



PROVIDING SOLUTIONS IN:

Tension Control
Process Weighing
Vibration Monitoring
Local Field Service

Quick Guide to Enviro Scale Setup

To enter menus press and hold Program/Enter

Press the Over/Under/Next key to scroll through selections.

1. Setup
2. Config
3. APP
4. Cal
5. Done

Press the Program/Enter key to enter the selection.

Keypad operation:

- Program/Enter key = accept displayed value. Advance to next step
- Over/under/next = scroll forward or moves flashing selection one place to right
- B/G/NET = Backs up one step in programming mode.
- UNITS = scrolls forward through choices or increments value selection.
- 1 = decrements selected digit value
- TARE = moves backwards through selection or moves flashing selection one place to left.
- ZERO = Resets value to all zeros
- Print = moves decimal place to the right.

The parameter settings in the Setup, Config, and APP menus will determine how the unit will operate.

Setup Menu

- Time Format for display and print out
 - 12 hour format
 - 24 hour format
- Set-ti - Set time (always set in 24 hour format)
- Set-da – Set date (MM.DD.YY)
- Id - unit ID (1-32)
- Port 1 (set serial port 1 output)
 - Off – no serial output
 - Poll – Computer polls for output
 - Pollid – Computer polls for output using unit ID
 - Contin – continuous output
 - Button – transmit when print button pressed



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- Auto – Transmit occurs when autoprint threshold is met or exceeded
 - diS – continuous output using remote display format
- Baud – set baud rate port 1
- Dbit – set data bits (7 or 8) Port 1
- P – Parity setting (odd/even/none) Port 1
- Busy – set handshaking (no, lo, hi) Port 1
- Opti – include time on output Port 1
- Opda – include date on output Port 1
- Opid – include ID on output Port 1
- Port 2 (set port 2 output)
 - Off
 - Poll
 - Pollid
- Baud Port 2
- Dbit Port 2
- P Port 2
- Opte Port 2
- Opda Port 2
- Opid Port 2
- Int – set intensity of leds on front display

Config Menu

- Cap – Scale capacity
- Units – set up available units
- P-units - Primary units of measure
- Lboz – enable ability to display lb oz as units
- Cust – custom units (primary units * c-factor set in App)
- Azt – auto zero tracking (set per division/increment/graduation)
 - Off
 - 0.5
 - 1
 - 3
- Bal – Motion band (set per division/increment/graduation)
 - Off
 - 0.5
 - 1
 - 3



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- O.r – zero tolerance range (set as % of capacity)
 - 100
 - 2
- D – division size
 - 50, 20, 10, 5, 2, 1, 0.5, 0.2, 0.1, 0.05, 0.02, 0.01, 0.005, 0.002, 0.001, 0.0005, 0.0002, 0.0001
- Filter – (intended to minimize effects of motion, vibration, and wind currents)
- Flf – Flush filter. Allows switch to fast filter rate if weight changes quickly
- Tare – enable tare function
 - Off – tare inactive
 - On – tare is active
 - On-Clr – automatically clears when gross wt returns to zero.
- Hl – overload limit (set as % of capacity)
 - 102.5
 - 103
 - 105
 - 110
 - 300
- Ul – underload limit (set as % of capacity below zero)
 - 5.5
 - 10
 - 25
 - 50
 - 100
- D rate – display update rate (set in tenths of seconds)
 - From 0.1 to 1.0
- P1 – serial port 1 output format
 - GTN – if in gross mode will print gross weight. If in net mode, will print gross/tare/net weights
 - nEt – will print net only
- P2 – serial port 2 output format
 - GTN
 - nEt

APP menu

- X.xxupd – display of micro volts per division. Should be greater than 1.0. Read only. If less than 1.0, adjust division size.
- Acc – Enable/disable accumulator
- A thld – Autoprint and accumulator threshold. Number of divisions to meet or exceed to trigger auto print or accumulator.



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- Aout – auto print enable when accumulate weight met.
- Beep – beep tone for key press
- C-fact - conversion factor for custom units. Will multiply weights, in primary units, to get custom units. Divide primary units by C-factor to get display in custom units.

Cal Menu

- SL – security level – see manual for complete setup information.
- DI - (deal load) flashes dl then goes to raw counts for condition of scale input
- Calat 1 – reference weight value for first calibration point (used in both single point or multiple point calibration.
- Calat 2 – 4 – reference weight values for second to forth calibration points in a multiple point calibration.
- Load 1-4 - prompt to place test load on scale for each cal point. Will show raw counts for weights.

Calibrating the scale

1. Press and hold Program/Enter key until “Setup” appears
2. Press Program/Enter to enter the Setup menu.
 1. Set the parameters in setup menu. These settings will determine how the unit will handle the serial ports.
3. Press the Over/under/next key to go to “Config”
4. Press Program/Enter to enter the config menu.
 1. Set the parameters in the config menu. These settings will determine how the unit will handle the weight readings and how it responds to changes in weight and tolerances used.
5. Press the Over/under/next key to go to “APP”
6. Press Program/Enter to enter the APP menu.
 1. Set the parameters in the App menu. These settings will determine how the unit will handle the printer outputs. Also sets up the C-factor for custom units.
7. Press the Over/under/next key to go to “Cal”



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8. Press Program/Enter to enter the Cal menu.
 1. SL – Press the Over/under/next key to set the Security Level. Enter to accept.
 2. Unit flashes –dl--, then gives raw counts for deadload weight. Scale should be empty except for dead load at this time.
 - If the counts do not show zero, press the ZERO key to set this new cal zero point.
 - If the counts show zero, then you can press the enter key to go to next step.
 3. Unit flashes Calat 1, then gives a reference weight value.
 - If this is the value for the test weight that will be used, press enter to accept.
 - If this is not the value for the test weight that will be used, change the value to the correct test weight value then press enter
 4. Unit flashes Load 1, then shows the raw counts.
 - Place your test weight on the scale
 - When counts settle, press enter.
 5. Unit will show the weight reading of the first reference point.
 - If this is a multiple point calibration, press enter for next step.
 - Unit will flash Calat 2, Calat 3, Calat 4 depending on next step. Repeat steps 3 – 5 for each additional calibration point.
 - If this is a single point calibration, press #2 key.
 - Unit will show microvolts per division. This should be greater than 1.0. If not greater than 1.0, then return to Config menu and increase the division size.
 - Press enter to return to CAL display.
 - Press over/under/next to go to “done”.
 - Press enter to accept. Press enter at “SAVE”.



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Operations setup:

Check weighing setup:

1. Press and hold the Over/Under/Next key until "CHEC" is displayed.
2. Press Enter to enter into the checkweigh setup menu.
 - a. Rec 1 will display
3. Press enter to accept recipe 1 or press over/under/next key to go to next recipe and enter.
4. Display shows EnA. Press over/under/next key to toggle between Y & N to enable this recipe. Press enter to accept.
5. diS displays. Press over/under/next key to toggle between Y & N to enable the display leds for this recipe. Press enter to accept.
6. Units will display. Press over/under/next key to toggle between the different unit selections. Press enter to accept.

NOTE: Only those unit selections enabled in the Units setting under the "Config" menu will be available here.

7. hAnd will be displayed. This is where you will set up the limits for the bar graph led display for under/accept/over. Use the over/under/next key to toggle between Y and N and enter to accept selection.

NOTE: Regardless of which selection you make, you will need to enter the values for the end points of the three categories, under, accept, over.

- a. If you select Y.
 - i. The leds will have the first led on the Under section lit. You will see a value on the display. Change this value to be the low end of the Under range of leds. Enter to accept.
 - ii. The leds will now have the entire under section and the first led in the Accept section lit. The value on the display should be changed to the low end value of the accept range. Enter to accept.
 - iii. The leds will now have the entire under and accept sections lit and the first led in the over section lit. The value on the display should be changed to the low end value of the over range amount. Enter to accept.
 - iv. The leds will now all be lit. The value on the display should be changed to the high end value of the over range amount. Enter to accept.
- b. If you select N
 - i. The leds will be scrolling back and forth. Place an acceptable weight on the scale. This will give you a starting weight display. Press enter. The leds for under will all be lit and the first of the accept will be lit. Adjust the value displayed to be the low acceptable value. Press enter to accept.
 - ii. Only the first led in the under range will be lit. Adjust the value displayed to be equal to the low value for the under range. Press enter to accept.



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- iii. The entire under and accept section leds will be lit and the first of the over section. Adjust the value displayed to be equal to the low end of the over range. Press enter to accept.
- iv. The entire bar graph will be lit. Adjust the displayed value to be equal to the high end of the over range. Press enter to accept.
- c. The display will briefly display CSaved and return to weight display.
- d. Repeat these steps for the other recipes if needed.

Check Weighing operation

- 1. Select the check weigh recipe 1-4 you wish to use by pressing the 1-4 button.
 - a. Recipe led should light.
- 2. Place weight on scale.
 - a. Leds will light based on weight.
 - i. If only amber leds, then under weight
 - ii. If all amber and any green and no red, then acceptable
 - iii. If all amber and green and any red, then over weight.

Accumulator and Serial output

- 1. There are four settings to select from
 - a. Auto accumulate and auto print
 - i. Set serial port output to Auto under Setup menu
 - ii. Set Aout to Y under APP menu
 - b. Auto accumulate and manual print
 - i. Set serial port output to Auto under Setup menu
 - ii. Set Aout to N under APP menu
 - c. Manual accumulate and auto print
 - i. Set serial port output to button under Setup menu
 - ii. Set Aout to Y under APP menu
 - d. Manual accumulate and manual print
 - i. Set serial port output to button under Setup menu
 - ii. Set Aout to N under APP menu
- 2. When place weight on scale, and it comes out of motion
 - a. If Selection a above (auto/auto),
 - i. Will automatically add weight to accumulator even if out of range
 - ii. Will automatically send output from serial port



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- b. If selection b above (auto/manual)
 - i. Will automatically add weight to accumulator even if out of range
 - ii. Will require the print button pressed to send output from serial port
- c. If selection c above (manual/auto)
 - i. Will require the Program/Enter button pressed to add weight to accumulator
 - ii. Will automatically send output from serial port when weight is added to the accumulator with the Program/Enter button
- d. If selection d above (manual/manual)
 - i. Will require the Program/Enter button pressed to add weight to accumulator
 - ii. Will require the print button pressed to send output from serial port

To enable the Accumulator, press and hold the Tare Button

Printing the Accumulator

- 1. To view the accumulator
 - a. Press the Over/Under/Next key momentarily (requires gross weight to be at zero)
 - b. Display will then alternate between number of weighments that were added to accumulator and the accumulated weight
 - c. Press the Over/Under/Next key again to exit to normal weight again, or after 30 seconds, unit will return to normal mode.
- 2. To Print the accumulator
 - a. While viewing the accumulator
 - i. Press the print button
 - 1. Display will show ALL Y/N
 - a. If select ALL Y
 - i. Unit will print each weighment that was added to accumulator and the total accumulated value.
 - b. If select ALL N
 - i. Unit will print only the accumulated total.
 - 2. Display will then show Clr Y/N
 - a. If select Clr Y and press Program/Enter
 - i. Unit will clear accumulator
 - b. If select Clr N and press Program/Enter
 - i. Unit will not clear accumulator



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3. To clear accumulator
 - a. While viewing the accumulator
 - i. Press the ZERO key
 1. Unit will display Clr Y/N
 - a. If select Clr Y and press Program/Enter
 - i. Unit will clear accumulator
 - b. If select Clr N and press Program/Enter
 - i. Unit will not clear accumulator

NOTE: If you wish to change units of measure on the unit, accumulator must be cleared.

Peak Hold

1. To enable Peak Hold
 - a. Press and hold the Over/Under/Next button until displays CHEC
 - b. Momentarily press Over/Under/Next button to display HOLD
 - c. Press Program/Enter to display HOLD (Y or N)
 - i. Press Over/Under/Next button to toggle Y/N to Y.
 - ii. Press Program/Enter to accept to display CSaved
2. Press #1 key to place the unit into Peak Hold mode.
 - a. First three leds of under/accept/over sections will flash
 - b. Leds for #1,2,& 3 buttons will turn on.
 - c. Unit will now show peak weight.
3. Press #2 button to go out of peak mode without losing peak value
4. Press #3 button to exit peak mode and clear peak value.



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The unit has several different outputs from the serial port based on the settings of the unit. Below are screen shots showing how each of the different setups will look.

Serial port output

Set up to include time, date, and ID. If one or all of these are not selected to print, the output would be the same, except without the non selected data.

Data collected is shown ASCII format.

Output format GTN and unit in gross mode.

```
2.000 1b GR
10:14:06 AM
05/12/10
Scale Id 3
```

Output format GTN and unit in Net mode

```
4.224 1b GR
2.224 1b TA
2.000 1b NT
10:17:43 AM
05/12/10
Scale Id 3
```

Output format NET and unit in Gross mode

```
2.224 1b GR
10:20:39 AM
05/12/10
Scale Id 3
```

Output format NET and unit in NET mode

```
1.998 1b NT
10:20:56 AM
05/12/10
Scale Id 3
```



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Print accumulator with All = N

```
10:32:59 AM
05/12/10
Scale Id  3

12 Accumulations =  24.220 lb GR
```

Print accumulator with ALL = Y

```
10:32:25 AM
05/12/10
Scale Id  3

Weight  1 =  2.000 lb GR
Weight  2 =  2.000 lb GR
Weight  3 =  2.224 lb GR
Weight  4 =  2.000 lb GR
Weight  5 =  2.000 lb GR
Weight  6 =  2.000 lb GR
Weight  7 =  2.000 lb GR
Weight  8 =  2.000 lb GR
Weight  9 =  2.000 lb GR
Weight 10 =  2.000 lb GR
Weight 11 =  1.998 lb GR
Weight 12 =  1.998 lb GR
12 Accumulations =  24.220 lb GR
```

Print after each addition to accumulator

```
Weight 13 =  2.000 lb GR
Weight 14 =  2.000 lb GR
```



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Continuous output (shows lower case gr as weight is changing and upper case GR when stable)

	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.000	lb	GR
	0.002	lb	gr
	0.010	lb	gr
	0.200	lb	gr
	0.426	lb	gr
	0.998	lb	gr
	1.728	lb	gr
	2.142	lb	gr
	2.220	lb	gr
	2.224	lb	gr
	2.224	lb	gr
	2.224	lb	gr
	2.224	lb	gr
	2.224	lb	gr
	2.224	lb	gr
	2.224	lb	gr
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	2.224	lb	GR
	2.224	lb	GR

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Output for remote display (just outputs weight with no carriage returns or line feeds in the output string.)

[illegible]