

TroubleShooter LE™

**Portable High-Speed Troubleshooting Camera
For Plant Maintenance & Field Service Engineers**

The **TroubleShooter LE Point & Shoot High-Speed Camera** is specifically designed for plant maintenance and field service operations, including line setup and changeovers, machinery diagnostics and general troubleshooting. It allows plant maintenance and field service engineers and technicians to see, measure and understand high-speed problems that happen too fast to see with the unaided eye.

For plant maintenance engineers, the ability to quickly identify and fix the problems that cause work stoppages on high-speed production and packaging lines means that they can get the lines back up to full production faster. Unlike bulky high-speed camera systems of the past, the point-and-shoot **TroubleShooter LE** requires no complicated setup. It's easy to use...so it will get used.

For field service departments, the **TroubleShooter LE's** small size and portability make it an indispensable troubleshooting tool... a "mechanical engineer's oscilloscope". Service engineers can reduce the time spent at the customer's site by eliminating "trial and error" troubleshooting. When they can see the problem, they can fix it!

Fast service calls improve customer uptime and satisfaction and, since each customer service call takes less time, overall service costs are usually less. Field service engineers can operate more efficiently and travel costs for overnight stays may also be significantly reduced.



Fast. Record up to 500 frames per second and stop the action.

Portable. Small, light weight, battery powered.

Easy. Capture thousands of images with the push of a button, review them on the built-in screen and save them to a Compact Flash card.

Connected. Communicate between TroubleShooter LE and your laptop through the built-in USB-2.0 port.

Light Sensitive. No additional lighting required for most applications.

Companies can **improve operational efficiency and save money** by:

- Reducing jams
- Speed up line setup and changeovers
- Lowering scrap and rejected material costs
- Reducing downtime

See what you've been missing

TroubleShooter LE

POINT & SHOOT High-Speed Camera

SPECIFICATIONS

MODELS	TroubleShooter LE 250 and TroubleShooter LE 500 (Monochrome and Color).
SENSOR	CMOS array, 8-bit monochrome resolution, 24-bit color resolution.
SHUTTER	1x, 2x, 3x, 4x, 5x, 10x and 20x the recording rate.
RECORDING MODES	<p>Manual Begins recording when the record button is pushed. Continues to record and store images in memory until the stop button is pushed.</p> <p>Trigger Begins recording when the record button is pushed. Continues to record and store images in memory until an external trigger signal is received. The adjustable trigger position determines how many frames are stored before and after the trigger signal is received.</p>
PLAYBACK MODES	Single step mode plus auto playback at 1, 2, 3, 4, 5, 10, 15, 25, 30, 50, 60, 125 and 250 frames per second, forward and reverse.
DISPLAY	Built-in 5" LCD color digital display.
OPERATOR CONTROLS	Power On/Off, Function Select/Change, Record, Stop, Download.
I/O CONNECTORS	DC Power, USB 2.0 Port, Compact Flash, Trigger-In, Sync-In, Sync-Out, Video-Out.
TRIGGER INPUT	Contact closure or standard TTL signal, 3 to 30 VDC.
MOUNTS	C-mount lens mount, 1/4-20 tripod mount.
POWER SUPPLY	Rechargeable Battery Pack (included) or 110/220 VAC adapter (included).
SIZE & WEIGHT	19cm W x 12cm H x 6cm D; 0.8 kg with Battery Pack.

Recording Rate (fps)	Resolution	Standard Memory - 512MB		Enhanced Memory - 1GB	
		Total Frames	Time (sec)	Total Frames	Time (sec)
50	640 x 480	1,746	35	3,492	70
60	640 x 480	1,746	29	3,492	58
125	640 x 480	1,746	14	3,492	28
250	640 x 480	1,746	7	3,492	14
50	640 X 240	3,492	70	6,984	140
60	640 X 240	3,492	58	6,984	116
125	640 X 240	3,492	28	6,984	56
250	640 X 240	3,492	14	6,984	28
500	640 X 240	3,492	7	6,984	14
50	440 x 330	3,694	74	7,388	148
60	440 x 330	3,694	62	7,388	123
125	440 x 330	3,694	30	7,388	59
250	440 x 330	3,694	15	7,388	30
500	440 x 330	3,694	7	7,388	15
50	320 x 240	6,984	140	13,968	279
60	320 x 240	6,984	116	13,968	233
125	320 x 240	6,984	56	13,968	112
250	320 x 240	6,984	28	13,968	56
500	320 x 240	6,984	14	13,968	28