KNIGHTSNARE

KNS16

Digital Reverberation System — User Manual



Audio effect plugin for Mac (AU, VST3, Standalone), Windows (VST3) and Linux (VST3).
knightsnare.com
Inspired by the 1982 AMS RMX16. KNS16 is an independent Knightsnare product: not affiliated with or endorsed by AMS Neve. The reverbs are original designs tuned to the published manuals.

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1. Welcome

KNS16 is a digital reverb in the style of the legendary early-1980s studio unit heard on countless records of that decade: big halls, dense plates, gated non-linear drums, reverse and freeze effects, chorus and echo. You drive it the way the original was driven: with a keypad and a row of readouts, one above each key.

It's set up like the original on an aux: 100% wet. If you put it straight on a track instead, lower the **Dry/Wet** parameter in your DAW.

2. Installing

Mac

Open the downloaded zip and double-click the installer. It installs the Audio Unit (Logic, GarageBand) and the VST3 (Ableton Live, Cubase, Studio One, Reaper and others). Then open your DAW and let it rescan its plug-ins. The installer is signed and approved by Apple, so macOS won't warn you. macOS 11 or later, Apple Silicon and Intel.

Windows

Unzip the download and copy the **.vst3** into `C:\Program Files\Common Files\VST3`, then rescan plug-ins in your DAW. 64-bit Windows 10 or 11.

Linux

Unzip the download and copy the **.vst3** into `~/.vst3` (create the folder if needed), then rescan in your DAW (for example Reaper or Bitwig). 64-bit, Ubuntu 22.04 or newer, or a similar distribution.

> **Tip** This is an audio effect. Insert it on an audio track, a bus or an aux / return channel.

3. The panel and display



KNS16.

The display has one readout directly above each key: **program**, **pre-delay** (ms), **decay time** (seconds), **decay filter low**, **decay filter high**, **store** (t means unsaved edits, otherwise the store you're on), **recall** (the last store recalled) and the **nudge** step. The program name sits on the top line and changes with the program.

- Everything (settings, the selected key, the pot link and your stores) is saved with your DAW project.
- You can use your computer keyboard too: digits, * or . (dot), # or Return, A to D, and the arrow keys to nudge.

4. Using the keypad

To	Press
Load a program	**program**, then 1-18, then #. For example program 1 4 # loads HALL A1.
Set the pre-delay	**predelay**, the milliseconds, **#** (up to the program's limit).
Set the decay time	**decay time**, digits with ***** as the decimal point, **#**. For example 2 * 8 # = 2.8 seconds.
Set a decay filter	**decay filter low** or **high**, optional ***** for minus, one digit, **#**. For example * 6 # = -6.
Step a value	Select it, then **nudge up** or **nudge down**. Hold to repeat; it speeds up.
Control decay time with the pot	Press **decay time**, then **pot** (its LED lights). The pot now sets the decay time. Press **pot** again to release it.
Save to a store	**store save**, 1-9, #.
Recall a store	**control recall**, 1-9, #.
Echo program: choose output A or B	**A** or **B**.

- A value outside the program's range shows **E** in its field. Press any key to carry on.
- Changing program mutes briefly and loads that program's default settings, as on the original, so store your settings first if you want to keep them.
- Recalling a store of the same program changes the settings without the mute.

5. The 18 programs

#	Program	Character
1	AMBIENCE	Hall / plate hybrid with little colouration. Pre-delay up to 200 ms; decay 9.9 is almost infinite.
2	ROOM A1	A live room, deliberately coloured. HIGH filter only.
3	HALL C1	Strong early reflections that give vocals presence.
4	PLATE A1	A dense, even plate.
5	HALL B3	Like HALL C1 with softer early reflections.
6	CHORUS	Five panned voices. Pre-delay sets the voice spacing (up to 50 ms); decay sets the depth.
7	ECHO	Two echoes: A up to 1.2 s and B up to 400 ms. Decay sets the feedback; the A and B keys choose which you edit.
8	NONLIN 2	Holds, then drops away: the classic gated drum sound, in stereo.
9, 10	REVERSE1, REVERSE2	Reverse build-up; the left output is diffuse, the right discrete.
11	FREEZE	Decay 0.0 clears; 0.1 freezes and mutes the input; 0.2 and up freezes and adds.
12	ROOM A0	The original Room A1, brighter.
13	ROOM B1	A small room with a decay of up to 0.7 s.
14	HALL A1	A smooth hall. HIGH filter only.
15	PLATE B1	A second dense plate.
16	DELAY	A delay of up to 810 ms on the right output; the left is straight through. Decay sets the feedback.
17	IMAGE P1	Reflections that sweep across the stereo image.
18	NONLIN 1	Non-linear; the left output is diffuse, the right discrete.

6. Decay filters

- **LOW** (-9 to +9) changes how long the low end rings: from a quarter of the decay time up to four times as long, at 350 Hz. Negative = tighter bass; positive = boomier.
- **HIGH** (0 to -9) darkens the tail: it moves the point where the highs die away from 18 kHz down to 1 kHz.
- Programs that don't offer a filter leave its field blank.

7. Stores

Nine stores keep your own settings, like presets. Save with **store save**, a number and #; recall with **control recall**, a number and #. They're kept with your session and on your computer, so they're there in every project.

8. Levels and power

- **in** and **out** dials (1-10): 1 = off, 7 = unity, 10 = +9 dB. Double-click to go back to 7.
- **o/flo** lights, top to bottom: overflow (red), -6 dB (red), -12 dB (yellow), -18 dB (green) below clipping. Aim for the yellow to flicker.
- **power** switches the unit off (silent) and on.

9. Getting good results

Job	Starting point
Vocal hall	Program 3 (HALL C1), pre-delay 40-60 ms, decay 2.0-2.5 s, HIGH filter -3.
Snare plate	Program 4 (PLATE A1), decay 1.5 s, pre-delay 10-20 ms.
Gated drums	Program 8 (NONLIN 2), decay around 0.3-0.5 s.
Ambient wash	Program 1 (AMBIENCE), decay 6-9 s, LOW filter +2.
Pad from nothing	Program 11 (FREEZE): set decay 0.2 to freeze a chord and keep adding to it.

Tip Put KNS16 on an aux / return channel and send several tracks to it: that's how the original was used, and it glues the mix together.

About

KNS16 is made by Knightsnare. It is inspired by the 1982 AMS RMX16, built from its published manuals and written from scratch; no circuits, sounds or code from the original are copied. AMS and RMX16 are trademarks of AMS Neve. KNS16 is an independent product: not affiliated with or endorsed by them.