Frame Adjusting I

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Today's Topics

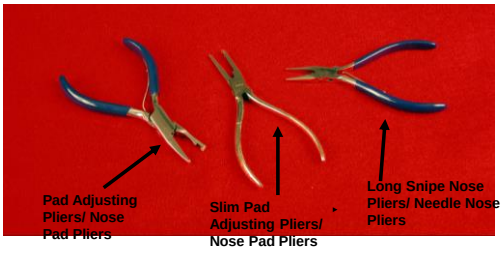
- Standard Alignment
  - This is where it all begins
    - What is it? When is it applied?
    - This is just something eye care professionals do but there is an actual "process" or "art"
    - Proper terminology- this is an art, we do not "bend" frames
  - Tools used
  - Truing of frame – six steps
  - Standard Alignment of nose pads

Why is Standard Alignment so Important?

Standard Alignment

- Standard Alignment is intended to ensure that adjustments required to fit the wearer are responsive to the wearer's physical characteristics and not to irregularities in the frame itself. Irregularities which may have been produced while the frame is fashioned in the laboratory.

Tools Used for Frame Alignment



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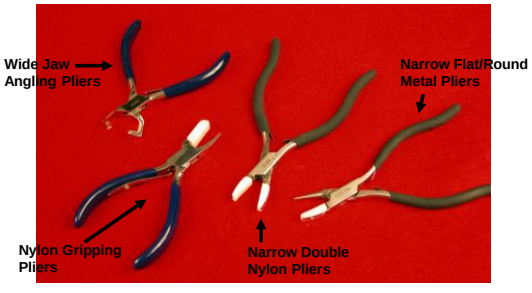

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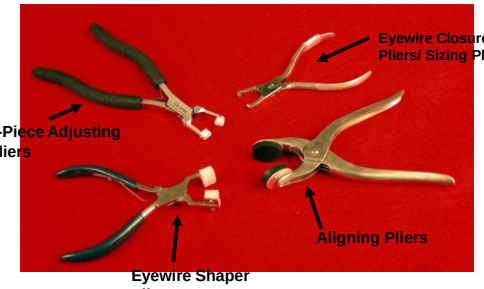


Other Tools

- Whatever you use develop a **bracing** technique
- Adjustments should not be completed in front of patient
- Many exist on the market
  - Use whatever you become comfortable with!
- Hands
  - Advantages
    - Prevents damage caused by tools
  - Disadvantages
    - Access to small parts

Guide To Standard Alignment

- Six Step Process
  - Horizontal Alignment
  - Four Point Touch (Vertical Alignment)
  - Open Temple alignment
  - Temple Parallelism (Flat Surface Touch Test)
  - Bent-Down Portion of the Temple
  - Temple Fold Angle

Step 1

- Horizontal Alignment
- Check for rotated lens
  - Use lens aligning pliers to turn the lens
  - Turned lens may throw off axis
- Check for a skewed bridge
  - Visual inspection might be the only way to check for this

Turn the lens carefully!

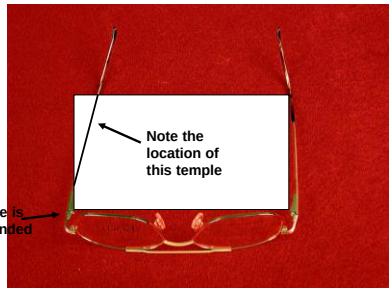
Step 2

- Four Point Touch (Vertical Alignment)
  - Check for x-ing
    - Hold frame with temples either facing you or away.
    - Compare the right side against the left with the frame flat on a surface
  - Check for variant planes
    - Once again, compare the right/left sides

Step 3

- Open Temple Alignment
  - Check the temples for straightness of shaft
  - Check the angles of the temples when fully opened for symmetry
    - Imagine a "**box**" within the frame
    - Example: a parallelogram would cause the frame front to be closer to one eye and would weigh heavier on one side of the nose

Imagine a box within the frame

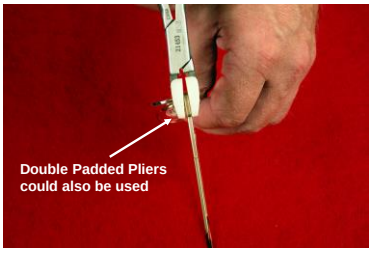


Step 4

- Temple Parallelism (Flat Surface Touch Test)
  - Check for a bent endpiece
  - Check for any bends in the temple shaft
- If neither of the above exist, the hinge is to be adjusted (**remember** – you are not going to "bend" the frame)

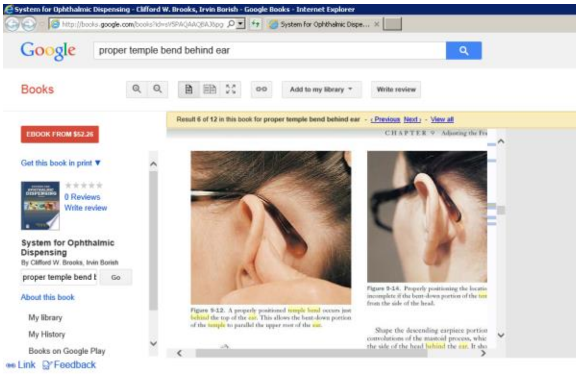
Temple Parallelism

Temple Parallelism



Step 5

- Alignment of the Bent-Down Portion of the Temple
  - Check for equality of downward bend
    - *No 90 degree bends! – are you crazy? (only a robot has an ear shaped like that)*
  - Check for equality of inward bend
    - Too much inward bend will cause pressure on the mastoid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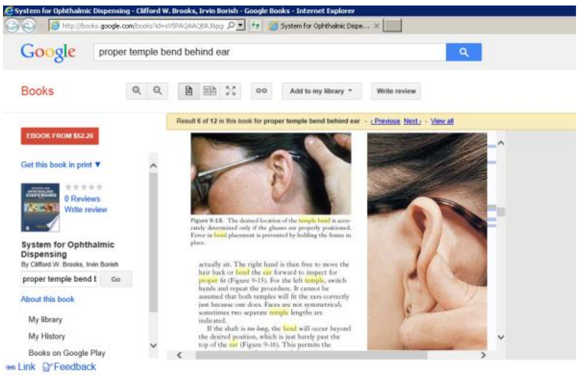
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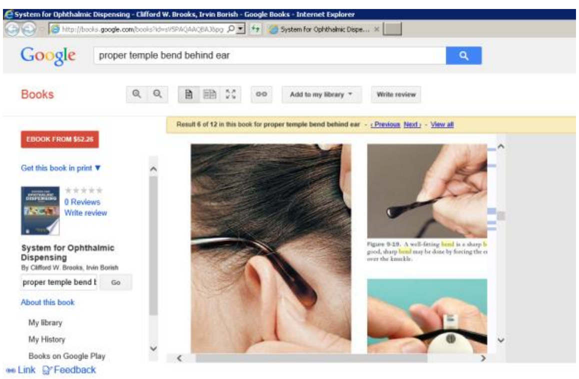
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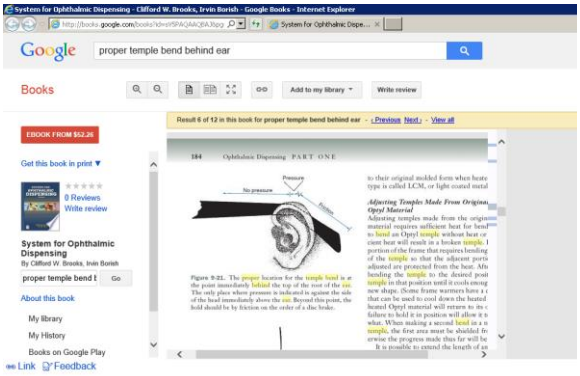
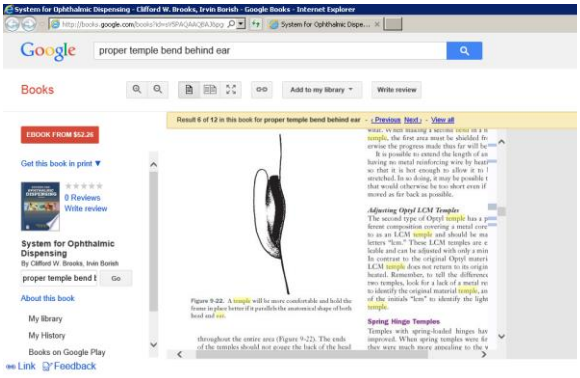




Step 6

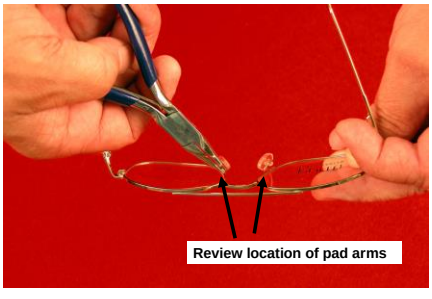
- Temple Fold Angle
  - Check for central crossing of the temple shafts when folded
  - Check for a fold which permits the insertion of the spectacles into a standard case

Temple Fold Angle

Standard Alignment of Nose Pads

- Step 1
  - Pad Position
    - Check for equidistance of pads from respective eyewires
    - Check for equal pad height
- Step 2
  - Frontal Angle
    - Front view – check for pad tops being closer together than pad bottoms

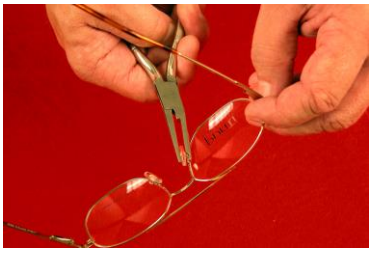
Standard Alignment of Nose Pads



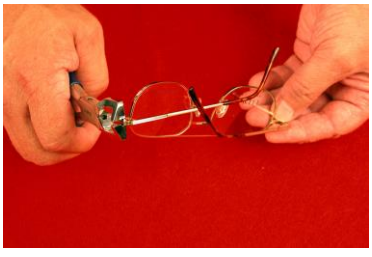
Standard Alignment of Nose Pads

- Step 3
  - Splay Angle
    - Top View – check for back pad edges being further apart than front edges
- Step 4
  - Vertical Angle
    - Side View – check for pad bottoms being closer to frame front

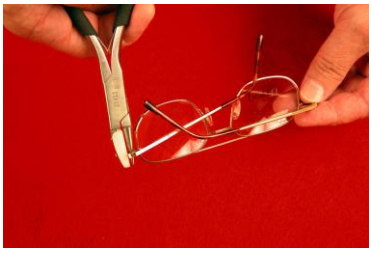
Standard Alignment of Nose Pads



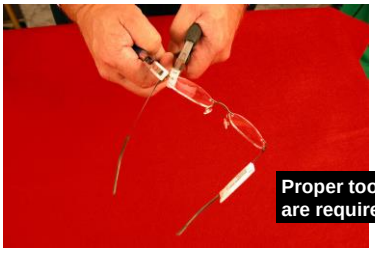
Wide Jaw Angling Pliers



Flat/Round Metal Pliers



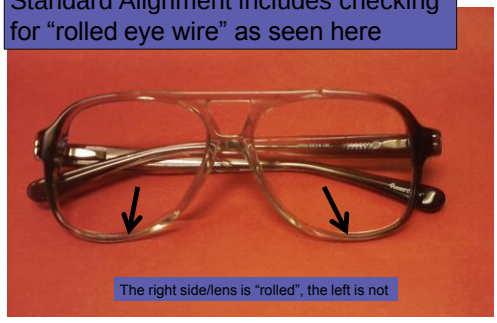
Standard Alignment Rimless Drill Mount



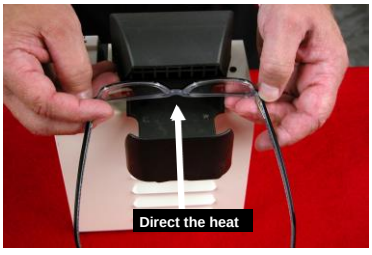
Heating Frames

- Concentrate heat to the area to be adjusted
  - Attempt to over heat a frame today
  - Older or thicker frame require more heat
- Metal Frames
  - Any plastic component, with the exception of nose pads, may require and should be adjusted with the use of heat
  - Metal frames in general should not be heated
- Hot Air Frame Units – work better, less chance of frame damage
  - Be aware of material difference and effects of heat
- "Setting an adjustment"
  - This means cooling the frame following adjustment

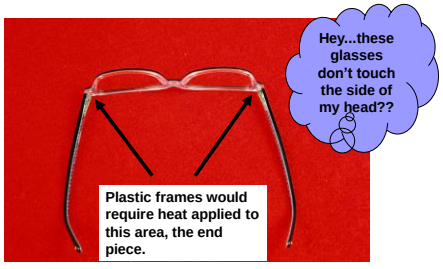
Standard Alignment includes checking for “rolled eye wire” as seen here



Hot Air Frame Warmer



Open Temple Alignment



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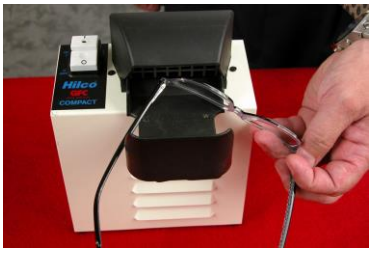
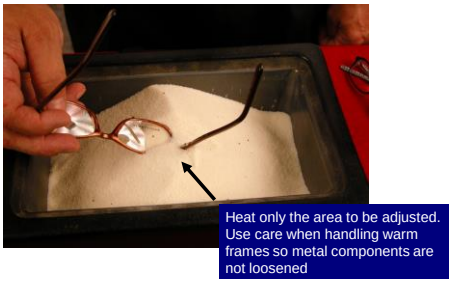


Other Methods to Heat a Frame

Using a Salt Pan

- Commonly known as a Salt Pan
- Can also contain “glass beads”
- Heat is controlled by arranging the salt into a pile
- Not suitable for some lens treatments
- “Moving” the frame is encouraged

Using a Salt Pan



Plastic Frame Adjusting