

Welcome to our first official introduction to the new Stratomaster Enigma range of color screen instruments.

This page is intended to give you a preview of our latest development. Enigma is now in flight testing stage and we are preparing manufacture of the first batch of 100 units.

In development for about two years, Enigma offers a very comprehensive hardware platform for our new FlightOps (tm) operating system specially created for Enigma and future instruments.

To make matters even more appealing, Enigma is an open development allowing third party software developers to take full advantage of all the features Enigma provides.

Going one step further, we have created a comprehensive, yet easy to use file format for map data which includes terrain information and provides for vector as well as raster mapping. We even made it possible for you to use any map, even a scanned, hand drawn scetch will do.

For Southern Africa, Enigma ships with a full complement of all



available aviation maps free of charge. We expect pre-made libraries of aviation maps for other regions to become available for Enigma soon.

Enigma is intended for closed cockpit aircraft only and may not be exposed to water (rain). We recommend our popular stratomaster Ultra for open cockpit aircraft.

We expect to release Enigma in the 3rd quarter of 2006.







Enigma features general items:

Housing/dimensions compatible with Stratomaster Ultra. Ultra can be used as slave to Enigma.

High brightness compensated passive display (500nits). Sunlight viewable. Similar color performance of a TFT display but higher brightness at same backlight levels due to no active components on front LCD glass that block light.

Display resolution/size: ¼ VGA (320x240) at 5.7 inches diagonal

Adjustable display contrast and backlight.

User interface: 20 keys including full numeric keypad and navigation keys.

Alarm light on front panel with acknowledge key.

Hardware interfaces:

- 2 x USB host
- 1 x USB device
- 2 x RS232 serial (including NMEA in/out), also supports RS422 and RS485 for special applications.
- 1 x GPS antenna
- 1 x 12V lead acid backup battery
- 1 x protected power output (for connection of horizon etc)
- 2 x airtalk ports
- 1 x low level audio output (for intercom feed)
- 1 x high level audio output (direct speaker drive)
- 1 x transponder encoder output
- 1 x power input / ambient temp sender input / switched alarm output
- 1 x pressure port
- 1 x static port
- 1 x AOA ports
- 1 x Rotor speed interface
- 2 x RDAC interfaces (engine monitor modules)
- 1 x SD/MMC card slot on front panel

Electronics:

ARM 926JE processor at 200 Mhz. 4Mbyte 32 bit Flash memory for program storage and execution. 4Mbyte of 32 bit, fully static, battery backed RAM. 2Mbyte flash boot disk. 2Mbyte flash storage for voice samples.

Internal, high sensitivity 16 channel GPS receiver.

Atmega 128 processor for general data acquisition and audio synthesis.

Internal data acquisition at 16 bits resolution.

Firmware:

Fixed boot system with ability to automatically update operating system and application program. FlightOps operating system.

Application program features:

9 fully user programmable screens using PC based editing software. Hundreds of highly configurable instruments and items in various forms from traditional analog to bargraphs, digital readouts, horizons, HSI, moving maps, etc.

Voice prompts in addition to visual and external alarms. Voice prompts can be recorded by user on PC to support different languages.

GPS moving map, map viewing, 3D synthetic vision displays (with terrain data).
Engine monitoring using up to two RDAC units (dual engines or many channels). Supports RDAC XB, XD and VD.
Additional features: Checklists, approach plates, any conceivable image.
Recording facility for primary flight data, GPS positions, engine monitor.
Downloadable flight log using SD/MMC card.
Open design with published data formats for map and terrain data. Published API for third party software developers.

PC based support software:

“Enigma designer” This program is used to design and configure the various user programmable screens.

“Enigma simulator” This program simulates the functions of a real instrument on your PC. Great for trying out different screen designs and setups without having to install your screen designs on actual hardware.

“Enigma map maker” This program allows the import of any map image in a compatible windows image format for use with Enigma. From scanned maps and hand sketches to map source data. Also used to import satellite based terrain data.

“Enigma flight log” This program is used to view Enigma flight log data.

“Enigma voice recorder” This program is used to record voice prompts for alarms and copilot modes (mainly intended if languages other than English are required).

"Enigma flight planner" Using Enigma maps as backdrop, easily create your routes and use them in Enigma. This program is also used to maintain your waypoint databases for airfields, navigation, intersections. Import from a variety of formats.