

REZ2ANS v1.0a

Image → ANSI Art Converter

User Guide

A comprehensive reference covering all menu items, on-screen controls, and keyboard shortcuts for converting images to ANSI art.

PREFACE

The ANSI art community has long held strong opinions about automated image-to-ANSI conversion tools, and understandably so. The art of hand-crafted ANSI has always been about human creativity, pixel-perfect placement, and the intimate knowledge of how each character block creates the final vision.

However, we face a reality: approximately **40 active ANSI artists** remain in the scene, while over **1,000 BBSes** continue to operate and need fresh artwork. The math doesn't work. A decision had to be made.

REZ2ANS exists not to replace the artist, but to serve the community during a critical time. It's a tool born of necessity, built with deep respect for traditional ANSI craft, and offered in the spirit of keeping our BBSes vibrant and visually engaging. Whether you're a sysop who needs artwork, a designer exploring retro aesthetics, or even a traditional artist looking for a starting point to refine by hand—this tool is here to help.

The scene survives through adaptation. This is one small step toward that survival.

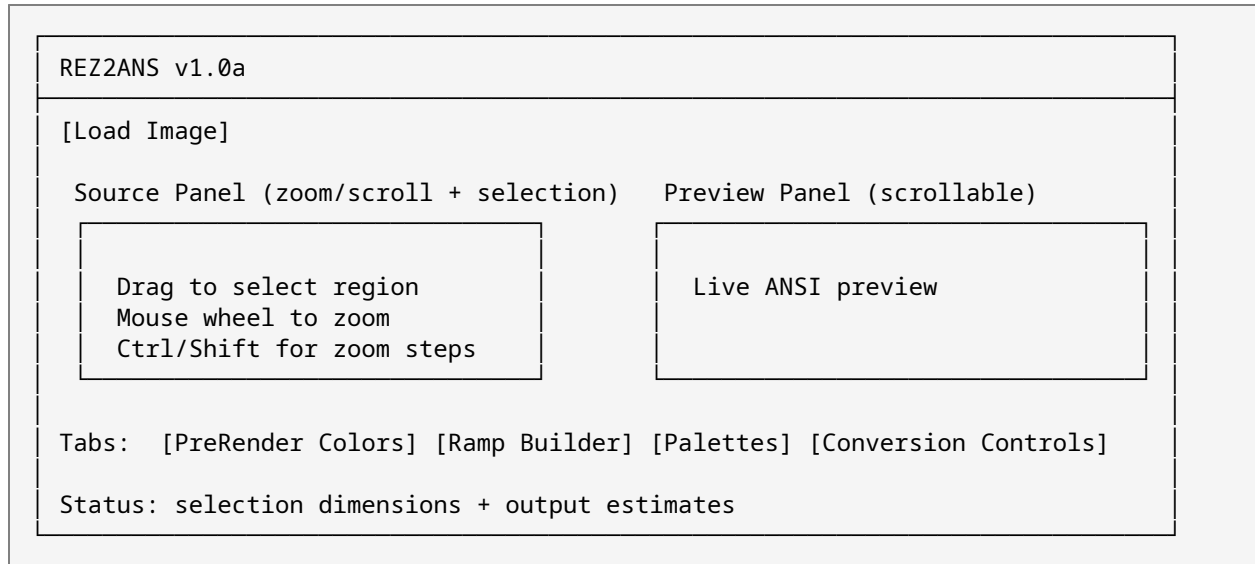
— Sudden Death (cia) aka Dennis Martin

TABLE OF CONTENTS

- 1 Overview
- 2 Main Window

3	Menu Reference
4	Workspace Tabs
•	4.1 PreRender Colors
•	4.2 Ramp Builder
•	4.3 Palettes
•	4.4 Conversion Controls
5	Keyboard & Mouse Reference
6	Data Directory
7	Credits & Acknowledgments
8	Author Notes

1) OVERVIEW



Quick Start Workflow

- 1 Click **Load Image** to import your source file
- 2 Draw a selection rectangle in the Source panel (optional cropping)
- 3 Adjust **PreRender Colors** sliders for tone and detail enhancement
- 4 Optionally **snap to a HEX palette** for color-locked results
- 5 Configure **Conversion Controls** (output size, color metric, dithering, character ramp)
- 6 Export via **File** → **Save ANSI...** or **File** → **Save BIN...** (shortcut: **Alt+S** for BIN)

2) MAIN WINDOW

2.1 Load Image Button

- **Function:** Imports image files in common formats (PNG, JPG, JPEG, BMP, GIF, TIF, TIFF)
- **Behavior:** Loading a new image resets all settings to factory defaults and selects the entire image area

2.2 Source Panel (Left Side)

Displays your source image with full zoom and selection capabilities.

- Click and drag anywhere to create a new selection
- Click inside an existing selection to reposition it
- Hover over corners or edges until the cursor changes, then drag to resize
- Minimal drag movements preserve the previous selection

- Mouse wheel zooms in/out centered on cursor position
- Hold modifier keys to adjust zoom sensitivity (see Keyboard Reference)

- When zoomed in, scrollbars appear for panning around the image
- Mouse wheel over scrollbars provides smooth navigation

2.3 Preview Panel (Right Side)

Shows a real-time render of your ANSI output based on current settings. Scrollbars enable inspection of larger conversions that exceed the panel dimensions.

2.4 Status Bar

Displays dynamic information including:

- Current selection dimensions in pixels
- Estimated output columns and rows

- Cell size configuration

3) MENU REFERENCE

File	
Save ANSI...	→ Export as .ANS text file with SAUCE metadata
Save BIN...	→ Export as .BIN binary format with SAUCE metadata

3.1 File → Save ANSI...

- **Output Format:** .ans (ANSI escape sequence text file)
- **Metadata:** Includes SAUCE (Standard Architecture for Universal Comment Extensions)
- **Usage:** Save after verifying preview; output reflects current selection and all active settings

3.2 File → Save BIN...

- **Output Format:** .bin (BinaryText: 2-byte cells containing character and attribute data)
- **Metadata:** Includes SAUCE metadata
- **Keyboard Shortcut:** Press **Alt+S** for immediate BIN export

Help	
Open Data Folder	→ Launch file browser to REZ2ANS user data directory
About...	→ Display version, credits, and contact information

3.3 Help → Open Data Folder

Opens the per-user REZ2ANS data directory (platform-specific location such as AppData on Windows). This directory contains ramp files, saved presets, and default output paths.

3.4 Help → About...

Displays application information including version number, credits, and project contact details.

4) WORKSPACE TABS

4.1 PRERENDER COLORS

Pre-processing controls for tone mapping, detail enhancement, and edge detection applied before ANSI conversion.

PreRender Colors			
[Color Boost]	[Color Tone]	[Image Detail]	[Special]
R G B W BL	Brightness / Contrast /	Sharpen / Blur	Edge Mode
Vertical sliders	Gamma / Black Point	Despeckle/Clarity	Edge Amt
			[Reset Settings]

A) COLOR BOOST (VERTICAL SLIDERS)

Individual channel intensity adjustment (range: 0-100):

- **R / G / B:** Red, Green, Blue channel boosts
- **W:** White level enhancement
- **BL:** Black level adjustment

B) COLOR TONE (HORIZONTAL SLIDERS)

Tonal correction controls (range: 0-100 each):

- **Brightness:** Overall luminosity adjustment
- **Contrast:** Difference between light and dark areas
- **Gamma:** Mid-tone response curve
- **Black Point:** Shadow depth threshold

C) IMAGE DETAIL (HORIZONTAL SLIDERS)

Clarity and sharpness controls (range: 0-100 each):

- **Sharpen:** Edge enhancement
- **Blur:** Smoothing filter
- **Despeckle:** Noise reduction
- **Clarity:** Local contrast enhancement

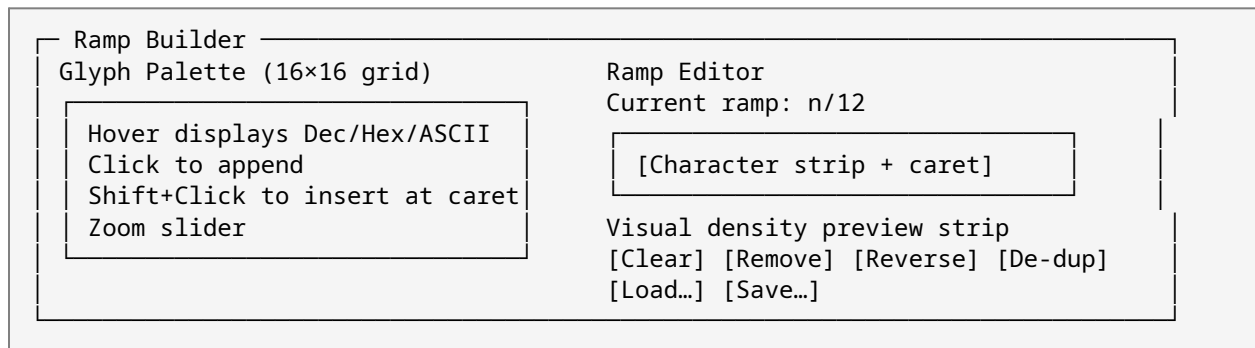
D) SPECIAL EFFECTS

- **Edge Detection Mode** (dropdown menu):
 - None (disabled)
 - Sobel
 - LoG (Laplacian of Gaussian)
 - DoG (Difference of Gaussians)
 - Canny
 - XDoG (eXtended Difference of Gaussians)
- **Edge Detect Amount** (0-100): Blend strength for selected edge detection method
- **Reset Settings:** Restore PreRender tab to default values (preserves conversion settings)

4.2 RAMP BUILDER

Character ramp editor for creating custom glyph sequences (maximum 12 characters) using the CP437 8×16 font.

NOTE: The Ramp Builder is a design workspace. Final conversion uses the ramp selected in **Conversion Controls**.



A) GLYPH PALETTE

- **Hover Information:** Displays decimal code, hexadecimal value, and ASCII representation (when printable)
- **Zoom Slider:** Scales the grid display (range: 1-6)

- **Left Click:** Append selected glyph to end of ramp
- **Shift + Left Click:** Insert glyph at current caret position

B) RAMP STRIP (EDITABLE)

- Horizontal display showing your current character sequence
- Yellow caret indicates insertion point for new characters

- **Left Click:** Reposition caret to clicked slot
- **Right Click:** Delete character at clicked position

C) ACTION BUTTONS

- **Clear All:** Remove all characters from ramp
- **Remove:** Delete character immediately before caret (backspace function)
- **Reverse:** Invert the order of all characters
- **De-dup:** Remove duplicate characters while preserving sequence order
- **Load... / Save...:** Import or export ramp files (stored as one byte value per line)

4.3 PALETTES

Palette management for ANSI color targeting and optional HEX palette preprocessing.

Palettes

Target ANSI 16 (fixed)

16-color reference

Target: DOS ANSI 16-color

HEX Palette Workflow (optional)

[Load HEX palette...]

HEX: (none loaded)

[] Snap source to HEX palette

Loaded palette swatches (read-only)

A) TARGET ANSI 16-COLOR DISPLAY

- Read-only reference showing the standard DOS ANSI color palette

- No user interaction required

B) LOAD HEX PALETTE...

- Imports .hex palette files (common Lospec format with one RGB hex value per line)
- After loading, displays: "HEX: <filename> (<n> colors)"
- **Source:** HEX palette files are available from and thanks to Lospec Palette List (<https://lospec.com/palette-list>)

C) SNAP SOURCE TO HEX PALETTE

- **Availability:** Only enabled when a HEX palette is loaded
- **Function:** Quantizes source image colors to match loaded palette before PreRender processing
- **Use Case:** Ideal for achieving palette-locked aesthetics before ANSI conversion

4.4 CONVERSION CONTROLS

Final conversion parameters including output dimensions, color metrics, dithering algorithms, and character ramp selection.

Conversion Controls		
[Output Size]	[Color]	[Dithering]
Cols / Rows	Metric	Type / Strength
Cell W / Cell H	iCE colors / No background	Serpentine (diffuse)
Keep aspect / Auto rows	Space character note	Ramp preset + files
Resize filter	Presets (Load/Save)	Refresh / Browse...

A) OUTPUT SIZE

- **Columns** (default: 80, range: 1-400)
- **Rows** (default: 25, range: 1-400)
- **Keep Aspect:** Maintains proportional dimensions when resizing
- **Auto Rows:** Automatically calculates row count (works best with Keep Aspect enabled)
- **Cell W / Cell H** (defaults: 8×16, range: 1-64 each)

- **Aspect Label:** Shows calculated "Aspect (H/W)" ratio based on cell dimensions
- **Resize Filter:**
 - Nearest Neighbor
 - Bilinear
 - Bicubic (default)
 - Lanczos
- **Load Preset... / Save Preset...**
 - Presets are .ini files storing both PreRender and Conversion settings
 - Active preset name shown in status area

B) COLOR SETTINGS

- **Metric** (color distance calculation algorithm):
 - Redmean (default)
 - CIE76
 - CIEDE2000
- **iCE Colors (Bright BG):** Enables bright background colors (iCE mode compatibility)
- **No Background:** Enforces foreground-only rendering rules
- **Space Character Note:** "Space" outputs background color only (black when BG=0)

C) DITHERING & CHARACTER RAMP

- **Dither Type:**
 - None
 - Bayer 4×4
 - Bayer 8×8 (default)
 - Floyd-Steinberg
 - Atkinson
- **Strength:** Dither intensity (range: 0-100, default: 100)
- **Serpentine (Error Diffusion):** Alternates scan direction for smoother error diffusion patterns

CONVERSION RAMP PRESET (ACTIVE FOR CONVERSION)

Built-in presets limited to 12 characters maximum:

- **Standard:** CP437 shading and block character mix
- **Toon:** Heavy solid blocks with outline emphasis
- **90s ANSI:** Classic ANSI art shading progression
- **ASCII:** Classic / Balanced / Soft
- **Custom File:** Load a ramp from disk

RAMP FILES LIST

- Displays all *.ramp and *.txt files from the ramps directory
- **Refresh:** Rescan ramps folder for new files
- **Browse...:** Select a ramp file from any location (automatically switches preset to "Custom File")
- **Active Indicator:** Shows currently loaded ramp name and character count

5) KEYBOARD & MOUSE REFERENCE

Global Shortcuts

- Alt+S → Quick save as BIN format
- Alt+R → Factory reset (all settings, ramps, and presets)

Source Panel

- Mouse Wheel → Zoom in/out at cursor position
- Ctrl + Wheel → Faster zoom increments
- Shift + Wheel → Fine zoom adjustments
- Drag (empty area) → Create new selection rectangle
- Drag (inside sel.) → Move selection
- Drag (handles/edges) → Resize selection (cursor changes on hover)

Ramp Builder

- Glyph Grid: Click → Append glyph to ramp
- Shift+Click → Insert glyph at caret position
- Ramp Strip: Left Click → Move caret to position
- Right Click → Delete character at position

6) DATA DIRECTORY

Access via **Help** → **Open Data Folder** to navigate to the per-user data directory.

TYPICAL DIRECTORY STRUCTURE:

- **ramps/** – Character ramp files (*.ramp, *.txt)
- **presets/** – Saved configuration presets (*.ini)
- **output/** – Default save location for .ans and .bin files
- **rez2ans_startup.log** – Application startup and diagnostic log

Ramp File Format

Simple text format with one integer byte value (0-255) per line:

```
219
178
177
176
32
```

Preset File Format

INI-structured files containing:

- All PreRender slider values
- Complete Conversion Controls settings (dimensions, color metric, dither configuration)
- Ramp selection data (preset index, custom file path, embedded character bytes)

7) CREDITS & ACKNOWLEDGMENTS

REZ2ANS is built with appreciation for the ANSI art community and the tools that support creative digital expression.

Development Platform

- **FreePascal & Lazarus IDE** – This project would not exist without these exceptional free and open-source development tools. The Pascal language and Lazarus visual development environment provided the perfect foundation for building REZ2ANS.

Special Thanks

- **grymmjack** – For invaluable feedback, testing, and scene wisdom
- **kf** – For encouragement and technical insights
- **xbit** – For support and keeping the ANSI spirit alive

Community Resources

- **Lospec Community** – For maintaining the extensive Lospec Palette List (<https://lospec.com/palette-list>), which provides the HEX palette files supported by REZ2ANS
- **CP437 Font** – The classic IBM PC character set that forms the foundation of ANSI art
- **SAUCE Metadata Standard** – For enabling proper archival and display of ANSI artwork
- **BBS Community** – The sysops and users keeping the scene alive

Technology Stack

- Color distance algorithms: Redmean, CIE76, CIEDE2000
- Edge detection: Sobel, LoG, DoG, Canny, XDoG operators
- Dithering methods: Bayer matrices, Floyd-Steinberg, Atkinson algorithms

8) AUTHOR NOTES

Author: Sudden Death (cia) aka Dennis Martin

Contact: suddendeath@email.com

REZ2ANS was created to bridge modern image processing with the timeless aesthetic of ANSI art. The goal was to provide both accessibility for newcomers and depth for experienced ASCII/ANSI artists.

The Decision to Build This Tool

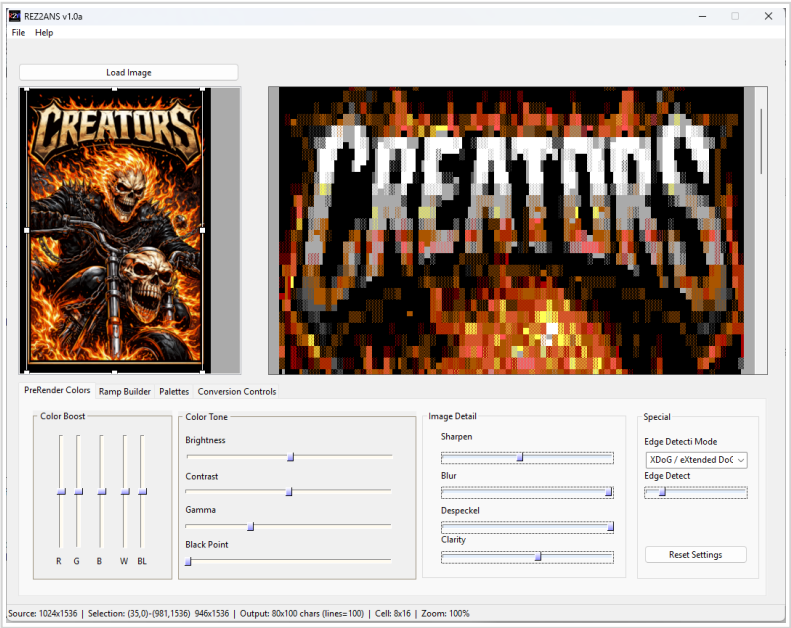
I'm aware of the controversy. Image-to-ANSI converters have historically been frowned upon in the BBS and ANSI art community—and for good reason. Hand-crafted ANSI art is a skill that takes years to master, and there's a justified concern that automated tools devalue that craftsmanship.

But let's be honest about where we are: roughly **40 active ANSI artists** remain in the scene. Meanwhile, over **1,000 BBSes** are still running and need artwork. The math simply doesn't work anymore.

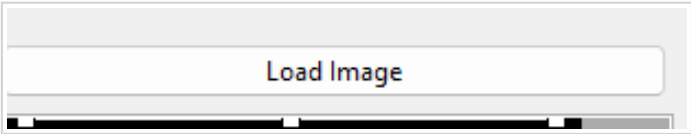
I didn't build this tool to replace artists. I built it because the community needs it. Sysops need artwork. New BBSes need

Control Screenshots

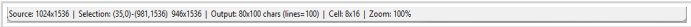
Main Window



Full tab view (context)



Load Image button



Status Bar



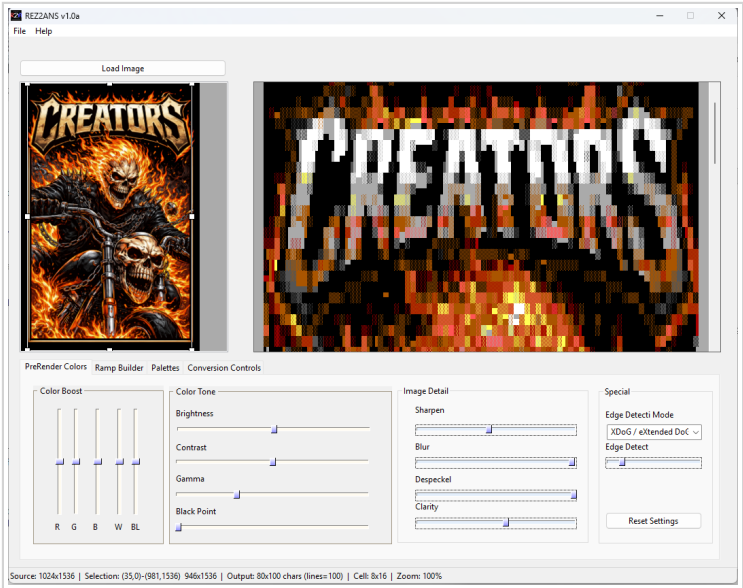
Source Panel



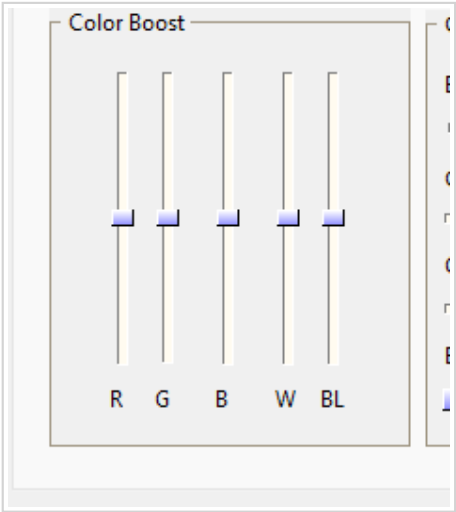
Preview Panel

Control Screenshots

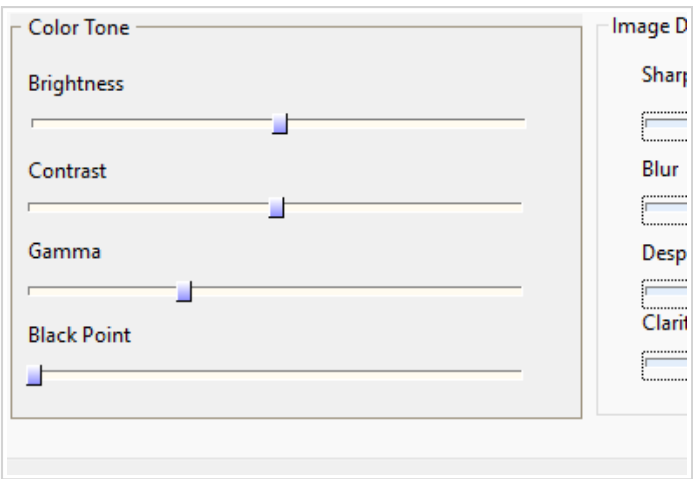
PreRender Colors tab



Full tab view (context)



Color Boost (R/G/B/W/BL sliders)



Color Tone (Brightness/Contrast/Gamma/Black Point)

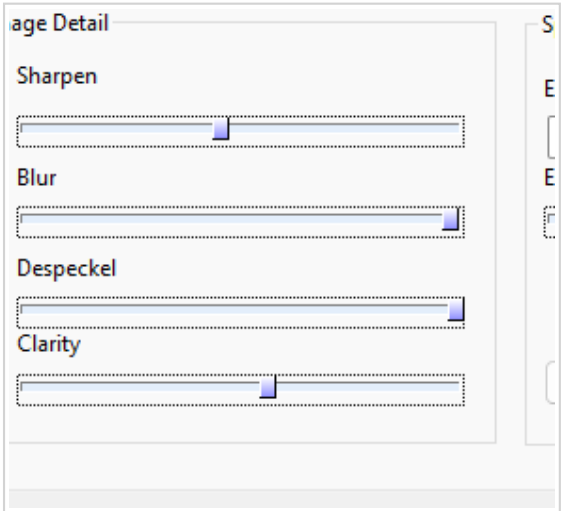
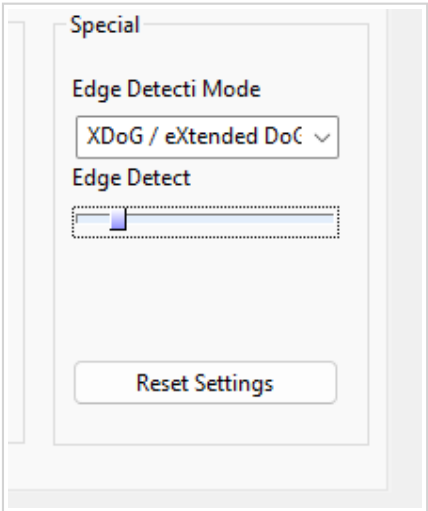


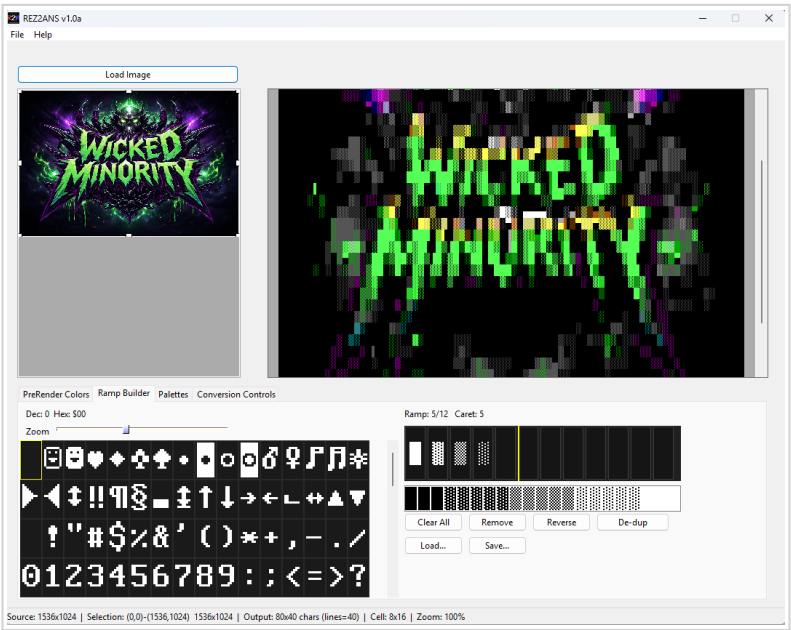
Image Detail (Sharpen/Blur/Despeckle/Clarity)



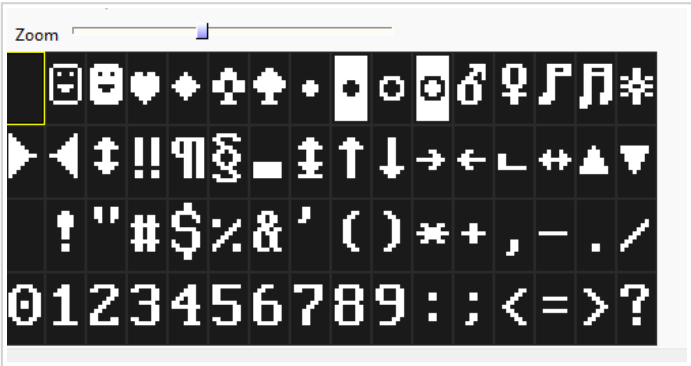
Special (Edge Detect Mode/Edge Detect + Reset)

Control Screenshots

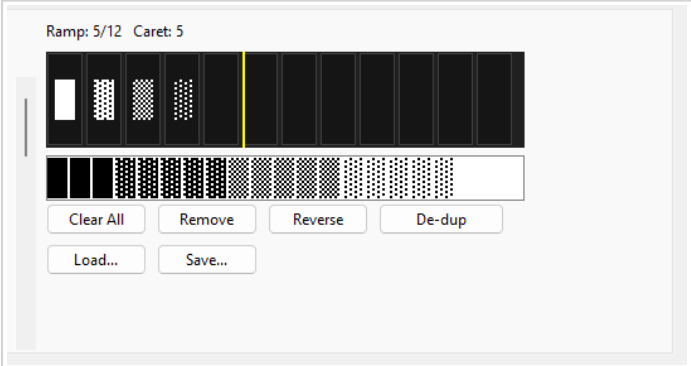
Ramp Builder tab



Full tab view (context)



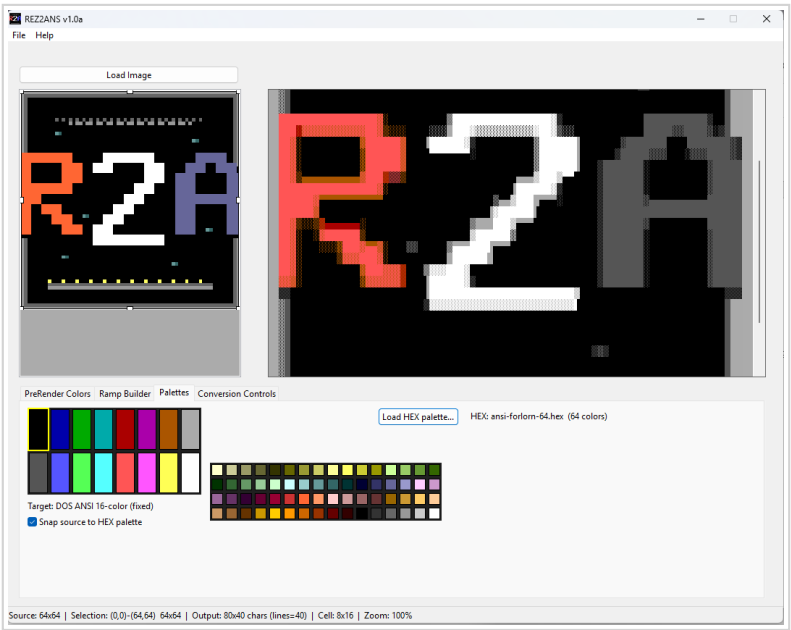
Glyph Palette



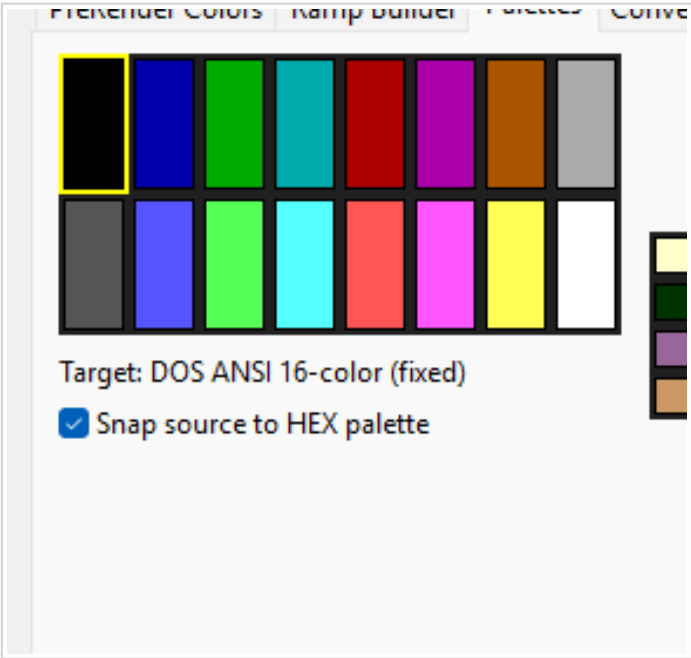
Ramp Strip Editor

Control Screenshots

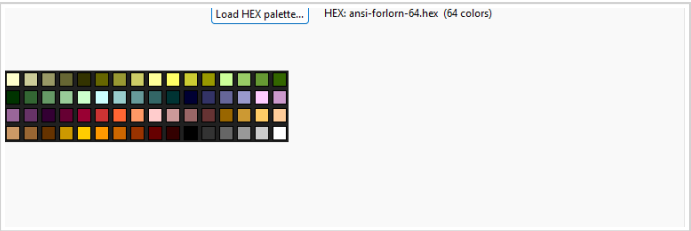
Palettes tab



Full tab view (context)



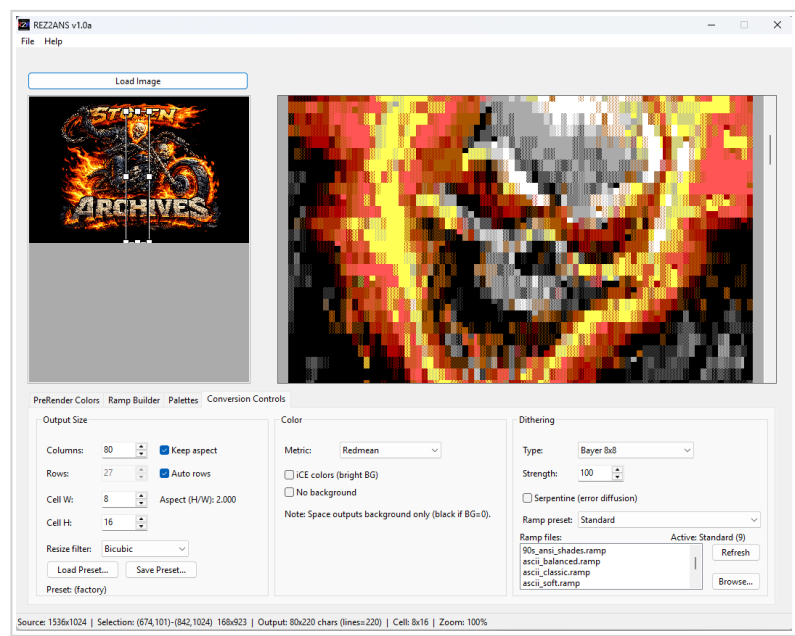
Target: DOS ANSI 16-color (fixed)



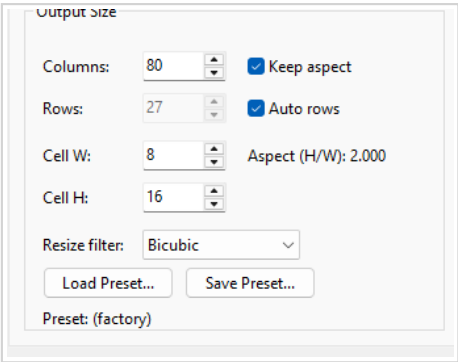
Loaded HEX palette

Control Screenshots

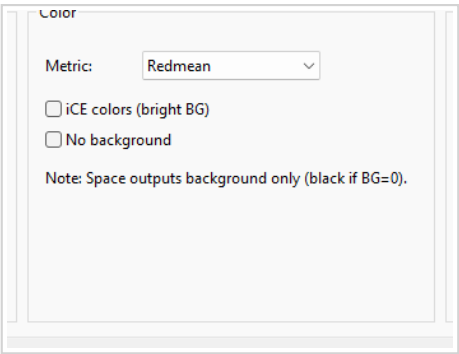
Conversion Controls tab



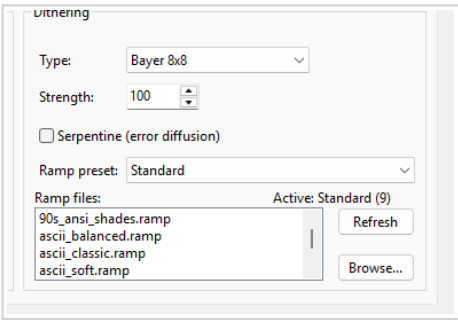
Full tab view (context)



Output Size



Color



Dithering