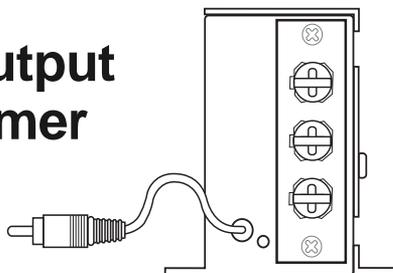


# Line Input / Line Output Matching Transformer

## Model WMT1A



The Bogen **WMT1A** Line Input/Line Output Matching Transformer is designed to match either a high-impedance input, or output of an amplifier, to a 500/600-ohm line. It may be used to connect telephone systems to most amplifiers, or for distributing background music that is transmitted over leased telephone lines. The unit also functions as an output-matching transformer to feed program material over a 500/600-ohm telephone line for transmission to a local broadcast studio.

The WMT1A provides an impedance match between the 500/600-ohm balanced line and the high-impedance (auxiliary) input of the amplifier, or the 25-volt output of the amplifier. The 500/600-ohm line input or output connections are made to a screw terminal strip. Connection to the amplifier is provided by a shielded cable terminated in an RCA phono plug.

Mounting flanges are provided to mount the WMT1A to the amplifier chassis or backboard. No wiring or soldering is required for making connections in most cases. A jumper is easily repositioned when connecting the WMT1A high-impedance output to the MIC input of the amplifier.

### Specifications

<b>Function:</b>	Impedance matches inputs/outputs to a 600-ohm line
<b>Frequency Response:</b>	50 Hz to 20 kHz $\pm 2$ dB
<b>Sensitivity:</b>	Less than 0.1V across 600-ohm line required for full output power from average amplifier; Maximum level +20 dBm
<b>Output:</b>	Approx. 1.73V output when connected across 25V output tap or WMT1A Hi-Z output connection on a Bogen amplifier
<b>Shipping Weight:</b>	1 lb.

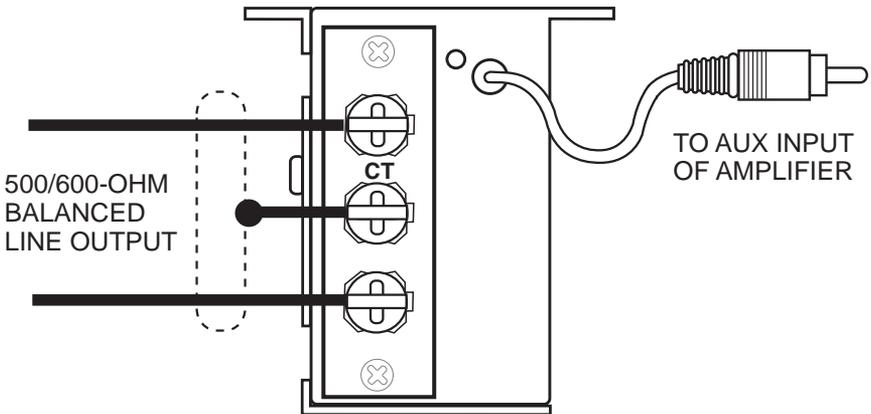
# INPUT MATCHING TRANSFORMER

To match the input from a 500/600-ohm line, proceed as follows:

1. Connect the input from the 500/600-ohm line to the terminal board on the WMT1A. For a balanced line, the shield is connected to the center terminal.
2. Insert the phono plug of the WMT1A to a high-impedance receptacle on the amplifier, usually the AUX receptacle.
3. If the AUX input is already in use, the WMT1A phono plug may be connected to one of the MIC inputs of the amplifier, after following the instructions below for MODIFICATION FOR MIC INPUT.

### **Note**

*With amplifiers which utilize a fader-type volume control for two AUX Channels, it is advisable to connect the WMT1A to a MIC input even though only one of the AUX inputs is in use.*

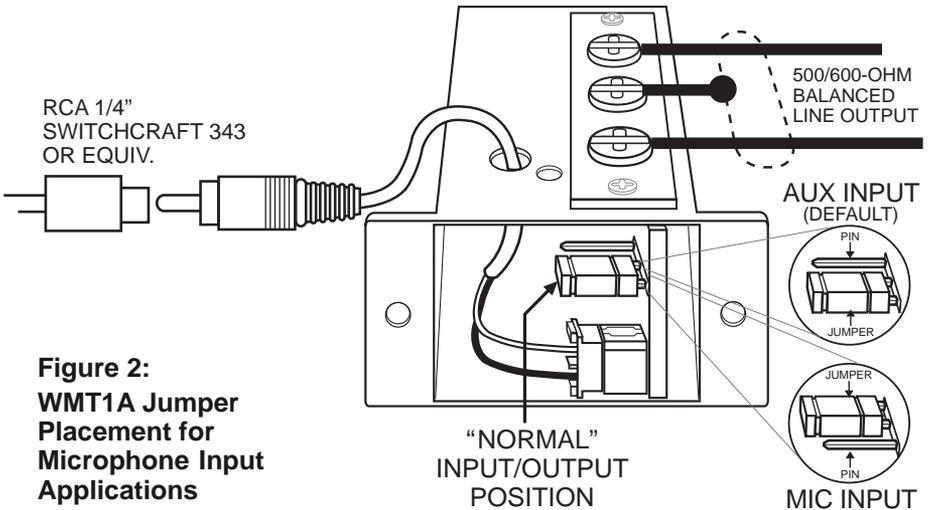


**Figure 1: Connecting WMT1A as Input Matching Transformer**

## MODIFICATION FOR MIC INPUT

The WMT1A includes a jumper connection to permit it to feed into a microphone input. The input may be Hi-Z or Lo-Z, balanced or unbalanced. The circuit uses a 150-ohm resistor to divide the signal down to one-hundredth of that normally obtained from the secondary. Refer to Figure 2 for jumper location and position.

Figure 2 shows the use of an adapter to connect the output of the WMT1A through the phono plug to the MIC input terminal on the amplifier. To connect to terminal strip-type inputs, clip off the phono plug and connect the shield to the ground terminal and the center conductor to one of the remaining terminals.



**Figure 2:**  
**WMT1A Jumper**  
**Placement for**  
**Microphone Input**  
**Applications**

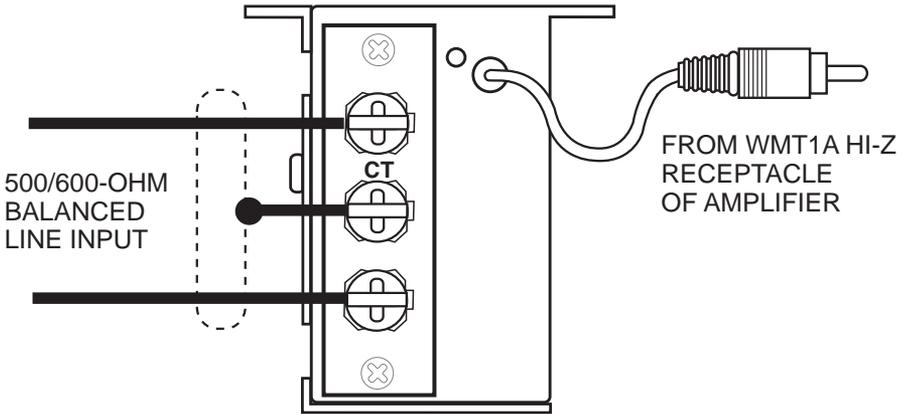
## OUTPUT MATCHING TRANSFORMER

To match the output to a 500/600-ohm line, proceed as follows:

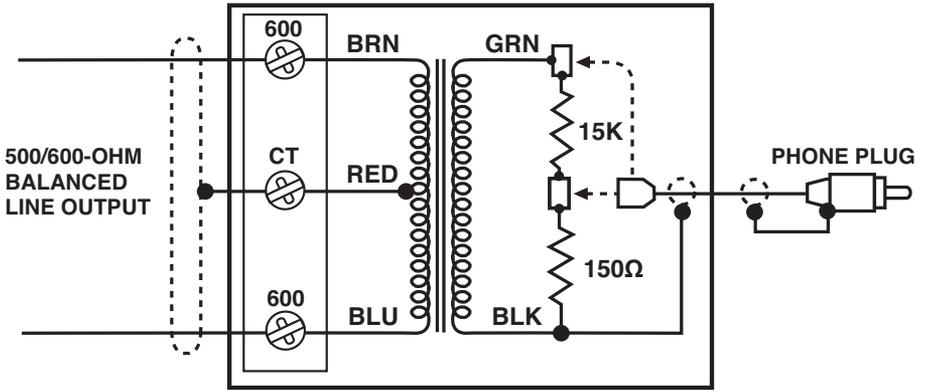
1. Connect the 500/600-ohm line to the screw terminal strip on the WMT1A. For a balanced line, the shield is connected to the center screw terminal.
2. Insert the RCA phono plug of the WMT1A into the receptacle marked WMT1A HI-Z OUTPUT on the amplifier chassis. If this receptacle is not available, remove the RCA phono plug from the WMT1A cable and make connections to the 25-volt output of the amplifier. Connect the center lead of the cable to the output terminal marked 25V, and the shield to COM/Ground.

### Note

**When the WMT1A is used as a bridging output, it does not draw any power from the amplifier.**



**Figure 3: Connecting WMT1A as Output Matching Transformer**



**Figure 4: WMT1A Schematic Diagram**

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