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# **PSEARN PRESENTATION**

**Puget Sound Emergency Radio Network**

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# ABOUT PSERN

## **What is PSERN?**

PSERN is the [Puget Sound Emergency Radio Network](#), which will fully replace the existing King County Emergency Communications System (KCERCS) when the [PSERN Project](#) is complete in 2024.

## **What is the current emergency radio system?**

The current emergency radio system, King County Emergency Communications System (KCERCS) was created in the late 1990's and is provided by [four separate radio operators](#) who jointly maintain the system, separately maintaining the equipment and managing the staff.

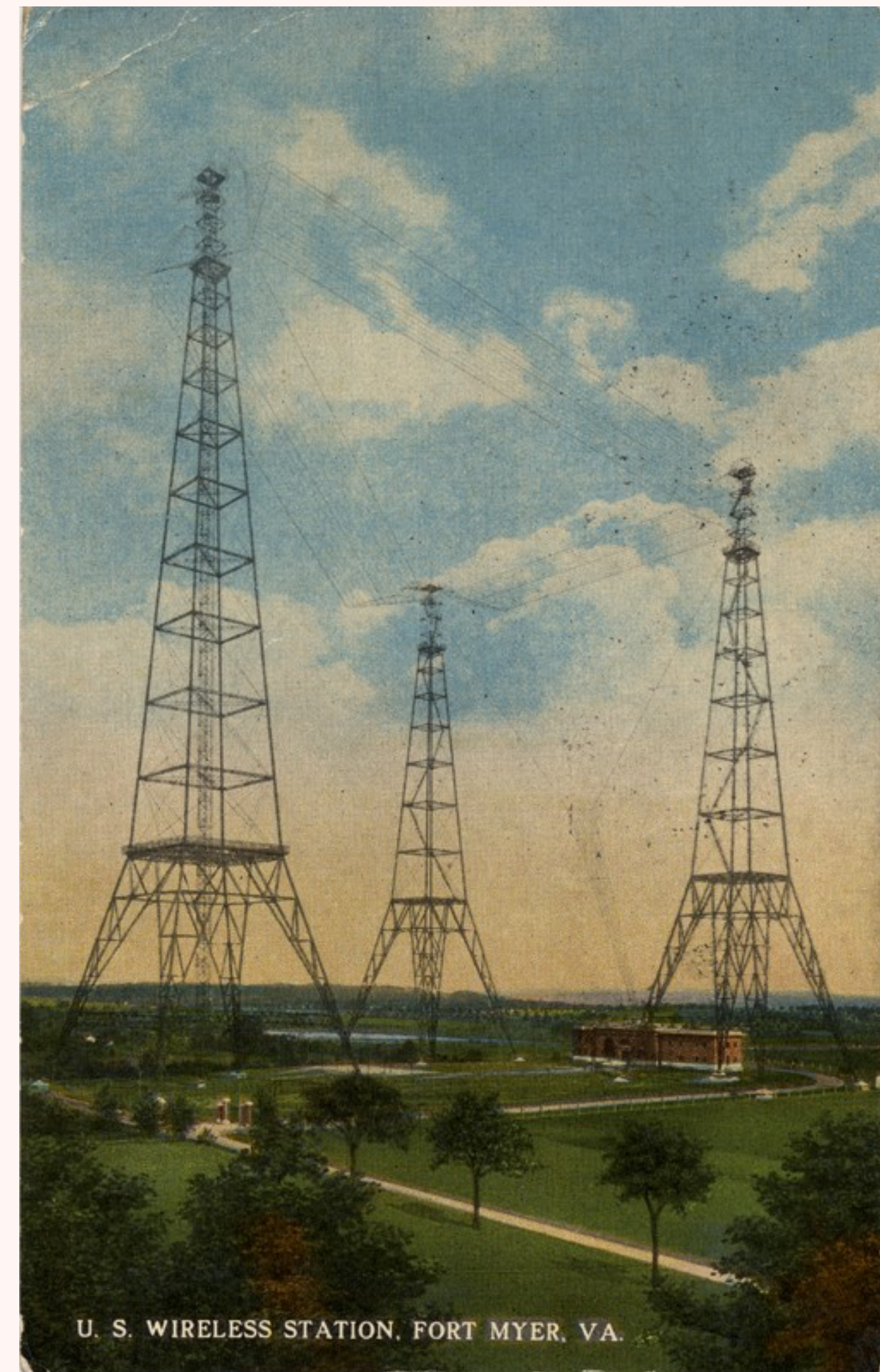
## **Why is a new Operator being created?**

The current emergency radio system owners – City of Seattle, ValleyCom Cities, EPSCA Cities, and King County – agree that emergency radio communications are a regional service and centralization is needed. To that end, they determined that the best model is to operate and own PSERN under a new nonprofit entity, the [PSERN Operator](#).

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- PSERN- 97% coverage from the front door at the street. Some buildings will still have troubles due to building construction.
- KCERCS- <95% Covered area reliability with a portable in front of face
- Templates/ Radios will have both the current KCERCS Analog system and PSERN Digital systems until final transfer in (unknown).



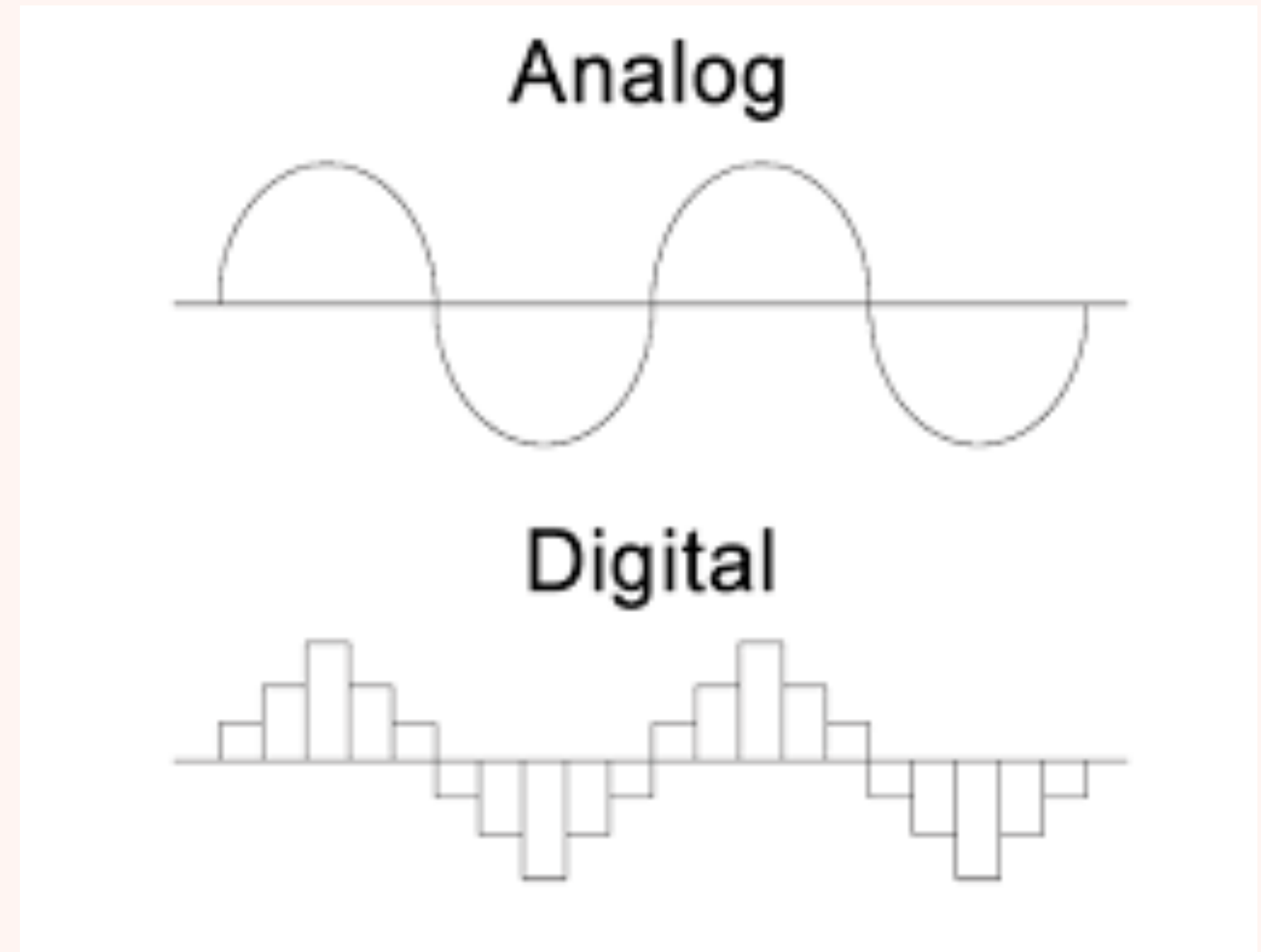


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# ANALOG VS DIGITAL

## **Advantages of Digital**

- Less static, clear, no background noise
- Analog gradually goes out where as Digital will stay strong until last second then cut out
- Stronger signal, with more towers accessible now
- Greater range out in rural areas





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# LAUNCH DATES



- PSERN will distribute New Radios:  
Portables

-March- May 2023 (North of I-90)

Mobile (Rigs) Radios

-May 2023

KCERCS Analog to PSERN Digital

-2024

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# WHAT YOU'LL SEE ON NEW PORTABLE RADIOS

## Two Versions of Talkgroups

All new radios will be programmed with the specific talkgroups or channels agencies use

### A-Bank

- **KCERCS** = zone name starts with “Z” to indicate analog talkgroup (e.g., **ZA 01 NC FTAC1**)

### B-Bank

- **PSERN** = zone name starts with “D” to indicate digital talkgroup (e.g., **DA 01 NC FTAC1**)



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When agencies first receive their radios, they will use the KCERCS talk-groups. After all agencies within a [Radio Deployment Wave](#) have received their radios, the Project will notify them on a designated [Transition Date](#) to begin using the PSERN talk-groups. At that point, the KCERCS talk-groups for those agencies will no-longer work and users will experience a “bonk” if they attempt to transmit on them. Although the KCERCS talk-groups will no-longer work, they will remain visible on radios until an over-the-air update process can occur remove them.

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# PATCHING INTO SNO COUNTY ON PORTABLES

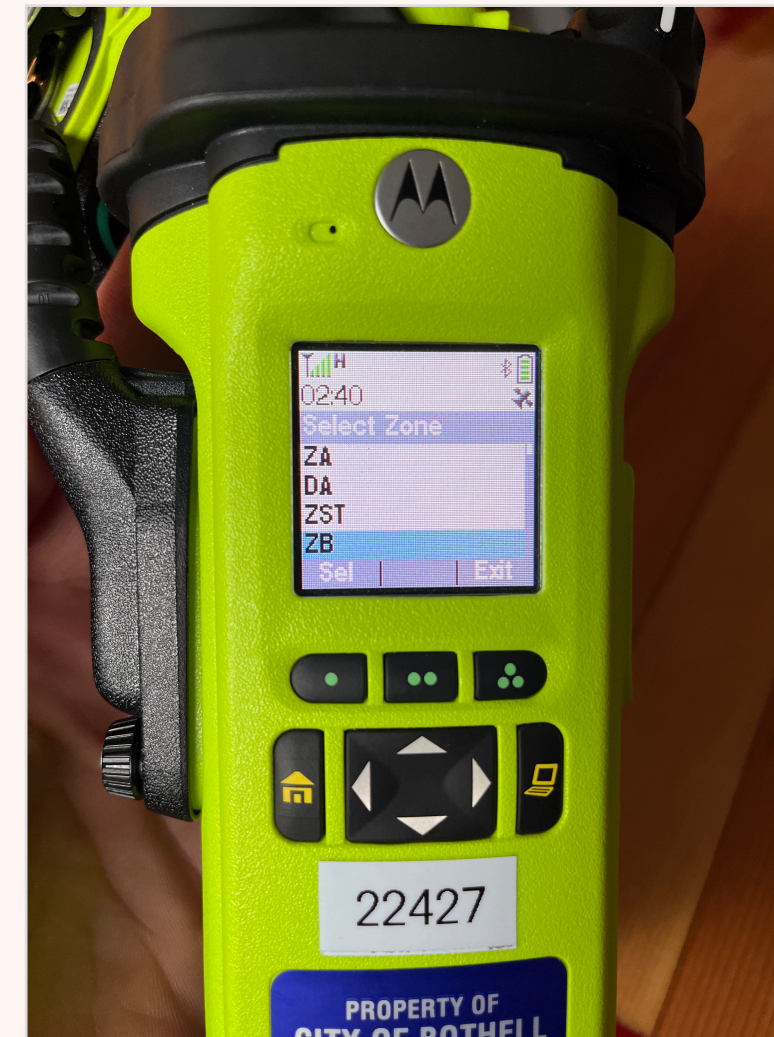


- Sno County will now be accessed through
  - ZONE B (as in Bravo)
    - ZB
  - 01 FIRE-TAC 1
  - This can be done by using the front screen and scrolling through the Zones to reach ZB, then press SEL. This can also be done by using the side black buttons to scroll to the ZB zone as well.
  - You will no longer be able to just switch the top toggle to B- Bank to get to Sno County. This is now the Digital Bank that is empty
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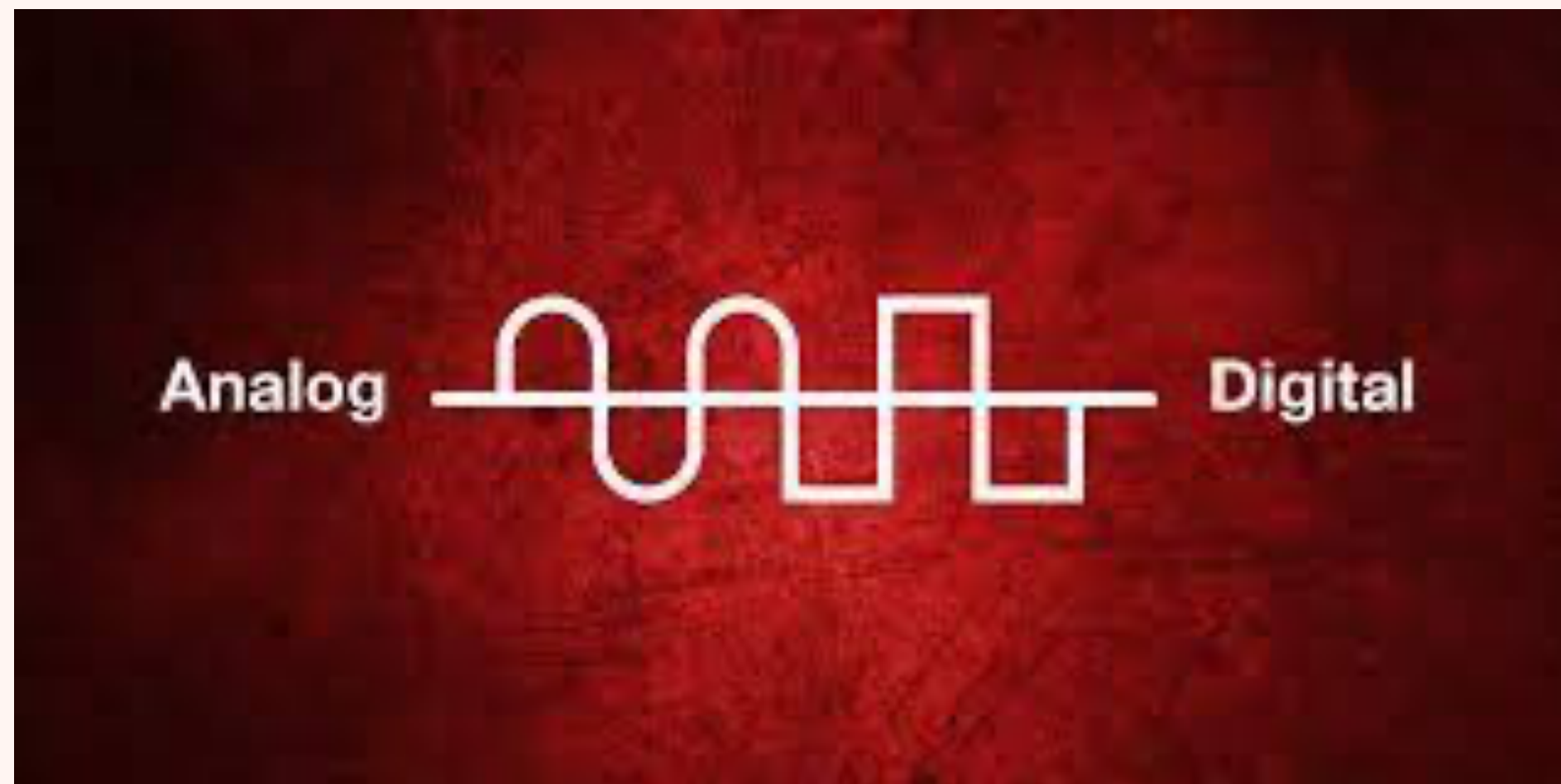
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# SCREENS



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# SWITCH FROM ANALOG TO DIGITAL



When the switch to Digital is made in December 2022:

**Zone A- ZA KCERCS Analog primary talk groups- THIS BANK WILL NO LONGER WORK**

**Zone B- DA PSERN Digital primary talk groups. This will be the NEW system**

**Zone ZST- SIMPLEX Operations on ST OPS1,**

**ST OPS4, ST OPS3 (adding)**

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# DIGITAL UPDATE FOR RADIOS

-As soon as all areas (May of 2024) have gone to Digital, an “over the air” update will be provided for the radios by PSERN. At this point the banks could change to update the termination of the Analog system.







BOB REED?



# MOTOROLA APX 6000XE P25





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# UPDATES





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# MIC BEST PRACTICES



**PLACE MICROPHONE CLOSE TO THE  
SCBA MASK VOICE EMITTER**

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# TRAINING WITH NEW RADIOS

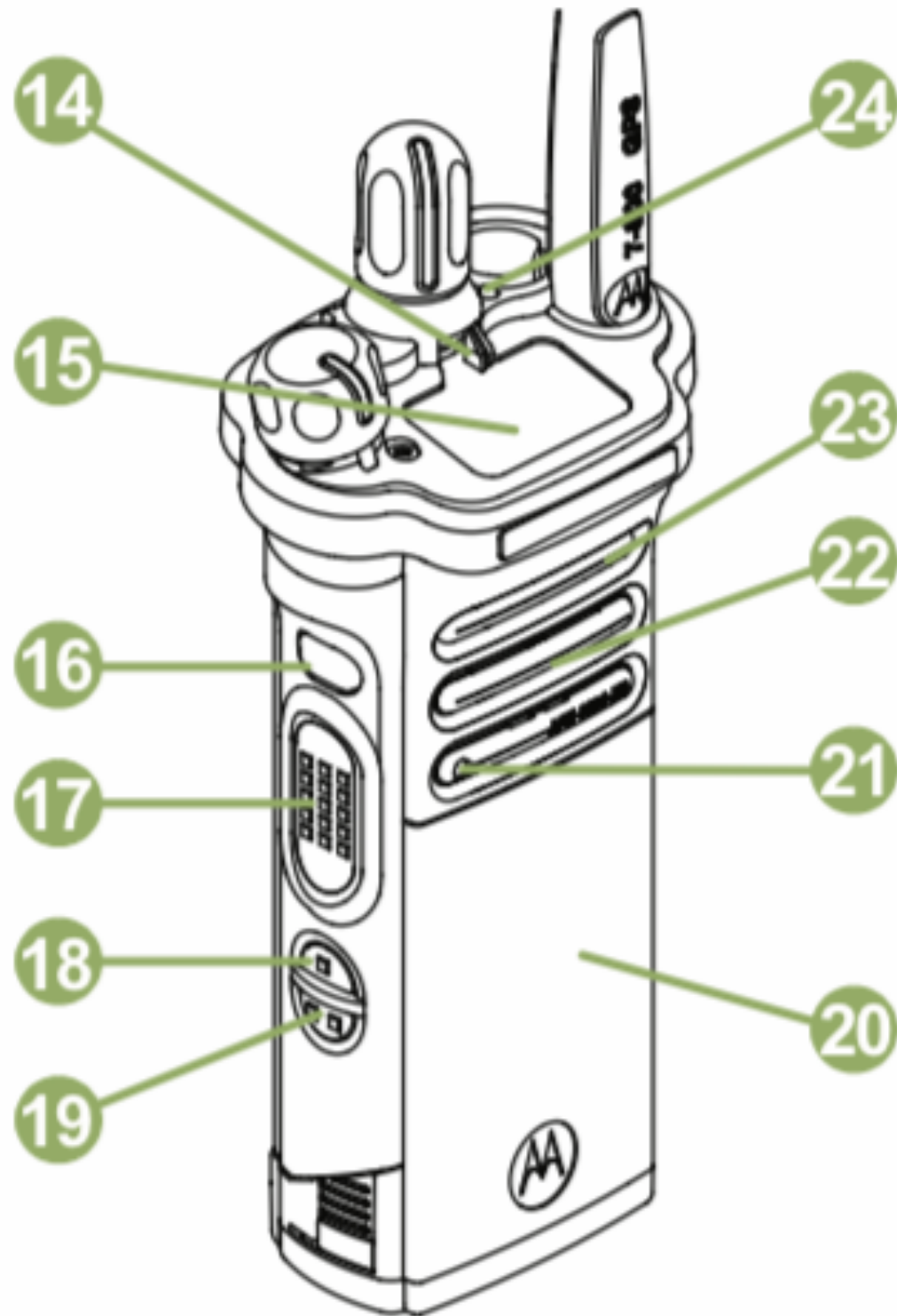
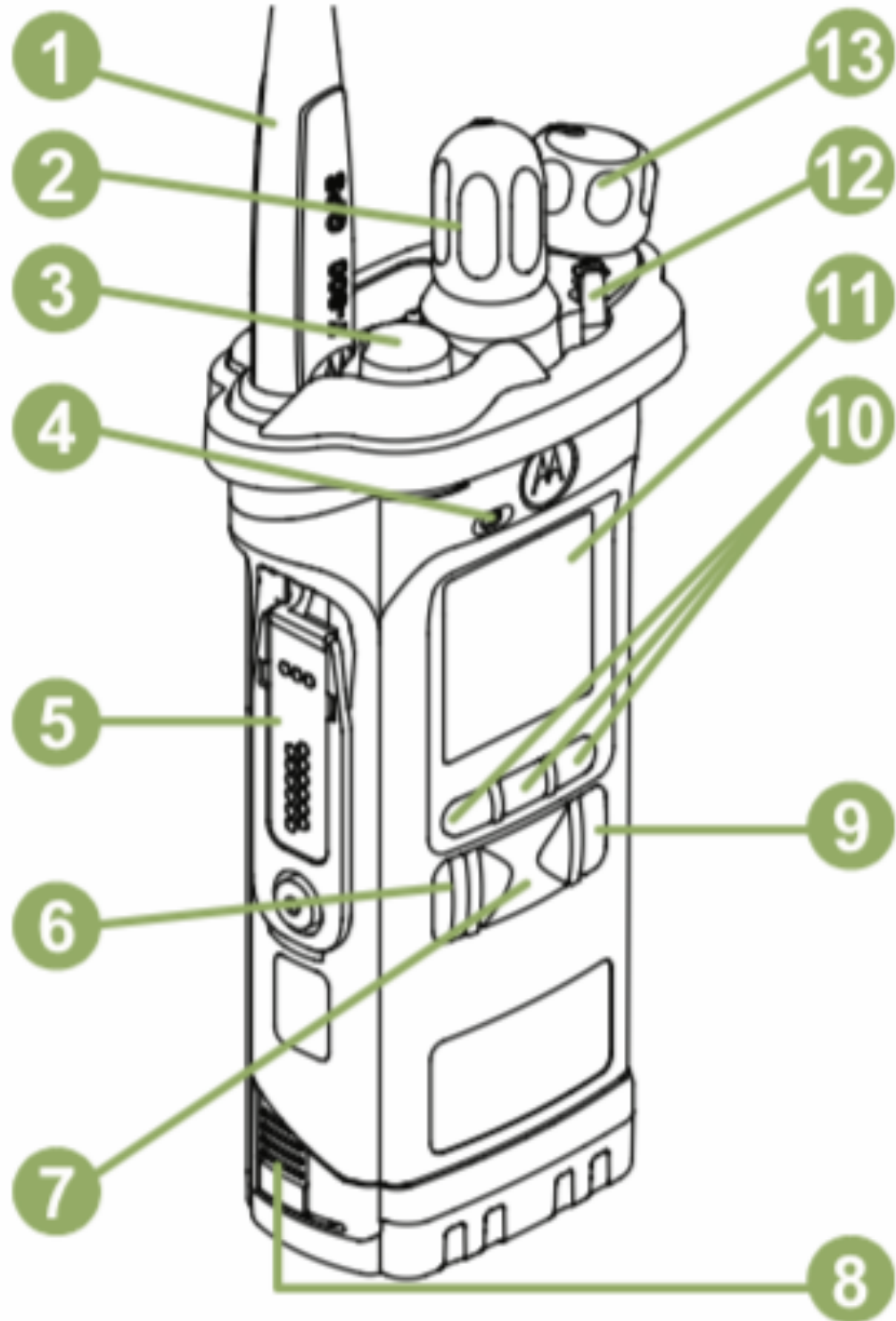
-Once the new radios are here and in service we will be able to do more hands on training with them. This is meant to give everyone an overview of the new radios and the new system we will be switching to.





Identifying Radio Controls

Radio Parts and Controls



1	Antenna
2	16-Position Select Knob <sup>[1]</sup>
3	Top (Orange) Button <sup>[1]</sup>
4	Microphone

5	Accessory Connector
6	Home Button
7	4-Way Navigation Button
8	Battery Latch
9	Data Feature Button
10	Menu Select Buttons
11	Main Display
12	3-Position A/B/C Switch <sup>[1]</sup>
13	On/Off/Volume Control Knob
14	2-Position Concentric Switch <sup>[1]</sup>
15	Top Display
16	Top Side (Select) Button <sup>[1]</sup>
17	Push-to-Talk (PTT) Button
18	Side Button 1 <sup>[1]</sup>
19	Side Button 2 <sup>[1]</sup>
20	Battery

21	Bluetooth Pairing Location Indicator
22	Main Speaker
23	Microphone
24	LED

## Programmable Features

Any reference in this manual to controls that are preprogrammed means that a qualified radio technician must use the radio programming software to assign a feature to a control.

Your dealer can program the programmable buttons as shortcuts to radio functions or preset channels/groups depending on the duration of a button press:

**Press** Pressing and releasing rapidly.

**Long press** Pressing and holding for the preprogrammed duration (between 0.25 seconds and 3.75 seconds).

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# BATTERIES

- Each radio will get 2 batteries
  - Should be cycled between both batteries every month to 2 months
  - Batteries will automatically condition themselves. If battery is needed in short time, it can be put back on charger and it will just charge.
  - Need to be charged in Smart Charger prior to use for roughly 8-12 hrs.  
Builds a baseline for battery
  - Chargers are smart and will do what they need for the battery
  - Condition or charge. You can manually override conditioning in need a quick charge.
  - Batteries should last roughly 2 years. Some have gone to 3 years.
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# REFERENCES

- **Motorola APX 6000XE P25- USER Manuals**
  - <https://www.motorolasolutions.com/content/dam/msi/docs/support/manuals/lac/astro-25/apx6000xe-m2-user-guide-en-68012003048.pdf>
  - [https://www.motorolasolutions.com/content/dam/msi/docs/products/apx/apx6000xe-enhanced/APX6000XEnhanced\\_DataSheet.pdf](https://www.motorolasolutions.com/content/dam/msi/docs/products/apx/apx6000xe-enhanced/APX6000XEnhanced_DataSheet.pdf) **PSERN Information**
  - <https://psern.org>
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# QUIZ/ RECAP

1. How will you patch through to Sno County on the Portable radios?
  2. What are two advantages of the Digital system?
  3. When are we switching to the PSERN Digital system?
  4. How many EMER button options does this set up have? Where?
  5. Where are the microphones on the radio?
  6. How do you flip the TOP Screen view?
  7. T or F- You can only change Zones with the toggle switch?
  8. What are 2 best practices when using the mic?
  9. How long should the batteries be “Smart Charged” for before use?
  10. T or F- You can submerge these radios in water?
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