

# ETS Inc. SMA1-C5 Speaker / Microphone Interface Instructions

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The SMA1-C5 is a two way public address, audio surveillance interface that is designed to connect to DVRs and I/P cameras. The SMA1-C5 can be used with any ETS Sound Surveillance speaker/microphone with the C5 option. The SMA-C5 can also be used with any 70v speaker and any Sound Surveillance **pre-amplified** microphone with the use of our MIS-C5BO breakout box. The SMA1-C5 is typically located near the DVR or I/P camera. Note-input and output signals on the SMA1-C5 are “line level” only. *The SMA1-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.*

## Microphone / Speaker Placement.

Locate the speaker and microphone near the area of interest in the space to be monitored. If a large area is to be monitored, locate the speaker and microphone in the middle of the space if possible. Avoid mounting the speaker and microphone near air conditioning vents, light fixtures or electrical equipment. The speaker and microphone should be placed as close to the subject(s) as possible. 5 to 10 feet is ideal. The speaker and microphone are still useable in the range of 15-25 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: CAT5 between the SMA1-C5 amplifier / interface and the microphone/speaker (STW1-XX-C5, MSI-C5-BO, or HSM11-C5 or CSM8-C5). 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.*

## IMPORTANT

Wire the RJ45 connectors in the following manner. DO NOT wire as a standard Ethernet cable and do not cross connections over.

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)

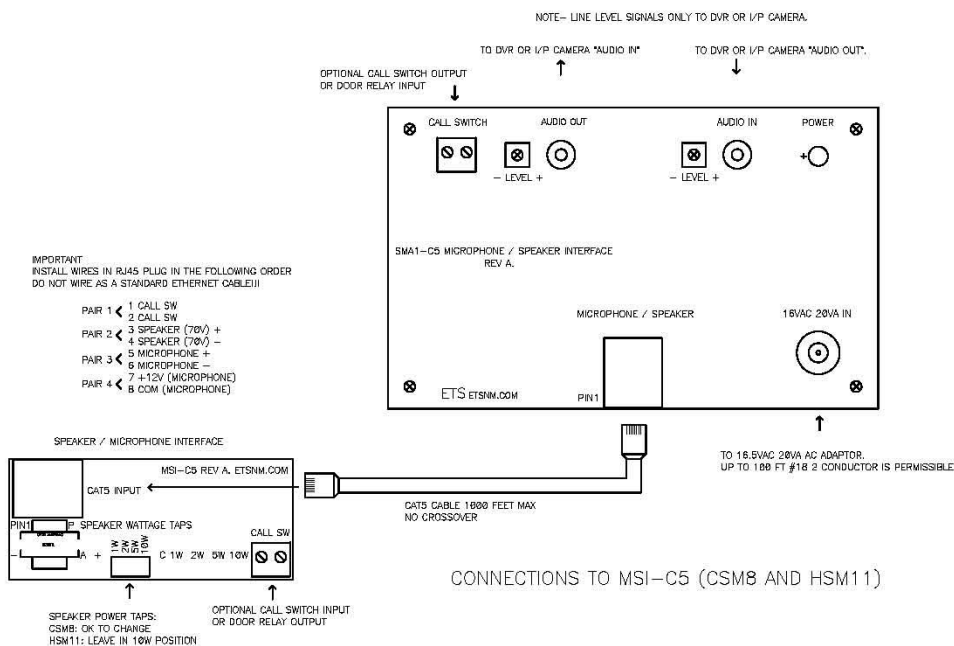
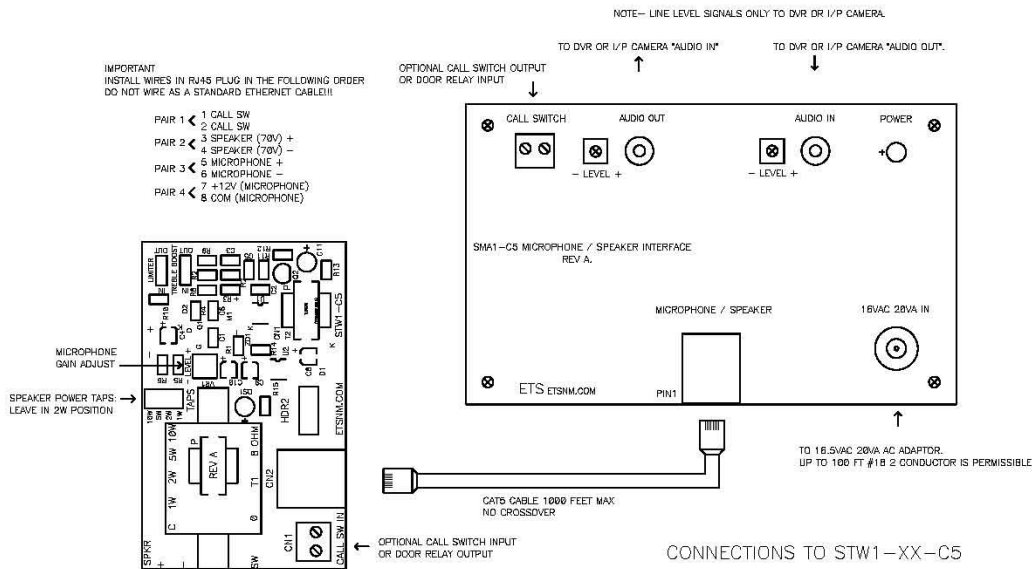
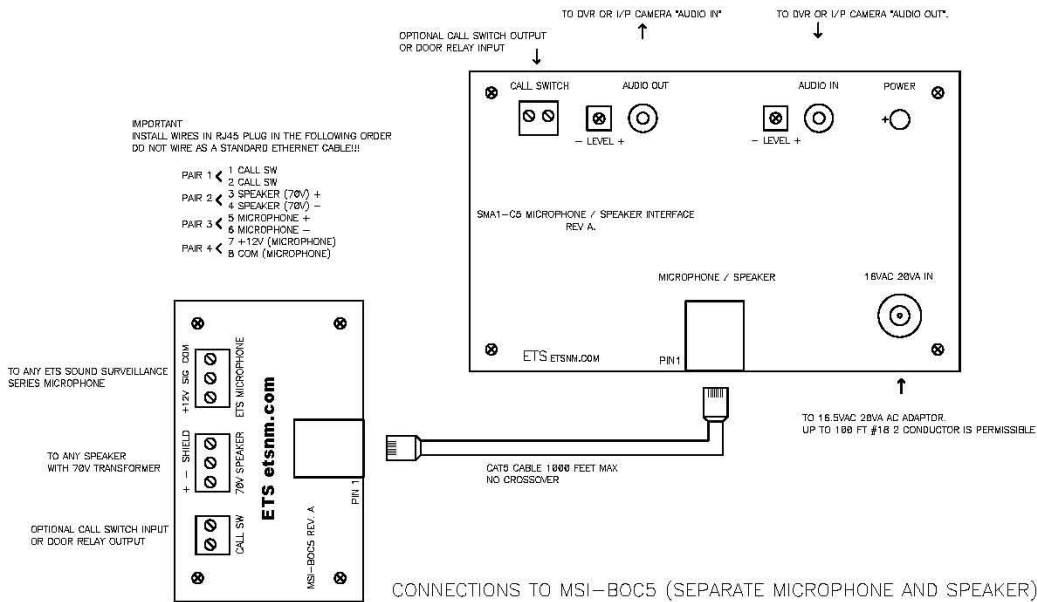
**SMA1-C5 location and power:** The SMA1-C5 interface box is designed to be located next to a DVR or I/P camera. The SMA1-C5 requires a 120VAC power source within 3 feet of its location. If this is not possible in your application, you can splice in up to 100 feet of 18 awg, 2 conductor cable to extend the distance between the AC power source and the SMA1-C5.

## DVR or I/P camera connections:

Connect the “audio out” of the SMA1-C5 to the “audio in” of the DVR or I/P camera. Connect the “audio in” of the SMA1-C5 to the “audio out” of the DVR or I/P camera. Note-input and output signals on the SMA1-C5 are “line level” only. If the DVR or I/P camera uses screw terminals for audio connections, simply cut off the ends of the supplied RCA patch cables, strip the wires back and connect the wires to the I/P camera terminal blocks. The center conductor of a cut patch cable is + and the shield is -.

## Adjusting the SMA1-C5 Levels:

Set both level controls to 1/8 clockwise from full counter clockwise on the SMA1-C5 before powering the system up. Adjust the controls + or – to the desired levels for both speaker and microphone. If the microphone sound at the DVR or head end is distorted, rotate the control towards the – mark (counter- clockwise). Adjust the volume of the speaker to the desired level. If the speaker volume is too high, amplifier oscillations may result. Turn the level control down if you experience this.



## **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.**