

**en/NMEA**

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# 1 NMEA

From software version 2.02a (FlightCtrl/NaviCtrl) we can also send the **NMEA** signal from the UBlox GPS. If you use a camera with integrated data logging you can use this data to save the position data in the pictures.

You can get the NMEA signal on the contacts **PIN9** (TxD) + **PIN7** (GND) of your serial output (FlightCtrl V3) or Debug port (NaviCtrl). The data records **RMC & GGA** are sent with *57600 Baud* (default) / TTL (5V).

## 1.1 Setting

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To send the NMEA signal via PIN9 you **need** a microSD card (max. 2GB/FAT16) in your FlightCtrl V3 / NaviCtrl.

On this microSD card you find the file "SETTINGS.INI". You can open and change this file via an editor. The output interval of the NMEA signal is set with the parameter *NMEA\_INTERVAL*.

- # NMEA Output interval in ms (0 = disabled)  
NMEA\_INTERVAL = 0

By default, the output is disabled (NMEA\_INTERVAL = 0)

If you need a signal e.g. every 500ms set here a "500" (NMEA\_INTERVAL = 500)

The output is 57600 baud. From SW-Version 2.20 you can change the output speed under "# Baudrate for the PC-UART".

- **IMPORTANT:**

If you change the baud in your SETTINGS.INI all data will be send in this speed !!!

So if you use e.g. a wireless connection between Copter <-> PC you also have to change here the speed!

- **INFO:**

If there is no Parameter "# NMEA Output interval in ms" in your SETTINGS.INI, delete the "SETTINGS.ini" on your microSD card. After you power up the copter the Software on your copter will create a new "SETTINGS.INI" with the needed parameters.

## 1.2 Check output

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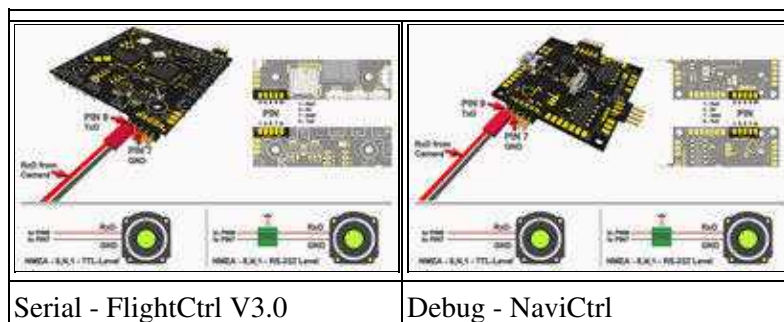
If you set a *NMEA\_INTERVAL* in your *SETTINGS.INI*, you can check the output data in the terminal window of your KopterTool.

For this "click" the button [-> **NaviCtrl**] in your KopterTool and then the button [**Firmware update & Terminal**] to open the terminal window. Here you should now see some data like this:

## 1.3 Connection

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In these examples the connection is described:



## 1.4 More informations about NMEA

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More informations about NMEA format you can find here:

- <http://www.kowoma.de/gps/zusatzerklaerungen/NMEA.htm>
- <http://aprs.gids.nl/nmea/>