

DBI3-V01	URRA
dbi3_v01_fw_updates_2021_02_01.odt	DBI3 V0.1 Firmware Updates

## DBI3 V01 Firmware Updates

Document summarizes DBI3-V01 firmware updates from revision 1.2. Future updates will be added to later revisions of this document.

## Firmware revision 1.4 Updates

### Display timeouts

For **setup**, **info** and new **windlog** display, there is now a 60 sec timeout then return to **flight** display. Timeout is reset on button action.

### Buttons sequence

Buttons sequence for **Fn** button selection e.g. **Info**, **Setup** and **OFF** is changed so that **Fn** button must be pressed prior to **I**, **S** or **OFF** button.

### Cryptic "NAN" readout

On a hardware fault a "NAN" display for altitude, rate of climb and temperature has been read out. This is now changed to "Fault".

### Log indicator

A log indicator "**log..**" now appears at top left part of display. Log indicator is shown when log running.

### Command Line Interface

Command line interface is extended with commands for all setup items and flight data readout.

### Variometer sound indicator

Sound indication for climb and descend is now implemented and can be enabled from setup display. Different sound signature and threshold for climb and descend.

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## GPS altitude and GPS Datum in log file

GPS altitude and GPS set datum is now added to each log record.

## Course over ground indicator

For very slow GPS speed over ground conditions, course over ground indicator now show "**slow**" instead of "---" which was cryptic.

## Auto off display

During auto-off sequence and when auto-off is enabled, "**OFF**" is displayed after an audible sound warning prior to instrument turn off. Button activity will interrupt and reset auto-off timeout.

## Wireless ambient temp support

Wireless ambient temp is now supported. When active, ambient temp display is prioritized with 1) wireless sensor, 2) cable sensor and 3) and with lowest priority, enclosure sensor. Ambient temp sensor source is indicated as: **AW** for wireless, **AC** for cable and **A** for enclosure.

## Wind history display

Wind history display (windlog) is shown by press and hold **Fn** button for more then 2 secs.

Display show altitude, speed over ground and course over ground for the latest 36 minutes of flight with 6 minutes intervalls. Button action or timeout return to flight display.

## Spurious premature stop

Spurious stop for flight timer and log session now cured.

## Battery monitor

Battery monitor (battery fuel gage) is now improved to present an equitable readout.

This is most notable at extra low operating temperatures.

## Wireless signal strength info page

A new info page is added showing received signal strength. Page show transmitters code and received signal strength. Signal strength unit is in dBm. Typical receiver sensitivity is -90 dBm.

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## Command Line Interface FW rev 1.4

**rst** - restart system

**?** - show help

**ri** - rtc init

**rs yyyy mm dd hh mm ss** - rtc set

**po** - turn hard off

**sm on|off** - sim data

**su alt {feet|meter} | roc {fpm|mps} | bar {ihg|hpa} | temp {fahr|cent} | sog {knot|mps|kmh|mph}**  
- set units

**sa alth {off|value} | altl {off|value} | clmb {off|value} | desc {off|value} | topt {off|value}** - set alarm

**sf aut {off|static|timeout} | frs {off|pon|toff|toffc|lapc} | aof {off|on} | dat {222-0}** - set funcs

**sv resp {6.0-1.2} | audio {off|on} | clmbt {value} | desct {value}** - set vario

**st top {4-1} {off|9999-1} | amb {2-1} {off|9999-1}** - set topt

**gu alt|roc|bar|temp|sog** - get units

**ga alth|altl|clmb|desc|topt** - get alarm

**gf aut|frs|aof|dat** - get funcs

**gv resp|audio|clmbt|desct** - get vario

**gt top{4-1}|amb{2-1}** - get topt

**sd met|imp|urb** - set defaults

**fs vinit|vdel|start|stop|list|del [filename]|read[filename]|state|clear** - file system

**si mod|brd|date|loc{adr} str** - set info

**gi mod|brd|date|loc{adr}** - get info

**md mach|con** - set CLI mode, machine or console

**sn** - print serialnumber

**vr** - print firmware version

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**gl** {360-1} - get wlog data

**rd** **presm|presb|bar|alt|roc|top|amb|ambc|ambw|lap|long|lat|sog|cog|utc|msl|all** - read DBI3 flight data

**cc** - battery fuel gage

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## Firmware revision 1.6 Updates

### DBI3 V01 Firmware version 1.6

#### Max Values Info Page

A **MAX** value **INFO** page is added. Max values for:

- Altitude
- Baro setting when max altitude was stored, displayed together with stored max altitude
- Climb
- Descend
- Top Temp
- Speed Over Ground

are stored and displayed with **MAX** page selected. Values are reset from instrument power on.

#### Loss of Top Temp function

A possible loss of top temp function has been corrected. Problem occurred when rate of foreign messages received was high.

#### Added UTC time Readout on Display

Double pressing **Fn** button replace Elap-time display with UTC-time for a 4 second fixed timeout.

The normal **Fn** button double press Altimeter Unit Toggle (AUT) function is still there.

#### Faster TOPT Code setup function

While setting TOPT Code, press and hold up/down button will automatically switch over from x1 to x10 to x100 then x1000 increment/decrement. Saves time and lowers Pilots In Command blood-pressures.

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## Command Line Interface FW rev 1.6

### *Perform warm reboot*

**rst** - restart system

### *Show help contents*

**?** - show help

### *Initialize Real Time Clock*

**ri** - rtc init

### *Set Real Time Clock*

**rs yyyy mm dd hh mm ss** - rtc set

### *Power off instrument*

**po** - turn hard off

### *Simulation mode on or off*

**sm on|off** - sim data

### *Set instruments units*

**su alt {feet|meter} | roc {fpm|mps} | bar {ihg|hpa} | temp {fahr|cent} | sog {knot|mps|kmh|mph}**  
- set units

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### *Set instrument alarms*

**sa alth {off|value} | altl {off|value} | clmb {off|value} | desc {off|value} | topt {off|value}** - set alarm

### *Set instrument functions*

**sf aut {off|static|timeout} | frs {off|pon|toff|toffc|lapc} | aof {off|on} | dat {222-0}** - set funcs

### *Set instrument variometer*

**sv resp {6.0-1.2} | audio {off|on} | clmbt {value} | desct {value}** - set vario

### *Set instrument top and ambient temp code*

**st top {4-1} {off|9999-1} | amb {2-1} {off|9999-1}** - set topt

### *Get instrument unit settings*

**gu alt|roc|bar|temp|sog** - get units

### *Get instrument alarm settings*

**ga alth|altl|clmb|desc|topt** - get alarm

### *Get instrument function settings*

**gf aut|frs|aof|dat** - get funcs

### *Get variometer settings*

**gv resp|audio|clmbt|desct** - get vario

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*Get top and ambient temp code settings*

**gt top{4-1}|amb{2-1}** - get topt

*Set defaults (settings), metric, imperial or urb*

**sd met|imp|urb** - set defaults

*File system commands*

**fs vinit|vdel|start|stop|list|del [filename]|read[filename]|state|clear** - file system

*Set nonvolatile info parameters*

**si mod|brd|date|loc{adr} str** - set info

*Get nonvolatile info parameters*

**gi mod|brd|date|loc{adr}** - get info

*Set console mode*

**md mach|con** - set CLI mode, machine or console

*Print instrument serialnumber*

**sn** - print serialnumber

*Print firmware version*

**vr** - print firmware version



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*Get windlog data*

**gl** {360-1} - get wlog data

*Read instrument flight data*

**rd presm|presb|bar|alt|roc|top|amb|ambc|ambw|lap|long|lat|sog|cog|utc|msl|all** - read DBI3 flight data

*Read instrument battery status*

**cc** - battery fuel gage