SAFEPATH facility communications system & expansion options

SP40S

SPB-320

SPB-80/4
SPB-160

SP4-TZC

SPRM

SP4Z-A/B

SP-SVC

SP4-APS

Contents

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Powering Business Worldwide

SAFEPATH Facility Communications: SP40S

Description

The SP40S is a multifunction supervised paging, messaging, background music (BGM) delivery and emergency voice evacuation system with 24 VDC battery backup. The SP40S integrates with fire alarm systems and provides full control of building audible and visual notification appliances. 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. It comes standard with an on-board digital voice messaging system with 8 standard messages, a hand-held microphone, power supply/battery charger and numerous additional features. The SAFEPATH system is expandable to 5280 watts utilizing the SPB-80/4 (80 watts and 4 amps of strobe power), the SPB-160 (160 watts) or SPB-320 (320 watts) supervised audio power boosters. All models are available in 115 VAC or 220 VAC.

SAFEPATH, when combined with audio boosters and Wheelock speakers (LSPK, LSPST, S, and EH product lines), meets both NFPA 72 (fire signaling) and NFPA 720 (CO signaling) low frequency tone requirements for sleeping areas.

Features

Voice evacuation

• Supervised NAC speaker and strobe circuits

• Live microphone override

• 8 digitally pre-recorded voice messages

• Selectable pre-tones for messages

Background music

• Capable of broadcasting from a supplied BGM source

• Unique supervision method allows for full system supervision even during background music

• Line Level input for music source

• Frequency Response 100 Hz–15KHz

General paging

• Easily interfaces with most existing phone system page port, CO port and line level signals

• Automatically mutes BGM

• Frequency Response 275–6.5kHz

• Night ringer or security alert connection

Strobe inputs and activation

• 2 Amps of 24 VDC supervised strobe power with built-in Wheelock sync protocol. Power limited.

• Strobe output is selectable for control of Wheelock sync protocol or non-sync operation

• Strobe terminals have pass-through capability for Wheelock sync or non-sync operation

• Any of the 8 messages can be dip switch selected to activate strobes

• Microphone activation can be dip switch selected to activate strobes

• Auxiliary activation (Remote MIC) 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 Wheelock power boosters

Speaker output

• 40 watts of supervised audio power

• Speaker outputs: 25V or 70.7V power limited

System activation

• Contact closure message activation

Audio processing

• Volume and tone controls for general paging and BGM

• Connectivity of optional speaker splitter modules

• Dual-tone tone generator with Code 3 Tone and Slow Whoop for alerting of system trouble

• Night ringer/security alerting capability

• Audio power can be expanded by connecting to optional audio power boosters

  ◦ SPB-80/4: 80-watt supervised audio power booster with 4 Amp of Synchronized Strobe Power

  ◦ SPB-160: 160-watt supervised audio power booster

  ◦ SPB-320: 320-watt supervised audio power booster

Live & pre-recorded message announcement

• Supplied with 8 pre-recorded emergency messages

• Capable of in-field recording of all messages via 1/8″ line level audio input jack

• Preset audio levels for emergency messaging (prerecorded and live mic)—system reverts back to a preset level regardless of the volume set for BGM or general paging

• On board push-to-talk microphone

• Telephone paging input, disconnects BGM when in use

• Auxiliary input for remote microphone connection

Power supply & batteries

• 24 VDC, 33AH max rechargeable battery back-up power circuitry built-in

• 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.)

Note: All CAUTIONS and WARNINGS are identified by the symbol ⚠. All warnings are printed in bold capital letters.

⚠ WARNING

PLEASE READ THESE SPECIFICATIONS AND ASSOCIATED INSTALLATION INSTRUCTIONS CAREFULLY BEFORE USING, SPECIFYING OR APPLYING THIS PRODUCT. FAILURE TO COMPLY WITH ANY OF THESE INSTRUCTIONS, CAUTIONS OR WARNINGS COULD RESULT IN IMPROPER APPLICATION, INSTALLATION AND/OR OPERATION OF THESE PRODUCTS IN AN EMERGENCY SITUATION, WHICH COULD RESULT IN PROPERTY DAMAGE, AND SERIOUS INJURY OR DEATH TO YOU AND/OR OTHERS.

Benefits & advantages

• One multi-function in-building 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)

Approvals & compliances

- Approvals: UL Standard 864, 9th edition, UL Standard 1711, California State Fire Marshal (CSFM), New York City (MEA), FCC Part 15
- To meet both NFPA 72 and NFPA 720 low frequency tone requirements for sleeping areas, SAFEPATH is listed to UL 2017 (code 4), UL 864 (code 3) and the low frequency requirements of UL 464 (520 Hz)
- OSHA 1910.165 and ADA Compliant
- 1 year warranty

Applications

- **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.
- **Fire code applications:** The system is listed under UL Standard 864, 9th edition 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 and therefore it **does not** require reliability inspections every two months or the required spare parts inventory.

- Wide ranging applications—from small to large facilities
- Can connect to pagers for private alerting of emergency/ trouble conditions

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)
- Removable quick connect/disconnect terminals for ease of wiring; accepts #12 to #22 AWG
- Power-limited circuitry with Class "B" or Class "A" wiring (Class "A" only with use of audio splitter)
- Surge protected circuitry
- Audio and strobe power limiter reset button

Compatible Wheelock Products

- All Wheelock speaker/strobes
- All Wheelock strobes
- All Wheelock speakers
- All cluster speakers
- Wheelock strobe power supply

Table 1. Inputs: Audio & Activation

Priority Ordered Inputs	Priority Level	Type of Input
On Board Microphone	1	Push to Talk (PTT) Microphone
Auxiliary	2	Remote Microphone or Remote Microphone Expander
Digital Message Input 1	3	Contact Closure activation
Digital Message Input 2	4	
Digital Message Input 3	5	
Digital Message Input 4	6	
Digital Message Input 5	7	
Digital Message Input 6	8	
Digital Message Input 7	9	
Digital Message Input 8	10	
Night Ringer Input	11	Contact Closure input
Telephone Paging Input	12	Page port input
Background Music Input	13	Line Level Input, 600 ohm, input voltage must be less than 2.5 V peak to peak or 0.3 volts RMS

Table 2. Inputs: Audio/Technical Specifications

Switch mode, Class D amplifier (40 Watts)	
Speaker Outputs	25V or 70.7V power limited
Frequency Response	Voice: 275 Hz – 6.5 kHz BGM: 100 Hz – 15 kHz Meets UL Voice Evacuation Requirements of 800 – 2800 Hz
Signal-to-Noise Ratio	Better than 65 dB
Dynamic Range	Better than 65 dB
Total Harmonic Distortion	Less than 2%
Stand by Current Draw	130 mA
Alarm Current Draw	4.7 amps

Table 3. SP40S Mechanical

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

Table 4. Ordering Information

Model Number	Order Code	Description
SP40S	9929	Multi-Function Supervised Paging, Messaging, Background Music delivery 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 8 standard messages. (Batteries not included, 2 required.) Red Enclosure.
SP40S-B	9935	Same as above but with black enclosure
SP40SE	6138	Same as above but with 220 VAC input
SP40SE-B	6139	Same as above but with 220 VAC input and black enclosure
SP40S-LF-KIT	6216	Digital voice message control chip that upgrades SP40S with low frequency sleeping area tone capability
BAT-1212	7390	12 volt, 12-ampere hour battery
SP40S-PMK	9936	SP40S 8 Message Programmed Message Kit
AM-SP40S-SMK	9937	SP40S After Market 8 Message Standard Message Kit
AM-SP40S-PMK	9938	SP40S After Market 8 Message Programmed Message Kit
AM-SP40S-NBT	9939	SP40S After Market Narrow Band Signal Tone Kit
SP-COA	9908	C.O. Port Adapter for the SP40S — Recommended 24 VDC Power Supply is Wheelock RPS-2406 (Order Code 3770)
BATC-R	5414	Battery Cabinet, Red
BATC-B	5413	Battery Cabinet, Black
BAT-1224	7391	12 Volt, 24Ampere Battery Cell

Table 5. Message Capabilities

Message and Priority #	Type of Message	Voice Type	Message Script
1	Fire (Do not use elevators)	Male	Three (3) rounds of code 3 horn (followed by): "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. Do not use the elevators."
2	Fire (Do not use elevators)	Female	Three (3) rounds of code 3 horn (followed by): "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. Do not use the elevators."
3	Fire	Male	Three (3) rounds of code 3 horn (followed by): "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."
4	Emergency	Female	Three (3) rounds of code 3 horn (followed by): "May I have your attention please! An emergency has been reported in the building. While this is being verified, please leave the building by the nearest exit."
5	Emergency	Male	Three (3) rounds of code 3 horn (followed by): "May I have your attention please! An emergency has been reported in the building. While this is being verified, please leave the building and report to the designated assembly area for your group."
6	Weather	Male	Five (5) seconds of 1kHz tone (followed by): "May I have your attention please! The National Weather Service has issued a severe weather warning for our area."
7	All Clear	Male	Five (5) seconds of 1kHz tone (followed by): "May I have your attention please! The building emergency has ended. An all clear has been given. Please resume normal activities."
8	Test	Male	Five (5) seconds of 1kHz tone (followed by). "May I have your attention please! This is a test of the Wheelock evacuation system, repeat, this is only a test."

- Each message can be selected to have a code 3 pre-alert tone, a 1kHz continuous pre-alert tone, or no pre-alert tone
- Post-tones are also selectable and match the pre-tones for individual messages
- Any of the 8 messages are field programmable to record your own custom message
  - Each message length is 30 seconds
  - A 1/8" line level audio input jack is supplied for message recording
  - A two-step recording procedure is required to ensure and verify that the standard message will be permanently erased
- Factory programmed messages are available for custom messages
  - Contact customer service for additional information
  - Form is required and can be downloaded from www.coopernotification.com

Note: For telephone paging, the SP40S 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 SP40S) may be used to connect the SP40S to an unused C.O. port or 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).

Table 14. Ordering Information

Model Number	Order Code	Description
SP40S	9929	Multifunction 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 8 standard messages (batteries not included, 2 required.); red enclosure
SP40S-B	9935	Same as above but with black enclosure
SP40S-PMK	9936	SP40S 8-message programmed message kit
SP40S-LF-KIT	6216	Digital voice message control chip that upgrades SP40S with low frequency sleeping area tone capability
AM-SP40S-SMK	9937	SP40S after market 8-message standard message kit
AM-SP40S-PMK	9938	SP40S after market 8-message programmed message kit
AM-SP40S-NBT	9939	SP40S after market narrow band signal tone kit
SP-COA	9908	C.O. port adapter for the SP40S or SP40/2; recommended 24 VDC power supply is Wheelock RPS-2406 (Order Code 3770)
SP4Z-A/B	9900	Supervised 2-zone Class A or 4-zone Class B speaker audio splitter for the SP40S, SP40/2 or audio boosters
SPMB4Z	9907	Mounting bracket for the SP4Z-A/B is required when used with the audio boosters
SPB-320	9918	320 watt supervised audio power booster (four 80 watt circuits)
SPB-160	8989	160 watt supervised audio power booster (two 80 watt circuits), red enclosure
SPB-160-B	9930	160 watt supervised audio power booster (two 80 watt circuits), black enclosure
SPB-80/4	8988	80 watt supervised audio power booster with 4 amps of supervised and synchronized strobe power (two 2 amp circuits), red enclosure
SPB-80/4-B	9931	80 watt supervised audio power booster with 4 amps of supervised and synchronized strobe power (two 2 amp circuits), black enclosure
SP4Z-A/B	9900	Supervised 2-zone Class A or 4-zone Class B speaker audio splitter for the SP40S, SP40/2, SPB-320, SPB-160 or SPB-80/4
SPMB4Z	9907	Speaker splitter mounting bracket for SPB-320, SPB-160 or SPB-80/4
SP4Z-APS	9920	Addressable paging splitter
SP4-TZC	9921	Telephone zone controller
TZC-USB	9923	SP4-TZC programming cable
SP-SVC	9926	Supervised volume control for use with the SAFEPATH 4 System
SPRM	8996	Remote microphone for use with the SP40S, SP40/2, SPB-320, SPB-160, SPB-80/4 or SP4-RMX, red plate
SPRM-GP	9927	General paging microphone for use with the SPB-320, SPB-160 or SPB-80/4, black plate
BATC-R	5414	Battery cabinet, red
BATC-B	5413	Battery cabinet, black
BAT-1212	7390	12 volt, 12 ampere battery cell
BAT-1224	7391	12 volt, 24 ampere battery cell
BAT-1265	7392	12 volt, 65 ampere battery cell