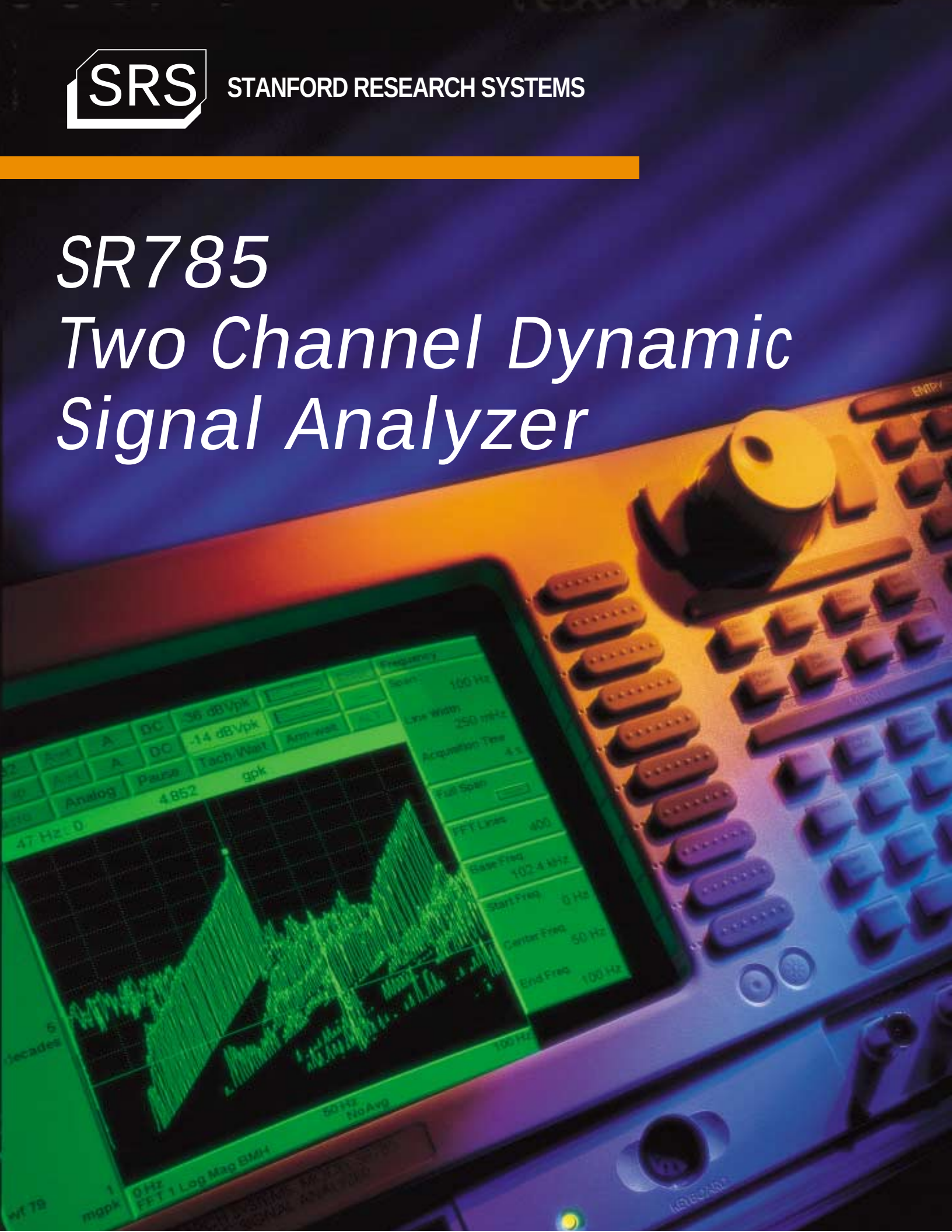
STANFORD RESEARCH SYSTEMS

SR785
Two Channel Dynamic Signal Analyzer



SR785
Two Channel Dynamic Signal Analyzer

$11,950 (U.S. list)

Features

- FFT, Correlation and Order Tracking Measurements
- ANSI Standard 1/1, 1/3, 1/12 Octave Analysis
- Swept-Sine Mode (145 dB dynamic range)
- 20-pole/20-zero Curve Fit and Synthesis
- Time/Histogram Mode
- Windows95™ DataViewer
- Output to SDF™, MAT™, UFF, ASCII, PCX, GIF™, PCL™, Postscript™ and HP-GL™ formats

Specifications

- 102.4 kHz frequency range on both channels
- 90 dB dynamic range (16 bit)
- 102.4 kHz real-time bandwidth
- ±0.2 dB accuracy
- ±0.05 dB channel match
- 100, 200, 400, 800 lines of frequency resolution
- Source type: low distortion (-80 dBc) sine and two-tone, swept-sine, white and pink noise, burst noise, chirp, burst and arbitrary

9" High Contrast CRT Display
800H x 600V resolution makes measurement data easy to read.

3.5" DOS 1.44 Mbyte Disk Drive
Stores instrument setups, time capture data, water-fall data, trace data, data tables, limit tables, curve fit/synthesis tables, math functions, arbitrary source data and plotter/printer output data.

Standard Measurement Modes

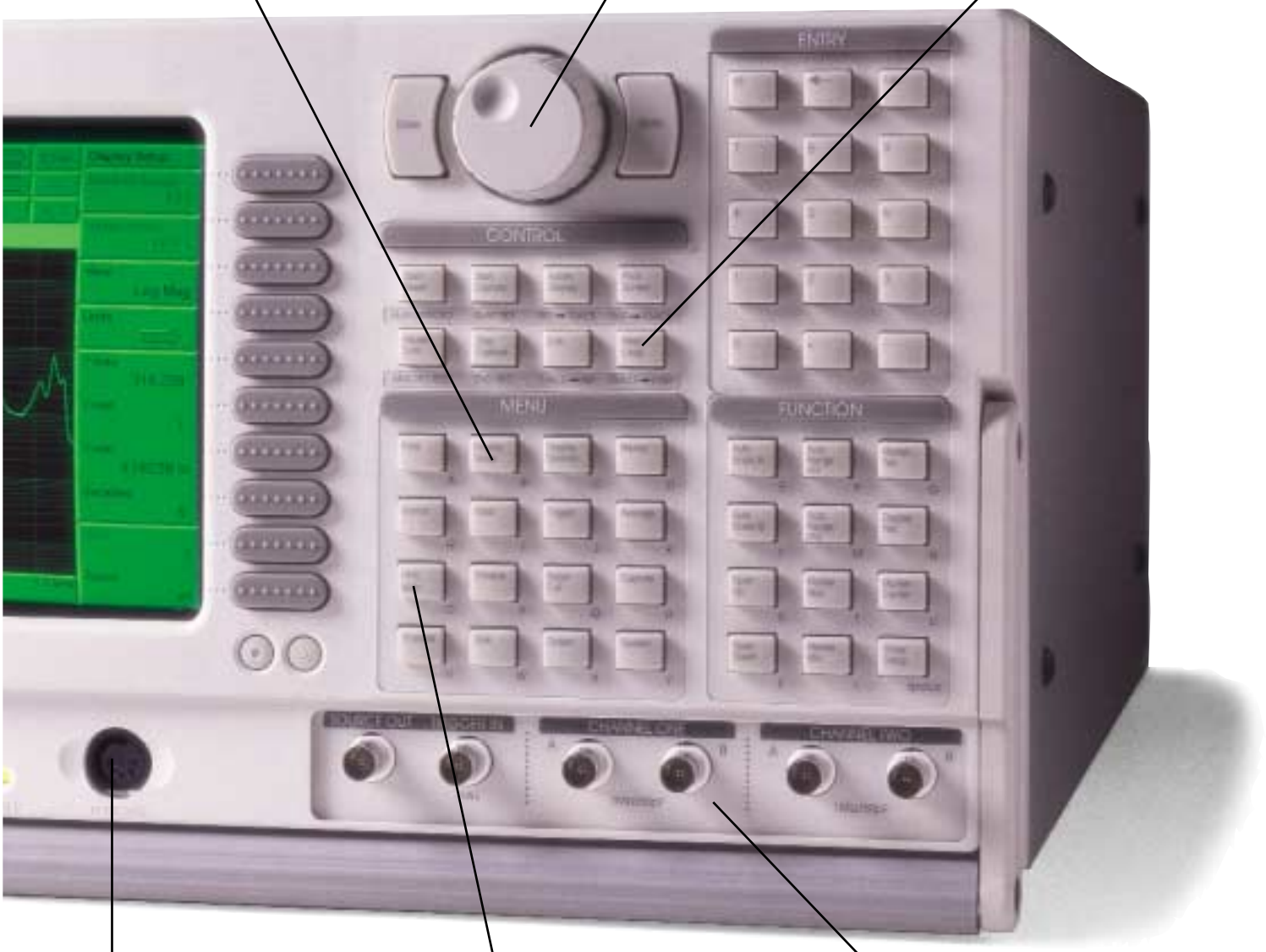
- FFT
- Swept-Sine
- Octave
- TIme/Histogram
- Order Tracking
- Time Capture

Fast Responsive Marker

- Find Max/Min or track peaks
- THD, THD + N
- Band, sideband, harmonic power
- Waterfall
- Frequency and damping
- Peak find
- Absolute and relative
- Statistics

On-Line Help

Locate information on any topic, browse specifications, examine remote commands - all from the front panel.



PC (XT) Keyboard Input

Enter text and annotations quickly and easily.

User Math

Build powerful custom measurements by directly entering equations.

Input Channels

- Dual ADCs provide 102.4 kHz bandwidth on both channels simultaneously.
- -50 dBV max full scale input sensitivity
- Built-in ICP power supply for accelerometers
- Switchable analog A-weighting filters
- Engineering units

SR785 Two Channel Dynamic Signal Analyzer

FFT Spectrum Analysis

The SR785 Two Channel Dynamic Signal Analyzer is a precision, full-featured signal analyzer that offers state-of-the-art performance and a wide selection of features at a price that's less than half that of competitive analyzers. Building on its predecessor, the SR780, the SR785 incorporates new firmware and hardware that make it the ideal instrument for analyzing both mechanical and electrical systems. Whether your measurements involve modal analysis, machinery diagnostics, vibration testing, servo systems, control systems, or acoustics, the SR785 has the features and specifications to get the job done. Standard measurement groups include FFT, order tracking, octave, swept-sine, correlation, time capture and time/histogram. The SR785 brings the power of several instruments to your application – a spectrum analyzer, network analyzer, vibration analyzer, octave analyzer and oscilloscope.

A unique measurement architecture allows the SR785 to function as a typical dual channel analyzer with measurements like cross spectrum, frequency response, coherence, etc. Alternatively, the instrument can be configured so that each input channel functions as a single channel analyzer with its own span, center frequency, resolution, and averaging.

Bottom display shows a wideband FFT, while the top display shows a narrowband FFT of the same signal. The sideband marker has been selected for calculation of the total sideband power.

This allows you to view a wideband spectrum and simultaneously zoom in on spectral details.

The same advanced architecture provides storage of all measurement building blocks and averaging modes. Vector averaged, RMS averaged, unaveraged and peak hold versions of all measurements are simultaneously acquired and can be displayed without re-taking data.

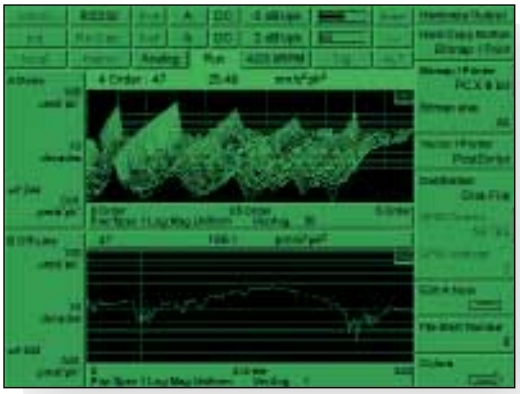
Use the SR785 to monitor the fundamental and harmonics of your signal. Total harmonic power and THD are calculated in real-time for fast, accurate analysis.

Averaging

The SR785 comes equipped with a wide selection of averaging techniques to improve your signal to noise ratio. Choose RMS averaging to reduce signal fluctuations, vector averaging to actually eliminate noise from synchronous signals, or peak hold averaging. In the order-tracking measurement group, time averaging is available. Both linear and exponential averaging are provided for each mode.

The SR785 is so fast, there's no need for a separate "fast averaging" mode. Averaging is always fast, and the display update rate is never sacrificed to increase the averaging rate. For instance, in a full span FFT measurement with a 4 ms

time record, 1000 averages take exactly 4 seconds, during which the SR785 still operates at its maximum display rate. For impact testing, the average preview feature allows each time record or spectrum to be accepted or rejected before adding it to the measurement.



View order maps or track individual orders with the SR785.

Order Tracking

Order tracking is used to evaluate the behavior of rotating machinery. Measurement data is displayed as a function of multiples of the shaft frequency (orders), rather than absolute frequency. Combined with a waterfall plot, the SR785 provides a complete history or "order map" of your data as a function of time or RPM. Using the slice feature, the amplitude profile of specific orders in the map can be analyzed.

In tracked order mode the intensity of individual orders vs. RPM is measured. Unlike other analyzers, there's no need to track a limited number of orders to ensure full speed measurements. The SR785's speed allows simultaneous tracking of up to 400 orders.

Run-up and run-down measurements are available in both polar and magnitude/phase formats. RPM profiling is

The SR785 tracks up to 400 orders simultaneously. You can display the amplitude profile of any two orders in tracked order mode.

Run-up and run-down measurements in both polar and bode formats are available.

provided to monitor variations of RPM as a function of time. And a complete selection of time and RPM triggering modes is included allowing you to make virtually any rotating machinery measurement.

Octave Analysis

Real-time 1/1, 1/3, 1/12 octave analysis at frequencies up to 40 kHz (single channel), or 20 kHz (2 channel) is a standard feature of the SR785. Octave analysis is fully compliant with ANSI S1.11-1986 (Order 3, type 1-D) and IEC 225-1966. Switchable analog A-weighting filters as well as A, B and C weighting math functions are included. Averaging choices include exponential time averaging, linear time averaging, peak hold and equal confidence averaging. Broadband sound level is measured and displayed as the last band in the octave graph. Total power, impulse, peak hold and Leq are all available. Exponentially averaged sound power (Leq) is calculated according to ANSI S1.4-1983, Type 0.

Octave displays can be plotted as waterfalls with a fast 4 ms storage interval. Once data is stored in the waterfall buffer, the SR785 can display centile exceedance statistics for each 1/1, 1/3 or 1/12 octave band as well as for Leq.

Expensive options are a thing of the past with the SR785. Real-time octave analysis is standard on every unit.

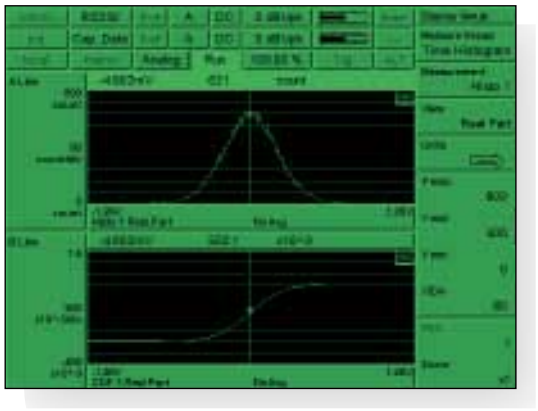
Swept-sine Bode plot of lowpass filter response. Top display shows magnitude with an expanded view of the passband response, while bottom display shows the phase response.

Swept-Sine Measurements

Network analysis using FFT mode produces fast results but suffers from limited dynamic range and frequency resolution. Swept-sine mode is ideal for network analysis that involves high dynamic range or wide frequency spans. Gain is optimized at each point in the measurement producing up to 145 dB of dynamic range. A frequency resolution of up to 2000 points is also provided. Auto-ranging can be used with source auto-leveling to maintain a constant input or output level at the device under test (to test response at a specific amplitude, for instance).

Auto-resolution ensures the fastest possible sweeps and adjusts the frequency steps in the scan based on the DUT's response. Phase and amplitude changes that exceed

user-defined thresholds are measured with high frequency resolution, while small changes are measured using wider frequency steps between points. A choice of linear sweeps with high resolution, or logarithmic sweeps with up to eight decades of frequency range is provided.



Top display shows a histogram of time data. Bottom display shows the cumulative density function.

Time / Histogram

Use the time/histogram measurement group to analyze time domain data. A histogram of the time data vs. signal amplitude is provided for accurate time domain signal characterization. Statistical analysis capabilities include both probability density function (PDF) and cumulative density function (CDF). The sample rate, number of samples and number of bins can all be adjusted.

Time Capture

The SR785 comes with 2 Msamples of memory (8 Msamples optional). Analog waveforms can be captured at sampling rates of 262 kHz or any binary submultiple, allowing you to optimize sampling rate and storage for any application. For example, 8 Msamples of memory will capture 32 seconds of time domain data at the maximum 262 kHz sample rate, or about 9 hours of data at a 256 Hz sample rate. Once captured, any portion of the signal can be played back in any of the SR785's measurement groups except swept-sine. The convenient Auto Pan feature lets you display measurement results synchronously with the corresponding portion of the capture buffer to identify important features.

Unit Conversion

Automatic unit conversion makes translating transducer data easy. Enter your transducer conversion directly in V/EU, EU/V or dB (1V/EU). The SR785 will display the result in units of meters, inches, m/sec^2, in/sec^2, m/s, in/s, mil, g, kg, lbs., N, dynes, pascals or bars. Built-in ICP® power means you don't need an external power supply for your accelerometer. Acoustic measurement results can be displayed in dBSPL, while electrical units include V, V^2, dBV and dBm.

Source

The SR785 comes standard with five precision source types. Generate low distortion (-80 dBc) single or two-tone sine waves, white noise, pink noise, chirps, and arbitrary waveforms. The chirp and noise sources can be bursted to provide activity over a selected portion of the time record for FFT measurements, or to provide impulse noise for acoustic measurements. The digitally synthesized source produces

Top display shows the burst noise source. Bottom display shows an arbitrary waveform downloaded to the SR785 via the IEEE-488 interface.

output levels from 0.1 mV to 5 V and offsets from 0 to ±5 V, and delivers up to 100 mA of current.

Arbitrary waveform capability is standard with the SR785. Use the arbitrary source to playback a section of a captured waveform, play a selected FFT time record or upload your own custom waveform from your computer.

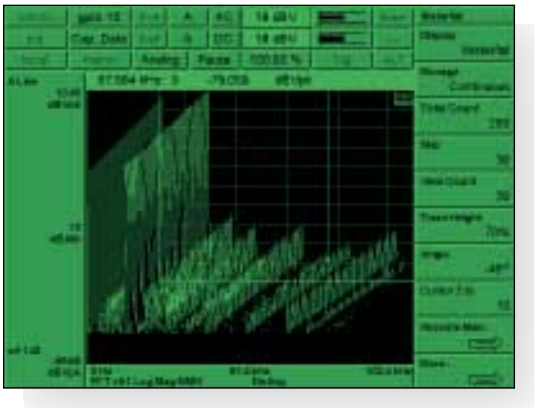
User Math

Create your own measurement in each of the SR785's measurement groups using the math menu. Enter any equation involving RMS averaged, vector averaged or unaveraged time or frequency data, stored files, constants, or a rich array of supplied operations including arithmetic functions, FFT, inverse FFT, jω, d/dω, exp, ln x, and many others. Because all the averaging modes are available as user math operands, non-repeatable runout measurements (used in analyzing disk drives) can be performed in a single pass by entering the equation MAG(RMS<F1>)-MAG(Vec<F1>). Unlike many other analyzers, the SR785's measurement rate is virtually unaffected when user math is selected. For instance, the function exp(ln(conj(FFT2/FFT1))) can be calculated with a 100 kHz real-time bandwidth.

The SR785 doesn't limit you to a few preselected measurements. With user math you can create an infinite variety of measurements.

Waterfall

Waterfall plots are a convenient way of viewing a time history of your data. Each successive measurement record is plotted along the z-axis making it easy to see trends in the data. All



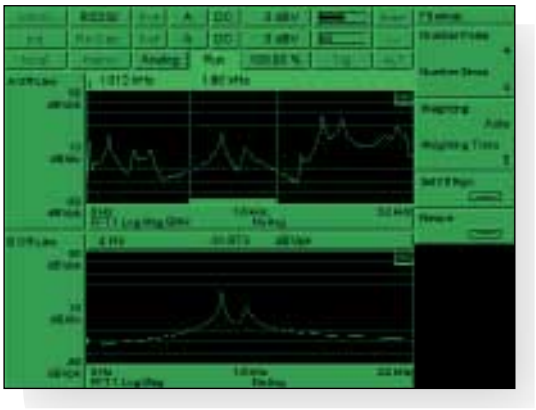
Two 2k deep waterfall buffers ensure you'll never miss important waterfall data.

FFT, octave and order tracking measurements can be stored in the SR785's waterfall buffer memory. You can choose to save all measurements and averaging modes or just the current measurement to conserve memory. Waterfall traces can be stored every n time records for FFT and order tracking measurements. For order tracking measurements new records can be acquired at a specific time interval or change in RPM. In octave measurements, the storage interval is in seconds (as fast as every 4 ms). While displaying waterfall plots, you can adjust the skew angle to reveal important features, or change the baseline threshold to eliminate low-level clutter. Any z-axis slice or x-axis record can be saved to disk or displayed separately for analysis.

Analysis

The SR785 includes a wide variety of built-in analysis features. Marker analysis lets you easily measure the power contained in harmonics, sidebands or within a given band of frequencies. Important information such as THD, THD+N, sideband power relative to a carrier, or total integrated power are calculated in real-time and displayed on the screen. The front/back display feature allows you to display live data from both signal inputs on one graph. You can also simultaneously display saved traces and live data. The peak-find marker allows you to quickly locate frequency peaks with the click of a button. The marker statistics feature calculates the maximum, minimum, mean and standard deviation of data in any section of the display. For modal analysis, the cursor can be configured to display the resonant frequency and damping of a single selected mode.

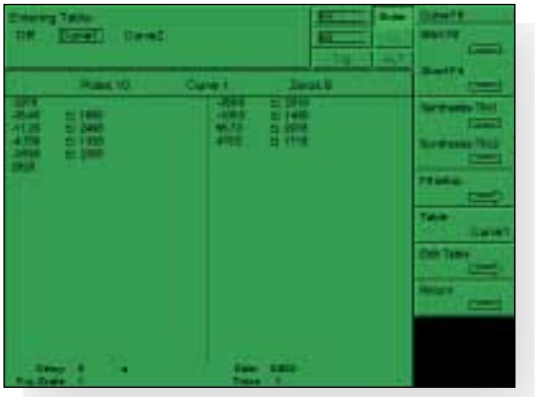
Use data tables to display up to 100 selected data points in tabular format. Limit tables allow you to define up to 100 upper and lower limit segments in each display for GO/NO GO testing. Data and limit table definitions can also be saved to and recalled from disk for quick setup.



Upper trace shows original frequency response data. Lower trace shows curve fit to a portion of the data.

Curve Fit and Synthesis

The SR785 has a standard 20-pole, 20-zero curve fitter that can fit frequency domain data from both the FFT and swept-sine measurement groups. Curve models can be displayed in pole/zero, pole/residue and polynomial formats.



Enter frequency response models in pole/zero, polynomial, or pole/residue format.

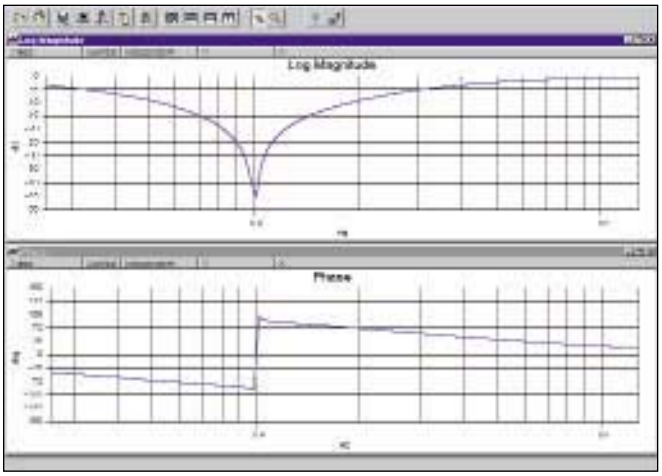
Synthesis reverses the process: enter a model in any of the above formats and the SR785 synthesizes the required curve. The curve fit/synthesis menu allows you to change gain, delay and frequency scale, set pole and zero locations and instantly see the response of the modeled system.

Output

The SR785's built-in 3.5" 1.44 MB disk drive, GPIB and RS-232 computer interfaces and Centronics printer port combine to allow almost unlimited flexibility in saving, printing, plotting or exporting your measurement data. Displays and setups can be printed or plotted to disk, GPIB, RS-232 or Centronics port in PCX, GIF, PCL (LaserJet® and DeskJet®), dot-matrix, Postscript, HP-GL or ASCII formats. An annotation editor lets you add text, time and date, or filenames to any portion of the plot. For modal analysis applications, nodal degree-of-freedom information is stored with the data files to simplify transfer to external analysis programs.

Data Conversion Utilities

The SR785 contains a complete suite of data conversion utilities for both Windows® and DOS® operating systems. These versatile utilities make data transfer to and from external programs fast and simple. SR785 files can be converted to ASCII for use with spreadsheets, or Universal File Format (UFF) and HP SDF for use with modal analysis programs. SR785 Files can also be converted to MAT file format for use with MATLAB. Conversion from external file types is also supported. Both HP SDF and SR780 files can be converted to SR785 format.



The SRS DataViewer Windows utility enables you to view SR785 data files graphically and save them in different formats.

DataViewer

The SRS DataViewer is a Windows 95 program that allows you to quickly upload SR785 files into a graphical environment, perform simple editing and cut and paste into other applications. You can add pointers and text, change scaling, and perform simple math operations. Graphs can be saved in PCX, BMP or GIF formats.

Help

Full, context sensitive help screens for all SR785 features means you will rarely have to refer to the user's manual. Hypertext links let you quickly switch between related help pages or instantly reference the remote command corresponding to any function. Use the help index to quickly locate information on any topic, jump to the on-line troubleshooting guide, browse a complete listing of the SR785's specifications, or examine a comprehensive description of the SR785's remote commands ... all from the front panel.

Inside the SR785

The computational heart of the SR785 is an Analog Devices' ADSP21020 32-bit floating point digital signal processor which delivers a true 102.4 kHz real-time bandwidth on both channels simultaneously – there's never a need to trade bandwidth for number of channels. Two precision 16-bit ADCs provide 90 dB dynamic range in FFT mode and 145 dB dynamic range in swept-sine mode – enough for the most demanding applications. With up to 800 lines of spectral resolution, the SR785 allows you to zoom in on any portion of the 476 mHz to 102.4 kHz range.

The Right Choice

The SR785 Two Channel Dynamic Signal Analyzer offers more useful features and superior performance than competitive analyzers and is priced considerably lower. For more details on the SR785 and our other FFT analyzers, call us at (408)744-9040, or visit our web site at www.srsys.com.

SR785 Specifications

Specifications apply after 30 minutes of warm-up and within two hours of last auto-offset. All specifications are with 400 line FFT resolution and anti-alias filters enabled unless stated otherwise.

Measurement Groups

Standard Groups	FFT analysis, Correlation, Time Histogram, Swept Sine
Optional Group	Order Tracking

Frequency

Range	102.4 kHz or 100 kHz (both displays have the same range).
FFT Spans	195.3 mHz to 102.4 kHz or 191 mHz to 100 kHz. The two displays can have different spans and start frequencies.
FFT Resolution	100, 200, 400 or 800 lines
Real-Time Bandwidth	102.4 kHz (highest FFT span with continuous data acquisition and averaging).
Accuracy	25 ppm from 20 ˚C to 40 ˚C

Dynamic Range

Dynamic Range	-90 dBfs typical, -80 dBfs guaranteed (FFT and Octave) -145 dBfs typical (Swept-Sine) Includes spurs, harmonics, intermodulation distortion and alias products. Excludes alias responses at extremes of span.
Harmonic Distortion	<-80 dB (single tone in band)
Intermod. Distortion	<-80 dB (two tones in band, each less than -6.02 dBfs)
Spurious	<-80 dBfs
Alias Responses	<-80 dBfs (single tone outside of span, less than 0 dBfs, less than 1 MHz)
Full Span FFT Noise Floor	100 dBfs typical (input grounded, input range >-30 dBV, Hanning window, 64 RMS averages)
Residual DC Response	<-30 dBfs (FFT with Auto Cal on)

Amplitude Accuracy

Single Channel	±0.2 dB (excluding window effects)
Cross Channel	±0.05 dB (dc to 102.4 kHz) (frequency response measurement, both inputs on the same input range, RMS averaged)

Phase Accuracy

Single Channel	±3.0 deg relative to External TTL trigger (-50 dBfs to 0 dBfs, freq <10.24 kHz, center of frequency bin, DC coupled). For Blackman-Harris, Hanning, Flattop and Kaiser windows, phase is relative to a cosine wave at the center of the time record. For Uniform, Force and Exponential windows, phase is relative to a cosine wave at the beginning of the time record.
Cross Channel	±0.5 deg (dc to 51.2 kHz) ±1.0 deg (dc to 102.4 kHz) (frequency response measurement, both inputs on the same input range, vector averaged)

Signal Inputs

Number of Inputs	2
Full Scale Input Range	-50 dBV (3.16 mVpk) to +34 dBV (50 Vpk) in 2 dB steps
Maximum Input Level	57 Vpk
Input Configuration	Single-ended (A) or true differential (A-B)
Input Impedance	1 MΩ + 50 pF
Shield to Chassis	Floating mode: 1 MΩ + 0.01 mF Grounded mode: 50 Ω Shields are always grounded in differential input (A-B)
Maximum Shield Voltage	4 Vpk
AC Coupling	-3 dB rolloff at 0.16 Hz
CMRR	90 dB at 1 kHz (in. range <0 dBV) 80 dB at 1 kHz (in. range <10 dBV) 50 dB at 1 kHz (in. range ≥10 dBV)
ICP Signal Conditioning	Current Source: 4.8 mA Open Circuit Voltage: +26 V
A-Weight Filter	Type 0 Tolerance, ANSI Standard S1.4-1983; 10 Hz to 25.6 kHz
Crosstalk	<-145 dB below signal (input to input and source to inputs, 50 Ω receiving input source impedance)
Input Noise	<10 nVrms/√Hz (<-160 dBVrms/√Hz) above 200 Hz

Trigger Input

Modes	Free run, Internal, External, or External TTL
Internal	Level adjustable to ±100% of input scale, positive or negative slope. Minimum Trigger Amplitude: 5% of input range
External	Level adjustable to ±5 V in 40 mV steps, positive or negative slope. Input impedance: 1 MΩ Max input: ±5 V Minimum trigger amplitude: 100 mV
External TTL	Requires TTL level to trigger (low <0.7 V, high >3.0 V)
Post-Trigger	Measurement record is delayed up to 100,000 samples after the trigger.
Pre-Trigger	Measurement record starts up to 8000 samples prior to the trigger.

Tachometer Input

Pulses Per Revolution	1 to 2048
RPM Accuracy	±50 ppm (typical)
Tach Level Range	±25 V, ±5V, TTL
Tach Level Resolution	20 mV @ ±25 V, 4 mV @ ±5 V
Max. Tach Input Level	±40 Vpk
Min. Tach Pulse Width	100 nSec
Max. Tach Pulse Rate	750 kHz (typical)

Transient Capture

Mode	Continuous real-time data recording to memory.
Maximum Rate	262,144 samples/sec for both inputs
Max. Capture Length	2 Msamples (single input) 8 Msamples with optional memory

Octave Analysis

Standards	Conforms to ANSI standard S1.11-1986, Order 3, Type 1-D.
Frequency Range	Band centers: Single Channel 1/1 Octave 0.125 Hz - 32 kHz 1/3 Octaves 0.100 Hz - 40 kHz 1/12 Octaves 0.091 Hz - 12.34 kHz Two Channels 1/1 Octave 0.125 Hz - 16 kHz 1/3 Octaves 0.100 Hz - 20 kHz 1/12 Octaves 0.091 Hz - 6.17 kHz
Accuracy	<0.2 dB (one second stable average, single tone at band center)
Dynamic Range	80 dB (1/3 octave, two second stable average) per ANSI S1.11-1986
Sound Level	Impulse, Peak, Fast, Slow and Leq per IEC 651-1979 Type 0

Order Tracking

Resolution	Up to 400 lines
Amplitude Accuracy	±1 dB (typ.)
Displays	Order map (mag and phase), order track (mag and phase), orbit

Curve Fit and Synthesis

Type	20-pole/20-zero non-iterative rational fraction fit.
Output Format	Pole-zero, polynomial, or pole-residue

Source Output

Amplitude Range	0.1 mVpk to 5 Vpk
Amplitude Resolution	0.1 mVpk
Offset Adjust	±5 V
Output Impedance	<5 Ω, ±100 mA peak output current

Sine-Source

Amplitude Accuracy	±1% of setting, 0 Hz to 102.4 kHz 0.1 Vpk to 5.0 Vpk, high impedance load
Harmonics, SubHarm. and Spurious Signals	0.1 Vpk to 5 Vpk <-80 dBc (fundamental <30 kHz) <-75 dBc (fundamental <102 kHz)

Two Tone Source

Amplitude Accuracy	±1% of setting, 0 Hz to 102.4 kHz, 0.1 Vpk to 5 Vpk, high Z load
Harmonics, SubHarm.	<-80 dBc, 0.1 Vpk to 2.5 Vpk

White Noise Source

Time Record	Continuous or Burst
Bandwidth	DC to 102.4 kHz or limited to span
Flatness	<0.25 dB pk-pk (typical), <1.0 dB pk-pk (max), 5000 rms averages

Pink Noise Source

Bandwidth	DC to 102.4 kHz
Flatness	<2.0 dB pk-pk, 20 Hz - 20 kHz (measured using averaged 1/3 octave analysis)

Chirp Source

Time Record	Continuous or Burst
Output	Sine sweep across the FFT span
Flatness	±0.25 dB, 1.0 Vpk

Swept Sine Source

Auto Functions	Source level, input range and frequency resolution
Dynamic Range	145 dB

Arbitrary Source

Amplitude Range	±5 V
Record Length	2 Msamples (playback from arbitrary waveform memory or capture buffer). Variable output sample rate.

General

Monitor	Monochrome CRT, 800H by 600V resolution, 8.2 inch diagonal display
Interfaces	IEEE-488, RS-232 and Printer interfaces standard. All instrument functions can be controlled through the IEEE–488 and RS-232 interfaces. A PC (XT) keyboard input is provided for additional flexibility.
Hardcopy	Print to dot matrix and PCL compatible printers. Plot to HP-GL or Postscript plotters. Print/Plot to RS-232 or IEEE–488 interfaces or to disk file. Additional file formats include GIF, PCX and EPS.
Disk	3.5" DOS compatible format, 1.44 Mbytes capacity. Storage of displays, setups and hardcopy data.
Preamp Power	Power connector for SRS preamplifiers.
Power	70 Watts, 100/120/220/240 VAC, 50/60 Hz
Dimensions	17"W x 8.25"H x 24"D
Weight	56 lbs.
Warranty	One year parts and labor on materials and workmanship.

SR785 Features

Instrument Modes

FFT, Time/Histogram, Correlation, Octave, Swept-Sine, Order Tracking

Frequency Domain Measurements

Frequency Response, Linear Spectrum, Cross Spectrum, Power Spectrum, Coherence, Power Spectral Density

Time Domain Measurements

Time Record, Cross Correlation, Auto Correlation, Orbit

Amplitude Domain Measurements

Histogram, PDF, CDF

FFT Resolution

100, 200, 400, 800 lines

Views

Linear Magnitude, Log Magnitude, dB Magnitude, Magnitude Squared, Real Part, Imaginary Part, Phase, Unwrapped Phase, Nichols, Nyquist, Polar

Units

V, V^2, V^2/Hz, V/$\sqrt{Hz}$, meters, meters/sec, meters/sec^2, inches, inches/sec, inches/sec^2, mils, g, kg, lbs., N, dynes, pascals, bars, SPL, user-defined engineering units (EUs)

Displays

Single, Dual, Front/Back overlay, Waterfall with Skew, Zoom and Pan, Grid On/Off

Marker Functions

Trace Marker, Dual Trace Linked Marker, Absolute and Relative Marker, Peak Find, Harmonic Marker, Band and Sideband Marker, Waterfall Marker, Frequency-Damping Marker

Averaging

RMS, Vector, Peak Hold, Linear, Exponential, Equal Confidence (Octave), Preview Time Record, % Overlap Averaging, Overload Reject

Triggering

Continuous, Internal, External (Analog or TTL), Source, Auto/Manual Arming, GPIB, RPM Step, Time Step, Pre/Post Trigger Delay

Source Outputs

Sine, Two-Tone, Swept-Sine, White/Pink Noise, Burst Noise, Chirp, Burst Chirp, and Arbitrary

Windows

Hanning, Blackman-Harris, Flat Top, Kaiser, Force/Exponential, User-Defined, +/-T/2, +/-T/4, T/2, Uniform

User Math

+, -, *, /, Conjugate, Magnitude/Phase, Real/Imaginary, Sqrt, FFT, Inverse FFT, jω, Log, Exp, d/dx, Group Delay, A, B, C Weighting, x/x-1, Trace 1 – 4, Vector Average, RMS Average, Peak Hold

Analysis

Harmonic, Band, Sideband, THD, THD + N, Limit Test with Pass/Fail, Data Table, Exceedance, Statistics, Curve Fit and Synthesis

Time Capture

Capture Time Data for later analysis (FFT or Octave). Up to 2 Msamples (8 Msamples optional) of data can be saved.

Storage

3.5”, 1.44 Mbyte, DOS formatted disk. Save data, setups and hard copy data.

Hard Copy and Interfaces

Print to Dot Matrix or PCL (LaserJet and DeskJet) printers. Plot to HP-GL or Postscript plotters. Print/Plot on-line (RS-232 serial, Centronics parallel or IEEE-488) or to disk file. EPS, GIF, PCX graphic formats also available for disk storage.

Data Conversion Utility

Data, waterfall and capture files can be converted to ASCII. Data files can also be converted to Universal File Format, SDF format or MATLAB MAT-File Format. SDF and SR780 files can be converted to SR785 format.

DataViewer

Windows 95 based graphics program for viewing SR785 files. Graphs can be pasted to the clipboard or saved in PCX, BMP or GIF formats.

Ordering Information

(All prices U.S. list)

SR785	Two Channel Dynamic Signal Analyzer (includes manual, DataViewer, disk utilities and power cord)	$11,950
Option O785OT	Order Tracking	Free (introductory offer)
Option O780RM	Rack Mount Kit.	$85
Option O780M1	8 Msample RAM.	call for pricing
Option O78012V	12 VDC-115 VAC Converter.	$295
CT100	MobileCart	$495

12 VDC Converter

Designed to power the SR785 in the field when AC power is not available.

Specifications

Input Voltage	10 VDC to 15 VDC
Output Voltage	115 VAC true RMS ±5%
Max Cont. Output Power	200 W
Max Peak Output Power	300 W
Input No Load Current	0.34 A

MobileCART

The SRS CT100 MobileCART makes the SR785 truly portable. Its rugged construction and full rack capacity will free up your valuable work space and allow you to take the SR785 wherever you need to go.

Specifications

Tray Size	17" x 22" (tray accommodates one full width rack mount instrument)
Maximum Tray Load	60 lbs.
Maximum Base Load	100 lbs.
Angular Adjustment	Horizontal to 60¼
Weight	58 lbs.

SRS

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