ESION studio

(Media Composer Extension)

USER GUIDE

(Windows and Mac)

An Acclaim Audio product

Version: 2601

Table of Contents

Thank you for purchasing ESION studio (Avid Media Composer Extension)

To get the most out of your new Acclaim Audio software, please take a moment to read this user guide.

Introduction

ESION, Enterprise- Grade Audio Consistency for Video Teams

Problem: In most enterprise video departments, audio proficiency varies widely, especially when it comes to dialogue. Editors often spend excessive time on audio, detracting from core tasks like editing and color correction. This inefficiency drives up costs and results in inconsistent sound quality, ultimately compromising brand integrity and production value.

Solution: ESION transforms this landscape by leveling the playing field. It empowers every editor—regardless of skill level—to produce content with consistent, professional-grade sound, ensuring your department delivers unified, award-winning audio across all projects.

Product Overview

ESION Studio Extension is a cutting-edge plugin for Avid Media Composer, purpose-built for dialogue, voice overs and production microphones to supercharge editorial workflows in high-pressure post-production environments. Whether you're cutting a feature film, crafting a docuseries, or delivering episodic content, ESION Studio brings AI-powered automation directly into your timeline—eliminating the need for clip gain adjustments, keyframe creation, and the audio mixer tool.

Why ESION Studio Extension?

Because your time is better spent creating—not clicking. 🎞 Deep Avid Integration. Built on the Avid Media Composer Extension SDK, ESION Studio works natively within the timeline—no switching apps, no workflow disruptions.

Secure and Private: The ESION AI algorithms and audio processing is local using your computer's resources, not on a remote server or cloud.

Important note: For the best results, review all the Best Practices sections.
Suggested Order of Operation
Best Practices for Preparing Audio for ESION
Best Practices: Don't Edit Out the Noise
Best Practices: Organize Audio by Scene or Location

Components

ESION studio bundles all of Acclaim Audio's AI tools into one unified application:

- ESION leveler

- ESION restore

- ESION editor

- ESION meter

🔍 Key Features:

-Smart Volume Leveling: Automatically balance inconsistent dialogue levels for a smooth, professional sound.

-Loudness Normalization: Meet broadcast standards (EBU R128, ATSC A/85, etc.) with precision loudness processing.

-Advanced Noise Reduction: Eliminate background noise, hums, hisses, and ambient distractions without compromising vocal clarity.

-Filler Word Removal: Intelligently detect and remove "uhs," "ums," and other verbal clutter to tighten your edits.

-AI-Powered Transcription: Generate accurate, timestamped transcripts for subtitles, scripts, or accessibility.

-Delivery-Ready Output: Export files that meet industry-standard Tech Specs and Delivery Guidelines—no extra formatting needed.

Channel formats supported:
- Mono
- Stereo
- Multi-channel (up to 24 channels)

Note: Surround sound formats are not supported

Quick Start Guide

1. To open the Extension, within Media Composer select the **Tools menu** and within this drop down select **ESION studio**.

When the Extension first opens you may see a slight hesitation as the Extension connects to the server. Once the connection is established the Status lamp will be Green, the stage lights will be on, and the Extension will populate.

Note: The Extension can be docked anywhere within the Media Composer workspace, or it can remain floating,
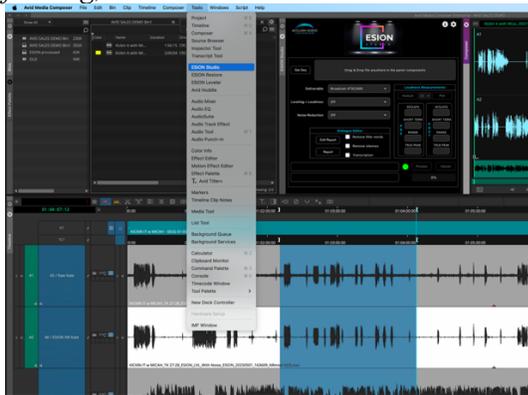
🔄 Basic Workflow: Enhancing Audio in Media Composer with ESION Studio Extension

The ESION Studio Extension is designed to streamline audio enhancement directly within Avid Media Composer. Follow this basic workflow to analyze, enhance, and export your audio with minimal effort.

Step 1: Import Your Media

- Open your Media Composer project.
- Import or open the sequence containing the audio you want to enhance.
- Ensure the audio tracks are properly linked and visible in the timeline.

Step 2: Launch the ESION Studio Extension

- Navigate to the **Tools** menu and select **ESION Studio Extension**.
- The Extension will open docked within the Media Composer interface.

Step 3: Select a Segment of Audio
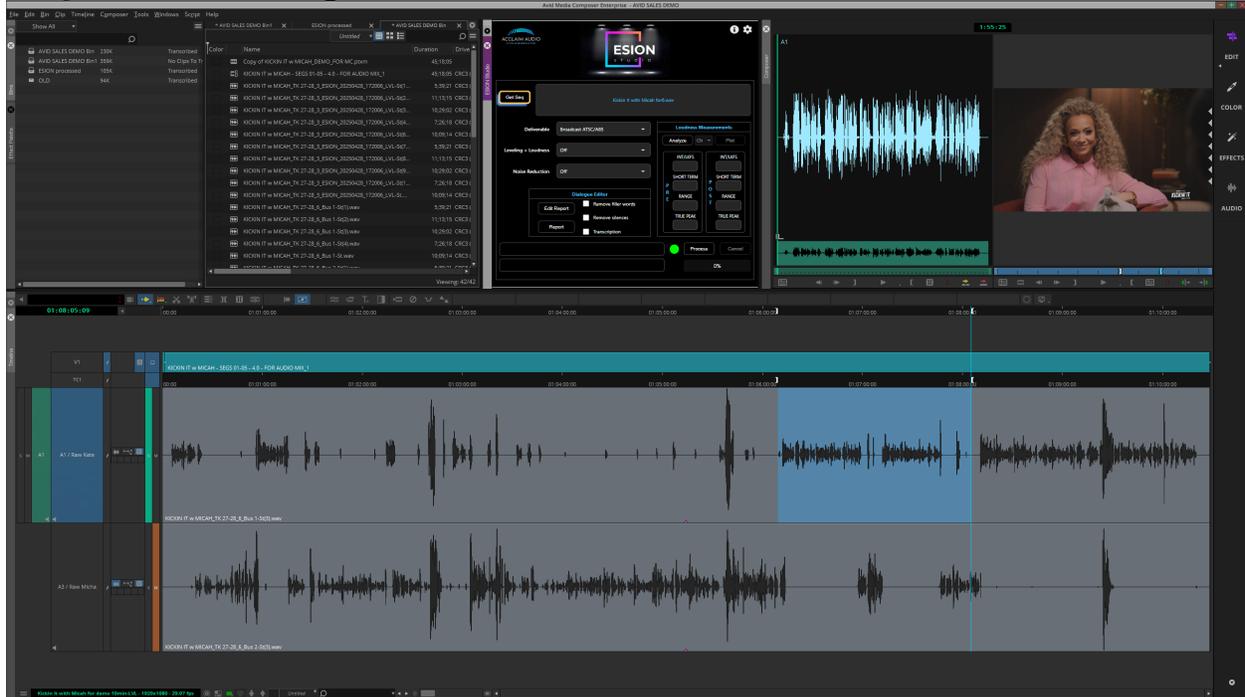
Before processing audio with ESION Studio Extension, select a segment of audio (at least **5 seconds** long) using Media Composer's **Mark In/Out** function:

1. In the timeline, position the play-head at the start of the desired audio segment.
2. Press **Mark In** (I key) to set the beginning.
3. Move the play-head to the end of the segment (minimum 5 seconds later).
4. Press **Mark Out** (O key) to set the end.
5. Press the **Get Sequence** button in ESION studio Extension.
6. The selected range will now be active for processing in ESION Studio Extension.

⚠️ **Note:** If the selection is shorter than 4 seconds, the Extension will not initiate processing. Ensure your selection meets the minimum duration requirement.

Alternative Workflow: Drag and Drop into ESION Studio Extension

In addition to using the timeline selection method, you can also drag and drop media directly into the ESION Studio Extension for processing.

✅ Supported Media Types:

- Sequences
- Sub-clips
- Audio files

Simply drag items from any bin in Media Composer and drop them into the ESION Studio Extension interface.

⚠️ Important Notes:

- If you drag a **sequence:**
  - If the sequence is not loaded into the timeline all audio tracks within that sequence will be processed.
  - If the sequence is loaded into the timeline, then only active tracks will be processed. And furthermore, if In/Out points are marked then only those areas will be processed
- The **entire duration** of the sequence will be analyzed unless you've set **Mark In** and **Mark Out** points beforehand.
- Ensure your media is properly prepared before dragging to avoid unintended processing of unwanted sections.

💡 **Tip:** Use Mark In/Out to limit processing to specific segments, especially when working with longer sequences.

Step 4: Apply ESION Enhancements

- Pick the AI audio tools you want processed.
  - **Noise Reduction**
  - **Leveling + Loudness**
  - **Dialogue Edit**
- Press the **Process button** to start ESION

*Note: The Cancel button will interrupt any file in process*

Step 5: Replace Original Audio with ESION-Processed File

Once ESION processing is complete, Media Composer will prompt you with the **Audio Start Time Options** dialog. This allows you to align the processed audio with your sequence's timecode.

☑️ Follow these steps to replace the original audio:

1. **Set the Timecode Frame Rate**
   o Media Composer will display the **Audio Start Time Options** dialog.
   o Select the appropriate **timecode frame rate** that matches your sequence (e.g., **29.97 fps**, **24 fps**, etc.).
   o Confirm the starting timecode to ensure the audio aligns correctly with your timeline.
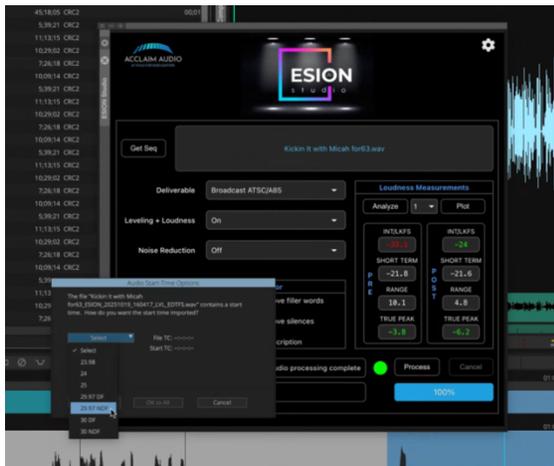
2. **Access the ESION Processed Bin**
   o Media Composer automatically creates a bin named **ESION Processed**.
   o Open this bin from the Project window.
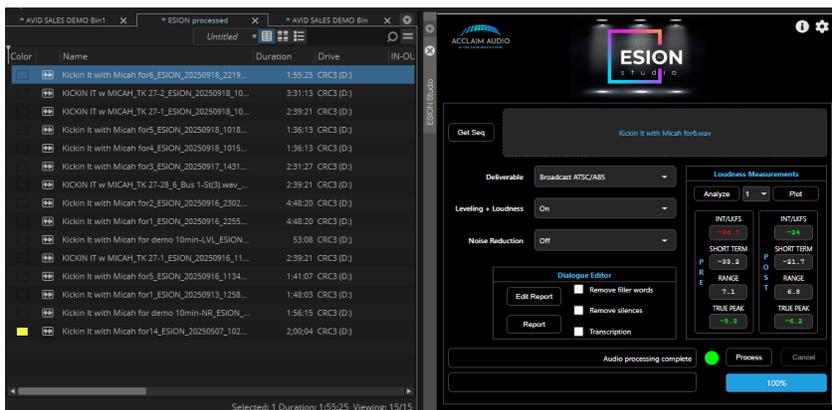
3. **Load the Enhanced Audio**
   - o Locate the ESION-processed WAV file (typically listed first).
   - o Double-click the file to load it into the **Source Monitor**.
4. **Perform an Overwrite Edit**
   - o With the ESION-processed audio loaded in the Source Monitor, and the same Mark In and Mark Out points set as the original clip:
     - o Press the **B** key or click the Overwrite Edit button to insert the enhanced audio into the timeline.
   - o You can choose to overwrite the original audio track or place the enhanced audio on a new track for comparison.

Before Overwrite Edit
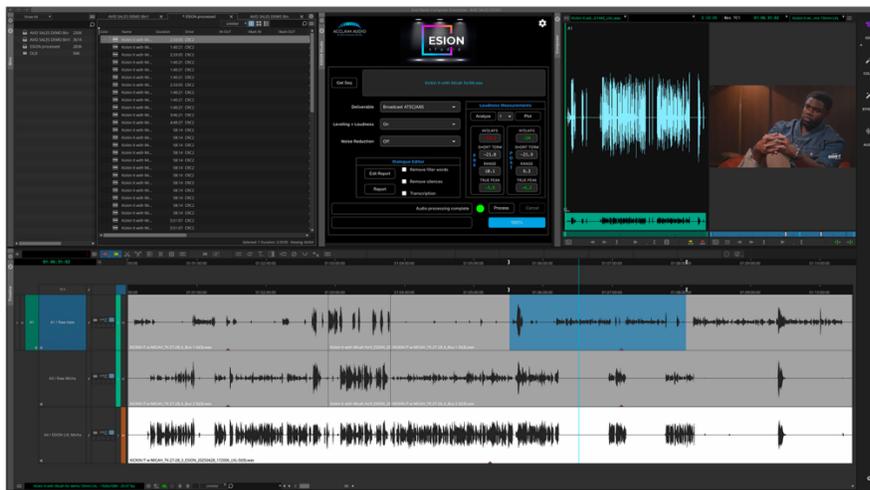
After Overwrite Edit
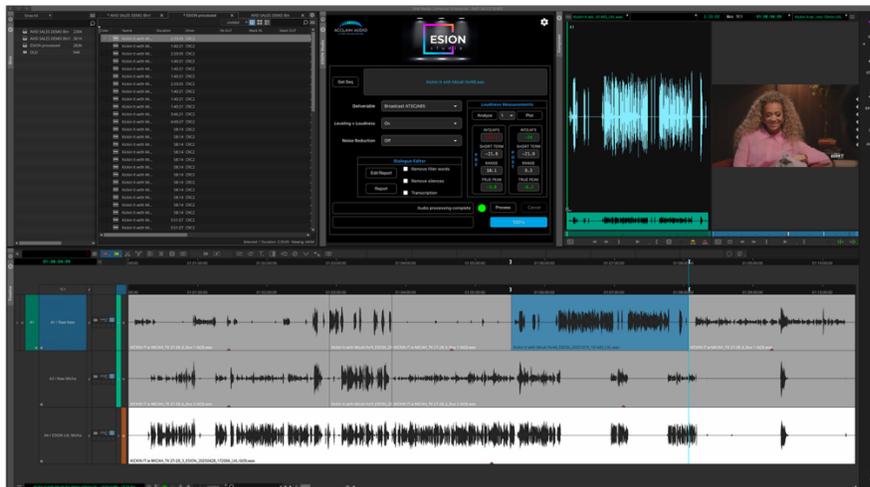
💡 **Tip:** Placing the enhanced audio on a new track allows you to toggle between the original and processed versions for easy A/B comparison.

Interface

1 **Get Seq** (sequence). use this button to automatically send a segment/sub-clip containing IN and OUT POINTS to ESION for processing

2 **Drag and Drop** - use this area to manually drag sequences, sub-clips or supported files from BINS in media composer for processing in ESION

3   **Deliverable** - select the content provider/platform you're delivering to

4   **Leveling +Loudness** - turn this on to automatically balance inconsistent volume levels and meet loudness standards

5   **Noise Reduction -** select the strength of noise reduction applied. (lite, medium, maximum
etc..)

6   **Dialogue Editor** - Check these boxes "on" for automatic removal of filler words, silence removal and/or speech to text transcription and reports.

7   **Loudness Measurements**:
- o Analyze - press this button to analyze audio loudness
- o Number use this menu to pick which audio channel to view measurements
- o Plot, press this button to see a plot over time of the pre and post processing loudness measurements

8   **Preferences**- The gear icon opens the user preferences screen which includes options for processing and Rev AI

Controls

Get Seq

The **Get Seq** option streamlines the drag-and-drop workflow and minimizes errors during audio processing.

What It Does:

- Automatically locates the sequence(s) associated with the activated tracks.
- Exports the audio between the marked In/Out points.
- Displays the resulting file name in the **ESION PROCESSED BIN**.

Note:
*If multiple tracks are selected, **Get Seq** will generate a single multi-track audio file and place it in the ESION PROCESSED BIN.*

How to Use:

Refer to the following sections within the Quick Start of this manual
 Step 3: Select a Segment of Audio
 Step 4: Apply Enhancements
 Step 5: Replace Original Audio with ESION-Processed File

Drag/Drop

This option is useful if you want to send the entire duration of the track(s) to ESION or if you know where the sequence is in the bin.

Tip: If no In/Out points are selected the entire track(s) will be exported.

Note: If multiple tracks are selected Drag/Drop will create a single multi-track audio file within the Drag/Drop area.

How to Use:

Refer to the following sections within the Quick Start of this manual
 Alternative Workflow: Drag and Drop into ESION Studio Extension
 Step 4: Apply Enhancements
 Step 5: Replace Original Audio with ESION-Processed File

Deliverable

Overview

The ESION Studio Extension includes a comprehensive **Deliverables Library** featuring top industry audio specifications. This allows editors to focus on creative content without needing to memorize technical requirements for each platform or provider.

When a deliverable is selected and the Leveling + Loudness is ON, ESION automatically applies the correct **leveling and loudness processing**, ensuring your audio conforms to the chosen specification.

How Deliverables Work

Each **Deliverable** corresponds to a specific provider or platform and includes a set of audio specifications such as:

- **Loudness Target** (e.g., -24 LKFS)
- **True Peak Limit** (e.g., -2 dBFS)
- **Bit Depth** (e.g., 24-bit)
- **Sample Rate** (e.g., 48 kHz)
- **Audio Codec & Channel Format**

Example:
Selecting **Broadcast / ATSC / A85** applies the following settings:

- Loudness: -24 LKFS
- True Peak: -2 dBFS
- Format: 24-bit WAV, 48 kHz

Deliverable Categories

Deliverables are organized into two main structures:

1. Content Type

- Film
- Television
- Streaming
- Radio
- Podcast
- Social Media
- Other

2. Specification Type

- **Generic Specifications**: Not tied to a specific provider; ideal when a specific platform is not listed.
- **Network-Specific Specifications**: Tailored to the requirements of individual broadcasters or platforms.

Generic Deliverables

These are commonly used standards that can be applied when a specific provider is not available:

- **Broadcast ATSC / A85**
- **EBU R128 LUFS -18**
- **Film**
- **Podcast LUFS -16**
- **Podcast LUFS -20**

Leveling + Loudness

BEFORE

AFTER
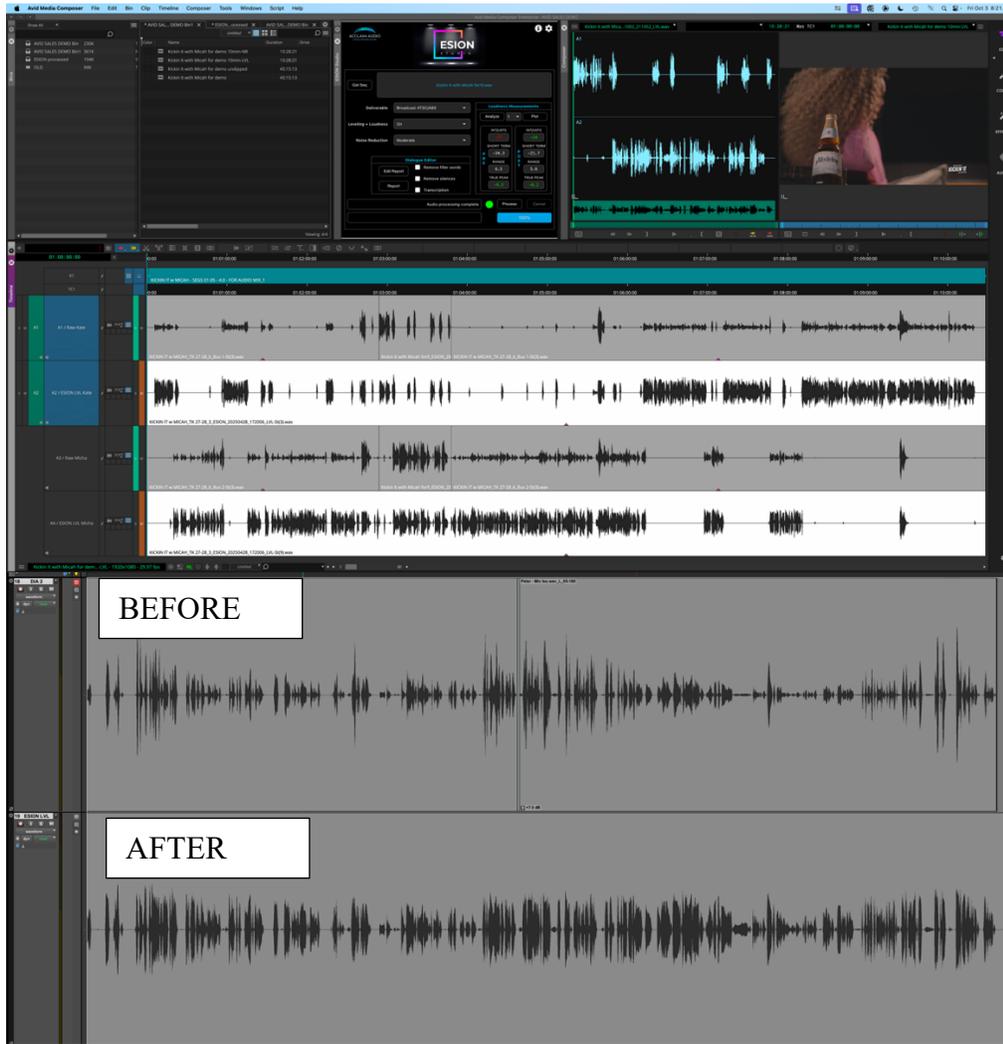
⚡ What ESION Leveler + Loudness Replaces

ESION uses AI to eliminate several time-consuming audio tasks in **Media Composer**, streamlining your workflow and improving consistency.

✅ Replaces Manual Tools:

- 🎚 **Clip Gain Adjustments**
  No more manually raising or lowering clip levels.
- 🎧 **Volume Keyframe Creation**
  ESION intelligently automates volume changes—no need to draw keyframes.
- 🎛 **Audio Mixer Tool**
  Skip the mixer Extension—ESION handles balancing for you.

✅ Replaces Common Plugins:

- 🧰 **Compressors & Limiters**
  ESION's built-in dynamic processors automatically apply compression and limiting, removing the need for third-party plugins.

🔊 How ESION Leveling and Loudness Work

ESION automatically optimizes your audio to meet the loudness and dynamic range requirements of your selected deliverable. Here's how it works:

1. 🎯 Deliverable-Based Targeting

ESION analyzes your audio and adjusts it to match the loudness specifications of your chosen deliverable (e.g., broadcast, streaming, social media). This ensures compliance with industry standards—without manual tweaking.

2. 🎚 Intelligent Volume Leveling

Louder sections are gently reduced, and quieter parts are boosted—at just the right moments. This mimics the effect of manual clip gain or volume keyframing in Media Composer, but without the time-consuming effort.

3. ⚙ Smart Dynamics Processing

ESION's built-in compressors, limiters, and expanders automatically handle the fine-tuning. You don't need to adjust attack, release, or threshold settings—ESION does it all for you, saving time while maintaining professional quality.

🏁 Save the Best for Last: Order of Operation

When should you use ESION Leveler + Loudness?
Always last. Just like prepping audio for a post-production mixer, ESION should be the final step in your audio workflow.

[Edit Dialogue] → [Add EQ] → ✅*[ESION Leveler + Loudness]*

🧭 Suggested Order of Operation

To get the best results from **ESION Leveler + Loudness**, follow this recommended workflow:

1. ✂️ Edit Dialogue First

- Complete all dialogue editing before sending audio to ESION.
- **Important:** The current version of the Avid SDK does **not** allow direct access to the timeline. This means:
    - All audio sent to ESION is automatically **rendered or flattened** to a **24-bit / 48kHz WAV file**.
    - **Handles, fades, and transitions will be baked into the file** and cannot be changed afterward.
- ✅ **Pro Tip:** Keep a copy of the original, unprocessed audio track (hidden or inactive) in case you need to revise edits or fades later.

2. 🎛️ Apply EQ Where Needed

- Add **equalization (EQ)** to individual tracks as necessary
- **Note:** ESION does **not** currently apply EQ. These features are planned for a future release.
- 🚫 **Do Not Use:** Compressors, limiters, or other dynamic processors at this stage. ESION handles all dynamic processing automatically.

3. 🚀 Send Audio to ESION

- Once editing and EQ are complete, send your audio tracks to ESION for **automated leveling and loudness correction**.
- ESION will intelligently balance levels and apply compression, limiting, and expansion—no manual adjustments required.

✅ Best Practices for Preparing Audio for ESION

Follow these guidelines to ensure optimal results and faster processing when using **ESION Leveler + Loudness**:

1. 🧹 Remove Duplicate MIC Sources
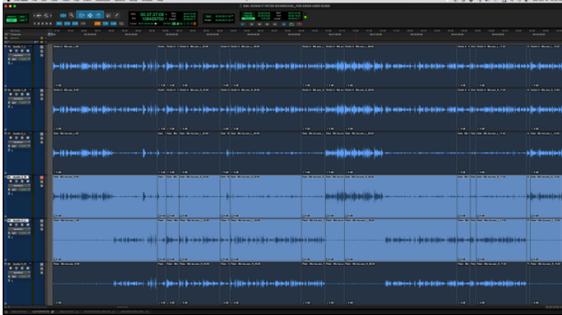
- Many production sound recorders create **duplicate audio tracks** for backup or split mono sources into Left and Right channels.
- **Before sending to ESION**, remove any redundant MIC tracks to:
 - o Improve audio clarity
  - o Reduce processing time

2. 🎤 Don't Mix LAVs and Booms

- If both **Lavalier (LAV)** and **Boom** microphones are recorded, **choose one**—not both.
- Mixing them can cause phase issues and inconsistent sound quality.

3. 🎚 Keep MICs on Separate Tracks

- Assign **each speaker's microphone to its own audio track**.
- Avoid combining multiple MIC sources on a single track to maintain clarity and separation.

4. 🚫 Eliminate MIC Bleed
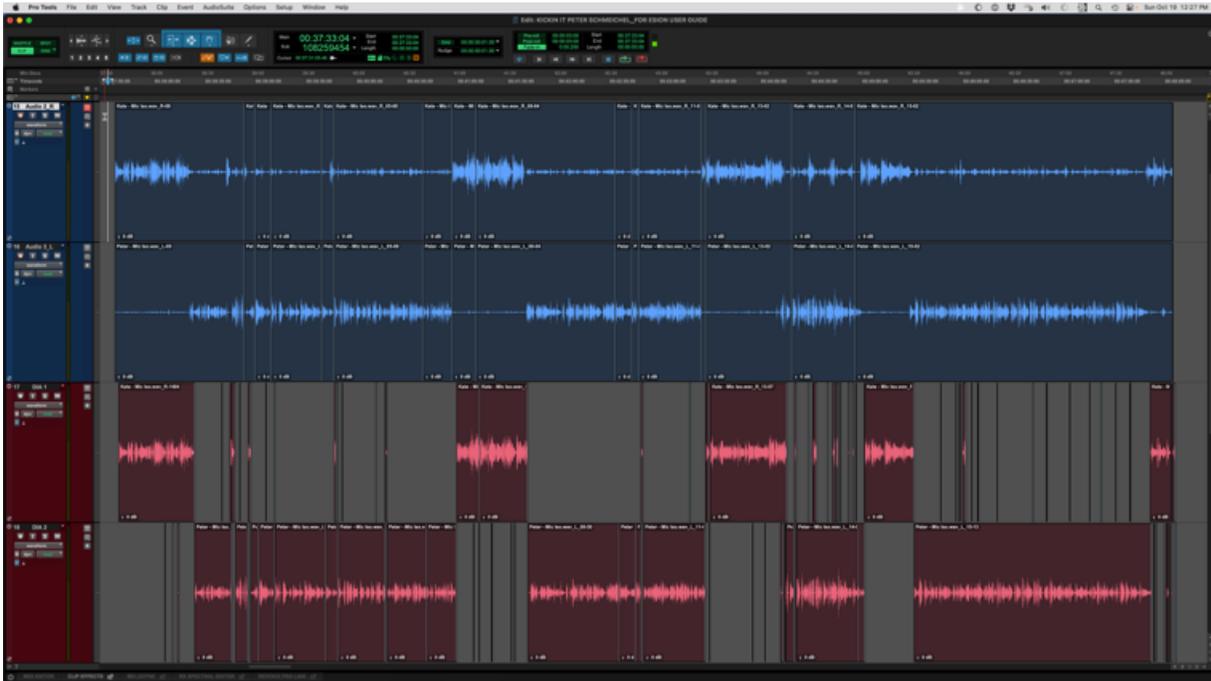
- **Cut out MIC bleed** wherever possible, especially when multiple mics capture the same source.
- MIC bleed can cause:
    - **Phase cancellation**
    - **Thin or weak audio**
    - **Loss of low-end or "punch"**
- 🔧 *Note:* ESION currently cannot detect or correct MIC bleed automatically, but this feature is in development.

Noise Reduction
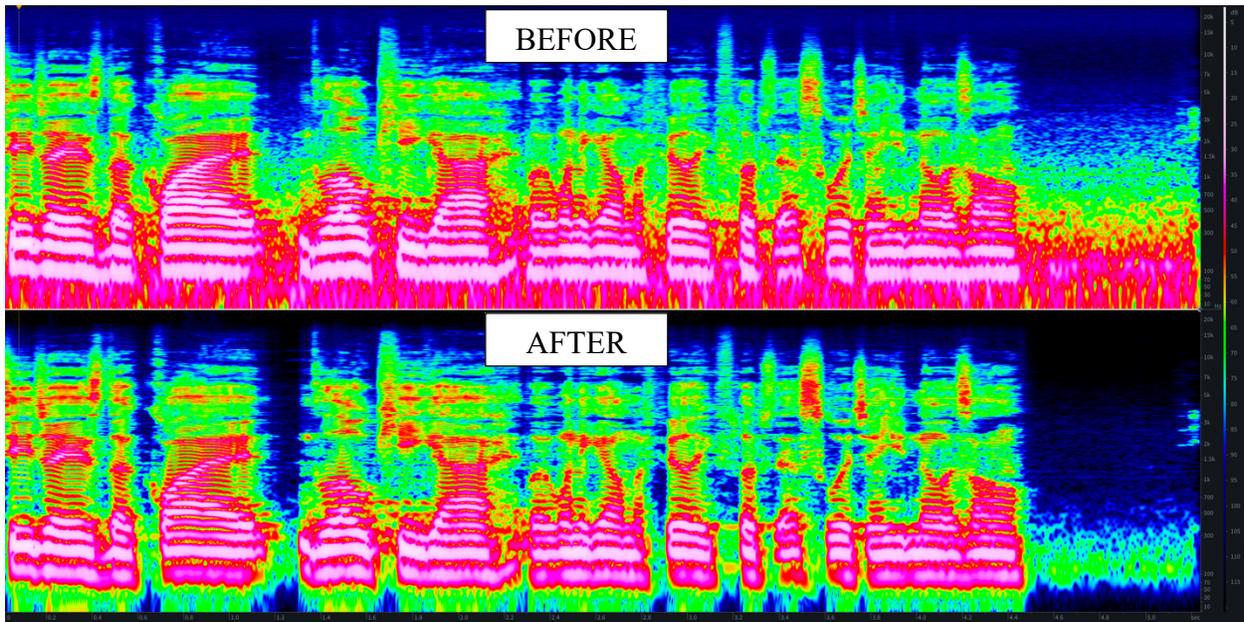
🔊 AI-Powered Noise Reduction

ESION features **high-quality, AI-driven noise reduction** that adapts to changing noise environments—saving you time and delivering exceptional audio clarity.

🧠 Smarter Than Traditional Plugins

Unlike most noise reduction tools that:

- Only reduce noise during **non-speech** segments
- Often introduce **choppy or unnatural artifacts**

ESION goes further by:

- Reducing noise during **both speech and non-speech**
- Maintaining a **transparent, artifact-free sound**
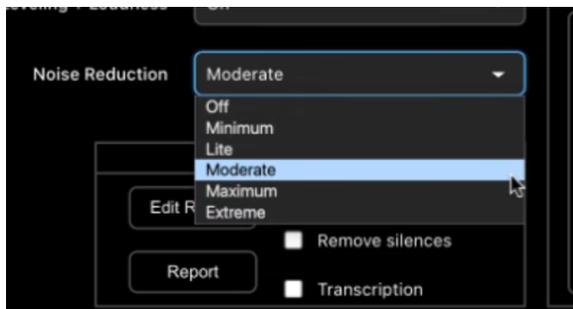- Adapting to **new and evolving noise profiles** automatically

🎧 The Result?

A smoother, more natural-sounding mix—without the need for manual tweaking or third-party plugins.

Time domain view of noise reduction
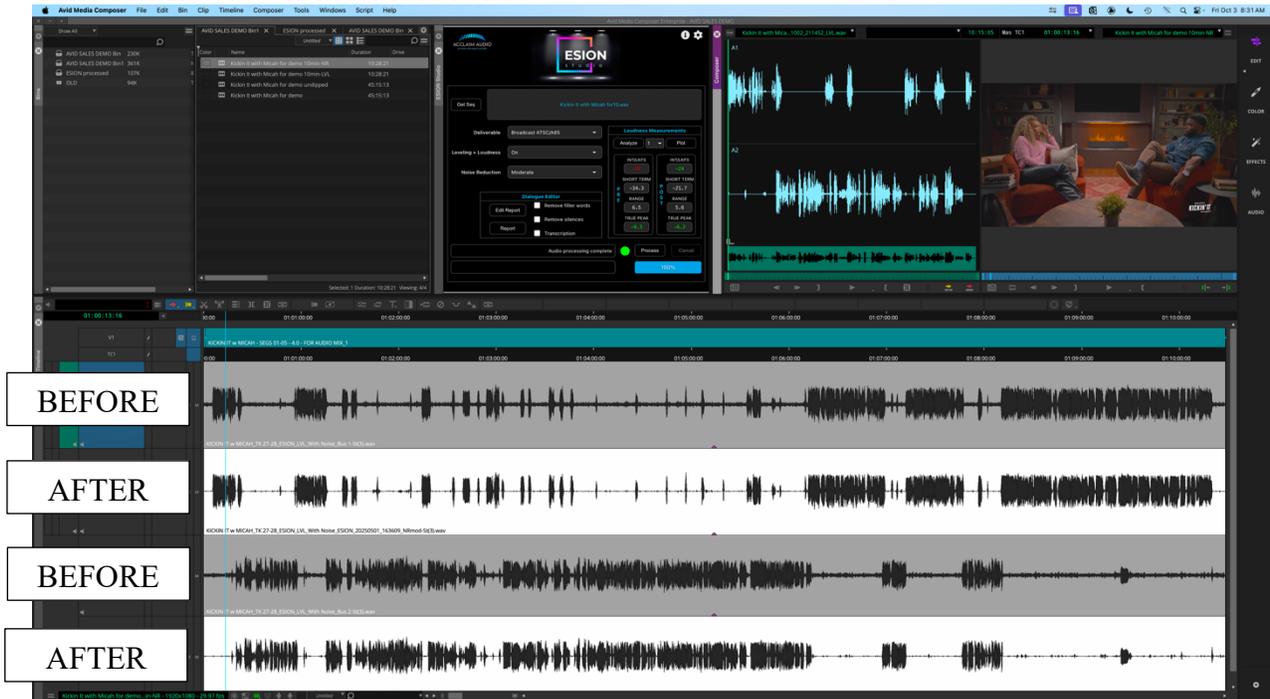
ESION Studio provides five different levels of noise reduction from the dropdown menu.

Each level provides the user with increasing amounts of noise reduction ranging from approximately 2dB up to 20dB. We recommend starting with either Lite or Moderate and then if those don't provide the desired result, adjust either up or down accordingly. The default noise reduction level is Off.

🔪 Best Practices: Don't Edit Out the Noise

Let ESION do the heavy lifting — don't remove background noise manually**.**

🧠 How ESION Handles Noise

ESION uses a **Voice Activity Detector (VAD)** to distinguish between **speech** and **non-speech** (background noise). During non-speech segments, ESION automatically "learns" the noise profile and applies **adaptive noise reduction** only when needed.

✅ What You Should Do

- **Leave at least 5 frames** of non-speech (room tone or background noise) at the **beginning and end** of each clip or segment.
- This gives ESION enough data to accurately identify and reduce noise without affecting speech quality.

🚫 What to Avoid

- **Do not manually remove all background noise** before sending audio to ESION.

Non-speech removed (BAD)

Non-speech retained (GOOD!!)
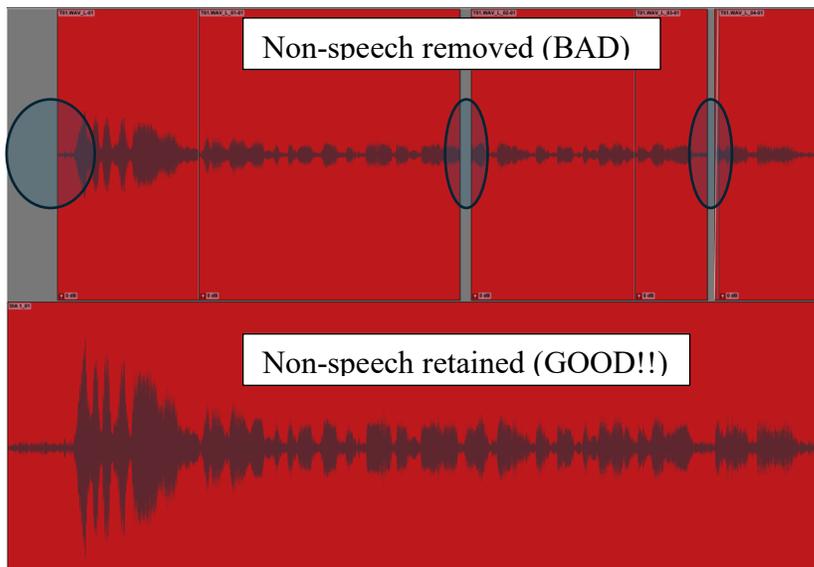
- **Avoid** using third-party noise reduction tools that may interfere with ESION's learning process
- **Do not add** artificial room tone or background noise that's not directly found in the audio before sending to ESION. This can be added after ESION processing if you would like.

📁 Best Practices: Organize Audio by Scene or Location

Organizing your audio tracks by **scene** or **location** helps streamline your workflow and improves ESION's noise reduction processing efficiency.

🎬 Recommended Track Layout (Example)

Track	MIC Type	Scene	Location
1–2	LAVs	Scene 1	House – Kitchen (Indoors)
3–4	LAVs	Scene 2	Park (Outdoors)
5–6	LAVs	Scene 3	Restaurant (Indoors)

✅ Why This Helps:

- Keeps your timeline organized and easy to navigate
- Speeds up ESION's processing by reducing unnecessary complexity
- Makes it easier to isolate and troubleshoot audio issues by context

Loudness Measurements
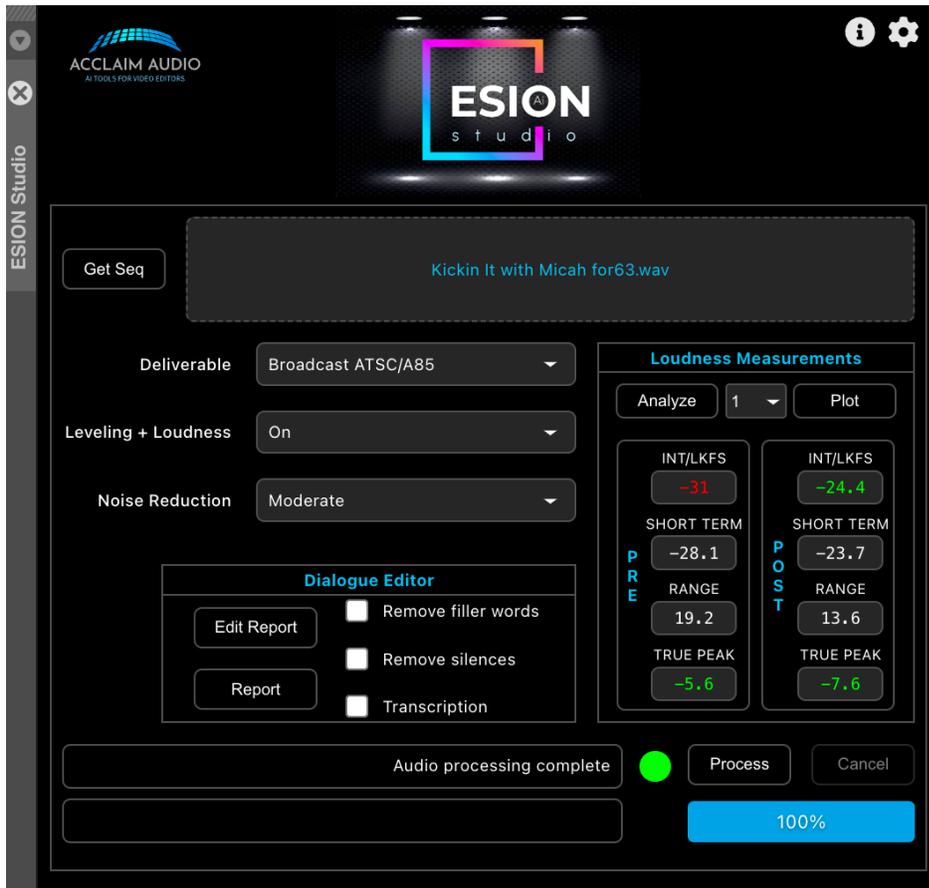
📊 Loudness Measurements Overview

ESION includes a **built-in loudness analyzer** that provides detailed insight into your audio's loudness characteristics, ensuring compliance with delivery standards.

📥 How to Analyze Loudness in ESION

To access ESION's **Loudness Analyzer**, simply send your audio using one of the methods.

🚀 Two Easy Ways to Send Audio:

1. **Get Seq Method** – Use the "Generate Sequence" option to prepare and send your audio.
2. **Drag and Drop** – Quickly drag your rendered audio sequence/file into the ESION Extension.

*Note: for further details refer to the **Quick Start** section.*

Once the audio is loaded, **press Analyze** and ESION will automatically measure the input file and display key loudness metrics, including:

🔍 Key Metrics Displayed:

- **Integrated Loudness (LUFS)** – Measures the overall loudness of the entire file.
- **Short-Term Max** – Shows the loudest short-term segment (typically over 3 seconds).
- **Loudness Range (LRA)** – Indicates the dynamic range of the audio.
- **True Peak** – Detects inter-sample peaks that may cause distortion during playback or encoding.

📈 Visualize Loudness Plot

By pressing the **"Plot"** button, you can view a **graphical timeline** of:

- **Integrated Loudness** over time
- **Short-Term Loudness** fluctuations

This allows you to:

- Identify problematic peaks or dips
- Visually confirm compliance with loudness targets
- Make informed decisions before final delivery

You can also click the **"Plot"** button to view a **graph of loudness over time**, showing both integrated and short-term loudness across the entire duration of the file.
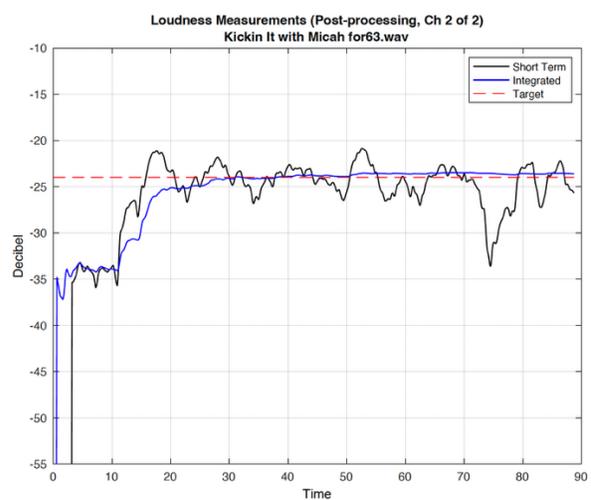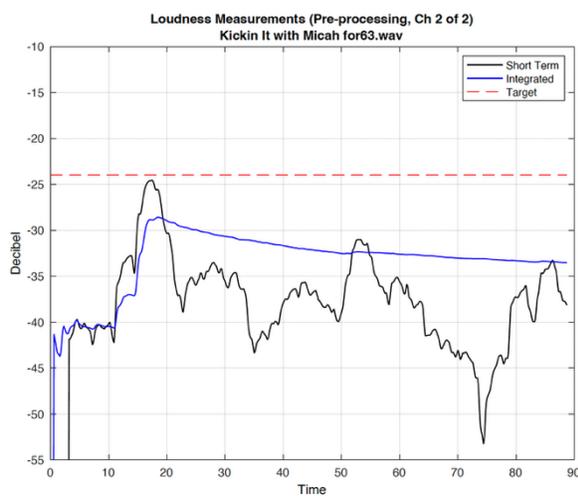
Dialogue Editor

Overview-

Research shows that speakers who avoid filler words sound more educated and persuasive.

ESION editor is an AI powered solution for cleaning up dialogue that makes the obvious edits for you by removing filler words, duplicate words, pauses and other verbal clutter. This produces a clean, edited audio file in moments, not hours. ESION editor also includes several detailed transcription reports which are explained in detail later in this manual.

**For details on how to use the Dialogue Editor refer to the Appendix.**

Preferences

Click the **gear icon** in the upper-right corner of the main Extension to open **Preferences**.

The Preferences Extension lets you set options for all future Studio processing. It includes:

- **File naming options**
- **ESION drive and main path**
- **Logging information**
- **Rev.ai API key** (required for transcription features)
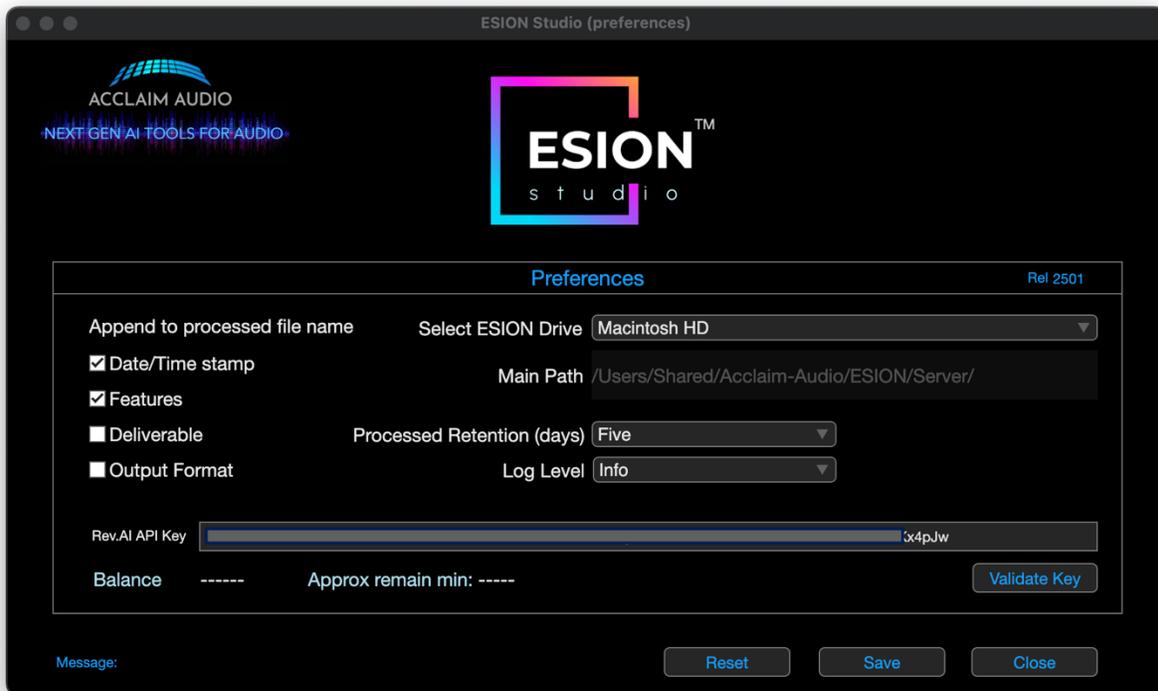
Append to Processed File Name

This section is used to customize what metadata is added to processed audio file names. This helps identify files when multiple features are applied. Options include:

- **Date/Time Stamp** – Adds date and time.
- **Features** – Adds short codes:
    - Leveling → `_LVL`
    - Noise Reduction → `_NR` + level (e.g., `_NRLt`)
    - Editor → `_EDT`
    - Filler words → `_EDTF`
    - Silences → `_EDTS`
    - Both → `_EDTFS`

Note: Transcription does not add an identifier.

- **Deliverable** – Adds deliverable type.
- **Output Format** – Adds output format (Edit Master = 24-bit WAV).

Select ESION Drive

ESION uses a 64-bit audio engine, so temporary files are large. By default, they are stored at:
`C:\ProgramData\Acclaim-Audio\ESION\server\Work`

To change location:

- Select a different drive in Preferences.
- ESION creates folders automatically and shows the new **Main Path**.

Tip: *Use an internal or always-available external drive.*
If the external drive is unavailable, ESION reverts to the system drive.

Processed Retention Days

Processed files are stored at:
`C:\ProgramData\Acclaim-Audio\ESION\server\Processed`
(or on the selected external drive under `Acclaim-Audio\ESION\server\Processed`).

Over time, these files can take up significant space. To manage this, you can set **Retention Days**—files older than this will be deleted automatically.

Options:

- None
- 1
- 5
- 15
- 30
- Never Delete

Tip: 5 days is recommended. It provides enough time to recover files without overloading your drive.

ESION Dialogue Editor Setup

ESION uses **Rev.ai** for transcription. These features require a Rev.ai account and API key.

Step 1: Create a Rev.ai Account

- Go to **Rev.ai** and click **Sign Up**.
- Enter your details and save your password securely.
- After login, select **Billing** from the left menu.

Step 2: Purchase Transcription Minutes

Rev.ai charges about **\$0.003 per minute** (~\$0.18 per hour).
To buy minutes:

1. Click **Billing**.
2. Add a credit card.
3. Click **Add More** next to Total Balance.
4. Enter minutes and confirm price.
5. Click **Purchase**.

Step 3: Generate Access Token

- In the left menu, select **Access Token**.
- Click **Generate** to create a token.

- Copy and store it securely.

Step 4: Add Token to ESION
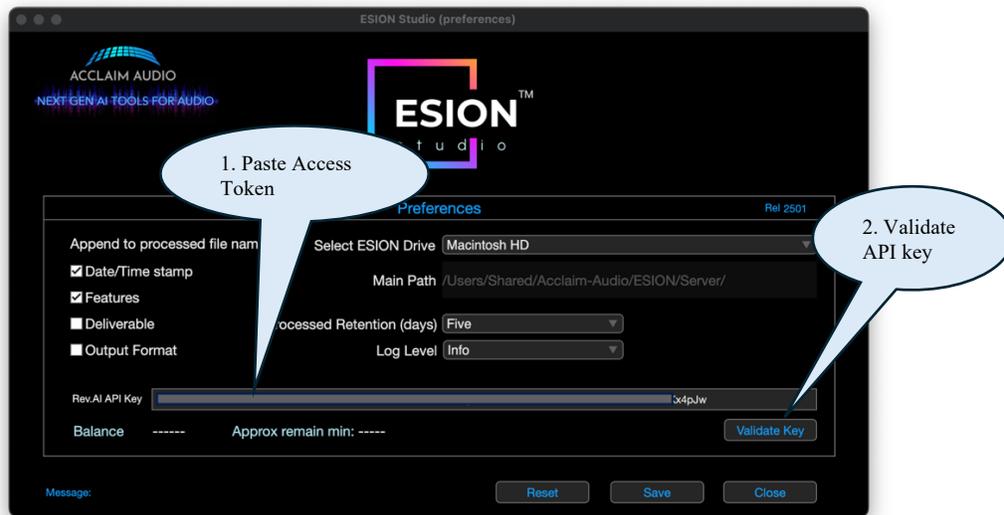
- In ESION Preferences, paste the token in **Rev.ai API Key**.
- Click **Validate Key**:
    - o **Green = Validated**
    - o **Red = Not Validated**

Once validated, the token will be masked for security.

Finalize Setup

You are now ready to use ESION Editor features in the Studio Extension.

Click **Close** to return to the main page. You can now enable:

- **Transcription**
- **Remove filler words**
- **Remove silences**

Congratulations! ESION Studio Editor is ready for use.

Note:

- *If you **regenerate your Access Token** at Rev.ai, copy the new token, paste it in ESION Preferences, and click **Validate Key**.*
- *Tokens must match for ESION Studio to communicate with Rev.ai.*

FAQ

1. Does ESION correctly level stereo audio files?

Yes. If the file metadata is set to **Stereo**, ESION will level each channel and ensure correct final stereo LUFS.

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2. How many audio tracks does ESION support?

ESION supports **1 to 24 tracks**.

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3. Does ESION support Surround sound formats?

No. Surround formats like **2.0, 5.1, 7.1** are not supported.
Supported formats:

- Mono
- Stereo
- Multi-channel (2–24 channels)

Note: If a 2-channel file does not have metadata set to Stereo, ESION treats it as multi-channel. Only files explicitly marked as Stereo are processed as true stereo.

---

4. Does ESION process multiple channels in parallel?

No. ESION processes channels **one at a time**. Future versions will support parallel processing.

---

5. Where are processed files stored within the ESION Processed Bin?

Processed files are saved as **.mxf** in the **AVID MEDIA FILES** folder.

---

6. Where are processed files stored within ESION?

Processed files are saved as **.mxf** in the **AVID MEDIA FILES** folder.

Troubleshooting

1. *My Get Seq does not export In/Out points. What's wrong?*

If ESION ignores your In/Out points, the most likely issue is that **Media Composer** did not correctly set up the `esion.xml` file under:
File → Settings → User Profile → Export
Refer to the **Install Guide** under the "Post Install" section.

---

2. *ESION Studio Extension is dark and shows a connection error. How do I fix this?*

ESION relies on a local server for processing. If the server stops or becomes stuck, follow these steps:

1. Click the **Retry** button.
2. If that fails, restart the server:
    - o Open **Task Manager**
    - o Find `ESIONstudio.exe`
    - o If found, right-click and select **End Task**
3. If not found:
    - o Open **File Explorer**
    - o Navigate to:
      `C:\ProgramData\ESIONserver\application`
    - o Start `ESIONserver.exe` (wait 15 seconds to initialize)
4. Return to Media Composer and click **Retry**.
5. If still not working:
    - o Reboot your system and restart Media Composer.
6. If the issue persists:
    - o Email **ESION@acclaim-audio.com** with your phone number for support.

---

3. *Noise Reduction Extreme causes artifacting or warbling. How do I fix this?*

Use a less aggressive setting. Try **Moderate**, **Lite**, or **Minimum** noise reduction.

---

4. *Noise Reduction did not reduce noise. Why?*

Leave at least **5 frames of non-speech (room tone or background noise)** at the start and end of each clip or segment.

Appendix 1 – Dialogue Editing

Overview

Research shows that speakers who avoid filler words sound more confident and persuasive. **ESION Editor** is an AI-powered solution that cleans up dialogue automatically by removing filler words, duplicate words, pauses, and other verbal clutter. This produces a polished audio file in **minutes, not hours**.

ESION also generates detailed transcription reports, explained later in this guide.
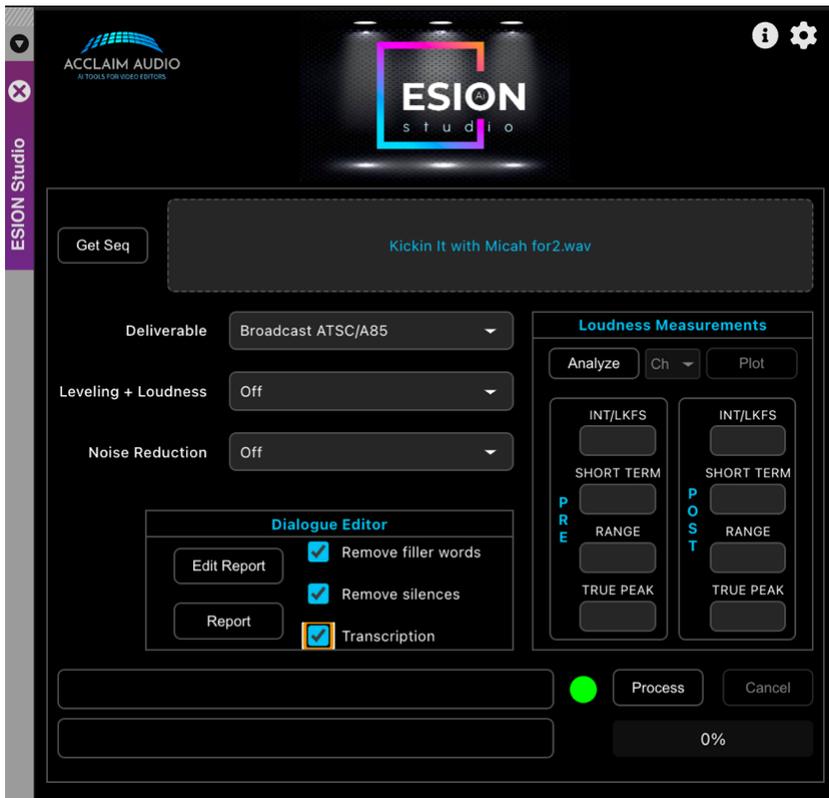
Remove Filler Words

Eliminate "ums," "uhs," "you know," and other common filler words without manual editing. ESION detects and removes these seamlessly, applying advanced fades and crossfades to ensure smooth transitions without clicks or pops.
Repeated words (stutters) and repeated phrases are also detected and removed for improved clarity.

Remove Silences

ESION identifies and removes excessive pauses and silences to improve dialogue flow and cadence.

Transcription

ESION integrates with **Rev.ai** for accurate, fast speech-to-text transcription.

- Output: **Text file (.txt)** with timecodes for each sentence.
- Includes: **Curated edit report** listing timecodes for every removed word, phrase, and silence.

Note: If a transcription file already exists, ESION will skip reprocessing to save time and cost. To force transcription, delete the existing `.txt` file in the input folder.

Dialogue Editor Reports

When ESION Editor features are used, reports are generated for reference. If all features are enabled, example files include:

- Transcription report
- Edit summary report
- Silence removal log

Name
23_InTheGame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Broadcast_Edit Master.wav
23_IntheGame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Report.json
23_InThegame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Report.txt
23_InTheGame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Transcription.srt
23_InTheGame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Transcription.txt
23_InTheGame_EP26_FOR ASR_ESION_20241019_105814_Transcription.srt
23_InTheGame_EP26_FOR ASR_ESION_20241019_105814_Transcription.txt

Below is a snippet from the Editor ..._EDTFS_Report.txt. This report provides details regarding every edit performed on the audio file. Each field is described in the table on the bottom of the report snippet.

Note: EDTFS: EDT – Editor, F – Filler words, S – Silences. The F and S correspond to the Editor options chosen, remove filler words and remove silences.

Note: A JSON file is also produced that matches the .txt file (below) but is in JSON format.

```
●  ●  ●    📄 23_InThegame_EP26_FOR ASR_ESION_20241019_105814_EDTFS_Report.txt — Edited

ESION Editor Report ——> 23_InTheGame_EP26_FOR ASR.wav

Action              Pattern     Beg Edit TC     End Edit TC       Edit Dur     New Edit TC
Remove Word             uh      0:00:00.420     0:00:00.960           0.54     0:00:00.420
Remove            *NonSpeech*   0:00:02.979     0:00:03.419           0.44     0:00:02.439
Remove Duplicate       sent     0:00:33.270     0:00:33.840           0.57     0:00:32.290
Remove            *NonSpeech*   0:00:37.520     0:00:38.120           0.60     0:00:35.969
Remove            *NonSpeech*   0:00:42.790     0:00:43.249           0.46     0:00:40.639
Remove Duplicate  welcome welcome 0:00:45.299   0:00:46.590           1.29     0:00:42.689
Remove Duplicate        And     0:00:56.910     0:00:57.269           0.36     0:00:53.009
Remove Duplicate          I     0:01:23.389     0:01:23.670           0.28     0:01:19.128
Remove Duplicate       from     0:01:25.260     0:01:25.498           0.24     0:01:20.718
Remove Word             uh      0:01:44.430     0:01:44.940           0.51     0:01:39.649
Remove Word             uh      0:01:47.009     0:01:47.160           0.15     0:01:41.719
Remove Word             uh      0:01:48.120     0:01:48.360           0.24     0:01:42.679
Remove Duplicate       full     0:01:53.459     0:01:53.640           0.18     0:01:47.778
Remove Word             uh      0:01:58.920     0:01:59.129           0.21     0:01:53.058
Remove            *NonSpeech*   0:02:00.920     0:02:01.240           0.32     0:01:54.849
Remove Duplicate       this     0:02:03.480     0:02:03.780           0.30     0:01:57.089
Remove Duplicate        who     0:02:14.879     0:02:15.240           0.36     0:02:08.188
Remove Word            Like     0:02:18.899     0:02:19.169           0.27     0:02:11.848
Remove Duplicate         he     0:02:19.498     0:02:19.739           0.24     0:02:12.177
Remove Word             uh      0:02:26.645     0:02:26.820           0.17     0:02:19.083
Remove Word            like     0:02:28.199     0:02:28.319           0.12     0:02:20.462
Remove Word            like     0:02:45.029     0:02:45.238           0.21     0:02:37.173
Remove Word            like     0:02:47.759     0:02:47.880           0.12     0:02:39.693
Remove Word            Like     0:02:48.929     0:02:49.169           0.24     0:02:40.743
Remove Word         um this     0:02:55.710     0:02:56.219           0.51     0:02:47.283
Remove Word            like     0:02:59.019     0:02:59.170           0.15     0:02:50.082
```

The EDTFS_Report.txt is a six-column text file that provides details regarding every edit performed on the audio file.

Column 1: **Action**
Remove: Removed a non-speech portion of the audio
Remove Word: Removed the word, or words indicated within the audio
Remove Duplicate: Removed one or more words that were spoken back-to-back creating a duplicate. This can be the same word, or it can be a pattern of the same words. For instance, "I, I, I" is an example of duplicate words. "I think, I think" is an example of duplicate phrases. Both will be removed, leaving only a single instance.

Column 2: **Pattern**
This column will contain *NonSpeech*, a single word, or a collection of words that were removed.

Column 3: **Beg Edit TC**
This is the timecode within the original audio where the beginning of the Pattern was identified as subject to removal.

Column 4: **End Edit TC**
This is the timecode within the original audio where the end of the Pattern was identified as subject to removal.

Colum 5: **Edit Dur**
The total duration of Pattern within the original audio file (End TC – Beg TC).

Colum 6: **New Edit TC**
This is the timecode within the new, edited audio file where the Pattern was removed. The New Edit TC will always be a different time than the Beg Edit TC. This is because as content is removed the content slides left to fill in the hole created by the removed content. Therefore, the New Edit TC will always occur prior to the Beg Edit TC (except for the very first edit, in which case they are the same).

Using the above report fields both the original word locations/time codes and where they would have existed in the new file can be located. This can be very useful to video editors and audio mixers if any additional edits are required.

If Transcription is selected then either two or four transcription reports will be produced, depending on additional Editor options chosen.

Below is a snippet of the Transcription reports created for each file; both Raw (pre-edit) and Edited.

Note: Each report (Raw and Edited) will contain two file types, the text (.txt) file and the SubRip Subtitle (.srt) file.

Raw transcription report:

Note: Words highlighted in blue are those words the Editor identified to be removed.

ESION Editor Transcription (Raw) --> 23_IntheGame_EP26_FOR ASR.wav

0:00:00.000   I, uh, had asked if you had a soda stream, one of those little, The, So bubblers, the bubble maker.
0:00:06.210   The bubble machine.
…
0:00:26.790   I'm gonna do it until I get a free product.
0:00:30.630   Big or small.
0:00:31.680   Sent, sent to me.
0:00:34.350   And at that point, I will stop using the old open of this all new episode.
0:00:41.160   Okay.
0:00:41.185   Of for In the game.
0:00:42.570   Let's get into it.
0:00:44.700   Welcome, welcome, welcome, everyone.
0:00:47.610   This is an all new episode of In the game.
0:00:50.700   We're getting it going.
0:00:51.960   Brought To you by our Sure.
0:00:53.460   Microphones and Apple products and<laugh> And my Jeep Cherokee, which I would love to have my car payments off
of<laugh>.
…
0:01:22.290   I mean, I, I would actually love to hear from, from everybody of like their favorite moment with officials. Yes. Whether
it's humorous, whether it's, you know, likely positive.
0:01:30.990   'cause here's the deal.
0:01:31.680   Officials are a tremendously undervalued part of the game.
0:01:35.430   You need someone to control the fun.
0:01:37.500   You need someone to do that.
0:01:38.820   And You need a Lucy Faller, Likely not paid.
0:01:42.450   And I side story, my brother, uh, Ben and my dad recently just, uh, played their first, uh, soccer game themselves.
0:01:49.890   Dad was a linesman.
0:01:50.880   Ben was center.
0:01:51.600   Nice.
0:01:52.500   They had a, they had a full, full time for that.
0:01:54.150   But what jogged my memory in terms of refs, officials, umpires, whatever, uh, came to mind in basketball,<laugh>
when this, this absolute giant of a kid fully just blocked all ball, all hand on.
0:02:11.040   And this poor kid just went up.
0:02:12.510   This kid's like five foot, nothing up against this kid who, who is definitely not 12 like<laugh>.
0:02:17.705   He was so big.
0:02:18.630   Like, he, he definitely may have been older, but swatted the ball completely in the bleachers.
0:02:24.630   Absolutely obliterated it.
0:02:25.890   And, uh, the dad popped up and was like, ref, referee.

Transcription report after ESION editor processes:

Note: The original (un-edited) timecodes are always presented. This is to retain an easy-to-use frame of reference throughout all the reports.

ESION Transcription (Edited) --> 23_IntheGame_EP26_FOR ASR.wav

0:00:00.000   I, had asked if you had a soda stream, one of those little, The, So bubblers, the bubble maker.
0:00:06.210   The bubble machine.
…
0:00:26.790   I'm gonna do it until I get a free product.
0:00:30.630   Big or small.
0:00:31.680   Sent, to me.
0:00:34.350   And at that point, I will stop using the old open of this all new episode.
0:00:41.160   Okay.
0:00:41.185   Of for In the game.
0:00:42.570   Let's get into it.
0:00:44.700   Welcome, everyone.
0:00:47.610   This is an all new episode of In the game.
0:00:50.700   We're getting it going.
0:00:51.960   Brought To you by our Sure.
0:00:53.460   Microphones and Apple products and<laugh> my Jeep Cherokee, which I would love to have my car payments off of<laugh>.
…
0:01:22.290   I mean, I, would actually love to hear from, everybody of like their favorite moment with officials. Yes. Whether it's humorous, whether it's, you know, likely positive.
0:01:30.990   'cause here's the deal.
0:01:31.680   Officials are a tremendously undervalued part of the game.
0:01:35.430   You need someone to control the fun.
0:01:37.500   You need someone to do that.
0:01:38.820   And You need a Lucy Faller, Likely not paid.
0:01:42.450   And I side story, my brother, Ben and my dad recently just, played their first, soccer game themselves.
0:01:49.890   Dad was a linesman.
0:01:50.880   Ben was center.
0:01:51.600   Nice.
0:01:52.500   They had a, they had a full, time for that.
0:01:54.150   But what jogged my memory in terms of refs, officials, umpires, whatever, came to mind in basketball,<laugh> when this, absolute giant of a kid fully just blocked all ball, all hand on.
0:02:11.040   And this poor kid just went up.
0:02:12.510   This kid's like five foot, nothing up against this kid who, is definitely not 12 like<laugh>.
0:02:17.705   He was so big.
0:02:18.630   he, definitely may have been older, but swatted the ball completely in the bleachers.
0:02:24.630   Absolutely obliterated it.
0:02:25.890   And, the dad popped up and was, ref, referee.

Appendix 2 – Leveling Cheat Sheet

Best Practices for Preparing Audio for ESION

Follow these guidelines to ensure optimal results and faster processing when using ESION Leveler + Loudness.

Remove Duplicate MIC Sources

Many production sound recorders create duplicate audio tracks for backup or split mono sources into Left and Right channels, Improve audio clarity before sending to ESION by removing any rerudundant MIC tracks.

Don't Mix LAVs and Booms

If both Lavalier (LAV) and Boom microphones are recorded, choose one—not both.

Keep MICs on Separate Tracks

Assign each speaker's microphone to its own audio track.

Eliminate MIC Bleed

Cut out MIC bleed wherever possible. MIC bleed can cause phase cancellation, thin or weak audio. and loss of low-end or "punch."

ESION

Appendix 3 - Noise Reduction Cheat Sheet

Best Practices: Don't Edit Out the Noise

Let ESION do the heavy lifting—don't remove background noise manually.

How ESION Handles Noise

ESION uses a Voice Activity Detector (VAD) to distinguish between speech and non-speech (background noise). During non-speech segments, ESION automatically "learns" the noise reduction orly w/ien adaptive noise reduction only when needed.

What You Should Do

Leave at least 5 frames of non-speech (room tone or background noise) at the beginning and end of each clip or segment.
This gives ESION enough data to accurately identify and reduce noise without affecting speech quality.

What to Avoid

Do not manually remove all background noise before sending audio to ESION. Avoid using third-party noise reduction tools that may interfere with ESION's learning process.