

# MGL Avionics iEFIS

## Getting started guide

Connect EFIS Power cable to EFIS panel and supply 12V to either main or backup supply input or both via avionics master switch.

Connect iBOX power cable and supply either main or backup or both with 12V via avionics master switch.

Connect the iBOX “keep alive (KA)” wire permanently to the aircraft battery +12V terminal. **This connection should remain at all times.**

Connect devices such as RDACs, AHRS and compass sensors to the CAN interface bus(es). See iBOX installation manual for details. Do not forget to fit CAN bus termination resistors.

Connect SMA cable to either Primary EFIS LAN connector and the iBOX LAN connector.

The EFIS panel should now be alive. Check to see that you get a green flashing light on the iBOX (typically a two pulse burst followed by a short pause).

If no data is received from the iBOX the panel will flash a large message in a red background: “No sensor data available – check iBOX data feed”.

Press the menu button, select “system setup” -> “Standard system selections”. Select your desired screen layout, engine and fuel monitoring options. You will complete the engine and fuel individual setups in the “Engine and fuel related setup menus”.

Connect pitot and static ports as needed. After final mounting of the iBOX allow the iBOX to warm up for 10 minutes and then perform the “zero ASI and AOA sensors” procedure in the “iBOX functions and sensor setup” menu (under system setup).

Verify correct airspeed indication before first flight. The iBOX V1 minimum airspeed for indication is 27 knots.

Install the navigation database, maps and terrain data using the “Install tasks menu”.

Install the GPS antenna and connect it to the iBOX. You should have a valid position typically in under one minute (Note: GPS reception may not be possible inside a hangar).

Please calibrate the touch screen to conform to your fingers anatomy and desired touch position (relative to the pressure point of your finger). The easiest way to do this is to press any of the four lower rotary controls towards the panel (past the detent), hold this and then switch on the panel. It will start straight in touch screen calibration mode. Calibration is quick and requires only three reference points.

Please refer to user and installation manuals for all devices used. The latest versions of these manuals are available for download at [www.MGLAvionics.co.za](http://www.MGLAvionics.co.za).

Please familiarize yourself with the operation of the EFIS and the many setups in the system. Most of these setups will be done only once to set the system up to your needs.

Please ensure that all systems are working correctly, that installation has been performed to required aircraft standards and that the pilot is familiar with the EFIS operation and is able to use it correctly as reference for safe flight, including emergency procedures for partial or full systems failure.

Ensure that adequate, high quality electrical power supply is available to the EFIS at all times, including a suitable backup supply (see iBOX installation manual for suggestions).

**Please keep your firmware updated to the latest available versions:**

Your iEFIS panel contains an operating system and application program that will be updated frequently as new functions are added or bugs are fixed.

These updates are available for free download from [www.MGLAvionics.co.za](http://www.MGLAvionics.co.za)

The update consists of a single file called "EXP1.BIN". This contains the complete operating system as well as the EFIS application itself.

Download this file and copy it to the root folder of an SD micro card. The SD micro card should preferably be freshly formatted to either FAT16 or FAT32 specification. You can perform this format using the functions provided in your PC.

Insert the SD micro card into your EFIS and switch on. The boot system in your EFIS should detect the card and find the file. If the file checks out it will be installed. This process takes about 30 seconds to a minute. The new system is then started.

You can delete the "EXP1.BIN" file after this from your SD card which is advisable as otherwise the system will load and check the file every time you switch on to make sure it is still the same that is installed. This will delay the start up by a few seconds and this can be avoided.

From time to time new functions introduced will require an update of the software in your iBOX. Your EFIS will inform you if such an update is required.

You can download this update from the same location. The file name is "IBOX01V1.BIN".

Copy this file onto the root folder of your SD card and use your EFIS to program the iBOX. This is done by finding the function "Load iBOX firmware from SD/MMC card". This is located under "iBOX functions and sensor setup" which is in the "System setup" menu.

Using this function sends the new firmware to the iBOX. Once complete, the iBOX will use this new firmware the next time it starts (power is applied).

Both EFIS panel and iBOX firmware contain strong validity checks so it is not possible to program software that has been corrupted during a download or copy process.

**Fly safely !**

