

**QUALITY**

**DEPENDABILITY**

**PERFORMANCE**



**P R O V E N**

# Solutions to the Aerospace Industry



## Audio Systems

AvtechTyee is a leading manufacturer of flight deck and passenger address audio systems for the commercial, regional and business jet market sectors.

AvtechTyee's systems can be configured to interface with most airframes, requiring minimum design changes. ARINC 429, 629 and Ethernet optical interfaces and spill-proof audio panels are just some of the many features available.

- Boeing 717, 737, 757, 767, 777 and 787 aircraft.
- Embraer EMB 120, ERJ 135, 145, 170, 190, 195
- Bombardier CRJ100, 200, 700, 900 DeHavilland -100, -200, -300
- CASA/IPTN CN-235 civil and military



## Chronometers

AvtechTyee's Electronic GPS Clock is designed to be a generic aircraft flight deck clock and timing reference. This highly accurate clock provides; Coordinated Universal Time (UTC) and date, Manual (MAN) time and date and elapsed time.

A chronograph with sweep second pointer and Elapsed Time is useful for timing in holding patterns, procedure turns, and approaches. This feature can also be externally controlled.

In addition to providing a visual time and date reference to the pilots, the clock is capable of receiving and transmitting the time and date information over the aircraft's ARINC 429 bus.

- Boeing 737NG and 767-400
- Sukhoi SSJ100
- Asian Regional Jet ARJ21



## Flight Deck Controls

AvtechTyee's 7522 series of VHF Comm Radio Tuning Panels are capable of both 25 kHz and 8.33 kHz channel spacing. This cost-effective solution is in response to the European requirement for 8.33 kHz VHF COMM frequency spacing.

These panels offer a single base part number that can tune both 500 and 700 ARINC series radios, providing high reliability through the use of electronic rather than mechanical components. The AvtechTyee approach provides spares commonality, improved maintainability logistics, and an upgradable platform.

- Single or dual encoder configurations available
- Brown, black or grey colors available
- Spill-proof front panel
- Optical encoders
- FAA TSO C37d and C38d



## Selective Calling

The SELCAL system consists of a ground-based SELCAL encoder, a VHF or HF communication system, and the airborne decoder. Each aircraft's "SELCAL decoder" is assigned a unique code. The airborne SELCAL decoder is connected to the aircraft's VHF and HF radios. When the aircraft is called, an aural alert is received and the active radio is identified on the cockpit annunciator panel, signaling the flight crew to monitor the company radio frequency.

- Two standard ARINC 714 configurations available
- Space saving panel mount configurations available
- Battery powered ramp testers can test SELCAL system at the aircraft
- Legacy ARINC 531 products still available
- FAA TSO C59 Certification



## Control

A significant strength since AvtechTyee's inception is the company's ability to interface with aircraft sensors used to monitor and control the aircraft environment.

This strength is supported by AvtechTyee's engineering expertise in system design, signal processing, power monitoring and control, and embedded software design.

This ability has found its way into many of AvtechTyee's innovative products such as windshield temperature controllers, anti-ice systems, voltage and current monitoring, fluid level monitoring, waste system monitoring and control and switched mode power supplies.



## Power Filtering

The AvtechTyee active electronic filter cancels up to a maximum of 8.0 Amps (rms) of current harmonics on the 115 VAC, 400 Hz power line. Primary applications are for IFE, LED lighting, or military installations in wide body aircraft when current harmonics of newly added equipment create potential AC bus problems. If additional cancellation is required, several filters can be operated in parallel.

The filter mounts between the 115 VAC line and neutral and does not require that the full bus current flow through the unit. This product has been Type Certified for the 747-400 and 767 and AvtechTyee has received Parts Manufacturing Approval (PMA) from the FAA.

**P R O V E N**

# Quality, Dependability & Performance

AvtechTyee has added a new dimension of custom electro-mechanical control and lighted display products for the aerospace industry. We offer expert design and manufacture of custom aircraft electro-mechanical and electro-optical devices (such as Master Caution Panels, Fire Control Handles and landing gear switches), among many others.

With our aerospace experience and resources, our in-house design staff, our engineering capabilities (which include electrical / circuit, mechanical, lighting, human factors design, test and validation), AvtechTyee can provide turnkey results to produce the product you need quickly and cost-effectively.



## Legend & Filter Design

Through its acquisition of WCS, AvtechTyee has become a leading innovator in illuminated displays – as well as designing and manufacturing plastic legends and filters for aerospace applications.

By using its in-house testing capabilities for Chromaticity, Luminance, Contrast, Transmission and Reflectance, AvtechTyee delivers the most advanced display technology.

- All Plastic, monolithic design, constructed for rugged treatment and long-term use
- Illuminated background or characters
- Excellent sunlight readability
- Custom or standard MIL-Spec colors
- Multi-cell, multi-color one piece legends
- Custom sizes or sheets
- Thickness from .030" - .250" available
- NVIS/NVG filter options available



## Crew Warning Panels

AvtechTyee utilizes advanced legend and filter production capabilities to deliver the most effective crew warning panels in the industry. Installations range from small GA aircraft to large commercial aircraft.

With our dead front panel design, the pilot's attention will only be drawn when the high resolution, brilliant colored warnings are displayed.

- Options ranging from status display only to integrated airframe system monitoring and voice/tone alerting
- Integrated aural warning with voice or tone alerts
- Front or Rear mounting options
- Night Vision (NVIS) capable panels for military applications



## Flight Deck Controls

AvtechTyee has extensive experience in developing precision electro-mechanical controls for the flight deck, with safeguards and redundancies built-in to prevent an accidental command. These controls provide both the tactile and visual feedback required for the pilot to be confident the command given has been properly translated into a control surface or landing gear action.

All engineering, production, and testing are performed in-house to ensure quality.

- Landing gear, spoiler and flap controls available off-the-shelf
- Rated for abuse loads of 100lbs or more
- Optional mounting plates and cable harnesses to simplify the electrical and mechanical interface to the aircraft
- Lighted gear or flap position indicators integrated with other assemblies



## Fire Bottle Discharge

You need designs you can rely on in emergency situations, with essential safeguards to prevent accidental discharge or engine shut down.

With AvtechTyee's proven experience developing solutions for business jet, commercial, and military aircraft, you can choose from a variety of off-the-shelf and custom solutions for fire bottles discharge controls, ranging from guarded push button switches to heavy-duty electro-mechanical design.

- Sunlight readable, dead-front hidden legends available in standard aviation colors.
- LED or incandescent illumination with self contained power supply, circuit protection and driver circuitry
- NVIS compatible lighting available
- Pull to arm, rotate to activate and other mechanisms available



## Switches & Connectors

An integral part of how we serve the industry is providing custom lighted and non-lighted switch assemblies, light plate power connectors and other aviation quality components for aircraft control panels.

With our in-house staff of mechanical and electrical engineers, many configurations can be rapidly developed from our "stock" products, including MIL Qualified and FAA/PMA approved parts!

- Alternate or Momentary Switch Action
- Multiple Switch Pole and Terminations available
- Configurations guaranteed for 200K cycles or more
- Industry standard sizes available or custom engineered
- Isolated edge-lit panel connectors designed to mate with MS90335 Light Plate Plug



## Electro-Mechanical Devices

Perfecting the connection between man and machine, AvtechTyee offers custom solutions in electro-mechanical design to translate a physical action into an electrical reaction. With our on-site staff of engineers and designers, we can translate your vision into a working model.

All AvtechTyee devices feature a reliable, high strength and cycle life mechanism to survive the toughest operational condition.

- Integration with airframe or your hardware
- Custom solutions developed to your specifications



**P R O V E N**

# Customer Specified Avionics

Many of our products are generated from our customer's ideas, hence our slogan – "Ideas that Fly". AvtechTye's team of avionics engineers is uniquely qualified to design and manufacture your next avionics project. Drawing from a staff of highly skilled mechanical, component, lighting, analog, digital, software and power engineers our staff will team together to design, certify, and produce your next product following AS9100 processes.

Once the design has entered the production phase our Operations engineers will maintain the product throughout the remainder of its life cycle. Should component obsolescence issues surface, they are uniquely qualified to select and design alternate solutions to the original source.

- Multi-disciplined design team
- In-house qualification test facility
- Over 40 years experience designing avionics equipment
- Integrated Design to Operations process
- In-house magnetic design and fabrication
- In-house EMI test facility
- In-house Maintenance Manual technical publications

CONCEPTS



REQUIREMENTS



PROBLEM SOLVING

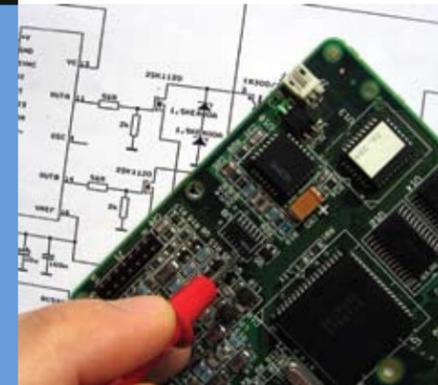
DESIGN SOLUTIONS



TESTING & CERTIFICATION



PRODUCTION & SUPPORT





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Having one vendor you can trust – one with proven quality, proven dependability, and proven performance makes product procurement far less stressful. AvtechTyee understands how important it is to find that single vendor to fulfill your needs.

With over 40 years experience designing and delivering quality avionics, AvtechTyee understands how important it is.

AvtechTyee... a company you can trust...products you can depend on.