The Ryan SCW

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It has been an unfortunate fact throughout the history of general aviation that deserving new designs do not always achieve notable production and sales records. There are many reasons for this: the principal ones, described in past articles being competition from cheap war surplus airplanes from 1919 into the mid-1920s and the advent of the great depression that started at the end of 1929.

In the case of the Ryan SCW, a good design succumbed to something else the imminence of a new war, not its after-effects. Let's back up for a moment and sort out this particular airplane's ancestry.

In 1922, T. Claude Ryan founded an air service in San Diego that soon expanded from sightseeing and charter flights to a scheduled airline running between San Diego and Los Angeles. To provide suitable passenger planes for these operations, Ryan got into the airframe business by making major modifications to war-surplus Standard Model J trainers and the one-only Douglas Cloudster that had been the prototype of a Navy torpedo plane.

From redesign and modification it was only a short step to the design and manufacture of new airframes. The innovative Ryan M-1 mailplane of 1926 was a monoplane in what was then a biplane world. Ryan's factory was a former fish cannery on the San Diego waterfront; he sold out to his partner B. F. Mahoney, just before the firm went to work on the long-range monoplane that buyer Charles A. Lindbergh named



The change to the Warner radial engine made a big improvement in the appearance of the SC as well as in its performance and reliability, but the two- to three-seater never made it to the best-seller list. A. U. Schmidt Photo

RYAN SCW Specifications

Powerplant

Span Length Wing area Empty weight Gross weight

High speed

Initial climb

Range

Cruising speed

Service ceiling

Warner Scarab 145 hp @ 2,050 rpm 37 ft 6 in 26 ft 7 in 202 sq ft 1,350 lb 2,150 lbs

Performance

152 mph @ 3,000 ft 136 mph @ 3,000 ft 900 fpm 19,400 ft 520 mi (37 gal)



Yesterday's Wings

The prototype Ryan Model SC of 1937 with the original Menasco engine, This was soon changed to a Warner Scarab radial, and the airplane was given a new Approved Type Certficate. Ryan Photo



The canopy of the SC slid backward on tracks for cabin access. The trailing edge of the wing root was curved upward to make a clean intersection with the fuselage without need for a big fillet. Photo by author.



Rich McDonald (AOPA 472949) of Olympia, Wash., owns this SCW fitted with a 185-hp flat-six Continental engine from a Beech Bonanza. Photo by author.

"The Spirit of St. Louis." The company became B. F. Mahoney Aircraft Co., but the airplanes were officially called Ryans until production ended early in the depression.

By 1933, things were looking brighter, and Ryan formed a new company, still in San Diego. This was the Ryan Aeronautical Co. whose first product, a slick little sport-trainer known as the ST, became an immediate hit. In 1937, the ST was followed by the less sporty Model SC, a low-wing, cabin monoplane more suitable to "family" flying. Two pilots sat side-by-side at stick controls, and space was provided behind them for either one passenger or 190 pounds of baggage. For access, the one-piece canopy slid aft on tracks.

The structure was all-metal, with the fuselage being built mainly from flatwrapped sheets of aluminum. The wing was fabric-covered from the main spar aft, and the ailerons and all tail surfaces were fabric-covered. The metal surface was left in its natural finish and the fabric areas were doped silver to match. Advanced features for the time were the full-cantilever wing and the single-leg landing gear. The extreme taper ratio of the wing, which was unusually long for a two- to three-place airplane, was an outstanding recognition feature.

Another oddity was the flat, perforated flap that was mounted forward under the belly instead of in the trailing edge of the wing. This flap was for drag only, to reduce the landing speed; it wouldn't have been suited to a wing installation, since the trailing edge of the wing at the root was curved upward to intersect the fuselage skin at 90 degrees and eliminate the need for the big fillet common to low-wing monoplanes of the time.

The original powerplant was the same 150-hp Menasco C-4S inverted in-line used in the ST-M. The prototype Model SC received Approved Type Certificate (ATC) 651 with this engine in the summer of 1937. The Menasco was undesirable, however, and was quickly replaced in the same airframe with a 145-hp Wagner Scarab seven-cylinder radial. This engine enhanced the looks immensely since the greater width of the Warner was better suited to the wide cabin of the airplane.

the Warner was better suited to the wide cabin of the airplane. With the new engine, the airplane was redesignated SCW and received ATC 658 in October 1937. In spite of its good looks and pleasant handling characteristics, the SCW did not win the immediate acceptance given to the ST. The \$7,500 price tag may have had something to do with it, plus the fact that all the optional goodies made deep cuts in the passenger/baggage allowance. Starter, battery, and generator alone added 60 pounds, and a cabin heater added another 10.

heater added another 10. Mainly, however, the SCW was the victim of poor timing. World War II was about to break out and the aircraft industry was building up for national defense and to supply aircraft to friendly powers. While Ryan didn't build high-powered warplanes, it found itself doing a brisk export business in militarized versions of the snappy little ST which became known in this form as the ST-M (for militarized).

as the ST-M (for militarized). At this time, too, the U.S. Army expanded its training program and gave Ryan further contracts for STs. The stock Menasco-powered models didn't do too well in the Army's program so the basic design was reworked into the ST-3 series with Kinner radial engines replacing the Menascos. Both the Army and the Navy bought in quantity. The SCWs pretty much got lost in the sales effort on their behalf was so lowlow the two remeniad uncold and ware

The SCWs pretty much got lost in the shuffle, and only 14 were built. The sales effort on their behalf was so lowkey that two remained unsold and were not even assembled until after the war. It remained for the passing of time to give the SCW status. By the time the antique airplane boom got under way in the 1950s, the SCW was a much-appreciated classic, even more venerated because of its small numbers (eight are presently on hand) and "round engine" configuration.

Like other popular airplanes fitted with orphan engines, SCWs have been suffering from the chronic spare parts problem. Some SCW owners have consequently taken the route followed by other antiquers and adapted modern flat engines to their old birds. The favorite for the SCW is the 185-hp Continental with constant-speed propeller as used on older Beech Bonanza models. No weight increase is involved; with an approved installation the airplane also retains its standard-license status and its utility as an everyday airplane.