

POWKO



PLT 3016M-1000 SERIES

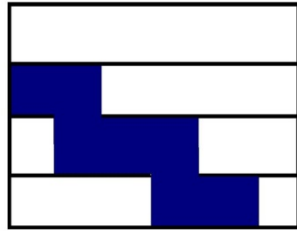
PLT 3016M-1500 SERIES

PLT 4516M-1500 SERIES

PLT 5516M-1500 SERIES

The Equinox Light Tower Gen-set Combo

Ruff Terrain Wide Area Lighting



POWKO

OPERATING/SERVICE MANUAL “THE EQUINOX”

WIDE AREA LIGHT TOWER

PLT 3016M-1000 SERIES

PLT 3016M-1500 SERIES

PLT 4516M-1500 SERIES

PLT 5516M-1500 SERIES

REV #2

DECEMBER 2011

Manual Instructions

Date: _____

Model Number: _____

Light Tower Information

Powko Serial Number(s): _____

Engine Model/Serial

Number(s): _____

Generator Kw/

Model/Serial Number(s): _____

Sold To: _____

Options:

Auxiliary Fuel Tank

Optional Colors

Arctic Package

Other (see below)

Production Date: _____

WO# _____

Shipping Date _____

In Service Date _____

Additional comments: _____

When this unit left the factory the engine was filled with engine oil grade of _____

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[Type or sign date here]

Shop Foreman signature

Date

[Type or sign date here]

Salesman signature (if needed)

Date

[Type or sign date here]

Powko Company Representative signature

Date

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INTRODUCTION

Congratulations on choosing the Powko Equinox Light Tower. You have chosen a high quality self-contained portable wide-area floodlighting system built from the latest design and manufactured to the most rigorous standards. By following the instructions in this manual and performing maintenance at the suggested intervals, the Powko Equinox light tower will give you years of trouble-free service.

The light tower consists of five major component groups: trailer, engine/generator, tower/boom, floodlights, and the electrical system. Each of these groups are covered in this manual. Please observe all WARNINGS and CAUTION signs in the manual and on the equipment to avoid serious personal injuries or property damage. Some of the information in this manual may not apply to other models. Each manual contains some information on engine maintenance and repair. However, do not attempt to set-up, operate or work on the light tower until you have working knowledge of the engine and generator. If technical assistance is needed, please contact the factory.

This manual is compiled from information available and current at time of printing. Powko reserves the right to improve its products without giving prior notice or incurring any obligation.

ALERT SYMBOLS

This manual contains four (4) callouts: **DANGER, WARNING, CAUTION and NOTICE**; which specifically addresses the level of exposure to the operator. The safety messages must be followed to reduce the possibility of personal injury, damage to the equipment or improper service.

This is the **Safety Alert Symbol**. This symbol is used to alert you to potential hazards. To avoid possible injury, death or damage to the equipment. Please obey all safety messages.



This is the Safety Alert Symbol. Always use this symbol as an alert to potential injury hazards. Always pay close attention to anything that displays this symbol while your personal safety is involved.



DANGER indicates that there is an extremely dangerous situation, which, if safety directions are not followed, will result in death or serious injury.



WARNING indicates that there is a potentially dangerous situation, which, if safety directions are not followed, could result in death or serious injury.



CAUTION indicates that there is a potentially dangerous situation, which, if safety directions are not followed, may result in minor or moderate injury.



NOTICE indicates that there is additional information of importance to a procedure.

GENERAL SAFETY

Be sure that you are completely familiar with the safety operations of this piece of equipment. Failure to understand and operate this light tower properly can cause serious or fatal injury. Only basic operating, maintenance, and cleaning procedures are described in this manual. Always be aware of your environment, and the various pieces of equipment that could be connected to the light tower, and being controlled by this machine. Always disconnect any and all electrical equipment that may be attached to the light tower through the startup, shut down, and towing process. It is not practical to list all unsafe conditions, while if a procedure is performed that isn't listed in this operational manual, and expert advice is not sought out, results could cause serious or fatal injury. Please seek expert advice anytime you have questions or perform repairs on this light tower.

DO NOT USE OR MODIFY THIS EQUIPMENT FOR ANY APPLICATION OTHER THAN WHICH IT WAS DESIGNED FOR.

Powko recommends that a qualified electrical professional perform any and all electrical functions pertaining to this tower.

Accident prevention is the key towards successfully operating and maintaining this light tower to its original spec. Always wear the necessary PPE when operating, repairing, cleaning, or servicing this piece of equipment. Damage caused by misuse or negligence of the unit should always be brought to the attention of the operator immediately.

Keep a copy of this manual in the unit at all times. Additional copies are available at www.powko.com or contacting one of our qualified technicians at 1-866-609-6379. Both engine and generator manuals are included with the initial shipment of this light tower. Extra engine and generator manuals are available upon request.

The information contained in this manual is compiled from the most current information possible at its release to the public. Powko reserves the right to improve its products, parts, and manuals without giving prior notice or incurring any prior obligations.



CALIFORNIA PROPOSITION 65 WARNING: Diesel engine exhaust and some of its constituents are known to the state of California to cause cancer, birth defects and other reproductive harm.

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Operational Safety Statements



OPERATIONAL HAZARDS

- WHENEVER OPERATING A LIGHT TOWER, YOU SHOULD ALWAYS EXERCISE SAFETY PRECAUTIONS TO AVOID PERSONAL INJURY OR EQUIPMENT DAMAGE. THE FOLLOWING IS A LIST OF RECOMMENDED OPERATIONAL SAFETY PRECAUTIONS.
- Never refuel this light tower while it is running, nor store its fuel container close to the light tower while it is running or being operated. Allow the light tower to cool for several minutes before refueling.
- Never overfill the fuel tank. OVERFILLING THE FUEL TANK CAN CAUSE DIESEL FUEL TO SPILL OUT, LEADING TO THE POSSIBILITY OF A FIRE OR EXPLOSION. If a spill occurs, clean up the spill immediately using dry towels that can be disposed of properly.
- Never try to start the light tower in an environment where the light tower has been tampered with or damaged in any form.
- Always make sure that the immediate environment surrounding the light tower is stable, has a level surface for supporting the light tower, and is clean and free of all debris. Always make sure you position the light tower in the safest environment possible. GOOD HOUSEKEEPING PRINCIPLES SHOULD CARRY OVER INTO ANY ENVIRONMENT WHERE THIS LIGHT TOWER MAY BE PRESENT.
- Always be aware of pinch points, such as where the main boom meets its horizontal resting position center of the trailer or also where the base of the boom moves parallel to the center of the trailer downward, vertically positioning the boom in the air.
- Always make sure that the vertical boom cables are in good working condition and have not been modified or tampered with. IF ANY ALTERATIONS OR FLAWS IN THE BOOM CABLES ARE NOTICED, STOP ANY OPERATIONAL PROCEDURE IMMEDIATELY, AND CONTACT A QUALIFIED LIGHT TOWER REPRESENTATIVE FROM POWKO FOR ASSISTANCE. Also, carefully monitor the boom cable as you are booming up the mast, so that the cables do not get caught on anything that could be possibly intruding into its operational path.
- Always make sure the hydraulic winch lines, attached to the hydraulic motor resting on the light tower platform, are not ripped, torn or have been tampered with before any operational procedures start. FAILURE TO DO THIS COULD LEAD TO THE BOOM STOPPING MIDWAY IN THE VERTICAL BOOMING PROCESS, CAUSING THE BOOM TO APPEAR STUCK, LEADING TO A POSSIBLE HAZARDOUS SITUATION.
- Always check all overhead areas before starting and stopping the pivot/extending process of the main boom. Your elevation range should always be 20 feet around the base of the trailer, and 70 feet above the boom while it is facing horizontally down. Always check for overhead wires and obstructions at every angle possible.
- Always lower the extension boom when the tower is not being directly used.

! WARNING

The main light tower boom can only be extended into a vertical position in winds 35 mph and less once the boom is locked into its stationary vertical position. This warning is regardless of the vertical extension lift boom ever leaving its original "boomed done" stationary position. (Never operate the light tower in winds 35 MPH or higher)

! WARNING

The 35 mph rule always applies any time while the main light tower boom is moving from a horizontal to a vertical position regardless of its exact point of position. (Never operate the light tower in winds 30 MPH or higher)

- Always make sure all six outriggers are removed from their tow position, and extended out, with all six-locking pins securely fastened, before you ever start any operations with the light tower. Always check where the outriggers are placed. Outriggers are not designed to lift tires off the ground. Make sure this area is secure enough to support the distribution of weight brought by that particular outrigger. Place barricades around the six outriggers, creating a barrier, so other people in its environment can immediately be aware that the light tower is operational, and certain hazards could be present. Never attempt to move the light tower while the leveling jacks are down.

! WARNING

This tower can tip over if all six outriggers are not positioned out and securely locked into place when the booming process starts. Always check the center boom level before you start the booming process.

- Never try to move the tower once the main boom is vertically boomed to its stationary locked position.
- If the boom, for any reason, would ever get hung up through the booming up and down process, stop immediately and contact a certified technical representative from Powko to help aid you in this process.
- Always be very careful when removing the boom locking and securing pin while the boom is both vertical and horizontally locked in position.
- Never try to adjust the light tower fixtures while the boom is positioned vertically in the air. The light tower fixtures should only be adjusted while the boom is resting in the horizontal position, with the boom lock pin securely fastened. This position is recognizable when the light fixture's face or lens is toward the ground.
- Never connect or disconnect electrical loads during operations.
- Never start the light tower in an environment that is not well ventilated.
- Keep hands and clothing away from all moving parts. Never attempt to make adjustments or repairs while the unit is in operation. Serious injury may result from unsafe practices.
- Only remove guards or protective devices designed for safety precautions temporarily for normal maintenance applications. REPLACE THESE GUARDS IMMEDIATELY AFTER MAINTENANCE, AND NEVER REMOVE OR ADJUST GUARDS OR PROTECTIVE DEVICES WHILE THE ENGINE IS RUNNING OR THE LIGHT TOWER IS IN OPERATION.

Electrical Safety Statements

WARNING

ELECTRICAL HAZARDS

- THIS EQUIPMENT USES EXTREMELY HIGH VOLTAGE CIRCUITS CAPABLE OF CAUSING SERIOUS INJURY OR DEATH. TAKE EXTREME CAUTION WHEN TROUBLESHOOTING OR REPAIRING ANY ELECTRICAL CIRCUITS.
- The electrical circuits in this light tower complete their paths back to the generator within the equipment. The neutral conductor at the generator is bonded to the equipment frame. Never remove these wires from the frame. IF THESE WIRES APPEAR TO BE REMOVED OR TAMPERED WITH, SEEK A QUALIFIED ELECTRICAL TECHNICIAN FOR HELP WITH TROUBLESHOOTING.
- Ground wires within the system are also bonded to the equipment frame. IMPROPER GROUNDING CAN CAUSE AN ELECTRICAL HAZARD LEADING TO SERIOUS INJURY OR DEATH.
- Once the boom is resting horizontally in a "storage state," always check the electrical wires from the light fixtures to the ballast box for cuts or snags. If any of these wires have been tampered with or damaged, replace immediately. Only attempt to work on the wires while no operations are commencing, and the engine is turned off. NEVER WORK ON LIGHT FIXTURES WHILE THE ENGINE IS ON.
- Never start/stop the engine with any of the light fixtures on, or any other machinery attached for electrical purposes, as this may cause damage to the light tower.
- Never use electrical connections on the generator if they have been tampered with or damaged.
- Disconnect electrical power and turn off the engine before removing protective covers on high voltage electrical closures.
- Always disconnect any electrical power and turn off engine before removing protective covers on the gen-set or removing the gen-set completely from the frame of the light tower.
- Always make sure that all electrical panel doors on the light tower are fastened correctly while the tower is being towed, stored, cleaned or in operation.

It is recommended that a qualified electrician perform repairs in the high voltage AC system. Also it is recommended that all wiring comply with the National Electrical Code (NEC).

NOTICE

Unit should be grounded with a mechanical earth ground when used as a portable generator. Some light towers are not classified as a portable generator; therefore, we do not recommend that they be used as such.

Hot Surface Safety Statements



HOT SURFACES

- Light fixtures become very hot during operation. To avoid painful burns or damage from the light bulb, allow fixtures to cool before handling. NEVER ADJUST FIXTURES WHILE THEY ARE ON.
- NEVER ATTEMPT TO OPERATE LIGHTS IF ANY PART OF THE LIGHT FIXTURE IS BROKEN OR IF PROTECTIVE PARTS ON THE LIGHT FIXTURE HAVE BEEN REMOVED.
- The engine exhaust manifold, muffler and exhaust pipe are very hot, as well as other parts of the engine. Use protective gloves when handling hot parts. Check the manifolds and exhaust systems regularly for leaks.
- Make sure unit is well ventilated. NEVER RUN THE ENGINE INDOORS.
- Batteries can be dangerous. The sulfuric acid in batteries can cause severe skin and eye irritation and burns. NEVER SMOKE OR ALLOW ANY TOOLS TO GET CLOSE ENOUGH TO COME IN CONTACT WITH ONE OF THE BATTERY TERMINALS. This may cause an arch, leading to a fire or explosion based on the various environments that may be present.

Towing Safety Statements



Proper trailer hardware is required. Failure to properly secure the light tower to the towing vehicle, may result in serious injury or death.



Be aware of traffic hazards. Before tower set up, be aware of the operational environment surrounding you.

- Always use the proper trailer hitch and the provided safety chains when towing the light tower. Improper use could cause severe personal injury or property damage.
- Always make sure that the trailer hitch is secured properly to the tow hitch, since the trailer may separate while the vehicle is in motion, and cause serious injury or product/property damage.
- Always make sure that all electrical panel doors on the light tower are fastened correctly while the tower is being towed, stored, cleaned or in operation.
- Never connect or disconnect the trailer while the machine is running or boom is extending vertically into the air. Also, never connect the trailer while other electrical machines are attached to the tower for power purposes.
- Always make sure that the tower is in a "storage state" before deciding to start the towing/connect/disconnect process. The boom is resting in a position with the boom pin inserted into the correct locking bracket, lights are securely fastened, outriggers are locked into place for towing, and any and all electrical machinery is not attached to the gen-set.
- Always check to make sure that the boom/winch cords are logical stored/secured to prevent any damage while the trailer is being towed.
- Never connect or disconnect the light tower when towing until all cabinet doors have been properly fastened.
- Always check to make sure the gen-set is fastened correctly and all fasteners are torqued to necessary standards before you start the towing process.
- Never allow anyone to ride in or on the trailer while the light tower is in tow.
- Maximum speed while towing this trailer is 55 miles per hour. Excessive speed while towing this trailer can cause serious injury or product/property damage.
- Tires should be checked regularly for proper air pressure. Not having the correct air pressure could cause premature wear or tire damage.

RECEIVING AND UNLOADING

Powko Light Towers are shipped fully assembled and ready to be placed into operation. When shipping light towers in container type vehicles, the light fixtures are removed from the unit and shipped on a separate pallet. Insure that the proper numbers of light fixtures are received for each tower. Also, remove any excess packing materials so that the light tower and floodlights can be inspected properly.

WHEN LOADING, UNLOADING, OR LIFTING THIS LIGHT TOWER, ALWAYS ABIDE BY THE VARIOUS "OPERATIONAL CALL OUTS AND SIGNS" POSTED FOR PROPER PLACEMENT OF MATERIAL LIFTING EQUIPMENT. THE "SLING HERE" DECAL POINTS SPECIFICALLY TO THE ONLY PLACES WHERE YOU ARE ALLOWED TO PLACE MATERIAL LIFTING EQUIPMENT FOR LOADING AND UNLOADING OF THE LIGHT TOWER. FAILURE TO ABIDE BY THESE OPERATIONAL CALL OUTS WILL RESULT IN SERIOUS INJURY OR DEATH. ALSO, FAILURE TO ABIDE BY THE OPERATIONAL CALL OUTS WILL CAUSE MAJOR DAMAGE TO THE LIGHT TOWER.

1. Always make sure that any hardware securing the light tower for transportation is free and unattached to the light tower, prior to starting the unloading process.
2. Make sure that any equipment used for lifting the light tower has sufficient capacity. Lifting equipment used must have a lifting capacity of 20,000 lbs. or better. FAILURE TO ABIDE BY THESE OPERATIONAL CALL OUTS WILL RESULT IN SERIOUS INJURY OR DEATH. ALSO, FAILURE TO ABIDE BY THE OPERATIONAL CALL OUTS WILL CAUSE MAJOR DAMAGE TO THE LIGHT TOWER.
3. Always make sure the main boom's horizontal travel locking pin is in place and secured. OBSERVE THE SAME OPERATIONAL STEPS USED FOR SECURING THE TOWER FOR TOWING OR STORAGE, AS YOU WOULD FOR THE LOADING AND UNLOADING PROCESS.
4. Always be aware of your environment. Always make sure that the immediate environment surrounding the light tower is stable, has a level surface for supporting the light tower, and is clean and free of all debris. Always make sure you position the light tower in the safest environment possible. Good housing keeping principles should carry over into any environment where this light tower may be present.
5. The light tower will be resting on the trailer in a stowed state with the main boom resting in a horizontal position. Place the proper material lighting equipment through the 2 designated areas stating "SLING HERE". Once all proper material lifting equipment is attached and secured properly, check the surrounding environment again, and proceed with lifting tower. IT IS ALWAYS RECOMMENDED THAT THE OPERATOR PREFORMING THE LIFT HAS 2 PERSONAL SPOTTERS TO HELP PROTECT AGAINST ANY ENVIRONMENTAL FLAWS/PERSONNEL NOT NOTICED IN THE INITIAL OBSERVATION OF ENVIRONMENT.



Exercise extreme caution during the unloading process. Keep all nonessential personnel clear of the lifting areas at all times.



Exercise care in handling and storage of light fixtures. Careless handling, such as angling the fixture without loosening bolts, can damage the fixtures, lenses and bulbs, leading to a hazardous environment.

INSPECTION

Always inspect light towers immediately for shipping damage. Note any damages on the shipping documents. Never sign shipping documents before inspection. Follow the inspection checklist below before putting unit into operation.

Inspection Check List

- ✓ Check unit for obvious structural damage.
- ✓ Make sure the boom traveling pin is secure.
- ✓ Check rear and front jacks for proper operation and security.
- ✓ Check outriggers for proper operation and security.
- ✓ Check tires for damage, proper air pressure and check lug bolts for tightness.
- ✓ Check engine/generator compartment for obvious damages.
- ✓ Check any exposed wiring/hoses for abrasions.
- ✓ Check light fixtures for damage to the lamp, lens or reflector.
- ✓ Check running lights for cracked lenses and damaged lamps.
- ✓ Check all fluid levels; battery, radiator, hydraulic and engine oils.

PLACING THE TOWER IN OPERATION

1. Open the cabinet doors.
2. Check the engine crankcase oil level with the dipstick. Add oil as necessary.



Do not overfill the crankcase with oil. If the engine is overfilled, serious engine damage could occur.

3. Check battery cables to insure they are properly connected and secured.
4. Check the fuel level in the diesel fuel tank. Add diesel fuel if necessary.



Use of ether or other starting fluids will cause engine damage and void manufacturer's warranty.

5. Before starting the engine, be sure all breakers located on the generator panel are set to the "OFF" position. NEVER START THE ENGINE WITH ANYTHING TURNED TO THE "ON" POSITION. THIS INCLUDES LIGHT SWITCHES, EVEN WHEN ALL THE BREAKERS ARE SET TO THE "OFF" POSITION.



To avoid damage to the starter, never operate the starter for more than thirty seconds at a time. Always pre-heat the engine before initially starting each time.

6. Be sure all floodlight switches located on the front of the ballast box are set to the "OFF" position. This will help prevent any damage occurring to the light tower.
7. Be sure the main disconnect located on the right side of the ballast box is in the "OFF" position.
8. Be sure that there is nothing plugged into the generator distribution panel other than the ballast box power cords.
9. Be sure the generator selector switch is set to "240/120V 1-Phase".
10. Preheat unit for 30 seconds. Turn key to start generator. BE SURE TO READ THE FACTORY GENERATOR MANUAL BEFORE OPERATING.
11. Turn the generator main breaker to the "ON" position.
12. Turn the main disconnect to the "ON" position.
13. Flip the floodlight switches to the "ON" position, one at a time until four switches are in the "ON" position. Allow the four fixtures to warm up until glowing bright. It will take a minimum of two minutes for the floodlight to start and reach full illumination. Once the four fixtures are illuminated, repeat these steps until all 16 lights are turned on.
14. Listen for unusual sounds or vibration once the engine is running. Shut the engine down immediately if the unit operates abnormally.
15. While the tower is in the horizontal/tow position, and only in the horizontal/tow position, adjust each fixture to the desired vertical aiming direction for your jobsite. You may need to loosen the tension knobs located on each side of the fixture. Once the fixtures are in the desired positions,

tighten the tension knobs until they are snug. If you need to adjust the fixtures horizontally, loosen the mounting nut located at the bottom of the fixture bracket. Rotate the fixture to the desired horizontal aiming direction for your jobsite. Tighten the mounting nut until it is snug.

16. To receive optimum floodlight illumination, it is recommended to aim each floodlight to a 30 degree below horizontal setting.
17. Be sure to check the power cord connection for each fixture. The 3-prong connector should be inserted into its corresponding receptacle and screwed down firmly.

! WARNING

Never attempt maintenance or adjustments while unit is running. Serious Injury or Death may occur.

18. Insure that each floodlight is operating properly.

HID floodlights require a warm up period of 2 to 5 minutes before reaching full intensity. Once the HID floodlight is shutdown, a cool down period is required before restarting. The cool down period for different HID lamps is as follows:

NOTICE

*Mercury Vapor - 3 to 6 minutes
High Pressure Sodium - 1 minute
Metal Halide - 10 to 15 minutes*

! CAUTION

When the floodlights and receptacles are being used simultaneously, special care must be taken not to overload the circuits.

19. Close and latch the cabinet doors.
20. Observe the following instructions when shutting down:
 - a. Place all lighting switches in the "OFF" position.
 - b. Allow the engine to run for a few minutes without a load. Turn the key switch to the "OFF" position. The engine will automatically shut down when the key is placed in the "OFF" position.

! CAUTION

Never shutdown the engine with the lighting switches in the ON position because damage to the generator and ballast system could occur.

Auxiliary Power for Floodlights While Generator is removed

1. The Equinox is equipped with an option to use auxiliary power for running the floodlights and boom while the generator is removed. This option offers the generator as a power source at a separate location from the light tower. To use the auxiliary power source, be sure the generator is not running and that the main disconnect located on the ballast box is in the "OFF" position. Remove the power cord from the lugs located on the generator power panel. Connect the power cord to a 240 volt power source according to updated electrical codes. **DO NOT ATTEMPT TO MAKE ELECTRICAL CONNECTIONS WITHOUT A LICENSED ELECTRICIAN.** To energize the power source, turn the main disconnect to the "ON" position. **PROCEED WITH NORMAL OPERATING INSTRUCTIONS.**

Generator Removal

1. To remove the generator, be sure the generator is not running and the ballast box power cord is disconnected. Both valves on the auxiliary fuel tank line that runs from the auxiliary fuel tank to the generator fuel tank must be turned to the "OFF" position. After both valves are turned off, disconnect the fuel line using the quick disconnect fitting that connects the fuel line to the generator fuel tank. Remove the generator mounting bolts. Use a forklift or approved lifting equipment to remove the generator from the unit. **PROCEED WITH THE NORMAL GENERATOR OPERATING INSTRUCTIONS.**



Never attempt to remove the generator if the light tower is on an incline, the wheels have the possibility of rolling, or the level surface is not suitable for placement of the light with the generator being removed and outriggers extended.

*** Important Fueling Instructions

BE SURE THAT BOTH VALVES LOCATED ON THE AUXILIARY FUEL TANK LINES ARE TURNED OFF WHILE REFUELING THE AUXILIARY FUEL TANK OR GENERATOR FUEL TANK. FAILURE TO DO THIS WHILE REFUELING EITHER TANK WILL CAUSE FUEL OVERFLOW AND SPILLAGE OF FUEL.



Never refuel this light tower while it is running, nor store its fuel container close to the light tower while it is running or being operated. Allow the light tower to cool for several minutes before refueling.



*Never overfill the fuel tank. **OVERFILLING THE FUEL TANK CAN CAUSE DIESEL FUEL TO SPILL OUT, LEADING TO THE POSSIBILITY OF A FIRE OR EXPLOSION.** If a spill occurs, clean up the spill immediately using dry towels that can be disposed of properly.*

TOWER SET-UP/RAISING THE BOOM

1. Find a suitable and level surface for placement of the light tower.
2. Disconnect the towing chains.
3. Release the hitch pin on the towing coupler.
4. Check frame level located on the center of the main boom's support.



If on an incline, use chocks in front and behind the wheels on the trailer to prevent the tower from rolling. Be sure there is a firm surface to place outriggers on. The unit has to be level for the boom to work properly and safely.

5. Remove the first outrigger pin closest to the jack plate, and extend the outrigger into place. Rotate and lock the leveling jack in the vertical position. Make sure that the jack plate hits the ground or outrigger pad is secured in place with pins attached. (Repeat the same steps for all six outriggers)
6. Use each of the six outriggers to level the light tower, while checking the center level located in the middle of the trailer, until the light tower is level.



Always check overhead for wires and various obstructions that may be present.

7. Check all cables and hydraulic hoses on the winch and boom for damage before each use.
8. Remove the main boom travel locking pin located on top of the boom cradle that locks the main boom in the horizontal position for tow. FAILURE TO REMOVE THIS PIN WILL RESULT IN SERIOUS DAMAGE TO THE UNIT.
9. Before pivoting the main boom, check to make sure that all floodlights are illuminated. Also, always double check the frame level again, after you check to see if the floodlights are illuminated. (Repeating step 6 after step 9 is only suggested as a secondary safety precaution).
10. Locate the hydraulic controls that are on the light tower deck next to the "MAIN DISCONNECT" for the ballast box. BE SURE THE BOOM TRAVEL LOCKING PIN LOCATED IN THE BOOM CRADLE IS REMOVED. FAILURE TO DO THIS WILL RESULT IN SEVERE EQUIPMENT DAMAGE. ALSO BE SURE THE BOOM SECURING PIN LOCATED ON THE LIGHT TOWER DECK AT THE BASE OF BOOM WHEN BOOM IS IN THE VERTICAL POSITION IS REMOVED. FAILURE TO DO THIS WILL RESULT IN SEVERE EQUIPMENT DAMAGE.
11. Begin to pivot the main boom up by pulling the left hydraulic lever towards the front of the light tower where the tow hitch is located. THE LEFT HYDRAULIC LEVER WOULD BE THE LEVER CLOSEST TO THE BOOMING INSTRUCTIONS
12. Raise the boom to its vertical position. BE SURE TO SLOW THE PIVOT MOTION DOWN WHEN THE BOOM IS NEARING VERTICAL. Slowly complete the pivot motion until the boom reaches vertical and is touching the boom stopping bar.
13. When the boom is completely vertical, replace the main boom securing pin in the yoke resting above the lower tow position cradle. This will properly secure the main boom into its vertical position. FAILURE TO SECURE THE MAIN BOOM SECURING PIN CAN RESULT IN EQUIPMENT MALFUNCTION AND SERIOUS INJURY.

! WARNING

Keep hands and fingers away from pinch points when bringing the tower to the vertical position. Careless operation can result in serious injury.

! WARNING

Keep all obstructions clear of any boom cables and electrical wires while you are booming up the mast into the air.

! WARNING

Never attempt to raise or lower the main or vertical boom once the tower is in operation.

14. Locate the right hydraulic lever on the same hydraulic control panel used to raise the main boom into a vertical position. Begin to extend the vertical boom by pulling the right hydraulic lever towards the front of the trailer where the tow hitch is located. THE RIGHT HYDRAULIC LEVER WOULD BE THE LEVER FURTHEST FROM THE BOOMING INSTRUCTIONS
15. BEGIN BY RAISING THE BOOM VERY SLOWLY. Extend the boom to your desired height within the allowed 55 maximum feet. WHEN YOU SEE THE RED AT THE BOTTOM OF THE VERTICAL BOOM SECTION, RELEASE THE RIGHT HYDRAULIC LEVER. EXTENDING THE VERTICAL BOOM PAST THE SET RED LINE CAN DAMAGE THE BOOM STOPS. IT WILL TAKE APPROXIMATELY 4 ½ MINUTES TO FULLY EXTEND THE VERTICAL BOOM.

NOTICE

It will take approximately 4 ½ minutes to fully extend the vertical boom.

NOTICE

When there is "SLIGHT SLACK" in the vertical boom winch cables, the boom sections are fully retracted.

Do not continue to extend the boom past the red marker on the main boom. Do not continue to extend the boom once the bottom section reaches the boom stop. The boom stops are for safety but cannot be relied upon solely to stop the boom. Hyperextending the boom can result in unit damage and serious injury or death.

! CAUTION

Maximum wind allowance is 30 mph. If winds exceed 30 mph, the boom must be lowered immediately. Do not extend boom without outriggers being extended fully and secured.

TOWER/BOOM TAKE DOWN INSTRUCTIONS

1. To retract the vertical boom, push the right hydraulic lever towards the rear portion of the trailer where the generator is located. DO NOT OVER RETRACT THE BOOM. THIS WILL CAUSE SLACK IN THE BOOM CABLES. CONTINUING TO RETRACT THE VERTICAL BOOM ONCE IN THE RESTING POSITION WILL CAUSE DAMAGE TO THE UNIT

NOTICE

It will take approximately 4 ½ minutes to fully extend the vertical boom.

! WARNING

The tower should descend to its lowest position very smoothly. If for some reason the tower hangs up or the winch cable develops slack, STOP the winching process immediately. Contact a qualified technician to resolve the problem.

2. Remove the main boom securing pin from the yoke.
3. Lower the main boom using the left hydraulic lever. Push the left hydraulic lever to the rear of the light tower where the generator is located. BE SURE NOT TO CONTINUE TO PUSH THE HYDRAULIC LEVER ONCE THE BOOM IS RESTING IN THE BOOM CRADLE. CONTINUING TO PIVOT DOWN AFTER THE BOOM IS RESTING IN THE CRADLE WILL CAUSE DAMAGE TO THE UNIT.
4. Verify that the boom rests properly in the cradle when lowered to the horizontal tow position.
5. Insert and secure the travel locking main boom pin in the yoke.

! WARNING

Beware on pinch points when lowering the tower. Careless operation can result in extreme physical danger.

! WARNING

Never attempt to raise or lower the main or vertical boom once the tower is in operation.

6. Latch the anti-telescoping safety chain on the end of the boom near the T-bar.
7. Reposition lights so that the fixture lens is face down and parallel to the ground.
8. Secure all locking hardware on the light fixtures.

Fixtures on the Powko tower do not have to be removed to transport the unit. However, it is recommended that the fixtures be removed when traveling over rough roads or congested highways. If the unit is transported with the fixtures, make sure retaining nuts and fixture plugs are secure.

NOTICE

9. Retract all six outrigger jacks and rotate them to their storage/tow position.
10. If open, close and latch all access doors.

TOWING INSTRUCTIONS

1. Attach the light tower to the towing vehicle using the front leveling jack.
2. Lock the hitch and insure that it is connected.

WARNING

If the hitch is not secured properly, the trailer could separate from the towing vehicle and cause equipment damage or personal injury.

3. Connect the taillight wiring harness to the towing vehicle. Check the taillights for proper operation.
4. Position the front leveling jack to its traveling position by pulling the pin and rotating 90°.
5. Verify that the wheel lug bolts are tight.
6. Verify tires are inflated to 35 psi (MAX).
7. Verify that all outriggers, jacks, and cables are secure.
8. Verify that all floodlights are secure.

NOTICE

Powko Light Towers can be towed with the floodlights in place on the tower T-bar. It is recommended that the floodlights be removed when traveling over rough roads or congested highways.

9. Verify that all locking pins and retainers are secure.
10. Verify that all doors are latched.
11. Remove wheel chocks, if required.

WARNING

The maximum highway towing speed recommended by Powko is 55 MPH. Off-road towing speed is not to exceed 10 MPH. Excessive speeds or improper use could cause severe damage and will void manufacturer's warranty.

NOTICE

Light fixtures do not have to be removed to transport the unit. However, it is recommended that fixtures be removed when traveling over rough roads or congested highways. If the unit is transported with the fixtures, make sure retaining nuts and fixture plugs are secure.

MAINTENANCE

Powko suggests following the maintenance intervals shown below. Please refer to the engine owner's manual for more specific information.

DAILY

- ✓ Engine oil level
- ✓ Engine coolant level
- ✓ Loose bolts, fittings or connections

WEEKLY

- ✓ Engine air filter
- ✓ Cleanliness of engine radiator fins

BI-WEEKLY

- ✓ Engine oil quantity/level

BI-MONTHLY OR 250 HOURS

- ✓ CHANGE engine oil

SIX MONTHS OR 500 HOURS

- ✓ CHANGE engine oil filter
- ✓ Check engine valve clearances (refer to engine manufacturer's manual)
- ✓ Inspect electrical wiring for wear, replace as needed
- ✓ Inspect electrical components, clean as needed

TWELVE MONTHS OR 1000 HOURS

- ✓ Clean or replace fuel filter
- ✓ Clean or replace engine fuel pump strainer (if applicable)
- ✓ Check engine head and manifold bolts
- ✓ REPLACE air filter

CLEANING

The Powko light tower uses several electronic devices that may be damaged by low or high pressure liquid spray. To prevent damage to these components, follow the procedures below.



Do not spray water into the unit while it is running.

EXTERIOR

1. The exterior of the cabinet may be washed using most conventional cleaners and methods.
2. The exterior of the cabinet may be waxed using conventional automotive wax.

INTERIOR

1. Use a damp cloth with mild soap.
2. Carefully wipe around the generator, electronics and thermostat.

LIGHT FIXTURE

1. The light housing and bulbs may be cleaned with window cleaner.



Be sure to allow lights to cool prior to cleaning.

**POWKO, INDUSTRIES, LLC.
LIMITED WARRANTY**

COMPONENTS, SUB-ASSEMBLIES AND DEVICES (COLLECTIVELY, "GOODS") MANUFACTURED BY OTHER MANUFACTURERS ARE NOT COVERED BY THIS WARRANTY. ALL WARRANTY INFORMATION FROM THESE OTHER MANUFACTURERS IS PROVIDED WITHIN OR ACCOMPANIES THESE GOODS.

Powko warrants all goods manufactured by it to be free from defects in material and workmanship for a period of one year after delivery to the original purchaser. Additionally, Powko warrants all replacement parts supplied by it to be free from defects in material and workmanship for a period of 90 days after date of invoice. For the purposes of this Limited Warranty, delivery is deemed to occur no later than five days following the date of the sale agreement or invoice unless the sale agreement or invoice specifically states a later delivery date in which case the delivery date controls. The original purchaser is the person who places the goods in actual use, and any person holding the goods solely for wholesale or retail sale purposes is not an original purchaser. Any leasing of the goods or other use beyond normal demonstration of same are deemed to be in use by an original purchaser and all warranty periods commence at the time of the use. During the warranty period any defective goods or parts thereof are repaired or replaced at manufacturer's discretion. If any goods or parts thereof must be returned, all transportation charges must be prepaid.

The manufacturer's obligations are solely to repair or replace defective goods or parts or to refund the cost of the same if the manufacturer determines that repair or replacement will not return the goods or parts to proper working order or utility. The remedies set forth in this Limited Warranty are exclusive, and the manufacturer is not liable for special, indirect or consequential damages. The obligations of the manufacturer under this Limited Warranty may not exceed the price of the goods or parts upon which the liability is based.

The warranty shall not extend to tires, lamps, batteries or parts that are altered, changed, damaged or improperly installed, repaired, operated or maintained. This exclusion will not apply to installations, repairs or other work done at the manufacturer's plant or under the manufacturer's direct supervision. The Operations Manual is deemed to set forth the proper procedures for operation, repair, installation and maintenance of the goods.

No representative, dealer or distributor is authorized to make any changes or exceptions to this Limited Warranty unless expressly authorized in writing from the manufacturer. All warranty claims must be filed within 30 days of the failure.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, IN LAW OR IN FACT, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTIES CREATED BY ANY AFFIRMATION OF FACT OR PROMISE OR BY ANY DESCRIPTION OF THE GOODS AND ANY OTHER WARRANTIES WHATSOEVER CONTAINED IN OR CREATED BY THE UNIFORM COMMERCIAL CODE OR SIMILAR LAW AS ADOPTED IN THE STATE OF TEXAS. REPAIR OR REPLACEMENT IS THE SOLE AND EXCLUSIVE REMEDY FOR A BREACH OF THIS LIMITED WARRANTY.

**POWKO INDUSTRIES, LLC.
LIMITED WARRANTY ADDENDUM**

THIS IS AN ADDENDUM TO THE POWKO INDUSTRIES, LLC LIMITED WARRANTY OF ONE YEAR AFTER DELIVERY TO THE ORIGINAL PURCHASER.

Subject to the foregoing, Powko warrants the following components manufactured by it to be free from defects in material and workmanship from the date of manufacture for the following.

Boom/tower Assembly **Two years failure to operate due to corrosion**

The following manufacturers limited warranty policy warrants their components to be free from defects in material and workmanship from date of manufacture as follows.

Perkins/Caterpillar **Two years OR 2000 hours**

Please contact Powko's Service and Warranty department for specific manufacturer's warranty terms and schedules. All warranties are subject to change without notice.

**POWKO INDUSTRIES, LLC.
WARRANTY PROCEDURE**

Any component, sub-assembly or device manufactured by Powko is warranted as stated in the Powko Industries, LLC. Limited Warranty.

If a component, sub-assembly or device manufactured by anyone other than Powko fails, it is warranted by its manufacturer. However, in some cases, this warranty is handled through Powko's Service and Warranty Department. Therefore, notification must be made to Powko upon failure for proper warranty procedure.

1. Upon notice of warrantable failure, gather information specific to the cause and results. File warranty claim within 30 days of failure.
2. Contact Powko's Service and Warranty Department and explain the situation. Be ready to provide model and serial number of unit, hours of operation, etc.
3. If replacement of component, sub-assembly or device is determined necessary, Powko's Service and Warranty Department will advise as to the proper Powko location to ship the unit. In some cases Powko's Service and Warranty Department may provide parts for replacement by the end user.
4. Powko's Service and Warranty Department issues a Returned Goods Authorization (RGA) number. Shipping is paid by customer.
5. Powko will ship replacement parts via ground freight only and invoice customer for parts and freight as necessary. Expedited freight specified by customer is billed to the customer. Upon examination of parts, Powko will determine warranty coverage and will issue credit for replacement parts and labor based on the aforementioned criteria. In order to receive credit, all defective parts must be returned within 30 days after failure for examination.
6. If field repair is necessary, contact Powko's Service and Warranty Department for prior authorization or warranty is considered void. Any repairs approved by Powko are paid as deemed appropriate by Powko upon receipt of claim, if filed within 30 days of failure.

Specification Sheet

- **The Equinox Light Tower Gen-set Combo**
- **PLT 4516M -1500 Series**
- **Wide Area Lighting**

GEN-SET

- ❑ Magnum, 45Kw generator set with selector switch. Options up to 70kw
- ❑ Skid base mounted with forklift pockets bolted on trailer
- ❑ Containment cell Drip Pan Installed in skid
- ❑ 12 gauge Powder Coated gen-set enclosure with sound attenuation, sound reduction air-inlet baffles and quiet type muffler
- ❑ Generator is removable to use as a separate power source when light tower is not being used.

LIGHTS

- ❑ Only Light Tower in the industry equipped with 16 ea, 1000 watt MH lights; optional 1500 watt MH
- ❑ Nema 3 Light Pattern
- ❑ Can be operated with auxiliary power source.

BOOM

- ❑ Galvanized, tubular steel 60 foot boom fully extended
- ❑ Dual electric winches for single person operation (Both Stow and Extend)
- ❑ Lockable in up position for operation and down position for travel

ELECTRICAL SYSTEM

- ❑ 240 volt configuration
- ❑ Main disconnect for use of auxiliary power source
- ❑ Available auxiliary receptacles

Trailer

- ❑ Painted steel frame
- ❑ Six outriggers for optimum support with 7 lifting jacks including the trailer jack
- ❑ Tandem 8000 lb capacity axle
- ❑ Electric Brake
- ❑ Pintle Ring Hitch
- ❑ Tail, Brake, Turn Signal Lights & Reflectors
- ❑ Safety Chains

ENGINE

- ❑ Isuzu or John Deere Water Cooled Diesel with Engine Safety Shutdowns
- ❑ Full flow oil filter, dry type cartridge air filter
- ❑ 113 gallon fuel tank for 54 hour run time with lights powered only and 26 hour run time with full load
- ❑ Key switch for preheat, start, and stop
- ❑ Hour meter, voltmeter
- ❑ Standard cold weather package

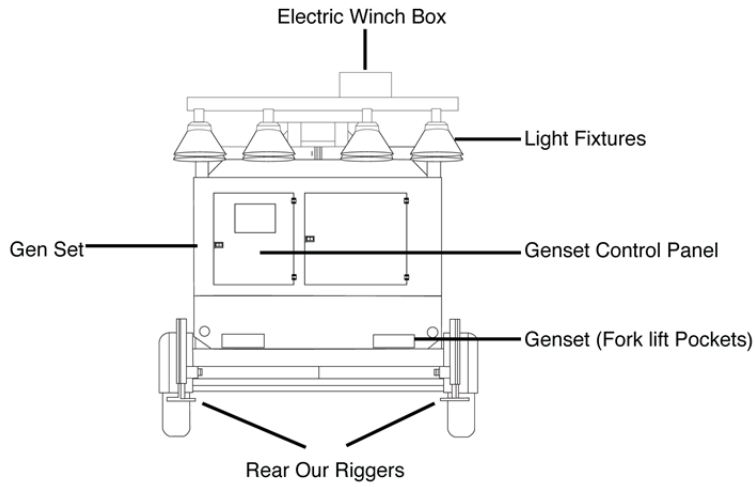
DIMENSIONS

- ❑ Overall length 28'
- ❑ Overall width 8'-4"
- ❑ Overall height 11'-3.5"
- ❑ Weight – 13,000 lbs
- ❑ Tongue weight 650 lbs

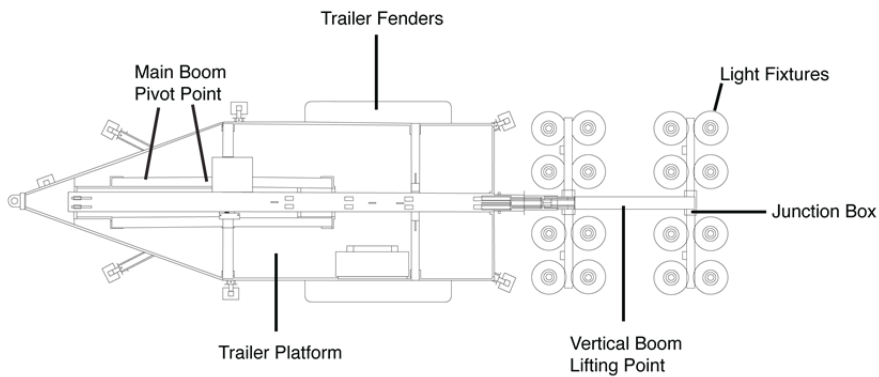
OPTIONAL FEATURES

- ❑ 95 gallon fuel tank
- ❑ Out-rigger pads
- ❑ Piggy back power distributing panels
- ❑ Spare tire

Rear view



Top View



Side View

