

Equipment Specifications

VHF or UHF Transmitter/Annunciator with wireless call buttons

Section 100003

WIRELESS NOTIFICATION SYSTEM

COMMERCIAL GRADE VHF OR UHF PROGRAMABLE WIRELESS TRANSMITTER AND VOICE NOTIFICATION DEVICE

PART 1 – GENERAL

The intent of this document is to specify the minimum criteria for the design, supply, installation, and commissioning of an emergency wireless notification system

1.1 SUMMARY

- A. The high quality transmitter/annunciator shall be designed for any governmental or commercial notification application.

1.2 REFERENCES

- A. Canadian Standards Association (CSA)
- B. Conformity for Europe (CE)
- C. Federal Communications Commission (FCC)
- D. Underwriters Laboratories (UL)

1.3 DEFINITIONS

- A. No Substitutes: The exact make and model number identified in this specification shall be provided without exception.
- B. Or Equal: Any item may be substituted for the specified item provided that in every technical sense, the substituted item provides the same or better capability and functionality.
- C. Or Approved Equal: A substitute for the specified item may be offered for approval by the Owner. The proposed substitution must, in every technical sense, provide the same or better capability and functionality as the specified item. Such requests for approval shall be submitted in accordance with the provisions of PART 1.05 – SUBMITTALS, and must be obtained within the time frames outlined.

1.4 SYSTEM DESCRIPTION

1. The high quality transmitter/ annunciator shall be designed for any wireless calling application. It shall be compatible with commercial grade VHF or UHF radios employing 12.5 or 25 kHz modulation with standard, sub-audible, or digital coded squelch.
2. The transmitter/annunciator Central Processing Unit (CPU) shall be housed in a NEMA 4 weather resistant housing complete with external antenna, plug-in wall type UL approved AC power supply, battery back up and programmable by a standard pulse dial telephone. User shall be given a choice of VHF or UHF model, full programmed to user specifications. Two single code wireless call buttons shall be provided to allow activation of the CPU from either of the two buttons. Both buttons shall operate on the same code and cause the same message to be transmitted by the CPU. Each button shall be fully programmed and equipped with a long life watch type non-rechargeable battery.

1.5 SUBMITTALS

- A. General: Submittals shall be made in accordance with the Conditions of the Contract and Submittal Procedures Section.
- B. Shop Drawings and Schematics: Shall depict the transmitter/annunciator in final proposed "as built" configuration. The following must be provided:
 1. Connection diagrams for interfacing equipment.
 2. List of connected equipment.
 3. Locations for all major equipment components to be installed under this specification.
- C. Product Data: The following shall be provided:
 1. Technical data sheets.
 2. A complete set of instruction manuals.
- D. Quality Assurance Submittals: The following shall be submitted:
 1. Checkout Report: The Contractor shall provide the Owner with a checkout report for each transmitter/annunciator. The report shall include:

- a. A complete list of every device.
- b. The date it was tested, and by whom.
- c. If rested, the date it was rested, and by whom.
- d. The final test report shall indicate that every device was tested successfully.

2. Manufacturer's Instructions: The Contractor shall deliver **TBD** sets of System Operation and Maintenance Manuals (if available) to the Owner.

3. Notice of Completion: When the final acceptance has been satisfactorily completed, the Owner shall issue a notice of completion to the Contractor.

1.6 QUALITY ASSURANCE

A. Manufacturer's Qualifications: The transmitter/annunciator provider shall provide 24/7 technical assistance and support via a toll-free telephone number at no extra charge.

1.7 DELIVERY, STORAGE, AND HANDLING

A. General: Delivery, storage, and handling of the transmitter/annunciator shall be in accordance with the manufacturer's recommendations.

B. Ordering: The manufacturer's ordering instructions and lead-time requirements must be followed in order to avoid installation delays.

C. Delivery: The transmitter/annunciator shall be delivered in the manufacturer's original, unopened, undamaged container with identification labels intact.

D. Storage and Protection: The transmitter/annunciator shall be stored and protected from exposure to harmful weather conditions and at the environmental conditions recommended by the manufacturer.

1.8 PROGRAMMING

A. Programming of frequency, voice message, low battery alerts, and number of message alert deliveries shall be by a standard pulse dial telephone.

1.9 SEQUENCING

1.10 SCHEDULING

1.11 WARRANTY

- A. General: The warranty period shall be minimum of twelve (12) months from the manufacture date code under normal use and service.

1.12 MAINTENANCE

- A. Preventative Maintenance Agreement During Warranty: As a separate price item, the Contractor shall provide preventative maintenance during the warranty period. Maintenance shall include, but no be limited to:
 - 1. Labor and materials, at no additional cost, to repair the transmitter/annunciator.
 - 2. Labor and materials, at no additional cost, to provide test and adjustments to the transmitter/annunciator.
 - 3. Regular inspections.
- B. Preventative Maintenance Agreement: As a separate price item, the Contractor shall provide a complete Maintenance Agreement or a period of **TBD** months after the conclusion of the warranty period. The Maintenance Agreement shall include, but not be limited to:
 - 1. Labor and materials, at no additional cost, to repair the transmitter/annunciator.
 - 2. Labor and materials, at no additional cost, to provide test and adjustments to the transmitter/annunciator.
 - 3. Regular inspections.

1.13 TRAINING

- A. Operator training shall be conducted for a minimum of one session, with a minimum session length of one hour at the customer's site.
- B. Training shall include, but not be limited to, the transmitter/annunciator operation and diagnostics

PART 2 – PRODUCTS

2.1 MANUFACTURED UNITS

A. Model Number/Description Table

Companion Plus	Transmitter/Annunciator model COMP15V (VHF) or COMP45U (UHF) in NEMA 4 weather resistant cabinet complete with AC power supply, battery backup, external antenna, and two wireless alert buttons capable of sending a message within 60 feet of the Central Processing Unit (CPU).
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2.2 SYSTEM PERFORMANCE

- A. The transmitter/annunciator shall include, as a minimum, the following features/functions/specifications:
1. The transmitter/annunciator must be protected by the most extensive support services in the industry, including Customer Service, Pre-Sales Applications Assistance, After-Sales Technical Assistance, access to Technical Online Support, and Online Training using the Internet.
 2. The transmitter/annunciator and its components shall be thoroughly tested before shipping from the manufacturer's facility.
 3. The transmitter/annunciator shall feature easy to use voice prompts in English.
 4. Transmitter/annunciator shall automatically reset after sending message to user defined message repeat interval of up to 8 times with 3 being the normal default.

2.3 MECHANICAL SPECIFICATIONS

- A. The transmitter/annunciator must have the following mechanical specifications:
1. Unit Dimensions (HxWxD).....8.0"x 8.0"x 8.0"
 2. Unit Weight.....28 ounces with batteries
 3. Shipping Weight.....4 pounds
 4. Frequency Band.....VHF 150-162 MHz or UHF 450-470 MHz.
 5. Squelch Type.....Carrier, CTCSS or DCS
 6. Bandwidth.....12.5 with compondering or 25 KHz
 7. Transmitter power 100 mW
 8. An ON/OFF switch shall be provided OFF/ON and reset control.

2.4 ELECTRICAL POWER REQUIREMENTS

A. The transmitter/annunciator must have the following electrical specifications:

1. Voltage.....110 VAC with battery backup
2. Battery Life.....Up to 12 hours
3. Message Type.....Analog Voice
4. Programming.....Via Pulse Dial Telephone

2.5 ENVIRONMENTAL CONDITIONS

A. The transmitter/annunciator shall be designed to meet the following environmental conditions:

1. Operating Temperature.....32 degrees to 104 degrees F (0 degrees to 40 degrees C)
2. Operation Humidity.....10% to 90% relative, non condensing
3. Emissions.....FCC: Part 15

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Submission of a proposal confirms that the contract documents and site conditions are accepted without qualifications unless exceptions are specifically noted.
- B. The site shall be visited on a regular basis to appraise ongoing progress of other trades and contractors, make allowances for all ongoing work, and coordinate the requirements of this contract in a timely manner.
- C. The transmitter/annunciator must be inspected before installation, and shall be free of any cosmetic defects or damage.

3.2 PREPARATION

- A. Prior to installation, the transmitter/annunciator shall be programmed and tested in accordance with the user's requirements.

3.3 INSTALLATION

- A. The transmitter/annunciator must be installed, programmed, and tested in accordance with the user's requirements

1. In order to ensure a complete, transmitter/annunciator, for bidding purposes, where information is not available from the Owner upon request, the worst-case condition shall be assumed.
2. Interfaces shall be coordinated with the Owner's representative, where appropriate.
3. All necessary support requirements with participating law enforcement agencies for operation of the transmitter/annunciator shall be coordinated by the bidder.

3.4 TESTING AND CERTIFICATION

- A. The Contractor shall demonstrate the functionality of the transmitter/annunciator upon completion of installation, documenting the results of all tests and providing these results to the Owner. The transmitter/annunciator shall be tested in accordance with the following:
 1. The Contractor shall conduct a complete inspection and test of all installed transmitter/annunciator equipment. This includes testing and verifying operation with connected equipment.
 2. The Contractor shall provide staff to test all devices and all operational features of the system for witness by the Owner's representative and the Authority Having Jurisdiction. All testing must be witnessed by the Owner's representative, prior to acceptance.
 3. The testing and certification shall take place as following:
 - a. The transmitter/annunciator shall be tested in conjunction with bidder's representative.
 - b. All deficiencies noted in the above test shall be corrected.
 - c. Test results shall be submitted to the consultant or Owner's representative.
 - d. The test and correction of any deficiencies shall be witnessed by the Owner's representative, and note.
 - e. The Owner's representative shall accept the system.
 - f. The system test shall be witnessed by the Authority Having Jurisdiction. Any deficiencies noted during the testing must be corrected.
 4. A letter certification shall be provided to indicate that the tests have been preformed, and all devices are operational.

END OF SECTION