

**Model 7815
Parcel Bench Scale**



User Instructions

Avery Weigh-Tronix is a trademark of the Illinois Tool Works group of companies whose ultimate parent company is Illinois Tool Works Inc (“Illinois Tool Works”). Copyright © 2017 Illinois Tool Works. All rights reserved.

No part of this publication may be reproduced by making a facsimile copy, by the making of a copy in three dimensions of a two-dimensional work and the making of a copy in two dimensions of a three-dimensional work, stored in any medium by electronic means, or transmitted in any form or by any means, including electronic, mechanical, broadcasting, recording or otherwise without the prior written consent of the copyright owner, under license, or as permitted by law.

This publication was correct at the time of going to print, however Avery Weigh-Tronix reserves the right to alter without notice the specification, design, price or conditions of supply of any product or service at any time.

Table of Contents

	<i>page</i>
Table of Contents	3
Chapter 1 General information and warnings	5
About this manual	5
Text conventions	5
Special messages	5
Installation	6
Electrical installation	6
Pluggable equipment	6
Wet conditions	6
Routine maintenance	7
Cleaning the machine	7
Training	7
FCC and EMC declarations of compliance	8
Chapter 2 Specifications	9
Chapter 3 Initial Setup	12
Unpacking the Scale	12
Installing the Scale	12
Chapter 4 Operation	13
Power Up Test Sequence	13
Model 7815 resident display	13
Remote Display	13
Chapter 5 Accessing the Menu Mode	14
Diagnostic (DIAG) Mode	14
Step-by-Step Instructions for Diag Mode	16
Configuration Mode	17
Step-by-Step Instructions for CONF Mode	17
Calibration (CAL) Mode	18
Step-by-Step Instructions for CAL Mode	18
Re-Calibration Mode	19
Step-by-step Instructions for RE-CAL Mode	20
Review/Test Scale Settings	20
Chapter 6 Communication	22
Communication Setting	22
Chapter 7 Error Codes and Troubleshooting	23
Troubleshooting	23
Chapter 8 Spare parts	26

1 General information and warnings

1.1 About this manual

This manual is divided into chapters by the chapter number and the large text at the top of a page. Subsections are labeled as shown by the 1.1 and 1.1.1 headings. The names of the chapter and the next subsection level appear at the top of alternating pages of the manual to remind you of where you are in the manual. The manual name and page numbers appear at the bottom of the pages.

1.1.1 Text conventions

Key names are shown in **bold** and reflect the case of the key being described. This applies to hard keys and onscreen or soft keys.

Displayed messages appear in ***bold italic*** type and reflect the case of the displayed message.

1.1.2 Special messages

Examples of special messages you will see in this manual are defined below. The heading words have specific meanings to alert you to additional information or the relative level of hazard.



ELECTRICAL WARNING!
THIS IS AN ELECTRICAL WARNING SYMBOL.
ELECTRICAL WARNINGS MEAN THAT FAILURE TO FOLLOW SPECIFIC PRACTICES OR PROCEDURES MAY RESULT IN ELECTROCUTION, ARC BURNS, EXPLOSIONS OR OTHER HAZARDS THAT MAY CAUSE INJURY OR DEATH.



CAUTION!
This is a Caution symbol.
Cautions give information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.



NOTE: *This is a Note symbol. Notes give additional and important information, hints and tips that help you to use your product.*

1.2 Installation



DANGER: RISK OF ELECTRICAL SHOCK. NO USER SERVICEABLE PARTS. REFER TO QUALIFIED SERVICE PERSONNEL FOR SERVICE.



CAUTION: Installation, configuration, and servicing are only to be done by qualified service personnel as authorized by Avery Weigh-Tronix.

1.3 Electrical installation



CAUTION: The power cable must be connected to an earth-grounded electrical outlet. The electrical supply must have a circuit breaker with an appropriate rating to protect from over-current conditions.

For your protection, all electrical (110V or 230V) equipment used out of doors or in wet or damp conditions should be supplied from a correctly fused power source and protected by an approved ground fault protection device (RCD, GFCI etc.)

IF IN DOUBT SEEK ADVICE FROM A QUALIFIED ELECTRICIAN.

1.3.1 Pluggable equipment

Pluggable equipment must be installed near an easily accessible socket outlet.

1.3.2 Wet conditions

Under wet conditions, the plug must be connected to the final branch circuit via an appropriate socket / receptacle designed for washdown use.

Installations within the USA should use a cover that meets NEMA 3R specifications as required by the National Electrical Code under section 410-57. This allows the unit to be plugged in with a rain tight cover fitted over the plug.

Installations within Europe must use a socket which provides a minimum of IP56 protection to the plug / cable assembly. Care must be taken to make sure that the degree of protection provided by the socket is suitable for the environment.

1.4 Routine maintenance



IMPORTANT: This equipment must be routinely checked for proper operation and calibration. Application and usage will determine the frequency of calibration required for safe operation.

Always turn off the machine and isolate from the power supply before starting any routine maintenance to avoid the possibility of electric shock.

Make sure that it is placed securely on a flat and level surface.

1.5 Cleaning the machine

Table 1.1 Cleaning DOs and DON'Ts



DO	DO NOT
Wipe down the outside of standard products with a clean cloth, moistened with water and a small amount of mild detergent	Attempt to clean the inside of the machine
	Use harsh abrasives, solvents, scouring cleaners or alkaline cleaning solutions
Spray the cloth when using a proprietary cleaning fluid	Spray any liquid directly on to the display windows

1.6 Training

Do not attempt to operate or complete any procedure on a machine unless you have received the appropriate training or read the instruction books.

To avoid the risk of RSI (Repetitive Strain Injury), place the machine on a surface which is ergonomically satisfactory to the user. Take frequent breaks during prolonged usage.

1.7 FCC and EMC declarations of compliance

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 présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la Classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère 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.

2 Specifications

Description

The Avery Weigh-Tronix Model 7815 is a digital electronic parcel bench scale specifically designed for shipping applications and is Legal-for-Trade.

The Model 7815 has a standard RS232 serial interface that enables it to be easily connected to a computer or other data-processing device.

Capacity/Resolution

Model	Capacity (lb)	n(max)
7815-75	150 x 0.1 lb	1500, 1500 ⁽¹⁾
7815-75	150 x 0.05 lb	3000, 3750 ⁽²⁾

(1) Factory Set (Type Approved) (2) Selectable (Not Type Approved)

Agency Certificates of Conformance



If unit is to be used as a commercial device, all local reporting and registration requirements must be followed.

United States: NTEP #00-096. For use as a Class III device from +5°C through +40°C
For use as a Class III device from +5°C through +40°C

Dimensions

14"L x 12.5" W x 4.2" H

Power Supply

UL/CSA approved in-line power supply with 6' line cord.
Input: 120 VAC +10%-15%, Standard 3 wire w/ground
Output: 15 VDC @.3 Amps DC

Frequency

60 Hz Standard

Power Requirements

0.1 amp maximum

Operating Temperature

42° to 104°F (5° to 40°C)

Construction

Die cast aluminum base with an ABS plastic weight platter.
Overload protection: Adjustable center stop, fixed corner stops.

Display

½" high, six-digit LCD.
Key panel with **ZERO** and **TEST** keys.
Optional remote display with 7ft. cable.

Scale Leveling

Level bubble located under weigh platter. Adjustable feet in each corner to level the scale.

Zero Window

Initial automatic zero setting is $\pm 10\%$ of maximum capacity—active at power up.
Manual zero setting range is $\pm 2\%$ of maximum capacity—active using the **ZERO** key.

Under Capacity Limits

Under capacity indication will be given with dashes appearing on the bottom line of the display whenever the display is below zero.

Over Capacity Limits

Over capacity indication will be given with dashes appearing on the top line of the display whenever the weighed item exceeds 9 divisions over the rated capacity of the unit. The scale will use the initial zero value for reference for over capacity determination.

Sealing

Access to the calibration switch can be secured with a lead-wire or pressure sensitive security seal. The remote and primary indicators have no metrological features that require the use of a security seal.

Internal Counts

The scale has 65,000 internal counts.

Dynamic Response

The time from when weight is applied to the scale until a stable weight display is displayed:

0–1000d	1.5 seconds
1000d+	2.0 seconds
	maximum mean average

Communications

Factory default settings: 9600 baud, 7 data bits, even parity, 1 stop bit.

Standard 9-pin pass through RS-232 interface cable included. Not a null modem.

RS-232 bidirectional, configurable 1200 to 19.K baud. Transmits weight and scale status whenever ASCII "W"<CR> is sent by a remote device.

3 Initial Setup

3.1 Unpacking the Scale

Remove contents of the shipping container and inspect the scale for evidence of shipping damage. Immediately report any damage to the shipper.

3.2 Installing the Scale

1. Mount the unit on a stable, level surface that is free from air currents and vibration. Be sure the weigh platter does not touch any adjacent surfaces.
2. To install the weigh platter flush with a countertop, use the dimensions below to guide your construction.

<u>Platform Dimensions</u>	<u>Minimum Cutout Dimensions</u>
14" W	14.75" W
12.5" D	13.25" D
4.2" Min. Ht.	

3. Loosen the collars on the leveling feet. Level the unit by using the level bubble under the platter as a guide. Be sure all four feet are in firm contact with the counter, then tighten all collars.
4. Make sure all power cords, remote display cables, etc. are not touching the live weighing surface.
5. Plug the unit into an appropriate voltage outlet, properly grounded.

4 Operation

4.1 Power Up Test Sequence

After the Model 7815 is properly installed and power is applied, the display will perform a countdown test to insure all display segments are functional.

After this test is completed, the display should show zero (**0.0**).

4.2 Model 7815 resident display



Figure 4.1 7815 resident display

If the display indicates a slightly “off” zero condition (either a number in the display or dashes at the bottom of the display), press the **ZERO** key. When the display shows **0.0**, it is ready to weigh.

Place item or parcel on the weigh platter and the weight will be displayed. This information can be transmitted when requested by the computer.

4.3 Remote Display

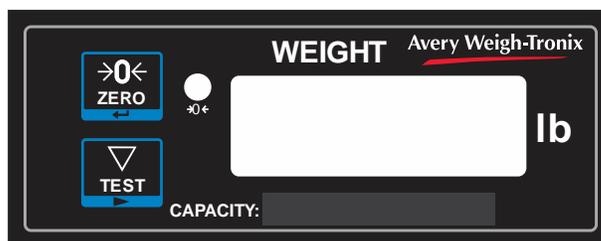


Figure 4.2 Optional Remote Display

Model 7815 scales can have an optional remote display (See [Figure 4.2](#)). The remote display has a keyboard and can be used in place of the resident display. To activate the remote display, power down the scale, plug the remote display cable end into the marked socket on the back of the unit. Reapply power and weight data will appear on both the resident and remote displays. The control keys (i.e., **ZERO** and **TEST**) are active on both displays in the Model 7815.

5 Accessing the Menu Mode

You can access the Menu Mode by pressing switch 1 shown in [Figure 5.1](#).

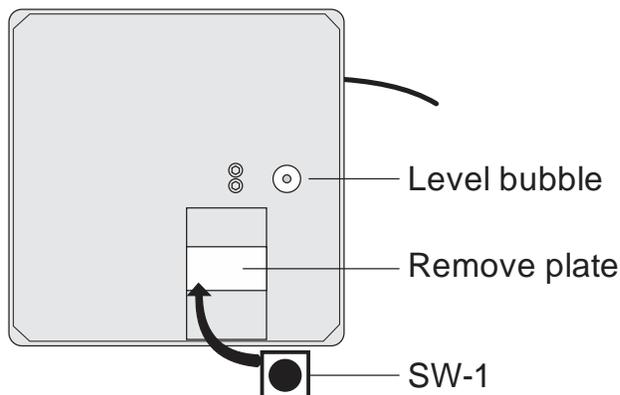


Figure 5.1 7815 switch location

In the Menu Mode, there are four modes available. They are:

Diagnostic Mode (DIAG)

Used to test areas of the scale's function.

Configuration Mode (CONF)

Used to configure the scale for your application.

Calibration Mode (CAL)

Used when calibrating the scale.

Recalibration Mode (RE-CAL)

Used to change resolution and rounding-type.

The structure for these menus is shown in [Figure 2](#). Following that are the step-by-step instructions for accessing the items within each menu.

5.1 Diagnostic (DIAG) Mode

The diagnostic (DIAG) mode menu lets you test specific areas of the unit's function. These areas are:

Display (DISP) - Shows the version and revision of the software, followed by a display segment test.

Input/Output (I-O) - To test the data I/O port, install a loopback connector and press the test button. The message PASS or FAIL is displayed. This test requires a jumper (short) between transmit and receive data lines.

Internal Counts (A/D) - Displays A/D data internal counts (factory use only).

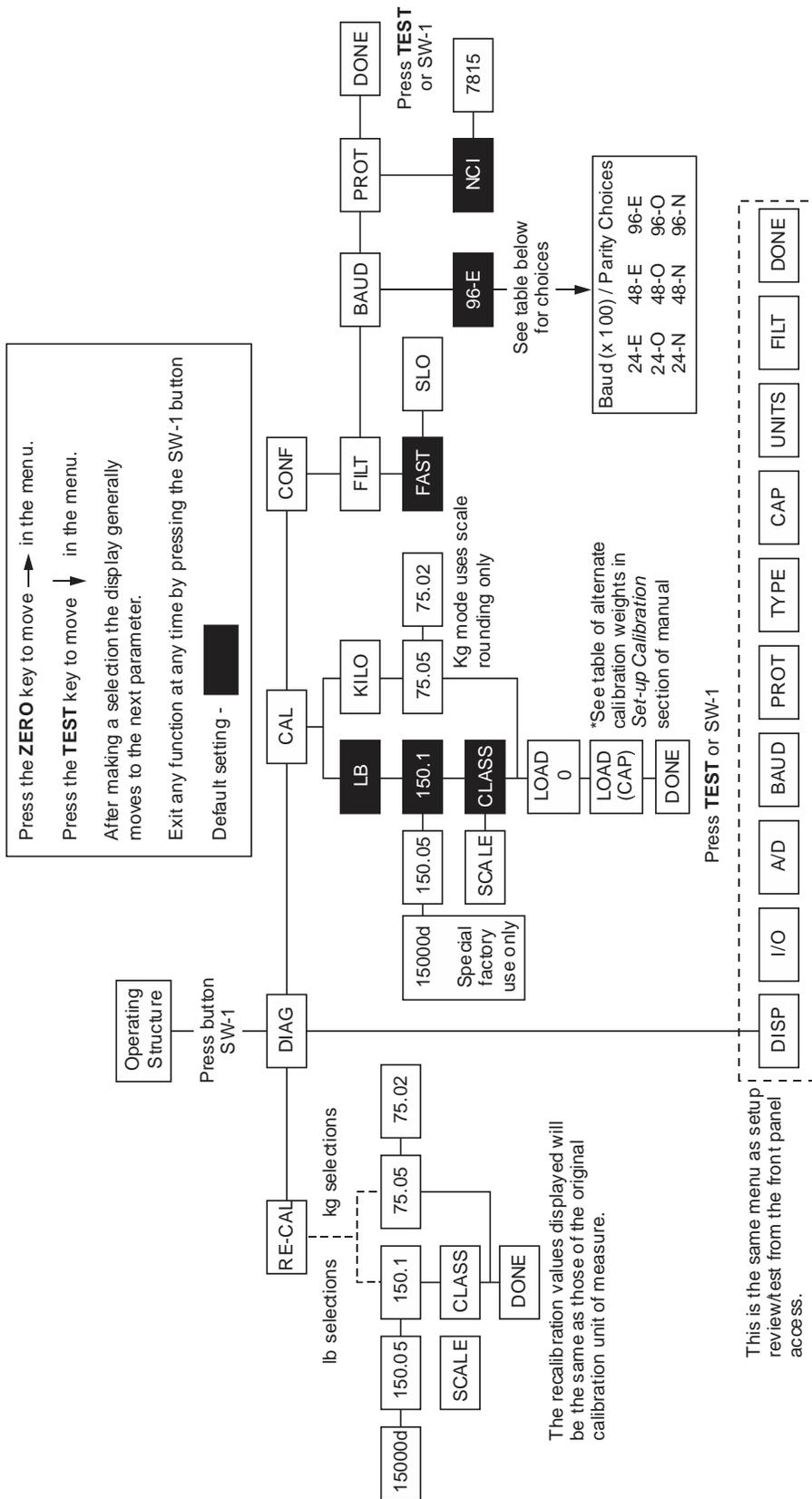


Figure 5.2 Menu structure

5.1.1 Step-by-Step Instructions for Diag Mode



Return to normal operating mode by pressing the SW-1 switch. Press the **ZERO** key to scroll through the lists of selections.

Press the **TEST** key to make a selection.

If you want to skip a test, press the **ZERO** key to scroll to the next test.

If you press the **ZERO** key to advance the display message to **DONE**, you can press **TEST** to return to the **DIAG** menu.

If you encounter any failure in these tests, contact your local Avery Weigh-Tronix dealer.

Follow these steps to access the tests in the **DIAG** menu. Refer to [Figure 5.2](#).

1. Press SW-1 ...
Display shows **DIAG**.
2. Press the **TEST** key ...
DISP is displayed.
3. Press the **TEST** key to perform the display test described earlier ...
Display test is performed and shows **DISP** after the test is completed.
4. Press the **ZERO** key to scroll to the I/O test ...
I-O is displayed. This stands for the Input/Output test.
5. With a loopback connector in place, press the **TEST** key to perform the I/O test ...
PASS or **FAIL** is displayed. If the test fails, the unit may have a serial interface failure.
6. Press the **ZERO** key to scroll to the internal count test ...
A/D is displayed. Tests A/D count data.
7. Press the **TEST** key to perform this test ...
Indicates internal A/D raw count. When weight is applied, the count value should increase proportionately.
8. Press the **TEST** key to stop the test ...

The remaining selections are for viewing current settings only. You can scroll through the menu to verify the settings, but to make changes, you must enter configuration or calibration.

5.2 Configuration Mode

The configuration (CONF) mode menu lets you configure the scale to your specific application. The items you can configure are as follows:

FILT (FILTER)	Adjusts the scale's response to fit environment. Factory default setting is FAST .
BAUD (BAUD)	Allows selection of appropriate baud rate and parity for computer interface. Factory default setting is 96-E .
PROT (PROTOCOL)	Allows selection of serial communication protocol for PC interfaces.

5.2.1 Step-by-Step Instructions for CONF Mode

Return to normal operating mode by pressing the SW-1 switch.

1. Press SW-1 ...

DIAG is displayed.
2. Press the **ZERO** key ...

CONF is displayed.
3. Press the **TEST** key ...

FILT is displayed.
4. Press the **TEST** key ...

The present filter setting is displayed. The two choices are **FAST** and **SLO**. When the proper selection is displayed, press the **TEST** key and **FILT** will again be displayed.
5. Press the **ZERO** key ...

BAUD is displayed.
6. Press the **TEST** key ...

The present baud rate and parity are displayed.
7. Press the **ZERO** key to scroll through the nine choices. When the proper selection is displayed, press the **TEST** key and the baud rate and parity will be set as selected ...

FILT is displayed again.
8. Press the **ZERO** key ...

PROT is displayed.
9. Press the **TEST** key ...

The current protocol selection is displayed.
10. Press the **ZERO** key to scroll through the protocol choices. NCI protocol sends status bytes and 7815 protocol sends status bytes. When the desired selection is displayed, press the **TEST** key and protocol will be set as selected.
11. Press SW-1 ...

The unit returns to normal weighing mode.

5.3 Calibration (CAL) Mode



Calibrating your scale requires a certified test weight to ensure accurate weighing.

The calibration (CAL) mode menu lets you calibrate your scale. The items in the calibration menu are as follows:

POUNDS/KILOGRAMS	Select the unit of measure (lb or kg).
SCALE or CLASS	Select the scale rounding factor as a SCALE or as a CLASS (Weight Classifier) rounding device. SCALE = .5 division rounding. CLASS = .9 division rounding. Factory default setting is CLASS.
CAPACITY	Select the capacity / resolution of the scale (150.05 or 150.1).

5.3.1 Step-by-Step Instructions for CAL Mode



To abort the CAL Mode at any time, press the SW-1 switch.

Follow these steps to calibrate your scale. Refer to [Figure 5.2](#).

1. From the normal weighing mode, press SW-1 ...
DIAG is displayed.
2. Press the **ZERO** key until ...
CAL is displayed.
3. Press the **TEST** key to start calibration ...
LB is displayed.
4. If you want to change the unit of measure, press the **ZERO** key to toggle between **LB** and **KILO**. When the choice you want is displayed, press the **TEST** key ...

The current capacity selection is displayed (150.1).
5. Press the **ZERO** key to scroll through the available capacity selections. When the choice you want is displayed, press the **TEST** key.

6. If **LB** was selected, the unit will display **CLASS**. Press the **ZERO** key to toggle between **SCALE** and **CLASS**. When the choice you want is displayed, press the **TEST** key ...

LOAD 0 is displayed.



Make sure the weigh platter and access plate are on the scale to establish proper zero load.

7. Clear all weight from the weigh platter and press the **TEST** key. After a brief wait ...

LOAD 150 is displayed (or the current capacity selected in Step 5). Alternate calibration points can be chosen using the **ZERO** key to scroll choices.

The NCI 7815 allows calibration using less than full capacity weights. Below are the alternative weights that can be used to calibrate your scale for its designed capacity.

Table 5.1 Alternative Calibration Points

<u>Capacity</u>	<u>Alternative Calibration Weights</u>
150 lb	10 lb, 50 lb



The calibration weight should be removed from the weigh platter before countdown completes.

8. Place chosen calibration weight on the weigh platter and press the **TEST** key ...

After a brief wait, **DONE** is displayed.

9. Press SW-1 ...

The unit returns to normal weighing mode.

The unit is now tested, configured and calibrated. It is ready for use in your application.

5.4 Re-Calibration Mode

The re-calibration (RE-CAL) mode menu lets you change the scale resolution or rounding method without using any calibration weights. If you want to change the unit of measure operation, you must perform a full calibration using test weights.

For a scale originally calibrated in the lb. mode, you may also change rounding methods (i.e., scale or classifier).

5.4.1 Step-by-step Instructions for RE-CAL Mode

Follow these steps to re-configure your scale (without weights). Refer to [Figure 5.2](#).

1. From the normal weighing mode, press SW-1 ...
DIAG is displayed.
2. Press the **ZERO** key until ...
RE-CAL is displayed.
3. Press the **TEST** key ...
150.1 is displayed. (Displays the current capacity/resolution setting)
4. Press the **ZERO** key until desired capacity/resolution is displayed.
5. Press the **TEST** key to select a new capacity/resolution. If the scale is operating in LB mode ...
The unit will display **CLASS**.
6. Press the **ZERO** key to toggle between **SCALE** and **CLASS**.
7. When the choice you want is displayed, press the **TEST** key ...
DONE is displayed.
8. Press the **TEST** key or SW-1 to return to normal weighing mode.

5.5 Review/Test Scale Settings

The **TEST** key located on the front panel lets you perform some basic system diagnostics, as well as review the current system settings without having to access SW-1 switch inside the scale.

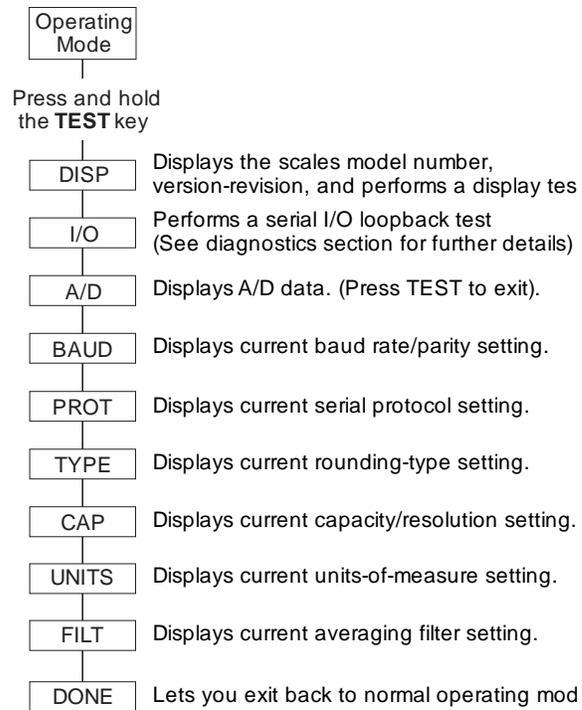


If you press and release the **TEST** key, the display will show the scales model number, version-revision, and performs a display test. To review the current system settings, press and hold the **TEST** until the display prompts **DISP**.



Press the **ZERO** key to move to the next item in the menu.

Press the **TEST** key to select the displayed item to run or view.



When finished running tests or viewing the settings, press the **ZERO** key until **DONE** is displayed. Then press the **TEST** key to return to normal (i.e., weighing) mode of operation.

6 Communication

The 7815 scale comes factory configured as a serial RS232 interface device. There is one 9-pin DE type female connector accessible at the rear of the unit. The functional pinout of this connector is compatible with a standard PC which is as follows.

DE-9 Female Scale			DE-9 Male Host		
Pin	Name	Direction	Pin	Name	Direction
1	JMP1	-	1	.DCD	IN
2	TXD	OUT	2	RXD	IN
3	RXD	IN	3	TXD	OUT
4	JMP 1	-	4	DTR	OUT
5	GND	REF	5	GND	-
6	JMP 1	-	6	DSR	IN
7	JMP 2	-	7	RTS	OUT
8	JMP 2	-	8	CTS	IN
9	NC	-	9	RI	IN



JMP1 PINS 1, 4 and 6, and **JMP 2** Pins 7 and 8 are internally jumpered inside the scale.

6.1 Communication Setting

Factory default settings: 9600 baud, 7 data bits, even parity, 1 stop bit. Protocol is NCI protocol (2 status bytes).

Standard 9-pin pass through RS-232 interface cable included. Not a null modem.

Symbol Key:

<ETX>	End of Text Character (03 hex)
<LF>	Line Feed Character (0A hex)
<CR>	Carriage Return Character (0D hex)
<SP>	Space (20 hex)
X	Character from display including minus sign
hh (hhh)	Two (NCI) or three (7815) status bytes depending on protocol selected.
uu	Unit of measure (lb, kg) using ANSI standard abbreviations)

Command	Scale Response	Results
W<CR>	<LF>xxxx.xxuu<CR> <LF>hh<CR><ETX> or <LF>xxxxxx<CR> <LF>hh<CR><ETX>	Returns decimal weight with units or and scale status. Returns contents of display (other than wt) and scale status
S<CR>	<LF>hh<CR><ETX>	Returns scale status
Z<CR>	<LF>hh<CR><ETX>	Scale is zeroed, then status returns
All else	<LF>?<CR><ETX>	Unrecognized command

7 Error Codes and Troubleshooting

Any system errors detected by the scale will be displayed as the letter **E** followed by a one-digit error code. Press the **TEST** key to continue operation. If a calibration error occurs, the only way to clear the error is by recalibrating the unit.

The error codes are defined as follows:

Err-1	Calibration Error
Err-2	Configuration Error
Err-3	Initial Zero Error
Err-4	Zero Error

7.1 Troubleshooting

Perform the following steps in the order presented until the described problem is corrected. If the problem cannot be corrected, contact your Avery Weigh-Tronix service provider.

No Power (Display is Blank)

1. Check that the primary side of the cord is plugged into the AC outlet, and the secondary side is properly connected to the power jack on the back of the scale.
2. Replace the power supply.
3. Replace the display board.
4. Replace the main board.

Missing or extra segments on display

1. Replace the display board.
2. Replace the main board.

Scale will not return to zero, or incorrect weight is displayed

1. Press the **ZERO** key.
2. Check for interference of weighing platform.
3. Power off, remove all items from the platter, and then power on the scale.
4. Recalibrate the scale.
5. Replace the load cell.
6. Replace the main board.

Display shows unrecognized characters

1. Check software PROM for proper insertion.
2. Check display cables for the proper connection.
3. Replace PROM.

4. Replace the display board.
5. Replace the main board.

Display shows under _ _ _ _ dashes

(Indicates that the scale is below zero or under capacity.)

1. Verify that weigh platter is on the scale.
2. Press the **ZERO** key.
3. Power off, remove any items from the platter, and then power on the scale.
4. Recalibrate the scale.
5. Replace the load cell.
6. Replace the main board.

Display shows center - - - - dashes

(Indicates that the scale is outside zero capacity of $\pm 2\%$.)

1. Verify that weigh platter is on the scale.
2. Press the **ZERO** key.
3. Power off, remove any items from the platter, and then power on the scale.
4. Recalibrate the scale.
5. Replace the load cell.
6. Replace the main board.

Display shows upper - - - - dashes

(Indicates the scale is over capacity.)

1. Remove all items from the scale.
2. Press the **ZERO** key.
3. Power off, and then power on the scale.
4. Recalibrate the scale.
5. Replace the load cell.
6. Replace the main board.

Scale is not transmitting data to the host device

1. Check cable connection at both the rear of the scale and the host device.
2. Check communication setting and baud rate on both scale and software.
3. Perform I/O loopback test.
4. Replace the cable.

5. Replace the main board.

The ZERO key and the TEST key do not function

1. Open display enclosure and verify that the keypad cable is still installed correctly.
2. Replace the display panel.
3. Replace the display PCB.
4. Replace the display cable.
5. Replace the main PCB.

8 Spare parts

DESCRIPTION	PART NUMBER
Keyboard Panel	AWT25-501978
Display PCB	7405-15465
Loadcell	7154-16321-75
Main PCB	7405-16315
Power Supply	1148-15536
RS-232 Cable	1140-13842
Remote Display Kit	7300-16577-01
Leveling Feet	7075-15475-02

Call factory for pricing.

Avery Weigh-Tronix



Avery Weigh-Tronix USA

1000 Armstrong Dr.

Fairmont MN 56031 USA

Tel: 507-238-4461

Fax: 507-238-4195

Email: usinfo@awtxglobal.com

www.averyweigh-tronix.com

Avery Weigh-Tronix UK

Foundry Lane,

Smethwick, West Midlands,

England B66 2LP

Tel: +44 (0) 8453 66 77 88

Fax: +44 (0)121 224 8183

Email: info@awtxglobal.com

www.averyweigh-tronix.com