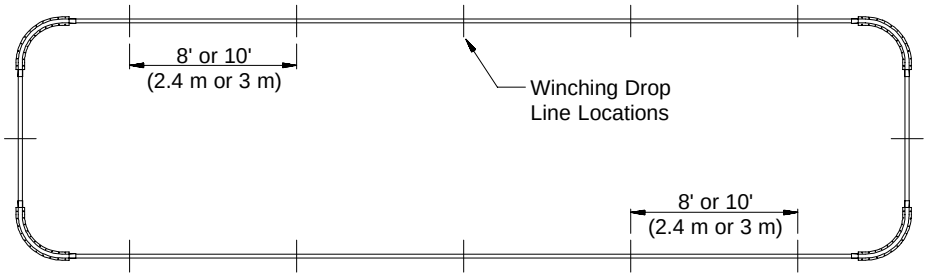
WINCH KIT INSTALLATION

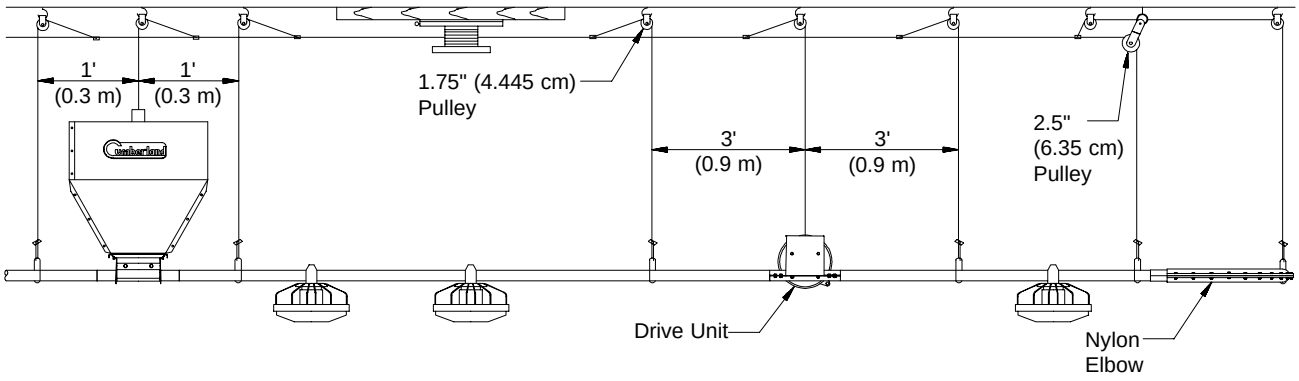
After deciding where the feeder line is to be installed, mark a straight line on the ceiling or rafters the full length of the feeder line. Use a string, chalk line, or a winch cable temporarily attached with staples to mark the line. Center the line directly over where the feeder line is to be installed.

Each loop requires two winches; one per feeder line. Winch each side of the loop as though it was a straight line feeder.



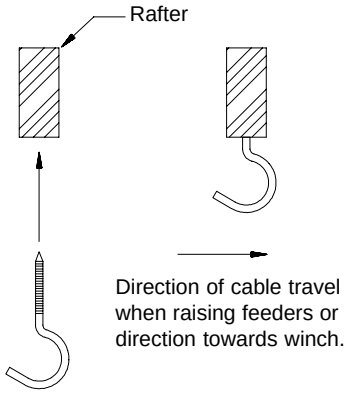
Required Winch Drop Line Locations:

A. 8' or 10' spacing
B. One on each side of the drive unit
C. One to hang each drive unit
D. One on each side of the feed hoppers
E. One to hang each feed hopper
F. On each end of the feed line near the nylon elbows
G. One between the nylon elbows



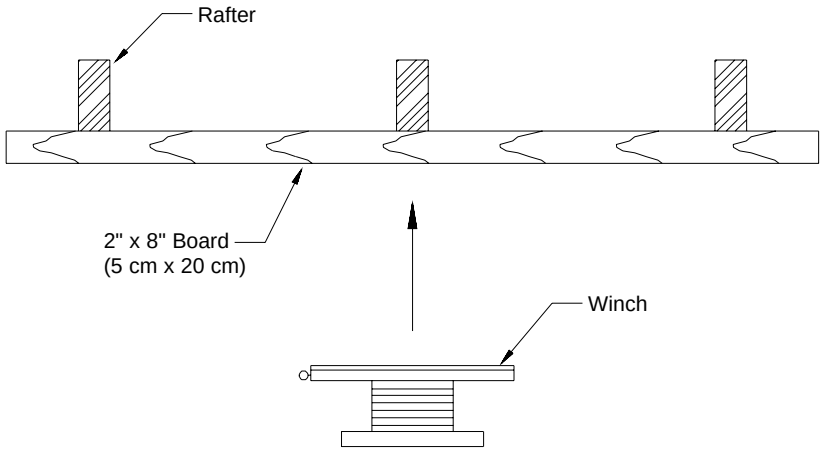
The recommended spacing between the winch cable at the hopper and the drop lines on each side of the hopper is 1' (0.3 m). A 3' (0.9 m) space is recommended between the cable at the drive unit and the drop lines on each side of the drive unit.

CABLE and WINCH INSTALLATION



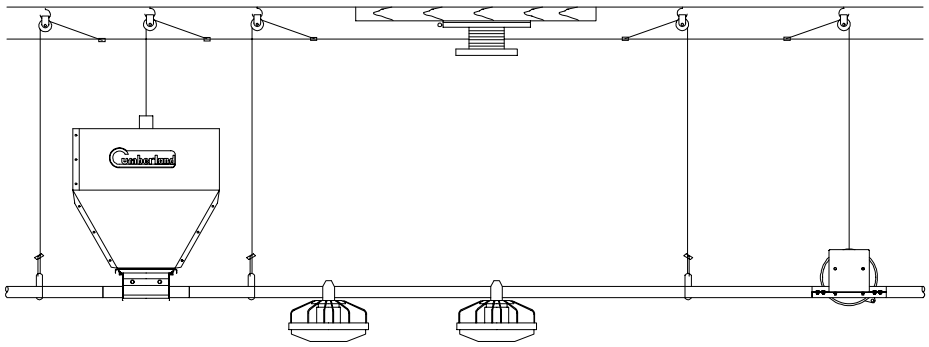
For wood frame installation install screw hooks along the line at the recommended spacing. Screw hooks into the ceiling supports or rafters the full length of the threads to prevent bending. For metal frame installations, some support fabrication may be necessary in order to install pulleys at the recommended spacing. For additional information and recommendations, contact a Cumberland representative.

The openings of the screw hooks must point away from the direction of cable travel when the winch raises the feeder. If the distance raised is greater than the distance between drop spacings, stagger the hooks 3" (8 cm) to each side of the line to prevent the cable clamp sleeves from catching on the pulleys.



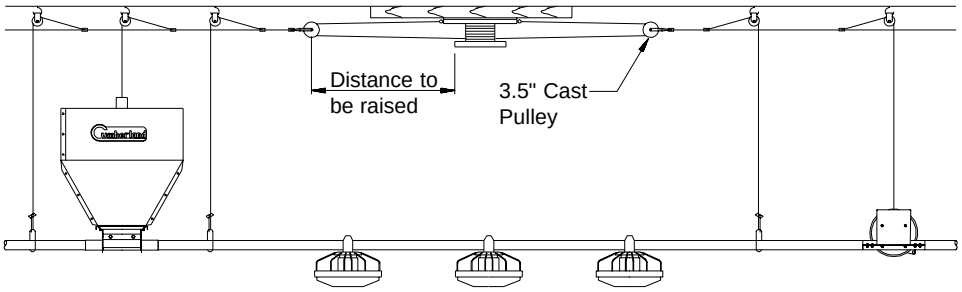
Attach a 2" x 8" (5 cm x 20 cm) board to the ceiling a few feet from the center of the feeder line. The board must be parallel to the feeder line and must span at least three rafters. Attach the winch to the board. The brake mechanism will protrude on one side.

CABLE and WINCH INSTALLATION
cont.



For systems shorter than 360' (109.73 m), extend the winch cable (3/16") the full length of the feeder line, stringing the cable through the cable hole on the winch drum. Attach the cable temporarily to the ceiling with nails, staples, or some type of fastener. The winch cable does not pass through any pulleys except for the 3.5" (8.89 cm) cast iron pulleys at the ends near the nylon elbows.

Note: The cable must not wrap over itself on the drum, but should lay as closely as possible to each previous wrap.



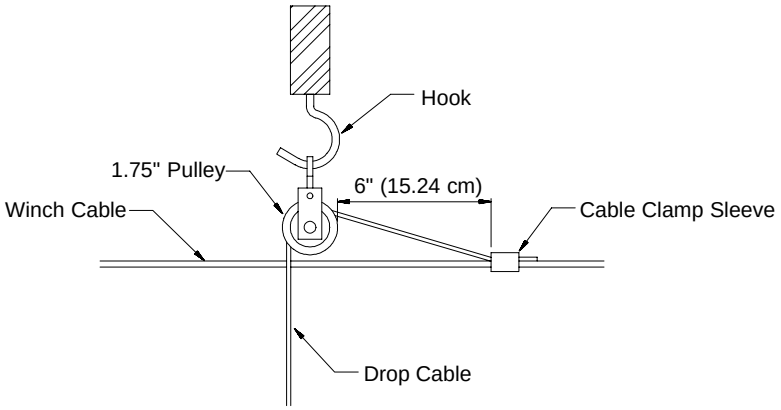
For systems longer than 360' (109.73 m), install the cable with double reduction pulleys.

The distance between the winch drum and the double reduction pulley should be slightly greater than the distance the feed line is to be raised.

Tighten the set screw on the winch drum to anchor the cable.

Turn the winch drum one full revolution. Guide the cable against the flange at the bottom of the winch drum.

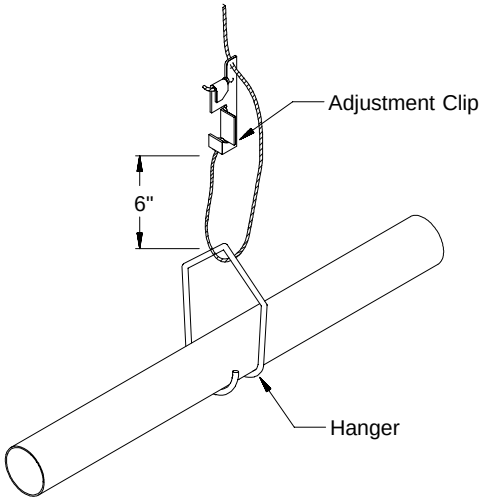
DROP CABLE INSTALLATION



Attach the 1.75" (4.445 cm) pulley to each hook. Place the hangers to the feed line directly below each pulley. Spread the wire hanger just enough to force it over the auger tube.

Note: Be sure the hangers are not touching the shocker wire.

To each pulley, thread the 1/8" drop cable through and attach to the 3/16" winch cable about 6" (15 cm) from the pulley towards the drum with the 1/8" x 3/16" cable clamp sleeves.

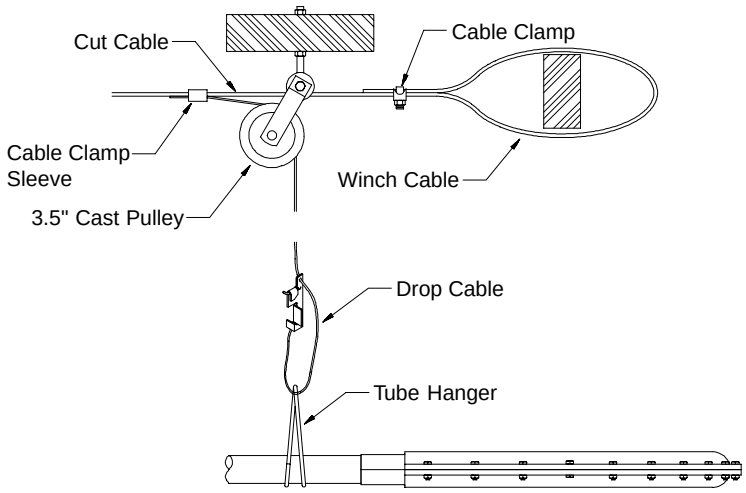


Important! Following the installation of all the drops, check the drop cables before raising the feeder. This cable must be on all the pulleys before raising the feed line.

Cut the drop cable long enough for installation from the winch cable, through the hanger to the cable adjusting clip. The clip should be located within 6" above the hanger so the feeder line can be raised without interference when the house is cleaned.

Begin installing the drops at the winch and proceed to the end of the feeder line.

DROP CABLE INSTALLATION cont.

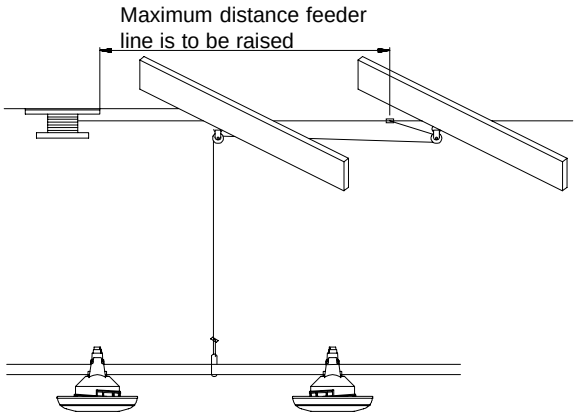


On the ends of the feeder line, clamp off the ends of the winch cable around a truss. Use a cable clamp sleeve to clamp the drop cable to the winch cable and thread it through the tube hanger and adjustment clip. Cut the winch cable behind the cable clamp sleeve.

Level the feed line using the adjustment clips. Excess drop cable should be trimmed close to the clamps to prevent ground faults of the shocker system. For proper installation, the feed line must hang straight and reasonably level. Winch systems should be carefully planned to keep all cables clear of building components, trusses, electric wiring, and gas and water lines. Drops to the feeders should be straight so as not to impose improper loads on the feeder when raised.

Keep tension on hanging cables at all times to prevent the pans from resting in the litter.

"THROWBACK" INSTALLATION



Drops located so close to the winch that they will wrap onto the drum when the feeder line is raised must be connected to the winch cable by a "throwback". This is a suspension drop which routes the cable away from the winch far enough so that the cable clamp sleeve and drop cable do not get wound onto the winch drum.

CYCLE PLUS PAN FEEDER CONTROL INSTALLATION

Install the Cycle Plus Pan Feeder Control Panel in a convenient location for easy access. Mount the panel toward the center of the house and keep the it high enough so birds cannot interfere with its operation.

Functions
To select a function, depress the appropriate function switch. An indicator LED just to the left of the switch will indicate the function that is selected.

Time of Day: This indicates the time of day on the four digit LED display. Two LEDs on the right of the display indicated whether the time is AM or PM. Two LEDs on the left indicate day 1 or day 2 (48 hour clock). The time is retained even during a power outage by an internal rechargeable battery - for up to 48 hours. If for some reason, the power should be off too long and the time is lost, when the unit is powered on, a time of 12:00 AM will be flashing on the display--indicating the time must be reset.

Feedings per Day: This indicates how many feedings per day there will be--up to 20 per 48 hour period.

Feeding Start Time: Indicates at what time the feedings will begin.

Feeding Run Time: Indicates how long each feeding will run.

Fill System Delay: Indicates length of time fill system will start before the first feeding.

Program: These keys are used to enter program information for the functions described above.

Programming
All programming is done with the program keys--modify, increase (up arrow), decrease (down arrow), and enter. The only program information that will be lost if power is out for an extended period of time is Time of Day. All other program information will be retained even during extended power loss. With all program functions, if the increase or decrease switches are depressed and held down, the count will increase or decrease at the rate of approximately four counts per second.

CYCLE PLUS PAN FEEDER CONTROL INSTALLATION
cont.

Time of Day: Select time of day function by depressing the Time of Day switch, then depress the Program switch. The hour digits to the left of the colon will begin flashing. Increase the hour with the increase switch and decrease the hour with the decrease switch. The AM/PM indicator on the right hand part of the display indicates if the hour is AM or PM. Day 1 and Day 2 indicator indicate which day is set. After the hour is correctly entered, depress the Enter switch. The hour digits stop flashing and the minutes digits to the right of the colon begin flashing. Increase or decrease the minutes with the increase/decrease switches. After the minute has been correctly entered, depress the Enter switch. The new time is entered, seconds are set to 0 and the new time begins at the moment the Enter switch is depressed.

The time set mode may be exited anytime by depressing any switch other than the four programming switches. Exiting the program mode by depressing a non-programming switch will cause the new hour or minute not to be entered. In order to set a new time, the Enter switch must be depressed. Example: Enter time set mode with = 10:00 AM. Using the increase switch, set the time to 11:00 AM. Then depress a non-program switch (including Time of Day switch). The new time will remain 10:00 AM.

Feedings per Day: Select the Feedings per Day function. Then depress the modify switch to enter the Feedings per Day program mode. By using the increase/decrease switches, you may enter any number of feedings from 0 through 20. Zero feedings per day will prohibit all feedings. To enter the new value you must depress the Enter switch. As with the time set mode, you may exit the Feedings per Day mode, leaving the old Feedings per Day value undisturbed, by depressing any non-program switch.

Feeding Start Time: The start time for each feeding, one through 20, must be individually programmed. When the Feeding Start Time mode is entered, the display will alternate between the feeding number and the time of that feeding. To enter a new start time for a particular feeding, enter the Feeding Start Time mode by depressing that switch. Then, using the increase/ decrease switches increment or decrement the feeding number until the feeding number whose time you wish to alter is on the display. Then depress the Modify switch to alter the time of that feeding. Depress the Enter switch to enter the new time.

CYCLE PLUS PAN FEEDER CONTROL INSTALLATION
cont.

Feeding Run Time: The run time for each feeding one through 20 must be individually programmed. When the Feeding Run Time mode is entered, the display will alternate between the feeding number and the run time of that feeding. To enter a new run time for a particular feeding, enter the Feeding Run Time mode by depressing that switch. Then, using the increase/decrease switches, increment or decrement the feeding number until the feeding number whose run time you wish to alter is on the display. Then depress the Modify switch to alter the run time of that feeding. Enter the time you wish the feeder to run in minutes (left two digits) and seconds (right two digits). The maximum run time is 99 minutes and 59 seconds. Depress the Enter switch to enter the new run time value. Zero run time will prohibit all feedings.

Fill System Delay: The Fill System Delay is the length of time in minutes and seconds that the feeder fill system will start before the first feeding. To enter a new fill system delay enter the Fill System Delay mode by depressing that switch and depress the Modify switch to alter the fill system delay. Enter the time you wish the delay to be run in minutes (left two digits) and seconds (right two digits). The maximum delay time is 30 minutes and 59 seconds. Depress the Enter switch to enter the new delay time value. Zero run time will prohibit all feedings.

Power Up Clear: By depressing and holding the Modify and increase switches during a power up, the time is automatically set to 8:00 AM and all program functions are set to 0. Program functions that involve time are set to 12:00 AM.

Operation

After following the wiring procedures, always power up the unit for the first time with all toggle switches in the center off position. Then, operate the feeders manually to test the feeders, before running the system in the Automatic mode.

The system can be operated manually by placing the toggle switches into the manual (up) position. The feeders may be shut off by placing the toggle switches into the off (center) position.

Note: Feeders and fill system will not run if the weigh tank is empty (upper scale switch open).

For automatic computer control operation, place the toggle switches in the automatic (down) position. With the switches in this position, the feed cycles are operated automatically based upon the program information that has been entered. During a feeding cycle, the feeding LED is on, indicating that a feeding operation is in progress. During the feeding cycles, the number of the feeding being fed is displayed in the left most digit of the display--just under the "Feeding Number". During those cycles the three digits to the right show what looks like a rotating auger.

PROGRAMMING THE CYCLE PLUS PAN FEEDER CONTROL

Use the following step-by-step procedure to program the Cycle Plus Pan Feeder Control. The programming procedure takes one Function at a time and leads you through the steps that are required to properly program the necessary information into that function. After each step, check the display to see that it shows what is shown in the Display column of the programming procedure.

It is simple and easy to program the Cycle Plus Pan Feeder Control. The control cannot be damaged by pushing the wrong button or buttons. Once a program had been entered into the control, the program will not be affected by pushing any of the buttons unless the Modify button has been pressed first. Even if you should accidentally push the Modify button and then push another button, only the information in the illuminated function will be changed. That function can easily be reprogrammed. You do not have to be afraid of this control. Try the different buttons and see what they are capable of doing.

FUNCTION	STEP	DISPLAY
TIME OF DAY	1. Press **Time of Day** key 2. Press **Modify** key 3. Press ⏶ ⏷ keys to set hours 4. Press **Enter** key 5. Press ⏶ ⏷ keys to set minutes 6. Press **Enter** key **Note:** The AM/PM indicator on the right hand part of the display indicates AM/PM. The DAY 1/DAY 2 indicator on the left indicates Day 1 or Day 2.	Time of Day Flashing hours Flashing minutes Correct time
FEEDINGS PER DAY	1. Press **Feedings per Day** key 2. Press **Modify** key 3. Press ⏶ ⏷ keys to set number of feedings 4. Press **Enter** key	Number of feedings Flashing number Correct number of feedings
FEEDING START TIME	1. Press **Feeding Start Time** key 2. Press ⏶ ⏷ keys until the feeding number time you wish to alter is on display 3. Press **Modify** key 4. Press ⏶ ⏷ keys to set hours 5. Press **Enter** key 6. Press ⏶ ⏷ keys to set minutes 7. Press **Enter** key	Alternate flashing of feeding number and the time of that feeding Alternate flashing of number and starting time for feeding Flashing hours Flashing minutes Alternate flashing of number and correct starting time for feeding

PROGRAMMING THE CYCLE PLUS PAN FEEDER CONTROL
cont.

FUNCTION	STEP	DISPLAY
FEEDING RUN TIME	1. Press **Feeding Run Time** key 2. Press ⌂ ⌄ keys until the feeding run time you wish to alter is on display 3. Press **Modify** key 4. Press ⌂ ⌄ keys to set minutes 5. Press **Enter** key 6. Press ⌂ ⌄ keys to set seconds 7. Press **Enter** key 8. Press ⌂ ⌄ keys 9. Repeat steps 3-8 until preset number of feeding cycles are programmed with correct run time. **Note:** Any feeding run time may be reprogrammed by going to that feeding run time number and following steps 3-7.	Alternate flashing of feeding cycle number and feeding run time for cycle Alternate flashing of number and run time for feedings Flashing minutes Flashing seconds Alternate flashing of number and correct feeding run time for feedings
FILL SYSTEM DELAY	1. Press **Fill System Delay** key 2. Press **Modify** key 3. Press ⌂ ⌄ keys to set minutes 4. Press **Enter** key 5. Press ⌂ ⌄ keys to set seconds 6. Press **Enter** key	Fill system delay time Flashing minutes Flashing seconds Correct fill system delay time in minutes and seconds