

VISIBLE AND/OR AUDIBLE SIGNALING APPLIANCES

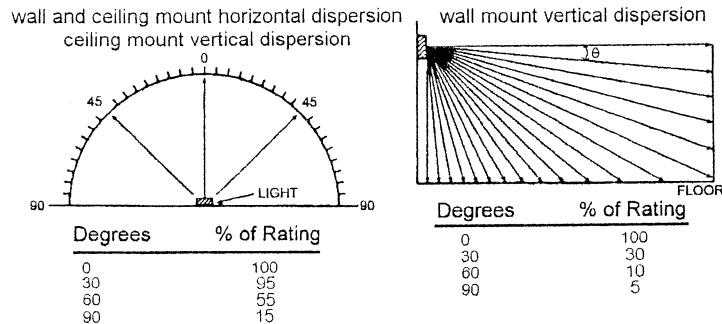
I. INTRODUCTION

The Gentex Model WGES24-75/WGEC24-75 strobe or horn/strobe and GEH24 horn, is a high quality visible and/or audible signaling appliance. The high intensity strobe utilizes a Xenon flash tube that generates a high-intensity flash visible from all angles. This appliance is intended to provide a visible, audible or audible/visible, depending on the model, notification signal for the purpose of life safety and property protection. This appliance is ideal for any occupancy that requires notification appliances per the applicable building or fire code or wherever dependable alarms are required. The strobe is listed in compliance with UL 1638, Visual Signaling Appliances - Private Mode Emergency and General Signaling.

II. LOCATION

This appliance is intended for use in Fire Alarm Systems and is to be installed in accordance with this manual, the recommendation of the local authorities having jurisdiction, and other NFPA documents that provide standards on notification appliances for protective signaling systems. The WGEC/WGES and GEH24 is intended for indoor and outdoor installations. This appliance is rated for outdoor or drip proof applications, when used with the GOE Enclosure.

LIGHT OUTPUT IN PERCENTAGE WHEN MEASURED FROM THE FOLLOWING DIRECTIONS

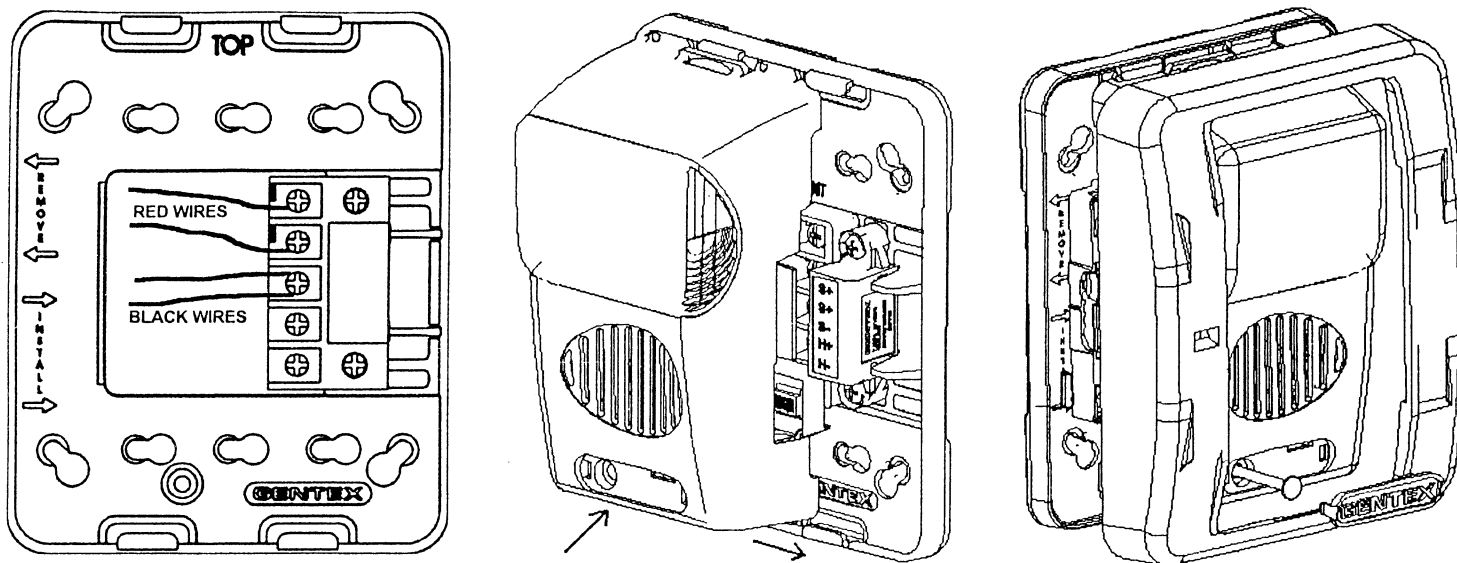


III. MOUNTING, ROUGH-IN BOX AND RUN WIRING

This unit is designed for mounting to most single gang boxes, 4" square outlet boxes, 2-gang masonry boxes or non-metallic 2-gang switch boxes. Conduit entrance to boxes should be selected to insure sufficient wiring clearance.

1. Mount a box for each remote signaling appliance. Screw bracket onto box. Insert signal into bracket and slide to the right firmly into the terminal block receptacle. Screw together with single screw at the bottom of the signal. Cover screw with plastic tab.
2. Run a minimum 18 gauge insulated 2 or more conductor cable.

Attention: Wiring should be connected to mounting bracket prior to mounting signal. Incoming positive power lead must be broken and each lead is to be inserted into each of the top two terminals. If two power runs are made to the signal, one for the strobe and one for the horn, only one of the runs must have its positive lead broken and placed under the two separate top terminals. A barrier is provided to prevent both leads from being placed under the same terminal.



CAUTION: A jumper card is provided to test for correct wiring in the supervisory mode only. **DO NOT** pass alarm current through the jumper.

NOTE: All strobes are designed to flash as specified with continuous applied voltage. This appliance is not recommended for use on coded or pulsing signaling circuits. However, use of the AVS44 control module is permitted to synchronize the strobe and/or mute the horn.

IV. WIRING

Wiring for independent synchronized strobes and horn.

Using this method you may:

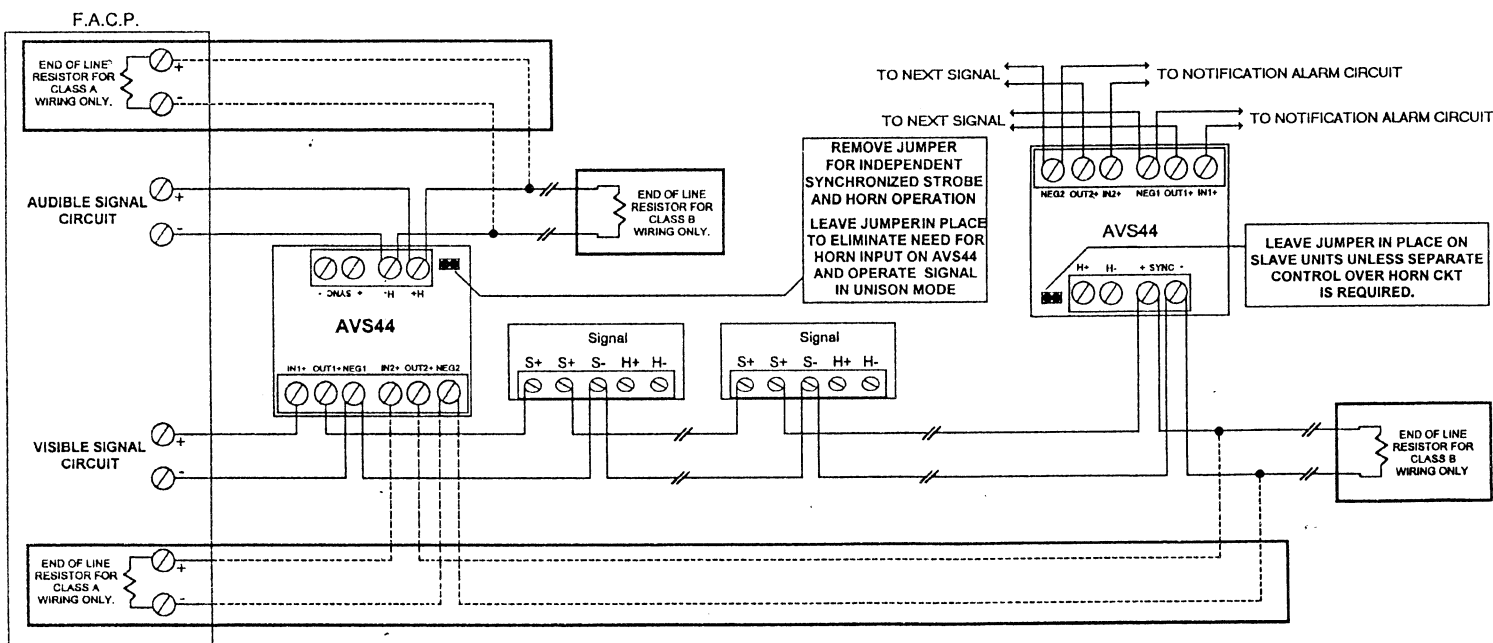
- Use only two wires to synchronize the temporal horn and strobe with the ability to mute the horn (place switches 1 and 2 up on the WGEC).
- Mute the horn only when the temporal horn option has been selected.

Wiring for synchronized parallel (unison) horn/strobe operation.

Using this method you may:

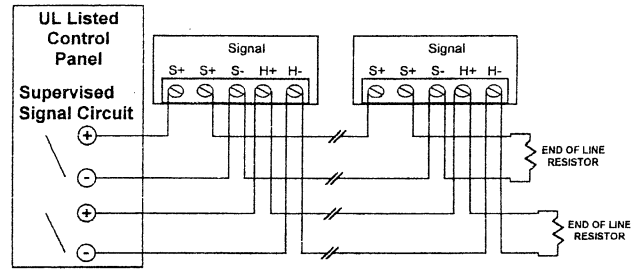
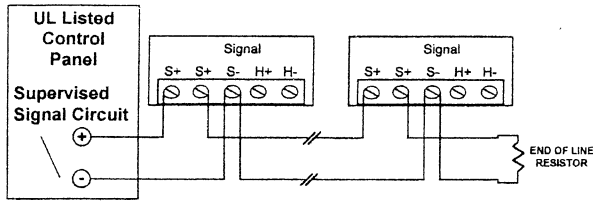
- Use only two wires to synchronize the temporal horn and strobe **without** the ability to mute the horn (place switches 1 and 2 up on the WGEC).
- Choose either temporal or continuous horn with the temporal horn synchronized.
- Also wire the control module (AVS44) to only the strobe input terminals, set the horn to continuous mode and power it from a coded source.

NOTE: For this option, switches 1 and 2 on the WGEC (Fig.1) must be down to isolate power to the audible and visible portion of the circuit.



Conventional Method:

You may connect both the strobe and the horn directly from a source of rated power without the use of a control module. However, the horns and strobe lights will NOT be synchronized. Place switches 1 and 2 up on the WGEC24-75 to power both the audible and visible from a single pair of power wires. If you wish to power the horn and strobe from independent sources of power, place switches 1 and 2 down and connect power to the appropriate terminals.

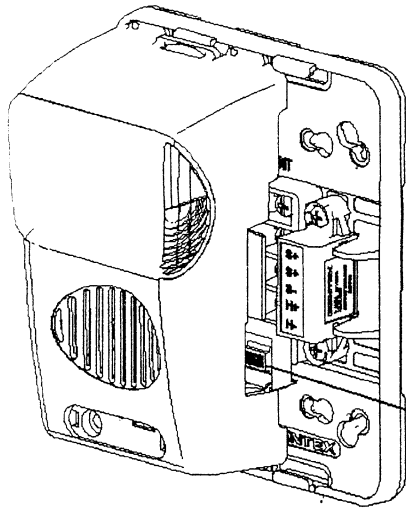


CAUTION: When using only a single power source to energize the strobe and horn (switches 1 and 2 up), the in/out wiring must be under the S+ and S- terminals only. Failure to do so may result in damage to your signal. For the horn only (GEH24) and strobe only (WGES), only the top three terminals are to be used.

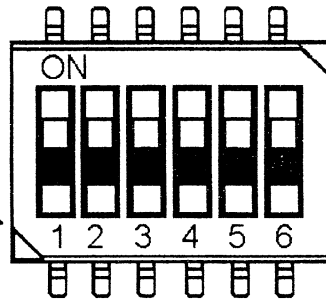
	SWITCH POSITION		
	3	4	5
Mechanical-Temp.	ON	ON	ON
Mechanical-Cont.	OFF	ON	ON
Hi-Temp.	ON	OFF	ON
Hi-Cont.	OFF	OFF	ON
Chime-Temp.	ON	ON	OFF
Chime-Cont.	OFF	ON	OFF
Whoop	ON	OFF	OFF
Whoop	OFF	OFF	OFF

Switch Position 6

ON > HIGH dB
OFF > LOW dB



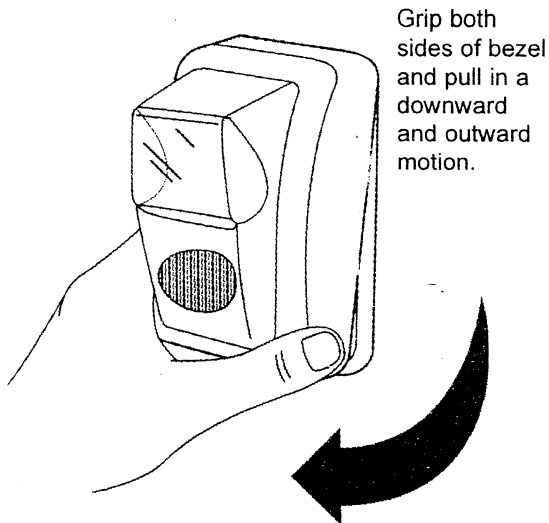
Switch positions 1 and 2 in the off position to select isolated horn and strobe power inputs.



MAX. WIRE DISTANCE (IN FEET) = $\frac{(\text{PANEL VOLTAGE} - \text{APPLIANCE MIN. VOLT}) \times \text{WIRE CONDUCTIVITY}}{\text{TOTAL CURRENT DRAW}}$

WIRE	CONDUCTIVITY
18AWG	60
16AWG	95
14AWG	153
12AWG	244

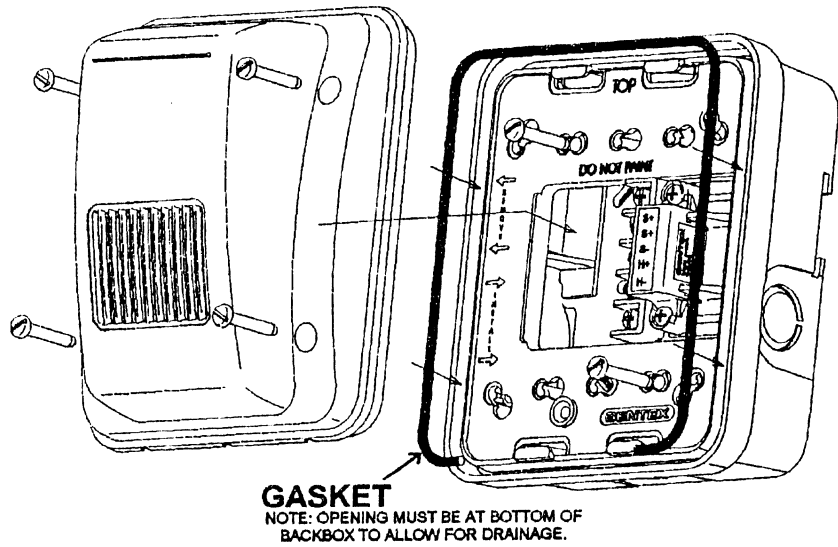
Includes wire to and from appliance. **CAUTION:** Applies only to regulated supplies. Assumes all appliances are at the end of wire run (worst case).



STROBE CURRENT RATINGS							
		DC (mA)			FWR (mA)		
Candela	Voltage	Inrush	Peak	RMS	Inrush	Peak	RMS
75	16	35	251	184	46	750	245
	24	49	204	112	70	676	167
	33	73	230	85	98	888	166

Tighten screws until the enclosure cover fits snugly against the backbox.
Do not over-tighten or damage to the enclosure cover will occur.

Back
Box



Insert gasket inbetween the box and mounting bracket. The signal (not shown) shall be inserted in the mounting bracket prior to attaching the cover.

Notes: Product does not meet UL 1971 light distribution requirements.
To allow for drainage, the seal is not water-tight.

HORN RATINGS OVER INPUT VOLTAGE RANGE OF 16-33V												
Horn Mode	dBA @ 10ft. Per UL464 HIGH dB			dBA @ 10ft. Per UL464 LOW dB			DC(mA)			FWR(mA)		
	16v	24v	33v	16v	24v	33v	16v	24v	33v	16v	24v	33v
Temp 3 2400Hz	78	83	84	71*	75	77	13	19	24	27	37	43
Temp 3 Mechanical	76	81	82	70*	73*	76	11	16	22	23	33	40
Temp 3 Chime	70*	71*	71*	66*	68*	70*	9	12	15	19	24	29
Continuous 2400Hz	81	86	87	74*	78	80	14	21	28	21	42	48
Continuous Mechanical	80	84	85	72*	76	78	13	18	25	27	37	44
Continuous Chime	70*	71*	73*	66*	68*	70*	10	12	15	19	24	30
Whoop	82	83	83	69*	72*	75	43	51	56	51	58	62

*Operating the horn in this mode at this voltage will result in not meeting the minimum UL reverberant sound level required for public mode fire protection service. These settings are acceptable only for private mode fire alarm signaling use. Use the high dBA setting for public mode applications.

NOTE: The sound output for the temporal 3 tone is rated lower since the time the horn is off is averaged into the sound output rating. While the horn is producing a tone in the temporal 3 mode its sound pressure is the same as the continuous mode.

V. CHECKOUT AND TROUBLESHOOTING

1. Supply power to the system control panel. The auxiliary signaling appliances in the system should not be activated.
2. If the signal is activated:
 - Check all smoke and fire detectors in the system to make sure they have not been activated.
 - Check all wiring connections to make sure the signal detection circuits are not reversed or shorted together. Check wire color codes and traces.
 - Verify that the jumpers and switches are properly set on both the control module and signal appliance. If the jumper on the AVS44 is removed, the horns will not produce any sound unless there is an input to the H+ and H- terminals on the control module.
3. To test the signal appliances, trip the auxiliary panel or activate the alarm circuit at the main control panel or activate one of the fire detection units in the system. All auxiliary signals should be activated.
4. An operational test on this product should be conducted in accordance with National Standards or at a minimum annually and more often if dictated by local and state codes or authorities having jurisdiction.

NOTE: These testing procedures and troubleshooting instructions are generalized. Please refer to the system control panel operating instructions for proper operation of the panel and fire detection system.

SIGNALING APPLIANCE LIMITATION:

Your horn and horn/strobe meet or exceed the current audibility requirements of Underwriters Laboratories. However, if the appliance is located outside a bedroom it may not wake up a sound sleeper, especially if the room door is closed or only partially open.