

# **ETS Inc.**

## **CSA-4 Amplified Speaker Instructions**

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*The CSA-4 is an indoor 4" ceiling speaker with a built in 10 Watt speaker power amplifier. It requires 12v @ 1A for 10 Watt operation. The audio input is line level (1v typical).*

### **Mounting**

Cut a round hole in ceiling, remove grill and install speaker by turning swing arm screws clockwise.

### **Power**

For best results, use only a REGULATED 12-15v 1A power supply for 10 Watt operation. Lower Voltages and current availability will cause distortion and Screeching and sputtering sounds.

### **Wiring**

Adequate power and cable type is essential for the speaker to perform well. Use #18 2 conductor for the power input connection and keep cable length at 250' or below. Too long of a power cable run and/or insufficient wire gauge will also cause distortion and Screeching and sputtering sounds.

For the audio connection, use RG174 coax or 22 gauge 2 conductor shielded cable. Keep the audio cable lengths at or below 500'.

Note- The audio input is "line level" which can be identified as directly compatible with the camera if the data sheet for the camera has its audio output labeled as "audio out" or "line out". If you experience hum or other noise in the speaker and, try grounding the "-" connection of the 12/24VDC input to a known good earth or electrical ground. You can also add the ETS TIB-1 isolation transformer to correct 60hz hum associated with ground loops.

### **Speaker Volume control**

The volume control for the speaker is located on The PCB mounted to the speaker magnet. You will need a small blade screwdriver to adjust it. It's set at the factory to mid position. The CSA-4 can be adjusted to be very loud and can project sounds up to 100' away in moderately noisy environments.

### **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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