Features

Add digital voice message capability to non-voice fire alarm control panels:

- **Remote booster amplifiers** are available to expand coverage area or extend to multiple notification areas
- **Activate up to 8 separate messages** by direct connection to fire alarm control panel NACs using the NAC Interface Module option, or via supervised connection to relay contact closures
- **4003EC Voice Control Panel status** (alarm, system trouble, or separate AC trouble) is via isolated contact closure allowing compatibility with a wide range of Simplex brand and other fire alarm systems
- **Multiple 4003EC control panels** can be interconnected for system-wide Emergency Communication Systems (ECS)/Mass Notification Systems (MNS) message control using Simplex® fire alarm Network node products
- **Broadcast live messages** using the internal microphone or by using a remote microphone; up to 18 remote microphones are supported for compatibility with UFC 4-021-01 (Unified Facilities Criteria) requirements
- **Select from 8 digitally pre-recorded messages** using the control panel switches or controlled from the fire alarm control panel; select a pre-tone and include a post tone if desired
- **Custom messages can be ordered** separately (as custom chip sets), or recorded directly at the panel (requires external equipment – new messages override standard messages)

4003EC control panel details:

- **Efficient Class D amplifier** design provides 40 W @ 25 or 70.7 VRMS with power-limited output
- **One general alarm Class B audio NAC** rated at 40 W; can be optionally expanded to 4, Class B NACs or 2, Class A NACs using a Class A/B Splitter
- **One general alarm Class B, 2 A strobe NAC** with strobe output formatted to synchronize either Simplex or Cooper Notification (Wheelock) strobes (not mixed)
- **Internal push-to-talk microphone** and individual manual tone/message controls for convenient operator control
- **Strobe circuit activation** is DIP switch selectable for each recorded message, for microphone use, and for Auxiliary input
- **Multiple connections are available** for auxiliary output power, 24 VDC, 1/2 A maximum
- **Internal battery charger** for up to 12 Ah batteries in cabinet or up to 33 Ah batteries in a separate cabinet
- **Removable terminal blocks** for easy wiring
- **Beige or red cabinet** for surface mounting
- **ULC listed** models include low battery cutoff board

Remote booster amplifier details:

- **Remote booster amplifiers** are available with 80 W (with 2, 2 A strobe circuits), 160 W, and 320 W; each has an efficient Class D amplifier design

Remote booster amplifier details (Continued):

- **Wiring options allow limited or detailed control** with respect to AC power failure and non-fire alarm operation modes
- **Wiring options allow control of non-alarm audio output** when on battery standby and selection of monitoring main trouble contacts or AC trouble contacts
- **Booster amplifiers support local connection** of general paging microphones
- **Removable terminal blocks** for easy wiring
- **Beige or red cabinet** for surface mounting
- **ULC listed** models include low battery cutoff board

Additional optional features:

- **Upgrade kit to support ten minute message timeout feature**, for compatibility with the audible message timeout specifications in UFC 4-021-01
- **Supervised remote microphones** with key switch control, beige or red for alarm paging, black for general paging
- **Local Operating Console (LOC)** providing enclosed microphone and switch control for the 8 panel messages; meets UFC 4-021-01 requirements for local control
- **Application Note**: For control from a Wide Area Notification System, connect audio (1 VRMS, 600Ω) and contact closure wiring to an available input port on a 4003-9834 Remote Microphone Expansion Module
- **Four circuit NAC module**, Class A or Class B for boasters or control panel allows zone wiring separation
- **Extensive non-fire alarm features** are available for night ringer tone activation, telephone page input, and background music
- **Non-fire alarm paging** includes zone control and zone volume adjustments that are bypassed when the panel is in alarm mode
- **Models are available** for 120 or 240 VAC input

* Refer to page 4 for CSFM models listed by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 6911-0026:332 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. This product was tested and approved by FM Approvals against both standard FM testing referenced to NFPA 72, and ANSI/UL Standard 864, 9th Edition. Additional listings may be applicable, contact your local Simplex product supplier for the latest status.
Introduction

When non-voice fire alarm control panels require the addition of voice and tone generation, Simplex 4003EC Emergency Communications Voice Control Panels conveniently supply an extensive feature list. Available equipment includes up to 18 remote microphones, up to 5000 W of distributed remote booster amplifiers, and extensive non-fire alarm general paging controls

Manual Operation requires opening the locked 4003EC cabinet door to access the 8 message selection switches, the local microphone, and status indicator LEDs. Control of Remote Microphones is secured by use of a key switch (refer to remote microphone illustrations on page 6).

Typical applications:
- Compatibility with UFC (Unified Facilities Criteria) requirements for Mass Notification systems for Army and Air Force requiring an LOC within 200 ft (61 m) horizontally of travel and no travel vertically to reach an LOC within a building; the Navy and Marines only require a single LOC per structure (refer to UFC 4-021-01, 9 April, 2008 for details)
- Add audio operations to existing fire alarm control panels or non-audio panels
- Connect to fire alarm Network using the Network System Integrator (NSI) to provide network control of a remote audio panel
- Allows the fire alarm Network to take control for Emergency Communications messages
- Use of non-emergency operations is suspended during battery standby operation and is overridden during emergency conditions

4003EC Voice Control Module Features

Selection of pre- and post audio tones. Pre-message tones can be selected and if desired, the same tone can also be selected as a post message tone. Tones are switch selected on-board and assigned per message pairs: IN1 and IN2 message will have the same tone, IN3 and IN4 message will have the same tone, etc.

Available tones:
- Temporal Pattern Bell; a digitally recorded mechanical bell sound
- Temporal Pattern Horn; 500 Hz tone
- Slow Whoop, a slowly ascending tone
- Wail, ascends, then descends between 600 to 940 Hz
- Chime Tone
- Announcement Chime
- High/Low, with high frequency of 750 Hz for 100 ms and low frequency of 500 Hz for 400 ms
- GSA Tone, continuous 2000 Hz
- Fast Whoop, a quickly ascending tone
- Horn Tone at 120 beats per minute
- Horn Tone at 20 beats per minute
- Bell Tone at 60 beats per minute

Temporal Pattern evacuation signal reference: 1/2 sec on, 1/2 sec off, 1/2 sec on, 1/2 sec off, 1/2 sec on, 1-1/2 sec off.

Standard Messages and Input Priority List (custom messages and priorities are available, see Note below)

<table>
<thead>
<tr>
<th>Priority</th>
<th>Input</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Panel push-to-talk microphone for on-site messages</td>
</tr>
<tr>
<td>2</td>
<td>Auxiliary input from one, or multiple remote microphones; or from a separate audio input with voltage selectable as: 1, 25, or 70.7 VRMS; NOTE: Multiple microphones require use of 4003-9834 Microphone Expansion Modules and each remote microphone input is prioritized by electrical wiring sequence. Operation also requires a separate contact closure to enable the Auxiliary input.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Message</th>
<th>Priority</th>
<th>Message Type</th>
<th>Voice</th>
<th>Message</th>
</tr>
</thead>
<tbody>
<tr>
<td>IN1</td>
<td>3</td>
<td>Fire</td>
<td>Male</td>
<td>&quot;Attention! Attention! Attention! This is a fire alarm. Exit the building.&quot;</td>
</tr>
<tr>
<td>IN2</td>
<td>4</td>
<td>Hostile Intruder</td>
<td>Male</td>
<td>&quot;Attention! Attention! Attention! There is an armed intruder in the building. Immediately take cover.&quot;</td>
</tr>
<tr>
<td>IN3</td>
<td>5</td>
<td>Bomb Threat</td>
<td>Male</td>
<td>&quot;We have received a bomb threat. The police have been notified and we are conducting a search of the building perimeter. Please standby for further information.&quot;</td>
</tr>
<tr>
<td>IN4</td>
<td>6</td>
<td>Weather/Shelter</td>
<td>Male</td>
<td>&quot;A severe weather condition has been reported. Please go directly to the nearest shelter area and wait for further instructions.&quot;</td>
</tr>
<tr>
<td>IN5</td>
<td>7</td>
<td>Weather</td>
<td>Male</td>
<td>&quot;Attention please! Severe weather has been reported in the vicinity. Please proceed to a designated shelter area.&quot;</td>
</tr>
<tr>
<td>IN6</td>
<td>8</td>
<td>Alert</td>
<td>Male</td>
<td>&quot;Attention! Attention! Attention! We have been alerted to a possible emergency situation. Please stay alert and you will be advised if emergency action is required.&quot;</td>
</tr>
<tr>
<td>IN7</td>
<td>9</td>
<td>Drill</td>
<td>Male</td>
<td>&quot;This is a drill. This is a drill. This is a drill. This is a building emergency drill. Walk to the nearest exit and vacate the building.&quot;</td>
</tr>
<tr>
<td>IN8</td>
<td>10</td>
<td>All Clear</td>
<td>Male</td>
<td>&quot;Attention! Your attention please! The building emergency condition has been cleared. You may return to normal activities.&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Priority</th>
<th>Non-Alarm Signal Inputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Night Ring, contact closure plays bell tone to alert facility personnel of doorbell ringing, etc.</td>
</tr>
<tr>
<td>12</td>
<td>Telephone input, requires telephone page port, voice activated switch allows facility paging</td>
</tr>
<tr>
<td>13</td>
<td>Background Music (BGM), requires a line level input signal</td>
</tr>
</tbody>
</table>

NOTE: When the system is being used as an Emergency Communications System (ECS) or a Mass Notification System (MNS), ECS or MNS messaging may take precedence over Fire Alarm Activation whether new or in process.
Custom Digitally Recorded Messages

- Messages can be reproduced from high quality customer supplied audio (professionally recorded to customer requirements) or selected from the archived message library
- To order Custom Messages, provide a CD or tape as appropriate; a completed custom message questionnaire; and include an English language transcript (Internal Order Processing Note: Document this information using the FASTool configurator)
- If supplied via CD, provide a WAV file format with 44,100 HZ and 16 bit mono (contact your local Simplex product representative for details)
- Custom messages can be recorded at the control panel; (locally recorded messages overwrite the pre-recorded messages and external equipment is required)

Ten Minute Message Timeout Feature

- Upgrade kit allows 4003EC panel to be upgraded to support 10 minute message timeout feature
- Provides automatic deactivation of audible Fire and MNS digital voice (DV) messages after 10 minutes for inputs 1 – 6; DV messages 7 and 8 do not automatically timeout
- Message activation is initiated manually by push button or via remote contact closure
- Message LED blinks to indicate timeout status; timing is extended if message is reactivated by either control
- Message priorities remain in effect

Non-Fire Alarm Operation Features

- Addressable Paging Splitters (Model 4003-9845) allow non-Alarm paging to be routed to zones as desired
- Supervised Volume Controls (Model 4003-9848) allow non-Alarm paging and background music local volumes to be adjusted as desired; during alarm conditions the volume controls are bypassed (Note: This is not a Non-Fire feature, it was specifically developed for Fire/ECS/MNS Applications)
- Telephone Zone Controller (Model 4003-9835) allows phone control selection of zones for background music or paging
- Night ringer (telephone) and security alert modes allow the 4003EC panel to provide system tones alerting of non-alarm conditions needing attention
- In night ringer mode, an externally mounted switch (such as a doorbell switch) can allow creation of a specific tone to alert a security guard who may not be in normal hearing range of the daytime doorbell sound

Power Supply/Battery Charger Features

- Charges up to 33 Ah batteries; up to 12 Ah batteries for cabinet mounting, larger batteries are housed in a separate close-nippled battery cabinet
- Green power-on LED, yellow trouble LED
- Earth fault detection; battery supervision circuitry; power loss, and brownout voltage supervision
### 4003EC Product Selection

#### Control Panels (* = CSFM listed models)

<table>
<thead>
<tr>
<th>Model</th>
<th>Cabinet/Listing</th>
<th>Input Voltage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003-9301</td>
<td>Beige</td>
<td>120 VAC, 60 Hz</td>
<td>Emergency Communications Voice Control Panel with internal user control panel and microphone, 40 W Class D amplifier with one audio NAC standard, internal power supply/battery charger</td>
</tr>
<tr>
<td>4003-9302*</td>
<td>Red</td>
<td>120 VAC, 60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9303</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9304</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
</tbody>
</table>

#### Remote Booster Amplifiers (* = CSFM listed models)

<table>
<thead>
<tr>
<th>Model</th>
<th>Cabinet/Listing</th>
<th>Input Voltage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003-9810</td>
<td>Beige</td>
<td>120 VAC, 60 Hz</td>
<td>80 Watt Remote Booster Amplifier with strobe power (APB/80); provides one 80 W audio NAC and two 2 A strobe NACs; accepts one 4003-9840 Class A/B Splitter (audio NAC expansion module); efficient Class D amplifier design</td>
</tr>
<tr>
<td>4003-9811*</td>
<td>Red</td>
<td>120 VAC, 60 Hz</td>
<td>160 Watt Remote Booster Amplifier (APB/160); provides two 80 W audio NACs; allows up to two 4003-9840 Class A/B Splitters; (no strobe power); efficient Class D amplifier design</td>
</tr>
<tr>
<td>4003-9812</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9813</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9814</td>
<td>Beige</td>
<td>120 VAC, 60 Hz</td>
<td>320 Watt Remote Booster Amplifier (APB/320); provides four 80 W audio NACs; allows up to four 4003-9840 Class A/B Splitters; (no strobe power); contains dual power supplies, dual 160 W amplifiers, and requires dual battery sets (4, 12 V batteries); efficient Class D amplifier design</td>
</tr>
<tr>
<td>4003-9815*</td>
<td>Red</td>
<td>120 VAC, 60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9816</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9817*</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9818</td>
<td>Beige</td>
<td>120 VAC, 60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9819*</td>
<td>Red</td>
<td>120 VAC, 60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9820</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>4003-9821</td>
<td>Beige</td>
<td>240 VAC, 50/60 Hz</td>
<td></td>
</tr>
</tbody>
</table>

#### Remote Microphone Controls and Associated Equipment (* = CSFM listed models)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003-9830</td>
<td>Surface mount Local Operator Console (LOC) with built-in Remote Microphone Control; in white cabinet</td>
</tr>
<tr>
<td>4003-9831</td>
<td>Flush mount Local Operator Console (LOC) HVAC Emergency Shut Off Kit; field installed behind door of either 4003-9830 or 4003-9831; red emergency shutoff button, push to activate; rated 3 A @ 240 VAC</td>
</tr>
<tr>
<td>4003-9832</td>
<td>Beige 4003-9833* (Red) Remote Microphone Control (RM), for fire alarm paging (see diagram on page 6)</td>
</tr>
<tr>
<td>4003-9842*</td>
<td>Remote Non-Alarm Microphone Control (RM-GP) black mounting plate, connects at Remote Booster and is for general paging through that booster only</td>
</tr>
<tr>
<td>4003-9834*</td>
<td>Remote Microphone Expansion Module (RMX) in black cabinet; expands panel remote microphone output to three (3); up to 6 RMX modules can be connected for a total of 18 remote microphones per system; (NOTE: Only one 4003EC system microphone can page at time, priority of RMX connected microphones is determined by wiring location); dimensions = 13” H x 7-3/4” W x 2-1/8” D (330 mm x 197 mm x 54 mm)</td>
</tr>
</tbody>
</table>

#### 4003EC Accessories (* = CSFM listed models)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003-9840*</td>
<td>Class A/B Splitter (SP4Z-A/B), audio NAC expansion module, 4 Class B zones or 2 Class A zones; requires one dedicated NAC input; rated 40 W output maximum per zone (Class A or Class B operation); requires 4003-9841 mounting bracket when mounted in booster cabinet; module dimensions = 4-1/2” H x 5-1/2” W x 1-1/2” D (114 mm x 140 mm x 38 mm)</td>
</tr>
<tr>
<td>4003-9841*</td>
<td>Mounting bracket for (2), 4003-9840 or (2) 4003-9845 Splitters; required when splitter is mounted in an 80, 160, or 320 W booster amplifier cabinet; not required when mounting splitter in the control panel</td>
</tr>
<tr>
<td>4003-9845</td>
<td>NAC Interface Module (NACIM); converts one NAC input to one contact closure for activating messages; one required per message to be activated; mounts in the 4003EC control panel; 4 maximum; dimensions = 2-1/2” H x 1-1/4” W x 1/2” D (64 mm x 32 mm x 13 mm)</td>
</tr>
<tr>
<td>4003-9851</td>
<td>End-of-Line Resistor Module Kit, quantity of 8, Agency listed: 10 kΩ, 1/2 W</td>
</tr>
<tr>
<td>4003-9860</td>
<td>Battery Cabinet, beige (cabinet only, for use with panel mounted charger); dimensions = 9-1/2” H x 24” W x 9” D (241 mm x 610 mm x 229 mm); Note: Battery Cabinet is available in red by special order (RPQ)</td>
</tr>
<tr>
<td>4003-9861</td>
<td>User Interface Chip Upgrade Kit for 10-Minute Message Timeout feature</td>
</tr>
<tr>
<td>4003-8801</td>
<td>Custom Message Ordering, select 4003-8801 and specify message type per the choices below: 4003-0204, from CD, 4003-0205, from transcript, 4003-0206, from message archive</td>
</tr>
<tr>
<td>4003-9836</td>
<td>Aftermarket Message Kit, 8 standard messages; (restores original messages if local changes are no longer wanted)</td>
</tr>
</tbody>
</table>

#### Non-Fire Alarm Accessories (* = CSFM listed models)

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003-9835</td>
<td>Telephone Zone Controller (TZC); use to select zones connected to background music and for general paging; cabinet: size = 13” H x 7-3/4” W x 2-1/8” D (330 mm x 197 mm x 54 mm)</td>
</tr>
<tr>
<td>4003-9847</td>
<td>Telephone Zone Controller Programming Cable; connects to service PC for programming selections</td>
</tr>
<tr>
<td>4003-9845*</td>
<td>Addressable Paging Splitter (SP4-APS); 4 Class B, or 2 Class A output zones, plus 2 Expansion outputs; allows Telephone Zone Controller to select non-alarm paging per zone; alarm paging connects to all zones; requires 4003-9841 bracket when mounted in booster cabinet; 80 W max. input, 40 W max. output per zone; (same size as 4003-9840 Class A/B Splitter)</td>
</tr>
<tr>
<td>4003-9848*</td>
<td>Supervised Volume Control Module (SP-SVC); for background music, disabled during alarm</td>
</tr>
<tr>
<td>4003-9843</td>
<td>CO Port Adapter (SP-COA); use to connect an unused CO Port (central office port) to the telephone input on the 4003EC panel; dimensions = 4-1/2” W x 5-1/2” H x 1-1/2” D (114 mm x 140 mm x 38 mm)</td>
</tr>
</tbody>
</table>
**System Interconnection Reference**

To one Remote Microphone, or to Microphone Expansion Module(s); maximum distance from Control Panel to any Microphone Expansion Module is 20 ft (6 m)

Maximum distance to Remote Microphone is 2000 ft (610 m)

Remote Microphone Controls (RM)
- 4003-9832 (beige)
- 4003-9833 (red) or Local Operator Consoles
  (Note: Additional Wiring is required for LOC Messaging Activation)

Optional 4003-9849 HVAC Cutoff Switch
(requires 2 additional wires)

Local Operating Consoles (LOC)
(Message control wiring to additional LOCs connects between LOCs)

6 wires to each remote microphone

16 wires to LOC(s) for message control

6 wires

To up to 3 additional remote microphones or LOCs maximum

To up to 6 total 4003-9834 Microphone Expansion Modules, total = 18 remote microphones or LOCs maximum

**NOTE:** Simplified one-line wiring is shown for reference only, refer to installation instructions for detailed wiring information.

Maximum system audio power is 5000 W.

**NOTE:** Locate close-nippled, within 20 ft (6 m), run wire in conduit

Typical Speaker and Strobe NACs

403-9840 Audio NAC Expander
(Class A/B Splitter); 2 Class A or 4 Class B NACs; one maximum
(see front view below)

40 W audio output, 25 or 70.7 VAC

Synchronized strobe NAC, 2 A total

4003-9834 Microphone Expansion Module (RMX)

4003EC Control Panel

4003-9834 Microphone Expansion Module (RMX)

4003EC Remote Amplifier, 80 W total

4003-9834 Microphone Expansion Module (RMX)

4003EC Remote Amplifier, 160 W total

4003-9834 Microphone Expansion Module (RMX)

4003EC Remote Amplifier, 320 W total

4003-9840 Audio NAC Expander

4003-9840, one maximum
(requires 4003-9841 bracket)

One, 80 W NAC

Two, 2 A strobe NACs

Remote Non-Alarm Microphone Control (RM-GP), 4003-9842 (black);
connects at Remote Booster and is for general paging through that booster only

4003-9840, two (2) maximum
(requires 4003-9841 bracket)

Two, 80 W NACs
(no strobe NACs)

4003-9840, four (4) maximum
(requires 4003-9841 bracket, two NAC modules per bracket)

Four, 80 W NACs
(no strobe NACs)

**NOTE:**

Connecting one Remote Microphone to a Microphone Expansion Module is not recommended.

The 4003-9834 Microphone Expansion Module is designed for Microphone Expansion only.

To one Remote Microphone, or to Microphone Expansion Module(s); maximum distance from Control Panel to any Microphone Expansion Module is 20 ft (6 m)

Maximum distance to Remote Microphone is 2000 ft (610 m)

Remote Microphone Controls (RM)
- 4003-9832 (beige)
- 4003-9833 (red) or Local Operator Consoles
  (Note: Additional Wiring is required for LOC Messaging Activation)

Optional 4003-9849 HVAC Cutoff Switch
(requires 2 additional wires)

Local Operating Consoles (LOC)
(Message control wiring to additional LOCs connects between LOCs)

6 wires to each remote microphone

16 wires to LOC(s) for message control

6 wires

To up to 3 additional remote microphones or LOCs maximum

To up to 6 total 4003-9834 Microphone Expansion Modules, total = 18 remote microphones or LOCs maximum

**NOTE:** Simplified one-line wiring is shown for reference only, refer to installation instructions for detailed wiring information.

Maximum system audio power is 5000 W.
Remote Microphone Control Reference

**SYSTEM STATUS:**
- Normal = Green
- Trouble = Yellow
- Alarm = Red

**OPERATING INSTRUCTIONS:**
1. Turn key to ON position
2. Press microphone button and speak into microphone.

Mount on 4-gang box, 1-1/2" (38 mm) minimum depth; four RACO # 400 or equal, supplied by others

**LOCAL OPERATING CONSOLE**

- Outer dimensions = Flush Mount, Model 4003-9831
- Inner dimensions = Surface Mount, Model 4003-9830

Optional Internal HVAC Emergency Cutoff Switch Model 4003-9849

Holes for security wire

Eight (8) internal message control switches with LEDs

Sliding door latch

Internal Remote Microphone Control

Mounting box, included

Local Operating Console (LOC) Reference
NOTE: Cabinet and door dimensions also apply to the 80 W and 160 W Booster Amplifiers.

Door Height = 36-3/8" (924 mm)
Cabinet Height = 36" (914 mm)
Door Width = 23-11/16" (602 mm)
Cabinet Width = 23-3/8" (594 mm)

Knockout list: 6 on top, 4 on bottom, 4 on sides as shown; for 1-1/2" conduit

### Instructions Reference

<table>
<thead>
<tr>
<th>Product</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003EC Control Panels</td>
<td>P84714-001</td>
</tr>
<tr>
<td>4003EC Control Panels 120 VAC</td>
<td>P84714-001</td>
</tr>
<tr>
<td>4003EC Control Panels 240 VAC</td>
<td>P84992-001</td>
</tr>
<tr>
<td>Remote Booster Amplifiers (APB/80, /160, /320)</td>
<td>P84748-001</td>
</tr>
<tr>
<td>Remote Booster Amplifiers (APB/80, /160, /320) 240 VAC</td>
<td>P84994-001</td>
</tr>
<tr>
<td>Local Operating Consoles (LOC)</td>
<td>P85173-001</td>
</tr>
<tr>
<td>LOC HVAC Emergency Cutoff Kit</td>
<td>P84858-001</td>
</tr>
<tr>
<td>Remote Alarm Microphone (RM)</td>
<td>P84207-004</td>
</tr>
<tr>
<td>Microphone Expansion Module (RMX)</td>
<td>P84557-001</td>
</tr>
<tr>
<td>Class A/B Splitter (SP4Z-A/B)</td>
<td>P84205-001</td>
</tr>
<tr>
<td>CO Port Adapter (SP-COA)</td>
<td>P84341-001</td>
</tr>
<tr>
<td>Addressable Paging Splitter (SP4-APS)</td>
<td>P84577-001</td>
</tr>
<tr>
<td>Supervised Volume Control (SP-SVC)</td>
<td>P84598-001</td>
</tr>
<tr>
<td>NAC Interface Module (NACIM)</td>
<td>P83487-001</td>
</tr>
<tr>
<td>Remote Paging Microphone (RM-GP)</td>
<td>P84207-003</td>
</tr>
<tr>
<td>Telephone Zone Controller (TZC)</td>
<td>P84567-001</td>
</tr>
<tr>
<td>Battery Cabinet</td>
<td>P83096-001</td>
</tr>
<tr>
<td>Low Battery Cutoff Board</td>
<td>P85091</td>
</tr>
<tr>
<td>Ten Minute Timeout</td>
<td>P85293-001</td>
</tr>
</tbody>
</table>

320 W Booster Dimension Reference

Door Width = 23-11/16" (602 mm)
Cabinet Width = 23-3/8" (594 mm)
Door Height = 36-3/8" (924 mm)
Cabinet Height = 36" (914 mm)

Knockout list: 6 on top, 4 on bottom, 4 on sides as shown; for 1-1/2" conduit
Reference Application 1, Generic Host Panel to 4003EC

- Contact closure connections are supervised by the 4003EC to the contact (10 kΩ end-of-line resistor).
- 2 wires per recorded message to control (16 wires max.).
- NAC control requires an optional 4003-9850 NAC Interface Module (NACIM) per message, up to 4 can be mounted in the 4003EC control panel.

Reference Application 2, 4003EC Connected to Simplex 4010 Control Panel

- Use one 4098-9843 (PAM-SD) relay (or equal) per output for message control.
- Alternate monitoring and control using the 4605-7401, 24 Point I/O module with mounting hardware mounted in suitable location.
- Size is 5-3/4" x 6-1/2" (146 mm x 165 mm); module power and relay power can be sourced from the 4003EC or from the 4010.
**Simplex Network System Integrator (NSI)** Model 4190-9826 (red) 4190-9827 (beige):

1. Power is supplied by the Host Fire Alarm Control Panel (or the 4003EC).

2. NSI has seven (7) available separate, isolated contact closures controlled by the Fire Alarm Network (a separate contact is dedicated to system trouble).

3. NSI has eight (8) isolated, polarized, separate inputs for information into the Fire Alarm Network.

4. Flexible operation allows interconnection of the Host Fire Alarm Control Panel and the NSI to control the 4003EC per system requirements.
## Specifications (refer to Installation Instructions for more information, see list on page 7)

### AC Input Ratings

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Ratings</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003EC Control Panels (4003-9301, -9302, -9303, &amp; -9304)</td>
<td>2.4 A maximum @ 102 to 132 VAC, 60 Hz</td>
</tr>
<tr>
<td>80 W Booster Amplifiers (APB/80) (4003-9810, -9811, -9812, &amp; -9813)</td>
<td>3.8 A maximum @ 102 to 132 VAC, 60 Hz</td>
</tr>
<tr>
<td>160 W Booster Amplifiers (APB/160) (4003-9814, -9815, -9816, &amp; -9817)</td>
<td>3.8 A maximum @ 102 to 132 VAC, 60 Hz</td>
</tr>
<tr>
<td>320 W Booster Amplifiers (APB/320) (4003-9818, -9819, -9820, &amp; -9821)</td>
<td>7.4 A maximum @ 102 to 132 VAC, 60 Hz</td>
</tr>
</tbody>
</table>

### Battery Currents

<table>
<thead>
<tr>
<th>Product Type</th>
<th>Supervisory Current</th>
<th>Alarm Current</th>
</tr>
</thead>
<tbody>
<tr>
<td>4003EC Control Panels (4003-9301, -9302, -9303, &amp; -9304)</td>
<td>130 mA</td>
<td>4.7 A maximum</td>
</tr>
<tr>
<td>80 W Booster Amplifiers (APB/80) (4003-9810, -9811, -9812, &amp; -9813)</td>
<td>120 mA</td>
<td>10.1 A maximum, including 500 mA Auxiliary output</td>
</tr>
<tr>
<td>160 W Booster Amplifiers (APB/160) (4003-9814, -9815, -9816, &amp; -9817)</td>
<td>120 mA</td>
<td>10.1 A maximum, including 500 mA Auxiliary output</td>
</tr>
<tr>
<td>320 W Booster Amplifiers (APB/320) (4003-9818, -9819, -9820, &amp; -9821)</td>
<td>120 mA, each power supply/amplifier set</td>
<td>10.1 A maximum, each power supply/amplifier set, including 500 mA Auxiliary output</td>
</tr>
</tbody>
</table>

### Strobe NAC Ratings, Regulated 24 DC

- 2 A per strobe NAC; provides synchronization for either Simplex or Wheelock strobes (not mixed); contact your Simplex product representative for compatible appliances; for other UL listed appliances, use associated external synchronization modules where required; (refer to Instructions P84714-001 for additional information)

### Total Amplifier Power per System

- 5000 W maximum

### Booster Input Requirements

- Input voltages are selectable for 1, 25, or 70.7 VRMS; output voltage and input voltage can be selected differently (25 VRMS versus 70.7 VRMS)

- **with 25 VRMS Input**
  - Input power = 0.25 W input for 80 W and 160 W boosters
  - Input power = 0.5 W for 320 W boosters (dual 160 W amplifiers)

- **with 70.7 VRMS Input**
  - Input power = 1.2 W input for 80 W and 160 W boosters
  - Input power = 2.4 W for 320 W boosters (dual 160 W amplifiers)

### Additional Module Current Requirements (24 VDC system power)

- Local Operator Console (LOC) (4003-9830, 4003-9831)
  - Standby = 26 mA; Alarm/Paging = 38 mA

- Remote Microphone Controls for Alarm (RM) (4003-9832, 4003-9833) and (RM-GP) (4003-9842)
  - Standby = 23 mA; Alarm/Paging = 30 mA

- Remote Microphone Expansion Module (RMX) (4003-9834)
  - Standby = 62 mA maximum; Alarm/Paging = 52 mA maximum; NOTE: includes attached remote microphones and/or LOCs; only one remote microphone can page at a time

- Class A/B Splitter (SP4Z-A/B) (4003-9840)
  - Standby = Alarm = 15 mA

- NAC Interface Module (NACIM) (4003-9850)
  - NAC powered, no impact to panel power

- CO Port Adapter (SP-COA) (4003-9843)
  - Standby = 2 mA; with input = 49 mA; telephone input level = telephone output level = 500 mVRMS

- Addressable Paging Splitter (SP4-APS) (4003-9845)
  - 120 mA; splitter uses 1.35 W of input power per output for operation, 8 W maximum (6 total outputs available; Zones 1-4, and two Expansion outputs)

- Supervised Volume Control (SP-SVC) (4003-9848)
  - 10 mA

- Telephone Zone Controller (TZC) (4003-9835)
  - 73 mA

### Battery Charger Details for Voice Control Panel and Booster Amplifiers (sealed lead-acid batteries)

- Agency listed for battery charging up to 33 Ah; up to 12 Ah batteries can be cabinet mounted, larger batteries require a remote battery cabinet; see note above concerning 320 W Booster Amplifier batteries (4, 12 V batteries)

### Environmental

- Operating Temperature Range: 32° to 120°F (0° to 49° C)
- Operating Humidity Range: Up to 93% RH, non-condensing at 90° F (32° C) maximum