

Prophet X/XL OS 2.0 Addendum

Prophet X OS version 2.0 adds support for the Prophet XL as well as a number of new features not covered in the main User's Guide. In this addendum, all references to the Prophet X apply to the Prophet XL as well.

New Features in OS 2.0

- 32-voice performance mode. In this mode, which requires that you use only a single instrument and/or oscillator per layer, all voices pass through a single stereo pair of filters. The filter envelope controls the filter cutoff paraphonically.
- In 16-voice mode, sampled instruments now play in stereo when LPF BYPASS is enabled in the SAMPLE PLAYBACK section (main display menu).
- Arpeggiator Beat Sync. This Global parameter quantizes keyboard performance of the arpeggiator so that notes are quantized to the current clock divide setting.
- Arpeggiator “Momentary Sustain” Mode allows the arpeggiator to sustain (even when you release the notes on the keyboard) for as long as you hold down the Sustain pedal. Releasing the Sustain pedal stops the arpeggiator.
- MIDI note output from the arpeggiator and sequencer allows you to use the arpeggiator or sequencer to drive other sound modules.
- New “forward/reverse” loop mode. This is available for all loop types: regular, pitched and sync. In this mode, loops play first forward then backward. Crossfades are not applied.
- Ring Modulation is now available as an effect.
- Hack and Decimate are now mod destinations and can be controlled through the mod matrix.
- Instrument 1 delay and Instrument 2 delay are now mod destinations and can be controlled through the mod matrix.
- The Edit Layer B function now allows you to copy or swap a sequence between layer A and B.

- Up to 64 alternative tunings can now be loaded. Imported tunings can also be exported using the `SEND ONE SCALE` (for the currently active scale) or `SEND ALL SCALES` Global commands.
- Velocity curves, aftertouch/pressure curves, and alternative tunings can now be saved per program using the `MISC PARAMS` menu. Previously this was only available as a Global parameter.
- The `Revert` command allows you to choose to revert Layer A, Layer B or both layers.
- A new `SAVE EDIT LAYER STATE` Global command has been added. When enabled, this command automatically remembers which Layer was active for editing when a program was saved.

Checking Your Operating System Version

If you've just purchased your Prophet X or XL new, OS 2.0 may already be installed. If not, and you want to use the new features just described, you'll need to update your OS to version 2.0 or later.

To update your Prophet X or XL OS, you'll need a computer and a USB 3.0 flash drive (USB stick). To download the latest version of the Prophet X or XL OS along with instructions on how to perform a system update, visit the Prophet X Support page of the Sequential website.

To check your OS version:

1. Press the `GLOBAL` button. The screen displays the OS version.
2. If your OS is out of date, download the latest version from the URL above and update your instrument using the instructions that follow.



Because OS 2.0 adds new commands to the Globals menu, after installing the OS update, you must refresh the Prophet X or XL's Global parameters using the `RESET GLOBALS` command in the Globals menu.

Updating Your Operating System

If you need to update your Prophet X OS, you'll need a computer and a USB 3.0 flash drive (USB stick).

To update the Prophet X OS:

1. Download the latest OS from the Prophet X Support page of the Sequential website.
2. Unzip the file and copy the *.bin* portion to a properly formatted USB 3.0 flash drive/thumb drive. (See “Formatting a USB Flash Drive” in your main Prophet X User’s Guide.
3. Insert the USB flash drive into the `SAMPLE IMPORT` port on the rear panel of the Prophet X.
4. Press the `GLOBAL` button.
5. Use Soft Knob 1 to select `UPDATE APPLICATION`.
6. Press Soft Button 1 (`UPDATE NOW`). The OS update will take a few moments. After it is done, you will be prompted to restart your Prophet X.

Using 32-Voice Mode

Prophet X OS version 2.0 adds a new 32-voice performance mode that is useful for sounds such as acoustic and electric pianos that benefit from additional polyphony. In this mode, you are limited to a single instrument and oscillator.

In addition, all voices pass through a single stereo pair of filters. The Filter Envelope controls the filter cutoff paraphonically, meaning that rather than each voice having its own filter envelope, a single envelope controls the filter cutoff for all voices.

If you want, you can enable paraphonic retriggering to retrigger the filter envelope each time you press a key. You can also bypass the filter and paraphonic operation of the filter envelope. To learn how to do either of these, see the instructions that follow.

To activate 32-voice mode:

1. Press and hold the 16-VOICE button until it begins blinking. 32-voice mode is activated.
2. To disable 32-voice mode, press the 16-VOICE button again.

To enable paraphonic retriggering:

1. With 32-voice mode active, press the MISC PARAMS button.
2. Press Soft Button 3 (UNISON/GLIDE).
3. Turn Soft Knob 4 to enable PARA TRIG.

To bypass the filter:

1. In the FILTER section, turn any knob and the Filter parameters will appear in the main display.
 2. Press Soft Button 4 (LPF MISC).
 3. Turn Soft Knob 2 to enable BYPASS. The low-pass filter is now bypassed.
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Arpeggiator Beat Sync

This option, found in the Global menu, quantizes keyboard performance of the arpeggiator so that notes are quantized to the current clock divide setting. Previously, changing notes or chords on the keyboard during arpeggiator playback would retrigger notes whether or not the note was played precisely on the beat. With this option enabled, arpeggiator note playback occurs only on the beat — regardless of when you press a key on the keyboard.

To enable Arpeggiator Beat Sync:

1. Press the GLOBAL button.
2. Turn Soft Knob 1 knob to select ARP SYNC TO BEAT.
3. Turn Soft Knob 3 knob to select QUANTIZE.
4. Press the GLOBAL button again to exit the Global menu.

Arpeggiator “Momentary Sustain” Mode

You can use the sustain pedal to turn the arpeggiator’s Hold function on and off and perform other arpeggiator-related functions. To access this feature, use the SUSTAIN ARP setting in the GLOBAL menu.

There are now three modes to choose from:

- **ARP HOLD** - With the arpeggiator running in this mode, pressing the Sustain pedal once causes the arpeggiator to hold the sequence (even when you release the notes on the keyboard). Pressing it again stops the arpeggiator.
- **SUSTAIN** - With the arpeggiator running in this mode, pressing and holding the Sustain pedal sustains the notes, as the Sustain pedal normally would.
- **ARP HOLD MOM** - With the arpeggiator running in this mode, pressing and holding the Sustain pedal causes the arpeggiator to sustain (even when you release the notes on the keyboard) for as long as you hold down the pedal. Releasing the Sustain pedal stops the arpeggiator.

To select the arpeggiator’s sustain pedal mode:

1. Press the GLOBAL button.
2. Turn Soft Knob 1 knob to select SUSTAIN ARP.
3. Turn Soft Knob 3 knob to select either ARP HOLD, SUSTAIN, or ARP HOLD MOM, depending on your preference.
4. Press the GLOBAL button again to exit the Global menu.

MIDI Note Output from the Arpeggiator and Sequencer

The arpeggiator and sequencer now output MIDI note numbers. Any notes that you hold on the Prophet X or XL keyboard will be arpeggiated according to the current settings of the arpeggiator and output over MIDI as MIDI notes. Similarly, any notes output by the sequencer will be output over MIDI as MIDI notes. You can use this feature to drive other MIDI-equipped devices such as synthesizers and drum machines. To access this feature, use the MIDI ARP NOTES setting in the GLOBAL menu.

To enable MIDI Note output from the arpeggiator:

1. Press the GLOBAL button.
2. Turn Soft Knob 1 knob to select MIDI ARP+SEQ.
3. Turn Soft Knob 3 to select ON.

To control an external MIDI device:

1. Connect the MIDI or USB output of the Prophet X or XL to the MIDI or USB input of the external device, depending on which type of connection the external device requires.
2. On the Prophet X or XL, press the GLOBAL button, then use Soft Knob 1 to select MIDI OUT SELECT.
3. Use the Soft Knob 3 to select MIDI, or USB, or MIDI+USB, depending on how your Prophet X or XL and external device are connected.
4. Press the GLOBAL button again to exit the Global menu.
5. On the external device, set the the MIDI Channel and MIDI Receive port to match the Prophet X .
6. Hold down a chord on the keyboard or start sequencer playback. The external device should be triggered by the arpeggiated or sequenced notes.

Forward/Reverse Loop Mode

OS 2.0 adds a new loop mode for sample manipulation: forward/reverse. This is available for regular, pitched, and sync loops. In this mode, loops play first forward then backward. Crossfades are not applied in this mode.

You can activate a sustain loop in any sample/instrument by pressing the LOOP button (if it's not already on) and adjusting loop attributes as necessary.

To enable a forward/reverse loop in an instrument:

1. Press the LOOP button (if it's not already on).
2. Press Soft Button 3 (INST1 LOOP) to show the EDIT SAMPLE parameters.
3. Use Soft Knob 2 to set the LOOP MODE. Try using REG+FWDREV. This selects REGULAR loop mode with forward/reverse activated.

4. Play a note or chord. You will probably want to fine tune the loop. To do this, press Soft Button 4 (INST1 EDIT) to show the loop controls.
5. Adjust Soft Knob 2 (LOOP SIZE) and Soft Knob 3 (LOOP CENTER) as necessary to fine tune the loop.

New Ring Modulation Effect

Ring modulation is now available as a digital effect. The ring modulator's mode of operation is determined by Parameter 2 (pitch tracking) which can be set to either ON or OFF.

Ring Mod Parameters

Param 1: Freq — This sets the modulation frequency. If Parameter 2 (TRACKING) is set to OFF, the modulation frequency remains the same regardless of what note you play on the keyboard. If Parameter 2 is set to ON, the ring modulator tracks the pitch of the lowest note that you play on the keyboard. In this case Parameter 1 sets a ratio between the lowest note that you play and the modulator note (instead of setting a fixed frequency). The modulation frequency will then change as you change the lowest note that you're playing, so that the ratio will remain constant between the note that you play and note of the modulator. If you only play one note at a time, the ring modulator will modulate with the same ratio as you play up and down the keyboard. Set Parameter 2 to the "on" position to get more musical results.

Parameter 2: Tracking — This controls whether note tracking is on or off for the ring modulator. See Parameter 1 above to learn how this affects the behavior of the ring modulator.

Parameter 3: Shape — This changes the shape of the ring modulation's carrier wave from a sine wave to a sawtooth wave. This affects the sound and character of the ring modulation. Experiment with different settings to vary the effect.

To use ring modulation:

1. Press the ON/OFF switch to turn on effects.
 2. Turn the SELECT 1/2 knob to choose RING MOD.
 3. Turn the MIX knob to blend in a good amount of the processed signal. You'll want to be able to clearly hear the effect when you adjust its settings.
 4. Use the PARAM 1, PARAM 2, and PARAM 3 knobs to adjust the effect.
 5. Finally, adjust the MIX knob again to optimize the amount of the effect. Full left is completely dry. Full right is completely wet (a 100% processed signal).
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Hack and Decimate as Mod Destinations

Hack reduces the bit depth and Decimate reduces the sample rate of the sampled instruments and digital oscillators of the Prophet X. With OS 2.0 you can now modulate these two parameters using the mod matrix. The menu/controls for Hack and Decimate appear in the main display when you adjust any parameter in the front-panel Mixer section.

To modulate Hack or Decimate:

1. In the MODULATION section, press the ASSIGN SOURCE button.
2. Use Soft Knob 1 to select an available mod slot.
3. Use Soft Knob 2 to scroll through the various mod sources and choose an appropriate mod source such as an LFO or one of the touch sliders.
4. Use Soft Knob 3 to set an appropriate modulation amount.
5. Use Soft Knob 4 to scroll through the various mod destinations and choose HACK OR DECIMATE, depending on which of these you want to modulate.
6. Press a key and listen. Adjust the mod amount as necessary.

Instrument 1 and 2 Delay as Mod Destinations

You can now delay playback of instruments 1 and 2 using the mod matrix. This is useful for offsetting the start of sample playback for each instrument relative to each other or relative to the oscillators. Note that this controls the start of playback for the instrument as a whole — not the sample start point within the instrument itself. It is a very effective way of creating sounds and textures that evolve over time.

To modulate Instrument 1 or Instrument 2 delay:

1. In the MODULATION section, press the ASSIGN SOURCE button.
2. Use Soft Knob 1 to select an available mod slot.
3. Use Soft Knob 2 to scroll through the various mod sources and choose an appropriate mod source such as DC to set a fixed amount of delay.
4. Use Soft Knob 3 to set an appropriate modulation amount. This controls the length of the delay from the time you press a key and when the instrument begins playback.
5. Use Soft Knob 4 to scroll through the various mod destinations and choose INST1DELAY or INST2DELAY, depending on which of these you want to modulate.
6. Press a key and listen. Adjust the mod amount as necessary.

Copying or Swapping Sequences Between Layer A and B

You can now copy or swap sequences between Layer A and Layer B.

To copy or swap sequences between Layer A and layer B:

1. Press the EDIT LAYER B button.
2. Press Soft Button 4 to toggle between ALL PARAMS and SEQ PARAMS.
3. With SEQ PARAMS displayed, use Soft Button 1, 2, or 3 to perform the function you want:
 - Soft Button 1 copies the sequence on Layer A to Layer B
 - Soft Button 2 copies the sequence on Layer B to Layer A
 - Soft Button 3 swaps the sequences on Layer A and Layer B

Support for Up to 64 Alternate Tunings

By default, the Prophet X is set to standard, chromatic western tuning. Additionally, it supports up to 64 additional alternative tunings, which you can access using the `ALT TUNINGS` parameter in the `GLOBAL` menu.

With OS version 2.0, the Prophet X ships with 64 preset alternative tunings ranging from Equal temperament to Indonesian Gamelan tunings. If you want, you can replace or add to these with other tunings that you can find on the Internet. These must be in SysEx format. You can download them into the Prophet X using SysEx Librarian for Mac or MIDI-OX for Windows.

You can also export any individual tuning or the entire set of tunings currently on your Prophet X as a SysEx file using the `SEND ONE SCALE` (for the currently active scale) or `SEND ALL SCALES` Global commands.

To export an alternative tuning as a SysEx file over USB:

1. Connect your synthesizer to a computer using a USB cable.
2. Open your MIDI librarian software (SysEx Librarian, etc.) and configure it to receive SysEx messages.
3. Press the `GLOBAL` button on the Prophet X.
4. Use the Soft Knob 1 to select `MIDI SYSEX CABLE`, then use Soft Knob 3 knob to choose `USB`.
5. Use Soft Knob 1 to select `SEND ONE SCALE` if you want to export just the currently active tuning. Or, select `SEND ALL SCALES` if you want to export the entire set of tunings on your Prophet X.
6. Press Soft Button 1 (`DUMP NOW`). The tunings are exported to your MIDI librarian software.

Per-Program Velocity Curves, Aftertouch Curves, and Alternative Tunings

Velocity curves, aftertouch/pressure curves, and alternative tunings can now be saved on a program-by-program basis using the MISC PARAMS menus. Previously these attributes could only be saved on a Global basis and were applied to all programs.

To set the velocity curve for a specific program:

1. Press the MISC PARAMS button.
2. Press Soft Button 2 to select CURVES.
3. Use Soft Knob 1 to deselect USE GLOBAL and instead select a specific curve, 1-8.
4. When you're finished, save the program.

To set the aftertouch curve for a specific program:

1. Press the MISC PARAMS button.
2. Press Soft Button 2 to select CURVES.
3. Use Soft Knob 2 to deselect USE GLOBAL and instead select a specific aftertouch curve, 1-4.
4. When you're finished, save the program.

To set an alternative tuning for a specific program:

1. Press the MISC PARAMS button.
2. Press Soft Button 2 to select CURVES.
3. Use Soft Knob 3 (SCALE) to deselect USE GLOBAL and instead select a specific alternative tuning, 1-64.
4. When you're finished, save the program.

Revert Program/Layer

Previously, pressing the REVERT button restored both layers of a program to its previously saved state. Now you can choose to restore both layers or just an individual layer.

To revert a program or individual layer to its previously saved state:

1. Press and hold the REVERT button. The main display shows the new revert options.
2. Press Soft Button 1 (REVERT A) to revert just Layer A.
3. Press Soft Button 2 (REVERT B) to revert just Layer B.
4. Press Soft Button 3 (REVERT ALL) to revert both layers.

“Save Edit Layer State” Command

There is a new command in the Global menu called SAVE EDIT LAYER STATE. When this is enabled, the Prophet X automatically remembers which layer was active for editing when a program was saved.

To enable the SAVE EDIT LAYER STATE command:

1. Press the GLOBAL button.
2. Turn Soft Knob 1 knob to select SAVE EDIT LAYER STATE.
3. Turn Soft Knob 3 knob to select ON.
4. Press the GLOBAL button again to exit the Global menu.

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