

Modeling with ASCII Text Survey Data Overview and Compatible Data Formats

Survey data may be received in a plain-text file format (ASCII or UTF8) containing survey point records documenting horizontal coordinates, elevation and other point *attributes*. All information for each survey point occupies a single line (*record*) in the text file and each attribute (*field*) for a survey point record is separated (*delimited*) by a space, tab, comma or other text character. Survey text files commonly result from “on the ground” data-collection methods (via optical total station or GPS) and they can be exported from any commercially-available survey software system. Survey systems typically offer various field-sequencing/field-delimiting options for exporting text files; if survey data text files will be used with AGTEK software, ask the text file provider for an AGTEK-compatible format 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 Numbers (Field 1)** are optional for **AGTEK 4D** but they are required for **AGTEK 3D**. **Point Labels (Field 5)** are optional but they may help to identify break-line points when included. If the received file’s sequence for **Field 2** and **Field 3** is reversed as **EN (XY)** rather than **NE (YX)**, **AGTEK 4D** users can specify this during import via the *Point Order* dialog shown on page 198 [**AGTEK 4D** also includes a **ENZ Text Files (*.csv; *.txt) read option** under its **File > Import/Open** menus]; before importing a **EN** sequenced text file, **AGTEK 3D** users would need to modify the file in **Microsoft Excel** by rearranging the field columns (swap the **Field 2** and **Field 3** columns) then **Save As** using **Excel’s CSV (Comma delimited) (*.csv)** option or the **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 may conveniently identify the attribute field sequence in 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** or program crash in AGTEK (see left dialog below).

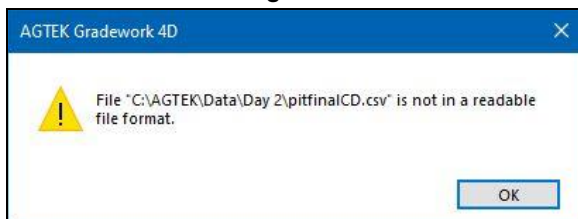
Compatible Attribute/Field Delimiters:

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 296, 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:

