METTLER TOLEDO

IND780axle
Terminal
and
Axle-780
Application Software
Technical Manual

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This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of 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 or her expense.

- Declaration of conformity is located on the IND780 Terminal documentation CD.

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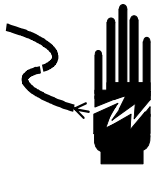
- SAVE this manual for future reference.



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CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

WARNING!

THE IND780 IS NOT DESIGNED FOR USE IN HAZARDOUS (EXPLOSIVE) AREAS.

WARNING!

WHEN THIS EQUIPMENT IS INCLUDED AS A COMPONENT PART OF A SYSTEM, THE RESULTING DESIGN MUST BE REVIEWED BY QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF ALL COMPONENTS IN THE SYSTEM AND THE POTENTIAL HAZARDS INVOLVED. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Contents

Chapter 1.0

Introduction

Overview

The IND780axle industrial terminal is a single- or multi-range, high performance weighing terminal for use with analog or METTLER TOLEDO® POWERCELL®/MTX® scale bases. The Axle-780 Application Software is a TaskExpert™ application for weighing vehicles on a single-platform axle scale.

The Axle-780 Application Software has two modes of operation: Automatic (Unattended) and Manual (Attended).

Automatic Mode guides the truck though the weighing process using a threshold weight and timers. When the truck enters the scale, the entrance and exit lights turn red. Once motion stops on the scale, the weight is captured, and the exit light is changed to green. This process is repeated until all the axles are weighed. Upon exiting the scale, the operator then presses the PRINT button on the IND780 front-panel to print the transaction ticket. The transaction information is stored internally within the Transaction Table. When this feature is enabled, Manual Control of the lights allows an Automatic Mode transaction to be halted and controlled via Manual Control softkey.

In Manual Mode, the truck is guided through the weighing process by a series of prompts acknowledged by the operator. When the truck enters the scale, the entrance and exit lights turn red. Once motion stops on the scale, the weight is captured. A prompt then appears, which the operator must use the softkeys to acknowledge in order to continue. This process is continued until all the axles are weighed. The transaction information is stored internally within the Transaction table, and the ticket is printed.

Software Features

- Weighs vehicles with up to 12 axles
- Ability to select either Automatic (Unattended) or Manual (Attended) Mode of operation
- With the use of traffic lights, the driver is signaled when to stop and move forward
- Ability to set tolerances, thresholds, and timers via the Axle Setup branch

- Ability to flag overloads and control ticket printing for overloaded trucks
- Ability to reprint previous tickets
- Enter transaction ID via Truck ID (keyboard) or Badge ID (RFID badge reader)
- View and print all transactions via the Transaction Table in Axle Setup
- Ability to remotely download vehicle transaction via FTP to a PC

Model Identification

Figure 1-1 explains the model numbers used to define and identify the hardware and software configuration of an IND780.

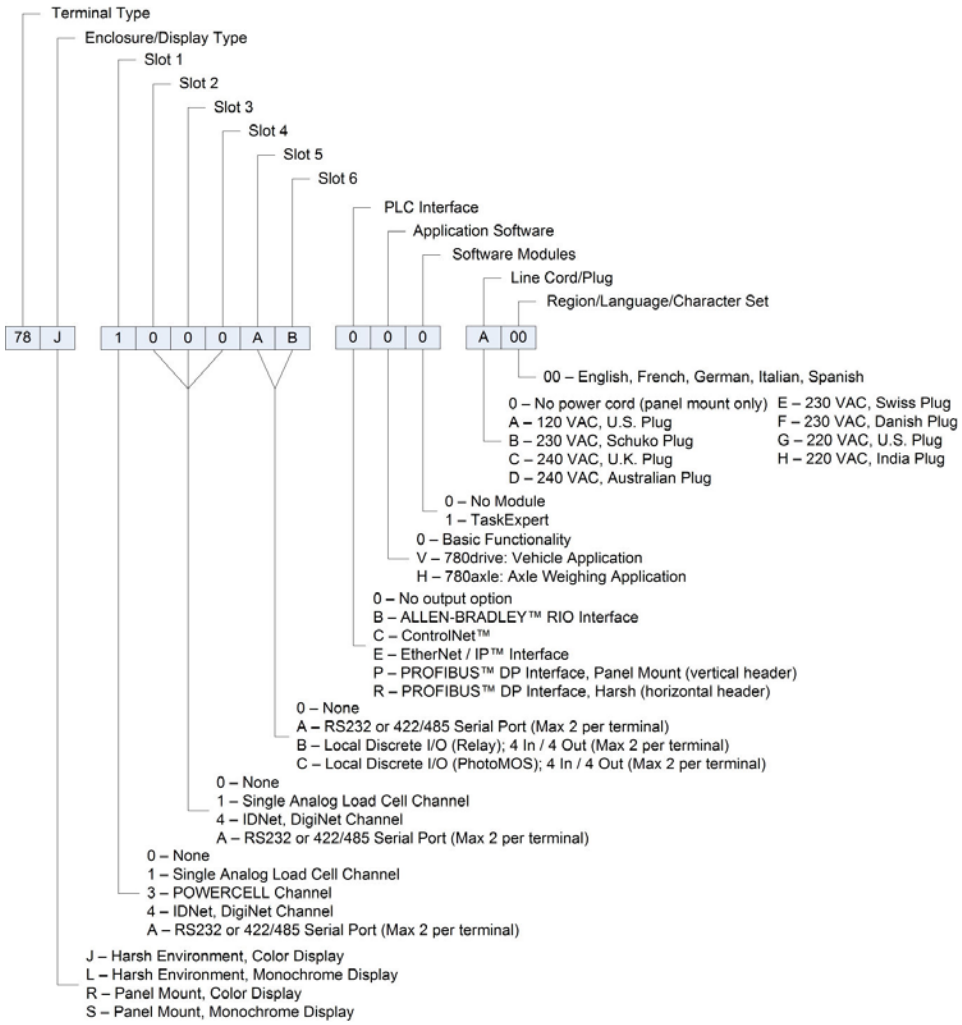


Figure 1-1: Model Configuration Numbers

Capabilities

Basic

The Automatic and Manual weighing modes are outlined in Chapter 2 and described in detail in Chapters 4 and 5.

Advanced

Advanced applications – operation with overload checking, badge reader setup, manual control of lights and gross mode operation – are described in Chapter 6.

Chapter 2.0

Operational Overview

Introduction

This chapter provides an overview of operations that are specific to the IND780axle. Details on basic IND780 functionality may be found in the IND780 **User's Guide** and **Technical Manual**.

Home Screen

Figure 2-1 shows an IND780axle Home screen.

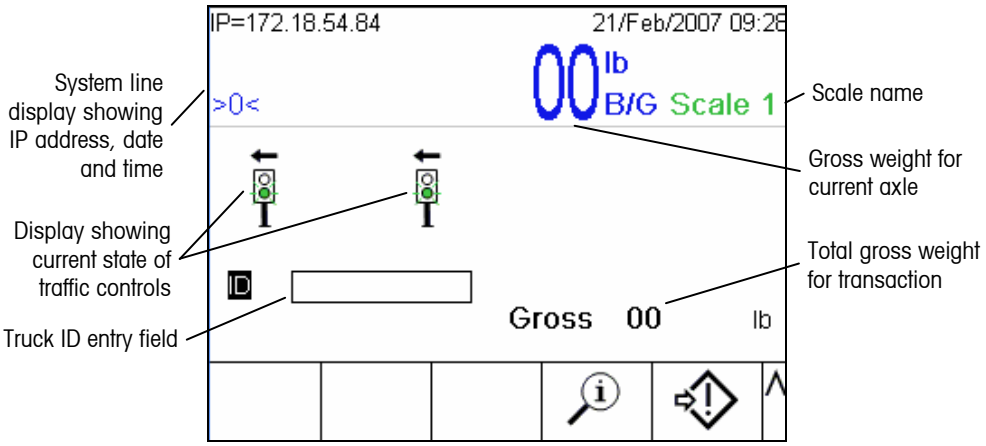


Figure 2-1: Elements of the Home Screen

Security

General IND780 Security

The IND780axle supports the use of usernames and passwords for four levels of setup security. Refer to the IND780 **Technical Manual** Appendix B, **Default Settings**, to determine security levels assigned to specific parameters in setup.

- **Administrator**—An Administrator account has unlimited access to all areas of the operating and setup system. There can be multiple Administrator accounts. There is a Primary Administrator account, which can be changed but never deleted. The terminal is pre-configured at the factory with the Primary Administrator account with no password. The unit as configured at the factory requires no login or password entry to enter the setup mode. All functions of the terminal are available to all users until a password for the Primary Administrator account is set up.

  When the Metrology switch is turned "on", all users with Administrator rights are reduced to the Maintenance level. This is done to protect metrologically significant parameters that cannot be changed when the terminal is "approved."

Once a password is set up, be sure to remember it. If the password is changed or forgotten, access to the setup menu will not be available. Be sure to protect the password from access by unauthorized personnel. The password provides access to the entire setup menu, unless the metrology switch is placed in the approved position.

- **Maintenance**: Access is generally the same as the Administrator level with the exception of access to metrologically significant areas of the setup.
- **Supervisor**: Access is generally limited to editing tables and setting time and date.
- **Operator**—One default operator account is provided. Sites with validation requirements might create many operator accounts, each with a username and password entry requirement. The Operator-class of security is the most restrictive, allowing the user to use and view, but not change records within tables.

If a password has been programmed for the default Administrator username in Setup, and all other users have a password assigned, a login screen is presented whenever the Setup softkey is pressed. A valid username and password must be entered. Depending on the access level of the user logged in, setup screens may be visible only, or visible and available for modification. If a login fails, the display exits the login page and returns to the home screen.

Axle-780 Security

The Axle-780 application has its own login password protection, separate from the IND780 security settings that protect setup parameters. The Axle-780 login procedure is detailed in Chapter 3.0, **Configuration**.

Softkeys and Icons

Table 2-1 lists all icons specific to the IND780axle, i.e., those that are not available with the basic functionality version of IND780.

Table 2-1: Axle-780 Icons and Softkeys

Icon	Function	Explanation
Axles 1 - 6	Axles 1-6	Displayed on Axle Weighing General screen; opens first Axle Thresholds settings screen.
Axles 7 - 12	Axles 7-12	Displayed on first Axle Thresholds settings screen; opens second Axle Thresholds settings screen.
	Go Light	Indicates light is showing Go/green
	Stop Light	Indicates light is showing Stop/red
	Manual Lights	Starts manual traffic control of lights or gates: Icon appears in position 3. UP/DOWN arrow keys switch control between Entrance and Exit.
	Switch Lights	When Manual Lights selected, appears as a softkey in position 3. Toggles state of lights on/off, or gates up/down
No	NO	During transaction, used to decline additional axles or to decline printing the transaction ticket
Yes	YES	During transaction, used to accept additional axles or to accept printing the transaction ticket
Re-Weigh	Reweigh	Available in Manual Mode only. During transaction, allows the operator to reweigh the current axle.
	Reprint	Reprints the most recent transaction, including "*DUPLICATE*" in the ticket heading.This softkey may be assigned to the runtime screen so that it is always available to the operator.

Modes of Operation

Automatic Mode

In Automatic Mode, the truck is guided though the weighing process by the use of a threshold weight and timers. When the truck enters the scale, the entrance and exit lights turn red. Once there is no motion on the scale, the weight is captured, and the exit light changes to green. This process is repeated until all the axles have been weighed. Upon exiting the scale, the driver then pushes the PRINT button on the IND780 front-panel (or optional external keyboard) to print the transaction ticket. Transaction information is also stored internally within the Transaction Table.

Manual Mode

In Manual Mode, the truck is guided through the weighing process by a series of prompts acknowledged by the operator. When the truck enters the scale, the entrance and exit lights turn red. Once there is no motion on the scale, the weight is captured. A prompt then appears which the operator must use the softkeys to acknowledge before weighing can continue. This process is continued until all the axles have been weighed. Transaction information is stored internally within the Transaction table, and the ticket is printed.

Chapter 3.0

Configuration

Installing the Task Expert Application

Overview

Before the hardware key is installed and a master reset performed, the Axle-780 application files must be copied to the IND780's CF (Compact Flash) card. This may be performed in any of three ways:

- Using the InSite™ configuration tool.

  Note: InSite will not display the Axle-780 menu tree, since it is a Task Expert application.
- Through an FTP connection
- By removing the CF card and writing the files to it via a card reader.

Files and Hardware Required

The IND780AX (IND780AXTE) iButton is required – refer to **Installing the Hardware Key**, below.

The following files must be installed:

- AxlePac.cpt
- AxleSetup.cpt
- AxlSclThread.cpt
- FLASH.JDV
- Five bitmap files:
  - axles.bmp
  - yes.bmp
  - reweigh.bmp
  - axles1.bmp
  - no.bmp

To load files via FTP

1. Use a web browser or ftp utility to connect via FTP to IND780 – **ftp://xxx.xxx.xxx.xxx**.
2. Login to the IND780 – **File > Login As**. The default username and password are **admin**, **admin**.

3. Once logged in to the ftp server, continue to **Installing the Software**, below.

To load files using a Compact Flash card reader

1. Power down IND780.
2. Open the case and remove the Compact Flash (CF) card.
3. Insert Compact Flash card into the card reader. The PC will automatically identify the card as a removable drive.
4. Open an Explorer window and locate the Compact Flash card on the PC.
5. Continue to **Installing the Software**, below.

Installing the Software

1. Either in ftp or using an Explorer window, navigate to **/Terminal/JDD**.
2. Create a new folder called **OPT11**.
3. Copy the **FLASH.JDV** file into the OPT11 folder created in the previous step.
4. Return to the root directory of the Compact Flash card.
5. Navigate to **/TaskExpert/Programs**.
6. Copy the following three .cpt files to the folder:
   - AxlePac.cpt
   - AxleSetup.cpt
   - AxlSclThread.cpt
7. Return to the root directory of the Compact Flash card.
8. Navigate to **/Terminal/SKBMP/[COLOR or MONO]**.

   NOTE: The name of the folder is based on IND780 display type.
9. Copy the following five bitmap files to the folder:
   - axles.bmp
   - axles1.bmp
   - yes.bmp
   - no.bmp
   - reweigh.bmp
10. Close the FTP session, or close the Explorer window.
11. Power down the IND780.
12. Continue to **Installing the Hardware Key**.

    Note: Adding a new iButton (hardware key) requires a Master Reset. Refer to **Installing the Hardware Key**, below.

Installing the Hardware Key

Once the Axle-780 application software is installed on the Compact Flash card, the hardware key which enables Axle-780 functionality must be installed in a socket on IND780 Main PCB. Access to the Main PCB varies depending on whether the enclosure is the Panel Mount or Harsh model.

- When the IND780 terminal is restarted after the hardware key is installed or removed, all configuration settings and files except metrologically significant scale data are restored to their factory defaults. Any information stored in user-configured tables such as targets and tare weights will be lost. This information can be saved by performing a Backup to USB operation **before** installing the hardware key. Refer to the Chapter 4 of the IND780 **Technical Manual**, **Service and Maintenance**, for the procedure to follow. Calibration data will not be affected.

To install the hardware key:

1. With power removed from the terminal, access the Main PCB:
   A. For a Panel Mount unit, remove the four screws that fasten the back cover to the enclosure.
   B. For a Harsh unit, remove the front panel using a flat blade screwdriver, as described in Chapter 6 (**Installation**) of the **IND780 Technical Manual**.
2. Identify the hardware key socket, adjacent to the Main PCB backup battery. The socket is indicated in **Error! Reference source not found.**.

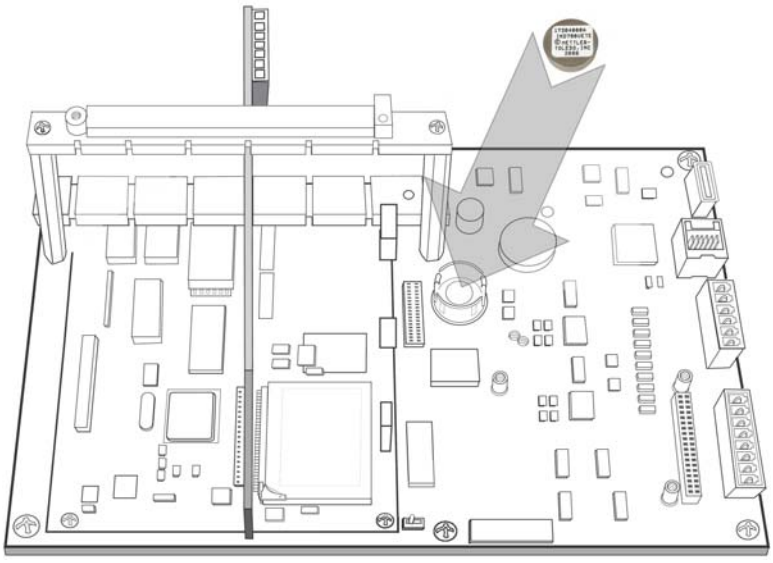


Figure 3-1: Hardware Key Socket

3. Position the hardware key in the socket, label-side up. Press it down into the socket until the two retaining clips snap into position, as seen in **Error! Reference source not found.**.

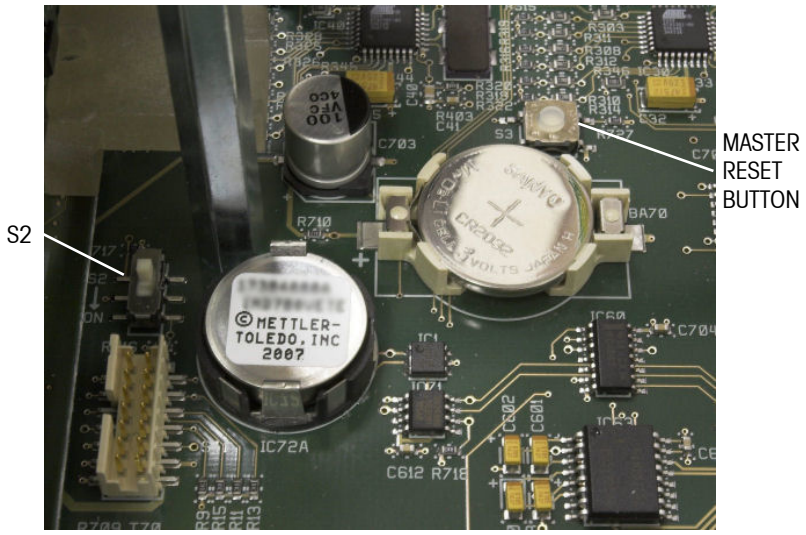


Figure 3-2: Hardware Key Installed

4. Note that when the terminal is restarted, a Master Reset must be performed by holding down the Master Reset button (indicated in **Error! Reference source not found.**) when power is applied, until the terminal beeps.

The Master Reset operation will **not** reset metrologically significant scale configuration data unless S2 (shown in its OFF position in **Error! Reference source not found.**) is in its ON position when the reset is performed.

Setup Mode

The setup menu of the IND780axle includes all the elements and functionality of the default configuration (detailed in Chapter 3 of the IND780 **Technical Manual**, **Configuration**), together with some additional or modified screens (Figure 3-3). The functions and parameters of each of the Task Expert screens are detailed in the Configuration Options section, immediately below. The remaining configuration changes – to Output Templates 2 and 3, and to Connections – are set in the Axle-780 application.

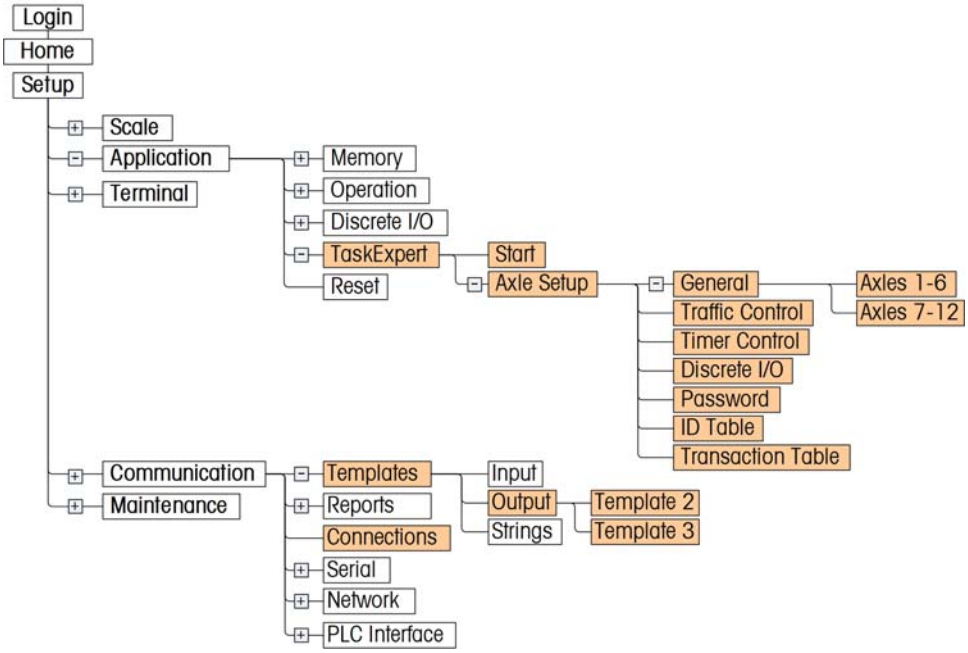


Figure 3-3: IND780 Menu Tree: Branches Specific to Axle-780

Entering and Exiting Setup Mode

To access the setup menu tree, press the DOWN or UP key, if necessary to display the appropriate row of softkeys, then press the SETUP softkey .

If security is enabled (passwords have been assigned to the default Administrator and Operator), and no log-in is in effect, attempts to access setup will be met with a Login screen (Figure 3-4) that requires the entry of a valid user name and password. Depending on the access level of the login, setup screens may be visible only, or visible and modifiable.

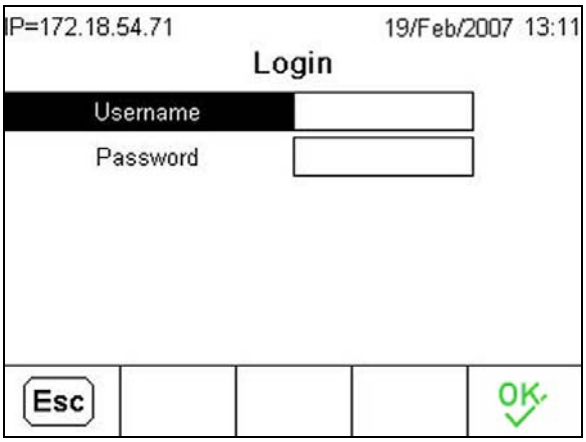


Figure 3-4: Log-In Screen

To leave setup and return to the home screen, either press the first (left-most) softkey while the menu tree is showing, or use the UP key to move focus to the Home branch and then press ENTER.

Accessing Axle-780 Configuration Screens

If a password is enabled (at Application > Task Expert > Axle Setup > Password), a password screen (Figure 3-5) appears when the Axle Setup screen is selected in the menu tree (Figure 3-3).

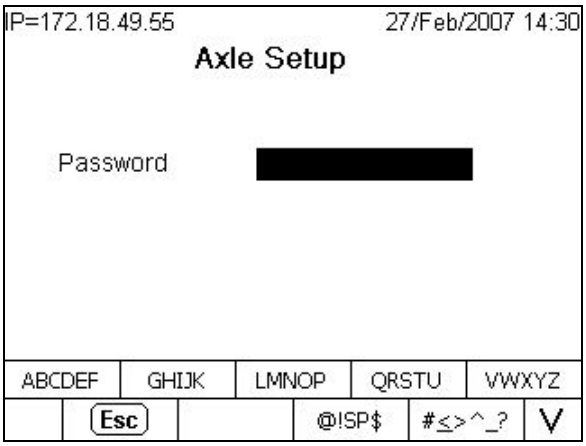


Figure 3-5: Axle-780 Login Password Screen

Once a correct password has been entered and the OK softkey OK pressed, the Axle Weighing Setup screen (Figure 3-6) appears.

Configuration Options

- In the following sections, default values are indicated with an asterisk (*).
- Performing an Application > Reset restores Axle Weighing Setup parameters to their default values, but does **not** clear the ID or Transaction table. Each table can be cleared using the CLEAR softkey C on its Search screen.

Application > TaskExpert > Axle Setup

Because this setup menu was created in TaskExpert, it functions differently than the Standard IND780 Setup Tree. The Axle Setup branches (Figure 3-6) can only be selected by placing the focus on the desired branch and pressing the OK softkey.

Figure 3-6: Access to Axle-780 Setup Screens

The features of each available screen are detailed in the following subsections.

General

The Axle Weighing General screen is shown in Figure 3-7.

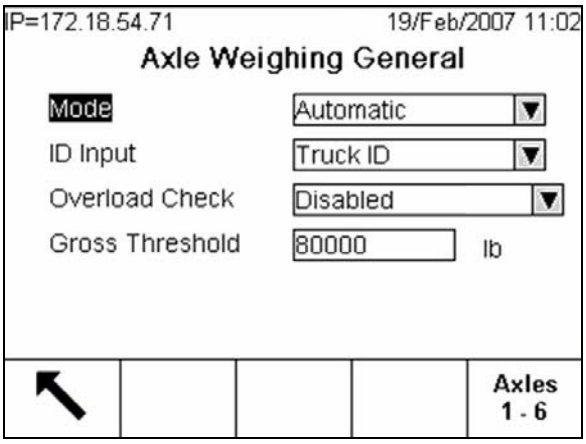


Figure 3-7: Axle-780 General Setup Screen

Press the EXIT softkey ↖ to return to the initial Axle Weighing Setup screen.

Settings and functions available in this screen are:

Mode	Manual, Automatic*
ID Input	None*, Truck ID, Badge ID
Overload Check	Disabled*, Yes; OK to Override, Yes; No Override
Gross Threshold	0-999999, 80000*

Mode sets the mode of operation for the Axle-780 – either Automatic or Manual. For specific operation of each mode, please refer to the **Automatic Mode Weighing** and **Manual Mode Weighing** Chapters (4 and 5) in this manual.

ID Input sets the type of input that is to be used during the transaction. When **None** is selected, no ID label and textbox will appear on the Runtime display. **Truck ID** is used to enter an ID manually via the IND780 front panel or an optional external keyboard. **Badge ID** is used to enter in an ID via an optional RFID badge reader.

Overload Check determines how the application will respond when an overload threshold has been exceeded. Selecting **Disabled** turns off the Overload Check. **Yes; OK to Override** is available only in Manual Mode operation. This option allows the operator to acknowledge the overload violation and either accept or ignore it during runtime operation. The transaction is stored in both cases, but the overload is only notated on the transaction ticket when the overload violation is accepted. **Yes; No Override** does not allow the operator to acknowledge the overload violation. The transaction will always be stored and notated on the transaction ticket. For more information about this function, refer to the **Operation with Overload Checking** section of Chapter 6, **Advanced Applications**.

Gross Threshold is the gross weight value used for comparison by the Overload Check during a transaction.

Axle Thresholds

The AXLES 1-6 softkey Axles 1 - 6 opens the first of two Axle Thresholds screens (Figure 3-8). Note that, depending on the size of the scale platform used, an "Axle" defined on this screen may represent one or two actual axles.

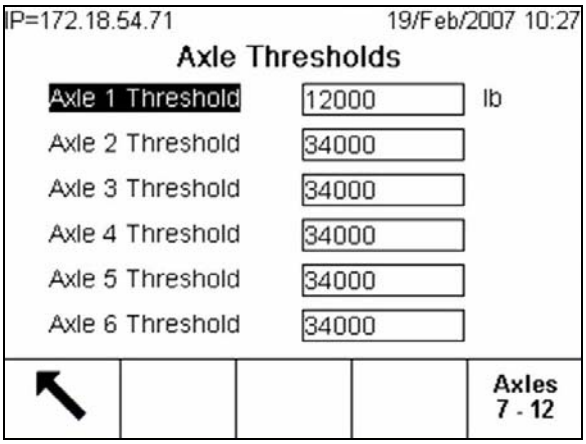


Figure 3-8: First Axle Thresholds Screen

The EXIT softkey returns the view to the Axle Weighing General screen.

Press the AXLES 7-12 Axles 7 - 12 softkey to access the second screen (Figure 3-9).

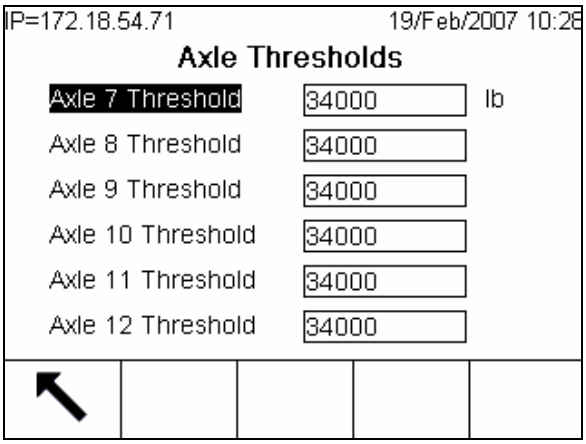


Figure 3-9: Second Axle Thresholds Screen

The EXIT softkey returns the view to the first Axle Thresholds screen (Figure 3-8).

Settings and functions available in these screens are:

Axle 1 Threshold	0-999999, 12000*
Axle 2 – 12 Thresholds	0-999999, 34000*

Axle Thresholds 1-12 are the threshold values for each axle. When the **Overload Check** is enabled (see Figure 3-7), each of these values is compared to the axle being weighed. If an overload is detected, that axle's weight appears on screen in bold and (on terminals with color screens) in red.

In cases where both axles in a tandem configuration fit on the scale platform at the same time, the threshold is for the summed weight of the two and the "Axle" designated in the application is a virtual axle.

Traffic Control

The **Traffic Control** screen varies in its appearance, depending on which Control Type is selected. By default, Control Type is set to **None**, as shown in Figure 3-10. In this case, only the **Threshold**, **Excursion**, and **Zero Tolerance** parameters are available.

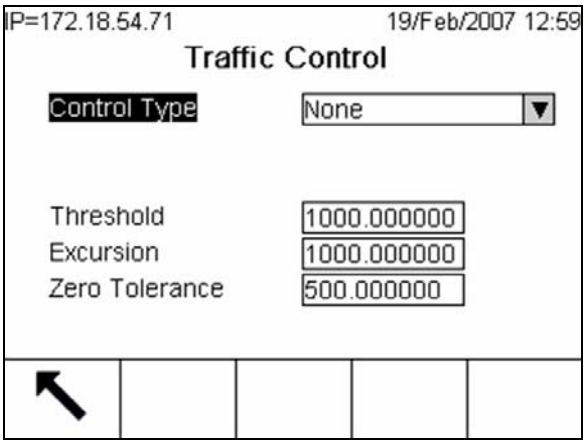


Figure 3-10: Traffic Control Screen, No Control Enabled

Further options become available (Figure 3-11) when a Control Type is selected.

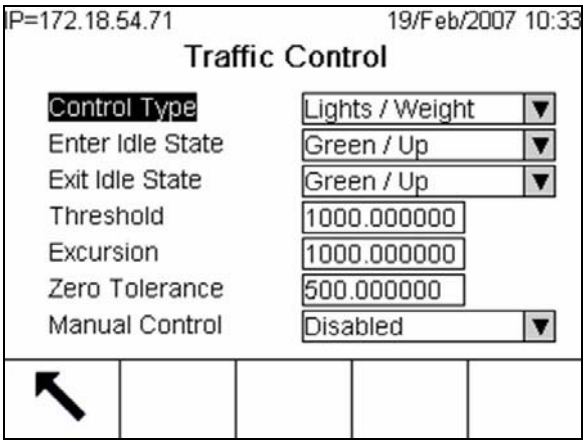


Figure 3-11: Traffic Control Screen, Lights/Weight Control Selected

Settings and functions available in this screen are:

Control Type	None*, Lights/Weight
Enter Idle State [when Control = Lights/Weight]	Green/Up*, Red/Down
Exit Idle State [when Control = Lights/Weight]	Green/Up*, Red/Down
Threshold	0-999999, 1000*

Excursion	0-999999, 1000*
Zero Tolerance	0-999999, 500*
Manual Control [when Control = Lights/Weight]	Enabled, Disabled*

Control Type determines the way in which vehicles are handled as they arrive at and leave the scale. When **None** is selected, no traffic control is in effect. The **Lights/Weight** setting uses scale output to control red and green lights at the scale's entry, its exit, or at both.

Enter Idle State and **Exit Idle State** set the state of the controls when a transaction is not underway.

The **Threshold** value is the weight above which a truck axle is assumed to be on the scale. The light controls are actuated once the value is exceeded.

The **Excursion** value is the amount the weight must change to indicate that the last axle has moved off the scale, or that an additional axle has come onto the scale.

Zero Tolerance is used in combination with the **Zero Time Delay** (see Figure 3-12, below). In order to minimize the number of false positives, the Zero Time Delay is used to delay the control signal. When the Zero Tolerance value is exceeded, the zero timer starts. If the scale is out of tolerance after the timer delay expires, then the controls are actuated to turn the lights to RED. A value of zero disables Zero Tolerance checking.

Timer Control

Options available in the Timer Control screen (Figure 3-12) vary, depending on which mode is selected in the General Page.

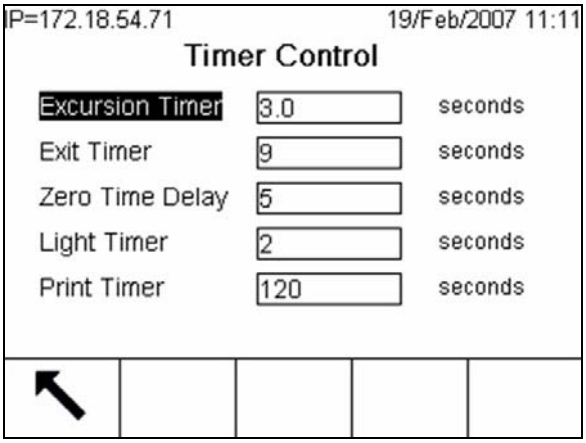


Figure 3-12: Timer Control Screen, Automatic Mode Selected

Settings and functions available in this screen are:

Excursion Timer	0.1 - 10 seconds, 3 seconds*
Exit Timer	5-100 seconds, 9 seconds*
Zero Time Delay	0-99 seconds, 5 seconds*

Light Timer [When Mode = Automatic]	1-20 seconds, 2 seconds*
Print Timer [When Mode = Automatic]	0-200 seconds, 120 seconds*

The **Excursion Timer** sets the amount of time the program will wait between seeing a change in the **Excursion Weight** (see Traffic Control, above) and checking for the next axle on the scale. If the weight on the scale is below the threshold after the excursion time is exceeded, it is assumed that there are no more axles, and the Exit Timer is started.

The **Exit Timer** sets the amount of time the weight must be below the threshold before the system assumes the truck is off the scale.

Zero Time Delay is used in conjunction with the **Zero Tolerance** setting (see Traffic Control, above). In order to avoid setting the lights to red unnecessarily, it sets a delay in sending the control signal when zero tolerance is exceeded. If the scale is out of tolerance after the timer delay expires, then the controls are actuated.

Light Timer is the amount of time the RED light will remain turned on for each axle weightment.

Print Timer is the amount of time the Axle-780 application will wait for the driver to initiate a ticket print. If the Print Timer time elapses, the scale will reset without printing a ticket. If the Print Timer is set to a value of zero (0) seconds, Axle-780 will automatically print the ticket after the transaction is stored.

Discrete I/O Setup

The Discrete IO Setup screen is shown in **Figure 3-13**.

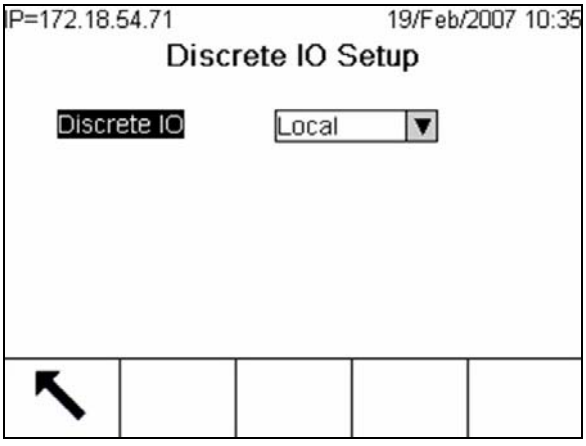


Figure 3-13: Discrete I/O Setup Screen

In this screen, the discrete outputs for the lights can be set to be controlled either by an internal Discrete I/O option card (Local*) or by an ARM100 Remote Discrete I/O Module (Remote).

The following connection addresses are static connections and should not be modified via the standard IND780 setup screens. Changes made to these settings will be over-written by the Axle-780 application.

Local	Remote
0.5.1 – Entrance Red	1.0.1 – Entrance Red
0.5.2 – Entrance Green	1.0.2 – Entrance Green
0.5.3 – Exit Red	1.0.3 – Exit Red
0.5.4 – Exit Green	1.0.4 – Exit Green

Example: Address 0.5.1 = Local Discrete IO board, slot 5, output 1.

Password

The Password setup screen is shown in Figure 3-14.

Figure 3-14: Password Setup Screen

Settings and functions available in this screen are:

Login Password	Enabled, Disabled*
New Password	8 alphanumeric characters
Confirm Password	8 alphanumeric characters

When enabled, **Login Password** requires the operator to login to the Axle Setup. This password is specific to the Axle-780 application, and separate from the standard IND780 setup security.

New Password is used to overwrite an existing password.

Confirm Password checks to make sure the two values are the same. Once OK is pressed, the two passwords are compared. If there is a discrepancy, a "Passwords Do Not Match" message will appear. The operator can then re-enter both passwords to correct the error.

ID Table

The ID Table is used to store RFID Badge data. If the ID Input mode is set to Badge ID, during runtime, this ID Table is searched for the ID Badge Number. If the number does not exist, an error message will appear on the display. If the number does exist, the Badge ID will appear on the display, and the driver can continue with the transaction.

Note: To avoid delays in searching the ID Table, no more than 1,500 IDs should be stored.

ID Table Search

Figure 3-15 shows the ID Table/Search screen.

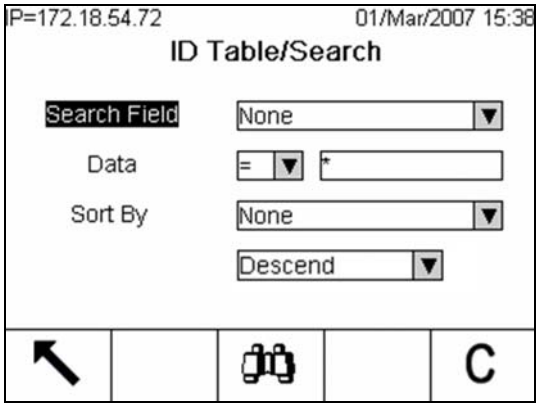


Figure 3-15: ID Table Search Screen

Settings and functions available in this screen are:

Search Field	None*, Bade ID, Badge Number
Data	Specifies operation to be performed on entered data – < (less than), <= (less than or equal to), =* (equal to), >= (greater than or equal to), > (greater than)
Data Field	Alphanumeric entry field
Sort By	Same as Search Field
[Sort By order]	Ascend, Descend*
C	After a warning prompt. clears the ID table

ID Table View and Print

Once the data have been filtered using the search screen, pressing the VIEW TABLE softkey opens the screen shown in Figure 3-16.

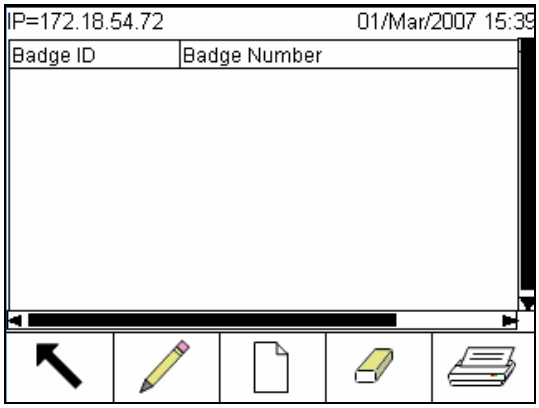


Figure 3-16: ID Table View Screen

From this screen, badge IDs may be edited, created, erased and printed.

Figure 3-17 shows the ID New screen, where Badge ID and Number data can be entered. The Badge ID must be entered manually. The Badge Number can either be entered manually, or the badge can be read into the field by the badge reader.

The new ID fields are defined as follows:

Badge ID	16 alphanumeric characters: The identifier associated with the badge number. This ID is printed on the transaction ticket.
Badge Number	16 alphanumeric characters: The unique identifier for the badge itself.

Figure 3-17 (left) shows the ID New screen with data entered. Pressing OK in this screen saves the badge to the ID table (right).

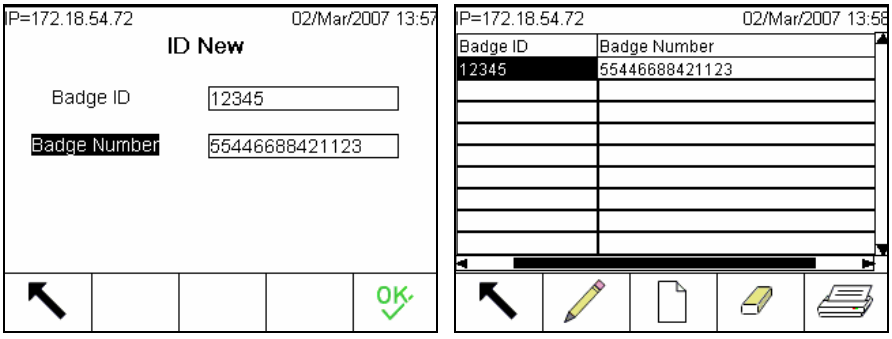


Figure 3-17: ID New Screen

Transaction Table

Transaction Table Search

Figure 3-18 shows the Transaction Table / Search screen.

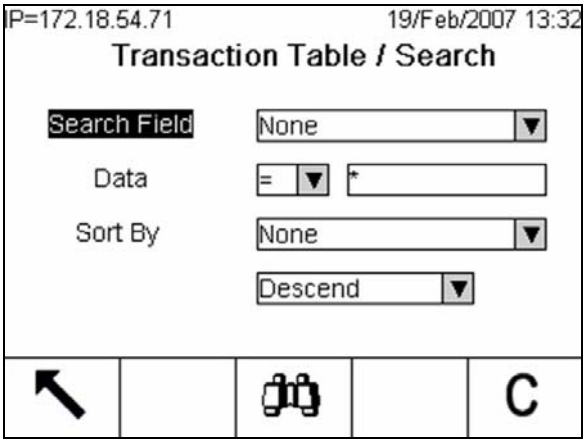


Figure 3-18: Transaction Table / Search Screen

Settings and functions available in this screen are:

Search Field	None*, Transaction, ID, O/L, Date, Time
Data	Specifies operation to be performed on data entered in the adjacent alphanumeric field: < (less than), <= (less then or equal to), =* (equals), <> (not equal), >= (greater than or equal to), > (greater than)
Sort By	Same as **Search Field**
[Sort By order]	Ascend, Descend*

Softkeys in this screen function as follows:

	**Exit**	Returns to the Axle Weighing Setup screen (Figure 3-6)
	**Search**	Opens the Transaction Table View screen (Figure 3-19)
C	**Clear**	Opens a warning screen and, if OK pressed, clears the transaction table

Transaction Table View and Print

The Transaction Table stores a record of all transactions. The following data are included in each record:

Transaction	Sequential number identifying the transaction
ID	Alphanumeric string from the Vehicle ID field displayed during the transaction
Date	Date on which the transaction was performed

Time	Time at which the transaction was performed
O/L	Indicates whether transaction included one or more axles with weight overloads
Gross	Calculated gross weight of the truck
Unit	Weight unit for the transaction
Axles 1-12	Individual axle weights

Figure 3-19 shows the initial Transaction Table View screen, together with a series of partial screens showing further columns of data visible. The IND780's arrow keys can be used to move through the rows and columns of data.

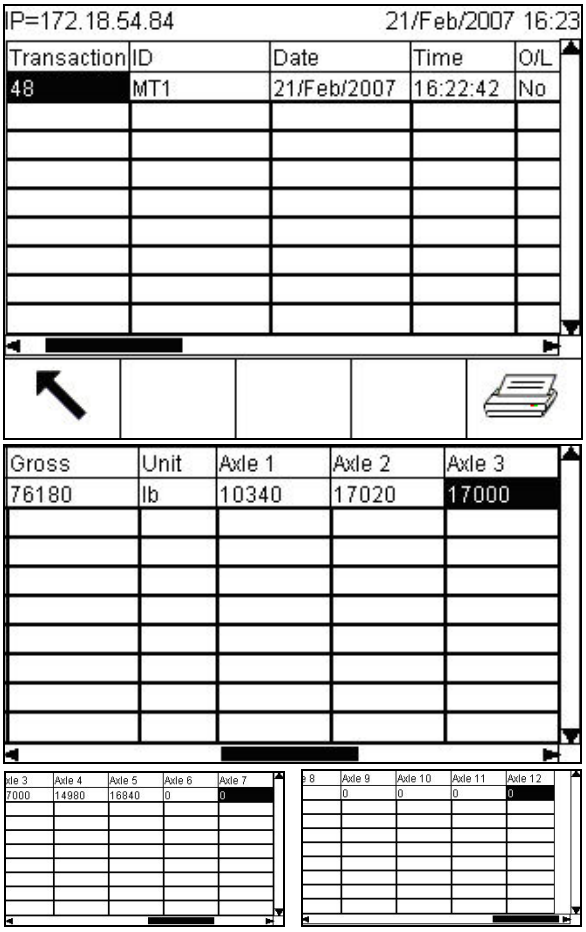


Figure 3-19: Transaction Table View Screens

When the PRINT softkey  is pressed, a report is printed that includes all transactions selected in the Search screen (Figure 3-18). Figure 3-20 shows an example of a printed Transaction report.

A "yes" in the O/L (Over Load) column indicates that one or more axles exceeded the permitted maximum; the overall gross weight may or may not be excessive.

Transaction Report

Trans#	ID	Date	Time	O/L	Gross	Unit
48	MT1	21/Feb/2007	16:22:42	No	76180	lb
49	METTLER 5	22/Feb/2007	08:47:33	No	77840	lb
50	METTLER 6	22/Feb/2007	09:01:15	Yes	79560	lb

Figure 3-20: Sample Transaction Report

Connections

The necessary Axle-780 connections can be configured using the standard IND780 setup screen, at Communications > Connections. By default, the following two connections are created:

- COM1, Demand Output, Trigger 1, Template 2
- COM1, Demand Output, Trigger 2, Template 3

Trigger 1 is used to print the Axle ticket. Trigger 2 is used for printing the Gross Mode ticket.

Chapter 4.0

Automatic Mode Weighing

Automatic Mode Weighing

- To use this function, the **Mode** (selected on the Axle Weighing General setup screen) must be set to Automatic. This is the default mode.

Automatic Mode weighing is used for unattended axle weighing. The Threshold and Excursion weight values, together with the various timers, are used to guide the truck through the weighing process.

Performing an Automatic Mode Transaction

Figure 4-1 shows the idle state Axle Runtime display, with Lights/Weight and Truck ID selected. This idle state remains until a truck enters the scale.

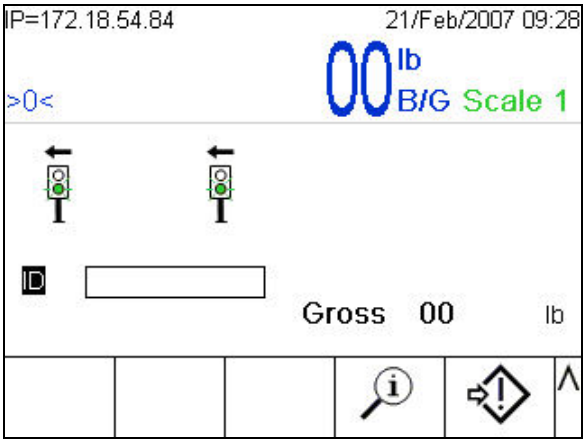


Figure 4-1: Axle Runtime Display, Idle

An ID can be entered throughout the transaction. However, if no ID is entered after the last axle is weighed, the focus will be placed on the ID field (Figure 4-2). The drive can then either key in the ID (using the numeric keypad or the softkeys in their alphanumeric mode) or press ENTER to ignore the ID and complete the transaction.

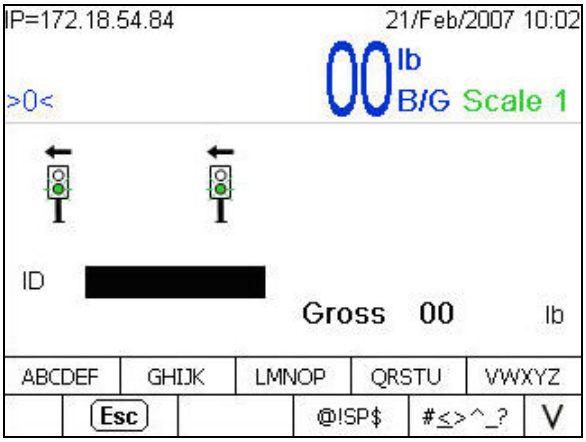


Figure 4-2: ID Entry

Once the Threshold value is exceeded, the lights turn RED. When motion stops on the scale, the weight is captured and displayed (Figure 4-3). As the individual axle weights are captured, the gross weight is incremented.

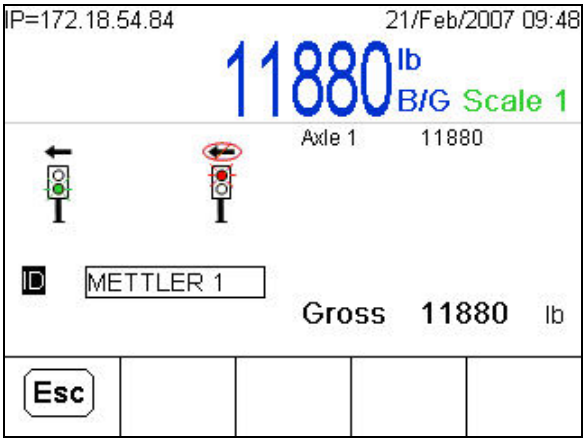


Figure 4-3: First Axle Weight Displayed

After the first axle weight is captured, the softkeys change. In this instance, only one softkey is now available. The ESC softkey allows for the transaction to be halted and then cleared if desired.

Note: If **Manual Control** is enabled in the Traffic Control setup screen, the MANUAL LIGHTS softkey will appear on the runtime display once the first axle weight is captured (Figure 4-4). This permits the state of the traffic control lights to be changed by the operator, without ending or otherwise affecting the ongoing transaction.

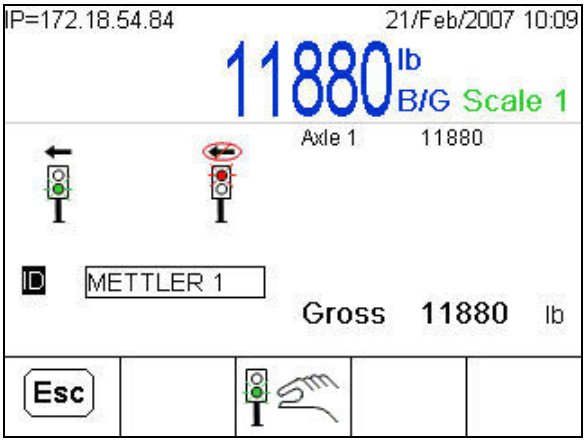


Figure 4-4: Manual Mode Softkey Displayed

If the ESC softkey (Esc) is pressed, a "Clear Scale?" prompt appears (Figure 4-5) with ESC and OK softkeys showing:

OK Releases the vehicle currently on the scale abandons the transaction. The display will be cleared and return to its idle state.

Esc Allows the transaction to be continued from its current state.

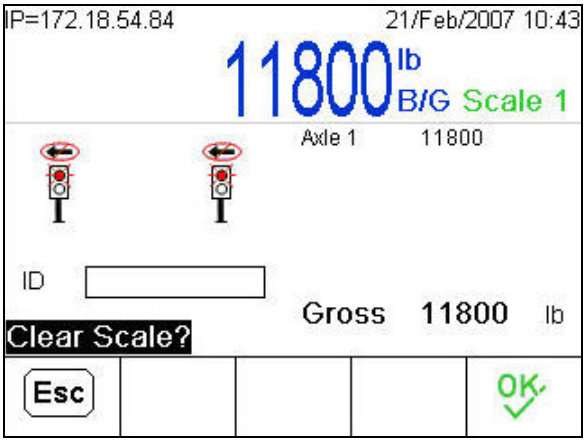


Figure 4-5: ESC Pressed, Clear Scale Prompt Showing

After the first axle weight is captured, the exit light changes to signal the driver to move on to the next axle. Figure 4-6 shows a transaction after the steering, drive tandem, and trailer tandem axles have been weighed. The application is signaling the driver to continue on to the next axle.

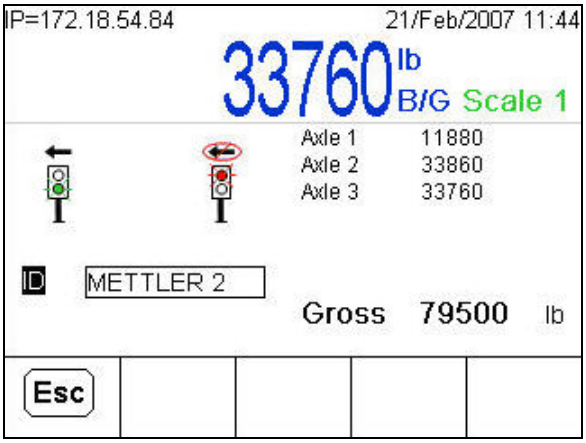


Figure 4-6: Multiple Axles Weighed

In this case, though, there are no more axles, and the Exit Timer will start once the weight goes below Threshold. Once the Exit Timer expires, the transaction will be saved (Figure 4-7). All the transactions are stored in the Transaction Table.

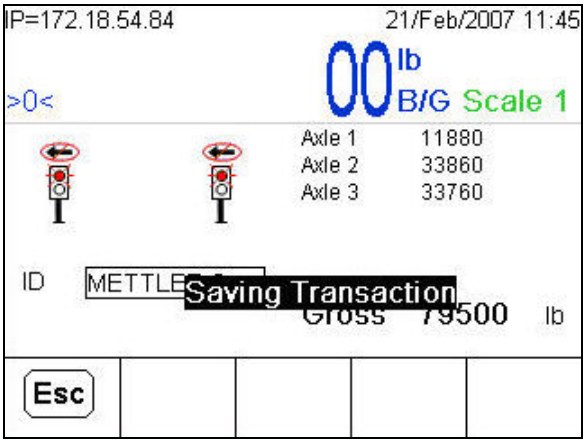


Figure 4-7: Transaction Completed, "Saving" Prompt Showing

After the transaction has been saved, the Print Timer starts and waits (Figure 4-8) for the PRINT key to be pressed. If the PRINT key is not pressed and the Print Timer expires, the application will reset without printing a ticket.

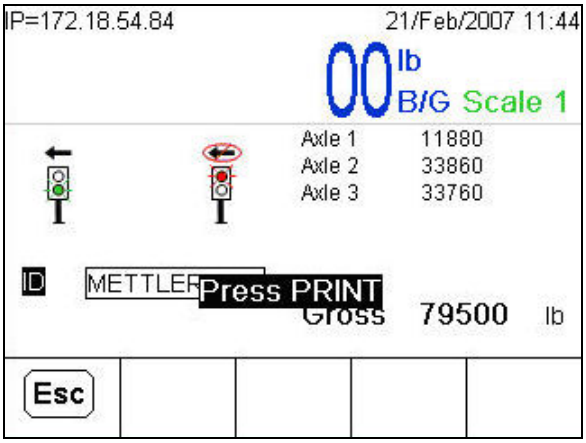


Figure 4-8: Transaction Completed, Waiting for Print Button Push

Once the PRINT key is pressed, a message appears (Figure 4-9) notifying the driver that the application is in the process of printing.

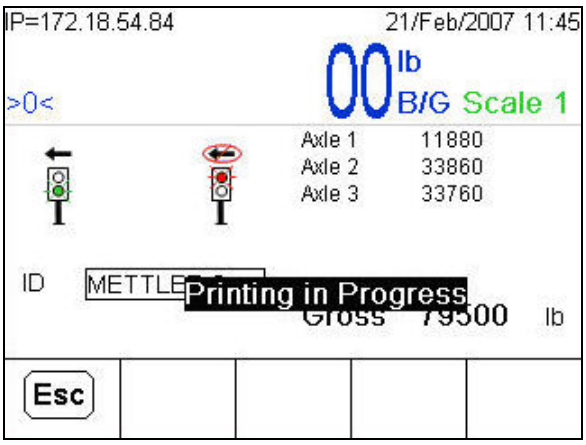


Figure 4-9: Print Key Pressed, "Printing in Progress" Prompt Showing

Figure 4-10 shows two examples of printed tickets, the second generated by pressing the REPRINT softkey .

```
22/Feb/2007
08:50:39

Transaction:  49

ID:  METTLER 5

Axle 1:   10720
Axle 2:   17460
Axle 3:   15660
Axle 4:   16580
Axle 5:   17420
Axle 6:   0
Axle 7:   0
Axle 8:   0
Axle 9:   0
Axle 10:  0
Axle 11:  0
Axle 12:  0

Gross:    77840    lb
```

```
*DUPLICATE*

22/Feb/2007
08:50:39

Transaction:  49

ID:  METTLER 5

Axle 1:   10720
Axle 2:   17460
Axle 3:   15660
Axle 4:   16580
Axle 5:   17420
Axle 6:   0
Axle 7:   0
Axle 8:   0
Axle 9:   0
Axle 10:  0
Axle 11:  0
Axle 12:  0

Gross:    77840    lb
```

Figure 4-10: Printed Tickets: Original (left), Reprint (right)

At this point, the transaction is complete and the traffic controls return to their idle state, as specified in the Axle Weighing General setup screen.

Chapter 5.0

Manual Mode Weighing

Manual Mode Weighing

To use this function, the **Mode** (selected on the Axle Weighing General setup screen) must be set to Manual.

Manual Mode weighing is used for attended axle weighing. The Threshold and Excursion weight values, along with prompts acknowledged by the operator, are used to guide the truck through the weighing process.

Performing a Manual Mode Transaction

Figure 5-1 shows the idle state Axle Runtime display, with Lights/Weight and Truck ID selected. The application remains in this idle state until a truck enters the scale.

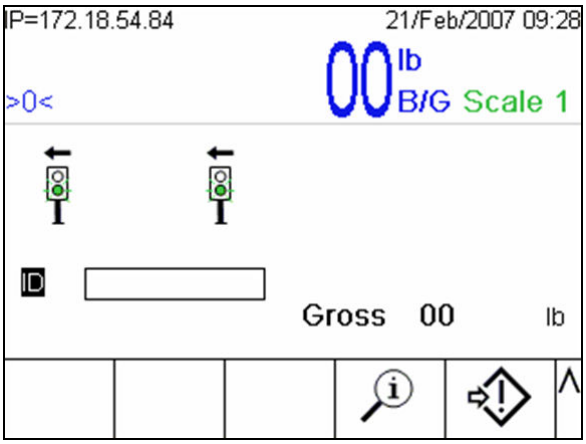


Figure 5-1: Axle Runtime Display, Idle

An ID can be entered throughout the transaction. However, if no ID is entered after the last axle is weighed, the ID field will be put in focus. The driver can now either key in the ID (using the numeric keypad or the softkeys in their alphanumeric mode) or press ENTER to ignore the ID and complete the transaction.

Once the Threshold value is exceeded, the lights turn red. When motion stops on the scale, the weight is captured and displayed. As the individual axle weights are captured, the gross weight (at lower right) is incremented.

In Manual Mode, new softkeys appear to give the operator flexibility throughout the transaction. After the axle weight is captured and displayed (just below the live weight display), a prompt appears (Figure 5-2) asking the operator if there is another axle.

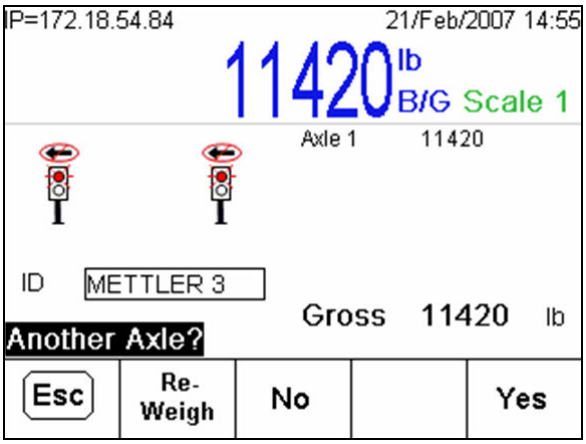


Figure 5-2: "Another Axle?" Prompt

The softkeys displayed in this screen function as follows:

Esc	When pressed, a "Clear Scale?" prompt appears with ESC (Esc) and OK softkeys. If ESC is pressed, the transaction continues from its previous state. Pressing OK releases the vehicle currently on the scale and abandons the transaction. The display will be cleared and return to its idle state.
Re-Weigh	Used when there is a discrepancy between the "live" weight on the display versus the displayed axle weight. When pressed, the application captures the weight again, updating the axle weight and gross weight on the display. Refer to **Using Reweigh** on page 5-5.
No	Signals the application that there are no more axles, begins to complete the transaction.
Yes	Signals the application that there is another axle. The light switches to GREEN to notify the driver to move ahead.

Figure 5-3 shows the screen after the YES softkey has been pressed, with the green light showing.

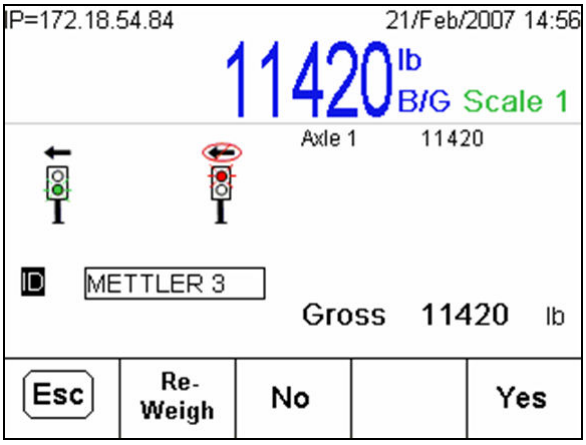


Figure 5-3: Green Light Instructing Driver to Move to Next Axle

The transaction in this example is continued through two further weighments. In Figure 5-4, the drive tandem and trailer tandem axles have been captured, and all three axle weighments are displayed on screen, just below the "live" weight display.

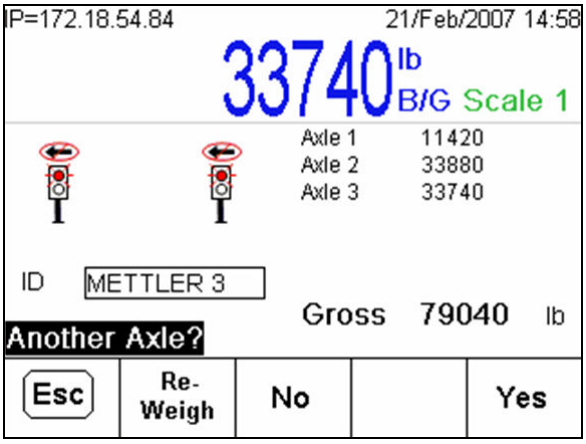


Figure 5-4: All Axles Weighed

At this point, pressing the NO softkey signals the application that there are no more axles to weigh. The application saves the transaction (Figure 5-5).

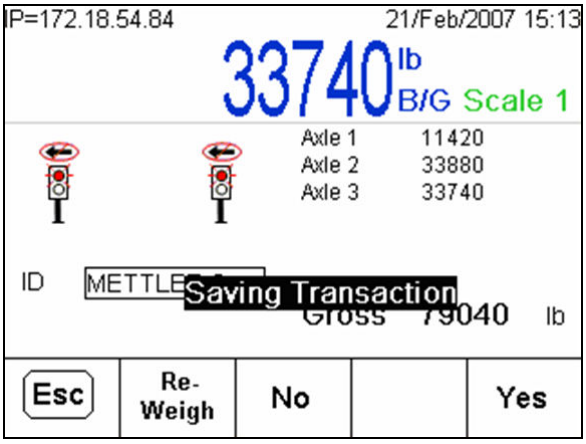


Figure 5-5: "Saving Transaction" Prompt

Once the transaction has been saved, the application prints the ticket (Figure 5-6).

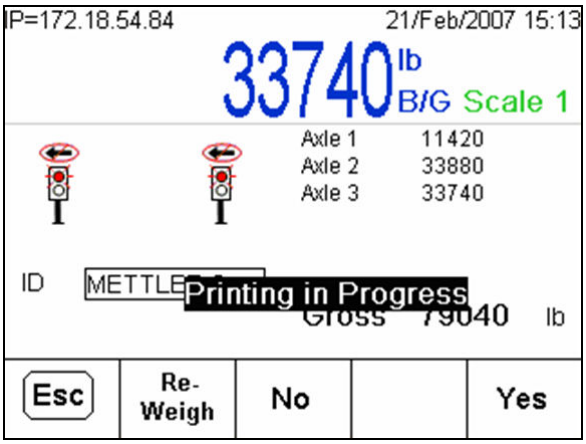


Figure 5-6: "Printing in Progress" Prompt

With the transaction saved and the ticket printed, the exit light changes to green (Figure 5-7) to notify the driver to move ahead and exit the scale.

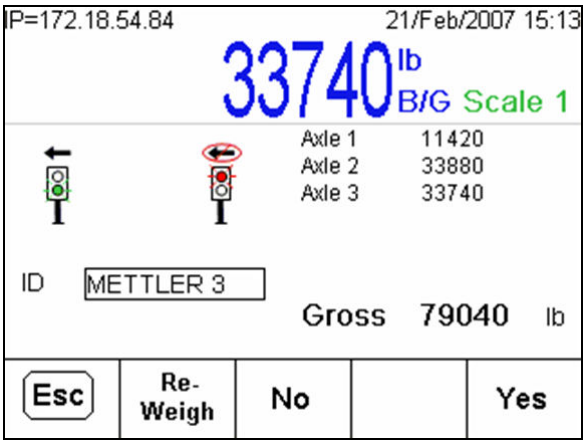


Figure 5-7: Transaction Complete, Green Light Instructing Driver to Exit Scale

After the truck exits the scale, the application returns to its idle state (Figure 5-1).

Using Reweigh

Reweighing is available in the Manual Mode only. It gives the operator the ability to reweigh an axle if the weight was captured and the truck readjusted its position, creating a discrepancy between the captured weight and the live weight.

In Figure 5-8, it can be seen that the captured weight does not equal the "live" weight on the scale. This can be adjusted by pressing the REWEIGH softkey.

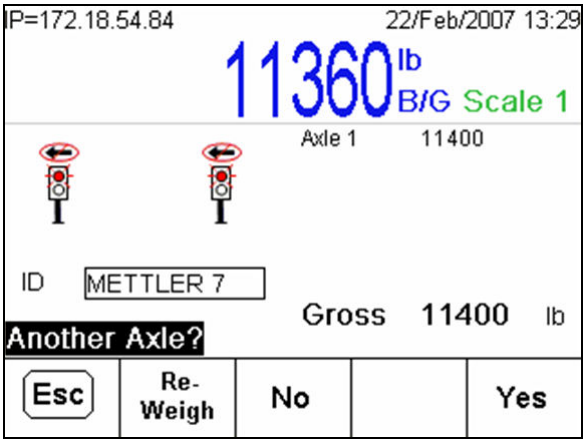


Figure 5-8: Live Weight Different from Captured Weight

In Figure 5-9, the REWEIGH softkey has been pressed, updating the captured Axle 1 weight and the Gross weight. After this adjustment, the YES softkey is pressed and the transaction continues as normal.

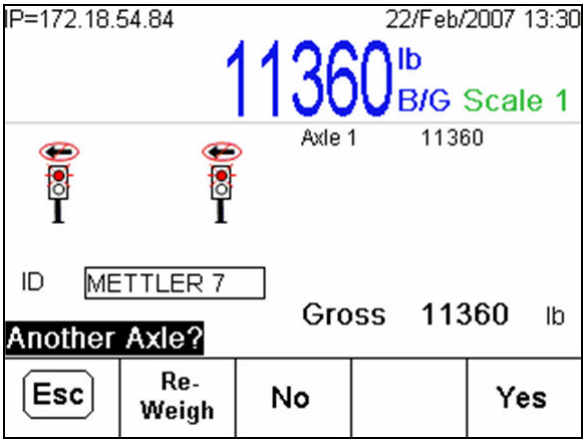


Figure 5-9: Captured and Gross Weights Corrected

Chapter 6.0

Advanced Applications

Operation with Overload Checking

Three modes of Overload Checking are available in Axle Setup: **Disabled**, **Yes; OK to Override** (in Manual Mode only), and **Yes; No Override**. The Overload Checking enables the operator to track individual overweight axles as well as an overweight gross load throughout the transaction. The sequence of illustrations below demonstrates how overload checking is used in both Automatic and Manual Modes of operation.

- When overload checking is enabled, the overload violation is recorded in the transaction table.
- In each of the following examples, the default axle threshold values are used:

  Gross: 80000 lb
  Axle 1: 12000 lb
  Axle 2: 34000 lb
  Axle 3: 34000 lb

Automatic Mode

Overload Check – Yes; No Override

When the **Overload Check** is set to **Yes; No Override**, and one of the axle or gross weight thresholds are exceeded, the driver receives a prompt at the end of the transaction that must be acknowledged to continue. The transaction is printed with *OVERLOAD VIOLATION* at the top of the ticket, and each overloaded axle is marked O/L.

In Figure 6-1, the entire truck has been weighed, and the application is now waiting for the truck to exit. The overweight value is displayed in **bold red** (IND780 color display only – **bold** only in monochrome). It can be seen from the display that Axle 2 (tandem drive axles) is overweight.

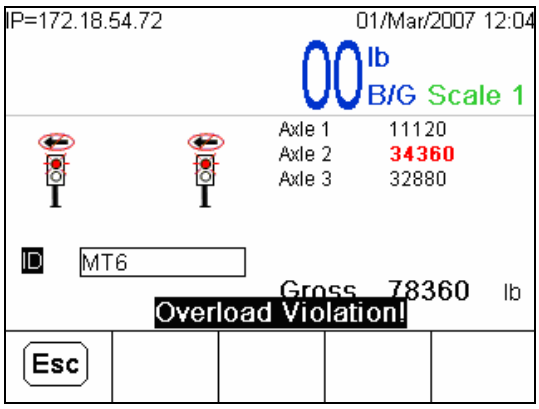


Figure 6-1: Axle Overload Displayed

Once the truck exits the scale, the transaction is stored (Figure 6-2).

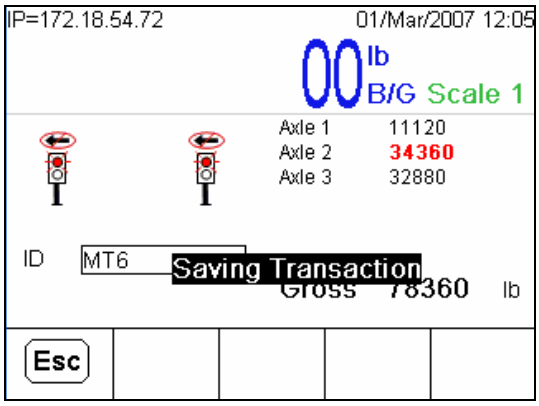


Figure 6-2: Saving Transaction

After the transaction is stored, a prompt appears notifying the driver to press PRINT to print the transaction ticket (Figure 6-13).

If one or more axles had gross weights in excess of the values configured in the Axle Thresholds setup screens, the printed tickets appear with headers, and O/L indications beside the overloaded axle/s, as shown in Figure 6-3.

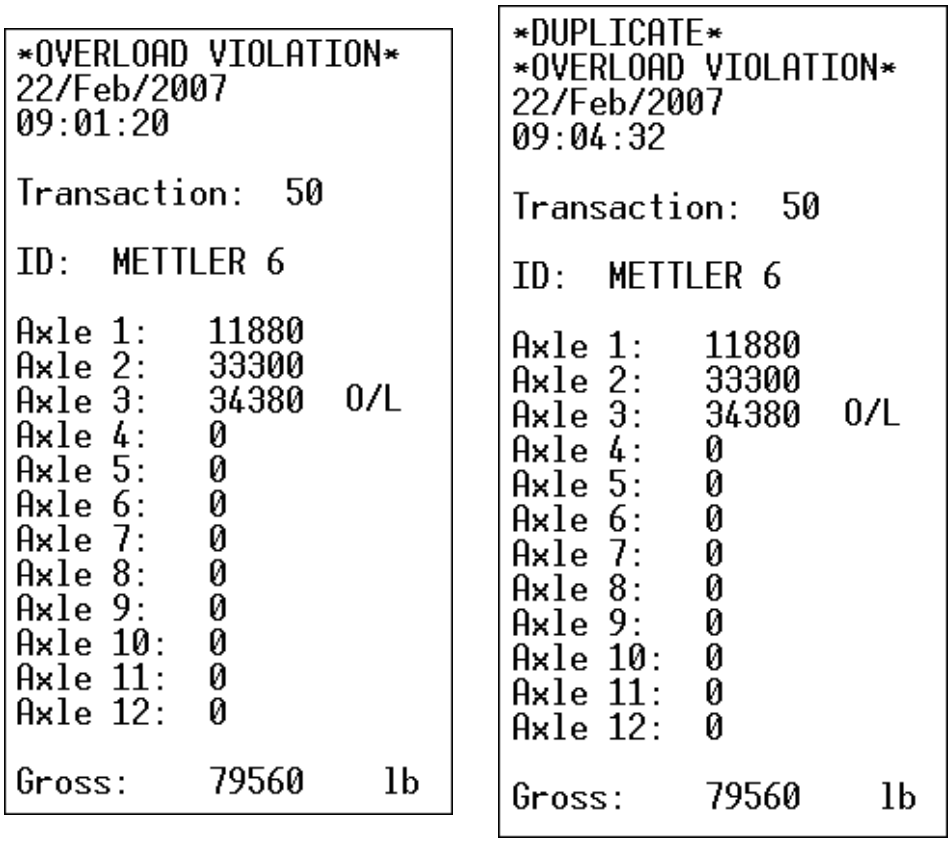


Figure 6-3: Printed Tickets with Overload Condition: Original (left), Reprint (right)

Manual Mode

Overload Check – Yes; OK to Override

When the **Overload Check** is set to **Yes; OK to Override**, and one of the axle or gross weight thresholds are exceeded, the driver is prompted to either accept or ignore the overload violation.

- If the overload violation is accepted, the operator will be given the prompt "Print Transaction?" after the transaction is stored.
  1. If the operator chooses to print the transaction, "Overload Violation" is printed at the top of the ticket. The overloaded axle or gross weight is notated on the ticket with the designation O/L.
  2. If the operator chooses not to print, the transaction is completed and it returns to the idle state without printing.
- If the overload violation is not accepted (ignored), the exceeded axle or gross weight will change from bold red to normal black font, and the transaction ticket is printed without "Overload Violation" printed at the top.

Note: If the operator chooses to override the overload violation, the violation will not appear in the transaction table.

Accepting an Overload Violation

In the figure below, the steering and tandem drive axles have been captured. It can be seen that the tandem drive axles (Axle 2) has exceeded the axle threshold. The overweight value is displayed in **bold red** (IND780 color display only – **bold** only in monochrome).

Once this threshold has been exceeded, a prompt appears (Figure 6-4) asking the operator to either accept or decline the overload violation. In this example, **Yes** is pressed to accept the overload violation.

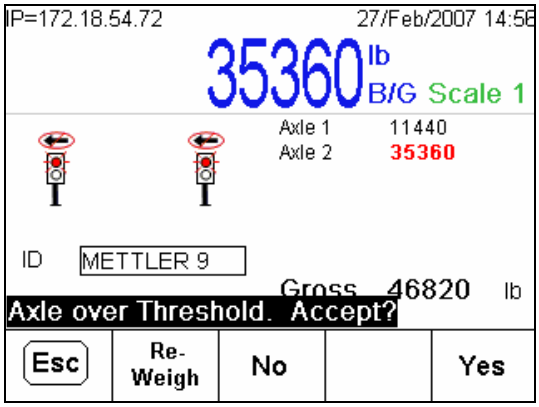


Figure 6-4: Accept Overload?

After **Yes** is pressed, the transaction continues by asking the operator if there is another axle (Figure 6-5). Yes is pressed again to continue with an additional tandem axle weightment.

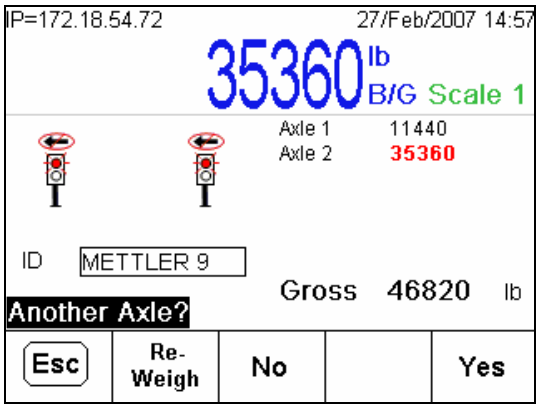


Figure 6-5: Another Axle?

After the last axle is captured, **No** is pressed to end the transaction. The transaction is saved to the Transaction Table after the last axle has been weighed.

Since the overload violation was accepted, the operator has the choice either to print the transaction ticket or to decline a ticket (Figure 6-6).

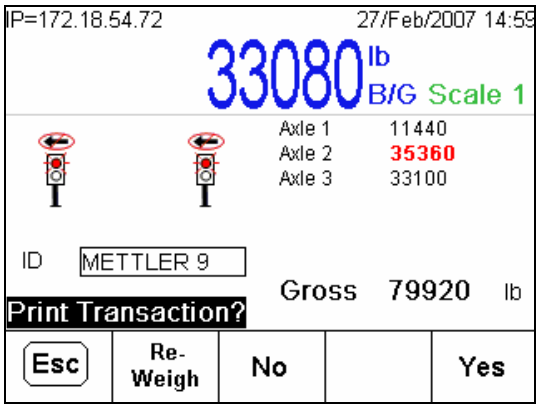


Figure 6-6: Print Transaction?

Yes was pressed, causing the transaction ticket to be printed (Figure 6-13).

After the ticket is printed, the light changes to GREEN (Figure 6-7) and the system waits for the truck to exit the scale.

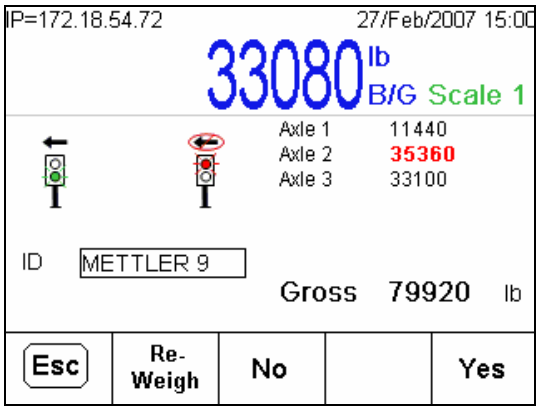


Figure 6-7: Truck Ready to Leave Scale

Ignoring an Overload Violation

In Figure 6-14, the steering and tandem drive axles have been captured. It can be seen that the tandem drive axles (Axle 2) hav exceeded the axle weight threshold. The overweight value is displayed in **bold red** (IND780 color display only – **bold** only in monochrome).

Once this threshold has been exceeded, a prompt appears asking the operator to either accept or decline the overload violation. In this example, **No** is pressed to accept the overload violation.

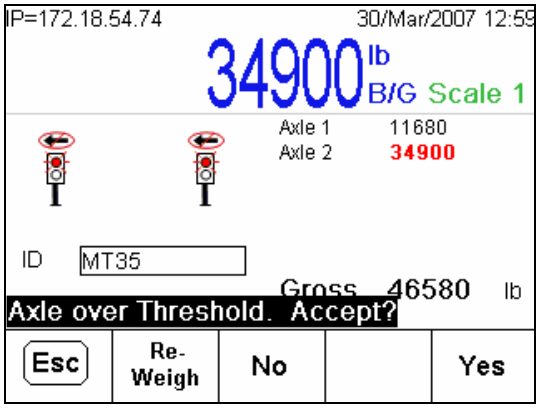


Figure 6-8: Axle over Threshold Prompt

After **No** is pressed, the axle displayed weight changes from **bold red** to normal black (Figure 6-14).

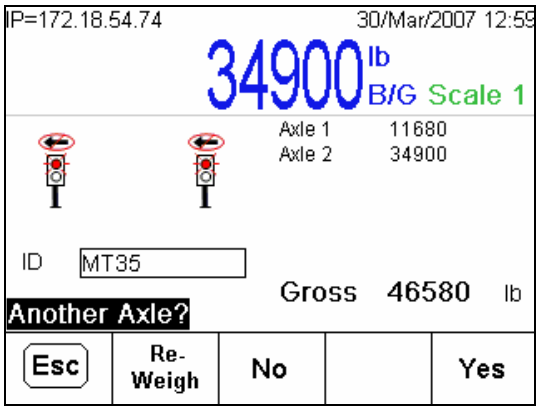


Figure 6-9: Overload Accepted, Weight Display Reset

Because the overload violation has been ignored, there will be no prompt at the end of the transaction to print. The transaction continues through normal operation. However, if before the end of the transaction, either another axle or the gross weight thresholds are exceeded, the operator must acknowledge the same prompts again.

Overload Check – Yes; No Override

When the **Overload Check** is set to **Yes; No Override**, and one of the axle or gross weight thresholds are exceeded, the operator receives no prompting.

In the figure below, the steering, tandem drive, and tandem trailer axles have been captured. It can be seen that the tandem trailer axles (Axle 3) has exceeded the axle threshold. The overweight value is displayed in **bold red** (IND780 color display only – **bold** only in monochrome).

Notice that, in this scenario, no prompt appears to allow the operator to acknowledge the overload violation. The process moves directly to the **Another Axle?** prompt (Figure 6-10).

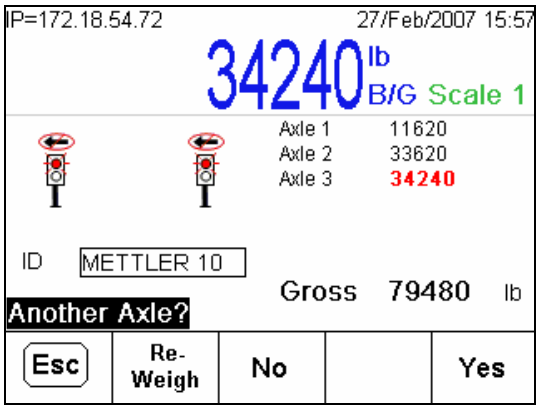


Figure 6-10: Another Axle?

Since there are no more axles, **No** is pressed to end the transaction. A prompt appears (Figure 6-11) indicating that one of the thresholds was exceeded.

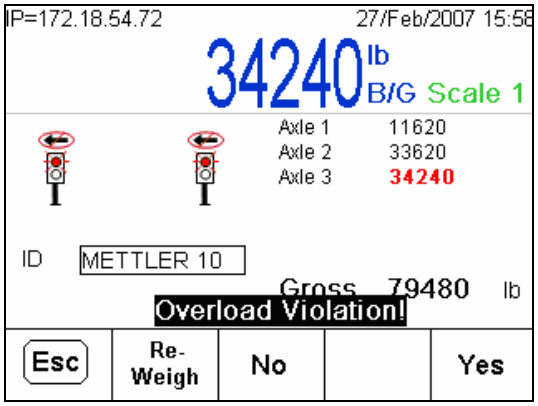


Figure 6-11: Overload Violation Prompt

The transaction is saved to the Transaction Table (Figure 6-12).

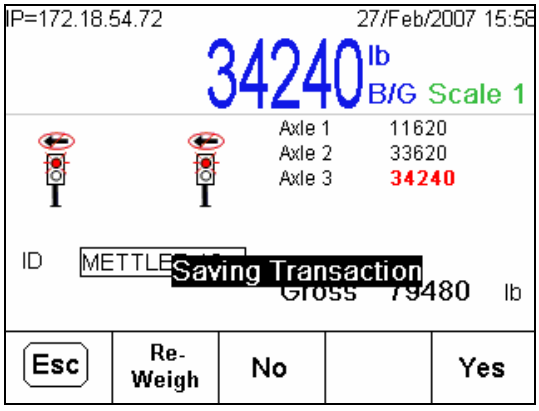


Figure 6-12: Saving Transaction

Finally the transaction ticket is printed (Figure 6-13).

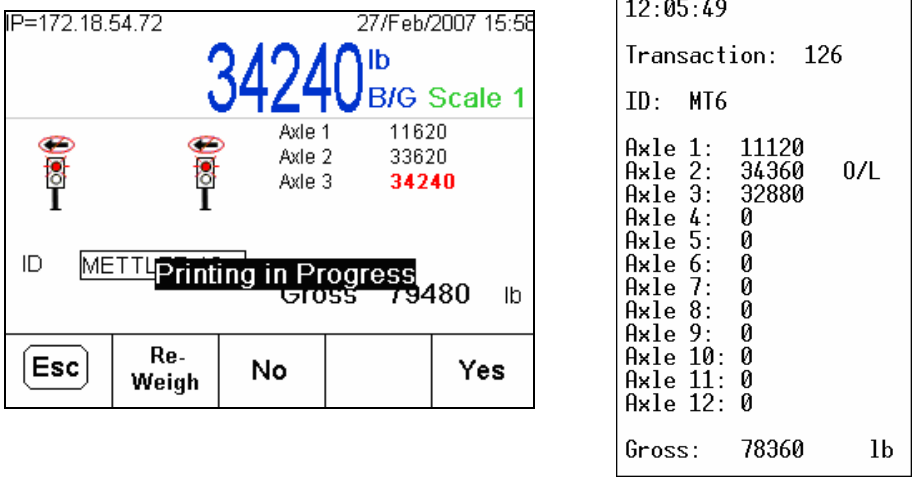


Figure 6-13: Printing in Progress and Printed Ticket Showing Overload Violation

After the ticket is printed, the exit light changes to GREEN and waits for the truck to exit (Figure 6-14).

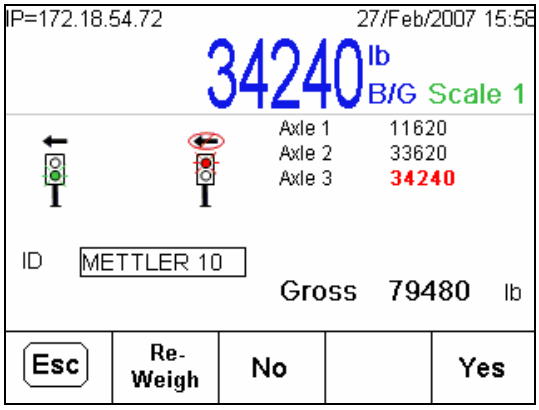


Figure 6-14: Truck Ready to Leave Scale

Badge Reader Setup

The following steps must be performed if an optional RFID Badge Reader is to be used:

1. Create an ASCII Input in the IND780 Setup (at Communication > Connections) using one of the available COM ports. Figure 6-15 shows the Connection Edit screen with a new connection being configured, and Figure 6-16 the Connections view screen showing the new input.

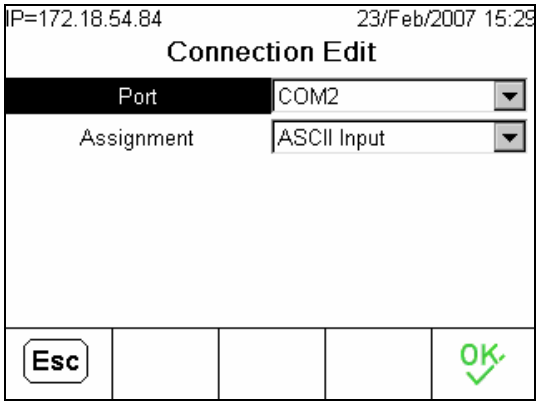


Figure 6-15: Creating an ASCII Input Connection

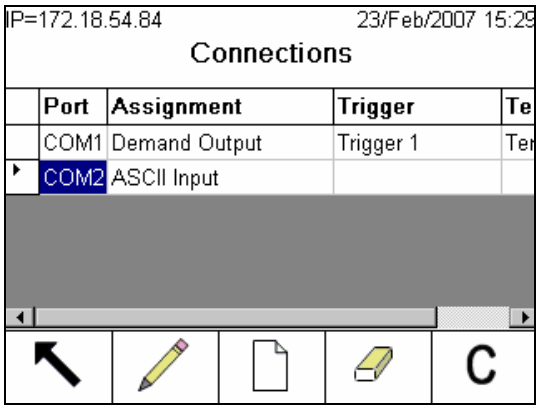


Figure 6-16: Connections View Screen, ASCII Input Configured

2. Set the Input Template parameters for the incoming ASCII message specific to the device. The Assignment parameter must be set to Application (Figure 6-17). For more information on the Input Template setup, please see the IND780 Technical Manual, Chapter 3.0, Configuration.

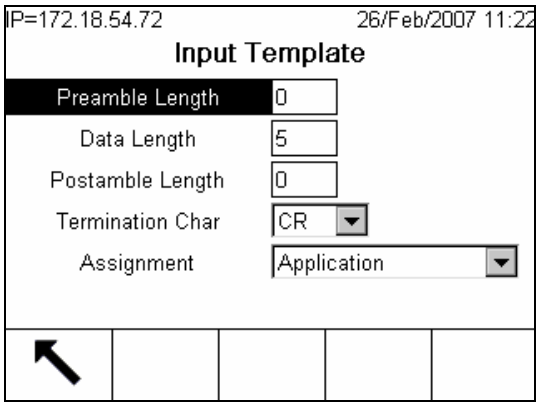


Figure 6-17: Input Template Configuration Screen

3. In the Axle Weighing General setup screen, set the ID Input parameter to Badge ID (Figure 6-18).

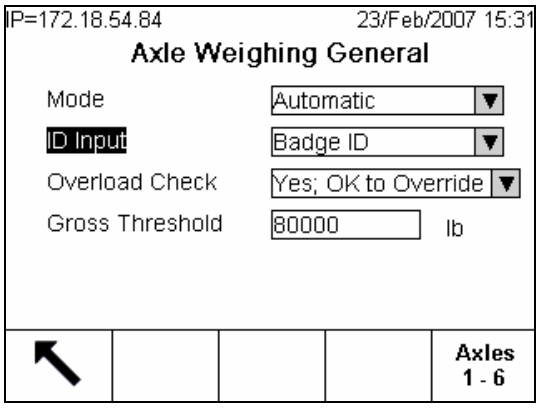


Figure 6-18: Setting ID Input in Axle Weighing General Screen

4. Once the Runtime screen is displayed, notice that the ID textbox has now been changed to a message (Figure 6-19). During the transaction, after the badge is scanned the ID appears on the display.

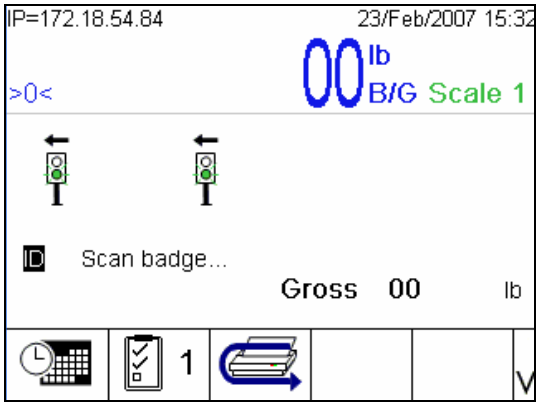


Figure 6-19: Runtime Screen with Scan badge... Prompt

5. If a badge is scanned and the Badge Number located in the ID Table, the Badge ID will be displayed on screen (Figure 6-20), and also printed on the transaction ticket as the transaction ID.

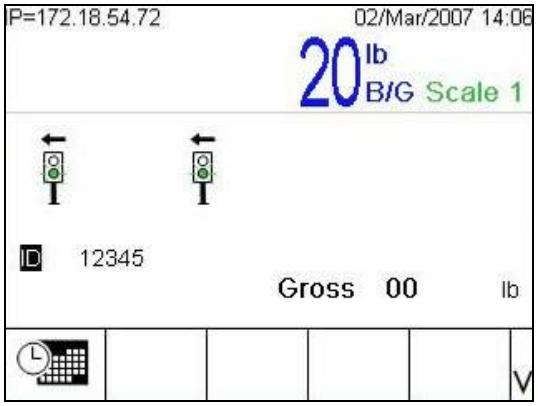


Figure 6-20: Runtime Screen, ID Read and Displayed

6. If a badge is scanned that cannot be located in the ID Table, a message will appear asking the driver to try again (Figure 6-21).

Note: In order to be accessible during runtime, all badge IDs must be entered via the ID Table configuration screen, accessed in Axle Setup – refer to Chapter 3, **Configuration**.

Figure 6-21: Runtime Screen with ID Not Found Prompt

Manual Control of Lights

Manual Control of Lights gives the operator the ability to interrupt an Automatic Mode transaction. Once the transaction is interrupted, though, the operator must manually guide the truck through the rest of the transaction.

Note: To enable manual control of lights, the Control Type must be set to Lights/Weight – refer to Chapter 3, **Configuration**.

1. If Manual Control is enabled, once an Automatic Mode transaction has begun (the first axle captured on the scale), the Manual Control softkey appears (Figure 6-22).

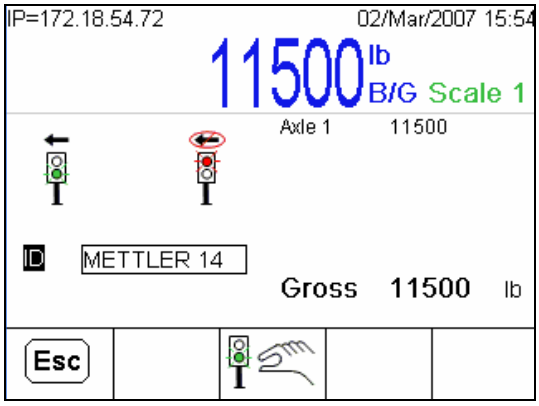


Figure 6-22: Runtime Screen, Manual Control Softkey Showing

2. Pressing the Manual Control softkey interrupts the transaction, and gives the operator control over the sequence. Notice that the softkey changes (Figure 6-23) to indicate that the operator can use it to toggle the state of the selected light.

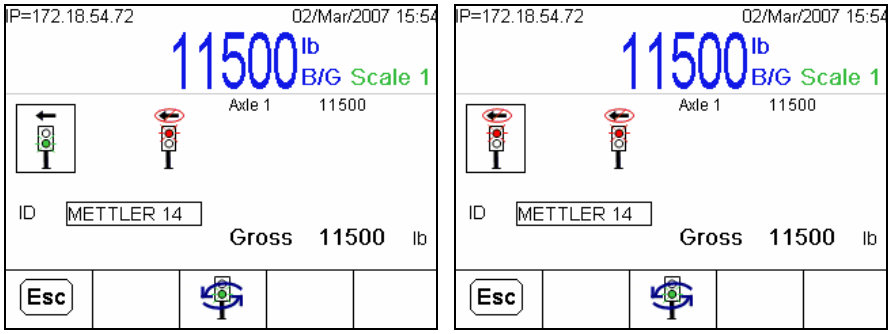


Figure 6-23: Manual Control Softkey Ready to Change Lights

3 Initially, the exit light is in focus, indicated by the box around its icon. Press ENTER or the UP/DOWN arrow keys to change focus to the other light (Figure 6-24).

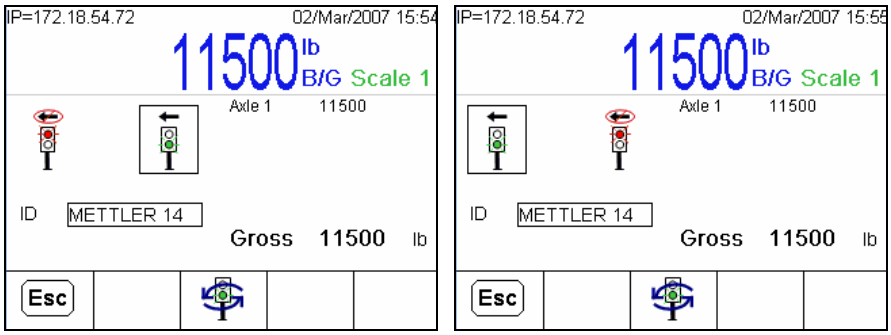


Figure 6-24: Changing Focus Between Lights

4 Once the light changes to GREEN, the application looks for a change in the Excursion Weight. Once this change has been detected, and when the scale

has returned to a no-motion condition, the application captures the next axle weight. This process is repeated until all the axles are captured. The transaction concludes (Figure 6-25) when the application saves it, and prompts the operator to press print.

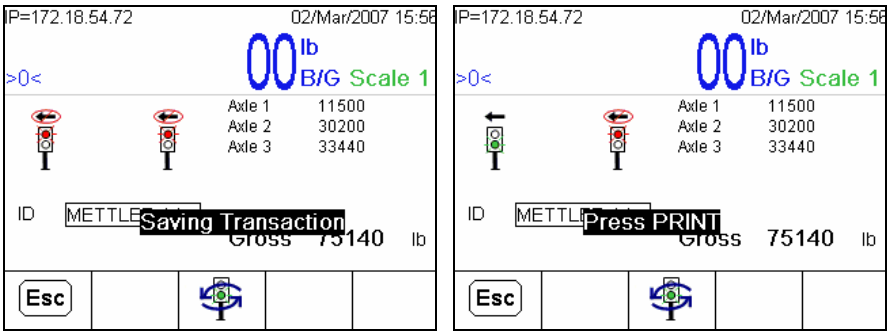


Figure 6-25: Concluding a Manually Controlled Transaction

Gross Mode Operation

If a larger scale platform is being used for both axle weighing and smaller trucks, a gross weight can be captured and printed on a ticket with the Axle-780.

- In Manual Mode, after the first axle (i.e., the entire truck) is weighed, press **No** when the "Another Axle?" prompt appears.
- In Automatic Mode, the transaction will complete once the truck has exited the scale and the Exit Timer has expired.

In both modes, the transaction will be stored in the Transaction Table as a normal Axle transaction. However, the Gross Weight and Axle 1 will show the same value.

Figure 6-26 shows an example of a transaction ticket printed from the Gross Mode operation.

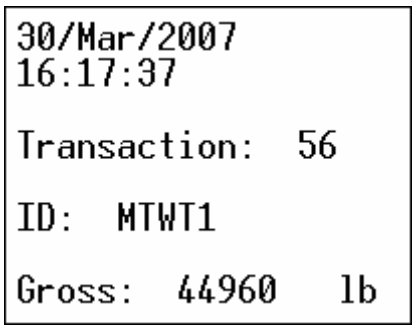


Figure 6-26: Gross Mode Transaction Ticket

Appendix A

Default Settings

Setup Parameters

Table A-1 lists default values for all IND780 settings that are specific to the Axle-780. Default settings for IND780 basic functionality are listed in Appendix B of the IND780 Technical Manual, **Default Settings**.

Access to items in the Axle-780 configuration screens is determined by the application's own password control. Access to other configuration screens (Discrete I/O, Templates and Connections) is the same as for the standard IND780.

Table A-1: IND780 Axle-780 Default Settings

Setup Feature	Default Value
Application – Task Expert – Axle Setup – General	
Mode	Automatic
ID Input	None
Overload Check	Disabled
Gross Threshold	80000
Axle 1 Threshold	12000
Axles 2-12 Threshold	34000
Application – Task Expert – Axle Setup – Traffic Control	
Control Type	None
Enter Idle State	Green/Up
Exit Idle State	Green/Up
Threshold	1000
Excursion	1000
Zero Tolerance	500
Manual Control	Disabled
Application – Task Expert – Axle Setup – Timer Control	
Excursion Timer	3
Exit Timer	9
Zero Time Delay	5

Setup Feature	Default Value
Light Timer	2
Print Timer	120
Application – Task Expert – Axle Setup – Discrete I/O	
Discrete I/O	Local
Application – Task Expert – Axle Setup – Password	
Login Password	Disabled
New Password	[null]
Confirm Password	[null]
Application – Discrete I/O – Outputs	
Discrete Outputs	Eight Local and Remote outputs as defined in Chapter 3.0, **Configuration**
Communication – Templates – Output	
Template 2	Refer to Table A-2 for format
Template 3	Refer to Table A-3 for format
Communication – Connections	
Port	COM1
Assignment	Demand Output
Trigger	Trigger 1
Template	Template 2
Port	COM1
Assignment	Demand Output
Trigger	Trigger 2
Template	Template 3

Output Templates

For clarity, carriage return/line feed (CR/LF) elements have been omitted from the tables below. These templates may be accessed in the IND780 in setup at Communication > Templates > Output.

Output Template 2

Output Template 2 is modified for use by the Axle-780 application. It is defined as shown in Table A-2. Examples of printed outputs from this template may be found in Chapter 4, **Automatic Mode Weighing**.

Note: [nn] means that the output for this element is left-aligned and nn characters in length.

Table A-2: Default Template Definition, Output Template 2

Template 2			
Element	**Data**	**Printed output**	**Format**
1	ak0119	*DUPLICATE* [Prints if print is a duplicate]	[20]
3	ak0121	*OVERLOAD VIOLATION* [Prints if violation condition detected]	[20]
5	xd0103	Current date	Default
7	xd0104	Current time	Default
10	String	**Transaction:**	Default
11	ak0101	Transaction number	[10]
14	String	**ID:**	Default
15	ak0102	Transaction ID	[20]
18	String	**Axle 1:**	Default
19	ak0107	Axle 1 weight	[10]
20	ak0123	**O/L** [Prints if axle 1 overload detected]	[10]
22	String	**Axle 2:**	Default
23	ak0108	Axle 2 weight	[10]
24	ak0124	**O/L** [Prints if axle 2 overload detected]	[10]
26	String	**Axle 3:**	Default
27	ak0109	Axle 3 weight	[10]
28	ak0125	**O/L** [Prints if axle 3 overload detected]	[10]
30	String	**Axle 4:**	Default
31	ak0110	Axle 4 weight	[10]

Template 2			
Element	**Data**	**Printed output**	**Format**
32	ak0126	O/L [Prints if axle 4 overload detected]	[10]
34	String	**Axle 5:**	Default
35	ak0111	Axle 5 weight	[10]
36	ak0127	O/L [Prints if axle 5 overload detected]	[10]
38	String	**Axle 6:**	Default
39	ak0112	Axle 6 weight	[10]
40	ak0128	O/L [Prints if axle 6 overload detected]	[10]
42	String	**Axle 7:**	Default
43	ak0113	Axle 7 weight	[10]
44	ak0129	O/L [Prints if axle 7 overload detected]	[10]
46	String	**Axle 8:**	Default
47	ak0114	Axle 8 weight	[10]
48	ak0130	O/L [Prints if axle 8 overload detected]	[10]
50	String	**Axle 9:**	Default
51	ak0115	Axle 9 weight	[10]
52	ak0131	O/L [Prints if axle 9 overload detected]	[10]
54	String	**Axle 10:**	Default
55	ak0116	Axle 10 weight	[10]
56	ak0132	O/L [Prints if axle 10 overload detected]	[10]
58	String	**Axle 11:**	Default
59	ak0117	Axle 11 weight	[10]
60	ak0133	O/L [Prints if axle 11 overload detected]	[10]
62	String	**Axle 12:**	Default
63	ak0118	Axle 12 weight	[10]
64	ak0134	O/L [Prints if axle 12 overload detected]	[10]
67	String	**Gross:**	Default
68	ak0105	Total gross weight	[10]
69	wt0103	Weight units	--
70	ak0135	O/L [Prints if any gross overload detected]	[10]
73	- End -		

Output Template 3

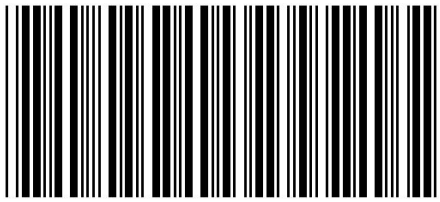
Output Template 3 is also modified for use when the Axle-780 application is in Gross Mode. It is defined as shown in Table A-2. An example of the printed output from this template may be found in Chapter 6, **Advanced Applications**.

Table A-3: Default Template Definition, Output Template 3

Template 3			
Element	**Data**	**Printed output**	**Format**
1	ak0119	*DUPLICATE* [Prints if print is a duplicate]	[20]
3	ak0121	*OVERLOAD VIOLATION* [Prints if overload violation detected]	[20]
5	xd0103	Current date	Default
7	xd0104	Current time	Default
10	String	**Transaction:**	Default
11	ak0101	Transaction number	[10]
14	String	**ID:**	Default
15	ak0102	Transaction ID	[20]
18	String	**Gross:**	Default
19	ak0107	Axle 1 weight [i.e., whole vehicle in gross mode]	[08]
20	wt0103	Weight units	[04]
21	ak0123	**O/L** [Prints if gross overload detected]	[10]
24	- End -		

METTLER TOLEDO

1900 Polaris Parkway
Columbus, Ohio 43240



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