



**A New Paradigm
in
Productivity**

Spectrum: Leading the Business Jet Design Revolution

In the first half of the 20th Century, the Douglas DC-3 gained notoriety as the premier workhorse aircraft, demonstrating the ability to address differing missions due to its utilitarian design, ruggedness and adaptability. As a testament to its durability and how it revolutionized aviation, almost 80 years after introduction many are still flying today.

Following the DC-3’s appearance, General Aviation has undergone rapid expansion. Many business jets currently operating were designed and built in an era with very different values and manufacturing capabilities. In today’s environment, business jets need to be utilized as tools and not as luxury items. Yes, there are still needs for comfortable cabins and pleasant surroundings however they also are required to be adaptable to a variety of mission requirements. Mission capability, reliability, low operating costs and environmental responsibility are today’s realities.

To meet the challenges of the 21st Century, Spectrum is developing two new aircraft, the Freedom S.40 mid size jet and the Independence S.33 light jet. Together, they will set the new standard for aircraft utility. Spectrum’s aircraft will:

- Utilize INNOVATIVE TECHNOLOGY to address evolving transportation realities
- Provide HIGH EFFICIENCY to lower cost of ownership and use
- Be ENVIRONMENTALLY FRIENDLY to reduce potential carbon offset costs
- Operate QUIETLY: Stage IV noise compliance is a reality, and will be enforced
- Prove their worth as true PRODUCTIVITY TOOLS, rather than high-priced luxuries

Spectrum takes these requirements seriously, and is committed to offer a price/performance value proposition that meets or exceed all of these goals.

Spectrum Leadership: Dedicated to Advancing the State-of-the-Art



Spectrum’s CEO, Linden Blue, has been dedicated to design innovation and improving aircraft utility throughout his career

Developing revolutionary aircraft such as Spectrum’s Freedom and Independence requires visionary leadership. The company is fortunate to have that leadership, right from the very top. Spectrum’s founder and chairman, Linden Blue, has a long and distinguished background in the aviation industry, and a passion for creating technical innovation.

Linden’s philosophy is centered in development of game changing technology. Development of another “me too” business jet simply does not make sense as new aircraft designs will need to set new standards in efficiency and utility. Linden and the Spectrum team have dedicated the last 25 years to development of manufacturing processes which will culminate in fielding the most advanced family of aircraft imaginable. Freedom and Independence performance specifications are testimony of their success.

Mission Flexibility and Durability: Made Possible with Advanced Composites

Utility aircraft. Everyday workhorses of the sky. They have to be fuel efficient, able to carry large payloads while performing in difficult conditions. They must have short field capability, low fuel consumption, exceptionally long range and be able to adapt to a variety of different missions. Utility aircraft must be rugged and able to stand up to thousands of hours and cycles of operation while providing previously unachievable operating economics.



Spectrum’s aircraft are designed to be rugged and reliable workhorses

A new paradigm of mission capability, reliability, cost of ownership and environmental responsibility is required.

Spectrum Aircraft are specifically designed with the intent of addressing the demanding needs of today’s missions. This is made possible by incorporation of advanced composites, state of the art engine technology and advanced avionics and aerodynamics.

When it comes to durability, composites offer two very important advantages when compared to metal structures: composites do not corrode, and they are virtually immune to fatigue. Additionally, through its use of fibeX®, Spectrum’s unique composite material, Spectrum is able to achieve smooth aerodynamic contours and lightweight structural design that simply can’t be cost-effectively matched by other means. The result is a beautifully streamlined airframe that can be operated for thousands upon thousands of hours and cycles with unparalleled durability.

Design Simplicity: The Key to Dispatch Reliability

Many existing manufacturers stretch fuselages, re-engine earlier airframes, modify wings and make other supplemental changes to aircraft originally designed decades earlier. Spectrum has taken a different approach that involves taking maximum advantage of new technology to develop aircraft that will set new standards for reliability and efficiency. A few of Spectrum’s innovations include:

- Use of fibeX® to dramatically reduce weight and parts count
- Elimination of complex/high-maintenance hydraulic systems
- Advanced wing icing protection that does not depend on fluids, boots or bleed air
- Multi-redundant electrical distribution without need of heavy circuit controls in the cockpit
- Use of GE Honda Aeroengines’ advanced HF120 fanjets that can operate for 5,000 hours without the need for a mid-TBO hot-section inspection

Spectrum’s aircraft offer an overall configuration that facilitates ease of inspection and access to key components. These characteristics are augmented through Spectrum’s incorporation of the Maintenance Steering Group 3 (MSG-3) continuing airworthiness program.

Unlike earlier outdated approaches, an MSG-3 program operates on principles of inspection and on-condition service for most system elements. The result is a highly cost-effective service routine that maximizes aircraft availability and dispatchability. Many existing aircraft cannot transition to MSG-3 methods. For those that can, it is not always economically feasible for the manufacturer to establish new maintenance procedures. With its “clean-sheet” design methodology, Spectrum is able to incorporate MSG-3 principles directly into its aircraft. Safe, effective airworthiness is assured with a minimum ratio of maintenance man-hours to flight-hours.

Freedom and Independence: Workhorse Aircraft for the 21st Century

New standards will be set by Freedom and Independence in efficiency, reliability, utility and environmental responsibility. In addition to traditional passenger carriage, the capability to complete a variety of missions including cargo operations, maritime and border surveillance and dual guernsey air ambulance will readily be achievable as well as will many other missions made possible by Spectrum’s design philosophy. Freedom and Independence are truly poised to assume the mantle as the utility workhorses of the 21st Century.



Freedom and Independence are short field, hot and high capable

Forward Thinking Innovation. Forward Thinking Technology. It’s Spectrum.