

General Description

The flight computer incorporates all of the functionality of the default GPS/MAP display with a navigation/data/LNAV/VNAV computer. It is available as a separate pop-up panel, and also in the virtual cockpit.

For detailed instructions on the use of the FS 2004 map please refer to the Microsoft Learning Center in your Flight Simulator menu. Here you will find extensive information on the capabilities of this unit. Most of the buttons are labeled the same here with a few exceptions, which will be described below.

Detailed information on the flight computer/calculation functions are also described in detail below.



Access to the flight computer is obtained via the button on the main instrument panel.



Note
The Flight Computer is for FS 2004 installation only. Not compatible with previous versions of Flight Simulator!



International



**Flight Computer
Operation Manual**

FS 2004 Map/GPS Display



Here is a basic description of the controls and their location. The following controls are labeled identical to their counterpart on the default Microsoft instrument:

- MSG** - Message Display
- CLR** - Clear
- NRST** - Nearest Facility
- TERR** - Terrain Map Display
- PROC** - Procedures Display
- ENT** - Enter
- MENU** - Menu Display
- FPL** - Flight Plan Display

The following buttons have the same function as their counterpart on the default unit, but are labeled somewhat differently:

	Zoom control for map display
	Next/last GPS page
	Next/last GPS group
	Map cursor on/off toggle
	Next waypoint button (same as OBS button)

Flight Computer and Calculator



The instrument incorporates the following features and capabilities:

- LNAV and VNAV aircraft control.
- Fuel/weight calculation
- Speed calculation
- Basic aircraft data information

Changes in settings, function or display modes of the flight computer and calculator will **not** have any affect on the map/GPS display above.

LNAV/VNAV FUNCTIONS



In order for the LNAV function to work **you must have a flight plan loaded into FS 2004**, using the simulator's Flight Planner. Otherwise there is no data for the computer to utilize in performing these functions. See the simulator's Learning Center for complete information on creating, loading and using Flight Plans in FS 2004.

LNAV Function



If a flight plan is loaded, press the **LNAV** button. The "LNAV" annunciation will appear on the flight computer display (left).

Once a flight plan is loaded, using the LNAV function will:

1. Lock out/nullify any autopilot settings in operation
2. Automatically follow the flight plan, waypoint to waypoint, until completion.

To discontinue flight plan following, and/or return to autopilot control, simply switch off the **LNAV** button.

Important note:

The LNAV function is locked out when the autopilot is in either approach (APR) or backcourse hold (BC) modes. If either of these functions are engaged the LNAV function will be discontinued.

VNAV Function


The VNAV function can operate independently from the LNAV function. As it utilizes data provided by you, and not the FS flight plan, it can also be used without a loaded flight plan in place.

Simply press the **VNAV** button. The "VNAV" annunciation will appear on the flight computer display (left). The VNAV function will:

1. Lock out/nullify any autopilot ALT settings in operation
2. Automatically lock out any automatic throttle (SPD) settings in use.

To discontinue flight computer VNAV control, and/or return to autopilot control, simply switch off the **VNAV** button.

USING THE VNAV FUNCTION

Step 1.
 Select the Performance **PERF** button. The aircraft vertical performance/altitude hold data settings will be displayed. The active setting for change/editing is highlighted in gray.



Use the **PREV** or **NEXT** buttons to change the highlighted selection up or down.





Step 2.
Enter the data for desired cruise altitude, vertical speed (climb/descent) and cruise speed. Use the number pad (0 - 9) to enter the data one digit at a time

As data is entered each key press on the number pad (0 - 9) will advance automatically to the next digit. So you can simply enter your value in sequence, like 4 - 0 - 0 - 0 for 4000.



To advance to the next digit without entering a value, or go back to the previous digit, use the < > keys.



Important! You must press **ENTER** once you have finished entering the desired value for the change to take effect!



Once all 3 parameters (altitude, climb/descent speed and cruise speed) have been set press the **VNAV** button. The flight computer will engage VNAV mode and take over these parameters of flight. Any settings on the autopilot will be overridden.

DATA MODE DISPLAY



Press the **DATA** button to change the display to DATA mode.

In DATA mode the following information is displayed:

LEng Hr	Total engine hours recorded for left engine
REng Hr	Total engine hours recorded for right engine
LMaint	Engine hour time marker for scheduled maintenance on left engine
RMaint	Engine hour time marker for scheduled maintenance on right engine
Aircraft Wt	Total gross weight of the aircraft. Based on weight parameters set in the Load Manager, plus fuel onboard.

FUEL MODE DISPLAY



Press the **FUEL** button to change the display to FUEL mode.

Important
Unless a flight plan is loaded in Flight Simulator some of these values may be blank, due to a lock of waypoint information!

In FUEL mode the following information is displayed:

Nxt Wpt	Identity code for next waypoint
F2D	Fuel To Destination – amount of fuel, in lbs., required to reach next waypoint
LEND	Engine hour time endurance, given current fuel on board and consumption – left engine
REND	Engine hour time endurance, given current fuel on board and consumption – right engine
Tot Fuel	Total fuel on board, left & right. In lbs.

SPD (SPEED) MODE DISPLAY



Press the **SPD** button to change the display to SPD (Speed) mode.

Important
Unless a flight plan is loaded in Flight Simulator some of these values may be blank, due to a lock of waypoint information!

In SPD mode the following information is displayed:

Gmd Spd	Calculated ground speed, in knots
TIAS	Calculated true airspeed, in knots
Time to	Calculated time to next waypoint, in hours
Dist to	Distance to next waypoint, in miles