ROGA Instruments

HR-12 Series

Palmtop Size PC Card Recorder and Instrumentation Amplifiers

HR-12

HR-12 is 12-channel PC card data recorder designed for measurements under vibration and shock environments. It is a palmtop size, light weight, and ruggedized aluminum chassis. Palmtop size strain amplifier and IEPE (Integrated Electronics Piezo Electric) amplifier for connecting to HR-12 are provided as optional accessories. Application for tests and measurements for motor cycles, construction utility vehicles, trains, testing, railway trains, etc. where its installation space is limited.

- Palmtop size, 135(W) x 28(H) x 85(D)mm
- Light weight, approx. 410g
- Shock-proof 100G/5msec, Vibration proof 10G/30 to 200Hz
- 12ch at 2 kHz 4ch at 10kHz sampling frequency
- Palmtop size, 135(W) x 28(H) x 85(D)mm
- +/- 5 V DC Input
- -48 dB/Oct low pass filter for each channe
- Voice memo recording with an optional remote control unit
- Connection to PC by using a proprietary PC card interface and a setting program (standard accessories)

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AR-12ST8A Strain Amplifier Unit

- Palmtop size, 135(W) x 28(H) x 85(D)mm
- Light weight, approx. 400g
- Shock-proof 100G/5msec, Vibration proof 10G/30 to 200Hz
- 8ch strain + 4ch DC inputs, DC outputs, can be used as a multi-channel strain amplifier.
- 4-active-gage inputs, optional 1-active-gage and 2-activegage connection cables
- - 48 dB/Oct low pass filter for each channel
- Condition settings by using PC
- Single cable connection to HR-12

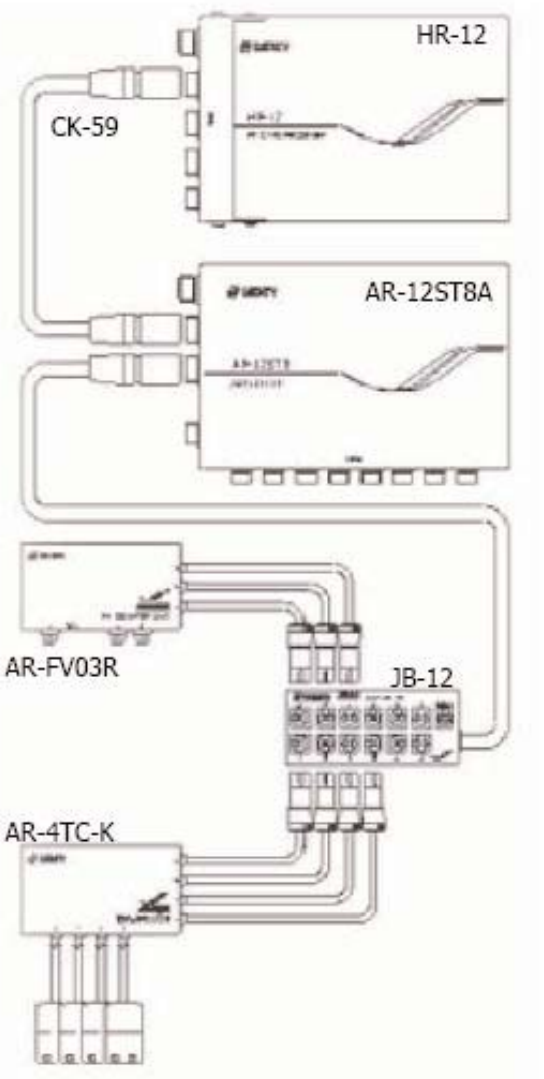
AR-12PA8A IEPE Amplifier Unit

- Palmtop size, 135(W) x 28(H) x 85(D)mm
- Light weight, approx. 400g
- Shock-proof 100G/5msec, Vibration proof 10G/30 to 200Hz
- 8ch IEPE + 4ch DC inputs, DC outputs, can be used as a multi-channel IEPE amplifier
- - 48 dB/Oct low pass filter for each channel
- Condition settings by using PC
- Single cable connection to HR-12

SPECIFICATIONS

HR-12 PC PC Card Recorder	
No. of Input Channels	12ch, Unbalanced voltage inputs (500 ohm input impedance)
Range	+/- 5 V (Fixed)
ADC	16-bit successive comparison type ADC with multiplexer
Sampling Hold	Yes, at all channels simultaneous
Sampling Frequency	1,2,5, 10, 20, 50, 100, 200, 500, 1k, 2k, 5k, 10kHz, External
Max. Sampling Frequency	12ch at 2 kHz, 4ch at 10 kHz
Low Pass Filter	20, 50, 100, 200,1 k, 2 kHz, Pass -48 dB/Oct Butterworth
Recording Media	PC Memory Card Type II (Up to 1GB)
Voice Memo Recording	Using Optional Remote Control Unit RC-12V (WAV file)
File Close Function	Close a recording file if power fails while recording
Interface	MC112 (Proprietary) interface for PC card slot (PCMCIA)
Power Supply and Consumption	10 to 15 V DC, Approx. 6.5 W at HR-12 single operation
External Dimensions	135W x 28H x 85D mm
Mass	Approx. 410 g
Operating Temperature	-10 to 50 degree C without condensing
Shock and Vibration Proof	100 G 5 msec, 10 G 30 to 200Hz

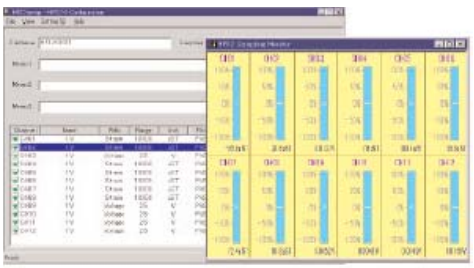
Measurement for Strain, DC, F-V, and Temperature



AR-12ST8A Strain Amplifier Unit	
No. of Input Channels	8 for Strain (CH1 to 8), 4 for DC (CH9 to 12)
Input Method	Strain Section: Balanced differential voltage inputs (1 M ohm input impedance) DC Section: Unbalanced voltage inputs (500 ohm input impedance)
Applicable Gauge (Strain)	120 to 1k ohm
Excitation Voltage (Strain)	2 V
Balance Method (Strain)	Electrical balance, within 800% of the input range
Range	Strain Section: +/- 1000, 2000, 5000, 10000, micro ST DC Section: +/- 5 V
Low Pass Filter	20, 50, 100, 200, 500, 1k, 2k, Pass -48 dB/Oct Butterworth
Frequency Bandwidth	Strain Section: 0 to 2 kHz -3 dB DC Section: 0 to 10 kHz -3 dB
Output	+/- 5 V
Interface	RS-232C 9600 bps fixed
Power Supply and Consumption	10 to 15 V DC, Approx. 5 W
External Dimensions	135W x 28H x 85D mm
Mass	Approx. 400 g
Operating Temperature	-10 to 50 degree C without condensing
Shock and Vibration Proof	100 G 5 msec, 10 G 30 to 200Hz

AR-12PA8A IEPE Amplifier Unit	
No. of Input Channels	8 for Strain (CH1 to 8), 4 for DC (CH9 to 12)
Input Method	IEPE Section: Unbalanced voltage input (100 k ohm input impedance) DC Section: Unbalanced voltage input (500 k ohm input impedance)
Sensor Power Supply (IEPE)	24 V, 500 micro A, 3 mA, 5 mA
Range	IEPE Section: High range +/- 0.2/0.5/1/2/5 V, Low range +/- 4/10/20/40/100 mV (Switch between High or Low range at Ch1 to 4 or Ch5 to 8 at a time) DC Section: +/-5 V
Low Pass Filter	20, 50, 100, 200, 500, 1k, 2k, Pass -48 dB/Oct Butterworth
Frequency Bandwidth	IEPE Section: 1 to 10 kHz -3 dB DC Section: 0 to 10 kHz -3 dB 1 to 20 kHz -3 dB
Output	+/- 5 V
Interface	RS-232C 9600 bps fixed
Power Supply and Consumption	10 to 15 V DC, Approx. 5 W
External Dimensions	135W x 28H x 85D mm
Mass	Approx. 400 g
Operating Temperature	-10 to 50 degree C without condensing
Shock and Vibration Proof	100 G 5 msec, 10 G 30 to 200Hz

Measurement condition settings at PC using a standard accessory MC-112 interface card



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