## Quick Guide of NaviViewerM9V

#### Overview

NaviViewerM9V is a GNSS viewer tool developed by NaviSys Technology Corp. NaviSys keeps the use of NaviViewerM9V as simple as possible. The use of it is very straightforward except following obscure functions. Set the correct COM port, Baud Rate, and then

#### Click Open Port.



**Note**. If there is no output, please click Close Port double check the settings and then Open Port again.

#### Signal Bars

- 1. Signal strength is represented by the bar length and color
  - Blue:  $\geq$  50, green:  $\geq$  40, yellow:  $\geq$  30, red: < 30
- 2. Satellites of different systems are displayed by different colors:



#### **Clicks and Double Clicks**

 Click on the Radar Window, it allows toggling (turning on or off) the direction (North, East, South, West) and cross-line indication. Double clicks toggles the normal/shrunk NaviViewerM9V.
E.g. click on following window



Get



NaviSys Technology Corp.https://www.navisys.com.tw/Tel : +886-3-5632598Fax: +886-3-5632597Sales contact:sales@navisys.com.twAddress: 2F, No.56, Park Ave. II, Hsinchu Science Park, 30844, Taiwan (R.O.C.)

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If double click it, one gets the shrunk viewer as shown below.



2. Click on the display console, display suspends.

\$GNGLL,2446.4141,N,12100.4368,E,035552.000,A,D*49	
\$GNGSA,A,3,20,30,24,06,18,13,15,05,196,195,199,194,0.62,0.38,0.49,1*06	
\$GNGSA,A,3,11,29,,,,,,,0.62,0.38,0.49,1*08	
\$GNGSA,A,3,67,69,81,82,68,83,0.62,0.38,0.49,2*08	
\$GNGSA,A,3,19,33,04,10,11,12,,,,,,0.62,0.38,0.49,3*0F	
\$GNGSA,A,3,28,03,33,38,01,43,08,41,13,60,39,10,0.62,0.38,0.49,4*00	
\$GNGSA,A,3,07,40,16,06,11,27,42,09,24,25,,,0.62,0.38,0.49,4*0F	
\$GNGSA,A,3,10,09,02,0.62,0.38,0.49,6*0E	
\$GNRMC,035552.000,A,2446.4141,N,12100.4368,E,0.01,0.00,130824,,,D,V*09	
\$GNV TG,0.00, T,,M,0.01,N,0.03,K,D*24	
\$GNZDA,035552.000,13,08,2024,,*42	
Open COM3 BB:115200hps	

One more click resumes display.

#### **Deviation function operation**

 Click on Map => Deviation to create the Deviation window for deviation statistics.



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### Log the Output

1. Click on Log.

NaviViewerM9V	- 0	×
Chip Map Help		
PMI 05:0619-92     OMT 09:0619-92     LAT.N 24.77363*     PD:09:08       1000000000000000000000000000000000000	s Navisys	
	93059	32
	OM4 v General	~
	.5200 V Close P	ort
	HOT Log	AGC
2 7 8 9 14 16 17 21 27 30 41 50 42 43 34 37 QZSS	WARM Play	Stop
	COLD Replay	
2 3 4 7		
29 31 39 35 34 GLONASS	LG A:Ongoing 0 Reset Al	LG
73 74 75 85 86 43 29 - 42 41 Galileo	asion status	
	asion init Wheel in MU inited INS ii MU-mount_Align initing	niting niting
3 5 10 11 12 16 24 25 39 39 36 39 37 40 35 41 39 39 44 48eiden G G G G	yrZ notcal AccZ not yrX notcal AccX not yrY notcal AccY not	cal cal cal
Si S	ingle Tick miss data	
1 3 4 6 7 9 10 16 27 29 30 59 62		
Open COM4 BR:115200bps		

Open the window and save log file

Save As		×
$\leftarrow \rightarrow \ \lor \ \uparrow \ \checkmark \rightarrow$ Downloads	✓ C Search Downloads	P
Organize 👻 New folder	8-	- 0
> 📥 建颖 - Personal	No items match your search.	
🔚 Desktop 🛷		
🛓 Downloads 🖈		
Documents *		
Z Pictures 🖈		
🕖 Music 🔹		
🛂 Videos 🛷		
新増資料次 (5)		
File name:		v
Save as type: Captured NMEA Files (*.txt)		~
∧ Hide Folders	Save	ancel

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#### Stop Log

1. Click on S-Log



Open the log file by an editor/viewer tool.

\$GNGGA,060609.000,2446.4145, W,12100.4361, E,2,80,0.38,125.4, W,15.0, M,\*7F \$GNGGA,060609.000,2446.4145, W,12100.4361, E,2,80,0.38,125.4, W,15.0, M,\*7F \$GNGSA,A,3,23,13,29,20,24,196,199,195,194,18,15,05,0.61,0.38,0.48,1\*0B \$GNGSA,A,3,84,85,69,79,68,78,85,...,0.61,0.38,0.48,2\*08 \$GNGSA,A,3,33,10,041,112,09,19,36,...,0.61,0.38,0.48,2\*01 \$GNGSA,A,3,39,38,03,16,59,08,06,01,41,13,25,02,0.61,0.38,0.48,4\*00 \$GNGSA,A,3,40,...,..,0.61,0.38,0.48,4\*00 \$GNGSA,A,3,40,...,..,0.61,0.38,0.48,4\*00 \$GNGSA,A,3,10,...,..,0.61,0.38,0.48,6\*07 \$GNGSA,A,3,10,...,..,0.61,0.38,0.48,6\*07 \$GNGSA,A,3,10,...,0.2,N,0.03,K,D\*27 \$GNZDA,060609.000,13,08,2024,.\*4F



#### Other functions



Open COM4 BR:115200bps

Click on HOT : Hot start.

Click on WARM : Warm start.

Click on COLD : Cold start.

Click on AGC : To refresh AGC percentage, AGCP.

Click on Play: To select the file to play.

Click on Stop : To stop playback.

Click on Replay : To replay the log file.

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#### DR (Dead Reckoning)



The DR function needs to be calibrated before it could be used for navigation. Related calibration information is shown below:

ALG A:Ongoing 0	Reset ALG
fusion status	
Fusion init	Wheel initing
IMU inited	INS initing
IMU-mount_Align	initing
GyrZ notcal	AccZ not cal
GyrX notcal	AccX not cal
GyrY notcal	AccY not cal
SingleTick	miss data

ALG is abbreviated for alignment. It transits from

**Ongoing** to **Coarse** and then **Fine** during calibration process.



ALG A:Coarse	Reset ALG
fusion status	
Fusion fusion IMU inited IMU-mount_Align	Wheel initing INS inited inited
GyrZ calibrated GyrX calibrated GyrY calibrated	AccZ calibrated AccX calibrated AccY calibrated
SingleTick	miss data
ALG A:Fine	Reset ALG
fusion status	
Fusion fusion IMU inited IMU-mount_Align	Wheel initing INS inited inited
Fusion fusion IMU inited IMU-mount_Align GyrZ calibrated GyrX calibrated GyrY calibrated	Wheel initing INS inited AccZ calibrated AccX calibrated AccY calibrated
Fusion fusion IMU inited IMU-mount_Align GyrZ calibrated GyrX calibrated GyrY calibrated SingleTick	Wheel initing INS inited AccZ calibrated AccY calibrated AccY calibrated miss data

In above pictures, there is no ADR wheel ticks input and

thus Wheel state would always be initing and Single

Tick shows miss data.

The DR function starts to work after the alignment status

is Coarse, the "DR" wording is shown as in red rectangle

in below picture.



If the Reset ALG button is clicked, all the calibration data would be cleared. It should be used only when one moves the installation location of GR-8018 and the calibration should be done again. Please use it carefully. Otherwise, one would need to recalibrate it again.