



# Spot Vision Screener

## Product Training Overview

Enhancing outcomes for  
patients and their caregivers:

Hill-Rom

WelchAllyn®

**SH SCHOOL  
HEALTH®**  
We Supply Your Future™

**HEALTH  
SERVICES**

**SPECIAL  
EDUCATION**

**SPORTS  
MEDICINE**

**EARLY  
CHILDHOOD**

# Licensed Training Professionals



School Health understands the challenges you may face when establishing a vision screening program. We've worked with many customers to get vision screening programs in place, even in times of tight budgeting.



School Health is certified and licensed by Welch Allyn as the exclusive trainers of the Spot® Vision Screener in North America.

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patients and their caregivers:



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SPECIAL  
EDUCATION

SPORTS  
MEDICINE

EARLY  
CHILDHOOD

# SmartCare™ Service Warranty

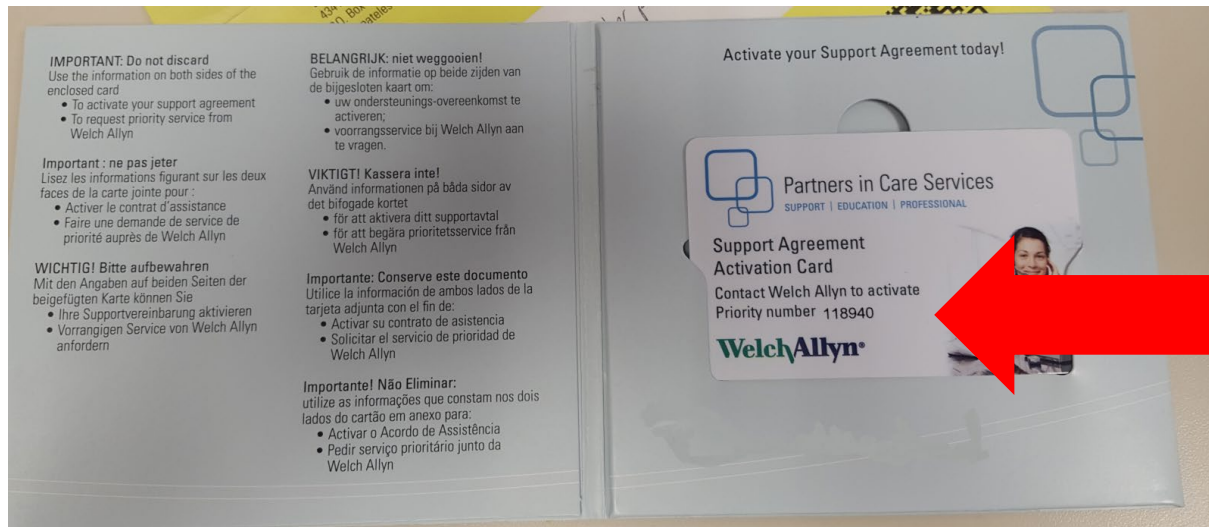
With your coverage under the Comprehensive Program,  
you will receive:

- Expert Repair Services
  - Hillrom technicians will perform a comprehensive check-up, make repairs & return your device to optimal service
- Accessory Protections
  - Upon return of broken, eligible accessories, Hillrom will replace one of each eligible accessory per year
  - If device has more than one eligible accessory, we will replace each accessory, one time per year
- Accidental Damage
  - Includes drop protection or damage caused by everyday use
- Free Shipping
  - All costs associated with shipping the product will be covered
- Remote Technical Support
  - Trained Hillrom technical staff utilize the Hillrom Service Tool to troubleshoot issues & download updates to your device

# SmartCare™ Service Warranty



- Inside every Spot box there is a yellow envelope.
- **DO NOT DISCARD**
- It contains your warranty priority numbers
- You will need the **priority number** and the device serial number to activate your SmartCare™ Service warranty



# SmartCare™ Service Warranty Activation Process

## To activate you Comprehensive Support Plan:

1. Locate the device serial number and priority numbers from the yellow envelope that was enclosed with your product shipment.
2. Please call Hillrom at 800-535-6663, Option 1 (US/Canada) or go to [welchallyn.com/service/activate](https://welchallyn.com/service/activate) and follow the instructions
3. Once your PIC has been activated, Hillrom will send you a welcome letter within 10-15 days including your service agreement number, the serial number of the devices covered, and the effective dates of the agreement. Please keep these numbers in a secure place for future use.

# A New Class of Vision Screening Technology



- Engineered for today's vision assessment market
- Customized for large production
- Optimal performance & durability
- Solid ergonomics for ease of use
- Embedded operating system
- Efficient size, speed, and power
- Portable camera and operating system combined
- WiFi connectivity for data transfer and printing

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# Easy to Use and Implement



## Advanced Technologies

Lithium ion battery keeps you working - no changing disposable batteries

Device design has no sharp edges and a black matte finish to reduce accommodation

Soothing sounds and visible infrared LED lights grab child's attention for quicker screenings

Easily captures results even when lighting conditions are not ideal

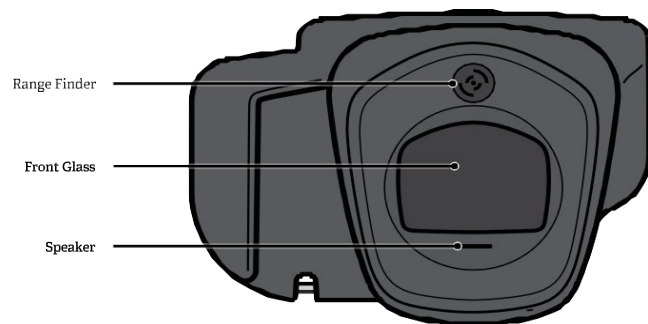
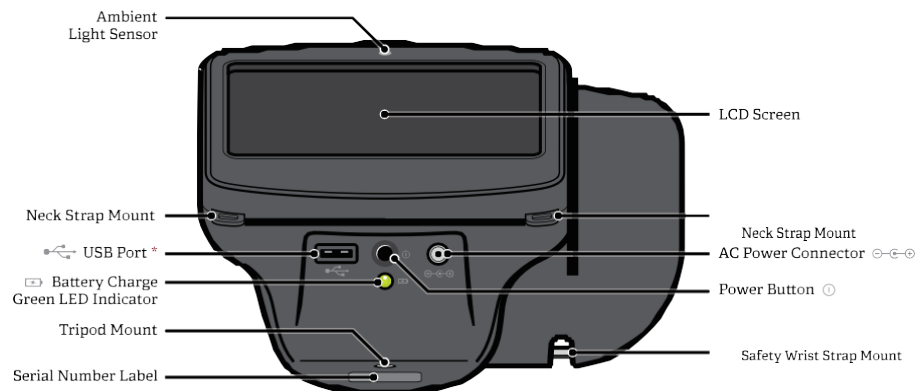
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# Patent-Pending Technology



Manufactured  
in the USA

## Specifications

Measurement distance: ~ 3 feet away

Capture time: one second or less

Operating system: embedded interactive touchscreen  
WiFi enabled

Battery use: over 4 hours

Weight: ~ 2.5 pounds

## Measurement Range

Refraction (SE): -7.50 D to +7.50 D

Refraction (Cylinder): 0.00 D to 3.00 D

Refraction (Cylinder Axis): 1 to 180 degrees

Pupil size: 4.0 mm to 9.0 mm

Gaze: 0 to 20 degrees

Pupil distance: 35 mm to 80 mm

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# Screen A Subject



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# Easy to Use and Implement

1

*Launch*



Touch-screen display and point-and-shoot technology allows for one-touch activation.

2

*Begin Testing*



Easy to use and easy to implement with minimal user training required. Screen both eyes at once from a comfortable 3.3 foot distance.

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# Easy Capture Indicator



**“Too Far”**  
Move camera  
toward subject

**Hold camera still**  
(about 3 feet away)

**“Too Close”**  
Move camera  
away from subject

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# Binocular Vision Screener

## Spot screens for these common vision issues:

### Refractive errors

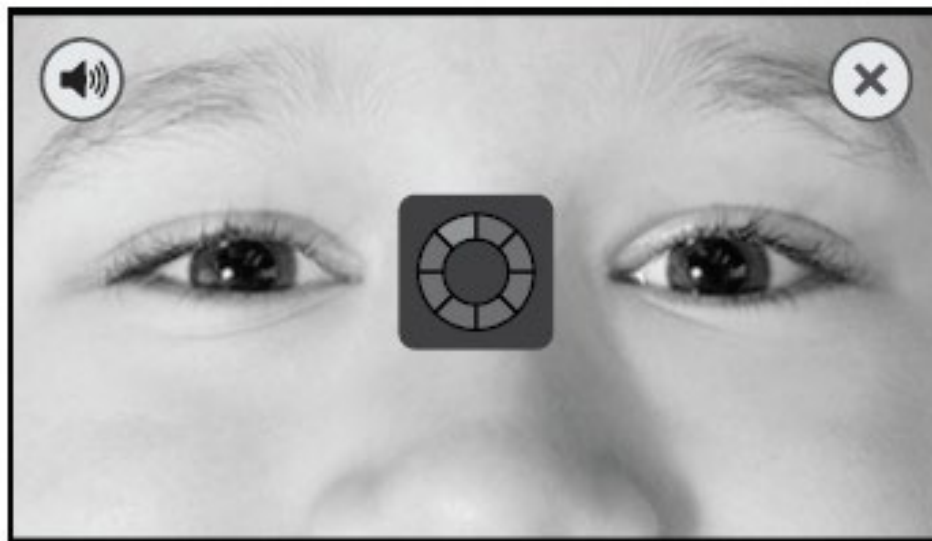
Myopia (near-sightedness)  
Hyperopia (far-sightedness)  
Astigmatism (blurred vision)

### Amblyopic precursors

Anisometropia (unequal refractive power)  
Strabismus (eye misalignment)

### Pupil abnormalities

Anisocoria (pupil size deviations)



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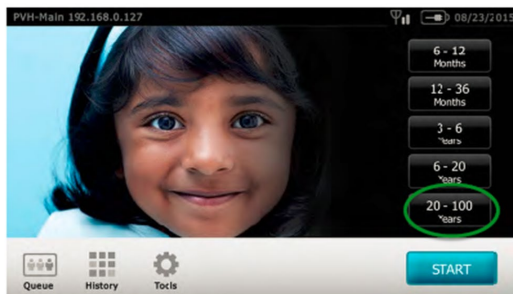
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# Easy to Use and Implement

## Three Distinct Screening Modes

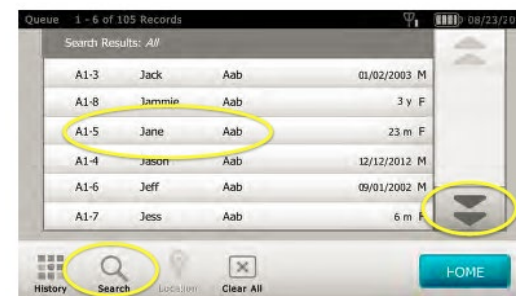
### Instant Screening



### Pre-Enter Subject Data



### Select from Queue



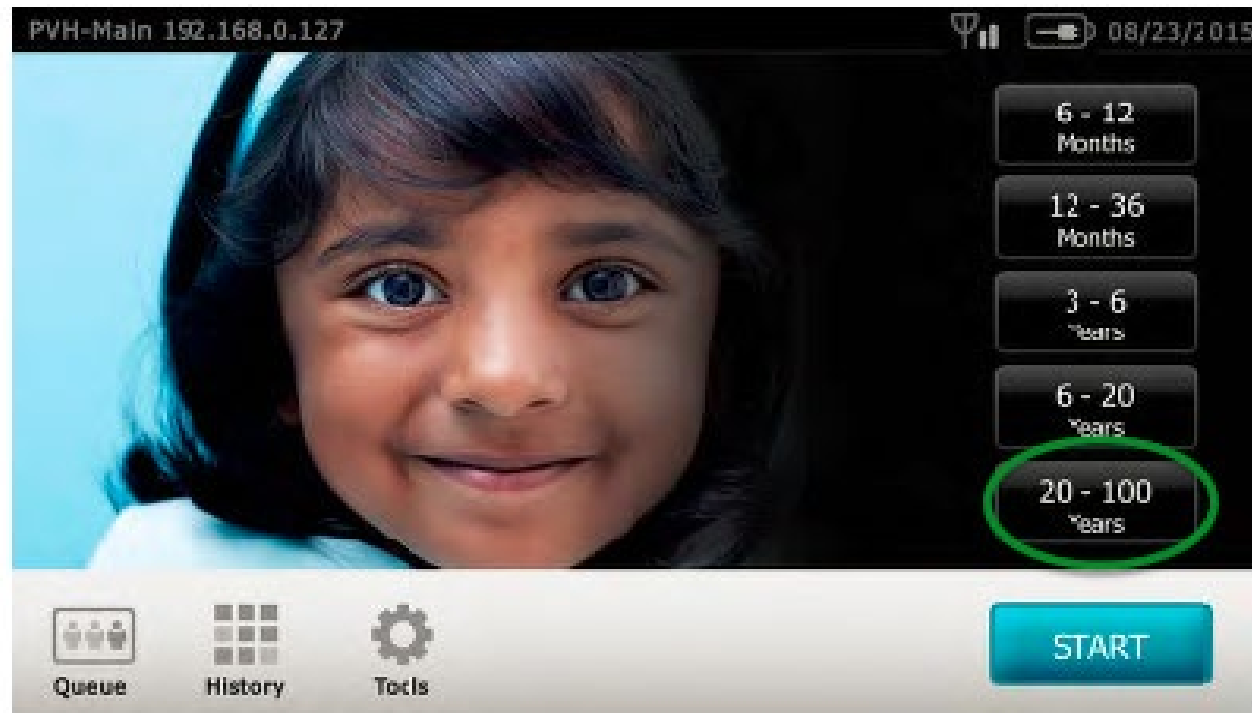
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# Quick Start Process



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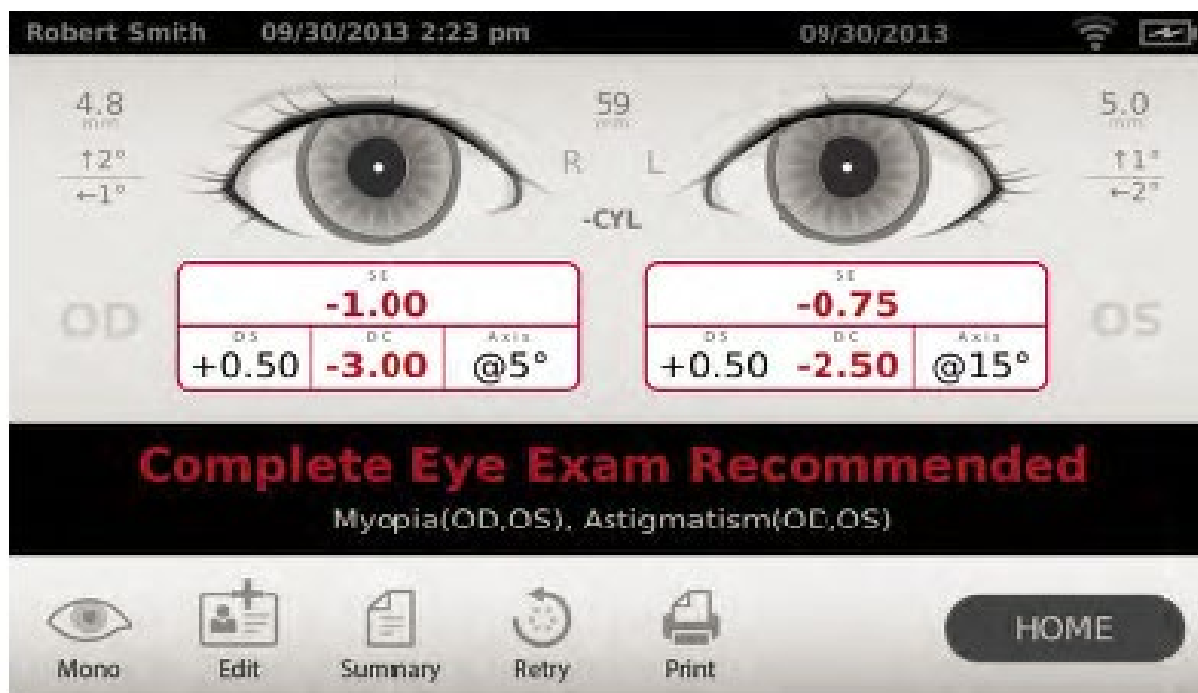
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# Results Screen



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# Enter Subject Data After Test

Subject Information 08/23/2015

SUBJECT ID

NAME

DATE OF BIRTH: 6 - 12m

EYEWEAR PRESCRIPTION: None, Glasses, Contact

GENDER: Male, Female

Back Save Delete GO

-Select section to open keyboard

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# Enter Subject Data After Test

Subject Information 08/23/2015

Last Name

◀  ▶

1 2 3 4 5 6 7 8 9 0

Q W E R T Y U I O P

A S D F G H J K L

↑ Z X C V B N M ↵

.?!@  Ok

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# Save Data

Subject Information 08/23/2015

SUBJECT ID  
SMITH123

NAME  
Robert Smith

DATE OF BIRTH  
6 - 12m

EYEWEAR PRESCRIPTION  
None Glasses Contact

GENDER  
Male Female

\* Required field

Back Save Delete GO

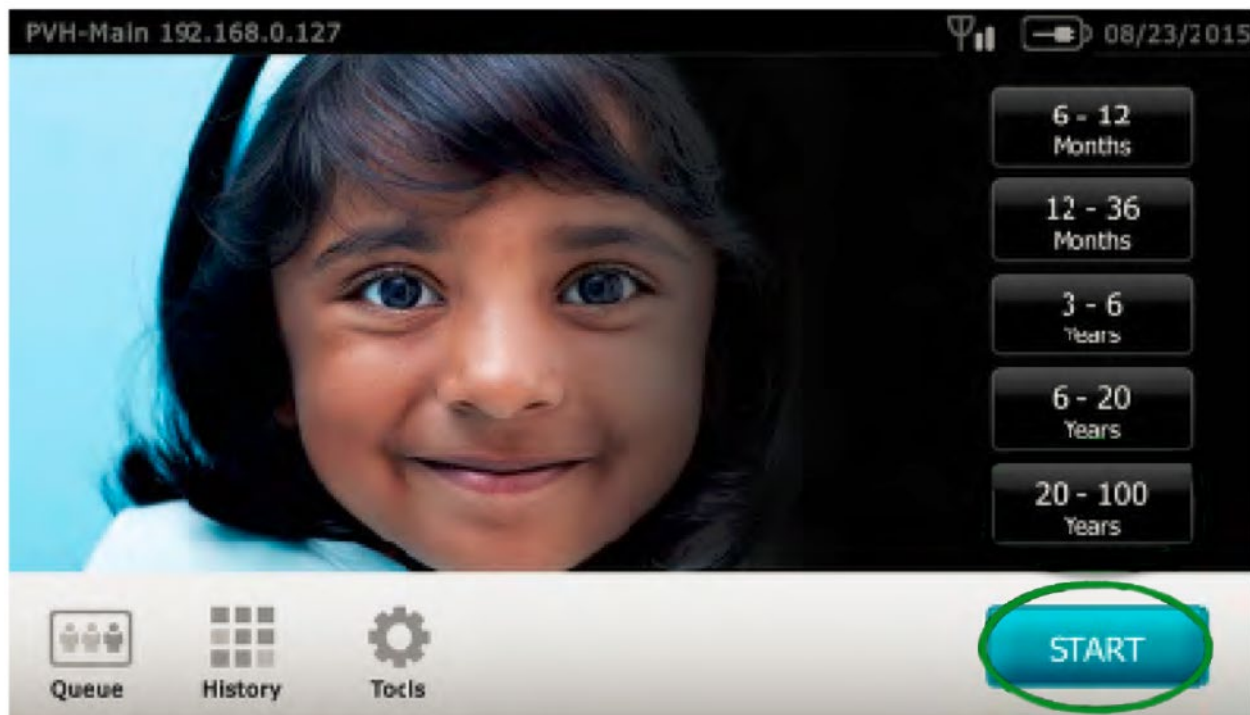
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# Pre-Enter Subject Data



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# Enter Subject Data

The screenshot shows a mobile application interface titled "Subject Information". At the top right, there is a status bar with a signal strength icon, a battery icon, and the date "08/23/2015". The main form area contains several input fields and sections:

- Subject ID:** A single-line text input field, highlighted with a green circle.
- NAME:** A two-line text input field, with the first line highlighted by a green circle.
- DATE OF BIRTH:** A date picker showing "6 - 12m". Below it, a red asterisk and the text "Required field" are visible.
- EYEWEAR PRESCRIPTION:** Three buttons: "None" (with an eye icon), "Glasses" (with a glasses icon), and "Contact" (with a contact lens icon).
- GENDER:** Two buttons: "Male" (with a male icon) and "Female" (with a female icon).

At the bottom of the screen, there are four buttons: "Back" (with a left arrow icon), "Save" (with a plus icon), "Delete" (with an X icon), and a large blue "GO" button.

-Select section to open keyboard

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# Additional Subject Information

Subject Information 08/23/2015

SUBJECT ID  
SMITH123

NAME  
Robert Smith

DATE OF BIRTH  
04/01/2009

REQUIRED FIELD

EYEWEAR PRESCRIPTION  
None Glasses Contacts

GENDER  
Male Female

Back Save Delete GO

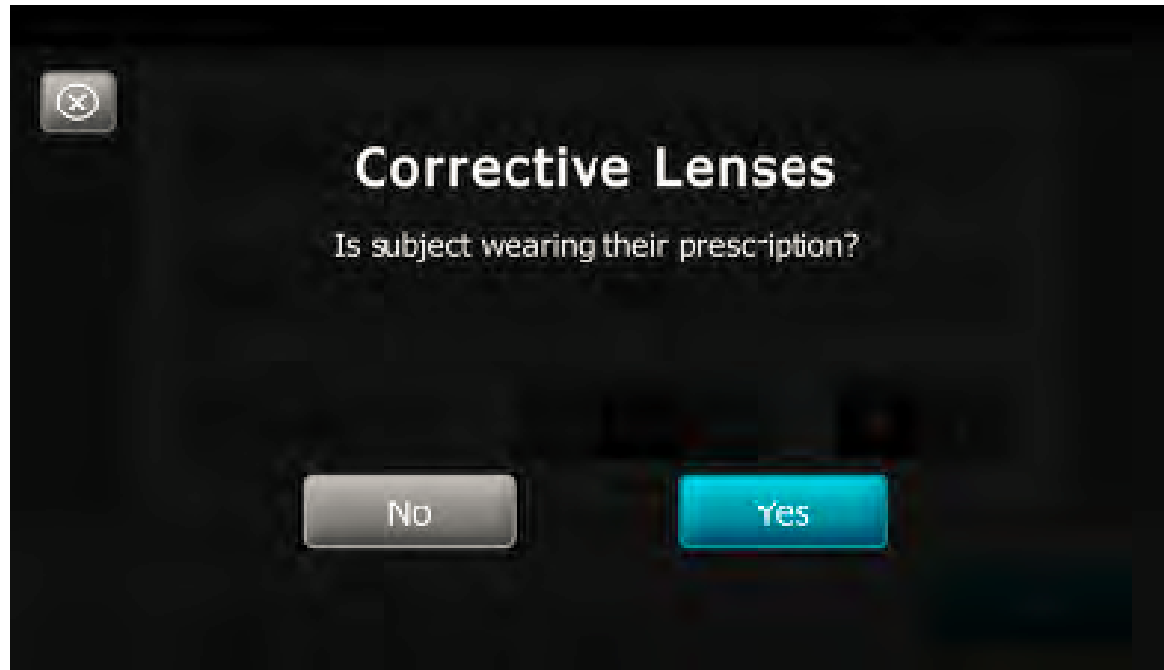
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# Additional Subject Information



The screenshot shows a dark-themed mobile application interface. In the top left corner, there is a small square button with a white 'X' icon. The main heading is 'Corrective Lenses' in a large, white, sans-serif font. Below the heading is the question 'Is subject wearing their prescription?' in a smaller, white, sans-serif font. At the bottom of the screen, there are two rectangular buttons: a light gray button on the left labeled 'No' and a teal button on the right labeled 'Yes'.

- This selection is only for data tracking on the SpotsResultsExpanded.csv file
- Making a selection of "No" or "Yes" does not alter how the device measures

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# Import/Export Screening Results



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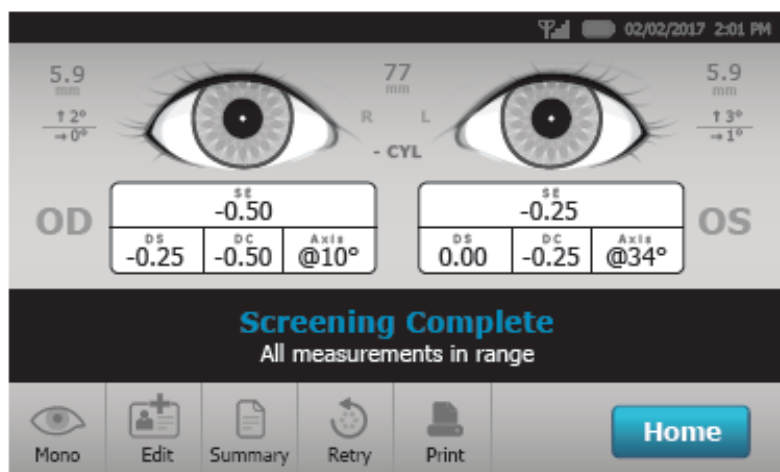
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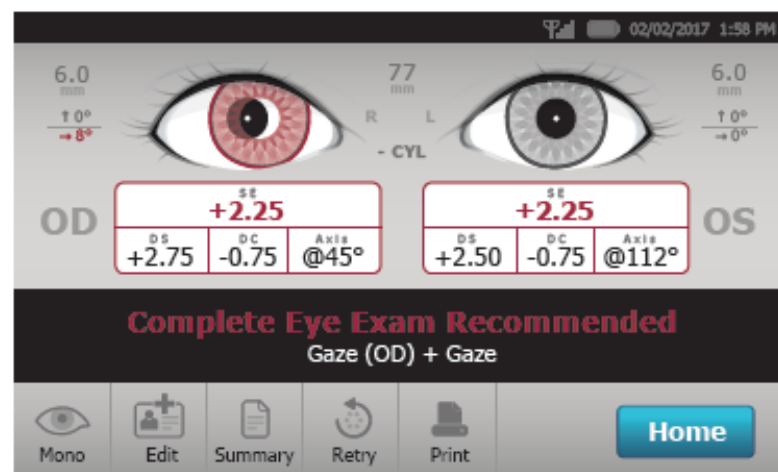
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# SPOT VISION SCREENER

## Instant Screening Results Displayed



**"Screening Complete"** with the indication of "All measurements in range" is consistent with screening results below the configurable threshold setting.



**"Complete Eye Exam Recommended"** with indication of potential vision disorders is consistent with screening results above the configurable threshold setting.

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# Vision Screening – Results Explained

pupillary distance

6.0 mm

77 mm

6.0 mm

alignment indicator

degree:  
 ↓↑ vertical or  
 ↗↘ horizontal

OD

OS

Complete Eye Exam Recommended  
 Hyperopia (OD) + Astigmatism (OD) + Anisometropia

MONO Edit Summary Retry Print HOME

complete refraction

SE = spherical equivalent

DS = sphere

DC = cylinder

Axis = axis

+/- cylinder convention

pupil size indicator

OD = Right Eye  
 OS = Left Eye

SE	DS	DC	Axis
+3.00	+4.00	-2.00	@99°
+1.50	+1.75	-0.75	@16°

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# Printed Report ~8.5" x 11" Paper

**Complete Eye Exam Recommended**

**Vision Screening Summary**

SCREENED: 01/17/2014 4:27 pm SCREENED BY: F AGE: 18'

REFRACTOR: Olivia

LATERAL: Dylan

Photo of Subject

**Data Display**

Right Eye	Left Eye
+1.00	+1.50
+1.00 -3.00 90°	+1.75 -0.75 90°

**Potential Conditions**

- Myopia (N/A)
- Hyperopia (N/A)
- Astigmatism (N/A)
- Anisometropia (N/A)

**Right Eye & Left Eye Results**

Results (In-Range=blue, Out of Range=red)

**WelchAllyn Spot Vision Screener**

- A Disclaimer
- B Screening Results
- C Date/Time of Test
- D Demographic Information
- E Photo of Subject
- F Data Display
- G Potential Conditions
- H Right Eye & Left Eye Results
- I Results (In-Range=blue, Out of Range=red)
- J Analysis of Both Eyes
- K Customizable Banner

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Vision screening does not replace a complete eye examination by an ophthalmologist or optometrist.

**Complete Eye Exam Recommended**

### Vision Screening Summary

SUBJECT ID: 21081-13572

SCREENING 02/02/2017 4:27 pm GENDER F AGE 3Y

FIRST NAME Olivia

LAST NAME Dylan

Vision screening should be conducted regularly as eyes may change over time.

OD				OS			
DS	DC	AXIS	AXIS	DS	DC	AXIS	AXIS
+3.00				+1.50			
+4.00	-2.00	99°		+1.75	-0.75	16°	

**POTENTIAL CONDITION**

- Hyperopia (OD) [ farsighted ]
- Astigmatism (OD) [ problem focusing ]
- Anisometropia [ unequal power ]

**RIGHT EYE**

OUT OF RANGE IN RANGE

myopia

hyperopia

astigmatism

anisometropia

**LEFT EYE**

OUT OF RANGE IN RANGE

myopia

hyperopia

astigmatism

anisometropia

**BOTH EYES**

OUT OF RANGE IN RANGE

myopia

hyperopia

astigmatism

anisometropia

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**Spot™ Vision Screener**

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LWY123456789\_20170202\_SPT02R\_OutOfRange\_R\_10000.tpdF PRINTED ON: 02-02-2017 4:33 PM

# Helpful Hints



How to get best results from screenings:

**> Distance to shoot from –**

- 1 meter (a little over one yard from patients eyes,
- The child may sit in the parents lap if they are more comfortable doing so.

**> Lighting; Dim is best –**

- It is very important to have minimal to no direct bright lights, this includes sunlight and fluorescent lights.
- Try using sunglasses when pupils are too small. First try screening through them, if that doesn't work remove the glasses and try again without them
- The pupils need to be between 3-9mm to capture a screening. If the pupils are too small you will need to reduce the light in the room, if they are too large you can introduce light for the opposite effect

# Helpful Hints



How to get best results from screenings:

- **Technician** stance when screening –
  - Keep handheld **device** at “**eye**” **level with the patient's eyes** – not above or below so as to get the most accurate reading
  - The ideal screening position **is standing up with one foot slightly ahead of the other**. This will allow the screener to gently move in or out to reach the correct screening distance.
- **Distractions to a minimum** –
  - Minimize all external distractions so that the child will watch the handheld device and their eyes will be focused straight ahead.
  - Create a “quite zone”.
- Patients/Childrens **head angle** –
  - it is best to have the child's head squarely faced toward the handheld device and not angled.

# GLOSSARY OF TERMS

## Refractive Measurements

Consists of Sphere, Cylinder and Axis

### Sphere [DS]

Measures the power of the eye for myopia and hyperopia

### Cylinder [DC]

Measures the shape of the cornea

### Axis

Measurable location of astigmatism

## Spherical Equivalent [SE]

Equal to the sum of the value of the sphere and half of the cylinder

## Pupillary Distance [PD]

Distance between the center of the pupil in each eye

## Cylinder Convention

There are two different conventions for indicating the amount of cylinder: "plus cylinder notation" and "minus cylinder notation"

## OD [oculus dexter]

Right eye

## OS [oculus sinister]

Left eye

## Binocular

Both eyes

## Here's what Spot Vision Screener can detect:

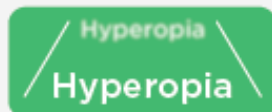
### Myopia

Near-sightedness



### Hyperopia

Far-sightedness



### Anisometropia

Unequal refractive power



### Astigmatism

Blurred vision, eye structure problem



### Strabismus

Eye misalignment, Gaze



### Anisocoria

Pupil Size is Unequal



# Two Great Companies.

## One Goal To Prevent Blindness



**Hillrom** empowers clinicians and health systems with smarter tools to assess, diagnose and treat every patient with confidence. For over 100 years Welch Allyn has been based in Skaneateles Falls, NY where we develop and manufacture innovative medical technologies, including Spot Vision Screener.

**School Health** is a national, full-service provider of health supplies and services and the exclusive distributor in the education channel for Spot Vision Screener. School Health is an expert in vision screening, offering sales, training and service support to Lions Clubs and school-based health professionals with the one goal of helping to keep students healthy.

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*We Supply Your Future*™

For more information, visit: [SchoolHealth.com/SpotVision](http://SchoolHealth.com/SpotVision)

**SCHOOL HEALTH CONTACT:**

Dave Cranny

630-339-7939

[dcranny@schoolhealth.com](mailto:dcranny@schoolhealth.com)

Assistance is available from Hillrom Monday–Friday, 8 a.m.–8 p.m. Eastern

**WARRANTY & SERVICE SUPPORT:**

[customerservice@hillrom.com](mailto:customerservice@hillrom.com)

800-535-6663, Option 1

**SPOT TECHNICAL SUPPORT:**

[technicalsupport@hillrom.com](mailto:technicalsupport@hillrom.com)

800-535-6663, Option 2