FEDERAL SIGNAL
Safety and Security Systems

Informer100 Speaker

Models I-IP100AC and I-IP100DC Series C
IP-Enabled High-Powered Indoor/Outdoor Speaker

Description, Specifications,
and Installation Manual

Limited Warranty

This product is subject to and covered by a limited warranty, a copy of which can be found at www.fedsig.com/SSG-Warranty. A copy of this limited warranty can also be obtained by written request to Federal Signal Corporation, 2645 Federal Signal Drive, University Park, IL 60484, email to info@fedsig.com or call +1 708-534-3400.

This limited warranty is in lieu of all other warranties, express or implied, contractual or statutory, including, but not limited to the warranty of merchantability, warranty of fitness for a particular purpose and any warranty against failure of its essential purpose.

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Federal Signal *www.fedsig.com*

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⚠ WARNING

It is important to follow all instructions shipped with this product. This device is to be installed by trained personnel who are thoroughly familiar with the country's electric codes and will follow these guidelines as well as local codes and ordinances, including any state or local noise-control ordinances.

Planning

- If suitable warning equipment is not selected, the installation site for the Informer100 Speaker is not selected properly, or the Informer100 Speaker is not installed properly, it may not produce the intended optimum audible warning. Follow Federal Emergency Management Agency (FEMA) recommendations.

- If Informer100 Speakers are not activated in a timely manner when an emergency condition exists, they cannot provide the intended audible warning. It is imperative that knowledgeable people, who are provided with the necessary information, be available at all times to authorize activation.

- When Informer100 Speakers are used outdoors, people indoors may not be able to hear the warning signals. Separate warning devices or procedures may be needed to effectively warn people indoors.

- The sound output of sirens is capable of causing permanent hearing damage. To prevent excessive exposure, carefully plan siren placement, post warnings, and restrict access to areas near sirens. Review and comply with any local or state noise control ordinances as well as OSHA noise exposure regulations and guidelines.

- Activating the Informer100 Speaker may not result in people taking the desired actions if those to be warned are not properly trained about the meaning of warning sounds. Users should follow FEMA recommendations and instruct those to be warned of correct actions to be taken.

- After installation, service, or maintenance, test the system to confirm that it is operating properly. Test the system regularly to confirm that it will be operational in an emergency.

Safety Messages to Installers

People's lives depend on your safe installation of our products. It is important to follow all instructions shipped with this product. This device is to be installed by a trained electrician who is thoroughly familiar with the National Electrical Code and/or Canadian Electrical Code and will follow the NEC and/or CEC Guidelines as well as all local codes. This Informer100 Speaker should be considered a part of the warning system and not the entire warning system.

The selection of the mounting location for this Informer100 Speaker, its controls and the routing of the wiring is to be accomplished under the Facilities Engineer and the Safety Engineer direction. Listed below are some other important safety instructions and precautions you should follow:

- Electrocution or severe personal injury can occur when performing various installation and service functions such as making electrical connections, drilling holes, or lifting equipment. Therefore, only experienced electricians should install this

product per national, state, and any other electrical codes having jurisdiction. Perform all work under the direction of the installation or service crew safety foreman.

- Read and understand all instructions before installing, operating, or servicing this equipment.

- This product shall be mounted at the minimum hearing distance of ten feet per FEMA guidelines limiting sound level exposure to 123 dBc maximum sound level.

- All effective warning sounds may, in certain circumstances, cause permanent hearing loss. Take appropriate precautions, such as wearing hearing protection. The maximum sound level exposure limits specified in OSHA 29 CFR 1910 should not be exceeded.

- I-IP100 series, DSA1, and DS100 devices are intended for permanent installation and operation per Title 46, Code of Federal Regulations, Parts 110–113, or Title 33, Code of Federal Regulations, Part 183, Sub-part I, Section 183.410, and the applicable requirements of the American Boat and Yacht Council, Inc., and/or ANSI/NFPA 302, "Fire Protection Standard for Pleasure and Commercial Motor Craft."

- For optimum sound distribution, do not install this speaker where objects would block any portion of the front of the Informer100 Speaker.

- Do not paint the Informer100 Speaker. No finish or coating is required. Paint may obstruct the sound output, reducing the effectiveness of the horn.

- Establish a procedure to check the signal system for proper activation and operation routinely.

- Any maintenance to the unit MUST be performed by a trained electrician per NEC Guidelines and local codes or a Federal Signal certified Service Provider.

- Never alter the unit in any manner.

- The nameplate should NOT be obscured, as it contains cautionary and/or other information of importance to maintenance personnel.

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

- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the device.

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

Installation and Service

- After installation or service, test the system to confirm that it is operating properly. Test the system regularly to confirm that it will be operational in an emergency.

- If future service and operating personnel do not have these instructions to refer to, the system may not provide the intended audible warning, and service personnel may be exposed to death, permanent hearing loss, or other bodily injuries. File these instructions in a safe place and refer to them periodically. Give a copy of these instructions to recruits and trainees. Also, give a copy to anyone who is going to service or repair the Informer100 Speaker.

- To reduce the risk of electric shock, do not perform any servicing other than what is contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel. Always test the Informer100 Speaker before using after repairs have been made.

Ethernet Wiring

- Unless shielded or run in conduit, Ethernet wiring must be at least six feet from bare power wiring or lightning rods and associated wires, and at least six inches from other wire (for example, antenna wires, doorbell wires, wires from transformers to neon signs), steam or hot water pipes, and heating ducts.

- Do not place Ethernet wiring or connections in any conduit, outlet or junction box containing high voltage electrical wiring.

- If using a cable gland, gland must be UL listed. The Informer100 Speaker has 3/4-inch and 1/2-inch NPT entry sizes.

Symbol Definition
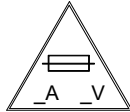
Indicates to reduce the risk of fire, replace the fuse as marked.

Pay careful attention to the notice located on the equipment.

Read and understand the information contained in this manual before attempting to install or service the siren.

General Description

Introduction

The Informer100 Speaker is an indoor and outdoor IP-enabled 100-watt speaker. Use the Informer100 as a warning and alert device with both audible and visual indicators. The audible capabilities include locally stored, high-quality, high-powered tones and voice. The visual indicators include the use of a message board/scrolling display sign support and strobes, lights, and beacons. The Informer100 can be equipped with up to four local initiation devices (switches) to activate the unit locally and to the Commander® system for mass notification communications.

The Informer100 Speaker has an internal 100-watt amplifier/driver to deliver tone warnings and intelligible voice messages from Informer100 stored memory. The Informer100 also has several unique capabilities when working with the Federal Signal Commander software. Using Commander software, the Informer100 can play text-to-speech, stream wave files, or broadcast live PA. Commander software can perform a talk/listen to individual Informer100s to allow call-box-type communications. The Informer100 also has remote volume control for optimizing sound levels across your alerting area. The remote volume control also includes an ambient noise monitoring capability to adjust the volume depending on external noise levels automatically.

The Informer100 allows the connection of up to four external switches to activate predefined alert events. The Informer100 can be programmed and configured as a standalone device to only use the inputs to activate the Informer100. This may be useful if the location has no network connectivity but where voice and tone alerts from locally activated inputs are required. The Informer100 can be networked later, and the activations can be brought into the Commander system for full system capability. When the Informer100 is networked using the Commander software, alerts initiated at the Informer100 can be used to activate other devices. The Commander software system can also alert emergency personnel via email, SMS, and handheld radios using optional messaging software.

The Informer100 includes a relay output, a DC solid-state relay output, and an AC solid-state relay output for controlling strobes or other devices. The Informer100 has a 1/2-inch NPT opening on the top of the speaker for simple installation of pipe mount devices. The bottom of the speaker has three 3/4-inch NPT openings to allow access to power, LAN, relay outputs, and activation inputs. The Commander system allows multiple configurations for activation of the relays during alerts.

The Informer100 is designed for outdoor use and large indoor structures. It can be powered from 120 or 240 Vac or 24 Vdc, depending on the model purchased. All wiring interfaces are accessible via internal connectors and built-in NPT entrances for quick and easy installation.

The Informer100 comes with an adjustable stainless steel wall mount bracket that allows the angle of the speaker to be adjusted. Optional pole mount brackets are available for small and large diameter poles.

See the Informer-IP Series C Setup, Program, and User Manual (part number 25500395) to learn how to set up, configure, program, and use Informer-IP devices.

Features

The Informer100 has the following features; some features require the use of the Commander® software system:

- High-powered outdoor or indoor IP-enabled speaker for audible and visual alerts

- Speaker rated at 120 dBa for tones and 114.5 dBa for voice at 10 feet

- Seven standard built-in warning signals: Wail, Steady, Alternate Wail, Alternate Steady, Pulsed Wail, Pulsed Steady, Auxiliary Chime

- Broadcasts live voice, text-to-speech, and prerecorded voice or tone files

- Deliver intelligible voice messages from locally prerecorded files or through the Commander system

- Prerecorded files: 4000 voice or tone messages with 17 hours of total recording time

- Ambient noise level monitoring with automatic volume control

- Each device can be individually configured for volume and noise-level adjustments

- Remote volume control for optimizing sound levels

- Speaker as a microphone for talkback feature

- Alerts can be sent to single devices, groups or zones, or all devices

- Integrated Modbus® PLC Interface

- Integrated SIP phone Interface

- Commander and CommanderOne® HMI software control and activation options

- Wall or pole mount options

- Four local alarm initiation inputs to activate the unit locally or standalone operation Momentary mode: contact closure sounds alarm for the programmed duration. Continuous mode: sounds alarm for the duration of the closure.

- Relay outputs to control strobes or other devices (See page 24 for warning lights information.)

- 120/240 Vac or 24 Vdc powered (two models)

- Wide outdoor temperature operating range

- Commander software provides full two-way control and status monitoring

- Allows remote software upgrades

Ordering Information

Table 1 Ordering Information

Part Numbers	Description
I-IP100DC	24 Vdc 100 watt wall mount
I-IP100AC	120/240 Vac 100 watt wall mount
I-IP100-PM	Small (6-inch or less) Pole Mount Bracket
I-IP100-PMW	Large (over 6-inch) Pole Mount Bracket
I-IP100-OMNI	Omni Directional Option for IP Speaker

Informer100 Speaker requires Federal Signal Commander® application software (sold separately).

Informer100 Speaker can be field configured or factory preconfigured to customer requirements. Contact your local representative for a quotation.

Table 2 Optional Accessories

Part Numbers	Description
PSEV-Y	Indoor Yellow Station – Push and Turn Reset Button "EVACUATION"
PSEVSC-Y	Indoor Yellow Station – Push and Turn Reset Button "EVACUATION," with Sounder Cover
PSEM-R	Indoor Red Station – Push and Turn Reset button "EMERGENCY"
PSEMSC-R	Indoor Red Station – Push and Turn Reset button "EMERGENCY," with Sounder Cover
PBS-4	Four-button push station (Indoor)
225XL-024X[1,2]	Hazardous Location LED Light 24 Vdc
225XL-120-240X[1,2]	Hazardous Location LED Light 120-240 Vac

[1] "X" Indicates color: (A) Amber, (B) Blue, (C) Clear, (G) Green, and (R) Red

[2] The light is powered from the same source as the speaker

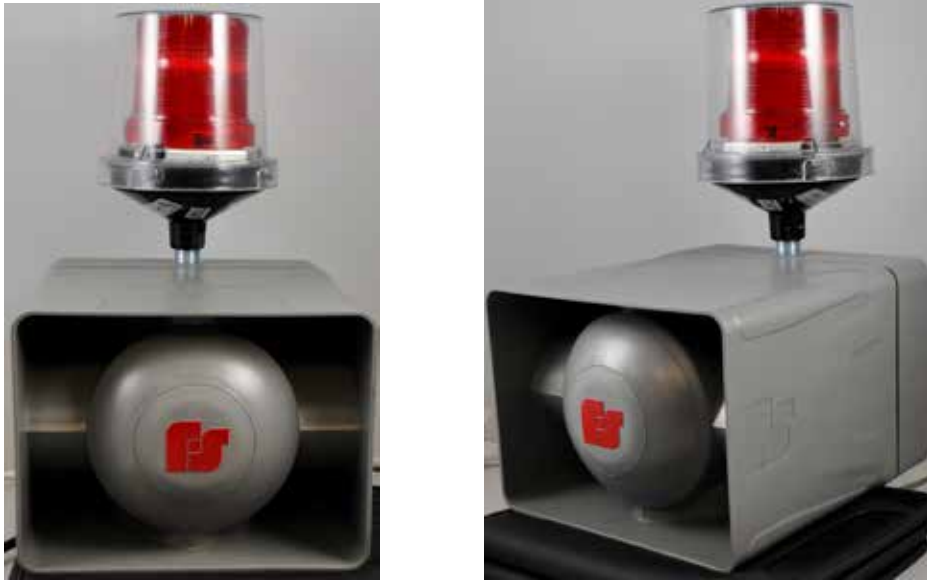The following figure illustrates the wall-mounted buttons for activation.

Figure 1 PS Series Push Button Stations (optional)

The following is a picture of the Informer100 Speaker shown with optional 225XL Warning Light.

Figure 2 Informer100 Speaker with 225XL light

Specifications

Table 3 Electrical

Operating Voltages I-IP100AC Switch-selectable 120 or 240 Vac	120 Vac nom, 50/60 Hz or 240 Vac nom, 50/60 Hz
Operating Current I-IP100AC	120 Vac; 26 mA Standby, 1.50 A during a function, 4.50 A during a function if relays are fully loaded. 240 Vac; 21 mA Standby, 820 mA during a function, 3.82 A during a function if relay outputs are fully loaded.
Operating Voltages I-IP100DC	24 Vdc nominal
Operating Current I-IP100DC	24 Vdc; 100 mA Standby, 5.15 A during a function, 12.15 A during a function if relay outputs are fully loaded.
Relay Outputs	Mechanical relay output 2 A at 30 Vdc or 250 Vac, 25 A max inrush, N.O. dry contacts. DC solid-state relay output 5 A at up to 28 Vdc current limited. AC solid-state relay output 1 A at 20 to 264 Vac zero crossing switched.
Ethernet Port	IEEE 802.3, 10/100 Base-T connection
Alarm Initiating Inputs	Four optically Isolated Inputs Dry Contact closure < 1 kilohm **NOTE**: The four optically isolated Alarm Initiation Inputs allow remote activation of tones and messages through a volt-free, dry-contact closure. The momentary contact closure must be a minimum of 500 ms.

Audio Storage	Warning siren audio, seven factory installed tones: Wail, Steady, Alternate Wail, Alternate Steady, Pulsed Wail, Pulsed Steady, Auxiliary Chime Prerecorded files—up to 4,000 voice or tone messages with 17 hours of total recording time
Audio Data	8 bit 8 kHz mono wave (G7.11 μ-law)
Audio Frequency response	300 Hz to 3000 Hz, +1 to -3 dB per octave
Maximum Audio Output	100 watts, 120 dBa tones/114.5 dBa for voice at 10 feet

The following indicators are for troubleshooting purposes only. These indicators are not visible when the unit is closed.

Table 4 Visual Indications (Located on internal control board.)

POWER	Green LED turns on when power is connected. (D5)
ISOLATED POWER	Green LED turns on when Isolated power for inputs and relay outputs is functioning. (D6)
CPU	Flashing RED LED indicates the CPU is running its program. (D18)
NETWORK	Green LED turns on when unit has made a connection to the network. (D27)
LISTEN	Red LED turns on when Commander® is listening. Unit is sending audio to Commander. (D25)
TALK	Green LED turns on when Commander is talking. Unit is playing audio being sent. (D26)
AMPOUTPUT VOLTAGE	Green LED turns on when amplifier is active. Brightness indicates level of amplifier output. (D2)
AMPLIFIER OUTPUT CURRENT	Green LED turns on when amplifier is active. Brightness indicates level of amplifier output. (D8)
ACTIVATION INPUT #1	Red LED turns on when Activation input #1 is being activated. (D13)
ACTIVATION INPUT #2	Red LED turns on when Activation input #2 is being activated. (D15)
ACTIVATION INPUT #3	Red LED turns on when Activation input #3 is being activated. (D19)
ACTIVATION INPUT #4	Red LED turns on when Activation input #4 is being activated. (D20)

Table 5 Connectors and Jacks (Control board connectors)

JP2	Serial Port for factory approved programming or for message board display
JP3 Pin Jack	Reserved for factory testing
JP4 Relay Outputs	1 and 2 mechanical relay Normally Open 3 – DC solid-state relay, (+) DC power 4 – DC solid-state relay, Switched (+) DC power to strobe or light 5 – AC solid-state relay 6 – AC solid-state relay **NOTE**: Mechanical relay output is programmed as Relay 1. Solid-state relays are programmed as Relay 2.

JP5 Initiation inputs	1 and 2 – ISO Ground/Input 1 3 and 4 – ISO Ground/Input 2 5 and 6 – ISO Ground/Input 3 7 and 8 – ISO Ground/Input 4 **NOTE**: Each input is activated by shorting the two pins associated with the input.
JP6, JP7, JP8, and JP9 AC or DC Power Distribution	1 – L1/Hot/(+) 24 Vdc 2 – L2/Neutral/(-) 24 Vdc Gnd 3 – Earth Ground **NOTE**: JP6, JP7, JP8 and JP9 are physically connected to provide a distribution of AC or DC power. The combined load of all power should not exceed 8 amperes AC/DC, 25 A max inrush
JP10	Reserved for factory testing
JP11	Short to restore factory default settings
JP12	Reserved for factory testing
JP14	10 V_{RMS} output for driving additional amplified speakers

Table 6 Environmental and Physical

Operating temp range	-40˚F to 150˚F (-40°C to +66°C) at 20% duty cycle. Continuous duty UL rating: -40˚F to 104˚F / (-40°C to 40°C).
Humidity range	0-95%, non-condensing
Size (Height x Width x Length)	7 x 9 x 10 inches (17.8 x 22.9 x 25.4 cm)
Weight I-IP100DC I-IP100AC	16.2 lb (7.35 kg) 19.2 lb (8.71 kg)

Installation

⚠ **WARNING**

Read and adhere to all safety warnings in this manual before installing the Informer100 Speaker.

⚠ **DANGER**

ELECTROCUTION HAZARD: Electrocution or severe personal injury can occur when making electrical connections, drilling holes, or lifting equipment. Therefore, experienced electricians, per national and local electrical codes, acting under the direction of the installation crew safety foreman, should perform the installation.

Determine a Suitable Location

The Informer100 can be mounted on any relatively flat surface with the supplied mounting brackets. The mounting surface must be capable of supporting the weight of the speaker.

Wall Mounting

The Informer100 Speaker comes standard with a bracket for vertical wall or pole mount with optional pole accessories. The standard mount can be flipped to allow ceiling mount.

To wall mount the Informer100 Speaker:

1. Find a suitable location to mount the speaker. Use industry or company-preferred practices when mounting hardware to structures.

2. Verify the mounting is adequate to hold the weight of the speaker, cables, and visual devices if equipped.

3. Refer to Figure 3 or use the U-shaped wall bracket as a template to scribe the mounting hole locations.

4. Mount the Informer100 Speaker to the mounting surface with user-supplied hardware. Federal Signal recommends 3/8-inch fasteners.

5. Loosen the pivot bolts to provide the direction of the speaker.

Attaching the Mounting Brackets to the Speaker Housing

To attach the brackets:

1. The mounting brackets are attached to the speaker, as shown below, using the six supplied 1/4-20 by 5/8 inch screws.

    Note the orientation of the curved slots on the L-shaped brackets; this orientation is important for the speaker to pivot downward.

2. Tighten the 1/4-20 by 5/8 inch screws to approximately 80 in-lb.

3. Attach the U-shaped wall bracket with four supplied sets of 3/8-16 by 1-inch bolts, flat washers, lock washers, and nuts.
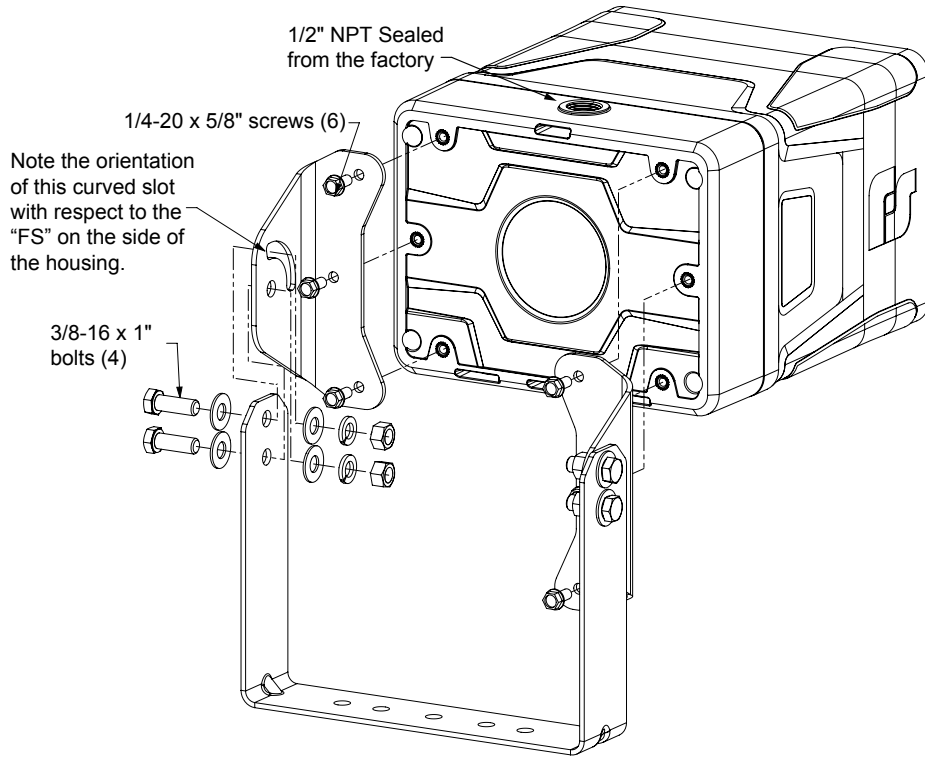
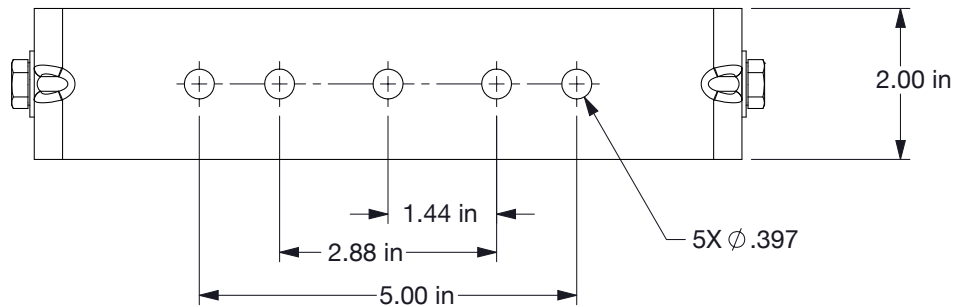**Figure 3 Bracket attached to speaker**

1/2" NPT Sealed
from the factory

1/4-20 x 5/8" screws (6)

Note the orientation
of this curved slot
with respect to the
"FS" on the side of
the housing.

3/8-16 x 1"
bolts (4)

Figure 4 Width and height of bracket

2.00 in

1.44 in

2.88 in

5X ⌀ .397

5.00 in

Figure 5 Depth and height with bracket

6.68 in

2.53 in

10.09 in

2.00 in

12.87 in
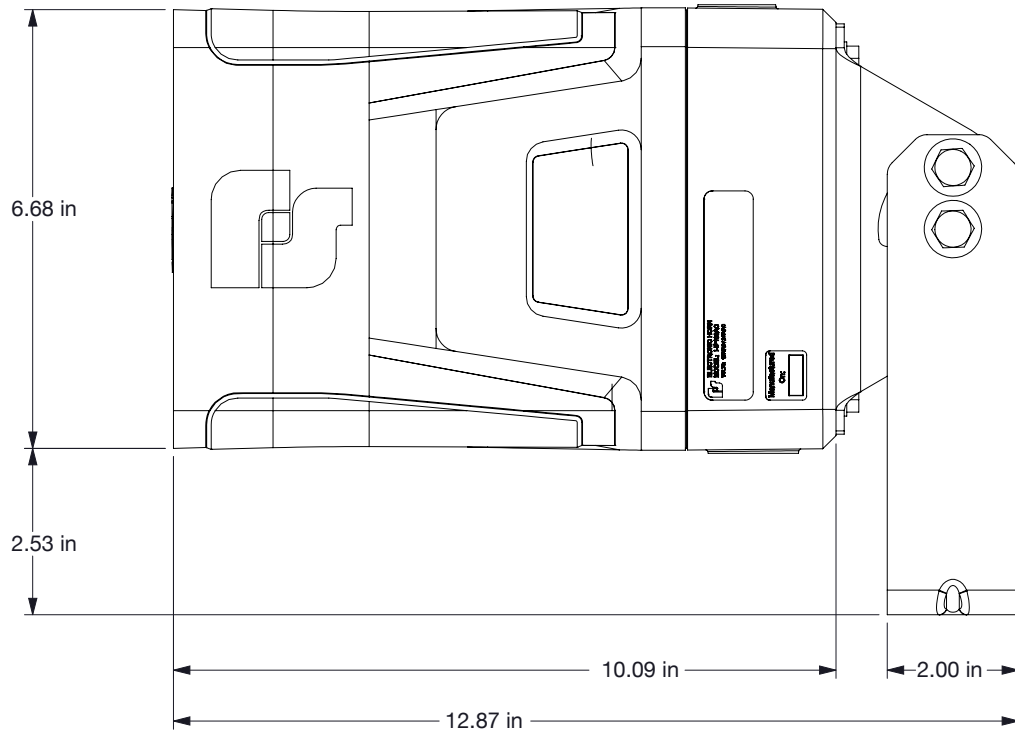
Figure 6 Top view of speaker

1/2" NPT Sealed
from the factory

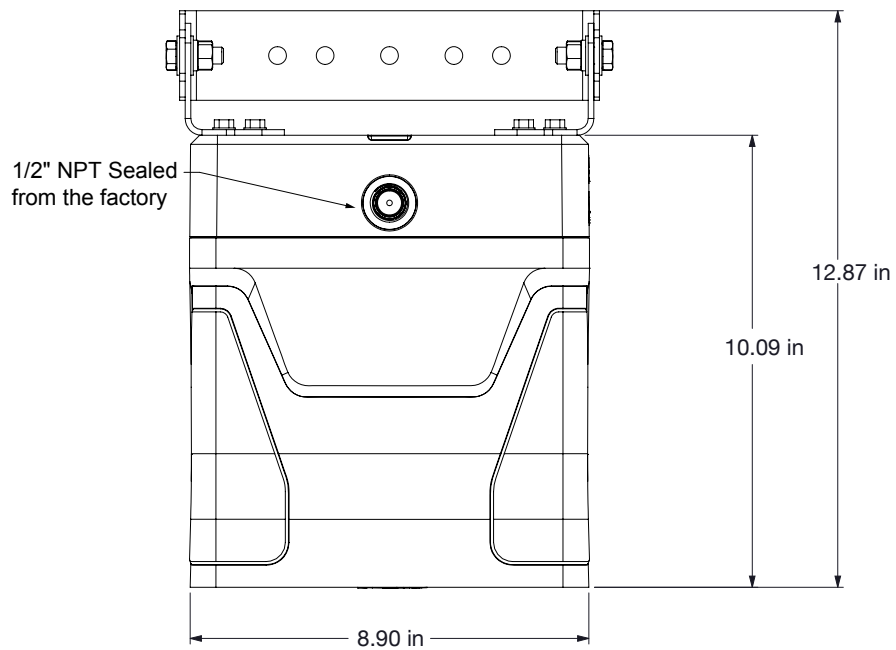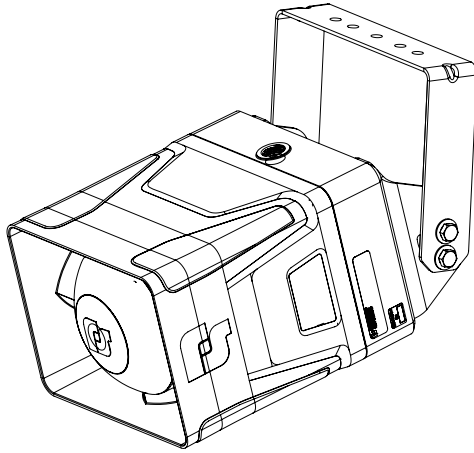12.87 in

10.09 in

8.90 in

**Figure 7 Ceiling mount**

Pole Mounting

The Informer100 comes standard with a bracket for vertical wall or pole mount with optional pole accessories.

Large Pole Mounting (6-inch diameter or larger)

Use the following procedure if mounting the speaker with the optional I-IP100-PMW bracket:

1. Find a suitable location to mount the speaker. Use industry or company-preferred practices when attaching hardware to poles or other structures.

2. Attach the I-IP100-PMW bracket to the pole using banding or use the pre-drilled holes to bolt the bracket to the pole or structure.

3. Using the supplied flat washers, lock washers, and 3/8-inch nuts, mount the speaker to the I-IP100-PMW bracket, as shown in Figure 2.

4. Use the side-pivot bolts to allow adjustment of the speaker up and down to optimize speaker effectiveness.
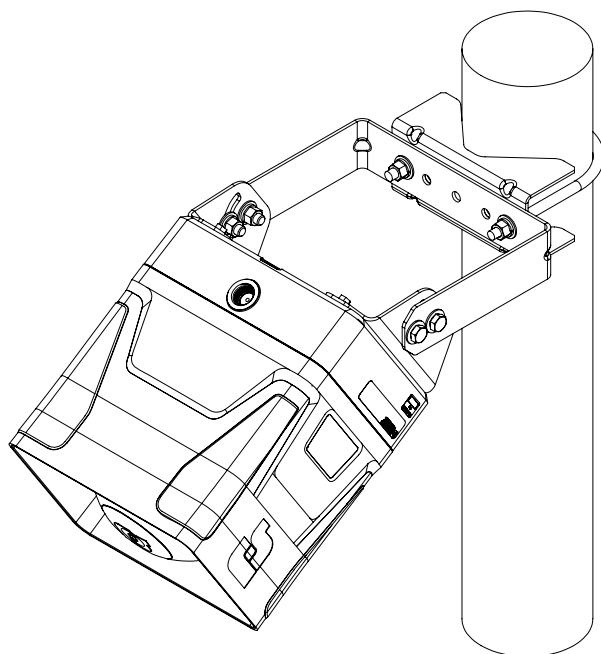
Figure 8 Bracket I-IP100-PMW
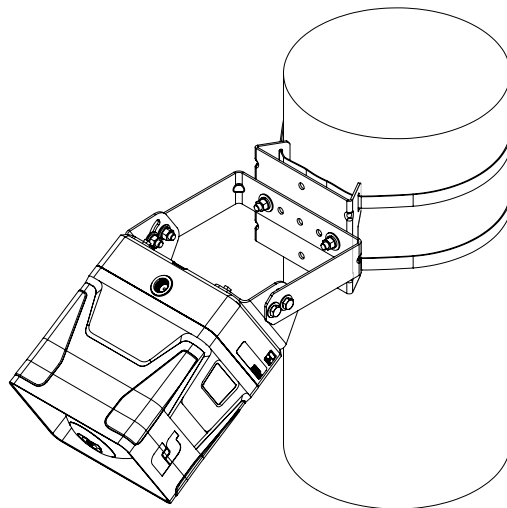
Small Pole Mounting (2-3/8 inch or 4-1/2 inch diameter poles)

Use the following procedure if mounting the speaker with the optional I-IP100-PM bracket:

1. Find a suitable location to mount the speaker. Use industry or company-preferred practices when attaching hardware to poles or other structures.

2. Remove the speaker U-shaped bracket; store the pivot/lock bolts.

3. Select the proper I-IP100-PM U-bolt for the pole.

4. Attach the U-shaped bracket from the speaker to the pole using the I-IP100-PM U-bolt, bracket, nuts, and washers.

5. Attach the speaker and set direction using the pivot and lock bolts.

Figure 9 Bracket I-IP100-PM

Mounting with Omni Direction Bracket (2-3/8 inch diameter pole)

Use the I-IP100-OMNI bracket to create an omni-directional speaker. The speaker is mounted as described in the Small Pole Mount section, with the omni bracket mounted at a distance of 2.0 inches from the speaker.

Use the following procedure if mounting the speaker with the optional I-IP100-OMNI bracket:

1. Identify the desired location for the bracket.

2. Attach the bracket using the supplied U-bolts and hardware.

Figure 10 Bracket I-IP100-OMNI

2.0 in

Omni Bracket
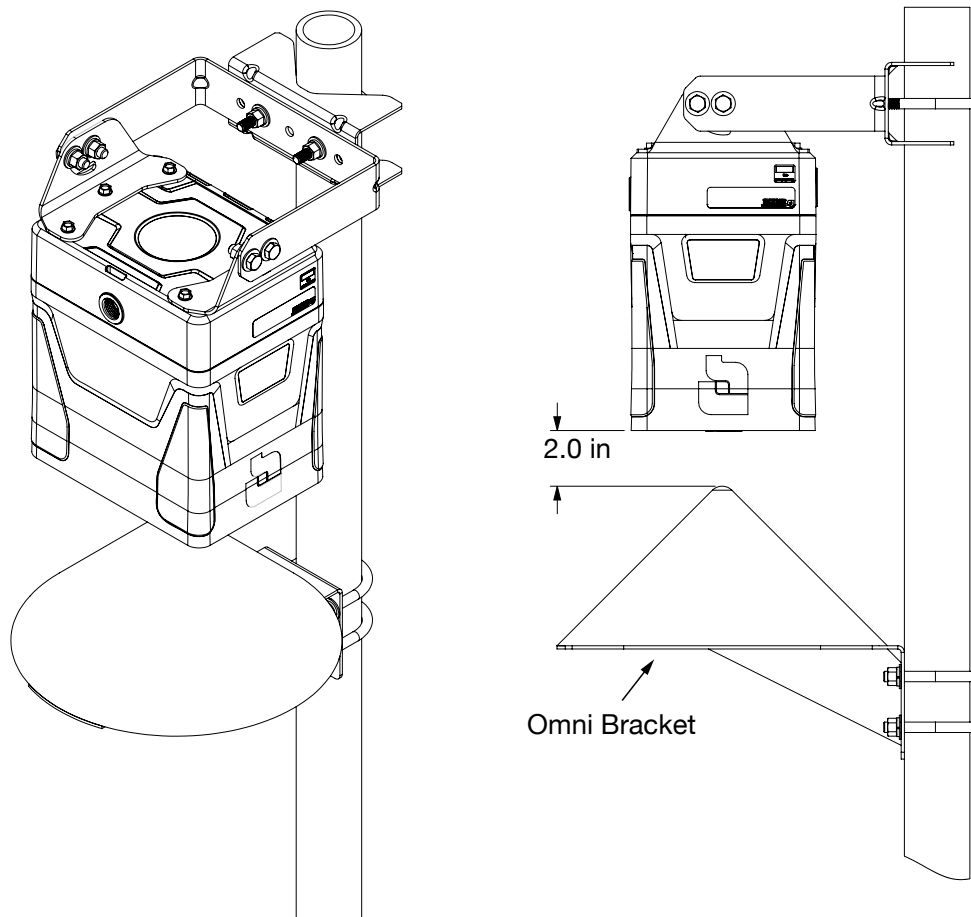
Mounting without Bracket

You can mount the speaker directly to the mounting surface without the bracket. Use installer-supplied 1/4-20 fasteners that are suitable for the mounting surface. See Figure 11 for the hole center dimensions.

**Figure 11 Surface mount hole center dimensions**
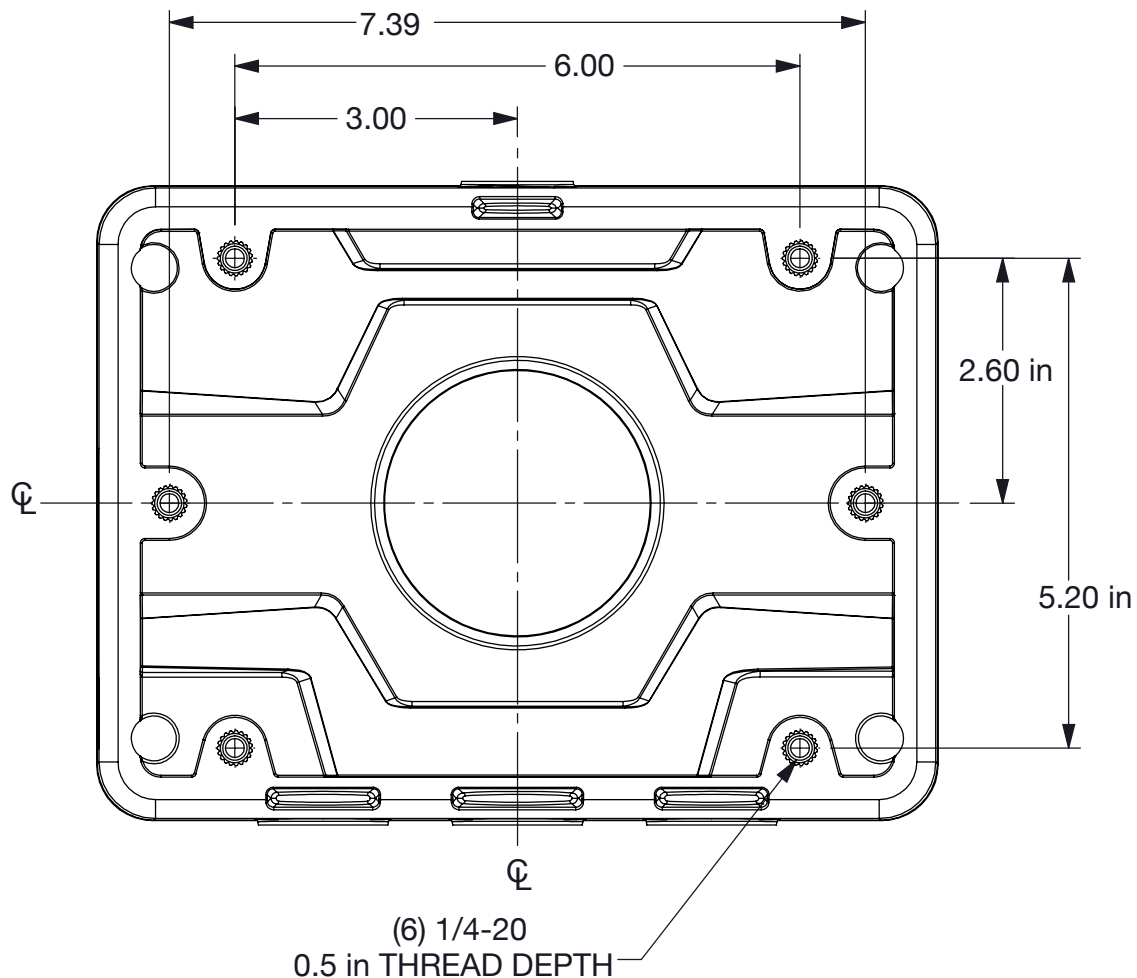
Opening the Housing

Tools required:

• 3/8-inch socket

• 6-inch extension

To open the housing, loosen the four cover screws while supporting the housing so it does not fall. (The cover screws are retained in the housing.) The front of the unit is heavy, but it is attached to the rear housing with a pivot hinge to allow ease of service. If the unit requires service, replace the front housing, amplifier, and power supply (if equipped) as an entire unit.

Figure 12 Opening speaker

Cover Screws
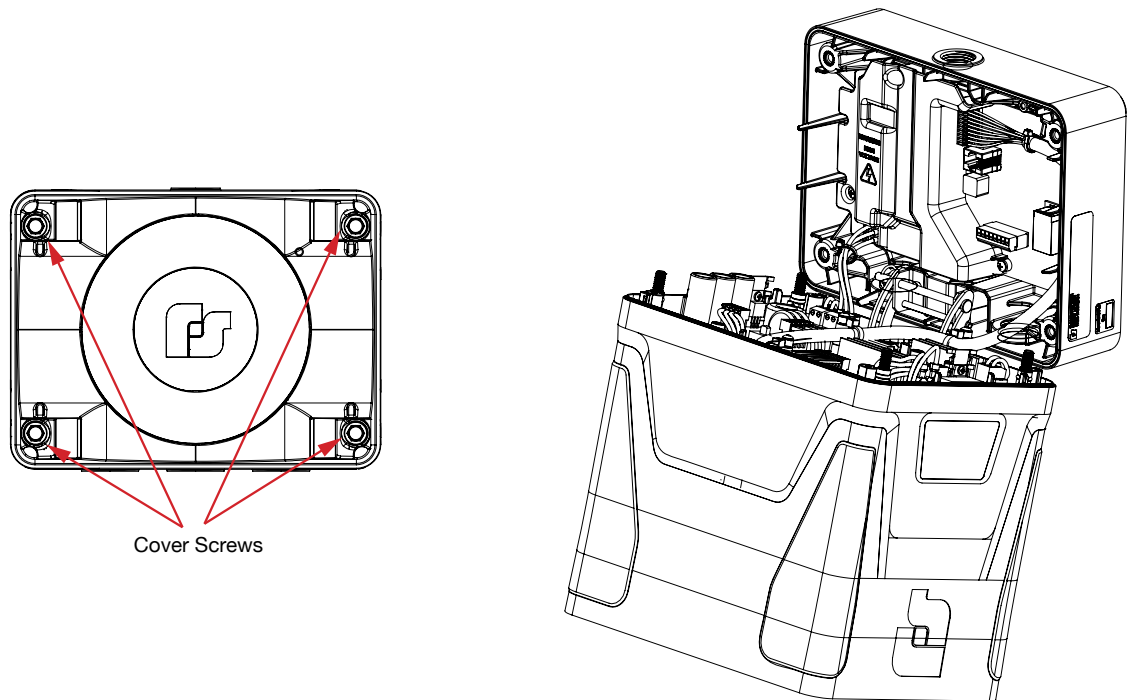
Wiring Power to the Control Board

JP6, JP7, JP8, and JP9 are all connected in parallel. Federal Signal recommends using JP8 as the AC or DC input to allow room for wires coming in from the 3/4-inch NPT opening. When power is supplied to JP8, it is connected through the PCB to the other three connectors. If a connector is not being used, it is recommended to leave the connector on the PCB. With I-IP100AC units, JP9 is wired from the factory to the power supply PCB. With the I-IP100DC units, JP9 is wired to the amplifier PCB. Use JP6 and JP7 to wire external lights or strobes through JP4. A typical installation would use voltage to be wired through the JP4 relays contacts or solid-state relay outputs.

NOTE: Current draw from JP6, JP7, and JP4 must not exceed 8.5 amperes AC or 5.0 ampere DC Max Combined Load.

I-IP100DC 24Vdc Model

- JP4 is used for relay 1 (pins 1 and 2) and provides an interface for DC powered strobes using (pins 3 and 4).

- JP6 and JP7 can be used for access to 24 Vdc to power strobes or other external equipment.

- JP8 is used for incoming +24 Vdc power.

- JP9 is prewired to the amplifier.

- JP14 can be used to add additional amplified speakers.

Figure 13 DC Controller Board
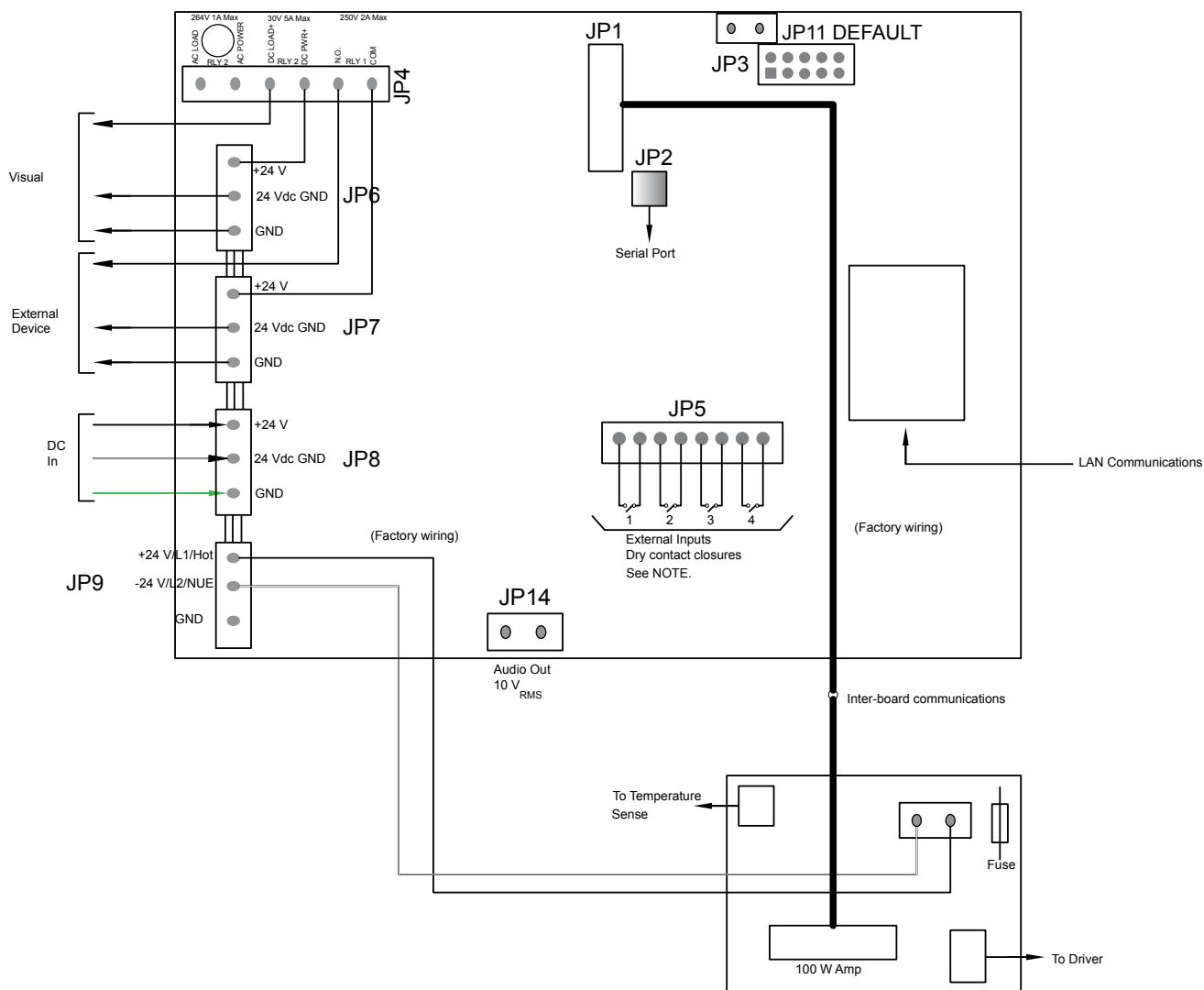
I-IP100AC 120/240 Vac Model

- JP4 is used for relay 1 (pins 1 and 2) and provides an interface for AC powered strobes using (pins 5 and 6).

- JP6 and JP7 can be used for access to 120 or 240 Vac to power strobes or other external equipment.

- JP8 is used for incoming AC power. Verify switch on the power supply is set correctly.

- JP9 is prewired to the power supply.

- JP14 can be used to add additional amplified speakers.

Figure 14 AC Controller Board

Informer100 Speaker (Models I-IP100AC and I-IP100DC Series C)
Federal Signal *www.fedsig.com*
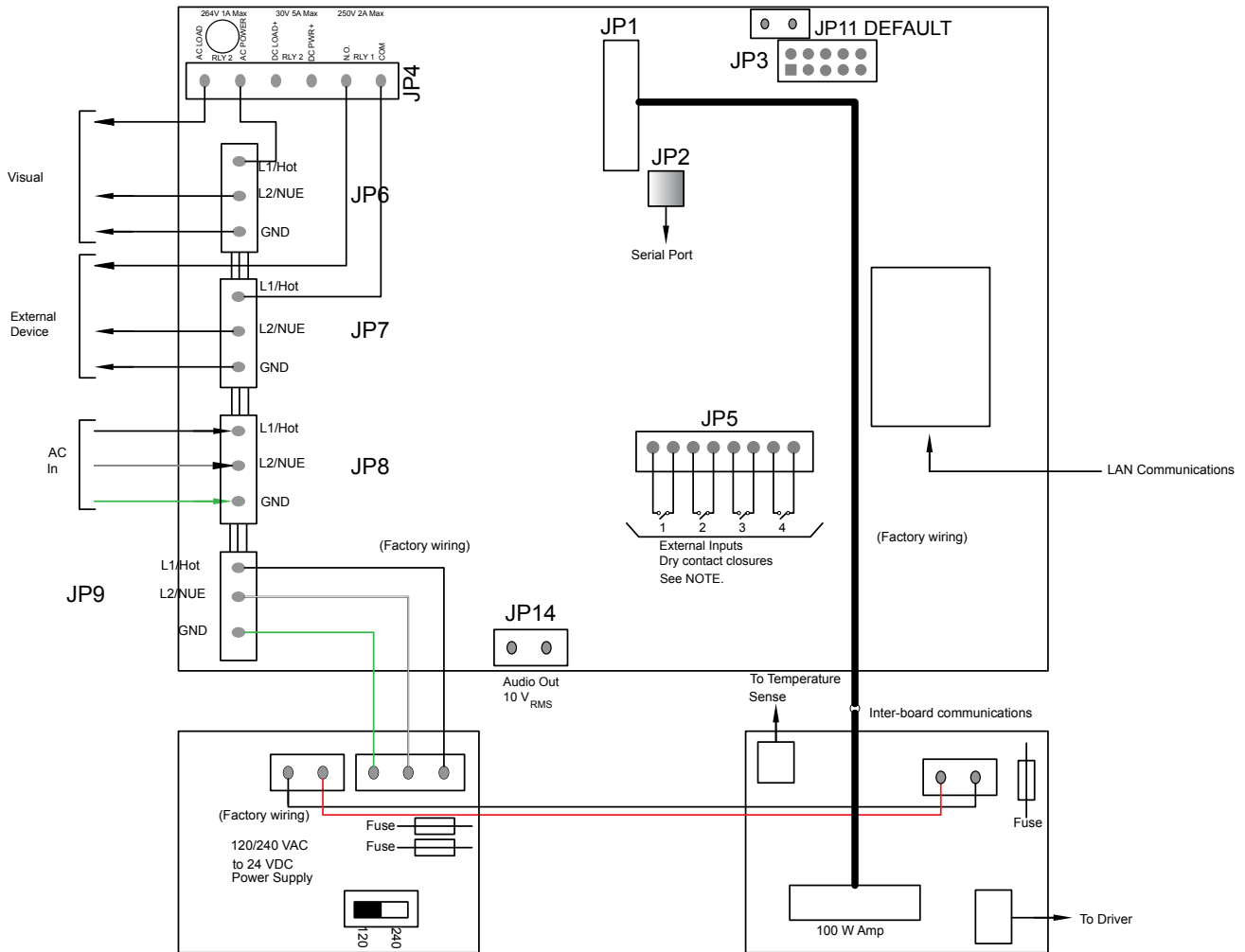
Wiring to the Relay/Electronic Outputs

JP4 – Relay Outputs

1 and 2 mechanical relay Normally Open.

3 – DC solid-state relay, (+) DC power.

4 – DC solid-state relay, Switched (+) DC power to strobe or light.

5 – AC solid-state relay power

6 – AC solid-state relay load

Wiring to the Alarm Initiation Input Connections

The Alarm Initiation Inputs are activated by shorting the input to the ISO-GND next to it, usually through a normally open switch or normally open dry relay contact.

NOTE: Momentary mode: contact closure sounds alarm for the typical programmed duration. Continuous mode: sounds alarm for the duration of the closure. The system can also be configured to allow activation from normally closed contacts.

Table 7 Alarm Initiation Inputs (JP5)

Alarm Initiation Inputs (JP5)	1	2	3	4
Isolated Ground	Pin 1	Pin 3	Pin 5	Pin 7
Input	Pin 2	Pin 4	Pin 6	Pin 8

Using Optional Warning Lights

Warning lights, such as strobes, often have a high inrush current that may damage mechanical relays. A solid-state relay has been implemented to handle these high input current devices. Use the DC solid-state relay for DC warning lights (pins 3 and 4 of JP4). See "Figure 13 DC Controller Board" on page 23. Use the AC solid-state relay for AC warning lights (pins 5 and 6 of JP4). See "Figure 14 AC Controller Board" on page 24. An external current-limiting resistor is not required with the solid-state relay.
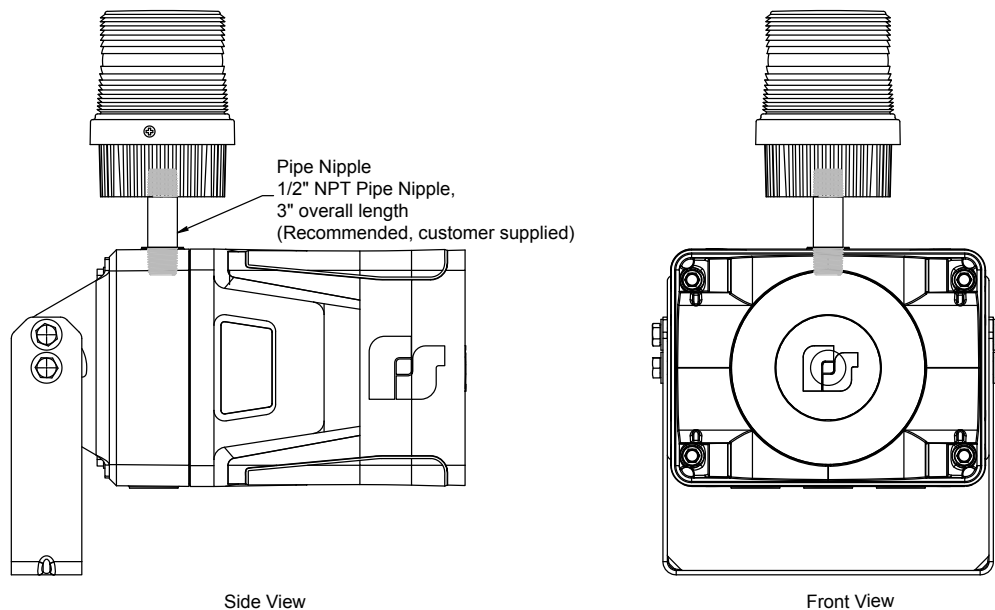
See the following list of Federal Signal DC powered warning lights that may be controlled by the IP100:

- 121A Vitalite® Rotating Warning Light

- 121X Explosion-Proof Rotating Light

- 191XL Hazardous Location Division Listed LED Warning Light

- FB2LED Fireball® LED Warning Light

- FB2LEDX Fireball Hazardous Location LED Warning Light

- 225XL Electraray® Hazardous Location LED Flashing Warning Light

- FB2PST Fireball Strobe Warning Light

- 225XST and 225XST-I Electraray Hazardous Location Strobe Warning Light

- 151XST Hazardous Location Warning Light

See the following list of Federal Signal AC powered warning lights that may be controlled by the IP100:

- 121S Vitalite® Rotating Warning Light

- 225 Electraray® Rotating Warning Light

- 225X Electraray® Hazardous Location Rotating Warning Light

- 371LED Commander® LED Rotating Warning Beacons

- 371LEDX Hazardous Location Commander® LED

- FB2LED Fireball® LED Warning Light

- FB2LEDX Fireball Hazardous Location LED Warning Light

- 191XL Hazardous Location Division Listed LED Warning Light

- 225XL Electraray® Hazardous Location LED Flashing Warning Light

- FB2PST Fireball Strobe Warning Light

- 225XST and 225XST-I Electraray® Hazardous Location Strobe Warning Light

- 151XST Hazardous Location Warning Light

Figure 15 FB2PST Strobe with Informer100 Speaker

Pipe Nipple
1/2" NPT Pipe Nipple,
3" overall length
(Recommended, customer supplied)

Side View   Front View

For a FB2PST Strobe, the following is recommended (customer supplied): 1/2-inch NPT Pipe Nipple (3 inches overall length).

Figure 16 151XST Strobe with Informer100 Speaker

3/4" NPT Pipe Nipple
3/4" NPT to 1/2" NPT Reducer,
1/2" NPT Pipe Nipple,
3" overall length
(Recommended, customer supplied)

Side View

Front View
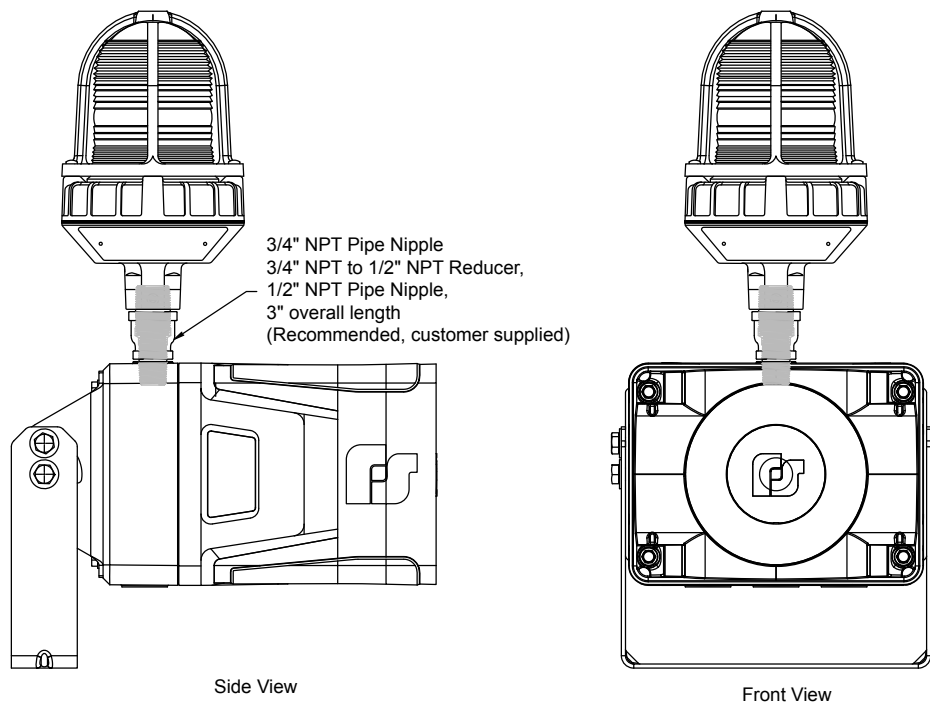
For a 151XST Strobe, the following is recommended (customer supplied):

• 1/2-inch NPT Pipe Nipple

• 3/4- to 1/2-inch NPT Reducer

• 3/4-inch NPT Pipe Nipple (3 inches overall length)

Figure 17 225XST/225XL Strobe with Informer100 Speaker

Pipe Nipple
1/2" NPT
3" overall length
(Recommended, customer supplied)

Side View

Front View
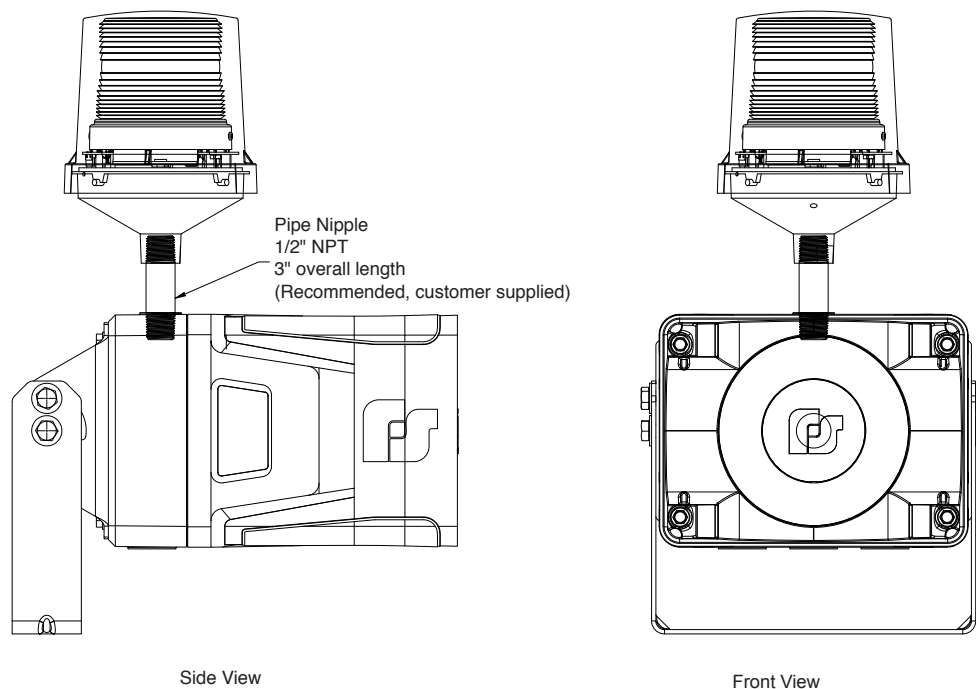
For a 225XST/225XL Strobe, the following is recommended (customer supplied): 1/2-inch NPT Pipe Nipple (3 inches overall length).

Ethernet Port

The Informer100 Speaker has an eight-pin Ethernet port for connecting to the network. Ethernet wire runs must be less than 328 feet from the nearest network switch. Do not install in a conduit carrying high voltage. The wired Ethernet port auto-negotiates a 10/100, full or half-duplex connection.

Relay Outputs

The Informer100 Speaker has two independently programmable relay outputs. Programming for relay output 1 operates the mechanical relay. Programming for relay output 2 operates both the DC solid-state relay and the AC solid-state relay. Configure the relay outputs by either using the Informer100 web pages or the Commander® software application.

The relay outputs are capable of controlling external devices. The outputs are located at pins 1 and 2, pins 3 and 4, and pins 5 and 6 of the removable output connector JP4 on the controller board. The outputs can be wired in series with the power wired into the unit by using the power connections available on JP6 and JP7, providing switched AC or DC power to activate other devices.

Do not exceed the voltage and current ratings listed in the specifications section of this manual. When using this feature, the relay outputs turn on until one of the following occurs:

- The programmed default timeout occurs

- The CANCEL or RESET command is received

You can individually configure the relay outputs to open, close, and cycle based on a pre-programmed sequence. Relays can also be configured to turn on when PA VOIP is active.

Configuring the Speaker

Perform Informer100 Speaker configuration before installing. See the Informer-IP Series C Setup, Program, and User Manual (part number 25500395) to learn how to set up, configure, program, and use Informer-IP devices.

Closing the Housing

To close the housing:

1. Verify that the cover gasket is in the groove around the perimeter of the rear cover.

2. If the front of the unit was removed, lift the front of the Informer100 to allow the hinge pin to be installed, align the front unit with the rear cover and attach the hinge pin with a retaining clip.

3. Attach the cable between the amplifier and rear cover IP PCB. Secure the cable using the two screw-down cable ties inside the rear cover.

4. On IP-100AC—Attach the power cable from the rear cover IP PCB to the power supply.
   On IP-100DC—Attach the power cable from the rear cover IP PCB to the amplifier.

5. Turn on the power to verify that the lights on the IP PCB are functioning. If the environment does not allow powering, proceed to the next step.

6. Verify all connectors are seated. Also verify wires are not strained and are not impeding the ability to close the unit.

7. Lift the front of the unit and seat the front cover against the rear enclosure.

8. Tighten the cover screws hand tight, and then torque them in an alternate pattern to 60 in-lb +/- 10 in-lb.

Applications

The following section describes two applications for the Informer100 when connected to another Federal Signal speaker.

Configuring the Informer100 with the DS100 (120 VAC)

To create a multi-directional system, connect the Informer100 with up to three DS100s to use the features of the controlling speaker (Informer100), such as prerecorded voice messages and live PA, through the DS100s. See "Figure 20 Informer100 Connected to Three DS100s (120 VAC) Wiring Diagram" on page 33.

Wiring Power to the Interconnect Board

AC power is brought over from the controlling speaker to the DS100. The power passes to JP5 to connect to an additional DS100.

IMPORTANT: The total AC current draw from the controlling speaker should not exceed 8.5 amperes. This is the AC for powering the speaker.

To wire power to the DS100:

1. Bring AC power from JP8 on the Informer100 to JP4 on the DS100's Interconnect Board. The power passes to JP5.

2. Connect JP5 to the next DS100 at JP4.

3. JP6 on the Interconnect Board connects to the DS100's Power Supply Board.

Wiring AC to the Interconnect Board

To wire AC between the DS100s, connect from JP5 on the DS100 to JP4 on the next DS100.

Wiring Audio to the Amplifier Board

Audio from JP14 on the Informer100 controller board is brought to JP3 on the DS100 amplifier board. JP3, on the amplifier board, connects to JP7, which can be connected to additional DS100s.

To wire audio to the DS100:

1. Ensure all audio potentiometers are set to the max by default on both the Informer100 and DS100s by turning the post of the potentiometer all the way up (fully clockwise).

2. Ensure that the jumper JP5 on the DS100 Amplifier Board is set to the 10 V_{RMS} position to make it compatible with the Informer100 audio output. The Informer100 outputs a 10 V_{RMS} signal.

3. Connect JP14 on the Informer100 to JP3 on the DS100's Amplifier Board.

4. Connect JP7 on the DS100's Amplifier Board to the next DS100 at JP3.

Figure 18 DS100 Amplifier Board
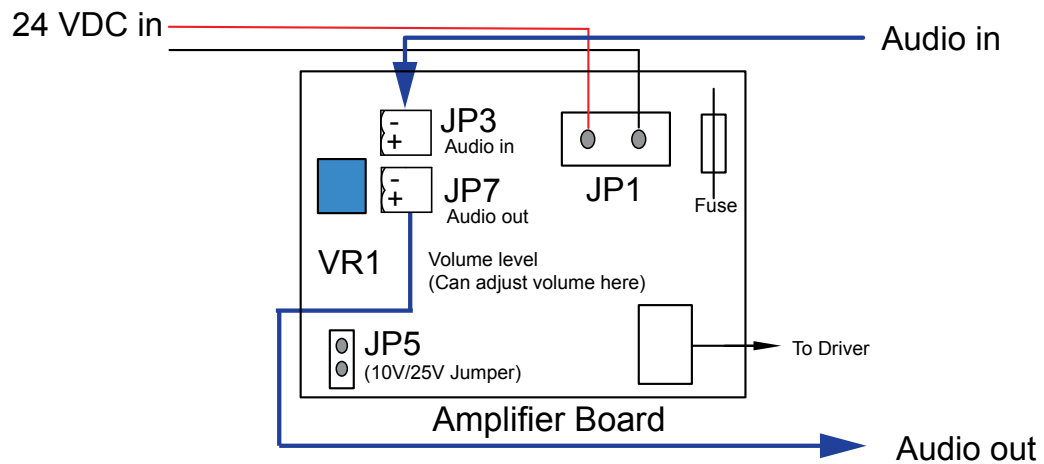
## Wiring Relays to the Interconnect Board

Relay outputs from the Informer100 are connected to JP1 on the Interconnect Board on the DS100. They pass on to JP2 and can be connected to an additional DS100. You can attach a light to the DS100 and connect it to one of the four relay outputs on JP3. Each relay output can handle a maximum total load of 1 ampere.

To wire relays to the DS100:

1. Connect the relay on the Informer100 to JP1 on the DS100's Interconnect Board. They pass on to JP2 and can be connected to an additional DS100.

2. Connect JP2 on the DS100's Interconnect Board to the next DS100 at JP1.

The following is an example of how to configure the DS100 with the Informer100.

Figure 19 Configuration Examples of DS100s with a Informer100
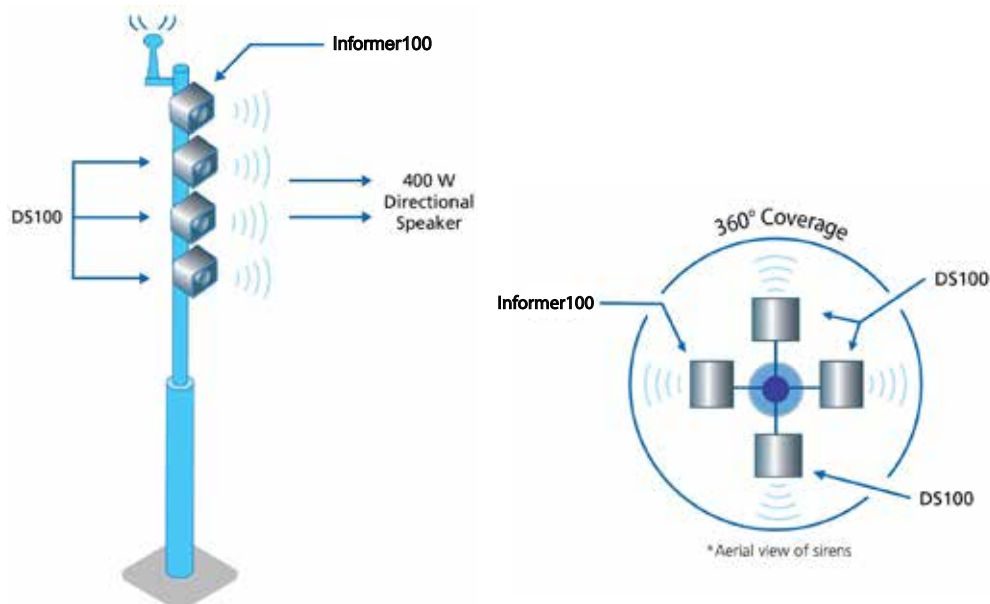
Configuring the Informer100 with the DS100 (24 VDC)

To create a multi-directional system, connect the Informer100 with up to three DS100s to use the features of the controlling speaker (Informer100), such as prerecorded voice messages and live PA, through the DS100s. See "Figure 21 Informer100 Connected to Three DS100s (24 VDC) Wiring Diagram" on page 34. For a list of options lights, see "Using Optional Warning Lights" on page 25.

Wiring Power to the Interconnect Board

To wire power to the DS100s:

1. Disconnect and remove the wires that connect the power supply board to the Amplifier Board.

2. Bring DC power from an outside source into JP1 on the Amplifier Board.

3. Wire to JP1 on the DS100's Amplifier Board.

4. Connect JP1 to the next board.

Wiring Audio to the Amplifier Board

Audio is brought over from JP14 on the Informer100 to JP3 on the Amplifier board. Audio comes back out of the Amplifier Board on JP7 and can be connected to an additional DS100.

Audio is brought over from JP4 on the Informer100 to JP3 on the Amplifier board.

To wire audio to the DS100:

1. Ensure all audio potentiometers are set to the max by default on both the Informer100 and DS100s by turning the post of the potentiometer all the way up (fully clockwise).

2. Ensure that the jumper JP5 on the DS100 Amplifier Board is set to the 10 V_{RMS} position to make it compatible with the Informer100 audio output. The Informer100 outputs a 10 V_{RMS} signal.

3. Connect JP14 on the Informer100 to JP3 on the DS100's Amplifier Board.

4. Connect JP7 on the DS100's Amplifier Board to the next DS100 at JP3.

You can attach a light to the Informer100 at JP4.

Ordering Replacement Parts

To order replacement parts, call Customer Care. See Getting Service.

Table 8 Replacement Parts

Description	Part Number
Service Kit, 20000314-01 PCBA Includes: IP Control PCB Only	Q-20000314-01
Service Kit, IP100, AC Model Includes: Assembled front housing, driver, power supply, and amplifier	Q-IP100AC
Service Kit, IP100, DC Model Includes: Assembled front housing, driver, and amplifier	Q-IP100DC
Service Part Fuse 2 per AC unit Bussman part – GDC-3.15A Littlefuse part p 2183.15HXP	K148186A-01
Service Part 1 per Amplifier Littlefuse part 0297010.wxnv	Not Available through Federal Signal

Getting Service

If you are experiencing any difficulties, contact Federal Signal Customer Support at 800-548-7229 or 708-534-3400 extension 7511 or Technical Support at 800-524-3021 or 708-534-3400 extension 7329 or through e-mail at techsupport@fedsig.com. For instruction manuals and information on related products, visit: http://www.fedsig.com.

Appendix A Wiring Diagrams

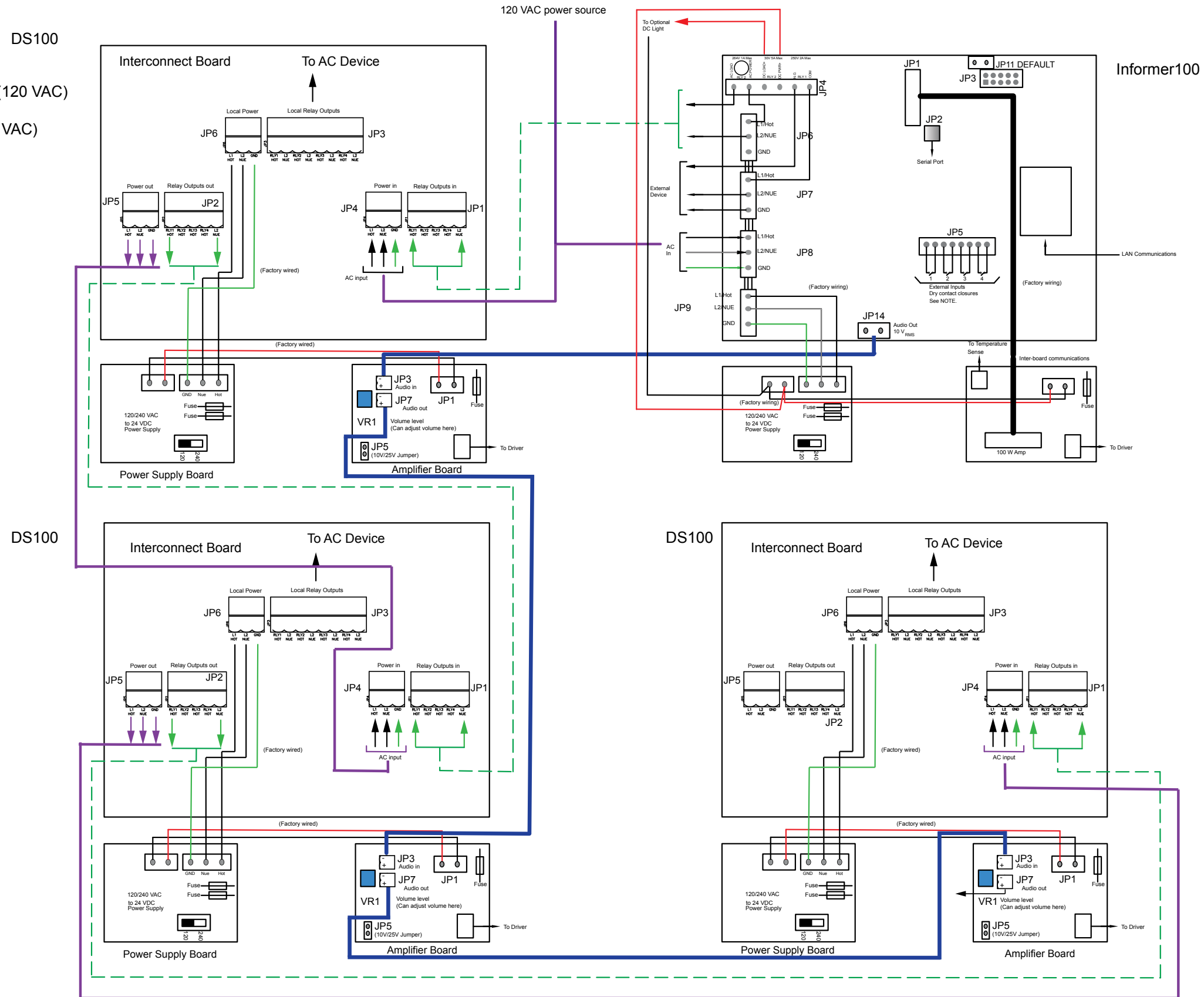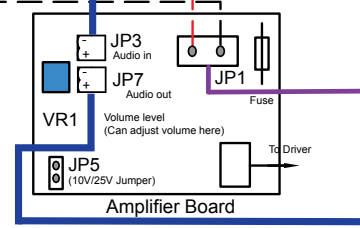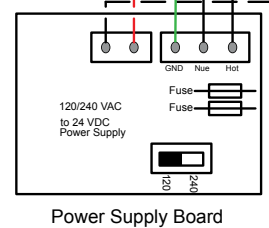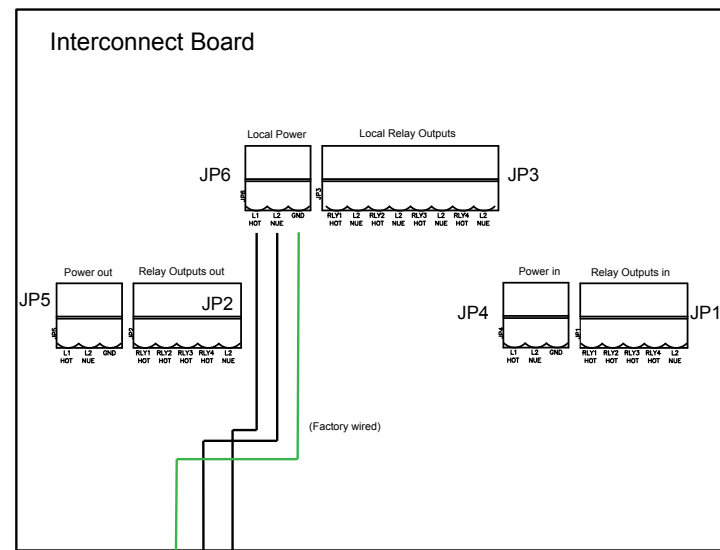## Figure 20 Informer100 Connected to Three DS100s (120 VAC) Wiring Diagram

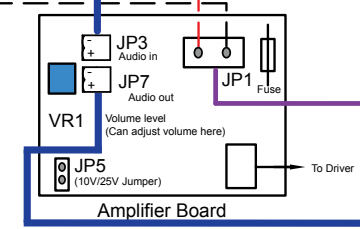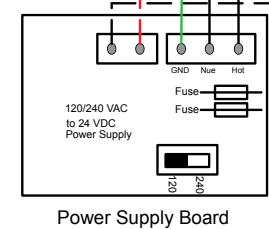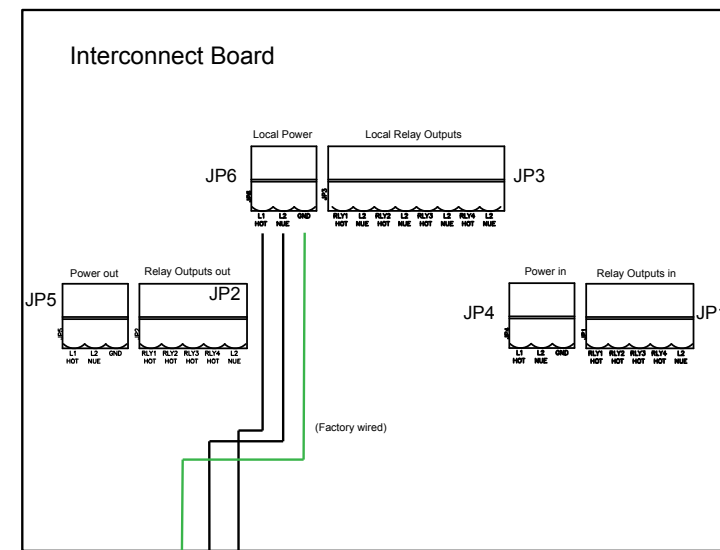**Figure 21 Informer100 Connected to Three DS100s (24 VDC) Wiring Diagram**