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## what are experimental/amateur built aircrafts?

Experimental aircrafts are aircrafts that are built for the purpose of testing new technologies or designs. These aircraft are often developed by individuals or small companies and are not subject to the same regulations as production aircraft. Experimental aircraft are used to test new ideas, push the limits of technology, and explore new frontiers in aviation.

Experimental aircraft come in many different shapes and sizes, from small homemade planes to supersonic jets. Some of the most famous experimental aircrafts include the Bell X-1 (Glamorous Glennis), fig 1. which was the first aircraft to break the sound barrier on 19th January 1946, and the X-15, fig 2. which took its first flight on 08th June 1959 and set numerous speed and altitude records in the 1960s. These aircraft were built and owned by the United States Air Force and NASA, but many experimental aircraft are built by private individuals or companies.

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One of the key advantages of experimental aircrafts is that they allow designers to test new ideas without the constraints of traditional regulations. This can lead to the development of new technologies and designs that would not be possible under normal circumstances. For example, experimental aircraft have been used to test new materials, such as carbon fiber and composites, which have revolutionized the aerospace industry. They have also been used to test new propulsion

systems, such as electric engines and hybrid systems.

Experimental aircraft also play an important role in advancing the science of aviation. By pushing the limits of what is possible, these aircraft help to expand our understanding of aerodynamics, materials science, and other fields that are critical to aviation. They also provide a platform for testing new technologies that may eventually be used in production aircraft.















Fig 1. Bell X-1 (1946)

Fig 2. X-15 (1959)

Despite these risks, experimental aircrafts continue to play an important role in aviation. They allow engineers and designers to explore new frontiers in technology and design, and they provide a valuable platform for testing new ideas and technologies. As the aerospace industry continues to evolve, experimental aircraft will likely continue to play an important role in shaping the future of aviation.

