D-BTB200 Dual Batching Control Operation Manual

Software Ver 3.31.77

Patented
U.S. Patent No. 7,980,129, Patent No. 8,581,122, Patent No. 8,853,566
U.S. Patent No. 9,310,243, Patent No. 9,651,413, Patent No. 10,082,421
Canada Patent No. 2,822,294
Korea Patent No. 1900521

Table of Contents

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Thank you for purchasing a BinTrac Dual Batching Control from HerdStar, LLC.

Overview

Your BinTrac Dual Batching Control provides a cost-effective way to automatically monitor bin level and batch programmed load and/or unload amounts.

Components

A BinTrac Dual Batching Control system consists of a few basic components:

BinTrac Dual Batching Control

This is the main unit of the BinTrac system. The BinTrac Dual Batching Control communicates with the Smart Summing Box to register the weight of material in the bins. The material level is computed and displayed on the LED bar graph.

Load Cell Bracket

Four or more load cell brackets allow the BinTrac system to accurately measure the material weight in your bins. The Smart Summing Box averages the signals from all brackets to minimize errors that could result from voids (holes) in the material.

Smart Summing Box

A single Smart Summing Box per bin communicates the current reading on the leg brackets to the BinTrac Dual Batching Control.

BinTrac Power Supply

This provides the power for the BinTrac Dual Batching Control. The power supply converts the line voltage to low voltage.

BinTrac Batching Control Remote Display

A BinTrac Batching Control Remote Display is a standard BinTrac Batching Control indicator configured as a Remote Display to control an additional independent load or unload batching function. A hardwire cable must connect the Remote Display to the Master BinTrac Batching Control. Required for dual Batching Control configurations.

Features

Weight Display

The BinTrac Dual Batching Control displays the gross weight of the bin and its level.

Batch Run

The BinTrac Dual Batching Control features relays to enable a load and/or unload system(s) for batching a programmed amount.

Days to Empty, Fill, Usage, and Batch Log

The BinTrac Dual Batching Control records the net weight increase of the last four fill events, the current day's and last four 24-hour usage amounts, and the last ten batch amounts. The number of days to empty can also be viewed.

Remote Display

A standard BinTrac Indicator is configured as a Remote Display which will display the same updated weight information from the host Dual Batching Control.

About This Manual

The BinTrac Dual Batching Control Operation Manual is divided into a few different sections:

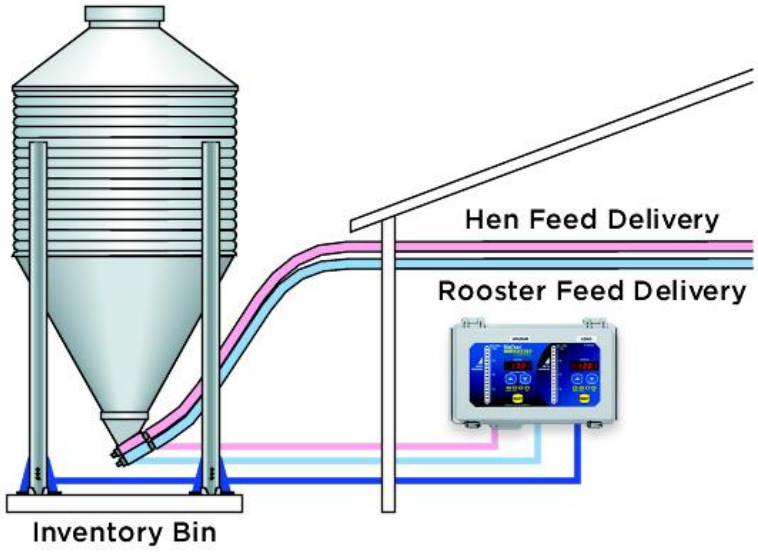
- **System Settings** – This section covers how to access and navigate the SETUP menu. It gives a basic overview of what each setting is used for.
- **Setup and Operation** – This section covers the specific setup and operation instructions for the BinTrac Dual Batching Control. Refer to **Configurations** below to determine which configuration is appropriate for your scenario.
- **Service** – This section covers the basic maintenance of the BinTrac Dual Batching Control system as well as troubleshooting should problems arise.

Configurations

The BinTrac Dual Batching Control can be used in different configurations based on your needs. Before beginning the setup of your system, determine which configuration you will be using. Below is an overview of different configurations of batching.

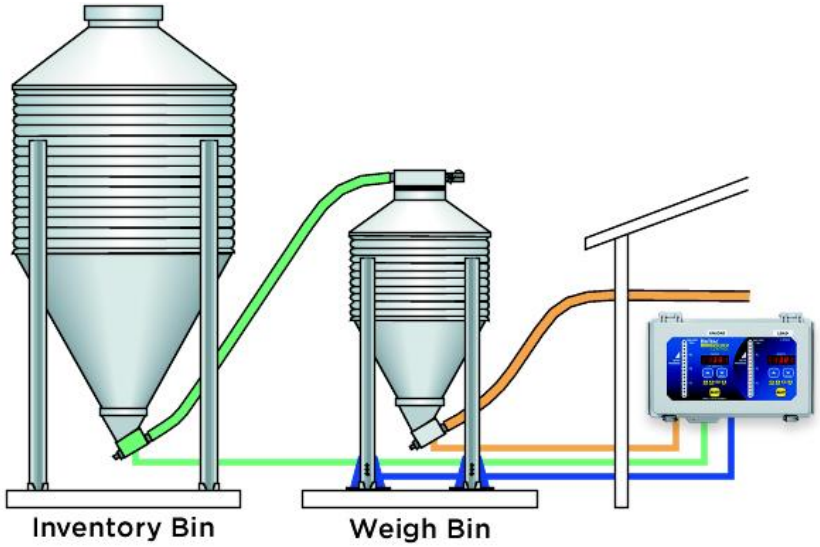
Inventory Bin with Dual Batching Control (Dual Unload Batch Method)

The Dual Batching Control can be connected to a single inventory bin equipped with BinTrac load cells. The Dual Batching Control incorporates two Batching Controllers within a single enclosure, one Unload Control (Master) assigned to the Rooster feeding system and one Unload Control (Remote) assigned to the Hen feeding system. Each controller within the Dual Batching Control is programmed to batch independent amounts of feed on separately controlled feed delivery systems.



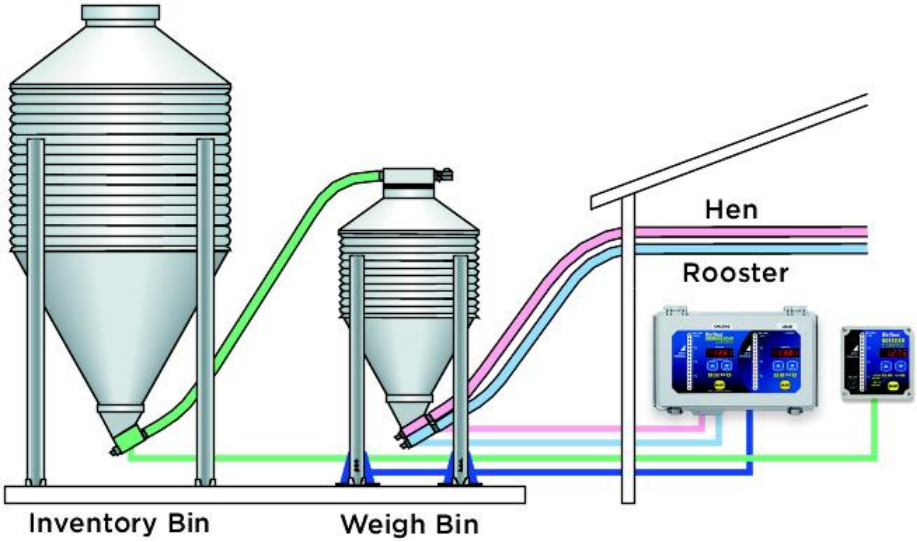
Weigh Bin with Dual Batching (Unload and Load Batch Method)

The Dual Batching Control can be connected to a single weigh bin equipped with BinTrac load cells. The Dual Batching Control incorporates two Batching Controllers within a single enclosure, one Unload Control (Master) assigned to deliver feed from the weigh bin into the house and one Load Control (Remote) assigned to deliver feed from the inventory bin into the weigh bin. Each controller within the Dual Batching Control is programmed to batch independent amounts of feed on separately controlled feed delivery systems.



Weigh Bin with Triple Batching (Load and Dual Unload Batch Method)

The Single BinTrac Batching Control and a Dual Batching Control can be connected to a single weigh bin equipped with BinTrac load cells. The Dual Batching Control incorporates two Batching Controllers within a single enclosure, one Unload Control (Master) assigned to the Rooster feeding system and one Unload Control (Remote) assigned to the Hen feeding system. The Single BinTrac Batching Control (Remote) is assigned to deliver feed from the inventory bin into the weigh bin. Each BinTrac Batching Controller within this scenario is programmed to batch independent amounts of feed on separately controlled feed delivery systems. See wiring information on pages 21 and 22.



System Settings

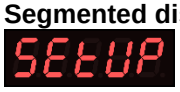
The SETUP mode is used to configure the different settings and parameters of the BinTrac Dual Batching Control.

Note: If there is no activity for 25 seconds while in SETUP mode, the system will exit SETUP mode and return to Weight Display mode.

Accessing the Setup Mode

1. Press and hold the SELECT button down until SETUP is displayed, then release.

   Segmented display:

Navigating Setup Mode

To navigate through the options in SETUP mode, use the ▲ or ▼ keys to cycle through the options/parameters. Refer to the SETUP menu flow chart to the right.

Selecting an Option in Setup Mode

To select an option/parameter to edit in SETUP mode, you must navigate to the option you wish to edit using the ▲ or ▼ keys. Press the SELECT key when you reach the desired option.

****Note: When editing parameters in the setup menu, pressing and holding the ▲ or ▼ keys will increase the speed at which the value changes.**

Options in Setup Mode

In the SETUP Mode, the four LEDs indicate configuration options as being enabled (solid on) or disabled (flashing).

- ○ GROSS WEIGHT - Configures Batching Control as a Remote Display. Must be enabled on Remote (right) display.
- ○ BATCH AMT - NOT USED
- ○ LED (left of RUN) - NOT USED
- ○ RUN - Enable communications to Peripheral devices. Must be enabled on Master (left) display

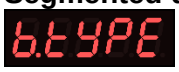
SETUP Menu Flow Chart

Batch Type

Enables you to set the batch option to **LoAd** or **u.LoAd** (unload). **LoAd** is used when you want material batched into a bin. Based on the gross weight of the bin, material is batched into the bin until the batched amount equals the gross amount. **u.LoAd** is used when you want material batched out of a bin. In this case, the bin is holding a bulk amount of feed and will batch out the programmed batch amount.

1. Press the SELECT key to enter menu.
2. Use the ▲ or ▼ keys to select LoAd or u.LoAd.

Segmented display:



Load Cell Capacity Value

Sets the total capacity of the system in pounds or kilograms. The total capacity is the sum of all the load cells rated capacity. This can be calculated by multiplying the capacity of individual load cells by the number of legs on the bin.

Example: *A four-legged bin using 5k load cells would result in an L.C.CAP setting of 20000.*

Note: When setting up for kilograms, convert the total capacity to kilograms (1 pound = 0.453592 kilograms). Using the example above, the capacity in kilograms would be 9072.

1. Press the SELECT key to select the desired bin.
2. Use the UPPER ▲ key to increase the value.
3. Use the LOWER ▼ key to decrease the value.

Segmented Display:

Increment Value

Sets the increment that the bin weight will be rounded to. The reading from a bin is rounded to the nearest multiple of the increment, using standard rounding rules. The possible values are: 1, 2, 5, 10, 20, 50, 100, 200, 500, 1., 2.,5.,10.,20., and 50..

Example: *If an increment of 10 is selected and the net value of a bin's weight is 11,314 lbs., the segmented display will read 11310. Refer to* ***Figure 1*** *for more examples based on a net weight of 11,314 pounds.*

Note: When the increment value is followed by a **"."**, the displayed weight value is then scaled by 10. For example, an increment value of 1. would cause 120462 pounds to show as 12046. on the display. This is required when the displayed weight will exceed the 5 available digits on the DBTB200.

1. Press the BIN key to select the desired bin.
2. Use the UPPER ▲ key to increase the increment value.
3. Use the LOWER ▼ key to decrease the increment value.

Segmented display:

incr	Display
1	11314
2	11314
5	11315
10	11310
20	11320
50	11300
100	11300
200	11400
500	11500
1.	1131.
2.	1132.
5.	1130.
10.	1130.
20.	1140.
50.	1150.

Figure 1

Full Value

Sets the weight of a full bin in pounds or kilograms. This is for calibration of the LED bar graph level. The value dictates at what net weight the bar graph will display completely full (all 16 LEDs lit).

1. Press the BIN key to select the desired bin.
2. Use the UPPER key to increase the value.
3. Use the LOWER key to decrease the value.

Segmented display:

Zero Value

Sets the weight of the empty bin. This value can also be set in the Operation Settings. This is used to compensate for the empty weight of the bin to give an accurate value for the net weight of the material inside the bin.

Example: *A bin weighs 1,200 lbs. empty. By setting the zero value to 1200, the BinTrac Dual Batching Control calculates the material weight as the total weight less the zero-weight value.*

Note: If the bin was zeroed on the Dual Batching Control by pressing and holding the UPPER and LOWER keys (see **Page 16** – Startup **step 4**), this field will display the automatically calculated amount.

1. Press the BIN key to select the desired bin.
2. Use the UPPER key to increase the value.
3. Use the LOWER key to decrease the value.

Segmented display:

Year

Sets the current year.

Segmented display:

Month

Sets the current month.

Segmented display:

Date

Sets the current date.

Segmented display:

Hour
Sets the current hour in 24-hour format.

Segmented display:

Minute
Sets the current minute

Segmented display:

Station ID Value
Sets the Station ID of the device. When interfacing the device to a Communication Hub (CH100), set this value from 1 to 127. **Each BinTrac device must have a unique Station ID when connected to a Communication Hub**.

1. Press the BIN key to select the desired bin.
2. Use the UPPER key to increase the value by 1.
3. Use the LOWER key to decrease the value by 1.

Segmented display:

Software Version
Displays the Dual Batching Control programmed software version number.

1. Press the BIN key to see the software version number.

Segmented display:

Smart Summing Box Software Version (Version 3.0 and higher)
Displays the software version number of each of the connected Smart Summing Boxes. This number may be required if technical help is needed. For example, a no.b in message on a remote BinTrac Control.

1. Press the BIN key to see the software version for each enabled bin.

Segmented display:

End
Allows the user to exit SETUP mode.

1. Press the BIN button to exit SETUP mode.

Segmented display:

Setup and Operation

Setup Parameters Overview

Follow the system wiring diagrams (**Pages 19-22**) to aid in the installation process, including supplied relays and switches. Once installation is completed, both the MASTER (left) and the REMOTE (right) Batching control units must be set for UNLOAD or LOAD batching based on the method you intend to use.

1. MASTER (left) Batching Control controls the unload batching withdrawal auger (all batch methods).

   Access SETUP mode and configure the following:

   - Enable Peripherals (**RUN LED**) under the SETUP menu
   - Validate that the **b.tyPE** is set to unload (**u.Load**) batching
   - Set an **L.C.CAP** value that matches the total capacity of all load cells
   - Set a **FuLL** value that matches the maximum capacity of the weigh bin
   - Set the **Hour** time parameter (default is CST Zone)

2. REMOTE (right) Batching Control controls either another unload batching withdrawal auger (Dual Unload Batch or Load and Dual Unload Batch Methods) **OR** a weigh bin fill auger (Unload and Load Batch Method).

   Access SETUP mode and configure/verify the following:

   - Validate Remote (right) Display feature is enabled (**GROSS WEIGHT LED** solid on) under the SETUP menu
   - Verify that the **b.tyPE** is set to unload (**u.load**) batching for **Dual Unload Batch** or **Load and Dual Unload Batch** Methods or load (**load**) batching for **Unload and Load Batch** Method
   - Validate that the **L.C.CAP** value matches what was entered on the MASTER (left) display

System Settings in Setup Mode – MASTER (Left Display)

The SETUP mode is used to configure the one-time system setup settings for the appropriate configuration. The following SETUP parameters MUST be correctly configured on the MASTER (Left) Batching Control to ensure proper operation and weighing:

- SETUP
- BATCH TYPE (b.tyPE)
- L.C.CAP
- FULL
- ZERO
- HOUR

NOTE: When first powering on the unit SEt.LC will be displayed, simply as a reminder that the load cell capacity for the system must be entered in the SETUP menu to ensure proper weighing calibration.

NOTE: If there is no activity for 25 seconds while in SETUP mode, the system will exit and return to the Weight Display mode.

Navigating Setup Mode

To navigate through the options in SETUP mode, use the ▲ or ▼ keys to cycle through the options/parameters. See the SETUP menu flow chart to the right.

SETUP Menu Flow Chart

Accessing the Setup Mode

1. Press and hold the SELECT button down until SEtUP is displayed, then release. b.tYPE will be displayed. Press the ▲ key once and SEtUP will be displayed.

   Segmented display:

Enabling Peripherals in Setup Mode

In the SETUP Mode, the four LEDs indicate configuration options as being enabled (solid on) or disabled (flashing). For this configuration, only the **RUN LED** should be solid on, enabling communication to peripherals.

○	GROSS WEIGHT	- NOT USED
○	BATCH AMT	- NOT USED
○	LED (left of RUN)	- NOT USED
●	RUN	- Enable communications to Peripheral devices. Must be enabled.

2. Verify the **RUN LED** is solid on.
   - If the RUN LED is solid on, press the down arrow once and b.tYPE will be displayed.
   - If the RUN LED is flashing, press the SELECT key four times and then press the ▲ key to enable Peripherals in the SETUP mode (**RUN LED** will be on solid). Press the SELECT key and b.tYPE will be displayed.

Batch Type

Segmented display:

3. Press the SELECT key to enter BATCH TYPE menu, and u.LoAd should be displayed (If LoAd is displayed press ▲ to set to u.LoAd).

4. Press the SELECT key and tap the ▼ key (if needed) until L.C.CAP is shown.

Capacity (L.C.CAP)

The load cell system capacity is the sum of all the load cells rated capacity in either pounds or kilograms. This parameter sets the calibration of the system. To determine this value, multiply the number of load cells by their capacity.

Example: A four leg bin with 5k load cells would require an L.C.CAP setting of 20000 pounds.

Segmented display:

5. Press the SELECT key. The display will show the current setting (default is 1000).
6. Use the ▲ or ▼ keys to increase or decrease the value. Hold the key down to increase/decrease quickly.
7. Upon setting the appropriate value, press SELECT and the display will show incr.
8. Tap the ▼ key and FULL is displayed.

Full Value

This value is the maximum weight of a full bin in either pounds or kilograms as is for calibration of the LED bar graph level. The value determines at what weight the bar graph will display completely full (all 16 LEDs lit). Set this to the maximum amount of feed that you would consider the bin to be full.

Segmented display:

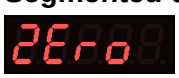
9. Press the SELECT key.
10. Use the ▲ or ▼ keys to increase or decrease the value. Hold the key down to increase/decrease quickly.
11. Upon setting the appropriate value, press SELECT and the display will show zero.

Zero Value

Sets the weight of the empty bin in either pounds or kilograms. Convenient when wanting to calibrate a system when a small amount of feed is already in the bin. The zero value is used to compensate for the empty weight of the bin to give an accurate value for the net weight of the material inside the bin. The Dual Batching Control calculates the material weight as the total weight less the zero (empty) weight value.

Example: A bin weighs 1200 pounds empty. In standard operation mode, simply press and hold on both the ▲ and ▼ keys until 0 displays. This would then set the zero value in the SETUP mode to 1200.

Segmented display:



12. Press the SELECT key. The current zero value is shown. If zeroed in standard operation mode, simply record this value for future reference. If you need to adjust this value, use the ▲ or ▼ keys until the desired value for an empty bin is shown.

13. Press the SELECT key and YEAr is displayed.

14. Tap the ▼ key until Hour is displayed.

Hour

Sets the current hour in 24-hour (military) format. The default hour is set to CST and should be adjusted, if necessary, for your time zone.

Segmented display:

15. Press the SELECT key and the current hour is displayed. Use the ▲ or ▼ keys to enter the proper hour in 24-hour format.

16. Once the proper value is displayed, press SELECT and nn in is displayed.

17. Tap the ▼ key until End is displayed.

End

Allows the user to exit SETUP mode.

18. Press the SELECT button while End is displayed to exit SETUP mode.

Segmented display:

System Settings in Setup Mode – REMOTE (Right Display)

The SETUP mode is used to configure the one-time system setup settings for the appropriate configuration. The following SETUP parameters MUST be correctly configured on the REMOTE (right) Batching Control to ensure proper operation and weighing:

- SETUP
- BATCH TYPE (b.tyPE)
- L.C.CAP

NOTE: When first powering on the unit, SEt.LC will be displayed. This is simply a reminder that the load cell capacity for the system must be entered in the SETUP menu to ensure proper weighing calibration.

NOTE: If there is no activity for a period of time while in SETUP mode, the system will exit and return to the Weight Display mode.

Navigating Setup Mode

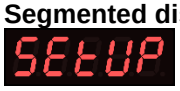
To navigate through the options in SETUP mode, use the ▲ or ▼ keys to cycle through the options/parameters. See the SETUP menu flow chart to the right.

SETUP Menu Flow Chart

Accessing the Setup Mode

19. Press and hold the SELECT button down until SEtUP is displayed, then release. b.tYPE will be displayed. Press the ▲ key once and SEtUP will be displayed.

    Segmented display:

Enabling as Remote in Setup Mode

In the SETUP Mode, the four LEDs indicate configuration options as being enabled (solid on) or disabled (flashing). For this configuration, only the **GROSS WEIGHT LED** should be solid on, enabling the unit as a Remote Display.

***Note: If the MASTER (left) Display has already been set to enable peripherals, the **GROSS WEIGHT LED** should already be solid on in the SETUP menu. If this is the case, simply press the ▼ key once to move to b.tYPE and then skip step 21.

20. Press the SELECT key one time and then use the ▲ key to enable Remote Display in the SETUP mode (**GROSS WEIGHT LED** should be solid on). Press the SELECT key four times and b.tYPE will be displayed.

●	GROSS WEIGHT	-Configures Batching as a Remote Display. Must be enabled.
○	BATCH AMT	-NOT USED
○	LED (left of RUN)	-NOT USED.
○	RUN	-NOT USED

Batch Type

Segmented display:

21. Press the SELECT key to enter BATCH TYPE menu. Tap the ▲ key to select u.LoAd for **Dual Unload Batch** or **Load and Dual Unload Batch** methods or LoAd for **Unload and Load Batch** method. After selecting the batch type, press the SELECT key.

22. Tap the ▼ key until L.C.CAP is displayed.

Capacity (L.C.Cap)

The load cell system capacity is the sum of all the load cells rated capacity in either pounds or kilograms. This parameter sets the calibration of the system. To determine this value, multiply the number of load cells by their capacity.

Example: A four leg bin with 5k load cells would require an L.C.CAP setting of 20000 pounds.

Segmented display:

23. Press the SELECT key.

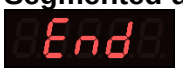
24. The REMOTE (right) display will mirror the value you entered on the MASTER (left) display. Verify that this is the case and that the L.C.CAP matches what you entered on the MASTER (left) display. Now, press the SELECT key.

End

Allows the user to exit SETUP mode.

25. Press the ▲ key until End is displayed. Press the SELECT key to exit SETUP mode.

Segmented display:



Startup

1. Inspect the BinTrac system installation on weigh bin and verify legs are evenly lifted and not binding. Confirm clearances shown in the diagram on **Page 26**.
2. Verify area under bin legs is free and clear of any material.
3. Check weighing accuracy:
    a. Have someone with known weight sit on bin cross bar support as close to leg as possible to verify bracket assembly is accurately measuring weight.
    b. Repeat on each cross bar support.
4. On Master (left) Batching Control, zero Inventory Bin:
    a. Make sure bin is empty and in the Gross weight mode on the Master (left) Batching Control. Hold on both the ▲ and ▼ keys until the display shows 0. **Note: Bin cannot be zeroed from Remote (right) Batching Control.**
    b. Verify both Master and Remote are displaying 0.
    c. Record Zero _____ (empty weight of bin) by viewing in SETUP Menu
    (Used for resetting the zero point of the scale if it is ever zeroed out with weight on the bin in the future).
5. Manually fill weigh bin with a buffer/charge of approximately 100 lbs. of feed to allow for overshoot and ensure flowability of feed.
6. Zero the bin again using the procedure in step 4.
7. Switch the Auto/OFF/On toggle switches to Auto.

Note: The filling of the bin must be completed at least 15 minutes prior to starting the batching process. If done sooner, the system will display 'Fill' showing unit is still processing the fill event and will not allow the unload process to start until this is completed. To override, press the ▼ key once and FILL will display. Press the Select key to override and begin batching.

Operation

IMPORTANT: <u>Never</u> put both displays in RUN mode simultaneously.

Unload Batching

1. Verify other Batching Control(s) are not in Run mode.
2. Tap the ▼ (BATCH) key until bAtch is displayed.
3. Press SELECT to view the Batch Target Weight value. Set this value to the amount/weight of material you want to batch out of the bin.
4. Use the ▲ and ▼ keys to increase or decrease the value.
5. Press SELECT and run will be displayed.
    a. To cancel the batch at this point, press the ▼ key and StoP will be displayed. Press SELECT to cancel the batch.
6. Press SELECT to start batching and the batch run will begin immediately, indicated by the **RUN LED** showing solid on.
7. To stop a manual batch run, tap the ▼ key until StoP is displayed. Press the SELECT key once to stop and again on the batch amount. The Indicator will then return to the Gross Weight Mode.

Load Batching

1. Verify other Batching Control(s) are not in Run mode.
2. Tap the ▼ (BATCH) key until bAtch is displayed.

3. Press SELECT to view the Batch Target Weight value. Set this value to the gross target weight of the bin you are filling. For example, if the bin currently has 500 pounds in it and you want to add 500 more, this value would be set to 1000.
4. Use the ▲ and ▼ keys to increase or decrease the value.
5. Press SELECT and run will be displayed.
    a. To cancel the batch at this point, press the ▼ key and StoP will be displayed. Press SELECT to cancel the batch.
6. Press SELECT to start batching and the batch run will begin immediately, indicated by the **RUN LED** showing solid on.
7. To stop a manual batch run, tap the ▼ key until StoP is displayed. Press the SELECT key once to stop and again on the batch amount. The Indicator will then return to the Gross Weight Mode.

Pause Batch Run

1. To pause a batch in mid run, tap the ▼ key until PAUSE is displayed. Press the SELECT key to pause the batch run.
2. When paused, the indicator will alternate between PAUSE and the remaining batch amount on the screen.
3. To restart the batch, tap the ▼ key until run is displayed, then press the SELECT key. The batch will then continue until completed.

Display Batch Log

This procedure allows you to view the last ten batch amounts.

1. Tap the ▲ (INFO) key until b.Log is displayed.
2. Press SELECT to view the last batch amount.
    a. For each batch event, the display will cycle through the date, time, target amount and actual batch amount. For example, a batch with a target of 1000 pounds that batched 1003 pounds on March 22nd at 2:00pm would display as 03-22 then 14:00 then tArGt then 1000 then ActL then 1003. **NOTE: A decimal preceding the batch amount indicates that batch was stopped manually prior to completion.**
3. Tap the ▼ key to view other prior recorded batch amounts. The LEDs on the Batch Progress meter will change to denote each different entry.
4. Press SELECT to return to Weight Display mode.

Display Fill Events

This procedure allows you to view the last four recorded fill events.

1. Press the ▲ (INFO) key until F iLLS is displayed.
2. Press SELECT to view the last recorded fill event.
    a. For each fill event, the display will cycle through the date, time, and fill amount. For example, a fill of 4000 pounds on January 2nd at 5:53pm would display as 01-02 then 17:53 then 4000.
3. Press the ▼ key to view other prior recorded fill events. The LEDs on the Batch Progress meter will change to denote each different entry.
4. Press SELECT to return to Weight Display mode.

Display 24 Hour Usage

This procedure allows you to view the current day's usage as well as the last four 24-hour usage amounts.

1. Tap the ▲ (INFO) key until USAGE is displayed.
2. Press SELECT to view the current day's usage amount recorded from midnight.

a. For each 24-hour period, the display will alternate between the date and the usage amount. For example, a usage of 2380 pounds for January 2nd would display as 01-02 then 2380.

3. Press ▽ key to view other prior recorded usage amounts. The LEDs on the Batch Progress meter will change to denote each different entry.
4. Press SELECT to return to Weight Display mode.

Display Days To Empty

This procedure allows you to view the calculated days to empty based on the current weight and the previous day's usage.

1. Tap the △ (INFO) key until d.t.E. is displayed.
2. Press SELECT to view the estimated days to empty.
3. Press SELECT to return to Weight Display mode.

Display Batch Net Amount

This procedure allows you to view how much over/under the previous batch was. *Note – this value will only be correct until the weight of the bin changes again, so it is recommended to only view this immediately following a batch.

1. Tap the △ (INFO) key until b. nEt is displayed.
2. Press SELECT to view the previous batch net amount.
3. Press SELECT to return to Weight Display mode.

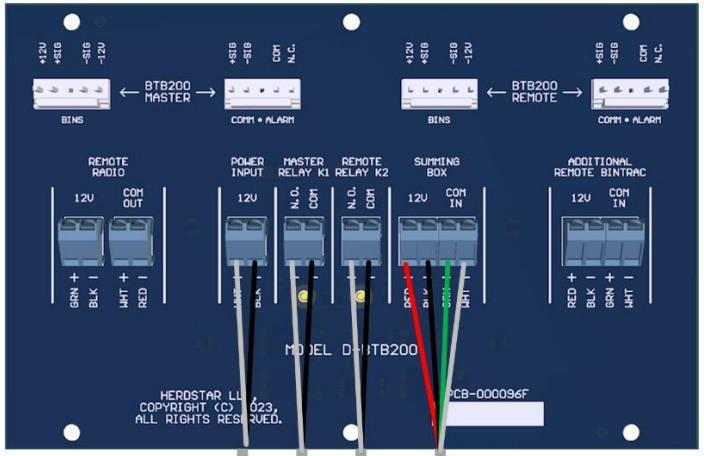
Optional - Scheduled Batch Run

Unload the programmed net weight amount at a scheduled time daily.

NOTE: By default, if the scheduled batch is not completed in the 24 hour cycle before the next scheduled batch, the batch will reset to the original scheduled amount. This can be changed so that if the batch is not completed in the 24 hour cycle, it will run the remainder of the original scheduled amount and will reset to the full amount for the *next* scheduled batch. Please contact HerdStar support to configure this feature.

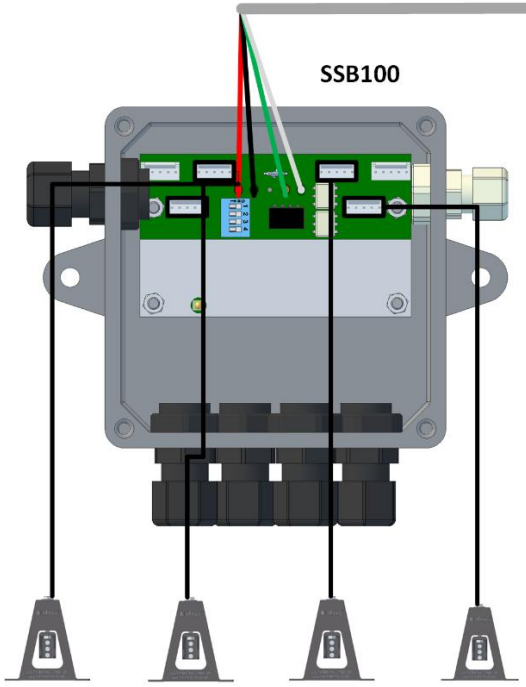
1. Tap the ▽ (BATCH) key until SchdL is displayed.
2. Press SELECT to view the hour and minute schedule.
3. Use the △ and ▽ keys to select hour and minute to schedule batch.
   Note: This is a 24-hour clock (i.e. 13:00 = 1:00pm).
4. Press SELECT to view the Batch Target Weight value.
5. Use the △ and ▽ keys to increase or decrease the value.
6. Press SELECT to display the batch run control status (run or StoP).
7. Use the △ or ▽ keys to enable or disable batch run control.
8. Press SELECT with run displayed. The Indicator will then display the batch amount and a countdown to the next batch run. Once the scheduled time occurs, the withdrawal auger will be enabled (indicated by **RUN LED** solid on). When the Batch Target Weight amount has been discharged, the withdrawal auger will automatically be disabled and the batch cycle time will start counting down for the next scheduled batch.
9. To stop a scheduled batch run, tap the ▽ key until StoP is displayed. Press the SELECT key once to stop and again on the batch amount. The Indicator will then return to display the gross amount in the bin.

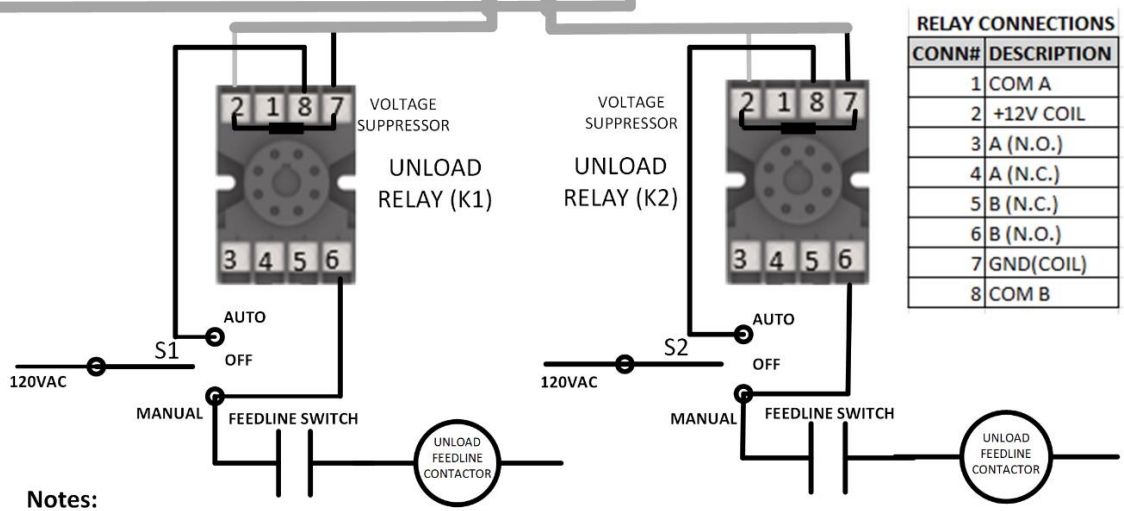
Dual Breeder Controls for Dual Unload
(Rooster/Hen Batch Configuration)



WHITE +12
BLACK -12

115/230VAC



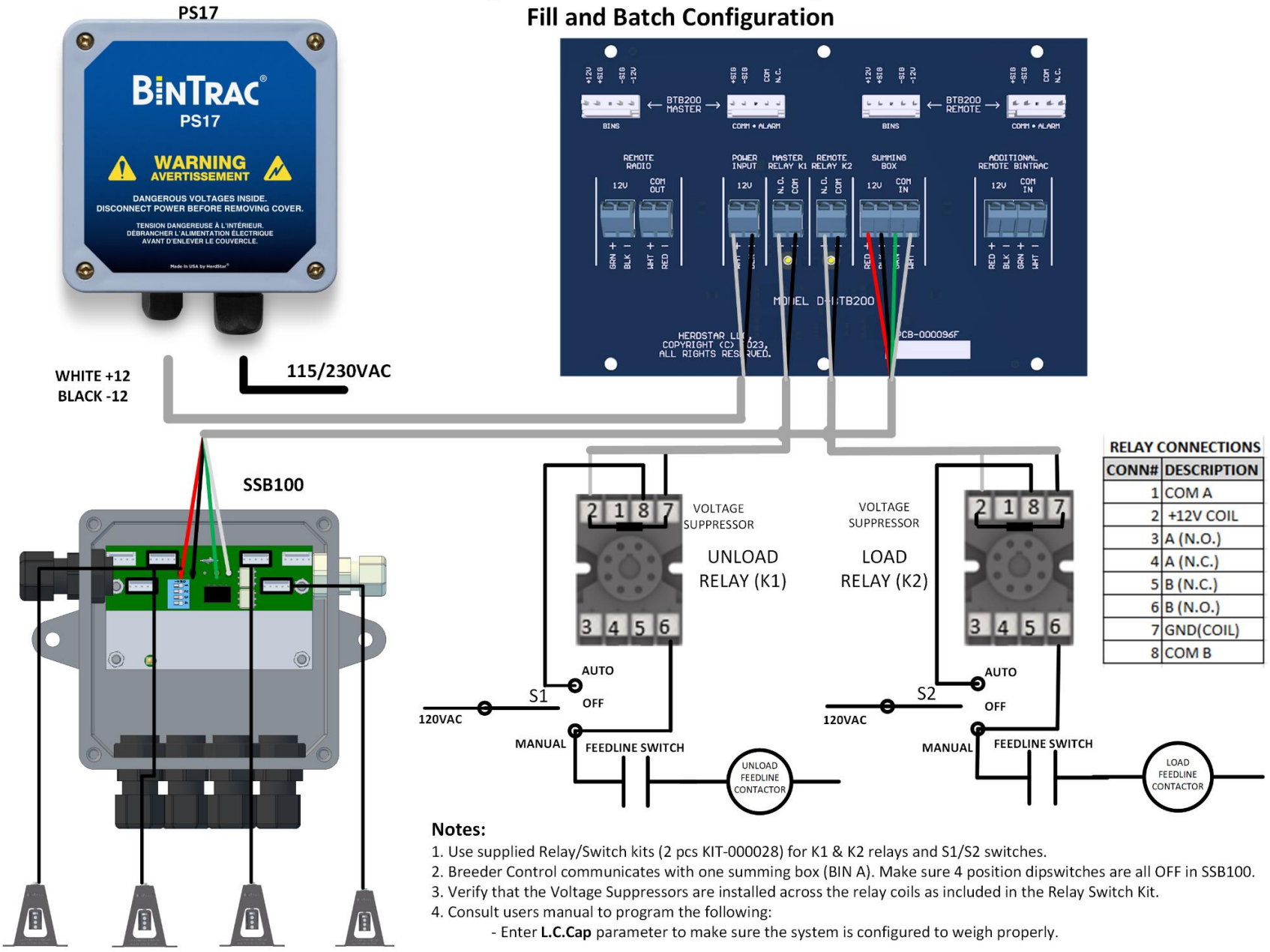


RELAY CONNECTIONS	
CONN#	DESCRIPTION
1	COM A
2	+12V COIL
3	A (N.O.)
4	A (N.C.)
5	B (N.C.)
6	B (N.O.)
7	GND(COIL)
8	COM B

Notes:

1. Use supplied Relay/Switch kits (2 pcs KIT-000028) for K1 & K2 relays and S1/S2 switches.
2. Breeder Control communicates with one summing box (BIN A). Make sure 4 position dipswitches are all OFF in SSB100.
3. Verify that the Voltage Suppressors are installed across the relay coils as included in the Relay Switch Kit.
4. Consult users manual to program the following:
   - Master & Remote Breeder Control must be configured for **UNLOAD** batching.
   - MASTER Unit must have SETUP D enabled for Peripherals.
   - Enter **L.C.Cap** parameter to make sure the system is configured to weigh properly.

Weigh Bin with D-BTB200 for Programmed Fill and Batch Configuration



RELAY CONNECTIONS

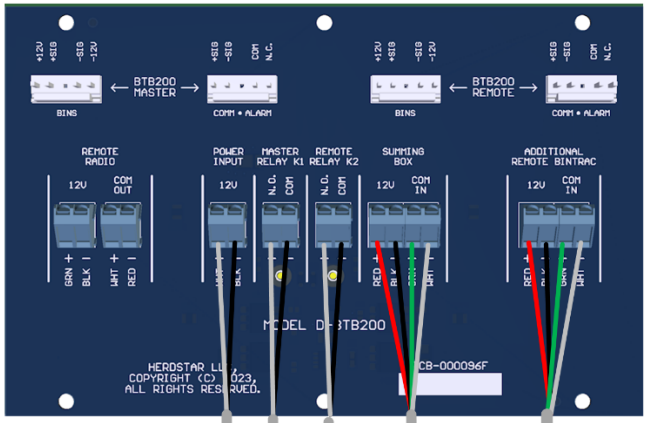
CONN#	DESCRIPTION
1	COM A
2	+12V COIL
3	A (N.O.)
4	A (N.C.)
5	B (N.C.)
6	B (N.O.)
7	GND(COIL)
8	COM B

Notes:

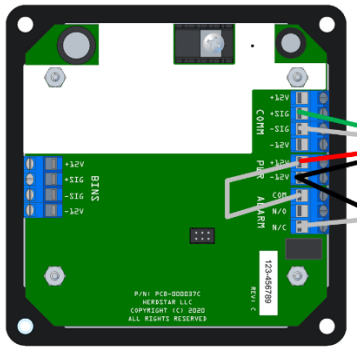
1. Use supplied Relay/Switch kits (2 pcs KIT-000028) for K1 & K2 relays and S1/S2 switches.
2. Breeder Control communicates with one summing box (BIN A). Make sure 4 position dipswitches are all OFF in SSB100.
3. Verify that the Voltage Suppressors are installed across the relay coils as included in the Relay Switch Kit.
4. Consult users manual to program the following:
   - Enter **L.C.Cap** parameter to make sure the system is configured to weigh properly.

Weigh Bin with Triple Batching
(Load and Dual Unload for Rooster/Hens)

PS17



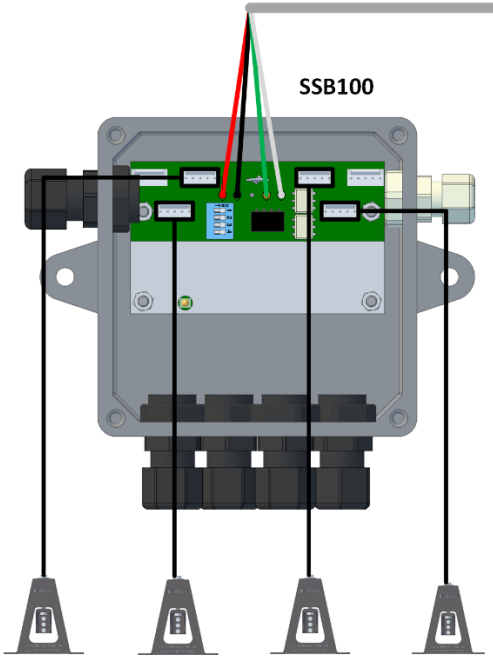
BinTrac Batching Control
Remote (Weigh Bin Load)

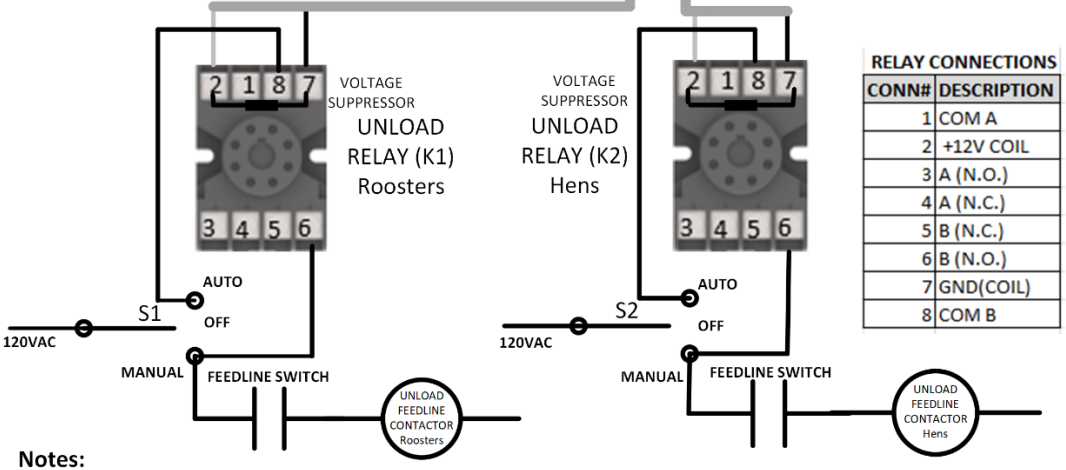


WHITE +12
BLACK -12

115/230VAC

SSB100





RELAY CONNECTIONS

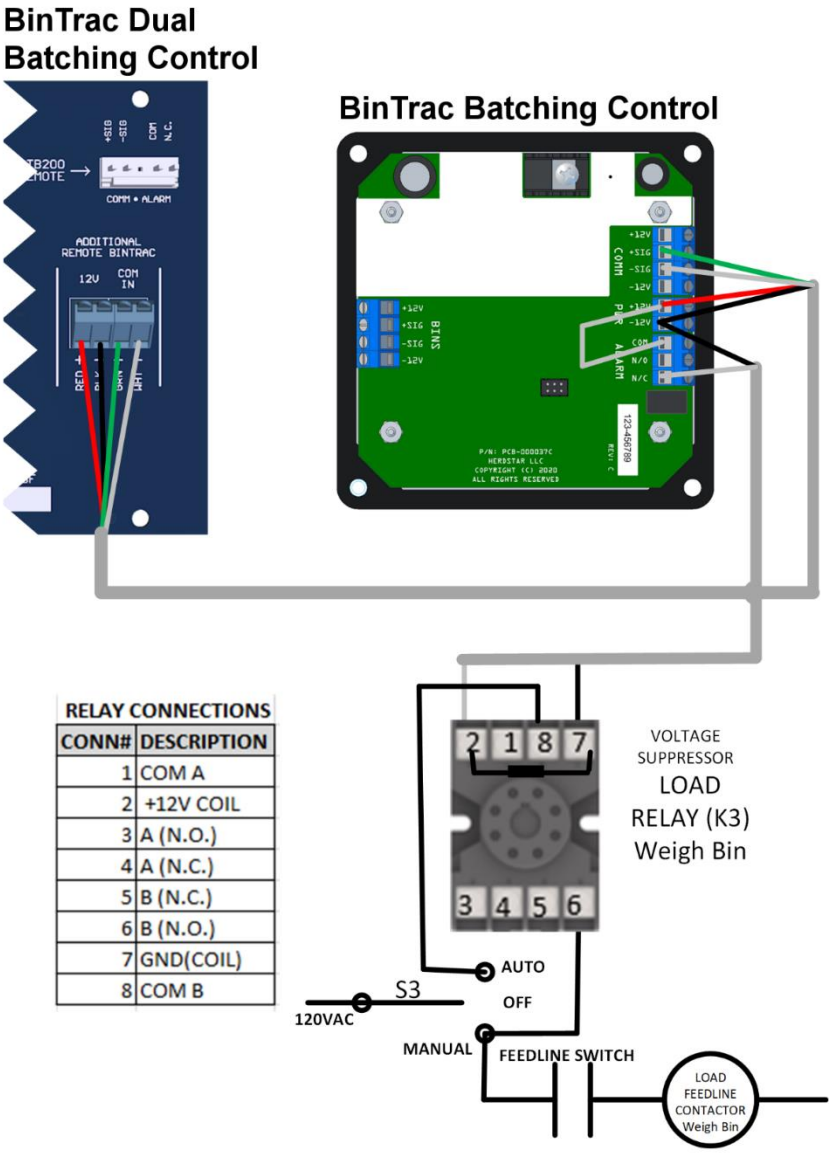
CONN#	DESCRIPTION
1	COM A
2	+12V COIL
3	A (N.O.)
4	A (N.C.)
5	B (N.C.)
6	B (N.O.)
7	GND(COIL)
8	COM B

Notes:

1. Use supplied Relay/Switch kits (3 pcs KIT-000028) for K1-K3 relays and S1-S3 switches.
2. Batching Control communicates with one summing box (BIN A). Make sure 4 position dipswitches are all OFF in SSB100.
3. Verify that the Voltage Suppressors are installed across the relay coils as included in the Relay Switch Kit.
4. Consult users manual to program the following:
   - Master & Remote Dual Batching Control must be configured for **UNLOAD** batching.
   - Remote Batching Control (Weigh Bin Load) must be configured for **LOAD** batching.
   - MASTER Unit must have RUN light solid under SETUP to be enabled for Peripherals.
   - Enter **L.C.Cap** parameter to make sure the system is configured to weigh properly.

Adding a Remote BinTrac Batching Control

The Weigh Bin with Triple Batching (Load and Dual Unload Batch Method) configuration setup requires the addition of a single BinTrac Batching Control for a total of 3 displays. The Dual Batching Control will have both displays set to unload (**u.load**) and the single Batching Control will be set to load (**load**). Wire the additional display as shown below and refer to the instructions beginning on **Page 14**.



Service

Maintenance and Repair

Your BinTrac module contains NO USER SERVICEABLE PARTS. If, after troubleshooting, the product stops working for any reason, it must be returned for repair.

To keep your BinTrac Dual Batching Control system functioning effectively, ensure that you periodically inspect the weighing system attached to the weigh bin. Inspect for material under the bin legs and for any binding.

Do not clean the BinTrac modules with a pressure washer. Use a washcloth soaked in warm water containing a mild detergent and disinfectant.

Troubleshooting

Flashing Fill

The message  will flash during an unload batch if a fill event is detected. This will continue to flash for 10 minutes from the last seen increase in weight to allow for settling and accurate batching. Batching will automatically resume following this delay. To override, press the down arrow once and C .F iLL will be displayed. Press the SELECT key to clear message and begin batching.

Flashing Set.LC

 is displayed only when the unit is first turned on. This simply means that you must set/verify the L.C.CAP setting in the SETUP mode to ensure proper weighing calibration of the system. Once this is set, the message will no longer be displayed.

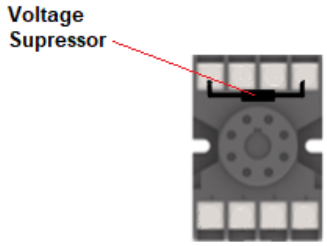
Load Batch Does Not Start

Loading of the weigh bin is based on a gross weight **target** amount. If the target amount is currently below the gross weight in the bin, the batch will not start. Changing the load batch amount to a target higher than the current gross weight in the bin and running it again will allow the load batch to begin.

Display Shows “Lo.Bat” and Restarts When Batching

This behavior is most likely due to an issue with the 12VDC relay or the voltage suppressor.

1. Try temporarily removing the voltage suppressor on the relay coil (shown to the right) and try again. If this resolves the issue, the voltage suppressor is faulty.
2. If still not functioning properly, replace the 12VDC relay and reinstall the voltage suppressor across the proper coil terminals on the relay connector.
3. If neither of the above resolve the issue, check for a short on the wiring between Batching Control and 12DC relay.



BinTrac Dual Batching Control Blank

BinTrac Dual Batching Control weight displays and tank level indicators are blank/off. This can be caused by loss of power to the unit, disconnected or broken wires, or damaged equipment.

1. Reset Problem
    a. A brown out condition can sometimes cause a problem with reset and startup of a Batching Control. Disconnect power to the devices with a 20 second delay before reapplying the power.
2. Loss of Power
    a. Inspect the electrical outlet for the BinTrac Power Supply. Ensure it is making a good electrical connection.
    b. Verify the breaker or GFI for the electrical outlet is not tripped.

3. Measure Input Voltage from BinTrac Power Supply
    a. Disconnect +12 and -12 PWR wires within BinTrac Batching Control(s) and measure input power. Input power should read between 11.5 to 12.5 VDC. If no voltage is detected, the BinTrac Power Supply may be defective.
4. Inspect all cabling between power supply, Batching Control(s), and Smart Summing Boxes to ensure it has not been damaged.
5. Disconnect components until the defective component is located that is shorting power.
    a. Disconnect Smart Summing Boxes and cycle power.
    b. Disconnect +12 and -12 PWR connects in the BinTrac Indicator and measure Smart Summing Boxes. Verify the electrical outlet the BinTrac Power Supply is plugged into is in good condition.

Inaccurate Weight Readings

Inaccurate weight readings, large fluctuations in readings, weight not changing, or error messages can be caused by obstructions and binding, incorrect user programmed settings, a problem within the Smart Summing Box, or a problem with a load cell.

1. **Check for binding and/or obstructions**
   Slow weight shifts or not returning to zero are frequently symptoms of a binding or obstruction problem.
    a. Check for binding of brackets and/or bin legs. Verify clearances as shown in the diagram on **page 26**.
    b. Check for loose bolts. Inspect bolts connecting bracket to bin leg and C-Channel to load cell.
    c. Check for material under the bin leg. Small rocks between the bin leg and the concrete can cause inaccurate readings.
2. **Check the Batching Control settings**
   Incorrect weight readings when the system is otherwise functioning normally can be due to incorrect settings.
    a. Confirm Rated Output – should match the average output recorded on each load cell (3.000 for HerdStar-supplied load cells).
    b. Confirm Capacity – equals the total capacity of all load cells summed together.
    c. Confirm Zero – bin may have been zeroed when not empty.
3. **Inspect the Smart Summing Box**
   Small fluctuations in weight can be caused by a problem with the Smart Summing Box.
    a. Inspect for moisture and/or foreign material.
    b. Inspect for loose wires and connections.
    c. Ensure seal is water tight.
4. **Inspect Load Cells**
   Wild fluctuating weights, a weight that does not change, a negative weight reading, or Error on the Indicator display are common indications of a load cell problem.
    a. Inspect load cell connections within the Smart Summing Box. A wire that is not seated properly within the load cell connector can cause inaccurate readings.
    b. Check for cut or pinched load cell wires.
    c. See **Load Cell Troubleshooting Procedures** on **Page 26**
5. **Check connected auger lines for binding and proper support**
    a. Auger line should be supported via chain back to the bin

Error Messages

There are a few types of errors that can be encountered during operation of the BinTrac system. The following should give you some insight into the cause of the error should one occur. Errors displayed are specific to the selected bin.

If this is displayed on the screen, the BinTrac Batching Control is unable to display the current value, or the value is outside of the displayable range.

1. Load batch target is less than current gross weight in bin. Check load batch target.
2. Verify programmed settings are correct:
    a. Verify Zero calibration is valid and in range.
    b. Verify load cell capacity (L.C.Cap) has been correctly programmed.
3. Open Smart Summing Box and inspect load cell connections:

a. Verify connector is properly aligned with its associated header.
b. Verify wires are properly seated in each connector.

4. Check for faulty load cell (See **Load Cell Troubleshooting Procedures** on **Page 26**).

This means that the Smart Summing Box for the selected bin is not communicating with the BinTrac Batching Control.

1. Verify wiring between Batching Control and Smart Summing Box.
2. Inspect Smart Summing Box internal diagnostic light:
   a. Off: Smart Summing Box not receiving power.
   b. Steady flashing: normal working condition.
   c. Irregular flashing: unable to communicate.
3. Verify Smart Summing Box has been programmed as the correct bin:
   a. Verify Smart Summing Box dip switch settings (see **Figure 2**).
   b. Verify that two or more Smart Summing Boxes have not been programmed as the same bin.
   c. Check for broken wires or loose connections .
4. Check for faulty load cell (See **Load Cell Troubleshooting Procedures** on **Page 26**).

BIN	S1	S2	S3	S4
A	OFF	OFF	OFF	OFF
B	ON	OFF	OFF	OFF
C	OFF	ON	OFF	OFF
D	ON	ON	OFF	OFF

Figure 2

This means that the weight in the bin has exceeded the programmed system capacity by 125% and the system is in an overload state.

1. Verify programmed settings are correct.
2. Check for physical binding of brackets/hardware.
3. Remove the weight from the system and check the condition of each load cell (See **Load Cell Troubleshooting Procedures** on **Page 26**).

This means that the Remote Display has lost communications with the host Master Display.

1. Verify unit was intended for use as a Remote Display and not programmed incorrectly:
   a. GROSS LED should be solid in setup menu if unit is intended to be configured as Remote Display. If unit is NOT intended to be a Remote Display, GROSS LED should be blinking in setup menu (**see Page 6).**
2. Check for broken wires or loose connections.
3. Verify wiring is correct between Indicator and Remote Display.

This error message indicates that the Batching Control has been programmed for a pulse output and is unable to communicate with the HouseLink.

1. Verify HouseLink dip switch settings (See HouseLink manual).
2. Check for broken wires or loose connection.
3. If not using a HouseLink, ensure Pulse setting is disabled (set to 0).

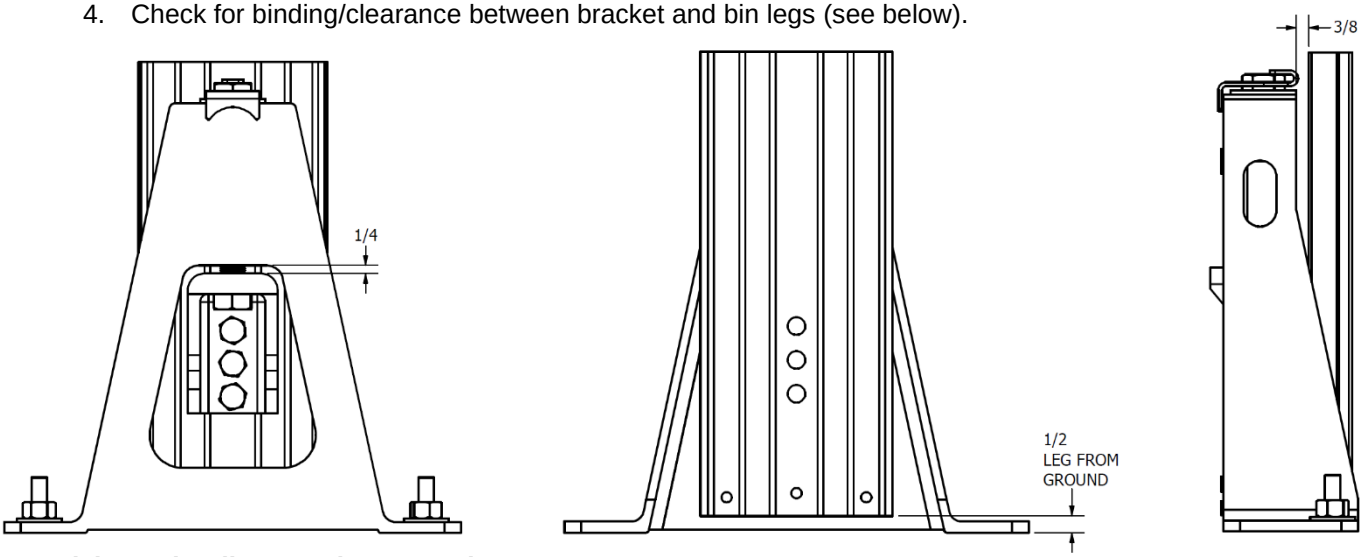
These error messages indicate an issue with the internal clock of the Batching Control, likely due to a failure with the internal coin cell battery.

1. Check that the year, month, date, hour, and minute are set correctly (see **Pages 8-9**).
2. Contact HerdStar for service of the internal coin cell battery.

Load Cell Troubleshooting Procedures

The procedures below outline the steps for identifying and locating a defective load cell. Procedure 1 is most commonly used and quickest, although Procedure 2 can be used for better analysis and for determining even loading across all load cells.

1. Check for cut load cell cables.
2. Check connections in Smart Summing Box.
3. Check for debris under bin legs.
4. Check for binding/clearance between bracket and bin legs (see below).



Quick Load Cell Inspection Procedure

1. Record/Note current weight reading on BinTrac Batching Control.
2. Disconnect a single load cell from Smart Summing Box.
3. Observe for change in weight display. If weight change is significant and/or more stable, note this load cell as possible defect.
4. Reconnect load cell if symptoms did not change.
5. Repeat for remaining load cells.
6. Replace load cell that, when disconnected, provides the most accurate reading or proceed to Comprehensive Load Cell Inspection Procedure.

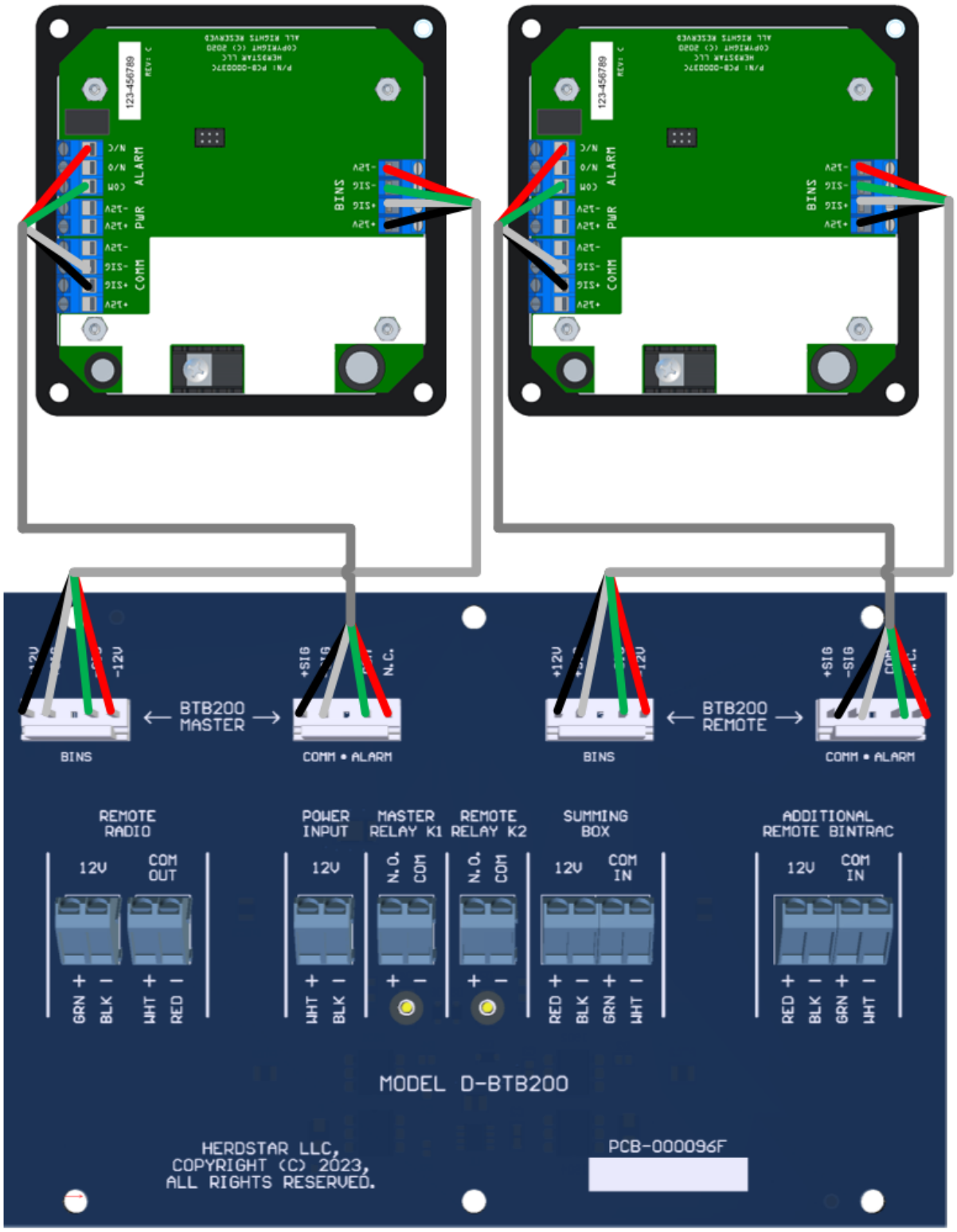
Comprehensive Load Cell Inspection Procedure

1. Record/Note current weight reading on BinTrac Batching Control.
2. Disconnect all but one load cell within Smart Summing Box.
3. Record weight reading.
4. Disconnect load cell and connect next load cell and repeat for all remaining load cells.
5. Review weight readings.
6. Variations in readings can be caused by offset loading within bin and/or improper lifting bolt tension.
    a. Inspect loading within bin matches load cell reading variations.
    b. Examine bracket assembly and lifting bolt tension.
        i. If reading is low and others beside it are high, tighten bolt slightly.
        ii. If reading is high and others beside it are low, loosen bolt slightly.
        iii. If reading is out of range, replace load cell.
        iv. Repeat individual readings inspection and adjustments return to Step 2.
7. Reconnect all load cells except for known defective one.
8. Repeat procedure if weight reading is not accurate.

Note: If a defective load cell is located, unplugging it will allow the scale system to continue to function until time is available to replace the defective load cell.

Appendix A - Additional Wiring Diagrams

Display to PCB Wiring



HerdStar BinTrac® Warranty

HerdStar, LLC ("**HerdStar**") warrants to original purchaser ("**Buyer**") that goods manufactured solely by HerdStar, LLC ("**Products**") will be free from defects in material or workmanship under normal and intended use and service for a period of one year from delivery date of the Products. Used and/or refurbished parts sold shall carry a 90-day warranty on material and workmanship. All warranty claims must be submitted within ten (10) days of discovery of defects within the warranty period or shall be deemed waived. Furthermore, HerdStar, LLC warrants the load cell ("Load cell" is defined as the s-shaped component and any cabling and connectors) against lightning damage for 12 months or the term of any extended warranty.

In the event of a defect in any Products constituting a breach of the warranty provided herein, HerdStar, LLC will at its option either (i) repair or replace such Product free of charge, or (ii) in lieu of repair or replacement, refund to Buyer the original purchase price less the reasonable value of Buyer's use of the Products. HerdStar, LLC shall furnish to Buyer instructions for the disposition of the defective goods. HerdStar, LLC shall have the option of requiring the return of the defective goods, transportation prepaid, and proof that the goods were not used, installed or altered or subject to misuse or abuse to establish the claim. No goods shall be returned to HerdStar, LLC without its prior consent. The acceptance of any goods returned to HerdStar, LLC shall not be deemed an admission that the goods are defective or in breach of any warranty, and if HerdStar, LLC determines that the goods are not defective they may be returned to Buyer at Buyer's expense. This warranty sets forth Buyer's sole and exclusive remedies for any defect in the goods. The rights and obligation under this warranty may not be assigned or delegated to a third party by Buyer without the prior written permission of HerdStar, LLC. Neither Buyer nor any other person may modify or expand the warranty provided herein, waive any of the limitations, or make any different or additional warranties with respect to the Products. Any statements to the contrary are hereby rendered null and void unless expressly agreed to in writing by an authorized officer of HerdStar, LLC.

EXCEPT AS STATED IN ABOVE, HERDSTAR, LLC DOES NOT MAKE ANY WARRANTY AS TO THE GOODS OR SERVICES AND, IN PARTICULAR, DOES NOT MAKE ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND BUYER IS SOLELY RESPONSIBLE FOR DETERMINING THE PROPER APPLICATION AND USE OF THE GOODS.

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HERDSTAR, LLC SHALL NOT HAVE ANY TORT LIABILITY TO BUYER OR ANY OTHER PERSON WITH RESPECT TO ANY OF THE GOODS OR SERVICES AND SHALL NOT BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, INDIRECT OR PUNITIVE DAMAGES ARISING FROM ANY PRODUCT DEFECT, DELAY, NONDELIVERY, RECALL OR OTHER BREACH. BUYER SHALL NOT HAVE ANY RIGHT OF REJECTION OR OF REVOCATION OF ACCEPTANCE OF THE GOODS.