

UL Listed; CSFM,  
FM, and MEA  
(NYC) Approved\*

Fire Alarm Controls  
Voice Control Panel  
4003 Series

## STANDARD FEATURES

- **UL listed to Standard 864**
- **Adds voice and tone functions to Simplex 4001, 4002, 4004, 4005, 4010, or 4020 fire alarm control panels:**
  - Alarms are received from a host panel notification appliance circuit (NAC)
  - Manual operation sends alarms to a host panel initiating device circuit (IDC) or via 4020 RUI communications
  - Earth fault detection is maintained by host panel
  - With the 4020 fire alarm control panel, the 4003 can generate spoken WALKTEST<sup>TM</sup> system testing<sup>†</sup>
- **Adds voice and tone functions to any compatible fire alarm control panel**
- **Provides stand-alone fire alarm operation as a paging system with manual selection of:**
  - Alarm tones and manual evacuation messages
  - Microphone input
  - “All Clear” messages
- **Internal 75 W, 25 VRMS amplifier with power-limited output**
- **Four general alarm Class B (Style Y) or Class A (Style Z) NACs**
- **Programmable tone and message sequence selection**
- **Surface/semi-flush cabinet included**
- **Available with 240 VAC input voltage**

## OPTIONAL FEATURES

- **Supervised remote microphone with keyswitch control**
- **Additional four circuit NAC card general alarm Class B (Style Y) or Class A (Style Z)**
- **Custom digitally recorded messages**

\* This product has been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 6911-0026:196 for allowable values and/or conditions concerning material presented in this document. It is subject to re-examination, revision, and possible cancellation. Accepted for use – City of New York Department of Buildings – MEA35-93E. FM approval requires operation with 120 VAC input voltage. This product was not ULC listed as of document revision date. Additional listings may be applicable, contact Simplex for the latest status.



4003 Series Voice Control Panel

## SPECIFICATIONS

Input Power		
120 VAC		3 A @ 102-132 VAC, 60 Hz
240 VAC		1.5 A @ 204-264 VAC, 50/60 Hz
Battery Requirements		
Supervisory	Standard 4003	120 mA
	Additional NAC Card	35 mA
Alarm		7 A maximum
Amplifier		
Output Power		75 W @ 25 VRMS, power-limited
UL Fire Alarm Frequency Response		200 Hz to 10 kHz
Alarm/Supervisory Input Voltage		18-32 VDC, filtered or unfiltered
General Specifications		
Distance from Host Fire Alarm Control Panel		20 ft maximum (6 m)
Operating Temperature		32° to 120° F (0° to 49° C)
Operating Humidity Range		10% to 90% RH from 32° to 104° F (0° to 40° C)

† WALKTEST system testing is protected under U.S. patent # 4,725,818.

## INTRODUCTION

The Simplex 4003 Voice Control Panel provides voice and tone generation, 75W of amplifier power, four supervised audio Notification Appliance Circuits (NACs), and satisfies multiple application requirements.

**Automatic stand-alone operation** is application dependent and easily selected by programming dipswitches.

**Manual operation** is accessible by opening the locked cabinet door and revealing operating switches, status LEDs, the local microphone, and the microphone control. Remote microphone operation is secured by use of a keyswitch.

**An optional, second four circuit NAC card** can be installed in the 4003 to power 24 VDC notification appliances. It is controlled by a second NAC from the host panel.

## APPLICATIONS

### Voice/Tone Addition to a Simplex 4020 Series Fire Alarm Control Panel

The 4020 fire alarm control panel digitally communicates with the 4003 via the Remote Unit Interface (RUI) bus, allowing the 4020 to monitor the 4003 status and to control tone and message selection. A dedicated 4020 NAC is connected to the 4003 to activate its four NAC speaker outputs.

When system WALKTEST service testing is in process, the 4020 will communicate to the 4003 to generate a voice message response to the device tested. For example, activating addressable manual station 075 on an addressable MAPNET II<sup>®</sup> circuit on Channel one would yield *"Testing Channel One, Device Seven Five."*\*

### Voice/Tone Addition To Non-Voice Fire Alarm Control Panels

The 4003 connects as the end-of-line device to a compatible, dedicated NAC and a compatible, dedicated IDC from the host panel (such as a Simplex model 4004, 4005, 4010, or other compatible panel).

Alarms from the host panel will signal the four, 4003 NACs to respond with tones and messages as programmed. The IDC connection monitors 4003 system troubles and allows selection of the manual evacuation message to automatically send an alarm signal to the host panel. An auxiliary power connection allows use of the 4003 panel voltage when required.

The alarm response can be customized such as to follow coded inputs with horn or chime tones or to play digitally pre-recorded messages with a programmable combination of digitally generated tones.

Alarm Signal Silence and Alarm Reset are performed at the host panel.

\* MAPNET II addressable communications is protected under U. S. patent # 4,796,025.

## APPLICATIONS (Continued)

### Stand-Alone Paging Applications

For stand-alone applications, the 4003 provides manual control for microphone announcements or pre-recorded messages. Announcement applications might include instructions concerning: Weather Alerts, Bomb Threats, and any other Emergency Evacuations. Connection of an initiating device circuit allows a separately mounted fire alarm control panel to monitor for trouble conditions.

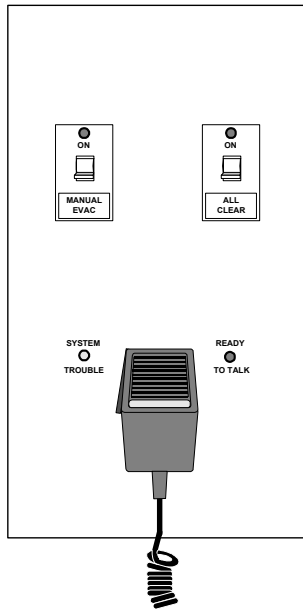
## MODULE FEATURES

### Voice Control Module

- **Internal DIP switches** allow selection of a combination of tones and messages.
- **Available audio tones.** The following audio tones are capable of either continuous or coded operation as controlled by the host fire alarm control panel:
  - **Slow Whoop**, starts at 200 Hz and rises to 830 Hz in 2.5 sec, recommended for fire alarm use only.
  - **High/Low**, a free running signal with a high frequency of 750 Hz for 0.1 sec and a low frequency of 500 Hz for 0.4 sec.
  - **Horn Tone** at 120 beats per minute.
  - **Horn Tone** at 20 beats per minute.
  - **Chime**, a 600 Hz tone with a 1.5 sec delay time, use for coded or free-running signaling.
  - **Continuous Bell**, a fundamental frequency of 350 Hz with prominent harmonics at 700 Hz and 2100 Hz.
  - **Bell Tone** at 60 beats per minute.
- Selectable **Temporal Code** for horn, bell, whoop, and chime tones (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 digitally recorded messages:**
  - **Evacuation:** *"Attention...Attention...Attention. An emergency situation has been detected in this building. Proceed to the nearest exit and leave the building. Do not re-enter the building until directed to by the proper authorities."*
  - **All Clear:** *"Attention. Your attention please. The building emergency condition has been cleared. You may return to your normal activities."*
- **Custom digitally recorded messages** can be reproduced from high quality customer supplied tapes, professionally recorded to customer requirements, or selected from the Simplex message library.
- **Operator Controls** (refer to diagram on next page):
  - **Manual Evacuation.** A momentary switch activation initiates an alarm to a connected fire alarm control panel and activates the programmed evacuation sequence.
  - **All Clear.** A momentary switch activation will start and stop the All Clear tone/message. Alarm conditions must be Reset and Silenced at the host panel if connected.

- **Operator Controls (Continued):**

- **Control Panel Operating Controls Diagram:**



- **Local Microphone Manual Paging.** Removing the microphone from its rest position and activating the microphone push-to-talk switch will begin three rounds of chime tones to alert the occupants that a voice message is about to be announced. When the tones are completed, the “READY TO TALK” green LED will light.
  - **Remote Microphone Manual Paging.** Activating the keyswitch and pressing the microphone control switch will allow the remote microphone to function the same as the local microphone. (The local microphone has priority over the remote microphone.)

- **LED Status Annunciators:**

- **Red** “MANUAL EVAC” Evacuation/Alarm Indication is on when the evacuation Tone/Message is in process.
  - **Red** “ALL CLEAR” is on when the All Clear tone or message is playing.
  - **Green** “READY TO TALK” identifies that the microphone is active and talking may begin.
  - **Yellow** “SYSTEM TROUBLE”, general trouble indication.
  - Additional internal status indicating LEDs identify operating status to assist installation and service.

- **Four Circuit NAC Modules:**

- Basic panel provides four, general alarm operation, Class B or Class A, audio NACs rated 2A @ 25 VRMS (50W).
- One optional four circuit NAC module can be field installed to provide additional NACs to separately control notification appliances. (Requires a second, dedicated NAC from host panel. A single, common input (audio or DC) is used to drive all four optional NACs.)
- Individual circuit trouble LEDs for service.

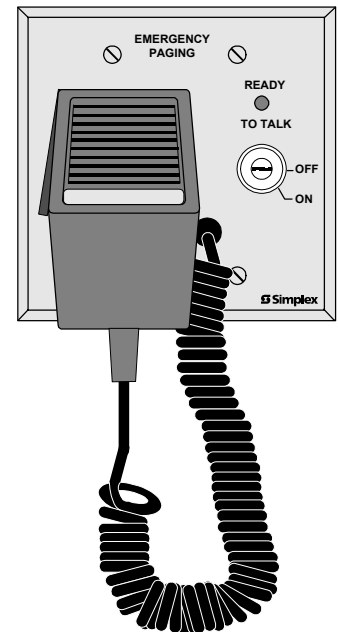
## Power Supply/Battery Charger Module

- Charge up to 18 Ah batteries, internally or externally mounted.
- Green power-on LED, yellow trouble LED.
- Battery supervision circuitry.
- Power loss and brownout voltage supervision.
- Selectable for remote battery and no charger.
- 24 VDC power that is not used by the amplifier is available for other DC applications per the following chart (outputs are power-limited):

Speaker Load	25 W	37 W	50 W	62 W	75 W
Available DC	4 A	3 A	2 A	1 A	0 A

## 4003-9803 REMOTE MICROPHONE

- Supervised microphone control at a remote location.
- Keyswitch included for controlled access.
- Ready-to-talk LED included.
- Maximum wiring distance of 4500 ft. (1372 m).
- Mounts in a standard double gang box, 2” (51 mm) minimum depth.



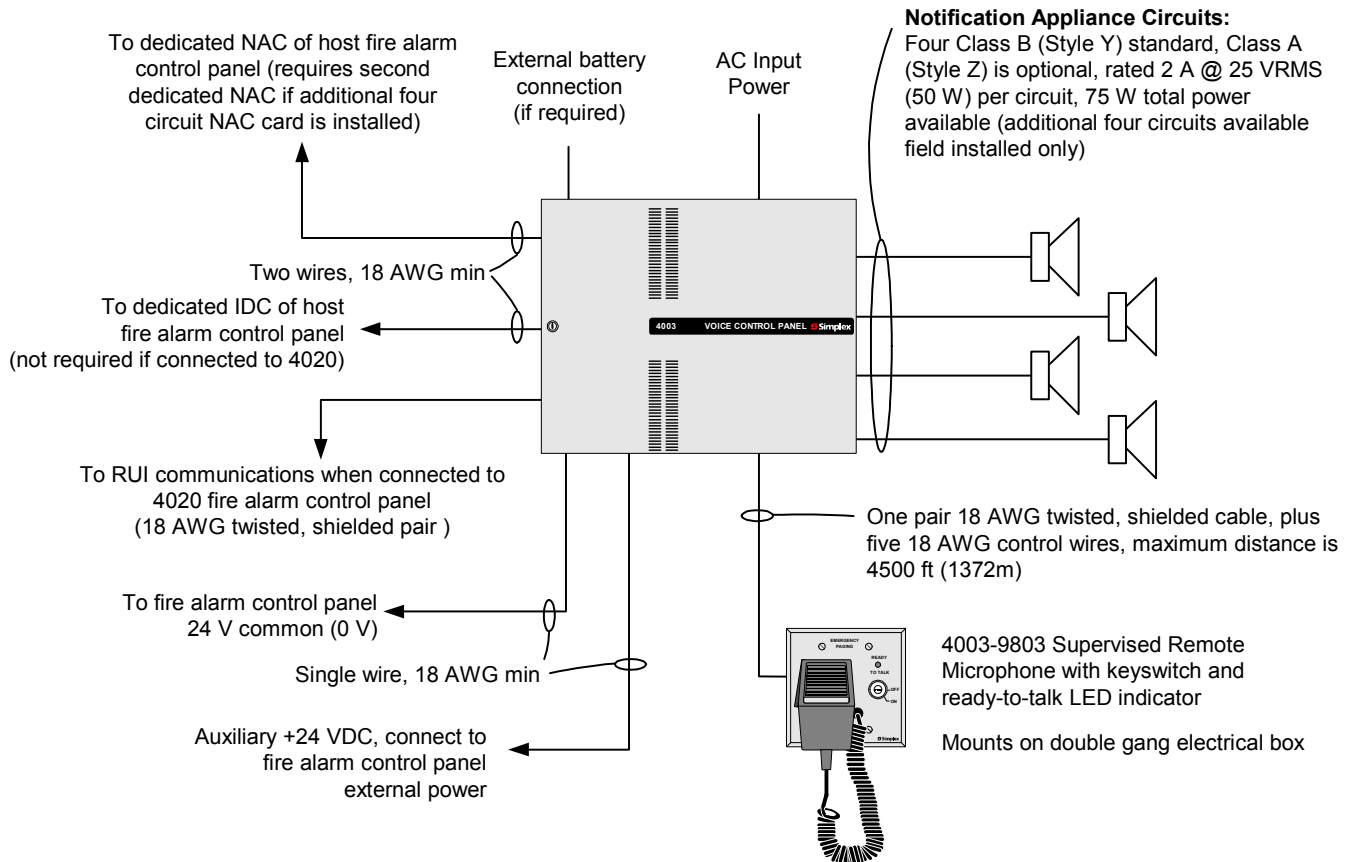
## 4003 MODEL SELECTION CHART

Model	Description	
4003-9001	Basic Panel, 120 VAC input, with four audio NACs	Class B NACs
4003-9002		Class A NACs
4003-9101	Basic Panel, 240 VAC input, with four audio NACs	Class B NACs
4003-9102		Class A NACs

## Optional Modules

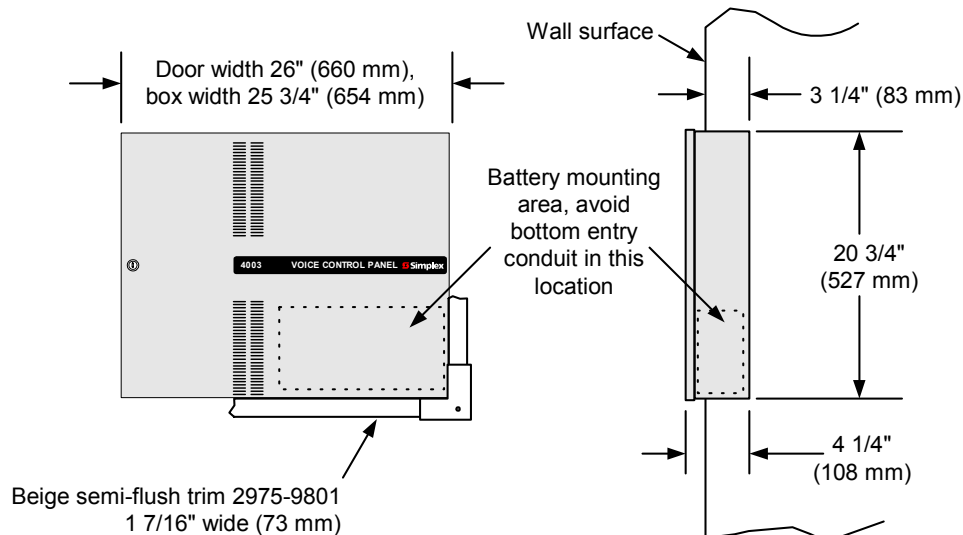
Model	Description	
4003-9801	Additional four circuit NAC module	Class B, Audio or DC
4003-9802		Class A, Audio or DC
4003-9803	Remote microphone	
2975-9801	Semi-flush trim band	
2081-9275	18 Ah, 12 V Battery, two required (refer to Simplex data sheet S2081-0006 for smaller batteries and additional information)	

## 4003 VOICE CONTROL PANEL CONNECTION DIAGRAM



**NOTE:** Refer to field wiring diagrams 841-921 and Installation Instructions 574-039 for additional information.

## MOUNTING INFORMATION



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