

Ophthalmic Equipment Terminology

TERM NAME	DEFINITION
A-Scan	Used to measure the length of the eye to assist in the calculation of the power of the intraocular lens to be used in cataract surgery.
Amsler Grid Eye Test Cards	Helps diagnose macular problems and is performed on patients with complaints of distortion, letters "jumping" when reading, or anyone with unexplained decrease in near vision. Patients describe the normal or abnormal appearance of gridlines on a chart. Distortions in the gridlines on the chart are recorded by the technician.
Argon Laser	Laser in which the light source is argon gas excited by electricity, used in the treatment of diabetic retinopathy, macular degeneration, trabeculectomy, and iridotomy.
Auto Refractor	A computerized instrument used to help determine the eyeglasses prescription.
Auto-keratometer	An instrument used to measure the curvature of the cornea. These measurements are frequently taken on patients who are being fitted for contact lenses, measured for intraocular lenses for cataract surgery, or who may have corneal problems.
B-Scan	Provides two dimensional reconstruction of the ocular and orbital tissues. It is also used to detect ocular tumors and retinal detachments.
Chart Projector	An instrument designed to project letters, numbers, or images onto a screen; used to check visual acuity.
Corneal Topographer	A computerized optical or digital instrument used to measure and map the curvature of the cornea. This is useful in diagnosing corneal diseases such as keratoconus and astigmatism. The testing is often performed for contact lens fittings and preliminary evaluations for refractive surgery such as LASIK.
Direct Ophthalmoscope	A hand-held instrument used at close range to view the inner structures of the eye.
Exam Chair and Stand	The patient chair attached to a device that is designed to hold the phoropter, slit lamp, ophthalmoscopes, retinoscopes, and other eye examination equipment.
Excimer Laser	A laser that uses a gas made up of argon and fluorine. This laser is used in ophthalmology to reshape the cornea by the process of photoablation, i.e., LASIK or PRK, to eliminate the need for dependence on glasses.
Exophthalmometer	Instrument used to measure abnormal protrusion of the eye.
Fundus Camera	Digital or analog camera designed to photograph the retina.
Geneva Lens Clock	An instrument used to determine the base curve of a lens.
Goldman Tonometer	Is normally mounted on a slit lamp, but can also be a hand-held instrument designed to be used with patients who cannot position themselves in the slit lamp chin rest.
Goniolens	A mirrored lens used to examine the angle structures in the front portion

	of the eye that allow for fluid outflow (primarily a screening test for glaucoma).
Indirect Ophthalmoscope	An instrument worn on the physician's head that allows viewing of the peripheral retina.
Lensometer	Instrument used to document the patient's current spectacle prescription. The readings identify not only the power of the lens, but also the type of the lens (as described in the module, Optical Dispensary).
Lid Speculum	Instrument used to hold the eyelids apart.
Maddox Rod	A transparent rod used in testing visual fusion.
Microkeratome	Surgical instrument used to create a corneal flap in refractive surgery.
Nd:YAG Laser	The principal application of this laser in ophthalmology is for posterior capsulotomy and iridotomy.
Occluder	An opaque device used to cover the eye during an eye examination.
Operating Microscope	In ophthalmic surgery, an instrument that is used by the surgeon to obtain an enlarged view of the eye.
Ophthalmodynamometer	An instrument used for measuring blood pressure in the central retinal artery by applying pressure to the sclera.
Pachymeter	An instrument used to measure the thickness of the cornea. This is commonly used in the diagnosis of glaucoma and corneal disease.
Perimeter (Visual Field)	An instrument used in visual field testing to document abnormal defects in a patient's central and peripheral vision. This test is most commonly used to diagnose and monitor glaucoma and other neurological eye problems.
Phaco	A commonly used abbreviation for an instrument used during phacoemulsification (cataract) surgery. This instrument breaks the lens (cataract) into small pieces and aspirates the lens material out of the eye.
Phoropter	An instrument containing a battery of convex, concave and cylindrical lenses used to determine an eyeglass prescription.
Potential Acuity Meter (PAM)	An instrument most frequently used to test the potential for improvement in visual acuity after cataract surgery.
Prism Bar	A plastic bar containing a series of prisms used to test for diplopia (double vision).
Retinoscope	An instrument used to objectively determine the refractive error of the eye.
Slit Lamp	An instrument with two oculars (eyepieces) that allow the examiner to view ocular structures through an attached low-powered microscope.
Snellen Acuity Eye Chart	An eye chart, manual or automatic, where measurement of the visual acuity is accomplished based upon standard sizes of letters visible to the normal eye at specified distances.
Specular Microscope	An instrument used to view the corneal endothelium under high magnification.

Tono-Pen	A hand-held tonometer.
Tonometers	Instruments used to measure intraocular pressure in the eye. There are different types of tonometers; see Goldman Tonometer and Tono-Pen.
Ultrasonography (Biometry)	A piece of equipment that uses the reflection or echo of sound waves to measure the length of the eye or detect abnormalities. Two types of tests are performed; see A-Scan and B-Scan.
Wheelchair Exchanger (Ramp)	Mechanical device that permits the typical patient chair in an examination lane to be easily moved out of normal position, so that the physician can exam a patient in a wheelchair.