

# MONNETT MONI

*Raising aviation to another level of semantics*

BY EDWARD G. TRIPP



Seattle and Wichita may be in a depression, but elsewhere in aviation, there are many, fascinating signs of life, good health and healthy curiosity.

None of the publicly known developments are under way at major general aviation manufacturers. None, that is, unless you count Beech's admission that the Model 336, a single-engine turboprop, is flying; Mooney's recession-slowed M-30 pressurized single; and Piper's reluctant admission-through-complaint of its experimental single engine, pressurized and supposedly all-new design.

The signs I am talking about are not in the quarter-million-dollar and above range. Indeed, they are burgeoning in the very area that the majors have been declaring dead and gone for a decade: personal aircraft. One of the more interesting projects, which I recently had a chance to fly very briefly, is the Moni now being offered in kit form by Monnett Experimental Aircraft, Incorporated, of Oshkosh, Wisconsin.

One of the reasons it is interesting

is that, because of its price, it is a practical alternative to ultralights. The substantial ultralight boom is one demonstration that there are many people who want to fly; in fact, many licensed pilots are getting involved. But for every one who does, there is another who would like to see them just disappear. There are probably just as many who are curious or even tempted, but for whom ultralights are too limited to be their answer to the quest for fun flying.

Aviation is a category-crazy, pecking-order-crazy world. So a new semantics battle order has been issued with the definition of another type of aircraft with the unwieldy and unfortunate moniker of Air Recreational Vehicle (ARV).

The desire—or the claim of a need or a market—for light, recreational aircraft is nothing new. It has been the subject of discussions, speeches, articles and, occasionally, aircraft for at least 50 years.

Anyone who has been involved with homebuilt aircraft knows of the

search for a light aircraft, an engine to power it, together with such criteria as simplicity of construction, operation and maintenance, low cost and the ability to transport it from an operating area to home or some other storage facility less expensive than the typical airport.

A reasonable claim can be made for providing a new focus to the effort by AOPA, when President John L. Baker disclosed to Experimental Aircraft Association President Paul L. Poberezny the topic of his planned speech to the faithful gathered at the 1978 EAA fly-in at Oshkosh, Wisconsin. Baker mentioned 10 objectives that the two associations could work together to achieve. Among these was a light, portable, simple, fun airplane.

Poberezny coined the Air Recreational Vehicle appellation. This has raised images in the minds of some pilots of a Winnebago with wings. That is not the case.

Last year, a competition to encourage the development of "new ARV designs that will be available to all

people" was initiated by *Western Flyer* and *Ultralight Flyer*. Dave Sclair, publisher of *Western Flyer* and AOPA's northwest regional representative, is chairman of the competition. The DuPont Corporation is the primary sponsor. AOPA Air Safety Foundation, Cuyuna Development Corporation, EAA and Wicks Aircraft Supply are cosponsors. Paul Poberezny is honorary chairman, and yours truly is one of the judges.

The competition has two categories: light aircraft and ultralights. Entries closed on July 4; the judging will take place June 10 through 12, 1983, at EAA's facilities in Oshkosh.

The rules governing light aircraft are quite simple: The vehicle should be 350 pounds or less. It should be capable of being towed, trailered or transported on a car top and set up by one person. The vehicle should qualify in the amateur-built, Experimental category and comply with all applicable Federal Aviation Regulations.

In addition, all restrictions must be flown off before June 1, 1983, and the winners must be willing to sell plans, kits or finished aircraft to the public.

It is unfortunate that the prototypical aircraft does not qualify for the contest because it flew before the offi-

cial starting date—September 7, 1981.

John T. Monnett Jr. flew his Moni just a few weeks before that, and he made quite a hit at the EAA fly-in. The Moni is Monnett's fourth or fifth design. Take your pick; it depends on whether you consider the Monerai sailplane and the Monerai motor glider as two aircraft.

Monnett calls his new aircraft an Air Recreational Vehicle category motor glider. Just to play semanticist, I call it an airplane in which you can soar. After all, the Monerai with an engine is a *real* motor glider.

Monnett's requirements for the Moni were: simple to build and fly; portable or roadable; fuel efficient; not dependent on avgas; and capable of limited aerobatics (International Aerobatic Club Sportsman category).

He has added another option to the Moni in recent months. Short wings

(44 square feet as opposed to the long wings of 75 square feet) are being tested. The glide ratio goes down, but speed and rate of roll increase. When flight testing is complete, a builder can have a choice or have both, if he wants to build two sets of wings.

The last time I visited Monnett's shop, the first two kits were being shipped, and seven more were being crated. A second Moni, which will be built with the short wings from the start, was under construction to test conformity with the plans.

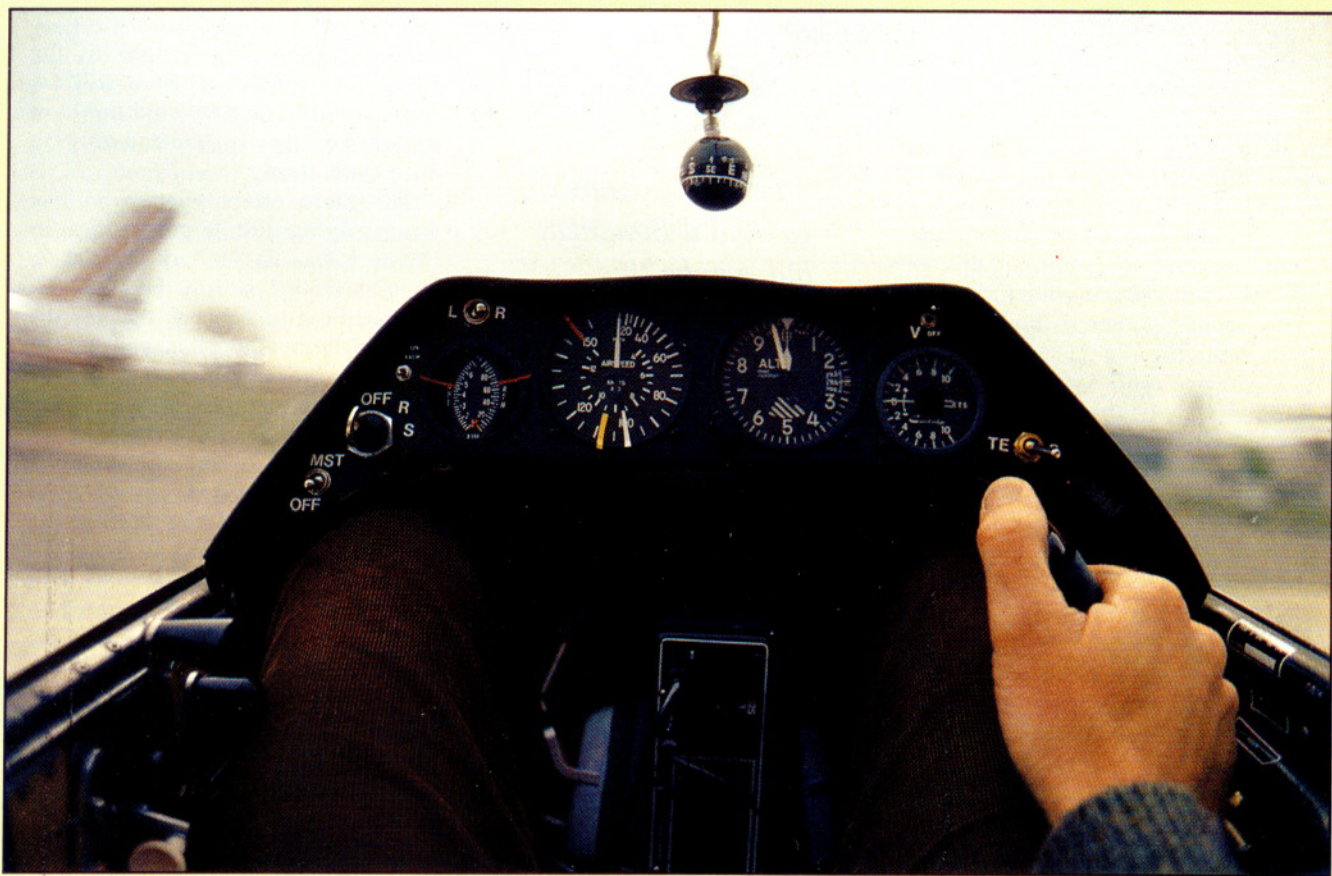
For the tricycle-gear-oriented pilot, the Moni looks as though it is quite a different proposition. The main gear—there is only one—protrudes from the bottom of the fuselage not too far ahead of the pilot's seat. There is a tailwheel and outriggers—roller-skate size wheels at the outboard of each wing.

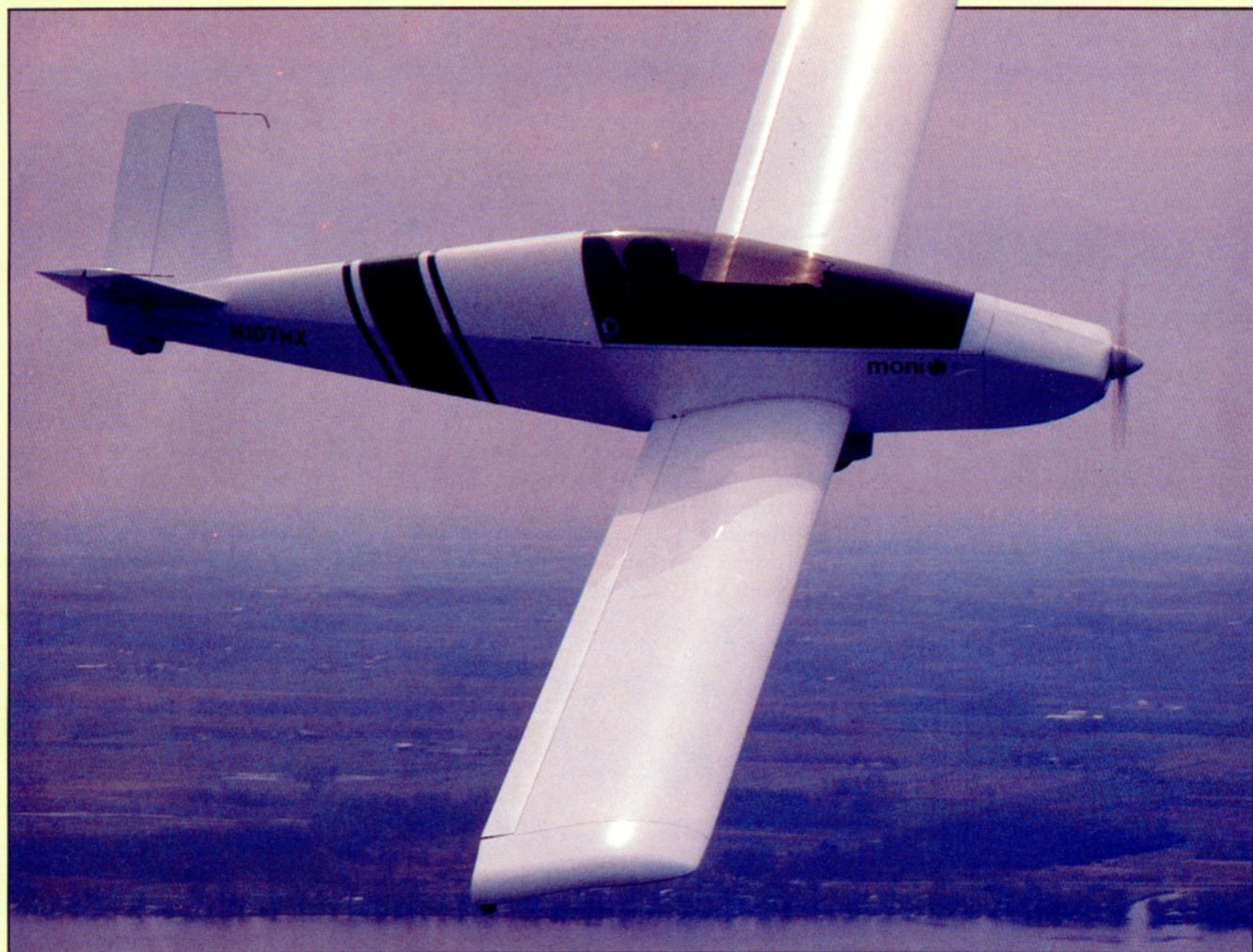
The first time I stood admiring it, wondering if I could fit in it and if Monnett would let me fly it, *Pilot Creative* Director Art Davis walked by. He stopped, looked at the Moni's V-tail with ruddervators and mused: "I've always wanted to own a Bonanza but knew I'd never have the money. But maybe this. . ."

This—the Moni—puts a one-place,

# MONI

*The first time I saw  
it, I wondered  
if I could fit in.*





versatile pleasure airplane within reach for less than the cost of the lowest-price car. For \$5,500 (not much more than a good ultralight), the company provides everything—engine, instruments, battery, cables—everything a builder needs to complete the airplane except for paint, sandpaper and the wood to build wing fixtures.

The estimated time to build is 400 hours. Designers' estimates of time to build homebuilts—including ultralights—are typically optimistic. (One kit I looked at recently took longer to inventory the parts and read the instructions than the manufacturer claimed would be involved in completing the entire airplane.) The only comment I can make about the Moni is that it looks simple enough for me to build with confidence, and I have said for years that I would not fly any aircraft that I built, even if I could devote the five years needed.

Monnett and his colleagues deserve a great deal of credit for the care and testing that the Moni has received in the past year to prove the concept and

## MONI

*"I've always wanted to own a Bonanza, but maybe this. . ."*

to ensure that the customer gets what the advertising promised.

For instance, there are dozens of propellers hanging on the shop wall that were tested to find the right combination of climb and cruise thrust and compatibility and efficiency with the KFM 107 engine, a two-cycle design of one of the world's premier go-cart engine design and manufacturing companies, IAME of northern Italy.

Testing—and Monnett's confidence in the airplane—had progressed to the point that he was willing to let me fly the prototype before the first builder's seminar. Weather interfered with that plan and with a few other aborted attempts; but when I finally

made my first, brief flight in the Moni, the conditions were still far less than ideal (and I would not have let anyone fly *my* one-and-only in such conditions).

The Moni offers pilots who like hangar flying infinite possibilities for "there I was flat on my back at X-thousand feet" stories, because you are reclining so far back that for the average lightplane pilot, you are always flat on your back. The picture the pilot has from the cockpit is fairly standard for people with time in high-performance sailplanes or modern fighters, but it is very unusual for the average pilot. Add to this the scant inches your fanny is above the ground, the unusual taxi attitude with one wing down, the stick mounted on the right side of the cockpit and the unusual control arrangement, and you have an aircraft that only a Bob Hoover should expect to fly with any grace and comfort without preparation.

For instance, the day I flew the Moni, after weeks and weeks of cancellations because of abominable

weather, I had flown four unresponsive airplanes, including the trucky, radar-equipped twin I had decided to fly to Oshkosh because of the cell-laden front I had to penetrate to reach the high-pressure system that finally had reached Wisconsin.

"Remember, the controls are very light and responsive," Monnett said. "Pitch control should be light."

Well, heck. I can figure that out. What does he think I am, a Mack-truck or DC-6 driver?

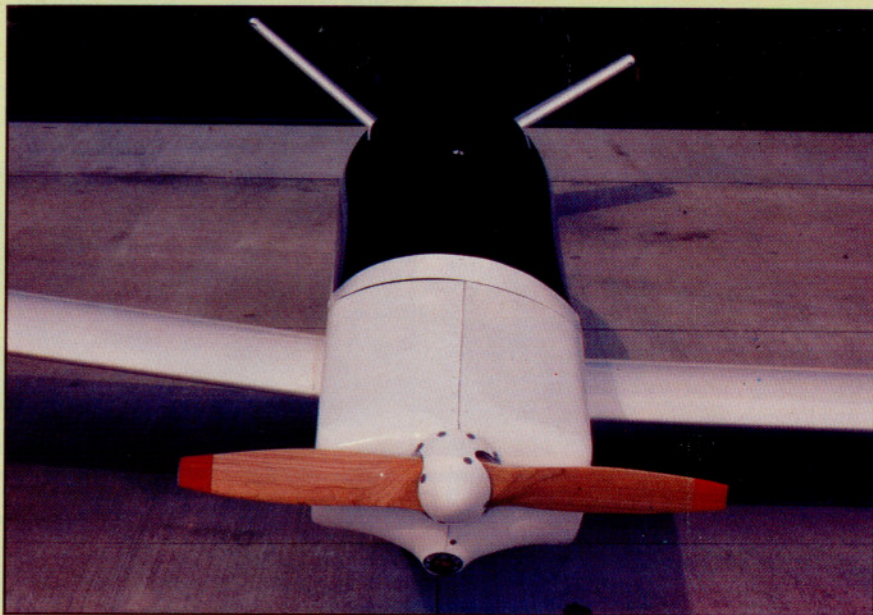
Taxiing, despite the unusual attitude, was easy. The tailwheel steering is direct and effective. The takeoff run is short, and the Moni gets up on the single main gear quickly.

I had a little trouble sorting out the throttle control from the other levers in the quadrant, and by the time I verified that my left hand was where it should be, the Moni was flying. About 15 feet in the air, however, we entered a cross between a curtsy and a dipsy-doo that filled the canopy with runway instead of sky and my mouth with heart instead of air. I thought I was going to stuff the Moni, the *only* Moni, into the concrete. The airplane and I resumed our climb as I rechecked that only my fingertips were on the stick (pilot induced oscillation, my test-pilot brain-side declared) as we hit another gust, and the aircraft entered another pitch excursion.

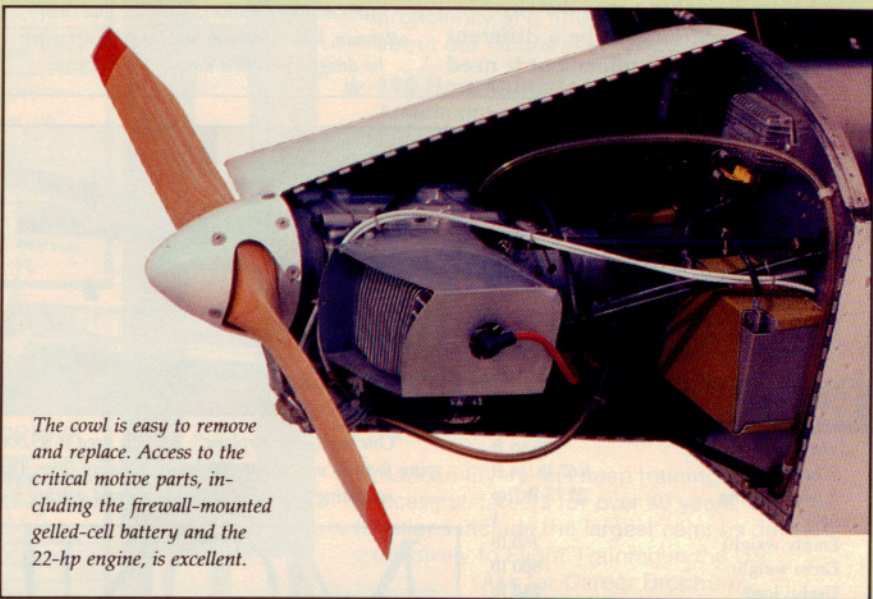
Honest, sir, I said to myself, I did *not* move the stick. We hit another gust, pitched again, and I decided to stay in the pattern, fly circuits until I was confident that I was not overcontrolling and that the airplane was under control. After all, there was plenty of fuel, and I could fly for at least two hours worth of circuits before reaching the reserves.

I fiddled with the controls more and more ("You don't really need the rudders," Monnett had said). The Moni, despite all the wingspan and area, is very responsive. I tried deploying the speed brake at different settings and power variations. It is a very effective descent-control device that made Monnett do away with the flap system he originally had built into the full-span ailerons.

All the while, I was looking at the world out the canopy. It looked good, and the Moni felt good. Except for those gusts. The sun was getting low, but the winds were not diminishing. I set up an approach and flew the Moni

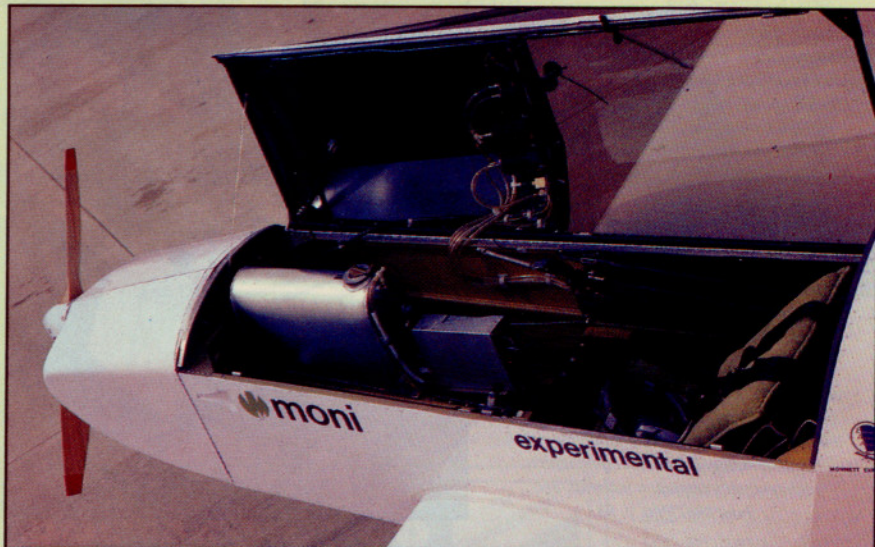


*The prop can be positioned horizontally to block the inlets, avoiding in-flight cooling shock.*



*The cowl is easy to remove and replace. Access to the critical motive parts, including the firewall-mounted gelled-cell battery and the 22-hp engine, is excellent.*

*The Moni cockpit is tiny, but even over-six-footers can straddle the fuel tank in comfort.*



on to the runway. The single-wheel friction brake is coupled to the speed brake, and it made the rollout quite short. As the left wing settled to the runway, I looked to the right for the taxiway and noticed a small group of people leaving the flight line to walk back to the Monnett hangar. "Maybe they were worried," I thought. After all, it was the *only* Moni.

There was a great deal of pressure on all of us that day. A combination of things and events—including deadlines—put the Moni to the test. The only reservation I have about the airplane is the same caveat about which designer Monnett is very forthright. Anyone who plans to fly it should at least go through a sailplane transition course and should follow the recommended series of taxi and ground-effect flights to feel things out before launching into the sky.

Flying the Moni will be a different experience for most pilots, but it need



*Moni designer, builder, test pilot and chief salesman, John Monnett, was teaching art when he designed his first aircraft, the Sonerai.*

not be challenging. Except for that differentness, the Moni meets the criterion of simple to fly.

The very complete kit fits the condition that it be easy to build. It is portable. The wing panels are light and the rigging procedure is straightforward. An inexpensive trailer can be built to carry it from the garage to the operating site (the Moni can be operated from grass strips). On the way to and from, the pilot can stop at the local gas station to refuel.

I have not yet tried soaring in the Moni, and I have yet to try a basic aerobatic sequence. That will be done before the summer is out.

So far, the Moni more than fills both Monnett's and the ARV competition criteria for what a fun airplane should do.

While the lights may be temporarily out in Wichita, the options for those many people who want to fly for fun are continuing to expand. □

**MONNETT MONI**

Kit price \$5,500

AOPA Pilot Operations/Equipment

Category\*: Sport/Special-purpose

**Specifications**

Powerplant	KFM 107, 2 cyl opposed, 2 cycle, 22 hp
Recommended TBO	1,000 hr
Propeller	Woods, 2 wooden blades, fixed pitch, 33 in dia
Length	14 ft 7.5 in
Height	4 ft 4 in
Wingspan	27 ft 6 in
Wing area	75 sq ft
Wing loading	6.67 lb/sq ft
Power loading	22.73 lb/hp
Seats	1
Empty weight	260 lb
Gross weight	500 lb
Useful load	240 lb
Payload w/full fuel	216 lb
Fuel capacity	24 lb (4 gal)

**Performance**

Takeoff distance, ground roll	400 ft
Rate of climb, sea level	500 fpm
Max level speed, sea level	108 kt
Cruise speed/Range w/45-min rsv	
@75% power, sea level	95 kt/200 nm
@55% power, sea level	69 kt/277 nm
Service ceiling	13,000 ft
Absolute ceiling (est)	15,000 ft
Landing distance, ground roll	500 ft

**Limiting and Recommended Airspeeds**

Vy (Best rate of climb)	56 KIAS
Vne (Never exceed)	131 KIAS
Vso (Stall in landing configuration)	33 KIAS

*All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, at sea level and gross weight, unless otherwise noted.*

*\*Operations/Equipment Category reflects this aircraft's maximum potential. See*

*June 1982 Pilot p. 93.*



*"One man, one airplane": All you need is \$5,500 for the kit, sandpaper, paint, wood for the wing fixtures and about 400 hours building time. The Moni that results can be ground-handled solo, including assembly, disassembly and getting it on and off the circa-\$400 Monnett trailer.*

