

## HARBOR MODELS NEW 12 VOLT LARGE SCALE SMOKER (HAR301-12)

**SCALE SMOKERS ARE PROUDLY DESIGNED, ENGINEERED, TESTED, AND ASSEMBLED IN THE USA!**

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The Harbor Models 12V Super Smoke Generators are a great way to add that extra touch of realism to your larger scale models. The unit features a brushless ball bearing fan for efficient and quiet operation, low power consumption, extended run time, and a size of 4 1/4" L (5 1/4" L with mounting tabs) 3" W and 1 7/8" H with a weight of just 5.8 OZ when filled with fluid.

### **PREPARING FOR OPERATION:**

- 1) The unit requires air flow from the front (direction of travel) of the model, or directly above the Smoke Unit Fan, equal to a minimum of 3 square inches through louvers, mesh, or vents. It is designed for a 12V NIMH, NiCad, or Sealed Lead Acid Battery with at least 4 AMPS, and Maximum of 12 AMPS. The unit has a 5/8" O.D. brass fitting that is designed for a 1/2" O.D. K&S Brass tube. DO NOT FORCE THE TUBE INTO THE FITTING. Clear 5/8" I.D. plastic tubing can also be placed over the fitting to connect up to the stack. Ensure that there aren't kinks or obstructions in the hose or tube, to prevent splashing from the fan area.**
- 2) The reservoir holds a Maximum of 2 OZ of Smoke Fluid that is included with the unit. Use the included dipstick to check your level, the top of the 1/4" black line indicates the Maximum capacity of 2 OZ. This unit only requires 2 Hours of priming prior to operation, filled through the brass fitting. After the 2 Hour priming period, check the level again with the dipstick, and carefully top off as necessary. DO NOT OVERFILL, DO NOT LET THE FAN GET WET, OR LET THE UNIT RUN DRY.**
- 3) JT's Mega Steam Smoke Fluid is recommended for the best results. Do not use anything other than smoke fluid, doing so will void the Warranty. An eye dropper can be used to remove excess fluid, or it can be tilted so it pours out the brass fitting. Black smoke is an indicator of combustion and is not possible to recreate with the Scale Smoker.**
- 4) The 2 smaller diameter wires operate the fan. Polarity must be correct. Red is Positive, Black is Negative THESE LEADS ARE TO BE HOOKED DIRECTLY TO THE BATTERY, terminal strip, or Harbor Models Power Distribution Box so that the Fan receives a constant 12V and is always running while the model is operating, regardless of fixed or proportional set up.**
- 5) So that the amount of smoke will be proportional with the amount of power going from the ESC to the motor, the 2 larger diameter wires for the heating element should be soldered to the motor tabs for best results. The leads can also be hooked directly to the battery for the same amount of smoke regardless of engine speed. An inline toggle manual or relay switch should be installed, as well as a fuse, rated at 4 AMPS.**
- 6) The unit should be mounted with Stainless Steel screws as low as practical to the keel to keep the center of gravity down, and to minimize rolling of the unit. A minimum of 3" of clearance should be maintained above the fan in order to allow proper air flow through the unit. Velcro or double sided can be used when screws are not possible.**

### **OPERATION:**

- 1) The unit consumes around 2.5 AMPS of power at full speed.**
- 2) The Harbor Models Super Smoke Generator should provide approximately 3 hours of combined run time at full speed, depending on your model. This time will be extended under normal operation when maximum turns are not used. The fluid should be checked at regular intervals to ensure that it doesn't run dry.**

### **WARRANTY:**

Limited 1 Year Warranty valid from date of purchase. **Please return all units directly to Scale Smokers with a check for \$25.00, and a note with the issue, email address, return address and phone number. Photos of the installation and related components may be required for Warranty Claims.** Any defects caused by normal operation will be repaired at no cost, and the check returned. Units that have been tampered with, have any indication of negligence or not following instructions, evidence of use of excessive voltage, bypassing the regulator or missing a fuse, units that have been run dry, or evidence of anything other than smoke fluid being used will not be covered by this Limited Warranty. Contact [scalesmokers@gmail.com](mailto:scalesmokers@gmail.com) with any questions.

**NOTICE:**

With proper use, this Harbor Models Super Smoke Generator should provide safe and reliable operation. The manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property of other loss whether direct, indirect, incidental, consequential, or otherwise based on a claim that the product failed to function. However, if the manufacturer is held liable, whether directly or indirectly, for any loss or damage arising under this Limited Warranty or otherwise, regardless of cause or origin, the manufactures' maximum liability shall not in any case exceed the Purchase Price of the product, which shall be fixed as liquidated damages, and not as a penalty, and shall be the complete and exclusive remedy against the manufacturer.