

Tips on Visibility

This month, we'll look at the most common factors concerning visibility issues, and provide helpful tips on how to avoid compromising a sign's discernibility using sizing techniques, font selections, color combinations, and artwork formats.

Letter Size

SIGN VISIBILITY CHART		
Letter Height (in.)	Maximum Impact (ft.)	Max. Readable Distance (ft.)
12	120	525
15	150	630
18	180	750
24	240	1000
30	300	1250
36	360	1500
48	480	2000
60	600	2500

Distances may vary by up to 10% depending on color combinations (discussed later). To make this make more sense, sit approximately 3 feet away from the screen, and look at the following text:

Sign Fab, Inc

Sign Fab, Inc

The top text is at maximum impact distance while the bottom text is at maximum readable distance.

For any sign height at maximum impact, the font size at 3ft away from the screen is 21.6pt, and for maximum readable distance, it's 4.94pt. How'd we figure out this example? Here's the simple formula:

$$\text{Letter height} \div (\text{Distance from sign} \div \text{Distance from screen}) \times 72 = \text{FONT SIZE}$$

It may look confusing, but we'll break it down:

- The letter height is any number from column 1 in the chart above (make sure it's in inches).
- Distance from sign is the corresponding number in columns 2 or 3, or whatever number you want to try (keep this in feet).
- Distance from screen is how far away you are from your screen (or paper, if printed) in a measurement of feet.
- The 72 comes from a conversion of inches to points, the most common scale for text sizes. The actual number is 71.999999, but who wants to type that?
- Do what's in the parenthesis first, round your answer to 2 decimal places, and you'll have the correct size to test out any font.

Word will not accept decimals in font sizes, but most image-editing software should. Remember, all screens render text differently, so it's best practice to print out the text to get a better idea of what it'll look like at that certain letter height at that distance. Just hold the paper the same distance away as you were from the screen. Now that we've covered the most apparent hurdle for sign visibility, let's venture into some of the other topics that are important to consider when designing signs.

Font

Continuing on, the font chosen can also have a huge impact on sign visibility. The example above used "Helvetica", which is a common font among channel letter signs. But what about that perfect font you just have to use? Perform your own font test to see what your font will

 look like from different distances. Most signs use block letters, but stylish or custom signs may use script lettering or special fonts. Take a look at the text to the left. The script font "Script MT Bold" makes visibility at the max distances above more difficult to read. Making the letters larger will allow for special fonts to read easier at those same distances, but they may not fit your space requirements. Most special fonts should be used on signs where distance of visibility isn't an issue or concern.

The following table contains more examples of fonts at the same distances compared above:

SIGN FAB, INC

SIGN FAB, INC

Block font "Machine"
Green face, Yellow return

Sign Fab, Inc

Sign Fab, Inc

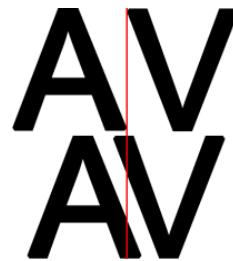
Script font "Freehand"
Light blue face, Blue return

Sign Fab, Inc

Sign Fab, Inc

Special font "Baby Kruffy"
Yellow face, Red return

Another thing worth mentioning is the spacing between words and letters. Look at the image on the right. The "A" and "V" on the top have no overlapping while the "A" and "V" on the bottom slightly overlap; this is called kerning. Kerning – changing the amount of space between two characters - may add a desirable effect to any sign, but from farther distances, this may cause difficulty in discerning letters from farther distances. Also, having too little space in between words may make it difficult to clearly read a sign.



COLORS

Back in August we wrote an article about colors, what they mean, and how they are perceived mentally and visually. If you missed that article, [click here](#) to view it. This month, we're going to cover sign visibility based on color choices and combinations. Some color combinations may sound great, but they may make letters hard to differentiate, therefore inhibiting clear

readability. Try to choose colors with high contrast based on hue and value, but try to avoid colors on opposite sides of the color wheel. White always works well with dark colors, as does black with lighter colors. Here are just a few basic examples of good color combinations:

WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW	WHITE	YELLOW
BLACK	BLACK	BLUE	BLUE	RED	RED	BROWN	BROWN

And here are a few examples of bad color combinations:

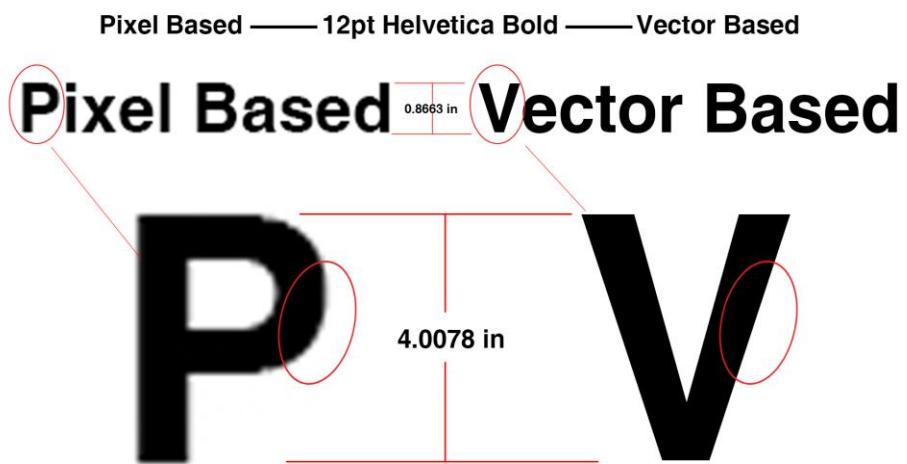
BLUE	GREEN	BLUE	YELLOW	BLUE
RED	RED	GREEN	ORANGE	ORANGE

When working with color combinations, make sure that the client's sign won't blend in with the color of the building or surrounding area. For example, a red face may not be the best option for a sign going on a red brick building.

Pixel vs Vector

There is a constant debate on which is better: Pixel Based images or Vector Based images? The truth is that depends on the situation. Pixels are often defined as the smallest element of a picture, and each pixel has its own attributes and properties. It is a digital process that replicates a photograph so we can see the image with uninterrupted color transition. Vector based images are defined by mathematical equations. They are similar to geometric diagrams using points and lines. Their individual objects each have their own set of attributes and characteristics. So it all depends on the line of work. For the purpose of this article, we are going to explain why vector based images are a must in the Sign Industry.

First the editing capabilities of vector based images are very easy. Since vector images are based off of mathematical equations, the size of the image can be changed infinitely small or large and still retain its quality. Whereas pixel based images, when sized up, drastically lose their quality.



Since vectors exist in a mathematical space, as opposed to a literal space that pixels exist in, zooming in on a vector image never seems to get any “closer.” The advantage to this is that vectored objects operate independent of image resolution, giving a crisp, clean look to the artwork. Here are some examples of Pixels compared to Vectors:



The most commonly used manufacturing programs in the sign industry, Sign Wizard, Omega (Gerber), and Flexisign being the top 3, work great with vector formatted artwork. When artwork submitted to a sign manufacturer isn't in some sort of vector format, it slows down the entire process of getting the sign finished and sent off. First, the artwork, especially if it is in a picture format such as .jpeg, .bmp, .png, etc., has to be cleaned up. When that process is done, the artwork has to then be vectorized, which isn't a long process, but it does take time to completely vectorize the artwork for any of the previously mentioned programs. When sending off finished artwork, make sure that the file is formatted as one of the common vector formats such as: .ai, .eps, .pdf, or .cdr. These formats allow us to most easily work with and prepare the artwork for final production.

There are many factors that may inhibit sign visibility, clarity, and recognition. The above information should help designers stay away from common design flaws in the development of their clients' signs. We hope you enjoyed this month's tip of the month!

