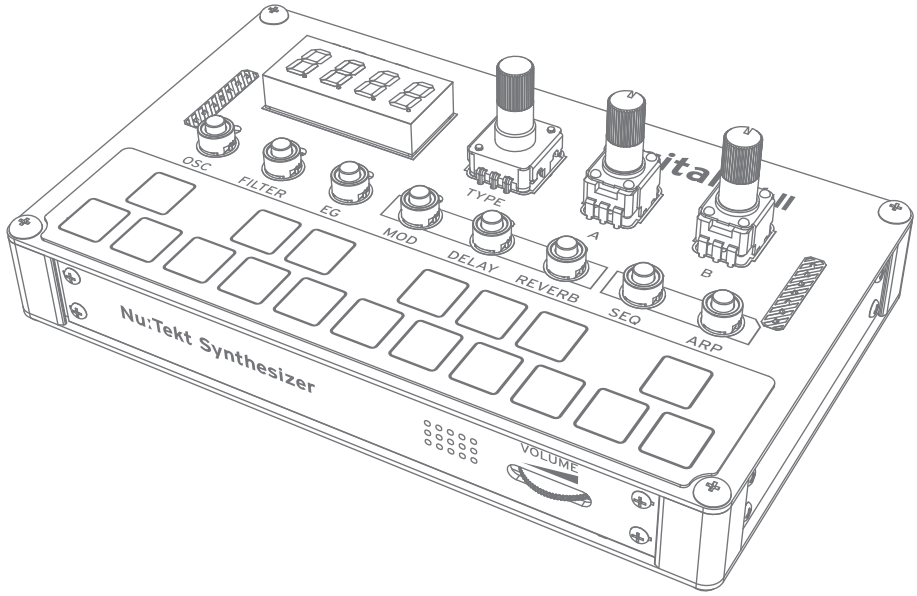
Nu:Tekt

NTS-1 digital kit mkII

PROGRAMMABLE SYNTHESIZER KIT

Owner's Manual



*Before using the NTS-1 digital kit mkII, please read the Assembly Instructions (PDF) carefully to ensure proper use.

Supplementary contents

PDF Assembly Instructions

MOVIE NTS-1 digital kit mkII video manual

APP NTS-1 digital kit mkII software

APP logue SDK Custom Content Sound Librarian

Prod. Product website

HELP Frequently asked questions

Published 04/2024

Table of contents

Introduction

Thank you for purchasing the Nu:Tekt programmable synthesizer kit, the NTS-1 digital kit mkII.

The NTS-1 digital kit mkII is a DIY synthesizer kit that's easy to assemble. This kit features a digital oscillator inherited from the prologue and minilogue xd, an analog modeling filter, envelope generator and digital effects (modulation, reverb and delay). With the logue SDK, you can load your own oscillators and effects or those designed by a third party.

To take full advantage of this device's functionality and ensure years of trouble-free operation, please read this Owner's Manual carefully before use.

→ Conventions in this manual

→ Main features

Conventions in this manual

- The shape and displays shown by illustrations in this manual may differ in some ways from the actual product.
- The parameter values shown in the example screens of this manual are only for explanatory purposes, and may not necessarily match the values that appear in the display of your instrument.
- Symbols used in this manual:

⚠	Indicates an explanation you should heed to ensure that you can correctly utilize the capabilities or functionality of this unit.
Note	Indicates an explanation that requires your attention.
Tip	Indicates supplementary information that is useful to know.

Main features

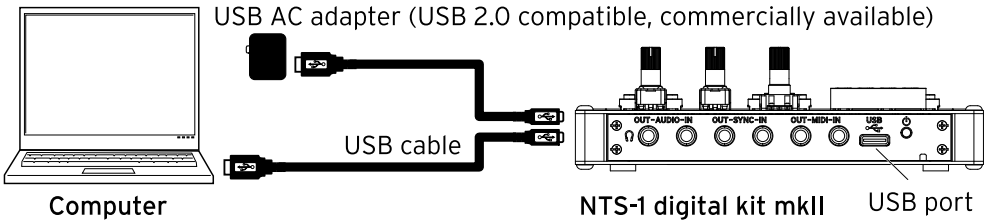
- The NTS-1 digital kit mkII is a DIY synthesizer kit that's easy to assemble.
- This kit features a digital oscillator inherited from the prologue and minilogue xd, an analog modeling filter, envelope generator and digital effects (modulation, reverb and delay).
- With the logue SDK, you can load your own oscillators and effects or those designed by a third party.
- In addition to the features of the first-generation NTS-1, this unit features a variety of new functions like new oscillator types, oscillator modulation and effect types. The unit also now has an auto-save function and a power button, among other features that make it even more fun and easier to use.
- The NTS-1 digital kit mkII is equipped with a new step recording sequencer.
- In addition to the MIDI IN jack on the original NTS-1, this new product features a MIDI OUT jack, which lets you control an external MIDI tone generator from the keyboard, arpeggiator or sequencer of this instrument. The keyboard supports multi-touch, from which you can play chords on your external MIDI tone generator.

Connecting and getting ready to play

Connecting and turning the power on/off

⚠ Before connecting external devices to this instrument, make sure that all devices are turned off. If you connect these devices while they are still on, this may cause your powered monitor speakers or other external devices to malfunction, or cause damage.

Making connections and turning on the power



1. Use the included USB cable to connect this unit to the USB port on your computer or to a commercially available USB standards-compliant AC adapter (at least 5 V DC 550 mA).
2. Press the power button on the rear panel. The unit turns on and enters play mode.

⚠ Make sure to use the included USB cable.

⚠ Use a cable that's no more than 3 m long when connecting your peripherals to this unit.

⚠ Make sure to use an AC adapter that's compliant with USB 2.0 standards. Note that some standards-compliant USB AC adapters might not operate correctly.

Turning off the power

1. Press the power button on the rear panel. This turns off the power.
2. Disconnect the USB cable from this unit.

Auto power-off function

The NTS-1 digital kit mkII has an auto power-off function that automatically turns the unit off after three hours have elapsed without the knobs, buttons or other controls being operated. The auto power-off function is enabled by factory default.

To disable the auto power-off function, set the Auto Power Off global parameter to "Off". → Global parameters

MIDI connectivity

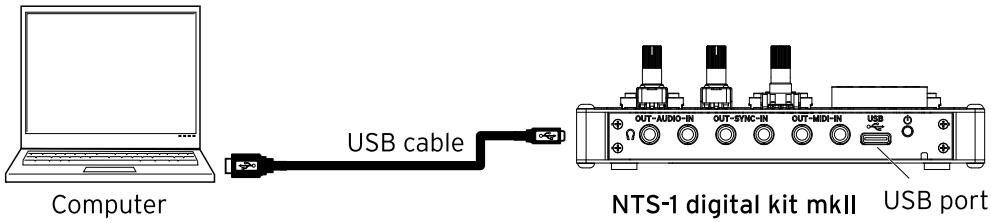
The device kit uses either the USB port or the MIDI IN/OUT jacks to send and receive MIDI signals.

Connect the USB port of the NTS-1 digital kit mkII to your computer to exchange data with KORG Kontrol Editor, transmit and receive note messages and more.

The MIDI IN/OUT jacks of the NTS-1 digital kit mkII can transmit and receive notes and other messages from external MIDI devices and other sources.

For details on MIDI data that can be transmitted and received, see the MIDI implementation chart.
→ MIDI implementation chart

Using MIDI data via the USB port



1 Connect the USB Type-C port on the NTS-1 digital kit mkII to the USB A port on your computer with the included USB cable.

KORG USB-MIDI driver

The USB-MIDI driver that's pre-installed on Windows does not allow the NTS-1 digital kit mkII to be accessed from multiple applications at the same time. If you want to use the NTS-1 digital kit mkII with multiple applications simultaneously, you must install the Korg USB-MIDI driver.

Even if you are not using this unit with multiple applications, we recommend installing the KORG USB-MIDI driver, as it may offer improved operating stability.

Download the driver from the Korg website, and install the driver by following the accompanying documentation.

Note: See the Korg website for the latest information on OS support.

https://www.korg.com/support/os/

Note: When you first connect the NTS-1 digital kit mkII to your computer, the USB-MIDI driver included with the operating system is installed automatically.

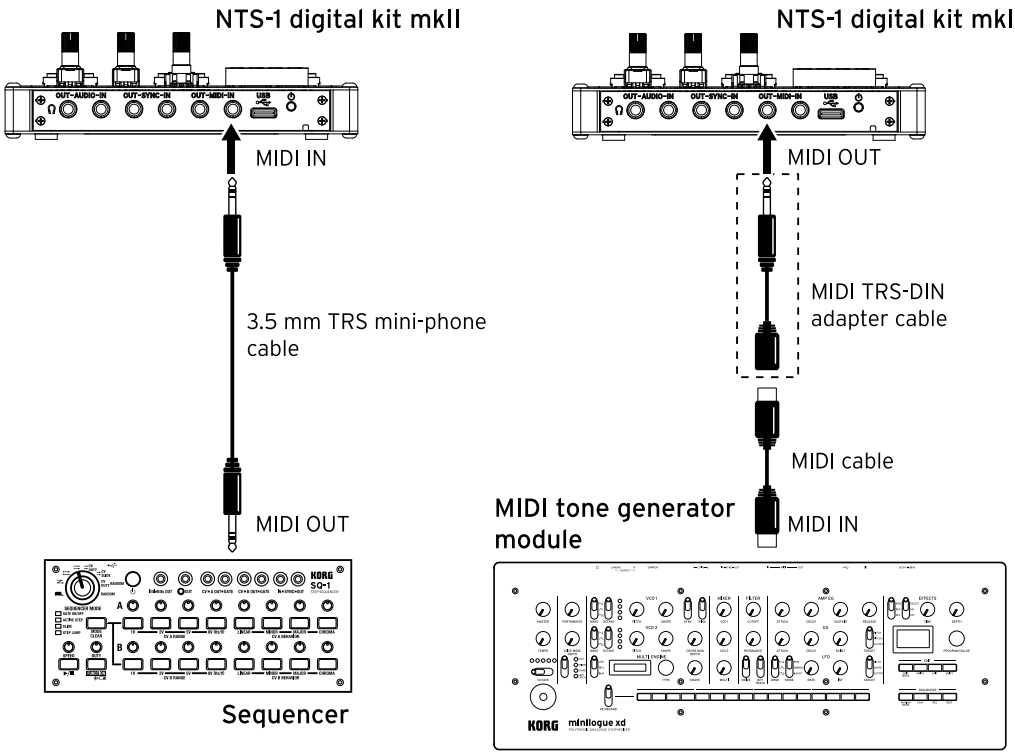
Using MIDI data via the MIDI jacks

Connect the MIDI IN jack of the NTS-1 digital kit mkII (3.5 mm TRS mini phone jack) to the MIDI OUT jack of your external device, and connect the MIDI OUT jack (3.5 mm TRS mini phone jack) of the NTS-1 digital kit mkII to the MIDI IN jack of your external device.

When connecting to the MIDI jack (3.5 mm TRS mini phone jack) of an external device, use a commercially available 3.5 mm TRS mini phone cable.

When connecting to a MIDI connector (5-pin DIN) on an external device, use a commercially available MIDI TRS-DIN adapter cable (3.5 mm TRS mini phone to 5-pin DIN female) and MIDI cable (5-pin DIN). You can also use a MIDI TRS-DIN cable (3.5 mm TRS mini phone to 5-pin DIN male).

⚠ Be sure to use only a TRS MIDI A cable for TRS to 5-pin DIN conversion. TRS MIDI B cables cannot be used.



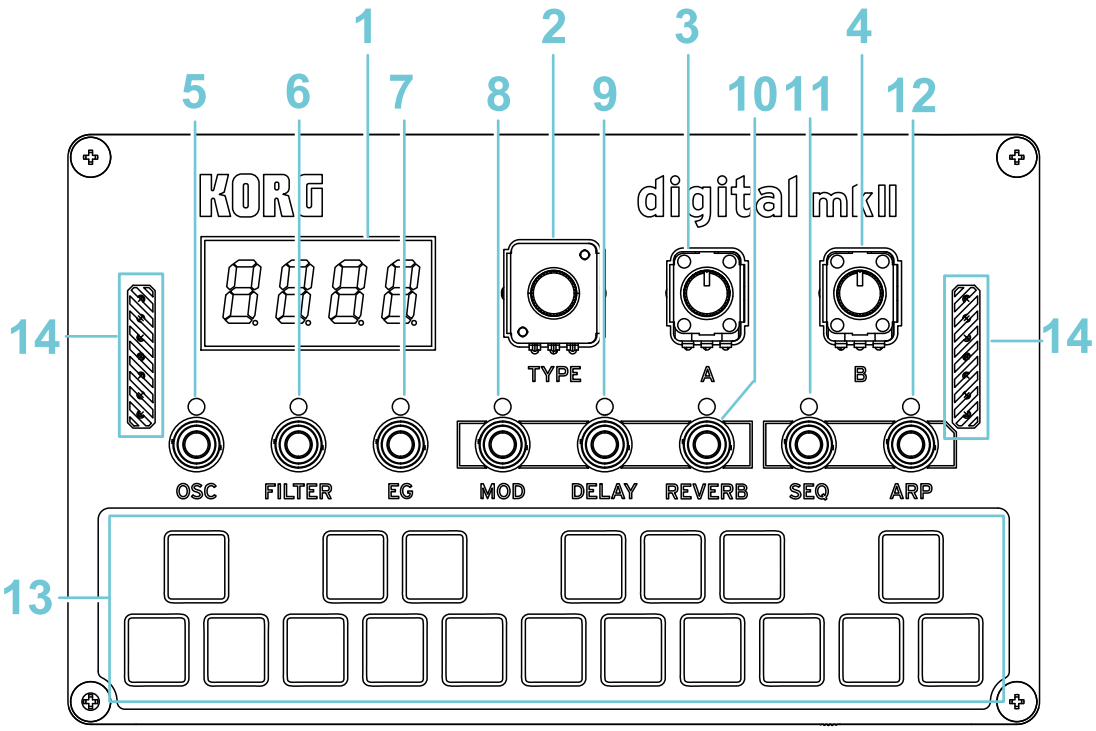
Configuring the MIDI settings on the NTS-1 digital kit mkII

Configure the MIDI settings of the NTS-1 digital kit mkII in the global parameters.
→ Global parameters

Part names and functions

Features

Top panel



1 Display
When you operate a knob or press a button, the parameter name and value will appear in the display.

2 TYPE knob
Different functions are assigned to this control depending on the buttons that are switched on, including the MODE button (OSC, FILTER, EG), the FX button (MOD, DELAY, REVERB), the SEQ button and the ARP button. See the explanations for the respective buttons for details.
→ Editing the sounds

3 A knob
Different functions are assigned to this control depending on the buttons that are switched on, including the MODE button (OSC, FILTER, EG), the FX button (MOD, DELAY, REVERB), the SEQ button and the ARP button. See the explanations for the respective buttons for details.
→ Editing the sounds

4 B knob
Different functions are assigned to this control depending on the buttons that are switched on, including the MODE button (OSC, FILTER, EG), the FX button (MOD, DELAY, REVERB), the SEQ button and the ARP button. See the explanations for the respective buttons for details.
→ Editing the sounds

MODE button → Editing the sounds

5 OSC button → OSC

6 FILTER button → FILTER

7 EG button → EG

EFFECT button → Editing the effects

8 MOD button → MOD

9 DELAY button → DELAY

10 REVERB button → REVERB

Other buttons

11 SEQ button → Using the sequencer

12 ARP button → Using the arpeggiator

13 Keyboard

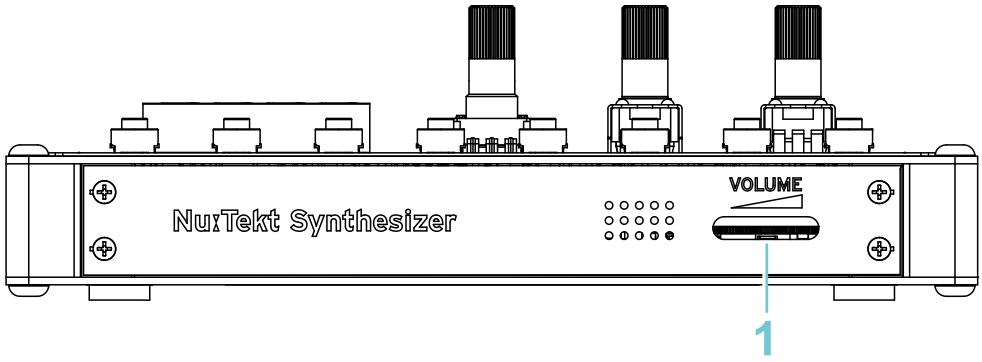
Use your fingers to play notes on the keyboard.

Slide on the keyboard while holding down the OSC button to change the keyboard octave setting. You can set the octave from "oct.0" on the left side of the keyboard and to "oct.05" on the right side of the keyboard, for a total of six possible settings.

When you play the keyboard while the sequencer is playing, you can transpose the pitch of the sequencer. → Basic operations

14 ⚠ Use caution, as the unit may short out and malfunction if these parts come into contact with metal objects.

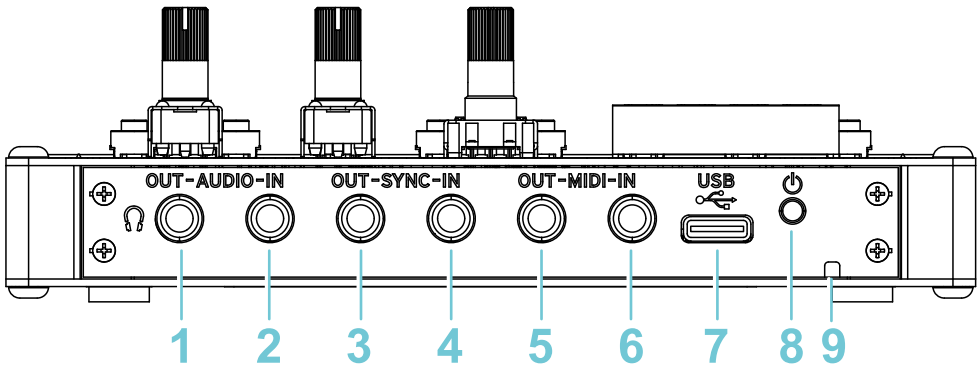
Front panel



1 VOLUME

Adjusts the output volume of signal from the 🎧 (Headphones jack)/AUDIO OUT jack.

Rear panel



1 🎧(Headphones jack)/AUDIO OUT jack

Connect a speaker or a pair of headphones (stereo mini plug) here. No sound is heard from the built-in speaker when a device is connected to this jack.

2 AUDIO IN jack

Connect an audio player or other external sound generator to this jack. Adjust the playback volume on the connected device. The input gain and routing can be set in the global parameters. → Global parameters

OUT-SYNC-IN (SYNC OUT, SYNC IN)

Connect the NTS-1 digital kit mkII to a device such as the volca series or an SQ-64 using a sync cable, which synchronizes both devices. Configure the polarity settings in the global parameters. → Global parameters

3 **SYNC OUT jack**
A 15 ms pulse at 3.3 V is output at the beginning of each step.

4 **SYNC IN jack**
When you start the connected external device first and then start the arpeggiator or sequencer on the NTS-1 digital kit mkII, these features are synchronized to the external sequencer.

5 **MIDI OUT jack**
This jack lets you control an external MIDI tone generator from the keyboard, arpeggiator, sequencer or knobs of this unit. The multi-touch keyboard lets you play chords on your external MIDI tone generator. → MIDI implementation chart

6 **MIDI IN jack**
Connect this jack to an external MIDI device to control the sound generator of the NTS-1 digital kit mkII (see the Nu:Tekt website for details). → MIDI implementation chart

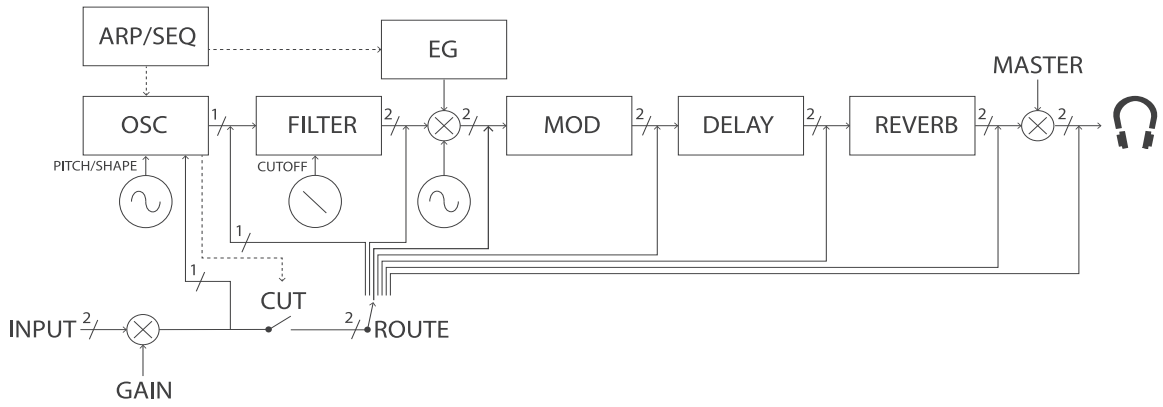
7 **USB Type-C port**
Use the included USB cable to connect this unit to your computer or to a commercially available USB standards-compliant AC adapter.

8 **Power button**
Turns the power of the NTS-1 digital kit mkII on/off.

9 **Anti-theft lock ( )**

Tip: Connect a commercially available security wire to the anti-theft lock.
http://www.kensington.com/

Block diagram



Parameter edit

Editing the sounds

This section explains how to edit the sounds of the NTS-1 digital kit mkII.

Basic operations

1. Select the editing mode by pressing the corresponding OSC, FILTER or EG MODE button.
2. To make the various settings, turn the TYPE, A and B knobs, or turn the A or B knob while holding down the MODE button.

OSC

TYPE knob: Off (oFF), sawtooth wave (SAW), triangle wave (tr I), square wave (SQr), VPM (UPM), noise (no ISE), User OSC (USER)*

Select the oscillator waveform.

* User OSC: The factory default setting is "waves" (USER). See the Nu:Tekt website (www.nutekt.org) for more on the User OSC.

• Common operations for all oscillator waveforms

You can adjust the speed and depth of the LFO (LFO) that modulates the oscillator waveform by pressing the OSC button.

OSC button + A knob: F 0.0–F30.0

Adjusts the LFO frequency speed.

OSC button + B knob: P100–P 1, 0, S 1–S100

Adjusts the depth of modulation that's applied to the Pitch or Shape.

• When sawtooth wave (SAW), triangle wave (tr I) or square wave (SQr) are selected

Sawtooth wave: This is a waveform used for uniquely analog synthesizer sounds, such as synth bass.

Triangle wave: A waveform with a rounder feel than the sawtooth or square wave.

Square wave: A waveform that's suitable for electronic sounds or simulating wind instruments.

A knob: Shape (SHPE)

Sets how well-formed the oscillator's waveform is.

B knob: Sub (Sub)

Sets the volume of the sub-oscillator.

OSC button + TYPE knob: In Mode (In ModE), In Level (In LVL)

Selects how the Audio INPUT is used as a modulation source for the oscillator, and its level.

Note: The OSC button's LED blinks during editing. To exit this state, press the OSC button again.

When In Mode (In ModE) is selected

B knob: OFF (oFF), FM (FM), AM (AM), RING (r InG)
Selects the algorithm used by the Audio INPUT to modulate the oscillator (off: do not apply modulation; FM: apply FM modulation; AM: apply AM modulation; ring: apply ring modulation).

When In Level (In LUL) is selected

B knob: 0.0–100.0
Sets the input level for Audio INPUT.

• When VPM (UPN) is selected

This is a VPM (Variable Phase Modulation) oscillator. Although the oscillator features a simple structure (a carrier and a modulator), you can use this to create a variety of sounds.

A knob: Mod (Mod)

Adjusts the index to set the intensity of the modulator.

B knob: Ratio (rt Io)

Adjusts the modulator ratio to add more harmonics.

OSC button + TYPE knob: In Mode (In ModE), In Target (In tGt), In Level (In LUL)

Selects how the Audio INPUT is used as a modulation source for the oscillator, and its level.

Note: The OSC button's LED blinks during editing. To exit this state, press the OSC button again.

When In Mode (In ModE) is selected

B knob: OFF (oFF), FM (FM), AM (AM), RING (r InG)
Selects the algorithm used by the Audio INPUT to modulate the oscillator (off: do not apply modulation; FM: apply FM modulation; AM: apply AM modulation; ring: apply ring modulation).

When In Target (In tGt) is selected

B knob: Car (CAr), Mod (Mod)
Selects the target for applying modulation (car: modulation is applied to the carrier of the VPM oscillator; mod: modulation is applied to the modulator of the VPM oscillator).

When In Level (In LUL) is selected

B knob: 0.0–100.0
Sets the input level for Audio INPUT.

• When noise (noISE) is selected

Noise is used to create percussion instrument sounds, or sound effects such as surf.

A knob: WdtH (WdtH)

Adjusts the peak characteristic frequency band of the peak filter.

B knob: Peak (PEAK)

Adjusts how much the peak filter is applied.

• When User OSC (USERS)* is selected

A knob: Factory default setting is "Shape" (SHPE)

The parameters differ for each User OSC. Shape sets how well-formed the oscillator's waveform is by factory default.

B knob: Factory default setting is "Sub" (Sub)

The parameters differ for each User OSC. Sub sets the volume of the sub-oscillator by factory default.

OSC button + TYPE knob: factory default settings are WAVE A(USAE A), WAVE B(USAE b), Sub

WAVE(SUb WAVE), Ring Mix(r InG MIX), Bit Crush(bIt CruSH), drift(dr IFt)

Selects the edit parameter. The parameters differ for each User OSC.

Note: The OSC button's LED blinks during editing. To exit this state, press the OSC button again.

B knob:
Use the B knob to set the edit parameter value.

FILTER

TYPE knob: Low pass-2 pole (LP 2), Low pass-4 pole (LP 4), Band pass-2 pole (bP 2), Band pass-4 pole (bP 4), High pass-2 pole (HP 2), High pass-4 pole (HP 4), Thru (thru)

Selects the filter type.

A knob: Cutoff (CutF)

This knob adjusts the filter cutoff frequency. Use this to cut or emphasize certain frequency components of the oscillator, or to adjust the tonal brightness.

B knob: Resonance (rESo)

This emphasizes the overtones near the filter cutoff frequency, adding a distinctive character to the sound.

FILTER button + A knob: Sweep rate F 0.0–F30.0

Adjusts the LFO frequency speed used by the LFO to modulate the filter cutoff frequency (cutoff sweep).

FILTER button + B knob: Cutoff sweep depth u100-u 1, 0, d 1-d100

Adjusts the depth (Up/Down) of the modulation (cutoff sweep) applied by the LFO to the cutoff frequency of the filter.

EG

TYPE knob: ADSR (AdSr), AHR (AHr), AR (Ar), AR Loop (Ar LooP), Open (oPEn)

Selects the type of amp EG (which makes volume-based changes to the sound).

A knob: Attack (AtCA)

Adjusts the time from note-on (the moment you play a key) until the envelope reaches its maximum value.

B knob: Release (rELS)

Adjusts the amount of time from note-off (the moment you release the key) until the sound has decayed to silence.

EG button + A knob: Tremolo rate F 0.0–F60.0

Adjusts the tremolo speed.

EG button + B knob: Tremolo depth d1–d100

Adjusts the tremolo depth.

Editing the effects

This section explains how to edit the effects of the NTS-1 digital kit mkII.

Basic operations

1. Select the editing mode by pressing the corresponding MODE button (MOD, DELAY or REVERB).
2. To make the various settings, turn the TYPE, A and B knobs, or turn the A or B knob while holding down the MODE button.

MOD

TYPE knob: OFF (oFF), Chorus (ChoruS), Ensemble (EnSEMbLE), Phaser (PHASEr), Flanger (FLAnGEr), Soft Clip (SoFt CL IP), Hard Clip (HArd CL IP), Sine Fold (S InE FoLd), Fuzz (Fuzz)

This selects the modulation effect.

• When Chorus (ChoruS), Ensemble (EnSEMbLE), Phaser(PHASEr) or Flanger (FLAnGEr) is selected

A knob: Time (t IME)

Adjusts the modulation speed.

B knob: Depth (dPtH)

Adjusts the depth of the effect.

• When Soft Clip (SoFt CL IP), Hard Clip (HArd CL IP) or Sine Fold (S InE FoLd) is selected

A knob: Tone (tonE)

Adjusts the brightness of the sound.

B knob: Depth (dPtH)

Adjusts the depth of the effect.

• When Fuzz (Fuzz) is selected

A knob: Tone (tonE)

Adjusts the brightness of the sound.

B knob: Depth (dPtH)

Adjusts the depth of the effect.

OSC button + TYPE knob: In Gain (In GA In)

Selects the parameter used for adjusting the volume of signal that's input to the effect.

Note: The MOD button's LED blinks during editing. To exit this state, press the MOD button again.

When In Gain (In GA In) is selected

B knob: -12.0–0.0–12.0
Adjusts the volume of signal that's input to the effect.

DELAY

TYPE knob: OFF (oFF), Stereo (StErEo), Mono (Mono), Ping pong (P InG Pon9), High pass (H IGHPASS), Tape (tAPE), One (onE), Stereo BPM (StErEo bPM), Mono BPM (Mono bPM), Ping BPM (P InG bPM), High pass BPM (H IGH bPM), Tape BPM (tAPE bPM), Doubling (doubL InG)

This selects the delay effect.

A knob: Time (t IME)

Adjusts the delay time.

B knob: Depth (dPtH)

Adjusts the depth of the effect.

DELAY button + B knob: MIX d100–d 1, bALn, W1–W100

Adjusts the balance between the dry/wet effect sounds.

REVERB

TYPE knob: OFF (oFF), Hall (HALL), Smooth (SMootH), Arena (ArEnA), Plate (PLAtE), Room (room), Early (EArLy), Space (SPACE), Riser (r ISEr), Submarine (SubMAr InE), Horror (Horror)

Selects the reverb effect.

A knob: Time (t IME)

Adjusts the reverb time.

B knob: Depth (dPtH)

Adjusts the depth of the effect.

REVERB button + B knob: MIX d100–d 1, bALn, W1–W100

Adjusts the balance between the dry/wet effect sounds.

Using the sequencer

The NTS-1 digital kit mkII features 8-step sequencer functionality. This lets you make changes to what you play by using the knobs for a variety of playback methods, based on the sequences you've created via step recording.

Basic operations

Press the SEQ button to play back the sequence. Sequences always play back from the beginning. Press the button again to stop.

You can play the keyboard to transpose the pitch of the sequence. Play a note above middle F on the keyboard to raise the pitch a maximum of nine semitones (t 9), and play a note below middle F to lower the pitch a maximum of eight semitones (t -8). Press the middle F key to revert the pitch to normal (t 0).

Operate the TYPE knob and the A, B knobs while holding down the SEQ button to make the sequence change.

Selecting a sequence playback pattern

SEQ button + TYPE knob: Forward (ForWArd), Reverse (rEVErSE), Bounce (bounCE), Stochastic (StoC), Random (rAnd)

Selects the sequence playback pattern.

Changing the sequence gate time

SEQ button + A knob: S 1–S100

Changes the gate time of all steps in the sequence.

Setting the tempo

ARP button + B knob: 56.0–240.0 (10.0–600.0)

Sets the tempo.

Tip: When you change the sequencer tempo, the arpeggiator tempo changes as well. The delay time for delay effect types that synchronize with the tempo (including Stereo BPM, Mono BPM, Ping BPM, High BPM and Tape BPM) also changes at the same time.

Tip: You can set the available tempo range in the Tempo Range global parameter.

Step recording

Long-press the SEQ button to enter step recording mode. The SEQ LED blinks. This lets you input the notes for each step of the sequence in order. Use the keyboard to specify the notes. Once you release a key, the note is input and the sequencer moves to record the next step. You can also use other controllers besides the keyboard for the following operations.

Long-press the SEQ button

Enters step recording mode.

TYPE knob: REC.1 (rEC.1)- REC.8 (rEC.8)
Moves to the step to be edited.

A knob: L1–L100, TTIE
Sets the gate time for the step you're currently inputting.

B knob: V1-V127
Sets the velocity of the step you're currently inputting.

SEQ button
Exits step recording mode.

ARP button
Clears all notes recorded at the current step, and advances one step.

SEQ button + ARP button
Deletes all sequence data.

Using the arpeggiator

The NTS-1 digital kit mkII features an arpeggiator function that lets you play patterns based on the notes you play on the keyboard.

Basic operations

Press the ARP button to turn the arpeggiator on (the LED lights up) or off (the LED goes dark).

When you turn this on, the arpeggiator plays while you're holding down a key.

Long-press the ARP button to set the arpeggiator to latch mode (the LED blinks). To cancel latch mode, long-press the ARP button again.

Operate the TYPE knob and the A, B knobs while holding down the ARP button to make the arpeggio change.

Selecting the arpeggiator pattern

ARP button + TYPE knob: UP (uP), Down (dn), Up-Down (u-d), Down-Up (d-u), Converge (ConU), Diverge (d IU), Conv.-Div. (C-d), Div.-Conv. (d-C), Random (rAnd), Stochastic (StoC)

This selects the arpeggiator pattern.

Setting the arpeggiator length

ARP button + A knob: 1–24

Sets the arpeggiator length (how long the arpeggio plays back).

Setting the tempo

ARP button + B knob: 56.0–240.0 (10.0–600.0)

Sets the tempo.

Tip: When you change the arpeggiator tempo, the sequencer's tempo changes as well. The delay time for delay effect types that synchronize with the tempo (including Stereo BPM, Mono BPM, Ping BPM, High BPM and Tape BPM) also changes at the same time.

Tip: You can set the available tempo range in the Tempo Range global parameter.

Selecting the arpeggiator scale

ARP button + OSC button: Octave (oCt)

ARP button + FILTER button: Major Triad (MAJ)

ARP button + EG button: Major Suspended (SUS)

ARP button + MOD button: Major Augmented (AUG)

ARP button + DELAY button: Minor Triad (M In)

ARP button + REVERB button: Minor Diminished (d IM)

These settings select the scale used by the arpeggiator.

Global parameters

Use these parameters to configure the overall operations of the NTS-1 digital kit mkII.

How to configure the settings

1. Turn on the power while holding down the REVERB button.
2. Use the TYPE knob to select the global parameter to edit, and use the B knob to change the value. The current value is shown on the right side of the display. Press the REVERB button to cancel.
3. After you're finished with the settings, press the ARP button. The settings are saved, and the NTS-1 digital kit mkII restarts.

TYPE knob: Input route (inr)
B knob: 0–7

Sets the routing for AUDIO IN.

0: OSC mod, 1: before filter, 2: before EG, 3*: before mod, 4: before delay, 5: before reverb, 6: before master, 7: after master. → Block diagram

TYPE knob: Input route cut (inC)
B knob: 0, 1

When the OSC uses AUDIO IN, this sets whether to enable or disable "Input route".

0: Even when the OSC uses AUDIO IN, "Input route" is enabled.

1*: When the OSC uses AUDIO IN, "Input route" is disabled.

TYPE knob: Input Gain (Gin)
B knob: 0–9, A–F

Sets the input gain (the volume of the external input that's connected to the AUDIO IN jack).

0: -85 dB, 1: -36 dB, 2: -24 dB, 3: -18 dB, 4:-12 dB, 5: -9 dB, 6*: -6 dB, 7: -3 dB, 8: -2 dB, 9: -1 dB, A: 0 dB, B: +1 dB, C: +2 dB, D: +3 dB, E: +6 dB, F: +9 dB

TYPE knob: Monaural (Mon)
B knob: 0, 1

Sets whether to use the AUDIO IN in stereo or in monaural.

0: stereo, 1: monaural

TYPE knob: SYNC OUT Polarity (SYo)
B knob: 0, 1

Sets the polarity of the SYNC OUT jack.

0*: Synchronizes at the peak of the waveform.

1: Synchronizes at the trough of the waveform.

TYPE knob: SYNC IN Polarity (SYI)
B knob: 0, 1

Sets the polarity of the SYNC IN jack.

0*: Synchronizes at the peak of the waveform.

1: Synchronizes at the trough of the waveform.

TYPE knob: Tempo Range (tRP)
B knob: 0, 1

Sets the variable range for the tempo.

0*: narrow (56.0–240.0), 1: wide (10.0–600.0)

TYPE knob: MIDI Clock Source (CLK)
B knob: 0, 1

Sets the clock to which this unit is synchronized.

0: Internal. Synchronizes to the internal clock.

1*: Auto. Synchronizes to the external clock when there is external clock input from the USB or MIDI IN jack, and synchronizes to the internal clock when there is no input. The clock input to the USB port is given priority when there is external clock input from both the USB port and MIDI IN jack.

⚠ If a cable is connected to the SYNC IN jack, the unit synchronizes to the SYNC IN input, regardless of the clock settings.

TYPE knob: MIDI RX/short messages (SHr)
B knob: 0, 1

Sets whether to receive MIDI short messages (such as note on/off, program change, control change and pitch bend). Turn this off if you want to connect to a computer just to power this unit via USB, or if you don't want to receive performance-related messages when the unit is synchronized via MIDI clocks only with the computer's software or with another MIDI device.

0: Off, 1*: On

TYPE knob: MIDI NRPN messages (nrP)
B knob: 0, 1

Sets whether MIDI NRPN messages are transmitted and received.

0*: Off, 1: On

TYPE knob: MIDI route (Mrt)
B knob: 0, 1

Sets the routing for MIDI messages.

0*: USB+MIDI: Both kinds of message input are received from the USB and MIDI IN jacks, and both kinds are transmitted from these two jacks.

1: USB: Messages are only transmitted and received via the USB port. This setting is useful when you're using this unit as a USB MIDI interface.

TYPE knob: MIDI Channel (CHn)
B knob: 0–1, A–F

Specifies the MIDI channel.

0*: 1ch, 1: 2ch, 2: 3ch- 9: 10ch, A: 11ch, B: 12ch, C: 13ch, D: 14ch, E: 15ch, F: 16ch

TYPE knob: SYNC IN/OUT Unit (StP)
B knob: 0, 1

Sets how many steps the arpeggiator advances for each pulse that's input to the SYNC IN jack, as well as how many steps are required for the arpeggiator to advance before a single pulse is output from the SYNC OUT jack.

0*: 1 pulse = 2 steps

1: 1 pulse = 1 step

TYPE knob: EG Legato (LGt)
B knob: 0, 1

Specifies how the EG behaves when you play the keys in a legato manner (by pressing a key and then pressing the next one while the first one is still held down).

0: Off: The EG is retriggered.

1*: On: The EG is not retriggered.

TYPE knob: Auto Power Off mode (APo)
B knob: 0, 1

Switches the auto power-off function on/off.

0: Off: The auto power-off function does not operate.

1*: On: The auto power-off function operates.

TYPE knob: Touch sensor calibration (CAL)

Press the ARP button to begin calibrating the touch sensor keyboard.

⚠ Do not touch the keyboard during calibration.

Factory reset

Restoring the factory default settings

1. Turn on the power while holding down the DELAY button.
   The REVERB and ARP buttons blink.
2. Press the ARP button to show the data onscreen that's targeted for factory reset.
   Turn the TYPE knob to select which parameters are to be reset.

   ALL (ALL): resets all of the following settings to their factory defaults.

   GLOB (GLob): resets the global parameters to their factory defaults.

   PROG (PrOG): resets the programs (edits you've made to the sounds and effects) to their factory defaults.

   OSC (osc): resets the user custom oscillator to its factory defaults.

   Mod (Mod): resets the user custom modulation to its factory defaults.

   DEL (dEL): resets the user custom delay to its factory defaults.

   REV (rEV): resets the user custom reverb to its factory defaults.
3. Press the ARP button that's blinking to execute the factory reset. The ARP button changes from blinking to continuously lit, and **RESET** (rSEt) is shown in the display. The unit automatically restarts when the reset is finished.
   Press the REVERB button to cancel. If you do this, the factory reset is not executed, and the unit automatically restarts.

Appendices

Specifications

Keyboard
Multi-touch keyboard

Sound generation system
1 digital oscillator, 1 multi-mode filter, 1 EG, 3 LFOs

Effects
MOD (CHORUS, ENSEMBLE, PHASER, FLANGER, SOFT CLIP, HARD CLIP, SINE FOLD, FUZZ)
DELAY (STEREO, MONO, PING PONG, HIGH PASS, TAPE, ONE, STEREO BPM, MONO BPM, PING BPM, HIGH BPM, TAPE BPM, DOUBLING)
REVERB (HALL, SMOOTH, ARENA, PLATE, ROOM, EARLY, SPACE, RISER, SUBMARINE, HORROR)

Input/output jacks and ports
(Headphones jack)/AUDIO OUT jack (3.5 mm stereo mini-phone jack), AUDIO IN jack (3.5 mm stereo mini-phone jack), SYNC OUT jack (3.5 mm TRS mini-phone jack, output level: 5 V), SYNC IN jack (3.5 mm stereo TRS mini-phone jack, maximum input level: 20 V), MIDI OUT jack (3.5 mm TRS mini-phone jack), MIDI IN jack (3.5 mm TRS mini-phone jack), USB Type-C port

Power supply
USB bus power supply

Current consumption
500 mA or less

Dimensions (W×D×H)
129 × 78 × 39 mm (5.08″ × 3.07″ × 1.54″)

Weight
122 g / 4.3 oz

Included items
USB cable, assembly instructions

* Specifications and appearance are subject to change without notice for improvement.

Operating requirements (for USB connection)

See the Korg website for the latest information on OS support.
https://www.korg.com/support/os/

MIDI implementation chart

[PROGRAMMABLE SYNTHESIZER KIT]
Model: NTS-1 digital kit mkII

MIDI Implementation Chart

Date: 2023. 11.15
Ver.: 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1–16	1–16	Memorized
	Change	1–16	1–16	
Mode	Default	X	3	
	Messages	X	X	
	Altered	**********		
Note Number		0–127	0–127	
	True Voice	**********	0–127	
Velocity	Note On	X 9n, V=64	O 9n, V=1–127	
	Note Off	X 8n, V=64	X	
After Touch	Key's	X	O	Forwarded to custom oscillator units.
	Channel	X	O	Forwarded to custom oscillator units.
Pitch Bend		X	O	
Control Change	6, 38	O	O	DATA ENTRY (MSB, LSB) *1 *2
	7, 39	O	O	MASTER VOLUME (MSB, LSB) *1
	14	O	O	EG TYPE *1
	16, 19	O	O	EG ATTACK, RELEASE (MSB) *1
	20, 21	O	O	TREMOLO DEPTH, RATE (MSB) *1
	24, 26	O	O	OSC. LFO RATE, DEPTH (MSB) *1
	28, 29	O	O	MOD. A, B (MSB) *1
	30, 31, 33	O	O	DELAY A, B, MIX (MSB) *1
	34, 35, 36	O	O	REVERB A, B, MIX (MSB) *1
	42	O	O	FILTER TYPE *1
	43, 44	O	O	FILTER CUTOFF, RESONANCE (MSB) *1
	45, 46	O	O	FILTER SWEEP DEPTH, RATE (MSB) *1
	48, 49	O	O	EG ATTACK, RELEASE (LSB) *1
	50, 51	O	O	TREMOLO DEPTH, RATE (LSB) *1
	53	O	O	OSC. TYPE *1
	54, 55	O	O	OSC. A, B (MSB) *1
	56, 58	O	O	OSC. LFO RATE, DEPTH (LSB) *1
	60, 61	O	O	MOD. A, B (LSB) *1
	62, 63, 113	O	O	DELAY A, B, MIX (LSB) *1
	88	O	O	MOD. TYPE *1
	89	O	O	DELAY TYPE *1
	90	O	O	REVERB TYPE *1
	98, 99	O	O	NRPN (LSB, MSB) *1 *2
	102, 103	O	O	OSC. A, B (LSB) *1
	107, 108	O	O	FILTER CUTOFF, RESONANCE (LSB) *1
	109, 110	O	O	FILTER SWEEP DEPTH, RATE (LSB) *1
	114, 115, 116	O	O	REVERB A, B, MIX (LSB) *1
	117, 118, 119	O	O	ARP. PATTERN, INTERVALS, LENGTH *1
Program Change		X	X	
	True Number	**********	X	
System Exclusive		O	O	*3
System Common	Song Position	X	O	
	Song Select	X	X	
	Tune Request	X	X	
System Real Time	Clock	O	O	*4
	Commands	O	O	*4
Aux Meassages	Local On/Off	X	X	
	All Notes Off	X	O (123–127)	*1
	Active Sense	O	O	
	System Reset	X	X	

Notes
*1: Received when global parameter MIDI RX Short Message is set to ON
*2: Received/transmitted when global parameter MIDI NRPN Messages is set to ON
*3: In addition to Korg exclusive messages, Inquiry is supported
*4: Not received when global parameter MIDI Clock Source is set to 0:Internal, received when set to 1:Auto

Mode 1: Omni On, Poly
Mode 2: Omni On, Mono
Mode 3: Omni Off, Poly
Mode 4: Omni Off, Mono

O: Yes
X: No

Consult your local Korg distributor for more information on MIDI Implementation.

KORG INC.
4015-2 Yanokuchi, Inagi-City, Tokyo 206-0812 JAPAN

www.korg.com
Published 04/2024