

# 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

Description	Page
SP40S facility communications system .....	2-4
Expansion Options	
SAFEPATH 2-zone Class A or 4-zone Class B speaker audio splitter.....	5
SAFEPATH audio boosters.....	6-7
System diagram.....	8-9
SAFEPATH addressable paging splitter and telephone zone controller.....	10
SAFEPATH supervised volume control and remote microphone.....	11
Remote microphone expansion module .....	12-13
Architects and engineers specifications .....	14-16



Powering Business Worldwide

## SAFEPATH 2-Zone Class A or 4-Zone Class B Speaker Audio Splitter

### Description

- Supervised 2-zone Class A or 4-zone Class B speaker audio splitter for the SP40S, SP40/2 or audio boosters
- Enables a single supervised speaker audio output to drive up to two Class A supervised speaker audio outputs or four Class B supervised speaker audio outputs
- For operation with SAFEPATH family of products: SP40S, SP40/2, SPB-320, SPB-160, SPB-80/4



### Features

- Expands one zone to up to 2 zones of supervised speaker audio output in Class A
- Expands one zone to up to 4 zones of supervised speaker audio output in Class B
- Each Class A zone can accept up to 40 watts of audio
- Each Class B zone can accept up to 40 watts of audio
- Operates on either 25V or 70.7V RMS
- Mounts inside the enclosure of the SP40S, SP40/2 or audio boosters
- Power and Trouble LED's
- Individual zone short and open LED indication
- Capable of detecting wiring faults
- Removable wiring terminals for quick connect/disconnect accepting 12–22 AWG
- All output circuitry is Power Limited
- Space provided to allow for naming of the zones
- Powered by 24VDC, supplied by the either the SP40S, SP40/2 or audio boosters
- Standby and Alarm current at 24VDC is 15mA

### Approvals & compliances

- UL Standard 864, 9th edition, and California State Fire Marshal (CSFM), New York City (MEA)
- UFC 04-021-01 2002

### Applications

- Provides for expansion of one zone to up to 2 zones of supervised speaker audio output in Class A
- Provides for expansion of one zone to up to 4 zones of supervised speaker audio output in Class B

**Table 6. Ordering Information**

Model Number	Order Code	Description
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

**Note:** The Speaker Splitter Mounting Bracket (SPMB4Z) is required when the speaker splitter is used in audio boosters. The SPMB4Z can support two splitters.

**Table 14. Ordering Information**

<b>Model Number</b>	<b>Order Code</b>	<b>Description</b>
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

#### 4 Zone Class B Speaker Splitter

The Wheelock SP4Z-A/B shall be UL Standard 864, 9th edition, California State Fire Marshal (CSFM) and New York City (MEA) approved, 2-Zone Class A or 4-Zone Class B Speaker Splitter for operation with the Wheelock, SP40S, SP40/2, SPB-80/4, SPB-160 and SPB-320. The SP4Z-A/B shall enable a single supervised speaker audio output to drive up to two Class A supervised speaker audio outputs or four Class B supervised speaker audio outputs. Each Class A zone shall be capable of accepting up to 40 watts and operate on either 25 or 70.7V RMS of audio input. Each Class B zone shall be capable of accepting up to 40 watts of audio and operate on either 25 or 70.7V RMS of audio input. The SP4Z-A/B shall be capable of supporting live microphone paging, prerecorded emergency voice evacuation messages, supervised background music and general paging announcements.

The SP4Z-A/B shall mount inside the enclosure of the SP40S, SP40/2, SPB-80/4, SPB-160 and SPB-320 and shall have power and trouble LED's with individual zone short and open LED indication. The SP4Z-A/B shall be capable of detecting wiring faults. The SP4Z-A/B shall be powered by 24VDC, which is to be supplied by the SP40S, SP40/2, SPB-80/4, SPB-160 or SPB-320. Standby and Alarm current at 24VDC shall be 15mA. Removable wiring terminals for quick connect/disconnect accepting 12–22 AWG shall be incorporated. All output circuitry shall be power limited. Space shall be provided to allow for naming of the zones.

#### Addressable Paging Splitter and Telephone Zone Controller

The Wheelock Addressable Paging Splitter (SP4-APS) and Telephone Zone Controller (SP4-TZC) shall be used to control and direct telephone paging and background music zones connected to the SAFEPATH Multi-Function Facility Communication System using an RS485 connection.

The Addressable Paging Splitter (SP4-APS) shall be UL Standard 864, 9th edition and California State Fire Marshal (CSFM) approved, addressable and supervised 2-zone Class A or 4-zone Class B Speaker splitter. The SP4-APS shall be used with Wheelock's SP40S or SP40/2 panel and the Audio Booster (SPB-160, SPB-80/4, and SPB-320) panels. Each SP4-APS shall have a single audio input capable of 25 Vrms or 70.7 Vrms at a maximum of 80 Watts. The input audio power shall be distributed to the zone connections with the total not exceeding the input and no zone exceeding 40 Watts. When audio boosters are connected, each audio booster module shall consume 1.2 Watts from the total input power of the SP4-APS. The splitter shall be mounted inside the SP40S, SP40/2 or Audio Booster that it is associated with, and it shall operate on 24VDC supplied by the supported module. The SP4-APS shall contain 16 LED indicators used to monitor and troubleshoot the module.

The Telephone Zone Controller Module (SP4-TZC) shall be used to address the output zones on the SP4-APS. The SP4-TZC shall be capable of supporting 17 SP4-APS speaker splitter modules and shall be capable of addressing all zones at once ("All Call"), a maximum of 68 separate zones, 17 fixed zone groups and 9 programmed logical zone groups. This shall be accomplished using two digit DTMF tones from a page port, an unused CO port, or a stand alone telephone with a loop start circuit. Also, the SP4-TZC shall be able to select zones for background music. The SP4-TZC has the following inputs: Power, USB port, Background Music (BGM), Page Audio in. The outputs are: Audio out and RS485 Digital Control. The basic operating parameters of the SP4-APS shall be pre-programmed. Customized programming shall be accomplished using a USB cable and programming computer software. The SP4-TZC shall be powered using a 24VDC filtered and regulated power supply such as the Wheelock RPS-2406. The Controller Module assembly is mounted in a metal enclosure measuring 13"L x 7 5/8"W x 2"D.

#### Supervised Volume Control

The Wheelock SP-SVC shall be UL Standard 864, 9th edition approved, supervised volume control for use with the SAFEPATH Facility Communications System.

The SP-SVC shall provide for manual volume setting for telephone paging and background music for a specific speaker or speaker zone. The selected adjustment will not affect the volume setting of emergency prerecorded messages or live microphone usage. The SP-SVC shall be capable of handling up to 35 watts of audio power @ 70.7 volts or 4 watts audio power @ 25 volts and shall operate on either 70.7 or 25 volt input from an SP40S or Audio Booster. The SP-SVC shall be capable of operating in Class B or Class A wiring configurations (for Class A, the SP4-APS is required). The SP-SVC shall receive operating power from an Audio Booster, SP40S or SP40/2. Volume adjustment settings shall be off, 1–10, in 3dB increments. The SP-SVC shall be supplied with a stainless steel mounting plate with a black knob and require a double gang, 3-1/2" deep back box for mounting.

#### Remote Microphone

The Wheelock SPRM shall be UL Standard 864, 9th edition and California State Fire Marshal (CSFM) approved, Remote Microphone for use with the SAFEPATH Facility Communications System.

The SPRM shall be a supervised hand held push to talk microphone and a key shall be required to enable remote microphone use. (Same key as SP40S or SP40/2). Removable wiring terminals for quick connect/disconnect accepting 12–22 AWG shall be incorporated. All output circuitry shall be power limited. Individual front panel LED's shall be provided for indication of System Normal, System Trouble and Alarm. Multiple on board diagnostic LED's shall be provided. When used with the SP40S or SP40/2, the priority level shall be number two. Remote microphone usage shall disengage background music and general paging.

Voice frequency response shall be 275 Hz–6.5 kHz +/- 2.4 dB. Power requirements shall be 24VDC and will be supplied by the SP40S or SP40/2. Input current for Standby shall be 26mA and for Alarm 38mA. Audio output level shall be 1.05V RMA. There shall be a 6-wire connection to the SP40S or SP40/2. The mounting plate shall be red and measure, 8-3/4" x 5-1/4", and shall fit into a 4 gang back box.