DEPAC 201 Mill St. Rome, NY 13440 (315) 339-1265 www.depac.com
Dyno Systems Setting The engine testing Standards for this century

MAJOR System Upgrade Vers3 is now Available.

Very Many years in the making and using much feedback from all DEPAC host sites combined with our own learning. We have Listened. We keep rediscovering how the advanced Physics technology we use can provide us with even better results. The DEPAC method of intelligent dyno instrumentation is easily 100 times more Precise than the very imperfect method called ‘sampling’ (used by all others).

Some Features of Vers3 LINK:

Still does NOT REQUIRE Windows to operate! **Smart Inertia correction!**
This means you can run the DEPAC system on a 10 year old PC that most have thrown out because Microsoft has made older PCs Totally Obsolete for Windows (tell me your happy about Mircrosoft).

High Resolution Graphics and Mouse interface Automatically sets video mode and interface.

A Major Refinement of our Patented Technology for being the MOST Precise Dyno system you can use.... ***The MOST PRECISE DYNO System you can Use!***

Real Time “Machine-Gun” Dot mode in GrafPlot to show *Immediate* Torque and Power During the pull. Play back Machine-Gun Dots as often as you like. MUCH information here. Over-lay MGun Dots from many pulls to see patterns, trends, and instabilities. (NFA ‘34 legal).

Easy and Automatic Backup of data. Unlike HUGE Windows, Vers3 LINK is Small and creates very small Files and backup of many years work takes only a minute or so to a floppy disk.

BAR TACHOMETER on BarGraf and GrafPlot screens. Pops up as needed

Add up to 40 more High Quality Channel inputs (with Patented Smart Averaging). Total of 95 channels. 10 more User Defined channels. Channels can be added in Groups of 10 using DEPAC ISA-10 PC expansion cards and matcing remote input plug boxes. the First 4 channels on each box will accept Freqency or pulse rate inputs for direct translation of sensor data. (no lost information as with other methods). Inputs are 0 to +7.5 Volts and 4-20 ma output sensors (with over-range). Type-K Thermocouple adaptors available.

ISA-10 Channel Expansion Card and Plug Box.

These Type-K thermocouple Converters are built into our standard 9-Pin connectors and use the miniature blade type plug. Resolution is 0.2 DegF from 32 to 1400 DegF. (or 0 to 750 C). Indicator shows any fault conditions.

Create Images and get printouts (use Prnt-Scrn key) Get a GrafPlot image that can be emailed or printed (like below). Also while viewing the Numbers on the spread sheet the Prnt-Scrn key will provide a shortcut text printout using current settings.

At Left is a negative image of a GrafPlot screen dump. Note the Machine-Gun dots on Torque curve for Immediate feedback on engine operation during the test run. These MGun dots can be replayed at any time just by hitting the Insert key.

Keep in mind that each dot represents the result of an 8 Revolution Average. The spacing between the dots give you an indication of the rate-of-sweep. Any vertical dot plots show an engine that is not running smoothly.
Note the Bar Tachometer at the top of the screen.

These MGun dots are therefore Highly Meaningful and indicate True engine behavior.
Other systems you can use only take very inaccurate 'samples' compared to DEPAC's patented Method of Physics.

Run Multiple Monitors: We have always been able to **run 2 or more displays** with the DEPAC System (even before Windows). Simple, just use more than one PC. The Box can send data to more than one PC simultaneously. Each is completely independent, using separate keyboards, video monitors, and mice. Unlike Windows if one PC dies the other has all the data and continues to run. Since DEPAC uses PCs that are being discarded why not hook up 2 or more, especially with the new LCD flat panel displays now at reasonable cost. Put the LCD display on the dyno console. This setup requires a special Muliple output fiber-optic cable.

Optional 19" Rack Mount version for New Systems

Much More to Come: The DEPAC system keeps on evolving and will continue to add Value to all its hosted systems. Vers3 Upgrade applies to all existing systems and makes each system no less than the current production unit. Your DEPAC system holds high demand and value (besides the very Best in Performance). No Compromise Physics.

Immediate Plans are to finish the Ignition Timing (and Speed Ratio) module that will mount inside the blue box. (you will see a place for these channels in the Vers3 LINK). We also plan on creating a DEPAC Junior system for small engine testing. This system will be just a small Solid Brick and require use of a PC for all functions. It will have reduced channel inputs but will use Vers3 LINK and be able to expand with the ISA-10 expansion. The main advantage of the Jr. system is that its base cost will be a fraction of the current DEPAC blue box setup. Perfect high quality instrumentation for those homemade dynos for Karting.

A future DEPAC windows program Networked to the Dyno PC to analyze, translate, and communicate results to other platforms.

Universal Fuel Management System Simulates a fuel tank which never goes dry. This small tetrahedron tank can supply fuel to 1500 #/Hr or more. Five ports for supply and return of fuel in a recirculating engine system. Stainless steel and brass construction for use with any common fuel including diesel. A small fuel pressure gage is attached to monitor inlet fuel pressure. A single fuel flow sensor is placed in the high pressure fuel inlet and only registers fuel consumed by the engine. The Special pressure regulator beneath the tank is set to hold a set fuel level indicated by a clear vertical sight tube. The pressure (or Fuel Level) Regulator tries to maintain the set fuel level. It responds quickly to changing engine fuel demands (unlike a tank that uses carburetor floats).

The Whole purpose of this fuel system is that you can plumb the fuel lines just as you would in the application and therefore test for any potential problems. The Fuel system does Not provide any pressure to the separate engine's fuel system. It acts only as a fuel supply tank.

The Regulator Inlet pressure requirements depend on the maximum fuel flow. The regulator Must be able to supply fuel to match any engine demands, else tank will run dry.

Up to 500 #/hr -- Use inlet pressure of 20 PSI.
For flows up to 1000 #/hr-- require 30 PSI
Flows to 1500 #/hr and above require 50 PSI +

If your engine drains the tank then you do not have enough supply pressure (at full flow). The pump required is much larger than the fuel pump used by the engine's system. A small gage is supplied to show the actual inlet supply pressure.

Basic DEPAC System Cost: $10k A Custom system made for your application. Includes Torque sensor, Main processor box, Tach sensor, 8” Dia Tach Indicator, Remote correction factor sensor probe, 8 EGT probes and remote plug box, one pair of oil/water temperature probes. One Flow Technology Fuel flow sensor is supplied internally calibrated with linear correction. Vers3 LINK PC Program with fiber-optic serial-to-PC cable. Most important is DEPAC’s very advanced technology to give the most precise dyno test results than any other system. Other system just meet the SAE test accuracy requirement of 1%. DEPAC exceeds that by several orders of magnitude.

Options include Airflow, Oil/Fuel pressures, extra RTD temperature sensors, etc..

Vers3 Upgrade for all existing DEPAC Host sites - - - $1500.00 requires the blue box and CF sensor probe returned to DEPAC for slight modification and recalibration.

Universal Fuel Management System: $850.00 includes a length of chemically clear hose. As an option we may provide a Fuel pump that’s large enough for the application. (out to 2000 PPH).

ISA-10 Channel expansion system: $1750.. PC ISA card and remote plug box at 15’. Vers3 LINK can support up to 4 each ISA-10 expansions for a total of 40 channels. The first 4 channels of each box will accept pulse rate (frequency) inputs directly. Signal inputs are 0 to +5V with over-range to 7.5V. Supplies +24V power for most 4-20 ma sensors (using a 250 Ohm drop resistor to convert to 1 to 5Volts). Two Sensym style pressure sensors can be mounted directly inside the plug box, just as we have done with our other expansion boxes.

Pressure sensors: Ranges from +/- 1 PSIDI to +/- 30 PSID. Gauge sensors from 0-15, 30, 50, 60, 100, 150, 200 PSI. All selected for their quality and performance (not the cheapest) $200-250.

Air Flow sensors: All using pitot tube sensors to maximize response at full flow at the expense of limited range. Nozzles (AMCA) designed to inlet air and form a predictable velocity profile at the location of an averaging array of pitot pickups. 3” 4” 5” 6” 7” 8” 10” and 11” in Dia. $250 to $600

Temperature sensors: We have thermistor RTD probes for low and mid temperature ranges as well as Type K thermocouples.

Fuel Flow Sensors: We have quality sensors from Flow Technology that covers any range you need and also cover a very wide range for any one sensor. $1250 and includes calibration

Oil and Water Flow Sensors: Flow Technology makes excellent (and small) flow sensors to cover the range and sizes needed for Water and Oil flow requirements. About $1600 with calibration.

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DEPAC - - The MOST PRECISE
Dyno Instrumentation System you can use!