



1. Latest Version

V2.5.2 April 2012

Problems / Issues

Should you identify a problem, please contact DTec providing as much information about the circumstances surrounding the problem as possible. Detailed information allows us to reproduce the problem (hopefully) and thereby improve the product.

If the problem is localised to a single .DYN2 file then by all means send us the file also.

The DYNertia2 Manual

The DYNertia2 manual is available for free download from the DTec web site.

We suggest you read the manual FIRST to familiarise yourself with the programs installation and operating procedures.

Note: changes in maintenance releases are not updated in the DYNertia version manuals.
Only major versions changes will include revised documentation.

2. Version Log

2.5.2 April 2012

- As 2.5.2Beta but bug fix for initialisation error applied (error55 description 62)
- Program password option added to software setup menu

Beta 2.5.2 February 2012 (test software, pre- release version)

- More information added to Settings.txt file
- Auto set of the current ratio to the last ratio set, mode added for faster testing of multiple vehicles
- Can edit user information (templates) from the View Graphs screen ('offline' editing possible now)
- Interface with D2Cal allows for torque correction on dyno's with engine RPM not equal to roller RPM

2.5.1 September 2011

- Min/Max speed selections fixed
- RAD added to 'Weather Watch' live data screen

Beta 2.5 July 2011 (test software, pre- release version)

- Addition of strip charts for dyno run screen
- Addition of strip charts for live data view
- Addition of strip charts for live 'Weather Watch'
- Dynamic Ratio function added (TAC input as only RPM source option)
- More TAC derived RPM functions added
- Bug in maximum recorded RPM selection system fixed
- Interface with D2CAL modified
- Approximate dyno run time function added (dyno service interval)
- Several "Information" and "Warning" messages added
- More flexible combined brake and inertia operation
- Bug in Speed dial display fixed (x!0 error in some modes)
- Revised Slip calculation screen operation
- Revised Trend screen operation
- Bug in run time gauges not holding their settings fixed
- F12 shortcut now stops runs
- Minor changes to graphics and wording



Beta 2.4.5 June 2011 (test software, pre- release version)

- Analogue Gauges added to static and run modes
- High visibility analogue alarm added
- Support for very low Inertial Mass RPM added

2.4.4 May 2011

- Load Cell / Gear Ratio system modified

Beta 2.4.4 May 2011 (test software, pre- release version)

- Delete key clears all Traces sets in Main Screen Graph.
- Multiple "On Graph Text" for Main Graph
- Main screen menu has "On Graph Text" menu added
- "On Graph Text" added for all other graphs
- Compare Graph changed to cross hair cursor
- Main Screen - Setup Menu has Setup Weather station added
- Weather Station support added (optional hardware required)
- "Auto Shift Traces Right After Run" setting moved to Software Setup
- Excessive correction warning added
- Functions not appropriate to Graph / DYNO modes selectively disabled
- SETTINGS.TXT option added to assist documenting user added information
- Bugs in Brake and Brake & Inertia calculations resolved
- Automatic Graph Scaling improved

V2.4.3 April 2011

- Improved conversion accuracy for Imperial Moment of Inertia
- Occasional misread of dial values resolved
- Error in large run summary Torque display resolved
- View all graph trace colours changed for better printing (difficult compromise....)
- Last Trace set now on selective load (same as other traces)
- Print for 'Single Trace' colours improved

Beta V2.4.3 February 2011 (test software, pre- release version)

- Multi Trace floating window extended to operate in Speed and RPM modes
- Function to end run at preset speed added
- Speed Mode graph error fixed

V2.4.2 February 2011

- Distribution Packaging error fixed
- Speed display bug fixed
- Run view bug fixed

V2.4.1 January 2011

- Floating data window (single trace data) replaced by multi trace data window (in rpm mode).
- Bug in Compare (Trend) screen fixed.
- Finer autoscaling graduations added.
- Numerous small "tweaks"



V2.4.0 December 2010 (for hardware version '003' and greater)

- Hardware Not Found changed to cover DYNertia2 and data acquisition system operation.
- Automatic Roller / Engine RPM ratio calculation added when second RPM source is used.
- Difference Graph has ability to shift "on screen" zero point.
- Difference Graph has "in graph" trace annotations added.
- Difference Graph has cursor added in Data scales at graphs RHS.
- View A Trace Set has "in graph" trace annotations added.
- View A Trace Set has print added
- View A Trace Set displays Slip %
- View A Trace Set data display includes Slip %
- View A Trace Set - Information indicates Inertia or Brake mode for previously recorded runs
- Slip Analysis (and print) added.
- Main Graph data display includes Slip %
- Secondary RPM source added with Pulses / rev to derive engine RPM.
- Live Data display now includes Secondary RPM display.
- Support for "brake" based loads added - multiple changes and re-wording.
- Tacho mode renamed "Monitor Mode", provides Tacho / Speed for Inertia Mode Tacho / Speed, Torque and Power for Brake modes.
- Gauge filtering option added to Hardware Setup screen.
- ADC Filtering option added to Hardware setup screen.
- Gauge disable added for slow PC's.
- Displays for Data Channels during Run and Gauge operation
- Low and High Alarm points for Data Channels during Run and Gauge operation
- Runtime gauge maximums now cover RPM, Speed and Torque setting - maximum Power automatically calculated.
- Analogue channel 5 allocated to Load Cell when in Brake mode - unchanged in Inertia mode.
- Sensor Delay correction removed.
- Optical sensitivity removed - not required.
- Multiple Reflector support removed.
- Setting to allow Brake based loads to include Inertial power absorption.
- Fixed bug in sensor calibration for user .CSV files on Channel 5 no other channels affected).
- Analogue gauge telltales, controls and resets removed.
- Point to Point print added.
- Directory function from Main-View menu renamed to File Explorer to match actual Window title.
- File Explorer indicates Inertia or Brake mode for previously recorded runs
- "Page Turner" based remote control added.

V2.3.1 August 2010 (for hardware version '002')

- Fixed Graph Zoom problem that allowed min RPM and max RPM to be the same
- Change in Trace Set - Load a Run, now always opens in default directory rather than in currently loaded trace sets directory.
- New buttons added to Load Trace Set from the currently load trace sets directory.
- Fixed bug with DataPAC indicator (rescan of ports didn't turn of the indicator)
- Comma Delimited ASCII (CDA) menu renamed to Comma Spaced Variable (CSV)

V2.3.0 May 2010

- Support for Mechanical Losses Correction (D2Cal).
- Integral USB driver installation removed - now standard Windows procedure.
- Difference Graphing and Printing Added.



V2.2.1 April 2010

- Manual entry of all gear ratios added.
- User naming of gear ratios 1 to 8 added.
- Fixed bug in File View which caused current path not to be automatically loaded.
- Added small motor support (<1).
- Variable Gauge resolution depending on range.
- Exact Value or preset ranges for Power and Torque.
- File Explorer Graph trace uses Trace Set colours.

V2.2.0 March 2010

- Gauge Scale flicker eliminated.
- Greater runtime RPM and Speed Choices from a revised menu.
- Peak Hold Reset Buttons now "depress".

V2.1.3 March 2010

- Error in Large Run Summary fixed.

V2.1.2 March 2010

- Minor software tweaks.

V2.1.1 February 2010

- Large "Run Summary - maximum power & torque" option added after user request.

V2.1.0 February 2010

- USB Driver Installation embedded within DYNertia2.
- Windows Desktop over-ride included.
- More DataPAC tools.
- More data display tools added.
- More trace display options.
- Cross Hair cursor with cursor in right hand scale(s).
- Minor changes to Layout / Menu's.
- Data trace disable for unused traces.
- Run AUTONUMBER option added after user request
- File Association added (DYN2 files can be open by "double clicking")
- Runtime Tacho scale redraws on scale change.

V2.0.0 January 2010 (test software, pre- release version)

- DataPAC option and tools added
- Data display tools added
- Data set consistency checking & warning added
- More trace display options
- User configured Data Calibration curves added
- Export system expanded to include Data
- Minor changes to Layout / Menu's
- Tacho filtering introduced
- Merge Run system improved during throttle roll offs
- Bug fix where Runtime tacho would not visually change scale unit user exited and re-entered DYNO mode.



V1.0.1 October 2009 (Maintenance release)

- Bug fixed, edit boxes for Inertia entries generated occasional runtime errors
- Start-up issue with Windows Regional Settings that used a "," (Comma) instead of a "." (Period) as the decimal separator. Warning now if this situation is identified and exit. User must change regional settings to use a "." (Period) as the decimal separator.
- Bug that caused print preview window to shrink when changing pages (printing was unaffected)

V1.0.0 November 2008

- Initial Release

3. General Information

Suggestions

We welcome your ideas for future product enhancement and development.

Specific Construction Help

Given the huge variation in design, construction (and sometimes unfortunately quality), DTec cannot provide specific construction advice. However the DTec web site contains general information covering the principles and general construction requirements of Inertia dyno's.

Ambient Correction

DYNertia2 includes four of the most widely used ambient correction factors. It is somewhat surprising to find the number of "odd" variations listed to supposed standards - especially on the Internet.

DYNertia2 contains only correction standards that have been validated from formally published standards and documentation.

Your Experiences

Feel free to tell us about your individual dyno construction and operating experiences, as you may have seen on the DTec Web Site we provide free technical articles to guide constructors, and practical examples, challenges and solutions are always valuable.

Email your pictures - we are always interested in individual's designs. Who knows... your dyno might end up on our website!

Updates

Please check the DTec Web site (www.DTec.net.au) for updated software by viewing the 'Dynertia Version Log'. Should there be a more recent version than you have then please contact us, we will provide the latest software to suit your hardware free of charge.

Safety

We strongly urge you to keep safety at the forefront when designing, constructing and operating your dyno. Local codes and regulations may require specific precautions to be implemented to protect yourself, employees and the general public.

Guards **MUST** be fitted - covering rotating components and of sufficient strength to contain fragments should the mechanical system fail due to overspeed / overstress.

Happy Tuning!
The DTec Team.