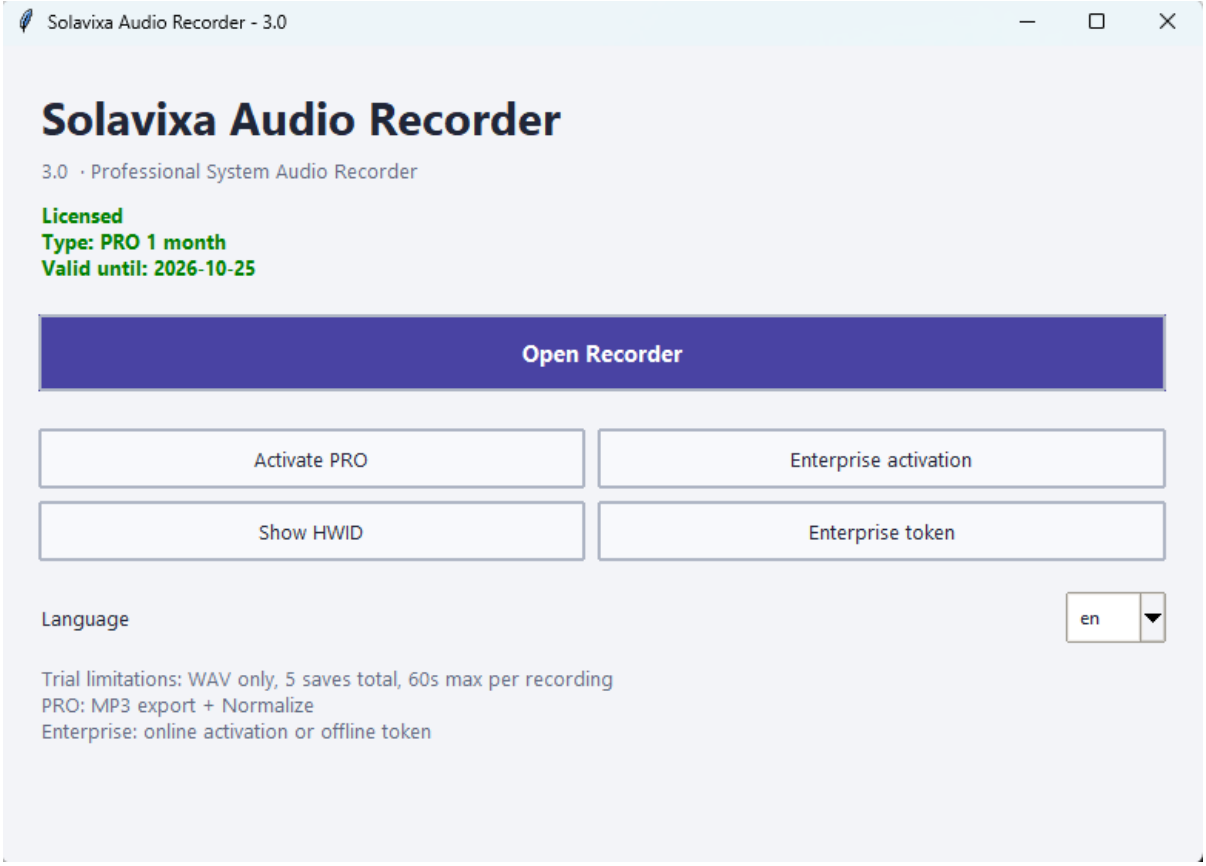
Solavixa Audio Recorder (SAR)

Professional User Guide

Version 3.0 | September 2026



Main application window - Solavixa Audio Recorder 3.0

Purpose This guide explains every main control in SAR 3.0, including System Audio, Application Capture, Multi-App recording, microphone tracks, Master Mix, Instant Replay, audio processing, recovery, and practical recording workflows.

Product	Solavixa Audio Recorder (SAR) 3.0
Primary use	Windows system/application audio recording with optional multi-track and microphone workflows
Output formats	WAV; MP3 for PRO / Enterprise
Licensing	Trial, PRO, Enterprise online activation, Enterprise offline token

SAR 3.0 at a glance

A major functional and interface upgrade over the earlier 2.x guide

Version 3.0 combines the redesigned recorder interface with the major recording features added after the earlier 2.x guide. The old single-window workflow has been reorganized into Recorder, Sources, Output, History, and Settings pages.

- Application Capture can record only a selected application (INCLUDE) or the remaining loopback mix while excluding one selected application (EXCLUDE).
- Multi-App Capture supports 1-8 selected applications, synchronized separate tracks, and an optional Master Mix.
- A microphone can be added to an Application/Multi-App session, saved separately, and/or included in the Master Mix.
- Instant Replay / Time-Shift continuously keeps a disk-backed rolling history and can save the last 30 seconds, 5 minutes, or 30 minutes without requiring a normal recording to be running.
- Background MP3 export, Normalize, crash recovery, pending-save recovery, and source-failure handling are integrated into the new interface.
- Application/Multi-App/Microphone sessions use a synchronized 48 kHz timeline. The active capture rate is shown in the Recorder footer.

Control	What it does
Main Window	License state, activation, HWID, language, and Open Recorder.
Recorder	Live monitor, recording modes, Instant Replay, Start/Stop, status, elapsed recorded time.
Sources	System Audio, Application INCLUDE/EXCLUDE, Multi-App, microphone, separate outputs, Master Mix.
Output	Save location, WAV/MP3, Normalize, and recovery of pending recordings.
History	Recent events and detailed messages for the current recorder window.
Settings	Gain, EQ, limiter, cut filters, silence-detection parameters, license/language shortcut.

Important Version 3.0 no longer exposes a manual sample-rate selector. System Audio uses a supported endpoint rate; Application/Multi-App/Microphone workflows are prepared on the synchronized 48 kHz path.

1. Main Window

Licensing, activation, language, and entry to the recorder

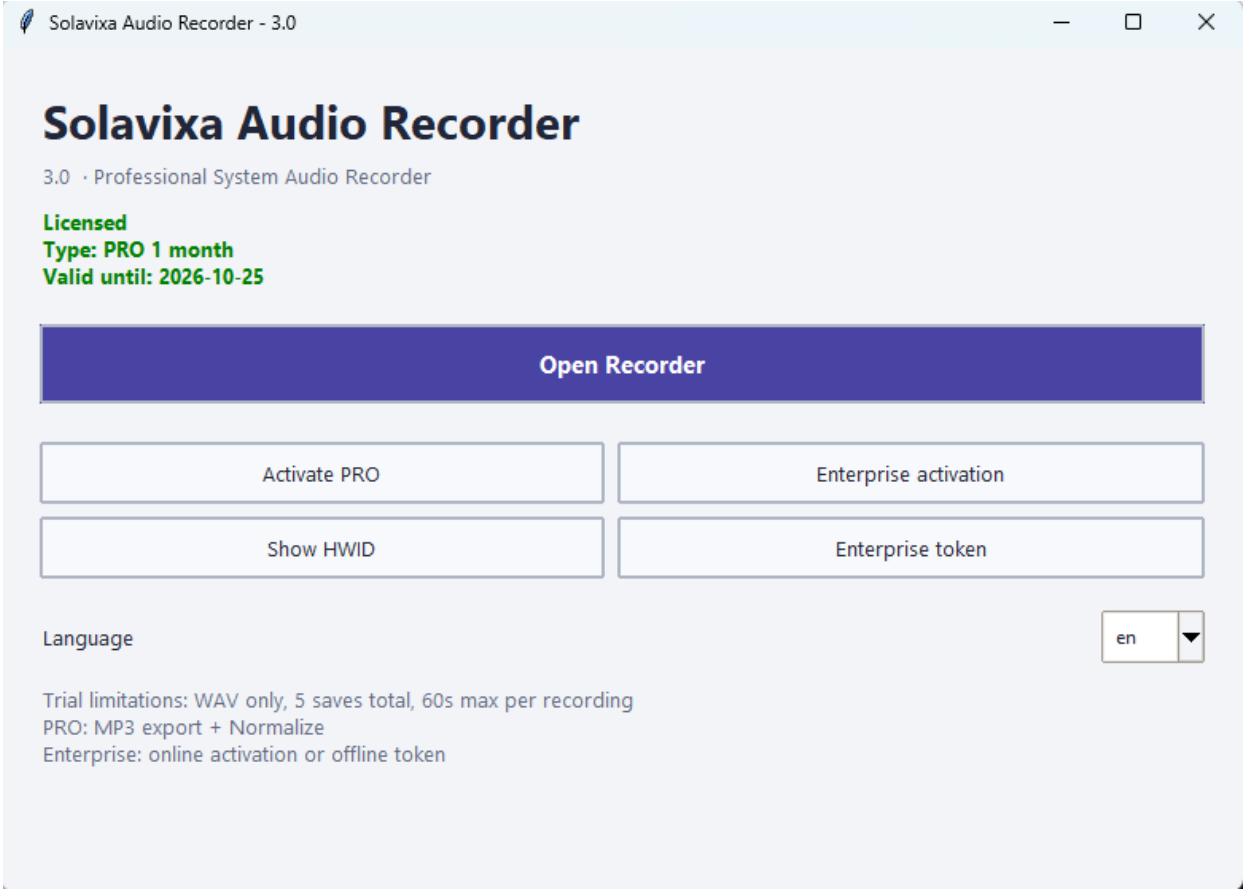


Figure 1. Main application window - Version 3.0

Control	What it does
Licensed / Trial status	Shows the current license state. A time-based license also shows its type and validity date.
Open Recorder	Opens the full recorder workspace. This is the main button for everyday use.
Activate PRO	Starts the standard PRO activation flow.
Enterprise activation	Starts online Enterprise activation.
Show HWID	Displays the hardware ID used by licensing and support workflows.
Enterprise token	Opens offline Enterprise activation using a token.
Language	Selects the interface language. Restart the application to ensure the selected language is applied everywhere.

Trial mode remains intentionally limited: WAV output only, up to 5 saved trial recordings, and a maximum of 60 seconds of captured audio per recording. PRO / Enterprise enables Application Capture, MP3 export, Normalize, and the advanced recorder features gated by the license.

> **Version number** The release shown in this guide is SAR 3.0. The application version is defined in sar_app_info.py and should match the distributed build and this PDF.

2. Recorder page

The primary live recording and Instant Replay workspace

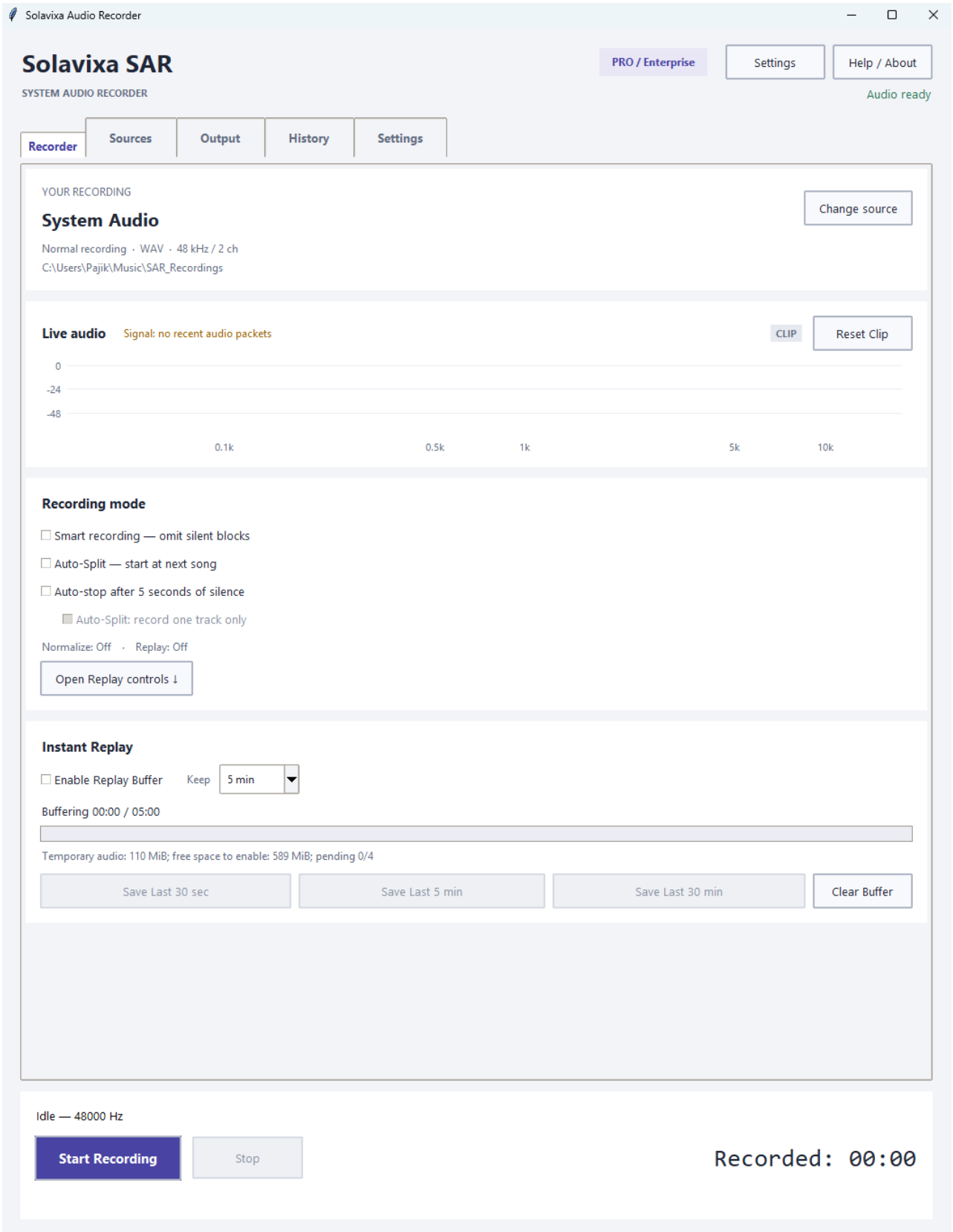


Figure 2. Recorder page - live monitor, recording modes, Instant Replay, and transport controls

The Recorder page is designed as a status-first dashboard. It summarizes what will be recorded, shows live signal activity, provides the three automatic recording modes, exposes Instant Replay, and keeps Start/Stop available in the footer.

> **Top-right status** PRO / Enterprise shows the current feature tier. Audio ready means the selected source has been prepared. If the source disappears, SAR shows: “Source unavailable – reconnect the device/application and click Refresh”.

2.1 Recorder controls in detail

Control	What it does
YOUR RECORDING	Summary card showing the selected source, current recording mode, output format, active sample rate/channel count, and save folder.
Change source	Jumps directly to the Sources page.
Live audio	Spectrum-style monitor for confirming that the selected source is delivering audio.
Signal: ...	Shows live signal state such as OK, Silent, no recent audio packets, or unavailable.
CLIP	Lights when peaks approach full scale. It is a warning that the current level may be too high.
Reset Clip	Clears the clip warning after you change Gain/EQ/source level and want to monitor for a new clipping event.
Smart recording	Single-source use: silent blocks are omitted. Multi-source use: SAR preserves the shared synchronized timeline instead of collapsing different tracks.
Auto-Split	Detects a continuous silence boundary, waits for the next track, records it, and can automatically create separate track files.
Auto-stop	Stops the recording after 5 seconds of continuous silence. In Multi-App/Mic sessions, all included sources must be silent.
Auto-Split: record one track only	Available only with Auto-Split. After the next complete detected track is saved, SAR returns to Idle instead of waiting for another track.
Open Replay controls	Scrolls the Recorder page directly to the Instant Replay section.
Start Recording	Starts a normal recording with the currently prepared source and settings.
Stop	Stops the current normal recording. It does not automatically disable an already armed Replay Buffer.
Recorded: mm:ss	Shows the duration of audio stored in the active recording. In Smart single-source mode, omitted silence does not increase the stored-audio timer.
Idle / state + Hz	Shows recorder state and the actual capture rate currently prepared.

> **Mode rule** Smart, Auto-Split, and Auto-stop are mutually exclusive recording modes. Selecting one turns the others off. Normal recording is used when none of the three is selected.

3. Instant Replay / Time-Shift

Save the recent past even when a normal recording was never started

Instant Replay keeps a rolling, disk-backed copy of the prepared post-processing audio. It runs independently of the normal Start/Stop recording gate. This is useful when something important happens before you decided to press Start.

Control	What it does
Enable Replay Buffer	Arms the rolling buffer. Replay requires PRO / Enterprise, a healthy prepared source, and a 48 kHz capture path.
Keep	Selects the maximum rolling history: 30 sec, 5 min, or 30 min.
Buffering mm:ss / target	Shows how much usable history is currently available compared with the selected Keep window.
Progress bar	Visual indication of how much of the selected Replay window has been filled.
Temporary audio	Estimated temporary disk usage for the rolling history.
Free space to enable	Preflight space requirement. Replay stays conservative because several synchronized outputs can require substantial temporary space.
pending 0/4	Replay snapshot queue status. Up to four snapshots can be pending/materializing/exporting at the same time.
Save Last 30 sec	Creates a snapshot of the most recent 30 seconds when at least 30 seconds are available.
Save Last 5 min	Creates a snapshot of the most recent 5 minutes. It is available only when Keep is at least 5 minutes and the buffer is full enough.
Save Last 30 min	Creates a snapshot of the most recent 30 minutes. It requires Keep = 30 min and sufficient history/free disk space.
Clear Buffer	Deletes unsaved rolling history and disables the current Replay buffer. Re-enable Replay to start a fresh history.

- Replay can run while normal recording is Idle.
- Replay continues after a normal recording is stopped, unless you disable or clear it.
- Smart recording does not compress the Replay timeline; Auto-stop does not stop Replay; Auto-Split does not split Replay.
- Live Gain/EQ/filter changes affect future Replay samples only. Already-buffered history is not recalculated.
- Normalize is an export operation applied to the snapshot you save; the rolling history itself remains the captured post-DSP audio.
- In Multi-App/Microphone sessions, Replay preserves the same synchronized track alignment and fixed Master Mix behavior as normal recording.

> **Disk-space tip** Long Replay windows with several separate tracks plus Master Mix can consume multiple gigabytes of temporary disk space. Use the on-screen estimate rather than assuming a fixed size.

4. Sources page

Choose exactly what SAR should capture

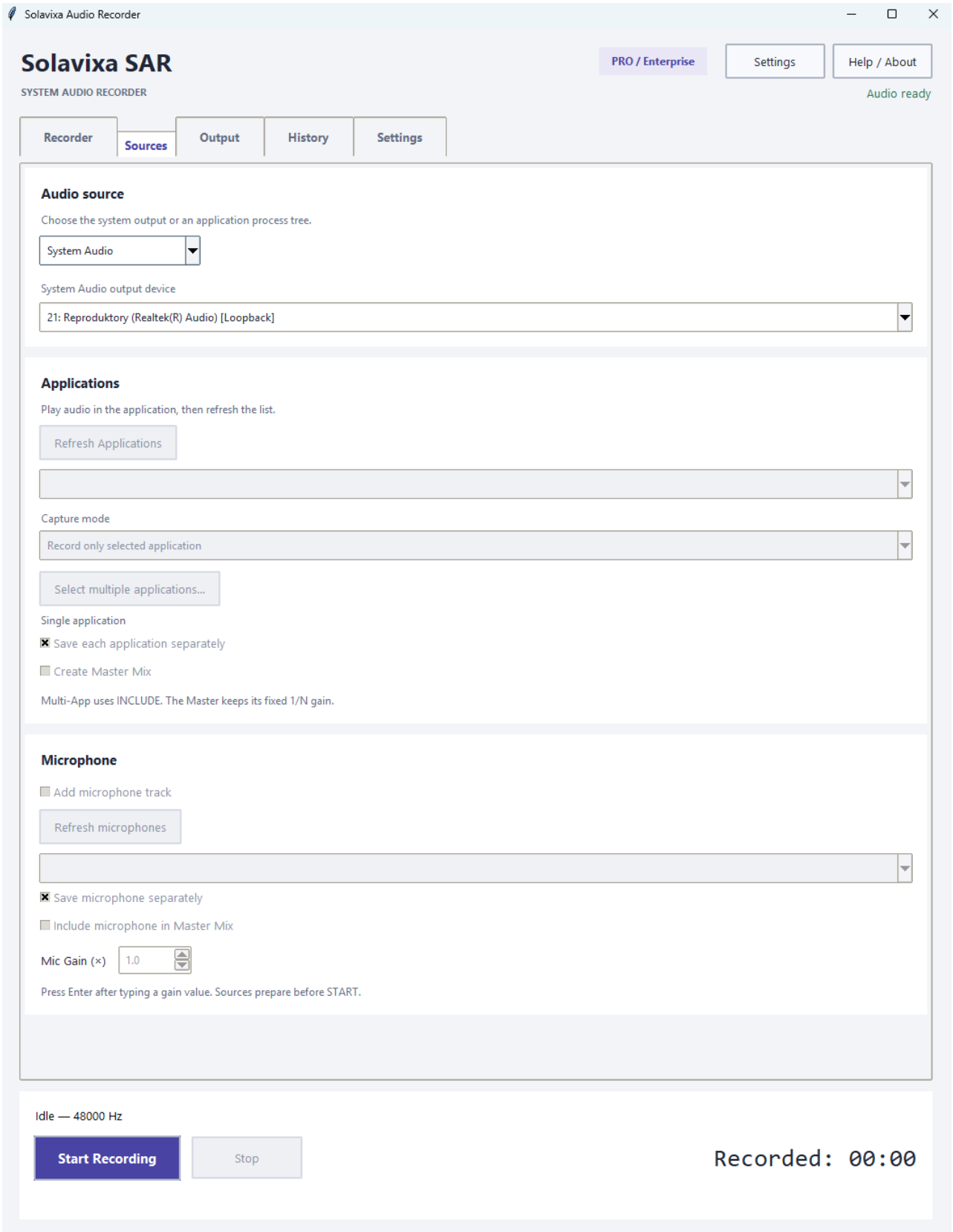


Figure 3. Sources page - System Audio, Application Capture, Multi-App, and Microphone

The Sources page separates source selection from recording controls. When a source is changed, SAR prepares it before Start Recording becomes available.

4.1 System Audio and Application Capture

Control	What it does
Audio source: System Audio	Records the selected Windows output device using loopback capture. This is the simplest choice when you want the complete audible output of that device.
System Audio output device	Selects the loopback output endpoint. Choose the playback device that is actually carrying the sound you want to record.
Audio source: Application	Enables PRO / Enterprise process-loopback capture for one or more applications.
Refresh Applications	Re-enumerates candidate audio applications. For best discovery, start playback in the target application first, then click Refresh Applications.
Application list	Selects the single target application/process tree.
Record only selected application	INCLUDE mode. Records the selected application process tree while ignoring other applications.
Record everything except selected application	EXCLUDE mode. Records the remaining process-loopback mix while excluding the selected application process tree.
Select multiple applications...	Opens a Ctrl/Shift multi-selection dialog. Select 1-8 applications and use Apply and prepare.

EXCLUDE limitation EXCLUDE is a single-application mode. When Multi-App, Master Mix, or Microphone features are used, SAR switches to INCLUDE behavior so the synchronized source set remains explicit.

Application identity safety If the selected application exits and later restarts, SAR does not silently attach to a different process. Reconnect/restart the application and use Refresh Applications, then reselect it if required.

4.2 Multi-App, Separate Tracks, and Master Mix

Control	What it does
Select multiple applications...	Selects several application process trees for synchronized capture. The current selection is listed below the button.
Save each application separately	Creates one synchronized output file per selected application.
Create Master Mix	Creates an additional synchronized mix of all sources included in the Master.
Fixed 1/N Master gain	Each included Master source has equal weight. With N sources the mix is (A+B+...)/N, providing deterministic headroom.
At least one output	SAR always keeps at least one output enabled. If both separate tracks and Master are turned off, separate tracks are automatically kept on.

Separate application tracks and the Master share a common timeline and the same frame boundaries. A source that starts late, becomes silent, or fails later is represented by silence while the surviving sources continue.

If one source fails, SAR does not increase the gain of the remaining Master sources. The original 1/N divisor remains fixed, which prevents the Master level from jumping unexpectedly.

> **Useful result** You can edit each application separately later while also receiving a ready-to-use Master Mix from the same synchronized session.

4.3 Microphone Track

Control	What it does
Add microphone track	Adds one microphone to an Application/Multi-App session. The microphone feature is available in the Application workflow, not the simple System Audio source mode.
Refresh microphones	Re-enumerates microphone endpoints. Use it after connecting/reconnecting a microphone or when a device is missing.
Microphone list	Selects the physical input endpoint to use.
Save microphone separately	Creates a dedicated microphone output track.
Include microphone in Master Mix	Adds the microphone to the synchronized Master Mix. This option is available when Create Master Mix is enabled.
Mic Gain (×)	Independent microphone pre-gain from 0× to 8× in 0.25 steps. It affects the mic before it is written and before it enters the Master.

When you type a Mic Gain value manually, press Enter or leave the field so SAR can re-prepare the source. The arrow controls apply the new value immediately. Refresh microphones is not required just to change Mic Gain.

A mono microphone is expanded consistently to the stereo session. If the microphone is unplugged during a session, existing microphone audio is preserved, the future microphone portion becomes silence, and healthy application tracks continue.

> **Practical level setup** Start with a conservative Mic Gain and watch the live level. Increase it only if speech is too quiet. The correct value depends on the microphone, distance, Windows device level, and voice.

5. Output page

File format, save location, Normalize, and recovery

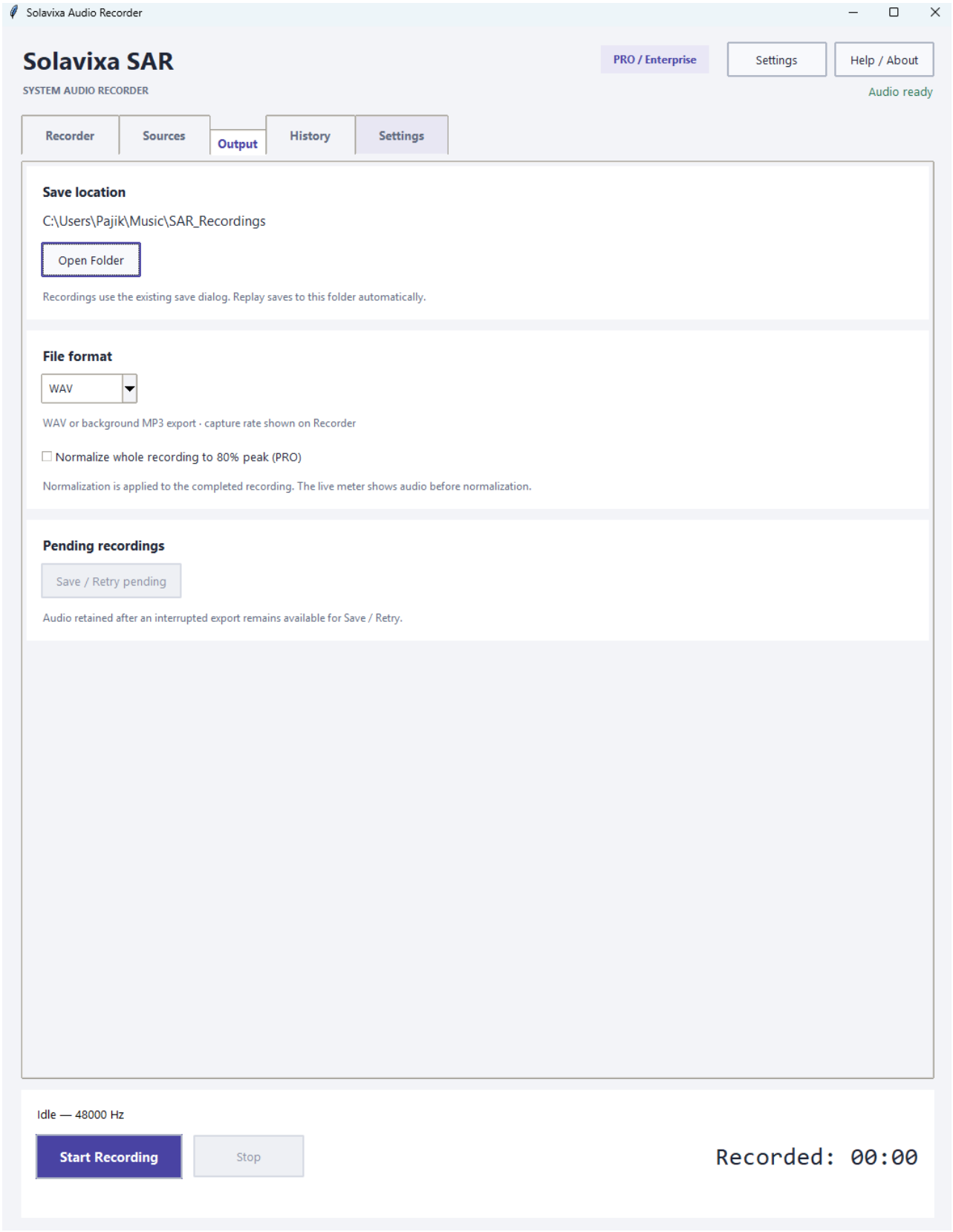


Figure 4. Output page

5.1 Output controls in detail

Control	What it does
Save location	Shows the current default recording folder. Replay snapshots save to this folder automatically.
Open Folder	Opens the recording folder in Windows Explorer.
WAV	Uncompressed output. Available in Trial, PRO, and Enterprise.
MP3	Compressed background export. Requires PRO / Enterprise and the bundled FFmpeg runtime.
Normalize whole recording to 80% peak	PRO / Enterprise export option. After recording, SAR analyzes the completed output and scales it to an 80% peak target.
Save / Retry pending	Available when an interrupted/failed export left recoverable audio. Lets you choose a destination and retry saving the retained recording.

WAV/MP3 export is performed outside the capture callback. A long MP3 conversion therefore does not have to block the next recording session. The footer reports exports in progress and pending recovery jobs.

Gain changes the live audio before export. Normalize works after the recording is complete. When Normalize is enabled, the manual main Gain control is disabled so the final level is determined from the captured recording rather than from a fixed live multiplier.

> **Recovery** If SAR or an export is interrupted after audio has already been retained to disk, the Output page can expose Save / Retry pending after restart. Use it before deleting recovery files manually.

6. History page

Session events and detailed status

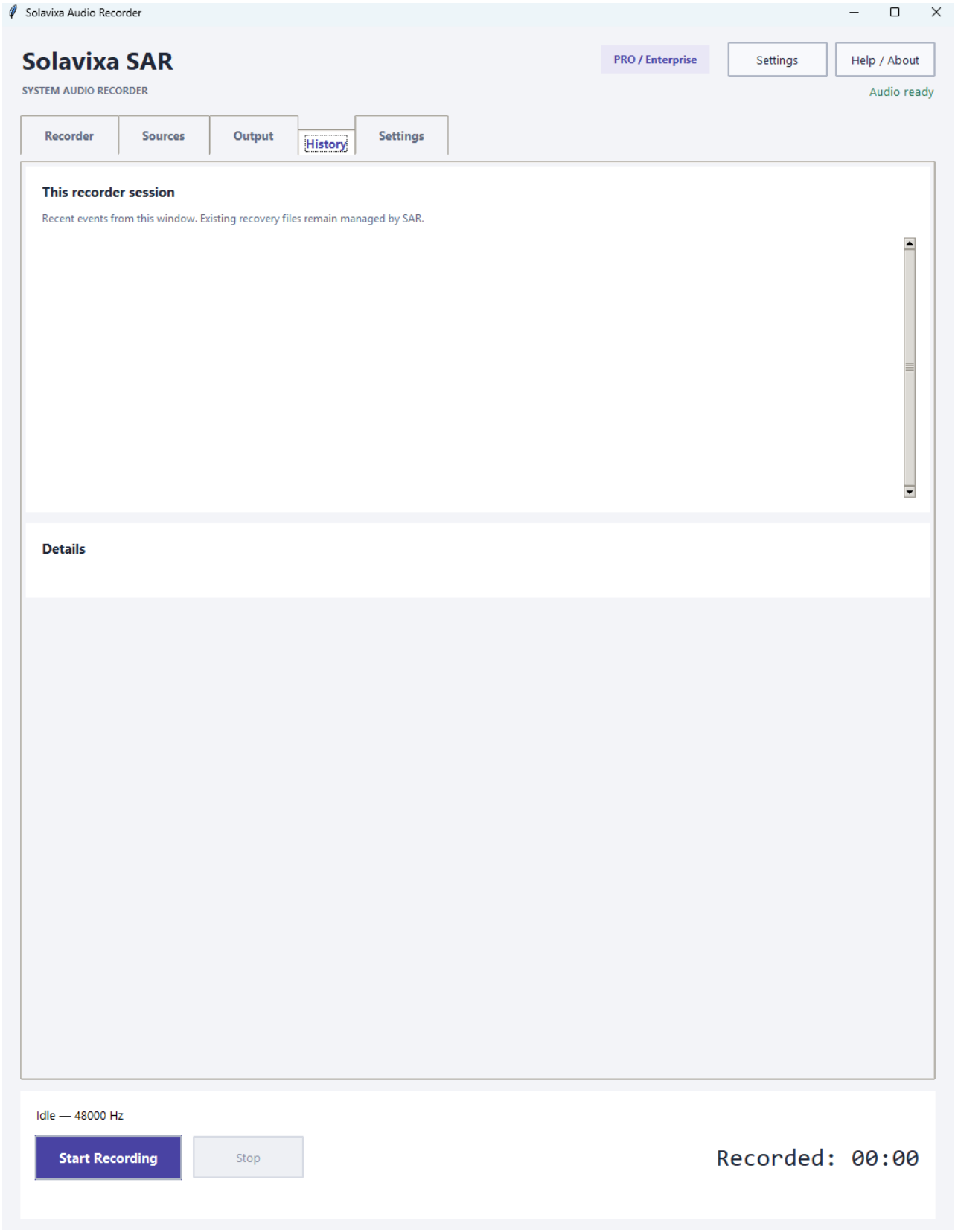


Figure 5. History page - current recorder-window events and details

Control	What it does
This recorder session	Shows up to the most recent 200 events generated by the currently open recorder window.
Event list	Examples include source preparation, recording start/stop, Replay save, export progress, source failures, and recovery messages.
Details	Shows the most recent technical or explanatory detail associated with an event.

> **Not a recording library** History is an in-memory event view for the current recorder window. It is not a persistent database of all files you have ever recorded.

7. Settings page

Live audio processing and silence-detection parameters

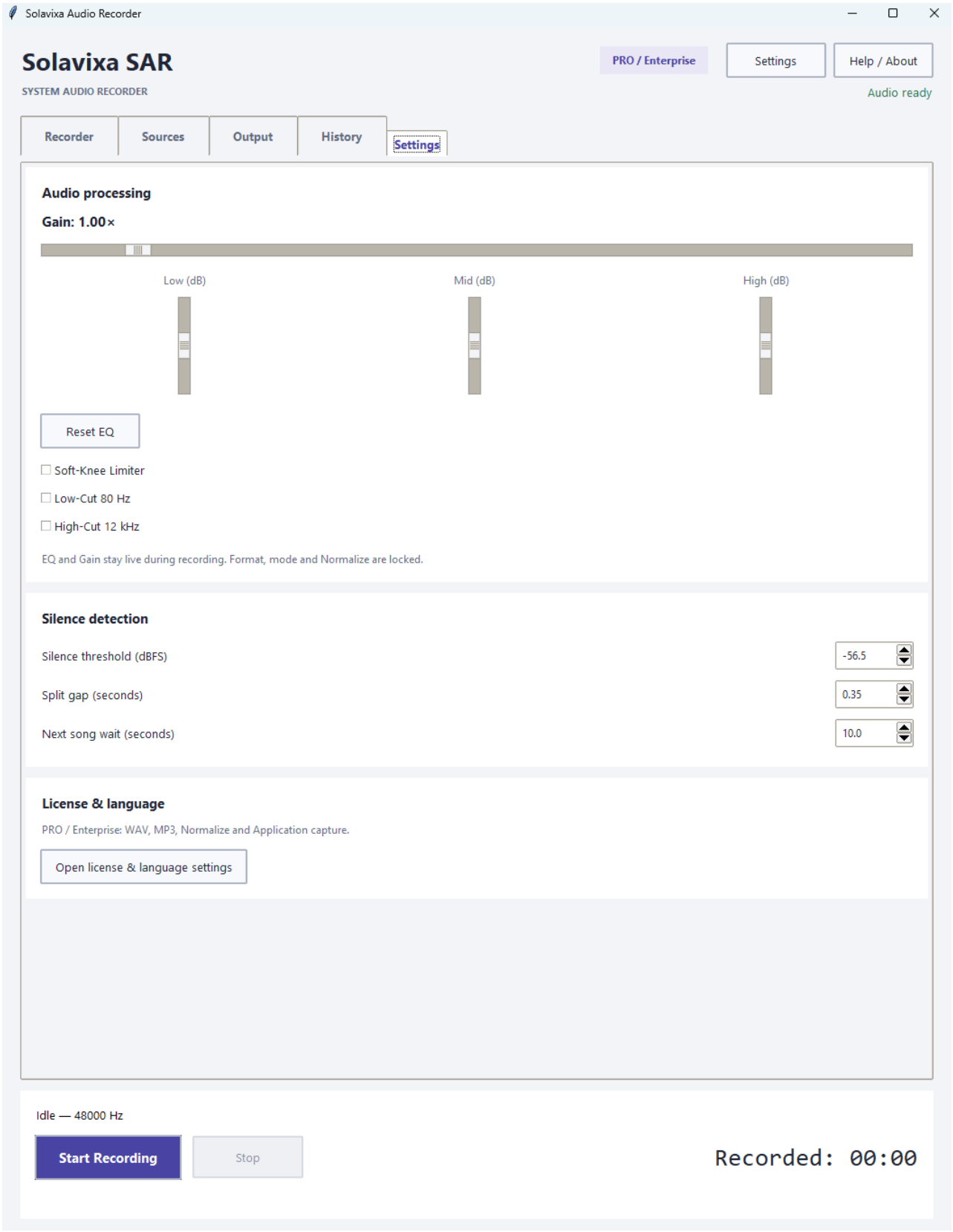


Figure 6. Settings page - Gain, EQ, filters, silence detection, license/language shortcut

7.1 Audio processing controls

Control	What it does
Gain	Main live amplification from 0× to 10×. Use carefully: large values can produce excessive peaks. Disabled while Normalize is enabled.
Low / Mid / High EQ	Three live equalizer bands centered approximately at 150 Hz, 1 kHz, and 6 kHz. Each ranges from -12 dB to +12 dB.
Reset EQ	Returns Low, Mid, and High EQ to 0 dB.
Soft-Knee Limiter	Smoothly controls strong peaks near full scale. Useful for occasional spikes, but it is not a substitute for sensible source/Gain levels.
Low-Cut 80 Hz	High-pass filter that reduces low-frequency rumble/hum below the useful audio range.
High-Cut 12 kHz	Low-pass filter that reduces very high-frequency hiss or harshness.

Gain, EQ, limiter, and cut-filter changes can be applied while recording. Format, automatic recording mode, source configuration, and Normalize are locked for the active session.

> **Replay interaction** A live processing change affects new Replay audio from that point forward; it does not retroactively recalculate audio already stored in the rolling buffer.

Control	What it does
Silence threshold (dBFS)	Defines what SAR considers quiet for Smart/Auto-stop/Auto-Split logic. Valid range: -90 to -10 dBFS. More negative values are more sensitive.
Split gap (seconds)	Continuous silence required to confirm an Auto-Split boundary. Valid range: 0.1 to 30 seconds.
Next song wait (seconds)	How long Auto-Split waits for the next track after a boundary before returning to Idle. Valid range: 1 to 600 seconds.
Open license & language settings	Returns to the main application window where activation/HWID/language controls are available.

8. Automatic recording modes

Choosing the right behavior for silence

For a single source, SAR stays active but writes only blocks that contain detected sound. Long silent gaps are omitted from the saved file. The stored-audio timer reflects the audio actually written, not necessarily wall-clock time.

For synchronized Multi-App/Microphone sessions, SAR preserves the shared timeline rather than collapsing one track independently; this keeps separate tracks and Master aligned.

SAR records normally and measures continuous silence. After 5 seconds below the threshold, it stops the entire normal recording. In a synchronized session the condition is based on the combined source set, so one active application or microphone prevents an early stop.

Auto-Split is designed for sequential tracks. If START is pressed while a previous track is still playing, SAR first waits for a confirmed silence boundary. It then waits up to Next song wait for the target track to begin, records it, and trims the confirmed ending silence from the saved track.

With “record one track only”, SAR saves the first complete target track and returns to Idle. Without it, SAR waits for the next track and continues creating files.

> **Multi-source Auto-Split** A split is confirmed only when the synchronized source set is silent. For example, a live microphone can prevent a music boundary from being detected until the microphone is also quiet.

9. Standard recording workflow

Open SAR and confirm the license state in the main window.

Click Open Recorder.

On Sources, choose System Audio or Application. For Application Capture, refresh and select the target app(s).

If needed, add a microphone, separate tracks, and/or Master Mix.

On Output, choose WAV or MP3 and decide whether Normalize is required.

On Settings, leave EQ/filters neutral unless the source genuinely needs processing. Adjust silence parameters only if you are using an automatic mode.

On Recorder, play the source briefly and confirm Audio ready plus visible live signal activity.

Choose Normal, Smart, Auto-stop, or Auto-Split.

Click Start Recording. Watch the status, live meter, CLIP indicator, and Recorded timer.

Click Stop when finished, unless an automatic mode stops/splits the recording for you.

If an export is still running, you can monitor it in the footer/History. Use Output > Open Folder to review the result.

> **Source application level** If an application is internally playing at a very low volume, its captured signal may also be low. Set the source application's own playback level appropriately before compensating with large SAR Gain values.

10. Practical scenarios

Examples that mirror the workflows used during validation

Sources > Audio source: Application.
Start playback in the browser and click Refresh Applications.
Select the browser and choose Record only selected application.
Choose WAV/MP3 on Output, then Start Recording.
Other applications can play audio; SAR records the selected browser process tree only.

Select Application and the app you want to exclude.
Choose Record everything except selected application.
Start Recording.
The remaining process-loopback mix is captured while the selected process tree is excluded.

Select Application, Refresh Applications, then Select multiple applications.
Ctrl/Shift-select two apps and click Apply and prepare.
Enable Save each application separately and Create Master Mix.
Start Recording.
SAR saves synchronized app tracks and a Master Mix with fixed 1/N weighting.

10.1 Practical scenarios with microphone and Replay

Prepare the two applications as a Multi-App selection.
Enable Add microphone track and choose the microphone.
Enable Save microphone separately if you want an editable voice track.
Enable Create Master Mix and Include microphone in Master Mix for a ready combined output.
Set Mic Gain conservatively, press Enter after typing a value, then Start Recording.

Prepare the source and confirm Audio ready.
Recorder > Enable Replay Buffer.
Keep can be 30 sec, 5 min, or 30 min; wait until at least 30 seconds are buffered.
When something worth keeping happens, click Save Last 30 sec.
SAR creates the snapshot even though Start Recording was never pressed.

Arm Replay and let it build history.
Start a normal recording.
During the recording, click Save Last 30 sec or Save Last 5 min as needed.
Continue recording; Replay snapshot materialization/export happens independently.
Stop the normal recording. Replay can remain armed and keep collecting the new wall-clock history.

10.2 Automation scenarios

Set Auto-Split and enable Auto-Split: record one track only.
If the previous song is still playing, press Start Recording anyway.
SAR waits for the confirmed end boundary, then waits for the next song to start.
It records the next complete song, trims the confirmed end silence, saves it, and returns to Idle.

Use Smart recording with a single source.
Start Recording and speak/play material intermittently.
During silence SAR waits and omits silent blocks from the output.
Press Stop manually when the session is complete.

Choose Auto-stop.
Start Recording.
When all relevant audio becomes silent, SAR waits 5 seconds.
If silence continues, SAR stops the recording automatically and proceeds to saving/export.

11. Troubleshooting

Control	What it does
No signal / no recent audio packets	Confirm the selected source is actually playing. For System Audio, choose the correct loopback device. For Application Capture, play audio and Refresh Applications.
Source unavailable	Reconnect/restart the device or application and click the matching Refresh button. SAR intentionally avoids silently reconnecting to a different process/device.
Application missing from list	Start playback in the application, then click Refresh Applications. Internal/helper processes are filtered from the picker.
Microphone missing	Connect the microphone, click Refresh microphones, then select the endpoint.
Mic Gain change seems ignored	If you typed the value, press Enter or leave the field. The source re-prepares before Start.
MP3 unavailable	MP3 requires PRO / Enterprise and a working bundled FFmpeg runtime.
Normalize unavailable	Normalize is a PRO / Enterprise feature and is disabled during an active recording.
Replay controls disabled	Replay requires PRO / Enterprise, a healthy prepared 48 kHz source, and no unresolved source failure.
Save Last disabled	Wait until the requested history length exists, ensure Keep is large enough, and check free disk/pending snapshot limits.
Recording is clipped/distorted	Reduce main Gain, Mic Gain, or large positive EQ boosts. Use Soft-Knee Limiter for occasional peaks and reset the CLIP indicator after adjustment.
Recording is too quiet	Check the source application's own playback volume first. For microphone speech, increase Mic Gain gradually while watching the live signal.
Pending recordings shown	Open Output and use Save / Retry pending. This is recoverable audio retained after an interrupted or failed export.

12. Reliability and recovery behavior

If one application or microphone fails, SAR preserves the already captured audio for that source and represents its future synchronized timeline as silence. Healthy tracks and the Master continue. This prevents one failed source from destroying the entire session.

SAR writes recording data progressively to disk and keeps recovery metadata. After an interrupted export or hard termination, retained jobs can reappear as Pending recordings and be saved through Save / Retry pending.

In an extreme hard-kill timing window, a Replay export that was already physically published may still be offered once more as Pending after restart. This can create a duplicate save, but the recovery policy is intentionally conservative so that retained audio is not silently discarded.

If background work is still materializing or exporting, SAR reports the outstanding work and follows its recovery/close policy rather than abandoning audio without notice.

13. Licensing notes and lawful use

Trial is intended for evaluation and is limited to WAV, 5 saves total, and up to 60 seconds of captured audio per recording. PRO / Enterprise unlocks Application Capture, MP3, Normalize, Instant Replay, and the advanced multi-source workflow available in the recorder UI.

Solavixa Audio Recorder is intended for lawful recording use only. You are responsible for ensuring that your recording activity complies with applicable law, copyright and privacy rights, contractual restrictions, workplace policies, and the rules of the services or platforms you use.

> **Good practice** When recording calls, meetings, streams, protected media, or third-party content, obtain any permission or consent required in your jurisdiction and by the relevant service.

Confirm the correct source and Audio ready before pressing Start.

Use INCLUDE when you want only one app; use EXCLUDE when you want the remaining mix without one selected app.

Use separate tracks when you may edit sources later; add Master Mix when you also want a ready combined file.

Use Replay when you may need to save something that happened before you decided to record.

Use Normalize for final loudness consistency; use live Gain/EQ/filters only when the source actually needs them.

If a source disappears, reconnect it and use Refresh rather than relying on automatic fallback.

Solavixa Audio Recorder 3.0

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