



REALDEPTH TECHNOLOGIES

RealDepth Production DNA™

The Operating System for Modern Film Production.

Installation, shared login, Workflow DNA, production presets, Library Explorer, media preview, intelligence, rename, recovery, verified clone, health, reporting and release workflows.

USER GUIDE • VERSION 0.7.0 • VOLUME 07

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About this guide

RealDepth Production DNA is a standalone native production operating system for Film, Television, OTT, Animation, VFX and Post Production teams. It combines portable project identity, a visual Workflow DNA engine, indexed Library Explorer, asset intelligence and verifiable storage operations. It does not replace Finder.

Guide	Value
Product	RealDepth Production DNA™
Release	0.7.0 • Volume 07
Current package	Apple Silicon macOS 12 or later
Project format	RDFD 1 • portable hidden .rdfd foundation
Support	support@realdepth.in • realdepth.in/file-dna.php

Source-media safety

Recovery and preview workflows open source content read-only. Production DNA does not format, mount, unmount or write a selected recovery disk.

Authentication boundary

Splash is followed by mandatory account sign-in and serial validation. The editor does not open when authentication or licensed module entitlement fails.

Build scope

The current signed package is arm64. A universal/Intel release requires a universal2 runtime and a separate Intel validation pass; Windows is reserved for the next release stage.

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1. Install and start

Keep the application bundle on fast local or SSD storage. Project databases remain with each production project, so moving a project keeps its identity and history together.

Install on macOS

- 1 Copy **RealDepth Production DNA.app** into Applications or the approved RealDepth Apps SSD folder.
- 2 Open the bundle. If macOS asks, approve Full Disk Access only when physical-device recovery is required.
- 3 Wait for the RealDepth splash screen, then complete the mandatory account and serial gate.
- 4 Create a new Project DNA foundation or open an existing production folder containing **.rdfd**.

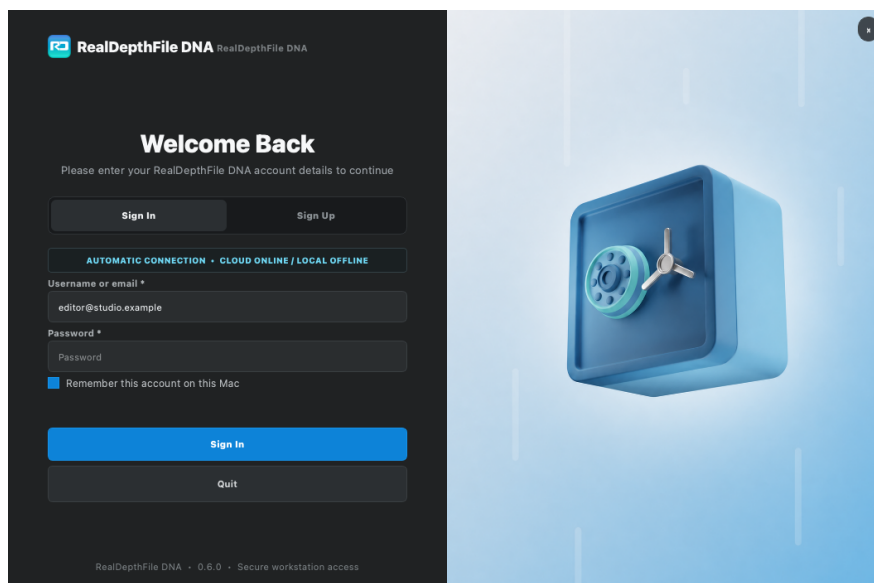
First-launch checks

- Confirm the title bar reads the intended product and version.
- Confirm the signed-in identity is shown and the licensed modules are enabled.
- Open Settings → Database and run Integrity Check before a critical production session.
- Keep recovery and clone destinations on separate verified storage whenever possible.

Gatekeeper or network interruption

A previously validated device may use its encrypted offline-grace token until its server-defined limit. Expired, suspended, revoked and wrong-device states remain locked.

2. Sign in and validate a serial



Mandatory Production DNA login: one automatic connection flow, remembered account and serial validation.

Automatic cloud/local connection

Use the RealDepth account already used by RealDepth AI Studio Pro 26. Production DNA first authenticates through RealDepth Cloud. If the cloud cannot be reached, it automatically falls back to the previously verified local Argon2 account on the same Mac; there is no manual Cloud/Local selector.

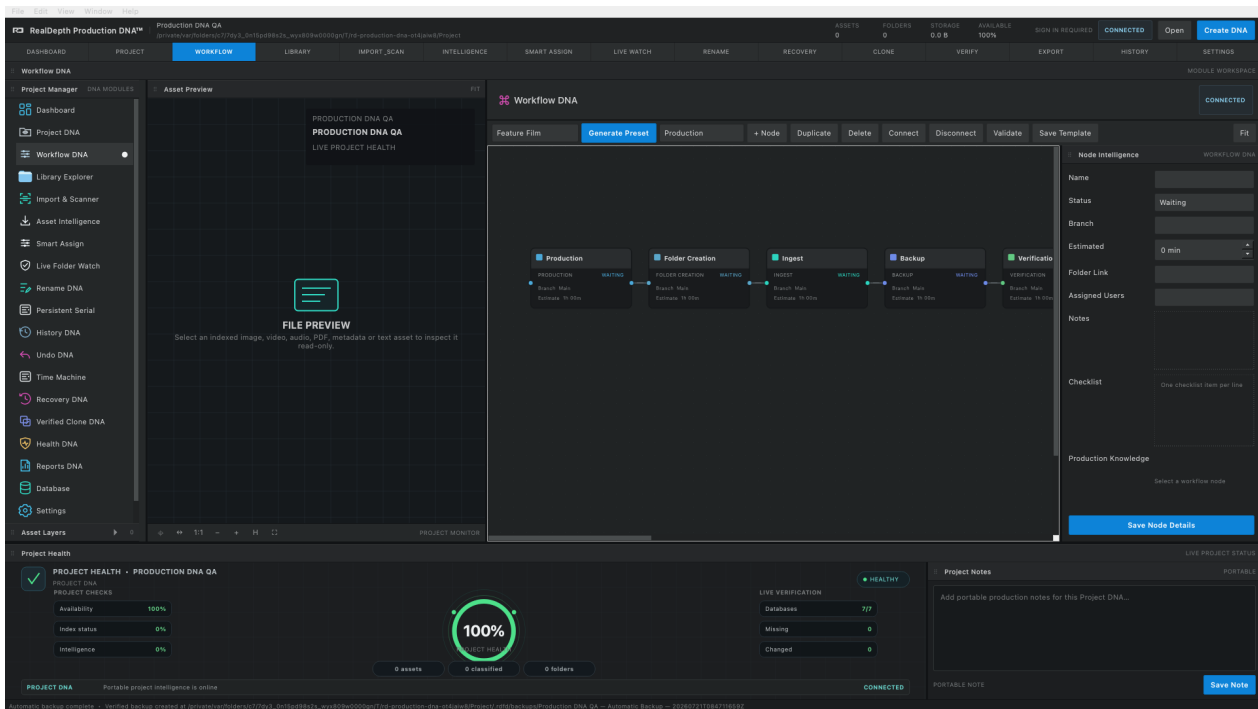
Remember account

Keep Remember this account on this Mac enabled to restore the last verified username or email and password from macOS Keychain. The plaintext password is never written to Production DNA account files or project databases. Local sign-in never bypasses license validity; it only uses a currently valid encrypted offline activation.

Serial states

State	Result
Correct + entitled	Green verified state; Continue becomes available.
Wrong serial	No green tick; workspace remains locked.
Revoked / suspended / expired	Fails closed and reports the server state.
Valid plan, missing module	Workspace opens only for included Production DNA modules.
Offline grace expired	Online revalidation is required.

3. Workspace tour



Approved editor layout with Project Manager and expandable Asset Layers at left, compact file preview in the center and the large active-module workspace at right.

Area	Purpose
Workflow tabs	Dashboard, Project, Workflow DNA, Library Explorer, Import & Scan, Intelligence, Smart Assign, Live Watch, Rename, Recovery, Clone, Verify, Export, History and Settings.
Project Manager	Complete DNA module navigation at far left.
Asset Layers	Expandable indexed-folder drawer below Project Manager.
File Preview	Compact read-only image/video/audio/PDF/text confirmation.
Module Workspace	Large controls, node canvas, preview and apply area for the selected DNA module.
Project Health + Notes	Live project state beside portable operator notes.

4. Dashboard and global search



Dashboard is the command center. It combines recent projects and operations with storage, database and module state so the operator can identify risk before starting a workflow.

Dashboard panels

- Recent Projects, Imports, Scans, Rename, Recovery and Clone operations.
- Project statistics, disk usage, database status and replaceable-module status.
- Recent notifications and errors without routine modal interruptions.
- Workflow progress, department state, Folder DNA health, missing assets, QC, delivery readiness and archive status.
- Quick Actions for Create, Open, Workflow, Library, Import, Scan, Rename, Clone, Recovery, Reports and Settings.

Global Search

Press **Command+F** on macOS or select Edit → Search. Search is bounded and read-only across projects, folders, files, assets, history, reports, logs, recovery history, rename history and settings. Results include category, location and relevance.

Search never changes a project

Search uses application and portable databases only. Selecting a result navigates or previews; it does not rename, move, recover or delete content.

5. Create and open Project DNA

Project DNA creates a portable foundation inside the chosen production folder. The hidden **.rdfd** directory contains local databases, backups, reports and project identity; original media remains in its normal production folders.

Create a project

- 1 Choose File → Create Project DNA or press Command+N.
- 2 Select an existing empty or production folder; do not choose a system root or the source of a recovery operation.
- 3 Set project name, production type, Workflow DNA preset, creation mode and department template.
- 4 Review the folder preview, then create the RDFD 1 foundation.
- 5 Confirm all seven database layers show Connected.

Portable database layers

Database	Responsibility
project.db	Identity, foundation, metadata and portable notes.
asset.db	Indexed files, folders, intelligence and health observations.
history.db	Operations, undo/redo, time machine and audit trail.
serial.db	Persistent production serial counters and scopes.
recovery.db	Checkpoints, recovery journal and verification evidence.
settings.db	Project-scoped settings and module configuration.
logs.db	Structured project event records.

6. Workflow DNA and Library Explorer

Workflow DNA is the visual operating layer for the complete production lifecycle. A preset creates an editable graph, production folders, department scope, storage and backup guidance, QC stages and delivery stages without removing existing Project DNA functionality.

Create a workflow

- 1 Create or open a Project DNA foundation, then open **Workflow DNA**.
- 2 Choose Feature Film, Short Film, OTT Series, TV Series, Commercial, Documentary, Music Video, Corporate, Wedding, YouTube, Podcast, Animation, VFX Only, Color Only, Audio Only or Custom Workflow.
- 3 Select Generate Preset and confirm replacement only when the current custom graph can be removed.
- 4 Drag nodes to reorder the canvas. Use Command/Control-click to select two nodes before Connect or Disconnect.
- 5 Select each node and save its status, notes, checklist, folder link, assigned files/users, reports and duration.
- 6 Run Validate before delivery; resolve missing critical stages, disconnected nodes and circular dependencies.

Parallel branches and production knowledge

- Editorial can branch to VFX, DI/Color and Audio in parallel, then merge into QC and Delivery.
- DI nodes expose gamma, color space, ACES, HDR, OTT/Netflix, cinema and QC guidance.
- Audio nodes expose dialogue, LUFS, stereo, 5.1, 7.1, Atmos and music-delivery guidance.
- Delivery nodes track codec, resolution, bit depth, frame rate, subtitles and package QC.
- Every node retains dependencies and links to related folders, files, reports and notes.

Library Explorer

Library Explorer is restricted to the current Project DNA index. Use its folder tree, intelligent search, favourites, metadata list, Folder DNA statistics and history timeline to inspect production content. Selecting a file routes it to the central read-only preview; Library Explorer never becomes a general operating-system file browser.

Preset replacement is explicit

Generate Preset replaces only the current workflow graph after confirmation. Existing source media, indexed assets, Project DNA databases and unrelated modules remain untouched.

7. Universal file preview

The center monitor is a real preview surface, not a decorative 3D viewer. Selecting an Asset Layer, Smart Assign proposal or recoverable candidate sends that source to the same read-only monitor.

File class	Preview behavior
Image	Fit-to-view, 1:1, zoom and luminance histogram; identity and read-only status remain visible.
Video	Native play/pause, frame step, J/K/L shuttle, loop, speed, timecode, safe frame, seek, mute and full-screen controls.
Audio	Transport controls with a clear audio-preview state.
PDF	Embedded read-only PDF pages.
Text / JSON / XML / CSV	Bounded read-only text view; large files are not loaded without limit.
Unsupported media	Identity and technical detail are shown; Production DNA never pretends to decode unsupported content.

Preview controls

- Fit centers the selected image within the monitor.
- 1:1 displays actual pixels where appropriate.
- Play/Pause, frame step, J/K/L, loop, speed, seek, safe frame, mute and full screen appear for playable media.
- Image zoom and the luminance histogram support visual inspection without changing source pixels.
- The footer shows the portable relative path or workflow candidate source.

Read-only guarantee

Preview does not write sidecar files, generate thumbnails beside source media or modify access metadata intentionally. It is a confirmation step before an operator-authorized action.

8. Import, Scanner and Asset Intelligence

Import & Scanner builds and refreshes the portable asset index. Asset Intelligence then classifies changed assets using names, paths, extensions and available technical context while reusing unchanged analysis.

Import & Scan

- 1 Open Import & Scan and select project folders or files.
- 2 Run an incremental scan. Progress remains cancellable and the interface stays responsive.
- 3 Review skipped unreadable files in Notifications/Logs; source content is not altered.
- 4 Select an indexed item in Asset Layers to confirm its preview.

Asset Intelligence

- Classifies editorial, camera, audio, VFX, animation, graphics, documents and other production contexts.
- Preserves confidence and reason fields so automated assignments remain reviewable.
- Updates Project Health intelligence coverage after analysis completes.
- Feeds Smart Assign without performing an unreviewed move or copy.

Large productions

Scanning, classification and database writes are batched and run outside the UI thread. Pause or cancel leaves the last committed database state consistent.

9. Smart Assign and Live Folder Watch

Smart Assign proposes category-aware destination folders. The lower-right panel follows Sources → Preview → Apply; selecting a proposal updates the center preview before confirmation.

Smart Assign workflow

- 1 Add files or a folder as sources.
- 2 Build Change Preview and review action, category, confidence, source and destination.
- 3 Select uncertain items to confirm content in File Preview.
- 4 Apply only the checked proposal set. The operation enters portable history.

Live Folder Watch

Live Watch observes approved folders on a bounded interval and routes new/changed entries through index and intelligence logic. It does not silently commit destructive changes. Review pending assignments before apply.

Notes belong below the monitor

Use Project Notes for handoff context, verified destinations and operator decisions. Notes are stored in project.db and travel with the Project DNA foundation.

10. Rename DNA, serials and undo

Rename DNA is preview-first. Persistent Serial generates deterministic counters; History DNA, Undo DNA and Time Machine retain recovery checkpoints and operator evidence.

Safe rename

- 1 Choose Rename DNA and add indexed source assets.
- 2 Configure naming pattern, metadata tokens and persistent serial scope.
- 3 Build the preview and resolve duplicate, collision and invalid-name warnings.
- 4 Apply the confirmed rows. Production DNA records the before/after mapping and checkpoint.
- 5 Use Command+Z to undo the latest eligible rename or Command+Shift+Z to redo it.

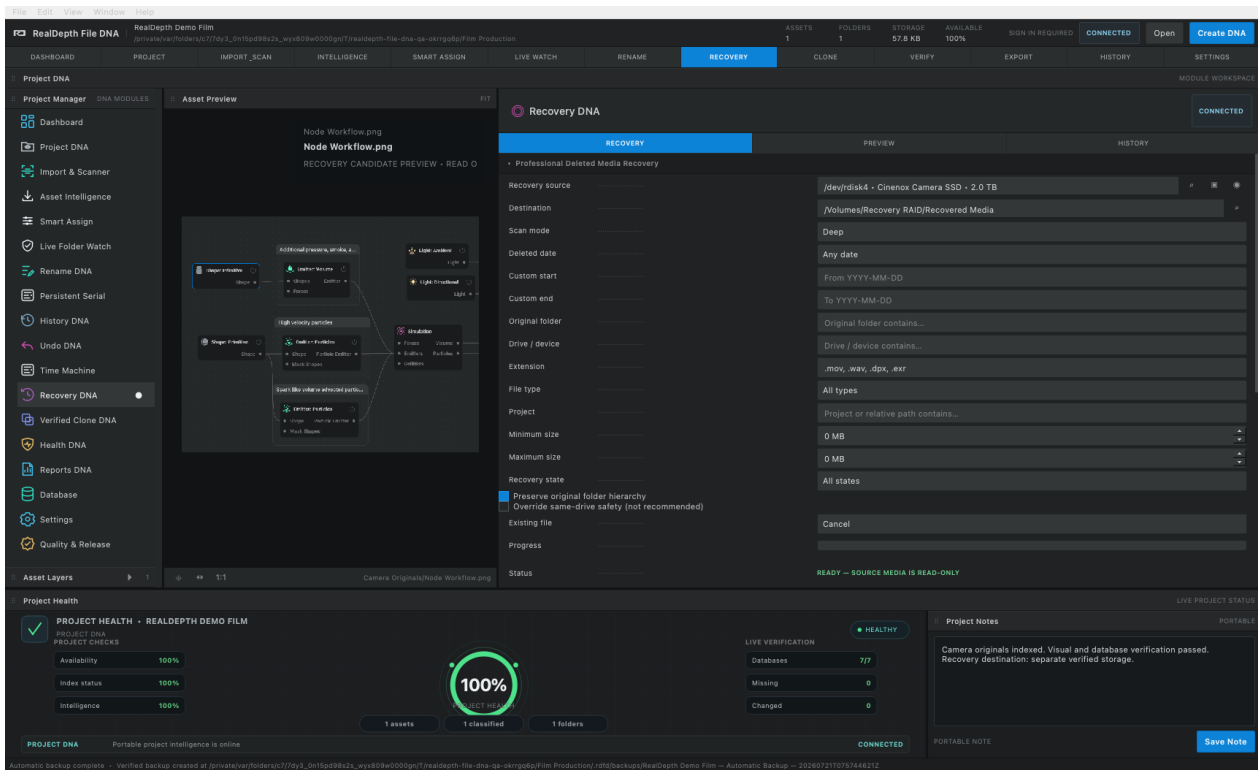
Persistent Serial

- Counters are database-backed and never inferred from a fragile in-memory value.
- Scopes can be project, department, asset group or workflow specific.
- Preview reserves no permanent mutation until apply is confirmed.
- History provides exact serial and filename evidence for troubleshooting.

Do not bypass the preview

If a collision or duplicate warning remains, cancel and correct the pattern. Never use Finder to reproduce a partially completed rename batch.

11. Recovery DNA



Recovery DNA with physical-device source, separate destination, Deep scan and media filters.

Supported recovery sources

- Project folders and Trash locations.
- Indexed-path reconstruction from portable asset/history databases.
- Disk images and raw image files.
- macOS physical disks or volumes exposed by diskutil, opened through the read-only raw device path.

Recovery workflow

- 1 Connect the source disk and a different verified destination disk.
- 2 Choose the physical disk/volume picker; confirm model, size and device identity.
- 3 Select Quick, Smart, Deep or Global and narrow date, folder, drive, extension, type, project and size filters.
- 4 Scan read-only. Select candidates to preview non-carved readable sources.
- 5 Recover selected candidates and verify size/SHA-256 evidence in the journal.

12. Recovery safety and signature carving

Deep/Global scans identify supported structures without changing the source. Carved files have no trustworthy original folder path unless Project DNA evidence can reconstruct it.

Signature	Behavior
JPEG / PNG / PDF / ZIP	Header/trailer or structural boundary detection.
WAV	RIFF size field defines the expected recovery extent.
MOV / MP4	ISO Base Media File Format boxes are walked conservatively.
DPX	Declared image size is used when valid and bounded.
Other formats	No fabricated recovery; use filesystem/index evidence or a later signed plugin.

Critical rules

- Never recover onto the source disk unless an authorized operator accepts the explicit same-drive override.
- Do not disconnect source or destination storage while a scan or restore is active.
- Grant Full Disk Access only to the signed Production DNA build and only where policy permits.
- A candidate preview is evidence, not proof of complete semantic integrity; verify recovered media in its native production tool.

Physical-device permission

If macOS denies `/dev/rdisk` access, stop the job, grant approved Full Disk Access, reopen Production DNA and reselect the exact device. Do not run the application as an unrestricted administrator.

13. Verified Clone and Project Health

Verified Clone DNA copies selected production content and records verification. Project Health converts live portable-database evidence into a centered operator-readable state.

Clone modes

Mode	Use
Copy	Create a verified destination copy.
Incremental	Copy new/changed content while retaining destination-only content.
Selective	Copy only the reviewed source set.
Mirror	Make destination follow source; requires explicit approval because destination-only content may be affected.

Live Project Health

- Availability — indexed assets currently present.
- Index status — current scan coverage.
- Intelligence — analyzed/classified coverage.
- Databases — connected portable layers out of seven.
- Missing and Changed — current exceptions requiring operator review.
- The ring refreshes every five seconds and after relevant workflow completion.

A score must be explainable

Select Health DNA to see the checks behind the ring. A green 100% state is computed from current project data; it is not a fixed illustration.

14. Reports, history and diagnostics

Reports DNA creates operator-ready evidence; History DNA and diagnostics retain the technical detail needed for handoff and support.

Report formats

Format	Typical use
PDF	Approved human-readable project, health or operation report.
HTML	Portable local review with searchable structured sections.
CSV	Spreadsheet analysis and interchange.
JSON	Machine-readable automation and archival evidence.

Diagnostic report

- Application/software version and operating-system information.
- Module, structured stack trace and bounded recent logs.
- Portable database state and integrity result.
- Active/background task status and release-manifest identity.
- No plaintext password or complete serial number.

Support package

Generate diagnostics from Quality & Release, review it for production-sensitive paths, then send it to support@realdepth.in with the project ID and exact workflow time.

15. Settings, database and performance

Settings is organized by General, Appearance, Projects, Rename, Scanner, Recovery, Clone, Reports, Performance, Database, Notifications, Keyboard Shortcuts and Advanced categories.

Appearance and accessibility

- Dark, Light or System theme; RealDepth Blue, Cyan, Teal, Violet or Amber accent.
- 80–160% font scaling, 16–32 px icon sizing and Expanded/Compact/Icons Only sidebar modes.
- High Contrast, keyboard navigation and accessibility names on primary controls.

Database maintenance

Tool	Safety behavior
Backup	Creates verified portable database copies.
Restore	Creates a safety backup, validates source and restores atomically.
Compact / Optimize	Reclaims database space and updates query planning.
Repair	Runs bounded repair only after verified backup.
Integrity Check	Read-only validation of all portable database layers.

Performance Engine

Startup, memory, CPU, database access, large-folder operations and background tasks are measured without blocking the editor. Scanning, rename, clone, recovery, health analysis and report generation execute through controlled background workers.

16. macOS menus and shortcuts

Production DNA installs native macOS File, Edit, View, Window and Help menus. Command is shown below; Qt may display Ctrl notation on non-macOS builds.

Action	Default shortcut
Create Project DNA	Command+N
Open Project	Command+O
Import / Smart Assign	Command+I
Scan Project	Command+Shift+S
Rename DNA	Command+Shift+R
Verified Clone DNA	Command+Shift+C
Recovery DNA	Command+Shift+E
Generate Report	Command+Shift+G
Undo / Redo	Command+Z / Command+Shift+Z
Search	Command+F
Run / Stop active workflow	Command+Return / Esc
Next / Previous panel	Command+Tab / Command+Shift+Tab
Dashboard ... Reports	Command+1 ... Command+9
Fit preview	F
Full screen	Control+Command+F

Customize a shortcut

Open Settings → Keyboard Shortcuts, select the action, enter a valid sequence and save. Conflicting or invalid sequences should be corrected before leaving Settings.

17. Licensing administration and module plans

RealDepth License Admin controls shared account plans and exact Production DNA entitlements. A common serial can unlock the full suite or a purchased subset without changing application architecture.

Entitlement family	Modules
Foundation	Project DNA, Workflow DNA, Library Explorer, Import & Scanner, Asset Intelligence, Smart Assign and Live Watch.
Identity	Rename DNA, Persistent Serial, History DNA, Undo DNA and Time Machine.
Storage	Recovery DNA and Verified Clone DNA.
Verification	Health DNA and Reports DNA.
Administration	Settings, Database, Quality & Release.
Full Suite	All current Production DNA modules under one plan feature.

Activation data

- The server validates user, license, plan, expiry, suspension/revocation and workstation device.
- The complete serial is not persisted locally.
- The activation token is encrypted with AES-GCM and bound to the current device identity.
- Existing RealDepth AI Studio Pro 26 identity/device data is reused for the common workstation seat.
- Plan changes take effect at the next online validation or when offline grace ends.

18. Troubleshooting

Symptom	Action
Workspace never opens	Complete sign-in, validate the serial and confirm the plan includes Production DNA.
Serial has no green tick	Check exact serial, internet access, account ownership, expiry and device-seat status.
Asset missing from layers	Run Import & Scan, clear the asset filter and review unreadable-file notifications.
Preview cannot decode	Confirm format support; use the identity view and verify in the native production application.
Physical disk not listed	Reconnect storage, confirm Disk Utility sees it, then reopen the picker.
Permission denied on /dev/rdisk	Grant approved Full Disk Access, reopen Production DNA and reselect the exact device.
Recovery candidate incomplete	Use a deeper mode, narrow signatures/filters and validate recovered media separately.
Database integrity fails	Stop workflows, make a backup and use Database Repair/Restore; do not edit SQLite files manually.
UI remains busy	Use Esc/Cancel, wait for the safe cancellation boundary, then generate diagnostics if it does not settle.

Never send credentials

Technical Support does not need your plaintext password or complete serial. Do not place credentials in screenshots, diagnostic archives, email or project notes.

19. Production release checklist



Before a production handoff, Quality & Release must validate both software and the current project. A signed bundle alone is not proof that a specific workflow or destination is ready.

Application release

- No placeholder/debug code, hardcoded paths, embedded credentials, unfinished UI or unused release resources.
- All unit, integration, regression, stress, compatibility and UI smoke checks pass.
- PyInstaller bundle builds, signs and passes deep strict code-sign verification.
- Splash → login → serial gate is visually verified in the packaged application.
- User Guide PDF, website screenshots, product page and release notes match the same version.
- Update package preserves settings, project databases, shared identity and recovery journals.

Project handoff

- Project Health checks explain the current ring value.
- All seven databases pass Integrity Check and have a recent verified backup.
- Rename, recovery and clone operations are complete with no active worker.
- Missing/changed asset exceptions are resolved or documented in Project Notes.
- Reports and diagnostic evidence are written to approved destination storage.

Support and legal

Technical Support

Email support@realdepth.in or open <https://realdepth.in/file-dna.php>. Include Production DNA version, macOS version, project ID, workflow module, operation time and a reviewed diagnostic report.

Data responsibility

Recovery success depends on source condition, filesystem reuse, media fragmentation and format structure. Always work from a preserved source and recover to separate storage. Validate restored media in the appropriate production application before delivery.

Trademarks and copyright

RealDepth, RealDepth Production DNA™, Workflow DNA™, Library Explorer™, Project DNA™, Rename DNA™, Recovery DNA™, Clone DNA™ and related marks are product identifiers of RealDepth Technologies Pvt. Ltd. Third-party file formats and product names remain the property of their respective owners.



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