

Laser-Guided Hairline Design and Donor Strip Marking

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Hairline design is one of the most important aspects of hair restoration surgery. Determining the position of the hairline and balancing it on both sides of the midline are some of the key factors of hairline design.

By using a laser level, we are able to instantaneously determine the most appropriate position for the hairline and create a perfectly symmetrical guideline on a patient's entire forehead (front and sides). With the guideline in place, we can quickly draw in the hairline after adding some irregularities.

Laser levels are ubiquitously found in hardware stores around the world. (We have no financial interest in these products.) Because it casts a horizontal plane of light, it allows the line to "turn corners" or follow the contour of an object. A professional model can have an accuracy of 1.5mm/5m (0.03% error), far exceeding what human eyes can do. Our laser level mounted on a tripod and the lines it casts on a flat surface are shown in Figure 1.

By sitting the patient upright, the laser level casts a perfectly horizontal guideline on the patient's forehead. Lining the vertical line with the tip of the nose will effortlessly identify the midpoint of future hairline. An example is shown in Figure 2.

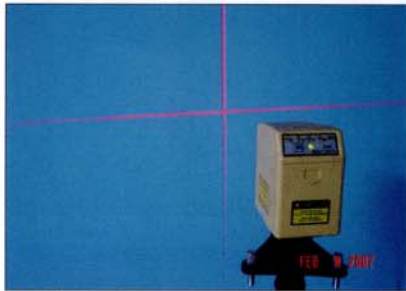


Figure 1. A professional grade laser level from a local tool store in Taipei, Taiwan; its auto-leveling feature and tripod that allow easy height adjustment prove invaluable.

Using the projected guideline, we can quickly draw in some irregularities and create a natural and balanced hairline, as shown in Figure 3.



Figure 2. The front and side views of the lines projected by a laser level.



Figure 3. The front and side views of the drawn hairline together with the lines projected by a laser level.

Because our patients are primarily ethnic Chinese, horizontal hairline appears to provide the best aesthetic result. For surgeons who prefer hairlines that slope upwards or downwards toward the center, they can easily achieve the desired sloping by tilting the patient's head forward and backward, respectively.

While the symmetry of donor strip may not be crucial, hair restoration surgeons tend to harvest both sides evenly. The same laser level can provide a symmetrical curve on the back of the head by having the patient tilting his or her head forward as demonstrated in Figure 4. Without the tip of the nose to help guide the midline, it is essential to have an assistant steady the head at the proper position.

We only discovered this laser guidance method recently. At the time of writing, we have used it on half a dozen cases. However, we felt an immediate impact from the first session and decided to share it with our colleagues. In conclusion, we find the laser level to be a tool that

1. rapidly provides a visual on potential hairline position,
2. allows easy creation of a well-balanced hairline,
3. effortlessly finds the midline if the device also projects a vertical line, and
4. adds a high-tech "wow" factor to the patient's impression. ♦



Figure 4. The laser level can also be used to guide the marking of donor strip. It is important to have an assistant steady the head during the process.

The greater danger for most of us lies not in setting our aim too high and falling short, but in setting our aim too low, and achieving our mark.

—Michelangelo