Updated Magnetic variation data for FS9 FSX-P3D-MSFS

Magnetic variation data calculated by FS9 date back to 1988 and have significantly changed (several degrees in some part of the world). Those used by FSX, P3Dv1-4 and MSFS2020 are identical and date back to 2009. P3DV5 and P3DV6 use more recent data (around 2018-2019).

FS9, FSX, P3D (all versions), MSFS2020 and presumably MSFS2024 calculate magnetic variation using a special latitude/longitude table that is contained in the MAGDEC.BGL file. Details on its structure and the way it is used by the simulator are available in this FSDeveloper Wiki article.

The new provided MAGDEC.BGL table corrects all magnetic variations for FS2004 & FSX-P3D-MSFS based on values calculated from the recent WMM2025 model at epox January 1st, 2025 and coded to the special normalized representation used in the MAGDEC.BGL file.

Additional details on how the simulator uses different "magnetic variation" data (MAGDEC.BGL file, ILS, navaid and airport magnetic declinations as defined in BGL files) can be found in this article.

This package contains updated (2025) MAGDEC.BGL files for both FS2004 and FSX-P3D-MSFS as well as a test and information program (Sim MagVar Calculator).

Installation of the new MAGDEC.BGL files

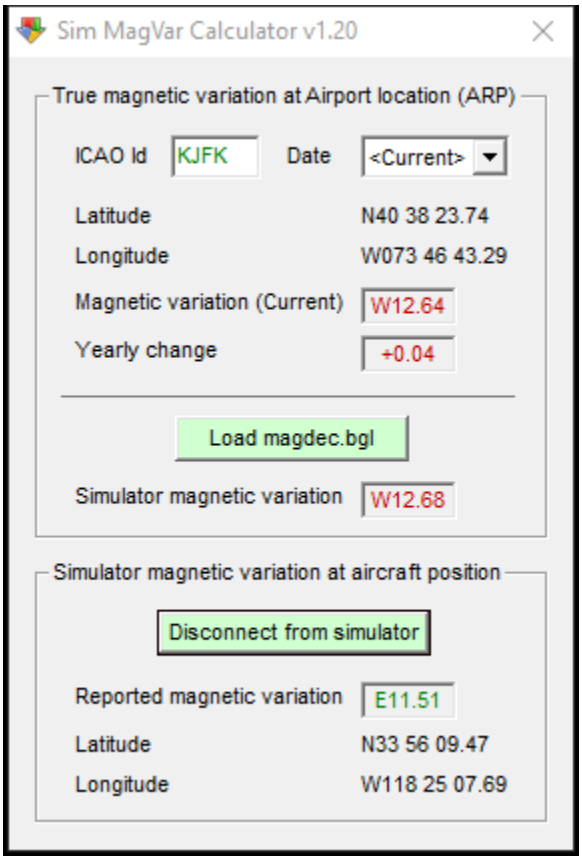
- Close the simulator since you will not be allowed to replace the file while it is running,
- Locate the MAGDEC.BGL file. For FS9, FSX and P3D (all versions) this file is located in the *Scenery\Base\Scenery* subfolder
  For MSFS2020, MAGDEC.BGL location depends on software provider:
  Microsoft Store:
  C:\Users\LOGINNAME\AppData\Local\Packages\Microsoft.FlightSimulator_8wekyb3d8bbwe\
  LocalCache\Packages\Official\OneStore\fs-base\scenery\Base\scenery
  Steam:
  (STEAM
  DRIVE):\Steam\steamapps\common\MicrosoftFlightSimulator\Official\OneStore\
  fs-base\scenery\Base\scenery\
- Keep a copy of the stock file or rename it as *magdec.bgl.bak*. (Do not use a bgl extension if the file is kept in its native directory). If the file is protected or locked (Store edition) additional actions will be required in order to rename the file and then copy the new file into the same folder,
- In the provided package, select the updated file you want to use, either FS9 or FSX-P3D-MSFS,
- Copy the new MAGDEC.BGL file into its original subfolder

Simulator will rebuild its index at first launch and the new magnetic variation data will be applied.

Sim MagVar Calculator

This small program will enable you to:

- Calculate the real magnetic variation at any airport at the current date or any date from 2015 to 2030,
- Calculate the magnetic variation at any airport from a defined MAGDEC.BGL file,
- Report the simulator magnetic variation at aircraft position while connected (FSUIPC or XPUIPC module is required).



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