DAKTRONICS
BEST PRACTICES
FOR LED DISPLAY CONTENT

DAKTRONICS

BEST PRACTICES FOR LED DISPLAY DESIGN

You purchased your display to communicate with your audience. Content that is hard to read or lacks visual appeal detracts from your investment and can even damage your reputation.

The good news – with a few simple tips, you can easily design content that leaves a lasting impression with all who pass by.

RULES FOR LED MESSAGES

› Focus on a single idea to attract a viewer's attention, then move them through your message.

› Keep your messages short. Too much text on a display is hard to read and may result in your message being ignored.

› Minimal text is best.

BREAKDOWN
FONT: Patua one
OUTLINE: Black; 2px Thick
COLOR: White

FONT: Open Sans Extrabold
OUTLINE: Black; 1px Thick
COLOR: Light Blue

This text heavy message[1] makes this hard to read and visually unappealing. The font is thin and lost on the display, making it hard to read from a distance.

This message is appealing because it focuses on the main idea: Holiday Concert. It uses bold fonts, an accent font, and good contrast, making it viewable from longer distances.

WHO ARE YOU TALKING TO?

In most sign applications, your target audience is the average consumer who is likely in motion. The Federal Highway Administration[2] says that drivers shouldn't take their eyes off the road for more than two seconds at a time. That means you have two seconds to tell a story.

MAKE IT
BRIEF

MAKE IT
BOLD

MAKE IT
LEGIBLE

[1] All content shown was created for the Galaxy® GS6 size 80x150 15.85

[2] "Driver Visual Behavior in the Presence of Commercial Electronic Variable Message Signs," U.S. Department of Transportation, September 2012, page 1.
<http://dakfiles.daktronics.com/downloads/Regulatory%20Resources/FHVVA%20Safety%20Study%20Digital%20Signs%202013%20.pdf>

COLORS

CONTRAST

› Contrast between colors is key. Contrast refers to the difference between light and dark.

› If there is not enough contrast between text and background, the message blends together, reducing legibility of the display.

› To check for contrast, view the content in grayscale.

› Avoid color vibration. Color vibration is when the edges of two colors appear to merge and blur, giving the illusion of motion.
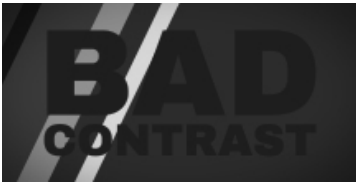
CONTRASTING COLOR COMBINATIONS

| GOOD | GOOD | GOOD |

COLOR VIBRATION COMBINATIONS
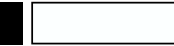
| BAD | BAD | BAD | BAD |

| IN COLOR | IN GRAYSCALE | IN COLOR | IN GRAYSCALE |

STANDARD FONT COLORS

These colors are standard in Venus Control Suite. Use these colors for text as recommended. You may find other colors that work well.

RGB (255,0,0)	RGB (255,255,0)	RGB (0,255,0)	RGB (0,255,255)	RGB (0,0,255)	RGB (255,0,255)	RGB (255,161,0)	RGB (252,217,0)
RGB (255,121,0)	RGB (255,109,66)	RGB (205,32,44)	RGB (236,67,112)	RGB (202,0,93)	RGB (37,38,169)	RGB (15,77,188)	RGB (0,115,116)
RGB (0,174,101)	RGB (88,166,24)	RGB (234,223,0)	RGB (228,215,0)	RGB (241,232,0)	RGB (0,0,0,)	RGB (255,255,255)	

*Colors may appear differently on LED display.

FONTS AND TEXT

READABILITY

› Bold/thick fonts are easier to read on a display. If the font is too thin, it gets lost on the display. See our recommended fonts below.

› Larger text uses more available space, which helps viewing when at a distance.

› Some fonts might look good when they're big, but are hard to read when they're too small.

› In most cases, it's easier to read upper and lowercase letters on a display. All caps has it's place, use for emphasis.

› Two fonts can be used on a piece of content. One font as the main font and the other used sparingly as an accent font.

This content is visually vibrating, making it hard to distinguish. It also has poor contrast. Font is too thin. It is also illegible for anyone with red/green color blindness.

A bold font helps readability as does the background and text broken up by thick black outline. The black outline provides contrast and stops the color vibration.

Great contrast, black outline added for extra sharpness between colors.

RECOMMENDED FONTS:
(FOUND IN VENUS CONTROL SUITE)

Archivo Black

Candal

Days One

Hammersmith One

Lemon

LUCKIEST GUY

Noto Serif

Open Sans EXTRABOLD

Patua One

Poppins

Roboto Condensed

Russo One

FONTS AND TEXT

OUTLINES

Depending on the background and the text color used, you may want to consider an outline. Sometimes an outline is the only difference between a good design and a bad one.

› Black/Dark outlines work the best and are easiest to read.

› The thicker the outline, the better the readability.

› 2px or 3px provides the best results.

2PX – 3PX OUTLINES
Recommend using a black or dark color to add contrast

1PX OUTLINES
Doesn't provide enough contrast when needed and difficult to see

NO OUTLINE
Works when there is enough contrast between text and background, and gives the text a softer feeling which may be better for certain messages

DROP SHADOWS

› Shadow Text (or a Drop Shadow) is a great alternative to an outline in some circumstances.

› Using black for drop shadows provides the best results.

OPTIMIZE YOUR BACKGROUNDS

DO	DON'T

DO

TEXT COLORS
Whites
Yellows
Bright Colors

OUTLINES
› Black or dark colored outlines are best
› 2px or 3px recommended (depends on display size)
› Shadows are a great alternative to an outline
› If using a colored text option that is not recommended, use a thick black outline

WHITES
BRIGHT COLORS
OUTLINES

RUBY PACKAGE
Available in stills
& animations

WHITES
BRIGHT COLORS
OUTLINES

AMBER PACKAGE
Available in stills
& animations

WHITES
BRIGHT COLORS
OUTLINES

AMYTHEST PACKAGE
Available in stills
& animations

DON'T

TEXT COLORS
Black   Cyan
Blues   Mid-range Colors
Reds   Dark Colors

OUTLINES
› Avoid colorful outlines
› Avoid drop shadows when using low contrast colors
› If color vibration or contrast is an issue, use an outline

RED   BLACK
BLUE   PINK
CYAN   PURPLE
GREEN   ORANGE

RUBY PACKAGE
Available in stills
& animations

RED   BLACK
BLUE   PINK
CYAN   PURPLE
GREEN   ORANGE

AMBER PACKAGE
Available in stills
& animations

BLACK   CYAN
REDS
DARK GREEN
BLUES
DARK COLORS

AMYTHEST PACKAGE
Available in stills
& animations

*While all color combinations may be possible, these recommendations are designed to provide the best possible results. Colors may appear differently on LED display.

DO

TEXT COLORS
Whites
Yellows
Bright Colors

OUTLINES
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WHITES
BRIGHT COLORS
OUTLINES

AQUAMARINE PACKAGE
Available in stills & animations

WHITES
BRIGHT COLORS
OUTLINES

EMERALD PACKAGE
Available in stills & animations

WHITES
BRIGHT COLORS
OUTLINES

SAPPHIRE PACKAGE
Available in stills & animations

DON'T

TEXT COLORS
Black   Cyan
Reds   Dark Greens
Blues   Mid-range Colors
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BLACK   CYAN
REDS
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