



G U A R D I A N T E L E C O M

Product and Services Guide

General Area Ringers & Loudspeakers

Guardian Telecom offers a wide variety of indoor & outdoor, metal & plastic, ceiling, horn & cone type Ringers & Loudspeakers from leading manufacturers around the world to meet your requirements outside of hazardous rated areas.



CONNECTED. PROTECTED.

SECTION

24

www.guardiantelecom.com



Visit industrial sites around the world and you can find telephones and communication systems designed, manufactured, distributed and commissioned by Guardian Telecom. From certified and ruggedized telephone and paging endpoints, to loudspeakers & ringers, cable, accessories, acoustic booths and much more. Our product line is extensive and our knowledge in-depth.

Guardian manufactures and assembles at our modern, ISO certified, CSA, UL and ATEX approved facility located east of the Canadian Rockies in Calgary, Alberta, Canada.

Working closely with our customers has always been a cornerstone in our work ethic. It keeps us up to date on their evolving needs and requirements as they operate in a demanding and uncompromising industrial world.

Guardian Telecom has completed its initial VoIP telephone product launch. As the IP world continues to evolve and grow, we will continue to invest both time and resources in design and testing to meet the stringent requirements that clients demand.

The in-house channel-partner sales and technical teams are here to work directly with you or through our network of distributors and representatives, locally, nationally and globally. Take advantage of their practical experience and product knowledge to make informed decisions based on your communication needs, environmental factors, regulatory requirements, budget considerations, growth and scheduling.

From individual telephone units to complete systems, our focus on customers' distinct needs is also addressed by customizing products whenever practical. From features to colors, finishes to labels, graphics, parts, enclosures and more.

Guardian can help guide you through the product selection process no matter how complex it is. We invite you to contact us to discuss your needs and see if our products & services will be the right fit.



Toll free (North America) 1 800 363-8010 Tel 403 258-3100 Fax 403 253-4967 E-mail info@guardiantelecom.com

Guardian Telecom's Product and Services Guide Catalogue is a compilation of individual Category Sections. They include an in-depth selection of Product Data Sheets from our extensive product lines including Analog and VoIP Telephones, Page/Talk, Cable, Talk/Back, PA/GA equipment, Acoustic Booths, Loudspeakers & Ringers and Accessories at the date of publication.

Based on a policy of continuous improvement, Guardian is constantly evaluating and redesigning existing models, adding new features and introducing new products to the benefit of our customers. Additional information can be found on our website at www.guardiantelecom.com.

General Area Ringers & Loudspeakers



P-HP-30(T)

- Manufactured by DNH
- IP Rating/UL Equivalent IP67
- CE
- High power plastic horn loudspeaker
- Made for adverse conditions
- Suitable for outdoor installations



24-1



P-HP-20(T)

- Manufactured by DNH
- IP57
- Suitable for outdoor installations
- Plastic horn loudspeaker
- CE



24-3



P-HP-15(T)

- Manufactured by DNH
- IP56
- Stable plastic
- Silicone free
- Pressure chamber loudspeaker
- CE
- Weather proof
- Suitable for outdoor installations



24-5



P-HS-15(T)

- Manufactured by DNH
- IP67
- Renowned for reliability and efficiency
- Suitable for all industrial environments and public area installations
- Aluminum horn loudspeaker
- CE



24-7



P-DB14 Series

- Manufactured by MEDC
- IP66 & IP67
- Suitable for all demanding environments where high Ingress Protection rating is required
- Corrosion resistant GRP horn loudspeaker
- CE



24-9



P-CS-154/U

- Manufactured by TOA
- UL 1480 (UEAY, outdoor use)
- 6W, 15W & 30W
- Fire-resistant ABS resin, polyurethane resin
- Cone-type dynamic speakers
- IP-64
- Indoor and outdoor applications



24-11



P-B-560(T)

- Manufactured by DNH
- Mounted by 3 screws in front of the loudspeaker
- Excellent loudspeaker for speech and alarm due to the wide frequency range
- Top selling, 5", 6W ceiling speaker



24-15

General Area Ringers & Loudspeakers continued ...

General Area Ringers & Loudspeakers ...continued



P-BL-620(T)

- Manufactured by DNH
- Mount with 4 screws
- 6" 6W ceiling speaker
- Commonly used for PA announcements



24-17

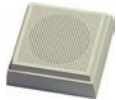


P-F-122CU

- Manufactured by TOA
- 6W, 30W & 60W
- Low-profile, paintable grille
- Indoor applications
- UL-Listed and compliant models
- Smooth off-axis coverage
- Metal back-can and safety cable
- Built-in overload protection circuitry



24-19



P-B-406(T)

- Manufactured by DNH
- Plastic front grille
- Ideal for use in speech and background music applications
- 6W low profile plastic cabinet speaker
- Wall mounted – simple installation



24-23



P-CW-4(T)

- Manufactured by DNH
- Indoor applications
- White or brown vinyl veneered particle board enclosure
- 6W cabinet loudspeaker
- Cloth front



24-25



Guardian Telecom manufactures, supplies and distributes a wide selection of **Explosion Proof, Hazardous Area, ATEX-IEC** and **General Area** Ringers and Loudspeakers from leading manufacturers around the world to meet the unique demands of Industrial Communication projects.

The Guardian Telecom website, www.guardiantelecom.com and catalogues present a selection of popular industrial grade Ringers or Loudspeakers and we have access to many more.

To discuss your present or future needs contact a Guardian Telecom representative at 403 258-300 (1-800-363-8010 in NA) or by e-mail at info@guardiantelecom.com.



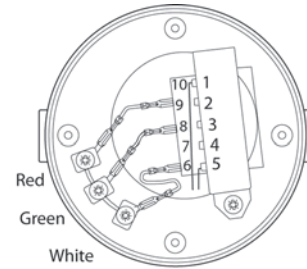
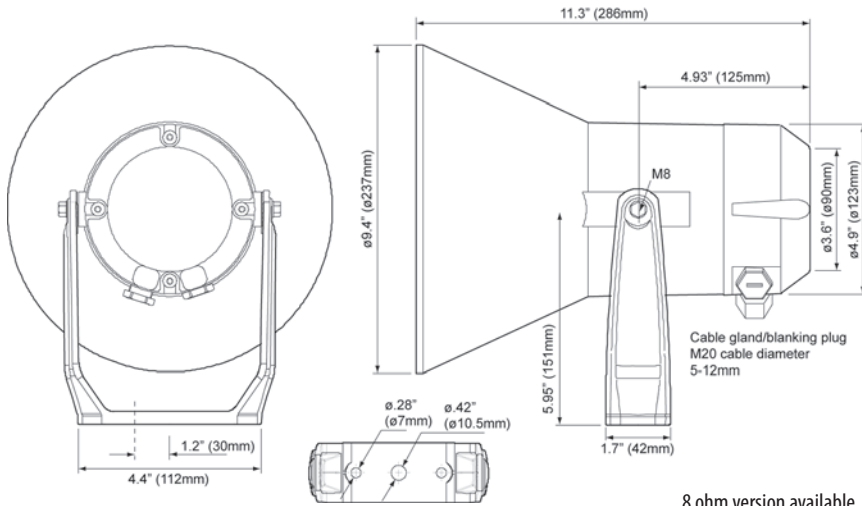


Horn Loudspeakers

Plastic Horns

P-HP-30(T)

Bracket and all outside nuts and bolts in stainless steel.



70/100 volt combined transformer:

Primary connections:

White : Green 70 V

White : Red 100 V

Secondary nominal tapings:

1:5 30.0 W 1:2 7.5 W

1:4 20.0 W 2:4 3.5 W

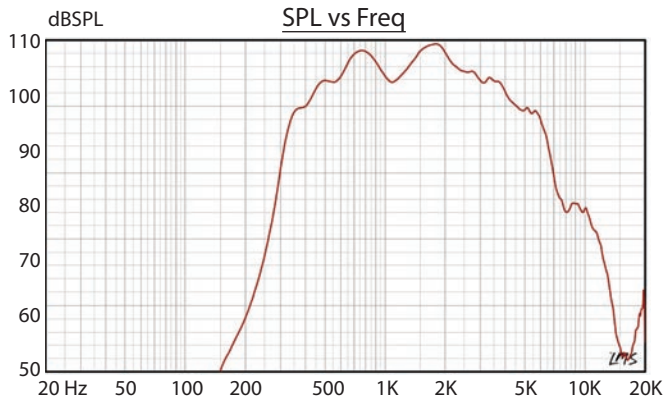
1:3 15.0 W 2:3 2.0 W

8 ohm version available

Specifications

| | |
|-------------------------------|-------------------------------|
| Material / Color | Polyamide / RAL 7035 |
| Mounting | Bracket |
| Termination | Internal screw connections |
| Weight w/transformer | 4.7 lbs (2.1 kg) |
| IP-rating (UL Equivalent) | 67 |
| Max. / min. amb. temp | 302°F / -58°F (150°C / -50°C) |
| Rated / max. power | 30 W / 40 W |
| SPL 1W/1m | 110 dB |
| SPL rated power | 124 dB |
| Effective freq. range | 310 – 8000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 115° / 30° |
| Options | Impedance, color, label |

Sound pressure levels 1W/1m sine wave



Installation, Operation and Maintenance Procedures

- Unscrew lid (4 screws). Lead cable through cable gland and connect to screw terminal (100 V or 70 V)
- Tapp transformer to wanted power. Tighten cable gland to ensure IP-Grade
- Fasten lid with a torque of 2 - 3 Nm.
- Fasten bracket with 1- 3 screws.
- To change the position of the loudspeaker adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- **Do not** open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship.



The Manufacturer reserves the right to alter specifications without notice.

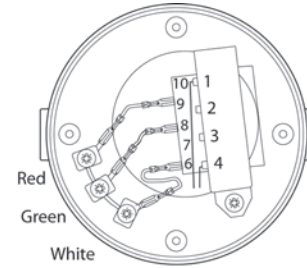
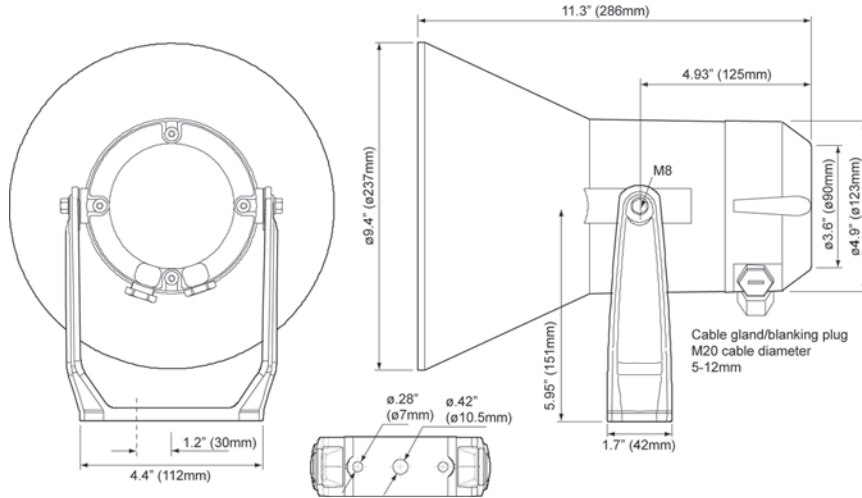


Horn Loudspeakers

PLASTIC HORNS

P-HP-20(T)

Bracket and all outside nuts and bolts in stainless steel.



70/100 volt combined transformer:

Primary connections:

White : Green 70 V

White : Red 100 V

Secondary nominal tapings:

1 : 4 20.0 W 2 : 4 3.5 W

1 : 3 15.0 W 2 : 3 2.0 W

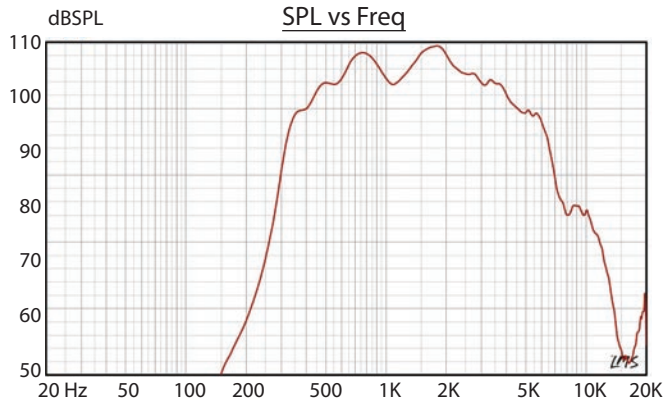
1 : 2 7.5 W

8 ohm version available

Specifications

| | |
|-------------------------------|-------------------------------|
| Material/Color | Polyamide/ RAL 7035 |
| Mounting | Bracket |
| Termination | Inside screw connections |
| Weight w/transformer | 4.7 lbs (2.1 kg) |
| IP-rating (UL Equivalent) | 67 |
| Max. / min. amb. temp | 302°F / -58°F (150°C / -50°C) |
| Rated / max. power | 20W / 25 W |
| SPL 1W/1m | 110 dB |
| SPL rated power | 122 dB |
| Effective freq. range | 310- 8000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 115° / 30° |
| Options | Impedances, colors, labels |

Sound pressure levels 1W/1m sine wave



Installation, Operation and Maintenance Procedures

- Unscrew lid (4 screws). Lead cable through cable gland and connect to screw terminal (100 V or 70 V)
- Tapp transformer to wanted power. Tighten cable gland to ensure IP-Grade
- Fasten lid with a torque of 2 - 3 Nm.
- Fasten bracket with 1- 3 screws.
- To change the position of the loudspeaker adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- **Do not** open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship.



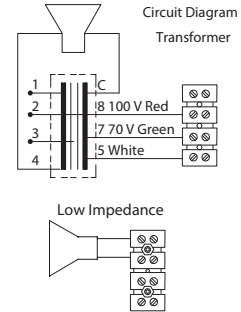
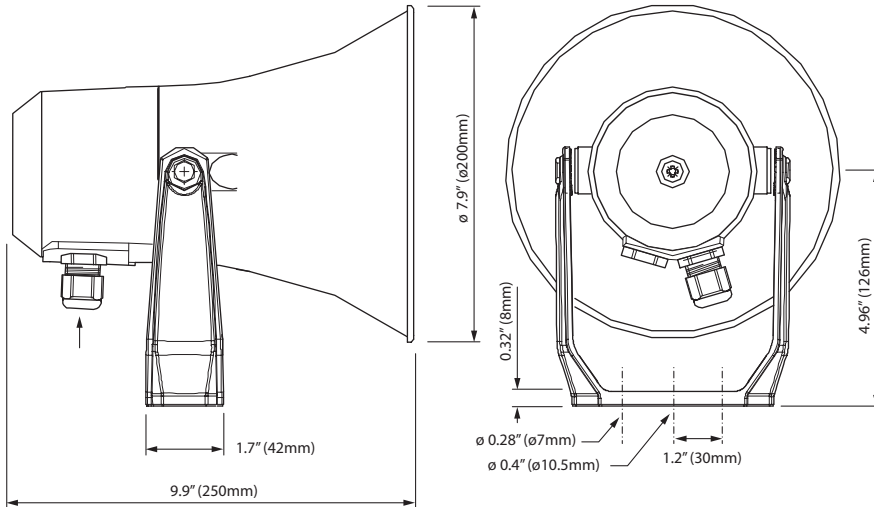
The Manufacturer reserves the right to alter specifications without notice.



Horn Loudspeakers

PLASTIC HORNS

P-HP-15(T)



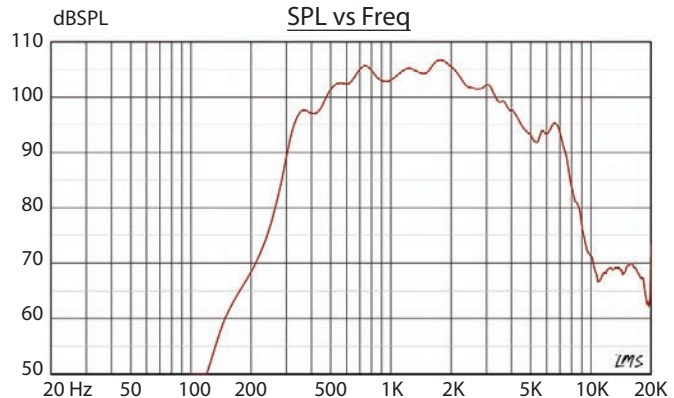
70/100 volt combined transformer:
Primary connections:
White : Green 70 V
White : Red 100 V
Secondary nominal tapings:
C : 4 15.0 W C : 2 4.0 W
C : 3 7.5 W C : 1 2.0 W

8 ohm version available

Specifications

| | |
|---------------------------------|---|
| Material / Color | ASA / RAL 7035 |
| Mounting | Bracket |
| Termination | Inside screw connections |
| Weight | 3.8 lbs (1.7 kg) |
| IP-rating (UL Equivalent) | 67 |
| Max. / min. ambient temperature | 194 °F / -58 °F (90 °C / -50 °C) |
| Rated / max. power | 15 W / 20 W |
| SPL 1W/1m | 108 dB |
| SPL rated power | 118 dB |
| Effective freq. range | 330 – 8000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 130° / 35° |
| Options | Impedances, colors, labels, steel bracket |

Sound pressure levels at 1W/1m P5/15T



Many DNH products are available in different colors, impedances and power ratings.

Installation, Operation and Maintenance Procedures

- Fasten loudspeaker to wall/ceiling with two screws through foot bracket.
- Remove lid by 1 screw, lead cable gland, select required tapping and connect to terminal 70 V or 100 V .
- To change the position of the loudspeaker adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- **Do not** open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.



The Manufacturer reserves the right to alter specifications without notice.

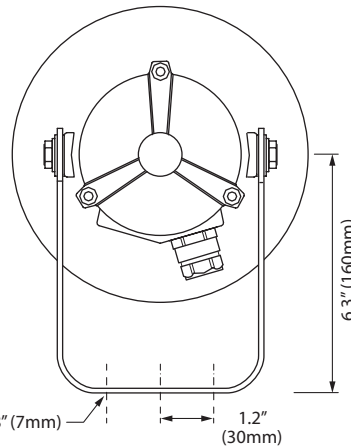
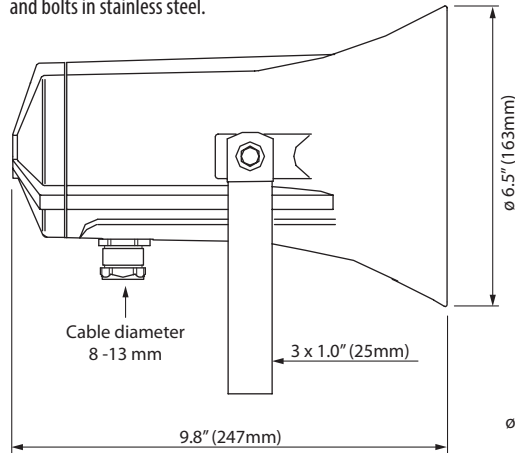


Horn Loudspeakers

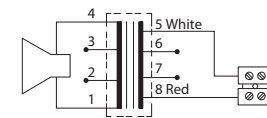
METAL HORNS

P-HS-15(T)

Bracket and all outside nuts and bolts in stainless steel.



Circuit Diagram



100 V = 5 (white) ; 8 (red)
70 V = Remove red wire from 8 to 7

Secondary nominal tapings:

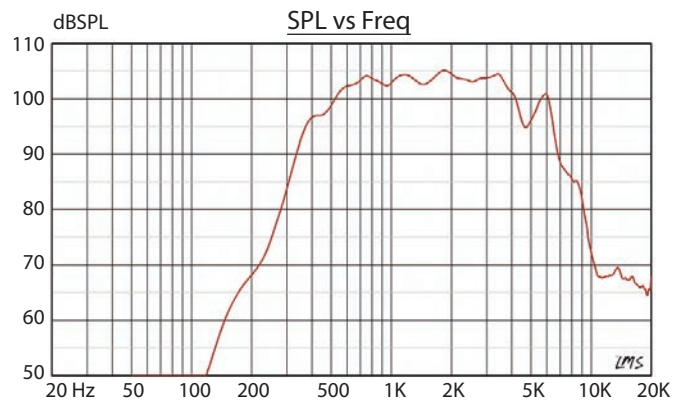
| | | | |
|-------|--------|-------|-------|
| 1 : 4 | 15.0 W | 1 : 2 | 4.5 W |
| 1 : 3 | 8.0 W | 3 : 4 | 3.5 W |
| 2 : 4 | 5.0 W | 2 : 3 | 1.0 W |

8 ohm version available

Specifications

| | |
|---------------------------------|-----------------------------------|
| Material / Color | Aluminum alloy / RAL 7035 |
| Mounting | Bracket |
| Termination | Inside screw terminals |
| Weight | 6.0 lbs (2.7 kg) |
| IP-rating (UL Equivalent) | 67 |
| Max. / min. ambient temperature | 302 °F / -58 °F (150 °C / -50 °C) |
| Rated / max. power | 15 W / 20 W |
| SPL 1W/1m | 107 dB |
| SPL rated power | 118 dB |
| Effective freq. range | 350 – 7500 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 150° / 40° |
| Options | Impedances, colors, labels |

Sound pressure levels at 1W/1m



Many DNH products are available in different colors, impedances and power ratings.

Installation, Operation and Maintenance Procedures

- Fasten the bracket to wall with 1-3 screws and ensure to use all washers in the same position that the loudspeaker is delivered with. (To isolate the main body from the bracket)
- Open the lid back 3 screws. Lead cable through cable gland and connect to terminal.
- To change the position of the loudspeaker, please adjust the bracket (by loosening / tightening the screws) as required.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- The aluminum surface of the loudspeaker should be regularly treated with paint at the same interval as with other similar outdoor equipment.
- **Do not** open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.



The Manufacturer reserves the right to alter specifications without notice.



Harsh Industrial & Marine Environments

Introduction

This range of loudspeakers has a power rating of 15 Watts and is suitable for use in demanding environments where a robust construction and high ingress protection rating is required.

The body is manufactured completely from a UV stable glass reinforced polyester which is also highly flame retardant and impact resistant. Stainless steel screws are incorporated thus ensuring a corrosion free product.

MEDC can also provide a range of speakers suitable for use in potentially explosive atmospheres.

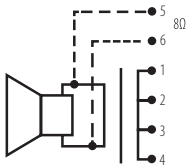
Features

- IP66 and IP67.
- Temperature range: -55°C to +70°C.
- Corrosion resistant GRP.
- 117dBA at 15 watts at 1 metre.
- 100V line transformer.
- Power tapings, via integral transformer
- Addressable capability.
- Stainless steel mounting bracket.
- Earth continuity available.
- BS5839 part 8 compliant version available.



Specifications

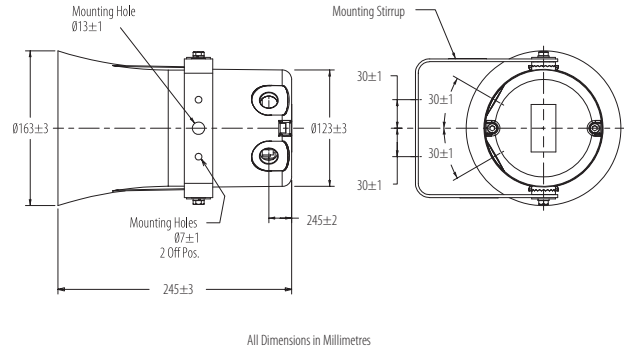
| | |
|-----------------------|---|
| Material: | Body & horn in UV stable, glass reinforced polyester. Swivel bracket in stainless steel. Cover screws in stainless steel. |
| Finish: | Painted to customer's specification. |
| Rated Power: | 15 watts RMS continuous (at 25°C). |
| Certified Temp: | -67°F to +158°F. -55°C to +70°C. |
| Weight: | 5.8lb/2.6kg approx. dependent on model. |
| Ingress Protection: | IP66 & 67. |
| Entries: | 2 x M20 ISO. |
| Terminals: | Up to 8 x 2.5mm ² . Other terminal arrangements available on request. |
| Output: | Maximum output at 1W/1m at 900Hz is 107 dBA. Maximum output at 15W/1m at 900Hz is 117 dBA. |
| Frequency Range: | 400Hz to 7kHz. |
| Voice Coil Impedance: | 8 ohms. |
| Mounting: | Via stirrup with ratchet facility. |
| Labels: | Duty and tag labels optional. |
| Transformer: | Used to vary the rated power by selecting different tapings (see table below). |



| Transformer Tappings | Power W |
|----------------------|---------|
| 1:2 | 15.0 |
| 2:3 | 7.5 |
| 3:4 | 5.0 |
| 1:3 | 4.0 |
| 2:4 | 2.0 |
| 1:4 | 0.8 |

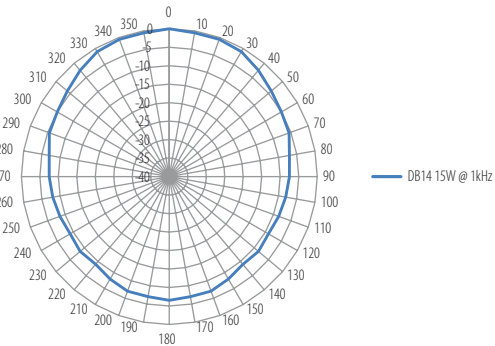
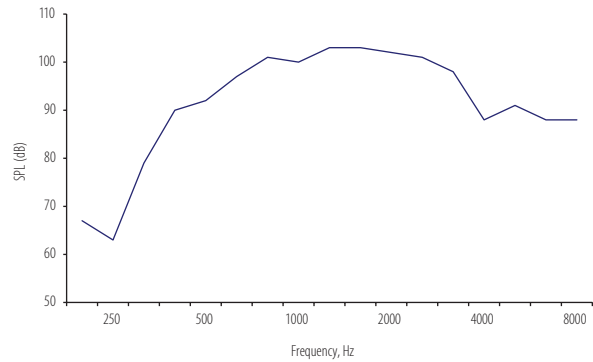
Transformer Tapping Options:

- Standard:
 - i) Standard Tapping: Loop in/Loop out (4 x 2) terminal tap change (8 terminals).
 - ii) Optional Tapping: 4 terminal tap change with 2 terminals (5 & 6), directly connected to driver (8 ohms).



All Dimensions in Millimetres

Frequency Response @ 1W/1M for 15W Unit (1/3 Octave Pink Noise)



All the above specifications, dimensions, weights and tolerances are nominal (typical) and Cooper MEDC reserve the right to vary all data without prior notice. No liability is accepted for any consequence of use.

Ordering

Contact a Guardian Telecom Sales representative for information on ordering this product.

Phone: 403 258-3100 Toll Free (North America) : 1-800 363-8010
Facsimile: 403 253-4967 info@guardiantelecom.com



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Wide-Range Paging Speakers

P-CS-154/U



P-CS-154/U

TOA P-CS-154/U WIDE-RANGE PAGING SPEAKERS are ideal for indoor and outdoor commercial sound system applications for voice paging, background music and tone signaling distribution.

Compared to traditional metal paging horns, P-CS-154/U Series speakers offer wider frequency range and superior sound quality.

Each P-CS-154/U model includes a built-in 70.7V/100 V transformer with screwdriver-adjustable power taps. Fully weather-resistant to withstand demanding environmental conditions with a sealed enclosure, full range moisture-resistant cone speaker, stainless-steel mounting hardware and a protective mesh grille.

The enclosure is also coated with polyurethane resin paint to resist the fading effects of prolonged exposure to ultraviolet light.

The P-CS-154/U Wide-Range Paging Speakers are backed with a five year manufacturer's warranty.

Applications

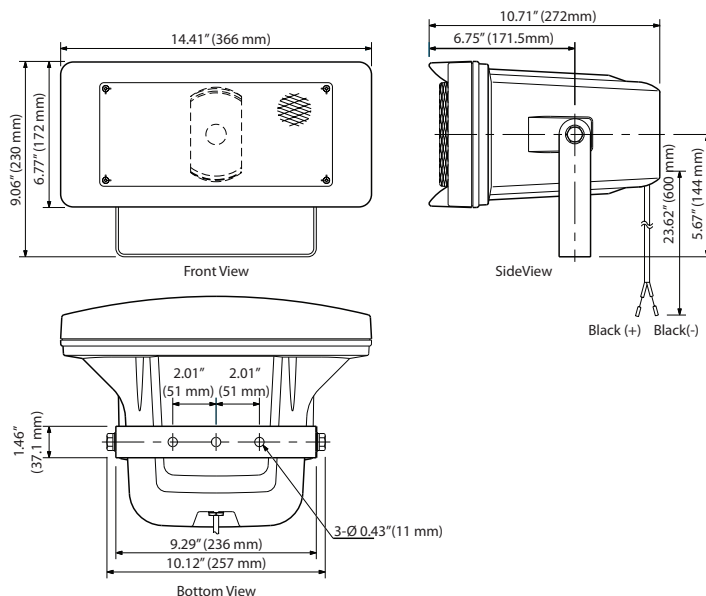
| | |
|---------------------|-----------------|
| Boats | Churches |
| Industrial | Mobile Vehicles |
| Parking Facilities | Parks |
| Schools | Security |
| Sporting Facilities | Swimming Pools |

Highlights

- Wide-Range Paging Speakers for voice paging, background music and tone signaling distribution
- Weather-Resistant to withstand demanding environmental conditions
- UL Listed - UL 1480 (UEAY, outdoor use)
- Constant Directivity Coverage
- High Sensitivity: up to 98 dB (1 W/1 m)
- Moisture-Resistant Speaker Component (4.72")
- Built-In 70.7 V/100 V Transformer with screwdriver-adjustable power taps
- Lightweight, Sealed Enclosure prevents moisture damage
- Cable Strain-Relief
- Polyurethane Resin Paint resists the fading effects of ultraviolet light
- IEC IP-64 Standards Compliant for dust and moisture-resistance
- Wide Temperature Range -4° F to 131° F
- Stainless-Steel Mounting Bracket for easy installation and aiming in wall, pole or ceiling-mount applications
- Protective Stainless-Steel Mesh Grille prevents speaker damage
- Five Year Warranty

The Manufacturer reserves the right to alter specifications without notice.

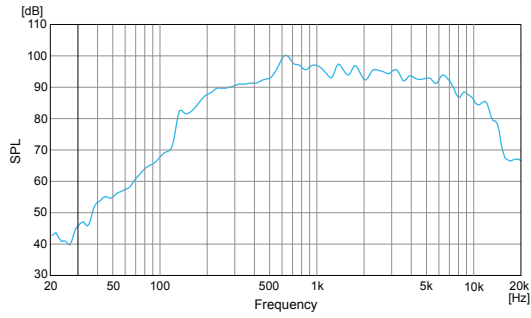
| | |
|--|---|
| Enclosure Type | Wide-Range Paging Speaker |
| Dispersion | Constant Directivity |
| Speaker Component | Cone-Type Dynamic Speaker, 4.72" (12 cm) (Treated For Weather-Resistance) |
| Power Handling | 15 W |
| Transformer Taps / Rated Impedance | 70.7 V: 15 W (330 Ω), 7.5 W (670 Ω), 2.5 W (2 kΩ) 100 V: 15 W (670 Ω), 10 W (1 kΩ), 5 W (2 kΩ) |
| Sensitivity (Sound Pressure Level) (1 W / 1 m) | 97 dB |
| Frequency Response | 150 Hz - 15 kHz |
| Dispersion (-6 dB, 2 kHz) | 110° H x 85° V |
| UL Listed Category | UL 1480 (UEAY, outdoor use) |
| IEC IP Code IP-64 | IP-64 |
| Temperature Range | -4° F to +131° F (-20° C to +55° C) |
| Material/Finish | |
| Enclosure: | Fire-Resistant ABS Resin, Polyurethane Resin Paint, Off-White |
| CS-154/U/304/U Net: | Aluminum, Gray Paint |
| Bracket/Screws: | Stainless Steel |
| Dimensions (W x H x D) | 14.40" x 9.06" x 10.71" (366 mm x 230 mm x 272 mm) |
| Weight | 6.17 lbs. (2.8 kg) |



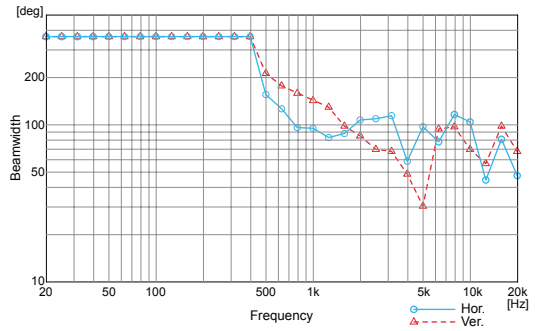
The Manufacturer reserves the right to alter specifications without notice.

Specifications

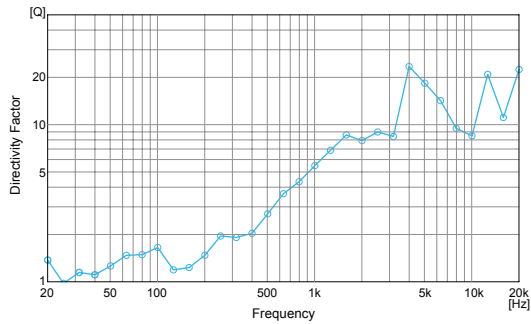
Frequency Response



Beamwidth

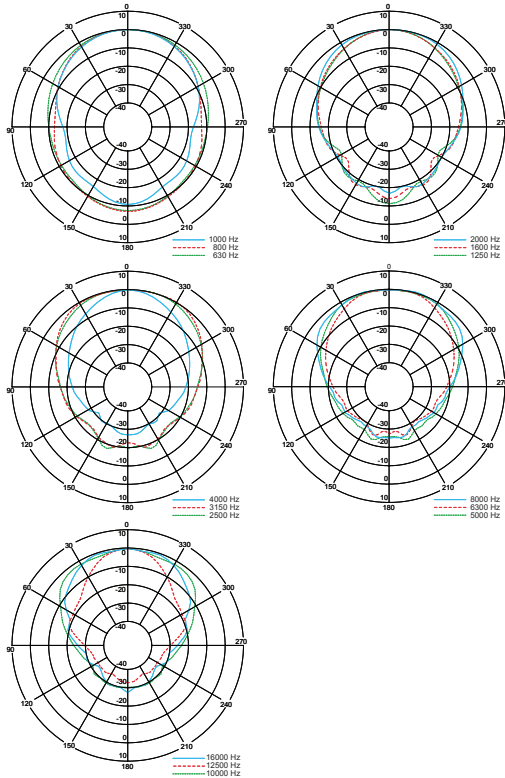


Directivity Factor

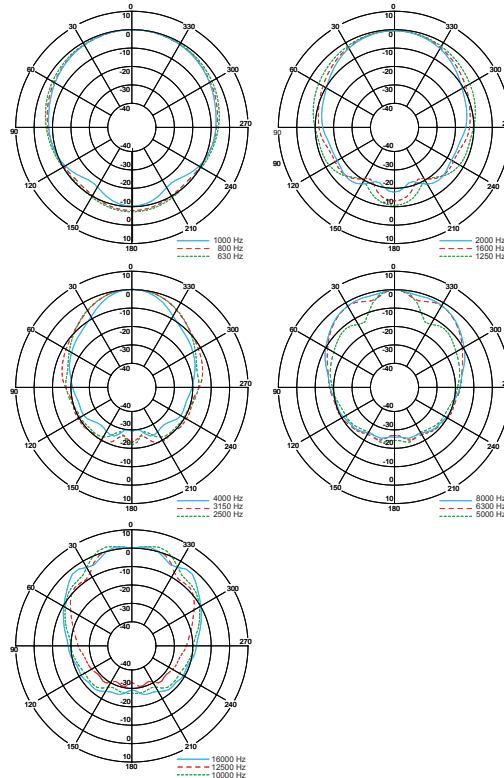


Polar Response

Horizontal



Vertical



Architects & Engineers Specifications

The speaker shall be a wide-range weatherproof horn speaker suitable for paging, background music and tone signaling distribution.

The wide-range paging speaker shall be P-CS-154/U: constant directivity horn; direct radiator design suitable for paging, background music and tone signaling distribution. The speaker component shall be a 4.72" (12 cm) cone-type dynamic speaker, treated for weather-resistance.

Power handling shall be P-CS-154/U: 15 W. The paging speaker shall include a matching transformer to accommodate 70.7 V and 100 V lines. Transformer wattage taps shall include P-CS-154/U: 70.7 V: 15 W (330 ohms), 7.5 W (670 ohms), 2.5 W (2 kohms), 100 V: 15 W (670 ohms), 10 W (1 kohms), 5 W (2 kohms).

Sound pressure level measured at one meter with one watt of power applied shall be P-CS-154/U: 97 dB SPL. Frequency response shall be P-CS-154/U: 150 Hz - 15 kHz. Horizontal and vertical dispersion at -6 dB below the on-axis reference at 2 kHz shall be P-CS-154/U: 110° H x 85° V.

The paging speaker shall be UL Listed under category UL 1480 and include external "UL Listed" labeling. The paging speaker shall comply with the IEC IP- 64 standard for dust and moisture-resistance and operate within a temperature range from -4° F to 131° F (-20° C to +55° C) .

The material and finish of the horn/cover shall be fire-resistant ABS resin and coated with polyurethane resin paint, off-white in color, to resist long-term exposure to ultraviolet light. The speaker shall include a protective net/grille to prevent damage and the material and finish shall be P-CS-154/U: punched, surface treated steel plate, dark gray powder coating.

All mounting hardware, including screws and bolts, shall be stainless steel. The paging horn shall include an integral speaker cable, insulated polyvinyl chloride type, with strain relief, 0.24" (6 mm) diameter and 24" (600 mm) length.

Dimensions shall be P-CS-154/U: 14.40" W x 9.06" H x 10.71" D (366 mm x 230 mm x 272 mm).

Weight shall be P-CS-154/U: 6.17 lbs. (2.8 kg).

The wide-range paging speaker shall be P-CS-154/U.

The Manufacturer reserves the right to alter specifications without notice.

Ordering

Contact a Guardian Telecom Sales representative for information on ordering this product.

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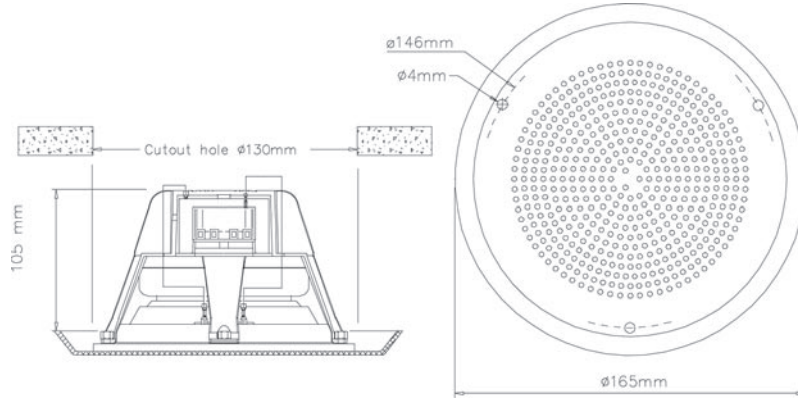
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Ceiling Loudspeakers || Metal

P-B-560(T)



Transformer:

Combined

70/100 Volt line

White : Red 100 V

White : Green 70 V

Secondary nominal tapings:

C : 6 6.0 W

C : 3 3.0 W

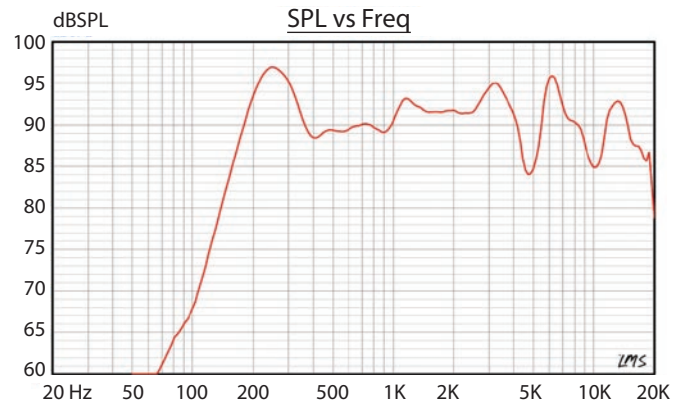
C : 1.5 1.5 W

C : 0.5 0.5 W

Specifications

| | |
|---------------------------------|---------------------------------|
| Material / Color | Aluminum / RAL9010 |
| Mounting | 3 screws |
| Termination | Spring clamps |
| Weight | 1.8 lbs (0.8 kg) |
| Max. / min. ambient temperature | 194 °F / -4 °F (90 °C / -20 °C) |
| Rated / max. power | 6 W / 15 W |
| SPL 1W/1m | 90 dB |
| SPL rated power | 97 dB |
| Effective freq. range | 130 – 20000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 170° / 60° |
| Options | Impedance, color, label |

Sound pressure levels at different frequencies at 1W/1m



Installation, Operation and Maintenance Procedures

- Connect to terminal. Install loudspeaker grill by screws.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Take care when loudspeaker is energized.
- This loudspeaker is supplied with a 2 year warranty against defective materials and workmanship by the manufacturer.

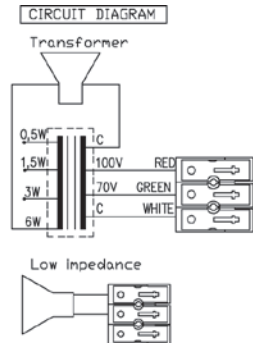
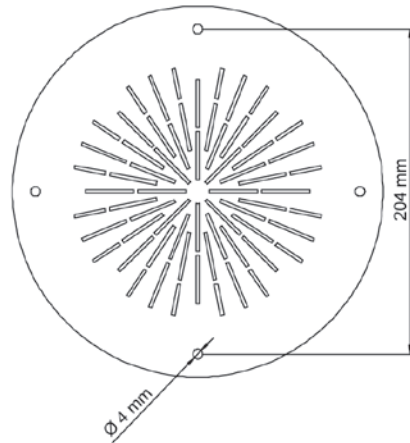
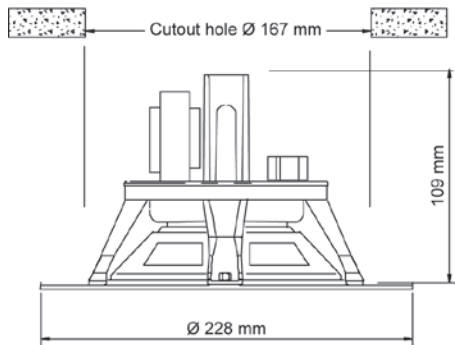


The Manufacturer reserves the right to alter specifications without notice.



Ceiling Loudspeakers || Metal

P-B-620(T)



70/100 Volt Combined Transformer:

Primary connections:

White : Green 70V

White : Red 100V

Secondary nominal tapings:

C : 6W 6.0W

C : 3W 3.0W

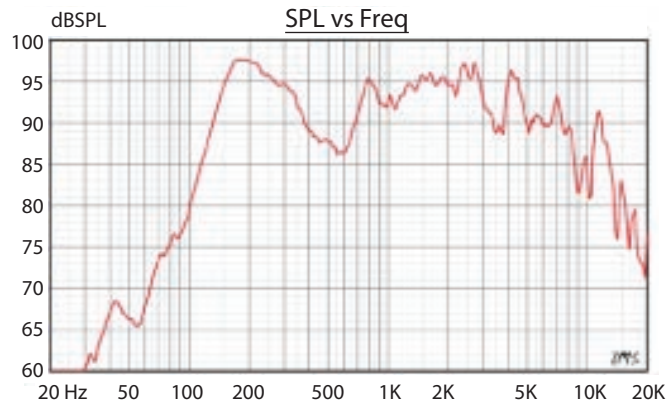
C : 1.5W 1.5W

C : 0.5W 0.5W

Specifications

| | |
|---------------------------------|---------------------------------|
| Material / Color | Aluminum / RAL9010 |
| Mounting | 4 screws |
| Termination | Spring clamp |
| Weight | 1.92 lbs (0.87 kg) |
| Max. / min. ambient temperature | 194 °F / -4 °F (90 °C / -20 °C) |
| Rated / max. power | 6 W / 15 W |
| SPL 1W/1m | 92 dB |
| SPL rated power | 99 dB |
| Effective freq. range | 90 – 20000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 130° / 60° |
| Options | Impedance, color, label |

Sound pressure levels at different frequencies at 1W/1m



Installation, Operation and Maintenance Procedures

- Connect cable to terminal (70V or 100V) and select required tapping.
- Install loudspeaker grill by screws.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- Do not open loudspeaker is energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship by the manufacturer.



The Manufacturer reserves the right to alter specifications without notice.

Ceiling Speakers

P-F-122CU



F-122CU

TOA F-122CU SERIES CEILING SPEAKERS are ideal for music and paging applications such as audio/visual, business music or retail sound systems. Built with the same high quality and reliability the industry has come to expect from TOA products. Key benefits include smooth off-axis coverage, versatile range of models, ease of installation, and competitive pricing.

For premium wide-dispersion performance, the new F-122CU is a 5" full-range processed ceiling speaker, UL1480/2043-Listed for Fire Protective, General Purpose Signaling and Air-Handling Spaces.

The F-122CU includes an integral metal back-can with safety cable, quick-mount hardware and removable Phoenix-style connectors with loop-through points for adjacent speakers. Built-in overload protection circuitry ensures outstanding reliability.

The F-122CU includes built-in multi-tap transformers with 8/16 ohm direct modes, front baffle power tap selection and double-locking, paintable grilles.

Accessories include HY-TB1 tile bridge rails, HY-TR1 trim ring and HY-BC1 surface back-can.

The F-122CU ceiling speaker is individually packaged and backed with a five year warranty.

Related Products

| | |
|-------------|--------------------------------|
| BG-M Series | Mixer/Amplifiers |
| BS-1030 | Wall/Ceiling-Mount Box Speaker |
| FB-100 | Corner-Mount Subwoofer |
| HB-1 | In-Wall Subwoofer |

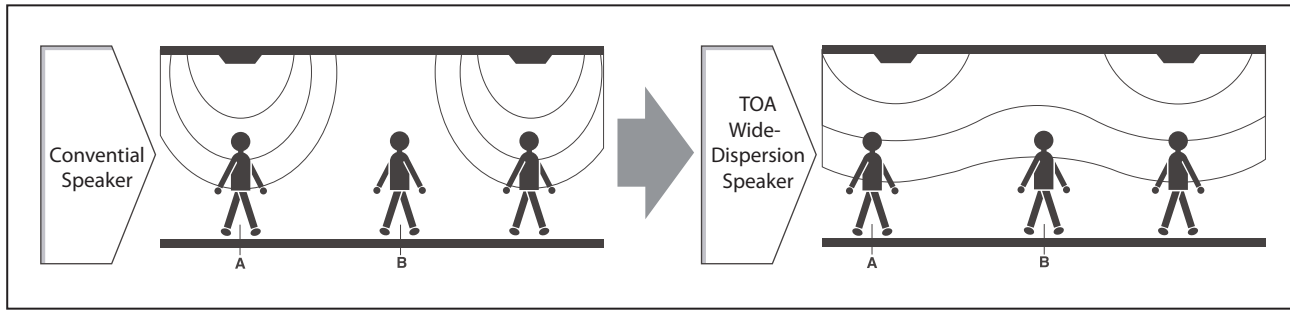
F-122CU

- FULL-RANGE PROCESSED CEILING SPEAKER (5")
- UL1480/2043-Listed
- 5" full-range driver
- Wide-dispersion: 180° (1-4k Hz avg.)
- Optimized equalization with model E-03R module or AC-120 processor
- Power Handling: 30 W (xfmr) / 120 W (8 ohms)

Highlights

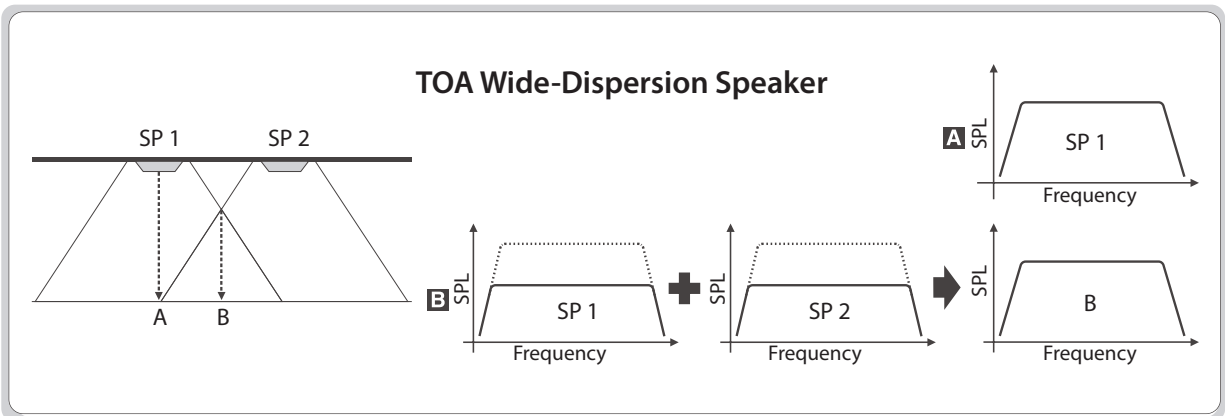
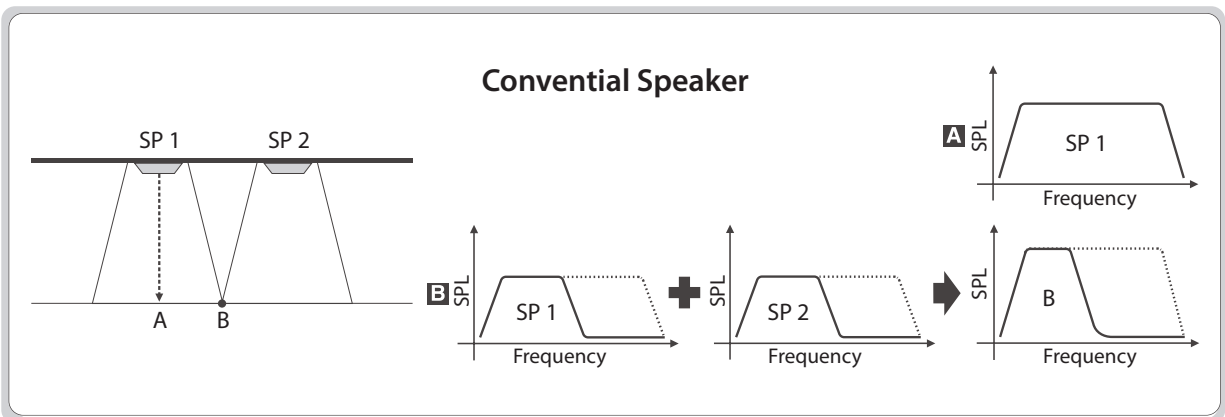
- Superior Sound Quality
- Wide-Dispersion, Smooth Off-Axis Coverage
- Fast and easy installation
- UL-Listed and compliant models
- Built-in 25/70.7 V Multi-Tap Transformer
- Low Impedance Mode (8/16 Ohms)
- Convenient Power Tap Selector On Front Baffle
- Integral Metal Back-Can And Safety Cable
- Low-profile, Paintable Grille
- Overload Protection Circuitry
- Mounting Hardware Included
- Competitive Pricing
- Individually Packaged
- Five Year Warranty

The Manufacturer reserves the right to alter specifications without notice.



Conventional ceiling speakers typically exhibit pronounced high frequency roll-off as you move away (off-axis) from the area directly beneath the speaker (on-axis) resulting in "dead spots" between speakers, poor intelligibility and on-axis "hot spots".

The TOA F Series ceiling speakers provide up to 180° of high frequency coverage allowing you to use fewer speakers for the most cost-effective installation.



Applications

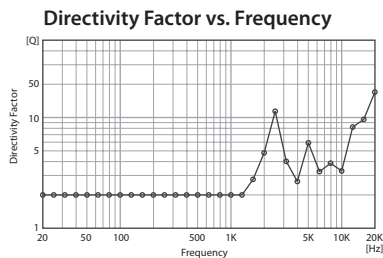
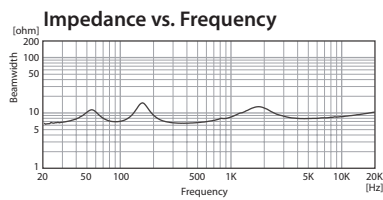
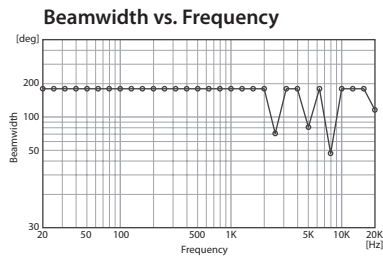
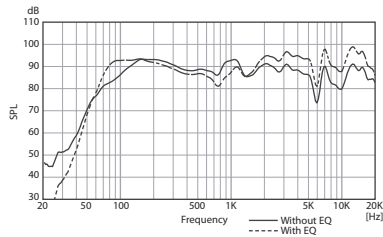
- | | | |
|---------------------------|--------------------|---------------|
| Airports | Houses of Worship | Retail Stores |
| Audio/Visual | Museums | Schools |
| Bars/Lounges / Nightclubs | Offices | Theaters |
| Convention Centers | Patios | Theme Parks |
| Corporate Boardrooms | Residential Spaces | |
| Hotels / Hospitality | Restaurants | |

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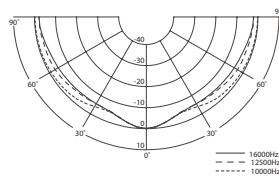
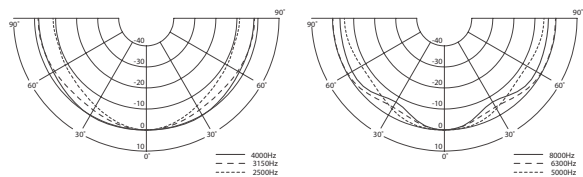
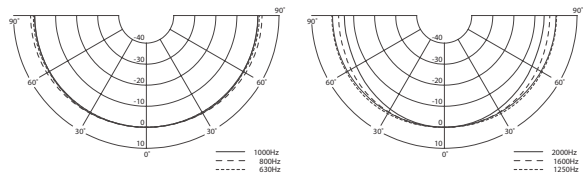
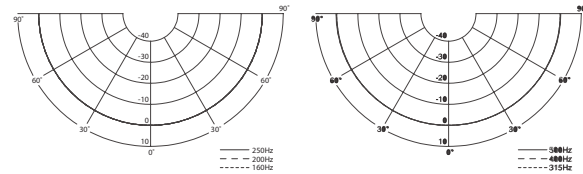


FULL-RANGE PROCESSED CEILING SPEAKER (5")

- Ideal for applications requiring premium sound quality
- Special diffuser provides wide off-axis high frequency response
- UL-Listed for Fire Protective, General Purpose Signaling and Air-Handling Spaces
- (UL1480 UUMW/UEAY, UL2043)
- Ported bass-reflex design
- 5" full-range driver
- Wide-dispersion: 180° (1-4k Hz avg.)
- Frequency Response: 70 to 20k Hz
- Sensitivity: 90 dB SPL (1 W, 1 m)
- Continuous Power Handling: 120 W
- Built-in 25/70.7 V transformer (30 W max.) with 8/16 ohm direct modes
- Convenient power tap selector on front baffle
- Integral metal back-can and safety cable
- Removable terminal block with loop-through terminations
- Low-profile, paintable grille
- Overload protection circuitry
- Mounting C-ring included
- Optimized equalization with E-03R module or AC-120 dual channel processor
- Optional HY-TB1 tile rails, HY-BC1 surface-mount back-can and HY-TR1 trim ring
- Five year warranty



Polar Response



The Manufacturer reserves the right to alter specifications without notice.

Specifications

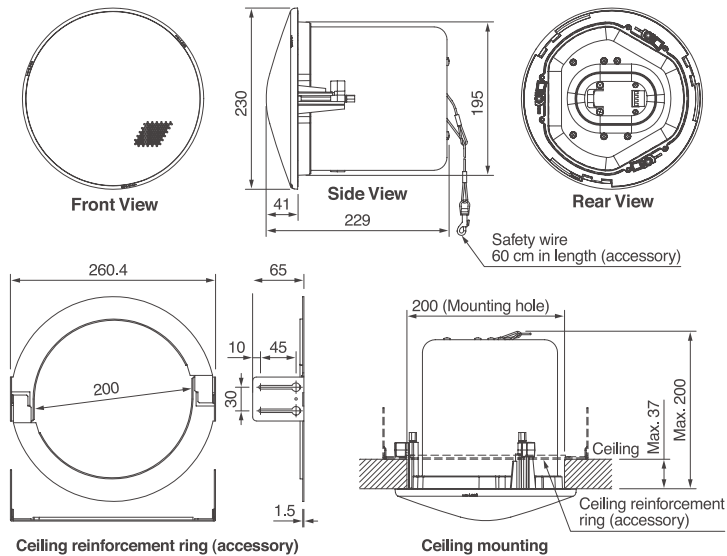
P-F-122CU

| | |
|--------------------------------|--|
| Type | Full-Range |
| Enclosure | Bass-reflex type |
| Rated Input (high impedance) | 30 W |
| Dispersion (1 to 4k Hz avg.) | 180 degrees (hemispherical) |
| Power Handling Capacity | |
| Continuous Pink Noise: | 60 W (8 ohms) 30 W (16 ohms) |
| Continuous Program: | 120 W (8 ohms) 60 W (16 ohms) |
| Impedance | 70.7 V: 30 W (170 ohms) 15 W (330 ohms) 5 W (1k ohms) 1.5 W (3.3k ohms) 0.5 W (10k ohms) |
| | 25 V: 3.7 W (170 ohms) 1.9 W (330 ohms) 0.6 W (1k ohms) 0.2 W (3.3k ohms) 0.06 W (10k ohms) |
| Low Impedance (adjustable) | 8 and 16 ohm direct mode (transformer bypass) |
| Sensitivity (1 W, 1 m) | 90 dB SPL |
| Frequency Response (1/2 space) | 70 - 20k Hz (-10 dB) 50 - 20k Hz (-20 dB) |
| Speaker Component | |
| High Frequency | 4.72" (12 cm) |
| Low Frequency | cone-type |

| | |
|---|---|
| Mounting Hole (maximum ceiling thickness 1.46" / 37 mm) | 7.87" (200 mm) |
| Input Terminal | Removable locking connector (Phoenix-type) with screw-down terminals (2 input terminals and 2 bridge terminals) |
| Usable Cable | Stranded / solid copper wire: AWG No. 24 - 14 |
| Enclosure | Steel plate, plating |
| Baffle | Fire-resistant ABS resin (resin material grade; UL-94 V-0 or equivalent), black |
| Rim | Fire-resistant ABS resin (resin material grade; UL-94 V-0 or equivalent), white, paint |
| Punched Net | Steel plate, white, paint |
| Dimensions (grille diameter x depth) | 9.06" x 9.02" (230 x 229 mm) |
| Weight (including mounting accessories) | 8.16 lbs (3.7 kg) |
| Accessories | Grille/Panel, Ceiling Reinforcement Ring, Safety Wire, Cutout Paper Pattern |
| Options | |
| Surface-Mount Back Can | HY-BC1 |
| Tile Bar Bridge | HY-TB1 |
| Trim Ring | HY-TR1 |
| Electronic Controller | AC-120 or E-03R |

Specifications subject to change without notice.

Dimensional Drawings



Ordering

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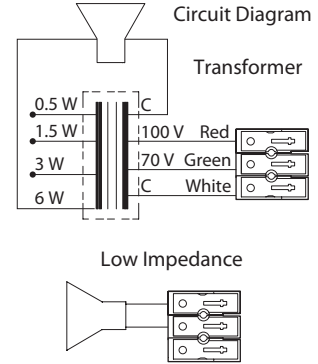
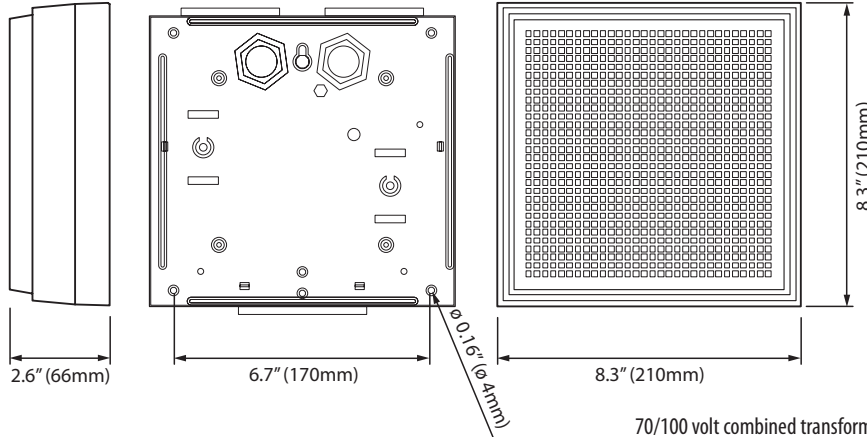
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Cabinet Loudspeakers

P-B-406(T)



8 ohm version available

70/100 volt combined transformer:

Primary connections:

White : Green 70V
White : Red 100V

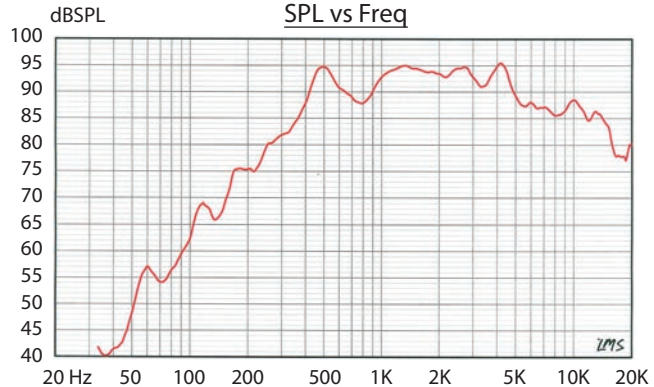
Secondary nominal tapings:

C:6 6.0W C:1.5 1.5W
C:3 3.0W C:0.5 0.5W

Specifications

| | |
|-------------------------------|-------------------------------|
| Material / Color | ABS/ Light grey |
| Mounting | Screws and keyhole |
| Termination | Spring clamp |
| Weight | 2.42 lbs (1.1 kg) |
| IP-rating (UL Equivalent) | 0 |
| Max. / min. amb. temp | 194 °F / -4 °F (90°C / -20°C) |
| Rated / max. power | 6W / 8W |
| SPL 1W/1m | 92 db |
| SPL rated power | 98 db |
| Effective freq. range | 180 - 14000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 170° / 50° |
| Options | Impedance, color, label |

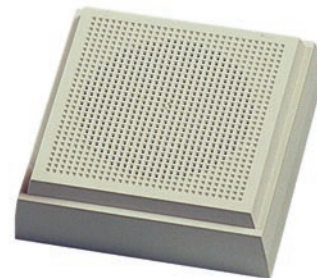
Sound pressure levels at 1W/1m w/P6-15B



Many DNH products are available in different colors, impedances and power ratings.

Installation, Operation and Maintenance Procedures

- Remove backplate by bending back two sides of cabinet.
- Screw the backplate to wall or ceiling.
- Lead cable through a cable entry, connect to terminal (70 V or 100 V) and select required tapping in to the transformer.
- Clip on the cabinet to the backplate.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- **Do not** open loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.

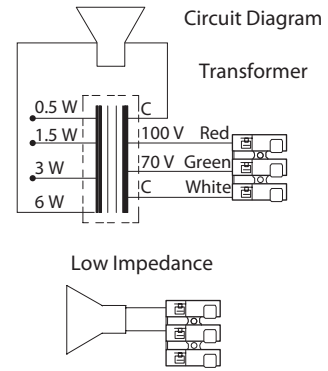
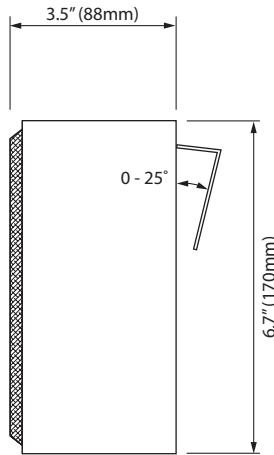
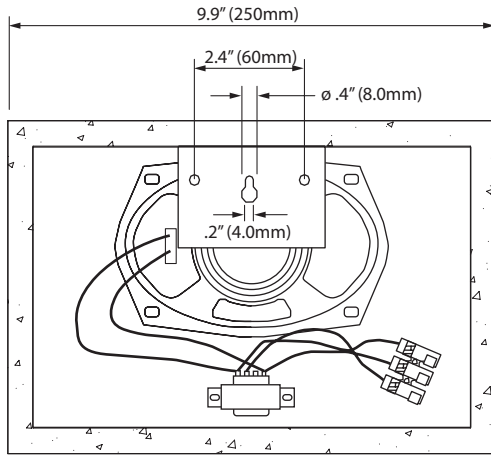


The Manufacturer reserves the right to alter specifications without notice.



Cabinet Loudspeakers

P-CW-4(T)



8 ohm version available

70/100 volt combined transformer:

Primary connections:

White : Green 70V
White : Red 100V

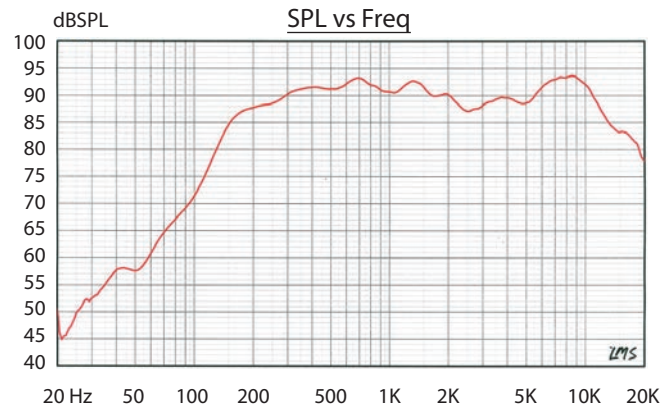
Secondary nominal tapings:

C : 6 6.0W C : 1.5 1.5W
C : 3 3.0W C : 0.5 0.5W

Specifications

| | |
|---------------------------------|------------------------------|
| Material / Color | Particle board / walnut |
| Mounting | Screws, keyhole |
| Termination | Spring clamps |
| Weight | 2.8 lbs (1.25 kg) |
| Max. / min. ambient temperature | 194°F / -4 °F (90°C / -20°C) |
| Rated / max. power | 6W / 8W |
| SPL 1W/1m | 90 dB |
| SPL rated power | 97 dB |
| Effective freq. range | 150 – 20000 Hz |
| Dispersion (-6dB) 1kHz / 4kHz | 140° / 80° |
| Options | Impedances, colors, labels |

Sound pressure levels at 1W/1m w/P-4x6



Installation, Operation and Maintenance Procedures

- Connect to terminal (70 V or 100 V) and select required tapping in to the transformer.
- Screw the bracket on the wall, and fasten the cabinet to the bracket with one screw.
- For optimum performance, always use the correct voltage / power and operate within the frequency limits as stated.
- **Do not** open the loudspeaker when energized.
- This loudspeaker is supplied with a 2 year warranty against defective workmanship.



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Sections

Guardian Telecom's Product and Services Guide Catalogue is a compilation of individual Category Section Publications

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- More Choices, Selections and Services
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- Options & Accessories
- Product and Project Consultation
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Guardian Telecom

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