THE CITY OF LOS ANGELES **CIVIL SERVICE COMMISSION**

CLASS SPECIFICATION

6/10/10 **SENIOR AVIONICS SPECIALIST, CODE 3566**

Summary of Duties: A Senior Avionics Specialist supervises a small group of employees engaged in the installation, calibration, and repair of electronic systems used on aircraft and may personally perform this work. Duties supervised or performed may include routine electronic maintenance (wiring), new installation and completion projects (R&D), troubleshooting or localizing and diagnosing causes of equipment malfunction, replacement of faulty components, tracing circuitry as well as aligning and adjusting repaired equipment; applies sound supervisory principles and techniques in building and maintaining an effective workforce; and fulfils equal employment opportunity responsibilities.

Distinguishing Features: Although both classes perform similar functions, a Senior Avionics Specialist is distinguished from a Senior Communications Electrician by the type of equipment involved and the experience required to perform the work operating within the standards of FAA regulations. Senior Avionics Specialists supervise and personally perform the work of employees engaged in supporting the design, installation, and maintenance of common avionics systems such as two way radio communications, navigational equipment and instrumentation, autopilot systems, integrated flight systems, flight management systems, video systems (camera, recording, and microwave downlink), and other necessary instrumentation required for flight, while Senior Communications Electricians supervise and personally perform the work of employees engaged in performing skilled work in the installation, construction, repair, maintenance, and modification of a wide variety of ground based communications systems. Senior Avionics Specialists are required to posses a Federal Communications Commission (FCC) General Radiotelephone license and an FAA Repairman's Certificate while Senior Communications Electrician are not.

Example of Duties:

- Designs and modifications of systems; schematics entry; system testing and repairing; software loading and testing; design and construct test fixtures; understanding of PC's and servers; and assists in the building of prototypes;
- Supervises and works with a small group of Avionics Specialists and helpers;
- Assigns and schedules maintenance work and performs inspections of work performed by other technicians prior to aircraft release into service;
- Reviews work orders, layout, and wiring diagrams to determine the need for equipment and materials and to become aware of potential problems;
- Prepares requisitions and initiates orders for materials and supplies not normally carried in stock;
- Determines that tools, supplies, and equipment are available as needed on work assignment;
- Keeps records of maintenance and repairs work;
- Coordinates the work of Avionics Specialist crews when such work involves

other avionics or communications crews, other City departments, local or federal governmental agencies, contractors, and vendors;
- Diagnoses malfunctions and systemic performance problems by interpreting flight data;
- Tests and inspects equipment and lines for proper installation and conformance to specifications and instructions;
- Installs electronic and electrical components, assemblies, and systems in aircraft;
- Adjusts, repairs, replaces, assembles or connects components and assemblies such as radio systems, instruments, inverters and camera; and systems;
- Makes field maintenance checks to determine system performance;
- Prepares sketches and diagrams of installation layouts;
- Recommends system and service improvements;
- Prepares work and supplies records;
- May drive automotive equipment to transport tools, supplies, and employees to job locations; and
- May occasionally be assigned to other duties for training purposes or to meet technological changes or unexpected emergencies.

Qualifications:

Knowledge of:
- Electricity and electronics;
- Electrical/electronic diagrams and schematic interpretation;
- Pneumatic (Pitot-Static), mechanical (rigging, sheet metal) and electro-mechanical systems (servos, solenoids, motors);
- Arithmetic, algebra, geometry, calculus, statistics, and their applications to avionics repair and maintenance work;
- Circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming;
- Principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction;
- Practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services;
- Raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods;
- Business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources;
- Computer-Aided Drafting software such as AutoCAD;
- Federal Communications Commission and Federal Aviation Administration regulations pertaining to the operation and maintenance of avionics equipment;
- Laws and regulations relating to equal employment opportunity and affirmative action;
- Principles of supervision;
- Memoranda of Understanding as they apply to subordinate personnel; and
- City personnel rules, policies and procedures.

The ability to:

- Troubleshoot Electronics from rudimentary circuits to wideband radios and Integrated Avionics Suites;
- Do detailed work with hands determining the kind of tools and equipment needed to do a job;
- Read and interpret AutoCAD or similar electrical schematics;
- Combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events);
- Repairing machines or systems using the needed tools;
- Work independently among several tasks;
- Keep records of daily activities;
- Deal tactfully and effectively with officials and the public;
- Maintain records and make reports; and
- Supervise subordinates.

Minimum Requirements:

1. Two years of full-time paid experience in a class at least at the level of an Avionics Specialist, engaged in the construction, installation, operation, repair, maintenance or modification of avionics equipment.
2. A valid Federal Communications Commission General Radiotelephone license and FAA Repairman's Certificate is required.

License: A valid California driver's license is required.

Physical Requirements:
The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.

Strength to perform lifting up to 25 pounds and occasionally over 50 pounds; hand and finger dexterity with both hands; and good eyesight and hearing.

Persons with disabilities may be able to perform the essential duties of this class with reasonable accommodation. Reasonable accommodation will be evaluated on an individual basis and depends in part, on the specific requirements for the job, the limitations related to the disability and the ability of the hiring department to reasonably accommodate the limitations.

As provided in Civil Service Commission Rule 2.6 and Section 4.55 of the Administrative Code, this specification is descriptive, explanatory and not restrictive. It is not intended to declare what all of the duties and responsibilities of any position shall be.