

OpenCPN Recognized NMEA Sentences:

1. **HDM - Heading, Magnetic**
2. **HDG - Magnetic heading, deviation, variation**
3. **HDT - Heading, True**
4. **RMB - Recommended Minimum Navigation Information**
 1. Status, V = Navigation receiver warning
 2. Cross Track Error, in nautical miles
 3. Direction to Steer, Left or Right
 4. TO Waypoint ID
 5. FROM Waypoint ID
 6. Destination Waypoint Latitude
 7. N or S
 8. Destination Waypoint Longitude
 9. E or W
 10. Range to destination in nautical miles
 11. Bearing to destination in degrees True
 12. Destination closing velocity in knots
 13. Arrival Status, A = Arrival Circle Entered
 14. *
5. **RMC -Recommended Minimum Navigation Information**
 1. Time (UTC)
 2. Status, V = Navigation receiver warning
 3. Latitude
 4. N or S
 5. Longitude
 6. E or W
 7. Speed over ground, knots
 8. Track Made Good, degrees true
 9. Date, ddmmyy
 10. Magnetic variation, degrees
 11. E or W
 12. *
6. **WPL - Waypoint Location**
 1. Latitude
 2. N or S (North or South)
 3. Longitude
 4. E or W (East or West)
 5. Waypoint Name
7. **RTE - Routes**
 1. Total number of messages being transmitted
 2. Message Number
 3. Message Mode
 1. c = complete route, all waypoints
 2. w = working route, the waypoint you just left, the waypoint you're heading to, then all the rest
 4. Waypoint ID
 5. More Waypoints

8. GGA - Global Positioning System Fix Data

1. Universal Time Coordinated (UTC)
2. Latitude
3. Longitude
4. GPS Quality Indicator
5. Number of satellites in view, 00 - 12
6. Horizontal Dilution of Precision (HDOP)
7. Antenna altitude above/below mean-sea-level (geoid)
8. Units of antenna altitude, meters
9. Geoidal separation, the vertical difference between the WGS-84 ellipsoid and the geoid
10. Units of geoidal separation, meters
11. Age of differential GPS data, time in seconds since last SC104
12. Differential reference station ID, 0000-1023
13. Checksum

9. GLL - Geographic Position, Latitude / Longitude

1. Latitude
2. N or S (North or South)
3. Longitude
4. E or W (East or West)
5. Time (UTC)
6. Status A - Data Valid, V - Data Invalid
7. *

10. GSV - Satellites in view

1. Number of sentences for full data / sentence 1 of 2
2. Number of satellites in view
3. Satellite PRN number
4. Elevation, degrees
5. Azimuth, degrees
6. SNR - higher is better / for up to 4 satellites per sentence
7. Checksum

11. VTG - Track Made Good and Ground Speed

1. Track Degrees
2. T = True
3. Track Degrees
4. M = Magnetic
5. Speed Knots
6. N = Knots
7. Speed Kilometers Per Hour
8. K = Kilometres Per Hour
9. *

1. VDM - Automatic Information System (AIS) position reports from other vessels

1. Time (UTC)
2. MMSI Number
3. Latitude
4. Longitude
5. Speed Knots
6. Heading
7. Course over Ground
8. Rate of turn
9. Navigation status

2. VDO - Automatic Information System (AIS) position reports from own vessel

1. Latitude
2. Longitude
3. Speed over ground
4. Course over ground
5. MMSI, navigational status, shiptype, callsign, destination, sizes (in AIS target list)

*

NMEA version 2.3. added a mode indicator to many sentences to indicate what kind of fix the receiver has. The value can be one of

A=autonomous

D=differential

E=Estimated

N=not valid,

S=Simulator.

Sometimes there can even be a null value as well.

The A and D are the only vales that will indicate an Active and reliable Sentence.

This mode character has been added to the end of RMC, RMB, VTG, and GLL sentences.

Optionally, to some others as well, including the BWC and XTE sentences.