

The HSM6-DP is a combination 70V / 8 Ohm speaker and **pre-amplified** microphone designed to be used in outdoor applications. The HSM6-DP is designed to directly interface with the ETS SMA1-xx for connection to DVRs, IP cameras, etc. but, can be used with other compatible equipment. **Note- to prevent unwanted feedback, use this product with systems supporting PTT (push to talk) half duplex audio or full duplex audio systems using acoustic echo cancelling technology**

### **HSM6-DP Microphone / Speaker Placement.**

Locate the HSM6-DP speaker / microphone near the area of interest in the space to be monitored. If a large area is to be monitored, locate the HSM6-DP in the middle of the space if possible. Avoid mounting the speaker / microphone near air conditioning vents, light fixtures or electrical equipment. The HSM6-DP should be placed as close to the subject(s) as possible. 5 to 10 feet is ideal. The HSM6-DP is still usable in the range of up to 50 feet in public address applications but is dependent on the level of background noise in the area. Experimentation in the environment will determine what distances work best.

### **Audio Signal Cable Runs**

Recommended cable is: 2 each 22 gauge, stranded, two conductor shielded cables (one for the microphone and the other for the speaker) between the HSM6-DP microphone / speaker and the SMA1-xx or other equipment. Keep the cable run distances under 250 feet and away from AC power sources, light fixtures and electrical equipment. *Make connections as shown in Figure 1.*

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

The HSM6-DP'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. Experimentation with the settings may be required to achieve the best results for a given environment.

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

The HSM6-DP features automatic control of gain. This is useful for environments where it is anticipated that sound levels will range from quiet to loud. 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 continue experimenting until a comfortable medium is found

### **Adjusting the Microphone Volume**

The HSM6-DP 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 HSM6-DP with IP cameras that utilize "microphone inputs" also known as "Mic. Level" inputs. This sets the maximum gain of the HSM6-DP's pre-amp to x14. The switch should be placed in the "HI" position when using IP cameras with "Line level" inputs of DVRs and IP cameras. This sets the maximum gain of the HSM6-DP's pre-amp to x196.

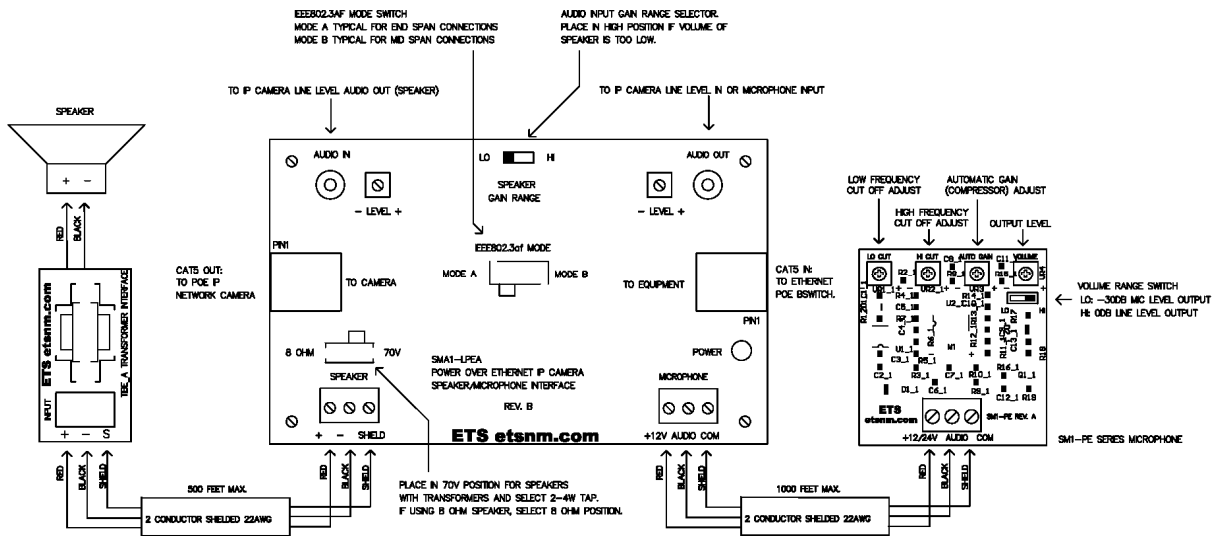
The HSM6-DP is shipped with the Volume set at midrange. If the sound at the "head end" is too loud and / or distorted, rotate the control - CCW. If the volume at the "head end" is too low, rotate the control +CW.

### **HSM6-DP Microphone gain**

Remove the windscreen and locate the gain control as shown in the figure on the back of this page. The gain is set to mid-point at the factory. If the signal from the SM1-WBE is too loud, rotate this control counter clock-wise. If the signal from the SM1-WBE is too low, adjust this control Clockwise. Experiment with different settings until the desired audio level is achieved. *See figure below.*

### **Speaker connection**

If you will be using the HSM6-DP with a 70v system and an ETS interface or base station, Connect the speaker to the transformer board as shown below. If you will be using the speaker with a 5-10 Watt 8 Ohm amplifier remove the transformer and connect to the red and black speaker wires directly.



### 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.

Made in the USA

by  
**ETS Inc.**