



Craggy Aero Ultimate Le®

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Craggy Aero Ultimate Le® Manual
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1.0 Introduction

The Craggy Aero Ultimate Le is an Embedded Flight Computer running state of the art hardware and software.

It offers:

- Excellent Sunlight readability that sets the standard.
- SeeYou Mobile PNA, StrePla, LK8000. The SeeYou Mobile, StrePla, and Software Manual is a companion manual for this instrument.
- Connection with many existing Hardware Variometers, GPS, and IGC GPS Loggers.
- Easy to use Ray Laser Stick Controller, Laser Controller, Micro Ball Track Mouse Input or Touch Pad, usable with either hand.
- Backlight potentiometer or 10K potentiometer for adjustment of the screen brightness



The Yellow Triangle is shown for part of the manual which should be read very carefully



Note with red triangle describe procedures which are critical and may result in loss of data or any other critical situation

Bulb icon is shown, when useful hint is given for the reader



2.0 Technical Specifications

- High Performance Embedded Technology 806 MHz Processor
- Sunlight readable screen 6.5" Diagonal VGA 640 X 480 resolution, true VGA
- 1400 nits brightness at full backlight adjustable by Potentiometer
- Input Device Ray Laser Stick Controller, Laser Controller, MicroTrack handheld trackball mouse or Touch Pad.

- Power Draw 400mA to 850mA (.4 amp to .85 amp) depending on the backlight setting.
- No exposed wiring board on the back of the instrument. Connectors include DB9 male serial input and power for a Serial GPS or Flight recorder. DB15 male for power and potentiometer. Dual USB A connectors for Input Device and Panel Mount USB extension.
- 3.5 mm speaker socket
- Temperature range -45C to 85C (-49F to 185F)
- Weight 1 lb 10 oz



- 13.8 volts DC Absolute Maximum Voltage This is the maximum voltage that the Backlight inverter will accept. Voltage above this max may limit the life of the inverter.

2.1 Interfaces

- RS232 interface DB9
- DB15 Power & digital Potentiometer
- USB for Input Device
- USB for data transfer using USB memory stick
- Audio Speaker Connector

3.0 Compatible Devices and Software

- CAI 302, LX1600, LX 1606, LXNAV V7 Vario
- IGC Approved Flight Recorder with Serial NMEA output
- Serial GPS, NANO, Colibri II, PowerFlarm, Butterfly Vario
- Software SeeYou Mobile PNA, Pocket StrePIa, LK8000, Pocket FMS

4.0 System Components

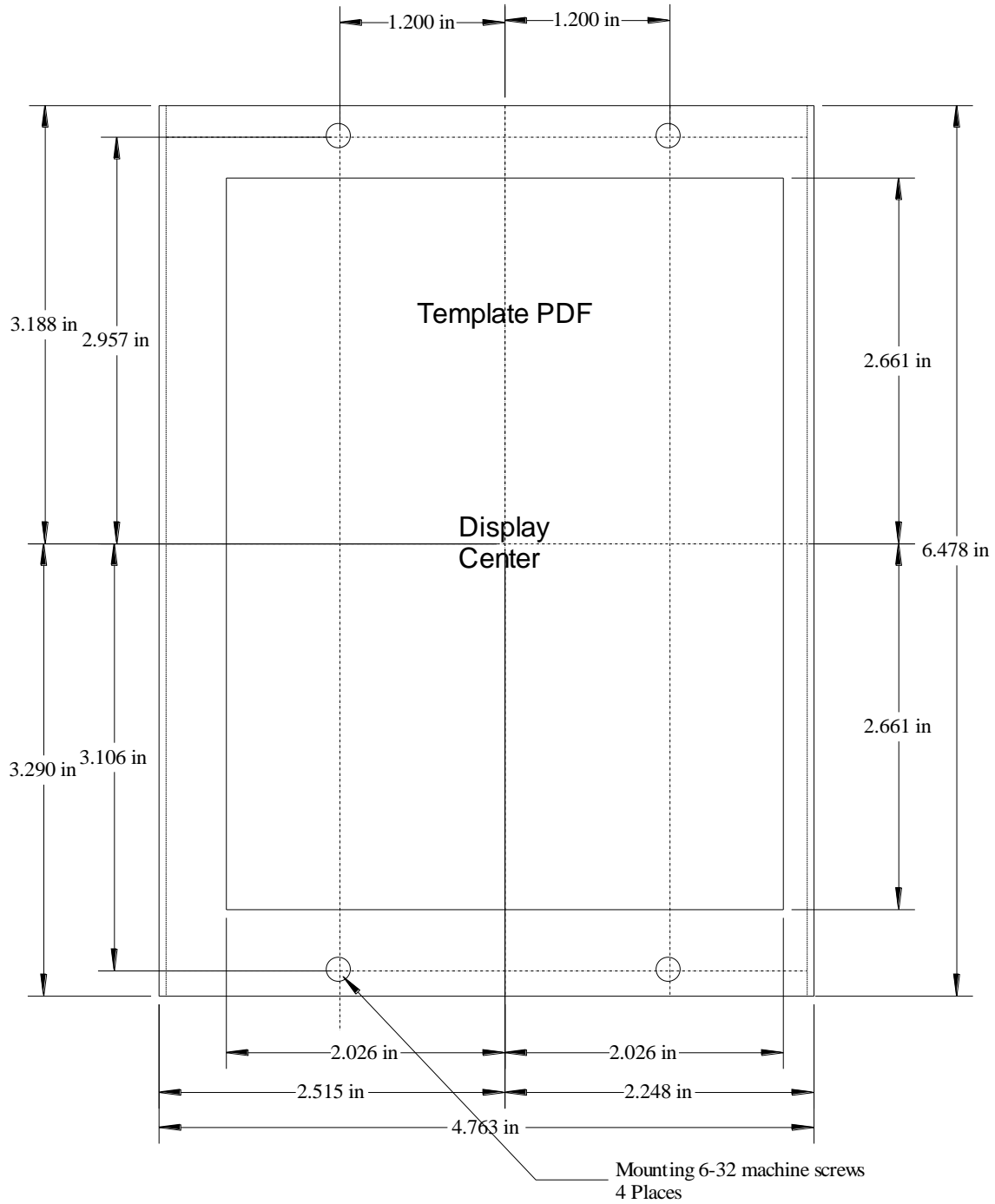
- Display
- Digital Potentiometer
- Panel Mount USB Port
- Speaker

5.0 Installation

5.1 Full size template to modify your instrument panel for the installation of the Ultimate Le. Cutout for the screen and drill four holes for the mounting Screws.

Download full size pdf template from:

<http://www.craggyaero.com/Drawings/UltimateLe%20Dimensions.pdf>



5.2 USB Panel Mount

Drill a hole in the panel and install the USB panel mount, plug the other end into one of the USB ports on the Ultimate Le.

5.3 10K Potentiometer installation drill .25" hole in the panel.

6.0 Operation

6.1 Operating the Ray Laser, Laser Controller, Ball Track Mouse or Touch Pad

Ray Laser Stick Controller™

Stick Controller PPT on the right and Optional Taster Red button on the Left. The Stick Controller laser ball track mouse plugs into either of the USB ports on the back of the Ultimate Le. It has three usable inputs, mouse trigger (actuated with the index finger), ball to position the mouse arrow, right PPT button, left optional taster momentary switch depending on software.



- BASF Composite with UV Resistance
- Laser Optical Trackball
- Trigger for Mouse Arrow Select
- PTT Mic Momentary switch
- Additional Switches available
 - Motor Start
 - Climb/Cruise
- 19.3mm 3/4" DG LAK
- 20mm .785 SH, LS, Stemme, Apis, EB29
- 24mm .9948 Schleicher, Pipistrel Taurus, Alisport Silent
- 24.5mm 1.00" JS

Laser Controller



Laser BallTrack Mouse with click actuator butto. No hard to use controller with button arrows menu

Ball Track Mouse



The hand held ball track mouse plugs into either of the USB ports on the back of the Ultimate Le. It fits nicely in either hand. It has three usable inputs, trigger (actuated with the index finger), ball to position the mouse arrow, right button depending on software.

- Thumb Ball moves the mouse arrow on the screen
- Trigger selects items and menu functions
- Holding the trigger and moving the mouse button is used to move Nav Boxes and the Pan and GOTO functions depending on software used.
- Left Button not used.
- Right Button not used



Don't hold the mouse tight. Move the ball with your thumb to place the arrow. Take your thumb off the ball and it quits moving and it will not move in turbulence. Click with the trigger to highlight. Place arrow on item and click right button to select.

The hardest task is to turn the glider in the simulator. Position the arrow on the glider. Click trigger and hold turn the arrow around with the ball.

Touch Pad - The Ergonomic Touchpad does everything your mouse does.



Right Click: Tap in the upper right hand corner.

Left Click: Tap anywhere else.

Drag and drop & highlight "Quickly!" tap twice holding down and dragging your finger on the second tap



Scrolling: Drag along the right edge to scroll documents

You never run out of dragging space. If you drag or draw something to the very edge of the touchpad, it automatically senses you are at the edge and gives you 3 seconds to lift up and reposition your finger.

6.2 Power the Ultimate Le, it takes about 5 to 30 seconds for the Ultimate Le to boot, depending on the CE image installed in the computer. The Windows Screen will appear. The menu bar is hidden at the bottom of the screen, Move

the mouse arrow to the bottom left of the screen and the start button will appear. Click the Icons on the Desktop to start your programs.

6.3 10K Potentiometer

The Ultimate Le screen brightness is adjusted by the supplied POT.



7.0 Software



Click the SeeYou Icon to start the Program.



Program Update Instructions

Instructions:

1. Download zip file below to your desktop computer
2. Unzip the file to your USB Traveler Drive to AutoCopy/FlashDisk
3. Place USB Traveler Drive in your Ultimate Le
4. Power Up the Ultimate Le
5. Files will AutoCopy to you Ultimate Le
6. Remove the USB Traveler and delete the files on the traveler. It will autocopy everytime you connect to the Ultimate.
7. Start SeeYou Mobile
8. Go Menu - About
9. Check your Key and reenter if necessary

To Enter Key

1. Place cursor in the Name field
2. Click the keyb folder on the bottom of the screen
3. Enter your name as shown on the Key email
4. Click OK
5. Place Cursor in the Registration Key field
6. Click the keyb folder on the bottom of the screen
7. Enter the key (make sure and enter the - dashes)
8. Click OK
9. Click Register
10. Click OK
11. Exit SeeYou Mobile

The page should show:

Program serial number: xxxxxxxxx

Free upgrades until: xx/xx/xx

Exit SeeYou Ultimate Le

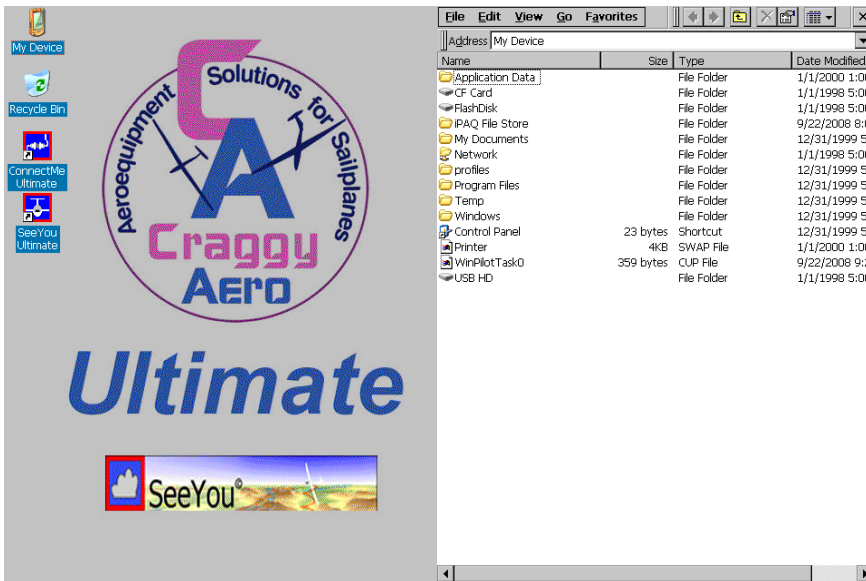
Before you shut down the Ultimate Le You may need to save the registry so you Name and Key will be remembered !!!!

!!!! Go Start - Programs - Colibri Tools-Save Reg before shutting down the Ultimate Le, The will set your SETTINGS folder if it was changed and save the screen rotation set in the SeeYou Mobile Program.

Program Updates, Aviation Data, terrain maps and user waypoints are downloaded to you Desktop PC and transferred to the USB Flash Drive.



All programs, Aviation Data, terrain maps and user waypoints are stored in the FlashDisk\AutoCopy\Folder of the Ultimate Le.

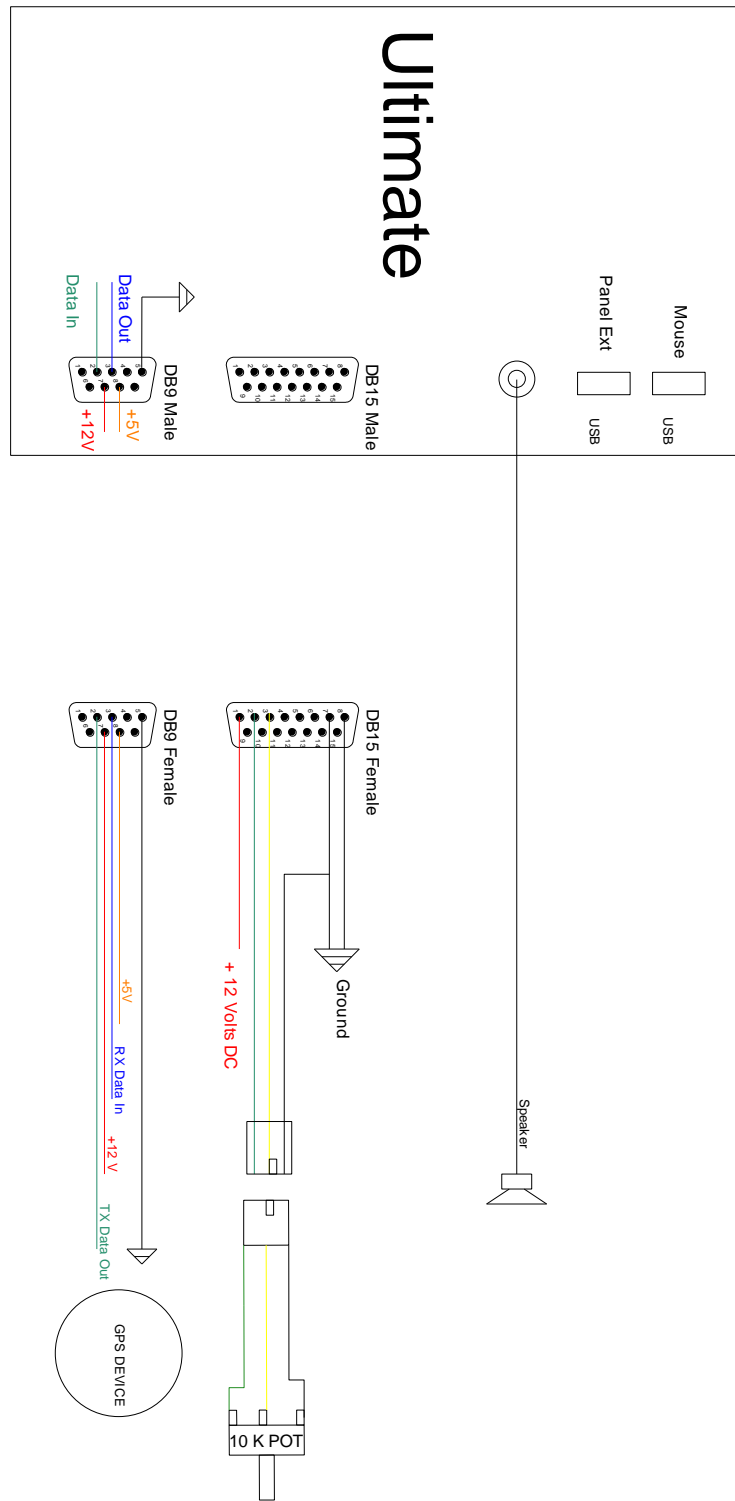


Files can be copied using the File Explorer resident in the Ultimate Le from the USB Flash. Access this by double clicking on the My Device icon on the Ultimate Le DeskTop. The File Explorer will appear. Cut and paste files from the USB drive.


Specific User turn points, Aviation Data and terrain maps should be copied to the FlashDisk\AutoCopy\My Documents folder on the Ultimate Le. All terrain maps for the world are in the FlashDisk\Maps Folder, only copy the terrain maps that you intend to use to the AutoCopy\My Documents Folder.

User Turn points can be downloaded from <http://soaringweb.org/TP> Copy the specific turnpoint .cup file to the flashdisk.

8.0 Wiring



8.1 Connectors

- 2 USB Connectors on the back of the instrument. Input Device and Panel extension.
- Speaker 3.5 mm jack connect 8 ohm speaker.
- DB15 Connector Power for the Ultimate Le +12V (**13.8V Absolute Max Voltage**) , Ground, Dimming POT. Dimming Pot must be connected for display to work.
- DB9 Serial Port. If NMEA GPS device is already powered only connect RX, TX and Ground. Devices that need power can get power from the DB9 Pin 7 +12V or Pin 8 +5V to get power from the Ultimate Le. Ground also needs to be connected.

9.0 Warranty

The Ultimate Le system is designed for VFR use only as an aid to prudent navigation. All information is presented for reference only. Terrain, airports and airspace data are provided only as an aid to situation awareness.

This product is warranted to be free from defects in materials and workmanship for one year from the date of purchase. Within this period Craggy Aero, LLC will, at its sole option, repair or replace any components that fail in normal use. Such repairs or replacement will be made at no charge to the customer for parts and labor; the customer will be responsible for any transportation costs. This warranty does not cover failures due to abuse, misuse, accident, or unauthorized alterations or repairs.

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