

Chart2020® version 9 delivers a new standard for the assessment of visual acuity, binocularity, stereo acuity, contrast sensitivity and other eye performance tests. Chart2020 offers hundreds of test options and strategies yet all easily accessed with the 45 button remote, smart menu docks, the iPad® controller and mini monitor or a click of the mouse.

Run your exam room efficiently and accurately, adding high-tech appeal, reduce administration time, delegate, with instant reporting database for trends over time.

Visual acuity finally a complete platform



Feature Overview

Visual acuity testing



Astigmatism



Binocularity



Media and education



Reporting



Contrast acuity



(e)ETDRS



Stereo acuity



Dyop® - dynamic optotype



iPad controller



Soft remotes



Near VA

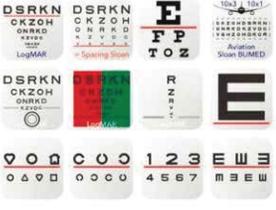


Amsler 3D



SON Visual acuity

Extensive library of logMAR, Snellen and equally spaced letters, with classic functions to isolate, overlay and randomize letters. Includes standard optotypes, and the revolutionary dynamic optotype Dyop®

- Auto calibration to any size monitor
- Mirrored display
- Repeater monitor option
- Easy alternate test distance selector
- Displayed notation (feet/meters/decimal or LogMAR)
- Drag and drop real-time chart editor
- Pref LogMAR allows customization of displayed optotype sizes

Functions	Optotypes
Randomization Isolation Direct Size Access Duochrome Overlay Inversion (e)ETDRS Reporting	Letters, HOTV Numbers, Kids Dyop® E's, C's 6 Global Low Vision

SON Contrast acuity

Test your patient's contrast sensitivity accurately with standardized outcomes, auto-guided test strategies. Test under different lighting conditions with real time luminance meter.



Suitability	Hardware	Targets
Ophthalmic clinics Clinical trial studies Low vision clinics Pre-testing exam rooms	Calibration device for screen luminance Real time ambient luminance	Letters, numbers, pediatric optotypes Sine gratings (spatial frequency)

In-built monitor luminance calibration calibrates to 85cd/m2
Calibration insures standardized outcomes
Automated Y/N test strategy allows for pre-testing PDF reports with age based graphical overlay* helps justify surgery to insurance companies
Test both eyes separately and together
Luminance meter saves real-time luminance directed at patient (allows comparison of contrast acuity under different lighting conditions)

Quick testing using using standard optotypes.
Comprehensive testing using the sine gratings, either showing a single target or a forced choice (pairs) target. Test at 1.5, 3, 6, 12, 18 cycles per degree. Repeater monitor or iPad real time display shows the answer to the doctor. Test the patient not the doctor!
Quick start option to shorten test time
Inter-target pause allows retina recovery time

* Normative data infrastructure provided for age based overlay on report. Data not supplied

SON e (ETDRS)

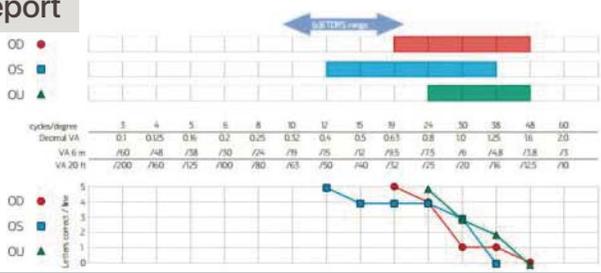
Simplify refractions with auto-guided visual acuity testing strategies, smart reporting and comparative results from previous visits.



Features	Suitability
Auto-guided - Y/N test strategy 2 modes quick staircase extensive (e)ETDRS ISO protocol High or low contrast 2 phases quick screening in big jumps precision threshold determination	Pre-test rooms Self service vision booths School screener
Immediate alternate test distance optotype selection - letters, numbers, pediatric	

Easily determine your patient's visual acuity using the quick staircase testing method or the comprehensive ISO compliant (e)ETDRS testing protocol. Reports show detailed tabulated and graphic information which can be sent directly to EMH | EMR systems

Report



SON Stereo acuity

Measure your patient's binocularity with some fun test strategies, either with a polarized or normal monitor.



Monitors	Suitability
Polarized using circular polarized methods Normal monitors using color separation	Military School screener

Patient wears polarized or color tinted anaglyphs
Identifies which object is closest
Large step sampling followed by precision threshold

Tests	Reporting
Random stereo dots 4 shapes test 3 poles test	Displays arc minutes achieved for each test. Military min req is 40 arc seconds

Unique testing due to randomization of targets
Immediate alternate test distance option
Doctor answer view – test your patient not the doctor



Binocular

Polarized

Patient sees this

Targets

Standard (red | green or red | blue)

Vertical & horizontal
Coincidence
Fixation disparity
Worth 4 dot
Duochrome balance

Astigmatism

Fan with rotating selector
Rotating block – variable angle
Adjustable concentric circle thickness
Adjustable showerhead dot sizes
Synchronous fan to block axis refinement
Cross cylinder

Dyop® - dynamic optotype

Dyop® – short for dynamic optotype.

A **Dyop®** is a strobic visual target (optotype) whose uniformly moving/rotating calibrated gap and segment sizes, motion, color, and contrast provide a precise method for measuring visual acuity.

Rotating segmented circular optotype
Does not require patient literacy
Minimizes fixation and decision fatigue
Avoids over minusing and memorization
Eliminates visual processing and perception
Acuity end point determined when dyop appears static
Faster and more accurate refractions
Clinically validated - Dr Paul Harris SCO OD, FCOVD, FACBO, FAAO, FNAP PROFESSOR
Eliminates guessing with similar shaped letters

Reporting

Track trends over time for patient's visual acuity, contrast sensitivity and stereo vision.
PDF reports can be used for

1. Justifying medical procedures to insurers
2. EMH | EMR records
3. Generating referrals

Report have your own logo and practice information, patient's information and detailed graphical and tabulated reports.



Specifications

Options

Mirrored lane Customizable test distances Alternate language optotype Metric US Polarized normal monitor Anaglyph to monitor calibrator Monitor calibration Patient real time luminance reader Customizable media library	Patient hold loop advertising Auto backups Dual monitor with private answer view Customizable logo and info for reporting Chat live from Chart2020 One click support request
Operating System	Windows 7, 8, 10 Mac OSX on Parallels iOS and Android controllers and repeater screens
Users	Multiple users Each user has multiple sequences easily edited from any library test by drag & drop
3rd Party Educational Apps	Most are easily added on request
Low Vision Optotypes	Only limited by size and resolution of monitor 20/10 to 20/2000
ePhoropter Interface	Available Q3 2017
Regulatory	ISO 8596-2009 compliant FDA listed
Upgrades	Many older electronic chart systems can be upgraded to the power of Chart2020
Demos	Try before you buy. Contact your representative or distributor for more information.

Configurations

	Plug & Play Hardware, software and IR remote supplied Just mount and start testing
	Software only User supplies PC Installation of software via internet or remote support LITE, PRO or month to month versions Accessories sold separately
	Trolley Plug & Play Hardware, software and IR remote supplied on a mobile trolley. Move trolley easily from room to room. Move the trolley instead of the patient, to test at different distances.

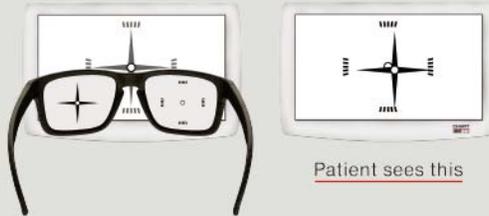
Purchase options



					
\$29 MONTHLY	\$795 LITE	\$1,295 PRO	\$2,099 BUNDLED	Price on request TROLLEY BUNDLE	\$29 Monthly DYOP



Polarized medical monitor



Patient sees this

Circular polarized monitor

- Stereo acuity auto-guided tests.
- Polarized test library including binocularity and fixation disparity

Datacolor spyder calibration



Luminance monitor calibration

- Automated built in luminance calibration
- Standardized contrast acuity

Patient luminance reader



- Real time luminance reader placed at the patient
- Test acuity and contrast under glare

Hardware feature options/kits

Remote / Control options



45 button infra red remote USB receiver

- Simplicity Reliability Move from room to room
- No pairing 6 month battery life

iPad controller

- Easy to pair via wifi In-built repeater monitor
- Gesture Control
- Easy access to control all tests and functions
- Helps to keep eyes on patient and not the monitor



NEAR
VA

Chart2020 Connect

Connect allows you to full over the Chart2020 application, via taps, gestures and more. It also serves as a repeat monitor, so you don't have to turn your head to see the patient monitor. Keep your eyes on your patient not the technology!

- Connects via wifi
- One-button access to all tests
- Private doctor answer view for Contrast and Stereo
- Intuitive gestures for
 - Randomization
 - Masking
 - VA size changes
 - Moving through test sequences
- Multiple exam room setup

CHART
2020
CONNECT

Amsler 3D

Allow your patient to draw on the iPad grid where they see the anomaly.

- Anomalies gets saved with the date and comments
- All anomalies layered on 1 image to see historic progression
- Complete history of your anomalies

TEST OPTIONS

- White, red or black grid
- Fixation diagonals
- Centre dot blink to assist to keep eye positioned correctly

AMSLER
3D

Near VA

Near VA provides a near visual acuity test. Test charts are dynamically prepared based on a users choice of settings.

- Test distances from 0.33 to 6 meters (14 inches to 20 feet)
- Gesture driven:
 - larger - smaller optotypes
 - randomization (double tap)
 - One touch, pop-up magnifier
- Masking options
 - single lines (vertical + horizontal)
 - single letter
- Notations
 - 20/xx, LogMar, Decimal, and Metric

CHART
2020
REMOTE

Remote

Remote allows you to connect to the Chart2020 application using your mobile or your tablet.

- Replace your old Infra Red remote with this app.

TEMPLATES

- Use our pre defined layout
 - Make your own template
 - Request customized template
- Use tablet | mobile as a virtual mouse, keyboard
 - Use as a repeater screen

