TicketPress

Ticket Printer

Version 1.00

Installation & Operation Manual

RICE LAKE®
WEIGHING SYSTEMS
To be the best by every measure®

128032 Rev B

Contents

About This Manual

This manual is intended for use by qualified service technicians responsible for installing and servicing the *TicketPress* printer.

Authorized distributors and their employees can view or download this manual from the Rice Lake Weighing Systems distributor site at **www.ricelake.com**.

1.0 Introduction

The *TicketPress* printer is a heavy duty, friction feed printer for printing on friction fed single or multipart tickets. It has been designed to be easily integrated with many common weigh indicators and to be placed in harsh environments.

Some of the key features of the *TicketPress* include:

- Prints at 200 characters per second (cps).
- Automatic head gap adjustment for single to five part tickets.
- Double strike mode for printing on poor quality multipart tickets.
- Standard RS-232 interface and optional RS-422 or 20mA Current Loop interfaces.
- Easy to change no-mess ribbon cartridge.
- Simplified configuration through easy to use setup menus.
- Internal battery back up for time and date, and for tracking serialized ticket ID numbers.

For complete details, please refer to the “Specifications” on page 39.

1.1 Safety Instructions

WARNING

Failure to heed may result in serious injury or death.

Don’t pour any liquid near the equipment, as it may result in electric shock.

Only qualified service personnel should open the equipment.

Don’t repair or adjust energized equipment alone under any circumstances. Someone capable of providing first aid must always be present for your safety.

Danger of explosion if battery is incorrectly replaced. Replace only with the equivalent type recommended by the manufacturer. Dispose of batteries according to the manufacturer’s instructions.

Hazardous moving parts, keep fingers and other body parts away.

Note

To prevent equipment damage:

Keep the equipment away from humidity.

Before you connect the equipment to the power outlet, check the voltage of the power source.

Disconnect the equipment from the voltage of the power source to prevent possible transient over-voltage damage.

2.0 Installation

2.1 Getting Started

This chapter will use the fewest possible steps to get the first time user up and running quickly. You will be guided through the following steps:

- Finding a suitable location and installing the printer.
- Setting up a host interface if necessary.
- Installing the ribbon cartridge.
- Inserting a ticket to be printed.
- Performing a printer self-test.

Before installation, a suitable site must be chosen. *TicketPress* printers have been designed to be rugged, heavy-duty printers. They will handle most harsh environments, but should not be placed in direct sunlight or in areas that will exceed the rated temperature, humidity or power requirements.

For details, refer to "Specifications" on page 39.

Important ***Before connecting power, open the top cover on the printer and make sure all shipping materials have been removed.***

Refer to Figure 2-1 to connect the power cord to the printer and a power receptacle.

Next verify that the interface parameters are set correctly as described in the following section "Interface Set Up" and connect the interface cable from the host computer to the appropriate connector on the printer.

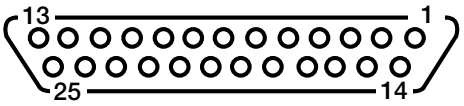
Figure 2-1. Connectors on Back of Printer

2.2 Interface Set Up

The *TicketPress* is supplied with a standard RS-232 serial interface. The default settings and connector pin out are shown below. For proper communication, the interface settings must match the settings on the host device. To modify these settings, please refer to "Interface Menu" on page 19.

Interface Menu Item	Value
Interface	RS-232
Baud Rate	9600
Data Bits	8
Stop Bits	1
Parity	None
DTR	Power On/Off
XON/XOFF	Off
RTS/CTS	Off
Auto CR	On
Auto LF	Off
Echo	Off

Table 2-1. Interface Menu Values



Pin	Signal	Cable Part # 130213
1	Chassis Ground	
2	Transmit Data (Printer output)	
3	Receive Data (Printer input)	Red
4	Request To Send (set) (Printer output)	Jumpered
5	Clear To Send (ignored) (Printer input)	
6	Data Set Ready (ignored) (Printer input)	
7	Ground	Black
8	Carrier Detect (ignored) (Printer input)	
11	Print (Open collector output pulsed low when Print is pressed on front panel)	Yellow
13	Ground	
14	+5V	
15	Data Terminal Ready (Printer output)	

Table 2-2. RS-232 Serial Interface Connector

2.3 Installing The Ribbon Cartridge

The *TicketPress* has been design to make ribbon installation a clean, easy process with no need to touch the ribbon fabric.

1. Remove the new ribbon cartridge from its packaging and turn the knob on top of the ribbon in the direction indicted until the fabric is taut.

Figure 2-2. Ribbon cartridge

2. Open the printer cover to expose the print head area.
3. Orient the ribbon as needed and press the ribbon onto the carriage. See Figure 2-3.

Without Ribbon *With Ribbon*

Figure 2-3. Print Head/Carriage

4. To remove the ribbon, grasp the sides where indicated above and pull the ribbon toward the front of the printer.

2.4 Inserting A Ticket

To insert a ticket for printing, simply slide the ticket into the printer as shown below. Align the right edge of the ticket with the printer's edge guide, and slide the ticket in far enough to align the desired print position with the print line indicator on the left side of the printer. The line of the indicator is aligned with the base line of the characters that will be printed.

Figure 2-4. Insert A Ticket

2.5 Printer Self Test & Hex Dump Mode

The printer performs many self-diagnostics each time power is applied. If you wish to perform an actual printing test and/or use the Hex Dump mode to diagnose host data sent to the printer, use the following steps.

1. Make sure the printer is powered off.
2. Make sure the printer has a ribbon installed and a blank ticket loaded. This ticket must be at least 4" wide and 8" long. You may also use a blank piece of copier/laser paper.
3. Press and hold  .

4. Turn the printer on while continuing to hold  .

5. When printer beeps, release  . The printer will automatically begin to print. Printer displays entering **Self Test**. A sample self test printout is shown below.

```
Rice Lake Self Test
TicketPress Firmware Version:
----------------------------------------
 !"#$%&'()*+,-./0123456789:;<=>?@A
BCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcd
efghijklmnopqrstuvwxyz{|}~
OPTIONS MENU
----------------------
Loc,Time,Date: Off
ID Action: Off
Ticket Out Fault: Off
Ticket Sensor: On
Toledo Interface: Off
Print Mode: Standard
Eat<LF>after<CR>: Off
High Impact: Off
Invert Text: Off
Reverse Feed: Off
Character Config: Normal
Font: Epson FX FD

INTERFACE MENU
----------------------
Interface: RS-232
Baud Rate: 9600
Data Bits: 8
Stop Bits: 1
Parity: None
DTR: Power On/Off
RTS/CTS: Off
XON/XOFF: Off
Auto CR: On
Auto LF: Off
Echo: Off

SECURITY MENU
----------------------
Options Menu: Edit Allowed
Interface Menu: Edit Allowed
```

Figure 2-5. Self Test Printout Example

6. After the self test has completed, the printer will be in **Monitor** mode and any data received will be printed in the following format. Insert a new ticket or blank piece of paper if needed.

```
GROSS     1667 lb

08:50AM 03/26/2012


GROSS------1667-lb....08:50AM-03/26/2012
..
47 52 4F 53 53 20 20 20 20 20 31 36 36
37 20 6C 62 0D 0A 0D 0A 30 38 3A 35 30
41 4D 20 30 33 2F 32 36 2F 32 30 31 32
0D 0A
```

Figure 2-6. Hex Dump Printout Example

7. To exit the **Self Test & Monitor** mode, turn the printer off by holding the power button.

3.0 Daily Operation

This section describes the features of the *TicketPress* that will be used daily by most users of the printer.

3.1 Control Panel Features

The following picture shows the printer's control panel. Each of these items is described below.

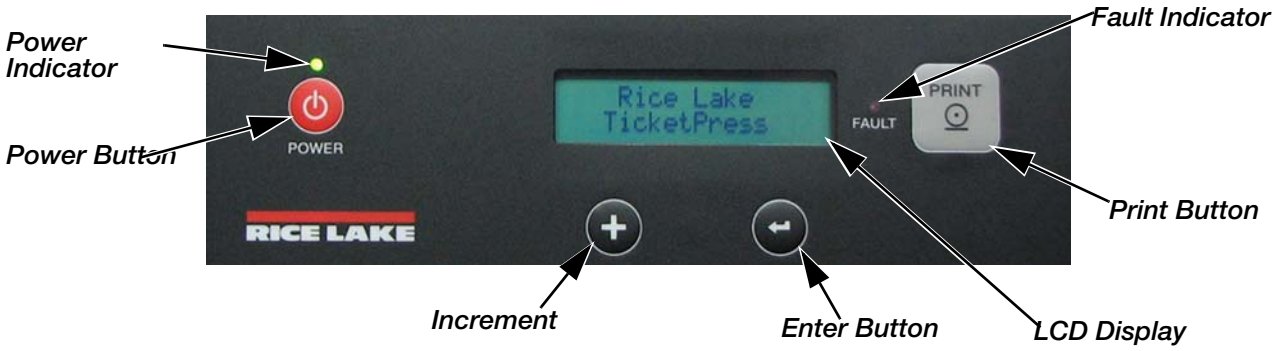


Figure 3-1. Control Panel

LCD Display	This two line by sixteen-character display is used to convey current printer status information and for printer configuration. During normal operation the printer will display the message shown in the picture above.
POWER Indicator	Off – The printer is powered off. On – The printer is powered on and ready to receive data.
FAULT Indicator	Off – The printer is operating normally. On – The printer has detected a fault condition that prevents printing. A description of the fault is displayed on the LCD. See "Fault Messages" on page 31 for a description of all fault messages and how to clear them. The "Check Ticket" fault is also described below. Flashing – Random pattern = Data being received from host. Steady pattern = Printer is in setup mode, input data is ignored.
Audible Alarm	Sounds where a fault condition has occurred.

Table 3-1. LCD Display and Status Indicators

POWER	Press and release to turn the printer on. When the printer has first been connected to a power source, the printer performs internal diagnostics and the power button will not function for several seconds. Press and hold for approximately five seconds to turn the printer off. The printer will display "Powering Off" for several seconds as the printer shuts down.
INCREMENT ENTER	These buttons are only used to initiate a self test or for printer configuration. Self test instructions are described in "Printer Self Test & Hex Dump Mode" on page 4. Configuration instructions are provided in "Printer Configuration" on page 8
PRINT	The Print button action is determined by the current settings and whether a fault condition currently exists. See Table 3-3 on page 7.

Table 3-2. Front Panel Control Buttons

	Menu Settings	Print Button Actions
Normal Operation (Fault Indicator is Off)	Print Mode = Standard Data Mode = N/A	Interface Pin 11 Pulsed.
	Print Mode = Weight Extraction Data Mode = Continuous (Streaming)	Interface Pin 11 Pulsed.
	Print Mode = Weight Extraction Data Mode = Demand	Print next valid indicator record.
Fault Condition (Fault Indicator is On)	N/A	Printer will only attempt to clear the fault and continue printing.

Table 3-3. Print Button Actions

3.2 Check Ticket Fault

If the *TicketPress* receives data to print and no ticket has been inserted, the printer will sound a long beep and **Ticket Out** will display.

To clear the fault:

1. Make sure a ticket has been inserted, is aligned with the ticket edge guide, and inserted far enough to be aligned with the print line indicator.
2. When the ticket is inserted properly, the printer will automatically continue printing.

The ticket sensor may be disabled as described in the "Options Menu" on page 9. This is not recommended for normal use as printing without a ticket installed causes additional wear on the print head and causes ink to be deposited on the platen surface.

For a complete list of all fault messages and instructions for clearing the fault, refer to "Fault Messages" on page 31.

4.0 Printer Configuration

4.1 Introduction To Setup

The *TicketPress* printer features simple, easy to use menus for setting the various interface and operating parameters. These parameters usually only need to be set once at the time of installation. These values are stored in nonvolatile memory, which means that they will remain set even if the printer is turned off.

The value that is last displayed before advancing to the next item is the value that will be saved when Setup mode is exited.

Figure 4-1. Control Panel Setup Buttons

4.1.1 Entering Setup

1. To enter Setup, with printer on.
2. Press and hold ↵. **Entering Setup Menus** is displayed as shown below.

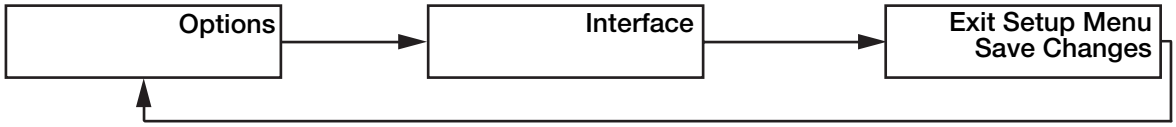
Entering Setup Menus

4.1.2 Selecting a Menu

After the above message has been shown, the display will show the first menu choice available, which is the **OPTIONS** menu as shown below.

Options

To cycle through the available menus, press ↵. This will advance you to the **INTERFACE** menu, the **Exit Setup Menus** choice, and back to the **OPTIONS** menu.



4.1.3 Entering a Menu

Once the display shows your choice of either **OPTIONS, SECURITY** or **INTERFACE**:

1. Press and hold ↵ approximately two seconds to enter that menu. The display will change to show the first item available in the menu.

4.1.4 Making Changes

The values for most menu items can be changed by pressing ↵ to cycle through the items available and then pressing + to change the value.

Note ***Remember the value that will be saved is the value displayed when you press ↵ to advance to the next menu item or exit the menu.***

The one area where changing values works differently is for making changes to the location, time, date and ID. To change these values see "Options Menu" on page 9.

4.1.5 Exiting Setup

1. If you are currently in the options or interface menu, press ↵ until **OPTIONS or INTERFACE** menu is displayed.
2. Press ↵ until **Exit Setup Menus** is displayed.

Note ***Note that the bottom line displays Save Changes. If you wish to exit without saving any changes, press + to display Discard Changes.***

3. Press and hold ↵ to exit setup. The printer will display one of the following messages. **No Changes** will be displayed automatically if no changes were made or if **Discard Changes** was selected.

Exiting Menus Save Changes

or

Exiting Menus No Changes

4.2 Options Menu

The **OPTIONS** menu is used to configure various operating modes, current time and date, and ticket ID values of the *TicketPress*.

Options

Enter Setup and select the **OPTIONS** menu as describe earlier. Each menu item and possible values are described in detail as follows. The factory default values are indicated with an asterisk (*) where applicable.

4.2.1 Loc, Time, Date

Controls whether the location, time, date, and ticket ID number are printed, and if so, where.

Loc,Time,Date
No

Value	Action
Off*	Press ↵ to skip all the related value settings and advance to the Ticket Out Fault menu item.
Print First	Time, date and ticket ID will be printed at the top of the next ticket followed by one blank line. Press ↵ to proceed to setting ALL of the values for location, time, date, and ticket ID.
Print Last	Time, date, and ticket ID will be printed on line following the weight after a <CR>. Press ↵ to proceed to setting ALL of the values for location, time, date, and ticket ID.
Print After Unit	Time, date, and ticket ID will be printed following the weight on the same line. Press ↵ to proceed to setting ALL of the values for location, time, date, and ticket ID. This value is only valid when "Print Mode" is set to Weight Extraction.

Note ***When set to any value other than No, you must advance through the values for all of the items below before continuing on to the remaining options menu items.***

Submenus:

Location.

This item sets the format used to display and print the time and date as described for each of those items below.

Location
US

Value	Action
US*	Use ✚ to select the desired value, then press ↵ advance to Time.
Intl	

Time

The two formats shown are selected by setting the location to US or Intl.

Value	Display	Action
US*	Time 12:00 AM	Each portion of the time will be highlighted and may be changed by pressing ✚. Press ↵ to highlight the next value to be set, or press and hold ↵ to advance to Date.
Intl	Time 23:00	

Note ***To exit when Time/Date is turned on press ↵ twice until Options is displayed.***

Date

The two formats shown are selected by setting the Location to US or Intl.

Value	Display	Action
US*	Date mm/dd/yy	Each portion of the date will be highlighted and may be changed by pressing ⊕. Press ↵ to highlight the next value to be set, or press and hold ↵ to advance to ID.
Intl	Date dd/mm/yy	

Note *To exit when Time/Date is turned on press ↵ twice until Options is displayed.*

4.2.2 ID Action (Weight Extraction Mode Only)

This item sets how the five digit ticket ID number is to be controlled. The value selected determines how the number entered in ID Number will be used.

ID Action
Count

Value	Action
Count Up*	Value will be incremented BEFORE it is printed.
Constant Value	Value entered here will be printed on every ticket and will not be incremented.
Count in Range	Value will be incremented within a specified range, BEFORE it is printed. Note *With **ID Min** on display and cursor flashing on the **I** of **ID**, press ↵ to toggle to **ID Max**.* *If **ID Max** is less than **ID Min** value will default to **ID Min**.*

Note ***When "Loc,Time,Date,ID" is set to "Yes", you may suppress printing the ticket ID by setting "ID Action" to "Constant Value" and setting the ID number to all spaces .***

Value	Display	Action
ID Number	ID Number 00000000	Eight characters of **All Spaces (ASCII SP) … 00000000* … 99999999** This item displays the value of the LAST ticket ID value that was printed. Changing this value will affect the ID printed on the next ticket. If "ID Action" is set to **Count UP** or **Count in Range**, this value will be incremented BEFORE it is printed. If "ID Action" **Constant Value** is selected, the value entered here will be printed on every ticket and will not be incremented. This value is entered one character at a time, left to right, by pressing ⊕ to select the value. Leading spaces are represented by an underscore character ("_"). Once a non-space character has been entered, the remaining characters must be numeric. To advance to the next character position, press ↵. After entering the last character, press ↵ to advance to the next menu item.
Note ***Must be set to "No Value" to turn off ID values.***		

Value	Display	Action
ID_min and ID_max	ID_min 00000000 ID_max 00000000	Eight characters of **All Spaces (ASCII SP) … 00000000* … 99999999** These items set the minimum and maximum ticket ID values to be used when "ID Action" is set to **Count in Range**. After **ID_max** is printed, **ID_min + 1** will be the next number printed. These values are entered one character at a time, left to right, by pressing + to select the value. Leading spaces are represented by an underscore character ("_"). Once a non-space character has been entered, the remaining characters must be numeric. To advance to the next character position, press ↵. After entering the last character, press ↵ to advance to the next menu item.

Note ***The number of leading spaces in these values must match those entered for "ID Number". These menu items are only available when ID Action is set to Count in Range.***

4.2.3 Ticket Out Fault (Weight Extraction Mode)

This item selects the action to be taken when the printer attempts to print past the bottom of the current ticket.

Ticket Out Fault
Break Page

Value	Action
Off*	No Action
Reprint Page	The print job will restart at the beginning of the job when the next ticket is inserted in the printer. Note ***Works in standard mode only.***

Note ***For normal printing there will be a 1/2" margin at the bottom of the ticket, if printing is required below the margin select the Reverse Feed option (see "Reverse Feed" on page 16).***

4.2.4 Ticket Sensor

Ticket Sensor
On

Value	Action
On*	The printer receives data when no ticket is installed, the red **Fault indicator** will light and "Ticket Out" will be displayed.
Off	The printer will print regardless of the presence of a ticket.

4.2.5 Toledo Interface

Toledo Mode
Off

Value	Action
Off*	No communication with Toledo indicators
On	Allows the *TicketPress* to communicate with Toledo indicators and format the weight information in both standard and weight extraction modes. The expected data format for Weight Extraction mode is as described in Print Mode, below.

Note ***XON/XOFF must be set to "OFF" during weight extraction when in Toledo Mode.***
The checksum must be disabled in the Toledo indicator.
Placement of text may not be identical to the Toledo positions.

A sample printout of the Toledo menu is shown below:

```
Scale 1
08:03 AM
02/10/12
      1875 lb
       625 lb T
      1250. lb N
```

Figure 4-2. Toledo Ticket Example

4.2.6 Fairbanks Interface

Fairbanks iface
On/Off

Value	Action
Off*	No communication with Fairbanks indicators
On	Allows the *TicketPress* to communicate with Fairbanks indicators and format the weight information in both standard and weight extraction modes. The expected data format for Weight Extraction mode is as described in Print Mode, below.

4.2.7 Print Mode

Print Mode
Standard

Value	Action
Standard*	Data is printed as sent by the host device.
Weight Extraction	The printer extracts weight, units, and status information from a predefined data input stream. Please refer to "Weight Extraction" on page 23 for details.

Note ***The *TicketPress* must be configured for "Weight Extraction" mode when connected to devices sending data as continuous output.***

Submenu of Weight Extraction

WeightEXAlign

WeightExAlign TicketPress

Value	Action
TicketPress*	Alignment at the margin.
SP2200	Alignment with offset.


Note *This menu is only visible when the Weight Extraction mode is set to ON.*

4.2.8 Data Mode

Data Mode

Value	Action
Demand*	The printer will ignore all weight extraction records received until PRINT is pressed. At that time, the printer will decode the next complete input record and print as described for the Print Mode setting above.


Note *This feature is only available when Print Mode is set to Weight Extraction.*

4.2.9 EAT (LF) After (CR)

Eat<LF>After<CR> No

Value	Action
No*	No Action.
Yes	Causes a Line Feed character that immediately follows a Carriage Return to be ignored. All other Line Feed commands will be performed. This feature is used to convert double-spaced data to a single-spaced format.


Note *This menu item is only available when Print Mode = Standard*

4.2.10 High Impact Mode

Double Strike Off

Value	Action
On	All data are printed in a bold format. This feature may improve the readability of back pages of a carbon or carbonless ticket.
Off*	No Action.

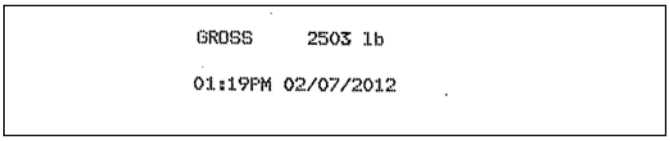

Note *Using this feature causes the TicketPress to print at one-half the normal print speed.*

4.2.11 Character Config

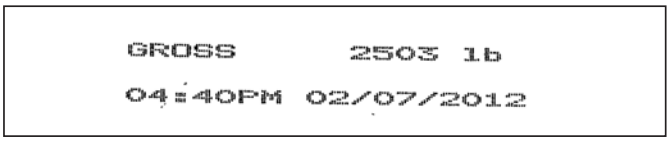
Character Config
Off

Value	Action
Normal	The mentioned values determine how the characters will be displayed on the printed tickets.
2 x Wide	
2 X High	
2 x W/ 2 X H	

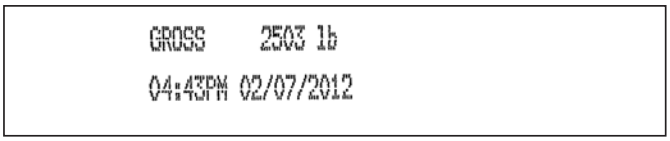
Sample printouts of character config printouts are shown below:



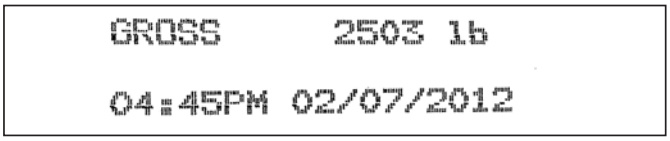
Standard



2X Wide



2X High



2X Wide & 2X High

Figure 4-3. Character Config Example Tickets

4.2.12 Invert Text

Invert Text
Off

Value	Action
Off	No Action
On	Prints inverted text.

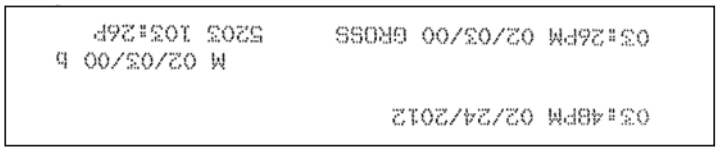


Figure 4-4. Inverted Text

4.2.13 Reverse Feed

Reverse Text
Off

Value	Action
Off	No Action
On	Reversed feed while pritning.

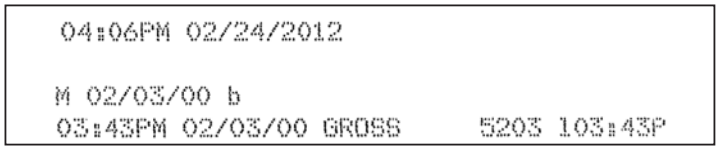


Figure 4-5. Reversed Feed

4.2.14 Fonts

Table 4-1. Available Fonts

Font Name	Example
EBCDIC LQ	GROSS 2503 lb 05:11PM 02/07/2012
OCR-A OQ (Not Available in 2X Wide & 2X High)	GROSS 2503 lb 11:14AM 02/08/2012
OCR-B OQ (Not Available in 2X Wide & 2X High)	GROSS 2503 lb 11:15AM 02/08/2012
ROMAN 8 FD	GROSS 2503 lb 11:17AM 02/08/2012
DEC LA120 DF	GROSS 2503 lb 05:02PM 02/07/2012
DEC LA120 LQ	GROSS 2503 lb 05:04PM 02/07/2012
EBCDIC FD	GROSS 2503 lb 05:07PM 02/07/2012
EBCDIC DF	GROSS 2503 lb 05:09PM 02/07/2012
ML EURO (858) LQ	GROSS 2503 lb 12:30PM 02/08/2012
ML (850) FD	GROSS 2503 lb 12:31PM 02/08/2012
ML (850) DF	GROSS 2503 lb 12:34PM 02/08/2012
ML (850) LQ	GROSS 2503 lb 12:36PM 02/08/2012

Font Name	Example
ROMAN-8 DF	GROSS 2503 lb 11:20AM 02/08/2012
ROMAN-8 LQ	GROSS 2503 lb 11:22AM 02/08/2012
ML EURO (858) FD	GROSS 2503 lb 11:24AM 02/08/2012
ML EURO (858) DF	GROSS 2503 lb 12:27PM 02/08/2012
PC ENGLISH DF	GROSS 2503 lb 01:02PM 02/08/2012
PC ENGLISH LQ	GROSS 2503 lb 01:05PM 02/08/2012
PC LATIN 2 FD	GROSS 2503 lb 01:10PM 02/08/2012
PC LATIN 2 DF	GROSS 2503 lb 01:05PM 02/08/2012
PC LATIN 2 LQ	GROSS 2503 lb 01:12PM 02/08/2012
EPSON FX FD	GROSS 2503 lb 12:38PM 02/08/2012
EPSON FX DF	GROSS 2503 lb 12:39PM 02/08/2012
EPSON FX LD	GROSS 2503 lb 12:41PM 02/08/2012
PC ENGLISH FD	GROSS 2503 lb 12:42PM 02/08/2012

4.3 Security Menu

The **SECURITY MENU** is for system administrators who want to be able to set up a printer and then "lock out" operator changes to the various menus. This method of security may be set independently for the menu areas described below.

When set to **Edit Allowed**, the user is allowed to make changes to any item in that menu section. When set to **View Only**, the operator can look at the settings, but cannot edit, or change the values. When set to **Initialize**, the printer will reset all values in that menu to the factory default values and security will be set back to **Edit Allowed.**

The **SECURITY** menu is more difficult to enter than other menus. To be able to access this menu:

1. Turn the printer off if it is on.
2. Then press and hold ↵ to turn printer on.
3. When printer has powered up, press ↵ to access **SECURITY** menu.

A sample printout of the security menu is shown below:

```
SECURITY MENU
.....
Options Menu: Edit Allowed
Interface Menu: Edit Allowed
```

Figure 4-6. Security Test Menu Example

4.3.1 Options Menu

This item selects whether items in the **OPTIONS** menu can be edited or only viewed by the operator.

Options
Edit Allowed

Value	Action
Edit Allowed*	Allows edits to be made.
View Only	Options can only be viewed by operator.
Initialize	Reset the value of all the items in the options menu to factory default values.

An example of an Options menu ticket is shown below.

```
OPTIONS MENU
.....
Loc,Time,Date: Off
ID Action: Count Up
ID Number:       25
Ticket Out Fault: Off
Ticket Sensor: On
Toledo Interface: Off
Print Mode: Standard
Fairbanks Interface: Off
Eat<LF>after<CR>: Off
High Impact: Off
Reverse Feed: Off
Character Config: Normal
Font: Epson FX FD
```

Figure 4-7. Options Menu Example

4.3.2 Interface Menu

This item selects whether items in the **INTERFACE** menu can be edited or only viewed by the operator.

Interface
Edit Allowed

Value	Action
Edit Allowed*	Allows edits to be made.
View Only	Options can only be viewed by operator.
Initialize	Reset the value of all the items for all interfaces to factory default values.

4.4 Interface Menu

The **INTERFACE** menu is used to configure the various operating modes, current time and date, and ticket ID values of the *TicketPress*. Enter Setup and select the **INTERFACE** menu as describe earlier.

Double Strike
Off

Value	Action
RS-422	Selects whether the standard RS-232 interface or the installed optional interface is active. Data will only be transmitted/received through the active interface.
20 mA Current Loop	
RS-232	

When entering the Interface menu, the first thing that must be done is selection of the communication type. If it is not selected at this time, and a change must be made, it will be necessary to exit and then re-enter the Interface menu to select a different communication type.

This menu item is only available if an optional RS-422 or 20mA Current Loop interface has been installed in the printer. If factory installed, the optional interface will be the default selection.

A sample Interface menu is shown below:

```
INTERFACE MENU
----------------------
Interface: RS-232
Baud Rate: 9600
Data Bits: 8
Stop Bits: 1
Parity: None
DTR: Power On/Off
RTS/CTS: Off
XON/XOFF: Off
ETX/ACK: Off
Auto CR: On
Auto LF: Off
Host FF at TOF: No
Echo: Off
```

Figure 4-8. Interface Menu Example

4.4.1 Baud Rate

Baud Rate 9600

Value	Action
300	Selects the baud rate for the serial interface. This must be set to match the baud rate setting on the host computer.
600	
1200	
2400	
4800	
9600*	
19200	
38400	
57600	
115200	

4.4.2 Data Bits

Data Bits 8

Value	Action
8*	Selects the number of data bits in the serial character frame. This must be set to match the character size setting on the host computer.
7	

4.4.3 Stop Bits

Stop Bits 1

Value	Action
1*	Sets the number of stop bits to be used at the end of the serial character frame. This must be set to match the stop bit setting on the host computer.
2	

4.4.4 Parity

Parity None

Value	Action
None*	Selects the parity checking requirements for the serial data bits. This must be set to match the parity setting on the host computer.
Even	
Odd	

4.4.5 DTR (Data Terminal Ready)

Selects the condition to be reflected by the DTR signal (pin 20 of the RS-232 interface).

DTR Power On/Off

Value	Action
Power On/Off*	In most cases, especially those involving a MODEM, this signal should be set to indicate Power On/Off.
Online/Offline	
Busy/Not Busy	Will cause DTR to indicate a buffer full condition, that there is a printer fault condition, or that the printer is in setup mode and is currently unable to receive data.

4.4.6 XON/XOFF

Value	Display	Action
Off* **on**	XON/XOFF Off	Enables or disables the transmission of the **XON** and **XOFF** characters from the printer to the host to control data flow to the printer. **XOFF** will be sent whenever the printer goes offline or the serial buffer is full, there is a printer fault condition, or that the printer is in setup mode. **XON** will be sent when the printer is again ready to receive characters.

XON/XOFF must be set to "OFF" during weight extraction when in Toledo Mode.

4.4.7 RTS/CTS

Value	Display	Action
RTS/CTS **Off*** **On**	RTS/CTS Off	When set to **On**, this item causes the **RTS** signal to indicate a buffer full condition, that there is a printer fault condition, or that the printer is in setup mode and is currently unable to receive data. If your Host system requires or supports hardware handshaking for data flow control, it may be useful to change this parameter to **ON**. This may apply especially to older Host systems using Full-duplex communications.

4.4.8 Auto CR (Automatic Carriage Return)

This item enables or disables automatic Carriage Returns (CR) whenever a Line Feed (LF) or Form Feed (FF) is received. Defaults to ON in Weight Extraction Mode

Auto CR On

Value	Action
On*	Enables automatic Carriage Returns
Off	Disables automatic Carriage Returns

4.4.9 Auto LF (Automatic Line Feed)

This item enables or disables automatic Line Feeds (LF) when a Carriage Return (CR) is received. Defaults to ON in Weight Extraction Mode

Auto LF Off

Value	Action
On	Enables automatic Line Feeds
Off*	Disables automatic Line Feeds

4.4.10 ECHO (Enabled Data Echo)

This feature may be used to provide error checking at the host system or to relay received data to a second printer or remote display.

Echo
No

Value	Action
On	Received data will be automatically echoed, or retransmitted, on the serial data output pin of the currently selected interface.
Off*	Disables automatic Line Feeds

When using this feature with the 20mA Current Loop interface to passive devices, you must wire the connector as shown for the "20mA Current Loop Interface" on page 30.

4.4.11 Different Operating Modes

Standard Mode - Print from Indicator

- Pins 3 and 7 wired.

Pin	Signal
1	Chassis Ground
2	Transmit Data (Printer output)
3	Receive Data (Printer input)
4	Request To Send (set) (Printer output)
5	Clear To Send (ignored) (Printer input)
6	Data Set Ready (ignored) (Printer input)
7	Ground
8	Carrier Detect (ignored) (Printer input)
11	Print (Open collector output pulsed low when Print is pressed on front panel)
13	Ground
14	+5V
20	Data Terminal Ready (Printer output)

Standard Mode - Print from Indicator or Printer

- Pins 3, 7 & 11 wired.

Pin	Signal
1	Chassis Ground
2	Transmit Data (Printer output)
3	Receive Data (Printer input)
4	Request To Send (set) (Printer output)
5	Clear To Send (ignored) (Printer input)
6	Data Set Ready (ignored) (Printer input)
7	Ground
8	Carrier Detect (ignored) (Printer input)
11	Print (Open collector output pulsed low when Print is pressed on front panel)
13	Ground
14	+5V
20	Data Terminal Ready (Printer output)

5.0 Weight Extraction

This section describes the *TicketPress* data input requirements and the resulting printed output format when the **Print Mode** is set to **Weight Extraction**. There are two modes available.

The information provided by the indictor is sent to the *TicketPress* as data "records" in one of two predefined formats. The expected format is determined by the value of the **Toledo Mode** menu setting. Each format is described below.

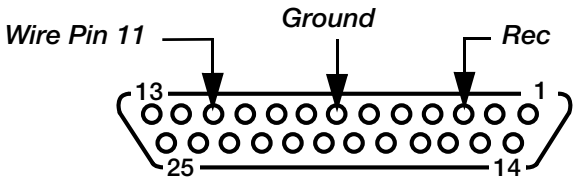
Required Printer settings:

- Ticket out fault - OFF
- Baud rate - 19.2k or below
- XON/XOFF - OFF
- Echo - OFF
- Auto CR/LF and AUTO LF are defaulted to ON

5.1 Weight Extraction - Demand

Print button will control indicator I/O. (Indicator must have Print digital I/O input) I/O goes into active low.

1. Set indicator for Demand.
2. Set Printer for Weight Extraction Demand.
3. CR/LF as last character in serial string.
4. Wire pin 3 & 7 for RS-232(see Wiring for other options).



5.2 Weight Extraction - Echo

Function is used for continuous output to printer and remote display. Print button from printer functional (not indicator).

Indicator Shear

Prints weight extraction demand and interface ECHO on wiring:

2 - Remote Display

3 - Indicator

7 - Remote display and Indicator

5.3 Data Input Record – Toledo Mode = No

Record Format:<STX><POL><WWWWWWWW><UNIT><G/N><S><TERM>

Where:

<STX> = ASCII STX (0x02)
<POL> = Polarity. SPACE (0x20) = Positive, "-" (0x2d) = Negative
<WWWWWWWW> = Weight. 7 character string with digits right justified. No leading zeros except for only one preceding decimal point.
<UNIT> = Unit of measure.
L = Pounds
K = Kilograms
T = Short tons
G = Grams
<SP> (0x20) = OZ, GN, T, LT, TROYOZ, TROYLB, NONE
<G/N> = Gross/Net. G = Gross, N = Net.
<S> = Status. <SPACE> (0x20) = Valid,
I = Invalid, M = Motion,
O = Over/under range
<TERM> = Record terminator. CRLF (0x0d0a), or CR (0x0d), or LF (0x0a)

Note *Software does not allow leading zeros to be spaces, spaces are not accepted in front of data.*

5.4 Data Input Record – Toledo Mode = Yes

Record Format:<STX><SWA><SWB><SWC><WWWWWW><TTTTTT><CR>

XON/XOFF must be set to "OFF" during weight extraction when in Toledo Mode. The checksum must be disabled in the Toledo indicator.

Where: <STX> = ASCII STX (0x02)

<SWA> = Status Word A

Function	Selection	Bit						
		6	5	4	3	2	1	0
Decimal Point or Dummy Zero	X00	0	1	-	-	0	0	0
	X0	0	1	-	-	0	0	1
	X	0	1	-	-	0	1	0
	0.X	0	1	-	-	0	1	1
	0.0X	0	1	-	-	1	0	0
	0.00X	0	1	-	-	1	0	1
	0.000X	0	1	-	-	1	1	0
	0.0000X	0	1	-	-	1	1	1
Increment Size	X = 1	0	1	0	1	-	-	-
	X = 2	0	1	1	0	-	-	-
	X = 3	0	1	1	1	-	-	-

<SWB> = Status Word B

Selection	Bit						
	6	5	4	3	2	1	0
Gross	-	1	-	-	-	-	0
Net	-	1	-	-	-	-	1
≥ 0	-	1	-	-	-	0	-
< 0	-	1	-	-	-	1	-
Within Capacity	-	1	-	-	0	-	-
Over Capacity	-	1	-	-	1	-	-
No Motion	-	1	-	1	-	-	-
Motion	-	1	-	1	-	-	-
lb	-	1	0	-	-	-	-
kg	-	1	1	-	-	-	-
Zeroed	0	1	-	-	-	-	-
Power Up Not Zeroed	1	1	-	-	-	-	-

<SWC> = Status Word C

Selection	Bit						
	6	5	4	3	2	1	0
No Print Request	-	1	-	0	0	0	0
Print Request	-	1	-	1	0	0	0
Weight	-	1	0	-	0	0	0
Expanded Weight	-	1	1	-	0	0	0
Manual tare in lb	0	1	-	-	0	0	0
Manual tare in kg	1	1	-	-	0	0	0

<WWWWWWWW> = Displayed weight. Six digits, no decimal point or sign
Non-significant leading zeros are replaced with spaces in lb weight unit mode.

<TTTTTT> = Tare Weight. Six digits, no decimal point or sign.

<CR> = Carriage Return (0 x 0d)

5.5 Printed Output

After a valid **Weight Extraction** mode record as described above has been received, the printer will print a single line formatted as follows.

The weight and units values are as received from the indicator. The time, date, and ticket ID are supplied according to the *TicketPress* configuration.

Printer output: **WWWWWWW UU HH:MM xM MM/DD/YY CCCCCCCC CRLF**

Where:

WWWWWWW = Weight

UU = Units (lb or kg)

HH:MM = Time – 12 or 24 hour format depending on Location setting.

xM = AM or PM – Only printed if Location = US.

MM/DD/YY = Date if Location = US. DD/MM/YY if Location = Intl.

CCCCCCCC = ID Code.

CRLF = Carriage Return/Line Feed.

The **WeightExAlign** menu will print the ticket out in the format selected.

Value	Action
TicketPress*	Alignment at the margin. (Default)
SP2200	Alignment with offset.

Note ***This menu is only visible when the Weight Extraction mode is set to ON.***

6.0 RS-422 And 20mA Current Loop Interfaces

The *TicketPress* is supplied with a standard RS-232 serial interface. It may also be equipped with an optional RS-422 or 20mA Current Loop interface. If an optional interface was factory installed, it will be selected as the currently active interface and the RS-232 interface will be ignored. To change which interface is active, refer to the configuration section on page .

If you have purchased the RS-422 or 20mA Current Loop interface after purchasing your *TicketPress*, the following instructions describe how to install the interface. If the interface is already installed, the description for each interface follows the installation instructions.

6.1 Optional Interface Installation

WARNING ***To avoid electrical shock, turn printer off and unplug before installing optional interface.***

To install either an RS-422 or a 20mA Current Loop interface, perform the following steps.

Note ***The* TicketPress *and the optional interfaces contain devices that may be damaged by static electricity discharge. Please follow common static protection procedures. Damage caused by static discharge is not covered by the* TicketPress *warranty.***

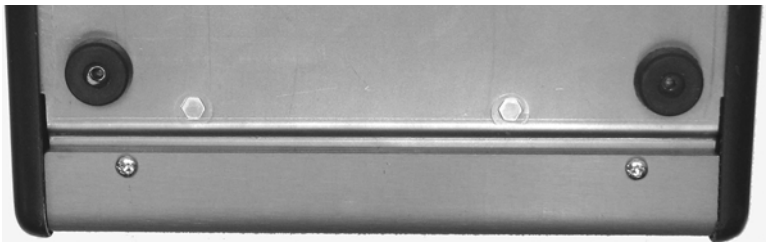


Figure 6-1. Cover Screws on Bottom of Printer

1. Turn the printer upside down and remove the two cover screws near the front of the printer.

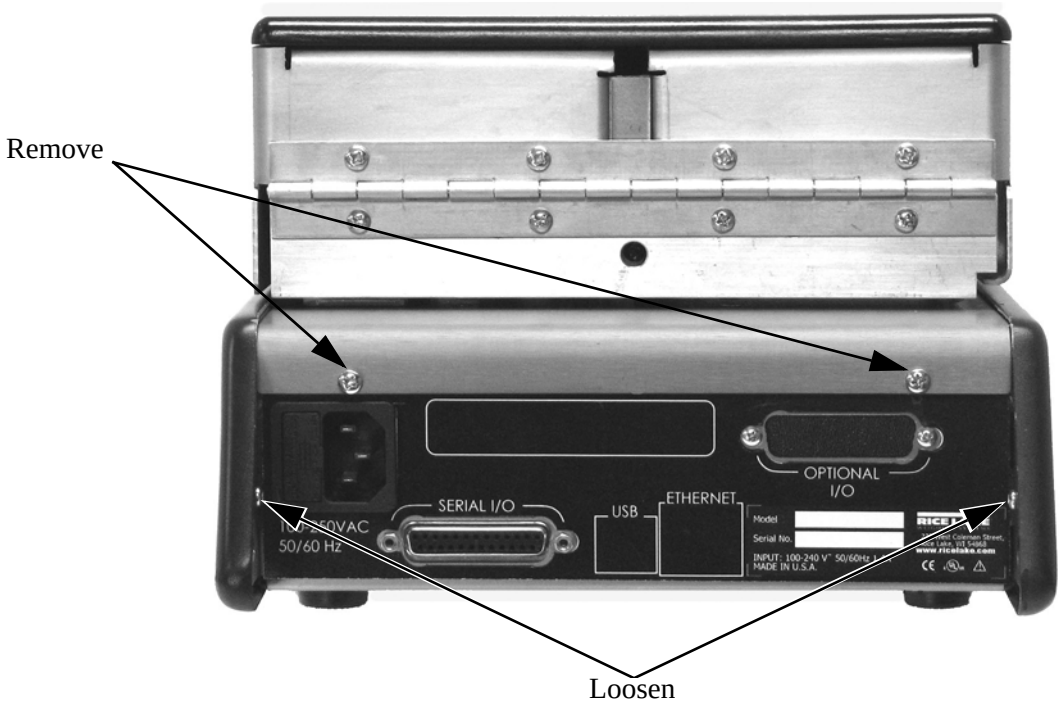


Figure 6-2. Cover Screws on Bottom of Printer

2. Remove the two cover screws on the back of the printer.
3. Loosen the two side screws.

Figure 6-3. Removing Printer Top Cover

4. Spread the sides away from the center of the printer, then lift the rear of the cover and rotate it off the base of the printer. Lay the top cover to the side of the base as shown below.

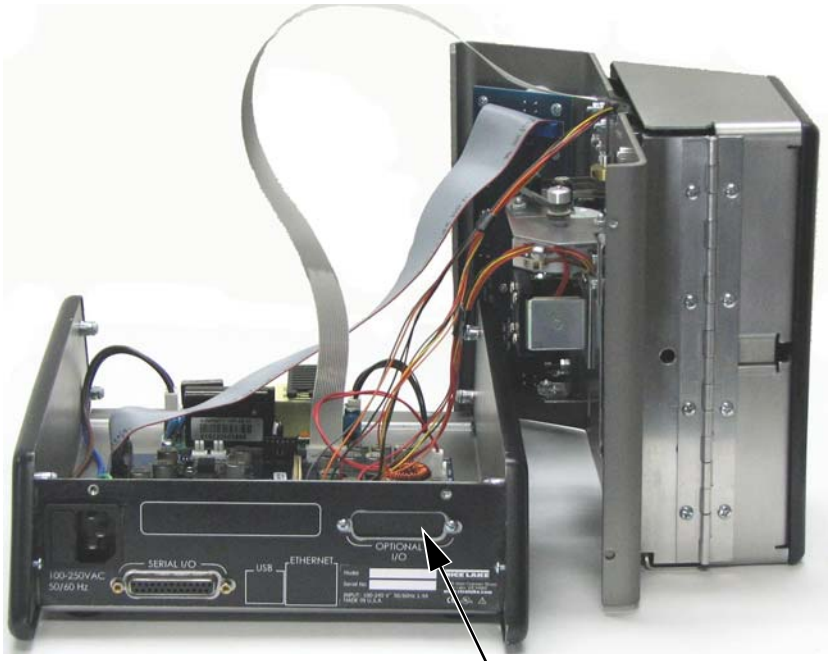


Figure 6-4. Optional Interface Blank Cover

5. Remove the two screws and blank cover at the optional I/O mounting position.

.

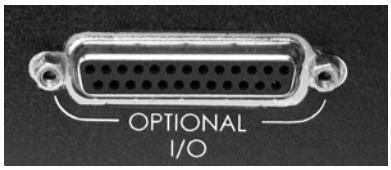


Figure 6-5. Interface Mounted

6. Remove the interface from its packaging and mount it with the two jack screws provided.

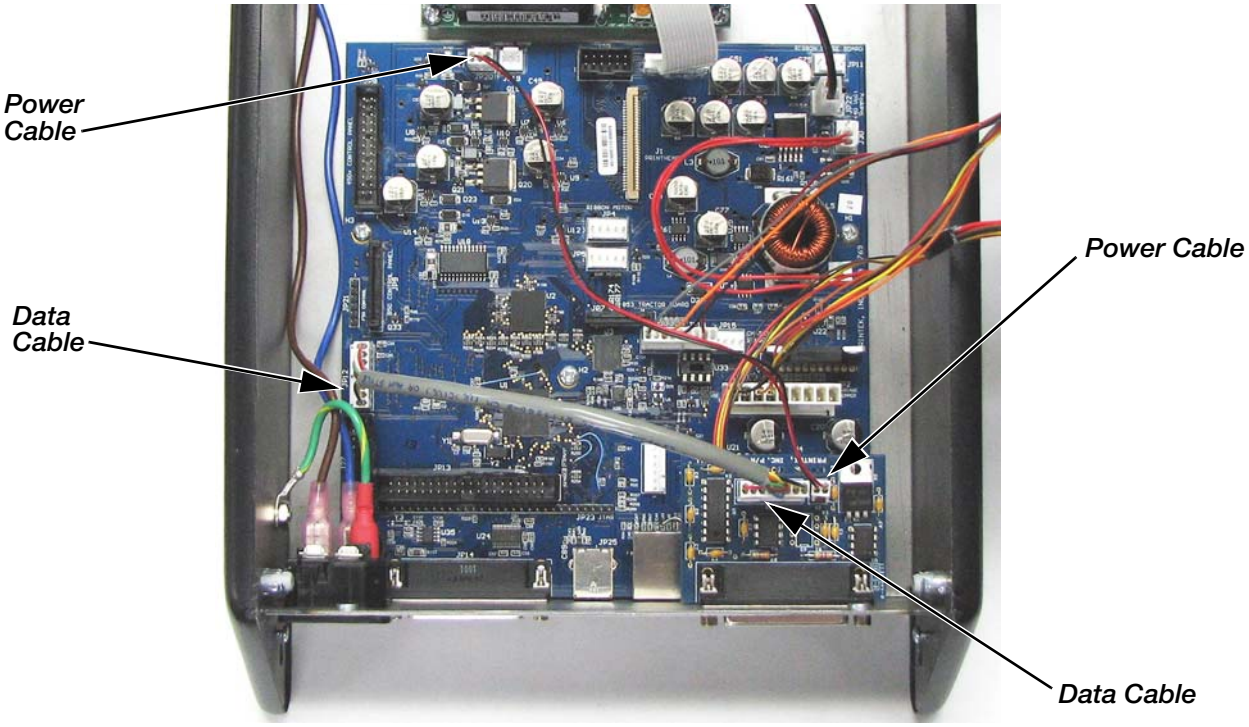


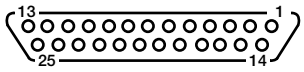
Figure 6-6. I/O Cable Connections

7. Connect either end of the data cable to the large connector on the interface circuit board.
8. Connect the other end of the cable to connector JP12 on the main logic board.
9. If installing a 20mA Current Loop interface, connect the end of the power cable with the two pin connector to the two pin connector on the interface circuit board. Connect the end with the three pin connector to JP20 on the main logic board. (This cable is not used for the RS-422 interface.)
10. Reinstall the cover by reversing the steps above.
11. Before connecting the interface cable, connect power to the printer and configure the interface settings as required to match the host device. Refer to the “Interface Menu” on page 19.
12. Make sure the host cable connector is wired as described in the appropriate section below and connect the cable to the printer.

6.2 RS-422 Interface

When pre-installed at the factory, the default configuration for this interface is as follows. To modify these settings, refer to "Interface Menu" on page 19.

Interface Menu Item	Value
Interface	RS-422
Baud Rate	9600
Data Bits	8
Stop Bits	1
Parity	None
DTR	Power On/Off
XON/XOFF	Off
ETX/ACK	Off
RTS/CTS	Off
Auto CR	Off
Auto LF	Off
Echo	Off



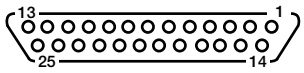
Pin	Signal	
1	Chassis ground	
4	+ 5V (through 4700 Ω resistor)	
5	CTS (RS-232 level)	
9	+ In	Green
10	– In	White
11	Print (Open collector output pulsed low when Print is pressed on front panel)	Yellow
13	Ground	
14	+5V	
18	+ Out	
19	– Out	
20	DTR (RS-232 level)	

RS-422 Serial Interface Connector

6.3 20mA Current Loop Interface

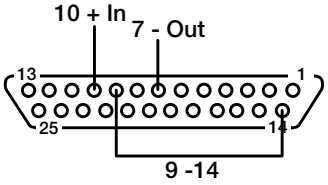
When pre-installed at the factory, the default configuration for this interface is as follows. To modify these settings, refer to the "Interface Menu" on page 19 .

Interface Menu Item	Value
Interface	Current Loop
Baud Rate	9600
Data Bits	8
Stop Bits	1
Parity	None
DTR	Power On/Off
XON/XOFF	Off
ETX/ACK	Off
RTS/CTS	Off
Auto CR	Off
Auto LF	Off
Echo	Off

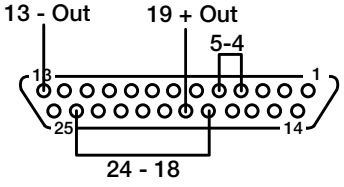


Pin	Signal	Cable Part # 130213
1	Chassis ground	
4	+ 5V (through 4700 Ω resistor)	
5	CTS (RS-232 level)	
7	Ground	
9	+ In	Green
10	– In	White
11	Print (Open collector output pulsed low when Print is pressed on front panel)	Yellow
13	Ground	
14	+5 V	
18	+ Out	
19	– Out	
20	DTR (RS-232 level)	
24	+ 9V (through 330 Ω resistor)	
25	+ 9V	

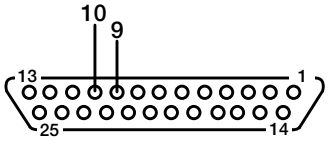
20mA Current Loop Serial Interface Connector



Active 20mA Current Loop



Active 20mA Current Loop
Echo Output



Passive

7.0 Maintenance And Troubleshooting

7.1 Fault Messages

There are two types of faults that may occur.

- "Recoverable" faults are those where printing has been interrupted, but which may be corrected in a way that allows printing to continue.
- "Fatal" faults are those where the printer cannot necessarily resume printing the correct data and/or in the correct print position. Fatal faults require the printer to be turned off to clear the fault, thus resulting in potential data loss.

Whether the fault is recoverable or fatal is indicated with the possible cause.

Fault Message	Possible Cause	Possible Solution
Ticket Out	Ticket Not Inserted Properly (Recoverable)	Make sure the ticket is inserted so the right edge is aligned with the ticket edge guide, and that it is inserted far enough that the top edge of the ticket is past the print line indicator on the left side of the printer. Once the ticket is positioned properly, press PRINT to resume printing. The printer will either continue from where printing was interrupted or will begin printing at the beginning of the ticket depending on how **Ticket Fault** is set in the "Options Menu" on page 9.
	Ticket Sensor Not Functioning (Fatal)	Disable the ticket sensor as described in the "Options Menu" on page 9. This is not recommended as a permanent solution since printing without a ticket installed will cause additional wear to the print head and will transfer ink to the platen (and the back of subsequent tickets). This solution should only be used until the printer can be repaired.
Head Blocked?	Print Head Cannot Move (Fatal)	Ticket is wrinkled or too thick and prevents the print head from moving. Insert a new ticket. Check print head area for other debris or obstructions.
I/O Overflow	Interface Configuration (Fatal)	Disconnect the interface cable (to prevent continuing errors caused by data being sent from the indicator). Review the settings in the to make sure handshaking parameters set in the printer and the host system match each other. Make sure interface cable is wired correctly.
I/O Parity Error	Interface Configuration	Disconnect the interface cable (to prevent continuing errors caused by data being sent from the indicator). Review the settings in the to make sure handshaking parameters set in the printer and the host system match each other.

7.2 Preventive Maintenance

The *TicketPress* is designed for harsh environments requires very little preventive maintenance. It is only suggested that you periodically clear out any excessive paper dust, paying particular attention to cleaning the ticket. The ticket sensor and surrounding area may be cleaned with a short blast from a can of compressed air.

DO NOT OIL any shafts or bearings. These surfaces are designed to operate without lubrication. Applying any type of lubrication will cause premature failure and will not be covered by warranty.

The outer case of the printer may be wiped with a slightly dampened if desired.

Figure 7-1. Ticket Sensor

8.0 Printer Commands

8.1 Communications

This section describes various methods of controlling the flow of data to and from the printer. Unlike other sections describing printer commands, the descriptions in this section indicate whether the command is one that is “received” by the printer, or “transmitted” by the printer.

Note that some handshaking methods are only supported by the RS-232 Serial interface and are not supported for the IrDA, Bluetooth, or Wi-Fi interfaces.

8.2 Print Position Commands

Line Feed (Ctrl J) LF

Causes the current line to be printed, and then advances the ticket one line. If **Auto CR** is set to **On** in the interface setup menu, a carriage return will also be performed.

Control code: **LF**
Hexadecimal: **0A**

Vertical Tab (Ctrl K) VT

Causes a Carriage Return and Line Feed (CRLF) to be performed

Control code: VT
Hexadecimal: 0B

Form Feed (Ctrl L) FF

(Must use Ctrl L with Ctrl K)

Causes _____

Control code: **FF**
Hexadecimal: **0C**

Carriage Return (Ctrl M) CR

Causes the current line to be printed, and then sets the current print position to the left margin. If **Auto LF** is set to **On** in the interface setup menu, a line feed will also be performed.

Control code: **CR**
Hexadecimal: **0D**

Toggle Wide Print (Ctrl W)

Causes print to change to 2xWide and 2xHigh.

Control code: **ETB**
Hexadecimal: **17**

Toggle High Print (Ctrl T)

Causes print to change to 2X High

Control code: **ETB**
Hexadecimal: **14**

Request Time & Date (Ctrl V) SYN

Causes _____ ***

Control code: **SYN**
Hexadecimal: **16**

8.3 Control Character Commands

The following table shows the key combinations used by IBM-compatible devices to enter control codes for the *Ticket Press*. The table lists the decimal and hexadecimal values of the control codes, ASCII character designation, and the command issued to the *Ticket Press* by the control code.

Dec	Hex	ASCII	Key Combination	Command
10	0A	LF	Ctrl-J	Line Feed
11	0B	VT	Ctrl-K	Print and Return (Automatic Line Feed)
13	0D	CR	Ctrl-M	Carriage Return (End of Field Data; Print Buffer Contents)
20	14	DC4	Ctrl-T	Toggle High Print 2xH
22	16	SYN	Ctrl-V	Request Time and Date
23	17	ETB	Ctrl-W	Toggle Weight to 2xWde and 2xHigh.
26	1A	SUB	Ctrl-Z	Clears Buffer - Requires Power Cycle

8.4 ASCII Character Table

Dec	Hex	ASCII
0	00	NUL
1	01	SOH
2	02	STX
3	03	ETX
4	04	EOT
5	05	ENQ
6	06	ACK
7	07	BEL
8	08	BS
9	09	HT
10	0A	LF
11	0B	VT
12	0C	FF
13	0D	CR
14	0E	SO
15	0F	SI
16	10	DLE
17	11	XON
18	12	DC2
19	13	XOFF
20	14	DC4
21	15	NAK
22	16	SYN
23	17	ETB
24	18	CAN
25	19	EM
26	1A	SUB
27	1B	ESC
28	1C	FS
29	1D	GS
30	1E	RS
31	1F	US

Dec	Hex	ASCII
32	20	SP
33	21	!
34	22	“
35	23	#
36	24	$
37	25	%
38	26	&
39	27	'
40	28	(
41	29	)
42	2A	*
43	2B	+
44	2C	,
45	2D	-
46	2E	.
47	2F	/
48	30	0
49	31	1
50	32	2
51	33	3
52	34	4
53	35	5
54	36	6
55	37	7
56	38	8
57	39	9
58	3A	:
59	3B	;
60	3C	<
61	3D	=
62	3E	>
63	3F	?

Dec	Hex	ASCII
64	40	@
65	41	A
66	42	B
67	43	C
68	44	D
69	45	E
70	46	F
71	47	G
72	48	H
73	49	I
74	4A	J
75	4B	K
76	4C	L
77	4D	M
78	4E	N
79	4F	O
80	50	P
81	51	Q
82	52	R
83	53	S
84	54	T
85	55	U
86	56	V
87	57	W
88	58	X
89	59	Y
90	5A	Z
91	5B	[
92	5C	\
93	5D	]
94	5E	^
95	5F	_

Dec	Hex	ASCII
96	60	`
97	61	a
98	62	b
99	63	c
100	64	d
101	65	e
102	66	f
103	67	g
104	68	h
105	69	i
106	6A	j
107	6B	k
108	6C	l
109	6D	m
110	6E	n
111	6F	o
112	70	p
113	71	q
114	72	r
115	73	s
116	74	t
117	75	u
118	76	v
119	77	w
120	78	x
121	79	y
122	7A	z
123	7B	{
124	7C	|
125	7D	}
126	7E	~
127	7F	DEL

8.5 Selected Replacement Parts

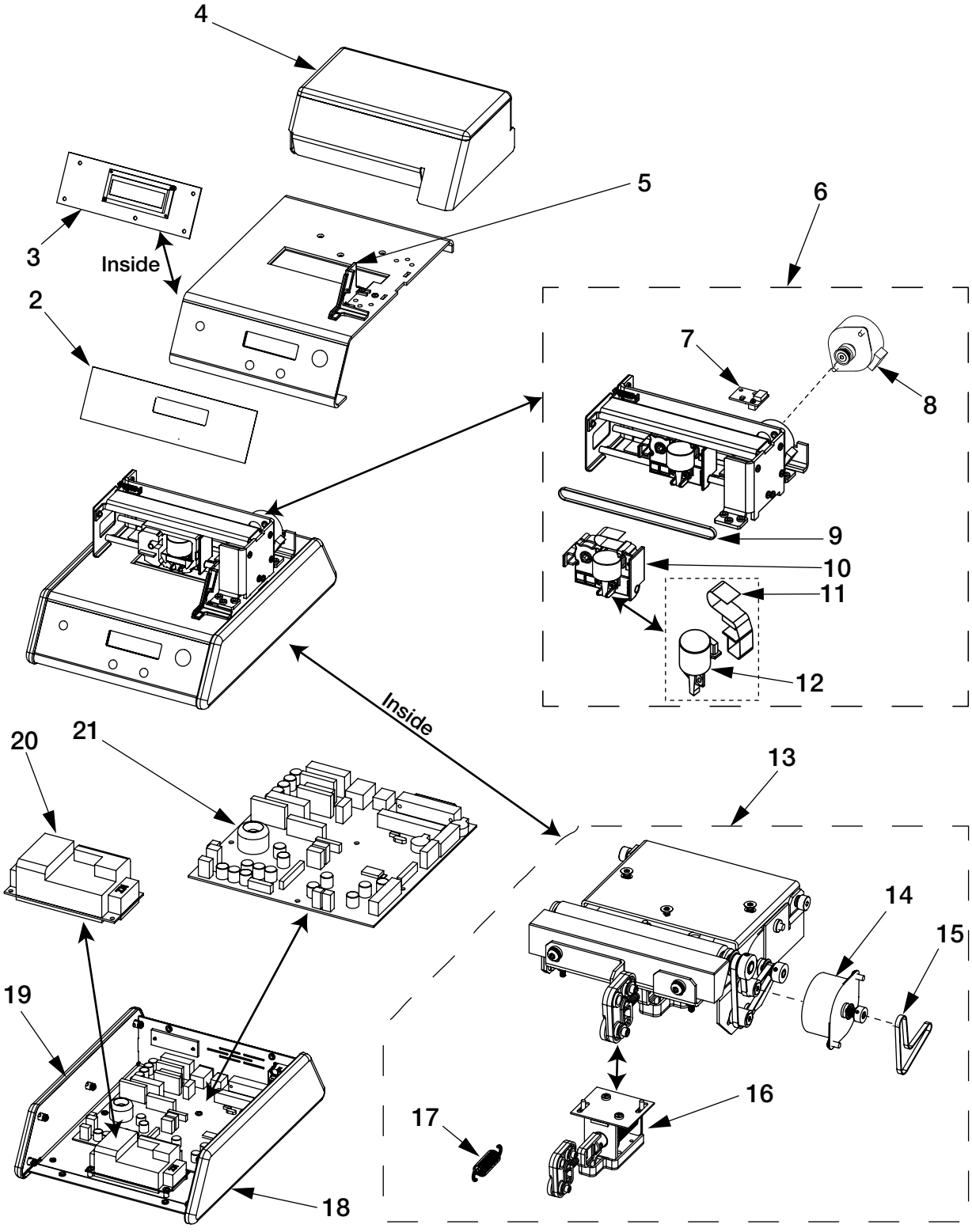


Figure 8-1. Selected Replacement Parts

Table 8-1. Selected Replacement Parts

Item #	Part #	Part #	Description	Comments
Accessories				
	128030	92658	RS-422 Interface, TicketPress	
	128029	92659	20mA Interface, TicketPress	
	128031	92660	Ribbon, TicketPress	
Major Components				
2	130514	92674	Overlay, Control Panel, TP	
5	130518	92673	Paperguide, TP	
8	130509	92665	Carriage Motor, TP	
9	130516	92671	Belt, Carriage drive, TP	
11	130515	92669	Cable, Printhead, TP	
12	130510	92670	Printhead, TP	
14	130506	92661	Paper Motor, TP	
15	130513	92675	Belt, Paper drive, TP	
16	130508	92662	Paper Drive Solenoid, TP	
17	130517	92672	Spring Extension, TP	
18	130511	92677	End Cap Right, TP	
19	130512	92676	End Cap Left, TP	
20	130507	92678	Power Supply 24V, TP	
NS	130519	92680	1.6A fuse Slow 250 Vac, TP	
NS	130520	92681	Battery, Main board memory backup, TP	
Major Assemblies - Some of these are offered for repair convenience, and embody one or more high value components from Service Component list				
3	130527	92664	Control Panel, TP	
4	130523	92666	Cowl, TP	
6	130521	92667	Print Mechanism, TP	Includes Items 7-11
7	130526	92682	Home Paper Sensor, TP	
10	130522	92668	Carriage Assembly, TP	
13	130524	92663	Paper Drive Assbly, TP	Includes Items 14-17
21	130525	92679	PWA Mainboard, TP	

Indicator Connection Set-up Samples

120 Plus Indicator

The *Ticket Press* can be connected to the 120 indicator at baud rates of 300 to 19200 bps. Communications cable connections are made to the terminal blocks in the 120 as shown in the following tables.

For connections not using hardware handshaking (CTS/DTR), install a jumper between pins 4 and 5 on the printer end of the serial cable.

120 Indicator - Port 1 - EDP		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
1	TxD	3	RxD
5	GND (Signal Ground)	7	GND (Signal Ground)

Table 8-2. RS-232 Connections

120 Indicator - Printer Port		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
5	-20mA OUT	9	-20mA IN
9	+20mA OUT	10	+20mA IN

Table 8-3. 20 mA Connections

120 Indicator - Printer Port		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
5	RS-422 OUT	9	RS-422 IN
9	RS-422 OUT	10	RS-422 IN

Table 8-4. RS-422 Connections

420 Plus Indicator

The *Ticket Press* can be connected to the 420 indicator at baud rates of 300 to 19200 bps. Communications cable connections are made to the terminal blocks in the 420 as shown in the following tables.

For connections not using hardware handshaking (CTS/DTR), install a jumper between pins 4 and 5 on the printer end of the serial cable.

420 Indicator - Port 1 - EDP		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J4-1	TxD	3	RxD
J4-3	GND (Signal Ground)	7	GND (Signal Ground)

Table 8-5. RS-232 Connections

420 Indicator - Printer Port		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J4-5	-20mA OUT	9	-20mA IN
J4-4	+20mA OUT	10	+20mA IN

Table 8-6. 20 mA Connections

420 Indicator - Printer Port		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J4-5	-RS-422 OUT	9	-RS-422 IN
J4-4	+RS-422 OUT	10	+RS-422 IN

Table 8-7. RS-422 Connections

920i Indicator

The *Ticket Press* can be connected to the 920i indicator at baud rates of 300 to 115200 bps. Communications cable connections are made to the terminal blocks in the 920i as shown in the following tables.

For connections not using hardware handshaking (CTS/DTR), install a jumper between pins 4 and 5 on the printer end of the serial cable.

920i Indicator - Port 4 - EDP		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J10-3	TxD	3	RxD
J10-1	GND (Signal Ground)	7	GND (Signal Ground)

Table 8-8. RS-232 Connections

920i Indicator - Port 4		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J10-1	-20mA OUT	9	-20mA IN
J10-4	+20mA OUT	10	+20mA IN

Table 8-9. 20 mA Connections

920i Indicator - Port 4		*Ticket Press* Printer	
Pin	**Description**	**Serial Port Pin**	**Description**
J10-5	-RS-422 OUT	9	-RS-422 IN
J10-6	+RS-422 OUT	10	+RS-422 IN

Table 8-10. RS-422 Connections

Specifications

Printing Characteristics

Line Length:	3.33”, 40 Characters at 12 characters per inch
Print Speed:	200 characters per second
Character Set:	Full 128 ASCII Character Set
Character Attributes:	Double High/Wide, Double Strike, Reverse Printing
Ticket Thickness Control:	Automatic

Ribbon

Ribbon:	Ink Cartridge, 3 Million Characters

Ticket Handling

Friction Feed:	Forward or Reverse Printing
Ticket Thickness:	Up to five parts, 0.025” maximum

Communications

Standard:	RS-232, 300 – 115200 Baud
Optional:	RS-422, 20mA Current Loop
Input Buffer Size:	32K bytes.

Operator Controls/Indicators

Normal Operating Mode

Indicators:	Power, Fault; 2x16 character LCD for current status and fault descriptions.
Controls:	Power, Print (signals remote weigh indicator)

Setup Mode

Indicators:	2x16 character LCD
Controls:	Enter (Select), Increment Value
Setup Features:	Options menu for printing and device parameters, Interface Menu for setting all I/O parameters, and Security Menu for disabling changes to user menus.

Reliability

MTBF:	10,000 hours on electronics, 100% duty cycle.

Warranty

Printer:	One year limited warranty for defects in materials and/or workmanship.
Print Head:	500 million draft equivalent character life. One year limited warranty for defects in materials and/or workmanship.

Environmental Specifications

Power requirements:	100-250 VAC, 50-60 Hz, 1.4A Autoswitching
Power consumption:	18 W non-printing, 60 W printing
Audible noise:	≤55 dBA
Operating Temperature:	14°F to 104°F (-10°C to 40°C)
Relative Humidity:	20% to 80% non-condensing
Physical Size:	6.25 in H x 8.8 in W x 12.38 in L (158.75mm H x 223.52mm W x 314.45mm L)
Weight:	10.6 lbs (4.8 kg)

Specifications subject to change without notice.

Glossary Of Terms

ASCII	American Standard Code for Information Interchange.
baud rate	The bit rate at which characters are transmitted over a serial interface.
binary	Base two numbering system. Digits are represented by the characters 0 and 1.
bit	A single binary digit.
control code	A single, non-printing character, which is used to control the configuration or operation of the printer.
character pitch	The horizontal spacing of characters. Measured in cpi.
cpi	Characters-per-inch.
cps	Characters-per-second.
current line	The line upon which the next character will be printed.
current print position	The column on the current line where the next character will be printed.
default	Value or configuration that is assumed when the printer is turned on or reset.
escape sequence	String of characters beginning with the escape (ESC) character, which is used to control the configuration or operation of the printer. The characters, which are part of this string, are not printed.
font	A group of characters of a given shape or style.
hexadecimal	Base sixteen numbering system. Digits are represented by the characters 0 through 9 and A through F.
interface	Generally refers to the connection between the printer and the host computer. May also be used in reference to the user interface at the control panel of the printer.
LCD	Liquid-Crystal Display.
LED	Light-Emitting Diode.
line pitch	The vertical spacing of characters. Measured in lpi.
lpi	Lines-per-inch.
parity	A method used for detecting errors within a single character transmitted or received via an interface.
reset	Initialization of various operating parameters of the printer to the value or state assumed when the printer is powered on (default values).

TicketPress Limited Warranty

Rice Lake Weighing Systems (RLWS) warrants that all RLWS equipment and systems properly installed by a Distributor or Original Equipment Manufacturer (OEM) will operate per written specifications as confirmed by the Distributor/OEM and accepted by RLWS. All systems and components are warranted against defects in materials and workmanship for one year.

RLWS warrants that the equipment sold hereunder will conform to the current written specifications authorized by RLWS. RLWS warrants the equipment against faulty workmanship and defective materials. If any equipment fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such nonconformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Individual electronic components returned to RLWS for warranty purposes must be packaged to prevent electrostatic discharge (ESD) damage in shipment. Packaging requirements are listed in a publication, *Protecting Your Components From Static Damage in Shipment*, available from RLWS Equipment Return Department.
- Examination of such equipment by RLWS confirms that the nonconformity actually exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair or improper testing; RLWS shall be the sole judge of all alleged non-conformities.
- Such equipment has not been modified, altered, or changed by any person other than RLWS or its duly authorized repair agents.
- RLWS will have a reasonable time to repair or replace the defective equipment. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment, nor will RLWS be liable for the cost of any repairs made by others.

These warranties exclude all other warranties, expressed or implied, including without limitation warranties of merchantability or fitness for a particular purpose. Neither RLWS nor distributor will, in any event, be liable for incidental or consequential damages.

RLWS and buyer agree that RLWS's sole and exclusive liability hereunder is limited to repair or replacement of such goods. In accepting this warranty, the buyer waives any and all other claims to warranty.

Should the seller be other than RLWS, the buyer agrees to look only to the seller for warranty claims.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.

RICE LAKE WEIGHING SYSTEMS • 230 WEST COLEMAN STREET • RICE LAKE, WISCONSIN 54868 • USA

For More Information

Web Site

• Frequently Asked Questions (FAQs) at
http://www.ricelake.com/faqs.aspx

Contact Information

Hours of Operation

Knowledgeable customer service representatives are available 6:30 a.m. - 6:30 p.m. Monday through Friday and 8 a.m. to 12 noon on Saturday. (CST)

Telephone

• Sales/Technical Support 800-472-6703
• Canadian and Mexican Customers 800-321-6703
• International 715-234-9171

Immediate/Emergency Service

For immediate assistance call toll-free 1-800-472-6703 (Canadian and Mexican customers please call 1-800-321-6703). If you are calling after standard business hours and have an urgent scale outage or emergency, press 1 to reach on-call personnel.

Fax

Fax Number 715-234-6967

Email

• US sales and product information at
prodinfo@ricelake.com
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