OPERATION AND PARTS MANUAL



Revision #0 (06/24/13)



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THIS MANUAL MUST ACCOMPANY THE EQUIPMENT AT ALL TIMES.

Certificate

Certificate no.

CA 72131710 01

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Manufacturing Plant: LIGHT BOY CO., LTD. 2-6-14 Kurigi, Asao KAWASAKI, KANAGAWA 215-0033 JAPAN

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Certified Product: Portable HID luminaire, Globug Series License Fee - Units

Model Designation:	1) GB12BW, GB12BS, GB12BP, 2) GBW, GBS, GBC, GBP
Rated Voltage:	AC 120V, 60Hz
Rated Power:	1) 430W 2) 1030W

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Appendix: 1, 1-9

Licensed Test mark: Date of Issue (day/mo/yr) 07/06/2013 TÜVRheinland TUV Rheinland of North America. Inc., 12 Commerce Road, Newtown, CT 06470, Tel (203) 426-0888 Fax (203) 426-4009

GLOBUG LIGHTING SYSTEM • OPERATION AND PARTS MANUAL - REV. #0 (06/24/13) - PAGE 3





Gasoline engine exhaust and some of its constituents are known to cause cancer, birth defects and other reproductive harm.

GBW/GBS/GBP/GBHM/ GBMP Lighting System

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Terms and Conditions of Sale - Parts 56

NOTICE

Specifications and part numbers are subject to change without notice.

PARTS ORDERING PROCEDURES



Do not operate or service the equipment before reading the entire manual. Safety precautions should be followed

at all times when operating this equipment. Failure to read and understand the safety messages and operating instructions could result in injury to yourself and others.



SAFETY MESSAGES

The four safety messages shown below will inform you about potential hazards that could injure you or others. The safety messages specifically address the level of exposure to the operator and are preceded by one of four words: **DANGER, WARNING, CAUTION** or **NOTICE.**

SAFETY SYMBOLS

DANGER

Indicates a hazardous situation which, if not avoided, WILL result in DEATH or SERIOUS INJURY.

Indicates a hazardous situation which, if not avoided, COULD result in DEATH or SERIOUS INJURY.

Indicates a hazardous situation which, if not avoided, COULD result in MINOR or MODERATE INJURY.

NOTICE

Addresses practices not related to personal injury.

Potential hazards associated with the operation of this equipment will be referenced with hazard symbols which may appear throughout this manual in conjunction with safety messages.

Symbol	Safety Hazard			
	Burn hazards			
Ż	Electric shock hazards			

SAFETY INFORMATION

GENERAL SAFETY

NEVER operate this equipment without proper protective clothing, shatterproof glasses, respiratory protection, hearing protection, steel-toed boots and other protective devices required by the job or city and state regulations.





- NEVER operate this equipment when not feeling well due to fatigue, illness or when under medication.
- NEVER operate this equipment under the influence of drugs or alcohol.





- ALWAYS check the equipment for loosened threads or bolts before starting.
- **DO NOT** use the equipment for any purpose other than its intended purposes or applications.

NOTICE

- This equipment should only be operated by trained and qualified personnel 18 years of age and older.
- Whenever necessary, replace nameplate, operation and safety decals when they become difficult read.
- Manufacturer does not assume responsibility for any accident due to equipment modifications. Unauthorized equipment modification will void all warranties.
- NEVER use accessories or attachments that are not recommended by Multiquip for this equipment. Damage to the equipment and/or injury to user may result.
- ALWAYS know the location of the nearest fire extinguisher.



- ALWAYS know the location of the nearest first aid kit.
- ALWAYS know the location of the nearest phone or keep a phone on the job site. Also, know the phone numbers of the nearest ambulance, doctor and fire department. This information will be invaluable in the case of an emergency.



LIGHTING SYSTEM SAFETY

WARNING

NEVER disconnect any emergency or safety devices. These devices are intended for operator safety. Disconnection of these devices can cause severe injury, bodily harm or even death. Disconnection of any of these devices will void all warranties.

NEVER attempt service on a running machine.

NOTICE

- To prevent the lighting system from overturning, NEVER use in winds that exceed 22 mph (10 m/s).
- The lighting system should only be used in temperatures between 23° to 104°F (-5° to 40° C). Failure to comply with these operating parameters could cause the lamp to malfunction and shorten the ballast life.
- ALWAYS keep the lighting system in proper running condition.
- Fix damage to lighting system and replace any broken parts immediately.
- ALWAYS store equipment properly when it is not being used. Equipment should be stored in a clean, dry location out of the reach of children and unauthorized personnel.

LAMP SAFETY

WARNING

- NEVER attempt to replace lamp with the power on. Always unplug the power cord from the generator or power source when changing the lamp.
- ALWAYS allow a sufficient amount of time for the lamp to cool before changing. The possibility exists of severe burns.

NEVER use force when installing the lamp. Excessive force could cause the lamp to break, causing bodily harm.

NOTICE

- NEVER leave any grease or oil residue on lamp surface when replacing or removing lamp. This can create hot spots, reducing the service life of the lamp.
- ALWAYS make sure lamp surface is clean and dry.
- ALWAYS replace with MQ recommended type lamp. See parts section of this manual.
- If applicable, ALWAYS make sure the lamp guard is installed correctly. NEVER deform the lamp guard.
- NEVER unplug the lamp's AC power cable during operation.
- ALWAYS have a trained technician to install and remove lamp or replace any damaged fixture wiring.

BALLOON SAFETY

A WARNING

To prevent serious burns, NEVER touch or unzip the balloon envelope when the lamp is on.



ALWAYS keep the balloon away from sharp objects and excessive amounts of heat.

NOTICE

- To prevent balloon deformation, NEVER use lighting system in strong winds.
- DO NOT place the balloon inside its protective cover until the lamp has had a sufficient amount of time to cool down. This will prevent the balloon's nylon cover from being burned (touching the lamp surface).
- ALWAYS place the balloon inside its protective cover after each use. This will prolong the life of the balloon material, keeping it protected from harsh environmental elements.
- Replace balloon immediately if damaged. A damaged balloon will not inflate properly, and may become more damaged by touching the hot lamp surface.
- DO NOT use excessive force when zipping and unzipping the balloon. Be gentle with the zipper mechanism. If the zipper is broken, the balloon will become unusable.

GENERATOR SAFETY

If using a generator to power lighting system, refer to applicable generator manual safety information section.



ELECTRICAL SAFETY

🚹 DANGER

Lighting system is equipped with a ground pin on the power plug. For your protection, ALWAYS complete the grounding path. NEVER insert the AC power plug into a 2-prong receptacle to operate lighting system.

When applying power to the lighting system, **ALWAYS** connect the AC power plug to a 3-prong receptacle that is grounded. The possibility exists of **electrical shock**, **electrocution and even death** if the lighting system is not grounded.

NEVER operate lighting system or handle any electrical equipment while standing in water, while barefoot, while hands are wet or in the rain. A dangerous electrical shock could occur, causing severe bodily harm or even death.



ALWAYS make sure the area above the lighting system is open and clear of overhead power lines and other obstructions. Contact with overhead power lines or other obstructions could result in equipment damage, electrical shock, electrocution and even death.

Power Cord/Cable Safety

DANGER

- NEVER let power cords or cables lay in water.
- NEVER use damaged or worn cables or cords. Inspect for cuts in the insulation
- NEVER grab or touch a live power cord or cable with wet hands. The possibility exists of electrical shock, electrocution or death.



Make sure power cables are securely connected. Incorrect connections may cause electrical shock and damage to the lighting system.

NOTICE

ALWAYS make certain that proper power or extension cord has been selected for the job. See Cable Selection Chart in this manual.

LOADING AND UNLOADING

Cart Type - With Lifiting Hook

If lighting system is equipped with a transport lifting hook, refer to the following safety information.

- Before lifting, make sure that lighting system parts are not damaged and screws are not loosened or lost.
- ALWAYS make sure crane or lifting device has been properly secured to lifting hook of the equipment.
- NEVER lift the equipment while lighting system is running.
- Make sure the mast is completely lowered before lifting the lighting system.
- Use adequate lifting cable (wire or rope) of sufficient strength.
- Use one point suspension hook and lift straight upwards.

Cart Type - No Lifiting Hook

If lighting system is not equipped with a transport lifting hook and the mast is removable, refer to the following safety information.

- Before lifting, make sure that the mast and lamp are removed as described in the manual.
- The cart can be safely lifted by two persons to the transport vehicle.

TRANSPORTING SAFETY

NOTICE

- When transporting the lighting system, if applicable, always place in **stow position** and place mast in its carrying case.
- ALWAYS remove balloon/lamp assembly from the mast when transporting lighting system. This will prevent damage to the bulb due to vibration.
- NEVER leave the balloon/lamp exposed during transport. Exposure to excess wind or rain could damage the balloon's nylon cover.
- ALWAYS place balloon inside its protective cover during transport. Be sure the cover is secured tightly around the balloon/lamp assembly.

- Never allow any person or animal to stand underneath the equipment while lifting.
- **DO NOT** lift machine to unnecessary heights.



SPECIFICATIONS

	Table 1. Specifications				
Model GBW/GBS/GBP					
Input Voltage	90-130, 170-240 VAC				
Max. Current	9.3 A @ 120 V				
Frequency	50-60 Hz Single-Phase				
Appropriate Generator	1200 Watts				
Lamp					
Lamp Type	1,000 Watt Metal Halide				
Total Luminous Flux	99,750 lm				
Standard Balloon Diameter	47.2 in (1200 mm)				
Light Coverage (360°)	150 ft (45.7 meters)				
Lamp Surface Temperature (Longitudinal)	476.6° F (247° C) max				
Lamp Surface Temperature (Transversal)	417.2° F (214° C) max				
Dimensions (L x W x H) Storage (Lamp)	7.9 x 8.7 x 27.0 in. (200 x 220 x 685 mm)				
BALLOON					
Balloon Dimensions (L x W x H)	47.2 x 47.2 x 25.6 in. (1200 x 1200 x 650 mm)				
Balloon Material	Polyester				
Balloon Heat-Resisting Temperature	320-356° F (160-180° C)				
Internal Balloon Temperature	126° F (52° C)				
Balloon Water Resistance	1500 mm H ₂ O				
FAN MOTOR					
Fan Motor Voltage	24 VDC				
Fan Motor Current	1.2 A				
Fan Motor Pressure	0.324 kPA (0.047 psi)				
PENTAPOD (GBW only)					
Outriggers	5				
Mast - Number of Stages	3 (air shock absorbers)				
GBW Dimensions (L x W x H) Upper Working Position	54.0 x 56.7 x 84.4 to 136.8 in (1,370 x 1,440 x 2,145 to 3,475 mm)				
Dimensions (L x W x H) Storage (Pentapod)	8.7 x 8.7 x 40.0 in (220 x 220 x 1015 mm)				
Weight	57.6 lb (21.5 kg)				
OFFSET POLE (GBS Only)					
Mast - Number of Stages	2 stages (offset and straight pole)				
Dimensions (L x W x H) Upper Working Position	47.2 x 50.6 x 78.0 in (1200 x 1285 x 1980 mm)				
Dimensions (L x W x H) Storage	Straight Pole: 39.4 in (1,000 mm) Offset Pole: 26.9 x 16.7 x 2 in (683 x 425 x 52 mm)				
Weight	44.2 lb (16.5 kg)				



Figure 1. GBW Dimensions

Table 2. GBW Dimensions					
Reference Letter	Dimension inches (mm)				
A	Total Max. Height (with Standard Balloon)	136.8 (3,475)			
В	Standard Balloon Height	25.6 (650)			
С	Mast Height (without Balloon)	111.0 (2,820)			
D	Standard Balloon Diameter	47.2 (1,200)			
E	Mast Height (Stowed)	40.0 (1,015)			



Figure 2. GBS Dimensions



Figure 3. GBP Dimensions

Table 4. GBP Dimensions				
Reference Letter	Dimension inches (mm)			
А	47.2 (1,200)			
В	25.6 (650)			



VALUES LISTED AS FOOTCANDLES

SCALE: 1 GRID = 50 FT. (15.24 METERS)



GENERAL INFORMATION

The Multiquip GloBug GBW, GBS, GBP are generalpurpose, portable, glare-free lighting systems intended for emergency and remote lighting needs. It is universally adaptable to all AC power supplies and accepts 50/60 Hz, 100-240 V.

The GBP (also included with the GBW and GBS) provides 360° glarefree illumination. The balloon is self-inflating and easy to install and inflate in less than 20 seconds. It uses a single 1,000 watt lamp with pure white light for maximum illumination with a light coverage of up to 150 feet. The balloon is self-inflating and easy to install and inflate in less than 20 seconds.

The GBW has a three-stage mast that extends to a height of up to 13 feet and 2 inches. The GBW has five outriggers (pentapod) for great stabilization.

The GBS is designed to be attached to an external piece of equipment such as a paver. The system is easy to assemble and includes poles and mounting brackets.

The GBHM Hitch Mount can be used to attach a GBP to a hitch on a truck.

The GBMP Plate Mount can be used to attach a GBP to a trailer.

If an extension cord is necessary to connect to a power source, refer to Table 5 to select the proper length.

Table 5. Extension Cord Gauge Selection										
Ampere	Volts		Length of Cord in Feet							
Rating	115V	25 Ft.	50 Ft.	100 Ft.	150 Ft.	200 Ft.	250 Ft.	300 Ft.	400 Ft.	500 Ft.
Range	230V	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	800 Ft.	1000 Ft.
0	- 2	18	18	18	16	16	14	14	12	12
2	- 3	18	18	16	14	14	12	12	10	10
3	- 4	18	18	16	14	12	12	10	10	8
4	- 5	18	18	14	12	12	10	10	8	8
5	- 6	18	16	14	12	10	10	8	8	6
6	- 8	18	16	12	10	10	8	6	6	6
8 -	10	18	14	12	10	8	8	6	6	4
10	- 12	16	14	10	8	8	6	6	4	4
12	- 14	16	12	10	8	6	6	6	4	2
14	- 16	16	12	10	8	6	6	4	4	2
16	- 18	14	12	8	8	6	4	4	2	2
18	- 20	14	12	8	6	6	4	4	2	2

COMPONENTS





Figure 5 shows the location of the controls and components for the GBW Lighting System. The functions of each control is described below:

- Balloon Cover Stores balloon when GBW is not in use. Allow a sufficient amount of time for the lamp to cool down before storing balloon. Possibility exists of balloon getting burned.
- 2. **Balloon** Made of heat resistant polyester, with a diameter of 47.2 inches (1,200 mm). Balloon is self-inflating and inflates in less than 20 seconds.
- 3. **Velcro** Used to easily attach optional message strip to the balloon.
- 4. **Buckle** Used to hold the balloon together when storing inside the cover.
- 5. **AC Power Cable** Connects to the AC power source (generator).
- 6. Pentapod Supports and holds up the GBW.
- 7. Latch To secure the pentapod, place the lock in the upper or lower position.
- 8. **Stay** Supports the mast against the pentapod.
- Mast This mast is comprised of three separate stages. The mast can be raised in excess of 8 feet (without balloon). When raising the mast, always be on the lookout for overhead obstructions.
- 10. **Mast Bolt** Loosen to raise mast and tighten to keep the mast in place when raised to the desired height.
- 11. **Message Strip (OPTIONAL)** A 12 x 43 inch message strip (GBBALD1) may be attached to the balloon. The message strip can be purchased separately.
- 12. **Zipper** Zips up balloon to completely close it when lamp is in place.
- 13. Lamp Holder Holds lamp in place. Lamp is screwed into socket.

- 14. Lamp/Balloon Bolt Used to tighten mast when attached to the lamp/balloon assembly.
- 15. Fan Motor (Blower) Inflates the balloon as soon as power is applied.
- 16. **Lamp** 1000 watt metal halide bulb with pure white light for maximum illumination.
- 17. **Lamp Guard** Protects the lamp from being hit by objects and the balloon from touching the lamp.
- 18. **Carrying Case** Use this case to store the pentapod when transporting or when not in use.
- 19. **Offset Pole** Supports lamp assembly when attached to the straight pole.
- 20. **Knob** Secures the offset pole to the straight pole when tightened.
- 21. **Straight Pole** Used in conjunction with the offset pole to support the lamp assembly.
- 22. **Clamps** Used to attach the straight pole to an external support. These clamps must be tightened securely to prevent the light assembly from falling off.
- 23. **Extension Pole** Extends mast height by 35 inches. For GBHM and GBMP, 2 poles are included to support the desired balloon assembly.
- 24. **Hitch Mount Assembly** Used to attach balloon assembly to a hitch on a truck or similar vehicle.
- 25. **Plate Mount Assembly** Used to attach balloon assembly to a trailer or similar vehicle.
- 26. **Plate** Attaches directly to a trailer to hold plate mount assembly.

GBW SETUP

- 1. Set the GBW on a firm level surface where there is enough space around the pentapod for the outriggers to be deployed.
- 2. Remove the pentapod from the carrying case. The pentapod outriggers are secured together with a strap. See Figure 6. Squeeze both tabs on the buckle to unlock strap and release pentapod outriggers.



Figure 6. Releasing Pentapod Buckle

3. Lift mast up and deploy the pentapod as shown in Figure 7.



Figure 7. Deploying the Pentapod

4. With pentapod fully deployed, hook the latch to lock the pentapod in place. The latch can be hooked in the

upper or lower position. Placing the lock in the upper position will provide 1 foot (305 mm) more height. See Figure 8.



Figure 8. Securing the Pentapod

5. If desired, attach extension pole to the top of the mast as shown in Figure 9.



Figure 9. Attaching Extension Pole

6. To improve stability and prevent tipping of the lighting system, place sand bags on the outriggers or similar weight on the weight hook as shown in Figure 10.



Figure 10. Sand Bags and Weight

GBS SETUP

1. Attach one of the clamps that come with the GBS to the external support pole. The clamps may be attached to vertical, horizontal, or angled pole. See Figure 11.



Figure 11. Clamp Attachment

- 2. Using a 19 mm wrench, tighten the locknut securely. See Figure 11.
- 3. Attach the other clamp to the external support pole about 7 inches (140 mm) lower than the previously installed clamp. See Figure 12 If using horizontal external support poles, a second pole is needed.



Figure 12. Distance Between Clamps

4. Attach the straight pole to the clamps. Tighten locknuts on both clamps. See Figure 13.



Figure 13. Straight Pole Attachment

Always securely tighten the locknuts when assembly is used to prevent the lighting system from falling off which can cause injury or equipment damage.

5. Place the offset pole (or an optional straight pole, if desired) on top of the straight pole. Tighten knob or bolt securely. See Figure 14.



Figure 14. Offset Pole Attachment

WARNING

Always securely tighten the knob on the offset or the bolt on the straight pole when assembly is used to prevent the lighting system from falling off which can cause injury or equipment damage.

BALLOON INSTALLATION (GBW/GBS)

1. Insert the balloon assembly into the mast. Tighten the T-bolt securely. See Figure 15.



Figure 15. Installing the Balloon

2. Unsnap the three buttons on the bottom of the balloon cover and unzip the cover. See Figure 16.



Figure 16. Unzipping Balloon Cover

3. Fold the balloon cover into itself and zip it up. See Figure 17.



Figure 17. Folding Balloon Cover

4. Secure the power cable by hooking it to the eyelet on the bottom of the balloon as shown in Figure 18.



Figure 18. Securing Cable with Hook

5. Release the buckle on the belt holding the balloon together. See Figure 19.



Figure 19. Releasing Buckle

GBHM INSTALLATION

The GBHM Hitch Mount can be used to attach a balloon/ lamp assembly (GBP) to the hitch of a truck or similar vehicle. See Figure 20 for installation procedure.



Figure 20. GBHM Installation

GBMP INSTALLATION

The GBMP Plate Mount is attached to a trailer or similar vehicle to support the balloon/lamp assembly (GBP). See Figure 21 for installation procedure.



Figure 21. GBMP Installation

RAISING THE MAST (GBW)

🚹 DANGER



ALWAYS make sure the area above the lighting system is open and clear of overhead power lines and other obstructions. Contact with overhead power lines or other obstructions could result in equipment damage, **electrical**

shock, electrocution and even death.

When raising or lowering the mast, keep hands and fingers clear of the mast sections to prevent hands and fingers from getting pinched.

1. Raise the second mast to the desired height and tighten the T-bolt securely. See Figure 22.



Figure 22. Raising the Second Mast

2. To raise the mast higher, raise the third mast until the lock/release tab pops out. The tab will automatically rest on the second mast. See Figure 23.



Figure 23. Raising the Third Mast

LOWERING THE MAST (GBW)

1. Loosen the T-bolt holding the second mast and push mast all the way down. Tighten T-bolt securely. See Figure 24.



Figure 24. Lowering Second Mast

2. Push the lock/release tab on the third mast to release it and lower third mast. See Figure 25.



Figure 25. Lowering Third Mast

OPERATION

APPLYING POWER

1. Before applying power, make sure that the Power **ON/OFF** switch (Figure 26) is in the **OFF** position.



Figure 26. ON/OFF Switch

1. If using a portable generator, plug the AC power cable to the 120 VAC receptacle on the generator used. See Figure 27.



Figure 27. Connecting to Generator

- 2. Start the generator as indicated in the generator manual.
- 3. If using power source other than a portable generator, plug the AC power cord to a 120 VAC, receptacle. See Figure 28.



Figure 28. Connecting to 120 VAC Receptacle

4. Turn on the Power **ON/OFF** switch (Figure 26). The balloon will start to inflate and the lamp will turn on.

NOTICE

If the power cable is accidentally unplugged from the power source, wait three to five minutes before reconnecting the power. This will allow time for the fan to reset and ensure balloon will inflate properly when power is reconnected.

SHUTDOWN

- 1. Turn off the power switch of the generator.
- 2. Turn off the Power **ON/OFF** switch. The balloon should start to deflate and the lamp will turn off.
- 3. Disconnect the AC power cable from the generator.

DIMMING/SHUTTING DOWN LAMP ONLY

1. Unzip the bottom -of the balloon. See Figure 29.



Figure 29. Unzipping Balloon

2. To dim the lamp, press the dimmer switch lightly. LED will blink red and the lamp will dim to about 75% brightness. The balloon will remain deployed.



Figure 30. Dimmer Switch

3. To return to 100% brightness, press the dimmer switch again. The LED will turn off.

OPERATION

4. To turn off the lamp, press and hold the dimmer switch for 3 seconds. The LED will light red and the lamp will turn off. The balloon will remain deployed.

NOTICE

To turn on lamp again, after it was turned off with the dimmer switch, turn off the Power **ON/OFF** switch. Wait three to five minutes then turn the **ON/OFF** switch back on. The lamp will now light back to 100% brightness.

STORAGE (GBW)

NOTICE

Allow about 15 to 20 minutes for the lamp to cool down before storing the GBW. The possibility exists of the balloon getting burned if it touches a hot lamp.

- 1. Unhook the AC power cable from the eyelet at the bottom of the balloon.
- 2. Make sure the mast is completely lowered as described in **LOWERING THE MAST** section.
- 3. Lock the buckle to secure the balloon together.
- 4. Unzip the zipper on the protective cover and pull down cover over the balloon/lamp assembly.
- 5. Loosen the T-bolt on the balloon/lamp assembly and lift balloon/lamp assembly from the mast.
- 6. Lift mast while pulling up strap (Figure 31).



Figure 31. Unlocking the Latch

7. Continue pulling upward on the mast until all the pentapod legs are fully retracted and are stowed. See Figure 32.



Figure 32. Stowing the Pentapod

8. Once pentapod legs are all in stow position, wrap strap around all five legs and secure by locking the buckle. See Figure 33.



- Figure 33. Locking Up Stowed Pentapod
- 9. Place the stowed pentapod inside the carrying case. See Figure 34.



Figure 34. Storing in Carrying Case

REPLACING LAMP

DANGER

Never attempt to replace lamp in a wet place. The possibility exists of electric shock.

WARNING



Always allow sufficient time for the lamp to cool down before replacing. The possibility exists of severe burns if hot lamp is touched.

Always shutdown power source and remove balloon assembly from mast when replacing a broken lamp. Utmost care should be taken in handling broken lamp. The possibility exists of serious injury from handling a broken lamp.

1. Unzip the zipper at the bottom of the balloon and roll the balloon up to expose the lamp. See Figure 35.



Figure 35. Exposing Balloon

2. Release the lamp guard locking tabs. See Figure 36.



Figure 36. Removing Lamp Guard

- 3. Remove the lamp guard.
- 4. Press the tabs on the lamp holder and push up lamp holder to release it from lamp. See Figure 37.



Figure 37. Lamp Holder

5. Remove the lamp from the lamp socket by turning lamp counterclockwise. See Figure 38.



Figure 38. Removing Lamp

6. Install new lamp into socket and turn lamp in a clockwise direction until tight. See Figure 39.



Figure 39. Installing New Lamp

NOTICE

Do not use excessive force when screwing the lamp to prevent lamp from breaking.

- 7. Secure lamp holder on top of the lamp.
- 8. Reinstall lamp guard.
- 9. Pull down balloon and zip the bottom zipper to cover lamp.

REPLACING BALLOON

1. Unzip the top and bottom of the balloon. See Figure 40.



Figure 40. Unzipping Balloon

2. Slide out the old or worn balloon over the top of the lamp guard assembly. See Figure 41.



Figure 41. Removing Old Balloon

3. Slide in the new replacement balloon over the top of the lamp guard assembly. See Figure 42.



Figure 42. Replacing Balloon

4. Zip up the top and bottom of the new balloon. See Figure 43.



Figure 43. Zipping Up New Balloon

FILTER REPLACEMENT

- 1. Remove the balloon as described in the STORAGE section.
- 2. Turn the balloon/lamp assembly upsidedown to access the filter. See Figure 44.



Figure 44. Accessing Filter

- 3. Turn the three locking tabs outwards to release the air plate. See Figure 44.
- 4. Remove the air plate and filter. See Figure 45.



Figure 45. Filter Removal

- 5. Install a new filter and reinstall the air plate.
- 6. Turn the three locking tabs inwards to lock the air plate in place. See Figure 46.



Figure 46. Locking Air Plate

Table 6. Troubleshooting						
SYMPTOM	POSSIBLE PROBLEM	SOLUTION				
	Is plug disconnected?	Plug in correctly.				
	Is generator power switched off?	Turn on switch.				
	Is lamp loose?	Screw lamp securely into socket.				
	Is power connector disconnected or loose?	Connect disconnected connector.				
Lamp does not light.	Are any other electric appliances (other than light tower) plugged into power source?	Unplug all other appliances.				
	Is model of lamp incompatible?	Use genuine MQ lamp.				
	Is lamp not cool enough to light again? (Interval of 5 to 10 minutes is required before turning on lamp again)	Wait for lamp to cool down.				
Lamp only lights for a short time.	Is ambient temperature too high (more than 104° F (40° C)?	Move lamp where there is proper ventilation.				
Balloon does not inflate.	Is fan motor (blower) not working properly?	Check and repair fan motor (blower).				
	Is balloon envelope defective?	Repair or replace balloon envelope.				





Table 7. Periodic Check and Maintenance									
FIGURE			PART		CHECK ITEM	SOLUTION			
Lamp	L1	Lamp (Base)		Lamp b	base loose?	Screw in securely.	•		
	L2	Lamp Holder		Lamp h	nolder loose?	Replace.	#		
	L3	Pipe Frame		Pipe Fr	ame skewed	Replace.	&		
	L4	Lamp		Defective lamp?		Replace.	•		
Balloon	B1	Balloc	on (Envelope)	Defective or dirty?		Replace.	•		
	B2	Zipper		Broken	?	Replace.	•		
	B3	Fan Motor (Blower)		Not wo	rking properly?	Repair or replace.	\$		
	B4	Buckle		Broken	?	Replace.	\$		
	B5	T-handle bolt (balloon)		Broken	?	Replace.	•		
Pentapod	P1	Pentapod		Damag	ed or Not Working Properly?	Replace.	#		
	P2	Mast		Damag	ed or Not Working Properly?	Replace.	#		
	P3	Latch		Damag	jed?	Replace.	•		
	P4	Stopper		Damag	jed?	Replace.	•		
Electric	E1	Power cable		Defecti	ve or worn cable?	Replace.	•		
	E2	Plug		Damag	jed?	Replace.	#		
Offset Pole	S1	Clamp		Damag	jed?	Replace.	•		
	S2	Straight Pole		Damag	jed or Skewed?	Replace.	\$		
	S3	Offset Pole		Damag	jed or Skewed?	Replace.	\$		
	S4	Knob		Loose?		Tighten Securely.	•		
• — Check daily			# — Every 20 h	ours	\$ — Every 100 hours	& — Every 500 ho	ours		



NOTES

EXPLANATION OF CODE IN REMARKS COLUMN

The following section explains the different symbols and remarks used in the Parts section of this manual. Use the help numbers found on the back page of the manual if there are any questions.

NOTICE

The contents and part numbers listed in the parts section are subject to change **without notice**. Multiquip does not guarantee the availability of the parts listed.

SAMPLE PARTS LIST

<u>NO.</u>	<u>Part no.</u>	PART NAME QTY. REM	ARKS
1	12345	BOLT11 NCL	UDES ITEMS W/%
2%		WASHER, 1/4 INNOT	SOLD SEPARATELY
2%	12347	WASHER, 3/8 IN1 MQ-4	IST ONLY
3	12348	HOSEA/RMAK	E LOCALLY
4	12349	BEARING1	345B AND ABOVE

NO. Column

Unique Symbols — All items with same unique symbol

(@, #, +, %, or) in the number column belong to the same assembly or kit, which is indicated by a note in the "Remarks" column.

Duplicate Item Numbers — Duplicate numbers indicate multiple part numbers, which are in effect for the same general item, such as different size saw blade guards in use or a part that has been updated on newer versions of the same machine.

NOTICE

When ordering a part that has more than one item number listed, check the remarks column for help in determining the proper part to order.

PART NO. Column

Numbers Used — Part numbers can be indicated by a number, a blank entry, or TBD.

TBD (To Be Determined) is generally used to show a part that has not been assigned a formal part number at the time of publication.

A blank entry generally indicates that the item is not sold separately or is not sold by Multiquip. Other entries will be clarified in the "Remarks" Column.

QTY. Column

Numbers Used — Item quantity can be indicated by a number, a blank entry, or A/R.

A/R (As Required) is generally used for hoses or other parts that are sold in bulk and cut to length.

A blank entry generally indicates that the item is not sold separately. Other entries will be clarified in the "Remarks" Column.

REMARKS Column

Some of the most common notes found in the "Remarks" Column are listed below. Other additional notes needed to describe the item can also be shown.

Assembly/Kit — All items on the parts list with the same unique symbol will be included when this item is purchased.

Indicated by:

"INCLUDES ITEMS W/(unique symbol)"

Serial Number Break — Used to list an effective serial number range where a particular part is used.

Indicated by:

"S/N XXXXX AND BELOW" "S/N XXXX AND ABOVE" "S/N XXXX TO S/N XXX"

Specific Model Number Use — Indicates that the part is used only with the specific model number or model number variant listed. It can also be used to show a part is NOT used on a specific model or model number variant.

Indicated by:

"XXXXX ONLY" "NOT USED ON XXXX"

"Make/Obtain Locally" — Indicates that the part can be purchased at any hardware shop or made out of available items. Examples include battery cables, shims, and certain washers and nuts.

"Not Sold Separately" — Indicates that an item cannot be purchased as a separate item and is either part of an assembly/kit that can be purchased, or is not available for sale through Multiquip.
GBW/GBS/GBP LIGHTING SYSTEM

1 to 3 units

Qty.	P/N	Description
2	.E000125600	.LAMP
2	.A300275900	. E BALLAST ASSY
2	.A100057000	BALLOON CLOTH CP
3	.A300155100	.FILTER
1	.1654000230	BALLOON PATCH KIT

NOTICE

Part numbers on this Suggested Spare Parts list may supersede/replace the part numbers shown in the following parts lists.

NAMEPLATES AND DECALS (GBW)



PAGE 38 — GLOBUG LIGHTING SYSTEM • OPERATION AND PARTS MANUAL — REV. #0 (06/24/13)

NO.	PART NO.	PART NAME	QTY.	REMARKS
1	A400324800	DECAL; GLOBUG INFORMATION	1	
2	A400166701	DECAL; LATCH, RIGHT	1	
3	A400324100	DECAL; LATCH, LEFT	1	
4	A400290900	DECAL; CAUTION, LAMP INFORMATION (ENGLISH)	1	
5	A400324200	DECAL; CAUTION, LAMP INFORMATION (FRENCH)	1	
6	A400326400	DECAL; LAMP TYPE	1	
7	A400325000	DECAL; CAUTION, AC ONLY	1	
8	A400206500	DECAL; DIMMER SWITCH	1	
9	A400324900	DECAL; LAMP OFF SWITCH	1	
10	A400084300	DECAL; GROUND	2	
11	A400194100	DECAL; DANGER, WORKSTAND DEPLOYMENT (ENGLISH)	1	
12	A400324300	DECAL; DANGER, WORKSTAND DEPLOYMENT (FRENCH)	1	
13	A400325100	DECAL; ELECTRIC SHOCK, HIGH VOLTAGE, BURN HAZ.	1	
14	A400207302	DECAL; GBW-004	1	
15	A400193300	DECAL; GLOBUG LIGHTING SYSTEM	1	
16		NAMEPLATE	1	CONTACT MQ PARTS

NAMEPLATES AND DECALS (GBS)



PAGE 40 — GLOBUG LIGHTING SYSTEM • OPERATION AND PARTS MANUAL — REV. #0 (06/24/13)

<u>NO.</u>	PART NO.	PART NAME	<u>QTY.</u>	REMARKS
1	A400193300	DECAL; GLOBUG LIGHTING SYSTEM	1	
2	A400323800	DECAL; GLOBUG INFO, ELECTRIC SHOCK(FRENCH)	1	
2A	A400204701	DECAL; GLOBUG INFO, ELECTRIC SHOCK (ENGLISH)	1	
3	A400326400	DECAL; LAMP TYPE	1	
4	A400290900	DECAL; CAUTION, LAMP INFORMATION (ENGLISH)	1	
5	A400324200	DECAL; CAUTION, LAMP INFORMATION (FRENCH)	1	
6	A400325000	DECAL; CAUTION, AC ONLY	1	
7	A400324900	DECAL; LIGHT CONTROL SWITCH	1	
8	A400206500	DECAL; DIMMER SWITCH	1	
9	A400325100	DECAL; ELECTRIC SHOCK, HIGH VOLTAGE, BURN HAZ	<u>.</u> 1	
10	A400084300	DECAL; GROUND	2	
11		NAMEPLATE	1.C	ONTACT MQ PARTS DEPT.

BALLOON AND LAMP ASSY (GBW/GBS)



BALLOON AND LAMP ASSY (GBW/GBS)

NO.	PART NO.	PART NAME	QTY.	REMARKS
1#	E000125600	LAMP MP1000	1	<u></u>
2#	E000038200	RUBBER	1	
3#	A300273200	SOCKET ASSY	1	
4#	0023304015	SCREW & WASHER, M4x15	2	
5#	A300160602	PLATE, LAMP	1	
6#	A400195200	STOPPER	4	
7#	0024304004	SCREW, M4x4	8	
8#	0023405012	SCREW, M5x12	4	
9#	A300174000	LAMP HOLDER	1	
10#	A200057703	MAIN POLE 1	3	
11#	A200061300	MAIN POLE 2	1	
12#	2214500230	SEAL, FLAT	2	
13#	A100061200	SHEET, TOP	1	
14#	A100060900	RED BALLOON COVER	1	
15#	0014808025	BUTTON SCREW AND WASHER, M8x25	4	
16#	A300162400	SEAL, PACKING	2	
17#	A300165100	PLATE, TOP	1	
18#	A300264500	FAN MOTOR ASSY	1	
19#	0023304012	SCREW AND WASHER, M4x12	12	
20#	0023204006	SCREW, M4x6	3	
21#	A300164900	PLATE, FAN	1	
22#	0024304008	SCREW, M4x8	15	
23	A400199500	PACKING, LAMP	4	
24	0043104000	WASHER, M4	4	
25#	0033104000	NUT, M4	9	
26#	A300145801	BOTTOM PLATE	1	
27#	A400030700	STOPPER, FILTER	3	
28#	E000119300	WAVE WASHER, M5	3 3 3	
29#	E000077500	SPACER	3	

BALLOON AND LAMP ASSY (GBW/GBS — CONTINUED)



BALLOON AND LAMP ASSY (GBW/GBS — CONTINUED)

NO.	PART NO.	PART NAME	<u>QTY.</u>	REMARKS
30#	A200057603	FLANGE	1	
31#	E000070000	SUPPORT NUT	4	
32#	A300181901		1	
33#	A300269600	SWITCH	1	
34#	A300160003	COVER 1	1	
35#	A300160100	COVER 2	1	
36#		PLATE, GUARD	1	
37#	A100061000	SHEET, BOTTOM	1	
38#	0014710035	BUTTON SCREW, M10x35	4	
39#	0043210000	SPRING WASHER, M10	4	
40#	2204510110	BUTTON SCREW, M10x35 SPRING WASHER, M10 WASHER WASHER, M10 LAMP GUARD	1	
41#	0043110000	WASHER, M10	3	
42#	A100061300	LAMP GUARD	1	
43#	A400209801	BALLOON KNOB COMPLETE	1	
44#	A300174401	FILTER	1	
45#	A300175300	PLATE, AIR	1	
46#	GBB115DR	PLATE, AIR BALLOON CLOTH BLANK MESSAGE STRIP (OPTIONAL)		CONTACT MQ UNIT SALES
47#	GBBALD1	BLANK MESSAGE STRIP (OPTIONAL)	1	CONTACT MQ UNIT SALES
48#	A300275900	E BALLAST ASSY	1	
49	GBP	E BALLAST ASSY BALLOON/LAMP ASSY		INCLUDES ITEMS W/ #
				CONTACT MO UNIT SALES
50	GB48	BALLOON CLOTH (OPTIONAL) BLANK MESSAGE STRIP, 48"X48" (OPTIONAL BALLOON CLOTH (OPTIONAL)		CONTACT MQ UNIT SALES
51	GB48BMS GB36	BLANK MESSAGE STRIP, 48"X48" (OPTIONAL	.)1	CONTACT MQ UNIT SALES
52	GB36	BALLOON CLOTH (OPTIONAL)	1	CONTACT MQ UNIT SALES
53	GB36BMS	BLANK MESSAGE STRIP, 36"X36" (OPTIONAL)	1	CONTACT MQ UNIT SALES
54	GB36N	BALLOON CLOTH (OPTIONAL)		CONTACT MQ UNIT SALES
55	1654000230	BLANK MESSAGE STRIP, 36"X36" (OPTIONAL) BALLOON CLOTH (OPTIONAL) BALLOON PATCH KIT (OPTIONAL)		CONTACT MQ UNIT SALES



NO.	PART NO.	PART NAME	QTY.	REMARKS
1	A300175400	FIRST MAST	1	
2	A300175500	SECOND MAST	1	
3	A300175600	THIRD MAST	1	
4	A400199700	PLUG	1	
5	A400112700	LEAF VALVE	1	
6	0023104008	SCREW, M4x8	1	
7	0043104000	WASHER, M4	1	
8	0023105008	SCREW, M5x8	2	
9	0043105000	WASHER, M5	1	
10	A400187601	KNOB	2	
11	0013108020	BOLT, M8x20	1	
12	A400200500	WASHER	1	
13	A400110200	WASHER, MAST	2	
14	A400200700	RUBBER, MAST	1	
15	A400092801	WASHER	2	
16	A400200800	BOTTOM PLATE	1	
17	0024705008	SET SCREW, M5x8	6	
18	E000081200	O-RING	1	
19	A400202700	BOLT	1	
20	0043108000	WASHER, M8	1	
21	A400109600	RUBBER, MAST	1	
22	A400092402	BOTTOM PLATE	1	
23	A400200300	PIPE, LEVER	1	
24	A400200400	WASHER	1	
25	A400200201	LEVER, HOOK	1	
26	A400195700	SPRING, HOOK	1	



PENTAPOD ASSY (GBW)

NO.	PART NO.	PART NAME	<u>QTY.</u>	REMARKS
1	A300180300	BASE PIPE 1	1	
2	A300178000	BASE PIPE 2	1	
3	A300113103	SUPPORT	5	
4	A300108700	SHACKLE	1	
5	1641000330	RUBBER FOOT	5	
6	0014708025	BUTTON SCREW, M8x25	11	
7	0033208000	SELF LOCK NUT, M8	11	
8	A400205901	WASHER, M8	10	
9	0014710025	BUTTON SCREW, M10x25	5	
10	0043110000	WASHER, M10	5	
11	0033210000	SELF LOCK NUT, M10	5	
12	A300171601	FOOT	5	
13	2212780310	LEVER	1	
14	A300152700	CARRYING CASE	1	
15	A300106500	STRAP	1	
16	0033206000	SELF LOCK NUT, M6	1	
17	A400205901	SPRING, SHACKLE	1	



POLE ASSY (GBS)

<u>NO.</u>	PART NO.	PART NAME	<u>QTY.</u>	<u>REMARKS</u>
1#	A200056702	OFFSET POLE	1	
2#	A300166600	POLE	1	
3#	E000077100	KNOB	1	
4#	E000093400	CLAMP	2	
5#	0013112040	BOLT, M12x40	1	
6#	0033112000	NUT, M12	1	
7	A000028100	POLE MOUNT KIT	1	INCLUDES ITEMS W/ #
				CONTACT MQ UNIT SALES

HITCH MOUNT ASSY (GBHM)



HITCH MOUNT ASSY (GBHM)

NO.	PART NO.	PART NAME	<u>QTY.</u>	REMARKS
1#	A300164601	SHAFT, JOINT	1	
2#	A300164501	JOINT	1	
3#	A300166600	POLE	2	
4#	0033112000	NUT, M12	4	
5#	0013112040	BOLT, M12x40	4	
6	GBHM	HITCH MOUNT	1	INCLUDES ITEMS W#
				CONTACT MQ UNIT SALES



PLATE MOUNT ASSY (GBMP)

<u>NO.</u>	PART NO.	PART NAME	<u>QTY.</u>	REMARKS
1#	A300166600	POLE	2	
2#	A300164601	SHAFT, JOINT	1	
3#	A300166000	ADAPTER	1	
4#	0033112000	NUT, M12	3	
5#	0013112040	BOLT, M12x40	7	
6#	A400192100	PLATE, ADAPTER	1	
7#	0043112000	WASHER, FLAT M12	8	
8#	0043212000	WASHER, LOCK	4	
9	GBMP	MOUNTING PLATE	1	INCLUDES ITEMS W#
				CONTACT MQ UNIT SALES

TERMS AND CONDITIONS OF SALE — PARTS

PAYMENT TERMS

Terms of payment for parts are net 30 days.

FREIGHT POLICY

All parts orders will be shipped collect or prepaid with the charges added to the invoice. All shipments are F.O.B. point of origin. Multiquip's responsibility ceases when a signed manifest has been obtained from the carrier, and any claim for shortage or damage must be settled between the consignee and the carrier.

MINIMUM ORDER

The minimum charge for orders from Multiquip is \$15.00 net. Customers will be asked for instructions regarding handling of orders not meeting this requirement.

RETURNED GOODS POLICY

Return shipments will be accepted and credit will be allowed, subject to the following provisions:

- 1. A Returned Material Authorization must be approved by Multiquip prior to shipment.
- 2. To obtain a Return Material Authorization, a list must be provided to Multiquip Parts Sales that defines item numbers, quantities, and descriptions of the items to be returned.
 - a. The parts numbers and descriptions must match the current parts price list.
 - b. The list must be typed or computer generated.
 - c. The list must state the reason(s) for the return.
 - The list must reference the sales order(s) or invoice(s) under which the items were originally purchased.
 - e. The list must include the name and phone number of the person requesting the RMA.
- 3. A copy of the Return Material Authorization must accompany the return shipment.
- Freight is at the sender's expense. All parts must be returned freight prepaid to Multiquip's designated receiving point.

- 5. Parts must be in new and resalable condition, in the original Multiquip package (if any), and with Multiquip part numbers clearly marked.
- 6. The following items are not returnable:
 - a. Obsolete parts. (If an item is in the price book and shows as being replaced by another item, it is obsolete.)
 - b. Any parts with a limited shelf life (such as gaskets, seals, "O" rings, and other rubber parts) that were purchased more than six months prior to the return date.
 - Any line item with an extended dealer net price of less than \$5.00.
 - d. Special order items.
 - e. Electrical components.
 - f. Paint, chemicals, and lubricants.
 - g. Decals and paper products.
 - h. Items purchased in kits.
- 7. The sender will be notified of any material received that is not acceptable.
- Such material will be held for five working days from notification, pending instructions. If a reply is not received within five days, the material will be returned to the sender at his expense.
- 9. Credit on returned parts will be issued at dealer net price at time of the original purchase, less a 15% restocking charge.
- 10. In cases where an item is accepted, for which the original purchase document can not be determined, the price will be based on the list price that was effective twelve months prior to the RMA date.
- 11. Credit issued will be applied to future purchases only.

PRICING AND REBATES

Prices are subject to change without prior notice. Price changes are effective on a specific date and all orders received on or after that date will be billed at the revised price. Rebates for price declines and added charges for price increases will not be made for stock on hand at the time of any price change. Multiquip reserves the right to quote and sell direct to Government agencies, and to Original Equipment Manufacturer accounts who use our products as integral parts of their own products.

SPECIAL EXPEDITING SERVICE

A \$35.00 surcharge will be added to the invoice for special handling including bus shipments, insured parcel post or in cases where Multiquip must personally deliver the parts to the carrier.

LIMITATIONS OF SELLER'S LIABILITY

Multiquip shall not be liable hereunder for damages in excess of the purchase price of the item with respect to which damages are claimed, and in no event shall Multiquip be liable for loss of profit or good will or for any other special, consequential or incidental damages.

LIMITATION OF WARRANTIES

No warranties, express or implied, are made in connection with the sale of parts or trade accessories nor as to any engine not manufactured by Multiquip. Such warranties made in connection with the sale of new, complete units are made exclusively by a statement of warranty packaged with such units, and Multiquip neither assumes nor authorizes any person to assume for it any other obligation or liability whatever in connection with the sale of its products. Apart from such written statement of warranty, there are no warranties, express, implied or statutory, which extend beyond the description of the products on the face hereof.

Effective: February 22, 2006

OPERATION AND PARTS MANUAL

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL NUMBER ON-HAND WHEN CALLING

UNITED STATES					
Multiquip Corporate Office			MQ Parts Department		
18910 Wilmington Ave. Carson, CA 90746 Contact: mq@multiquip.com	Tel. (800) 42 Fax (310) 53		800-427-1244 310-537-3700		800-672-7877 310-637-3284
Service Department			Warranty Department		
800-421-1244 310-537-3700	Fax: 310-53	7-4259	800-421-1244 310-537-3700	Fax:	310-943-2249
Technical Assistance					
800-478-1244	Fax: 310-94	3-2238			
MEXICO			UNITED KINGDO	М	
MQ Cipsa			Multiquip (UK) Limited	Head Of	ffice
Carr. Fed. Mexico-Puebla KM 126.5 Momoxpan, Cholula, Puebla 72760 Mexico Contact: pmastretta@cipsa.com.mx		Tel: (52) 222-225-9900	Unit 2, Northpoint Industria	al Estate,	Tel: 0161 339 2223
Momoxpan, Cholula, Puebla 7		Fax: (52) 222-285-0420	Globe Lane, Dukinfield, Cheshire SK Contact: sales@multiqu		Fax: 0161 339 3226
Momoxpan, Cholula, Puebla 7		Fax: (52) 222-285-0420	Globe Lane, Dukinfield, Cheshire SK		Fax: 0161 339 3226
Momoxpan, Cholula, Puebla 7 Contact: pmastretta@cipsa.co		Fax: (52) 222-285-0420	Globe Lane, Dukinfield, Cheshire SK		Fax: 0161 339 3226

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This manual MUST accompany the equipment at all times. This manual is considered a permanent part of the equipment and should remain with the unit if resold.

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