COLOR**DMD**

*Installation Instructions for **Data East***
(plastic speaker panel)

Congratulations on the purchase of your 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:
- 5/16" Nut Driver
- Phillips Screwdriver
- Dremel tool with 1¼" cutoff wheel
- Towels and/or masking tape to protect clear DMD lens

⚠️ *Be sure to turn **OFF** the power to the pinball machine before installing the ColorDMD display.*

STEP (1) Carefully remove the translite from the backbox and then lower the speaker panel to the position shown in Fig. A to gain access to the backbox.
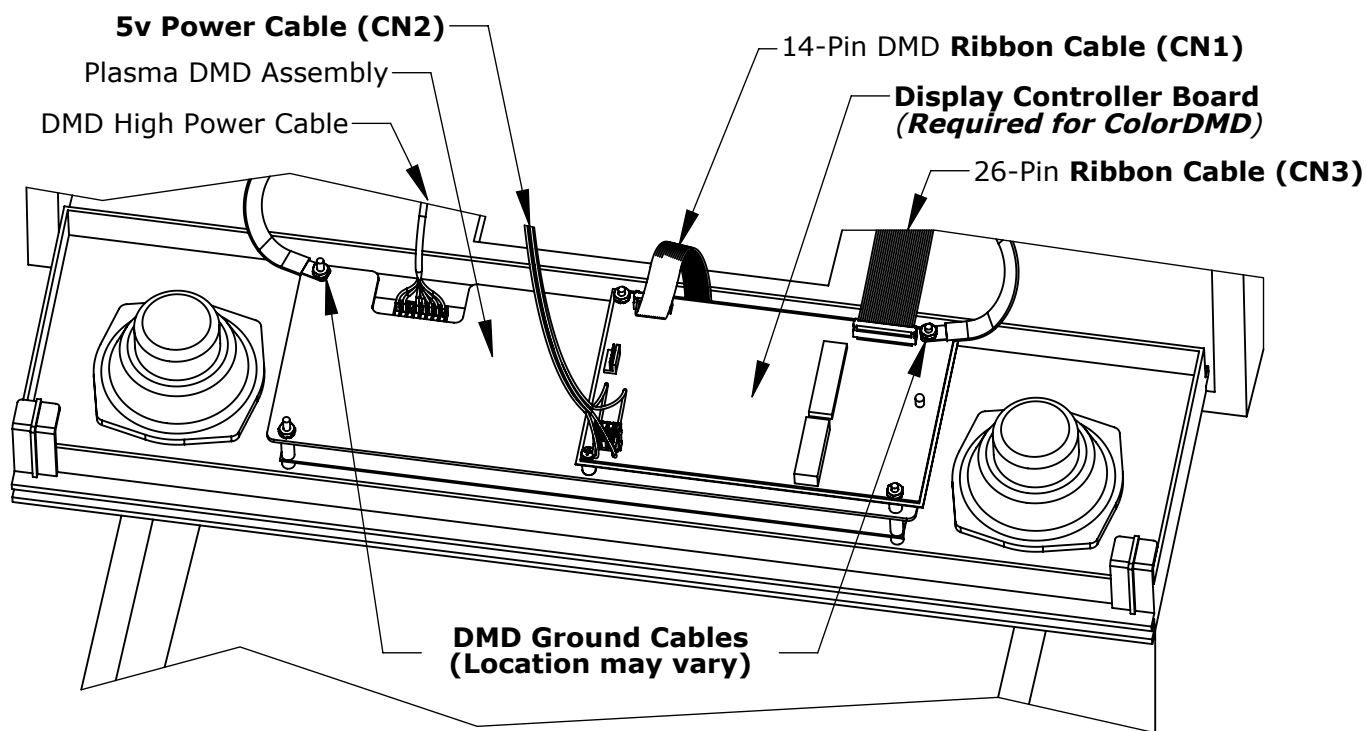
5v Power Cable (CN2)

Plasma DMD Assembly

DMD High Power Cable

14-Pin DMD **Ribbon Cable (CN1)**

Display Controller Board *(**Required for ColorDMD**)*

26-Pin **Ribbon Cable (CN3)**

DMD Ground Cables (Location may vary)

Figure A

STEP (2) Disconnect the DMD High Power Cable from the DMD and secure it aside (it is not used for the ColorDMD). Insulate the disonnected end of this cable with electrical tape. Also disconnect the 5v power cable at CN2 on Display Controller Board.

STEP (3) Disconnect the ribbon cables from CN1 and CN3 on the Display Controller Board. **Remove the Display Controller Board from the metal bracket on the DMD assembly**.

STEP (4) Remove the five DMD assembly mounting screws and/or nuts. **Remove the original DMD assembly from the game and store it in a safe place**.

STEP ⑤ ***Preparing the speaker panel to mount the ColorDMD.***

Remove the speaker panel from the game and protect both sides of the clear plastic with a towel and/or masking tape to prevent damage.

Using a Dremel tool with a 1¼" diameter cutoff wheel, <u>carefully</u> **cut the center threaded post so that it is completely flush with wooden speaker panel** <u>AND</u> **cut away a 15" wide portion of the top lip on the speaker panel** (see Fig. B).

This post must be cut off flush with speaker panel

Foam Tape

TOP Lip

Cut out a flush 15" wide notch in the speaker panel using a Dremel tool with 1¼" diameter cutoff wheel. This must be done to provide adequate clearance for the ColorDMD Display.

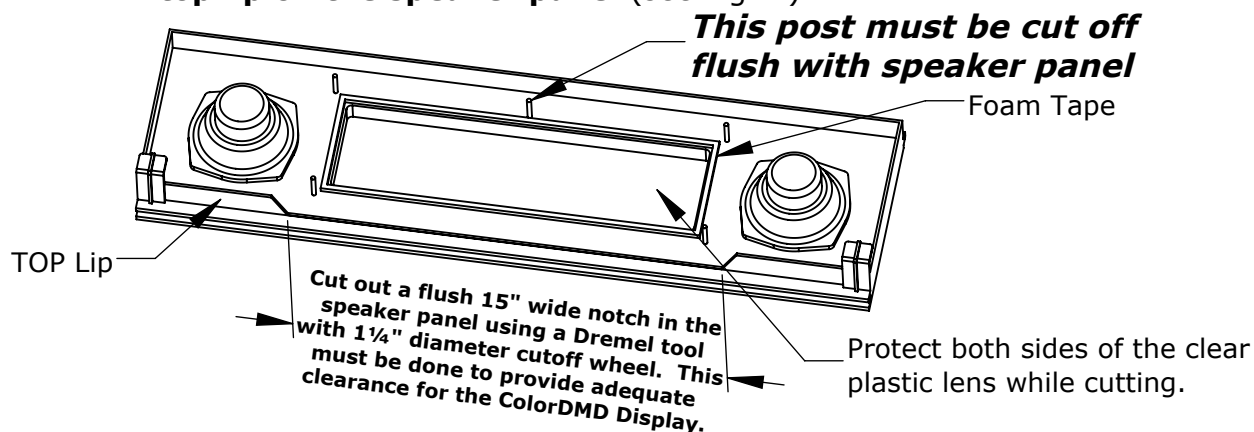Protect both sides of the clear plastic lens while cutting.

Figure B

STEP ⑥ ***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. C).

1. Attach the ColorDMD Power Harness to the ColorDMD Power Tap (see Fig. D).

2. Install the ColorDMD Power Tap to CN6 (See Fig. D). 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. D). The 15-pin power cable is keyed and will only install one way.
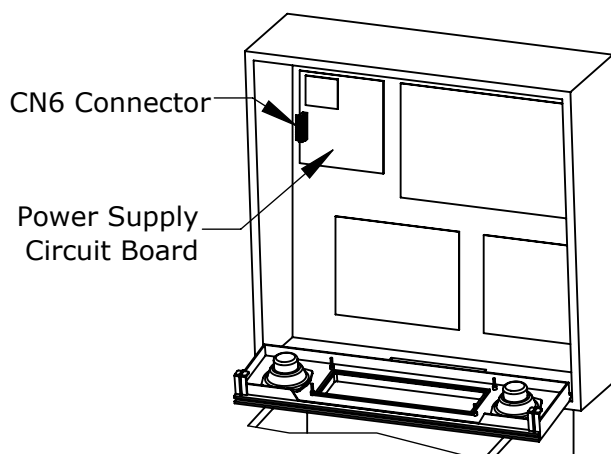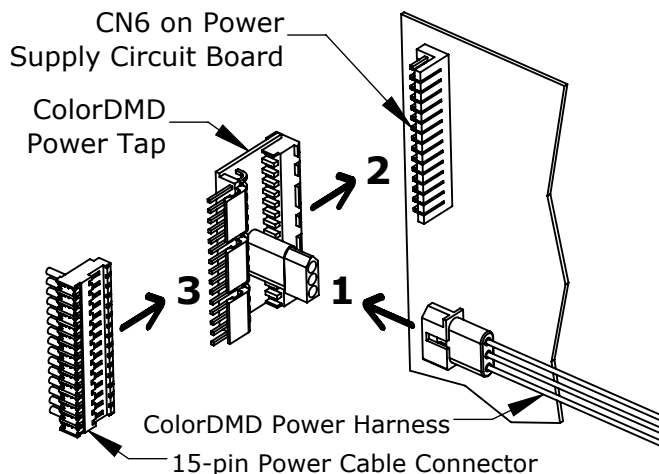
CN6 Connector

Power Supply Circuit Board

CN6 on Power Supply Circuit Board

ColorDMD Power Tap

ColorDMD Power Harness

15-pin Power Cable Connector

Figure C

Figure D

⚠️ ***Route all power cables to ensure there is no stress on the connections to the ColorDMD Power Tap.***

STEP ⑦ **Ensure the RF Shield (if present) remains under the Display Controller Board with metallic side facing down.** Using the 4 screws supplied in the ColorDMD mounting bracket, fasten the Display Controller Board to the ColorDMD in the orientation shown in Fig. E.
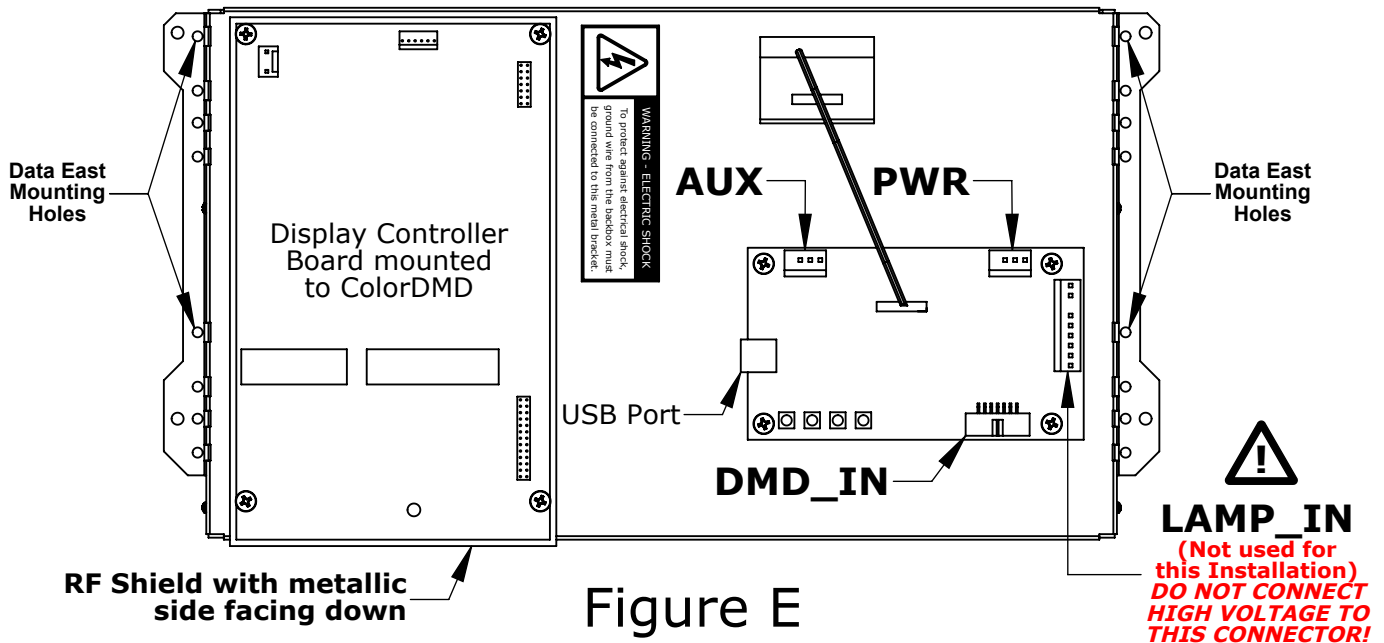
Data East Mounting Holes

Data East Mounting Holes

WARNING - ELECTRIC SHOCK
To protect against electrical shock, ground wire from the backbox must be connected to this metal bracket.

Display Controller Board mounted to ColorDMD

AUX **PWR**

USB Port

DMD_IN

⚠

LAMP_IN
(Not used for this Installation)
DO NOT CONNECT HIGH VOLTAGE TO THIS CONNECTOR!

RF Shield with metallic side facing down

Figure E

STEP ⑧ Remove the protective film from the front side of the new ColorDMD display.

STEP ⑨ Install one 1/4" Spacer on each of the four threaded posts and then position the ColorDMD face down (centered in the orientation shown in Fig. F) and align the Data East mounting holes (see Fig. E).
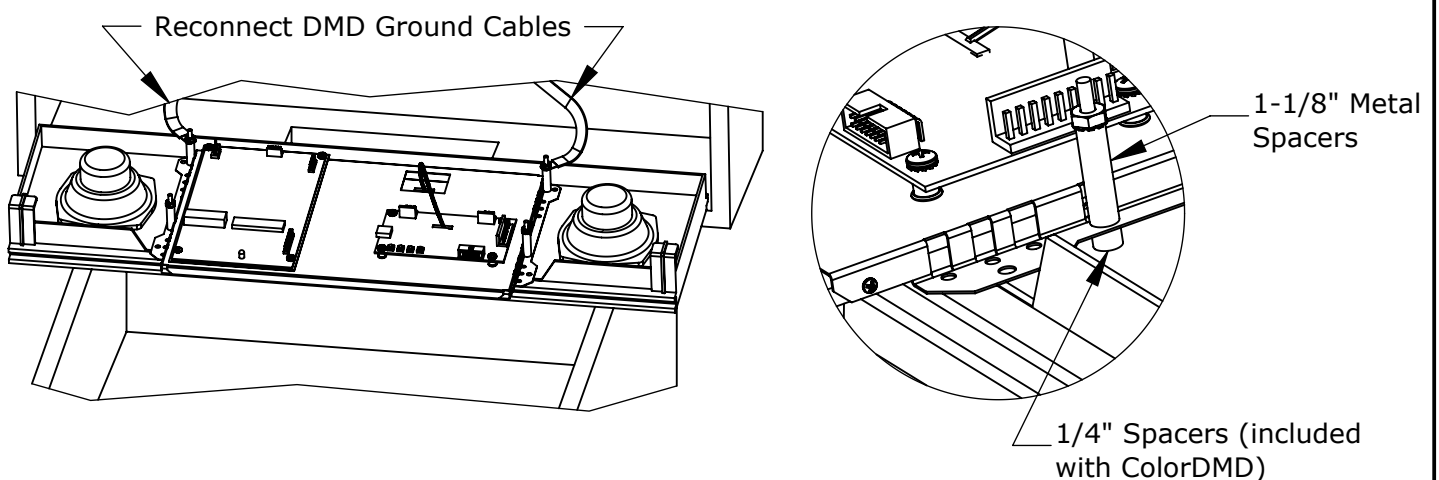
Reconnect DMD Ground Cables

1-1/8" Metal Spacers

1/4" Spacers (included with ColorDMD)

Figure F

STEP ⑩ Place one of the existing 1-1/8" long metal spacers over each threaded post and secure the ColorDMD with four of the existing nuts. **Make sure to reconnect the DMD Ground Cables to ColorDMD** (see Fig. 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.

STEP **11** One end of the included ColorDMD Power Harness has a single connector (see Fig. G). Plug this connector into the PWR header (see Fig. E) on the ColorDMD circuit board (see Fig. H).
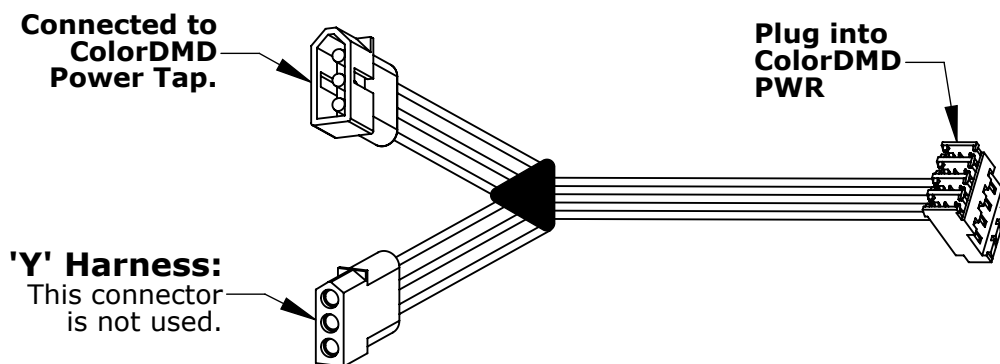
Connected to ColorDMD Power Tap.

Plug into ColorDMD PWR

'Y' Harness:
This connector is not used.

Figure G

ColorDMD Ground Cables securely installed.

Red Stipe (CN1)

ColorDMD Power Harness connected to PWR.

Red Stripe (CN3)
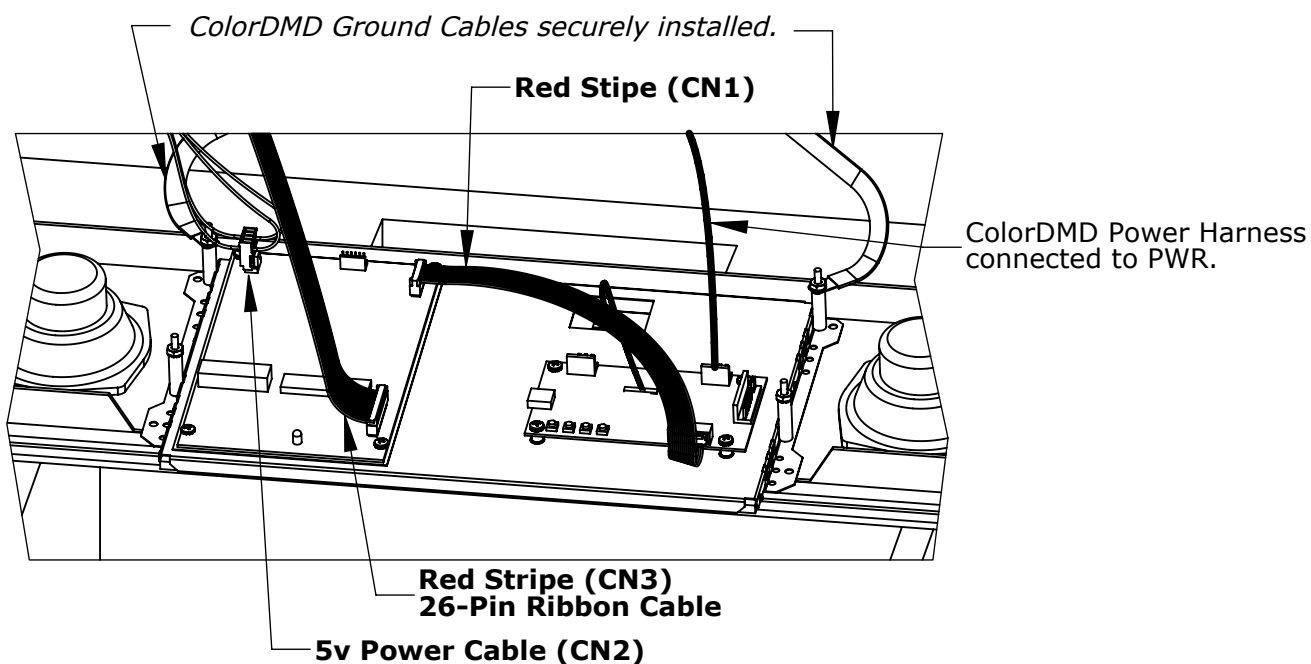**26-Pin Ribbon Cable**

5v Power Cable (CN2)

Figure H

TIP ⟩ Coil the excess and route the ColorDMD Power Harness along with other existing cables for a clean install.

STEP **12** Plug the included 12" ColorDMD 14-Pin ribbon cable into DMD_IN on the ColorDMD with the ***red stripe on the right-hand side*** (see Fig. J). The other end of this cable should be plugged into CN1 on the Display Controller Board with **red stripe facing top edge of speaker panel** (See Fig. H).
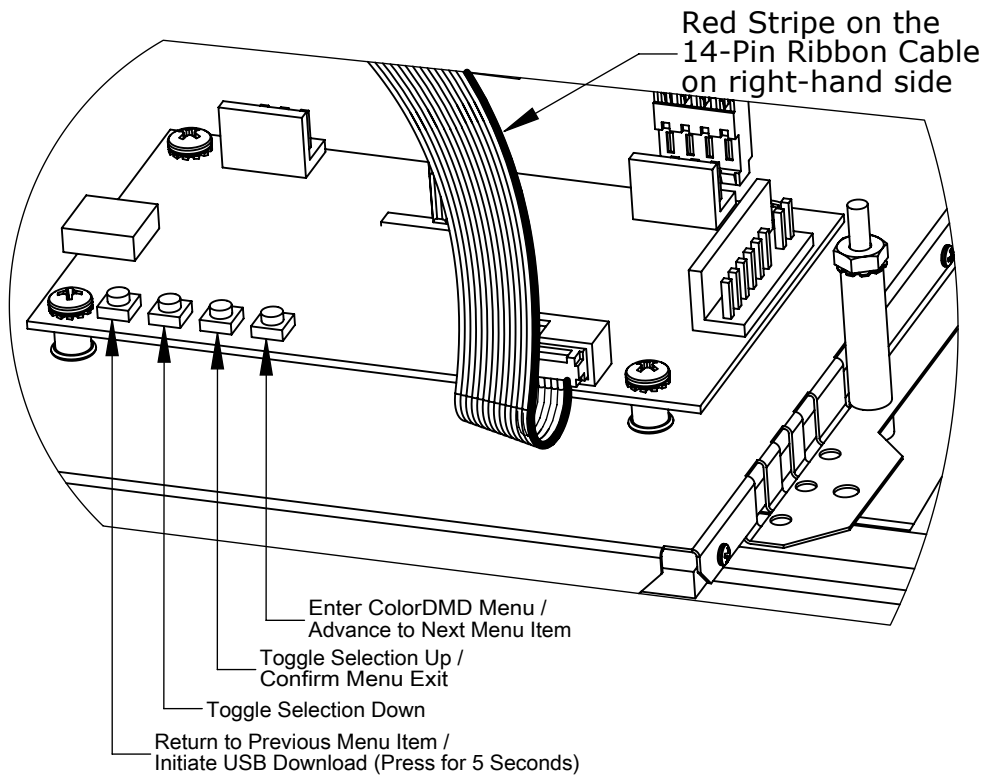
Red Stripe on the 14-Pin Ribbon Cable on right-hand side

Enter ColorDMD Menu / Advance to Next Menu Item

Toggle Selection Up / Confirm Menu Exit

Toggle Selection Down

Return to Previous Menu Item / Initiate USB Download (Press for 5 Seconds)

Figure J

STEP **13** Reconnect the **5v power cable to CN2** and the **26-pin ribbon cable to CN3 with red stripe facing the bottom edge of the speaker panel** (See Fig. H) to the Display Controller Board .

⚠ *Double check for proper alignment of **all** cable connections.*

STEP **14** While ensuring no wires get pinched, raise the speaker panel and turn on the pinball machine.

STEP **15** Locate and press the right-most *ColorDMD Menu* button (See Fig. J) to customize the display settings. Continue pressing the button to advance to the "MOUNTING" menu. Next use the *Toggle Selection Up* button to change the setting to "WS".

STEP **16** Press the right-most button to advance to the "EXIT AND SAVE" menu. Press the *Confirm Menu Exit* button to save settings and return to game mode. Video should appear on the new ColorDMD Display. Game is now ready to play. Have fun!

For additional information regarding display settings and updating to a full color ROM file please visit our website at **www.ColorDMD.com**