

The SM1-CF is a high quality, Covert, 12/24VDC powered, remote element, omni-directional, pre-amplified microphone for use with DRVs, I/P cameras, etc. Note- the audio output of the SM1-CF is range selectable "line level" (0db) or "microphone level" (-30db).

**SM1-CF Microphone Placement**

Locate the SM1-CF Microphone near the area of interest in the room to be monitored. If the entire room is to be monitored, locate the SM1-CF in the middle of the room. Do not mount the microphone near air conditioning vents, light fixtures or electrical equipment. The SM1-CF should be placed at least five feet away from the subject(s) to be monitored. The SM1-CF 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-CF 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 12/24v terminal, the audio signal to the "AUD" terminal and ground to the "COM" 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 ML1-CF can be located behind a painting, under a counter, etc or you can drill a 7/16" diameter hole in a ceiling or wall and press fit the ML1-CF into the hole. Then, connect the SM1-N pre amplifier. The SM1-N pre-amplifier PCB can be left floating in the ceiling (or wall) or remove the protective backing of the double stick tape and affix the PCB to a metal stud, etc.

**Setting the SM1-CF Volume Range Jumper**

The SM1-N pre-amplifier has 2 volume range settings. If you will be using the microphone with a "line level audio input" of an I/P camera, remove the jumper near the green I/O connector. If you will be using the microphone with a "microphone input" of an I/P camera, Install the jumper. The "gain" control is then used to set the final audio level in either volume range setting. See figures below.

**Adjusting the SM1-CF Gain**

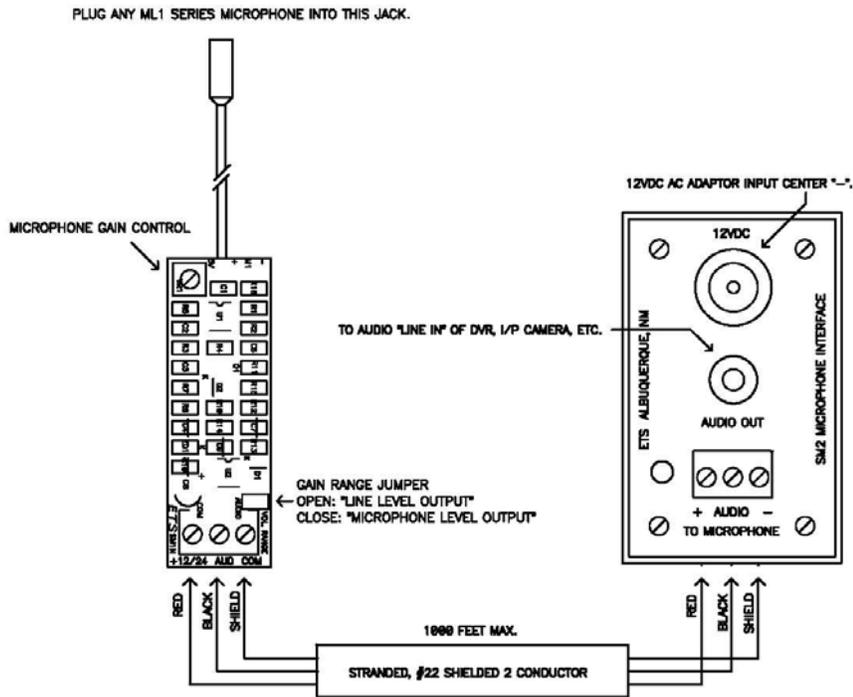
The SM1-N pre-amplifier board is shipped with the gain set at midrange. If the sound at the "head end" is too high, rotate the control counter-clockwise. If the volume at the "head end" is too low, rotate the control towards clockwise.

**Caution**

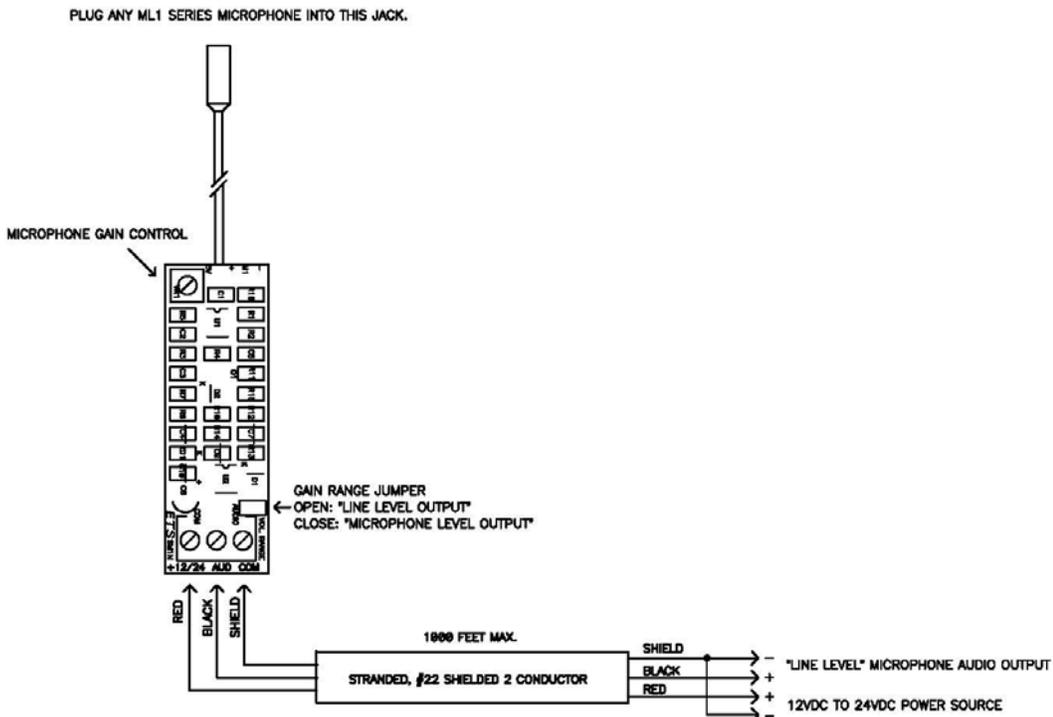
It may be against the law to install this microphone kit in certain environments. It may also be against the law to record conversations of the person(s) being monitored without their knowledge. It is the responsibility of the installation company and end-user to determine if the application of this 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.



CONNECTIONS TO ETS INTERFACE EQUIPMENT



SM1-N OUTPUT CONNECTIONS.  
NOTE- AUDIO AND POWER MUST SHARE A COMMON GROUND

Figure 1.