

MODEL 31

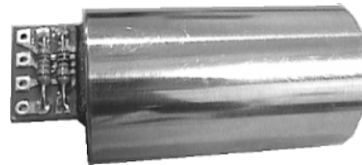
8 BIT, 1 CHANNEL HIGH SHOCK ANALOG RECORDER

DESCRIPTION

The Model 31 is a miniaturized, high shock, solid-state recorder designed to acquire transducer data in shock environments of up to 100,000 G's. The epoxy-encapsulated unit can be configured for a variety of transducer inputs to accommodate automotive crash testing, blast testing, weapon testing, or testing in hostile field environments. Low power consumption allows instrumentation build-up weeks before the test and extends the time for data retrieval after the test. Data retrieval is accomplished using a personal computer. Software supplied with the recorder enables storage, display, filtering, integration, and printing of the data.

FEATURES

- Small Size
- Low Power
- Single Battery Operation
- Instrumentation Amplifier Input
- User Selectable Gain
- Four-Pole Low Pass Filter
- High Sample Rate
- Expandable Memory
- Pre-Trigger Data Retention
- Easy Data Retrieval
- Extensive Software Support
- Reusable



ELECTRICAL SPECIFICATIONS

Number of Channels	1
Amplifier Input	Differential
Low-Pass Filter Type	4-Pole Butterworth
Low-Pass Filter Bandwidth	Selectable to 100 KHz*
Digitizer Amplitude Resolution	8 Bits (256 Digital Steps)
Standard Storage Capacity	32K Bytes (32K x 8)*
Sample Rate	Selectable to 1.0 MHz*
Pre-Trigger Data Storage	
with 32K Bytes	1762 Bytes
with 128K Bytes	7138 Bytes
with 512K Bytes	8162 Bytes
Triggers	5 Volt Pulse (Positive Edge)
External Power Requirements	
Supply Voltage	8 to 15 Volts
Standby Current	15 Microamps (Typical)
Data Acquisition Current	50 Milliamps (Typical)
Data Retention Current	15 Microamps (Typical)
Supply Voltage for External Sensor	5 Volts
Supply Current for External Sensor	20 Milliamps (Maximum)

*Selectable at Factory ONLY



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PHYSICAL SPECIFICATIONS

Temperature Range	0° C to 75° C
Length	2.27" (57.7mm)
Diameter	1" (25.4 mm)
Weight.....	2 oz. (58 Grams)
Maximum Shock Level	100,000 G's
Recommended Sensor.....	Piezoresistive Bridge

Note: The Recorder is fully epoxy-encapsulated with the exception of the input terminals and the output PC Board connector. The outer shell is stainless steel.

FACTORY SELECTABLE OPTIONS

- Storage Capacity Expandable to 128K x 8 or 512K x 8
- Sample Rate
- Filter Frequency
- User Defined Package Shape

STANDARD CONFIGURATION

- 1.0 MHz Oscillator
- 100 KHz Low Pass Filter Bandwidth
- 32K Bytes Memory Storage
- 1762 Bytes of Pre-Trigger

DATA RETRIEVAL

Software is supplied to retrieve, store, display, examine, and print data. The software requires a 386 based PC computer configured with a mouse, VGA graphics, a hard disk, a high density floppy, and a minimum of 2 Meg expanded memory. A PostScript laser printer is highly recommended for data printout. An AI-30 Interface Box (shown below) is required to retrieve the data and must be purchased separately.



AI-30 Interface Box

PostScript is a registered trademark of Adobe Systems Inc.
Specifications and options subject to change without notice.

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