

1280 Axle Weighing

Custom 1280 Program

Operation Manual



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www.ricelake.com

Revision History

This section tracks and describes manual revisions for awareness of major updates.

Revision	Date	Description
B	September 17, 2026	Established revision history; Updated communication terminology

Table i. Revision Letter History



Technical training seminars are available through Rice Lake Weighing Systems. Course descriptions and dates can be viewed at www.ricelake.com/training or obtained by calling 715-234-9171 and asking for the training department.

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1.0 Introduction

This manual provides operation instructions for the 1280 Axle Weighing software loaded on the 1280 Enterprise indicator connected to an axle scale.



Manuals are available from Rice Lake Weighing Systems at www.ricelake.com/manuals

Warranty information is available at www.ricelake.com/warranties

1.1 Overview

There are two modes of axle weighing, Automatic or Manual. When using either modes, a driver passes over a scale one axle at a time. Each time an axle enters the scale, it's weighed and added to the total. For the Long Axle mode, one axle is pulled onto the scale at a time until the truck is complete, all axles on the scale.

The 1280 Axle Weighing program can be interfaced to a short or long axle scale and directs each axle across the scale using traffic lights.

Optional features:

- Manual weighing
- Short axle weighing
- Long axle weighing
- Axle in/out weighing

2.0 Operation

The following operation procedures apply to both the short and long axle scale weighing.

2.1 Automatic Axle Weighing

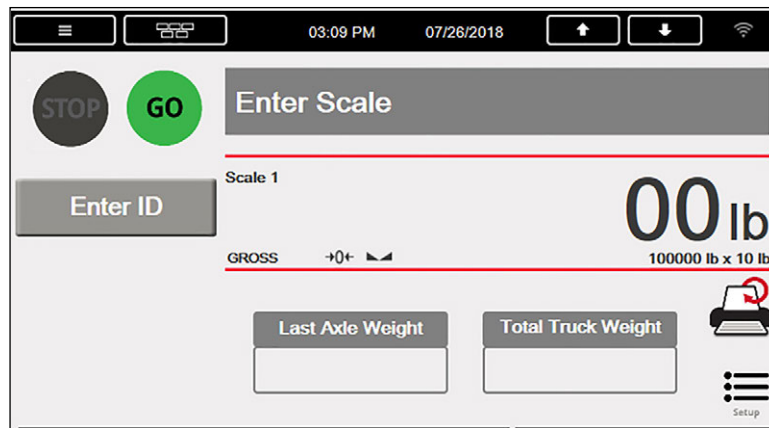


Figure 2-1. Axle Weighing Menu – Green Light

A green light displays when the scale is empty and at zero. The Stop & Go remote displays the live weight with a green light. Lights cannot be manually controlled in automatic mode.

1. Press **Enter ID** and enter the Truck ID (optional unless **Weigh In/Out** is enabled). The ID can be entered any time during this process.

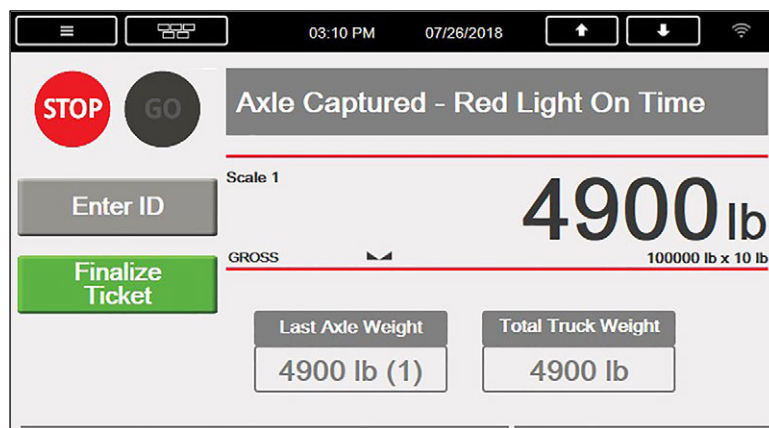
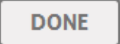


Figure 2-2. Axle Weighing Menu – Red Light

2. Pull axle onto the scale to exceed the configured **Axle Threshold** (default = 1000 lb).
 - A. The system performs the following actions:
 - i. Traffic light changes to red.
 - ii. A red serial command is sent to the Stop & Go remote display.
 - iii. The stable gross axle weight is captured after being stable for 3 seconds.
 - iv. Last Axle Timer starts and delays for the Red Light on time. This notifies the driver that the axle has been captured (it can happen quickly and be missed).
 - v. The Stop & Go remote display updates with the current axle weight.

- B. When the **Red Light On Time** expires (default = 3 seconds):
- Traffic light changes to green.
 - A green serial command is sent to the Stop & Go remote display.
 - The 1280 display updates with the current axle weight and total axle weight.
- C. Axle Setting is determined (**Short** or **Long**):
- Short Axle:** Driver pulls forward positioning the next axle onto the scale.
 - When the weight is **+/- Delta Weight** (default = 500 lb) than the previous axle weight, the system starts the **Axle Delay** (default = 5 seconds)
 - The Stop & Go remote display goes back to streaming the live gross weight
 - Long Axle:** Driver pulls forward positioning the next axle onto the scale. (*supports one to seven axles*).
 - When the weight is **+ Delta Weight** (default = 500 lb) than the previous total axle weight, the system starts the **Axle Delay** (default = 5 seconds)
 - The Stop & Go remote display goes back to streaming the live gross weight – current total axle weights
- D. **Step 2** is repeated until the configured **Last Axle Timer** (default = 45 seconds) expires, **Maximum Axles** (7) is reached or  is pressed, at which point the system does the following:

- If **Weigh In/Out** is enabled:
 - Prompts **ID Required to Complete – Enter ID** (unless already entered, then the system continues). Enter the ID and press  or .
 - The Inbound Database searches for the ID.
 - **ID Found:** value swapping is performed if necessary, **Net** is calculated based on the Inbound weighment, a record is stored in the transaction database and the Inbound weighment is deleted
 - **ID Not Found:** a record is stored in the inbound database

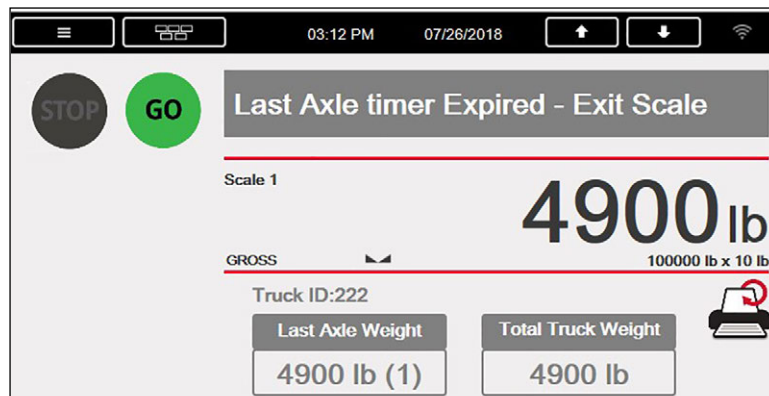


Figure 2-3. Last Axle Timer

- If **Weigh In/Out** is disabled
 - A record is stored in the transaction database. The net fields in the database are **0**.
 - Prints **n** (**n** = number of tickets) copies of the Weigh Ticket. The number of tickets to be printed is set in the setup menu.  allows the operator to print the previous weigh ticket.
 - The Stop & Go remote displays the axle's total weight for the **Total Weight Remote Display Time** before it goes back to streaming the live gross weight.
 - Traffic light changes to green.
 - A green serial command is sent to the Stop & Go remote display.
3. Vehicle exits the scale if still on it.



NOTE: Transaction database deletes 25% of oldest records when it reaches maximum capacity.

2.2 Manual Axle Weighing

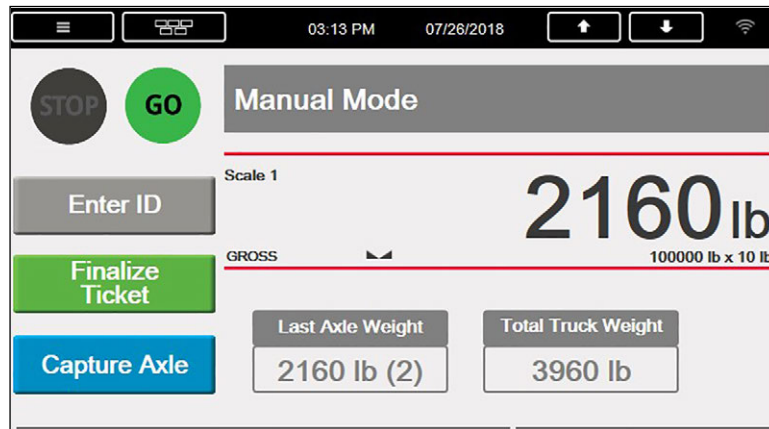
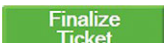


Figure 2-4. Manual Mode

1. Switch the setting from **Auto** to **Manual** in the **Setup** menu to enable manual weighing.
 - A. **Manual Mode** displays, removing all message control.
 - i. Disables automatic light changing. The lights are controlled by pressing  and .
 - ii. Disables **Weigh In/Out**.
2. Press  to store the current weight with the **Manual Axle Number** (starting at Axle #1 and increments each time capture is pressed).
3. Press  after all axles have been manually weighed:
 - A. Prints **n** (**n** = number of tickets) copies of the weigh ticket.  allows the operator to print the previous weigh ticket.
 - B. Stores a record in the transaction database; the net fields in the database are **0**.
 - C. All information is reset for the next truck



NOTE: Transaction database deletes 25% of oldest records when it reaches maximum capacity.

3.0 Serial Communications - Tickets, PC

3.1 Weigh Ticket Examples

Auxiliary Format #1, #2 and #3

The formats can be modified through the 1280 front panel or using the PC application Revolution. Auxiliary Format #1, #2 and #3 make up the weight ticket.

Truck ID 333	
Axle # 1	4400 lb
Axle # 2	5160 lb
Axle # 3	10560 lb
Total	20120 lb
10:34PM 08/29/2018	

Figure 3-1. Weigh Ticket

Auxiliary Format #1, #2 and #4 (if Weigh In/Out enabled)

The formats can be modified through the 1280 front panel or using the PC application Revolution. Auxiliary Format #1, #2 and #4 make up the outbound weight ticket.

Truck ID 999	
Axle # 1	2770 lb
Axle # 2	4190 lb
Axle # 3	4320 lb
Total	11280 lb
Gross	11280 lb
Tare	6120 lb
Net	5160 lb
10:34PM 08/29/2018	

Figure 3-2. Weight Ticket, Weigh Out

3.2 User Strings

User strings can be added to any print format in Revolution to print data on the ticket or transaction string. Add <USn> to any print format where **n** represents the user string number.

User Strings	
User String 1 <US1>	Axle Number
User String 2 <US2>	Axle Weight
User String 3 <US3>	Scale Units
User String 4 <US4>	Truck ID
User String 5 <US5>	Total Weight
User String 6 <US6>	Time
User String 7 <US7>	Date

Table 3-1. User Strings

3.3 Rice Lake Stop/Go Lights

Green Light – Auxiliary Format #19

The message is transmitted (default to none). The format can be modified through the 1280 front panel or using the PC application Revolution.

Red Light – Auxiliary Format #20

The message is transmitted (default to none). The format can be modified through the 1280 front panel or using the PC application Revolution.

4.0 Application Setup & Configuration

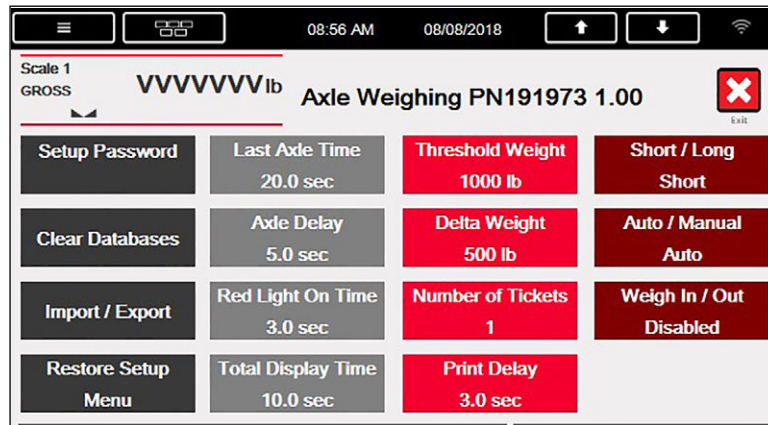
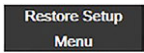


Figure 4-1. Configuration Menu

Parameter	Default	Description
System Password	" "	Change the password required to enter the Setup menu NOTE: Setup is password-protected and offers access to Display Program Name & Version and Display a weight widget
Clear Transactions or Inbound Database	--	Clear the transaction or inbound database; select YES or NO
Import/Export	--	Import and Export databases
Restore Setup Menu	--	Allows operator to import a database table from a USB flash drive using .DB file type; allows operator to save transactions to a USB flash drive; see Section 4.1 and/or the 1280 technical manual (PN 167659).
Last Axle Time	45.0 Sec	Maximum amount of time the system waits for another axle; if the timer is satisfied the transaction is complete;
Axle Delay	5.0 Sec	The delay between axles
Red Light On Time	3.0 Sec	Verifies the weighment was made and the green light is valid
Total Display Time	10.0 Sec	Time total axle weight is displayed after the transaction is finalized
Threshold Weight	1000 lb	Amount of weight that must be exceeded to trigger a weighment
Delta Weight	500 lb	Minimum weight change to recognize another axle
Number of Tickets	1	Set number of tickets printed with each transaction
Print Delay	3.0 Sec	Set number of seconds between tickets printed
Short/Long Axle	Short	Toggle between short and long axle; current selection is displayed
Auto/Manual Weigh Option	Auto	Toggle between automatic or manual weighing - Auto – with thresholds and timers - Manual – store axles by pressing icon – no traffic lights or in/out features available
Weigh In/Out Option	Disabled	Weigh twice per ID for Gross and Net weighments per axle - Auto/Manual overrides this (if in Manual mode this is not possible even if enabled). - Auto Mode and In/Out is enabled – stores inbound transaction the first time that ID is weighed, the second time it calculates the net and adds the transaction to populate the net fields.

Table 4-1. Configuration Menu Parameters

4.1 Restore Settings

The setup database can be exported and/or imported using ; once imported or downloaded press  to overwrite all parameters in this menu.

This data is not verified upon restore, it is verified when changed within the setup menu but any alteration to the backed-up database is not verified.

5.0 Database Tables

5.1 Inbound Database



NOTE: System deletes 25% of oldest records when the inbound database reaches maximum capacity.

Field	Type	Description
ID	String	Truck ID-15 alphanumeric
Gross1	Real	Axle 1 weight
Gross2	Real	Axle 2 weight (if applicable)
Gross3	Real	Axle 3 weight (if applicable)
Gross4	Real	Axle 4 weight (if applicable)
Gross5	Real	Axle 5 weight (if applicable)
Gross6	Real	Axle 6 weight (if applicable)
Gross7	Real	Axle 7 weight (if applicable)
TotalG	Real	Total gross weight
DT	Datetime	Time/date of weightment

Table 5-1. Inbound Database (1,000 Records)

5.2 Transaction Database



NOTE: System deletes 25% of oldest records when the transaction database reaches maximum capacity.

Field	Type	Description
ID	String	Truck ID-15 alphanumeric
Gross1	Real	Axle 1 weight
Gross2	Real	Axle 2 weight (if applicable)
Gross3	Real	Axle 3 weight (if applicable)
Gross4	Real	Axle 4 weight (if applicable)
Gross5	Real	Axle 5 weight (if applicable)
Gross6	Real	Axle 6 weight (if applicable)
Gross7	Real	Axle 7 weight (if applicable)
TotalG	Real	Total gross weight
Net1	Real	Net weight of Axle 1 (not populated until second time Truck ID is weighed) Weigh In/Out Enabled Difference between first and second weightment
Net2	Real	Net weight of Axle 2 (if applicable)
Net3	Real	Net weight of Axle 3 (if applicable)
Net4	Real	Net weight of Axle 4 (if applicable)
Net5	Real	Net weight of Axle 5 (if applicable)
Net6	Real	Net weight of Axle 6 (if applicable)
Net7	Real	Net weight of Axle 7 (if applicable)
TotalN	Real	Total of all axles net weight (not populated until second time Truck ID is weighed)
DT	Datetime	Time/date of weightment

Table 5-2. Transaction Database (10,000 Records)

6.0 Hardware Setup

6.1 Option Card Location

Slot	Type
1	Single Channel A/D Card
2-6	Currently Not Used

Table 6-1. Option Card Locations

6.2 1280 Screen Size/Luminance

NIT	1280 Screen Size
500/1000	7.5"
1500	12"

Table 6-2. 1280 Screen Size/Type

6.3 Digital I/O

Slot	Bit	Type	Function
0	1	Output	Green Light
0	2	Output	Red Light
0	4-8	Off	Currently Not Used

Table 6-3. Digital I/O

6.4 Serial Ports

Port	Type	Description	Setup
1	CMD	Printer	9600, 8, N, 1
2	CMD	Stop N Go Laser Light	9600, 8, N, 1

Table 6-4. Serial Port

6.5 Ethernet TCP/IP Port

Port	Type	Description	Setup
10001	CMD	Waits for connection from software/device i.e. Revolution or Interchange	TCP Server
10001	CMD	Currently Not Used	TCP Client1
10002	CMD	Currently Not Used	TCP Client 2
3000	CMD	Web Server	Web Server

Table 6-5. Ethernet TCP/IP Port

6.6 USB Port

Port	Type	Description	Setup
3	CMD	8 GB MicroSD™ Card	Images

Table 6-6. USB Device Port

6.7 USB Type-A Port

Port	Type	Description	Setup
-	CMD	Currently Not Used	-
-	CMD	Currently Not Used	-

Table 6-7. USB Type-A Port

6.8 SD Card Slot



NOTE: The SD Card is required.

Port	Type	Description	Setup
-	CMD	8GB MicroSD™ Card	Images

Table 6-8. SD Card Slot

6.9 WPAN Port

Port	Type	Description	Setup
4	CMD	Currently Not Used	-

Table 6-9. WPAN Port



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230 W. Coleman St. • Rice Lake, WI 54868 • USA USA: 800-472-6703 • International: +1-715-234-9171