Specifications

**Emergency Call Boxes and Two-Way Radios**

1. **COMMUNICATIONS, ALARM & CONTROL LOGIC**

   **RADIO FREQUENCY, GENERAL RADIO SYSTEM SPECIFICATION**

   a. Shall signal through a Kenwood, Model TK3170, or any conventional or trunking two-way radio system and have a frequency range of UHF 400 and 500 MHz.

   b. Call boxes shall operate through any land mobile radio-industry protocol.

   c. Shall be monitored, controlled, and provide communications through base, mobile and/or portable land mobile radios.

   **WIRELESS VOICE COMMUNICATION AND CALL BOX SIGNAL SEQUENCE**

   a. Upon initial push button activation, provide call boxes that automatically amplify a programmable voice greeting announcement to the caller.

   b. Upon initial push button activation, a bright easily identifiable front panel signal light shall illuminate on the call box to provide a visual indication that the call for help is being sent.

   c. Call box will automatically transmit a programmable voice call alert message to monitoring personnel over base, mobile, and/or portable radio. Call alert message shall contain a message “assistance needed,” “emergency,” etc., along with physical location ID of call box.

   d. A bright easily identifiable RED front panel signal light shall illuminate on the call box to provide a visual indication that the call for help has been received.

   e. Call box will provide two-way voice communications such that in the event caller is unable to talk back for any reason, security shall be able to initiate a “hands-free” listen mode while maintaining contact with the caller.

   f. Security shall have the ability to remotely reset/terminate a call box call and caller at any time.
TALK-MODE ACCESS PROGRAMMING

Call boxes shall have the programmability to not automatically enter a Talk-Mode after the Push-for-Help and tamper voice alerts are transmitted over the radio channel being monitored.

STANDARD WIRELESS CALL BOX VOICE ALERTS AND ALARM LOGIC

a. Automatically transmit a programmable push button voice alert message to monitoring personnel.

b. Automatically transmit a programmable tamper voice alert message when vandalism or tampering episode is taking place, to include a “tamper alert” message, physical location ID, and a secured Call Box ID Code number over the radio channel.

c. Contain field programming flexibility to have the Push-for-Help and silent tamper alerts repeat initially any number of times, then continue repeating automatically on a programmable cycle specified by the customer until security communication and physical security response is made.

d. Shall not allow a call box when in Talk Mode to repeat its Push for Help alert over the channel while two-way communications with a caller are in progress. When in Talk Mode, shall not allow a tamper alert to repeat over the channel while security is making a verbal warning to a vandal through the call box.

e. Transmit a programmable battery maintenance voice alert that servicing of power supply, charging circuit, or back-up battery is needed over the base, mobile and/or portable radio channel. Also transmit a programmable maintenance test voice alert message to monitoring personnel when a unit is being tested.

f. Provide call boxes with the capability to have a built in camera (CCTV) alarm circuitry that allows for a wireless alarm signal to be pre-settable surveillance cameras. At a minimum, this wireless alarm signal shall be generated from the Push-for-Help and tamper alert modes.
Illinois Valley Community College
Call boxes and Two-Way Radios

REMOTE CONTROL FEATURES

a. Allow a security officer or dispatch telecommunicator to remotely control the connect/enable Talk Mode function of the call box.

b. Enable security to initiate a remote control hands-free listen mode that enables security to listen to a wide area around the call box hands-free for a programmable amount of time.

c. The call box shall allow security the ability to remotely reset or disconnect a caller from the call box during talk mode.

d. Call box shall have built-in programmable circuitry that will automatically reset a call box from talk mode to standby (idle) mode.

e. Call boxes shall be able to re-enter talk mode by receiving a security initiated remote control call back while in standby (idle) mode.

f. Shall allow security the ability to initiate a select call to an individual call box at any time. This shall place the call box into talk mode and allow security to initiate communications to a person at a call box at any time.

g. Call box shall be enabled so security can remotely call all system call boxes into a talk mode at the same time known as an ALL-CALL.

h. Call box shall be enabled so security can remotely call a group of call boxes into a talk mode at the same time known as a GROUP CALL.

i. Call box shall be enabled so security can remotely activate a call box into a wide area listen mode for a programmable amount of time.

j. Call box shall be enabled so security can activate a remote maintenance test to check in on a call box unit.

k. Call box shall be enabled so security can remotely call any call boxes into a loud 30 watt PA Speaker mode. This mode shall be programmable so security can either selectively activate individual call box PA units or ALL call box PA units.
Illinois Valley Community College  
Call Boxes and Two-Way Radios

1. The call box is to be enabled so security can remotely activate a switch relay with the call box first having to be activated by a caller; this switch can then be integrated into remotely opening a gate or other secured access point.

2. **CALL BOX STRUCTURAL**
   a. Have a rugged, vandal-resistant, and weatherproof enclosure for optimal long term corrosion resistance and material stability, non-deforming.
   b. The only call box external moving mechanism the caller shall have to interact with in order to place a call and then communication shall be a one step push button process.
   c. The call box shall not have a door required to be open to access push button and caller instructions.
   d. The call box shall not have any shield barriers to push button access. Full 180 degree push button accessibility must be maintained with push button being fully exposed. No portion of the call box will require the use of a caller to have to stick their finger through a slot or hole to initiate a push button for activation to communicate to security.
   e. Provide call boxes that have completely sealed call box audio ports and protection shield built into the audio port of the call box to protect the audio speaker assembly.
   f. Provide call boxes that have large louvered audio port openings for superior voice and speaker audio volume and clarity.
   g. Each call box enclosure shall self-contain all electrical, electronics, batteries, and all options that pertain to the call box.
   h. Provide call boxes that allow for ease of access for authorized personnel if needing to access rechargeable battery and electronics.
   i. Provide call boxes that have a tamper-resistant antenna built on top of the call box.
J. If mounting the call boxes to round poles, provide an aluminum powder-coated round metal pole mounting bracket of the same color as call box finish that secures the call box to any size metal pole without the required use of banding.

ADA COMPLIANT

a. Meet the needs of the disabled including grade 2 raised letters and Braille, and an automatic caller greeting amplification from the call box once the Push-for-Help button has been activated for the visually impaired.

b. Meet the needs of the disabled including complete activation and operation from a one step use of a single push button.

c. Meet the needs of the disabled including two dual color front panel LED call status signal lights, one panel indicator light for signaling to the caller that the call for help has been sent and another light for signaling to the caller that the call for help has been received, and two-way communication can begin with security for the hearing impaired. The call status working “CALL SENT” and “CALL RECEIVED” shall be placed in respect to these call box front panel signal lights.

SOLAR SUPPLY VOLTAGE

a. Solar or DC supply voltage shall accommodate clean 12vDC supply voltage to power the call box.

b. All call box wiring, power supplies, fuses, and regulators shall be self-contained within the call box enclosure.

c. Shall provide a solar charging power supply system that maintains battery back-up power to the call box station. The charging system shall operate a call box including BlueStar Locator Beacon, Strobe Lighting, and Pendant Receiver options. Charging system will provide a minimum of 24 days of battery back-up autonomy on a single charge.

d. Provide photovoltaic modules (solar panels) that at a minimum are Factory Mutual (FM) Research certified.
Illinois Valley Community College
Call Boxes and Two-Way Radios

ADDITIONAL BATTERY SPECIFICATION/BATTERY MAINTENANCE ALERT

a. Provide each call box with one 12vDC rechargeable Gel-Cell Battery with an expected life of 2 to 3 years.

b. Provide call boxes that notify battery maintenance condition via a voice message alert that servicing of the power supply, charging circuit, or back up battery is needed over base, mobile, and/or portable radio.

c. All power back up batteres shall be self-contained inside the call box enclosures low-voltage compartment.

d. Call box shall remain operable for a minimum of 18 to 24 hours after sending the initial first battery maintenance alert.

3. LIGHTING OPTIONS AND REFLECTIVE IDENTIFICATION MARKINGS

a. Provide a call box that will operate all BlueStar Locator lighting and Strobe options from one Solar or AC power source and lights shall be powered by the call box.

b. Provide BlueStar LED Night Light Locator Beacon and High Intensity Blue Flash Strobe Light that are designed into one self-contained all weather assembly with matching Lexan Fresnel lenses.

c. The LED night light Beacon portion of the station shall include a 24 LED BlueStar array, to be rated for 100,000 hour burn time (10-year life expectancy on constant AC circuits or 20 years when operated from Solar or dusk-to-dawn circuit).

d. High Intensity Blue Flash true-Strobe is to have a 60 fpm, (flash per minute) rating at 600,000 candlepower and is triggered automatically when the push for help button is activated. When the tamper alarm mode is activated, the call box shall be field programmable to either activate the Strobe ON or OFF.
4. **HIGHLY VISIBLE IDENTIFICATION**

Provide call boxes that are clearly labeled with designated identification text and with large easy to read text instructions that are not blocked from view and easily recognized as a security/call box device using bold highly reflective material that is clear vinyl laminated. Solar power panel and mounting brackets/mounted a minimum eleven (11) feet above ground level. A drawing indicating where call boxes are to be located is enclosed.

5. **PROGRAMMING AND SET UP, MANUALS, AND TRAINING**

a. All call boxes shall be delivered with control board data and voice alarming parameters preprogrammed and activated according to the customer’s remittance of the programming and order set up forms. Radio frequencies are to be preprogrammed for the ease in commissioning each call box in the field.

b. Successful bidder shall provide a field programmer. All voice alert messages shall be field programmable.

c. Successful bidder shall provide two (2) sets of O-M Manuals.

d. Upon installation, the successful bidder will make available a technician for proper installation and training.

6. **MANUFACTURERS WARRANTY**

All call box systems shall have at least a 2-year warranty.

End of Specifications