



Scales for business and industry

WE RECOMMEND...
When setting up your scale,
fill in the "Placed In Service"
notes in the back of this guide

Operating Guide

7600E Digital Indicator

Includes Appendix For Scale Technicians
Set Up • Calibration • Connectivity



7600E



Advanced Function Digital Indicator

!!! CALIBRATION WARNING !!!

Calibration AND inspection of calibration properties
is prohibited unless done so by
a qualified scale technician.



WARNING

This device has static sensitive components. Take necessary precautions.

Do not make connections without powering off the device.



DANGER

This device has electric shock risk.
Take necessary precautions to avoid risk of shock.

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Specifications

ENCLOSURE: Stainless Steel, NEMA 4x

DIMENSIONS: 9" W x 6.44" H x 4" D

LOAD CELL A/D CONVERTER: 24 bit delta sigma

EXCITATION: 5 VDC, 120 mA max.

SIGNAL INPUT: 16 mv

SENSITIVITY: 0.1 uV/grad

UPDATE RATE: 30 update/second

DISPLAY: Six digits, 0.6 inch LED, lb, kg, Set 1, Set 2, Gross, Net, Zero, Stable

KEYPAD: Full numeric, plus function controls

POWER INPUT: 117/217 VAC, 50-60 HZ, 20 watts, fuse 0.25A

SERIAL PORTS:

- Ports 1 & 2: RS-232 (standard)
- Smart Serial Programmable Print Files: 8 custom print files plus 8 macro files, 30 characters each.

OPTIONS:

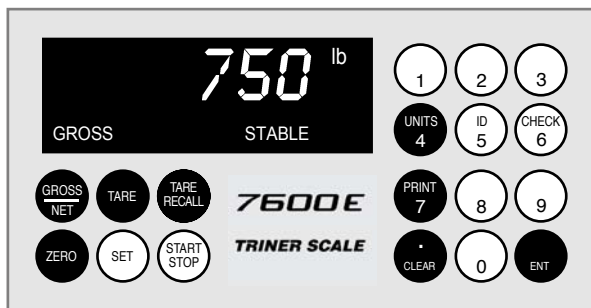
- Rechargeable battery
- Batch Start/Stop: Control from front panel or remote input.







Input/Output Options

- Setpoint Operation: 4 output relays configurable for normal setpoints, over/under or manual/auto batch modes.
- Input/Output Board for: RS-232C or 20mA.0-10v, 4-20ma (16 bit D/A)
- Digital Input/Output Board for: AC/DC inputs, AC outputs (SS Relay, 0.5 amp)

Basic Operation

KEYPAD FUNCTIONS



-  Toggles between Gross and Net weight.
-  Enters weight on scale as TARE weight.
-  Displays weight in TARE memory.
Enables numeric entry of TARE weight.
-  Resets the indicator to 0.
-  Changes units displayed to/from lb - kg.
Numeric entry.
-  Prints weigh data receipt (requires optional printer).
Numeric entry.

NOTE:
Basic TARE functions are disabled in Weigh-in/Weigh-out weighing mode.

TO TARE THE WEIGHT OF A CONTAINER ON SCALE

- With the empty container placed on the weighing platform, press the TARE key. The word NET will display in the readout, indicating that a TARE weight is in the memory.

TO RECALL & DELETE TARE WEIGHT

- To recall/view TARED weight, press the TARE RECALL key. To delete, remove weight from scale, and press TARE. The word GROSS will display in the readout.

Advanced Operation

MANUAL ENTRY OF TARE WEIGHT

(Unavailable in weigh-in/weigh-out mode)

- Press the TARE RECALL key. tArE will flash, along with any current weight in TARE memory.
- Using the numeric keys, enter the amount of weight to be TARED, then press the ENT key.
- NET will display under the indicated weight in the readout, indicating that a TARE weight is in the memory.

TO RECALL AND DELETE ENTERED TARE WEIGHT

- To recall/view TARED weight, press the TARE RECALL key. To delete, remove weight from scale, and press TARE. The word GROSS will display in the readout.

AXLE WEIGHING/ACCUMULATED TOTAL WEIGHING



NOTE: The indicator must be set to accumulation mode to in order to function as an axle weighing scale. If this indicator is part of a factory-configured axle scale, it will have been properly set up for accumulation mode. To verify accumulation mode, simply press the 2 key when the indicator is powered on. If ACCUM displays, the indicator is in accumulation mode. Press 2 again to exit. Also, whether or not a receipt printer is connected to the indicator will effect how accumulation mode functions.

Axle Weighing In Manual Accumulation Mode

(without receipt printer)

In manual accumulation mode, pressing the PRINT key adds the weight on the scale into the indicator's memory. A running total of all weights entered remains in the indicator's memory until it is manually cleared/reset to zero.

Advanced Operation



CAUTION: BEFORE WEIGHING AXLES, CLEAR THE INDICATOR'S ACCUMULATED WEIGHT MEMORY!

The indicator's memory must be cleared before beginning to weigh and accumulate a vehicle's axles. Before placing an axle on the scale, press the 2 key to view any weight in the indicator's memory. AC will flash, followed by the amount of weight in memory. If the memory weight is 0, press 2 key to exit and proceed. If any amount of weight is in memory, after exiting press and hold the 2 key. CLr.ACC, nO will flash. Press the TARE RECALL key to change nO to YES, then press the ENT key. CLEARrd will display, verifying the memory is cleared.

Example: To Total the Weight of a Vehicle's Axles (2 axles):

- With the display reading 0 weight and the words GROSS, ZERO (if required, press the ZERO key to zero the scale) and STABLE showing, load the scale with the first axle.
- With the display showing the weight of the axle, and the words GROSS and STABLE showing, press the PRINT key to put the weight into the indicator's memory. ACCU will briefly display, then the weight of the axle will return to the readout.
- The vehicle then pulls forward and removes all weight from the scale. Before proceeding with weighing the next axle, the indicator must display 0 weight and the word STABLE.
- Proceed with loading the scale with the next axle.
- With the display showing the weight of the axle, and the words GROSS and STABLE showing, press the PRINT key to add the weight into the indicator's memory. ACCU will briefly display, then the weight of the axle will return to the readout.

Advanced Operation

- To view the accumulated total of the axles, press the 2 key. AC will flash, followed by the accumulated weight. To exit, press the 2 key again.
- To clear accumulated weight in memory, press and hold the 2 key. Press the TARE RECALL key to change the displayed nO to YES, then press the ENT key.

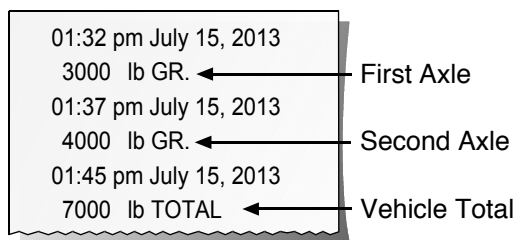
Axle Weighing In Manual Accumulation Mode

(with receipt printer)

TIP For general procedure, follow the example on page 4, *To Total the Weight of a Vehicle's Axles*.

When the PRINT key is pressed, the weight on the scale is printed out as it is placed in the indicator's memory (ACCUM does not display).

To print the total accumulated weight, press the 2 key, then while the AC and accumulated weight are flashing, press the PRINT key.



Axle Weighing In Automatic Accumulation Mode

(without receipt printer)

TIP For general procedure, follow the example on page 4, *To Total the Weight of a Vehicle's Axles*.

In automatic accumulation mode, it is not necessary to press the PRINT key to accumulate weights. When the weight on the scale becomes stable, the weight is then added to the indicator's memory.

To view total accumulated weight, press the 2 key.

Advanced Operation

Axle Weighing In Automatic Accumulation Mode

(with receipt printer)

11? For general procedure, follow the example on page 4, *To Total the Weight of a Vehicle's Axles*.

When the weight on the scale becomes stable, the weight is then printed and added to the indicator's memory.

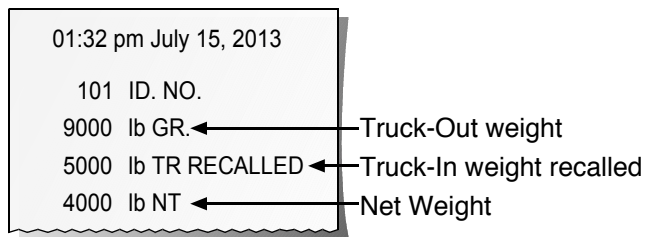
To view total accumulated weight, press the 2 key. To print out the total accumulated weight, press the PRINT key while the accumulated weight is flashing.

WEIGH-IN/WEIGH-OUT TRUCK WEIGHING



IMPORTANT! Weigh-in/Weigh-out mode requires a receipt printer in order to output a record of the in and out weights, and the net difference between the two weights.

In weigh-in/weigh-out mode, an ID is assigned to the first weightment (Truck-In), then that ID/weight is recalled when the same truck returns to the scale (Truck-Out). The second weight is then applied to the first weight in the ID memory bank, and the difference is automatically calculated and printed out:



NOTE: The indicator mode must be set to weigh-in/weigh-out. To verify weigh-in/weigh-out mode, press the ID/5 key when there is no weight on the scale. If nO trUCK displays, the indicator is in weigh-in/weigh-out mode.

Advanced Operation

Truck-in/Tuck Out Weighing

Truck-In/Truck-Out weighing is based on assigning and recalling IDs in the indicator's memory. Every weight must be associated with an ID: assigning a new ID to a weight establishes a Truck-In weight, assigning an ID that is already in the memory establishes a Truck-Out weight and triggers a print out that shows the In Weight, the Out Weight, and the net difference between the two.

Assign an ID to the Truck-In Weight

- With the incoming truck on the scale, the weight displaying and the words GROSS and STABLE displaying, press the ID/5 key. Id will flash on the display (if there are any Truck-In IDs in the memory, the last ID entered will also flash).
- Enter a new ID number using the keypad keys. IDs can be from one to six digits long.
- Press the ENT key. In will display, and the weight will print out, along with the ID number.

Recall the Truck-In ID Number When the Truck Weighs Out

- With the outgoing truck on the scale, the weight displaying and the words GROSS and STABLE displaying, press the ID/5 key. ID will flash in the display, along with the last incoming truck ID entered.
 - If the ID displaying is the correct incoming ID for the truck on the scale, press the ENT key, and the completed transaction will print out.
 - If the ID displaying is not the incoming ID for the truck, enter the correct ID on the keypad, then press ENT. The completed transaction will print out.
- TIP** Also, the SET key can be used to scroll through the previously entered truck IDs in the memory. Scroll to the correct ID, and press ENT.

Advanced Operation

Working With Weigh-In/Weigh-Out ID Records



NOTE: Weight must be on the scale platform in order to work with the ID records in the indicator's memory.

To View IDs in Memory

- Press the ID/5 key. With Id flashing, press the SET key to scroll through all IDs in memory. To exit, press the ZERO key.

To Print Out IDs in Memory

- Press the ID/5 key. With ID flashing, press the GROSS/NET key. A WIWO record will print. To exit, press the ZERO key.

WIWO RECORDS			
0	100	1245	OK
1	101	4561	OK
2	102	4587	OK
3	103	265	OK
4	104	8552	OK
5	105	8552	OK

To Delete an ID From Memory

- Press the ID/5 key. With Id flashing, press the SET key to scroll through the IDs and locate the ID you wish to delete. With the ID number displaying, press the CLEAR key. To exit, press the ZERO key.

To Clear All IDs From Memory

- Press the ID/5 key. With Id flashing, press and hold the CLEAR key. Clr.ALL, nO will flash. Press the Start/Stop key to change nO to YES, then press ENT. Clearing the memory will take approx. 30 seconds.

Advanced Operation

ID ASSIGNMENT TO WEIGHMENTS



IMPORTANT! Weighment ID mode requires custom programming of the 7600E digital indicator by a qualified scale technician. It is possible for the user to access and change software settings that will conflict with Weighment ID mode operation. Please be sure to contact Triner scale before making any adjustments to the indicator's settings parameters.

Weighment Id Description

By entering a numeric ID via the indicator keypad, a record can be printed that includes the ID with the weight on the scale. The ID can be any combination of numbers and dashes, from 1 to 16 characters. A dash can be entered with the /CLEAR key.

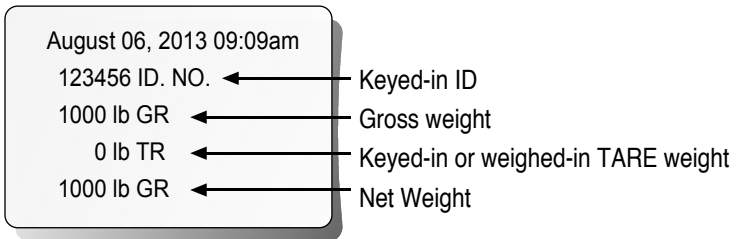
The ID entered will remain in memory and be attributed to all subsequent weighings until the ID# is deleted or overwritten with a new ID#.

How To Use The Weighment Id Feature

- Press the ID/5 key. Id will flash (if an ID has been entered previously, the last ID entered will also display).
NOTE: An ID can be entered with or without weight on the scale.
- Enter the desired ID numbers.
- Press the ENT key. The ID numbers will be entered into the indicator's memory.
- TARE can be weighed in by placing the object to be TARED on the scale, then pressing the TARE key, or the weight can be keyed in by pressing the TARE RECALL key, then entering the numeric value of the TARE weight via the keypad, then pressing the ENT key.

Advanced Operation

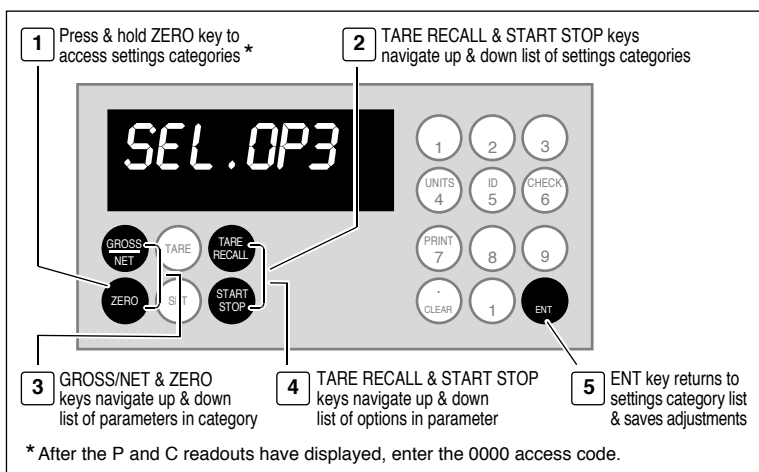
- To output a record of the weighment and ID:
- With the item placed on the scale platform, press the PRINT key.
- When the indicator is properly interfaced with a printer (such as model MP-20 label printer), it will print out a record as shown below:



- Duplicate labels can be printed as desired by pressing the PRINT key again (with item remaining on the scale platform).
- The ID# in memory will be assigned to all subsequent weighments until the ID is either deleted or overwritten.
- To overwrite the existing ID with a new number, follow the same steps as stated at the beginning of this section:
 - Press the ID/5 key. Id will flash, along with the ID# in the indicator's memory.
 - Enter the new ID numbers.
 - Press the ENT key.
 - To delete the ID#/clear the indicator's memory:
 - Press the ID/5 key.
 - With ID flashing, press the ZERO key.

Settings

EXAMPLE: HOW TO ADJUST THE TIME SETTINGS



CAUTION! Changing any settings in the SEL.CFG or SEL.CL1 categories will alter the basic functions of the indicator. **DO NOT access the SEL.CFG or SEL.CL1 settings without consulting a scale technician!**

1 How to Access the Settings

- Press and hold ZERO key for 5+ seconds, until the display shows P on the left-hand side, then release the key. Next, C will display, along with a number on the right-hand side (the P and C readouts are for NTEP audit trail purposes).
- Next, AC ? will display. This is a prompt to enter the access code, which by default is 0000. Enter the access code, then press ENT.
- The indicator will go into settings mode. A settings category will display, such as SEL.CFG.



NOTE: There are three types of settings categories:
 SEL.CFG = Configuration Settings (Technician Only)
 SEL.CL1 = Calibration Settings (Technician Only)
 SEL.OP1-9 = Options Settings (OP3, OP4 and OP6 are typical user-access settings categories).

Settings

2 Navigate to the Desired Settings Category (SEL.OP3)

- With a settings category showing in the display, (any version of SEL.NNN), press the TARE/RECALL or START/STOP key to move up or down the list of settings categories to locate your desired category. To adjust time, go to SEL.OP3.

3 Access the Parameters in the Selected Category

- With the appropriate category displaying, press the GROSS/NET key to access the first in the list of parameters within the settings category, for example, with SEL.OP3 displayed, pressing the GROSS/NET key will access parameter 3.1, the first parameter in the category.

TIP The GROSS/NET key can be used to proceed up the list of available parameters, and the ZERO key can be used to proceed down the list. Pressing either key continuously will cycle through all available parameters, then return to the settings category, for example, 3.1 > 3.2 > 3.3 > 3.4 > 3.5 > SEL.OP3 > 3.1, > 3.2, etc.

4 Access & Adjust the Options in the Parameter







- To activate the time option, the setting must be changed from 3.1 --, which is the setting that deactivates the time function. The available options are 24h, 12A, and 12P.
- Press the TARE RECALL key to navigate through the options list to display option12A (12 hr, AM time).
- Press the GROSS NET key to move to the next available parameter, 3.2, which is the time entry parameter. Enter the full time, for example: 112500 (hour, minutes, seconds).

5 Exit and Save Settings

- Press the ENT key. SEL.OP3 will display. Press the ENT key again, and enter the 0000 access code when the screen displays the prompt, then press ENT again to save and exit.

Settings

SETTINGS CATEGORIES CHART*

Settings Category	Type of Settings	Access
SEL.CFG	<i>Primary Software Configuration</i>	 <i>Scale Technician Only!</i>
SEL.CL1	<i>Calibration</i>	 <i>Scale Technician Only!</i>
SEL.OP1	Analog Output Options	Optional Board Required
SEL.OP2	DIO Options	Optional Board Required
SEL.OP3	Time, Date, Print Options	User Access*
SEL.OP4	Weigh-in/Weigh-out Options	User Access*
SEL.OP5	<i>Calibration Options</i>	 <i>Scale Technician Only!</i>
SEL.OP6	Totalizer Options	User Access*
SEL.OP7	<i>Smart Serial Options</i>	 <i>Scale Technician Only!</i>
SEL.OP8	<i>AC/DC Power Options</i>	 <i>Scale Technician Only!</i>
SEL.OP9	<i>Access Code Options</i>	 <i>Scale Technician Only!</i>

* Refer to the **Settings Flowchart** on page 14 for a complete overview of all settings categories and parameters.

* Refer to the **Parameter Options Charts** on pages 15 and 16 for a complete listing of all parameters that can be adjusted in the user-access categories.

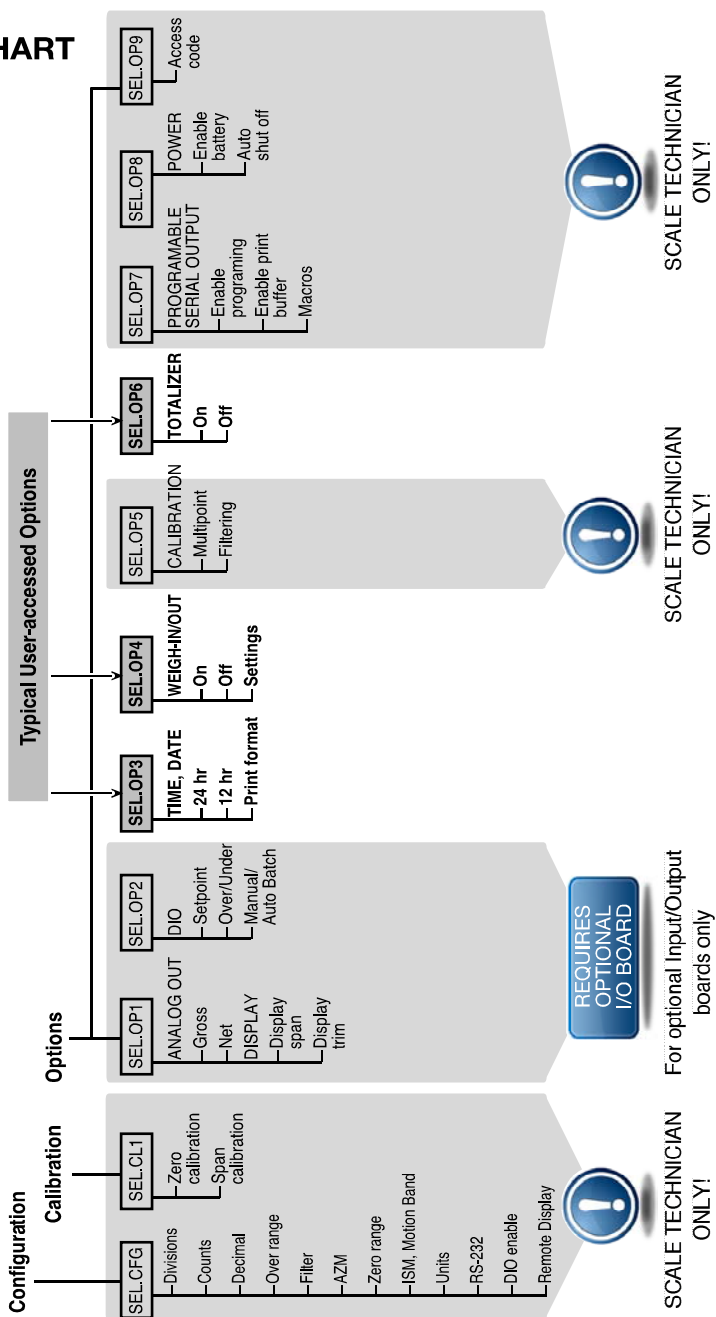


CAUTION! Before attempting to adjust any settings, be sure to thoroughly review this chapter. Incorrectly adjusted settings will cause the scale to malfunction and may require a scale technician to remedy!

Settings

FLOWCHART

Settings Flowchart



Settings

PARAMETER OPTIONS CHARTS (typical options for users)

SEL.OP3: Time & Date Options

PARAMETER	FUNCTION	OPTIONS
3.1	Hours	--- = none 24h = 24 hour 12A = 12 hour AM 12P = 12 hour PM
3.2	Time	Enter time: hh mm ss
3.3	Date	Enter date: mm dd yy
3.4	Printed format of month	S.no = short numerical no = long numeric Let = spelled out
3.5	Location on printed receipt	Off = no print Un = under data Ab = above data On = same line as data

Settings

PARAMETER OPTIONS CHARTS (typical options for users)

SEL.OP4: Weigh-in/Weigh-out Options

PARAMETER	FUNCTION	OPTIONS
4.1	Enable or disable Weigh-in/Weigh-out	OFF = disable on = enable
4.2	Delete record after weigh out	Yes = delete record No = do not delete
4.3	Enable manual TARE	Yes = enable No = do not enable
4.4	Select port	1 = port 1 2 = port 2
4.5	Data protocol	8n1 = 8 bit, no parity, 1 stop 7e1 = 7 bit even, 1 stop 7o1 = 7 bit odd, 1 stop
4.6	Baud rate X 100	1200 -- 9600
4.7	Line feed delay	Off = none 1 = 1 line delay 2 = 2 lines delay 3 = 3 lines delay

SEL.OP6: Weight Accumulation/Totalizing Options

PARAMETER	FUNCTION	OPTIONS
6.1	Accumulation mode	OFF = disable On = enable AU = Automatic
6.2	Totalizer reset band	OFF = disable 1---50

Error Code & Message Descriptions

MESSAGE	DESCRIPTION
DAC	D/A card detected -Displayed under the check function.
IIC.ERR	IIC short -Power-up hardware failure indication.
RST	EEPROM is reset by EER command.
ON	Displayed on when powered-on in DC operating mode.
AUTO	EEPROM is reset.
ERR6.x	Key-pad key is stuck.
-232	Serial calibration/setup is active.
UPDATE	Enhancement calculation in progress.
LO.BATT	Low battery.
D BATT	Dead battery.
ULULUL	Under-load (-400 graduations under dead-zero).
OLOLOL	Over-load (+9 graduations or 105% from dead-zero reference).
----	A/D acquisition is in progress.
7x00	Instrument mode selection.
Err 10	Number > 999999
Err 13	Number < -99999
ADC.Err	A/D hardware failure (channel one only).
CHECK	Check mode accessed.
rC.xxxx	Lower four-digits of the ROM check-sum.
Err.80	Serial command data error.
Err.81	Unknown serial command.
-CAL-	Remote calibration
Err.OFF	Hardware failure of the D.C. power on/off circuitry.
RTC.RST	The clock is reset to 01:01:04 12:00:00am.
RST ID	The ID EEPROM has been reset following detected corruption.
AC OK	Access code entered has been accepted.
E-1234	EEPROM set 1,2,3, and/or 4 have been fixed.
Err 40	Positive or negative signal overload (check sense connections).
Err 31	Bad tare entry.
Err 30	Push to Zero out of range.
PC Err	Piece Weight Entry is out of range.

Appendix For Scale Technicians

Initial Setup



IMPORTANT! Configuration parameters 1, 2 and 3 must be correctly adjusted before the indicator can be calibrated.

Access The SEL.CFG/Configuration Menu

- Press and hold ZERO key to access settings mode. P will display, then C will display, followed by AC ?.
- Enter access code: 0000, press ENT. SEL.NNN will display.
- Navigate to SEL.CFG (if required) using the TARE RECALL key.
- With SEL.CFG displaying, press the GROSS/NET key to proceed to Parameter 1.

CAPACITY: SEL.CFG Parameters 1, 2 & 3



NOTE : Refer to the chart: *SEL.CFG MENU, Weighing Functions* on page A-5 for complete listing of options and descriptions.

Adjust Divisions/Parameter #1

- With parameter #1 displaying, press the TARE RECALL and/or START STOP key to navigate to the desired division setting.
- Press the GROSS/NET key to proceed to Parameter 2.

Adjust Counts/Parameter #2

- With parameter #2 displaying, press the TARE RECALL and/or START STOP key to navigate to the desired count setting.
- Press the GROSS/NET key to proceed to Parameter 3.

Appendix For Scale Technicians

Initial Setup

Adjust Decimal Point/Parameter #3

- With parameter #3 displaying, press the TARE RECALL and/or START STOP key to navigate to the desired decimal point setting.

Example Settings for SEL.CFG Parameters 1, 2 & 3			
Capacity	Parameter 1 (Divisions x 100)	Parameter 2 (Count x 10,000)	Parameter 3 (Decimal location)
2,500 lb x 0.5 lb	50	5	0.0
5,000 lb x 0.5 lb	100	5	0.0
5,000 lb x 1 lb	50	1	0
10,000 lb x 2 lb	50	2	0
60,000 lb x 20 lb	30	20	0

TIP Parameters 4 through 8 refine the indicator's operating characteristics for special applications, and typically these do not require adjustment.

- Press the GROSS/NET key to proceed on to Parameter #9.

UNITS & TARE: SEL.CFG Parameters 9 & 9.1

Adjust Units of Weighment/Parameter #9

- With parameter#9 displaying, press the TARE RECALL key to navigate to the desired option.
- Press the GROSS/NET key to proceed to Parameter 9.1.

Adjust TARE Function/Parameter #9.1

- With parameter #9.1 displaying, press the TARE RECALL to key to navigate to the desired TARE function setting.

Appendix For Scale Technicians

Initial Setup

- Press the ENT key to enter the settings. SEL.CFG will display.

To Proceed On To RS-232 Settings

- See the RS-232 parameters section below.

To Save & Exit Without RS-232 Settings

- With SEL.CFG displaying, ENT key to exit settings mode. Save ?, nO will flash. Press the TARE RECALL key to change nO to YES. Press the ENT key to accept. Ent AC will display. Enter the 0000 access code, then press the ENT key.

RS-232: SEL.CFG Parameters 10, 11, 12, 13, 14 & 19



NOTE: Refer to the chart: *SEL.CFG MENU, RS-232 Settings, Port #1* on page A-6 for options and descriptions.

Adjust Data Output Options/Parameter #10

- With SEL.CFG displaying, press the GROSS/NET key to proceed to parameter 10.

NOTE: If parameter 10 does not display, proceed to parameter 11.P1. Press the TARE RECALL key to navigate to option 11.P1.dE (to enable output by demand/print key). Press the ZERO key to then navigate back to parameter 10.

- With parameter #10 displaying, press the TARE RECALL key to select the desired option.
- Press the GROSS/NET key to proceed to Parameter 11.P1.

Adjust Data Sending Mode/Parameter #11

- With parameter #11 displaying, press the TARE RECALL key to navigate to the desired option.
- Press the GROSS/NET key to proceed to Parameter 12.

Appendix For Scale Technicians

Initial Setup

Adjust Parity Protocol/Parameter #12

- With parameter #12 displaying, press the TARE RECALL key to navigate to the desired option.
- Press the GROSS/NET key to proceed to Parameter 13.

Adjust Baud Rate/Parameter #13

- With parameter #13 displaying, press the TARE RECALL key to navigate to the desired option.
- Press the GROSS/NET key to proceed to Parameter 14.

Adjust Delay Between Lines/Parameter #14

- With parameter #14 displaying, press the TARE RECALL key to navigate to the desired delay between lines setting.
- Press the GROSS/NET key to proceed to Parameter 19.

Adjust Data String Protocol/Parameter #19

- With parameter #19 displaying, press the TARE RECALL key to navigate to the desired option.
- Press the ENT key to enter settings. SEL.CGF will display.

Proceed On To Calibration

- To calibrate the indicator, proceed to Step 2a on page A-7.

To Save & Exit Without Calibrating

- With SEL.CFG displaying, ENT key to exit settings mode. Save ?, nO will flash. Press the TARE RECALL key to change nO to YES. Press the ENT key to accept. Ent AC will display. Enter the 0000 access code, then press the ENT key.

Appendix For Scale Technicians

Parameter Menus for Basic Setup

SEL.CFG MENU		
Weighing Functions		
Parameter	Options	Description
1*	5, 10, 15, 20 - 1000	Number of divisions x 100: 5 = 500 divisions
2*	1, 2, 5, 10, 20, 50, 100	Number of counts x 10,000: 1 = 10,000 counts
3*	0, 0.0, 0.00, 0.000, 0.0000	Decimal point selection
4	105P, 9 d (105% or 9 divisions)	Over-range selection
5	1, 2, 3, 4, 5, 6, 8, 10, 12, 15 - 90	Digital filter selection (averaging)
5.1	OFF, On	Multi-point calibration: Calibrate up to ten points
5.2	A, b	Averaging: A = Rolling average b = Box average
6	off, 0.5, 1, 3, 5, 10 (divisions)	Auto Zero Maintenance (AZM)
7	1.9, 5, 10, 20, FS (% of capacity)	Zero range selection: 1.9% of 2,000 x 0.2 = 38.0 lb
7.1	off, on (ISM)	Zero's scale on power-up
8	off, 1, 3, 5, 10 (divisions)	Motion Band selection
9*	lb, kg, con	Units selection and convert
9.1*	Of, At, Tr, On	TARE function: Of = Off At = TARE key only Tr = Manual TARE entry only On = Both: TARE key & manual entry via keypad

*Must be adjusted as required during initial setup of indicator.

Appendix For Scale Technicians

Parameter Menus for Basic Setup

SEL.CFG MENU		
RS-232 Settings, Port #1		
Parameter	Options	Description
10	nt, Gtn* , n.nt, n.Gtn. NOTE: This parameter will not be available if parameter 11 is set to "Off".	Data output selection: nt = display only Gtn = gross, tare, net n.nt = negative gross inhibited n.Gtn = negative gross inhibited
11.P1.	OF, CO, dE* NOTE: This parameter will not be available if Weigh-in/Weigh-out mode is set to "on" in settings category SEL.OP4, parameter 4.1.	Data send mode: OF = Off CO = Continuous dE = Demand (indicator's Print key)
12.P1.	7E, 7o, 8n*	Parity: 7E = 7-even 7o = 7-odd 8n = 8-none
13.P1.	12, 24, 48, 96*	Baud rate x 100
14.P1.	OF* , 1, 2, 3, 5, 10, 15 (seconds)	Delay between printed lines or continuous output segments.
19	A, b*	Data string configuration: A = "STX" in continuous output b = No "STX" in continuous output

* Typical settings for output to a receipt printer

Appendix For Scale Technicians

Calibration, Single Point

1) Access The Calibration Menu

- Press and hold ZERO key to access settings mode. P will display, then C will display, followed by AC ?.
- Enter access code: 0000, press ENT. SEL.NNN will display.

2) Calibrate the Indicator

NOTE: If capacity settings are required, refer to Initial Setup section on page A-1.

- a) Remove all weight from the weighing platform.
- b) Navigate to SEL.CL1 (if required) using the TARE RECALL key.
- c) Press the GROSS/NET key to proceed. C will flash and 0 lb (or kg) will display.
NOTE: If a lower case c flashes, multi-point calibration is enabled. If more than one calibration point is desired, proceed directly to Step 2 on the following page.
- d) Press the ZERO key to perform a zero calibration.
- e) Load the weighing platform (30% of capacity minimum).
- f) On the keypad, enter the weight that is on the platform, then press the ENT key. The display will show dashes, then the calibrated weight will display.
- g) Press ENT to enter the calibration settings. SEL.CL1 will display.
- h) Press ENT to save settings and exit the settings mode. SAVE ? and nO will flash. To save calibration settings, press TARE RECALL to change nO to YES, then press ENT.
- i) At the prompt, enter the 0000 access code, then press ENT.
- j) Calibration is complete.

Appendix For Scale Technicians

Calibration, Multi-Point

1) Access The Calibration Menu

- Press and hold ZERO key to access settings mode. P will display, then C will display, followed by AC ?.
- Enter access code: 0000, press ENT. SEL.NNN will display.

2) Calibrate the Indicator

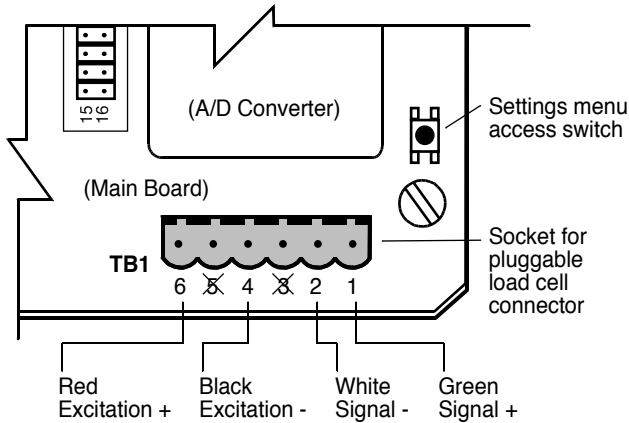
NOTE: If capacity settings are required, refer to Initial Setup section on page A-1 .

- a) After performing steps 2a through 2d on page A-7, load the weighing platform with the first/lowest weight, key in the weight, then press the ENT key. The display will show dashes, then the calibrated weight will display along with a flashing 1 to indicate the first weight has been calibrated.
- b) Add the next weight to the platform, key in the total weight on the platform, then press the ENT key. The display will show dashes, then the calibrated weight will display along with a flashing 2 to indicate the second weight has been calibrated.
- c) Repeat the process per step b above for as many calibration points as desired, up to ten points.
NOTE: A single-point calibration can be performed even when the indicator has the multi-point calibration feature enabled.
- d) Press ENT to enter the calibration settings.
- e) Press ENT to save settings and exit the settings mode. SAVE ? and nO will flash. To save calibration settings, press TARE RECALL to change nO to YES, then press ENT.
- f) At the prompt, enter the 0000 access code, then press ENT.
- g) Calibration is complete.

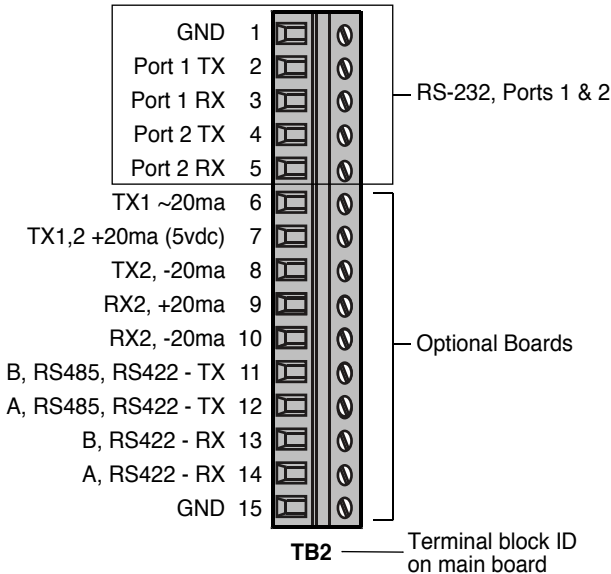
Appendix For Scale Technicians

Connections

Load Cell Connections



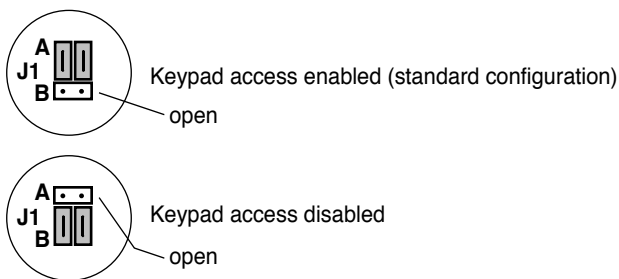
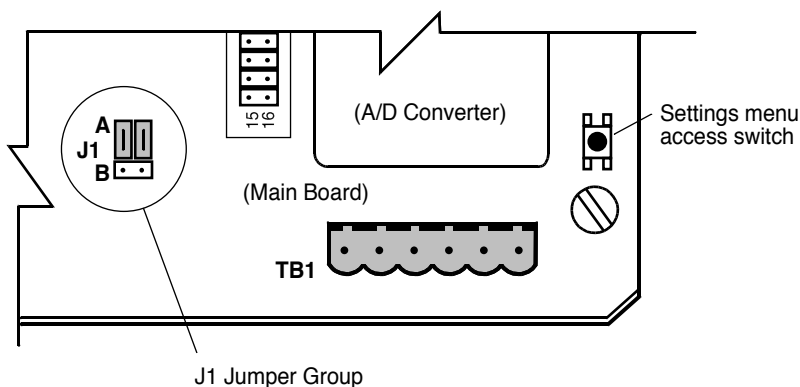
RS-232 Connections



Appendix For Scale Technicians

Settings Access Lockout

Settings Access Lockout Jumper



J1 Jumper Group Configuration

Keypad access to the indicator's settings menus can be locked out by reconfiguring the J1 jumper group.

To disable keypad access, move the two jumpers so that position A is open/position B is closed. Settings menu access will only be available after pressing the settings menu access switch located on the main board.

Appendix For Scale Technicians

Parameter Menus for Extended Functions

SEL.CFG MENU		
RS-232 Settings, Port #2		
Parameter	Options	Description
20.P2.	nt, Gtn, n.nt, n.Gtn NOTE: This parameter will not be available if parameter 21 is set to "Off".	Data output selection: nt = display only Gtn = gross, tare, net n.nt = negative gross inhibited n.Gtn = negative gross inhibited
21.P2.	OF, CO, de, Ln	Data output mode: Off = Off co = Continuous de = Demand Ln = network
22.P2.	7o, 7E, 8n	Parity: 7o = 7-odd 7E = 7-even 8n = 8-none
23.P2.	12, 24, 48, 96	Baud rate x 100
24.P2.	off, 1, 2, 3, 5, 10, 15 (seconds)	Delay between lines or continuous output.
25.P2.	1 – 16 (RS-485/RS-422)	Network address selection.
30	off, on	Digital input/output0

Appendix For Scale Technicians

Parameter Menus for Extended Functions

SEL.CFG MENU																															
Remote Serial Display Settings																															
Parameter	Options	Description																													
40	rd.OF rd.En rd.re	rd.En = Selects Indicator as remote display (RSD). rd.re = Enables indicator to transmit to remote display.																													
41	En.On	Allow remote keypad operation.																													
42	Zr.On	Enable/Disable zero key.																													
43	OF, At, Tr, On	Off (OF), Auto Tare (At), Key Tare (Tr), Both (On).																													
44	Un.On	Enable/Disable unit key.																													
45	Combines with parameter 11 for the following print functions: <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 15%;">Param 11</th> <th style="width: 15%;">Param 45</th> <th style="width: 20%;">RSD Port</th> <th style="width: 50%;">RSD Print Key</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">off</td> <td style="text-align: center;">off</td> <td style="text-align: center;">Disabled</td> <td style="text-align: center;">Disabled</td> </tr> <tr> <td style="text-align: center;">off</td> <td style="text-align: center;">off</td> <td style="text-align: center;">Disabled</td> <td style="text-align: center;">Send print command to weigh meter</td> </tr> <tr> <td style="text-align: center;">co</td> <td style="text-align: center;">off</td> <td style="text-align: center;">Sends co serial</td> <td style="text-align: center;">Disabled</td> </tr> <tr> <td style="text-align: center;">co</td> <td style="text-align: center;">on</td> <td style="text-align: center;">Sends co signal</td> <td style="text-align: center;">Sends print command to weigh meter</td> </tr> <tr> <td style="text-align: center;">dE</td> <td style="text-align: center;">off</td> <td style="text-align: center;">Disabled</td> <td style="text-align: center;">Disabled</td> </tr> <tr> <td style="text-align: center;">dE</td> <td style="text-align: center;">on</td> <td style="text-align: center;">-----</td> <td style="text-align: center;">Outputs demand format from RSD serial port</td> </tr> </tbody> </table>			Param 11	Param 45	RSD Port	RSD Print Key	off	off	Disabled	Disabled	off	off	Disabled	Send print command to weigh meter	co	off	Sends co serial	Disabled	co	on	Sends co signal	Sends print command to weigh meter	dE	off	Disabled	Disabled	dE	on	-----	Outputs demand format from RSD serial port
Param 11	Param 45	RSD Port	RSD Print Key																												
off	off	Disabled	Disabled																												
off	off	Disabled	Send print command to weigh meter																												
co	off	Sends co serial	Disabled																												
co	on	Sends co signal	Sends print command to weigh meter																												
dE	off	Disabled	Disabled																												
dE	on	-----	Outputs demand format from RSD serial port																												
46	Fn, On	Enable/Disable other functions.																													
50	nOr, 10	Expanded resolution, Test mode.																													
51	nO, YES	Sum, dual channel option.																													

Appendix For Scale Technicians

Settings Categories Reserved for Optional Functions



NOTE: Refer to the chart: *Settings Flowchart* on page 14 for an overview of all settings categories and related parameters.

SEL.OP1: Analog Output Option

SEL.OP1 parameters 1.0 through 1.8 are for use only with an optional analog input/output board. Contact Triner Scale for further details.

SEL.OP2: Digital Output Option

SEL.OP2 parameters 2.0 through 12.10 are for use only with an optional digital input/output board. Contact Triner Scale for further details.

SEL.OP7: Smart Serial Output Option

SEL.OP7 parameters 7.0 through 7.16 are for use only when electing to customize serial output. Contact Triner Scale for further details.

SEL.OP8: Power Option

SEL.OP8 parameters 8.1 through 8.2 are for battery operation. Contact Triner Scale for further details.

SEL.OP9: Access Code Option

SEL.OP9 enables input of a customized access code.

USER'S NOTES

PLACED IN SERVICE:

Date: _____

Location: _____

Capacity: _____ x _____ lb kg

Application:

Truck Scale: Axle Weighing Single Weighment Weigh In/Weigh Out

Floor Scale Bench Scale Other _____

Peripherals:

Printer: Model _____

Remote Display: Model _____

Other: _____

Customization, Software:

ID Weighing Printed Ticket Content Checkweighing

Other _____

Customization, Hardware:

Analog Input/Output Digital Input/Output

Other _____

ISSUES & SOLUTIONS

Issue: _____

Solution: _____

Date: _____

Triner Support contacted? _____

Issue: _____

Solution: _____

Date: _____

Triner Support contacted? _____

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