

# OC-1401

## Quick Reference Chart

### PREFLIGHT

#### Loading Data

	PRESS	DISPLAY
Calibrated Air Speed	119 <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">CAS</span>	<span style="border: 1px solid black; padding: 2px;">119.00</span>
Temperature (°C)	68 <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">°F ◀ °C</span> <span style="border: 1px solid black; padding: 2px;">°C</span>	<span style="border: 1px solid black; padding: 2px;">20.00</span>
Pressure Altitude	3300 <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">PALT</span>	<span style="border: 1px solid black; padding: 2px;">3300.00</span>
Magnetic Variation	3 <span style="border: 1px solid black; padding: 2px;">CHS</span> <span style="border: 1px solid black; padding: 2px;">VAR</span>	<span style="border: 1px solid black; padding: 2px;">-3.00</span>
Fuel Tank Capacity	40 <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">FUEL</span>	<span style="border: 1px solid black; padding: 2px;">40.00</span>
Fuel Consumption Rate	8 <span style="border: 1px solid black; padding: 2px;">RATE</span>	<span style="border: 1px solid black; padding: 2px;">8.00</span>
Wind	12 <span style="border: 1px solid black; padding: 2px;">∟</span> 210 <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">WIND</span>	<span style="border: 1px solid black; padding: 2px;">12.00 ∟ 210.0</span>
Flight Legs	45 <span style="border: 1px solid black; padding: 2px;">∟</span> 83 <span style="border: 1px solid black; padding: 2px;">LEG<sub>n</sub></span> 1	<span style="border: 1px solid black; padding: 2px;">45.00 ∟ 83.00</span>

#### Recalling Data

Calibrated Air Speed	<span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">RCL</span> <span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">CAS</span>	<span style="border: 1px solid black; padding: 2px;">119.00</span>
Temperature (°C)	<span style="border: 1px solid black; padding: 2px;">F</span> <span style="border: 1px solid black; padding: 2px;">RCL</span> <span style="border: 1px solid black; padding: 2px;">°C</span>	<span style="border: 1px solid black; padding: 2px;">20.00</span>

NOTE: Use the same procedure to recall each of the preflight data.

#### Standby Mode

Set ON-OFF switch to ON.

Set NORMAL-STANDBY switch to STANDBY

## IN-FLIGHT

### Clock Functions

To set True Time

PRESS

14.00.

DISPLAY

14.00.

F SET

14.00.01

To start/stop Elapsed Time

S/SET

00.00.01

To see True Time displayed

F<sup>-1</sup> CLK

14.05.30

To see Elapsed Time displayed

F<sup>-1</sup> ET

0.06.45

### Start

To start Flight Leg 1

F ST.LEG<sub>n</sub> 1

127.19 ∟ 84.32

### Computing In-Flight Data

Ground Speed and True Course

GS TC

134.05 ∟ 83.00

Set Computer to flight leg 2

LEG<sub>n</sub> 2

33.00 ∟ 109.0

Ground Speed and True Course  
for flight leg 2

GS TC

128.93 ∟ 109.0

Return to flight leg 1

LEG<sub>n</sub> 1

45.00 ∟ 83.00

Fuel remaining

F FUEL

38.67

Distance and Time to checkpoint

D/TΔ

19.4 0.08.40

Distance and Time to destination

F D/T DES

64.1 0.29.50

Estimated Time of Arrival at  
next checkpoint

F<sup>-1</sup> ETA Δ

14.30.10

Estimated Time of Arrival at  
final destination

F ETA

14.55.00

Checkpoint

Δ

127.19 ∟ 138.0

Wind vector

WIND

16.39 ∟ 243.0

\* True air speed and magnetic heading

## NAVIGATION

	PRESS	DISPLAY
Distance and Angle from VOR 1 to VOR 2	26 <input type="text" value="∠"/> 244 <input type="text" value="F"/> <input type="text" value="VR&lt;sub&gt;12&lt;/sub&gt;"/>	26.00 <input type="text" value="∠"/> 244.0
Distance and Angle from VOR 1 to checkpoint	12 <input type="text" value="∠"/> 236 <input type="text" value="VR&lt;sub&gt;1Δ&lt;/sub&gt;"/>	12.00 <input type="text" value="∠"/> 236.0
Radial for VOR 1	270 <input type="text" value="F"/> <input type="text" value="RAD 1"/>	270.00
Radial for VOR 2	35 <input type="text" value="RAD 2"/>	35.00
Distance and Magnetic Heading	<input type="text" value="DST MH"/>	9.43 <input type="text" value="∠"/> 137.3
Distance and Angle from VOR 1 to Plane	<input type="text" value="F"/> <input type="text" value="VR&lt;sub&gt;1P&lt;/sub&gt;"/>	15.39 <input type="text" value="∠"/> 270.0

## WEIGHT AND BALANCE CALCULATION

Total Moment (lb·in) = (1378 × 82.18) + (15 × 32) + (270 × 95) + (360 × 91) + (275 × 126) + (42 × 151)

378	<input type="text" value="ENTER"/>	82.18	<input type="text" value="x"/>	<input type="text" value="113244.04"/>
15	<input type="text" value="ENTER"/>	32	<input type="text" value="x"/>	<input type="text" value="480.00"/>
		<input style="width: 50px;" type="text" value="+"/>		<input type="text" value="113724.04"/>
270	<input type="text" value="ENTER"/>	95	<input type="text" value="x"/>	<input type="text" value="25650.00"/>
		<input style="width: 50px;" type="text" value="+"/>		<input type="text" value="139374.04"/>
360	<input type="text" value="ENTER"/>	91	<input type="text" value="x"/>	<input type="text" value="32760.00"/>
		<input style="width: 50px;" type="text" value="+"/>		<input type="text" value="172134.04"/>
275	<input type="text" value="ENTER"/>	126	<input type="text" value="x"/>	<input type="text" value="34650.00"/>
		<input style="width: 50px;" type="text" value="+"/>		<input type="text" value="206784.04"/>
42	<input type="text" value="ENTER"/>	151	<input type="text" value="x"/>	<input type="text" value="6342.00"/>
		<input style="width: 50px;" type="text" value="+"/>		<input type="text" value="213126.04"/>

PRESS

DISPLAY

$$\text{Total Weight (lbs)} = 1378 + 15 + 270 + 360 + 275 + 42$$

1378	ENTER	15	+	270		
+	360	+	275	+	42	+
						2340.00

$$\text{Center of Gravity Point (inches)} = \frac{213126}{2340}$$

213126	ENTER	2340	÷		91.08
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## ADVANCED MATHEMATICS

### Function Keys

Reciprocals

20	F	1/x	0.05
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Square roots

81	F	$\sqrt{x}$	9.00
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Squaring numbers

18	F <sup>-1</sup>	x <sup>2</sup>	324.00
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Using  $\pi$ 

4	F <sup>-1</sup>	$\pi$	x	12.57
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### Trigonometric Functions

Sine

60	F	SIN	60.
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Arc sine

0.7071	F <sup>-1</sup>	SIN <sup>-1</sup>	0.7071
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	F <sup>-1</sup>	SIN <sup>-1</sup>	45.00
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### Logarithmic Functions

Common logarithm

23	F	LOG	23.
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	F	LOG	1.36
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Common antilogarithm

2.45	F <sup>-1</sup>	10 <sup>x</sup>	2.45
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	F <sup>-1</sup>	10 <sup>x</sup>	281.84
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	PRESS	DISPLAY
Raising Numbers to Powers	3 <input type="text" value="ENTER"/>	3.00
	2.965 <input type="text" value="CHS"/>	-2.965
	<input type="text" value="F&lt;sup&gt;-1&lt;/sup&gt;"/> <input type="text" value="y&lt;sup&gt;x&lt;/sup&gt;"/>	0.04

### Time Conversions

Decimal Hours/	18.43	18.43
Hours, Minutes, Seconds	<input type="text" value="F"/> <input type="text" value="H▶HMS"/>	18.25.47
Hours, Minutes, Seconds/	125.37.1628	125.37.1628
Decimal Hours	<input type="text" value="F&lt;sup&gt;-1&lt;/sup&gt;"/> <input type="text" value="H◀HMS"/>	125.62

### Adding Time

Adding Time	39.07.4096	39.07.4096
	<input type="text" value="ENTER"/>	39.07.40
	10.52.2317	10.52.2317
	<input type="text" value="+"/>	50.00.04

### Adding Vectors

Adding Vectors	34 <input type="text" value="∟"/> 98	34. ∟ 98.
	<input type="text" value="ENTER"/>	34.00 ∟ 98.00
	23 <input type="text" value="∟"/> 134	23. ∟ 134.
	<input type="text" value="+"/>	54.32 ∟ 112.4

# APPENDIX

## PREFLIGHT KEYS

- CAS** — Keys in calibrated air speed.
- °C** — Keys in temperature in °C.
- PALT** — Keys in pressure altitude in feet.
- VAR** — Keys in magnetic compass variation.
- FUEL** — Keys in fuel supply on board.
- RATE** — Keys in fuel consumption rate.
- WIND** — Keys in reported wind vector (speed  $\angle$  direction).
- LEG<sub>n</sub>** — Keys in up to nine legs in vector format (distance  $\angle$  heading).

## IN-FLIGHT KEYS

- ST.LEG<sub>n</sub>** — Commands the Computer to start the next (n-th) flight leg. True airspeed and magnetic heading of the flight leg, in vector format, is displayed.
- LEG<sub>n</sub>** — Recalls the n-th leg vector entered in preflight.
- POS $\Delta$**  — When pressed, after keying in distance and magnetic heading flown from the last checkpoint, the Computer displays the updated wind vector.

TAS MH

- Calculates true airspeed (from preflight data) and magnetic heading (from solving wind triangle). Shown in vector format.

FUEL

- When pressed, shows current fuel supply on board. If you are in a flight leg, display is decremencing.

GS TC

- Calculates ground speed from wind triangle and displays it with current flight leg course in vector format.

ETA  $\Delta$

- Calculates estimated time of arrival at the next checkpoint based on computed ground speed.

ETA

- Calculates estimated time of arrival at the final destination. NOTE: This is based on the sum of the estimated time for each of the flight legs entered in the Computer.

WIND

- Recalls current wind vector (speed direction). If winds have not been updated, it would be equal to the entered preflight data.

D/T DES

- Gives dynamic display of distance and time to the end of all flight legs.

D/T $\Delta$

- Gives dynamic display of distance and time to the next checkpoint.

$\Delta$

- “Tells” the Computer that you have arrived at the checkpoint (end of that flight leg). This commands the Computer to start the next flight leg. The wind vector is now recomputed based on when you arrived at the checkpoint. If you were flying a heading that was different from the magnetic heading in the previous flight leg, the actual heading you were flying may be keyed in and included in the wind update. The Computer displays true airspeed and magnetic heading of the next flight leg in vector format.

LAST $\Delta$

- Reverts all data present in the Computer to what it was before the  $\Delta$  key was pressed prematurely or by accident.

## NAVIGATION KEYS

- RAD 1** — Keys in radial from VOR 1 (from VOR receiver reading).
- RAD 2** — Keys in radial from VOR 2 (from VOR receiver reading).
- VR<sub>12</sub>** — Keys in distance and angle from VOR 1 to VOR 2 in vector format (from charts).
- VR<sub>1Δ</sub>** — Keys in distance and angle from VOR 1 to checkpoint in vector format (from charts).
- VR<sub>1P</sub>** — Calculates distance from VOR 1 to plane. Displays distance and angle from VOR 1 to plane in vector format.
- DST MH** — Calculates new distance and magnetic heading, in vector format, to checkpoint.

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Datamath Calculator Museum

## TIME FUNCTION KEYS

- SET** — When pressed, with a time format number (two decimal points) in the display, sets the clock to that time and starts the clock.
- CLK** — Accesses the true time display.
- S/S ET** — Starts elapsed time. If the timer is already running, pressing this key stops the elapsed time.
- ET** — Displays the elapsed time.
- CLR** — Stops the elapsed time and clears it to zero.