Checking load cell sensor connections in the Force 3 Treadmill

Disconnect the treadmill from the power by unplugging from the wall socket. Then you will need to remove the side cover to access the XPV7 Interface PCB.

loosen the two screws at the top of the right-side cover (standing at rear of treadmill).

If the Upright for the control panel is still connected you will also need to remove the three screws that hold the panel that surrounds the upright.

Once all screws are removed you can slide the side panel off. This will give you access Printed circuit board (PCB).


Make sure to Turn off and unplug the power at the wall before touching anything inside the treadmill. Start by unplugging the USB lead (see below)


Before removing the load cell connectors you will want to ensure they are labelled 1 to 5, left to right as below (use a permenant marker). this will help ensure the correct load cell reconnects to the right position when the new board is installed. These could be dual or single connectors but the process is the same for both.

Now you can unplug the load cells from the PCB. **Do this by pulling on the connector not the cable.**
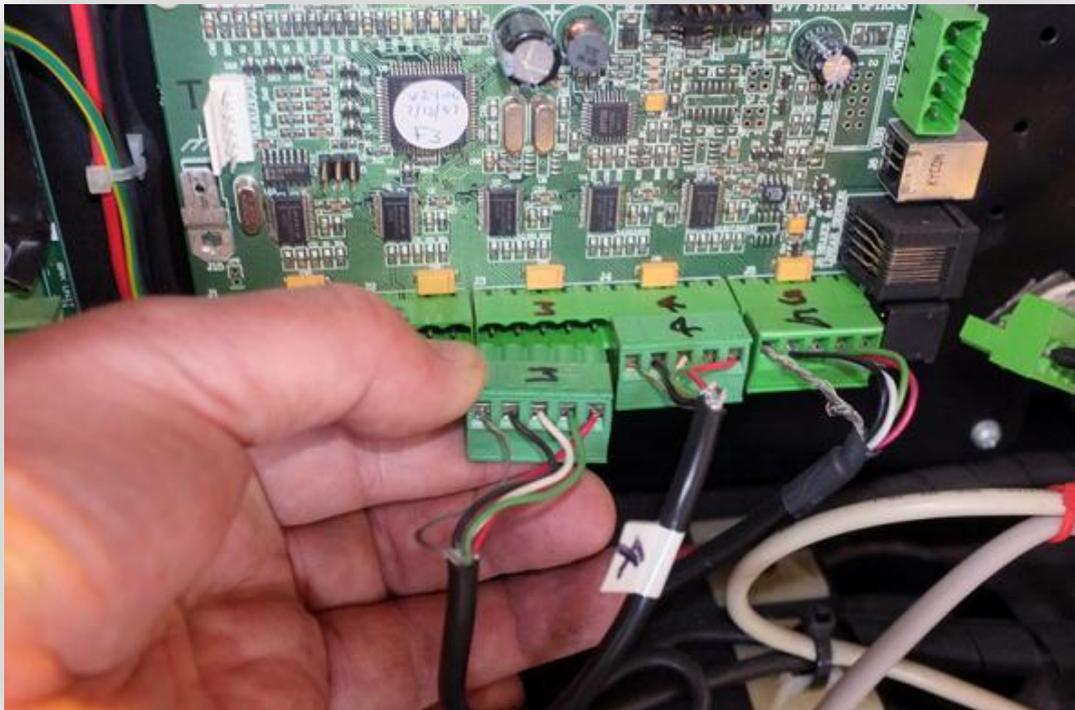
With the connectors unplugged you will wanrt ensure the all screw connectors are done up tight to do this you will need a small flt tiped screwdriver as shown below. (the image below is of a dual load cell connector above is a single load cell connector)
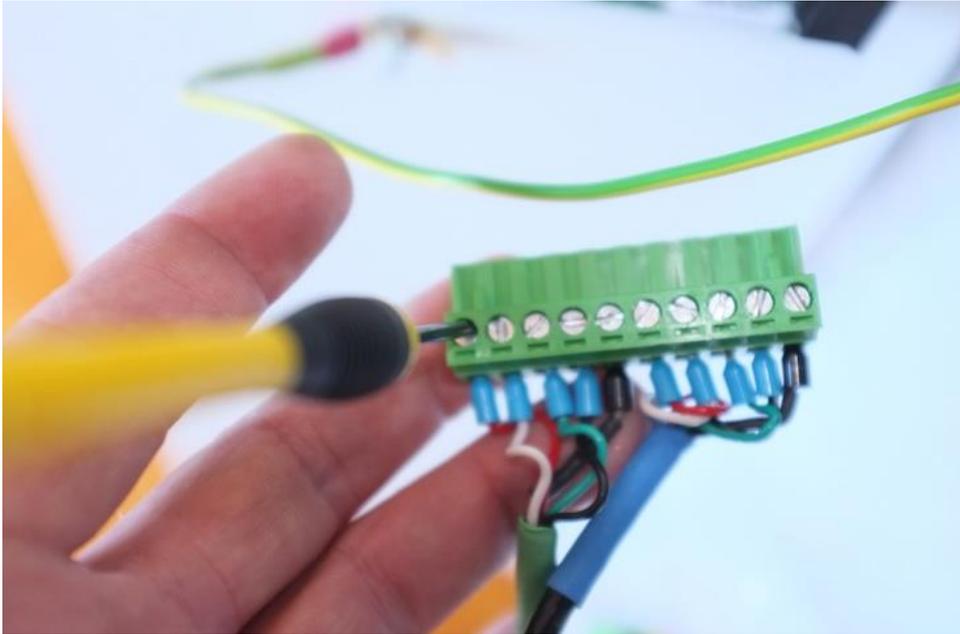
Once the connector screws have all been tightened re-insert the connector into the PCB I its correct positition.

When all connectors have been checked plugged back in reconnect the USB lead and plug the power back in.

You can then run the XPV7 diagnostic test software again (XPV7 Test software is explained in following pages) and check to see if it is reading correctly.

If the load cells are still not reading correctly contact Fitness technology. info@fittech.com.au

XPV7 Diagnostic Test Software Functionality.

When you start the XPVTEST application and the measurement hardware is not connected the main window will be as shown.
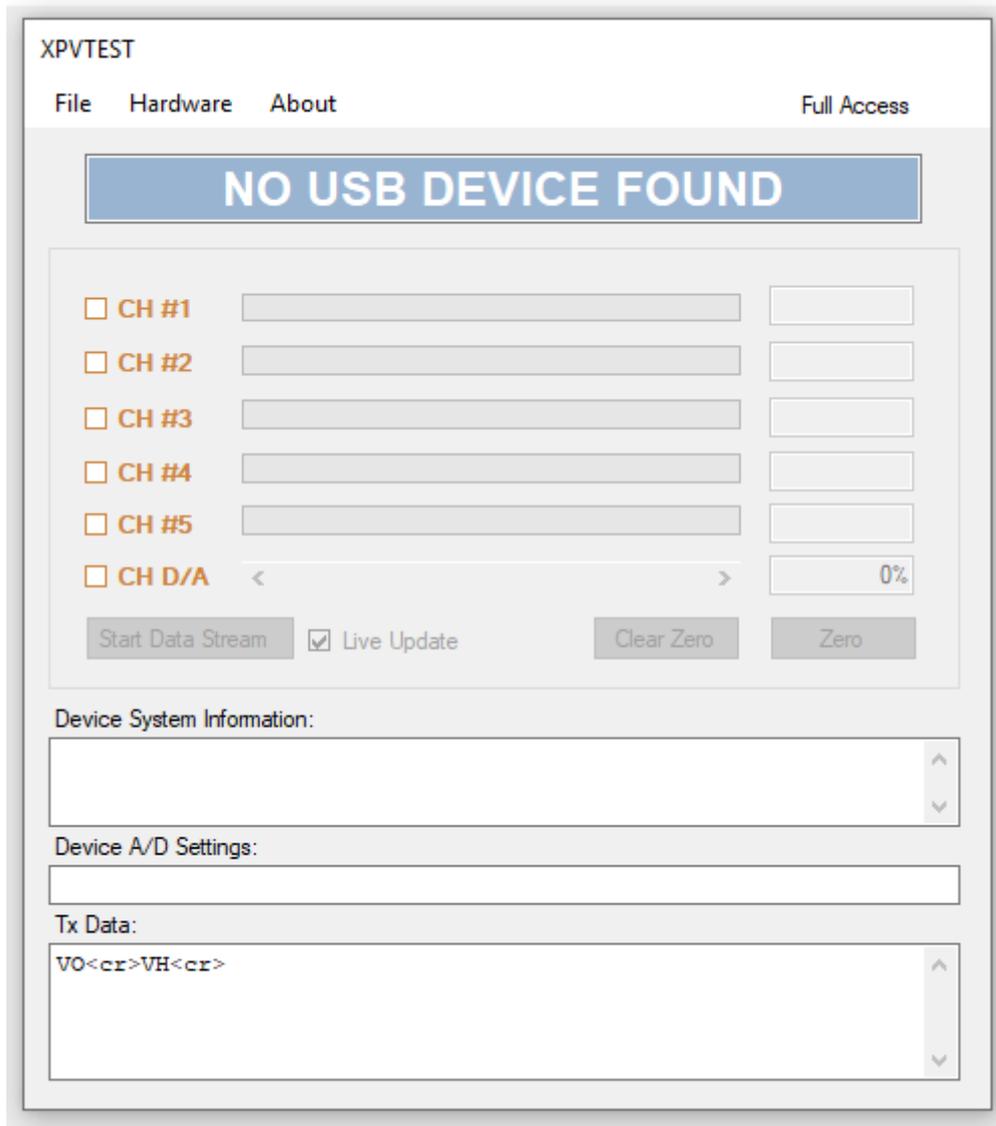
Connection:

Once the USB cable from the hardware is connected to your PC there will be a short delay then XPVTEST will indicate that a USB device is connected. At this time the software will try to connect at the baud rate used in the last session. If the device cannot be found a search cycle will begin, looking for all known devices and may take up to 5-7 seconds.
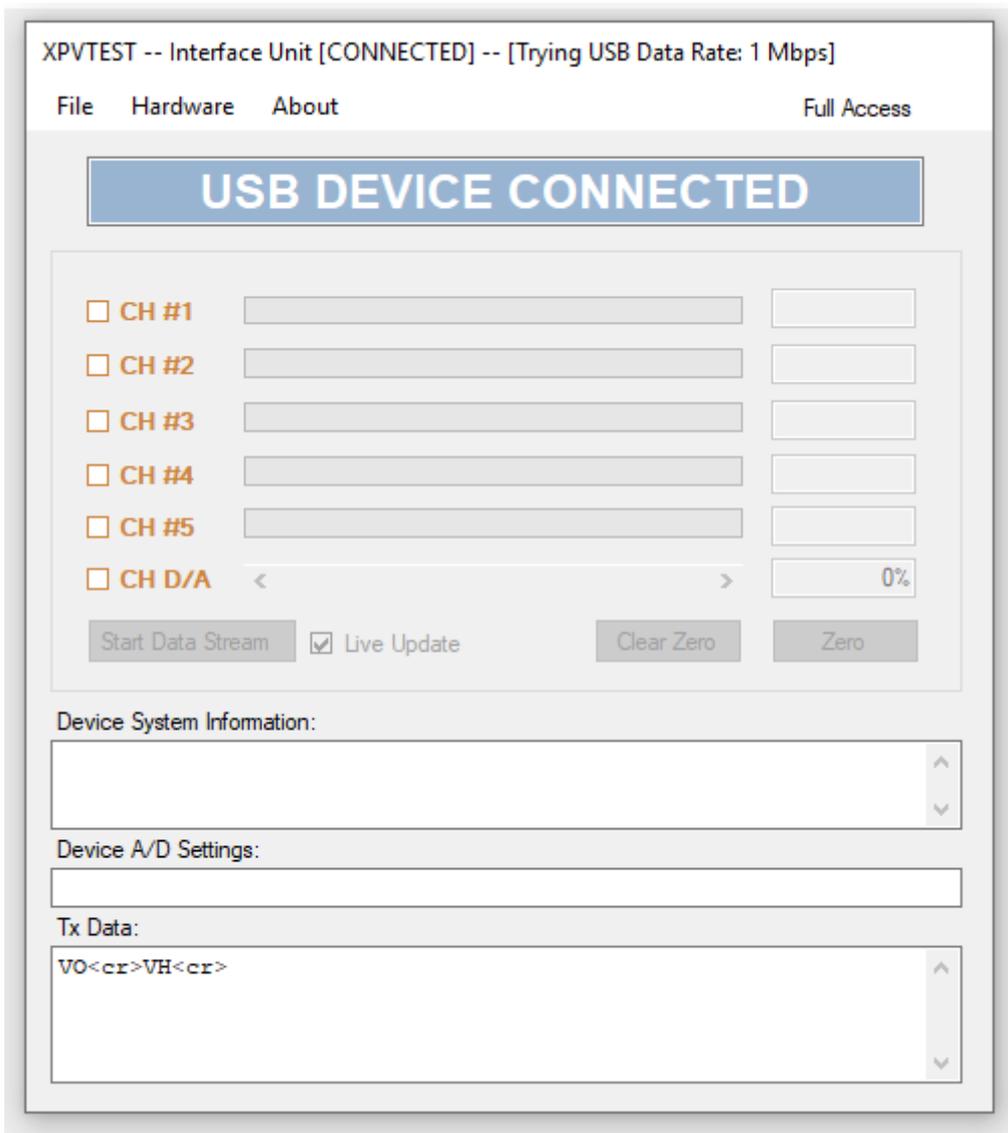
Device Found:

When a known device has been found the Model, Version, and Serial numbers are displayed in the window heading along with the USB data rate. To the right of the menu bar three further pieces of information are displayed. Firstly, as shown below you see the words "Short Packet" this refers to the type of data packet used by an XPV7 or XPV8, there are two types the old "Long" or the new "Short" packet. Next is the streaming enunciator, currently showing "STOPPED", or while streaming will flash the word "RUNNING". Finally, in the menu bar is the access level, in this example we see "Full Access", see the section in the access menu item for details.
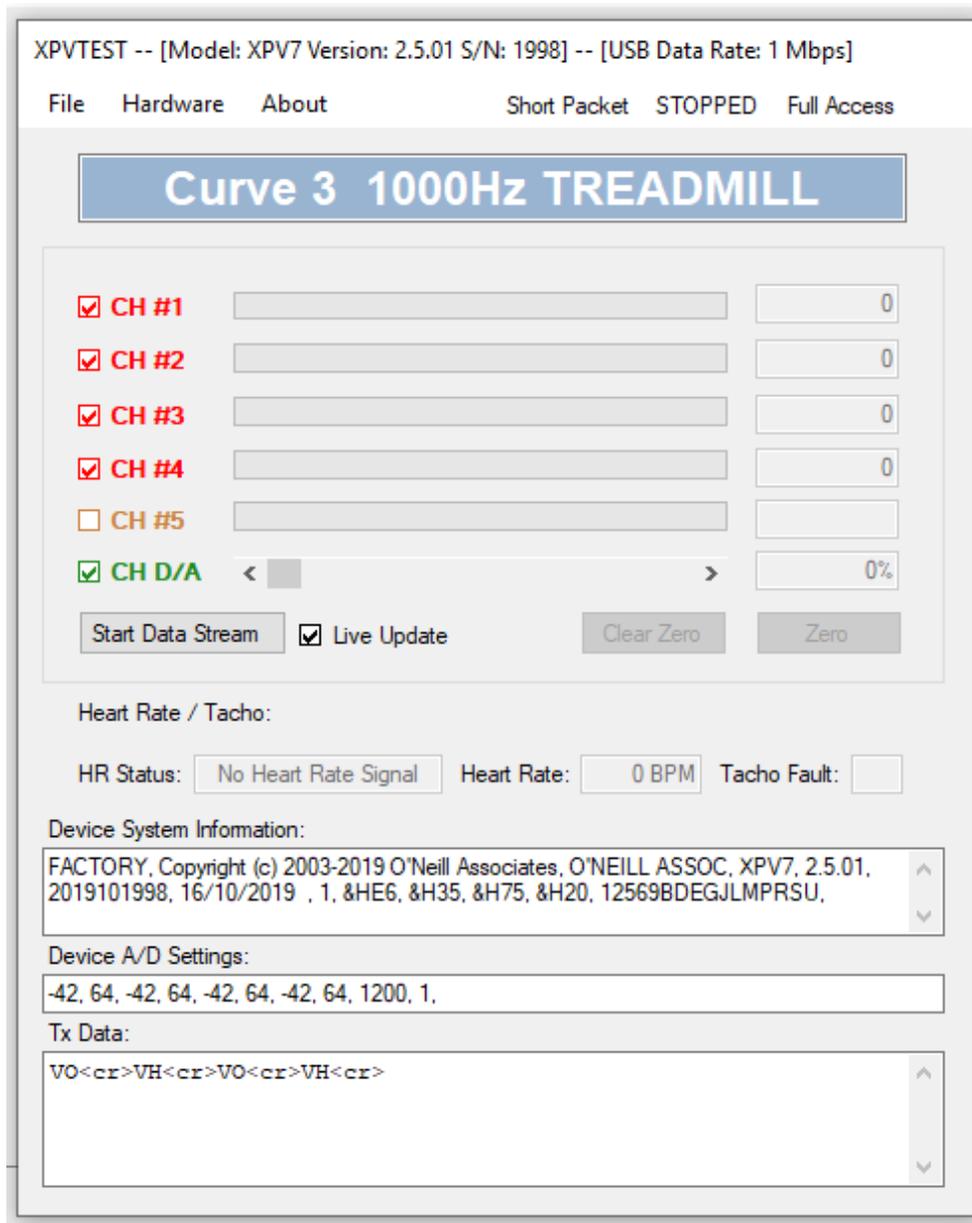
Information Display:

To change how much information is displayed go to the menu time "Configuration" and click on any of the three items "Hide A/D Settings", "Hide Device Info", "Hide Tx Data" so you can only what you require.
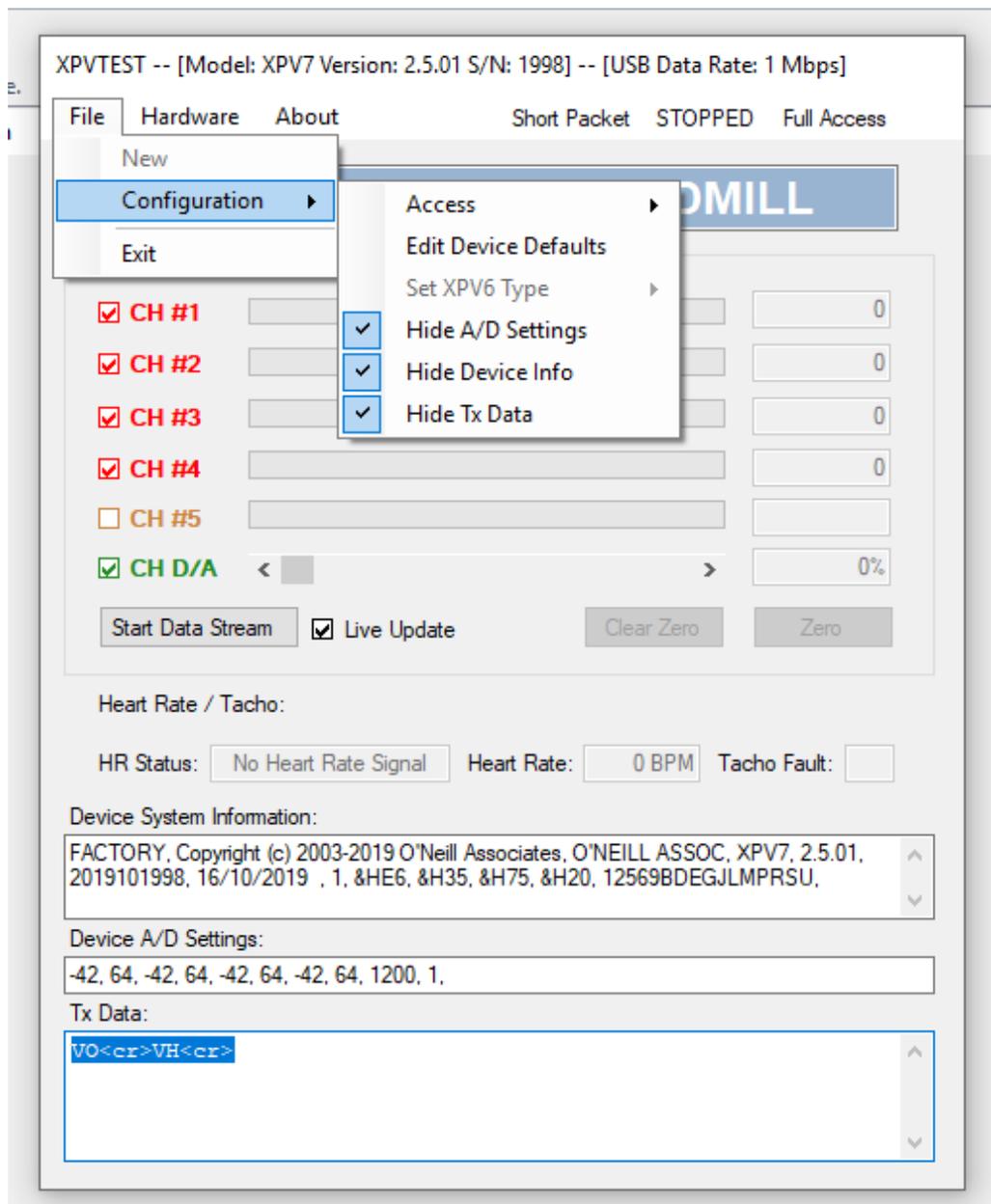
With all three pieces of information hidden the window looks like this and for most field testing of the hardware this display will provide all the necessary information. Sometimes the Device System Information may need to be displayed and this information can be displayed without a user password.
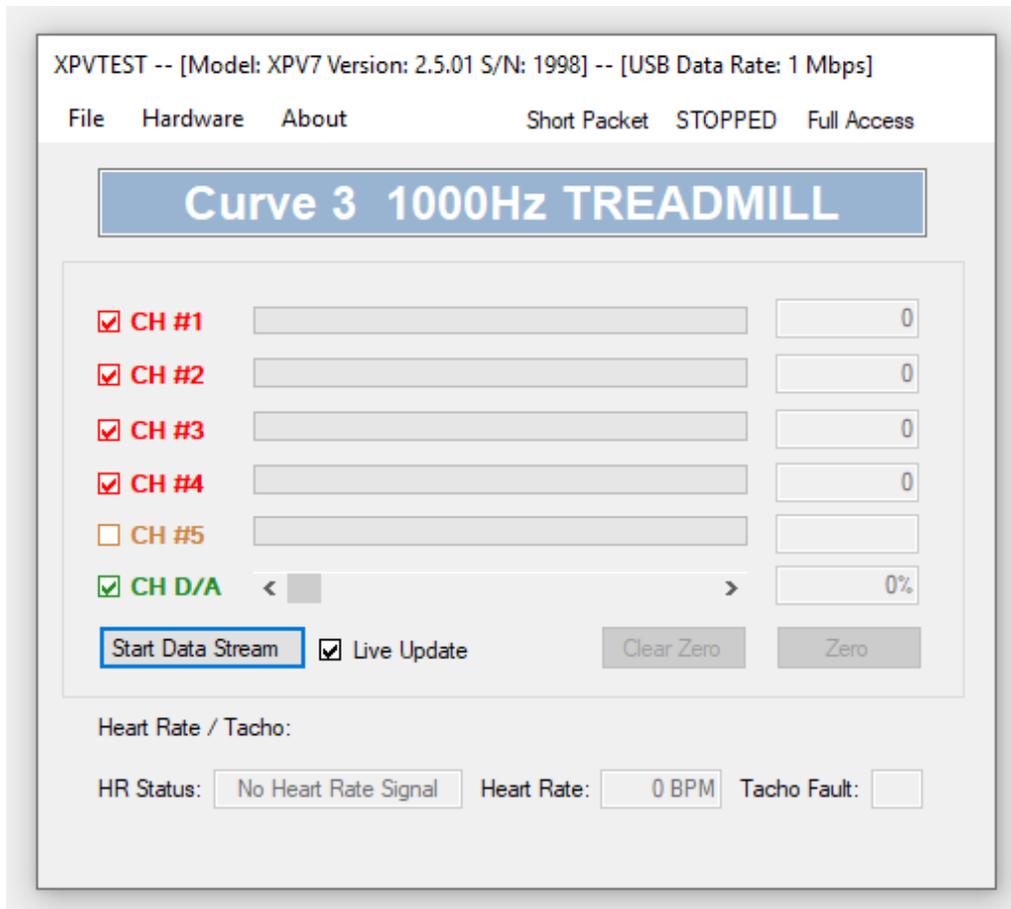
Channel Enables and Colour Coding:

The checkbox to the left of the channel identifier has two purposes:

1. Indication of the availability of a channel function, checked is available.
2. The user can turn the channel display on or off by clicking on the checkbox. If an unavailable channel is turned on before streaming it will show as disabled when streaming it started or will show a data value of zero if checked while streaming.

The channels are colour coded.

1. Colour, "Peru" tan, indicates the channel is currently disabled.
2. Colour, "ForestGreen", indicates the channel is enabled.
3. Colour, "Red", XPV7 / XPV8 only, indicates bad data 0 or 65535 usually means a load cell disconnection. This is also displayed before any data has been received from the hardware.
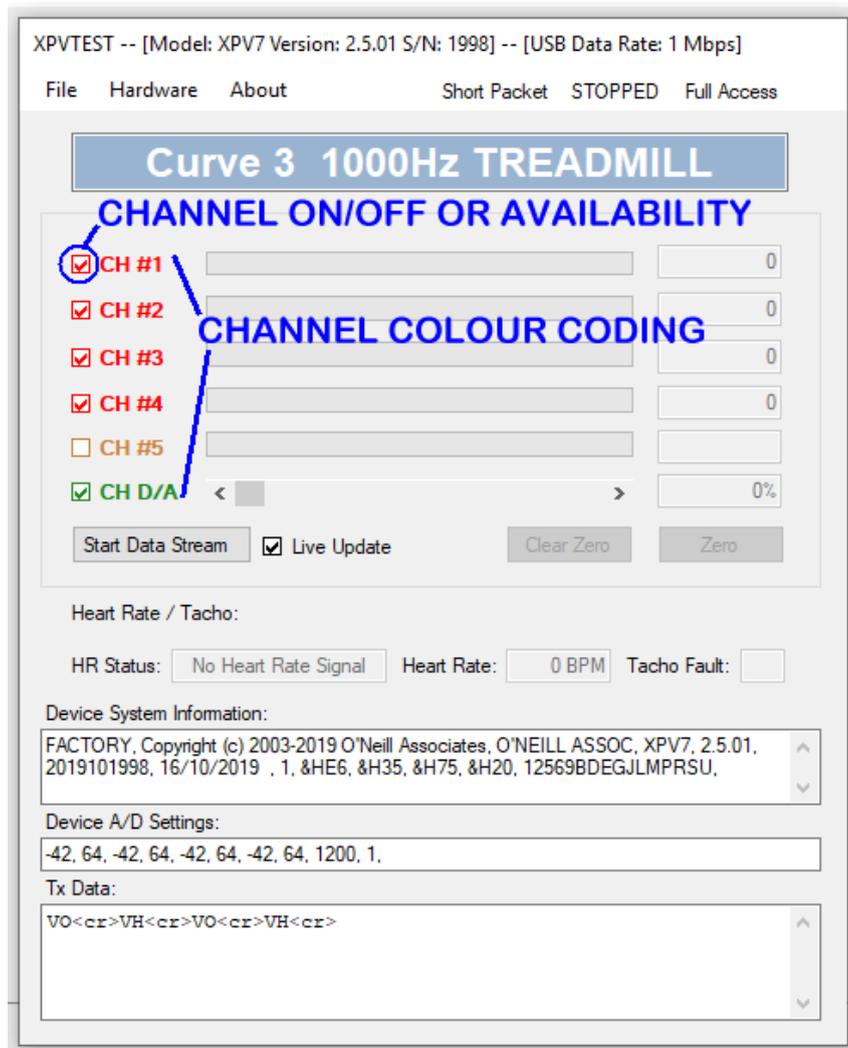
Heart Rate and Tacho Display:

The Heart Rate and Tacho information will only be displayed when the connected device can provide this functionality and when "Live Update" is checked.
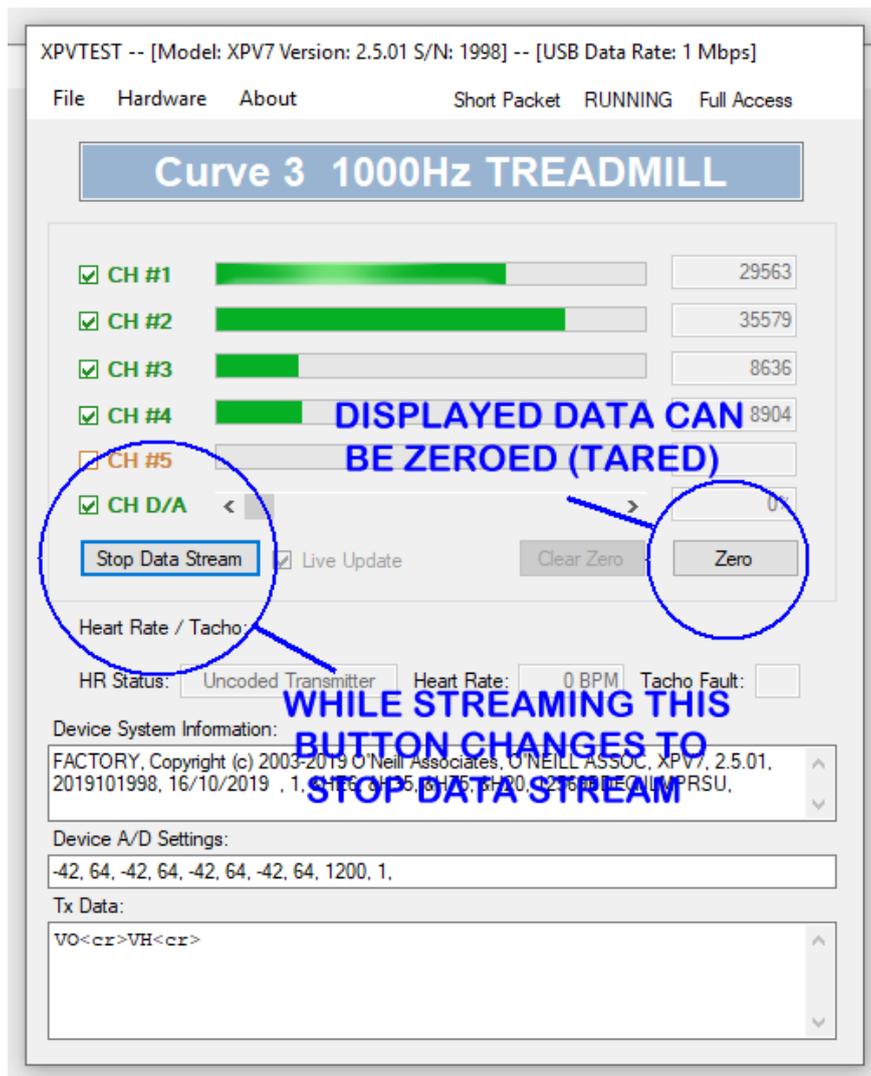
Status Information:

1. The Tacho status is simple, if "Tacho Fault:" is displayed the tacho cable is disconnected, and when "Tacho Count:" the textbox to the right will display the counts for the current sample.
2. The Heart Rate status indicates three possible states:
   (a) No Heart Rate Signal.
   (b) Uncoded Transmitter.
   (c) Transmitter code = XX. Where XX is the code number.
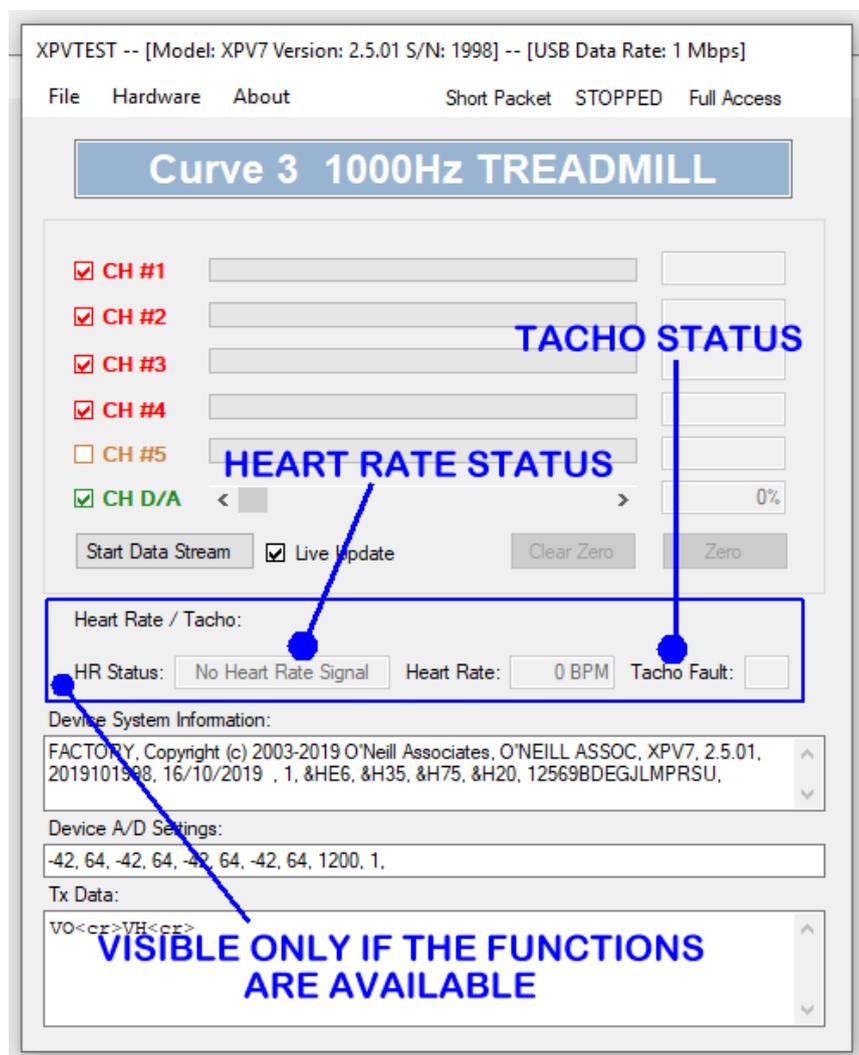
Data Streaming:

To start data streaming press the "Start Data Stream" button, once started the wording on the button changes to "Stop Data Stream".

While the data stream is running the display data only can be "Zeroed" or "Tared" to see a relative displayed zero value. When the "Zero" button is pressed the "Clear Zero" button to the left is enabled so that the zero offset can be removed from the displayed data.

About:

Provides information about the connected device, general hardware information Model, Version, and Serial numbers plus a list of available resources provided by the device.

Shown here is an XPV7.