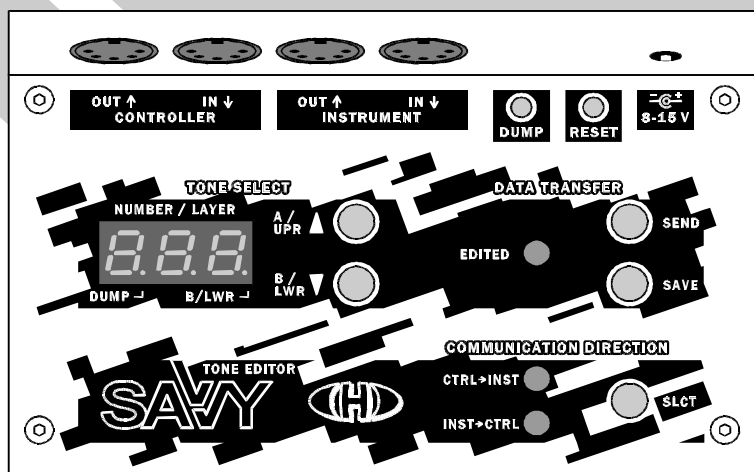


# SAVVY

## Tone Parameters Editor & Controller



## Manual Supplement Roland MKS-50

OS 004 ver. 2.0



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## 1 FEATURES

**Supported instrument:** Roland MKS-50. For Roland Juno Alpha 1, Juno Alpha 2, HS-10 (Synth Plus 10), HS-80 (Synth Plus 80), see separate manual and OS files.

**Number of tone memories:** 896 (seven memory banks)

**Individual tone parameters** (36x): all MKS-50 tone parameters assigned to MIDI CCs. Patch parameters are not controlled.

**Modifiers** (5x): MOD RATE, MOD DEPTH, BRILLIANCE, BASS BOOST, ENV TIME

**Macro** (1x): ENV 4-SEG ATTACK

**Random functions** (8x): DCO – Light, DCO – Full, VCF – Light, VCF – Full, VCA, ENV, FX, ALL

## 2 PREPARE THE INSTRUMENT

To use SAVVY with your MKS-50 set the **MIDI CH**, **MIDI PROG.CG** and **TX TONE APR**:

- 1) Press the TUNE/MIDI button on the instrument panel.
- 2) Press the Parameter Button repeatedly until the **MIDI CHANNEL** function is displayed.
- 3) Set value “**1**” with the value button<sup>1</sup>. (The MIDI channel is automatically saved in memory even after MKS-50 is turned off).
- 4) Press the Parameter Button repeatedly until **MIDI PROG.CG**
- 5) Set value “**ON**” with the value button. (The MIDI PROG.CG is automatically saved in memory even after MKS-50 is turned off).
- 6) Press the Parameter Button repeatedly until **TX TONE APR**
- 7) Set value “**ON**” with the value button. (**Note:** after the MKS-50 is turned off the value of TX TONE APR parameter is automatically set OFF – so this step has to be repeated every time you switch the MKS-50 on).

<sup>1</sup> SAVVY use MIDI channel Nr. 1 as a default after factory reset (see System Parameters table). It can be changed by the user anytime. All other MIDI commands (Note On / Off, Pitch Bend, etc.) for the instrument control must be sent on the same MIDI channel.



## 3 INSTRUMENT PARAMETERS – MIDI CC ASSIGNMENT

- **Individual tone parameters** - MIDI CCs assigned to individual tone parameters control.
- **Modifiers** - MIDI CCs assigned to tone modifications controls (+/- offsets), that affect more tone parameters simultaneously accordingly to the fixed algorithms. In the middle position (i.e. value 64), the tone is not affected
- **Macros** – MIDI CCs assigned to macro functions that simplify control of more tone parameters simultaneously (e.g simplified ADSR envelope, etc.).
- **Random functions** - MIDI CC assigned to intelligent random functions set random values of selected tone parameters.

All changes of individual tone parameters, Modifiers and results of Macro and Random functions can be saved in SAVVY's tone memories.

The following table shows factory assigned MIDI CCs numbers, however the assigned MIDI CCs are user definable<sup>2</sup> and can be changed by user.

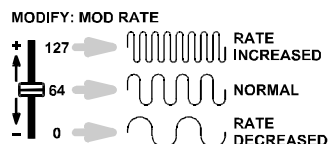
INDIVIDUAL TONE PARAMETERS			
Parameter Name	CC Nr.	Parameter Name	CC Nr.
DCO RANGE	24	VCF LFO MOD DEPTH	53
DCO LFO MOD DEPTH	37	VCF KEY FOLLOW	55
DCO ENV MOD DEPTH	40	VCF AFTER DEPTH	56
DCO ENV MODE	39	VCA LEVEL	71
DCO AFTER DEPTH	41	VCA ENV MODE	70
DCO BENDER RANGE	9	VCA AFTER DEPTH	72
DCO WAVEFORM PULSE	27	CHORUS	66
DCO WAVEFORM SAW	28	CHORUS RATE	67
DCO WAVEFORM SUB	29	LFO RATE	13
DCO SUB LEVEL	30	LFO DELAY TIME	14
DCO NOISE LEVEL	23	ENV T1	74
DCO PW/PWM DEPTH	35	ENV L1	75
DCO PWM RATE	36	ENV T2	76
HPF CUTOFF FREQ	49	ENV L2	77
VCF CUTOFF FREQ	50	ENV T3 (DECAY for ENV 4-SEG Macro)	78
VCF RESONANCE	51	ENV L3 (SUSTAIN for ENV 4-SEG Macro)	79
VCF ENV MOD DEPTH	54	ENV T4 (RELEASE for ENV 4-SEG Macro)	80
VCF ENV MODE	52	ENV KEY FOLLOW	81
MODIFIERS			
Modifier Name	CC Nr.	Modifier Name	CC Nr.
MOD RATE	95	BASS BOOST	92
MOD DEPTH	94	ENV TIME	91
BRILLIANCE	93		
MACROS			
Macro Name	CC Nr.		
ENV 4-SEG ATTACK	110		
RANDOM FUNCTIONS			
Random Setting Name	CC Nr.		
DCO / VCF / VCA / ENV / FX	3		

<sup>2</sup> To see how to change the assigned MIDI CCs or make new user map see chapter 5.

### 3.1 MODIFIERS

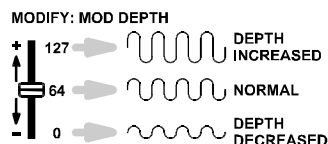
#### MOD RATE

MOD RATE is an emulation of original MKS-50's "Tone Modify – Modulation Rate" performance parameter. This modifier changes the rate of the **vibrato**, **growl**, **LFO delay** or **PWM** effects.



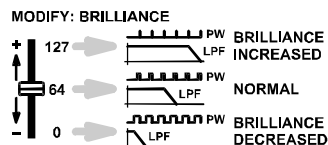
#### MOD DEPTH

MOD DEPTH is an emulation of original MKS-50's "Tone Modify – Modulation Depth" performance parameter. This modifier changes the depth of the **vibrato** or **growl** effects.



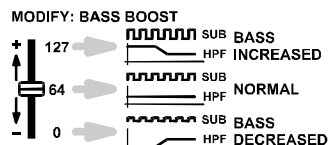
#### BRILLANCE

BRILLANCE is an emulation of original MKS-50's "Tone Modify – Brilliance" performance parameter. This modifier changes the **Brilliance** / **sharpness** of the tone



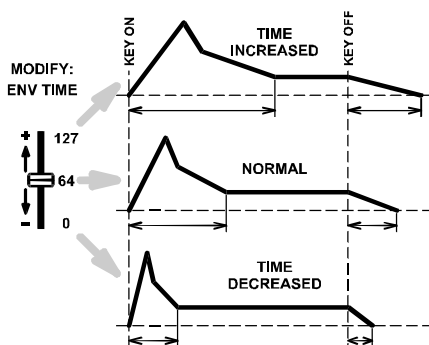
#### BASS BOOST

BASS BOOST modifier emphasize the bass frequencies of the tone. It is a new Modifier that use **HPF** and **DCO** Suboscillator.



#### ENV TIME

ENV TIME is an emulation of original MKS-50's "Tone Modify – Envelope Time" performance parameter. This modifier offsets all **time segments of Envelope generator** with single MIDI CC, while preserving all other tone settings. The original tone color can be used with various lengths of envelope from short percussive to long evolving pad.

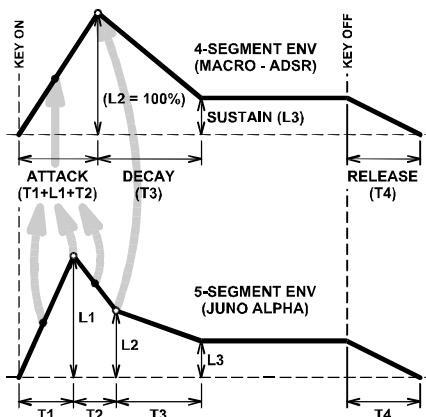




## 3.2 MACROS

### ENV 4-SEG ATTACK

Roland MKS-50 series instruments use 5-segment envelope generator. ENV 4-SEG ATTACK Macro emulates **Attack segment** of traditional 4-segment (ADSR) envelope, original tone parameters ENV T3, ENV L3, ENV T4 work as Decay, Sustain and Release segments.



## 3.3 RANDOM FUNCTIONS

The random functions or “Intelligent random generator” use MIDI CC #3<sup>3</sup>. There are different random algorithms available as described in the table below:

VALUES OF CC ASSIGNED TO RANDOM SETTING FUNCTION CONTROL		
CC Value	Function	Description
0 ~ 7	n/a	Not used
8 ~ 15	DCO – Light	Limited number and range of DCO parameters without pitch modulation effects for more predictable results.
16 ~ 23	DCO – Full	All available DCO parameters in full range, including modulation for more excentric tones and sound effect.
24 ~ 55	n/a	Not used
56 ~ 63	VCF – Light	VCF limited range random (both HPF and LPF cutoff and resonance settings)
64 ~ 71	VCF – Full	All available VCF paramateres in full range (both HPF and LPF, including modulations)
72 ~ 79	VCA	VCA modulation parameters random
80 ~ 87	ENV	Envelope (all time and level parameters including keyfollow modulation) random
88 ~ 103	n/a	Not used
104 ~ 111	FX	LFO and Chorus parameters random
112 ~ 119	n/a	Not used
120 ~ 127	ALL	Full tone random for sound experimenting.

It is recommended to assign push buttons on your hardware MIDI controller with the different MIDI CC #3 values as described in the table above.

<sup>3</sup> Factory preset value. To see how to change number of assigned MIDI CC see chapter 5.2.



## 4 SYSTEM PARAMETERS

System Parameters define basic functions of SAVVY (MIDI channel for communication, MIDI data flow processing, tone number display format, display brightness, etc.).

SYSTEM PARAMETERS				
Parameter			Factory Default <sup>4</sup>	
Name	Range	Description	Value	Description
<b>Global Parameters</b>				
MIDI Channel	0 ~ 15	0: Chnl 1 ... 15: Chnl 16	0	MIDI Channel Nr. 1
Use Bank Select Command	0 ~ 1	0: No / 1: Yes	1	Yes
MIDI Errors Auto Reset	0 ~ 1	0: Off / 1: On	1	On
Remember last tone	0 ~ 1	0: No / 1: Yes	1	Yes
Tone Number Format	0 ~ 1	0: 0 to 895 / 1: 1 to 896	1	Numbers 1 to 896
Display Brightness	0 ~ 15	0: min ... 15: max	15	Maximal brightness
<b>Inst → Ctrl Data Transfer</b>				
Select Device ID for Bulk Dump	0 ~ 1	0: Universal / 1: MIDI Chnl Nr.	0	Universal ID Number
Send All CCs (Tone Change)	0 ~ 1	0: No / 1: Yes	1	Yes
Send Manual Tone Slct as Pgm Chng	0 ~ 1	0: No / 1: Yes	1	Yes
<b>Ctrl → Inst Data Transfer</b>				
Cache Modifications in Edit Buffer	0 ~ 1	0: No / 1: Yes	1	Yes
Cache Macro Settings in Edit Buffer	0 ~ 1	0: No / 1: Yes	1	Yes
Cache Random Setting in Edit Buffer	0 ~ 1	0: No / 1: Yes	1	Yes
Transfer Pgm Chng from Ctrl to Inst	0 ~ 1	0: No / 1: Yes	0	No
Accept Pgm Chng from Ctrl	0 ~ 1	0: No / 1: Yes	1	Yes
Send Manual Tone Slct as Pgm Chng	0 ~ 1	0: No / 1: Yes	1	Yes

### 4.1 GLOBAL PARAMETERS

#### 4.1.1 MIDI Channel

This parameter sets MIDI channel used for the instrument control (**0 for channel 1, 1 for channel 2, etc. up to 15 for channel 16**). All MIDI Channel messages are received and transmitted on selected MIDI channel only. MIDI channel for the SAVVY editor must be the same as selected MIDI channel of the controlled instrument!

#### 4.1.2 Use Bank Select (CC #32)

If the parameter is 1 (i.e. "**YES**"), SAVVY uses the **CC #32** as the **Bank Select LSB** command for communication between the controller / PC and SAVVY. The CC #32 then defines number of active tone memory bank (0 to 6).

If the parameter is 0 (i.e. "**NO**"), the CC #32 can be used as universal CC for setting of a tone parameter (see chapter 3).

<sup>4</sup> Factory preset values are user editable. See chapter 5 for details..



## 4.1.3 MIDI Errors Auto Reset

If the parameter is 1 (i.e. "ON") and an error in MIDI communication occurs, the **communication is reset** and the device continues normal operation.

If the parameter is 0 (i.e. "OFF") and an error in MIDI communication occurs, the **device stops operation** and the error status it indicated.

## 4.1.4 Remember Last Tone

If the parameter is 1 (i.e. "YES"), SAVVY **remembers last selected tone number** after switching off (for next session).

If the parameter is 0 (i.e. "NO"), SAVVY always **starts with the first tone** number.

## 4.1.5 Tone Number Format

This parameter sets the displayed tone number format. It can be either **0** to **895** (parameter value is 0) or **1** to **896** (parameter value is 1).

## 4.1.6 Display Brightness

The parameter sets the display brightness (**0 for minimum, 15 for maximum**).

# 4.2 INST → CTRL DATA TRANSFER PARAMETERS

## 4.2.1 Select Device ID for Bulk Dump

The parameter selects identification number of the SAVVY editor for both transmitted and received MIDI Bulk Dump SysEx Messages.

If the parameter is 1 (i.e. "MIDI Channel"), the Device ID number is the same as number of MIDI channel chosen for MIDI communication with the instrument (i.e. global parameter MIDI Channel).

If the parameter is 0 (i.e. "Universal ID Number"), the Device ID number is equal to 127. SysEx messages will be in such setting recognized by any SAVVY editor independently on selected MIDI channel number.

## 4.2.2 Send All CCs (Tone Change)

If the parameter is 1 (i.e. "YES"), the SAVVY editor **transmits all CCs** assigned to tone parameters **when tone number is selected / changed** (manually by button on front panel or by APR SysEx message or Program Change command from the instrument).

If the parameter is 0 (i.e. "NO"), **no CCs are transmitted after tone select / change**.

## 4.2.3 Send Manual Tone Slct as Pgm Chng

If the parameter is 1 (i.e. "YES"), **Program Change** command is **sent to the controller / PC** each time the tone is changed manually (by buttons on SAVVY's front panel). If "Use Bank Select Command" parameter (see chapter 4.1.2) is "YES", the Bank Select LSB command (i.e. CC #32) is also sent.

If the parameter is 0 (i.e. "NO"), **Program Change** command is **not transmitted**.





## **4.3 CTRL → INST DATA TRANSFER PARAMETERS**

### **4.3.1 Cache Modifications in Edit Buffer**

If the parameter is 1 (i.e. "YES"), any **change of tone** parameters made by a "Modifier" CCs are **sent to the instrument and remain in edit buffer** (so they can be saved together with the tone parameters in SAVVY's memory).

If the parameter is 0 (i.e. "NO"), the **changes** are only **sent to the instrument and not cached** in edit buffer.

### **4.3.2 Cache Macro Settings in Edit Buffer**

If the parameter is 1 (i.e. "YES"), any **change of tone parameters** made by a "Macro" CC are **sent to the instrument and remain in edit buffer** (so they can be saved as a new tone parameters values in SAVVY's memory).

If the parameter is 0 (i.e. "NO"), the **changes are only sent** to the instrument and they are **not cached** in edit buffer.

### **4.3.3 Cache Random Setting in Edit Buffer**

If the parameter is 1 (i.e. "YES"), **changes** of tone parameters generated by the "Random" CC are sent to the instrument and **remain in edit buffer** (so they can be saved as a new tone parameters values in SAVVY's memory).

If the parameter is 0 (i.e. "NO"), the **changes** are only sent to the instrument and they are **not cached**.

### **4.3.4 Transfer Pgm Chng from Ctrl to Inst**

If the parameter is 1 (i.e. "YES"), transfer of **Program Change** command is **enabled from** the connected **controller / PC** to the instrument through the editor.

If the parameter is 0 (i.e. "NO"), **Program Change** command is **filtered** by the SAVVY.

### **4.3.5 Accept Pgm Chng from Ctrl**

If the parameter is 1 (i.e. "YES"), the editor **changes its tone bank** each time a **Program Change** command is **received** from the connected controller / PC. Number of newly selected tone conforms to value of the received Program Change command. If "Use Bank Select Command" parameter (see chapter 4.1.2) is "YES", the Bank Select LSB command (i.e. CC #32) is also accepted and active tone bank is also changed.

If the parameter is 0 (i.e. "NO"), **Program Change** command is **ignored** by the SAVVY.

### **4.3.6 Send Manual Tone Slct as Pgm Chng**

If the parameter is 1 (i.e. "YES"), **Program Change** command **is sent to the instrument** each time the number is changed manually (by buttons on SAVVY's front panel).

If the parameter is 0 (i.e. "NO"), **Program Change** command **is not transmitted** after the tone is selected / changed.

## 5 SYSEX MESSAGES GENERATOR

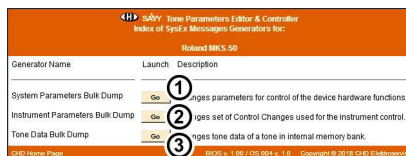
As a support for the users we have made software generator to create System Exclusive messages to control the SAVVY editor. Any necessary SysEx message can be created with this generator without difficult calculating of binary or hexadecimal numbers.

The generator is based on Java scripts so it can run on any computer with web browser (Windows, OSX, etc.)<sup>5</sup>. To send the generated commands you will also need a **utility to send the generated text<sup>6</sup> as a MIDI SysEx dump** (see chapter 6 for recommended software<sup>7</sup>).

Visit our website and download the **“syxgen\_004-20\_Roland-MKS-50”** archive for Roland MKS-50 instrument. Expand the archive to a selected folder on your computer's hard drive (i.e. **“index.html”**, **“00420\_general.html”**, **“00420\_instrument.html”**, **“00420\_tone.html”** and **“00420\_help.html”** files and **“media”** sub-folder).

To launch the SysEx messages generator, simply open the **“index.html”** file in your web browser (e.g. by clicking on the file icon). The generator type selector window opens.

Click on **“Go”** button to request either **System Parameters ①**, **Instrument Parameters ②** or **Tone Data ③** SysEx message generator windows.

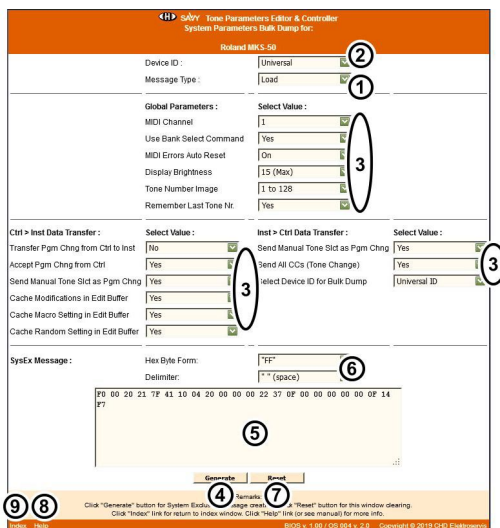


### 5.1 SYSTEM PARAMETERS WINDOW

#### 5.1.1 Change the system parameters

To change / adjust the system parameters:

1. Select **“Load”** message type ①.
2. Select the **“Device ID”** ② (It is either the same number as active MIDI Channel Nr. or **“Universal”**<sup>8</sup>).
3. Select / adjust requested values of System parameters to be changed ③.
4. Click the **“Generate”** button ④.
5. The hexadecimal MIDI SysEx message is generated as a text in the **“SysEx Message”** field ⑤.
6. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) to a MIDI SysEx software<sup>9</sup>.
7. Send the message to SAVVY<sup>10</sup>.
8. SAVVY starts operation with the new system parameters settings immediately, no reset is necessary.



<sup>5</sup> Note that scripts and ActiveX elements must be enabled in web browser for proper function of the generator.

<sup>6</sup> The generated format of the message is **text**. The text can not be saved as a \*.syx or \*.mid file directly, hence a text to SysEx utility is needed.

<sup>7</sup> It is not necessary to use the recommended utility. The same function is provided by various DAW and MIDI SysEx softwares. For required text format and instructions check the documentation of your DAW/software.

<sup>8</sup> “Universal” ID will be recognized by any SAVVY editor.

<sup>9</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>10</sup> SAVVY must be set in **“CTRL→INST”** communication direction.



## 5.1.2 Request the contents of system memory

To request the contents of System parameters memory for backup in your computer:

1. Select **"Request"** message type ①.
2. Select the **"Device ID"** ② (It is either the same number as active MIDI Channel Nr. or **"Universal"**<sup>11</sup>).
3. Click the **"Generate"** button ④.
4. The hexadecimal MIDI SysEx message is generated as a text in the **"SysEx Message"** field ⑤.
5. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>12</sup>.
6. Send the message to SAVVY<sup>13</sup>.
7. SAVVY responds immediately – it sends the System parameter settings as **"Load"** type SysEx message<sup>14</sup>.
8. Now you can save the received message in your computer for further use.

## 5.1.3 Initialize data

To initialize the System data to factory default values:

1. Select **"Initialize"** message type ①.
2. Select the **"Device ID"** ② (It is either the same number as active MIDI Channel Nr. or **"Universal"**<sup>15</sup>).
3. Click the **"Generate"** button ④.
4. The hexadecimal MIDI SysEx message is generated as a text in the **"SysEx Message"** field ⑤.
5. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>16</sup>.
6. Send the message to SAVVY<sup>17</sup>.
7. SAVVY starts operation with the initialized system settings immediately, no reset is necessary.

## 5.1.4 Other functions

Select **"Hex Byte Form"** and **"Delimiter"** character ⑥ as required for your MIDI SysEx software<sup>18</sup>. Default setting of the generator is optimized for the recommended **Pocket MIDI** utility<sup>19</sup> (see Chapter 6). However some DAW or MIDI SysEx utilities require different format of the generated text message.

To clear the text field and return all values to their defaults, click the **"Reset"** button ⑦.

**"Help"** link ⑧ opens new window with brief help.

**"Index"** link ⑨ closes this window and returns to initial generator type selection window.

<sup>11</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>12</sup> See Chapter 6.1.3 for recommended MIDI SysEx software.

<sup>13</sup> SAVVY must be set in **"CTRL→INST"** communication direction and your computer must be connected bi-directionally (both MIDI IN and OUT cables) with SAVVY.

<sup>14</sup> If you are using the recommended MIDI SysEx software, the message should be visible in the "MIDI In Monitor" window - see Chapter 6.1.3.

<sup>15</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>16</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>17</sup> SAVVY must be set in **"CTRL→INST"** communication direction.

<sup>18</sup> See the documentation of your DAW for required format.

<sup>19</sup> The default format is also compatible with Bome SendSX and various other softwares.

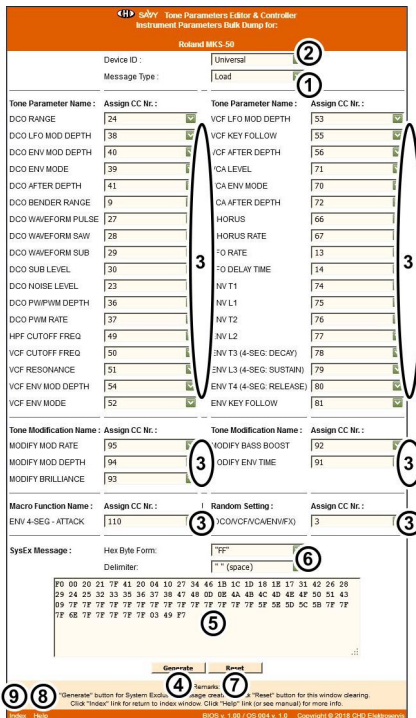
## 5.2 INSTRUMENT PARAMETERS WINDOW

### 5.2.1 Create / adjust the MIDI CC map

You can **create** your own user **MIDI CC map** in this generator window (e.g. to use your modern Virtual analogue synthesizer as a controller for your vintage instrument).

To create your own MIDI CC map:

1. Select **“Load”** message type ①.
2. Select the **“Device ID”** ② (It is either the same number as active MIDI Channel Nr. or **“Universal”**<sup>20</sup>).
3. For each of tone parameter and functions, select / change the respective MIDI CC<sup>21</sup> Nr. as you need ③.
4. Click the **“Generate”** button ④.
5. The hexadecimal MIDI SysEx message is generated as a text in the **“SysEx Message”** field ⑤.
6. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) to a MIDI Sysex software<sup>22</sup>.
7. Send the message to SAVVY<sup>23</sup>.
8. SAVVY starts operation with the new user MIDI CC mapping immediately, no reset is necessary.



### 5.2.2 Request MIDI CC map

Actual **MIDI CC map** can be **saved** in your computer for backup. To request the MIDI CC map:

1. Select **“Request”** message type ①.
2. Select the **“Device ID”** ② (It is either the same number as active MIDI Channel Nr. or **“Universal”**<sup>24</sup>).
3. Click the **“Generate”** button ④.
4. The hexadecimal MIDI SysEx message is generated as a text in the **“SysEx Message”** field ⑤.
5. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>25</sup>.
6. Send the message to SAVVY<sup>26</sup>.
7. SAVVY responds immediately – it sends the MIDI CC map as **“Load”** type SysEx message<sup>27</sup>.
8. Now you can save the received message in your computer for further use.

<sup>20</sup> “Universal” ID will be recognized by any SAVVY editor.

<sup>21</sup> You can assign more than one parameter to a single MIDI CC Nr.

<sup>22</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>23</sup> SAVVY must be set in **“CTRL→INST”** communication direction.

<sup>24</sup> “Universal” ID will be recognized by any SAVVY editor.

<sup>25</sup> See Chapter 6.1.3 for recommended MIDI SysEx software.

<sup>26</sup> SAVVY must be set in **“CTRL→INST”** communication direction and your computer must be connected bi-directionally (both MIDI IN and OUT cables) with SAVVY.

<sup>27</sup> If you are using the recommended MIDI SysEx software, the message should be visible in the “MIDI IN Monitor” window - see Chapter 6.1.3.



## 5.2.3 Initialize MIDI CC map

To **Initialize** the MIDI CC map to **factory default** values:

1. Select "**Initialize**" message type ①.
2. Select the "**Device ID**" ② (It is either the same number as active MIDI Channel Nr. or "**Universal**"<sup>28</sup>).
3. Click the "**Generate**" button ④.
4. The hexadecimal MIDI SysEx message is generated as a text in the "**SysEx Message**" field ⑤.
5. **Copy** the text in clipboard (CTR+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>29</sup>.
6. Send the message to SAVVY<sup>30</sup>.
7. SAVVY starts operation with the initialized MIDI CC map immediately, no reset is necessary.

## 5.2.4 Other functions

Select "**Hex Byte Form**" and "**Delimiter**" character ⑥ as required for your MIDI SysEx software<sup>31</sup>. Default setting of the generator is optimized for the recommended **Pocket MIDI** utility<sup>32</sup> (see Chapter 6). However some DAW or MIDI SysEx utilities require different format of the generated text message.

To clear the text field and return all values to their defaults, click the "**Reset**" button ⑦.

"**Help**" link ⑧ opens new window with brief help.

"**Index**" link ⑨ closes this window and returns to initial generator type selection window.

<sup>28</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>29</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>30</sup> SAVVY must be set in "**CTRL→INST**" communication direction.

<sup>31</sup> See the documentation of your DAW for required format.

<sup>32</sup> The default format is also compatible with Bome SendSX and various other softwares.

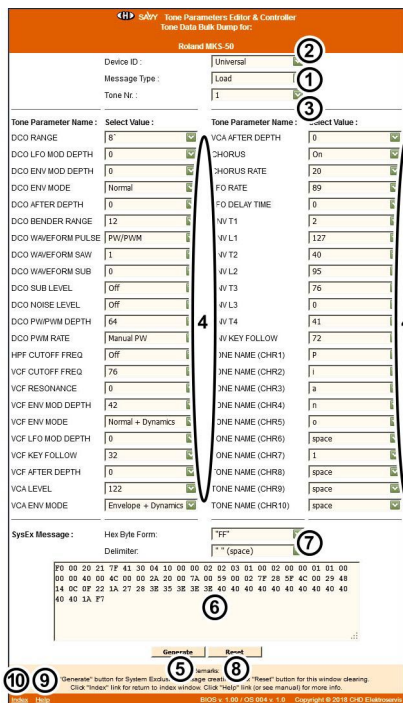
## 5.3 TONE DATA WINDOW

### 5.3.1 Create single user tone

A **single tone** can be **created** by entering the individual tone parameter values (e.g. to create tone from a Magazine paper sheets, Video tutorials or advices from other users).

To create your own user tone:

1. Select **"Load"** message type ①.
2. Select the **"Device ID"** ② (It is either the same number as active MIDI Channel Nr. or **"Universal"**<sup>33</sup>).
3. Select the **"Tone Nr."** you want to create ③.
4. Select / change the respective value for each of tone parameters ④.
5. Click the **"Generate"** button ⑤.
6. The hexadecimal MIDI SysEx message is generated as a text in the **"SysEx Message"** field ⑥.
7. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) to a MIDI Sysex software<sup>34</sup>.
8. Send the message to SAVVY<sup>35</sup>.
9. SAVVY saves the new tone to selected **"Tone Nr."** for immediate use.



### 5.3.2 Request single tone

A **single tone** can be **backed up** (e.g. to share your sounds with other users).

To request single tone data:

1. Select **"Request"** message type ①.
2. Select the **"Device ID"** ② (It is either the same number as active MIDI Channel Nr. or **"Universal"**<sup>36</sup>).
3. Select the **"Tone Nr."** you want to request / backed-up ③.
4. Click the **"Generate"** button ⑤.
5. The hexadecimal MIDI SysEx message is generated as a text in the **"SysEx Message"** field ⑥.
6. **Copy** the text in clipboard (CTRL+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>37</sup>.
7. Send the message to SAVVY<sup>38</sup>.
8. SAVVY responds immediately – it sends the MIDI CC map as **"Load"** type SysEx message<sup>39</sup>.
9. Now you can save the received message in your computer for further use.

<sup>33</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>34</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>35</sup> SAVVY must be set in **"CTRL→INST"** communication direction.

<sup>36</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>37</sup> See Chapter 6.1.3 for recommended MIDI SysEx software.

<sup>38</sup> SAVVY must be set in **"CTRL→INST"** communication direction and your computer must be connected bi-directionally (both MIDI IN and OUT cables) with SAVVY.

<sup>39</sup> If you are using the recommended MIDI SysEx software, the message should be visible in the "MIDI IN Monitor" window - see Chapter 6.1.3.

### 5.3.3 Initialize single tone

To **Initialize** a single tone to **factory default** values:

1. Select "**Initialize**" message type ①.
2. Select the "**Device ID**" ② (It is either the same number as active MIDI Channel Nr. or "**Universal**"<sup>40</sup>).
3. Select the "**Tone Nr.**" you want to initialize ③
4. Click the "**Generate**" button ④.
5. The hexadecimal MIDI SysEx message is generated as a text in the "**SysEx Message**" field ⑤.
6. **Copy** the text in clipboard (CTR+C) and **paste** (CTRL+V) in a MIDI Sysex software<sup>41</sup>.
7. Send the message to SAVVY<sup>42</sup>.
8. SAVVY initializes and saves the selected tone immediately, no reset is necessary.

### 5.3.4 Other functions

Select "**Hex Byte Form**" and "**Delimiter**" character ⑥ as required for your MIDI SysEx software<sup>43</sup>. Default setting of the generator is optimized for the recommended **Pocket MIDI** utility<sup>44</sup> (see Chapter 6). However some DAW or MIDI SysEx utilities require different format of the generated text message.

To clear the text field and return all values to their defaults, click the "**Reset**" button ⑦.

"**Help**" link ⑧ opens new window with brief help.

"**Index**" link ⑨ closes this window and returns to initial generator type selection window.

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<sup>40</sup> "Universal" ID will be recognized by any SAVVY editor.

<sup>41</sup> See Chapter 6.1.2 for recommended MIDI SysEx software.

<sup>42</sup> SAVVY must be set in "**CTRL→INST**" communication direction.

<sup>43</sup> See the documentation of your DAW for required format.

<sup>44</sup> The default format is also compatible with Bome SendSX and various other softwares.

## 6 RECOMMENDED MIDI SOFTWARE

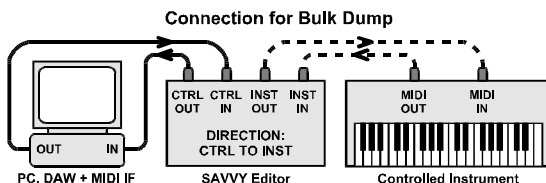
The hexadecimal MIDI SysEx messages created in the Generators (as described in chapter 5) are in **plain text format**. The text can not be saved as a \*.syx or \*.mid file directly, hence a text to SysEx capable utility or DAW is needed.

### 6.1 POCKET MIDI

**Pocket MIDI**<sup>45</sup> is a utility that can be used to send the text as a SysEx message. It is a simple MIDI monitoring tool for both Windows and Mac OSX platforms. **Pocket MIDI** is a **freeware** for commercial, non-profit or private use.

#### 6.1.1 Setting up the computer<sup>46</sup> and software

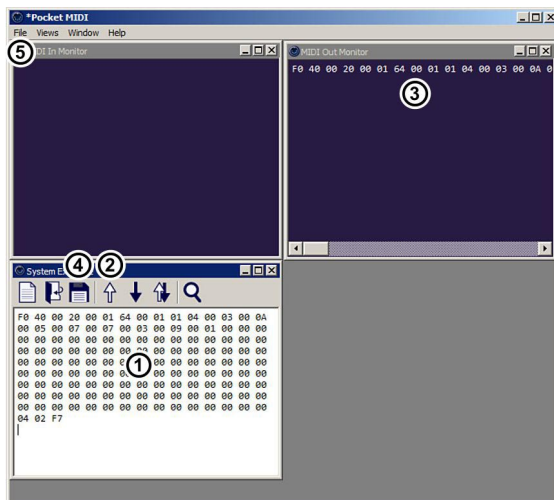
1. **Download** the **Pocket MIDI** utility at <https://www.morson.jp/pocketmidi-webpage/>
2. **Install** the utility in your computer.
3. **Connect** SAVVY accordingly to the figure "Connection for Bulk Dump".
4. **Select** the MIDI interface **Input and Outputs** to device where the SAVVY is connected to (drop-down menu **Views** → **MIDI Settings** → **Input Port / Outpu Port**).



#### 6.1.2 Send the text SysEx message to SAVVY

Basic procedure to send any SysEx data to SAVVY.

1. Generate required SysEx message in the SysEx Messages Generator (as described in Chapter 5)<sup>47</sup>.
2. **Copy** the text in clipboard (CTR+C) and **paste** (CTRL+V) in "System Exclusive" window ①.
3. Click the "↑" ("Transmit") arrow ② to send the data to SAVVY.
4. The sent message appears in the "MIDI Out Monitor" window ③.
5. Alternatively **you can save the file** for future use (either by the floppy icon ④ as a \*.txt file or in the drop-down "File" menu ⑤ as a \*.pocketmidi file).



<sup>45</sup> Pocket MIDI is Copyright © MORSON JAPAN Co.,Ltd. All rights reserved.

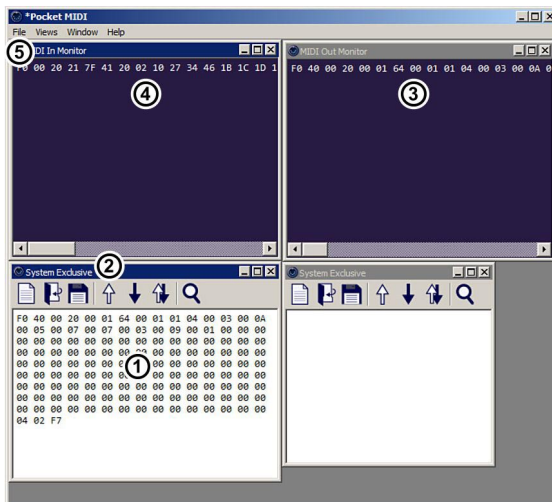
<sup>46</sup> Computer MIDI interface must be active / switched on and all necessary MIDI drivers correctly installed.

<sup>47</sup> The correct "FF" Hex Byte Form and " " (space) for Delimiter are the initial values after the generator is launched, so there is no need to change them for Pocket MIDI.



### 6.1.3 Request the SysEx data from SAVVY

1. **Generate** required ("Request" type) SysEx message in the SysEx Messages Generator (as described in Chapter 5)<sup>48</sup>.
2. **Copy** the text in clipboard (CTR+C) and **paste** (CTRL+V) in "System Exclusive" window ①.
3. Click the "↑" ("Transmit") arrow ② to send the data to SAVVY.
4. The sent message appears in the "MIDI Out Monitor" window ③.
5. SAVVY responds with "Load" type SysEx message. The received message appears in the "MIDI In Monitor" window ④.
6. Click on the "MIDI In Monitor" window heading and **Save** the data (File dropdown menu ⑤) as a \*.pocketmidi file) for future use.
7. Alternatively **you can copy the data** (CTRL+C) from "MIDI In Monitor" window ④ and paste (CTRL+V) to any text editor and **save** as a \*.txt or document file.



## 6.2 ALTERNATIVE SOFTWARE SOLUTIONS

There are various DAW and MIDI utilities<sup>49</sup> that can be used for the communication with SAVVY, both commercial and free. Among the others:

**MIDI-OX** (free for private users, paid for commercial users) – advanced MIDI tool for MS Windows computers:  
<http://www.midiox.com/>

**Bome SendSX** (postcardware for private users, reasonably paid for commercial users) – Simple and effective MS Windows MIDI utility:  
<https://www.bome.com/products/sendsx>

**InerziaSysEx** (commercial) – advanced MIDI tool for Mac OSX:  
available on iTunes

**Steinberg Cubase Pro** (commercial) - DAW for both MS Windows and Mac OSX computers with full sysex support:  
<http://www.steinberg.net>

**Apple Logic Pro** (commercial) – Mac OSX DAW with full sysex support (all versions up to Logic Pro X):  
<https://www.apple.com/logic-pro/>

**Cakewalk Sonar** (commercial) – MS Windows DAW with full sysex support:  
<http://www.cakewalk.com/>

etc.

<sup>48</sup> The correct "FF" Hex Byte Form and " " (space) for Delimiter are the initial values after the generator is launched, so there is no need to change them for Pocket MIDI.

<sup>49</sup> All mentioned products are copyright of their respective owners.



## 7 TONE MEMORY ORGANIZER

The Tone Memory Organizer is a support software what we have made for the users to rename and relocate individual tones stored in SAVVV's tone memory. Also whole tone banks can be copied, exchanged or initialized. The software and guide how to use it are available for downloading at our website.

**SAVVY Tone Memory Organizer for Roland MKS-50 (OS 004 ver. 2.0)**

Insert whole received Bulk Dump stream:

PO 00 20 21 7F 41 10 04 20 00 00 00 22 37 0E 00 00 00 00 0E 14 F7 E9 00  
20 21 7F 41 20 04 20 27 34 46 18 1C 1D 18 1E 17 31 42 28 28 29 23 24 32 33  
35 36 37 38 47 48 00 0E 4A 4B 4C 4D 4E 4F 50 51 43 09 7F 7F 7F 7F 7F 7F  
7F 7F 7F 7F 7F 7F 5F 5F 5F 5F 5F 5F 7F 7F 6E 7F 7F 7F 7F 7F 03 3C F7 F0  
00 20 21 7F 41 30 04 20 00 00 02 02 03 01 00 02 00 01 01 00 00 00 40  
00 4C 50 00 28 20 00 7A 50 58 00 02 7F 28 5F 4C 00 28 48 14 0C 7F 22 1A 27  
A5 A6 A7 A8 A9 AA AB AC AD AE AF B0 B1 B2 B3 B4 B5 B6 B7 B8 B9 BA BB BC BD BE BF

Check Data OK

Source Tone Data:

Tone No. (Bank No.) (Pgm No.) (Name) (SysEx Data)  
24 0 23 BestPiano F0 00 20 21 7F 41 30 04 20 00 17 00 02 02 0

Target Tone Data:

Tone No. (Bank No.) (Pgm No.) New Name / Copy Source (SysEx Data)  
773 6 4 BestPiano F0 00 20 21 7F 41 30 04 20 06 04 00 02 02 0

Execute

Reset Index Help © 2009 CHD Elektroservis

**Tone Library**

Bank 0		Bank 1		Bank 2		Bank 3		Bank 4		Bank 5		Bank 6	
Tone	Name	Tone	Name	Tone	Name	Tone	Name	Tone	Name	Tone	Name	Tone	Name
001:	Brass 2	129:	Bl Phase	257:	RichStrings	385:	E-Piano 1	513:	ObiBasses	641:	CheesyOrgn	769:	Piano-FX
002:	Brass 3	130:	Swamp Dwn	258:	Orchestra	386:	Clavi	514:	ObiSnare	642:	ChownOrgn	770:	Clavichord
003:	BrassForma	131:	Sunrise	259:	SynOrchestra	387:	Harpeichrd	515:	Piano 3	643:	PipeOrgn2	771:	Harpes 2
004:	BrassForma	132:	Sunrise	260:	BrassSwgn	388:	ChorusGuit	516:	E-Piano 2	644:	PipeOrgn2	772:	AccoGuitar
005:	BrassForma	133:	Sunrise	261:	BrassSwgn	389:	ChorusGuit	517:	Acid-Piano	645:	Accordion	773:	AccoGuitar



Tone Parameters Editor & Controller

Model TPE-1 Nr. 8-361 / Bios v. 1.00 / OS Nr. 004 v. 2.0

Document: 8361100-00420\_manual

Manufacturer:

CHD Elektroservis, Czech Republic

[www.chd-el.cz](http://www.chd-el.cz)      [info@chd-el.cz](mailto:info@chd-el.cz)



**SAVVY**

Tone Parameters Editor & Controller