

K R A Z Y S T I T C H E R

Color Palette Generator

User Manual

Find Perfect Bead Color Harmonies
krazystitcher.com

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Note: Update the Table of Contents in Word by right-clicking it and selecting "Update Field."

Section 1: Beginner — Understanding Color

Welcome! If you're new to color theory, this section will give you everything you need to start creating beautiful, harmonious color palettes for your bead projects. No art degree required — just curiosity and a love of color.

The Color Wheel

The color wheel is the foundation of color theory. It arranges all visible hues in a circle, showing how colors relate to one another. Think of it as a map of color — it shows you which colors are neighbors, which are opposites, and which sit at different distances from each other.

On the wheel, you'll find the three primary colors — red, blue, and yellow — spaced evenly around the circle. Between them sit the secondary colors (orange, green, violet), created by mixing two primaries. And between each primary and secondary, you'll find the tertiary colors (like red-orange or blue-green), giving you a smooth, continuous spectrum.

Colors that sit across from each other on the wheel (like red and green, or blue and orange) create strong visual contrast. Colors that sit side by side (like blue and blue-green) feel naturally harmonious and calm. Understanding these relationships is the key to choosing colors that look great together.

Tip: In the Color Palette Generator, you pick your starting color by clicking directly on the wheel. Try clicking in different spots and watch how the harmony colors update automatically!

Warm vs. Cool Colors

The color wheel naturally divides into two temperature zones, and understanding them will help you control the mood and feel of your bead projects.

Warm colors — reds, oranges, and yellows — feel energetic, inviting, and vibrant. They tend to "advance" visually, meaning they seem to pop forward and grab attention. In beadwork, warm colors are fantastic for focal points, borders, and areas you want the eye to go to first.

Cool colors — blues, greens, and violets — feel calm, soothing, and spacious. They "recede" visually, meaning they seem to sit further back. Cool colors are ideal for backgrounds, large areas, and creating a sense of depth in your patterns.

The real magic happens when you combine warm and cool colors in the same project. A mostly cool palette with one warm accent creates a natural focal point. A warm palette with cool shadows adds visual depth and sophistication.

Tip: A mostly cool palette with one warm accent bead creates a natural focal

point in your beadwork. Try starting with a blue Analogous palette and adding one orange or red accent — it draws the eye beautifully.

Hue, Saturation, and Lightness

Every color you see can be described using three properties. Understanding these gives you precise control over your palette:

Hue is the pure color itself — red, blue, green, orange, violet, and everything in between. When you pick a spot on the color wheel, you're choosing a hue. It's what most people mean when they say "color."

Saturation controls how vivid or muted a color is. At full saturation, you get the most intense, pure version of the color. Lower the saturation and the color becomes more muted, gray, and subtle. Think of it as adding gray paint to your hue — a little gray gives you a sophisticated tone, a lot of gray gives you almost neutral.

Lightness controls how bright or dark a color is. High lightness gives you pastels (like baby blue or light pink). Low lightness gives you deep, rich tones (like navy or burgundy). Medium lightness gives you the purest expression of the hue.

In the Color Palette Generator, the color wheel handles hue selection. You can type a specific hex code in the text field or use the color picker to fine-tune saturation and lightness.

Note: When the tool generates a monochromatic palette, it creates variations of your chosen hue by adjusting saturation (by -20%) and lightness (by +/-15% and +/-30%), giving you a range of shades and tints that all belong to the same color family.

How Colors Work Together

Color harmonies are combinations of colors that are naturally pleasing to the eye. They aren't random — they're based on geometric relationships on the color wheel. The Color Palette Generator offers six different harmony types, each creating a different mood:

- **Complementary** — Two colors sitting opposite each other on the wheel. High contrast and bold. Great for making elements pop against each other, like a border against a background.
- **Analogous** — Three colors sitting side by side on the wheel. Serene and unified. These palettes feel natural and are the easiest to work with. Perfect for gradients and backgrounds.
- **Triadic** — Three colors evenly spaced around the wheel (120° apart). Vibrant and balanced. Ideal for geometric patterns and projects that need energy without chaos.

- **Split-Complementary** — Your base color plus the two colors flanking its complement. You get contrast without harshness. This is the most versatile harmony for most bead projects.
- **Tetradic** — Four colors forming two complementary pairs. Rich and complex. Works best when you let one color dominate and use the others as accents.
- **Monochromatic** — One hue at different saturations and lightness levels. Elegant and cohesive. A classic choice for single-color-family work that still has visual interest.

Tip: If you're just starting out, try Analogous or Monochromatic first — they're the most forgiving harmonies. Once you're comfortable, experiment with Split-Complementary for more dynamic designs.

Getting Started with the App

Ready to create your first palette? Here's how to get started:

1. **Open the Color Palette Generator.** Navigate to the Color Palette Generator page on krazystitcher.com. You'll see a color wheel on the left and a controls panel on the right.
2. **Pick a base color.** Click anywhere on the color wheel to choose your starting hue. You can also use the color picker square or type a specific hex code (like #CC3366) in the text field below the wheel.
3. **Choose a harmony type.** Click one of the six harmony buttons: Complementary, Analogous, Triadic, Split-Comp, Tetradic, or Monochromatic. The app will instantly calculate the matching colors.
4. **Select a bead brand.** Use the dropdown to choose from Miyuki Delica, Toho Round, DMC Thread, Perler, or Hama. The tool will find the closest real bead matches for your palette colors.
5. **Set your match tolerance.** Choose Strict (top 3 matches), Standard (top 5), or Relaxed (top 8) to control how many bead suggestions you see for each color.
6. **Click "Generate Palette."** Your palette appears as a color strip with the closest bead matches shown below. Each match card shows the bead ID, name, hex code, and match quality.
7. **Save your palette.** When you find a combination you love, click Save and give it a name. You can come back to it anytime — saved palettes persist between sessions.

Tip: Don't worry about getting it perfect on the first try. Experiment freely — you can save as many palettes as you like, compare them side by side, and delete the ones that don't work.

Section 2: Advanced — Mastering the Tool

Now that you understand the basics, this section dives deeper into the technical details. You'll learn exactly how each harmony is calculated, how bead matching works, and how to export your palettes for use in Krazy Stitcher and other applications.

The Six Harmony Types Explained

Each harmony type is calculated mathematically from your base color's position on the HSL (Hue, Saturation, Lightness) color wheel. Here's exactly what the tool does for each one:

Complementary (180°)

The tool rotates your base hue by exactly 180° on the color wheel to find the mathematical opposite. This creates the maximum possible contrast between two colors. If your base is a warm red (like 0°), the complement is a cool cyan (180°). The result is a two-color palette with strong visual tension — bold, energetic, and attention-grabbing.

Analogous (±30°)

The tool takes your base hue and adds two neighbors at +30° and -30°, staying within the same color neighborhood. This produces a three-color palette of related hues that blend naturally. Because the colors are so close together on the wheel, analogous palettes always feel harmonious and are nearly impossible to get wrong.

Triadic (±120°)

The tool divides the wheel into three equal segments by placing colors at +120° and -120° from your base. This creates a three-color palette where each color is distinctly different yet equally spaced, producing a vibrant, balanced result. Triadic palettes work particularly well for geometric and repeating bead patterns.

Split-Complementary (150° / 210°)

Instead of going straight to the complement at 180°, the tool flanks it — placing colors at 150° and 210°. You get the contrast benefits of complementary harmony but with more nuance and less visual tension. This is often considered the most versatile harmony for craft projects because it provides contrast without being jarring.

Tetradic (90° / 180° / 270°)

The tool places four colors in a rectangle on the wheel at 90°, 180°, and 270° from your base. This produces two complementary pairs, giving you the richest and most complex palette option. Tetradic palettes have the most color variety but need careful handling — let one color dominate (about 60% of your design) and use the others as supporting accents.

Monochromatic (Same Hue, Varied S/L)

The tool keeps your chosen hue and creates variations by adjusting saturation (reduced by 20%) and lightness (+15%, -15%, +30%, -30%). The result is a palette of shades, tints, and tones that all belong to the same color family. Monochromatic palettes are elegant, cohesive, and perfect for projects where you want subtle variation without introducing new hues.

Note: All harmony calculations wrap around the 360° wheel automatically. A base hue of 350° with a +30° analogous shift produces 20°, not 380°.

Understanding Delta-E Match Quality

When you pick a color on the wheel, there probably isn't a bead that matches it exactly. The tool needs a way to measure how close each real bead color is to your target — and that's where Delta-E comes in.

The Color Palette Generator converts both your target color and every bead in the selected brand's database into the **CIE Lab color space** — a mathematical model designed to match how human eyes actually perceive color differences. It then calculates **ΔE (delta-E)**, the perceptual distance between the two colors. The lower the number, the closer the match.

Here's what the numbers mean:

Delta-E	Rating	What It Means
< 3	Excellent	Nearly indistinguishable from the target. The bead is a near-perfect match.
3 - 8	Good	Noticeably different up close, but works well in a pattern. Most bead matches fall here.
8 - 15	Fair	The closest available, but the color shift will be visible. Consider adjusting your target.
> 15	Poor	Significantly different. Try a different bead brand or change your target color.

Tip: If your best match has a high Delta-E, try switching bead brands. Miyuki Delica has 474 colors while Perler has only 117, so the same target color can get a much better match from a larger catalog.

Bead Brand Databases

The Color Palette Generator includes verified color data for five major bead and thread brands. Each brand's database contains the color ID, name, and calibrated hex value for every available color:

Brand	Colors	Best For
Miyuki Delica 11/0	474	Detailed beadwork. Largest color selection for the best matches.
Toho Round 11/0	304	Seed bead projects. Excellent shape consistency.
DMC Embroidery Thread	285	Cross-stitch and embroidery thread projects.
Perler Midi	117	Fuse-bead projects. Good for kid-friendly crafts.
Hama Midi	89	Fuse-bead projects. Widely available internationally.

Note: Larger databases generally produce better matches. If match quality matters more than brand preference, start with Miyuki Delica and its 474 colors.

Saving and Loading Palettes

The Color Palette Generator stores your saved palettes in your browser's localStorage, so they persist between sessions without needing an account or login.

How to Save

1. Generate a palette you're happy with.
2. Click the Save button next to the Generate Palette button.
3. Enter a descriptive name (e.g., "Ocean Sunset Delicas" or "Spring Garden Perler").
4. Your palette appears in the Saved Palettes section at the bottom of the page.

How to Load

Click on any saved palette card to reload it. The tool restores all the original colors and bead matches exactly as they were when you saved it.

How to Delete

Click the Delete button on any saved palette card to remove it permanently. This cannot be undone.

Tip: Because palettes are stored in your browser's localStorage, they are specific to the browser and device you're using. If you switch browsers or clear your browser data, your saved palettes will be lost. Use the Export feature to back up any palettes you want to keep long-term.

Export Formats

Click Export on any saved palette to choose from five output formats. Each is designed for a different use case:

Copy to Clipboard

Copies formatted text with bead IDs and hex codes directly to your clipboard. Paste it into notes, messages, emails, or project planning documents. This is the quickest way to share or record a palette.

JSON (for KS Import)

Exports a machine-readable JSON file designed for direct import into Krazy Stitcher Pro and Studio. This format preserves all color data, bead IDs, brand information, and match quality scores. It can also be used with other software that accepts JSON color data.

CSV (Spreadsheet)

Creates a comma-separated file that opens in Excel, Google Sheets, or any spreadsheet application. Columns include bead ID, color name, hex code, brand, and match quality. This is ideal for creating bead shopping lists, tracking inventory, or doing your own analysis.

PNG Swatch Sheet

Generates a visual color card image showing each swatch with its bead ID and color name. The image is perfect for printing as a quick-reference card for your workspace, sharing on social media or bead groups, or uploading to project-planning apps.

Text File

Downloads a plain text file with all palette details in a human-readable format. This is a universal format that works with any text editor, note-taking app, or documentation tool.

Using Palettes in Krazy Stitcher

The Color Palette Generator is designed to work seamlessly with Krazy Stitcher Pro and Studio. Here's how to connect the two:

1. In the Color Palette Generator, click Settings in the header.
2. Enable the KS Integration toggle. When connected, a "KS Connected" badge appears in the header.
3. Generate and save a palette you want to use in your bead pattern.
4. Click Export on the saved palette and choose JSON (for KS Import).
5. In Krazy Stitcher Pro or Studio, use the palette import feature to load the JSON file.

6. Your pattern will now use exactly the bead colors you selected in the palette generator.

Tip: For the best results, generate your palette before you convert your photo in Krazy Stitcher. Export it as JSON, then import it in KS before running the photo conversion — this gives you full control over which beads appear in your pattern.

Using Palettes in Other Programs

Your palettes aren't limited to Krazy Stitcher. Each export format is designed to work with different tools and workflows:

- **CSV for spreadsheets and inventory:** Open the CSV in Excel or Google Sheets to create bead shopping lists, track what you already own, or calculate project costs.
- **PNG for sharing and printing:** Upload the swatch sheet to bead groups on Facebook, Reddit, or forums. Print it as a reference card to take to the bead store. Attach it to project files in planning apps.
- **Clipboard for notes and communication:** Paste the formatted palette text into emails to fellow crafters, project notebooks, or chat messages.
- **Text file for documentation:** Keep a plain text record of every palette you've created. Store it alongside your project files.
- **JSON for developers and custom tools:** If you build your own tools or scripts, the JSON export contains all the structured color data you need.

Workflow Example: From Inspiration to Project

Here's a complete example of how to go from a color idea to a finished bead project plan:

1. **Find your inspiration.** Maybe it's a sunset photo, a fabric swatch, a painting you love, or even a flower from your garden. Note the dominant color you want to start with.
2. **Pick your base color.** Open the Color Palette Generator and click the wheel to match your inspiration color, or type its hex code directly.
3. **Choose a harmony type.** Select the mood you want: Analogous for calm and cohesive, Complementary for bold contrast, Split-Complementary for versatile depth, or Monochromatic for elegant simplicity.
4. **Fine-tune.** Adjust the color picker to dial in the exact saturation and lightness you want. Try different base colors near your original pick to see how the palette shifts.
5. **Compare bead brands.** Switch between Miyuki, Toho, DMC, Perler, and Hama to see which brand gives you the best matches for your palette. Pay attention to the Delta-E scores.

6. **Save your palette.** Give it a descriptive name so you can find it later. Save a few variations if you're deciding between options.
7. **Export.** Choose the format that fits your next step: JSON for Krazy Stitcher, CSV for a shopping list, PNG for printing or sharing.
8. **Use in your project.** Import the JSON into KS Pro/Studio, take your CSV shopping list to the bead store, or pin your PNG swatch sheet above your workspace.

Tip: Save your palette before you start shopping! Having a reference prevents impulse-buying colors that don't fit your plan, and the bead IDs in the export make it easy to find the exact products you need.

Krazy Stitcher Color Palette Generator

krazystitcher.com

Questions or feedback? Visit our website for support.

Explore the Full Krazy Stitcher Lineup

Krazy Stitcher Base — \$24.95 one-time (intro price \$19.95)

Design bead patterns from any photo or from scratch — offline, no subscription.

- 12+ stitch types, dark mode, full print-ready PDF export (paper size + 300 DPI)
- Built-in Thread & Bead Estimator
- Keyboard shortcuts overlay (press "?")
- One-time purchase, works fully offline

Krazy Stitcher Pro — \$34.95 one-time

Everything in Base, plus brand remapping, a difficulty score, bead inventory tracking, a cost estimator, gradient fill, custom bead palettes, real SVG/CSV export, and a 66-design Starter Pattern Library.

Krazy Stitcher Studio — \$59.95 one-time

The full studio: multi-layer editing, a Multi-Pattern Workspace (tab between and compare up to 4 patterns), a 6-type Color Harmony Engine, and 26 stitch types — the largest stitch library in bead software.

Photo-to-Pattern Converter — \$59.95 one-time (standalone add-on, works with any edition)

Turn any photo into a ready-to-stitch bead pattern. 9-brand, 1,814-color database, Median Cut/K-Means/Bayer Matrix dithering choice, full brightness/contrast/saturation control, WCAG AA audited.

Color Palette Tool — Free

Build a bead-accurate color palette before you open a pattern. 6 harmony types, Delta-E/Lab matching across 5 brands/1,269 colors. One-click "Send to Krazy Stitcher."

PatternFolio — Coming Soon

In development — details to come.

Find them all at krazystitcher.com