WEIGH-TRONIX

TT-830 Bench Scale
User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la Class A prescrites dans le Reglement sur le brouillage radioelectrique que edicte par le ministere des Communications du Canada.

EUROPEAN COUNTRIES

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which the user may be required to take adequate measures.

CAUTION

Risk of electrical shock. Do not remove cover. No user service-able parts inside. Refer servicing to qualified service personnel.

Weigh-Tronix reserves the right to change specifications at any time.

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Specifications

Power Input	115 Volts AC, 50/60 Hz single phase *Optional* 230 Volts AC, 50/60 Hz single phase
Operational Keys	Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0-9, Decimal Point and Five Soft Keys labeled per selected operational routine.
Operational Annunciators	Displayed symbols indicate motion, center of zero, unit of measure and more.
Display	5" W x 1.33" H dot matrix LCD, cold cathode flourescent backlight (240 X 64 dot layout)
Display rate	Selectable, 0.1 to maximum readable updates
A to D Conversion Rate	60 times per second
Unit of Measure	Pounds, kilograms, grams, ounces, pounds and ounces and two selectable custom units
Capacity Selections	10 (5); 50 (25); 100 (50); lbs (kg)
Incremental Selections	Multiples and sub multiples of 1, 2, 5
Displayed Resolution	NTEP pending at 10,000d / configurable
Audio Output	Audio tone for key contact assurance or operational alarms
Time and Date	Battery protected real time clock is standard
Internal Resolution	1,000,000 counts analog, Quartzell™ transducer = 2,000,000
Harmonizer™ digital filtering:	Fully programmable to ignore noise and vibration
Standard input and outputs:	Four communications choices: Com 1: RS232, RS-485/422 Com 2: RS232, 20 mA current loop (*One bi-directional signal per port*)
Available Options	- DC operation at 10 to 32 VDC, 3.5 Amp - OPTO 22 I/O Modules - Remote Expanded Control Interface for 8, 16, 24, or 32 OPTO 22 I/O Modules - Alpha-numeric, PC style serial keyboard
Operating Temperatures	14 to 104° F (-10 to 40° C), 10 to 90% relative humidity
Dimensions	Platform: 12" x 14" (50- and 100-lb models) Platform: 8.5" dia. (10-lb models) Overall: 14" W x 17" D x 4.5" H (35.6cm W x 43.2cm D x 11.4cm H)
Weight	18.5 lb, 8.4 kg
Agencies	UL/CUL pending CE pending NTEP pending
Warranty	2 year

Introduction

About This Manual

This manual covers the information you need to understand the operation of your Table Top 830 (TT-830) bench scale.

Major sections of this manual are headed by titles in a black bar like *Introduction* above. Subheadings appear in the left column. Instructions and text appear on the right side of the page. Occasionally notes, tips, and special instructions appear in the left column.

TT-830 Bench Scale

The TT-830 is a completely programmable table top scale with a Quartzell™ weight sensor. See the Specifications for a complete list of standard features.

TT-830 Front Panel

The TT-830 front panel is shown in Figure 1.

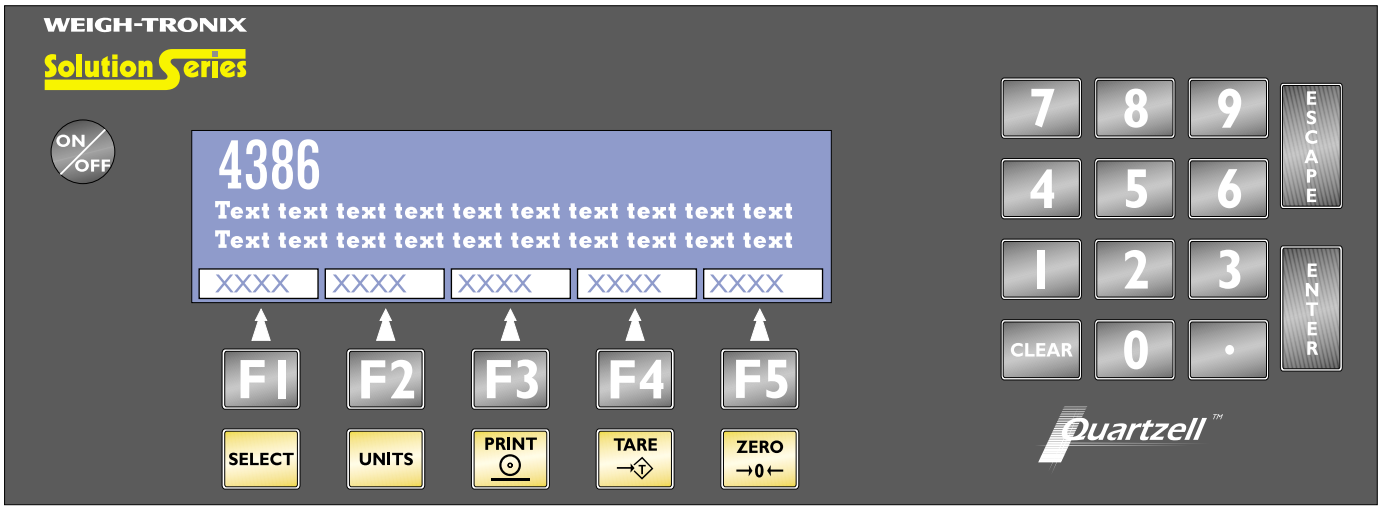


Figure 1
TT-830 Front Panel

The front panel includes the following:

- 240 x 64 dot matrix LCD display with cold cathode fluorescent backlight
- Five variable function soft keys
- Numeric keypad
- SELECT key
- UNITS key
- PRINT key
- TARE key
- ZERO key
- CLEAR key
- ESCAPE key
- ENTER key
- Decimal point key

Main Display

The main display is a 240 x 64 dot matrix LCD display with cold cathode fluorescent backlight. It can display graphics, words and numbers. This flexibility allows graphics and alphanumeric characters to be displayed at the same time. There are 33 displays available on the TT-830. See the *Service Manual* for all the examples. Your system will be configured for your particular needs. The screen you see will depend on what weighing application you are performing.

Front Panel Keys

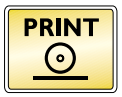
The keys on the front panel of the TT-830 are of two types, hard keys and soft keys. Hard keys are labeled directly and soft key labels appear on the display. Soft keys (F1-F5) function differently at different times and their labels appear on the main display and they change as needed.

Hard Keys

Below are brief descriptions for each of the hard key functions:

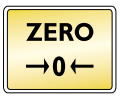
Repeatedly press the **SELECT** key to scroll through the available weight reading displays. (Examples - gross, net, tare, minimum, maximum, etc.)

Press the **UNITS** key to scroll through the available units of measure.



Press the **PRINT** key to send data to a connected printer.

Press the **TARE** key to enter a tare weight, then press **SELECT** to see the net display mode.



Press the **ZERO** key to establish a zero reference. A center-of-zero icon will be displayed. During motion an **M** will appear below the center-of-zero icon.

Press the **ESCAPE** key to back out of menus or cancel a numeric entry without accepting the value.

Press the **CLEAR** key to clear values from the display.

Press the **ENTER** key to enter a keyed in value or accept a displayed choice.

Press and hold the ON/OFF key for five seconds to turn the unit off.

The numeric keypad is for entering numbers.

Soft Keys

Soft keys are so-called because their function is not fixed. Function can change as mode of operations change or as the program for your particular setup changes.

Their are five soft keys located directly below the display. If the keys are needed during any operation, a label for each active key appears in the display directly above. There are only five key labels available at one time but this does not limit the potential usefulness of these keys. Programs can be created to enable one key to access another level of operation with five more key names and functions.

Installing the TT-830

After unpacking the scale, place it on a level, stable surface. Plug it into an appropriate power source. The outlet must be properly grounded and readily accessible.

A new unit will power up ready to use. This scale is fully programmable. If you have a custom program resident in your unit, it will power up with that program active and ready to use.

Since custom programming is possible with this scale, the following pages only cover basic weighing procedures available when you receive a factory fresh scale.

To customize your unit you must write a program using the 830 SimPoser™ software available from Weigh-Tronix and download it to the scale.

Weighing Operation

The following instructions step you through a typical weighing operation:

1. Power up the indicator. If the display mode is not the one you want to use, repeatedly press the **SELECT** key until the display value you want (gross, net, etc.) is displayed. . .

   Your indicator may be configured with only one display value. Selecting other display values may not be an option with your particular setup.

2. Zero the scale by pressing the **ZERO** key. . .

   Display should read zero weight and the center of zero symbol is displayed.

3. Place object to be weighed on the scale. . .

   An ***M*** appears on the display during scale motion and the weight is displayed.

Pushbutton Tare Operation

To perform a tare operation with the **TARE** key, follow these instructions:

1. Zero the scale by pressing the **ZERO** key. . .

   Display shows zero weight.

2. Place container to be tared on the scale and press the **TARE** key. . .

   The display changes to a NET display and shows zero weight.

3. Place material to be weighed on the scale. . .

   Net weight is displayed.

Keypad Tare Entry

For entry of a known tare weight follow these instructions:

1. With the indicator showing gross weight, key in the tare weight using the numeric keys. . .

   A tare entry display shows the weight that you key in.

2. Press **ENTER** to accept this tare entry. . .

   The net weight is displayed in net mode.

Specialized Operations

Due to the unlimited variety of applications available for the TT-830, it is not practical to describe all the possible specialized operations in this manual. Each application program will be unique.

Specialized operations will offer you soft key choices specific to the application and will guide you with messages on the display.

Accessing Program Information

The time may come when you are asked by a service technician for information about your software program. There is a series of key strokes which will bring that information to the screen. Below are the instructions:

1. Press and hold the **ESCAPE** key until the TT-830 beeps.
2. Within five seconds, key in the number 111 and press **ENTER**.
3. Press the soft key labeled **VIEW**.
4. Press the soft key labeled **VERS**. The information will appear on the display.

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