granted

AVIONICS TECHNICIAN JOBS

Without avionics technicians, most military and high-tech planes would be unsafe at any speed. Avionics technicians test, maintain and produce aviation electronics, including missile-guidance systems, jet engines, and flight-control circuitry. Much of an avionics job is preventative. Technicians work unusual hours, providing maintenance and support to private research concerns, aerospace companies, the military, and other government agencies. Levels of satisfaction in the industry are high, mainly because it provides intellectual curiosity with a very close attention to detail. The installation of electronics devices, their calibration, and their testing are all critical to the success of any aviation endeavor.

Many avionics technicians specialize in one area of expertise, such as microcircuit television microscopy, or oscilloscope review, or computerized guidance systems. Since the field is evolving, many people's specialties change over time. Because of rapid changes in technology, continuing education through professional reading, and attending company-sponsored seminars, industry events, and conferences is the norm in this field. Most technicians are also educated through interaction with their colleagues; while each member has an assigned responsibility, the majority of technicians work as part of a team. Communication skills and the ability to write comprehensive and complete reports are as important as technical skills.

Two discrete professional categories exists for those in the industry. The first are those involved in the research and development (design and testing stages) of new electronic equipment. These technicians must have curious minds that can imagine potential problems that might occur, including atmospheric conditions, magnetic field interference, and weight limitations. The second category are those involved in the direct installation and maintenance. These people must be extremely attentive to detail, organized, and interested in high degrees of responsibility and long hours. The two fields do cross over at a variety of points, but in general, the fields are separate.

How to Become an Avionics Technician

Most people attend a specialty school or community college that specializes in electronics engineering for one to three years. Major aerospace employers run their own schools and training centers; but corporate-run schools teach only about each company's own product line. General coursework at these schools includes electronics, the physics of electricity, circuit design, and computer science. Familiarity with math (calculus-level studies are preferred) and a degree of manual dexterity are both helpful. If communications equipment is part of your job, you also will need an Federal Communications Commission (FCC) license as a restricted radiotelephone operator. Most specific skills, such as use of an oscilloscope, or a circuit analyzer, are part of on-the-job training.

Careers Related to Being an Avionics Technician

Some avionics technicians continue their education and become aviation engineers, electrical engineers (specializing in circuit design and testing), or communications engineers. Others become repair consultants, in-house electronics designers, or join research groups which test and rate developed products. But few avionics technicians leave the field, due to the interesting work and competitive salaries the profession offers.

Past And Future

Avionics developed with the rise of modern warfare. The number of electronic devices used in navigation, control, maintenance and flight multiplied by a factor of 100 between the World War II B-29 bomber and the current B-58 supersonic bomber. Missile technology, including the development of SCUDS, ICBMs and other "smart" missiles, has also matured. The current demand for aviation technicians is significant.

While strong demand exists for technicians now, much of the direction of avionics technicians relies on defense spending, and with budget slashing looming on the horizon, this career faces an uncertain financial future. Aerospace work will continue to be done at some level, but to what degree and by how many people is the question. Research project support and government funding sway from supporting laser-based missile defense systems, to backing propulsion-based systems, from encouraging the development of stealth weapons and high-altitude aircraft, to supporting nothing at all.

Quality of Life

Two Years Out

Avionics technicians make the transition from school to the practical work environment during these early, busy years. Many participate in one- to two-month on-the-job training programs sponsored by their aerospace employers. Beginners join research teams as 'junior' members and their work is carefully scrutinized by more experienced members. Duties include calibration and installation of communication and other, less complicated, electronics systems. Salaries are reasonable, as are hours, but many entering the field mentioned that the technical journal-reading burden, a feature of most evolving professions, is one unexpected time-stealer.

Five Years Out

Five-year survivors are now the senior members of research teams, and in rare cases, are leading them. Those involved in the design and research stages of products now have significant input into the testing protocols and installation procedures. Those involved in maintenance have regular schedules and may have some oversight responsibility for newer entrants to the field. The majority of avionics technicians--over 70 percent--remain with their original employer through their first five years, possibly due to the paucity of aerospace companies.

Ten Years Out

Ten-year avionics technicians spend their time running research projects, working with designers and producers, and managing less-senior avionics technicians. Those who have advanced not only understand the technical specifications and the electronic requirements of what they do, but the spirit of cooperation that must take place for teams in this industry to function efficiently. The majority of ten-year veterans are employed by the major aerospace companies, with the government employing the second-largest number. Satisfaction is high and hours increase.

Professional Profile

# of people in profession	**15,400**
% male:	**90**
% female:	**10**
average hours per week:	**40**

Professionals Read

Aviation Week and Space Technology
Flight

Books, Films and TV Shows Featuring the Profession

Iron Eagle
Groundmen
The Gypsy Moth
Black Sunday

Major Employers

Cessna Aircraft Company
PO Box 7704
Wichita, KS 67277
Tel: 316-941-6000
Fax: 316-941-7865
Contact: Employment

Boeing Aircraft
P.O. Box 3707
M/S 6H-PL
Seattle, WA 98124
Tel: 206-655-1131
Fax: 206-544-3111
Contact: Employment Center

You'll Have Contact With

Aerospace Engineers

Electrical Engineers
Pilots
Safety Inspectors

Major Associations

American Institute of Aeronautics & Astronautics
85 John Street
4th Floor
New York, NY 10038
Tel: 212-349-1120
Fax: 703-264-7551
Contact: Public Affairs

Professional Aviation Maintenance Association
1200 18th Street, NW
Washington, DC 20036
Tel: 202-296-0545
Fax: 202-296-0618

Future Aviation Professionals of America
4971 Massachusetts Boulevard
Atlanta, GA 30337
Tel: 770-997-8097
Fax: 770-997-8111
Contact: Human Resources