# FREQUENTLY ASKED TECHNICAL QUESTIONS

## FIRE NOTIFICATION APPLIANCE CIRCUITS (NAC)
## SERVICE & MAINTENANCE

| NUMBER | QUESTION | ANSWER |
|---|---|---|
| 1 | "I am synchronizing using a Wheelock Synchronization module (SM-12/24 and/or DSM-12/24) and using Series AS, NS and RSS appliances. My audible chirped once then shut off." | Check the audible connections on the sync module for proper polarity. In addition check the audible connections for both forward polarity during alarm. Ensure that voltage is not a pulsed voltage such as a temporal pattern or march time. |
| 2 | "I have 10 DSM Modules and they are not syncing together. How do I get them all to sync at the same time?" | You need to connect each DSM module through the plus (+) and minus (-) interconnection terminals of each DSM module. |
| 3 | " Why won't the interconnection terminals on the DSM Module tighten?" | Those terminals utilize a self-tapping screw. Apply pressure when you are tightening the screw. |
| 4 | "On the PS-12/24-8 Power Booster, everything is working fine but I notice the LED on the logic board is blinking faintly" | This is normal. |
| 5 | " I would like to parallel two of the outputs on the PS-12/24-8 Power Booster to give me a 4 Amp output" | You can parallel either outputs 1&2 or 3&4 to give you a 4 Amp output. |
| 6 | "I wired the PS-12/24-8 for AC Fail and Battery Fail. It's been 2 minutes already and it hasn't given me a trouble." | It takes approximately 5 minutes for the Power Booster to change state. |
| 7 | "I want the PS-12/24-8 to report a ground fault. How do I wire the Power Booster to give me that?" | Connect a single wire from the negative (-) side of the AUX terminal to the chassis ground located by the Transformer within the panel. |
| 8 | "I have the Series NS and my hole in the wall is just a little bit too big. What do I do?" | Use the NATP Trim Plate. |
| 9 | "How do I connect multiple PS-12/24-8 Power Boosters with Class "B" wiring without the silence option?" | Wire to Input 1, then take a jumper wire out of 1's return to input 2. Place the EOLR on the return of input 2. Then come out of output 4 to the input 1 of the next booster putting the EOLR on the last booster and set the DIP switch according to the Instruction Manual. |
| 10 | " I have one of your signals installed on a job. It's not working. What should I do?" | Take the appliance out of the NAC Circuit. Use either a power supply or a 24 VDC battery and connect the appliance to the power source. If it does not function then most likely the appliance is defective. You need to replace the appliance. To be on the safe side, test the new appliance before installing it into the Fire Alarm System. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

| NUMBER | QUESTION | ANSWER |
|---|---|---|
| 11 | **"How do I hook up the NS4 separating the horn and strobe while using the DSM Module and have the horns do a Code 3 Pattern?"** | Connect a NAC Circuit from the FACP to the Audible Terminals of the DSM. Jumper from the Audible Terminals to Input 1. Connect the Strobe portion of the NS4 to output 1 of the DSM. Connect the Horn portion of the NS4 to a separate NAC Circuit from the FACP. Have the FACP provide the Code 3 Pattern. |
| 12 | **"How do I set either the NS or the AS appliances for continuous horn operation?"** | Remove the factory installed jumper from the Code 3 position. Note that you cannot get continuous horn when connected to a sync module. |
| 13 | **"I have the CH 70 Chime Strobe and I want to use it with a Sync /module."** | Wire the strobe portion of the Chime Strobe through the Sync Module. Wire the Chime portion through your FACP on a separate NAC Circuit and set the Chime to single stroke and pulse the NAC Circuit. |
| 14 | **"How do I set the DIP switches for Code 3 on a MT-12/24-R?"** | Look at the SW1 switch. Set positions 2 & 3 to the up position and position 4 to the down position. |
| 15 | **"How do I set the priorities on the AMT appliance?"** | By setting the SW 1 DIP switch. Position 1 sets the dB level from either high or low. Positions 2 through 4 sets the priorities of the signal. |
| 16 | **"What kind of Back Box do I need to mount a bell outdoors?"** | The correct box to use is a WBB-R. |
| 17 | **"What kind of Back Box do I need for the Series E70 & ET70 Speakers when I need to mount the appliance on the surface?"** | The correct box to use is the SBB-R for Red or the SBB-W for White. |
| 18 | **"How do I increase the output of the STH-15S-R?"** | Remove the cover plate on the side of the horn and adjust the tap setting using a flat head screwdriver. |
| 19 | **"On the new Mini Horn (MIZ-24TC-R), how do I set the appliance for Code 3?"** | There is a jumper plug on the rear of the appliance. Set the plug so the plug is on the left pin. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

| NUMBER | QUESTION | ANSWER |
|---|---|---|
| 20 | "I am synchronizing using a Wheelock Synchronization module (SM-12/24 and/or DSM-12/24) and using Series AS, NS and RSS appliances. My strobes and audibles are not synchronizing." | There are 3 main reasons for loss of synchronization. Voltage drops below the appliance's listed voltage, pulsed voltages from the power source or the appliances are not capable of synchronization. |

**To check for voltage drop perform the following test.**

1. Put temporary jumper wires between +in1 & + out1 and +in2 & +out2. Please note that this disables the sync protocol. When finished with the test the temporary jumpers must be removed.
2. Activate the circuit and go to the last appliance on the circuit and take a voltage reading. This should also be the location of the end of line resistor.
3. For appliances manufactured after January of 2001 the allowable voltage drop is 16 VDC.
4. Either the quantity of appliances on that circuit need to be reduced or a power extender such as Wheelock's PS-12/24-8 should be used at a midway point that has a voltage greater than 16 VDC.

**To check for pulsed voltages from the power source.**

1. Measure the voltage between +in1 & minus1 and +in2 & minus2.
2. The voltage should be constant with no fluctuation.
3. Change panel program to a constant/steady output. Temporal/code 3 and march time should never be used.

4. An additional test can be performed to validate the power source. Remove the circuit from the power source and test the circuit directly on the batteries. If it works correctly on the batteries then contact your panel manufacturer on how to program a constant/steady output.

**To check if your appliances are capable of synchronization.**

1. Reference the instruction sheets that came with your appliances. If they do no mention synchronization as a feature then they cannot be synchronized. In addition you can contact Wheelock Technical Support @ 800-631-2148, option 3 for assistance determining the appliances features.

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

## FIRE NOTIFICATION APPLIANCE CIRCUITS (NAC)
## APPLICATIONS

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "I need a horn that can take a pulse voltage from my FACP" | MT-12/24-R |
| 2 | "I have several strobes on my NAC Circuit from my FACP which is rated at 1 AMP. I want to put more horn strobes on that circuit. How can I accomplish this?" | By using the PS-12/24-8 Power Booster |
| 3 | "I need a Horn Strobe that I can put in a freezer" | Use the ASWP-2475W-FR with the WPBB-R Back Box |
| 4 | "Do you make a strobe only appliance for outdoor use that can be synchronized?" | Yes, the RSSWP-2475W-FR with the WPSBB-R Back Box |
| 5 | "Do you make a Vibrating Explosionproof Bell?" | Yes, the CVX10-115AC-R |
| 6 | "I have 4 circuits of Horn Strobes that I need to synchronize. Do you have a product I can use?" | Yes, either the PS-12/24-8 Power Booster or two interconnected DSM Sync Modules |
| 7 | "Do you have a Horn Strobe that operates on 115 VAC for outdoor use?" | Yes, the MT4-115-WH-VFR with the WBB-R Back Box |
| 8 | "My customer ordered the MT-12/24-R and was sent a WBB-R Back Box. It doesn't fit. What is the correct Back Box?" | The IOB-R |
| 9 | "Do you make a tile bridge for the CH90 Chime for installation in a supported ceiling?" | Yes, the SSB-4 |
| 10 | "I have a hotel that needs to put a Mini Horn in each hotel room . Do you have something I can use?" | Yes, the MIZ-24TC-R, which is either continuous or Code 3. |

# FREQUENTLY ASKED TECHNICAL QUESTIONS

## TELEPHONE SIGNALING PRODUCTS
## SERVICE & MAINTENANCE

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "I have a UTA-1 in a washdown area. Is it ok if I hose it down?" | Although the unit is weather resistant, it is not recommended to directly spray the unit with water. |
| 2 | "I purchased, the CRT-T-40 Relay. After the phone rings the relay contacts seem to stay closed." | First check to see if you have the relay set to the low sensitivity. If this does not fix the problem gently bend the contacts up. |
| 3 | "My customer is calling me looking for a loud horn for his garage. He currently has an old Wheelock bell on the wall but I can't seem to find it in your catalog. What would be the replacement?" | The bell you are referring to is probably a Series 163 Bell.The recommended replacement would be a MTH-24, which is 117dB, and a CRT-T-40 which is the relay to activate the horn. |
| 4 | "I am trying to get the UTA-WH-VPS to operate on my analog phone no matter what phone I try the thing won't ring. What is the issue?" | That unit requires a 115vac wired directly to TB3 on the unit. |
| 5 | "My customer has called me to fix his PS-33A-WPW because it won't stop flashing on his analog phone line. Do you have any suggestions?" | The unit is working fine. The problem is the unit is not the right product for the application. That device requires 18-30 volts AC or DC. The device you need is either the PS-11A-WPW, which also needs to be plugged into a 110 VAC wall outlet, or the PS-15A-WPW, which can connect directly to the analog phone line. |
| 6 | "I have a CA-312 that was working but I moved its location and now it does not operate even though I measure ring voltage coming into device." | The common problem with these devices is they require a good ground. If you place your butset on tip and the ground you are using and do not pull dial tone, it will verify that the ground is not correct. Make sure you have a solid earth ground. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

## TELEPHONE SIGNALING PRODUCTS
## INSTALLATION

| QUESTION | ANSWER |
|---|---|
| **1** | **"I need to install a weatherproof phone signal device. What should I use?"** | The UTA-1 is recommended for both indoor and outdoor applications. |
| **2** | **"I am installing a digital phone system for my customer and he wants a signal device for his guys in the warehouse. The system can provide a contact closure when the phone rings. What would be the loudest horn you make?"** | The MTH-24 would be the best device for this installation. It comes with its own power supply and activates on a contact closure. |
| **3** | **"I have a CA-312 that was working but I moved its location and now it does not operate even though I measure ring voltage coming into the device."** | The common problem with this device is they require a good ground. If you place your butset on tip and ground and do not pull dial tone, this would verify that the ground is not correct. Make sure you have a solid earth ground. |
| **4** | **"I am installing the UTA-WH-VPS. Where can I get the 110-power that I need?"** | The 110 VAC comes from any standard wall outlet. Simply cut a line cord and connect to TB3 and plug into the wall. |
| **5** | **"I want to install a chime for my phone system. Need something small that I can leave on my desk. Any suggestions?"** | The CH-AT1-W works directly off the phone ring voltage and is small enough to leave on your desk. |

## TELEPHONE SIGNALING PRODUCTS
## APPLICATION

| QUESTION | ANSWER |
|---|---|
| **1** | **"What High Candlepower TeleStrobe do I use with an analog phone system with 110 VAC power cord?"** | PS 11A WPW |
| **2** | **"What Ringer do I use with an analog phone?"** | UTA-1 |
| **3** | **"I need a signal device for a digital phone system."** | Wheelock does not have a device that is plug and play with a digital system but if you can provide a dry contact when the phone rings we have a interface (DCI-24-24) that will receive the contact closure and provide a 24vdc output that can be used with a number of products like a UTA-1. |
| **4** | **"I need a relay to provide contact closure when my analog phone rings."** | The CRT-T-40 will perform this task. |
| **5** | **"I need a weather Resistant Telephone signal device."** | Either the UTA-1 or the TB-593 for analog phone systems. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

## INDUSTRIAL SIGNALING PRODUCTS
## INSTALLATION

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "I am installing 3 DC max strobes to the RPS-2406 with some switches to notify the guys in the back it's time to go home. Will my installation be successful?" | No, the DC-MAX strobes has a high current draw (470ma). It is recommended that a larger power supply such as the RPS-2440 be installed. |
| 2 | "What strobe (only) should I use for a door bell signaling device?" | If you are using 24 VDC as your input voltage, the correct part would be a RSS-24MCW-DW |

## INDUSTRIAL SIGNALING PRODUCTS
## APPLICATION

| | QUESTION | ANSWER |
|---|---|---|
| 1 | Do you carry a beacon type strobe that operates on 24vdc and is clear in color | The product you need is a DC-MAX-C |

## FREQUENTLY ASKED TECHNICAL QUESTIONS

## COMMERCIAL & TELEPHONE PAGING PRODUCTS
## SERVICE & MAINTENANCE

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "My customer is upgrading his phone system to a new digital system. He currently is using your MZC-144. Will I be able to use this unit on his new phone system?" | The MZC-144 can only be used with a CO line or a Page Port |
| 2 | "I am using the MZC-144 with a power supply that is unfiltered and not regulated. There seems to be a lot of noise when I page and my customer is unhappy. What is the problem with the MZC-144?" | The MZC-144 needs a filtered and regulated power supply. It is recommended that you replace the power supply with an RPS-2406 and see if that remedies the problem. In most cases that will clean up the noise you hear when you use the paging system.. |
| 3 | "I am trying to upgrade a 60 watt amplifier I purchased from Wheelock to 100 watts. What is the part number I need to order?" | Wheelock no longer manufacturers amplifiers. |

## COMMERCIAL & TELEPHONE PAGING PRODUCTS
## INSTALLATION

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "I just completed wiring a MZC-144 and I cannot get the device to page. I have my power wires connected to pins 5 & 6 but still have nothing?" | The MZC-144 requires reverse polarity; make sure that pin 5 is your positive (+) and pin 6 is connected to ground (-). |
| 3 | " I am installing some ST-C8's into a drop ceiling. What can you recommend I mount them to?" | Wheelock makes a product for just such an application. It is a tile support bridge part number SSB-8 |

## COMMERCIAL & TELEPHONE PAGING PRODUCTS
## APPLICATION

| | QUESTION | ANSWER |
|---|---|---|
| 1 | "What is the recommend power supply for the MZC-144?" | The RPS-2406, which is filtered and regulated, is the recommended power supply |
| 2 | "I need to install a 24vdc 4-amp power supply for some self amplified paging speakers. What should I use?" | Although the outputs on the RPS-2440 are rated as two amps you can parallel them to give you a 4amp 24 VDC power supply |
| 3 | "I need a 3 zone paging device?" | The MZC-144 with RPS-2406 power supply |
| 4 | "I need an amplifier to connect to your MZC-144 for background music." | Wheelock no longer manufactures amplifiers. |

# FREQUENTLY ASKED TECHNICAL QUESTIONS

## SAFEPATH PRODUCTS
## SERVICE & MAINTENANCE

| | QUESTION | ANSWER |
|---|---|---|
| 1 | **"Why are the bottom yellow LED blinking on the SAA-80S amplifier card?"** | The amplifier LED blinking is normal. That shows the supervision passing through the amp. |
| 2 | **"I can hear a low tone coming out of my SafePath. Is that normal?"** | Yes. That is the supervision tone passing through the amplifier. |
| 3 | **"I added another amplifier to my SAPE or DCSP. Why is it when I play a message it only comes out over the original amplifier not the new one, but when I use the live microphone or put the panel in manual mode all the amplifiers work?"** | Either the **PMK** message chip you have installed was only programmed for one output or you do not have the **OCK** output channel IC chips installed. |
| 4 | **Why is it when I key up the microphone I can hear a clicking noise coming from inside the SafePath?** | The clicking noise is the strobe sync relays. When you key the onboard microphone the SafePath is designed to activate the strobe outputs at the same time. If you do not have Wheelock sync strobes on the outputs then turn off the strobe sync {SS} dip switch ( check the O&M manual for location). If you do have Wheelock sync strobes then you have to push the white RESET button after you are finished with your announcement. |
| 5 | **"If I have an older Multi-Circuit SafePath and want to update it, will the boards you sell today work in my older system?"** | Yes, the new boards are backward compatible. If you are replacing the controller card you have to get a new dead front panel for it to fit model # **DFP-R** (red), **DFP-B** (black). |
| 6 | **"Can I disable the supervision tone on the SafePath?"** | No. You cannot disable the tone. |
| 7 | **"Can I change the SMK messages after installing the SafePath system at my job location if the customer wants special messages later?"** | Yes. All you need to do is order an AM- PMK for the SAPE, or an AM- MDV-PMK for the DCSP or the SCSP. |
| 8 | **"We just installed a remote microphone station to my SafePath but it doesn't work."** | Make sure that you turned the remote microphone (RM) dipswitch to the on position on the controller card. |
| 9 | **"Why is it when I key up the microphone to do a live message then release the strobes keep flashing?** | You have the strobes set in the sync mode; after you finish your live message you have to push the white RESET button. |
| 10 | **"When testing the SafePath for BAT and AC fail how long does it take to report a trouble?"** | On the SCSP or the DCSP it could take as long as 5 Minutes. On the Multi-Circuit SafePath it is virtually instantaneous. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

## SAFEPATH PRODUCTS
## INSTALLATION

| | QUESTION | ANSWER |
|---|---|---|
| 1 | **"Why is it as soon as I power up the SafePath it goes right into the tone alarm mode?"** | Most common reason is that the **automatic/manual** switch is in the manual position. Make sure to put it to the automatic position. |
| 2 | **"When I power up my SafePath it goes right into trouble. What is causing this?"** | Most common problem is that the onboard microphone and or batteries are not hooked up. These are supervised part of equipment within the SafePath. |
| 3 | **"Why does my SAPE-2AR stay in trouble, and the DX-200 board has a 2-blink error?"** | The 2-blink error on the DX-200 is showing you that there is no message recorded. Record a simple TEST message on the DX-200 and the trouble should clear. |
| 4 | **"When I hook a NAC/24vdc to the SafePath inputs it doesn't play the message, only tones."** | The SafePath is only activated from a dry contact closure (a short). If your FACP cannot provide a contact closure and will only give a voltage output then you need to order a Wheelock model # **NACIM** (**N**otification **A**ppliance **C**ircuit **I**nterface **M**odule). This module will take your FACP's voltage output and convert it to a signal for activation of the SafePath. |
| 5 | **"On my SCSP when I connect to the CH PLAY terminal it will not play the message."** | The CH PLAY terminal is not what's used to activate the SCSP to play messages. You have to connect your dry contact closure to the appropriate message terminal on the MDX-2 board on the left. Check the O&M manual or Fast-Track setup guide for terminal location. |
| 6 | **"Do you have a flush mount kit for the SafePath?"** | No. The unit is designed for surface mount only. |
| 7 | **"Where are the conduit entrances located on the SafePath?"** | Conduit entrances are only located on the top and bottom of the enclosures. |
| 8 | **"Do the batteries fit inside of the SafePath?"** | **A.** The Single Circuit SAFEPATH (**SCSP**) **will** fit up to two (2) 12 ah batteries.<br>**B**. The Dual Circuit SAFEPATH (DCSP) **will not** fit any batteries in the enclosure. **<br>**C**. The Multi Circuit SAFEPATH (SAPE) **will not** fit any batteries in the enclosure. **<br>**\*\* NOTE—The recommended battery cabinet is Wheelock part # BATC-R (red) BATC-B (black)** |
| 9 | **"Do I have to put End Of Line Resistors (EOLR) on the inputs of the SafePath?"** | **A.** Single Circuit SafePath………NO<br>**B**. Dual Circuit SafePath………..NO<br>**C**. Multi Circuit SafePath……….YES |
| 10 | **"What value EOLR do I have to use on the outputs?"** | 10k Ohm Resistors. Minimum 1/8 Watt. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

## SAFEPATH PRODUCTS
## APPLICATION

| QUESTION | ANSWER |
|---|---|
| **1** **"How many messages can I have on the SafePath?"** | **A.** The SCSP and DCSP come with eight (8) standard messages or you can even order your own personal messages (MDV-PMK) up to eight (8) with not totaling more than 2 minutes.<br>**B.** The SAPE-1AR can be ordered with the SMK consisting of eight messages or you can order a Program Message Kit (PMK) with your own eight (8) custom messages or with ordering additional PMK's (up to 7) you can get up to 999 message files not totaling more than 8 minutes.<br>**C**. The SAPE-2AR is a field programmable unit that includes 2 minutes of PSRAM Memory.You can have up to 999 message files by adding up to 7 MEM-2 IC Chips which gives you a total of 16 minutes. |
| **2** **"Am I able to use your SafePath to power my paging speaker system that I already have installed?"** | No. You can not use standard paging speakers on the SafePath because the speakers have to be designed to work with supervisory circuits. Standard speakers do not have the circuitry required for supervision. |
| **3** **"Can I record my own messages on your SafePath?"** | Yes. You can record your own messages on the SAPE-2AR Multi Circuit SafePath with the DX-200. |
| **4** **"Instead of messages can I have tones from my SafePath?"** | Yes. Wheelock will program the chip set (PMK) with the tones you require. |
| **5** **"Can your SafePath be used as a paging system as well as voice evacuation?"** | Yes. All you need to order is the AIM-3 module. This unit will let you feed a page port or unused co port to the SafePath for paging.  Note: page port will require a contact closure in addition to the audio. |
| **6** **"Can I also use the SafePath for weather alerts as well as fire?"** | Yes. It is just a matter of activating the contact input on the voice message board. You must have that message recorded on the unit. |
| **7** **"Will the SafePath work with 25 or 70.7-volt speakers?"** | Yes. It will work with both 25v and 70v speakers providing they are supervisable. |
| **8** **"I have a movie theater with 4 different rooms that require a voice evac system. I want to have the capability to notify only one room at a time. Can the SafePath do this?"** | Yes. The Multi Circuit SafePath has this type of function to where the message will play over only one amplifier at a time. |
| **9** **"I have a job site that needs a specification for a voice evacuation system. I've never done a job like this. Can I send in my blue prints for the job to get some help?"** | Yes. You can send the blue prints into our applications department where we will work up a specification for the project at no additional charge. |

# *FREQUENTLY ASKED TECHNICAL QUESTIONS*

| 10 | **"Am I able to wire multiple PS-12/24-8's to the SafePath and have them all sync together?"** | Yes. All you have to do is set the SafePath for the sync output. |
|----|----|----|
| 11 | **''Is there any way that I can have my customer listen to the SMK messages without having to make them wait till the system is installed?"** | Yes, have your customer log onto the internet and go to www.wheelockinc.com, click on the Tech Support  tab on the top of the page and then go to the bottom of the page to download all the SMK messages. |

**FAQ-2**