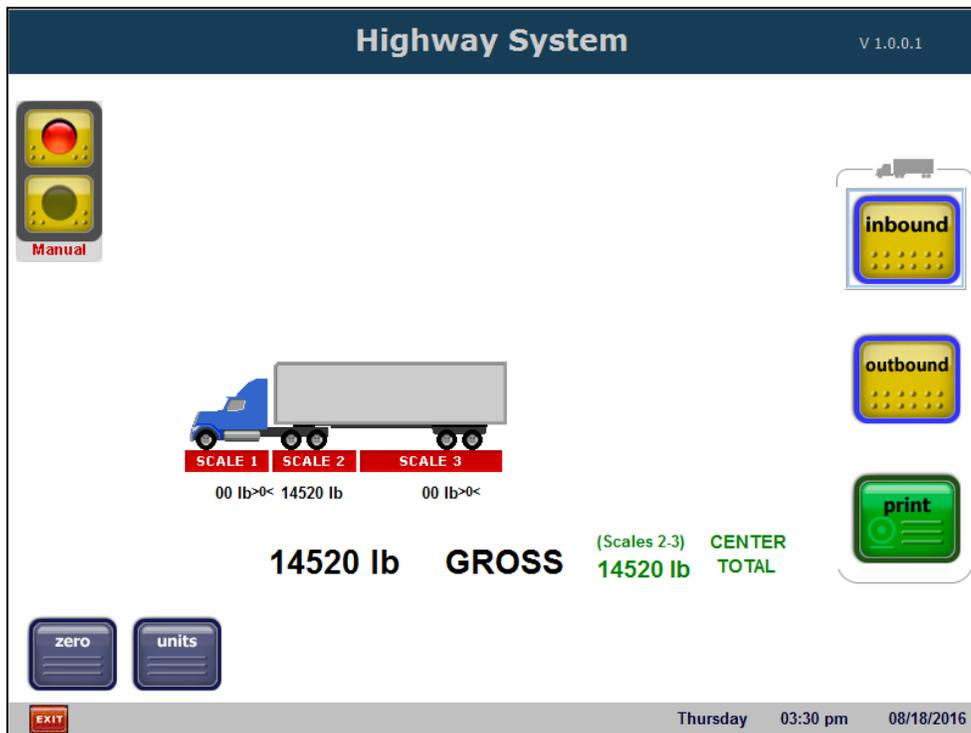




Operators Manual

FB4000 Highway System Application



Amendment Record

FB4000 Highway System Application

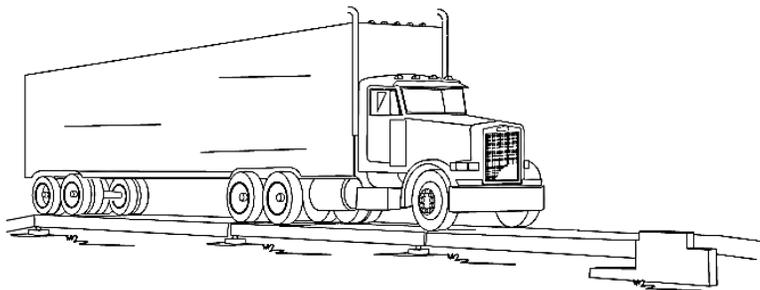
Document 51388

Manufactured by Fairbanks Scales Inc.

821 Locust

Kansas City, Missouri 64106

Created	10/2017	
Revision 1	10/2017	Documentation Release
Revision 2	05/2018	Updated Remote Display
Revision 3	08/2019	Added printer information



Disclaimer

Every effort has been made to provide complete and accurate information in this manual. However, although this manual may include a specifically identified warranty notice for the product, Fairbanks Scales makes no representations or warranties with respect to the contents of this manual, and reserves the right to make changes to this manual without notice when and as improvements are made.

It is the responsibility of the requesting party to develop, maintain, install, and connect networking devices and general network connectivity as it applies to the originating party's network. No warranty or guarantee, expressed or implied, concerning the network, its design, its installation, or operational characteristics has been offered by Fairbanks Scales. Fairbanks Scales shall not be liable for any loss, damage, cost of repairs, incidental or consequential damages of any kind, whether or not based on express or implied warranty, contract, negligence, or strict liability arising in connection with the design, development, installation, or use of an intended network.

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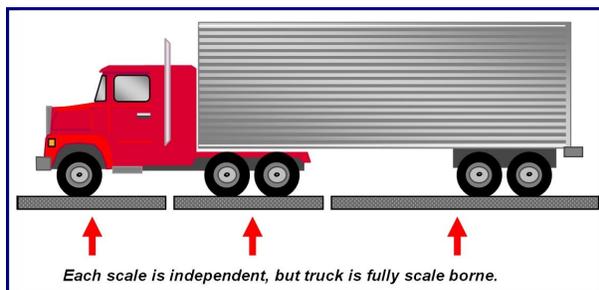
Section 1: General Information

1.1. DESCRIPTION

The **FB4000 Highway System** provides “*Pay-to-Weigh*” services, re-weigh and multi-platform weighments, as well as individual platform values.

The system operates in *one of two modes*.

- **Highway System Mode** – The **Default Operating Mode** that provides Fairbanks Scales standard truck weighing services.
- **Enforcement Mode** – Used to determine if a vehicle and its individual axle weights are legal, based on configurable weight values.



The **Highway System Application** is specifically designed and intended for *multi-platform truck scale weighing*.

The **FB4000 Highway System** can be divided into *four separate applications*.

- **User Interface** – Translates computer language into a usable English format (or another).
- **Data Collection & Reporting** – Maintains the database information required by the **Highway System User Interface Application**.
- **Weigh Kernel** – The primary underlying weighment program that interfaces directly with the scales.
- **Error Logging** – Used for quality control and for troubleshooting errors.

NOTE: For multiple terminal installations, a redundant storage model is used. Each terminal has a complete copy of the data.

1.2. MAIN PROGRAM FEATURES

Some *main features* of the FB4000 Highway System are listed below.

- The **FB4000 Highway System** supports one multi-platform scale, which can be configured for two, three, or four (2, 3 or 4) platforms.
- **FB4000 Highway System** supports up to four (4) networked terminals.
- The system has configurable outputs, as well as the remote display output of individual scale weights and their combined total.
- Current date and time displays on all screens, except when a user is working in the setup and configuration screens.
- The application allows for up to ten programmable prompts and legends.
- User navigation includes touch screen, mouse and keyboard options.
- Reporting, ticket formatting and printing is done with drag and drop fields.

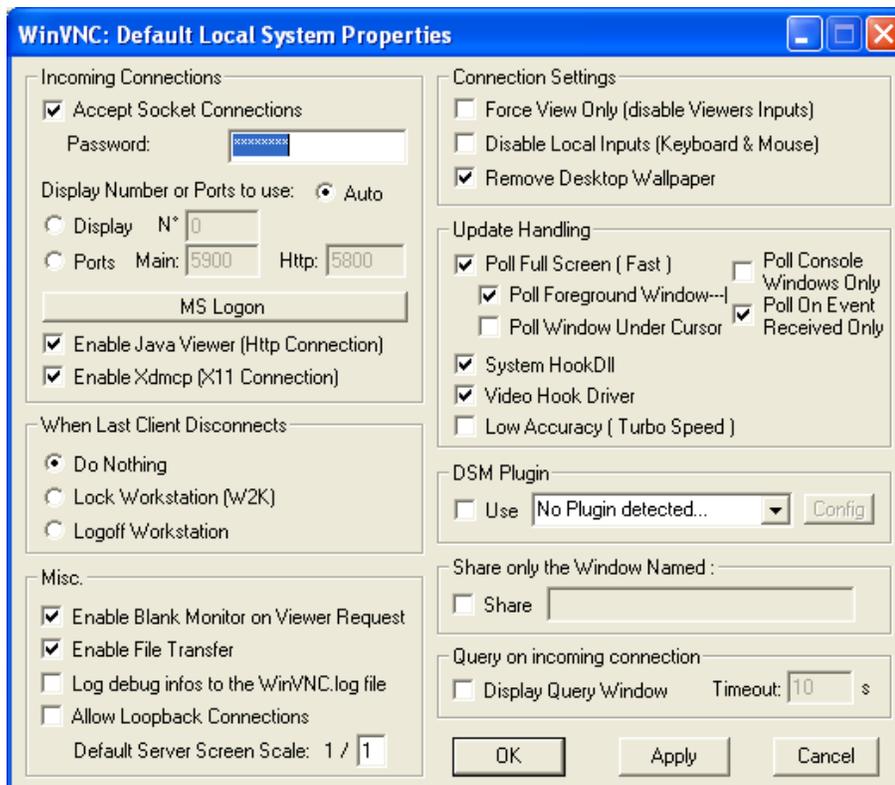
A T T E N T I O N

It is *strongly advised* to keep the following manuals on hand to reference specific setup and programming needs:

- ✓ **FB4000 Kernel Program Operator's Manual – Doc. #51364**

1.2. Main Program Features, Continued

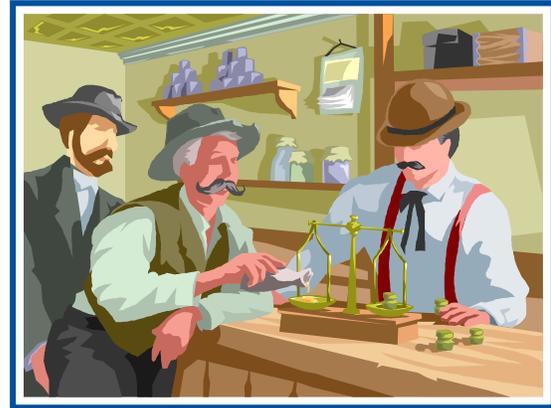
- The customer’s logo can print onto the tickets.
- The program has control for one set of traffic lights.
- Video camera input for up to two Ethernet Cameras.
 - The display alternates to the active one.
 - An animated inactivity screen displays, after a timed delay, when neither is in use.
- The program has a **Void Weighment** feature, which allows for one ticketed transaction to be removed.
- The program also has a **Blind Counter Function**, which records all activity that doesn’t result in a print, as long as the **Initial Weight Threshold** is met and stable for **ten (10) seconds**.
- The application includes **DOT Scale Summing** to a single value for display and print.
- All remote access is negotiated using **Ultra VNC™**.



Section 2: Service Policy Information

2.1. GENERAL SERVICE POLICY

Prior to installation, **always** verify that the equipment satisfies the customer's requirements as supplied, and as described in this manual.



It is **the customer/operator's responsibility** to ensure the equipment provided by Fairbanks is operated within the parameters of the equipment's specifications and protected from accidental or malicious damage.

WARNING!

Absolutely NO physical, electrical or program modifications other than selection of standard options and accessories can be made by customers to this equipment

Repairs are performed by Fairbanks Scales Service Technicians and Authorized Distributor Personnel ONLY!

Failure to comply with this policy voids all implied and/or written warranties

2.2. OVERVIEW

2.2.1. Physical Installation Notes

- Check all devices for proper operation. If any error messages occur, refer to Troubleshooting or the proper manual of that device.
- **Only those charges which are incurred as a result of the equipment's inability to be adjusted to performance specifications may be charged to warranty.**

The installing technician is responsible that all personnel are fully trained and familiar with the equipment's capabilities and limitations before the installation is considered complete.

2.2.2. Electronic Component Care

- Much of the equipment consists of printed circuit assemblies, which **must be** installed using **ESD handling procedures**.
- Replacement of individual components is not allowed.
- All components must be returned intact for replacement credit per normal procedures.
- All electronic and mechanical adjustments are part of the installation, and are included in the installation charge(s).
- Included is any required computer programming or upgrades.
- Included are any accuracy and/or operational specification changes.
- The AC receptacle / outlet shall be located near the Indicator and easily accessible.
- Electrical connections other than those specified may not be performed.

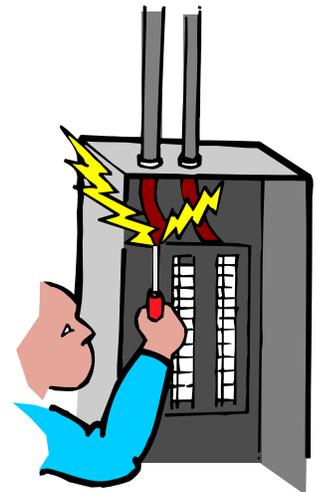


2.2.3. Conferring with Our Client

- The technician must be prepared to recommend the arrangement of components which provide the most efficient layout, utilizing the equipment to the best possible advantage.
- The warranty policy must be explained and reviewed with the customer.

★ ★ **IMPORTANT INSTALLATION NOTICE** ★ ★

- ✓ **All communications which utilize RS232 Serial Cable *must be limited to fifty (50') feet.***
- ✓ **All load cells, load cell cables and interconnecting cables used to connect all scale components shall be located **a minimum of thirty-six (36") inches distance away** from all single and multiple phase high energy circuits and electric current carrying conductors.**
 - *This includes digital weight indicators, junction boxes, sectional controllers, and power supplies.*
 - *This includes any peripheral devices, such as printers, remote displays, relay boxes, remote terminals, card readers, and auxiliary data entry devices.*
 - *Also included is the scale components themselves, such as 120 volt AC, 240 volt AC, 480 volt AC and electric supply of higher voltage wiring runs and stations, AC power transformers, overhead or buried cables, electric distribution panels, electric motors, florescent and high intensity lighting which utilize ballast assemblies, electric heating equipment, traffic light wiring and power, and relay boxes.*
 - *This includes all scale components, including digital weight indicators and peripheral devices that are not designed to operate on internal combustion engine driven electric generators and other similar equipment.*
- ✓ **Electric arc welding can severely damage scale components such as digital weight indicators, junction boxes, balance boards, sectional controllers, power supplies, and load cells.**



NOTE: For additional information, please contact your **Fairbanks Scales Service Representative.**

Summary:

- ✓ **All scale components *must be located at least thirty-six inches (36") away* from all high-energy circuits and conductors.**
- ✓ **No electric arc welding around any scale components.**

2.2.4. Pre-Installation Checklist

The following points should be thoroughly discussed between the Fairbanks Representative and the Customer, before the Service Technician installs any software or equipment.



- ✓ Study the current Office Network and decide how the scale system can best integrate into it.
 - Would a standalone unit be the best option?
 - Are the IP Addresses dynamic or set manually?
 - What are all the needed employee computer IP Addresses?
- ✓ Decide the printer(s) arrangements within the Office, and list which users will link to each one.
- ✓ Determine the best physical placement for the scale(s) with its approaches and exits, where the station(s) should be located, and also where the video cameras should be put, if any are used.
- ✓ Make a detailed list of the current employee hierarchy, and note how the employee duties should determine their security level.
- ✓ List the level(s) of training each employee needs over the LabelBank and the DataBank Applications.

After arriving, the Service Technician reviews the recommended setup with the Area Sales Manager or Area Service Manager, and together they identify any necessary variations to satisfy the customer's particular application.

2.2.5. Users' Responsibility

- ✓ All electronic and mechanical calibrations and/or adjustments required for making the equipment perform to accuracy and operational specifications are considered to be part of the installation.
 - This is included in the installation charge.
 - Only those charges which are incurred as a result of the equipment's inability to be adjusted or calibrated to performance specifications may be charged to warranty.
- ✓ Absolutely no physical, electrical or program modifications other than selection of standard options and accessories are to be made to this equipment.
- ✓ The equipment consists of printed circuit assemblies which must be handled using ESD handling procedures, and must be replaced as units.
 - Replacement of individual components is not allowed.
 - The assemblies must be properly packaged in ESD protective material and returned intact for replacement credit per normal procedures.

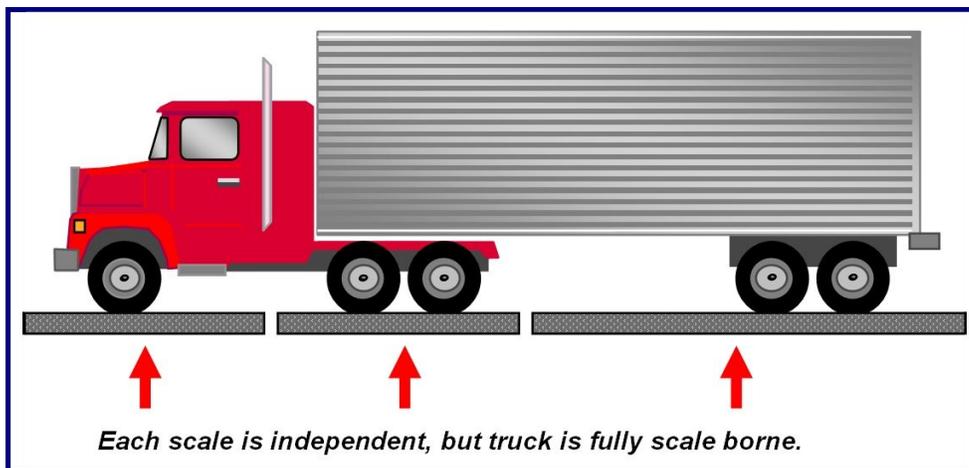


Section 3: Highway System Mode of Operation

3.1. INTRODUCTION

The **Highway System Application** is specifically designed and intended for *multi-platform truck scale weighing*.

- The **FB4000 Highway System** typically weighs a semi-truck in one weighing, depending on the number of scales and length of trailer.
- This system is superior to an axle scale since the weight can be obtained in one weighing, and it can still provide axle weight information.



In the **Pay-to-Weigh Application**, different fees are charged for different weighing types.

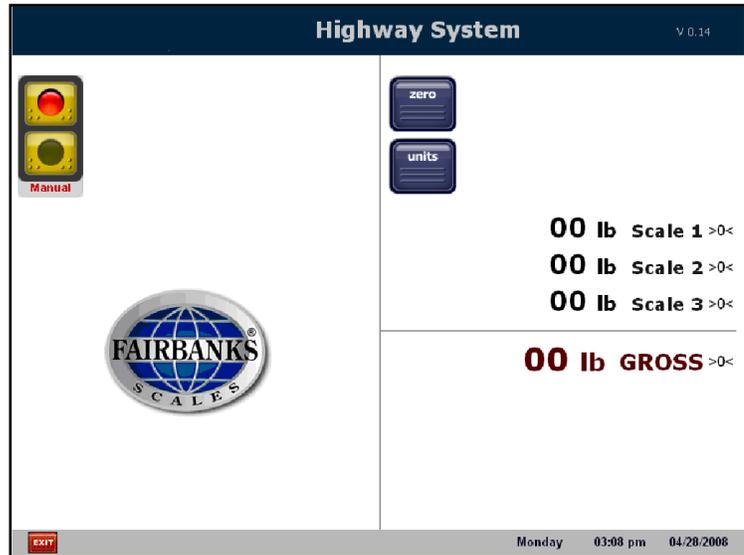
- **The bigger the truck, the larger the fee.**
- Re-weighment fees are required to allow a truck to weigh. If the weights are outside what is legal for over the road, the truck weights must be adjusted, usually by shifting the load around.
- A report ticket prints and is given to the truck driver, providing information about where the load needs to be shifted.
- The **Legal** column in this illustration is a **programmable value** within the application.
- When the truck re-weighs, this fee is usually less than the original weighing fee minutes before.

	11:15 AM	4-24-2016	
	Actual	Legal	Difference
Scale 1	8900	12000	3100
Scale 2	28420	34000	5580
Scale 3	30240	34000	3760

3.2. DESCRIPTIONS

The **Idle Screen** displays when weight on the scale is below the initial weight threshold setting.

- An animated image displays after a configurable period of non-usage.
- **Weight Threshold Values** trigger a weightment cycle and define the maximum legal weight limit for each axle scale.



*This Idle Screen displays the Highway Program default window, shown here **without** the Video Camera option.*

- **Legal Weight Limits** are used to calculate and print the difference between the actual weight and the legal limit.
 - They also trigger a popup error window on the display, turning the weight display to red if the weight on the scale exceeds the configurable limit.

3.2.1. Traffic Lights

The **Traffic Light Control**, when activated, shows the status of the scale and is controlled automatically by the instrument weightment cycle.

- The light has a **manual override** using the touch screen or function key.
- This supports **one (1) set of lights**.



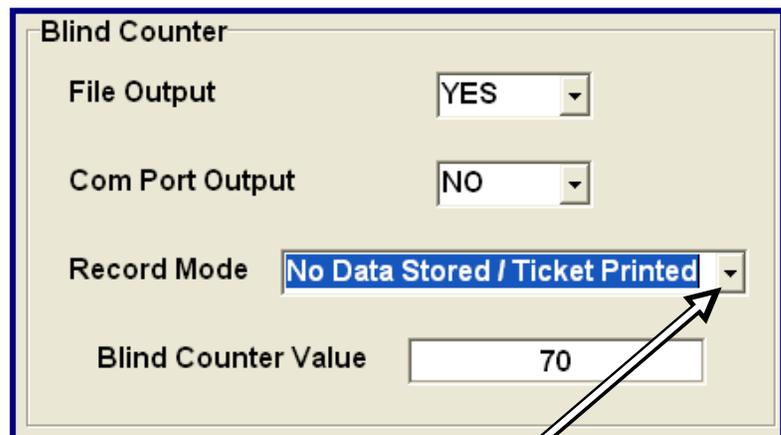
3.2.2. Blind Counter Functionality

The **Blind Counter** monitors all activity on the scale, and triggers an event whenever the weight exceeds the **Initial Weight Threshold**.

- The **Blind Counter** records all activity that doesn't result in a print, if the **Initial Weight Threshold** is met and stable for **ten (10) seconds**.
- While in the **“All Scale Activity”** mode, output is directed to **File Output, COM Port Output, or both**.
 - If the unit uses cameras, an image can be captured, depending on the configuration.
 - The system supports up to **two (2) cameras**.
 - Images are displayed, printed on tickets, and stored with complete transactions.

The **Blind Counter** uses two basic (2) functions.

- The **Record Mode** is what defines a **Blind Counter Event**.
- Increments every time in the **“All Scale Activity”** section of the **“No Data Stored/ Ticket Printed”** report.
- When **No Data Stored / Ticket Printed** is selected, the Application only increments when not ticket is printed.



The screenshot shows a configuration window titled "Blind Counter". It contains four settings:

- File Output**: YES (dropdown menu)
- Com Port Output**: NO (dropdown menu)
- Record Mode**: No Data Stored / Ticket Printed (dropdown menu, highlighted with a blue selection bar)
- Blind Counter Value**: 70 (text input field)



A legend box with a blue border and background. It contains two entries:

- All Scale Activity** (text in black)
- No Data Stored / Ticket Printed** (text in white on a blue background)

3.2.3. Automatic and Semi-Automatic Weighing

Axle weighing is done **Automatically** and **Semi-automatically** on two, three, or four platforms.

- **Automatic Weighing** is used when **all axles fit** on the scale.
 - The weight displays once it is fully stabilized in the **Automatic Mode**.
 - Press either **Weigh, Reweigh, or Multi-axle** to continue.
- **Semi-Automatic Weighing** involves double and triple axles that do not fit on the scales.



Automatic Weighing



Semi- automatic Weighing

3.2.4. Fee Schedule

The following weighment types are associated with the default **Highway System Mode Fee Schedule**.

- | | | |
|-------------------|------------|-------------------|
| • Weigh | • Re-weigh | • Double |
| • Re-weigh Double | • Triple | • Triple Re-weigh |

Tare weights are stored, as well as the following seven, programmable axle weights.

- | | | |
|------------|-----------|-----------|
| • Steering | • Drive | • Tandem |
| • Tandem2 | • Tandem3 | • Tandem4 |
| • Tandem5 | | |

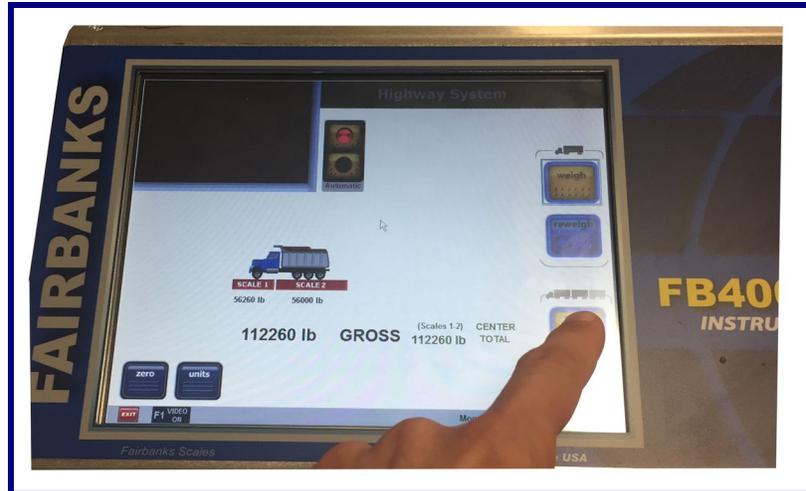
3.3. NAVIGATION TIPS

The three main ways to navigate through the **Highway System Program** are listed below.

3.3.1. Using the Touchscreen

The Touchscreen is the most user-friendly way of navigating through the different menu options.

This application **does not require** using a mouse with the touchscreen.



3.3.2. Using Only the Keypad

Although this is the most difficult way to navigate through the different fields, it is still possible to enter numeric values and configure dialogs using only the keypad.

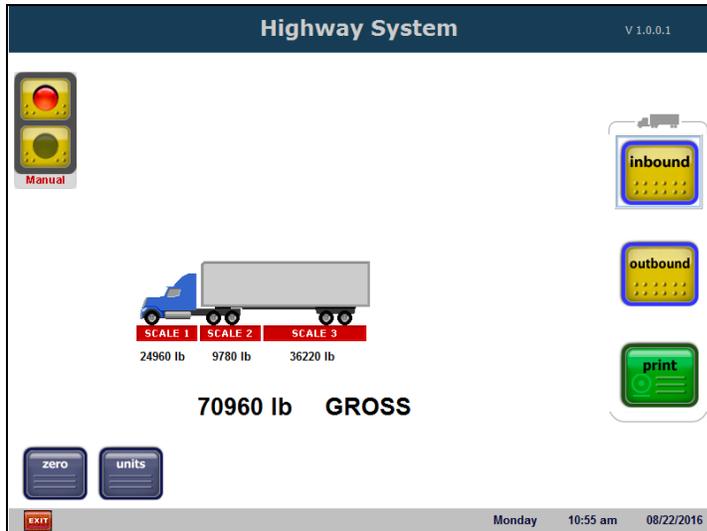
Useful key functions include the following:

- The **Tab** key advances to the next field.
- The **UP/Down Arrow** keys move between fields.
- The **Left/Right Arrows** navigate within the field.
- The **Enter** key selects a choice.



3.4. MENU NAVIGATION

3.4.1. Main Weighment Screen

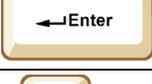


FB4000 Highway System Weighment screen with traffic light installed

3.4.2. Specialized Keys

On-Screen Keyboard	External Keyboard	Description
		This key Zeros the Scale , once the truck is scale-borne.
		Toggles the Weight Units .
----		Highway System Operation – Displays the Configuration Items menu.
----		Opens the monitor to the Windows® Desktop view.
Arrows	Arrows	<ul style="list-style-type: none"> • Navigates through the display. • Used also for scrolling.
		<ul style="list-style-type: none"> • F1 turns the camera on, if available. • Selects Inbound Format while in Ticket Formatting Operation.
		<ul style="list-style-type: none"> • F2 turns the camera off, if available, while in Highway System Operation. • Selects Outbound Format while in Ticket Formatting Operation.

3.4.2 Specialized Keys, Continued

On-Screen Keyboard	External Keyboard	Description
----		<ul style="list-style-type: none"> F3 displays the list of Inbound Records during the Outbound entry of the Truck/Loop ID while in the Highway System Selects GTN Format while in Ticket Formatting Operation.
----		<ul style="list-style-type: none"> F4 activates the Void Ticket function while in HW System Operation.
----		<ul style="list-style-type: none"> F5 opens the Format Ticket menu while in Ticket Formatting Operation and Reprint Function (from Weigh Screen)
----		<ul style="list-style-type: none"> F6 activates the Delete Ticket function while in Ticket Formatting Operation
----		<ul style="list-style-type: none"> F7 opens the View Printers window while in Ticket Formatting Operation
----		<ul style="list-style-type: none"> F8 opens the Add Printer function while in Ticket Formatting Operation
----		<ul style="list-style-type: none"> Esc button Cancels/aborts the function. Reverts to previous window.
----		If entering weighment data, pressing this displays the Print, Edit, and Cancel buttons regardless of which data item is being entered.
Print		Prints a ticket, but only when the Print button displays.
----		<ul style="list-style-type: none"> Enters weighment data, and the last data item processed. Displays the Print, Edit, and Cancel buttons.
 + 		Toggles the Traffic Light if set for Manual control.
 + 		Toggles the Traffic Light during the Axle Selection Process .
 + 		Toggles the displayed Video Image , if so configured.
 + 		Mimics the Exit Application button.
 + 		Switches software programs without closing any of them.

NOTE: Function Keys (**F-Keys**) **9 thru 12** are not used.

3.5. QUICK SETUP FOR FB4000 TO A SERIAL PRINTER

1. Exit your Application by clicking the **EXIT** button.
2. Select **Exit Application** by double clicking.
3. Move mouse to lower left corner **Windows** icon should appear.
4. Right click on the **Windows** icon.
5. Click on **CONTROL PANEL**
6. Click on **Devices and Printers**
7. Find the **EPSON TM U590** and right click on it
8. Hover over printer, **set as default printer**, click on the appropriate printer.

Example: After choosing **TM U295**. A ✓ appears next to **EPSON TM U295**.

9. Right click on the **EPSON TM U295** (your printer)
10. Click on the **Ports** tab
11. Choose the correct **COM** port connected to the printer.
12. Check the box for the appropriate com port.
13. Click configure port...
14. Verify the baud, parity, stop bits and flow control.
15. Click **Apply** if you made changes then click **ok** if correct.
16. Click **Apply** again then click **OK**.
17. Hit **F5** key to refresh.
18. Right click on the **TM U295**.
19. Click on **Printer** properties.
20. Click on **Print test page** test page should print.
21. Close all windows and relaunch your application by double clicking the **FB4000** icon
22. Once your application is running, press the **HOME** key on your key board
23. Now proceed to [Section 6: Formatting Tickets](#) for detailed instructions on setting up your ticket.

3.6. QUICK SETUP FOR FB4000 TO AN USB PRINTER

1. Close all applications and perform a shutdown on the FB4000.
2. Connect printer to any available USB port on the **back** side of the FB4000.
3. Power up the printer **first** then power up the FB4000.
4. On boot up, notice **device installation** in the task bar. Let all applications initialize before proceeding to step 5.
5. Exit your Application by clicking the **EXIT** button.
6. Select **Exit Application** by double clicking.
7. Move mouse to lower left corner **Windows** icon should appear.
8. Right click on the **Windows** icon.

9. Click on **CONTROL PANEL**
10. Click on **Devices and Printers**
11. Find the **ML420, Brother L2300D, or Current USB printer** and right click on it.
12. **Left click on set as default printer.**
Example: After choosing **ML420**. A ✓ appears next to it.
13. Right click on the **ML420** (your printer)
14. Click **Printer Properties**
15. Click on **Print test page** test page should print.
16. Close all windows and relaunch your application by double clicking the **FB4000** icon
17. Once your application is running, press the **HOME** key on your keyboard
18. Now proceed to [Section 6: Formatting Tickets](#) for detailed instructions on setting up your ticket.

3.7. DEFINING THE CONFIGURATION ITEMS

There are thirty-two (32) formatting tabs used in the **FB4000 Highway System Configuration Menu**.

Access the **Main Configuration Window** by pressing the keyboard **Home** button.



*Pressing the **Home** button accesses the **Main Configuration Window**.*

Highway System Configuration Items

Operating Mode / Scale Configuration	Ticket Number / Machine Id	Threshold Weights	Traffic Light Control	DOT Scale Summing	
Blind Counter	Idle Screen / Ticket Logo	Location Information	Fee Schedule	Entry Sequence / Legends	
Programmable Entry Prompts	Reports	Format Tickets	Configurable Outputs	Remote Display	Video Camera Input
Networked Terminals Setup	Passwords	Tare Options / Editor	Product File Editor	Customer File Editor	Kernel
Data Collection / Reporting Setup	Error Logging Setup	System Options	Check For Updates		
Time and Date Format	Backup / Restore / Defaults	Remote Access / Ultra VNC	About	Save and Exit	

Operating Mode

Highway System

Inbound / Outbound

Enforcement

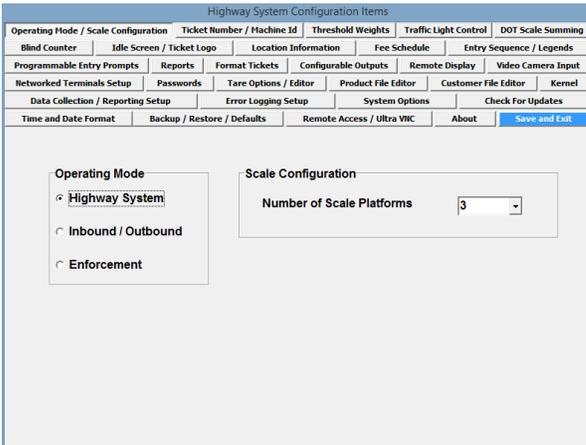
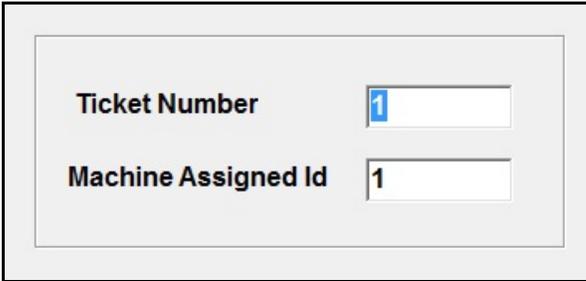
Scale Configuration

Number of Scale Platforms 3 ▾

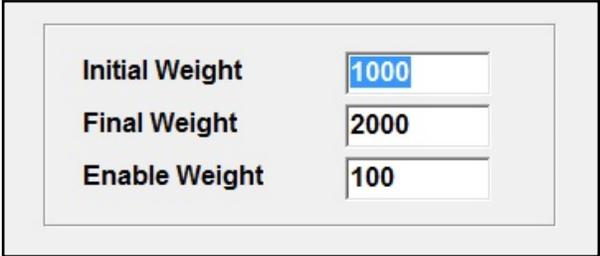
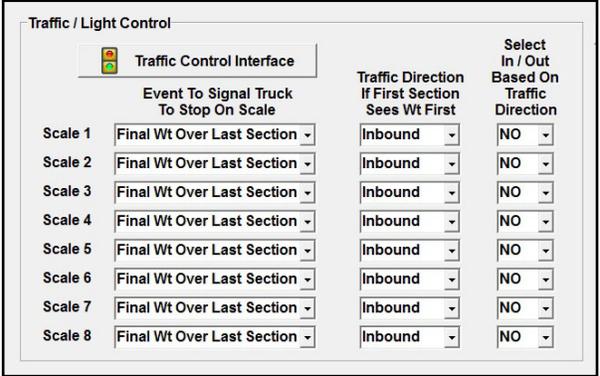
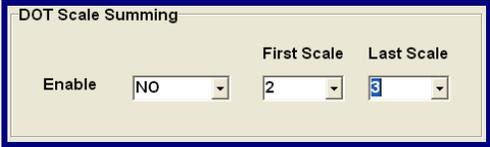
The following section details each of the 4000 Highway System Configuration Items, beginning with the **upper-left tab** and moving across and down to the **lower-right tab**.

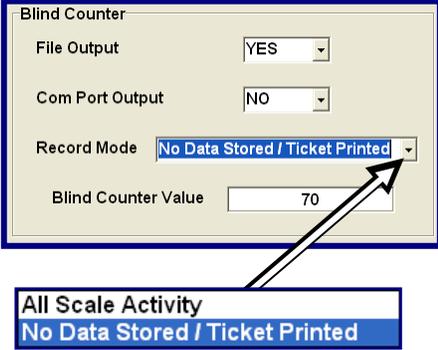
NOTE: Special permission is required to access certain tabs. If attempting to access a tab that requests a password, contact your scale technician for assistance.

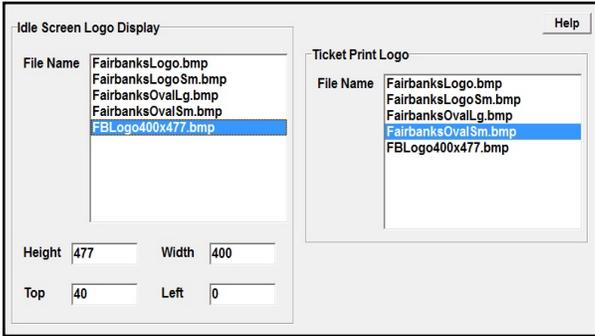


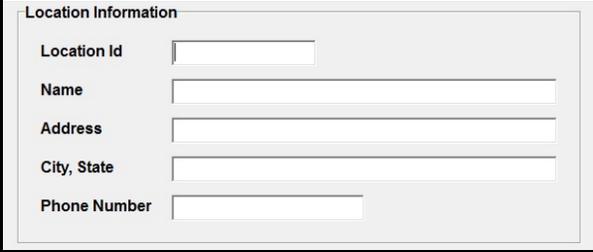
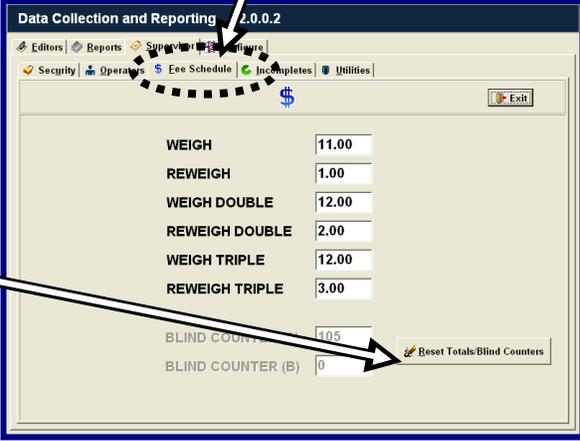
Definition	Window
<p>3.7.1. Operating Mode / Number of Scales</p>	 <p>The screenshot shows a software window titled "Highway System Configuration Items". It features a menu bar with various options like "Operating Mode / Scale Configuration", "Ticket Number / Machine ID", etc. The main area is divided into two sections: "Operating Mode" with radio buttons for "Highway System" (selected), "Inbound / Outbound", and "Enforcement"; and "Scale Configuration" with a text box labeled "Number of Scale Platforms" containing the value "3".</p>
<p>3.7.2. Ticket Number/Machine ID</p> <p>Ticket Number is the number of the next ticket print.</p> <p>Machine Assigned ID is the next Loop Number assigned by the instrument if no Loop Number/ Truck ID is entered during an Inbound Weighment.</p>	 <p>The screenshot shows two input fields. The first is labeled "Ticket Number" and contains the value "1". The second is labeled "Machine Assigned Id" and also contains the value "1".</p>

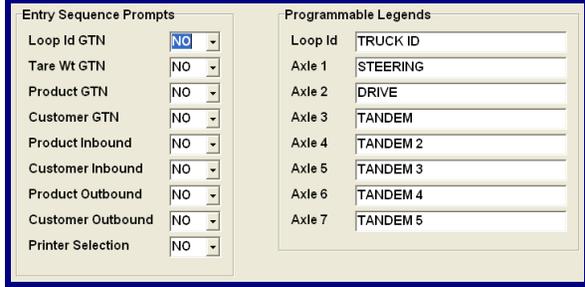
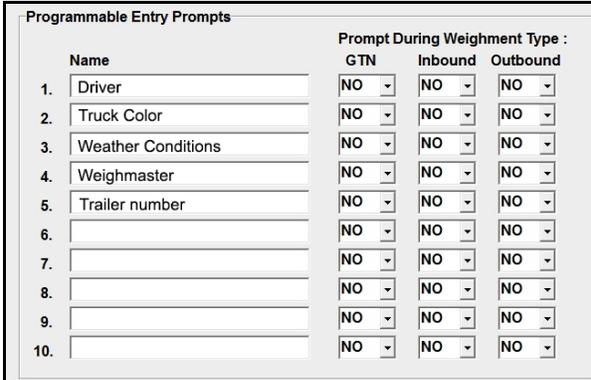
NOTE: Throughout these description frames, only the necessary **bottom sections** are shown. The **top tabbed area** is eliminated to save space.

Definition	Window
<p>3.7.3. Threshold Weights</p> <p>Initial Weight sets the minimum amount the truck must weigh to display the Weight Selection Screen, and to initiate a weighment.</p> <p>Final Weight is the value that, when applied to the front-most scale, causes the traffic light to automatically turn red.</p> <p>Enable Weight is used to determine if a truck has repositioned after an axle selection, so not to select it twice.</p>	
<p>3.7.4. Traffic / Light Control</p> <p>Select Traffic/Light to Enable the traffic light, and NO to Disable it.</p> <p>Control Method sets to AUTOMATIC or MANUAL (when Enabled).</p> <ul style="list-style-type: none"> The standard Traffic Light Controller used is p/n 25161Q. <p style="text-align: center;">★★ IMPORTANT ★★</p> <ul style="list-style-type: none"> AUTOMATIC weighs the truck(s) once its weight is stable, without the assistance from an operator (normal setting). MANUAL is used when the operator presses the Enter button on the external keyboard to weigh the truck, usually used in a multi-axle weighment. 	 <p style="text-align: center;">  +  </p> <p style="text-align: center;"><i>Toggles between the setting of AUTOMATIC and Manual.</i></p>
<p>3.7.5. DOT Scale Summing</p> <p>When enabled, combines the weight from the first scale to the last scale for display and print. Typically, this is Scales 2 and 3 of a 4-platform scale. It is referred to as the Center Total. Legal Limit errors for scales included in this sum cause this sum to show in error.</p> <ol style="list-style-type: none"> Select YES to Enable, and NO to Disable. Select which two (2) platforms. 	

Definition	Window
<p>3.7.6. Blind Counter</p> <p>The Blind Counter monitors all activity on the scale, and triggers an event whenever the weight exceeds the Initial Weight Threshold.</p> <ul style="list-style-type: none"> The Blind Counter records all activity that doesn't result in a print, as long as the Initial Weight Threshold is met and stable for ten (10) seconds. <ul style="list-style-type: none"> While in the All Scale Activity mode, output is directed to File Output, COM Port Output, or both. <ul style="list-style-type: none"> If the unit uses cameras, an image can be captured, depending on the configuration. The system supports up to two (2) cameras. Images are displayed, printed on tickets, and stored with complete transactions. 	

Definition	Window
<p>3.7.7. Idle/Ticket Logo</p> <p>Programs the logo design onto the Idle Screen, and also on the ticket.</p> <ul style="list-style-type: none"> — Bitmap Files located in the C:\FB4000_HighwaySystem\LOGOS folder displays for selection. <p>Size of the useable display area depends on whether the Video Camera Input and Traffic Light Control are used.</p> <ul style="list-style-type: none"> — When both are present, the Traffic Light Control and the Video Camera Input Display Image cover the Ticket Print Logo. <p>Height, Width, Top and Left refer to the Bitmap image position on the screen. All values are in pixels.</p> <p>The Inactivity Time Trigger setting controls how long of a period of inactivity must elapse before the Animated Inactivity Image displays.</p> <p>✓ Default Display = FBLogo400x470.bmp</p> <p>The Display Logo is used regardless of whether the Video Camera Input or Traffic Light Control are used, because the upper part of the logo image is white.</p> <ul style="list-style-type: none"> — Any other image besides the Default Logo must be dragged-and-dropped into place on the page, as its gray box will need adjustment. <hr/> <p>NOTE: The printer must be capable of printing logos on the ticket to activate the logo feature.</p>	

Definition	Window
<p>3.7.8. Location Information</p> <p>Programs the address and telephone number of the business where the scale is located.</p>	
<p>3.7.9. Fee Schedule</p> <p>Pressing the Fee Editor button allows fees for the following to be established.</p> <ul style="list-style-type: none"> • Weigh Fee • ReWeigh Fee • Double Fee • ReWeigh Double Fee • Triple Fee • ReWeigh Triple Fee <p>Reset the totals while in the Fee Schedule window by pressing </p> <p>NOTE: A corresponding fee must be entered for the weighment type to be available at the weigh screen.</p>	 

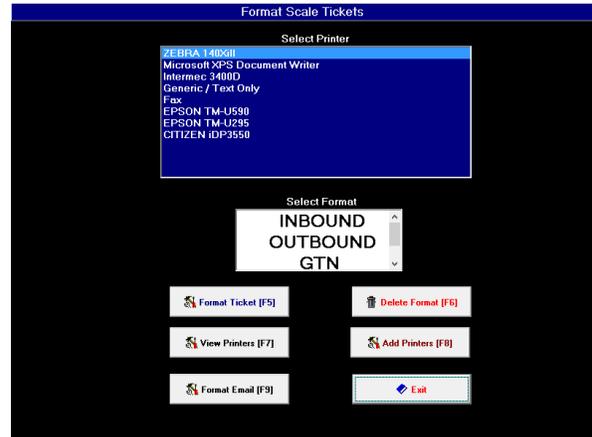
Definition	Window
<p>3.7.10. Entry Sequence / Legends</p> <p>Entry Sequence Prompts – Turns prompts ON or OFF, based on the selection.</p> <ul style="list-style-type: none"> – The prompt must be ON or the field will not display. <p>Programmable Legends – Determines the legends for the TRUCK (or Loop) ID and Axles.</p> <p><i>Twenty (20) characters max.</i></p>	
<p>3.7.11. Programmable Entry Prompts</p> <p>Name – Programmable legend (title) of the prompt as it displays.</p> <ul style="list-style-type: none"> – <i>Twenty (20) characters max.</i> <p>Prompt During Weighment Type – Turns ON or OFF prompts for the weighment type selected.</p>	
<p>3.7.12. Reports</p> <p>Prints one of the eight following reports:</p> <ul style="list-style-type: none"> • Completed Transactions • Incomplete Transactions • Report by Product • Report by Customer • Daily Report • Weekly to Date Report • Voids Report • Scale Activity Summary Audit 	

3.7.13. Format Tickets

Formats Tickets for each printer used. Functions within this window include the following:

- Formatting a Ticket **[F5]**.
- Delete an unneeded ticket format **[F6]**.
- View all available printers **[F7]**.
- Add a new printer **[F8]**.
- Format Email **[F9]**.

*Complete details for formatting the Scale Tickets is located in **Section 7: Serial Input/Output.***

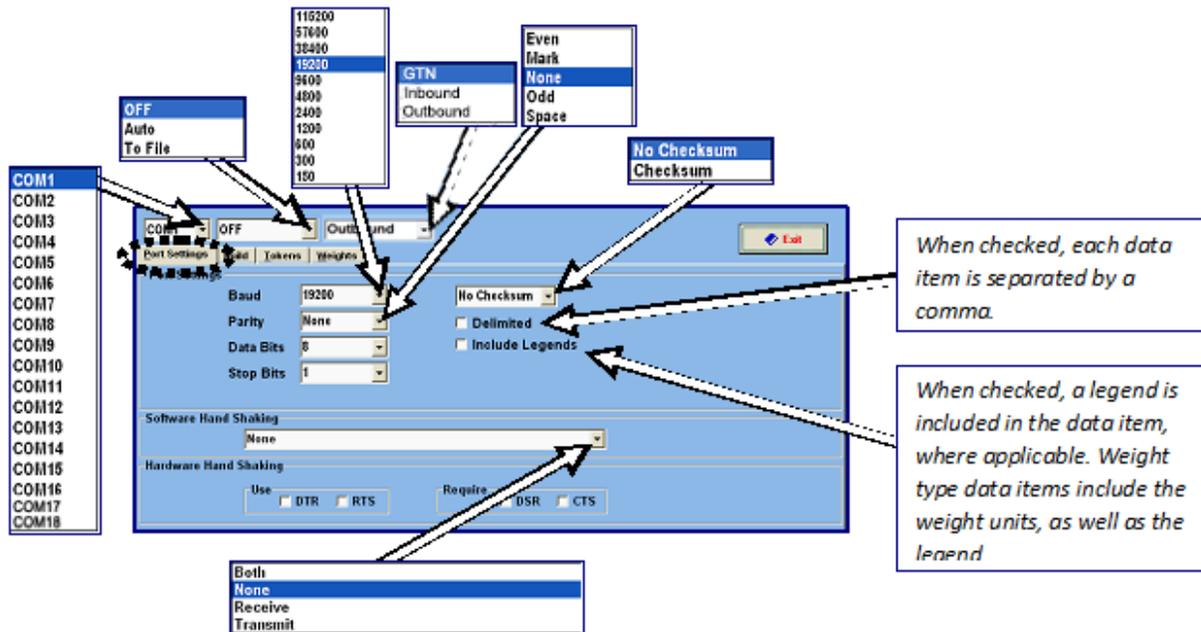


Definition

3.7.14. Configurable Outputs: Port Settings

Sets the communication parameters and output type for the selected communication port.

- ✓ **Port Default = COM1** (Same on all **Configurable Outputs** windows)
- ✓ **Output Type Default = OFF** (Same on all **Configurable Outputs** windows)
 - **Auto** transmits a serial data string to the selected COM Port when a print is done.
 - **To File** saves the transmission to the **C:\TRAINS\TRAINS.txt** file when a print is done.
- The format of the **Auto** and **File Output** is controlled by the **Delimited** and **Include Legends** check boxes and the **Build, Tokens, and Weight** tabs.
- ✓ **Baud Default = 19200**
- ✓ **Parity Default = None**
- ✓ **Data Bits Default = 8**
- ✓ **Stop Bits Default = 1**
- ✓ **Checksum Default = No Checksum**
- ✓ **Software Handshaking Default = None**
- **Hardware Hand Shaking** controls the flow of data between the **Application** and the **Receiving Device** by using hardware lines.
 - ✓ **Hardware Handshaking Default = No checkboxes selected**
 - **DTR (Data Terminal Ready)** – A control signal that indicates that the Data Terminal Equipment (DTE) is ready for data transmission.
 - **RTS (Request To Send)** – A control line which receives a verification signal from the CTS Control Line when it is ready to send data.
 - **DSR (Data Set Ready)** – A control signal that indicates the device is ready to transmit data.
 - **CTS (Clear To Send)** – A control signal used to notify the device that it has line control.



Definition

Configurable Outputs: Build

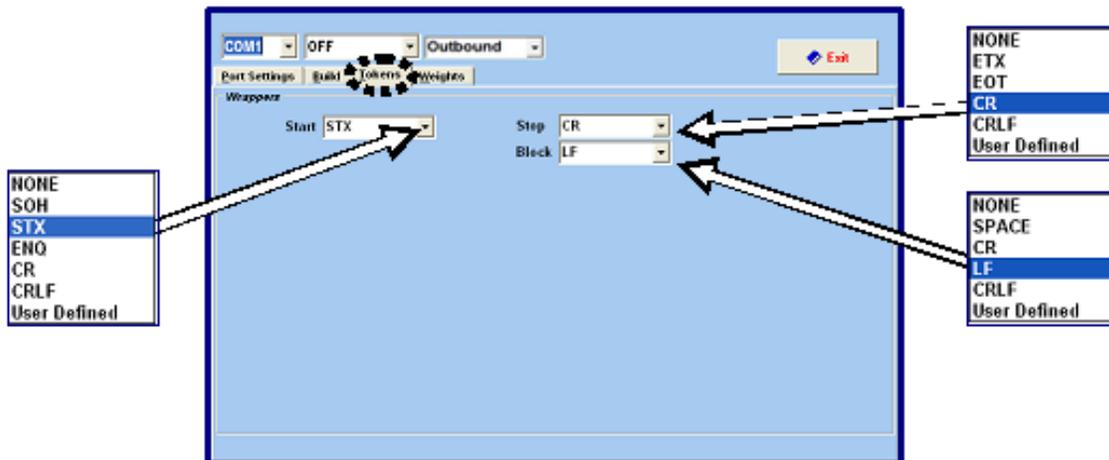
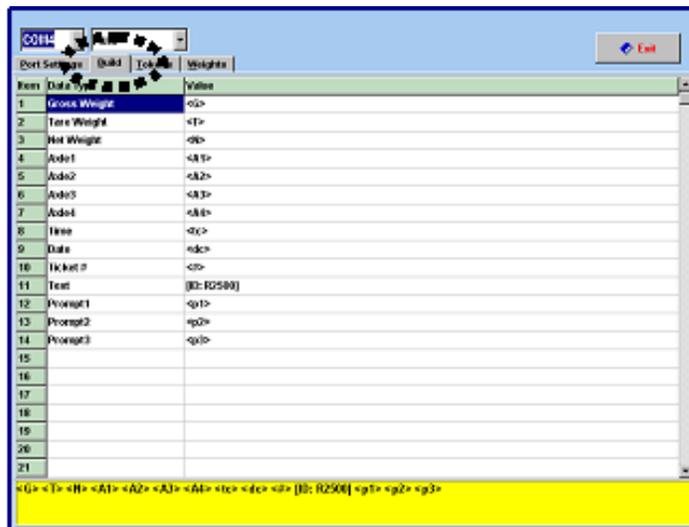
Defines the **Output String** format.

1. Click on the **Data Type** block to see the list of **Data Items** to select from.
2. Scroll through using the **Up** and **Down** arrow keys.
3. Select the data item to **Add** or select **Remove** to delete item.
4. Selecting **“Text”** allows for fixed text to be added to the **“Value”** block in the **Output String**.

Configurable Outputs: Tokens

Defines the beginning character(s) (**Start**), ending character(s) (**Stop**), and data item separator character(s) (**Block**) of the **Output String**.

- ✓ **Start Default = STX**
- ✓ **Stop Default = CR**
- ✓ **Block Default = LF**



Definition

Configurable Outputs: Weights

Formats the appearance of **Weight Output Strings**.

Weight Digits – The number of digits in the **Weight Output String**.

Justification – Determines whether the numbers line-up on the left or the right.

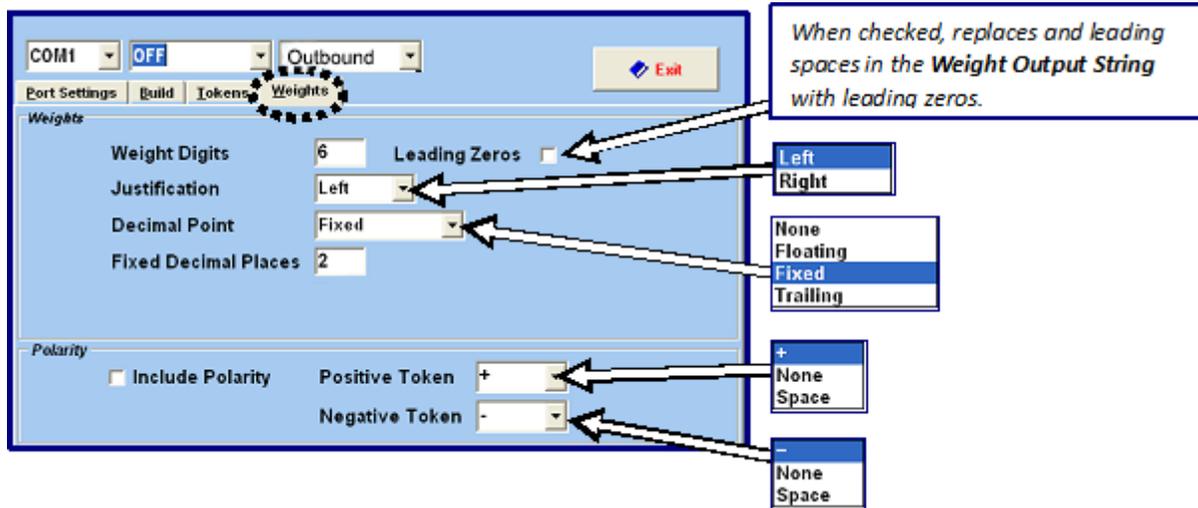
Decimal Point – Sets whether the **Decimal Point** is **None**, **Floating**, **Fixed**, or **Trailing**.

Fixed Decimal Places – If “**Fixed**” was the previous selection, this sets the number of digits to the right of the decimal point.

Test Weight – Sets the test amount when the scales are being manually calibrated (*not used*).

Polarity – Controls whether or not the **Weight Output String** includes a **Priority Character** and what that character is for positive and negative weight values.

- Checking the box **includes** this feature.

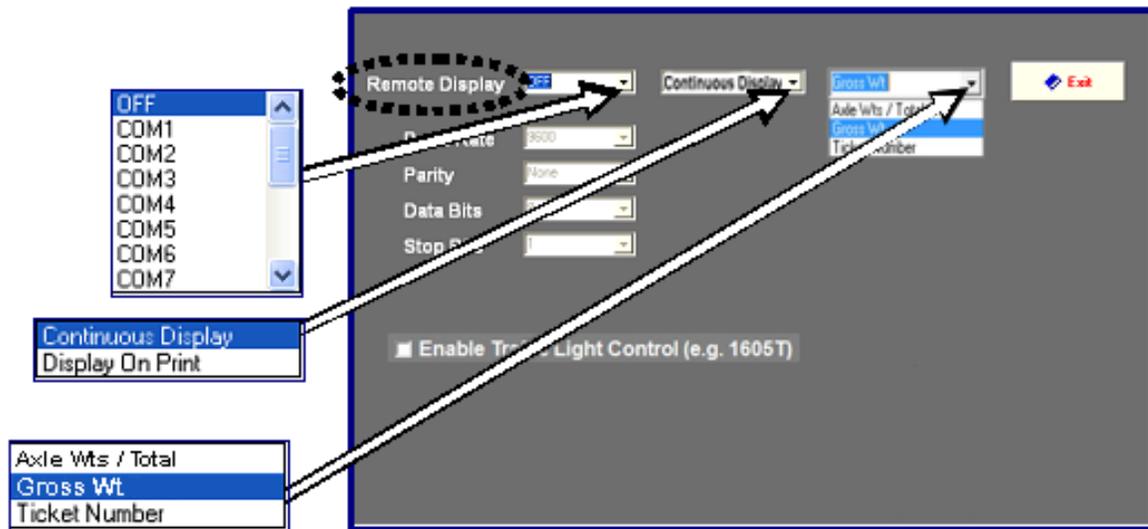


Definition

3.7.15. Remote Display

Formats the settings for **Output** to the **Remote Display**.

- **20mA Output** requires serial expansion card to be installed.
- ✓ **COM Port Default = OFF**
- ✓ **Default = Continuous Display**
- ✓ **Default = Gross Wt**



Definition

3.7.16. Video Camera Input

Formats the settings for an **Ethernet Video Camera**, when one is installed.

- Sets up to two (2) camera types and establishes their **Network Addresses**.
- Formats parameters for the camera(s).

- Only cameras **supplied by Fairbanks Scales** are supported with this option.

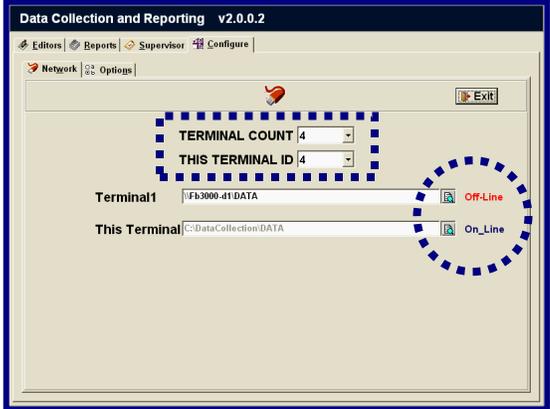
The screenshot shows the 'Video Camera Input' configuration window. It has two camera sections, Camera 1 and Camera 2. Each section has a 'Type' dropdown menu and a 'Network Address' field. Below these are several options: 'Idle Screen Display', 'Select Screen Display', 'Print On Ticket', 'Store With Transaction', 'Store With Partial Transaction', and 'Video File Format'. The 'Video File Format' dropdown is currently set to 'JPG Image (*.JPG)'. To the right of the window are two callout boxes. The top one is titled 'Toggle' and lists 'None', 'Camera 1', 'Camera 2', and 'Toggle' (highlighted). The bottom one lists 'None', 'Camera 1', 'Camera 2', and 'Both'. Below the window are two more callout boxes: 'Axis Camera' with 'Gadspot/Sony NC1600' below it, and 'JPG Image (*.JPG)' with 'Bitmap Image (*.BMP)' below it. Arrows point from these callouts to the corresponding dropdown menus in the screenshot.

3.7.17. Video Camera(s) with a Standalone FB4000

A **Switch** (p/n **26220**) is necessary when installing the Video Camera(s) to a Standalone FB4000 Indicator. This establishes a **Peer-to-Peer Network**, which **is required** for the two to function together.

- It is not possible to connect the two directly together using only an Ethernet connection. A Switch directs and translates the message, **and is required**.
- The **Camera** has only a **Ethernet Port**. Because of this, using either a **laptop computer** or a **USB CD Drive** for the **Installation Software** is necessary.
- The **Camera Installation Software** allows a **Static IP Address** to be programmed into the Video Camera.
- Follow Tips for Techs Issue [TIP2016-01](#) for detailed network configuration instructions.

NOTE: The printer must be **able to print images** to activate **“Print on Ticket”** feature.

Definition	Window
<p>3.7.18. Networked Terminals Setup</p> <p>Sets up the application for Multiple Terminal Operation.</p> <ul style="list-style-type: none"> — Terminal Count defines the total number of terminals in the System. — This Terminal ID Defines the local terminal's Terminal Number. — Defines the storage locations for all the non-local terminal's database files (<i>not This Terminal ID</i>). <ul style="list-style-type: none"> ▪ The Browse button helps with this entry. — Terminals that cannot be communicated with at the selected storage locations are shown as Off-line. — Terminals that can be communicated with at the selected storage locations are shown as On-line. 	

Network Terminal Setup Steps

1. Select the number of terminals the System is configured for (**Terminal Count**).
2. Select the terminal number for the local terminal (**This Terminal ID**).
3. For all terminals except the local terminal (**This Terminal**), enter the storage location for each terminal's database files.
4. A **Browse** button helps with this entry.
5. Press  **Exit** .

Definition	Window
<p>3.7.19. Passwords</p> <p>The Highway System has two passwords.</p> <ul style="list-style-type: none"> • Configuration Password secures the functions of the Configuration Menu. ✓ Password = No characters (blank) <ul style="list-style-type: none"> — The security is reset after exiting to the weight processing screen. — To clear the password, press the Delete key. • Service Password controls access to the Password tab, the Kernel Application, and the Backup/Restore/Defaults tab. <hr/> <p>NOTE: <i>All passwords are case sensitive.</i></p>	

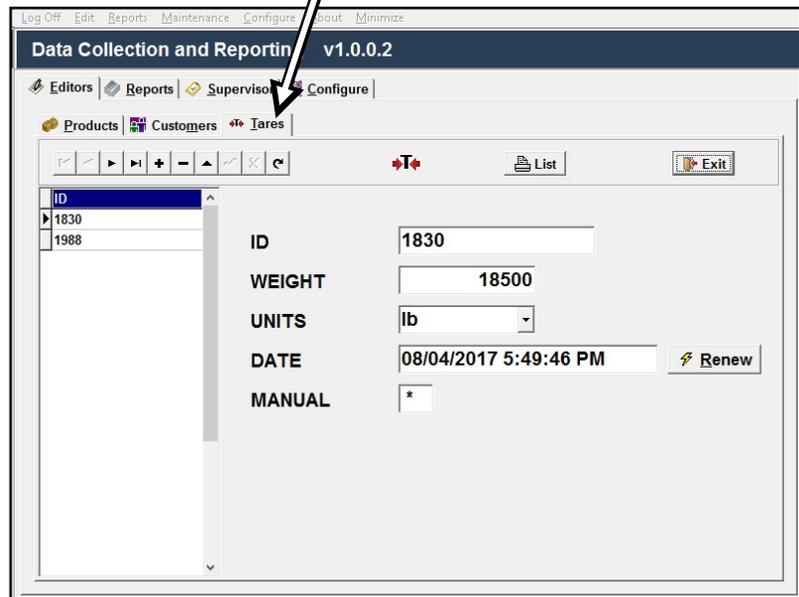
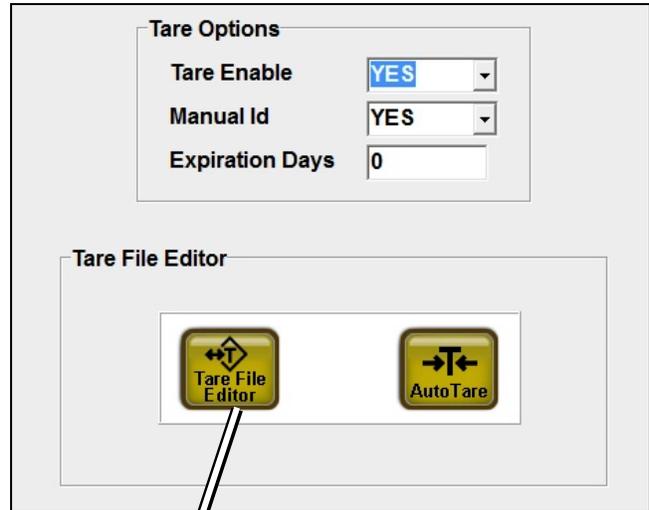
Definition

3.7.20. Tare Options / Editor

Programs the default **Tare** settings.

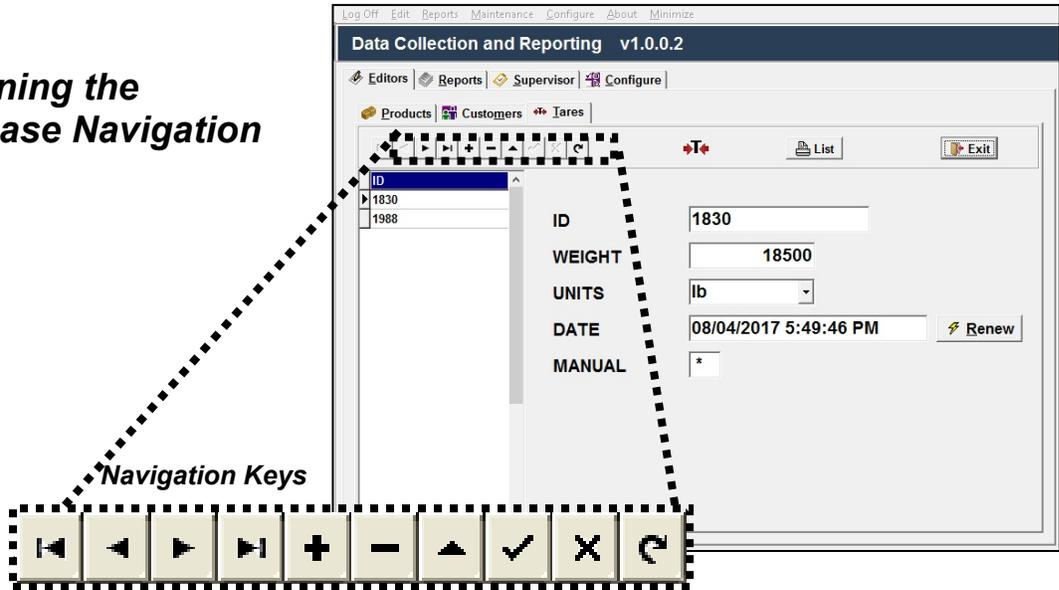
Steps to setting the Tare Options

1. Select either **Yes** or **No** for **Tare Enable**.
 - This controls whether a **Tare Wt** is prompted for doing data entry.
2. Select either **Yes** or **No** for **Manual ID**.
 - This controls whether the Manual Tare ID Character “*” is printed with the tare weight for a Keyboard entered tare.
3. Enter either **0**, or a specific number to the Tare’s **Expiration Days**.
 - This sets the number of days that a Stored Tare Weight may be used.
 - After exceeding this number of days, the operator is prompted to continue to use the Tare Wt. or not.
 - A value of “0” disables this option.



4. Press the **Tare File Editor** button to create a new Tare setting or to view existing **Shared Tare Weights**.
5. Press the **Auto Tare** button to select the standard **preset Tare amount**.
 - This captures the weight on the scale to be stored in the tare file.
 - The weight is displayed and the operator is prompted to enter the **Tare ID**.

3.7.21. Defining the Database Navigation Keys



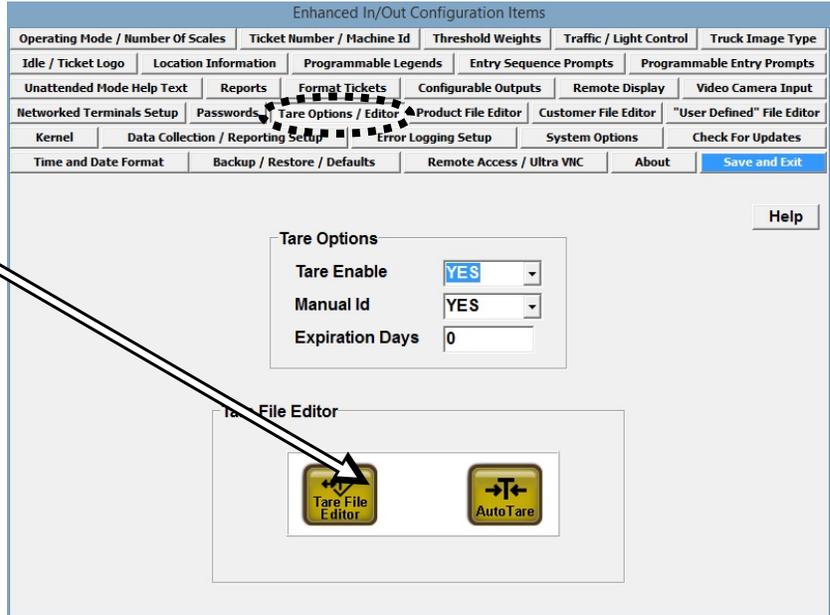
ACTION KEY	DESCRIPTION
	Moves to the first record .
	Moves to the previous record in the list.
	Moves to the next record in the list.
	Moves to the last record in the list.
	Adds a new record.
	Deletes the selected record.
	Puts the current record selected in the Edit Mode .
	Confirms changes to the displayed record .
	Cancels changes made to the displayed record and restores original values.
	Refreshes the displayed data from the database, in case it is changed by another operator.
	Displays and optionally prints a list of displayed records.
	Exit to the main Configuration Items page .
	Renews the Stored Tare and stamps the new setting with the current date and time.

3.7.22. Steps to Entering a New Tare

Follow these steps to enter a new Tare.

1. From the **Weight Screen**, press the  button *on the keyboard*.
2. Open the **Tare Options / Editor** tab in the Configure Items window.

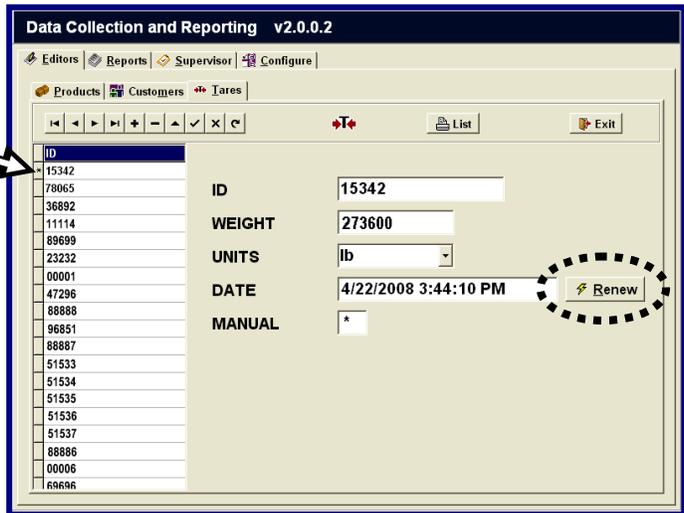
3. Press .



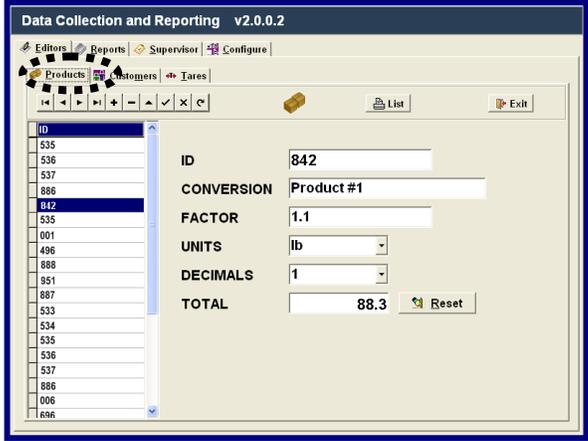
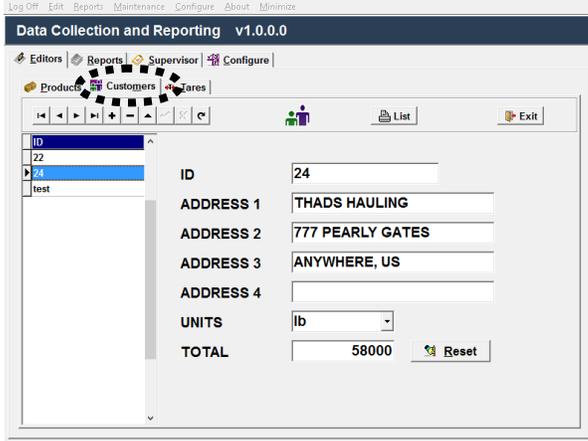
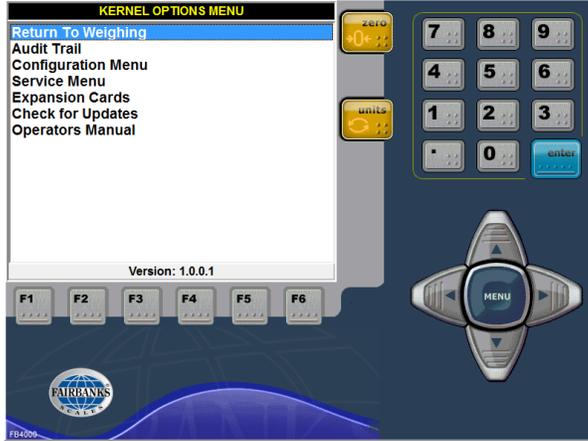
4. In the **Tares** tab, press .

- A **Star** appears beside the newly made Tare Record.

5. Enter a numeric **Vehicle Number** in the **ID** field.
6. Enter the vehicle's **WEIGHT**.
7. Select the desired **UNITS**.
8. Press  to accept all the new **Tare** information, date and time stamp the entry, and record it in the **Data Collection** database.



Press , then enter a **Product Code** and the other vehicle information.

Definition	Window
<p>3.7.23. Product File Editor*</p> <p>Creates and edits Product files. Enter the following:</p> <ol style="list-style-type: none"> Product ID. Product CONVERSION. <ul style="list-style-type: none"> Legend for the result of the Net Wt. multiplies by the Factor (i.e. bushels). Product FACTOR. <ul style="list-style-type: none"> Value is multiplied by the Net Wt. to calculate the conversion. Product UNITS in lb or kg. Number the DECIMAL places to print the conversion. TOTAL amount of conversion weighed since last pressing . 	
<p>3.7.24. Customer File Editor*</p> <p>Inputs and edits Customers files. Enter the following:</p> <ol style="list-style-type: none"> Customer ID. Customer ADDRESS 1 thru 4. Customer UNITS in lb or kg. TOTAL amount of pounds weighed since last pressing . 	
<p>3.7.25. FB4000 Kernel</p> <p>Configures all the settings within the KERNEL OPTIONS MENU, which is the core weighing application for the FB4000 Highway System.</p>	

3.8. DATA COLLECTION & REPORTING: CONFIGURATION MENU

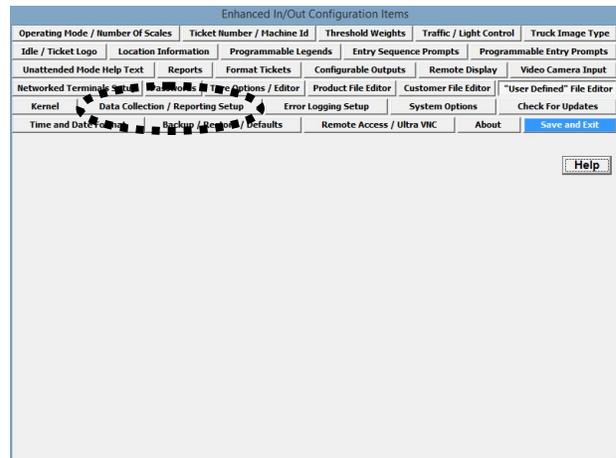
The **Data Collection & Reporting Configuration Menu** is a very important tabbed window to the **Highway System Program**. It allows access to elements of the application, including the **Database Editors, Reports, Maintenance, Configuration and Help Options**.

Follow these steps to access the **Data Collection & Reporting Configuration Menu**.

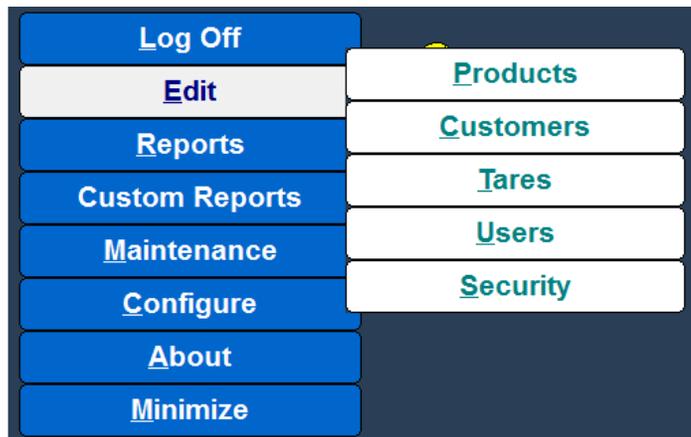
1. While in the **Weigh** screen, press the **Home** button on the external keyboard.



2. Select the **Data Collection & Reporting Setup** tab.



3. Select **Edit**, scroll right and select **Security**.



NOTE: The following description frames detail each of the six formatting functions (Products, Customers, Tares, Fees, Security, and Users) in the order of top tabs in the opened window. Each one can also be accessed using the method shown above.

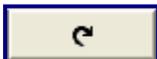
Definition
<p>3.8.1. Data Collection & Reporting: Supervisor</p> <p>— Sets up security limitations for the management functions of the Highway System Program.</p>

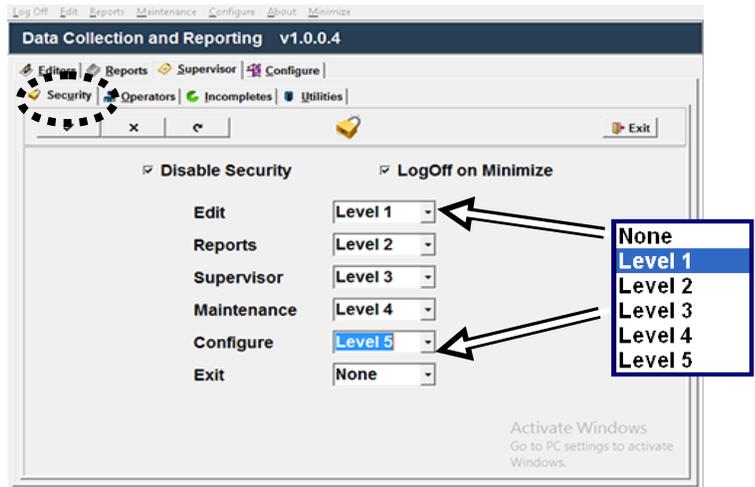
3.8.1.1. Data Collection & Reporting: Supervisor – Security tab

SETTINGS

 = **Accept** the changes.

 = **Delete** the changes.

 = **Refresh** the displayed data from the database, in case it is changed by another user.



Disable Security checkbox – Turns off the **Security Feature** entirely.

CAUTION

Disabling the Security Feature allows all personnel types full access to any of the management functions, possibly causing irreparable, untraceable problems within the Highway System Program!

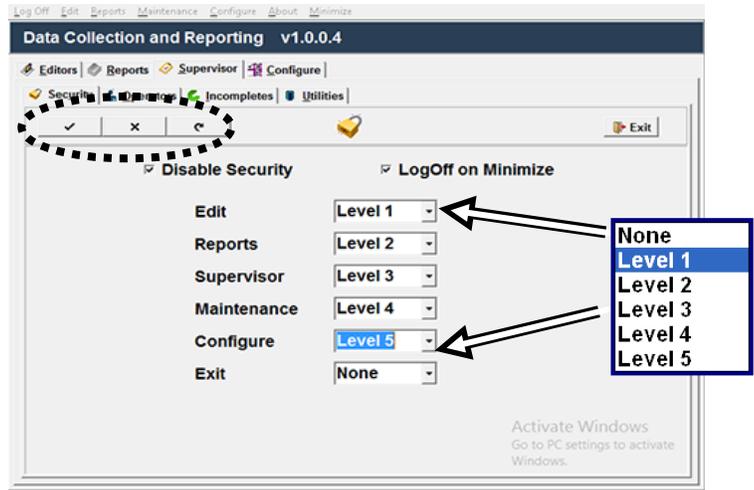
LogOff on Minimize checkbox – Logs the user off whenever he or she minimizes the program.

3.6.1.1. Data Collection & Reporting: Supervisor – Security tab, Continued

Setting the Security Levels

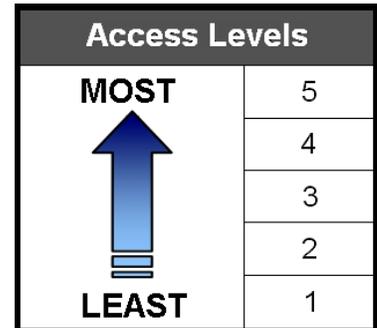
1. Edit any of the **Security Levels** by left-clicking on the drop-down menu arrow.
2. Scroll down to the appropriate level for the user's function, then left-click on the selection.
3. Press  to **accept** the new.

setting, or  to **cancel/reset** it.



Security Levels 1 thru 5 – Configures the hierarchy of the management functions, and limits privilege accesses from unauthorized employees.

- When making the employee hierarchy, employee duties should determine their security level.
- Each access level includes all of the rights of any access level(s) below it.

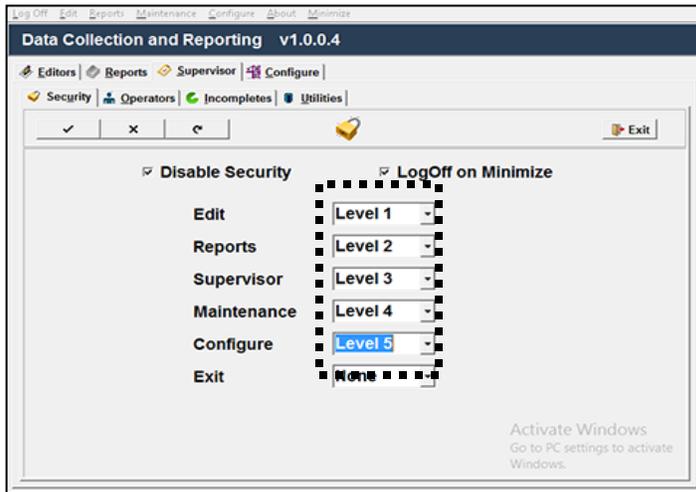


Highway System Security Level Configuration

Level	Function	Ability
1	Operator	Restricted access capabilities to no higher than performing weighments, monitoring trucks and drivers, and printing tickets.
2	Supervisor	<ul style="list-style-type: none"> • Restricted access capabilities to no higher than monitoring and controlling employees' activity, then to generating Status Reports. • Allows inputting Customer and Product Data.
3	System	Restricted access capabilities to no higher than generating and altering the a Ticket Format , monitoring the System Operations , adjusting System Settings , and to troubleshooting the Highway System Application.
5	Kernel	Restricts access capabilities to no higher than the underlying Kernel Program , the Weighment Application that drives the Highway Scale System.
5	Calibration	Restricts access capabilities to no higher than the Calibration Process .

3.6.1.1. Data Collection & Reporting: Supervisor – Security tab, Continued

NOTE: Each access level includes all of the rights of any access level(s) below it.

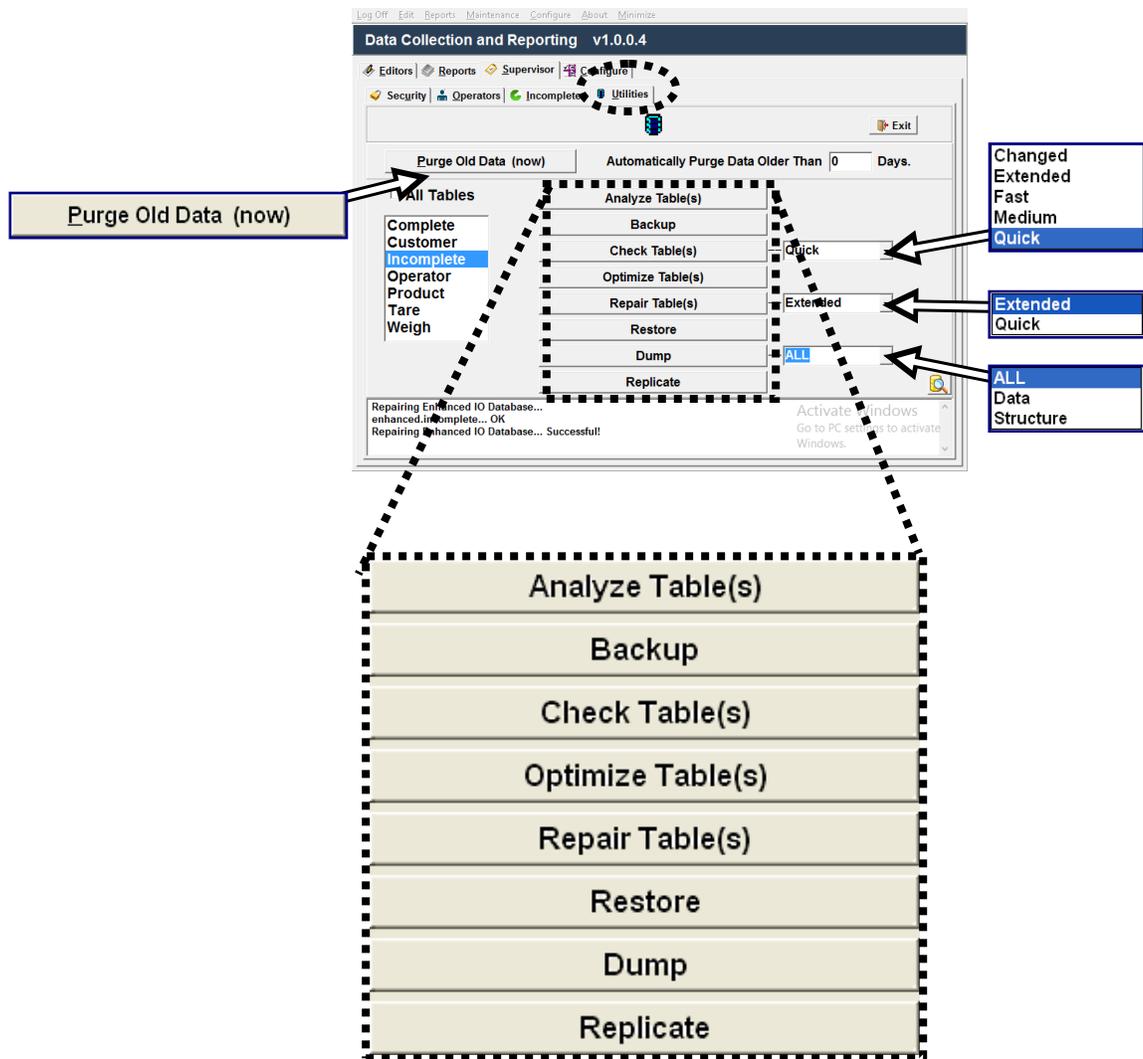


Function	Ability
Editor	Sets the accessibility limits for the editing functions within the Data Collection & Reporting Application , along with the Kernel Application Settings .
Reports	Sets the accessibility limits for manipulating the different Reports .
Supervisor	Sets the accessibility limits for the Supervisor Functions .
Maintenance	Sets the accessibility limits for Maintenance functions within the Data Collection & Reporting Application , along with the Kernel Application Settings .
Configure	Sets the accessibility limits for Configuration functions within the Data Collection & Reporting Application , along with the Kernel Application Settings .
Exit	Sets the accessibility limits to shut down the Data Collection & Reporting Application , along with the Kernel Application Settings .

Definition	Window
<p>3.8.1.2. Data Collection & Reporting: Supervisor – Operators tab</p> <p>Inputs and edits Operator files. Enter the following:</p> <ol style="list-style-type: none"> 1. Operator ID NUMBER. 2. Operator's FIRST name. 3. Operator's LAST name. 4. Operator's own personal PASSWORD. 5. Re-enter the operator's PASSWORD. 6. Operator's SHIFT period 7. Operator's ACCESS Level. 	
<p>3.8.1.3. Data Collection & Reporting: Supervisor – Fee Schedule tab</p>	
<p>3.8.1.4. Data Collection & Reporting: Supervisor – Incompletes tab</p> <p>Displays a list of Incomplete/Inbound Weighments.</p> <p>In an Inbound/Outbound Weighment, the driver completed the first weighment, but has not followed-through with the second one to complete the transaction.</p>	

* Refer to 3.5.19. Tare Options/Editor for descriptions of the **Navigation Keys**.

Definition	Feature
<p>3.8.1.5. Data Collection & Reporting: Supervisor – Utilities tab</p>	<p>Purge Old Data (now) – Deletes transactions older than the “Automatically Purge Data Older than [] days”.</p> <ul style="list-style-type: none"> – Saves hard drive space. <p>All Tables Check Box – Manipulates all the tables to match and update the changes being made.</p> <p><i>(All Utility Buttons are defined on following the page).</i></p>



3.6.1.5. Data Collection & Reporting: Supervisor – Utilities tab, continued

BUTTON	FUNCTION
Analyze Table(s)	Analyzes and stores the key distribution for the table(s).
Backup	Backs up the table(s) to a selected folder.
Check Table(s)	<p>Checks the table(s) for errors.</p> <p>Changed – Only check tables which have been changed since last check, or have not been properly closed.</p> <p>Extended – Do a full key lookup for all keys for each row. This ensures that the table is 100% consistent.</p> <ul style="list-style-type: none"> • <i>This process takes longer to complete.</i> <p>Fast – Only checks tables which have not been properly closed.</p> <p>Medium – Scan rows to verify that deleted links are okay. This also calculates a key checksum for the rows and verifies this with a calculated checksum for the keys.</p> <p>Quick – <i>Doesn't scan the rows to check for wrong links.</i></p>
Optimize Table(s)	Used to deleted a large part of the table(s), or to make many changes to a table with variable-length rows.
Repair Table(s)	<p>Repairs a possibly corrupted table.</p> <p>Extended – MySQL creates the index row-by-row, instead of creating one index at a time with sorting. This <i>may be</i> better than using the sorting function on fixed-length keys, especially on long CHAR keys that compress very well.</p> <p>Quick – MySQL tries to repair only the index tree</p>
Restore	Restores the table(s) from the backup that was previously made with Backup .
Dump	<p>Generates the SQL script for the Highway Database.</p> <p>Structure – Generates a SQL script containing the <i>DB structure only</i>.</p> <p>Data – Generates a SQL script containing the <i>data only</i>.</p> <p>All – Generates a SQL script containing <i>both structure and data</i>.</p>
Replicate	In a networked environment, the user will encounter a series of prompts allowing the local database to be replicated.

Note: *This deletes all data on the selected remote FB4000 and replaces it with a copy of this unit's database.*

The **Search Button** expands/limits the activity displayed in the **SQL Monitor** (the memo field at the bottom of the page).

Definition	Window
<p>3.8.1.6. Data Collection & Reporting: Configure – Network tab</p> <p>Sets up the application for Multiple Terminal Operation.</p> <ul style="list-style-type: none"> – Terminal Count defines the total number of terminals in the System. – This Terminal ID defines the local terminal's Terminal Number. – Terminal 1 (Off-Line) are terminals that cannot be communicated with at the selected storage locations. <ul style="list-style-type: none"> ▪ Status indicator of whether the described item is Online. – This Terminal (On_Line) are terminals that can be communicated with at the selected storage locations. <ul style="list-style-type: none"> ▪ Status indicator of whether the described item is Offline. 	
<p>3.8.1.7. Data Collection & Reporting: Configure – Options tab</p> <p>Crystal Reports Directory – Maps the location for the Crystal Reports [.exe] file.</p> <p>Show Button Style Menu – Displays a big button style menu on the main screen of the Data Collection & Reporting Application.</p> <p>Show File Menu – Displays a Windows® style file menu along the to edge of the screen.</p> <p>Minimize To Tray – Places the Data Collection and Reporting Application into the System Tray so it is active, but hidden.</p> <ul style="list-style-type: none"> – If this is not selected, it is available in the Task Bar. <p> Error Collection – Opens the Error Logging Setup (see following two pages).</p>	

3.6.1.7. Data Collection & Reporting: Configure – Options tab, continued

Definition Window

Error Logging Setup

The **Error Notification Application** receives error conditions (*in the form of the latest Blat.DLL*), from the **Kernel Application**, the **Highway System Application**, and the **Data Collection & Reporting Application**.

The **Error Notification Application** is initiated by the **Highway System Application**.

- It runs indivisibly in a minimized position until it is needed, like a guard dog.
- The application can be configured to search multiple locations for errors, define e-mail recipients and servers and be used to modify/add errors.
- The **User Interface** is always available for configuring or modifying the application settings, and for any maintenance or needed program upgrades.

Each error message can be reported to **up to eight (8) recipients**.

- The configuration fields for each recipient include the following elements.
 - **Mail Server**
 - **Username**
 - **Password**
 - **From**
 - **Subject**
- An additional parameter controls whether a message is displayed when an error is e-mailed.

The **Weigh Kernel Application**, **Highway System User Interface Application**, and the **Data Collection & Reporting Application** each have a list of predefined error conditions that report.

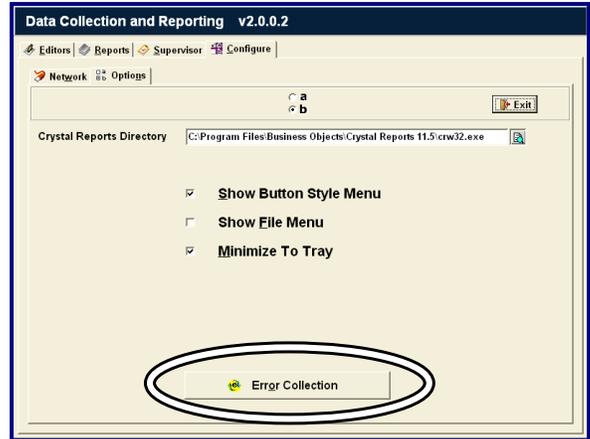
- Default errors can be modified to better define how it is dispersed. i.e. Each error can be enabled/disabled, set to trigger only after a specific interval has passed, filtered (a specific error might contain information about multiple devices that could force the interval to be ignored if filtered). The error text and/or subject can also be changed.
- Error conditions transfer to the **Error Notification Application** through a shared folder and files on the instruments hard drive.
- Each error condition is stored as a single file.
- The file name consists of a description that identifies the error, followed by any additional information specific to the error.

3.6.1.7. Data Collection & Reporting: Configure – Options tab, continued

Generating, Viewing or Editing an Error Message

This program adds a new error possibility to the list of others that are emailed as notifications to the formatted recipients.

1. Press  in the **Data Collection and Reporting / Options** Tab.



2. Press the **View/Edit Errors** button.

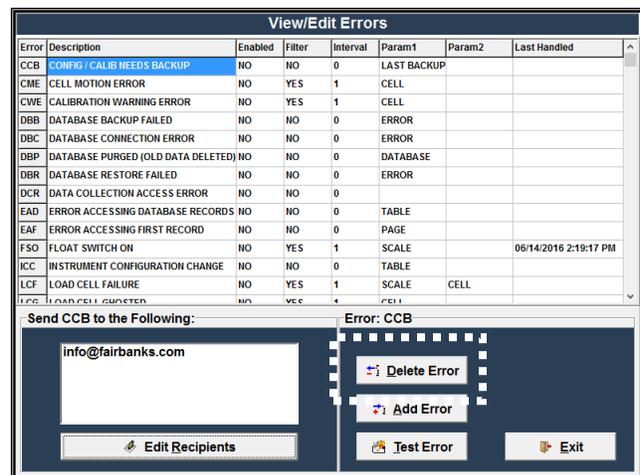


The **View/Edit Errors** window configures the following:

- Delete Error
- Add Error
- Test Error
- Edit Recipients (of notification email)

3.8.1.8. Deleting an Error

1. Highlight the error in the **Description** field.
2. Press .
3. Confirm the deletion when asked in the pop-up window.



Adding an Error

1. Click **Add Error** .
2. In the pop-up window, **“Enter [a] three character code”** for the new error.
 - A new row will generate (in blue) within the spreadsheet window.
3. Enter **YES** or **NO**, or fill in the correct response into each of the fields.

FIELD	DESCRIPTION
Error	Three (3) letter abbreviation for the error.
Description	Text sent in email notification that defines the error.
Enabled	If disabled (“NO”), the error is ignored and not sent.
Filter	If filtered, ignore the error interval if the error contains information about a different device than that found in the previous same error.
Interval	If “0”, the error is sent every time it is found, otherwise the error is sent the first time it occurs and then again at the specified interval should the error persist.
Param1	Defines the information found in the error. Errors contain 0,1 or 2 parameters.
Param2	Defines further the error information found, if two Params are included in the error.
Last Handled	Date and time the error was accessed.
Sent “Error” to the Following	Highlight any recipients to receive the selected error

The screenshot shows the 'View/Edit Errors' window with a table of error records. A callout box points to the 'Enabled' column with the text: *Enter YES or NO, or the correct response.*

Error	Description	Enabled	Filter	Interval	Param1	Param2	Last Handled
PCB	CONFIG / CALIB NEEDS BACKUP	NO	NO	0	LAST BACKUP		
CME	CELL MOTION ERROR	NO	YES	1	CELL		
CWE	CALIBRATION WARNING ERROR	NO	YES	1	CELL		
DBB	DATABASE BACKUP FAILED	NO	NO	0	ERROR		
DBC	DATABASE CONNECTION ERROR	NO	NO	0	ERROR		
DBP	DATABASE PURGED (OLD DATA DELETED)	NO	NO	0	DATABASE		
DBR	DATABASE RESTORE FAILED	NO	NO	0	ERROR		
DCR	DATA COLLECTION ACCESS ERROR	NO	NO	0			
EAD	ERROR ACCESSING DATABASE RECORDS	NO	NO	0	TABLE		
EAF	ERROR ACCESSING FIRST RECORD	NO	NO	0	PAGE		
F50	FLOAT SWITCH ON	NO	YES	1	SCALE		06/14/2016 2:19:17 PM
CC	INSTRUMENT CONFIGURATION CHANGE	NO	NO	0	TABLE		
CF	LOAD CELL FAILURE	NO	YES	1	SCALE	CELL	

The bottom section of the window shows a dialog for adding an error. It includes a field for 'Send CCB to the Following:' with the email 'info@fairbanks.com' and an 'Edit Recipients' button. The 'Error: CCB' section contains buttons for 'Delete Error', 'Add Error' (circled with a dashed border), 'Test Error', and 'Exit'.

3.8.1.9. Edit Notifications

Error Collection: Editing A Recipient

Only the user defined errors can be deleted.

1. Highlight the recipient in the **“Send SCC to the Following:”** field.

2. Press **Edit Recipients**.

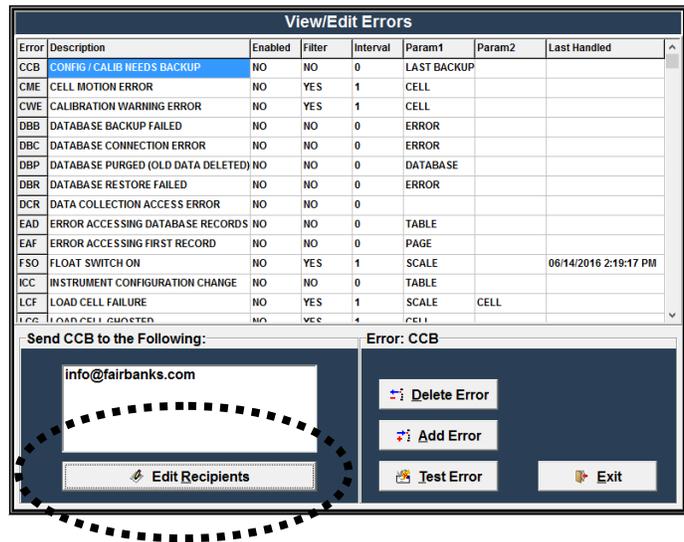
- Can also be accessed by pressing **Error Notifications** using the **Error Collections** buttons.

3. Either highlight the appropriate **Mail Server** for the **Recipient**, or input the necessary information about the **Mail Server** where the email address originates.

- A server must be selected for the recipient to receive the email notification.

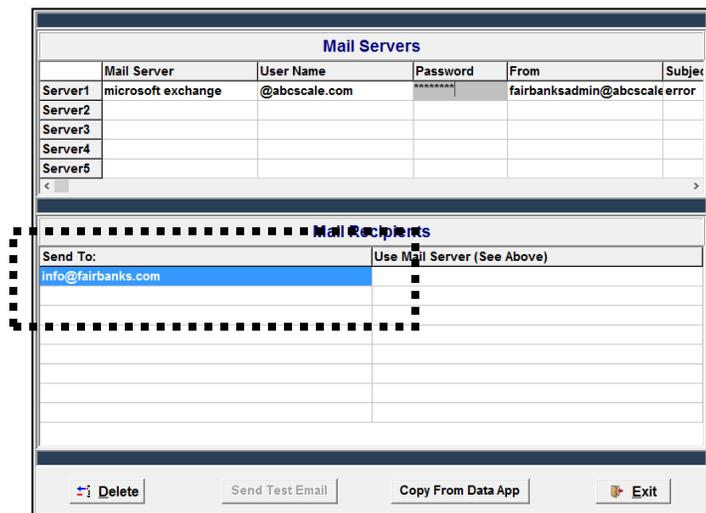
4. In the **“Send To:”** field, enter the recipient’s email address.

5. Press the **Enter** button on the external keyboard.



Error Collection: Testing an Error

Press **Test Error** to send a test email to all the recipients.

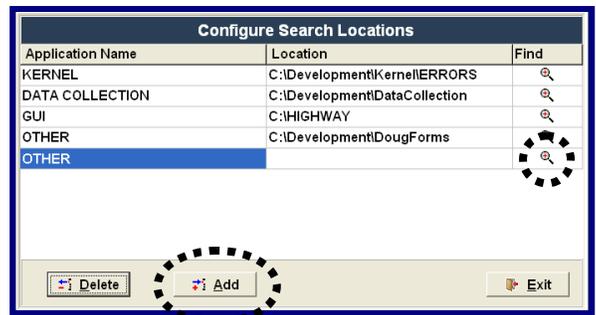


3.8.1.10. Configuring a Search

This configures the location where each of the error messages are stored.

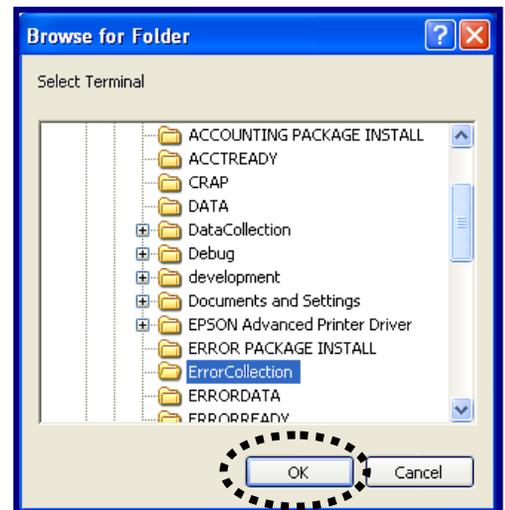
The **Error Notification Application** searches these locations for error conditions to report.

- **KERNEL**
 - **C:\kernel\errors** folder
- **DATA COLLECTION**
 - **C:\datacollection\errors** folder
- **GUI**
 - **C:\FB4000_HighwaySystem\errors** folder



A new **Application Folder** can be generated and used by clicking **Add**, and then pressing

- The new address appears in the **Location** field.
- Press **Add**.
- Press **Exit**.

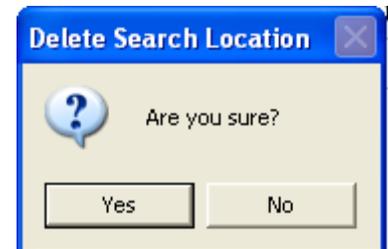


3.8.1.11. Deleting a Search Location

1. To delete a Search Location, highlight the **Application Name**.

2. Press **Delete**.

Press **Yes** to confirm.



3.8.1.12. Options

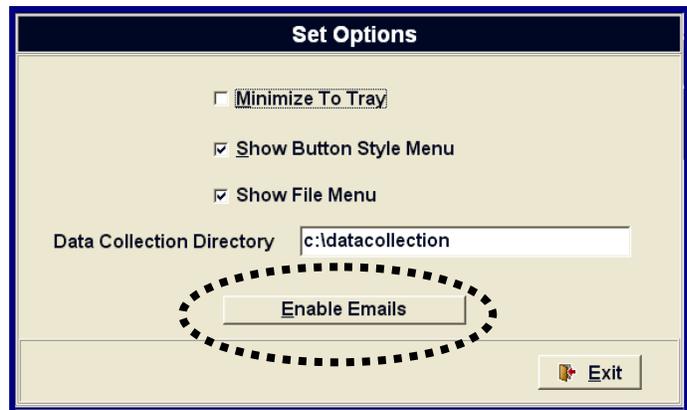
The **Set Options** selection formats the following choices.

- **Minimize To Tray** – The checkbox positions the **Error Collections Window** into the **System Tray** at the bottom of the screen, instead of in the **Task Bar**.
- **Show Button Style Menu** – Buttons appear on **Main Form** to access user functions.
- **Show File Menu** – A **File Menu** appears on **Main Form** to access user functions.
- **Data Collection Directory** – Formats the **Data Collection folder** where the files are placed.



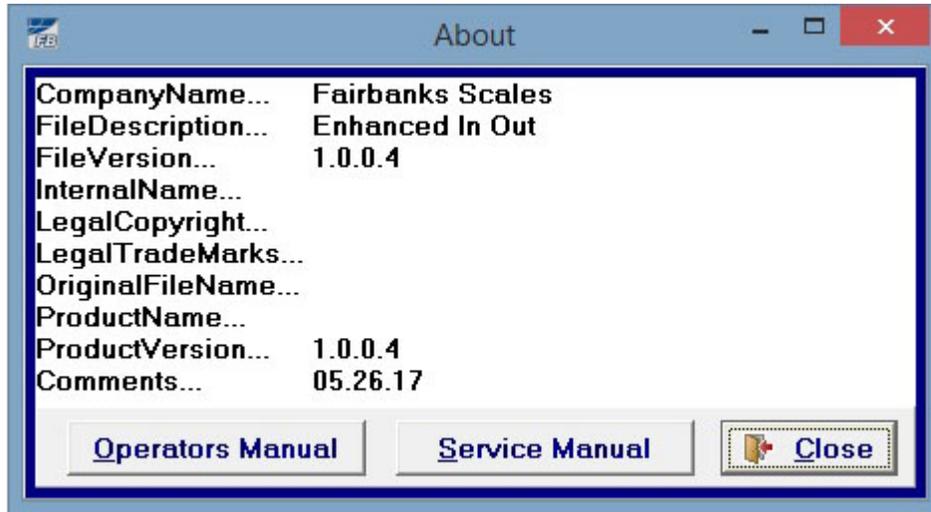
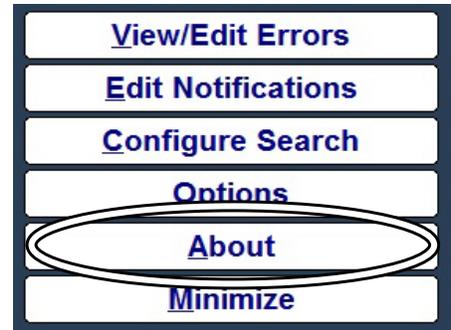
Enable Emails – Allows the **Notification Emails** to transmit.

- After pressing this button, this option disappears.



3.8.1.13. About

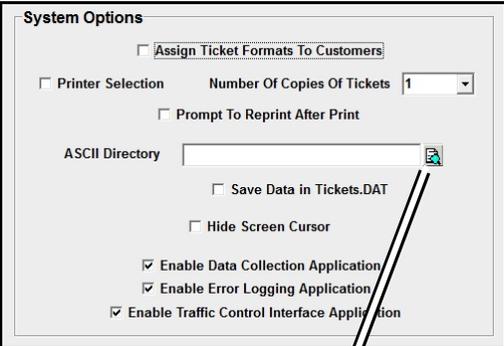
- The **Help** button displays the Program information.
- It is the access to the **Operators Manual** and to the **Service Manual**.



3.8.1.14. Minimize

This minimizes the editing feature to the **Task Bar** behind the **Highway System Application Window**.



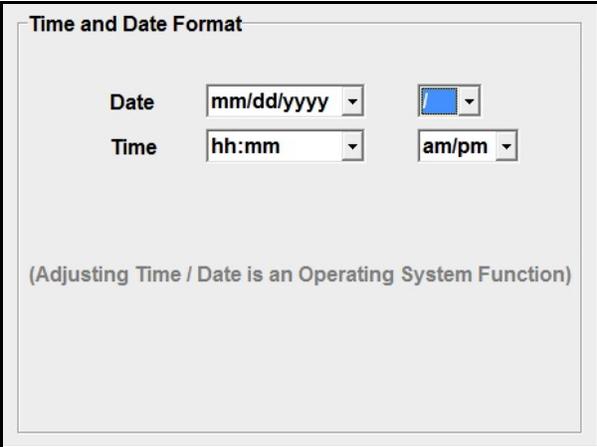
Definition	Window
<p>3.8.2. System Options</p> <p>Check Boxes</p> <ul style="list-style-type: none"> — Assign Ticket Formats to Customers – Allows various ticket formats to be used for different customers. — Printer Selection – Allows for a choice of printers when printing weigh tickets. — Number of Copies of Tickets – Allows for 1 - 5 copies of tickets to be printed for each transaction. — Prompt to Reprint After Print – A message box appears asking if you want to print a duplicate copy of the ticket. <p>ASCII Directory</p> <ul style="list-style-type: none"> — Either enter the File Location, or click  to Browse for [the] Folder. <p>Check Boxes</p> <ul style="list-style-type: none"> — Save Data in Tickets.DAT – Writes information into file. <ul style="list-style-type: none"> • If a directory entry exists, all transaction will be written to files in it using the “Ticket Number”.DAT as the file name. • If Save Data in Ticket.DAT is checked, all transactions are written/appended to that file. — Hide Screen Cursor – Removes cursor from view <ul style="list-style-type: none"> • Used <i>only</i> when the unit has the <i>touch-screen feature</i>. ✓ Default = Enable Data Collection & Reporting Application ✓ Default = Enable Error Logging Application <p style="text-align: center;">★★ Warning! ★★</p> <p>Checking the Hide Screen Cursor box can make computer navigating very cumbersome, and even render it INOPERABLE!</p>	  <p>The 'System Options' window shows the following settings: <input type="checkbox"/> Assign Ticket Formats To Customers; <input type="checkbox"/> Printer Selection; Number Of Copies Of Tickets: 1; <input type="checkbox"/> Prompt To Reprint After Print; ASCII Directory: [empty]; <input type="checkbox"/> Save Data in Tickets.DAT; <input type="checkbox"/> Hide Screen Cursor; <input checked="" type="checkbox"/> Enable Data Collection Application; <input checked="" type="checkbox"/> Enable Error Logging Application; <input checked="" type="checkbox"/> Enable Traffic Control Interface Application.</p> <p>The 'Browse for Folder' window shows a tree view with 'Local Disk (D:)' expanded to show a folder named 'BACKUPS'. An arrow points from the 'Browse for Folder' window to the 'ASCII Directory' field in the 'System Options' window.</p>

The Highway System Application *can* operate without the **Data Collection/Reporting Application**. It can be used to *enter data* and *print tickets*.

- The **DEFAULT_FEES.INI** file controls the **fee values** and the **weightment types that are enabled**.
- The **BLIND_CTR.INI** file stores the **Blind Counter Value**.
 - These files are located in the same folder as the Highway System Application.

By **unchecking** the **Enable Data Collection & Reporting Application** box, functionality is limited in the following ways.

- Transactions are **not stored**.
- No recall of **Product, Customer, or Stored Tare data**.
- **No Void Ticket** functionality.

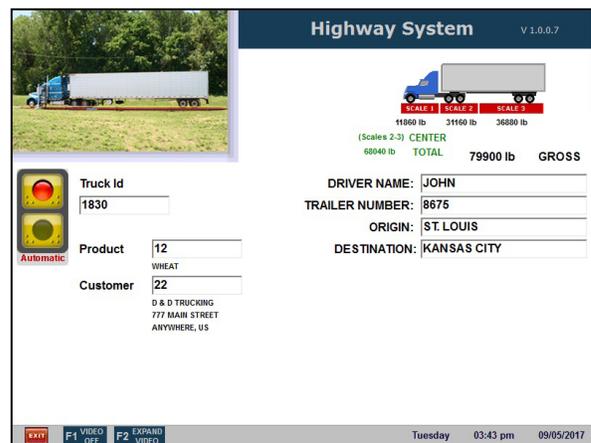
Definition	Window
<p>3.8.3. Time and Date Format</p> <p>Programs the Time and Date.</p> <ul style="list-style-type: none"> - Selects the format of the Time and Date that is displayed on the weight screens and printed on the tickets. - Selects the format of the Time that is shared with a completed transaction. - The format of the Date that is shared with a completed transaction is then tied to the Windows® Short Date Format. <p>✓ Default = mm/dd/yyyy</p>	
<p>3.8.4. About</p> <p>Displays all the current Program Version information.</p> <ul style="list-style-type: none"> - This is especially helpful with software troubleshooting. - The Operators Manual button opens literature from the C-drive without needing a user password. - The Service Manual button opens literature from the C-drive, requiring a user password before opening. 	
<p>3.8.5. Save and Exit</p> <p>Save and Exit closes the Application, saving all the new changes made to the current session.</p> <p>Exit Without Saving closes the Application leaving the changes as they were before the current session.</p>	

3.9. OPERATION STEPS

The **FB4000 Highway System** options include **Weigh** and **Multi-Axle**.

3.9.1. Making a Standard Weighment

- The Scale is set at “00”. If not, press the **ZERO** button.
 - The instrument displays the **Idle/Inactivity Screen**.
 - The traffic light is **GREEN**.
- A truck drives onto the scale. When the weight on the scale exceeds the **Initial Weight Value**, the display switches from the **Idle/Inactivity Screen** to the **Weighment Type** selection screen.
 - The instrument waits for the weight on **Section One** of the scale to reach the **Final Weight** value.
 - The traffic light turns **RED**.
- Press  .
- Edit the fields using a mouse, touch screen or arrows on the external keyboard. In this example the following options are required:
 - TRUCK ID**
 - PRODUCT**
 - CUSTOMER**
 - TRAILER NUMBER**
 - ORIGIN**
 - DESTINATION**



Enter all the Truck's information, then press **ENTER** (external keyboard) to print the ticket.

3.7.1. Making a Standard Weighment, Continued

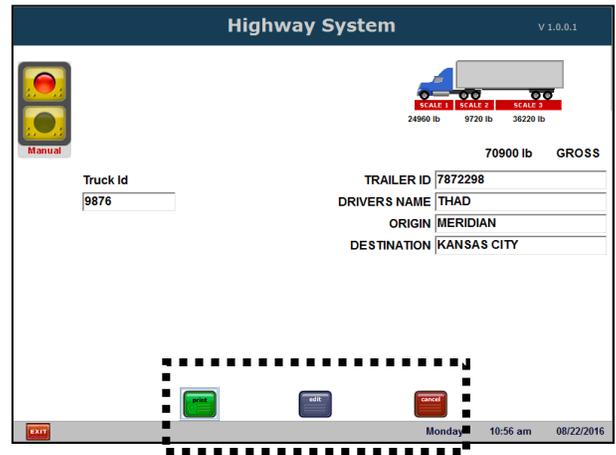
NOTE: Entry fields listed above are only examples. Other input fields may or may not appear, depending on the page format. See [Programmable Entry Prompts](#) to change entry prompts.

If the **Driver** or **Product** input does not match any on the **Data Collection database**, one of the two pop-up windows appear.

5. For inputting the **New Entry**, press .
 - For a new **Product**, see 3.5.20.
 - For a new **Customer**, see 3.5.21.



6. Type in all the needed information on the page, then press the **ENTER** button on the external keyboard.
7. Press **Print** to complete the transaction. A *“Printing Ticket..please wait”* box appears briefly.
 - The ticket prints, and is given to the driver.
 - The **Traffic Light** changes to **green**, and the truck exits.



After entering the truck information and pressing **ENTER**, press the **Print, Edit** or **Cancel** button. *The transaction is complete.*

Press **EDIT** to change **Products** or **Customers**.

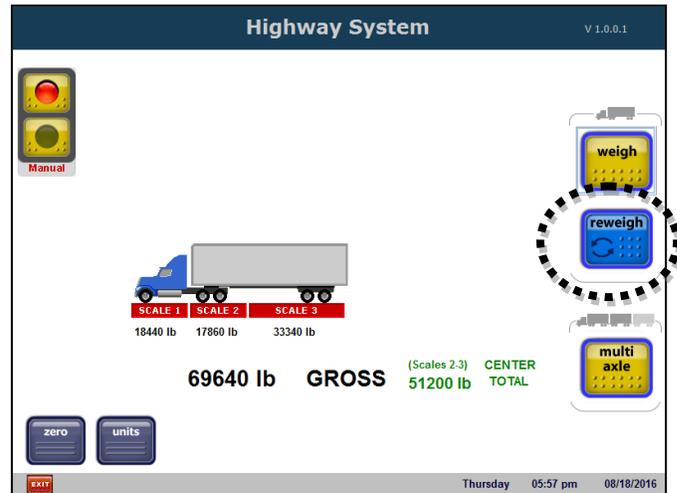
Press **CANCEL** to abort completely.

**** The Standard Weighment transaction is complete. ****

3.9.2. Reweighing a Load

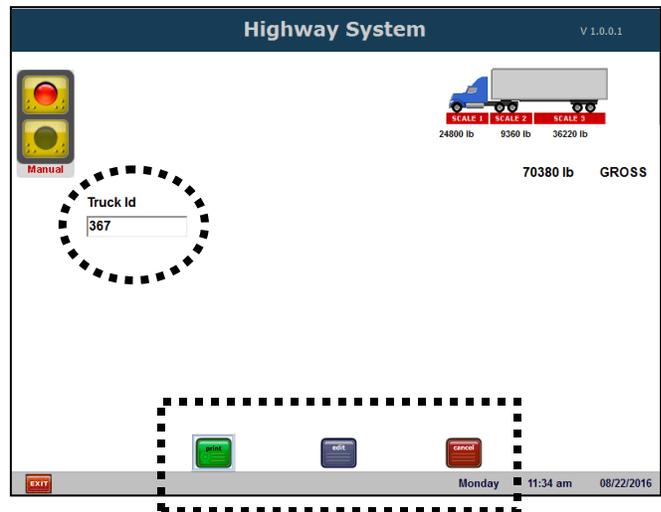
This option is mostly used when a driver needs to readjust the truck's load so the weight is evenly and legally distributed evenly to all the axles.

1. After the truck drives onto the scale, and the Traffic Light is **red**, press **reweigh**.



The **Reweigh** button is mostly used when a driver readjusts the load to redistribute the load.

2. Enter the **Truck ID**.
3. Press **Enter** on the external keyboard.
 - The axle weight amounts will display.
4. Click: **Print**, **Edit** or **Cancel**.



3.9.3. Making a Multi-axle Weighment

1. The Scale is set at "00".

- If not, press .
- The instrument displays the **Idle/Inactivity Screen**.
- The traffic light is **GREEN**.

2. A truck drives onto the scale, and the scale exceeds the **Initial Weight** value.

- The instrument then displays the **Weigh Screen**.
- The instrument waits for the weight on **Section One** of the scale to reach the **Final Weight** value.
- The traffic light turns **RED**.
- The Instrument then displays the **Weighment Type Selection Screen**.

3. Press .

4. Press one of the four buttons:

- **Weigh Double**



- **Reweight Double**

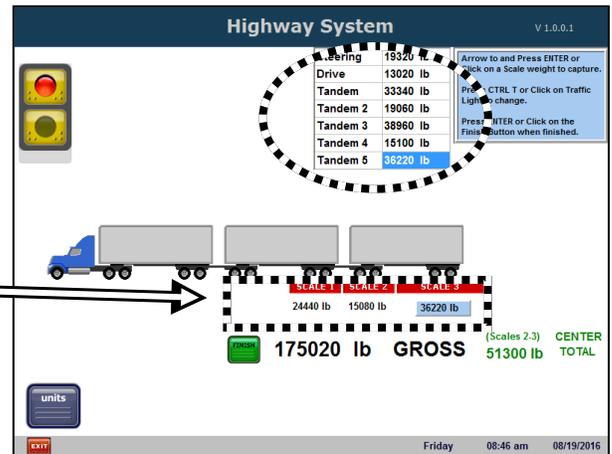
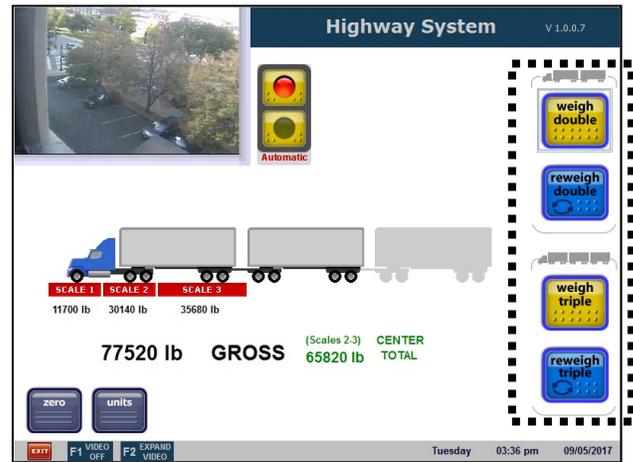
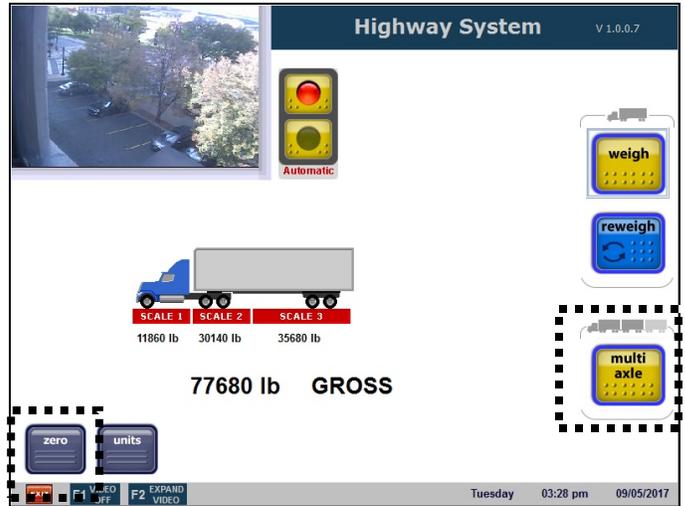
- **Weigh Triple**



- **Reweight Triple**

5. Click on the three or four

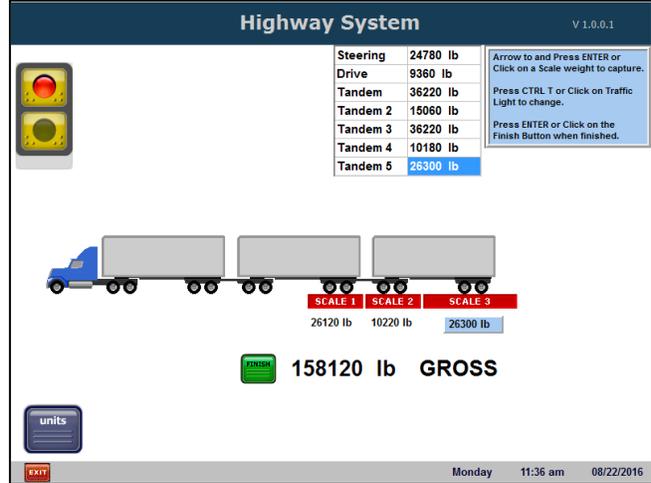
- As the **Scale Weighments** are entered, the amounts for each display in the **Totals window**.
- Once all the scale weighments are all entered, the light turns green and the truck moves forward.



Click on the truck's **Axle Scale Numbers** in the animation. The chart fills with weighments. The cab moves forward

3.7.3. Making a Multi-axle Weighment, Continued

6. Again, click on the next set of **Axle Scale Numbers** that pertain to the truck's weighment.
7. For a **Weigh Triple** or **Reweigh Triple**, continue the process once more, as needed.
 - Up to seven (7) axles can be captured.



NOTE: *If any of the Axle Scale buttons have not yet been pressed before pressing the **Finish** button, this error message appears.*



8. Once complete, press  .
 - If any data fields display, input the needed information.
 - The instrument prompts to **PRINT**, **EDIT**, or **CANCEL**.

9. Press **PRINT** to complete the transaction.
 - The ticket prints, and is given to the driver.
 - The **Traffic Light** changes to green, and the truck exits.



This window display while printing.

The Multi-axle Weighment transaction is complete.

* *The Tag Reader (TransCore RFID Reader – 10-4002-009) is an optional accessory.*

Section 4: Highway Enforcement Mode

4.1. INTRODUCTION

The **Highway Enforcement Mode** determines if a vehicle and its individual axle weights are legal, based on *configurable weight values*.

- This is similar to the **Highway System Mode**, except a ticket is normally *only printed when a violation occurs*, and the gross and/or axle weight is over the legal limit. There is no fee associated with such a weighment.
- When a weighment is initiated, programmable data entry prompts appear, if enabled.
- Following the same cycle of operation, when no violation has occurred will result in a weighment ticket with legal weights.
- It is suited specifically for **Law Enforcement Agencies**, such as the State Highway Patrol.



4.2. FURTHER DESCRIPTION

The **Highway Enforcement Mode** consists of four main applications.

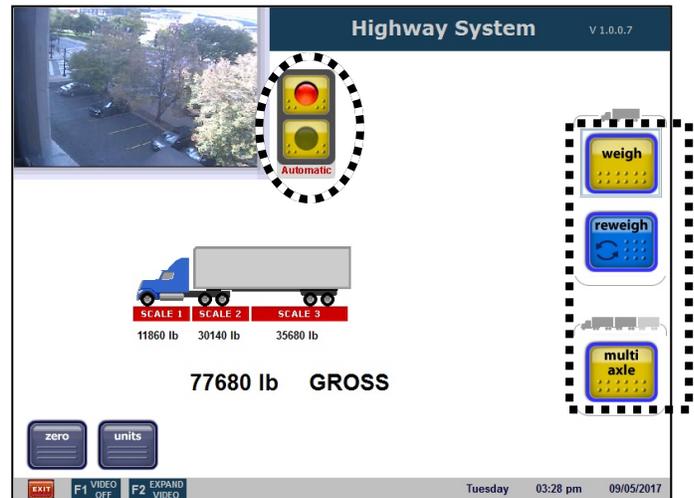
- The **Highway System User Interface Application**
- The **FB4000 Kernel Program**
 - The **FB4000 Kernel Program** controls the setup and calibration of the scales.
 - It also provides weight data to the **Highway System User Interface Application**.
- The **Data Collection & Reporting Application**
 - The **Data Collection & Reporting Application** maintains the database information required by the **Highway System User Interface Application**.
 - This information includes **Completed Transactions, Incomplete Transactions, Stored Tare Weights, Product Information, Customer Information**, and the **Fee Schedule**.
- The **Error Notification Program**.
 - The **Error Notification Application** receives error conditions from the Weigh Kernel application, the Highway System User Interface application, and the **Data Collection & Reporting Application**.
 - It then emails these error condition reports to the designated recipients.

4.3. OPERATION STEPS

4.3.1. Basic Weigh Function

The Instrument displays “00” in the Idle/Inactivity Screen, and the traffic light is **GREEN**.

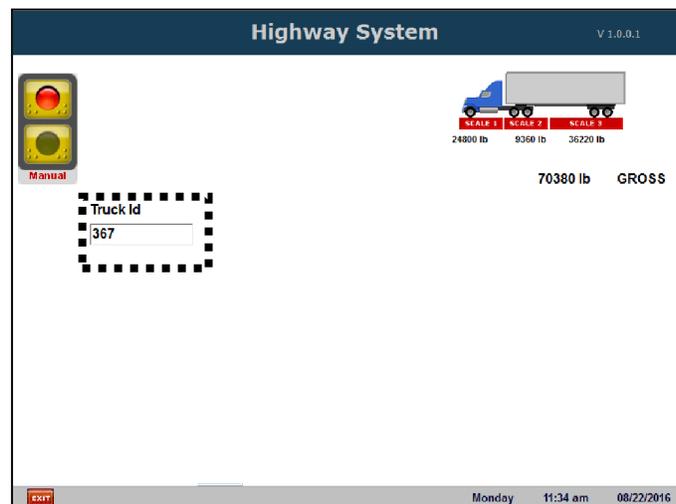
1. Press the **ZERO** button on the **Weigh Screen Keypad**, if needed.
1. Drive the vehicle onto the scale.
 - The instrument then displays the **Weigh Screen**.
 - The **Initial Weight Value** is exceeded.
2. Wait for **Section One (1)** of the scale to reach the **Final Weight Value**.



When traffic light turns **RED**, select **Weigh**, **Reweight**, or **Multi-axle**.

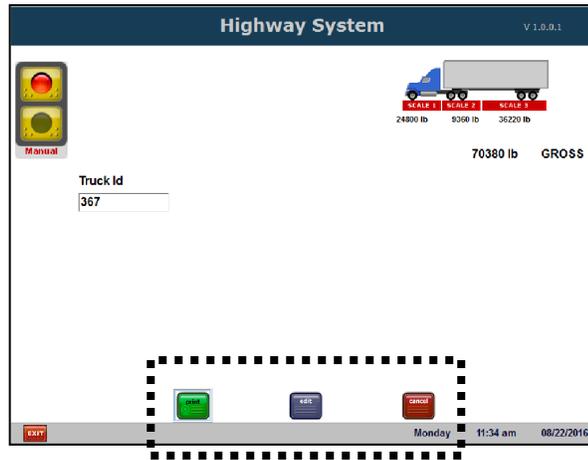
- The traffic light turns **RED**.
 - The **Instrument Type Section Screen** appears.
3. Select either **Weigh**, **Reweight** or **Multi-axle**.

4. Enter the necessary information, such as the **Truck/Loop ID**.
 - Other input fields may appear, depending on the page format.
 - See [Programmable Entry Prompts](#) for formatting the necessary input fields.



4.3.1. Basic Weigh Function, Continued

5. Press the **Enter** button on the external keyboard.
6. When prompted, select either **Print**, **Edit**, or **Cancel**.
 - Pressing **Print** generates a ticket, outputs the weights to the remote display, and if so configured, stores the completed transaction data, and turns the traffic light to **GREEN**.
 - Pressing **Edit** cycles the program through the data entry sequences.
 - Pressing **Cancel** aborts the transaction and displays the **Weighment Type Selection Screen**.



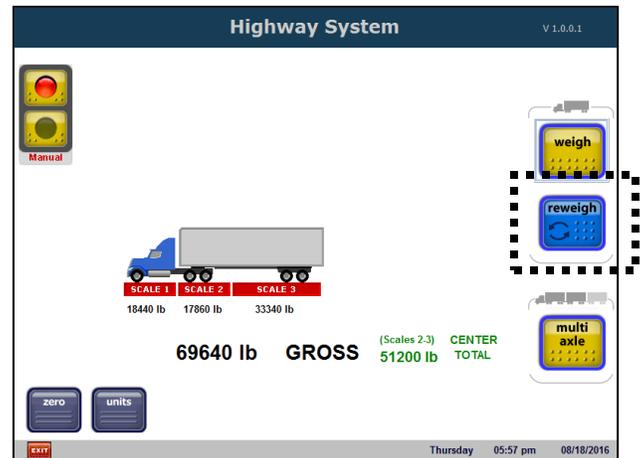
After entering the truck information and pressing **ENTER**, press the **Print**, **Edit** or **Cancel** button. The transaction is complete.

This weighment cycle is complete.

4.3.2. Reweighing a Truck

This option is mostly used when a driver needs to readjust the truck's load so the weight is distributed evenly to all the axles.

1. After the truck drives onto the scale, and the Traffic Light is **red**, press .
2. Enter the **Truck/Loop ID**.
3. Press **Enter** on the external keyboard.
 - The axle weight amounts displays.
4. Select **Print**, **Edit** or **Cancel**, as noted above.



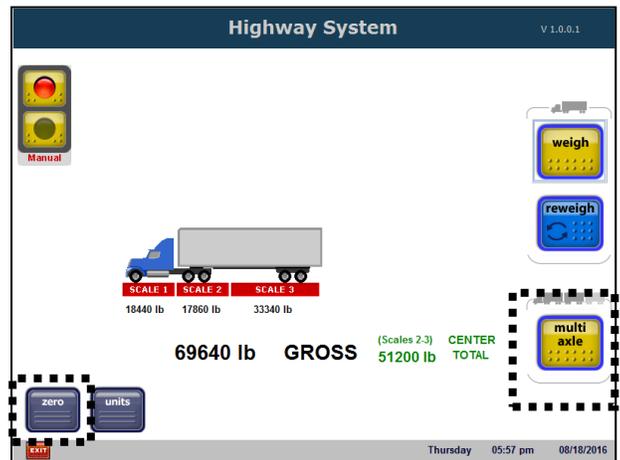
The **Reweigh** button is mostly used when a driver readjusts the load to redistribute the load.

4.3.3. Multi-axle Weighment

The Instrument displays “00” in the Idle/Inactivity Screen, and the traffic light is **GREEN**.

1. Press the **ZERO** button on the **Weigh Screen Keypad**, if needed.
2. Drive the vehicle onto the scale.
 - The **Initial Weight Value** is exceeded.
 - The instrument then displays the **Weigh Screen**.
3. Wait for **Section One (1)** of the scale to reach the **Final Weight Value**.
 - The traffic light turns **RED**.
 - The **Instrument Type Section Screen** appears.

4. Press



5. When **Multi-axle** is selected, the **Axle Selection Screen** displays.

6. Press one of the four buttons:

- **Weigh Double**

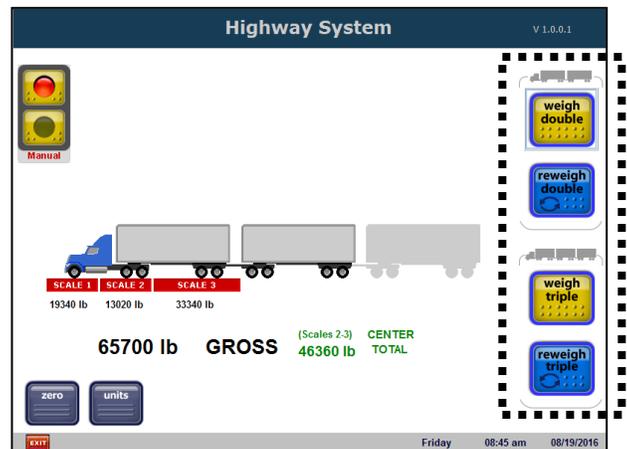


- **Reweigh Double**

- **Weigh Triple**



- **Reweigh Triple**

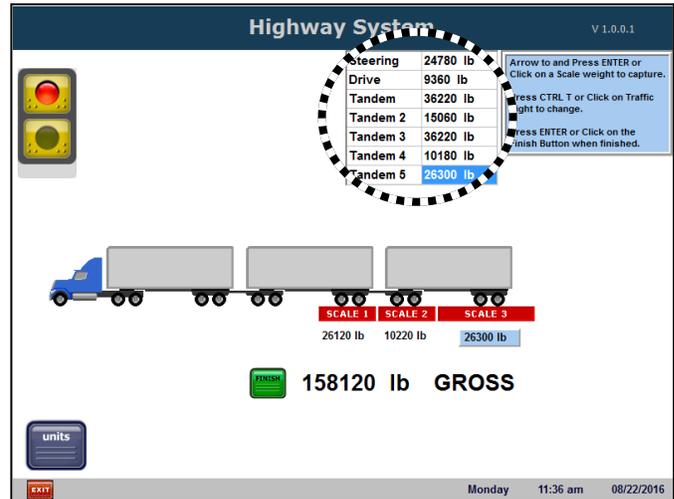


Select the correct **Weight Type** button.

4.3.3. Multi-axle Weighment, Continued

7. Press each of the **Axle Scale Numbers** that pertain to the truck's weighment.

- As the **Scale Weighments** are entered, the amounts for each display in the **Totals window**.
- After all of the first set of axles are entered, the image of the truck automatically moves forward.
- Press each of the back **Axle Scale Numbers** also.
- Up to seven (7) axles can be captured.



8. Once all the scale weighments are all entered, press  .

9. Enter Truck ID and complete and all prompts, Press **ENTER**

*Clicking on the truck's **Axle Scales** in the animation fills the chart with weighments. The cab automatically moves it forward.*

10. When prompted, select either **Print, Edit,** or **Cancel.**

- Pressing **Print** generates a ticket, outputs the weights to the remote display, and if so configured, stores the completed transaction data, and turns the traffic light to **GREEN**.
- Pressing **Edit** cycles the program through the data entry sequences.
- Pressing **Cancel** aborts the transaction and displays the **Weighment Type Selection Screen**.

This weighment cycle is complete.

Section 5: The Data Collection & Reporting Application

5.1. INTRODUCTION

The **Data Collection & Reporting Application** maintains the database information from the **Highway System User Interface Application**.

- **Data Collection & Reporting Application** provides the data that generate reports.
- It is normally minimized on the application window.
- The database is a **MySQL Server 5.0 Application™**.
- Customer created reports are accessible in the **Data Collection/ Reporting Application** with the default reports.

5.2. FURTHER DESCRIPTION

The **Default Reports** include the following:

- **Completed Transactions**
 - **Incomplete Transactions**
 - **Stored Tares**
 - **Product Information**
 - **Customer Information**
 - **Audit Report**
-
- Database Information is automatically maintained, but can also be manually adjusted.
 - The **Completed Transaction Information** can be maintained automatically using a **“Delete Data Older Than...”** setting.
 - The **Incomplete Transaction Information** is maintained automatically, but incorrect entries can also be deleted manually.
 - The **Stored Tare Information** can be maintained automatically with the use of the **Tare Expiration Days**. Incorrect or unwanted tares can also be manually deleted.
 - The **Product and Customer Information** is maintained using the editors accessed from the **Highway System User Interface Application**. The accumulated totals can be manually reset and incorrect or unwanted entries can be manually deleted.
 - The **Audit Information** is maintained automatically, but the accumulated totals can also be manually reset.

5.2. Further Description, Continued

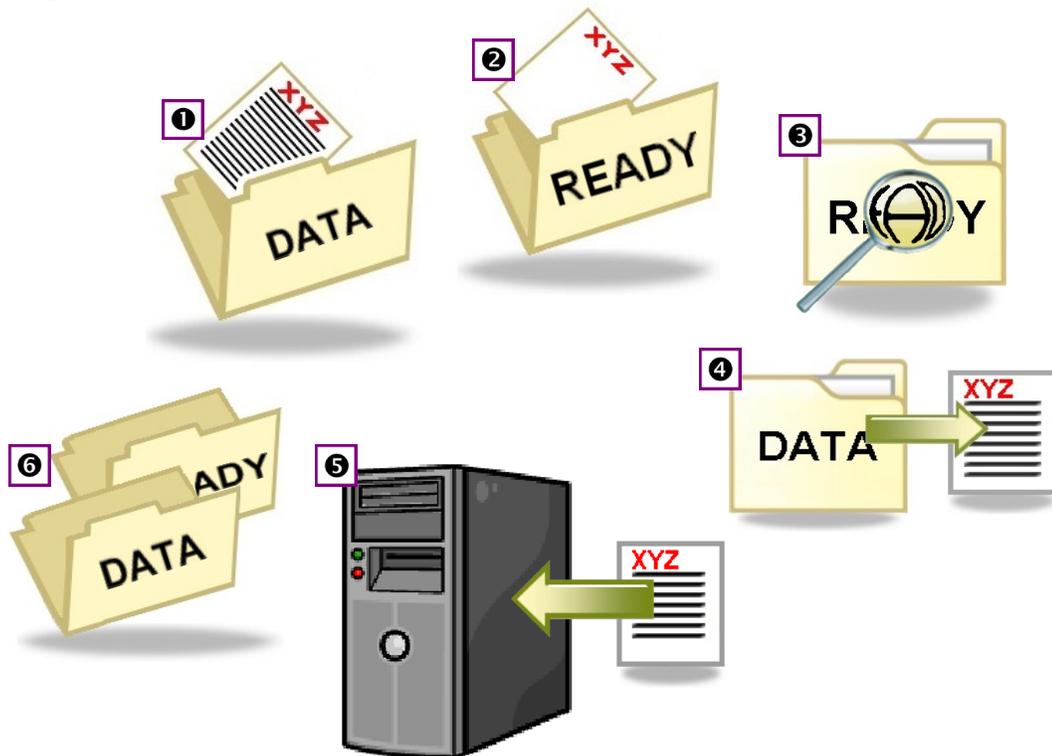
- For **multiple terminal installations**, a redundant storage model is used.
 - Each terminal has a **complete copy of the data**.
 - Database information that needs to be copied to the other terminals is placed in **“Pickup”** directories specific to each terminal.
 - The **receiving terminals** control reading and deleting the information from the originating terminal.
 - If a network connection goes down, the database information to be copied to the other terminals accumulates on the **originating terminal** until the network connection is restored. Afterwards, the **“Pickup”** data is processed, and then the local database(s) is updated.
 - In the event of an unrecoverable error or a terminal being added, it is possible to designate one of the terminal’s database information to be the **“Master Copy”**. Then the information to another terminal or terminals.

5.3. FILE SHARING PROCESS

1. The operator inputs data using the **Highway System Application**, which writes that into a file in the **“Data”** folder.
2. Once it is completely finished, the **Highway System Application** writes an empty file with the same name in the **“Ready”** folder.
3. The **Data Collection & Reporting Application** sees the data file written in the **“Ready”** folder.
4. The **Data Collection & Reporting Application** gets the data from the **“Data”** folder.
5. The data is processed, and then stored on the *instrument’s hard drive* in the following file.

✓ **C:\\Data Collection\\DATA COLLECTION.GDB**

6. The **Data Collection & Reporting Application** deletes the files from the **“Ready”** and the **“Data”** folders.



NOTE: All numbers on the images correlate with the steps above.

SECTION 6: INPUTS/OUTPUTS

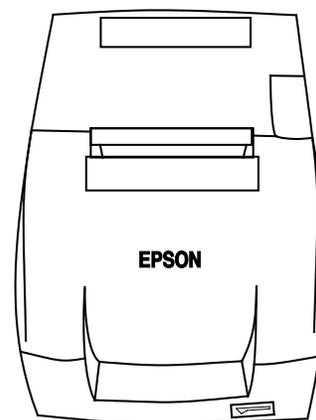
6.1. PRINTERS

The FB4000 instrument has three (3) standard RS232 Output Ports and one USB port.

6.1.1. TM-U220 Tape Printer

- Uses **SERIAL** communication.
- Use cable **25932**.

BAUD	9600
PARITY	No
DATA BITS	8
STOP BIT	1



WIRING

Cable **25932** Wiring for COM 1-3

DB-9 INSTRUMENT	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
2	RxD	BR	2	TxD
3	TxD	R	3	RxD
4	DRT	O	6	DSR
5	SG	Y	7	SG
6	DSR	G	20	DTR
7	RTS	BL	5	CTS
8	CTS	BK	4	RTS

Cable **25932** Wiring for Serial Expansion Module*

RS232 PORT 1: COM7 XX	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
TB1a-2	RxD	BR	2	TxD
TB1a-3	TxD	R	3	RxD
TB1a-4	DRT	O	6	DSR
TB1a-5	SG	Y	7	SG
TB1b-6	DSR	G	20	DTR
TB1b-7	RTS	BL	5	CTS
TB1b-8	CTS	BK	4	RTS

* Must remove the 9-pin connector.

6.1.1. TM-U220 Tape Printer, Continued

DIP SWITCH 1 (Serial Interface)

SWITCH	FUNCTION	ON	OFF
1	Data receive error	Ignored	Prints “?”
2	Receive buffer capacity	40 bytes	4KB
3	Handshaking	XON/XOFF	DTR/DSR
4	Work length	7 bits	8 bits
5	Parity check	Yes	No
6	Parity selection	Even	Odd
7	Transmission speed	4800 bps	9600 bps
8	BUSY condition	Receive buffer full	Receive buffer full or Offline

Default settings are in bold.

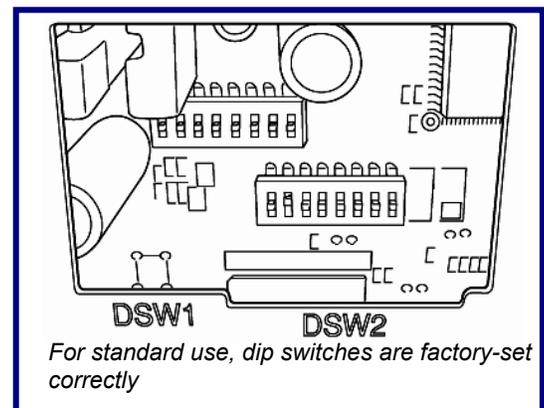
DIP SWITCH 2 (Serial Interface)

SWITCH	FUNCTION	ON	OFF
1	Print Column	42/35	40/33
* 2	For internal use only (auto-cutter) (do not change)	Enabled	Disabled
3	Pin 6 reset signal	Used	Not used
4	Pin 25 reset signal	Used	Not used
5	Undefined	--	--
6	Internal use only (flash memory rewriting) (Do not change)	Enabled	Disabled
7	Undefined	--	--
8	Serial Interface section	Memory Switch	Dip Switch

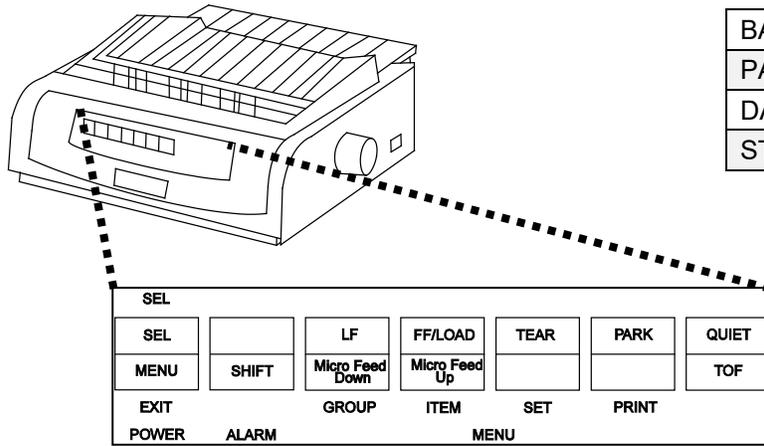
Default settings are in bold.

* The TM-U220 Tape Printer DAT (dk gray case, w/cutter) will have DSW2 switch #2 set to ON. TM-U220 Tape Printer (white case, no cutter) will have DSW2 switch #2 set to OFF. All other switch settings are identical between printers.

Access the **Dip Switches** by unfastening the screw and removing the cover plate, found on the bottom of the printer.



6.1.2. OKI ML420 Report Printer



BAUD	9600
PARITY	None
DATA BITS	8
STOP BIT	1

- Use cable **25932** or **14807**
- For **USB** input, use cable **29827C**

CABLE 26041 WIRING for Serial Expansion Module *

RS232 Port 1: COM XX	RS232 Port 2: COM XX	RS232 Port 3: COM XX	Description	DB-25 Printer
TB1a-3	TB1b-5	TB1d-2	Transmit (Tx)	3
TB1a-2	TB1c-1	TB1d-3	Receive (Rx)	2
TB1a-5	TB1c-2	TB1d-4	Ground (GND)	7

- **All** printer settings apply to both the **Serial** and **USB** models.

Cable **25932** Wiring for Serial Expansion Module*

RS232 PORT 1: COM7 XX	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
TB1a-2	RxD	BR	2	TxD
TB1a-3	TxD	R	3	RxD
TB1a-4	DRT	O	6	DSR
TB1a-5	SG	Y	7	SG
TB1b-6	DSR	G	20	DTR
TB1b-7	RTS	BL	5	CTS
TB1b-8	CTS	BK	4	RTS

* Must remove the 9-pin connector.

6.1.2. OKI ML420 Report Printer, Continued

NOTE: The **Okidata ML420** is used as both a Report Printer and a Ticket Printer.

- As a **USB Printer**, there is no need to adjust the Switch Settings.

Follow these steps to change **MENU** settings on the Printer.

1. To enter **MENU MODE**, press and hold the **SHIFT** key while pressing the **SELECT** key.
 - The “**MENU**” legend will be illuminated.
2. With the printer in the **MENU MODE**, press the **PRINT** key
 - This prints all the programming options in the **MENU MODE**, as well as the current default settings.
 - It is recommended to use tractor fed paper.
 - The printed menu selections are different for each Emulation Mode.
3. Press the **GROUP** key to select the relevant **Group** that needs to be changed.
4. Press the **ITEM** key to select the relevant **Item** within the selected group.
5. Press the **SET** key to cycle through all the **Settings** available
6. Press and hold the **SHIFT** + **SELECT** keys to exit the **MENU MODE**.

NOTE: Turning off the printer before exiting the **MENU MODE** will lose any changes made.

Change Printer to These Settings

PRINTER SETTINGS

GROUP (Press LINE FEED to change)	ITEM (Press FORM FEED to change)	SET (Press TOF SET to change)
---	--	--

Printer Control	Emulation Mode	IBM PPR
Font	Print Mode	Utility
Font	DRAFT Mode	HSD
Font	Pitch	10 CPI
Font	Proportional Spacing	No
Font	Style	Normal
Font	Size	Single



6.1.2. OKI ML420 Report Printer, Continued

Symbol Sets	Character Set	Set 1
Symbol Sets	Language Set	American
Symbol Sets	Zero Character	Slashed
Symbol Sets	Code Page	USA

GROUP (Press LINE FEED to change)	ITEM (Press FORM FEED to change)	SET (Press TOF SET to change)
---	--	---

Printer Control	Emulation Mode	IBM PPR
Rear Feed	Line Spacing	6 LPI
Rear Feed	Form Tear-off	Off
Rear Feed	Skip Over Perforation	No
Rear Feed	Page Length	11"
Bottom Feed	Line Spacing	6 LPI
Bottom Feed	Form Tear-off	Off
Bottom Feed	Skip Over Perforation	No
Bottom Feed	Page Length	11"
Top Feed	Line Spacing	6 LPI
Top Feed	Form Tear-off	Off
Top Feed	Skip Over Perforation	No
Top Feed	Page Length	11"
Set-Up	Graphics	Bi-directional
Set-Up	Receive Buffer Size	64K
Set-Up	Paper Out Override	No
Set-Up	Print Registration	0
Set-Up	Operator Panel Function	Full Operation
Set-Up	Reset Inhibit	No
Set-Up	Print Suppress Effective	Yes
Set-Up	Auto LF	No
Set-Up	Auto Select	No
Set-Up	SI Select Pitch (10CP)	17.1 CPI
Set-Up	SI Select Pitch (12CPI)	12 CPI
Set-Up	Time Out Print	Valid
Set-Up	Auto Select	No
Set-Up	Centering Position	DEFAULT
Set-Up	ESC SI Pitch	17.1 CPI
Set-Up	Power Saving	Disable
Set-Up	Power Save Time	5 Min
Parallel I/F	I-Prime	Buffer Print
Parallel I/F	Pin 18	+5v
Parallel I/F	Bi-Direction	Enable

6.1.2. OKI ML420 Report Printer, Continued

GROUP (Press **LINE FEED** to change) **ITEM** (Press **FORM FEED** to change) **SET** (Press **TOF SET** to change)

Printer Control	Emulation Mode	IBM PPR
Serial I/F	Parity	None
Serial I/F	Serial Data 7/8 Bits	8 Bits
Serial I/F	Protocol	X-On/X-Off
Serial I/F	Diagnostic Test	No
Serial I/F	Busy Line	SSD-
Serial I/F	Baud Rate	9600 BPS
Serial I/F	DSR Signal	Invalid
Serial I/F	DTR Signal	Ready on Pwr up
Serial I/F	Busy Time	200 ms

6.1.3. TM-U590 Ticket Printer

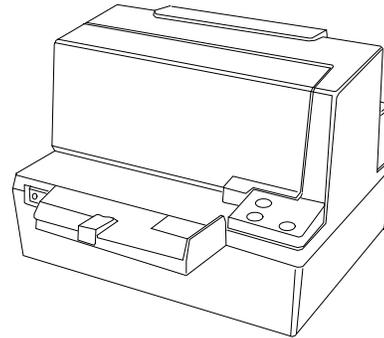
- Use cable **25932**.

BAUD	9600
PARITY	No
DATA BITS	8
STOP BIT	1

Set the printer **dip switches** as listed below.

DSW 1: 1, 3, and 7 = **ON** only.

DSW 2: All Switches = **OFF**



Cable **25932** Wiring for COM 1-3

DB-9 INSTRUMENT	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
2	RxD	BR	2	TxD
3	TxD	R	3	RxD
4	DRT	O	6	DSR
5	SG	Y	7	SG
6	DSR	G	20	DTR
7	RTS	BL	5	CTS
8	CTS	BK	4	RTS

Cable 25932 Wiring for Serial Expansion Module*

RS232 PORT 1: COM7 XX	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
TB1a-2	RxD	BR	2	TxD
TB1a-3	TxD	R	3	RxD
TB1a-4	DRT	O	6	DSR
TB1a-5	SG	Y	7	SG
TB1b-6	DSR	G	20	DTR
TB1b-7	RTS	BL	5	CTS
TB1b-8	CTS	BK	4	RTS

* Must remove the 9-pin connector.

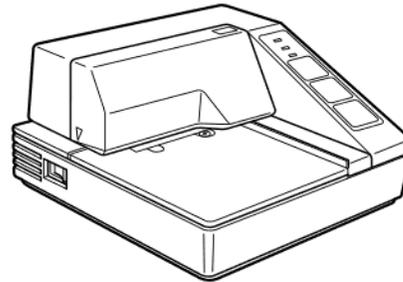
6.1.4. TM-U295 Ticket Printer

- Use cable **25932**.

BAUD	9600
PARITY	No
DATA BITS	8
STOP BIT	1

Set the printer **dip switches** as listed below.

- **SW1:** 1 and 3 = **ON**
- Remainder = **OFF**


Cable 25932 Wiring for COM 1-3

DB-9 INSTRUMENT	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
2	RxD	BR	2	TxD
3	TxD	R	3	RxD
4	DRT	O	6	DSR
5	SG	Y	7	SG
6	DSR	G	20	DTR
7	RTS	BL	5	CTS
8	CTS	BK	4	RTS

Cable 25932 Wiring for Serial Expansion Module*

RS232 PORT 1: COM7 XX	DESCRIPTION	WIRE COLOR	DB-25 PRINTER	DESCRIPTION
TB1a-2	RxD	BR	2	TxD
TB1a-3	TxD	R	3	RxD
TB1a-4	DRT	O	6	DSR
TB1a-5	SG	Y	7	SG
TB1b-6	DSR	G	20	DTR
TB1b-7	RTS	BL	5	CTS
TB1b-8	CTS	BK	4	RTS

* Must remove the 9-pin connector.

6.2. FORMATTING TICKETS

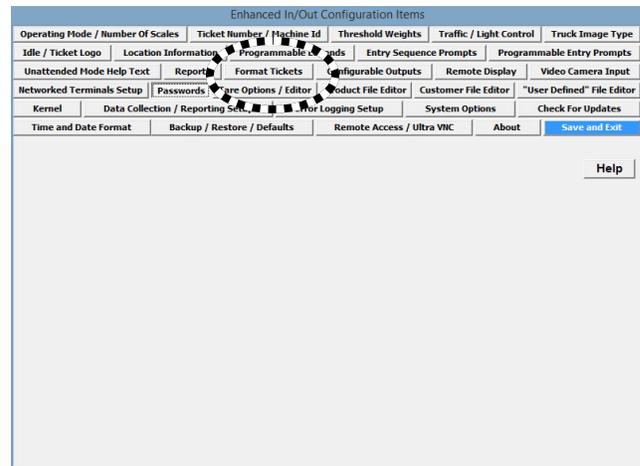
Follow these steps to access the **Format Scale Tickets** window.

1. From the **Main Weigh Window**, press the **Home** button on the external keyboard.



Pressing the **Home** button accesses the **Main Configuration**

2. Press the **Format Tickets** tab.



Select the correct **printer**.

3. Select the correct **ticket format**.

The complete ticket formatting procedure is outlined in this section.



6.2.1. Ticket Layout

The **Ticket Layout Screen** is comprised of a grid with all the current page default elements on it.

- ✓ **Default = Eight inches (8”) wide by eleven inches (11”) long**
 - Size of the page can be altered, as described on the following pages.
 - The ticket is referenced from the **top left corner** for normal printing.
 - Each major grid line is marked by a numeric value representing **an inch**.
 - Each major grid block is comprised of **16 smaller grid lines**, both horizontally and vertically.
 - This allows the data to be located to the nearest **sixteenth of an inch**.
 - The actual data items to be printed are identified with **greater than (>)** and **less than (<) brackets**.

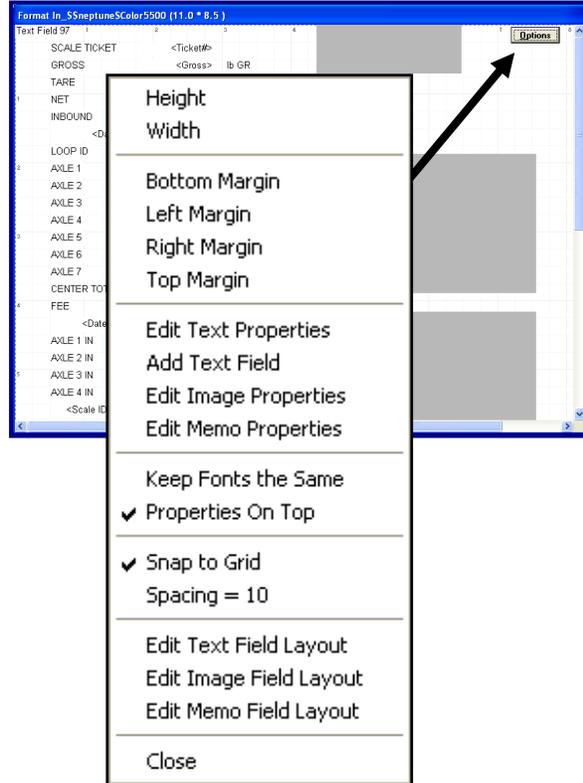
Example

<Gross> represents the actual **Gross Weight Value** to be printed.

- Each item within these brackets, **< >**, prints the actual data.
- The other items without the brackets are simply text items or legends for the data items.

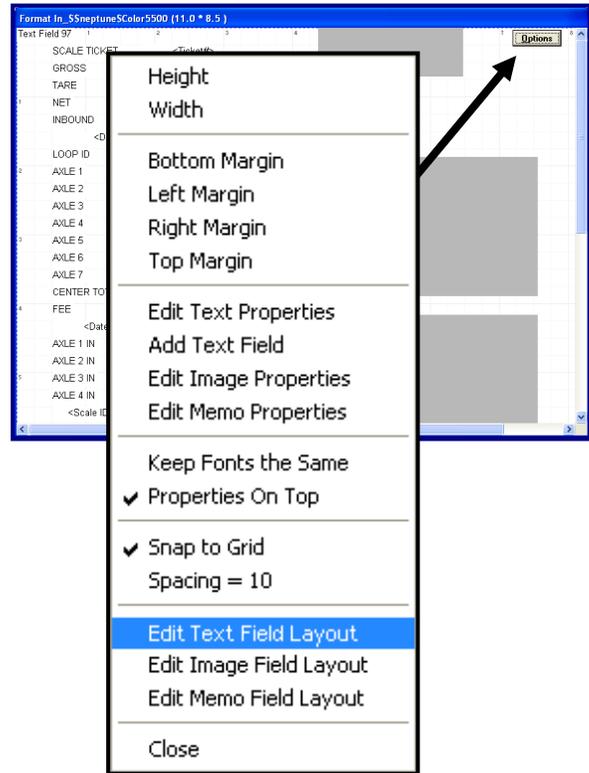
6.2.2. Options Button

Note: The 420 serial printer requires the 520 driver to print tickets that are less than 11 inches in height.



Window Name	Description
Options Button	<ul style="list-style-type: none"> • Height – Ticket height. • Width – Ticket width.
	<ul style="list-style-type: none"> • Bottom Margin – Edits the field distance from the bottom. • Left Margin – Edits the field distance from the left. • Right Margin – Edits the field distance from the right. • Top Margin – Edits the field distance from the top.
	<ul style="list-style-type: none"> • Edit Text Properties – Opens the Add/Change Text Properties window. • Add Text Field – Inserts a new text field in the next available numbered position. • Edit Image Properties – Alters the Image Size and/or its placement. • Edit Memo Properties – Alters the Text Properties (i.e. Font and Paragraph Properties, etc.) and/or its placement.
	<ul style="list-style-type: none"> • Keep Fonts the Same – The font formats remain identical. • Properties On Top – Places the Add/ Change Text Properties on top of the Ticket Layout screen.
	<ul style="list-style-type: none"> • Snap to Grid – Causes the data item being moved to align itself to the nearest grid line position • Spacing = 10 – Opens the Enter Grid Spacing window. <ul style="list-style-type: none"> – Grid spacing values range from two (2) to twenty (20).

6.2.2. Options Button, Continued



Window Name	Description
	<ul style="list-style-type: none"> • Edit Text Field Layout – Manually changes the location, size and properties of each field in the Ticket Layout screen. • Edit Image Field Layout – Manually changes the location and size of each field in the Ticket Layout screen. • Edit Memo Field Layout – Manually changes the location and size of each field in the Ticket Layout screen. • Close – Closes the Ticket Layout screen.

Field	Text	Top	Left	Height	Width
SCALE TICKET	SCALE TICKET	24	50	20	95
<TICKET NO>	<Ticket#>	24	175	20	100
GROSS LABEL	GROSS	48	50	20	51
<GROSS WT>	<Gross>	48	175	20	100
<GROSS UNITS>	lb GR	48	295	20	37
TARE LABEL	TARE	72	50	20	38
<TARE WT>	<Tare >	72	175	20	100
<TARE UNITS>	lb TA	72	295	20	34
NET LABEL	NET	96	50	20	29
<NET WT>	< Net >	96	175	20	100
<NET UNITS>	lb NT	96	295	20	34
INBOUND LABEL	INBOUND	120	50	20	62
<INBOUND WT>	<Inbound>	120	175	20	100

Image Name	Top	Left	Height	Width
Image Field 1... Logo Image	-30	420	148	202
Image Field 2... Camera 1 Image	180	430	194	296
Image Field 3... Camera 2 Image	400	430	194	296

Memo Name	Top	Left	Height	Width
Memo Field 1... Legal Limits Block	610	410	150	335

The **Edit Text Field Layout**, **Ticket Image Field Layout**, and the **Ticket Memo Field Layout** manually change location, size and properties of the ticket fields, and is great for minute adjustments.

6.3. FORMATTING A TICKET

Formats the Text within a ticket.

- Access the **ADD/CHANGE TEXT Properties** window by right-clicking on any data item, or by pressing the **Options** button and selecting **Edit Text** properties.
- Properties for each field are individually set.
- There is a maximum of **one hundred-twenty (120)** report fields available for each ticket.
 - *The first ninety-six (96) report fields are pre-defined.*

Field or button	Descriptions
Text Input Field	Enters or edits the text to describe this Data Field Heading .
“Ticket Field XXX... <’Field Descriptor’>”	Identifies which Data Field is being added or edited.
Visible	Check box that makes this Data Field visible on the screen , and includes it when printing.
Auto Size	Makes the image size on the ticket the actual size of the image file. The Height and Width properties are grayed-out.
Top and Left	Places the Data Field into its position, according to the top and left edges of the window. ✓ 97 pixels = ~1”

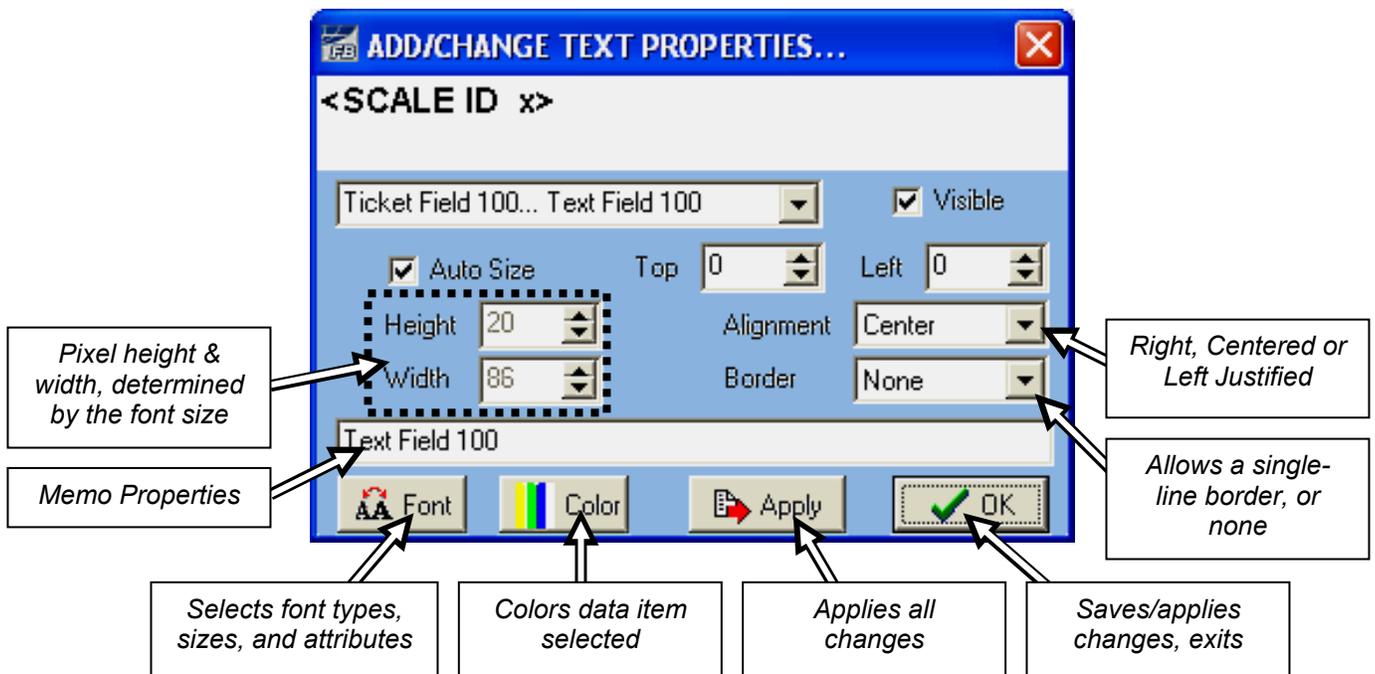
The screenshot shows the 'ADD/CHANGE TEXT PROPERTIES...' dialog box. It features a title bar with the 'FAIRBANKS SCALES' logo and a close button. The main area contains a dropdown menu for selecting a field (currently showing 'Ticket Field 100... Text Field 100'), a 'visible' checkbox, an 'Auto Size' checkbox, and input fields for 'Top' and 'Left' placement (both set to 0). Below these are fields for 'Height' (20), 'Width' (86), 'Alignment' (Center), and 'Border' (None). At the bottom, there are buttons for 'Font', 'Color', 'Apply', and 'OK'. A dashed box highlights the 'Top' and 'Left' input fields.

Callouts provide the following information:

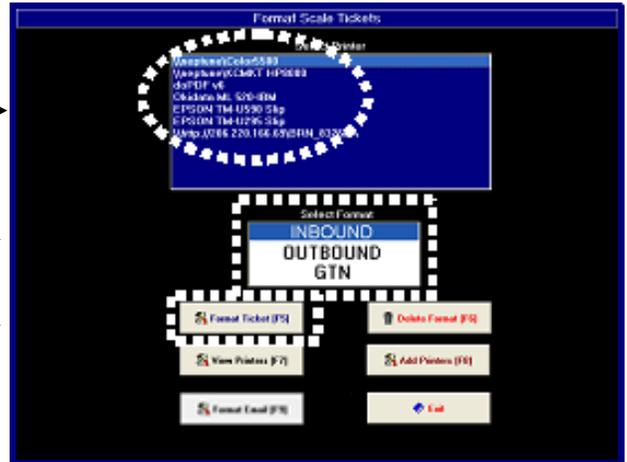
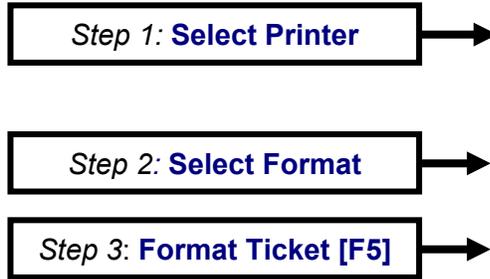
- Field to be added or changed:** Points to the dropdown menu.
- Changes field item:** Points to the dropdown menu.
- Allows a field to grow as needed:** Points to the 'Auto Size' checkbox.
- Makes item visible on screen, and allows printing:** Points to the 'visible' checkbox.
- Data field placement value from top or left; 97 pixels = ~1”:** Points to the 'Top' and 'Left' input fields.

6.3. Formatting a Ticket, Continued

Field or button	Descriptions
Height and Weight	Sets the pixel size of each Data Field. This is automatically determined by the font size, but can be adjusted manually using these settings.
Alignment	Places the image within the Height and Width Values , if the image size is smaller. Settings include Right, Centered* , or Left Justified .
Border	Allows a Single-line border to frame the Data Field, or None .
Memo Properties	Adds additional descriptive text to the Data Field.
Font	Selects the font type, size, and attributes .
Color	Colors the text within the Data Field.
Apply	Applies the changes to the Data Field without saving, to view how it appears onscreen.
OK	Saves and applies the changes , then exits from that Data Field.



6.3.1. Adding a New Ticket Format



1. From the **Main Weigh Window**, press the **Home** button on the external keyboard.

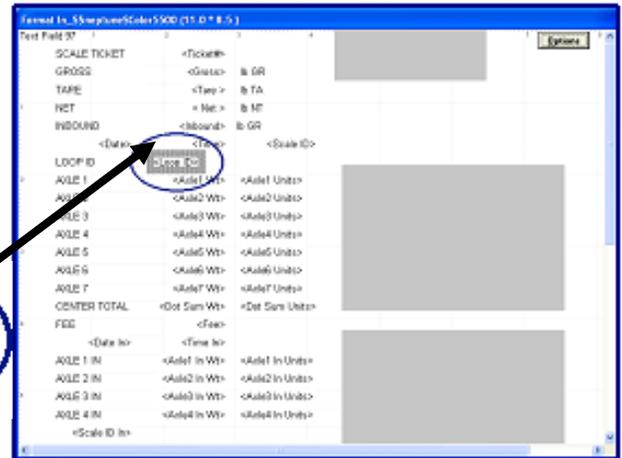
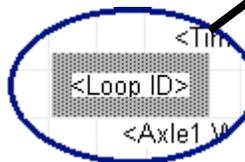
2. Press the **Format Tickets** tab.

3. Select the **Printer**.

4. Select the Format.

- **Inbound**
- **Outbound**
- **GTN**

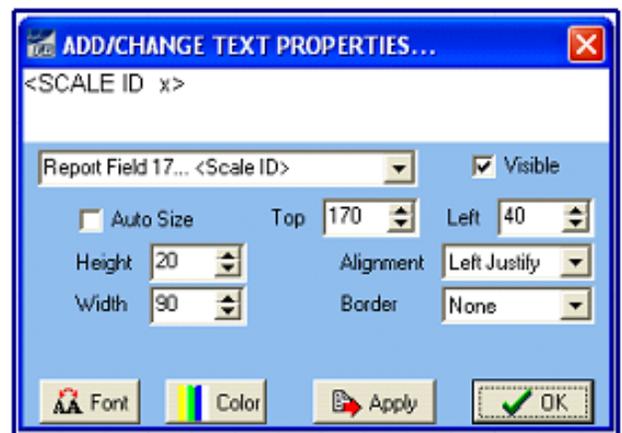
5. Press the **Format Ticket [F5]** button.



- A basic, default ticket template appears, which can be adjusted to fit the business' specific needs.

6. Adjust the placement of a current field by left-click-holding, then dragging it to its new location.

- The **Add/Change Text Properties...** window opens once the mouse button releases.



7. Adjust the field properties to fit the necessary ticket format.

8. Click to view the edits.

9. Once all edits are correct, click to save them.

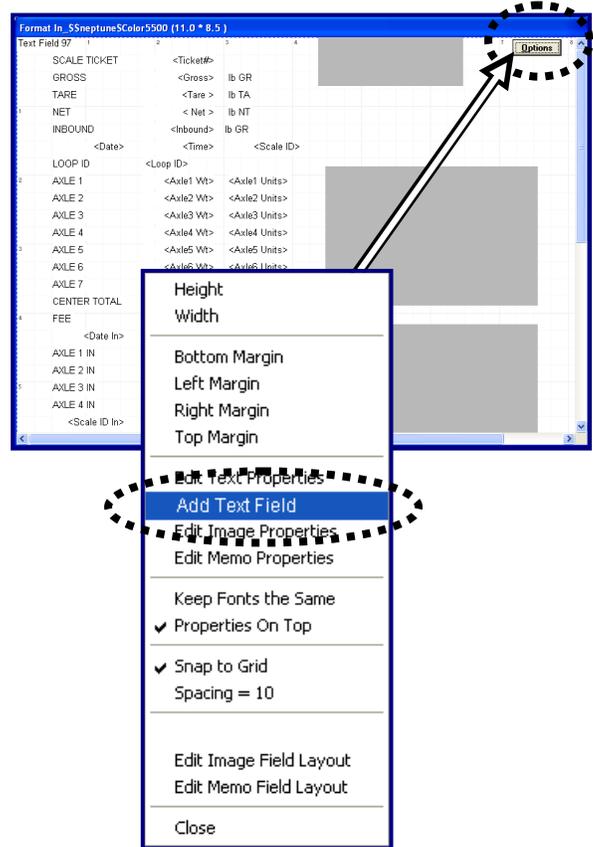
6.3.2. Adding a Text Field

1. To add a field, click



2. Select **Add Text field**.

3. **Drag-and-drop** the field where it belongs on the page.



4. In the **Text** field, add a title or text, as needed.

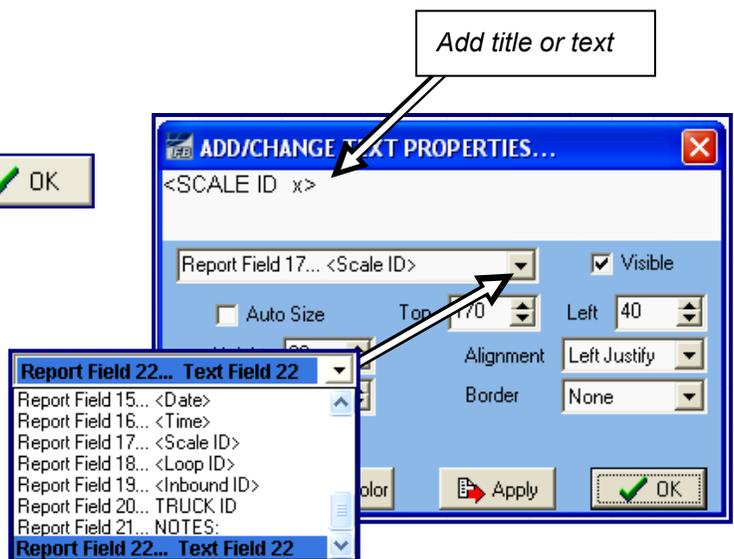
5. In the **Report** field drop-down list, select the appropriate type of field.

6. Format the field size, placement, font size and style, as needed.

7. Click to view the edits.

8. Once all edits are correct, click to save them.

9. Click the button to close the window.

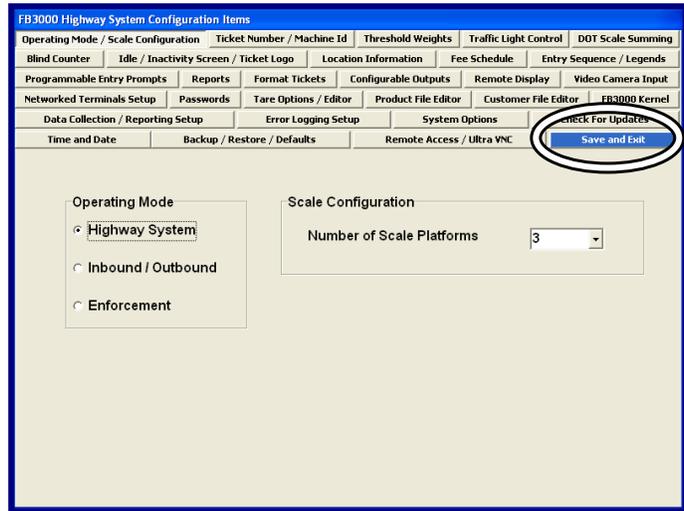


6.3.2. Adding a Text Field, Continued

10. Press **Save and Exit**.

11. Confirm the selection.

After finishing this process, the display will return to the main Weigh Window.



6.3.3. Deleting a Text Field

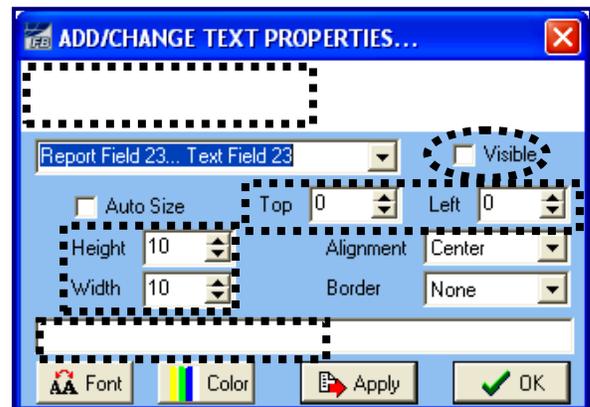
1. From the **Ticket Layout Screen**, click on the unneeded field.
 - The field highlights with a bold rectangle.

- The **ADD/CHANGE TEXT PROPERTIES...** window opens

2. Remove all information from the **Title** and/or **Text** fields.

3. Input **0** in to the **Top** and **Left** fields.

4. Input **10** in the **Height** and **Weight** fields.
 - These are the minimum amounts allowed.



5. Uncheck the **Visible** box.

6. Once all edits are correct, click to save them.

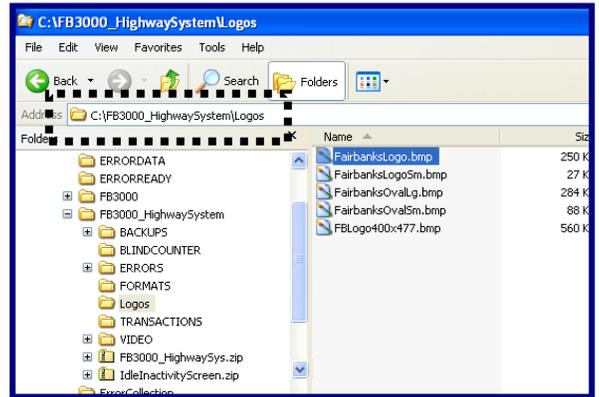
7. Click the button to close the window.

6.3.4. Adding a Logo/Image

To add a new logo or image to the ticket, the image file must be in the correct format, and then saved in the appropriate folder.

1. **Save the Image File** in the following address:

C:\FB4000_HighwaySystemLogos



- Image types include the following file extensions.

- | | | | | |
|--------|--------|--------|--------|--------|
| – .jpg | – jpeg | – .bmp | – .png | – .gif |
| – .tif | – .eps | – .emf | – .cdr | – .wmf |

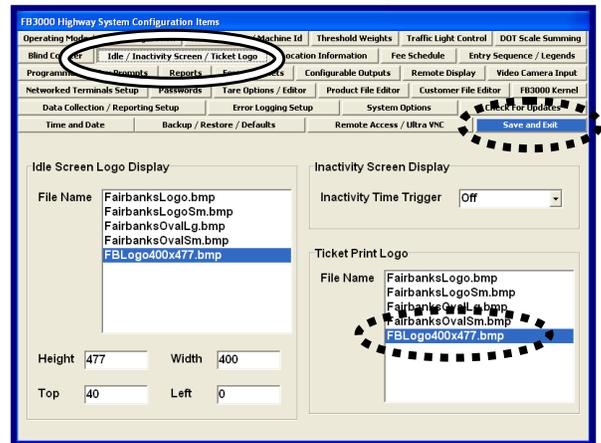
2. From the **Main Weigh Window**, press the **Home** button on the external keyboard.



Pressing the **Home** button accesses the **Main Configuration Window**.

6.3.4. Adding a Logo/Image, Continued

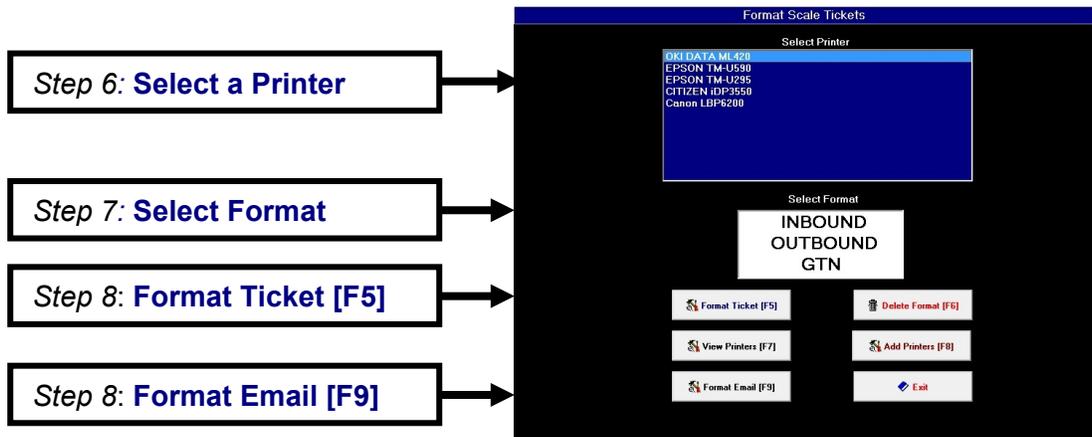
3. Press the **Idle / Inactivity Screen / Ticket Logo** tab.



4. Highlight the correct logo image file to be displayed screen and on the ticket.

- Due to ticket size constrains, only one image or logo is allowed.

5. Open the **Format Tickets** tab.



6. Select the **Printer**.

7. Select the Format.

- **Inbound**
- **Outbound**
- **GTN**

8. Press the **Format Ticket [F5]** button.

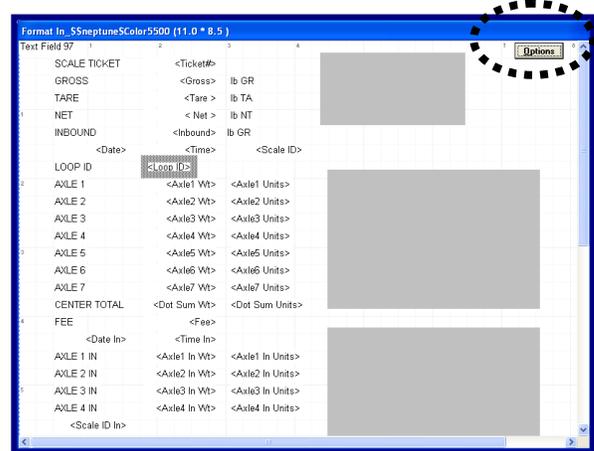
- The **Ticket Configuration** window displays.

9. Press the **Format Ticket [F5]** button.

- The **Format Email Template** window displays.

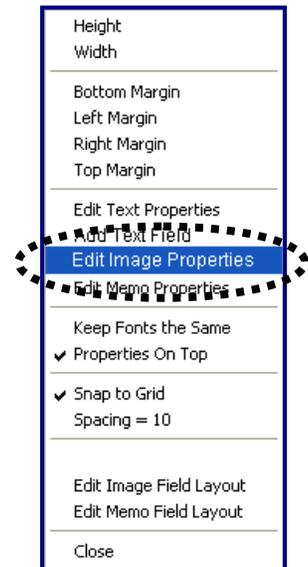
6.3.4. Adding a Logo/Image, Continued

10. Drag-and-drop the grayed-out image to wherever it belongs on the ticket.



11. To edit the logo image further, double-click on it, or click **Options**.

12. Select **Edit Image Properties**.



13. In the “Image Field X... <‘Image File Name’>” drop-down menu, select the correct logo or image file.

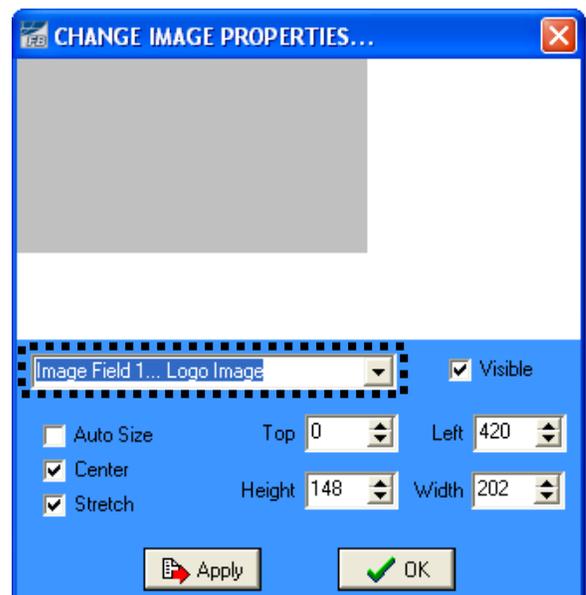
- All listed will be from the folder **C:\FB4000_HighwaySystem\Logos**

14. Format the field size, placement, font size and style, as needed.

15. Click **Apply** to view the edits.

16. Once all edits are correct, click **OK** to save them.

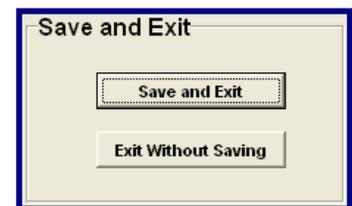
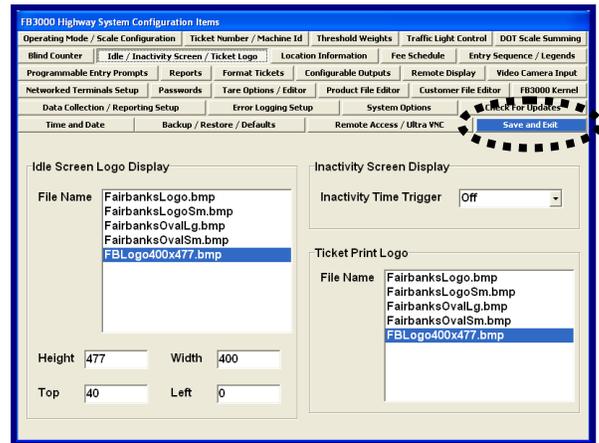
17. Click the **Close** button to close the window.



6.3.4. Adding a Logo/Image, Continued

18. Press **Save and Exit**.

19. Confirm the selection.



After finishing this process, the display will return to the main Weigh Window.

Section 7: Operation

7.1. SYSTEM BOOT-UP PROCEDURE

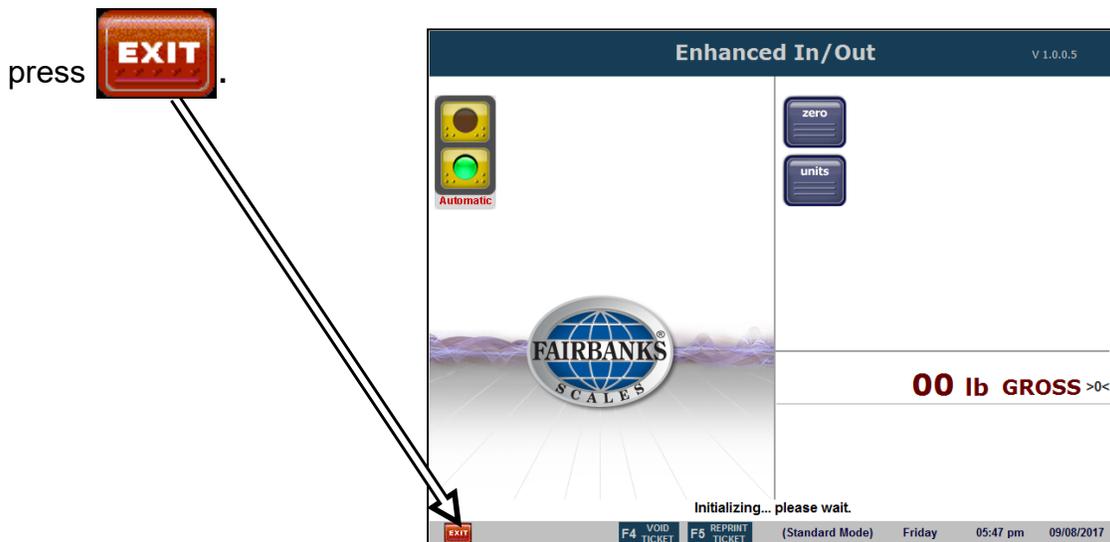
Initiate the power up sequence by plugging in the instrument.

Normal indications include the following:

- Lights on the keyboard should blink.
- A Windows welcome screen appears.
- Lastly, a **Weighing Application Window** appears.

7.2. APPLICATION SHUT-DOWN PROCEDURE

1. To close the Highway System Program,



2. Double-click on the **YES** button in the **Exit Application** window.
3. Turn off the power using the **ON/OFF** rocker switch.



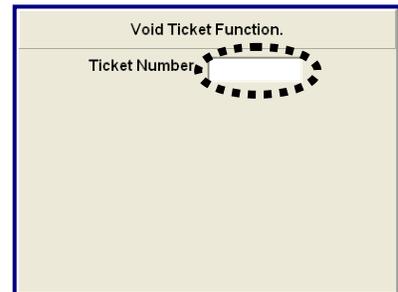


7.3. VOIDING A TICKET

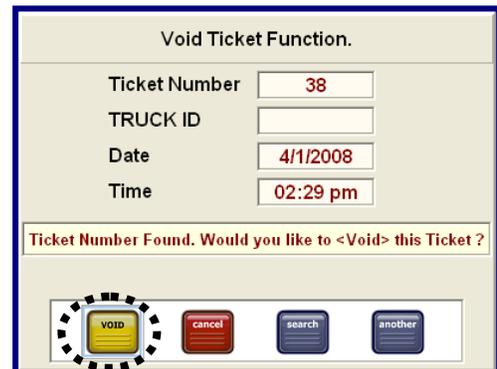
Follow these steps to **VOID** an **active ticket**.

NOTE: For this function to work, all vehicles must be off of the scale.

1. On the *external keyboard*, press  .
2. Enter the **Ticket Number**.
3. On the *external keyboard*, press **Enter**.



4. In the **Void Ticket Function** window, press  .
 - The ticket is voided immediately and permanently.
 - Press  to abort the transaction.
 - Press  to find another occurrence of



the entered ticket number, in case there are multiple transactions with the same ticket number.

- Press  to void a different ticket.

7.3.1. Void Ticket Function

5. If this ticket number has not yet been generated, a notification window appears.
6. Press  , or  to find a different ticket.

Void Ticket Function.

Ticket Number	<input type="text" value="38"/>
TRUCK ID	<input type="text"/>
Date	<input type="text"/>
Time	<input type="text"/>

Ticket Number Not Found. Select <another> to try again.

Section 8: Service & Maintenance

• IMPORTANT PRECAUTION ★

- ***Before handling the FB4000 boards or other system components, the certified service technician must always be properly grounded.***
 - Electrostatic Discharge (ESD) severely damages all computer components.
 - Remove the anti-static packaging ***only when the parts are ready for installation.***
 - Handle the boards by their edges, and avoid touching their components.

8.1. STEPS TO WRITING ERROR CONDITION FILES

1. An ***Error Condition*** formats a file name as described below.
2. The initiating application then checks for a pre-existing error file name.
 - 2a. If none is found, the error file is written.
 - 2b. If it *does* exist, the error file is not written.
 - This allows the **Error Notification Application** to control the frequency of repeating errors (such as Load Cell Failure and Float Switch On) by deleting the error file when it is ready to check for a continued error.
 - 2c. The error files are written to the “**Errors**” directories using the “**Data/Ready**” file writing scheme.
3. In the case of a multiple terminal installation, each terminal will report its own errors.
4. An additional key and value is added to the **[Data]** section to identify the terminal.

8.2. ERROR FILE FORMAT

- | | | |
|----------------|------------------------|--|
| [Error] | Description = xxxxxxxx | (description of error) |
| [Data] | yyyy = zzzz | (keys and values specific to the error, as many lines as needed) |

8.3. WEIGHT KERNEL ERRORS

The following is a list of error conditions and their file names.

ERROR CONDITION	FILE NAME	FILE CONTENTS
Calibration Change	CalibrationChange_# (# = Weight used)	[Error] Description=Calibration Change [Data] Calibration Wt=#
Cell Motion Error	CME_#.ERR (# = cell number)	[Error] Description=Possibly Dead Cell [Data] Cell=#
Float Switch On	FloatSwitchOn	[Error] Description=Float Switch On
Scale Behind Zero	SBZ_#_t.ERR (# = Scale) (t = A if t < 400, B if wt >= 400)	[Error] Description=Scale Behind Zero [Data] Scale=# Range=A or B
Load Cell Failure	LCF_#.ERR (# = cell number)	[Error] Description=Load Cell Failure [Data] Cell=#
Section Error	SER_# (# = Section)	[Error] Description= Sectional Error! [Data] Section=#
Scale Trimmed	STR.ERR	[Error] Description=Scale Trimmed
Cell Warning Error	CWE_#.ERR (# = cell number)	[Error] Description=Possible Stuck Cell [Data] Cell=#
Load Cell Drift	LCD_#.ERR (# = cell number)	[Error] Description=Load Cell Drift [Data] Cell=#

8.4. HIGHWAY SYSTEM USER INTERFACE ERRORS

ERROR CONDITION	FILE NAME	FILE CONTENTS
Data Collection/ Reporting Application not running	DCR.ERR	[Type] Code = DCR

Appendix I: Report Examples

A. COMPLETED TRANSACTIONS REPORT

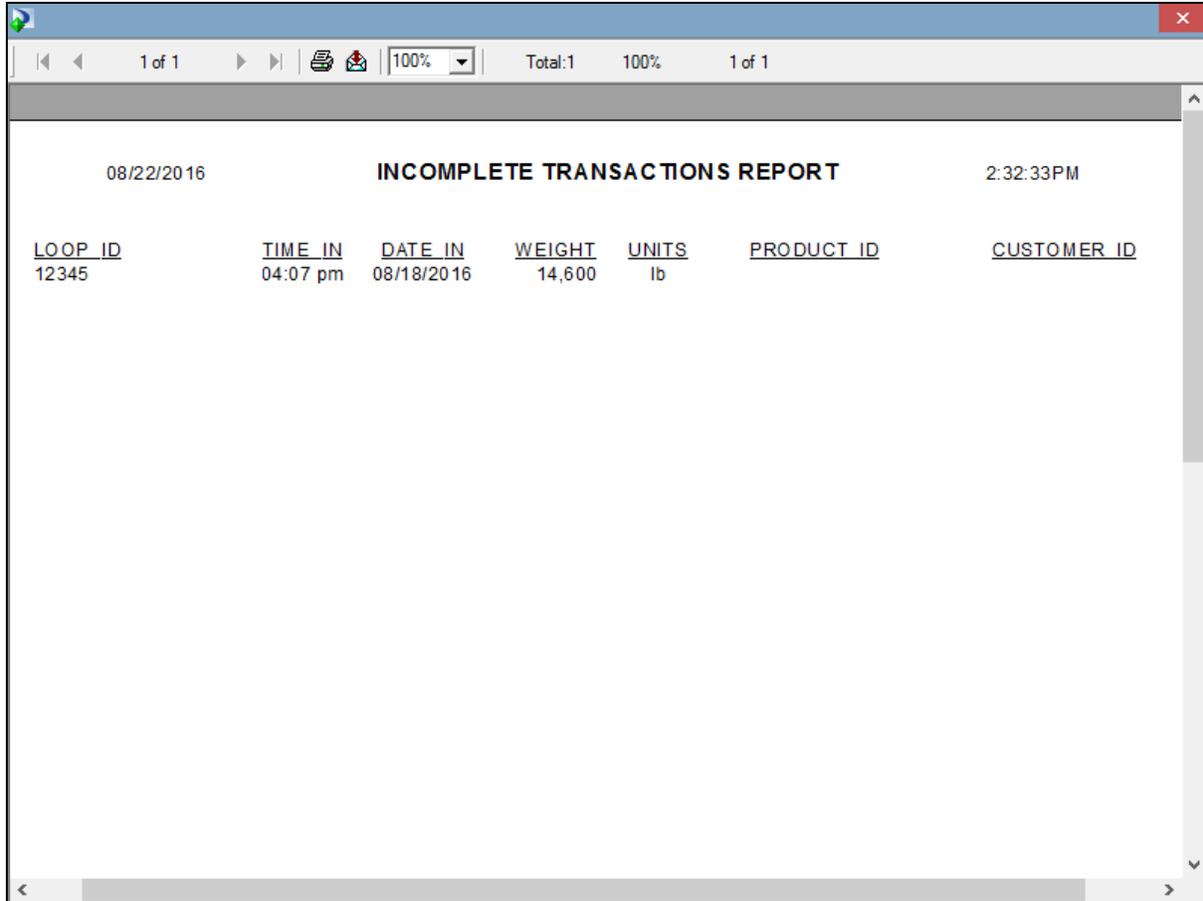
This report summarizes *all* the transactions that are complete and final.

08/22/2016 **COMPLETED TRANSACTIONS REPORT** 2:31:29PM

<u>TICKET</u>	<u>TIME</u>	<u>DATE</u>	<u>NET</u>	<u>FEE</u>	<u>PRODUCT ID</u>	<u>CUSTOMER ID</u>
000014	06:06 pm	08/18/2016	65,680 lb	2.50		
000015	08:49 am	08/19/2016	175,020 lb	8.00		
000016	08:51 am	08/19/2016	75,700 lb	2.50		
000017	08:52 am	08/19/2016	75,700 lb	2.50		
000018	08:52 am	08/19/2016	75,720 lb	2.50		
000019	08:52 am	08/19/2016	75,700 lb	2.50		
000020	08:52 am	08/19/2016	75,700 lb	2.50		
000021	08:54 am	08/19/2016	75,740 lb	2.50		
000022	08:54 am	08/19/2016	75,720 lb	2.50		
000023	08:55 am	08/19/2016	75,740 lb	2.50		
000024	08:56 am	08/19/2016	75,740 lb	2.50		
000025	08:56 am	08/19/2016	75,740 lb	2.50		
000026	08:56 am	08/19/2016	75,740 lb	2.50		
000027	08:56 am	08/19/2016	75,740 lb	2.50		
000028	08:57 am	08/19/2016	75,720 lb	2.50		
000029	08:57 am	08/19/2016	75,720 lb	2.50		
Total Count:		16	1,300,820 LB	45.50		

B. INCOMPLETE TRANSACTIONS REPORT

An **Incomplete Transactions Report** is used with the **Inbound/Outbound Application**. An event generated for it occurs when a vehicle makes its first weighment, but does not complete the transaction with the second (final) weighment.

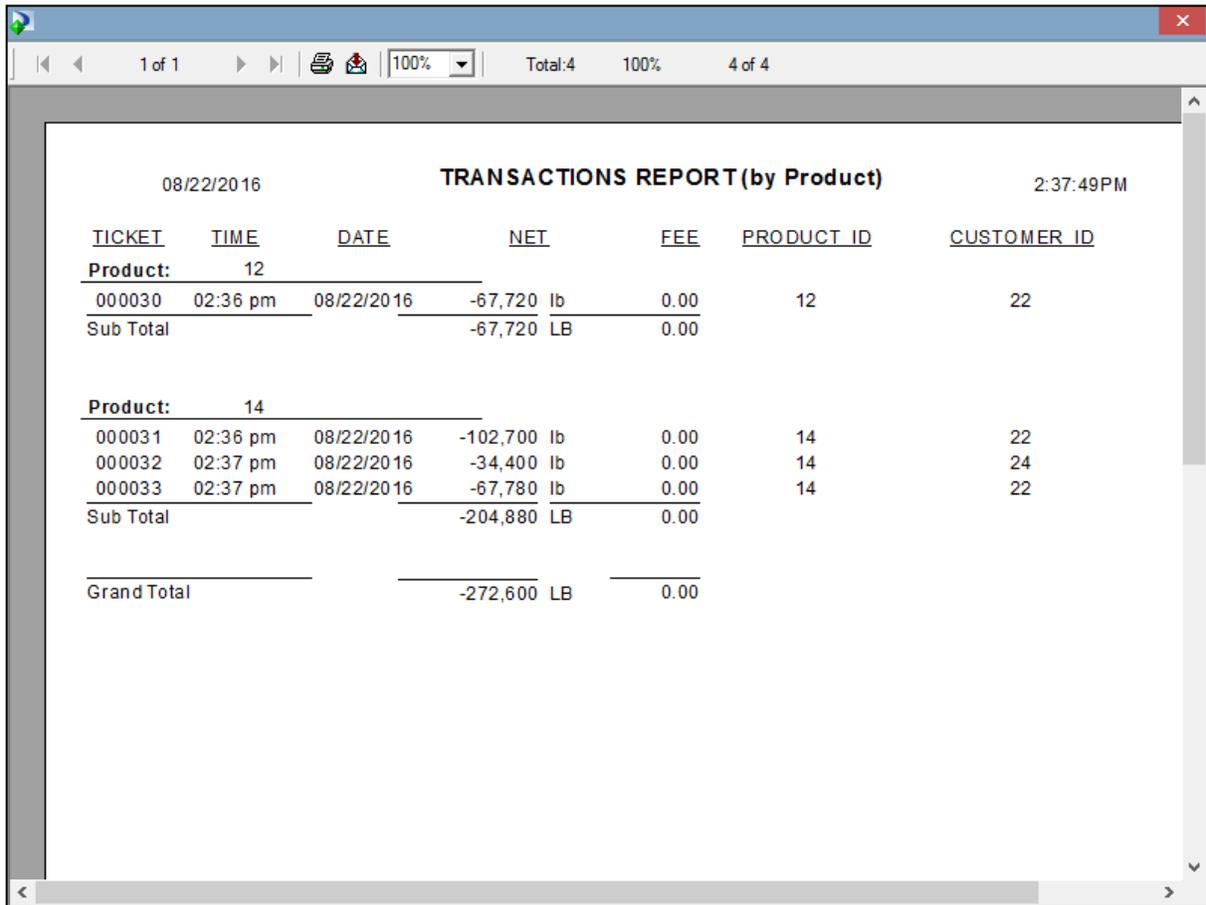


08/22/2016 **INCOMPLETE TRANSACTIONS REPORT** 2:32:33PM

<u>LOOP_ID</u>	<u>TIME_IN</u>	<u>DATE_IN</u>	<u>WEIGHT</u>	<u>UNITS</u>	<u>PRODUCT_ID</u>	<u>CUSTOMER_ID</u>
12345	04:07 pm	08/18/2016	14,600	lb		

C. REPORT BY PRODUCT REPORT

This displays all the transactions sorted by **Products**.



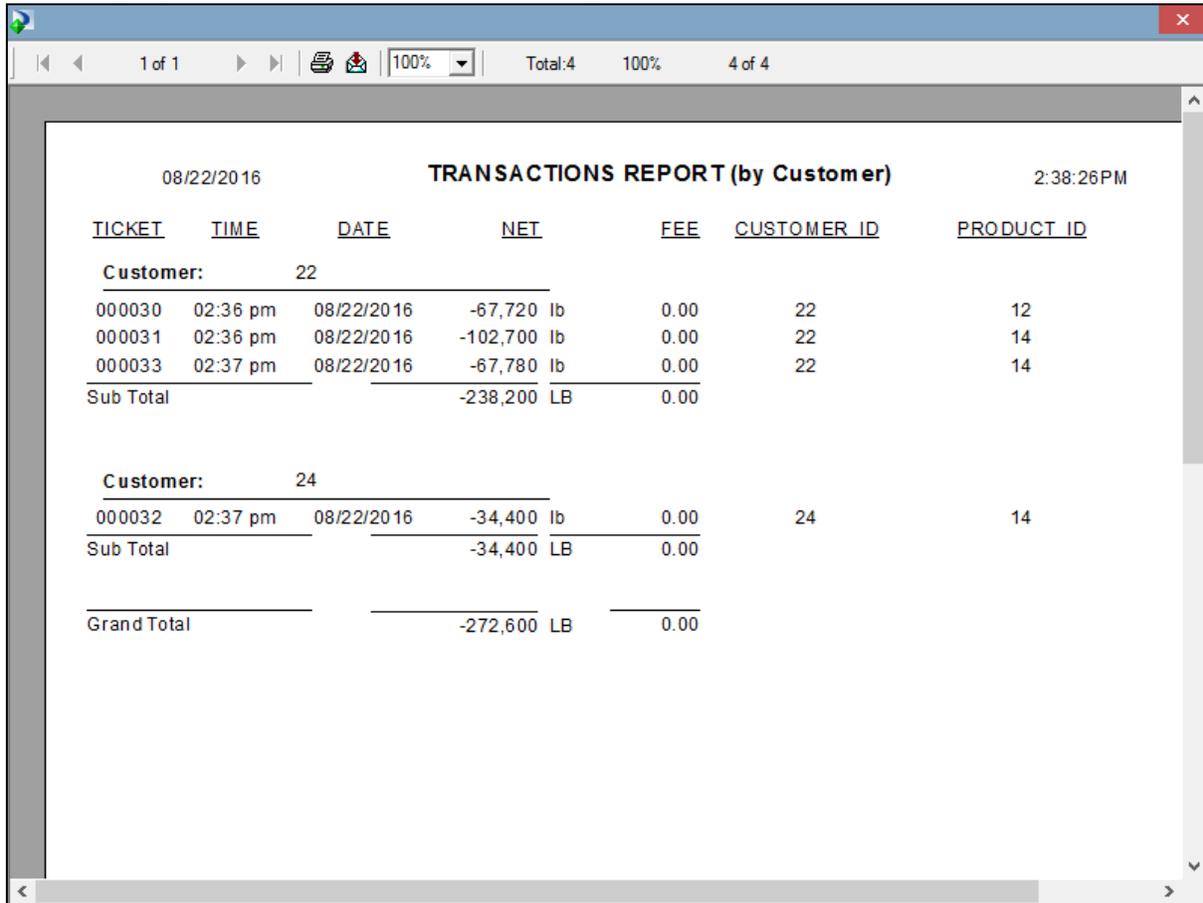
08/22/2016 2:37:49PM

TRANSACTIONS REPORT (by Product)

TICKET	TIME	DATE	NET	FEE	PRODUCT ID	CUSTOMER ID
Product: 12						
000030	02:36 pm	08/22/2016	-67,720 lb	0.00	12	22
Sub Total			-67,720 LB	0.00		
Product: 14						
000031	02:36 pm	08/22/2016	-102,700 lb	0.00	14	22
000032	02:37 pm	08/22/2016	-34,400 lb	0.00	14	24
000033	02:37 pm	08/22/2016	-67,780 lb	0.00	14	22
Sub Total			-204,880 LB	0.00		
Grand Total			-272,600 LB	0.00		

D. REPORT BY CUSTOMER REPORT

This displays all the transactions sorted by **Customers**.

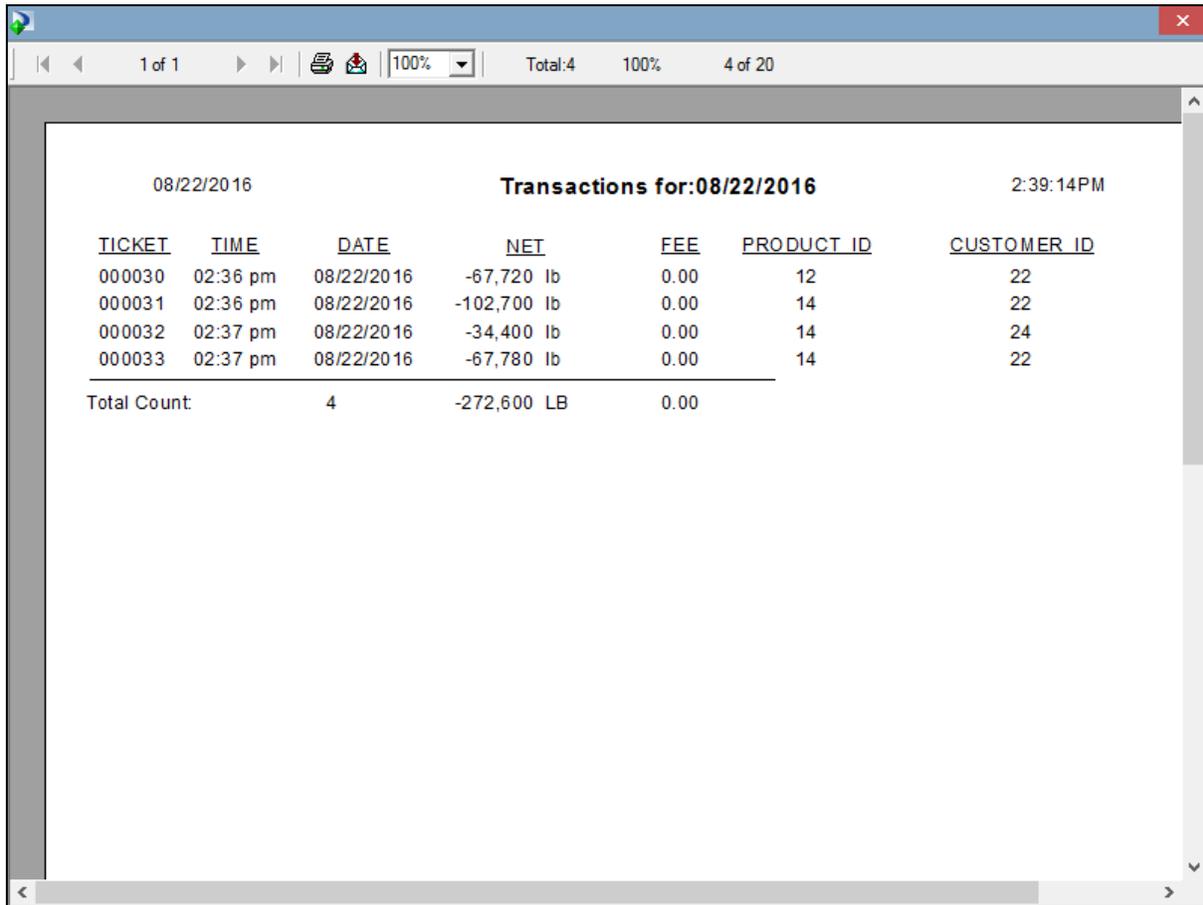


08/22/2016 **TRANSACTIONS REPORT (by Customer)** 2:38:26PM

TICKET	TIME	DATE	NET	FEE	CUSTOMER ID	PRODUCT ID
Customer:		22				
000030	02:36 pm	08/22/2016	-67,720 lb	0.00	22	12
000031	02:36 pm	08/22/2016	-102,700 lb	0.00	22	14
000033	02:37 pm	08/22/2016	-67,780 lb	0.00	22	14
Sub Total			-238,200 LB	0.00		
Customer:		24				
000032	02:37 pm	08/22/2016	-34,400 lb	0.00	24	14
Sub Total			-34,400 LB	0.00		
Grand Total			-272,600 LB	0.00		

E. DAILY REPORT

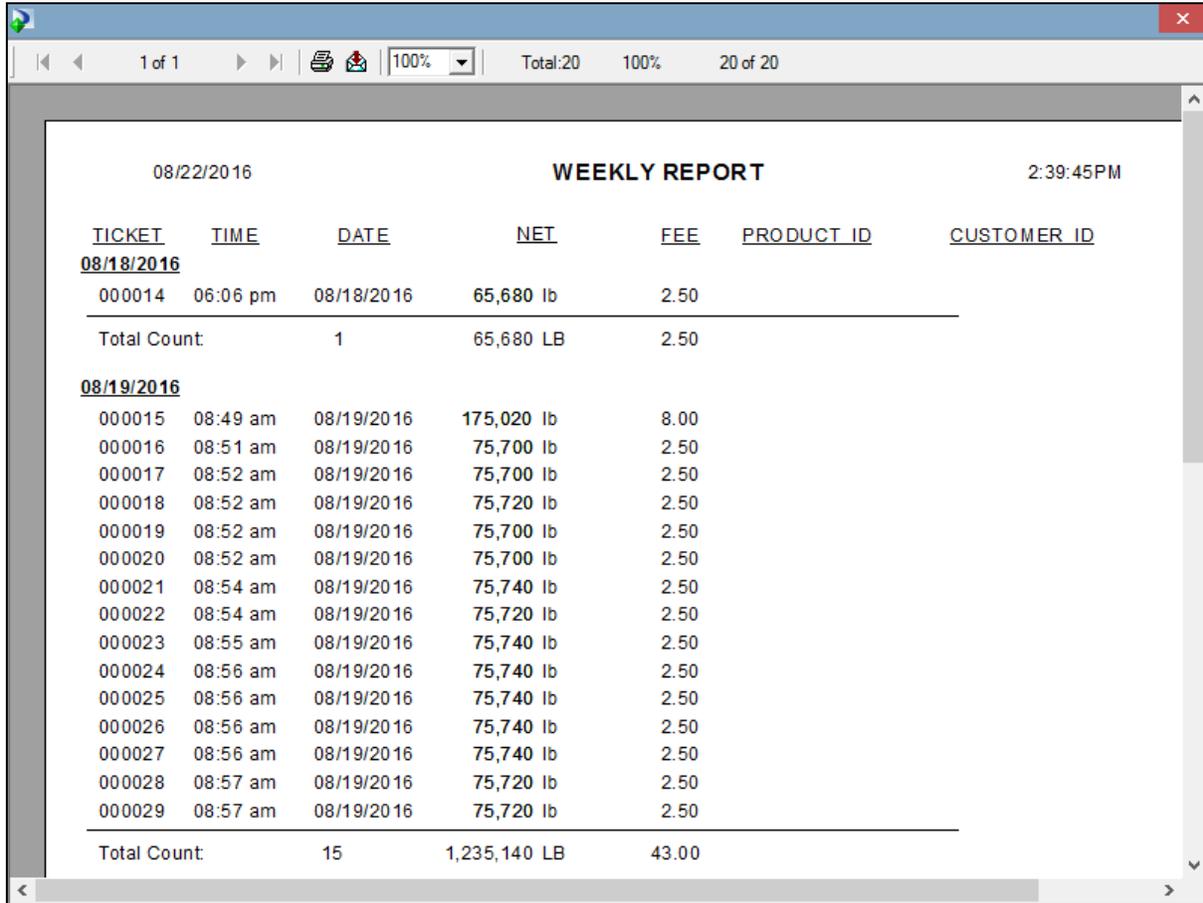
This displays all the transactions of any particular day.



08/22/2016		Transactions for:08/22/2016				2:39:14PM	
<u>TICKET</u>	<u>TIME</u>	<u>DATE</u>	<u>NET</u>	<u>FEE</u>	<u>PRODUCT_ID</u>	<u>CUSTOMER_ID</u>	
000030	02:36 pm	08/22/2016	-67,720 lb	0.00	12	22	
000031	02:36 pm	08/22/2016	-102,700 lb	0.00	14	22	
000032	02:37 pm	08/22/2016	-34,400 lb	0.00	14	24	
000033	02:37 pm	08/22/2016	-67,780 lb	0.00	14	22	
Total Count:		4	-272,600 LB	0.00			

F. WEEKLY TO DATE REPORT

This displays all the transactions of any particular **Week**.



TICKET	TIME	DATE	NET	FEE	PRODUCT ID	CUSTOMER ID
08/22/2016						
			WEEKLY REPORT		2:39:45PM	
08/18/2016						
000014	06:06 pm	08/18/2016	65,680 lb	2.50		
Total Count		1	65,680 LB	2.50		
08/19/2016						
000015	08:49 am	08/19/2016	175,020 lb	8.00		
000016	08:51 am	08/19/2016	75,700 lb	2.50		
000017	08:52 am	08/19/2016	75,700 lb	2.50		
000018	08:52 am	08/19/2016	75,720 lb	2.50		
000019	08:52 am	08/19/2016	75,700 lb	2.50		
000020	08:52 am	08/19/2016	75,700 lb	2.50		
000021	08:54 am	08/19/2016	75,740 lb	2.50		
000022	08:54 am	08/19/2016	75,720 lb	2.50		
000023	08:55 am	08/19/2016	75,740 lb	2.50		
000024	08:56 am	08/19/2016	75,740 lb	2.50		
000025	08:56 am	08/19/2016	75,740 lb	2.50		
000026	08:56 am	08/19/2016	75,740 lb	2.50		
000027	08:56 am	08/19/2016	75,740 lb	2.50		
000028	08:57 am	08/19/2016	75,720 lb	2.50		
000029	08:57 am	08/19/2016	75,720 lb	2.50		
Total Count		15	1,235,140 LB	43.00		



FB4000 Highway System Application

Operators Manual

Document 51388

Manufactured by Fairbanks Scales Inc.
821 Locust
Kansas City, Missouri 64106
www.fairbanks.com