

# HealthNet Base Station Radio Guide

The HealthNet radio network is a backup communications system that enables participating Sonoma County healthcare facilities to communicate with the County of Sonoma Department of Health Services (DHS) and with each other when primary communications systems are down.

HealthNet operates on dedicated VHF public safety frequencies which are licensed to the County of Sonoma and are only to be used by designees of the County for disaster/emergency preparedness and response purposes. HealthNet radios should not be used for amateur radio operations (HAM) or other purposes.



## How HealthNet Works

HealthNet is comprised of a network of base station radios (Kenwood TK-7180 or TK-7360) located at healthcare (and County DHS) facilities and a repeater tower on Mt. Jackson in Guerneville. The base station radio at each facility is connected to an external roof antenna (installed by the Communications Division of the Sheriff's Office). Under normal circumstances, the radio transmits its signals on one particular frequency.

The repeater tower receives these signals (which may be relatively weak) then re-transmits (and amplifies) them onto a second frequency. Consequently, these signals that are re-transmitted on this second frequency are received by the radios. The repeater allows the signal to cover longer distances throughout the county without degradation, creating a countywide "wireless intercom system" for the County DHS and healthcare facilities.

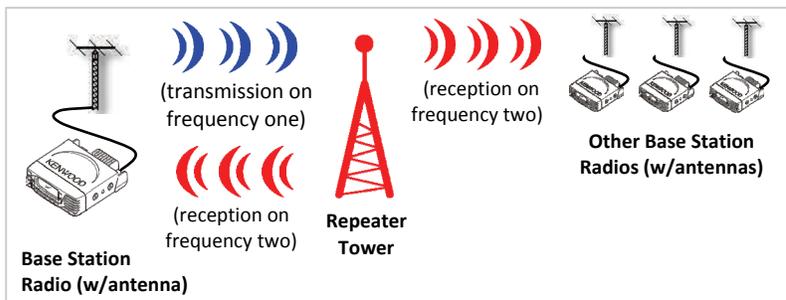


Diagram 1. HealthNet radio communication using the repeater (on HEALTH 1 channel)

## HealthNet Channel Guide

**HEALTH 1** is HealthNet's primary channel that transmits on one frequency and receives on a second frequency. Use of HEALTH 1 in conjunction with the repeater enables countywide communication (as explained above).

**HEALTH 2** is a "talk-around" channel that both transmits and receives signals on the second frequency. As HEALTH 2 does not use the repeater to boost the signal, its range is more limited (and will depend upon a facility's location). This channel might be used if the repeater was inactive, in which case all radios would switch to HEALTH 2 and countywide communication would be accomplished via message relay.

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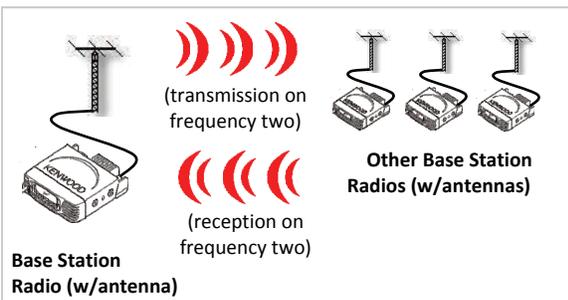


Diagram 2. Radio communication without the repeater (on HEALTH 2 channel)



HealthNet radios should ONLY be used with the installed external roof antennas. Using other antennas (such as whip antennas) may result in exposure to dangerous levels of RF radiation. Use of alternate antennas must be cleared (& deemed safe) on a case-by-case basis by the Communications Division.



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**HEALTH 3** is an independent channel that both transmits and receives signals on a third frequency. HEALTH 3 cannot communicate with radios tuned to HEALTH 1 or 2. This channel is reserved for internal communication within a facility. A facility might use this channel if they have more than one base station radio at their site, or if they have two-way handheld radios that are HealthNet-programmed. If two separate facilities using HEALTH 3 for internal communication are located near each other, there may be the potential for interference (which could be dealt with on a case-by-case basis).

### **ADDITIONAL CHANNELS:**

- FASTER, HOSPITAL, and MEDCOM - Channels already in use at hospitals for communicating with each other and with ambulances, etc.
- COMM (Coast, East, North, West) - "Common" channels that will allow for future "scaling up" of coverage to larger geographical areas.
- VX 3 is a monitor-only weather channel.

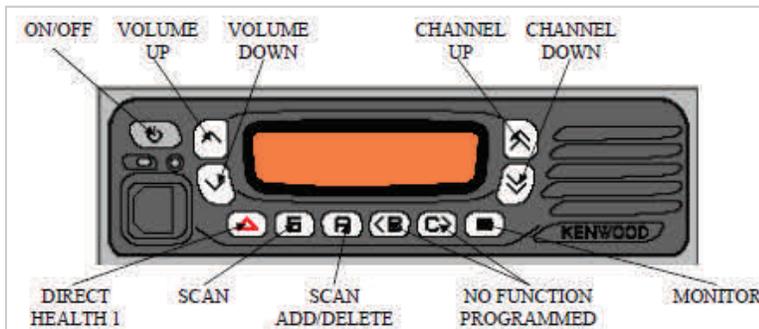


**RADIO**

**POWER SUPPLY**

### **Using the Base Station Radio**

The base station radio will be connected to and sit on top of a power supply (usually they are affixed to each other, sometimes within a metal hood.) Make sure the power supply is plugged in. Turn the power supply on. The radio should turn on. If not, turn the radio on by pressing the upper-left "power" button. You can adjust the volume or select channels as indicated by the diagram below. If you would like to use headphones, plug the 1/8" headphone jack into the back of the radio (the plug will likely be on the right side on the back, perhaps with a rubber cover on it.) To protect your ears, turn the radio on and lower the volume to an appropriate level before donning the headphones.



### **Conventions for use**

HealthNet operators are **not** required to have HAM licenses, yet should conduct communications based on the following basic protocols.

When making a call on HealthNet, make sure to tune your radio to the HEALTH 1 channel. While pressing the transmit button on the handheld microphone, speak into the microphone in your normal speaking voice.

If you are using a desk microphone, you must first press the "monitor" button to listen to the channel (you can slide the "lock" button down to keep the monitor on). While the monitor button is engaged, press "transmit" to speak.

If you are initiating a conversation, or if you hear static interference, ask if there is emergency or priority traffic already using the frequency. You will then communicate by first identifying the station you are calling, then identify your station. For example, "Santa Rosa Memorial Hospital, this is DOC 5th Street." When using HEALTH 1, a kickback sound ("squelch tail") will indicate that the repeater is working. Use simple, natural language when communicating and speak clearly. End a conversation by identifying the station you are talking to, then say "This is (your station), signing off."



**DESK MIC**

**HAND-HELD MIC**