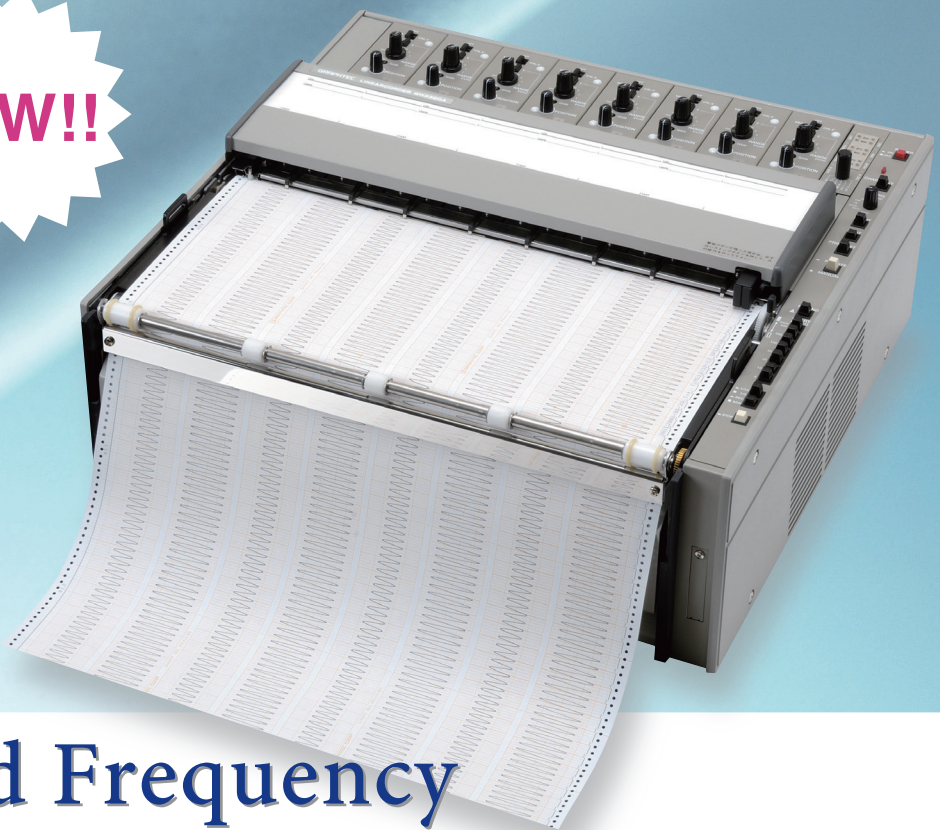


# GRAPHTEC

## Linearcorder MARK VII

# WR3320A Series

**NEW!!**



## High-Speed Frequency Response Thermal writing

### **140Hz High speed frequency response and crisp, clear traces by a thermal writing**

The WR3320A boasts a frequency response of DC to 140Hz as the highest speed thermal writing pen osillograph. Chart speeds can be set in seven steps in both the 5 to 500mm/s and 5 to 500mm/min ranges and thermal pens ensure crisp, clear traces.

### **Multiple Remote Control Functions**

Seven kinds of remote control functions are available for automation recording and step-up.

- Synchronization chart feed by pulse and voltage signal
- Time mark by timing pulse
- Event mark by event signal
- Pen heat ON/OFF
- Control of chart start ON/OFF, and signal output for external equipment
- Paper end signal
- Internal timing pulse output

### **Optional Versatile Recording and Printing Functions**

The WR3320A has an optional annotation function that prints the date, time (real or elapsed), and chart speed. ASCII codes input from external devices can be used to print alphanumeric and symbols (Direct record and command control record).

### **Selectable channel variation for various purposes**

The WR3320A can be configured as a 2-, 4-, 6-, or 8-channel 140Hz recorder with an amplitude of 40mm per channel, or as a 1-, 2-, 3-, or 4-channel 60Hz recorder with an amplitude of 80mm per channel.

### **Continuous Recording Up To 200 Meters**

Both roll and Z-hold paper can be used with the WR3320A.

A 100m length stock inside the recorder, while an optional Z-hold chart supply box (For 8ch model only) with a chart stock tray enables the use of 200m length.

### **0.2% Highly Accurate Chart Feed**

The stepper motor and sprocket chart drive eliminate chart wander and enable an accuracy of 0.2%

# WR3320A Series

Specifications (Main unit)										
Model	WR3320A				WR3320A					
No. of Channel	-2H	-4H	-6H	-8H	-1DH	-2DH	-3DH	-4DH		
Pen motor	GS3310				GW3310					
Amplitude	±20mm				±40mm					
Recording method	Heat-sensitive paper and thermal pen (Black)									
Circuit form	DC Servo									
Accuracy	Within ±0.5% of full scale (including non-linearity and dead-band)									
Frequency response (1Hz reference)	10mmP-P : 0 to 140Hz (+5~-10%) 20mmP-P : 0 to 100Hz (+5~-10%) 40mmP-P : 0 to 60Hz (+5~-10%)				20mmP-P : 0 to 60Hz (+5~-10%) 40mmP-P : 0 to 45Hz (+5~-10%) 80mmP-P : 0 to 30Hz (+5~-10%)					
Reference voltage	1V (Accuracy ±0.2%)									
Paper feed speed	5, 10, 25, 50, 100, 250 and 500mm/sec or mm/min 0.5, 1, 2.5, 5, 10, 25 and 50mm/sec or mm/min <Accuracy: ±0.2% ±0.5mm> External synchronization feed (50mm/sec max) *Switching of pulse input or voltage input control									
Time marker	<Accuracy> Pulse input control : ±0.2% ±0.5mm Voltage input control : ±2.0% ±0.5mm									
Event marker	One mark every 1 or 10s or 1 or 10min (Accuracy: ±0.1%), and remote control by external contact closure or TTL signal (Time marker mode or Event marker mode)									
Remote paper feed	Push-button operation, or external control (contact closure or TTL signal)									
Remote paper harter	Remote paper feed External contact closure or TTL signal									
Paper rewind	50mm/sec (Roll paper only)									
Annotation printing (optional: A-380)	Internal printing : Date, time (elapsed or real), and chart speed External printing : Alphanumeric, symbols by ASCII codes input from external devices									
Power requirement	AC 100-117-220-240V ±10%, 50/60Hz									
Power consumption *1	H: 10mm p-p 140Hz DH: 20mm p-p 60Hz Paper feed speed: 500mm/sec		250VA	340VA	450VA	560VA	155VA	190VA	240VA	300VA
Dimensions (mm)	W : 430 x H : 187 common									
(Tolerance: ±3mm)	199 (D)	289 (D)	379 (D)	450 (D)	199 (D)	289 (D)	379 (D)	450 (D)		
Weight (approx.) *1	13kg	17kg	25kg	26kg	12kg	15kg	22kg	22kg		
Operating environment	0 to 45°C, 30 to 85% RH									

\*1 Power consumption and weight include pre-amplifiers.

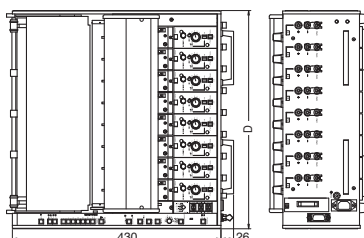
Specifications (Pre-amplifier)		
Model	AH3301A	AH3302A
Maximum sensitivity	1mV/cm	0.5mV/cm
Measurement range (Switching accuracy)	1, 2, 5, 10, 20, 50, 100, 200, 500mV/cm 1, 2, 5, 10, 20, 50, 100, 200, 500V/cm	0.5, 1, 2.5, 5, 10, 25, 50, 100, 250mV/cm 0.5, 1, 2.5, 5, 10, 25, 50, 100, 250V/cm
	±1% (with respect to 500mV/cm range)	±1% (with respect to 250mV/cm range)
Input resistance	1MΩ (fixed)	
Maximum input voltage	DC 500V (including common mode voltage)	
Sensitivity adjustment	Settable anywhere within full measurement range	
Calibration voltage	Measurement range x 2 (20mm)	Measurement range x 4 (40mm)
Zero position	Settable anywhere within full scale	
CMRR	AC : 120dB	
Input filter	Built-in (50Hz/60Hz/OFF, switchable)	
Compatible Pen motor	GS3310	GW3310

- ### Standard accessories
- User's manual
  - Chart Paper
  - Input cables (Required channels)
  - Soft plastic cover
  - Philips screwdriver
  - Flatblade screwdriver
  - Allen wrench
  - Storage bag for accessories
  - Power cable
  - Fuse 2.5A (2to6ch)/4A(8ch)
  - Remote controls
  - input connector (14pins)
  - Cable for calibrated output

Options		
Description	Model	
Acrylic dustproof cover	WDC-201	For 2-ch model
	WDC-202	For 4-ch model
	WDC-203	For 6-ch model
	WDC-204	For 8-ch model
200m Z-fold paper supply box	A-329	For 8-ch model
BNC converter plugs	SMA-101-4P	Banana to BNC, set of 4
Printing function *2	A-380	—
Rack mount brackets	A-334	For 8-ch model, inch

Recording Paper (Black, 100m length)	
Roll Paper (5rolls/box)	Z-fold paper (5books/box)
PR410-2B-R5A	PZ410-2B-R5A
PR412-4B-R5A	PZ412-4B-R5A
PR413-6B-R5A	PZ413-6B-R5A
PR414-8B-R5A	PZ414-8B-R5A
PR420-1B-R5A	PZ420-1B-R5A
PR422-2B-R5A	PZ422-2B-R5A
PR423-3B-R5A	PZ423-3B-R5A
PR424-4B-R5A	PZ424-4B-R5A

\*2 With one printing connector (16pins)



CH	D(mm)
2H, 1DH	199
4H, 2DH	289
6H, 3DH	379
8H, 4DH	450

Unit : mm  
Tolerance : ±3mm

Brand names and product names listed in this brochure are the trademarks or registered trademarks of their respective owners. Specifications are subject to change without notice.

## GRAPHTEC

GRAPHTEC AMERICA, INC.

1251 East Dyer Rd., Ste. 110, Santa Ana, CA 92705  
Tel Toll Free: 800.854.8385  
Fax: 949.855.0895

Website <http://www.graphtecamerica.com>

