



# COLORDMD

ColorDMD 128x16 H-LED Display  
Installation Instructions for  
Data East Wooden Light Panels

Congratulations on the purchase of a new ColorDMD display. The ColorDMD will enhance your pinball machine by introducing *color* to the dot matrix display graphics produced by the game.

- Tools Required:
- Phillips Screwdriver
  - 1/4" Nut Driver
  - Nippers / Small Diagonal Cutters
  - Marker Pen
  - Drill with 5/64" drill bit



Be sure to turn **OFF** the power to the pinball machine before installing the ColorDMD 128x16 H-LED display.

*NOTE: The ColorDMD 128x16 H-LED Display ships configured for installation on a metal speaker panel. Some disassembly of the ColorDMD is necessary for installation on wooden light panel games.*

STEP **1**

Remove the original DMD from the pinball machine by detaching it from the four plastic mounts and disconnecting the two cables. Insulate the disconnected original DMD high power cable with electrical tape (it will not be used with the ColorDMD 128x16 H-LED display).

STEP **2**

Carefully extract the game ROM chip from socket U8 on the back side of the original DMD and then insert it into socket U9 on the ColorDMD circuit board. Orient the ROM chip so the half moon polarity markers on the ROM chip and the socket are on the same end. Ensure all of the game ROM chip pins are properly inserted into the socket. **Game ROM chips shorter than the socket are inserted as shown in Fig. A.**

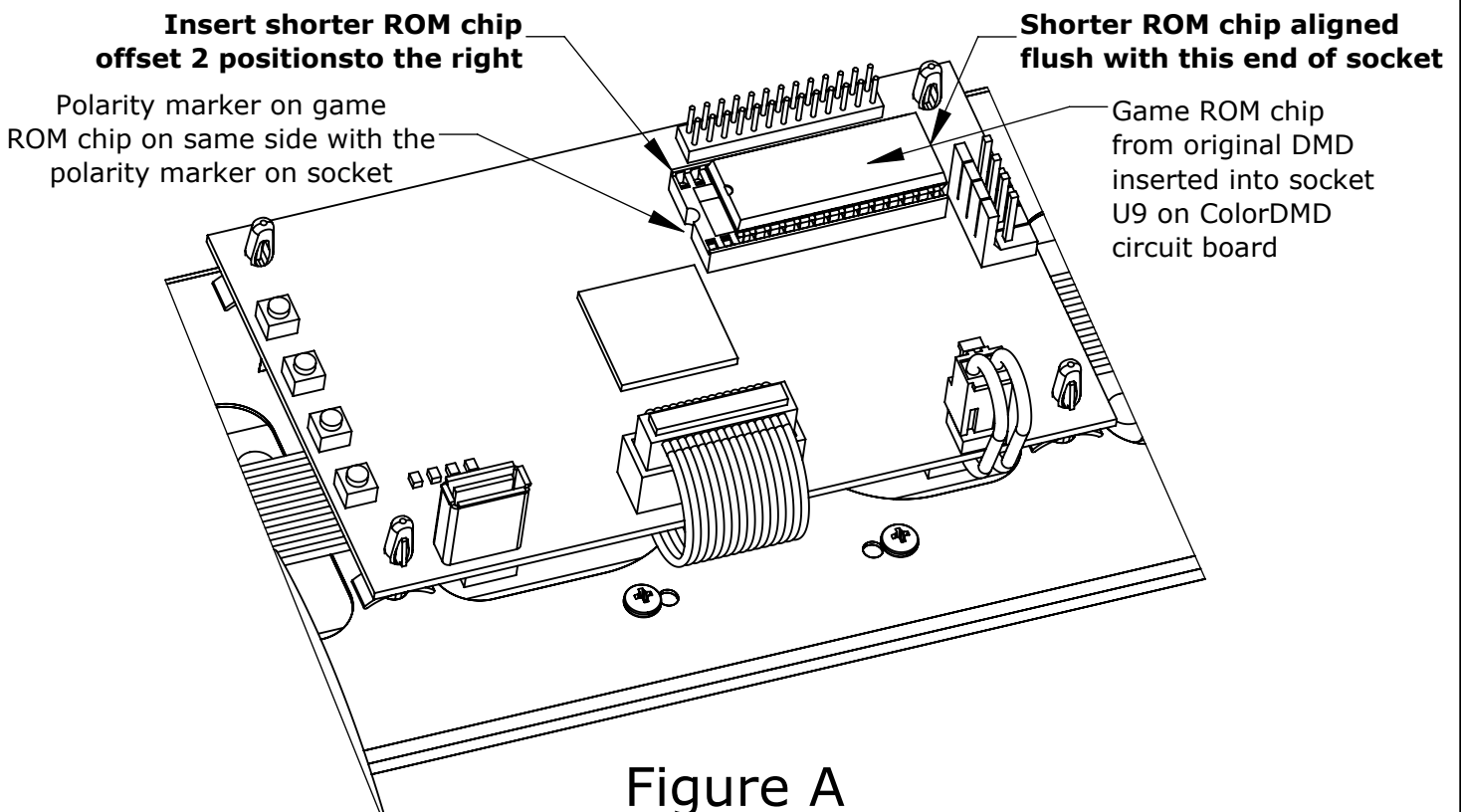
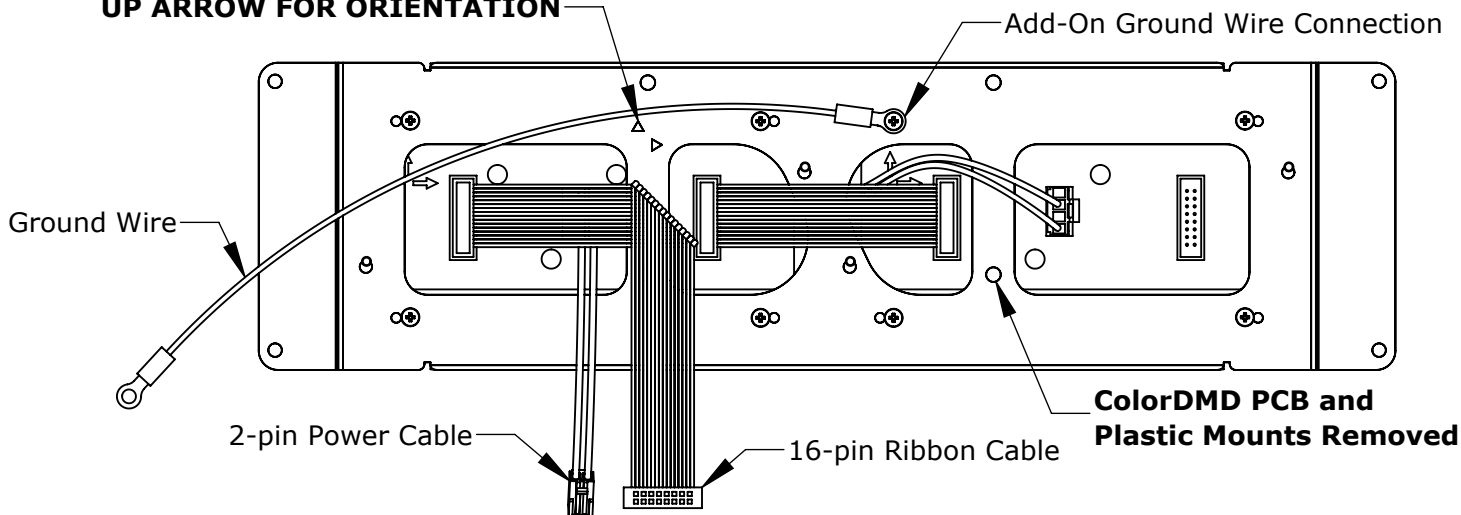


Figure A

STEP 3

The ColorDMD will need to be reconfigured and mounted to the rear side of the wooden light panel (See Fig. B). Remove the 16-pin ribbon cable and 2-pin power cable from the ColorDMD circuit board. Remove the ColorDMD circuit board and the four plastic mounts from the bracket (these plastic mounts will not be used for wooden light panel installations). Nippers or small diagonal cutters may be necessary to cut/remove the plastic mounts.

**UP ARROW FOR ORIENTATION**

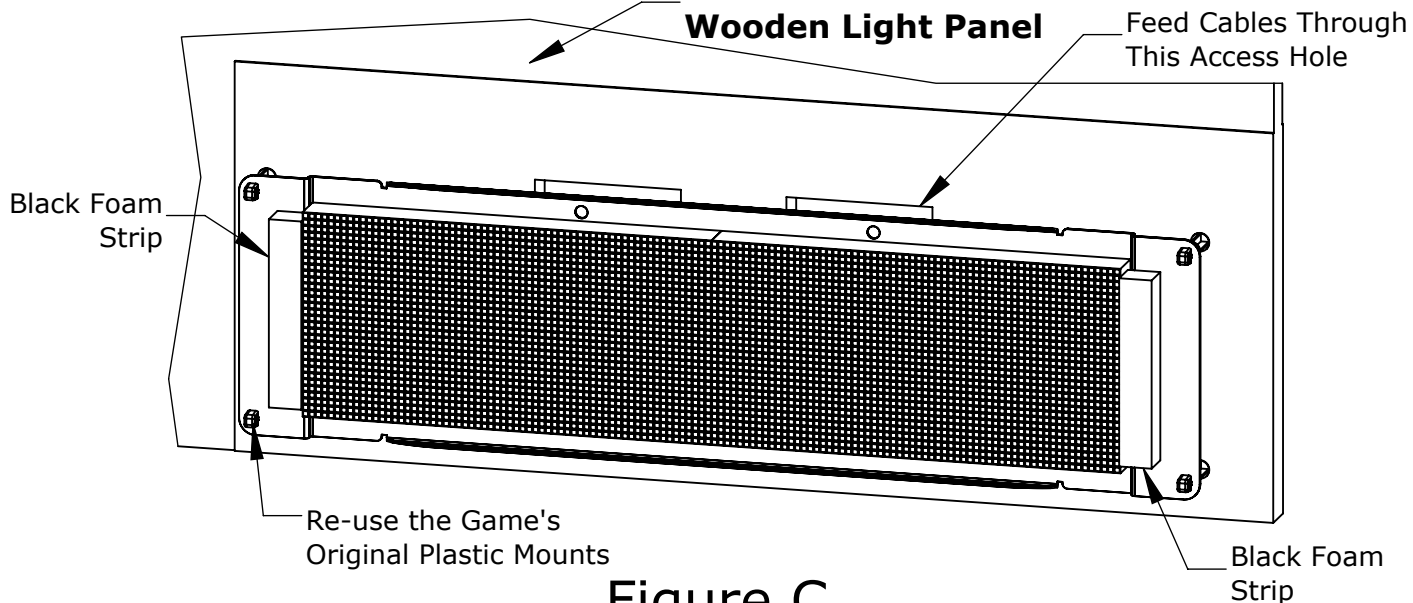


**Figure B**

STEP 4

Locate the included green ground wire in the accessory bag. Remove one of the phillips screws (See Fig. B) and secure the ground wire underneath the screw when re-attaching. Do not overtighten. (See Fig B.)

**Front Side of  
Wooden Light Panel**



**Figure C**

STEP 5

Mount the ColorDMD to the game's four plastic mounts while feeding the 16-pin ribbon cable, 2-pin power cable, and green ground cable through the access hole on the right side of the game.

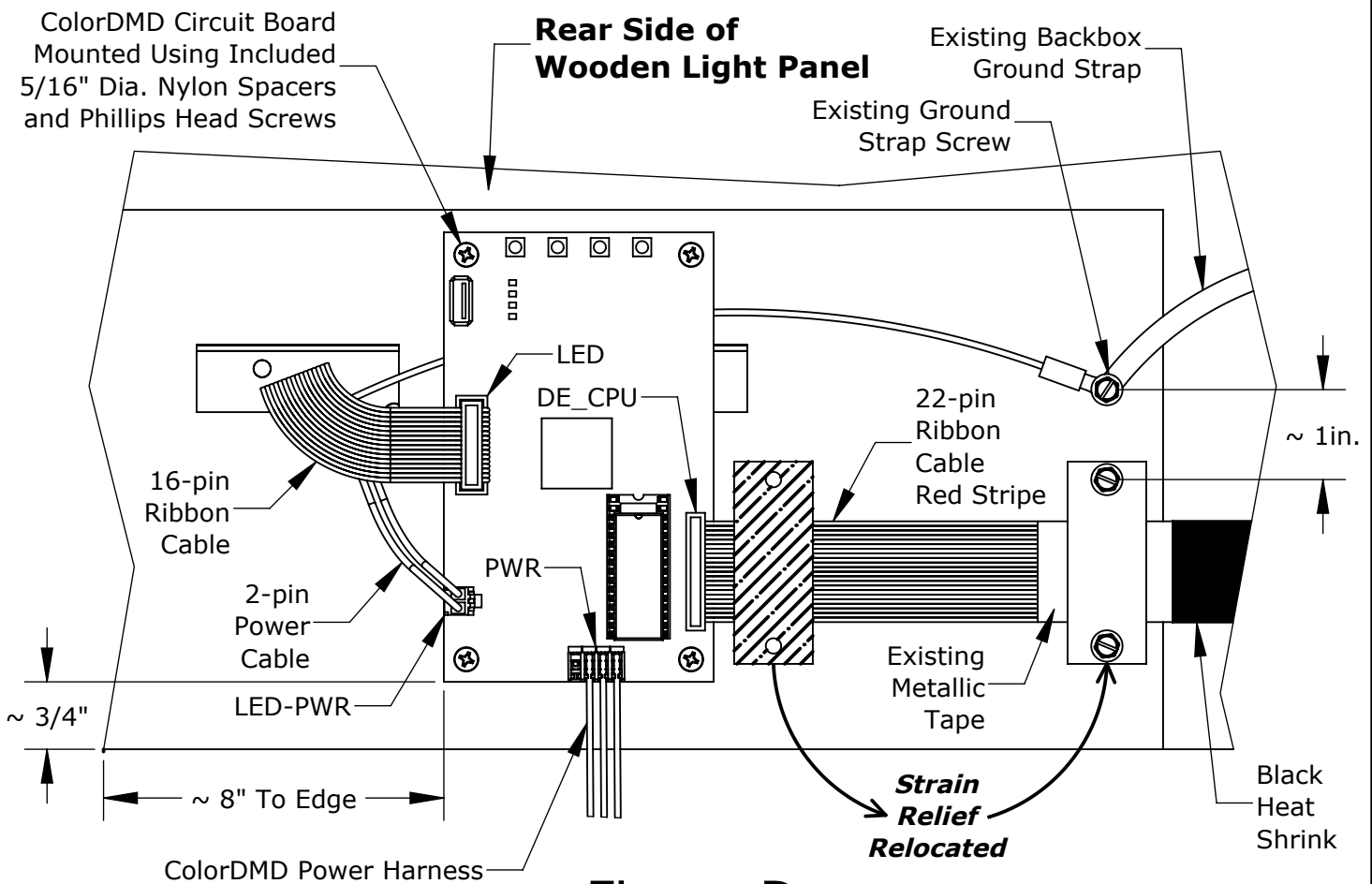
STEP 6

Locate the two 3" pieces of black adhesive backed foam in the accessory bag. Peel off the backing and attach the foam to the front of the ColorDMD metal bracket against each side of the LED display (see Fig. C).

*NOTE: Use a 5/64" drill bit to drill a very shallow starter hole for the six screws used in the following steps. A marker pen can be used to mark the holes prior to drilling.*

**STEP 7** Remove the metal strain relief (See Fig. D) and relocate it 1" directly beneath the Existing Ground Strap Screw. Pull the slack on the 22-pin ribbon cable so the strain relief cinches down on the metallic tape portion of the cable.

**STEP 8** Locate the four smaller 5/16" dia. Nylon spacers and the four phillips head screws in the accessory bag. Align ColorDMD circuit board with the 22-pin ribbon cable (See Fig. D) approximately 8" from the left edge of the wooden speaker panel. Using the smaller 5/16" dia. spacers underneath the ColorDMD circuit board, fasten it to the wooden speaker panel using the phillips screws.



**Figure D**

**STEP 9** Plug the 22-pin ribbon cable into DE\_CPU on the ColorDMD H-LED circuit board with the red stripe on the top (see Fig. D). The other end of this cable should still be plugged into CN22 on the CPU Board board with red stripe on the right-hand side.

**STEP 10** Re-attach the 16-pin ribbon cable to LED and the 2-pin power cable to LED\_PWR on the ColorDMD circuit board.

STEP **11** Locate the included ColorDMD Power Tap and Power Harness in the accessory bag.

### ***Installing the ColorDMD Power Tap***

Temporarily remove the game's 15-pin power cable connector from CN6 on the Power Supply Circuit Board located inside the backbox (See Fig. E).

- 1.** Attach the ColorDMD Power Harness to the ColorDMD Power Tap (see Fig. F).
- 2.** Install the ColorDMD Power Tap to CN6 (See Fig. F). The ColorDMD Power Tap is keyed and will only install one way.
- 3.** Attach the game's 15-pin power cable connector to the ColorDMD Power Tap (See Fig. F). The 15-pin power cable is keyed and will only install one way.

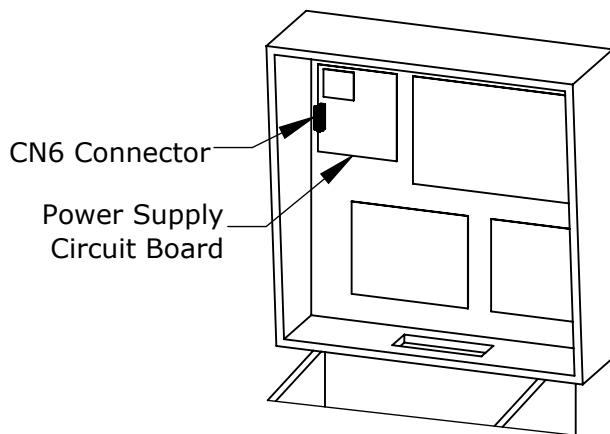


Figure E

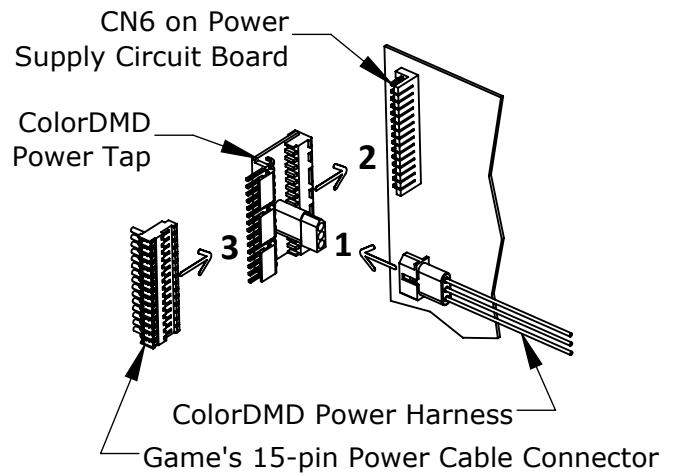


Figure F

STEP **12** Plug the other end of the ColorDMD Power Harness into the PWR header on the ColorDMD circuit board (See Fig. D). Route the Power Harness to ensure there is no stress on the connections to the ColorDMD Power Tap.

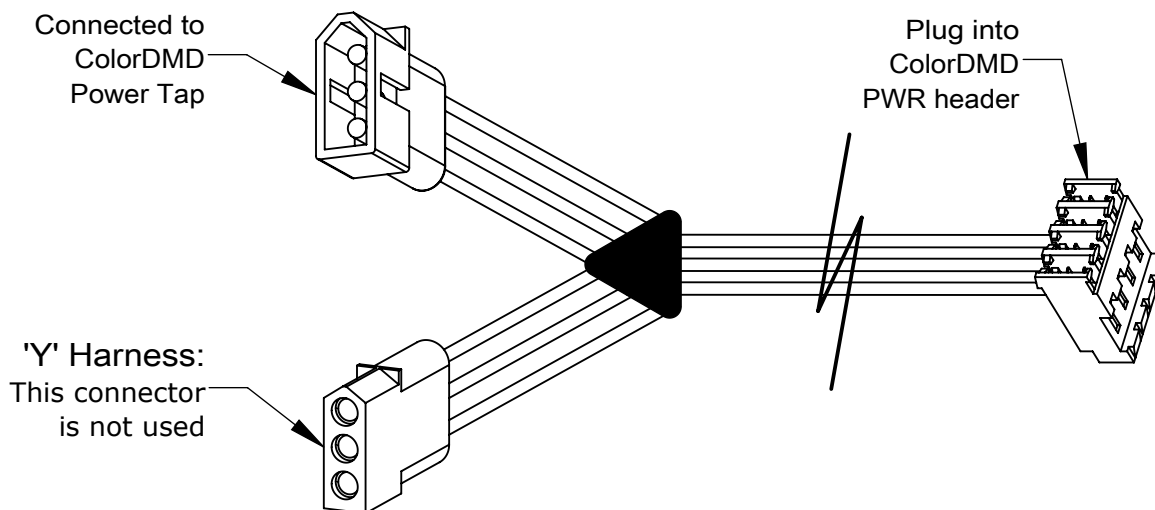


Figure F



**WARNING. Electric Shock Hazard** - To protect against accidental electric shock, **DO NOT** operate the game without ensuring that the ColorDMD metal bracket is electrically grounded to game via the backbox ground strap.

*Double check for proper alignment of **all** cable connections.* Coil the excess and route the ColorDMD Power Harness along with other existing cables for a clean install.

STEP **13** While ensuring no wires get pinched, close and latch the light panel and then turn on the pinball machine.

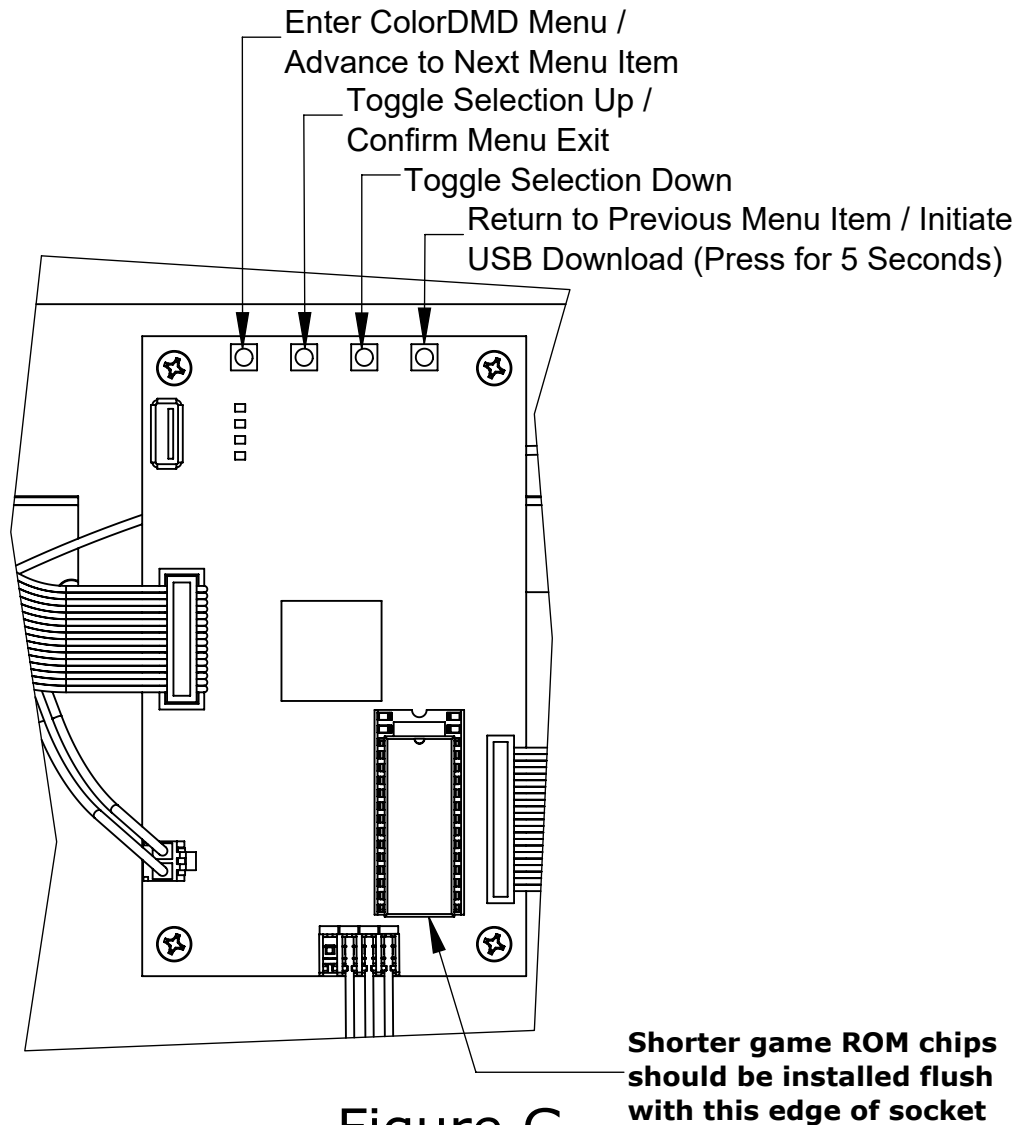


Figure G

STEP **14** Press the right-most ColorDMD H-LED push-button to customize the display settings. When finished press the Confirm push-button to "EXIT AND SAVE". (See Fig. G)

For additional information regarding installing ColorDMD game specific color file using the USB port, please visit our website at [www.colordmd.com](http://www.colordmd.com).