FEDERAL SIGNAL
Safety and Security Systems / Industrial

MODELS 304GC-CN, 304GCX-CN, 314GC-CN, and 314GCX-CN

INSTALLATION AND SERVICE INSTRUCTIONS FOR SELECTONE®

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INSTALLATION INSTRUCTIONS FOR
MODELS 304GC-CN, 304GCX-CN, 314GC-CN, AND 314GCX-CN

⚠ SAFETY MESSAGE TO INSTALLERS

People's lives depend on your safe installation of our products. It is important to read, understand and follow all instructions shipped with these products. Listed below are some other important safety instructions and precautions you should follow:

- This unit must be installed by a qualified electrician in accordance with either NFPA 72 and the National Electrical Code or CAN/ULC S524 and the Canadian Electrical Code, all National and local Electrical and Fire Codes, and be acceptable to the Authority Having Jurisdiction.

- Do not connect this unit to the system wiring when circuits are energized.

- For optimum sound distribution do not install this device where objects would block any portion of the front of the speaker.

- These signal appliances produce a loud audible signal, which will over extended exposure cause permanent hearing loss. Take appropriate precautions such as wearing hearing protection.

- After installation of the device and the fire system is certified operational, a program for periodic testing of this device must be established per the direction of the NFPA 72 or CAN/ULC S524, Local Fire Codes and the Authority Having Jurisdiction.

- After installation and completion of initial system test, provide a copy of this instruction sheet to all personnel responsible for operation, periodic testing and maintenance of this equipment.

- WARNING – EXPLOSION HAZARD: Substitution of any components may impair Suitability for Class I, Division 2 and Class I, Zone 2.

- This equipment is suitable for use in Class 1 Division 2, Groups A, B, C, D or Non-Hazardous Locations Only.

- WARNING – EXPLOSION HAZARD: Do not disconnect equipment unless power has been switched off or the area is known to be non-hazardous.

⚠WARNING

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

I. INTRODUCTION.

These four SelecTone Models are 24 Vdc, polarized, high output (with internal volume adjustment), continuous duty, indoor/outdoor rated audible signaling devices for use in fire alarm systems. A plug-in tone module is required for tone generation. See the specification section for compatible plug-in models. Speaker projectors on both models are adjustable and may be repositioned to obtain desired sound distribution.

The SelecTone Models 304GCX-CN and 314GCX-CN are for use in areas where flammable dusts, liquids, and gases are normally confined within closed containers or systems but may be present in case of accidental rupture or spillage.

II. SPECIFICATIONS.

Operating Voltage:	Regulated 24 Vdc (16 Vdc to 33 Vdc)
Current Requirements:	
Models 304GC-CN & 304GCX-CN:	0.85 A max.
Models 314GC-CN & 314GCX-CN:	0.90 A max.
Weight: Model 304GC-CN:	4.5 lb [2.0 kg]
Model 304GCX-CN	4.9 lb [2.2 kg]
Model 314GC-CN	6.1 lb [2.8 kg]
Model 314GCX-CN:	6.5 lb [3.0 kg]

Construction:

Amplifier Housing: Die-cast aluminum alloy with powder coated finish Housing sealed with a neoprene rubber gasket. External mounting bracket on Models 304GCX-CN & 314GCX-CN.

Speaker Cone Tip & Projector: Spun aluminum alloy with powder coated finish.

UL Audibility Ratings per ULC-S525-99: (based on TM6, “horn”)
Models 304GC-CN & 304GCX-CN: 104 dB(A)
Models 314GC-CN & 314GCX-CN: 104 dB(A)
For directional characteristics, see Figure 4.

Approval Agency Listings: Reference product nameplate

Compatible Tone Modules: UTM

III. INSTALLATION.

A. *Unpacking.*

After unpacking the signaling device, examine it carefully for possible damage that may have occurred in transit. If equipment has been damaged, immediately file a claim with the carrier stating the extent of the damage. Carefully check all shipping labels and tags for special instructions before removing or destroying them.

B. *Mounting Arrangements (see Figure 1).*

⚠CAUTION

To maintain the hazardous location rating of the Models 304GCX-CN and 314GCX-CN, DO NOT use the 7/8" knockout (concealed conduit mounting).

The signaling device can be mounted on any relatively flat surface. Conduit connections can be made to the two 1/2" threaded openings at bottom of the housing. A 1/2" conduit plug is supplied for field installation if one of the 1/2" threaded openings is not utilized. After the mounting location has been selected, proceed with the applicable instructions below.

⚠WARNING

Property damage, serious injury, or death could occur if an accumulation of water, snow, dust, etc. resides in the speaker projector, severely reducing or preventing operation of this device. Mount the unit so speaker projector is pointed horizontally or slightly downward.

⚠WARNING

Property damage, serious injury, or death could occur if any objects are in front of the speaker, severely reducing optimum sound distribution. For maximum effectiveness, ensure that the front of the speaker is clear of obstructions.

1. Loosen the two screws on the cover and remove it.

2. Select the mounting location and place rear of the housing against mounting surface.

3. Using the mounting holes two inside for Models 304GC-CN and 314GC-CN or four outside for Models 304GCX-CN and 314GCX-CN) as a template, scribe drill position marks on the mounting surface. See Figure 1 for mounting hole locations and dimensions.

⚠CAUTION

Before drilling holes in any surface, ensure that both sides of surface are clear of items that could be damaged.

4. Secure the unit to a wooden mounting surface with #10 x 1" wood screws. If mounting on a metal surface, drill 13/64" diameter holes and secure the unit with #10 screws, lockwashers and nuts.

5. Route wires through the 1/2" threaded openings into the SelecTone unit in accordance with National and Local Electrical and Fire Codes. Wire size depends upon the operating current and the distance from the power source.

WARNING

Property damage, serious injury or death could occur if the projector is mishandled during installation or over time. DO NOT rotate the projector more than 180 degrees or internal speaker wiring may be damaged.

6. Reposition speaker projector if necessary to obtain desired sound coverage. Loosen collar nut (see Figure 1) and move projector to desired position.

7. Before reinstalling the housing cover, read paragraph III.C Electrical Connections below and make the necessary electrical connections.

C. *Electrical Connections.*

⚠WARNING

To avoid electrical shock, do not connect wires when circuits are energized.

⚠WARNING

Never energize the unit unless the cover is securely fastened to the housing. Property damage, serious injury, or death could occur if the housing is not closed properly.

National and Local Electrical and Fire Codes must be adhered to in the installation and operation of these models. All electrical wiring must be routed through approved conduit and fittings as specified.

1. Power Connections.

a. Use only 12 AWG to 18 AWG [2.5 mm2 – 1.0 mm2] wire for the power connection. Strip no more than 0.25 inch [6 mm] of wire insulation from the ends of the power leads. If stranded wire is used, be sure that there is no loose strands outside the connector plug that could touch the adjacent lead and cause a short circuit.

b. See Figures 2 and 3. Connect the power source positive (+) lead to one of the (+) terminals of the connector plug. Connect the power source negative (–) lead to one of the (-) terminals of the connector plug. Connect the remaining (+) and (–) terminals on the connector plug to the next unit or an end of line device.

c. Plug the connector into the receptacle provided on the printed circuit board.

⚠WARNING

Property damage, serious injury, or death could occur if independent conductors are terminated together, both wires of the same polarity must be used as two separate connections. NFPA 72 requires that the wires be terminated independently to provide electrical supervision of the connection.

2. Tone Card Installation

NOTE

Tone card is purchased separately.

a. Plug the desired tone card into the socket as shown in Figure 3.

b. To ensure a proper seal, be sure that the neoprene rubber cover gasket is properly seated in the housing groove and reinstall the housing cover.

IV. TESTING/OPERATING.

⚠WARNING

Under certain conditions these devices are capable of producing sounds loud enough to cause hearing damage. Adequate hearing protection should be worn if standing within close proximity to device while testing. Recommendations in the OSHA Sound Level Standard (29 CFR 1910F) should not be exceeded.

A. After installation is complete, be sure to test the system to verify that each audible signal operates satisfactorily. If it is found that the unit is too loud for its location, an internal volume control can be adjusted. Remove the housing cover. Using a

slotted screwdriver with a 1/8" blade, gently turn the control to desired loudness. See Figure 3. Reinstall the housing cover.

⚠WARNING

Property damage, serious injury or death could occur if the housing is not closed properly. To reduce possibility of explosion, housing cover must be kept tight while circuits are energized.

B. After completion of initial system test, establish a program for periodic testing of this device. Refer to NFPA 72 or CAN/ULC S524, local Fire Codes and the Authority Having Jurisdiction for this information.

C. Provide a copy of these instructions for the Safety Engineer, system operator(s) and maintenance personnel.

⚠ SAFETY MESSAGE TO OPERATORS

Even if your warning system is operating properly, it may not be completely effective. People may not hear or heed your warning signal. You must recognize this fact and ensure that your warning signal achieves its intended effect through proper test/training sequences within your specific application(s).

V. MAINTENANCE.

⚠ SAFETY MESSAGE TO MAINTENANCE PERSONNEL

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death to you or others.

- Read and understand all instructions before performing maintenance on this unit.
- To reduce the risk of electrical shock or ignition of hazardous atmospheres, do not perform maintenance or service on this unit when circuits are energized.
- Periodic checks should be made to ensure that effectiveness of this device has not been reduced because the speaker has become clogged with a foreign substance or because objects have been placed in front of the speaker.
- Any maintenance on this unit MUST be performed by a licensed electrician in accordance with NEC or CEC guidelines and Local codes.
- Never alter this unit in any manner. Note, additional openings or alterations made to the 304GCX-CN or 314GCX-CN models may jeopardize the safety of the hazardous location.
- Periodic evaluation on the performance of the unit should be conducted at regular intervals. Reference NFPA 72G or CAN/ULC S524, Local Fire Codes and the Authority Having Jurisdiction for additional information.

⚠WARNING

EXPLOSION HAZARD

Substitution of components may impair suitability for Class I, Division 2, and Class I, Zone 2.

⚠WARNING

Unauthorized repair/servicing of the unit may result in degradation of performance and/or safety, resulting in property damage, serious injury, or death to you or others. If a malfunctioning unit is encountered, do not attempt any field repair/retrofit of parts.

VI. SERVICE.

Federal Signal will service your equipment or provide technical assistance with any problems that cannot be handled locally.

Any units returned to Federal Signal for service, inspection, or repair, must be accompanied by a Return Material Authorization (RMA). The RMA can be obtained from the local Distributor or Manufacturer's Representative.

At this time a brief explanation of the service requested or the nature of the malfunction, should be provided.

Address all communications and shipments to:

Federal Signal Corporation
Industrial Products Division
Service Department
2645 Federal Signal Drive
University Park, IL 60484-3167

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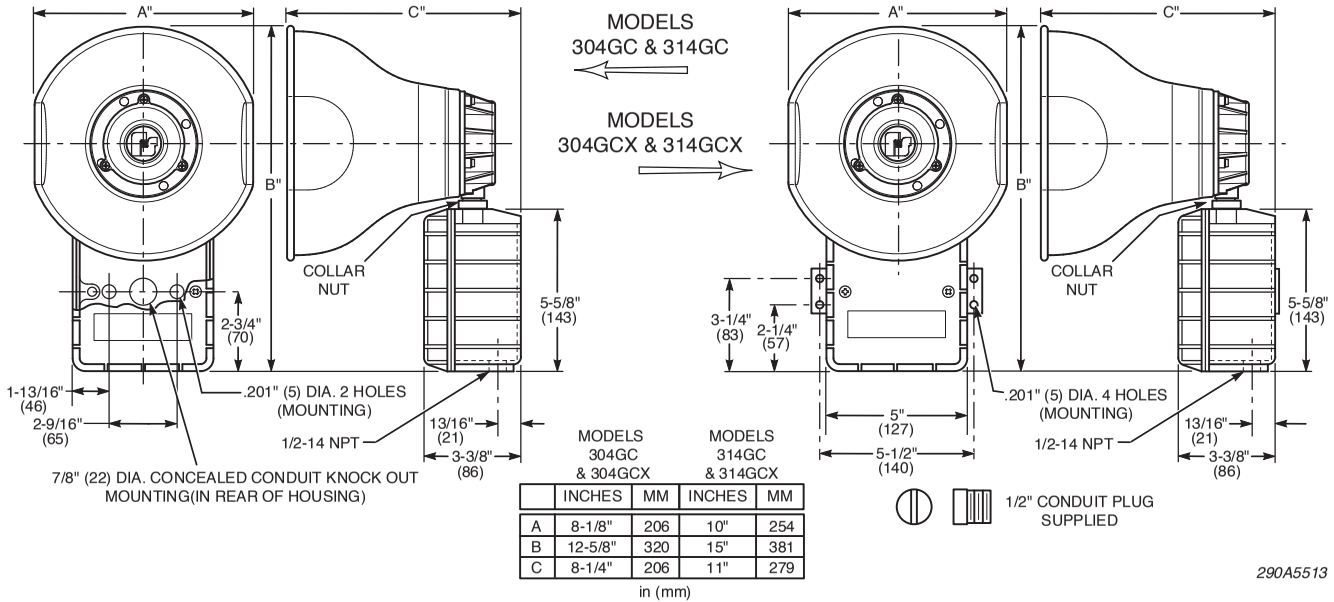

	MODELS 304GC & 304GCX		MODELS 314GC & 314GCX	
	INCHES	MM	INCHES	MM
A	8-1/8"	206	10"	254
B	12-5/8"	320	15"	381
C	8-1/4"	206	11"	279

in (mm)

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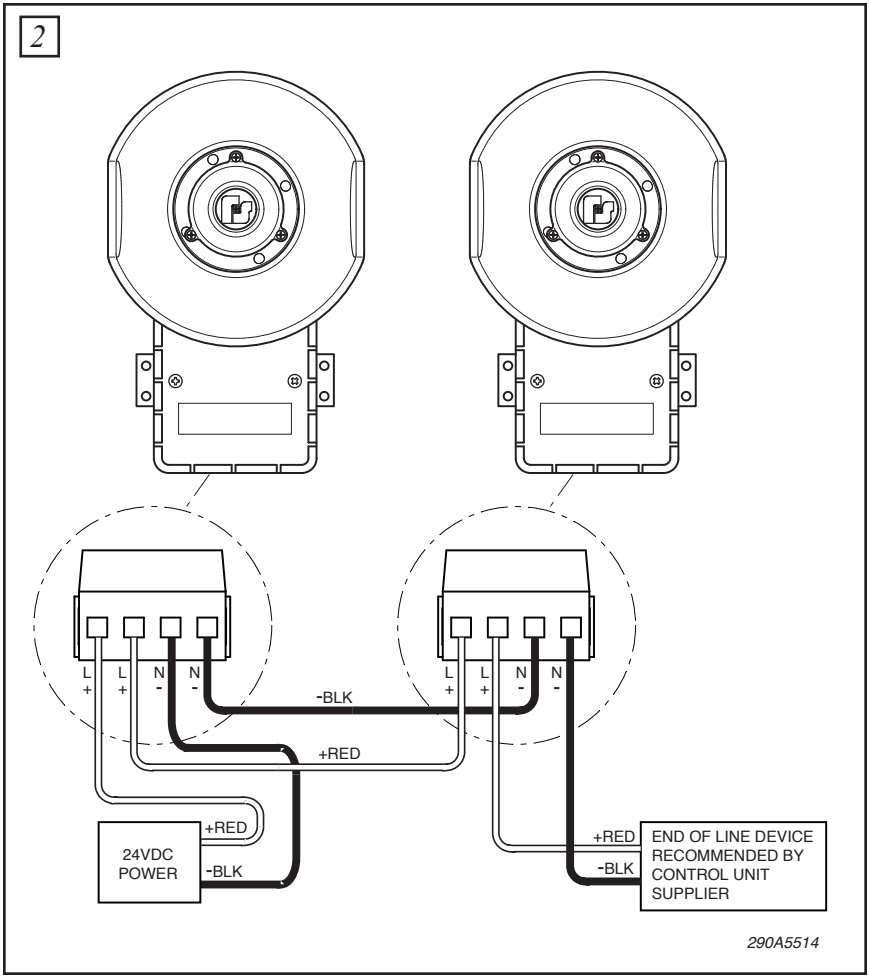
2
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+RED
24VDC
POWER
-BLK
+RED
-BLK
END OF LINE DEVICE
RECOMMENDED BY
CONTROL UNIT
SUPPLIER
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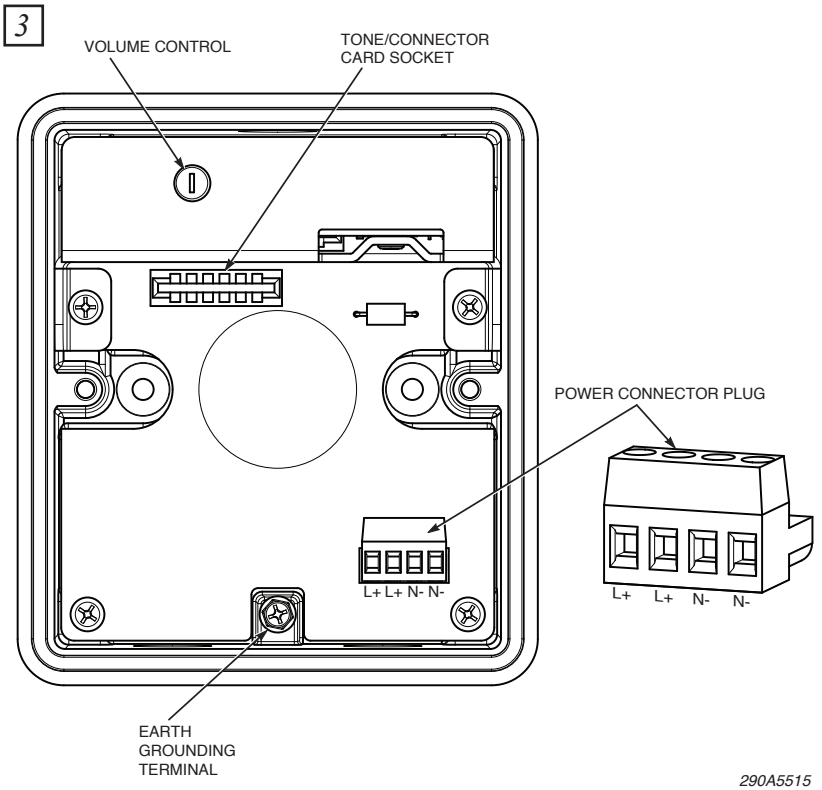
3
VOLUME CONTROL
TONE/CONNECTOR
CARD SOCKET
POWER CONNECTOR PLUG
L+ L+ N- N-
L+ L+ N- N-
EARTH
GROUNDING
TERMINAL
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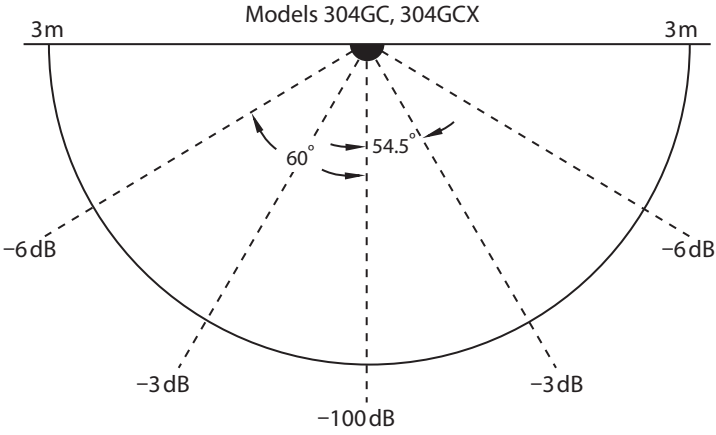
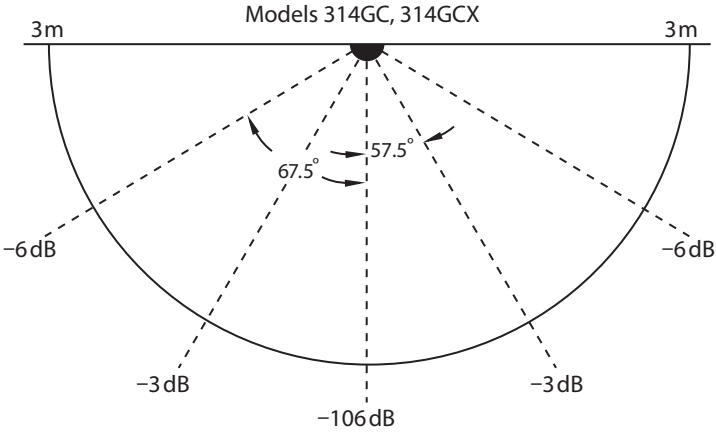
4

Directionality Characteristics





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