



P. O. Box 1201
Enfield, CT 06083
Ph : (860) 627-6870

Change Request

To: Loren Compson
Pacheco Ross Architects, P.C.
72 Voorheesville Avenue
PO Box 558
Voorheesville, NY 12186
Ph: (518)765-5105 Fax: (518)765-5107

Number: 30
Date: 10/21/14
Job: 14-009 Thompsonville Fire Station
Phone:

Description: Supply and Install Speakers and Volume Controls

We are pleased to offer the following specifications and pricing to make the following changes:
Supply and Install Speakers and Volume Controls

The total amount to provide this work is \$20,186.42

If you have any questions, please contact me at 860-627-6870.

Submitted by: Kirk Nassetta

Approved by: _____
Date: _____

Cc:

Proposed Change Order Detail Breakdown Sheet

PCO 30 Supply and Install Speakers and Volume Controls

Direct Costs: Item		PCO \$	
First Line Electric			\$15,315.64
EBI O&P	5.00%		\$765.78
SUBTOTAL - SUBS			\$16,081.42
EBI - Labor/Materials# Uts Rate			
Carpenter		68.5	\$0.00
Laborer			\$0.00
Mason			\$0.00
Concrete Material			\$0.00
Misc Equip/Mtl		35	\$0.00
Superintendent	40	88.75	\$3,550.00
EBI Overhead and Profit		10%	\$355.00
TOTAL DIRECT COSTS			\$3,905.00
Indirect Costs:			
	Hrs	Rate	
Project Manager	0	115	\$0.00
Chief Estimator	0	96.5	\$0.00
Project Engineer	0	37.15	\$0.00
			\$0.00
TOTAL INDIRECT COSTS			\$0.00
Bond Premium		1.00%	\$200.00
TOTALS			\$20,186.42

SUB-CONTRACTOR CHANGE PROPOSAL WORK SHEET

First Line Electric, LLC

Change Order Proposal No.:

19

[Signature]
Signature

Date:
Project Name:

10/16/14

Thompsonville Fire Station

Supply and install wiring, speakers, volume controls as per plan

EBI Project No.:

13-018

Job No.:

Section 1 Quantity	Unit	Description of Material and Equipment	Unit Cost	Lump Sum Cost	Insert "X" If Credit	(Quantity x Unit Cost OR Lump Sum) Total
1	ea	cable, l-hooks, tyrapa, speakers, volume controls		\$ 4,884.12		\$ 4,884.12
						\$ 0.00
						\$ 0.00
						\$ 0.00
						\$ 0.00
						\$ 0.00
						\$ 0.00
Line #1 Subtotal Costs - Material and Equipment						\$ 4,884.12

Section 2 Labor Classification	No. of Workers	Total Hours	Hourly Rate	Emps	W/Other	Total Rate (D+E+F)	Total Cost Per Hour (D + E + F) x G	Insert "X" If Credit	Total Labor Hourly Cost (G x H)
Electrician	2	120.25	\$ 37.10	\$ 22.12	15.95	\$ 75.17	\$ 150.34		\$ 9,039.19
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
						\$ 0.00	\$ 0.00		\$ 0.00
Line #2 Labor Hourly Costs:									Total: \$ 9,039.19

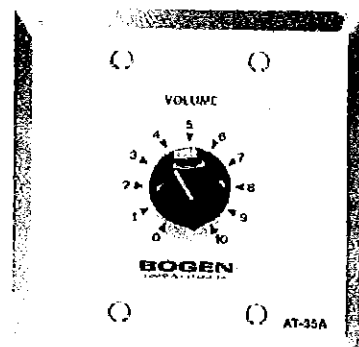
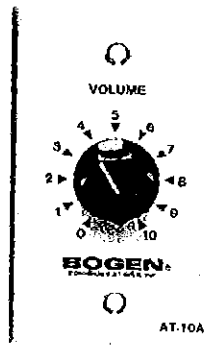
Line #4	Total Labor, Taxes and Materials (Total Lines #1 + #2 + #3)	\$ 13,923.31
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Line #5	Total Mark-up on Sub Contractor's Own Work	
Line #6	Total Contractor Cost (Lines #4 + #5)	10% \$ 1,382.33

Section 3 - Trade	Other Firms associated with change (from attached proposed change order form)	Cost
	6% OH and Profit	
Line #7	Subtotal Other Firms	\$ 0.00

Line #8	Total Proposed Change Order Amount (Lines #6 + #7)	\$ 15,315.64
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Attenuators for 25V/70V Speaker Line Models AT10A, AT35A



Description The AT-Series of attenuators allows the output level of a network of 25V or 70V speakers to be controlled from a wall-mounted volume control, without affecting overall amplifier volume settings. The AT10A can handle speaker loads of up to 10W and the AT35A can handle speaker loads of up to 35W. Volume reduction takes place in 3 dB increments except for the two lowest settings, which provide 6 dB reduction increments. These rugged attenuators have 10 levels of sound control, plus an off setting.

Features

- Adjusts loudspeaker output levels on 25V and 70V systems
- 2 models control up to 10-watt and 35-watt speaker systems
- 10 attenuation steps and an off setting
- Attenuation in 3 dB increments except for two lowest settings, which provide 6 dB reduction increments
- Mounts in standard electrical box, single (AT10A) or double (AT35A)
- Simple connections

Technical Specifications	Model:	AT10A	AT35A
	Speaker Types:	25V & 70V	25V & 70V
	Power Rating:	10 Watts	35 Watts
	Gang Box:	Single	Dual
	Dimensions:	2-7/8" W x 4-5/8" H x 3" D	4-3/4" W x 4-3/4" H x 2-1/2" D
	Shipping Weight:	1 lb.	2 lb.

Architect & Engineer Specifications

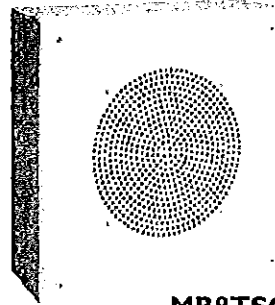
The speaker line attenuator shall be a Bogen model (specify AT10A or AT35A), and shall permit setting the output level at loudspeakers on a 25V or 70V line without altering the amplifier volume setting. The attenuator shall provide a choice of 10 stops and an "off" position, and shall be capable of controlling up to 10-/35-watt speaker systems. The attenuator shall measure (2-7/8" W x 4-5/8" H x 3" D for AT10A or 4-3/4" W x 4-3/4" H x 2-1/2" D for AT35A) and weigh (1 lb. for AT10A or 2 lb. for AT35A).

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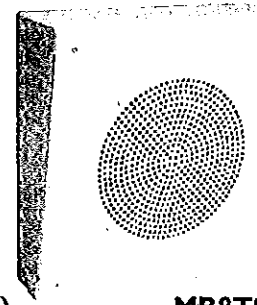
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Metal Box Speakers

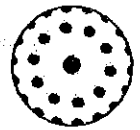
Models MB8TSQ, MB8TSL, MB8TSQVR, and MB8TSLVR



MB8TSQ(VR)



MB8TSL(VR)



recessed volume control, VR models

Description

Bogen's MB8TSQ and MB8TSL speakers feature an all-steel surface-mounted enclosure with an 8" cone loud-speaker and multi-tap 4-watt 70V/25V transformer. The MB8TSQ speakers are suitable for ceiling or wall mounting. The MB8TSL speakers are designed primarily for wall mounting, with front face angled downward by 12.5 degrees. Models with VR suffix have a recessed volume control at the center of the grille (see inset).

Features

- Rugged all-steel surface-mounted enclosure
- Full range 8" cone speaker for excellent intelligibility
- Compatible with 25V or 70V amplifier systems
- Multiple taps at 4, 2, 1, 1/2, 1/4, 1/8 watts
- 4-Watt maximum output power
- Mounting hardware included (toggle bolts, wood screws and wire crimps)
- VR Models feature recessed volume control at the center of front speaker grille

Technical Specifications

Cone Diameter:	8" (paper)
Magnet Weight:	6 oz.
Power Rating (max.):	4 Watts
Transformer Power Taps:	4, 2, 1, 1/2, 1/4, 1/8 Watts
Constant Voltage Amp Type:	70V or 25V
Frequency Response:	110 Hz -15 kHz
Sensitivity (min.) (1 watt @ 1 meter on axis):	96 dBspl
Dispersion (min.):	100°
Product Weight:	9 lb.
Enclosure Size:	MB8TSQ(VR) - 11-5/8" W X 11-5/8" H X 4-1/4" D; MB8TSL(VR) - Top: 11-5/8" W X 11-5/8" H X 5-3/8"; Bottom: 11-5/8" W X 11-5/8" H X 3-1/8" D
Construction:	Painted steel enclosure

Architect & Engineer Specifications

The speaker shall be a Bogen Model _____ (specify MB8TSQ, MB8TSQVR, MB8TSL, or MB8TSLVR). The unit shall include an 8" paper cone speaker with 6 oz. magnet. The frequency response shall be 110 Hz to 15 kHz. Dispersion angle shall be no less than 100°. Sensitivity, measured 1 watt @ 1 meter on axis, shall be a minimum of 96 dBspl.

The unit shall incorporate a transformer with tap selection wires corresponding to power settings of 4, 2, 1, 1/2, 1/4, and 1/8 watts for both 70V and 25V constant voltage speaker systems.

Models with VR suffix shall feature a recessed volume control centered in the front speaker grille.

The speaker enclosure shall be full steel construction and allow for surface mounting. The enclosure shall be painted off-white and measure ____ [specify 11-5/8" W X 11-5/8" H X 4-1/4" D for MB8TSQ(VR) or 11-5/8" W X 11-5/8" H X 5-3/8" D (top) and 11-5/8" W X 11-5/8" H X 3-1/8" D (bottom) for MB8TSL(VR)].

Front face of models MB8TSL(VR) shall be angled by 12.5 degrees downward. Product weight shall be 9 lb.

Specifications subject to change without notice.
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50 Spring Street, Ramsey, NJ 07446, U.S.A.
201-934-8500 FAX: 201-934-9832
www.bogen.com



Q-Series

MODEL Q-6 LOUDSPEAKER

For Installations Requiring:

- Clear Voice Announcements
- High Fidelity Background Music
- High Fidelity Foreground Music
- Fast Distributed System Installation
- Fully Weatherproof Speakers

Features:

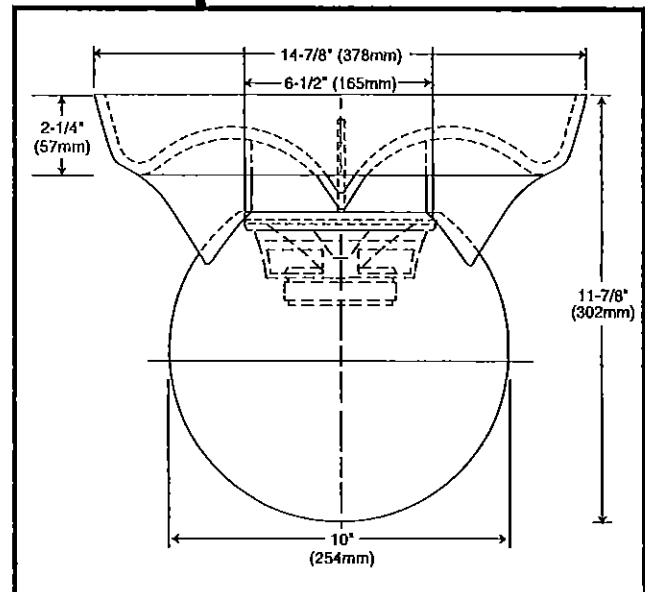
- Fully weatherproof for year-round exposure to the elements
- Hemispherical Coverage Pattern
- Accurate, full range voice announcements
- Enhanced high fidelity music reproduction
- Fully assembled and ready to mount
- Hanging or surface mount
- Standard and custom colors available

Specifications:

Sensitivity	88dB SPL 1W/1m
Maximum SPL	103dB SPL 35W/1m
Power Handling	35 Watts continuous RMS
Frequency Response	70Hz to 17kHz \pm 6dB
Coverage	180° vertical 360° horizontal
Rated Impedance	4 ohms
Weight	8 lbs. (3.6 kg)
Size	Height: 11 7/8" (302mm) Sphere Diameter: 10" (254mm) Reflector Diameter: 14 7/8" (378mm)
Driver	Coaxial: 6 1/2" LF 1/2" dome HF Constructed of inorganic materials impervious to environmental contaminants (weather, ozone, UV, chlorine, salt, etc.)
Material	Enclosure and reflector are structural foam polystyrene with rustproof hardware

Applications:

- Health Clubs
- Sports Bars
- Restaurants
- Hotel Lobbies
- Classrooms
- Retail Stores
- Shopping Center Common Areas / Food Courts
- Outdoor applications requiring weatherproof speakers
- Anywhere full range music and voice in a compact omnidirectional speaker is required



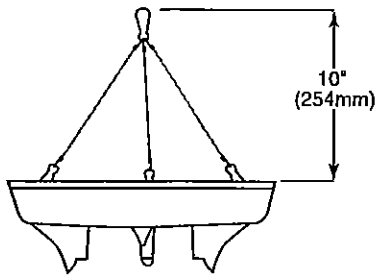
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Division of Sonic Systems, Inc.

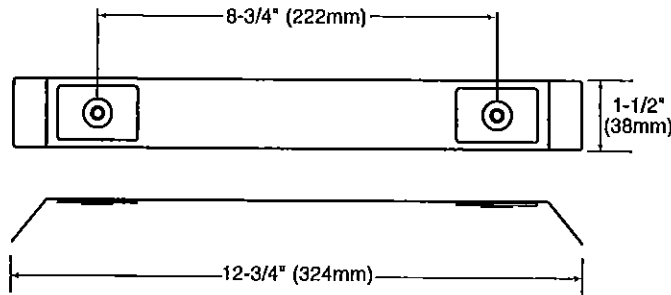
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(203) 386-9200 • Fax: (203) 386-0773 • Web: www.soundsphere.com

Log on to www.soundsphere.com
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Accessories



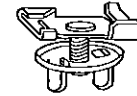
Hanging Kit — Order No. HK



Mounting Bracket — Order No. MBS
for mounting speaker on a flat surface



Beam Clip — Order No. BC
Locates a 1/4" hole on a 1/8" to 1/4" beam flange using just a hammer.

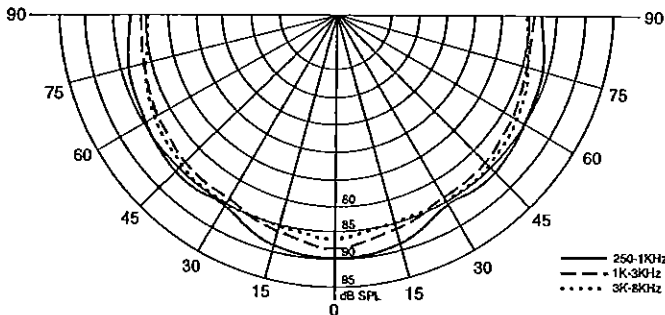


Drop Ceiling Bracket — Order No. DCB

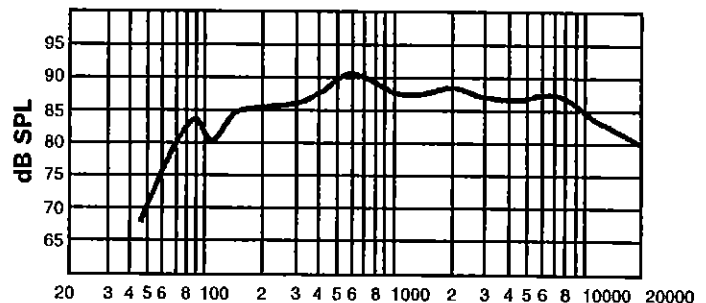
Two twist clips and MBS are supplied. Clips twist onto t-bar stringers, and mounting bracket attaches with wing nuts.

Line Matching Transformer — Order No. TX30

The Model TX30 is a 30 Watt line matching transformer for the Model Q-6 with taps for 25, 50, 70, and 100 Volt constant voltage systems. The TX30 is designed for factory or field mounting in the Q-6 reflector. Connection to system wiring is via 10" color coded flying leads. Available taps: 25 Volt: 30, 15, 7.5, 3.8, 1.9, 1.0, 0.5 Watts; 50 Volt: 30, 15, 7.5, 3.8, 1.9 Watts; 70 Volt: 30, 15, 7.5, 3.8 Watts; 100 Volt: 30, 15, 7.5 Watts.



Vertical Polar Response



Hemispherical Frequency Response 1W/1m

Architects and Engineers Specifications

The loudspeaker shall be a self contained, wide range device with a wide coverage pattern. The frequency response shall be 70Hz to 17kHz ± 6 dB; the vertical polar coverage shall be 180° within ± 4 dB.

The loudspeaker shall have a minimum sensitivity of 88dB SPL 1 Watt/1 meter, a continuous power handling capability of 35 Watts RMS, and a rated impedance of 4 ohms.

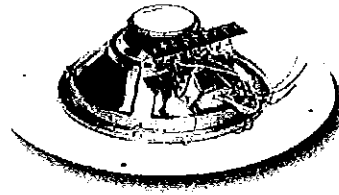
The loudspeaker driver shall be one 6½ inch woofer with a ½ inch dome tweeter mounted coaxially. The driver shall be mounted in a spherical enclosure made of structural foam polystyrene. Assembly hardware shall be rustproof. Optional mounting kits are available; a bracket to mount flat against a ceiling surface, or a three element hanging kit for single point suspension.

The enclosure and reflector color shall be ordered in advance, otherwise white shall be supplied. The loudspeaker shall be comprised of a 1¼ inch (378mm) diameter reflector mounted to a 10 inch (254mm) diameter sphere. The complete loudspeaker shall be 11½ (302mm) inches in overall height and weigh 8 lbs. (3.6kg). The loudspeaker shall be the Soundsphere Model Q-6.

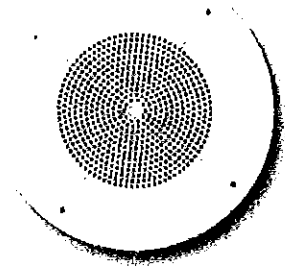
Warranty

Soundsphere® loudspeakers are warranted against failure or malfunction due to defects in materials or workmanship for a period of five years from date of original purchase. Defective units will be repaired or replaced at our option if delivered prepaid to our factory. Repaired or replaced units will be returned at our expense. Warranty does not cover appearance or damage caused by abuse, misuse, neglect, accident, or exceeding maximum rated power. Warranty does not cover labor costs involved in removing and/or reinstalling the defective unit, nor any liability due to accidents caused by improper installation. Warranty is extended to original purchaser and is not transferable.

Ceiling Speaker Grille Assemblies



S86T725PG8WBR



S86T725PG8WVK

Description

Bogen's Ceiling Speaker Assemblies consist of an 8" Cone Speaker (S86 or S810) pre-assembled onto a 13" steel ceiling grille painted with off-white (PG8W) or bright white (PG8U) enamel. Options for these assemblies are recessed volume control (VR), volume control with knob (VK), and rear-mounted screw terminal strip for power taps (BR).

Features

- 4-watt capacity
- 8" cone speaker for excellent audio quality
- 6 different power taps available (4, 2, 1, 1/2, 1/4, 1/8W)
- T725 4-watt transformer
- Off-white enamel over steel grille ("W" versions)
- Bright white enamel over steel grille ("U" versions)
- Pre-assembled for faster installation
- Works with both 70V and 25V amplifier outputs
- Available with volume control – recessed or with knob (VR and VK models only)
- Screw terminals (BR models only)
- 6 oz. or 10 oz. magnet weights

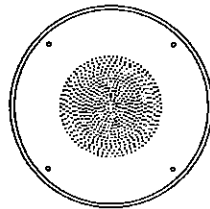
Technical Specifications

Model	Power Taps (in Watts)	Frequency Response	Sensitivity (4 ft./1W)	Magnet Weight	No Volume Control	Recessed Volume Control (VR)	Volume Control w/Knob (VK)	Screw Terminals (BR)	Off-White (W)	Bright White (U)	Shipping Weight (6/Carton)	Dimensions						
S86T725PG8W	4, 2, 1, 1/2, 1/4, 1/8 @ 25 & 70V	50 Hz-12 kHz	95 dBspl	6 oz.	•				•		27 lb. / carton	13" Dia x 3-1/4" D						
S86T725PG8WVR						•				•								
S86T725PG8WVK							•						•					
S86T725PG8WBR					•			•					•					
S86T725PG8WBRVR						•			•				•					
S86T725PG8WBRVK							•		•				•					
S86T725PG8U								•						•				
S86T725PG8UVR									•						•			
S86T725PG8UVK										•					•			
S86T725PG8UBR								•					•		•			
S86T725PG8UBRVR									•					•	•			
S86T725PG8UBRVK										•					•			
S810T725PG8W						70 Hz-15 kHz	96 dBspl	10 oz.	•						•		30 lb. / carton	
S810T725PG8WVR									•						•			
S810T725PG8WVK			•							•								
S810T725PG8U				•							•							
S810T725PG8UVR					•							•						
S810T725PG8UVK									•			•						

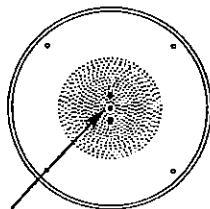
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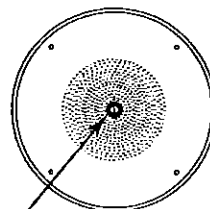
Ceiling Speaker Assembly Variations



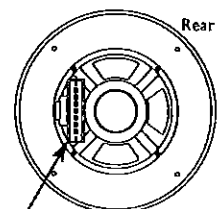
No Volume Control



Recessed Volume Control - (VR suffix)



Volume Control Knob - (VK suffix)



Screw Terminal Strip - (BR suffix)

Architect and Engineer Specifications

S86T725PG8W & Variations The loudspeaker assembly shall be a Bogen model **S86T725PG8W** (or **S86T725PG8WVR**, **S86T725PG8WVK**, **S86T725PG8WBR**, **S86T725PG8WBRVR**, or **S86T725PG8WBRVK**), or equivalent, 8" cone-type loudspeaker, having a frequency response of at least 50 Hz to 12 kHz. Axial sensitivity shall be 95 dB, measured at 1-watt/4 feet. The loudspeaker shall have a 6 oz. ceramic magnet and a 3/4" voice coil. A transformer, capable of matching an 8-ohm loudspeaker to a 25-volt or 70-volt line, and providing power taps of 4, 2, 1, 1/2, 1/4, and 1/8 watts shall be included. The loudspeaker shall be assembled on a 13" steel ceiling grille, finished in off-white semi-gloss enamel. Assembly depth shall be 3-1/4". (For **S86T725PG8WVR** add) A recessed volume control shall be included.

(For **S86T725PG8WVK** add) A volume control knob shall be accessible from the front of the grille.

(For **S86T725PG8WBR** add) A terminal strip shall be included for connection of the audio line.

(For **S86T725PG8WBRVR** add) A terminal strip shall be included for connection of the audio line. A recessed volume control shall be included.

(For **S86T725PG8WBRVK** add) A terminal strip shall be included for connection of the audio line. A volume control knob shall be accessible from the front of the grille.

S86T725PG8U & Variations The loudspeaker assembly shall be a Bogen model **S86T725PG8U** (or **S86T725PG8UVR**, **S86T725PG8UVK**, **S86T725PG8UBR**, **S86T725PG8UBRVR**, or **S86T725PG8UBRVK**), or equivalent, 8" cone-type loudspeaker, having a frequency response of at least 50 Hz to 12 kHz. Axial sensitivity shall be 95 dB, measured at 1-watt/4 feet. The loudspeaker shall have a 6 oz. ceramic magnet and a 3/4" voice coil. A transformer, capable of matching an 8-ohm loudspeaker to a 25-volt or 70-volt line, and providing power taps of 4, 2, 1, 1/2, 1/4, and 1/8 watts shall be included. The loudspeaker shall be assembled on a 13" steel ceiling grille, finished in bright white semi-gloss enamel. Assembly depth shall be 3-1/4".

(For **S86T725PG8UVR** add) A recessed volume control shall be included.

(For **S86T725PG8UVK** add) A volume control knob shall be accessible from the front of the grille.

(For **S86T725PG8UBR** add) A terminal strip shall be included for connection of the audio line.

(For **S86T725PG8UBRVR** add) A terminal strip shall be included for connection of the audio line. A recessed volume control shall be included.

(For **S86T725PG8UBRVK** add) A terminal strip shall be included for connection of the audio line. A volume control knob shall be accessible from the front of the grille.

S810T725PG8W & Variations The loudspeaker shall be a Bogen model **S810T725PG8W** (or **S810T725PG8WVR**, or **S810T725PG8WVK**), or equivalent, 8" cone-type loudspeaker, having a frequency response of at least 70 Hz to 15 kHz. Axial sensitivity shall be 96 dB, measured at 1-watt/4 feet. The loudspeaker shall have a 10 oz. ceramic magnet and a 1" voice coil. A transformer, capable of matching an 8-ohm loudspeaker to a 25-volt or 70-volt line, and providing power taps of 4, 2, 1, 1/2, 1/4, and 1/8 watts shall be included. The loudspeaker shall be assembled on a 13" steel ceiling grille, finished in off-white semi-gloss enamel. Assembly depth shall be 3-1/4".

(For **S810T725PG8WVR** add) A recessed volume control shall be included.

(For **S810T725PG8WVK** add) A volume control knob shall be accessible from the front of the grille.

S810T725PG8U & Variations The loudspeaker shall be a Bogen model **S810T725PG8U** (or **S810T725PG8UVR**, or **S810T725PG8UVK**), or equivalent, 8" cone-type loudspeaker, having a frequency response of at least 70 Hz to 15 kHz. Axial sensitivity shall be 96 dB, measured at 1-watt/4 feet. The loudspeaker shall have a 10 oz. ceramic magnet and a 1" voice coil. A transformer, capable of matching an 8-ohm loudspeaker to a 25-volt or 70-volt line, and providing power taps of 4, 2, 1, 1/2, 1/4, and 1/8 watts shall be included. The loudspeaker shall be assembled on a 13" steel ceiling grille, finished in bright white semi-gloss enamel. Assembly depth shall be 3-1/4".

(For **S810T725PG8UVR** add) A recessed volume control shall be included.

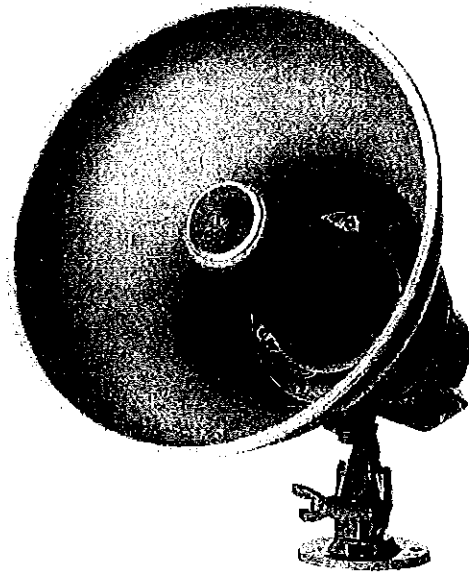
(For **S810T725PG8UVK** add) A volume control knob shall be accessible from the front of the grille.

BOGEN®
COMMUNICATIONS, INC.

50 Spring Street, Ramsey, NJ 07446, U.S.A.
Tel: 201-934-8500; FAX: 201-934-9832; www.bogen.com

Reentrant Horn Loudspeakers

Models SPT15A
and SP158A



Description

The Bogen SPT15A and SP158A are compact, high intelligibility, reentrant type loudspeakers, designed for one-way or two-way sound and communication systems. Their sturdy, weatherproof, all-metal construction is ideal for indoor and outdoor use in industrial plants, warehouses, schools, construction sites, transportation terminals, and recreational areas.

The Model SPT15A has a built-in, rotary impedance selector switch for matching the speaker power requirements to a 25V or 70V constant-voltage line. The model SP158A has an 8-ohm impedance only.

Features

- High intelligibility and efficiency; ideal for both one-way and talk back applications
- Weatherproof, all-metal construction
- 15 watts; 25/70 volt (SPT15A) or 8-ohm (SP158A) operation
- Tap settings for 70V: 15, 7.5, 3.8, 1.8, 0.9 watts; for 25V: 15, 7.5, 1.8, 0.94, 0.46 watts
- Rotary tap impedance selector on SPT15A
- Tilt and swivel base for easy positioning
- Screw terminals make installation fast and easy
- All-purpose mounting bracket
- Self-aligning, field replaceable diaphragm
- Mocha enamel finish
- Limited lifetime warranty
- Mountable to I-beam flange using Bogen's BC1 Beam Clamp (sold separately)
- Mountable to electrical box using Bogen's HSES10 mounting strap (sold separately)
- Terminal Cover (TCSPT1) allows connection of conduit fittings to horn speakers (sold separately)

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54-7612-05D 0904

Technical Specifications

Power Rating (RMS): 15 watts continuous, 20 watts equalized
Frequency Response: 275 Hz to 14 kHz
Impedance:
SPT15A — 25/70 volts
SP158A — 8 ohms
Sound Pressure Level: 121 dB @ four feet on axis with 15 watt input @ 1000 Hz
Dispersion: 110°
Sensitivity as Microphone: -22 dBm [Ref: 10 dynes/cm²]
Dimensions: 9" Diameter x 9-1/4" D
Product Weight:
SPT15A — 4 lb.
SP158A — 3 lb.
Finish: Textured mocha enamel

Impedance Selector Switch Settings (SPT15A only): 25V @ 15, 7.5, 1.8, 0.94, 0.46 watts
 70V @ 15, 7.5, 3.8, 1.8, 0.9 watts

Sound Pressure Level in dB @ 1000Hz:	Watts Input:	Feet on Axis				
		4	8	16	32	64
15	15	121	115	109	103	97
7.5	7.5	118	112	106	100	94
3.8	3.8	115	109	103	97	91
1.8	1.8	112	106	100	94	88
0.9	0.9	109	103	97	91	85
0.46	0.46	106	100	94	88	82

Architect and Engineer Specifications

The loudspeaker shall be a Bogen Model ____ (specify SPT15A or SP158A), or approved equal, reentrant type horn loudspeaker. The frequency response shall be 275 Hz to 14 kHz. Rated power output shall be 15 watts, RMS continuous. Dispersion shall be 110°. Sound pressure level, measured four feet on axis with 15 watt input @ 1000 Hz, shall be at least 121 dB.

Use for SPT15A. The unit shall incorporate a seven-position weather-sealed switch, to allow matching the loudspeaker to a 25V or 70V constant-voltage line. Power handling capacity shall be adjustable at 70V to 0.9, 1.8, 3.8, 7.5, or 15 watts, and at 25V to 0.46, 0.94, 1.8, 7.5, or 15 watts.

Use for SP158A. The unit shall have an impedance of 8 ohms.

The loudspeaker shall be of weatherproof, all-metal construction, with driver enclosed within a weatherproof housing. The loudspeaker shall include a self-aligning, field-replaceable diaphragm.

Screw terminals shall be provided for connection to the audio line. A plastic cover shall be provided to protect the connectors and impedance selector switch, and provide strain relief for the audio line.

An all-purpose mounting bracket shall provide precise positioning in the vertical and horizontal planes with a single adjustment. The bracket shall include banding slots to permit mounting the loudspeaker on beams or pillars. Bracket and loudspeaker shall be finished in textured mocha enamel. The unit shall measure 9" diameter by 9-1/4" D. Product weight shall be _____ (insert 4 lb. for SPT15A, 3 lb. for SP158A).

BOGEN[®]
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