

OWNER'S MANUAL

MODEL 161785 SERIES – TIMER, PROGRAMMING GUIDE AND OPERATION MODEL 166030LT – TIMER, PROGRAMMING GUIDE AND OPERATION



Supplier Name: **MARSHALL AIR SYSTEMS, INC.**
Address: 419 Peachtree Drive South
Charlotte, NC 28217

Model #: _____
Serial #: _____
Date Received: _____
Date Installed: _____
Telephone #: 704-525-6230
Fax #: 704-525-6229
Service Referral #: 800-722-3474
Local Service: _____
Local Service #: _____

161785LT shown

PRODUCT DESCRIPTION

The RR5 Fry Dump Station timer is specially designed to maximize food monitoring. The 10 independent countdown timers, one for each section of the RR5 station, quickly inform the user of the food product status in all 10 sections of the dump station. It is also designed to be easily configured for a dump left or a dump right station.

Each timer features a pre-alert alarm to let the user know that the associated food product holding time is about to expire. Both, the holding time and the pre-alert alarm can be independently programmed for each timer.

The timer also has its own ON/OFF switch to allow the user to turn the timers OFF leaving the dump station heaters and lights ON.

Model 161785 and 166030 are electrically identical except that 166030 is 6 inches shorter than 161785.

GENERAL SPECIFICATIONS

Voltage: 12VDC (120VAC to 12VDC power supply included)
Amps: 1 Amps @120
Rocker ON/OFF switch
Time range: 00:30 to 99:59 (MM:SS)
10 independent count down timers

Can be configured for a dump Left or a dump Right Station

"LT" suffix means dump left, fryers on the right
"RT" suffix means dump right, fryers on the left

FOR YOUR SAFETY

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS OR LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, OR MAINTENANCE CAN CAUSE PROPERTY DAMAGE, INJURY OR DEATH. READ THE INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR SERVICING THIS EQUIPMENT.

KEEP THIS MANUAL IN A SAFE PLACE AND RETAIN FOR FUTURE USE.

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TIMER LAYOUT

The Fry Dump Station timer can be configured for a dump left or a dump right station (see "TIMER CONFIGURATION" page 6 for instructions on how to change the configuration). Each section of the station has its own independent timer. The two configurations with their associated timers are shown in figure 1A and figure 1B. There is also an Owner's Manual for the Dump Station itself that can be used for further details.

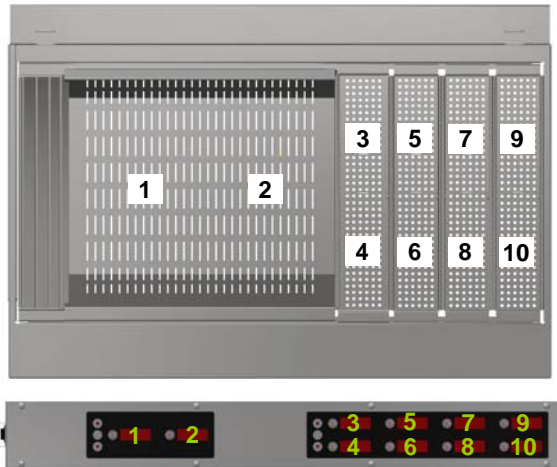


FIGURE 1A - Dump Left Configuration
Models RR5-48.5LT and RR5-42LT

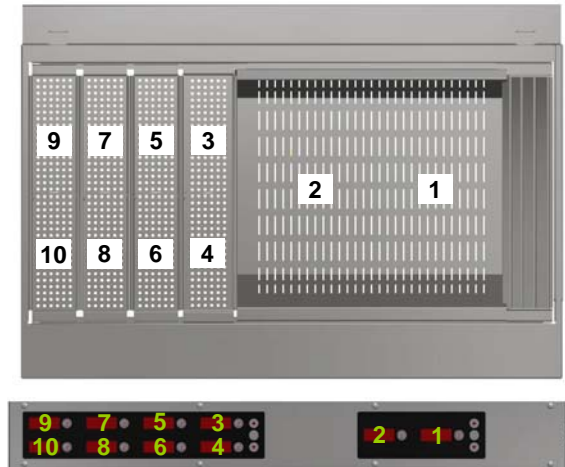


FIGURE 1B - Dump Right Configuration
Models RR5-48.5RT and RR5-42RT

POWERING UP THE TIMER

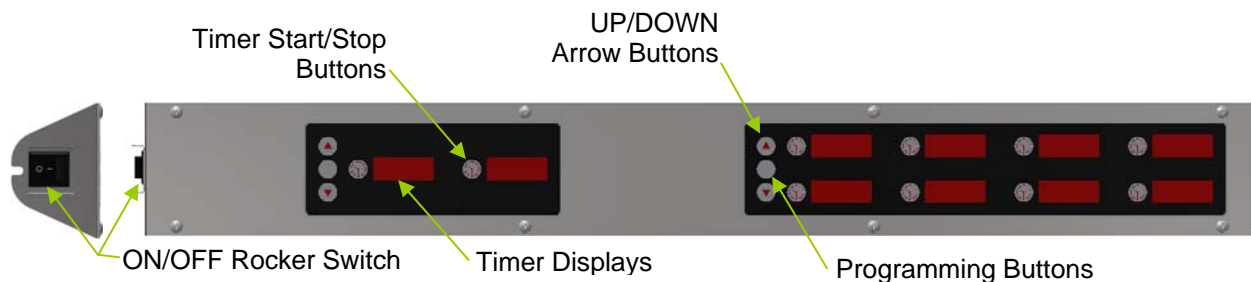


FIGURE 2A - Interface

If the timer is not already mounted to the station, refer to Timer Box Mounting page 4 for mounting.

1. Verify that the 12VDC power supply cord is connected to the extension cord coming out from the back of the timer box inside the cabinet. This connection is made at the factory.
2. Plug the power supply into the 120VAC outlet of the Fry Dump Station. The outlet is located beside the dump station main ON/OFF switch behind the left door inside the cabinet (figure 2B).

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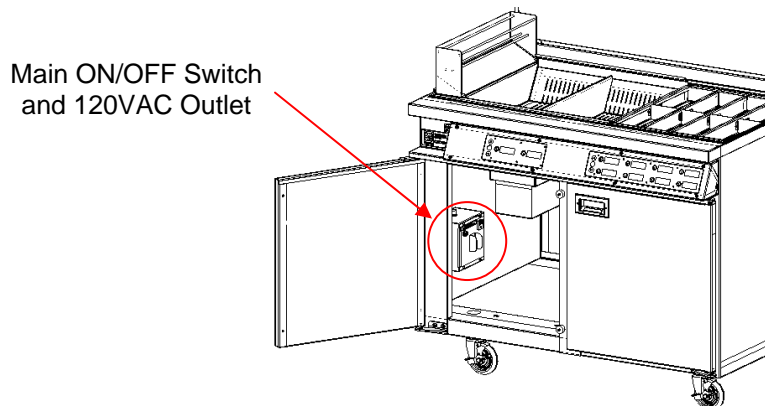


FIGURE 2B - Main ON/OFF Switch and 120VAC Outlet

3. Turn ON the dump station main ON/OFF switch (figure 2B). This switch controls the station heaters, lights and the 120VAC outlet used to power the timer. **The timer will not turn ON if this switch is OFF.**
4. Push the timer rocker switch to the ON position "I" (figure 2A). The timer displays will briefly show the firmware version number before going to idle mode "---".

OPERATION

1. To initiate a timing cycle, press the timer button for the desired dump section. The corresponding display will show the programmed time value in minutes and seconds (MM:SS) and then start to count down. When the timer reaches "00:00" or the pre-alert time (see Default Settings), the audio alert will beep and the display will flash.
2. Press the timer button to acknowledge the end of the cycle.
3. Any timing cycle can be cancelled at any time by pressing its corresponding timer button.
4. If enabled, the pre-alert alarms will beep three times when a timing cycle is about to expire and the display will flash the remaining time. The time at which the pre-alarm is occurring can be programmed independently for each timer (see "PROGRAMMING" page 2 and Default Settings page 3).

PROGRAMMING

All channels must be in idle state "---" in order to access the programming mode. While adjusting parameters, a single press of either arrow button will cause the value to scroll by increments of one and a press and hold will cause the value to increase continuously.

1. Holding Time Setting:

Press and hold the timer button of the channel that needs updated. The display will flash the current setting for that channel and all other displays will be OFF. Use the up and down arrow buttons to change the time. Press and release the programming button to advance to the Pre-Alert Alarm parameter or press and hold the corresponding timer button to save changes and return to idle mode "---". If necessary, repeat for the other channels.

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2. Pre-Alert Setting:

While all channels are in idle state "---", press and hold the timer button of the channel that needs updated. The display will flash the current holding time setting for that channel and all other displays will be OFF. Press and release the programming button to advance to the Pre-Alert parameter. The left two digits of the display will show "PA" and the right 2 digits will show the current setting. The Pre-Alert is expressed as a percentage of the Holding

Time. For example, if the Holding Time is 45 minutes and the Pre-Alert is 10%, the Pre-Alert alarm will occur when the countdown is at 4 minutes and 30 seconds (10% of 45 minutes). Use the up and down arrow buttons to change the percentage. Press and release the programming button to cycle back to the Holding Time parameter or press and hold the corresponding timer button to save changes and return to idle mode "---". If necessary, repeat for the other channels.

3. Default Settings:

Refer to figure 1A and 1B on page 1 for timer channel locations.

Default Settings			
Channel	Holding Time (MM:SS)	Pre-Alert (%)	Product
1	7:00	0	Curly Fries
2	7:00	0	Curly Fries
3	30:00	20 (6:00 MIN)	Tenders
4	30:00	20 (6:00 MIN)	Tenders
5	7:00	0	Potato Cakes
6	7:00	0	Potato Cakes
7	30:00	0	Jalapeno Bites
8	30:00	0	Onion Rings
9	15:00	20 (3:00 MIN)	Mozzarella Sticks
10	15:00	20 (3:00 MIN)	Mozzarella Sticks

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TIMER BOX MOUNTING

If the timer box didn't come already assembled with the Fry Dump Station, follow these steps to mount it:

1. Remove the snap plug covering the wire chase hole located on the front of the station just above the cabinet doors (figure 3A). Using a Phillips head screwdriver and an adjustable wrench, remove the three screws, washers and acorn nuts covering the station timer box mounting holes (Figure 3B).

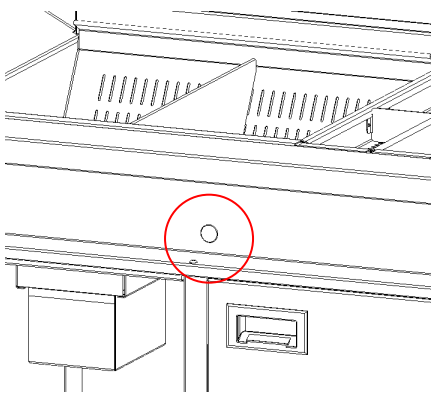


FIGURE 3A - Wire Chase Hole

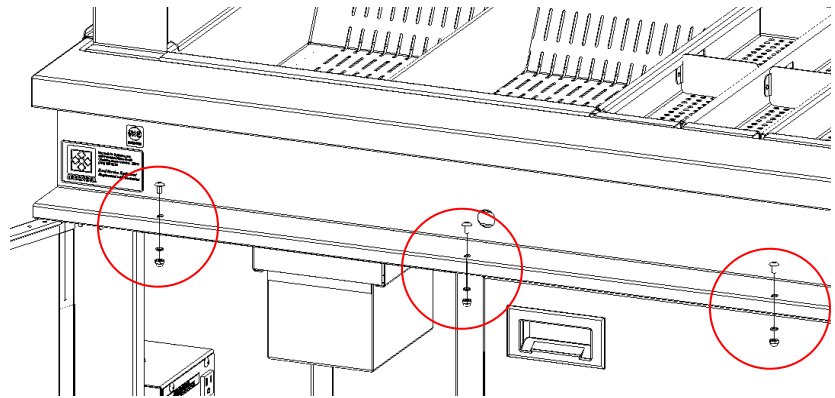


FIGURE 3B - Cabinet Mounting Holes

2. Carefully slide in place the timer box by routing its extension cord through the cabinet wire chase hole (figure 3C). Make sure that the cord is not pinched between the timer box and the cabinet frame as you slide it in place.

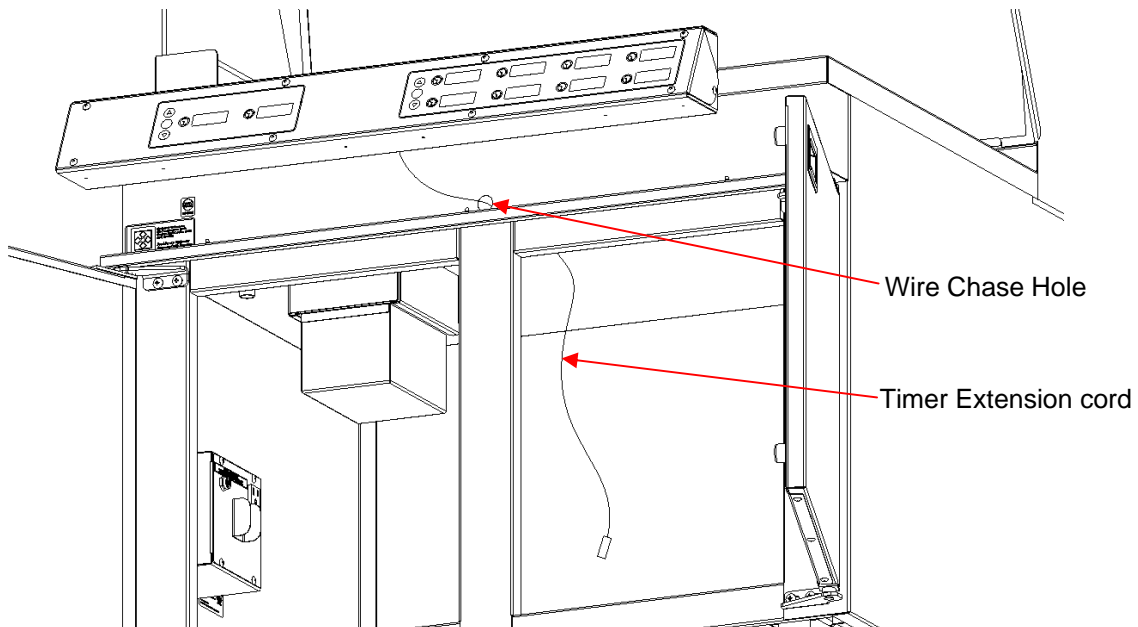


FIGURE 3C - Timer Extension Cord Routing

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- The timer box has one set of mounting holes for each configuration (dump left and dump right). Figure 3D shows the two sets of mounting holes with their respective configuration. Using the appropriate timer box set of mounting holes for your station configuration (refer to figures 1A and 1B on page 1), align the timer box mounting holes with the station mounting holes and use a Phillips head screwdriver and the 3 screws provided with the timer box kit to fix in place (Figure 3E).

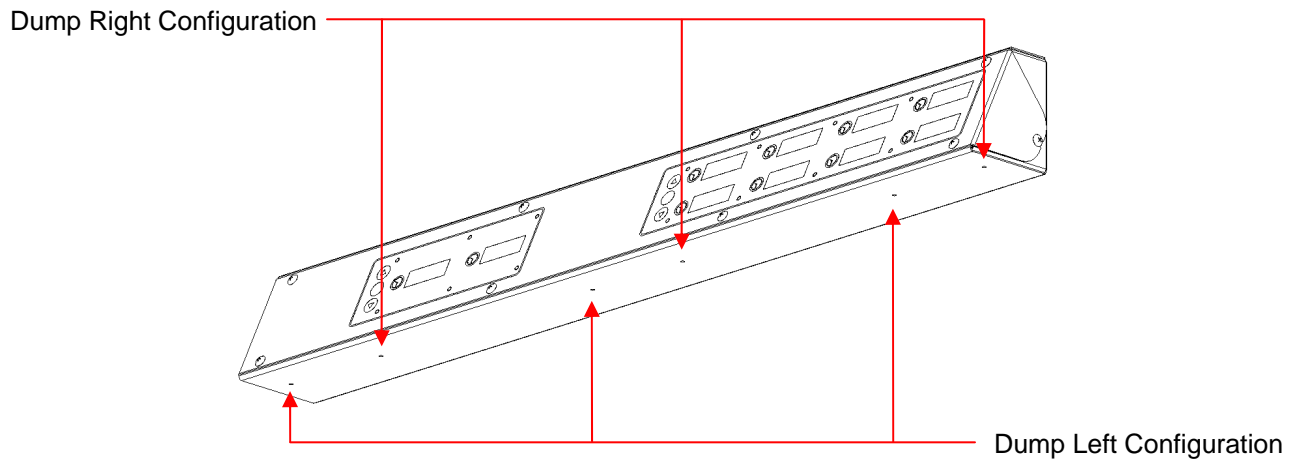


FIGURE 3D - Timer Box Mounting Holes

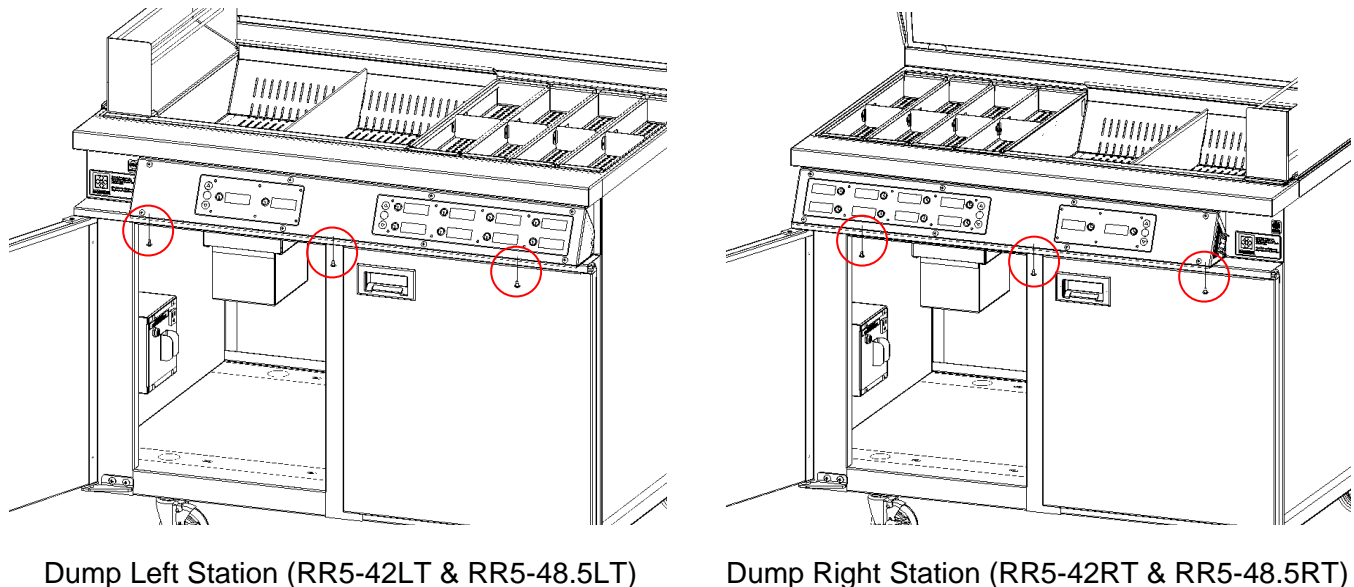


FIGURE 3E - Timer Box Mounting

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4. Plug in power supply cord to the timer extension cord. Route cords in channel and secure excess using the cable clamp (figure 3F).

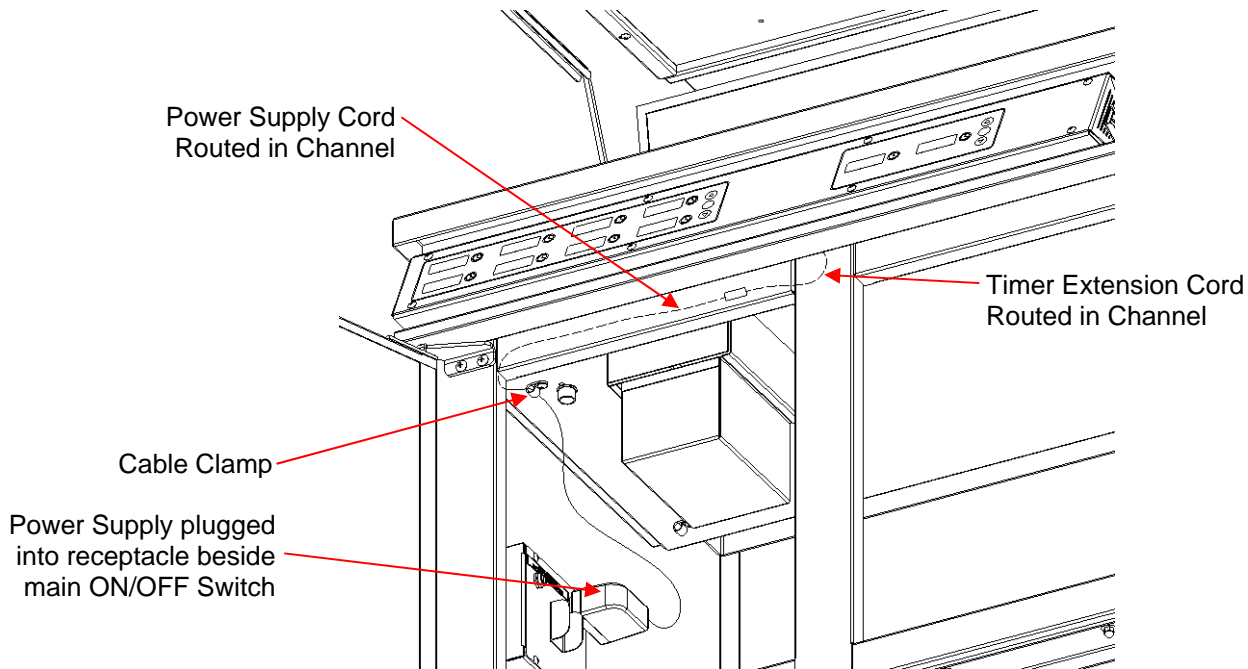


FIGURE 3F - Cable Clamp and Channel

5. Refer to "Powering Up The Timer" page 1 for connecting and powering up the controller.

TIMER CONFIGURATION

The timer can be configured for a dump left or a dump right station. The configuration of the timer should already be properly set up for the station. However, if the configuration needs to be changed, follow these steps:

1. Turn the timer OFF by pushing the ON/OFF Rocker Switch to the OFF position "O".
2. Unplug the timer power supply from the station outlet located inside the cabinet behind the left door (figure 2B on page 2).
3. Using a Phillips head screwdriver, remove the timer box by removing the three mounting screws (figure 3E on page 5).
4. The timer box has one set of mounting holes for each configuration (Figure 3D on page 5). Using the appropriate timer box set of mounting holes for the station new configuration (refer to figures 1A and 1B on page 1), align the timer box mounting holes with the station mounting holes and use a Phillips head screwdriver and the 3 screws from step 3 to fix in place (Figure 3E on page 5). Make sure that the cord is not pinched between the timer box and the cabinet frame as you slide it in place.

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- Using a Phillips head screwdriver, unscrew all 8 screws on the timer front cover and loosen the 2 side screws (figure 4A). Carefully slide out the timer box front cover and lay it face down on a workable area. If necessary, disconnect power extension cable from the 2 display timer circuit board.

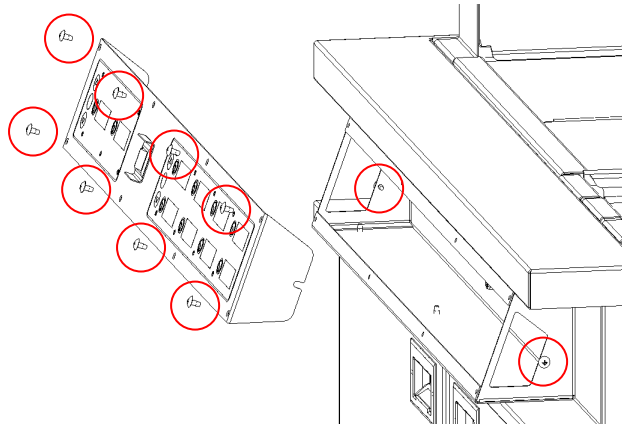


FIGURE 4A - Timer Box Cover

- Remove the two configuration jumpers labeled "L I R DISPLAY" on each board by carefully pulling them up (figure 4B).

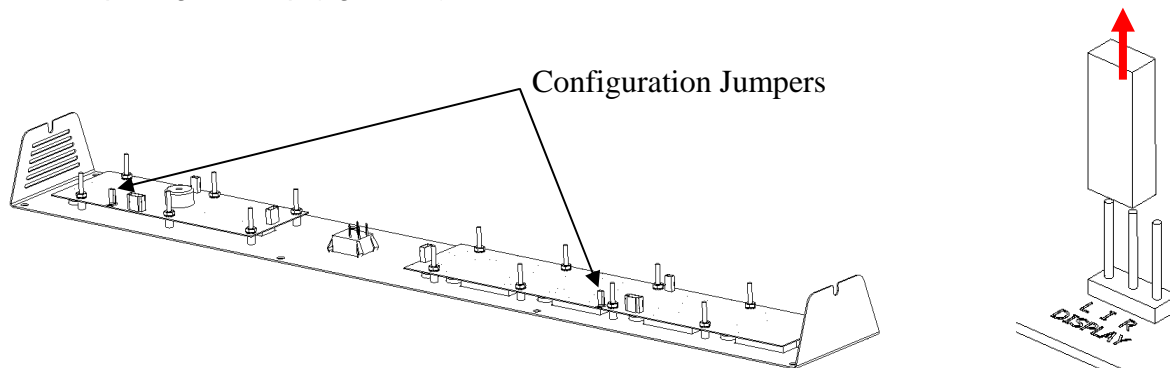


FIGURE 4B - Configuration Jumpers

- For a dump left configuration (see figure 1A for reference), place the jumper so it covers the "L" and "I" pins (figure 4C). For a dump Right configuration (see figure 1B for reference), place the jumper so it covers the "I" and "R" pins (figure 4D). Do this for both boards, the 2 and the 8 display timers. Make sure that the jumpers are pushed all the way in.

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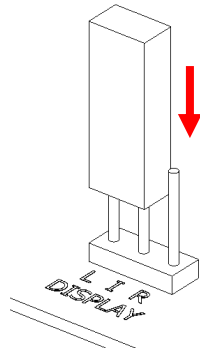


FIGURE 4C -

Jumper Placement For Dump Left Configuration

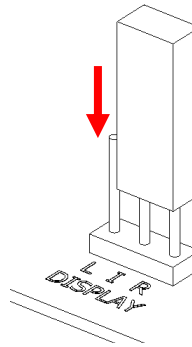


FIGURE 4D -

Jumper Placement For Dump Right Configuration

8. If the power extension cable is disconnect, reconnect it in the +12V plug of the 2 display board labeled "J5". Properly orient the timer box cover (see figure 1A and 1B for reference) and carefully slide it back in place making sure that no wires are pinched. Retighten the 2 side screws and use all 8 screws from step 5 to fix the front cover in place.
9. Refer to "Powering Up The Timer" page 1 for connecting and powering up the controller.

REPLACEMENT PARTS LIST

PART NO.	DESCRIPTION	QUANTITY
504381	Cable, Power Extension	1
504373	Cord, Power Adapter	1
504374	Overlay, 2 Display	1
504382	Overlay, 8 Display	1
502425	Switch, Rocker	1
162257	Timer, 2 Display Dump Left RR5-48.5LT, RR5-42LT, RR5-31.5	1
162258	Timer, 2 Display Dump Right RR5-48.5RT, RR5-42RT	1
162259	Timer, 8 Display Dump Left RR5-48.5LT, RR5-42LT, RR5-31.5	1
162260	Timer, 8 Display Dump Right RR5-48.5RT, RR5-42RT	1
164660	Wire Harness, 10 Channel Timer Replacement	1