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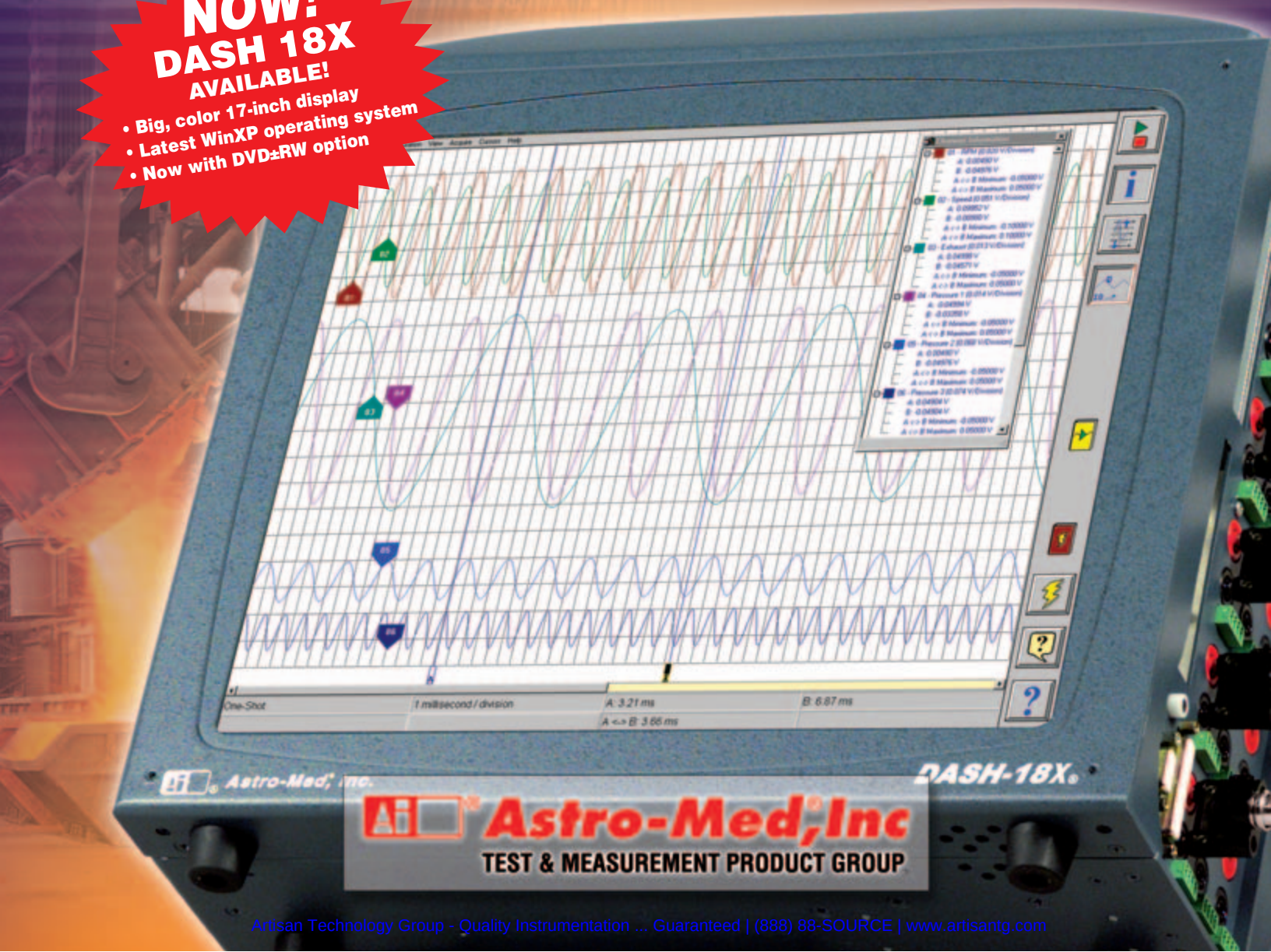
Find the *AstroNova / Astro-Med Dash 18X* at our website: ***Click HERE***

DASH 18X

DATA ACQUISITION RECORDER

- RECORD WAVEFORM DATA, VIDEO SNAPSHOTS AND AUDIO
- 18 UNIVERSAL INPUT CHANNELS FOR VOLTAGE, THERMOCOUPLE AND BRIDGE
- 17-INCH TOUCH-SCREEN DISPLAY FOR DATA VIEWING AND ANALYSIS
- RECORD DATA DIRECTLY TO 36 GB HARD DRIVE AT 100 KHZ SAMPLE RATE PER CHANNEL
- REAL-TIME FILTERING AND MATH FUNCTIONS
- 10/100BaseT ETHERNET INTERFACE AND OPTIONAL DVD±RW DRIVE

NOW!
DASH 18X
AVAILABLE!
- Big, color 17-inch display
- Latest WinXP operating system
- Now with DVD±RW option



Astro-Med, Inc
TEST & MEASUREMENT PRODUCT GROUP

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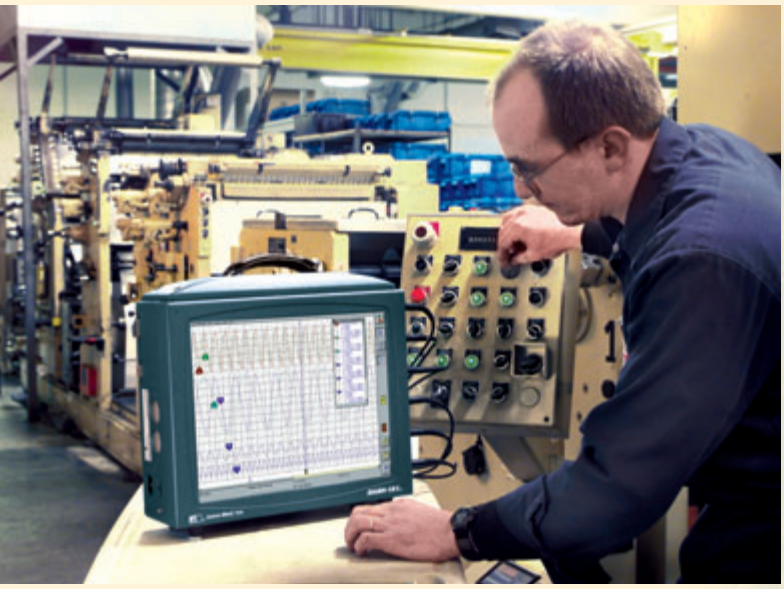
THE DASH 18X – COMBINE WAVEFORM DATA, VIDEO, AUDIO AND ANALYSIS IN A "READY-TO-GO" SYSTEM

In today's work environment, you need to be ready to test at a moment's notice. You need a system that will handle all of your recording requirements in one instrument, so you don't have to carry a scope, a meter, a data recorder, a datalogger and an audio recorder. The Dash 18X gives you all of this in a system with the footprint of a laptop computer.

Are you tired of systems that promise you the world but forget to tell you about all the configuration and programming involved in setting up their system? If you are, take a look at the Dash 18X – the "ready-to-go" system for your most demanding applications.

BIG 17-INCH TOUCH-SCREEN DISPLAY

Operation of the Dash 18X is quick and easy with the intuitive touch-screen display. Icon-based and menu-driven operation provides for straightforward setup and operation. There are no switches, push-buttons or other controls – simply touch the screen and the Dash 18X will handle the rest!



The Dash 18X is rugged enough for demanding mill applications.

HIGH-SPEED DATA ACQUISITION

The Dash 18X captures 18 channels of data continuously to a dedicated 36 GByte hard drive at a sample rate of 100 kHz per channel. That translates to hours of continuous data capture, even at the highest sample rates! Best of all, set the Dash 18X for long-term trend recording at sample rates as low as one sample per minute for months of unattended data acquisition.

PC COMPATIBLE

The Dash 18X gives you a number of ways to get data to your PC for analysis. Connect the Dash 18X to an Ethernet network and immediately upload your data to your PC. USB-based DiskOnKey® flash hard drives and an optional DVD±RW drive let you carry data from a remote location to your computer. Free viewing, analysis and conversion software enables you to analyze your data instantly.

UNIVERSAL INPUTS

The universal inputs in the Dash 18X let you connect almost any signal without using external signal conditioning. With high voltage, temperature, DC Bridge and frequency inputs, most signals can connect directly to the Dash 18X. Since each input can be independently set up for any type of signal, it's like having an unlimited combination of signal conditioners!

IRIG TIME DECODING

For applications requiring external time correlation, the Dash 18X offers an optional IRIG decoding module. This module decodes IRIG A, B, H and NASA 36 time codes, providing high-speed time synchronization of your data.

OPTIONAL STRIP CHART RECORDER

If you ever have a need for a real-time or post-capture strip chart output, the Dash 18X chart recorder is the perfect solution. Designed to be quickly attached to the main unit, it provides hard copy output wherever and whenever you need it. Take it to the field for on-location printing of vital data, or leave it in your office to print out certain parts of your test when you return.

THREE DATA ACQUISITION MODES

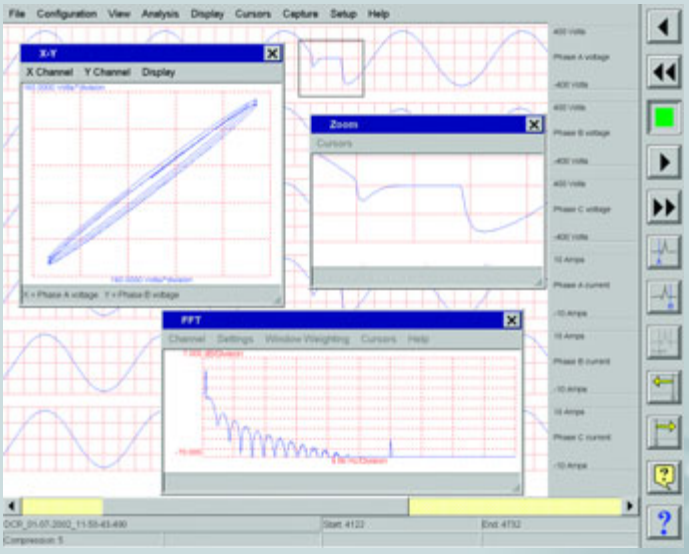
Three different data acquisition modes make the Dash 18X adaptable for any application. Real-time recording mode lets you see your data in real-time while capturing continuously to the hard drive. Scrolling waveforms show you exactly what is happening in real-time.

Scope mode gives you the power of a Digital Storage Scope at the tip of your fingers! Scope mode gives you a detailed, real-time view of high frequency signals while capturing data to the hard drive in the background. Traditional scope controls give you make it easier than ever to look at your high-speed data.

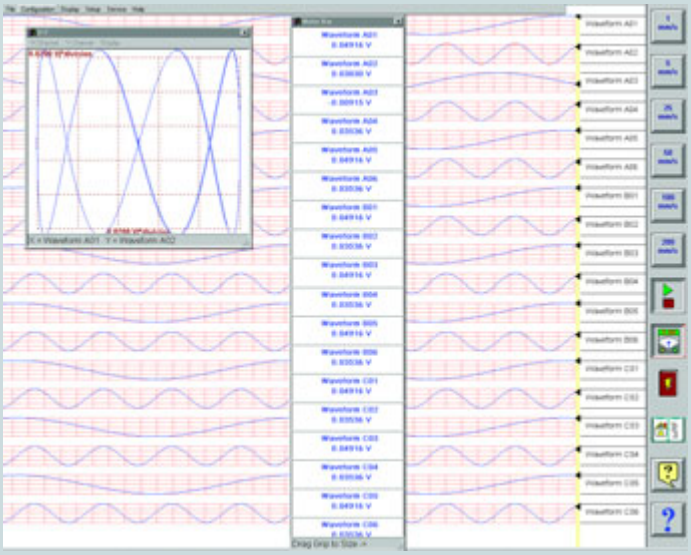
Acquire/review mode is ideal for applications where immediate access to captured data is important. It allows you to look back at previously captured data without interrupting real-time recording. You can even review and analyze captured data while still recording to the same file.

RUGGED ENOUGH FOR ANY ENVIRONMENT

Test equipment is only useful if it will survive your most harsh environment. With its rugged case and compact design, the Dash 18X can handle any condition you give it. Whether you need to gather data in a steel mill, vehicle, power plant or in the comfort of your own office, the Dash 18X is sure to survive.



Review mode includes post capture analysis.



Real-time mode provides you with immediate data viewing.

VIDEO SNAPSHOT

Simply connect a USB-compatible webcam and the Dash 18X displays and records real-time video snapshots at one frame per second, synchronized to the waveform data.

Video snapshots are ideal for digital picture documentation of a test setup or subject, so "before and after" pictures can automatically become a standard part of your testing. If an event occurs, you have visible proof of exactly what happened.

AUDIO CAPTURE

Have you ever been in the middle of a test and wished you could add a voice comment to your data? With the Dash 18X, you can! Utilizing a USB-compatible microphone, voice or other audio can be synchronously recorder with your waveform data.

AUDIO/VIDEO SYNCHRONIZATION

The Dash 18X will bring your testing to new levels with its ability to capture audio and video snapshots along with waveform data. Imagine being able to recreate an entire test in one system!

INTELLIGENT POWER

Have you ever lost data due to a power loss? With the Dash 18X, you never will. If power is lost in the middle of a data acquisition, the Dash 18X will shut down the acquisition and turn itself off. When power is restored, the Dash 18X will power on and immediately begin acquiring data again.

For automotive and other applications where AC power is not available, the Dash 18X has an optional 12 Volt DC power input module, making it ideal for in-vehicle or remote applications.

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INTELLIGENT ACQUISITION

The Dash 18X can capture data based on user defined trigger conditions, letting you capture exactly the data you want to see. You can stack thousands of captures on the hard drive, ideal for unattended, triggered operation. Each Dash 18X offers pre- and post-trigger memory storage, so you can program it to show you what caused an event, what followed an event, or both. With pre-trigger percentage selectable from 0 to 100 percent, you can tailor each capture specifically to the application.



Isolated inputs are ideal for power and high voltage applications.

HIGH-SPEED DATA ACQUISITION

Whether you are looking for high-speed data acquisition, trend recording or triggered data capture, the Dash 18X is powerful enough to handle any application you have. It samples each channel at 100 kHz per channel up to 18 channels, so you'll never miss an important event. And unlike PC-based data acquisition systems, the Dash 18X is not dependent on Windows® for data capture, so you are assured full bandwidth recording all the time.

VARIABLE SAMPLE RATES

The Dash 18X lets you set the sample rate anywhere from one sample per minute up to 100,000 samples per second. Whether you're measuring slow-speed signals such as temperature, pressure or humidity or fast transients or glitches, you can adjust the Dash 18X's sample rate to optimize disk space. Even better, the Dash 18X can be set to capture different signals at different rates, for the most efficient recording.

SCOPE CAPTURE

High speed, scope captures can be captured in the background while data is continuously captured to the hard drive. Imagine being able to capture slow-speed data, while at the same time, capture high-speed transients at a higher resolution. The Dash 18X even embeds scope captures in your data acquisition files, so you can review high-speed and trend data with time synchronization.

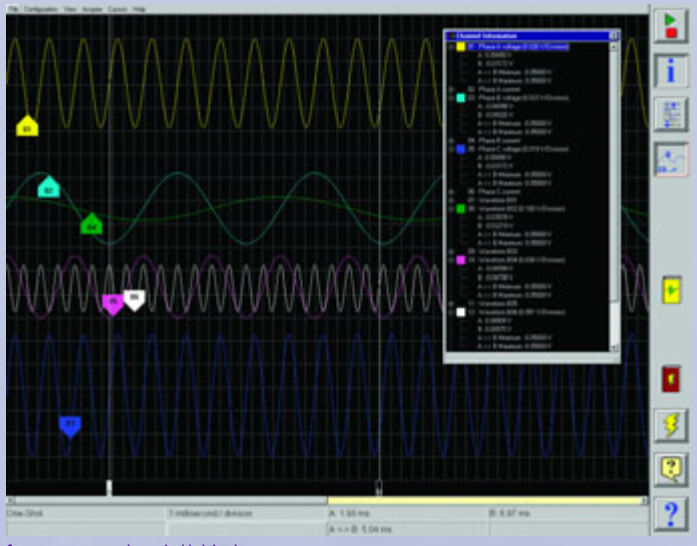
ACQUIRE/REVIEW MODE

The Dash 18X lets you review previously acquired data while still recording new data to the hard drive. You can even make measurements and perform analysis without interrupting on-going data recording. Applications include long-term monitoring, trend analysis, endurance testing and troubleshooting intermittent problems.

The Dash 18X even allows captured data files to be uploaded to your PC while another capture is in progress, giving you immediate access to your data without interrupting data acquisition.

ON-BOARD ANALYSIS

The Dash 18X has built-in analysis capability, ideal for applications where access to a PC and office are luxuries! Imagine being able to view, acquire and print your data with one system, letting you to make intelligent decisions on the spot.

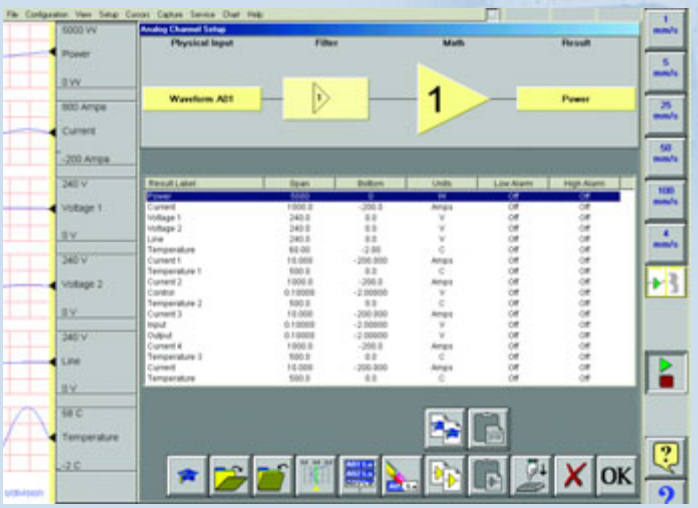


Scope captures can be embedded in data captures.

The Dash 18X includes a number of functions to let you quickly analyze your data. From simple peak detection and post-capture filtering to more advanced statistical and frequency analysis, the Dash 18X has it all.

TOUCH-SCREEN FOR SETUP, MONITORING & REVIEW

The built-in touch-screen and the intuitive graphical user interface make the Dash 18X one of the easiest instruments you'll ever use. The interface is completely customizable, allowing you to design controls that even the most casual user can understand. If you forget how to use a particular function, on-line help will step you through the operation.



Touch-screen interface simplifies operation.

ON-SCREEN WAVEFORM INFORMATION

The Dash 18X provides all the information you need to allow you to make a quick assessment of your data. Use the real-time multimeter function to display instantaneous values of your waveforms. Channel limits give you a quick indication of top and bottom grid values for each channel. And each channel can be uniquely identified with its own alphanumeric label.

For many applications, waveform data alone isn't enough to tell the whole story. Often there is an audible or visual cue that determines the cause of a problem. With the Dash 18X, you can record it all, allowing you to see and hear exactly what happened!

REAL-TIME DISPLAY

The Dash 18X has a 17-inch color touch-screen display for displaying waveform data, the largest display on any portable instrument. With 1280 x 1024 resolution, the display provides the clearest and most accurate waveform representation available while at the same time, simplifying Dash 18X setup.

View up to 18 waveforms simultaneously in discrete, overlap, or your own custom designed format. Choose different colors for each waveform for instant visual identification. Waveforms can even change color when an alarm threshold is exceeded.

TOUCH-SCREEN INTERFACE

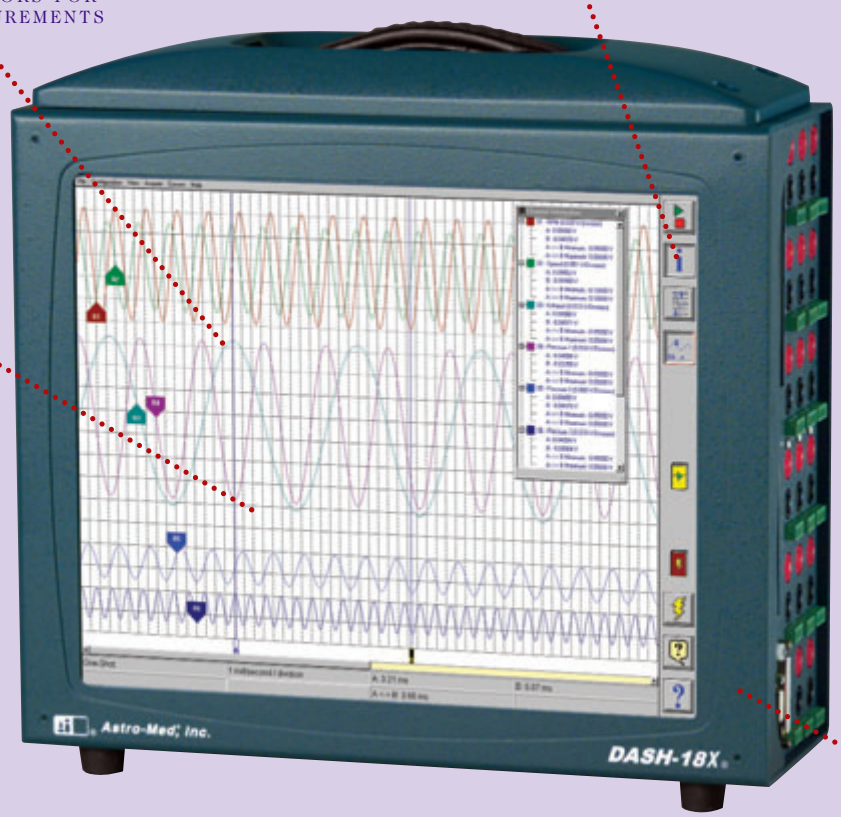
Once data is acquired, the touch-screen makes it easier than ever to review data and make measurements. You can scroll through your data at the touch of a button, allowing you to quickly find important events. For quick measurements, simply touch the screen to activate on-screen cursors for amplitude, timing and other information.


The Dash 18X is portable enough for in-vehicle applications.

SPECIAL FEATURES OF THE DASH 18X

Graphic user interface

On-screen cursors for waveform measurements





Dash 18X with cover

Real-time waveform display



Dash 18X with stand

Hands-free headset

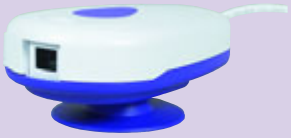


Aluminum case



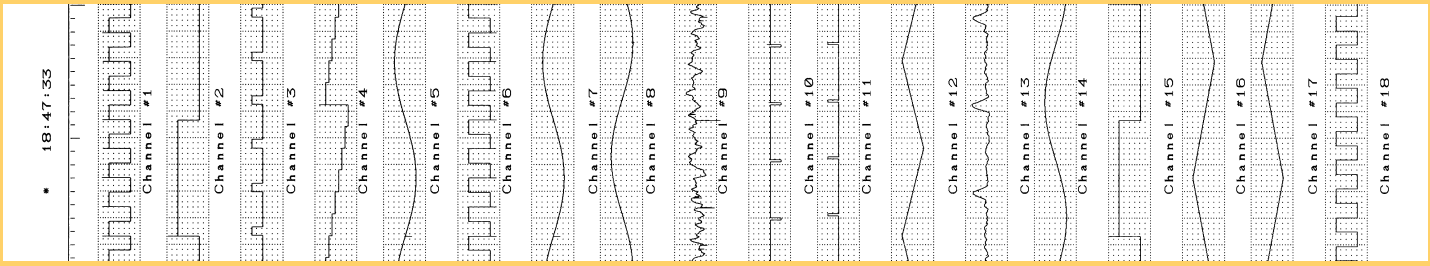
Universal inputs

Webcam



PRINT TO STRIP CHART, LASERJET, INKJET AND MORE!

For applications requiring a strip chart output, the Dash 18X features an optional 11-inch wide chart and a 300 dot per inch thermal array recorder to give you the recording resolution you need. Attach the printer to the Dash 18X and you have a data acquisition system and chart recorder in one small box. If a simple hard copy output is required, connect any Windows-compatible printer to your Dash 18X for quick screen prints of your data – in black and white or color!



Real-time strip chart recording available as an option.

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SET-UP, REVIEW AND ANALYSIS SOFTWARE

ASTROVIEW® X PC-BASED REVIEW SOFTWARE

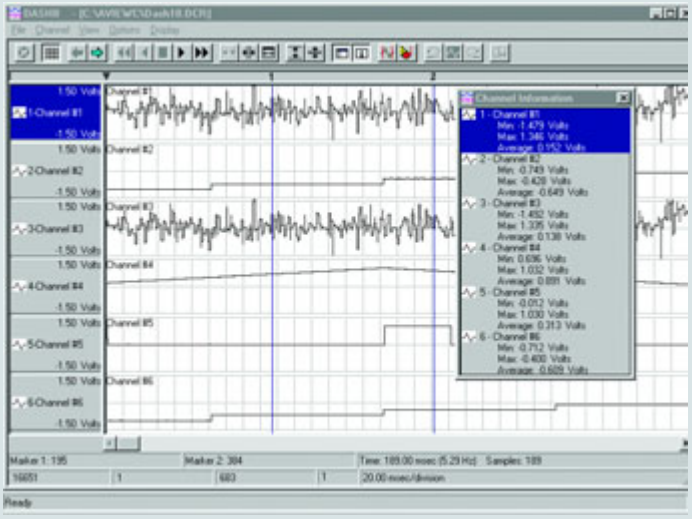
Each Dash 18X system includes AstroVIEW X, our PC-based data review and analysis program. AstroVIEW X runs on any Windows PC and lets you upload and review data captured from your Dash 18X. AstroVIEW X has built-in analysis with basic functionality and easily converts data into ASCII, Excel, MathCAD™, DADiSP™ and other popular formats.

DASH 18X OFFLINE SOFTWARE

For complete offline setup of the Dash 18X, optional Dash 18X Offline software runs on any PC running Windows 98, 2000 or XP. It lets you quickly and easily set up your Dash 18X on your PC, and transfer setups to the recorder via Ethernet, DiskOnKey or DVD.

TRANSFER DATA VIA DVD, ETHERNET, DISKONKEY, OR MODEM

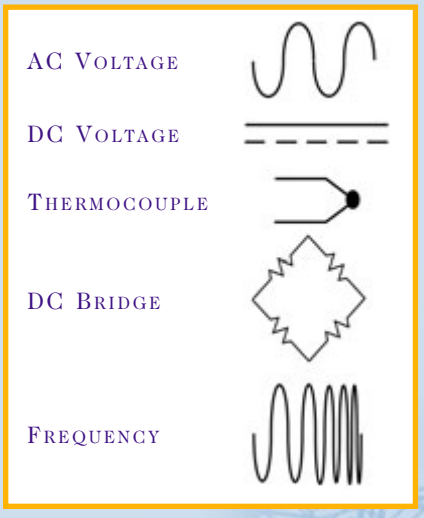
The Dash 18X has an integral 10/100BaseT Ethernet port to allow you to upload and download setups from your PC to the Dash 18X. It can also be used to upload data files from the Dash 18X to your PC for analysis. For remote applications, use the optional DVD±RW drive or USB Flash hard drive to transfer setups along with data or install a modem in the Dash 18X and download your setups via the phone lines.



AstroVIEW X is ideal for quick data review.

VERSATILE INPUTS

Tired of carrying around external signal conditioners, isolators or amplifiers? If you are, the Dash 18X is what you have been searching for! With universal inputs for voltage, thermocouple and DC bridge measurements, the Dash 18X is ready to connect to all your signals. Best of all, simply enter the scaling and units for each channel and the Dash 18X will automatically display your data in those units.



VOLTAGE

The Dash 18X can handle up to 250 Vrms directly. Utilizing shrouded banana jack connectors for safety, the Dash 18X is designed to handle high voltage measurements. The Dash 18X can even measure both AC and DC waveforms, with true RMS conversion built right in!

DC BRIDGE

Perfect for a wide variety of pressure transducers and load cells, the DC bridge input offers a variable isolated 10 V excitation source up to 20 mA. You can balance inherent offset at the touch of a button with the Dash 18X's autobalance feature.

THERMOCOUPLE

The thermocouple input supports J, K, E, T and N thermocouples and can measure in both Fahrenheit and Celsius scales. Linearization and cold junction compensation are standard, minimizing setup time and potential measurement error.

DSP-BASED FILTERING

Have you ever tried to record data, only to find that electronic noise is interfering with your test? The Dash 18X offers integral Low Pass, High Pass, Bandpass and Notch filtering, with selectable cutoff frequencies for each. Integral frequency-to-voltage conversion lets you perform direct frequency recordings.

REAL-TIME MATHEMATICS

With the built-in math functions of the Dash 18X, you can add, subtract, multiply or divide different signals in real-time. Imagine, no more waiting until after you have captured your data to see processed signals.

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SPECIFICATIONS

COLOR DISPLAY

Type	17-inch Active Matrix color LCD (TFT)
Resolution	1280 x 1024
Touch	Full screen, resistive
Functions	User interface with touch-based icons and menus; Real-time waveform monitoring; Review previous waveform records while recording; Overlay numeric values in Engineering Units

ANALOG INPUT BOARDS

Maximum Boards	3
Maximum Waveforms	18

STANDARD EVENT INPUTS

Number of Inputs	8 TTL via 9-pin, D-shell connector

REAL-TIME SIGNAL PROCESSING

Low Pass Filter	Stops from 10 Hz to 10,000 Hz
High Pass Filter	Starts from 0.1 Hz to 100 Hz
Notch Filter	50 or 60 Hz Center
RMS	Time constant selectable from 0.02 to 2 seconds
Frequency to Voltage	5 Hz to 20 kHz measurement range
Cross Channel	Addition, Subtraction, Multiplication, Division

REAL-TIME SIGNAL TESTING

Test Types	Test include window, slope/level, slew and event pattern triggering
Outputs	Result available for alarms, trigger, abort and external TTL

DATA CAPTURE

Recording Method	Internal disk drive
Sample Rate	1 sample/minute to 100,000 samples/second per channel
Total Capacity	Over 18 billion samples
Time Stamp	Time and date saved with data
Header	Information on units, range, sample rates, etc. saved with data
Events	All captured with waveforms
Trigger Point .	Amount of pre- and post-trigger is user adjustable
Auto Re-Arm	Allows automatic stacking of captures
Auto Playback	Yes

VIDEO SNAPSHOT RECORDING

Rate	Up to 1 frame per second
Synchronization	Synchronized to waveform data

AUDIO RECORDING

Method	Continuous audio recording
Synchronization	Synchronized to waveform data

OPTIONAL CHART RECORDER

Recording Method	Direct writing thermal array
Chart Width	11-inch
Max Chart Speed	50 mm/sec

SIGNAL CONDITIONER SPECIFICATIONS

GENERAL SPECIFICATIONS

Number of Channels	6 per module
Isolation	250 Vrms
Bandwidth	12 kHz (-3 dB)
Input Coupling	DC
Zero Suppression	Yes
User Engineering Units	Yes
Calibration	Semi-automated to external reference

SINGLE-ENDED VOLTAGE

Input Type	Isolated, single-ended
Max. Rated Input	250 Vrms
Specified Ranges	40 to 400 VFS; 4 to 40 VFS; 0.4 to 4 VFS

DIFFERENTIAL VOLTAGE MEASUREMENTS

Input Type	Isolated, differential
Absolute Max. Input	±40 V differential
Measuring Ranges	200 to 1600 mVFS; 50 to 500 mVFS; 5 to 50 mVFS

BRIDGE MEASUREMENTS

Input Type	Isolated, differential
Absolute Max. Input	±40 V differential
Measuring Ranges	200 to 1600 mVFS; 50 to 500 mVFS; 5 to 50 mVFS
Excitation	Isolated 10 V@20 mA; Adjustable 0.1 to 10.1 V

THERMOCOUPLE MEASUREMENTS

Input Type	Isolated, differential
Absolute Max. Input	±40 V
Specified Range	Type J: 0 to 760°C; Type K: 0 to 1370°C; Type T: -160 to 400°C; Type E: -100 to 1000°C; Type N: 0 to 1300°C

REMOVABLE DRIVE

Type	Optional DVD±RW drive
Function	Setup files, software upgrades, data transfer/archive

POWER

Input Voltage Range	102-264 VAC; 47-63 Hz; optional 9-18 VDC
Power Consumption	300 Watts maximum

COMPLIANCE

Safety	EN61010
EMC	FCC Class A, EN61326
Power Harmonics	IEC1000-3-2

PHYSICAL

Enclosure	Aluminum
Dimensions	16.1" L x 15.1" W x 6.4" H
Weight	27 lb.

OTHER PRODUCTS AVAILABLE FROM ASTRO-MED, INC.



Dash 2EZ: Features 2 channels of selectable inputs, data acquisition to removable CF memory at 10 kHz sample rate per channel and 5.7-inch display.



Everest: Features up to 32 channels of analog or digital recording, 18.1-inch color -screen display, integral 16.3-inch chart recorder.



Dash 8Xe: Features 8 channels of modular inputs, data acquisition to internal hard drive at 200 kHz sample rate per channel.

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