

VB SYSEX Decoder for Roland Sound Canvas Modules

Version 1.4

Yes, because the Sound Canvas Users Group (SCUG) asked for it - here is a SYSEX decoder/encoder.

VBSYX decodes **RAP-10, SC-55, SC-155, etc** SYSEX messages as well as those for the **SC-88** and **M-GS64**.

Contents

Installation Instructions
Copyright and Registration
What I want from you
Acknowledgements and Limitations
Bugs
The Buttons
The Options
Examples of Use
Sample SYX Files

I suggest you read all this help before starting to use the product. However, if you just want to play straight away, you **MUST** read the Limitations section first or you can get into serious trouble!

Installation Instructions:

- (1) Unzip this file and run the SETUP.EXE program. You must have done that or you wouldn't be reading this message <g>
- (2) The program will copy CMDIALOG.VBX, SPIN.VBX, THREED.VBX, MIDIVBX.VBX **and** CALLBACK.DLL to your x:\WINDOWS\SYSTEM directory if you don't already have a copy of these files.

Note: You may have older versions of these files. VBSYX will **not** work with them. If the program won't load *or* does strange things during operation, use the VBXs I sent you.

It *might* be possible to set the Working Directory for the Program Item to be the same as the directory where all files that came with this program are stored. This should work but it is not foolproof as Windows may have loaded the other VBXs for use by other Windows programs. Play safe: copy the files. Keep the old VBXs in case something else stops working <g>

- (3) Use PKUNZIP or whatever to unzip the SYX.ZIP file to a suitable directory eg C:\VBSYX\SYSEX. This file contains example SYSEX files for you to use.
- (4) Let it rip!

If you don't have a copy of VBRUN300.DLL (the Visual Basic 3 DLL runtime library) in your x:\WINDOWS\SYSTEM directory, the SETUP program won't run. Get hold of a copy or ask me for one.

Let me know any bugs - if you don't I won't fix them. If possible, MIME send me a copy of the file it can't decode properly. This will make my diagnostic work much easier %-) I'll take a UUENCODED version at a pinch! Let me know if you have suggestions for improvement. I may do something about them.

Copyright and Registration

This Software is Copyright M. R. Le Voi Systems Consultants (1996)

NB This software is Shareware/Tradeware - I'll take anything in return eg some sequencing software would be nice!

Take a look at the next section of this help file called **What I want from you**. If you send me a present from that list, I will register you straight away. Send me a message first to ensure that the item on the list is still required!

If you want to regard this as ShareWare instead of Tradeware, \$24.95 is all it will cost you! American or Canadian Dollars if you live overseas (sic). Australian Dollars, if you live in Australia. Please refer to the forms that came with this software. Use **ORDER.FRM** or **ORDER.USA**, whichever is more convenient. Read **REGISTER.TXT** for more information and for how to register via the **Compuserve SWREG** process.

Mail all suggestions, compliments, requests for how to send me money etc to:

mlevoi@modemss.brisnet.org.au

or write to me at the address below if you do *not* have an email address:

Mike Le Voi
33 Pleasant Drive
ALBANY CREEK
QLD 4035
AUSTRALIA

Good Luck,

Mike Le Voi
February to September, 1996
Latest version always available at: <http://modemss.brisnet.org.au/~mlevoi>

What I want from you

- (a) Money! If you want to give me some, mail me and I'll tell you how to donate! If you give me some money, I'll fix the program as you require it to be fixed ...
- (b) An official copy of CANVAMAN
- (c) Band in a Box - latest version for Windows (Version 6). If you can't afford it, buy it with a mate and send it to me via Internet. Send the diskettes via regular mail.
- (d) Jammer Pro or similar software.
- (e) Anything else that is great for Sound Canvas or sequencing. Cakewalk Pro 3.0x for Windows or above would be fantastic! Those with more money than they need can buy me that!

If you don't have access to my email address, use a friend's access and get him to register it for you!

Acknowledgements and Limitations

I am indebted to Gary Agnew and Charl Engela of SCUG for their suggestions throughout this project. This program would not be as slick as it is without their comments. I am also indebted to Lee Jackson at Apogee for his invaluable suggestions and marketing experience.

As usual, the standard disclaimers apply. Anything you lose or have corrupted on your machine is your problem, not mine. Use this software at YOUR OWN RISK.

Known Limitations:

I have assumed that you have certain fonts installed on your system. If you have removed fonts from your Windows environment, this program may not load or may function incorrectly. Edit VBSYX.INI if this is a problem for you.

I only find Roland SYSEX messages in *Cakewalk* .WRK files and *Power Tracks Pro* .SEQ files. As these file formats are not a documented interface, I have to search for known patterns. Thus, SYSEX strings for Yamaha etc will be ignored.

Change History

In **Version 1.1**, code was added to decode **SC-88** SYSEX data. This also applies to the **M-GS64**, which uses the same command set. Thanks are due to Roland Corporation, Australia and Dean Brewer of SCUG for providing the necessary documentation.

In **Version 1.2**, the interface was redesigned to add a toolbar and to fix some bugs.

In **Version 1.3**, support was added to decode SC-55 Bulk Patch Dumps, Global Bulk Dumps and Bulk Drum Dumps. SC-88 bulk dumps decode as well. However, certain SC-88 specific bytes *may* not be decoded as I do not have a SC-88 to practice on. Everything else for a **SC-55, SC-88 etc** should decode perfectly.

In **Version 1.4**, support was added for **RAP-10** SYSEX data. Also added was the option to omit the show/extract of default SYSEX messages. Finally, the option to allow backward scrolling in MID/WRK files was added by popular request as well as the ability to Go To a message by clicking in the Summary View.

See Also: Bugs

Bugs (1)

Some of these are serious. Most are not caused by my code <g>

- (a) **Play MID files.** Playing certain MID files has been known to lock Windows 3.11 completely! On my machine, this happens when the file contains LOTS of SYSEX data eg a complete dump generated by SCEDIT. Also, MID files containing SC-88 effects lock my machine as well.

Cause: This is a bug in Microsoft's code, not mine. I have not been able to reproduce this problem under Windows 95 (sic)

Solution: Don't play the MID file in question

See Also: Limitations

Bugs (2)

(b) **GPF in KRNL386.EXE** under Windows 95 using File Open.

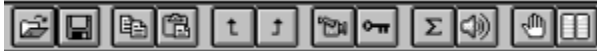
Cause: 3rd party product called Instant File Access in use.

Solution: Don't use IFA.

Reported to me by: Stephen Hayward. Thanks

See Also: Limitations

The Buttons:



Open	Same as File, Open... Shortcut: Ctrl-O
Save	Same as File, Save
Extract	Same as Edit, Extract SYSEX . Shortcut: Ctrl-C
Paste	Same as Edit, Paste SYSEX . Shortcut: Ctrl-V
Back	Same as Edit, Back . Shortcut: Ctrl-B
More	Same as Edit, More . Shortcut: Ctrl-M
Show All	Same as Summary, Show All . Shortcut: Ctrl-A
Mass Extract	Same as Summary, Mass Extract . Shortcut: Ctrl-T
Summary	Same as Summary, Show Summary . Shortcut: Ctrl-S
Play	Same as Midi, Play/Stop MID File . Shortcut: Ctrl-P
Change	Same as Edit, Change SYSEX Byte . Shortcut: Ctrl-E
Edit	Same as Edit, Edit SYSEX Bytes

The Options:

The options in this program should be self explanatory. However, here is some help if it's not obvious what to do.

Contents

File
Edit
Summary
Dump
MIDI
Help

Don't forget to read the Examples section for more hints and tips.

See Also: Buttons

File

Open... Shortcut: **Ctrl-O**

Opens .SYX, .MID, .WRK, .SEQ or .SYG files and finds SYSEX data in *any* of them. **Clicking** on the main form will perform this action if there is nothing better to do. Opening an EXE file will set that to be your preferred Midi Sequencer. See [Midi, Midi Sequencer](#).

Save

Only enabled when the input file was a .SYX file. This allows ALL of a SYX file to be written to disk after any of it has been changed by the Change button.

Save As...

Writes the internal SYSEX buffer, created by repeated use of the Extract Button, to a nominated .SYX file.

Exit

Exit (stage left)

See Also: [Examples of Use](#)

Edit (1)

More Shortcut: **Ctrl-M**

When not disabled, can be used to "scroll" forward through the SYSEX data in the file. **Clicking** on the main form will perform this action if there is nothing better to do.

Back Shortcut: **Ctrl-B**

When not disabled, allows you to "scroll" backward through .SYX files, .MID, .WRK and .SEQ files.

You can also "scroll" backward and forward through a MID/WRK files SYSEX data as follows: Open a MID/WRK file, then do a **Summary, Mass Extract**. This will extract all SYSEX data to the buffer, rename the active file to VBSYSEXT.SYX and then you can browse backward and forward through it.

Change Shortcut: **Ctrl-E**

When not disabled, allows you to change the latest parameter setting being displayed. Note: to change parameters that require more than one byte to be changed, use **Edit, Edit SYSEX**.

See Also: Examples of Use

Edit (2)

Extract SYSEX Shortcut: **Ctrl-C**

Extract the SYSEX shown in the detail display to an internal buffer. Every time you hit **Extract**, another copy is taken. This allows you to "browse" through a MID/WRK file, extracting SYSEX messages as you go. The buffer is reset every time a new file is opened.

All messages are appended to the internal buffer. Select **File, Save As** when you want to write the SYSEX data out. You can confirm that an extract has been taken as the **Extract** button will be *greyed out* after each extract has been made.

Extract also copies the **current** SYSEX data to the Windows Clipboard. Yes, that's right, you can go into *Cakewalk*, *SYSX*, Edit Bytes mode and Ctrl-V the message straight in! Then, you can **send** it to the Canvas to see whether you want to keep it or change the bytes some more!

If **Edit, Auto Send Extract?** is checked, this item is *not greyed out* after each extract. This allows you to send a SYSEX message over and over again. However, the resulting *cumulative* extract may be less than useful to you.

Paste SYSEX Shortcut: **Ctrl-V**

Pastes the current clipboard to the buffer. The buffer can then be "Save As"ed or sent to the Canvas via **MIDI, Send Latest Extract**.

It is **YOUR** responsibility to ensure that the contents of the clipboard are sensible! I have done a Ctrl-C under *Cakewalk*, *SYSX*, Edit Bytes and this works OK.

See Also: Examples of Use

Edit (3)

Edit SYSEX Bytes

Allows you to edit SYSEX bytes AS IS. There is **no** error checking and **no** help. This option is for those who know what they are doing! However, if you get it wrong, the subsequent decode will tell you where your error is %-(. Also, use this option for editing Patch Name and/or Display messages.

Edit SYSEX Message

This is an advanced version of **Edit SYSEX Bytes** above. This allows you to edit **ALL** SYSEX bytes including Manufacturers ID, Device ID etc. There is **no** error checking and **no** help. See above for standard disclaimer. Open any .SYX message to get a template to copy. At least I calculate the checksum for you!

Auto Send Extract?

This is a check item. If checked, VBSYX will send the latest SYSEX message which has been extracted to the *Default Output MIDI Port*. The default is checked. If this is off, you will have to use **Midi, Send Latest Extract** to send the SYSEX message to your sound module.

See Also: [Examples of Use](#)

Summary (1)

Show Summary Shortcut: **Ctrl-S**

Show the Summary Window. This is a display of all the SYSEX messages as they are decoded. No HEX stuff! The **Go to** button allows you to go direct to any SYSEX message that is shown in the Summary Window. Double clicking **on or slightly to the right** of the message number accomplishes the same affect.

The **Save** button allows you to save the results of the Summary Window to a pair of files. The file extensions are *SYT/SYZ* for **.SYX** files, *MIT/MIZ* for **.MID** files and *WRT/WRZ* for **.WRK or .SEQ** files. This allows you to **Load** the files in a later VBSYX session so that the summary information is immediately available to you. I suggest you do a **Save** immediately after loading a file and doing a **Ctrl-A** (see below).

Once the **Load** or **Save** button has been pressed, no more messages are written to the Summary Window until a new file is opened. If the Summary Window is preloaded automatically, the same applies. See **Summary, Open Summary Info?** below.

Hide Summary Shortcut: **Ctrl-H**

Hide the summary window.

See also: Limitations

Summary (2)

Show All Shortcut: **Ctrl-A**

Like hitting the More button without stopping! Does 1500 "More"s by default and then stops. Can be used until the end of the file has been reached. No more messages will be written to the Summary Window after this action has completed until a new file is opened.

Do a **Ctrl-A again** if you get fed up waiting for all messages to be shown. You may only want to show nn messages. See [Examples](#) for some reasons why you would want to do this.

Two options are available. To speed up the process, you can elect to omit the decode of dot display messages. This option is chosen by selecting the **check box** in the counter dialog box. See **Dump, Omit Default Messages?** for the other option.

Mass Extract Shortcut: **Ctrl-T**

Normally used **immediately** after loading a MID/WRK file. It reads the entire MID/WRK file and loads the SYSEX messages into a buffer. Finally it renames the active buffer to VBSYSEXT.SYX. It is up to **you** to SAVE or SAVE AS! Do a **Ctrl-T again** if you get fed up with waiting for all messages to be extracted. See [Examples](#) for some reasons why you would want to extract less messages.

Two options are available. To speed up the process, you can elect to omit the extract of all display messages. This option is chosen by selecting the **check box** in the counter dialog box. See **Dump, Omit Default Messages?** for the other option.

See also: [Limitations](#)

Summary (3)

Copy Summary

This copies the text in the Summary Window to the clipboard. Don't try to do an **Edit, Paste** immediately after doing this. The clipboard doesn't contain SYSEX data anymore!

Print Summary

This prints the Summary Window on your printer

Printer Font

Like it says - choose your own font if you don't like the default. **WARNING:** This affects the Summary Window, too, so you can see what the printout will look like. The default is set in the INI file.

Note: Any font changes are not remembered after the program has been closed. Edit the INI file for permanent changes!

Open Summary Info?

This is a check item. If checked, VBSYX will look for a *SYT/SYZ*, *MIT/MIZ* or *WRT/WRZ* pair of files to open. This will preload the Summary Window with the information saved from a previous session. See Summary, Show Summary for more information.

Dump

Show Bulk Dump Info Shortcut: **Ctrl-D**

Use this option to decode Bulk Dumps (when enabled). This applies to patch bulk dumps, drum bulk dumps and global bulk dumps. Hit **Esc** or **Enter** or **Click** on the detail display to exit this detail display.

When **Auto Decode** mode is on (see below), **Enter** will display the next message. **Esc** will stop the decode of all messages. **Clicking** on the main form will also decode a bulk dump if possible.

Extract Bulk Dump Info Shortcut: **Ctrl-I**

Use this option to extract Global Bulk Dumps (**when enabled**). A Global Bulk Dump consists of 30 SYSEX packets in sequence. This option is **only enabled** when **Bulk Dump Parameters - Packet 1** is being viewed. When selected, the 30 SYSEX packets are extracted (less headers/trailers) and can be decoded with Ctrl-D (see above). The resultant extract is renamed to VBSYXEXT.SYG and can be saved as such or as another **.SYG** file (see below).

Clicking on the main form will perform this action if possible.

Edit Patch Dump

Use this option to edit patch dumps. This option is used in 2 different ways. If you are decoding a **.SYX** file, this option can be used to change the part/channel for the patch dump. This allows you to use an already created patch on a different part/channel from the one it was created for.

The second use of this option is for extracting patch dumps from **.SYG** files (see above). **First**, use Ctrl-D to find/look at the patch you want to extract. **Second**, use this option, choose a new part/channel for the patch and hit Enter. The last patch you looked at will be extracted as a patch dump and you will be able to save it as a **.SYX** file *after* doing a **Ctrl-C** to extract the data to the clipboard. Alternatively, **Ctrl-V** the extracted data into your favourite sequencer instead of saving it as a **.SYX** file.

Note that **Auto Decode Global Dump** (see below) must be **OFF** for this feature to work.

Decode Complete Patch Dump?

This is a check item. The default is only to decode Sound Canvas parameters that have changed. Check this option if you want to see all dump bytes decoded.

Auto Decode Patch Dump?

This is a check item. If checked, patch bulk dumps will be decoded when encountered. The default is unchecked. If this is off, you will have to use Ctrl-D to decode them manually.

Auto Decode Global Dump?

This is a check item. If checked, global bulk dumps will be decoded in sequence when encountered. The default is unchecked. If this is off, you will have to use Ctrl-D to decode them manually. See **Show Bulk Dump Info** above for extra information.

Omit Default Messages?

This is a check item. If checked, **Summary, Show All** will *not* copy decoded default messages to the Summary window. See **Summary, Show All** for extra information.

In addition, **Summary, Mass Extract** will *not* extract default messages. This can be very useful in extracting useful SYSEX messages for use in your own files.

Finally, if this option is checked, detail SYSEX message bytes will not be displayed. This speeds up scrolling through SYSEX data.

See also: Limitations

NB. The Dump options will only be available to registered users

MIDI (1)

Send Latest Extract Shortcut: **Ctrl-X**

This sends the last SYSEX message you did an **Extract** on to the nominated SYSEX port.

Send SYX File Shortcut: **Ctrl-Y**

Sends the whole of the SYX file to the nominated SYSEX port.

Play/Stop MID File Shortcut: **Ctrl-P**

Yes, **Play** the MID file via MIDI MAPPER or **any other MIDI port**. Something to do while you're staring at the screen <g>. Choose this option again to **Stop** a MID file playing.

Note: I am unable to play WRK or other proprietary formats as this program uses the official Microsoft MCI interface.

WARNING: Playing certain MID files has been known to lock Windows completely! On my machine, this happens when the file contains LOTS of SYSEX data eg a complete dump generated by SCEDIT. Also, MID files containing SC-88 effects lock my machine as well.

Don't blame me - this is a bug in Microsoft's code - NOT MINE!

See also: Limitations

MIDI (2)

GS Reset

Allows you to do a GS Reset when you are just playing a MIDI file.

MS Midi Mapper

Invokes the Microsoft Midi Mapper. This function is available under Windows 3.11 only. It is not available for Windows 95 and does not work under Windows NT.

MS Media Player

Invokes the Microsoft Media Player to play the current MIDI file. This allows more control over playing than just Ctrl-P (Start/Stop). **Warning:** Close Media Player before selecting this item again. If you do not, you will get another instance of Media Player. This may not be what you want and you may run out of memory.

Midi Sequencer

Invokes your favourite Midi Sequencer to play/edit the current midi file. Open a **.EXE** file under **File, Open** to change the default of MS Media Player. **Warning:** Close your sequencer before selecting this item again. If you do not, you will get another instance of your sequencer program. This may not be what you want and you may run out of memory.

Change MIDI Port

This allows you specify which port will be opened to play your MIDI file via **Ctrl-P**. Thus, you are no longer at the mercy of Midi Mapper or its Windows 95 equivalent!

Change SYSEX Port

This allows you specify which port will be used to send SYSEX messages to your Sound Canvas via such options as **Ctrl-X** and **Ctrl-Y**.

See also: [Limitations](#)

Help

Contents

Tells you to read this. If you send me a present I'll probably write some more help!

Select Font

Use if you want. It should work. It was built for my testing. However, if the program doesn't work on your machine, try this before calling me! The default is set in the INI file.

Note: Any font changes are not remembered after the program has been closed. Edit the INI file for permanent changes!

Register

This allows you to register the program with me. If you send me a present, I will send you your *personalised* registration number. This will allow you to use all the **Dump Menu** items as well as allowing you to use the **Go To** function. In addition, you will feel good and I will keep updating this program.

About

Displays program version and current registration details.

Examples (1)

(1) Set Part 6 to OFF in Cakewalk WRK file

Open PART1OFF.SYX and **Edit, Edit SYSEX Message**, changing byte 2 from 11 to 16. This is not as hard as it may seem. Try it - you can't break anything!

Now **Extract** the data to the clipboard, switch to *Cakewalk*, **SYSX, Edit Bytes** and **Ctrl-V** the data in. Simple, huh? To copy data back from *Cakewalk*, highlight the data bytes, **Ctrl-C**, switch to VBSYX, **Edit, Paste SYSEX**. Voila! All is revealed.

Use this technique for anything. See [Sample SYX Files](#) for supplied SYX files you can copy.

See also: [Sample SYX Files](#)

Examples (2)

(2) Extract 25,000 bytes from your favourite MID file

I have set a limit on Mass Extract of 19,000 bytes. This should be enough for anybody! If you REALLY want to do this then:

- (a) Open, Mass Extract, Save As BIG.SYX (or whatever). Make a note of the last message extracted (say, **nnn**).
- (b) Open, Show All (changing the number to be shown to **nnn**), Mass Extract from here on, Save as BIG.SYX, Reply No to dialog box to Append to original SYX file. OK?

Try this out on DEMO0001.MID from Roland. Don't expect to be able to do anything with the extracted data. Those SCUG users without a plasma display should do **Summary, Show All** on this file to see what they are missing out on %-)

See also: Sample SYX Files

Examples (3)

(3) Extract messages 2 to 4 and 9 to 16

You have looked at a MID file and you want to extract selected messages only. In this example there are, say, 30 SYSEX messages in the MID file but you only want messages 2,3,4 and 9,10,11,12,13,14,15,16.

You use the same technique as the last one:

Open

More, **Extract**, More, **Extract**, More, **Extract**

More x 5 (or is that 4?)

Mass Extract (Change the number of messages to extract to 8)

Save As.

See also: Sample SYX Files

Sample SYX Files

Here are some sample .SYX files used (a) for my testing and (b) for you to display/edit and use in your sequences as required. They are supplied as **SYX.ZIP** in your installation package.

ALLGM.SYX	All valid GM SYSEX messages
ALLRAP10.SYX	All valid RAP-10 SYSEX messages
ALLSC55.SYX	All valid SC-55, SC-155 etc SYSEX messages
ALLSC88.SYX	All valid SC-88, M-GS64 SYSEX messages
BETTE.SYX	Bette Davies Eyes. Messages
DRUM.SYX	Drum Messages
GMSYSON.SYX	General Midi Reset
GSRESET.SYX	GS Reset
HALL1.SYX	Set Canvas Reverb to Hall 1. Use Change for any other effect you want.
MASTER.SYX	Set System Parameters such as Master Tune, Volume and Pan
MMSALOGO.SYX	Charl's call sign!
MRL.SYX	My greeting to you.
OK.SYX	OK? in big dot letters
PART10.SYX	Example of half of the SYSEX messages of the form 40 10 nn
PART1OFF.SYX	Turn Part 1 OFF. See PART1PAN.SYX below.
PART1ON.SYX	Example of the other half of the SYSEX messages of the form 40 10 nn
PART1PAN.SYX	Set Part 1 to random pan. Use Edit, Edit SYSEX to choose another Part.
PART20.SYX	Example of the SYSEX messages of the form 40 20 nn

Continued on next screen

Sample SYX Files (2)

PARTSET.SYX	Set Parts 1-16 to nominated parts
PARTTONE.SYX	Set Part 1 Bank and Patch settings
REVCHOR.SYX	Set all Reverb and Chorus Settings
REVLEVEL.SYX	Set Reverb Level
SC88DRUM.SYX	SC-88 / M-GS64 User Drum SYSEX messages
SC88EQ.SYX	SC-88 / M-GS64 Equalisation SYSEX messages
SC88PART.SYX	SC-88 / M-GS64 Part SYSEX messages
SC88PATC.SYX	SC-88 / M-GS64 Patch SYSEX messages
SC88USER.SYX	SC-88 / M-GS64 User Instrument SYSEX messages
SCUG.SYX	Sound Canvas Users Group - what else!
TONEFINE.SYX	Set Part 1 fine tuning parameters
TUNING.SYX	Set Part 1 Scale Tuning
VOICE.SYX	Set Overall Voice Reserve

Use the Change button to change individual values. Use the Edit, Edit SYSEX menu item to edit messages that contain multi-byte values. Use the Edit, Edit SYSEX menu item to edit messages to change Part 1 to any other part you want.

See also: Examples of Use

