

## COMMUNICATIONS TECHNICIAN

### CODES/PAY RANGE

Class Code: 1159      EEO Code: C    FLSA: NE      Pay Range: 414  
Level I:

Level II:

### MAJOR FUNCTION

Technical work installing, testing, maintaining, modifying, and repairing telephone, on-line computer systems, electronic private automatic branch exchange equipment, local and wide area network equipment, signaling and alarm systems; and/or radio equipment, systems, associated hardware and support infrastructure.

### ILLUSTRATIVE DUTIES

(NOTE: These are intended only as illustrations of the various types of work performed. The omission of specific duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.)

### LEVEL I

#### TELEPHONE/DATA DUTIES

Installation of terminals and printers, PC hardware and software. Installs and configures 3X74 IBM Controllers, IBM Front End Processors, OEM Controllers and channel extenders. Installs and configures analog and digital modems. Maintains the County-owned cabling system.

Installs and maintains Category 3+5 wire and fiber optic cable installations for data transmission.

Troubleshoots problems with personal computers, network hardware and related data lines using advanced diagnostic equipment.

Installs, tests, maintains, and repairs key telephone systems, and electronic private automatic exchange equipment.

Installs, maintains and repairs distribution racks, inter-connecting and distribution cables, terminals and wiring on a variety of communications systems.

Responds to emergency calls in the event of a system failure. Diagnoses and locates breakdowns for Microcomputers and/or the telephone systems and makes repairs to restore normal operation. Makes precision adjustments on switches, relays, and other electrical control devices for maximum operating efficiency.

Places wiring for special circuits such as data processing.

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Maintains current telephone line termination records. Prepares written work reports as required. Performs related work as required.

RADIO DUTIES

Programs and reprograms user equipment and updates the database.

Provides routine and special system reports as directed by Radio Systems Manager.

Reports any suspected system misuse to Radio Systems Manager.

Assists with daily maintenance checks of the system through the use of the system manager and associated test equipment to ensure optimum network performance.

Provides input for the station log for each site that provides a history of all maintenance.

Helps maintain spare parts inventory.

Ensures test equipment is functional and is calibrated when required.

Checks and performs operator level maintenance on infrastructure support equipment. (E.g., - generators, air conditioners, etc.)

Prepares written work reports as required. Performs related work as required.

LEVEL II

TELEPHONE/DATA DUTIES

Performs work at lower level.

May oversee the work of contractors and other County employees in the installation of terminals, printers, PC hardware and software, and other major networking projects. May serve as liaison to outside contractors on wiring plans relating to new building construction and renovation.

Installs and configures LAN microhubs. May install and configure WAN bridges and routers, LAN hubs (token ring and Ethernet). May assign IP and IPX addresses to routers and microhubs.

May plan, maintain and expand the local (token ring and Ethernet) and wide area network. May certify or supervise all token ring and Ethernet installations. May perform CNA/CNE duties.

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May track error and utilization rates of LAN/WAN. Maintains network baseline for future expansion.

Plans, designs, coordinates coax Category 3+5 wire and fiber optic cable for data transmissions.

Performs related duties as required.

**RADIO DUTIES**

Performs work at lower level.

Retrieves and processes data relating to the radio system maintenance program. Performs routine maintenance on the radio system.

Assists with the network maintenance of the mobile data terminal system to include upgrades to network management using multi-language protocols associated with packet switching serving mainframe and PC based networks within different agencies throughout the County.

Collects information relating to equipment failure and determines repair required.

Performs related duties as required.

**KNOWLEDGE, ABILITIES AND SKILLS**

**LEVEL I**

Knowledge of tools, equipment, practices, and methods of installing telephone and signaling equipment. Knowledge of construction, assembly, repair, and operation of electronic telephone equipment. Knowledge of operation, adjustment, and care of network hardware. Knowledge of wiring and high speed computer cabling systems. Knowledge of COAX, EIA 568A and B wiring, and twisted pair technology.

Ability to diagnose defects in the telephone and signaling equipment. Ability to read schematic diagrams. Ability to prepare and maintain records and reports. Ability to establish and maintain effective working relationships. Ability to understand and follow complex oral and written instructions. Ability to coordinate with other divisions, vendors and contractors. Ability to troubleshoot network problems. Ability to install computer hardware. Ability to read plans to follow wiring schemes. Ability to reconfigure analog and digital modems. Ability to reconfigure 3 X 74 controllers, FEP and OEM controllers. Ability to install voice and data equipment.

Ability to install microcomputer hardware and operating system software. Basic understanding of microcomputer networking.

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Knowledge of 800 MHZ radio communications system, interfaces to conventional systems and FCC/FAA requirements.

Ability to use computer systems associated with 800 MHZ systems. Ability to use computer interfaces to program equipment and update databases.

LEVEL II

All KSAs of Level I.

May require knowledge of equipment, tools and methods for voice WAN installation and LAN networking equipment.

Ability to design complex data network layouts for connection from the County's local and wide area network. Ability to reconfigure LAN hubs, channel extenders, routers and bridges. Ability to use PC-based voice and data test equipment. Ability to install voice and data equipment. Ability to design complex data network layouts for connection from County mainframe computers to remote and local user locations. Ability to coordinate services with all user agencies and contract personnel associated with the radio system. Ability to train user personnel and technical staff on the system.

Complete understanding and knowledge of microcomputer hardware and software components and their installation. Ability to trouble shoot connectivity issues and understanding of LAN/WAN network. Ability to communicate effectively, orally and in writing.

MINIMUM QUALIFICATIONS

LEVEL I

Graduation from high school or possession of a GED and one (1) year experience in computer operations, installation of microcomputers, computer related electronics or electrical fields basic line and station installation and maintenance.

OR

Graduation from high school or possession of a GED and two (2) years experience in radio maintenance and/or installation.

LEVEL II

Associate's degree in Computer Science, Electronics or related field, and two (2) years experience in (depending upon position of assignment): a) voice or line and station installation and maintenance, or b) personal computers, networking or computer related electronics.

OR

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Associate's degree in Electronics, Electrical Engineering or related field, and two (2) years experience in radio maintenance and/or installation.

A comparable amount of education, training, or experience may be substituted for the minimum qualifications.

**ADA REQUIREMENTS**

Physical Demands: Light to medium work. Ability to lift (20 lbs.), sit, bend, stoop, walk, climb, pull, push, reach overhead, talk, hear, see, and handle; finger dexterity.

Environmental Demands: Generally inside work. Exposure to dust.

Mental Demands: Ability to read and comprehend technical manuals and instructions; layouts, blueprints, schematics; procedures, safety and general instructions, and memos. Ability to perform shop math. Ability to speak clearly and concisely. Ability to write compound sentences relaying information, data, and details.

Revised 05/99  
Replaces 10/96

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OR

Graduation from high school or possession of a GED and two (2) years experience in radio maintenance and/or installation.

A comparable amount of education, training, or experience may substitute for the minimum qualifications.

### LEVEL II

Associate's degree in Computer Science, Electronics or related field, and two (2) years experience in (depending upon position of assignment): a) voice or line and station installation and maintenance, or b) personal computers, networking or computer related electronics.

OR

Associate's degree in Electronics, Electrical Engineering or related field, and two (2) years experience in radio maintenance and/or installation.

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