The HSM11-C5 is a combination 70V speaker and **pre-amplified** microphone designed to be used in outdoor applications. The HSM11-C5 is designed to directly interface ONLY with the ETS SMA1-xx-C5 for connection to DVRs, IP cameras, etc. 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.

HSM11-C5 Microphone / Speaker Placement.

Locate the HSM11-C5 speaker / microphone near the area of interest in the space to be monitored. If a large area is to be monitored, locate the HSM11-C5 in the middle of the space if possible. Avoid mounting the speaker / microphone near air conditioning vents, light fixtures or electrical equipment. The HSM11-C5 should be placed as close to the subject(s) as possible. 5 to 10 feet is ideal. The HSM11-C5 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.

Cable Run

Run a single CAT5 cable from the HSM11-C5 Speaker / Microphone and the SMAx-LP interface box. Keep the cable run distance at or below 500 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 HSM11-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 HSM11-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 IP camera, set the microphone gain of the HSM11-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.
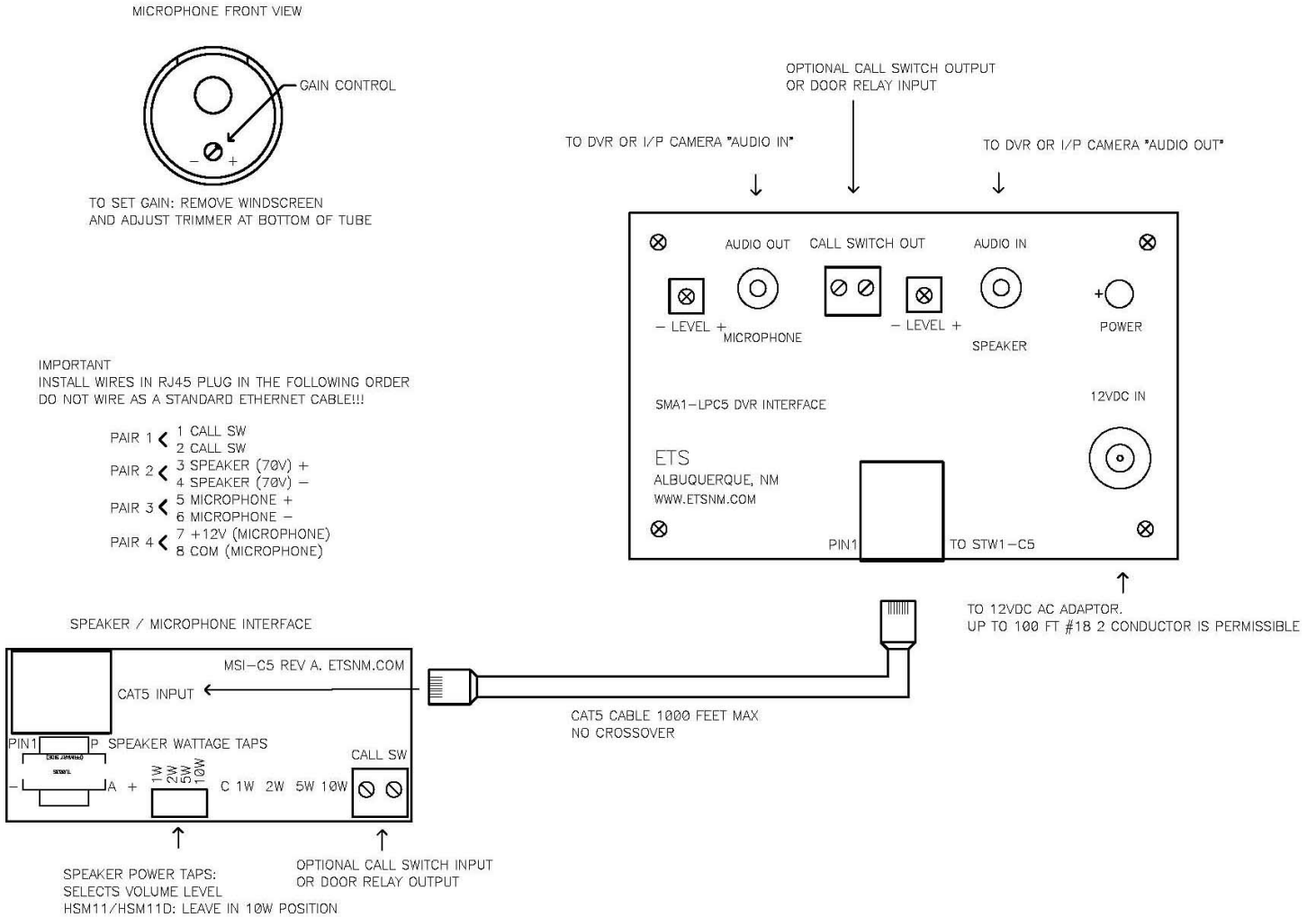If the SMAx-LPxx-C5 will be used with a "line level" input, turn the gain control of the HSM11-C5 to 3/4 full clockwise and adjust the level control on the SMAx-LPxx-C5 to produce the clearest audio level at the head end.

HSM11-C5 Speaker volume

The volume of the HSM11-C5 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-C5 Mounting

The HSM11-C5 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-C5and 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.

MICROPHONE FRONT VIEW

GAIN CONTROL

TO SET GAIN: REMOVE WINDSCREEN
AND ADJUST TRIMMER AT BOTTOM OF TUBE

IMPORTANT
INSTALL WIRES IN RJ45 PLUG IN THE FOLLOWING ORDER
DO NOT WIRE AS A STANDARD ETHERNET CABLE!!!

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)

OPTIONAL CALL SWITCH OUTPUT
OR DOOR RELAY INPUT

TO DVR OR I/P CAMERA "AUDIO IN"

TO DVR OR I/P CAMERA "AUDIO OUT"

AUDIO OUT   CALL SWITCH OUT   AUDIO IN

− LEVEL +   − LEVEL +   POWER
     MICROPHONE   SPEAKER

SMA1−LPC5 DVR INTERFACE

12VDC IN

ETS
ALBUQUERQUE, NM
WWW.ETSNM.COM

PIN1   TO STW1−C5

TO 12VDC AC ADAPTOR.
UP TO 100 FT #18 2 CONDUCTOR IS PERMISSIBLE

SPEAKER / MICROPHONE INTERFACE

MSI−C5 REV A. ETSNM.COM

CAT5 INPUT

PIN1   P SPEAKER WATTAGE TAPS   CALL SW

A +   1W 2W 5W 10W   C 1W 2W 5W 10W

CAT5 CABLE 1000 FEET MAX
NO CROSSOVER

SPEAKER POWER TAPS:
SELECTS VOLUME LEVEL
HSM11/HSM11D: LEAVE IN 10W POSITION

OPTIONAL CALL SWITCH INPUT
OR DOOR RELAY OUTPUT

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.