COMPUTER ELECTRONIC TECHNICIAN

JC: MA700
PG: MW-III
FLSA: Non-Exempt

BU: 01 (SEIU)
Created: 1999

DEFINITION

Under general supervision, performs installation, modification, preventive maintenance and primary and secondary repair of a wide variety of real-time, process control and data acquisition computer systems and ancillary equipment; maintains records of work performed; performs related work as assigned.

CLASS CHARACTERISTICS

This is the full journey level classification performing skilled maintenance, modifications and primary and secondary repair of a variety of computer systems, such as the central train control, data acquisition system, sequential occupancy release and destination sign computers, and ancillary equipment and devices such as printers, drivers, data input and display devices and recorders. Incumbents work independently according to accepted standards of the trade, supervisory direction and District procedures and practices. Incumbents at this level are expected to select appropriate tools, materials and approach to the work. This class is distinguished from other electronic technician classes in that the duties relate specifically to the maintenance and repair of computers and related equipment.

EXAMPLES OF DUTIES

Installs, repairs and maintains central processing units, disk drives, core memory, logic boards and related computer components; removes and replaces discrete components such as diodes, transistors and integrated circuit chips, removes and replaces capacitors, power supplies, read brushes and related electronic components; installs, modifies and repairs wiring, harnesses, pins, fans, motors, switches and related electrical assemblies and components; repairs broken traces; operates electrical and electronic test equipment such as oscilloscopes, voltage, ohm and amperage meters and multi-meters and related devices; performs preventive maintenance to computer and ancillary equipment; loads and runs software diagnostic programs; monitors computer in normal operations, checking for appropriate bits; assesses equipment problems and determines appropriate repairs; performs various operations, start-up and tie-in testing; discusses equipment problems and work to be performed with supervisors, lead workers and equipment users; reads and interprets manuals, diagrams, schematics and configuration equations; obtains required stock tools, parts and equipment; obtains approval from Central Operations to test alarms and other systems capable of impacting revenue operations; determines appropriate substitutions for parts and components no longer in production; constructs special assemblies, circuit boards, components, harnesses and connectors; performs calculations for resistor pot timing, power supply ratings, etc.; installs new display boards and ties in to existing systems; programs and erases prom chips to reflect station configuration; loads schedules; operates computer systems; performs system and disk saves, back-ups, and restores; extracts data and generates special reports; provides various assistance to programming and operations personnel; coordinates with maintenance technicians from other areas on jointly maintained or interlinked system

maintenance; maintains records of work performed and prepares various reports.

QUALIFICATIONS

Knowledge of:

Methods, materials, tools and equipment used in the repair, installation, modification and maintenance of computer and ancillary equipment. Basic principles of computer operations, analog and digital electronics and electrical circuitry. Techniques used in troubleshooting computer and electronic equipment, including diagnostic software. Use and care of hand and power testing and repair tools and equipment common to the trade. Mathematics used in computer maintenance, including Boolean algebra. Safety practices as applied to computer maintenance.

Skill in:

Installing, repairing, maintaining and modifying real-time, process control and data acquisition computer equipment. Troubleshooting and assessing computer and ancillary equipment problems. Programming machine code language and computer prom chips. Using and caring for hand and power tools and equipment used in computer testing and repair. Reading and interpreting manuals, procedures, diagrams, schematics and configuration equations. Performing calculations required for computer repair and maintenance. Keeping accurate records of work performed and parts and materials used. Establishing and maintaining effective working relationships with those contacted in the course of the work.

Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record. Must possess physical strength to lift and carry up to 50 pounds and mobility to climb, stoop and crawl to reach work. Must be willing to work in exposure to live voltage and be willing to work underground.

MINIMUM QUALIFICATIONS

Equivalent to completion of an apprenticeship or technical training in computer maintenance or of a two-year college with major course work in digital electronic technology or a closely related field and one year of journey level experience in the maintenance and repair of computers and ancillary equipment.

BART EEO-1 Code: 4000 – Technicians
Safety Sensitive: Yes

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