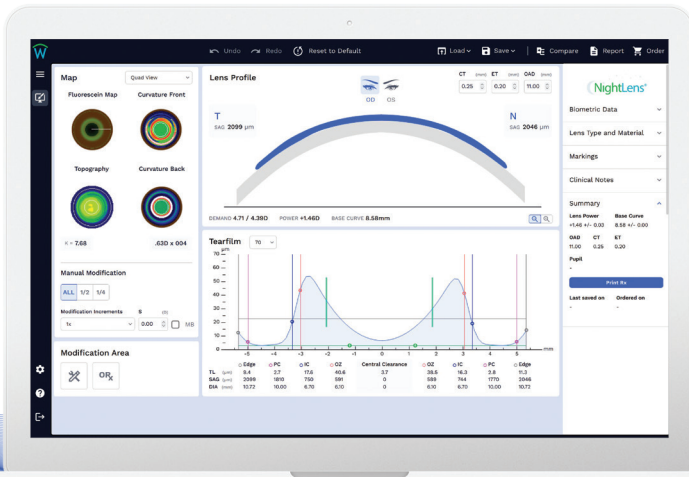


NightLens®

Correct Your Vision While You Sleep



How to design a WAVE NightLens®

BEFORE YOU START

- Measure the patient's subjective refraction, corneal diameter, and pupil size carefully.
- Capture repeatable and good quality topography maps and check for coverage:
 - If using a **Medmont** topographer, take at least 4 scans and determine which offers the best coverage without artifacts. Coverage must be >8 mm in all directions.
 - **Keratograph**® maps must show more than 75% analyzed area and vertical coverage >7.5 mm in all directions. WAVE recommends using scans with QS = OK.
 - **Pentacam**® maps must show vertical coverage >8 mm in all directions. WAVE recommends using scans with QS = OK.

Step 1 – Import the Corneal Topography

- Once you are satisfied with the topography map quality, import it into WAVE.

Step 2 – Data Input

- Enter the refraction and check the HVID. Click on **Next**.
- Choose **NightLens**®.
 - If the Rx falls within the VST approved range (up to -5.00D Sph. & -1.50D Cyl.), WAVE automatically defaults to the VST template option. Check and modify the following parameters as needed.

Lens Diameter: Typically, 0.2 mm to 0.5 mm smaller than HVID. To save time for future designs, this can be set as a default in User Preference Settings.

Target Lens Power:

If you use the VST template, the default values are,
+1.25D if the Spherical Equivalent is less than -3.00D
+1.50D if the Spherical Equivalent is between -3.00D & -4.00D
+1.75D if the Spherical Equivalent is between -3.00D & -5.50D

BOZD Diameter:

Typically, between 6.0 to 6.2 mm for adults. Using a smaller BOZD between 5.6 to 5.8 mm may be used for myopia management for children.

If you change OZ, modify the Intermediate Curve (IC) too.


WAVE recommends **IC = OZ + 0.6 mm**.

- Click on **Start Design**.

Step 3 – Review and Finalize the Design

- Check simulated Fluorescein map and tear layer 360° to confirm design is suitable for the patient.
- On the right menu, under the Lens Type and Material, check the material, color, or choose add-ons if desired. Review the Lens Summary.

Step 4 – Order

- Proceed to **Order** the lens or save it until a later time. You can track your orders online. To access the WAVE Internet Order Status System (IOSS), you can easily click on the Help button  and access the WAVE resources page.

How to modify a WAVE NightLens®

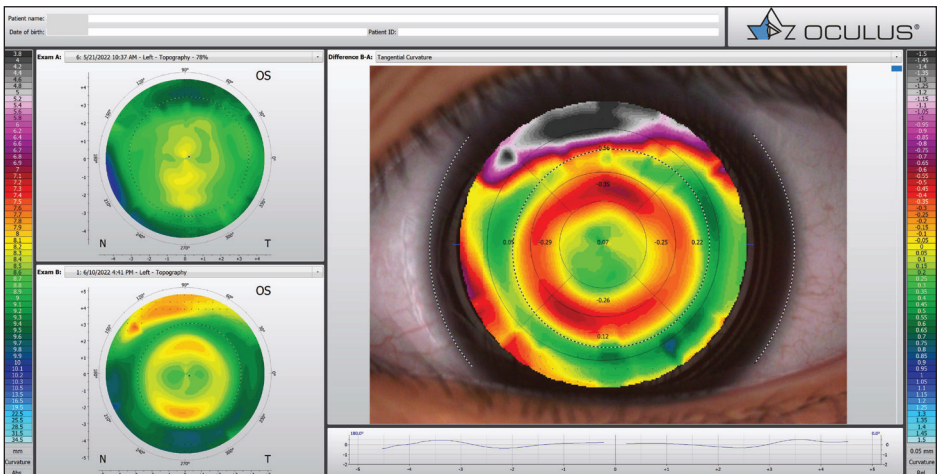
Making lens modifications are categorized into two main areas.

- Centering of the lens while asleep
- Eliminating under/over treatment when the lenses are off the eye

There are other issues that dictate modifications such as dense corneal staining or lenses that are too large or too small.

Evaluating the Lens Fit and Treatment Centration

Comparing the pre- and post- treatment Tangential topography maps (difference maps) is the best way to determine if the treatment is well centered over the pupil. Comparing the Axial topography maps will show how much treatment or power change there is at the time of evaluation.



If centering issues are verified by topography or dense corneal staining is seen, a lens modification will be necessary. Discontinue wear, modify the design, and reorder.

Before you make treatment modifications, WAIT!

If there are no concerns about the health of the cornea or obvious fit issues, it is recommended to wait until the one month visit before making modifications for treatment correction.

If no modifications are needed after the first overnight wear, schedule subsequent follow-up appointments later in the day. This visit is to confirm the treatment position and the refraction change. Here again, difference maps will verify centration and how much treatment has taken place. Slight SPK is normal at this stage and should disappear with additional wearing time.

If topography verifies the treatment zone is decentered, modifying the NightLens® is quite simple. To proceed with modifications:



- Open the design file
- Click on Modification Area

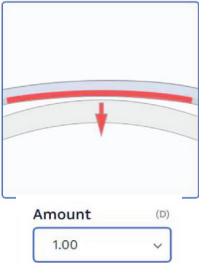
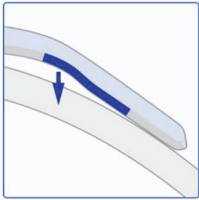
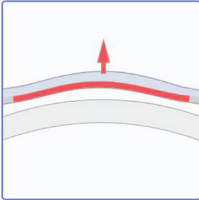
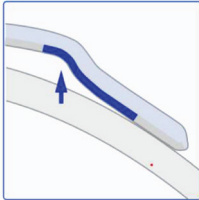
The screenshot shows the 'Modifications' section of the software. It features four icons: 'Alignment Zone' (a lens cross-section with a red dot), 'Reverse Zone' (a lens cross-section with a blue arc), 'Base Curve' (a lens cross-section with a red arc), and 'Optic Zone Diameter' (a circular target with a red center). Below these is the 'Modify Alignment Zone' section, which includes two diagrams showing the lens being adjusted. The left diagram shows the lens being moved downwards, labeled 'Increase SAG', and the right diagram shows it being moved upwards, labeled 'Decrease SAG'. To the right of the diagrams are controls for 'Amount' (set to 15 micrometers) and 'Area' (with options for ALL, 1/2, and 1/4). A compass icon with 'T' and 'N' is also present. At the bottom are 'Cancel' and 'Apply' buttons.

Step 1 - Modifying the Lens Fit

Observations	How To Fix it
 <p>Frowny Face or Inferior Decentration <i>(Happens more frequently)</i> Excessive Sagittal height can cause a lens to be "steep" for a given cornea. Causing the lens to ride low.</p>  <p>Central Island Excessive Sagittal height, lens is too steep. Peripheral squeeze and excessive central clearance. This causes the central cornea to "Pop Up" leaving a central island.</p>  <p>Nasal Decentration <i>(Happens more frequently)</i> Flat nasal taper causing lens to bind. Tight lenses too much Sag. Tight lids driving the lens nasally</p>	 <p>Modify Alignment Zone to decrease SAG. <i>(Flatten the AZ)</i></p>
 <p>Temporal Decentration <i>(Happens rarely)</i> Flat temporal taper. Loose lens. Low Sag. AC too flat.</p>  <p>Smiley Face or Superior Decentration <i>(Happens rarely)</i> Too little Sagittal depth can cause the lens to be "Flat" for the given cornea. This can cause the lens to ride High.</p>	 <p>Modify Alignment Zone to increase SAG. <i>(Steepen AZ)</i></p>

When selecting **Alignment Zone** changes, Flatten or Steepen by approximately 10-15 microns

Step 2 - Modifying the Treatment Amount

Observations	How To Fix it
<p>Under-Correction Flattening the BC will allow slight under correction but not necessarily increase the treatment zone size.</p> <p>Decreasing the sag in the Reverse Zone will bring the BC closer to the corneal surface and increase the size of the treatment zone.</p>	<p>Flatten Base Curve if the amount of under correction is 1.00D or less.</p>  <p>Decrease SAG in the Reverse Zone by 10 - 12 microns if the amount of under correction is over 1.00 D</p> 
<p>Over-Correction The opposite functions are indicated for over-correction. Steepen the BC or increase sag in the reverse zone.</p>	<p>Steepen Base Curve in 0.50 D steps.</p>  <p>Increase SAG in the Reverse Zone by 5 - 8 microns. This action will decrease the treatment zone size.</p> 

The over-refraction (OR) with the lens on the eye should be slightly hyperopic. If the OR is minus, flatten the BC appropriately until a plus OR is achieved. $0.10 \text{ mm} = 0.50 \text{ D}$

For additional assistance:

17721 59th Avenue NE Arlington, WA 98223 USA

Tel: +1 (855) 655-2020

Fax: +1 (877) 393-1888

info@wavecontactlenses.com

www.WaveContactLenses.com

