Ultralight Aircraft of the U.S.A.
A presentation of Virtualultralightmuseum.com

Jerry M. Goffman, Curator
These unique aircraft can be flown with no pilot's license, no insurance and no Medical Certificate.
Building these aircraft takes a minimum amount of time and few tools. Average building time can be less than 200 hours.
There are limitations where these aircraft can be flown, but you can soar like an eagle for an hour's time and Realize an American Dream.
A-10

Designed by Don Mitchell. Powered glider from late 70's. Aluminum wing covering. Empty weight 280 lbs. Structural limits +4 Gs and -2.3 Gs.
Aerolite 103

Assembled and ready to fly. Empty weight 250 lbs. Useful load 270 lbs. Cruise speed 55 mph and stall speed 28 mph. Structural limits are +4 Gs and -2.8 Gs.
Aeroplane XP

Aerosport Raile MkII (1970)

H.L. Wood is the designer. Easy build low wing monoplane. Rockwell JLO LB-600 snow mobile power plants weighing about 56 lbs and developing 33 hp.
Aerotique Parasol

Airbike (1994)

A conventional hi-wing monoplane and the pilot rides it like a bicycle. This is a 3-Axis aircraft with removable wings. Structural limits +4 Gs and -2 Gs.
Airey-Plane

Wilbur Staib built this small airplane in limited hangar space. Two 10 hp West Bend 820 chain-saw engines. Net weight 175 lbs.
Ascender III B (1975)

Astra (1983)

Avenger

High-wing, 3-axis monoplane with cable braced wing. 30 hp Kawasaki 440 engine. Empty weight 252 lbs.
Avion (1982)

B1RD

First major aircraft company to manufacture an ultralight airplane. Empty weight 220 lbs. Load factors +3 Gs and -2 Gs.
Backyard Flyer

All welded aluminum construction. Wing swings parallel to fuselage for easy transport. Empty weight 254 lbs. Rate of climb 800 fpm.
Banchee (1982)

Banty (1985)

Beachy Breezer (1984)

Beaujon Mach .07

Birdman TL-1B (1975)

Designed by Emmett M. Talley. Aluminum and wood with 2-Axis controls. Empty weight 130 lbs. Glide ratio 15:1
Babybird DS-1 (1984)

Designed by Donald Stits as World's Smallest Plane. Empty weight 250 lbs. Payload 188 lbs. Cruise speed 88 mph and climb rate of 925 fpm.
Boxmouth (1975)

Easy to build requiring local supplies from hardware and farming equipment supply stores. Wings at front and rear.
Buzzard MG-1

Cadet

Calypso (1984)

Challenger I

Factory built airframe and wings. Estimated 100 hours assembly time. Empty weight 235 lbs. Payload 258 lbs. Load factors +4 Gs and -3 Gs.
Chandelle Mk IV

Citizen Fly

Composite materials.
Clipper (1984)

Cloudbuster (1981)

Cloud Dancer (1983)

V-tail powered glider designed by Erwin Rodger and Delura Roger. Aluminum tube, and dacron sail cloth. Empty weight 252 lbs. Payload 252 lbs. Structural limits +4.2 Gs and -2 Gs.
Cloud Rider

Low front mounted engine with tricycle landing gear and strut braced double surface wing. 3-axis control.
Cloudster (1999)

Wood with metal struts. Pilots legs extended outside the fuselage to the rudder pedals. Empty weight 250 lbs. Cruise 50 mph, stall 22 mph, and climb rate 700 fpm.
Cobra (1982)

Designed by Wayne and Kerry Richter. Cruise speed 50 mph, stall speed 24 mph, and climb rate at 1000 fpm. Empty weight 235 lbs. Payload 280 lbs. Load factors +5 Gs and -3 Gs.
Condor

Designed by Buddy Head, Bob Carswell and Dave French. Climb rate 775 fpm Empty weight 245 lbs. Structural limits: +5 Gs and -3 Gs. Build time 75 hrs.
Cumulus (1996)

Useful load 280 lbs. Cruise speed 60 mph and stall speed 32 mph. Load factors $+4 \text{ Gs}$ and $-2 \text{ Gs}$. Glide ratio 20:1. Approximate build time is 150 hrs.
Diehl XTC (1982)

Dream Classic

Akin to the 1907 Demoiselle. Estimated construction kit build time 100-200 hrs. Empty weight 241 lbs. Cruises at 57 mph, stalls at 26 mph and climbs at 850 fpm.
Eagle (1975)

Designed by Larry Hair. Single-seat, high-wing, monoplane with canard wing. Build time is 75 hrs. Empty weight 170 lbs. Structural limits +8 Gs and -2.5 Gs.
Easy Riser (1975)

Eclipse (1983)

EZ-1 (1983)

Designed by Richard Jiminez. Empty weight 234 lbs. Payload 271 lbs. Load factors +9 Gs and -4.5 Gs. Glide ratio 8:1
Falcon (1982)

Designed by Romuald Drlik as a flying wing with canard. Empty weight 250 lbs. Payload 255 lbs. Load factors +5.8 Gs and -2.9 Gs.
Firebird Flyer (1983)

Designed by Robert J. Davis and John T. Venaleck. 3-Axis single-seat, high-wing monoplane with inverted V-tail and pusher engine.
Firestar I

Designed by Homer Kolb.
Empty weight 250 lbs.
Payload 295 lbs.
Structural limits +4 Gs and -2 Gs. Cruise speed 53 mph and climb rate 650 fpm.
Flyer

Homer Kolb designer.
Single seat, twin tractor engines. Empty weight 185 lbs. Structural limits +4Gs and -2.5 Gs.
FP-303 (1984)

Goldwing (1979)

Gypsy (1980)

Designed by John Chotia. Airframe of aluminum tubes bolted together. 3-Axis control. Empty weight 165 lbs.
Home Depot

Designed by Jack Harper from materials purchased from the Home Depot. The plane utilizes all wood construction. Uses two 10 HP Tecumseh motors.
Huber Aero 101-1 (1983)

Hummel CA-2

All aluminum aircraft that requires 600 hrs. build time. Structural loads are +4.4 Gs and -2.2 Gs. Empty weight 250 lbs.
Hummer (1977)

Klaus Hill designed monoplane with pusher engine and V-tail. 2-Axis control. Empty weight 185 lbs. Payload 255 lbs. Structural limits +4 Gs and -3 Gs.
Hummingbird Sport

Designed by Ed Sweeney. Engines were Partner 8hp chain saws. Takeoff and landing speed was 15 mph and top speed was 55 mph. Empty weight 150 lbs.
Hurricane 103 (1991)

Huski/Coyote (1978)

Aluminum tubing and sailcloth. Hybrid control system. Cruise speed 43 mph and stalls at 22 mph. Climb rate 800 ft/min. Empty weight 198 lbs.
Invader MkIII (1982)

Javelin I (1996)

Kasperwing I-80 (1976)

Designed by W. Kasper in collaboration with Steve Grossruck. Single-surface high-wing pusher engine monoplane with hybrid control. Empty weight 160 lbs. Structural strength +7 Gs and -4 Gs.
Lazair IV (1978)

Lucky Stars II (2009)

A Mark Stull design.
Empty weight 245 lbs.
Payload 255 lbs. 60 mph cruise with a stall speed of 28 mph and rate of climb 600 fpm.
Meadowlark (1984)

Designed by Jim Higgs. Empty weight 251 lbs. Structural limits +3.8 Gs and -1.5 Gs. Glide ratio 8:1.
Mirage

Designed by Frank Riley. Aluminum tube and sailcloth with tractor engine. Empty weight 246 lbs. Payload 254 lbs. Structural limits +5.6 Gs and -2.8 Gs.
Nomad/Honcho

Bob Teman's design known for its toughness. Aluminum, steel and composite construction. Structural limits +10 Gs and -10 Gs. Empty weight 250 lbs. Payload 300 lbs.
Motor Bipe

Empty weight 225 lbs. Cruise speed 60 mph and stalls at 26 mph. Climb rate 750 fpm. Estimated build time of 175 hrs.
Nova-1 (2007)

P-38 Lightning

Papillon

Designed by D. Paup. 22 hp Polaris snowmobile engine. Empty weight 189 lbs. Cruise speed 30 mph and stalls at approx. 24 mph.
P-Craft

The PDQ-2 was designed by Wayne Ison. Empty weight 218 lbs. Cruise speed 70 mph and stall speed 46 mph. Rate of Climb 400 fpm. Rockwell JLO engine.
Penetrater (1985)

Pilot flies prone. Empty weight 175 lbs. Cruise speed 60 mph and stall speed 24 mph. Structural limits +6 Gs and -6 Gs. Glide ratio 14:1. 40 hr build time
Pinocchio

Pioneer FlightStar

Cruise speed approx. 50 mph. Stalls at approx. 25 mph. Structural limits are +6 Gs and -4 Gs. Empty weight 247 lbs. Payload 253 lbs.
Poorboy PB-1

Single-seat, high-wing, monoplane. Empty weight 254 lbs. Build time 450 hrs. Plans only
P.U.P. (1983)

Quicksilver MX Sprint (1981)

Designed by Dave Cronk. Empty weight 250 lbs. Load factors +5 Gs -3 Gs. Cruise speed 46 mph, stall speed 24 mph. Assembly time estimated at 30 to 40 hrs.
Rally Sport

Sandpiper ULS (1983)

The first aircraft Mr. Sadler produced was all metal. Cruise speed 63 mph, stall speed 25 mph. Empty weight 245, payload 250 lbs, Structural limits +6 Gs and – 6 Gs.
Skybaby (1983)

Skycycle (1984)

Snoop I (1981)

Designed by Bob Able.
Stall speed 18 mph.
Empty weight 238 lbs.
Payload 280 lbs.
Structural limits +6 Gs and -4 Gs.
Sparrow (1987)

Stratos (1982)

Sunbird

Stinger S-17

Sunburst

Tristar (1980)

A Dick Turner design. Cruise speed 45 mph, stall speed 21 mph. Climb rate 800 fpm. Empty weight 200 lbs. Structural limits +5.8 Gs and -3 Gs.
Ultrastar

Designed by Homer Kolb. Steel tube and fabric construction. 3-Axis control system. Empty weight 235 lbs.
Vector 600

Designed by Berndt Petterson, Mike McCarron and Paul Yarnell. 22 hp engine. Cruise speed 45 mph with stall at 26 mph. Climb rate 600 fpm. Empty weight 195 lbs. Structural limits +5.7 Gs and -2.8 Gs.
Viking (1983)

Designed by Kevin Bell. 38 hp engine. Cruise speed 45 mph and stall speed 23 mph. Climb rate 800 fpm. Requires 75-100 hrs. for construction. Empty weight 244 lbs. Useful load 225 lbs. Structural limits +5 Gs and -3 Gs.
Viper II

Aluminum tube and Dacron covered wing. Twin tailbooms. Empty weight 150 lbs.
Weedhopper (1977)

Whing Ding II (1971)

Designed by Bob Hovey. Essentially a plywood box filled with urethane foam. 14 hp McCulloch chainsaw engine. Cruise speed 40 mph, stall speed 26 mph, climb 100 fpm. Empty weight 123 lbs. Construction time around 400 hrs.
Witch (1982)

Wizard 1

Woodhopper

Wren (1982)

Zing

More information can be viewed at virtualultralightmuseum.com. Over 300 aircraft, from all over the world, are included with pictures and comprehensive descriptions.

VUM, 03/2011