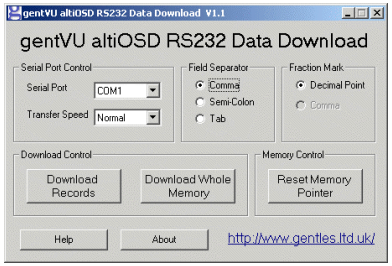
RS232 & Logger Manual

for recording & downloading to a PC the altiOSD telemetry

Once the Logger has been removed from altiOSD it can be downloaded to a computer using the RS232 module. If using a PC you should consider using the special user interface / formatter software at: www.gentles.ltd.uk/gentvu/contact.htm.



There are instructions for this program, which has a simple user interface, and is the best method of downloading your data. For other computers and systems the data can be downloaded using the terminal emulator software that comes with PC, Mac, Linux, or UNIX OS.

Open the terminal emulator on your computer and set it up as follows:

- Set the port you will be connecting to (e.g. COM1).
- Set the data rate to 19200baud.
- Set the start and stop bits to one.
- Set the handshaking to none.

Now plug the Logger into the RS232 as shown in the picture, the terminal emulator should report *gentVU, 421*. There are a number of single character commands available to change the default data format and start the data upload to the computer. Upper or lower case is accepted:

	General Commands
V	Resets status to power-up defaults: FAST data transfer, DoS new lines, comma field separator, decimal Fraction Mark, 2047 records. Prints the version number (also printed at power-up).
U	Initiates the upload of data from I2C (full details later). Upload can be aborted by pressing and holding **W** until "OK" appears.
R	Resets the memory pointer to address 1 (DOESN'T erase data). AltiOSD uses this pointer to decide where to write new data.
	Memory Card size (defaults to 2047)
H	Sets high capacity memory card (4095 vs 2047 records)
	Data download speed (defaults to high speed)
S	Sets slow data download (only use if experiencing corruption)
	Field separator (defaults to comma)
C	Sets field separator to semi-colon
T	Sets field separator to tab
	Fraction Mark (defaults to decimal point)
F	Sets the fraction mark to comma (do not use comma for fields!)
	New Line sequence (defaults to Windows/DoS, CR-LF)
L	Sets the new line characters for UNIX/Linux (LF)
M	Sets the new line characters for Mac (CR)

Output Data Format

Each output record has fields separated by tab/comma/semi-colon. Use the Terminal Emulator's record facility or *cut & paste* to capture the data:

Record #:	integer	from 1 to 2047/4095
Timestamp:	hour:minute:second	loops at 255:59:59
Pressure:	xxxx.x (mBar)	e.g. 1007.8
Rel altitude:	+/-xxxxx (m or ft)	signed integer
Event	integer	from 0 to 255 (then loops)
Battery volts:	xx.xx	from 0 to 18V in 50mV steps
Voltage V1:	xx.xx	from 0 to 18V in 50mV steps
Voltage V2:	xx.xx	from 0 to 18V in 50mV steps
Temperature:	+/-xx (degrees C/F)	signed integer
Speed:	integer (Km/h or mph)	from 0 to 255
Direction:	integer (degrees)	from 0 to 359
Flags:	2^0 degree C=0, F=1	from 0 to 16
	2^1 meters=0, feet=1	
	2^2 Km/h=0, mph=1	
	2^3 unused =0	

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The first line of the data is marked Record 0, and contains different fields representing the number of valid data records in the Logger, followed by the revision of the altiOSD used to generate the data.

DO NOT leave the Logger connected to the RS232 module – this will drain the battery!

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