

# Expanded Backup Control

## Installation & Operator's Instruction Manual



CTB Inc. warrants each new Chore-Tronics® 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-Tronics® 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-Tronics® 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: **May 2004**

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## Thank You

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

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## Support Information

The Chore-Tronics® Expanded Backup Control is used to provide a backup system for an electronically controlled livestock or poultry facility. 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, installation, safety, operation, and parts listing information. The Table of Contents provides a convenient overview of the information in this manual. The Table of Contents also specifies which pages contain information for the sales personnel, installer, and consumer (end user).

## 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.

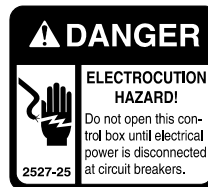
### Follow Safety Instructions

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.

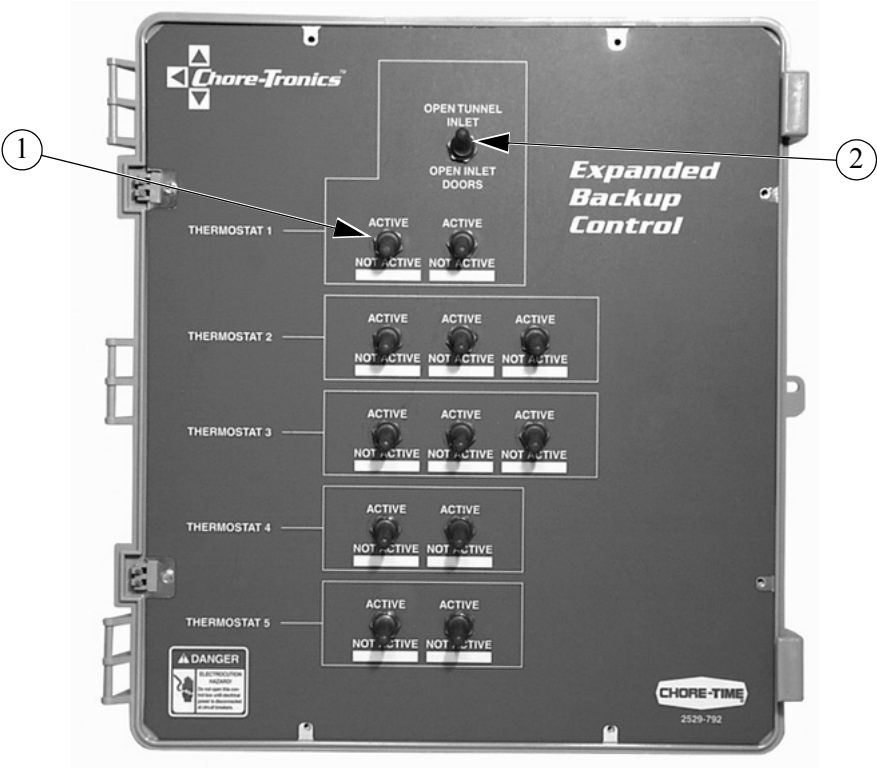
Ground all non-current carrying metal parts to guard against electrical shock.

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



The Chore-Tronics® Expanded Back-up Control contains relays that are pre-wired for use with Backup Thermostats (Not Supplied). These relays are sized to conduct the actual motor current in one line of the power to the Fans being backed up. Each Relay can have a maximum of two independent 1hp loads wired to it.

Each Output Relay is wired to a Toggle Switch (**Item 1, Figure 1**). The Toggle Switch allows the user to determine whether or not a fan or fans should turn on when the back up thermostat that the fan is connected to turns on. There is also a toggle switch that allows the user to determine if the Tunnel Curtain or the Sidewall Air Inlet Doors open when Thermostat 1 turns on (**Item 2, Figure 1**).



Item	Description
1	Toggle Switch (Fans)
2	Toggle Switch (Tunnel Curtain, Sidewall Inlets)

Figure 1. Toggle Switches

**Danger !**

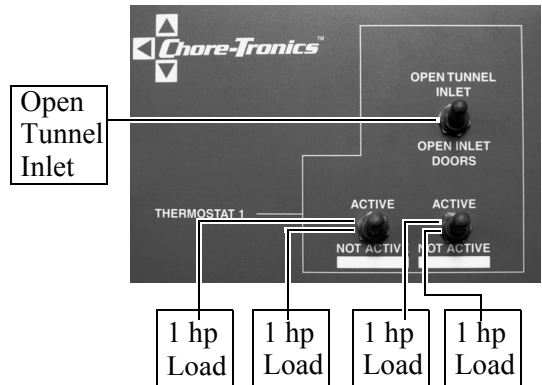
Never place all of the Toggle Switches associated with any one Thermostat in the "Not Active" position. This will result in no Fans or Heat Zones turning on when the Backup Thermostat turns on.

**Thermostat functions**

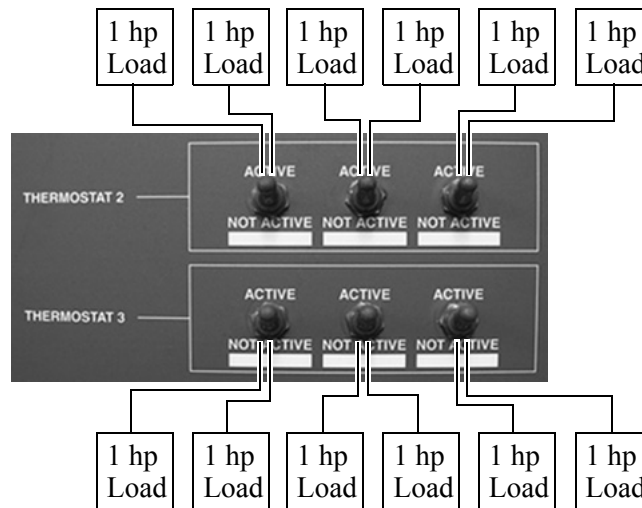
The Expanded Backup Control can have a maximum of 5 Backup Thermostats connected to it.

**Thermostat 1**

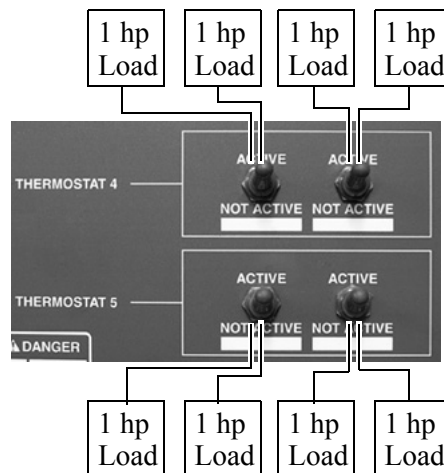
When Thermostat 1 turns on, or if the 24Vdc (Volts direct current) of the electronic climate control is lost, a maximum of four independent 1 hp loads will turn on. Also, depending on the position of the Toggle Switch, (Item 2, Figure 1), either the Tunnel Curtain or the Sidewall Inlet Doors will be given a continuous open signal while the close signal from the climate control will be blocked.

**Thermostats 2, and 3**

Thermostats 2 and 3 will **each** turn on up to six independent 1 hp loads.

**Thermostats 4, and 5**

Thermostats 4 and 5 are used to back up heat zones. Each Thermostat can turn on up to 4 one HP independent heat zones **each**.



Switch Stickers

Remove the appropriate Switch Stickers (Item 1 Figure 2) from the Sticker Sheet, and stick them on the front of the Control in the space provided to identify what Fans or Heat Zones are wired to each Relay.

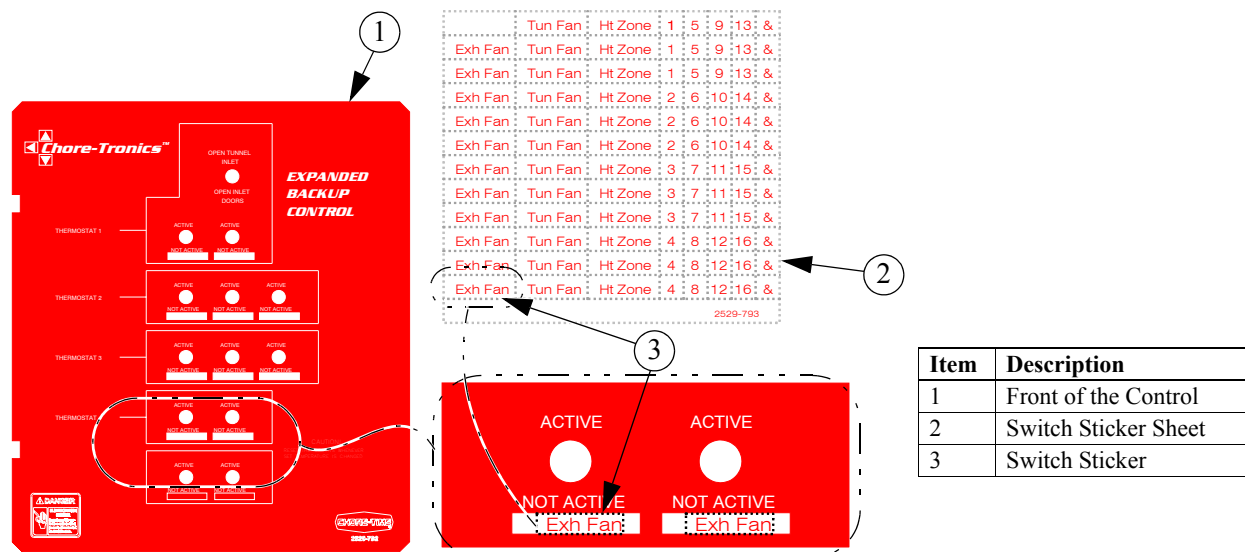


Figure 1. Switch Stickers

Thermostat Temperature Settings

As with all backup systems that depend on mechanical Thermostats, it is essential that the temperature settings of the Thermostats be adjusted close enough to the set temperature to protect the livestock or poultry. Every time the set temperature of the electronic control is changed, the Backup Thermostats must be adjusted appropriately.

Danger !

**Do not cross phase.** The other leg of the power to the motors goes directly to the motors.

The 24 VDC Input of this Back-up Box is meant to be connected to the 24 VDC output of the control being backed up.

# Thermostats & Inlet Wiring

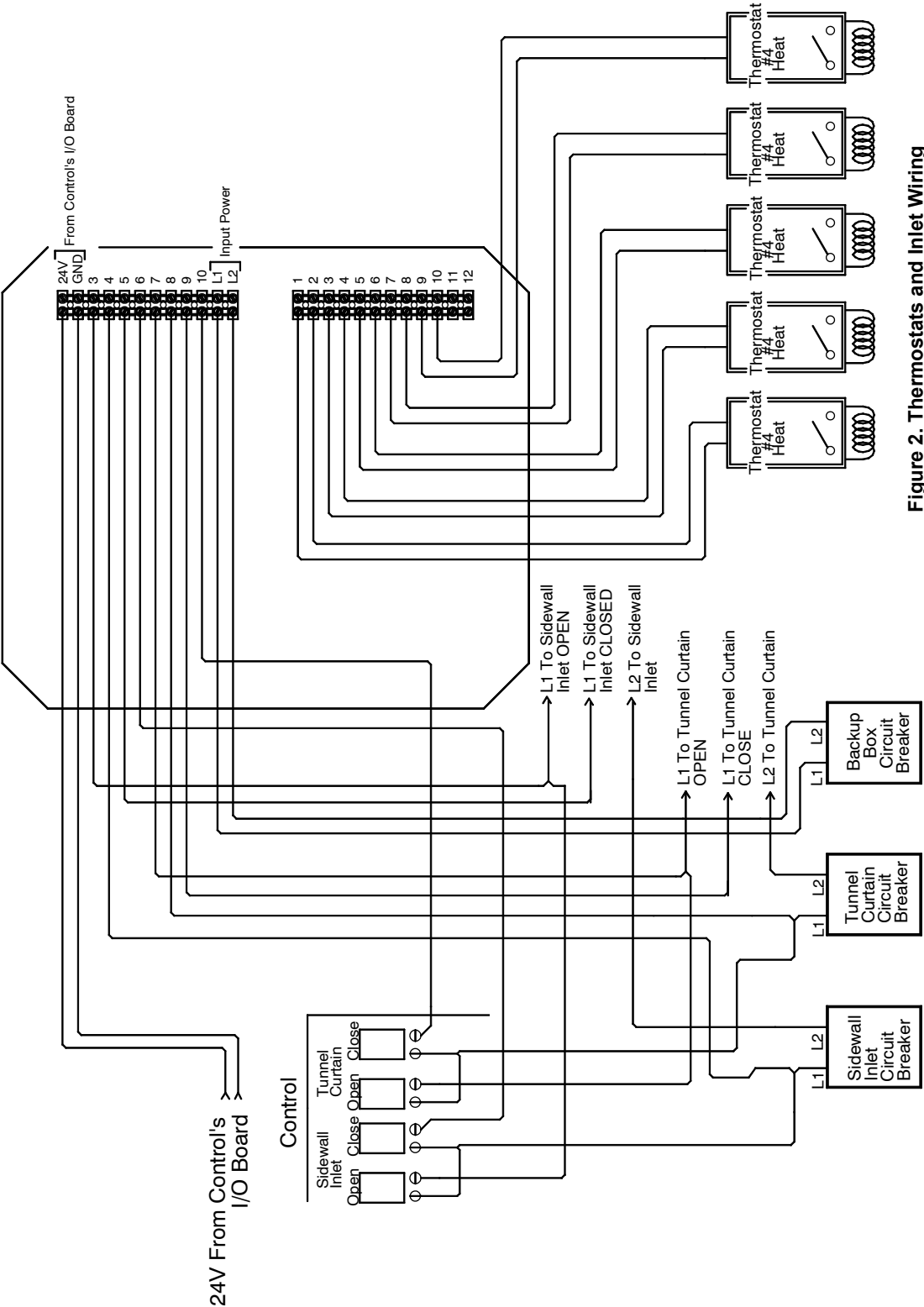


Figure 2. Thermostats and Inlet Wiring



## Relay Wiring

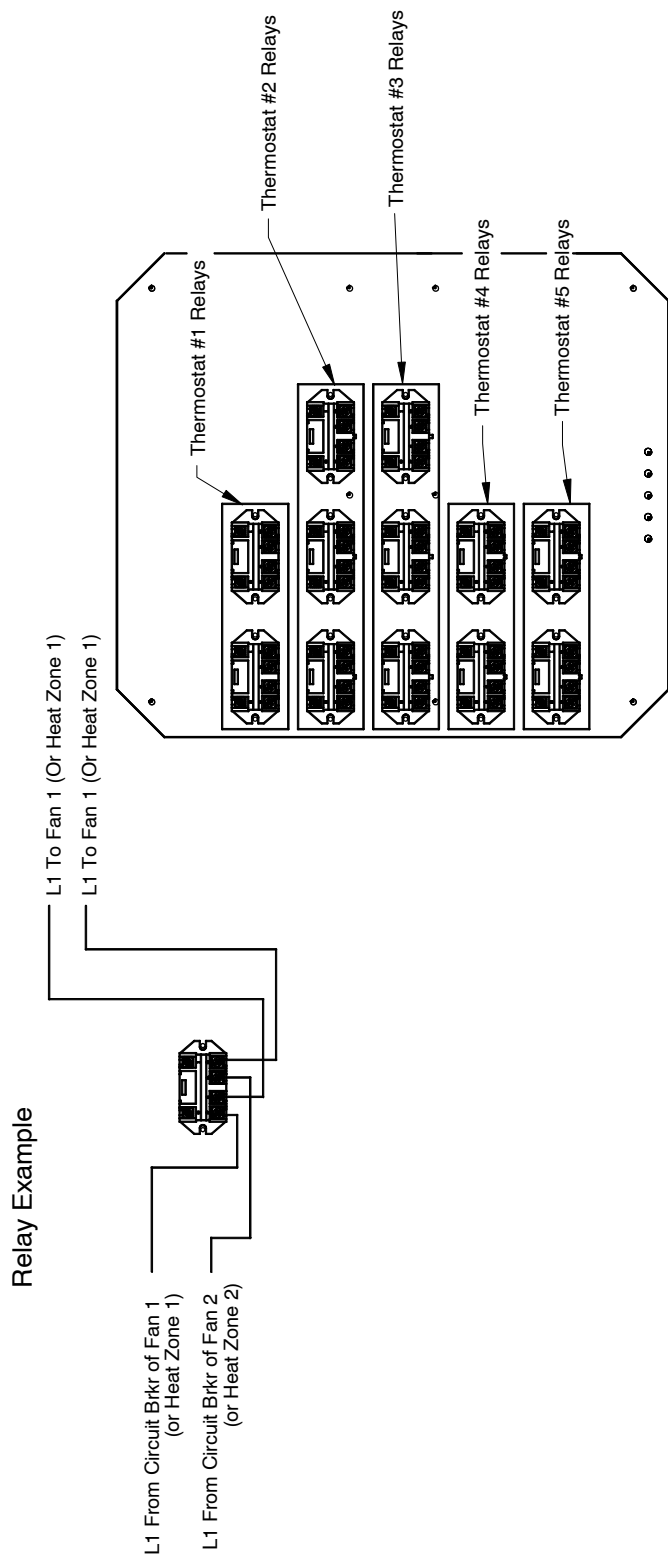


Figure 3. Relay Wiring

# Internal Wiring #1

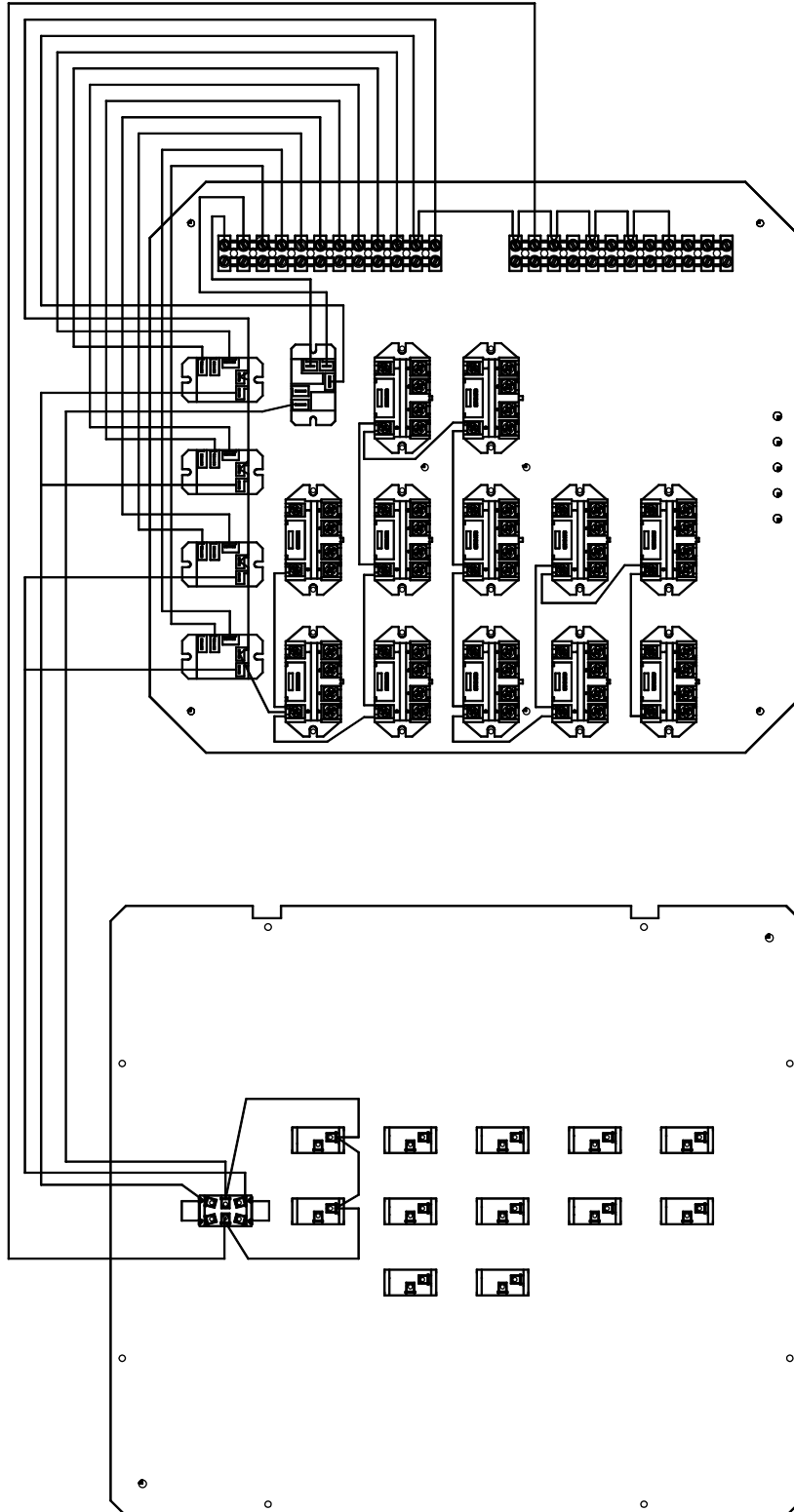


Figure 4. External Wiring #1

Internal Wiring #2 (Thermostat and Toggle Switch)

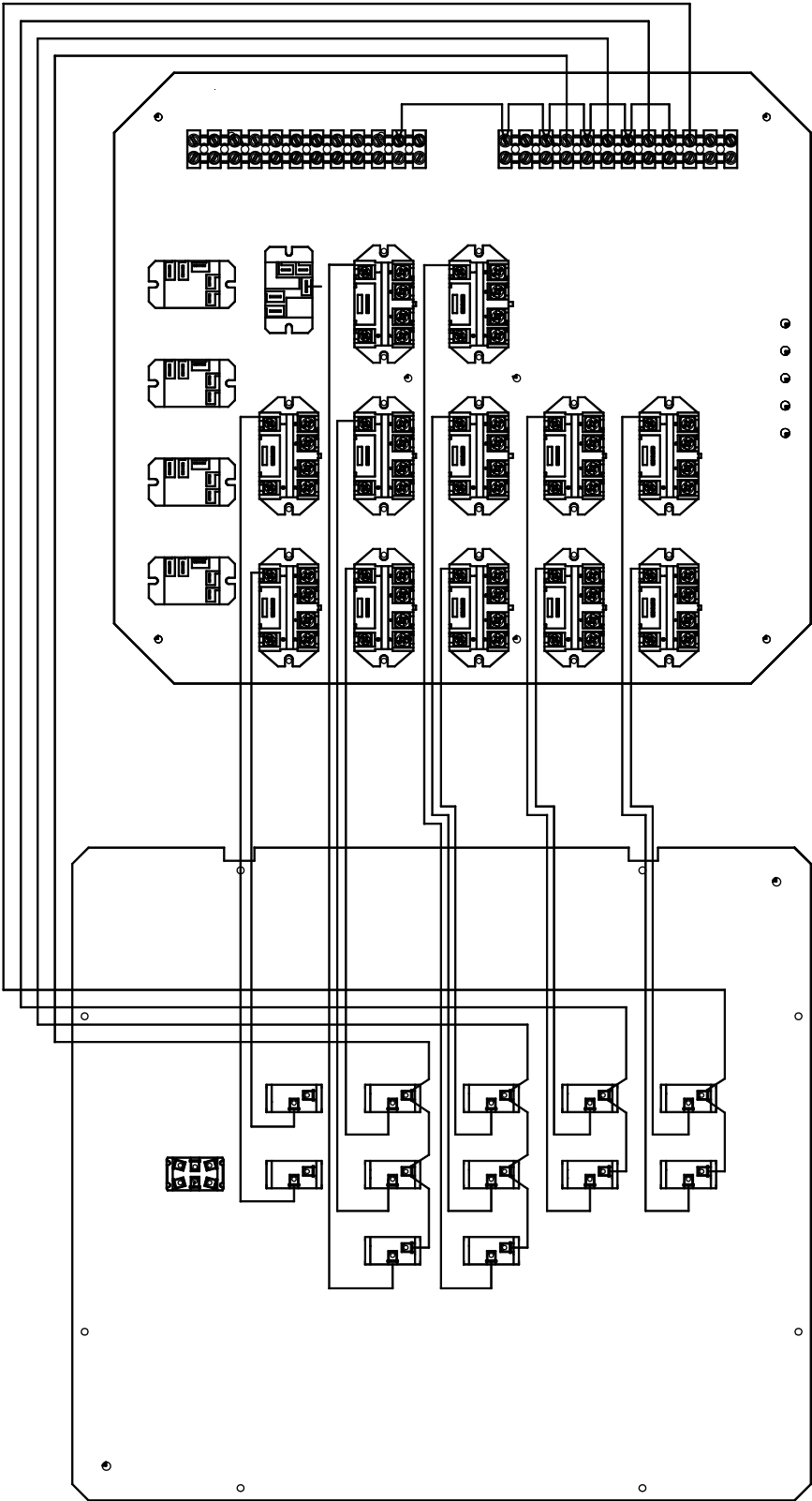


Figure 5. External Wiring #2

Part Numbers

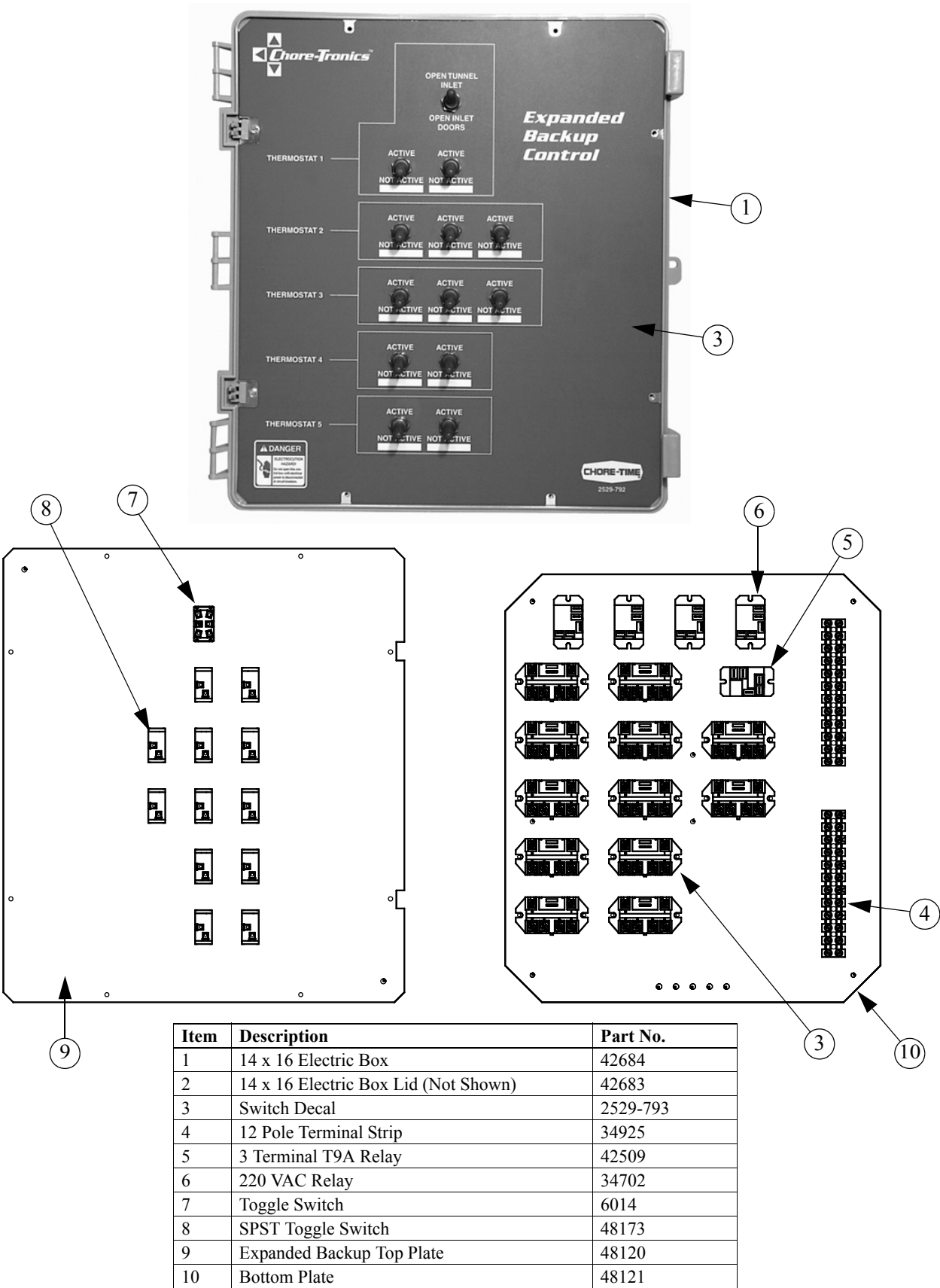
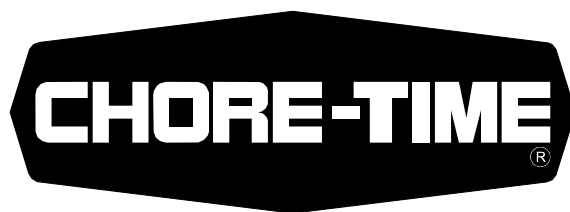


Figure 6. Part Numbers

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### Revisions to this Manual

Page No.	Description of Change
	New Book

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

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