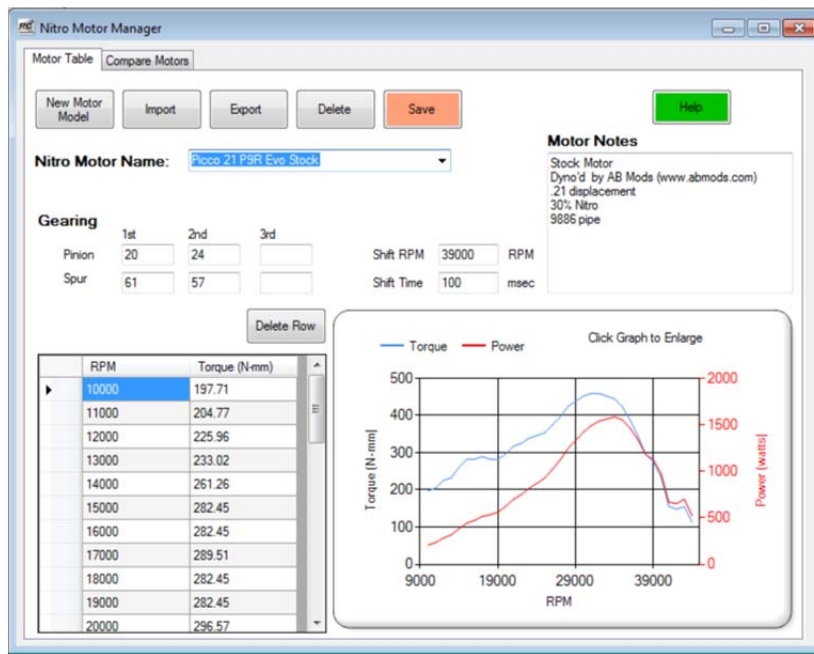


# Nitro Motor Manager User's Manual

## General

The Nitro Motor Manager allows processed data from a Flywheel Dyno test to be assigned for use as a model in the Nitro Motor Library. The data must be in the form of a RPM versus Torque table. Once the Nitro Motor has been created it can be assigned to a car and then used in the acceleration Simulation Tab on the main page to investigate the effect of gearing, shift RPM and shift delay on straight line vehicle acceleration.



The manager allows Nitro Motor files to be Created, Imported, Exported, Deleted and Edited.

Two motors can also be compared graphically on the "Compare Motors" tab

## Motor Table Tab

### **Edit Model values**

Simply select a Nitro Motor from the list, change any of the values as needed and then click **Save**.

## Create a New Motor Model

Click the “New Motor Model” and enter a suitable name for the motor. Enter values for the 1<sup>st</sup> gear pinion & spur as a minimum. The remainder of the boxes can be left blank or edited later.

**Nitro Motor Manager**

Motor Table | Compare Motors

New Motor Model | Import | Export | Delete | Save | Help

**Nitro Motor Name:** Enter New Motor Name

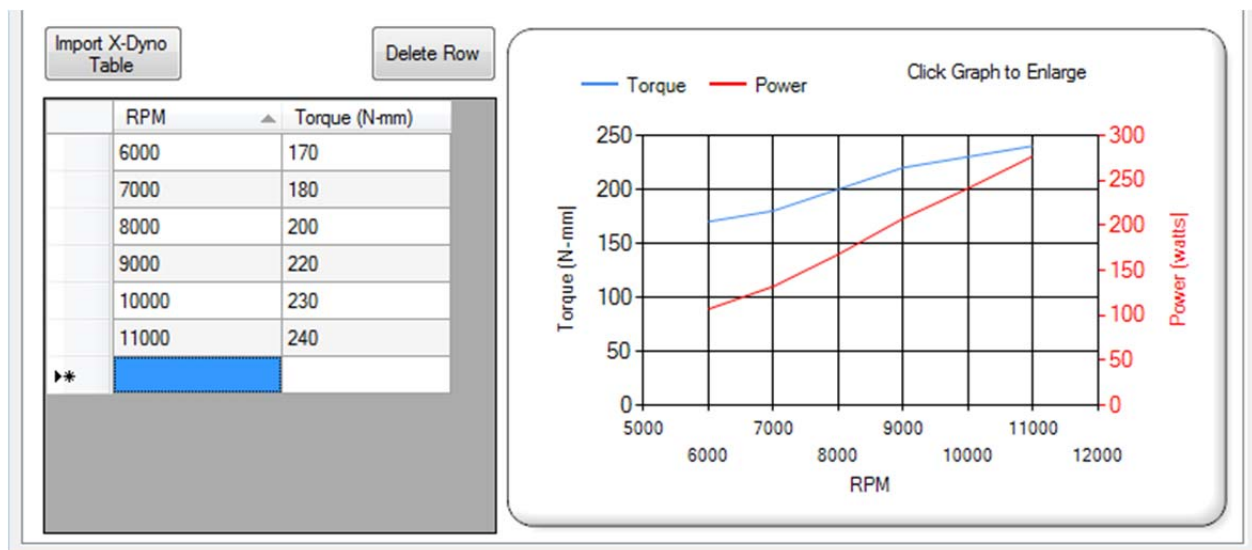
**Gearing**

	1st	2nd	3rd		
Pinion				Shift RPM	RPM
Spur				Shift Time	msec

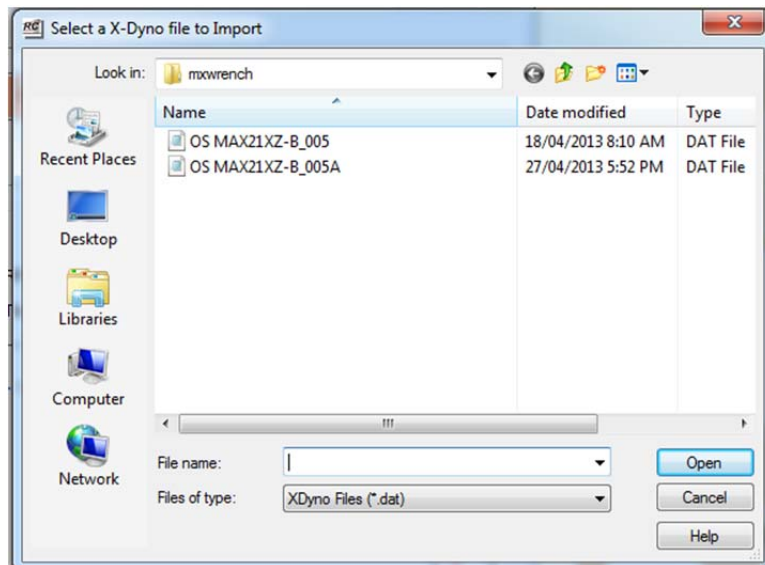
**Motor Notes**

Next enter the RPM versus Torque data in the table. There are two methods of entering the data, simply typing the values into the table or Import a processed data file from the X-Dyno.

As values are entered the graph will update displaying the torque and calculated power. Values should be entered sequentially from low to high RPM. The minimum recommended RPM increment is 100 RPM. Smaller increments can be entered however this will increase the execution time required to complete the simulation. The maximum increment should be no more than 1000 RPM for a motor with a useful RPM range up to 35-40 kRPM.



Clicking the “Import X-Dyno Table” button will open a File Dialog that will allow you to select the folder containing the file. The normal file extension for a X-Dyno file is .dat so only files matching that criteria will be displayed by default.



Select the file, click open and the data will be imported into the table. That's it.

## Import

The Import button will load a RC Crew Chief Nitro Motor file with the .rcn file extension. Files in this format can be downloaded from the library on the website or you can import a file shared by one of your fellow racers.

Clicking the button will open a File Dialog similar the one shown above. Navigate to the folder containing the desired file and click “open”.

## Export

Select the file to export from the drop down list, click Export, and select a folder then click “save”.

## Delete

Select the file to delete from the drop down list, click Delete. A message box will pop up giving you a chance to change your mind in case you clicked the button by mistake.

## Compare Motors

Two motors can be compared head to head by selecting different models from the drop down boxes. Power is displayed in the upper graph and torque in the lower. A performance summary on the left displays the peak power and torque values for both motors.

