

# **Rotary Woofer**

**Setup & Installation Guide**

**for the**

**Eminent Technology**

**Model TRW-17**

**READ PRIOR TO UNPACKAGING COMPONENTS**

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### **Removing Rotary Woofer optional Stand from Shipping Crate**

- A. Open Rotary Woofer Stand Crate from top side and set documentation, hardware, rotor blades, and tooling aside.
- B. Remove stand from crate and remove bagging. Use Care to avoid stress to wiring and motor controller mounting.
- C. Remove the four screws securing the rear panel of the woofer stand and swing panel aside, exposing the inside for mounting and hex nut tightening.
- D. Remove the four 1/4-20 bolts from the top of the stand.
- E. Extend white and black woofer input wires as well as the motor controller output wire from top of mounting cabinet prior to placing woofer on stand.

### **Removing Rotary Woofer from Shipping Crate**

- A. Open Crate from top side
- B. Remove top slices of foam board and set aside
- C. Open plastic covering to expose woofer
- D. Remove woofer from crate by lifting electric motor and magnet structure.

**CAUTION: Care must be taken not to bend the blade grips or damage voice coil tensile leads and woofer input terminals.**

### **Assembling Rotary Woofer to Mounting Stand**

- A. Carefully place Rotary Woofer centered on mounting stand with 1"x1"x1/16" square rubber pad beneath woofer magnet (installed on nose of stand at factory).
- B. Insert the four 1/4-20 bolts, washers, and lock washers, and secure with supplied 1/4-20 hex nuts
- C. Solder or attach white and black woofer input wires to voice coil barrier terminal on top of woofer
- D. Wire the Rotary Woofer electric motor for 220volt 3-phase AC from the output of the GE Fuji AF-300 Mini attached to rear of motor stand. Attach motor controller output wiring (using labeled wire nuts) to yellow numbered wiring in rear of motor as follows:

1. #3,#9,Green line lead from woofer stand motor controller output
2. #1,#7,Brown or Black line lead from woofer stand motor controller output (Line Lead)
3. #2,#8,White or Blue line lead from woofer stand motor controller output
4. #4,#5,#6 leads from rear of motor (wired together from the manufacturer).

**NOTE: To reverse rotation of motor, swap any two LINE LEADS (listed in steps 1-3 above) at rear of motor. Rotor rotation should be counterclockwise as viewed from the front. Rotor blade convex side should lead direction of rotation as illustrated in the Appendix of this guide.**

E. Supply 115volt Single Phase AC power to the GE Fuji AF-300 Mini input as instructed in AF-300 Startup Guide (the output wiring is supplied and connected to the controller).

F. The AF-300 motor controller has been preset by Eminent Technology using an extended acceleration/deceleration time of 15 seconds instead of the default 6 seconds to prevent startup and shutdown damage to the shaft and the rotor mechanism.

G. If the motor controller unit should arrive reset to the GE Fuji defaults (listed in the AF-300 manual), the items listed in section (F) above should be accomplished prior to operation to ensure longer service life of the Rotary Woofer components. Consult highlighted programming section of manual.

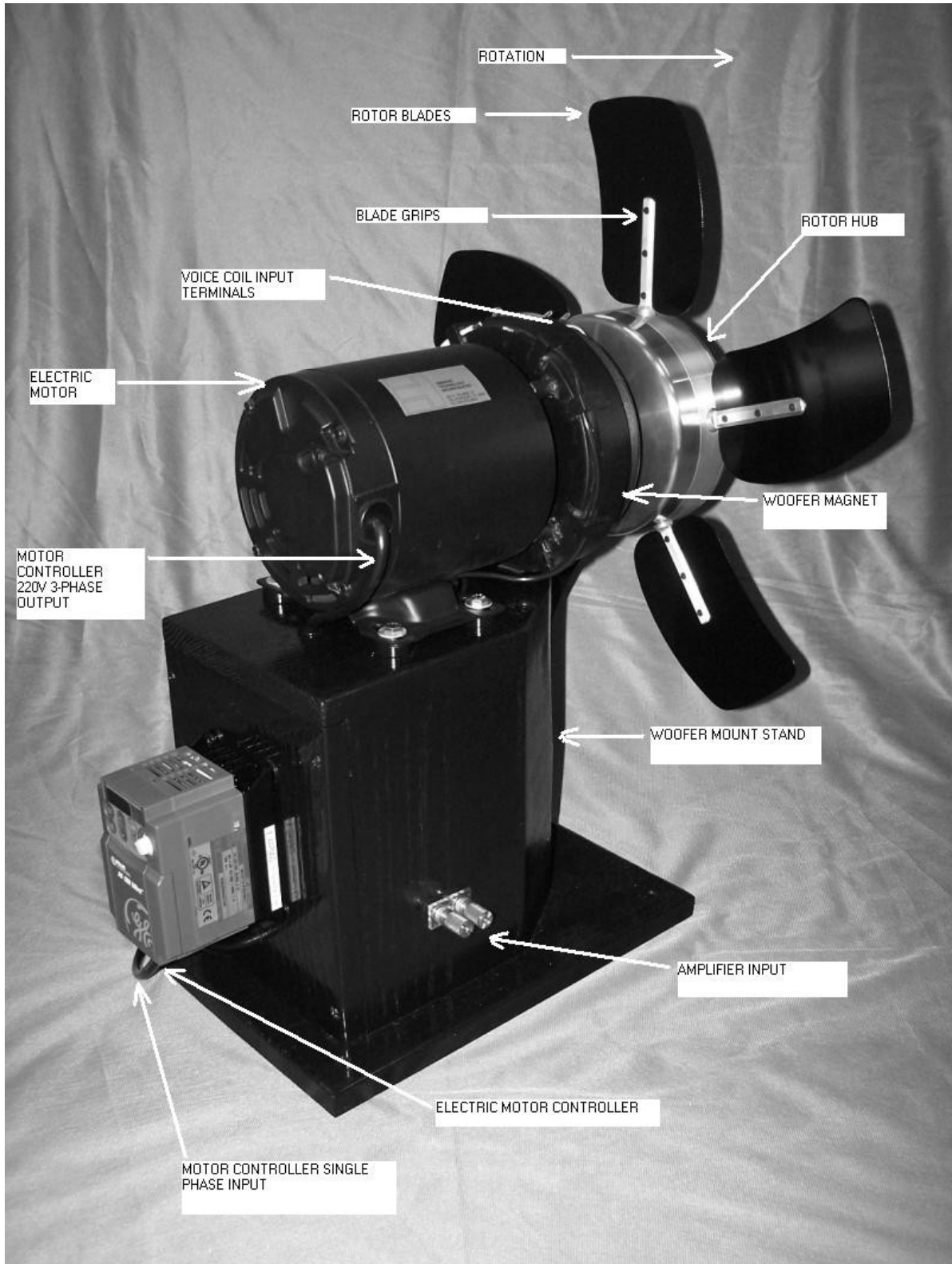
H. Attach rotor blades to blade grips (convex side facing direction of rotation) using the included 3mm short, flush, socket head hardware. Install the hardware with the 2.5mm ball end hex wrench included with the blade kit.

**NOTE: Torque blade hardware lightly, with a small drop of blue thread locking compound. The blade grip material is aluminum and therefore threads will easily become damaged with excessive torque. All three screws must be installed into each Rotor Blade before torque is applied in order for proper blade tracking to occur and as well as ease of threading. Screws should freely thread into the blade grips without force such that threads are not damaged. If cross-threading (stripping) should occur, chase blade grip hole thread by inserting a 3mm screw from the opposite side (hub nose side). This should restore the threads.**

## **Rotary Woofer Baffle Specification**

A. The rotary woofer baffle can be constructed from 1/2" or 3/4" thick Plywood, MDF, or Industrial Board using a router or Jigsaw to create the 20" hole for the rotor. The center of the hole can be measured from the center height of the rotor hub center. The woofer is designed to operate in an infinite baffle, meaning the desired sound on one side of the woofer is completely isolated from the sound on the other side of the woofer. The minimum backside volume for the woofer is about 600 cubic feet, ideally the backside volume should be much larger to achieve optimum efficiency.

# Appendix



### Typical installation between two rooms

