

NOISEMOD.3PC HELP DOCUMENTATION

What is NOISEMOD.3PC?

Noisemod.3pc is a Geopak application that generates a Mn/DOT specific ASCII file. This ASCII file is used to input data into Mn/DOT's Stamina noise model program.

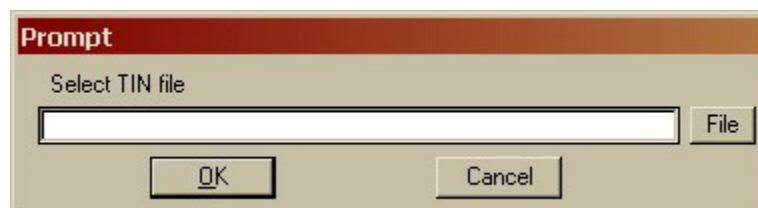
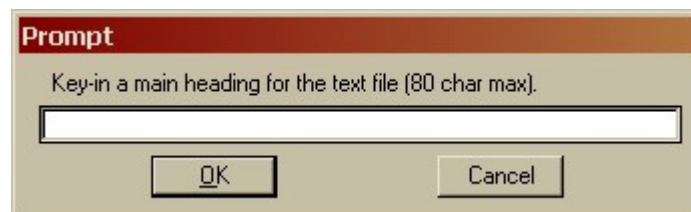
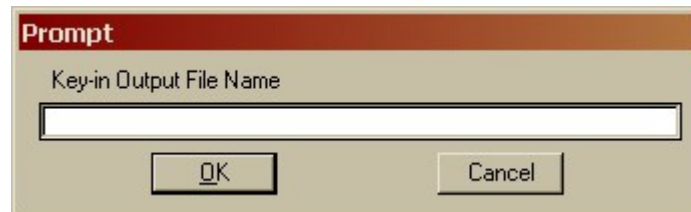
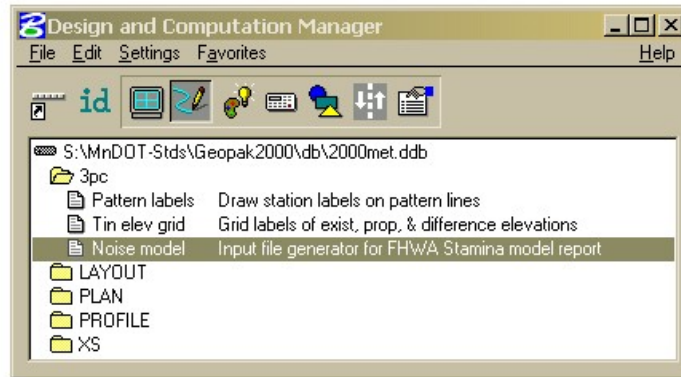
What is needed to process noisemod.3pc?

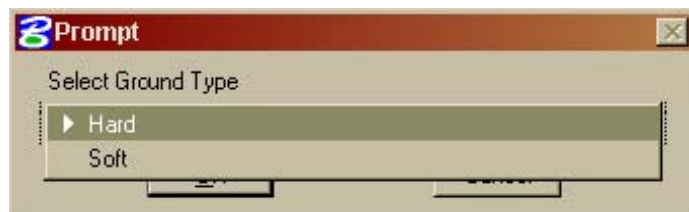
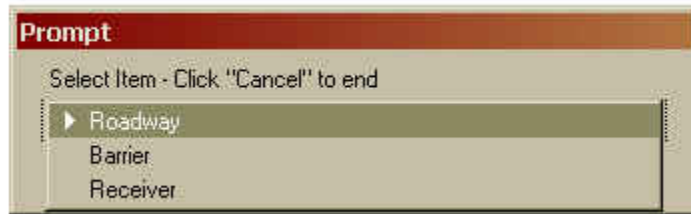
Several files are needed: Noisemod.3pc – Geopak criteria file
 2001eng.ddb/2001met.ddb – Geopak Design and Computation Manager database .TIN file – A Geopak DTM (.tin) file .DGN file – A MicroStation plan view file (2d) mndot01.cel – Cell library with cells “ALI”, “COS”, and “X” 3D DGN file – A MicroStation 3D plan view file (If using option to draw to 3D file.) mn-image.cel – 3D Cell library with cell “TH5” (If using option to draw to 3D file.)

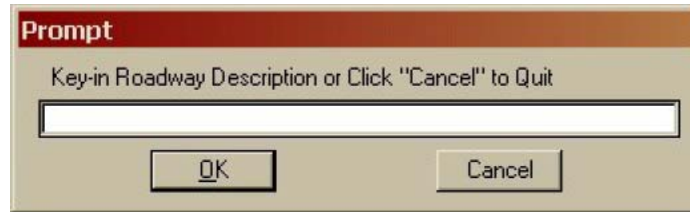
Procedure:

1. While in a plan view design file (most likely a topog file), kick off noisemod.3pc from D&C Mgr by double clicking the “Noise model” item while in the design mode.
2. When prompted, select the Working Units for the project (English or Metric).
3. When Prompted for “Key-in Output File Name, enter the name of the ASCII report file you will be generating. Be sure to include the full path in this name if it is to go somewhere other than the current working directory. (Ex. c:\prj\th169\ th101.out)
4. Next key in a main heading for the ASCII text file. (80 character max.) You may wish to indicate such items as general job location, date of report, .TIN file used, etc.
5. Next identify the TIN file. It can be typed in or selected by clicking the “File” button.
6. If you want line strings representing the roadway, top of barrier, and the bottom of barrier drawn into a 3D file, select “Yes” Note that this will not actually do the drawing at this time, it only creates a text file named “3d_draw.xyz” which contains the commands to do the drawing. This process will be explained at the end of this instruction document.
7. Next select the type of data to be collected. (Roadway/Barrier/Receiver).
8. Upon selection of the 3 options, you will be prompted for the number of that item you have. Depending on which option you selected the dialogs will look as below.
9. If you selected receiver, you will be prompted for the type of ground (hard or soft).

7. 10. For each of the 3 options (Roadways, Barriers, & Receivers), you will next be prompted for a description. Depending on which option you selected the dialogs will look as below. (80 character limit, generally much shorter though.)
8. 11. If you selected Roadway you have the option to enter traffic data at this time.

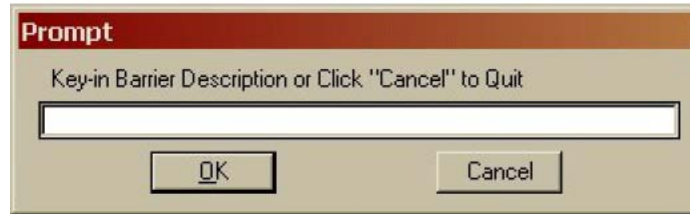






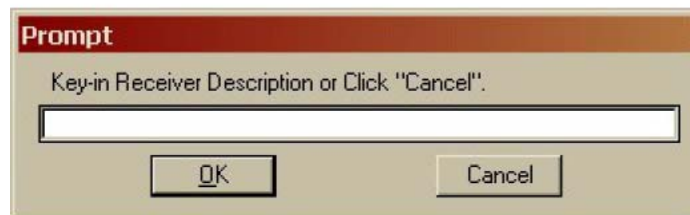
Prompt

Key-in Roadway Description or Click "Cancel" to Quit



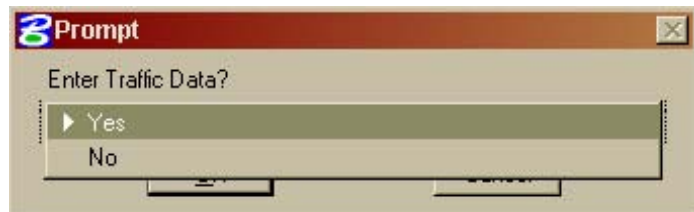
Prompt

Key-in Barrier Description or Click "Cancel" to Quit



Prompt

Key-in Receiver Description or Click "Cancel".



Prompt

Enter Traffic Data?

☒ Yes

☐ No

- a. If “Yes” is chosen, you will be prompted for car volume, car speed, medium truck volume, medium truck speed, heavy truck volume, & heavy truck speed.

The image displays six sequential 'Prompt' dialog boxes, each with a title bar containing a blue 'B' icon and the word 'Prompt'. Each dialog box has a text input field and two buttons: 'OK' and 'Cancel'.

- 1. Title: Key-in Car Volume
- 2. Title: Key-in Car Speed
- 3. Title: Key-in Medium Truck Volume
- 4. Title: Key-in Medium Truck Speed
- 5. Title: Key-in Heavy Truck Volume
- 6. Title: Key-in Heavy Truck Speed

12. After entering the Roadway Traffic Data (Step 11) or Barrier Description (Step 10), you will get one of the following dialogs. For the Roadway Point Description or Barrier Point Description options, limit this entry to just a few characters. (Max of 5 is recommended.) For the Barrier Height option, enter appropriate value.

A dialog box titled "Prompt" with a red header bar. Below the header, the text "Key-in Roadway Point Description" is displayed above a single-line text input field. At the bottom, there are two buttons: "OK" and "Cancel".

or

 A dialog box titled "Prompt" with a red header bar. Below the header, the text "Key-in Barrier Height" is displayed above a single-line text input field. At the bottom, there are two buttons: "OK" and "Cancel".

followed by:

 A dialog box titled "Prompt" with a red header bar. Below the header, the text "Key-in Barrier Point Description" is displayed above a single-line text input field. At the bottom, there are two buttons: "OK" and "Cancel".

1. 13. After entering a Receiver Description (step 10), or after entering the Roadway Point Description or Barrier Point Description (step 12), you will get the following dialog.
2. 14. At this point you will select a coordinate position in the design file by using a MicroStation data point (DP) command. At each DP location, a cell ("ALI" for roadways, "COS" for barriers, and "X" for receivers) is placed along with a text element that is your point description followed by a number that is incremented at each DP starting with 1 (Receivers are not incremented). These are drawn as graphic groups. Also, for Roadways & Barriers, the points are connected with lines.
3. 15. Within the Roadway Points and Barrier Point cycles, an unlimited amount of DP locations are allowed. For Receiver locations, only one DP location is allowed per Receiver location. To exit out of the DP cycle select the Cancel button.
4. 16. There are a maximum of 30 Roadway, 20 Barrier, and 40 Receiver locations. To exit out of a specific cycle, simply hit the Cancel option while at the following prompts.
5. 17. This program will allow you to select any item type (Roadway, Barrier, Receiver) in any order. However, you will normally start with Roadways, then Barriers,

and finally Receivers.

.18. When all locations have been defined, and you wish to exit the process. Select the Cancel button from the Select Item Prompts.

.19. Select the OK option from the Processing Complete prompt to exit.

6. 20. Next open up the ASCII output file this process created (named in Step 3) to verify the results. Note that additional editing and manipulation will be required before this file can be input into the Stamina program.

.21. If you selected “Yes” in the “Draw 3D Line Strings” option in step 6 and you now want to draw the line strings into a 3D file:

- .a. Copy a 3D seed file into your project directory.
- .b. Access this 3D file with MicroStation.
- .c. At the command line, type in @3d_draw.xyz.
- .d. If you fit the view you should see:



Prompt

Key-in Roadway Description or Click "Cancel" to Quit

Prompt

Key-in Barrier Description or Click "Cancel" to Quit

Prompt

Key-in Receiver Description or Click "Cancel".

By clicking the cancel option, you will retreat back to the item selection prompt seen below.

Prompt

Select Item - Click "Cancel" to end

- ▶ Roadway
- Barrier
- Receiver

Prompt

Select Item - Click "Cancel" to end

Receiver ▼

Prompt

Processing Complete

- i. Roadways – a line string connecting the points entered
- ii. Barriers – two line strings connecting the points entered (top & bottom of wall)

- iii. Receivers – a vertical line (5' or 1.5 m) at the ground elevation with the cell "TH5" at the top. This cell was only chosen & drawn so you can see something in the "top" view.