Instrument Accuracy

Dimension	Instrument	Manufacturer Model or Product No.	Instrument Precision	Instrument Accuracy (max. relative error)	Common Error Limiting Factor
Length	meter stick	Cenco 73115	0.5 mm	<0.5%	visual
Length	Vernier calipers	Craftsman 40257	0.05 mm	0.1%	misreading scale
Mass	electronic balance	Ohaus GT 4000	0.1 g	0.1% to 1%	calibration
Time	digital stopwatch	PASCO SE-8755	0.01 s	~ 0.001%	reaction time (~0.2 s)
Time	photogate	PASCO ME-9206A	5 ms	0.50%	data processing
Time	Smart Timer	PASCO ME-8930	0.1 ms	0.01% of full scale	calibration
Frequency	signal generator	Instek FG-8016G	0.1 Hz	1%	calibration
V, I, R	multimeter	Radio Shack 22-163, Micronta 22-167	4.5 digits	DCV: 1% ACV: 1.5% DCA (< 30 mA): 1% DCA (0.3 to 10 A): 2% R (< 300 kΩ): 1% R (0.3 to 3 MΩ): 2%	extra resistance, calibration
V, I, R	multimeter	Fluke 77 Series II	4.5 digits	0.3% for 1 mV to 320 V 1.5% for 0.1 mA to 10 A 0.5% for 1Ω to 3.2 MΩ	calibration
V, I, R	multimeter	Keithley 178 DMM		(see bottom of meter)	extra resistance, calibration
Capacitance	capacitance meter	BK 810B	3.5 digits	0.5% for 200 pF to 0.2 mF 2% for 0.2 mF to 20 mF	calibration, stray capac.
Inductance	LCR meter	BK 875 A	3.5 digits	3% for C < 0.2 mF 3% for L < 20 H	calibration
V, freq.	oscilloscope	Tektronix 2211, 2213	2 digits	3% for both gain and sweep	visual resol., calibration
Freefall Time	Tape Timer	PASCO ME-9283		0.1%	obstruction
Time/dist	Spark generator	Daedalon EA-50		0.1%	wrinkled paper, spin on
Resistance	Decade resistor	General Radio Co. 1432-N, 1432-A,		10%	calibration
Resistance	Resistance subst. box	Heath EUW-28	7 Ohms	10%	calibration
Inductance	Decade inductor	Wide Range Electronics ALD-12	1 mH	10%	calibration
Mag. Field	Hall Probe	FW Bell 5070	0.01 mT	± 2% DC, ± 3.5% AC	probe
Angle	Digital Level	Spi-Tronic Pro 3600	0.05^o	0.05^o	unstable level