

AutoProbe CP-Research

AutoProbe CP-Research™ is a high resolution SPM for research in the physical sciences. It incorporates all major SPM modes and can be readily modified for any research application. Setup and use are simple and user friendly.

AutoProbe CP-Research

AP-2001

CP-Research Head

The CP-Research head includes :

- All necessary components for optical alignment of the laser and photodiode
- A set of 5 LED's for quick check of the optical alignment
- A logical switching sequence to select mode of operation
- The photodiode and STM preamplifier
- The amplitude and phase detectors

The CP-Research head is designed to accept the on-axis optical microscope: PSMS-1000 (see Figure 1).

Specification of components:

Laser:

Class: IIIa
 Power: 0.5 mW
 Wavelength: 600-700nm

Photodetector:

Type: 4Q-PSD (4 quadrant position sensitive detector)

Alignment mirror:

Size: 9mm x 9mm
 Alignment: Any TM cantilever may be used, in air and liquid

Photodiode preamp:

Bandwidth: 800 kHz

Amplitude measurement:

Det A: Single phase lock/in amplifier
 Det B: 'RMS' detector.

STM preamp:

Type: Ultra-low noise I-V converter (factor 10^8)

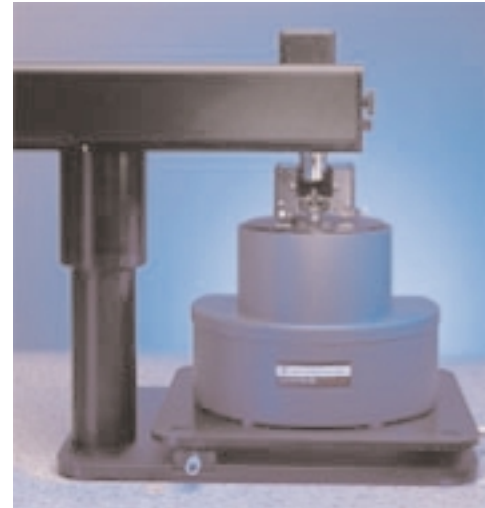


Figure 1: CP-Research with on-axis optical microscope

Figure 2: View of scan head

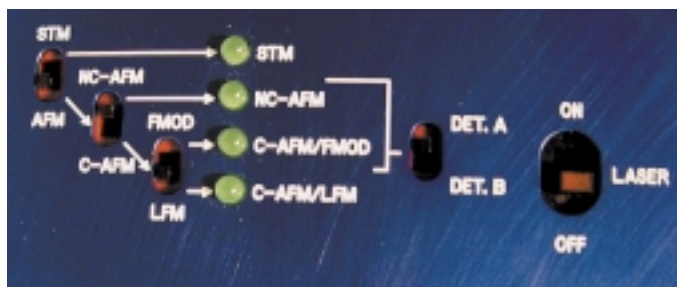


Figure 3: Close-up of scan head controls