920i Rate of Gain Program

Single Animal Software Application
Version 1

Operation Manual

iRite

RICE LAKE
WEIGHING SYSTEMS

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PN 173160 Rev D

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1.0 Introduction

The 920i Rate of Gain Program is available in either static or mobile versions. The mobile version includes an inclinometer that will cause the screen to go blank when scale is at an angle over three degrees.

The 920i Rate of Gain Program can be used to weigh animals and store the weighments for download to a PC.
Up to 500 animals with three weighments per ID may be stored (total of 1500 transactions).
This program can be used with a 920i weighcenter or a stand-alone 920i.

This program is written to interface with an Allflex RS420 Stick Reader connected to the 920i serial port 3 (RS-232).
Bluetooth or wired connection is available. Connect the stick reader to the indicator according to the stick reader manual.

RF Tag Reader needs to be set at:

- 9600 baud
- 8 bits no parity bit
- 2 stop bits

Manuals and additional resources are available from the Rice Lake Weighing Systems website at www.ricelake.com

Warranty information can be found on the website at www.ricelake.com/warranties

1.1 Safety

Safety Signal Definitions:

DANGER ***Indicates an imminently hazardous situation that, if not avoided, will result in death or serious injury. Includes hazards that are exposed when guards are removed.***

WARNING ***Indicates a potentially hazardous situation that, if not avoided, could result in serious injury or death. Includes hazards that are exposed when guards are removed.***

CAUTION ***Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.***

IMPORTANT ***Indicates information about procedures that, if not observed, could result in damage to equipment or corruption to and loss of data.***

General Safety

Do not operate or work on this equipment unless this manual has been read and all instructions are understood. Failure to follow the instructions or heed the warnings could result in injury or death. Contact any Rice Lake Weighing Systems dealer for replacement manuals.

WARNING

Failure to heed could result in serious injury or death.

Do not allow minors (children) or inexperienced persons to operate this unit.

Do not operate without all shields and guards in place.

Do not jump on the scale.

Do not use for purposes other then weight taking.

Do not place fingers into slots or possible pinch points.

Do not use any load bearing component that is worn beyond 5% of the original dimension.

Do not use this product if any of the components are cracked.

Do not exceed the rated load limit of the unit.

Do not make alterations or modifications to the unit.

Do not remove or obscure warning labels.

Do not use near water.

Before opening the unit, ensure the power cord is disconnected from the outlet.

Keep hands, feet and loose clothing away from moving parts.

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2.0 Operation

This section provides an overview of 920i Rate of Gain Software operation information.
Power up the indicator. It will go through the startup test and the startup screen will display. This screen also displays when the indicator exits the configuration or setup menus.

2.1 Sequence of Operation

Program to weigh animals and capture these weighments for later download to a PC. Up to 500 animal IDs and three weighments per ID may be stored. This program is written to interface with an Allflex RS420 Stick Reader connected to 920i serial port 1 via RS-232. RF Tag Reader needs to be set at 9600 baud, 8 bits no parity bit, 2 stop bits. After a successful download the 920i needs to be power cycled.

2.1.1 Weighing an Animal with ID#

1. The operator places an animal on the scale.
2. System display – ***Enter / Scan Animal ID***.
3. Operator either keys in an ID (maximum 15 characters) or scans the ear tag of the animal.
   a. New Animal ID.
      i. Transbase Database Full.
         • Operator will be prompted – ***Memory Full, Override Oldest Unused ID?***
            ◦ Operator can press the **Yes** softkey to override the oldest unused ID in memory and go Step 4.
            ◦ Operator can press the **No** softkey and will be reverted back to the startup screen.
      ii. Transaction Database Not Full.
         • Goes to Step 4.
   b. Existing Animal ID.
      i. Goes to Step 4.
4. With the ID displayed and up to three previously record weighments, press one of the following softkeys:
   Record Weight – **Print Records** – [] – [] – **End**
   a. If **Record Weight** is pressed:
      i. Captures stable weight.
         • If ID was used less than three times, the system adds data to transaction database.

If transaction database is full, the system displays Transaction Database Full.

         • If ID enter already has three weighments stored in transaction db, the system update the oldest record to new captured data.
      ii. Displayed three previously recorded weights with the new weightment at the top and will print a ticket with the ID#, Gross Weight, Date and Time.
   b. If the **Print Records** softkey is pressed, the system prints only the three displayed previously recorded weights.
   c. If the **End** softkey is pressed the system will revert back to the startup screen.

2.1.2 Weighing a Single Animal

Press **Print** to send the Gross Format (including just the gross weight and time/date) out at any time between batches to print just one animal's weight.

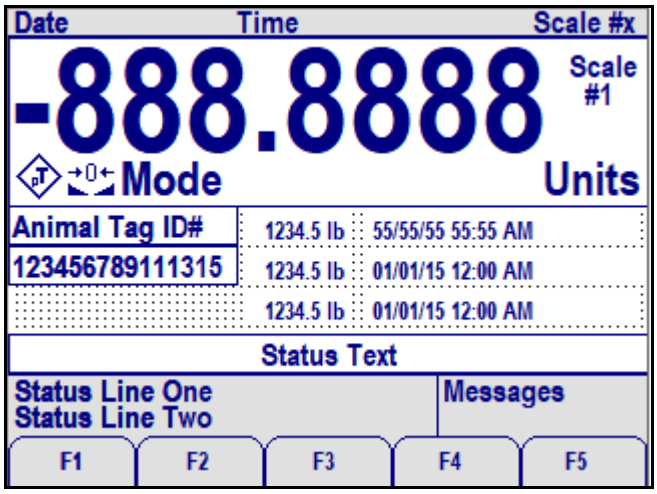

Figure 2-1. Example Screen

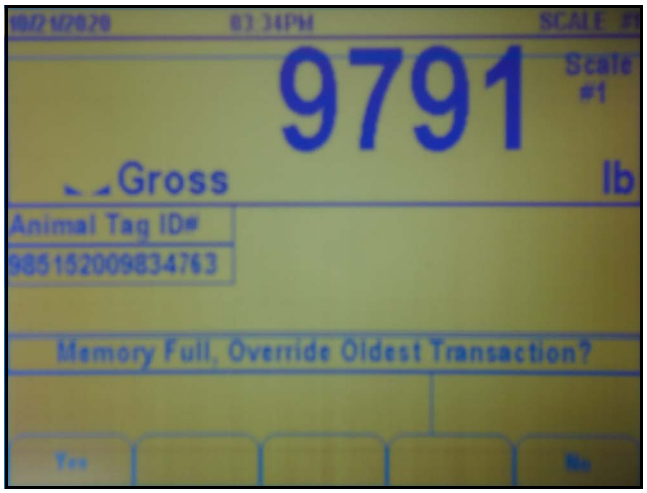

Figure 2-2. Example Screen with Weight

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

- Display Program Name & Version
- Display a weight widget

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3.0 Serial Communication

This section provides an overview of 920i Rate of Gain Software serial communication information.

3.1 Record Weigh Ticket

The program uses the Auxiliary Print Format #1 so that the dealer may modify the print format through the 920i front panel or by using iRev PC software.

```
ID#               Weight UM    Date      Time
------------------------------------------------
123456789102345   1000   lb  01/01/2015 12:00 PM
```

Figure 3-1. Record Weight Ticket

3.2 Print Record Weigh Ticket

The program uses the Auxiliary Print Format #2 so that the dealer may modify the print format through the 920i front panel or by using iRev PC software.

```
ID#               Weight UM    Date      Time
------------------------------------------------
123456789102345   1000   lb  01/01/2015 12:00 PM
123456789102345    750   lb  12/01/2014 12:00 PM
123456789102345    500   lb  11/01/2014 12:00 PM

Avg. Rate of Gain 8.19 lbs / day
```

Figure 3-2. Print Record Weigh Ticket

3.3 Incoming ID Tag Serial Data

Tag Type	Default Format
HDX ISO	LA_982_000001088420{CR}{LF}
HDX Industrial	LR_0006_0000000018514243{CR}{LF}
FDX-B ISO	LA_982_000000255895{CR}{LF}

Note: _ = space; {CR} = carriage return; {LF} = line feed

Figure 3-3. Incoming ID Tag Serial Data

Once ID tag is scanned and read by the 920i, the system will remove all characters before the second _ (space) and will suppress all leading zeros of the unique ID#.

Example: LA_982_000001088420{CR}{LF} will be recorded and printed as 1088420{CR}{LF}.

3.4 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. iRev is another option to do database maintenance.

4.0 Configuration

The **Setup Menu** softkey offers access to the program name/version and weight widget. It may be password-protected.

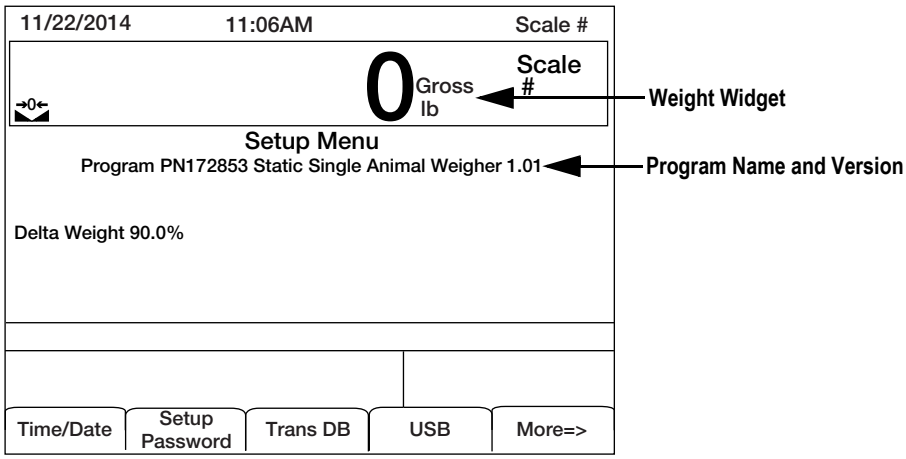

Figure 4-1. Setup Menu Screen

Parameter	Description
Time/Date	Current time and date of the 920i
Setup Password	Used to enter/change the password required for entry into the setup menu (Section 4.1)
Trans DB	Allows user to delete selected weight, delete all weights for selected ID or print recorded weights of each ID number (Section 4.2 on page 6)
USB	Allows selection of USB device, downloading of database files, and adjusting of screen contrast
More=>	Press **More=>** to view remaining softkeys
<=Back	Returns to previous menu
% Delta Weight	Percentage of change in recorded weight required before the next weighment can begin
Exit	Returns display to main screen

Table 4-1. Setup Menu Parameters

4.1 Change Password

When a password has been set, pressing the **Setup Menu** softkey will prompt user to enter the password. If nothing is set in the password screen, pressing the **Setup Menu** softkey will enter the setup menu.

1. Press **Setup Menu**.
2. Press **Setup Password**.
3. Using the keypad, enter the desired password. Up to seven digits can be entered.
4. Press enter. ***Re-enter Password to Verify*** displays.
5. Re-enter the password.
6. Press enter. ***Password Changed*** displays.

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4.2 Transaction Database

The transaction database can be viewed, cleared or printed from this menu. Up to 1500 transactions can be stored.

1. Press **Setup Menu** softkey.
2. Press **Trans DB** softkey. The database screen displays.

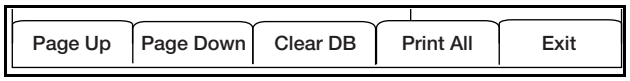

Figure 4-2. Transaction Database Softkeys

3. Use the softkeys to perform the following actions.
   - **Page Up** or **Page Down** – Scroll through the records
   - **Clear DB** – Clear all records in the database
   - **Print All** – Send all records to be printed
4. To select individual database items, use the navigation arrows to scroll up/down until the arrow on the screen is next to desired record.
5. Press

. The record screen displays the animal ID, the weight captured in that record and the time and date of the transaction (Table 4-2).
6. Use the softkeys to perform the following actions.
   - **Delete One** – Delete the current record
   - **Delete All for ID** – Delete all records for the current ID
   - **Print** – Print the current transaction

Field	Type	Description
ID	Integer	Unique numeric animal identifier
Wgt	Real	Weight
DT	DateTime	Time and Date of transaction

Table 4-2. Transaction Database Table (1,500 Records)

7. Press **Exit** to return to the ***Setup Menu***.

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	1-6	Off	Currently Not Used

Table 5-2. Digital I/O

Port	Type	Description	Setup
1	INCLIN	Inclinometer (mobile version only)	9600, 8, N, 2
2	USB	Flash Drive/Keyboard	115200, 8, N, 2
3	PROGIN	Allflex RS420 Stick Reader	9600, 8, N, 2
4	CMD	TM-U295 Ticket Printer	9600, 8, N, 2

Table 5-3. Serial Port (PN 173810) for Mobile Scale with Inclinometer

Port	Type	Description	Setup
1	CMD	Not Used	9600, 8, N, 2
2	CMD	USB Download	115200, 8, N, 2
3	PROGIN	Allflex RS420 Stick Reader	9600, 8, N, 2
4	CMD	TM-U295 Ticket Printer	9600, 8, N, 2

Table 5-4. Serial Port (PN 172853) for Static Scale without Inclinometer

Version	Changes	Date	WO	Firmware
1.00	Initial Release	06/12/2015	–	5.09
1.01	Fix to Displaying Transaction DB Fix to Storing Transaction data	10/08/2020	–	5.10

Table 5-5. Version Changes

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