

Title: Sr. Simulcast Communications System Specialist
PG: 54
Status: Civil Service
Position reports to: Radio Communications System Supervisor
Department: Information Technology

Class Code: 3811
Date: 09/08

GENERAL DESCRIPTION OF CLASS:

This is the highly specialized technical work involving the installation of hardware, programming and maintenance of computer based electronic systems (servers and workstations) equipment and electro-mechanical devices (remote terminal units and programmable logic) used in the control, monitoring, and protection of the City wide radio communications system. An employee in this classification maintains a safe technical and functional continuity between sensitive equipment interfacing with other departments and divisions in one of the three specific areas to include Electric System Engineering/Relay, System Control/Energy Management System (EMS), or Information Services/Telecommunications/Fiber Optic. Work is performed in accordance with established policies and procedures; however, the incumbent is expected to exercise independent judgment and initiative in the performance of tasks. Work will be reviewed by inspection and results obtained.

ESSENTIAL FUNCTIONS:

1. Manage and maintain the 3 Site Simulcast Radio System which consists of 6 dispatch consoles 5 located at the Lakeland Police Department and 1 remotely located at the Lakeland Electric building. Each tower site houses 11 transmitters, 11 receiver voting comparators, 1 tower top preamp, 2 transmitter combiner systems, 1 MOSCAD monitor reporting system, 3 Microwave system and several miscellaneous subsystems.
2. Manage and maintain the 11 channel backup Radio System located in the penthouse at the Lakeland Electric building.
3. Manage and maintain a Paging System used for Lakeland Electrics Load Management program ARCOS call out system and general paging purposes.
4. Manage and maintain 2 campus transmitters used by McIntosh and Larsen Power plants.
5. Manage and maintain the Site Lens System used for setting radio system parameters (call prioritizing, selective inhibiting, regrouping, and storm plans). Site Lens also is used for logging and reporting radio traffic.
6. Installs, tests, calibrates and repairs all types of electronic and electro-mechanical equipment from digital computers used in real time process control applications to analog devices used in the communications industry using standard and specialized test equipment and tools.
7. Terminates cables in color code order. Test cables for signal quality and connectivity.
8. Uses factory manuals and schematics to repair equipment. Contact factory engineers for aid in troubleshooting complex problems and seeking solutions to continuing problems in equipment.
9. Constructs special devices such as printed circuit boards and test equipment to assist department/division personnel in implementing unique monitoring or control systems.
10. Maintain accurate records of all work performed, including repair and calibration records.
11. Requisition parts and maintains spare parts inventory.
12. Supports other divisions with technical assistance and field work as needed.
13. Proficient with transmitters, receivers, amplifiers, sound systems, digital to analog and analog to digital converters, microprocessors, and control circuits.
14. Perform installation, commissioning, maintenance, troubleshooting, functional testing and in-service testing of all communications equipment.

ADDITIONAL RESPONSIBILITIES:

1. May work in teams to accomplish inter-divisional tasks.
2. May be responsible for keeping vehicles and work areas clean and organized.
3. Performs related work as required.

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KNOWLEDGE, SKILLS & ABILITIES:

1. Thorough knowledge of the principles, practices, and materials of communications equipment construction, maintenance, and repair.
2. Thorough knowledge of the principles of trunking simulcast communications systems and a good working knowledge of the inter working of resident and remote interfacing consoles.
3. Skill in the use and care of test and diagnostic equipment used to repair communication systems/networks.
4. Ability to read and work from complex electronic schematic diagrams and written technical documentation.
5. Ability to detect defects in equipment operation and perform difficult maintenance or repair.
6. Ability to acquire, retain, and apply new technology or new service/repair methodologies which are desirable to improve the simulcast communications system or operations.
7. Knowledge of bridges/switches, routers/hubs used with system LANs utilizing Ethernet, TCP/IP protocols and applications is required.
8. Knowledge in the installation and maintenance of Motorola electronic telephone interconnect system interfaced into a simulcast trunked communications system.
9. Knowledge in the installation, programming and maintenance of the Motorola MOSCAD alarm reporting system.
10. Knowledge of UPS backup systems hooked to critical public safety communications equipment.
11. Knowledge of multiple receiver voting systems, transmitter combiners, tower top preamplifiers, tower lighting systems, and receiver multi-couplers.
12. Knowledge of critical FCC rules and regulations.
13. Knowledge of paging systems and tone remotes.
14. Knowledge of microwave equipment 6 gig and 18 gig used for communications transport.
15. Skill in the use and care of electrical and electronic test equipment used in the various areas of the specialty such as oscilloscopes, digital logic analyzers, volt-ohm meters, communications line quality monitors, relay test systems, both automated and/or manual transducer testing and calibration equipment, T1 tester, RF power meters, cable and antenna analyzer, network analyzer, spectrum frequency analyzer, audio frequency meter and signal analyzer.
16. Ability in order to maintain proficiency on new equipment and devices as the technology evolves.

WORKING ENVIRONMENT/CONDITIONS:

The position requires manual labor work that involves walking or standing most of the time, exerting up to 75 pounds of force on a recurring basis, keyboard operations, soldering circuit boards, manipulating tools and wires.

The position risks exposure to heights, toxic/caustic chemicals, traffic moving machinery, extreme cold or heat, electrical shock, adverse weather conditions, bright/dim light, fumes, noxious odors, dusts, pollen, wet humid conditions, and extreme noise levels.

The position requires normal visual acuity, good manual dexterity, and field of vision, hearing, speaking, color perception, sense of smell, depth perception, and texture perception. An employee in this position must be able to discriminate between the following colors generated by red/blue/green primary colors at full or half intensity: white, green, yellow, orange, magenta, red, cyan, and blue. Confirmation will be accomplished by a standard medical test for color blindness.

QUALIFICATION, EDUCATION, TRAINING & EXPERIENCE:

1. High school diploma or its equivalent and completion of technical school courses in communications and electronics.

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2. Five (5) years of current experience related to this class of work.
3. Completion of advanced training classes in simulcast trunking technology is preferred.
4. An equivalent combination of education and experience that is determined to be directly related to the foregoing specific requirements may be substituted.
5. Must possess a FCC general class license.

SPECIAL REQUIREMENTS:

1. Must possess and maintain a valid state of Florida driver's license
2. Must have a valid phone number.
3. May be required to work overtime, or alternate hours, as necessary for the efficient operation of the department. Position may be designated as Mission Critical by Department Director.