

# HELP FOR E6B

**PURPOSE:** The E6B is used to perform a number of standard aeronautical calculations and unit of measurement conversions.

---

## When to Use the E6B

### To perform aeronautical calculations

There are 10 calculations and functions available

### To perform aeronautical unit of measurement conversions

There are 28 units of measurement available for conversions

### Flight planning and performance calculation

There is a simple calculator and some special purpose calculators for this function

---

## How to Use the E6B

### Calculator

The Calculator is a standard calculator with a memory. Numbers entered and the answer are both displayed in the green field. The memory is displayed in the yellow field. A record of the numbers and operators entered is shown in the blue field at the bottom.

This color scheme is used throughout the App. Green fields are used for input values.

### Keyboard keys

C - Clear all entries

CE - Clear the current entry

MC - Memory Clear

MR - Memory Recall

M= - Set the Memory equal to the currently display number

M- - Subtract the current displayed amount from the memory amount

M+ - Add the current displayed amount to the memory amount

### Conversions

The Convert function is used to perform Numerical conversions. Use the green entry field to enter the number to be converted. Touch the Unit of Measurement button next to the green From entry field and select the From unit.

Touch the Unit of Measurement button next to the yellow To field and select the To unit.

There are 26 units of measurement available in the conversion function.

Temperature	MPH - Statute Miles per Hour
Fahrenheit	FPS - Feet per Second
Celsius	FPM - Feet Per Minute
	MPS - Meters per Second
Pressure	KPH - Kilometers per Hour
inHg	Knots
mb	
	Liquid measurement
Distance	US Gallons
Feet	Imperial Gallons
NM - Nautical Miles	Liters
SM - Statute Miles	
Meters	Fuel over Time
KM - Kilometers	GPH - Gallons per Hour
	GPH (Imperial)
Time	LPH - Liters per Hour
Hours	
Minutes	Fuel over Distance
Seconds	MPG - Miles per Gallon
Days	MPG - Imperial
	KML - Kilometers per Liter
Speed	

### **Clock / Timer**

The Clock/Timer is a digital clock and stopwatch. The digital clock shows UTC time and local time.

The stopwatch shows both a count Up and Down to/from the time entered. Touch the Start button to start the timer. Touch the Stop button to stop the timer. And touch the reset button to reset the timer. Reset sets all the timer fields to zero.

To enter a time touch the Green hours, minutes or seconds fields and enter the amount.

### **Wind Correction Angle Calculator - WCA**

Enter the four required fields Wind Speed, Wind Direction, True Airspeed and Course. The answers will be automatically filled in the yellow answer fields. WCA (Wind Correction Angle), Heading and Groundspeed.

Select the Unit of Measurement using the buttons next to the speed fields.

### **Density Altitude Calculator**

Enter the Altitude in MSL, Altimeter setting, Temperature and Dew Point.

The Density Altitude will be displayed.

Select the Units of Measurement using the buttons next to the input and output fields.

### **Time/Distance/Speed Calculator**

On the Time/Distance/Speed Calculator enter any two of the fields to get the solution for the third field. The user must select which field will be "solved for" by touching the corresponding Solve For box.

Select the Units of Measurement using the buttons next to the input and output fields.

### **Fuel usage Calculator**

On the Fuel Usage Calculator enter any two of the fields to get the solution for the third field. The user must select which field will be "solved for" by touching the corresponding Solve For box.

Select the Units of Measurement using the buttons next to the input and output fields.

### **Vertical Rate Calculator**

The Vertical Rate Calculator is used to solve for the Required Vertical Rate based on a given starting and ending altitude, ground speed and distance between the starting and ending points. Enter the four required fields to solve for the Rate. Select the Units of Measurement using the buttons next to the input and output fields.

### **Required Climb Rate Calculator**

The required Climb Rate Calculator is used to solve for the Required Climb Rate based on a Climb Gradient and ground speed. Enter the required fields to solve for the Rate. Select the Units of Measurement using the buttons next to the input and output fields.

### **Top of Descent Calculator**

The required Top of Descent Calculator is used to solve for the point at which the descent should begin. This point is defined as a distance before arriving at the destination.

Enter beginning and ending altitudes along with the ground speed and vertical descent rate.

The point where the descent should begin will be calculated.

Select the Units of Measurement using the buttons next to the input and output fields.

---

# E6B Calculator Screenshot

Carrier 4:49 PM 100% CFI Tools

[Back](#)

## E6B CALCULATOR

15

Memory 6

1 + 2 + 3 + 4 + 5

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel
- Vert Rate
- Req Climb Rate
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Conversions Screenshot

Carrier 4:49 PM 100% CFI Tools

[Back](#)

## E6B CONVERSION

59	Fahrenheit
15.000	Celsius

- Calculator
- Convert**
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel
- Vert Rate
- Req Climb Rate
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

**Temperature**

**Fahrenheit**

**Celsius**

**Pressure**

**inHg**

**mb**

**Distance**

**Feet**

**NM**

**SM**

**Meter**

**KM**

**Time**

**Hour**

**Minute**

**Second**

**Day**

**Speed**

**MPH**

**FPS**

**FPM**

**MPS**

**KPH**

**Knots**

**Liquid**

**Gallons**

# E6B Clock/Timer Screenshot

Carrier

4:50 PM

100%

CFI Tools

Back

## E6B CLOCK / TIMER

Enter Timer 12 : 34 : 56

Count Down 12 : 34 : 51

Count Up 00 : 00 : 05

Start

Stop

Reset

Time Now

2013-02-06 21:50:43 UTC

2013-02-06 16:50:43 EST

Calculator

Convert

Clock/Timer

WCA

DAltitude

Tm/Spd/Dist

Fuel

Vert Rate

Req Climb Rate

Top of Descent

C

CE

MC

MR

M=

7

8

9

/

M-

4

5

6

X

M+

1

2

3

-

0

.

=

+

# E6B Wind Correction Angle Calculator Screenshot

Carrier 5:49 PM 100% CFI Tools

[Back](#)

## E6B WIND CORRECTION

30	Wind Speed	<a href="#">Knots</a>
330	Wind Direction	
120	True Airspeed	<a href="#">Knots</a>
020	Course	
WCA	-12	
Heading	008	
Groundspeed	98.5	<a href="#">Knots</a>

Calculator
Convert
Clock/Timer
<b>WCA</b>
DAltitude
Tm/Spd/Dist
Fuel
Vert Rate
Req Climb Rate
Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	



# E6B Density Altitude Calculator Screenshot

Back

## E6B DENSITY ALTITUDE

MSL	1000	Feet
Alt. Setting	29.92	inHg
Temp C	22	Celsius
DewPt C	15	Celsius
Density Alt.	2053	Feet

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude**
- Tm/Spd/Dist
- Fuel
- Vert Rate
- Req Climb Rate
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Time/Distance/Speed Calculator Screenshot

Carrier 4:52 PM 100% CFI Tools

[Back](#)

## E6B TIME/DISTANCE/SPEED

Time	Solve For
45	Minute
99	NM
132	Knots

Distance

Speed

Calculator  
Convert  
Clock/Timer  
WCA  
DAltitude  
**Tm/Spd/Dist**  
Fuel  
Vert Rate  
Req Climb Rate  
Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Fuel Usage Calculator Screenshot

Carrier 4:52 PM 100% CFI Tools

[Back](#)

## E6B FUEL RATE

Time	Solve For
45 Minute	<input type="checkbox"/>
● Volume 9 Gallons	<input type="checkbox"/>
Rate 12 GPH	<input checked="" type="checkbox"/>

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel**
- Vert Rate
- Req Climb Rate
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Vertical Rate Calculator Screenshot

Carrier 4:53 PM 100% CFI Tools

[Back](#)

## E6B VERTICAL RATE

Alt 1	9000	Feet
Alt 2	3000	Feet
Gnd Spd	120	Knots
● Fix DME	25	NM

Required Rate

-480	FPM
------	-----

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel
- Vert Rate**
- Req Climb Rate
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Required Climb Rate Calculator Screenshot

Carrier 4:53 PM 100% CFI Tools

[Back](#)

## E6B REQUIRED CLIMB RATE

Climb Gradient	<b>330</b>	Feet/NM
● Ground Speed	<b>79</b>	<b>Knots</b>
Required Rate	<b>435</b>	<b>FPM</b>

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel
- Vert Rate
- Req Climb Rate**
- Top of Descent

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	

# E6B Top of Descent Calculator Screenshot

Carrier 4:54 PM 100% CFI Tools

[Back](#)

## E6B TOP OF DESCENT

Alt 1	9000	Feet
Alt 2	2000	Feet
Gnd Spd	120	Knots
● Vert Rate	500	FPM

Top of Descent - Distance before Dest.

28	NM
----	----

- Calculator
- Convert
- Clock/Timer
- WCA
- DAltitude
- Tm/Spd/Dist
- Fuel
- Vert Rate
- Req Climb Rate
- Top of Descent**

C	CE	MC	MR	M=
7	8	9	/	M-
4	5	6	X	M+
1	2	3	-	
0	.	=	+	