

# Documentation for the 3-column utility script in MATLAB

David E. Haddad

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## Description

The 3-column utility script was written in MATLAB and was designed to prepare multi-column LiDAR point cloud datasets for use with the Points2Grid (P2G) and ArcMap applications. Inputs to the script include a single multi-column and comma-, space-, or character-delimited ASCII text file. The script returns two 3-column ASCII text files named “xyz\_ArcMap.txt” and “xyz\_P2G.txt” that may be used in ArcMap and P2G, respectively.

## Operating steps

### Notes

**\*\* The header in the input file must be deleted prior to running the 3-column utility script.**

**\*\* The input file must be located in the same directory as the script.**

**\*\* The 3-column utility script will create two new files in the same directory as the input file and script.**

**\*\* The user is advised to rename the output text files if multiple datasets are being processed. The 3-column utility script will overwrite any older files that have been named “xyz\_ArcMap.txt” and “xyz\_P2G.txt” by default.**

```
File Edit Text Go Cell Tools Debug Desktop Window Help
Stack: Base
1 % 07/2008
2 % David E. Haddad
3
4 % This is an efficient version of the script "three_column_utility.m" that
5 % is designed to clean very large datasets by loading a multi-column matrix from an
6 % existing text file and exporting two 3-column text files (one for ArcMap with a
7 % header, and another for P2G without a header). Greater efficiency is achieved
8 % by processing reducing the number of copies of the dataset in memory.
9
10 % IMPORTANT NOTE: You cannot use MATLAB's "load" command if your original data text
11 % file has a header. MAKE SURE YOU DELETE THE HEADER!
12
13 % Here we go...
14
15 clear all
16
17 % CHANGE THIS TO YOUR INPUT FILE NAME
18 xyz_data = load('input_filename.txt');
19
20
21 % For P2G (doesn't need a header):
22 dlmwrite('xyz_P2G.txt',xyz_data(:,1:3)); % comma delimited
23
24
25 % For ArcMap (needs a header):
26 fid = fopen('xyz_ArcMap.txt','wt');
27 fprintf(fid,'x,y,z\n'); % writes headers to text file
28 fclose(fid);
29 dlmwrite('xyz_ArcMap.txt',xyz_data(:,1:3),'-append'); % comma delimited,
30 % appends new xyz
31 % matrix to text file
32
```

- (1) Replace the text “input\_filename” with the name of the multi-column ASCII file to be prepared for use in P2G or ArcMap.
- (2) Rename the output text files (if multiple datasets are to be processed).
- (3) Run the script in MATLAB.