

PSM

Programmable Sample Monitor

The Logitech Programmable Sample Monitor, is a high precision sample monitoring facility designed for use with PP5, PP6 and PP8 Precision Polishing Jigs. It provides an effective means for automatic processing of samples to a pre-determined programmed thickness. Due to the audible alarm feature on the PSM and the optional infra-red cut-out, the unit can be left to run unsupervised-freeing the operator to perform additional tasks.

High Precision

The PSM system is ideal for all applications where the requirement is to produce a highly uniform specimen with a precisely controlled final thickness to within 1µm. Typical applications are: ultra-thin section production, backlapping and polishing of semiconductor wafers, optoelectronic materials, surface preparation of crystals or surfaces on samples at chosen angle.

Construction

The PSM system consists of a sample monitor and digital linear gauge (DLG), which replaces the mechanical dial gauge normally fitted to a PP5, PP6 or PP8 jig. Both units are mounted directly on the jig and can be fitted to both new and existing jigs with the minimum of modifications.

The sample monitor is a sealed unit with a membrane control panel and digital readout with 1µm resolution. This unit features all the controls for the main operation of the PSM. The DLG gives an absolute reading of the chuckface position and relays it to the sample monitor.

The unit is powered by rechargeable batteries, easily accessible in the compartment on top of the jig.

Operation

Before placing the jig on the lapping or polishing machine, the amount of material to be removed is entered into the sample monitor unit. The jig is then placed on the machine and on pressing the RUN button, the sample monitor takes a zero reference from the digital linear gauge and displays the amount of material to be removed. It continues to display this information throughout the whole process.

If the operation has to be interrupted for whatever reason, the amount of material removed and preset value are stored in the monitor unit so that on restarting, measurements start from the point already reached.



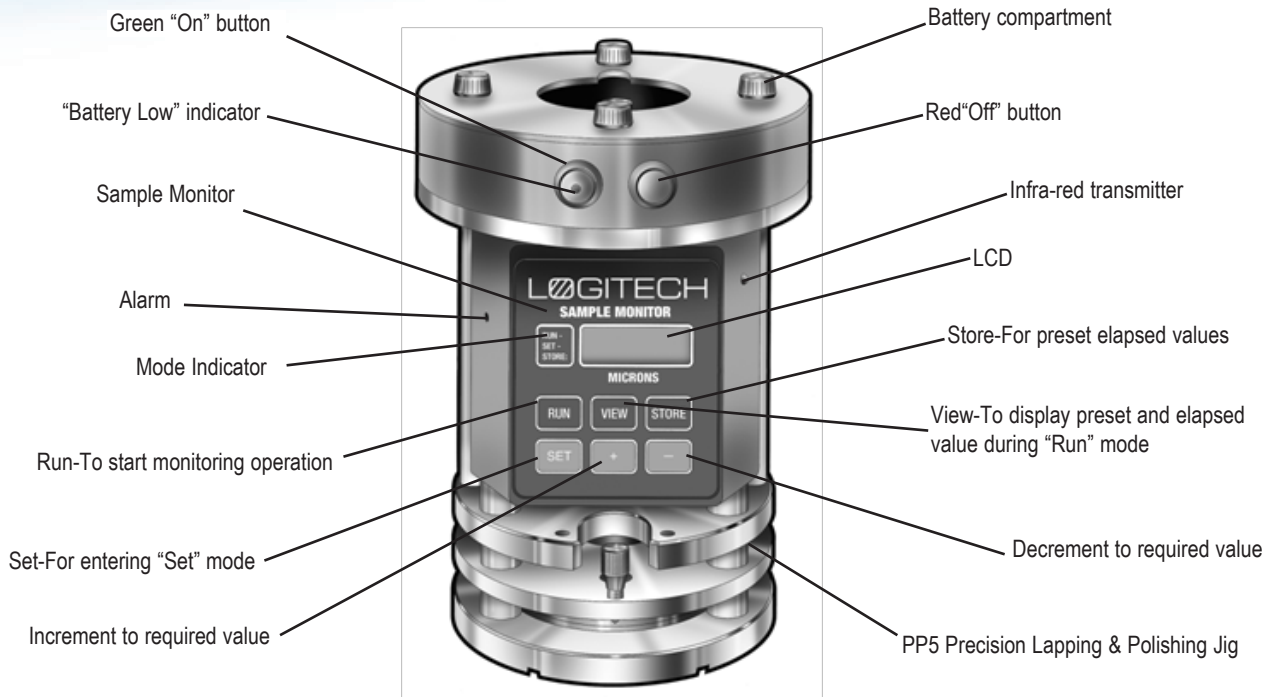
- Programmable material removal
- Continual material removal display to 1µm
- Automatic recall of sample values
- Optional automatic machine cut-out
- Audible alarm towards end of processing

As the desired quantity for removal is approached, an alarm sounds to give warning of completion. Alternatively, if the optional receiver unit has been fitted, an infra-red transmitter on the monitor unit switches the machine off when the preset amount has been removed.

These features are of particular benefit in large multi-jig systems as they enable the operator to monitor the progress of individual specimens and therefore keep machine down time to a minimum.

Integral rechargeable batteries allow around 18 hours of usage and can be recharged in around 3 hours. A second set of batteries are supplied. A "battery low" LED indicates to the operator when the batteries should be changed or recharged.

The robust construction of the PSM unit ensures its suitability for both production and research environments.



Technical Specifications:

Resolution:	1 micron
Full range accuracy (at 20 deg C):	3 microns over 25mm travel
Maximum allowable preset value:	999 microns
Power supply (OLG and sample monitor):	Rechargeable batteries (around 18 hours of continuous operation)

Accessories, Components & Consumables

A comprehensive range of accessories, components and consumables are available to support these systems, enabling optimum results and longevity of the machines. A selection of supporting products can be found below, for a more comprehensive listing please go to www.logitech.uk.com

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