

# 1280 Grain Program

*Software Application*

## Software User Guide



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# Revision History

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

Revision	Date	Description
A	April 23, 2019	Initial manual release
B	July 14, 2023	Updated Software Part Number

*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](http://www.ricelake.com/training) or obtained by calling 715-234-9171 and asking for the training department.*

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# 1.0 Introduction

The 1280 Grain Program is a custom software application for Rice Lake Weighing Systems 1280 Enterprise Indicator/Controller to support weighing trucks of grain. The 1280 Grain Program stores accounts, trucks and the associated divisor, grain types and accumulation.



Manuals are available from Rice Lake Weighing Systems at [www.ricelake.com/manuals](http://www.ricelake.com/manuals)

Warranty information is available at [www.ricelake.com/warranties](http://www.ricelake.com/warranties)

## 1.1 Safety

### Safety 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.

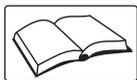


**CAUTION:** Indicates a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.



**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.**

#### **Electric shock hazard!**

**There are no user serviceable parts. Refer to qualified service personnel for service.**

**The unit has no power switch, to completely remove power from the unit, disconnect the power source.**

**For pluggable equipment the socket outlet must be installed near the equipment and must be easily accessible.**

**Always disconnect from main power before performing any work on the device.**

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

**Do not operate without all shields and guards in place.**

**Do not use for purposes other than weighing applications.**

**Do not place fingers into slots or possible pinch points.**

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

**Do not make alterations or modifications to the unit.**

**Do not remove or obscure warning labels.**

**Do not use near water, avoid contact with excessive moisture.**

## 2.0 Operation

The 1280 Grain Program has a touchscreen display. **Weigh Screen** displays on startup or after exiting configuration. To navigate the 1280 Grain Program, select a parameter on the touchscreen display.

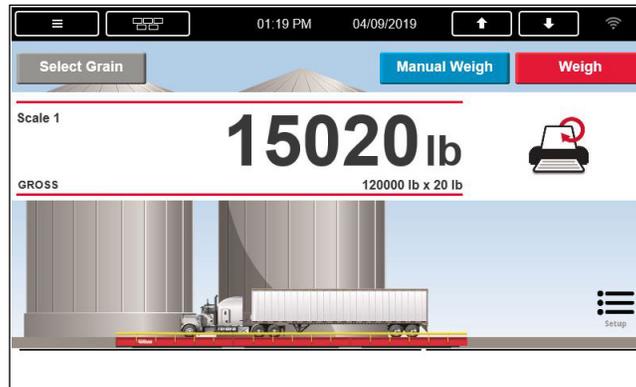


Figure 2-1. Weigh Screen

1. Press  on the 1280 to print the **Gross Print Format Ticket**.
2. Press  to reprint the last printed **Weigh Ticket** without adding a new record to the **Transaction** database table or incrementing the **Ticket Number**.

### 2.1 Selecting a Default Grain

The top eight records from the database are displayed in the table.

1. Press .

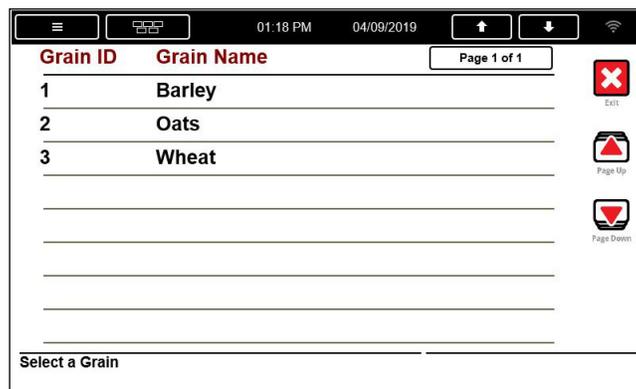


Figure 2-2. Default Grain Selection

2. Press  and  to scroll through **Grain** records.
3. To select a grain, press a **Grain Name ID** or **Grain Name** associated with a grain.
4. Press  to return to **Weigh Screen**.

## 2.2 Truck Weighing



**NOTE:** Perform the *Selecting a Default Grain* procedure, See [Section 2.1 on page 6](#) if the displayed grain is incorrect.

1. Drive the truck onto the scale.
2. Press **Weigh**. **Enter Truck ID** prompts.
3. Enter a value.
4. Press **DONE**.



**NOTE:** Press **Cancel** to exit to return to **Weigh Screen**.

5. **Inbound** database table is queried with the entered value and performs one of the following:
  - A. Truck ID Not Found
    - i. Stable weight is captured (all three scale units – primary, secondary and tertiary); if the driver entered in a tare the system uses tare instead of gross; **Keyed** notes weight printed this way
    - ii. New record is added to the **Inbound** database table
    - iii. **Weigh In Ticket** prints and  displays
    - iv. **Ticket Printed** prompts for three seconds and exits this sequence of operation
  - B. Truck ID Found
    - i. Continue to [Step 6](#)
6. **Enter % Shrinkage** prompts. Enter a value.
7. Press **DONE**. **Enter % Dockage** prompts.
8. Enter a value.
9. Press **DONE**. **Enter % FM** prompts.
10. Enter a value.
11. Press **DONE**. **Enter % Moisture** prompts.
12. Enter a value.
13. Press **DONE**. **Is this a Contract?** displays.
14. Perform one of the following:



Figure 2-3. Contract Selection

- A. Press **NO**; continue to [Step 15 on page 8](#)
- B. Press **YES**; **Enter Contract ID** prompts
  - i. Enter a value
  - ii. Press



**NOTE:** Press **Cancel** to return to [Step 14 on page 7](#).

- iii. **Contract** database table is queried with the entered value and performs one of the following:
  - a. **Contract Not Found; Enter Amount Required** prompts
    - Enter a value
    - Press ; **Contract** and **Amount Required** are added to the **Contract Database**; continue to [Step 15](#)
  - b. **Contract Found**; continue to [Step 15](#)

Figure 2-4. Verification

15. **Touch gray field to edit answer** displays. Perform one of the following:
  - A. Select the field associated to a parameter; selected parameter prompts



**NOTE:** Press **Cancel** to return to [Step 15](#).

- B. Press ; stable weight is captured; new record is added to the **Transaction** database table



**NOTE:** **Transaction** auto deletes 25% of the oldest records if too many records are entered.

- i. **Weigh Out Ticket** prints; **Weigh Out Ticket** contains **Contract Ticket** if **Contract ID** is entered; the truck value from the **Inbound** database table is deleted
- ii. Increments the sequential **Ticket Number** (resets at 100,000) and  prompts
- C. **Ticket Printed** prompts for three seconds and exits this sequence of operation



**NOTE:** When prompted for a value, other than **Truck ID**, if  is pressed the value is set to 0. Setting a value for **Truck ID** is required and cannot be set to 0.

## 2.3 Manual Ticket Processing



**NOTE:** Perform the *Selecting the Default Grain* procedure if the displayed grain is incorrect.

1. Drive the truck onto the scale.
2. Press **Manual Weigh**. **Enter Truck ID** prompts.
3. Enter a value.
4. Press **DONE**. **Enter Gross Weight** prompts.



**NOTE:** Press **Cancel** to exit.

5. Enter a value.
6. Press **DONE**. **Enter Tare Weight** prompts.
7. Enter a value.
8. Press **DONE**. **Enter % Shrinkage** prompts.
9. Enter a value.
10. Press **DONE**. **Enter % Dockage** prompts.
11. Enter a value.
12. Press **DONE**. **Enter % FM** prompts.
13. Enter a value.
14. Press **DONE**. **Enter % Moisture** prompts.
15. Enter a value.
16. Press **DONE**. **Is this a Contract?** displays.
17. Perform one of the following:



Figure 2-5. Contract Selection

- A. Press **NO**; continue to [Step 18 on page 10](#)
- B. Press **YES**; **Enter Contract ID** prompts
  - i. Enter a value
  - ii. Press **DONE**

- iii. **Contract** database table is queried with the entered value and performs one of the following:
- Contract Not Found. **Enter Amount Required** prompts
    - Enter a value
    - Press ; **Contract** and **Amount Required** are added to the **Contract Database**; continue to [Step 18](#)
  - Contract Found; continue to [Step 18](#)

Touch gray field to edit answer		Continue	
Truck ID	14566	Gross	87640
Shrinkage %	1.8	Tare	23460
Dockage %	3.3	Grain	2 Oats
FM %	1.0	Contract 1	Required: 10000.00 Delivered: 9328.62
Moisture %	0.8		

Figure 2-6. Contract Values

18. **Touch gray field to edit answer** displays. Perform one of the following:

- Select the field associated to a parameter
  - Selected parameter prompts



**NOTE:** Press **Cancel** to return to [Step 18](#).

- Press 
  - Manual Ticket** prints and adds a new record to the **Transaction** database table; **Manual Ticket** contains the **Contract Ticket** if a **Contract ID** had been entered



**NOTE:** **Transaction auto deletes 25% of the oldest records if too many records are entered.**

- Increments the sequential **Ticket Number** (resets at 100,000) and  displays
- Ticket Printed** prompts for three seconds and exits this sequence of operation

## 3.0 Serial Communications

This section provides information regarding serial communications.

### 3.1 Weigh In Ticket

The program uses the Auxiliary Print Format #1. Print format may be modified through the 1280 front panel or by using Revolution™ PC software.

```
11320 lb 05:39 AM SCALE S Truck 77
```

Figure 3-1. Weigh In Ticket

User String	Description
<US1>	Gross Weight with units
<US2>	Time of transaction
<US3>	Date of transaction
<US4>	Truck ID – up to 15 characters
<US5>	“KEYED S” or “SCALE S”

Table 3-1. Weigh In Ticket User String Definitions

### 3.2 Weigh Out Ticket

The program uses the Auxiliary Print Format #2. Print format may be modified through the 1280 front panel or by using Revolution PC software.

```
11320 lb 05:39 AM RECALLED 77

05:42 AM 03/20/2019
Grain 1 Wheat
G 18100 lb 60.00 lb/bu 113.00 bu
T 11320 lb R 5.0 %DOCK 5.65 bu
N 6780 lb 5.0 %SHRK 5.37 bu
                                101.98 NET bu
% MOISTURE 15.0 % FM 3.0
```

Figure 3-2. Weigh Out Ticket

User String	Description
<US1>	Gross Weight with units
<US2>	Time of transaction
<US3>	Date of transaction
<US4>	Truck ID – up to 15 characters
<US5>	“KEYED S” or “SCALE S”
<US6>	Grain Name – up to 15 characters
<US7>	Gross Weight with units
<US8>	Tare Weight with units
<US9>	Net Weight with units
<US10>	“R” – Gross was Recalled
<US11>	“R” – Tare was Recalled
<US12>	Pounds per UOM (BU, TN, etc)
<US13>	Divisor UOM (BU, TN, etc)
<US14>	UOM
<US15>	Net UOM

Table 3-2. Weigh Out Ticket User String Definitions

User String	Description
<US16>	Dockage in %
<US17>	Dockage in UOM
<US18>	Shrinkage in %
<US19>	Shrinkage in UOM
<US20>	Moisture in %
<US21>	Foreign Material in %
<US22>	Ticket Number
<US23>	Time of Transaction
<US24>	Date of Transaction
<US25>	Scale Units

Table 3-2. Weigh Out Ticket User String Definitions (Continued)

### 3.3 Contract Ticket

The program uses the Auxiliary Print Format #3. Print format may be modified through the 1280 front panel or by using Revolution PC software.

Contract No.	Required	Delivered
4	4000.00 bu	219.23 bu

Figure 3-3. Contract Ticket

User String	Description
<US30>	Contract Number
<US31>	Required
<US32>	Delivered
<US33>	UOM

Table 3-3. Contract Ticket User String Definitions

### 3.4 Manual Ticket

The program uses the Auxiliary Print Format #4. Print format may be modified through the 1280 front panel or by using Revolution PC software.

```

05:47 AM 03/20/2019
Grain 1 Wheat
G 20000 lb K 60.00 lb/bu 250.00 bu
T 5000 lb K 5.0 %DOCK 12.50 bu
N 15000 lb 5.0 %SHRK 11.88 bu
                                     225.62 NET bu
% MOISTURE 15.0 % FM 3.0

```

Figure 3-4. Manual Ticket

User String	Description
<US1>	Recalled Weight with units (Not Used)
<US2>	Recalled Time of Inbound transaction (Not Used)
<US3>	Recalled Date of Inbound transaction (Not Used)
<US4>	Recalled Truck ID – up to 15 characters (Not Used)
<US5>	Grain ID
<US6>	Grain Name – up to 15 characters
<US7>	Keyed Gross Weight with units
<US8>	Keyed Tare Weight with units
<US9>	Net Weight with units
<US10>	“K” – Gross was Keyed
<US11>	“K” – Tare was Keyed
<US12>	Pounds per UOM (BU, TN, etc)
<US13>	Divisor UOM (BU, TN, etc)
<US14>	UOM
<US15>	Net UOM
<US16>	Dockage in %
<US17>	Dockage in UOM
<US18>	Shrinkage in %
<US19>	Shrinkage in UOM
<US20>	Moisture in %
<US21>	Foreign Material in %
<US22>	Ticket Number
<US23>	Time of Transaction
<US24>	Date of Transaction
<US25>	Scale Units

Table 3-4. Manual Ticket User String Definitions

### 3.5 Grain Report

The program uses the Auxiliary Print Format #10, #11 and #12. Print format may be modified through the 1280 front panel or by using Revolution PC software.

```

Grain Report
05:53 AM 03/20/2019
*****
ID      Name      Divisor Accumulator
1       Wheat      60.00  956.35

Total All Grains 956.35

```

Figure 3-5. Grain Report

User String	Description
<US50>	Grain ID
<US51>	Grain Name
<US52>	Grain Divisor
<US53>	Grain Accumulator
<US54>	Total Grain Accumulator

Table 3-5. Grain Report User String Definitions

### 3.6 Contract Report

The program uses the Auxiliary Print Format #13, #14 and #15. Print format may be modified through the 1280 front panel or by using Revolution PC software.

```

Contract Report
05:53 AM 03/20/2019
*****
Number  Required  Delivered  Remaining
4       4000.00    219.23    3780.77
12      100.00     0.00      0.00

Totals  4000.00    219.23    3780.77

```

Figure 3-6. Contract Report

User String	Description
<US60>	Contract ID
<US61>	Contract Required
<US62>	Contract Delivered
<US63>	Contract Remaining
<US64>	Contract Total Required
<US65>	Contract Total Delivered
<US66>	Contract Total Remaining

Table 3-6. Contract Report User String Definitions

## 4.0 Modifying the Database Tables

Interchange Database Management software may be used 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. Revolution may be used instead of Interchange Database Management to perform database maintenance.

### 4.1 Application Setup and Configuration

Setup is password-protected and offers access to the following:

- Display Program Name & Version
- Display a weight widget

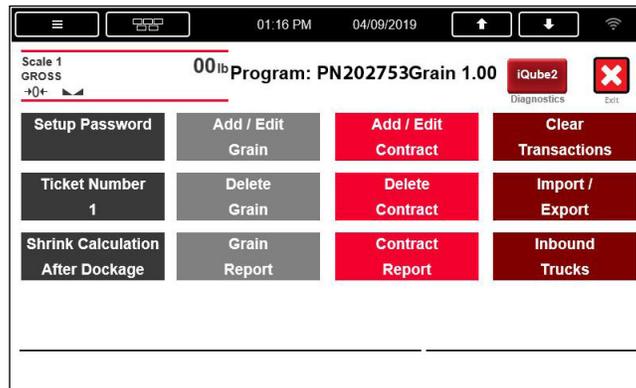


Figure 4-1. Program Setup

Parameter	Default	Touch Widget	Description
System Password	****	Setup Password	Changing the password is required for entry into the <b>Setup Menu</b> ; not entering a password causes the system to not prompt for a password when <b>Setup</b> is pressed
Clear Transactions	–	Clear Transactions	Clear <b>Transaction</b> database with a Yes/No option
Import/Export	–	Import/Export	Allows importing and exporting of databases
iQube2 Diagnostics	–	Diagnostics	1280 standard iQube2 <b>Diagnostics</b> ; reference the 1280 Installation manual for more details
Ticket Number	1	Ticket Number	Modify the sequential <b>Ticket Number</b>
Add/Edit Grain	–	Add/Edit Grain	Add or edit a record in the <b>Grain</b> database table
Delete Grain	–	Delete Grain	Delete a record from the <b>Grain</b> database table
Grain Report	–	Grain Report	Print the <b>Grain Report</b> and then have a <b>Yes – No</b> prompt to reset the <b>Accum</b> field for each grain
Add/Edit Contract	–	Add/Edit Contract	Add or edit a record in the <b>Contract</b> database table
Delete Contract	–	Delete Contract	Delete a record from the <b>Contract</b> database table
Contract Report	–	Contract Report	Print the <b>Contract Report</b>
Shrink Calculation	Off Gross Weight/ <b>After Dockage</b>	Shrink Calculation	Switch shrink calculation between <b>Off Gross Weight</b> and <b>After Dockage</b>
Inbound Trucks	–	Inbound Trucks	View/delete trucks which have weighed in but not weighed out yet

Table 4-1. Parameter Descriptions

## 4.2 Database Tables

Field	Type	Description
ID	Integer	Grain ID – (1-999)
Name	String	Alphanumeric grain name – up to 15 characters
Divisor	Real	Number of pounds per bushel
DivUOM	String	Divisor Units (lb, kg, bu, and others)
Accum	Real	Accumulator

Table 4-2. Grain Database Table - 100 Records

Field	Type	Description
ID	String	Truck ID
PWgt	Real	Weight in Primary Units
SWgt	Real	Weight in Secondary Units
TWgt	Real	Weight in Tertiary Units
Keyed	Byte	Keyed tares
TD	DateTime	Time and date of Inbound

Table 4-3. Inbound Database Table - 1000 Records

Field	Type	Description
ID	Integer	Grain ID – (1-999)
Reqd	Real	Amount required
Del	Real	Amount delivered

Table 4-4. Contract Database Table - 100 Records

Field	Type	Description
Ticket	Integer	Ticket number
Truck	String	Truck identifier
GID	Integer	Grain identifier
GName	String	Grain name
Divisor	Real	Grain divisor – pounds per bushel
DivUOM	String	Divisor unit of measure
Contract	Integer	Contract number – 0 if not used
Gross	Real	Gross weight
Tare	Real	Tare weight
Net	Real	Net weight
NetDiv	Real	Net bushels
Shrink	Real	Shrink %
Moisture	Real	Moisture %
FM	Real	Foreign Material %
Dock	Real	Dockage %
TD	DateTime	Time and date of transaction

Table 4-5. Transaction Database Table - 3000 Records

## 5.0 Hardware Setup

This section provides information regarding hardware setup of option card locations, digital I/O and serial ports.

NIT	1280 Display Size/Type (12" or 7")
500	7"
1500	12"

Table 5-1. 1280 Display Size/Type

Slot	Type
1	Single Channel A/D card (analog scale) or Dual Channel Serial Card (iQube2 scale)
2 – 6	Currently not used

Table 5-2. Option Card Locations

Slot	Bit	Type	Function
0	1 – 8	Off	Currently not used

Table 5-3. Digital I/O

Port	Type	Description	Setup
1	CMD	Epson TM-U295 printer	9600,8,N,1
2	CMD	Remote Display	9600,8,N,1
5	iQube2	iQube2 (optional)	115200,8,N,1
6	CMD	Currently not used	9600,8,N,1

Table 5-4. Serial Port

Port	Type	Description	Setup
3	CMD	Currently not used	–

Table 5-5. USB Device Port

Port	Type	Description	Setup
–	CMD	Currently not used	–
–	CMD	Currently not used	–

Table 5-6. USB Type-A Port

Port	Type	Description	Setup
10001	CMD	Currently not used	TCP server
10001	CMD	Currently not used	TCP client 1
10002	CMD	Currently not used	TCP client 2
20000	CMD	Currently not used	Stream server
3000	CMD	Currently not used	Web server

Table 5-7. Ethernet TCP/IP Port

Port	Type	Description	Setup
4	CMD	Currently not used	–

Table 5-8. Bluetooth Port







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