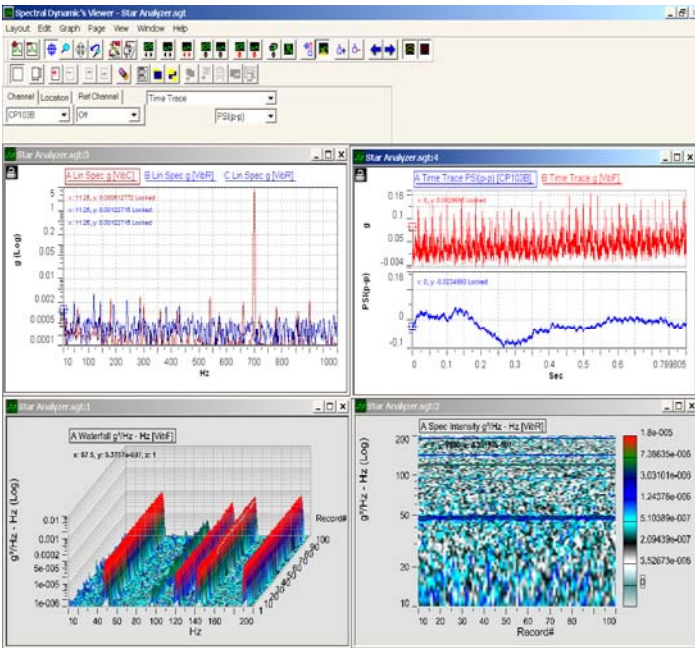




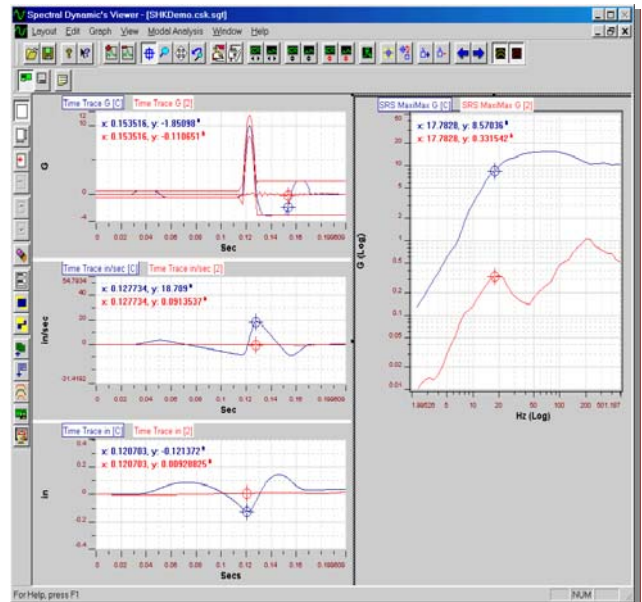
CATS Star Analyzer

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The Computer-Aided Test Suite™ **Star Analyzer** package is a standalone software package that offers unsurpassed analysis for variable speed measuring applications, along with general-purpose signal analysis. It allows you to analyze time stream data files without any additional hardware other than a PC. These data files could come directly from the Puma or the Puma Export Manager can convert time-streamed data from other sources. When selecting bandwidths lower than the original data bandwidth, we will filter, decimate, window, and Gate the data as per your setup. You also have the ability to increase or decrease your resolution, store the reprocessed data, and still have all of our real time display capability. It is not necessary to replay the entire data file. You can start and stop at different points in the data file and play the data back at different rates. Star Analyzer is an extremely powerful post-processing package.

- Post Analysis of complex Data
- Ability to re-digitize data without additional acquisition
- Start, Stop, Pause or go directly to desired area of analysis
- Increase or Decrease resolution for post analysis
- Filter and decimate acquired data
- Annotate and Print directly from Star Analyzer
- Stand alone package is not hardware specific (run from any Windows XP platform)
- Extensive Real Time Plots



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| Input | All of the Channel information is stored in the Time Stream data file (STS) and cannot be modified. |
| Input channels | 4 to 32: all simultaneously sampled |
| Input dynamic range | 92 dB |
| Maximum input | ±12V (24bit FE) |
| Voltage ranges | .44V, 2.5V and 12V (24bit FE) |
| Overload detection | Full scale on all channels, analog and digital detection |
| Voltage coupling | AC or DC |
| ICP power | 4mA (20V maximum into open circuit) |
| Maximum rated input signal | ±35 Volts peak |
| Sampling rate | 51,200 samples per second (24bit FE) |
| Frame size | 256, 512, 1024, 2048 , 4096 |
| Frame duration | 5ms to 32 seconds |
| Gates | |
| Gates | Up to 5 Gates for Starting, Stopping, and Incrementing Acquisition |
| Gate Types | RPM, Frequency, Speed, Auxiliary |
| Gate Process | Pulses, DC proportional |
| Analysis | |
| Frequency range (DC to) | 50, 100, 200, 500, 1000, 2000, 5000, and 10000Hz; 20000 (the maximum bandwidth will correlate to the bandwidth the data was originally collected at) |
| Frequency resolution | 100, 200, 400, 800, and 1600 lines |
| FFT windows | Hanning, Blackman, calibration, Hamming, Blackman Harris |
| Window Scaling | Broadband or Narrowband |
| Spectra Weighting | Flat (None), A, B, C acoustic functions |
| Acquisition Mode | Mapped Spectrum, Average Spectrum |
| Sampling | Fixed |
| Averaging | |
| Types | Linear, exponential, peak hold (max) |
| Number | 1 to 100,000 (the maximum number of averages will be linked to the amount of data stored in the original test along with the analysis parameters (resolution and frequency)) |
| Overlap Processing | None, 25%, 50%, 75%, Max. |
| Channel Setup | All of the Channel information is stored in the Time Stream data file and can not be modified |
| Channel type | Measurement, Reference, Inactive |
| Sensitivity | 0.001 to 1,000,000 mV/EU |
| ICP power | On/off |
| Coupling | AC or DC |
| Channel label | Up to 8 characters for each channel |
| Transducer serial number | Up to 10 characters for each channel Transducer Database Optional |
| Tachometers Setup | All of the Tachometer information is stored in the Time Stream data file and can not be modified |
| Tacho Name | Up to 8 characters for each Tacho |
| Serial # | Up to 8 characters for each Tacho |
| Status | On/Off |
| Average Period | 1 to 999 |
| Pulses/Rev | 1 to 999,999 |
| Coupling | AC, DC, Ground |
| Tacho Full Scale | 5 volts, 25 volts |
| Trigger Slope | Positive, Negative, |
| Trigger Level | % Full Scale |
| Filter | On/ Off |
| Squaring | On/Off |
| EU Definitions | All of the EU information is stored in the Time Stream data file and can not be modified |
| Base Engineering Units | Label(EU), Conversion(EU/Transducer Units) |
| EU Calculations and Support | Integrated (Label and Scale Factor), Double Integrated(Label and Scale Factor), Differentiated (Label and Scale Factor), Double Differentiated (Label and Scale Factor) |

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|----------------------------------|--|
| STS Page | |
| Start Time | You can start your analysis at any point in the time stream data file (STS) |
| Stop Time | You can enter a stop point in the data file prior to the end of the data file. |
| On-Line Controls | |
| Start/Stop test | Initiates or stops data acquisition |
| Auto-range | Automatically set Input channel voltage ranges |
| Manual Trigger | Set trigger to Manual arm mode |
| Arm Trigger | Initiate trigger threshold detection |
| On-Line Status Monitors | |
| Average count | Current number of frames averaged |
| Channel Status | RMS or peak levels for all active channels |
| Message log | Records all test operations, including operator commands, and reports on any error conditions |
| Gate Status | Time, Gate 1 , Gate 2 , Gate 3 , Gate 4 , Gate 5 |
| On-Line Analysis | |
| Real-time displays | Any available function for all available channels may be displayed simultaneously. |
| Time | Time Trace, Time Trace 1/rev |
| FFT | Magnitude, phase, real, Imaginary, Nyquist |
| FFT-Order | Magnitude, phase, real, Imaginary |
| Freq Track | Magnitude, phase |
| Linear Spectrum | EU |
| Linear Spectrum-Order | EU |
| Magnitude Spectrum | EU**2 |
| Mag Spectrum-Order | EU**2 |
| Order Track | Magnitude, phase |
| PSD | EU**2/Hz |
| PSD-Order | EU**2/Hz |
| Composite | EU |
| Transfer functions | Magnitude, phase, real, Imaginary, coherence |
| Statistical functions | Mean, RMS, Peak +, Peak -, Peak Abs |
| 1/n Octave | 1/3, 1/6, 1/12, 1/24 |
| Bode | |
| Spec Intensity | EU**2/Hz-Hz, EU**2-Hz, EU-Hz, EU**2-Order, EU-Order |
| Campbell | EU**2/Hz-Hz, EU**2-Hz, EU-Hz, EU**2-Order, EU-Order |
| Waterfall | EU**2/Hz-Hz, EU**2-Hz, EU-Hz, EU**2-Order, EU-Order |
| Real-time/Stored data | Simultaneous display and overlay of spectra or time histories for real-time data and any stored data |
| Data Storage | |
| Format | Spectral Dynamics binary or Universal File Format |
| Setup options | Select from all available functions, new data file or append data to file |
| Playback | Automatic play of entire test data file, with adjustable display update delay; manual selection; select by input channel number. |
| Run message log | Text file records all system status messages displayed during test run |
| Export Manager (Optional) | |
| File formats | ASCII, STAR™, I-DEAS™, MATLAB™, UFF, ZMOD, ROM, SIR-1000, TH, TIM, TPD, TRD |



Spectral Dynamics, Inc.
2730 Orchard Parkway
San Jose, CA 95134

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