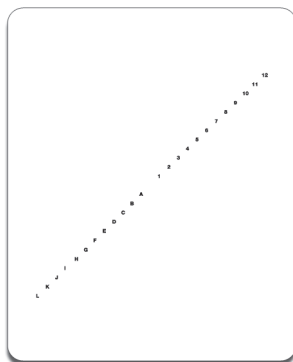


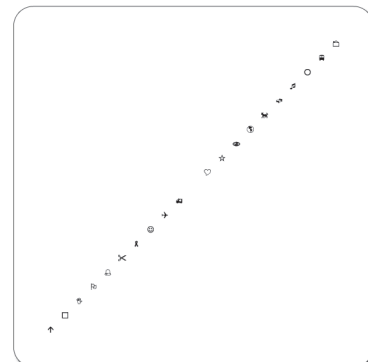


Thorington Card Guide

Part Number: 489300, 555800, 539000, 555900



489300 - Adult Thorington Card



539000 - Pediatric Thorington Card

Guide for Testing Eye Alignment using Slant Modified Thorington Cards

Items needed:

- Slant Modified Thorington Card (Adult , Pediatric and Distance, as appropriate).
- Transilluminator (or muscle light – except for LED lighted versions).
- Maddox Rod.
- Patient's proposed Rx (see below).

Set up for Adult Near Card:

Patient is to wear their proposed Rx:

For non-presbyopes, this is typically based on the results of the binocular balance technique.

For presbyopes, the starting lenses are the tentative additional lenses or tentative 'add'.

Lighting in room should be normal.

Tell patient that we are measuring their eye alignment.

Set up card at 40 cm (16 inches) in a normal reading position.

Place transilluminator (muscle light) behind card so the light is shining through the small hole at the center.

If the white washer fits loosely on your transilluminator, simply wrap the tip of the transilluminator with masking or other tape. This will ensure a secure fit.

Test:

Have patient hold a Maddox rod over their OD.

To measure the horizontal phoria, the Maddox rod is held so that the patient sees a vertical line. The patient reports which diagonal letter or number the line intersects.

Command the patient to "look at the white light in the center of the card" (while holding the Maddox over their right eye). Ask the patient, "While looking at the white light, can you see the red line? Does it pass through a letter or number? Which letter or number?"

To measure the vertical phoria, the Maddox rod is rotated 90 degrees and the patient sees a horizontal line. The patient then reports which diagonal letter, number (or figure for Pediatric Version) the line intersects.

Repeat the Test Procedure to the patient as needed.

Interpretation For Adult Near Point Version (with letters and numbers):

If the patient has normal alignment, the red line will pass thru the white light.

If the patient has other than normal alignment:

Vertical line thru a number means an EP (uncrossed diplopia).

Vertical line thru a letter means an XP (crossed diplopia).

Horizontal line thru a number represents a RhypoP (LhyperP).

Horizontal line thru a letter represents a RhyperP (LhypoP).

To calculate the prism diopters, determine which letter or number is involved with the understanding that each letter or number from the center equals one prism diopter (see table below).

Note: Some patients will report that the streak moves as they stare at the card. If this is the case, order the patient to close their eyes, and then open again. Ask them "Through which letter or number does the red line pass when you first open your eyes?"

| | | | | | | | | | | | | |
|---------|---|---|---|---|---|---|---|---|---|----|----|----|
| Score | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Diopter | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Score | A | B | C | D | E | F | G | H | I | J | K | L |
| Diopter | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |



Thorington Card Guide

Part Number: 489300, 555800, 539000, 555900

Interpretation For Pediatric Version (with children's figures):

[See above for Adult Near Version]

If the patient has normal alignment, the red line will pass through the white light.

- If the patient has other than normal alignment:
- Vertical line thru a number means an EP (uncrossed diplopia).
- Vertical line thru a letter means an XP (crossed diplopia).
- Horizontal line thru a number represents a RhypoP (LhyperP).
- Horizontal line thru a letter represents a RhyperP (LhypoP).

To calculate the prism diopters, determine which children's figure the red line passes through with the understanding that each figure from the center equals two prism diopters (see table below). The matching card can be used with the child so they can point at the figure where the red line passes through. This is especially helpful if they are having trouble 'naming' the figure.

Note: Some patients will report that the streak moves as they stare at the card. If this is the case, order the patient to close their eyes, and then open again. Ask them "Through which letter or number does the red line pass when you first open your eyes?"

| Figure | Vertical Line Interpretation | Diopter | Horizontal Line Interpretation | Diopter |
|--------------|------------------------------|---------|--------------------------------|---------|
| Heart | EP (uncrossed diplopia) | 2 | RhypoP (LhyperP) | 2 |
| Star | EP (uncrossed diplopia) | 4 | RhypoP (LhyperP) | 4 |
| Eye | EP (uncrossed diplopia) | 6 | RhypoP (LhyperP) | 6 |
| World | EP (uncrossed diplopia) | 8 | RhypoP (LhyperP) | 8 |
| Dog | EP (uncrossed diplopia) | 10 | RhypoP (LhyperP) | 10 |
| Bed | EP (uncrossed diplopia) | 12 | RhypoP (LhyperP) | 12 |
| Musical Note | EP (uncrossed diplopia) | 14 | RhypoP (LhyperP) | 14 |
| Circle | EP (uncrossed diplopia) | 16 | RhypoP (LhyperP) | 16 |
| Bus | EP (uncrossed diplopia) | 18 | RhypoP (LhyperP) | 18 |
| House | EP (uncrossed diplopia) | 20 | RhypoP (LhyperP) | 20 |
| Ambulance | XP (crossed diplopia) | 2 | RhyperP (LhypoP) | 2 |
| Plane | XP (crossed diplopia) | 4 | RhyperP (LhypoP) | 4 |
| Smiley Face | XP (crossed diplopia) | 6 | RhyperP (LhypoP) | 6 |
| Ribbon | XP (crossed diplopia) | 8 | RhyperP (LhypoP) | 8 |
| Scissors | XP (crossed diplopia) | 10 | RhyperP (LhypoP) | 10 |
| Bell | XP (crossed diplopia) | 12 | RhyperP (LhypoP) | 12 |
| Flag | XP (crossed diplopia) | 14 | RhyperP (LhypoP) | 14 |
| Hand | XP (crossed diplopia) | 16 | RhyperP (LhypoP) | 16 |

Square XP (crossed diplopia) 18 RhyperP (LhypoP) 18

Arrow XP (crossed diplopia) 20 RhyperP (LhypoP) 20



Thorington Card Guide

Part Number: 489300, 555800, 539000, 555900

Set up for Distance Version:

Patient is to wear their proposed Rx:

For non-presbyopes, this is typically based on the results of the binocular balance technique.

For presbyopes, the starting lenses are the tentative additional lenses or tentative 'add'.

Lighting in room should be normal or dimmer.

Tell patient that we are measuring their eye alignment.

Set up patient at 1, 2, or 4 meters in accordance with your desired result from the chart below.

Touch the center hole to turn on the LED light (see the LED Set-up guide below).

Test:

Have patient hold a Maddox rod over their OD.

To measure the horizontal phoria, the Maddox rod is held so that the patient sees a vertical line. The patient reports which diagonal letter or number the line intersects.

Order the patient to "look at the white light in the center of the card" (while holding the Maddox over their right eye). Ask the

patient, "While looking at the white light, can you see the red line? Does it pass through a letter or number? Which letter or number?"

To measure the vertical phoria, the Maddox rod is rotated 90 degrees and the patient sees a horizontal line. The patient then reports which diagonal letter, number (or figure for Pediatric

Version) the line intersects.

Repeat the Test Procedure to the patient as needed.

Interpretation For Distance Version (with letters and numbers):

If the patient has normal alignment, the red line will pass thru the white light.

If the patient has other than normal alignment:

Vertical line thru a number means an EP (uncrossed diplopia).

Vertical line thru a letter means an XP (crossed diplopia).

Horizontal line thru a number represents a RhypoP (LhyperP).

Horizontal line thru a letter represents a RhyperP (LhypoP).

| Selection | Vertical Line Interpretation | Horizontal Line Interpretation | Test Distance | | |
|-----------|------------------------------|--------------------------------|---------------|-----------|------------|
| | | | One Meter | Two Meter | Four Meter |
| 1 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 4 | 2 | 1 |
| 2 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 8 | 4 | 2 |
| 3 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 12 | 6 | 3 |
| 4 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 16 | 8 | 4 |
| 5 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 20 | 10 | 5 |
| 6 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 24 | 12 | 6 |
| 7 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 28 | 14 | 7 |
| 8 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 32 | 16 | 8 |
| 9 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 36 | 18 | 9 |
| 10 | EP (uncrossed diplopia) | RhypoP (LhyperP) | 40 | 20 | 10 |
| A | XP (crossed diplopia) | RhyperP (LhypoP) | 4 | 2 | 1 |
| B | XP (crossed diplopia) | RhyperP (LhypoP) | 8 | 4 | 2 |
| C | XP (crossed diplopia) | RhyperP (LhypoP) | 12 | 6 | 3 |
| D | XP (crossed diplopia) | RhyperP (LhypoP) | 16 | 8 | 4 |
| E | XP (crossed diplopia) | RhyperP (LhypoP) | 20 | 10 | 5 |
| F | XP (crossed diplopia) | RhyperP (LhypoP) | 24 | 12 | 6 |
| G | XP (crossed diplopia) | RhyperP (LhypoP) | 28 | 14 | 7 |
| H | XP (crossed diplopia) | RhyperP (LhypoP) | 32 | 16 | 8 |
| I | XP (crossed diplopia) | RhyperP (LhypoP) | 36 | 18 | 9 |
| J | XP (crossed diplopia) | RhyperP (LhypoP) | 40 | 20 | 10 |



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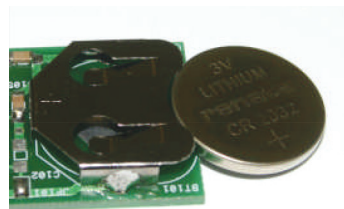
Push - Button LED Lighted Thorington Cards

The Push-button LED lighted Thorington Cards are available in either the Adult or Pediatric Versions. The Test Procedure, Scoring, and Interpretation are all identical. The only difference is the use of an LED light behind the hole instead of a penlight or transilluminator.

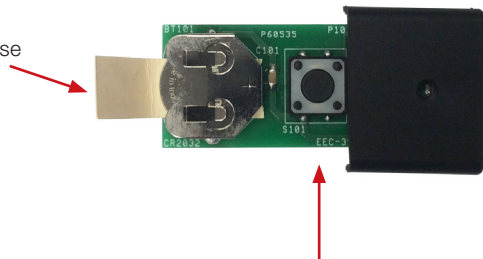
Set-up:

1. Pull out the clear plastic insulator at the bottom of battery
2. Push button on back to turn the LED on or off.

3. Certainly it is important that the light be left in the off position after use. For longer term storage the battery should be removed.



1. Remove before use



2. Press Button for On/Off