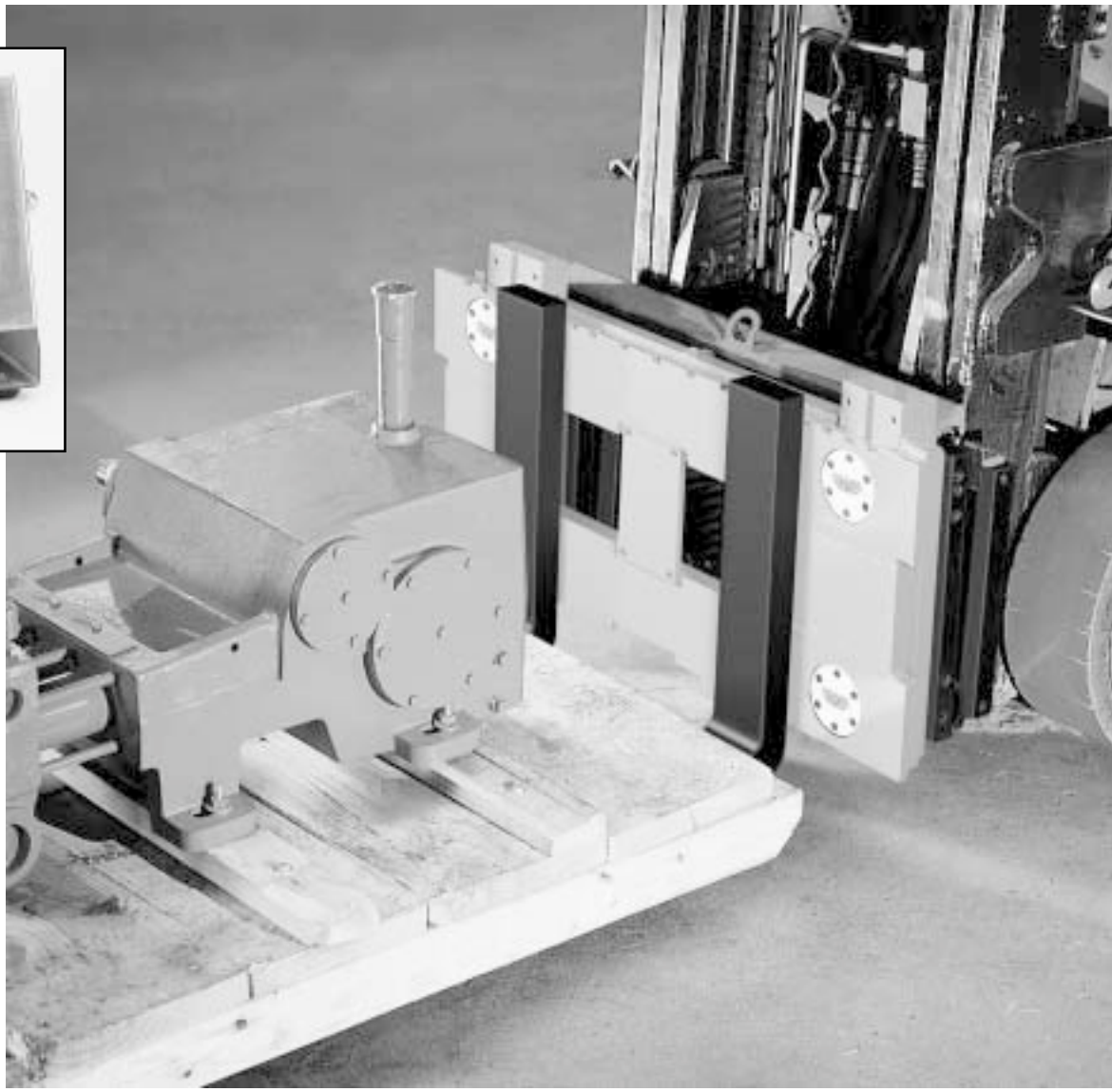
WEIGH-TRONIX



Certified Lift Truck Scale with SimulCast™ Instrument User's Manual

UNITED STATES

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

CANADA

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

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

CAUTION

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

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

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Specifications

Indicator Specifications

Power input	10-90 volts DC
Display	1.6" H x 3.2" W electroluminescent dot graphic display (160 x 80 dot layout) Simultaneously displays 0.6" high readings of weight, pro number, accumulated weight and accumulated number of skids
Operational keys	Zero, Tare, Print, Units, Select, Enter, Escape, Clear, 0-9, decimal point and five soft keys labeled per selected operational routine All keys provide users with audio acknowledgment upon activation
Operational annunciators	Displayed symbols indicate motion, center of zero, unit of measure and more
Time and date	Battery protected real time clock is included
Angle compensation	Detects and automatically compensates for pitch and/or roll out of level weighing
Standard interface ports	(all with quick disconnects): • infrared communication port • RS-232 bar code reader port • RS-232 printer output • scale carriage input • power source input
Available options	• Bar code wand • Infrared transceiver
Operating environment	14°F to 104°F - NTEP (-10°C to +40°C) -40°F to 140°F - Operational (-40°C to +60°C)
Enclosure	Stainless steel enclosure
Dimensions	10.5" H x 10.75" W x 4" D, (26.67 cm x 27.31 cm x 10.16 cm)
Weight	9 lb, 4.1 kg

Daily Operation Quick Reference

Attention

Press any key to turn the unit on.

Press and hold CLEAR to turn the unit off.

Below is a brief overview of how to use this system during a work shift. Complete instructions are covered in the body of this manual.

1. At start of shift, enter employee ID number

2. Enter a PRO number in the unit using the bar code wand or keying it in on the numeric keypad of the SimulCast

3. Key in the weight listed on the shipping papers

4. Edit the number of skids if different than the default value of 1

5. Weigh the skid or skids contained in that PRO# and store the weights

6. Close the PRO#

7. Enter a new PRO# and repeat until the shift ends or until you are required to download the stored information.

Introduction

This manual will explain the operation of the WI-130 SimulCast™ indicator when used with the Quik Tach Lift Truck Scale-Certified (QTLTSC).

This manual is divided into the following sections:

- Daily Operation Quick Reference
- Introduction
- Daily Operation
- The MORE Key

Front Panel

The WI-130 indicator on your lift truck will have a front panel similar to the one shown in Figure 1.

Figure 1
WI-130 SimulCast™ front panel

The F1-F5 keys correspond to the labels which appear above them in the display and are called soft keys because their function changes as the label changes. The hard keys appear below the softkeys and their function is labeled on each key.

Daily Operation

Overview

Attention

Press any key to turn the unit on.

Below is a brief overview of how you will use this system during a work shift. Exceptions to these procedures and additional functions are covered in later sections.

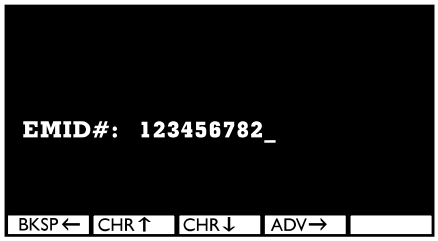
- At start of shift, enter employee ID number
- Enter a PRO number in the unit using the bar code wand or keying it in on the numeric keypad of the SimulCast
- Key in the weight listed on the shipping papers
- Edit the number of skids if different than the default value of 1
- Weigh the skid or skids contained in that PRO#
- Close the PRO#
- Enter a new PRO# and repeat until the shift ends or until you are required to download the stored information into the central computer.

Start Up and Entering Employee ID#

The exact steps in doing the above procedures are shown below.

1. Start the lift truck. . .

   Press any key on the indicator to power up. After the brief startup message it will ask for an employee ID number (EMID#) as shown below.



   The last ID number entered will be displayed.

2. If your number is displayed press the **ENTER** key to accept.

   If this is not your ID number, either key in your ID number and press **ENTER**

   OR

   Scan the appropriate bar code for your ID number. . .

   The indicator will go to the weighing mode and the display will look like this:

Press the **ESCAPE** key at any time to return to this mode.

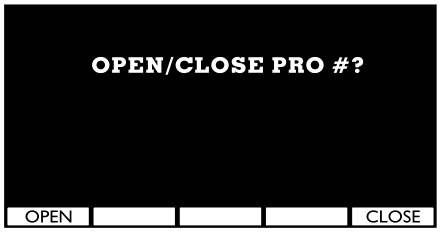
Entering the PRO# and Estimated Weight

3. Scan in the PRO# from the bar code

   OR

   Press the **PRO#** (F1) softkey and key in the PRO number. . .

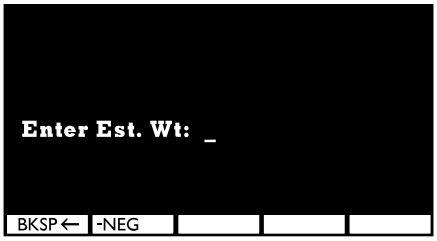
If this is a new PRO number, skip to step 5. If this is an active or previously entered PRO number the display will ask if you want to OPEN or CLOSE the PRO number. Choose the correct response and continue.



4. If you open a previous PRO number skip to step 9.

   If you close a PRO number, repeat step three with a new PRO number.

5. The following is displayed:



6. Enter the weight recorded on the shipping papers for the entire PRO# and press the **ENTER** key. . .

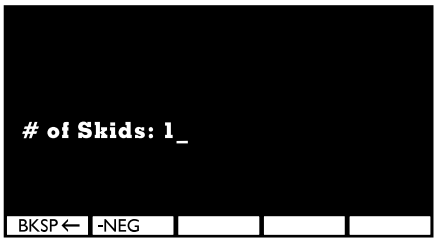
The following is briefly displayed:

then the following information is displayed:
Current weight
PRO number
Accumulated weight
Accumulated skids
and softkey labels.

An example of the display is shown below with a fictitious PRO number.

7. If you have just one skid to weigh, skip to step 7. If you have more than one skid in this PRO#, press the **SKIDS** (F2) softkey. . .

The following is displayed:



8. Key in the number of skids and press the **ENTER** key. . .

The previous screen is displayed.

Weighing Skids

When zeroing the scale or trying to store information, the display will show "ABORTED" if scale motion is detected, an overload condition is detected, or the angle detected is greater than the angle used to calibrate.

The scale weight must fall below a set weight before another transaction can be stored. You set this weight under the ***SETUP*** key. The display will remind you if you forget to allow the weight to go below this limit.

9. Make sure the forks of the lift truck are off the ground and empty, then press the **ZERO** key. Lift the skid and when the weight reading is stable, press the **STORE** (F4) softkey. . .

The display will show the weight of the skid, the accumulated weight, and the number of skids weighed as shown below:

Downloading Information

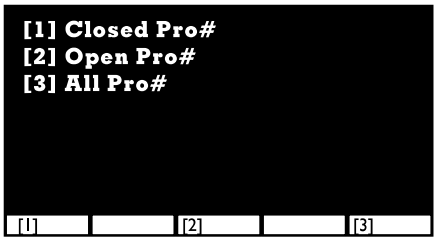
The information stored in the SimulCast can be downloaded at any time.

1. Connect an interface cable between the SimulCast and peripheral or drive the fork lift to the area where the infrared receiver is located. Line up the transmitter and receiver. Press the **PRINT** key. . .

The following is briefly displayed:

Then the following is displayed:

F1 = 1
F3 = 2
F5 = 3



2. Press the appropriate softkey for the report you want to download. . .

The following is briefly displayed:

Then the following is displayed:

F1 = NO
F5 = YES

3. Press the **YES** softkey to clear the reports from memory or **NO** to save the reports. . .

The display returns to the weigh mode.

The MORE Key

Overview

The **MORE** key (F5) relabels the softkeys for several functions. Below is the list of softkeys and their use.

EDIT (F1) Press this key to change the skid transaction count of an existing PRO number.

CAL (F2) Press this key to test accuracy of the WI-130 system.

SETUP (F3) Press this key to customize information included in reports. The address information also appears during the power up sequence. The following items are available for you to personalize:
4 lines for name and address
Towmotor ID#
Min. Trans Limit

RESET (F4) Press this key to erase all variables from memory.

EXIT (F5) Press this key to return to the normal weigh mode display.

Below are step by step instructions for each of these softkeys.

EDIT Softkey

This key allows you to correct the recorded skid number when you pick up more than one skid at a time.

1. Press the **EDIT** (F1) softkey to change the skid counter for an existing PRO number. . .

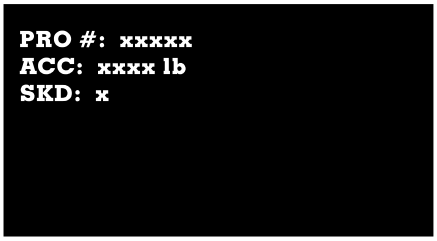
   The following is displayed:

2. Scan in a PRO# or key one in and press the **ENTER** key. . .

   If the PRO number is valid you will see the following display. If it is not valid the display tell you so then return to the normal weighing mode.

3. Key in the number of skids for the PRO number and press the **ENTER** key. . .

The following is briefly displayed:



The display then changes to the normal weighing mode with the PRO# you edited active.

CAL Softkey for Testing Accaccuracy

Following these steps will produce an accuracy report which is downloaded when transmitting the Pro number data.

1. Press the **CAL** (F2) softkey. . .

The following is displayed:

2. Key in the ID number of the test weight you are using and press the **ENTER** key. . .

The following is displayed:

3. Key in the test weight amount and press the **ENTER** key. . .

The following is displayed:

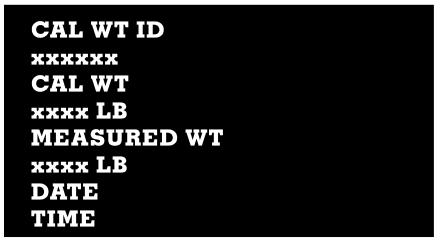
XXXXX represents the ID number of the test weight.

You can press the **ESCAPE** *key to abort.*

4. Place the test weight on the scale and press the **ENTER** key. . .

The following is briefly displayed:

The following is briefly displayed:



The display then returns to the normal weighing mode.

SETUP Softkey

You have four 16 character lines to enter your company and location details. (ADD#1 - ADD#4)

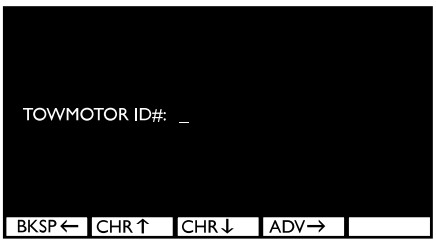
The next softkey is SETUP. Follow these steps to complete the setup:

1. Press the **SETUP** (F3) key. . .

The following is displayed:

2. Use the softkeys to scroll in up to 16 alphanumeric characters then press the **ENTER** key. . .

Repeat this step for address line 2-4. The following will be displayed:



3. Key in the scale carriage serial number then press the **ENTER** key. . .

The following is displayed:

4. Key in the maximum weight the scale must be below before a new transaction can be stored, then press the **ENTER** key. . .

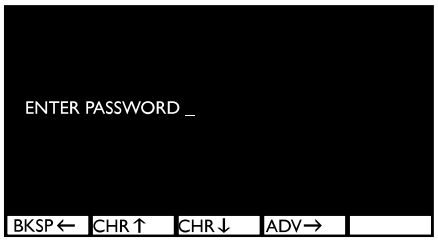
The display returns to **MORE** key default display mode with **EDIT**, **CAL**, **SETUP**, **RESET** and **EXIT** softkeys.

Default for MIN. TRANS LIMIT is 5% of capacity.

RESET Softkey

The next softkey is **RESET** (F4). This key gives you the option of clearing all the Pro numbers and transactions from the system's memory. All items under the **SETUP** key are retained as well as the accuracy test if one has been performed. To clear the memory follow these steps:

1. Press the **RESET** (F4) key. . . The follow is displayed:



If an invalid password is tried, the display will return to the normal weight display mode.

2. Key in your password using the numeric keypad or the softkeys if your password has letters. After the password is keyed in, press the **ENTER** key. . . The following is briefly displayed:

The following is briefly displayed:

The display returns to the normal weighing mode.

EXIT Softkey

Press the **EXIT** (F5) key to return to the normal weighing mode display.

Report Format

Below are the parameters used to generate reports. This will help in designing the database used to manage the information gathered from the SimulCast system.

Special characters or sequence of characters

, = Delimiter between information fields

(N) = numeric field only

(S) = string field only

(SP) = Space

CR = carriage return

LF = line feed

* = The weight readings themselves will always be numeric only, but the current unit of measure will be a string, i.e. “LB”, which forces the whole field to be a string.

Headers and/or identifiers

[BH] and [EH] = These characters will be sent to allow the parser you are writing to identify the header information.

[BD] and [ED] = These characters will be sent to allow the parser you are writing to identify the transaction data.

[BC] and [EC] = These characters will be sent to allow the parser you are writing to identify the calibration data.

Sample Printout Format

[BH]

Beginning of report information

Report Type(S)CRLF
Address Field #1(S)CRLF
Address Field #2(S)CRLF
Address Field #3(S)CRLF
Address Field #4(S)CRLF
Towmotor ID Number(S)CRLF
Scale ID Number(S)CRLF
Present Time(S)CRLF
Present Date(S)CRLF
[EH]

[BD]

One complete PRO# record

Pro Number(N),Pro Number Status(S),Employee Number(S),Last Transaction Time(S),Last Transaction Date(S),Actual Accumulated Weight(SP)Current Unit of Measure(S)*,Actual Number of Skids(N),Estimated Accumulated Weight(SP)Current Unit of Measure(S)*,Estimated Number of Skids(N)CRLF

One complete PRO# record

Pro Number(N),Pro Number Status(S),Employee Number(S),Last Transaction Time(S),Last Transaction Date(S),Actual Accumulated Weight(SP)Current Unit of Measure(S)*,Actual Number of Skids(N),Estimated Accumulated Weight(SP)Current Unit of Measure(S)*,Estimated Number of Skids(N)CRLF

One complete PRO# record

Pro Number(N),Pro Number Status(S),Employee Number(S),Last Transaction Time(S),Last Transaction Date(S),Actual Accumulated Weight(SP)Current Unit of Measure(S)*,Actual Number of Skids(N),Estimated Accumulated Weight(SP)Current Unit of Measure(S)*,Estimated Number of Skids(N)CRLF

[ED]

End of report information

[BC]
Test Weight ID Number(S)CRLF
Test Weight Value(SP)Current Unit of Measure(S)CRLF
Measured Weight(SP)Current Unit of Measure(S)CRLF
Calibration Date(S)CRLF
Calibration Time(S)CRLF
[EC]

Sample Printout

```
All Pro# Report
Weigh-Tronix
1000 Armstrong Drive
Fairmont, MN
56031

Towmotor ID Number          : 111
Scale ID Number             : 222
Present Time: 12:16:31
Present Date 1-13-97

Pro Number 123456782
Pro Number Status           : OPEN
Employee Number             : 456
Last Transaction Time       : 12:02:14
Last Transaction Date       : 1-13-97
Actual Accumulated Weight   : 2655 lb
Actual Number of Skids      : 2
Estimated Accumulated Weight: 40000 lb
Estimated Number of Skids   : 4

Pro Number 975257987
Pro Number Status           : CLOSED
Employee Number             : 456
Last Transaction Time       : 12:15:20
Last Transaction Date       : 1-13-97
Actual Accumulated Weight   : 7300 lb
Actual Number of Skids      : 2
Estimated Accumulated Weight: 50000 lb
Estimated Number of Skids   : 5

Pro Number 423284687
Pro Number Status           : OPEN
Employee Number             : 456
Last Transaction Time       : 12:15:44
Last Transaction Date       : 1-13-97
Actual Accumulated Weight   : 5310 lb
Actual Number of Skids      : 2
Estimated Accumulated Weight: 6000 lb
Estimated Number of Skids   : 1

CAL WT ID#                  : 157845
CAL WT                      : 500 LB
MEASURED WT                 : 500 LB
CAL Date                    : 1-13-97
CAL Time                    : 12:01:29
```

Error Messages

Following are the error messages you may see while using the SimulCast.

Scale Capacity Exceeded
Transaction Aborted...
The scale is in an overload or underload state

Blanking Enabled
Transaction Aborted...
The system has exceeded the maximum calibration angle.

Blanking Enabled
Zero Aborted...
The system has exceeded the maximum calibration angle.

Transaction Aborted.....
Motion Detected
The scale has a motion condition, the transaction is aborted.

Zero Aborted.....
Motion Detected
The scale has a motion condition, the zero is aborted.

Transaction Aborted.....
Invalid Pro#
There is no active pro number in memory, transaction aborted.

Transaction Aborted.....
Under Weight
The weight on the scale has not gone above the minimum weight limit defined in the <SETUP> key.

Below are service related error messages.

Check Proms	The firmware chips are corrupted and need to be replaced.
Blank EE	The EEPROM IC is blank. Factory defaults or the backup copy of configuration settings will be used. Replace EEPROM IC which will force a recalibration.
Check EE	The EEPROM IC is not responding. Factory defaults or the backup copy of configuration settings will be used. Replace EEPROM IC which will force a recalibration.
Overload	The weight on the scale has exceeded the capacity of the system. Remove weight or troubleshoot equipment for defects.
Underload	The weight on the scale has exceeded the capacity of the system. Add weight or troubleshoot equipment for defects.
Over Angle	The angle of the fork lift has exceeded the angle used to calibrate the system. Decrease angle of the fork lift or troubleshoot equipment for defects.
ADC Reset	The analog to digital converter is not responding and/or is in a reset state. Cycle power, verify A/D board is plugged into main board or replace A/D board.
Dead Display	The unit may be in sleep mode. Press any key to turn the unit on or hold the **CLEAR** key for five seconds then press any key to turn the unit on.

Daily Inspection Checklist For Lift Truck Scale Users

- ❑ Check scale carriage for loose, worn, bent, or broken components.
- ❑ Inspect forks for damage.
- ❑ Check locking pins on forks for proper function.
- ❑ Inspect cables from the junction box to Weigh Bars for wear.
- ❑ Inspect retractable cable for pinched, rubbed, stretched, or damaged areas.
- ❑ Inspect power cable for nicks or cuts.
- ❑ Make sure power cable is routed out of harms way. Fasten periodically to eliminate potential problems.
- ❑ Tighten cable connections at indicator and summing box if necessary.
- ❑ Inspect cable clamps and cable ties to be sure all cable attachments are secure.
- ❑ Inspect digital indicator mounting bracket, isolation mounts and hardware for loose or cracked parts.
- ❑ Check to make sure the junction box cover/shielf is fastened.
- ❑ Tighten bottom clamps on scale carriage if necessary. Raise carriage and visually inspect.
- ❑ Check and adjust the lift chain so the heel of the forks have ½" to 1" of clearance from the floor when the carriage is down and the mast is vertical.

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