

VehicleSim Database Builder

The VehicleSim (VS) products CarSim, TruckSim, BikeSim, and SuspensionSim for Windows include a main program (e.g., `CarSim_64.exe`) that builds and manages databases. The generic name for the main program is *VS Browser*. The VS Browser is used to view and edit data, run simulations, visualize results with plots and video, access on-line help, and connect with external software tools such as MATLAB Simulink from MathWorks.

Each product includes a collection of examples of many simulations, covering different vehicle types and simulation scenarios. Databases can be built at any time from the VS Browser.

When launching a new version for the first time, a window appears with the title **Select Recent Database** (Figure 1). It initially has a message describing options for building a new database or accessing older databases for use in the new version (1).

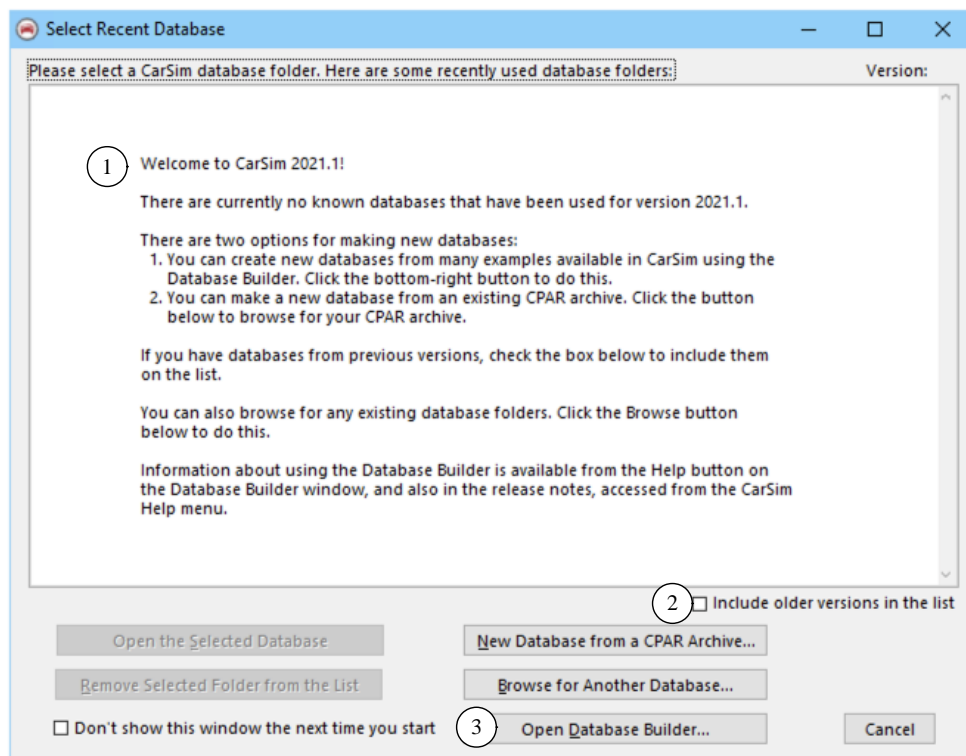


Figure 1. Select Recent Database window shown when opening a new version of CarSim.

Note Figure 1 was made for CarSim version 2021.1. Other than the product name and version number, the information is the same for all four products in releases 2021.1 and newer.

If you have databases from previous versions, you can check the box **Include older versions in the list** (2) and the window will show databases that were used in the previous version of the product.

To get new examples, click the button **Open Database Builder** (3) to bring up the **Database Builder** window (Figure 2).

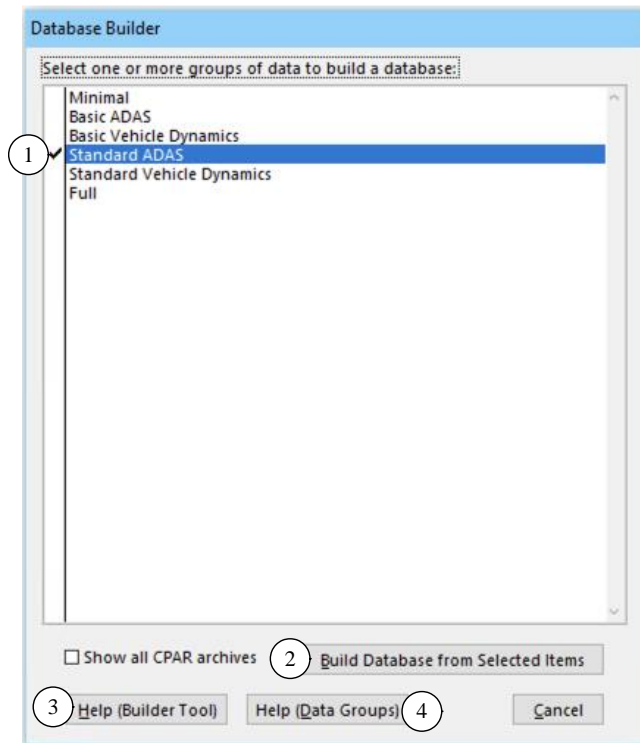


Figure 2. The database builder window showing only predefined database options.

Notice that there are a few predefined options. When one or more groups of data is selected (1), the button **Build Database from Selected Items** (2) becomes active.

There are also two **Help** buttons. The first button (3) opens this document, which is also available from the Browser Help menu in **Help > Tools**. The second button (4) opens a document specific for the product and version that describes the specific data groups that are available. That document is also available from the Help menu in **Help > Release**.

Clicking the **Build Database from Selected Items** button (2) will cause the VS Browser to prompt you for the name of an empty folder to use for the new database (Figure 3).

When the **Browse for Folder** window appears, you will normally take the following steps:

1. Navigate to the location for a new database folder, e.g., Documents (1).
2. Click the **Make New Folder** button (3). Windows will make a new folder with the name New Folder (not shown), with the name selected so it is ready to change.
3. Change the name to something appropriate for the new database, e.g., CarSim_Data_Std_ADAS (2).

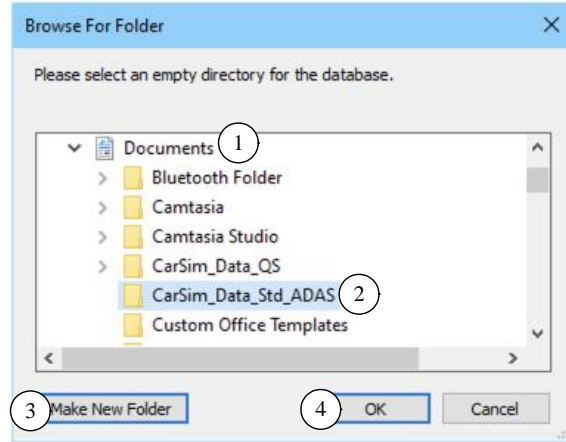


Figure 3. Prompt from CarSim to identify an empty folder for a new database.

4. After setting the name, make sure that new newly named folder is selected in the window (as shown), and then click the **OK** button (4).

The Browser will now extract information from CPAR archives to build the database. The time needed to do this depends on the size of the selected database. The CarSim **Standard ADAS** option shown in the Figures has about 200 example runs and takes a couple of minutes to build.

You can access the Database Builder any time after the initial installation of the VS product. It can be viewed whenever the Browser is launched and the **Select Recent Database** window appears, by clicking on the button **Open Database Builder** (Figure 1).

The Database Builder can also be brought up directly from within the Browser using the **File** menu (1) command **Open Database Builder** (2) (Figure 4).

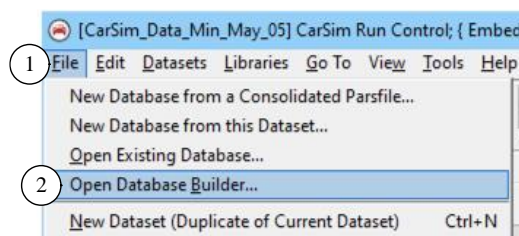


Figure 4. Use the File menu command Open Database Builder.

Note Three of the first four options in the **File** menu correspond directly to three of the buttons in the **Select Recent Database** window (Figure 1).

None of the basic options shown in Figure 2 include specialty examples, such as RT HIL systems, software development kit (SDK) examples, etc. To access these, and other specific categories of examples, check the box **Show all CPAR archives** (3) (Figure 5) to see the entire collection.

Notice that many CPAR archives are available, shown below the six database options shown earlier. These CPAR files are in the folder `<product>_Prog\Resources\CPAR_Archives.`

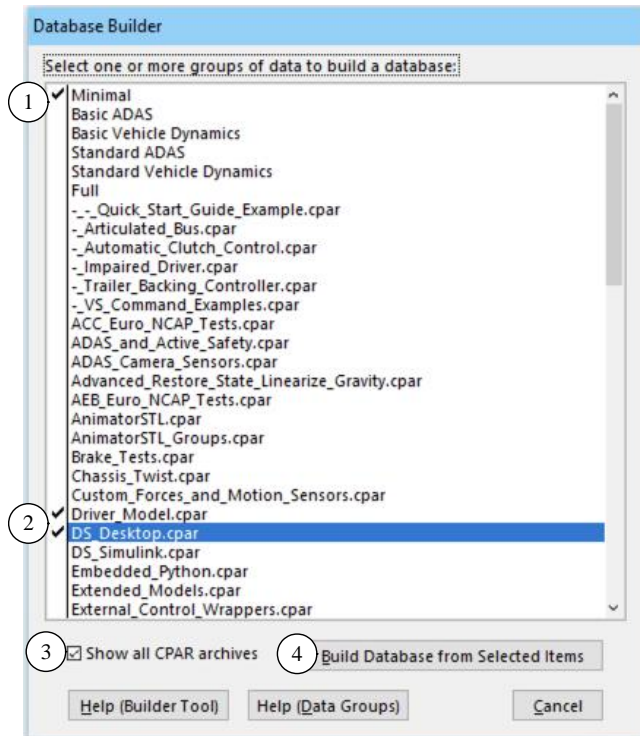


Figure 5. Display when CPARs are also shown.

The settings shown in Figure 5 have two CPAR categories selected (2), along with the **Minimal** option (1). In this case, clicking the button **Build Database from Selection** (4) will cause the Browser to build a clean database that includes the examples from the **Minimal** database, plus examples from two additional CPAR archives: `Driver_Model.cpar` and `DS_Desktop.cpar`.

Note The Database Builder is only intended to be used with the special CPARs installed in the `product_Prog\Resources\CPAR_Archives` directory. For other CPARs, use the **New Database from a CPAR Archive** button on the **Select Recent Database** window, or **File > New Database from a Consolidated Parsfile**.