SeaSonde Radial Site Release 6
Pattern File Format
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IdealPattern.txt   Ideal antenna pattern
MeasPattern.txt   Measured antenna pattern

These files are text based and require a linefeed character (ASCII 10) as an end-of-line indicator. The SeaSonde10 processing software will not be able to correctly read the file if it the end-of-line is some other character(s) like a return or return/linefeed combination.

SeaSondeRadialSetup installs a one degree resolution **IdealPattern.txt**.

IdealPattern.txt and **MeasPattern.txt** files can be created by the **CrossLoopPatterner** application. In order to create a **MeasPattern.txt** you will need to measure the antennas; see the HW6_Antenna_Pattern_Measure hardware guide.

These files define the antenna pattern used to resolve radial bearings. **IdealPattern.txt** is a theoretical ideal pattern. **MeasPattern.txt** is a Radial Site specific measured pattern. Both have the same format but are used slightly differently by the SpectraToRadial processing software.

Each file is text based and requires a linefeed character (ASCII 10) as an end-of-line indicator. The last line in the file must also have a linefeed.

The pattern bearings are CCW (counter-clockwise) degrees referenced from the antenna bearing. The antenna bearing is found in Header.txt and is (CW) clockwise degrees from true North. See the File_RadialSetups guide.

The Quality factor is a standard deviation of the measurements that went into the pattern value. The Quality factor is currently not used by the processing software.

Pattern file contents:

Line 1: Parameter 1: *Number of Bearings*
Starting with Line 2:
   Bearings Array
      Repeat for 1 to *Number of Bearings*
         Bearing Degrees CCW relative to antenna bearing (up to 6 values per line)
   Loop1to3 Real Component Array
      Repeat for 1 to *Number of Bearings*
         Measurement (up to 6 values per line)
   Loop1to3 Real Component Quality Factor Array
      Repeat for 1 to *Number of Bearings*
         QualityFactor (up to 6 values per line)
   Loop1to3 Imaginary Component Array
      Repeat for 1 to *Number of Bearings*
         Measurement (up to 6 values per line)
   Loop1to3 Imaginary Component Quality Factor Array
      Repeat for 1 to *Number of Bearings*
         QualityFactor (up to 6 values per line)
   Loop2to3 Real Component Array
      Repeat for 1 to *Number of Bearings*
         Measurement (up to 6 values per line)
   Loop2to3 Real Component Quality Factor Array
      Repeat for 1 to *Number of Bearings*
         QualityFactor (up to 6 values per line)
   Loop2to3 Imaginary Component Array
      Repeat for 1 to *Number of Bearings*
         Measurement (up to 6 values per line)
   Loop2to3 Imaginary Component Quality Factor Array
      Repeat for 1 to *Number of Bearings*
         QualityFactor (up to 6 values per line)
(Followed by optional lines of metadata)
<ampl1to3> <ampl2to3>   **! Amplitude Factors**
<deg CW True>   **! Antenna Bearing**
<XXXX>   **! Site Code**
<lat> <lon>   **! Site Lat Lon**
 1.0   **! Degree Resolution**
<deg   **! Degree Smoothing Applied**
 YYYY MM DD HH MM SS **! Date Year Mo Day Hr Mn Sec**
<Pattern User Note>
<UUID>   **! UUID**
End File