

The HSM8-C5 is a combination 70V speaker and **pre-amplified** microphone designed to be used in outdoor applications. The HSM8-C5 is designed to directly interface **ONLY** with the ETS SMA1-xx-C5 for connection to DVRs, I/P cameras, etc. *HSM8-C5 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.*

### **HSM8-C5 Microphone / Speaker Placement.**

Locate the HSM8-C5 speaker / microphone near the area of interest in the space to be monitored. If a large area is to be monitored, locate the HSM8-C5 in the middle of the space if possible. Avoid mounting the speaker / microphone near air conditioning vents, light fixtures or electrical equipment. The HSM8-C5 should be placed as close to the subject(s) as possible. 5 to 10 feet is ideal. The HSM8-C5 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.

### **Cable Run**

Run a single CAT5 cable from the HSM8-C5 Speaker / Microphone and the SMAx-LP interface box. Keep the cable run distance at or below 1000 feet and away from AC power sources, light fixtures and electrical equipment. Wire the RJ45 cable connectors in the following order:

Pair 1	1	CALL SW
	2	CALL SW
Pair 2	3	SPEAKER (70V) +
	4	SPEAKER (70V) –
Pair 3	5	MICROPHONE +
	6	MICROPHONE –
Pair 4	7	+12V (MICROPHONE)
	8	COM (MICROPHONE)

### **Call Switch Connections**

The HSM8-C5 features a call switch input. This pair of wires is isolated from all other circuitry and can be used for a call switch, door contact, door release relay, etc. Terminal block connections are “broken out” on the HSM8-C5 and any ETS SMAx-LP interface ordered with the –C5 option.

### **Adjusting the microphone “gain” and SMAx-LPxx-C5 “level” controls (audio output)**

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.*

If the SMAx-LPxx-C5 will be plugged into a “microphone level” input of an I/P camera, set the microphone gain of the HSM8-C5 slightly clockwise (or 1/8 of a full turn) from full counter-clockwise. Then use the “level control” on the SMAx-LPxx-C5 to set a volume that produces an acceptable audio level at the head end.

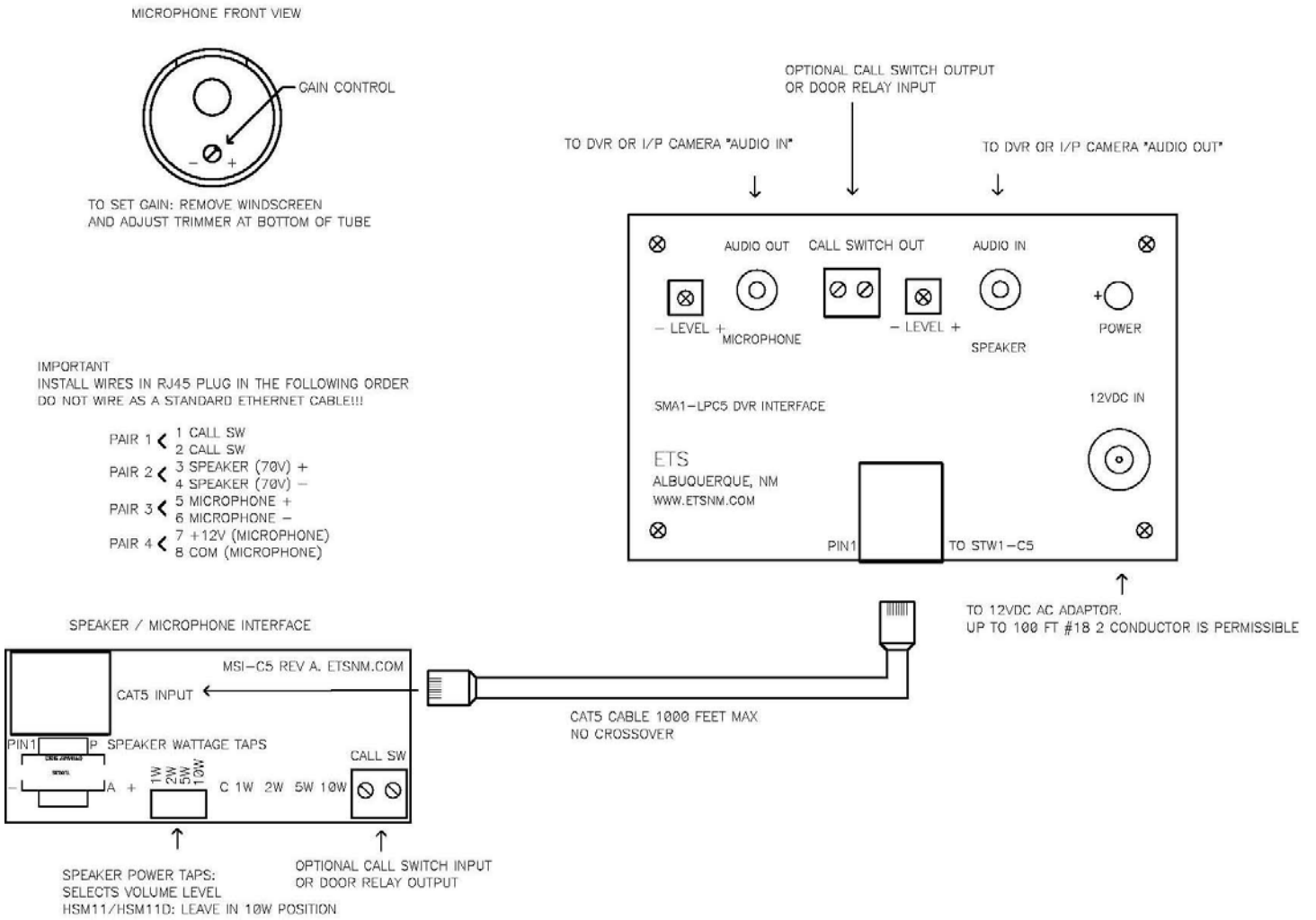
If the SMAx-LPxx-C5 will be used with a “line level” input, turn the gain control of the HSM8-C5 to 3/4 full clockwise and adjust the level control on the SMAx-LPxx-C5 to produce the clearest audio level at the head end.

### **HSM8-C5 Speaker volume**

If the volume is too loud, the power level of the HSM8-C5 speaker can be changed by moving the position of the jumper on the MSI-C5 board (inside the wiring enclosure on the rear of the Speaker housing) to a lower power position. See figure 1.

## HSM8-C5 Mounting

The HSM8-C5 is designed to be mounted on ceilings or walls and features up/down adjustments for directional aiming. Make wire connections inside the weather tight box on the back of the HSM8-C5 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. Sound levels for the speaker and microphone are user adjustable on the SMA1-xx interface box.



CONNECTIONS MSI-C5 to SMA1-LP-C5 (FOR EXAMPLE)

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.

**Made in the USA**  
by  
**ETS Inc.**