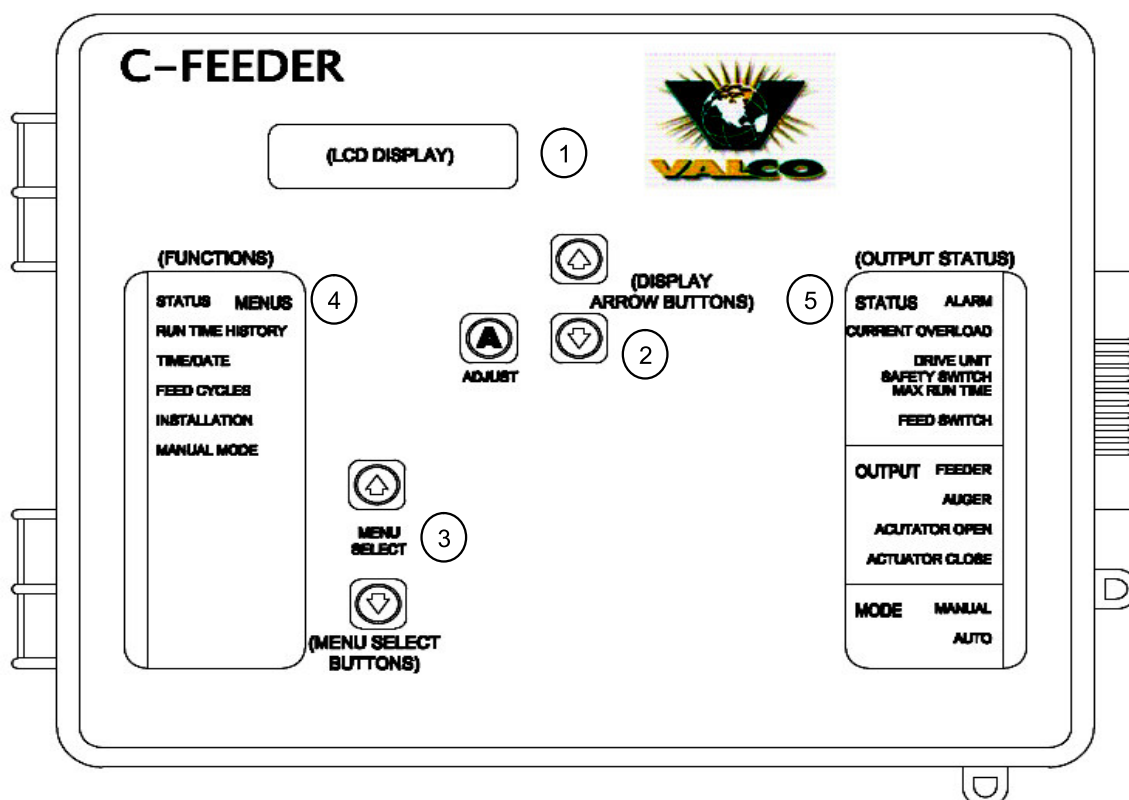


## 10 CHAIN DISK CONTROLLER – C805

### 10.1 Front Panel



1. **LCD Display:** Shows the current information and adjustable parameters within a function.
2. **Adjust Arrows:** Steps through displayed information or allows a flashing parameter to be modified.
3. **Menu Arrows:** Keys are used to select the functions that are located in the main menu.
4. **Menu LED's:** LED's at the Left of the control panel shows current menu displayed.
5. **Status LED's:** LED's at the right of the control panel give the status of each output.

**Steps to adjusting parameters:**

1. Chose a specific menu that corresponds with a parameter that needs to be changed using the MENU arrow keys
2. Choose a parameter from the display using the **ADJUST** up and down arrow buttons.
3. Once a parameter is chosen, press the **ADJUST** button. The parameter will flash on the display.
4. Adjust the parameter with the same up and down buttons used to select the parameter.
5. Once the parameter is set, press the **ADJUST** button to validate the change. (A parameter that can be changed will flash on the display. If the parameter does not flash, it is a read only parameter and can not be changed.)

***The display will return to 'STATUS' mode after four (4) minutes of inactivity.***

**10.2 Status LEDs**

*The following table gives the definition of each LED displayed on the right side of control:*

LED	DEFINITION
Alarm	'ON' when there is a problem with the system that requires attention. The Chain Disk Feed System will stop operating until the alarm is acknowledged and fixed.
Current Overload	'FLASHES' when the amperage draw of the Chain Disk Feed System has exceeded the maximum current limit. Fix the error. Then to restart the system, press <u>and hold</u> the RESET button.
Chain Disk Safety Switch	'ON' when the Chain Disk Feed System drive unit trips the safety switch.
Max Run Time	'ON' when the Chain Disk Feed System run time exceeds the maximum parameter value (this only occurs if a proximity sensor is used).
Feed Switch	'ON' when feed is detected by the proximity sensor. 'FLASHES' during the Feed Bypass Delay.
Chain Disk Output	'ON' when the master Chain Disk Feed System is running.
Auger Output	'ON' when the bin auger is running. 'FLASHES' during Auger Delay.
Actuator Open	'ON' when the dumps are opened.
Actuator Close	'ON' when the dumps are closed.
Manual Mode	'ON' when outputs are manually controlled. <i>Flashes when the Actuator or Electrical Valve is in manual</i>
Automatic Mode	'ON' when the controller is in the Automatic mode.

## 10.3 Control Installation

### Mounting instructions:

1. Remove the front cover.
2. Remove the black caps from the four (4) mounting holes.
3. Mount the enclosure – make sure the electrical knock outs are to the bottom of the enclosure to prevent water seepage.
4. Replace the black caps over the four (4) mounting holes.
5. Replace front cover.

### Connections:

Refer to the wiring diagrams provided in this manual and with the Chain Disk control.



**Do not make any additional holes in the enclosure.**

1. Use only nylon cable strain reliefs.
2. Do not install rigid conduit into the electrical knock outs. *(For safety in regard to damaging wires and shorting out high voltage wires).*
3. Add a switch or circuit breaker in close proximity to any person operating this equipment. Mark the switch or circuit breaker as **'DISCONNECT FOR CHAIN DISK CONTROL UNIT'**.
4. Use a 20A (L1/L2 Power In) circuit breaker for the Chain Disk Feed System motor.
5. Use a minimum of 12AWG wire for the Chain Disk Feed System main power supply and motor.
6. Use a separate 15A circuit breaker and a minimum of 14AWG wire for the Flexible Auger motor.



**Always follow the safety instructions specified by the manufacturer and any applicable local and national codes.**

## 10.4 Controller Operation

### Controller's Description:

The C805 controls the feed entry into the Chain Disk feeders and the distribution of feed to the animals.

1. Timed or continuous feed cycles.
2. With or without proximity sensors at the end of the feeders.
3. With or without actuators/electric valves to open the drops.
4. With one or multiple bin augers.

## 10.5 Feed Distribution

### Timed Feed Distribution

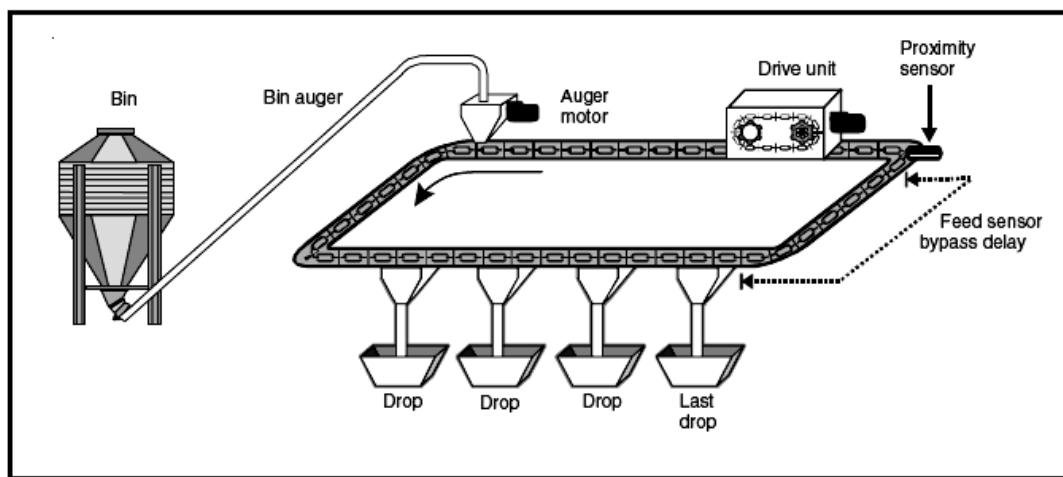
- ❖ Allows the time to be chosen as to when the feed is delivered to the feeders. Twenty (20) different feed cycles can be programmed daily. See *'Installation Setup'* for further assistance in setting up timed feed distributions.

### Continuous Feed Distribution

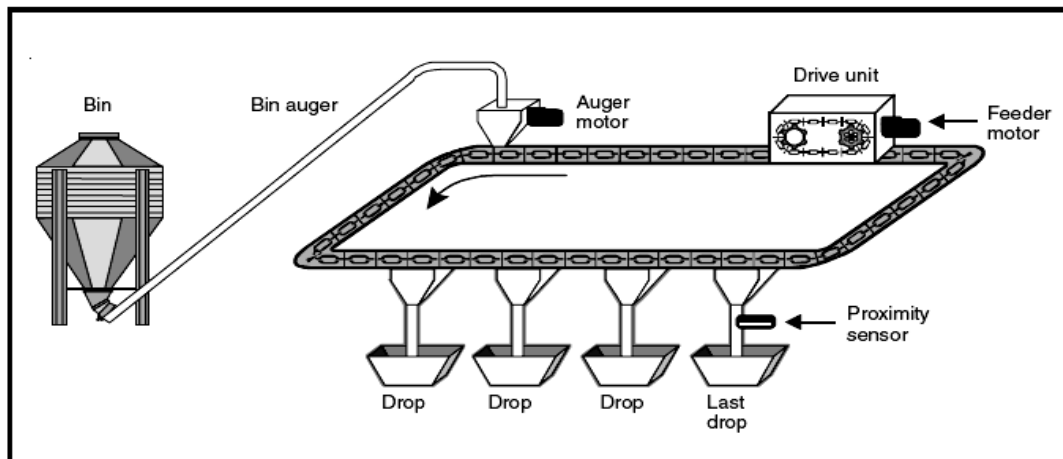
- ❖ Allows the feeders to be filled when a proximity sensor (located at the end of the Chain Disk Feed System) does not detect any feed.

### Proximity Sensor Location

**In Timer Mode:** One proximity sensor must be located at the end of each feed line.



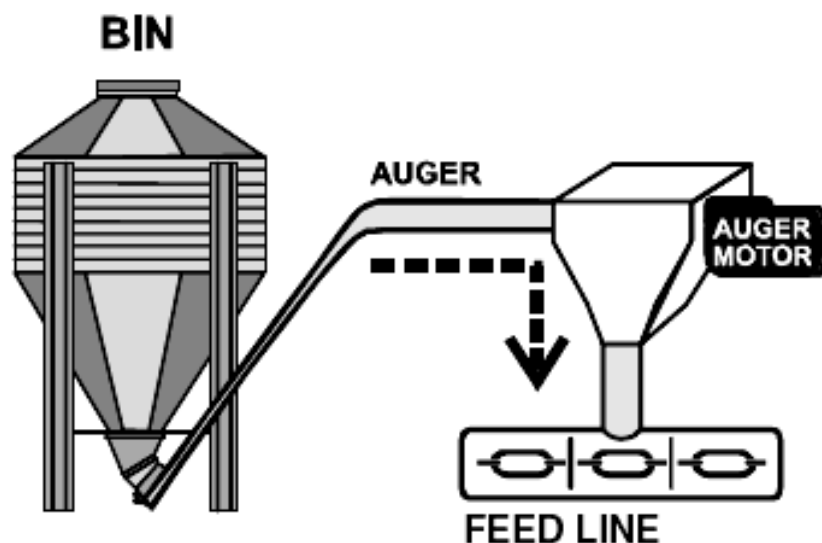
**In Continuous Mode:** A proximity sensor must be located in the tube of the last feeder drop.



## Filling Chain Disk Feeders

### Operation of the Bin Auger

At the beginning of a feed cycle, the bin auger brings feed to the feeders and stops when the feeder is full.



**There are two (2) ways for the controller to detect a full feeder:**

1. The proximity sensor, located at the end of each feeder, detects feed for a 5 second period without any interruptions.
2. If no proximity sensor is used, the drive unit will run for the maximum run time set up within the controller.

### Chain Disk Overload Protection

During the Chain Disk Feed System fill cycle, the amperage draw will steadily increase. The current sensor will automatically turn off the Flexible Auger Fill System – temporarily – if the amperage reaches the maximum point set up within the system. As the Chain Disk Feed System continues to empty, the amperage draw will steadily decrease. The current sensor will automatically turn the Flexible Auger Fill System on when the amperage reaches a minimum point set up within the system.



## Filling Process

### Option A Timed Feed Distribution

1. **Beginning the Filling Process:** Starts at the beginning of a feed cycle.
2. **Drop Cleaning:** Using actuators, the control will open and close the drops three (3) times in succession to eliminate any feed left in the system. Enable '*Clean Drop*' option in the Installation menu.
3. **Emptying the Feeders:** The control will activate all drive units during the '*Auger Delay*' to empty all feeders before new feed is delivered.
4. **Filling the Chain Disk Feeders:** Feeders continue to run after an '*Auger Delay*' elapses and the bin auger can start filling the feeders.
5. **Feeder is Full:**
  - a. **Proximity sensor used:** A proximity sensor is located at the end of each feeder. When the control detects feed for 5 seconds without interruption, it will stop the bin auger. The drive unit will continue to run until the '*Shutdown Delay*' cycle has elapsed.
  - b. **No proximity sensor used:** A '*Run Time*' parameter value is set up within the control, once the Chain Disk drive unit has run for the length set up in the control for the '*Run Time*', the control will stop the feeder drive unit when the feeder is full.
6. **Feed Dumping:** Feed is delivered to the animals when the Chain Disk Feed System is fully loaded.

See page 37, '*Proximity Sensor Location*' for further information.

## Option B Continuous Feed Distribution

1. **The Filling Process:** Begins when the '*Continuous Delay*' has elapsed. The delay is triggered when the proximity sensor stops feed detection. The proximity sensor is located in the tube of the last feed drop.
2. **Emptying the Feeders:** Begins after the '*Continuous Delay*' has elapsed. All the drive units are then activated by the controller during the '*Auger Delay*' cycle to ensure all feeders are empty before bringing feed to the feeders.
3. **Filling the Chain Disk Feeders:** Begins after the '*Auger Delay*' cycle has elapsed. All the feeders will continue to run as they are being filled by the designated bin augers.
4. **Full Feeder (one):** A proximity sensor is located in the tube of the last feed drop. When the control detects feed for 5 seconds without interruption, it will stop the bin auger. The drive unit will continue to run until the '*Shutdown Delay*' cycle has elapsed.
5. **Full Feeders (all):** All drive units and bin augers will shut off when the last feeder is full. As the feeder load decreases, the '*Continuous Delay*' cycle will activate when the proximity sensor of the Chain Disk feeder stops detecting feed. (Start back at Step 1.)

### Feed Delivery Process

Actuators and electric valves can only be used with the timed feed distribution. Do not use actuators and electric valves with the continuous feed distribution. It is possible to run the Chain Disk Feed System without using actuators or electric valves.

### Actuator Feed Delivery

- The actuator opens the feeder drops during '*Open Time*'.
- After the '*Open Time*' has elapsed, the actuator moves during '*Actuator Delay*'.
- Once the '*Actuator Delay*' has elapsed, the actuator closes the feeder drops until the safety switch (limit switch) is triggered or for the length of a double '*Open Time*' period.
- The feed cycle is ended.

### Electric Valve Feed Delivery

- During the '*Dump Time*' cycle the electric valves open the feeder drops.
- The feeder drops will remain open during the '*Electric Valve Delay*' cycle.
- After the '*Electric Valve Delay*' cycle has elapsed, the electric valves close the feeder drops.
- The feed cycle is ended.

**Feed Delivery without Actuators or Electric Valves**

Feed falls directly into the Chain Disk feeder drops as the feeders are being filled. After all the feeders are full, the feed will gradually unload as the feed is eaten.

**Feed Cycles**

In timer feed distribution, feed cycles must be programmed to signal when the feeders are to be filled and when the feed will be delivered to the animals. Twenty (20) feed cycles per day can be programmed.

See page 48 on how to enter the desired number of feed cycles.



*So cycles do not overlap the control restricts times the feed cycle can start.*

- **Start Time – Feed Cycle:** Time feed cycle starts.
- **Drop Times:** Set times for the feeder drops to open if using actuators or electric valves. The feeder drop should always be full when a dump is scheduled. (Start time + Max run time.)
- **Run Time:** Time needed to fill each feeder. Only available if a proximity sensor is not used.



## 10.6 Parameter Settings

### Controller Status

**STATUS menu:** displays all ongoing operations of the controller.



**All alarms must be acknowledged from the STATUS menu.**



*After 4 minutes of inactivity the control automatically returns to the STATUS menu.*

See pages 51-54 '*Manual Mode/Test Mode*' for further alarm information.

#### **STATUS menu displays:**

- An active test mode
- An active manual mode
- Start of the next feed cycle
- Stopped drive units ('Shut Down Delay')
- Cease of actuator movement
- End of 'Actuator Delay'
- End of 'Purge Time'
- When the next drop will occur
- Drive unit amperage draws

1. To select the STATUS main menu, use the menu select buttons.
2. To scroll through all the displays, use the up and down arrow buttons.



### Run Time History

Six (6) days of Run Time history is kept in memory within the Chain Disk Feed System control.

Run Time History	
LastCyc	0:50 ▼

Press the **MENU SELECT** up or down buttons to get to **Run Time History**.  
Displayed is the total run time of the last cycle.

Run Time History	▲
Today	1:40 ▼

Press the **MENU SELECT** down button to scroll through the last 6 days of total run times.

### Date & Time

12:00:00 AM	
01/01/200X	▼

Press the **MENU SELECT** up or down buttons to get to **TIME/DATE**.

Follow the below process to change the time and/or date – if necessary:

<u>12</u> :00:00 AM	▲
01/01/200X	▼

Press **ADJUST**: The hour will flash on the display.  
Press the ADJUST up or down buttons to select the correct hour.

1: <u>00</u> :00 PM	▲
01/01/200X	▼

Press **ADJUST**: The minutes will flash on the display.  
Press the ADJUST up or down buttons to select the correct minute.

1:35: <u>00</u> PM	▲
01/01/200X	▼

Press **ADJUST**: The seconds will flash on the display.  
Press the ADJUST up or down buttons to select the correct seconds.

1:35:15 PM	▲
<u>01</u> /01/200X	▼

Press **ADJUST**: The day will flash on the display.  
Press the ADJUST up or down buttons to select the correct day.

1:35:15 PM	▲
12/ <u>01</u> /200X	▼

Press **ADJUST**: The month will flash on the display.  
Press the ADJUST up or down buttons to select the correct month.

1:35:15 PM	▲
12/05/ <u>200X</u>	▼

Press **ADJUST**: The year will flash on the display.  
Press the ADJUST up or down buttons to select the correct year.

## Feed Cycle

Available only if using timed feed distribution, *(a password may be required for access.)*



**A template has been provided to write down feed cycle settings to ease the programming process. (See next 2 pages.)**

Feeding Cycle 1 ▲  
Start At 6:01A ▼

Press the **MENU SELECT** up or down buttons to get to **FEED CYCLES**.

Press **ADJUST** : The start time of the first feed cycle flashes on the display.  
Press the ADJUST up or down buttons to change the time value.  
Press **ADJUST** to accept.

Feeding Cycle 1 ▲  
Stop At 6:25A ▼

Press the **ADJUST** down button one time.  
Displayed is the stop time of the first feed cycle. (Only available if a proximity sensor is **NOT** used.)

Press **ADJUST** : The stop time of the first feed cycle flashes on the display.  
Press the ADJUST up or down buttons to change the time value.  
Press **ADJUST** to accept.

Feeding Cycle 1 ▲  
Dump At 7:01A ▼

Press the ADJUST down button one time.  
Displayed is the dump time of the first feed cycle. (Only available if an actuator or electric valve is in use.)

Press **ADJUST** : The dump time of the first feed cycle flashes on the display.  
Press the ADJUST up or down buttons to change the time value.  
Press **ADJUST** to accept.

***Repeat the above process for the number of feed cycles that will be used.***

***If the ADJUST button (or any other button) is not pressed after making a parameter change, the control will automatically accept the change after 8 seconds.***



### IMPORTANT !



Feed cycles are automatically rearranged within the control if a programming error has occurred. A warning message "**Check Feed Cycles**" will occur. To accept the new feed cycle, scroll through the "**Feed Cycle**" menu completely. The warning message will disappear.

## Feed Cycle Template

Write down the start time and stop time (if a proximity sensor will not be used).

Write down the dump time (if an actuator or electric valve is used).

***\*Only perform the dump time after all feeders are full.\****

The figure consists of two side-by-side diagrams, labeled (a) and (b), illustrating the timing of a cycle. Both diagrams show a vertical timeline with a 'Cycle' indicated by a horizontal bar. The timeline is marked with 'TIME' at the top and bottom, with a jagged line indicating a break in the timeline.

**Diagram (a):** Shows a cycle with a start time, dump time (if applicable), and stop time (if applicable). The cycle is represented by a horizontal bar. The timeline is marked with 'TIME' at the top and bottom, with a jagged line indicating a break in the timeline. The cycle is divided into three segments: 'START TIME', 'DUMP TIME (IF APPLICABLE)', and 'STOP TIME (IF APPLICABLE)'. Each segment is represented by a box with a time field (HH:MM) and a checkbox for AM/PM.

**Diagram (b):** Shows a cycle with a start time, dump time (if applicable), and stop time (if applicable). The cycle is represented by a horizontal bar. The timeline is marked with 'TIME' at the top and bottom, with a jagged line indicating a break in the timeline. The cycle is divided into three segments: 'START TIME', 'DUMP TIME (IF APPLICABLE)', and 'STOP TIME (IF APPLICABLE)'. Each segment is represented by a box with a time field (HH:MM) and a checkbox for AM/PM.

# PARAMETER SETTINGS / FEED CYCLE

TIME

Cycle

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

TIME

TIME

Cycle

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

—

<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	START TIME
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	DUMP TIME (IF APPLICABLE)
<input type="text"/> : <input type="text"/>	<input type="checkbox"/> AM <input type="checkbox"/> PM	STOP TIME (IF APPLICABLE)

TIME



### Installation Setup

The following will explain how to customize the Chain Disk Feed System control for individual applications. Setup should only need to occur one time.

Enter Password 06 01 00	Press the <b>MENU SELECT</b> up or down buttons to get to <b>INSTALLATION</b> . A password may be required. The password is set to 6-1-0 by default.
Use password? Yes ▼	Press the <b>MENU SELECT</b> down button to select <b>Yes</b> . Using a password will restrict the access to the "Installation & Feed Cycle" menus.
Use Proxy Switch?      ▲ Yes ▼	Press the <b>MENU SELECT</b> up or down buttons to select whether a proximity sensor will be used to detect feed presence at the end of the feed line.

*\*The 'Prox Switch' status only appears if the proximity switch is enabled in the previous option.\**

Proxy Switch      ▲ Normally Open      ▼	Press the <b>MENU SELECT</b> up or down buttons to select the status of the proximity switch to <b>Normally Open (NO)</b> or <b>Normally Closed (NC)</b> .
---	--

*\*The 'Feed Sensor Bypass' only appears if the proximity switch is enabled and the system is set up for timed feed distribution.\**

Feed Sensor      ▲ Bypass      0:30m:s ▼	Press the <b>MENU SELECT</b> up or down buttons to set the length of time required to eliminate the feed that remains at the end of the feed line. Length of time can be set from 0 to 30 minutes.
---	---

*The 'Continuous Feeding' or 'Timed Feeding' only appears if the proximity switch is enabled.\**

Continuous      ▲ Feeding?      No ▼	Press the <b>MENU SELECT</b> up or down buttons to select <b>Yes</b> for <b>Continuous Feed Distribution</b> or <b>No</b> for <b>Timed Feed Distribution</b> .
---	--



## PARAMETER SETTINGS / INSTALLATION SET-UP

*\*The 'Cont. Feeding Delay' only appears if the Continuous Feeding is enabled in the previous option.\**

Cont. Feeding	▲
Delay	0:30m:s ▼

Press the **MENU SELECT** up or down buttons to set the length of time for the feeder motor to restart when separating feed cycles.

Length of time can be set from 1 minute to 23 hours and 59 minutes.

*\*The 'Feed dump use' only appears if the Continuous Feeding is disabled.\**

Feed dump use	▲
Actua	▼

Press the **MENU SELECT** up or down buttons to select **Actua** if feed drops are actuator controlled; **Valve** if the feed drops are electric valve controlled or **None** to disable the feed drops.

*\*The 'Actuator Open Time' only appears if the actuator is enabled.\**

Actuator Open	▲
Time	2:30m:s ▼

Press the **MENU SELECT** up or down buttons to set the length of time needed for the actuator delay to open the drops.

Length of time can be set from 0 to 120 minutes.

*\*The 'Actuator Delay' only appears if the actuator is enabled.\**

Actuator Delay	▲
	2:30m:s ▼

Press the **MENU SELECT** up or down buttons to set the length of time for the drops to remain open after the actuators open time has elapsed.

Length of time can be set from 0 to 60 minutes.

*\*The 'Use Security Sensor' only appears if the actuator is enabled.\**

Use Security	▲
Sensor?	No ▼

Press the **MENU SELECT** up or down buttons to select **Yes** if a limit switch has been placed at the end of the actuator.

*\*The 'Elec. Valve Delay' Time only appears if the electric valves are enabled.\**

Elec. Valve Delay	▲
Time	2:30m:s ▼

Press the **MENU SELECT** up or down buttons to set the length of time for the drops to remain open using electric valves instead of actuators.

Length of time can be set from 0 to 60 minutes.



Max. Current	▲
7.0AMP	▼

Press the **MENU SELECT** up or down buttons to set the maximum current allowed to be used by the feeder motor.  
Amp range can be set from 1.0 to 14.0Amp.

Window Size	▲
1.0AMP	▼

Press the **MENU SELECT** up or down buttons to set the current difference, below the Max. Current, when the auger motor restarts.  
Amp range can be set from 0.5 to 3.0Amp.

Over Current	▲
Delay 0:45m:s	▼

Press the **MENU SELECT** up or down buttons to set the length of time the feeder motor's current consumption is allowed to exceed the Max. Current limit before an alarm is triggered.  
Length of time can be set from 30seconds to 15 minutes.

Auger Delay	▲
0:20m:s	▼

Press the **MENU SELECT** up or down buttons to set the length of time in which the auger is delayed after the feeder start up (Continuous Delay elapse).  
Length of time can be set from 0 to 60 minutes.

Max Run Time	▲
2:10m:s	▼

Press the **MENU SELECT** up or down buttons to set the Max Run Time. Operation is different if using a proximity sensor or not – See below.  
Length of time can be set from 0 to 4 hours.

**Proximity sensor used:** The 'Max Run Time' is the feeder's maximum allowable run time. If the set run time is reached, an alarm is triggered stopping the Chain Disk Feed System operation until the alarm is acknowledged and fixed.

**Proximity sensor not used:** The 'Max Run Time' is the length of time the Chain Disk Feed System is not running while operating in manual mode.

# of Feeding	▲
Cycles 1	▼

Press the **MENU SELECT** up or down buttons to set the number of feed cycles to be used each day – up to 20 per day.



**IMPORTANT !**



Feed cycles are automatically rearranged within the control if a programming error has occurred. A warning message 'Check Feed Cycles' will occur. To accept the new feed cycle, scroll through the 'Feed Cycle' menu completely. The warning message will disappear.





## PARAMETER SETTINGS / INSTALLATION SET-UP / CHANGING THE PASSWORD / VERSION

Time Mode	12h ▲ ▼
-----------	------------

Press the **MENU SELECT** up or down buttons to select whether to display the time in a 12 hour or 24 hour format.

*\*The 'Shut Down Delay' only appears if the proximity switch is enabled.\**

Shut down delay	▲ 5:00m:s ▼
-----------------	----------------

Press the **MENU SELECT** up or down buttons to set the length of time the feeder motor needs before stopping when feed is detected by the proximity switch at the end of the feed line. This delay time also stop the bin auger. Length of shut down delay can be set from 0 to 10 minutes.

### Changing the Password

Change password?	▲ Yes ▼
------------------	------------

Press the **MENU SELECT** down button.

Enter new password	▲ ** ** * ▼
--------------------	----------------

Press **ADJUST**. The first two digit number set will begin to flash on the display. Use the ADJUST up and down buttons to set the first number set.

Enter new password	▲ ** * * ▼
--------------------	---------------

Press **ADJUST**. The second two digit number set will begin to flash on the display. Use the ADJUST up and down buttons to set the second number set.

Enter new password	▲ ** * * ▼
--------------------	---------------

Press **ADJUST**. The third two digit number set will begin to flash on the display. Use the ADJUST up and down buttons to set the third number set.

### Version Display

C-FEEDER	
Version X.X	▲

Displays the current version of the Chain Disk Feed System Controller.



## 10.7 Manual Mode/Test Mode

### Manual Mode – Filling Feeders

1. In Manual Mode, actuators, electric valves and drive units can all be manually activated.
2. The Chain Disk Feed System can be filled without waiting for a feed cycle to start.
3. At start up, when the manual mode is used, the 'Manual Mode' light will turn on and the control will activate the outputs needed for the feeder to fill.

*The manual mode process is completed after the feeder is full.*

Press the **MENU SELECT** up or down buttons to select the **Manual Mode** menu.

*A password may be required.*

Press the **ADJUST** down button to select **Feed Cycle Mode**.

Feed Cycle Mode:  
Auto

Press the **ADJUST** button to activate the **Feed Cycle Mode**.

Press the **ADJUST** up or down buttons to select **Auto**, **Start** or **Stop**.

Press the **ADJUST** button to accept.



### IMPORTANT !



When a manual fill of a feeder is started while a feed cycle is in process, the feed cycle is overridden by the manual fill. The controller will not resume the interrupted feed cycle when it returns to the automatic mode, but will perform a drop at the next Dump Time (if applicable). A manual dump can also be performed. (See 'Manual Dump Section' on pg 58) Exit from the manual mode after the completed manual filling process.



## MANUAL MODE / MANUAL DUMP

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### Manual Mode – Manual Dump

1. An actuator or electric valve can be manually activated so long as a drive unit is not in use.
2. When an actuator or electric valve is manually controlled the Manual Mode light will flash.

Press the **MENU SELECT** up or down buttons to select the **Manual Mode** menu.

Press the **ADJUST** down button to select **Actuator Mode**.

*\*The 'Actuator Mode' only appears if an actuator is enabled.\**

Actuator
Mode:                      Auto

Press the **ADJUST** button to activate **Actuator Mode**.

Press the **ADJUST** up or down buttons to select **Auto**, **Open**, **Stop** or **Close**.

Press the **ADJUST** button to accept.

Press the **ADJUST** down button once to select **Electric Valve Mode**.

*\*The 'Electric Valve Mode' only appears if an electric valve is enabled.\**

Electric Valve
Mode:                      Auto

Press the **ADJUST** button to activate **Electric Valve Mode**.

Press the **ADJUST** up or down buttons to select **Auto**, **Open** or **Close**.

Press the **ADJUST** button to accept.



### Test Mode

The Test Mode allows a simulated amperage draw of the drive unit to verify the controller's performance.

Press the **MENU SELECT** up or down buttons to select the **Manual Mode** menu.

Press the **ADJUST** down button to select **Test Mode Status**.

Test Mode Status:	On
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Press the **ADJUST** button to activate **Test Mode Status**.

Press the **ADJUST** up or down buttons to enable the test mode.

Press the **ADJUST** button to accept.

*Press the **ADJUST** down button once to select **Feeder Current**.*

Feeder Current:	0.5AMP
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Press the **ADJUST** button to activate **Feeder Current**.

Press the **ADJUST** up or down buttons to set the simulated current usage.

Press the **ADJUST** button to accept.



**Exit from the test mode after the testing is completed.**

### Toggle Switch

1. A toggle switch can be added to the main board of the control.
2. The toggle switch allows the feeder and auger motors to be manually stopped without setting off an alarm (*Feeder Is Not Running*) between feed cycles.

*Refer to the Chain Disk control wiring diagram to add a toggle switch.*



**The feeder motor power is not cut when using the toggle switch.  
Cut the power via a circuit breaker during service and/or**

## ALARMS / ALARM ACKNOWLEDGEMENT / TROUBLE LIGHT

### Alarms

Possible alarm conditions are shown in the table below.

Any alarm will shut down the whole Chain Disk Feed System until the alarm is acknowledged and fixed.

Alarm	Description
<b>Actuator is not Closed</b>	The actuator limit switch has not been reached after the Closing Time (only occurs if a safety sensor is enabled).
<b>Actuator is not Opened</b>	The actuator limit switch is still detected after the Opening Time (only occurs if a safety sensor is enabled).
<b>Chain Disk is not running</b>	The feeder motor amperage draw is less than 2.0 Amps.
<b>Current Overload</b>	The feeder motor amperage draw has exceeded the Maximum Current Consumption limit for the Over Current Delay.
<b>Max Run Time</b>	The run time of the Chain Disk drive unit exceeded the Max. Run Time (can only occur if a proximity switch has been enabled).
<b>Toggle Switch is off</b>	Toggle switch is not properly wired or is in the off position.
<b>Chain Disk Safety Switch</b>	The Chain Disk feeder safety switch has been reached.

### Alarm Acknowledgement

Toggle  
Switch is off

Press the **MENU SELECT** up and buttons to select **STATUS**.

Press **ADJUST** button. The display flashes an acknowledgement status.

Press the **ADJUST** up button to acknowledge the alarm.

Press the **ADJUST** button to accept.

### Trouble Light

A trouble light can be added to the main board of the control and can be set to turn on whenever there is an alarm.



**The trouble light should ONLY be wired 115-120 VAC**  
***Refer to the Chain Disk control wiring diagrams to add a trouble light.***