# Easy Prismi — User Manual

**Glasses · Prisms (T.A.B.O.)**
*Stile Ottica SA — stileottica.ch/app*

## Overview

Easy Prismi is a professional tool for opticians and eye-care practitioners. It combines prismatic corrections using **vector addition**, handles over-refraction (adding a measured prism to an existing prescription), and provides tools to redistribute the combined prism load across both eyes — including full transfer to one eye and symmetric split between both.

Prismatic values are expressed in **cm/m**, equivalent to prism dioptres (Δ). Bases follow the **T.A.B.O. system**.

## The T.A.B.O. Coordinate System

Prism bases are specified as angles in degrees following the T.A.B.O. convention:

| DIRECTION | ANGLE |
|---|---|
| Nasal (R) / Temporal (L) | 0° |
| Up | 90° |
| Temporal (R) / Nasal (L) | 180° |
| Down | 270° |

> ***Important:*** *Nasal and Temporal are* ***eye-specific****. For the Right eye, Nasal = 0° and Temporal = 180°. For the Left eye, these are swapped: Temporal = 0° and Nasal = 180°. The app manages this automatically.*

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## Interface Layout

1. **Patient** — name, date, language, settings
2. **Values** — existing prismatic prescription (up to 2 prisms per eye)
3. **Over-refraction** *(collapsible)* — additional prism measured over the existing correction
4. **Separate prisms per eye** *(collapsible)* — resultant for each eye separately, with transfer and split options
5. **Single prism per eye** *(collapsible)* — vector sum collapsed to one prism per eye, with transfer and split options
6. **Notes** — reference information on units, T.A.B.O., and calculation rules

## Patient Card

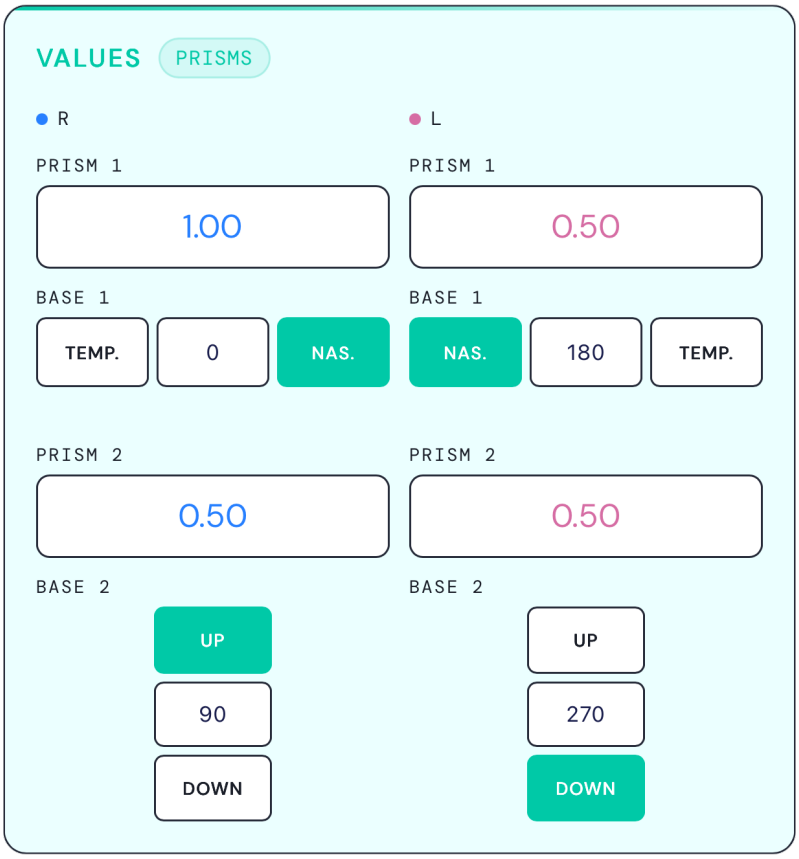

**Name** and **Date** identify the record. The date defaults to today.

**Language selector** (top-left) — available languages: English, Italian, French, German, Spanish, Portuguese, Chinese, Japanese, Korean.

**Settings** (gear icon) — see the Settings section.

**Share** (share icon) — captures the screen as an image and opens the system share sheet.

## Values Card



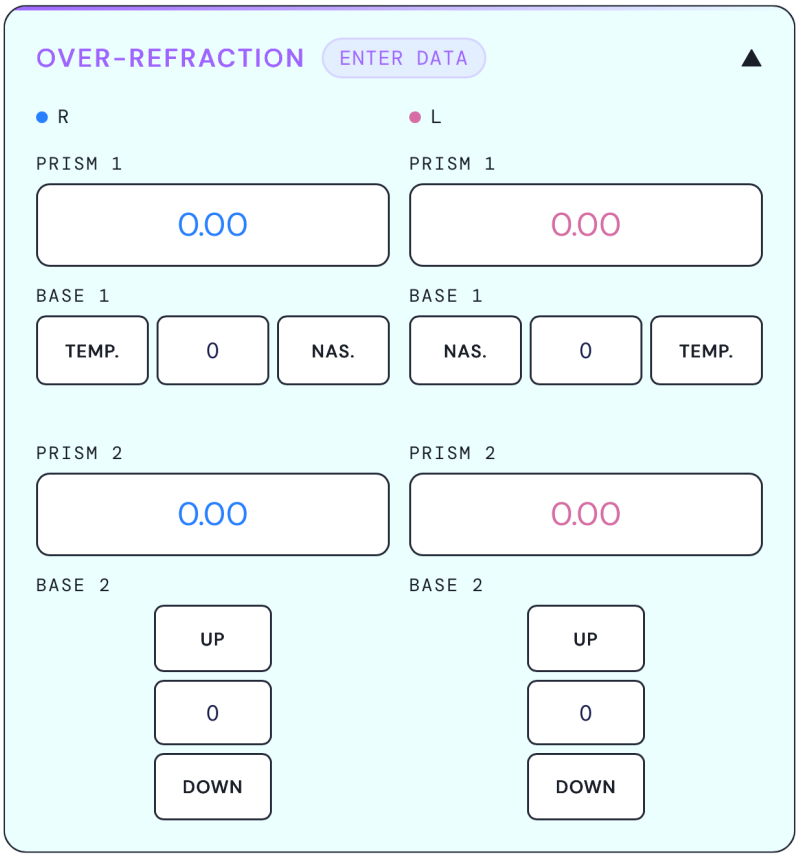

Enter the patient's **existing prismatic prescription** — up to two prisms per eye, each defined by a magnitude and a base direction.

For each eye (Right / Left), there are two prism slots:

| FIELD | DESCRIPTION |
|---|---|
| **Prism 1** | Magnitude in Δ (prism dioptres / cm/m). Typically the horizontal component. |
| **Base 1** | Base direction in degrees (T.A.B.O.). Shortcut buttons: **Temp.** (180°) and **Nas.** (0°) for horizontal; values are eye-specific. |
| **Prism 2** | Magnitude in Δ. Typically the vertical component. |
| **Base 2** | Base direction. Shortcut buttons: **Up** (90°) and **Down** (270°). |

Entering `0` for a prism magnitude means that component is not present. Results update automatically.

## Over-Refraction Card *(collapsible)*




Enter a **prism measured over the existing correction** — for example from a refraction performed with the patient wearing their current glasses. The format is identical to the Values card (two prisms per eye with bases).

The over-refraction is **vectorially added** to the Values input before computing the results. If no over-refraction is needed, leave this card collapsed or set all values to zero.

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## Calculation Method

All combinations use **vector addition of H and V components**.

Each prism $p$ at base angle $\theta$ is decomposed into:

$$H = p\cos\theta \qquad V = p\sin\theta$$

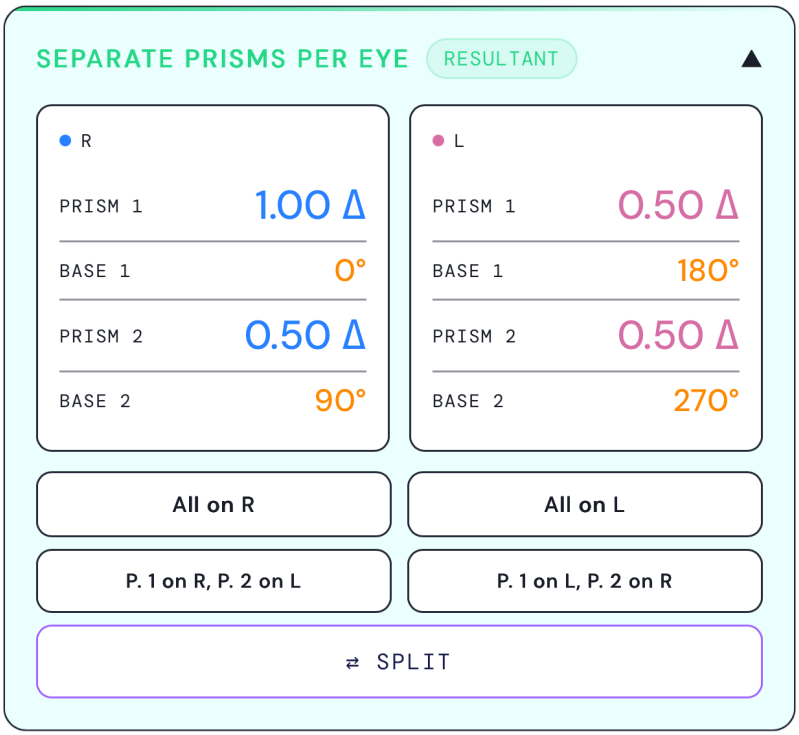
Multiple prisms are summed component-by-component:

$$H_{\text{tot}} = \sum H_i \qquad V_{\text{tot}} = \sum V_i$$

The resultant magnitude and base are then reconstructed:

$$p_{\text{tot}} = \sqrt{H_{\text{tot}}^2 + V_{\text{tot}}^2} \qquad \theta_{\text{tot}} = \arctan!\left(\frac{V_{\text{tot}}}{H_{\text{tot}}}\right)$$

## Separate Prisms per Eye Card *(collapsible)*




Shows the **resultant of the two input prisms for each eye independently** — i.e. the vector sum of Prism 1 + Prism 2 within each eye, expressed as two separate orthogonal components (horizontal + vertical), still in two-prism format.

This is the standard dispensing format: one horizontal prism and one vertical prism per eye.

### Transfer buttons

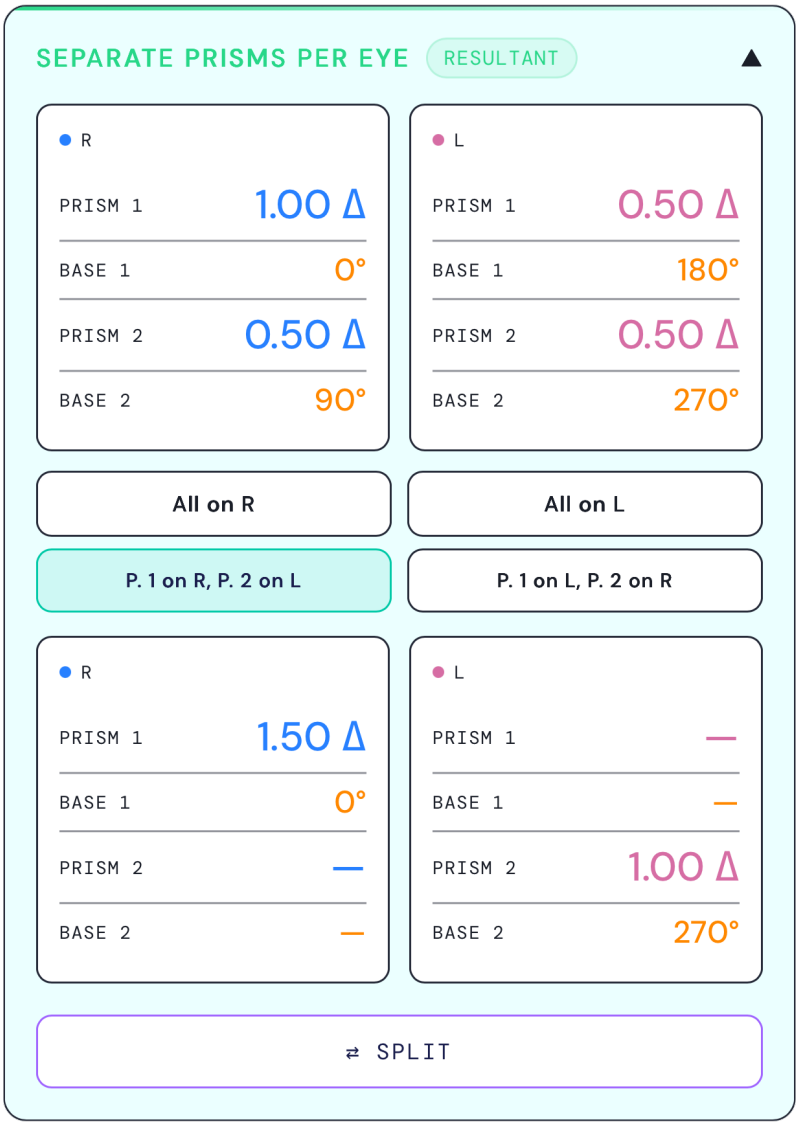

**All on R** / **All on L** — transfers the total combined prismatic effect (both eyes) onto a single eye. This is used when concentrating the full correction in one lens.

When transferring from one eye to the other, both the H and V components are **inverted** (Up ↔ Down, Nas. ↔ Temp.) to maintain the correct optical effect at the other eye.

Mathematically, for a transfer to R:

$$H_{\mathrm{R,total}} = H_{\mathrm{R}} + (-H_{\mathrm{L}}) \qquad V_{\mathrm{R,total}} = V_{\mathrm{R}} + (-V_{\mathrm{L}})$$

### Prism 1 on Right, Prism 2 on Left / Prism 1 on Left, Prism 2 on Right

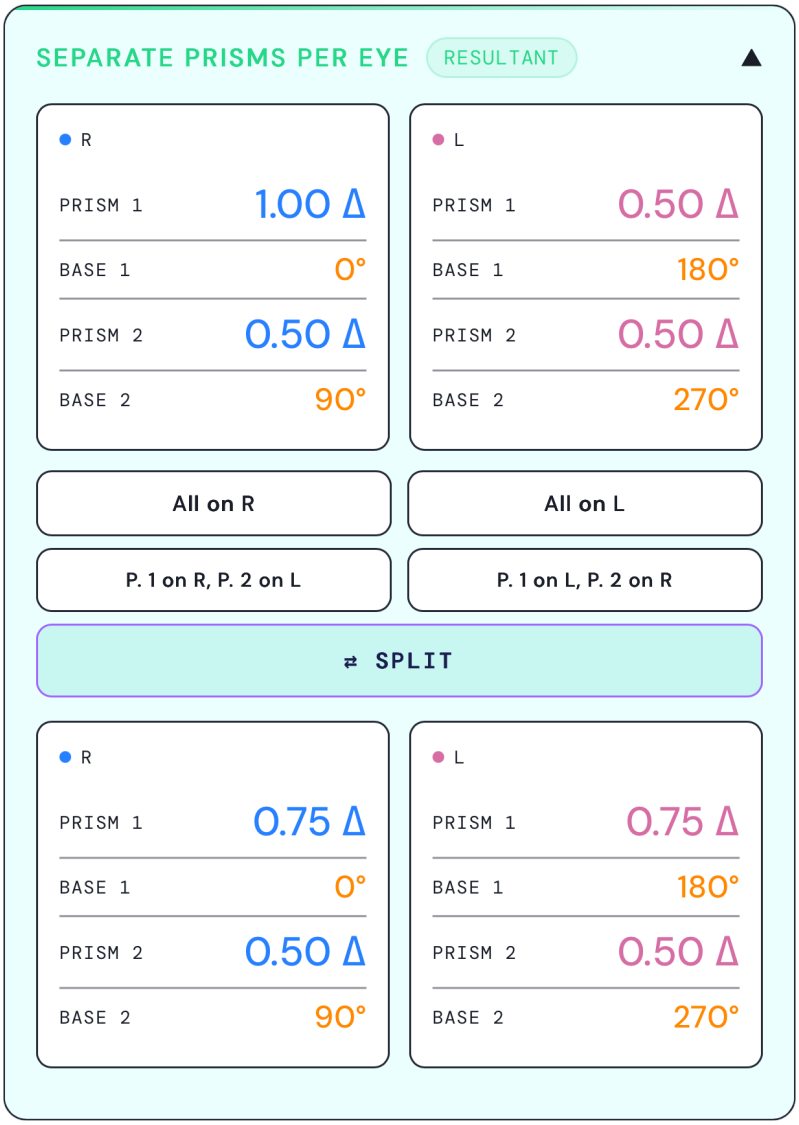



Assigns the two input prisms to specific eyes: **Prism 1 on Right, Prism 2 on Left** places the first input prism on the right eye and the second on the left; **Prism 1 on Left, Prism 2 on Right** does the reverse.

The components of Prism 1 go directly to the selected eye, and the components of Prism 2 go to the other.

Unlike the Transfer buttons (which collapse both prisms onto a single eye) or Split (which symmetrically divides the total), this operation preserves both prisms independently and simply routes them to the intended eyes.

## ⇄ Split



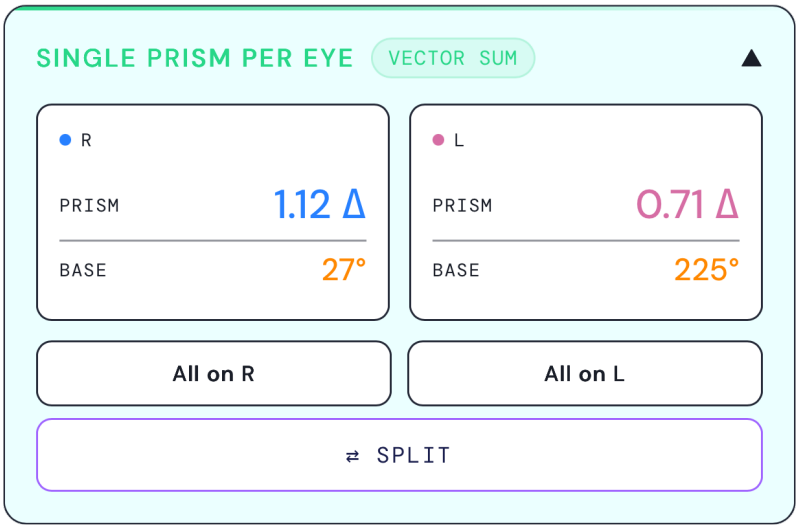

Symmetrically divides the total prismatic load between both eyes. Each eye receives exactly half, with mirrored bases:

$$H_{\mathrm{R,split}} = \frac{H_{\mathrm{tot}}}{2} \qquad H_{\mathrm{L,split}} = -\frac{H_{\mathrm{tot}}}{2}$$

$$V_{\mathrm{R,split}} = \frac{V_{\mathrm{tot}}}{2} \qquad V_{\mathrm{L,split}} = -\frac{V_{\mathrm{tot}}}{2}$$

This minimises the prismatic load per lens and is the preferred approach when both eyes can tolerate the correction equally.

## Single Prism per Eye Card *(collapsible)*




Collapses the result to **one single prism per eye** using the same vector addition, but expressing the resultant as a single magnitude and base angle instead of two components. This is useful when the lens manufacturer requires a single oblique prism specification.

The same **Transfer** and ⇄ **Split** operations are available here, operating on the single combined prism per eye.

### Transfer

⇄ Split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## Notes Card

A permanent reference at the bottom of the page:

- Prismatic values are in cm/m (= Δ)
- Bases follow T.A.B.O. (R Nas. = 0°, Up = 90°, Temp. = 180°, Down = 270°; L swaps Nas./Temp.)
- Combination uses vector addition of H and V components
- Transfer inverts both H and V
- Split divides the total load symmetrically, with mirrored bases

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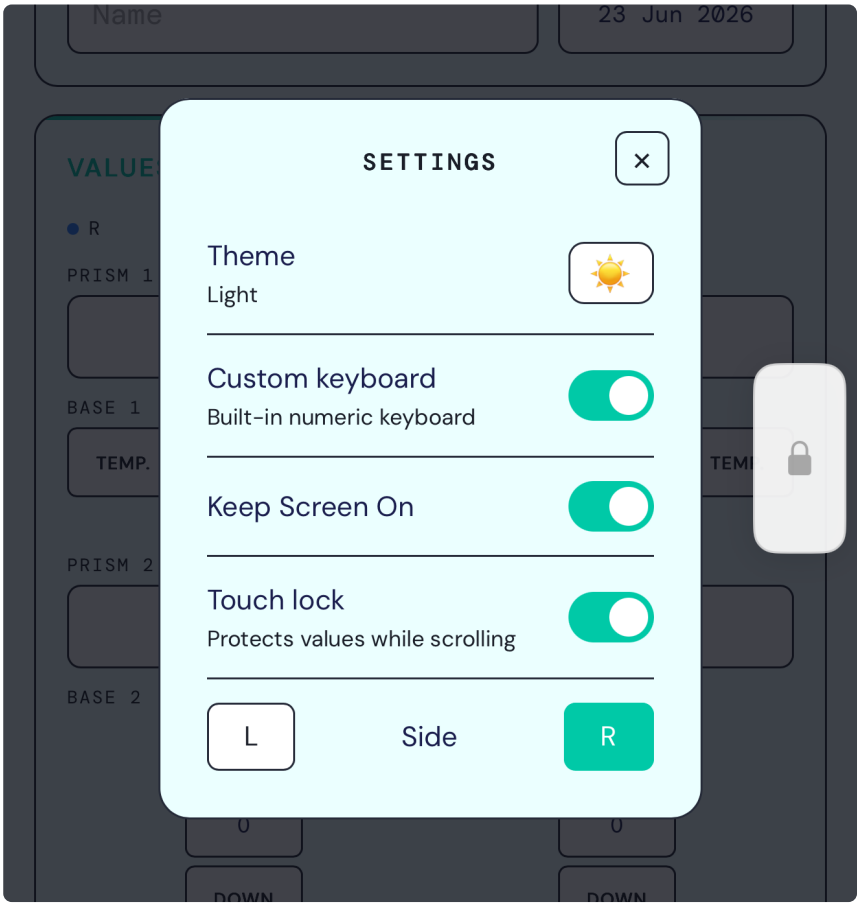
## Reset

↺ **Reset all values** clears all prism and base fields.

## Settings

Open via the **gear icon** in the Patient card header.




### Theme

Toggles between **Light** and **Dark** mode. Saved automatically.

### Custom Keyboard


Enables the built-in numeric keypad for entering prism and base values.

### Touch Lock

Floating **lock pill** to prevent accidental input changes while scrolling. Choose **L** or **R** for the pill position.

Even with Touch Lock active, the following control remain accessible:

- **Share** button

> *Touch Lock is available on iOS only.*

## ⓘ Info Modal

The ⓘ **button** at the bottom shows the app version and links to **stileottica.ch/app** and support@stileottica.ch.

## Tips

- **Prism 1 is typically horizontal** (Base Nas. or Temp.) and **Prism 2 is typically vertical** (Base Up or Down). This matches the standard prescription format. The shortcut buttons fill in the correct T.A.B.O. angle automatically.
- **If only one prism component exists** (e.g. purely horizontal), leave Prism 2 at `0`. It will not appear in the results.
- **The Over-refraction card** is useful when re-evaluating a patient who already has prisms in their glasses — enter the existing prescription in Values and the newly measured correction in Over-refraction; the app computes the new total.
- **Transfer to one eye** is sometimes necessary when one eye cannot tolerate any prism (e.g. due to anisometropia or lens constraints). Remember that concentrating prism in one lens adds weight and thickness.
- **The Split** is generally preferred for binocular balance and lens weight distribution.
- **Oblique prisms** (bases not at 0°/90°/180°/270°) are fully supported — type the angle directly in the Base field. The shortcut buttons cover the four cardinal directions only.

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