

UNO Synth PRO X

Paraphonic Dual Filter Analog Synthesizer

USER MANUAL



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1 – Introduction

Thank you for purchasing UNO Synth PRO X.

1.1 – What's inside the box

- UNO Synth PRO X
- USB-C cable
- Power Supply
- Registration Card
- Quick start guide with QR Code to this User Manual

1.2 – Register your UNO Synth PRO X

By registering, you can access technical support, activate your warranty and receive free JamPoints™, which will be added to your account. JamPoints™ allow you to obtain discounts on future IK purchases! Registering also keeps you informed of all the latest software updates and IK products.

Register at: www.ikmultimedia.com/registration

1.3 – Overview

UNO Synth PRO X is a powerful and portable monophonic analog synthesizer with digital effects and built-in sequencer and arpeggiator.

The synth architecture provided by Sound Machines based on the IK Multimedia design presents an analog audio path and a digitally controlled engine with these features:

Powerful engine

- 3 wave-morphing oscillators
- Sync and pulse-width modulation
- FM and ring modulation
- 3-voice paraphony
- OTA multimode filter with HP and LP mode
- SSI chip-based LP filter with self-oscillation and 2/4 Pole slope
- Serial and parallel configurations with phase inverting
- 3 full ADSR envelopes with looping option + 2 LFOs
- 16-slot modulation matrix
- Analog drive circuit
- 3 FX slots – reverb, delay, modulation
- 256 user-editable presets
- 10-mode onboard arpeggiator
- 64-step sequencer with parameters recording
- CV/Gate automation

Advanced connectivity

- Balanced Stereo out for noiseless operation
- 3.5 mm Headphone out for maximum portability
- USB and MIDI In/Out
- 2 Programmable CV/Gate In/Out
- Audio input for filters and FX, daisy-chain

1.4 – Precautions

Locations

Using the unit in the following locations can result in a malfunction:

- In direct sunlight
- Location of extreme temperature or humidity
- Excessively dusty or dirty locations
- Locations of excessive vibration
- Close to magnetic fields

Power Supply

Please use only the power supply provided with the unit and connect the cable to the correct port on the device. Please note: the USB-C port can power the unit, however is meant to be used as secondary source. Use the provided power supply for optimal use.

Interference with other electrical devices

Radios and televisions placed nearby may experience reception interference. Operate the unit at a suitable distance from radios and televisions.

Handling

To avoid breakage, do not apply excessive force to the knobs, buttons or the OLED display.

Care

If the exterior becomes dirty, wipe it with a clean and dry cloth. Do not use liquid cleaners such as benzene or thinner, or cleaning compounds of flammable polishes.

Keep this manual

After reading, please keep this manual for later reference.

Keep foreign matter out of your unit

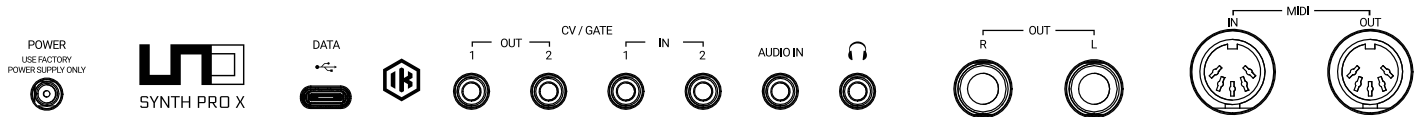
Never set any container with liquid in it near this unit. If liquid gets into the unit, it could cause a breakdown, fire or electrical shock. Be careful not to let metal objects get into the equipment. If something does slip into the unit, unplug the power and/or the USB cable, then contact your nearest IK Multimedia dealer or the store where the equipment was purchased.

Specification subject to change

The information contained in this manual is believed to be correct at the time of printing. However, IK Multimedia reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

2 – Installation and setup

2.1 – Connections



Please note: To prevent malfunction and equipment failure, always turn down the volume and turn off all the units before making any connections.

UNO Synth PRO X can be powered either from USB or POWER jack. When connected via USB the host (Mac, Windows) must provide at least 1.5 A in order for the Uno Synth PRO X to work properly. In case the host is not capable of supplying the required power an external power supply (included in the box) must be connected to the POWER jack.

POWER

Connect the provided power supply to power the unit.

NB: Only use the original power supply included in the box.

USB-C Port

USB port should be used to connect UNO Synth PRO X with a PC/Mac host for both data transmission. The USB-C port is capable of powering the unit, but is not meant to be the sole source of power. Use the power supply provided for normal use.

CV/GATE

These are typically used to send or receive electrical signals with external devices such as a Eurorack modular system. These connections can be used as CV, Gate or Sync signals.

The CV output sends and receives a control voltage you can use to control external oscillators, filters or other voltage-controlled devices. A gate can send or receive a simple on-off message from external devices similar to a note on-off message. Gate signals are typically used for triggering envelopes or advancing sequencer steps. Sync sends or receives time-based signals from external devices.

Audio IN

Connect an external mono audio source. The incoming audio can be processed through the internal sound engine or simply passed through as a daisy chain with no processing.

Phones

Headphones can be connected to the UNO Synth PRO X through the 3.5 mm stereo jack on the back panel.

Audio OUT

Connect the UNO Synth PRO X output to an external amp, mixer or audio interface. Note that the output is stereo because of the integrated digital effects.

MIDI IN/OUT ports

Connect the UNO Synth PRO X to a MIDI interface, controller, synthesizer or drum machine with standard 5-pin MIDI DIN connectors.

2.2 – Turning the unit ON/OFF and Calibration process

UNO Synth PRO X powers on as soon as the power supply is connected to the unit. The unit can then be powered on and off by pressing and holding the HOLD Button.

Once powered ON it automatically starts the first tuning and capacitance sensing calibration. During the calibration the display will first show a static “UNO,” the FW version and then a blinking “CALIBRATION.”

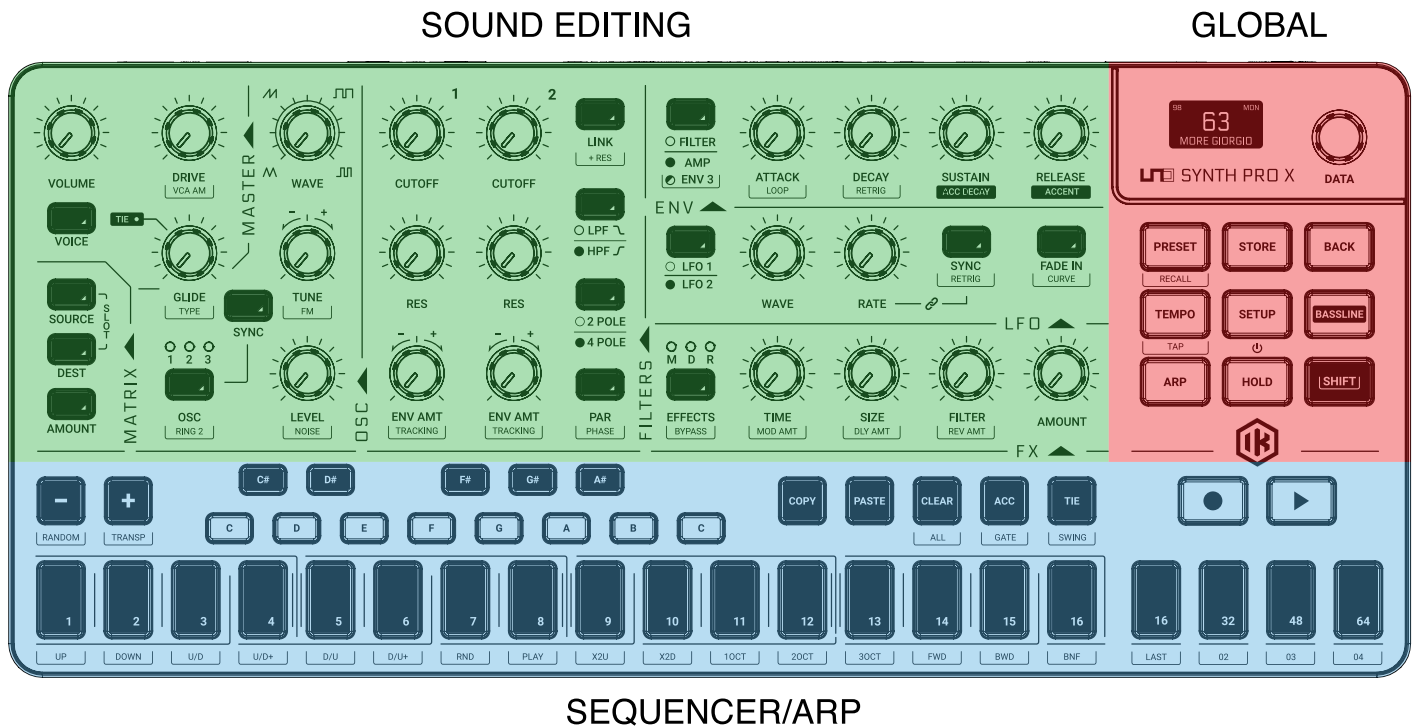


The unit will then be ready for use and the last used preset will be loaded and indicated on the display.

Due to the fully analog signal path various noises and calibration sounds might be audible during the startup of the unit.

We recommend turning your system volume down while starting up.

3 – Front Panel Interface



The interface is designed with groups of controls divided by their function.

Sound Editing section

The group of buttons, knobs and light indicators that work together to navigate the sound design parameters of the synth engine. These controls are located on the upper left.

Global controls

This is the group of buttons on the right along with the display and push encoder for dedicated setup and to manage the synth to fit your needs.

Sequencer and Arpeggiator

The group of buttons on the bottom of the synth, made of a small 1-octave keyboard and utility buttons. This section will help you create your riffs and synth lines with ease and inspire you during your sound design journey.

The SHIFT button located on the far right of the interface can be used in combination with other knobs/buttons in order to access alternate functions.

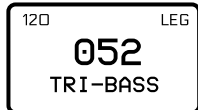
For the sake of clarity the names of the functions accessed with the shift key are written in red inside this document.

3.1 – Home Display

The display of the USPX on the home page gives information about the Preset, BPM/Sync and the Voice mode.

On the top left, when sync is set to INTERNAL, the BPM is shown, otherwise the EXT will let you know that the machine will wait for an external tempo.

On the top right, the Voice mode of the preset is shown as LEG for legato, MON for mono and PAR for paraphonic.



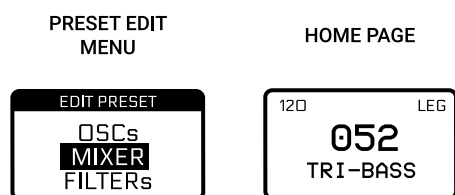
3.2 – Sound Editing

The sound editing section is comprised of 15 buttons, 22 knobs and 6 lighted indicators.

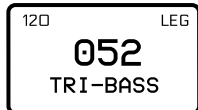
Each time you need to go deeper into the editing of a section, PUSH the DATA encoder. You will jump directly inside the EDIT PRESET menu, being able to move inside it with using PUSH, DATA and BACK.

The EDIT PRESET menu is where all the parts of the synth engine, even the ones not shown on the interface, are available for editing.

To access this menu press PRESET while the “home” page is shown. To exit, use BACK the number of times necessary to exit the nested menu.



NOTE: We can call HOME page the display view where the name of the preset, the slot number, the tempo and the voice mode are shown.



3.3 – Oscillators

OSC

Press the button to toggle between the 3 OSCs. Hold the button to edit all three OSCs at the same time.

WAVE

As seen on the UNO synth, the wave is selected by a continuous wave shaper going from Triangle to Saw to Pulse with PWM from 50% to 98%.

SYNC

When OSC 2 or 3 are selected, the phase is forced to be synchronized to the phase of OSC1. This adds harmonic overtones to the frequency of oscillator 2 and/or 3, creating complex waveforms.

TUNE

The tuning system is similar to the original UNO Synth, but with an increased semitone range of +/- 2 octaves. The first +/-100 cents (1 semitone) are adjusted in cents and the remaining course in semitones.

Tip: After modifying the tuning with the knobs and it changes to semitone adjustment, you can still use the data knob to adjust the tuning in cents.

FM

Adjusts the amount of Frequency Modulation from OSC 1 to OSC 2 and/or 3.

RING 2

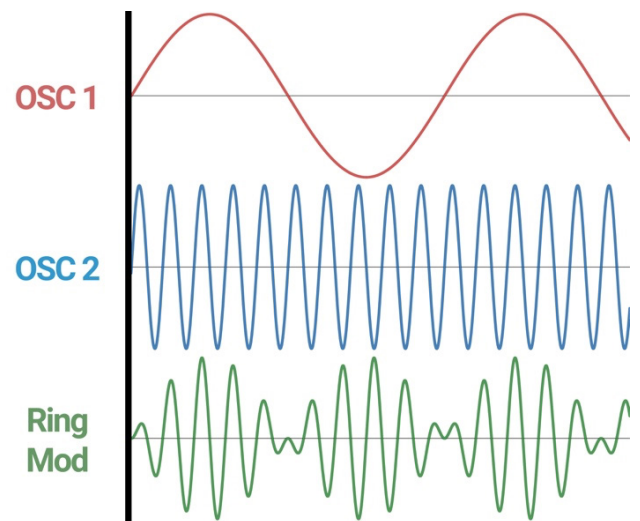
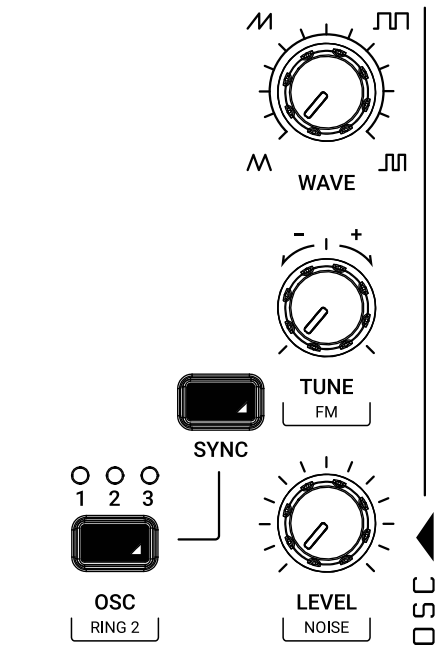
Ring Modulation multiplies the signals from OSC1 and 2 generating different harmonics not present in either of the original signals.

Adjusting the pitch of Oscillator 2 creates atonal and metallic sounds.

When ON, OSC 1 ring modulates OSC 2. RING is an ON/OFF control.

LEVEL

Adjusts the pre-filter volume of Oscillator 1 from 0 to 127.



NOISE

Adjusts the pre-filter volume of the Noise Generator from 0 to 127.

The External Audio-In routing is selectable in the MIXER section inside the EDIT PRESET menu, between PRE, where the audio enters pre-filters and became part of the audio sources, and POST, which acts as an audio daisy chain.

3.4 – Filters

The UNO Synth PRO X is equipped with 2 filters for its voice that can be routed either in series or parallel, and are shown in the following:

Filter 1 is a 2-pole OTA-based filter with HP and LP modes.

Filter 2 is a selectable 2 or 4-Pole LP based on the SSI2164 chip.

CUTOFF 1 & 2

Adjusts the cutoff frequency of the filter between 20 Hz and 21 kHz.

RES 1 & 2 (Resonance)

Adjusts the resonance of the filter from 0 to 127. Filter 2 will begin to self-oscillate at around value 210.

ENV AMT 1 & 2 (Envelope Amount to filter)

This is a fixed modulation route that determines how much the Filter Envelope modulates the cutoff frequencies with a range of -63 to 64.

TRACKING

This determines to what extent the cutoff frequency will track the keyboard. The higher the value is set, the more the filter will open over the upper range of the keyboard and close in the lower ranges of the keyboard. The control range is +/- 200%.

LINK (link Cutoff only)

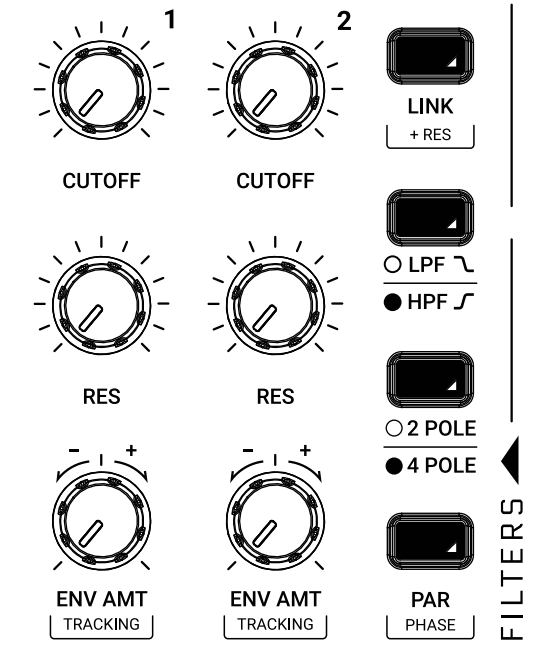
When ON, operating the FILTER 1 CUTOFF will uniformly change both of their cutoff frequencies. The relative offset between the cutoff frequency settings of the Filters is preserved as the linked value is increased or decreased. This relative offset can be modified moving the FILTER 2 CUTOFF.

+RES (link Cutoff + Resonance)

When ON, operating the FILTER 1 RESONANCE will uniformly change both of their Resonance frequencies. The relative offset between the cutoff frequency settings of the filters is preserved as the linked value is increased or decreased. This relative offset can be modified moving the FILTER 2 RESONANCE.

LPF / HPF Toggle

Toggles between the Filter 1 modes.



2P / 4P Toggle

Toggles between the Filter 2 slopes.

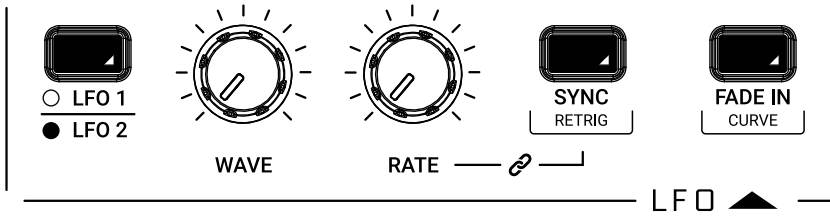
PAR

Toggles between the series and parallel routing of the two filters.

PHASE

Toggles between the polarity of Filter 1.

3.5 – LFOs



LFO 1 / LFO 2 Toggle

Selects which of the two LFOs is currently being edited.

WAVE

Hard switch between Sine, Triangle, Falling Sawtooth, Rising Sawtooth, Square, Random, S&H, Noise.

RATE

Selects the speed of the LFO 1 from 0.01 Hz to 100 Hz. When the sync is enabled, the Rate is synchronized to the tempo and the rate is displayed in BPM.

FADE IN

This parameter controls how much time it takes for the LFO amplitude to rise from zero to maximum. The value is expressed in seconds from 0.0 to 10.0 (one decimal place).

SYNC

An ON/OFF control. When ON, the LFO rate synchronizes to the tempo with the following musical note subdivisions: 1/1 1/2, 1/4, 1/4d, 1/4t, 1/8, 1/8d, 1/8t, 1/16, 1/16d, 1/16t, 1/32, 1/32d, 1/32t, 1/64, 1/64d, 1/64t, 1/128.

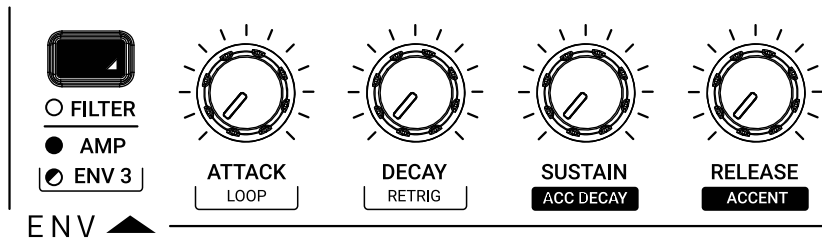
CURVE

This parameter selects the type of curve to apply at the Fade In time between Linear, Logarithmic and Exponential.

RETRIG

An ON/OFF control, which resets the phase of the LFO each time a key is pressed.

3.6 – Envelopes



There are three ADSR envelopes: the Filter Envelope, the Amp Envelope and the Envelope 3.

The Filter Envelope modulates the cutoff frequency of the two filters with the modulation amount set by the Envelope Amount controls for each filter.

The Amp Envelope modulates the volume of the VCA by 100%.

The Envelope 3 hasn't got a fixed routing, instead it can be set inside the modulation matrix.

All the envelopes can be used as sources to modulate other parts of the synth in the Modulation Matrix.

FILTER / AMP / ENV 3

This control toggles between the AMP and the FILTER envelopes. To select the ENV 3, use the SHIFT.

ATTACK

Sets the amount of time from 0 to its maximum. The range is from 0 to 30 sec.

DECAY

Sets the amount of time needed to go from peak to the specified sustain level.

The range is 0.1 ms to 30 sec.

SUSTAIN

Sets the level of the held note. Unlike A, D and R, Sustain is a level and not a time control. The range is from 0 to 127.

RELEASE

Sets the amount of time for the sustain level to 0. The range is 0.1 ms to 30 sec.

LOOP

Both envelopes have the ability to loop between Attack and Decay. When the control is set to ON, it goes back to the attack stage after the end of the decay stage and repeats the envelope cycle until stopped.

RETRIG

Retrigger of both the envelopes is automatically switched when using the VOICE button to switch between MONO, LEGATO and PARAPHONIC mode.

However, you can individually select the ON/OFF status of the retrigger based on the necessity.

ACC DECAY

Refer to “Bassline mode” section.

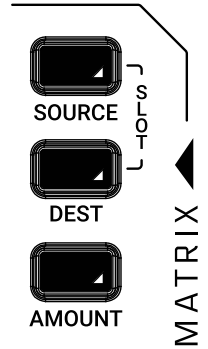
ACCENT

Refer to “Bassline mode” section.

3.7 – Modulation Matrix

The Modulation Matrix is the way to create modulation connections between parts of the engine, which are usually not connected (ex: the amp envelope modulating the OSC2 wave).

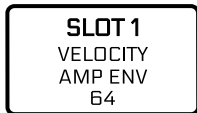
There are 16 modulation slots available, each with a source, destination and amount. Modulation amounts can have unipolar or bipolar values depending on the destination. For bipolar destinations, negative values create inverted modulations.



SLOT (press both SOURCE and DEST keys)

Selects the modulation slot number between 1 and 16. Pressing the button will show on the 16 steps (like the 16 slots), the available slots (not lit steps), the used slot (the red lit steps) and the selected slot (the flashing white step).

Pressing a step will select the relative modulation slot. The display will show not only the slot number, but also the source and the destination.



SOURCE

Selects from the available modulation sources.

DEST

Selects from the available modulation destinations.

AMOUNT

Adjusts the bipolar amount of modulation, depending on the destination and source parameters.

Note: Holding the SOURCE or the DEST buttons will allow to select either by turning the knobs on the front panel.

Regarding the CV (control voltage)

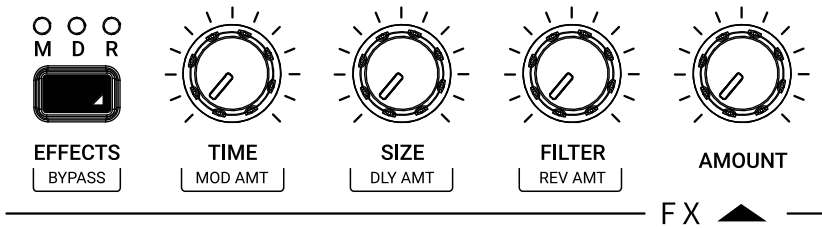
CV and Gate connections are defined in the Modulation Matrix by selecting them as destinations for the CV/ Gate outputs) or sources for the CV/Gate inputs.

CV input is bipolar (where value 64 is +2.5 V).

CV output is unipolar (positive range only from 0 to +5 V).

MODULATION SOURCES	MODULATION DESTINATIONS
Velocity	OFF
Mod Wheel	Osc 1 Tune
Aftertouch	Osc 1 Wave
Key Pitch	Osc 1 Level
Key Gate	Osc 2 Tune
Osc 1 Tune	Osc 2 Wave
Osc 1 Level	Osc 2 Level
Osc 2 Tune	Osc 2 FM Amount
Osc 2 Tune	Osc 3 Tune
Osc 3 Tune	Osc 3 Wave
Osc 3 Level	Osc 3 Level
Noise	Osc 3 FM Amount
Filter 1 Cutoff	Noise level
Filter 1 Res	Filter 1 Cutoff
Filter 2 Cutoff	Filter 1 Res
Filter 2 Res	Filter 2 Cutoff
Filter Spacing	Filter 2 Res
LFO 1	Filter Spacing
LFO 1 Fade In	LFO 1 Wave
LFO 2	LFO 1 Rate
LFO 2 Fade in	LFO 2 Wave
Filter Env	LFO 2 Rate
Amp Env	Filter 1 Env Amount
CV 1 IN	Filter 2 Env Amount
GATE 1 IN	Amp Env Amount
CV 2 IN	Drive Amount
GATE 2 IN	Delay Amount
Accent	Reverb Amount
Gate	Mod Amount
Tie	CV OUT 1
	GATE OUT 1
	CV OUT 2
	GATE OUT 2
	Accent Amount
	Mod N1-16 Amounts

3.8 – Effects



UNO Synth PRO X is equipped with 3 slots of digital effects, which are MODulation, DELAY and REVERB. There is also an Analog DRIVE in the global section.

All effects are mono-to-stereo, 48 kHz 16-bit. All effects are routed as sends, so the audio signal path will always be analog.

EFFECTS

Pressing the button will toggle between the three effect slots and relative controls.

Three LEDs marked M, D and R display the currently selected effect.

AMOUNT

Adjust the selected effect amount between 0% and 100%.

BYPASS

Enable/Disable the bypass on the whole effects section.

MOD AMT

Can be used to adjust the modulation effect amount without selecting it first.

DLY AMT

Can be used to adjust the delay effect amount without selecting it first.

REV AMT

Can be used to adjust the reverb effect amount without selecting it first.

EFFECT TYPE

Can be used to change the type of effect of the selected slot.

3.8.1 – Modulations (M)

TYPE (SHIFT + AMOUNT)

Selects between CHORUS and UNI-V. Chorus is the default modulation.

MODE (FILTER knob)

When in CHORUS, selects between SYNTH I, SYNTH II and STRING.

When in UNI-V selects between CHORUS and VIBRATO.

INTENSITY/DEPTH (SIZE knob)

Adjusts the intensity of the effect between 0% and 100%.

RATE (TIME knob)

Adjusts the speed of the effect.

3.8.2 – Delays

TYPE (SHIFT + AMOUNT)

Selects between MONO, STEREO, DOUBLER, PING PONG and LCR. Stereo is the default delay.

TIME

Adjusts the delay tempo and division. When sync is off, the tempo goes from 1 ms to 350 ms without decimal values. When sync is on, the values are 1/4, 1/8 T, 1/8 D, 1/8, 1/16 T, 1/16 D, 1/16, 1/32T, 1/32 D, 1/32 (some divisions depend on the master tempo).

Synced values are the default.

NOTE: The maximum total delay time is 1 second, which becomes 500 ms for stereo delays and 350 for LCR. For this reason, available time divisions depend on the delay type and BPM.

Depending on the type, separate L and R times might be shown.

FEEDBACK (SIZE knob)

Adjusts the delay feedback from 0% to 80% (where 100% is near auto oscillation).

FILTER

Adjusts the LPF cutoff from 20 Hz to 10000 Hz.

SYNC

Enables or disables the sync of the delay division to the master tempo. This control can be found inside the PRESET EDIT MENU.

3.8.3 – Reverbs

TYPE (SHIFT + AMOUNT)

Selects between HALL, PLATE and SHIMMER-S.

PRE-DELAY

Adjusts the pre-delay time between 0 ms and 200 ms. This control can be found inside the PRESET EDIT MENU.

SIZE

Adjusts the reverb size between 0 and 100.

TIME

Adjusts the reverb decay time. Each type has a different way to deal with the decay:

HALL PLATE will have 3 controls: TIME with min 0.1 and max 30 sec, TIME LOW and TIME HIGH (with the same range). Changing TIME will automatically change the other 2 settings. If you changed manually TIME LOW or HIGH, the control TIME will automatically retain the ratio between the controls.

REVERSE: Time is a feedback control that goes from 0% to 100%.

SHIMMER: Time works as a Diffusion control between 0 and 100.

FILTER

Adjusts the LPF IN from 50 Hz to 10 kHz.

3.9 – Master

VOLUME

Adjusts the main out and phones volume of the instruments.

DRIVE

Adjusts the amount of signal going to the drive circuit, which is built around 2 diodes positioned after the filter stage. The range is 0 to 127.

VCA AM

Adjusts the amount of modulation the VCA will receive from the AMP ENV. At 100% the VCA is fully modulated from the ENV. At 0% the VCA isn't modulated by the AMP ENV and remains fully open.

Please note: When the VCA remains fully open for a long period of time, the synth auto-calibration will stop and the synth will be prone to tuning drift.

GLIDE

Adjusts the amount of portamento glide between 0% and 100%.

TYPE

Selects between Constant Speed or Constant Time.

VOICE

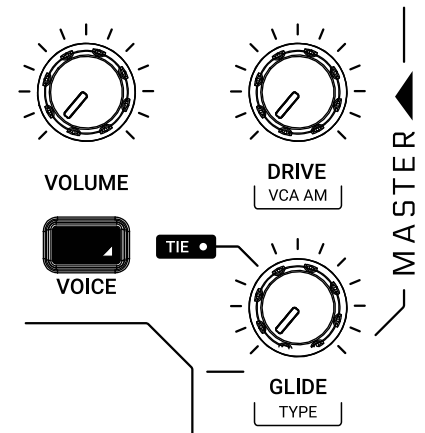
Selects between the 3 voice modes of the synth:

LEGATO: When LEGATO mode is enabled, and detached notes are played, each Attack will still be re-triggered. But when overlapping notes are played, the pitches will change without new Attacks, for Legato response. This is the standard and default mode of the synthesizer.

MONO: The MONO mode is selected by pressing the “VOICE” button until the display shows “MONO.”

PARAPHONIC: In this mode the 3 Oscillators will play up to 3 different notes (or pitches) played on the keyboard. This is possible as the 3 oscillators' pitch can be controlled separately in a one voice synth architecture.

Please note that each oscillator can still have different settings so, if you want a “poly” sound, remember to set the oscillators accordingly.



3.10 – Other sound editing shortcuts

Due to the complexity of the engine and the limitation of the UI, some shortcuts are handy to speed up the process of sound design for advanced users.

For editing, depending on which sound editing button is pressed, pressing the DATA encoder will show the relative menu or parameter inside the EDIT PRESET menu (e.g. OSC will show the OSC menu).

3.11 – Bassline Mode

The BASSLINE mode is meant to change the behavior of the synth to mimic the inspiring limitations of the original 303 bassline. That does not mean it will mimic the sound, since the analog components and engine is different, instead to mimic the behavior of some of the controls and the interaction between those.

For example, when ON the cutoff and envelopes get limitations in ranges or controls:

CUTOFF: The upper frequency limit is moved from 20 kHz to approximately 5 kHz.

ENV: The envelopes controls will be limited to Attack and Decay controls with a higher minimum limit. The Sustain and Release will be anyway available in the PRESET EDIT menu.

Two parameters will be now available on the panel:

ACCENT: Determines the amount of accent between 0 and 127.

ACCENT DECAY: Determines the decay time of the accent envelope modulation.

The interaction between the various points is an important aspect of this mode, and helps get the feeling and specific musicality of a bass and groove machine.

The best part of this mode is that it's fitted in a super powerful synth engine, so you will still get the 3 OSCs, the 2 filters, modulators and bipolar controls for those inspirations from the past to get sounds for the future.

That is the aim. So have fun - a lot of fun!

4 – Global Controls

The global settings are a group of buttons dedicated to the presets and the internal MIDI and system settings.

4.1 Preset

The instrument is capable of storing 256 presets. The presets can be recalled by Program Change with 2 banks of 128 presets each.

All presets can be renamed on the machine itself using a maximum of 14 characters each.

A preset stores all the parameters on the panel, the parameters found on the PRESET MENU, the sequence, the arpeggiator settings and the effects settings.

4.1.1 – Edit Preset menu

The EDIT PRESET menu is accessible by pressing DATA or when pressing the PRESET button while the preset name is shown on the display.

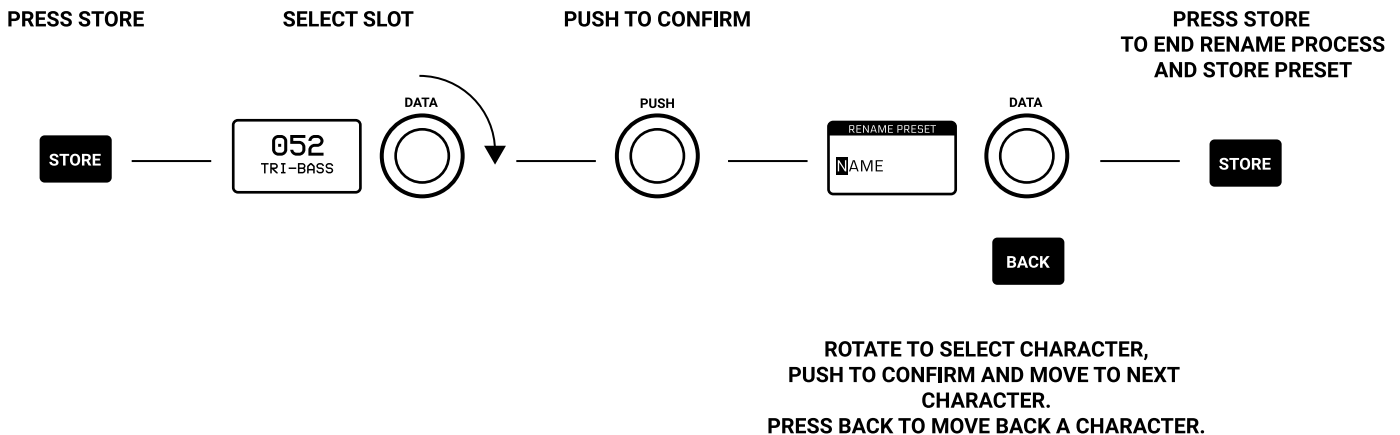
In this menu, you can view and adjust all the parameters related to the synth engine (OSC, FILTERS, etc.)

4.1.2 – Store a preset

To store a preset, press the STORE button at any time. Once pressed, the display will show the name of the loaded preset and the slot number blinking. Use the DATA to select the slot number and PUSH to confirm, or press BACK to discard.

Once the desired slot is selected, Press STORE to rename the preset. Use the DATA to select the letter, press DATA to select the next character and BACK to selected the previous.

Once the name is complete, press STORE again to finish the storing procedure.



4.1.3 – Load a preset

To Load a preset, the PRESET button has to be lit, meaning preset operations are enabled. Turning the DATA knob will show the preset lists, but only PUSH will load the preset. BACK discards the operation.

After the PUSH, you can choose to load the sound, the sequence or both part of the preset.

That might give you an extra inspiration.

4.1.4 – Rename a preset

While storing a preset, or in the preset menu, you can rename a preset.

The rename process is done letter by letter, using the DATA rotation to select the letter, the PUSH to move to the next character, the BACK to move to the previous character and STORE to confirm the rename.

The characters are always capital, starting with a space then numbers from 1 to 0, then letters in alphabetical order, then symbols as follows:

-space- , 1...0, A...Z, .-_

4.1.5 – Initialize a preset

To initialize a preset, enter the EDIT PRESET menu, the last selection is INITIALIZE. You will be asked to confirm the initialization: use BACK to discard or push DATA to confirm.

Please note: Once initialized a preset cannot be restored.

4.1.6 – Recall a preset

All parameters of a preset can be changed at any given time for sound design and performance purposes, and a preset is not stored until the procedure is used. At any given time, you can recall the original selected and loaded preset in real-time by pressing SHIFT + PRESET.

4.2 – Setup

The setup menu is where the global utility settings are selected. Machine settings includes MIDI and system management.

4.2.1 – Master Tuning

In this first voice of the menu, you can select the Master Tuning between +/-50 cents from the standard A at 440 Hz.

4.2.2 – MIDI

UNO Synth PRO X transmits the front panel knob and button movements via Control Change messages (CC), and also receives CC messages for external control.

Each parameter or control on the synth has its own unique Control Change number, so you can completely control the unit via external controllers or computers.

MIDI data can also be exchanged between the UNO Synth PRO X and a computer using a USB cable.

CHANNEL IN

Between 1 and 16.

CHANNEL OUT

Between 1 and 16.

SOFT THRU

The MIDI Soft Thru functionality, when enabled, allows messages from the MIDI IN DIN of the unit to be copied to the MIDI OUT DIN.

INTERFACE

When the MIDI Interface Mode is enabled, the MIDI messages incoming from the USB are copied to the MIDI OUT DIN of the unit and the MIDI messages incoming from the MIDI IN DIN are copied to the USB.

PROGRAM CHANGE

Program Change messages allow the recall of a preset without touching the interface. You can enable and disable the receive and transmit of Program Change messages.

4.2.3 – SYNC

You can synchronize the UNO tempo to the clock of an external sequencer or other devices.

SEND

The send of the MIDI Clock can be turned ON or OFF, or you can use the CV SYNC.

Note that the CV Sync uses both CV OUT ports: on CV OUT 1 it will send the clock, while on CV OUT 2 it will send the gate. The gate information will be used by some devices as a RUN/STOP trigger.

RECEIVE

You can select the sync between Internal, External and USB, or you can use the CV SYNC.

Note that the CV SYNC uses both CV IN ports: on CV IN 1 it will receive the clock, while on CV IN 2 it will receive the gate. The gate information will be used as PLAY/STOP trigger for the sequencer.

4.2.4 – KEYBOARD

VELOCITY

Sets the default velocity for the onboard keyboard.

SCALE

Quantizes the tone generator to different musical scales using the natural note keys (white keys). The default setting is Chromatic where incoming note data will not be converted.

When a scale other than Chromatic is selected, the accidental note keys (black keys) on the keyboard will be disabled. This makes it possible to gliss across the bottom part of the keyboard with ease and play only the notes in the chosen scale.

The available Scales are:

- Chromatic
- Major
- Minor
- Major Pentatonic
- Major Blues
- Minor Pentatonic
- Minor Blues
- Minor Harmonic
- Mixolydian
- Dorian
- Klezmer

- Hungarian Gypsy
- Spanish Gypsy
- Japanese
- South-East Asian

TRANSCOPE

You can transpose the entire keyboard +/- 12 semitones.

4.2.5 – PITCH WHEEL

Adjusts the Pitch Wheel range between 0 and 12 semitones.

4.2.6 – KNOB

UNO Synth PRO X knob behavior uses “Absolute Mode” by default: this means that the knob value is recalled using the absolute value of the position of the knob when edited (i.e.: turn a pot and the value jumps immediately from the stored value to the edited value).

The other 2 modes are Pass-Through and Relative. In Pass-Through Mode, turning the knob has no effect until after the edited value equals the preset value (or “passes through” the stored value).

In Relative Mode, the changes are relative to the stored setting and the full value range of the knob is not available until either the minimum or maximum value and the respective lower or upper limit of the knob’s travel is reached.

4.2.7 – AUDIO

Configures the routing for the external Audio IN signal. Choices are FIXED PRE, FIXED POST and PRESET.

4.2.8 – METRONOME

“OFF,” “ON” or “PLAY.” OFF means the metronome is off in all situations. ON means the metronome is on and hearable only when in real-time recording. PLAY means the metronome is always on, both in real-time recording and in Playback.

The metronome is affected by the division chosen for a pattern.

4.2.9 – ILLUMINATION

Configures the level of backlight illumination.

4.2.10 – CALIBRATE

UNO Synth PRO X does a calibration and tuning of the oscillators each time it's turned on. From the Setup menu you can start a calibration process for the oscillators.

4.2.11 – OS UPDATE

Sets UNO Synth PRO X in FW update mode. You can exit this stage only with a complete power cycle, disconnecting all the power cables from the unit (power supply and USB).

4.3 – Arpeggiator

UNO Synth PRO X is equipped with a multimode arpeggiator with 10 modes, a 4-octave range and hold functionality.

The modes are:

UP: Held notes play from the lowest to the highest (default).

DOWN: Held notes play from the highest to the lowest.

U/D: Held notes play from the lowest to the highest then down to the lowest again.

UD+: A variation of U/D (up/down) where the upper note and the lower note play twice at the top and bottom of the pattern instead of just playing once.

D/U: Held notes play from the highest to the lowest then up to the highest again.

DU+: A variation of D/U (down/up) where the lower note and the upper note play twice at the bottom and top of the pattern instead of just playing once.

RND: Held notes play in a random order.

PLY: (as played) The held notes played in the order in which they are triggered.

X2U: Each note in the arpeggio plays twice from the lowest to the highest.

X2D: Each note in the arpeggio plays twice from the highest to the lowest.

Selecting the arpeggiator mode

To select the arpeggiator mode press the SHIFT button, then Press the relative step on the sequencer.

Selecting the arpeggiator gate

To select the arpeggiator gate press GATE using SHIFT + ACCENT. Use DATA to select between 0 and 10, where 10 is a legato note.

Adjusting the swing

To select the arpeggiator mode press the SHIFT + TIE. Use DATA to select between 50% and 80%. Note that the Swing is global parameter for both ARP and sequencer.

Selecting the arpeggiator triggers

The arpeggiator is constantly repeating the played notes in loop, and while this happens the 16 steps light up following the arpeggio notes.

Pressing the steps, you can select when the notes from the arpeggio will be played, creating different rhythmic patterns.

Holding the arpeggio

You can hold the arpeggio notes by pressing HOLD. The button will light up when engaged.

Recording the arpeggio into the sequencer

To record the arpeggio into the sequencer, while holding the notes for the arpeggio with the arpeggiator engaged, press REC+PLAY: the sequencer button will blink and it will record the arpeggio in 16 steps. Once the 16th step is recorded, the arpeggiator will disengage and the sequencer will playback what has been recorded.

4.4 – SEQUENCER

The sequencer is a 64-step sequencer capable of recording notes, chords and parameters. Recording options are REALTIME and STEP.

Majority of the editing parameters can be recorded in the sequencer, plus some additional sequencer-only parameters such as Accent, Tie and Gate.

Activate sequencer

When PLAY is pressed and the playback of the sequencer starts.

Everything is active apart from the ARP. To record the ARP into the sequencer you must start with the arpeggiator first.

Exit sequencer

You must cease playback to exit the sequencer.

Realtime Recording

To enter the real-time mode recording hold REC and press PLAY.

The REC button LED starts blinking and the PLAY and SEQ LEDs light up.

From now on, every note and parameter received as input is recorded as step information, smoothed between steps, differently from the step mode recording.

The real-time recording stops itself at the end of a loop, switching to Step Recording.

To return in Realtime recording, always hold REC and press PLAY.

Step Recording

The Step recording is activated when REC is engaged; once activated, holding a step will let you insert data in that step, which could be notes, chords and parameters or combinations of those. To move between steps simply hold different steps.

The Step Recording always overrides the real-time recorded elements.

Modify Step Data

To view the data stored in a step, hold a step: the display will show the data in a list scrollable via DATA encoder. To modify a parameter, activate the recording by pressing REC, hold the desired step and scroll with DATA to highlight the desired parameter; PUSH to enter the parameter editing and adjust with the DATA. Once finished, release the step.

4.4.1 – Editing button and play tools

CLEAR

This is the tool used to clear the majority of the events recorded or saved.

While holding CLEAR:

- Press any step to delete all the events stored in the step (valid also on SONG mode).
- Press the pages to delete the entire section of the sequence.
- Press Clear while the parameter list is open to clear the selected parameter.

COPY

While holding COPY, press any step to copy the events, or press a page to copy the entire page.

PASTE

While holding PASTE, press any step to paste copied events on another step, or press another page to paste the entire page.

SWING

Use DATA to select between value 50% (default) until 80%. The swing value is global for both ARP and SEQ.

GATE

After pressing Gate, press any step to insert a gated note. A gated note is any note recorded in the sequencer, but with a shortened length with selection between OFF and 10.

ACCENT

After pressing ACCENT, press any step to add an accent modulation and use the DATA knob to determine the amount of accent between 0 and 127.

TIE

This control operates only in LEGATO, and you can switch it ON/OFF. After pressing TIE, press any step to add a tied note, hence a legato note from the pressed step to the following.

LENGTH

To modify the length of the sequencer, press the SHIFT + any page button and adjust the length with the DATA encoder.

TRANSPOSE

Sequences can be transposed +/- 1 octave. Pressing SHIFT + OCTAVE UP the display will show the transpose value, by default on 0 st (semitones).

You can use the onboard keyboard to transpose the sequence, or an external keyboard if connected.

RANDOM

Sequences can be randomized. Pressing SHIFT + OCTAVE DOWN a new random sequence will be created. The randomisation cover all the aspects of a sequence (length, acc, tie, gate, swing, etc...) and the notes will be chosen between +/- 1 octave from the viewed one. Randomizer follows the scale of the keyboard.

5 – FAQ and troubleshooting

The ARP is not working properly, what could be the issue?

This can occur when no MIDI Clock data is being sent to the unit. Please check your SYNC setting in the UNO Synth PRO X as this may be set to USB, or EXTERNAL which could result in no incoming data. Setting the SYNC setting to INTERNAL will correct this behavior.

How come the Sequencer/Patterns are not playing back?

This can occur when no MIDI Clock data is being sent to the unit. Please check your SYNC setting in the UNO Synth PRO X as this may be set to USB, or EXTERNAL which could result in no incoming data. Setting the SYNC setting to INTERNAL will correct this behavior.

Additionally, it's possible a sequence/pattern has not been recorded - please check to see if a sequence/pattern has been recorded.

Is there a Factory Reset option?

In order to do a Factory Reset on the UNO Synth PRO X, go to the SETUP menu: the last voice is Factory Reset. Selecting it, you will choose if to proceed or not. Please, be aware that the action is irreversible. We suggest you first back up your sounds using the Editor/Librarian.

How can I replace my UNO Synth PRO X power supply?

The UNO Synth PRO X uses the IK PSU 5300 (iRig PSU 3A) Power Supply and it's available for purchase on our online store [here](#).

There is excessive noise or interference when I play the UNO Synth PRO X.

If your UNO Synth PRO X is connected to your computer via the USB port, the ground noise and interference from the USB may be increased. The easiest way to avoid this is to power the UNO Synth PRO X using the provided power supply and then use MIDI DIN cables to connect to your computer.

Alternatively, if you want to maintain the USB connection to the UNO Synth PRO X, you can reduce the USB noise and interference by either using a TRS cable into a balanced input on your audio interface or a USB isolator.

Where can I find my IK product Serial Number?

The Serial Number is written on the Registration Card (included with your IK product).

IMPORTANT: The number zero can easily be identified in your Serial Number because it's crossed by a line.

6 – Technical Specifications

Keyboard: 13 keys (1 octave) custom silicone keys

Sound Generation: Digitally controlled analog synthesis

Number of Oscillators: 3

Filters: 2x analog filters

Envelopes: 3x ADSR

Sequencer: 64-steps, all parameters editable for each step

FX: 2 Modulations, 5 Delays, 3 Reverbs

Number of programs: 256

Power consumption (max): 1.5 A @ 5 V (7.5 W)

CONNECTIONS

Audio OUT: 2x 6.3 mm TRS jacks (balanced), 1x 3.5 mm TRS headphone (stereo)

Audio IN: 1x 3.5 mm TS (mono)

MIDI IN: 1x standard 5-pin DIN

MIDI OUT: 1x standard 5-pin DIN (Soft THRU available in system menu)

CV/Gate IN: 2x 3.5 mm jack (5 V MAX)

CV/Gate OUT: 2x 3.5 mm jack (5 V MAX)

Other: USB-C port, power supply jack

7 – Support

For any questions you may have, please refer to the FAQ webpage at:

www.ikmultimedia.com/faq

Here you will find answers to the most commonly asked questions.

To submit a Technical Support Form, go to:

www.ikmultimedia.com/support

For warranty information, please visit: www.ikmultimedia.com/warranty

For other requests such as Product, Sales, or Web info, please go to:

www.ikmultimedia.com/contact-us

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- Access any current Promotions.
- View exclusive offers and pricing.
- Manage your earned JamPoints.
- View your Orders.
- Download firmware and hardware drivers.
- Access the IK Forum and more.

To access the User Area go to:

www.ikmultimedia.com/userarea

To access your User Area, please login with your User Name and Password created upon registration and emailed to your registered email address. If you need to update your Password, you may do so at the User Area login.

IK Multimedia Production Srl

Via dell'Industria, 46,
41122 Modena
Italy

IK Multimedia US, LLC

590 Sawgrass Corporate Pkwy.
Sunrise, FL 33325
USA

IK Multimedia Asia

TB Tamachi Bldg. 1F, MBE #709
4-11-1 Shiba
Minato-ku, Tokyo 108-0014
Japan

www.ikmultimedia.com

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All specifications are subject to change without further notice.

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