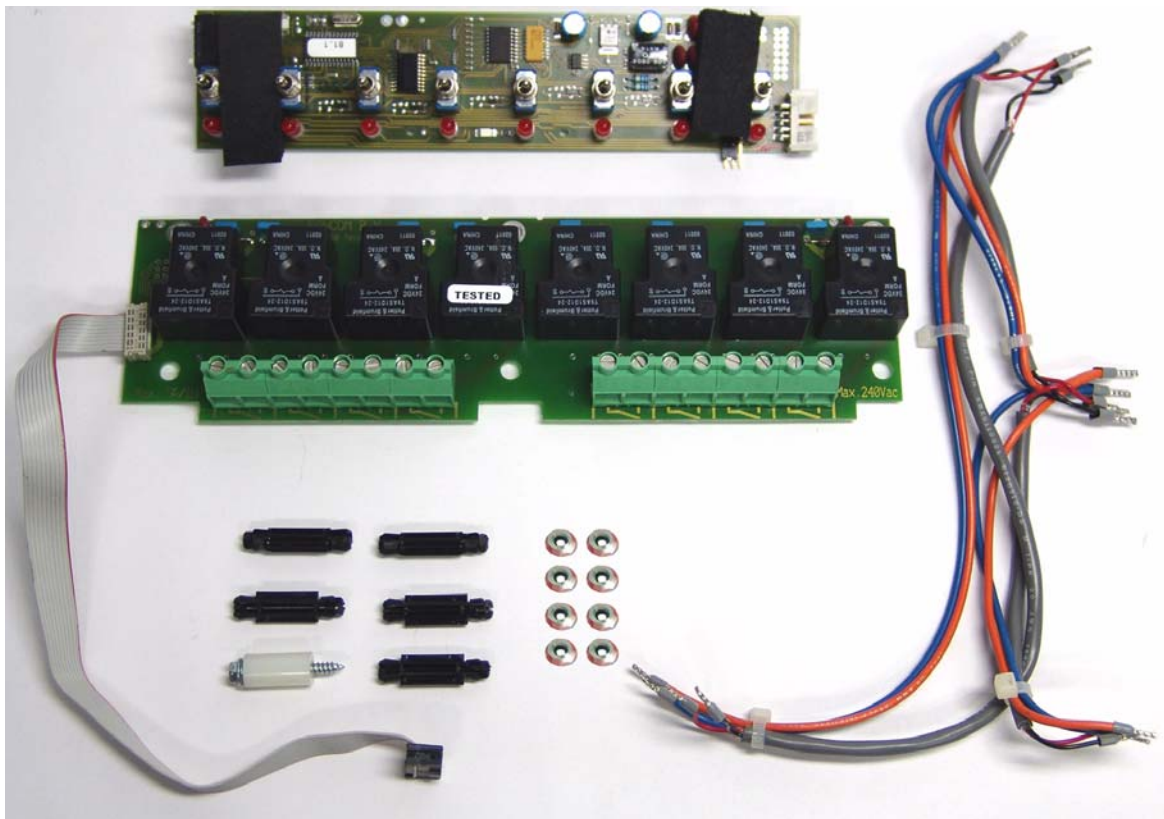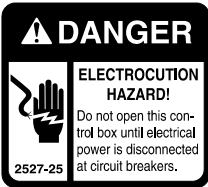# 32 to 40 Update Kit
Installation Instruction

General

The 32 to 40 Output Update Kit is used to expand a Control with 32 output relays to 40 output relays. 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.
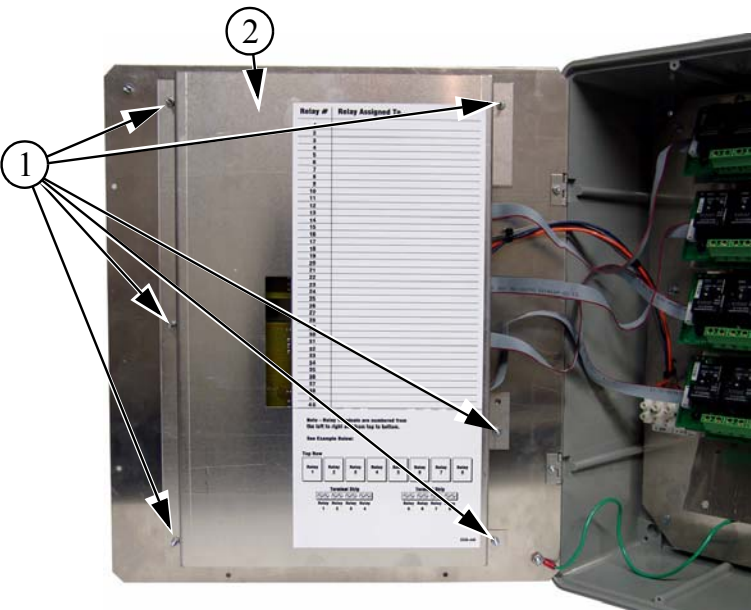
Safety

DANGER! **Electrical Hazard**

Disconnect electrical power to the Control and to ALL electrical devices connected to the Control's Relay Box before installing the update kit! Failure to disconnect power to equipment connected to Relay Box could result in personal injury.

⚠ **DANGER**

ELECTROCUTION HAZARD!
Do not open this control box until electrical power is disconnected at circuit breakers.
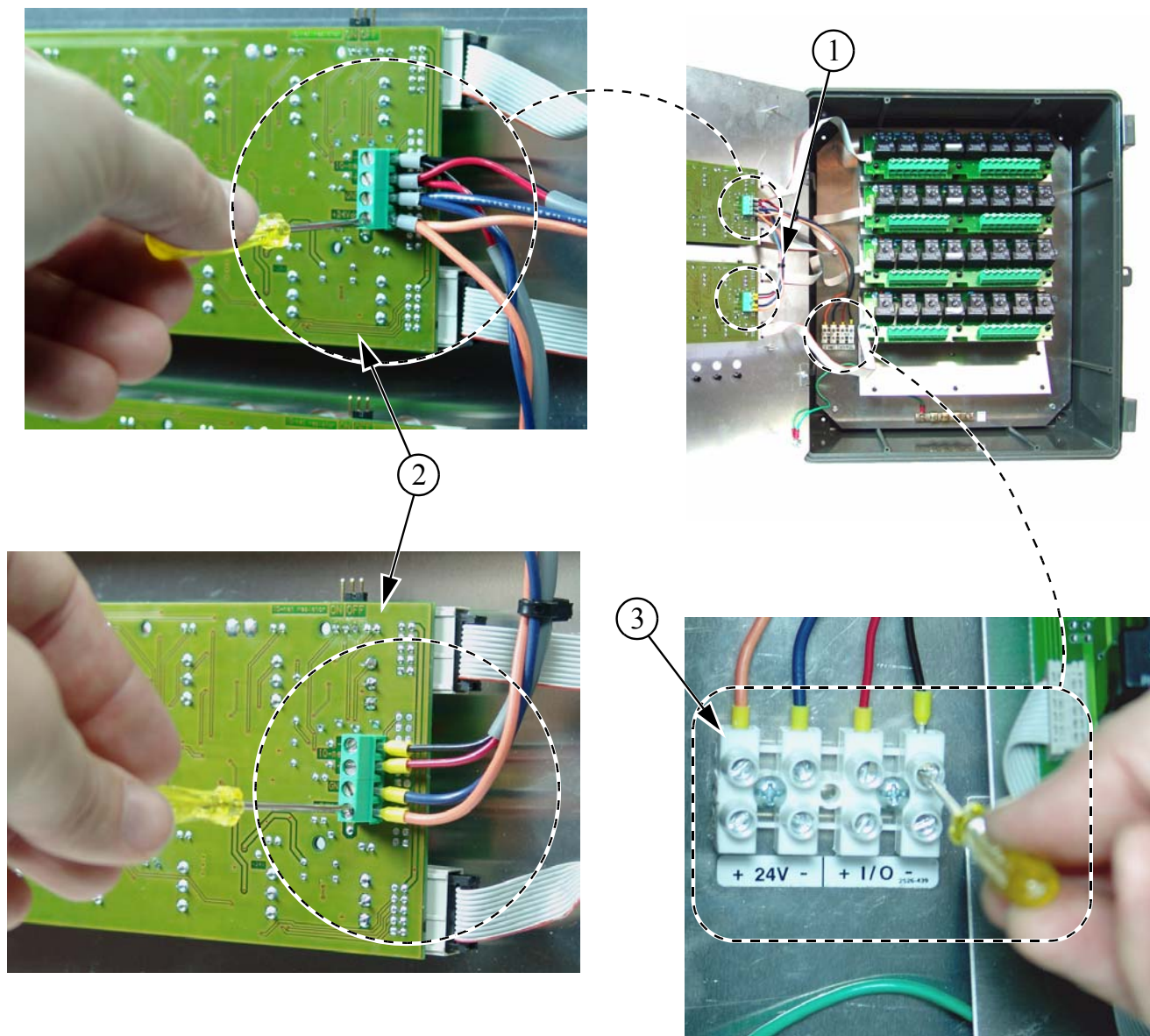
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Update Kit Installation

Open the Relay Box. To expose the two Manual Switch Boards, remove the 6 .4-40 HX Nuts **(Item 1, Figure 1)** holding on the Relay Box Cover Plate **(Item 2)**.

Item	Description
1	.4-40 HX Nut
2	Cover Plate

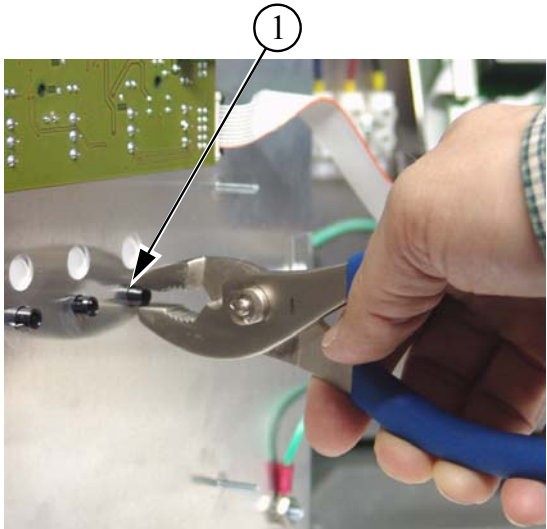**Figure 1. Removing Relay Box Cover Plate**

Disconnect the 4-Connection Wiring Harness **(Item 1, Figure 2)** by loosening the screws on both of the Manual Switch Boards **(Item 2)** and the Terminal Strip **(Item 3)**.

Item	Description
1	4-Connection Wiring Harness
2	Manual Switch Board
3	Terminal Strip

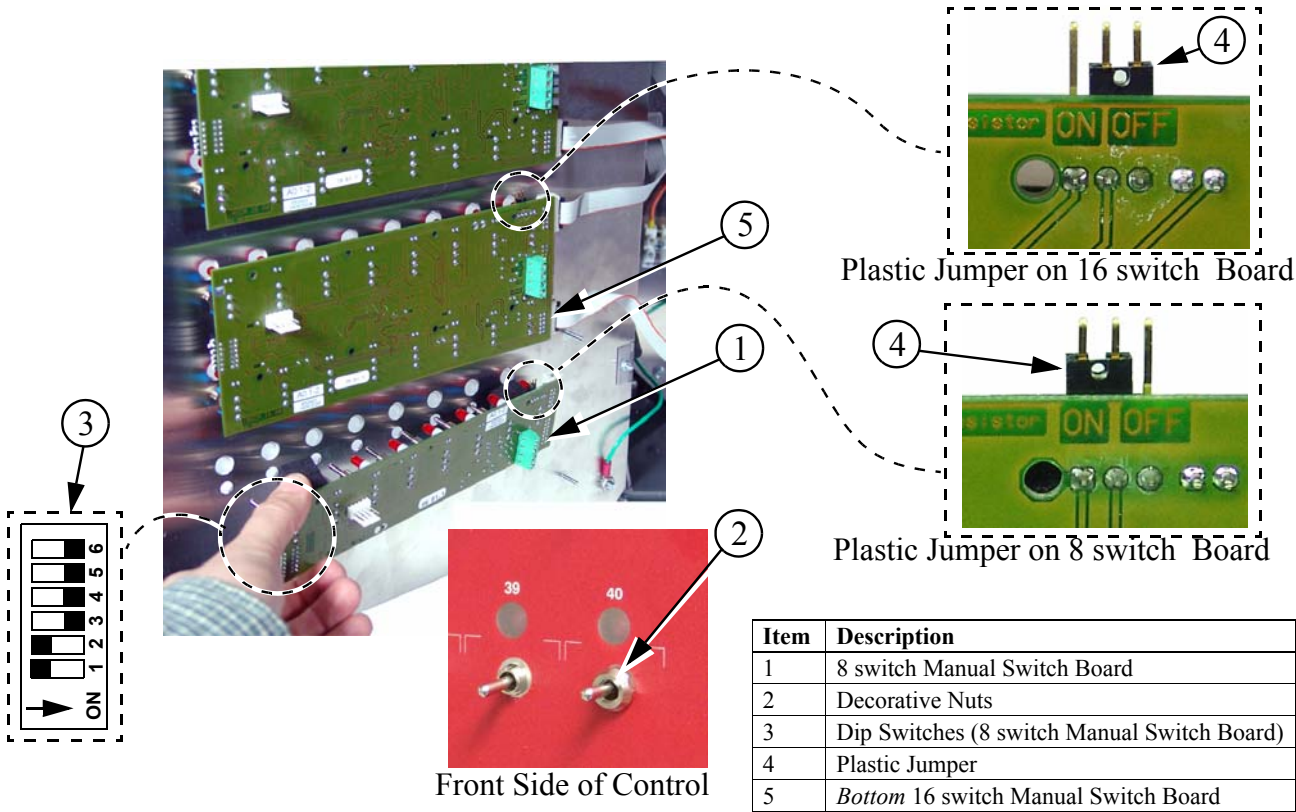**Figure 2. Removing the 4-Connection Wiring Harness**

Remove the eight Black Hole Plugs **(Item 1, Figure 3)** from the Relay Box Top Plate by compressing the Hole Plug catches toward the center of the Plug and pushing the Plug through the hole using pliers.

Item	Description
1	Black Hole Plug

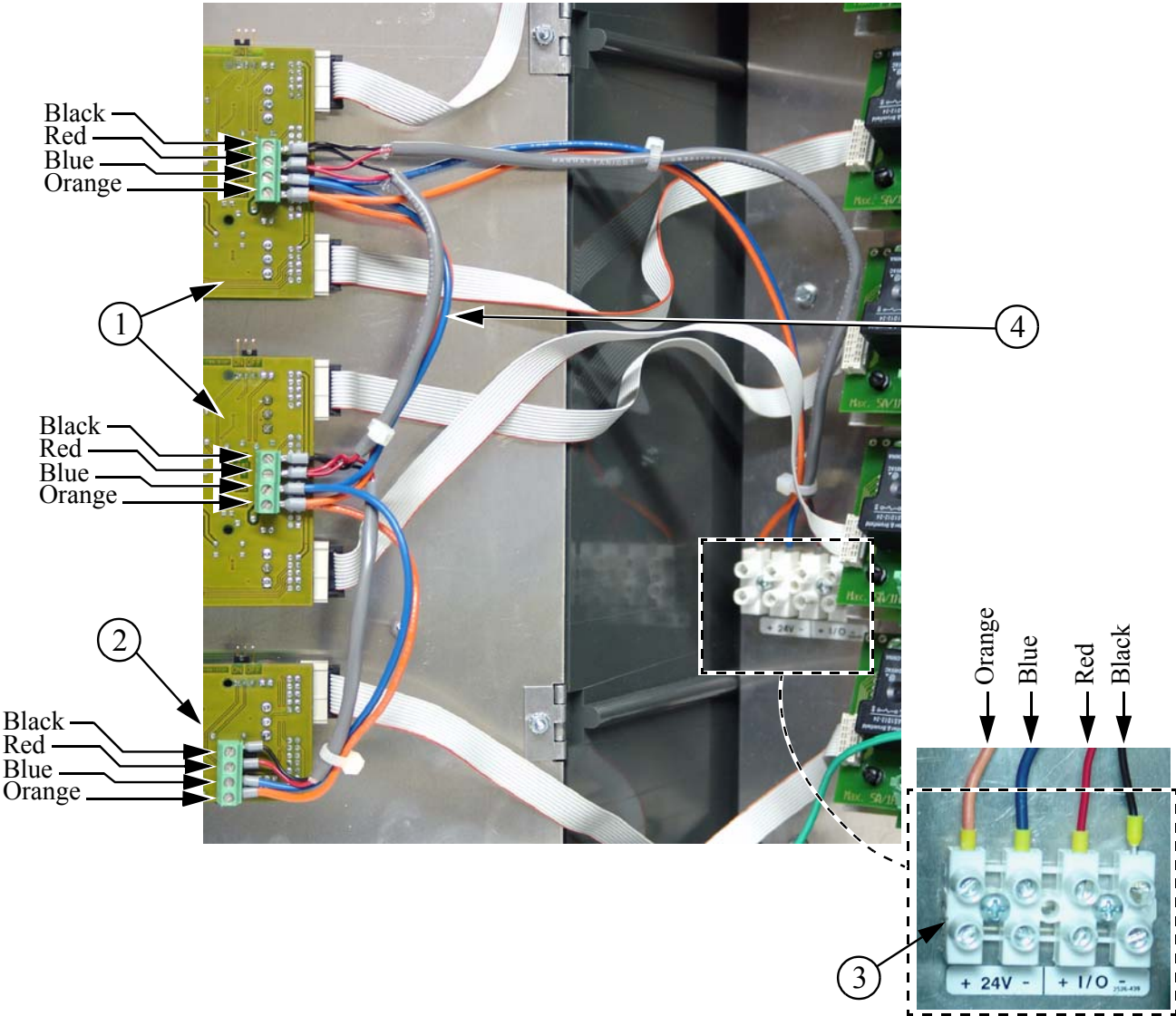**Figure 3. Removing the Black Hole Plugs**

Line up the switches on the 8 switch Manual Switch Board provided **(Item 1, Figure 4)** with the holes in the Top Plate; Slide the 8 switch Manual Switch Board into place and secure with (8) Decorative Nuts **(Item 2)** provided. Make sure the DIP switches **(Item 3)** of the 8 switch Manual Switch Board are set as shown in **Figure 4** below. Set the Plastic Jumper **(Item 4)** on the *bottom* 16 Manual Switch Board **(Item 5)** to the "Off" position. Set the Plastic Jumper on the 8 switch Manual Switch board to "On"

Plastic Jumper on 16 switch Board

Plastic Jumper on 8 switch Board

Front Side of Control

Item	Description
1	8 switch Manual Switch Board
2	Decorative Nuts
3	Dip Switches (8 switch Manual Switch Board)
4	Plastic Jumper
5	*Bottom* 16 switch Manual Switch Board

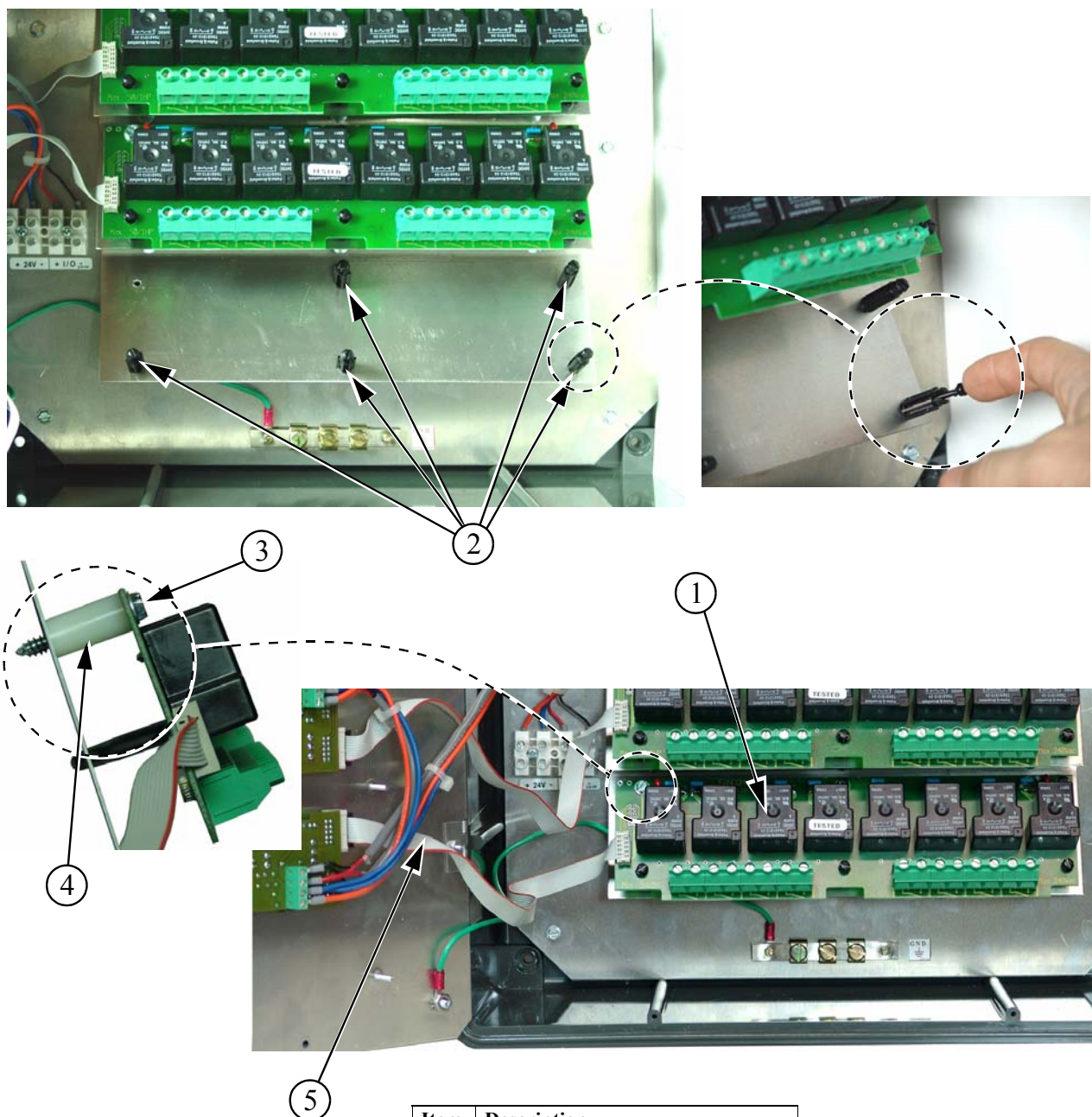**Figure 4. Installing the 8 switch Manual Switch Board**

Attach the 4-Connection Wiring Harness **(Item 4, Figure 5)**, *provided with the update kit,* to the two existing 16 switch Manual Switch Boards **(Item 1)**, the new 8 switch Manual Switch Board **(Item 2)**, and the Terminal Strip **(Item 3)**. Make sure that each wire is attached in the correct position **(See Figure 5 below)**.

Item	Description
1	16 switch Manual Switch Board
2	8 switch Manual Switch Board
3	Terminal Strip
4	4-Connection Wiring Harness

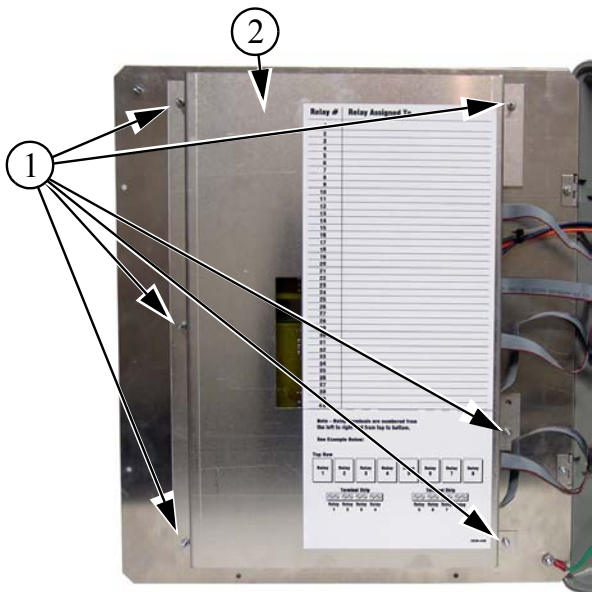**Figure 5. Installing new 4-Connection Wiring Harness**

Mount the (8) switch Relay Module Board **(Item 1, Figure 6)**, *supplied with the kit,* using the 5-Nylatch standoffs **(Item 2),** (1) Mounting Screw **(Item 3),** and the Nylon Spacer provided. Attach each Nylatch standoff to the Mounting Plate by inserting the Standoff into the mounting hole and pressing on the screw head top until it snaps into place **(See Figure below)** Press the (8) switch Relay Module on to the Nylatch Standoffs and secure by turning the (5) Standoff screws ¼ turn. Use the Mounting Screw and a Nylon Spacer **(Items 3 and 4)** *provided* to secure the Board in the upper left mounting corner **as shown**. Attach the Flat Cable **(Item 5)** of the Relay Module to the connector of the Manual Switch Board.

Item	Description
1	8 switch Relay Module Board
2	Nylatch Standoff
3	Mounting Screw
4	Nylon Spacer
5	Flat Cable

Figure 6. Mounting the (8) Switch Relay Module Board

Place the Cover Plate **(Item 2, Figure 7)** back on to the Top Plate of the Relay Box and fasten on with 6 .4-40 HX Nuts. The Relay Box is now ready to have devices connected to the new Relay Module.

Item	Description
1	.4-40 HX Nut
2	Cover Plate

Figure 7. Re-installing the Cover Plate

Programming the number of Output Relays

Go to the Setup-General screen. In the General Tab, go the number of relays line, and change the number of Relays from 32 to 40. The Control is now ready to operate 40 Output Relays.

Troubleshooting

	Possible Cause	Possible Solution
IO Net Alarm appears after installing update kit and increasing the number of available relays	A.) Manual switch boards wired incorrectly or poor connection. B.) DIP switch settings on one or more of the manual switch boards is incorrect. C.) Defective manual switch board	A.) Check wiring of manual switch boards in the relay box. Correct or repair if necessary. B.) Check DIP switch settings of all manual switch boards. Correct if necessary. Turn power off then on to the control if DIP switch settings are changed. C.) Replace defective board.

Kit Part Numbers

Part No.	Qty.	Description
42530	5	Nylatch Standoff
43425	1	#8-18x1.25 HXWH Screw
46103	1	Nylon Spacer .75"
49646	1	RM 8 Board
42803	8	Decorative Nut
49672	1	IMSCM 8 Board
49747	1	Model 40 Wiring Harness

Warranty

CTB Inc. warrants each new 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.

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Effective: **March 2005**