

The SM1-PAP is a high quality, 12V-60VDC, 9-42VAC powered, Microphone pre-amplified microphone for use with ETS ML1 series microphones and permits connections to DRVs, I/P cameras, etc. Note- the audio output of the SM1-PAP is switch selectable “line level” (0db) or “microphone level” (-30db).

### **Microphone**

The SM1-PAP is designed to be used with ETS ML1 series microphones (or any other PC compatible microphone). Plug the ML1 microphone into the “mic in” jack of the SM1-PA. Do not mount the ML1 microphone near air conditioning vents, light fixtures or electrical equipment. The ML1 microphone should be placed as close as possible to the subject of interest. The ML1 microphone is useable in the range of 3-25 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-PAP pre-amplifier 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-PAP can be surface mounted in a ceiling or behind receiving equipment via its mounting tabs.

### **Adjusting the SM1-PA Gain**

The SM1-PAP output level is set by selecting the desired volume range and adjusting the gain control.

The “Volume Range” switch should be set to the “LO” position when using the SM1-PAP with I/P cameras that utilize “microphone inputs” also known as “Mic. Level” inputs. This sets the maximum gain of the SM1-PAP’s pre-amp to x14. The switch should be placed in the “HI” position when using I/P cameras with “Line level” inputs of DVRs and I/P cameras. This sets the maximum gain of the SM1-PA’s pre-amp to x196.

The SM1-PAP 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).

### **Adjusting the Lo-Cut and Hi-cut filters**

The SM1-P’s high and low frequency response can be trimmed to reduce background noise. If you are primarily interested in capturing conversations and want to reduce air conditioning and other noises, rotate both controls (hi-cut and lo-cut) to just short of full clockwise. Some experimentation may be required to achieve the best results for a given environment.

### **Adjusting the Automatic Gain Control**

The SM1-P features automatic control of gain. This is useful for environments where it is anticipated that sound levels will range from quiet to loud. This prevents the end user from having to constantly readjust the volume of the base station to the audio environment and to reduce the possibility of pre-amplifier clipping (distortion). The best way to set this control is to adjust it to a comfortable volume level (on an ETS base station or PC monitor speakers) when the loudest sounds are present and constant. Turning the control CW will increase the amount of gain reduction during loud sound intervals. If the sound is reduced too much during loud sounds, turn the control CCW a small amount and experiment until a comfortable medium is found.

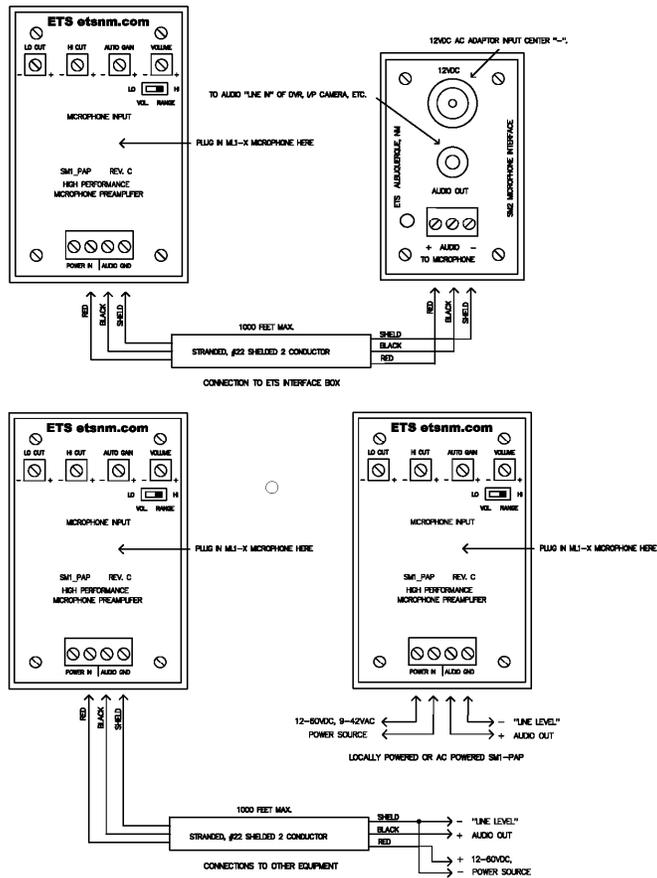


Figure 1.

### 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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 by  
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