

## Overview

Integrity temporal horns and temporal horn-strobes are specially designed for use with compatible life safety communication and control equipment to alert occupants of a life safety event. The horn emits a piercing low frequency sound that is easily heard above moderate ambient noise levels. The flash from its strobe can be noticed from almost any position in the room, corridor, or large open space.

Integrity's rugged plastic housing is made from durable and fire retardant, high impact plastic with a slightly textured surface. Its ingenious mounting plate firmly holds the device in place with a single screw. A separate trim plate is not required. Terminals accept up to #12 AWG (2.5mm<sup>2</sup>) wire for polarized connections.

Synchronization is important because a small portion of the population have a condition which may cause them to become disoriented from multiple random flashes of light. Integrity strobes minimize this risk.

Strobes are shipped with standard wall mount style "FIRE" lens markings. Where ceiling orientation, other languages, or different lens markings are required, GE Security offers optional LKW and LKC series Lens Marking Kits. These optional lens markings simply snap on to the strobe. Consult GE Security for availability of special lens markings.

Integrity horns and horn-strobes are designed for 20 to 31 Vdc operation and must be connected to signal circuits that output a constant (not pulsed) voltage. A diode is used to allow full signal circuit supervision.

## Standard Features

- UL 1971-listed synchronizing strobe**  
 Integrity strobes synchronize to the latest UL 1971 requirements when used with an external control module (G1M or SIGA-CC1S).
- Adjustable Audible Output**  
 Select temporal or continuous tones, and High setting for 98 dBA output or Low setting for 94 dBA sound output.
- Genesis-compatible**  
 Can be mixed with Genesis signals. All Genesis and Integrity strobes on the same circuit meet UL 1971 synchronization requirements when used with an external control module.
- Approved for public and private mode applications**  
 UL 1971-listed as signaling devices for the hearing impaired and UL 1638-listed as protective visual signaling appliances.
- Satisfies ADA code requirements**  
 Integrity strobes provide the "Equivalent Facilitation" allowed under ADA Accessibility Guidelines. A single strobe in rooms up to 50 ft x 50 ft satisfy both ADA and NFPA codes.
- Durable red or white Noryl front plate**  
 Ideal for outdoor, industrial or harsh environments.
- Field changeable field markings**  
 Lens language or standard "FIRE" marking is easily changed with optional LKW and LKC series lens kits.
- Easy Installation**  
 Flush mount to standard North American 4" square or two-gang box. Integrity's universal mounting plate allows it to be wired and then left hanging free for easy inspection and testing before it is fastened to the electrical box.

# Temporal Horns and Horn-strobes

## 757 Series

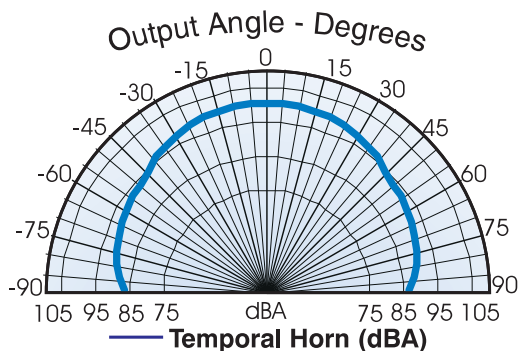


## Horn Application

During installation, the horn is configured for steady or temporal tone signal and either low (94 dBA) or high (98 dBA) output. When temporal output is selected all horns on a common two-wire circuit are self-synchronized (see specifications). External control modules are not required for audible synchronization.

Suggested sound pressure level for each signaling zone used with alert or alarm signals is at least 15dB above the average ambient sound level, or 5dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater, measured 5' (1.5m) above the floor. The average ambient sound level is the RMS, A-weighted sound pressure measured over a 24-hour period.

Doubling the distance from the signal to the ear will theoretically result in a 6 dB reduction of the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. A 3 dBA difference represents a barely noticeable change in volume.



Typical Sound Output Distribution  
dBA measured at 10 ft in anechoic chamber  
757 Series Temporal Horn ('HIGH' output)

## Strobe Application

GE Security strobes are UL 1971-listed for use indoors as wall-mounted public-mode notification appliances for the hearing impaired. Prevailing codes require strobes to be used where ambient noise conditions exceed 105 dBA (87dBA in Canada), where occupants use hearing protection, and in areas of public accommodation as defined in the *Americans with Disabilities Act* (see application notes - USA).

As part of the Enhanced Integrity line of products, 757 Series strobes exceed UL synchronization requirements (within 10 milliseconds other over a two-hour period) when used with a separately-installed G1M Signal Master or SIGA-CC1S Synchronization Module. They are fully compatible with Genesis signals.

Combination horn-strobe signals must be installed in accordance with guidelines established for strobe devices.

The following guidelines are based on ANSI/NFPA 72 *National Fire Alarm Code* (1999). When applied and installed in accordance with that code, GE Security strobes meet or exceed the illumination produced by the ADA-specified 75 candela (cd) strobe at 50 feet.\*

**Non-Sleeping Rooms and Corridors:** GE Security strobes rated at less than 110 cd per UL 1971 are intended for use in non-sleeping areas only. Install with the bottom of the device at least 80 inches (2.0 m) and no more than 96 inches (2.4 m) above the finished floor. No point in any space (including corridors) required to have strobes should be more than 50 feet (15.2 m) from the signal (in the horizontal plane).

Non-Sleeping Rooms	Use One Wall Mounted Model:
Up to 20' x 20' (6.1 x 6.1m)	One 15 cd strobe
Up to 30' x 30' (9.1 x 9.1m)	One 30 cd or two 15 cd strobes
Up to 40' x 40' (12.2 m x 12.2 m)	One 75 cd or two 30 cd strobes
Up to 50' x 50' (15.2 x 15.2m)	One 110 cd or two 75 cd strobes

Corridors	Wall Mounted - Model:
Any Length x Max. 20' (6.1m) Wide	15 cd strobes spaced at 100' (30.5 m) max. Strobes must be placed within 15' (4.5m) of each end of the corridor.

\* ADA suggests using 75 cd strobes throughout an area, with spacing that never exceeds 50 ft from the strobe to any point in the protected space.

**Sleeping rooms:** GE Security 110 cd strobes are intended for use in sleeping rooms and should be installed along with a smoke detector. It must be wall mounted at least 80" (2.03 m) above floor level, but no closer than 24" (610 mm) to the ceiling. The distance from the strobe to the pillow must not exceed 16' (4.8 m).

Sleeping Rooms	Use One Wall Mounted Model:
Any Size	110 cd within 16 feet of pillow

## Application Notes - USA

Audible signals should never have a sound level less than 75 dBA at 10' (3m) per NFPA 72. Signals cannot exceed 120 dBA per ADA (130 dBA per NFPA 72) at the minimum hearing distance to audible appliance. Audible signals shall be installed with the top of the device above the floor not less than 90" (2.3m) and below the finished ceiling at least 6" (150 mm) (per NFPA 72).

Strobes must be used to supplement audible signals wherever the average ambient sound level exceeds 105 dBA. Combination Audible/Visible signals must be installed per NFPA guidelines established for strobes.

ADA suggests that the following areas may require Visual Alarm Signals:

- rest rooms, meeting rooms, and other general usage areas.
- lobbies, hallways, and other common use areas.
- sleeping rooms intended for use by persons with hearing impairment (per Title 1 of ADA).
- work areas used by a person with a hearing impairment (per Title 1 of ADA).

## Application Notes - CANADA

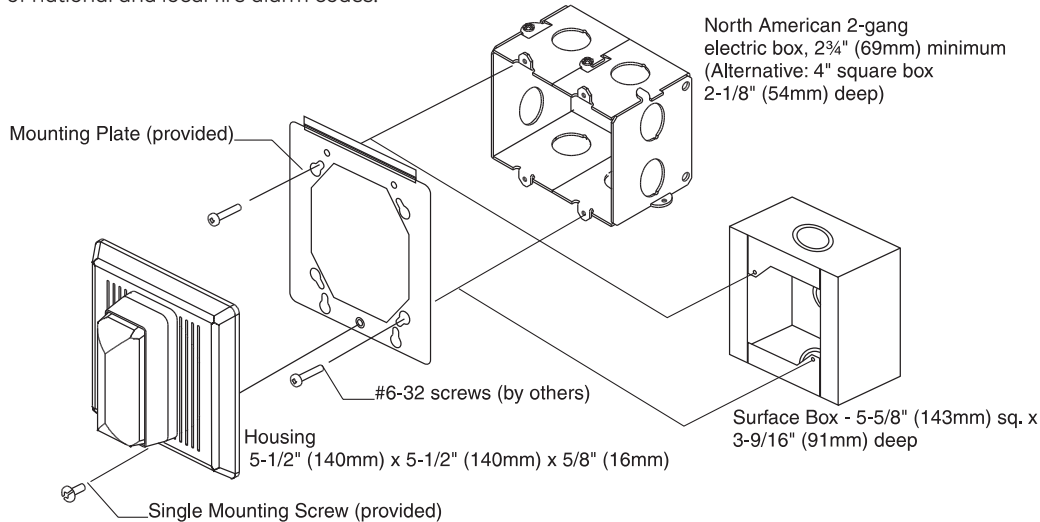
Based in part on 1995 Canada National Building Code - The fire alarm signal sound pressure level shall not exceed 110 dBA in any normally occupied area. The sound pressure level from an audible signal in a floor area used for occupancies other than residential occupancies shall be not less than 10 dBA above the ambient noise, and never less than 65 dBA. The sound pressure level in sleeping rooms from an audible signal shall not be less than 75 dBA when any intervening doors between the device and the sleeping room are closed. Audible signal devices shall be installed not less than 1.8 m to the center of the device above the floor (per CAN/ULC S524).

The fire alarm audible signal shall be supplemented by fire alarm strobes in any floor area where the ambient noise level exceeds 87 dBA, or where the occupants of the floor area use ear protective devices, are located within an audiometric booth, or are located within sound insulating enclosures. This also applies to assembly occupancies in which music and other sounds associated with performances could exceed 100 dBA.

Strobes shall be installed in a building so that the flash from not less than one device is visible throughout the floor area or portion thereof in which they are installed. For maximum safety, GE Security recommends that strobes be installed as per the guidelines shown here under Strobe Application.

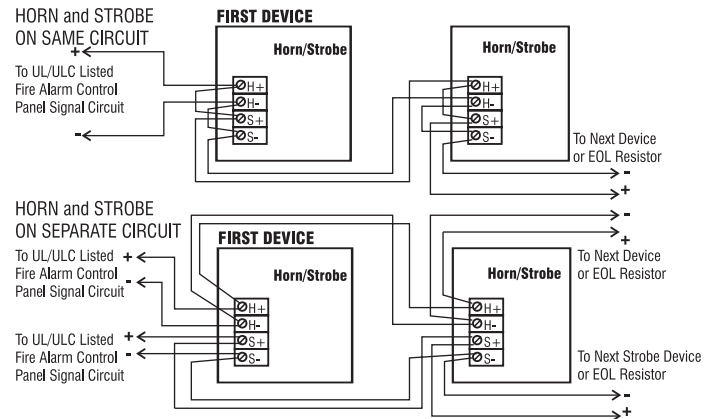
## Installation and Mounting

All models fit to a standard flush mounted, North-American two-gang electrical box, 2 3/4 inch (69 mm) minimum. Optional flush trims are not required. For surface mount, use GE Security's custom indoor and outdoor surface boxes painted in color-matched red or white epoxy. GE Security recommends that fire alarm horn/strobes always be installed in accordance with the latest recognized edition of national and local fire alarm codes.



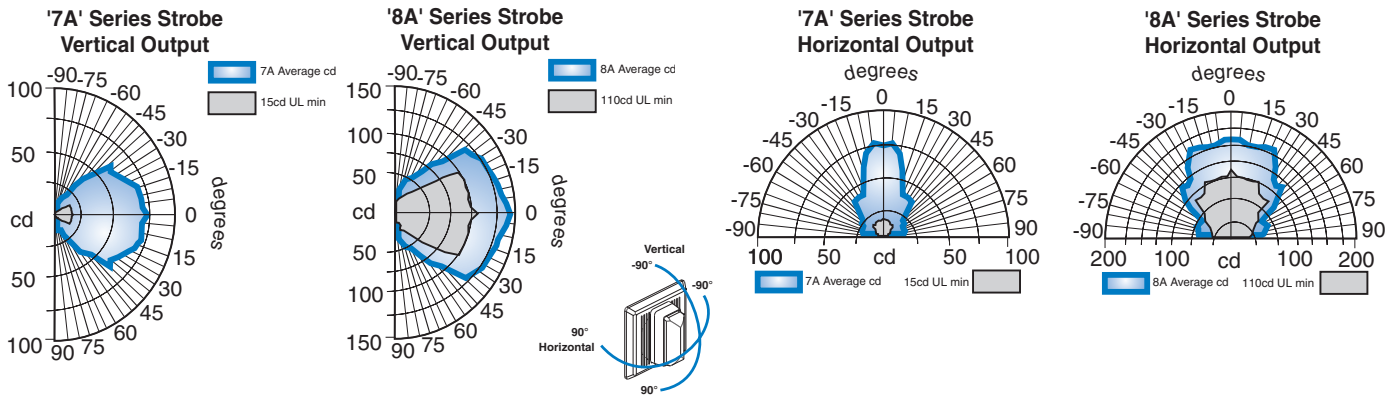
## Typical Wiring

The strobe must be connected to signal circuits which output a constant (not pulsed) voltage. The horn can be connected to continuous voltage circuits.



**WARNING:** These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist. These visual signal appliances' flash intensity may not be adequate to alert or waken occupants in the protected area. Research indicates that the intensity of strobe needed to awaken 90% of sleeping persons is approximately 100 cd. GE Security recommends that strobes in sleeping rooms be 110 cd minimum.

## Light Output Patterns



## Current Draw

### Typical Current

	15/75 cd			110 cd		
	RMS	Mean	Peak	RMS	Mean	Peak
20 Vdc	121	115	277	248	241	402
24 Vdc	101	96	204	203	197	338
31 Vdc	81	76	173	155	151	280
20 Vfwr	168	97	452	342	202	868
24 Vfwr	146	79	446	286	159	788

### UL Rating

	15/75 cd			110 cd		
	RMS	Mean	Peak	RMS	Mean	Peak
20 Vdc	113	107	248	228	222	420
24 Vdc	90	85	214	180	175	360
31 Vdc	65	62	174	125	122	280
20 Vfwr	153	81	540	327	177	952
24 Vfwr	128	64	412	260	134	808

### Current Draw Notes and Comments

1. Current values are shown in mA.
2. UL Nameplate Rating can vary from Typical Current due to measurement methods and instruments used.
3. GE Security recommends using the Typical Current for system design including NAC and Power Supply loading and voltage drop calculations.
4. Use the Vdc RMS current ratings for filtered power supply and battery AH calculations. Use the Vfwr RMS current ratings for unfiltered power supply calculations.
5. Fuses, circuit breakers and other overcurrent protection devices are typically rated for current in RMS values. Most of these devices operate based upon the heating affect of the current flowing through the device. The RMS current (not the mean current) determines the heating affect and therefore, the trip and hold threshold for those devices.
6. Our industry has used 'mean' currents over the years. However, UL will direct the industry to use the 2004 RMS values in the future.

## dba Output

### Horn-strobes

High dB Output	UL464		Average		Peak	
	Temporal	Steady	Temporal	Steady	Temporal	Steady
20 Vdc	79.0	82.0	93.5	93.5	100.0	100.0
24 Vdc	79.0	85.0	97.0	97.0	102.0	102.0

Low dB Output	UL464		Average		Peak	
	Temporal	Steady	Temporal	Steady	Temporal	Steady
20 Vdc	75.0	79.0	89.2	89.2	95.4	95.4
24 Vdc	75.0	79.0	93.0	93.0	98.0	98.0

### Horns

High dB Output	UL464		Average		Peak	
	Temporal	Steady	Temporal	Steady	Temporal	Steady
20 Vdc	79.0	82.0	97.0	97.0	102.5	102.5
24 Vdc	82.0	85.0	98.0	98.0	104.0	104.0

Low dB Output	UL464		Average		Peak	
	Temporal	Steady	Temporal	Steady	Temporal	Steady
20 Vdc	75.0	79.0	92.3	92.3	98.4	98.4
24 Vdc	75.0	82.0	94.0	94.0	99.0	99.0

### dba Output Notes and Comments

- All values shown are dBA measured at 10 feet (3.01m).
- UL1480 values measured in reverberation room.
- Average values are measured in anechoic chamber.

# Specifications

Rated Strobe Output - candela (cd)	757-1A-T	757-7A-T	757-8A-T
UL 1971	N/A (horn only)	15 cd wall 15 cd ceiling	110 cd wall 60 cd ceiling
UL 1638 & ULC S526		75 cd	110 cd
Standalone Synchronization Characteristics (note 2)	Strobe flash at 1 per second within 200 milliseconds on common circuit Horn pulses at temporal rate within 200 milliseconds on common circuit		
Operating Volts	Strobe: 20-24 Vdc Continuous Horn: 20-31 Vdc Continuous		
Horn Output (note 1)	Anechoic: High Setting - 104 dBA (peak)/98 dBA (avg); Low Setting - 99 dBA (peak)/94 dBA (avg) Reverberent: High Setting - 85 dBA (continuous)/82 dBA (temporal); Low Setting - 82 dBA (continuous)/75 dBA (temporal)		
Horn Current	High Output: 40 mA @ 24 Vdc; 55mA @ 24 Vrms FWR Low Output: 20 mA @ 24 Vdc; 28 mA @ 24 Vrms FWR		
Strobe Flash Synchronization	Synchronized at one flash per second. External control module necessary to meet UL 1971 synchronization requirements of 10 milliseconds over a two-hour period.		
Compatible Synchronization Modules	G1M, G1M-RM, SIGA-CC1S, SIGA-MCC1S		
Strobe Marking	Supplied with LKW-1 "FIRE" red letters, vertical both sides (Wall Mount) - see LKW and LKC series for ceiling style and optional markings.		
Flash Tube Enclosure	Clear LEXAN with white marking sleeve		
Housing	Textured, color impregnated engineered plastics - exceeds 94V-0 UL flammability rating		
Wire Connections	Terminals - separate, polarized inputs for Horn & Strobe, #12 AWG (2.5mm <sup>2</sup> ) maximum		
INDOOR Operating Environment	32-120° F (0-49° C) ambient temperature. 93% relative humidity @ 40° C		
OUTDOOR Operating Environment (must use weatherproof box)	98% relative humidity @ 40° C; -35-150° F (-31-66° C) ambient temperature (757-7A: rated at 17.7 cd @ -35° C per UL/@ -40° C per ULC) (757-8A: rated at 70.7 cd @ -35° C per UL/@ -40° C per ULC)		
Mounting - INDOOR	Flush: North-American 2-gang box, 3" high x 4" wide x 2¾" (69 mm) minimum Surface: 757A-SB Back box Bi-directional: 757A-BDF Mounting Frame		
Mounting - OUTDOOR	Surface: 757A-WB Weatherproof Box		
Agency Listings	UL 1971, UL 1638, UL 464, ULC S526, ULC S525, MEA, CSFM, FM, CE (All models comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule)		

**Note 1** - Measured at 10 ft (3m) @ 24 Vdc. Subtract 3 dBA for models with strobes. **Note 2** - Temporal audible pattern is defined as: ½ sec ON, ½ sec OFF, ½ sec ON, ½ sec OFF, ½ sec ON, 1½ sec OFF, then repeat cycle.

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## Ordering Information

Catalog Number	Description	Ship Wt., lb. (kg)
<b>Temporal Horns</b>		
757-1A-T*	Temporal Horn, Red	1.7 (0.8)
<b>Temporal Horn-Strobes</b>		
757-7A-T*	Temporal Horn-Strobe, 15/75cd, Red	2.0 (0.9)
757-8A-T*	Temporal Horn-Strobe, 110cd, Red	
<b>Synchronization Modules</b>		
G1M-RM	Genesis Signal Master Remote Mount (1-gang)	0.2 (0.1)
SIGA-CC1S	Synchronization Output Module (Standard Mount)	0.5 (0.23)
SIGA-MCC1S	Synchronization Output Module (UIO Mount)	0.18 (0.08)
<b>Mounting Accessories</b>		
757A-SB*	Surface Box, Red, Indoor	1.5 (0.7)
757A-WB*	Weatherproof Box, Red, Surface	
757A-BDF*	Bi-directional Frame, Red	4 (1.8)
<b>Lens Marking Kits (see note 1)</b>		
LKW-1	"FIRE", Wall Orientation (supplied)	0.1 (0.05)
LKW-1R	"FIRE", Wall Orientation, RED	
LKW-2	"FEU", Wall Orientation	
LKW-3	"FIRE/FEU", Wall Orientation	
LKW-4	"SMOKE", Wall Orientation	
LKW-5	"HALON", Wall Orientation	
LKW-6	"CO2", Wall Orientation	
LKW-7	"EMERGENCY", Wall Orientation	
LKW-8	"ALARM", Wall Orientation	
LKW-9	"FUEGO", Wall Orientation	
<i>Add Suffix "W" to catalog no. for WHITE. (e.g. 757-7A-TW)            Change "W" to "C" for CEILING mount. (e.g. LKC-1)</i>		

