# Precision Goniometer(Comparison)

PAT-serial Goniometer is a precision comparation angle testing instrument with dual autocollimator design. It could be used for precision measurement for any dihedral angles, perpendicularity, parallelism, as well as the output beam deviation angle, etc. According to the lightsource used, there are two options: PAT-300(white light) and LPAT-650（Green or Red Laser）.

PAT-300 is with better accuracy(about 1 aresec), and it is good for normal prism testing(size≥3mm). LPAT-650 uses monochrome laser as input lightsource, since the laser inherent good directional and small spot characteristics, it is competent for small size product measurement(size ≥1mm). Both devices include measurement software that can capture images in real time and displays the results automatically. It makes the measurement simple and efficiency.
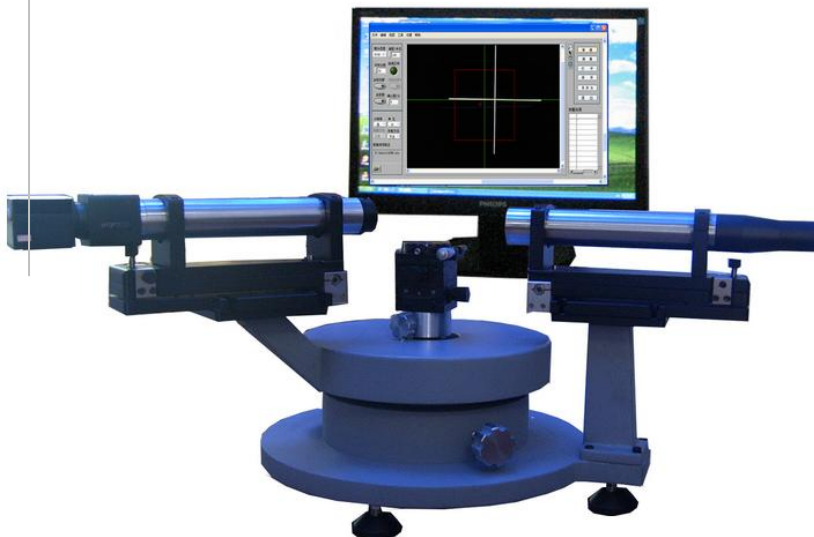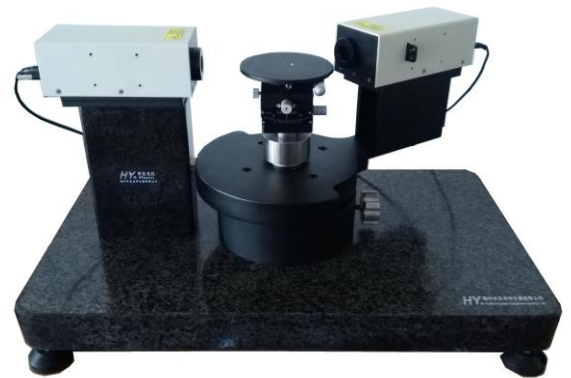
PAT-300   **LPAT-650**

Main Functions(Comparison Test):

- 🔴 **Any Dihedral angle measurement；**

- 🔴 **Output Beam Deviation accuracy for prisms;**

- 🔴 **Beam combination angle accuracy；**

- 🔴 **Perpendicularity, Parallelism, etc…**

Principle & Operation:

1.   Dihedral angle measurement for prism:

♦ Put the prism gauge(a known angle data prism) on the measurement stage and adjust it until the two auto-collimators pick up the reflection images, and then click "Initialization" on the software screen.

♦ Replace the prism gauge with tested prism, you will see the reflection images immediately(or slightly adjust if needed), and click "Measure", and tested angle result will show on the list.
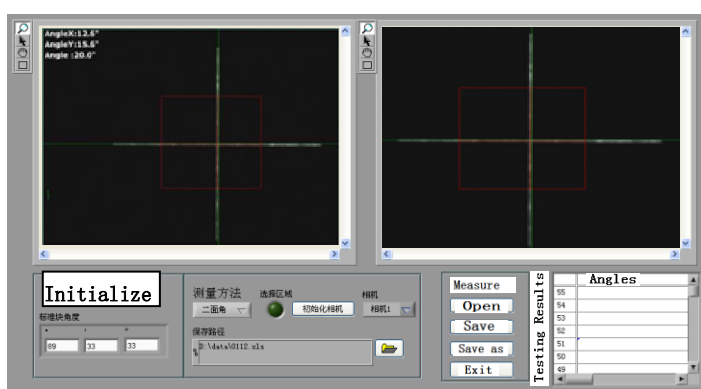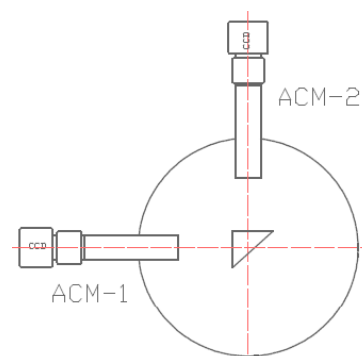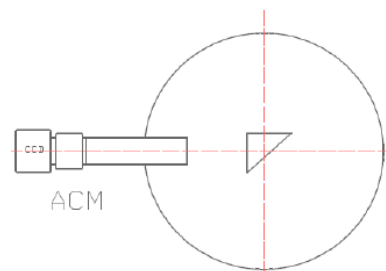
2.   Perpendicularity, Parallelism, Beam deviation angle testing：

Rotate the Auto-collimators as straight(180°), and "Initialize", then put the tested sample and "Measure", the parallelism(or Beam deviation)results will show on the list. You can also use single auto-collimator directly test perpendicularity as normal.

3.   90°Beam deviation angle testing:

Rotate the Auto-collimators at upright(90°), and use a 90°guage to "Initialize" the stage, then put the tested sample and make sure the input beam is normal(the reflection beam will show on the screen), and then just "Measure", the results will show on the list. It is the best way to testing the 90° deviation angle of Penta prism or PBS.

P/N	PAT-300	LPAT-650	Main Parts of Equipment
Resolution	0.1″	0.1″	● High power Lightsource
Accuracy (Repeatability)	1″	5″	● Precision Auto-collimator (with CCD)
Lightsource	Laser(Red/Green)	White light(400-700nm)	● Multi-Axes adjuster
Sample Size range(mm）	1x1 ~ 100x100	3x3 ~ 150x150	● Precision rotating platform ● Measurement Software, etc
Size(mm)/W	300x450x800	400x400x600	● 90/45°Master angle gauges