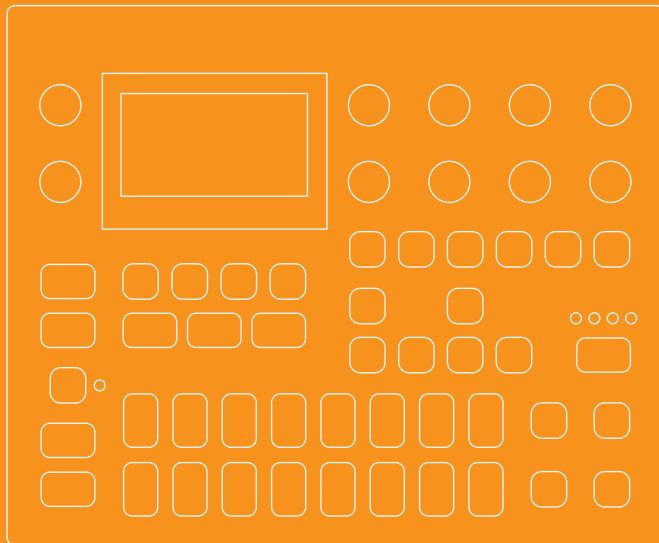


# Digitone

Master of the digital method



**Quick Guide**

***elektron***





## **Digitone**

### **THANK YOU**

Thank you for purchasing Digitone. Digitone represents our vision of how FM synthesis can be revitalized and modernized. Here's how: combine FM sound generation with a classic subtractive synthesis signal flow. You go from jagged chaos to mellow soundscapes in less than a second. Digitone is one unique box.

Choose from multiple FM algorithms featuring carefully selected parameters. Shape the tones with powerful filters. Arrange them with the intuitive Elektron sequencer, and then round it all off with the stellar effects. Now enjoy the most spectacular sounds, seemingly emanating from some parallel universe.

Become the master of the digital method!

- The Elektron Team

### **FCC compliance statement**

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **Canada**

This Class B digital apparatus complies with Canadian ICES-003.  
Cet appareil numérique de la classe B est conforme à la norme NMB-003.

### **European Union regulation compliance statement**

This product has been tested to comply with the Low Voltage Directive 2006/95/EC and the Electromagnetic Compatibility Directive 2004/108/EC. The product meets the requirements of RoHS 2 Directive 2011/65/EU.



Your product must be disposed of properly according to local laws and regulations.

### **Legal disclaimer**

The information in this document is subject to change without notice and should not be construed as a commitment by Elektron. Elektron assumes no responsibility for any errors that may appear in this document. Elektron may also make improvements and/or changes in the products and programs described in this document at any time without notice. In no event shall Elektron be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or profits, whether in an action of contract, negligence, or other action, arising out of or in connection with the use or performance of this information.

## **IMPORTANT SAFETY INSTRUCTIONS**

1. Do not use the unit near water.
2. Never use aggressive cleaners on the casing or on the screen. Remove dust, dirt and fingerprints with a soft, dry and non-abrasive cloth. More persistent dirt can be removed with a slightly damp cloth using only water. Disconnect all cables before doing this. Only reconnect them when the product is safely dry.
3. Install in accordance with the manufacturer's instructions. Make sure you place the unit on a stable surface before use.
4. Connect the unit to an easily accessible electrical outlet close to the unit.
5. When transporting the unit, preferably use accessories recommended by the manufacturer or the box and padding the unit was originally shipped in.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or any other appliance (including amplifiers) emitting heat.
7. Do not put the PL-2S Protective Cover (Elektron accessory) on the unit while the unit is powered on.
8. This product, in combination with an amplifier and speakers or headphones, is capable of producing sound levels that can cause permanent hearing loss. Do not operate for a long period of time at a high volume level or at a level that is uncomfortable.
9. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the unit.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug this unit during lightning storms or when it is not used for an extended time.
12. Refer all servicing to qualified service technicians. Servicing is required when the unit has been damaged in any way, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.

## **TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR PRODUCT DAMAGE**

- Do not expose the unit to rain, moisture, dripping or splashing and also avoid placing objects filled with liquid, such as vases, on the unit.
- Do not expose the unit to direct sunlight, nor use it in ambient temperatures exceeding 40°C as this can lead to malfunction.
- Do not open the casing. There are no user repairable or adjustable parts inside. Leave service and repairs to trained service technicians only.
- Do not exceed the limitations specified in the Electrical specifications.

## **SAFETY INSTRUCTIONS FOR THE POWER ADAPTER ELEKTRON PSU-3b**

- The adapter is not safety grounded and may only be used indoors.
- To ensure good ventilation for the adapter, do not place it in tight spaces. To prevent risk of electric shock and fire because of overheating, ensure that curtains and other objects do not prevent adapter ventilation.
- Do not expose the power adapter to direct sunlight, nor use it in ambient temperatures exceeding 40°C.
- Connect the adapter to an easily accessible electrical outlet close to the unit.
- The adapter is in standby mode when the power cord is connected. The primary circuit is always active as long as the cord is connected to the power outlet. Pull out the power cord to completely disconnect the adapter.
- In the EU, only use CE approved power cords.

## **RESTART**

- For a complete restart of the Digitone, wait for at least 30 seconds after turning it off before turning it on again.

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# 1. INTRODUCTION

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## 1.1 CONVENTIONS IN THIS MANUAL

We use the following text formatting conventions throughout the manual:

- **KEY NAMES**

Uppercase, bold style and within brackets. For instance, the key labeled “FUNC” on the main panel is called **[FUNC]**.

- **KNOBS**

Uppercase, bold, italic letters. For instance, the knob “Level/Data” is called ***LEVEL/DATA***.

- **LED INDICATORS**

Uppercase letters with angle brackets. For instance, the Pattern page LEDs are called: **<PATTERN PAGE>**.

- **MENU NAMES**

Uppercase letters. The GLOBAL SETTINGS menu is an example of that.

- **PARAMETER NAMES, MENU OPTIONS**

Uppercase bold letters for parameter names and certain menu options where you can make settings or perform actions. For example, **VOL**.

- **PARAMETER SETTING ALTERNATIVES**

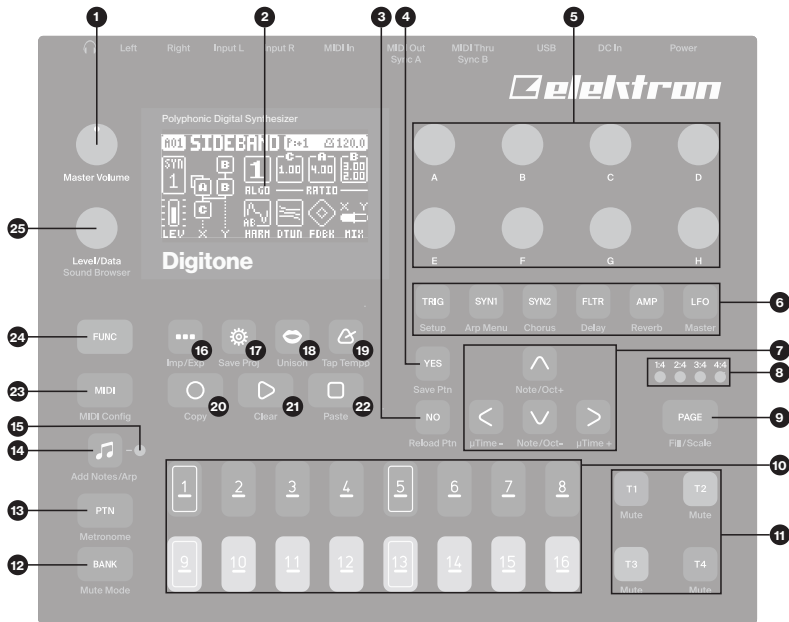
Uppercase letters. For example, **OFF**.

- **SCREEN MESSAGES**

Uppercase letters with quotation marks. For example, **“QUANTIZE LIVE REC”**.






## 2. PANEL LAYOUT AND CONNECTIONS

### 2.1 FRONT PANEL CONTROLS



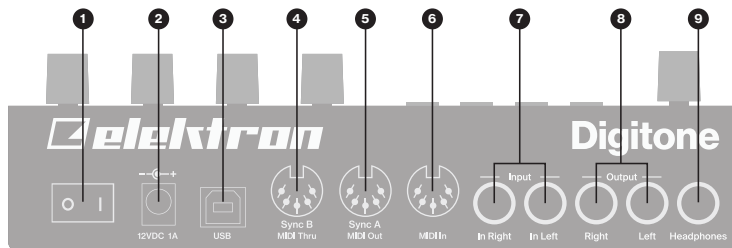
1. **MASTER VOLUME** sets the volume for the main outputs and the headphones output.
2. Screen.
3. **[NO]** key. Used for exiting an active menu, backing one step and negating. The secondary function is a temporary reload of the active pattern.

4. **[YES]** key. Used for entering sub-menus, selecting and confirming. The secondary function is a temporary save of the active pattern.
5. **DATA ENTRY** knobs **A-H**. Used for setting parameter values. Press and turn the knobs to change values in larger increments.
6. **[PARAMETER]** keys access the **PARAMETER** pages of the active track. The color of the keys indicates if the page is active (red/blue) or inactive (off).
  - **[TRIG PARAMETERS]** accesses parameters such as **NOTE**, **VELOCITY**, and other trig related parameters. The secondary function accesses the **SOUND SETUP** menu.
  - **[SYN1]** accesses the **SYN1** page. Here you can find parameters related to the **FM** engine. For **MIDI** tracks this page has parameters such as **CHANNEL**, **BANK** and **PROGRAM**. The secondary function accesses the **ARPEGGIATOR** menu.
  - **[SYN2]** accesses the **SYN2** pages. Here you can find further parameters related to the **FM** engine. The secondary function accesses the **CHORUS** page.
  - **[FLTR]** accesses the **FILTER** pages. Here are the parameters for the base-width and multimode filters. On **MIDI** tracks you find the **CC** value settings here. The secondary function accesses the **DELAY** page.
  - **[AMP]** takes you to the **AMP** page, where you find parameters for the amplitude envelope and effect sends. On **MIDI** tracks you find the **CC** select settings here. The secondary function accesses the **REVERB** page.
  - **[LFO]** accesses the **LFO** parameters for both synth and **MIDI** tracks. The secondary function accesses the **MASTER** page.
7. The **[ARROW]** keys. Used for navigation and for setting parameter values. In menus, they are called **[UP]**, **[DOWN]**, **[LEFT]**, and **[RIGHT]**.
8. <PATTERN PAGE> LEDs indicate how many pattern pages the active pattern consists of and which pattern page is currently active. The LED flashes on the pattern page that is currently playing.
9. **[PAGE]** selects the active pattern page, if the pattern has more than 16 steps. The <PATTERN PAGE> LEDs indicate how many pattern pages the active pattern consists of and which pattern page is currently active. The LED flashes on the pattern page currently playing. The secondary function accesses the **SCALE** menu. This key also activates Fill Mode (when **GRID RECORDING** mode is not active).

10. **[TRIG]** keys enter or remove sequencer trigs, and parameter locks, in combination with the **DATA ENTRY** knobs. They also select, banks, and patterns, in combination with the **[PTN]**, and **[BANK]** keys. The **[TRIG]** keys also function as a keyboard to play the Digitone or to input notes to the sequencer. The **[TRIG]** keys lights indicate trigs on the sequencer by lit red keys, while flashing red keys indicates parameter locks, in GRID RECORDING mode.
11. **[TRACK]** keys. Selects the active track. The secondary function mutes the track.
12. **[BANK]** selects bank A–H in combination with the **[TRIG 9–16]** keys. The secondary function accesses the MUTE Mode.
13. **[PTN]** selects pattern 1–16 in combination with the **[TRIG 1–16]** keys. The secondary function opens the METRONOME menu.
14. **[TRACK NOTE]**  opens the TRACK NOTE menu where you can view and edit note related settings such as transpose, scale, and chords. The secondary function toggles the arpeggiator on and off. This key is also used to add notes in the sequencer (when in GRID RECORDING mode).
15. <ARPEGGIATOR> LED indicates the arpeggiator's on/off status.
16. **[PATTERN MENU]**  opens the PATTERN menu, where you find pattern management. The secondary function accesses the Import/Export menu.
17. **[GLOBAL SETTINGS]**  contains the management of projects, MIDI configuration, and the System settings. The secondary function saves the current project.
18. **[VOICE]**  opens the VOICE menu where you handle the track's voice allocation. The secondary function accesses the UNISON menu.
19. **[TEMPO]**  opens the TEMPO menu, where you can adjust the global/pattern tempo and also adjust the swing. The secondary function makes it possible to tap the tempo.
20. **[RECORD]** key. Activates/deactivates GRID RECORDING mode. Press and hold **[RECORD]**, and then press **[PLAY]**, to activate LIVE RECORDING mode. Press and hold **[RECORD]**, and then press **[PLAY]** twice to activate/deactivate quantized LIVE RECORDING. The secondary function is a copy operation.
21. **[PLAY]** starts the sequencer playback. The secondary function is a clear operation.

22. **[STOP]** stops playback. The secondary function is a paste operation.
23. **[MIDI]** activates the MIDI editing mode where you can edit the MIDI tracks. A lit **[MIDI]** key indicates the MIDI editing mode is active. The secondary function opens the MIDI CONFIG menu.
24. **[FUNC]** key. Press and hold **[FUNC]**, and then press another key to access the secondary function of that key. The blue-green text on the Digitone front panel shows the keys secondary functions.
25. **LEVEL/DATA** sets the overall volume level of the active track. You can also set parameters and scroll through lists. The secondary function opens the SOUND BROWSER.

## 2.2 REAR PANEL CONNECTIONS



1. **POWER** Switch for turning the unit on and off.
2. **DC In**, Input for power supply. Use the included PSU-3b power adapter, connected to a power outlet.
3. **USB** For connecting the unit to a computer. For MIDI-control or Overbridge use. Use the included A to B USB 2.0 connector cable to connect to a computer host.
4. **MIDI THRU/SYNC B** Forwards data from MIDI IN. Can also be configured to send DIN sync to legacy instruments. Use a standard MIDI cable to connect another MIDI device in the chain.

5. **MIDI OUT/SYNC A**, MIDI data output. Can also be configured to send DIN sync to legacy instruments. Use a standard MIDI cable to connect to MIDI In of an external MIDI device.
6. **MIDI IN**, MIDI data input. Use a standard MIDI cable to connect to MIDI Out of an external MIDI device.
7. **INPUT L/R**, Audio inputs. Use a 1/4" mono phone plug (unbalanced connection).
8. **OUTPUT L/R**, Main audio outputs. Use either 1/4" mono phone plug (unbalanced connection) or 1/4" Tip/Ring/Sleeve phone plug (balanced connection).
9. **HEADPHONES** Audio output for stereo headphones. Use 1/4" Tip/Ring/Sleeve phone plug.

### **2.3 SETTING UP AND STARTING DIGITONE**

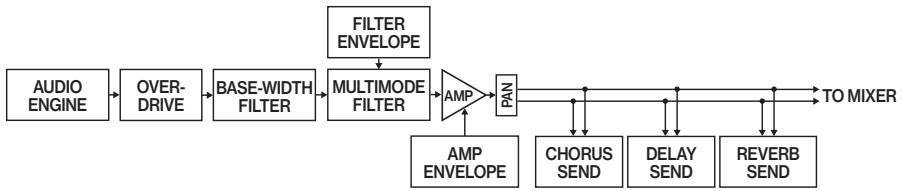
Make sure you place the Digitone on a stable support, such as a sturdy table, with sufficient space for the cables. Make sure to switch off all devices before you connect the Digitone to other devices.

1. Plug the supplied DC adapter into a power outlet and connect the small plug to the 12 V DC In on the Digitone.
2. Connect OUTPUT L/R from the Digitone to your mixer or amplifier.
3. To control the Digitone from a computer, connect a USB cable between the computer and the USB connector of the Digitone.
4. If you want to use MIDI to control the Digitone, connect the MIDI OUT port of the device you wish to send data from to the MIDI IN port of the Digitone. The MIDI THRU port duplicates the data arriving at the MIDI IN port so that it can forward data to other MIDI units. Connect the MIDI OUT port of the Digitone to the MIDI IN port of the of the device you want to control if you want to use Digitone to control other devices using MIDI.
5. Connect an audio source to INPUT L/R or via USB if you want to process audio from external sources.
6. Switch on all units. Press the POWER switch located at the back of the Digitone to switch it on.

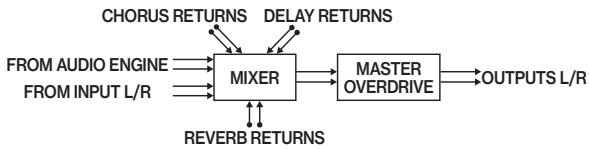
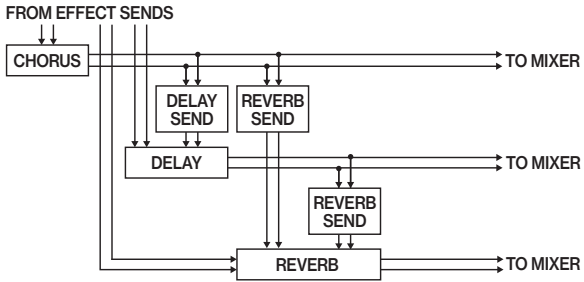
### 3. SOUND ARCHITECTURE

The illustrations below show the Digitone sound architecture, with its eight audio voices, three send effects (chorus, delay, and reverb) and master effect (overdrive).

#### 3.1 AUDIO VOICES

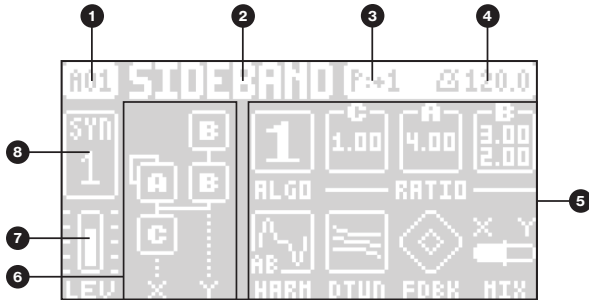


#### 3.2 EFFECTS



## 4. THE USER INTERFACE

The screen shows all the information needed for real-time interaction and editing on the Digitone. The eight **DATA ENTRY** knob parameters shown varies depending on which parameter page you have selected. Below is the main interface screen of the SYN1 page.



1. Bank and pattern.
2. Pattern name.
3. Pattern/Track transpose.
4. Tempo.
5. Eight track parameters. They show what parameters the **DATA ENTRY** knobs control and the current parameter values.
6. FM algorithm (Displayed on the SYN1 and SYN2 pages).
7. Track volume level. Use the **LEVEL/DATA** knob to change the level.
8. Track number and track type. Synth (SYN) track or MIDI (MID) track.

### 4.1 SCREEN NAVIGATION

Use the [ARROW] keys [UP], [DOWN], [LEFT] or [RIGHT] to navigate menus or sub-menus. The **LEVEL/DATA** knob is used to scroll through menus and lists quickly.

[YES] is used to affirm, select, enter sub-menus and tick/untick boxes.

[NO] is used to negate, deselect or go back one or more steps.

## 4.2 PARAMETER EDITING

The *DATA ENTRY* knobs are used to change the values of the track parameters. The positions of the parameters on the screen correspond to the physical locations of the knobs on the front panel.

- The parameters are adjusted in larger increments if you press down the *DATA ENTRY* knob while turning it. This function makes it quicker to sweep through the whole parameter range.
- Press *DATA ENTRY* knob + [NO] to reset the parameter to the default value.
- Press [PARAMETER] + [FUNC] + [PLAY] to reset all the parameters on the selected parameter page to default values.
- Press and hold a [PARAMETER] key to see the exact values of the parameters.

## 4.3 PARAMETER VALUE JUMP

Pressing [FUNC] while editing certain parameters makes the parameter values jump to appropriate positions. The time of the Delay, for example, doubles and halves the value.

## 4.4 [FUNC] KEY PRESS COMBINATIONS

The standard way to use the [FUNC] key in combination with other keys, is to press and hold [FUNC] and then press the second key in the combination. For some key combinations, it is also possible to access a sub-menu by pressing and holding [FUNC] + second key for a second.

## 4.5 QUICK SCROLLING

Scroll through menus using the *LEVEL/DATA* knob. Quick scrolling is possible on many menus. Press [FUNC] + the [UP] or [DOWN] keys to move the cursor one menu page.

## 4.6 COPY, CLEAR AND PASTE

Copy, clear and paste commands are available in many contexts. Pressing [FUNC] + [REC] to copy. Press [FUNC] + [STOP] to paste. Press [FUNC] + [PLAY] to clear. Repeat the key press combination to undo the paste and clear operations. See the different sections in the Digitone User Manual for more information on when these commands are available.

## 4.7 THE NAMING SCREEN

The naming method is identical for the various naming situations that appear when you save sounds, projects et cetera.



The [LEFT] and [RIGHT] arrow keys are used to navigate between the characters. Turning the *LEVEL/DATA* knob or pressing the [UP] or [DOWN] arrow keys selects the characters. [FUNC] + [NO] erases letters. Press and hold [FUNC] to access the pop-up naming menu.

## 4.8 OVERBRIDGE

The Overbridge software suite enables a tight integration between the Digitone and a computer DAW software.

When using Overbridge, the user interface for the Digitone presents itself as a plug-in window in your DAW. Access, edit and automate parameters for sound shaping on screen.

Always find your device preset parameters in the same state as you left them when you return to your DAW project, with the useful total recall functionality.

Read more about Overbridge use and availability on the Elektron website: <https://www.elektron.se/overbridge/>

## 5. EXPERIMENTING WITH PATTERNS

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### 5.1 PLAYING THE FACTORY PRESET PATTERNS

You can find a number of preset patterns and Sounds in the Digitone. Follow the instructions below to get started exploring your new instrument.

1. Press **[BANK]** and then press **[TRIG 9]** key to select bank A. The screen reads "BANK A : SELECT PTN".
2. Press **[TRIG 1]** key to select the first pattern of bank A.
3. Press **[PLAY]** to listen to pattern A01.
4. Press **[PTN]** and then press **[TRIG 2]** key to select pattern A02. It starts once pattern A01 has reached its end. Select pattern A03 by pressing **[PTN]** and then press **[TRIG 3]** key, and so on.
5. Press **[STOP]** to stop playback.

### 5.2 USING THE TRIG KEYS TO PLAY THE DIGITONE

You can use the **[TRIG]** keys to play any synth track manually.

1. Make sure you are not in GRID RECORDING mode.
2. Press **[TRACK 1–4]** keys to select the synth track you wish to play manually. The **[TRIG]** keys are lit up in a pattern that resembles an octave of a piano keyboard layout. Only lit keys are playable.
3. Play the **[TRIG]** keys. The active track Sound is pitched differently for each of the playable keys. Press the **[ARROW]** keys **[UP]** or **[DOWN]**, to transpose the virtual keyboard up or down one octave.

### 5.3 USING MUTE MODE

You can mute/unmute any of the sequencer tracks in this mode. You can mute/unmute all tracks simultaneously.

1. Make sure a pattern is playing.
2. Press **[FUNC] + [BANK]** to enter MUTE mode.
3. Press any of the **[TRACK]** keys to mute the corresponding track. Press again to unmute. The color of the **[TRACK]** keys indicates the mute status. Unlit keys are muted tracks. Green keys are active tracks.

### 5.4 TEMPO

To change the BPM setting, press the **[TEMPO]** key to open the TEMPO menu. Use the **LEVEL/DATA** knob to change tempo. Pressing the knob while turning it changes the tempo four BPM at a time. The **[ARROW]** keys **[UP]** or **[DOWN]** change the tempo in fractional steps. Note that you can set both a tempo and a separate tempo for every pattern. On the main interface screen, press and hold **[ARROW]** keys **[LEFT]** or **[RIGHT]** to nudge the tempo 10% up or down temporarily. Release the key to revert back to the original tempo.



## 6. ABOUT THE TRACKS

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### 6.1 THE SYNTH TRACKS

The Digitone has four synth tracks. Each synth track holds one Sound. The Sound contains the settings in the **PARAMETER** pages (SYN1, SYN2, FLTR, AMP, and LFO) together with the settings in the **SOUND SETTINGS** menu and the **ARPEGGIATOR** menu.

To select a synth track to edit, press one of the **[TRACK 1–4]** keys.

### 6.2 THE MIDI TRACKS

The Digitone also has four dedicated MIDI tracks. The MIDI tracks are used to control external MIDI-equipped gear. Each MIDI track can trigger a chord of up to 8 notes with adjustable parameters such as velocity and length, control pitch bend and aftertouch as well as 8 freely assignable MIDI control change parameters (MIDI CCs). The MIDI tracks function almost the same way as the synth tracks, with features such as parameter locks, LFO modulation, micro timing, trig conditions, individual track length and time signature settings.

To select a MIDI track to edit, press and hold **[MIDI]** key and then press one of the **[TRACK 1–4]** keys.

### 6.3 EDITING THE TRACKS

The six **[PARAMETER]** keys open parameter pages that you use to edit the tracks and Sounds. The **TRIG**, **SYN2**, **FLTR**, **AMP**, and **LFO** parameter groups has two pages To access page one, press the **[PARAMETER]** key once. To access page two, press the **[PARAMETER]** key twice. The **TRIG** pages contains different parameters such as **NOTE**, **VELOCITY**, and other trig related parameters. The parameters on the **SYN1** and **SYN2** pages controls various aspects of the FM synthesis. For MIDI tracks the **SYN1** page has parameters such as **CHANNEL**, **PROGRAM**, and **AFTERTOUCH**. On the **FLTR** page, you find parameters for the multimode and base-width filters and the filter envelope for the synth tracks. For MIDI tracks you find the **CC** value settings here. The **AMP** page for synth tracks hosts parameters for the amplitude envelope and effect sends. For MIDI tracks you find the **CC** select settings here. Finally, the **LFO** page hosts the **LFO** parameters for the active track. Use the **DATA ENTRY** knobs **A-H** to edit the corresponding parameters.

## 7. THE SEQUENCER

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The Digitone's sequencer stores its information in patterns. A pattern controls the playback of the synth tracks and the MIDI tracks by the trigs entered on the sequencer.

### 7.1 SELECTING A PATTERN

1. Press **[BANK]** + **[TRIG 9–16]** key to select bank A–H.
2. Press **[TRIG 1–16]** key to select pattern 1–16. (Press **[PTN]** + **[TRIG 1–16]** if you want to change pattern without changing bank.)

White **[TRIG]** keys indicate pattern positions that contain data. A red **[TRIG]** key indicates the current active pattern. Empty patterns **[TRIG]** keys are unlit.

### 7.2 PATTERN CONTROL

Press **[PLAY]** to start the pattern playback. Press **[PLAY]** again to pause. Press **[STOP]** to stop the playback. The audio is cut off, but effects like the delay continues until the delay repeats fades out. Quickly press **[STOP]** twice to stop playback of all tracks and the fade out of the send effects.

If you change patterns during playback, the patterns changes after the current playing pattern reaches its end.

### 7.3 TRIGS AND TRIG TYPES

A trig is a sequencer event that you can place where you want the sequencer to perform an action on the Digitone. There are two types of trigs available in both recording modes: Note trigs and Lock trigs.

- **Note trigs** trigger notes on synth tracks and MIDI tracks.
- **Lock trigs** trigger parameter locks, but without triggering notes.

### 7.4 PATTERN RECORDING MODES

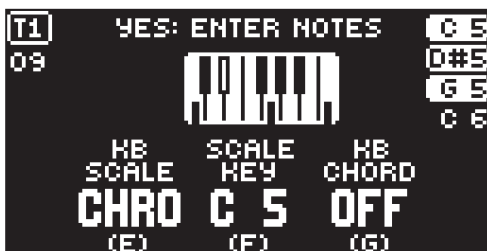
The Digitone offers two main modes of inputting trigs when you create a pattern: GRID RECORDING mode and LIVE RECORDING mode. To create a new pattern first select an empty pattern slot in one of the banks.


## 7.5 GRID RECORDING MODE

GRID RECORDING is a method of composing where you use the [TRIG] keys to add trigs in the pattern grid.

1. Press [TRACK 1-4] to select the track to which you want to add trigs. A green [TRACK] key light indicates the active track.
2. Press [RECORD] to enter GRID RECORDING mode. The [RECORD] key lights up red to indicate that GRID RECORDING mode is active.
3. Use the [TRIG] keys to place note trigs on the sequencer. The trigs note value is the value specified by the **NOTE** parameter in the TRIG PARAMETERS page. To add a lock trig, press [FUNCTION] and [TRIG]. You can enter lock trigs on any sequencer step, including ones that contain note trigs. Press the [TRIG] key of any of the previously entered trigs if you wish to remove the trig. Press a [TRIG] key of a trig and hold it slightly longer to prepare the trig for editing, rather than removing it.
4. Select another track, and add note trigs and lock trigs. Repeat the procedure for all the tracks you want to use.
5. Press [PLAY] to listen to the sequence.

There is an alternative way to enter note trigs in GRID RECORDING mode that gives you more control over what note values you want to have on a sequencer step.



1. Press **[TRACK 1–4]** to select the track to which you want to add note trigs and additional notes. A green **[TRACK]** key light indicates the active track.
2. Press **[RECORD]** to enter GRID RECORDING mode. The **[RECORD]** key lights up red to indicate that GRID RECORDING mode is active.
3. Press the **[TRIG]** key to where you want to add or remove notes + **[TRACK NOTE]** . A graphic keyboard appears on the screen where you can see all the notes on the chosen sequencer step. A highlighted key on the screen keyboard indicates the notes added to the trig.
4. Press the **[TRIG]** keys to add notes with the corresponding note value. Press the **[TRIG]** key of a previously entered note if you wish to remove that note.
5. Press **[YES]** to enter the changes and then exit. Press **[NO]** if you wish to exit without making any changes.

Press **[RECORD]** to exit GRID RECORDING mode.

## 7.7 LIVE RECORDING MODE

LIVE RECORDING mode is the second method of adding trigs to the tracks. In this recording mode, all the **[TRIG]** keys are played in real time to input trigs to the tracks. You can also turn the **DATA ENTRY** knobs to enter lock trigs with parameter locks in real time.

1. Press and hold **[RECORD]**, then press **[PLAY]** to enter LIVE RECORDING mode. If you quickly press **[PLAY]** twice while keeping the **[RECORD]** key pressed, you activate/deactivate the quantization of LIVE RECORDING. The sequencer starts to play, and the **[RECORD]** key starts to flash red.
2. Press the **[TRIG]** keys and turn the **DATA ENTRY** knobs to enter trigs in real time. The **[TRIG]** key pressed determines the pitch value of the note trig.
3. Press **[PLAY]** to exit LIVE RECORDING mode while keeping the sequencer playing. GRID RECORDING mode is activated if you press **[RECORD]** while LIVE RECORDING mode is active.
4. Press **[STOP]** to stop both recording and playback of the sequencer.

## 7.8 PARAMETER LOCKS

Parameter locks enable all trigs to have their unique parameter values. The note trigs of a synth track can, for example, have different pitch, velocity or length settings. It is possible to parameter lock all parameters found on the **PARAMETER** pages, and you can apply parameter locks on both synth and MIDI tracks.

In **GRID RECORDING** mode, press **[FUNC] + [TRIG]** to add a lock trig. On a lock trig, you can add parameter changes without triggering a note. A yellow **[TRIG]** key indicates that it has a lock trig. Then press and hold the **[TRIG]** key of a trig and use the **DATA ENTRY** knobs adjust the parameters to which you want to add parameter locks. The graphics on the screen becomes inverted for the locked parameter and shows the locked parameter value. The **[TRIG]** key of the locked trig begins to flash, to indicate that the trig now contains a parameter lock.

Press and hold **[TRIG]** and then press the **DATA ENTRY** knob of the locked parameter to remove a single parameter lock. All parameter locks are erased from the trig if you remove a note trig and then enter it again.

In **LIVE RECORDING** mode, turn the **DATA ENTRY** knobs, or play the **[TRIG]** keys to add parameter locks to the active track. Note trigs are placed, and parameter locked accordingly, and it also places lock trigs that contain the parameter locks on the sequencer steps that do not already have any trigs.

## 7.9 PATTERN SCALE

You can change the length and timing of the pattern.

1. Press **[FUNC] + [PAGE]** to access the scale menu.
2. Use the **DATA ENTRY** knobs to change the settings.

The left figure under **LENGTH** shows the number of steps in the pattern. The total length, shown on the right, determines the maximum number of steps. The figure under **SCALE** displays the time signature of the pattern. If you use 17 steps or more in a pattern, the **[PAGE]** key can toggle between the different pattern pages when in **GRID RECORDING** mode.

## 7.10 PATTERN SWING

Adjust the swing setting of the pattern, to employ a propulsive, rhythmic groove.

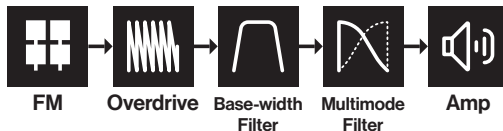
1. Press **[TEMPO]** to access the tempo/swing menu.
2. Turn **DATA ENTRY** knob **E** to set the **SWING** ratio from 50% to 80%. The default setting is equal spacing, 50%.

## 8. THE DIGITONE FM SYNTHESIS

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### 8.1 OVERVIEW

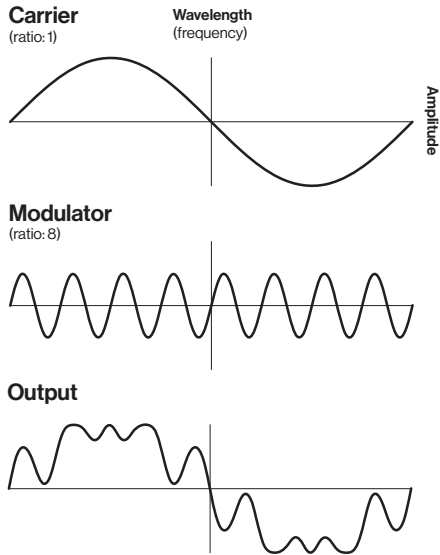
At its core, the Digitone is a standard four operator FM synth in the style of the classic 80s implementations. However, unlike the early FM synths, the Digitone use its FM engine more like a complex tone generator than a complete synthesizer voice (although it does have this capability too). The Digitone signal path is much more similar to a typical subtractive synth rather than a classic FM voice.



The idea of this design is to harness the raw, and sometimes complex, soundscapes of FM synthesis and use a more well-known and approachable subtractive method for the overall sound shaping.

### 8.2 THE OPERATORS

In FM synthesis an operator basically functions as an oscillator. The difference is that an operator contains an envelope and specific input and outputs, making it a sort of macro oscillator. FM combines two or more operators to generate a more harmonically rich output. An operator that is used to modulate another operator is called a modulator. The operator that generates the resulting tone is called a carrier.

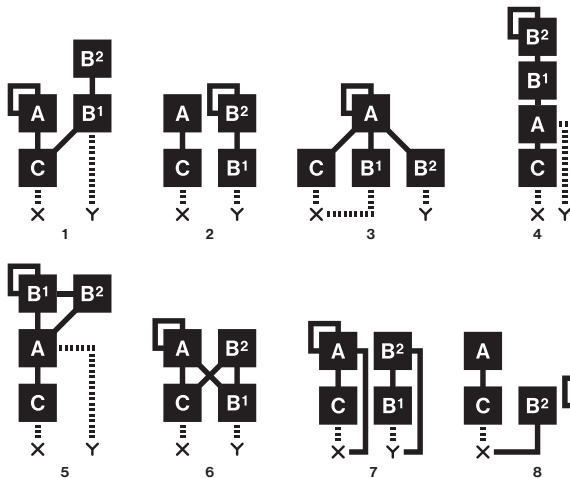


In some instances, an operator can be both carrier and modulator. This means that it outputs its result as a tone while also using it to modulate another operator. We have divided the operators into three groups: **C**, **A** and **B** (B1 and B2) to lessen the complexity and make the Digitone easier to use. Since group **B** consist of two operators, the parameter controls for **B** are macro mapped to both operators.

### 8.3 ALGORITHMS

An algorithm is a set structure of how the four operators are connected to each other. Every algorithm gives different sound shaping and modulation possibilities. The Digitone has eight different algorithms. Each algorithm has two carrier outputs (X and Y) that come from two different operators depending on what algorithm you chose. It is possible to use

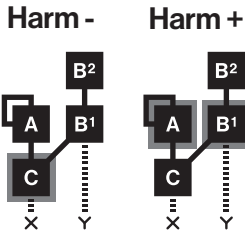
the **MIX** parameter to mix between these outputs so that you can cross-fade between two separate timbres.



The lines going to X and Y indicate the output from a carrier. The sound from these outputs is then routed via the overdrive to the filters.

## 8.4 HARMONICS

The default output from an operator is a sine wave, but you can use the **HARM** parameter to add upper partials to some of the operators sine waves to create more harmonically rich waveforms. The **HARM** parameter is bipolar. Negative parameter values change the harmonics of operator C, while positive parameter values change the harmonics of operators A and B1.



## 8.5 FM RATIOS

Each operator group's ratio is a multiplier of the input pitch (note value). The higher the ratio, the higher the pitch frequency.

**C** which always works like a carrier is limited mostly to integers since it is generally used for carrying the base note of the sound.

**A** has a more extensive number of ratio values to allow for more inharmonic relationships.

**B** (**B1** and **B2**) controls both operators at the same time. The minimum value for **B1** and **B2** is .25. As you turn the encoder, **B2** increases until it reaches the max (16). It then starts over from .25 and **B1** increases to the next value (0.5). This revolving behavior continues until both operators reach the maximum value. This parameter behavior is similar to the movement of the hands on a watch.

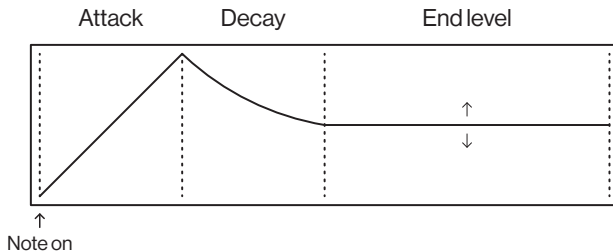
## 8.6 THE OPERATOR ENVELOPES

The FM engine has two operator envelopes designed for more comfortable FM synthesis. One is for operator group **A**, and one is for group **B** (**B1** and **B2**).

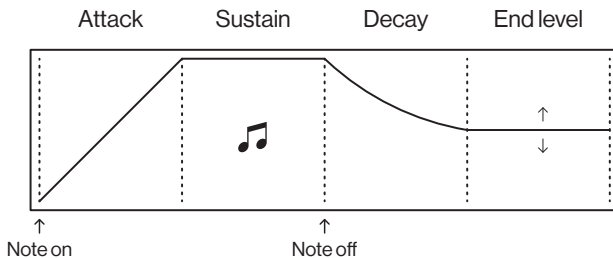
The envelopes are essentially expanded AD (Attack Decay) envelopes, but with an added adjustable end level (the amplitude level the sound reaches at the end of the decay stage). Normally, an AD envelope always ends at zero level, but with FM you often want to retain some modulation after a short pluck or fade in for example. The amplifier envelope at the end of the signal path then shapes the overall amplitude of the Sound.

The envelopes can be either triggered or gated - making it either an ADE (Attack Decay End) or an ASDE (Attack Sustain Decay End) envelope. The sustain phase does not have an adjustable envelope level. It is instead the **LEV** parameter that sets the sustain level. The note length defines the length of the sustain phase.

### Triggered (ATRГ/BTRG ON)



### Gated (ATRГ/BTRG OFF)



## 9. TECHNICAL INFORMATION

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### ELECTRICAL SPECIFICATIONS

#### Impedance balanced audio outputs

Main outputs level: +22 dBu

Output impedance: 440  $\Omega$  unbalanced

Digital-to-analog S/N ratio: 108 dB  
(20–20,000 Hz)

#### Headphones output

Headphones out level: +22 dBu

Output impedance: 55  $\Omega$

#### Audio inputs

Input level: +19 dBu

Audio input impedance: 11 k $\Omega$

Analog-to-digital S/N ratio: 112 dB  
(20–20,000 Hz)

Unit power consumption: 7 W typical

Compatible Elektron power supply: PSU-3b

### HARDWARE

128  $\times$  64 pixel OLED screen

MIDI In/Out/Thru with DIN Sync out

2  $\times$  1/4" impedance balanced audio out  
jacks

2  $\times$  1/4" audio in jacks

1  $\times$  1/4" stereo headphone jack

48 kHz, 24-bit D/A and A/D converters

Electrically isolated Hi-Speed USB 2.0 port

Power inlet: Center positive 5.5  $\times$  2.5 mm  
barrel jack, 12 V DC, 1 A

### PHYSICAL SPECIFICATIONS

Sturdy steel casing

Dimensions: W 215  $\times$  D 176  $\times$  H 63 mm

(8.5"  $\times$  6.9"  $\times$  2.5") (including knobs and feet)

Weight: approximately 1.49 kg (3.3 lbs)

100  $\times$  100 mm VESA mounting holes. Use

M4 screws with a max length of 7 mm.

Maximum recommended ambient operating  
temperature: +40°C (+104°F)

## 10. CREDITS AND CONTACT INFORMATION

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### CREDITS

#### PRODUCT DESIGN AND DEVELOPMENT

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