Avery Weigh-Tronix

Model 1310 Truck Scale
In/Out Application
User's Manual

Table of Contents

Pages are numbered consecutively beginning with the cover page.

1310 Specifications

Power Input	Universal 85-265 VAC, 50/60Hz, 75VA
Excitation	10 Volts DC or 10 volts AC square wave capable of driving up to thirty-two 350-ohm weight sensors. Indicator is also capable of driving Quartzell™ transducers
Operational Keys	Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0-9/Alpha, 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	Model 1310—Dot graphic display, 5"W x 1.33"H provides images and up to eight lines of weight and/or text. 240 x 64 dots cold cathode flourescent backlit, white on blue.
Display Characters	Application defined. 1.16" to 0.145" high.
Display rate	Selectable, from 1 in 10 seconds to 10 times per second
A to D Conversion Rate	60 times per second
Unit of Measure	Pounds, kilograms, grams, ounces, pounds and ounces and four programmable custom units
Capacity Selections	Up to 10,000,000 selectable
Incremental Selections	Multiples and sub multiples of 1, 2, 5
Decimal locations	88888888 pick any location relative to division size
Displayed Resolution	Up to 1 part in 10,000,000
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 higher
Harmonizer™ digital filtering	Fully programmable to ignore noise and vibration
Memory	128K (expandable to 8MB)
Standard input and outputs	Com 1: RS232, RS-485/422, Quartzell™, SensorComm™ Com 2: RS232, 20 mA current loop Com 3: RS232, RS-485/422, Quartzell™, SensorComm™ Com 4: RS232, RS-485/422, Quartzell™, SensorComm™ (*One bi-directional signal per port*) Four set point I/O ports via OPTO 22 I/O modules 1 Analog scale input PS/2 Keyboard port
Dimensions	7.25" H x 11" W x 8.25" D (184 mm x 279 mm x 205 mm)
Available Options	- Multiple analog scale inputs, up to seven additional (16-Bit D/A) - Eight fully isolated, programmable analog outputs (selectable 0-20mA, 0-24mA, 4-20mA, 0-5VDC, 0-10VDC, ±5VDC, ±10VDC) - Remote expanded control interface for TTL or solid state up to 64 - OPTO 22 Generation 4 I/O Modules - Internal modem - Memory Expansion - 1, 4, 5, 8 MB (battery backed SRAM) - PC (AT) style alphanumeric keyboard - Up to sixteen pulse counter inputs - SensorComm™ Digital j-box - Traxle™ total truck and axle weighing
Fieldbus Network Interfaces	Device Net™, ProfiBus®, ControlNet™, InterBus, ModBus Plus, Ethernet 10/100 (ModBus TCP, TCP/IP (sockets), HTTP, SMTP, FTP, EtherNet/IP)
Operating Temperatures	NTEP 14 to 104° F (-10 to 40° C), 10 to 90% relative humidity
Enclosure	Stainless steel wash down enclosure NEMA 4X
Weight	17 lb, 7.7 kg
Agencies	NTEP Class III/IIIL:10,000d CC# 01-033 A1 FCC Class A

Introduction

About This Manual

Configuration file name is 14835_0D.310

This manual covers the information you need to understand the operation of your Model 1310 indicator with the Truck In/Out application installed.

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.

1310 Indicator

The 1310 is a stand alone or network capable weight indicator and process controller. Built into the 1310 are the following standard features:

- 4 serial ports
- Time
- Date
- Stainless steel enclosure
- Large graphic display

The 1310 front panel is shown in Figure 1. The front panel includes the following:

- Dot graphic display, 5"W x 1.33"H provides images and up to eight lines of weight and/or text. 240 x 64 pixel cold cathode flourescent backlit, white on blue
- Five variable function soft keys (F1-F5)
- Alphanumeric keypad
- **SELECT** key
- **UNITS** key
- **PRINT** key
- **TARE** key
- **ZERO** key
- **C** (Clear) key, Power Off/On
- **ESC** (Escape) key
- **ENTER** key
- Decimal point key

1310 Front Panel

Plug the 1310 into an easily accessible grounded outlet only. Never use the unit without an appropriate earth-ground connection.

Any computer based system should have a separate, grounded power circuit. We recommend one for the 1310.

A power surge suppression unit is recommended between the 1310 and AC outlet.
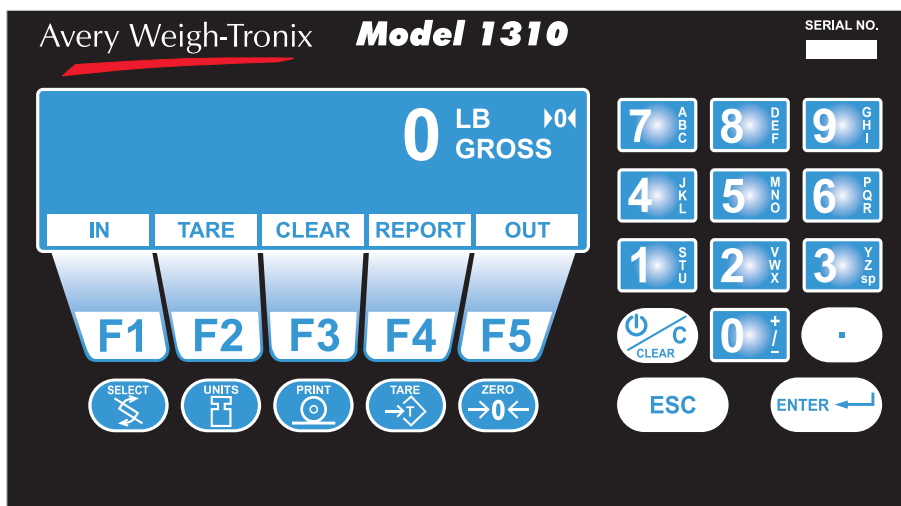
Figure 1
1310 Front Panel

Main Display

The main display is a 240 x 64 dot, dot-addressable, vacuum fluorescent display. The ability to address each of the dots individually makes this display nearly as versatile as a computer screen. It can display graphics, words and numbers. This flexibility allows graphics and alphanumeric characters to be displayed at the same time.

To increase the contrast of the display, press and hold the **DECIMAL POINT** and **7** keys until the desired contrast is reached. To decrease the contrast of the display, press and hold the **DECIMAL POINT** and **1** keys until the desired contrast is reached.

Front Panel Keys

The keys on the front panel of the 1310 are of two types, hard keys and soft keys. Hard keys are labeled directly and soft keys are labeled F1-F5. If a soft key has a function, its label appears at the bottom of the display. Soft keys function differently at different times and their labels change as needed.

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

Hard Keys

Use this key to toggle UPPER and lower case alpha characters, while entering alphanumeric characters.

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

For alpha entries, this key toggles UPPER/lower case entry (if Lowercase Enable is turned on in the configuration). If lower case is selected, "abc" will appear in the upper right of the display.

Press the **UNITS** key to scroll through the available units of measure (lb, kg, oz, etc.).

Press the **PRINT** key to send data to a connected printer. By default this key performs a DOPRINT command followed by a DOACCUM command.

Press the **TARE** key to tare the current gross weight, then repeatedly press **SELECT** to scroll through the tare, gross and net weight displays.

Press the **ZERO** key to establish a zero reference. A center-of-zero icon will be displayed when the weight is within ¼ division of zero. 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 and hold the **ESCAPE** key for 3-5 seconds to gain access to Password Entry Mode.

Press the **C(Clear)** key to clear values from the display prompts. Press and hold the **C** key for five seconds to power down the indicator.

Press the **ENTER** key to enter a keyed in value or accept a displayed choice.
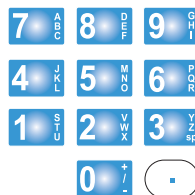
The alphanumeric keypad is for entering number and alpha characters. If a display for entering **numbers only** appears, you can key in the numbers using the keypad normally.

If a display appears in which alpha or numeric characters can be entered, key function switches automatically so that repeated pressing of one key causes the number to appear first, followed by the alpha characters in descending order as labeled on the key. If you wait for the cursor to appear on the display and press a key, a new character is added to the previous one entered.

ON/OFF Clear key

*If the indicator is powered down via the **ON/OFF/Clear** key or by sleep mode time-out, press this key to power the indicator back up.*

Attention

If a display appears in which alpha or numeric characters can be entered, key function switches automatically so that repeated pressing of one key causes the number to appear first followed, by the alpha characters in descending order as labeled on the key. If you wait for the cursor to appear on the display and press a key, a new character is added to the previous one entered.

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.

There are five predefined soft keys used in the Truck In/Out application. See Figure 1.

Truck Scale In/Out Application Introduction

Overview

The Truck Scale In/Out software application installed in the 1310 allows you to automate truck weighing. You can track up to 250 different open transactions and store up to 1,000 completed transactions. You can also store up to 500 tare weights.

Serial ports are configured for transmitting information to different devices; printer, computer and remote display.

Serial Port Configuration

Serial port #1 is configured for use with dot matrix printers such as the TM-295, WP-233, or WP-234 printers. Configuration is 9600 baud, 8 data bits, no parity, no handshake, basic control mode.

Serial port #2 is configured for use with a computer. Configuration is 9600 baud, 8 data bits, no parity, no handshake, basic control mode.

Serial port #3 is configured for use with the Weigh-Tronix flip digit remote display. Configuration is 9600 baud, 8 data bits, no parity, no handshake, basic control mode.

Serial port #4 is configured for use with the Truck Weigh PC software program. Configuration is 19,200 baud, 8 data bits, no parity, no handshake, basic control mode.

Open Transaction Database

Data stored in the databases is in calibration units.

The following data is stored for each open transaction and is included in the open transaction report:

- Truck identification number (up to 16 alphanumeric characters)
- Inbound weight
- Time of inbound transaction
- Date of inbound transaction

Completed Transaction Database

The following data is stored for each completed transaction and is included in the transaction report:

- Truck identification number (up to 16 alphanumeric characters)
- Inbound weight
- Time of inbound transaction
- Date of inbound transaction
- Outbound weight
- Time of outbound transaction
- Date of outbound transaction

Tare Database

The Tare database stores up to 500 tare weights. You can print tare weight tickets using the **PRINT** key.

Remote Display

Serial port #3 is used to send the displayed weight to a Weigh-Tronix flip digit remote display. The data is sent 1 times/second.

Operation

Powerup

Follow these steps to perform truck in/out operations:

1. When the indicator is powered up you will see this screen. . .

```
        00  LB  >0<
            GROSS
```
```
IN    TARE    CLEAR    REPORT    OUT
```

Inbound Procedure

2. Be sure scale is zeroed by pressing the **ZERO** key. After an inbound truck comes onto the scale, press the **IN** key. . .

The inbound weight is stored in the OPEN database and the screen below is displayed.

```
TRUCK ID: _
```
```
BKSP←    CHR↑    CHR↓    ADV→    ←PREV
```

If you have an optional PS2-style keyboard attached to the indicator, below is a list of keyboard key strokes and their equivalent on the indicator:

Keyboard	Indicator
ALT-S	**SELECT** key
ALT-Z	**ZERO** key
ALT-T	**TARE** key
ALT-C	**C** key (clear)
ALT-U	**UNITS** key
ALT-P	**PRINT** key
ALT-ESC	Access to setup menu
ENTER	**ENTER** key or **YES** soft key
ESCAPE	**ESC** key or **NO** soft key
1..9	Numeric entry
A..Z	Alphabet entry
F1..F5	**F1**..**F5** key
F6	**PRINT** key
.	Decimal point
Y	**YES** soft key
N	**NO** soft key

3. Key in up to 16 alphanumeric characters for the truck ID. You can enter alphanumerics in several ways.

A) Use the **CHR** soft keys to scroll through the alphanumeric list and move the cursor using the **ADV** and **PREV** soft keys.

B) Use the keypad on the 1310, following the directions for alphanumeric entry in the *Front Panel Keys* section of this manual.

C) Use an optional remote keyboard to enter the numbers and alpha characters. With a remote keyboard attached, only alpha entries are allowed from the front panel keys.

When you have entered the ID, press the **ENTER** key. . .

```
PRINTER READY?
```
```
NO                              YES
```

is displayed.

This is a friendly reminder to have a printer attached and ready to print if you want to have an inbound ticket printed.

```
INBOUND

TRUCK  ID:  BALC1254
WEIGHT :   1344 lb
TIME   :   11:54:28
DATE   :   11-12-01
```

4. Press **YES** and information, like in the Inbound ticket example at left, is sent to the printer:

5. Press **NO** if you don't want the ticket printed. . .

> The 1310 searches the OPEN database for the ID number. If the ID number is found, see **A** below.

> **OR**

> If there is no previous use of this ID number, see **B** below.

A. The following is displayed:

```
TRUCK ID IS ALREADY
IN USE
1) OVERWRITE
2) ABORT
```

Press 1 on the keypad to overwrite the current ID number. Press 2 to abort the transaction. . .

> If you choose to abort the transaction, the previously stored information remains unchanged and the indicator returns to the weight display.

> If you choose to overwrite the previous information, the gross weight on the scale is stored as the inbound weight and the current time and date are stored as the inbound time and date. After the information is stored, an inbound ticket is printed. See sample in Figure 2.

B. The gross weight on the scale is stored as the inbound weight and the current time and date are stored as the inbound time and date. After the information is stored, an inbound ticket is printed. See sample at left.

Outbound Procedure

1. Be sure scale is zeroed by pressing the **ZERO** key. After an outbound truck stops on the scale, press the **OUT** key. . .

> The following is displayed (your display may show a currently active ID):

```
TRUCK ID:  _

BKSP←    |CHR↑     |CHR↓     |ADV→     |←PREV
```

2. Key in up to 16 alphanumeric characters for the truck ID. You can enter alphanumerics in several ways.

> A) Use the **CHR** soft keys to scroll through the alphanumeric list and move the cursor using the **ADV** and **PREV** soft keys.

B) Use the keypad on the 1310, following the directions for alphanumeric entry in the *Front Panel Keys* section of this manual.

C) Use an optional remote keyboard to enter the numbers and alpha characters. With a remote keyboard attached, only alpha entries are allowed from the front panel keys.

When you have entered the truck ID, press the **ENTER** key. . .

is displayed.

This is a friendly reminder that if you want to have an outbound ticket printed, you must have a printer attached and ready to print.

3. Press YES if you want the ticket printed. Press NO if you don't want the ticket printed. . .

The 1310 searches the OPEN database for the ID number. If the number is not found, the display informs you of that fact and returns to the weight display.

If the number is found, the outbound weight, date and time are stored in the transaction database and an outbound ticket is printed (if you have chosen to print the ticket). See example in Figure 2.
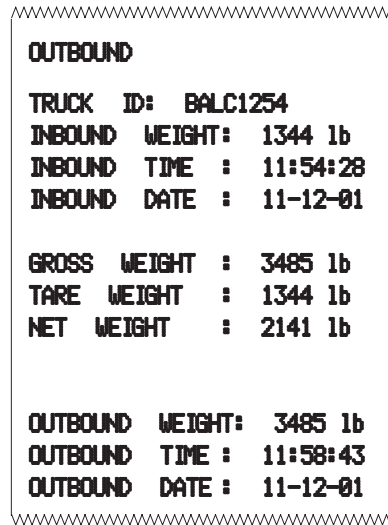
Figure 2
Outbound ticket sample

TARE Soft Key (F2) Function

The **TARE** soft key functions in two ways. Method one is for new truck ID entry and Method 2 is for an existing truck ID entry. The **TARE** soft key allows you to add tare weights to the TARE database. You can recall, edit and delete existing tare weights.

Method 1: New Truck ID Tare Entry

1. Press the **TARE** soft key (F2). . .

```
1) ENTER TARE WEIGHT
2) RECALL STORED TARE
3) ABORT
```

When you are given a numbered list to choose from, press the number key on the number keypad to select your choice.

If you press 1 to choose **Enter Tare Weight,** see Step 2 below.
If you press 2 to **Recall Stored Tare,** see Method 2 for a known truck ID..
If you press 3, the action is aborted.

2. When you press 1. . .

```
TRUCK ID:  _

BKSP ←   CHR ↑   CHR ↓   ADV →   ←PREV
```

is displayed.

3. Key in a truck ID to store the tare weight in. This is a 16 character, alphanumeric entry. Press the **ENTER** key. . .

```
LIVE WT / KEY IN ?

LIVE WT                         KEY IN
```

If Truck ID with tare value already exists in data base

☞

If that ID already has a tare weight associated with it, the following is briefly displayed

```
A TARE WEIGHT IS ALREADY STORED FOR
THIS TRUCK ID NUMBER
```

followed by this display:

```
1) OVERWRITE STORED TARE WEIGHT
2) DELETE STORED TARE WEIGHT
3) EXIT
```

Capture Live Tare Weight

If you press **LIVE WT**, the scale will attempt to do a tare operation. If it is successful, *TARE WEIGHT STORED* is displayed. If it is not successful, *COULD NOT CAPTURE WEIGHT. TARE WAS NOT STORED.* is displayed.

Key In Tare

If you press **KEY IN**, go to step 4

4. The following is displayed:

```
TARE WEIGHT: 0_


BKSP←   -NEG
```

5. Key in the weight and press **ENTER**. . .

> The tare weight is stored under that Truck ID and the display returns to a net weight display with that tare value active.

Method 2: Tare Entry for Existing Truck ID

1. Press the **TARE** soft key (F2). . .

```
1) ENTER TARE WEIGHT
2) RECALL STORED TARE
3) ABORT
```

> If you press 1, see Method 1.
> If you press 2, go to step 2 below.
> If you press 3, the action is aborted.

2. When you press 2. . .

```
TRUCK ID:  _


BKSP←  CHR ↑   CHR ↓   ADV →   ←PREV
```

> is displayed.

3. Key in the known truck ID to recall the tare weight. This is a 16 character, alphanumeric entry. Press the **ENTER** key. . .

```
TARE FOR TRUCK ID xxx  RECALLED
TARE WEIGHT = xxxxx
```

> is displayed. The display returns to a net weight display with that tare value active.

If truck ID does not exist in database, no value can be recalled.

The following message is display:

TARE WEIGHT IS NOT STORED

The display then returns to the normal weighing operation screen.

To enter a tare, perform the steps in Method 1 on previous page.

See the next section to generate a print with a stored tare weight.

PRINT Key Function

The **PRINT** key allows you to print a tare ticket. The tare ticket includes the Truck ID, gross weight, tare weight, net weight, time and date. A example is shown in Figure 3 below.

```
TARE   TRANSACTION

TRUCK  ID      :   12345
GROSS  WEIGHT:    3485 lb
TARE  WEIGHT :    60 lb
NET  WEIGHT   :   3425 lb
TIME:   11:58:43
DATE:   11-12-01
```

Figure 3
Tare ticket sample

CLEAR Key Function

The **CLEAR** key allows you to delete information from one or more of the databases.

1. Press the **CLEAR** key. . .

    The following is displayed:

    ```
    CLEAR DATABASE
    1) TRANSACTION    4) ABORT
    2) OPEN TRANS.
    3) ENTIRE MEMORY
    ```

When you are given a numbered list to choose from, press the number key on the number keypad to select your choice.

2. Press 1, 2 or 3. . .

    You are asked if you really want to do this. If you choose NO, the display returns to the weight display. If you choose YES the database selected is cleared of all data. When you choose 3, you delete both the completed transaction and open transaction databases.

    OR

    Press 4. . .

    The display returns to the weight display with no data deleted.

REPORT Key Function

The **REPORT** key allows you to upload the contents of the completed or open databases to a computer through serial port 2. The reports are in a comma-delimited format.

Below is an example of the data transmitted from the open transaction database (truck ID, inbound weight, inbound time, inbound date):

1,3485,12:01:45,11-12-01
11,3485,12:01:51,11-12-01
111,3485,12:01:55,11-12-01
1111,3485,12:02:01,11-12-01
11111,3485,12:02:06,11-12-01
15,3485,12:02:12,11-12-01
16,3485,12:02:17,11-12-01
17,3485,12:02:21,11-12-01
89,4015,12:02:27,11-12-01
125,4486,12:02:34,11-12-01
115,3938,12:02:44,11-12-01
4589,3551,12:02:50,11-12-01
47,3551,12:02:55,11-12-01
4789,3183,12:03:07,11-12-01
789,4523,12:03:14,11-12-01
456,4263,12:03:18,11-12-01

Below is an example of the data transmitted from the completed transaction database (truck ID, inbound weight, inbound time, inbound date, outbound weight, outbound time, outbound date):

1,3485,12:01:45,11-12-01,5004,12:04:52,11-12-01
11,3485,12:01:51,11-12-01,5004,12:05:00,11-12-01
111,3485,12:01:55,11-12-01,5004,12:05:05,11-12-01
1111,3485,12:02:01,11-12-01,5004,12:05:12,11-12-01
11111,3485,12:02:06,11-12-01,5004,12:05:19,11-12-01
15,3485,12:02:12,11-12-01,5004,12:05:26,11-12-01
16,3485,12:02:17,11-12-01,5004,12:05:32,11-12-01
17,3485,12:02:21,11-12-01,5004,12:05:37,11-12-01
89,4015,12:02:27,11-12-01,5004,12:05:41,11-12-01
125,4486,12:02:34,11-12-01,5004,12:05:46,11-12-01
115,3938,12:02:44,11-12-01,5004,12:05:52,11-12-01
4589,3551,12:02:50,11-12-01,5004,12:05:59,11-12-01
47,3551,12:02:55,11-12-01,5004,12:06:06,11-12-01
4789,3183,12:03:07,11-12-01,5004,12:06:12,11-12-01
789,4523,12:03:14,11-12-01,5004,12:06:25,11-12-01
456,4263,12:03:18,11-12-01,5004,12:06:32,11-12-01

Accessing Software Version

The time may come when you are asked by a service technician what the software version of your software is. There is a series of key strokes which will bring that number up on the screen. Below are the instructions for accessing this information.

1. Press and hold the **ESCAPE** key until the 1310 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 software version will appear on the display.

Setting Time and Date

1. Press and hold the **ESCAPE** key until the Model 1310 beeps. . .

    The display asks for a password and looks like the example shown below:
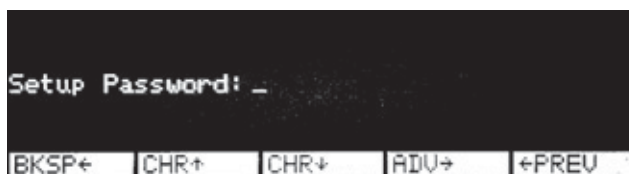
2. Key in 111 and press **ENTER**. . .

    A new soft key set appears.

3. Press the **CLOCK** soft key to access the time and date setting function.

4. The display shows the current hour value. If this is not correct key in a new value and press **ENTER** or press **ENTER** to accept the current value. . .

    The display shows the minutes value.

5. Repeat step 4 for minutes, seconds, year, month and day. (The day of the week is calculated automatically from the four digit year.)

6. Press the **EXIT** soft key to return to normal operating mode.

Error Messages

Error Messages from SensorComm™

You may see the error messages listed in the table below. Also listed is a description of the error and possible causes. These may help with servicing. Error messages will appear in the upper right corner of the display window as shown in the example of error message #8 shown below.

```
                              SCOM
                              ERR:8
```

**All error messages below which mention components
are referring to components within the SensorComm product.**

Error #	Error	Description of Error	Possible Cause
1	Communications error	SensorComm not responding	-Cable -SensorComm hardware failure -1310 hardware falure
2	Power fault	+Vin, +EXC, or -EXC has fallen out of tolerance. Voltage ±5%.	-Power supply failure -Cable
3	A to D overrange	More than +5mV/V has been applied to the A to D converter	-Cable -Weight sensor failure
4	A to D underrange	Less than -5mV/V has been applied to the A to D converter	-Cable -Weight sensor failure
5	A to D Initialization failure	A to D converter not responding	-Component failure -Power supply problems
6	Weight sensor overrange	The weight sensor output has exceeded the configured amount.	-Abuse of scale -Weight sensor failure
7	Weight sensor deadload shift warning	The output of the weight sensor is greater than a configurable percent of capacity since calibration	-Gauging problem on the weight sensorf -Mechanical isssue with the scale
8	Weight sensor deadload shift error	The output of the weight sensor has increased more than a configurable percent of capacity since calibration	-Gauging problem on the weight sensor -Mechanical isssue with the scale
9	Weight sensor stability	The output of 1 or more weight sensor is not in the same range as the rest of the scale.	-Mechanical isssue with the scale -Weight sensor problem

Error Message from the Ghost Feature

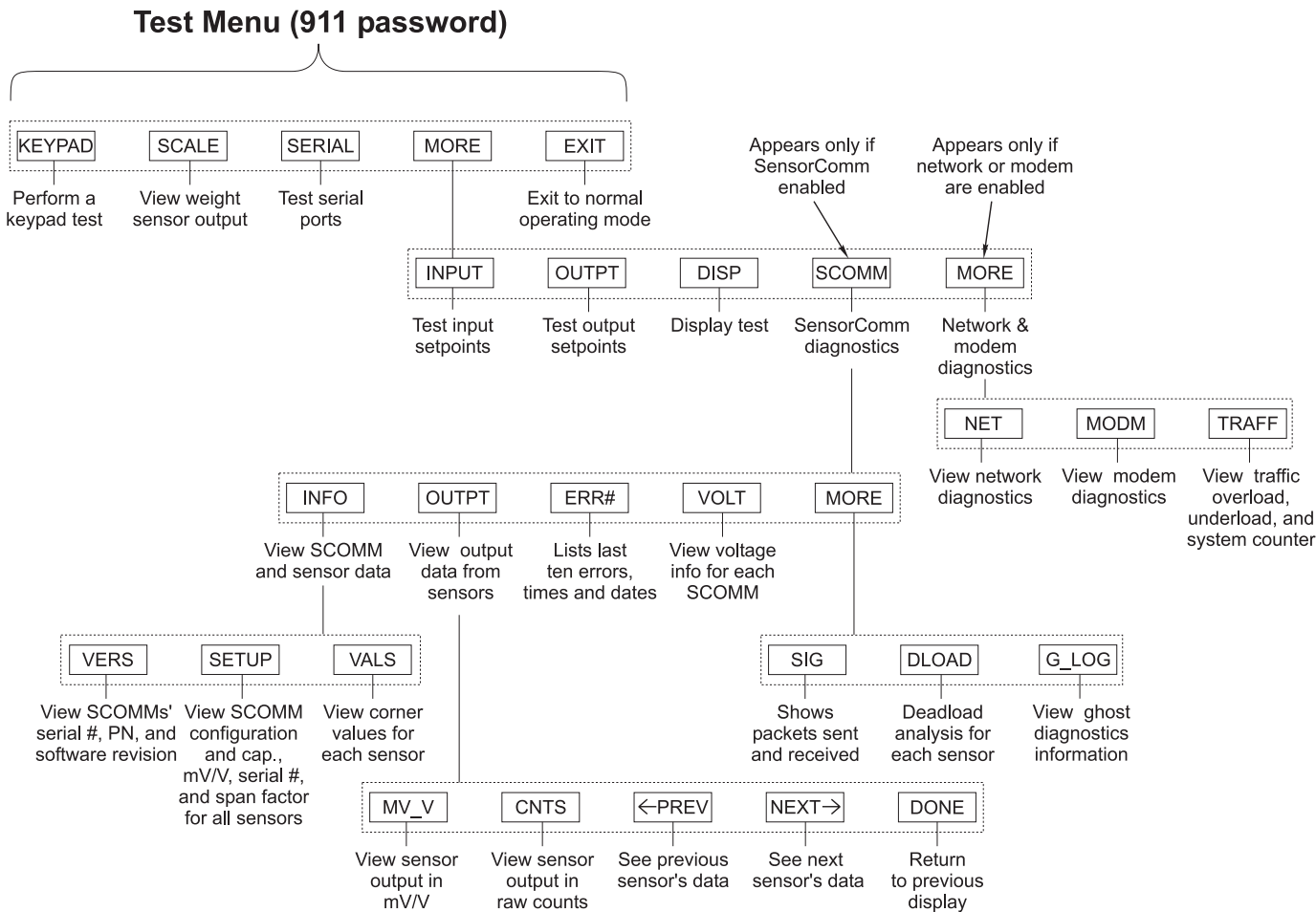You may see an error message when the Ghost feature is enabled.

```
                              GHOST
                              CELL: X
```

The display at left tells you the Ghost option is functioning and that Cell X has failed.

911 Diagnostic Menu

The 1310 has an emergency help menu with a password of 911 to help you diagnose problems with SensorComm components. Following are the instructions you need to access this menu and explanations of each part of the menu that pertain to the SensorComm option. Figure 4 shows a flow chart of the soft keys in the 911 menu.

Test Menu (911 password)

KEYPAD	SCALE	SERIAL	MORE	EXIT
Perform a keypad test	View weight sensor output	Test serial ports		Exit to normal operating mode

Appears only if SensorComm enabled

Appears only if network or modem are enabled

INPUT	OUTPT	DISP	SCOMM	MORE
Test input setpoints	Test output setpoints	Display test	SensorComm diagnostics	Network & modem diagnostics

NET	MODM	TRAFF
View network diagnostics	View modem diagnostics	View traffic overload, underload, and system counter

INFO	OUTPT	ERR#	VOLT	MORE
View SCOMM and sensor data	View output data from sensors	Lists last ten errors, times and dates	View voltage info for each SCOMM	

VERS	SETUP	VALS
View SCOMMs' serial #, PN, and software revision	View SCOMM configuration and cap., mV/V, serial #, and span factor for all sensors	View corner values for each sensor

SIG	DLOAD	G_LOG
Shows packets sent and received	Deadload analysis for each sensor	View ghost diagnostics information

MV_V	CNTS	←PREV	NEXT→	DONE
View sensor output in mV/V	View sensor output in raw counts	See previous sensor's data	See next sensor's data	Return to previous display

Figure 4
Flowchart of soft keys in the Test menu

This manual covers the information needed to use and understand SensorComm. For information on the soft keys not covered in this manual, see the 1310 Service Manual PN 29803-0016.

Hold the **ESCAPE** key for 5 seconds then key in **911** at the prompt and press **ENTER**. The following is displayed:

```
TEST



KEYPAD  SCALE   SERIAL  MORE    EXIT
```

These softkeys appear:

KEYPAD   This test lets you check each front panel key for proper operation. Follow the instructions on the display.

SCALE   Press this soft key to view weight sensor outputs. Disabled when SensorComm active.

SERIAL   Use this to test your ports. Select Port #1 through 4 then short the TX and RX on the selected port. The display will change from NO LOOP to LOOP indicating the port is good. Jumper RTS to CTS to test the handshake lines.

MORE   Accesses the following keys:

```
TEST-MORE




 INPUT    OUTPT    DISP     SCOMM    MORE
```

Inputs and outputs have to be defined in the WT-BASIC program for them to work.

    INPUT   Allows you to Activate/Deactivate any input setpoint device such as a switch or contact closure remotely and monitor it with this menu.

    OUTPT   Allows you to Activate/Deactivate any output setpoints to verify correct hardware operation during installation or for troubleshooting purposes.

    DISP   This test continuously cycles the display through a test pattern.

    SCOMM   Present only if SensorComm™ is active. It accesses the SensorComm diagnostics which are explained the following section, *SCOMM Soft Key*.

    MORE   Accesses the following keys:

```
TEST-MORE-MORE




 NET      MODM     TRAFF
```

    NET   This diagnostic will only appear if a network option card is installed. Follow the instructions on the display. For more information reference the *1310 Network Installation Guide* PN29806-0013.

MODM   Appears only if modem is enabled by a SimPoser program. The display will show Port #, Status (see list at left), User configuration information.

TRAFF   Press this soft key to see the System Counter Menu. This shows you the traffic, overload, and underload counter values. See example below.

```
SYSTEM COUNTER MENU:

TRAFFIC:   20
OVERLOAD:  10
UNDERLOAD:  5

UNDER  |OVER  |CLEAR  |      |DONE
```

If the scale experiences a load exceeding 105% of capacity, an overload event is logged. Press the **OVER** soft key to see the log of overloads. Example below.

```
OVERLOAD COUNTER LOG:

EVENT 1 OF 10
TIME:   12:50
DATE:   12-04-2002

←PREV  |NEXT→ |CLEAR  |      |DONE
```

Press the **PREV** or **NEXT** soft keys to scroll through the list of overload event times and dates. Press the **CLEAR** soft key to clear the displayed event.

If the scale experiences a negative weight exceeding 105% of capacity, an underload event is logged. Example below.

```
UNDERLOAD COUNTER LOG:

EVENT 1 OF 5
TIME:   01:26
DATE:   11-03-2002

←PREV  |NEXT→ |CLEAR  |      |DONE
```

Press the **PREV** or **NEXT** soft keys to scroll through the list of overload event times and dates. Press the **CLEAR** soft key to clear the displayed event.

The traffic counter increments when weight exceeds the configured trigger point (% of scale capacity). (See the *Service Manual* for configuration information.) For the next weightment to increment the counter, the weight must fall below the configured re-arm point (% of scale capacity).

SCOMM Soft Key

Refer to Figure 4 as the soft keys and functions which apply to SensorComm are explained below.

When you press the SCOMM soft key, the following keys appear:

```
TEST-MORE-SCOMM




 INFO   OUTPT   ERR#    VOLT    MORE
```

INFO   See *INFO Soft Key* section.
OUTPT   See *OUTPT Soft Key* section.
ERR#   See *ERR# Soft Key* section.
VOLT   See *VOLT Soft Key* section.
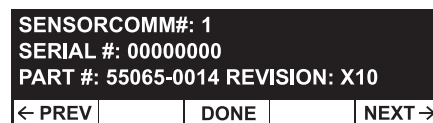**MORE**   Brings up the following keys:

```
TEST-MORE-SCOMM-MORE




 SIG    DLOAD   G_LOG
```

SIG   See SIG Soft Key section.
DLOAD   See DLOAD Soft Key section.
G_LOG   See G_LOG Soft Key section.

INFO Soft Key

Press this key to view SensorComm and weight sensor specifications.

```
TEST-MORE-SCOMM-INFO




 VERS   SETUP   VALS
```

VERS soft key   Brings up a display similar to this example:

The displays on the next few pages are illustrations of examples, not actual screen captures.

```
SENSORCOMM#: 1
SERIAL #: 00000000
PART #: 55065-0014 REVISION: X10
← PREV          DONE          NEXT →
```

This display shows you the serial number, part number and software revision level of SensorComm #1. Press the **NEXT** or **PREV** soft key to other active SensorComm J-boxes.

SETUP soft key   Brings up a display similar to this example:

```
SENSORCOMM CONFIGURATION:
# OF BOXES: 2
# OF SENSORS: 8
ANY KEY TO CONTINUE.
```

This display shows you the configuration of the SensorComm system. In this example the system has two SensorComm j-boxes with a total of eight weight sensors. Press any key and the following is displayed:

```
SENSOR#: 1
CAP:5000 OUTPUT:1.000000 MV/V
SERIAL#: 000000 SPAN:0.000000
← PREV        DONE         NEXT →
```

This screen lets you scroll through all the sensors using the **PREV** and **NEXT** soft keys. Information displayed for each sensor is programmed capacity, output in mV/V, serial number and span factor.

VALS soft key   Brings up a display similar to this example:

```
CORNERING VALUES FOR SCOMM#:1
#1: 0.949705   #2: 0.989280
#3: 1.079973   #4: 0988274
ANY KEY TO CONTINUE.
```

This display shows you the stored cornering values for each sensor attached to a SensorComm j-box. Press any key to see the next SensorComm values if there is another attached. Returns to VERS-SETUP-VALS soft key set after viewing the last set of values.

OUTPT Soft Key

Press this key to view the current output of each weight sensor in raw counts or mV/V. You will see a display similar to this example:

```
SENSORCOMM#: 1  COUNTS MENU
#1: 500000   #2: 500000
#3: 500000   #4: 500000
 MV_V    CNTS   ← PREV  NEXT →  DONE
```

This display shows you the current output in raw counts for each sensor attached to SensorComm #1. Press the **PREV** or **NEXT** soft key to move between multiple SensorComm j-box displays.

If you press the **CNTS** soft key, you will see a display similar to this example:

```
SENSORCOMM#: 1  MV/V MENU
#1: 0.639000   #2: 0.651000
#3: 0.653000   #4: 0.660000
 MV_V    CNTS   ← PREV  NEXT →  DONE
```

This display shows you the current output in mV/V for each sensor attached to SensorComm #1. Press the **PREV** or **NEXT** soft key to move between multiple SensorComm j-box displays.

ERR# Soft Key

Press the **ERR#** soft key to see a record of the last 10 error code numbers and the dates and the times these occurred. The screen will look similar to the example below:

```
ERROR:  3 of 5
ERROR #: 1   8:30   12-28-01
 - COMMUNICATION ERROR
← PREV │ CLEAR │        │ DONE │ NEXT →
```

The top line tells you how many errors are in the list and which one you are viewing.

The second line shows the error number and time and date it occurred.

The third line gives you the name of the error. This corresponds to the list of errors in *Error Messages from SensorComm™*.

Press **NEXT** or **PREV** to see the entire list of error messages.

Press **CLEAR** to clear all the messages. You will be asked if you are sure and be shown **YES** and **NO** keys. If you press **NO**, the display returns to the error message screen. If you press **YES**, the display returns to the following screen:

```
TEST-MORE-SCOMM



INFO │ OUTPT │ ERR# │ VOLT │ MORE
```

If you press the **ERR#** key and there are no active errors, you will see this display:

```
        NO ACTIVE ERROR
         TO BE DISPLAYED

ANY KEY TO CONTINUE
```

VOLT Soft Key

Press the **VOLT** soft key to see current Voltage In and Excitation voltage reports. The screen will look similar to the one below:

```
SENSORCOMM#: 1 VOLTAGE MENU
VIN: 14.99V(GOOD)   4.92V(GOOD)
EXC: -5.07V(GOOD)   4.94V(GOOD)
← PREV │        │ DONE │        │ NEXT →
```

View other connected SensorComm j-boxes by using the **PREV** or **NEXT** soft key. Press **DONE** to return to the previous level display.

SIG Soft Key

Press the **SIG** soft key to see a constantly changing display similar to the example below:

```
PACKETS TX'D: 123195
PACKETS RX'D: 122849
GOOD PACKETS: 122849
SIGNAL STRENGTH: 99.72%
```

*Press the **ESC** key to back out of most displays and return to the previous display.*

This screen shows the number of packets of information sent to the SensorComm system and the number received back correctly. This is a measure of the relative reliability of your communication setup. If the signal strength shows a lower percentage, chances are the system is experiencing some kind of line noise and thus, less reliable communication.

DLOAD Soft Key

Press the **DLOAD** soft key to view the deadload analysis for each weight sensor. You will see a display similar to the example below:

```
DEADLOAD ANALYSIS: SENSOR#: 1
CALIBRATION COUNTS: 575000
COUNTS: 569000      DIFF: 1.05%
← PREV          DONE          NEXT →
```

This display shows the calibration counts, current raw counts and difference for sensor #1.

G_LOG Soft Key

Press the **G_LOG** soft ket to view the log of error messages concerning ghosted weight sensors. See example below.

```
ERROR:  X of Y
15:48   12-28-02
CELL NUMBER: 2
← PREV                DONE   NEXT →
```

Press the appropriate softkey to scroll through the available error messages. Time and dates of errors are displayed.

X = active error

Y = Number of errors

2 = Cell number that was "ghosted"

Ethernet 10/100 SMTP Option

Email data will display system overload and underload counts only.

If your 1310 has the optional Ethernet 10/100 SMTP card installed, your system can be configured to send you an email informing you of system errors as they occur. Follow the steps below to set up your 1310 for auto-notification.

1. Open SimPoser.

2. Open the standard truck IN/OUT application file.

3. Click on the **CONFIG** button.

4. Click on the **Parameters** tab.

5. Click on the **Diagnostics** button.

6. Enable *Email* under *Alarm Levels*.

7. Click OK.

8. Click on the **Network** tab.

9. Choose Ethernet IT from the Network Type list.

10. Click on Enable.

11. Configure the IP, SUBNET MASK, GATEWAY and SMTP IP as shown in the example below:
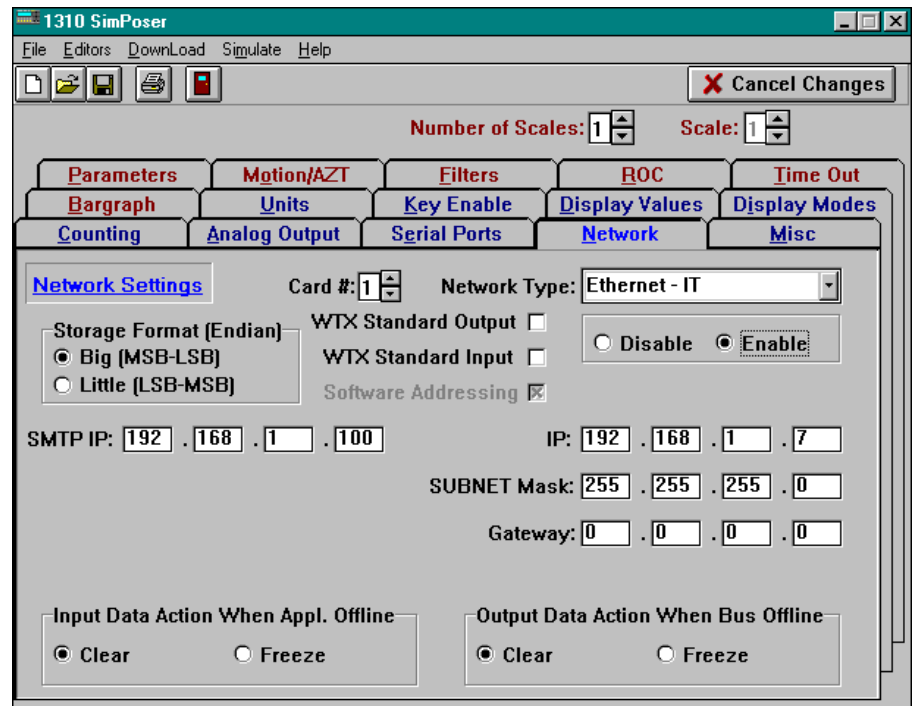
12. Click File>Save.

13. Download to your 1310.

14. To configure the TO and FROM email addresses, press and hold the **ESC** key for five seconds on the 1310. Enter the password 411. A prompt will appear for the From address then the To address, as you fill in the information. Exit the menu and save your changes.

Model 1310 Truck Scale In/Out Application User's Manual

Avery Weigh-Tronix