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 n 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

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.

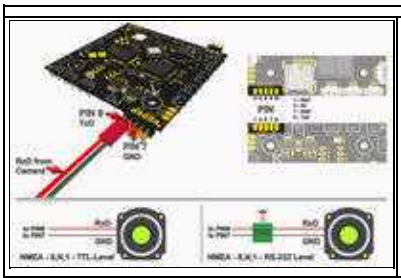
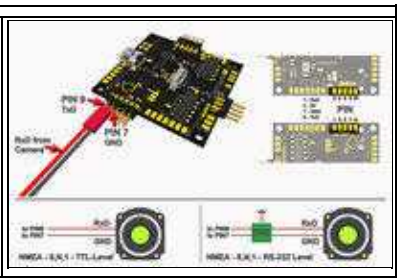
1.2 Check output

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

In these examples the connection is described:

	
Serial - FlightCtrl V3.0	Debug - NaviCtrl

1.4 More informations about NMEA

More informations about NMEA format you can find here:

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