

CL Series



Effective December 2019 This guide supersedes all previous versions

MODELS COVERED:
CL605
CL607
CL611
CL615

1-800-797-7974 www.CommandLight.com

3842 Redman Drive Fort Collins, CO 80524

THANK YOU

Please allow us to express a simple thank you for investing in a *COMMAND LIGHT* product. As a company we are dedicated to producing the very best and most versatile flood lighting package available. We take great pride in the quality of our work and hope that you will find many years of satisfaction from the use of this equipment.

Should you have any problems with your product please do not hesitate to contact us.

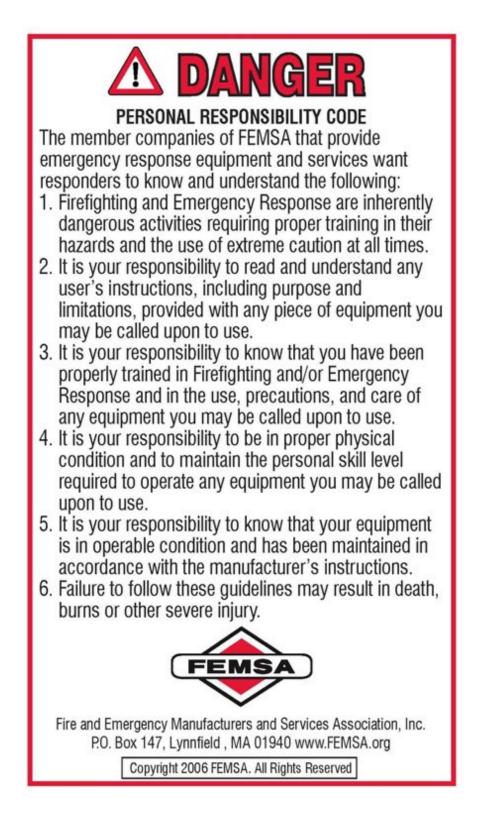
COMMAND LIGHT

3842 Redman Drive Fort Collins, CO 80524

 PHONE:
 1-800-797-7974

 FAX:
 1-970-297-7099

 WEB:
 www.CommandLight.com



Please take the time to read this manual before installing or operating the COMMAND LIGHT.

Save this guide for future reference.

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Command Light 3842 Redman Drive Fort Collins, CO 80524 PHONE: FAX: WEB:

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LIMITED WARRANTY Five Year

COMMAND LIGHT warrants that the equipment is free from defects in materials and workmanship when used and operated for a period of five years. The responsibility of **COMMAND LIGHT** under this limited warranty is limited to the repair and replacement of any parts found defective. Parts must be returned to **COMMAND LIGHT** at 3842 Redman Drive, Ft Collins, Colorado 80524 with transportation charges prepaid (**C.O.D. shipments will not be accepted**).

Prior to returning defective parts to *COMMAND LIGHT*, the original purchaser shall make a claim in writing to *COMMAND LIGHT* at the above address indicating the model number, serial number and type of defect. No parts or equipment will be received by *COMMAND LIGHT* for repair or replacement under this warranty without specific written authority from it in advance.

Any parts damaged by improper installation, overloading, abuse or accident of any type or cause are not covered by this warranty.

All equipment manufactured by us is tested before leaving our plant, and is shipped in good working order and condition. We therefore extend to the original purchasers the following Limited Warranty for the period of five years from the original date of purchase:

- 1. This warranty does not apply to defects caused by accident, misuse, neglect, or wear and tear, nor can we be held responsible for incidental and consequential expense and loss, nor does this warranty apply to equipment where alterations have been executed without our knowledge or consent. These conditions are readily discernable when the equipment is returned to us for inspection.
- 2. On all component parts not manufactured by *COMMAND LIGHT*, their warranty is to the extent that the manufacturer of such component warrants them to *COMMAND LIGHT*, if at all. Look in your local business telephone directory for the nearest repair station for the brand of parts you have or write to us for the address.
- 3. If equipment received has been damaged in transit, a claim should be made against the carrier within three days, as we assume no responsibility for such damage.
- 4. Any service other than our Authorized Service voids this warranty.
- This warranty is in lieu of and is intended to exclude all other warranties, express or implied, oral or written, including any warranties of <u>MERCHANTIBILITY</u> or <u>FITNESS</u> for a particular purpose.
- 6. Travel time is paid at a maximum of 50% and only if pre-approved.

Warranty/Service

COMMAND LIGHT products* come with a industry leading 5 year warranty against any defects in materials and workmanship when used and operated for a period of five years. If during this time period, you have any malfunctions not related to misuse, accident, neglect, or normal wear and tear, please take the following steps in order to have your light tower serviced under **COMMAND LIGHT's** warranty.

- 1. Contact us immediately for initial diagnosis and parts if needed at 800-797-7974 or info@commandlight.com
- 2. You will need to have immediate access to light tower. This process can be done by individuals with little mechanical ability. (Involves pushing buttons and telling us what the light tower is doing or not doing)
- 3. We then send parts (if needed) and have a technician dispatched (if needed) with a written work authorization number and a base amount of hours allotted to do repair
- 4. We remain available for service support via phone, email, or video conference while technician completes repair, also to extend original time allotted if additional issue arise
- 5. Mark repair as completed and validate the work authorization number for hours of labor / travel rates as agreed during diagnosis

6. Finally, we will pay out or credit the invoice when we receive it from person/company performing the repair Please make contact with us as soon as problems arise in order to execute our warranty. We must have knowledge of the issue and a work order in place in order to pay or reimburse the department with the issue. Any unauthorized service voids this warranty. (No work is authorized until the call is made to us)

Contact Us Early – before any work is done – We'd love to help!

*excludes light producing components (bulbs, lasers, LEDs) These components come with their own manufacturer warranty. Contact us and we can help get it.

Breakage or Damage During Shipment

The transportation company is fully responsible for all shipping damage and will resolve problems promptly if you handle it correctly. Please read these instructions carefully.

Examine the contents of all shipping cases. If you find any damage, call your transportation agent at once and have them make a description on the freight or express bill describing the damage and the number of pieces. Then contact us and we will send you the original bill of lading. Also promptly contact the transportation company and follow their procedure for filing a claim. Each company will have a unique procedure to follow.

Please note, we cannot and will not enter claims for damages. If we filed claim here, it would be sent to your local freight agent for verification and investigation. This time can be saved by you filing the claim directly. Every consignee is on the ground floor, in contact with the local agent who inspects the damaged goods, and thus, each claim can be given individual attention.

Since our goods are packed to comply with the regulations of all railroad, truck, and express companies, we cannot allow deduction from any invoice because of any damage, however, be sure to file your claim promptly. Our goods are sold F.O.B. factory. We take receipt from the transportation company certifying that the goods were delivered to them in good order and our responsibility ceases.

It is seldom that any breakage or damage occurs in any of our shipments and in no case will the customer be out any expense if they follow the above instructions.

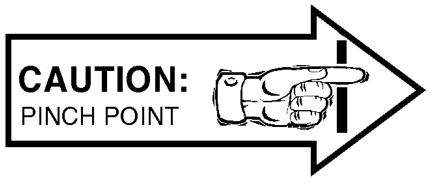
Be sure to keep all damaged goods subject to examination of the truck or express company inspector, who may call on you some time later. These damaged goods, of course, will belong to them, and they will inform you what to do with them. If you dispose of these damaged goods, your claim may not be paid.

Product Safety Precautions

- Never operate the COMMAND LIGHT near overhead high voltage power lines. The COMMAND LIGHT is manufactured from electrically conductive materials.
- Do not use the *COMMAND LIGHT* for uses other than its intended purpose.



- ◎ Do not move emergency vehicle with the light extended. Visually verify that the light is completely nested before moving vehicle.
- Do not change light position while people are located within its operating envelope. There are numerous pinch points that can cause serious bodily injury.
- ♥ Do not use a high-pressure washer or subject the light to high volumes of water when cleaning.
- ◎ Never use the *COMMAND LIGHT* as a lifting device or mobile arm.
- ◎ Do not use a *COMMAND LIGHT* that has been damaged or is not fully functional, including non-working indicator lamps.
- ◎ Never hold any part of the *COMMAND LIGHT* with a hand or foot while it is in motion.
- ◎ The *COMMAND LIGHT* has numerous pinch points. Keep loose clothing, hands and feet clear of moving parts.



General Description and Specifications

The *Command Light* is designed to provide high intensity emergency scene lighting with quick precision. As with any electromechanical device, take precautionary steps to assure safe operation.



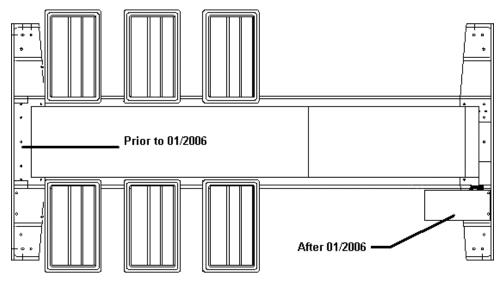
Never operate the COMMAND LIGHT near overhead power lines.

There are several standard lighting options available for the COMMAND LIGHT

Model #	Description	Minimum Power Requirements
CL605	6 x 500 watts	3KW, 110 or 240 VAC
CL607	6 x 750 watts	5KW,110 or 240VAC
CL611	6 x 1000 watts	6KW, 240 VAC
CL615	6 x 1500 watts	9KW, 240 VAC

The emergency vehicle generator provides power for the 110/240 VAC circuitry. All mechanical actuation is powered by an internal power supply. The umbilical corded control unit is powered via 12 VDC eliminating hazardous voltage levels within the hand held control box.

The *COMMAND LIGHT* is manufactured to provide years of service with a minimum of maintenance.



SERIAL NUMBER LOCATION

Operation

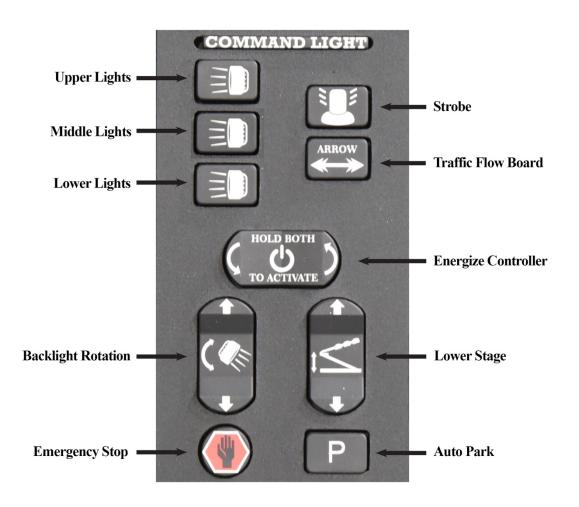
Raising the light from the nested position

Using the control box, raise the lower or upper stage. You may also activate both stages simultaneously. Control switches are of momentary action style and must be held in the "on" position to actuate the stages.

The *COMMAND LIGHT* has an override system that precludes rotation of the upper stage until the lower stage has elevated approximately 16" from the nested position. When the lower stage is below 16" the following conditions exist:

- Upper stage is prevented from rotating.
- All lights are turned off, including strobe light if equipped, regardless of light switch activations.
- Prevents the upper stage from moving down if upper stage is not centered.

If the supply from the generator is marginal, position the *COMMAND LIGHT* before turning on lights.



Returning the light to the nested position

The *COMMAND LIGHT* is equipped with an Autopark function as a standard feature. The "P" on the control box initiates the Autopark sequence. Once initiated, the "Emergency Stop" red button indicator is illuminated. Pressing the "Emergency Stop" button will cancel the Autopark sequence.

Autopark Sequence

Press "P" button on the controller once. It does not need to be held in position. The Autopark sequence begins:

- 1. "Emergency Stop" light is illuminated.
- 2. Lamps are extinguished.
- 3. Upper stage begins rotation to the center position. If equipped with back light option, back light begins rotation and returns to the home position.
- 4. Once upper stage is centered, rotation stops, lower stage begins retracting.
- 5. After lower stage has fully retracted, upper stage begins retracting. Upon upper stage retracting fully, "Emergency Stop" light turns off. Controller will need to be re-energized after "Emergency Stop" or nest is activated.

Installation

The *COMMAND LIGHT* must be installed by a designated installation facility by qualified personnel only. All safety precautions must be thoroughly understood before installation. Please consult the factory for additional installation information assistance.

Installation Kit

Included with the *COMMAND LIGHT* is an installation kit. Verify that the kit contains the following items:

- (1) 50 feet of 8GA-4 Conductor power cable
- (1) Pre-wired HOLSTER BOX w/cover
- (1) Lifting sling

- (1) 50 feet of 22GA-20 conductor cable
- (1) Handheld Controller

- (1) 2111119 51119
- (1) Small hardware parts bag with:
 - (4) mounting spacers
 - (4) $\frac{3}{8}$ -16 nylon lock nuts
 - (4) large diameter flat washers
 - (4) $\frac{1}{4}$ flat washers
 - (1) $\frac{1}{2}$ 90° sealing connector w/nut
 - (4) screw pin clevis

- (4) $\frac{3}{8}$ -16 X 2 $\frac{1}{2}''$ bolts
- (8) $\frac{3}{8}''$ flat washers
- (2) $^{1}\!\!/_{4}$ -20 X $^{5}\!\!/_{8}{}''$ Phillips pan head machine screws
- (2) $\frac{1}{4}$ -20 nylon lock nuts
- (1) $1'' 90^\circ$ sealing connector w/nut

Tools Required

Lifting device (crane, forklift, block and tackle, etc.)

Sling for lifting (included with light)

Drill

 $\frac{3}{8}$, $\frac{17}{64}$ drill bits

Hole punch for metal with ⁷/₈ and ¹⁷/₆₄ diameter capacity Phillips head screwdriver, #2

COMMAND LIGHT flat blade screwdriver (included with light)

 $9_{16}^{"}$ and $1_{2}^{"}$ combination wrenches and/or ratchet and $9_{16}^{"}$ and $1_{2}^{"}$ sockets

8" adjustable wrench Tongue and Groove Pliers

Wire stripper or razor blade knife Solder-less wire connector crimp tool

Silicone based gasket sealer, RTVTM recommended

Installation Notes

The *COMMAND LIGHT* weighs approximately 300 pounds. Use mechanical assistance to lift the light into installation position such as a forklift or crane.

Use the provided sling to grasp the light.

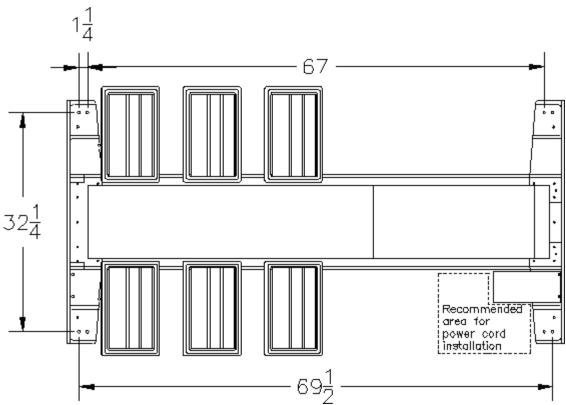
Use the provided fender washers under the mounting surface to distribute the weight load evenly.

When routing the connecting electrical wires take care to avoid sharp bends, hot components or other hazards to the wire.

The *COMMAND LIGHT* is not designed to be operated in a raised position while the vehicle is in motion. The *COMMAND LIGHT* includes warning circuit wiring to enable a warning device.

Location Requirements

The standard *COMMAND LIGHT Models 605,607,611,615* can be mounted on any location that is 73" x 36". The surface should be flat or have only a slight crown. For a recessed installation allow for a minimum of 86" x 48". Consult with factory before construction of recessed installation. Verify all dimensions before installation to assure proper operation of light will not infringe on other installed components. For all other installations refer to the dimensional drawing included in the beginning pages of this guide that represents your particular model of light. The drawings reflect the dimensions of the "working envelope" of a typical light. Make certain sufficient clearances are incorporated in your installation to allow for variations (vehicle body flex, environmental conditions, future servicing needs, etc.) If your light is not represented, call the factory prior to beginning any construction of a recessed installation.



Four mounting bolt holes are required. Eight holes are provided to allow the installer to avoid obstructions when mounting the light. Additional holes may be drilled in the frame ends if necessary to clear obstructions.

Access holes for the power cord cabling should be in close proximity to the entrance box on the light. Installing the cords with a sweeping 90° or 180° bend will provide better results.

The control box holster should be mounted in an area shielded from the weather. Allow a minimum of 10" clearance above the control box holster mounting location for easy access to the controller.

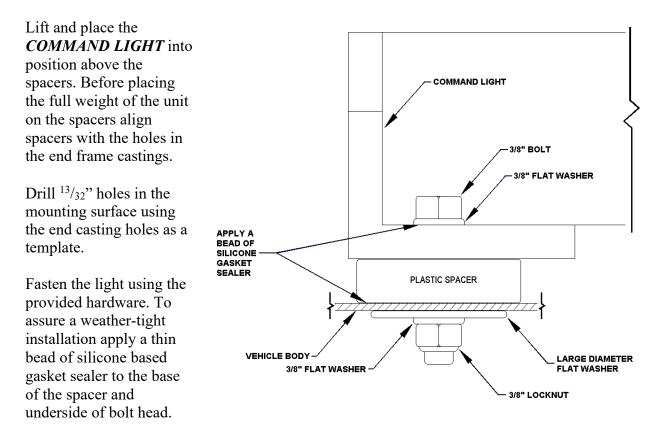
Mounting

Place the provided spacers in the location of the light mounting holes. The spacers may be modified to conform to the contour of the mounting location.

Remove any obstructions below the mounting surface such as headliners.

Attach any necessary lifting attachments to the *COMMAND LIGHT*. The center of gravity (balance point) is slightly behind the lower bank of lights.

Slowly lift the *COMMAND LIGHT* and check for balanced lifting. Lower and make any necessary adjustments to the lift points.



Remove any lifting straps and devices from the COMMAND LIGHT.

Locate and drill the wire feed holes. Control Box Holster Mounting Using the holster as a template, mark hole locations. Drill ¹⁷/₆₄" mounting holes.

Drill any holes required to route the control wire from the control box to the *COMMAND LIGHT* unit. Mount holster box with provided hardware.

Electrical Wiring

Please Note: Detailed internal wiring schematic for the light is found in the supplement pages found at the end of this document.

Run the control wire from the control box holster to the COMMAND LIGHT.

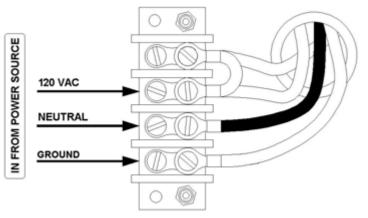
Run the power wire from the breaker box or generator to the COMMAND LIGHT.

Make the control connections in the *COMMAND LIGHT* entrance box. To simplify installation, remove the connector hold down screws and pull the connector out of the box slightly.

The Model 605/607 series *COMMAND LIGHT* comes pre-wired to connect to 120 VAC. A 40 Amp breaker is recommended.

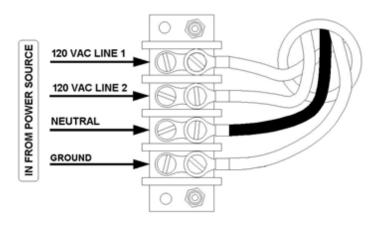
The Model 611/615 series *COMMAND LIGHT* comes pre-wired to connect to 240 VAC. A 50 Amp breaker is recommended.

120 VAC Wiring Diagram



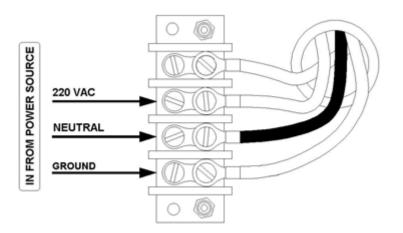
240 VAC Wiring Diagram

If 240 VAC operation is desired, remove the jumper wire between the red and black leads.



220 VAC European

If the light tower is ordered with 220 VAC (Single Hot Leg) wiring, only use a single hot conductor from the power source, the other is not needed.



Holster Wiring

Determine if an elevated warning device will be used in conjunction with the light tower. If a warning device will be used, use the wiring diagram on the next page, otherwise, use the wiring diagram in the back of the user guide.

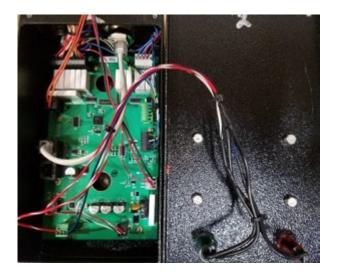
After routing the control cable into the holster through the sealing connector, attach individual wires to the provided connectors and insert the connectors into the proper ports on the circuit board

Warning Device Installation

Tools Required:

- ³/₃₂" Flathead Screwdriver
- Wire Strippers
- Small Torch or Lighter

Wire the gray 22-20 control cable wires to the small connectors using the wiring schematics provided. There are 2 different schematics, one is the standard version and the other is the version for dual control with wireless controllers or V-Mux control. The standard schematic will be used for V-Mux or any other multiplex system if it is only being used for elevated warning. A V-Mux wiring schematic and circuit board troubleshooting guide are included.



Detaching & Attaching the Controller

1.) Loosen the small nut.

2.) Loosen the large nut.



3.) Gently slide the connector away from the holster.

4.) Disconnect the cable by pressing down on the tab and pulling.



Make sure the tab on the ethernet (CAT 5) connector is in the slot before attaching the cord. Lock the large nut, make sure the ethernet cord is pushed all the way in, lastly tighten the small nut onto the cord.

Maintenance

Bulb Replacement

Tools required: Clean oil-free cloth, Cleaning alcohol

Replacement bulbs:

Model 605 bulbs 500 watt, Q500T3/CL Model 607 bulbs 750 watt, Q750T3/4CL Model 611 bulbs 1000 watt, Q1000T3/CL Model 615 bulbs 1500 watt, Q1500T3/CL

Bulbs are available from General Electric, Sylvania, Phillips, Grainger or direct from *COMMAND LIGHT*.

Position lamp tree so lamps are readily accessible. This is usually with the lower stage in the retracted position and the upper stage extended to 90°.

Disconnect the power supply from the *COMMAND LIGHT*. Allow sufficient time for lamps to cool. The surrounding metal lamp housing can cause serious burns.

Caution: Be certain that the bulb is cool to the touch before handling. Do not touch the bulb directly. Use a clean oil-free towel to handle the bulb. Handling the bulbs directly leaves minute traces of skin oils that cause localized hot spots that can lead to early bulb failure. Bulb surfaces may be cleaned with alcohol.

Latch the bezel making sure that the weather stripping is properly fitted. Weather stripping must be properly installed to ensure lamp water tightness.

Cleaning

The *COMMAND LIGHT* is constructed with corrosion resistant aluminum and stainless steel fasteners. To further enhance corrosion resistance all exposed surfaces receive a powder coated paint finish. To assure years of trouble free service periodically clean all external surfaces with a mild detergent solution and a gentle spray of water. **DO NOT USE A HIGH-PRESSURE WASHER**, which will force water into sensitive electric circuitry.

Lamp lenses may be cleaned with any commercially available glass cleaner.

Upper and lower stage actuators are sealed units and do not require adjustment or lubrication. The actuators have internal limit switches at each end of the stroke. The actuators should not be made to ratchet excessively, this can lead to premature actuator clutch failure.

All pivot points on the *COMMAND LIGHT* are self-lubricating thermal polymer. Periodic cleaning with a moisture displacing cleaner and soft bristle brush, without disassembly, to remove accumulated dirt and debris will minimize wear.

Rotation Motor Replacement

1.) Raise the lamp tree fully. Loosen the center switch screw. Take off the midplate covers. Carefully remove the smaller cover, maneuvering around the Turck sensor and wire.

2.) Loosen the motor screws enough to slide back and forth. Rotate the upper lamp tree and locate the master link in the rotation chain. Position the master link to an available and comfortable place to remove. Once disconnected, remove chain.

Note:

The upper lamp tree will now rotate freely.

3.) Using a ³/₃₂ allen wrench, Remove the two set screws in the small sprocket. Gently pull off the small sprocket.

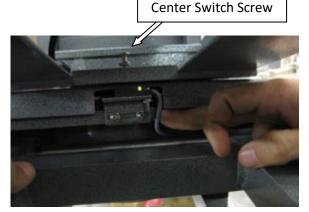
4.) Remove the bottom motor box cover. Carefully pull out the pole strip and all connected wires.

5.) Follow the two motor wires down to the pole strip and disconnect. Brown wire (negative) red/white wire (Positive).

Note:

The same wires that come off the old motor will be the same wires you use for the new rotation motor.

Swap the wires from the old motor to the new motor. Now the new motor can be installed.









6.)Attach the wires to the new motor (the brown is negative and the red/white is positive) and connect them to the pole strip. Place the motor back into the housing and screw in all four screws. Rotate the motor so the key stock slot is facing you.

7.) Place the small sprocket back on the motor and put in the keystock. Use blue Loctite on the set screws tightening them as much as possible.

8.) If not already, loosen up the four motor screws to let the motor slip for adjustment. Wrap the chain back around the sprockets bringing the ends together.

Note:

Be sure the half-link is on the right hand side with the small cotter pin facing upwards.

9.) Using a small pry bar or a screw driver, put pressure on the small sprocket pushing it away and tightening the chain. Tighten down the four motor screws.

10.) Now the bottom box cover can be put back on after placing all the wires back in place. The mid plate covers can now be put back on also.

Note:

After motor replacement is completed, the center switch and the safety switch will need to be adjusted.



Center Switch Adjustment

Exercise caution when performing the following procedure. There are numerous pinch points that can cause severe injury. Adjustment should be performed by qualified personnel.

- 1. Raise lamp tree fully. Raise lower stage enough to comfortably work on. Verify lower stage is above the safety limit, lamps can be illuminated.
- 2. Visually inspect the screw on the rotation platform to be sure it is activating the Turck sensor. The green light on the sensor indicates it has power. The orange light indicates the sensor is activated.
- 3. Rotate off center. Activate Autopark and let light tower proceed through sequence until the lamp tree is a couple inches above the nested position, hit Emergency Stop.
- 4. Visually determine which side the lamp tree will be hitting the nest pad.
- 5. Raise lower section above safety limit and to comfortable working height.
- 6. Loosen screws on center switch bracket slightly.
- 7. Tap center switch bracket slightly toward the side that the lamp tree is hitting on.
- 8. Fully tighten the screws holding the center switch bracket.
- 9. Raise lamp tree all the way up, rotate off center.
- 10. Press the Autopark button and let light tower proceed through sequence until the lamp tree is a couple inches above the nested position, hit Emergency Stop.
- 11. If it looks like center is now adjusted properly, raise light tower all the way up one last time and press Autopark and let it go through the entire sequence.
- 12. If it is still hitting off center, repeat steps 3-11. If problems adjusting center still persist you may need to adjust the height on the set screw, or call Command Light at 1-800-797-7974 to order a new switch part number 065-12884.

Light Tower is Not Finding Center

- 1. Visually check to see if the orange indicator light is activating with metal in proximity and that the green light is on constantly.
- 2. Check continuity of white/black wire in relay box to the connection point in the box below the mid plate. White/black should connect to the black wire from the Turck sensor.

Power Failure

The *COMMAND LIGHT* can be retracted manually if power to the unit is lost. If power loss is temporary, reestablishing power may be easier than manually retracting the light.

Disconnect power source from the COMMAND LIGHT.

Rotate to center

Slowly apply pressure to the rotation platform to manually rotate to the centered position. Trying to rotate the platform too quickly or with too much pressure can break the rotation motor shaft. Be certain that you rotate the platform in the proper direction. The upper stage can rotate a full 360°. Generally you need to rotate the platform in the direction that requires the least amount of travel in order to center the platform.

*Retract The Lower Stage First

Locate the silver plug located on lower actuator below the lower actuator's motor. Use the provided hex tool to remove silver plug. Be sure to not lose this plug. Use the same hex tool inserted into the opening to drive the internal gears of the actuator. Be sure to replace the silver plug after this actuator is fully retracted

Retract The Upper Stage

To access the upper actuator mechanism it is necessary to remove the main cover. Remove the 16 screws using a #2 Phillips head screwdriver. There are 12 screws on top and 2 on either end of the main cover. Use the same hex bit and method as above in "*Retract The Lower Stage First*" to retract the upper actuator.

Backlight

*Slowly apply pressure to align lower lights with the fixed ones.

Troubleshooting

Problem	Possible Cause	Solution
Unit will not extend	No power to the unit	Check power input
		connections.
	Incorrect installation	Refer to installation
		instructions.
Upper stage will not rotate	Lower stage not raised above 16"	Raise lower stage higher.
	Rotation motor failure.	Consult with factory.
Lights will not illuminate.	Lower stage not raised above 16"	Raise lower stage higher.
	Circuit breaker tripped.	Check circuit breaker at power supply.
	No power to the unit.	Check power supply operation/output.
	Lamp filament broken.	Replace lamp.
Rotation coasts after switch is released	Drive chain out of adjustment	Adjust chain to provide no more than ¼" slack
Unit will not nest	Upper stage not centered	Raise lower stage higher than 16". Center upper stag (green light illuminated)
	Unit being operated on a slope >10°	Lower upper stage to horizontal. Using a pike pole, hold unit level while lowering to nest position.
Autopark button must be held in to park unit	Improper or faulty ground	Check nest sensor for power and activation. Test red/green wire for 12VDC
	Water in electronics	Remove moisture from ground points and electronics. Do not use a pressure washer to clean unit.
Upper Act. & Rotation Start at the same time	Check down limit sensor.	Contact factory for replacement part.
Wires on back light	Check for 90 degree sealing	Contact factory for
catching	connector on lamp tree.	replacement part.
No lights or rotation	Check safety limit switch, bad, etc.	Contact factory for replacement part.
Autoparking off Center	Center switch out of adjustment	Refer to instructions on page
Popping noise coming from back light	Drive belt loose, switch hoods stuck, faulty rotation relay.	Adjust belt for minimal play. Replace switch hood



PWR AND ERROR LED GUIDE BOARD REV 5. MAIN BOARD 5.3, FIRMWARE 4

ON OFF	READY TO GO
PWR ERROR OFF OFF	NO POWER AND/OR NO GROUND AT EITHER CBAT OR VBAT TERMINALS CHECK VBAT, CBAT, AND GND TERMINALS. SHOULD HAVE 12-18 VDC CHECK 2 AMP FUSE AT MAIN BOARD
PWR ERROR FLASH 1X PAUSE FLASH 2X PAUSE, REPEAT	ERROR CODE 12 NO CBAT POWER AT 3 PIN GRAY CONNECTOR "CBAT" TERMINAL, COMMAND LIGHT IS NOT POWERED. CHECK FOR 12VOLTS AT GRAY 3 PIN CONNECTOR, TERMINAL CBAT.
PWR ERROR FLASH 1X PAUSE FLASH 3X PAUSE, REPEAT	ERROR CODE 13 COMMUNICATION ERROR BETWEEN MAIN BOARD AND KEYPAD BOARD. CHECK ALL CAT 5 CONNECTIONS BETWEEN THE MAIN BOARD AND THE KEYPAD BOARD INCLUDING COIL CABLE.
PWR ERROR FLASH 1X PAUSE PAUSE ON	ERROR CODE 14: WILL ONLY ERROR ON FIRST LOGIN ATTEMPT AND DOES NOT REPEAT. YOU MUST LOOK FOR THIS ERROR CODE AS YOU ARE TRYING TO LOGIN TO THE DEVICE. INDICATES THAT COMMAND LIGHT CONTROLLER DOES NOT HAVE CONTROL OF THE SYSTEM. - IF USING VMUX - CHECK GREEN 5 PIN CONNECTOR "VMUX IF" FOR 12 VOLT POWER AT THE "CTRL" TERMINAL. IF NO, CHECK VMUX DUAL CONTROL BOARD. IF NOT USING VMUX, ENSURE BLACK/WHITE WIRE IS TERMINATED INTO THE CTRL TERMINAL AND THAT THIS TERMINAL HAS 12VDC.

Technical Specifications – Standard AC Models (605/607/611/615)

Dimensions (with strobe and	1/2" mounting space	ers) – May va	ry by mod	el:
× ×	Height(Depth)		Width	
Retracted	12.75"	74″	40″	-
Extended	10'-7"	80″	40″	
Recessed installation	12.75"	86″	48″	Minimum
Weight: 306 pounds				
Wiring:				
Main Power	VAC 8/4 SO co	rd	50' prov	rided
Control wiri	ng 22/20 PV	C Jacketed	50' prov	ided
Relay protection:				
Lights	Cole-Hersey	y 3055	40 at	mp
Other electric	al Cole-Hersey	y 3055	40 at	mp
Current Draw / Power Requirements:				
	Average	Gen	erator Re	quirement
500 Watt bulbs	115 VAC/25 an	nps	4 kW mini	mum

	itterage	Senerator Requirement
500 Watt bulbs	115 VAC/25 amps	4 kW minimum
750 Watt bulbs	115 VAC/41 amps	5.5 kW minimum
1000 Watt bulbs	230 VAC/28 amps	6 kW minimum
1500 Watt bulbs	230 VAC/40 amps	10 kW minimum

Lift actuators and rotation motor will cause higher current draw during use.

Motor Duty Cycle:

(All motors thermally	protected, specifications are to thermal relay trip):
Lower stage	1:3 (90 seconds maximum per 5 minute)
Upper stage	1:3 (90 seconds maximum per 5 minute)
Rotation	5-6 Revolutions

Motor Speed:

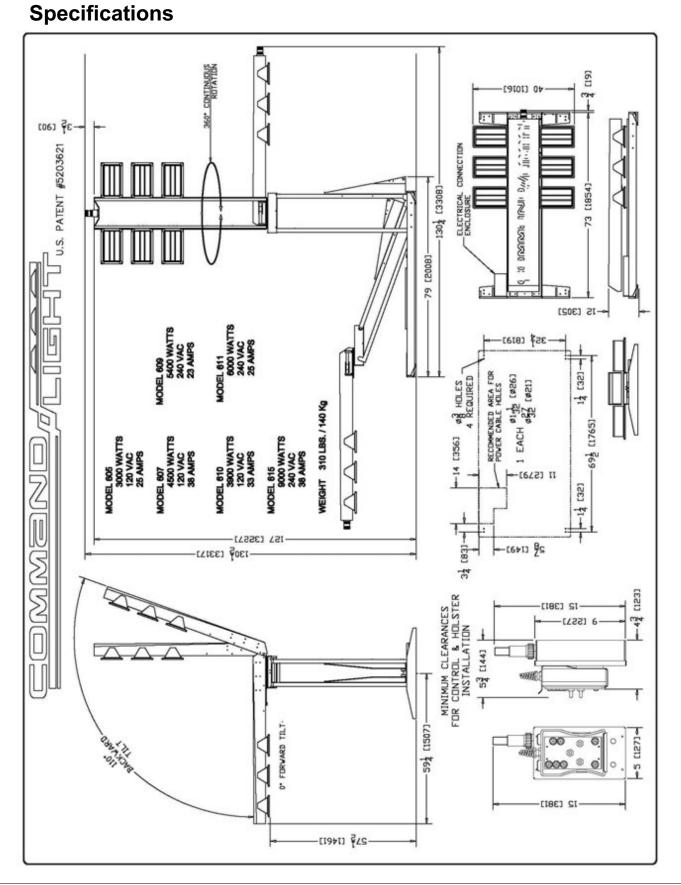
Lower stage	1.0 inches per minute	12 seconds to full extension
Upper stage	0.5 inches per minute	12 seconds to full extension
Rotation	2.75 RPM at lamp tree	

Operation:

Angle of vehicle	15° maximum incline
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Wind load:

Design maximum	60 mph
Maximum tested	55 mph

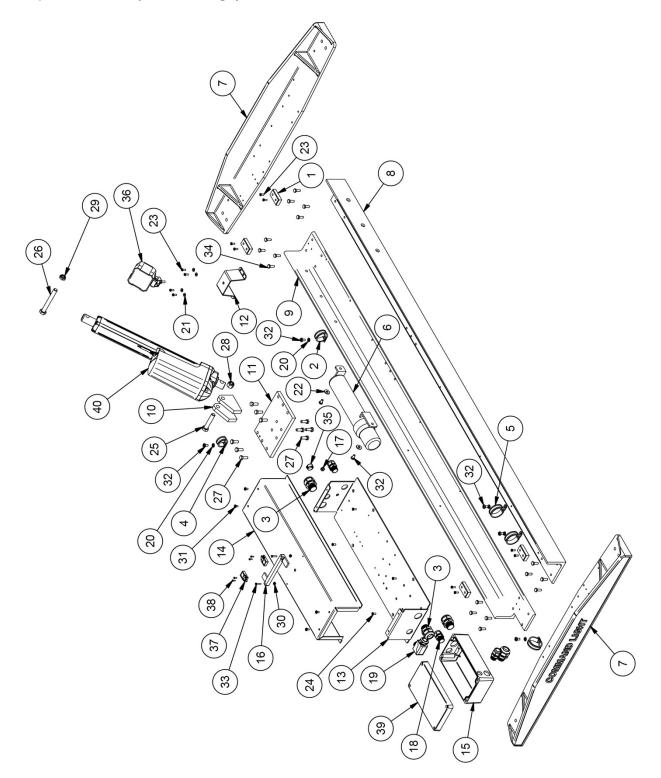


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Parts List (Lower Stage)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	4	065-13013	FEET, RUBBER, RECTANGULAR, CL
2	1	065-12367	CLAMP,LOOM,#12,SS
3	4	065-12854	STRAIN RELIEF, DOMED, SCR .5171, 3/4 NPT, BLACK
4	1	065-12860	CLAMP,LOOM,#10,SS
5	3	065-14961	CLAMP,LOOM,#14,SS
6	1	065-15001	CANISTER, DOCUMENT, BLACK
7	2	070-00202	END, FRAME, CASTING, CL6XX
8	1	070-00204	FRAME, SIDE RAIL, RIGHT, CL
9	1	070-00205	FRAME, SIDE RAIL, LEFT, CL6XX
10	2	070-00209B	STANDOFF, MAIN CLEVIS, CL6XX
11	1	070-00209C	BASE, MAIN CLEVIS, CL6XX
12	1	070-06119	BRACKET,LOOKUP LIGHT,CL6xx NEW LED
13	1	070-00611	BOX,CONTROL,BASE,CL6xx
14	1	070-00612	LID,CONTROL BOX,CL6xx
15	1	070-00621	BOX,ENTRANCE,FINISHED,CL6XX
16	1	070-12011	MOUNT, SENSOR, RELAY COVER, CL6XX
17	1	065-13016	GROMET,1/4,BLK,RELAY BOX/HOLSTER
18	3	065-12852	STRAIN RELIEF, DOMED, SCR .2447, 1/2 NPT, BLACK
19	1	065-12851	STRAIN RELIEF, DOMED 90, SCR .3955, 1/2 NPT, BLACK
20	5	034-11028	WASHER,LOCK,SPRING,REGULAR, 1/4", SS
21	4	034-10947	WASHER,FLAT,SAE, #8, SS
22	2	034-11029	WASHER,FLAT,USS, 1/4", SS
23	12	034-10939	SCREW,PHP,8-32 UNCx0.5
24	4	034-10973	SCREW,FHPMS,10-24 UNC x 1/2 in,SS
25	1	034-11134	SCREW,HH,1/2-20x2-1/2,SS
26	1	032-13865	SCREW,HH,1/2-20x4,SS
27	10	034-11110	SCREW,HH,5/16-18x7/8,SS
28	1	034-11104	NUT,NYLOCK, 1/2-20 UNF,SS
29	1	032-13866	NUT,NYLOCK,THIN, 1/2-20 UNC,SS
30	2	034-13098	NUT,NYLOCK, 6-32 UNC,SS
31	4	034-10961	SCREW,PHP,10-24 UNCx0.375
32	7	034-11001	SCREW,PHP,1/4-20 UNCx0.5
33	2	034-10919	SCREW,PHP,6-32 UNCx0.75
34	16	034-11016	SCREW,HH,1/4-20x3/4,SS
35	1	065-10084	PLUG,FINISHING,13/16,CL,BL,BLK
36	1	065-14784	LOOK UP LIGHT,4 RD,48 IN CABLE,TECNIQ
37	2	065-12884	SENSOR,NEST, TURK
38	4	034-10904	SCREW,PHP,4-40 UNCx0.375
39	1	070-00621/00622	LID, ENTRANCE BOX, FINISHED, CL6XX/CL602D
40	1	065-15359	ACTUATOR,300MM,12VDC,CL LOWER

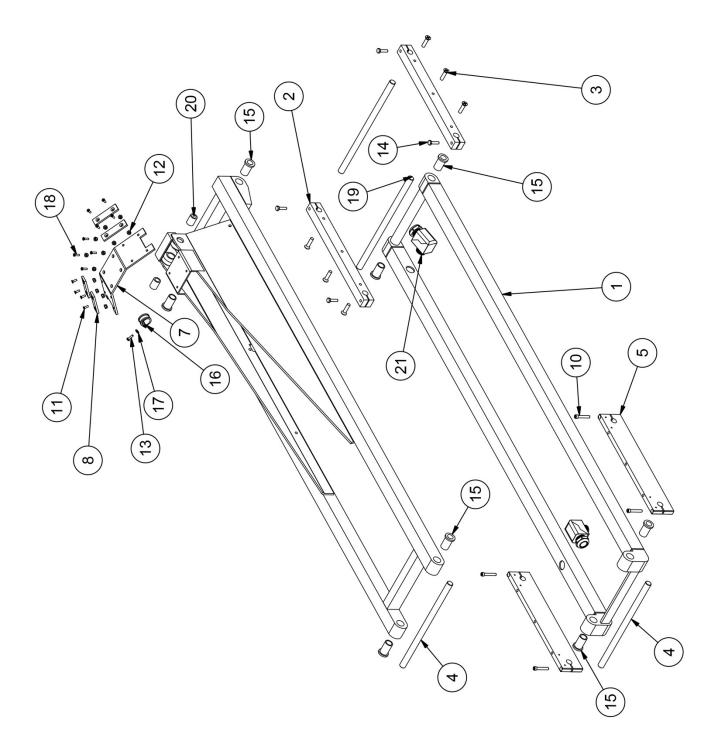
Exploded View (Lower Stage)



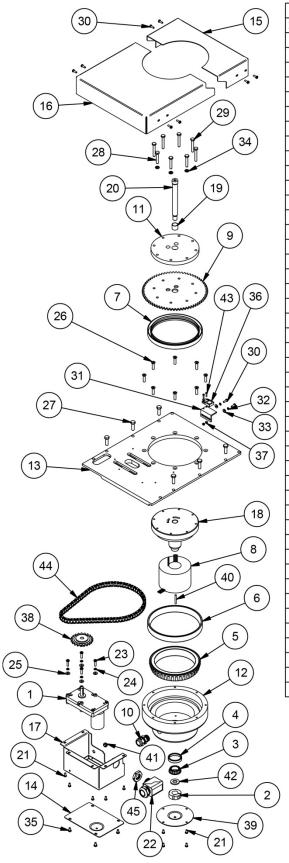
Parts List (Upper Stage)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	070-00320	STABILIZER, WELDMENT, CL6XX
2	2	070-00302	MOUNT, TILT, LOWER, CL6XX
3	6	034-13085	SCREW,FHPMS,5/16-18 UNC x 1 1/4 in,SS
4	2	070-00304	SHAFT, PIVOT, UPPER, CL6XX
5	2	070-00301	MOUNT, PIVOT, MIDPLATE, CL6XX
7	1	070-00319	PLATE,NEST ALIGNMENT,CL6xx
8	4	070-00714	PAD,NEST BRACKET,CL6xx
10	4	034-14708	SCREW,SHCS,1/4-20x1-1/2,SS
11	8	034-11188	SCREW,FHPMS,8-32 UNC x 1/2 in,SS
12	13	034-10951	NUT,NYLOCK, 8-32 UNC,SS
13	1	034-10940	SCREW,PHP,8-32 UNCx0.625
14	4	034-11017	SCREW,HH,1/4-20x1,SS
15	8	065-13852	Bushing, Flanged, Bronze, FB1013-12, 5/8 ID
16	1	065-12861	CLAMP,LOOM,#8,SS
17	1	034-10947	WASHER,FLAT,SAE, #8, SS
18	4	034-13059	SCREW,FHPMS,8-32 UNC x 5/8 in,SS
19	2	070-00303	SHAFT, PIVOT, LOWER, CL6XX
20	2	065-14791	Bushing, Plain, Bronze, B812-8, 1/2 ID
21	2	065-12853	STRAIN RELIEF, DOMED 90, SCR .5171, 3/4 NPT, BLACK
22	1	070-00310W	ARM,MAIN LIFT,CL6xx,REVISED

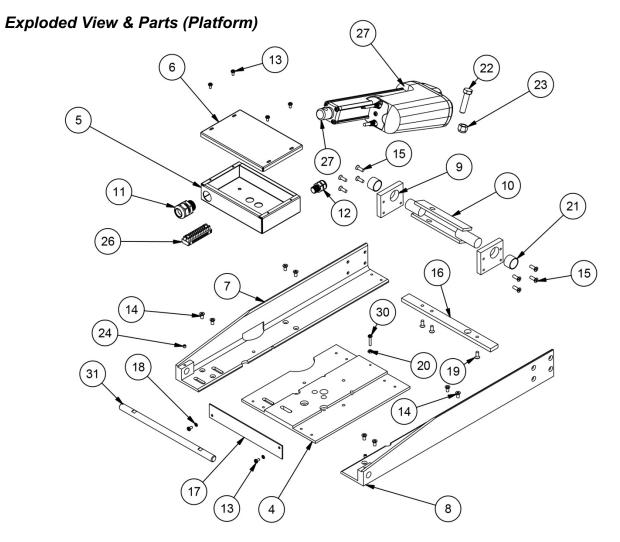
Exploded View (Upper Stage)



Exploded View & Parts (Mid-Plate)



ITEM	QTY	PARTS LIST PART NUMBER DESCRIPTION			
1	1	065-13829	MOTOR, LOW GEAR, 12V, CL, KL		
2	1	065-12808	CLAMP, NUT, 3/4-16		
3	1	065-12805	BEARING,LOWER,ROTATION,LL52549		
4	1	065-12806	CUP,BEARING,LOWER,ROTATION		
5	1	065-12804	BEARING,UPPER,ROTATION,L225849		
6	1	065-12803	CUP,BEARING,UPPER,ROTATION		
7	1	065-12807	BEARING SEAL, NATIONAL, 415447		
8	1	065-12817	SLIP RING, LITTON, AC4837-12		
9	1	070-00410	SPROCKET, DRIVEN, ROTATION, CL6xx		
10	1	065-12852	STRAIN RELIEF, DOMED, SCR .2447, 1/2 NPT, BLACK		
11	1	070-00408	SPACER,LAMP TREE,CL		
12	1	070-00402	HOUSING,BEARING,ROTATION,CL6XX		
13	1	070-00406	MIDPLATE, ROTATION, CLIGHT		
14	1	070-00632	COVER,MOTOR,ROTATION,CL6xx		
15	1	070-00412	COVER,MIDPLATE,REAR,CL6XX		
16	1	070-00411	COVER,MIDPLATE,FRONT,CL6XX		
17	1	070-00631	BOX,MOTOR,ROTATION,CLxxx		
18	1	070-00451	SPINDLE, ROTATION, CLIGHT		
19	1	070-00452	SLEEVE,SPINDLE,EXTENSION,CL6XX		
20	1	070-00453	BOLT,SPINDLE,5/8 x 4 3/4,1/2-13,MOD		
21	10	034-10938	SCREW,PHP,8-32 UNCx0.375		
22	1	065-12853	STRAIN RELIEF, DOMED 90, SCR .5171, 3/4 NPT, BLACK		
23	4	034-10966	SCREW,PHP,10-24 UNCx0.75		
24 25	4	034-10979	WASHER,LOCK,SPRING,REGULAR, #10, SS		
25	8	034-10977 034-10997	WASHER,FLAT,SAE, #10, SS SCREW,FHPMS,1/4-20 UNC x 1 in,SS		
20	6	034-11042	SCREW,HH,5/16-18x1,SS		
27	3	034-11019	SCREW,HH,1/4-20x1-1/2,SS		
29	5	034-11020	SCREW,HH,1/4-20x1-3/4,SS		
30	10	034-10939	SCREW,PHP,8-32 UNCx0.5		
31	1	070-00407	BRACKET,CENTER SENSOR,CL6XX		
32	2	034-11175	WASHER,LOCK,SPRING,REGULAR, #8, SS		
33	2	034-10947	WASHER,FLAT,SAE, #8, SS		
34	3	034-11028	WASHER,LOCK,SPRING,REGULAR, 1/4", SS		
35	4	034-10961	SCREW,PHP,10-24 UNCx0.375		
36	1	065-12884	SENSOR,NEST, TURK		
37	2	034-13672	NUT,NYLOCK, 4-40 UNC,SS		
38	1	070-00419	CLUTCH,CLUTCH SPROCKET,CL		
39	1	070-00403	COVER,SLIP RING,CL6XX		
40	1	034-10101	ROLL PIN, 5/32 x 1 1/4, SS, CL - KL		
41	1	065-13016	GROMET,1/4,BLK,RELAY BOX/HOLSTER		
42	1	034-11102	WASHER,FLAT,SAE, 1/2", SS		
43	2	034-13674	SCREW,PHP,4-40 UNCx0.5		
44	1	065-12799	CHAIN ASSEMBLY, MIDPLATE, CL		
45	1	065-12857	LOCKNUT,NYLON,3/4 NPT,BLACK		

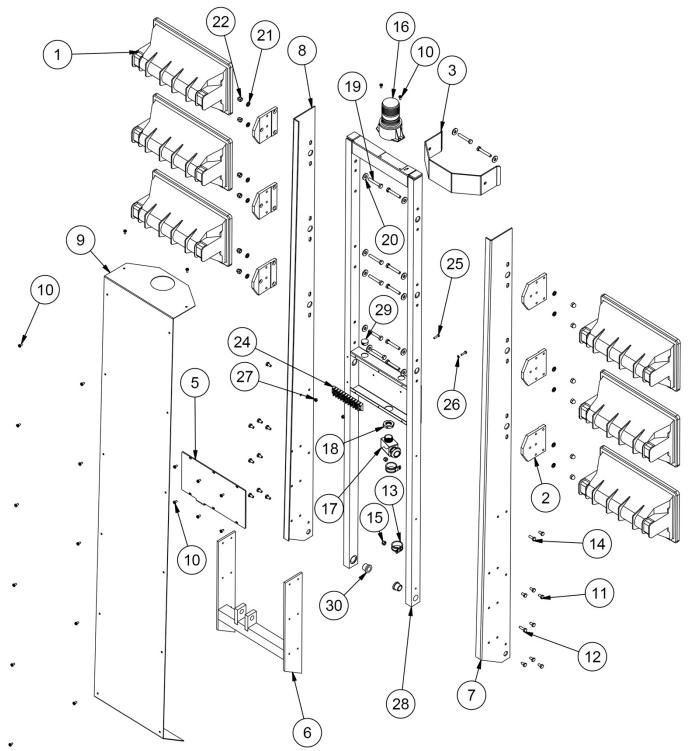


ITEM	QTY	PART NUMBER	DESCRIPTION
4	1	070-05105	BASE,ROTATION,LAMP TREE,CL6xx,REVISED
5	1	070-00633	UPPER ACTUATOR CONNECTION BOX
6	1	070-00634	UPPER ACTUATOR BOX LID
7	1	070-05110L	MOUNT,LAMP TREE,LEFT,CL6xx,REVISED
8	1	070-05101R	MOUNT, LAMP TREE, RIGHT, CL6xx, REVISED
9	2	070-00512	BLOCK, ACTUATOR SHAFT, CLIGHT
10	1	070-00506	MOUNT, ACTUATOR, UPPER, CL6XX
11	1	065-12854	STRAIN RELIEF, DOMED, SCR .5171, 3/4 NPT, BLACK
12	1	065-12875	STRAIN RELIEF, DOMED, SCR .1631, 3/8 NPT, BLACK
13	6	034-10961	SCREW,PHP,10-24 UNCx0.375
14	8	034-13080	SCREW,FHPMS,1/4-20 UNC x 1/2 in,SS
15	8	034-10996	SCREW,FHPMS,1/4-20 UNC x 3/4 in,SS
16	1	070-05107	STOP,LAMP TREE,CL6xx,REVISED
17	1	070-05108	COVER, ROTATION PLATFORM END, CL
18	2	034-10979	WASHER,LOCK,SPRING,REGULAR, #10, SS
19	3	034-13018	SCREW,FHPMS,1/4-20 UNC x 5/8 in,SS
20	1	034-11167	NUT,MS,HEX1,10-32UNF,SS
21	2	065-12820	Bushing, Plain, Bronze, B1618-6, 1 ID
22	1	034-11132	SCREW,HH,1/2-20x2,SS
23	1	034-11104	NUT,NYLOCK, 1/2-20 UNF,SS
24	2	034-13311	1/4-20 UNC x 1/4 SH Set Screw SS
26	1	065-12827	STRIP, BARRIER, 12 POLE
27	1	065-15358	ACTUATOR, 300MM, 12VDC, CL LOWER
30	1	034-14900	SCREW PHPMS 10-32 UNF x 1
31	1	070-00510	SHAFT, PIVOT, LAMP TREE, CL6XX

Parts List (Lamptree)

ITEM	QTY	PART NUMBER	DESCRIPTION
1	6	611-615-Lamp	
2	6	070-00626	MOUNT,LAMP,HUBBELL,CL6XX
3	1	070-00525	SADDLE,NEST,TREE,CL6xx
5	1	070-00638	COVER, CONNECTION BOX, CL6xx, REVISED
6	1	070-00501R2	WELDMENT, CLEVIS, UPPER, CL6XX, REVISED
7	1	070-00522R	MOUNT,LAMP,SIDE,RIGHT,CL6XX
8	1	070-00522L	MOUNT,LAMP,SIDE,LEFT,CL6XX
9	1	070-00517	COVER,LAMP TREE,CL6xx
10	22	034-10961	SCREW,PHP,10-24 UNCx0.375
11	17	034-11015	SCREW,HH,1/4-20x1/2,SS
12	1	034-13033	SCREW,HH,1/4-20x7/8,SS
13	2	065-12860	CLAMP,LOOM,#10,SS
14	1	034-11016	SCREW,HH,1/4-20x3/4,SS
15	2	034-11033	NUT,NYLOCK, 1/4-20 UNC,SS
16	1	065-12867	STROBE, PRE-WIRED, INDICATE COLOR
17	1	065-12853	STRAIN RELIEF, DOMED 90, SCR .5171, 3/4 NPT, BLACK
18	1	065-12857	LOCKNUT,NYLON,3/4 NPT,BLACK
19	12	034-11046	SCREW,HH,5/16-18x2,SS
20	12	034-13695	WASHER,FLAT,USS, 5/16", SS
21	12	034-11053	WASHER,LOCK,SPRING,REGULAR, 5/16", SS
22	12	034-11058	NUT,ACORN, 5/16-18 UNC, SS
24	1	065-12951	TERMINAL BLOCK,5 POLE
25	2	034-10941	SCREW,PHP,8-32 UNCx0.75
26	1	034-11175	WASHER,LOCK,18-8SS,INTERNAL,#8
27	2	034-10951	NUT,NYLOCK, 8-32 UNC,SS
28	1	070-00520W	TREE,LAMP,WELDMENT,CL6XX
29 30	<u>1</u> 2	065-10084 065-13852	PLUG,FINISHING,13/16,CL,BL,BLK BUSHING,FLANGED,.625x.8125x.75,THML PLYM

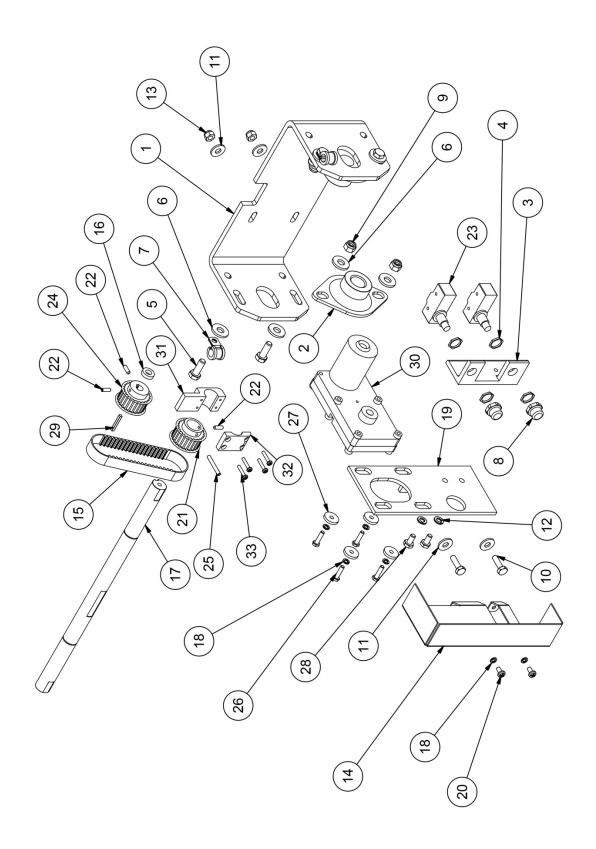
Exploded View (Lamptree)

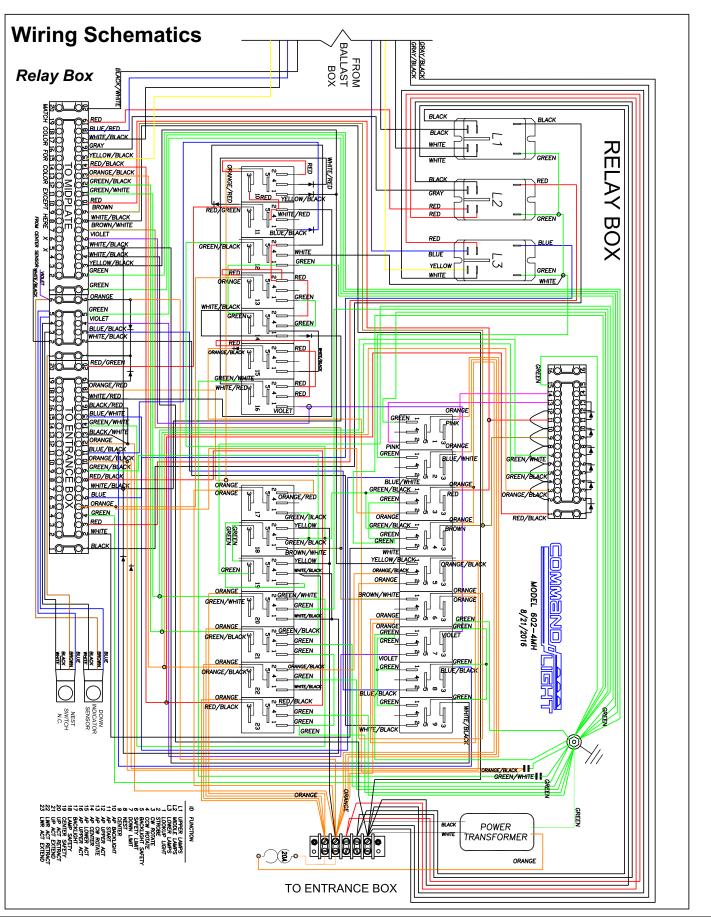


Parts List (Backlight)

	PARTS LIST			
ITEM	QTY	PART NUMBER	DESCRIPTION	
1	1	070-06010	SADDLE, MOTOR MOUNT, BACKLIGHT, CL802	
2	2	065-12318	BUSHING, 3/4 ID, SELF ALIGN, BACKLIGHT	
3	1	070-06148	MOUNT, LIMIT SWITCH, BACKLIGHT, CL	
4	4	069-15360	NUT,SWITCH, DOWN LIMIT / NEST / BL LIMIT	
5	4	034-11110	SCREW,HH,5/16-18x7/8,SS	
6	8	034-13695	WASHER,FLAT,USS, 5/16", SS	
7	2	065-13084	CLAMP,LOOM,#4,SS	
8	2	065-12935	BOOT, PUSHBUTTON, BLK, BACK LIGHTS	
9	4	034-11057	NUT,NYLOCK, 5/16-18 UNC,SS	
10	2	034-13033	SCREW,HH,1/4-20x7/8,SS	
11	4	034-11029	WASHER,FLAT,USS, 1/4", SS	
12	2	034-11028	WASHER,LOCK,SPRING,REGULAR, 1/4", SS	
13	2	034-11033	NUT,NYLOCK, 1/4-20 UNC,SS	
14	1	070-06002	COVER, DRIVE BELT, BACKLIGHT, CL6xx	
15	1	065-12385	BELT,HTD,BACK LIGHT for 8 HEAD TOWER	
16	1	070-06087	SPACER,BACKLIGHT,CL6XX	
17	1	070-06036	SHAFT,BACKLIGHT, HD, CL802A	
18	6	034-10979	WASHER,LOCK,SPRING,REGULAR, #10, SS	
19	1	070-06011	MOUNT, MOTOR, BACKLIGHT, CL802	
20	2	034-10961	SCREW,PHP,10-24 UNCx0.375	
21	1	069-14151	PULLEY, SHAFT, CL8XX - BL	
22	3	034-11164	8-32 UNC x 1/2 SH Set Screw SS	
23	2	069-15360	SWITCH, DOWN LIMIT / NEST / BL LIMIT	
24	1	069-14151	PULLEY, MOTOR, CL8XX - BL, KL4XX - ROT	
25	1	034-10101	ROLL PIN, 5/32 x 1 1/4, SS, CL - KL	
26	4	034-11233	HHCS-01 SCREW,HH,10-32x3/4,SS	
27	4	070-06144	WASHER, SUPPORT, BL, CL802	
28	2	034-11015	SCREW,HH,1/4-20x1/2,SS	
29	1	065-12967	KEYSTOCK, 1/8 INCH, SS	
30	1	065-13833	GEAR MOTOR,12V MERKLE KORFF KL1	
31	1	070-06146	PADDLE, SWITCH, BOTTOM HALF, BACKLIGHT, CL	
32	1	070-06147	PADDLE, SWITCH, TOP HALF, BACKLIGHT, CL	
33	4	034-10919	SCREW,PHP,6-32 UNCx0.75	

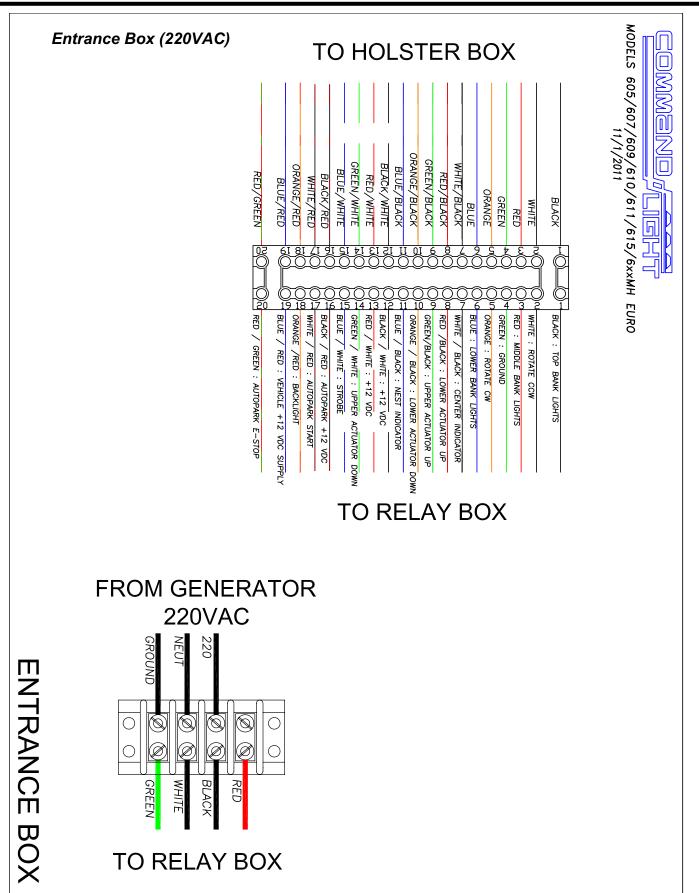
Exploded View (Backlight)

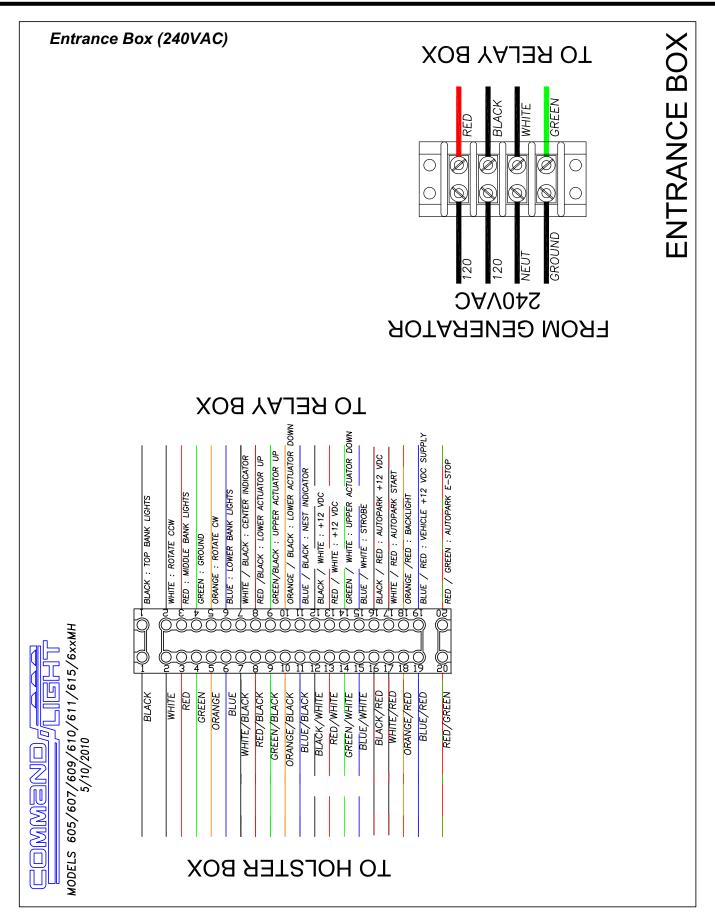


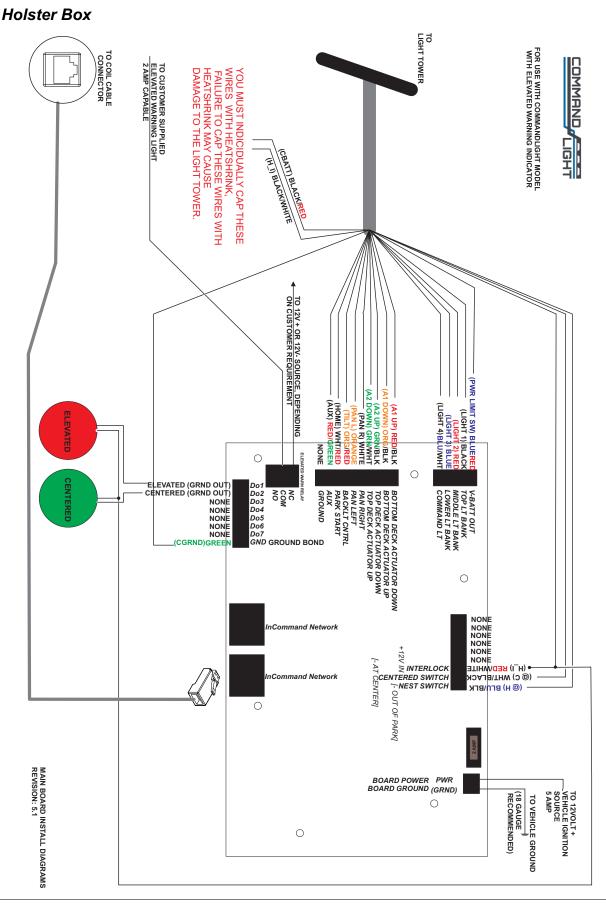


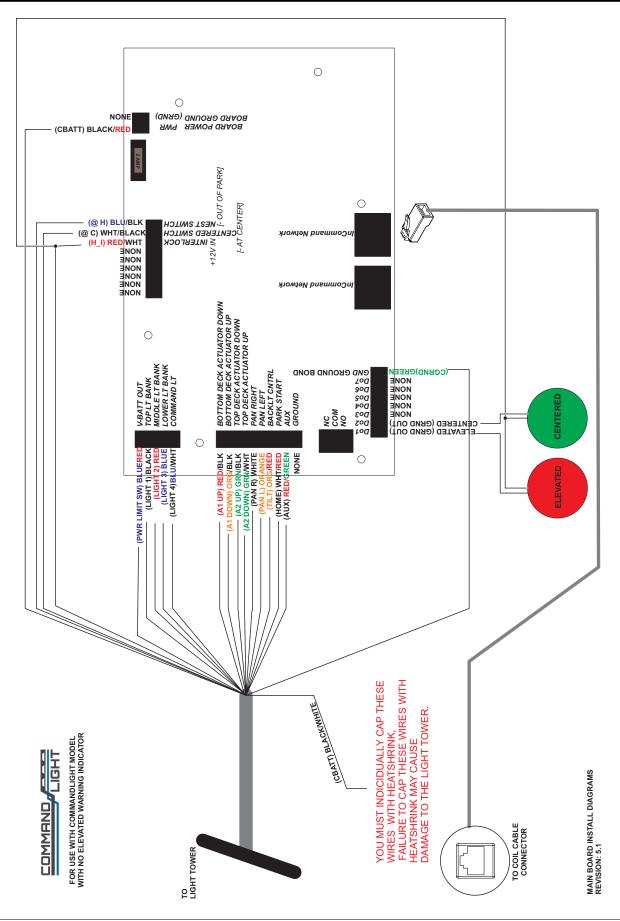
Entrance Box (120VAC) **ENTRANCE BOX** TO HOLSTER BOX MODELS 602D OMMENO 1/15/2016 ORANGE/BLACK GREEN/BLACK WHITE/BLACK ORANGE/RED GREEN/WHITE BLACK/WHITE BLUE/BLACK **BLUE/WHITE** RED/GREEN RED/BLACK BLACK/RED **RED/WHITE** WHITE/RED BLUE/RED ㅋ ORANGE GREEN BLACK WHITE BLUE RED GI C 8 BLACK WHITE BLUE RED BLACK BLUE RED / GREEN : AUTOPARK E-STOP ORANGE GREEN/BLACK : UPPER ACTUATOR UP WHITE ORANGE : ROTATE CW GREEN : GROUND BLUE / RED : VEHICLE +12 VDC SUPPLY GREEN ORANGE RED /BLACK : LOWER ACTUATOR UP BLUE : LOWER BANK LIGHTS RED : MIDDLE BANK LIGHTS WHITE : ROTATE CCW BLACK : TOP BANK LIGHTS WHITE : +12 VDC WHITE : STROBE BLACK : NEST INDICATOR /RED : BACKLIGHT BLACK : CENTER INDICATOR **RED** : AUTOPARK START WHITE : +12 VDC RED : AUTOPARK +12 VDC WHITE : UPPER ACTUATOR DOWN BLACK : LOWER ACTUATOR DOWN **FROM TRUCK 12VDC** TO RELAY BOX 12V-12V+ ۲ WATERPROOF 100A 2~+ 121-TO RELAY BOX

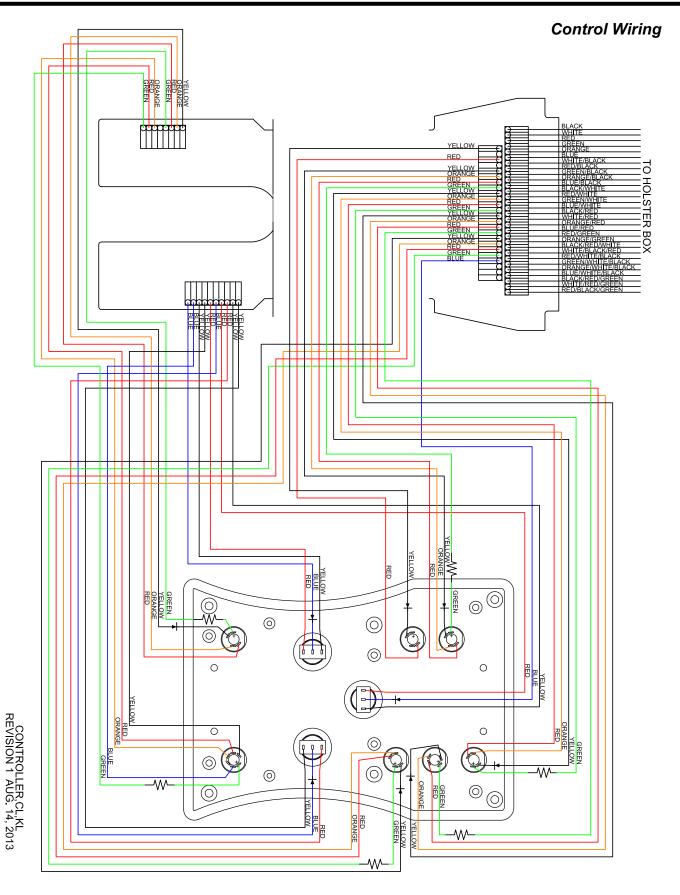
COMMAND LIGHT



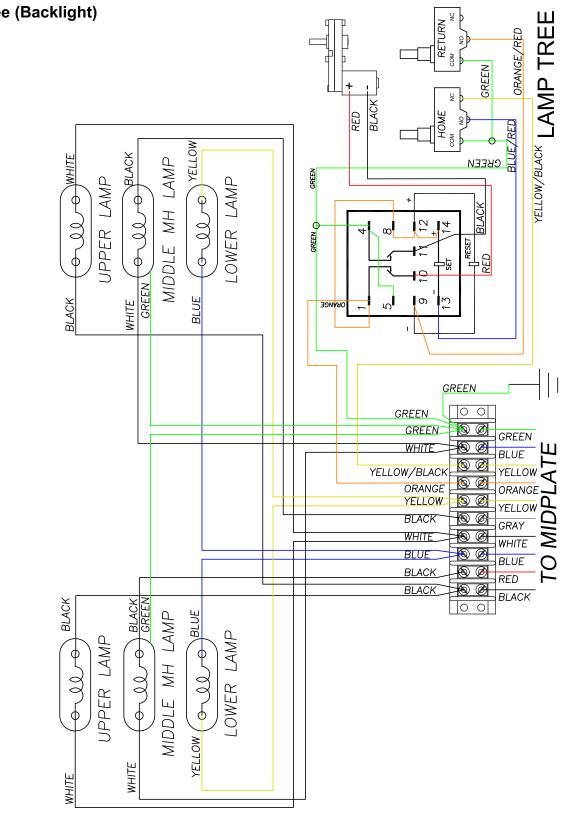








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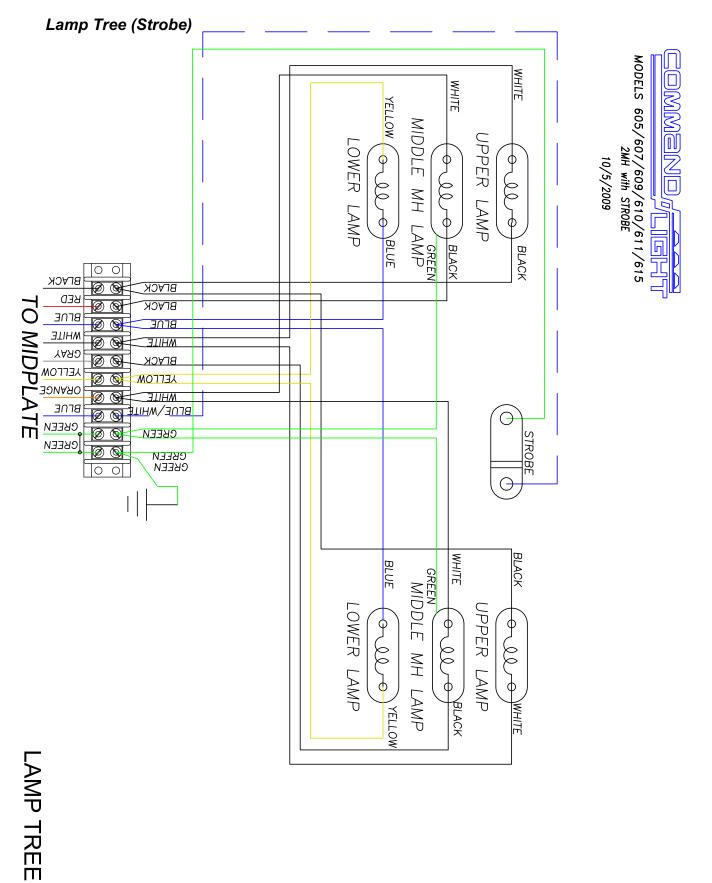
Lamp Tree (Backlight)

MODELS 605/607/609/610/611/615 2MH with BACKLIGHT

07/14/2017

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<u>COMMENUa</u>



4MH

MODELS 605/607/609/610/611/615 4MH

10/5/2009

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<u>VONEWWOD</u>

