

Modeling with ASCII Text Survey Data Overview and Required Data Format

ASCII text survey data are plain-text files containing survey point records documenting the horizontal coordinates, elevation and other survey point *attributes* (we'll call them "text files" from here). All information for a specific survey point occupies a single line (*record*) in the text file and each attribute for that survey point (*field*) is separated (*delimited*) by a space, tab, comma or other character. Such text files commonly result from "on the ground" survey data-collection methods (optical total station or GPS) and they can be exported from any commercially-available survey software system. Survey systems typically offer various formatting options when exporting a text file and, if the exported text file is to be read by AGTEK software, a compatible format should be requested by the AGTEK user per the following table and discussion ...

AGTEK-Compatible PNEZ (PYXZ) ASCII Text Record Format										
	Field 1		Field 2		Field 3		Field 4		Field 5	
	Point # (P)		North (N / Y)		East (E / X)		Elevation (Z)		Point Label	
Record (Line):	102	-Delimiter-	946.268	-Delimiter-	1060.285	-Delimiter-	100.773	-Delimiter-	TOP	
	(Numeric)		(Numeric)		(Numeric)		(Numeric)		(Alpha-Numeric)	

Compatible Left-to-Right Attribute/Field Sequence:

Request a **PNEZ** sequence (**P = Point Number, N = Northing, E = Easting, Z = Elevation**) [or the equivalent **PYXZ** sequence (**P = Point Number, Y = Northing, X = Easting, Z = Elevation**)]. **Point Labels (Field 5)** are not required but they can be useful for identifying break-line points. **Point Numbers (Field 1)** are not required with **Earthwork 4D** (v1.19.3+) and **Gradework 4D**, but **AGTEK 3D** does require them. If a text file is received in a non-compatible field sequence, such as **PENZ (PYXZ)**, open the file in **Microsoft Excel** and rearrange the relevant field columns (swap **Field 2** and **Field 3** columns in the **PENZ** case) then **Save As** using **Excel's CSV (Comma delimited) (*.csv)** option or **Text (Tab delimited) (*.txt)** option (AGTEK's short video at www.agtek.com/video.html?id=574 includes an example of editing field columns in *Excel*). The first record (line) in some text files is a header that conveniently identifies the attributes in each field of the survey point records (see **Example 1** on next page), but *the header line must be removed from the text file to avoid a file format error in AGTEK* (see left dialog below).

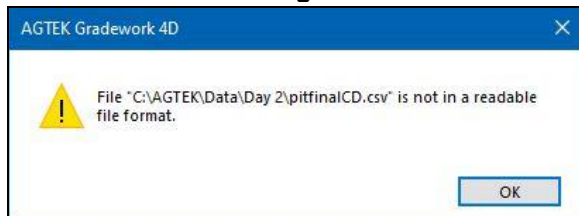
Compatible Attribute/Field Delimiters:

Request that the text file's record fields be separated by **Comma, Space** or **Tab** delimiters. Any other delimiters will generate a file format error in AGTEK (see left dialog below)—in that case, the find and replace function in **Windows Notepad** can be used to change the delimiters to a compatible type (see **Example 1** on next page).

Compatible File Name Extensions:

When receiving a text file from a third-party surveyor, you likely won't have control over the file's name extension, but AGTEK will only read PNEZ-formatted text files if they have the **.AGT, .CSV** or **.TXT** name extension. **AGT** files are actually exported from AGTEK software in a space-delimited custom PNEZ format (see bottom of next page, and page 292, for more details on AGT files), **CSV** files are typically comma delimited and **TXT** files are typically space or tab delimited. If a text file has a non-compatible name extension (**.ASC, .PTS** and **.PRN** are some possibilities), it will generate an error in AGTEK (see right dialog below)—in that case, open the file in **Windows Notepad** to preview its format (see next page)—if the format looks to be compatible, close the file and use **Windows File Explorer** to **Rename** the file so it has a **.TXT** (if **Space** or **Tab** delimited) or **.CSV** (if **Comma** delimited) name extension.

File Format Error Dialog:



File Name Extension Error Dialog:

