



# Toonzharlequin 7.1

## Main Features

Toonz Harlequin is the meeting point of the traditional and paperless animation production workflows. It provides state-of-the-art tools for both the approaches for endless creative possibilities, and allows you to follow your personal approach to computer-assisted animation fast-forwarding tedious and time-consuming steps. You choose, not the software.

## Toonzharlequin 7.1

### Platform & Interface

- Support for Windows and Macintosh**  
Available for Windows XP, Vista, 7, 8 and for Mac OS X running on Intel processors—with optimization for 64-bit OS version— including support for cross-platform projects.
- Seamless Workflow Integration**  
No need to open or close applications to pass, from one task to another, for example from a scanning process to a painting session.
- Ergonomic User Interface**  
Clean interface with a powerful customizable working environment.
- Configurable Shortcuts**  
Command and function shortcuts can be customized for each user separately.

### Production Database

- Production Management Tool**  
Production material can be easily stored and retrieved for a quick re-use, from one network to another, or from one studio to another, through project folders.
- Central Repository / Local Working Copy**  
Store the database in a central repository, that can be located on your computer, on your local network, or on the internet, and work locally before submitting modifications to production files.
- Version Control System**  
Retrieve previous versions of any file thanks to the version control system that tracks the history of the revisions for every file in the production database.
- Browser with Production Folders**  
Use the file browser, that includes a list view with sortable detail columns, and the project management browser to retrieve material used in your production.
- Drag & Drop Loading**  
Load files and folders by dragging and dropping them from external browsers as well.
- Browser-Embedded Tools**  
Use browser-embedded tools to rename sequences of files, get frame-by-frame detailed info, convert files from one format to another, including Toonz TLV formats.

- Support for Raster and Vector Drawings**  
Drawings can be scanned; created directly in Toonz in vector or raster mode; and converted from raster to vector.
- Wide Support of Input Formats**  
Avoid any incompatibility with third-party software thanks to the wide range of supported input formats, including Photoshop document, SVG, Avi and QuickTime clips.

### Drawing

- Full Drawing Capabilities**  
Create both vector and raster drawings, or touch up scanned images; add sketches, roughs and graphical notes and modify any loaded image, including its canvas size.
- Wide Set of Drawing and Editing Tools**  
Vector and raster animation levels can be edited with a wide range of drawing and editing tools.
- Powerful Selection Tool**  
Transform any selection—free distortion included—in any type of image, or on multiple frames selections, by using the bounding box or numerical values.
- New Generation Vectors**  
Create vector graphics, modify them using intuitive handles, create automatic inbetween frames.
- Pressure Sensitivity**  
Full support of pressure sensitive pens and tablets for drawing expressive variable-thickness lines.
- Digital Light Table**  
Zoom, pan and rotate the work area the way you prefer while drawing.
- Strokes Grouping and Layering**  
Group and isolate drawing strokes to better manage lines and areas, and manage their layering order.
- Automatic In-betweenner**  
Interpolate vector-based drawings to quickly create animation levels.
- Flexible Onion Skin**  
Activate and customize the onion skin view that can be extended to the whole scene content.
- Easy Rotoscoping**  
Load any image, sequence or clip in the xsheet and use it for rotoscoping.

### Raster-to-Vector Converter

Convert raster-based drawings to vector-based ones; copy and paste selections from raster drawings to vector ones, and vice versa, automatically converting them.

- Paperless Animation Compliant**  
Ready for high quality paperless animation to fit new creative and technical standards.
- Quick Scan and Cleanup Sessions**  
Scan paper drawings using the scanner paper feeder, and autocenter them automatically during the cleanup process.
- Direct & TWAIN Support for Scanners**  
Use Epson scanners via Toonz internal drivers, or any other scanner via TWAIN drivers.
- Multiple Drawing Scanning and Cleanup**  
Scan all animation levels defined in the scene at once in a single scanning session, and clean them up in a single process.
- Powerful Cleanup Process**  
Use colored lines in paper drawings, and make the software recognized them; check and edit how the drawings will be processed; and monitor each drawing while being processed.

### Ink & Paint

#### Super-Sized Palette

Define up to 4096 colors for each animation level palette, that can be used both for coloring lines and fill areas; save palettes and load them in the xsheet for special FX purposes.

- No Need for Repaint**  
Change palette styles and automatically update all the colored level drawings.
- Interactive Color Editing**  
Edit colors working directly in the final scene, viewing backgrounds, overlay and other animation levels, with an immediate visual feedback.
- Special Palette Styles**  
Apply material, pattern and volume effect to palette style; use any image to define custom styles for vector-based drawings. Apply Custom textures to the Toonz Raster Levels.
- Studio Palette with Linked Styles**  
Assure color consistency for the production with the Studio Palette, that thanks to interactive links can automatically update colored drawings.

## ● Smart Color Models

Use any full color image as color models and assign them to level palettes so that every time a palette is used its relevant color model is displayed.

## ● Matchline Drawings

Use additional drawings, scanned or drawn directly in Toonz, as matchline for animation levels by setting the way they are merged.

## ● Automatic Painting Tools

Paint quickly and effectively sequences of drawings and animated levels by using different tool options combinations, including an autopaint option for lines, gap and fill checks, and an automatic fill that applies the colors used in an image to paint other images.

## Compositing

## ● Animator-friendly Xsheet Interface

Composite the scene in the xsheet with spreadsheet-like editing tools, context sensitive menus and drag & drop actions.

## ● Customizable Work Area

Adjust the work area to visualize the scene content according to the task to perform; display and customize the field guide, the safe area, guides, background colors and the camera box.

## ● Simple Mode Animation

Animate objects in a quick way by controlling and managing key positions and interpolations for column movements directly in the xsheet.

## ● Global Controls on Animation

Adjust the scene timing by inserting or deleting global frames in the xsheet; control animations involving several columns at once by inserting or deleting multiple keys.

## ● Sub-xsheet Management

Load or create scenes nested inside another scene, so that they can be managed as a single xsheet column; export them for endless reuse, or explode them to merge their content with the main xsheet.

## ● Scene Cast

Store and retrieve files used in the scene and organize them in folders.

## ● Stage Schematic

Create in a flowchart-like interface complex movements by linking and editing objects like pegbars, camera and table, and using shared motion paths.

## ● Special FX Schematic

Define in a flowchart-like interface interactions between scene elements and special FX.

## ● Smart FX Schematic Editing

Choose to insert, add or replace FX nodes by selecting them from drop-down menus; copy and paste selected links, and insert or extract nodes from links.

## ● FX Gadgets in the Work Area

Define FX parameters related to positions or dimensions, such as radial gradient center and size, with gadgets available in the work area.

## ● Nodes and Objects Grouping

Group objects and nodes in the schematics to better manage the scene content.

## ● 3D Camera View

Animate the camera in a 3D environment as if moving it with a dolly or a truck.

## ● Automatic Multiplane Effect

Create automatic multiplane effect by actually moving the camera through characters and elements placed on the stage.

## ● Multiple Cameras

Create different shots of the same scene by defining multiple cameras, e.g. to preview only a section of the frame, or to output the animation with different formats and A/R.

## ● Full Set of Object Transformations

Animate drawings and objects—like camera, pegbars and columns—by moving, on the depth axis as well, scaling, rotating and shearing them; change and animate the column stacking order without editing the actual column position.

## h Full Range of Special FX

Add special FX completely integrated in the working environment: the set includes image and color adjusting, blurs, lighting, distort, keys, masks, warp (controlled displacement map), gradients, layering, shaders and many others.

## ● Palette-based FX for Toonz Levels

Apply color blendings, textures and line FX to Toonz levels according to the selected styles.

## ● Macro FX and Presets

Save and reuse configuration and animation of FX parameters as presets or Macro FX.

## ● Particles FX Plug-in

Create particles FX with an engine specifically designed for 2D animation and seamlessly integrated in Toonz special FX, supporting multiple levels as particles or as control images for particles animation.

## ● Function Editor

Control the speed of the object and FX transformations, by editing the related curves, even several ones at the same time, or modifying numerical columns with cells displaying transformation values.

## ● Segment Interpolations

Control interpolations affecting the way the value changes from one key to another by assigning different type of interpolations to the different segments of the transformation.

## ● Similar Shape Interpolation

Base the interpolation on the shape of the curve you specify as reference, so that whenever the reference curve is edited, the segment will change accordingly.

## ● Expression-based Interpolations

Use expressions to define interpolations based on a mathematical formula that can also relate to any object or effect transformation.

## ● Cutout Animation Friendly

Thanks to the schematic viewer and the Skeleton tool, link together your character's sections and create a model that can be fully animated.

## ● Skeleton Tool with Inverse Kinematics

Define character models and animate them in cutout-like animation with the Skeleton tool supporting inverse kinematics.

## ● Hooks on Drawings

Use hooks to track a specific feature of any clip, sequence or level image, or to keep an animated character from skating on the ground.

## ● Xsheet Printing

Save xsheets as HTML file for printing and visualization purposes.

## Audio

## ● Easier Lip Sync

Check the sync between the animation and the soundtrack by using the audio scrubbing that is extended to multiple audio columns, or import Magpie files to expose mouth drawings accordingly.

## ● Multiple Audio Clips Import

Import, edit and trim all the audio clips you want in the xsheet, without modifying the original files, and composite a soundtrack in sync with the animation.

## Preview & Render

## ● Preview Window

Run previews with specific settings different from the rendering ones, and use multiple windows to examine or compare specific frames resulting from different previews.

## ● Sub-camera Preview

Define and use a sub-camera area inside which the preview will be rendered and outside which the scene elements will be displayed as they are, for quicker previews.

## ● Preview Progressive Framebar

Use the viewer framebar to check and move through frames as soon as they are rendered.

## ● FX Schematic Quick Preview

Open a preview from any node of the FX schematic to check the result up to that node.

## ● Cached FX Preview

Cache the preview up to a specific node, so that the result of the compositing up to that node is stored and will be reused the next time the preview is run.

## ● Versatile Rendering

Render the scenes the way you prefer: use batch processing and the render farm; render directly the current scene; or save previewed frames.

## ● Wide Range of Output Settings

Choose the output format to render the scene as a sequence of images—such as TIF or TGA—or as a single Avi or QuickTime clip, with settings including framerate-stretching, 64-bit color-depth and stereoscopic options.

## ● Automatic Multiple Rendering

Creates automatically for a single scene several output files based on the xsheet columns content, and according to the FX schematic.

## ● Batch Processing

Create, save, load and execute task lists using a render farm or locally, at a specified time, with a set priority and dependencies.

## ● Render Farm

Divide render tasks in chunks and distribute them on the whole network, or any subset of computers, while controlling them centrally.

## ● Preview and Rendering Tools

Use the flipbook window to check previewed and rendered frames; use embedded tools to visualize images histograms or color channels; take snapshots and compare different frames interactively.

## h Toonz Levels Export

Export Toonz animation levels as sequences of image files in different file format, including Retas, with no need to render them.