

# WHELEN<sup>®</sup>

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## Installation Manual for the: BLTA Traffic Advisor Lightbar

### Automotive: Serial Communication

### Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- **Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.**
- **If mounting this product requires drilling holes, the installer MUST be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.**
- **If this product is mounted with tape or Velcro™, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.**
- **Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owners manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.**
- **For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the NEGATIVE (-) battery post.**
- **If this product uses a remote device to activate or control this product, make sure that this device is located in an area that allows both the vehicle and the device to be operated safely in any driving condition.**
- **Do not attempt to activate or control this device in a hazardous driving situation.**
- **If this product contains strobe light(s), halogen light(s) or high-intensity LEDs, do not stare directly into these lights. Momentary blindness and/or eye damage could result.**
- **Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.**
- **It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.**
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

When selecting a location keep in mind: ease of operation, installation, and unobstructed visibility. The TA comes assembled with the two upper brackets of the mounting feet located inside the groove of the housing base. When assembled, the angular adjustment of the lower bracket permits the TA to be mounted on sharp angled mounting surfaces (Fig. 1).

### Installation:

Do not connect the TA to power until installation is completed.

1. Remove the two lower brackets of the mounting feet from the mounting kit and secure them to the upper brackets with the supplied hardware.
2. Slide the mounting feet in the desired position inside the groove, and secure them with the phillips machine screws and hardware supplied. (Fig. 1)
3. Slightly loosen the hex nuts holding the upper and lower brackets together and place the light array assembly in the desired position on the mounting surface. Adjust the lower brackets of the mounting feet to rest on a firm surface. Trace the outline of these brackets on that surface. Also, if the power cable (customer supplied) is to run inside the mounting surface, mark the location of its passage hole.
4. Remove the light array assembly from the mounting surface and remove the lower brackets of the mounting feet from the upper brackets. Align these brackets with the outlines traced in the previous step. Trace the mounting hole locations on the mounting surface.

**Note: Make sure that the lower bracket is facing in the same direction as it was facing, when it was outlined on the mounting surface as indicated in step 3.**

5. Examine the back side of the mounting surface to insure that no damage will occur when drilling the mounting

holes. Drill the mounting holes with a 7/32" drill. Also at this time, if the power cable is to be installed inside mounting surface, drill the power cable passage hole.

6. Mount the lower brackets on the mounting surface with the hardware supplied, in the order shown in figure 1.
7. Lower the light array assembly onto the two lower brackets secured to the mounting surface. Fit the upper brackets located on the light array assembly against the lower brackets. Secure both brackets together with the supplied hardware in the same order as indicated in figure 1. Before tightening the upper and lower brackets together, rotate the light array assembly as desired.

**Note: There are two holes that can be used when assembling lower and upper brackets together, to position the light array assembly at two different heights (Fig. 1)**

8. Slide power cable through passage hole in mounting surface and route it from the light array location to the area selected for the controls. Holes to be drilled in metal surfaces to serve as cable passages should be deburred, and avoid sharp bends in the cable at the corners.
9. On the cable exit end of the light array, remove the end cap from the housing base. Pull the 5 wires connected to the P.C. board assembly, and protruding from the cable exit hole, back inside the housing base. (Fig. 4) Insert the 5 conductor power cable through cable exit hole inside the housing base and crimp to these the 5 wires observing color coding. Secure power cable with strain relief, and remount end cap on the TA.
10. Connect the system to the power source and test. (See Wiring Diagram Pg. 4)

**WARNING! When servicing or trouble shooting the TA always disconnect it from the power source.**

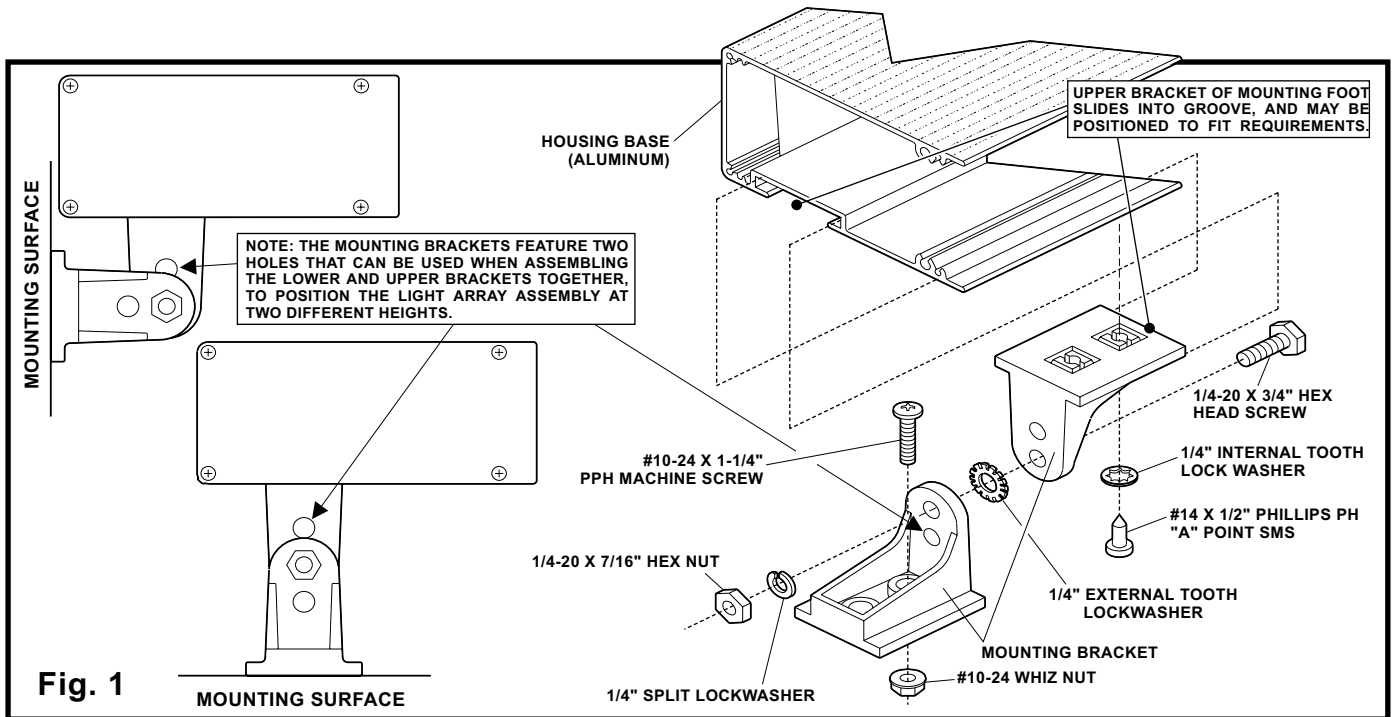
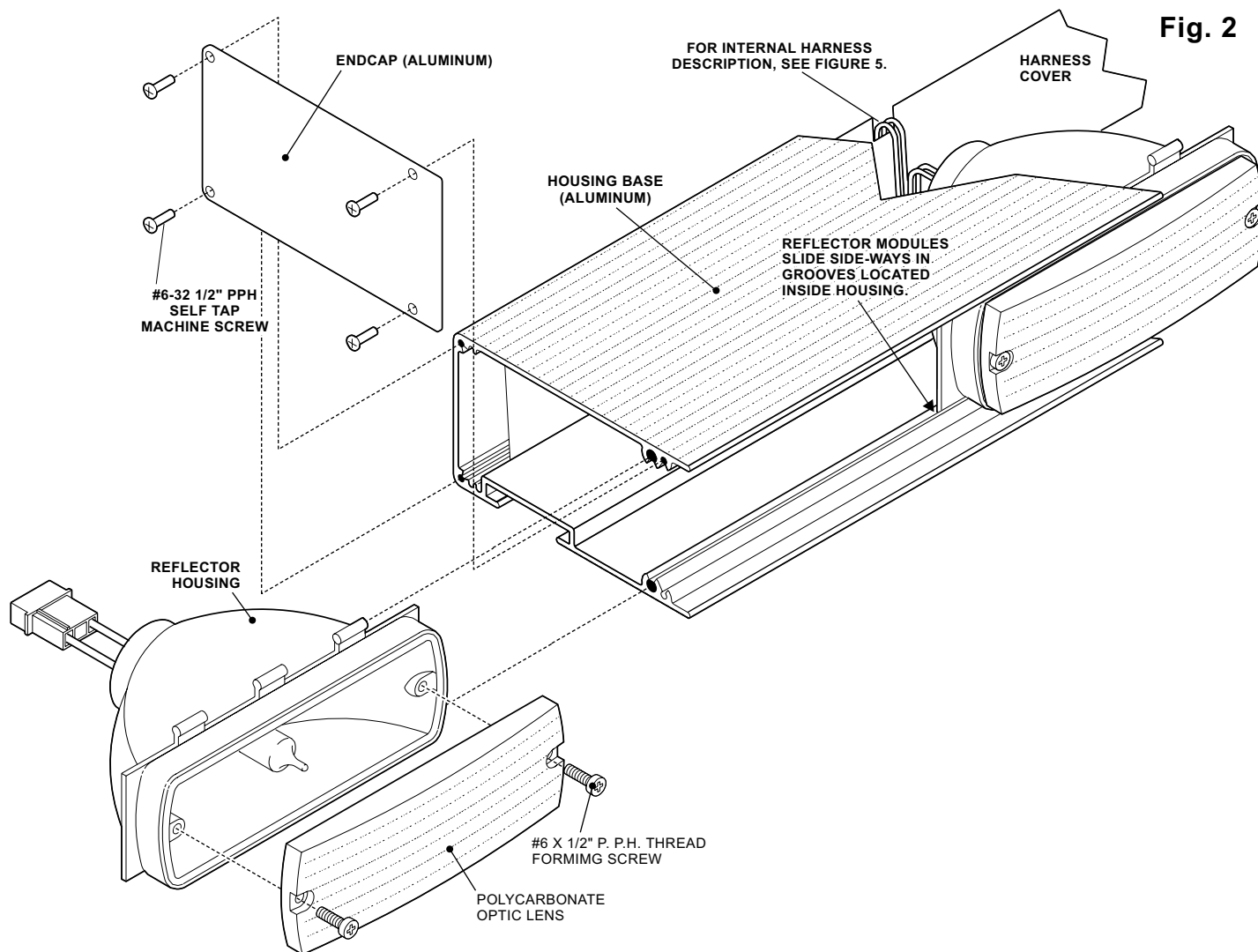


Fig. 1

**Fig. 2**

### ***Servicing the Light Array:***

**Disconnect the lightbar from the power source.** Remove the end cap, and the reflector modules can be slid from the housing base by disconnecting them from the internal wire harness located in the back of the housing base, and replaced if needed (Fig. 2).

**IMPORTANT NOTE: REPLACE LAMPS ONE AT A TIME ONLY!** If more than one light is removed from the unit without being replaced, the cable harness will shift and the socket connectors will be inaccessible.

1. Remove the two lens screws and remove the lens.

**Caution: To avoid personal injury, do not attempt to replace the lamp with your fingers! Use the lamp replacement tool supplied with spare lamp kits.**

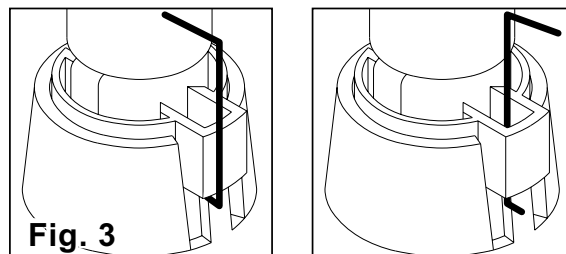
**Caution: Replacing any bulb requires the use of safety glasses to prevent injury! Do not handle the bulb with bare hands. Use gloves**

2. Be sure the power is turned off. Locate the removal tool included with your new bulb. Use the small end of the tool to lift the base of the bulb assembly away from the socket

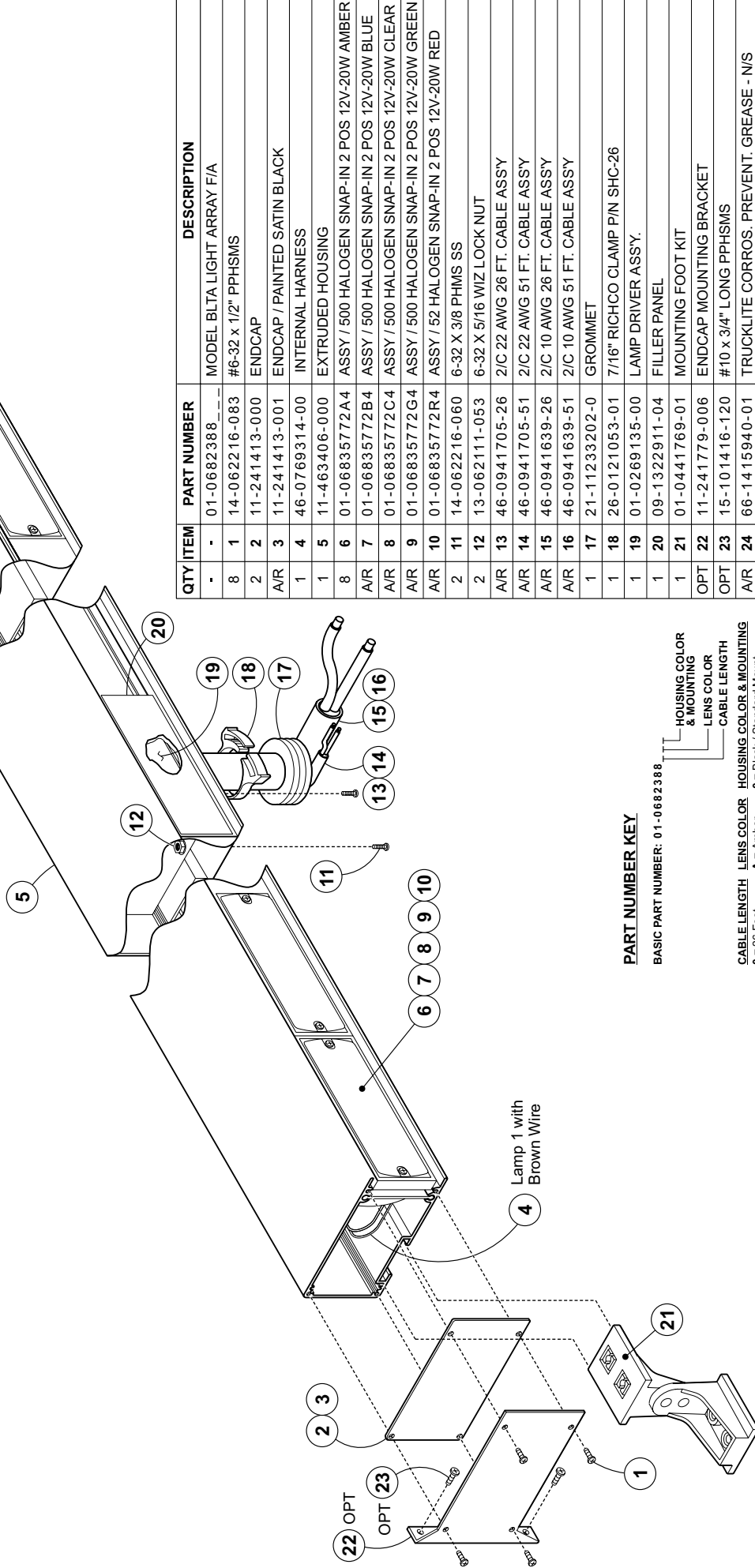
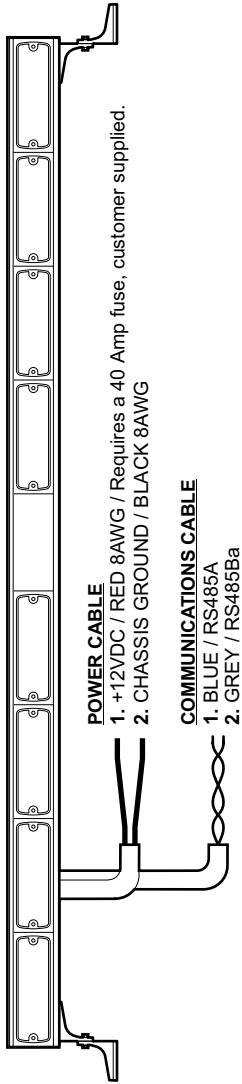
until the bulb is free. Use either of the methods in figure 3 for best results, depending upon application. Use a pliers to hold the tool and aid bulb removal.

3. Insert the alignment tab of the new bulb into the bulb holder and press firmly into socket to lock the new bulb into place.
4. Wipe any finger prints from the glass bulb with a soft cloth or tissue. Replace lens and lens retaining screws.

**Caution: As not to crack the optic lens near the mounting holes, use hand held screw driver and tighten both retaining screws evenly.**

**Fig. 3**

# BLTA WIRING DIAGRAM



QTY	ITEM	PART NUMBER	DESCRIPTION
-	-	01-0682388	MODEL BLTA LIGHT ARRAY F/A
8	1	14-062216-083	#6-32 x 1/2" PPHSMS
2	2	11-241413-000	ENDCAP
A/R	3	11-241413-001	ENDCAP / PAINTED SATIN BLACK
1	4	46-0769314-00	INTERNAL HARNESS
1	5	11-463406-000	EXTRUDED HOUSING
8	6	01-06835772A4	ASSY / 500 HALOGEN SNAP-IN 2 POS 12V-20W AMBER
A/R	7	01-06835772B4	ASSY / 500 HALOGEN SNAP-IN 2 POS 12V-20W BLUE
A/R	8	01-06835772C4	ASSY / 500 HALOGEN SNAP-IN 2 POS 12V-20W CLEAR
A/R	9	01-06835772G4	ASSY / 500 HALOGEN SNAP-IN 2 POS 12V-20W GREEN
A/R	10	01-06835772R4	ASSY / 52 HALOGEN SNAP-IN 2 POS 12V-20W RED
2	11	14-062216-060	6-32 X 3/8 PHMS SS
2	12	13-062111-053	6-32 X 5/16 WIZ LOCK NUT
A/R	13	46-0941705-26	2/C 22 AWG 26 FT. CABLE ASSY
A/R	14	46-0941705-51	2/C 22 AWG 51 FT. CABLE ASSY
A/R	15	46-0941639-26	2/C 10 AWG 26 FT. CABLE ASSY
A/R	16	46-0941639-51	2/C 10 AWG 51 FT. CABLE ASSY
1	17	21-11233202-0	GROMMET
1	18	26-0121053-01	7/16" RICHCO CLAMP P/N SHC-26
1	19	01-0269135-00	LAMP DRIVER ASSY.
1	20	09-1322911-04	FILLER PANEL
1	21	01-0441769-01	MOUNTING FOOT KIT
OPT	22	11-241779-006	ENDCAP MOUNTING BRACKET
OPT	23	15-101416-120	#10 x 3/4" LONG PPHSMS
A/R	24	66-1415940-01	TRUCKLITE CORROS. PREVENT. GREASE - N/S
1	25	39-0402023-04	AMP 2 POS SOCKET CONNECTOR / N/S
2	26	39-9601B03-14	AMP INNERGY HOUSING #556137-2 / N/S
2	27	39-9600336-34	12-10 AWG AMP CONTACT #556136-2 / N/S

## PART NUMBER KEY

BASIC PART NUMBER: 01-0682388

HOUSING COLOR & MOUNTING  
 LENS COLOR  
 CABLE LENGTH

CABLE LENGTH    LENS COLOR    HOUSING COLOR & MOUNTING  
 0 = 26 Feet    A = Amber    0 = Black / Standard Mount  
 1 = 51 Feet    B = Blue    1 = Black (Optional) / End Mount  
                   C = Clear    G = Green  
                   R = Red