

pilot report

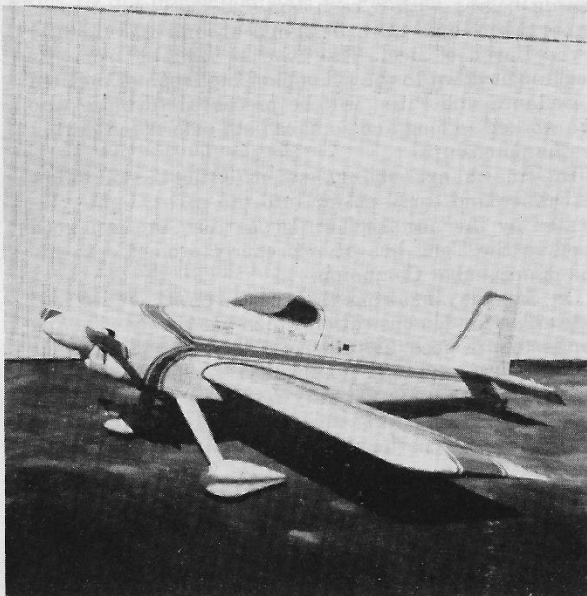
UPDATE VM-7 COMPETITOR

by
Dick Murphy

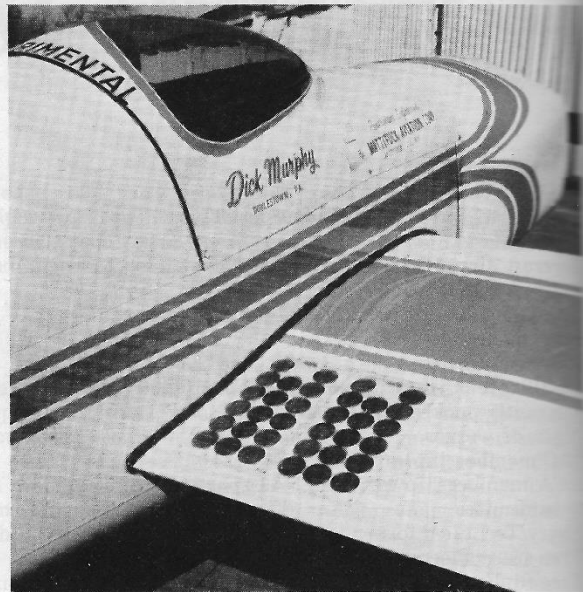
Since the first flight in March, 1978, progress has been moving at or ahead of schedule. The objectives of the first year were to test, modify and improve where needed. As with any new design, changes were anticipated; and, of course, much of the first year was spent "showing" and demonstrating — but that is now all behind us. In 1979, competition is the goal.

Surprisingly, only minor modifications were needed in the original design. Items such as the aileizon air gap were reconfigured to improve the roll rate (now at 180°/sec.). The control stick was repositioned and the stick forces lightened. This move will also allow the cockpit to accomodate a larger pilot, up to 6' tall. But by far, the most significant change was made in the power plant package.

Mattituck Airbase of Long Island, New York, engineered a new concept in engine modification. This concept centered on more power and better reliability at existing engine weights. By improving the torsionally weak areas and the main shaft flange strength, Mattituck has developed an engine to withstand the higher RPM's and shaft loadings required in aerobatic competition.



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The engine is a four cylinder, 220 to 230 HP at 3100 RPM. This little four banger only weighs 294 lbs. and stands only 19¼" high. Reliability tests are now being conducted on the Competitor.

Due to the engine modification the propeller was also changed from a constant speed Hartzel to a fixed pitch metal prop. In this area of props, there is significant room for improvement as the state of the art in prop manufacturing appears somewhat behind that of the airframe and engine developments. Most prop makers will not even discuss this area with designers. Some serious testing is now underway to come up with a good prop combination.

The airplane does perform. The Competitor will do all the unlimited competition maneuvers and excels in the area of vertical performance and rolling turns (inside and outside). No unusual characteristic have been noted and general handling is light and responsive. The ground handling is very good, but visibility directly over the nose while on the ground is limited. Take-offs and landings are simple, nothing like the "adrenalin pumpers" of some of the other competition aircraft.

The search is now on for a good unlimited pilot, who can realize the airplane's potential. The designer is not so vain as to think he is that pilot. A younger, more aggressive competitor will be needed. At the present time, Peggy Davies is beginning to work out in the Competitor and is doing quite well. Other pilots have flown the plane — all with favorable comments.

As set forth in the beginning of the project, I will continue to keep a low profile. I have no intentions of going commercial with plans or kits until such time as the airplane is a winner in world class competition. I feel any airplane, particularly a competitive airplane, should be sold by performance rather than the printed word.