microDAQ / MicroCAT

User Span Calibration Guide

900248-1.0

Software Licence Agreement

This licence agreement is provided to you before you install the software. On installing the software, you are demonstrating your agreement to the Terms & Conditions of Chell Instruments Ltd. If you do not agree to these Terms & Conditions then you may not use the software.

Licence: Chell Instruments Ltd. hereby grants to the customer who has purchased a microDAQ or flightDAQ derivative with this software a limited, non-exclusive licence to use the software on a single computer. The software may also be installed on a second computer where it is necessary to support a Chell product from a second location, such as a service engineers Notebook PC. The customer may transfer the software to another computer provided that the software may not be used on more than one computer at any given time, except in the aforementioned situations.

This licence is granted solely for the purpose of interfacing, display and configuration of a Chell product. Use with other equipment is prohibited unless an additional fee is paid and a licence variation issued.

Subject to the foregoing limitation, the customer is entitled to copy the software into backup in support of the use of the software on a single computer. The customer may likewise merge the software or incorporate the same into another programme provided that such programme will, for so long as the software is included therein, be subject to all of the Terms & Conditions of this licence. Any copy of this software permitted by the preceding provision shall include a copyright notice of Chell Instruments Ltd.

Terms of Licence: The licence will continue until the customer physically destroys all copies of the software and merged portions thereof and returns the original programme disk to Chell Instruments Ltd.

Copyright: The software is Copyrighted and all rights therein are reserved by Chell Instruments Ltd.

Acknowledgements: The customer acknowledges that he/she has read this agreement, understands it and agrees to be bound by its Terms & conditions, which agreement shall be acknowledged in writing upon the request of Chell Instruments Ltd.

General Provisions: The customer shall have no rights to rent, lease, sub-licence time-share, lend or transfer the software or software copies, or the customer's rights under this licence. In the event of a breach of this agreement by the customer, the customer shall be liable for all damages to Chell Instruments Ltd. and this agreement shall be terminated.

Introduction

The MicroDaq or MicroCAT allows the user to store a zero and span calibration in the MicroDaq / MicroCAT without storing the new coeffcinets to the EEPROM in the scanners. This document details the procedure.

Procedure

[1] Load MicroDaqSetup program onto the PC. The software can be found at:

https://www.chell.co.uk/pressure/wind-tunnel/microdaq-series/microcat-pressure-scanner

[2] Using a USB lead, connect the MicroDaq / MicroCAT to the PC. When the com port is established, determine the number of the com port assigned.

[3] Open MicroDaqSetup and follow the wizard to connect. If you can't connect, hit cancel and go directly to the MicroDaqSetup software. Here you can edit the com port details (click on 'COM' if these are not visible).
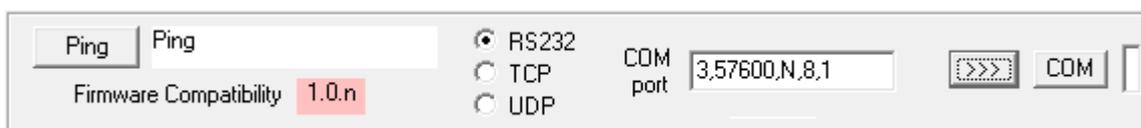

[4] On the setup tab, click on 'Connect and read'. All the setup parameters are then copied from the MicroCAT / MicroDaq to MicroDaqSetup.
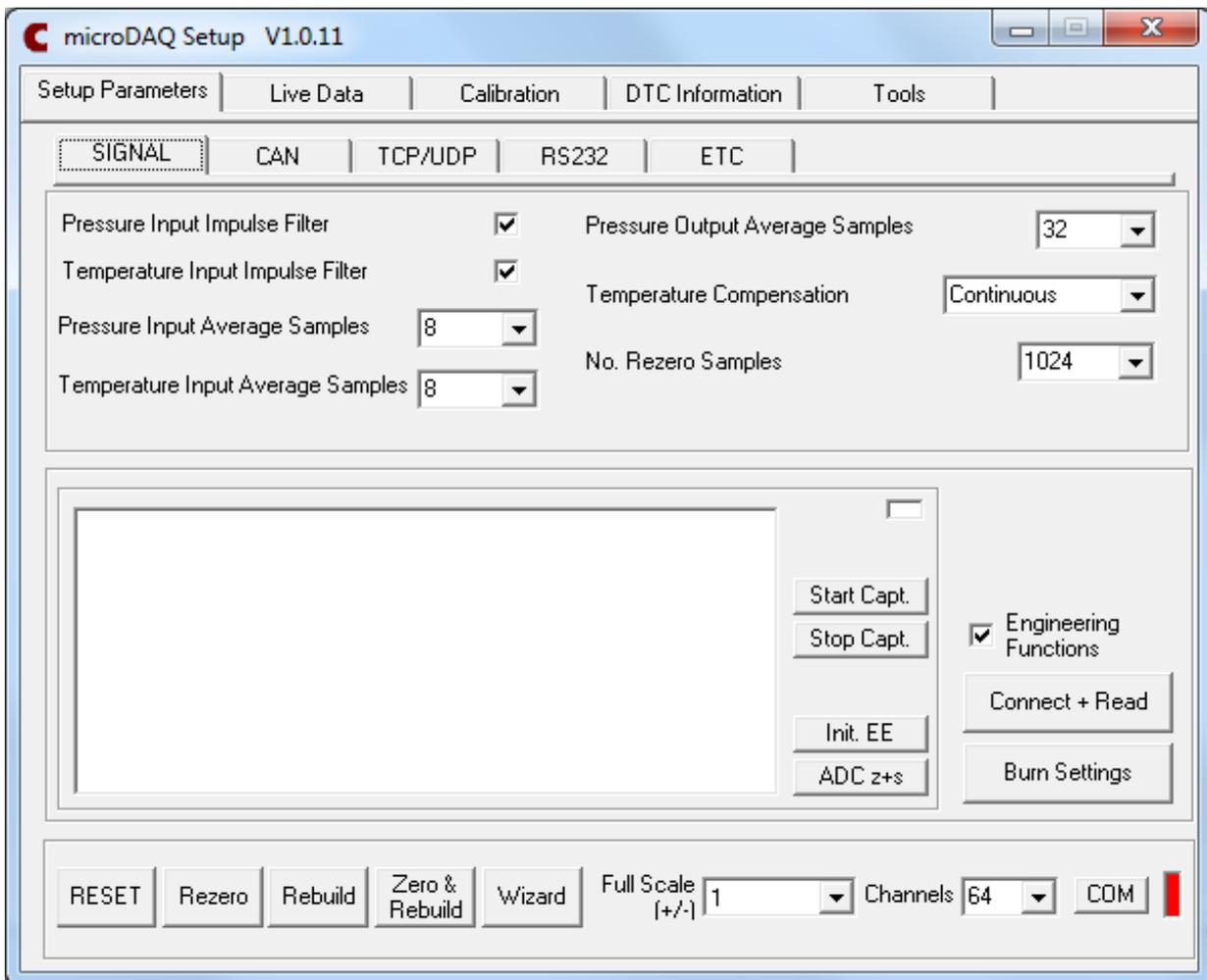
[5] Check that the Full Scale is correct. If not, select correct value, burn settings and reset.

[6] Check that the span high value is correct under 'ETC'. This is usually 90% of the scanner full scale. So, for a 5 psi scanner, it would be 4.5 psi. If it needs to be changed, choose the correct value from the drop down box, burn settings and reset.
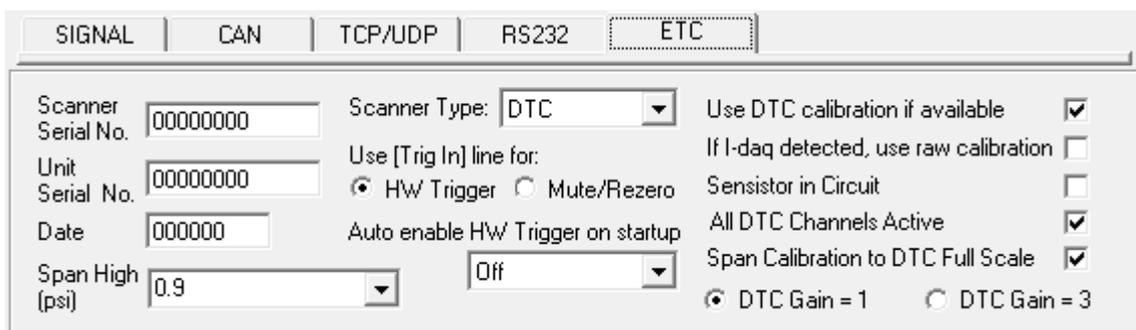
[7] Leave the scanner to warm up. It is very important that the MicroDaq is booted up for at least a minute before any calibration work is carried out. This enables the temperature compensation to cycle through all channels.

[8] Put the scanner into cal mode, assure no pressure applied and rezero the scanner.

[9] Using a pressure controller, apply the span high pressure (4.5 psi in this example).

[10] When the pressure has stabilised, go to the calibration tab and select 'Actions'. Select 'Set Span' and answer 'yes' to all questions.

[11] The red LED will light on the MicroDaq / MicroCAT. Wait for this to go out.

[12] Reset the scanner. (TIP : if you first enable 'Egineering Functions' and 'Start Capture', all the setup functions will be shown in the window as they are downloaded from the MicroDaq/ MicroCAT. You will be able to review all the calibration coefficients. The zero term is in bits (16 bit) and the span term is a multiplier that should be very close to 1.00000).

[13] When the MicroDaq / MicroCAT boots up, hit 'Rebuild' to regeneratre the calibration file held in flash memory.

[14] You can now review the measurements in the live data window.

[15] If the calibration was unsuccessful, the generated coefficients can be rest to 0 and 1 by selecting 'Reset Linear Cal' in the 'Calibration' 'Actions' tab.