CHART 2020

Chart2020® version 10 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

Feature	
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	

CHART 2020

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

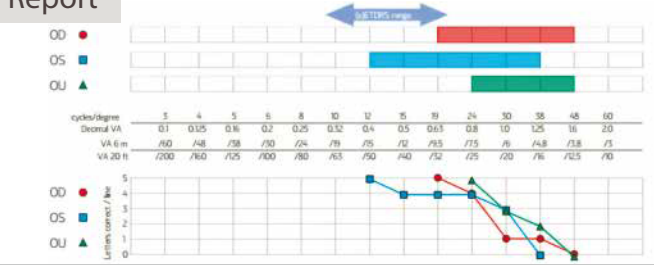| Functions	Optotypes
Randomization	Letters, HOTV
Isolation	Numbers, Kids
Direct Size Access	Dyop®
Duochrome Overlay	E's, C's
Inversion	6 Global
(e)ETDRS Reporting	Low Vision

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	Pre-test rooms
2 modes quick staircase extensive (e)ETDRS ISO protocol	Self service vision booths
High or low contrast	School screener
2 phases quick screening in big jumps precision threshold determination	
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

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
Ophthalmic clinics
Clinical trial studies
Low vision clinics
Pre-testing exam rooms

Hardware
Calibration device for screen luminance
Real time ambient luminance

Targets
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

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	Military
	School screener
Normal monitors using color separation	

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

- Patient wears polarized or color tinted anaglyphs
- Identifies which object is closest
- Large step sampling followed by precision threshold
- Unique testing due to randomization of targets
- Immediate alternate test distance option
- Doctor answer view – test your patient not the doctor

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

GOOD-LITE®
www.good-lite.com

SHEMESH HEALTH SOLUTIONS

Binocular

Polarized

Patient sees this

Polarized

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® - **dy**namic **op**totype

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

Dyop®

Reporting

Track trends over time for patient's visual acuity, contrast sensitivy 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.

CHART 2020

THE PREMIER VISUAL ACUITY AND OCULAR PERFORMANCE TESTING SOLUTION

Specifications

Options

Mirrored lane	Patient hold loop advertising
Customizable test distances	Auto backups
Alternate language optotype	Dual monitor with private
Metric | US	answer view
Polarized | normal monitor	Customizable logo and info
Anaglyph to monitor calibrator	for reporting
Monitor calibration	Chat live from Chart2020
Patient real time luminance reader	One click support request
Customizable media library	

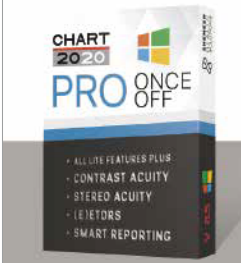|	
Operating System	Windows 7, 8, 10 Mac OSX on Parallels iOS and Android controllers and repeater screens
Users	Multiple users Each user has multiple sequences easily edited from any library test by drag & drop
3rd Party Educational Apps	Most are easily added on request
Low Vision Optotypes	Only limited by size and resolution of monitor 20/10 to 20/2000
ePhoropter Interface	Available Q3 2019
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.

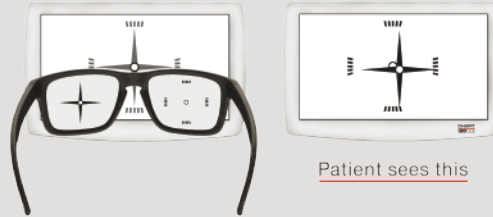Move the trolley instead of the patient, to test at different distances.

Purchase options

MONTHLY LITE PRO BUNDLED **Price on request** TROLLEY BUNDLE DYOP Monthly

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

Hardware feature options/kits

Patient luminance reader

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

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

CHART 2020

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

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

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

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