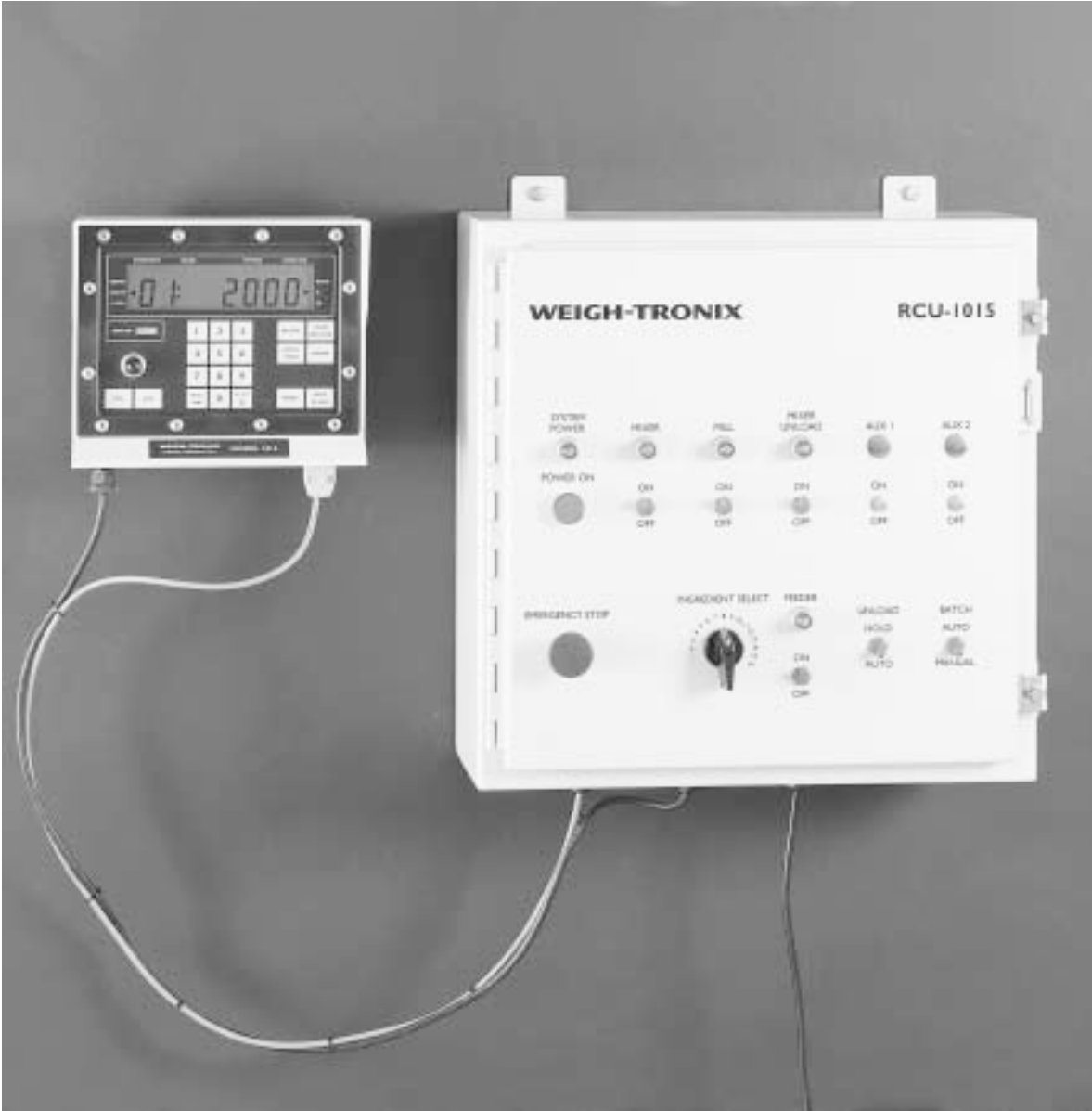


WEIGH-TRONIX



Model 1015 Indicator/RCU User's Manual

UNITED STATES

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CANADA

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le present appareil numerique n'emet pas de bruits radioelectriques depassant les limites applicables aux appareils numeriques de la Class A prescrites dans le Reglement sur le brouillage radioelectrique que edicte par le ministere des Communications du Canada.



CAUTION

Risk of electrical shock. Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

Weigh-Tronix reserves the right to change specifications at any time.

Table of Contents

Model 1015/RCU-1015 Batching System Overview	5
Model 1015 Batching Indicator	6
RCU-1015 (Relay Control Unit)	6
System Setup	6
Mounting the Model 1015	7
Weighing	8
Recipe Entry Programming Modes	8
Net Weight Example	8
Percent Mode Example	8
Entering and Editing A Recipe	9
Entering a Recipe for the First Time	9
Using Hand-Add Ingredients	10
Editing an Existing Recipe	10
Changing Ingredient Quantities	11
Deleting Ingredients	11
Inserting Ingredients	11
Clearing a Recipe	12
Batching Rations in the Auto Mode	12
Multi-Batching in the Auto Mode	14
Restarting After Error Messages	16
Unload Ration From Auto Unload Mode	19
Unload Hold: Continuing Unloading Either Auto or Manual	19
Batching Rations in the Manual Mode	20
Mix Timer Operation (Manual mode only)	22
Viewing Last Batch	22
Viewing Batch Accumulators	24
Total of Individual Recipes	24
Total of Individual Ingredients Within A Recipe	24
Total of All Recipes	25
Total of Each Ingredient	25
Setting Batch Number Accumulator	26
Clearing Accumulators	26
Clearing Single Ingredient Accumulators	26
Clearing Recipe Accumulators	26
Viewing and Setting System Parameters	27
Setting Type of Mixer (Control Process)	27
Setting Size-ton	28

Pages are numbered consecutively beginning with the cover page.

Setting Blend	28
Setting Cleanout Time	28
Viewing and Setting the Auto Ingredient Advance Tolerance Range	29
Viewing and Setting the Time and Date	29
Viewing and Setting the Time	29
Viewing and Setting the Date	29
Using a Printer	30
Basic Display Printout	30
Recipe Printout	30
Last Batch Printout	31
Batch Accumulator Printouts	31
Single Recipe/Ingredient Accumulator Totals	31
All Recipe/Ingredient Accumulator Totals	32
Total Recipe Accumulator	32
Individual Recipe Accumulators	33
Individual Ingredient Accumulator Totals	33
All Ingredient Accumulator Totals	33
Troubleshooting	34
Power-On Failure	34
Stalled Display Following Power-On	35
Indicator Lock-up	36
Inaccurate Weight Readings	36
Alarm Light Function	37
Measuring Supply Battery Voltage	37
Service Repairs	33
Display Messages	38
RD 1012 Remote Display	39
Indicator Diagnostics	40
Auto-Batching Troubleshooting	41

Figures

Figure 1: Typical installation diagram	5
Figure 2: Indicator with 1 Weigh Bar Connector	7
Figure 3: Indicator with 4 Weigh Bar Connectors	7
Figure 4: Entering and Editing Recipes Flow Chart	9
Figure 5: Timer Flow Chart	22
Figure 6: Menu Options	23
Figure 7: Viewing Batch Accumulators Flow Chart	24
Figure 8: Test Menu	40

Model 1015/RCU-1015 Batching System Overview

The Weigh-Tronix Model 1015/RCU-1015 is a simple batching system that can automate a new or existing feed processing system. This system consists of two main pieces: the Model 1015 weight indicator and the RCU-1015 (Relay Control Unit). The Model 1015 serves as a weight indicator plus, it operates as a sophisticated batch controller that can be used for a simple batch process. See Figure 1. The system is simple to operate, requires minimal installation, and gives today's farmer a low cost automated batching system which will

- Improve ration consistency
- Speed up the batching process
- Eliminate ingredient overshoots due to human error
- Reduce operator labor costs
- Increase batch accuracy with auto-adjusting preacts
- Compensate for individual ingredient free-fall
- Simplify record keeping with several batch reports
- Provide ingredient inventory

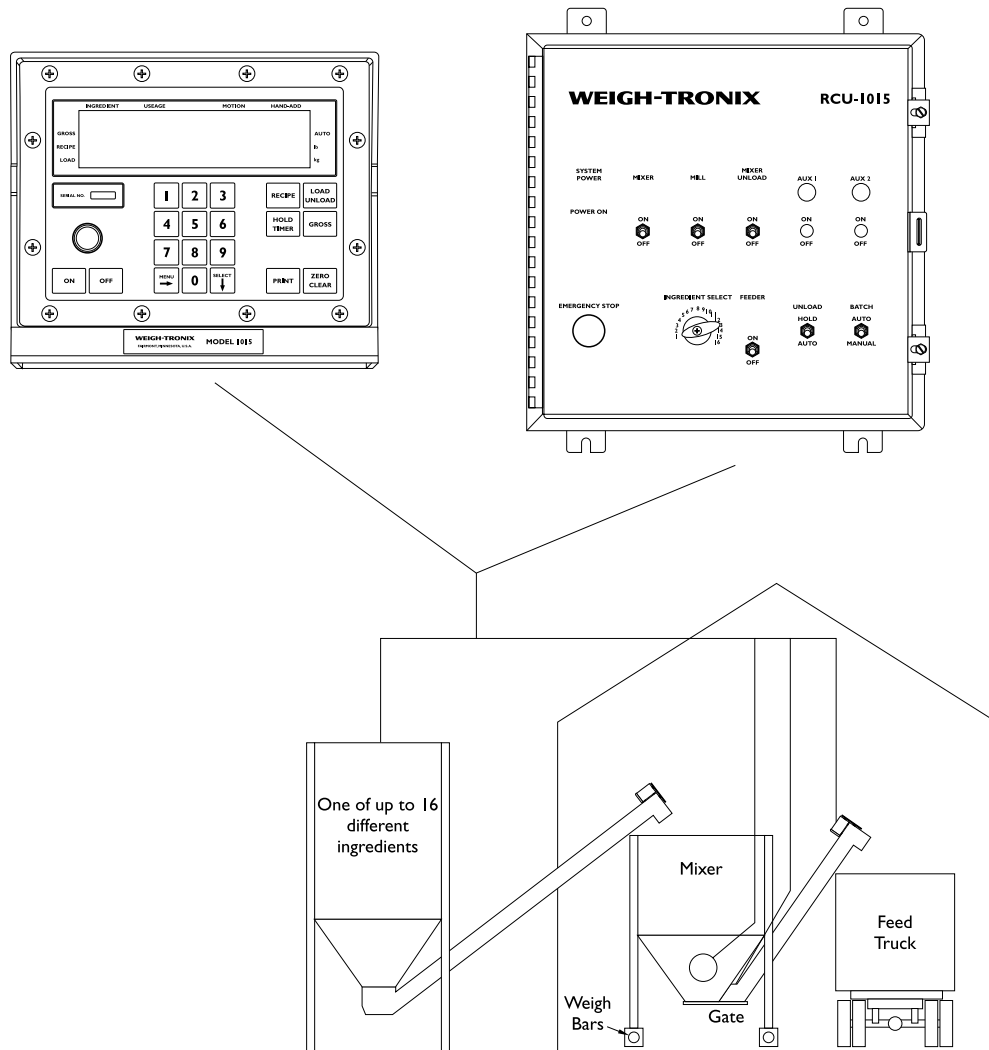


Figure 1
Typical installation diagram

Model 1015 Batching Indicator

You can program up to 100 recipes, with up to 16 different ingredients per recipe. The indicator automatically weighs the individual ingredients, controls the shut-off of ingredients, operates a mixer and a mill, controls the mixing time, and provides for the discharging of the batched product. You can adjust the mix time, size of the mixer, loading tolerance and mixer discharge cleanout time. After requesting any amount of total batched product, it will compute the new required ingredient quantities keeping the same proportions specified by the recipe. Run a single or fractional batch amount, or use multiple batching to process several consecutive batches without further prompting by the user.

RCU-1015 (Relay Control Unit)

The RCU-1015 is a dust-tight enclosure containing 24 solid-state relays that control 16 different ingredients, mixer, mill, mixer discharge, and several other inputs to monitor Auto/Manual, Power On, and Unload Hold conditions. Safety interlocks are wired into the relay box to prevent Manual Power On unless all toggle switches are in the OFF position.

The RCU has a pre-wired interface back to the Model 1015 to provide indicator power, and also make the control link between the two devices. Use the connectors provided inside the relay box and wire the 115VAC outputs from the RCU-1015 box to your motor starters for the ingredients, mixer, mill and mixer discharge.

System Setup



Attention

Make sure nothing is binding the scale and that all connections to the scale, such as augers and conduits, are flexible!

For optimum loading accuracy, allow a minimum of 20 seconds for each ingredient to load.

1. Using the service manual and the wiring diagram, have the electrician wire up to all the ingredients, mixer, mill, and mixer discharge/gate starter coils.
Note: All outputs from the RCU-1015 must be wired to 115VAC coils only! We recommend using RC type surge suppressors (series resistor and capacitor WT PN 17890-0023) across all starter coils. Also make sure main system power (115VAC) is brought into TB1 on the power supply board inside the RCU-1015.
2. Connect the 2-pin power cable, RCU-1015 interface, and Weigh-Bar cables into the bottom of the Model 1015 indicator as shown in Figures 2 and 3.
3. Turn power on the Model 1015 indicator and check scale to verify indicator is weighing properly. If recalibration is necessary, see the *1015 Service Manual*.
4. Using the instructions on page 24, you **MUST** set the Model 1015 parameters (size-ton, blend, type, and cleanout).
5. Turn on the RCU-1015 power and put batch switch to MANUAL. Use the manual controls to verify mixer, mill, ingredients, and mixer unload all function properly and augers are turning in the proper direction. Please note mixer must be ON to load any of the ingredients.
6. Enter the ingredients and recipes into the indicator. Please note that during the initial batches the controller needs to learn flowrates, and ingredient fall times. The system should be accurate once the controller has established flow rates and fall times for each ingredient.

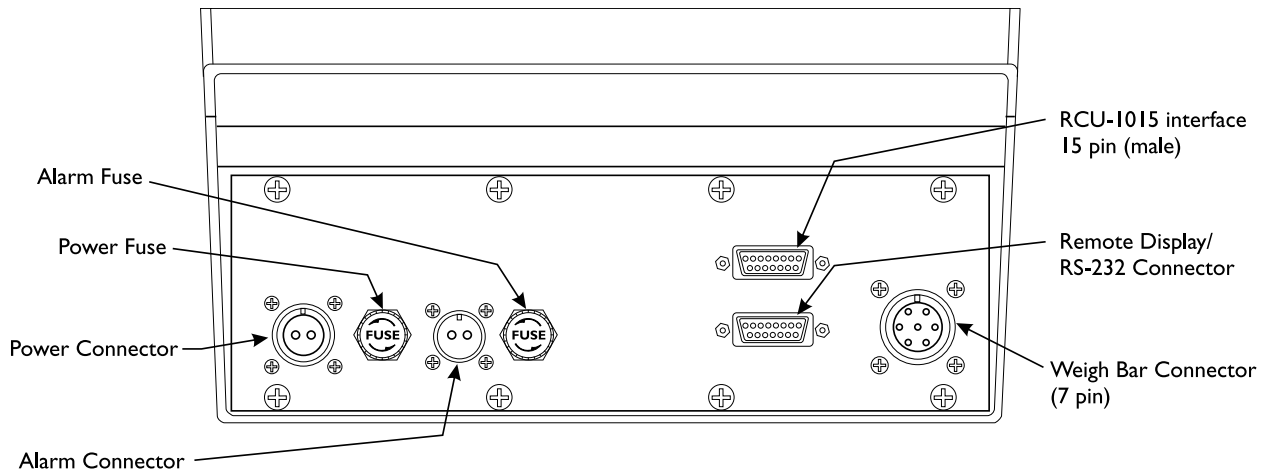


Figure 2:
Indicator with 1 Weigh Bar Connector

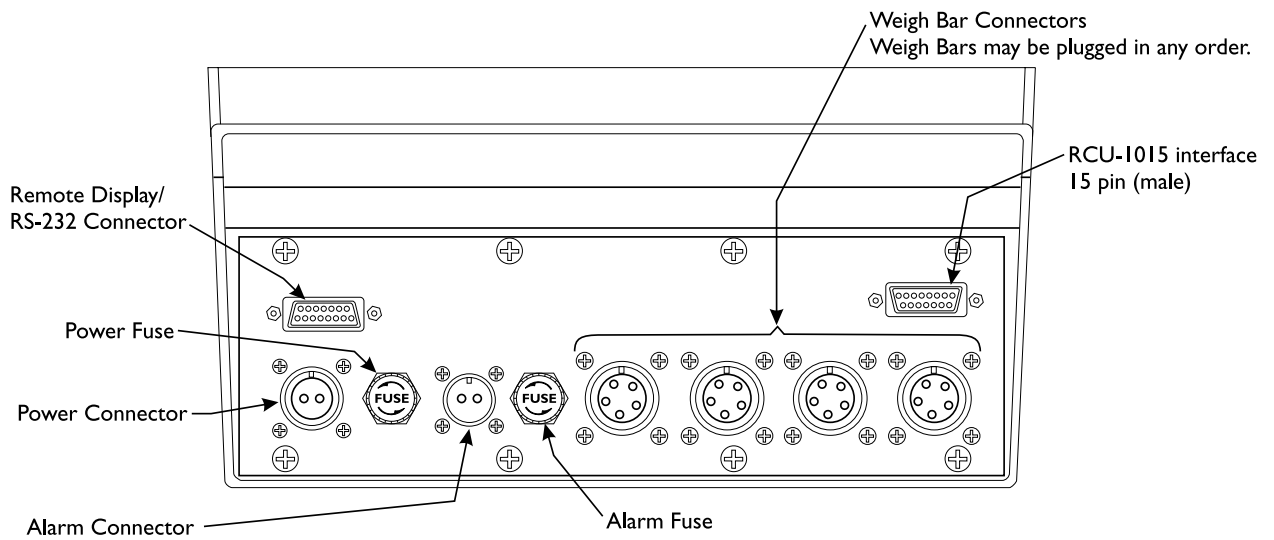


Figure 3:
Indicator with 4 Weigh Bar Connectors

Mounting the Model 1015

The Model 1015 mounts on a quick-detach bracket.

1. Choose a mounting location that provides convenience and protection for operation of the indicator.
2. Hold the indicator at the proposed mounting location, and verify that the display is legible and the controls accessible.
3. Positioning the quick-detach bracket with the wider end at the top, mark the desired mounting location. If bolting, use the quick-detach bracket as a template and mark and drill holes.
4. Weld or bolt the quick-detach bracket at the appropriate location. If bolting, use double nuts or self-locking nuts to protect both indicator and machinery.
5. Insert indicator bracket into top of quick-detach bracket and push down into place.

Weighing

GROSS MODE is required for zeroing. Your indicator must be zeroed before weighing begins.

- | | |
|-----------------------------------|------------------------------------------------------------------------------------------------|
| 1. Press ON . . . | Display says HELLO , then value is displayed in mode last used before removal of power. |
| 2. Press GROSS . . . | Live scale weight is displayed in gross weighing mode. |
| 3. Press ZERO/CLEAR . . . | Zero value is displayed. Weighing system is zeroed. |
| 4. Place weight on the scale. . . | Live gross weight of material is displayed. |

Recipe Entry Programming Modes

You can program recipes by using the net weight or percent mode. See the examples below.

Net Weight Example

Enter recipe such as: the sum of the individual ingredient target amounts (lb or kg) is equal to your required batch size.

(ex: 4,000 lb batch)

1. 1000 lb (ingredient # 1 amount)
2. 1000 lb (ingredient # 2 amount)
3. 1000 lb (ingredient # 3 amount)
4. 1000 lb (ingredient # 4 amount)
- t 4000 lb (total amount of all programmed ingredients, or standard batch size)

You can then enter any size load amount for this recipe and the indicator will automatically proportion the ingredient target amounts to maintain the proper ratios as stored in the recipe.

Percent Mode Example

Example: Percent

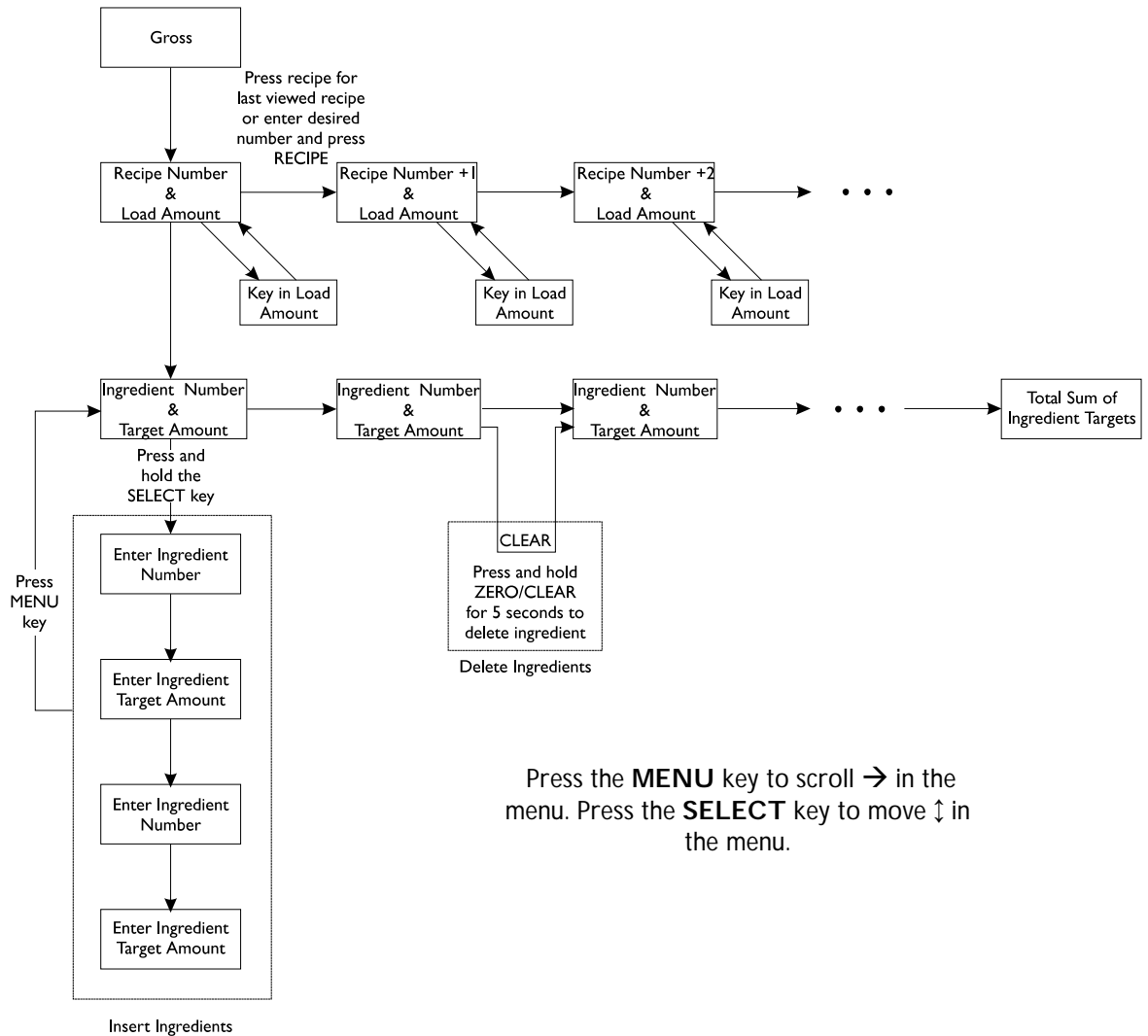
Enter recipe such as: the sum of the individual ingredient percentages is equal to 100 percent. Same example as above would now be:

1. 25 (ingredient # 1 percent)
2. 25 (ingredient # 2 percent)
3. 25 (ingredient # 3 percent)
4. 25 (ingredient # 4 percent)
- t 100 (total percent of all programmed ingredients)

Again, you can then enter any size load amount for this recipe and the indicator will automatically proportion the ingredient target amounts to maintain the proper ratios as stored in the recipe.

Entering and Editing a Recipe

The 1015 allows you to enter and store recipes in memory where they can be recalled and edited. Each recipe contains a load amount, ingredient quantities, and a sum total of the ingredient quantities. Refer to the flow chart in figure 4 as you go through this section.



Press the **MENU** key to scroll → in the menu. Press the **SELECT** key to move ↑ in the menu.

Figure 4
Entering and Editing Recipes Flow Chart

Entering a Recipe for the First Time

While in Gross, Load, or Timer modes, select a recipe number using one of the following methods.

1. Do either A or B:
 - A. Use the numeric keys to enter in the desired recipe number and press **RECIPE**.

OR

 - B. Press **RECIPE** to recall the last viewed recipe. Then press **MENU**

Ingredients do not need to be entered in numerical order. They are batched in the order that they are entered.

2. Press **SELECT**.
to scroll to the desired recipe number.
t is displayed with a **0**. This indicates the sum total of the ingredients.
3. Press and hold **SELECT**.
_ _ is displayed.
4. Enter the first ingredient number and press **SELECT**.
5. Using the numeric keys, enter the ingredient load amount and press **SELECT**.
6. Repeat steps 4 and 5 until all desired ingredients have been entered.
7. Press **MENU**.
t is displayed with the sum total of the ingredients.
8. Press **SELECT**.
The recipe number is displayed.
9. Press **GROSS** to exit.

Using Hand-Add Ingredients

To use hand-add ingredients (those ingredients added to the batch by hand) enter any ingredient from 17-99 as a hand-add. When these special hand-add ingredients come up within the recipe, they will be indicated as hand-add ingredients. Dump the ingredient into the mixer and:

- A. Press **SELECT** (for pre-weighed ingredients) . . .
StorEd will be displayed and hand-add target will be added to accumulators and batch printout. System advances to next ingredient.
- OR**
- B. Press **MENU** . . .
Actual weight loaded will be displayed, then the system advances to the next ingredient.

Editing An Existing Recipe

While in Gross, Load, or Timer modes, select a recipe number using one of the following methods.

1. Do either A or B:
 - A. Press **RECIPE** to recall the last viewed recipe. Then press **MENU**

to scroll to the desired recipe number.

OR

- B. Use the numeric keys to enter in the desired recipe number and press **RECIPE**.

The first ingredient in the recipe is displayed.

2. Press **SELECT**.
3. Press **MENU** until the ingredient that you want to edit is displayed and use any or all of the following editing procedures.

Changing Ingredient Quantities

1. Using the numeric keys, enter desired ingredient quantity and press **SELECT**.

Deleting Ingredients

- 1 Press and hold **ZERO/CLEAR** until ingredient is deleted and the next ingredient is displayed.

Inserting Ingredients

1. Press **MENU** until you get to the ingredient **just after** where you want to insert the new ingredient.
2. Press and hold **SELECT**.
3. Enter ingredient number and press **SELECT**.
4. Enter ingredient quantity and press **SELECT**. Repeat steps 2 and 3 for additional ingredients that you want to insert.
5. Press **MENU** to exit ingredient insertion and display next ingredient.

__ is displayed.

Press **RECIPE** or **SELECT** to exit ingredient editing and display current recipe or press **GROSS** to return to gross weighing mode.

Clearing a Recipe

While in Gross, Load, or Timer modes, select a recipe number using one of the following methods.

1. Do either A or B:
 - A. Press **RECIPE** to recall the last viewed recipe. Then press **MENU** to scroll to the desired recipe number.

OR

- B. Use the numeric keys to enter in the desired recipe number and press **RECIPE**.
2. Press and hold **ZERO/CLEAR** for three seconds.

Recipe is now cleared.

Batching Rations in the Auto Mode

All of the RCU-1015 toggle switches must be in the OFF position before the unit will power on.

1. Press the RCU-1015 **POWER ON** button. . . System power is now on
2. Toggle the **BATCH** switch and the **UNLOAD** switch to the Auto position. Auto batching is now enabled.
3. Make sure the Mixer, Mill, Mixer Unload, and Feeder switch are all OFF. Switches should be off in the Auto Mode.
4. Turn on the Model 1015 indicator Model 1015 powers on
5. If indicator is not in the Gross mode, press **GROSS**. . . Gross annunciator illuminates.
6. Press **ZERO/CLEAR**. . . Zero value is displayed and indicator is zeroed.
7. Key in desired recipe number (RR) and then press **RECIPE**. . . **RR:BBBBBB** is displayed. (BBBBB represents batch amount)
8. Key in desired batch amount and press **SELECT**. . . Batch amount and recipe number is displayed.

*At any point during the ingredient loading process, you may press **MENU** to stop loading an ingredient and advance to the next ingredient.*

During the batching process if any errors occur, restart by following instructions in the section, Restarting After Error Messages.

9. Press **LOAD/UNLOAD**. . . **START-UP** appears while the following happens:
 - a. Mixer and Mixer Lamp turns on, then 5 seconds later
 - b. Mill and Mill Lamp turns on if system has a mill, then 5 seconds later
 - c. First ingredient and Ingredient feeder lamp turns on...
 - d. **XX:TTTTTT** (XX ingredient number, and Target amount are displayed)
 - e. The ingredient begins loading and the target counts down. When getting within a programmed amount the alarm light will begin to flash, and once the ingredient is loaded, the ingredient relay is shut-off.
 - f. As soon as the indicator senses that motion on the scale has stopped, the amount of the ingredient just loaded will be displayed for 2 seconds, and then automatically advance to the next ingredient to be loaded.
 - g. This process will continue until all ingredients have been loaded.
 - h. After the last ingredient is loaded, the recipe number is displayed with the mix time, and it counts down during the mixing cycle.
 - i. Once the mixing time cycle is completed the MIXER UNLOAD relay and lamp are turned on, and the recipe number along with the decreasing weight are displayed.
 - j. Once the weight drops below 50 lbs/kgs and motion stops, the display will say "01 done" and the cleanout timer will start.
 - k. After the timer is done, **ALL donE** will be displayed and all relays will power down.
 - l. System will return to the GROSS mode, and the batch process is completed.

Multi-Batching in the Auto Mode

1. Press the RCU-1015 **POWER ON** button. . . System power is now on
2. Toggle the **BATCH** switch and the **UNLOAD** switch to the Auto position. Auto batching is now enabled.
3. Make sure the Mixer, Mill, Mixer Unload, and Feeder switch are all OFF. Switches should be off in the Auto Mode.
4. Turn on the Model 1015 indicator Model 1015 powers on
5. If indicator is not in the Gross mode, press **GROSS**. . . Gross annunciator illuminates.
6. Press **ZERO/CLEAR**. . . Zero value is displayed and indicator is zeroed.
7. Key in desired recipe number (RR) and then press **RECIPE**. . . **RR:BBBBBB** is displayed. (BBBBBB represents batch amount)
8. Key in desired batch amount and press **SELECT**. . . Batch amount and recipe number is displayed.

EXAMPLE: If you have the size-ton parameter set to 1.0 ton (1.0 ton = 2000 lb = 1000kg) and you want to automatically do 10 one ton batches, enter your batch size as 20000 lb and the system will automatically cycle through 10 times. (Make sure your system is setup to handle this case, otherwise if dumping into a truck you may want to use the **UNLOAD HOLD** feature, see page 14).

9. Press **LOAD/UNLOAD**. . . **START-UP** appears while the following happens:
 - a. Mixer and Mixer Lamp turns on, then 5 seconds later
 - b. Mill and Mill Lamp turns on if system has a mill, then 5 seconds later
 - c. First ingredient and Ingredient feeder lamp turns on...
 - d. **XX:TTTTTT** (**XX** ingredient number, and Target amount are displayed)
 - e. The ingredient begins loading and the target counts down. When getting within a programmed amount the alarm light will begin to flash, and once the ingredient is loaded, the ingredient relay is shut-off.

*At any point during the ingredient loading process, you may press **MENU** to stop loading an ingredient and advance to the next ingredient.*

During the batching process if any errors occur, restart by following instructions in the section, Restarting After Error Messages.

- f. As soon as the indicator senses that motion on the scale has stopped., the amount of the ingredient just loaded will be displayed for 2 seconds, and then automatically advance to the next ingredient to be loaded.
- g. This process will continue until all ingredients have been loaded.
- h. After the last ingredient is loaded, the recipe number is displayed with the mix time, and it counts down during the mixing cycle.
- i. Once the mixing time cycle is completed the MIXER UNLOAD relay and lamp are turned on, and the recipe number along with the decreasing weight are displayed.
- j. Once the weight drops below 50 lbs/kgs and motion stops, the display will say **01 done** (meaning the first draft is completed), and the cleanout timer delay will start to time down..
- k. After the cleanout timer is done, the unload relay will shut off and a standard 15 second delay for the closing of a gate will occur. After the 15 seconds expires, the recipe number and the next draft size will appear for 2 seconds, and then continues on at step C above. When all drafts have been completed and the entire multi-batch sequence is finished, **ALL done** will be displayed and all relays will power down.
- l. System will return to the Gross mode, and the batch process is completed.

Restarting After Error Messages

The Model 1015 RCU system has different error conditions that may occur during batching. If they do occur, please observe the following instructions on restarting your system.

Error Display: **XX: Err**

Interpretation: This error means there was an interruption of the Auto ingredient loading caused by ingredient overshooting or undershooting the target amount. **XX** represents the number of the ingredient that was loading when the error condition began.

User response: Locate and correct the problem which may be one of the following:

Underloading error condition may exist because:

- Flow rate is irregular
- Ingredient Bin ran empty
- Auger is malfunctioning for whatever reason

Overloading error condition may exist because:

- Flow rate is irregular
- Flow rate became too fast for whatever reason

To continue choose A or B:

A. If an ingredient is underloaded, press **ZERO/CLEAR** . . .

The system re-initiates back to ingredient loading mode. The system completes the load cycle if remaining in the Auto Batch mode.

B. If an ingredient is overloaded, make sure the RCU-1015 is powered ON, and press **ZERO/CLEAR** . . .

A negative net value is displayed equaling the overloaded quantity of ingredient

Press **SELECT** . . .

If remaining in the Auto Batch mode, the system re-initiates back to ingredient-loading mode. The system accepts additional quantity of ingredient and ingredient-loading process advances automatically to the next ingredient.

If in the manual mode it simply remains in the ingredient loading mode and the user must finish the batching process manually.

If you continue to have Errors and the system shuts down because of overshooting on ingredients, you can change the Auto Ingredient tolerance window to a larger percent (+/- 5% is standard). See page 25 in the user's manual.

*If the system reaches twice its tolerance (because, for example, a contactor inadvertently sticks) the RCU will shut down and **xx: Err** will be displayed.*

Error Display: *Err-UnLd*

Interpretation: The interruption of the Auto ration unloading is caused by material leaving the mixer too slowly. If weight on the mixer doesn't change by more than 5% of the batched amount within one minute an error condition will exist. In addition, if the Model 1015 doesn't return to within 50 lbs/kgs of zero, it will also interpret this as an error condition and the system will shut down.

User Response: Remove system power , then proceed to locate and correct the problem.

Condition may exist due to :

- Mixer discharge auger is malfunctioning for whatever reason
- Mixer discharge gate is not fully open
- Feed is hung up in mixer

To continue:

1. Press System Power On. If you are going to manually unload, turn Batch switch to manual. . .

Press **ZERO/CLEAR** on the Model 1015 to return to the GROSS mode and unload manually.

OR

to continue automatically keep switch at auto. . .

Press **ZERO/CLEAR** to re-initiate the system back to automatically unloading and completing the batch cycle.

Error Display: *StoPPed*

Interpretation: The interruption of the Auto batch process was stopped by either pressing **Emergency Stop** or the system experienced an interruption of system power.

User Response: Locate and correct the problem.

To Continue:

AFTER A SYSTEM POWER INTERRUPTION:

1. Power Model 1015 indicator back on by pressing **ON**. . . Display shows *StoPPed*.

Manual:

1. If switching to manual Batching, turn BATCH switch to manual.
2. Now, power on the RCU-1015 by pressing System Power back on.
3. Press **ZERO/CLEAR**. . . Indicator display returns to the exact point of the batch that system power was turned off. Continue batching manually.

Once you clear the error and return to the manual state, you must finish the batch manually.

Auto:

1. Power on the RCU-1015 by pressing System Power back on.
2. Press **ZERO/CLEAR** to clear the *StoPPed* display and to immediately restart the auto batching sequence The batch will complete automatically.

Unload Ration From Auto Unload Mode

If you set the UNLOAD switch to AUTO UNLOAD position during start-up, the ration is unloaded automatically once batching cycle is completed. If you are multiple auto batching, the system then automatically recycles through ingredient loading, auto mixing, and ration unloading until total ration quantity has been batched and unloaded.

Unload Hold : Continuing Unloading Either Auto Or Manual

If you set the UNLOAD switch to the HOLD position anytime before the system starts to unload, the system will shut down when the mix cycle times out. Then the Model 1015 indicator enters the UNLOAD HOLD state, with **UnLd-HLd** displayed. To unload the batch either Auto Or Manual follow **A or B**.

A. Automatically Unloading

To finish the batch automatically perform the following steps:

1. From the UNLOAD HOLD state, make sure the UNLOAD switch is returned to the AUTO UNLOAD position.
2. When load-receiving vehicle is in position, press **ZERO/CLEAR** . .

Automatic unloading begins. If multiple auto batching is in effect, batching cycle automatically recurs X number of times until your requested Total Ration Quantity has been batched.

B. Manually Unloading

To finish the batch manually , perform the following steps:

1. From the UNLOAD HOLD state, return the UNLOAD switch to the AUTO UNLOAD position.
2. Toggle the BATCH switch to the MANUAL position.

3. When load-receiving vehicle is in position, press **ZERO/CLEAR**. . . The indicator returns to the Gross mode. Turn on the mixer and mill switch, and then turn on the Mixer Unload to manually unload.
4. Once completed, turn all switches off and return Batch switch to the AUTO position.

Batching Rations In The Manual Mode

If the RCU-1015 is being used to manually batch follow these simple steps.

1. Toggle the BATCH switch to the manual position. Manual batching is now enabled.
2. Make sure the Mixer, Mill, Mixer Unload, and Feeder switches are all off. Switches must be in the OFF position, due to safety interlocked wiring. If any switch is ON, the RCU-1015 will not power up.
3. Press the POWER ON button. . . System power is now on.
4. Turn on the Model 1015 indicator. . . Model 1015 powers on
5. If indicator is not in the Gross mode, press **GROSS**. . . Gross annunciator illuminates.
6. Press **ZERO/CLEAR**. . . Zero value is displayed and indicator is zeroed.
7. Key in desired recipe number (RR) and then press **RECIPE**. . . **RR:BBBBBB** is displayed. (BBBBB represents batch amount)
8. Turn the MIXER switch to ON. . . Mixer and Mixer Lamp turns on
9. Turn the MILL switch to ON. . . Mill and Mill Lamp turns on

Even if your system has no Mill it is interlocked with the wiring so it must be ON to manually load ingredients.

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| 10. To start the Load process press the LOAD/UNLOAD key on the Model 1015 indicator. . . | The first ingredient and its target amount are displayed. |
| 11. To select loading of the ingredient displayed, move the INGREDIENT SELECT switch to the proper ingredient number. . . | Ingredient selector is properly positioned. |
| 12. Now toggle the feeder switch to ON . . . | Ingredient auger and Lamp turns on. Ingredient begins to flow. |
| 13. Watch the target amount, and use the ON/OFF feeder switch to manually load the ingredient. | Target weight counts down as loading occurs. Alarm light begins to flash on the Model 1015 when approaching target. |
| 14. Once target displays 0 lb or - value then stop loading and press MENU on the Model 1015 indicator to manually advance to the next ingredient. The next ingredient and target are displayed. | |
| 15. Repeat steps 11-14 until all ingredients are properly loaded. | |
| 16. After the last ingredient is loaded, press MENU to return to the Gross mode. . . | Gross weight of the recipe is displayed. |
| 17. Key in the desired mix time and press HOLD/TIMER . . . | Mix time will be displayed and count down until the timer has elapsed. Alarm light comes on indicating timer is done. |
| 18. Press GROSS . . . | Unit returns to the Gross mode. |
| 19. Now toggle the MIXER UNLOAD switch to the ON position. . . | Weight on the display begins to count down, unload auger and lamp are turned ON. |
| 20. When done unloading turn all switches OFF. | |

Mix Timer Operation (Manual mode only)

To pause timer, press **HOLD/TIMER**. Pressing **HOLD/TIMER** a second time will cause the timer to resume count down.

1. In gross weighing mode, enter mix time in hours, minutes, and seconds. For example, 5½ minutes would be entered 000530.
2. Press **HOLD/TIMER**. Indicator will display mix time and immediately begin to count down. Alarm will sound when the specified time has elapsed.
3. To disable alarm and exit timer mode, press **GROSS**.

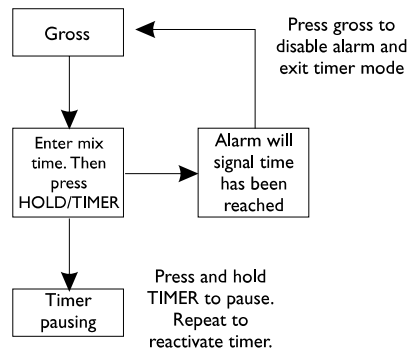


Figure 5
Timer Flow Chart

Viewing Last Batch

To navigate through the menu options for this and the following sections, refer to Figure 6 on the next page.

To view the most recent batch:

1. In gross weighing mode press and hold **MENU** until. . . **L. bAtch** is displayed.
2. Press **SELECT**. . . The number of the most recent recipe and the load amount is displayed.
3. Press **SELECT**. . . The ingredient number and the actual amount batched of it are displayed.
4. Press **MENU**. . . The next ingredient number and the actual amount batched are displayed.
5. Repeat step 4 until all ingredients and their batched amounts have been displayed.
6. After the last ingredient is displayed, press **MENU**. . . **t** is displayed with the sum of all the actual ingredients.
7. Press **RECIPE** or **SELECT**. The recipe number is displayed.
8. Press **GROSS** to return to gross weighing mode.

Press the **MENU** key to scroll → in the menu. Press the **SELECT** key to move ↑ in the menu.

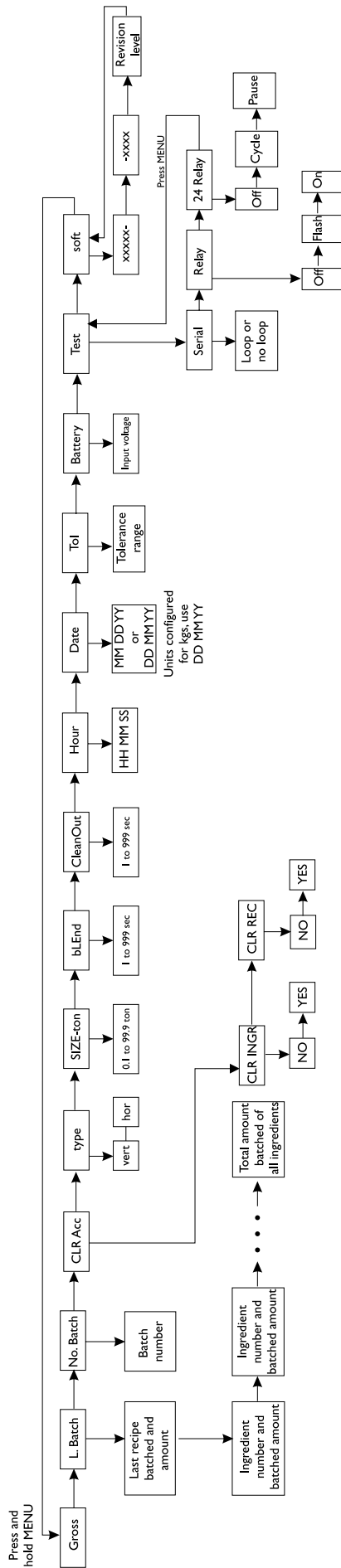


Figure 6
Menu Options

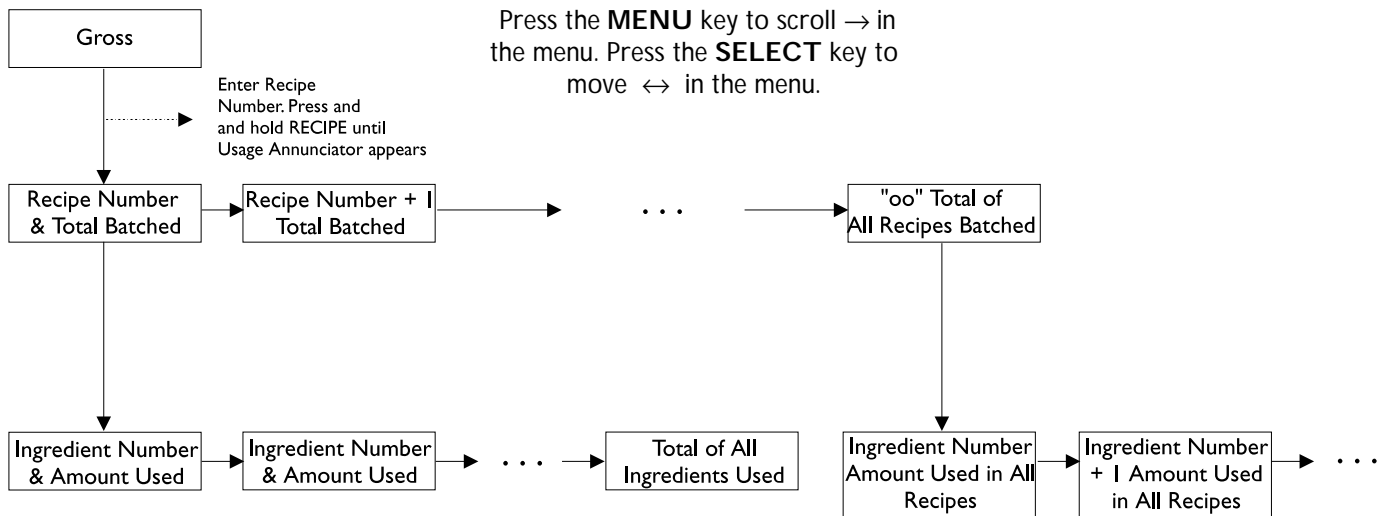


Figure 7
Viewing Batch Accumulators Flow Chart

Viewing Batch Accumulators

Total of Individual Recipes

Refer to Figures 6 and 7 for menu flow charts.

1. In gross weighing mode, enter the recipe number, and press **RECIPE**.
2. When the appropriate recipe is displayed, press and hold **RECIPE** until the Usage annunciator appears. The recipe number and actual batched amount for that recipe are displayed.

Total of Individual Ingredients Within A Recipe

1. In gross weighing mode, enter the recipe number and press **RECIPE**.
2. When the appropriate recipe is displayed, press and hold **RECIPE** until the Usage annunciator appears. The recipe number and total batched amount for that recipe are displayed.
3. Press **SELECT**. The first ingredient of the selected recipe and its actual batched amount are displayed.
4. Press **MENU** to scroll through all the ingredients, each displayed with its total batched amount.
5. Press **RECIPE** or **SELECT**. The recipe number and total batched amount are redisplayed.
6. Press **GROSS** to return to gross weighing mode.

Total of All Recipes

1. In gross weighing mode, enter recipe number and press **RECIPE**.
2. When the appropriate recipe is displayed, press and hold **RECIPE** until the Usage annunciator appears.
3. Press **MENU** to view each recipe and its total batched amount. After recipe 99, the 00 recipe will be displayed. This is a final accumulator that shows the total amount batched for all the recipes.

The recipe number and actual batched amount for that recipe are displayed.

Total of Each Ingredient

1. In gross weighing mode, enter the recipe number and press **RECIPE**.
2. When the appropriate recipe is displayed, press and hold **RECIPE** until the Usage annunciator appears.
3. Press **MENU** to view each recipe and its total batched amount. After recipe 99, the 00 recipe will be displayed. This is a final accumulator that shows the total amount batched for all the recipes.
4. Press **SELECT**.
5. Press **MENU** to view each ingredient and its total batched amount.
6. To return to gross weighing mode, press **RECIPE** or **SELECT**, and then press **GROSS**.

The recipe number and total batched amount for that recipe are displayed.

The first active ingredient number will be displayed with the actual amount of that ingredient batched in all recipes.

Setting Batch Number Accumulator

Refer to Figure 6 for menu flow chart.

To set the batch number accumulator:

1. In gross weighing mode, press and hold the **MENU** key until **L.bAtch** is displayed.
2. Press **MENU**. **no. bAtch** is displayed.
3. Press **SELECT**. Using the numeric keys, enter the desired starting number.
4. Press **SELECT** to return to **no. bAtch**.

Clearing Accumulators

Clearing Single Ingredient Accumulators

Refer to Figure 6 for menu flow chart.

1. In gross weighing mode, press and hold **MENU** until **L.bAtch** is displayed.
2. Press **MENU** until . . . **Clr Acc** is displayed.
3. Press **SELECT** until . . . **Clr Ingr** is displayed.
4. Press **SELECT** until . . . **Clr no** is displayed.
5. Press **MENU** until . . . **Clr Yes** is displayed.
6. Press **SELECT** until . . . **Clr Ingr** is displayed.
7. Press **GROSS** to return to gross weighing mode.

Clearing Recipe Accumulators

1. In gross weighing mode, press and hold **MENU** until **L.bAtch** is displayed.
2. Press **MENU** until . . . **Clr Acc** is displayed.
3. Press **SELECT** until . . . **Clr Ingr** is displayed.
4. Press **MENU** until . . . **Clr rEC** is displayed.
5. Press **SELECT** until . . . **Clr no** is displayed.
6. Press **MENU** until . . . **Clr Yes** is displayed.
7. Press **SELECT** until . . . **Clr rEC** is displayed.
8. Press **GROSS** to return to gross weighing mode.

Viewing and Setting System Parameters

Setting Type of Mixer (Control Process)

"Vert" type

Use this section to select which control process you need for your system.

In this selection the control process is as follows:

1. Turns on the mixer
2. Turns on the mill
3. Loads the ingredients while mixer is running
4. Mixes for the programmed blend time
5. Turns on the unload and empties the mixer
6. Batch is completed, everything shuts off

"Horiz" type

This selection is only intended for certain mixer styles which must be shut off to insure ingredient loading accuracy.

In this selection the control process is as follows:

1. Loads the ingredients, while mixer is off
2. Turns on the mixer
3. Turns on the mill
4. Mixes for the programmed blend time
5. Turns on the unload and empties the mixer
6. Batch is completed, everything shuts off

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **tYPE** is displayed.
3. Press **SELECT**. . . The current selection is displayed. *Vert* is the default setting.
4. Use the **MENU** key to toggle to the appropriate selection. . . Either *Vert* or *hORiZ* is displayed.
5. Press **SELECT** and the unit is programmed for the appropriate process control type. . . **tYPE** is displayed.
6. Press **GROSS** to return to gross weighing mode.

Setting Size-ton

Refer to Figure 6 for menu flow chart.

To set the Size-ton parameter (maximum size of a batch):

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **Size-ton** is displayed.
3. Press **SELECT**. . . The current value is displayed.
4. Using the numeric keys, enter the desired size of your batch in tons (0.1 to 9.9).
5. Press **SELECT** to return to *Size-ton*.
6. Press **GROSS** to return to gross weighing mode.

Setting Blend

Refer to Figure 6 for menu flow chart.

To set the Blend parameter (amount of time required to mix the batch):

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **bLEnd** is displayed.
3. Press **SELECT**. . . The current value for blending time is displayed.
4. Using the numeric keys, enter the desired length of blending time in seconds. (1 to 999 seconds)
5. Press **SELECT** to return to *bLEnd*.
6. Press **GROSS** to return to gross weighing mode.

Setting Cleanout Time

Refer to Figure 6 for menu flow chart.

To set the Cleanout parameter (amount of time mixer discharge auger is kept on after mixer is empty):

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **CleanOut** is displayed.
3. Press **SELECT**. . . The current value is displayed.
4. Using the numeric keys, enter the desired cleanout time in seconds. (1 to 999 seconds)
5. Press **SELECT** to return to *CleanOut*.
6. Press **GROSS** to return to gross weighing mode.

Viewing and Setting the Auto Ingredient Advance Tolerance Range

Refer to Figure 6 for menu flow chart.

The default tolerance range is ± 5 percent.

The 1015 Indicator will automatically advance to the next ingredient in a recipe once a predetermined percentage of the target amount is met. To set the tolerance range, complete the following steps.

1. From gross weighing mode, press and hold **MENU** until. . . **L. bAtch** is displayed.
2. Scroll through the menu options by pressing the **MENU** key until. . . **tol** is displayed.
3. Press **SELECT**. . . The current tolerance range will be displayed.
4. Using the numeric keypad, enter the desired tolerance range. This can be any number between 1 and 99 percent.
5. Press **SELECT** to enter the new range and return to **tol**.

Viewing and Setting the Time and Date

Viewing and Setting the Time

Refer to Figure 6 for menu flow chart.

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **Hour** is displayed.
3. Press **SELECT**. . . The time will be displayed in hours, minutes and seconds.
4. Enter the correct time allowing spaces for hours, minutes and seconds. For example, 1:59 would be entered as 15900.
5. Press **SELECT**. . . **Hour** is redisplayed.
6. Press **GROSS** to return to gross weighing mode.

Viewing and Setting the Date

Refer to Figure 6 for menu flow chart.

1. In gross weighing mode, press and hold **MENU** until. . . **L.bAtch** is displayed.
2. Scroll through the menu options by pressing **MENU** until. . . **Date** is displayed.
3. Press **SELECT**. . . The date is displayed in month, day, year.

4. To change the date, key in the new data.
5. Press **SELECT** . . . Date is redisplayed.
6. Press **GROSS** to return to gross weighing mode.

Using a Printer

If you have a printer, the following print options are available to you.

- Basic display printout
- Recipe printout
- Last batch printout
- Batch accumulator printouts

While all printed data includes the displayed value and the correct unit of measure, *lb* or *kg*, the printout format will vary depending on the options that you choose.

Basic Display Printout

1. In gross weighing mode, press **PRINT** . . . Amount displayed on indicator will print as shown in sample below.

```

4001 lb
  
```

Basic Display Printout Sample

Recipe Printout

1. Display the desired recipe.
2. Press **PRINT** . . . Recipe number, ingredients, target amounts and totals will print as shown in the sample below.

```

08/24/99  11:57:04
Recipe 01
Load Amt.  4000 lb
Ingredient  Target
01Ingr.    500 lb
02Ingr.    500 lb
03Ingr.    1000 lb
04Ingr.    1000 lb
05Ingr.    1000 lb
Total      4000 lb
  
```

Recipe Printout (Percent) Sample

Last Batch Printout

Press and hold the **PRINT** key until **Pr-ALL** is displayed and the last 99 batches, maximum, will be printed.

1. From gross weighing mode, press and hold **MENU** until. . .
2. Press **PRINT**. . .

L. bAtch is displayed.

The last batch information will print as shown in the sample below. If your system is configured for auto print, it will provide a printout after each batch automatically. See note at left.

```
~~~~~  
Batch 6  
08/24/99 12:57:44  
ReciPe 02  
Load Amt. 4000 lb  
IngrEdient Target Actual  
10Ingr. 500 lb 500 lb  
11Ingr. 1500 lb 1501 lb  
13Ingr. 500 lb 500 lb  
14Ingr. 500 lb 500 lb  
15Ingr. 1000 lb 1001 lb  
Total 4000 lb 4002 lb  
~~~~~
```

**Last Batch Printout (Percent)
Sample**

Batch Accumulator Printouts

Single Recipe/Ingredient Accumulator Totals

An asterisk (*) denotes a hand-added ingredient.

1. In gross weighing mode, enter the recipe number and press **RECIPE**.
2. When the appropriate recipe is displayed, press and hold **RECIPE** until the Usage annunciator appears.
2. Press **PRINT**. . .

The accumulated ingredient totals for that specific recipe will print as shown in the sample below.

```
~~~~~  
08/24/99 1:17:44  
ReciPe 01  
  
IngrEdient Usage  
01Ingr. 1500 lb  
02Ingr. 1500 lb  
03Ingr. 3001 lb  
04Ingr. 3000 lb  
05Ingr. 3002 lb  
Total 12003 lb  
~~~~~
```

Single Recipe/Ingredient Accumulator Sample

All Recipe/Ingredient Accumulator Totals

1. In gross weighing mode, enter the recipe number and press **RECIPE**. Display any recipe, and press and hold **RECIPE** until the Usage annunciator appears.
2. Press and hold **PRINT** until *PR-All* is displayed.
3. Release **PRINT** key.

All recipe and ingredient totals will print as shown in the sample below.

```
08/28/99      1:47:44
Recipe 01    12003 lb
Ingredient Usage
01Ingr.      1500 lb
02Ingr.      1500 lb
03Ingr.      3001 lb
04Ingr.      3000 lb
05Ingr.      3002 lb
Total        12003 lb

Recipe 02    12006 lb
Ingredient Usage
10Ingr.      1500 lb
11Ingr.      4503 lb
13Ingr.      1500 lb
14Ingr.      1500 lb
15Ingr.      3003 lb
Total        12006 lb
```

All Recipe/Ingredient Accumulator Sample

Total Recipe Accumulator

1. In gross weighing mode, enter a recipe number and press **RECIPE**. Press and hold **RECIPE** until the Usage annunciator appears.
2. Press **MENU** to scroll to the *00* recipe and press **PRINT**.

The total of all the recipes batched will print as shown in the sample below.

```
08/28/99      2:47:44
Recipe All    24009 lb
```

Total Recipe Accumulator Sample

Individual Recipe Accumulators

1. In gross weighing mode, enter a recipe number and press **RECIPE**. Press and hold **RECIPE** until the Usage annunciator appears.
2. Press **MENU** to scroll to the *oo* recipe and press and hold **PRINT** until *Pr-All* is displayed.
3. Release **PRINT** key.
The total amount batched for each recipe with active usage recipe will print as shown in the sample below.

```
08/28/99    2:49:24
Recipe      Usage
Recipe 01   12003 lb
Recipe 02   12006 lb
```

Individual Recipe Accumulators Sample

Individual Ingredient Accumulator Totals

1. In gross weighing mode, enter a recipe number and press **RECIPE**. Press and hold **RECIPE** until the Usage annunciator appears.
2. Press **MENU** to scroll to the *oo* recipe.
3. Press **SELECT**.
4. Display ingredient and press **PRINT**.
The accumulator for the ingredient will print as shown in the sample below.

```
08/28/99    2:49:44
Recipe 01   1500 lb
```

Single Ingredient Accumulator Sample

All Ingredient Accumulator Totals

1. In gross weighing mode, enter a recipe number and press **RECIPE**. Press and hold **RECIPE** until the Usage annunciator appears.
2. Press **MENU** to scroll to the *oo* recipe.
3. Press **SELECT**.
4. Display any ingredient, and press and hold **PRINT** until *PR-All* is displayed.
5. Release **PRINT** key.
The accumulators for all active ingredients will print as shown in the sample below.

```
08/28/99    4:47:24
Ingredient   Usage
01Ingr.     1500 lb
02Ingr.     1500 lb
03Ingr.     3001 lb
04Ingr.     3000 lb
05Ingr.     3002 lb
10Ingr.     1500 lb
11Ingr.     4503 lb
13Ingr.     1500 lb
14Ingr.     1500 lb
15Ingr.     3003 lb
Total       24009 lb
```

All Ingredient Accumulators Sample

If you experience problems in the operation of your system, read through these troubleshooting steps and perform those which are appropriate. This information may help you to correct the following operational difficulties without calling your supplier or sending your equipment in for repair:

- *Power-on Failure*
- *Stalled Display Following Power-on*
- *Indicator Lock-up*
- *Inaccurate Weight Readings*
- *Alarm Light Malfunction*
- *Measuring the Supply Battery Voltage*

Instructions for sending an indicator in for repair are provided in the last section under *Service Repairs*.

Power-On Failure

Indicator voltage can be checked inside the RCU enclosure on TB3-pins 4 (+12 VDC) and 8 (ground).

If your indicator fails to power-on, check the following possible problem sources in the order given. Attempt to power-on after trying each of these four troubleshooting steps:

1. **Check RCU-1015 Voltage.** Required voltage is 10-18 volts DC negative ground. If the voltage is between 8-10 volts, the indicator will display *Lo-bAt*. The indicator will automatically turn off if the incoming voltage drops below 8 volts or rises above 18 volts. (Check the RCU-1015 power supply fuse.)
2. **Disconnect and Check Power Cable Connector** from the RCU-1015, clean if necessary, and reconnect.
3. **Replace M1015 Fuses.** Sometimes, a bad fuse can be recognized by an obvious break in the wire filament. However, such a break is not always observable, and getting a successful power-on after changing a fuse is often the only way of knowing that the fuse was indeed defective.

Make sure new fuses are the proper size and have a current rating of five amperes. Using a fuse with too high a current rating can cause costly damage to the indicator and will void your warranty. The same is true for substituting wire, a nail, or any other object in place of a fuse.

Place nothing in the fuse connector except a proper fuse.

Change one fuse at a time (see instructions below). Try to power-on after changing the first fuse; if unsuccessful, change the second fuse and try to power on again. If changing the second fuse fails to allow successful power-on, proceed to the next trouble shooting step.

To replace a fuse, first locate fuse caps on the bottom panel of the indicator. Then:

1. Turn cap counterclockwise and lift out fuse & cap assembly.
2. Remove old fuse from cap and insert new fuse.
3. Replace fuse & cap assembly in fuse connector.

4. **Test Indicator and Cables** to isolate the source of the problem.
 - a. Disconnect all cables on bottom panel of Indicator except for power cable.
 - b. Now try powering-on. If this is not successful, your problem is in the indicator and you should contact your supplier.
 - c. If you are able to power-on with only the power cable connected, your problem is probably not in the indicator; continue troubleshooting.
 - d. With power still on, plug in cables, one at a time — Weigh Bar® cables first, then alarm cable, then printer/remote display cable — until plugging in one of the cables causes the indicator to shut off. That cable is the bad one and needs to be repaired or replaced.

Stalled Display Following Power-On

If you experience one of these symptoms, follow the steps below:

- An **illegible display** that cannot be zeroed and from which you cannot escape;
- A **legible display**, such as *HELLO*, that cannot be zeroed and from which you cannot escape;
- An **illuminated backlight** with no characters displayed and allowing no escape.
- **No escape?** If the red illumination on the display is visible, telling you the indicator has power (on a sunny day you may have to shade the display), doing a **Re-initialization** (explained below) may restore proper display function.

To Re-initialize a Stalled Indicator:

1. Press **OFF**.
2. Press and hold **ZERO/CLEAR**, while you press and release **ON**.
3. Then release **ZERO/CLEAR**.

If the display says *HI* instead of *HELLO* following a re-initialization power-on, your indicator may require service. Contact your supplier.

Indicator Lock-Up

A locked up indicator is represented by an illuminated alarm light and a display of **Error**.

1. Shut off the alarm by pressing any key.
2. Test the scale system to isolate the source of the lock up problem, as follows:
 - a. Disconnect all Weigh Bars.
 - b. Try to zero the indicator by pressing **GROSS** and **CLEAR**.
 - If you are unable to zero the indicator with the Weigh Bars disconnected, the problem is in the indicator and you should contact your supplier.
 - If you are able to zero your indicator with the Weigh Bars disconnected, then the problem is probably in the Weigh Bars, cables, j-box, etc. and you should continue troubleshooting.
3. Reconnect all Weigh Bars. You will see **Error** displayed again.
4. If your Weigh Bar connectors have the five-pin configuration, disconnect one Weigh Bar. No adapter plug is necessary.
5. Try to zero the indicator.

Repeat Steps 4 and 5 with each Weigh Bar cable, making sure each time that all cables are connected except the one you removed.

A faulty Weigh Bar may be identified with this method. Once the faulty bar is removed, **Error** will no longer be displayed and the indicator will again display weight readings. Carefully inspect the Weigh Bar cable for possible damage and inspect connector pins for possible corrosion.

Inaccurate Weight Readings

First: Visually Inspect The Scale System for apparent problems and improper installation:

1. Check each cable, from source to indicator, for stress, cuts, breaks, or abrasions.
2. Unplug and reconnect each connector at the indicator to verify that it is tight and making good contact. Clean connector pins if there are any signs of corrosion.
3. Check between supporting structure and weighing structure for debris that might restrict Weigh Bar movement.
4. Make sure the supporting structure and weighing structure do not touch each other at any point except at the Weigh Bars.

Next: Compare Weight Readings for All Weigh Bars:

Position a person or heavy object on the mixer above each Weigh Bar, one bar at a time, and compare weight readings for the same person or same object.

For each weighing, the weight itself will be off-center, favoring a single Weigh Bar; therefore, none of the readings will be accurate.

However, your readings obtained by weighing the same person or object above each Weigh Bar should be very similar to each other. A single Weigh Bar reading that is significantly different from the others indicates that bar may be faulty. Make sure each Weigh Bar is securely bolted to the floor and none of the bars is "floating". Each Weigh Bar must be carrying a load when the scale is both empty and loaded.

Alarm Light Function

If your external alarm works properly but the alarm light fails to illuminate when it should, the problem may be the bulb itself.

Unscrew the red cap. To remove the bulb, grip it, push down, and turn counter-clockwise until it releases.

If the bulb is bad, you can replace it at most hardware stores.

Measuring Supply Battery Voltage

To check battery voltage:

1. Press and hold **GROSS** until **L. bAtch** is displayed.
2. Press **MENU** to scroll through menu options until **battErY** is displayed.
3. Press **SELECT** to display incoming battery voltage.
4. Press **SELECT** to return to **battErY**.

Service Repairs

If you determine that the indicator or a Weigh Bar needs service, contact your supplier, or send your equipment back to the factory for repair, postage prepaid.

Include the following information:

1. Your name, address, and telephone number
2. Supplier name, address, and telephone number
3. Date of purchase
4. **Important:** An informal note describing symptoms of the problem.

Display Messages

HELLO

Indicator is being re-initialized. Message is displayed briefly at time of power-on.

Indicator is in state of over-capacity.

Indicator is in state of under-capacity.

Error

System is not functioning properly. Weight is not being calculated because scale weight is too high or too low. (Refer to information on "Indicator Lockup" in **Troubleshooting** section of manual.)

Print

Indicator is transmitting data. Appears after pressing **PRINT**.

Pr-All

Indicator is transmitting data. Appears after pressing and holding **PRINT**.

Lo-bAt

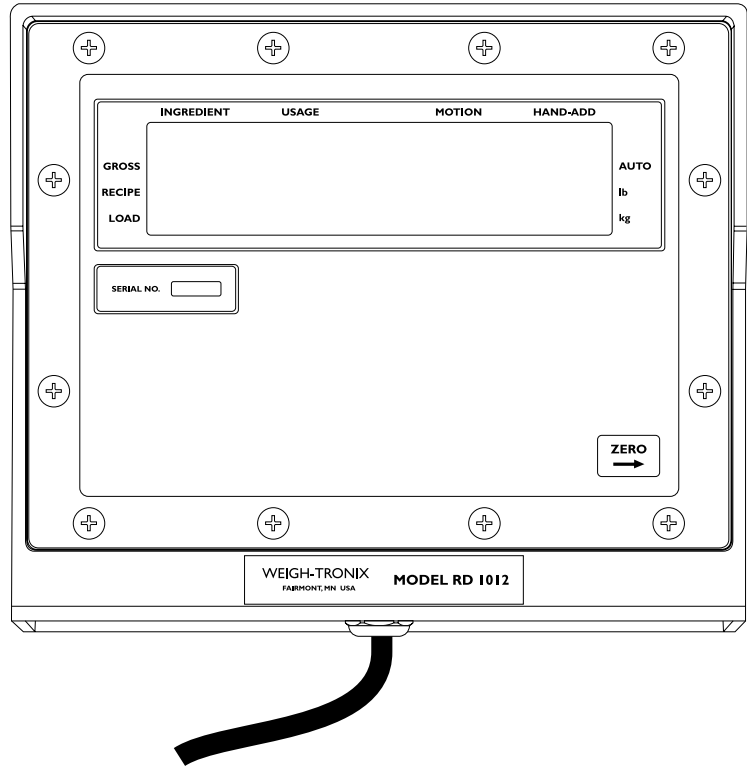
Displayed when input voltage to indicator is between 8 and 10 volts.

HOLD

Used when moving a portable system. Alternates between hold and net weight just loaded or unloaded.

RD 1012 Remote Display

The RD1012 is a remote display that is compatible with the Model 1015. (An RD1012 output option is required on the Model 1015 for interfacing.) It is available with 1" or 2" digits. The interface cable plugs directly into the bottom of the Model 1015. When using the remote display, any data displayed on the Model 1015 is also displayed on the RD1012. This can be useful for adding hand-add ingredients.



Indicator Diagnostics

The test mode is used to test various functions of the 1015 Indicator. The test menu is shown in Figure 8. Instructions for using the test menu are found below.

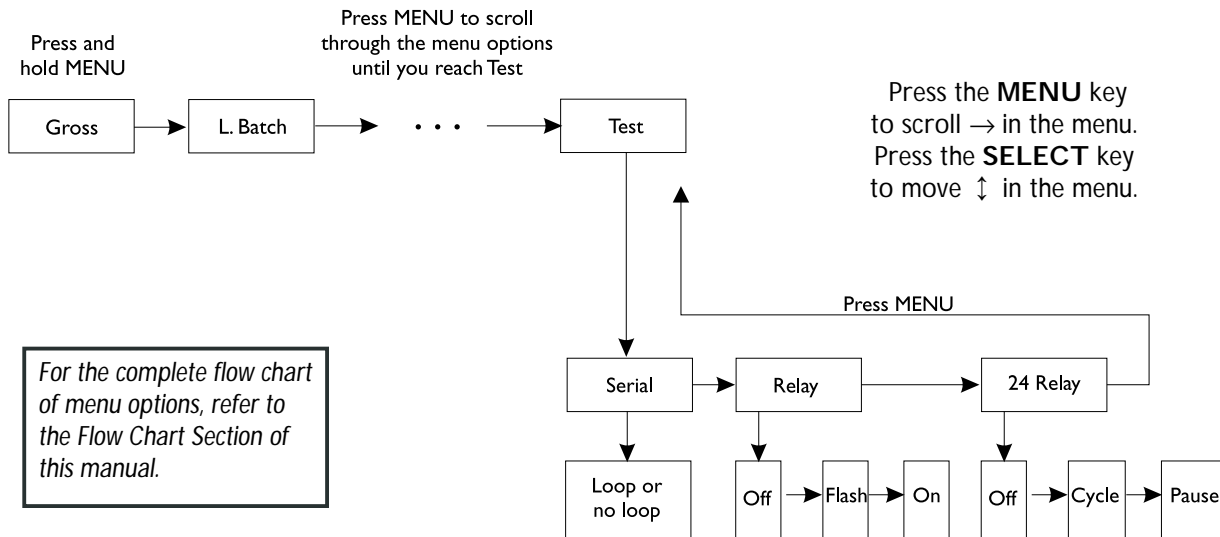


Figure 8:
Test Menu

1. Enter the test mode from gross operation by pressing and holding **MENU** until **L. bAtch** is displayed. Scroll through the menu options until **tESt** is displayed.
2. To scroll through the menu, press **MENU**.
3. To move up or down a level, press **SELECT**.
4. Press **MENU** to toggle between choices.

Below are the specific directions and explanations for the items you see in the test menu.

SERIAL— Indicates whether the serial output is ready or busy. Pressing **MENU** puts **LOOP** or **no LOOP** on the display. With pins 2 and 3 connected, **LOOP** is displayed. With them disconnected, **no LOOP** is displayed.

RELAY — With **rELAY** displayed, press **SELECT**. Press **MENU** to scroll through the different alarm light functions. After testing the alarm light, press **SELECT** to return to **rELAY**.

24 RELAY— To conduct this test, turn the 1015 RCU off so augers do not turn on. Press **MENU** to **CYCLE** and watch relays cycle through in groups of eight. Press **MENU** to **PAUSE** and relays will stop at last relays that were turned on. Test is useful for debugging if relays work properly.

Auto-Batching Troubleshooting

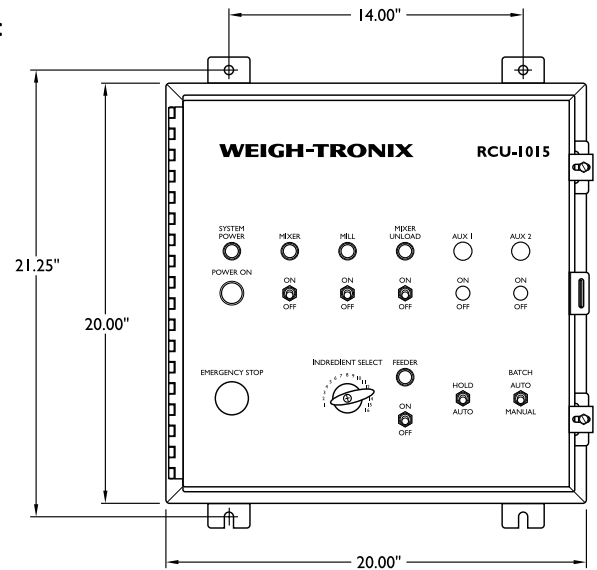
Batching Symptoms	Possible Cause/Possible Solution
<p>Errors out during the loading of ingredients, and indicator displays XX: Err.</p>	<p>The current ingredient tolerance is too small for the system.</p> <p>Solution: Adjust the "Tol" parameter wider . See page 26 in the users manual. Remember that "tol" should be set to an achievable tolerance percentage based off the smallest ingredient inclusion amounts. Example : 50 lbs +/- 5% means it has to be within +/- 2.5 lbs or it will shut down with an error.</p>
<p>Errors out during unloading process and indicator displays Err-UnLd.</p>	<p>During unloading, the weight did not decrease by at least 5% of the batch amount within one minute, or the scale did not return to within 50 lb/kg of zero.</p> <p>Solution: Speed up the auger , increase the auger size, repair the malfunctioning auger, or unplug the auger.</p>
<p>RCU shuts off and indicator displays "Stopped"</p>	<p>Interruption of the Auto batch process was either stopped by pressing Emergency Stop, or a power failure occurred.</p> <p>Solution: Check in-coming 115VAC, and fuses.</p>
<p>Overshoots the ingredient tolerance and shuts off the RCU-1015. Indicator displays "XX: Err"</p>	<p>The ingredient overshoot by twice the programmed tolerance, and the Model 1015 shut the RCU off because it interpreted this as an emergency shutdown situation Example: a motor starter contactor remained in the on position even after the RCU-1015 told it to shut off.</p> <p>Solution: Correct the unwanted condition that caused this to occur. This could also be caused by an ingredient tolerance being programmed too small.</p>
<p>Inaccurate batching results</p>	<p>Certain ingredients are consistently loading above or below the target amounts.</p> <p>Solution: Make sure ingredient flowrates allow for a minimum loading time of 20 seconds for optimum accuracy. It may be necessary to either slow down the auger speed or put in smaller augers. In addition you may check scale calibration: See Service Manual.</p>
<p>Doesn't automatically advance forward to the next ingredient, and system shuts down the mixer.</p>	<p>This probably means the motion from the mixer is causing an unstable scale condition. If the indicator detects motion hasn't ceased within 10 seconds after ingredient has been shut off, then it will cycle down the mixer in order to get a stable weight reading. In turn it can then properly determine the ingredient has stopped flowing, and record accurate ingredient free-fall coming onto the scale.</p> <p>Solution: First make sure nothing is binding the scale such as electrical or auger connections. All auger connections must be flexible or canvas type connections. Otherwise adjust the motion window as described in the service manual, on page 15 to the next highest selection.</p>

Specifications

Indicator Enclosure: Impact/water/dust resistant - polycarbonate structural enclosure; Dimensions: 8.75 " H X 10.5" W X 6.5"D; Standard Weigh-Tronix mounting bracket on back of indicator

RCU-1015 Enclosure: Carbon steel, painted enclosure. 20" x 20" x 8" or 48" x 36" x 8"

RCU-1015 Dimensions:



RCU Power: 115 VAC

RCU Outputs: Ingredient select (1-16), feeder control, mixer control, mill control, mixer unload control, emergency stop

RCU Inputs: Auto/manual feedback, Power enabled /emergency stop feedback, Batch hold (unload) feedback

Display: Eight digit, seven segment LCD, 1.0 inch high characters, 10 annunciators, and fiber optic backlighting (Annunciators - GROSS, RECIPE, LOAD, INGREDIENT, USAGE, MOTION, HAND-ADD, AUTO, lb and kg.)

Display Rate: One, two or five times per second.

Accuracy: $\pm .1\%$ of applied load ± 1 division, whichever is greater

Power: 10 to 18 volts DC negative ground at .10 ampere for 4 Weigh Bars® (4-pin), and at .17 ampere for 4 Weigh Bars® (5-pin)
Current for remote alarm light—typically 2.2 amperes

Environment: -20° to 140°F, or -29° to 60°C, to 95% relative humidity

Weigh Bar® Drive Capacity:	Ten 350 ohm Weigh Bars®
Calibration:	Front panel calibration and spanning for all types of Weigh Bar® and load cell applications up to 999,999 lb or kg
Zero Balance Range:	±1 mV/V, via front panel
Analog Span Range:	0.20 mV/V to 1.0 mV/V (full scale)
Automatic Zero Tracking:	OFF, ±0.2, 0.5, 1.0, 2.0, 3.0 5.0, 10.0 divisions
Motion Detection Window:	OFF, ± 0.2, 0.5, 1.0, 2.0, 3.0, 5.0, 10.0 divisions
Motion Filtering:	Three selections - Normal, Intermediate, and High
Auto Ingredient Tolerance:	OFF (manual), or programmable from ± 1 to 99 %
Alarm Warning:	Programmable to any weight value. Light begins flashing once per second when programmed value has been reached.
Standard Cutoff Output:	Used in conjunction with alarm warning. To be used with standard alarm and light options to indicate when ingredient is approaching target weight. Weigh-Tronix output connector comes standard.
Warranty:	Model 1015: 3 years RCU-1015: 1 year

Features

Selectable Units of Measure:	Lb or kg equivalent, front panel selectable
Load/Unload Function:	Use alarm light on front panel or optional audible alarm when batching to signal operator that loading or unloading process is approaching a preset weight. Use in conjunction with recipes or single ingredient target weight.
External Alarm Connector:	Allows you to attach an audible alarm or alarm light for batching operations.
Timer:	Use for entering a mix time after all ingredients have been loaded. Timer counts down and activates alarm light when preset time has expired.
Auto/Manual:	Configurable for manual or auto advance between ingredients. Can be changed during batching without returning to programming mode by pressing LOAD/UNLOAD .
Large Memory:	Can program up to 100 recipes with 10 ingredients per recipe or a total of 1000 memory locations. Scrolling abilities make it simple to view recipes and ingredients.

Inventory:	Ability to accumulate inventory on all recipes and ingredients. All batched records are stored for keeping track of total recipe and ingredient usage. Scrolling abilities make it simple to view inventory accumulations (Maximum of 999,999 lb or kg total accumulations).
Hand-Adds:	Include hand-add ingredients as part of the recipe for better accuracy of the total recipe batched. Useful for pre-weighed ingredient amounts or small amounts that cannot be weighed accurately on the system. Hand-adds are ingredients 17-99.
Last Batch:	Recall batching information on the last recipe which was completed. Useful for verifying which recipe was last batched.
Power Fail Recovery:	When turning on after a power failure, indicator returns to where the user was before the power failed. Useful for continuing a batch or any other procedure.
Front Panel Programming and Calibration:	On site calibration. All functions performed through keypad. Selectable calibration for other uses without the need for weights. User can easily switch between applications.
Low Power Requirements:	Current drain of only 0.10 to 0.180 amperes gives extended life to your battery power source.
Automatic Turnoff:	If voltage is less than 9.5 volts or higher than 18 volts, the power supply turns unit off to protect the battery from draining. Low battery indication when input drops below 10 volts.
Choice of Connectors:	Allows field retrofit for any scale system; four connector, 5-pin, or one 7-pin connector for interface with junction box.
RS232 Serial Output:	Includes battery backed up time and date baud rate selectable: 9600, 4800, 2400, 1200, 600 and 300 xon/xoff, 8 data bits, one stop bit, no parity Initiate serial transmission using PRINT button, bidirectional communications, auto print after batch and, broadcast mode.
RD1012 Output:	To be used with the RD1012 or RD1012XL remote display

Options

RD1012/RD1012XL Remote Display

Printer

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Weigh-Tronix

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WEIGH-TRONIX

Weighing Products & Systems