

HARBOR MODELS SMALL SCALE SMOKER OPTIONAL "CHUFF" FEATURE

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

Visit www.facebook.com/smallandlargescalesmokers for Videos, Wiring Diagrams, and additional info.
Smokers with the Chuff Feature already installed are available on a Special Order Basis. Email:
ScaleSmokers@gmail.com

This kit will require basic skills for proper installation, including soldering, gluing of magnets, and most importantly...some patience. The optional "chuff" kit consists of 1 fan, 1 resistor, 2 micro reed switches, micro magnets, 4 stainless steel Philips screws, and nylon washers.

The fan in this kit is designed to be retrofitted directly on top of the existing Scale Smoker Fan.

22-26 Gauge Wire and Glue are also required for installation, and are not included in the "chuff" kit. Minor soldering, tinkering and experimentation for the ideal installation may also be required.

PREPARING FOR OPERATION

This kit contains components that are to be hooked up as a separate system. The Scale Smoker is to be wired in accordance with the original proportional smoke directions. It will not produce a "chuff" if wired directly to the battery, which is designed to produce a fixed amount of smoke.

The power of existing lower fan will need to be cut around 50%, the included resistor is to be soldered into the + lead of the LOWER fan that is included with the Smoker.

The 4 existing fan screws are to be removed. The "chuff" fan is to be installed on top of the existing fan, using the longer stainless steel Philips screws. The fan guard is to be installed on the upper fan. The included washers are to be placed under the screw heads, and under the fan guard, so that the fan guard doesn't rub on the fan blade. Additional washers will also need to be placed in between the 2 fans.

Find a suitable location for the reed switches and magnets to be installed, before soldering lengths of wire and gluing in the components. Only one set (2) magnets are to be installed, the size of the magnets used depends on the size of the shaft or wheels that they will be glued to. The micro reed switches will need to be mounted in a fixed location near the magnets in a suitable location where they will cause the switch to close in conjunction with the rotation of the wheels or shaft.

The 2 magnets are then to be glued with CA or Epoxy to the locomotive wheels or propeller shaft or coupling. Allow time for the glue to dry before testing. The micro reed switches are to then be soldered inline to the positive (red) upper fan wire. The red upper fan wire is then to be soldered directly to the positive motor tab. The black upper fan wire is to be soldered directly to the black motor tab.

OPERATION:

As the ESC puts power to the motors, the wheels or shaft will rotate. If installed correctly, the micro reed switches will close when they come in contact with the micro magnets, completing the circuit and putting power to the upper fan. This will momentarily turn on, then off the upper fan at full power, creating a synchronized "chuff" of smoke.