

## ELECTRONICS TECHNICIAN II

### DESCRIPTION OF WORK

This is skilled work in the repair and maintenance of electronics devices, electronics subsystems, and smaller electronics systems.

Employees in this class may either function as agency or department-wide technicians responsible for the maintenance and repair of electronics devices, subsystems, or smaller systems; or involved in the same type of repair independently under the general supervision of a higher level electronics technician. Employees calibrate, perform preventive maintenance, troubleshoot, and repair electronics devices or systems made up of several interconnected devices where this interconnection complicates troubleshooting and repair procedures. Documentation in the form of schematic diagrams, wiring diagrams, and repair manuals may be fragmented or nonexistent. Employees may modify existing circuitry to improve performance or effect output or layout circuitry to provide for special functions such as the interfacing of individual devices into systems. In these efforts, reliance on existing types of circuits and circuit designs is common. Work is evaluated through analysis of reliability of electronic repair and workability of designs and circuit modifications.

### EXAMPLES OF DUTIES PERFORMED

Reads and interprets schematic and wiring diagrams.

Determines circuit configuration and function in the absence of wiring diagrams. Determines troubleshooting procedures and repair techniques.

Troubleshoots and repairs standard electronics devices such as televisions, radios, recorders, pagers, etc.

Troubleshoots and repairs non-standard electronics devices such as gas chromatographs, spectrometers, spectrophotometers, EKG machines, X-ray equipment, scintillation counters, fluorometers, etc., using available schematics and manuals.

Troubleshoots and repairs electronics systems such as closed circuit television systems including studio equipment, micro computers and peripheral equipment, electronic control systems, radio stations, etc.

Operates standard and specialized electronics testing devices.

Evaluates and installs electronics devices and systems.

Compiles a library of technical literature, reads some to keep electronics knowledge up to date.

Researches electronic literature and lays out electronics circuitry as required to modify, build, or interface electronics devices. Determines component values.

May maintain an inventory of electronic replacement parts.

May recommend additional shop equipment or replacement of equipment to supervisor.

May supervise lower level technicians.

Performs related duties as required.

### RECRUITMENT STANDARDS

#### Knowledges, Skills, and Abilities

Working knowledge of electronic principles.

Working knowledge of the fundamentals of physics as applied to electronics.

Working knowledge of mathematical principles as applied to electronic circuit analysis.

Working knowledge of the uses of standard and specialized electronic testing equipment.

Ability to analyze and modify standard circuitry to improve its performance or to perform special effects.

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Ability to troubleshoot non-standard electronic devices or devices for which documentation is incomplete or not available.

Minimum Education and Experience

Associate's degree in electronics from an appropriately accredited institution and one year of experience in the repair and maintenance of a variety of specialized electronic devices, preferably including some responsibility for circuit modification; or an equivalent combination of training and experience.