MRF Online – Patient Telehealth Guide

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1. Introduction (Device description and Intended use)

The Melbourne Rapid Fields (MRF) Online Perimeter is a software medical device that functions as a visual field plotter. It presents controlled visual stimuli on a calibrated electronic display and records patient responses to determine pointwise sensitivity and overall visual field status. The device operates through a standard web browser without the need for dedicated hardware, and incorporates AI-enabled webcam assessment to monitor gaze stability and viewing distance to promote test validity. The primary output is a visual field report displaying numerical and graphical representations of visual function, analogous to those produced by conventional perimeter devices.

1.1 Intended use

MRF is a software application to be used in clinics or at home to test the visual field patient's currently undertaking treatment for chronic conditions that affect the visual field. The MRF device is used in conjunction with current/existing practices by providing an additional monitoring tool, that gives the user a risk assessment and advice in relation to seeing their eye care specialist. It is not intended to make a specific diagnosis; it provides test outcomes that a specialist can use to form a diagnosis.

The MRF device for home test is intended for use with patient's already diagnosed with chronic conditions affecting the visual field, such as glaucoma, macular degeneration, diabetic retinopathy or neurological conditions.

1.2 Intended Purpose

The Melbourne Rapid Fields (MRF) device is a software-based visual field test intended to assess and monitor visual function in individuals with conditions known to affect the visual field. It is designed to be used in conjunction with existing clinical practice as an additional in-clinic or remote testing tool, supporting both initial assessment and ongoing monitoring of visual function.

MRF may be used by:

- Eye-care professionals (ophthalmologists, optometrists) in clinical settings to assess visual field defects and monitor disease progression.
- Patients with diagnosed chronic eye or neurological conditions that affect visual field for remote/home-based testing, with results available to their treating clinician to support management decisions.

The device provides quantitative measures of visual sensitivity and maps of the visual field, enabling the clinician to detect and monitor visual field loss. Patients with chronic eye diseases that affect visual field, such as glaucoma, age-related macular degeneration, diabetic retinopathy, or neurological conditions (e.g., stroke, optic neuropathy), may benefit from interim home monitoring between scheduled clinic visits. Where persistent changes are detected, MRF advises the patient to seek review with their eye-care specialist.

MRF is not intended to provide a medical diagnosis. It provides information to support the clinician's overall assessment and management plan.

1.3 Indications

The device is indicated for assessment of visual field defects in patients with conditions that may impair visual function, including but not limited to:

- **Glaucoma** – typically assessed using the 24-2 (24° vertical × 30° horizontal from fixation) or 30-2 (30° × 30°) test protocols. In advanced glaucoma, the 10-2 protocol (10° × 10° central field) may be used to evaluate central visual loss.
- **Macular degeneration** – typically assessed using the 10-2 protocol to evaluate central visual field impairment.
- **Neurological conditions** (e.g., stroke, optic pathway lesions) – typically assessed using the 24-2 or 30-2 protocols to evaluate hemianopic or quadrantanopic field defects.

- **Diabetic retinopathy** – assessed using the 24-2 protocol for peripheral field changes and the 10-2 protocol to evaluate central fixation loss.

1.4 List of Test Module Variants

Test Protocol	Field Area Assessed	Stimulus Parameters	Typical Clinical Use / Indication
MRF 24-2 Threshold	**24° vertically × 30° horizontally from fixation**	**Static threshold stimuli**	**Standard visual field testing; used commonly in glaucoma, neurological disease affecting central and peripheral field; diabetic retinopathy (peripheral field defects)**
MRF 30-2 Threshold	**30° vertically × 30° horizontally from fixation**	**Static threshold stimuli**	**Extended glaucoma assessment; neurological field defects (e.g., hemianopia, quadrantanopia)**
MRF 10-2 Threshold	**Central 10° × 10°**	**Static threshold stimuli**	**Advanced glaucoma (central loss); macular disease (e.g., age-related macular degeneration); diabetic macular involvement**
MRF Binocular Suprathreshold Screening	**Central 20 ° x 120 °**	**Suprathreshold stimuli at set dB level above age-corrected normal**	**Binocular functional screening in community**
MRF Radial pattern test	**24° vertically × 30° horizontally from fixation**	**Static threshold stimuli**	**Legacy test pattern used prior to 2020 on MRF iPad app. Not marketed in EU/UK. This test pattern is discontinued.**

1.5 Intended patient population

The device is intended for adults (≥18 years) undergoing assessment of visual field loss due to ocular or neurological disease. Use in pediatric populations may be undertaken under clinician supervision, where the child is judged capable of performing the test reliably. The device may be used across disease stages provided that measurable thresholds can be obtained within the luminance range of the display system.

1.6 Intended users

The device is intended for use by trained eye-care professionals, including ophthalmologists, optometrists, and clinical researchers, in both clinical practice settings. When configured for home-monitoring, the device may be used by patients under the supervision and direction of their clinician. The results are interpreted by the eye-care professional. It is not intended for self-diagnosis of disease by patients.

1.7 Contraindications, warnings, and precautions

1. Contraindicated in individuals unable to maintain fixation or understand test instructions (e.g., severe cognitive impairment, significant tremor).
2. Results may be influenced by poor environmental conditions (e.g., glare, excessive lighting, distractions).

3. Results should be interpreted only by a qualified clinician, with consideration of reliability indices and test conditions.
4. Test results should always be interpreted in conjunction with a comprehensive clinical examination. The device is not intended for standalone diagnosis of any disease.
5. Testing visual field at home does not replace regular clinic visits. You must continue to follow the advice of your eye care profession to have regular clinical review.
6. If experience eye strain, headache, or discomfort during testing, pause and rest. If discomfort persists, stop the test and contact your doctor before continuing.

1.8 Use of AI enabled Webcam analysis

The Melbourne Rapid Fields (MRF) system uses an AI/ML module (FaceAPI.js running on TensorFlow.js) to process live webcam images. This module allows the software to:

- Monitor your viewing distance to make sure you remain at the correct position.
- Check your gaze stability (how steadily you look at the centre target).
- Confirm that the eye not being tested is correctly covered.
- Assess whether background lighting is too bright.

All image processing happens locally in your web browser. No photos or video recordings are stored, uploaded, or shared. The AI module analyses only anonymised real-time data to support testing quality and safety feature. The AI module does not make diagnostic decisions or identify individuals.

2. Logging in to the MRF Vision System

You can log in to the MRF Vision System either by selecting the URL sent to you by your eye-care provider (this is the most common method) or by logging in via your MRF Online Account.

a. Logging in via a Telehealth URL

If your eye-care provider has provided you with a telehealth URL, do the following to log into the MRF Online Vision System:

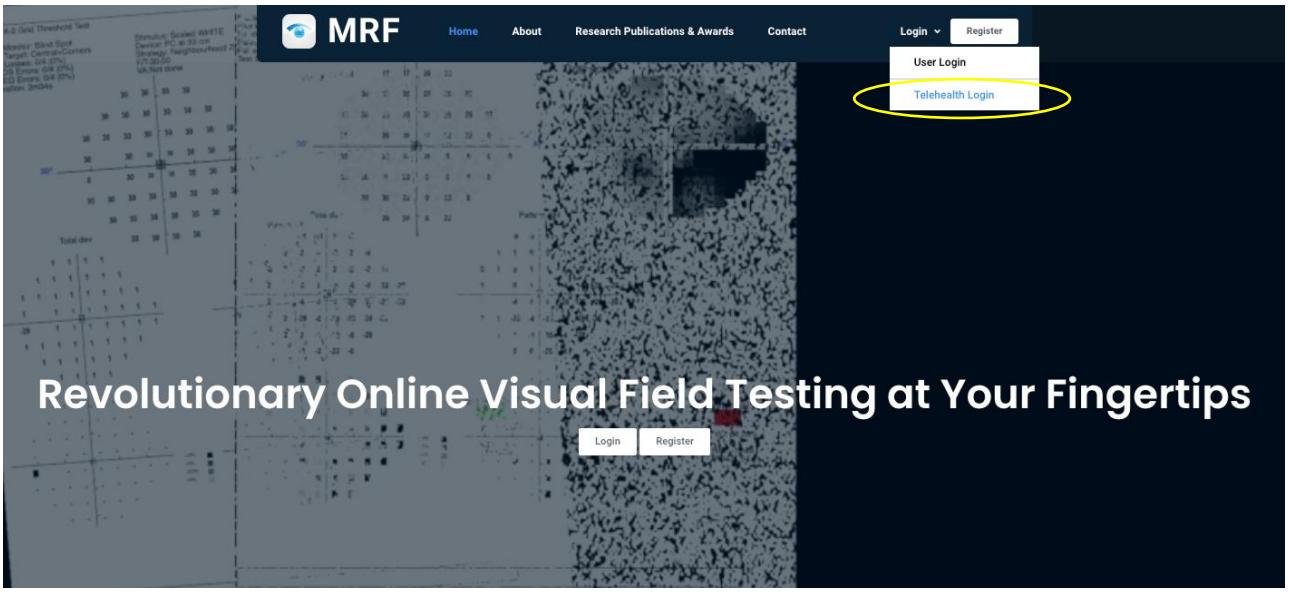
1. Click on the telehealth URL provided by your eye-care provider
2. Enter your year of birth
3. Click 

4. Click 

5. Proceed to section 2. Screen Calibration

b. Logging in via your MRF Online Account

If you have been given Telehealth Clinic Code and Patient ID from your eye-care provider then, do the following to log into the MRF Online Vision System:

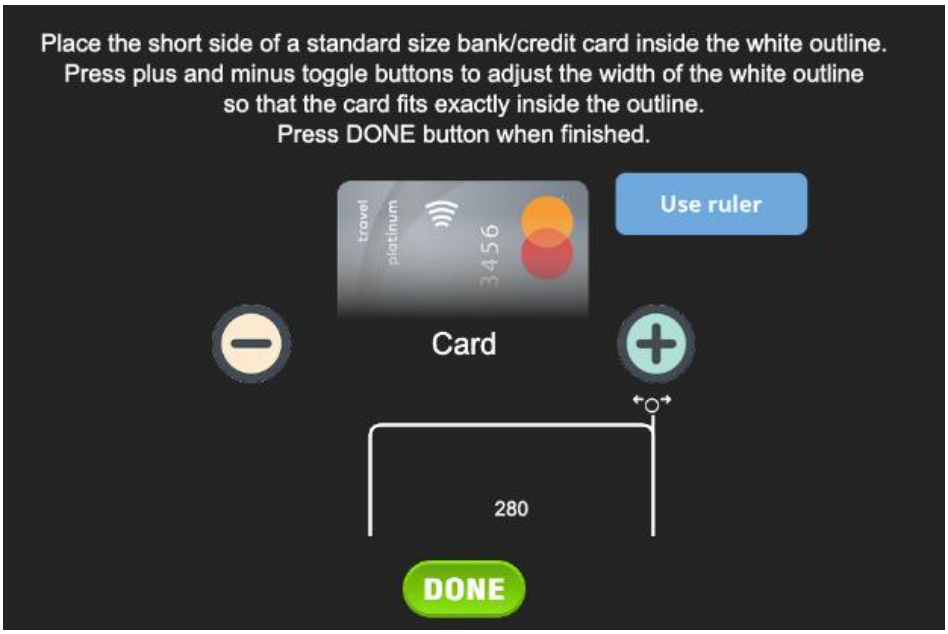


1. Navigate to MRF web site via your web browser
    a. For UK / EU navigate to the website www.visioninhome.uk
    b. For Australian /NZ customers navigate to the website www.visioninhome.au
    c. For International customers navigate to the website www.visioninhome.com
2. Select **Telehealth Login** from the Login menu on the top right hand corner
3. Enter your **Telehealth Clinic Code** and **Patient ID** as provided by your eye-care provider
4. Click Enter Telehealth
5. Click Start Test
6. Proceed to section 2. Screen Calibration

3. Screen Calibration

It is essential that you perform a screen calibration before you test your vision. The calibration only needs to be performed once unless you decide to test on a different screen in which case it will need to be repeated. To perform a screen calibration, do the following:

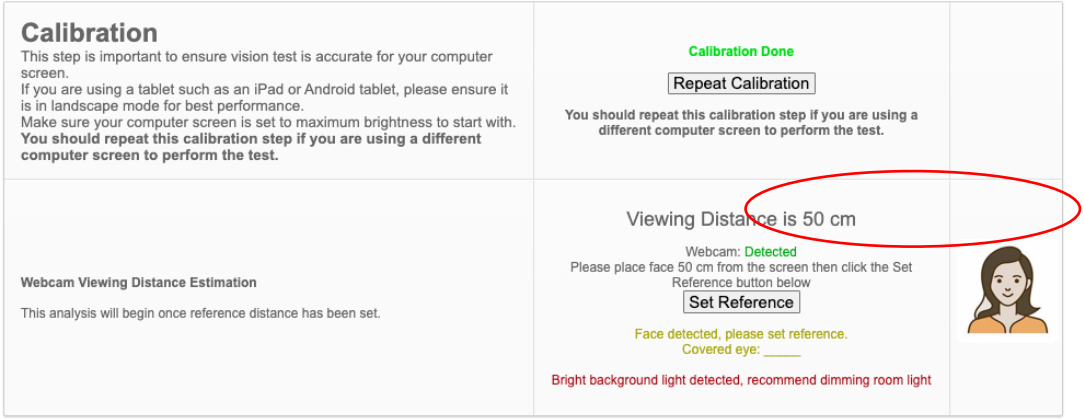
1. Click Start Calibration
2. The calibration screen will open. Hold a standard bank/credit card against the screen in the white box that appears. You can also use a ruler with 5 cm measurement by clicking the use Ruler button.



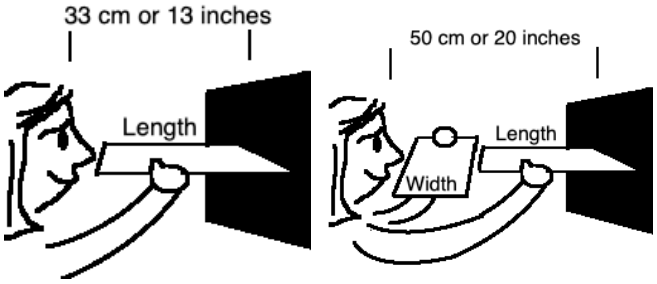
3. Click the and until the edges of the white box match the edges of the card or 5 cm on the ruler.
4. Click DONE. The screen calibration is complete
5. Ensure the brightness of the screen is turned to maximum.

4. Calibration of AI-enabled webcam analysis of Front facing camera

1. If you have a Web-cam or front facing camera, you can enable the camera to monitor viewing distance throughout the test.
2. The web-browser will ask to Allow Access to Camera, select Allow
3. To set a reference, move your face to the specified viewing distance (eg. 33 cm , 40 cm or 50 cm) . This viewing distance is specified under the Calibration section



4. For convenience 33 cm is approximately the length of an A4 (letter) size paper. For 40 cm, it is approximately the length of an A4 (letter) size paper plus half width of an A4 (letter) size paper. For 50 cm, it is approximately the length of an A4 (letter) size paper plus the width of an A4 (letter) size paper.



7. Once your face is at the specified viewing distance, click on the **Set Reference** button and it will set the reference for viewing distance. The distance between your face and the screen will then be calculated in real time based on this reference.

5. How AI-Enabled Webcam Assists You During Vision Testing

The Melbourne Rapid Fields (MRF) system uses your computer's webcam together with an **AI-enabled program** to help make sure your vision test is carried out correctly. The webcam does not record or save images – it simply checks your position and environment during the test.

The webcam helps in the following ways:

1. **Viewing Distance**
    - The webcam measures how far you are from the screen.
    - If you move too close or too far (more than about 10% from the correct distance), the system will guide you:
        - A voice will say *"move farther back"* or *"come closer"*.
        - A red circle around the fixation dot will expand or contract to remind you to adjust.
    - At the end of the test, your doctor will see how often you stayed at the right distance.
2. **Gaze Monitoring**
    - The system quietly checks whether you are looking at the centre dot.
    - You will not see feedback during the test, but after the test your doctor will see a **gaze chart** that shows if your eyes moved away.
    - This helps your doctor judge how reliable the results are.
3. **Eye Cover**
    - The system checks if the correct eye is covered before you start the test.
    - If the wrong eye is covered, you will see a warning so you can fix it.
4. **Background Lighting**
    - The webcam checks the brightness of the room.
    - If it is too bright, you will see a warning to adjust the lighting.

6. Setting Up

Prior to testing your vision with the MRF Vision System, please ensure you are set up correctly by strictly adhering to the following steps:

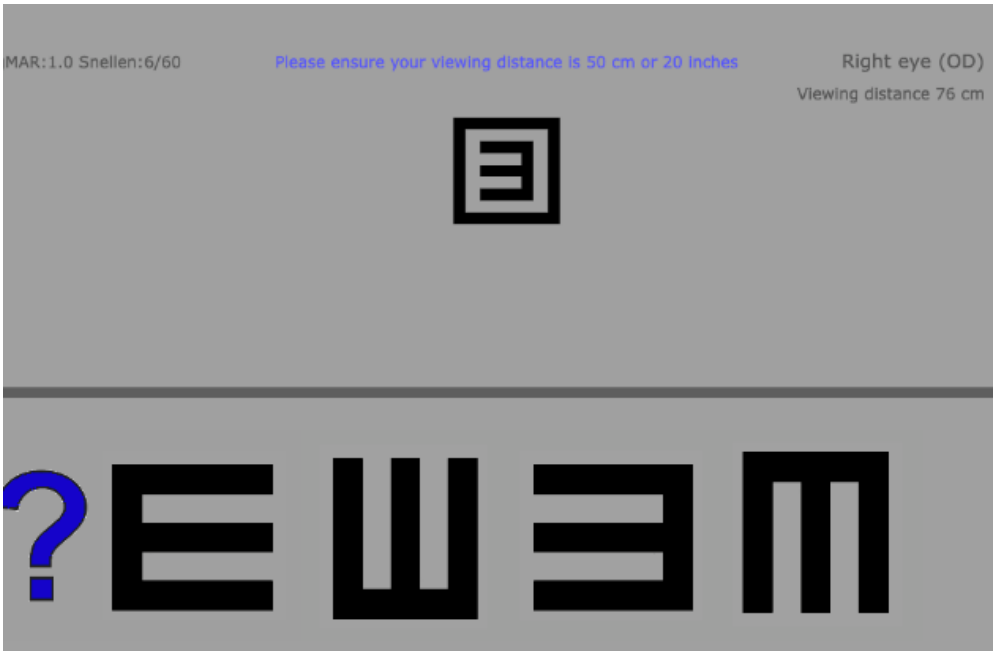
1. Dim the room lights
2. Ensure you are seated comfortably, within easy reach of your keyboard and mouse
3. Turn the volume of your speakers up to hear the voice over directions
4. Set the brightness of your computer screen to maximum. This needs to be checked each time you do a test.
5. Ensure there are no reflections on your screen from windows, doors, or lights around you
6. Wear your reading glasses (if you do not require glasses to read then you do not need to wear anything)
7. Block the eye that is not being tested by covering it with a piece of clean tissue or by placing a tissue over your glasses as shown in the image

8. Ensure you maintain the correct viewing distance from the screen. On screen instructions will advise of the correct viewing distance (typically 33, 40cm or 50cm). 33 cm is approximately the length of an A4 (letter) size paper. For 40 cm, it is approximately the length of an A4 (letter) size paper plus half width of an A4 (letter) size paper. For 50 cm, it is approximately the length of an A4 (letter) size paper plus the width of an A4 (letter) size paper.
9. Proceed to section 4. Testing Your Vision

7. Testing Your Vision

Your eye-care providermay have assigned you one, or several, vision tests. To commence testing, ensure you have blocked the eye not being tested, turned your screen brightness to maximum, and are positioned at the correct viewing distance (see Section 3. Setting Up).

a. Visual acuity test



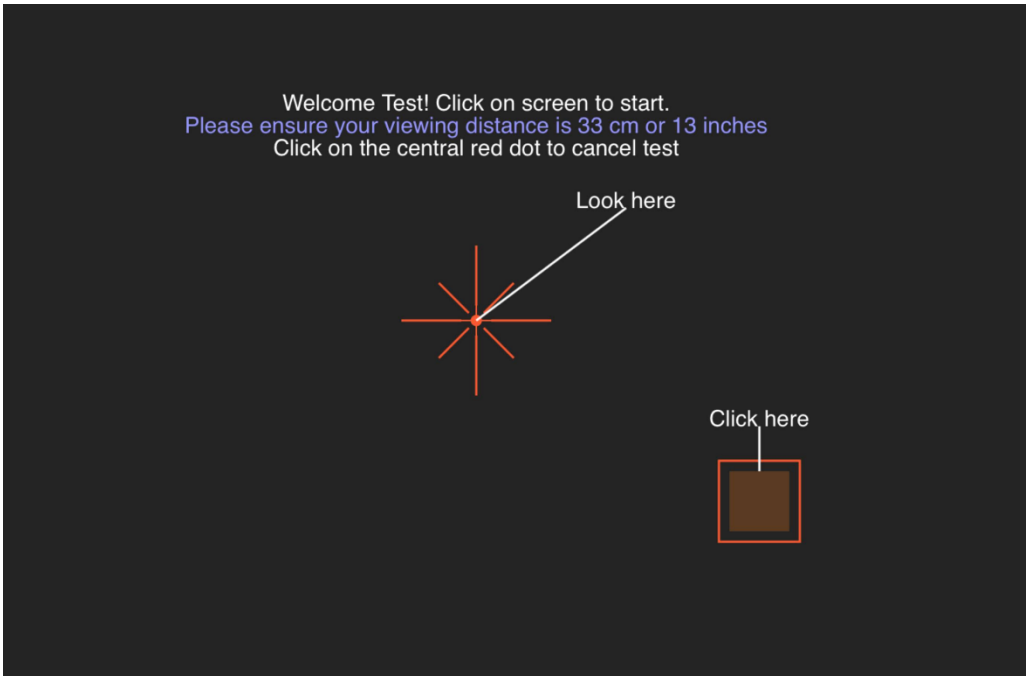
Visual acuity tests the clarity of the central part of your vision.

i) To test the right eye, click Right eye and to test the left eye click Left eye

ii) The visual acuity tests require you to match the boxed shape in the centre of the screen with one of the shapes at the bottom of the screen. Click on the correct shape with your mouse. If you are unsure, click the question mark.

iii) The test will stop automatically when you have reach down to the smallest shape that you are able to see clearly.

b. Visual field test



The visual field test measures your peripheral vision.

i) To test the right eye, click and to test the left eye click

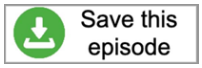
ii) You must look at the red cross in the centre of the screen and click the mouse each time you see a white or grey spot flash in the side of your vision. The red cross will move to each of the edges of the screen during the test.

iii) Follow the voice instructions of the test until the test is completed.

Light Safety

- The light flashes used during the test are of low intensity and safe for the eyes.
- If you experience eye strain, headache, or discomfort during testing, pause and rest.
- If discomfort persists, stop the test and contact your doctor before continuing.

8. Saving the Test

Once you have completed all the tests ordered by your eye-care provider, move to the Save Test section and save your results by clicking button 

. This will save the test and allow your eye-care provider to review the test.

9. How your test results will be used by your doctor

Once you have completed your visual field test, the results are automatically saved and securely accessible by your eye-care provider.

- **Review by your doctor**: Your doctor will review the results alongside your eye history, eye pressure, optic nerve scans, and other test results. The visual field test shows how well you can see in different parts of your vision and whether there are any areas of reduced sensitivity.
- **Diagnosis and monitoring**: The results are used to help detect eye diseases that affect the visual field (such as glaucoma, optic nerve damage, or neurological conditions, for example, stroke). If you already have a diagnosis, your doctor will compare your results to previous tests to check whether your vision has changed over time.
- **Guiding treatment**: If changes are found, your doctor may contact you to adjust your treatment plan. This could include starting or changing eye drops, recommending laser or surgery, or planning closer follow-up.
- **Home monitoring**: If you are testing from home, the results allow your doctor to keep track of your vision between clinic visits.
- **Testing visual field at home does not replace regular clinic visits. You must continue to follow the advice of your eye care profession to have regular clinical review.**
- **Reliability of the test**: The system records whether the test was performed reliably. These include gaze monitoring plot, % time at correct viewing distance, false positive rates, false negative rates, fixation loss rates. If a test is unreliable (for example, due to distraction or fatigue), your doctor may contact you to ask you to repeat it.

Important: Your test results are **one part of your eye care**. They should always be interpreted by a qualified doctor or eye-care professional and not used for self-diagnosis.

10. Troubleshooting

While using MRF online test, you may occasionally encounter difficulties. The following table lists common problems and simple steps to resolve them:

Issue	Possible Cause	Solution
Cannot log in to the test	Incorrect Clinic Code or Patient ID	Check that you entered the code exactly as provided by your eye-care provider. If using a telehealth link, ensure you clicked the correct URL.

Issue	Possible Cause	Solution
Screen calibration not working	Card/ruler not aligned, or wrong screen size detected	Repeat calibration carefully using a standard credit card or ruler. Ensure your browser zoom is set to 100%.
Webcam calibration fails	Browser has blocked camera access	Check your browser settings and allow camera access when prompted. Position your face at the correct distance (33–50 cm) and retry.
Test does not start	Internet connection issue or browser not compatible	Refresh the page. Ensure you have a stable internet connection. Try using Google Chrome or Microsoft Edge.
Screen appears too bright/dim	Room lighting too strong, or screen brightness too high/low	Adjust the room lighting so it is dim but comfortable. Adjust your device screen brightness to its maximum level. Avoid glare from windows.
Missed stimuli or no response recorded	Mouse not clicked, or lag in device response	Ensure you are holding the mouse correctly. Click once when you see the flash. Avoid double-clicking. If using a trackpad, ensure it is responsive.
Difficulty maintaining fixation	Fatigue or distraction	Pause between eyes, rest briefly, and retry. Ensure you are seated comfortably and the room is quiet.
Test feels too slow or too fast	Internet lag or personal perception of stimulus speed	Check your internet speed. If problem persists, report to your clinician for further advice.
Results not saved	Test not completed or internet interruption	Repeat the test and press the **Save Test** button. If the problem persists, restart your browser and log in again.
“Face not detected” warning during test	Camera cannot see your face clearly	Sit upright facing the camera. Ensure lighting is adequate. Remove glasses with reflective coating if needed.
Test freezes midway	Browser or device memory issue	Close other programs or tabs. Refresh the page and restart the test. If persistent, try another device.
Eye strain during test	Testing fatigue. Screen brightness may be high for the patient.	If experience eye strain, headache, or discomfort during testing, pause and rest. If discomfort persists, stop the test and contact your doctor before continuing.

Issue	Possible Cause	Solution
Warning that the wrong eye is covered.	Wrong eye covered or poor patching	Ensure one eye (the eye not being tested) is completely covered (use an eye patch or tissue under glasses).
Unsure if test is valid	Concern about quality or unusual results	Contact your clinician. The system also flags unreliable tests automatically if fixation or responses are inconsistent.

11. Support and Contact Information

If you continue to experience problems or if you wish to report an issue with MRF Online, please contact:

Glance Optical Pty Ltd – Support Team

📧 Email: **info@glance-optical.com**

🌐 Website: **www.glance-optical.com**

📞 Phone: +61 1800 225 307 (Mon–Fri, 9:00–17:00 AEST)

Address: Level 1/ 420 Little Collins St, Melbourne, VIC 3000, Australia.

Complaints Contact

You may also report device-related complaints or adverse events directly to your local Competent Authority or to EU/UK Representative for Glance Optical Pty Ltd.

EU Authorised Representative Donawa Lifescience, Piazza Albania, 10 00153 Rome, Italy, Tel: +39 06 578 2665

UK Authorised Representative: Donawa Lifescience Ltd Aviation Business Park Christchurch BH23 6NX UK, Tel: +39 06 578 2665

Electronic Instructions for Use (e-IFU):

This IFU is available in electronic form via the official Glance Optical Pty Ltd website, as well as directly within the MRF application.

A paper copy can be provided free of charge upon request.

For any questions or support, please contact our support team at: info@glance-optical.com

Basic UDI-DI: ++G583MRFONLINEEU2VJ

UDI-PI: +G583MRFONLINEEU2VJ/01SW2.48

MRF Version 2.49.001