Fourier Analyzers

2622
2630
2642A

Fourier Analyzers

PC INTEGRATED

Fourier Analyzers from Tektronix provide the most advanced architecture in bench-top instrumentation available today. From their inception, Fourier Analyzers have been designed to carefully integrate the advancing technology of personal computers with the precision and speed of dedicated measurement hardware. The result is a continuously evolving, high-quality measurement system dedicated to the analysis of analog signals and the properties they represent.

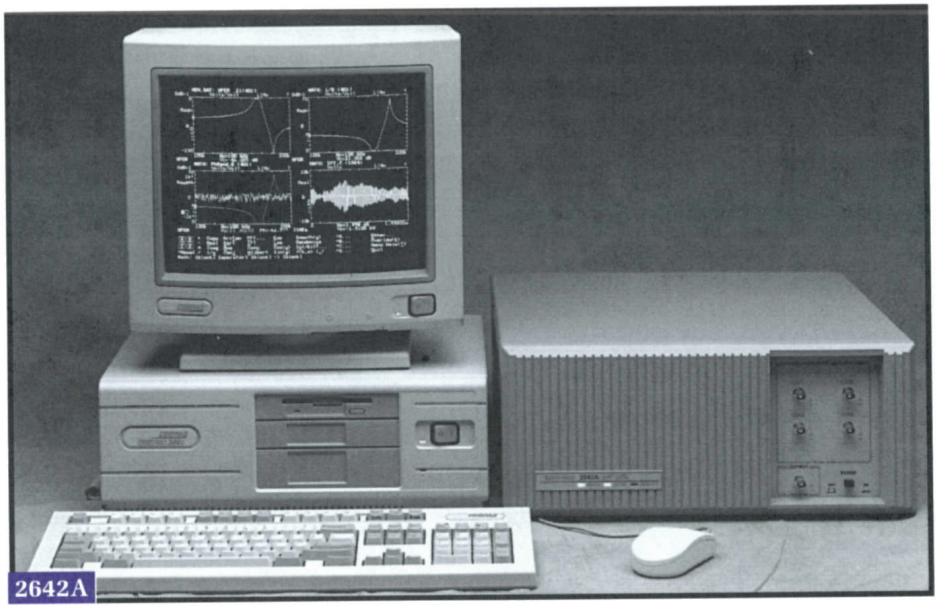
Within each Tek Fourier Analyzer is a combination of precision signal-acquisition hardware and microprocessors specifically designed for high-performance signal processing. Connected to a PC, the Fourier Analyzer's internal processors have access to the PC's display, I/O ports, mass storage, and keyboard. In short, the PC becomes the terminal for a powerful Fourier analysis system.

FLEXIBLE

The Instrument Program (IP) supplied with the Fourier Analyzer is the critical link between the analyzer and the PC. When it is executed from the PC, all of the Fourier Analyzer's instructions are downloaded into the analyzer's internal RAM, providing the latest features and capabilities. IP then uses the PC's display to generate the Fourier Analyzer's user interface – complete with high resolution graphics and easy-to-learn pull-down menus.

From the keyboard, or using a mouse, you have access to a wide variety of analysis functions and data presentations. Standard functions include:

- Time Record (Waveform)
- Orbits (Lissajous)
- Auto- and Cross-Correlation
- Power Spectrum for each Channel
- Frequency Response Functions Between any Two Channels
- Impulse Response
- Real, Imaginary, Magnitude, Phase, and Nyquist Displays
- Advanced Data Cursors



2642A Shown with Desktop PC

2622/2630/2642A

FEATURES:

- Easy-to-Learn Pull-Down Menus
- Up To Four Input Channels
- Optional Built-in Signal Generator with Periodic, Random, and Arbitrary Analog Signal Generation
- UL Listed 1244 Certified CSA C22.2 No. 231-M89

BENEFITS:

- PC-Based for Easy Use, Data Management and Interfacing to Analysis Software
- Superb Hardware for Fast, Accurate Measurements
- Software and Hardware Expansion Options Protect Investment

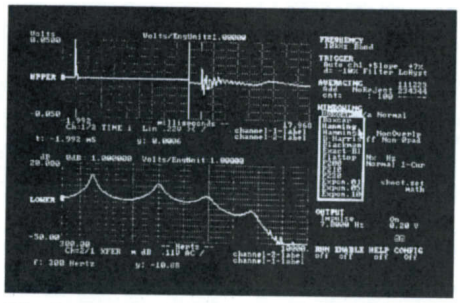
APPLICATIONS:

- Real Time Spectrum, Network (Frequency Response), and Waveform Analysis
- Complete Modal System for Structural Analysis
- Accessory Software for Control Systems Analysis, Production Tests, 1/3 Octave Analysis, Spectral Maps, and More

Advanced analysis of analog and digital signals in the time and frequency domains, from DC to 200 kHz.

To order, contact your local sales office (listed on the inside back cover) or call the National Marketing Center at 1-800-426-2200, Ext. 99.

Fourier Analyzers

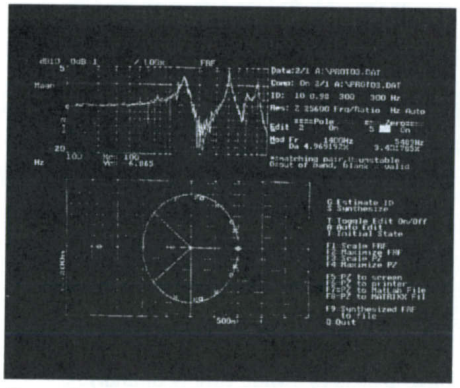


The Instrument Program provides high-quality color graphics and easy-to-learn pull-down menus for data analysis and acquisition control.

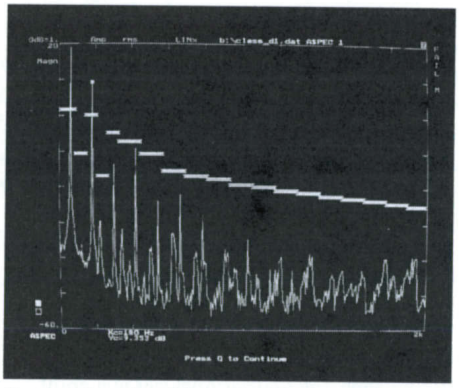
POWERFUL

While IP satisfies the majority of measurement needs, the utility of the analyzers is further enhanced with these additional standard programs:

- Transient Capture 500K Samples (Std) up to 3.5 M Samples (2642 A with Opt. 6M) or 1.5 M Samples (2622/2030 with Opt. 2M).
- Automated measurement program.
- Waveform Math Program with 17 standard (+ – * /) and advanced (cepstrum, open-loop mapping) operations for general purpose waveform manipulation.
- Swept sine testing for measurement conditions requiring maximum signal to noise ratio (built-in signal generator required).
- Other display, hardcopy, and data translation utilities.

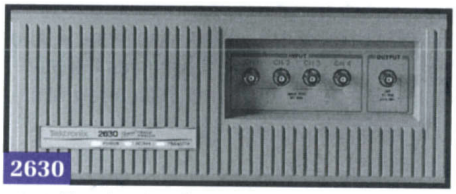


One of many accessory software packages, the RLS System Identification software produces pole/zero system models from measured stimulus/response data.



Production Test Manager Software allows fully automated production testing for noise, vibration, electrical system performance or other applications.

2622 Fourier Analyzer – DC-20 kHz



2630 Fourier Analyzer – DC-20 kHz

Fourier Analyzers

2622
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ADVANCED SOLUTIONS
In addition to the standard software, optional accessory programs extend the capabilities of the Fourier Analyzer – providing everything from advanced tools to complete solutions for a variety of applications.

Production Test Automation – The Production Test Manager program dramatically reduces the development time for creating automated production tests using Fourier Analyzers. Using the LIMITS program, test limits can be defined quickly using a table of values, previously measured data, or rubber-band style graphics. Other routines provide failure report generation, results archiving, multiple limit checks for quality sorting, a simple pass/fail operator interface, and many more standard functions. Executed individually or included in larger programs, these routines can replace hundreds of lines of program code saving valuable time and money.

Control System Analysis – The optional RLS and CFIT System Identification programs (RLS shown in photo) analyze time or frequency domain stimulus/response data to produce system models expressed as poles and zeros in either the S or Z planes. For further analysis, the pole/zero models can be passed on to powerful system development programs such as PC-MATLAB™

Acoustics and Vibration – When monitoring acoustic signals, the optional Third Octave program provides 1/3 octave analysis of up to four signals simultaneously.

The Machine program automatically labels significant vibration peaks and allows switching among displacement, velocity, and acceleration displays.

Modal Analysis – The 2600MS Structural Analysis Solution includes the TekSTAR™ data acquisition manager software plus SMS STARModal or STARStruct analysis software, for a complete, turn-key structural analysis package. Interfaces to other modal analysis software are also available.

Spectral Maps and Order Tracking – The 2600SMT software provides capabilities for the analysis of signals which change over time, such as rotating machinery, speech, or underwater device tracking. Three dimensional displays include waterfall plots and color intensity maps to permit viewing changes in amplitude and frequency versus either time or RPM. Detailed analysis of individual orders, frequencies, or spectra is also possible.

Continued on next page.

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Fourier Analyzers

2600 Systems

2622

The 2622 is a small, lightweight, two channel analysis system with a very economical price. Primary applications include production line testing and education. When the integrated system controller (Opt. 33) is added, it becomes an ideal transportable system for machinery, vibration, or acoustic analysis.

2630

The 2630 is a two or four input channel system with an optional signal generator. The system's flexibility and PC integration make it perfect for applications such as modal analysis, control system analysis, or general signal and system analysis. When your data record length exceeds the analyzer's transient capture buffer and even the 1.5 M Sample Large Data Memory option isn't enough, Option 5H Data Record/Playback streams data directly to the host PC's hard disk, allowing virtually unlimited record lengths. The four channel configuration also makes it possible to production test three or four units at a time, greatly increasing throughput. An integrated PC, transportable configuration is also available.

2642A

The 2642A is the flagship of the 2600 line, providing dedicated DSP performance for a pace-setting 100 kHz real time bandwidth, and full floating-point FFT processing for maximum precision. It offers two 200 kHz input channels, zoom processing, and an arbitrary output generator standard at an extremely attractive price. Extended performance (16-Bit) input channels, a large data memory, an integrated controller, and two additional input channels may be added. Applications include electronic systems analysis, sonar and underwater acoustics, speech analysis, and numerous others.

SELECTION GUIDE

	2622	2630	2642A
Frequency Range	20 kHz	20 kHz	200 kHz
Input Channel	2	2 (4 with Opt. 1H)	2 (4 with Opt. 1H or 17)
Max Real time BW	5 kHz	10 kHz	100 kHz
Dynamic Range	75 dB	75 dB	75 dB (90 dB* with Opt. 16 or 17)
Channel Match	±0.2 dB, ±0.5 deg	±0.2 dB, ±0.5 deg	±0.075 dB*, ±0.5 deg
Spectral Lines	25 to 800	25 to 1600	25 to 1600
Zoom	Opt. 2H	Opt. 2H, 3H	Std.
Signal Generator	–	Opt. 4H	Std.
Data Rec/Playback	–	Opt. 5H	–
Weight	12 lb. (5.5 kg)	17 lb. (7.7 kg)	27 lb. (12.3 kg)

**(DC – 50 kHz)*

Fourier Analyzers

ORDERING INFORMATION

2622
2-CH Standard.....**$6,950**
Opt. 2H – 2-CH Zoom.....**+$500**
Opt. 2M – Large Data Memory (add 2 MB).....**+$800**

2630
2-CH Standard.....**+$9,950**
Opt. 1H – Four Input Channels.....**+$3,950**
Opt. 2H – 2-CH Zoom.....**+$500**
Opt. 2M – Large Data Memory (add 2 MB).....**+$800**
Opt. 3H – 4-CH Zoom.....**+$1,000**
Opt. 4H – Signal Generator.....**+$1,750**
Opt. 5H – Data Record/Playback.....**+$3,150**

2642A
2-CH Standard.....**+$15,900**
Opt. 1H – Four Input Channels.....**+$7,000**
Opt. 16 – Two 16-Bit Input Channels.....**+$4,000**
Opt. 17 – Four 16-Bit Input Channels.....**+$15,000**
Opt. 6M – Large Data Memory (add 6 MB).....**+$2,400**

All products include IP, MEASURE, TCAP, SEEFILE, MATH, SWSINE, PLT, ASCIILNK*[1]

CONTROLLER OPTIONS FOR ALL ANALYZERS (2622, 2630, AND 2642A)
Opt. 26 – Desktop System Controller.....**+$3,540**

*[1] **IP (Instrument Program)** – For general signal analysis

*[1] **MEASURE** – For automated measurements

*[1] **TCAP** – For capture to memory of transient data

*[1] **SEEFILE** – For analysis of captured transients

*[1] **MATH** – For waveform arithmetic

*[1] **SWSINE** – For transfer function analysis using swept sine excitation

*[1] **PLT** – For advanced data plotting and display

*[1] **ASCIILNK** – For data conversion to formats suitable for input into other analysis software (PC-Matlab, MATRIXx, spreadsheets, etc.)

Application Development Kit – Includes Borland's Turbo Pascal and a collection of high level subroutines (analyzer control, data display, menu driver, etc.) to allow custom application program development. Order 2600ADK.....**$1,200**

Application Utilities – A collection of application routines developed by Tektronix to address specific testing needs. Examples include 1/1 and 1/3 octave analysis, THD measurements, and probability density measurements. Order 2600AU.....**$950**

TekSTAR – Provides a highly integrated interface between IP and PC modal analysis software packages. Drivers are available for most commercially available modal software. Order S3JMS05.....**$250**

STARModal and STARStruct – Offer a complete PC based modal and structural analysis solution from the leaders in PC modal software, Structural Measurement Systems.

STARModal – (Includes TekSTAR) Order 2600MS.....**$7,500**

STARStruct – Order 2600MS with Opt. 01.....**$16,600**

Production Test Manager – Acquires data and compares it to manually defined or automatically generated limits. Includes pass/fail operator interface, error reports, data archiving, and serial number tracking. Order 2600PTM.....**$2,500**

Spectral Maps and Order Tracking – Provides three dimensional displays (waterfalls or intensity maps), order tracking, RPM extraction, and other features for transient analysis. Order 2600SMT.....**$1,500**

RECOMMENDED ACCESSORIES

Cart – See Cart Section page 504 for complete description. Order K420.....**$695**

MINIMUM PC REQUIREMENTS

Fourier Analyzers operate with an IBM PC, XT, AT, PS/2 or 100% compatible having the following minimum configuration: DOS 3.0 or higher, RAM – 640 KB, One 3.5 or 5.25 in. floppy drive and 20 MB Hard Drive, One RS-232-C serial port, Intel 8087, 80287, or 80387 Co-processor, Enhanced Graphics Adapter (EGA), Monochrome or color EGA monitor (Second serial port and mouse recommended).

INTERNATIONAL POWER PLUG OPTIONS

Opt. A1 – Universal Euro 220 V, 50 Hz.....**NC**
Opt. A2 – United Kingdom 240 V, 50 Hz.....**NC**
Opt. A3 – Australian 240 V, 50 Hz.....**NC**
Opt. A4 – North American 240 V, 60 Hz.....**NC**
Opt. A5 – Switzerland 220 V, 50 Hz.....**NC**
Also see General Customer Information Section.

WARRANTY-PLUS SERVICE PLANS OPTIONS

Opt. M7 – Calibration Service
2622.....**+$300**
2630.....**+$350**
2642A.....**+$400**

Opt. M9 – Repair Protection
2622.....**+$695**
2630.....**+$765**
2642A.....**+$975**

*[1] *Included with 2622, 2630, 2642A.*

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