920i Short Axle Weighing

Software Application
Version 1.02

Operation Manual

iRite

RICE LAKE®
WEIGHING SYSTEMS

PN 153211 Rev A

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1.0 Introduction

The *920i*® Short Axle Weighing (PN SZ99998) with custom programming will be interfaced to a short axle scale and will direct each axle across the scale using traffic lights.

Note *After a successful download the 920i needs to be power cycled.*

2.0 Operation

System displays the ***Enter ID***, ***Reprint,*** and ***Setup Menu*** softkeys when it powers up or when it exits the configuration or setup menus.

Note *The scale should have no weight on it and the display should be at 0 and have a **GREEN** light if traffic or Laserlight® is used.*

If a Stop n Go Laserlight is being used a serial command will be sent to port 4 (Laserlight).

1. Press the ***Enter ID*** softkey and enter the Truck ID (optional).
2. Driver pulls the axle onto the scale exceeding the configurable **Axle Threshold** (defaulted to 1000 lb).
3. The system performs the following actions:
   - Traffic Light changes to **RED**
   - Captures the stable axle weight
   - Displays ***Axle X Captured*** (X = the axle number being weighed)
4. System waits for **Red Light On Time** (defaulted to 3 seconds) to expire before changing the light to **GREEN**.
5. Driver pulls ahead until the current axle is off the scale and the next axle is on the scale.
6. When the weight changes by ± the **Delta Weight** lbs (defaulted to 500 lb) more/less than the previous axle weighment the system starts waiting for standstill.
7. The axle is captured and the **Axle Delay** will start (defaulted to 5 seconds).
8. System repeats steps 2-7 until the 15th axle is weighed, the configurable **Last Axle Timer** (defaulted to 20.0 seconds) is expired or the ***Finalize Ticket*** softkey is pressed, at which point the system prints a weigh ticket.

Note

- *Maximum number of axles is 15*
- *The **PRINT** key will print the standard Gross Format (see Figure 3-1) to the TM-U295 on Port 3.*
- *Port 4 will be setup up for LFT streaming to a Remote Display.*
- *The **Reprint** softkey allows the operator to reprint the last ticket.*
- *A transaction will be stored with the truck ID, each axle weight and the total weight and time/date and optional truck ID (if entered).*

3.0 Serial Communications

The outbound weigh ticket will be transmitted out Port 3 to a TM-U295. The formats can be modified through the *920i* front panel or using a PC application called *i-Rev*™.

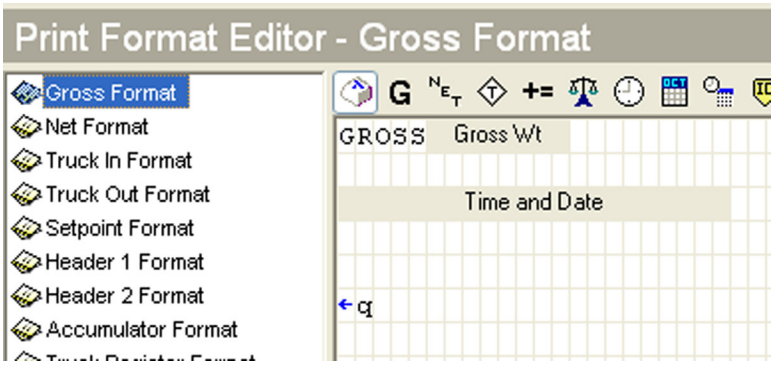

Figure 3-1. Print Format Editor

RLWS
1234

AXLE # 1 : 13780 lb
AXLE # 2 : 10580 lb
AXLE # 3 : 14540 lb
AXLE # 4 : 7920 lb

TOTAL 46820 lb

Printed @ 10:34PM 09/28/2010

Figure 3-2. Ticket Sample

3.1 Auxiliary Format 1

Used to print header information.

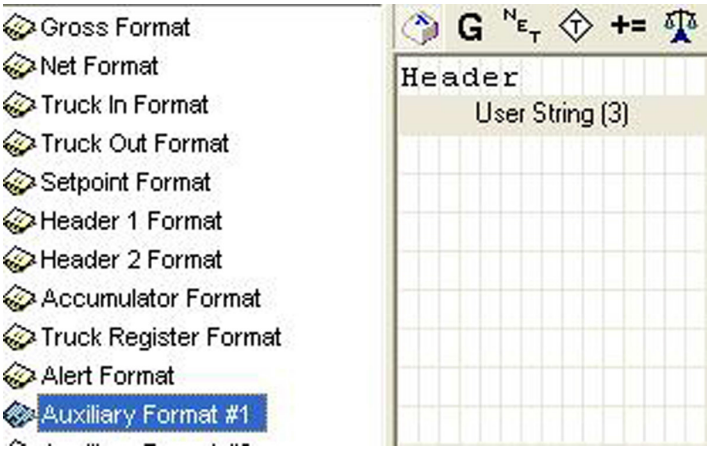

Figure 3-3. Auxiliary Format 1

Note *User String 3 is the optional Truck ID*

3.2 Auxiliary Format 2

Used to print detail information.

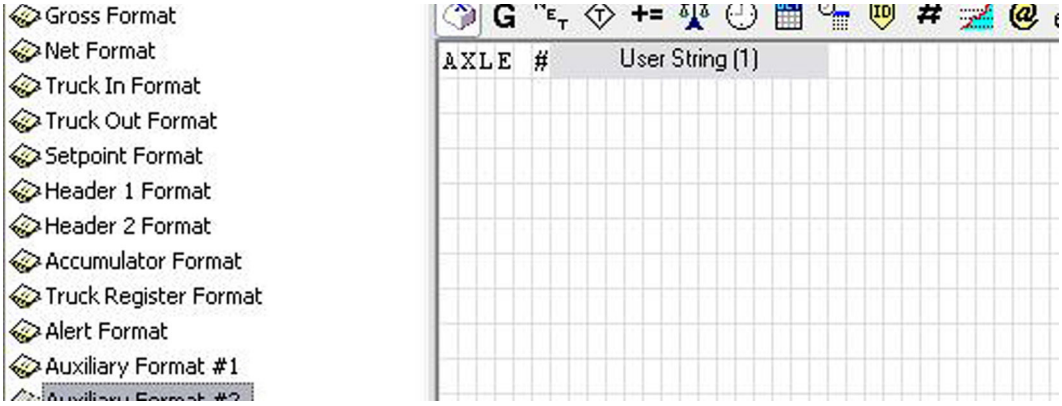

Figure 3-4. Auxiliary Format 2

3.3 Auxiliary Format 3

Used to Print Total Information.

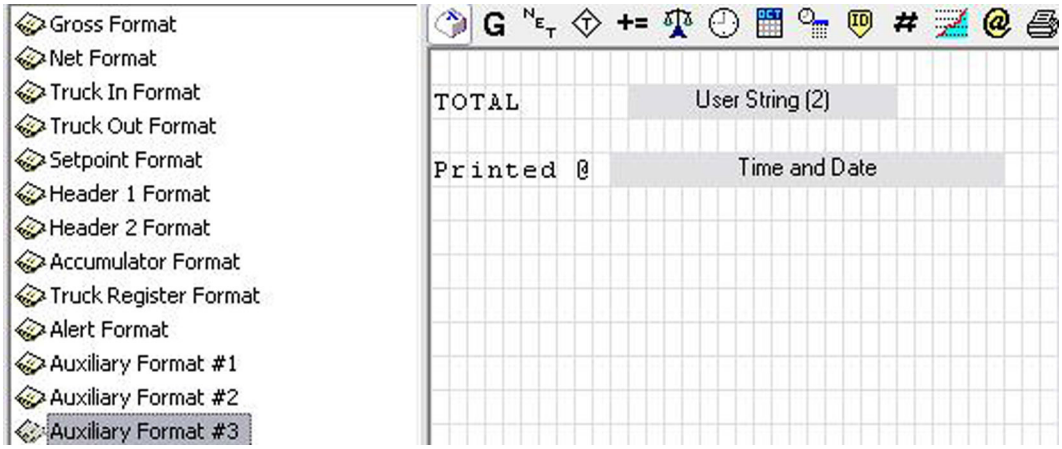

Figure 3-5. Auxiliary Format 3

4.0 Modifying the Database Tables

A PC program called iNterchange can be used by the end-user to upload, export and clear the database tables. The exported file may be saved as a delimited text file, an Excel spreadsheet, or as a XML document. *i-Rev*™ may also be used to perform database maintenance.

4.1 Application Setup & Configuration

The ***Setup Menu*** softkey is password-protected and offers access to the following:

- Display Program Name & Version
- Display a weight widget

Parameter	Default	Softkey	Description
System Time and Date	Current	Time/Date	Time and date of 920i
System Password	none	Setup Password	Changing the password that is required for entry into the Setup menu. Setting the password to nothing will cause the system to not prompt for a password when the [Setup Menu] softkey is pressed.
Axle Threshold	1000 lb	Axle Threshold	The amount of weight the scale must exceed to trigger a weighment.
Last Axle Time	20.0 sec	Last Axle Time	Maximum length of time the system will wait for another axle. If the timer is satisfied, the transaction is complete.
Delta Weight	500 lb.	Delta Weight	Minimum weight change the indicator must see in order to recognize another axle.
Axle Delay	5.0 sec	Axle Delay	The delay between axles.
Red Light On Time	3.0 sec	Red Light On Time	Time the red light stays on before switching to green to prompt the driver for the next axle.
Clear Transactions	-	Clear Trans DB	Clear Transaction database with a Yes/No option.
USB Upload/ Download	-	USB Options	920i standard USB softkey. Please reference the 920i Installation manual for more details (920i USB required).
Contrast Key	-	USB Options	920i standard Contrast softkey. Please reference the 920i Installation manual for more details (920i USB required).

Table 4-1. Setup Menu Parameters

4.2 Database Table

Field	Type	Description
ID	String	Truck Id – 16 alphanumeric
Axle1	Real	Axle 1 weight
Axle2	Real	Axle 2 weight (if applicable)
Axle3	Real	Axle 3 weight (if applicable)
Axle4	Real	Axle 4 weight (if applicable)
Axle5	Real	Axle 5 weight (if applicable)
Axle6	Real	Axle 6 weight (if applicable)
Axle7	Real	Axle 7 weight (if applicable)
Axle8	Real	Axle 8 weight (if applicable)
Axle9	Real	Axle 9 weight (if applicable)
Axle10	Real	Axle 10 weight (if applicable)
Axle11	Real	Axle 11 weight (if applicable)
Axle12	Real	Axle 12 weight (if applicable)
Axle13	Real	Axle 13 weight (if applicable)
Axle14	Real	Axle 14 weight (if applicable)
Axle15	Real	Axle 15 weight (if applicable)
Total	Real	Total of all axles
TimeDate	Datetime	Time/date of weighment

Table 4-2. Transactions ("Trans") Database Table 350 Records

5.0 Hardware Setup

Slot	Type
1	Single Channel A/D Card
2	Currently Not Used

Table 5-1. Option Card Locations

Slot	Bit	Type	Function
0	1	Output	Green Light
0	2	Output	Red Light
0	3-6	Off	Currently Not Used

Table 5-2. Digital I/O

Port	Type	Description	Setup
1	CMD	Currently Not Used	9600,8,N,2
2	CMD	iRev Downloads	115200,8,N,2
3	CMD	Ticket printer (TM-U295 as an example)	9600,8,N,2
4	CMD	Stop n GO Remote Display (Streaming LFT)	9600,8,N,2

Table 5-3. Serial Ports

5.1 Version Updates

Version	Changes	Date	Firmware
1.02	Added Auto Delete Transactions. Added PassCalc. Added Contrast Key for USB indicators.	06/06/2013	5.06
Download: ☒ SC = Standard Configuration ☒ PF = Print Formats ☒ SP = Setpoints ☒ W = Widgets ☒ DB = Database Tables ☒ COD = Program			

Table 5-4. Version Updates

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