RED BLUE GREEN ORANGE YELLOW PURPLE WHITE OTHER_____

BriteButtons™

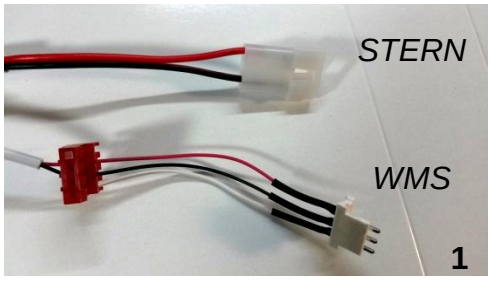
SPECIAL INSTRUCTIONS FOR MM-R, AFM-R, MB-R from Chicago Gaming Company (CGC)

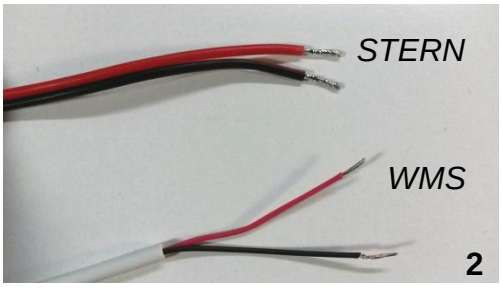
CGC CGC

Make sure your machine power is turned completely off before starting installation.

Disclaimer: As with any modification requiring power from the machine itself, these 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. The following instructions are for adapting BriteButtons flipper button LED kits for the CGC Remake games of Medieval Madness, Attack from Marks, and Monster Bash in 2015-2019. We are not responsible for any differences in design or power connection from the representations of this installation manual. Please read and check illustrations carefully before proceeding. BriteMods products are not affiliated with or endorsed by Chicago Gaming Company.

CGC CGC



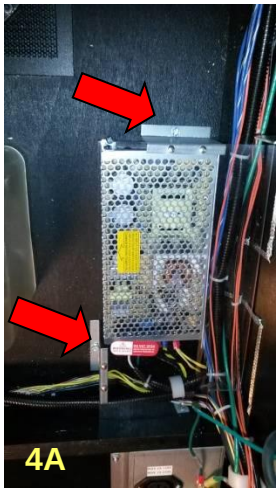


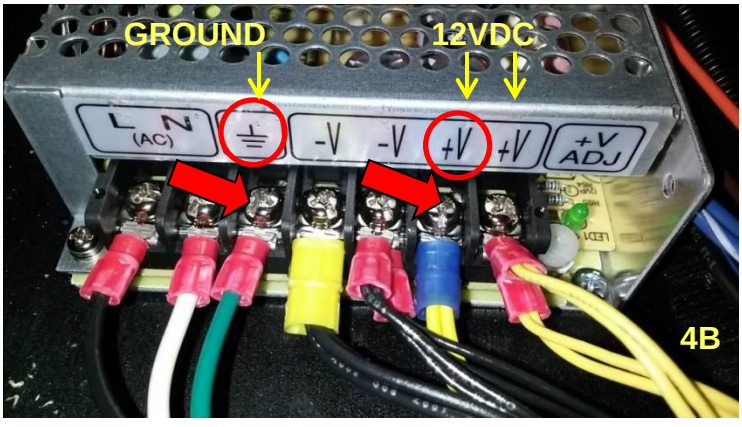
PROCEDURE

1. In order to adapt BriteButtons kits for CGC power connection, you will need to be able to cut and strip two wires, add two crimped spade connectors (recommended), identify the two screw-on power terminals in your pinball machine, and attach the wires. If you are not comfortable with performing these steps, please do not attempt without assistance. Either the BriteButtons kit for Stern SAM or for Williams WPC may be used with your CGC pinball machine. The Stern SAM kit is preferred because the wire length for power connection is optimal. Pictured are the two types of power connectors on your kit, either for STERN or WMS.

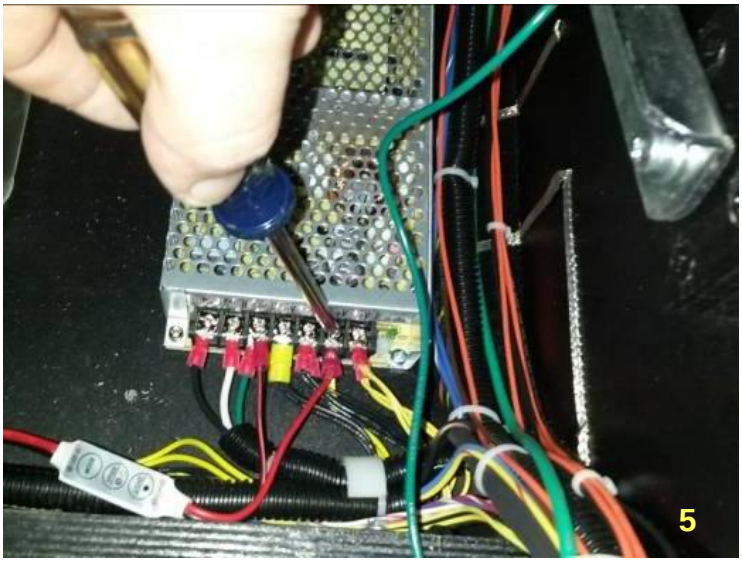
2. You will need to cut off and discard the plastic connectors that come with your kit to reveal just the red and black power wires. The ends should be stripped of insulation by about 1/3rd of an inch. Red will be for +12 Volts DC and black will be for – 12 Volts DC (ground).

3. **To connect your red and black wires from the BriteButtons to the power terminals of your CGC pinball machine, you can "tin" the stripped wire leads with a little solder, or add 22-18 spade type crimp thermals (recommended), available from your local hardware store.**

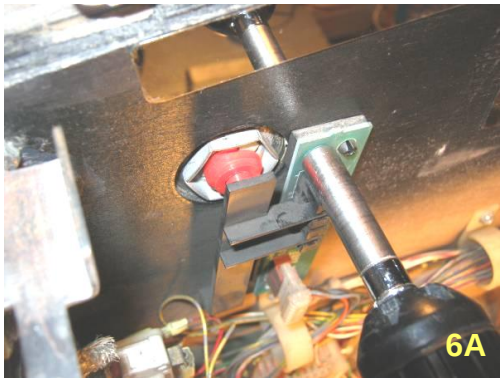


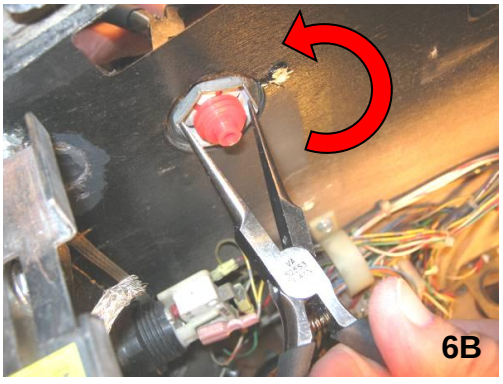


4B. **Remove the pinballs, turn off the machine, and for best safety, unplug it.** Open the coin door, remove the lock down bar, glass, and lift the playfield up and to a safe, secure position in accordance with the owners manual. Inside the base cabinet on the right side, you will see a rectangular power supply with metal screen and protective plastic over the top (picture 4A). Remove the two screws holding the plastic cover and set aside. Observe the wire terminals as shown above (picture 4B). The GROUND terminal as indicated and circled (with green wire) is where you will need to connect the BLACK wire of your BriteButtons. The 12VDC (+V) as indicated actually has two terminals. You can use either terminal, but the one circled is recommended because it has less wires connected to it. This is where you need to connect the RED wire of your BriteButtons.

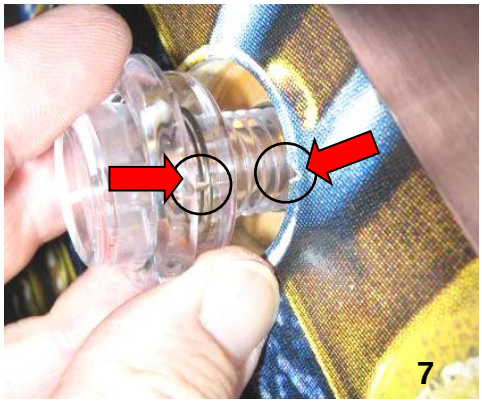


5. Once the red and black wires from the BriteButtons kit are connected to the Ground and +12V power supply terminals of your pinball machine (as illustrated) you can replace the clear plastic protective cover and two screws.

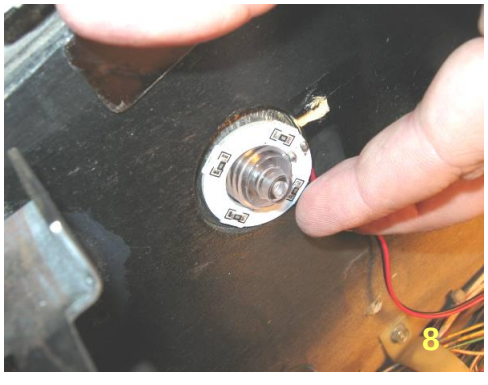




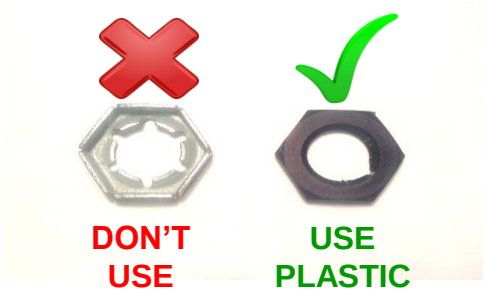
6A. Perform the following for both pairs of flipper buttons. In some cases your flipper buttons can be replaced without removing the flipper switches (opto assemblies). However, it is best practice to first remove them if possible so you can fully access the buttons without damaging the switch parts. 6B. Remove the old Pal Nut by turning counter-clockwise. If tight, small needle nose pliers can be expanded within the Pal nut rim and used to turn the nut. Remove the old flipper buttons.



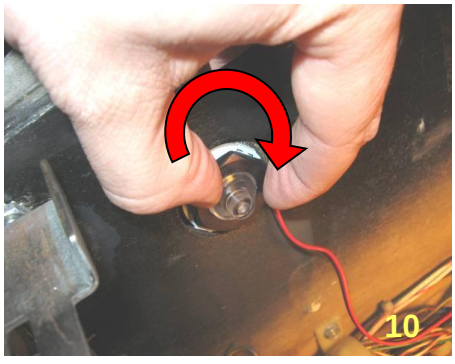
7. Fit the new, clear buttons into the cabinet flipper button holes, making sure to align the notches on the rim of the button with the notches on the cabinet hole. Some cabinets have notches that are very pronounced, others do not. The button may require a few taps in with a soft mallet if the fit is snug.



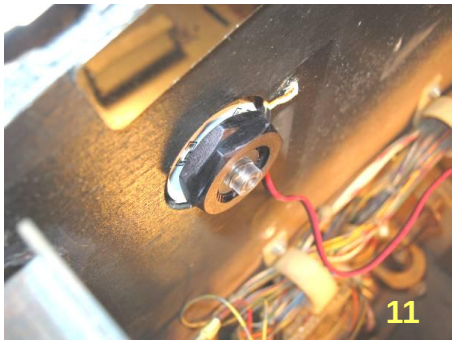
8. The LEDs are interchangeable, so either ring can be used on either side of the machine. Apply the LED ring over the shaft of the new button, making sure the 12 LEDs are facing in toward the button and the 4 resistors are facing outward toward the threads as shown.



9. It is now time to fasten the LED ring and button to the cabinet using the included PLASTIC Pal nuts. IMPORTANT: **DO NOT USE THE OLD METAL NUT TO SECURE YOUR LED BUTTON LIGHT**. The metal Pal nuts can conduct electricity and short circuit the LEDs! Only use the included plastic Pal nuts to secure your LED ring and new button.



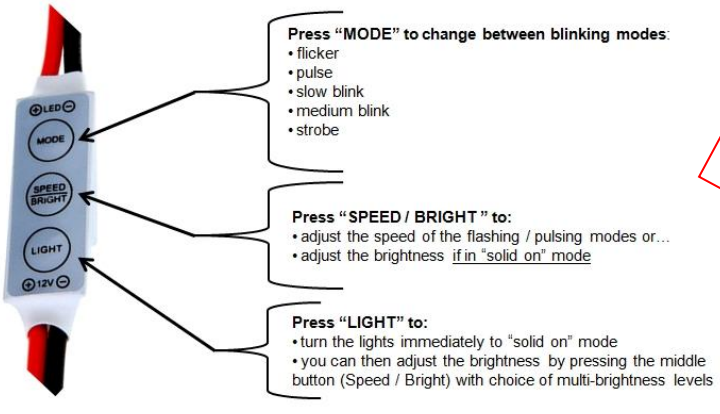
10. Apply the included plastic pal nuts to the button shafts, turning clockwise. They should be hand tight, but do not use excessive force as this can damage the LEDs. A very small amount of tightening with pliers can be used beyond hand tightening. But do not go much beyond hand tightening. The plastic nut fitment and notches in the cabinet will prevent the buttons from being loose or spinning.



11. For some machines, only one Pal nut is possible to fit on the button threads. This is due to the different countersinking depths of various wood cabinets. If two Pal nuts can fit on the button, a second set is provided and may be used to help prevent excess light leakage from the button into the cabinet. Do not over tighten.

12. You may wish to briefly power on your machine at this point to make sure your lights are working. Then power off, secure excess cabling, and close up the pinball machine. Lower the playfield and add back the pinballs. Insert the glass and lockdown bar. Your machine is now ready to enjoy with its new BriteButtons!

Operation of LED Controller



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