



## **TMPA-1 Microphone pre-amplifier for the TOA PM-660U Desktop paging microphone or equivalent.**

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The TMPA-1 is a microphone pre-amplifier was specifically designed for use with the TOA PM-660U desktop paging microphone or equivalent. The TMPA-1 can also be used with any lo Z dynamic type microphone . The TMPA-1 utilizes a high performance, ultra low noise microphone pre-amplifier IC for high fidelity in public address systems. The output of the TMPA-1 features both balanced and unbalanced, line level audio outputs. The TMPA-1 also features a dual purpose function for the PTT (Push to talk switch) contact available on the PM-660U.

### **Push To Talk (PTT) Modes**

#### **PAO (pre-amplifier output) Mode**

In this mode the audio output of the TMPA-1 pre-amplifier's output is routed back through the PTT switch inside the PM-660U desktop paging microphone. This mode is ideal for sending audio directly into a PA system (or other audio system) that does not feature a PTT input enable switch function. All pre-amplifiers generate some noise (due to very high amplification levels). This is typically heard as a constant hiss in the speakers of a PA system. Routing the pre-amplifier's output through the PTT switch eliminates this hiss (speakers are quiet) when the PA system is not in use. Place the switch in the PAO position and remove the 4 screws in each corner of the TMPA-1 to facilitate **removal of the jumper** directly under the PTT Mode switch. See figure 1 in addition for proper setting of this mode. Please note- output connector SW terminals serve no function in this mode.

#### **SPT (switch pass through) Mode**

In this mode the audio output of the TMPA-1 is uninterrupted by the PTT switch. The PTT switch contacts (which are N.O.=Normally Open) are directly connected from the input connector to the output connector of the TMPA-1. This mode is ideal for use with PA systems requiring a "keying" contact closure that enables the PA system microphone's input. Place the switch in the SPT position and remove the 4 screws in each corner of the TMPA-1 to facilitate **installation of the jumper** directly under the PTT Mode switch. See figure 1 in addition for proper setting of this mode.

### **Connecting the PM-660U**

Connect the wires from the PM-660U as shown in figure 1. Wire color abbreviations are printed on the TMPA-660U as a guide for the installer. The TMPA-1's input features ESD and RFI interference protection circuitry.

### **Device Locations**

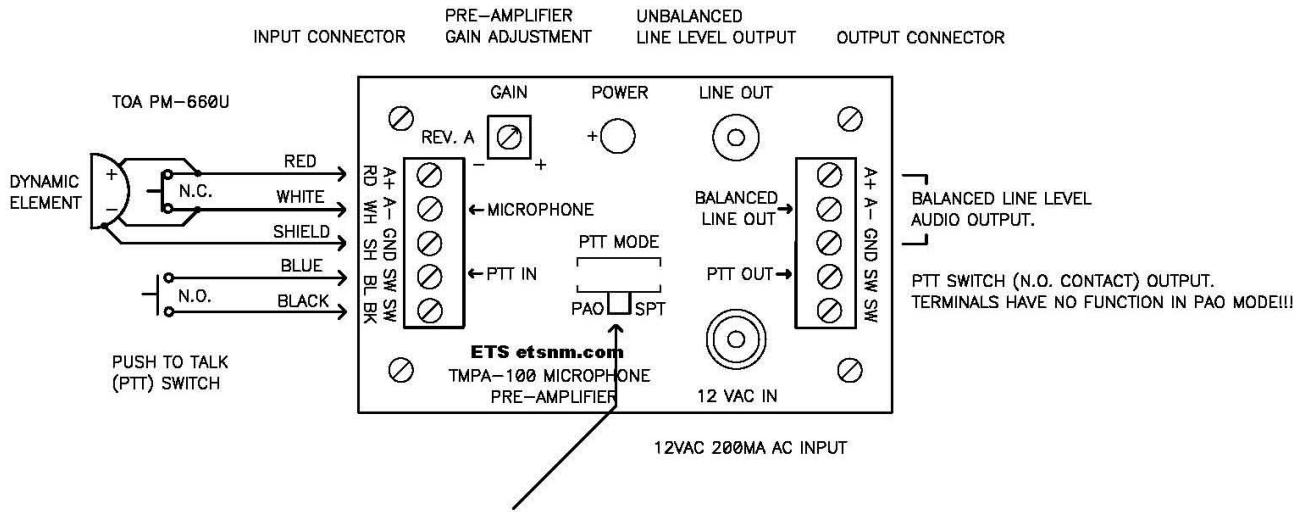
The TMPA-1 should be located as close to the PM-660U as possible. Both the TMPA-1 and PM-660U should be located away from AC electrical equipment and light fixtures to avoid unwanted AC hum pickup. Do not extend the cord length on the PM-660U.

### **Audio Output Cable runs**

Both the balanced and unbalanced audio outputs can drive cable lengths up to 1000'. Use low cost, #22 AWG, 2 conductor, with an overall shield / drain wire or high quality microphone cable for the balanced audio output. Use coax cable for the unbalanced output. We do not recommend using both audio outputs at the same time due to the potential risk of oscillations occurring in the system (especially when cable runs are very long) as well as other factors. All audio outputs are short circuit protected. Output impedance of all audio outputs is 100 Ohms.

### **Adjusting the "Pre-amplifier Gain" Control**

The setting of this control depends on the distance the microphone will be from the operator and the input sensitivity of the PA equipment. It is recommended that this control be set low initially (Counter clock wise) and turned up (Clock wise) until obvious distortion (clipping) is heard when talking normally at a 3-5" distance from the microphone, then drop the gain 10-20% back towards -. Gain range is 40 to 60db.



- PTT MODE SWITCH:
1. PAO MODE POSITION= PRE-AMPLIFIER OUTPUT IS ROUTED THROUGH PM-660U PTT SWITCH. IMPORTANT-JUMPER LOCATED INSIDE THE TMPA-100 (DIRECTLY UNDER THIS SWITCH) MUST ALSO BE REMOVED!!!
  2. SPT MODE POSITION= PM-660U PTT SWITCH CONTACTS ARE ROUTED TO OUTPUT CONNECTOR SW TERMINALS. IMPORTANT-JUMPER LOCATED INSIDE THE TMPA-100 (DIRECTLY UNDER THIS SWITCH) MUST ALSO BE INSTALLED!!!

Figure 1.

## Warranty

The TMPA-1 carries a one year parts and labor warranty. This warranty does not cover damages as a result of misuse, improper handling of the unit or exposure to extreme temperatures or moisture. At its discretion, ETS reserves the right to repair or replace this unit under the conditions of the warranty. If you experience problems with your equipment call ETS at: 505-888-3923 to obtain a return authorization number. Equipment requiring repair beyond the warranty period or units that have been damaged or are not covered under the warranty can be repaired by ETS for a minimal cost under most conditions.

Made in the USA  
by  
**ETS Inc.**