



MiDiGenerator

Supplement Manual

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FORCE TO SCALE

A track's step notes may be determined by the track's scale and root values. The track's force-to-scale notes can be auto-generated, randomized, or modulated.

Set Scale and Root

The scale and root is set in the track's PROG menu.

In the PLAY view tap a track PROG button. In the PROG menu, SCALE selects the musical scale to which the track notes are generated.

Fifty common scales are listed in the scale list, in the key of C. In addition, there are nine "Chord" scales. A chord scale is selected by the chord button in the KEYS view.

The PROG menu ROOT sets the key signature of the given scale. Sequences may then be transposed by MIDI input depending on the trigger mode.

KEYS Chords

M	Major
7	Dominant
min	Minor
m7	Minor 7 th
o	Diminished
o7	Half-diminished
x	Augmented
b9	Flat 9 th
mb9	Minor Flat 9

Scale List

Number	Scale	Type
Octave	C C C...	
1	C D E F G A B	Major
2	C D Eb F G A B	Melodic Minor
3	C Db Eb F G A B	Neopolitan Major
4	C Db E F G A B	Rag Arnand Bhairav
5	C Eb E F G A B	
6	C Db D F G A B	
7	C D Eb F# G A B	Lydian Diminished (Rag Madhuvanti)
8	C D E F# G A B	Lydian Mode
9	C D E F G A Bb	Mixolydian Mode
10	C D Eb F G A Bb	Dorian Mode
11	C Db Eb F G A Bb	
12	C Db E F G A Bb	Rag Ahir Bhairav
13	C Eb E F G A Bb	Bebop Minor (Hungarian Blues)
14	C Db D F G A Bb	
15	C D Eb F# G A Bb	Blues (Rag Madhukant)
16	C D E F# G A Bb	Overtone
17	C D E F G Ab Bb	Melodic Major Descending
18	C D Eb F G Ab Bb	Aeolian Mode
19	C Db Eb F G Ab Bb	Phrygian Mode
20	C Db E F G Ab Bb	Rag Basant
21	C Eb E F G Ab Bb	
22	C Db D F G Ab Bb	
23	C D Eb F# G Ab Bb	
24	C D E F# G Ab Bb	Lydian Minor
25	C D E F G Ab B	Harmonic Major
26	C D Eb F G Ab B	Harmonic Minor
27	C Db Eb F G Ab B	Neopolitan Minor
28	C Db E F G Ab B	Double Harmonic (Gypsy) Minor
29	C Eb E F G Ab B	Major Augmented
30	C Db D F G Ab B	Bhairav That
31	C D Eb F# G Ab B	Hungarian Minor
32	C D E F# G Ab B	
33	C D E F G Bb B	Bebop Dominant
34	C D Eb F G Bb B	
35	C Db Eb F G Bb B	
36	C Db E F G Bb B	
37	C Eb E F G Bb B	
38	C Db D F G Bb B	
39	C D Eb F# G Bb B	Saranga
40	C D E F# G Bb B	
41	C D E F G Ab A	Bebop Major
42	C D Eb F G Ab A	
43	C Db Eb F G Ab A	
44	C Db E F G Ab A	
45	C Eb E F G Ab A	
46	C Db D F G Ab A	
47	C D Eb F# G Ab A	
48	C D E F# G Ab A	
49	C D E F# G# A#	Whole Tone
50	C D Eb F Gb Ab A B	Diminished

MIDI CONTROLLERS

Each track has a MIDI controller number that may be sent on each step. The controller number is sent on the MIDI channel of the track.

The MIDI channel and controller number is set in the track's PROG menu.

In the PLAY view tap a track PROG button. In the PROG menu, MIDI CCN selects the MIDI controller number. MIDI controller output is disabled when MIDI CCN is set to Off. MIDI CHAN selects the track MIDI output channel.

Transmitted Continuous Controller Numbers

Controller	CCN
Off	0
Modulation	1
Breath	2
CCN 3	3
Foot	4
Portamento	5
Data	6
Volume	7
Balance	8
CCN 9	9
Pan	10
Expression	11
Effect 1	12
Effect 2	13
CCN 14	14
CCN 15	15
General 1	16
General 2	17
General 3	18
General 4	19
Knob 1	20
Knob 2	21
Knob 3	22
Knob 4	23
Knob 5	24
Knob 6	25
Knob 7	26
Knob 8	27
Knob 9	28
Knob 10	29
Knob 11	30
Knob 12	31

Received Continuous Controller Numbers

The MiDiGenerator receives the following MIDI controller messages on the respective track channels. Three CCN General numbers 16 to 18 control the track's X, Y and Z modulations as defined in the track PROG menu.

Controller	CCN	Function
General 1	16	Modulation X
General 2	17	Modulation Y
General 3	18	Modulation Z

The MiDiGenerator receives the following MIDI controller messages on the global MIDI channel.

Balance	8	Mix Cross-Fade
Pan	10	Mix Morph

STANDARD MIDI FILE

The MiDiGenerator can load MIDI data from a MIDI sequencer using the Standard MIDI File format. In this way, a song composed in a program like Ableton, for example, may be uploaded to a MiDiGenerator bank. Up to eight MIDI tracks may be uploaded at a time to one MiDiGenerator bank.

SMF Upload

Standard MIDI files are transferred via non real-time universal system exclusive MIDI file dump messages. To do this, a computer MIDI sequencer must export a song in standard MIDI file format 1. Using a MAC or PC computer, this file needs to be converted to a MIDI sysex file and then uploaded to the MiDiGenerator through USB MIDI.

Download the Signal Arts converter utility, required to convert the SMF file into a sysex file.

A computer MIDI sysex program is then required to send the sysex files to MIDI in. Many computer sequencers have a sysex transmit utility built in.

If there is a problem with a sysex transmission, set your computer system exclusive MIDI utility to delay 20 to 50ms between MIDI sysex packet transmissions.

Set the MiDiGenerator view to PLAY to read the status of an upload on the bank chord display. The new bank will be the name of the first MIDI track in the file.

OPEN SOUND CONTROL

OSC is an open protocol now used in many music software products as a way to implement real-time control of musical events through computer network communications. The MiDiGenerator communicates with OSC enabled applications.

Session Setup

To establish communications between the MiDiGenerator and a remote computer application, the remote IP address, receive and send port numbers must be set. Tap SETUP and turn on Connect OSC. Fill in the Remote Host to match the IP address of the connecting computer. Set the Receive Port to match the send port of the remote host. Set the Send Port to match the receive port of the remote host.

The connecting remote host target IP (in the computer application) must also be set to your device's Local Host IP.

The OSC addresses must be set in the computer's OSC program in order to send and receive OSC messages to the MiDiGenerator.

OSC messages that represent a track parameter always have an OSC address that ends with the track number, designated in the table as 'n'. This number must be 1 to 8.

The following tables list the recognized receive and transmit OSC addresses.

MiDiGenerator Receive Message Formats

Function	Address	Data Format
Track Trigger n	/MDG/trig/n	boolean int
Random Function Note	/MDG/rand/Note/n	
Random Function Velocity	/MDG/rand/Vel/n	
Random Function Step Duration	/MDG/rand/SDur/n	
Random Function Note Duration	/MDG/rand/NDur/n	
Random Function Controller	/MDG/rand/Ctl/n	
Generate new rhythm with scaled notes	/MDG/regen/Scale/n	
Generate new rhythm with root notes	/MDG/regen/Root/n	
Trigger Mode Multiple	/MDG/tMode/Multi/n	
Trigger Mode Multiple Arp	/MDG/tMode/MultiArp/n	
Trigger Mode Single	/MDG/tMode/Single/n	
Trigger Mode Step	/MDG/tMode/Step/n	
Step Mode Forward	/MDG/sMode/Forward/n	
Step Mode Reverse	/MDG/sMode/Reverse/n	
Step Mode Random	/MDG/sMode/Rand/n	
Step Mode Brownian	/MDG/sMode/Brown/n	
Step Mode Pendulum	/MDG/sMode/Pendulum/n	
Step Mode Pendulum Repeat	/MDG/sMode/PendulumRepeat/n	

Track Scale	/MDG/Scale/n	int (0..50)
Mix Cross-Fade	/MDG/XFade	int (0..16)
Mix Morph	/MDG/Morph	int (0..16)
Track Modulate Note	/MDG/modNote/n	float (0..1)
Track Modulate Time	/MDG/modTime/n	float (0..1)
Track Modulate Note Duration	/MDG/modNDTime/n	float (0..1)
Track Modulate Volume	/MDG/modVol/n	float (0..1)
Track Modulate Step Thin.....	/MDG/modThin/n	float (0..1)
Track Modulate Controller Number.....	/MDG/modCCN/n	float (0..1)
Track Modulate Patch	/MDG/modPatch/n	float (0..1)
Text Receive	/MDG/text	string

MiDiGenerator Transmit Message Formats

Track Step Value	/MDG/stepValue/n	float 0..1
Text Send	/MDG/text	string