

PRO MULTI RADIO V47

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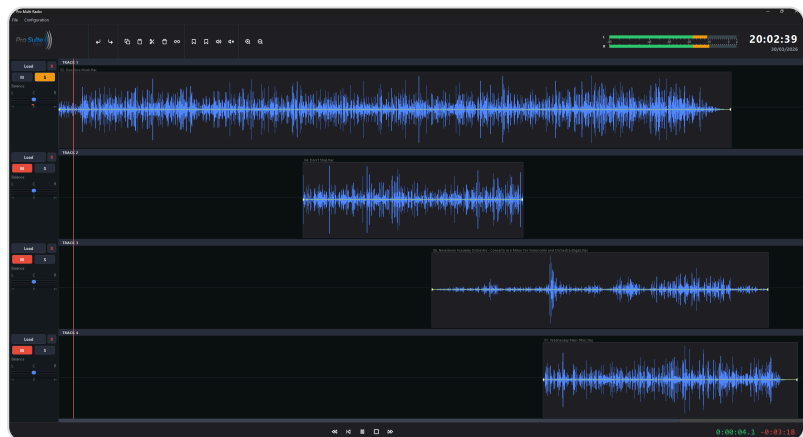
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V 47.0

USER MANUAL

Pro Multi Radio V47 is a digital audio workstation (DAW) optimized and designed specifically for the professional radio environment. It enables intuitive multitrack editing, audio clip management, and the export of final mixes with high fidelity.

Built on a low-latency audio engine (PySide6 / Sounddevice / Scipy), the program guarantees unwavering precision in wave manipulation, clip operations without loss of synchronization, and essential tools like automatic silence trimming (Trim) and Envelope Volume management.



Pro Multi Radio V47 Main Interface: Real-Time Multitrack Editing

SYSTEM REQUIREMENTS

The processing engine and in-memory manipulation of large files require capable hardware. The following specifications are designed to ensure total stability for **24 × 7 × 365 broadcasting and operation.**

MINIMUM REQUIREMENTS (STANDARD EDITING)

- **CPU:** Intel Core i3 / AMD Ryzen 3 (Quad-Core at 2.5 GHz or higher).
- **RAM Memory:** 8 GB (For projects up to 2-3 tracks of medium duration).
- **Storage:** 256 GB SSD (Solid State Drive) essential.
- **Operating System:** Windows 10 / 11 64-bit.
- **Audio Card:** WDM / ASIO compatible (Updated drivers).

RECOMMENDED REQUIREMENTS (24/7/365 OPERATION & EXTREME EDITING)

- **CPU:** Intel Core i5 / AMD Ryzen 5 or higher (Preferably six cores for smooth wave calculation without general audio dropouts).
- **RAM Memory:** 16 GB DDR4/DDR5 (Allows full clip loading in memory with 0 latency in destructive editing and Ripple Editing tools).
- **Storage:** 512 GB or more on exclusive M.2 NVMe drive for audio (Avoid mechanical HDD drives).
- **Operating System:** Windows 10 / 11 Pro 64-bit, properly optimized by eliminating unnecessary background tasks.

- **Resilience:** UPS (Uninterruptible Power Supply) essential for electrical protection against micro-cuts, ensuring uninterrupted operation.
- **Hardware Security:** Stable USB 2.0/3.0 ports for the Security License Dongle.

INSTALLATION & SECURITY

The **Pro Multi Radio V47** software incorporates a hardware security system based on an authorized USB Dongle, preventing unauthorized use or piracy.

- **Hardware Validation (Dongle):** Upon launching the software, the wmi module inspects mounted USB drives verifying if the Serial Number matches the official license. If not present, editing and saving will be blocked.
- **Folder Structure:** The software generates its operational logs transparently in the secure per-user path: C:\Users\YourUser\AppData\Local\Pro Multi Radio\Logs, for monitoring without invading administrator privileges.

USER INTERFACE

Designed with a dark and professional Digital Console aesthetic. The neutral tones prevent eye strain during night shifts, while visual accents (Accent Blue) direct attention to the active track.

- **Top Bar (Transport & Menus):** Standard control buttons, general sound output device selector, and Json dump/export menu.

- **Central Timecode:** Dual indicators in Console format (HH:MM:SS:FF), vital for synchronization in the radio grid.
- **Tracks and Controls:** Four channels (Track 1 to 4). Each track header includes Mute, exclusive Solo, virtual Pan potentiometer, and analytical VU meter (calibrated with offset for better visualization on weak signals).
- **Timeline Head (Playhead):** The dark red playback head, draggable to any position and the central core for live Audio trimming.

EDITING & WORKFLOW

Pro Multi Radio V47 includes mathematical and numerical modules for instantaneous operations on the canvas.

- **Clip Control (Envelopes):** Clips have dynamic volume points built into the wave, allowing control of *Fades* (Fade In and Fade Out) by dragging the envelope (Line #98C379).
- **Ripple Editing and Range Deletion:** By selecting a time range and invoking deletion, the software removes that sound fragment, chaining (shifting to the left) all subsequent clips, maintaining continuity without jumps.
- **Split/Cut at Playhead:** Cuts a passage instantly by positioning the Playhead and isolating segments separately without forced resampling.
- **Silence Trim V47 (Density Basic AI):** New improved *non-blocking* algorithm. Eliminates silences at the beginning and end of your recording based on a root mean square of background noise, applying an intelligent mathematical ratio. Perfect for unedited voiceovers.

AUDIO ENGINE & EXPORT

The internal AudioEngine mixes the 4 tracks in unison, maintaining the stereo balance of the panning in a balanced final output.

- **Format Compatibility:** Recognizes standard formats, performing Resampling via *Scipy* to native 44100Hz transparently if the file does not match.
- **VU Meter Calibration:** Customized by an internal +8.0 dB threshold in the code, facilitating visual analysis ("*signal makeup*") on measuring bars so the broadcaster has evident visual feedback even at low listening volume.
- **Mix Export:** Renders the mix of all inserted clips respecting Mute/Solo. It works via a blocking memory dump by "Chunks" or Fragments (10-second blocks) greatly minimizing RAM impact, useful when exporting hours-long radio sessions.

TROUBLESHOOTING

To maintain the 24/7/365 standard, check the logs at `AppData\Local\Pro Multi Radio`.

- **AudioEngine won't start:** Go to menu "Options > Select Sound Device" and verify it's designated correctly. Overriding the primary WASAPI is common if another broadcast suite takes it in "Exclusive Mode".
- **"Dongle Missing" Errors:** Disable USB selective suspend in Windows advanced power options, as it may temporarily power off the adapter simulating its disconnection.