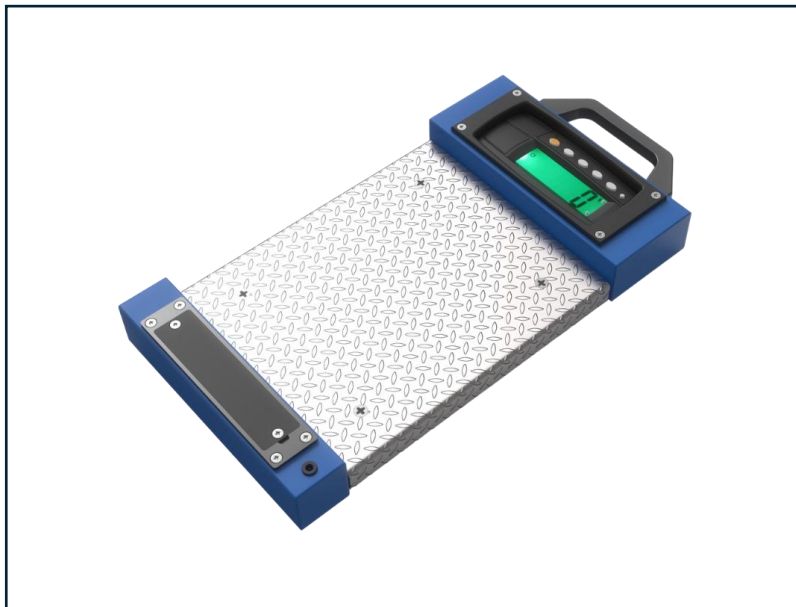# GasQuip

Gas Cylinder Scale – GQ-CWS-V3

Operation Manual
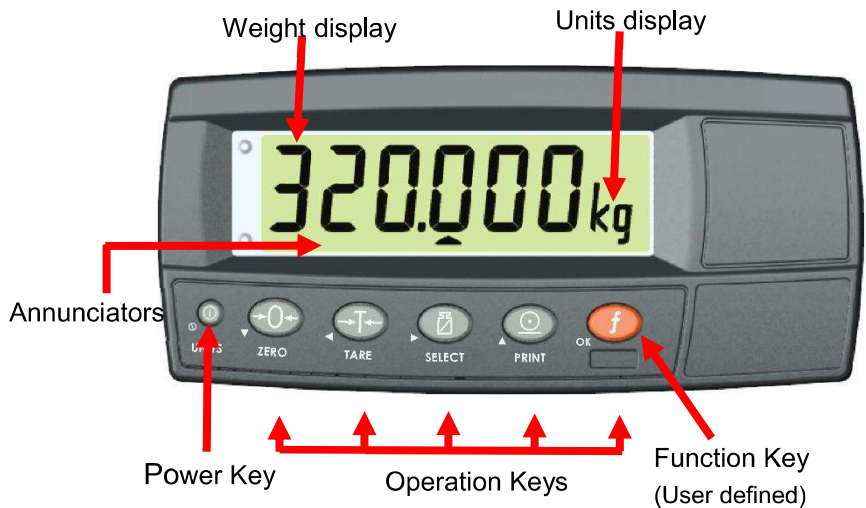
Version 1.0.0

5.   Basic Operation

Figure 16: Display and Controls Illustration

5.1.   Display

Weight Display	The Weight Display indicates the weight readings, setup information, errors, and warnings.	
Units Display	The Units Display shows the units of the weight reading as: grams (g), kilograms (kg), pounds (lb), tonnes (t) or none. If the instrument is set up for counting the units display will show pieces (p).	
Annunciators	➡0⬅	ZERO	Visible when the gross reading is within ± ¼ of a division of true zero.
	NET	NET	Visible when the displayed reading represents NET weight.
	~	MOTION	Visible when the displayed reading is not stable.
	▲	OVER	Visible when either of the setpoints is set as type OVER, and the weight is above the target weight.
	▼	UNDER	Visible when either of the setpoints is set as type UNDER, and the weight is below the target weight.
	1	OUT 1	Visible when Output 1 is turned ON and dual range is not enabled.
		RANGE 1	Visible when dual range is enabled and range 1 is active. (K35* only)
	2	OUT 2	Visible when Output 2 is turned ON and dual range is not enabled.
		RANGE 2	Visible when dual range is enabled and range 2 is active. (K35* only)
	⊔	ZERO BAND	Visible when the displayed weight is within the zero 'dead' band setting. (The zero band symbol shows near the top right corner of the display.)
	H	HOLD	Visible when the displayed reading is held.
	⊞	LOW BATTERY	Visible when battery voltage is too low and batteries need replacing or recharging. (The low battery symbol shows in the top right corner of the display.)

> When in Setup the editing annunciators are shown to identify the function of the front panel keys (i.e. **GRP, ITM, SEL, EDT** and **OK**). For more information refer to Editing Annunciators page 18.

5.2.   Has a key been locked?

A single press of each key triggers the weighing operation printed on it. The instrument allows individual keys to be disabled in the setup. All keys are enabled at the factory, but some keys may have been intentionally disabled (locked) during installation. If a key has been locked, a long beep sounds when it is pressed. If however, the key beeps normally, but does not appear to trigger the desired action, it is waiting for the weight reading to settle before the action can proceed.

5.3.   Editing Function

Available during digital setup and calibration. This function is displayed using the editing annunciators above each key. Refer to Editing Annunciators page 18.

5.4.   Stability – What is a "Stable Error"?

Once a **<ZERO>**, **<TARE>** or **<PRINT>** key is pressed the instrument waits for a stable valid reading before performing the associated operation. If the weight readings remain unstable or invalid due to some diagnostic error for longer than 10 seconds, the operation is cancelled and the **STABLE ERROR** message is displayed.

To improve the stability of the weight reading, increase the filtering or relax the motion detection criteria. Refer to **FILTER (Reading Average)** page 34 and **MOTION (Motion Detection)** ⊗ page 34 for more information.

5.5.   POWER Key
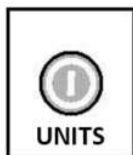
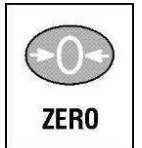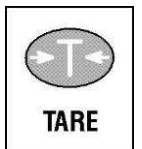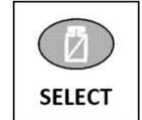|	
	The **<POWER>** key is used to turn the instrument on and off. If the PWR.FN feature is set to UNITS, then a short press of the **<POWER>** key will switch units. To initially turn the instrument on, press and hold the **<POWER>** key. The display will show the following: • Display segments will light and then clear. • Software Version (e.g. V4.0). • Calibration Counter (e.g. C.00010). Refer to Calibration Counter page 25 for more information. • The current weight will then display. To turn the instrument off, press and hold the **<POWER>** key for three seconds. The instrument will display **OFF** followed by the 3s countdown. **Battery Operation:** When using batteries, the backlight will automatically turn off to conserve power after a short period of inactivity. A short press of the **<POWER>** key will turn the backlight on again. Refer to B.LIGHT (Backlight Operation) page 37 for more information. **Unit Switching:** The <POWER> key will function as a unit switching button with a short press by configuring PWR.FN to UNITS. **Locking:** The **<POWER>** key can be locked to prevent the instrument being turned off from the front keypad. Refer to KEY.LOC (Front Panel Key Locking) page 36 for more information.
Automatic Operation	The **<POWER>** key has a memory function associated with it. This means that the state of the auto out setting is remembered even if external power is interrupted. It is therefore possible to turn the instrument on in the safe knowledge that it will operate whenever external power is available and will not need to be manually turned on again if the power is interrupted.

5.6.   ZERO Key

ZERO	When an empty scale has drifted away from a true zero reading, this key is used to perform a zero adjustment on the scale display. In the K35x versions, the zero adjustment is stored when power is removed and is re-used when next powered up. The amount of weight that may be cancelled by the **<ZERO>** key is limited via an item in the Setup of the instrument. Refer to Z.RANGE (Allowable Zero Operating Range) ⊗ page 34 for more information. **Long Press:** When the indicator is set to Industrial mode a long press of the **<ZERO>** key will remove any stored zero adjustment. Refer to Industrial vs OIML and NTEP Modes page 25 for more information on modes.

5.7.   TARE Key
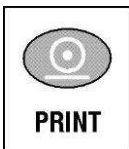
TARE	This key is used to temporarily set the scale to zero (such as cancelling the weight of a carton before performing a filling operation). The display will show the Net weight and the NET annunciator will be lit. The **<TARE>** key can operate in all modes (i.e. Industrial, OIML and NTEP). Refer to Industrial vs OIML and NTEP Modes page 25 for more information. The weight tared is deducted from the allowable range of the scale, reducing the maximum weight that can be displayed. In the K35x versions, the tare adjustment is stored when power is removed and is re-used when next powered up.
Preset Tare	This feature allows the operator to manually enter the tare weight. After setting the preset tare value, indicator will display **Pt** followed by selected preset tare value. When a preset tare weight is being used the instrument will display **Pt** before displaying the net weight. Any printing of the tare weight will be followed by the letters **Pt** if a preset tare value is active. A long press of the **<TARE>** key will allow editing of the Preset Tare value. Press the **<OK>** key to enter the Preset Tare setting. Change the Preset Tare setting using the **<SEL>** and **<EDT>** keys. The Preset Tare setting can be cleared by one of two means: • Using a long press of the **<TARE>** key and editing the preset tare value to zero. • While the gross load is zero; • Using a short press of the **<TARE>** key to re-tare the instrument in the usual manner. • OR, Using a short press of the **<ZERO>** key to zero the instrument in the usual manner. In the K35x versions, the tare adjustment is stored when power is removed and is re-used when next powered up.

5.8.   SELECT Key

SELECT	This key is used to toggle the weight display between the Gross weight and the Net weight (provided that a Tare has previously been acquired using the **<TARE>** key).

opto-LINK Activation	This feature is used to temporarily connect a PC to the instrument for calibration and setup purposes.
	A long press of the **<SELECT>** key will toggle the opto-LINK infrared communications On/Off.
	When the opto-LINK has been enabled the following will occur:
	• The instrument briefly displays the prompt **opto-L.**
	• The editing annunciators (i.e. GRP, ITM, etc.) will flash for up to five minutes while the instrument searches for activity. During this period, the instrument also disables the RS-232 communications.
	• After a 5-minute period of no activity, the opto-LINK is disabled and the editing annunciators will stop flashing. The instrument will revert to the normal RS232 (i.e. the SERIAL:TYPE setting will be re-activated).

5.9.   PRINT Key

	If a printer or computer has been attached to the instrument and the manual print function has been selected, the **<PRINT>** key will trigger an output of the current weight reading. The **PRINT** prompt is displayed while waiting for the printer to accept data. If the printer is offline the **PRINT** prompt will remain for a maximum of 10 seconds before the operation is cancelled. Each weight printed is automatically added to an internal Total Weight.
	Instrument can only perform **PRINT** in High Resolution mode when the indicator is setup in Industrial mode. Refer to Industrial vs OIML and NTEP Modes page 25 for more information.
	Long Press: A long press of the **<PRINT>** key will print the total. The total weight is then cleared automatically.

5.10.   FUNCTION Key

 K34*	Use this key to perform hold.
 K35*	The function of this key can be selected from a number of distinct functions including peak-hold, counting, etc. Refer to page 56 for details of the available functions. Each has an associated overlay sticker that should be applied to the **<FUNCTION>** key.
	Long Press: A long press of the **<FUNCTION>** key may be used for certain functions depending on the primary function of the key.

Step 1: Download and install the View300 software from the Rinstrum web site.

1. go to website: All Downloads – Rinstrum
2. Scroll down to "Viewer" option and select
3. Select "view 300". And then select "with Rinstrum brand"
4. The software will start to download
5. Install as administrator to avoid any issues.

Step 2: connections

Make sure scale is connected to the indicator

Power up the display and verify power has been applied

Connect the Rin-Link cable from the PC to the optical connections on the face of the indicator.
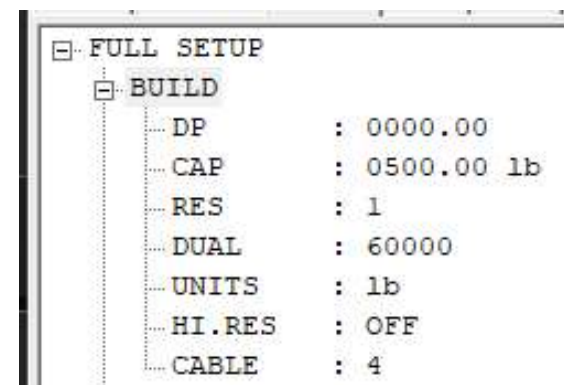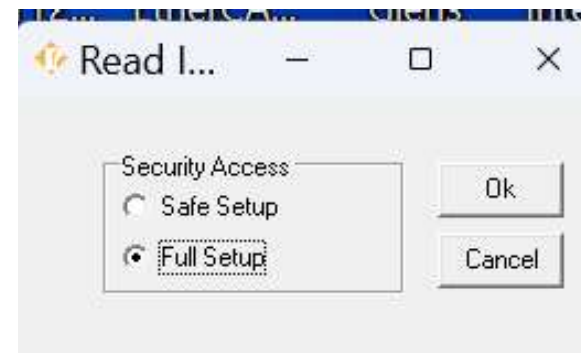
Magnetic connection

Windows PC
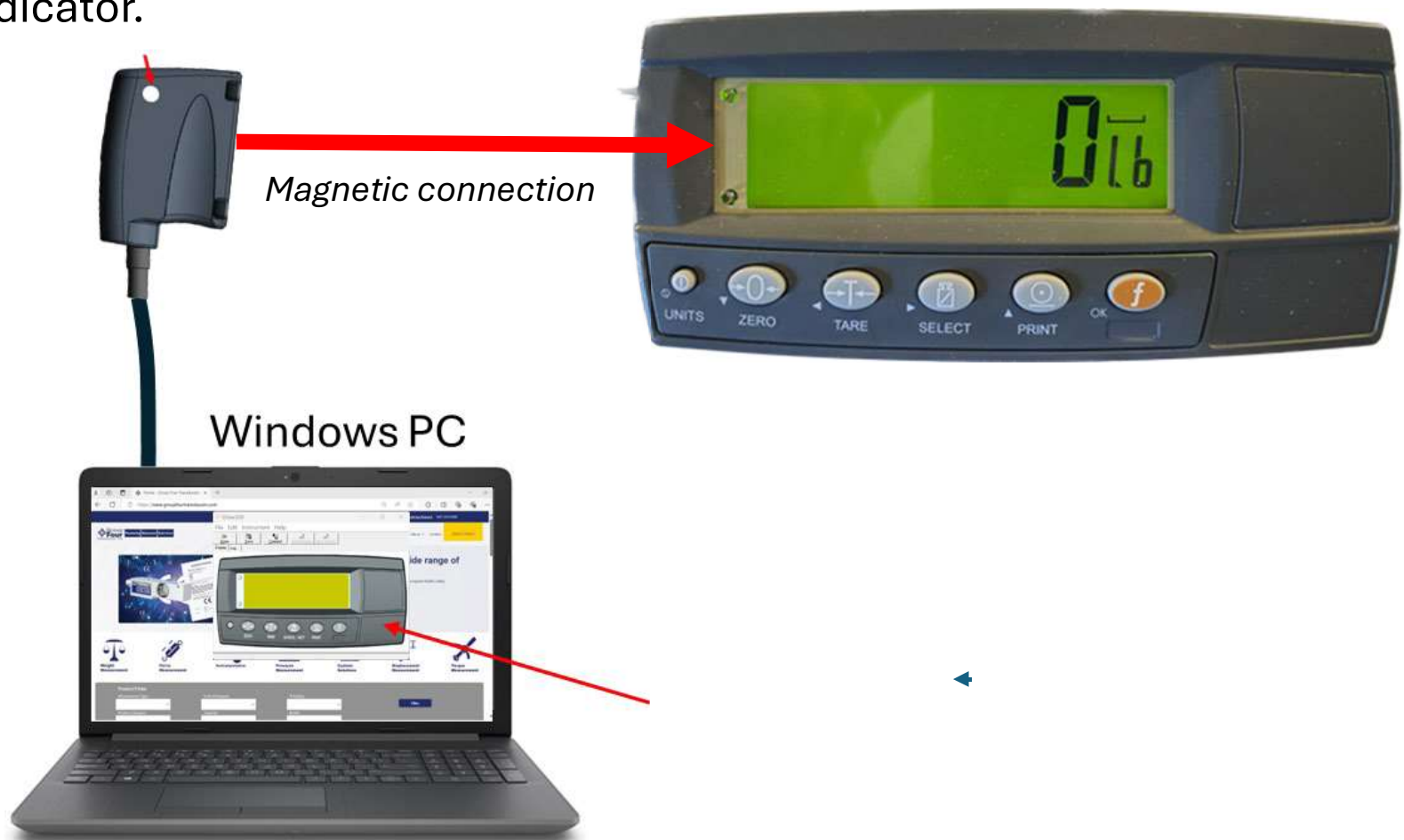
Step 3: Connect Viewer software to indicator.
1. Star up View 300 software
2. Select the "Connect" tab
3. Select the appropriate com port
4. Select the "Optical Link " option
5. Then press OK. The Viewer should now be connected and show the same values as can be seen on the indicator.
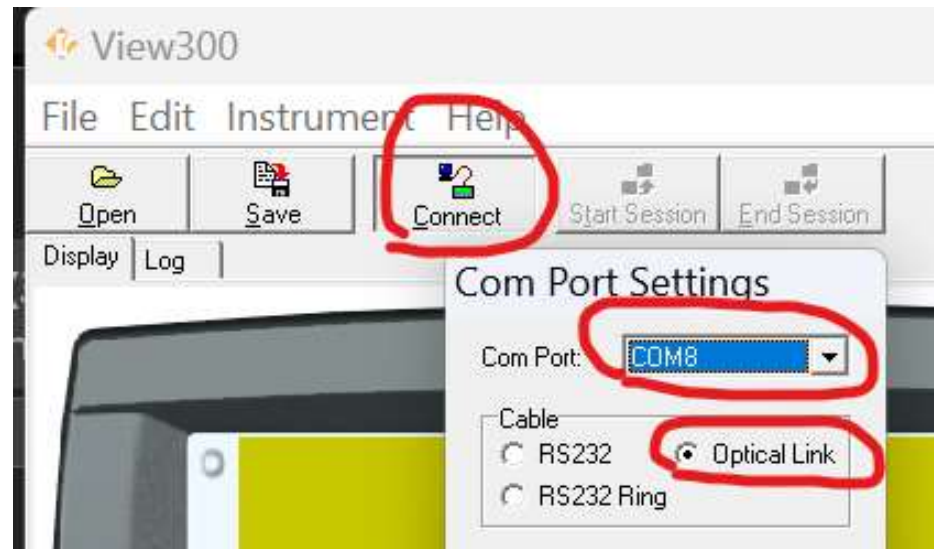
Step 4: Verify the main setup options are correct
1. Select the "Start Session" tab
2. Select "Full Setup" option on popup window and then select OK
3. Now select "BUILD" option to review your primary setup options.
    1. *DP is the decimal placement*
    2. *CAP is the full capacity of your scale*
    3. *RES is the resolution of your measurement*
    4. *DUAL is an option to change your resolution at a given weight. Keep the default value of 60,000 to essentially turn this feature off.*
    5. *Units is the engineering units to be displayed*
    6. *HI-RES is an option for very hi resolution and precise measurement systems.*
   7. *CABLE is to define your load cell cabling, 4 or 6 wire.*

Read I...   —   □   ✕

Security Access
○ Safe Setup
● Full Setup

Ok
Cancel

```
⊟ FULL SETUP
  ⊟ BUILD
       DP      : 0000.00
       CAP     : 0500.00 lb
       RES     : 1
       DUAL    : 60000
       UNITS   : lb
       HI.RES  : OFF
       CABLE   : 4
```

Step 5: Main, 2 point Calibration.

1. Select the "Calibration" tab, The program display will change, showing the indicators face and calibration values
2. Exercise scale 3 times with the maximum load to be used.
3. Remove all weight off the scale, wait a minute to allow the scale to stabilize at its no load point.
4. Now press "Zero" to capture the calibrated zero point.
5. Before proceeding, clear the linearization values but selecting one at a time and press the clear button.
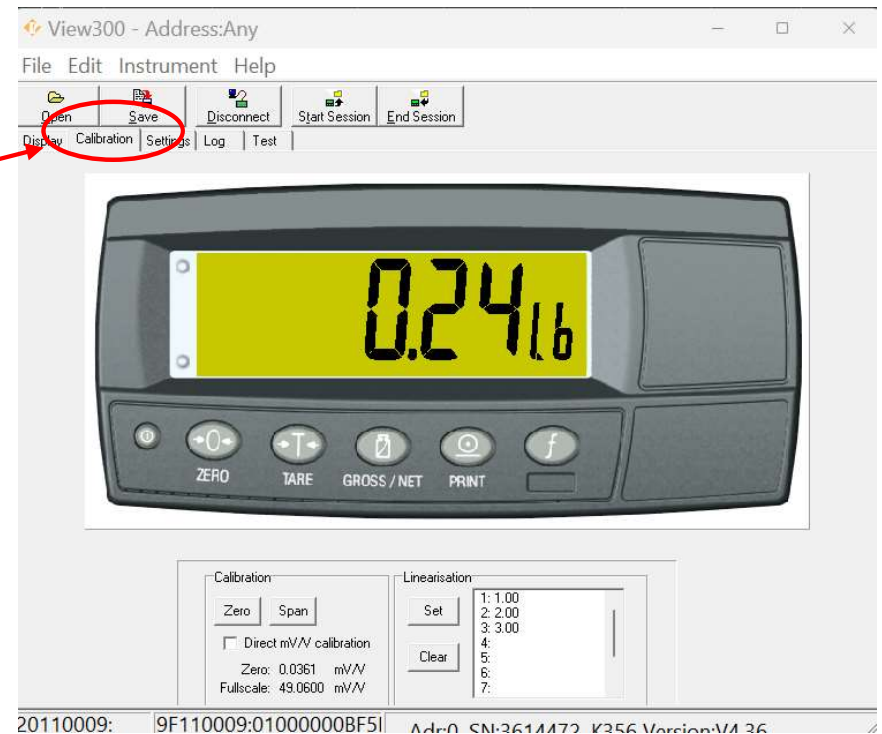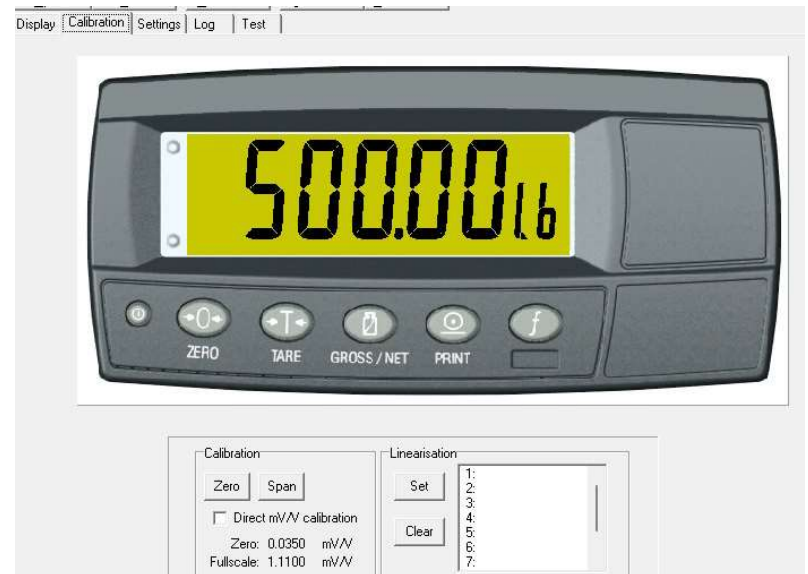

Showing the zeroing in process
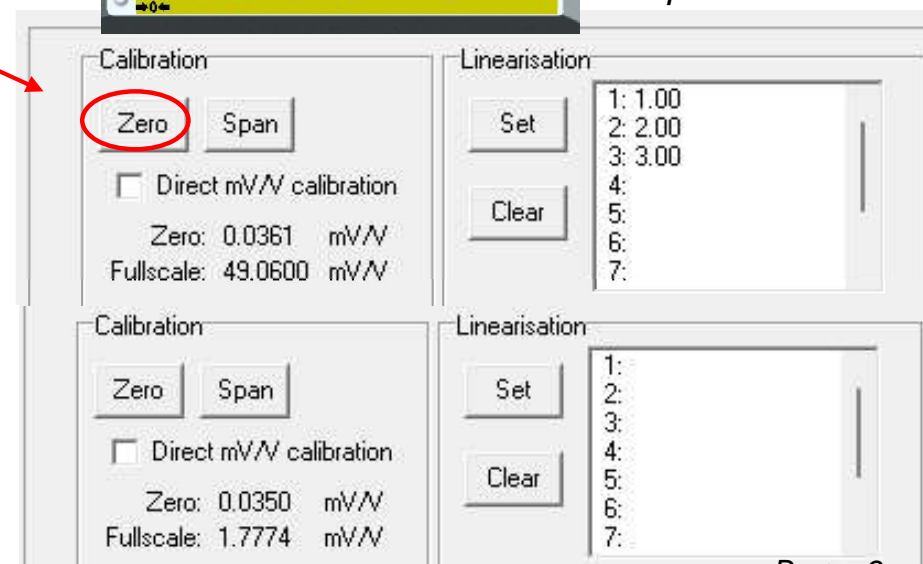
6.   Now, Place the maximum load on the scale you plan to use, example 500 lbs. Allow scale a minute to stabilize, then press "SPAN". A small popup window will appear, enter the weight you have on the scale and press OK. The span will me measured and recorded to the calibration.


Showing the span in process

Step 6: Calibration Linearization

The linearization points are weight values between zero and the span value.

A maximum of 7 linearization points are available.

1. Select the weights to be used, in this example we will use three 125 lbs. weights. Place the weight on the scale and let the displayed value stabilize.
2. Press line one of the linear table and then press "SET"
3. Enter the weight that was placed on the scale and then press :OK". The linear point will me measured and recorded for point number 1.
4. Repeat this process for the next two weights of 250.00 and 375.00 lbs.

Linearization in process
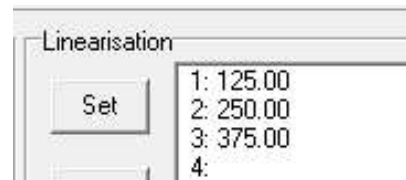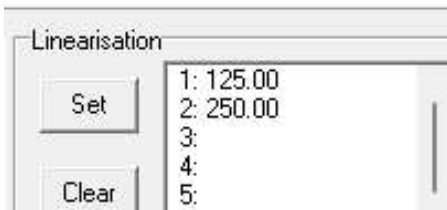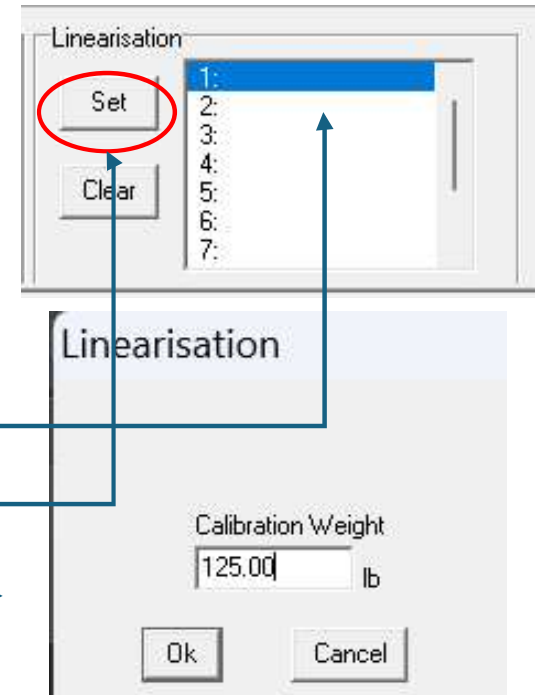
The calibration is now complete and automatically saved.

A highly recommended precautionary step is to save the indicators complete setup and calibration data. This will allow one to review it's settings if ever necessary, as well as, in the case where the settings or calibration should become changed or corrupted, the saved file can be uploaded to the indicator, bringing it back to the sate as it was at this point.

Select the "File" tab, then select "Save". Save the file, naming the file with the scales serial number and date of the calibration.