TECHNICAL NOTE

STANDPIPE-PAC™ - WIRING OF EXTERNAL AUDIBLE SIGNALING DEVICES

IMPORTANT
REFER TO THIS DOCUMENT BEFORE WIRING SIGNAL HORNS

The purpose of this document is to assist qualified electricians in the specifics for adding signal horns to a **STANDPIPE-PAC™. Proper installation can avoid service calls, saving time and expense for the customer.**

Signal Horn: The signal horn is the required audible indicator to annunciate a standpipe supervisory signal condition. The signal horn will sound when the pressure in the standpipe drops below approximately 7 PSIG or rises above 25 PSIG. This indicates an impairment of the standpipe and will require correction.

Additional Signal Wiring: If additional signal horns are required, connect these devices to the notification appliance circuit serving the signal horn on the **STANDPIPE-PAC™** unit (**Figure A** and **Figure B**). See Step-by-Step Guide, page 2 Additional horns are available from UNITED Fire Systems – P/N 03-100006-201.

Notification Appliance Circuit

- Maximum wiring length is 375 feet.
- Minimum wire gage: 14 AWG (See page 4, 'Do's and Don'ts')
- Operating voltage nominal 13.8 VDC
- **Current for all external devices: 1.0 amp**
- **End-of-line resistor**: 2.2K ohms, ½ watt (UFS P/N 03-100005-102)

IMPORTANT--NYC

UNITED Fire Systems recommends that all devices connected to the Notification Appliance Circuit (NAC) of the **STANDPIPE-PAC™** unit be audible ONLY. Local Law 64 / BC 3303.8.1 requires only audible notification. Visual indicators, such as strobes, can easily be mistaken for fire alarm signal horns. Signals from the **STANDPIPE-PAC™** unit are NOT fire alarm signals. NYC does not require additional signal horns for **STANDPIPE-PAC™.**

(Figure A) UNITED Fire Systems STANDPIPE-PAC™

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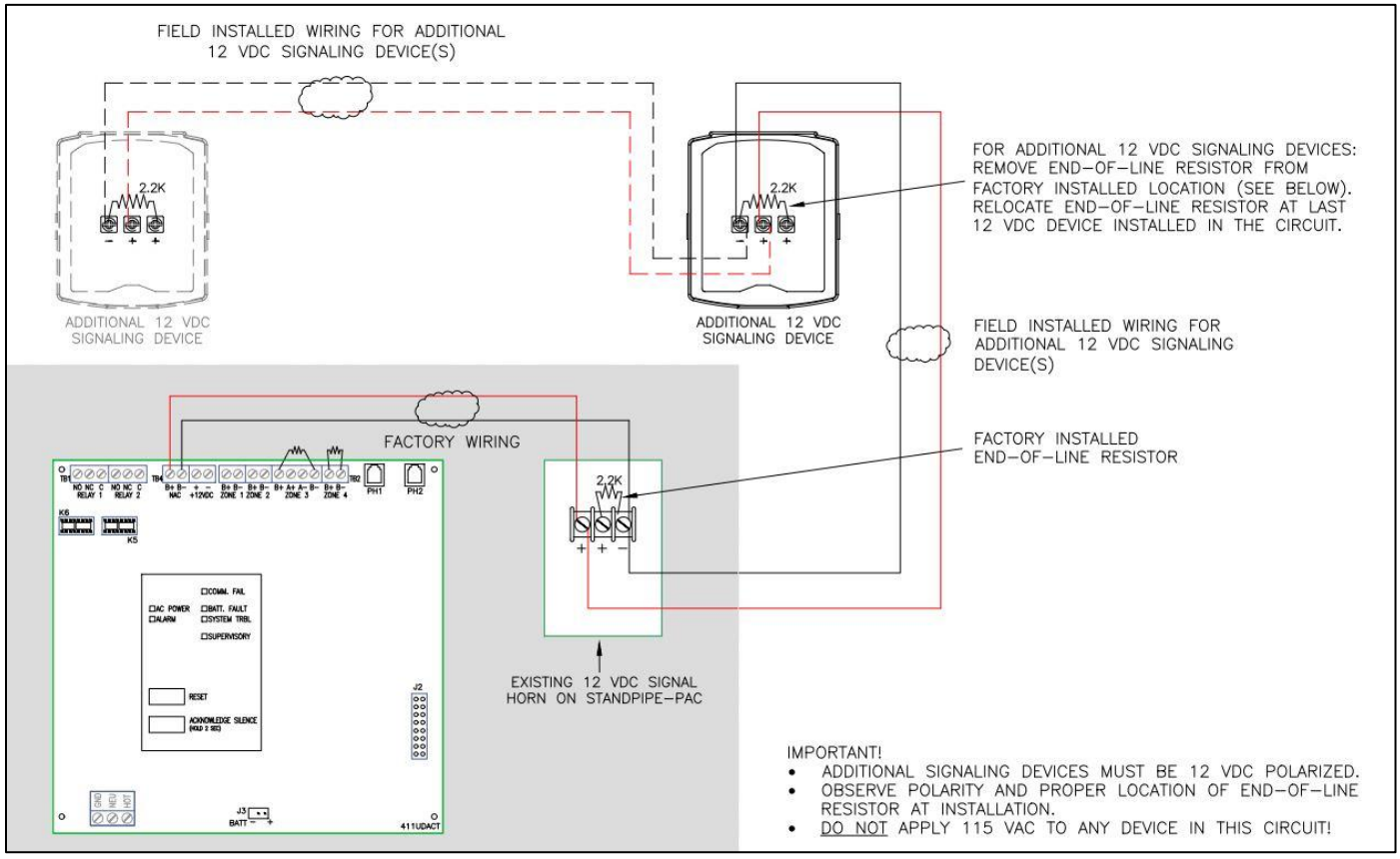
T E C H N I C A L N O T E

STANDPIPE-PAC™ - WIRING OF EXTERNAL AUDIBLE SIGNALING DEVICES



(Figure B) Signaling Devices Wiring

STEP-BY-STEP GUIDE TO INSTALLING ADDITIONAL SIGNAL HORNS TO STANDPIPE-PAC™

1. Ensure that the **STANDPIPE-PAC™** control unit has **NOT** been powered up, with AC power and batteries disconnected.
2. See **Figure 1** and **Figure 2**. Remove Signal Horn cover from factory installed Signal Horn assembly on **STANDPIPE-PAC™.**

Figure 1

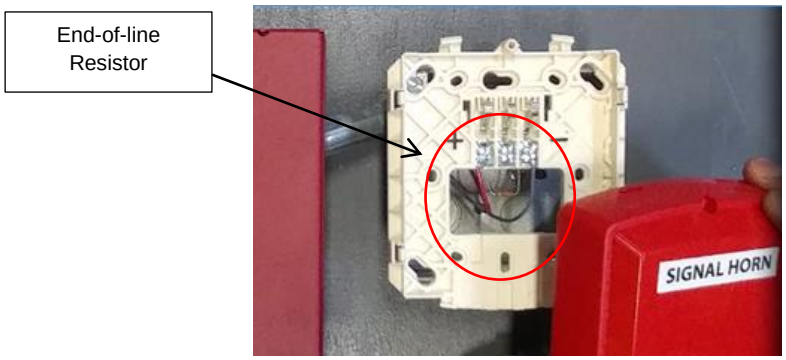


Figure 2

TECHNICAL NOTE

STANDPIPE-PAC™ - WIRING OF EXTERNAL AUDIBLE SIGNALING DEVICES

STEP-BY-STEP GUIDE, CONTINUED

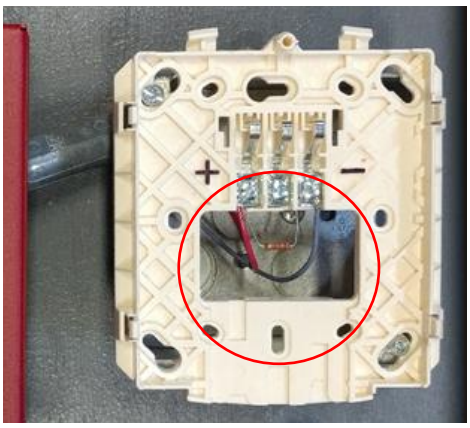


Figure 3

3. See **Figure 3**. Visually inspect Signal Horn base-plate connections. Locate positive and negative terminals on base-plate. **NOTE**: **RED** wire connects to positive terminal; **GRAY** wire connects to negative terminal.

4. See **Figure 3**. Locate **end-of-line resistor**; factory installed between positive and negative terminals on Signal Horn base-plate.

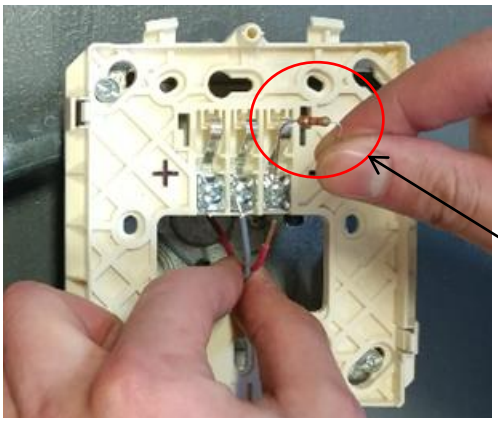


Figure 4

5. See **Figure 4**. Disconnect **RED** and **GRAY** wires and remove **end-of-line resistor** from base-plate. **IMPORTANT: DO NOT DISCARD END-OF-LINE RESISTOR**.

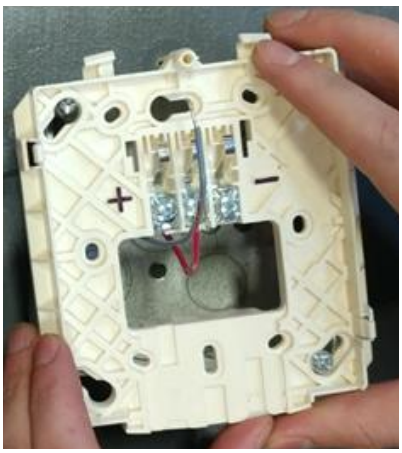


Figure 5

6. See **Figure 5**. Remove Signal Horn base-plate from back box.

TECHNICAL NOTE

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STEP-BY-STEP GUIDE, CONTINUED

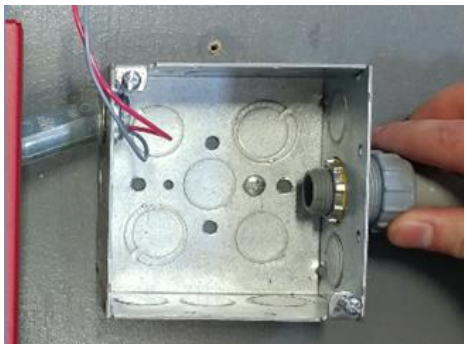

Figure 6

7. See **Figure 6**. Attach raceway to signal horn box at appropriate knockout. Install raceway from factory installed Signal Horn back box to additional Signal Horn. **NOTE**: See Table 1 for distance limitations.

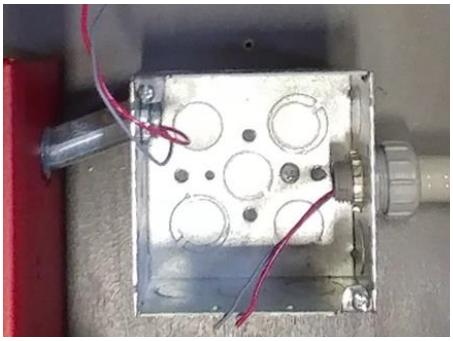

Figure 7

8. See **Figure 7.** Run **14 AWG Solid** wires from additional Signal Horn, through raceway and into factory installed Signal Horn back box. **NOTE:** UNITED Fire Systems recommends using **RED**, and **GRAY** or **BLACK** wires for consistency and polarity identification.

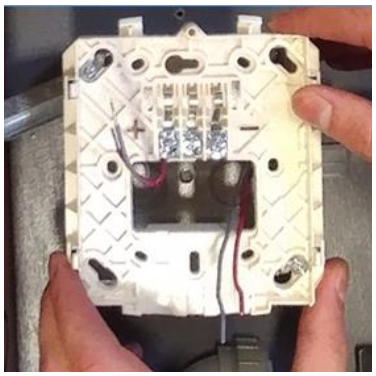

Figure 8

9. See **Figure 8**. Re-install Signal Horn base-plate to back box on **STANDPIPE-PAC™**.

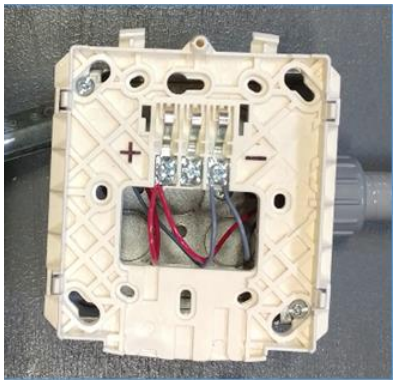

Figure 9

10. See **Figure 8** and **Figure 9** and **Figure B: Wiring Diagram**. Strip ends of wire installed in Step 8. Attach wires removed in Step 5 and wires installed in Step 8 to Signal Horn base-plate terminals.

TECHNICAL NOTE

STANDPIPE-PAC™ - WIRING OF EXTERNAL AUDIBLE SIGNALING DEVICES

STEP-BY-STEP GUIDE, CONTINUED

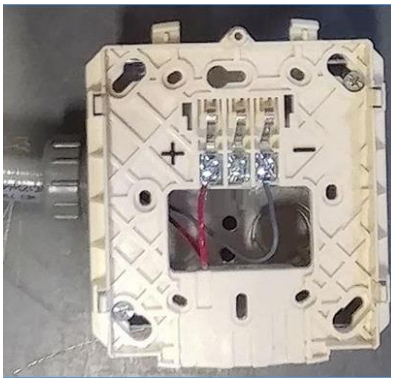

Figure 10

11. See **Figure 10**. Connect wires at additional Signal Horns. **IMPORTANT! Do not branch Signal Horn circuit. Run circuit from the first Signal Horn to the second Signal Horn, then the second Signal Horn to the third, and so on.**

12. Repeat steps 5 through 10 for each additional Signal Horn. **NOTE**: See Table 1 for distance limitations and maximum number of additional devices.

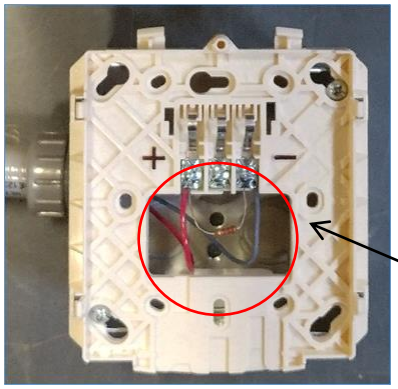

Figure 11

13. See **Figure 11**. Install **end-of-line resistor**, retained from Step 5, at last Signal Horn, between positive and negative terminals.

14. See **Figure 12** and **Figure 13**. Replace Signal Horn cover(s). **IMPORTANT**: Cover(s) MUST be fastened correctly for proper wire contact. Trouble signal will occur if Signal Horn cover(s) is not fastened correctly.

Figure 12

Figure 13

TECHNICAL NOTE

STANDPIPE-PAC™ - WIRING OF EXTERNAL AUDIBLE SIGNALING DEVICES

Distance Limitations:	Total length of circuit, run from the **STANDPIPE-PAC™** to the last additional Signal Horn, cannot exceed **375** feet**.**
Maximum number of Signal Horns:	**10** Additional Signal Horns, not including the factory installed horn.
Recommended Wire Gage:	**14** AWG Solid
Polarity Identification:	**RED** for positive (+) **GRAY** or **BLACK** for negative (-)

TABLE 1

Do's and Don'ts—How to avoid Service Calls

✓ **Do** make sure the Signal Horn covers are clicked firmly into place onto the Signal Horn base plates once wiring is complete.

✓ **Do** use a minimum of 14 AWG size wire.

✓ **Do** wire additional devices per Figure B. The end-of-line resistor must be moved to the last device in the circuit per Figure B.

✓ **Do** use **RED** and **GRAY** wire for (+) and (-) conductors so it is easy to maintain polarity.

✓ **Do** install the end-of-line resistor on the terminals indicated.

✓ **Do** ensure additional device(s) are 12VDC.

× **Don't** wire 115 VAC on this circuit.

× **Don't** mix up the polarity. Know the polarity at both ends of the wiring. Wire per polarity diagram.

× **Don't** exceed the current capacity of the circuit when adding additional horns to the **STANDPIPE-PAC™**. Each additional horn adjusted to FULL VOLUME draws 0.047 amps. As noted on page 1, the current for all external devices, including the factory-installed signal horn, is 1.0 amp.

× **Don't** branch the signaling circuit. Wire horns in parallel, from one horn to the next. See **Figure B: Wiring Diagram.**

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