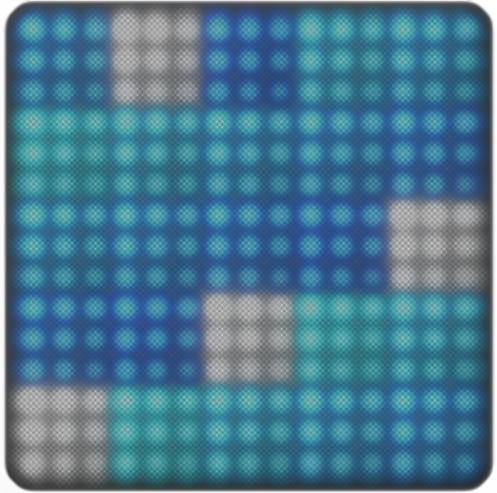# Lightpad Block Creator Manual

1 Introduction - Lightpad Block

Welcome to the Creator Manual for the Lightpad Block. We think of the people who buy and use ROLI's products as creators more than customers. Our products are designed to extend the joy of music creation to everyone — and thereby empower people as the creators they are. Everyone who buys and uses BLOCKS is investing in this vision of creativity and therefore is also a co-creator of ROLI.

BLOCKS is the most accessible and versatile music creation system ever made. It is a modular music studio that lets anyone make music whether they're a professional musician or a total beginner. Each individual Block is powerful and intuitive, offering unique capabilities that let people make music in simple but far-reaching ways. The Blocks connect together to create customizable kits that suit any budget, skill level, and musical style. With a click of magnetic connectors, music-makers can build their own instruments as they go.

You're starting with the Lightpad Block, the center of the BLOCKS system. You may already be shaping music on its tactile, glowing surface. This comprehensive Creator Manual explains the details of your Lightpad Block to ensure that you get the most out of it.

We have included a short list of terms specific to BLOCKS at the beginning of this manual. We will refer to these terms throughout this Creator Manual.

Please note that this is a digital manual updated regularly to reflect software updates and other improvements. This Manual is current up to **NOISE** v2.1.3.

Support and Feedback

We want you to have the best experience possible with our products and would love to hear your feedback. Should you have any questions, experience any problems, or just want to say hello, please don't hesitate to get in touch.

The easiest way to reach us is to send a support inquiry from the NOISE app or from support.roli.com. We will respond as quickly as possible.

2 Glossary of selected BLOCKS terms

BLOCKS

A modular music studio built of individual Blocks, each with specific capabilities, that connect together physically through BLOCKS DNA connectors and wirelessly through Bluetooth.

Block(s)

The individual hardware components of the BLOCKS system including the Lightpad Block, Live Block, Loop Block, Seaboard Block, Touch Block, and Developer Kit Control Block.

BLOCKS Dashboard

A desktop application for modifying and customising the internal settings of Blocks, making it easy to use BLOCKS with third-party digital audio workstations and synthesizers.

BLOCKS DNA Connectors

Six-pin connectors that magnetically connect multiple Blocks and also transmit power and data between the Blocks. Each Control Block has six DNA Connectors.

Control Block

Any one of several different Blocks with ten buttons and a row of LEDs, designed to control NOISE functions. Control Blocks include the Live Block, Loop Block, Touch Block, and Developer Kit Control Block. Control Blocks can also send MIDI messages to third-party applications.

Equator Player

Based on **Equator** – ROLI's custom-built, multi-dimensional sound engine and software synthesizer – **Equator Player** is a Windows and MacOS app included

with the Lightpad Block and Seaboard Block. Equator Player takes advantage of the Seaboard Block's 5 dimensions of touch, maximizing your ability to express yourself using just the motions of your fingers on your Seaboard Block's keywaves and Lightpad Block's playing surface. It features a simplified user interface that allows you to easily modify the most important characteristics of a preset. If you'd like to create your own sounds and have full control of Equator you may upgrade to the full version of Equator.

The Five Dimensions of Touch (5D Touch)

The feature of real-time control and modulation of sound through the basic movements of **Strike, Press, Glide, Slide, and Lift.**

- **Strike:** The velocity and force with which a finger makes contact with the **Lightpad surface or keywave surface**.
- **Press:** The pressure and continuous touch applied to the **Lightpad surface or keywave surface** after the initial **Strike**.
- **Glide:** Horizontal left and right movements on **Lightpad surface or keywave surface.**
- **Slide:** Vertical movements up and down the **Lightpad surface or keywave surface**.
- **Lift:** The release velocity or speed of liftoff from**Lightpad surface or keywave surface**.

Grid

A fixed configuration of pads on the NOISE interface and the Lightpad Block surface. Possible grid layouts include 2×2, 4×4, and 5×5. In each grid layout, the number of pads is the same on the X and Y axis.

Keywave

A wavelike element of the keywave surface of Seaboards that corresponds to a single key on a standard keyboard. Each of the Five Dimensions of Touch can be accessed on a single keywave.

Keywave surface

The entire playing Seaboard surface including all keywaves and the ribbons above and below them. The keywave surface corresponds to a keyboard.

Lightpad Block

A Master Block and the central Block in the BLOCKS system. The Lightpad Block features an illuminated tactile surface that enables creators to shape sound through Five Dimensions of Touch: Strike, Glide, Slide, Press, and Lift. When paired with NOISE it builds sequencing, looping, finger drumming and expressive control into one intuitive device. It can also be used with BLOCKS Dashboard to expressively control digital audio workstations and software and hardware synthesizers.

Lightpad Surface

The 15×15 LED matrix made up of individual cells (225) and covered with laser-etched silicone which makes up the surface of the Lightpad Block and enables users to play multidimensional or 5D Touch performances.

Live Block

A Control Block that provides quick access to music performance functions, so creators can be more expressive in real time. The Block's 10 buttons include controls for switching scales and octaves, playing chords and arpeggios, and sustaining notes in NOISE. The Live Block can also be used with BLOCKS

Dashboard to transmit MIDI CC messages in order to control digital audio workstations and software synthesizers.

Loop Block

A Control Block that provides quick access to music production functions so creators can easily layer sounds into a song in NOISE. The Block's 10 buttons include controls for setting a tempo, recording loops, and quantizing loops so they snap in time with the tempo. The Loop Block can also be used with BLOCKS Dashboard to send MMC messages to control the trasport functions of digital audio workstations, and it can also transmit MIDI CC messages in order to control digital audio workstations and software synthesizers.

Master Block

Master Blocks – including the Lightpad Block and Seaboard Block – are the central Blocks of the BLOCKS system. To use BLOCKS you need at least one Master Block. Additional Blocks, including Control Blocks, connect via DNA to the Master Block.

MPE

Multidimensional Polyphonic Expression (MPE) is a protocol for using standard MIDI messages to communicate with and enable the operation of multidimensional instruments such as the Seaboard and BLOCKS. MPE enables independent, per-note control of multiple sound parameters such as pitch and timbre.

NOISE

A free modular music app that lets anyone create beats, melodies and songs using simple, easy-to-learn gestures on the touch screens of mobile devices.

The app's expressive power can be expanded with BLOCKS. It is at the heart of the BLOCKS system.

Pad

A square that corresponds to a note in the grid layout of the Lightpad Block and NOISE.

Seaboard Block

The Seaboard Block pairs the powerfully expressive keywave surface of the Seaboard GRAND and Seaboard RISE with the portability and modularity of BLOCKS. It is a Master Block and includes 24 keywaves as well as lower and upper octave switches. Multiple Seaboard Blocks can connect together to create an extended playing surface.

Touch Block

A Control Block that adjusts the responsiveness of the Seaboard Block's and Lightpad Block's 5D Touch when used with NOISE or desktop applications. The Touch Block's 10 buttons control the sensitivity of Strike, Glide, Slide, Press, and Lift, lock Strike or Glide, or put the Seaboard Block into "piano mode," by turning off Glide. The Touch Block can also be used with BLOCKS Dashboard to transmit MIDI CC messages in order to control digital audio workstations and software synthesizers.

USB-C

The type of USB connector used to connect and charge the Lightpad Block and Seaboard Block. There is a female connector on the block itself, and a male connector on the included USB-C-to-USB-A cable.

3 Start
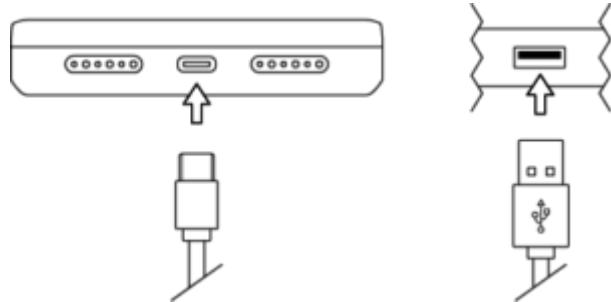
3.1 Charge Your Lightpad Block

You should charge your Lightpad Block as the first step before proceeding. When connected to a suitable power source, the Lightpad Block can charge additional Blocks that are connected to its DNA connectors.

Plug the included USB "C" cable into the Lightpad Block and plug the other end of the cable into a USB 3 charger or a computer with a USB 3 port. The Lightpad Block requires 5 watts of power to run and charge the battery efficiently. Adding more Blocks via the DNA connectors will increase the demand for power so we recommend using a higher output charger such as an iPad charger (10-12 watts) or a higher output USB 3 charger.

Please note that when charging via a computer that you must use the ROLI supplied USB cable to connect to the host computer. When using a laptop computer please make sure that it is plugged into a wall outlet and has its sleep feature disabled. This configuration will charge one Lightpad Block and one Live Block or Loop Block, but not all three unless they are powered off.

Note: Please do not use an iPhone charger to charge BLOCKS as it is not a compatible charger.

3.2 What is BLOCKS?

BLOCKS is a modular music platform that opens new possibilities for musical expression. BLOCKS starts with the Lightpad Block, a playable surface. Other Blocks such as the Live Block and Loop Block connect to the Lightpad Block and allow easier, faster control of music performance and production. The modular system is powered by NOISE, a free iOS app that functions as the software engine for the BLOCKS system. NOISE and BLOCKS connect wirelessly over Bluetooth.

3.3 What's in the Box?

- Lightpad Block
- USB-C cable
- Quick start guide
- Warranty Information

3.4 System Requirements

NOISE

NOISE, the free iOS app, is the software engine of BLOCKS. It is a powerful standalone instrument for iPhones and iPads and responds to 3D Touch technology on newer iOS devices. It also pairs with BLOCKS hardware via MIDI-

over-Bluetooth and becomes the software synthesizer and sound engine for BLOCKS. NOISE and BLOCKS are integrally connected, and together they make a modular, mobile music platform.

Visit the Apple App Store and download NOISE on your iPhone or iPad.

iOS Device

NOISE requires iOS 9.0 or higher and can take advantage of Apple's 3D touch capabilities on the iPhone 6s or higher and the iPad Pro. 3D Touch capabilities are not required as the Lightpad Block offers 5D Touch. The following iOS devices have been tested and are supported.

- iPhone 6 or higher
- iPhone SE
- iPad Mini 4 or higher
- iPad Air 2
- iPad Pro (9.7 and 12.9 inches)

MIDI-over-Bluetooth

BLOCKS supports MIDI-over-Bluetooth and connects to any compatible MIDI-over-Bluetooth enabled iOS or OSX device and app. The Lightpad Block must be in pairing mode to do this.

3.5 Product Registration and Setup

Registering on NOISE.fm makes it possible to store and retrieve your projects and other NOISE app data in the cloud. You can also easily share data with

other users and browse additional content all on NOISE.fm (more on this later in this manual).

- Download NOISE from the Apple App Store
- Turn on Bluetooth on the iOS device
- Launch NOISE
- Within NOISE sign in to register with an existing ROLI ID

-OR-

- Create a new ROLI ID on NOISE.fm or My ROLI

  - Enter your first and last name
  - Enter a valid email address
  - Enter a password (must be alphanumeric and contain at least one capital letter and number)

- Register BLOCKS (See next segment)

-OR-

- Play with NOISE (Skip to "Learn")

Connecting and Registering Blocks

Now that you have registered an account and chosen to register Blocks please follow the prompts on screen and outlined below.

- Switch your Blocks on. If you are registering additional Blocks you may turn them all on to register them simultaneously.

- You do not need to connect additional Blocks via Bluetooth as long as you have a Lightpad Block connected via Bluetooth. Additional Blocks connect directly to your Lightpad Blocks via the DNA connectors.
- Open NOISE, press the Settings cog in the top-right corner of NOISE and select 'Connect BLOCKS'.
- Choose the Lightpad Block from the Bluetooth MIDI Devices screen to complete MIDI-over-Bluetooth pairing. Your Lightpad Block will be listed as 'Lightpad Block XXXX' with the X's representing the last 4 digits of the serial number which is located on the underside of the Block.
- Connect any additional Blocks that you have purchased to the DNA ports of the Lightpad Block to register them now.
- Once your Blocks are connected, select "Register Block."
- Your Blocks will now be registered to your account on NOISE.fm.
- If you are prompted to update the firmware, you should do so now.
- You are now connected and ready to make music.

If you are using Blocks with third-party applications rather than with NOISE, you may also register your Blocks on My ROLI. Once you've created a MyROLI account, click "Register a Product." Enter the serial number found on the bottom of your Block for both the "Product Registration Code" and "Serial Number" fields, and then click "Register."

Updating Firmware

You may be prompted to update the firmware during this setup. This is highly recommended. It's important that you update to the latest firmware as periodic updates improve functionality and introduce new features.

To update the firmware for your Lightpad Block, launch NOISE and connect your Block. In NOISE, click the Settings icon in the upper-right corner, and then

click "Firmware." NOISE will look for BLOCKS updates. If there are new firmware updates, you may select "Click to Update." The update will take a few minutes to process. When the update is finished, your Block will restart. After your Block restarts, reconnect it to NOISE by clicking "OK" and then clicking on the name of your Block.

Lightpad Blocks need at least 30% battery remaining in order to update the firmware. If you are not able to update your Block's firmware, make sure it is charged and try again.

Re-Connecting to NOISE

To re-connect your Blocks to NOISE after the initial setup please follow the steps below:

- Turn Bluetooth 'ON' on your iOS device.
- Turn on the Lightpad Block by pressing the power button.
- The Lightpad Block will power up in Bluetooth pairing mode as long as it is not connected by cable to a computer. This is indicated by a blue light on the power button and an expanding blue ring displayed on the Lightpad Surface. If there is no blue light then please press the power button once to enter pairing mode.
- Launch NOISE on your iOS device.
- Press the Bluetooth icon in NOISE and select 'Lightpad Block XXX' from the list of Bluetooth MIDI Devices to pair app and hardware.

4 Learn

4.1 Learning How to Play the Lightpad Block

Once connected to NOISE, you can play the Lightpad Block and hear NOISE responding to 5D Touch. The surface of the Lightpad Block mirrors the NOISE display and can be used to play NOISE.

Each NOISE preset features a grid layout, colour palette, and demo phrase associated with it. The demo phrase is a musical demonstration of what can be achieved with BLOCKS. It can be accessed by pressing the 'Learn' icon for each preset to see and hear the phrase being performed.

As the phrase plays back, the notes which are being performed appear simultaneously on both NOISE and the Lightpad Block. The corresponding pads illuminate and each of the notes are displayed as a circle of light that expands and contracts respectively as more or less Press is applied. Glide and Slide articulations are simultaneously displayed as light trails.

4.2 Five Dimensions of Touch or 5D Touch

The Lightpad Block is a multidimensional instrument that lets you modulate sound through Five Dimensions of Touch. NOISE is optimised to respond to these dimensions of touch. Through simple movements and gestures, you can shape sound easily and discover new modes of expression. The icons below depict the Five **Dimensions of Touch** on the Lightpad Block. The **Five Dimensions of Touch** are:

Strike: The velocity and force with which a finger makes contact with the **Lightpad Surface**. This dimension of touch corresponds to MIDI velocity on a standard keyboard.

Press: The pressure applied to the Lightpad Surface after the initial Strike. The Lightpad Block responds to each moment of continuous touch, transmitting minute variations of pressure to sound. This continuous pressure-sensitivity allows for swells, fades, and other detailed expressions.

Glide: Horizontal left and right movements on the Lightpad Block surface. **Glide** movements bend and adjust pitch as naturally as on a string instrument, allowing effects such as vibrato and glissando, all on a polyphonic basis. **Glide** is typically assigned to pitch.

Slide: Vertical movements up and down the Lightpad Block surface. For example, an upward movement can open a filter that turns an organ sound into a brassy sound, while a downward movement can close the filter. Your initial point of contact with the surface, no matter where this point is, becomes the basis for sound modulation on the Y axis above and below that point.

Lift: The release velocity or speed of liftoff from the Lightpad Block. Many presets in NOISE respond to Lift.

4.3 Playing Techniques

Strike and hold: Strike the Lightpad Surface and hold for a duration without adding any additional movement.

Glide vibrato: Pressing into **the Lightpad Surface** and holding the point of your finger there, wiggle your finger from side to side. The pitch-bend effect of vibrato will widen the wider the arc of movement away from the stationary finger.

Glide glissando: Strike and hold a note on the **Lightpad Surface**. Whilst still holding the note, move your finger sideways to hear the note bend in pitch.

Continuous press modulation: While sustaining a note, increase and decrease downward pressure on **the Lightpad Surface** to modulate the note.

5 Create

5.1 Perform: Instrument View
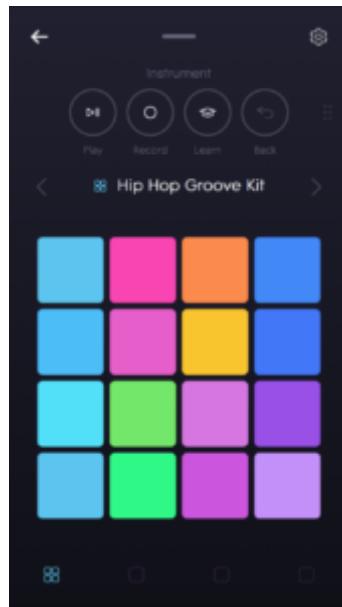
There are two main views in NOISE: Instrument View and Song View. You can navigate between these two views by swiping between them. From Instrument View, swipe down to enter the Song View. Notice that as you do this the Lightpad Block mirrors the NOISE display. Now swipe back up to Instrument View.

This section focuses on the Instrument View, which is one of two main views in NOISE and features two types of Instruments: Multi Instruments and Solo Instruments. In NOISE there is one Multi Instrument slot and three Solo Instrument slots which can be selected by touching the icons at the bottom of the Instrument View. The bottom left-most icon indicates a Multi Instrument and the three that follow indicate a Solo Instrument.

5.2 Solo Instruments

Solo Instruments, which are indicated by an empty square icon (can be any colour) contain a single instrument which can be arranged melodically or harmonically across the individual pads of the Lightpad Block. The lowest pitch and root note of the scale is on the bottom left pad. The notes ascend in pitch, row by row from bottom left to top right. The root note in the first and second octaves are indicated in white on the bottom left pad, direct centre pad, and top right pad. They are arranged according to the selected scale (more on this below).

Solo Instruments contain their own unique features such as Scale, Arp, Chord, Octave, and Sustain. On the iPad these features are visible from the Instrument View. On the iPhone they can be accessed by grabbing the ( ) icon in the Instrument View and swiping to the left. Now you can access Click, Octave, and Sustain. Swipe to the left again to access Scale, Chord, and Arp.

Click

Click lets you control the tempo of the instrument (Groove or Arp) and turn the Click "ON" or "OFF". When it is set to "ON" it will play whenever the Play/Pause icon is touched. If you turn it "OFF" you will still hear the click for the 1 bar count-in during recording.

Octave

Transpose up or down across a 6-octave range with the Octave Button.

Sustain

Press the sustain button to hold notes.

Scale

Scale allows you to determine the Key and Scale for the Solo Instruments and will affect all three Solo Instrument slots simultaneously. There are 19 different scales to choose from including the modes.

Hide Notes Toggle (Scale)

When set to OFF, the 'Hide notes' toggle will darken all of the notes that are not part of the selected scale with the exception of when "Chromatic" is the selected scale. Hidden notes are still playable on the Lightpad Block and NOISE.

Chord

Chord can be turned 'ON' or 'OFF' and makes it possible to play entire chords with one finger or pad. You may select from 14 different chord types. If Arp is switched "ON", Chord will directly determine the notes being played by the arpeggiator. This makes it possible to generate some very complex melodies with just one finger.

Arp

The Solo Instruments feature an arpeggiator per instrument slot. The arpeggiator can be turned 'ON' or 'OFF' with the Arp toggle and is tempo synced to other Solo Instruments' arpeggiators and any playing clips.

Pattern

Choose from Up, Down, Up Down, Down Up, Up Up Down, Down Down Up, and Random arpeggiator patterns.

Gate

Gate controls the duration of the notes, from short blips up to the entire duration of the note value, determined with the Time parameter.

Time

Time controls the note value for the notes being played by the arpeggiator.

Octave

Octave determines the range of pitches played by the arpeggiator from 1 to 4 octaves.

5.3 Multi Instruments

Multi Instruments, which are indicated by an icon containing a 2X2 grid of small squares (can be any colour) contain multiple sounds arranged across the individual pads of the Lightpad Block. Multi Instruments are made up of 4 or 16 individual sounds which are indicated by the number of illuminated pads. Multi Instruments can be made up of individual drum sounds, samples, synthesis elements or a combination of both and respond to 5D Touch.

## 5.3.1 Drum Kits vs Groove Kits

There are two types of Multi Instruments: Drum Kits and Groove Kits. A Drum Kit is a Multi Instrument made up of multiple sounds which all respond to 5D Touch and has "Drum Kit" as part of the title of the preset.

A Groove Kit is an interactive Multi Instrument that has "Groove Kit" in the preset title and is made up of multiple sounds that each have an interactive, tempo-synced musical pattern associated with them. For example, in the

preset "Hip Hop Groove Kit", Strike the second pad from the left in the bottom row and lightly hold to hear a synthetic snare on beats 2 and 4. Now use the Press, Glide, and Slide dimensions to hear both the groove and sound simultaneously evolve to be more complex and include fills.

Grab the (⠿) icon and swipe to the left to access the "Click". Press the Click icon to turn the click "ON" or "OFF" and change the tempo of the Groove Kit.

5.4 Produce: Song View
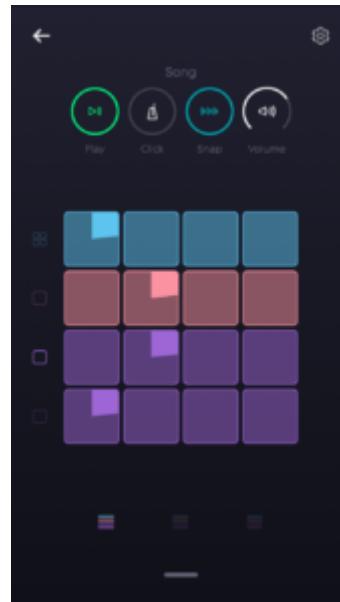
The Song View is the second main view in NOISE. Access it by swiping down from the top of the Instrument View in NOISE. Here you can select a loop slot to record to and arrange your loops into songs. There are four icons across the top of the screen, Play/Pause, Click, Snap, and Volume.

Play/Pause

Press Play/Pause to begin or stop playback of all selected loops.

Click

Press Click to control the tempo of the project and to turn the Click "ON" or "OFF". When it is set to "ON" it will play whenever the Play/Pause icon is touched. If you turn it "OFF" you will still hear the click for the 1 bar count-in during recording.

Snap

Snap tightens up or "quantizes" your performances so they are perfectly in time.

Volume

Touch and drag the Volume Button directly up or down to raise or lower the volume of project.

In Song View the Instruments are arranged in 4 rows from top to bottom starting with one Multi Instrument on top and three Solo Instruments below. There are 12 available loop slots per instrument. On the iPad you can see all 12 loop slots on one screen.

On the iPhone you can view 4 loop slots per page and use the slot selection icon (▤) at the bottom of the screen to navigate to the corresponding page.

5.5 Playing a Loop

While in the Song View there are several pre-recorded loops in NOISE for you to experiment with. Touch the top left loop. You will hear a groove begin to play which will repeat every four bars until you touch another loop in the same instrument, and then the second loop will begin playing when the first reaches the end of four bars. You can do this for all four of the instruments simultaneously. Each instrument can play one loop at a time.

Loops can also be started by pressing the ⏯ button and then touching the specific loop or loops you wish start playback on. You can experiment with combinations of different loops playing back together.

5.6 Creating a New Project

You can begin recording over the existing project or you can create a new one. To create a new one, press the arrow at the top left of the Song View. This will take you to NOISE.fm. Touch the "Create New project" icon to create a new

project. Enter a name for the project and touch "OK". You now have a new empty project that you can use to record your own loops.

5.7 Recording Loops

From the Instrument View select the Multi Instrument icon at the bottom of the screen. Now use the arrows on either side of the Multi Instrument preset name to select "Dance Groove Kit". Strike and hold different combinations of pads until you find a combination that produces a groove that you would like to record.

Record A Beat

Swipe down from the top of the screen to the Song View and select the top left empty loop slot. This will allow you to record a beat to start with. Swipe up from the bottom of the screen to go back to the

Instrument view. Touch the Record button and a 1 bar count-in will begin playing. At the end of the count-in begin playing your groove for 4 bars. The pattern you just created will continue to loop.

Swipe down to the Song View and press the Play/Pause button to stop.

Record A Bassline

Swipe back up to instrument view and select the first Solo Instrument . Use the preset arrows to select "Classic Acid Bass". Grab the ( ) icon and swipe twice to the left to access Scale, Chord, and Arp. For a quick and easy bass line set the Scale to "Major" and set the Hide

Notes toggle to "OFF". Press the "X" at the top right-hand corner of the screen to exit back to Instrument View. Press the Chord Button and turn it on. Select "Octave" and then "X" to exit. Now press the Arp Button. Turn it "ON", set Pattern to "Up", Gate to 80%, Time to 1/16, and Octave to "2". Press "X" to exit. Now when you play one of the pads on the Lightpad Block you will hear a steady and instant bass line.

Swipe back down to Song View and touch the left-most loop slot in the 2nd row from the top on the Lightpad Block (Instrument 2). This slot is now record enabled. Touch it again to return to Instrument View. Press the Record Button and begin recording after the 1 bar count-in. Strike and hold a note for 1 bar before changing to a new note. Continue for 4 bars. Now you have recorded an animated bass line just by playing 4 notes.

Add Some Chords

Select the next Solo Instrument and switch the preset to "Digital Glass Synth". Turn on Chord and set it to "5th". Select the first loop slot in this instrument and press record. After the count in play the same notes and durations as you did for the bassline.

Add A Melody

Select the last instrument and switch to the preset "Moraz Lead". Add an Arp if you wish or just experiment with the 5 Dimensions of Touch. Select the bottom left loop slot on the Lightpad Block and press it again to return to Instrument View. Press record and play, adding lots of 5D Touch. NOISE will record all of your movements.

6 Share and Discover

6.1 What is NOISE.fm?

NOISE.fm is a social platform for sharing and collaborating on music made with NOISE and BLOCKS. It's directly accessible from within NOISE and also by visiting www.noise.fm.

6.2 Share

To share a NOISE project on NOISE.fm, click the back arrow from the Song or Instrument View, which will display your projects. Next click the share icon next to the project you'd like to share. This will share your project to NOISE.fm and allow other NOISE.fm creators to use and remix your work. Your project will be licensed under a Creative Commons license.

6.3 Discover

When you visit NOISE.fm and click "Explore" you can listen to and comment on projects from other NOISE creators. You can follow creators to get a personalised feed of updates, and you can share projects you've published or discovered to social media including Facebook and Twitter.

7 Lightpad Block Appendix

Power / Bluetooth Button

The power button is located on the front panel of the Lightpad Block. Press this button to turn it on, press and hold for approximately 3 seconds to turn the Lightpad Block off. While on, pressing this button repeatedly toggles between Bluetooth pairing mode on and off.

The Lightpad Surface

The Lightpad surface features a 15 x 15 LED matrix comprised of individual cells (225) and covered with laser etched silicone which enables users to create multidimensional or 5D Touch performances.

The Lightpad Surface is made of silicone which is purposely engineered to withstand repetitive pressure inputs from fingers and hands while providing passive haptic feedback to the input gestures. The surface has been specially treated to provide soft touch and reduce surface friction for lateral gestures.

Mode Button

The Mode button is on the left side panel of the Lightpad Block and cycles the Instruments. The secondary use for the Mode button is to cycle through the various configurations of the 15×15 LED grid when connected to 3rd party software applications.

DNA Connectors

The Lightpad Block features 8 DNA connectors. These six-pin connectors magnetically connect multiple Blocks and also transmit power and data between the Blocks.

USB-C Port

The Lightpad Block features a USB-C connector for charging the device and for a MIDI-over-USB connection between BLOCKS and a computer. More information about the battery and charging the Lightpad Block are listed below.

Battery Indicator

The Power LED on the Power / Bluetooth button also indicates the current battery status of the Lightpad Block and when the Lightpad Block is being charged. The Power LED will display green when fully charged, yellow when partially charged and red when the charge is below 20%.

Additional Battery Info

The Lightpad Block features a 2000mAh Li-po (Lithium polymer) battery with a nominal discharge voltage of 3.7 volts. Protection is provided for overvoltage, overcharge, over discharge, and short circuit. The battery is capable of powering the Lightpad Block for over four hours when fully charged. Using USB 3 charger, the battery will charge nominally within four hours. If additional Blocks are connected the charging time will increase accordingly, as the current is shared between all connected Blocks.

The battery will retain over 80% of its capacity for over 300 charge cycles. A charge cycle is defined as a complete discharge from 100% to 0%, and subsequent recharge back to 100%. For example, charging a device going from 50% charge up to 100% and back twice would be equivalent to one charge cycle.

Charging Times

BLOCKS	Watts	Time to charge
Lightpad Block	5W——-12W	4 hours ———————— 3 hours

Lightpad Block + Live Block	*10W——-12W*	*4 hours ———————— 3 hours*
Lightpad Block + Live Block + Loop Block	*10W——-12W*	*4 hours ———————— 4 hours*

Additional Information

Battery Life	4 hours when in use; 6 months when turned off (on firmware 0.2.0+)
Bluetooth Range	15 meters
Bluetooth Latency	30 ms touch to sound
USB Latency	10 ms touch to sound
LEDs	225 on surface, 2 indicator LEDs on power button & mode button
Mass	250g
Dimensions	94mm x 94mm x 20mm
Ports	USB-C port (MIDI out and power)
Connectivity	Full MIDI compatibility over USB and Bluetooth LE
DNA Connectors	8
Buttons	Mode / Power & Bluetooth
Included in package	Lightpad, USB-C to USB-A Cable, Quickstart Guide, Warranty Information

Cleaning the Lightpad Block

Basic care and attention will protect your Lightpad Block and help it stay in optimal condition. Keep it away from direct sunlight, sharp objects or edges, corrosive solvents, liquids, and especially oils – including greasy fingers after

eating food. The Lightpad Surface is designed for finger and hand pressure/impact, but NOT for hard objects, such as drum sticks.

To clean the **Lightpad Surface** you may use damp, bleach-free and oil-free cleansing wipes. Do not use any abrasive cleansing agents on the Lightpad Block.