

The SM5 is a single channel, one way pre-amplified microphone “listen in” surveillance kit designed to be used in applications where an audio amplifier (speaker) is not needed or is already provided in a CCTV monitor or DVR. It provides a convenient way of supplying power to the SM1, installer friendly termination of the cable runs and a standard RCA or 3.5mm audio output connector. The SM5 easily connects to recording equipment such as DVRs, I/P cameras, time-lapse VCRs and audio recorders. Note the audio output signal of the kit is “line level” (0dbm).

SM1 Microphone Placement

Locate the SM1 microphone as close as possible to the area of interest in the space to be monitored. If a large area is to be monitored, locate the SM1 in the middle of the room. Do not mount the microphone near air conditioning vents, light fixtures or electrical equipment. The SM1 should be placed at least 5 feet away from the subject(s) to be monitored. The SM1 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.

SM2 location and power

The SM2 interface box is designed to be located next to a DVR or I/P camera. The SM2 requires a 120VAC power source within 3 feet of its location. If this is not possible in your application, you can splice in up to 100 feet of 18 awg, 2 conductor cable to extend the distance between the AC power source and the SM2.

Cable Run

Run a 22 gauge, stranded, two conductor shielded cable between the SM2 interface and the SM1 microphone. Keep the cable run distance under 1,000 feet and away from AC power sources, light fixtures and electrical equipment. *See Figure 1 for connection diagram.*

Mounting

The SM1 can be surface or flush mounted on ceilings or 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 to the surface with screws. For surface mounting, purchase the SM1S surface mount adapter or use a single gang electrical box.

Adjusting the SM1 Gain

Start with a midrange setting of the gain control on the SM1. Adjust the control + or – for maximum clarity. If the sound at the amplifier is distorted, rotate the control towards the – mark (counter- clockwise). If the volume at the amplifier is too low, rotate the control towards the + mark (clockwise).

Setting the SM1 Jumpers

The SM1 microphone has jumper selectable treble boost and limiter circuits. The treble boost circuit when jumpered in, emphasizes the high frequency sounds that the microphone picks up. This is useful for improving the sound quality on slow speed tape recordings (VCR time-lapse recordings). The limiter circuit, when jumpered in, automatically reduces the SM1’s output during loud sound intervals. This eliminates the need for the listener to reduce the volume control on the amplifier when sounds get louder.

Note: It is not recommended to use the SM1’s limiter circuit if you are using a tape recorder or other device that already employs an AGC or limiter circuit. Most tape recorders have limiter circuits. The recommended jumper settings are as follows:

	Stand-alone Application	Tape Recorder Application
Limiter	“IN”	“OUT”
Treble Boost	“OUT”	“IN”

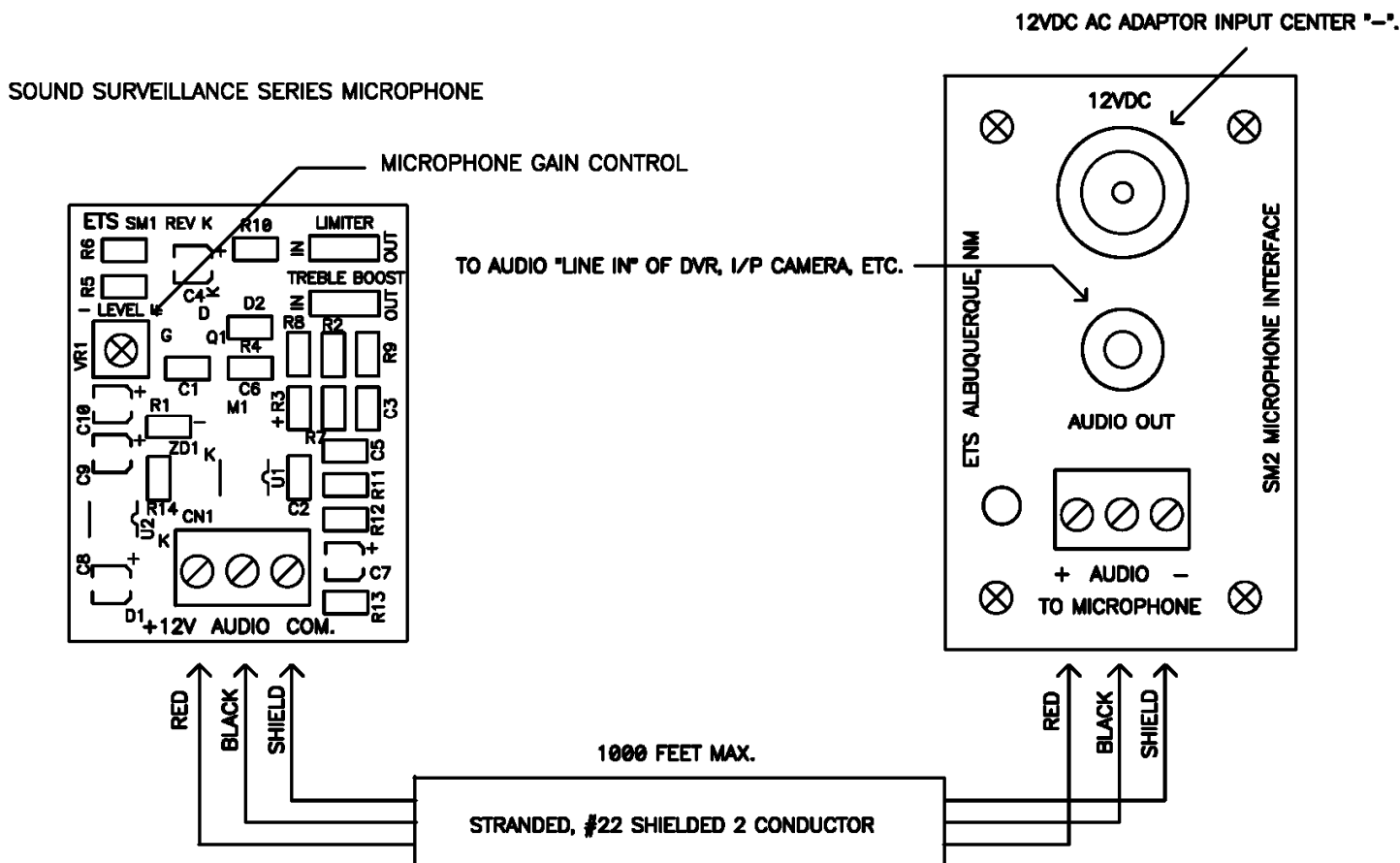


Figure 1.

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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