



SYNTHSKOOL INSTRUMENTS

PHOSPHOR.

Vintage Hardware Sampler — User Manual

FIRMWARE 1.0 VST3 • AU MAC + WINDOWS

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HOW TO READ THIS MANUAL

Names shown in CAPITALS are labels exactly as they appear on the PHOSPHOR screen. Keys and gestures are shown as **Shift** + **Drag**. Chapters 05–10 follow the five pages of the instrument from left to right, so you can read them in order or jump straight to the page you're looking at.

01 WELCOME

PHOSPHOR is a sampler instrument built from rare vintage synthesizers — their character captured sample by sample, then trimmed, tuned and mapped by hand. There is no emulation and no modeling inside: every sound you play started as a real signal leaving real hardware. On top of that sits a compact, hands-on engine that draws what it hears on a living oscilloscope.

30

MACHINES SAMPLED

500+

SAMPLES · PRESETS

\$287K

OF VINTAGE HARDWARE

WHAT'S INSIDE

- **Sample engine** — chromatically mapped multi-samples from 30 instruments, from the Yamaha CS-80 and Roland Jupiter 8 down to the DX7 and Poly D.
- **Sample editor on the tube** — start/end markers, loop points with crossfade, zoom, zero-crossing snap, normalize and reverse.
- **Two full ADSR envelopes** — one for amplitude, one for the low-pass filter with cutoff, resonance and envelope amount.
- **Three tempo-syncable LFOs** — volume, pan and filter, each with five wave shapes.
- **Chorus, Delay, Reverb** — BBD-style stereo delay with free or linked L/R times, a reverb from small room to endless wash, and **FREEZE** on both.
- **Two browsers** — presets by bank and category, or raw samples by category; star anything as a favorite.
- **Hardware feel** — 16-voice polyphony, mono mode, output meter with peak hold, MIDI panic, every knob a host-automatable parameter.
- **Your screen, your tint** — UI scales 75-150 %, green, blue or red scope phosphor, CRT grain from off to high.

THE COLLECTION

Every sample in PHOSPHOR was captured from one of these units. The list is sorted by the approximate market value of the original hardware.

INSTRUMENT	INSTRUMENT	INSTRUMENT	INSTRUMENT
Yamaha CS-80	Roland Jupiter 8	Oberheim OB-X	ARP 2600
Oberheim OB-Xa	Elka Synthex	Memorymoog	Sequential Prophet 5
Oberheim OB-8	Oberheim Xpander	Minimoog	Roland Jupiter 6
Sequential Prophet VS	ARP Quadra	Sequential Pro One	UDO Super 8
Roland Juno 60	Moog Source	Roland SH-2	Prophet Rev2
Moog Prodigy	Korg Polysix	Moog Matriarch	Polivoks
Korg M1	Roland D-50	Korg DW-8000	Moog Grandmother
Behringer Poly D	Yamaha DX7		

02 INSTALLATION & ACTIVATION

SYSTEM REQUIREMENTS

ITEM	REQUIREMENT
Formats	VST3 and AU, 64-bit only
macOS	macOS 10.13 or later, Intel and Apple Silicon
Windows	Windows 10 or later
Host	Any DAW that loads VST3 or AU — FL Studio, Ableton Live, Logic Pro, Studio One, Cubase, Reaper, Bitwig and others
Disk space	Approx. 1 GB including the complete sample library
Activation	Serial key, entered once inside the plugin. An internet connection is required for the moment of activation.

INSTALLING

MAC OS

- 01 Open the downloaded **.pkg** and follow the installer.
- 02 The installer places the VST3 and AU components in the standard system folders and installs the sample library. No manual sample path is needed.
- 03 Start your DAW. If PHOSPHOR does not appear, rescan your plugins (Logic Pro users: it can help to open Plug-in Manager once).

WINDOWS

- 01 Run the downloaded **Setup.exe** and follow the installer.
- 02 The VST3 is installed to **C:\Program Files\Common Files\VST3**; the sample library goes to the location the installer shows you.
- 03 Start your DAW and rescan plugins if PHOSPHOR does not show up automatically.

ACTIVATING YOUR LICENSE

After purchase you receive your serial key by email. The first time PHOSPHOR opens without a license, a **LICENSE CHECK** panel appears after the boot sequence and the audio engine stays locked until a key has been accepted.

- 01 Copy the key from your email **exactly as sent** — including the dashes, with no spaces before or after.
- 02 Paste it into the **KEY** field on the license panel (or later on the **MISC** page under **LICENSE**).
- 03 Click **ACTIVATE**. The state line below the field reports progress; once it reads activated, the engine unlocks immediately and the status bar returns to **READY**.

GOOD TO KNOW

One license covers up to **three of your own computers**. Activation is stored per machine, so you only do this once per computer — your projects and presets are not tied to the key. **ENTER KEY LATER** closes the panel so you can explore the interface, but nothing will sound until a key is entered. **GET A LICENSE** opens the SynthSkool shop in your browser.

03 QUICK START

Five minutes from a fresh install to a sound of your own. Nothing here requires reading further — but every step points to the chapter that goes deeper.

- 01 **Load PHOSPHOR on an instrument track** and play a chord. The **SCOPE** on the **MAIN** page draws the signal as a vector figure that changes with every note you add. → Chapter 05
- 02 **Step through presets** with the < and > arrows in the **PROGRAM** bar, or hit **RANDOM** to jump anywhere in the library. The status bar shows what's loaded. → Chapter 05
- 03 **Shape it with the macros.** Drag **ATTACK** up for a slow swell, **RELEASE** for a tail, **TONE** down to darken. Hold **Shift** while dragging for fine control; double-click any knob to reset it. → Chapter 04
- 04 **Switch to EDIT** and drag the start marker **S** into the sample to skip the attack transient. Turn **LOOP** on and a one-shot becomes an endless pad; raise **XFADE** until the seam disappears. → Chapter 06
- 05 **Try REVERSE.** A fifty-year-old machine played backwards is a texture nobody has heard before. All envelopes and effects stay exactly where they are. → Chapter 06
- 06 **Add space on the FX page.** Switch **REVERB** to **ON**, raise **SIZE**. Switch **DELAY** on, pick a note value for **TIME**. Hit **FREEZE** on either while a chord is ringing and it hangs in the air forever. → Chapter 07
- 07 **Save it.** On the **PRESETS** page, type a name in the **NAME** field and click **SAVE**. It lands in your **USER** bank, right next to the factory library. Click the star next to anything you want to find again. → Chapter 08
- 08 **Make it comfortable.** On **MISC**, choose a **UI SIZE** that fits your screen and a phosphor tint you like. → Chapter 09



MAIN PAGE WITH A FACTORY PRESET LOADED

04 THE INTERFACE

4.1 ANATOMY OF THE SCREEN

PHOSPHOR is a single fixed screen, like the front panel of a hardware unit. Every page shares the same frame: a header with the page tabs at the top and a status bar at the bottom. Only the area in between changes.



- 1 **Logo.** Purely decorative — mostly.
- 2 **Page tabs.** MAIN • EDIT • FX • PRESETS • MISC. Click to switch pages; the active page is highlighted.
- 3 **Engine LED.** RDY when the sample engine is loaded and licensed.
- 4 **Program bar.** Current preset name with previous/next arrows.
- 5 **RANDOM.** Loads a random preset from the whole library.
- 6 **Scope.** Real-time oscilloscope drawn from the output signal.
- 7 **Macro knobs.** The five most-used controls, always one click away.
- 8 **Voices / CPU.** Currently held notes and engine load.
- 9 **Output meter.** Peak-hold level with a built-in volume fader (chapter 10).
- 10 **MONO.** Switches the instrument to monophonic playback.
- 11 **Status readout.** Shows the value of whatever you are touching; READY when idle.

4.2 KNOBS, BUTTONS AND THE STATUS READOUT

All controls in PHOSPHOR follow the same handful of rules. Once you know them, every page behaves the way you expect.

KNOBS

GESTURE	RESULT
Drag up / down	Increase / decrease the value. The exact value appears under the knob and in the status readout while you drag.
Shift + Drag	Fine mode — four times slower, for precise settings.
Double-click	Reset to the knob's default value.
Host / MIDI	Every knob is exposed to your DAW as a plugin parameter (chapter 11). Moving it from the host moves the knob on screen.

Knobs with a note-value scale (LFO rates in **SYNC** mode, delay times) step through musical divisions from **1/1** down to **1/64T** instead of a percentage. **D** is dotted, **T** is triplet.

BUTTONS AND TOGGLES

- **Toggles** such as **LOOP**, **REVERSE**, **SYNC**, **ON** or **FREEZE** light up when active. Click again to switch off.
- **Cycle buttons** show their current value as the label — for example the LFO wave button reads **SIN**, and each click steps to the next shape.
- **Option rows** such as **SCOPE COLOR** or **UI SIZE** are radio groups: exactly one option is lit.
- **Function keys** (the wide **< PREV • RANDOM • NEXT >** row under the browsers) mirror the front-panel keys of classic hardware samplers.

THE STATUS READOUT

The right end of the status bar is PHOSPHOR's display line. Whenever you touch a control it names it and shows the current value — **CUTOFF 64%**, **WAVE TRI**, **SYNC ON** — and falls back to **READY** about two seconds later. When a sample or preset loads, its name is shown here too. If the engine is locked because no license is active, the readout says so permanently.

WHAT IS SAVED WITH A PRESET

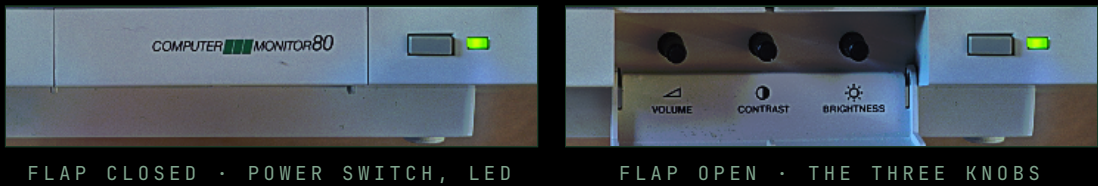
Everything that shapes the sound: sample map, markers, loop and crossfade, reverse, both envelopes, filter, all LFO, chorus, delay and reverb settings, mono mode and the macro knobs. Display settings — scope color, UI size, grain — and favorites are global and stay as you set them regardless of preset.

KEYBOARD FOCUS AND HANGING NOTES

Your DAW keeps keyboard focus while you play. PHOSPHOR only takes focus while you type in a text field (preset name, license key) and hands it back the moment you leave the field. Should a note ever hang, **PANIC — ALL NOTES OFF** on the **MISC** page silences everything instantly.

4.3 THE HOUSING – POWER SWITCH, FLAP AND SCREEN KNOBS

The monitor around the tube is part of the instrument: the grey power switch at the bottom right, the flap under the screen and the three knobs behind it can all be operated — on any page, whatever the screen shows.



POWER SWITCH

Click the grey switch next to the LED to turn the instrument off. The LED goes dark, the picture collapses like a real tube — first to a bright line, then sideways into black — and PHOSPHOR falls silent. This is the instrument's bypass: the track passes silence until you click the switch again, and the screen flickers back on with everything exactly where you left it.

While the power is off, held notes are cut, new notes are ignored, the output is muted and the screen ignores the mouse; the flap snaps shut and stays locked. The power state is a session setting, not part of a preset or project — a preset can never switch the unit off, and PHOSPHOR always starts powered on.

THE FLAP

Click the flap under the screen and it folds down, revealing three knobs; click it again to close it. All three keep their values whether the flap is open or closed. The knobs follow the usual rules (4.2): drag up or down, hold **Shift** for fine mode, double-click to reset; the status readout shows the value while you turn.

KNOB	RANGE	WHAT IT DOES
VOLUME host: Output Trim	0–100 % default 80 %	A trim at the very end of the signal path, after the master VOLUME macro and all effects. Use it to level-match a preset to the rest of your session without touching the preset's own balance. Saved with the preset, exposed to the host.
CONTRAST host: Pan	L100 ... C ... R100 default C	The housing says CONTRAST ; in the plugin this is the static stereo position of the whole instrument. The PAN LFO on the FX page moves around this centre, so a left-panned pad with a slow triangle LFO still lives on the left. The readout shows L, C or R plus the amount. Saved with the preset, exposed to the host.
BRIGHTNESS	0–100 % default 50 %	Brightness of the picture — purely visual, no effect on the sound. Below 50 % the tube dims to a dark but readable image; above 50 % the phosphor runs too hot — brighter, more saturated, a halo bleeding around every line. A machine setting like the display options on MISC : stored per computer, never in presets.

HOST AUTOMATION

Output Trim and Pan are the last two sound parameters in the host list, after Chorus Delay and before Page Nav (chapter 11). The power switch and BRIGHTNESS are deliberately not automatable — one is a session control, the other belongs to your screen, not to the song.

05 MAIN PAGE

Play a chord — the tube answers. The MAIN page holds everything you need for a quick shape and nothing else: the program bar, the oscilloscope and five macro knobs.

PROGRAM BAR

CONTROL	FUNCTION
< / >	Step through the whole factory library by rotating through the categories: each click moves to the next category — BASS → KEYS → LEADS → PAD → PLUCK and back to BASS — and picks the next preset in that category. Five clicks give you one sound from every category; the sixth returns to the second bass. To step through one category only, use < PREV / NEXT > on the PRESETS page.
Preset name	Shows BANK / NAME of the loaded preset. A trailing * means you have changed something since loading.
RANDOM	Loads a random preset from the entire library — the fastest way to find a starting point you would never have picked yourself.

SCOPE

The scope is a real-time vector oscilloscope fed by PHOSPHOR's own output, after all effects. A single note draws a stable figure; a chord makes it breathe and rotate as the harmonics beat against each other. It is not just decoration: filter sweeps show up as the figure softening, delay repeats as echoes of the shape, and clipping as hard corners. Its trace color and the grain overlay are set on the **MISC** page (chapter 09).

MACRO KNOBS

KNOB	RANGE	WHAT IT DOES
VOLUME	0–100 %	Master output level. The same control as the fader inside the status-bar meter.
ATTACK	0–100 %	Amp envelope attack. Identical to ATTACK in the AMP ENVELOPE section on EDIT — turn one and the other follows.
RELEASE	0–100 %	Amp envelope release. Likewise mirrored from the EDIT page.
TUNE	–12 ... +12 st	Transposes the whole instrument in semitones. Great for dropping a bass an octave or finding the register where a sample sits best.
TONE	0–100 %	A gentle low-pass tone control that sits after the main filter. 100 % is fully open; lower values roll off the top end without touching resonance or envelopes — think of it as the treble knob on a hi-fi.

TIP

TONE and the main **CUTOFF** are different filters. Use **TONE** to fit a sound into a mix without changing its character, and **CUTOFF** with envelope and LFO when you want the filter to be part of the sound.

06 EDIT PAGE

A full sample editor on the tube. Zoom into a waveform, cut it down to its sweet spot, loop it into an endless pad — or flip a vintage machine backwards. Below it: the amp envelope and the low-pass filter with its own envelope.



EDIT PAGE – SAMPLE DISPLAY, AMP ENVELOPE, LOW-PASS FILTER

SAMPLE DISPLAY

The waveform shows the loaded sample map. Markers are dragged directly on the display; the readout above the waveform reports the exact positions the engine uses.

MARKER	MEANING
S	Start point. Playback begins here on every note — drag it into the sample to skip a slow attack or a click.
E	End point. Playback stops here (the release still fades out normally).
L1 / L2	Loop start and loop end. Only shown when LOOP is on; the sample then plays from L1 and cycles between L1 and L2 for as long as the key is held.

NAVIGATING THE WAVEFORM

GESTURE	RESULT
Mouse wheel	Zoom in / out around the cursor
Shift + wheel · drag empty area	Pan left / right
Shift + drag marker	Fine mode for precise marker placement
- / +	Zoom out / in (buttons)
FIT	Zoom to the loop region (or S...E when loop is off)
ALL · double-click	Show the whole sample

SAMPLE TOOLS

CONTROL	FUNCTION
SNAP	When lit, every marker you release jumps to the nearest zero crossing. This is what keeps loops and edits free of clicks — leave it on unless you deliberately want a hard edge.
NORM	Auto-normalize: the audible region (the loop, or S...E) is level-corrected so a quiet section of a sample plays at full strength.
MAP < / >	Step through the sample library. Changing the map swaps only the sound source — envelopes, filter and all effects stay exactly as they are. This is the quickest way to hear one patch on every synth in the collection.
RND	Loads a random sample map, same rule: everything else stays put.
XFADE	Loop crossfade. Click to set, drag to adjust, Shift for fine mode, mouse wheel for $\pm 1\%$. Raise it until the loop seam disappears; the waveform readout shows the real crossfade length the engine applies.
REVERSE	Plays the sample backwards. Combined with a slow attack this turns almost any sample into a swelling, unfamiliar texture.
LOOP	Enables looping between L1 and L2. With loop on, the start marker is replaced by L1 and the sample plays to its full length after the loop region.

Marker changes are committed to the engine with a short fade after you release the mouse, so a ringing note does not glitch. This is also why markers are not host-automatable (chapter 11).

AMP ENVELOPE

A classic ADSR controlling the level of every note. The graph on the left redraws as you turn the knobs. **ATTACK** and **RELEASE** are the same parameters as the macro knobs on the MAIN page.

KNOB	FUNCTION
ATTACK	Time from note-on to full level. 0 % is instant.
DECAY	Time to fall from full level to the sustain level.
SUSTAIN	Level held while the key is down. 100 % means no decay stage is audible.
RELEASE	Time to fade to silence after the key is released.

LOW PASS FILTER

A resonant low-pass filter with its own ADSR envelope. The graph shows the filter curve including the resonance peak.

KNOB	FUNCTION
CUTOFF	Filter frequency. 100 % is fully open — the filter is then effectively bypassed.
RESO	Resonance: emphasis at the cutoff frequency. High values ring audibly.
ENV	How far the filter envelope pushes the cutoff up from its knob position. 0 % disables the envelope. To hear it, set CUTOFF low first — at 100 % there is nowhere left to go.
ATK · DEC · SUS · REL	The filter's own ADSR, independent of the amp envelope. A short decay with sustain around 50 % gives the classic pluck; slow attack gives a sweep on every note.

07 FX PAGE

Finish it fast. Three columns — modulation, delay, reverb — each with a live graph, each saved with the preset.



FX PAGE WITH DELAY AND REVERB SWITCHED ON

LFO SECTION

The left column holds three LFOs and the chorus, selected with the tabs VOL · PAN · CHO · FLT. Each tab works in two steps: **click once to show** that modulator's controls, **click again to switch it on or off**. Active modulators stay lit even while another tab is displayed, so you can see at a glance what is running.

CONTROL	FUNCTION
RATE	LFO speed. With SYNC off it is a free rate; with SYNC on the same knob steps through note values from 1/1 to 1/64T locked to your DAW's tempo.
AMOUNT	Modulation depth. At 0 % the LFO has no effect even when switched on.
Wave (SIN...)	Cycle button: SIN → TRI → SAW → SQR → RND. RND is a stepped random source — sample & hold.
SYNC	Tempo-sync on/off for this LFO.

CHORUS

The CHO tab holds a real stereo chorus with its own internal LFO — it has no wave or sync buttons. SPEED sets the sweep rate, DEPTH the sweep width, FEEDBK adds resonance to the modulated delay, and DELAY sets the base delay time from a tight flange to a wide ensemble.

LFO TARGETS

TAB	TARGET	TYPICAL USE
VOL	Output level (tremolo)	Square wave + sync 1/8 = rhythmic gate; slow sine = gentle pulse
PAN	Stereo position (auto-pan)	Slow triangle for width; fast for spin
FLT	Filter cutoff	Sine or triangle wah; RND for random filter steps
CHO	Stereo chorus	Ensemble strings, wide pads — see below

DELAY

A stereo delay in the spirit of bucket-brigade units: warm repeats that soften as they fade. Times are note values synced to the host tempo. Switch it in with **ON**.

CONTROL	FUNCTION
TIME L / TIME R	Delay time per channel as a note value, 1/1 to 1/64T.
Lock (padlock)	Links both times: turn either knob and the other follows. Unlock for ping-pong style patterns such as 1/4 left and 1/8D right.
FEEDBK	Amount of each repeat fed back into the delay. High values build up quickly — keep an eye on the meter.
MIX	Level of the delayed signal against the dry signal.
FREEZE	Closes the delay's input and lets what is already inside recirculate endlessly. Play a chord, hit FREEZE , keep playing on top: the frozen loop underneath stays clean, the new notes pass through dry. Click again to release.

REVERB

From a small room to an endless wash. Switch it in with **ON**.

CONTROL	FUNCTION
SIZE	Room size and decay length.
DAMP	High-frequency damping. More damping = darker, more natural tail; less = bright and glassy.
WIDTH	Stereo width of the reverb, from mono at 0 % to full width at 100 %.
MIX	Reverb level against the dry signal.
FREEZE	Holds the current reverb tail indefinitely without letting new input in. Perfect for building a drone under a melody, or for an infinite pad you can play a part over. Click again to let it decay.

FREEZE AS A PERFORMANCE CONTROL

Both **FREEZE** buttons are exposed to the host as **DeLay Freeze** and **Reverb Freeze**. Map them to a pad or footswitch and you can grab and release tails without touching the mouse.

SIGNAL PATH

Sample → amp envelope → low-pass filter (with its envelope and the **FLT** LFO) → **TONE** → **VOL** / **PAN** LFOs → chorus → delay → reverb → master **VOLUME** → scope and output. Delay and reverb sit at the very end, so a frozen tail is unaffected by anything you do to the envelope or filter afterwards.

08 PRESETS PAGE

Two browsers in one page. Work through finished presets by category, or skip presets entirely and load raw samples straight from the library — then save what you built.



PRESET BROWSER – BANK COLUMN ON THE LEFT, PROGRAMS ON THE RIGHT (PAD BANK)

PRESET BROWSER

Select **PRESETS** at the top of the page. The left column lists banks, the right column the programs inside the selected bank. A single click loads a program; the name appears in the program bar on **MAIN** and in the status readout.

BANK	CONTENTS
★ FAVORITES	Appears at the top as soon as you have starred at least one preset. Collects your stars from every bank in one list.
BASS • KEYS • LEADS • PAD • PLUCK	The factory library, sorted by category. Factory content is write-protected — you cannot overwrite or delete it by accident.
USER	Your own presets. Anything you save lands here.

FAVORITES

Every entry in both browsers has a star on its right edge. Click it to mark a preset or sample as a favorite; click again to unmark. Favorites are stored globally on your computer, not inside presets, so they are the same in every project.

FUNCTION KEYS

The wide keys below the browser — **< PREV, RANDOM, NEXT >** — step through the **selected bank only**, wrapping at the ends, or pick a random program from the whole library. This is the difference to the arrows on the **MAIN** page, which rotate through all categories.

SAVING, RENAMING AND DELETING

- 01 Shape your sound on any page.
- 02 On the PRESETS page, click into the NAME field and type a name. PHOSPHOR takes keyboard focus while you type and returns it to your DAW when you leave the field.
- 03 Click SAVE. The preset is written into your USER bank and becomes the active program.
 - **Overwrite:** save with the same name as an existing user preset to replace it.
 - **Rename:** load the preset, save it under the new name, then delete the old one.
 - **Delete:** select a user preset and click DELETE. Factory presets cannot be deleted; the button does nothing for them.

WHERE USER PRESETS LIVE

User presets are ordinary files in PHOSPHOR's user folder in your system's application-data location. They are not stored inside the DAW project — but the complete current state of the instrument **is** saved with the project, so a song will always open exactly as you left it, even if the preset file has since changed.

SAMPLE BROWSER



SAMPLE BROWSER — CATEGORIES WITH MAP COUNTS ON THE LEFT, SAMPLE MAPS ON THE RIGHT

Select **SAMPLES** at the top of the page. The left column lists categories (plus **ALL** and, once you have starred a sample, ★ **FAVORITES**) with the number of maps in each; the right column lists the sample maps themselves. Clicking a map loads **only the sound source** — every knob, envelope and effect stays exactly where it is. This is deliberately different from loading a preset: it lets you audition the entire collection through one patch, or drop a new synth into a sound you have already dialed in. The < **PREV** • **RANDOM** • **NEXT** > keys below step through the maps of the selected category. The same sample maps are also reachable from **MAP** on the **EDIT** page.

09 MISC PAGE

Make it yours. System functions, your license, and how the scope looks on your screen.



MISC PAGE

SYSTEM

CONTROL	FUNCTION
PANIC – ALL NOTES OFF	Immediately silences every voice. Use it if a note hangs after a MIDI hiccup or a lost note-off.
SYNTHSKOOL.COM	Opens the support site in your browser.

LICENSE

Shows the activation state of this computer. To (re-)activate — for example after a fresh OS install — paste your key into the **KEY** field and click **ACTIVATE** (chapter 02). The panel at the bottom of the page shows firmware version and loaded library; quote both when contacting support.

DISPLAY

SETTING	OPTIONS	NOTES
SCOPE COLOR	GREEN · BLUE · RED	Phosphor tint of the oscilloscope trace. Green is the classic P1 look; blue and red give the scope a different character while the rest of the interface stays as it is.
UI SIZE	75 · 100 · 125 · 150 %	Scales the whole window. 75 % fits comfortably next to a mixer on a laptop; 150 % is meant for 4K displays. The setting is remembered per computer.
GRAIN	OFF · LOW · MID · HIGH	Intensity of the CRT phosphor grain overlay. OFF gives a clean flat display if you find the texture distracting.

All three display settings are global — stored per computer, never written into presets.

UPDATES

Updates are free for registered users, and PHOSPHOR tells you when one exists — it never downloads or installs anything on its own. Once a day, when the plugin window opens, it asks synthskool.com which version is current and compares it with the firmware you are running. Nothing but that request is transmitted; offline, the check is skipped silently.



MISC PAGE WITH AN UPDATE AVAILABLE – UPDATE ROW AND UPD LED

ELEMENT	MEANING
UPDATE – UP TO DATE	The UPDATE row in the SYSTEM block shows UP TO DATE – 1.0.0: you are running the current firmware. Until the first check has completed it reads CHECKING...
UPDATE – VERSION AVAILABLE	The row turns amber, names the new version with a short note on what changed, and shows a DOWNLOAD button. The button opens the download page in your browser — the plugin itself does not fetch any file.
Engine LED – UPD	The LED in the header reads UPD in amber instead of RDY on every page, so you notice a new version without visiting MISC. When the engine is locked, LOCKED takes priority. The status readout shows UPDATE 1.1.0 – SEE MISC once after loading.

INSTALLING AN UPDATE

- 01
- Click **DOWNLOAD** (or open your purchase library at synthskool.com) and download the new installer for your system.
- 02
- Close your DAW and run the installer. It replaces the plugin and, when needed, the sample library in place — your license, user presets and favorites are untouched.
- 03
- Reopen your project. It loads with the state it was saved in, the host parameter order is fixed across versions (chapter 11), and the **FIRMWARE** line on MISC shows the new version.

10 STATUS BAR

The strip at the bottom of every page tells you what the engine is doing while you play — and hides two controls you will use constantly.



STATUS BAR — VOICES, CPU, OUTPUT METER WITH FADER, MONO, READOUT

ELEMENT	MEANING
VOICES	Number of notes currently held. PHOSPHOR plays up to 16 notes at once; release tails beyond that are managed automatically so fast chord stabs never cut each other off.
CPU	Approximate processing load of this instance.
OUT	Output level meter with a peak-hold line. The thin marker inside it is the master volume fader : drag it to set the level (same as the VOLUME macro), double-click it to jump to 100 %.
MONO	Monophonic mode. Only one note plays at a time; overlapping notes play legato, the newest note taking over. Turns any pad or key sound into a lead or bass instantly. Saved with the preset and available as a host parameter.
Readout	Names and values while you touch controls; loaded preset or sample names; READY when idle.

READING THE METER

- The bar fills from the left with the current level and falls smoothly; the peak line stays a moment longer.
- If the peak line reaches the right end, the output is clipping — lower **VOLUME**, delay **FEEDBK** or reverb **MIX**.
- Double-click the fader marker to return to 100 % after riding the level down.

11 MIDI & HOST AUTOMATION

Every knob in PHOSPHOR is a plugin parameter. Map it to a controller, draw automation, or link it to a macro in your DAW — the knob on the tube moves with it in real time.

MAPPING A HARDWARE CONTROLLER

PHOSPHOR has no MIDI-learn menu of its own; it uses your DAW's mechanism, so the mapping is stored with the project and works like every other plugin:

- 01 Open your DAW's parameter list or automation panel for the PHOSPHOR instance (FL Studio and Reaper: right-click the parameter; Ableton: Configure mode; Logic: Smart Controls / Controller Assignments).
- 02 Pick the parameter by name from the table below.
- 03 Move the knob or fader on your controller to learn it. From now on the hardware knob turns the on-screen knob, with the value shown in the status readout as if you had dragged it.

PARAMETER LIST

Names as they appear in the host, in host order. The order is fixed and will not change in future updates, so automation in existing projects stays valid. **Rate** is the free rate, **Division** the note value used when **Sync** is on.

HOST PARAMETER NAME(S)	SCREEN LABEL / LOCATION
Master Volume · Tune · Tone · Mono Mode	VOLUME · TUNE · TONE (MAIN), MONO (status bar)
Amp Attack · Amp Decay · Amp Sustain · Amp Release	AMP ENVELOPE (EDIT); attack and release also on MAIN
Filter Cutoff · Filter Resonance · Filter Env Amount	CUTOFF · RESO · ENV (EDIT)
Filter Attack · Filter Decay · Filter Sustain · Filter Release	ATK · DEC · SUS · REL (EDIT)
Delay On · Delay Time L · Delay Time R · Delay Feedback · Delay Freeze · Delay Mix	DELAY column (FX)
Reverb On · Reverb Freeze · Reverb Size · Reverb Damping · Reverb Width · Reverb Mix	REVERB column (FX)
LFO Vol / LFO Pan / LFO Filter — each with On · Amount · Rate · Division · Sync · Wave	VOL · PAN · FLT tabs (FX)
Chorus On · Chorus Speed · Chorus Depth · Chorus Feedback · Chorus Delay	CHO tab (FX)
Page Nav	no on-screen control — see below

PAGE NAV — SWITCH PAGES FROM A CONTROLLER

Page Nav is a parameter with no knob on screen (0–100, resting at 50). Map it to a joystick axis, a pitch-bend wheel or a spring-return fader: push it to the right for the next page, to the left for the previous one. Each push switches exactly once and re-arms when the control returns to the centre. It is not stored in presets.

Not automatable by design: sample markers (S · E · L1 · L2), XFADE, LOOP, REVERSE and the delay L/R lock are edit-time controls. They are saved with the preset but not exposed to the host, because changing them re-commits the sample with a short fade and would glitch under continuous automation.

12 SOUND DESIGN RECIPES

Short, repeatable moves that get the most out of the collection. Each starts from a factory preset or a raw sample and takes under a minute.

ENDLESS PAD FROM A ONE-SHOT

Load any sample map on the SAMPLES browser. On EDIT, turn LOOP on, drag L1 past the attack and L2 a second or two later. Raise XFADE until the seam vanishes. Set amp ATTACK 30 %, RELEASE 60 %. Add reverb SIZE 70 %.

BACKWARDS SWELL

Take a pluck or key sound. Turn REVERSE on, then amp ATTACK to 50 % and RELEASE to 40 %. Add delay at 1/4D with 40 % feedback. The transient now arrives at the end of the note and the delay smears it forward.

CLASSIC FILTER PLUCK

Any bass or lead map. CUTOFF 25 %, RESO 35 %, ENV 70 %, filter ATK 0, DEC 30 %, SUS 10 %. Amp sustain 100 %, release 15 %. Switch MONO on for a lead.

TREMOLO GATE

Pad preset. FX → VOL tab, click it again to switch on. Wave SQR, SYNC on, rate 1/8 or 1/16, AMOUNT 100 %. Add delay 1/8D for the off-beats.

RANDOM FILTER STEPS

FLT LFO with wave RND, sync 1/16, amount 60 %; cutoff at 40 % with resonance 30 %. Each sixteenth lands on a new filter position — instant sequencer feel from a held chord.

ENSEMBLE STRINGS

Any string or ensemble map from the PAD category (the sample browser lists over 200). CHO on: SPEED 30 %, DEPTH 60 %, DELAY 55 %. Slight PAN LFO, triangle, free rate 15 %, amount 25 %. Reverb DAMP 70 % keeps it warm.

FROZEN DRONE UNDER A MELODY

Play a big chord with reverb on and SIZE 90 %. While it rings, click reverb FREEZE. Release the keys — the chord stays. Now play a lead over it; new notes pass through with their own tail while the drone holds. Map Reverb Freeze to a footswitch or pad for hands-free use.

SAME PATCH, EVERY SYNTH

Dial in envelopes, filter and FX you like. Then on EDIT press MAP > repeatedly — or RND — and listen to the identical patch on 30 different machines. Star the ones that work; they collect under ★ FAVORITES in the sample browser.

ONE MORE THING

Somewhere in PHOSPHOR the oscilloscope stops drawing your chords and boots a menu of six playable games instead. No hints — you'll know it when you hit it. Click outside the scope to eject the ROM.

13 TROUBLESHOOTING & FAQ

NO SOUND, STATUS READOUT SAYS THE ENGINE IS LOCKED

No license is active on this computer. Go to **MISC** → **LICENSE**, paste your key and click **ACTIVATE**. Make sure the key was copied without leading or trailing spaces and with all dashes intact. Activation needs a working internet connection at that moment.

"SAMPLE DATA NOT FOUND" ON START

The sample library has been moved or deleted. Run the installer again — it restores the library without touching presets or license. Then click **RETRY** or reopen the plugin.

THE PLUGIN DOES NOT APPEAR IN MY DAW

Rescan plugins in your DAW's preferences. On macOS, make sure the DAW is allowed to load AU/VST3 from the system folders and that you are running a 64-bit host. PHOSPHOR does not ship as VST2 or AAX.

A NOTE HANGS

Click **PANIC — ALL NOTES OFF** on the **MISC** page. PHOSPHOR also detects most lost note-offs automatically and ends the affected voices on its own.

PRESETS I SAVED ARE GONE IN ANOTHER PROJECT

User presets are global files, not part of a project — if they were saved on this computer they will be in the **USER** bank in every project. If you switched computers, copy the user preset folder across. A project itself always reopens with the exact state it was saved in, even without the preset file.

THE DELAY/REVERB TAIL CHANGES WHEN I SWITCH PRESETS

That is expected: delay and reverb settings are part of the preset. If you want an effect to stay constant, use your DAW's send effects instead and leave PHOSPHOR's FX off in the presets you switch between.

KNOBS FEEL TOO COARSE / TOO SENSITIVE

Hold **Shift** while dragging for fine mode. Larger **UI SIZE** settings also give you more pixels per value.

CAN I USE PHOSPHOR ON MORE THAN ONE COMPUTER?

Yes — one license activates up to three of your own machines.

IS THERE A TRIAL OR DEMO VERSION?

No. Listen to the demos on synthskool.com; all sales are final to the extent permitted by law.

WHERE DO THE SAMPLES COME FROM?

Every sample was recorded from the real hardware listed in chapter 01, then trimmed, tuned and processed by hand before being mapped chromatically. Nothing is emulated or modeled.

THE LED SAYS UPD / MISC SHOWS A NEW VERSION

A newer version of PHOSPHOR is available. On **MISC**, click **DOWNLOAD** — it opens the download page in your browser; the plugin never downloads or installs anything by itself. Run the new installer with your DAW closed; your license, user presets and favorites are kept. The check runs at most once a day and stays silent offline.

STILL STUCK?

Write to kleemann@synthskool.com with your operating system, DAW and version, the firmware version and library string shown at the bottom of the **MISC** page, and — if possible — a screenshot of the status readout.

14 SPECIFICATIONS

ENGINE

Type	Multi-sample player, chromatic mapping
Library	500+ samples from 30 instruments, ~1 GB
Presets	500+ factory, unlimited user
Polyphony	16 voices, mono mode
Sample editing	Start / end, loop L1 / L2, crossfade, zero-crossing snap, normalize, reverse
Envelopes	2 × ADSR (amp, filter)
Filter	Resonant low-pass with env amount; separate tone control
Tuning	±12 semitones

MODULATION & FX

LF0s	3 (volume, pan, filter); sine, triangle, saw, square, random; free or tempo-synced 1/1–1/64T
Chorus	Stereo, speed / depth / feedback / delay
Delay	Stereo, tempo-synced, linked or independent L/R, freeze
Reverb	Size / damping / width / mix, freeze

INTERFACE

Display	Real-time vector oscilloscope
Scope tints	Green, blue, red phosphor trace
Grain	Off, low, mid, high
Size	75 / 100 / 125 / 150 %
Metering	Voice count, CPU, peak-hold output meter

FORMATS & SYSTEM

Plugin formats	VST3, AU (64-bit)
macOS	10.13+, Intel & Apple Silicon
Windows	10+
License	Serial key, up to 3 computers per user
Updates	Free for registered users

LICENSE IN BRIEF

This is a summary for convenience; the End User License Agreement shown during installation is the binding document.

- PHOSPHOR is licensed, not sold. One license may be activated on up to three computers owned and used by the same person.
- You may use every sound you make with PHOSPHOR in your own commercial and non-commercial music without further credit or payment.
- You may not redistribute, resell or share the plugin, its sample library or its factory presets, in whole or in part, or use the raw samples to build another sample library or instrument.
- There is no trial version. All sales are final to the extent permitted by applicable law.

SUPPORT

EMAIL

kleemann@synthskool.com

WEB

synthskool.com

Synth Skool · Kilian Kleemann · Habichtswaldstraße 14 · 34270 Schauenburg · Germany

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PHOSPHOR.

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