CHORE-TIME®

Poultry Production Systems

4 and 8 Station PDS™ Control

Installation & Operators Manual

Installation and Operators Manual

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June 2003 MW1402C

Chore-Time Warranty

Chore-Time Equipment ("Chore-Time") warrants each new Chore-Time product manufactured by it to be free from defects in material or workmanship for one year from and after the date of initial installation by or for the original purchaser. If such a defect is found by the Manufacturer to exist within the one-year period, the Manufacturer will, at its option, (a) repair or replace such product free of charge, F.O.B. the factory of manufacture, or (b) refund to the original purchaser the original purchase price, in lieu of such repair or replacement. Labor costs associated with the replacement or repair of the product are not covered by the Manufacturer.

Conditions and Limitations

1. The product must be installed by and operated in accordance with the instructions published by the **Manufacturer or Warranty will be void**.
2. Warranty is void if **all components** of the system are not original equipment supplied by the **Manufacturer**.
3. This product must be purchased from and installed by an authorized distributor or certified representative thereof or the Warranty will be void.
4. Malfunctions or failure resulting from misuse, abuse, negligence, alteration, accident, or lack of proper maintenance shall not be considered defects under the Warranty.
5. This Warranty applies only to systems for the care of poultry and livestock. Other applications in industry or commerce are not covered by this Warranty.

The **Manufacturer** shall not be liable for any **Consequential or Special Damage** which any purchaser may suffer or claim to suffer as a result of any defect in the product. **"Consequential"** or **"Special Damages"** *as used herein include, but are not limited to, lost or damaged products or goods, costs of transportation, lost sales, lost orders, lost income, increased overhead, labor and incidental costs and operational inefficiencies.*

THIS WARRANTY CONSTITUTES THE MANUFACTURER'S ENTIRE AND SOLE WARRANTY AND THIS MANUFACTURER EXPRESSLY DISCLAIMS ANY AND ALL OTHER WARRANTIES, INCLUDING, BUT NOT LIMITED TO, EXPRESS AND IMPLIED WARRANTIES AS TO MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSES SOLD AND DESCRIPTION OR QUALITY OF THE PRODUCT FURNISHED HEREUNDER.

Chore-Time Distributors are not authorized to modify or extend the terms and conditions of this Warranty in any manner or to offer or grant any other warranties for Chore-Time products in addition to those terms expressly stated above. An officer of CTB, Inc. must authorize any exceptions to this Warranty in writing. The Manufacturer reserves the right to change models and specifications at any time without notice or obligation to improve previous models.

Effective: **June 2003**

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Thank You

The employees of Chore-Time Equipment would like to thank your for your recent Chore-Time purchase. If a problem should arise, your Chore-Time distributor can supply the necessary information to help you.

Contents

General

Support Information

The Chore-Time 4 and 8 Station Pneumatic Drinking System Control is designed to control water line regulators in a Chore-Time Nipple Watering System. Using this equipment for any other purpose or in a way not within the operating recommendations specified in this manual will void the warranty and may cause personal injury.

This manual is designed to provide comprehensive planning and installation information. The Table of Contents provides a convenient overview of the information in this manual.

About This Manual

The intent of this manual is to help you in two ways. One is to follow step-by-step in the order of assembly of your product. The other way is for easy reference if you have questions in a particular area.

IMPORTANT: Read ALL instructions carefully before starting construction.

IMPORTANT: Pay particular attention to all SAFETY information.

- *Metric measurements are shown in millimeters and in brackets, unless otherwise specified.* " " " equals inches and " ' " equals feet in English measurements.
  Examples:
  1" [25.4]
  4' [1 219]
- Optional equipment contains necessary instructions for assembly or operation.
- Major changes from the last printing will be listed on the back cover.

•This Planning Symbol is used in areas where planning needs to take place before construction continues.

- Very small numbers near an illustration (*i.e.,* 1257-48) are identification of the graphic, not a part number.

Safety Information

Caution, Warning and Danger Decals have been placed on the equipment to warn of potentially dangerous situations. Care should be taken to keep this information intact and easy to read at all times. Replace missing or damaged safety decals immediately.

Using the equipment for purposes other than specified in this manual may cause personal injury and/or damage to the equipment.

Safety–Alert Symbol

This is a safety–alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury. This equipment is designed to be installed and operated as safely as possible...however, hazards do exist.

Understanding Signal Words

Signal words are used in conjunction with the safety–alert symbol to identify the severity of the warning.

DANGER indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION indicates a hazardous situation which, if not avoided, MAY result in minor or moderate injury.

Safety Instructions

Follow Safety Instructions

Carefully read all safety messages in this manual and on your equipment safety signs. Follow recommended precautions and safe operating practices.

Keep safety signs in good condition. Replace missing or damaged safety signs.

Decal Descriptions

DANGER: Electrical Hazard

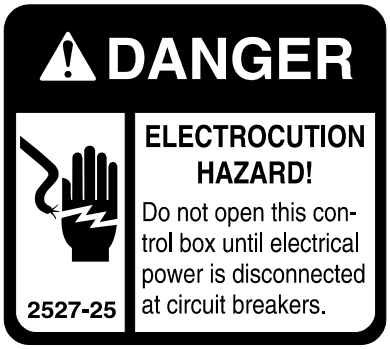
Disconnect electrical power before inspecting or servicing equipment unless maintenance instructions specifically state otherwise.

Ground all electrical equipment for safety.

All electrical wiring must be done by a qualified electrician in accordance with local and national electric codes.

Ground all non-current carrying metal parts to guard against electrical shock.

With the exception of motor overload protection, electrical disconnects and over current protection are not supplied with the equipment.

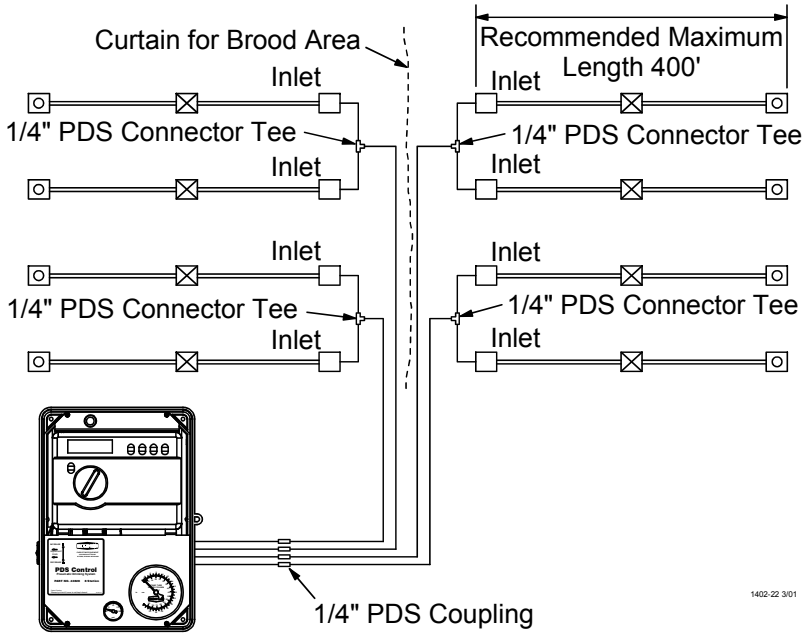


The System Layout

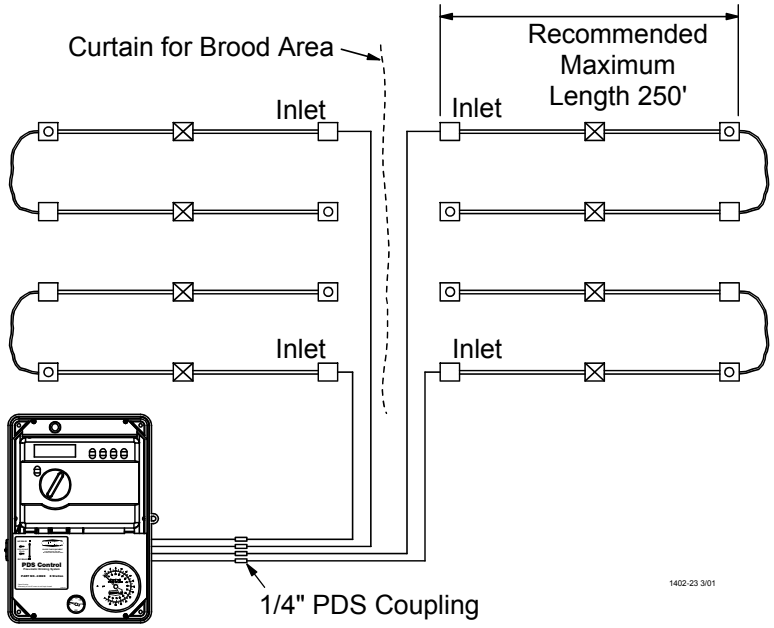
Below are examples of the Chore-Time Nipple Watering System layouts. These are to be used to show different methods for installing the PDS System.

Refer to Parts List Section, page 12 for item part numbers.

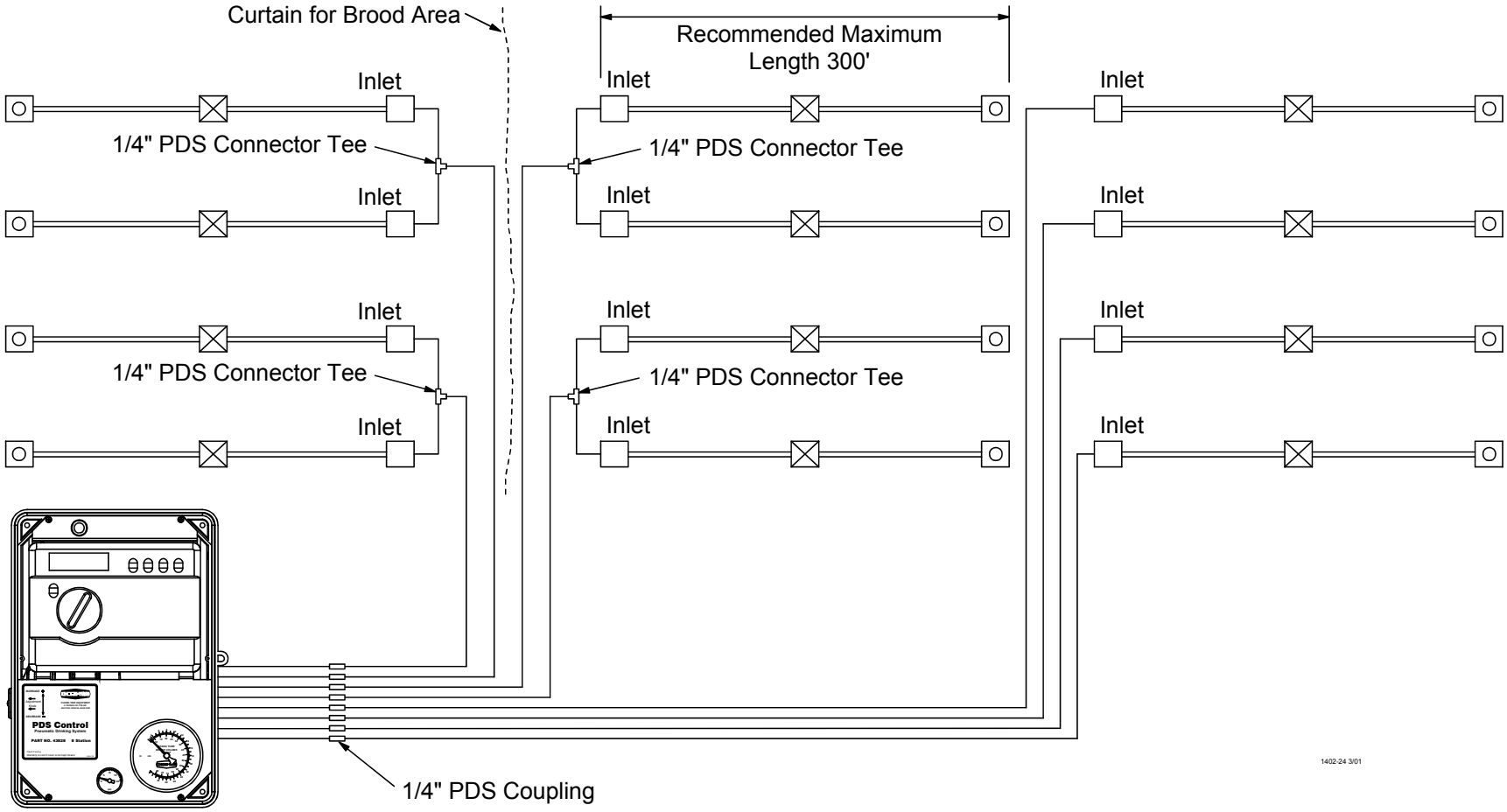
System Layout #1



System Layout #2



System Layout #3



Installation

Position Control in the most convenient location where it can easily be seen and adjusted.

Fasten the Control to the wall through the four holes in the corners.

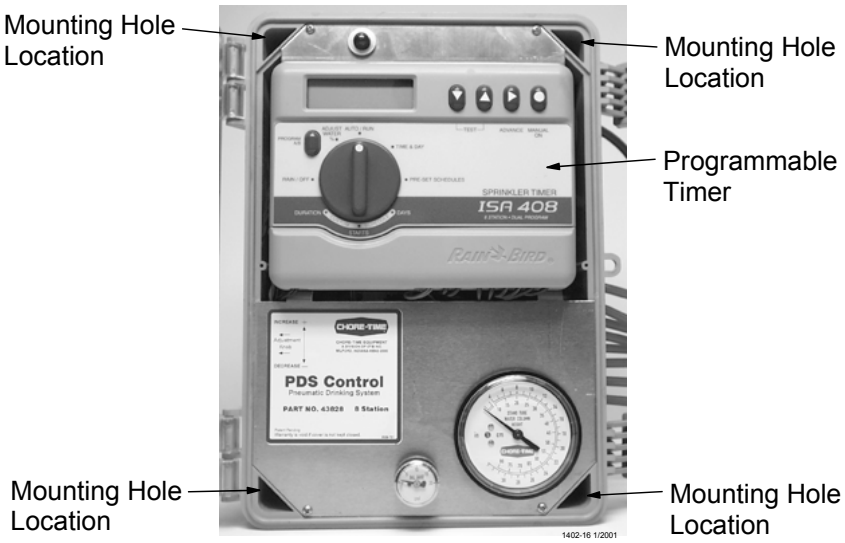


Figure 1. Mounting the Control Unit

Install the Intake Screen in a dust free environment, if possible, run outside to reduce frequency of cleaning. Hang the Intake Screen so that water will not get into the Inlet Tube, route Intake Tube up to the control so that no water gets in the compressor.

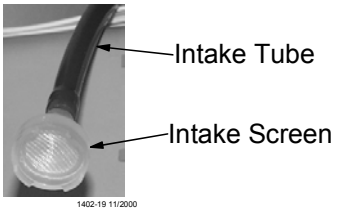


Figure 2. Intake Screen and Intake Tube

Drape regulator hoses so that water drains away from compressor, allow slack in the Regulator Hose Leads so that they can be pinched for maintenance and diagnostic purposes.

Each Regulator Hose Lead may be used to supply air to two Nipple Line Regulator Inlets. This will assure enough flush water volume per Line to move air and sediment down the Nipple Lines and out. Run the air supply hoses across the ceiling and down the hoses supplying water to each of the Regulators, attaching it to the provided hose barb on the bottom of each Regulator.

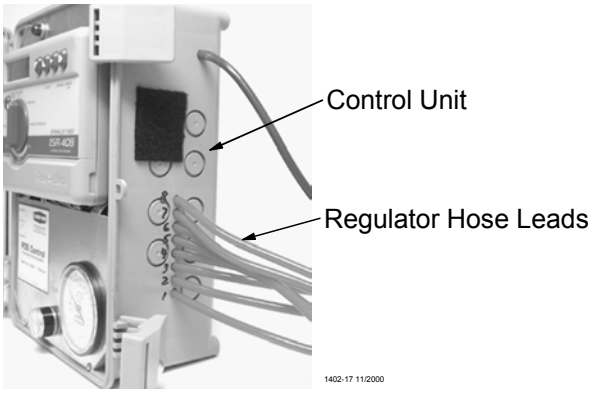


Figure 3. View of Regulator Hoses

The Regulators have a 3" minimum preset so water column gauge will still show a 3" column when system is off. The gauge should not show any less. The plastic lens can be removed and a screw driver can be used to adjust the gauge dial to read accurately.

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Figure 4. Water Column Gauge

The PDS Control has an Air Pressure Gauge to monitor the Air Compressor. Under normal operating conditions the Air Pressure Gauge should show between 11 p.s.i. and 13 p.s.i. of air pressure.

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Figure 5. Air Pressure Gauge

Operation

IMPORTANT: COMPRESSOR SHOULD ONLY RUN 10 - 30 SECONDS EVERY 10 - 20 MINUTES. IF IT RUNS MORE OFTEN, FOLLOW THE TROUBLESHOOTING GUIDE, OTHERWISE COMPRESSOR FAILURE MAY OCCUR.

Set water column as recommended in the Chore-Time Nipple Watering Manual, part Number MW1186.

Keep door closed, the compressor draws outside air through the blue tube and will vent inside the box. This internal pressure will keep the box clean if the lid is closed.

The green indicator light comes on when the system is pressurized and the compressor is switched off. It is normal for the compressor to run for 10 - 30 seconds several times per hour. The light is off while the compressor is running.

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Figure 6. Adjusting the water column

Flushing The System

Refer to the Control Timer manual for specific programing details.

The eight stage model has an A and B program option. This allows you to program two separate flushing sequences. One for summer and one for winter or one for brooding and one for finishing.

When birds go out it is a good idea to turn the timer selector switch to the off position and turn the loader regulator knob so that the water column gauge reads 3". The unit can also be unplugged if the house is going to be empty for an extended period of time.

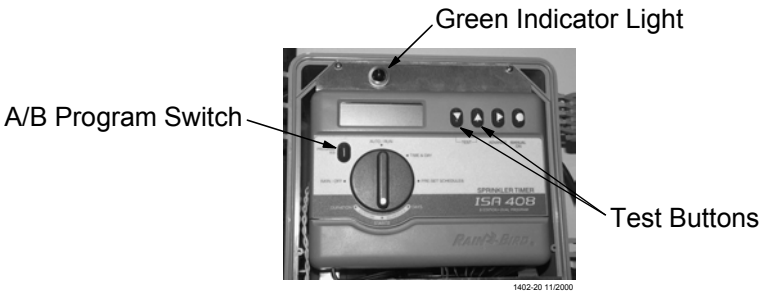


Figure 7. Operating the control

The Control can be programed to flush as often as three times per day to one time per week.

The flush cycle has to flush all lines, one at a time, unless a station time is set to "0".

The test feature flushes for two minutes per line and will flush all lines.

Flushing Recommendations

When to flush the system.

1. Start by flushing several times per flock. Watch the water coming out of the ends of the water lines. If the water is clean with little or no air you can flush less often. If the water is discolored and has sediment or large amounts of air you may want to flush more often until these problems disappear. These sediments could react with medications, vaccines, and electrolytes. It will also hamper the effects of disinfectants and cleaners (chlorine and acids).
2. After running any type of medication, disinfectant, electrolyte, vitamin, or vaccine, flush for two minutes per 100’ of water line.
3. Flush during hot periods of the day to stimulate birds to drink.

Maintenance

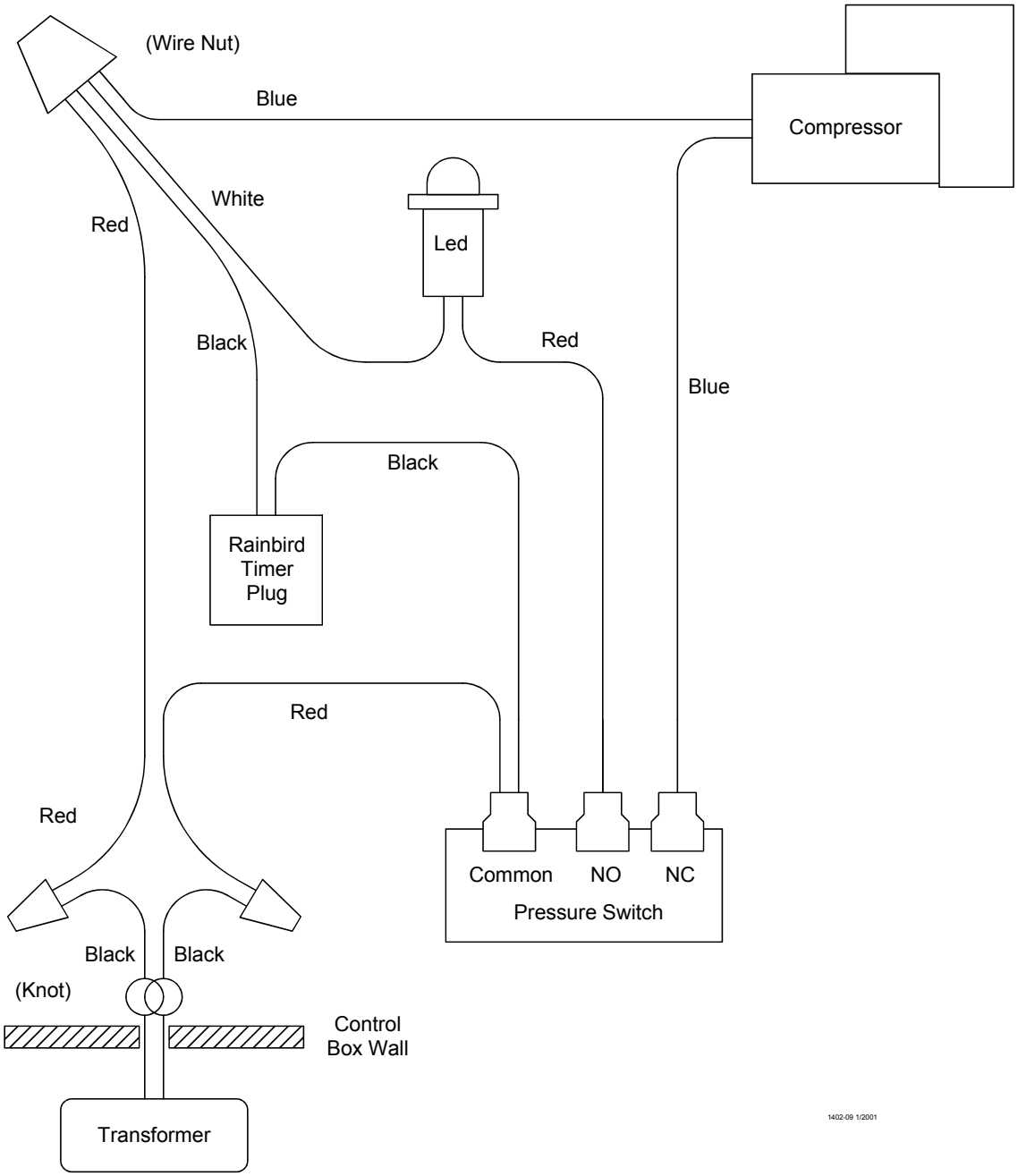
When the system is operating correctly the compressor should only run a small proportion of the time, approximately 3 minutes per hour. Flushing more often increases the compressor run time. If it runs more often, then check the system for possible leaks.

Clean the screen in the blue air inlet tube.

Keep the control box lid closed. The control is not capable of operating in a dusty environment. The loading regulator vents into the control box. When the control box is sealed the positive internal air pressure keeps dust out.

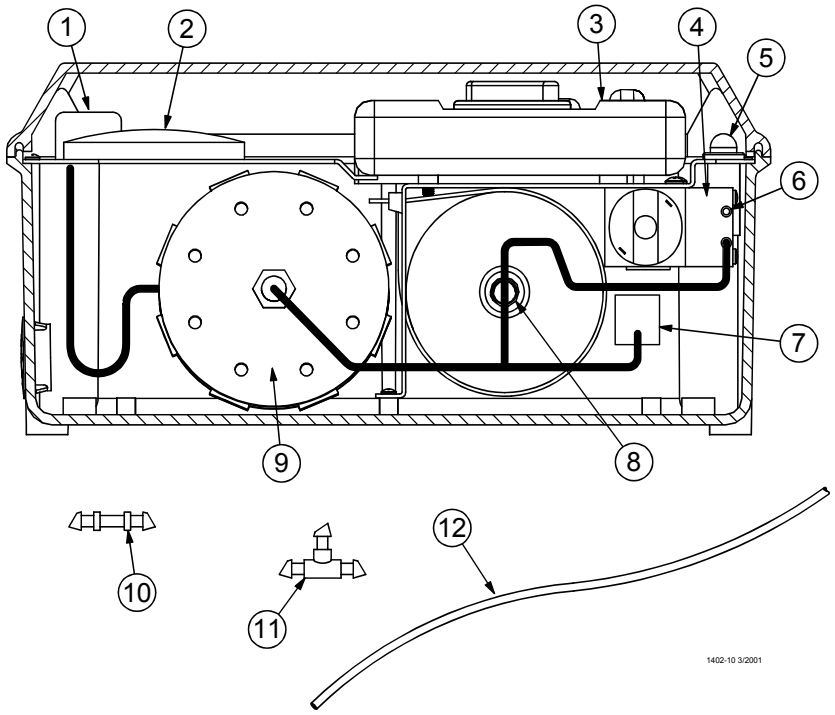
Wiring Diagram

Electric supply: 110 VAC 50 or 60 Hz.



Parts Listing

4 Station PDS Control — Part Number 43824
8 Station PDS Control — Part Number 43828



Item	Description	4 Station Part No.	8 Station Part No.
1	Air Pressure Gauge	46620	46620
2	Loading Pressure Gauge	44029	44029
3	Control Timer	43487-1	43487-2
4	Compressor	44027	44027
5	Green Indicator Light	44021	44021
6	Compressor Inlet	———	———
7	Pressure Switch	44028	44028
8	Compressor Supply Tank	43896	43896
9	Air Loader Supply	48837	48584
10	1/4" PDS Coupling	45893	45893
11	1/4" PDS Connector Tee	45894	45894
12	1/4" O.D. PDS Tubing (500 feet)	45895-500	45895-500

Troubleshooting

Problem	Correction
No water in Regulator Stand Tube	1. Water Off. 2. Defective or plugged Regulator. 3. Regulator plumbed backwards.
Water Column does not change on a Regulator	1. Stand Tube Cap plugged (not venting). 2. Air line to Regulator pinched.
Water Column does not change on all Regulators	Low air pressure or no air pressure, check output pressure. Possible reasons are a bad Compressor, bad Pressure Switch, bad Air Loading Unit, or a defective Nipple Regulator.
Water Column to top of Stand Tube	1. Regulator seat worn. 2. Stand Tube Cap plugged. 3. Air Loading Unit putting out too high pressure (defective solenoid).
Compressor runs more often than it should or does not shut off (compressor should run once every 10 - 20 minutes for about 15 seconds duration or the green light will not come on)	1. Inlet hose is plugged or pinched. 2. System air leak, pinch (fold and kink) off all Regulator Hose Leads at the Control. Watch the Air Pressure Gauge. If Compressor still runs, the air leak is inside the Control. First check the vent hole in the red cover of the Air Loading Unit. Put soapy water over the hole. A small amount of air coming out is normal (bubble should grow slowly over several seconds). If Compressor shuts off, release pinched Regulator Hose Leads one at a time until Compressor runs and stays running. That will be the hose with the leak. Next go to the Regulator attached to the Regulator Hose Lead and remove the hose covering the end with your finger. If the Control behaves normally, the leak is in the Regulator. If the Control continues to run, the leak is in the hose. 3. Defective Pressure Switch.
Regulators do not adjust to the same level	Water in some of the air lines. Drain hose and check for defective Regulator Diaphragm. This is done by pinching the hose off at the nipple line regulator and if there is no leak the water column will remain constant, if the regulator has a leak the water column will decrease.

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Made to work.
Built to last.

Contact your nearby Chore-Time distributor or representative for additional parts and information.

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