

The HSM11 is a combination 70V speaker and **pre-amplified** microphone designed to be used in outdoor applications. The HSM11 is designed to directly interface with the ETS SMA1-xx for connection to DVRs, I/P cameras, etc. but, can be used with other compatible equipment. *HSM11 is for use in half duplex audio systems only. Audio whine or “feedback” will be result if both speaker and microphone are active at the same time.*

### **HSM11 Microphone / Speaker Placement.**

Locate the HSM11 speaker / microphone near the area of interest in the space to be monitored. If a large area is to be monitored, locate the HSM11 in the middle of the space if possible. Avoid mounting the speaker / microphone near air conditioning vents, light fixtures or electrical equipment. The HSM11 should be placed as close to the subject(s) as possible. 5 to 10 feet is ideal. The HSM11 is still useable in the 15 to 50+ feet range 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 HSM11 microphone / speaker and the SMA1-xx or other equipment. Keep the cable run distances under 1,000 feet and away from AC power sources, light fixtures and electrical equipment. *Make connections as shown in Figure 1.*

### **HSM11 Mounting**

The HSM11 is designed to be mounted on ceilings or walls and features swivel adjustments for directional aiming. Make wire connections inside the weather tight box on the back of the HSM11 and screw the lid down. Mount the speaker in a fashion that does not allow water to directly flow (from driving rain etc.) inside the junction box. Leave the factory set jumper on the MSI circuit board in the 5 watt position and the power switch setting to match (as close as possible) the power level being supplied. Sound levels for the speaker and microphone are user adjustable on the SMA1-xx interface box.

### **HSM11 Speaker volume**

The volume of the HSM11 speaker can be changed by changing the position of the switch on the back of the unit. Rotate the switch (2 clicks short of full clock-wise) to the 32W position for the loudest power setting and (counter clock-wise) 2W position for the lowest power setting.

### **HSM11 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.*

HSM11 MICROPHONE / SPEAKER INTERFACE BOARD

MICROPHONE FRONT VIEW

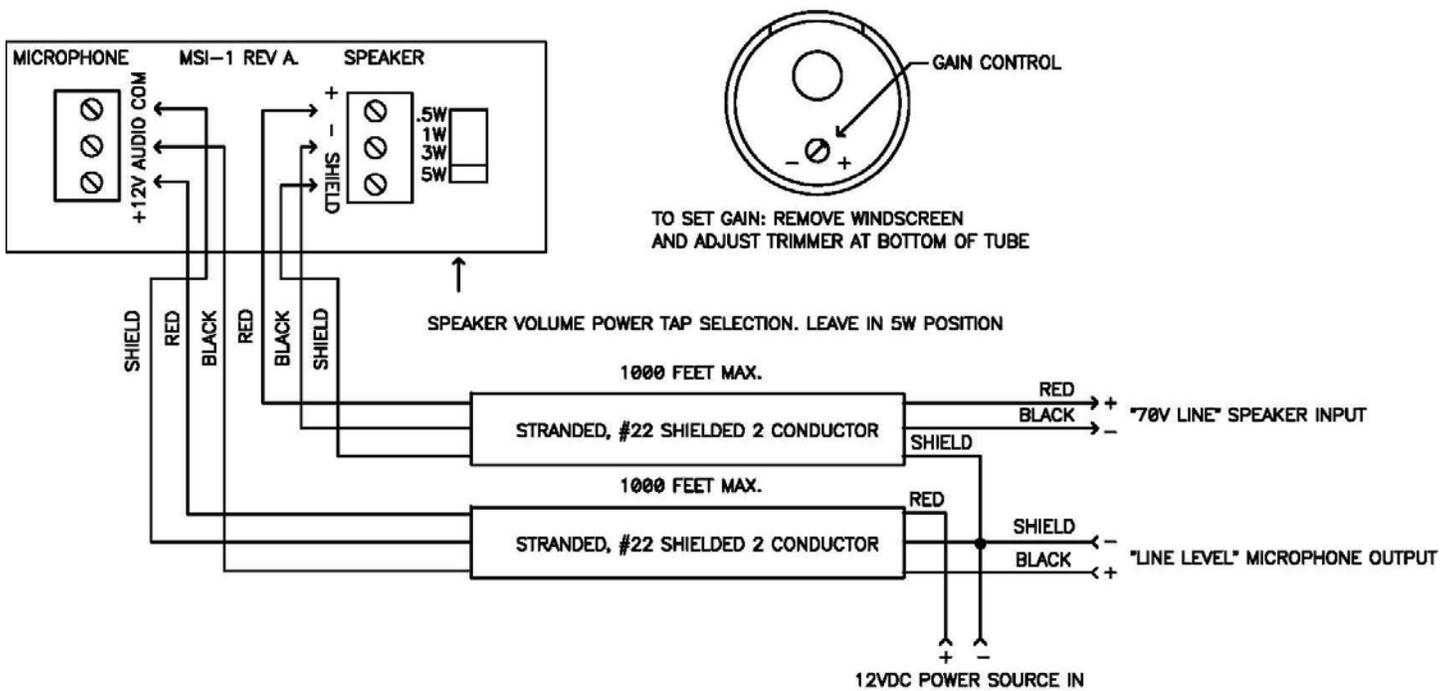


Figure 1.

**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  
**ETS Inc.**