



# RECORDERS & PRINTERS

High dynamic performance X-Y recorders  
Models 7044A, 7045A, 7046A, 7047A (cont.)

## 7044A, 7045A, and 7047A Specifications

### Performance Specifications

	7044A MEDIUM SPEED	7045A HIGH SPEED	7046A 2-PEN, HIGH SPEED	7047A HIGH SENSITIVITY, HIGH SPEED
Type of input	Front and rear input. Floating, guarded. Polarity reversal switch on front panel.			Front input only. Floating, guarded. Common mode driver circuit eliminates need to connect CMV to recorder, if CMV <10V peak.
Input ranges	0.5, 1, 5, 10, 50 mV/in. 0.1, 0.5, 1, 5, 10 V/in. (metric available in 0.25, 0.5, 2.5, 5, 25 mV/cm; 0.05, 0.25, 0.5, 2.5, 5 V/cm). Continuous vernier between ranges.			0.05, 0.1, 0.5, 1, 5, 10 mV/in.; 0.05, 0.1, 0.5, 1.5, 10 V/in. (metric available in 0.02, 0.05, 0.1, 0.5, 1, 5 mV/cm; 0.01, 0.05, 0.1, 0.5, 1, 5 V/cm). Continuous vernier between ranges.
Input resistance	1 megohm constant on all ranges			
Source resistance	10 k ohm maximum on all ranges			10 k ohm max except 0.02 mV/cm, 0.05 mV/cm, and 0.1 mV/cm (0.05 mV/in. and 0.1 mV/in.) ranges are 2 k ohm max.
Accuracy	±0.2% of full scale (includes linearity and deadband) at 25°C. Temp coefficient ±0.01% per °C			
Range accuracy	±0.2% of full scale ±0.2% of deflection (includes linearity and deadband) at 25°C. Temp coefficient ±0.01% per °C.			
Deadband	0.1% of full scale			
Common mode rejection	110 dB and 90 dB AC (exceeds 130 dB DC and 110 dB AC under normal lab environmental conditions) with 1 k ohm between HI and LO terminals. CMV applied between ground and LO, and attenuator on most sensitive range. CMR decreases 20 dB per decade step in attenuation.			130 dB DC and 130 dB AC with 1 k ohm imbalance in HI or LO terminal (exceeds 150 dB under normal conditions). CMR decreases 20 dB per decade step in attenuation from most sensitive range.
Normal mode rejection	Internal filter not available			30 dB min at line frequency with FILTER IN. (50 dB typical at 60 Hz and 40 dB at 50 Hz.)

### Dynamic Specifications

Slewing speed	50 cm/s (20 in./s), min.	76 cm/s (30 in./s) minimum. 97 cm/s (38 in./s) typical under normal lab conditions.		
Acceleration peak-Y axis	2540 cm/s <sup>2</sup> (1000 in./s <sup>2</sup> )	7620 cm/s <sup>2</sup> (3000 in./s <sup>2</sup> )	6350 cm/s <sup>2</sup> (2500 in./s <sup>2</sup> )	7620 cm/s <sup>2</sup> (3000 in./s <sup>2</sup> )
-X axis	1270 cm/s <sup>2</sup> (500 in./s <sup>2</sup> )	5080 cm/s <sup>2</sup> (2000 in./s <sup>2</sup> )	3800 cm/s <sup>2</sup> (1500 in./s <sup>2</sup> )	5080 cm/s <sup>2</sup> (2000 in./s <sup>2</sup> )
Overshoot	2% of full scale maximum.	1% of full scale maximum.		

### Offset Specifications

Zero offset	Zero may be placed anywhere on the writing area or electrically off scale up to one full scale from zero index.	11 calibrated scales of zero offset in both axes. Switchable in steps of full scale from +1 to -10.		
Offset accuracy at 25°C (applies to calibrated unit)	Not applicable			±0.1% of full scale times N where N = number of scales of offset.
Temperature coefficient	Not applicable			±0.004% of full scale times N per °C.

### Time Base Specification

Time base	Optional: 6 speeds; 0.25, 0.5, 2.5, 5, 25, 50 sec/cm (English is 0.5, 1, 5, 10, 50, 100 sec/in.) switchable to X or Y axis (7046A only to X axis).	Standard: 6 speeds; 0.1, 0.5, 1, 5, 10, 50 s/cm (English is 0.5, 1, 5, 10, 50, 100 s/in. switchable to X or Y axis.		
Time base accuracy	1.0% at 25°C. Temp coefficient at ±0.1%/°C			

### General Specifications

Power	100, 120, 220, 240 Vac +5 -10%; 48 to 440 Hz; 135 VA	100, 120, 220, 240 Vac +5 -10%; 48 to 440 Hz; 175 VA	100, 120, 220, 240 Vac +5 -10%; 48 to 440 Hz; 175 VA	100, 120, 220, 240 Vac +5, -10%; 48 to 66 Hz; 180 VA
Pen lift	Electric (remote via TTL level)			
Writing area	25 x 38 cm (10 x 15 in.)			
Weight	Net 13.7 kg (30 lb)	Net 16 kg (35 lb)	Net 18.6 kg (41 lb)	
Size	400 H x 483 W x 165 mm D (15¾ x 19 x 6½ in.)		441 H x 483 W x 173 mm D (17¾ x 19 x 6¾ in.)	

### 7044A, 7045A, 7046A and 7047A Options

Option No.	Description	Price	Option No.	Description	Price
001:	Time Base	\$255	001:	Metric calibration	N/C
002:	Event marker	\$120	002:	Event marker	\$120
006:	Metric calibration	N/C	<b>Ordering information</b>		
<b>7046A</b>			7044A	Medium speed recorder	\$2200
001:	Time base	\$255	7045A	High speed recorder	\$2550
002:	Event marker	\$120	7046A	2-pen, high speed recorder	\$3700
007:	Metric calibration	N/C	7047A	High sensitivity, high speed recorder	\$3900