

SYNTH

TRUE ANALOG SYNTHESIZER

USER MANUAL

Table of Contents

English 1
Table of Contents 2
Introduction 4
In the box 4
Register your UNO Synth 5
Precautions 5
1 – Installation and setup 7
2 – Turning the unit ON/OFF - Calibration process 9
3 – Overview 10
4 – Front panel interface 11
4.1 – Sound Editor 12
4.1.1 – Oscillator Row 12
4.1.2 – Filter Row 13
4.1.3 – Envelope Row 14
4.1.4 – LFO Row 14
4.2 – Master Section 15
4.2.1 – Display 15
4.2.2 – Tempo Knob 16
4.2.3 – Volume Knob 16
4.2.4 – Data Buttons 16
4.2.5 – Preset Button 16
4.2.6 – Octave 16
4.2.7 – Glide 16
4.2.8 – Scale 16
4.2.9 – Delay Time and Mix 17
4.2.10 – Alternate Functions 17
4.2.11 – Arpeggiator and Sequencer 18
4.2.12 – Transport Functions 18
4.3 – Performance controls 18
4.3.1 – Performance Buttons 19
4.3.2 – Keyboard / 16 Step Buttons 19
4.3.3 – HOLD Button 20
5 – Presets 21
5.1 – Loading a Preset 21
5.2 – Store a Preset 21
5.3 – Factory Presets 22
6 – The Arpeggiator 23
7 – The Sequencer 25
7.1 – Step Recording 25
7.2 – Real-Time Recording 27

7.3 – Step Edit Recording 28
7.4 – Deleting a sequence 29
7.5 – Sequencer Length and Direction 29
7.6 – Keyboard Priority 29

8 – MIDI Implementation 30
8.1 – General 30
8.2 – Control External Devices with UNO Synth 30
8.3 – Control UNO Synth from External Devices 30
8.4 – Connecting UNO Synth to a computer via MIDI 30
8.5 – Connecting UNO Synth to a computer via USB 31
8.6 – Setting the MIDI Channel 31
8.7 – MIDI Soft Thru 31
8.8 – Setting the Sync Mode 31
8.9 – MIDI Implementation Chart 32

9 – Specifications 36

10 – Troubleshooting 38

11 – Support 39
11.1 – User Area 39

Introduction

Thank you for purchasing UNO Synth.



In the box

Your package contains:

- UNO Synth
- USB cable
- 4 AA Batteries
- MIDI cables
- Quick Start Guide
- Registration Card

Register your UNO Synth

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**

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 USB cable provided with the unit, and connect the same cable to a correct USB port in the device or power adapter.

UNO synth works with both Ni-MH and Alkaline. Ni-MH batteries are tested to last about 4 hours of continuous use, while Alkaline batteries last about 3 hours of continuous 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 and capacitive controls.

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 read, 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 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.

1 – Installation and setup

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 can be powered by the USB bus or by internal AA batteries.

USB: When connected to an USB host (MAC, Windows), all the required power is typically provided by the host. If the connected host is not capable to provide the required power, batteries may be needed (for example, using an iOS device with a camera connection kit).

IMPORTANT: If the power switch is set to USB and batteries are present, the synth will be powered by the batteries even when connected to a USB host that can provide enough power.



1 - Power switch

This switch turns the power on and off. The unit can be powered by 4 AA batteries or by USB.

Ni-MH batteries are tested to last for about 4 hours of continuous use, while Alkaline batteries last about 3 hours of continuous use.

2 - Micro USB port

Connect the UNO Synth to a Host such as a Mac/PC or an iOS device with a Lightning to USB Camera Adapter or power supply (for example a USB power adapter or USB powerbank).

3 - MIDI IN/OUT ports

The MIDI ports works with the included 2.5mm micro plugs to MIDI DIN adapters.

4 - Audio IN

Connect another UNO unit or any external mono audio source.

5 - Audio OUT

Connect the UNO Synth output to an external amp, mixer or audio interface or to your headphones with stereo mini-plug here.

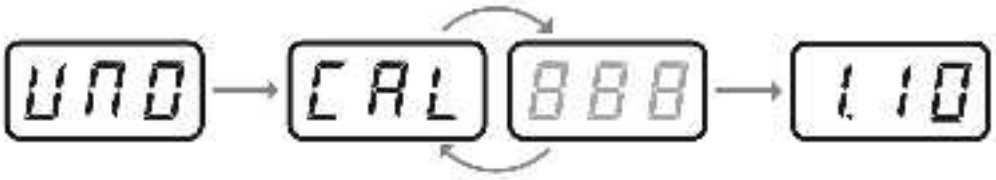
6 - Knobs Behavior

UNO Synth 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.

2 – Turning the unit ON/OFF - Calibration process

When the unit is powered ON, it automatically starts the first tuning and capacitance sensing calibration. During the calibration the display will first show a static “UNO,” then blink “CAL.” At the end of the calibration, it will display the firmware version. The unit will then be ready for use and the last used preset will be loaded and indicated on the display.



Do not press buttons or put objects on the unit during the calibration as this will incorrectly calibrate the capacitnance sensing system. In case of incorrect calibration of the capacitance sensing system, please power off the unit, and then turn it on again to repeat the process.

Various noises and calibration sounds might be audible during the startup of the unit, so we recommend turning the volume down while starting up.

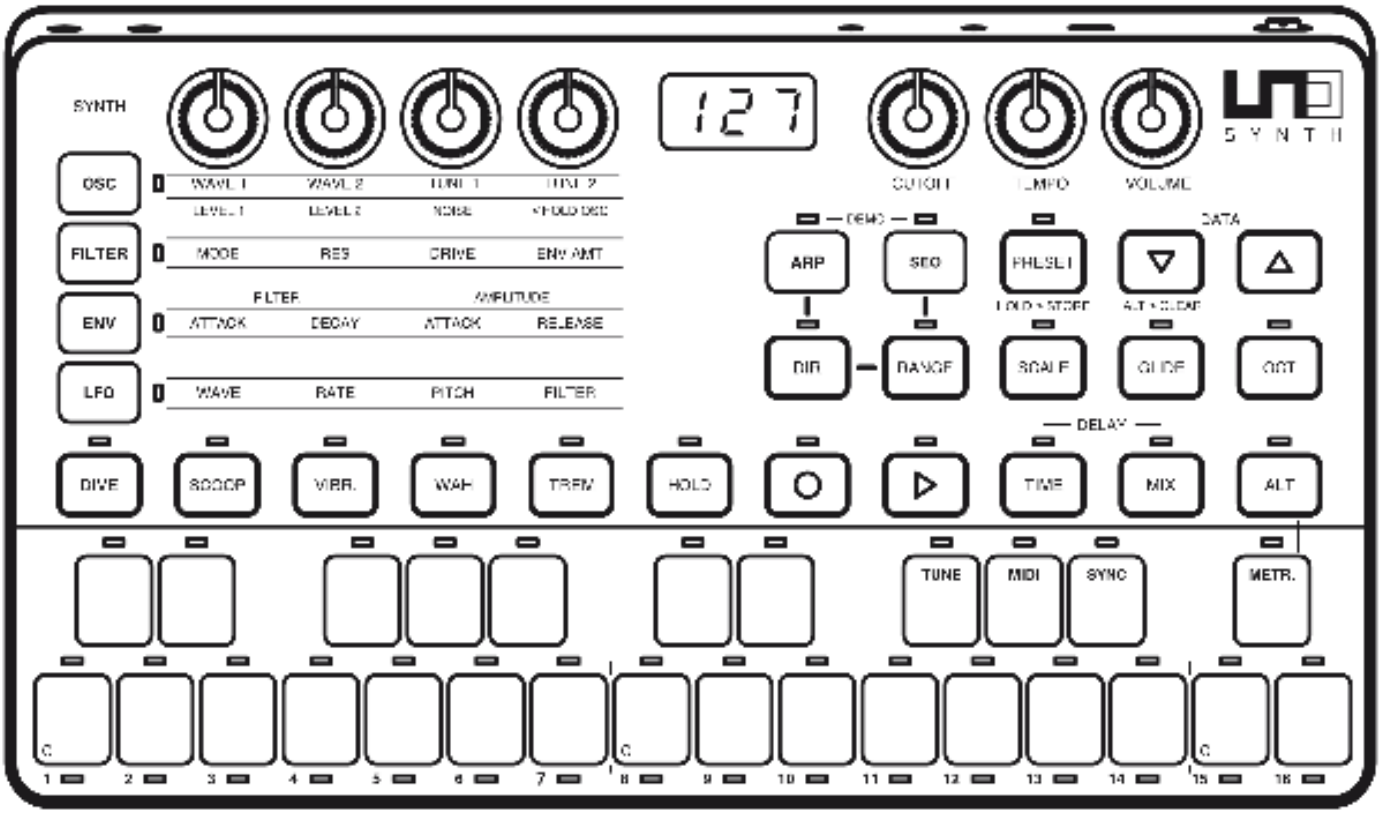
3 – Overview

UNO synth is a powerful and portable monophonic synthesizer with features that change the meaning of “complete instrument” for the price range. It is an instrument that will become known for its sound and flexibility, ready for creative artists that need inspiration.

Raw, warm, tight and everything in-between, this monophonic beast is the first of its kind thanks to the easy and powerful analog architecture and the complex digital controls. The synth architecture provided by Sound Machines based on the IK Multimedia design presents an analog audio path with a digitally-controlled engine with these features:

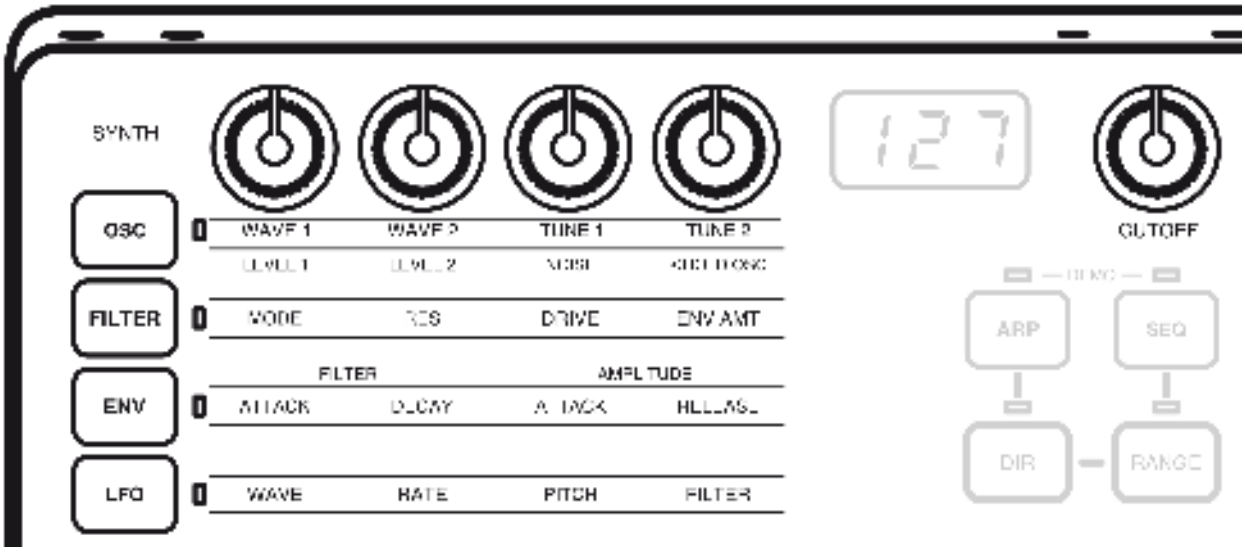
- 2 analog oscillators per voice with continuously variable wave shapes including triangle, saw and square with pulse width modulation
- Noise generator
- 2-pole analog multimode filter that can be set to LP, HP and BP with overdrive
- 2 digital envelopes, one for the filter and one for the amplitude
- 1 digital LFO with sine, triangle, saw up, saw down, square, random and sample-and-hold shapes
- 5 performance buttons for instant musical articulations
- A 10-mode arpeggiator
- A powerful 3-mode sequencer with parameter sequencing and parameter step recording
- A digital delay
- Capacitance sensing keyboard with smart scale capabilities
- Audio input to connect another UNO unit or any audio source
- 20 factory presets and 80 user presets
- Fully MIDI controllable

4 – Front panel interface



The synth has 3 main sections: the Sound Editor, the Master Section and the Performance Controls.

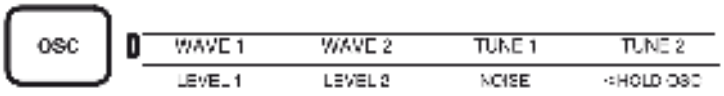
4.1 – Sound Editor



The sound editor section uses a matrix of 4 buttons and 4 knobs to modify the synthesis parameters in real-time. However, the sound editing capabilities of the synth are not limited to the matrix, and with the help of MIDI Continuous Controllers, it is possible to additional synth parameters (see MIDI implementation chart for more).

Here is the description of each row of the sound programming matrix.

4.1.1 – Oscillator Row



The oscillators generate the basic sound of a synthesizer.

The UNO synth has two analog oscillators and a noise generator. Both oscillators have continuously variable waveforms that go from triangle to saw to square and then variable pulse width square from 50 to 98%.

The OSC row contains these controls:

The WAVE 1 and WAVE 2 controls continuously change the waveform of the oscillator starting from triangle at the minimum setting to square with its pulse width at 98% at the maximum setting.

To change the tuning of the oscillators, a semitone and detune control for each oscillator is available. The controls are labeled TUNE 1 and TUNE 2. From the center position of the knob, detune the oscillator +/- 100 cents. Then at the outer extremes, the tune adjustment switches to quantized semitones to transpose the oscillator.

To adjust the levels of OSC1, OSC2 and the noise generator, hold the OSC button for 1 second unitl the OSC LED starts blinking. Now the knobs adjust the volumes for OSC1, OSC2 and Noise.

The oscillator tuning is digitally controlled. The tuning is updated at startup and then automatically during moments of inactivity. You can also tune the oscillators manually by pressing the ALT+TUNE buttons.

4.1.2 – Filter Row



The filter colors the sound of the oscillators in a synthesizer.

The UNO filter is a 2-pole multimode filter. It filters from the cutoff frequency at 12dB per octave.

The UNO Synth has a dedicated filter cutoff knob. Turning CUTOFF is the most immediate and effective ways to change the sound.

Then the FILTER row contains these controls:

MODE: selects between Low Pass (LP) where highs above the cutoff frequency are reduced, High Pass (HP) where lows below the cutoff frequency are reduced and Band Pass (BP) where both highs and lows around the cutoff frequency (the selected “band”) are reduced.

RES: adjust the resonance of the filter which is the level of the resonant peak at the cutoff frequency.

DRIVE: adjusts the amount of saturation applied to the sound going from subtle overdrive to distortion.

ENV AMOUNT: sets the amount that the filter envelope will modulate the filter cutoff frequency with both positive or negative values available. The Filter Envelope is a powerful tool and an essential part of the sound of a synthesizer. Its settings and amount lets you create all types of sounds.

4.1.3 – Envelope Row

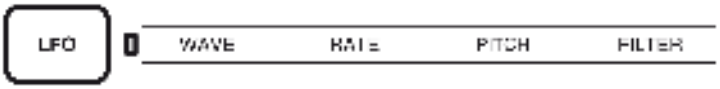


Envelopes are modulation sources in a synthesizer that create shapes that change the filter cutoff frequency, the amplitude (volume) or even the oscillator shape.

The UNO Synth has two separate envelopes, one for the filter and one for the amplitude (volume). The panel provides Attack and Decay controls for the Filter Envelope and Attack and Release controls for the Amplitude Envelope.

Full ADSR controls are editable via MIDI continuous controllers (MIDI CC). See the UNO Synth MIDI Implementation Chart for the specific CC numbers.

4.1.4 – LFO Row



LFO stands for Low Frequency Oscillator. The LFO is a cyclical modulation source that can module the oscillator pitch or shape, the filter cutoff frequency and the amplitude of the synth.

The UNO Synth LFO is not only a way to create moving sound textures, it's also the source for a user-friendly performance tool with instant articulation effects.

There are 7 LFO waveforms: Sine, Triangle, Falling Sawtooth, Rising Sawtooth, Square, Random and Sample-and-Hold.

The rate of the LFO goes up to 30Hz and can be set to freerun or to sync with the master tempo using just one knob: The first 75% of the knob's travel set the independent freerun speed of the LFO, and the last 25% of the knob's travel syncs the LFO to the master tempo using note values starting with 1/1 (whole note) and continuing with ½ (half note), ¼ (quarter note), 1/4d (dotted quarter note),1/4t (quarter note triplet), 1/8, 1/8d,1/8t, 1/16, 1/16d and 1/16t.

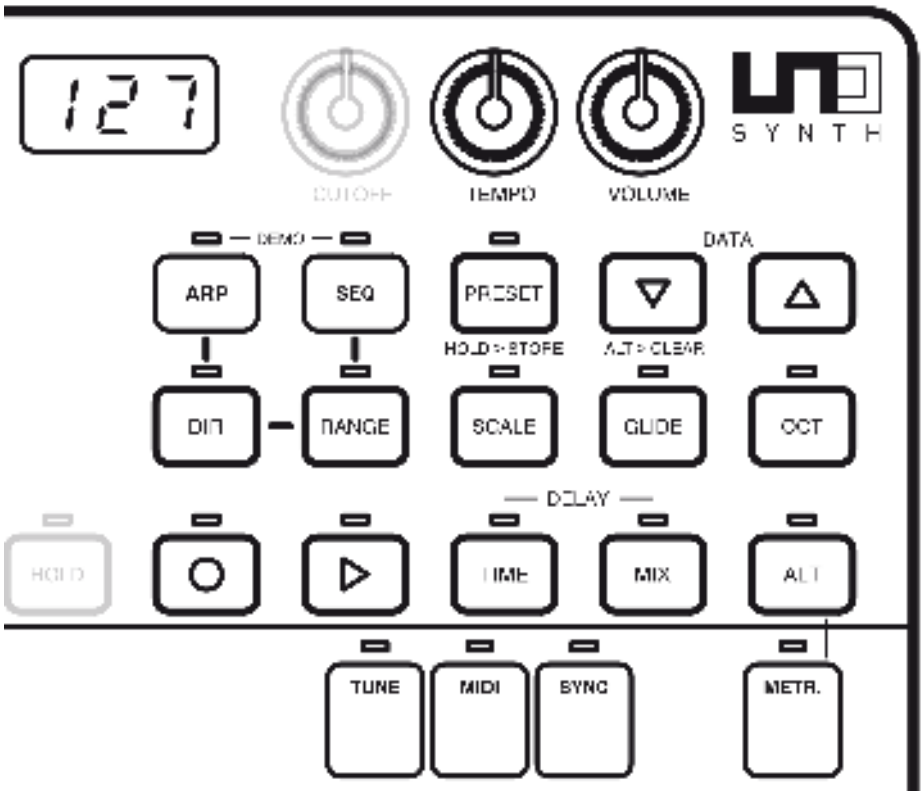
The Pitch and Filter controls set the amount that the LFO modulates the master pitch and the filter cutoff.

The LFO modulation is also routed to the Pulse With Modulation and Waveshaper of both of the VCOs, and to the performance buttons called Tremolo, Wah and Vibrato.

The relative amounts of modulation are editable via MIDI continuous controllers (MIDI CC).

See the UNO Synth MIDI Implementation Chart for the specific CC numbers.

4.2 – Master Section



The Master section is where you access more gloabal parameters that are identified by buttons with the red outline, the display which shows the parameter values, and the TEMPO and VOLUME knobs.

4.2.1 – Display

This displays the values for parameters selected by using the knobs and buttons.

4.2.2 – Tempo Knob

This knob sets the tempo for the sequencer and the arpeggiator. Note that if the sync is set to USB or external, the tempo knob will work as note value selector in units from 1/4 to 2x.

4.2.3 – Volume Knob

This knob adjusts the output volume.

4.2.4 – Data Buttons

The UP and DOWN buttons adjust the value for the functions selected using the buttons with the red outline. These buttons also move between steps during the step-by-step recording of a sequence.

4.2.5 – Preset Button

The PRESET button is the “home position” of the instrument’s interface. It cannot be deselected. When the PRESET button is active, you can move between the 100 presets stored in the synth using the data buttons. The PRESET button also lets you store presets by pressing and holding it. See Chapter 5 for further info.

4.2.6 – Octave

This button selects the octave of the keyboard using the data buttons.

4.2.7 – Glide

This button selects the amount of portamento or “slew” between held notes using the data buttons.

4.2.8 – Scale

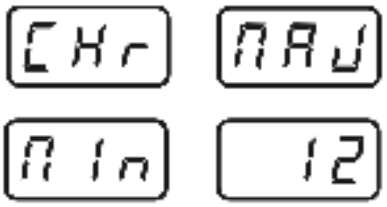
This button quantizes the tone generator to different musical scales using the natural note keys (white keys). The default setting is Chromatic where incoming note data will not be converted.

Press SCALE, and only one LED on the keyboard will be lit which indicates the currently selected key. Press another note in the first octave of the keyboard to change the key.

Use the data buttons to select the musical scale.

When a scale other than Chromatic is selected, the accidental note keys (black keys) on the keyboard will be disabled, and you can use only the bottom 16 keys to play the chosen scale in the selected key. 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:



- CHR: Chromatic
- MAJ: Major
- MIN: Minor
- 1: Major Pentatonic
- 2: Major Blues
- 3: Minor Pentatonic
- 4: Minor Blues
- 5: Minor Harmonic
- 6: Mixolydian
- 7: Dorian
- 8: Klezmer
- 9: Hungarian Gypsy
- 10: Spanish Gypsy
- 11: Japanese
- 12: South-East Asian

4.2.9 – Delay Time and Mix

The DELAY and MIX buttons adjust the delay time and the delay mix amount using the data buttons. Note that the feedback amount of the delay is fixed.

Note that the Feedback amount is fixed.

4.2.10 – Alternate Functions

The ALT button lets you select alternate and global functions. The values can be changed with the up / down buttons. Once you are finished adjusting the alternate settings, press ALT again to exit.

METRONOME: enables or disables the audio metronome click during the recording of the sequence.

SYNC: adjusts the MIDI Clock settings. The default is Internal where the internal tempo of the UNO Synth is used. The data buttons also allow the selection of external MIDI and external USB where the UNO Synth will sync to incoming MIDI Clock.

MIDI: select the MIDI channels of the UNO Synth between 1 and 16 using the data buttons. The default is channel 1. When the button LED is green, the selection is relative the MIDI IN channel. Press the MIDI button again, and the LED will became orange: now the selection refers to the MIDI OUT channel.

TUNE: starts the automatic tuning of the synth. If during the calibration the button is pressed again, it will stop the calibration. Please note that when SEQ or ARP is active, this function is disabled.

4.2.11 – Arpeggiator and Sequencer

These are the controls for the Arpeggiator and Sequencer.

ARP: activates the arpeggiator

SEQ: activates the sequencer

DIR: When the ARP button is active, the DIRection button lets the data buttons set the order in which the held notes are arpeggiated. There are 10 different arpeggiator modes. When the SEQ button is active, the DIRection button lets the data buttons move between 3 sequence playback modes: Forward, Backward and Forward-Backward.

RANGE: when the ARP button is active, the Range button lets the data buttons set the range of the arpeggiator in octaves with a range of 1 to 4. When the SEQ button is active, the Range button lets the data buttons set the Range of the sequence between 1 and 16 steps

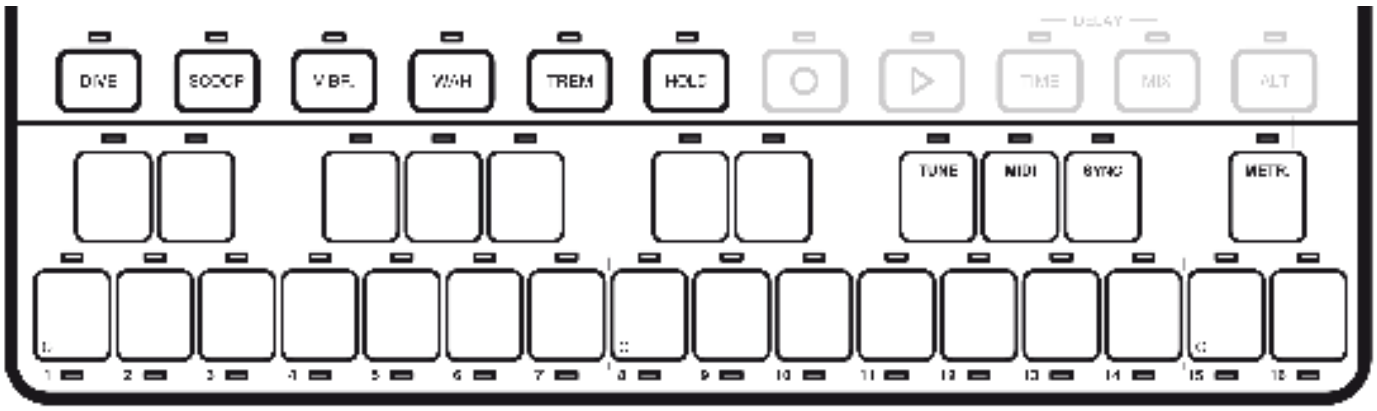
4.2.12 – Transport Functions

The transport functions are part of the sequencer. They work only when the sequencer is active.

PLAY: starts and stops the sequencer.

REC: pressed alone enables step recording of the sequencer, pressed with PLAY activate the real-time recording of the sequence, and pressed with ALT activate the Step-Edit recording.

4.3 – Performance controls



Performance controls are used to play and articulate the presets. They include the keyboard and the performance buttons.

4.3.1 – Performance Buttons

The performance buttons provide instant musical articulations that can be used with live playing or while the arpeggiator or sequencer are running. Note that the LFO drives the Vibrato, Wah and Tremolo effects. So the selected LFO waveform and rate in the LFO row affects the behavior of these performance buttons.

The amount of modulation for the performance buttons is editable via MIDI continuous controllers (MIDI CC).

The buttons are:

VIB: bipolar oscillator pitch modulation for musical vibrato. The vibrato rate and wave shape are set in the LFO section.

WAH: filter modulation for wah wah-style timbral changes. The wah wah rate and wave shape are set in the LFO section.

TREM: negative amplitude modulation of the VCA for tremolo. The tremolo rate and wave shape are set in the LFO section.

DIVE: applies the filter envelope decay to oscillator pitch with a range of 2 semitones to create a bend down to the played pitch.

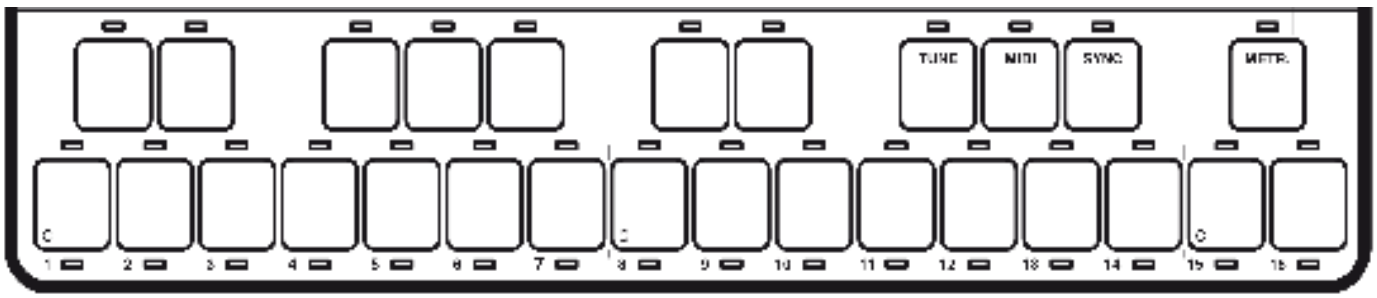
SCOOP: applies the negative filter envelope decay to oscillator pitch with a range of 2 semitones to create a bend up to the played pitch.

4.3.2 – Keyboard / 16 Step Buttons

The keyboard is a 27-note capacitance sensing device that can be played by just swiping a finger over it. This makes the UNO synth very easy to use and also extremely portable. By setting a particular scale, it gets even easier as only the bottom keys are used. The creates the possibility for everyone to play in key and experiment with solos, strange riffs or just for fun.

The 16 “white” keys in the bottom row also represent the 16 steps of the sequencer which has its own separate chapter.

Keyboard



Scale keyboard or Sequencer's steps



4.3.3 – HOLD Button

The HOLD button sustains the played note or the chord of an arpeggio when the ARP function is enabled. When in step recording, pressing HOLD lets you change the duration of the note in the step from 0.5 to 16 steps.

5 – Presets

UNO Synth contains 100 presets, each with its own sequence and settings.

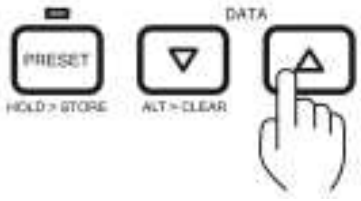
The first 20 presets are factory, meaning that it is not possible to overwrite them. Also, the first 20 presets are used for the DEMO.

The demo it is the perfect way to discover the powerful feature of the UNO synth simply by listening. To activate the demo, press ARP and SEQ simultaneously.

5.1 – Loading a Preset

Every time the UNO synth is powered up, the last preset selected is loaded.

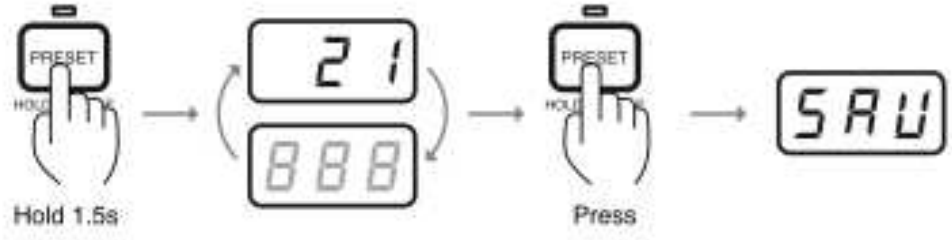
To select other presets, simply press the PRESET button and use then the data buttons to load the desired preset.



5.2 – Store a Preset

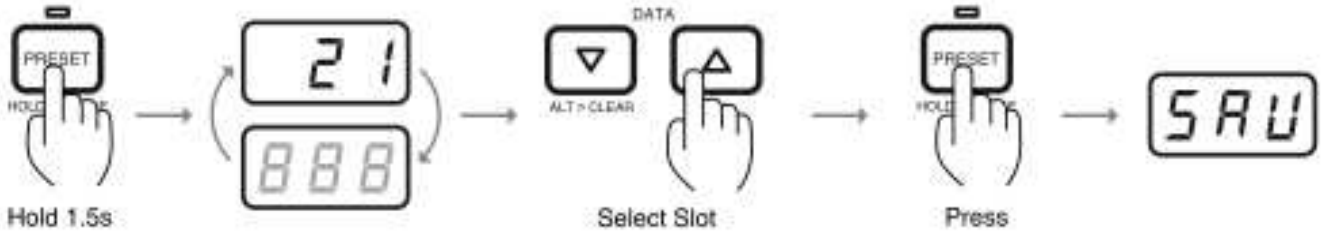
After the preset has been modified and the desired sound is reached, it is possible to save the presets in the slots between 21 and 100.

To save a preset, hold the PRESET button for 1.5 seconds until the preset number blinks on the display.



To overwrite the current preset, simply press PRESET again, and the display will show “SAV” and the preset

number will stop blinking. To store the preset in another slot, select the new slot with the data buttons, then press the PRESET again.



Please note that presets cannot be stored on the first 20 location, and cannot be deleted.

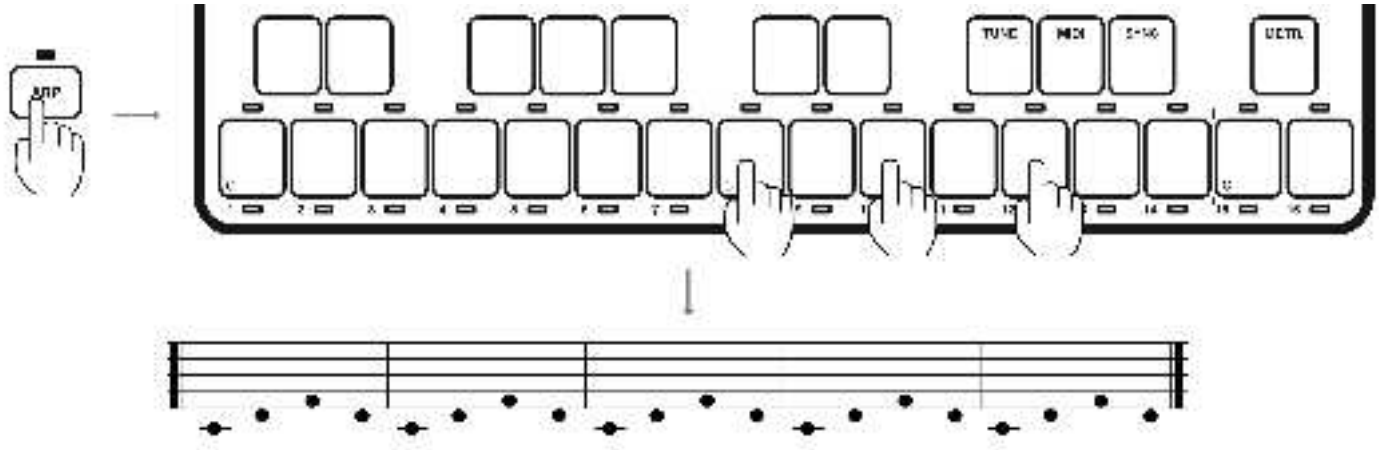
5.3 – Factory Presets

UNO Synth comes with a collection of 100 ready-to-use presets to inspire your creativity. The presets cover many genres and styles, and they are organized for easy browsing and management. The presets are organized using the last number of the preset as shown here:

1- Saw Basses
2- Square Basses
3- Mixed Basses
4- Leads 1
5- Leads 2
6- Pads
7- Sweeps
8- Drones
9- Plucks
0- Sound Effects

Example: Preset 51 is a Saw Bass, and Preset 90 is a sound effect.

6 – The Arpeggiator



What is an arpeggiator? Music is typically based around chord progressions. These may not be presented in an obviously “chordal” way when the notes of the chord are not played together simultaneously. For example, think of a guitarist playing with fingerpicking and using intricate plucks to create a more complex pattern. Often the pattern is still based on simple chord shapes. An arpeggiator takes advantage of this fact, and it provides synth players with an easy way of playing complex synth parts via simple chords.

Switching on an arpeggiator tells the synth to “listen” to the notes being played, then it creates a pattern using these notes which is played at the master tempo so all that is required of the player is to hold the notes. Or if the arpeggiator has a “latch” function, just play the chord once, and the pattern will continue to play until another note or chord is played. Simple.

The UNO Synth’s arpeggiator section is one of the most complete in its category and includes 10 modes:

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

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

U/D: (up/down) 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.

To select a mode, activate the arpeggiator by pressing ARP, then press DIR (direction). Use the the data buttons to select the desired mode.

You can also specify the the arpeggio RANGE and select a range from 1 to 4 octaves. Press the RANGE button when the arpeggiator is active, and select the desired range from 1 to 4 using the data buttons.

7 – The Sequencer



The UNO Synth's sequencer is a particularly deep section because it integrates some great features which are rarely available at this price point. For example, the parameter recording is particularly powerful. Each preset on the UNO Synth has its own sequence.

The UNO Synth's sequencer has up to 16 steps whihc are represented by the 16 "white" keys of the keyboard. There are 16 LEDs, one for each step, below the keys.

There are three recording modes for sequencer:

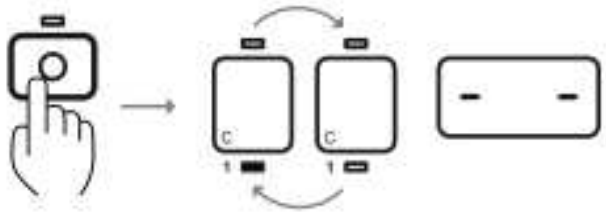
- Step Recording
- Real-Time Recording
- Step Edit Recording

7.1 – Step Recording

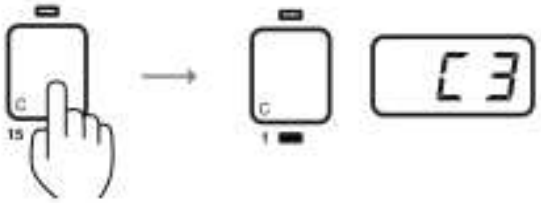
Step Recording lets you to manually insert notes or parameters without having the UNO Synth playing.

The method lets you record all the parameters and notes for each step with precision and detail.

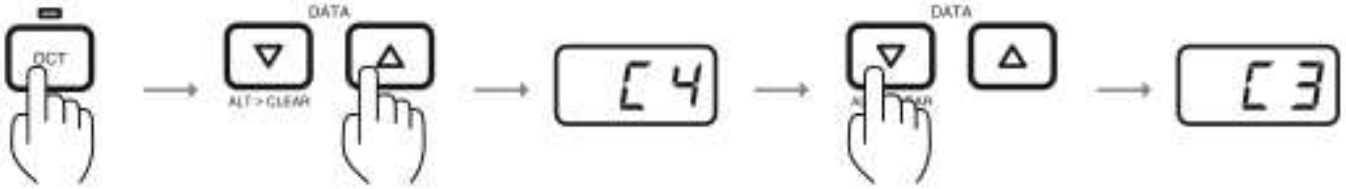
To start the step recording of a sequence, activate the sequencer, then press the REC button. The Step will blink, and the display will show a "double minus" figure.



To record a note, press the desired note on the keyboard. The display will show the name of the note, and the step will stop blinking and will light solid. To change the note for the step, simply play another note



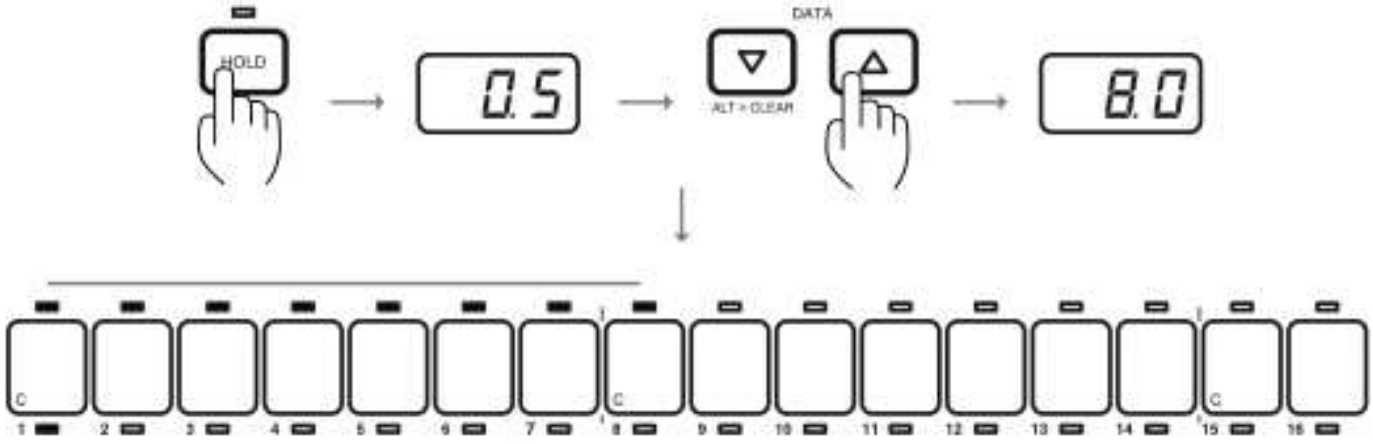
To change the octave, press OCT and select the desired octave with the data buttons (the synth will play the note each time the octave is changed). When the selection is done, press OCT again to go back to the editing of the step.



To change the duration of the note, press HOLD. The default length is 0.5, half a step.

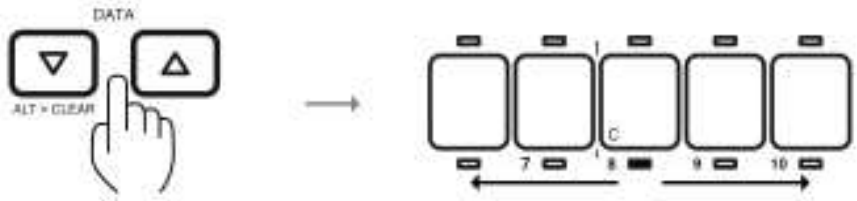
Use the data buttons to select a length up to 16 steps.

The LEDs above the step sequencer show the duration of the note changing. Changing the length of a step gives you the possibility to create musical legato notes when overlapping one a step with another.

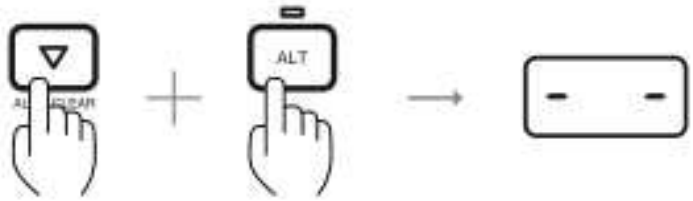


To record a parameter change, simply turn the knob and insert the desired parameter with the desired value.

Use the data buttons to move between steps. The current step will light below the keyboard.

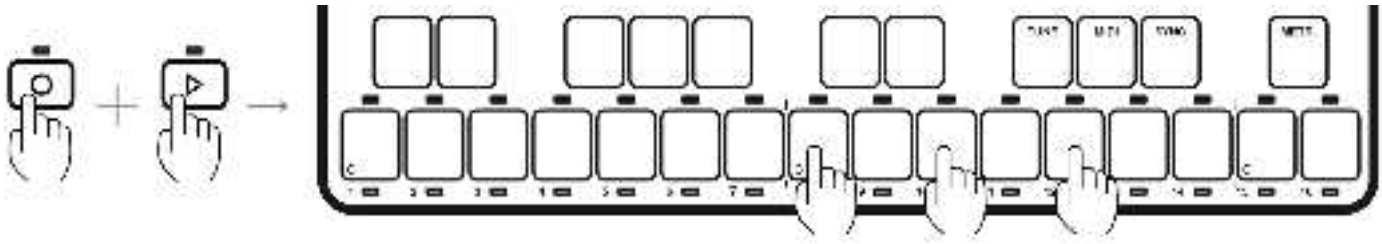


To delete a step, press ALT+DOWN to empty the current step. The step will blink and the display will show a “double minus.”



To exit Step Recording, simply press REC again.

7.2 – Real-Time Recording



Real-time Recording is the most common and easy to use method. Press Play and Rec to record the notes and parameters in real-time. This type of sequencing is the most similar to “live” situations where you just hit record and record on-the-fly. Plus, while in this mode, all the parameters motions will be recorded into a smooth type of recording which means that it will include all the single values of the motions. Basically every parameter motion you make on your UNO Synth will be recorded in this mode.

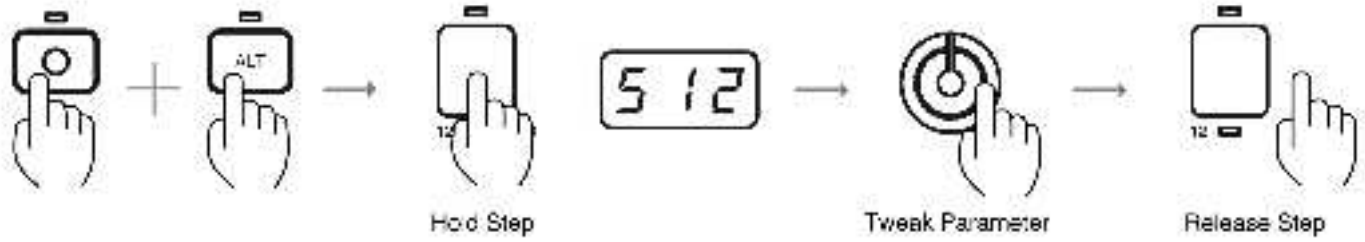
While the sequencer is in playing, it always loops. Similarly, the recording and the overdubbing of the notes will also continue until REC is pressed again. Except when recording parameters instead, the sequence records only

one iteration of the loop, and then it automatically stops recording to avoid overlapping your motion events.

A metronome is also available for real-time recording in the ALT section. When is ON, it will play only when in the sequencer is recording, and it will automatically stop when recording is stopped.

To exit Real-Time Recording, press REC again.

7.3 – Step Edit Recording



Step Recording is available when ALT + REC is pressed. It is available regardless of whether the sequencer is playing. The goal of this mode is to give you the ability to bypass the keyboard and precisely select and craft sequences of only parameters, creating really experimental sounds with precision.

Let's start from the beginning. Press ALT+REC, and the 2 buttons will start blink. The keyboard is now bypassed so it is possible to edit only the sound parameters.

Now hold a step, by pressing and holding one of the 16 "white" keys. This shows the number of the step in the display to indicate that the step is selected and ready to be edited.

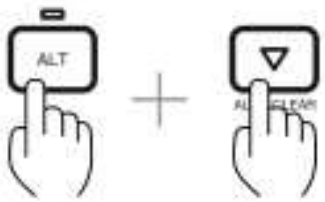
To record a desired parameter, simply hold the step and adjust the parameter. Once released, the parameters is saved.

To delete a step in this mode, simply press the down button.

To exit Step Edit Recording, press REC again.

7.4 – Deleting a sequence

To delete a sequence, press ALT+DOWN when the sequencer is active. Please note that after deleting a sequence, it is not possible to restore it unless it was previously saved with the preset.



Please note that after deleting a sequence is not possible to restore it, unless it was previously saved on the preset.

7.5 – Sequencer Length and Direction

The UNO's sequencer can have a default length of 16 steps, but it can be shortened by pressing RANGE when the sequencer is active and then selecting the desired length with the data buttons. This feature is available also while the sequencer is playing.

It is also possible to change the direction between Forward, Backward and Back and Forth by pressing the DIR button when the sequencer is active. Select the desired direction with the data buttons. This feature is available also while the sequencer is playing.

7.6 – Keyboard Priority

The keyboard has always the priority on the recorded notes on the sequence, meaning that when a sequencer is playing a sequence with both notes and parameters recorded, pressing a key will play the desired note overriding the notes recorded in the sequence. However the parameters recorded will continue to change according to the sequence.

8 – MIDI Implementation

8.1 – General

MIDI stands for Musical Instrument Digital Interface, and is the worldwide standard for exchanging musical data between electronic musical instruments and computers.

When MIDI cables are used to connect two or more MIDI devices, performance data can be exchanged between the devices, even if they were made by different manufacturers.

The UNO Synth transmits the front panel knobs or buttons movement via continuous controller (CC) messages to let you control other external MIDI devices.

As each parameter and control on the synth has its own unique Control Change number, it is possible to completely control the unit via external controllers or computers.

MIDI data can also be exchanged between the UNO Synth and your computer using the provided USB cable in addition to the MIDI DIN ports.

It is possible to synchronize the UNO Synth's tempo to the MIDI clock of an external MIDI sequencer or other device.

8.2 – Control External Devices with UNO Synth

If you want to use the UNO keyboard, controls, arp and sequencer to play sounds on or to control an external instrument, connect the UNO Synth MIDI OUT connector to the external instrument MIDI IN connector using a MIDI cable.

8.3 – Control UNO Synth from External Devices

If you want to play or control the UNO Synth from another MIDI keyboard, sequencer or other external device, connect the MIDI OUT connector of the external MIDI device to the UNO Synth's MIDI IN jack with a MIDI cable.

8.4 – Connecting UNO Synth to a computer via MIDI

You might want to play the UNO Synth and record your performance on a computer (connected using a MIDI interface) and/or play the UNO Synth while monitoring what you recorded. You also might want to use the UNO Synth as both an input device for playing notes and as a tone generator. In all of these cases, connect the MIDI OUT connector to the MIDI IN connector on both the UNO Synth and the computer.

8.5 – Connecting UNO Synth to a computer via USB

The UNO Synth is recognised as a standard USB device, so the installation of proprietary drivers is not needed. The USB MIDI has IN capability only.

8.6 – Setting the MIDI Channel

To select the MIDI channels, press the ALT button, and then the MIDI button. MIDI channels can be selected between 1 and 16 using the data buttons.

The default MIDI IN and OUT channel is the 1.

When the button's LED is green, this indicates the MIDI IN channel.

Press the MIDI button again to change the LED to orange select the MIDI OUT channel.

8.7 – MIDI Soft Thru

The MIDI Soft Thru functionality allows messages from the MIDI IN DIN of the unit, to be passed through to the MIDI OUT DIN. When disabled, MIDI IN data is not passed to the MIDI OUT. MIDI Soft Thru is enabled by default and can be disabled via MIDI SysEx.

8.8 – Setting the Sync Mode

To adjust the MIDI sync mode, Press ALT and then the SYNC buttons. The default Sync is Internal (INT), meaning the internal tempo of the UNO Synth is used. The data buttons allow the selection of external MIDI (EXT), meaning the MIDI clock received from the MIDI IN DIN connector decide the Tempo of the UNO Synth, or external USB (USB), meaning the MIDI clock received from the USB connector sets the tempo of the UNO Synth.

8.9 – MIDI Implementation Chart

[Monophonic Analog Synthesizer]
Model: UNO Synth

MIDI Implementation Chart

Date: July 12, 2018
Version: 1.0

	Transmit/Export	Recognize/Import	Remarks
1. Basic Information			
MIDI channels	**1-16**	**1-16**	**Memorized**
Note numbers	**0-127**	**0-127**	
Program change	**0-99**	**0-99**	**Displayed as "1-100", Memorized**
Bank Select response? (Yes/No) If yes, list banks utilized in remarks column		**No**	
Modes supported : Mode 1: Omni-On, Poly (Yes/No) Mode 2: Omni-On, Mono (Yes/No) Mode 3: Omni-Off, Poly (Yes/No) Mode 4: Omni-Off, Mono (Yes/No) Multi Mode (Yes/No)		**No** **No** **No** **Yes** **No**	
Note-On Velocity (Yes/No)	**Yes**	**Yes**	
Note-Off Velocity (Yes/No)	**No**	**No**	
Channel Aftertouch (Yes/No)	**No**	**No**	
Poly (Key) Aftertouch (Yes/No)	**No**	**No**	
Pitch Bend (Yes/No)	**No**	**Yes**	
Active Sensing (Yes/No)	**No**	**No**	
System Reset (Yes/No)	**No**	**No**	
Tune Request (Yes/No)	**No**	**No**	
Universal System Exclusive: Sample Dump Standard (Yes/No) Device Inquiry (Yes/No) File Dump (Yes/No) MIDI Tuning (Yes/No) Master Volume (Yes/No) Master Balance (Yes/No) Notation Information (Yes/No) Turn GM1 System On (Yes/No) Turn GM2 System On (Yes/No) Turn GM System Off (Yes/No) DLS-1 (Yes/No) File Reference (Yes/No) Controller Destination (Yes/No) Key-based Instrument Ctrl (Yes/No) Master Fine/Coarse Tune (Yes/No) Other Universal System Exclusive	**No**	**No**	
Manufacturer or Non-Commercial System Exclusive	**Yes**	**Yes**	
NRPNs (Yes/No)	**No**	**No**	
RPN 00 (Pitch Bend Sensitivity) (Yes/No) RPN 01 (Channel Fine Tune) (Yes/No) RPN 02 (Channel Coarse Tune) (Yes/No) RPN 03 (Tuning Program Select) (Yes/No) RPN 04 (Tuning Bank Select) (Yes/No) RPN 05 (Modulation Depth Range) (Yes/No)	**No**	**No**	
2. MIDI Timing and Synchronization			
MIDI Clock (Yes/No)	**Yes**	**Yes**	
Song Position Pointer (Yes/No)	**No**	**No**	
Song Select (Yes/No)	**No**	**No**	
Start (Yes/No) Continue (Yes/No) Stop (Yes/No)	**Yes** **No** **Yes**	**Yes** **No** **Yes**	
MIDI Time Code (Yes/No)	**No**	**No**	
MIDI Machine Control (Yes/No)	**No**	**No**	
MIDI Show Control (Yes/No) If yes, MSC Level supported	**No**	**No**	
3. Extensions Compatibility			
General MIDI compatible? (Level(s)/No) Is GM default power-up mode? (Level/No)	**No**	**No**	
DLS compatible? (Levels(s)/No) (DLS File Type(s)/No)	**No**	**No**	
Standard MIDI Files (Type(s)/No)	**No**	**No**	
XMF Files (Type(s)/No)	**No**	**No**	
SP-MIDI compatible? (Yes/No)	**No**	**No**	

[Monophonic Analog Synthesizer]
Model: UNO Synth

MIDI Implementation Chart

Date: July 12, 2018
Version: 1.0

Control #	Function	Transmitted (Y/N)	Recognized (Y/N)	Remarks (Uno Synth parameter)
0	Bank Select (MSB)	No	No	
1	Modulation Wheel (MSB)	No	Yes	
2	Breath Controller (MSB)	No	No	
3		No	No	
4	Foot Controller (MSB)	No	No	
5	Portamento Time (MSB)	Yes	Yes	Glide Time
6	Data Entry (MSB)	No	No	
7	Channel Volume (MSB)	No	Yes	VCA Level
8	Balance (MSB)	No	Yes	Battery Type (0=Alkaline, 1=NiMh)
9		No	Yes	Swing
10	Pan (MSB)	No	No	
11	Expression (MSB)	No	No	
12	Effect Control 1 (MSB)	Yes	Yes	Osc 1 Level
13	Effect Control 2 (MSB)	Yes	Yes	Osc 2 Level
14		Yes	Yes	Noise Level
15		Yes	Yes	Osc 1 Wave
16	General Purpose Controller 1 (MSB)	Yes	Yes	Osc 2 Wave
17	General Purpose Controller 2 (MSB)	Yes	Yes	Osc 1 Tune
18	General Purpose Controller 3 (MSB)	Yes	Yes	Osc 2 Tune
19	General Purpose Controller 4 (MSB)	Yes	Yes	Filter Mode
20		Yes	Yes	Filter Cutoff
21		Yes	Yes	Filter Resonance
22		Yes	Yes	Filter Drive
23		Yes	Yes	Filter Env Amount
24		Yes	Yes	Amp Attack
25		No	Yes	Amp Decay
26		No	Yes	Amp Sustain
27		Yes	Yes	Amp Release
28		No	No	
29		No	No	
30		No	No	
31		No	No	
32	Bank Select (LSB)	No	No	
33	Modulation Wheel (LSB)	No	No	
34	Breath Controller (LSB)	No	No	
35		No	No	
36	Foot Controller (LSB)	No	No	
37	Portamento Time (LSB)	No	No	
38	Data Entry (LSB)	No	No	
39	Channel Volume (LSB)	No	No	
40	Balance (LSB)	No	No	
41		No	No	
42	Pan (LSB)	No	No	
43	Expression (LSB)	No	No	
44	Effect Control 1 (LSB)	Yes	Yes	Filter Attack
45	Effect Control 2 (LSB)	Yes	Yes	Filter Decay
46		No	Yes	Filter Sustain
47		No	Yes	Filter Release
48	General Purpose Controller 1 (LSB)	No	Yes	Filter Env to Osc 1 PWM
49	General Purpose Controller 2 (LSB)	No	Yes	Filter Env to Osc 2 PWM
50	General Purpose Controller 3 (LSB)	No	Yes	Filter Env to Osc 1 Wave
51	General Purpose Controller 4 (LSB)	No	Yes	Filter Env to Osc 2 Wave
52		No	No	
53		No	No	
54		No	No	
55		No	No	
56		No	No	
57		No	No	
58		No	No	
59		No	No	
60		No	No	
61		No	No	
62		No	No	
63		No	No	

[Monophonic Analog Synthesizer]
Model: UNO Synth

MIDI Implementation Chart

Date: July 12, 2018
Version: 1.0

Control #	Function	Transmitted (Y/N)	Recognized (Y/N)	Remarks (Uno Synth parameter)
64	Sustain Pedal	No	Yes	Hold
65	Portamento On/Off	No	Yes	Glide On/Off
66	Sostenuto	Yes	Yes	LFO Wave
67	Soft Pedal	Yes	Yes	LFO Rate
68	Legato Footswitch	Yes	Yes	LFO to Pitch
69	Hold 2	Yes	Yes	LFO to Filter Cutoff
70	Sound Controller 1 (default: Sound Variation)	No	Yes	LFO to Tremolo
71	Sound Controller 2 (default: Timbre / Harmonic Quality)	No	Yes	LFO to Wah
72	Sound Controller 3 (default: Release Time)	No	Yes	LFO to Vibr
73	Sound Controller 4 (default: Attack Time)	No	Yes	LFO to Osc 1 PWM
74	Sound Controller 5 (default: Brightness)	No	Yes	LFO to Osc 2 PWM
75	Sound Controller 6 (GM2 default: Decay Time)	No	Yes	LFO to Osc 1 Waveform
76	Sound Controller 7 (GM2 default: Vibrato Rate)	No	Yes	LFO to Osc 2 Waveform
77	Sound Controller 8 (GM2 default: Vibrato Depth)	Yes	Yes	Vibrato ON/OFF
78	Sound Controller 9 (GM2 default: Vibrato Delay)	Yes	Yes	Wah ON/OFF
79	Sound Controller 10 (GM2 default: Undefined)	Yes	Yes	Tremolo ON/OFF
80	General Purpose Controller 5	Yes	Yes	Delay Mix
81	General Purpose Controller 6	Yes	Yes	Delay Time
82	General Purpose Controller 7	No	Yes	Arpeggiator ON/OFF
83	General Purpose Controller 8	Yes	Yes	Arpeggiator Direction
84	Portamento Control	Yes	Yes	Arpeggiator Range
85		No	Yes	Arpeggiator and Seq Gate Time
86		Yes	Yes	Seq Direction
87		Yes	Yes	Seq Range
88				
89		Yes	Yes	Dive ON/OFF
90		No	Yes	Dive Range
91	Effects 1 Depth (default: Reverb Send)	Yes	Yes	Scoop ON/OFF
92	Effects 2 Depth (default: Tremolo Depth)	No	Yes	Scoop Range
93	Effects 3 Depth (default: Chorus Send)	No	Yes	Mod Wheel to LFO Rate
94	Effects 4 Depth (default: Celeste [Detune] Depth)	No	Yes	Mod Wheel to Vibrato
95	Effects 5 Depth (default: Phaser Depth)	No	Yes	Mod Wheel to Wah
96	Data Increment	No	Yes	Mod Wheel to Tremolo
97	Data Decrement	No	Yes	Mod Wheel to Filter Cutoff
98	Non-Registered Parameter Number (LSB)	No	No	
99	Non-Registered Parameter Number(MSB)	No	No	
100	Registered Parameter Number (LSB)	No	No	
101	Registered Parameter Number(MSB)	No	Yes	Pitch Bend Range
102		No	No	
103		No	Yes	Velocity to Filter Cutoff
104		No	Yes	Velocity to Filter Env Amount
105		No	Yes	Velocity to LFO Rate
106		No	Yes	Filter Cutoff Keytrack
107		No	No	
108		No	No	
109		No	No	
110		No	No	
111		No	No	
112		No	No	
113		No	No	
114		No	No	
115		No	No	
116		No	No	
117		No	No	
118		No	No	
119		No	No	
120	All Sound Off	Yes	Yes	Scale Type
121	Reset All Controllers	No	No	
122	Local Control On/Off	No	Yes	Local ON/OFF
123	All Notes Off	No	Yes	All Notes Off
124	Omni Mode Off	No	No	
125	Omni Mode On	No	No	
126	Poly Mode Off	No	No	
127	Poly Mode On	No	No	

[Monophonic Analog Synthesizer]
Model: UNO Synth

MIDI Implementation Chart

Date: July 12, 2018
Version: 1.0

Function	SysEx
Enter Setup Mode	F0 00 21 1A 02 01 11 01 7F F7
[SETUP] Pot Mode: Absolute (default)	F0 00 21 1A 02 01 21 00 01 00 F7
[SETUP] Pot Mode: Relative	F0 00 21 1A 02 01 21 00 01 02 F7
[SETUP] Pot Mode: Pass-Through	F0 00 21 1A 02 01 21 00 01 01 F7
[SETUP] MIDI Soft Thru ON (default)	F0 00 21 1A 02 01 21 00 02 01 F7
[SETUP] MIDI Soft Thru OFF	F0 00 21 1A 02 01 21 00 02 00 F7

9 – Specifications

Synthesis

- Type: Analog
- Polyphony: 1 voice
- Synthesis structure: 2 VCO, Noise generator, 1 VCF, 1 VCA, 2 EG, 1 LFO
- VCO variable shape waveforms: Triangle, Sawtooth, Pulse with variable pulse width
- VCF: 2-pole resonant multimode filter with Cutoff, Resonance, Env Amount, Drive
- LFO: 7 shapes (Sine, Triangle, Square, Saw Up, Saw Down, Random, Sample & Hold), Rate
- Modulation Destinations: Amp, Pitch, Filter, PWM, Waveshape (PWM and Waveshape via MIDI CC)
- EG: 2 for Filter and Amplitude (full ADSR is available via MIDI)

Preset

- 100 Presets (20 factory non-writable, 80 user)

Keyboard and controls

- 7 Knobs (4 matrix, 3 fixed)
- 13 Selectable scales (Chromatic, Major, Minor, Major Pentatonic, Minor Pentatonic, Major Blues,Minor Blues, Harmonic Minor, Mixolydian, Dorian, Klezmer, Hungarian Gypsy, Spanish Gypsy, Japanese, South-East Asian)

Sequencer

- 16-step sequencer
- Real-time and step recording with parameter recording
- Real-time parameter recording per-step
- 3 directions: Forward, Backward, Forward and Backward
- Selectable length between 1 and 16 steps

Arpeggiator

- 10 Mode Arpeggiator
- 4 octave range
- Hold control

Effects

- Delay
- Dive, Scoop, Vibrato, Wah, Tremolo

Connections

- Audio Out: Mini-jack 3.5mm stereo (mono summed)
- Audio In: Mini-jack 3.5mm stereo (mono summed)
- 2 x MIDI 2.5mm mini-jack to DIN cables (IN/OUT)
- 1 Micro USB*

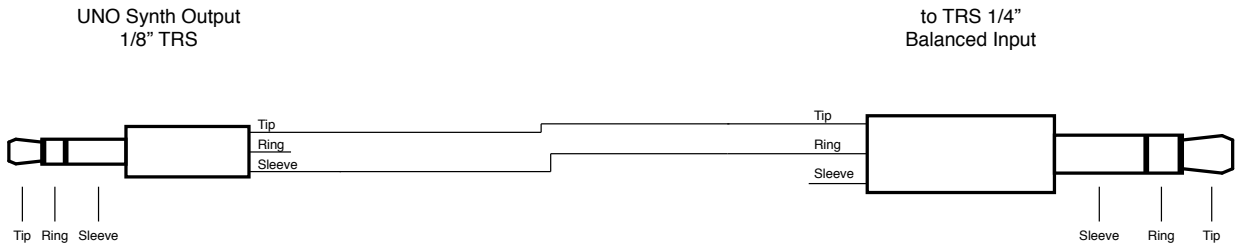
Power

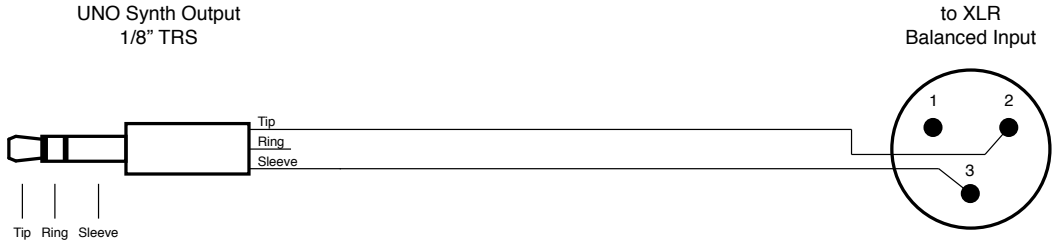
- 4x AA Batteries
- Micro USB connector

Dimensions

- Size: 25.6cm/10.1” x 15cm/8.9” x 4.9cm/1.93”
- Weight: 400g/14.1oz (batteries excluded)

* USB power has inherent ground noise, so when connecting the UNO Synth directly to your computer via USB, you may hear more noise and interference than when the synth is connected to a USB wall charger or running via batteries. With the direct computer connection, you can reduce the USB ground noise and other interference by either using a USB isolator or a custom TRS cable into a balanced input on your preamp or audio interface where the ground is not connected balanced at the input side.





10 – Troubleshooting

There is excessive noise or interference in the audio.

If your UNO Synth is connected to your computer via the UNO Synth's USB port, the ground noise and interference from the USB may be increased. The easiest way to avoid this is to instead power the UNO Synth using a standard wall charger or with batteries and then use the 2.5mm to MIDI DIN cables for the MIDI connection to your computer. Alternatively, if you want to maintain the USB connection to the UNO Synth itself, you can reduce the USB noise and interference by either using a USB isolator or a custom TRS cable into a balanced input on your preamp or audio interface where the ground is not connected balanced at the input side. See the cable wiring image on the Specs page.

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 is crossed by a line.

Why is the Authorization Manager rejecting my Serial Number?

Probably because of a typo, here are some common errors:

- Typing a 0 ("zero" number) instead of an O ("o" letter).
- Typing 1 ("one" number) instead of an I ("i" letter).
- Typing 2 ("two" number) instead of a Z ("z" letter).
- Typing 5 ("five" number) instead of an S ("s" letter).
- Typing 8 ("eight" number) instead of a B ("b" letter).
- Typing a "." (point) instead of a "-" (minus).

Suggestions:

- If possible, please copy and paste the information.
- Cut off all the leading and trailing spaces.
- Please type all codes in UPPERCASE during the installation and registration process.
- Check that the Serial Number that you are entering is in correlation with the product installed.

I need to log in into the User Area but I forgot my User Name and Password. What should I do?

You can retrieve your User Area login details in two different ways:

- Run the Authorization Manager and follow the steps until you reach the login page. Here you just have to click on the 'Forgot password?' button and submit your email address. Your login details will be sent to your email account. In case you have checked the 'Remember me' checkbox before and are not able to access the login page, just click on the LOGOUT button.
- Go to www.ikmultimedia.com, click on 'I forgot my username and/or password' and submit your email address. Your login details will be sent to your email account.

11 – 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**

11.1 – User Area

The User Area is a special section of our website specifically designed for our users.
Here you can easily edit your personal data, manage your product authorizations and licenses, and download the latest IK products updates.

Access your User Area to be able to:

- Edit your Personal data.
- View and download the latest product updates, free content, and Sound Libraries.
- Access any current Promotions.
- View exclusive offers and pricing.
- Manage your earned JamPoints.
- View your Orders.
- Share your AmpliTube presets.
- 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

UNO® Synth is a registered trademark property of IK Multimedia Production Srl. All other product names and images, trademarks and artists names are the property of their respective owners, which are in no way associated or affiliated with IK Multimedia. Product names are used solely for the purpose of identifying the specific products that were studied during IK Multimedia's sound model development and for describing certain types of tones produced with IK Multimedia's digital modeling technology. Use of these names does not imply any cooperation or endorsement.

All specifications are subject to change without further notice.

Document Version: 1.0.3

Release date: 2018/07/27

© 2018 IK Multimedia. All rights reserved.