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**INSTALLATION INSTRUCTIONS
 SP-SVC SAFEPATH SUPERVISED VOLUME CONTROL**

Use this product according to this instruction manual. Please keep this instruction manual for future reference.

GENERAL:

The SP-SVC Supervised Volume Control is a 35 watt volume attenuator that is listed under UL864 for installation with the Safepath SP40/2 along with the SPB-160, SPB-80/4, or SPB-320. It can be used to control the volume of a single speaker, multiple speakers or an entire audio loop up to 35 watts. The SP-SVC contains an override relay that will bypass the attenuator when the system is put into an alarm condition, thereby allowing the emergency notification message(s) to be announced at the maximum volume. The SP-SVC is designed to be compatible with a UL864 listed 24 volt supervised notification appliance circuit (NAC). It is compatible with class B wiring and with class A wiring if used with the SP4-APS Addressable Paging Splitter.

NOTE: This model is recommended for use with 70.7VRMS supervised audio systems, but it can be used in 25.0VRMS systems if the speaker load is reduced to 4 watts.

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

WARNING: PLEASE READ THESE INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH ANY OF THE FOLLOWING INSTRUCTIONS, CAUTIONS AND 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.

SPECIFICATIONS:

<i>Table 1: Attenuation Rating</i>		
Switch Position	Position Attenuation (dB)	Total Attenuation (dB) (Approx.)
10	0	0
9	-4	-4
8	-3	-7
7	-3	-10
6	-3	-13
5	-3	-16
4	-3	-19
3	-3	-22
2	-3	-25
1	-3	-28
0	OFF	OFF

Insertion loss is less than 0.5 dB.

<i>Table 2: Audio Power Rating</i>	
Audio Input Voltage	Maximum Load
70.7 VRMS	35W
25.0 VRMS	4W

<i>Table 3: DC input ratings</i>	
Input voltage	Maximum RMS Current
16.0-33.0 VDC/VRMS	10.0 mA

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WIRING INFORMATION:

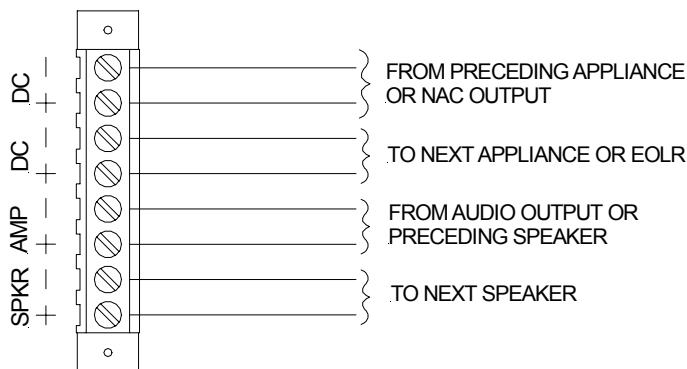


Figure 1. Terminal Block wiring diagram.

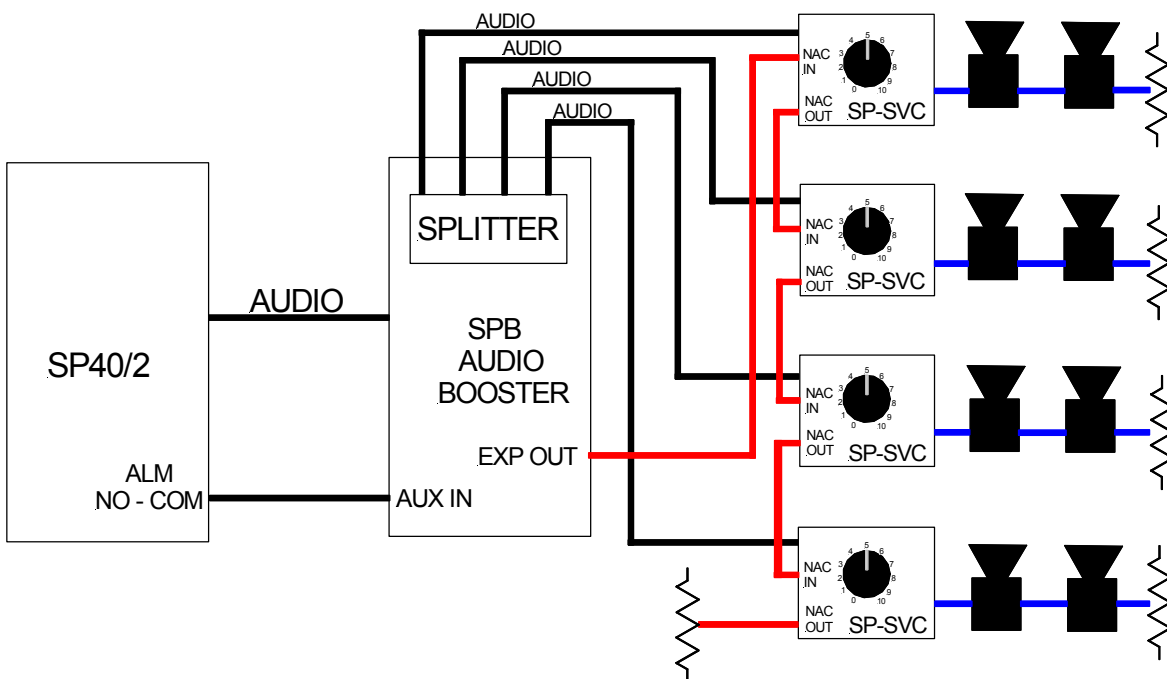


Figure 2. Typical system layout with SP40/2 and SPB Audio Booster and optional splitter.

NOTES:

1. Only one SP-SVC can be installed per audio zone; however, multiple units can be controlled by the same NAC.
2. All fixed volume speakers must be placed before the SP-SVC in the audio circuit. Any speakers placed after the unit will be able to be attenuated.
3. If the SP-SVC is installed in a supervised audio system with class B wiring, then an end-of-line resistor (EOLR) must be installed on the last speaker connected to the volume control unit.
4. Attach wires according to the label on the terminal block. The DC input/output terminals are interchangeable. If the SP-SVC is the last unit on the NAC, then an end-of-line resistor must be installed.
5. The maximum wire impedance between devices shall not exceed 35 ohms.

CAUTION: The SP-SVC is not designed to be used on coded systems in which the applied voltage is cycled on and off.

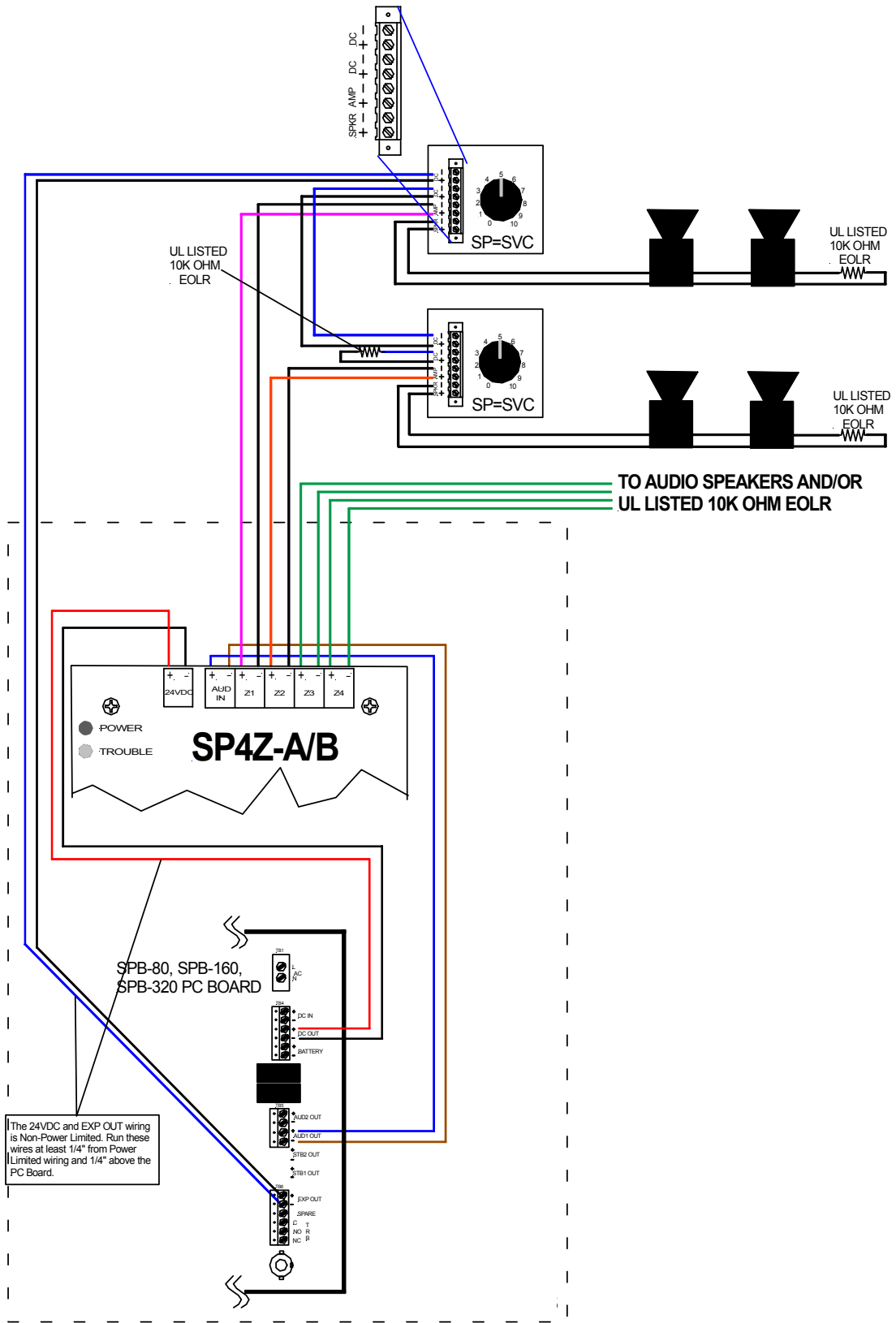


Figure 3. Class B system wiring diagram. SP4Z-A/B splitter is optional.

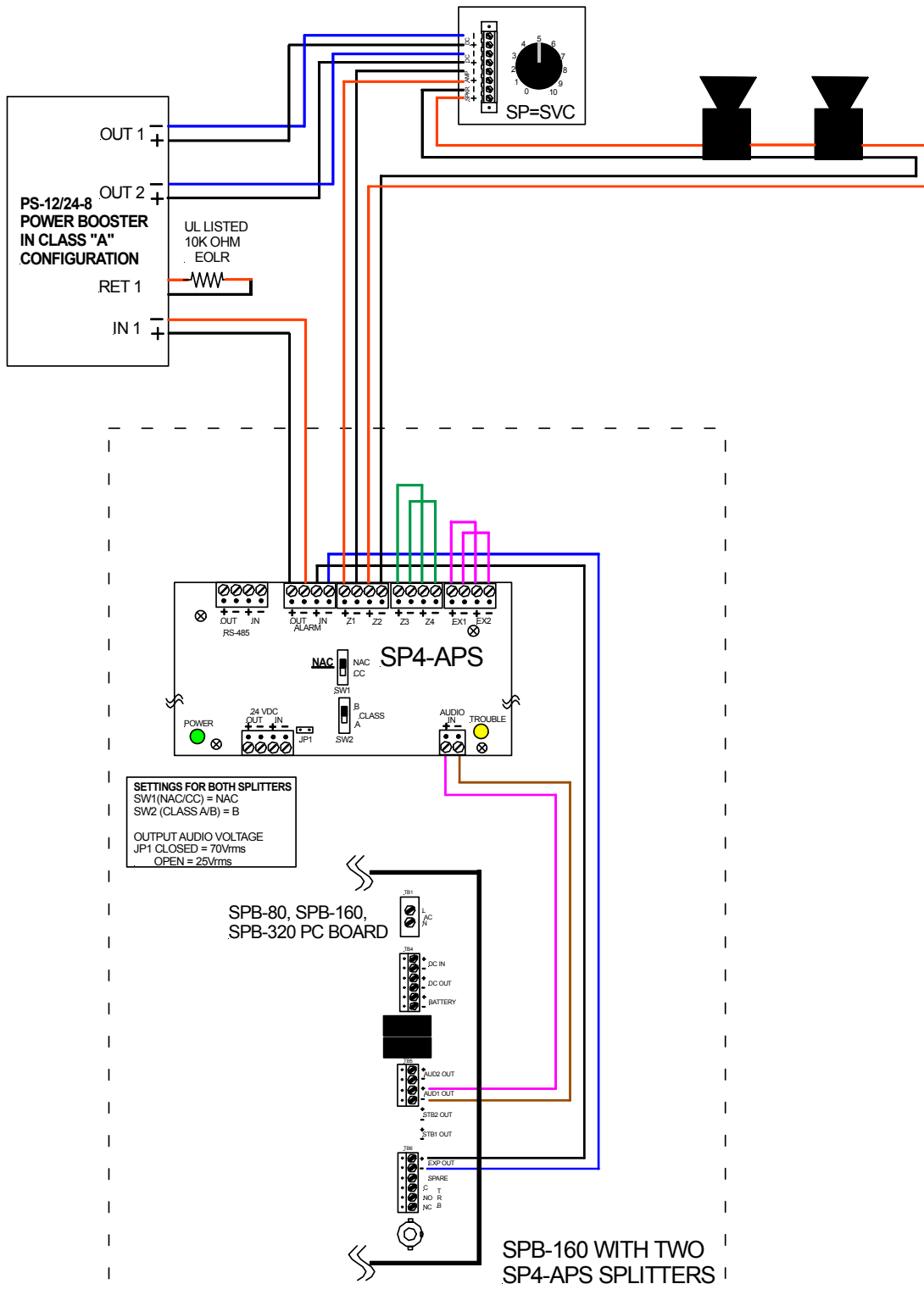


Figure 4. Class A system wiring diagram. SP4-APS Splitter is required. SP-SVC DC input must be connected to class A NAC.

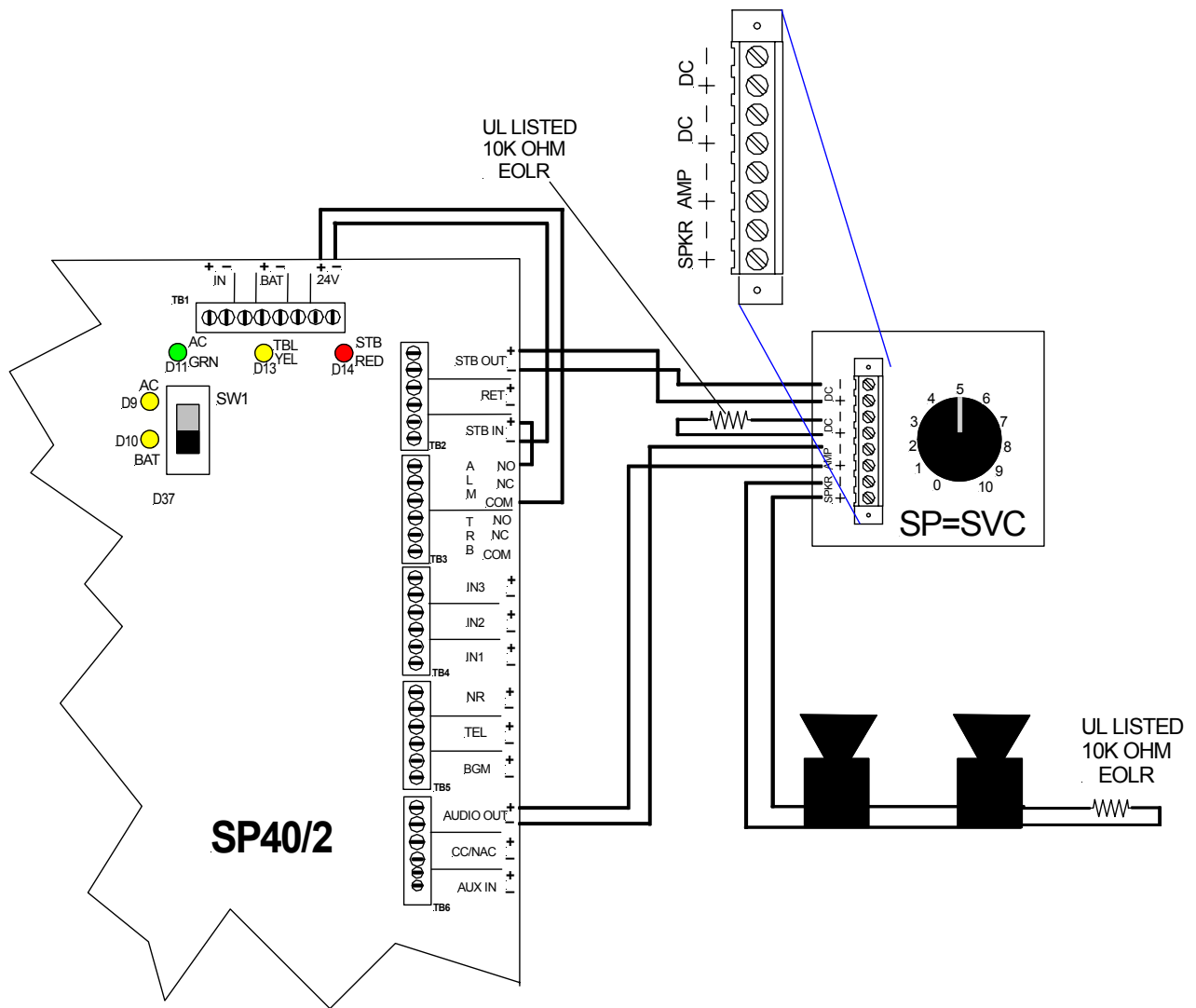


Figure 5. Installation with SP40/2 ONLY.

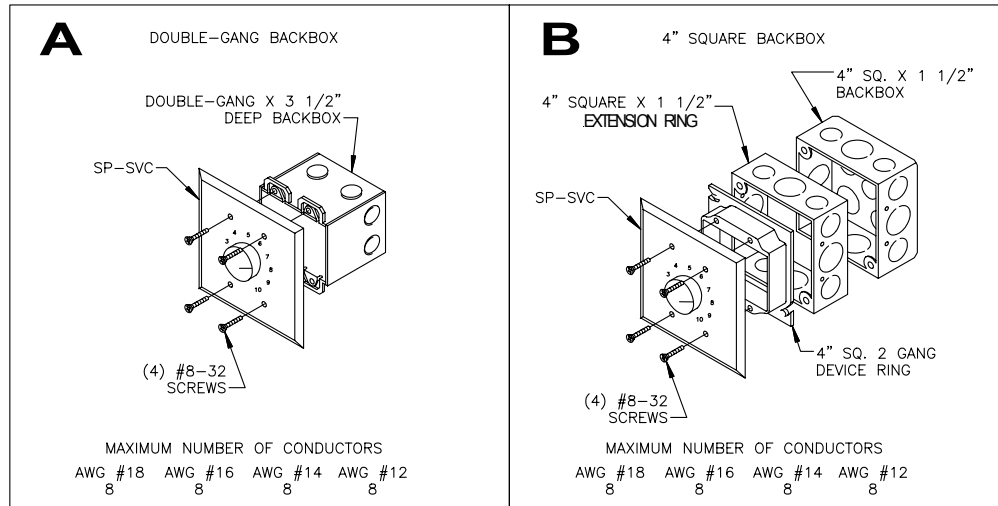
CAUTION: This installation option will result in loss of alarm contact closure.

Refer to the following product manuals for additional wiring and installation information:

- SP40/2 (P84116)
- SPB-160 & SPB-80/4 (P84296)
- SPB-320 (P84244)
- SP4-APS (P84577)
- SP4Z-A/B (P84205)

MOUNTING INFORMATION:

Although the limits shown for each mounting option comply with the National Electrical Code (NEC), Wheelock recommends use of the largest back box option shown and the use of approved stranded field wires, whenever possible, to provide additional wiring room for easy installation and minimum stress on the product from wiring. The back box must be UL listed.



⚠ CAUTION: Check that the installed product will have sufficient clearance and wiring room prior to installing back boxes and conduit, especially if sheathed multiconductor cable or 3/4" conduit fittings are used.

1. The SP-SVC can be mounted to a 3 1/2" deep double gang box (Figure A) or a 4" inch square, 1 1/2" deep box with a 1 1/2" extension ring and double gang ring (Figure B).
2. Conduit entrances to the back box should be selected to provide sufficient wiring clearance for the installed product.
3. When terminating field wires, do not use more lead length than required. Excess lead length could result in insufficient wiring space for the appliance. Do not pass additional wires through the back box. Such additional wires could result in insufficient wiring space for the device.
4. Verify that the SP-SVC is oriented correctly before wiring. Position the unit so that the number 5 is at the top.
5. The terminal block can accept 8 wires from #12 to #18 AWG with one wire per each position. Strip wires 1/4 of an inch. Insert the wires into the terminal block and turn the screws tightly to secure the wires. If using stranded wire, use care when inserting the wires to ensure that the wires do not fray and cross with the other wires.
6. Carefully push the unit into the back box. Use care and proper techniques to position the field wires in the back box so that they use minimum space and produce minimum stress on the product. If using rigid, heavy gauge wires, it may be necessary to pre-bend the wires so that the unit can be easily pushed into the back box.
7. Insert the mounting screws through the holes in the cover plate and fasten them.
8. Verify correct installation by testing the unit and the system in background music mode and alarm mode.

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