

## Monarch Phase Shifting Stroboscopes

- Rechargeable Battery and Line Operation
- Wide 30–32,500 FPM Range
- Phase or Time Delay Modes
- Input/Output TTL Triggers

This is the world's fastest phase shifting strobe, and also the only battery operated strobe we have seen which allows phase shifting and time delay measurements. Shift phase in degrees or time, work directly up to 32,500 FPM.

### Specifications

Flash Range:	30 to 32,500 flashes/min; 1.667 to 533.33 flashes/sec
Accuracy:	±0.01%
Display:	5-digit LCD with backlight
Power Supply:	Internal rechargeable batteries and/or line voltage continuous operation
Size:	Body 3.56 x 3.66 x 9" HWD/Reflector Housing 4.8" dia
Weight:	2½ lbs/1.2 kg with batteries

### Ordering Information

Order #	Mfg #	Description	Price
MP5277FST	6210-010	Stroboscope, Phase-Shifting, Battery (115V Charger)	
MP5277FST-KIT	6210-011	Stroboscope, Phase-Shifting, Battery or Line 115V	
MP5278FST	6210-012	Stroboscope, Phase-Shifting, Battery (230V Charger)	
MP5278FST-KIT	6210-013	Stroboscope, Phase-Shifting, Battery or Line 230V	
MP5280FST	6280-037	6' Input/Output Cable (dual male phone plug to BNC)	
MP5282FST	MT-190P	Magnetic Sensor with 8' Cable (for phaser strobe triggering)	
MP4435FST	6280-030	Spare Lamp	
MP4432FST	6280-040	Plastic Latching Carrying Case	
MP5283FST	6180-050	Remote Optical Sensor with 8' Cable (Includes 1" tape)	
MP7246FST	6180-070	Reflective Tape, 5' Roll x ½" Wide	
MP5284FST	SPC-1	Splash-Proof Protective Cover (for use with phaser strobe only when battery powered)	

Transcat Accredited Calibration with Data	CALL
Transcat Accredited Calibration without Data	CALL



▲ 5277FST

**Each Unit Includes:** Manufacturer's NIST traceable certificate, standard battery charger, and 115V (R5) or standard battery charger, 230V (R6).

**Each Kit Includes:** Power supply/battery charger (115V units) PSC-3, power supply/battery charger, (230V units) PSC-4, spare lamp (L-1903), latching carrying case (CC-7), and instruction manual.

**Applications:** Timing marks, printing press, textile, vibration studies, and RPM to ±.5.

## Ametek Stroboscope/Tachometer

- Direct 20-31,250 Flashes/Minute, 120-99,999 RPM
- Flash Timing: 31,251 to 62,500 Every Other Pulse; 62,501 to 93,750 Every Third Pulse; 93,751 and Higher Every Fourth Pulse
- Accuracy: ±0.01%

### Or as a Tach

Must be used with an optional external magnetic or photoelectric pickup. Magnetic pickup senses movement of gears, keys, and other ferrous machine parts.

**Each Unit Includes:** Flash tube (E10-028) and instruction manual.

### Use as a Strobe

Observe linear motion of objects on conveyor belts; check slippage; verify printing press register; determine the speed of motors, gears, pulleys, and other rotational equipment.

### Ordering Information

Order #	Mfg #	Description	Price
MP3156FST	1965-115V	Stroboscope/Tachometer, 115V	
MP3156FST-220	1965/220V	Stroboscope/Tachometer, 220V	
MP3216FST	E80-394	Carrying Case	
MP3219FST	892/SXA-1800	Magnetic Pickup, Brass-Nickel Plated, 2"	
MP3220FST	995/SXA	Photoelectric Pickup, ¼" to 25" Application Distance	
MP7271FST	996	Power Pack (25 min at 12,000 fpm)	

Transcat Accredited Calibration with Data	CALL
Transcat Accredited Calibration without Data	CALL



▶ 1965/115V

### Specifications

Range:	20-29,999 fpm; 120-99,999 rpm
Accuracy:	±0.01% ± 1 LSD
Strobe:	Xenon white, 70-100 µs
Display:	5-digit LCD
Power Supply:	115 VAC (3156FST), 220 VAC (3156FST-220), or optional power pack (7271FST)
Size/Weight	4½ x 5 x 11½" HWD/3 lb

# Monarch Stroboscope

- Diagnostic and RPM Checks
- Internal Phase Shifting (JOG)
- Digital and Analog Readout Stroboscopes with Backlit Display
- Internal Battery-Operated Portable or Line-Powered Models
- Rated for Continuous Duty
- Tripod Mounting Adapter (1/4–20 UNC) in Handle
- CE Approved

### High Performance, High Value

These strobes offer analog or digital readouts in line or rechargeable battery-powered models. Each has a high-intensity Xenon flash tube and an efficient switching circuit and body vents to allow continuous operation if needed. Features include latching trigger, simple flash tube replacement, and convenient tripod mount.

### Basic Models Provide (BA115 and BB115) 100 to 8000 Flashes Per Minute Range

The back-lighted display shows selected flash rate on a large-diameter drum rotated by a control knob. The setting drum is calibrated linearly, so there are none of those hard-to-read markings common on the high end of the scales in comparable models.

### Digital Strobes Provide a Range of 30 to 14,000 FPM

Readout is on a 5½-digit LCD on the rear of the case, set by its rotary encoder for precise adjustment. Built-in TTL-compatible input and output allow the strobe to be remotely triggered and synced to external events, or operated in a master/slave configuration. Can also be used to trigger FFT analyzers for phase measurements, provide a timing reference on magnetic tape recorders, or drive other TTL-compatible instruments.

### Portable Units for Field Use

At full charge, the BB115 and 4431FST models can operate continuously for more than 60 minutes at a 6000 FPM rate. Both feature a low battery indicator and automatic shut-off. Battery charge percentage indicator on digital Units

### Special Features (4430FST and 4431FST)

“Divide by 2” and “Multiply by 2” buttons allow a quick check of actual RPM. “Phase-” buttons allow internal phase delays to be added or subtracted. An “Adder” mode enables visual inspection for misalignment or bent odd-numbered fan blades etc. The “Tach” mode enables the unit to be used with optional external sensors to measure up to 200,000 RPM directly without flashing the strobe. Up to 6 user-preset memory values can be recalled for quick routine checking of equipment, and the unit recalls the last value measured.



### Each Unit Includes:

6200-030/6200-050 Standard 115 VAC charger and internal rechargeable lead acid batteries. EACH KIT also includes spare flash tube and plastic latch carrying case, and instruction manual. NIST Certificate Included

### Ordering Information

Order #	Mfg #	Description	Price
MP6200-071	BA115	Stroboscope, Basic, 115 VAC Kit	
MP6200-081	BB115	Stroboscope, Basic, Battery Powered Kit	
MP4430FST	6200-060	Stroboscope, Digital, 115 VAC	
MP4430FST-KIT	6200-060	Stroboscope, Digital KIT 115V	
MP4431FST	6200-050	Stroboscope, Digital, Battery Powered	
MP4431FST-KIT		Stroboscope, Digital KIT 115V Battery Powered	
MP4432FST	6280-040	Attache Carrying Case	
MP4434FST	6280-031	Spare Lamp for Basic Versions (L1902)	
MP4435FST	6280-030	Spare Lamp for Digital Versions (L1903)	
MP5283FST	6180-050	Remote Optical Sensor (for digitals)	

NOTE: For 230 VAC versions, please contact Transcat.

### Specifications

Mfg#	BA115	BB115	4430FST	4431FST
Range, Flashes/Minute:	100–8000			30–14,000.0
Accuracy:	±1 FPM			±0.01% Rdg/.1FPM
Flash Tube:	Xenon			
Flash Duration:	20–50 microseconds			
Flash Tube Life:	50,000,000 flashes typical		100,000,000 flashes typical	
Operating Time:	Continuous	60 min	Continuous	60 min
External Input (1/8" Phone Plug):	No		Yes, TTL Compatible to 24V	
Trigger Output/Remote Sync (1/8" Phone Plug):	No		Yes, TTL compatible	
Display:	Back-Lit LCD		5½-digit LCD	
Power Supply: (220/230V optional)	115 VAC, 50–400 Hz	Internal rechargeable batteries	115 VAC, 50–400 Hz	Internal rechargeable batteries
Weight:	1.5 lb	2.5 lb	1.5 lb	2.5 lb
Size:	Body 3.56 x 3.66 x 9" HWD. Reflector housing 4.8" diameter			



## **NEW** Ametek Analog Stroboscope

- Easily Stop Machinery or Product Motion for Inspection
- Large Dial for Adjustment and Reading
- Flash Rate 200 to 6000 FPM or 4 to 100 Hz
- Flash Duration 70 to 100 microseconds
- Accurate to  $\pm 3\%$  of Scale
- Lightweight and Durable
- Line Powered 115 or 320 VAC
- Size/Weight 3 x 3 x 7" HWD / 20 oz

**Each unit includes:** Stroboscope, Power Cord certificate of conformance, and instruction manual

### Ordering Information

Order #	Mfg #	Description	Price
MP1000/115V	1000/115V	Stroboscope – 115 VAC	
MP1000/230V	1000/230V	Stroboscope – 230 VAC	
MP4712FST	999	Convex tip	
MPK-1562	K-1562	Tripod – Heavy duty	



## Exttech Programmable Stroboscope/Tachometer

- Speed and Motion Analysis of Gears, Fans, Pumps and Motors
- 0 to 360° Phase Shift Offset
- Ranges from 12 to 12,000 RPM or FPM
- Coarse and Fine Adjustments Using Keypad
- Memory Stores/Recalls 3 Measurements
- Divide/Multiply Readings by 2
- Accuracy  $\pm 0.01\%$  Reading
- Stop Motion Function at 2:1, 3:1 or 4:1 for Harmonics

**Each Unit Includes:** 6' power cord and handle.

### Specifications

Dimensions:	8 x 4.8 x 4.8" (20 x 12 x 12 mm)
Weight:	2.9 lbs (1.3 kg)

### Ordering Information

Order #	Mfg #	Description	Price
MP461840	461840	Programmable Digital Stroboscope 117 VAC 50/60 Hz	
MP461841	461841	Programmable Digital Stroboscope 220 VAC 50/60 Hz	
MP461834	461834	Spare Xenon Lamp	



## Exttech Stroboscopes/Tachometers

### Freeze motion and measure speed without contact

- Checks and Analyzes Motion and Speed
- Read RPMs on 4-Digit LED Display
- Duty Cycles from 5 to 30 Minutes, 1 Second Sampling Time
- High Accuracy Over a Wide Dynamic Range
- Complete with 6 ft Power Cord, Handle

### Specifications

Flash/Speed Rate:	100 to 10,000 FPM/RPM
Accuracy:	$\pm(0.05\% + 1 \text{ Digit})$
Dimensions/Weight:	8.3 x 4.8 x 4.8" (211 x 122 x 122 mm)/2.2 lbs (1 kg)

### Ordering Information

Order #	Mfg #	Description	Price
MP461830	461830	Digital Strobo Tach, 115 VAC	
MP461831	461831	Digital Strobo Tach, 220 VAC	
MP461834	461834	Spare Xeon Lamp	

**Each 461830/461831 includes:**  
6-ft cord, handle, standard tripod mounting, connection, and operating manual.

**461830** ▶



## Shimpo Digital Stroboscopes

- Line- and Battery-Powered Models
- Range: 40 to 12,500 FPM
- Phase Shift (360°) and External Triggering Input (12V, 24V, Switch, and Relay)
- Output Signal NPN Open Collector

encoder rather than a traditional potentiometer, which enables them to be set exactly at the required flash rate. Other integral functions include phase shift; external trigger; synchronous signal output; and  $\pm 2$ ,  $\times 2$  rate function. The units are offered in battery or AC-line powered versions and are rated for continuous duty.

Incorporating key functions with practicality, these digital stroboscopes are cost-effective choices. Use them for standard strobe functions and as digital tachometers to measure RPM without contact or special markings. They feature a unique rotary pulse

**Each Kit Includes:** Carrying case, extra flash tube, battery charger (DC version only) or power cord, and operating instructions.



DT-721

### Specifications

Flash Range/Accuracy:	40 to 12,500 FPM/ $\pm 0.02\%$ of reading
Resolution:	0.1 FPM at 4,999.9 FPM to 1 FPM at 12,500 FPM
Display:	5-digit LED, 0.3" high
Flash Tube:	Xenon, 10W; 100,000,000 flashes typical
Flash Duration:	10 to 15 $\mu$ s
Power Supply:	23023FST: 115 or 220 VAC, 50/60 Hz 23024FST: Internal rechargeable battery
Size:	8.5 x 4.3 x 9" HWD
Weight:	1.5 lbs, 23023FST; 2.75 lbs, 23024FST

### Ordering Information

Order #	Mfg #	Description	Price
MP23023FST	DT-721-KIT	Digital Stroboscope Kit, 115V Line Powered	
MP23023FST-220	DT-721-KIT-220V	Digital Stroboscope Kit, 220V Line Powered	
MP23024FST	DT-725-KIT	Digital Stroboscope Kit, Battery Powered, 115V Charger	
MP23024FST-220	DT-725-KIT-220V	Digital Stroboscope Kit, Battery Powered, 220V Charger	

Transcat Accredited Calibration with Data	CALL
Transcat Accredited Calibration without Data	CALL

**Great Kit Value**

## Shimpo Phase Shifting Stroboscopes

- Line, Internal, or External Power
- 35,000 FPM Range
- Internal or External Triggering
- Rugged Aluminum Construction
- Rate Multiplier/Divider (  $\times 2$  /  $\div 2$  )

### Feature-Packed

This family of three high quality strobes is identical except for power supply requirements. The 5045DST runs from the 115 VAC line, the 5046DST uses an internal 12V rechargeable battery pack (and includes the charger/adaptor), and the 5047DST comes with an external 12V rechargeable battery.

External trigger input and synchronous output allow the strobe to be daisy-chained to other strobes, or triggered from an external photo sensor or proximity switch.

**5046DST Unit Includes:** Charger adapter (SWA1502).

**5047DST Unit Includes:** External battery pack (BP-100).

**NOTE:** Charger adapter available in 220V. Call Transcat for information.

### Ordering Information

Order #	Mfg #	Description	Price
MP5045DST	DT-311	Digital Stroboscope, 115 VAC	
MP5045DST-220	DT-311-220V	Digital Stroboscope, 220 VAC	
MP5046DST	DT-315	Digital Stroboscope, Internal Battery Pack	
MP5047DST	DT-315EB	Digital Stroboscope, External Battery Pack	
MP5048DST	DT311-DT315 CASE	Carrying Case	
MP5049DST	FLASH DT311-315	Replacement Flashtube	

Transcat Accredited Calibration with Data	CALL
Transcat Accredited Calibration without Data	CALL

### Specifications

	5045DST	5046DST	5047DST
Flashing Range:		40 to 35,000 FPM	
Accuracy:		$\pm 0.01\%$ of reading	
Output:		Synchronous 400 $\mu$ s pulse output, 0 to 12 VDC amplitude (approx)	
Phase Shift:		0 to 359° with 1° resolution	
Display:		5-digit, 0.39" H red LED	
Power Supply:	115 VAC, 50/60 Hz	Internal rechargeable battery	External 12 V battery
Size:	4.72 x 4.72 x 7.19" HWL	4.72 x 4.72 x 9.76" HWL	4.72 x 4.72 x 7.19" HWL
Weight:	2.6 lbs	4.4 lbs	2.5 lbs

DT-311



Test Instruments — Miscellaneous

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## **NEW** Monarch Palm Strobe Compact Industrial Stroboscope

**World's first removable re-chargeable battery pack stroboscope**

- Provides Unlimited Continuous Use
- Unique Joystick Tuning Button Adjusts Flash Rate, Multiply by 2 and Divide by 2
- Rapid and Precise Frequency Selection
- Instant Stop-Motion Inspection
- Flash Range 30.0 - 14,000.0 FPM
- Tachometer Measurements 10 to 250,000 RPM
- Typical Accuracy ±0.01% of Reading
- Run Time 1 Hour Typical at 1800 FPM
- Removable 6V Rechargeable Battery Pack with Integral Charger
- 6 digit Alphanumeric Backlit LCD display

**Palm Strobe 115** ▶



▲ **Battery Pack**

**Each unit includes:** Strobe, battery, recharger

**Pak:** adds second battery pack and holster.

**Kit includes:** Strobe, 2 battery packs, recharger, (2) spare lamps and latching hard case.

**Deluxe Kit includes:** Strobe, 2 battery packs, recharger, (2) spare lamps, holster and latching hard case.

### Ordering Information

Order #	Mfg #	Description	Price
MP6205-010	Palm Strobe 115	Industrial Stroboscope 115VAC	
MP6205-011	Palm Strobe Pak 115	Industrial Stroboscope Pak	
MP6205-012	Palm Strobe Kit 115	Industrial Stroboscope Kit	
MP6205-013	Palm Strobe Deluxe Kit 115	Industrial Stroboscope Deluxe Kit	
MP6280-017	PR Universal	Universal Charger 120-240 50/60 Hz (USA/UK/AUZ/Euro adapter plugs)	
MP6280-029	L-1904	Replacement Lamps (2)	

▶ **Palm Strobe Deluxe Kit**



## Extech Combination Contact/Photo Tachometer

**Laser Photo Tachometer Now Available**

- Unique Display where Characters Reverse Direction Depending on Measurement Mode You are in
- Large 0.4" (5 digit) LCD Display
- Tachometer Memory Stores Last, Max and Min Readings
- Provides Wide RPM (photo and contact) and Linear Surface Speed (contact) Measurements
- Accurate to 0.05% with Max Resolution of 0.1 RPM

**Each Unit Includes:** Complete with tips and wheel for RPM or linear surface speed, four 1.5V AA batteries, reflective tape and carrying case.

### Additional Features (22510FST)

- Narrow Beam Laser Photo Tachometer for Accurate Non-Contact RPM Measurements
- Measurements from up to 6.5 ft from the Target for Improved Safety and Accessibility

### Specifications

	Photo	Contact
Range—RPM:	5–99,999	0.5–20,000 (Contact)
Accuracy:	0.05% FS +1 digit	
Sampling Time:	1 Sec >60 RPM	1 Sec >6 RPM
Surface Speed:		0.2 to 6560 ft/min 0.05 to 1999.9 m/min
Resolution:	0.1 RPM (0.5 to 999.9 RPM) 1 RPM >1000 RPM	
Power:	4 AA batteries	
Dimensions/Weight:	8.5 x 2.6 x 1.5" / 10.6 oz (300g)	



### Ordering Information

Order #	Mfg #	Description	Price
MP22507FST	461895	Combination Contact/Photo Tachometer	
MP22510FST	461995	Laser Photo/Contact Tachometer	
MP22508FST-1	461936	Spare Reflective Tape (23" each roll)	
MP22508FST-2	461899	Set of Spare Wheels	