

## **BriteRings™ Installation Instructions: Model 102516-1**

### **NOTICE:**

As with any modification requiring power from the machine itself, these devices were not included in the original design and user assumes all responsibility for any loss, damage, or injuries which may occur as a result of modifying your machine from original form. Pictured items are for illustrative purposes and may differ from actual product. Exact performance may vary, depending on the type and condition of pinball machine being used.

### **INSTALLATION:**

1. Remove the two screws, the pop bumper cap and “wedge” light bulb or LED. Gluing: Use super glue or a thermal glue gun to install the new LED rings into your standard Williams style pop bumper caps. The side with the most LEDs faces the top of the cap. The side with less LEDs and the adjustable resistor screw faces the bottom of the cap (toward the playfield). **IMPORTANT: Make sure when gluing in the LED ring that the wire solder point for the 2 wires on the ring is 45 degrees from the two screw holes in the pop bumper cap.** (Fig. 1) This is necessary so when the wired cap is installed, the wires fit in the U-shaped groove of the pop bumper body.
2. Insert the “wedge connector” center lamp from the BriteRing into the pop bumper socket. At this point you can power on the machine and test the brightness. A small brightness adjustment resistor screw is on the underside of the cap and can be adjusted with a small Phillips screw driver. (Fig. 2)
3. Be sure to fit the two wires from the center lamp into the U-shaped groove of the pop bumper body. (Fig. 3) Failure to do so may result in the wires becoming damaged.
4. Set the cap back onto the pop bumper with the screw holes directly over the threads of the pop bumper body. Replace the two screws and make snug, but not over tight. If using new Jeweled caps on Bally-Williams, two longer screws may be required.
5. After initial use, the brightness setting may need to be re-adjusted due to vibrations in the popball machine.

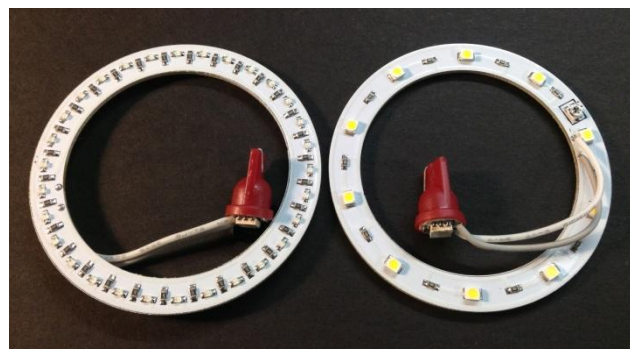
### **Power consumption comparative to an ordinary incandescent bulb:**

***Incandescent #555 lamp ~ 0.25 amps @ 6.3v AC/DC***

***BriteRing™ on FULL POWER ~ 0.17 amps @ 6.3V AC/DC***



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**TOP SIDE**

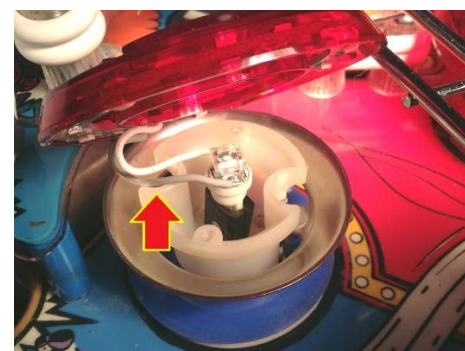
**BOTTOM SIDE**



**Fig. 1**



**Fig. 2**



**Fig. 3**