



Tool for Creating SysEx Data
for Yamaha Keyboards

Manual

Sysexcel is a joint venture
of

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Version 3.02

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1. Introduction

1.1 What is SysExcel?

The synonym SysExcel is a neologism out of sysex and Excel. Clearing up the comprehensibility of sysex data (system exclusive data) is the whole purpose of this tool. For many keyboarders this group of objects seems to be a closed book. Sysexcel will open this book and make you more and more familiar with the usability of sysex.

Since I don't know how to programm separate software I used Microsofts Excel to realize SysExcel. Starting with a sysex library from Robert Müller (Mod of the Yamaha-Europe forum). This library gave me the inspiration to create the tool.

1.2 What are the functions of SysExcel?

As a clearly arranged alternative SysExcel enables the user to create sysex data for several parts of Yamaha Keyboards. Furthermore there is the option to transfer sysex strings into sequencer software. Therefore I take attention to the specialities of the sequencer software like XG-Works (Yamaha) and Cubase VST. For an example XG-Works does not allow the "F0" at the beginning of the string. Cubase VST also need a special format for a sysex bank with commas. In order to complete the options the users of Cakewalk/Sonar or Logic will find the sysex banks in one row, the easiest way of transfer.

1.3 Functions in version 1.00

Version 1.00 includes the parameter for VH (Vocal Harmony) and the effects for the DSP which is routed for the microphone channel. Please find more details below (Topic 5).

1.4 Functions in version 2.00

To realize the version 2.00 it was necessary to build a new worksheet. Draw your attention to the worksheet "Systemeffekte" which is written for the effect section of the keyboard. The basic effect parameters for Reverb, Chorus, Variation and insertion effects are included. Please find more details below (Topic 6).

From Version 2.20 onwards SysExcel there is a brandnew look and feel of the program. The Excel environment removed and the program looks like an

independent software. This feature can only be implemented with the help of Klemens Siebert, who programmed the VBA code. Many thanks to Klemens.

1.5 Functions in version 3.00

From Version 3.00 onwards the awareness and programming knowledge of Rainer Martin has a big influence in SysExcel. Similarly functionality and possibilities increased. VH Presets as well as each effect presets are editable in detail parameters. This feature can only be implemented with the help of Rainer Martin, who programmed the VBA code. Many thanks to Rainer. Please find more details under the menu item Overview Functions. Furthermore look & feel of the program have been optimised.

2. Global Overview

2.1 Screens

SysExcel has 2 screens:

2.1.1 Screenshot VH-Mikroeffekte

To be used for Vocal Harmony and Microphone effect settings.

The screenshot shows the 'VH Parameter' dialog box, which is used for configuring Vocal Harmony and Microphone effects. The dialog is divided into several sections:

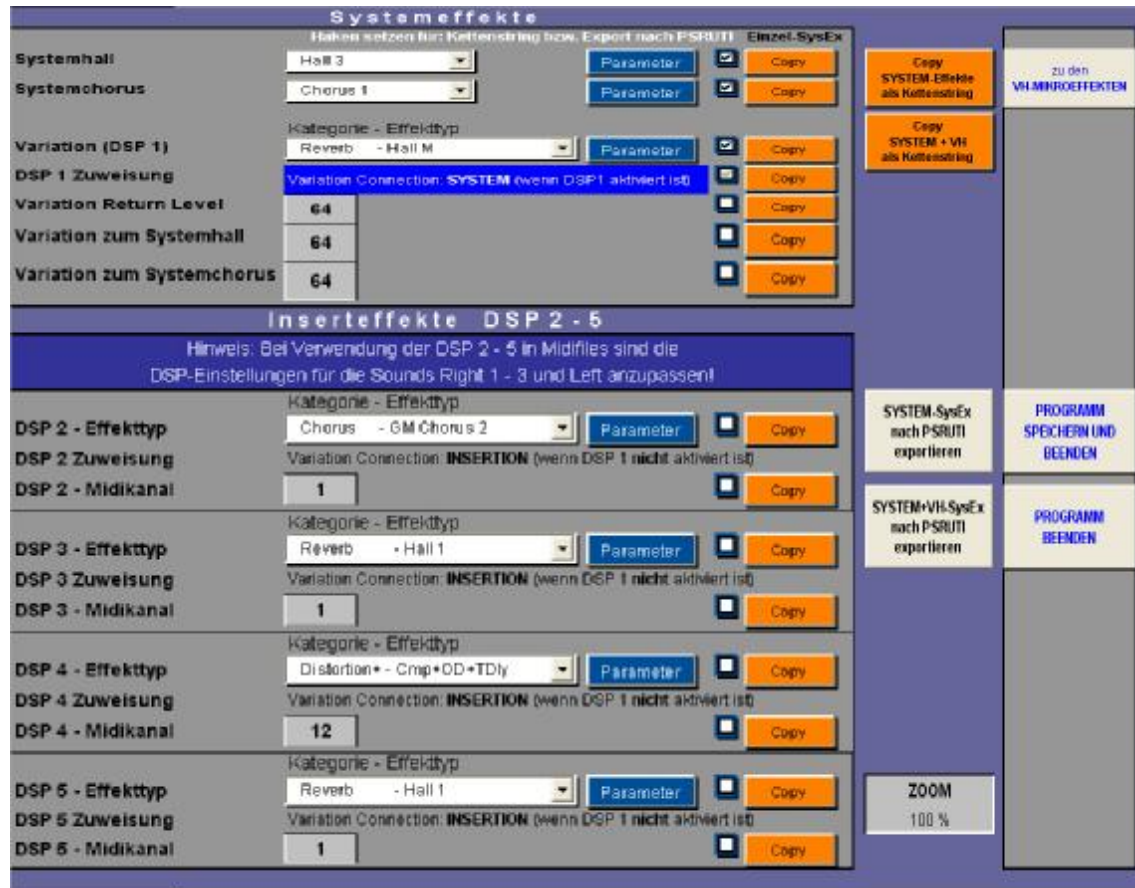
- VH Parameter**
 - VH an / aus:** A dropdown menu set to 'On'.
 - VH Mode:** A dropdown menu set to 'Vocoder-Modus'.
 - VH-Typ:** A dropdown menu set to 'Men Choir'.
 - VH-Kanal:** A numeric input field set to '15'.
 - Keyboardsteuerung VH auswählen:** A dropdown menu set to 'Off'.
 - Balance Mikro/VH:** A slider control set to 'L=H'.
 - Mikrofonvolumen:** A numeric input field set to '100'.
- DSP 6 - Mikrofoneffekt**
 - DSP 6 ein-ausschalten:** A checkbox labeled 'DSP 6 - on'.
 - DSP 6 Effektyp:** A dropdown menu set to 'Hall 1'.
 - DSP 6 Effektivolumen:** A numeric input field set to '20'.
- Volumen Systemeffekte Mikrophon**
 - Volumen Systemeffekt 1 (Hall):** A numeric input field set to '30'.
 - Volumen Systemeffekt 2 (Chorus):** A numeric input field set to '0'.

On the right side of the dialog, there are several buttons and a list:

- Einzel-SysEx:** A button labeled 'Copy'.
- Hinweis:** A yellow box containing the text: 'Bitte zuerst das Ausgabeformat wählen!'.
- Output Format Selection:** A list with three options: 'XG-Works', 'Cubase VST', and 'Cakewalk'.
- Copy VH-EFFEKTE als Kettenstring:** A button labeled 'Copy'.
- Copy SYSTEM + VH als Kettenstring:** A button labeled 'Copy'.
- VH-SysEx nach PSRUTI exportieren:** A button labeled 'Copy'.
- SYSTEM+VH-SysEx nach PSRUTI exportieren:** A button labeled 'Copy'.
- Navigation Buttons:** 'zu den SYSTEMEFFEKTEN', 'PROGRAMM SPEICHERN UND BEENDEN', and 'PROGRAMM BEENDEN'.

2.1.2 Screenshot Systemeffekte

To be used for System - and DSP effect settings



2.2 Basic Informations

2.2.1 Output Format

The output format can be adjusted at the VH-Mikroeffekte view. Therefore three options are available:

XG Works
Cubase VST
Cakewalk

Reference: Different Sequencer programs are using different formats for the same SysEx.

Hinweis:
Bitte zuerst das
Ausgabeformat
wählen!

☐ XG-Works


☒ Cubase VST

☐ Cakewalk

For example XG Works: 43 10 4C 02 01 40 06 00 F7
Resp. Cubase VST: F0,43,10,4C,02,01,40,06,00,F7

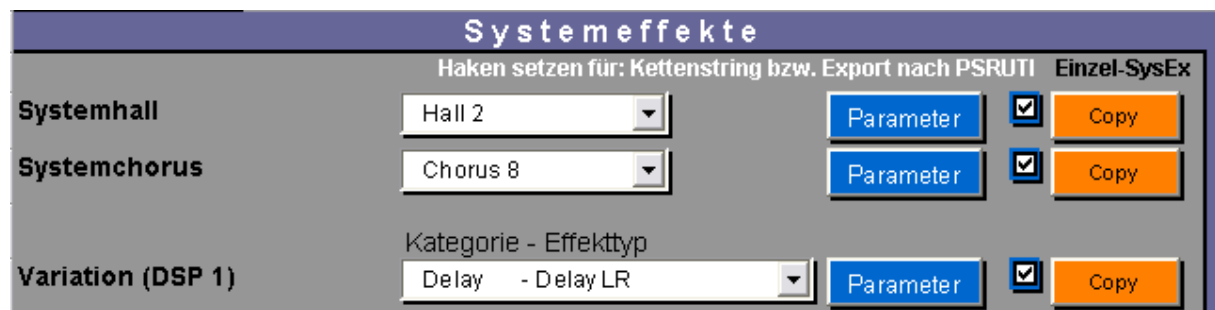
Reference: Cubase SX is using the same format as Cakewalk.

2.2.2 Copy SysEx separately

Each SysEx can be copied separately into the windows clipboard by using the button . Afterwards it can be pasted into each sequencer program. Take care adjusting the correct output format (Ausgabeformat) before.

2.2.3 Creating a multiple SysEx String(Kettenstring)

A multiple SysEx string includes following SysEx in one line. To create a multiple SysEx string the adequate check box has to be marked for each used effect (Haken setzen für: Kettenstring bzw. Export nach PSRUTI).



Reference: To accept detailed parameters the check box has to be marked also before the parameter window will be opened.

A multiple string can be copied by using the buttons



Copy SYSTEM-Effekte als Kettenstring will copy system effects only;
Copy VH-Effekte als Kettenstring will copy VH effects only and
Copy SYSTEM + VH als Kettenstring will copy both as a multiple string.

Example for multiple string: F0 43 10 4C 02 01 00 01 10 F7 F0 43 10 4C 02 01 20 41 08 F7 F0 43 10 4C 02 01 40 06 00 F7 F0 43 10 4C 02 01 5A 01 F7

Remark:

- Ø Multiple strings are useful for Cakewalk or Logic. Others, like Cubase VST or XG-Works, uses single strings.
- Ø *Unfortunately the sequencer software is not able to bring the multiple strings into a time sheet so it is recommended to make a XG Optimierung with PSRUTI to finalise the file.*

2.2.4 Creating an Export File for PSRUTI

By using one of the Export buttons a textfile which includes all selected SysEx (where the check box is marked) can be created. This file can be imported into PSRUTI.

By using the buttons




the export file can be created.


SYSTEM-SysEx nach PSRUTI exportieren can write the SysEx for the system effects; VH-SysEx nach PSRUTI exportieren can write the SysEx for the VH parameters and SYSTEM+VH-SysEx nach PSRUTI exportieren will write both.

Remark:

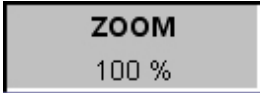
- Ø *By using one of the buttons the “save as” window of your WINDOWS will be opened. A default name for the file is written automatically, but can be changed user defined. Take notice that the file extension “.txt” is necessary.*
- Ø *The written file will be shown promptly in the WINDOWS editor.*
- Ø *During PSRUTI is importing this file the included SysEx will be optimised automatically into the correct time sheet.*

2.2.5 Change View

By using the button  the system effect view will be displayed.

By using the button  the VH and Microphone effect view will be displayed.

2.2.6 Zoomfunction

By using the zoomfunction  the size of the program window can be changed.

2.3 Saving Options

The program can be closed on different ways:

Either with this two buttons



“PROGRAMM BEENDEN” - Exit without saving

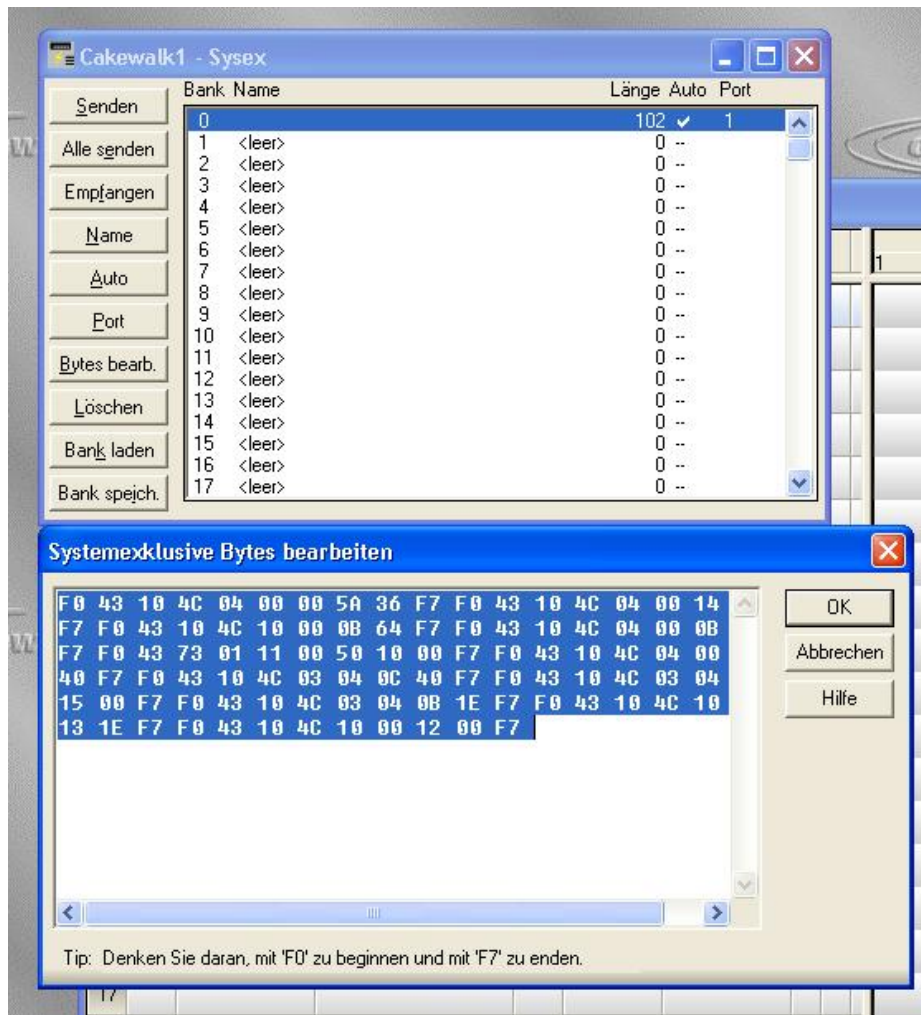
and

“PROGRAMM BEENDEN UND SPEICHERN” - Save and Exit

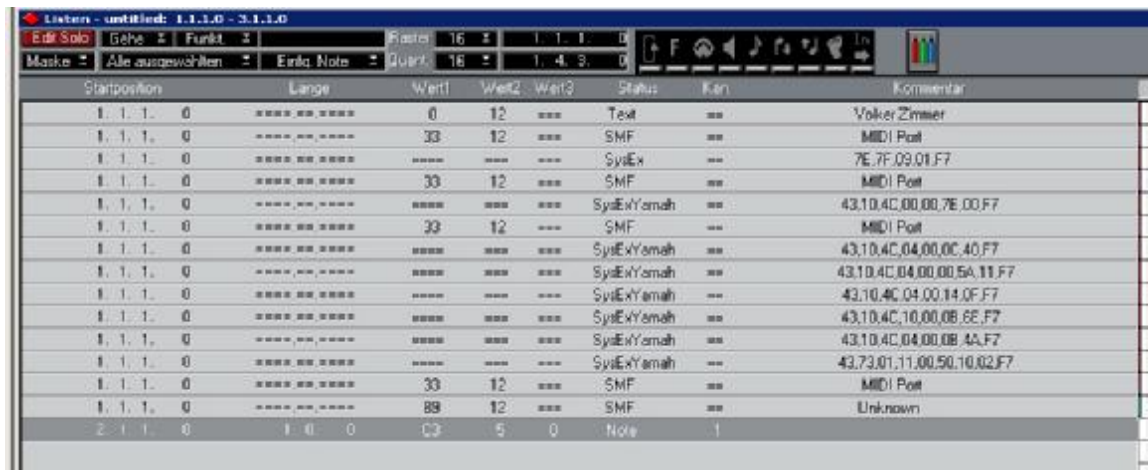
By using this button favourite settings of parameters will be saved.

2.4 Screenshots:

2.4.1 Screenshot under Cakewalk

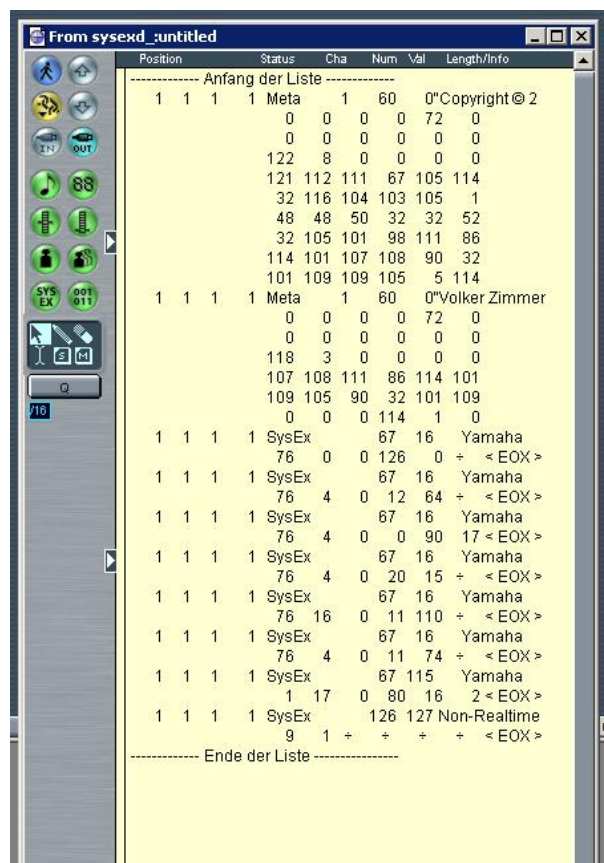


2.4.2 Screenshot under Cubase



Startposition	Longe	Wert1	Wert2	Wert3	Status	Ken	Kommentar
1. 1. 1. 0	00000000	0	12	---	Text	---	Volker Zimmer
1. 1. 1. 0	00000000	33	12	---	SMF	---	MIDI Port
1. 1. 1. 0	00000000	---	---	---	SysEx	---	7E 7F 09 01 F7
1. 1. 1. 0	00000000	33	12	---	SMF	---	MIDI Port
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 00 00 7E 00 F7
1. 1. 1. 0	00000000	33	12	---	SMF	---	MIDI Port
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 04 00 00 40 F7
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 04 00 00 5A 11 F7
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 04 00 14 0F F7
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 10 00 0B 6E F7
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 10 4C 04 00 0B 4A F7
1. 1. 1. 0	00000000	---	---	---	SysExYamaha	---	43 73 01 11 00 50 10 02 F7
1. 1. 1. 0	00000000	33	12	---	SMF	---	MIDI Port
1. 1. 1. 0	00000000	88	12	---	SMF	---	Unknown
2. 1. 1. 0	1 0 0	C3	5	0	Note	1	

2.4.3 Screenshot under Logic



Position	Status	Cha	Num	Vel	Length/Info
----- Anfang der Liste -----					
1 1 1 1	Meta	1	60	0	0"Copyright © 2
		0	0	0	72 0
		0	0	0	0 0
		122	8	0	0 0
		121	112	111	67 105 114
		32	116	104	103 105 1
		48	48	50	32 32 52
		32	105	101	98 111 86
		114	101	107	108 90 32
		101	109	109	105 5 114
1 1 1 1	Meta	1	60	0	0"Volker Zimmer
		0	0	0	72 0
		0	0	0	0 0
		118	3	0	0 0
		107	108	111	86 114 101
		109	105	90	32 101 109
		0	0	0	114 1 0
1 1 1 1	SysEx	67	16		Yamaha
		76	0	0	126 0 + <EOX>
1 1 1 1	SysEx	67	16		Yamaha
		76	4	0	12 64 + <EOX>
1 1 1 1	SysEx	67	16		Yamaha
		76	4	0	90 17 <EOX>
1 1 1 1	SysEx	67	16		Yamaha
		76	4	0	20 15 + <EOX>
1 1 1 1	SysEx	67	16		Yamaha
		76	16	0	11 110 + <EOX>
1 1 1 1	SysEx	67	16		Yamaha
		76	4	0	11 74 + <EOX>
1 1 1 1	SysEx	67	115		Yamaha
		1	17	0	80 16 2 <EOX>
1 1 1 1	SysEx	126	127		Non-Realtime
		9	1	+	+ + <EOX>
----- Ende der Liste -----					

3. Functions Overview

3.1 Worksheet "VH-Mikrofoneffekte" (Vocal Harmony)

3.1.1 Input options VH:

Please find below the basic parameters for Vocal Harmony (VH):

Ø VH on-off (dropdown list)

The Tyros has a button for activating the VH. For other keyboards, like PSR 3000 it can be activated in the system menu. Both models allow to control the activity of VH by receiving of sysex. Default value is "ON". By selecting "OFF" all corresponding sysex for the VH parameter will be hidden.

Ø VH Mode (dropdown list)

Most of the VH presettings are working in two different modes. The "Chordal" mode is preferably used for playing with styles and the "Vocoder" mode for playing with songs (midifiles) having a VH-Track. Default is "Vocoder-Modus".

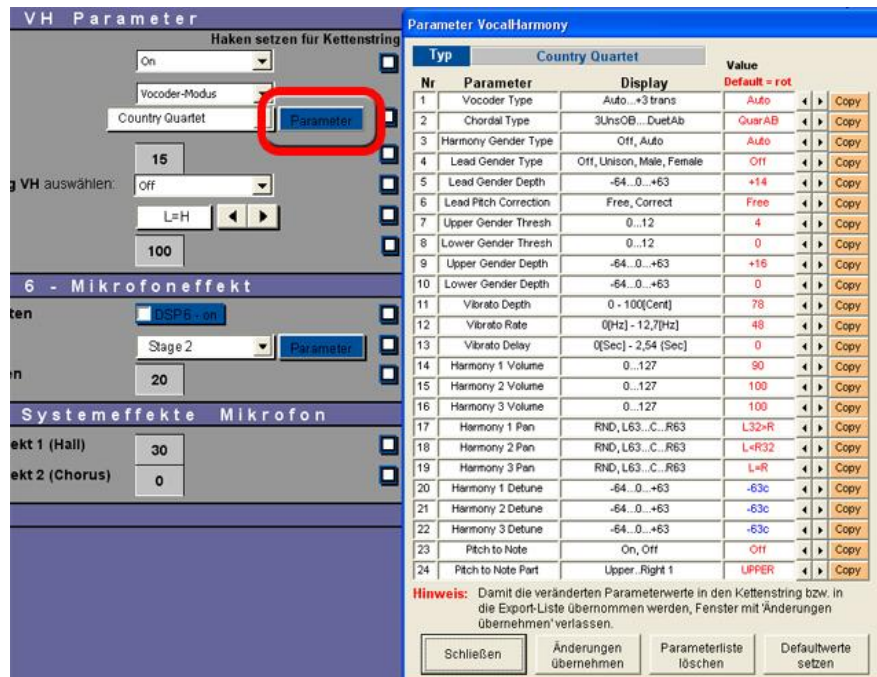
Remark: Working in Vocoder Mode the KBD (Keyboard) option is available for sysex. Working in Chordal Mode KBD is fixed to „Lower“. For the prestetings which are working in other modes like Detune or Chromatic the proper sysex will be displayed even if Vocoder- or Chordal mode is selected.

Ø VH Type (dropdown list)

Selection of the VH presets for PSR-Models and Tyros. Using the button

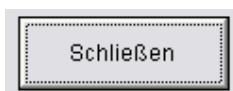
Parameter

show a popup window with the detailed VH Parameters of the active VH preset. Default values are shown with red font, changed parameters with blue font. First call show default values.

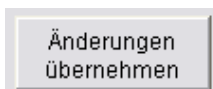


The button **Copy** allows to copy the changed parameter to the clipboard.

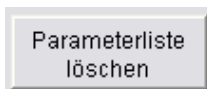
At the bottom of the window you find 4 buttons:



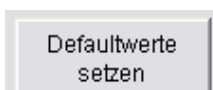
- Close without changes.



- Close and save the changed parameters. Default values are ignored, because no changes are necessary.



- deleting of existing values in the export table to PSRUTI.



- reset to default values.

Ø VH Channel (Input box - range 1 to 16)

Selection of the track of the midi file that includes the VH events. Normally track 15 or 16 is used for these events.

Ø Keyboard control VH (dropdown list)

Selection of the control part of the VH. Use "upper" or "lower" in chordal mode in order to play with styles and "off" for playing with songs.

Ø Balance Micro/VH (Input box - range 1 to 127)

Concerning this parameter the keyboard models differentiate in there labelling. In case of Tyros there is a button L/H (L=Voice, H=VH)where as the 9000 series uses D/W which means the same (D=dry=Voice, W=wet=VH).

3.1.2 Microphone parameters

Ø Microphone volume (Input box - range 1 to 127)

Input for microphone output. Default value is "100".

Ø DSP 6 (Microphone effect) on-off (dropdown list)

This parameter allows to activate the DSP effect for the microphone. If the effect is deactivated sysex will be hidden for effect type and volume will be ignored by the keyboard.

Ø DSP 6 (Microphone effect) Effect type (dropdown list)

Only reasonable effects will be shown in the dropdown list. Furthermore some special effects are included.

Ø DSP 6 (Microphone effect) Volume (Input box - range 1 to 127)

Select the value for the microphone DSP effect.

**Ø Volume system effect 1 (Reverb) for the microphone
(Input Box - range 1 to127)**

Chose the volume for the system effect 1 (reverb). The value has influence on the reverb ratio for the microphone. The presetting for the effect is available under the worksheet "Systemeffekte".

**Ø Volume System effect 2 (Chorus) for the microphone
(Input Box - range 1 to127)**

Chose the volume for the system effect 1 (chorus). The value has influence of the reverb ratio for the microphone. The presetting of the effect is available under the worksheet "Systemeffekte".

3.2 Worksheet „Systemeffekte“ (System effects)

3.2.1 Input options system effects

Ø System effects for Reverb and Chorus (dropdown list)

System effect 1 (Reverb) and 2 (Chorus) can be selected by means of the dropdown list. The volume value for each track of the midi song will be defined with Controller 91 (Reverb) and Controller 93 (Chorus). By clicking the button "Parameter" a popup window shows all detailed parameters of the selected effect.

Ø DSP 1 (Variation)

The first DSP will be switched for variation effect. This means the effect influences to all tracks in the same way as reverb and chorus.

The dropdown list provides an overview of all available effects of the keyboard. The volume value for each track of the midi song will be defined with controller 94. The button parameter opens a popup window with the detailed parameters of the selected effect.

Ø DSP 1 Routing

If the DSP is selected using the button “Kettenstring” the sysex for the routing will be selected as variation effect automatically.



Ø Variation Return Level

Represents the master volume of the variation effect. Default is „64“

Ø Variation to reverb

The variation effect can be routed to the system reverb. Default = 64.

Ø Variation to chorus

The variation effect can be routed to the system chorus. Default = 64.

Ø DSP 2-5 (Insert effects)

The remaining DSP effects are routed as insert effects. Up to 4 midi channels can be provided with one of these DSP effects. The properties can be adjusted by the detailed parameters.

Remark: Keep in mind that not all DSP effects should be used for the midisong. I recommend to use only the Variation and one Insert DSP. The remaining effects can be used by the voices for R 1 to R 3 and Left.

Input options:

With the dropdown list the type of effect can be selected.

The Input box gives you the opportunity to select the midi channel.

4. History:

Version 1.01 dated 30.09.2004

- ü A bug with the VH selection was fixed.
- ü Some format changes were carried out

Version 1.10 dated 18.10.2004

- ü Export functionality to the program PSRUTI by Heiko Plate (<http://www.heikoplate.de>) was implemented.

Version 1.11 dated 20.10.2004

- ü A bug in the dialog box „Save As“ was fixed.

Version 2.00 dated 05.11.2004

- ü Worksheet „Systemeffekte“ was implemented
- ü Dialog box „Save As“ was optimised.

Version 2.10 dated 03.01.2005

- ü Routing of variation- and insert effekt was enhanced (worksheet: „Systemeffekte“).
- ü Effect return level for variation Effect was implemented (worksheet: „Systemeffekte“).
- ü SysEx display for Cubase (comma displaying) was implemented (worksheet: „Systemeffekte“ and „VH-Mikroeffekte“).
- ü Vocoder mode selection for chordal- and vocoder-Mode was worked out (worksheet: „VH-Mikroeffekte“).

Version 2.11 dated 04.01.2005

- ü Button „Kopieren in die Zwischenablage“ was implemented (worksheet: „Systemeffekte“ und „VH-Mikroeffekte“).
- ü Sysexrouting of VH and DSP 6 was optimised.

Version 2.20 dated 09.01.2005

- ü Excel environment was removed (VBA programming by Klemens Siebert)
- ü Fit to screen resolution automatically
- ü A bug with the PSRUTI export function for VH Sysex was fixed.
- ü English manual available

Version 2.21 dated 12.01.2005

- ü Display layout was optimised.

Version 3.00 dated 20.02.2005

- ü Details of VH parameters for each preset were displayed and editable.
- ü Details of effect parameters for each available effect were displayed and editable.
- ü Display layout was optimised: Columns for SysEx display slipped.
- ü Global selection of SysEx formats.
- ü Effect routing has been optimised.

Version 3.01 dated 02.03.2005

- ü A bug at „Detailparameter“ for Variation Effect was fixed.
- ü A bug at default parameters for Dry/Wet was fixed.

Version 3.02 dated 12.03.2005

- ü Bug at several „Copybuttons“ were fixed.

Version 3.03 dated 27.03.2005

- ü A bug at „Detailparameter“ for Variation Effect was fixed.

5. Final remarks

5.1 System requirements

Microsoft Windows 98 ff
Microsoft Excel 2000

5.2 Common remarks

SysExcel is freeware and can only be downloaded under:

<http://www.onemansound.de/>

SysExcel must not be offered for downloading on other websites. Neither vor commercial nor for personal purposes the development of storage media by means of SysExcel is allowed without any authorization given by the author.

The author disclaims all warranties, expressed or implied, including, without limitation, the warranties of fitness for any purpose. The author assumes no liability for damages, direct or consequential, which may result from the use or inability to use SysExcel.

On the other hand the author welcomes all comments on problems arising with SysExcel. Please send a mail to info@onemansound.de

...and now, have a lot of fun using SysExcel.

Rainer Martin, Klemens Siebert and Volker Zimmer (SysExcel Team)

(written in February 2005)

Special thanks go to:

Heiko Plate
Klaus Hofmann
Peter Lempert
Klemens Siebert

and all friends for using and feed backing SysExcel.