

Dr. William J. Schmidt

From: radioartisan@groups.io on behalf of Dimitry, 4Z5CP via groups.io
<4z5cp=bezeqint.net@groups.io>
Sent: Thursday, November 6, 2025 4:42 PM
To: radioartisan@groups.io
Subject: [radioartisan] GPS module for K3NG controller.

Hello group.

For everyone who going to use Ublox-M8N , maybe also M8 purchased from Aliexpress, small instruction.

After connecting new M8N module to controller - nothing works 😞

Controller used TINY_GPS_LIBRARY, so only GPGGA and GPRMS messages are acceptable.

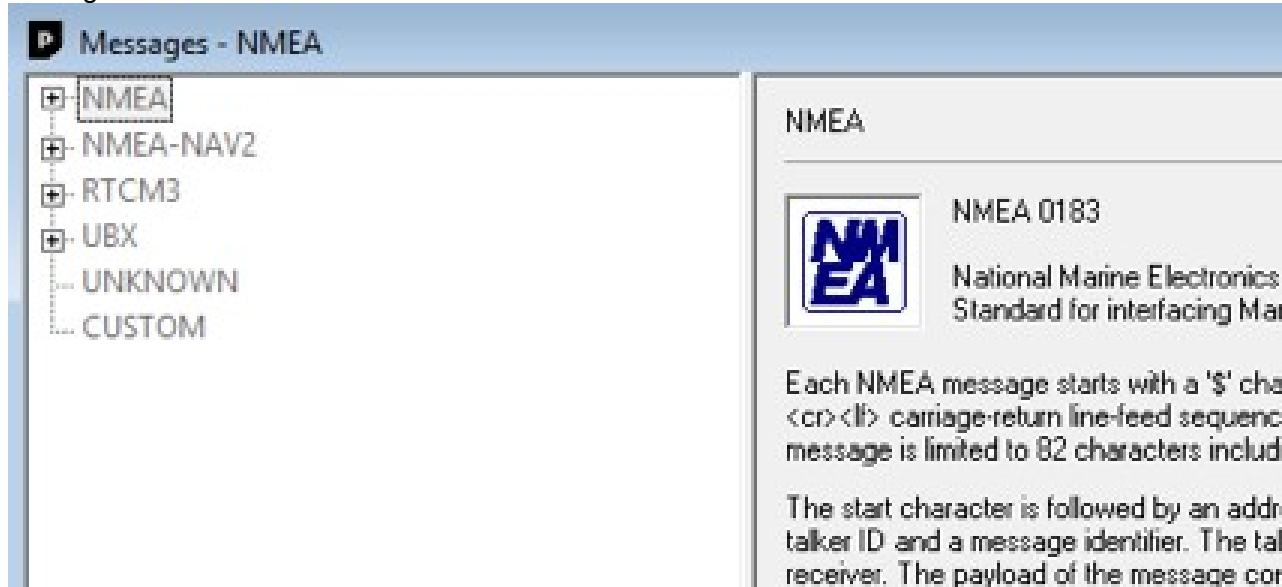
U should to config module for using GPS only.

Use u-Center software for configuration.

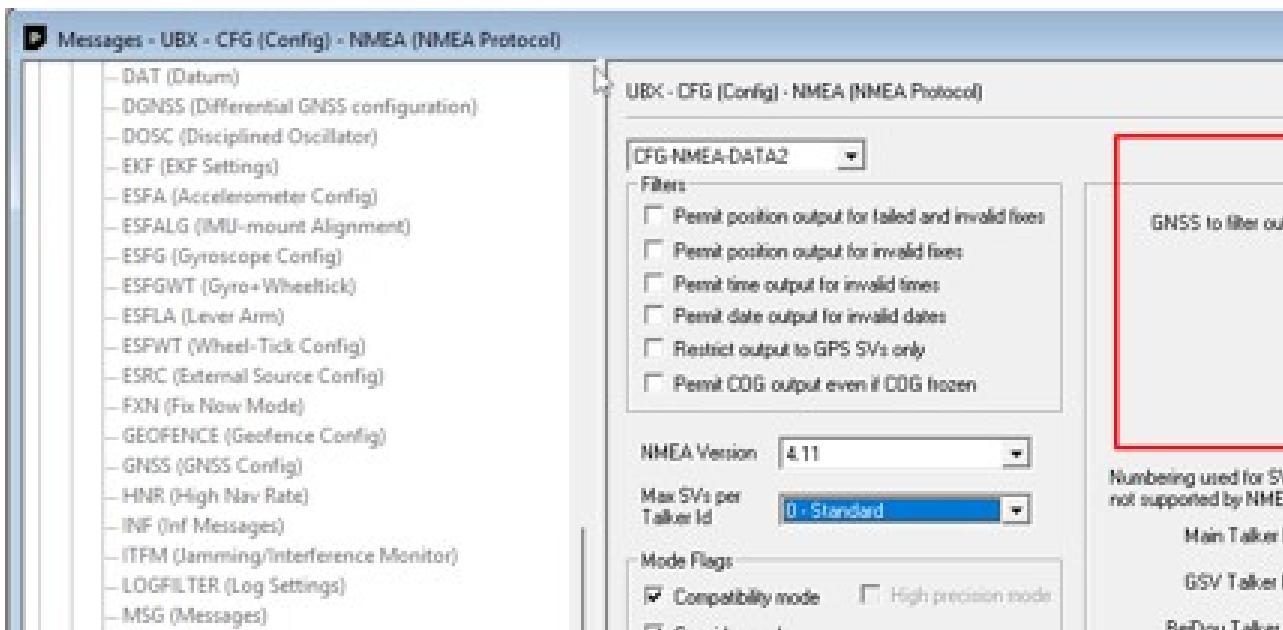
Connect to module with speed 9600.

Press F9 key on the keyboard.

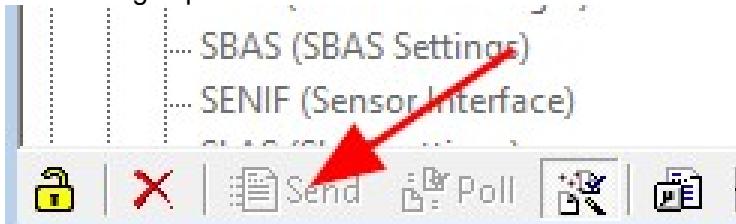
U will get:



Go to UBX -> CFG -> NMEA (NMEA Protocol) and do changes:



After changes press button "Send"



Now go to NMEA messages settings:

P Messages - UBX

└ NMEA

- ⊕- GxDTM (Datum Reference)
- ⊕- GxGBS (Satellite fault Detection)
- ⊕- GxGGA (Global Positioning System Fix Data)
- ⊕- GxGLL (Geographic Position - Latitude/Longitude)
- ⊕- GxGNS (GNSS Fix Data)
- ⊕- GxGRS (GNSS Range Residuals)
- ⊕- GxGSA (GNSS DOP and Active Satellites)
- ⊕- GxGST (GNSS Pseudorange Error Statistics)
- ⊕- GxGSV (GNSS Satellites in View)
- ⊕- GxRLM (Return Link Message)
- ⊕- GxRMC (Recommended Minimum Specific GNSS Data)
- ⊕- GxTHS (Heading of Vehicle)
- ⊕- GxTXT (Text Transmission)
- ⊕- GxUTC (UTC TAI information)
- ⊕- GxVLW (Dual Ground/Water Distance)
- ⊕- GxVTG (Course Over Ground and Ground Speed)

UBX

The UBX proto

Each UBX message starts with a byte value of 0x62). This is followed by a class identifier which indicates the class of this message.

Enable GPRMS: Right click on it -> Enable

- GPGLL (Geographic Position - Latitude/Longitude)
- GQGLL (Geographic Position - Latitude/Longitude)
- _GLL (Geographic Position - Latitude/Longitude)
- + GxGNS (GNSS Fix Data)
- + GxGRS (GNSS Range Residuals)
- + GxGSA (GNSS DOP and Active Satellites)
- + GxGST (GNSS Pseudorange Error Statistics)
- GxGSV (GNSS Satellites in View)
 - GAGSV (GNSS Satellites in View)
 - GBGSV (GNSS Satellites in View)
 - GIGSV (GNSS Satellites in View)
 - GLGSV (GNSS Satellites in View)
 - GNGSV (GNSS Satellites in View)
- GPGSV (GNSS Satellites in View)
 - page 1
 - page 2
 - page 3
- GQGSV (GNSS Satellites in View)
- _GSV (GNSS Satellites in View)
- + GxRLM (Return Link Message)
- GxRMC (Recommended Minimum Specific GNSS Data)
 - GARMC (Recommended Minimum Specific GNSS Data)

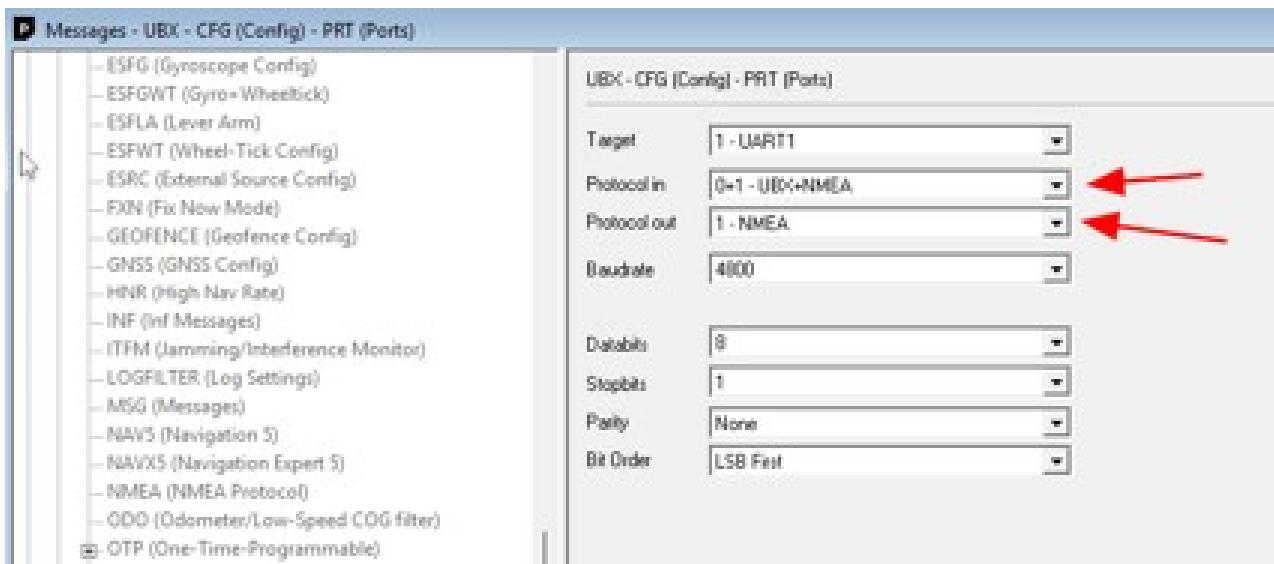
Check if GPGGA message is Enabled|:

NMEA			NMEA - GxGGA (Global Positioning System Fix Data) -																																						
Parameter	Value	Unit	Parameter	Value	Unit																																				
UTC	212359.000	Nanoseconds	Lat	3248.3498	ddmm.mmmm	Nothing Indicator	N		Lon	03600.2007	ddmm.mmmm	Easting Indicator	E		Status	1		SVs Used	07		HDOP	0.0		Alt (MSL)	75.9		Unit	H		Geod Sep.	18.8		Unit	H		Age of DGNSS Cor			DGNSS Ref Station	0000	
Lat	3248.3498	ddmm.mmmm																																							
Nothing Indicator	N																																								
Lon	03600.2007	ddmm.mmmm																																							
Easting Indicator	E																																								
Status	1																																								
SVs Used	07																																								
HDOP	0.0																																								
Alt (MSL)	75.9																																								
Unit	H																																								
Geod Sep.	18.8																																								
Unit	H																																								
Age of DGNSS Cor																																									
DGNSS Ref Station	0000																																								

Check if Enabled

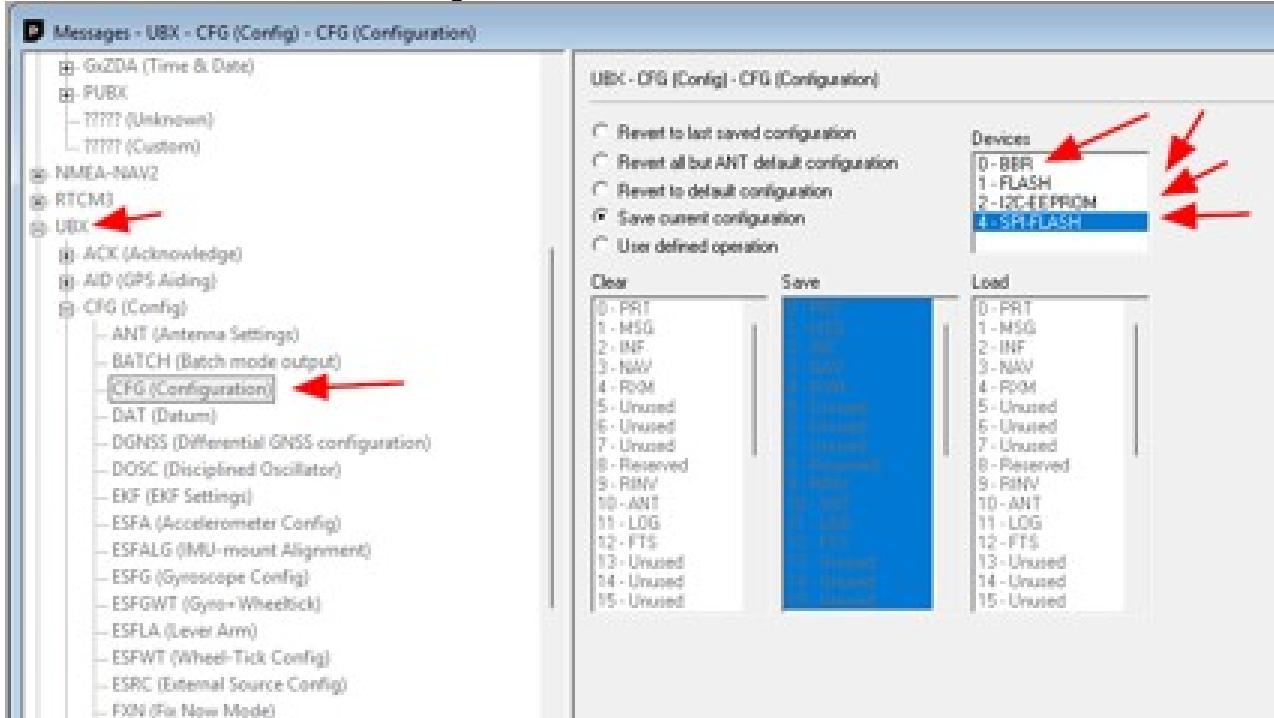
Other messages possible to disable, they do nothing.

I have set only NMEA protocol to output in UBX -> CFG -> PRT :



After changing - click on Send button.

So, now needs to save all new configurations to Flash, I2C:



I do not know which type of memory is used, I have save in the 4 devices, choose 4-SPI-FLASH and press Send, than 2-I2C-EEPROM and press Send, etc.

So after those steps my module starts working with controller 😊

Groups.io Links:

You receive all messages sent to this group.

[View/Reply Online \(#20015\)](#) | [Reply to Group](#) | [Reply to Sender](#) | [Mute This Topic](#) | [New Topic](#)
[Your Subscription](#) | [Contact Group Owner](#) | [Unsubscribe](#) [bill@wjschmidt.com]