

# 1. Configurable Input

Revision History			
Revision	Date	Author	Comments
1.0	December 02, 2021	S. Westaway	
2.0	January 12, 2024	S. Westaway	Updated - NavView 3.6

## 1.1 Overview

Configurable Input is used to decode an ASCII string sent from an external device or software.

## 1.2 Add Device

1. Select Devices from the Configuration section of the Setup ribbon to open the IO Devices window.
2. Select Configurable Input in the drop-down list, see Figure 1

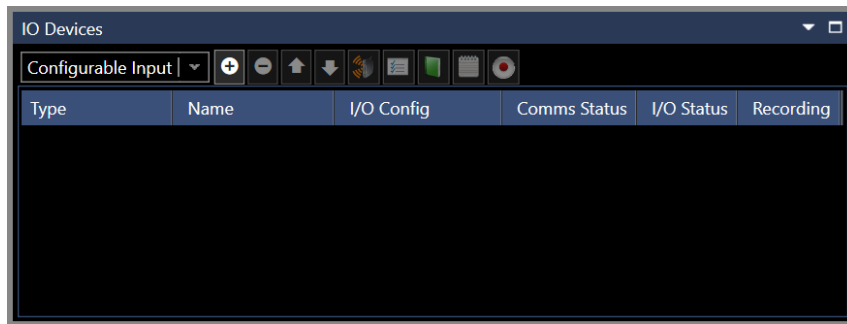



Figure 1 IO Devices Window

3. Click the add  button, this will open the Configure Device I/O dialog, see Figure 2

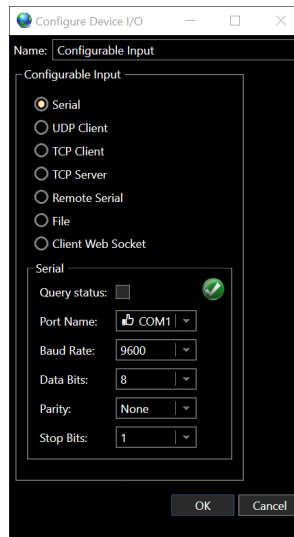



Figure 2 Configure Device I/O Dialog

4. Configure I/O as required. Refer to *Device* section in the NavView User Guide for I/O configuration.

5. Click **Okay**

## 1.3 Configure Device

1. Click the Configure Device  button to open Configure Input dialog, see Figure 3

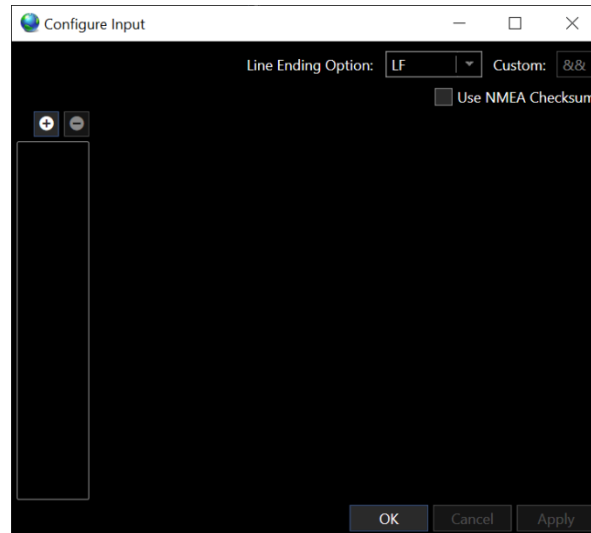




Figure 3 Configure Input Dialog

2. Click the add a Telegram  button, to remove a telegram click the remove  button.

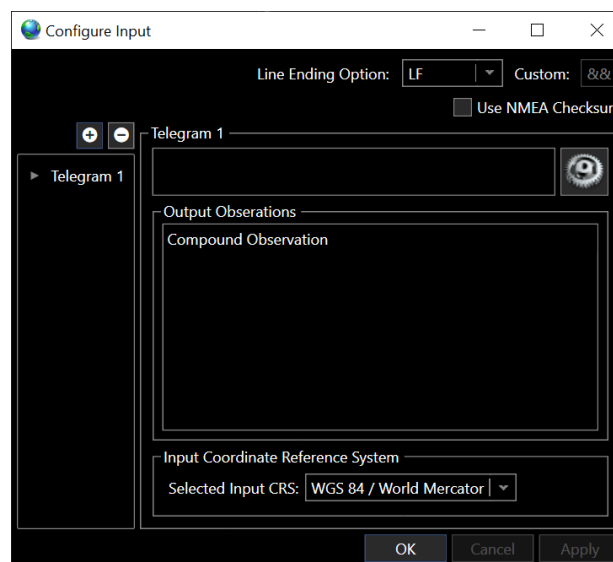
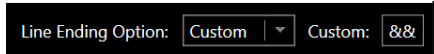


Figure 4 Telegram Added

3. Select the **Line Ending Option** of the input telegram from the drop-down. Options include LF, CR, CRLF, LFCR, EXT, EOT and Custom

- **LF:** Line Feed
- **CR:** Carriage Return
- **CRLF:** Carriage Return and Line Feed
- **LFCR:** Line Feed and Carriage Return

- **ETX:** End of Text
- **EOT:** End of Transmission
- **Custom:** If custom is selected enter characters in the Custom Box



4. If the telegram contains a NMEA Checksum, i.e. \*28, check the Use NMEA Checksum box.
5. Click to open the **Edit Import Settings** dialog, see Figure 5

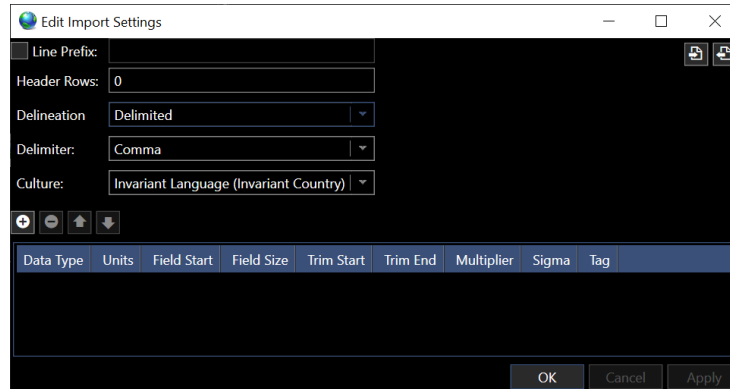


Figure 5 Edit Import Settings Dialog

- a. If an existing Configurable Input has been created, click the button to load the settings file
- b. If the data string in the telegram contains a line prefix check the **Line Prefix** box to enable the use of line prefix filtering. When enabled, lines which do not start with specified text are ignored. This is also used if the telegram contains multiple data strings with different line prefix
- c. **Header Rows:** If the data string has a header enter the number of rows in the box
- d. **Delineation:** Select the telegram format, **Delimited** or **Fixed Length**
  - **Delimited**
    - i. From the drop-down select the delimiter option

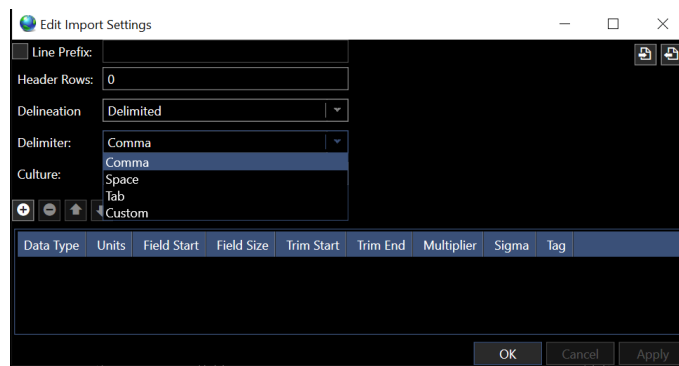


Figure 6 Telegram Delimited Settings

- **Fixed Length**

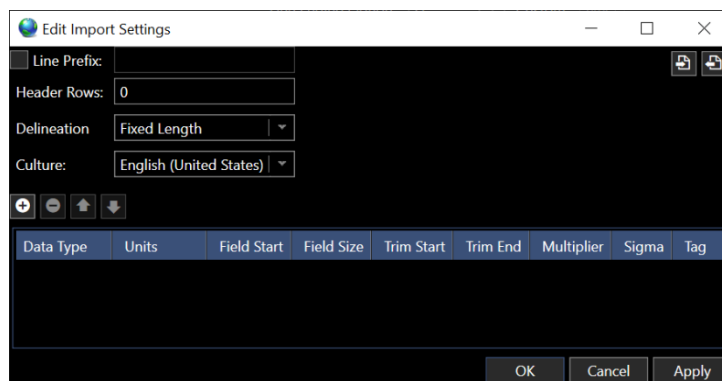




Figure 7 Telegram Fixed Length

- e. **Culture:** From the drop-down select the country decimal and thousands separator format the telegram uses
6. The next step is to parse out the data items in the telegram. Click the  button to add a field data definition for each data field in the telegram, see Figure 8.

To remove a data item, click the  button.


Data items can be moved up or down in the list by using the up/down arrows .



Figure 8 Data Field Added

- a. **Data Type:** From the drop-down select the data type to parse out of the telegram
- b. **Units:** From the drop-down select the unit to be used for the data type
- c. **Field Start:** If **Delineation** is **Fixed Length**, enter the zero-based index of the start of the field, e.g. the index of the first character in a record is 0, the index of the 10<sup>th</sup> character is 9
- d. **Field Size:** If **Delineation** is **Fixed Length**, enter the length of the data in the field
- e. **Trim Start:** If **Delineation** is **Delimited**, enter the number of characters to trim from the start of the field value, e.g. if a field containing Depth contains “D567.89”, 1 would be entered to trim the “D” before reading the value
- f. **Trim End:** If **Delimiter** is **Delimited**, enter the number of characters to trim from the end of the field value, e.g. if a field containing Depth contains “567.89D”, 1 would be entered to trim the “D” before reading the value
- g. **Multiplier:** Multiplier applied to data on arrival
- h. **Sigma:** Standard deviation of the value if known
- i. **Tag:** To differentiate two items of the same type, apply an alphanumeric tag

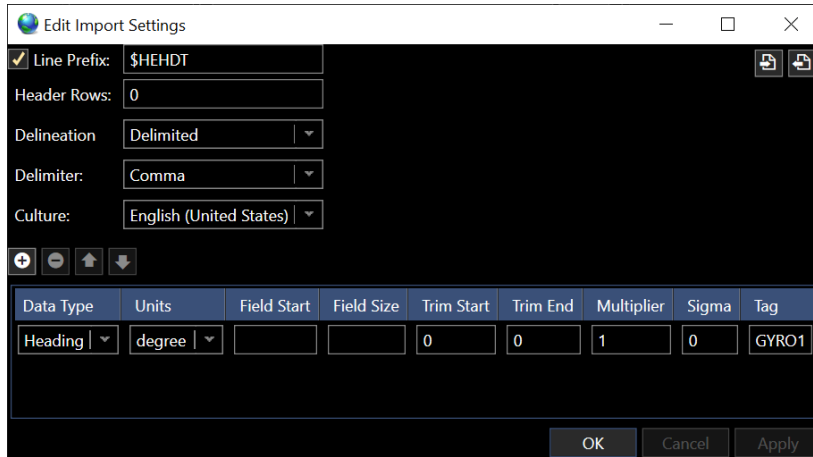


Figure 9 Heading Import Example – Delimited

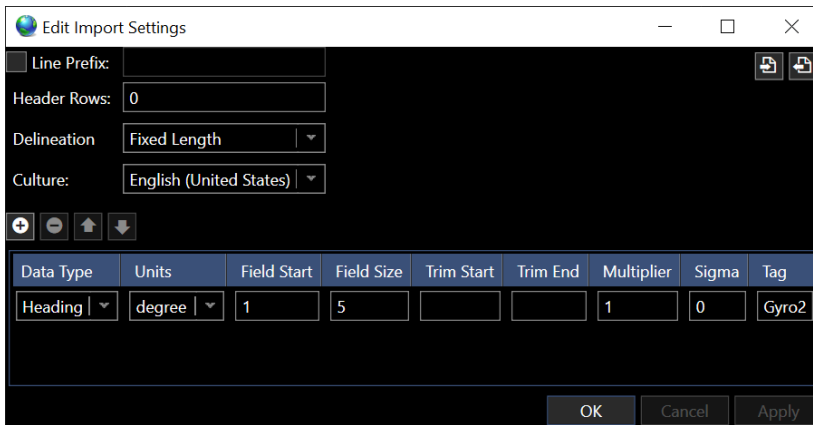


Figure 10 Heading Import Example – Fixed Length

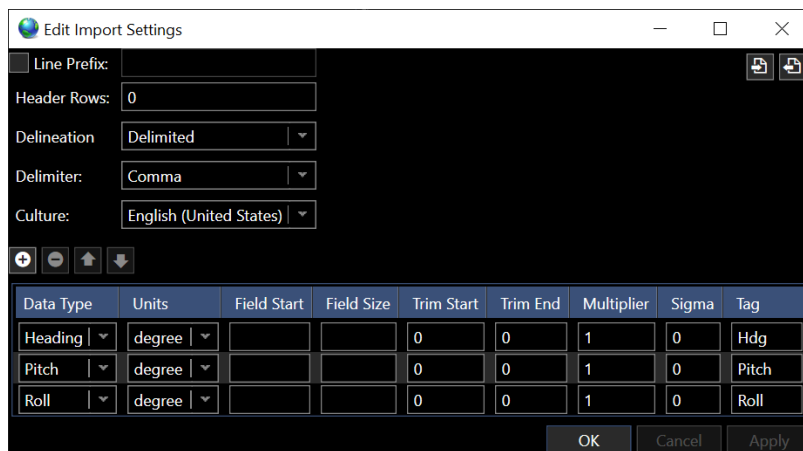


Figure 11 Multiple Fields Example

7. Data items added are displayed in the **Configure Input** dialog as seen in Figure 12.

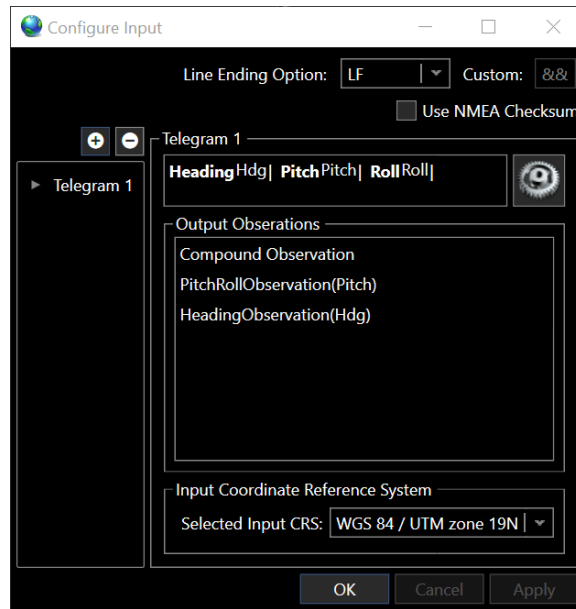


Figure 12 Data Items Added

- When importing coordinates in the telegram, the source coordinate reference system (CRS) is assigned by selecting the **Input Coordinate Reference System** from the drop-down.

**Note:** The source CRS must be added in Horizontal CRS setup to be available in the drop-down. Refer to *Geodesy* section in NavView User Guide.

- The added items are now available to be published for use in calculations.

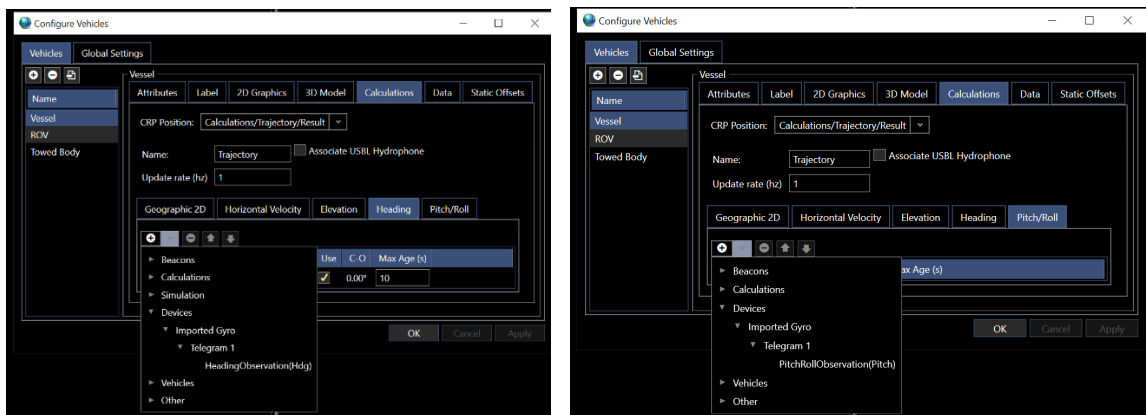


Figure 13 Published data Example