



# SBS-1 & SBS-3 Mode-S / ADSB Virtual Radar : User Forum

Kinetic Avionic Products Limited

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## [FAQ: How Can I Add Outlines? What Is The File Format?](#)

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## [FAQ: How Can I Add Outlines? What Is The File Format?](#)

by [KineticWill](#) » November 16th, 2005, 10:18 am

**Question:** What is the format of the .out files found in the \Outlines directory

**Answer:** To add outlines to BaseStation, you need to create a new file using notepad in the /Outlines directory of BaseStation. The file should be named "something".out (e.g. "Centrelines.out").

Here is an example of part of an outline file:

```
{ Coast outlines }
$TYPE=3
21.67+92.02
21.63+92.00
21.60+92.02
21.57+92.00
21.52+92.00
```

Anything between "{" and "}" is treated as a comment, and is therefore ignored.

The \$TYPE= statement is used to indicate which type of outline the following lines are. A value of 3 (as in the example) indicates that the line (and all following lines until the next \$TYPE statement) is of type coastline.

The currently defined types are:

- 1: General
- 2: Airport
- 3: Coastline
- 4: Border
- 5: Final App
- 6: Lwr Awy C/L
- 7: Upr Awy C/L
- 8: ATZ
- 9: CTA / TMA
- 10: CTR
- 11: Danger Area
- 12: FIR
- 13: RVA
- 14: HOLD
- 15: IAP
- 16: SID
- 17: STAR
- 18: MATZ
- 19: Lwr Awy Bdy
- 20: AARA
- 21: AIAA
- 22: ARA
- 23: ATA
- 24: ATSDA

(Types 25 to 30 are currently undefined, but available for use).

A outline contains a number of lines, each defined as a sequence of latitude-longitude values. The above example, shows a single such line.

Each latitude-longitude pair consists of the latitude followed by a "+" symbol followed by the longitude, for example:

21.67+92.02

Multiple latitude-longitude pairs may be placed on a single line. In this case, they must be separated by spaces.

To indicate the end of the line, a single -1 value is entered.

Will Howliston, Kinetic Avionic Products Limited  
Lead developer, Basestation software



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