

TeachSpin Modern Interferometry - Component List as of October 30, 2006

#	Item
Equipment for Breadboard	
1	Optical Bread Board - Aluminum 24" x 36"
1	Set Stiffening Ribs
1	Ball-Point Hex Key Driver 3/16"
1	Hex Key Set (6-7 pieces)
1	Assortment of 1/4-20 screws, post holders and bases for attaching pieces to Bread board
Light Sources	
1	HeNe Laser - 633 nm, 1mW, polarized
1	Diode Laser Module with thermoelectric device 650 nm adjustable focus, 5mW polarized
1	White Light Source - halogen lamp
1	Red/Green LED
1	Light Source Support (holds all light sources at same distance above the table)
Optical Component Supports	
2	Proprietary High Stability Vertical Tilt Flexure Mirror Mount, mirror attached
1	Proprietary High Stability Horizontal Tilt Flexure Mirror Mount, mirror attached
1	Standard Mirror mount with post and holder - steering mirror
1	Translation stage- commercial with standard mirror mount - steering mirror
1	Translation stage (1 inch travel) - commercial with high stability mirror mount
1	Proprietary High Stability Flexure Translation Stage
2	Cube Beam Splitter Holders
2	Flat Beam Splitter Holders (1" diameter)
1	45° Cube Beam Splitter Holder
1	360° Rotation Stage (5° fine adjust)
1	Lens holder
1	Filter holder - commercial
2	Filter Holders - TeachSpin
2	Alignment Towers
2	Alignment Paddles
Electronics/Controller box	
Power Sources	
	Power supplies for HeNe and Diode Lasers
	Power for Motor Drive
	Banana Plug Inputs for external power supply connected to output for thermoelectric device and Bi-color LED
Analog Conditioning Electronics in Controller	
	2 Channels available - 1 with gain adjust
	DC offsets for each channel
	Low pass Filter
	Differential Amplifier Pair for signal Subtraction
Digital Counting Electronics	
	Variable Hysteresis Input
	Counter for either Quadrature or Single Cycle Counting

#	Item
Optical Components	
2	extra Mirrors for high stability mounts (1"X2")
2	mirrors 1" diameter
2	Polarizing Beam Splitting Cubes (1" side)
2	50/50 Dielectric Beam Splitters (1" diameter)
1	Metallic (Inconel) Beam Splitter
1	Quartz Phase Shifter - For "quadrature interferometry"
1	Glass Phase Shifter
1	Two Pane Glass Phase Shifter
2	Polarizers in Calibrated Ring - 2"
1	Set 1" diameter lenses FL: 35 mm, 50 mm, 100 mm
1	Compensator Plate (1" diameter)
Accessories Supplied for Experiments	
1	Gas Cell with tubing and gas manifold - for Index of Refraction of Gas
1	LiNbO3 Crystal and crystal holder with electrodes - for electro-optic effect
1	Set of Magnetostriction Samples including Copper, Steel, Nickel
1	Solenoid for magnetostriction
1	Piezo electric transducer - for piezo electric effect
1	Draft cover
1	Thermal Expansion Sample Set including Aluminum, Copper, Invar, Alumina
1	Invar Squares for "Keepsake" experiment
1	Hand activated "push rod" for "Keepsake" Experiment
1	Differential Micrometer - Mitutoyo, 0.1 micron resolution
1	Low speed motor & coupling for differential micrometer - direct wavelength measurement
Detectors/Transducers	
2	Proprietary Large Area Photodiode Detectors/built-in preamp and cables
1	Pressure Transducer (for gas cell index of refraction)
1	Thermocouple Kit including 5 Transducers
Also Included	
	Digital Thermocouple Meter for Temperature Readouts - Omega, Inc.
	Kit for construction of Thermal Expansion Samples
Required Accessories	
	Power/Audio Amplifier such as TeachSpin PAA1-A for Magnetostriction Solenoid
	Vacuum Pump or any forepump for Index of Refraction of Gas
	Power Supply such as Kenwood PR36-3A for Halogen Light Source and LED