



FROM  
ITALY WITH  
FUN

*Affordable sportplanes—the Italian way*

BY PETER A. BEDELL

When most of us hear the type designation “F22,” we think of the Air Force’s proposed stealth fighter jet intended to keep the United States at the forefront of air superiority. F22, however, also happens to

PHOTOGRAPHY BY WINSTON LUZIER

be the name of a new general aviation airplane to be produced in the United States by a family-run shop located in Vero Beach, Florida.

Like the missile-toting fighter, the General Avia

F22 is a sleek, nimble aircraft designed to outmaneuver the competition—but the similarities end there. An F22B can be had for as little as \$129,000, whereas the Lockheed-Boeing F22 is expected to cost the government more than \$90 million a copy if it enters production.

Earlier this year, LeRoy LoPresti of LoPresti Speed Merchants and Stelio Frati of General Avia in Italy shook hands on a deal to give LoPresti the sole distribution rights for General Avia's F22s in the United States, Canada, and Mexico. LoPresti expects to receive the manufacturing rights within a year. At that time the pact will establish the LoPresti Aircraft Company.

In a swift and wise move, LoPresti and crew quickly readied two examples to be shown at the EAA International Fly-in and Convention in Oshkosh, Wisconsin. "The airplanes went from box to Oshkosh in 10 days," said LoPresti at a press conference at the July convention. F22 designer Frati was on hand at Oshkosh for the airplane's American launch.

Most people who stopped by the LoPresti tent remarked that the airplanes looked like the SIAI Marchetti SF.260 without tip tanks. Others believed they resembled the kitbuilt Falco. The Marchetti and Falco are known for their sexy Italian lines and, not surprisingly, they too are Frati designs. During his second appearance ever at Oshkosh, Frati was sharing his time with the loyal following he has established among the Falco owners who were celebrating that airplane's fortieth anniversary. The Falco hardly looks its age.

Frati's all-new and all-metal F22 was certified in Italy last year and is being used by flying clubs there. For now, General Avia builds and certifies the aircraft that are destined for North America. The airplanes are then disassembled, crated, and shipped to LoPresti for reassembly. Until LoPresti chooses a location for manufacturing the F22, the airplanes will arrive at

**The stout airframe utilizes a one-piece wing design and is certified in the Aerobatic category to +6 and -3 Gs.**

Both aircraft evoke a military character, from the canopied fuselage to the no-nonsense, flat-gray instrument panel. Most aircraft mechanics will find the F22s easy to work on. The B model has a 160-horsepower Lycoming O-320—as plain and simple as it gets. The C uses an O-360 of 180 hp with a Hartzell constant-speed propeller. Airframe construction is plain aluminum—there is no extensive use of fancy composites that require special knowledge to repair. The wing spar is a one-piece design utilizing six wing bolts for its attachment. The airplanes are certified in the Aerobatic category, with load limits of +6 and -3 Gs.

No fuel is stored in the F22's wings. The fuselage-mounted tank is claimed to enhance safety in the event of a crash because it is suspended from the top of the fuselage, leaving a large space between it and the airplane's belly. However, one could ponder the effects in a crash of 25 forward Gs upon 40 gallons of fuel stored behind the occupants. The tank location keeps the fuel weight near the center of gravity, further enhancing the F22's roll performance.

Clever engineering is found in a number of areas in the F22. For instance, the battery is located behind a door in the right side of the fuselage near the registration number which allows for easy inspection and removal of the battery. Incorporated into the door are small air scoops for venting the box. Adjacent to the door is an auxiliary-power port—far away from the propeller.

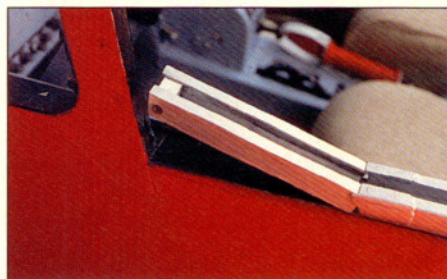
Both airplanes are equipped with jettisonable canopies that utilize another simple, yet efficient design. Two six-inch portions of the canopy rails are held in place by pins at the front. Pulling a large red handle at the top of the instrument panel retracts the pins, allowing the rails and canopy to rise far enough for the oncoming air to blow the canopy the rest of the way off.

As with any new airplane, however, there are some aspects of the F22

Speed Merchants' Vero Beach site at the rate of about two per month. During our August visit, LoPresti had both the fixed-gear F22B and the retractable-gear F22C available for testing.

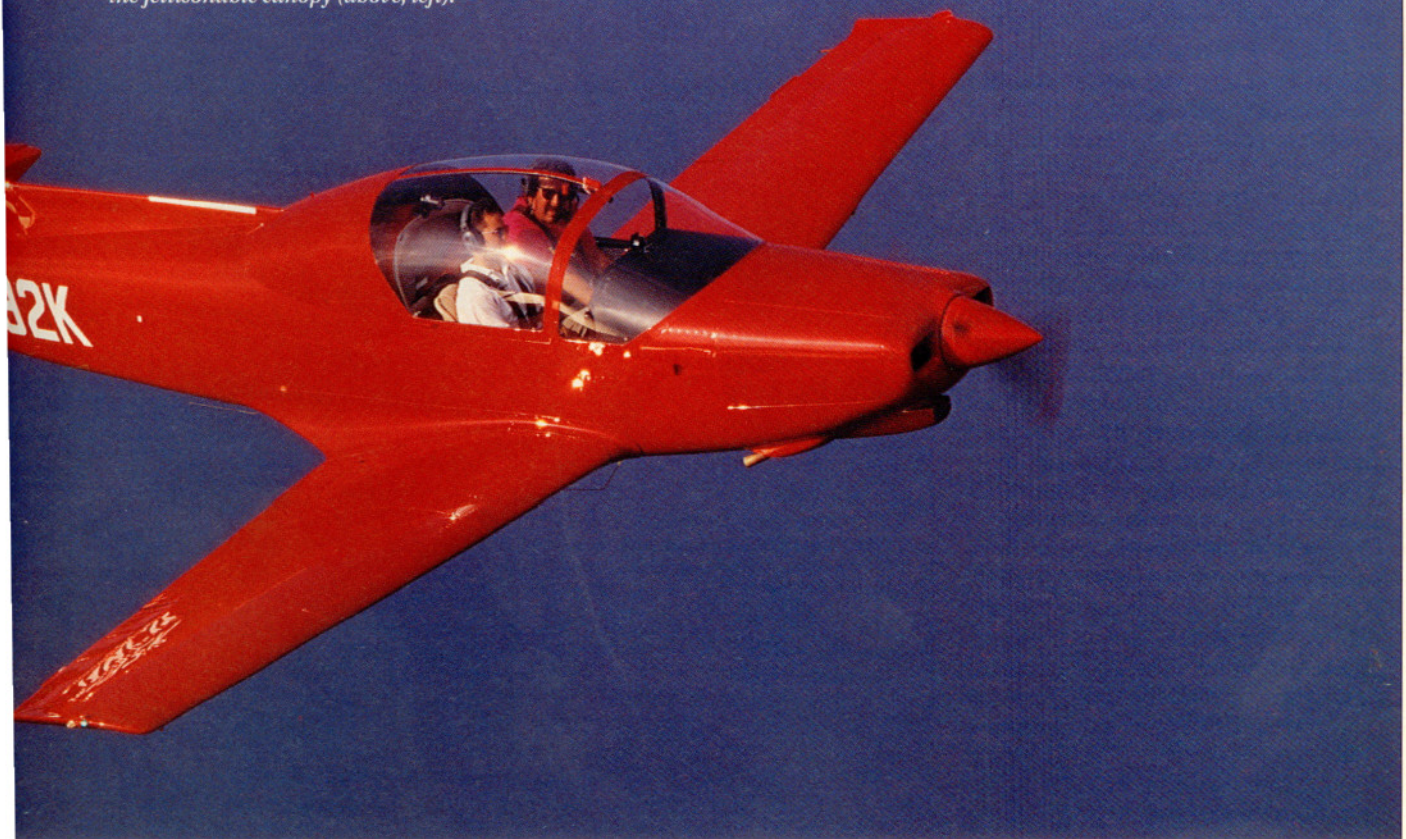


*The trailing-link gear smooths ground handling and all but the worst landings.*





*Pulling the large red handle atop the instrument panel (top) raises the rails of the jettisonable canopy (above, left).*



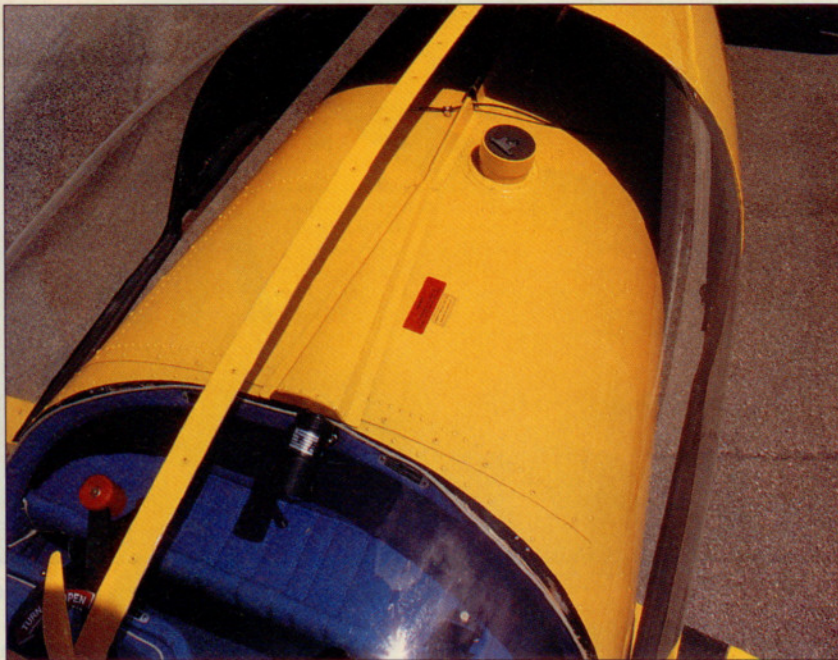
design that need to be addressed. The fixed-gear F22B's castoring nosewheel makes ground handling an awkward, throttle-jockeying brakedance (pun intended). During taxi, this particular airplane always wanted to turn left, requiring the pilot to ride the right brake. Tight turns required an abundance of power and careful conservation of taxi speed. During our visit, one of the brakes blew a seal and the airplane had to be tugged back to the hangar—another disadvantage of the castoring nosewheel. General Avia has since taken care of this problem and has informed LoPresti that all B models will now come with the precise steering linkage of the F22C.

Improvements to the F22C that would be welcome include higher landing gear operating and extended speeds, which are currently 90 and 100 knots respectively. It's a slippery airplane, and entering the pattern at the bottom of a descent requires a long wait before reaching 90 knots. In addition, the need for a better uplocking system for the electric gear became apparent when the gear warning light in the test airplane came on during two loops that topped out at around 4 Gs. LoPresti says that a new gear motor destined for the C will likely raise the  $V_{LO}$  and  $V_{LE}$  speeds and solve the uplock problem.

LoPresti's first efforts at bringing this airplane to the United States are admirable. There were only four weeks (two of which were spent on display at a major airshow) from crate to editor's hands, but the F22s had mostly minor bugs—bugs that LoPresti intends to or has already fixed. Both airplanes are a delight to fly. Control forces are light and precise and invite the pilot to play. The C model's rigging was a little out of whack and required slight right rudder and left aileron pressure—there's no trim for aileron or rudder in either airplane. The B model's rigging felt perfect, and the control surfaces showed no deflection in straight-and-level flight.

Aerobic competitor and instructor Nancy Lynn also flew the F22C during the visit and commented that the F22C would be a "very acceptable" trainer up to the Sportsman level of aerobatics. She felt the roll rate of the F22C was a little faster than that of a Bellanca Decathlon. The F22C did seem to roll slightly faster but required more forward stick while rolling





The F22B's tank contains 36 gallons of fuel behind the occupants' heads (above), which may cause a bit of concern in a crash. Dual throttles in both airplanes allow for left- or right-hand power management (below). A small baggage area resides behind the seats.



through the inverted segment than a Decathlon. Since F22s have no inverted fuel or oil systems, the airplanes are currently limited to positive-G maneuvers, but LoPresti intends to fix that.

Spin recovery seems to come naturally to the F22C. Upon our entering the first half of what was hoped to be a one-turn spin, recovery inputs were made. The F22C immediately stopped, and a recovery was made on a reciprocal heading from the entry. On the second spin attempt, after at least two turns, the F22 recovered within a quarter turn of applying recovery inputs. Lynn commented that she thought the F22C recovered better than her Pitts S-2B. Indeed, knowing that the airplane will respond quickly to your inputs boosts confidence in the design.

Looping the F22C requires about a 4-G entry tug and a constant pull on the stick all the way through. This made the loop somewhat elliptical;

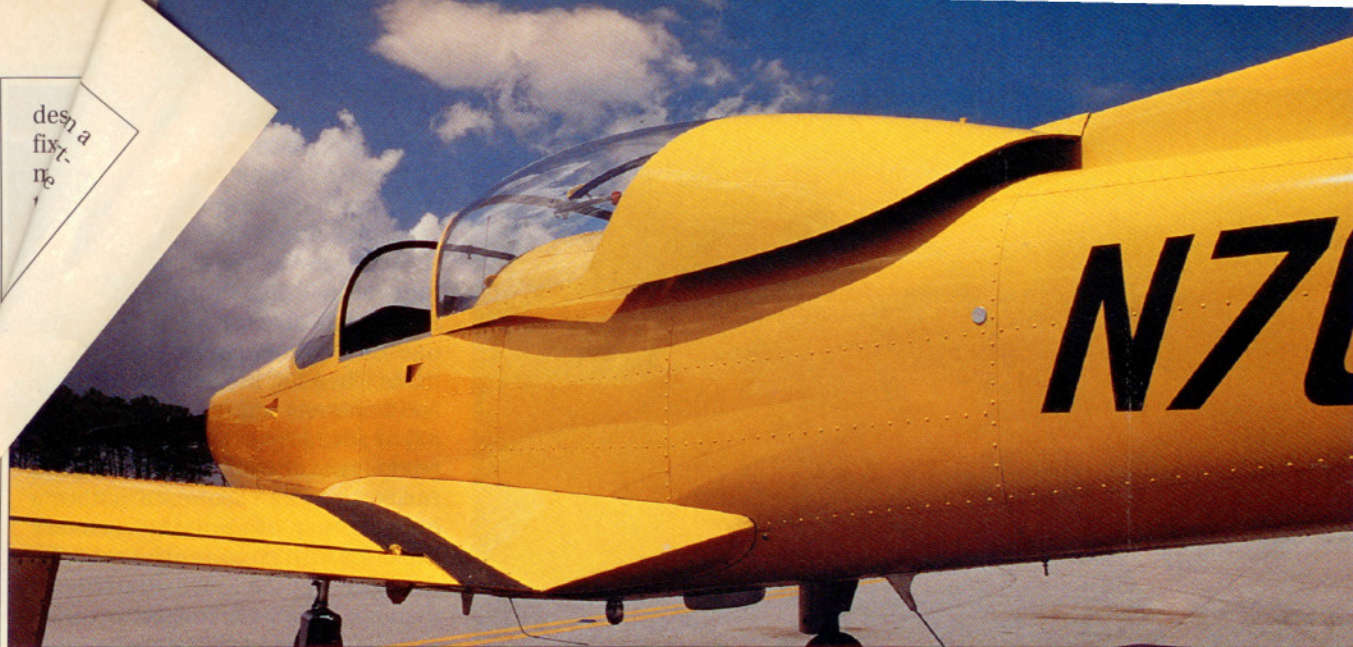
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*For those more interested in getting from point A to B, the F22C will provide a stylish and swift ride.*

but with more practice and better knowledge of the airplane, it could surely be prettier, especially at lighter weights (we were just under the airplane's max aerobatic weight of 1,885 pounds) and temperatures less than 90 degrees Fahrenheit. Although aerobatics were not performed in the F22B, it would be safe to assume that the maneuvers would best be done with only one person aboard and partial fuel.

For those more interested in getting from point A to B, the F22C will provide a stylish and swift ride. The B model will cruise as fast as your average Piper Cherokee or Cessna 172, allowing you to enjoy a simple fixed-gear, fixed-prop single while learning aerobatics. At 3,500 feet on a hot day, we managed 115 knots TAS at 2,500 rpm. With its flush riveting and retractable gear, the C model will outrun the 200-hp Piper Arrow and burn fewer than 10 gallons per hour. At 4,500 feet, we managed 158 knots true,

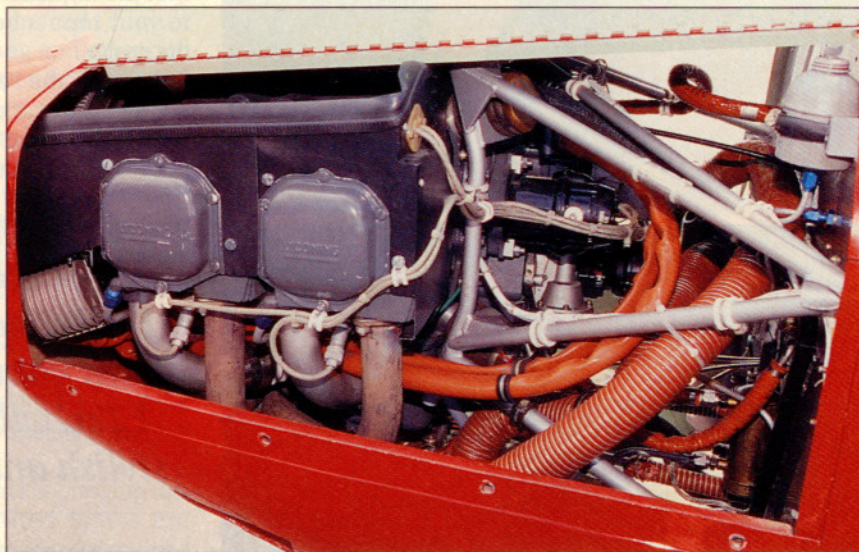
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with the throttle and propeller fire-walled (24 inches, 2,700 rpm). Claimed top true air speed is 165 knots, and book figures promise 160 knots at 7,000 feet at 75 percent power.

Fuel capacity is 42.3 gallons in the C and 35.7 gallons in the B, allowing each to stay aloft for 3.7 hours and land with 45 minutes of fuel. Be

sure to bring your headset, though; like many canopied airplanes, the F22s—especially the C model—are plenty noisy inside. Headroom for taller riders may be limited, especially if they are wearing a parachute and a headset, but LoPresti is working on



*A familiar Lycoming O-360 is mounted to the firewall. LoPresti is already hinting at an aerodynamic cleanup, starting with the cowl.*

new seats and a new canopy to accommodate larger pilots. Baggage space is also limited to only a few soft

pieces of luggage. Long trips with lots of bags may not be possible; but remember, this is mostly a for-fun airplane.

So what sort of person will buy an F22? According to LoPresti, Civil Aviation Academy Inc. of Fort Pierce, Florida, is considering purchase of 22 F22s over a year for its airline pilot training program.

"I think we'll take some of the kit-built customers, too," said Curt LoPresti, Roy's son and vice president of LoPresti Aircraft. Curt was quick to point out that this is an airplane someone can have now, not five or 10 years later when a homebuilt project has

General Avia F22C		Payload w/full fuel		Limiting and Recommended Airspeeds	
Base price: \$169,900		446 lb		$V_X$ (best angle of climb)	75 KIAS
<b>Specifications</b>		Max takeoff weight	1,985 lb	$V_Y$ (best rate of climb)	85 KIAS
Powerplant	Lycoming O-360-A1A; 180 hp at 2,700 rpm	Max landing weight	1,985 lb	$V_A$ (design maneuvering)	147 KIAS
Recommended TBO	2,000 hr	Fuel capacity, std	42.3 gal (41.9 gal usable)	$V_{FE}$ (max flap extended) (20 degrees)	110 KIAS
Propeller	Hartzell, two blade, constant speed, 72-in diameter	Baggage capacity	66 lb, 7 cu ft	$V_{LE}$ (max gear extended)	100 KIAS
Length	24 ft 5 in	<b>Performance</b>		$V_{LO}$ (max gear operating)	90 KIAS
Height	9 ft 4 in	Takeoff distance, ground roll	720 ft	$V_{NO}$ (max structural cruising)	167 KIAS
Wingspan	28 ft	Takeoff distance over 50-ft obstacle	1,150 ft	$V_{NE}$ (never exceed)	212 KIAS
Power loading	11 lb/hp	Max demonstrated crosswind component	15 kt	$V_R$ (rotation)	50-55 KIAS
Seats	2	Rate of climb, sea level	1,500 fpm	$V_{SI}$ (stall, clean)	62 KIAS
Cabin width	3 ft 6 in	Max level speed, 8,000 ft	165 kt	$V_{SO}$ (stall, in landing configuration)	56 KIAS
Empty weight	1,290 lb	Cruise speed/endurance w/45-min rsv, std fuel (fuel consumption)		<i>For more information, contact LoPresti Aircraft, 2550 Airport North Drive, Vero Beach, Florida 32960; telephone 407/562-4757.</i>	
Max ramp weight	1,990 lb	@ 75% power, 7,000 ft, best economy	160 kt/4.4 hr (9.5 gph)	<i>All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted.</i>	
Gross weight	1,985 lb	Service ceiling	20,000 ft		
Useful load	695 lb	Landing distance over 50-ft obstacle	1,285 ft		
		Landing distance, ground roll	645 ft		

been completed. His philosophy may be right—the first F22C was sold to Jim Kennedy, who has been working on his Falco for 18 years. True, with its wood construction, the Falco is a time-consuming kit. However, even with the F22 in hand, Kennedy doesn't plan to give up on his Falco—he just wants something to fly in the meantime.

Kennedy's observations of the F22C are in line with ours—the airplane has some bugs (control and landing-gear rigging) that need to be worked out. He also is concerned about the airplane's achieving a solid 160-knot cruise at a realistic power setting. But at the same time he is confident that LoPresti and General Avia will make good on that



*Unmistakably a Stelio Frati design, the F22 carries the looks of the Falco and the Marchetti over to a budget-minded pilot.*

promise. After all, the folks at LoPresti are the ones to talk to if you want your airplane to go fast; in fact, there is already an agreement between LoPresti and General Avia about cleaning up the cowl, among other things.

Roy LoPresti seems to think that the F22s will appeal to the same people who once put down deposits for the Piper/LoPresti SwiftFury project in the late 1980s. LoPresti claims that he had 569 orders (of which Kennedy's was one) for the modified Swifts when the program was killed because of funding problems and the Piper bankruptcy.

"Now these same people are looking at the F22," said LoPresti. "These are retired or active airline and military pilots and empty-nesters," he said. Although not everyone interested in the F22 meets those criteria, the airplane will surely win the hearts of those who want an aerial sports car that can get them from point A to B while exploring a little of the X, Y, and Z axes on the way. □