



Industrial Weighing Systems

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CHAPTER 4: SETUP MENU DESCRIPTIONS AND PROCEDURES

4.1 SETUP MENU DESCRIPTIONS

This section provides more detailed descriptions of the selections found in the Setup Menu Chart. Factory-set defaults are shown in bold with a checkmark (✓).

Table 4-1 shows the selections that are not allowed for “Legal-for-Trade” applications:

NAME/CODE	DESCRIPTION	CODE/VALUE
F1 Graduations	Specifies number of full-scale graduations. Value should be consistent with legal requirements and environmental limits on the useful system resolution.	500 1,000 1,500 2,000 2,500 3,000 4,000 5,000 6,000 8,000 10,000 ✓ 12,000 20,000 30,000 40,000 50,000
F2 Span Gain	Span Gain is related to A/D integration time. The larger the span gain, the higher the internal resolution, but the slower the update speed. Note that the scale must be re-calibrated whenever this parameter is altered. See Appendix C for more information.	25 50 75 100 ✓ 150 200
F3 Zero Track Band	Selects the range within which the scale will automatically zero. Note that the scale must be in standstill to automatically zero. Selections are in Display Divisions.	0d 0.5d ✓ 1d 3d 5d
F4 Zero Range	Selects the range within which the scale may be zeroed. Note that the indicator must be in standstill to zero the scale.	100% ✓ 1.9%
F5 Motion Band	Sets the level at which motion is detected by comparing the present display update with the previous one. If motion is not detected for two seconds or more, scale is in standstill and can process a Print or Zero command. Maximum value varies depending on local regulations.	1d ✓ 3d 5d 10d
F6 Digital Filter	Averages weight readings to produce higher stability. The higher the filter number, the greater the stability but the slower the response time. Choose 8 or 12 unless a very fast response is needed. Use the “Auto” setting to automatically determine the filter length as you are weighing.	Auto ✓ 1 2 4 8 12 16 32
F7 Overload Limit	Selects the desired formula which determines the point at which the indicator shows overload. All selections are based on the primary unit selected in F8. "FS" = Full scale in primary units.	FS FS + 2% ✓ FS + 1d FS + 9d
F8 Calib. Unit	Selects the primary base unit to be used in the calibration process. Also the default unit for normal operation. "1" = primary unit is lb. "2" = primary unit is in kg.	1 ✓ 2

NAME/CODE	DESCRIPTION	CODE/VALUE
F9 Display Divisions	Determines the desired weight increments. Value should be consistent with legal requirements.	1√ 2 5
F10 Decimal Pt.	Determines location of the decimal point.	0√ 0.0 0.00 0.000 0.0000 00
F11 Custom Unit Multiplier	Actuates the function that allows you to enter a multiplier for the custom unit. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence 1√
F12 Custom Unit Enable	Used to enable or disable the custom unit whenever the UNITS key is pressed. This feature must be disabled for commercial applications. "0" = Disable custom unit "1" = Enable custom unit	0 1√
F13 Piece Count Enable	Used to enable or disable the piece count feature. This feature must be disabled for commercial applications. "0" = Disable piece count "1" = Enable piece count	0 1√
F14 lb/kg Conversion Enable	Used to enable or disable the lb to kg conversion whenever the UNITS key is pressed. "0" = Disable conversion "1" = Enable conversion	0 1√
F16 Zero Calibration	Places indicator into the zero calibration routine. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence
F17 Span Calibration	Places indicator into the span calibration routine. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence
F18 View Calibration	Actuates the function that allows you to view both the zero and span calibration value. The values displayed in this function are valid only after Calibration (F16 & F17) has been successfully completed. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence
F19 Key-in Zero	Allows you to key-in known zero calibration value in case of memory loss in the field. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence
F20 Key-in Span	Allows you to key-in a known span calibration value in case of memory loss in the field. Scrolling down with the ZERO key one level begins the procedure.	Press ZERO key to begin sequence
F21 Factory Reset	This sub-menu will reset all parameters in the "F" and "A" menu to the default settings. USE WITH CAUTION!	Press the ZERO key twice to execute.

CHAPTER 6: CALIBRATION

6.1 CALIBRATION OVERVIEW

The indicator is calibrated by following the procedures embedded in F16 (Zero) and F17 (Span) of the Setup Menu. Each procedure enters a value into the indicator's non-volatile memory - F16 the zero value (deadweight) and F17 the span value (test weight). The minimum test weight that can be used is 1% of full-scale capacity. After the two calibration procedures are executed successfully, you should record both calibration values in Table 6-1 using the F18 View procedure.

In the unlikely event that either value is lost while in the field, the setup menu makes provisions for re-entering these values via F19 and F20, thus eliminating the need for re-calibration with test weights.

NOTE: This chapter assumes that the indicator is in Setup ("F") Menu mode. If the indicator is not in Setup Menu mode, refer to Chapter 3 for instructions.

6.2 ZERO CALIBRATION (F16)

1. While in the Setup mode, scroll to "**F 16**", then scroll down once using the ZERO key to enter zero calibration menu. The display will momentarily show "**C 0**" followed by a value. This value is the internal A/D count and can prove useful when trying to troubleshoot setup problems.
2. After making sure that there are no test weights on the platform, press the ZERO key again to zero out the displayed value.
3. Press the NET/GROSS key to save the zero point value. The display will show "**EndC0**" momentarily, then revert back up to F16. At this time, proceed to the F17 span calibration to complete indicator calibration.

6.3 SPAN CALIBRATION (F17)

1. While in the Setup mode, scroll to "**F 17**", then scroll down once using the ZERO key to enter span calibration menu.
2. The display will momentarily show "**C 1**" for the span calibration, followed by a value with one flashing digit. This value will be zero with the Decimal Point parameter selected in F10. Place the test weight on the weighing mechanism.
3. Use the four directional keys (shown in Figure 6-1 below) to adjust the displayed value to the actual test weight value. Increase the flashing digit by pressing the UNITS key. Decrease the flashing digit by pressing the ZERO key. Pressing the PRINT key or the TARE key will change the position of the flashing digit.

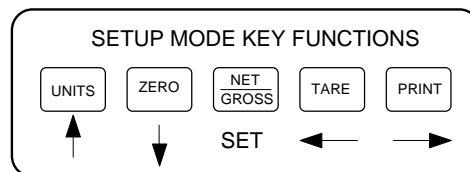


Figure 6-1: Setup Menu Key Assignments

4. After setting the exact value, press the NET/GROSS key to save the value.
5. If the calibration was successful, the display will show "**EndC1**" momentarily, then revert back up to F17. At this time it is suggested that the calibration values be recorded for future use (see Section 6.4).
6. If the calibration was *not* successful, one of the error messages below will appear. Take the indicated action to correct the problem, then perform a new calibration.

"**Err0**" - The calibration test weight or the adjusted keyed-in weight is larger than the full capacity of the scale. Change the calibration test weight or check the input data.

"**Err1**" - The calibration test weight or the adjusted keyed-in weight is smaller than 1% of the full capacity of the scale. Change the calibration test weight or check the input data.

"**Err2**" - The internal resolution of the scale is not high enough to accept the calibration value. Select a larger parameter for the Span Gain (F2). SEE APPENDIX C FOR MORE INFORMATION.

6.4 VIEW CALIBRATION VALUES (F18)

Note: The values displayed in this procedure are valid only after a successful calibration has been performed using F16 and F17.

1. While in the Setup mode, scroll to "**F 18**", then scroll down once using the ZERO key to enter View calibration menu.
2. The display will momentarily show "**CAL 0**" followed by a value. This value is the **zero calibration value** and should be recorded in the table below. Press any key to continue.
3. The display will momentarily show "**CAL 1**" followed by another value. This value is the **span calibration value** and should also be recorded in the table below. Press any key to return to upper level (F18).

INDICATOR	ZERO CALIBRATION VALUE	SPAN CALIBRATION VALUE
S/N:		

Table 6-1: Calibration Value Table

6.5 KEY-IN ZERO CALIBRATION VALUE (F19)

Note: This procedure is intended for emergency use only in the case of non-volatile memory loss. A valid zero calibration value, obtained from a successful F16 calibration procedure, must be used.

1. While in the Setup mode, scroll to "**F 19**", then scroll down once using the ZERO key.
2. The display will momentarily show "**CAL 0**", followed by a flashing zero. Use the four directional keys (shown in Figure 6-1) to adjust the displayed value to the zero calibration value.
3. After setting the exact value, press the NET/GROSS key to save the value.
4. The display will show "**E CAL 0**" momentarily, then revert back up to F19.

6.6 KEY-IN SPAN CALIBRATION VALUE (F20)

Note: This procedure is intended for emergency use only in the case of non-volatile memory loss. A valid span calibration value, obtained from a successful F17 calibration procedure, must be used.

1. While in the Setup mode, scroll to "**F 20**", then scroll down once using the ZERO key.
2. The display will momentarily show "**CAL 1**", followed by a flashing zero. Use the four directional keys (shown in Figure 6-1) to adjust the displayed value to the span calibration value.
3. After setting the exact value, press the NET/GROSS key to save the value.
4. If the entered value is greater than zero, the display will show "**E CAL 1**" momentarily, then revert back up to F20. If a value of zero is entered, the indicator will briefly show "**Err 5**", then revert back to the screen described above in Step # 2.