

Laser targeting using the NPS-TG-7A Tip/Tilt Stage



Brief

The application demonstrates the use of the 'Function playback' feature using the NPS-TG-7A tip tilt mechanism. A laser is directed at a mirror mounted to the stage which reflects the beam onto a 'target surface' (i.e. a piece of white paper). The required sequence of moves for the X and Y axes is uploaded to the controller.

Function playback carries this out on both axes synchronously, ramping smoothly between points with speed and precision.

The Queensgate NPS-TG-7A has been developed for applications requiring high speed, ultra-high precision, positioning of mirrors. Incorporating capacitance positioning sensors it operates in closed loop to deliver over 7 milliradians of travel with nanoradian resolutions at over 1,2KHz bandwidth. Made from Invar 36, its low thermal expansion matches most optics minimising any thermal distortion.

The Queensgate NPS-TG-7A tip tilt mechanism is designed for applications requiring high speed, ultra-high precision positioning of mirrors.

Applications

- Laser scanning
- Laser pointing
- Atmospheric compensation
- Image processing and stabilization
- Scanning microscopy
- Laser communication point ahead devices
- Optical filters/switches

Equipment used in this application

- NPC-D-6330 Controller (inc. PSU)
- NPS-TG-5A Stage
- Laser - low level
- Laser Mount
- USB Cable
- Laptop/PC
- Target (i.e. sheet of paper)



NPC-D-6330 Controller

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