



BINOCULAR MOBILE REFRACTOMETER



THE NEW WAY OF TAKING
CARE OF YOUR PATIENTS




A vision that inspires yours



2WIN

BINOCULAR MOBILE REFRACTOMETER



Now you can perform refractometry by using the most innovative, versatile and accurate technology. The 2WIN combines all of the necessary visual pretesting functions in one beautifully designed instrument. The Mobile portable refractometer and vision analyzer is: binocular, portable, wireless, objective, easy to use, child friendly, has key applications to measure phorias/tropias, pupillometry, intermediate distance refraction, and spectacles lens centering.



FEATURES

- Eccentric Photo-Retinoscopy
- Binocular / Monocular Refraction
- Phorias and Tropias Early Detection
- Gaze Measurement
- Pupil Size Measurement
- Refracts Over Lenses
- Non-invasive, fully automated and easy to use
- Ideal for non-cooperative patients
- Captures Infrared Retinoscopy Images
- Can refract patients as young as 2 months old and up to 120 years old
- Kids Mask Kit



ECCENTRIC PHOTO-RETINOSCOPY

The 2WIN measurement principle is eccentric photo-retinoscopy. Infrared (IR) light is projected through the patient pupils and onto the retina. Depending upon the refractive error, the reflected light forms a specific crescent-shaped brightness pattern within the pupil.



The 2WIN measures spherical power, cylinder power and axis by interpreting the reflected light crescent pattern and position. The 2WIN infrared exam also provides valuable information about corneal abnormalities as well as ocular media opacities such as cataracts.



BINOCULAR/ MONOCULAR REFRACTION

The 2WIN takes the measures in natural mydriasis and factors in accommodations which influences the measurement of hyperopic refractive errors. Such influence can be reduced by a dim light environment and no strong accommodation stimuli (i.e., no luminous fixation targets). In addition to that, the 2WIN features an age-related software compensation techniques referred to accommodation.

The 2WIN measurements are closer to the final prescription on patients with a strong accommodative response.

EXTENDED MEASUREMENT RANGE

The 2WIN covers an impressive measurement range of spherical power from -15D to +15D.





PHORIAS AND TROPIAS EARLY DETECTION



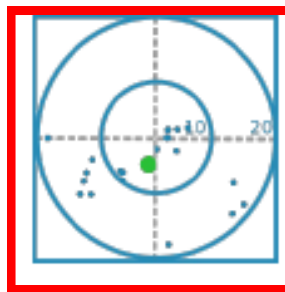
The 2WIN is capable of diagnosing Myopia, hyperopia, astigmatism and other amblyogenic factors. Additionally, it will provide evidence of sight anomalies that may be related to anisometropia, anisocoria, strabismus, phobias.

PUPIL PARAMETERS

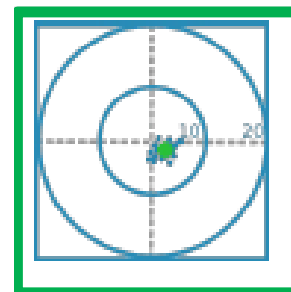
The 2WIN provides accurate and instant pupil size, pupil distance and head tilt.

GAZE MEASUREMENT

The Package will add the feature to collect data from 3 measurements and analyze the corneal reflex. Results are expressed either in prism diopters or in degree.



NOT GOOD



GOOD



**NON-INVASIVE/
FULLY AUTOMATED AND
EASY TO USE**

The 2WIN works as a camera and operates at three feet (1 meter) distance; it needs only 3 seconds to get a complete screening of the patient, immediately providing a detailed PDF report to print and share.

Complete and objective assessment of the visual function in natural vision conditions. It is ideal for infants, children, the handicapped and non-cooperative patients, due to the 2WIN's small footprint and reduced exam time.

Criteria	Criteria for:	20-99yrs	OK ↔ NOT OK	Outcome	Years and Outcome
	Hyperopia	Sph<-1.5D		✓	Screening Result
	Myopia	Sph>0.75D		✗	
	Astigmatism	Cyl<1.5D		✓	
	Anisometropia	DIFF<1D		✗	
	Anisocoria	DIFF<3mm		✓	
	Gaze	<6°		✓	
Dr's signature	Dr's signature:		Screening Result: Refer		
	Adaptica				

Example-Reading of the Screening Report





ZOOM OF INFRARED RETINOSCOPY IMAGES

The 2WIN Zoom Application helps to detect infrared artifacts due to other eye abnormalities (opacities, foreign bodies etc.) This function allows professional to enlarge the Infrared retinoscopy to accurately inspect it.



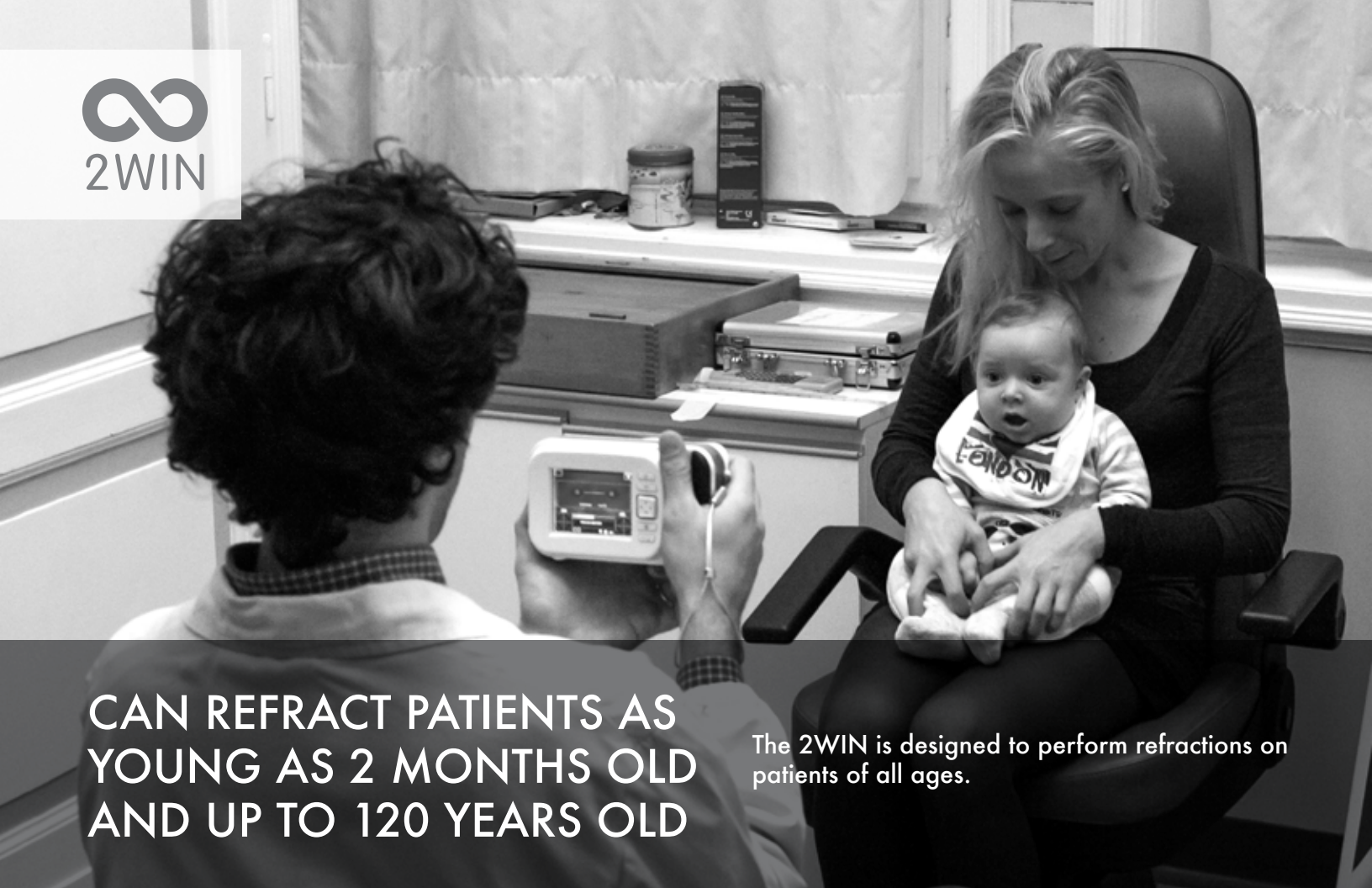
CONNECT TO IR PRINTER

2WIN measurements can be stored and printed. The exams are stored internally in a micro-SD card using a PDF format. Which is capable of storing 1,000+ results.

WIFI

The 2WIN's built-in WiFi connects seamlessly to the internet, making it possible to share results and diagnostics via email. The 2WIN utilized its WiFi capability to connect directly to the VisionFit.





CAN REFRACT PATIENTS AS YOUNG AS 2 MONTHS OLD AND UP TO 120 YEARS OLD

The 2WIN is designed to perform refractions on patients of all ages.



REFRACT OVER LENSES

The 2WIN performs over-refraction very easily and effectively with both spectacles and contacts. It checks the optical corrections making the results objective, stored and documented.

ADJUSTABLE REFERRAL THRESHOLD

The device is ideal for multiple screening sessions and vision screening programs. The 2WIN is equipped with an age range threshold that can be adjusted according to the specialists requirements.

Screening Result: 2.5-4yrs

TEST:	THRESHOLD:	RESULT:
Hyperopia:	Sph<4D	OK
Myopia:	Sph<3D	NO
Astigmatism:	Cyl<2D	OK
Anisometropia:	Diff<2D	OK
Anisocoria:	Diff<1mm	OK
Gaze:	<4.6°	OK

Screening Result: 1-2.5yrs

TEST:	THRESHOLD:	RESULT:
Hyperopia:	Sph<4.5D	OK
Myopia:	Sph<3.5D	NO
Astigmatism:	Cyl<2D	OK
Anisometropia:	Diff<2.5D	OK
Anisocoria:	Diff<1mm	OK
Gaze:	<4.6°	OK





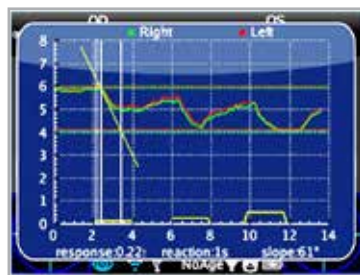
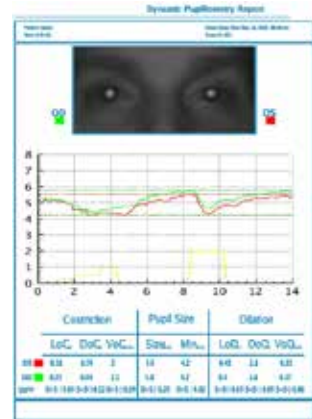
ADDITIONAL App's

LC-App | LENS CENTERING ON FRAME

Correspondence between the optic center of the lens and the actual visual axis of the eye (corneal reflex) for better visual comfort.

CR App | MEASUREMENT OF TROPIAS AND PHORIAS

The CR-App compares the position of the corneal reflexes in three different measurements (the first binocular, the second and the third monocular under an infrared occluder).

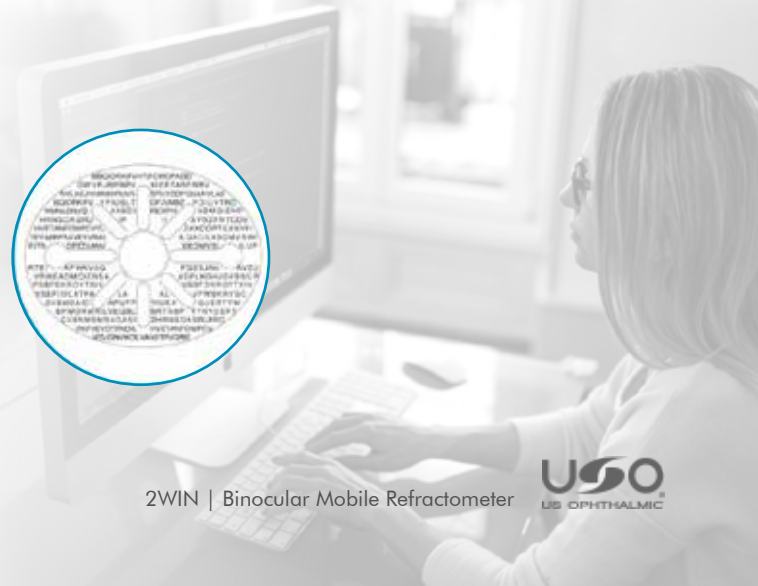


DP-App | DYNAMIC PUPILLOMETRY

Automatic measurement of dynamic pupils response under programmable light stimulations. This function removes subjectivity from the pupillary evaluation and helps the detection of pupillary behavior.

66cm-App | INTERMEDIATE DISTANCE

The 2WIN measures the patient's refraction while reading from VDU's (i.e. computer monitor), at a distance of 66 cm (2'). When reading at such a distance proves difficult, the 2WIN calculates the necessary addition power to restore best vision. The application requires the use of an additional lens, inserted in the central aperture of the 2WIN, and an eye-chart applied on the instrument.





2WINNY MASK

The 2WINNY mask is fun and attractive. It is removable to help the operator select the mask appropriated for the child. It is an accessory designed to draw the child's attention to the 2WIN during the examination while activating the visible and audible fixation targets. The operator selects the mask on the basis of child's age. The mask can be attached to the front of the 2WIN.



2WIN-S

The 2WIN-S is a stationary base that allows the 2WIN to become faster than ever. The structure provides the perfect scenario for the objective refraction. It provides the exact distance and brightness conditions to obtain the most accurate measurement. Due to the tube's structure creating dim-light and the measurements being binocular and performed in a dark field it induces less accommodation.

After obtaining the objective refraction the results can be transferred to the next generation subjective refraction unit. The VisionFit is an innovative electronic, tunable, all-in one, solid state, mobile and wearable system of lenses. It performs a subjective sight examination and it effectively replaces both the trial glasses, the manual and digital phoropter functionality.



Software App

*All items are sold separately

APPLICATIONS & BENEFITS OF THE 2WIN

VisionFit in combination with 2WIN binocular handheld refractometer and vision analyzer, the operator performs an objective and subjective refraction exam in only a few minutes, with maximum mobility and flexibility.

1

Quick and non-invasive measurement of binocular manifest refraction

2

Accurate objective measurement of ocular deviations, both tropias and phorias
*(*optional software App)*

3

Detection of other major amblyogenic factors such as anisometropia, anisocoria, media opacities, etc.

4

Over-refraction with both spectacles and contact lenses

5

Objective measurement of dynamic pupillometry
*(*optional software App)*

6

Portable

FIELDS OF APPLICATION

- Ophthalmology and/or Optometry Practices
- Pediatric Ophthalmology
- Orthoptics
- Pediatricians
- Vision Screening Programs
- Mobile Eye-Care
- Occupational Medicine

AREAS OF EXCELLENCE

- Refraction and Vision analysis of infants (0-3 year)
- Vision care of disabled and/or un-cooperative patients
- Analysis of binocular vision and accommodative balance
- Early detection and documentation of multiple amblyogenic factors
- Objective analysis of under- or over-corrections
- Objective orthoptic exam



BINOCULAR MOBILE REFRACTOMETER

The New Way of Taking Care of Your Patients
The Handle Practice

SPECIFICATIONS

Operating Mode	Binocular / Monocular
Refraction	Measurement Automatic
Sphere Range	+15, -15 D, step 0.25 D
Cylinder Range	+5, -5 D, step 0.25 D
Cylinder Axis	1° – 180°, step 1°
Pupil Size	Automatic Detection, 0.15-0.27in (4-7 mm), step 0.004in (0.1 mm)
Pupil Distance	Automatic Detection, 1.18-4.72in (30-120 mm), step 0.04in (1 mm)
Fixation Target	Built-in
Acoustic Target	1 m ± 5cm
Data Interface	Wi-Fi, USB, microSD card
Printer Interface	USB, Infrared (irida)
Power	Rechargeable Battery
Battery Charger	110-220 Vac, 0.5 A
Size	6.5 x 5.11 x 3.9 in (165 x 130 x 98 mm)
Display	3.5" Weight 1.85 lb (0.83 kg)
Options / Accessories	Portable wireless printer, supplementary battery, battery-charger, metal case, Wi-Fi connectivity



www.usophthalmic.com
Ph: 1800.334.4640
info@usophthalmic.com

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