transceiver is not listed here.

Troubleshooting

If the software seems to having trouble connecting to your radio:

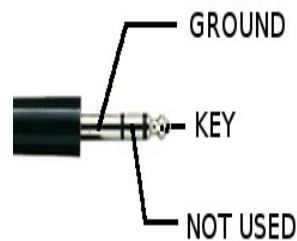
- Communication may be disabled on the radio (check menus)
- Ensure the speed (baud rate) setting matches your radio
- Try setting or clearing RTS and/or DTR (if available)
- Double-check that you are using the right COM port
- Disable hardware flow control on the COM port
- On older radios, the connector may be oxidised or worn
- Check that no other software is trying to access the COM port (modem software, GPS, camera etc.)
- Wait a couple of minutes after the cable has been connected before trying the cable for the first time, it may be that Windows is searching for a modem on the port
- Check the USB chip manufacturers website for a more recent driver

2. CW keying cable instructions

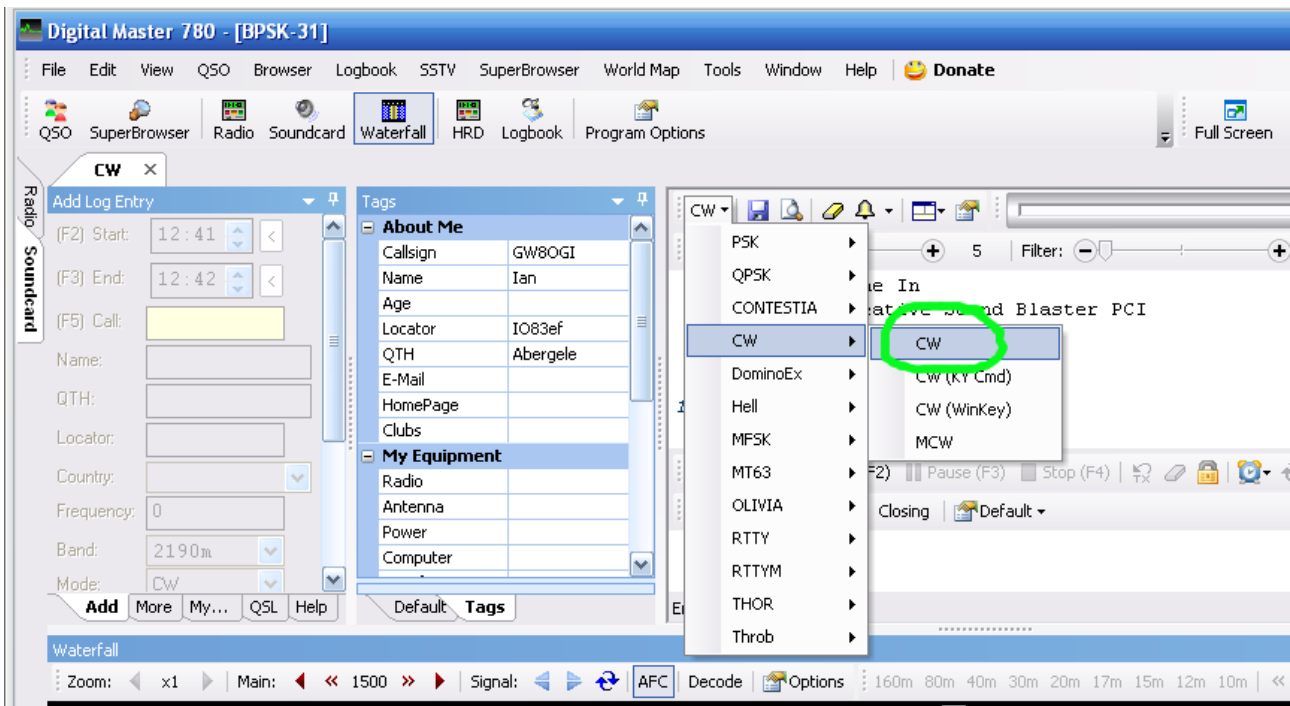
Connecting the cable

The cable can now be connected to the CW socket on your radio. Consult your radio's manual for more information if you are unsure which connector to use. If your radio has a 6mm (1/4") jack, use the adapter provided. Make sure your radio's internal keyer is off so the radio is configured to use a straight key. You may also need to enable break-in so the radio switches to transmit as soon as it is keyed.

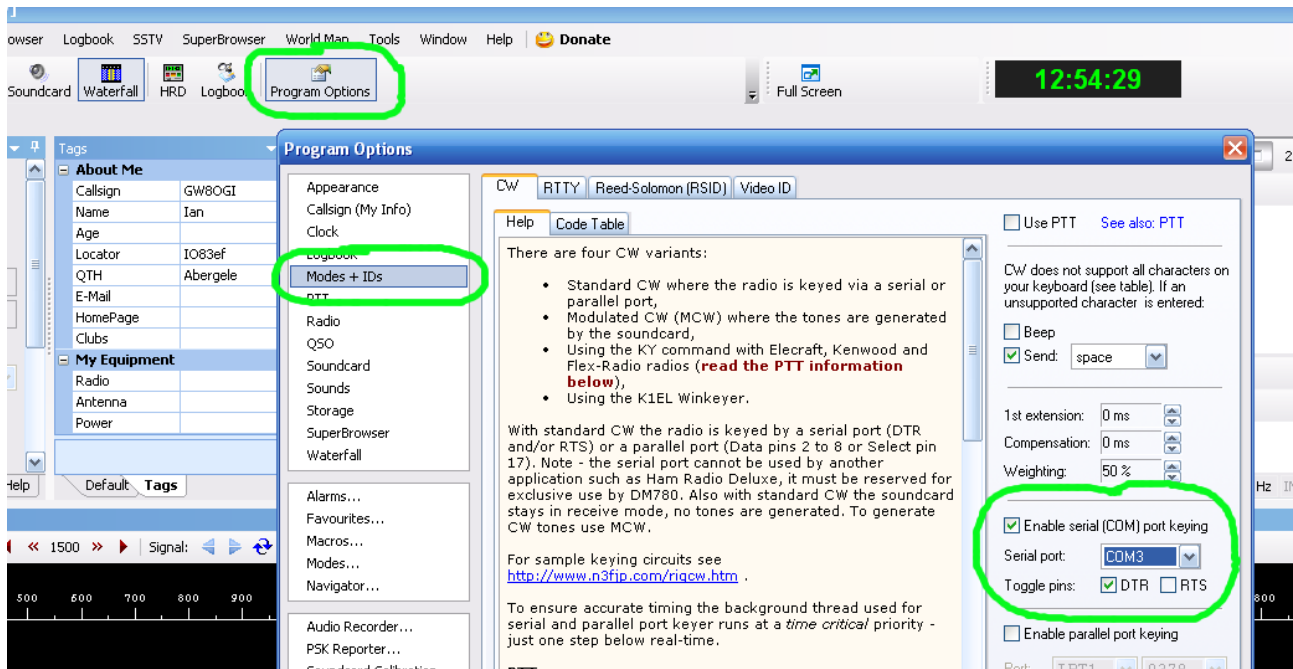
The CW keying output is open-collector to ground, maximum current 80mA, maximum voltage 35V, positive DC only. The connector sleeve is ground and the tip is the keying output. The ring is not connected. This should suit most modern radios.



You will need to configure your CW software to use the correct COM port and key the radio using the DTR line. The following example shows DM 780, part of the well-known Ham Radio Deluxe suite. The keying cable must be connected before starting the software. First select CW mode:



Now click the *Program Options* button, then click on *Modes + IDs*.



Tick *Enable serial (COM) port keying*. Select the correct COM port for your USB CW keying cable and then tick *DTR*.

Now you are ready to send CW with your PC.

Troubleshooting

- Double-check that you are using the right COM port
- Make sure you are using the DTR line for keying
- Verify that the transceiver is in VOX or QSK mode, so that it switches to transmit as soon as they CW key is pressed
- Disable your transceiver's internal keyer (if fitted)
- Check that no other software is trying to access the COM port (modem software, GPS, camera etc.)
- Wait a couple of minutes after the cable has been connected before trying the cable for the first time, it may be that Windows is searching for a modem on the port
- Check the USB chip manufacturers website for a more recent driver

3. Programming cable instructions

Specific instructions for the wide variety of programming applications is beyond the scope of this document. Please consult your equipment manufacturer's documentation and/or search the web for information before commencing. Here are some general guidelines:

Switch off equipment before connecting/disconnecting the programming cable.

Some equipment needs to be manually placed in 'programming' or 'clone' mode before programming can take place.

Do not connect the cable to anything other than the equipment that is sold for. Even if it has the same connector, it will almost certainly be wired differently and damage could result.

Troubleshooting

If the software seems to having trouble connecting to your equipment:

- Does the equipment need to be in 'programming' mode?
- Ensure the speed (baud rate) setting matches your equipment
- Try setting or clearing RTS and/or DTR (if available)
- Double-check that you are using the right COM port
- Disable hardware flow control on the COM port
- Check that no other software is trying to access the COM port (modem software, GPS, camera etc.)
- Wait a couple of minutes after the cable has been connected before trying the cable for the first time, it may be that Windows is searching for a modem on the port
- Check the USB chip manufacturers website for a more recent driver
- If the programming software is old it may need an older version of Windows to run. A web search will often yield useful tips.