



## ICC Alpha/Numeric 2Hx4W Timer Bar Retrofit Kit Installation Manual



This manual will guide a person having minimal technical knowledge on how to change ICC Red Light Green Light Timer Bars and controls with new Alpha/Numeric Timers.

**Please read this entire manual before attempting to retrofit your new bars.**

**WARNING!!** PHU's operate using HIGH VOLTAGE (220VAC). UNPLUG each PHU from the outlet prior to attempting any of these procedures.

There are four (4) different types of retrofit kits available, below is a brief description. New Front/Back connectors and cables have been supplied in case the old ones have been damaged by heat or grease. There is a detailed parts breakdown on the following page.

### Kit Part#'s/Description

- |           |  |
|-----------|--|
| 990264-MP | Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Primary PHU<br>2 Timer bars, Internal Black Box Control, Cables, Connectors      |
| 990264-MS | Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Secondary PHU<br>2 Timer bars, Internal Power Supply Box, Cables, Connectors     |
| 990264-SP | Alpha/Numeric Retrofit Kit, 2x4 Duke Specialty-Primary PHU<br>1 Timer bar, Internal Black Box Control, Cables, Connectors  |
| 990264-SS | Alpha/Numeric Retrofit Kit, 2x4 Duke Specialty-Secondary PHU<br>1 Timer bar, Internal Power Supply Box, Cables, Connectors |

<b>Main Board</b>	<b>Primary PHU</b>	<b>A/N Retrofit Kit, 2x4 Duke Main-Primary PHU</b>
	<b>990264-MP</b>	
2	980264-2x4#	A/N Timer Bar, Duxe 2x4
1	980195-60#	A/N Black Box, Duke 2x4
1	802008	FB Connector
1	801195#	Power connector, Internal PHU
1	681-6X6-12	12" Data Cable
	896195-60-INST	A/N Installation Guide
<b>Main Board</b>	<b>Secondary PHU</b>	<b>A/N Retrofit Kit, 2x4 Duke Main-Secondary PHU</b>
	<b>990264-MS</b>	
2	980264-2x4#	A/N Timer Bar, Duxe 2x4
1	980680#	A/N Power Supply Box
1	802008	FB Connector
1	801195#	Power connector, Internal PHU
1	681-6X6-96	96" Data Cable
	896195-60-INST	A/N Installation Guide
<b>Specialty Board</b>	<b>Primary PHU</b>	<b>A/N Retrofit Kit, 2x4 Duke Specialty-Primary PHU</b>
	<b>990264-SP</b>	
1	980264-2x4#	A/N Timer Bar, Duxe 2x4
1	980195-60#	A/N Black Box, Duke 2x4
1	802008	FB Connector
1	801195#	Power connector, Internal PHU
1	681-6X6-12	12" Data Cable
	896195-60-INST	A/N Installation Guide
<b>Specialty Board</b>	<b>Secondary PHU</b>	<b>A/N Retrofit Kit, 2x4 Duke Specialty-Secondary PHU</b>
	<b>990264-SS</b>	
1	980264-2x4#	A/N Timer Bar, Duxe 2x4
1	980680#	A/N Power Supply Box
1	802008	FB Connector
1	801195#	Power connector, Internal PHU
1	681-6X6-96	96" Data Cable
	896195-60-INST	A/N Installation Guide

## 990264-MP Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Primary PHU

### Tools needed:

Philips Head Screwdriver





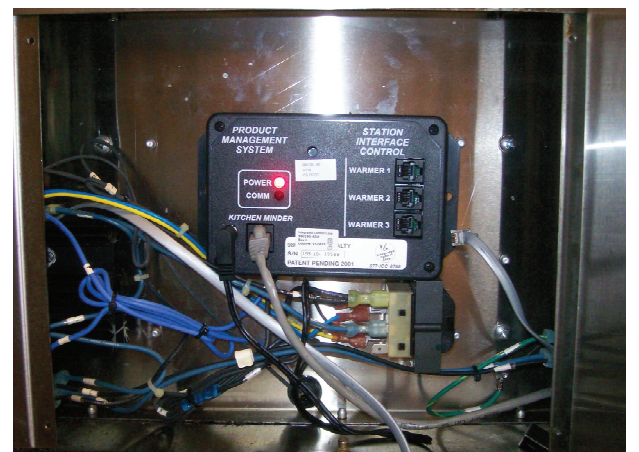
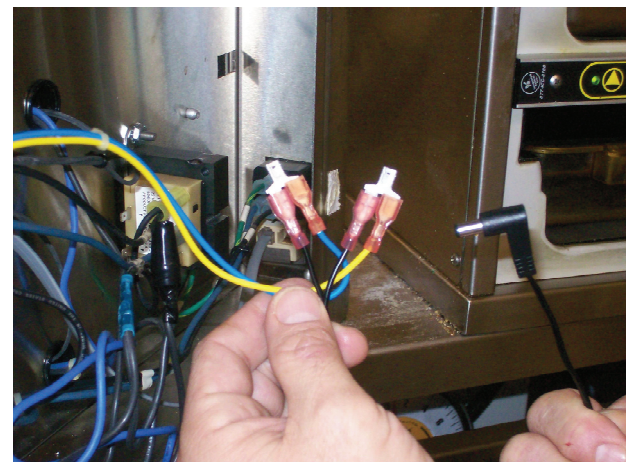
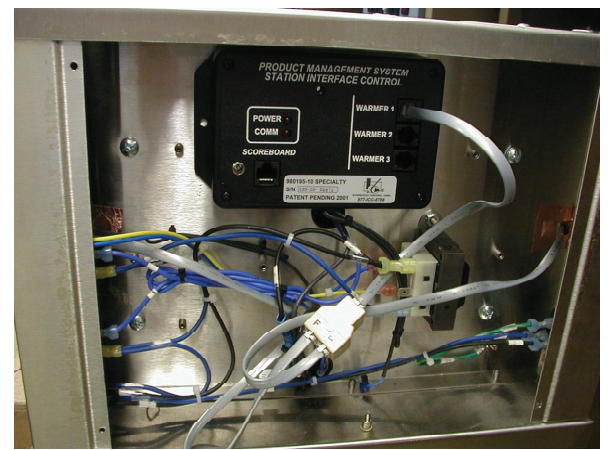
## 990264-MP Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Primary PHU (continued)

### Existing Black Box Removal

1. **WARNING; HIGH VOLTAGE:** Double check that the PHU is unplugged from the power source.
2. Locate the Black Box inside PHU.
3. Unscrew 2 hardware nuts from the side tabs of the Black Box.
4. Do not remove any cables from the Black Box at this time.
5. Slide the Black Box off of mounting posts.
6. You may use this as a spare Black Box for Red Light Green Light 2x4 Timer Bars, but NOT Alpha/Numeric Timer Bars

### Alpha/Numeric Black Box Installation

1. Slide the Alpha/Numeric Black Box PN 980195-60# onto the mounting posts.
2. Install 2 hardware nuts onto the Black Box mounting posts.
3. One at a time, except for the FB connector assembly, transfer the cables from the old Black Box to the respective location on the replacement Black Box.
4. Unplug the old FB connector assembly and discard it.
5. Plug the new FB connector assembly attached to the new Timer bars in to the same port that the old FB connector assembly was plugged in to.
6. Locate the Yellow and Blue wires attached to the transformer near the Black box and note the location of where each wire is plugged in.
7. Use part #801195, "Power Connector, Internal PHU" to plug the Yellow and Blue wires in to the Silver T-connectors of the 801195 wire assembly next to the existing Black wire.
8. Plug the free end of the T-connector back in to the transformer where the Yellow and Blue wires were
  - a) This is AC power so if you reverse the Yellow and blue locations, it is OK
9. Plug the other end of 801195 in to the power connector of the new Black box
10. Replace the PHU side panel and install 4 screws.
11. Plug in the PHU power cord.
12. Power up PHU and test the Timer bars for proper operation



## 990264-MS Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Secondary PHU

### Tools needed:

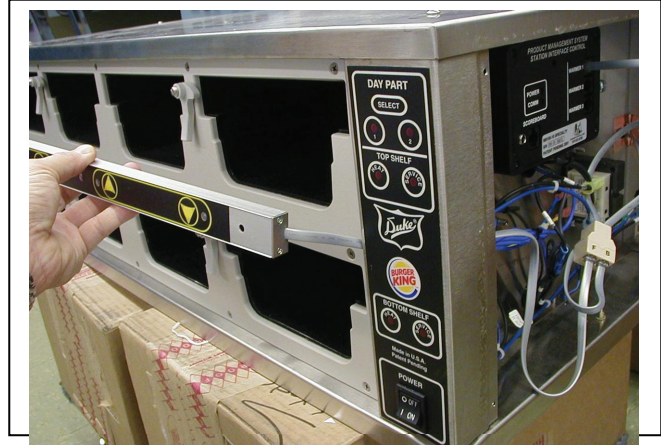
Philips Head Screwdriver  
Wire cutters

### Existing Timer Bar Removal

1. Locate the Main Board Secondary PHU
  - a) This PHU has a Front and Back Timer Bar without an internal Black box.
2. Unplug the power cord going to the PHU.  
**WARNING:** High Voltage is present inside the PHU cavity; not performing this step could result in serious injury or death.
3. Stand at the front of the PHU (the side with the power switch).
4. Remove the PHU Side Panel by unscrewing 4 screws.
5. Follow the flat gray cable from Front Timer Bar to the FB (Front/Back) "T" connector inside the PHU.
6. Using wire cutters, clip any cable ties holding the flat telephone type wires together.
7. Disconnect the gray cable from the FB connector.
8. Remove 2 screws from the Front of the Timer Bar.
9. Pull the Timer Bar away from the PHU and carefully pull cable through its hole as not to break the connector clip.
10. Repeat steps#5-8 for the Back Timer Bar

### Alpha/Numeric Timer Bar Installation

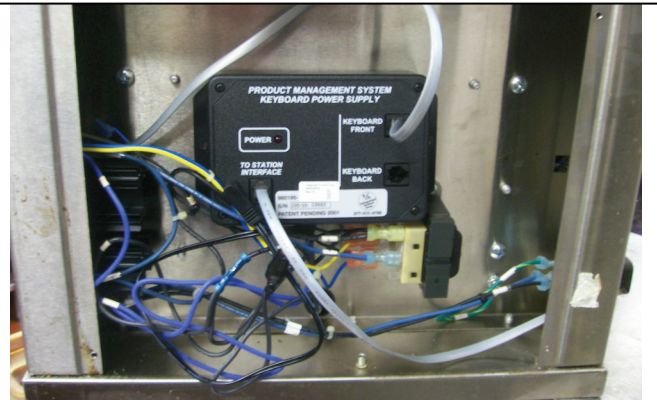
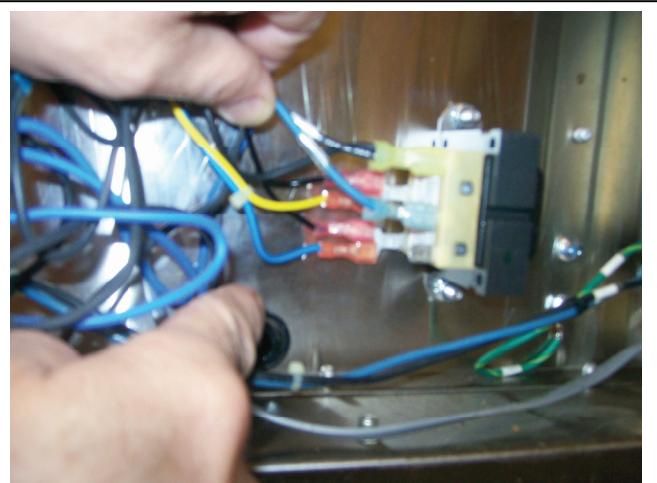
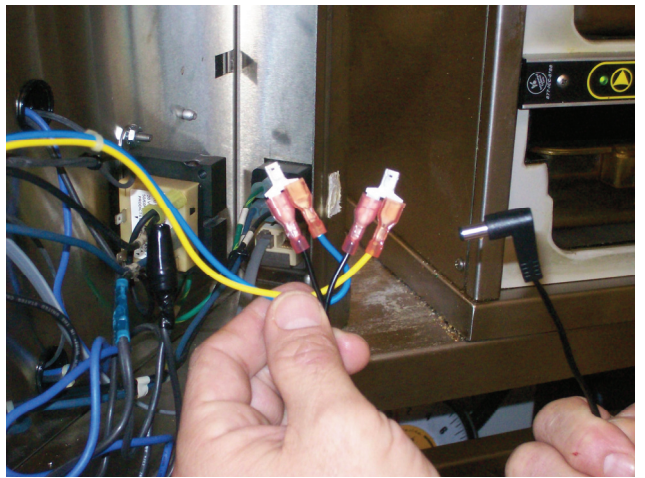
1. Hold a Timer Bar (Front and Back Bars are interchangeable) up to the front of the PHU and carefully feed the flat gray cable through the hole.
2. Mount the timer keyboard to the PHU by using the 2 screws previously removed
3. Repeat steps #1-2 for the Back Timer bar.
4. From the back of the PHU, remove the Phillips head screw holding the FB connector in place
  - a) Remove the FB connector and discard.
  - b) Fit the new FB connector in to the same spot as the old one and secure by screwing in to place.
5. Do not plug the Timer bars in to the Front Back Connector
6. Plug the new 12" Data Cable to either the F or B port of the new new FB Connector. You will plug this cable in to the new Power Supply Box in the next section
7. Leave the side panel off and proceed to the next section.



**990264-MS Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Secondary PHU (continued)**

**Power Supply Black Box Installation**

1. **WARNING; HIGH VOLTAGE:** Double check that the PHU is unplugged from the power source.
2. Locate Part# 980680# A/N Power Supply Box from your new kit.
3. Plug the new 12" data cable installed in the new FB connector in the last section in to the "TO STATION INTERFACE" port on the A/N Power Supply Box.
4. Plug the Front Timer Bar cable in to the "KEYBOARD FRONT" port on the A/N Power Supply Box.
5. Plug the Back Timer Bar cable in to the "KEYBOARD BACK" port on the A/N Power Supply Box.
6. Locate the Yellow and Blue wires attached to the PHU transformer and note the location of where each wire is plugged in.
7. Use part #801195," Power Connector, Internal PHU" to plug the Yellow and Blue wires in to the Silver T-connectors of the 801195 wire assembly next to the existing Black wire.
8. Plug the free ends of each T-connector back in to the transformer where the Yellow and Blue wires were
  - a) This is AC power so if you reverse the Yellow and Blue locations, it is OK
9. Plug the other end of 801195 in to the power connector of the new Black box
10. On the back of the A/N Power Supply Box, remove the plastic protector from the Velcro.
11. Adhere the A/N Power Supply to the inside panel of the PHU, (see pic.)
12. Replace the PHU side panel and install 4 screws.
13. Plug in the PHU power cord.
14. Power up PHU and test the Timer bars for proper operation



For the Specialty Board PHU's, the process is the same as the Main PHU except there is only 1 Timer Bar on each PHU to change.

For your Specialty Primary PHU, use kit:

990264-SP Alpha/Numeric Retrofit Kit, 2x4 Duke Specialty-Primary PHU  
1 Timer bar, Internal Black Box Control, Cables, Connectors

Refer to the procedure above:

**990264-MP Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Primary PHU**

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For your Specialty Secondary PHU, use kit:

990264-SS Alpha/Numeric Retrofit Kit, 2x4 Duke Specialty-Secondary PHU  
1 Timer bar, Internal Power Supply Box, Cables, Connectors

Refer to the procedure above:

**990264-MS Alpha/Numeric Retrofit Kit, 2x4 Duke Main-Secondary PHU**

# Alpha/Numeric 2x4 Timer Wiring Diagram

