

SIRN Pager Information

SIRN/800MHz Paging

Each SIRN console is capable of 800MHz paging over the SIRN network as installed.

Each tower will broadcast pages. Redundant and diverse connectivity and backup power at each site ensure high reliability across the system.

800 MHz pagers have a higher cost than VHF pagers (see cost comparison at the end of the document). Responders would need to acquire additional funds to purchase pagers in addition to SIRN radios.

Only 1 brand of 800 MHz pager is available [Unication USA](#)

Portable radios can be utilized as pagers (see radio shops for specific models and pricing) Electronic Communications quoted a Motorola APX 900 Portable Radio with 800 MHz paging enabled at **\$2167**

SIRN Console Paging:

2 options:

Designated Talk group paging – A talk group dedicated to paging of resources. Upon key-up of the talk group, the pager can recognize that and set off the pager. This uses up additional console resources as well as a radio to be on that talk group on each tower to deliver audio to that tower unless we force the system to deliver pages to all towers in the dispatched area.*

Page over existing talk group – Quick Call II tones can be sent over an existing talk group. You will hear the paging tones come over the radio. A radio can be setup to recognize tones and act as a pager, or the 800 MHz pager can recognize the tones and go off. You will hear all paging tones on that talk group go out, even if they are paging someone else that shares that talk group.

These are explained in greater detail in the accompanying document **P25 Voice Paging – Reviewing Alerting Methods 2022**

*Under normal configuration pages would only be delivered to towers that have a radio affiliated to them on the talk group being paged. We are researching the development of a regional, shared paging talk group that would be forced to all towers in a defined geographic area to ensure that pages are delivered whether or not a radio is affiliated with each tower.

SIRN Paging Next Steps:

State Contract (Cities and Counties can participate) for 800 MHz pagers will be completed by NDIT (underway)

Coverage testing of 800 MHz pagers will be completed by NDIT. Our goal is to understand if the coverage provided by SIRN for paging will be similar to portable predictions and if not is it greater or less.

VHF Paging

Known coverage of existing VHF infrastructure

Black boxes (repeaters) are in use to ensure adequate coverage in many areas.

Existing infrastructure and equipment can be utilized

Lower priced pagers compared to 800MHz pagers

Each PSAP needs to evaluate the anticipated lifespan of individual VHF systems and the determine the ability/desire to continue incurring costs to maintain these systems.

Maintaining existing infrastructure to page while also maintaining SIRN may become cost prohibitive.

State Owned VHF Towers and Paging

The State will maintain all current VHF towers and paging equipment until the system buildout allows all State Radio counties and cities have the ability to transition to SIRN. For initial planning purposes we anticipate beginning to decommission legacy VHF towers (with no transfer of VHF gear) early in the 2027-2029 biennium. This is subject to change if we have delayed SIRN transitions.

NDIT will coordinate with State Radio to ensure that the dates of decommissioning are known to all State Radio customers.

SIRN to VHF Gateways

Motorola

Per Jack at Electronic Communications:

What we would do is build a crossband repeater. We would need a SIRN capable radio with tone signaling. That radio would interface to a VHF radio or repeater. A two tone signal would be sent from SIRN dispatch to activate the SIRN radio's receiver audio. Then the specific agency's tones along with the dispatcher voice would be sent. The audio received by the SIRN radio would be retransmitted on the VHF radio/repeater.

It's pretty similar to what State Radio already does with the black box paging repeaters. Except the current systems receive and transmit on VHF. The new setup would receive tones and audio on a SIRN talkgroup and retransmit on a VHF radio.

PSAPs should reach out to their radio vendor to determine exact equipment needs and pricing, as there is great variance between local systems.

Kenwood/EFJohnson

Per Jamestown Communication:

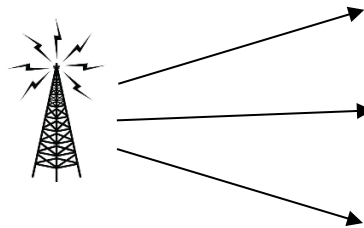
They have similar abilities described above.

SIRN Tower



SIRN 800 MHz Pager
Tones sent from SIRN
dispatch console

Local Radio system



Local Radio System ingests SIRN 800
MHz tones and rebroadcasts on VHF
to local VHF pagers

Pager Pricing

Unication G5 Dual Band Pager Analog and P25 Digital – Phase 1 & 2

VHF 136-174/700-800 MHz

2 year warranty

\$726.75

Ray's Pager Sales

Unication G4 700/800 MHz P25 Voice Pager

2 year warranty

\$631.75

Magnum Electronics

Unication G1 Voice Pager

VHF

2 year warranty

\$384.75

Magnum Electronics

Motorola APX 900 Portable Radio

800 MHz

\$2167

Electronic Communications

Motorola Minotor VII VHF Pager

\$552

Electronic Communications