



# wheelock

Helping People Take Action<sup>SM</sup>

## **SAFEPATH<sup>®</sup>4** **Facility Communications** **SP40/2**

### **Description**

The **SP40/2** is a Multi-Function Supervised Paging, Messaging, Background Music and Emergency Voice Evacuation System with 24 VDC battery backup. This single channel system is capable of delivering 40 watts of supervised **high fidelity** audio power and 2 amps of supervised 24 VDC synchronized strobe power. Supervised 24 VDC synchronized strobe power is 2 amps, expandable to the requirements of the installation. It comes standard with an on-board digital voice messaging system with 3 standard messages a hand-held microphone, power supply/ battery charger and numerous additional features. The SAFEPATH4 system is expandable to 5280 watts utilizing the SPB-80/4 (80 watts and 4 amps of strobe power) and the SPB-160 (160 watts) supervised audio power boosters.

### **Applications for the SP40/2**

- Multi-use applications—The system can function as an evacuation system, an emergency messaging system, a paging system, an employee notification system and a background music system per NFPA 72, section 3-8.2.4.
- Fire code applications—The system is listed under UL Standard 864 delivering supervised audio and voice messaging with strobes and notification appliance circuits (NAC) for visual alerting.
- Economic OSHA applications—The system is OSHA 1910.165 compliant; this means that it does not require reliability inspections every two months, or the required spare parts inventory. Wheelock's Facility Communication systems save the building owner costly inspection fees.
- Wide ranging applications—from small to large facilities; can operate on input voltage ranging from 9 - 31 VDC.
- Can connect to a pager for private alerting of emergency/trouble conditions.

### **System Activation**

- 9 - 31 VDC
- NAC input from a Fire Alarm Control Panel



### **Features**

#### **Approvals & Compliance**

- Approvals: UL Standard 864, UL Standard 1711, CSFM, FCC Part 15
- OSHA 1910.165 and ADA Compliant
- 3 Year Warranty

#### **Background Music**

- Patent pending supervision with Background Music (BGM) operation
- Line Level input for music source
- Frequency Response 100 - 15KHz  $\pm$  3 dB

#### **General Paging**

- Easily interfaces with most existing phone system page ports and line level signals
- Automatically mutes BGM
- Frequency Response 275 - 6.5kHz  $\pm$  3 dB

#### **Voice Evacuation**

- Complies to NFPA-72, 1999 requirements
- Supervised NAC speaker and strobe circuits
- Live microphone override
- 3 standard digitally pre-recorded voice messages

#### **Strobe Inputs and Activation**

- 2 Amps of 24 VDC supervised strobe power with built-in Wheelock sync protocol
- Strobe output is selectable for control of Wheelock sync protocol or non-sync operation
- Strobe terminals have pass thru capability for Wheelock sync or non-sync operation
- Any of the three messages can be dip switch selected to activate strobes
- 24 VDC supervised and synchronized strobe power can be expanded to meet the requirements of the installation via connecting to optional PS-12/24-8 power boosters

#### **Speaker Output**

- 40 watts of supervised audio power
- Speaker outputs: 25V or 70.7V power limited

## Audio Processing

- Volume and tone controls for general paging and BGM
- Connectability of optional speaker splitter modules
- Dual-tone tone generator with: Code 3 Tone and Slow Whoop for alerting of system failure
- Night ringer capability
- Audio power can be expanded by connecting to optional audio power boosters (For exact audio power capabilities consult Wheelock Tech Support):
  - SPB-80/4 80 Watt Supervised Audio Power Booster with 4 Amps of Synchronized Strobe Power (Data Sheet V2007)
  - SPB-160 160 Watt Supervised Audio Power Booster (Data Sheet V2007)

## Power Supply & Batteries

- 24 VDC rechargeable battery back-up power circuitry built-in
- Required batteries can be housed in the enclosure (Up to two (BAT-1212), 12 volt, 12 ampere hour batteries can fit in the enclosure. Actual battery size required will depend on speaker and/or strobe load. Batteries are sold separately).

## Live & Pre-recorded Message Announcement

- Supplied with three pre-recorded emergency messages
- Capable of in-field recording of all messages
- Preset audio levels for emergency messaging (prerecorded and live mic) - system reverts back to a pre set level regardless of the volume set for BGM or general paging
- On board Push-to-Talk Microphone
- Includes "Microphone Located Inside" decal for optional placement on enclosure front cover if required
- Telephone paging input, disconnects BGM when in use

## Installation/Maintenance

- Multiple trouble LED indicators for quick system diagnostics
- Fully supervised circuitry always in effect – even during BGM and general paging (via patent pending technology)
- Three NAC activation connections for message play
- Removable quick connect/disconnect terminals for ease of wiring, accepts #12 to #22 AWG
- Power limited circuitry with Class "B" wiring
- Surge protected circuitry

## Benefits and Advantages of the Multi-Function SAFEPATH4

- One System Multi-Function Facility Communications System
- Background Music (BGM) system, with patent pending supervision during BGM operation
- Supervised Emergency/Fire Voice Evacuation System
- Interfaces with telephone system for general paging requirements
- Built in power for visual notification appliances e.g., Strobes
- Expandable for larger system requirements (with optional equipment)

### Compatible Wheelock Products

All Wheelock Supervised Speaker/Strobes  
 All Wheelock Supervised Strobes  
 All Wheelock Supervised Speakers  
 All Cluster Speakers  
 PS-12/24-8 Strobe Power Supply

Inputs – Audio and Activation		
8 Priority Ordered Inputs	Priority Level	Type of Input
On Board Microphone	1	Push to Talk (PTT) Microphone
Remote Microphone	2	N/A
Digital Message Input 1	3	9 - 31 VDC
Digital Message Input 2	4	9 - 31 VDC
Digital Message Input 3	5	9 - 31 VDC
Night Ringer Input	6	Contact Closure input
Telephone Paging Input	7	Page port input
Background Music Input	8	Line Level Input, 600 ohm, input voltage must be less than 2.5 V peak to peak, or .3 volts RMS

Audio/Technical Specifications	
Switch mode, Class D amplifier (40 Watts)	
Speaker Outputs	25V or 70.7V power limited
Frequency Response	<b>Voice:</b> 275 Hz – 6.5 kHz ± 3 dB <b>BGM:</b> 100 Hz - 15 kHz ± 3 dB Meets UL Voice Evacuation Requirements of 400 - 4000 Hz
Signal to Noise Ratio	better than 65 dB
Dynamic Range	better than 65 dB
Total Harmonic Distortion	less than 1%
Stand by Current Draw	125 mA
Alarm Current Draw	4.3 amps

Mechanical	
Dimensions	21" H x 16" W x 6" D (wall mount)
Weight	36 lbs. (without batteries)
Finish	Red exterior enclosure
Door Lock	Wheelock Key-lock

# Ordering Information

Model Number	Order Code	Description
SP40/2	8985	Multi-Function Supervised Paging, Messaging, Background Music and Emergency Voice Evacuation System with 24 VDC battery backup circuitry. Single channel system with 40 watts of supervised audio power and 2 amps of supervised 24 VDC synchronized strobe power and 3 standard messages. (batteries not included, 2 required)
BAT-1212	7390	12 volt, 12-ampere hour battery
SPPMK	8987	3 Message Factory Programmed Kit
AM-SPSMK	9902	After Market 3 Message Standard Message Kit
AM-SPPMK	9903	After Market 3 Message Factory Programmed Kit
SP-COA	9908	C.O. Port Adapter for the SP40/2 - Recommended 24 VDC Power Supply is Wheelock RPS-2406 (Order Code 3770)

## Message Capabilities

A three (3) message Standard Message Kit (SPSMK) is included with the SP40/2.

**Message 1: (Fire)** (3 cycles of code 3 horn) "May I have your attention please! A fire emergency has been reported in the building. While this is being verified, please leave the building by the nearest exit."

**Message 2: (Alert)** (2 cycles of slow whoop) "May I have your attention please! An emergency has been reported in the building. While this is being verified, please stand by for further instructions."

**Message 3: (All Clear)** (5 seconds of chime) "May I have your attention please! The building emergency has ended. An all clear has been given. Please resume activities."

- The SP40/2 comes standard with three messages with approximately 20 seconds of time per message (including tones)
- Any of the three standard messages are field programmable - for recording of custom non-emergency messages - (requires a 2-step recording process to ensure and verify that the standard emergency message is to be permanently erased)
- The message memory is comprised of one minute of erasable memory
- Factory Programmed Message Kits (**SPPMK**) are available for custom messages – contact customer service for additional information

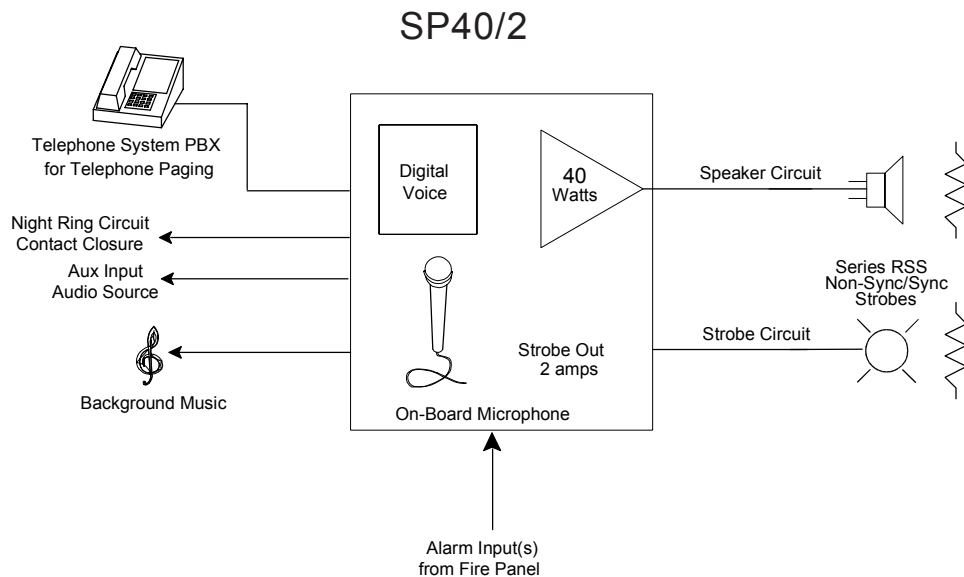
**Note:** When ordering Factory Programmed Message Kits SPPMK (8987) or the AM-SPPMK (9903), for custom messages, the messages can be divided in 20 second blocks with any of the following options:

**Option 1** 3 messages with a maximum of 20 seconds each (Standard)

**Option 2** 2 messages, 1 message with a maximum of 40 seconds and 1 message with a maximum of 20 seconds

**Option 3** 1 message with a maximum of 60 seconds

Contact customer service for additional information.



Note: For telephone paging, the SP40/2 can connect directly into the page port of the local phone system. If a page port is inaccessible, the SP-COA (C.O. Port Adapter for the SP40/2) may be used to connect the SP40/2 to an unused C.O. port or a stand-alone telephone.

**Wheelock products must be used within their published specifications and must be PROPERLY specified, applied, installed, operated, maintained and operationally tested in accordance with their installation instructions at the time of installation and at least twice a year or more often and in accordance with local, state and federal codes, regulations and laws. Specification, application, installation, operation, maintenance and testing must be performed by qualified personnel for proper operation in accordance with all of the latest National Fire Protection Association (NFPA), Underwriters' Laboratories (UL), National Electrical Code (NEC), Occupational Safety and Health Administration (OSHA), local, state, county, province, district, federal and other applicable building and fire standards, guidelines, regulations, laws and codes including, but not limited to, all appendices and amendments and the requirements of the local authority having jurisdiction (AHJ).**

## Architects and Engineers Specifications

The system shall be a multi-purpose NFPA compliant, supervised, general-purpose audio, and fire/emergency evacuation system. The system shall be a single channel voice evacuation system incorporating supervision during the broadcasting of background music and general paging. The system shall be capable of delivering 40 watts of supervised audio power and 2 amps of supervised 24 VDC synchronized strobe power. Minimum supervised audio power shall be 40 watts, expandable to 5280 watts, depending on system configuration and with additional modules and power boosters. Supervised 24 VDC synchronized strobe power shall be 2 amps, expandable to the requirements of the installation. The system shall be capable of operating from a 120 VAC power source and have 24 VDC battery backup. Standard on-board system features shall include: digital voice messaging, a hand-held push-to-talk microphone with override priority, and a power supply/battery charger. The system shall be capable of interfacing with telephone systems for general paging announcements and will have night ringer capabilities. Form C contacts shall be provided for system alarm and trouble conditions. The system shall have an internal sounder to indicate trouble, and shall be capable of being silenced using a trouble acknowledge switch.

The system shall have three fire alarm notification appliance circuit inputs with a voltage range of 9 to 31 VDC. Background music input voltage shall be capable of handling less than 2.5 V peak to peak or less than .3 volts. The system shall have eight priority ordered inputs, including: On Board Microphone, Auxiliary Input (Line Level), three Digital Messages, Night Ringer Input, Telephone Paging Input, and Background Music Input. The system shall have preset audio levels for emergency messaging (prerecorded and live mic). The system shall revert back to a preset level regardless of the volume set for background music (BGM) or general paging. Background music inputs can be an AM/FM tuner, cassette, CD, or any other remote source. The system shall be supplied with three pre-recorded messages and be capable of in-field recording of customer unique messages. The system shall have a dual-tone tone generator with Code-3 Tone and Slow Whoop. When the system is on battery power, telephone page, night ring and background music shall be disengaged.

The system shall have power limited circuitry and class B wiring. Wiring terminal blocks will be removable and accept #22 - #12 AWG wire. Audio output voltage shall be selectable for 25V or 70.7V. The voice (live microphone or recorded message) frequency response shall be 275 Hz – 6.5 kHz  $\pm$  3 dB, background music frequency response shall be 100 Hz - 15 kHz  $\pm$  3 dB. Stand by current draw shall be 125mA. Alarm current draw shall be 4.3 amps. The signal to noise ratio shall be better than 65 dB, dynamic range shall be better than 65 dB, total harmonic distortion shall be less than 1%.

The system shall be wall mountable, enclosed in a steel locking enclosure. The required batteries for 40-watt systems shall fit inside the enclosure. The 40 watt system shall weigh no more than 36 lbs (without batteries) and its dimensions shall not exceed 21" H x 16" W x 6" D. The system shall be made in the **USA**. Approvals for the system shall include: UL Standard 864, UL Standard 1711, FCC part 15, cUL, and CSFM.. The system shall be OSHA 1910.165 and ADA compliant. 3 Year Warranty.

Note: Refer to the products Installation Instructions for proper installation, wiring procedures and any additional specifications.

**NOTE: Due to continuous development of our products, specifications and offerings are subject to change without notice in accordance with Wheelock Inc. standard terms and conditions.**

### WE ENCOURAGE AND SUPPORT NICET CERTIFICATION

National Sales Office  
800-631-2148

Canada 800-397-5777

E-Mail: [Info@wheelockinc.com](mailto:Info@wheelockinc.com)  
<http://www.wheelockinc.com>

### 3 YEAR WARRANTY

Made in USA



Distributed By:

273 Branchport Avenue • Long Branch, NJ 07740 • TEL: 732-222-6880 • FAX: 732-222-2588

V2003 01/  
04Help-  
ing