

Dunkin Donuts Installation Guide



Speaker Post & Menu Board
(SIDE MOUNT Pg. #7)



Speaker Post & Menu Board
(TOP MOUNT Pg. #9)



Speakers in Menu Board
(FRONT MOUNT Pg. #8)



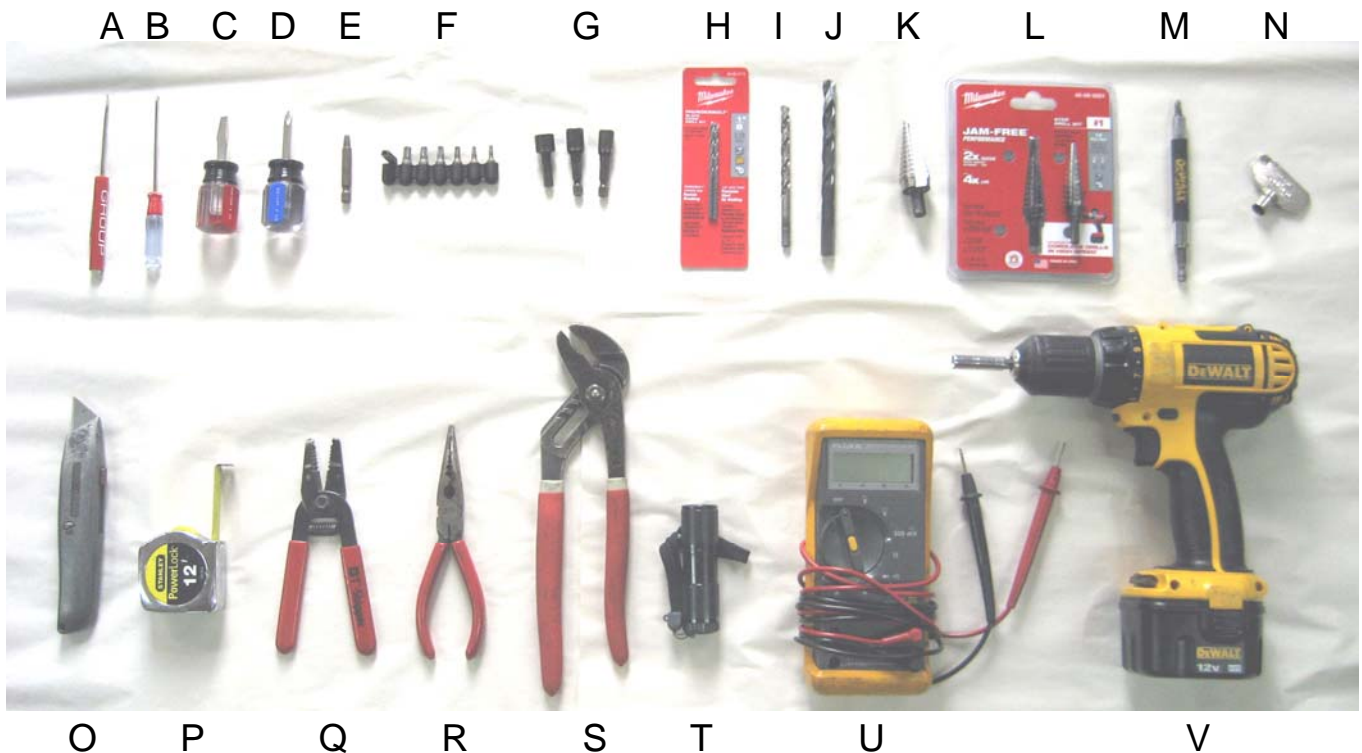
COD / Pole Mount Canopy
(SIDE MOUNT Pg. #7)

NOTE:

This guide is designed to give a general idea on how to install a FlashRight Display in various installation situations.

Because it is impossible to address every installation situation, the installer will have to make some installation adjustments as needed.

Recommended Tools for FlashRight Installations



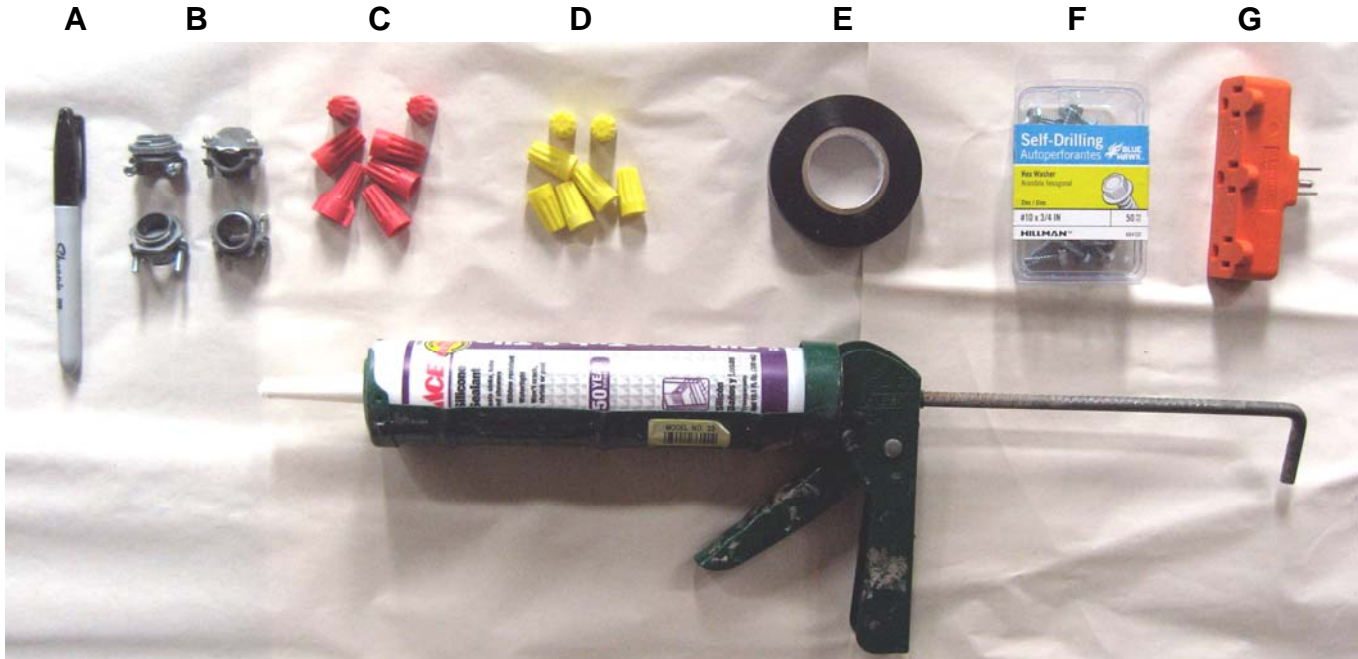
- A) #1 Flat Blade Screw Driver
- B) #1 Phillips Head Screw Driver
- C) #2 Flat Blade Screw Driver (Short & Long)
- D) #2 Phillips Head Screw Driver (Short & Long)
- E) #2 Square Recess Bit
- F) Torx Bit Set (Tamper Resistant)
Make sure they are Tamper Resistant type
- G) Magnetic Nut Driver Set (7/16" – 3/8" – 5/16")
- H) 1/8" Drill Bit (Set of at least 2 & have extras)
- I) 1/4" Drill Bit (Set of 2 & have extras)
- J) 3/8" Drill Bit (Set of 2)
- K) # 4 Step Drill Bit (3/16" to 7/8")
- L) # 1 Step Drill Bit (1/8" to 1/2")
- M) 6" Magnetic Drive (Extension Bit)
- ~~N) Metal Pedestal OCU Key (Not needed for Dunkin Installs)~~
- O) Utility Knife
- P) Tape Measure
- Q) Wire Strippers
- R) Long Nose Pliers
- S) Channel Lock Pliers
- T) Flash Light
- U) Voltage/Multi Meter (Analog or Digital) & Circuit Identifier/Toner
- V) Cordless Drill w/Hammer Option & Magnetic Drive Bit (Minimum 12VDC or Higher)
- W) IDEAL Part # 45-165 (Buy online-Amazon) This will help speed up install & cut cable perfect.

Cable Stripper



W

Recommended Materials for FlashRight Installation



- A) Felt Tip Marker (Black)
- B) Romex Connector - For ½" Knock Out (Sometimes needed)
- C) RED Wire Nut Connects (Sometimes needed)
- D) YELLOW Wire Nut Connectors (Sometimes needed)
- E) Electrical Tape (Sometimes needed)
- F) #10 x ¾" Hex Head - Self Drilling Screws (Sometimes needed)
- G) Heavy Duty 3 Way Plug (Rarely Needed)
- H) Caulk Gun with a Tube of 100% Silicone Caulking

- Note: A Hammer Drill with 24" x 3/8" Drill Bit, 1/4" Drill Bit may also be needed in rare situations

Other miscellaneous materials that might be needed:

- Large "BLUE" Wire Nut Connectors
- Cement Screws (if exposed conduit is run from Speaker Post to Menu Board)
- ½" Flex Conduit, ½" Straight Connectors, ½" 90° Connectors (twist on-recommended)
- ½" Plastic Straps
- White, Black, Green, and 2 other color 12 gauge wires (for Timer/Photo Controller-when needed)
- 12 gauge Romex Wire (50')
- 12 gauge BX Wire (50') Metal Box Connectors
- 50' Direct Burial Landscape Wire

NOTE:

If an electrical circuit is not available, an Exterior Timer or Photo Control might need to be added.

See "Determine Your Electrical Needs" at the end of this document.

Warning Statements

- **A qualified person should perform the installation & servicing of the FlashRight Displays (FRD).** Damage can result from dropping or mishandling the Display.
- Standard safety measures must be practiced at all times during the installation of this product. Use proper safety gear and tools for the installation procedure to prevent personal injury.
- **Prior to installation of this product, the installation instructions should be read and completely understood.** The installation instructions must be read to prevent personal injury and property damage. Keep these installation instructions in an easily accessible location for future reference.
- When working around an electrical source, **make sure the electrical source has been shut off** and confirm it is off with the appropriate testing device.



The FlashRight Display is a 12 Volt DC system and must be used with the plug-in 120 VAC to 12 VDC power transformer supplied.

(Do not connect the 2 conductor Display wiring directly to 120 VAC)

- All wiring should meet or exceed local codes and the **National Electric Code (NEC)**.
- **1 Year Warranty** on all electronic FlashRight Display Components.



Overview

- The FlashRight Display (**FRD**) is designed to install on the right side of most any Drive-Thru OCU, COD or Speaker Post. All the (**FRD**) electronic components are outdoor rated.
- Please allocate enough time to correctly complete any installation configuration.
- Installation should be completed during **dry conditions and above 40° F.**

FCC Compliance Statement

- This equipment has been tested and found to be FCC Part 15B compliant.
Caution: Any changes to this equipment not approved by the responsible parties for compliance could void the user's authority to use this equipment.



Power Supply

- Power Supply used for the FlashRight Display is UL listed for US and Canada.
- Switching Power Supply = Input: 100-240V~50/60Hz 0.5A
Output: 12.0V ---- 0.8A



For Technical Assistance Call: 678-455-9121

Mon - Fri 9 am - 5 pm

(Eastern Standard Time)

-OR-

Email us @ info@FlashRightDisplays.com

Display Connection to Power Supply

AC to DC
Power Transformer
12 VDC



Connect **BLACK** wire (-) to **BLACK** wire on Display

Connect **RED/White** wire (+) to **RED** wire on Display

AC to DC
Power Transformer
12 VDC



Connect **BLACK** wire (-) to **BLACK** wire on Display

Note: Extending Low Voltage Underground Wiring/12VDC.

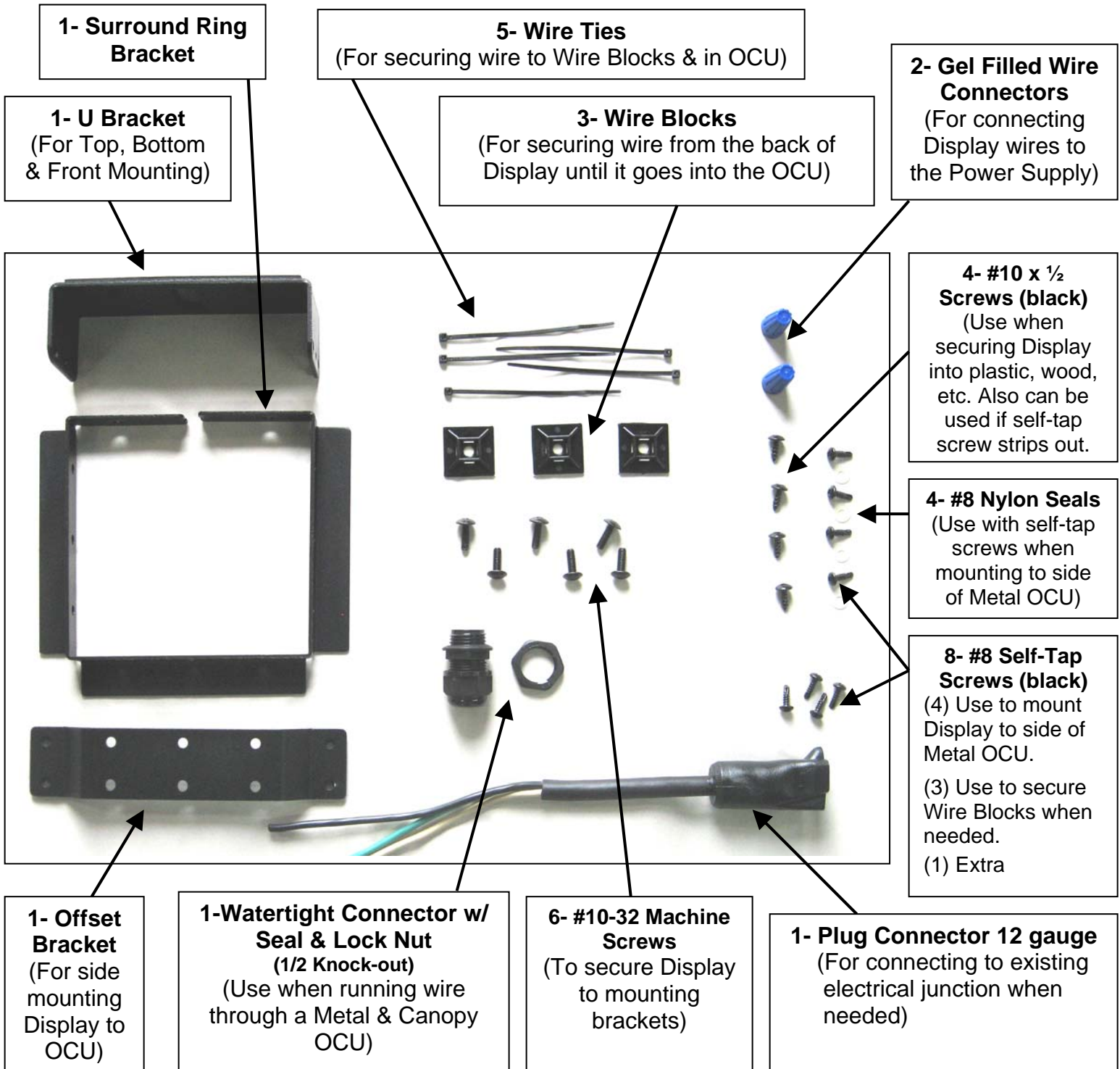
If you have to extend the wire run, make sure to use 18 gauge, 2 conductor with a jacket, outdoor rated wire, with **RED** and **BLACK** conductors.

Part #'s

- Nexans-c 2a-1802, 2c-18awg Sun Res Direct Bur Cable
- or
- Ultrex-vn 600v TC TFN, 2c-18awg Sun Res Direct Bur Cable

Make **ALL** exposed or underground connections with Gel Filled wire connectors or equivalent.

FLASHRIGHT Display (FRD) Brackets and Hardware Description



• **PLEASE READ “DISPLAY SET-UP GUIDE” ON PAGES 7, 8 & 9**

BEFORE YOU START THE INSTALLATION

Display Set-Up Guide – Side Mounting

➤ Use this type of mounting if securing to the or right side of the Speaker Post.

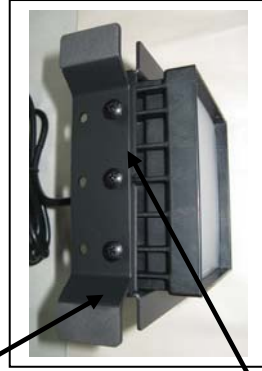
1-Place the POP Bracket over the Display so holes are aligned.

2-Secure the POP & Offset Brackets w/ 3 machine screws

3-Align the 3 holes on the Right side. Use the 3 supplied machine screws to secure.



Left Side



Left Side



Right Side

Note: Make sure to use the holes on the front side of the Offset Bracket when putting it together. The Offset Bracket should not go past the front of the bent part on the POP Ring Bracket.

>Make sure the POP Ring Bracket has the “fold” towards the front of the FlashRight Display (FRD).

Note: The Right Side of the (FRD) **MUST** stay clear to allow proper operation of the photocell. The photo cell is on the right side behind a clear round cover (see above).

VERY IMPORTANT

Make sure the 3 bracket tabs are aligned so there is 1 on TOP, RIGHT SIDE and BOTTOM. The tabs should be facing forward.

The bracket side WITHOUT a tab should be on the LEFT SIDE with the OFFSET Bracket.

Make sure the OFFSET Bracket does not go past the front side of the POP RING Bracket.
(See above middle picture for alignment)

NEXT... GO TO PAGE #10 FOR SIDE MOUNT INSTRUCTIONS

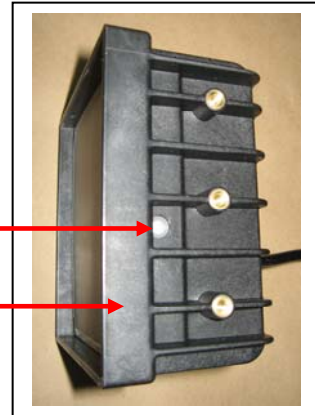
Display Set-Up Guide – Front Mounting

➤ Use this type of mounting if securing to the front of the Menu Board.

U Bracket Mounting (left side)



U Bracket Mounting (right side)



Note Photo Cell location

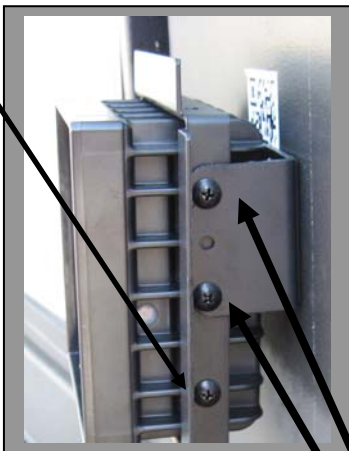
Right Side

Metal Tabs on TOP & BOTH SIDES with the BENT SIDE FACING FORWARD



(A) Place the POP Trim Ring over the FRD and secure it using the bottom two holes and #10 machine screws.

DO NOT tighten the bottom screws until the Display is on the Mounting Bracket.



VERY IMPORTANT

Make sure the 3 bracket tabs are aligned so there is 1 on TOP, & 1 on each SIDE and the tabs should be facing forward.

The bracket side **WITHOUT** a tab should be facing **DOWN**.

Note: You will use the top 4 screw holes later to mount the FRD to the U Bracket.

NEXT... GO TO PAGE # 11 FOR FRONT MOUNT INSTRUCTIONS

Display Set-Up Guide – Top Mounting

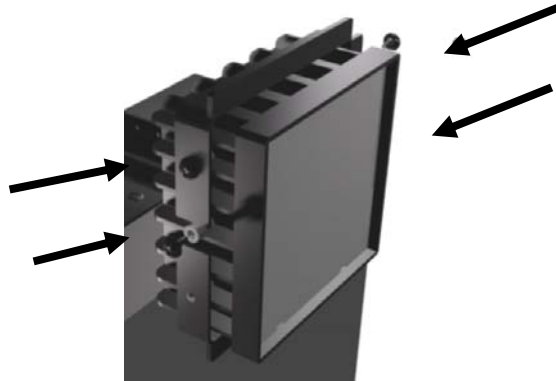
➤ Use this type of mounting if securing to the top of the Speaker Post.

1- Place Surround Ring Bracket over Display.



2- Place (4) #10 Machine Screws in the top four holes to secure the Ring Bracket until it is time to mount the Display to the Speaker Post.

Note: Do NOT tighten the screws all the way until the Display is in place and the last 2 bottom screws have been inserted.



Note: You will use the bottom 2 screw holes later to mount the FRD to the U Bracket.

VERY IMPORTANT

Make sure the 3 bracket tabs are aligned so there is 1 on TOP, RIGHT SIDE and BOTTOM. The tabs should be facing forward.

The bracket side WITHOUT a tab should be on the LEFT SIDE with the OFFSET Bracket.

NEXT... GO TO PAGE # 12 FOR INSTALLATION INSTRUCTIONS

Now the Display is set-up for this installation type - SIDE MOUNT

Steps:

1. Determine where the Display will be placed on the Speaker Post.

- Approximate location is center with the top speaker & even with the front of the Speaker Post.



2. Remove the back cover of the Speaker Post and look where you will be mounting the Display on the outside.
Confirm there is nothing in the way

3. Mount the Display with the supplied (4) **#8 Self Tap Screws** or use the (4) **#10 Sheet Metal Screws**.

4. Drill a 7/8" Hole with the Step Bit (a hole saw is not recommended to be used) and install the supplied **Watertight Connector**.

- Run the wire through the **Watertight Connector**.
- Tighten the **Connector** on the Speaker Post.
- Then run the wire down to the base.



5. Connect the supplied **Direct Bury Wire** to the Display wire (Red to Red & Black to Black).

- Run the wire under the landscaping material or dirt and up into the base of the Menu Board.



Note: In some cases with concrete or asphalt you may need to run a plastic conduit or plastic Cord Cover so the wire can be run from the Speaker Post to the Menu Board.

6. Connect the wire from the Display **Direct Burial Wire** to the **12 VDC Power Supply**, (Red to Red & Black to Black)

7. Plug the Power Supply into existing outlet in Menu Board OR wire in the supplied **Plug Connector**.

Note: **If there is NOT an electrical plug or circuit to plug the Power Supply into, an Exterior Timer/Photo Cell Controller may need to be added to the back of the Menu Board.**

See "Determine Your Electrical Needs" pages at the end of this document.

NEXT... GO TO - Attaching the POP Trim Panel – Pg. 14

Now the Display is set-up for this installation type - FRONT MOUNT

Step:

1. Determine where the Display will be placed on the Menu Board.
 - Remove the back panels Top/Bottom and make sure there is nothing in the way where the Display will be mounted.
 - Typically, it will be 4" to 5" up, from the bottom speaker to the bottom of the Display Bracket.
 - Center the Bracket between the door panels and secure it using (4) **#8 Self Tap Screws**.
2. Drill a 3/8" hole under the center of the Display Bracket and run the wire into the back/center area of the Menu Board.
 - Apply silicone sealer to the back of the Display
 - Mount the Display using the (4) **#10-32 Machine Screws**

Note: If there is a Camera in that spot you will need to move the Display to the lower section.



Note: In some cases the front panel will have to be removed because there is not access to the rear of the Menu Board.

3. Run the wire down to the base of the Menu Board.
4. Connect the Display wire to the **12 VDC Power Supply**
(Red to Red & Black to Black)
5. Plug the Power Supply into existing outlet in Menu Board OR wire in the supplied **Plug Connector**.

Note: ***If there is NOT an electrical plug or circuit to plug the Power Supply into, an Exterior Timer/Photo Cell Controller may need to be added to the back of the Menu Board.***

See “Determine Your Electrical Needs” pages at the end of this document.

NEXT... GO TO - Attaching the POP Trim Panel – Pg. 14

Now the Display is set-up for this installation type - TOP MOUNT

****Set up Brackets for the Top Mount Installation****

Connect the **Offset Bracket** and the **U Bracket** together using the (4) **#10-24 x 3/8"** machine screws.



Step:

1. Place the assembled Bracket on the top of the Speaker Post.

Note: Position Bracket **even with the front side** of the Speaker Post

$\frac{3}{4}$ " from right side (working from the back)

2. Secure the Brackets with (4) **#8 Self Tap Screws** OR use the (4) **#10 Sheet Metal Screws**.

Note: The Bracket is off center so the POP/Surround Panel ends up centered with the Speaker Post (See picture on front page).

3. Mount the Display to the Bracket using the last (2) **#10 Machine Screws**

- Drill a $\frac{7}{8}$ " hole centered behind the Display with the Step Bit (Hole Saw is not recommended)
- Install the supplied **Watertight Connector**
- Run the wire through the connector and tighten it
- Silicone where wire goes through connector
- Run wire down to the base of the Speaker Post

Note: Leave "drip loop" of wire behind Display (see picture)



Image is looking from the back side



Make sure bottom 2 screws are hand tightened very well.

4. Connect the supplied **Direct Bury Wire** to the Display wire (Red to Red & Black to Black).

- Run the wire under the landscaping material and under dirt at least 6", then up into the base of the Menu Board.



Note: In some cases with concrete or asphalt you may need to run a plastic conduit or plastic Cord Cover so the wire can be run from the Speaker Post to the Menu Board.

5. Connect the wire from the Display **Direct Burial Wire** to the **12 VDC Power Supply**,
(Red to Red & Black to Black)
6. Plug the Power Supply into existing outlet in Menu Board OR wire in the supplied **Plug Connector**.

Note: *If there is NOT an electrical plug or circuit to plug the Power Supply into, an Exterior Timer/Photo Cell Controller may need to be added to the back of the Menu Board.*

See “*Determine Your Electrical Needs*” pages at the end of this document.

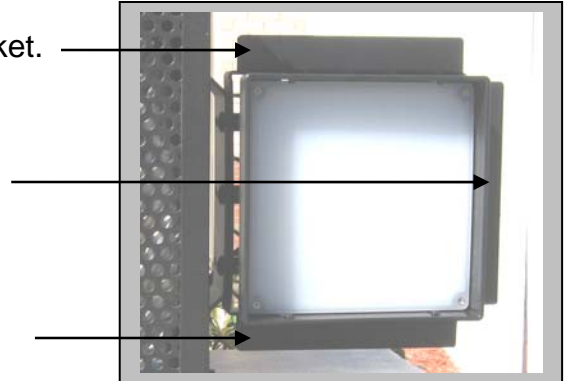
NEXT... GO TO - Attaching the POP Trim Panel – Pg. 14

Attaching the POP Trim Panel

- Separate the Velcro strips on the back of the Surround Panel (if applicable).

Note: 5" Velcro Strips might be in a separate bag in most new installations.

- Place the strips on the 3 Tabs of the Surround Ring Bracket.



- Slide the Surround Panel over the FRD/Display & push against the areas where the Velcro strips are.



Photocell Test

- Place a piece of black tape over the photocell on the Right Side of the **FRD**.
- Wait approximately 45 seconds to 1 minute. The **FRD** will dim to about 50% brightness.
- Remove tape and wait approximately 45 seconds and the **FRD** will come back to full brightness.

Note: If you are installing the **FRD** at dusk or during the night time the **FRD** may already be in the Dim Mode and it will NOT dim anymore.

To test during night time

Shine a flashlight over the photocell for approximately 45 seconds to 1 minute. The **FRD** will go to full brightness. Remove flashlight and wait, the **FRD** will go back to 50% brightness.

For Technical Assistance call 678-455-9121
Mon-Fri 9 am - 5 pm
(Eastern Standard Time)

FlashRight Displays – 6210 Browns Bridge Rd. Cumming, GA 30041
Tel. 678-455-9121 <<< >>> www.FlashRightDisplays.com

FLASHRIGHT® Insert Panel Replacement Instructions

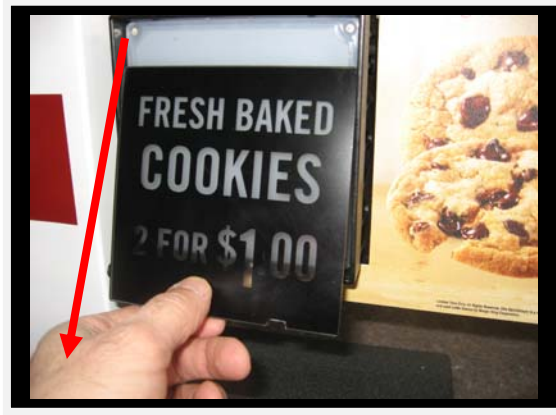
- 1) Place the Insert Panel removal key (or any key) in one of the bottom slots and pry open.

Note: Use the same movement as opening a can of paint.

DO NOT USE A SCREW DRIVER



Panel will pop out and down.



- 2) Take the new Panel and slide it down behind the 2 bumps on the bottom.

Make sure it is behind the 2 bumps on the bottom.



Snap the Panel in place on top. Make sure you hear the "Snap".



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Tel. 678-455-9121

Determine Your Electrical Needs

1. Is the Drive-Thru open 24/7? **Yes** / No
2. Are the lights in your Menu Board ON during this 24/7 period? **Yes** / No

Rare Situation

(If YES to questions 1 & 2, you will need no additional electrical work other than connecting the supplied electrical connector to the menu board wiring)

(An optional Photocell could be added to control menu board lights if requested for an additional cost)

1. Is the Drive-Thru open 24/7? **Yes** / No
2. Are the lights in the Menu Board controlled by a Timer or Switch for night time operation? **Yes** / No

(If YES to question 1 & 2, - **a**) The electrical circuit to the Menu Board will need to be traced out and identified and switched to a constant power circuit. **b**) A Photocell will need to be added to control the Menu Board lights for day/night operation.

>See (A) on next page

1. Is the Drive-Thru open 24/7? Yes / **No** - only when the store is open
2. Are the lights in the Menu Board controlled by a Timer for night time operation? **Yes** / No

(If NO to question 1 & YES to question 2, - **a**) The electrical circuit to the Menu Board will need to be traced out and identified and switched to a constant power circuit. **b**) A 24/7 Timer/Photo Cell controller will need to be added on the Menu Board to control the lighting for on/off and day/night operation.

>See (B) on next page

NOTE: If a spare wire or circuit is available in the Menu Board, a Timer/Photo Cell Controller will not be needed.

Parts needed for Timer/Photo Cell Controller



Intermatic Timer Model:

- T101R (Metal Case -Recommended)

or

- T101P (Plastic Case)

Estimated Cost: \$75.00

Part is Available: Home Depot, Online, Amazon, Electrical Supply



Intermatic Photo Control Model:

- K4121C

or

York Photo Control Model

- 2001

Estimated Cost: \$12.00

Part is Available: Online, Amazon, Electrical Supply

Installation Guide for Installing Timer/Photo Cell

(A) If Drive-Thru is 24/7

1. Identify Menu Board (MB) circuit (connect circuit toner to wires at Menu Board to ID).
2. Move circuit to constant power side on existing Timer Box or move to other constant power source.
3. Add Photo Cell to MB to switch lights on/off.
4. Wire in FlashRight "power connector" (supplied) to constant power.

(B) If Drive-Thru is NOT 24/7

1. Identify Menu Board (MB) circuit (connect circuit toner to wires at Menu Board to ID).
2. Move circuit to constant power side on existing Timer Box or move to other constant power source.
3. Add new Timer/Photo Cell Box to the back side of the MB.
4. Wire in FlashRight "power connector" (supplied) to new Timer/Photo Cell Controller as needed.
(See below for wiring recommendations)



- Mount Timer/Photo Cell Box with 3/4" self tap screws
- Drill 1-1/4" to 1-1/2" hole (max.) on the side of base cover
- Run flex conduit with wiring along back of Menu Board and through hole drilled in Menu Board base
- Strap flex conduit in place and secure with 3/4" self tap screws
- Make wire connections in Timer Box
- Make connection in base to control Menu Board lights and FlashRight Display
- Used (CLEAR) Silicone to seal TOP and SIDES of Cell Box or Timer/Photo Cell Box and 1/2" strap screws

NOTE: Do not use longer than a 3/4" screws to mount Controller to back of Menu Board and check inside Menu Board for where the screws will be placed to make sure that are is clear of any other obstructions.



This wiring is for Intermatic Timers ONLY

– See your equipment wiring as needed–

- **Green:** Connect to Ground Wires & Plate
- **Left Connection #1:** WHITE/COMMON
To: Menu Board & Photo Cell
- **Center #2:** BLACK/HOT (IN)
To: Timer Only
- **Right #3:** BLACK/HOT (OUT)
To: Photo Cell & FlashRight Power Connection
- **Wire Nut:** PHOTO CELL (OUT) (HOT/LOAD)
To: Menu Board (IN)

[ALL ELECTRICAL WORK SHOULD MEET LOCAL AND NATIONAL NEC CODES]