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ASC Arc/Info ASCII Grid File Description

Surfer imports and exports ASC Arc/Info ASCII grid files.

An Esri grid is a raster GIS file format developed by Esri. The ASCII format is also known as Arc/Info ASCII grid. The ASCII format is used as an exchange, or export format, with a simple ASCII file structure.

File Format

The first six lines of the file indicate the reference of the grid, followed by the values listed in the order they would appear (left to right and top to bottom).

Example

```
ncols 4
nrows 6
xllcorner 0.0
yllcorner 0.0
cellsize 50.0
NODATA_value -9999
-9999 -9999 5 2
-9999 20 100 36
3 8 35 10
32 42 50 6
88 75 27 9
13 5 1 -9999
```

Where:

- *ncols* is the numbers of rows (represented as integers)
- *nrows* is the numbers of rows (represented as integers)
- Lower-left corner refers to a cell corner, and not to a data point
- *xllcorner* and *yllcorner* are the western (left) X coordinate and southern (bottom) Y coordinates, such as easting and northing (represented as real numbers with an optional decimal point)
- *xllcorner* and *yllcorner* are the X and Y coordinates for the lower left corner of the lower left grid cell. Some ESRI raster files use *xllcenter* and *yllcenter* instead for the XY reference point, which indicate the X and Y coordinates for the center of the lower

left grid cell. These values are represented as real numbers with an optional decimal point

- *cellsize* is the length of one side of a square cell (a real number)
- *nodata_value* is the value that is regarded as "missing" or "not applicable"; this line is optional, but highly recommended as some programs expect this line to be declared (a real number)

The remainder of the file lists the raster Z values for each cell, starting at the upper-left corner cell. The Z values are always reported for the center of each grid cell. These real numbers (with optional decimal point, if needed) and are delimited using a single space character.

File name extensions

.AIG, .ASC, .AGR, .GRD

Loading Files

Arc/Info ASCII grid files are similar to grid files and can be loaded to create a grid based map (i.e. **Home | New Map | Contour**), or when using the functions in the [Grid](#) menu.

Import Options Dialog

No import options dialog is displayed.

Import Automation Options

No import options are available.

Saving Files

Use the [Grids | Edit | Convert](#) command in the plot document, or **File | Save As** in the [Grid Editor](#) to export .AIG, .ASC, .AGR, and .GRD files. Alternatively, the ArcInfo ASCII Grid file format is available when prompted to [save a grid file](#).

See Also

[Open Grid](#)

[Export Options - Save Grid As](#)

[File Format Chart](#)

[Export Options - Spatial References](#)