



# Owner's Manual Showmobile® Mobile Stage and Canopy



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Visit the Showmobile Mobile Stage and Canopy web page at [wengercorp.com](http://wengercorp.com) for more information.

**Note:** Please read and understand these instructions before operating.

**Note:** If you need additional information, contact Wenger Corporation using the information below.

# ***Important User Information***

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## ***General***

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In no event will Wenger Corporation be liable for technical or editorial omissions made herein, nor for direct, indirect, special, incidental, or consequential damages resulting from the use or defect of these instructions.

The manufacturer reserves the right to change this product at any time.

The information in this document is not intended to cover all possible conditions and situations that might occur. The end user must exercise caution and common sense when assembling or installing Wenger Corporation products. If any questions or problems arise, call the Wenger Corporation at (800) 4WENGER (493-6437) or +1-507-455-4100 worldwide.

## ***Manufacturer***

The Showmobile® Mobile Stage and Canopy is manufactured by:

Wenger Corporation

555 Park Drive

Owatonna, MN 55060

(800) 4WENGER (493-6437) • +1 (507) 455-4100

wengercorp.com

## ***Warranty***

This product is guaranteed free of defects in materials and workmanship for five full years from date of shipment. A full warranty statement is available upon request.

## Safety Precautions

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Throughout this document you may find cautions and warnings which are defined as follows:

- **WARNING:** Failure to follow the instruction could result in serious injury or damage to property.
- **CAUTION:** Failure to follow the instruction could result in minor injury or damage to property.

Read all of these safety instructions before using the equipment.

### **⚠ WARNING**

***Make sure that anyone working with the Showmobile has read and understands these instructions.***

### **⚠ WARNING**

***Failure to comply with Warnings and Cautions in this document can result in damage to property or serious injury.***

### **⚠ WARNING**

***Always observe and comply with the Warnings and Cautions posted on the system equipment.***

### Setup and Operation

Use only authorized and trained personnel to set up and take down the Showmobile. Insist that those who handle the unit be familiar with these instructions.

Never raise or lower the roof/canopy while people are under it or inside the Showmobile. Keep bystanders away until the roof/canopy and hydraulic stage are set up and fully secured.

After setup, never leave the hydraulic stage and roof/canopy open when the Showmobile is unattended.

Never move the Showmobile with the roof/canopy in the raised position, as the unit will be top-heavy.

Use only experienced, competent drivers, be extra careful when turning, and be conservative when accelerating and braking.

### **⚠ WARNING**

***To avoid personal injury, keep bystanders away during setup.***

### Wind Precautions

Because of the large surface area of the roof/canopy, heavy winds can tip the Showmobile. If the wind raises (or threatens to rise) above 30 mph, remove all personnel and lower the roof/canopy.

### **⚠ WARNING**

***Heavy winds can tip the Showmobile.***

### Electrical Power

If the standard auxiliary power cord cannot be used, Wenger recommends that a licensed electrician make the necessary connections between the Showmobile and the auxiliary power source or, if appropriate, provide you with a cord and standard plug suitable for use with your local electrical system.

### Battery

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks, or lighted tobacco products to come near the battery. When charging or working near a battery, always shield your face and protect your eyes. Always provide ventilation around the battery.

Do not charge or use booster cables, or adjust post connections, without proper training.

Keep batteries out of reach of children. Batteries contain sulfuric acid. Avoid contact with skin, eyes, or clothing. Shield your eyes when working near the battery to protect against possible splashing of the acid solution. In case of acid contact with skin or eyes, flush immediately with water for at least 15 minutes and get prompt medical attention. If acid is swallowed, call a physician immediately.

Keep vent caps tight and level. When lifting a plastic-cased battery, excessive pressure on the end walls (for instance, if the battery is dropped) could cause acid to spew through the vent caps, resulting in personal injury. Always lift with a battery carrier or with your hands on opposite corners.

### **⚠ WARNING**

***Use extreme care around the battery.***

## Safety Precautions (continued)

### **⚠ WARNING**

#### **Each time you use this Showmobile unit:**

- Read and understand the Owner's Manual
- Use only Authorized and Trained personnel to set up, take down, and transport the Showmobile
- Support the Showmobile on the jack stands on level ground before doing any service work

#### **Inspect any cargo stowed inside the Showmobile:**

- Never exceed the Gross Vehicle Weight (GVW) of 16,000 lb
- Put cargo in front of the axle to keep 10% -15% of the GVW on the tongue
- Distribute the cargo evenly from side to side
- Keep the load as low as possible
- Secure any cargo using the tie-downs provided
- Close and secure all doors

#### **Check each of the tires and wheels:**

- Check tires for wear, damage, and sidewall cracks
- Check tire inflation pressure as stated on sidewall
- Inspect the wheels for dents and cracks
- Tighten wheel lug nuts evenly per instructions in the Owner's Manual

#### **At the destination:**

- Never raise the roof/canopy without first extending the four stabilizing jacks and leveling the Showmobile unit.
- Never raise, lower, or adjust the roof/canopy or stage while people are inside the Showmobile or under the roof/canopy or stage
- Never leave the stage down or the roof/canopy open when the Showmobile is unattended
- Lower the roof/canopy if winds exceed 30 mph
- Test the shore power voltage, polarity and ground before attaching the power cord
- Never connect the shore power to an ungrounded source
- Never disconnect the ground connection
- Replace fuses with the proper rating per the Owner's Manual

**Note the location of these Warning Decals**



**End Panel Brace Areas**



**Underside of the Stage**

## **Safety Precautions (continued)**

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### **⚠ WARNING**

#### **Before Moving This Showmobile Unit:**

- *Make sure the hitch coupler is secured and all safety locks are engaged*
- *On level ground, adjust the hitch height to level the Showmobile unit*
- *Fasten the safety chains securely to the frame of the towing vehicle—cross the chains under the hitch to allow turning*
- *Attach the brake breakaway switch to the towing vehicle. Make sure it engages the brakes properly*
- *Connect the electrical cable to the tow vehicle*
- *Check all lights—tail, stop, and turn signal*
- *Check the brake electrical operation*
- *Make sure the hitch jack and the four Showmobile jack stands are fully retracted*
- *Make sure the Roof/canopy are in the lowered position*

#### **Towing:**

- *Contact your dealer for proper determination of towing vehicle - make sure your towing vehicle has a trailer towing capacity of at least 16,000 lb GVWR*
- *Check and adjust the brakes for correct operation at 10 mph or less in a safe area before towing*
- *Never exceed 55 mph*
- *After 50 miles, recheck tires, hitch coupler, brake operation, lights, and cargo*
- *An improperly loaded or towed trailer can result in loss of control of the vehicle which may result in serious injury or death*
- *Be certain that the load is evenly distributed and that the rating of the axles, wheels, tires, tow vehicle, hitch and other components are not exceeded*
- *The tow vehicle must be appropriately sized to the trailer. Consult your tow vehicle dealer if there are any questions about the suitability of the vehicle.*
- *Be certain that the tow vehicle hitch is appropriately rated for this trailer*
- *Always have your brakes adjusted correctly*
- *Be aware of changing road and wind conditions that may affect traction or how the trailer is handling and adjust speed accordingly*

### **Reporting Safety Defects**

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Wenger Corporation.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or Wenger Corporation.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 202-366-0123) or write to: NHTSA, U.S. Department of Transportation, 400 7th Street, SW,

NSA-11, Washington, DC 20590. You can also obtain other information about motor vehicle safety from the Hotline.

# Specifications

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## Dimensions

### Closed for Transport:

Length	33'-8"
Height	13'
Width	8'-5"

### With roof/canopy, hydraulic stage, and end panels fully open:

Length	33'-8"
Height	20'-10"
Width	16'-5"
Main stage size	28' x 6'-6"
Hydraulic stage size	28' x 8'

## Weight

### Gross weight (GVW) (approximate)

Basic unit with 1 stairway	13,490 lb
Basic unit with 1 stairway and ADA lift.	14,240 lb

### Tongue weight (approximate)

Basic unit with 1 stairway	1,600 lb
Basic unit with 1 stairway and ADA lift.	2,000 lb

Gross vehicle weight rating . . . . . 16,000 lb

## Electrical System

Electrical requirements	110-volt 60 Hz, 1-phase, 3-wire, 30-amp circuit via NEMA L5-30
LED work lights	Four sets of four LED strips located in various locations across the canopy
Outlets (standard)	Two duplex outlets on stage; one duplex outlet by charger
Additional outlets (lighting upgrade)	Two quadplex and one duplex outlet in roof/canopy
Battery	12-volt, BCI #8D
Battery charger	4-amp fully-automatic charger/maintainer

**Note:** Before each use, charge battery for 24 hours.

## Tires

Size	LT235/85R16BG G-rated tubeless
Pressure	110 psi (verify maximum inflation pressure marked on tire sidewall)

## Leveling System

### Standard

Four hand-cranked leveling jacks with 18" travel. Each jack is rated at 12,000 lb.

### Optional

Hydraulically-operated automatic leveling system, controlled by wireless remote control.

## Axle, Wheel and Hub Assembly

Two highway-rated torsion-type axles. Each axle has 7,200 lb capacity.

## Brakes

Dexter two-sided adjustable electric brake, 12-1/4" x 2-1/2", 12-volt.

## Breakaway Switch

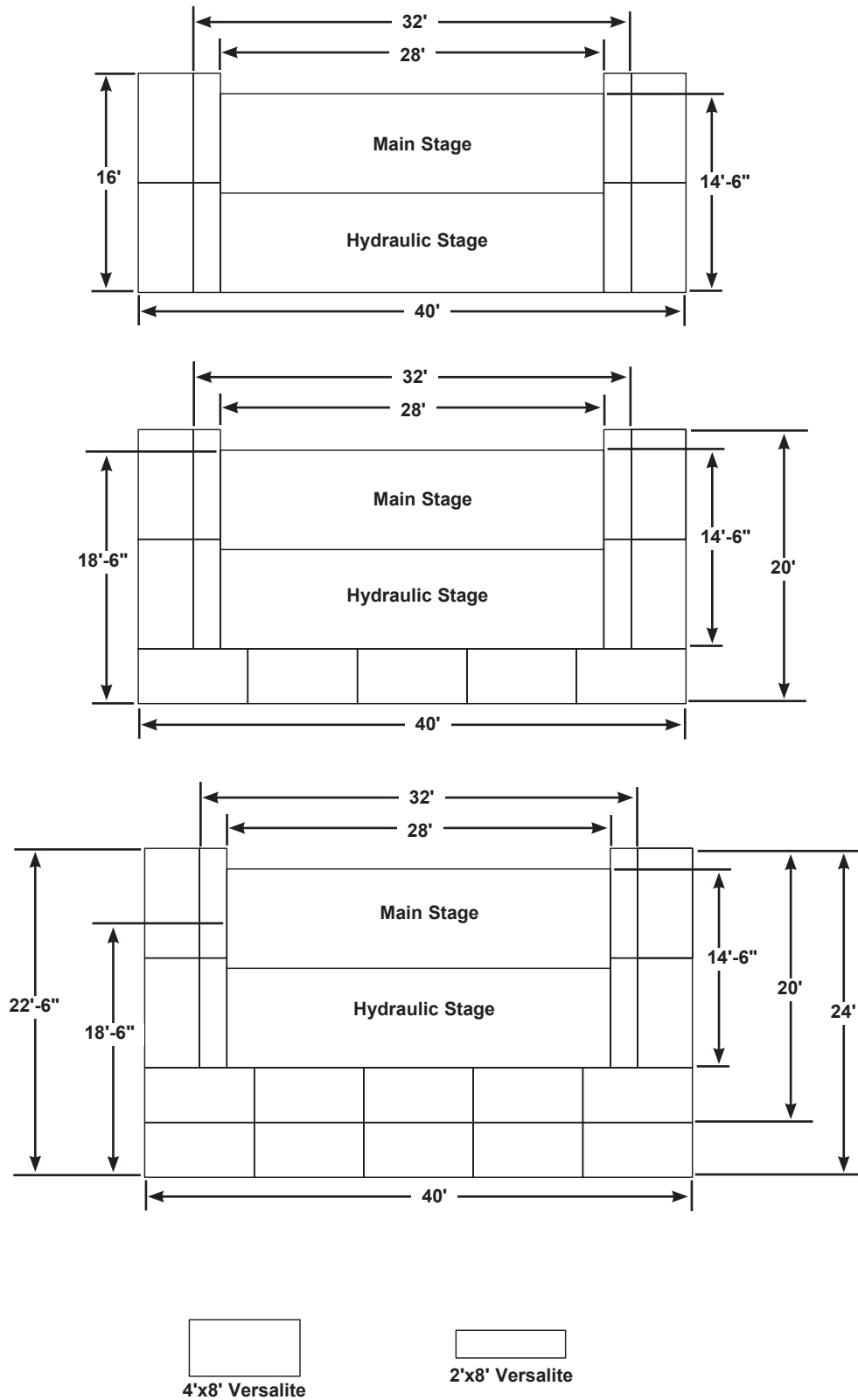
12-volt, connected to on-board battery.

**Note:** Specifications are subject to change without notice.

## Specifications (continued)

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### Typical Stage Configuration





# Towing the Showmobile

**Important:** Moving your Showmobile from one location to another is like moving any large house trailer. Because of the size and weight of the unit, use a tow vehicle that has adequate towing capacity and is suitably equipped to tow a trailer of this size.

## Connecting The Towing Vehicle

1. Tie-downs are located along the stage floor inside the Showmobile. Locate cargo near tie-downs, and securely tighten the tie-down straps which are provided. Place cargo forward of axles to improve trailer handling.
2. Be sure that the hitch on the towing vehicle is at the correct height so the Showmobile will be level front-to-rear (as measured on a level surface) when towed.
3. Use the hitch jack to raise the front of the Showmobile. Back the towing vehicle under the hitch, and secure the hitch to the towing vehicle.
4. Attach the 12-volt electrical supply cord to the towing vehicle, to operate the stop, turn, marker, clearance, and license-plate lights, and electrical brakes.
5. Attach the breakaway cable to the towing vehicle.

**Important:** Never disconnect the breakaway cable by pulling the pin out of the switch on the Showmobile. If the pin is pulled from the switch, the Showmobile brakes are activated and will drain the battery within two hours.

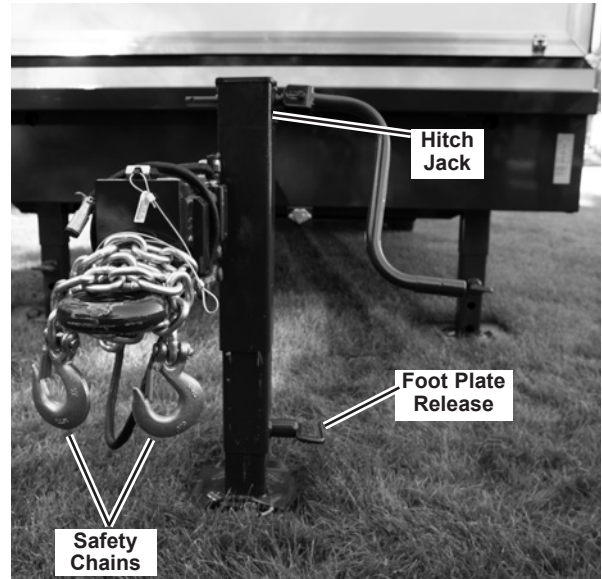
6. Fully raise the Showmobile hitch jack.
7. Attach the safety chains from the towing vehicle to the Showmobile.
8. Be sure that the Showmobile end panels are secured in their closed positions and that all storage and control compartment doors are locked.
9. Tongue weight as measured on a certified scale should be at least 10–15% of the GVW.

## Important Precautions While Towing

- Never tow the unit when there are strong cross winds.
- Always slow down sufficiently before cornering with the Showmobile.
- Always provide adequate clearance for the corner jacks when towing. Because of the extreme length of the Showmobile, extreme changes in ground level can cause its stabilizing jacks to drag: use appropriate maneuvering to avoid this.
- Never back the Showmobile over curbs.
- Always tow Showmobile "level" or parallel to roadway.
- Always place cargo forward of axles to improve trailer handling.

### **⚠ WARNING**

**To avoid personal injury, and vehicle damage, never tow Showmobile with an undersized vehicle.**



**Foot Plate Shown Lowered for Performance**

### **⚠ WARNING**

**Showmobile can tip over if towing precautions are not followed.**



## Selecting a Location

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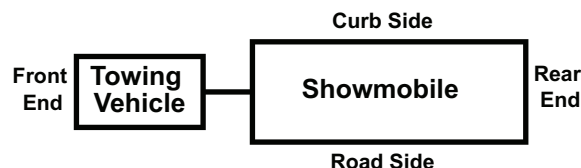
**Important:** Read all of the Safety Precautions before beginning.

Select a firm level area on which to place the Showmobile for use. Face the road side toward the center of the audience location.

Check for any possible obstructions (trees, power or light poles, overhanging wires, etc.) which might be in the way of the roof/canopy when raised.

Be sure to park where there is access to a 110-volt electrical supply to operate the battery charger, for opening and closing the roof/canopy and hydraulic stage.

In the following procedures, the sides and ends of the Showmobile are identified as indicated below.



## Disconnecting the Towing Vehicle

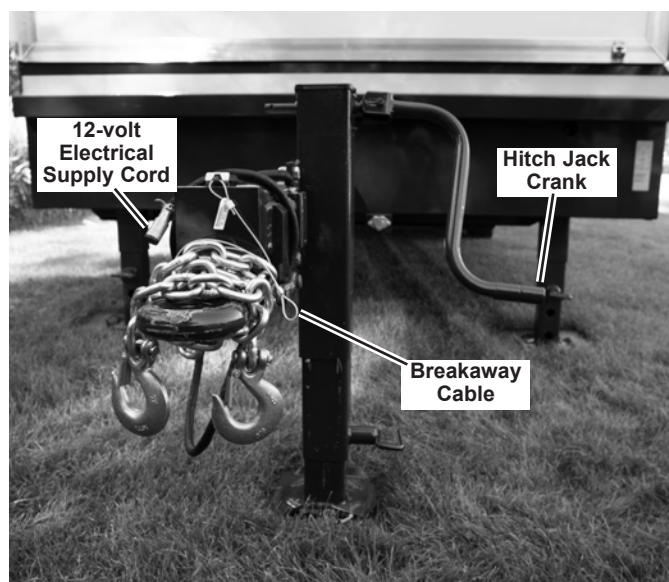
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### **⚠ WARNING**

*To avoid personal injury, use only authorized and trained personnel.*

1. Block the Showmobile's wheels with chocks.
2. Free the safety chain.
3. Disconnect the 12-volt electrical supply cord which connects the brake and running lights to the towing vehicle.
4. Disconnect the breakaway cable from the towing vehicle's hitch.

- Important:** Disconnect the breakaway cable from the towing vehicle, rather than pulling the pin out of the switch on the Showmobile. If the pin is pulled from the switch, the Showmobile brakes are activated and will drain the battery within two hours.
5. Pull out the release and lower the foot plate.
  6. Use the crank of the hitch jack to raise the Showmobile coupler off the towing vehicle hitch.
  7. Move the towing vehicle away.



## Leveling the Showmobile

### **⚠ CAUTION**

**To avoid injury, do not use Showmobile if the stage is not level.**

1. Unlock and open the control and storage compartments.

**Note:** Three keys are provided with the Showmobile: one for the control compartment and storage compartments, one for the main power lock on the remote module, and one for the end panel locks.

**Note:** There are three lockable storage compartments on the curb side of the Showmobile, for tools, electrical cords, sill plates, etc.

2. The Showmobile includes four jacks which are used to level and stabilize the unit. Refer to the appropriate procedure below, depending on whether your unit has a manual or hydraulic leveling system.

### **⚠ CAUTION**

**If you are setting up the unit on a soft surface, use sill plates (at least 18" square) to assure that the jacks don't recess into the ground.**

**Manual Leveling (Standard):** Remove the stabilizing crank from the storage compartment. Insert it into the opening on the front of the Showmobile.

Pull the foot release to drop each jack's foot. Adjust the height by turning the stabilizing crank to lower the jack farther.

Continue to adjust each corner jack until the unit is level.

**Hydraulic Leveling (Optional):** See following page.



## Leveling the Showmobile (continued)

### Hydraulic Leveling (optional) Using the Wireless Remote Control

- Important:** Before using the wireless remote control, be sure the following have been completed:
- The Showmobile is unhitched from the tow vehicle.
  - You have checked the front, rear, or overhead clearances required for the particular operation.
  - The battery has been fully charged.

To level the unit hydraulically using the wireless remote control:

1. Open the control compartment.
2. Set the 60-minute timer switch to the desired time. The switch will not function unless its knob is turned past the 10-minute position.

Activating the timer switch energizes the under-chassis angle sensors, the roof limit switch (see following page), and the receiver module in the control compartment. The remote control will not operate if the timer switch is off and will not work unless the timer is turned on before the remote.

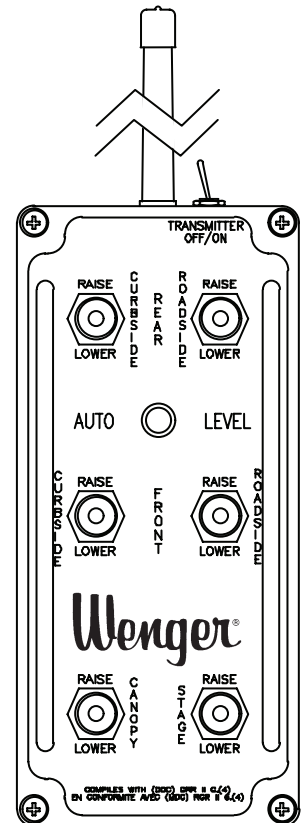
3. Remove the remote control from the control compartment, and set its transmitter switch to on.
4. Move one of the upper four switches to the raise corner position. When that stabilizing jack is in contact with the ground and the corner of the Showmobile starts to raise, set the switch back to its neutral (center) position.

Repeat this process on the other three corners.

5. After all four stabilizing pads are in full contact with the ground, press and hold the red auto level button. The Showmobile will begin to raise to properly level its chassis.

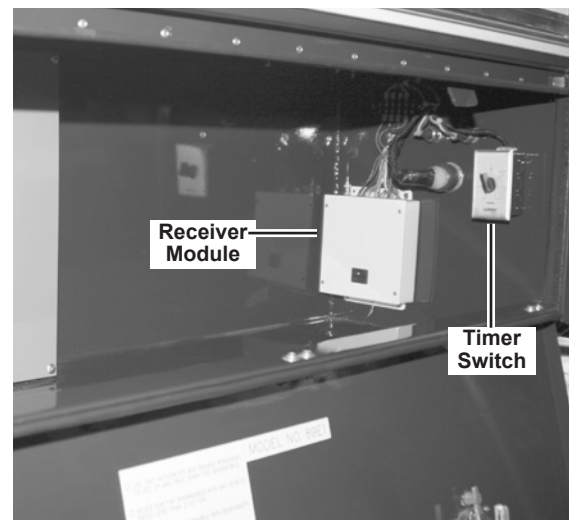
When the leveling is complete, the Showmobile will stop moving and you will no longer hear the hydraulic motor running. Release the auto level button.

Note: If the Showmobile stops moving but the hydraulic motor continues to run, the slope of the ground exceeds the limits of the leveling system. You will have to place blocks under the low end or side of the stabilizing jack pads to increase the stroke capabilities of the jacks.



### Abbreviated Procedure for Hydraulic Leveling

1. Set the timer.
2. Turn the wireless remote control on.
3. Lower all corner jacks until they are in full contact with the ground.
4. Press and hold the auto level button.

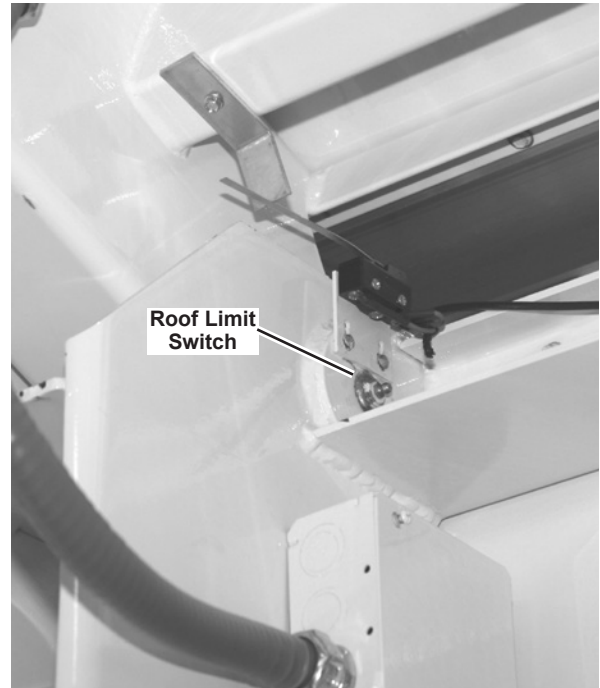


## ***Leveling the Showmobile (continued)***

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### ***Things to remember when operating the wireless remote control***

- You may have to increase the timer switch setting during the setup procedure, if there are interruptions.
- If the timer switch turns off before you are finished with the remote control:
  1. Turn the timer switch back on.
  2. If the stabilizing jacks are already lowered into position, you must press the red auto level button again to regain use of the roof/canopy raise function and the stage function.
- Turn the transmitter switch off when not in use, to save battery power.
- When the performance is complete, you will probably have to turn the timer switch back on (see the previous note) before you can close up the Showmobile.
- Turning the transmitter switch off and on doesn't change anything on the Showmobile.
- You can lower the roof/canopy at any time by turning the transmitter on and pressing lower roof/canopy.
- **The roof/canopy will not raise unless the chassis is level.**



## ***Connecting Auxiliary Power***

The 12-volt hydraulic system is powered from a battery inside the front road side corner of the Showmobile. This battery has enough power to open and close the roof/canopy and hydraulic stage 6 to 8 times before it requires recharging.

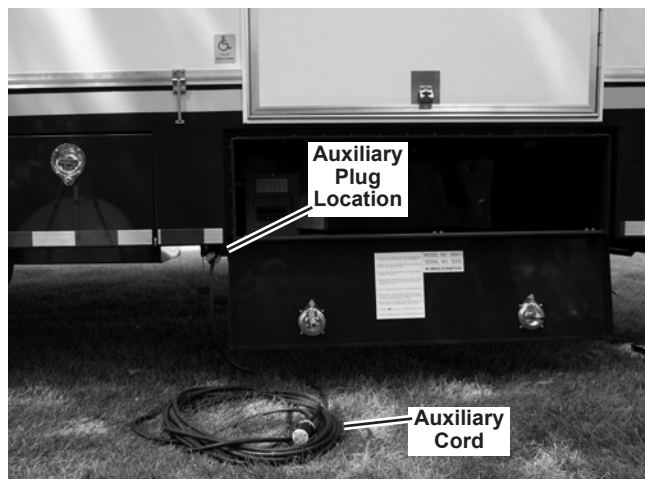
All lighting and auxiliary equipment is powered by an auxiliary 110-volt electrical system. This auxiliary system powers the LED lighting, the outlets on the stage and roof/canopy, and an outlet near the 12-volt battery for use with the battery charger.

It is a single-phase 3-wire system that requires a NEMA L5-30 plug (shown) for the power connection to the Showmobile. The receptacle for this auxiliary power is located on the curb side of the Showmobile, just to the rear of the control compartment. A 50' cord with matching plug is provided with the standard 110-volt electrical system.

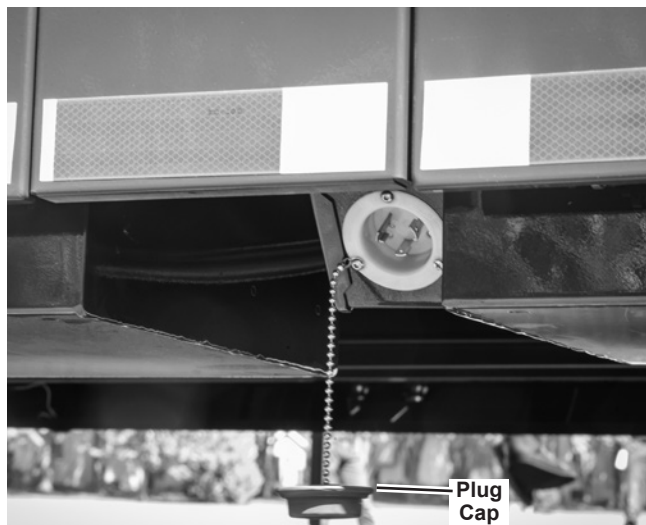
**Important:** Auxiliary power must be connected to keep the battery charged (the battery powers all hydraulic functions and the breakaway switch).

**Note:** The auxiliary system can also be hard-wired to the Showmobile, if necessary. In this case, Wenger recommends that a licensed electrician make the necessary connections between the Showmobile and the auxiliary power source or, if appropriate, provide you with a cord and standard plug suitable for use with your local electrical system.

Make sure the battery charger is operational. Refer to the original Battery Charger's Instructions received with the battery charger for more information.



***Auxiliary Plug Location***



***Auxiliary Plug Detail***

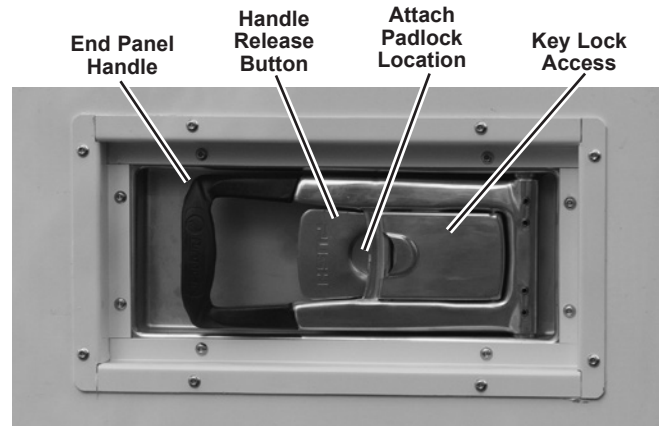


## Opening the End Panels

### **⚠ CAUTION**

***Never raise or lower the roof/canopy if the end panels are closed.***

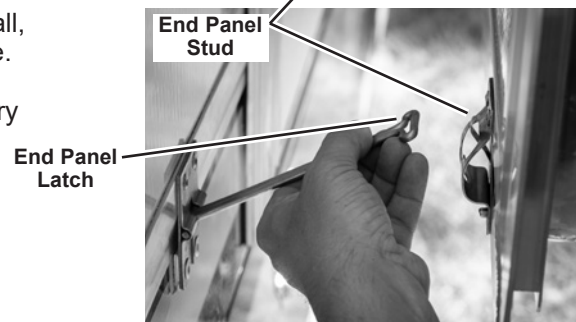
1. Unlock the front end panel. There is a key lock in the handle assembly, and also a hole for an optional padlock. When not in use, store the padlock in the control compartment.



2. Press the release button, and use the handle to open the end panel.



3. Swing the front end panel open until it is against the back wall, and latch it onto the stud on the curb side of the Showmobile. This keeps the end panel out of the way while you lower the hydraulic stage, raise the roof/canopy, and install any auxiliary equipment.



4. Lower the end flap.
5. Unlock, open, and secure the rear end panel in the same way.

**Note:** Later in this setup procedure, the end panels can be secured at an intermediate position (if desired). See "Positioning the End Panels".

End Flap





## Opening the Roof/Canopy

### **⚠ WARNING**

**Adjust stabilizing jacks and open end panels before raising roof/canopy.**

### **⚠ CAUTION**

**Be sure there are no obstructions in the way of the roof/canopy.**

**Note:** The Showmobile must be level with all jacks contacting the ground before opening the canopy.

#### 1. **Manual Leveling Model:**

Remove the remote control from the control compartment, and plug it into the receptacle on the front of the Showmobile.

The control has a keyed main power switch (for the hydraulic system) and up/down switches for adjusting the position of the roof/canopy and hydraulic stage.

2. Check for any possible obstructions (trees, power or light poles, overhanging wires, etc.) that might be in the way of the roof/canopy when it is raised.

**Note:** The battery must be fully charged before you use the hydraulic system that opens the Showmobile roof/canopy and hydraulic stage.

3. Level the Showmobile before opening the canopy. See "Leveling the Showmobile".

#### 4. **Manual Leveling Model:**

Activate the remote control by turning its key switch on.

5. Open both end doors and lock them in position.
6. With either remote control, set the roof/canopy switch to raise until the roof/canopy is raised just far enough that you will be able to lower the hydraulic stage.  
For maximum stability, do not raise the roof/canopy any higher than necessary at this time.



Remote Control Receptacle Location

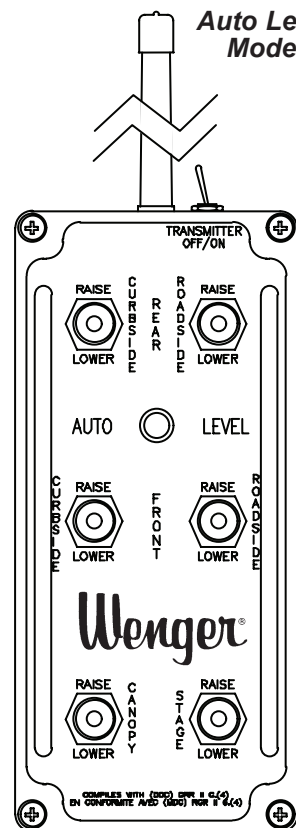


Plug In Remote Control

Manual Leveling Model



Auto Level Model



## If The Roof/Canopy Ever Drifts Down

The roof/canopy always should stay in position until you change it. If one end ever begins to drift down, it is not hydraulically locked in place: immediately raise the roof/canopy again slightly to ensure that it locks. Once hydraulically locked, it will not drift. Bump three times if necessary. Repeat as necessary.

**Note:** If you ever feel that the roof/canopy is out of phase front-to-rear (i.e., one end is moving faster than the other), stop lowering and immediately raise it completely until the pump goes over relief. See "Closing the Showmobile for Travel" for the complete re-phasing procedure.

## Lowering and Leveling the Hydraulic Stage

### **⚠ WARNING**

***Always clear people and objects from the stage when moving ceiling panels to or from storage.***

### **⚠ CAUTION**

***Do not allow a ceiling panel row upstage edge to touch or strike the stage floor.***

**Note:** The Showmobile must be level with all jacks contacting the ground before opening the canopy.

After raising the roof/canopy, lower and level the hydraulic stage:

**Note:** On a Showmobile with the hydraulic leveling option, there is a limit switch to prevent lowering or raising the hydraulic stage if the roof/canopy is not high enough for the stage to clear or if the flip-down panels are not unfolded and extended.

1. Set the stage switch on the remote control to lower. Stop the stage momentarily about two-thirds of the way down, so the legs can be released from their retaining magnets.
2. Continue lowering the hydraulic stage until it is level with the main stage.
3. Level the hydraulic stage using leg extensions and appropriate blocks as required:

**Note:** The length of each leg is adjustable. There are holes in both the inner and outer leg members at different spacings. Only one set of inside and outside holes align at any time. You may wish to raise the hydraulic stage slightly to adjust the length of each leg.

- a. Remove the locking pin from the first leg. Adjust the inner member, then reinsert pin into holes that most closely align.
- b. Repeat the procedure on each of the other legs.
- c. Make final adjustments as necessary to ensure that the entire floor is level.
- d. Lock the adjusting pin on each leg, using the attached retaining clip.
- e. Be sure the stage legs are supporting the stage.

**Note:** Return leg extensions to original position after every use to avoid damaging stage when lowering it onto a different surface contour.

4. When the hydraulic stage is level unfold the two flip-down corner panels.
  - a. Move one of the two flip-down corner panels to the performance position.
  - b. Unlatch the panel by pulling the handle until the latch unhooks from the groove in the end of the panel.
  - c. Lift the panel upward half-way and then pull the leg from the magnetic latch.
  - d. Lower the panel allowing the leg to swing downward until the panel rests on the frame and is flush with the other stages.
  - e. Adjust the leg as described in the previous section, "Lowering and Leveling the Hydraulic Stage".
  - f. Lower the other flip-down corner panel by repeating steps 4a to 4e.



## ***Raising the Roof/Canopy***

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**Note:** The Showmobile must be level with all jacks contacting the ground before opening the canopy.

1. To raise the roof/canopy, set the roof/canopy switch on the remote control at raise.  
After the canopy is fully raised, lower the canopy to the desired performance height.

2. **Manual Leveling Model**

Turn the key switch to off and remove the key.

Unplug the remote control module from the front of the Showmobile and store it in a safe place (such as the control compartment).

**Hydraulic Leveling Model (Wireless Remote Control)**

Set the transmitter switch at off. Store the remote control transmitter in the control compartment or other safe place.





## Attaching Additional Stage Units

Additional 4' x 8' stage units are optional equipment with the Showmobile. They can be attached to the road side of the stage or to the ends, to increase the stage size.

There are also four special 2' x 8' stage units which attach to the ends of the main stage, to extend it to 32' to match additional stage setups.

These additional units attach easily to the edge of the stage or to each other, to provide a rigid continuous surface.

### **⚠ DANGER**

***To avoid serious injury, use star and gravity connectors as illustrated.***

To install the additional stage units:

**Note:** Two types of connectors are used between the Showmobile stage and additional stage units, or between two additional units.

Generally:

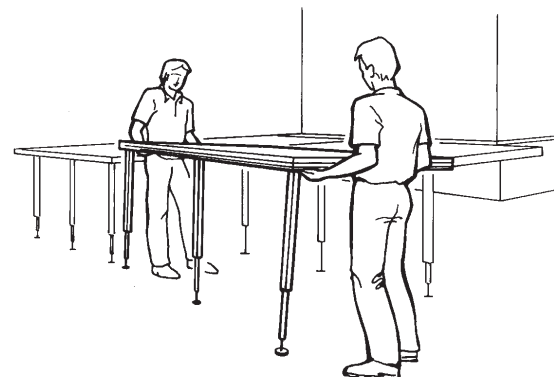
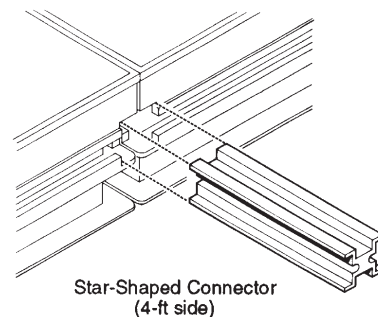
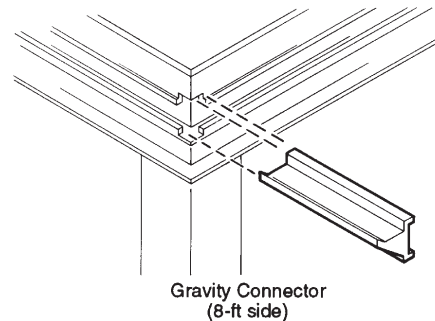
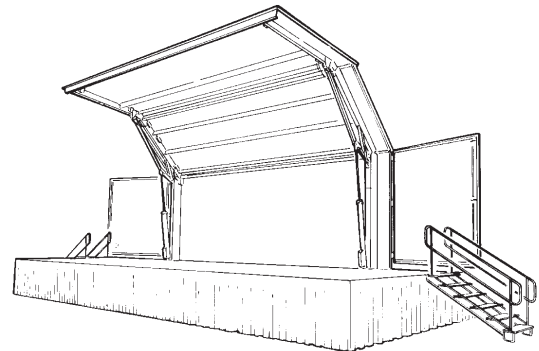
- Gravity connectors are used on the 8' sides of the units.
- Star-shaped connectors on the 4' sides, and around the perimeter of the stage.

If a stage is set up independently (not attached to the Showmobile stage), use only star-shaped connectors.

Refer to the for additional clarification.

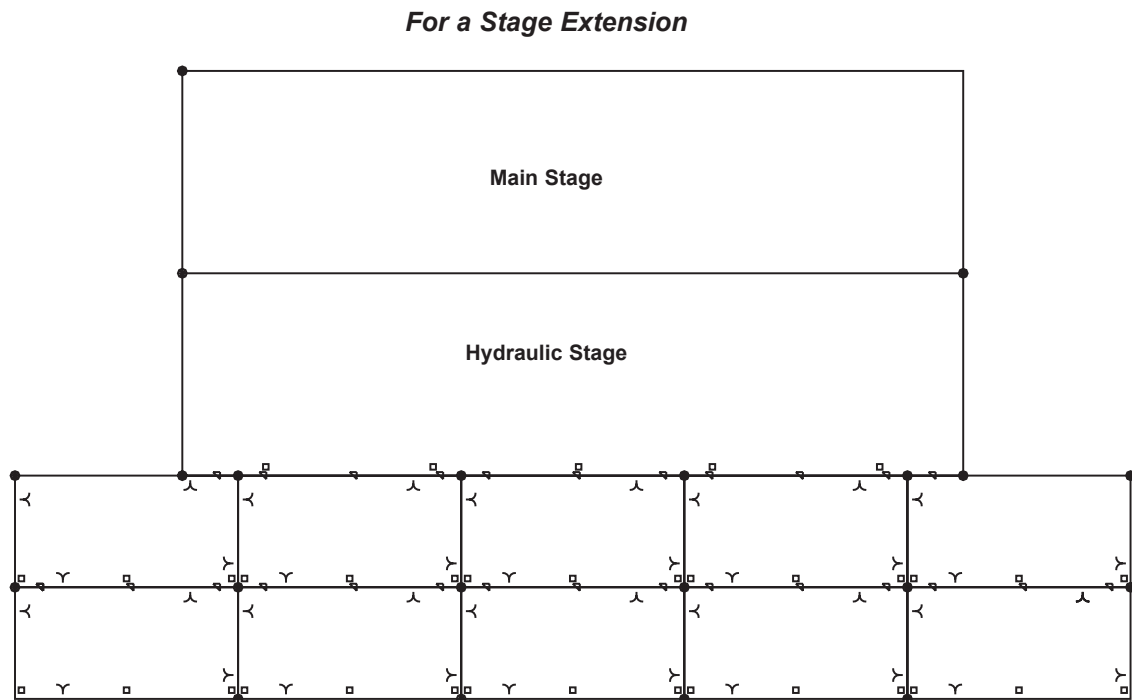
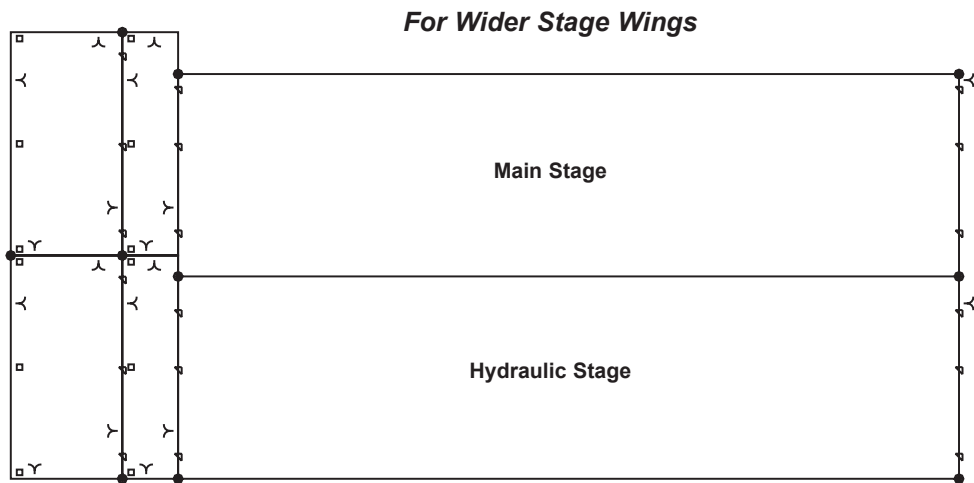
1. Insert three gravity connectors into the extrusion on the edge of the Showmobile where the 8' side of the first stage unit will be attached. Position the connectors so that one will be centered on the 8' side of the additional unit, and the others will be about 6" from each end.
2. Plug three legs into the sockets along one of the 8' sides of the additional stage unit.
3. Lift and tilt the stage unit until it rests on the connectors.
4. Lower the stage unit. If properly installed, its top surface should be level with the Showmobile stage surface and it should be firmly held by the connectors.
5. Level the stage unit to match the Showmobile stage by adjusting the three legs:
  - a. If necessary, pull the leg pin and slide the leg extension in or out until it snaps into the proper hole.
  - b. Screw the leveling foot in or out to make finer adjustments.
6. Install the remaining stage units in the same way. For stability, a star-shaped connector must be used in all locations as shown.

**Showmobile with three additional 4x8-ft stage units and one 2x8-ft unit installed on each end.**



## ***Attaching Additional Stage Units (continued)***

---



Sample connections of optional stage units shown.  
Additional units can be added to the sides or front (or both).

- Gravity Connector
- Y Star Connector
- ▽ Butterfly Clip
- Leg

## Attaching Stairways

---

The portable stairway can be located anywhere around the perimeter of the hydraulic stage floor or stage extension.

### Attaching a Stairway

1. With two people lifting the stairway, raise its lower end until you can slip the top of the two clamps (on the stairway) into the channel on the edge of the stage.
2. Rotate the stairway back down, being sure the clamps remain in the stage channel.
3. Tighten the thumb screw on each clamp, to secure the stairway to the stage.
4. Lock the stairway by securely tightening the two knobs (one on each side) at the middle of the stairway.

#### **⚠ WARNING**

***Secure both lock knobs and level the steps before using stairway.***



Tighten the  
Thumb Screw



### Adjusting a Stairway

1. Loosen the stairway lock knobs.
2. Adjust the stairway angle by pushing on the ends of the stair railings. Adjust so the steps are perfectly level.
3. Tighten the lock knobs.

## Attaching Accessories

---

A full line of railings, drapery closures, audience seating platforms, and other stair units are available. Attach drapery closures using the hook and loop tape provided.



## Optional Theatrical Lighting Packages

### ⚠ CAUTION

**Mount a maximum 300 lb of equipment on front edge of roof/canopy**

### ⚠ CAUTION

**If hydraulic pump runs, but roof/canopy does not lift, there is too much weight.**

Showmobiles that have optional theatrical lighting packages will include:

#### **Utility Package: (Included with standard Showmobile)**

- 16 strips of housed, LED lights
  - Total Intensity: 40,000 lumens
  - Color temperature: 4000k

#### **Show lighting upgrade, includes Utility Package lighting plus:**

- Wall mounted reprogrammable 5 preset DMX controller (pre-programmed for basic function from the factory)
- 5 pin DMX override port for optional external control
- 4 upstage RGB batten downlights
- 8 canopy mounted RGBWA-UV front wash fixtures
  - Total additional intensity: 38,000 lumens

#### **Performance lighting upgrade, includes Utility Package lighting plus:**

- Wall mounted reprogrammable 5 preset DMX controller (pre-programmed for basic function from the factory)
- 5 pin DMX override port for optional external control
- 4 upstage RGB batten downlights
- 4 high output canopy mounted LED profile fixtures
  - CRI (Color Rendering Index): 97.2
  - Color Temperature: 3200k
  - 50-degree lens
  - Total additional intensity: 57,000 lumens

The theatrical light fixtures and protruding cables from the canopy are rated IP65 to give them a better longevity in the field and protect the electronics against any unpredicted light weather that may occur.

Do not operate the Showmobile in bad weather. Read the manufacturer's manuals and understand the limits of the fixtures. In areas where extreme climate may exist, it may be necessary to remove the canopy fixtures and store in a climate controlled area for long storage periods.

The maximum ambient operation temperature is 104° F (40° C) and the minimum ambient operational temperature is -4° F (-20° C). Wenger recommends storing the canopy fixtures in a climate controlled area if the Showmobile is going to be outside in less than -22° F (-30° C) weather.



## Optional Theatrical Lighting Packages (continued)

### Deploying/Storing the Lighting Package

For faster take down and setup, leave the fixtures attached to the Showmobile and follow the instructional decal for folding/unfolding the system. The canopy may need to be raised and lowered slightly while deploying/storing the fixtures so they clear the deck.

To deploy light, follow steps 1-4. To store light, reverse steps 1-4.

#### CAUTION

To avoid injury or damage, lower the fixture batten with the help of another person.

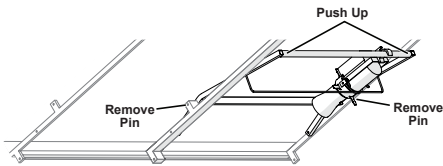
#### CAUTION

Avoid pinching cables when deploying or storing lights.

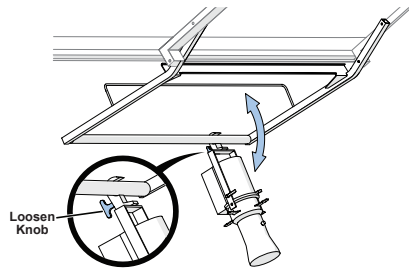
#### CAUTION

When storing fixtures, verify that all adjustment points are tightened.

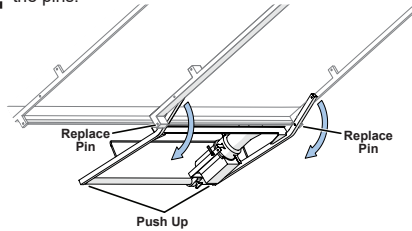
- 1** With one person on each side, push up on the fixture batten and remove the pins.



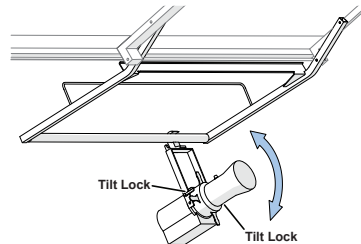
- 3** Loosen the knob at the back of the fixture clamp to rotate the fixture bracket, then retighten.



- 2** Rotate the fixture batten down 180° and replace the pins.

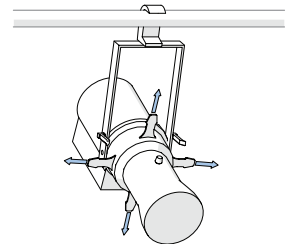


- 4** Loosen the tilt locks on both sides and adjust the light fixture to the desired angle, then tighten.

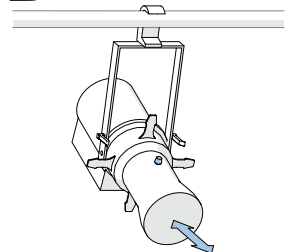


#### Light Operation

- A** Pull the framing shutters outward to allow light output.



- B** Loosen the knob to focus the light output.



When storing fixture, the lense must be in as far as possible.

When storing the fixtures always make sure to tighten all the adjustment points on the fixtures so that they do not come loose in transit.

When lowering the canopy to its fully closed position, double check the hydraulic stage deck is all the way up and watch the fixtures checking that they do not collide with the underside of the deck.

## ***Optional Theatrical Lighting Packages (continued)***

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### ***Operating the Lighting Package***

Located on rear wall there is a 5 button programmable controller for the light fixtures.

From the factory it comes standard programed with the following:

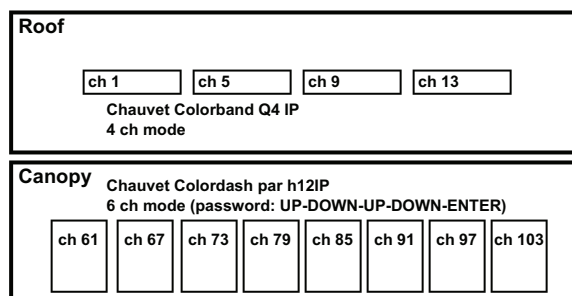
- Button 1 - Toggles Front light at 50%
- Button 2 - Toggles Front light at 100%
- Button 3 - Toggles upstage battens Red
- Button 4 - Toggles upstage battens Green
- Button 5 - Toggles upstage battens Blue

Note that with the upstage battens you can mix red green and blue to obtain other colors as well.

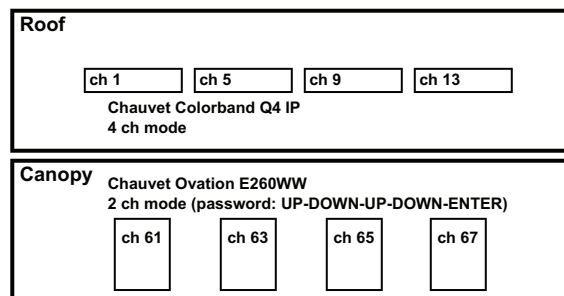
If reprogramming of the controller is necessary, contact Wenger Corporation or consult the manual located on <https://interactive-online.com/products/scenestation/models/architectural>.

The lighting may also be controlled by an external DMX 512 input through the 5 pin xlr connector located below the control panel. The DMX patching information is shown.

**Note:** If you change the fixture addressing the installed controller will not operate as intended.



***Show Lighting Package  
DMX Patching Information***



***Performance Lighting Package  
DMX Patching Information***

### ***Optional Roof or Canopy Light Bars***

Optional roof or canopy light bars are installed at the factory.

When installing other light fixtures, route the cords carefully and cable tie into position so that they do not interfere with the stage or rest on another light fixture and get hot.

## Positioning the End Panels

After all auxiliary equipment is installed, position the end panels:

1. Unlatch an end panel from the curbside of the Showmobile, and position it over the stage where desired.
2. Pull down the end panel brace, and use the stay pin to attach it to the bracket on the bottom of the end panel.
3. Position the end panel where desired. It can be set at three different positions ( $45^\circ$ ,  $68^\circ$ , and  $90^\circ$  to the end of the Showmobile) by placing the center stay pin in the appropriate hole. Do not close the end panels while the roof/canopy is raised from the travel position.
4. Position the other end panel in the same way.

**Note:** The roof/canopy can be safely positioned at any height after the stage has been deployed and adjusted. Watch for end panels and obstructions when lowering the roof/canopy.



Attach brace here  
with stay pin

Adjust end-panel angle  
by inserting stay pin  
into appropriate hole



### **⚠ WARNING**

*Be careful when positioning end panel and panel brace to prevent serious injury from pinching.*

### **⚠ CAUTION**

*Never close end panels when roof/canopy is open.*

### **⚠ CAUTION**

*Be aware of wind conditions when opening. Assistance may be required.*



## ***Closing with Stage in the Performance Position***

---



The Showmobile roof/canopy can be lowered into its closed position for security between performances without removing any stage extensions or folding up the hydraulic stage floor.

Use the following procedure:

1. Set the roof/canopy switch on the remote control to lower.  
Be careful so the roof/canopy doesn't damage any equipment which is on the stage or suspended from the light bars.
2. Raise the end flaps.
3. Close the front and rear end panels to the travel position and lock them.

If the Showmobile is left outside overnight, for long periods of time, or during inclement weather, cover exposed stage extensions.



# Closing the Showmobile for Travel

## **⚠ CAUTION**

**To avoid personal injury, use only authorized and trained personnel.**

## **⚠ CAUTION**

**Use tie-downs to secure all equipment in Showmobile**

### **Clear the Stage**

Remove all equipment, and sweep all dirt, grit, and other debris from the stage.

### **Disconnect the Auxiliary Power**

Disconnect the extension cord for the auxiliary electrical system.

### **Load Auxiliary Equipment**

Load supplementary equipment such as lighting, sound systems, generator systems, chairs, etc., into the Showmobile.

**Important:** Allow enough clearance for the hydraulic stage floor when it is folded up into its storage position.

### **Remove the Stairway(s)**

Remove the stairways from their set position. Store them inside the Showmobile.

### **Load any Stage Extensions**

Disconnect any auxiliary stage units from the stage floor. Store these units inside the Showmobile. Be sure to remove the connectors from the channels around the edge of the stage.

To provide proper weight distribution for towing, store the stage extensions and any other cargo in the front one-third of the Showmobile.

### **Secure the Equipment Inside the Unit**

Secure all equipment inside the Showmobile so that it will not shift during transport. Shifting could cause damage and create a dangerous distribution of cargo weight. Tie-downs are located along the stage floor inside the Showmobile. Locate cargo near these tie-downs, and securely tighten the tie-down straps which are provided. Do not exceed the 16,000 lb gross vehicle weight rating.

### **Lower the Roof/Canopy to the Intermediate Position**

If the Showmobile is equipped with an optional lighting package, the canopy will need to be lowered for accessibility to fold up the lighting fixtures.

Set the roof/canopy switch at lower to lower the roof/canopy partway down.

Leave enough clearance for raising the hydraulic stage.

### **Raise the Hydraulic Stage**

Move the flip-down panels upward to the storage position.

1. Lift the panel slightly and move the leg upward to the magnetic latch.
2. Lift the panel and lower it onto the main hydraulic stage.
3. Latch the panel in place by placing the hook into the panel groove and then rotating the latch handle until it stops against the hook.
4. Repeat step 1, 2, and 3 for the other flip-down panels.

Set the stage switch on the remote control to raise, until the hydraulic stage is in its vertical storage position. Return the legs to their original length position to avoid damage if there is an uneven surface when the stage is used next time. Check that the legs swing against their retaining magnets.



### **Lower the Roof/Canopy**

If the Showmobile is equipped with an optional lighting package, watch and verify that nothing will contact the lighting fixtures while closing.

Set the roof/canopy switch on the remote control to lower, until the canopy leading edge fully contacts the roadside fender skirting.

## **⚠ CAUTION**

**Never lower the roof with people inside the Showmobile or under the roof.**

### **Close the End Panels**

Lift the end flaps. Unpin the end panel positioning braces, and lift and latch them against the vertical column structure. Close and lock the end panels.



## ***Closing the Showmobile for Travel (continued)***

### ***Fully Retract the Leveling Jacks***

1. Retract the front leveling jacks by using the manual hand cranks (Manual Leveling Model), or by pressing lower corner on the wireless remote control (Hydraulic Leveling Model).
2. Retract the rear leveling jacks in the same way.

**Important:** The hydraulic or manual jacks may be damaged if they hit an obstruction caused by rough terrain, uneven road conditions, pot holes, or curbs and other objects. Slow down and check for interference as necessary.

**Important:** If the Showmobile will be moved more than 15 miles or over rough terrain, wire each manual corner jack at the crank connection to prevent the jack from retracting because of road vibration.

3. Turn the key to off and unplug the remote control module from the front end of the Showmobile. Store it in a safe place (such as the control compartment).

### ***Attach the Towing Vehicle***

See "Towing the Showmobile".

#### **CAUTION**

**To avoid personal injury and vehicle damage, never tow Showmobile with an undersized vehicle.**

### ***Lock the Showmobile***

Lock all doors and compartments on the Showmobile:

- Front end-panel lock (and padlock, if used)
- Back end-panel lock (and padlock, if used)
- Control compartment
- Both storage compartments

### ***Check the Electrical System***

1. Check all lights to be sure each switch and light is functioning properly: clearance and marker lights; tail lights; directional lights; license plate light; and brake lights.
2. Move the Showmobile at no more than 5 mph while you check the brakes by manually applying the trailer brakes.
3. Adjust the brakes so that they are functioning properly.
4. If the lights and brakes are functioning properly, the Showmobile is ready for towing.

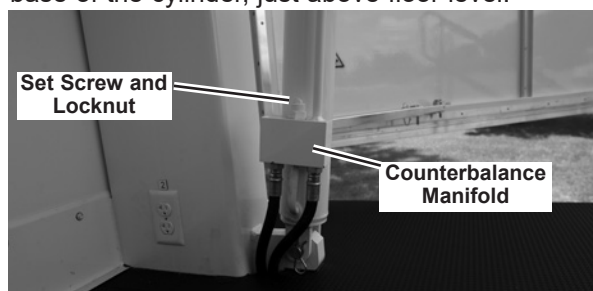
### ***Re-Phasing the Roof/Canopy Motion***

After a time, you may have to adjust the roof/canopy motion. You may notice, after the roof/canopy is fully raised, that when lowering the front and rear have become out of phase with each other (i.e., one end is moving faster than the other). This out-of-phase condition is most likely to occur within the first 5 to 10 seconds when you are initially lowering the roof/canopy from the fully raised position.

If you ever feel that the roof/canopy is out of phase when lowering, stop it immediately and follow this adjustment procedure:

1. Focus your adjustment on the end of the roof/canopy that is moving faster (the end that is ahead of the other when lowering). You will make adjustments to slow this end.

At that end of the Showmobile, locate the square counterbalance manifold that is welded to the base of the roof/canopy hydraulic cylinder. Two hydraulic hoses connect with this manifold at the base of the cylinder, just above floor level.



2. There is a cartridge sticking out of the top of the manifold with an Allen-head set screw and locknut. While holding the set screw in place, loosen the locknut. Adjust the set screw in 1/8 turn increments: counterclockwise to slow that end of the roof/canopy; clockwise to speed up that end. Hold the set screw in its new position and retighten the locknut.

#### **WARNING**

**Canopy may drift down if screw is adjusted too far clockwise.**

3. Move to the front of the stage and raise the roof/canopy completely until both hydraulic cylinders bottom out. Begin to lower the roof/canopy. You should notice the effects of your adjustment within the first 5 to 10 seconds.
4. Repeat steps 2 and 3 until the roof/canopy has been re-phased to your satisfaction.

**Important:** To check your adjustment, always raise the roof/canopy completely after you have made the adjustment. Then begin to lower it to view the results.

# Maintenance

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## Storage

The materials used in the manufacture of the Showmobile are generally waterproof. However, under prolonged exposure to the elements, some of these materials may eventually show signs of decline. Therefore, Wenger strongly encourages you to:

- Store the unit inside a building when not in use.
- Cover any components which are left outside overnight, for long periods of time, or during inclement weather.

Regular storage will protect your investment and add years to the life of the Showmobile.

## Repair Parts

When you contact Wenger for any repair parts for the Showmobile, be sure you know the Serial Number of the unit (refer to the decal inside the control compartment door).

## Lubrication

All moving parts of the Showmobile should be lubricated about twice a year. In seasonal climates, these occasions will normally be in the spring when the Showmobile is first put into use, and again when it is stored for the winter.

## Locks

Protect all locks, locking mechanisms, keyways, and hinges with a spray-type lubricant such as WD-40, to prevent sticking and corrosion.

## Roof/Canopy Pivot Bearings

Once a year, lubricate the bearings on the roof/canopy pivot points (26 grease fittings total) with an all-purpose grease.

## Battery

Once a month, check the 12-volt battery (located in the front road side corner of the Showmobile):

1. Remove the battery caps and check the fluid level.
2. Check that the power and ground wires are securely attached to the battery posts.

Before using the Showmobile, charge the battery for 24 hours to assure that adequate power will be available at the site.



Pivot Point  
Grease Fittings

<b>⚠ WARNING</b>
<b><i>Risk of explosion and personal injury see "Safety Precautions".</i></b>

## Battery Charger

The Showmobile is equipped with a battery charger/maintainer designed to be plugged in continuously when power is available to keep the battery charged and in peak condition.

Refer to the original Battery Charger's Instructions received with the battery charger for more information.

## Hydraulic Fluid

Wenger recommends checking the fluid level after each 10-12 uses of the roof/canopy/floor lift system.

To add fluid to the hydraulic reservoir (below the stage deck), remove the filler cap. If fluid is needed, use only an approved Dexron IIe automatic transmission fluid. Never mix with other fluids, as the hydraulic components will be damaged.



Battery

## Maintenance (continued)

### Wheel Bearings

The wheel bearings of the Showmobile are greased at the factory. They should be regreased after every 500 miles of travel, or at least every six months:

1. Remove the rubber plug from the end cap of the wheel.
2. Lubricate the wheel bearing with an all-purpose wheel bearing grease.
3. Replace the plug.



### Tires

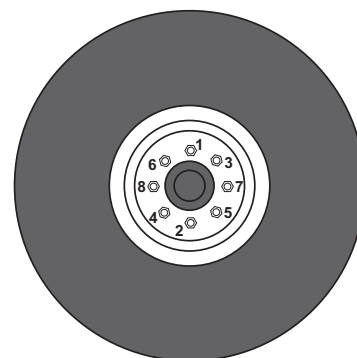
The Showmobile uses LT235/85R16BG G-rated tires. The manufacturer's recommended inflation pressure is 110 psi.

**Note:** Verify maximum inflation pressure marked on tire sidewall before inflating tires.

### Changing Tires

First set the brakes and block the wheels to be sure the Showmobile cannot move. Place a hydraulic jack under the frame near the tire to be changed. Raise the jack until the tire is just free of the ground. Block under the 4x12" frame tubing within 12" of the ends before removing the wheel. Change the wheel. Torque all lug nuts on the new wheel in three stages in the sequence shown above: first to 20-25 ft-lb, then 50-60, then 90-120. Remove the blocking under the frame and lower the jack. (Re-check lug nuts for tightness within 10 miles after changing a tire and periodically thereafter.)

**Note:** The four corner jacks can also be used to raise the Showmobile so the tires can be changed. Block under the 4x12" frame tubing within 12" of the ends before removing the wheel.



### Stage Decks

The decks on the main stage, hydraulic stage, and stage extensions are of exterior-grade pressure-preserved plywood panel covered with a textured polyglass overlay. Keep the floors clean and dry.

When necessary, clean with soap and water. No other maintenance is required. Do not use oil-based cleaning products, and do not wax or polish the decks.

Periodically clean the channels along the edge of the stage units, so that connectors will slide in easily.

### **⚠ WARNING**

**To keep stage floor from becoming slippery, do not use wax or polish.**

### Paint

The paint used on the Showmobile is the same as used on other mobile equipment. It may be washed with clear water or, if necessary, with mild soap. Waxing once a year is recommended.

Your Showmobile will last indefinitely if properly maintained. Retouch areas that show signs of deterioration, or repaint the entire unit if needed. How often this is necessary depends on the use and exposure to which it is subjected.

The painted metal parts have been covered with primer before the final coat of paint was applied. Re-prime if the paint is removed to the base metal.

## ***Maintenance (continued)***

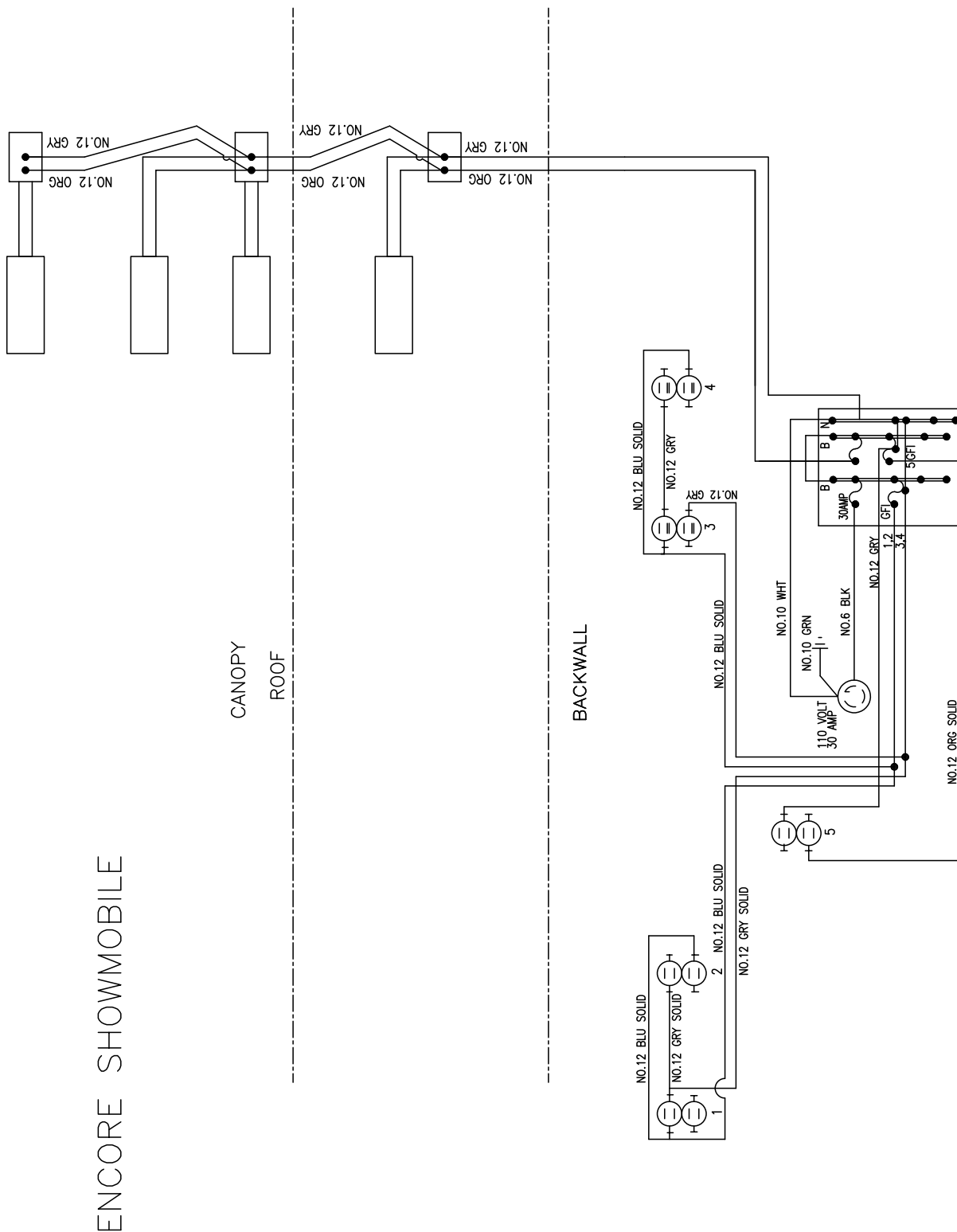
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### ***Showmobile Maintenance Checklist***

1. Check oil level in the hydraulic reservoir.  
Fill with Dextron II as needed.
2. Check the operation of the hydraulic pump and motor.  
Replace the pump or the motor if necessary.
3. Check the solenoid coil connections, clean and tighten as necessary.
4. Check and clean all spade terminal connections on the hydraulic solenoid valves.
5. Check and clean the ground terminals. (2 places)
6. Check the battery, replace as necessary with an equivalent BCI #8D30 large capacity battery.
7. Clean the battery terminals.
8. Check the tires for wear and/or damage.
9. Check the tire pressure, they should be at 75 – 80 PSI.
10. Check for damaged Trim Seal Gasket on the front and back doors.  
Replace if necessary, order gasket # 089A573 - 40 feet.
11. Check the hitch connection used to tow the vehicle.
12. Check and clean the electrical plug used to tow the vehicle, replace if necessary.
13. Check the breakaway switch for the emergency brakes.  
Make sure that the brakes engage when the switch plug is pulled out. Do not leave the breakaway switch plug pulled out for an extended period since that will drain the battery.
14. Check all of the tail lights, turn signal lights and clearance lights.
15. Check the bulbs in the stage lighting, replace as necessary.
16. Lubricate the storage compartment locks.
17. Check the door locks on the front and rear doors.
18. Check the wheel bearings, replace if necessary.
19. Grease the grease fittings on the lift linkage.
20. Check the trim seal on the front and rear flip-down panels, replace if necessary (gasket #089A573).
21. Check the roof and canopy gasket, replace if necessary.
22. Check for any loose screws in the deck tops, tighten as required.

# Electrical Schematic

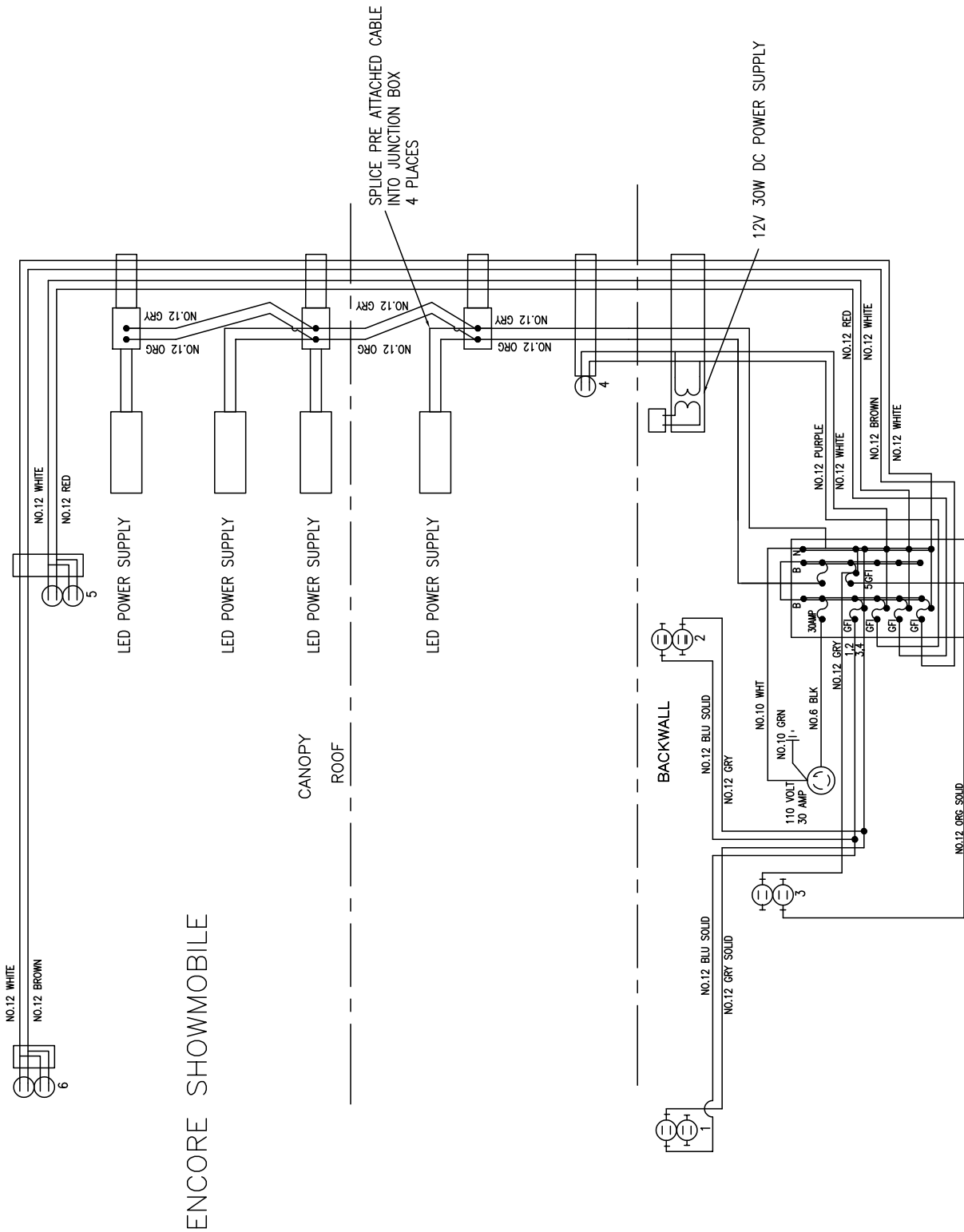
## Standard Units





# Electrical Schematic

## LED Lighting Upgrade



## ***Electrical Schematic (continued)***

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### **Location of Electrical Outlet Boxes**

#### ***110-volt Units with Lighting Upgrade***



2 = Duplex Receptacle  
4 = Quadplex Receptacle

Both models also have a duplex receptacle inside the front road side corner.

### ***Circuit Breakers in Electrical Load Center***

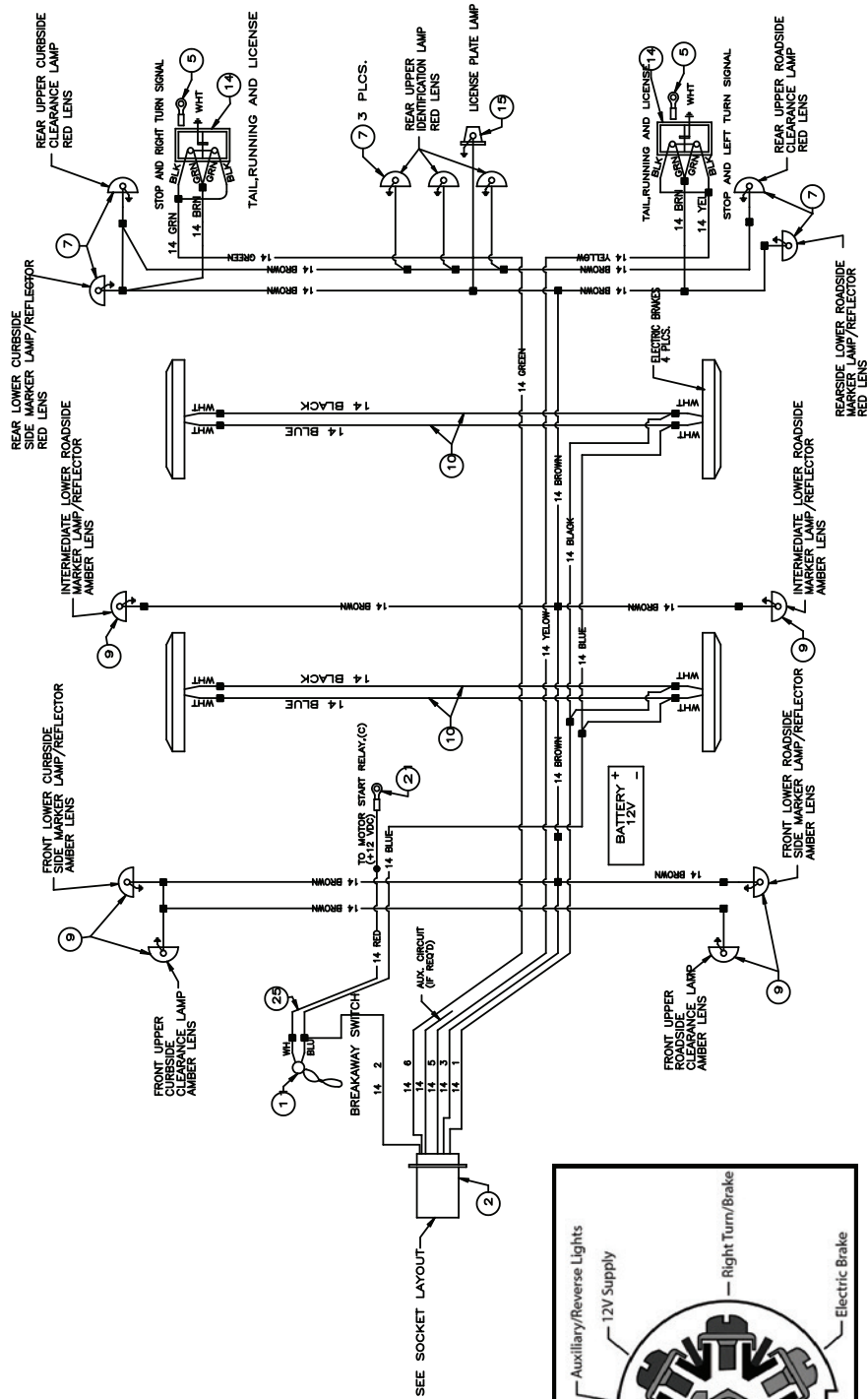
#### ***Standard Units***

MAIN BREAKER 30 AMP	WORKING LIGHTS (W)
RECEPT NO. 1,2,3,4	RECEPT NO. 5

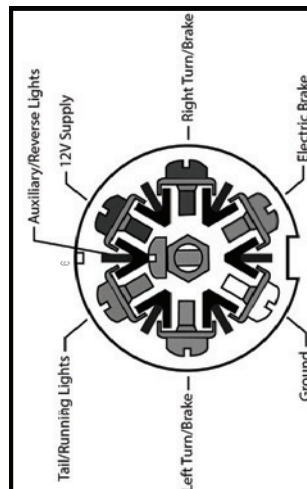
#### ***Lighting Upgrade***

MAIN BREAKER 30 AMP	WORK LIGHTS (W)
RECEPT NOS. 1,2	RECEPT NO. 5
RECEPT NO. 3	RECEPT NO. 6
RECEPT NO. 4	

# 12-Volt Wiring Diagram



ENCORE  
SHOWMOBILE



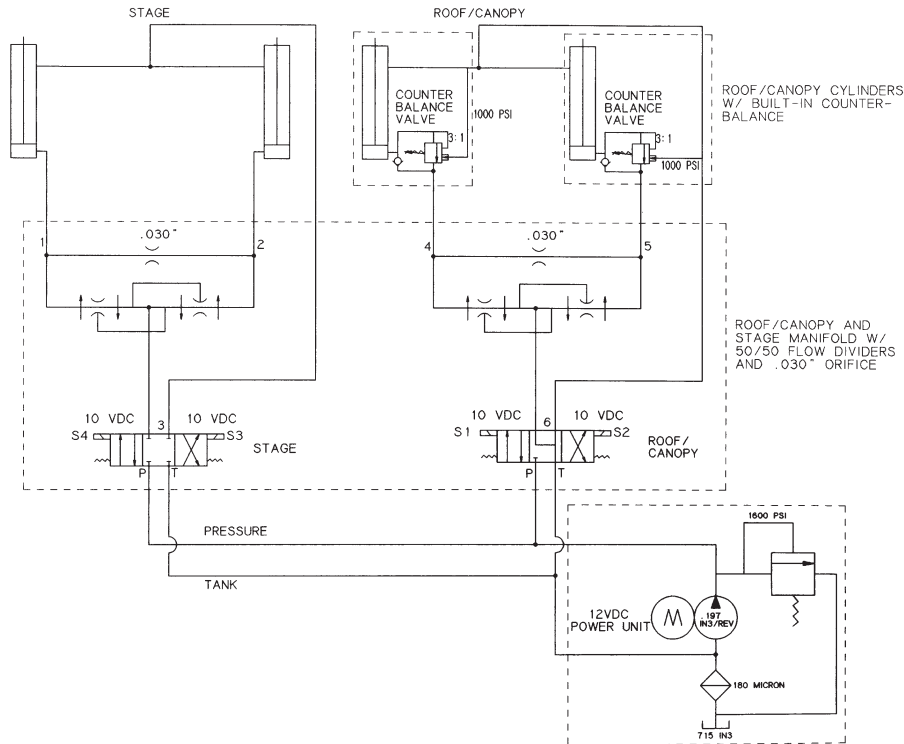
SOCKET LAYOUT

## WIRING CODE

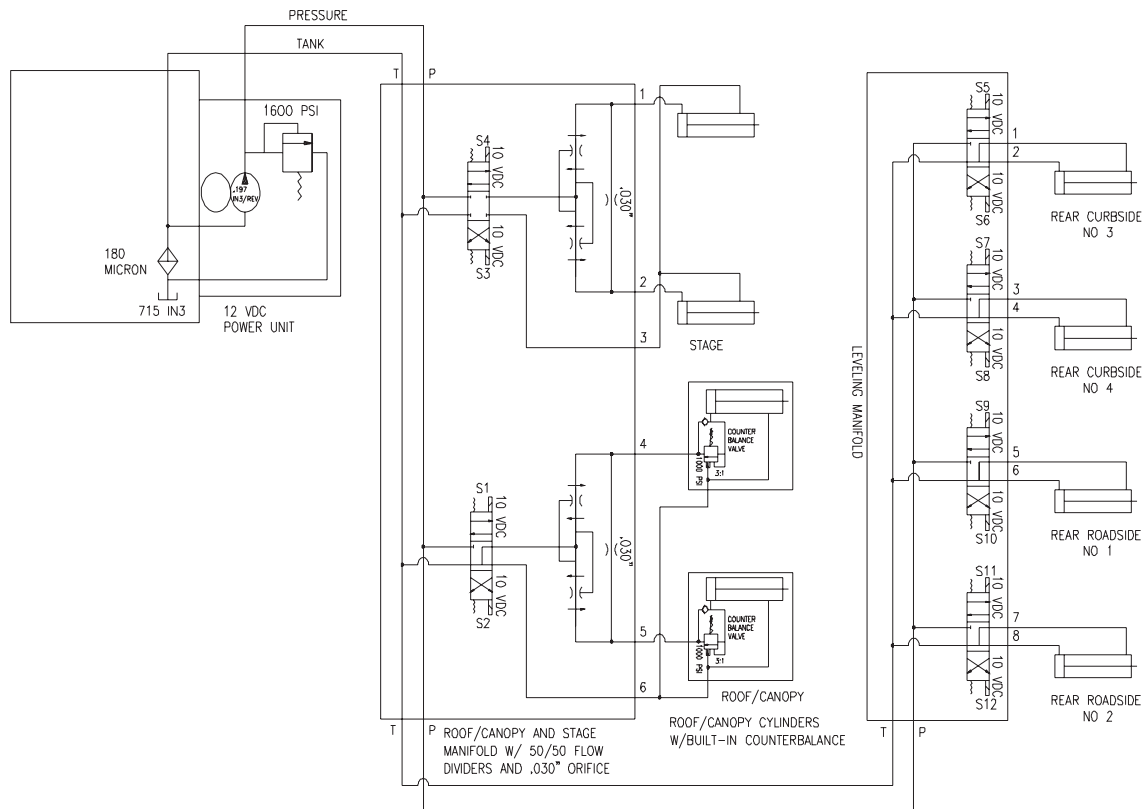
- 1 = COMMON GROUND, BLACK
- 2 = ELECTRIC BRAKES, BLUE
- 3 = TAIL-RUNNING AND LICENSE LIGHT, BROWN
- 4 = 12V SUPPLY (IF REQUIRED)
- 5 = STOP AND LEFT TURN SIGNAL, YELLOW
- 6 = STOP AND RIGHT TURN SIGNAL, GREEN
- 7 = AUX. CIRCUIT, RED (IF REQUIRED)
- = WIRE CONNECTOR

# Hydraulic Schematic

## Manual Leveling Model



## Hydraulic Leveling Model



# Troubleshooting: Wireless Remote Control (Transmitter & Receiver)

