EST
Life Safety & Communications

Wall Speakers, Speaker-Strobes

Genesis G4 Series



MEA 7320-1657: 0211/0285 S2813

See Specifications Section for listings details.

Overview

The Genesis line of life safety and emergency communications speakers and speaker-strobes combine high performance output with a low profile design to deliver a life safety audio solution that's as versatile as it is effective. Protruding no more than one inch from the wall, these appliances blend inconspicuously with any decor.

Optional amber lens tints, ALERT or FIRE markings, and red or white housing colors ensure there is a device for every application, including mass notification and emergency communications.

Speakers feature selectable wattage taps, while speaker-strobes allow for both wattage and light output levels to be configured in the field. Both settings remain clearly visible — even after final installation, which allows devices to be easily fine-tuned to achieve maximum benefit in exchange for the lowest possible system overhead.

High fidelity models meet the NPFA 520 Hz requirements for newly construced commercial sleeping areas. They also produce crisp, clear voice audio output that is highly intelligible over large areas.

All Genesis speakers include a DC blocking capacitor to allow electrical supervision of the audio distribution circuit. Models for 25 V_{RMS} and 70 V_{RMS} audio circuits are available. With their sealed back construction, these speakers are extra durable and provide outstanding audibility.

Standard Features

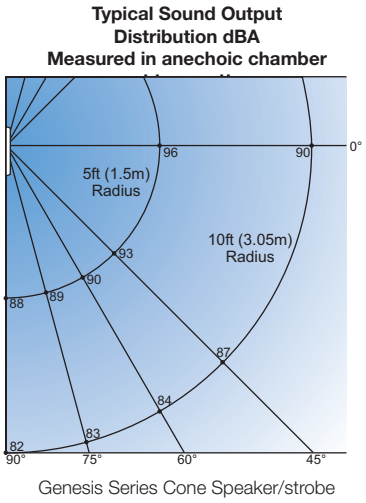
- **High Fidelity 520 Hz speaker models available**
  Low frequency output meets NFPA standards for newly constructed commercial sleeping areas; increases sound fidelity and audio intelligibility.
- **Unique low-profile design**
  - The most compact UL/ULC listed speaker-strobe available
  - Ultra-slim, protrudes a mere one inch from the wall
  - Attractive appearance, no visible mounting screws
- **Field configurable – no need to remove the device**
  - ¼, ½, 1, or 2 watt operation and selectable candela output with convenient switches that remain visible even after the unit is installed
- **Mass Notification models available with amber lenses**
- **Unparalleled performance**
  - loud 90 dBA output ensures clear, crisp audio
  - Exclusive FullLight strobe technology produces even light distribution
  - Precision timing electronics meet tough synchronizing standards for strobes when used with compatible modules
  - Optional field-configurable temporal strobe output
  - 25 Vrms and 70 Vrms models available, all supplied with a DC blocking capacitor for audio circuit supervision
- **Easy to install**
  - Fits all standard 4-inch square electrical boxes with plenty of room behind the signal for extra wire – no extension ring or trim plate needed
  - #18 - #12 AWG terminals – ideal for long runs or using existing wiring

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Speaker Application

The suggested sound pressure level for each signaling zone used with alert or alarm signals is a minimum of 15 dB above the average ambient sound level or 5 dB above the maximum sound level having a duration of at least 60 seconds, whichever is greater. This is measured 5 feet (1.5 m) above the floor.

Doubling the distance from the signal to the ear will theoretically cause a 6 dB reduction in the received sound pressure level. The actual effect depends on the acoustic properties of materials in the space. Doubling the power output of a device (e.g.: a speaker from 1W to 2W) will increase the sound pressure level by 3dBA.



Genesis Series Cone Speaker/strobe

G4 speakers are available in combination with a UL 1971-listed strobe light for indoor wall-mounted public-mode notification applications. These audible-visible appliances should be installed in accordance with guidelines established for visible (strobe) devices.

High Fidelity Models

Genesis G4HF Series High Fidelity appliances provide highly intelligible voice audio output. They are also effective in areas subject to high levels of ambient noise. These appliances are approved for use in sleeping areas under conditions described below.

Sleeping Room Applications

Genesis G4HF Series High Fidelity appliances are ideal for hotels, dormitories, and other residential occupancies where audible output must meet the 520 Hz signaling characteristics required by NFPA 72.

In sleeping areas, always ensure that the wattage tap of the speaker is set sufficiently high so that the sound pressure reaches at least 75 dBA-fast at the pillow.

These appliances are part of an end-to-end audio system approved for use in sleeping areas when used in conjunction with approved audio hardware and a factory-supplied 520 Hz tone. Check the System Compatibility List for other 520 Hz signaling requirements.

NOTE: Speakers driven by third-party audio systems are not UL approved for use in sleeping rooms.

Strobe Application

Genesis clear-lensed 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 specified levels, where occupants use hearing protection, and in areas of public accommodation. UL 1638-listed colored-lensed strobe lights are available for mass notification applications. Consult with your Authority Having Jurisdiction for details.

When used with a compatible EDWARDS synchronization source, all Genesis xenon-based strobes — audible units, and combination appliances — remain fully synchronized indefinitely. This exceeds the UL synchronization requirements of 10 milliseconds over a two-hour period. Strobe light synchronization is important in order to avoid issues with people that have Photosensitive Epilepsy.

Mass Notification Applications

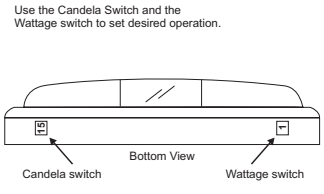


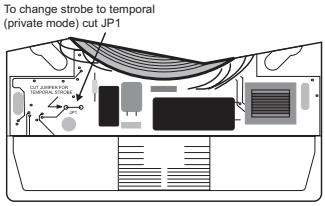
Genesis mass notification appliances bring the same high-performance life safety features and unobtrusive design to mass notification applications. Standard models are available with clear or amber lenses and optional ALERT housing labels, they are ideal for applications that require differentiation between life safety and mass notification alerts. Appliances with red, green or blue lenses are available. Contact EDWARDS Customer Service for details.

Field Configuration

Genesis speakers may be set for ¼, ½, 1, or 2 watt operation. The wattage setting is visible through a small window on the bottom of the device and is changed by simply sliding the switch until the desired setting appears in the window. The speaker does not have to be removed to change the wattage.

Genesis speaker-strobes feature selectable candela output. The output setting is visible through a small window on the bottom of the device and is changed by simply sliding the switch until the desired setting appears in the window. The speaker-strobe does not have to be removed to change the output.





Genesis speaker-strobes may also be configured for temporal flash. This battery-saving feature is intended for private mode signaling only. To set the device for temporal flash, snip the circuit board as shown in the Jumper Locations diagram above.

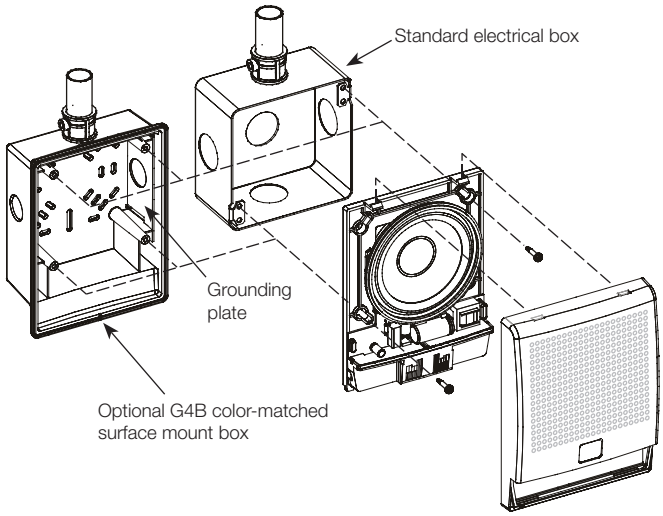
WARNING: These devices will not operate without electrical power. As fires frequently cause power interruptions, we suggest you discuss further safeguards with your local fire protection specialist.

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Installation and Mounting

All models are intended for indoor wall mounted applications only. Speakers and speaker-strobes are flush mounted to a North-American 4" square electrical box, $2^{1}/_{8}$" (54 mm) deep or a European 100 mm square box. Signals may be surface mounted to a Genesis surface-mount box (see ordering information for details).

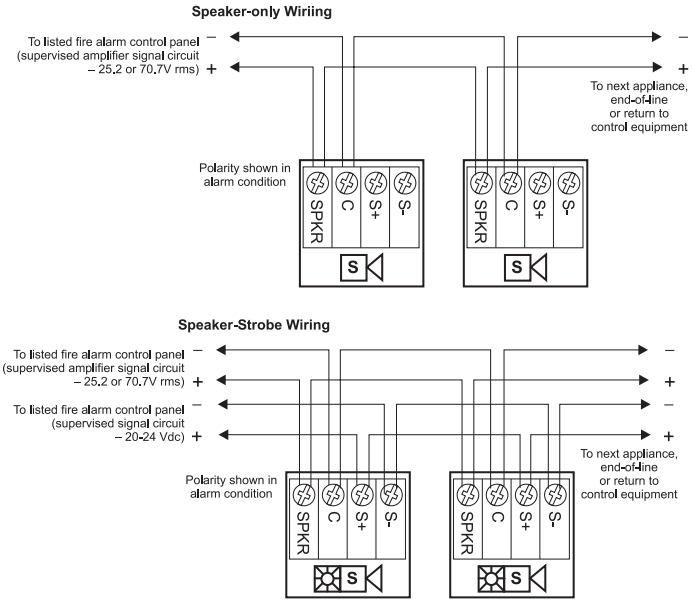
Two tabs at the top of the signal unlock the cover to facilitate mounting. The shallow depth of Genesis devices leaves room behind the signal for extra wiring. Once installed with the cover in place, no mounting screws are visible.



EDWARDS recommends that these speaker-strobes always be installed in accordance with the latest recognized edition of national and local codes. Refer to installation sheet for mounting height information.

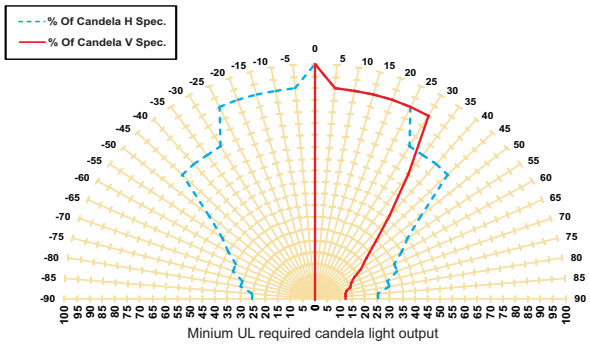
Wiring

Field wiring is connected to Genesis signals with terminals that accommodate #18 to #12 AWG (0.75 mm² to 2.5 mm²) wiring.



Light output

Per cent of UL rating versus angle



Minium UL required candela light output

UL name plate maximum operating current (RMS-mA)

Cd rating	"15" or "D"	"30" or "C"	"75" or "B"	"110" or "A"
16 Vdc	96	130	239	294
16 Vfwr	120	169	329	375

Typical current, milliamps - average (RMS)

Cd rating	"15" or "D"	"30" or "C"	"75" or "B"	"110" or "A"
20 Vdc	65 (78)	93 (101)	182 (188)	238 (245)
24 Vdc	55 (65)	78 (86)	153 (159)	196 (203)
31 Vdc	45 (53)	63 (69)	120 (124)	151 (157)
20 Vfwr	56 (106)	79 (147)	147 (264)	197 (342)
24 Vfwr	50 (95)	68 (130)	121 (225)	155 (283)
27 Vfwr	44 (84)	60 (115)	107 (200)	137 (251)

Light output switch settings for UL 1971 listed models are selectable by numeric candela value. Light output for Mass Notification (ECS/MNS) appliances is selectable by A, B, C, or D designations.

Lens Color	Switch Position A	Switch Position B	Switch Position C	Switch Position D
Clear	110 cd	75 cd	30 cd	15 cd
Amber	95 cd	65 cd	26 cd	13 cd

Sound level output

G4HF High Frequency Models, dBA at 3.05 m (10 ft.)

Voltage	Setting (nominal)	Wattage (actual)	UL 1480 Rating	ULC-S541 Rating	Anechoic (nominal)
25 VRMS	1/4 W	0.25 W	80.9	81.5	81
	1/2 W	0.50 W	84.1	84.3	84
	1 W	1.00 W	86.6	87.2	87
	2 W	2.00 W	89.7	90.1	90
70 VRMS	1/4 W	0.25 W	81.8	81.9	81
	1/2 W	0.50 W	84.6	84.9	84
	1 W	1.00 W	87.3	88.2	87
	2 W	2.00 W	90.5	90.9	90

UL 1480: Sound level output at 10 ft (3.05 m) measured in a reverberant room using 400 to 4,000 Hz band limited pink noise. ULC-S541: Sound level output at 10 ft (3.05 m) measured in anechoic chamber using 0 to 4,000 Hz band limited pink noise.

G4 Standard Frequency Models

Speaker Wattage Tap	Sound Output Level
1/4 Watt	80 dBA
1/2 Watt	83 dBA
1 Watt	86 dBA
2 Watt	89 dBA

UL 1480: Sound level output at 10 ft (3.05 m) measured in a reverberant room using 400 to 4,000 Hz band limited pink noise.

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Specifications

Genesis Speakers and Speaker-Strobes	
Housing	Red or white textured UV stabilized, color impregnated engineered plastic.
Dimensions	Height: 6.5” (165 mm). Width: 5” (127 mm). Depth to wall: 1” (25 mm).
Mounting (indoor wall mount only)	Flush: North-American 4” square box, 2 1/8” (54 mm) deep. Surface: model G4B (white) or G4RB (red) surface mount box.
Wire Connections	Screw terminals: separate polarized inputs for speaker and strobe, #18 to #12 AWG (0.75 mm^2 to 2.5 mm^2) wire size
Operating environment	32-120° F (0-49° C) ambient temperature; 0-93% relative humidity.
Agency listings and approvals, G4 Models	Meets ULC-S541, year 2004 UL requirements for standards UL1638 and UL1971. Complies with UL1480 Fifth Edition. UL/ULC File Number: S2813. FM, MEA, CSFM approved. CSFM File Number: 7320-1657: 0211/0285. Speaker-strobes comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule.
Agency listings and approvals, Low Frequency G4HF Models	UL 464 Listed for low frequency signaling applications. Meets ULC-S541, year 2004 UL requirements for standards UL1638 and UL1971. Complies with UL1480 Fifth Edition. FM, MEA, CSFM pending. Speaker-strobes comply with ADA Code of Federal Regulation Chapter 28 Part 36 Final Rule.

Speakers	
Input/Operating Volts	25 VRMS or 70 VRMS. See ordering information.
Speaker Cone	Speaker frequency response: 400 to 4,000 Hz. Optimized for voice intelligibility. 4-inch (102mm) mylar cone, sealed back construction.

Strobes	
Clear Strobe Output Rating	UL 1971, ULC S526: selectable 15 cd, 30 cd, 75 cd, or 110 cd output UL 1971: 15 cd (fixed 15/75 cd models) UL 1638, ULCS526: 75 cd (fixed 15/75 cd models)
Amber Strobe Output Rating	UL 1638: 13 (D), 26 (C), 65 (B), 95 (A)
Strobe Operating Voltage	16 - 33 Vdc Regulated, 16-33 V Full wave rectified (UL Voltage Designations “Regulated 24” and “24 fwr”)
Strobe Flash Rate	One flash per second.
Strobe Flash Synchronization	All strobes: one flash per second (fps) within 200 milliseconds over 30 minutes on common circuit. All strobes: Synchronization source required to comply with UL 1971 synchronization standard. Temporal setting (private mode only): synchronized to temporal output on the same circuit.
Synchronization Sources	SIGA-CC1S, SIGA-MCC1S, SIGA-CC2A, SIGA-MCC2A, G1M-RM BPS6A, BPS10A, APS6A, APS10A, iO Series, Fireshield Plus 3, 5 and 10 zone.
Strobe Lens Material	Polycarbonate

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Ordering Information

Model	High Fidelity (520 Hz)	Housing Color	Text Marking	Lens Color	Strobe Output	Speaker Voltage	Shipping Weight
Life safety Appliances							
G4-S2		White	None	None	Speaker only models	25 Volt (Selectable ¼, ½, 1, or 2 watt)	1.5 lbs. (0.68 kg)
G4HFWN-S2	✓						
G4R-S2		Red					
G4HFRN-S2	✓						
G4F-S2		White	FIRE				
G4HFWF-S2	✓						
G4RF-S2		Red					
G4HFRF-S2	✓						
G4-S2VM		White	None	Clear	Selectable 15, 30, 75, or 110 cd		
G4HFWN-S2VMC	✓						
G4R-S2VM		Red					
G4HFRN-S2VMC	✓						
G4F-S2VM		White	FIRE				
G4HFWF-S2VMC	✓						
G4RF-S2VM		Red					
G4HFRF-S2VMC	✓						
G4-S7		White	None	None	Speaker only models	70 V (Selectable ¼, ½, 1, or 2 watt)	
G4HFWN-S7	✓						
G4R-S7		Red					
G4HFRN-S7	✓						
G4F-S7		White	FIRE				
G4HFWF-S7	✓						
G4RF-S7		Red					
G4HFRF-S7	✓						
G4-S7VM		White	None	Clear	Selectable 15, 30, 75, or 110 cd		
G4HFWN-S7VMC	✓						
G4R-S7VM		Red					
G4HFRN-S7VMC	✓						
G4F-S7VM		White	FIRE				
G4HFWF-S7VMC	✓						
G4RF-S7VM		Red					
G4HFRF-S7VMC	✓						
G4F-S7V1575		White	FIRE	Clear	15/75 cd[1]		
G4RF-S7V1575		Red					
Mass Notification Appliances							
G4WA-S2VMA*		White	ALERT	Amber	Selectable 13, 26, 65, or 95 cd	25 Volt (Selectable ¼, ½, 1, or 2 watt)	1.5 lbs. (0.68 kg)
G4HFWA-S2VMA*	✓						
G4WA-S2VMC				Clear	Selectable 15, 30, 75, or 110 cd		
G4HFWA-S2VMC	✓						
G4WN-S2VMA*			None	Amber	Selectable 13, 26, 65, or 95 cd		
G4HFWN-S2VMA*	✓						
G4WN-S2VMC				Clear	15, 30, 75, or 110 cd		
G4WA-S2			ALERT	None	Speaker only models		
G4HFWA-S2	✓						
G4WN-S2			None				
G4WA-S7VMA*		White	ALERT	Amber	Selectable 13, 26, 65, or 95 cd	70 V (Selectable ¼, ½, 1, or 2 watt)	
G4HFWA-S7VMA*	✓						
G4WA-S7VMC				Clear	Selectable 15, 30, 75, or 110 cd		
G4HFWA-S7VMC	✓						
G4WN-S7VMA*			None	Amber	Selectable 13, 26, 65, or 95 cd		
G4HFWN-S7VMA*	✓						
G4WN-S7VMC				Clear	15, 30, 75, or 110 cd		
G4WA-S7			ALERT	None	Speaker only models		
G4HFWA-S7	✓						
G4WN-S7			None				

* Not approved for fire alarm applications

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Accessories

G1M-RM	Synchronization Output Module (1-gang)	0.2 (0.1)
SIGA-CC1S	Intelligent Synchronization Output Module (2-gang)	0.5 (0.23)
SIGA-MCC1S	Synchronization Output Module (Plug-in UIO)	0.18 (0.08)
G4B	Surface mount box, white	0.7 (0.32)
G4RB	Surface mount box, red	0.7 (0.32)

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