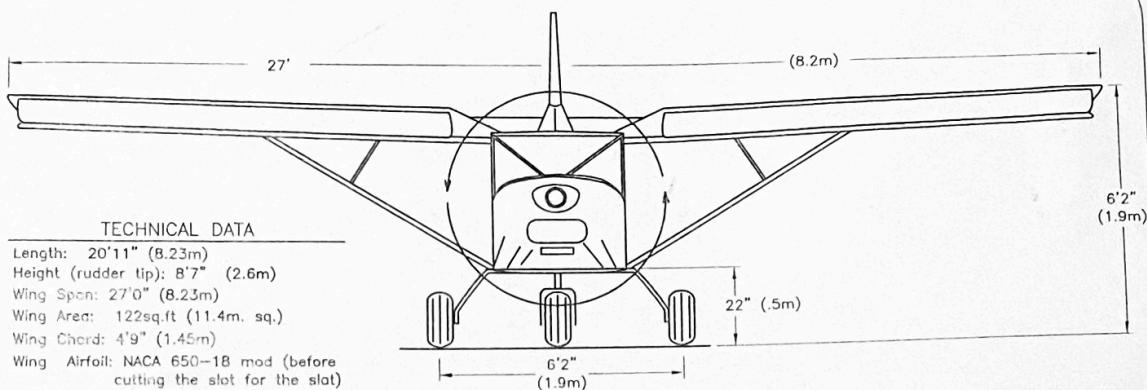


AIRFRAME		
DRAWING	DATE	DESCRIPTION
GENERAL		
7-G-0	01/2008	DRAWING LIST
7-G-1	09/2007	THREE VIEWS
7-G-2	04/2006	GENERAL ARRANGEMENT
7-G-3	04/2003	L ANGLES & Z ANGLES GENERAL SPECIFICATIONS
WINGS		
7-V-0	04/2006	WING: EXPLODED VIEW
7-V-1	04/2006	WING RIBS / PITOT TUBE ASSEMBLY
7-V-2	04/2006	WING SPAR WEB
7-V-3	04/2006	WING SPAR TIP
7-V-4	04/2006	WING ROOT RIBS AND WING PARTS
7-V-5	04/2006	WING DETAILS
7-V-6	04/2006	WING SKELETON AND DETAILS
7-V-7	04/2006	WING SKINS
7-V-8	01/2006	WING RIVETING AND DETAILS
7-V-9	04/2006	WING TIP AND WING ROOT
7-V-10	06/2005	WING STRUTS, JURY STRUTS, AND STRUT INSTALLATION
7-V-11	04/2006	10 GALLON WING TANK
SLATS / FLAPERONS		
7-S-0	06/2005	SLATS: EXPLODED VIEW
7-A-1	01/2004	FLAPERON RIBS, SPAR, HINGE BRACKETS
7-A-2	04/2006	FLAPERONS
7-S-1	04/2006	SLATS RIBS / SKINS
7-S-2	04/2006	SLATS TIPS
ELEVATOR / STABILIZER		
7-H-0	11/2004	HORIZONTAL TAIL: EXPLODED VIEW
7-H-1	04/2006	HORIZONTAL RIBS
7-H-2	04/2006	HORIZONTAL TAIL BENT PARTS
7-H-3	04/2006	HORIZONTAL TAIL HINGES AND ATTACHMENT DETAILS
7-H-4	04/2006	HORIZONTAL TAIL SKELETON, SKINS, AND RIVETING DETAILS
7-H-5	04/2006	ELEVATOR HORNS & STABILIZER CENTER HINGE BRACKET
RUDDER		
7-R-0	06/2005	701 RUDDER ASSEMBLY REF DWGS: 7-R-1, 7-R-2, & 7-R-3
7-R-1	04/2006	VERTICAL RIBS
7-R-2	05/2007	RUDDER PARTS AND SKELETON
7-R-3	06/2006	RUDDER SKIN AND HINGE DETAILS
FUSELAGE		
7-F-00	09/2003	REAR FUSELAGE: EXPLODED VIEW
7-F-0	11/2004	FRONT FUSELAGE: EXPLODED VIEW
7-F-1	04/2006	FUSELAGE FORMERS
7-F-2	09/2003	REAR FUSELAGE SKINS
7-F-3	11/2004	REAR FUSELAGE STIFFENERS, LONGERONS & PARTS
7-F-4	11/2007	REAR FUSELAGE DETAILS
7-F-5	04/2006	REAR FUSELAGE PARTS AND DETAILS
7-F-6	04/2006	REAR FUSELAGE GENERAL AND DETAILS
7-F-7	05/2006	FIREWALL DETAILS
7-F-8	06/2005	NOSE GEAR UPPER BEARING FORWARD FUSELAGE PARTS
7-F-9	08/2005	EXTENDED BAGGAGE COMPARTMENT
7-F-10	04/2006	CABIN SIDES ASSEMBLIES
7-F-11	06/2005	FORWARD FUSELAGE FLOOR
7-F-12	06/2005	SEAT FRONT & TUNNEL DETAIL
7-F-13	1/2008	FUSELAGE DETAILS
7-F-14	03/2004	FUSELAGE DETAILS SLAT PROFILE
7-F-15	04/2006	FRONT SIDES & TOP SKIN ENGINE MOUNT MIDDLE BOLTS DETAIL
7-F-16	04/2006	JOINING THE FUSELAGE SECTIONS PANEL LOCATION / DOOR LATCH
7-F-17	09/2006	SEAT BOTTOM CABIN SIDE DOUBLER STRIP
7-F-18	06/2006	LANDING GEAR / WING STRUT FITTINGS
7-F-19	04/2006	CABIN FRAME
7-F-20	11/2004	FORMED WINDSHIELD HINGED DOOR UP
LANDING GEARS		
7-L-0	10/2008	LANDING GEAR / NOSE GEAR
7-L-1	10/2008	NOSE GEAR ASSEMBLY AND STEERING
7-L-2	10/2008	MAIN GEAR SPRING AND WHEEL FORKS
CONTROLS		
7-C-0	04/2006	CONTROL: ASSEMBLY
7-C-1	04/2006	CONTROL SYSTEM PARTS
7-C-2	11/2004	PITCH AND AILERON CONTROLS
7-C-3	06/2005	FLAPERON CONTROL
7-C-4	02/2005	RUDDER AND TOE BRAKE PEDALS
7-C-5	06/2005	FAIRLEADS & STOPS
7-C-6	06/2002	RUDDER PULLEY FIN & FLAPERON ROD COVER

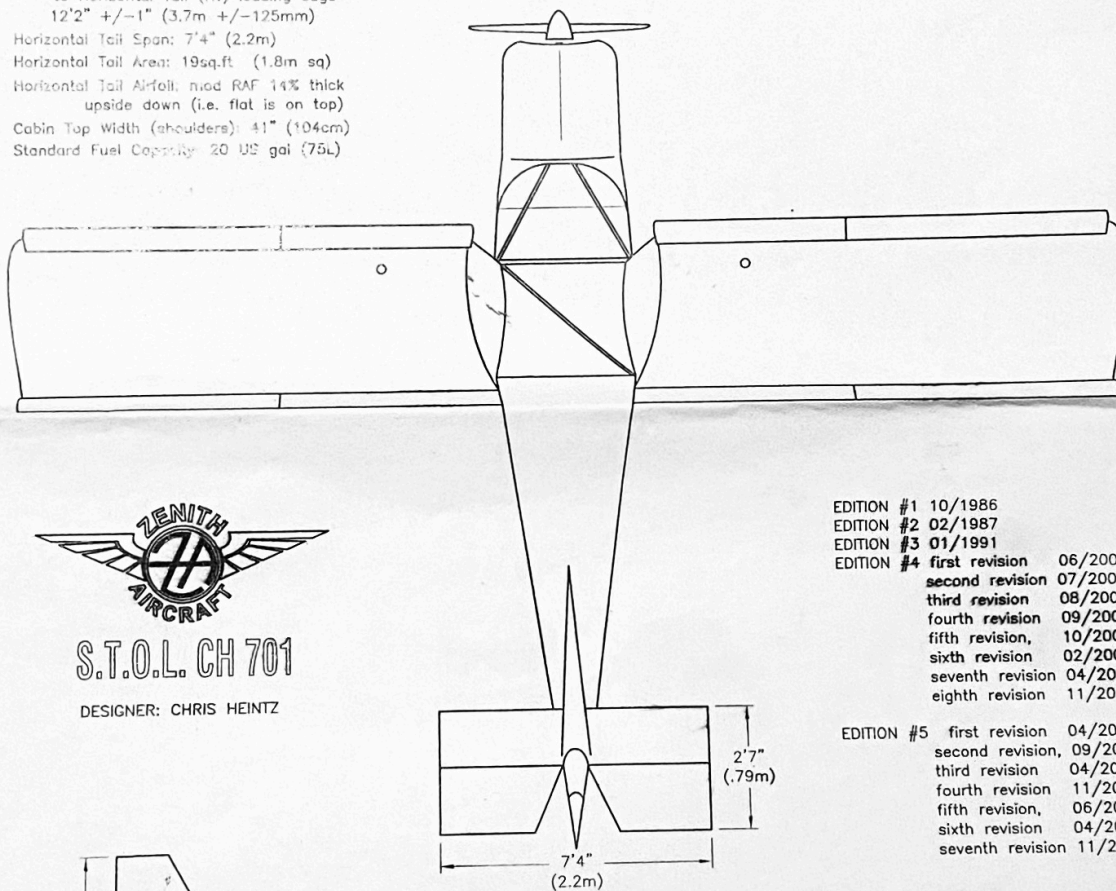
POWERPLANT		
DRAWING	DATE	DESCRIPTION
ROTAX 912 & 912S		
7-E-1	04/2004	ROTAX 912 & 912S ENGINE MOUNT
7-E-2	02/2003	ROTAX 912 & 912S DYNAFOCAL ENGINE MOUNT BRACKETS
7-E-3	04/2006	ROTAX OIL TANK BRACKETS
7-E-4	04/2006	GASCOLATOR / SHUT-OFF VALVE
7-E-5	06/2005	DUAL THROTTLE / CHOKE
OPTIONS		
DRAWING	DATE	DESCRIPTION
7-ETO-1	02/2005	ELECTRIC TRIM TAB OPTION
7-NSO-1	04/2003	NAV / STROBE LIGHTS OPTION
7-WTO-1	04/2006	10 GALLON AUXILIARY WING TANK
7-WTO-2	04/2003	AUXILIARY FUEL SYSTEM GASCOLATOR / FUEL SELECTOR

- 71 pages, original size 11"x17" -



TECHNICAL DATA

Length: 20'11" (8.23m)
 Height (rudder tip): 8'7" (2.6m)
 Wing Span: 27'0" (8.23m)
 Wing Area: 122sq.ft (11.4m. sq.)
 Wing Chord: 4'9" (1.45m)
 Wing Airfoil: NACA 650-18 mod (before cutting the slot for the slot)
 Distance from Leading Edge of Wing to Horizontal Tail (HT) leading edge 12'2" +/-1" (3.7m +/-125mm)
 Horizontal Tail Span: 7'4" (2.2m)
 Horizontal Tail Area: 19sq.ft (1.8m sq)
 Horizontal Tail Airfoil: mod RAF 14% thick upside down (i.e. flat is on top)
 Cabin Top Width (shoulders): 41" (104cm)
 Standard Fuel Capacity: 20 US gal (75L)

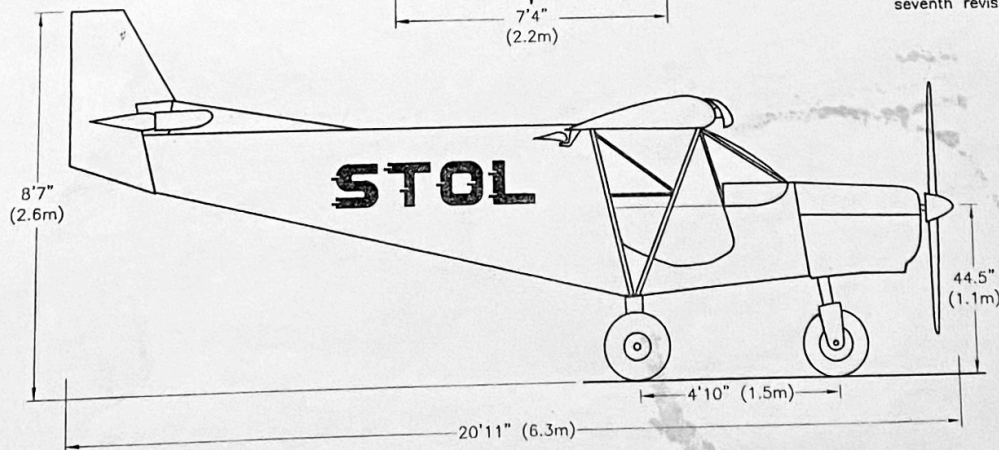


S.T.O.L. CH 701

DESIGNER: CHRIS HEINTZ

EDITION #1 10/1986
 EDITION #2 02/1987
 EDITION #3 01/1991
 EDITION #4 first revision 06/2001
 second revision 07/2001
 third revision 08/2001
 fourth revision 09/2001
 fifth revision, 10/2001
 sixth revision 02/2002
 seventh revision 04/2002
 eighth revision 11/2002

EDITION #5 first revision 04/2003
 second revision, 09/2003
 third revision 04/2004
 fourth revision 11/2004
 fifth revision, 06/2005
 sixth revision 04/2006
 seventh revision 11/2008



8267

STOL
CH 701

THREE VIEWS
GENERAL ARRANGEMENT

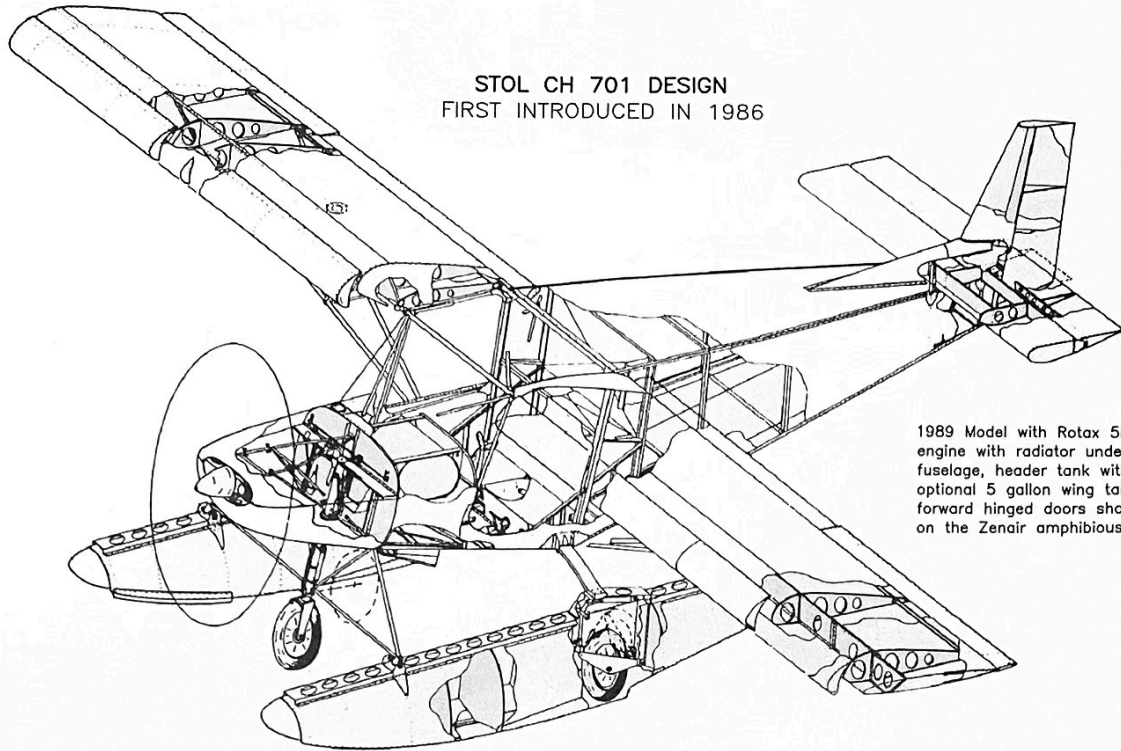
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7-G-1

DATE: 11/2008

STOL CH 701 DESIGN
FIRST INTRODUCED IN 1986



1989 Model with Rotax 582 engine with radiator underneath fuselage, header tank with optional 5 gallon wing tanks, forward hinged doors shown on the Zenair amphibious floats.

PART NUMBERS: EXAMPLE 7F15-10B/0

DRAWING UPDATES
REFER TO CURRENT
DRG LIST 7-G-0

7-F-15
DATE: 06/2002

DRAWING NUMBER

PART REVISION #

10B

ZEE CHANNEL
t=.025" 6061-T6 (1 REQ'D)

PART DESCRIPTION

7 - REFERS TO MODEL: STOL CH 701
(OTHER MODELS: STOL CH 801 & ZODIAC CH 601 XL)
F - FUSELAGE SECTION (SEE DRAWING LIST 7-G-0)
15 - PAGE 15 OF DRAWING SECTION F
10 - PART #10 ON DRWG 7-F-15
B - PART NUMBER SUFFIX
0 - REVISION NUMBER
t - MATERIAL THICKNESS
REQ'D - QUANTITY REQUIRED

PART NUMBER SUFFIX:

- A - Added Part between part numbers: 7V1-3A, 7V9-3A, 7R2-1A, 7F3-2A, 7F11-4A, 7F16-1A, 7F19-1A, 7L2-2A, 7C5-1A.
- C - (Introduced 02/2002) Bungee Chord 1080, upper & lower plastic bearing: 7F7-2C, 7F7-4C, 7F7-6C, 7F7-8C, 7F7-9C.
- B - Extended Baggage Compartment: 7F5-8B, 7F8-9B & 7F8-10B.
- D - Hinged Up Door: 7F15-3D, 7F15-4D, 7F19-7D, 7F19-10D, 7F19-12D to 14D.
- J - Sky Jeep; heavy duty all-terrain tundra gear and wheels: 7C4-1J, 7L1-1J to 5J, 7L2-1J to 7L2-4J
- K - Wing Tanks: 7V1-2K, 7V11-1K to 7V11-4K.
- M - Formed Windshield: 7F19-8M, 7F19-9M, 7F19-11M.
- R - Rotax 912 or 912S engine: 7F14-5R, 7F14-6R, 7E1-1R, 7E3-1R, 7E3-2R.
- SP - Sport Plane Ready (introduced 06/2001). Starting with serial number #7-4512 (and up) designates new parts and/or modification to parts required for 1100 lbs gross weight: 7V2-6SP, 7V3-1SP, 7V3-2SP, 7V6-2SP, 7V8-1SP, 7V8-4SP, 7V10-1SP, 7V10-2SP, 7V10-3SP, 7A1-1SP, 7A-2, 7H3-3SP, 7F3-3SP, 7F5-1SP, 7F5-2SP, 7F5-3SP, 7F7-1SP, 7F7-7SP, 7F9-9SP, 7F17-1SP, 7F18-1SP.

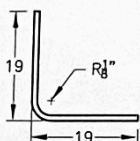
NOTE: PARTS NUMBERS WITH NO SUFFIX INDICATE PARTS FROM THE 3rd EDITION 1/91
REVISION 0 REFERS TO PARTS AS THEY APPEAR IN THE 4th EDITION 7th PRINTING 04/2002

LEGEND

L=LENGTH: MEASURED IN MILLIMETERS (mm).
dl=DEVELOPED LENGTH = WIDTH BEFORE PART IS BENT:
MEASURED IN MILLIMETERS (mm).
R1/8"=BEND RADIUS
19=FLANGE, MEASURED IN MILLIMETERS (mm).
NOTE: UNLESS SPECIFIED, DISTANCE MEASURED IN mm.

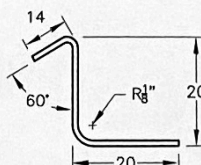
DESIGNATED THROUGHOUT
DRAWINGS AS: (L)

CUT TO LENGTH AS REQUIRED
EXAMPLE: 7-V-5



L=1219 (4 FEET)
dl=36

(L) STANDARD 'L' ANGLE
t=.025" 6061-T6 (38 REQ'D)



L=1219 (4 FEET)
dl=50

(Z) STANDARD 'Z' ANGLE
t=.025" 6061-T6 (6 REQ'D)

DEPICTED ON
DRAWINGS AS (Z)
EXAMPLE: 7-F-6,
7-F-14

8267

STOL
CH 701

PART NUMBER EXAMPLE
(L) ANGLES & (Z) ANGLES

7-G-2

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DATE: 04/2008

The CH 701 built to the present specification and equipped with the ROTAX 912 or 912S powerplant will have an empty weight of 580 to 620lbs (260 to 280kg). The design gross weight being 1100lbs (500kg), the fuel weight of 20 gallons (75L) being 120lbs (55kg), this leaves 360 to 400lbs (165 to 185kg) for the pilot, passenger and baggage.

The airframe is structurally designed to Canadian design standards TP101-41 (as updated 2001), which corresponds to FAR23 or JAA-VLA for light airplanes, with an ultimate load factor of 6 "G" positive and 3 "G" negative at 1100 lbs gross weight with flaps up, and 3 "G" positive, 1 "G" negative with flaps down. (also meets or exceeds NASAD, LAMA, as well as LPAS standards)

The powerplant limitations are: 100 BHP and 200lbs (90kg).

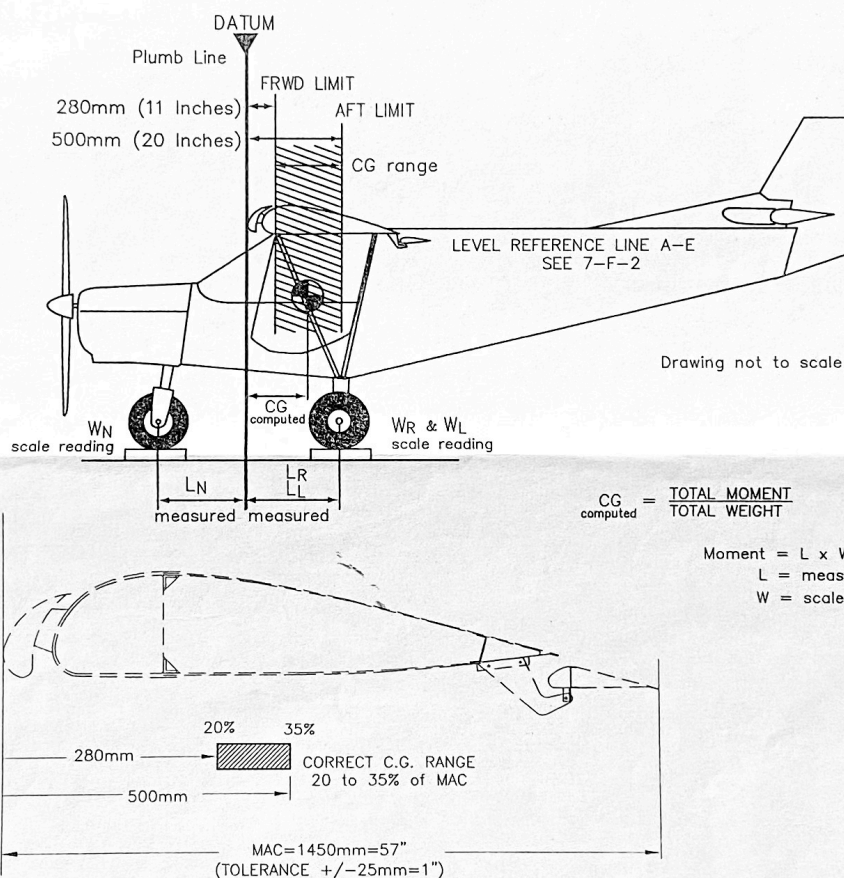
Speed limitations:

Max speed flaps down: $V_f = 60$ mph (95 km/h)

Maneuvering speed: $V_a = 85$ mph (135 km/h)

Never exceed speed: $V_{ne} = 110$ mph (180 km/h)

Center of gravity limitations:



WARNING: If operating the aircraft at a weight over the gross weight:

- 1) The load factor will decrease as follows:

$$\text{"g" overgross} = 6 \times \frac{1100}{\text{Weight in lbs}}$$

(for example at 1150lbs the limit load factor will be 3.8

Ultimate load factor=limit load factor multiplied by the standard aircraft safety factor of 1.5)

- 2) Reduced performance:

- Stall speed will be higher.
- Rate of climb and controllability will deteriorate.

- 3) The center of gravity must always stay within the design limits.

These drawings are to be used together with the Construction Manual. Other specifications such as materials, working tolerances, control surface deflections, etc... are given in the present drawings and manual. Building sequence, follow the step by step photo guide. The Zenair Newsletter provides updates and is the only publication recognized for approved design updates by designer Chris Heintz.