Essential & Recommended Amateur Radio Equipment for Hospitals

Santa Clara County ARES/RACES

28-Dec-2019
Overview

• These diagrams show two configurations
  • Essential Equipment
    • The minimum equipment that all hospitals should have so they can effectively use amateur radio to coordinate with its local jurisdiction EOC and the county health DOCs or county EOC
  • Recommended Equipment
    • What hospitals should have so they can take advantage of the most current technology and services

• These diagrams are highly stylized
  • They seek to convey the overall connectivity, not every detail

• Specific recommendations for each component are available
Hospital Amateur Radio Station
Essential Equipment

- **Tri-band Antennas** (2m/1.25m/70cm)
  - Qty: 2
  - Voice and Low-speed Data

- **Coax**

- **Indoors**
  - **2m/70cm**
  - **2m/70cm**
  - **1.25m**

- **Outdoors**
  - **Coax**

- **Triplexer**

- **Diplexer**

- **Audio**

- **TNC**

- **Serial**

- **Hospital IT Firewall**

- **Internet**
Notes: Hospital Amateur Radio Station
Essential Equipment

• Combination of VHF/UHF radios and antennas enables simultaneous operation on city and county voice and low-speed data nets
• Laptop and printer enables efficient processing of forms-based communications, which is most of hospital traffic
• Internet access and local admin rights on PCs enables flexible access to tools and other Internet-based resources during non-emergency situations
• Hospital firewall prevents unauthorized access to the rest of the Hospital network
Hospital Amateur Radio Station
Recommended Equipment

Tri-band Antennas (2m/1.25m/70cm)
Qty: 2
Voice and Low-speed Data

Coax

Outdoors

Indoors

2m/70cm

2m/70cm

UHF Data Radio*

Audio

Triplexer

Diplexer

1.25m

TNC

Serial

Internet

SCCo RACES Network

SCCo RACES Firewall

Hospital IT Firewall

Hospital Network (Optional & Limited)
Notes: Hospital Amateur Radio Station
Recommended Equipment

• Adds higher-speed data access to Santa Clara County RACES data network
  • If line of sight exists to a hub site, use high speed (n*10 Mbps) radio
    • Provides hospital with alternate access to Internet
  • If no line of sight exists, use UHF radios* for some additional services
    • No alternate access to Internet

• Local RACES firewall controls access to local RACES LAN segment

• Consider enabling restricted access to shared drives or other tools used by the Hospital Command Center to enable efficient sharing and archiving of data, messages, forms

• *UHF Data Radio undergoing trials; not yet selected
Additional Information

• Santa Clara County ARES/RACES website home page:
  • https://www.scc-ares-races.org

• Information specific to Hospitals:
  • Services, personnel, station equipment, radio nets, exercises, ...
  • https://www.scc-ares-races.org/services/hospitals

• SCCo ARES/RACES leadership:
  • https://www.scc-ares-races.org/staff.html

• City ARES/RACES leaders:
  • https://www.scc-ares-races.org/cities.html