

# ETS Inc. SM1-TRW Microphone Instructions

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The SM1-TRW is a stainless steel, tamper resistant, weather resistant, high quality, 12VDC powered, flush mount, omni-directional, pre-amplified microphone with a for use with DRVs, I/P cameras, etc. Note- the audio output of the SM1-TRW is "line level" (0db).

## **SM1-TRW Microphone Placement.**

Locate the SM1-TRW Microphone near the area of interest be monitored. Do not mount the microphone near air conditioning vents, light fixtures or electrical equipment. The SM1-TRW operates optimally at 3 to 5 feet away from the subject(s) to be monitored. The SM1-TRW is still useable in the range of 15-25 feet but is dependent on the level of background noise in the area. Experimentation in the environment will determine what distances work best.

## **Cable Run**

Run a 22 gauge, stranded, two conductor shielded cable between the SM1-TRW microphone and the monitoring device. Keep the cable run distance under 1,000 feet and away from AC power sources, light fixtures and electrical equipment. Connect power to the + terminal, the audio signal to the "audio" terminal and ground to the – terminal. The Ground of the power and audio signal must share a common ground for proper operation. *See Figure 1 for connection diagram.*

## **Mounting**

The SM1-TRW can be surface or flush mounted on walls. For flush mounting, cut a 2 ¼" by 2 ¾" hole in the wall or ceiling tile to allow room for the circuit board and mount the SM1-TRW to the surface with screws (sound hole side down). A single gang outdoor rated electrical "Bell box" can be used for surface mounting. **BE SURE TO USE SUPPLIED GASKET** to prevent water from leaking into the back side of the microphone

## **Adjusting the SM1-TRW Gain**

The SM1-TRW is shipped with the gain set at midrange. If the sound at the "head end" is distorted, rotate the control towards the – mark (counter-clockwise). If the volume at the "head end" is too low, rotate the control towards the + mark (clockwise).

## **Setting the SM1-TRW Jumpers**

The SM1-TRW microphone has jumper selectable treble boost and peak limiter circuits.

The limiter circuit lowers the gain of the microphone preamplifier, preventing it from clipping during very loud sound intervals. During normal audio levels, the limiter circuit has no affect on the audio signal and there won't be any observable result in performance. If there will be periods of high volume in your application, jumper the limiter "in". Note-as the gain control is decreased, the limiter will have less affect on the pre-amplifier during loud sound intervals.

The Treble boost circuit emphasizes the high frequencies of the pre-amplifier. Jumpering treble boost to the "in" position will result in improved pick up of faint conversations such as whispers. Note however, when the treble boost is on, background and amplifier noise will increase as well.

CONNECTIONS TO OPTIONAL ETS SM2 INTERFACE BOX.  
MAKE CONNECTIONS TO DVRs AND I/P CAMERAS FAST  
AND EASY.

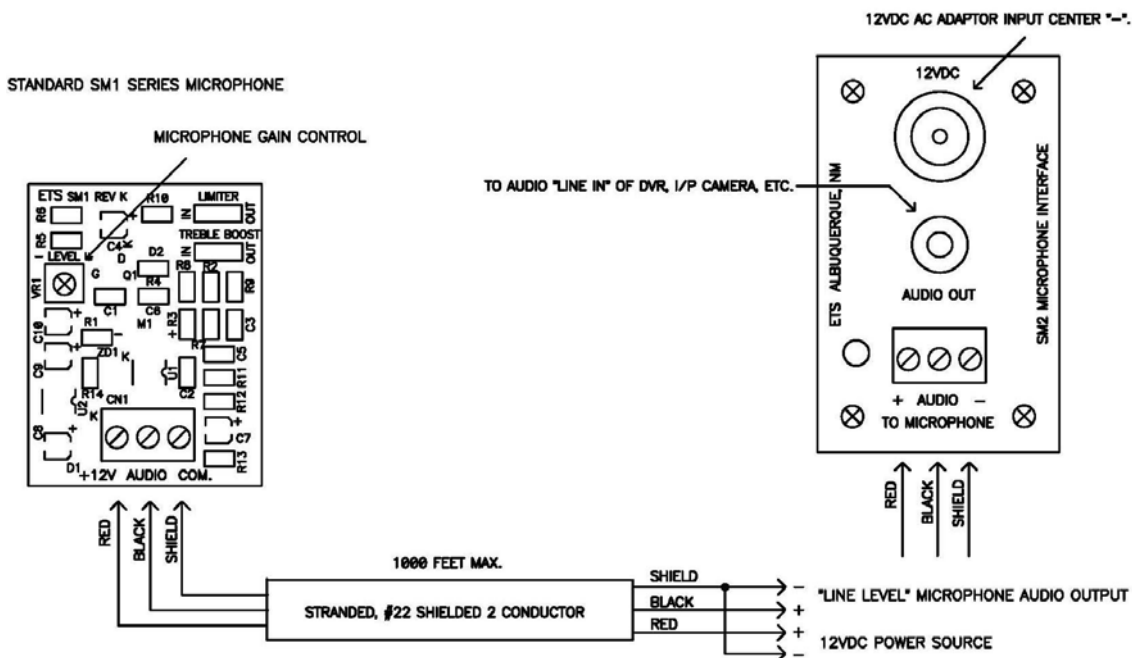


Figure 1.

**Caution**

It may be against the law to install this microphone kit in certain environments. It may also be against the law to record conversations of the person(s) being monitored without their knowledge. It is the responsibility of the installation company and end-user to determine if the application of this product is legal. These laws vary from state to state. If you are not informed on these matters, consult a qualified attorney or contact the appropriate state agency. A sticker is provided with this kit for the applications where notification must be posted.

**Warranty**

All ETS products carry 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.

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