

Test utility for 190iD guide

Test program for digital load cells 190iD

Test utility for 190iD Ver.1.0.2

Disconnect SW.VERSION: 1.0011 CAL SEAL: 0 **OPEN SEAL**
Node: 127 SNR: 1741946 CAL.CNT: 105 **CLOSE SEAL**
CAP: 150000

WEIGHT: 0 **STABLE** **NET** **TARE** **CLEAR TARE** **ZERO**
ZERO **ERROR**

MAX: 1000 FILTER: 60
DIV: 1 BAND: 1
DP: 0 ZERO TRACK: 0 **SAVE CALIB.**
UNIT: 3 ZERO RANGE: 1 **READ ALL**

Coefficients:
ZERO: 204790 **Zero Calibration**
SPAN: 63164 **SPAN Calibration** **EXIT**

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1 Description

The functionality of this program is to test the operation of a 190iD loadcell using a Windows computer with a USB to CAN adapter.

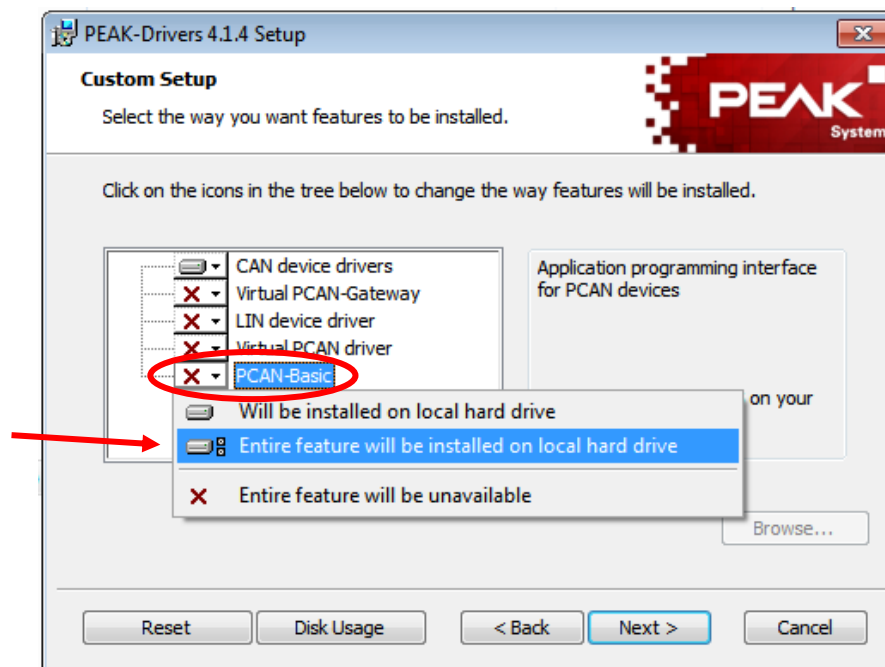
2 Requirements

This software only works with *Windows* operating system.

To use this software, a PCAN-USB adapter (from PEAK_{systems}) must be installed on your computer:



The corresponding drivers must have been installed before connecting the PCAN-USB adapter including the PCANBasic dll. To install the PCANBasic dll, select the corresponding option during the driver installation:



Refer to the PCAN-USB adapter manual for installation details.

3 Installing the program

To install the program, close all the other applications running in your PC and double-click the SETUP.EXE file. Follow the steps to install the program.

4 Connection to 190iD

Connect the 190iD load cell to the PCAN-USB adapter and to a power source.
Refer to PCAN-USB and load cell manuals for Pin assignment.

5 Using the program

Run the program by clicking on **190iD Test utility.exe**



WARNING

To use this program, only the load cell to be tested and the USB-CAN adapter can be connected to the CAN bus.

5.1 Main controls

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① **Connect** SW VERSION: SNR: CAP: CAL SEAL: CAL CNT: OPEN SEAL CLOSE SEAL

Node: 0 ②

WEIGHT: STABLE NET TARE CLEAR TARE ZERO

MAX: DIV: DP: UNIT: FILTER: BAND: ZERO TRACK: ZERO RANGE: SAVE CALIB. READ ALL

Coefficients: ZERO: SPAN: Zero Calibration SPAN Calibration EXIT ③

①	Start / Stop communication with load cell.
②	Node ID selection.
③	Close the program.

When you start the program there are only two active buttons and .

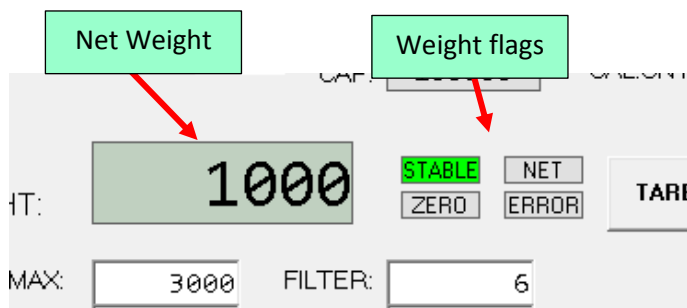
5.2 Initiate communication with the load cell

To start the communication, if known, the ID of the load cell can be selected in the Node text box ②. The node ID can be from 1 to 127.

Another way to initiate communication is to select zero as the node ID. In this case the program will listen the CAN bus and when it receives a *Heartbeat* from a load cell it will select it and communication will start. Once the communication has started, the information of the load cell, all its parameters and the weight will be displayed.

5.3 Weight and flags indication

When the communication is active the weight and different informative flags will be indicated:



The weight window shows the net weight read from the load cell. If the communication fails, the text "Error" will appear. If an overload or underload occurs, the corresponding text will appear in the window.

We have the following flags:

STABLE	Green when the weight is stable
ZERO	Green when wight is inside zero range
NET	Green when there is an active tare
ERROR	Red when there is a scale error

5.4 Load cell information

This area shows the following information:

SW.VERSION:	1.0009	CAL.SEAL:	0
SNR:	1741946	CAL.CNT:	46
CAP:	150000		

- SW.VERSION: Load cell software version.
- SNR: Serial number
- CAP: Capacity
- CAL.SEAL: CALIBRATION SEAL state (0 → CLOSED; 1 → OPEN)
- CAL.CNT: Calibration counter

5.5 Load cell parameters

This area shows the calibration parameters of the load cell:

MAX:	1000	FILTER:	60
DIV:	1	BAND:	1
DP:	0	ZERO TRACK:	0
UNIT:	3	ZERO RANGE:	1
<u>Coefficients:</u>			
ZERO:	204790	Zero Calibration	
SPAN:	63164	SPAN Calibration	

- **MAX:** Maximum configured capacity of the load cell
- **DIV:** weight division
- **DP:** decimal point
- **UNIT:** Load cell units (read only)
- **FILTER:** weight filter
- **BAND:** The level at which motion is detected. Out of this level there is no stability.
- **ZERO TRACK:** The level at which the system is automatically zeroed as long as the weight is within the selected band.
- **ZERO RANGE:** The range within which the weight may be zeroed (by command or by zero track).

Note: Refer to the load cell manual for more details on the meaning and possible values of each parameter.

5.6 Control buttons

While the communication is active, we have the following controls and information in the form:

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Node: 127 SNR: 1741946 CAL.CNT: 105 **CLOSE SEAL** ②

CAP: 150000

WEIGHT: 0 **STABLE** **NET** **TARE** ③ **CLEAR TARE** ④ **ZERO** ⑤ **ZERO**

ZERO

MAX: 1000 FILTER: 60

DIV: 1 BAND: 1

DP: 0 ZERO TRACK: 0

UNIT: 3 ZERO RANGE: 1

SAVE CALIB. ⑥

READ ALL ⑦

EXIT

Zero Calibration ⑧

SPAN Calibration ⑨

COEFFICIENTS:

ZERO: 204790

SPAN: 63164

①	Open CALIBRATION SEAL
②	Close CALIBRATION SEAL
③	Take the current weight as TARE
④	Remove the TARE
⑤	Makes a Zero

⑥	Save calibration parameters to NVM
⑦	Read all load cell parameters
⑧	Make the zero-point adjustment
⑨	SPAN calibration with a test weight

5.7 Open or close the calibration seal

To modify a calibration parameter the CALIBRATION SEAL must be in the open state.

Use the button **OPEN SEAL** to open the seal and the **CLOSE SEAL** to close it.

5.8 Changing a parameter

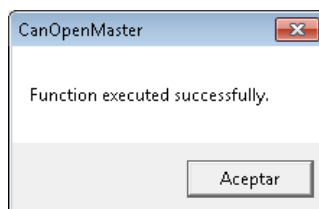
The parameters shown in section 5.5 can be modified by typing on them. To send them to the load cell, ENTER must be pressed after modifying them.

When a parameter is edited, its background turns green. When we press ENTER, it is sent to the load cell and the background turns white again. If the background turns red, it indicates that there was an error and could not be written to the load cell. An error may occur because the CALIBRATION SEAL is closed, or the value is invalid, or communication fails.

After modifying a parameter, the  button will turn green to indicate that it is pending to save it to the non-volatile memory (NVM). Pressing it will send a command to the load cell to save the modified parameters to NVM.

5.9 Zero adjustment

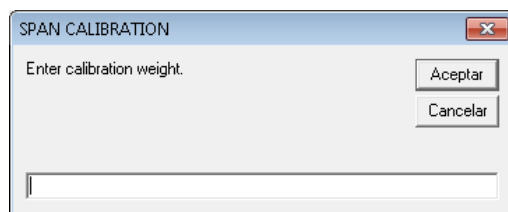
To automatically adjust the zero value, make sure there is not any weight on the load cell and press the button . If the process is ok, this message appears:



Press the  button to save the calibration to non-volatile memory.

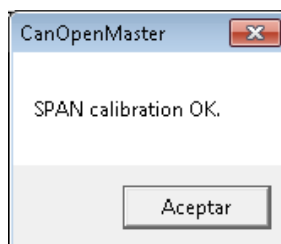
5.10 SPAN Calibration

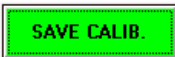
To adjust the SPAN of the load cell with a reference weight, press the  button. A message will appear asking for the applied weight:



Enter the weight and validate it with ENTER having the weight stable.

The next screen appears to indicate the end of the process:



Press the  button to save the calibration to non-volatile memory.