UC-33e

ENGLISH

User Guide

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1 Evolution UC-33 User Guide

About The Advanced Guide

In the UC-33 Advanced Guide we have made the assumption that you have been through the UC-33 Getting Started Guide which should have been supplied in printed form with your UC-33. If you do not have this guide, please contact your local distributor or download it from our website www.evolution.co.uk

The Getting Started Guide should insure that you are now familiar with the basic operation of the UC-33 so that we now can focus on more in-depth features.

First however, we need to explain some terminology we use throughout the guide.

Terminology

Edit Mode:

Edit Mode describes the short period after a function button has been pressed during which the parameters of that function can be altered. The numeric keypad can be used to alter a parameter during this time. No data is sent out of the UC-33 when it is in Edit mode except for program and bank changes. LCD symbols shown in Edit mode will flash to show you that a particular parameter can be edited. If a number is part entered, and a new controller turned, that number will become the relevant parameter number for the new controller and the 3 second editing period will re-trigger.

Default mode :

Default Mode describes the state of the UC-33, when no function buttons have been pressed within the last 3 seconds. In Default mode, the LCD will show the controller symbol, and the 2 digit display will show the last selected controller. The 3 digits display the currently assigned MIDI CC number.

2 "On The Fly" Operations

Sending Program Changes On The Fly

You can at any one time send out a program change message to you sound card, sound module, instrument or whatever other device will receive this standard MIDI message.

The program change will be sent on the global MIDI channel.

1. Press the PROGRAM button.
2. Type in the program number you wish to send, using the numerical keypad or the +/- keys.

Example: The LCD display the PROG symbol in the left hand corner Indicating that the PROGRAM button has been pressed. The program value sent is 00 and its sent on the global MIDI channel 01.

You can also program the assignable buttons to send out fixed program messages to individual MIDI channels. For further information regarding this method, please go to pages XXX to XXX.

Global MIDI channel: For more information, please go to page XXX.

Sending Bank Changes On The Fly

If your receiving device has more than 128 presets, you may be able to access the additional banks by sending out bank change LSM and MSB messages.

1. Press the DATA LSB or DATA MSB button.
2. Type in the bank number you wish to send, using the numerical keypad or the +/- keys.

Please check the documentation for your receiving device to ensure that it will respond to these messages. For more information about LSB and MSB, please see the chapter "Program and Bank Changes Explained" on page XXX in this manual.

Sending Snap Shot

Press the +/- buttons together to send a SNAP SHOT of the current UC-33 controller assignments and their values.

When you send a snapshot, the LCD will display the SNAPSHOT symbol. The data for an individual controller will be sent on which ever channel that controller has been assigned to.

Snap Shot is one way of synchronizing the receiving device with the UC-33 and can be used as a creative tool, with interesting and surprising results.

The data sent when SNAP SHOT is pressed, can be viewed in your sequencers list editor. Set your sequencer to record and press SNAP SHOT. Then open the list editor and ensure its set to display controller data.

Muting All Controllers

To Mute all faders and rotary controllers, press the CTRL MUTE buttons.

This allows you to alter the position of the controller without affecting the settings of your software. CTRL MUTE does not affect buttons, and as soon as an assignable button or a function key is pressed, the controllers are turned back on. Alternatively, you can press the CTRL MUTE buttons again to turn the controllers back on.

When you first press the CTR MUTE buttons, you will see the LCD display 'OFF'. Changing the position of a controller with controller mute engaged, the LCD will always display OFF to indicate no data is being sent out by the UC-33. To cancel the controller mute function, simply press a function key (or keys) or one of the assignable buttons.

This is a very useful feature if you are switching between presets on the UC-33 with the controllers out of position. You will be able to move the controller to a position relative to the software's controller value, rather than causing the software's controller value to jump.

You can also use this feature for creative mixing and interesting DJ type control. If for instance you use the UC-33 as a conventional volume mixer, try engaging the controller mute function, change the volume up or down of various channels and press the SNAP SHOT buttons. This form of mixing is very dynamic and can not be done using a conventional mixer.

Draw Bar Mode

Pressing the CHANNEL and RECALL Buttons engages DRAW BAR mode. In DRAW BAR mode, the sliders of the UC-33 will be reversed – such that 0 is at the top, while 127 is at the bottom.

To engage DRAW BAR mode, press the two buttons labeled CHANNEL and RECALL.

When DRAW BAR mode is engaged, the LCD display indicates this by displaying the FADER symbol. Press the CHANNEL and RECALL buttons to disengage DRAW BAR mode. DRAW BAR MODE is meant for use with Hammond organ type synths that have draw bars. Try this mode out with the Native Instruments B4 (demo version included on the CD-ROM).

3 Programming & Editing The UC-33

Introduction To UC-33 Programming Options

Each of the UC-33's 47 controllers can send MIDI cc, RPN/NRPN, GM 1&2 SysEx and even be assigned to individual MIDI channels.

MIDI cc (continuous controller) numbers are part of the standard MIDI specifications and are typically used to control the real-time changing of parameters in musical equipment. For a complete list of standard MIDI controller numbers from 0 to 131, please see Appendix E on page XX.

Any of the 47 real-time controllers on the UC-33 can be assigned to a MIDI cc number however the 14 assignable buttons have slightly different options from the 9 faders or 24 rotary controllers.

The following 2 charts show all the transmit messages you can program for each of the 33 fader/controllers and 14 assignable MIDI buttons respectively. We show you this already at this stage, so you can follow the principle of programming the UC-33 controllers in the following instructions and examples.

Please pay extra attention to the differences between how you program the faders or controllers and how you program the buttons.

Faders & Controllers Faders & Controllers			
ASSIGN	*Description*	*Data Lsb (Press Twice)*	*Data Msb (Press Twice)*
0-119	Standard MIDI CC's	-	-
120-127	Channel Mode Messages	-	-
128	Pitch Bend Sensitivity	-	-
129	Channel Fine Tune	-	-
130	Channel Coarse Tune	-	-
131	Channel Pressure	-	-
132	RPN Coarse	RPN LSB	RPN MSB
133	RPN Fine	RPN LSB	RPN MSB
134	NRPN Coarse	NRPN LSB	NRPN MSB
135	NRPN Fine	NRPN LSB	NRPN MSB
136	Master Volume GM*	Volume LSB	Volume MSB
137	Master Pan*	Pan LSB	Pan MSB
138	Master Coarse Tune*	Tuning LSB	Tuning MSB
139	Master Fine Tune*	Tuning LSB	Tuning MSB
140	Chorus Mod rate**	Mod rate	-
141	Chorus Mod Depth**	Mod depth	-
142	Feedback**	Feedback level	-
143	Send to Reverb**	Reverb send level	-
144	Pitch Bend	Pitch shift LSB	Pitch shift MSB
255	Controller Off****	-	-

* General MIDI SysEx messages - for details please see pages XXX & XXX.

** General MIDI 2 SysEx messages

*** MMC Sysex messages, for details please see page XXX.

**** This value cannot be typed in using the numerical keypad.

Assignable MIDI Buttons				
Assign	*Description*	*Program (Press Twice)*	*Bank LSB (Press Twice)*	*Data MSB (Press Twice)*
0-119	Standard MIDI CC's	-	Toggle Value 2	Toggle Value 1
120-127	Channel Mode Messages	-	Toggle Value 2	Toggle Value 1
128	Pitch Bend Sensitivity	-	Sensitivity Value	-
129	Channel Fine Tune	-	Tuning Amount	-
130	Channel Coarse Tune	-	Tuning Amount	-
131	Channel Pressure	-	Pressure Amount	-
132	RPN Coarse	Value	RPN LSB	RPN MSB
133	RPN Fine	Value	RPN LSB	RPN MSB
134	NRPN Coarse	Value	NRPN LSB	NRPN MSB
135	NRPN Fine	Value	NRPN LSB	NRPN MSB
136	Master Volume*	-	Volume LSB	Volume MSB
137	Master Pan*	-	Pan LSB	Pan MSB
138	Master Coarse Tune*	-	Tuning LSB	Tuning MSB
139	Master Fine Tune*	-	Tuning LSB	Tuning MSB
140	Chorus Mod rate**	-	Mod Rate	-
141	Chorus Mod Depth**	-	Mod Depth	-
142	Feedback**	-	Feedback Level	-
143	Send to Reverb**	-	Reverb Send Level	-
144	Pitch Bend	-	Pitch Shift LSB	Pitch shift MSB
145	Program/Bank Preset	Program	Bank LSB	Bank MSB
146	MIDI CC (On/Off)	MIDI CC	Button Release Value	Button press value
147	Note (On/Off)	Note	Velocity Off	Velocity on
148	Note (On/Off Toggle)	Note	Velocity Off	Velocity on
149	MMC Command***	-	Command Select	-
150	Reverb Type **	-	Type	-
151	Reverb Time **	-	Time	-
152	Chorus Type **	-	Type	-
255	Controller Off****	-	-	-

* General MIDI SysEx messages - for details please see pages XXX & XXX.

** General MIDI 2 SysEx messages

*** MMC Sysex messages, for details please see page XXX.

**** This value cannot be typed in using the numerical keypad.

Selecting A Controller For Editing

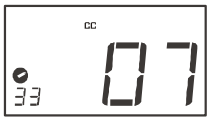
Before you can assign a MIDI cc to one of the UC-33's controllers, you will need to select it for editing. There are 2 methods for doing this:

1. ***Press CONTROL SELECT***. The LCD will display the CONTROLLER symbol. The symbol will be flashing to indicate the controller settings can be altered. The 3-digit display will show the number of the currently selected controller, proceeded by a 'C', or an 'F' if the controller is a fader.
2. ***Type in the number of the controller*** using the numeric keypad, or the +/- buttons.

   or

Move a fader/rotary controller.

Simply moving a fader/rotary controller will make it the currently selected controller, ready for editing.



You can also select any of the 4 assignable buttons labelled with the transport bar icons by simply pressing them. It is however not possible to select any of the 10 numerical buttons by pressing them, since during edit mode, they are used to enter numerical values. To program these buttons, please use the first method.

Assigning MIDI CC's

Once the controller you want to edit has been selected, you can change the assigned MIDI cc number in the following way:

1. Press ASSIGN. The LCD will flash the CC symbol.
   The 3 digit display will indicate the currently assigned MIDI cc number.
2. Type in a new MIDI cc value using the numeric keypad or '+' and '-' buttons.
   The MIDI controller number you select will be assigned to the currently selected controller, shown by the number on the small, 2-digit display.

Example: *After pressing ASSIGN, the display shows the cc symbol and in this case displays that currently the MIDI cc 07 is assigned to fader/rotary controller number 33.*

Assigning An Individual MIDI Channel

1. Select the controller you want to edit as described earlier.
2. Press CHANNEL.
   The LCD will display the CHAN symbol and the 3-digit display will show the current channel assignment of the selected controller, preceded by a 'c'. The small 2-digit display will show the currently selected controller for assignment.
3. Type the MIDI channel number (01-16) you want the controller to send to, using the numeric keypad or the +/- keys.

If the controller is assigned to channel 00, it will transmit on the global channel.

Changing The Global MIDI Channel

The UC-33's global MIDI channel affects only the controllers that have the individual MIDI channel assigned to value 00, as described in the previous section.

Here is how you change the global MIDI channel:

1. Press GLOBAL CHANNEL (ASSIGN and CHANNEL together).

The LCD will display the KEYBOARD and CHAN symbol. The 3-digit display will show the currently selected global channel, preceded by a 'c'.

2. Type in the MIDI channel number (01-16) using the numeric keypad or the +/- keys.

***Example**: MIDI channel 01 is assigned as global MIDI channel.*

Using a combination of global MIDI channel and individually assigned MIDI channels can be a great way of navigating through your system. With multitimbral instruments such as Reason, it can be easier to just change the global MIDI channel on the UC-33 in order to jump to the next device, rather than operating the software.

Setting Toggle Values For The Buttons

The 14 assignable buttons can each be assigned to toggle between two values. You may for instance want to send out value 15 when you first press the button followed by value 74 when you press the button for a second time. This is how you do it:

1. Press the Function button labelled DATA MSB 2 times.
2. Type in 15 using the numerical keypad or the +/- keys.
3. Press the Function button labelled DATA LSB 2 times.
4. Type in 74 using the numerical keypad or the +/- keys.

If you want the button to send the same value every time you press it, simply type in the same value both times.

RPN/NRPN, GM 1+2 SysEx & Other Messages

As already described, the standard MIDI controller numbers range from 0 to 131. We have extended the list of MIDI cc's that can be assigned to the controllers of the UC-33 to include RPN/NRPN, MMC and General MIDI 1&2 SysEx messages.

These advanced messages are as easy to program as a regular MIDI cc instruction by entering values 132 to 152 when programming MIDI cc's. The charts on page XXX and XXX (or Appendix B) show you what number correspond to each message.

To program the values required for these advanced messages, the UC-33 requires you to press the PROGRAM, DATA LSB and DATA MSB buttons twice respectively. Pressing only once will send the program and bank change instructions "on the fly" as described earlier.

Lets look at a couple of examples to see how this works. Please refer to the chart in Appendix B so you get to grips with the principle:

Assigning MMC Control To A Button

1. Select the button you want to control the MMC message.
2. Press "ASSIGN" on the UC-33.
3. Type in "149" using the numerical keypad.
   This is the number that corresponds to the MMC instruction, as per the chart on page XXX and XXX.
4. Press "Channel" once.
5. Type in "127", using the numerical keypad.
   This ensures that the message is set to all device ID numbers. For more information about this, please read "About SysEx Messages & Device ID" on page XXX.
6. Press the "DATA LSB" button twice.
7. Enter a number from the chart on the next page to select the MMC message you want:

Number	MMC Command
01	STOP
02	PLAY
03	DEFERRED PLAY
04	FAST FORWARD
05	REWIND
06	RECORD STROBE
07	RECORD EXIT
08	RECORD PAUSE
09	PAUSE
10	EJECT
11	CHASE
12	COMMAND ERROR RESET
13	MMC RESET

Assigning RPN/NRPN To A Fader/Rotary Controller

Note: For a detailed description of RPN/NRPN data see section RPN/NRPN's Explained on page XXX.

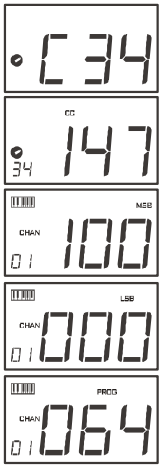
1. Press Control select, and move the desired controller.
2. Press control assign twice and while the display is flashing, enter controller 132 for RPN coarse, 133 for RPN fine, 134 for NRPN coarse or 135 for NRPN fine.
3. Press DATA MSB twice to assign the number for the RPN/NRPN MSB.
4. Press DATA LSB twice to assign the number for RPN/NRPN LSB.
5. Press CHANNEL ASSIGN to assign the MIDI channel the message should be sent on.

You will find most data sheets for synths that make use of NRPN's will give the MSB and LSB values that you should enter into DATA MSB and DATA LSB banks (also see Appendix F). However, some manuals may only give the hex values. The UC-33 requires you to enter the decimal value. You can easily convert hexadecimal values to decimal using the windows calculator. Simply select Scientific mode, select hex and enter the hexadecimal value you need to convert. Press the Dec button to convert it to a decimal value. Enter the decimal value into the UC-33.

Alternatively, use the look up table in Appendix C.

The following shows how to set a button to transmit a note on when pressed, and a note off when released.

Assigning A Note To A Button



1. Press SELECT and press the "0" button. The display will show that you have selected controller 34.
2. Press ASSIGN and enter '147' this is the MIDI CC number that corresponds to Note on/off mode, as shown in Appendix B.
3. Press DATA MSB twice and enter a value of '100'. This means when you press the button, a Note on message will be sent out with a velocity of 100.
4. Press DATA LSB twice, and enter a value of '000'. This means when you release the button, a Note off message will be sent out.
5. Press the PROGRAM button twice and enter '064'. This will mean you are sending out MIDI note 64 or E4, each time you press the button.
   The MIDI note numbers are given in Appendix D.

   This button mode has many uses. You can use this mode to trigger samples, control lighting equipment, play keyboard notes and much more.

   Note: When you press the button in note mode, the LCD display will briefly show the note velocity.

About SysEx Messages & Device ID

When transmitting SysEx messages, the individual control channel number does not define a transmit channel, but a device ID. This is made clear since when you press the CHANNEL button, the CC symbol will not be shown and there is no 'c' in the 3 digit display.

Device ID's range between 00–127. In most cases, you should set the device ID as 127. 127 means the SysEx message will be received by all devices.

Please note that the device ID for a Sys Ex message assigned to a controller can not be changed using the Device ID buttons. These buttons are used for varying the global device ID of the UC33.

Non-Volatile Memory

The UC-33 uses non-volatile memory so that you can continue where you left off even after powering down and restarting. The current UC-33 controller and channel assignments are stored whether you have stored your setup to a memory locations or not. Also stored is Draw Bar mode (on/off), DATA LSB and DATA MSB data, global channel setting and last used memory preset.

Memory Dump

Pressing the MEMORY DUMP buttons will send out a number of Sys Ex data packets that represent the 33 memories you have set up in your UC-33. This is a useful way of storing or backing up the contents of your memory presets externally.

You can record the complete memory dump in to a standard sequencer. To recall the memory dump back to the UC-33, play the MIDI track containing the recorded memory dump to the UC-33, making sure that the UC-33 drivers are selected as output for that particular track.

The current controller assignments are not affected by a memory dump, or a memory send to the UC-33. Once a memory dump has been sent to the UC-33, you will need to recall a preset to access the new memory settings.

Assigning A Device ID To The UC-33

Pressing the "DEV. ID" buttons will allow you to assign a Device ID to the UC-33. The default Device ID is 127, which means when a memory dump is performed, that dump can be received by any UC-33, regardless of the Device ID setting.

If a device ID is assigned to any number other than 127, the memory dump performed will be specific to UC-33's with the same device ID. If the device ID of a UC-33 differs from the one recorded with the memory dump, the data will be ignored.

The device ID is a handy way of differentiating between multiple UC33's. Otherwise, we recommend you keep the device ID setting as 127.

When you press the Device ID buttons, you will see the small 2-digit display on LCD display 'id'. The 3-digit display represents the assigned Device ID. You can enter a new device ID using the numeric keypad, or the '+' and '-' buttons.

For more information on SysEx messages and device ID, please go to page XXX.

Resetting The UC-33 To The Factory Default Setting

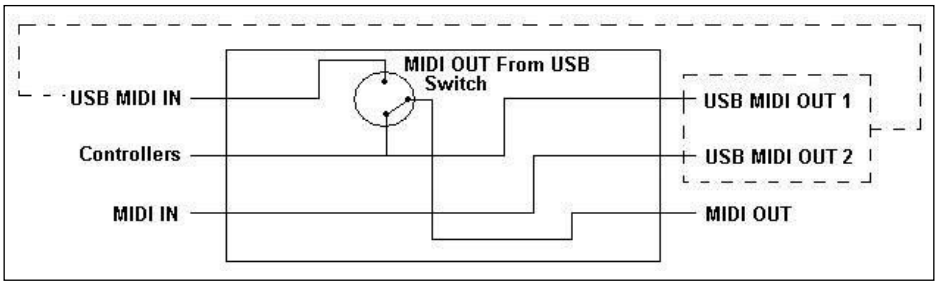
The UC-33 comes with 33 useful presets stored in it's memory (for complete list, see Appendix H). You can reset the UC-33 back to the factory defaults on power-up by holding down the +/- buttons.

Note: *Restoring the Factory presets will erase all UC-33 setups stored to memory.*

4 MIDI In/Out & MIDI Messages Explained

MIDI In & MIDI Out Signal Flow Diagram

The MIDI IN & MIDI OUT ports have different uses depending on how you intend to connect and power the UC-33. The diagram below shows the different routing options.



About The MIDI In Port

The MIDI in plug can be used to interface another MIDI device to your PC, via the USB port. Data received from this device will be transmitted via the UC-33 to the PC. This is achieved using a second USB MIDI out. So, when you select the MIDI devices section of your sequencer you will see two UC-33 USB MIDI Ins. The first of these is used to receive the UC-33 controller data, the second is used to receive data from the other device connected to the UC-33's MIDI IN plug. So, the UC-33 is acting as a MIDI-to- USB interface for the other MIDI device.

About The MIDI Out Port

The UC-33 can of course also interface with other MIDI devices. By default (I.e. when you switch the unit on), all controller data is sent out via the MIDI output as well as the USB out.

If you want the MIDI output to act like a traditional USB-to-MIDI interface, just press the two buttons (SELECT and ASSIGN) that activate the MIDI OUT from USB mode.

If you are using a host application which can pick up multiple input drivers, you will be able to use the UC-33's MIDI input and the UC-33 surface to record MIDI data and send the whole lot out of the UC-33's MIDI output.

***Important note**:The UC-33 is not a MIDI THRU device and as such, MIDI data received at the UC-33's MIDI IN plug can never be sent directly to the UC-33's MIDI OUT plug. However, if the UC-33 is connected via USB to a computer, data received at the MIDI IN can be transmitted to the MIDI OUT plug, since the data is sent to the computer, and received back from the computer. MIDI OUT FROM USB mode must be engaged for this to occur.*

Program & Bank Changes Explained

The original GM MIDI specification catered for only 128 voices, numbered from 0-127. It is possible to access a different voice by sending a program change.

In order to expand on the GM set of voices, Bank changes were devised. Each bank contains 128 patches, which can be accessed using a program change. There are 16,384 banks available, accessible by sending a 14-bit Bank change message. The first 7 bits of this message are sent in a single byte known as the Bank LSB. The last 7 bits are specified by another byte known as the Bank MSB. The BANK LSB is the most commonly used This allows for 128 bank changes, and often there is no need to send a Bank MSB.

You will find almost all MIDI devices respond to the program change, but some that do not conform to the GM set of voices use the program change message for other purposes. Many VST instruments have adopted this approach, allowing you to use a program change to change the instrument patch. The FM7 by Native Instruments is a good example of this.

Bank changes are more rarely used, although they do exist. Bank changes are useful in manufacturer's extensions to the MIDI specification, such as Roland's GS specification and Yamaha's XG specification. Both of these require you to specify a Bank change, in order to access the extra voices and effects that these specifications provide.

Sending Program, Bank LSB and Bank MSB data is made simple using the UC-33. Simply press the PROGRAM, DATA LSB or DATA MSB button and enter the program or bank change you wish to send.

RPN/NRPN's Explained

Non-registered parameter numbers (NRPN's) are device specific messages that enable the control of synths via MIDI. The MIDI specification defines parameter numbers to allow scope for manufacturers to specify their own controllers. The more common of these have been registered by the MIDI Manufacturer's Association and are part of the MIDI specification (hence the term Registered Parameter Numbers – RPN's). (See Appendix F.)

MIDI controllers 98 and 99 represent the NRPN LSB and MSB respectively, while 100 and 101 represent the RPN LSB and MSB. This can be seen from the MIDI controllers list in Appendix D. To transmit an NRPN/RPN, these two controller messages are sent along with their user-specified values. A further controller message and value needs to be sent to specify the (coarse or fine) value adjustment. This is specified by controller number 6 (Data entry) for coarse adjustments or number 38 for fine adjustments.

A list of NRPN's will always be given in the User Manual of a device that receives NRPN messages. It is always necessary that the NRPN MSB and LSB are sent together. Both will be specified in the device's manual. You may find the manufacturer's have only specified the numbers in Hexadecimal format. In this case, use Appendix C to translate the value to Decimal.

The UC-33 makes the process of transmitting NRPN's easy. All you need is to enter the appropriate NRPN LSB by pressing the LSB/DATA button twice, enter the NRPN MSB by pressing the MSB/DATA button twice, and as you move the UC-33 controller, an appropriate NRPN message will be sent out. Assign NRPN coarse to make big sweeps, or NRPN fine to make slight adjustments.

SysEx Explained

System Exclusive (SysEx) messages were defined in the MIDI specification to allow individual devices to have individual control via MIDI. The format of SysEx messages allows for virtually any function to be performed via MIDI – so long as the receiving device is able to translate the message, and act accordingly. This allows devices to send audio sample memory data, memory dumps, controller settings, and much more. It also allows the controllers of one device to be controlled by another.

It is not possible to program your own specified SysEx message into the UC-33. However, there are some useful SysEx messages pre-programmed into the UC-33, that can be accessed by assigning the appropriate MIDI CC to a controller (see Appendix B).

It should be noted that a SysEx message is not transmitted on any specified channel. All SysEx messages contain a device ID, that is used to single out devices to respond to the SysEx message. All other devices are ignored. If you are using a SysEx message on the UC-33, the global channel is ignored. When you press CHANNEL, instead of entering a channel for the controller, you will be enter a device ID instead. This is indicated by the fact that the CC symbol will not be showing.

Device ID's run from 00 to 127. 127 is the default device number setting on the UC-33. This setting transmits the SysEx message to all devices. Although it is not possible to program the controllers of the UC-33 with your own SysEx messages, there are software applications that can receive a MIDI input signal and transmit a different, user specified message. You can program your SysEx messages into the translator software, then translate the incoming data from the UC-33 to your SysEx, depending on the controller you are using.

5 The Evolution Librarian Software

About The Evolution Librarian Software

The Evolution Librarian Software is a Windows PC librarian program developed for Evolution products. The program not only works with the MK-425C/449C/461C keyboards but is also compatible with the Evolution UC-33e USB controller. That means you can use one librarian package for both your keyboard and your controller, if you own a UC-33e

And even better, you can swap patches between Evolution products that are supported by the Librarian so you never have to create the same patch twice.

The librarian itself, allows you to send and receive the 10 patches to and from the MK-425C/449C/461C, load and save memory banks, view how individual patches have been programmed and drag and drop patches in order to create new combinations in the 10 memory locations.

Installing The Evolution Librarian Software

1. Insert the Evolution Installer CD-ROM in to your CD-ROM drive.
2. Click on "Librarian Installer"
3. Follow the on-screen instructions to complete the installation process

Once the installation has been completed, launch the program. The following is a screenshot of what you should be seeing on your monitor.

Setting Up The Librarian Software

Before you start using the Librarian, check that the MK-425C/449C/461C has been selected as input and output device.

1. Select MIDI Setup from the Options menu.
2. Ensure the USB driver for you MK-425C/449C/461C is selected in the "Inputs" Column.

If you are using native drivers this may be named "USB Audio Device".

1. In the "Outputs" column, select the USB driver for you MK-425C/449C/461C

If you are using native drivers this may be named "USB Audio Device".

You should now be ready to use the Librarian software with you Evolution keyboard.

Librarian Overview

As you can see from the screenshot of the Librarian on page XXX, you can save, load, receive or send the complete content to and from either Bank columns.

To transmit the complete content of your MK-425C/449C/461C to the librarian, simply press the "Receive" button on the Librarian software.

This process can only be completed successfully if the USB drivers for your keyboard have been selected correctly, as described in the "Setting Up The Librarian Software" section.

Once you have Received data from the keyboard, the memories are displayed in the column.

Organizing Presets Received From A Device

You can name the memories as you like. To re-name a memory, double-click on the memory. You can then move memories around by dragging them to a new position, or using the copy buttons between the two windows.

These buttons are defined below:

Will copy the selected memory in Bank 2 to Bank 1.

Will copy the selected memory in Bank 1 to Bank 2.

Will copy all memories in Bank 2 to Bank 1.

Will copy all the memories in Bank 1 to Bank 2.

Will undo the last copy you made. Only the last copy is remembered.

It's a good idea to decide which column is your master column, to avoid confusion and maybe loosing hours of work.

Viewing The Contents Of A Memory

Right-click on a memory to view the contents. Please note that it is not possible to edit the contents of a memory. The Sys Ex librarian will simply allow you to rearrange the order of memories, or copy memories between one dump and another.

Saving A Setup

Once you have named all your presets, and organized them in the desired order, click 'save' to save the content.

Alternatively you can click on the File menu and select save to save the file with the previously assigned file name, or save as to assign the memory dump a new file name. The shortcut key to save Bank 1 is CTRL+S.

Make sure you give the file a name that allows you to quickly identify your collection of setups.

Loading A Setup

To load a memory setup file back in to the librarian, click on the 'Load' button and select the required file. The loaded preset setups will appear in the Bank Window. You can then either send it directly to the Evolution device by clicking send, or edit it.

Alternatively, select Open from the File menu.

The shortcut key for loading is CTRL+O

Future Development Of The Librarian

We stronglyrecommend you register your ownership of the Evolution Librarian if you would like to be kept informed about future development. As you can see from the version number, the software is at an early version 1.0 stage and we will continue to work on enhancements for the software.

To register your copy, please visit www.evolution.co.uk/register

6 Technical and Warranty Info

Technical Info

Caution: The normal function of the product may be disturbed by Strong Electro Magnetic Interference. If so, simply reset the product to resume normal operation by following the instruction manual. In case the function could not resume, please use the product in other location.

Note: Your M-Audio product has been tested to comply with FCC Standards FOR HOME OR OFFICE USE. Modifications not authorized by the manufacturer may void users authority to operate this device.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

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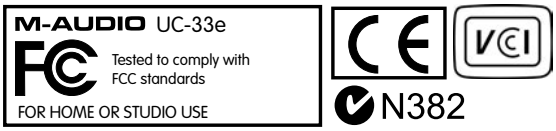
Warranty

Warranty Terms

M-Audio warrants products to be free from defects in materials and workmanship, under normal use and provided that the product is owned by the original, registered user. Visit www.m-audio.com/warranty for terms and limitations applying to your specific product.

Warranty Registration

Thank you for registering your new M-Audio product. Doing so immediately both entitles you to full warranty coverage and helps M-Audio develop and manufacture the finest quality products available. Register online at www.m-audio.com/register to receive FREE product updates and for the chance to win FREE M-Audio gear



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8 Appendix A-G & Factory Preset List

Appendix A - MIDI IMPLEMENTATION CHART

Function		Transmitted	Received	Remarks
Basic	:Default	1-16	X	
Channel	:Changed	1-16		
	:Default	*******	X	
Mode	:Messages	X		
	:Altered	*******		
Note		0-127	X	
Number	:True Voice	*******		
Velocity	:Note ON	0	X	
	:Note OFF	0		
After	:Keys	0	X	
Touch	:Ch's	0		
Pitch Bend		0	X	
Control Change	0-119	0	X	
	120-127	0	X	
Program		0-127	X	
Change	:True Number	*******	X	
System Exclusive		GM, GM2, MMC	Memory Dump	
Song Position		X	X	
Common	:Song Select	X		
System	:Clock	X	X	
Exclusive	:Commands	0		
Aux	:Local ON/OFF	0	X	
Messages	:All Notes OFF	0		
	:Active Sense	0		
	:Reset	0		
Notes:		0=YES	X=NO	

Appendix B - Assignable MIDI CC's on the UC-33

B1 - The Faders and rotary Controllers:

MIDI CC	Description	Data Lsb (Press Twice)	Data Msb (Press Twice)
0-119	Standard MIDI CC's	-	-
120-127	Channel Mode Messages	-	-
128	Pitch Bend Sensitivity	-	-
129	Channel Fine Tune	-	-
130	Channel Coarse Tune	-	-
131	Channel Pressure	-	-
132	RPN coarse	RPN LSB	RPN MSB
133	RPN fine	RPN LSB	RPN MSB
134	NRPN coarse	NRPN LSB	NRPN MSB
135	NRPN fine	NRPN LSB	NRPN MSB
136	Master Volume GM*	Volume LSB	Volume MSB
137	Master Pan GM*	Pan LSB	Pan MSB
138	Master Coarse Tune GM*	Tuning LSB	Tuning MSB
139	Master Fine Tune GM*	Tuning LSB	Tuning MSB
140	Chorus Mod rate GM2*	Mod rate	-
141	Chorus Mod Depth GM2*	Mod depth	-
142	Feedback GM2*	Feedback level	-
143	Send to Reverb GM2*	Reverb send level	-
144	Pitch Bend	Pitch shift LSB	Pitch shift MSB
255	Controller Off***	-	-

* Sysex messages - for details please see pages XXX & XXX.

** MMC Sysex messages, for details please see page XXX.

*** This value cannot be typed in using the numerical keypad. Type in 144 and then press the + button to set this value.

B2-The Buttons:

MIDI CC	Description	Program (Press Twice)	Data Lsb (Press Twice)	Data Msb (Press Twice)
0-119	Standard MIDI CC's	-	Toggle Value 2	Toggle Value 1
120-127	Channel Mode Messages	-	Toggle Value 2	Toggle Value 1
128	Pitch Bend	Range	-	Sensitivity value
129	Channel Fine Tune	-	Tuning Amount	-
130	Channel Coarse Tune	-	Tuning Amount	-
131	Channel Pressure	-	Pressure Amount	-
132	RPN Coarse	Value	RPN LSB	RPN MSB
133	RPN Fine	Value	RPN LSB	RPN MSB
134	NRPN Coarse	Value	NRPN LSB	NRPN MSB
135	NRPN Fine	Value	NRPN LSB	NRPN MSB
136	Master Volume GM*	-	Volume LSB	Volume MSB
137	Master Pan GM*	-	Pan LSB	Pan MSB
138	Master Coarse Tune GM*	-	Tuning LSB	Tuning MSB
139	Master Fine Tune GM*	-	Tuning LSB	Tuning MSB
140	Chorus Mod Rate GM2*	-	Mod Rate	-
141	Chorus Mod Depth GM2*	-	Mod Depth	-
142	Feedback MB2*	-	Feedback Level	-
143	Send to Reverb GM2*	-	Reverb Send Level	-
144	Pitch Bend	-	Pitch Shift LSB	Pitch Shift LSB
145	Program/Bank Preset	Program	Bank LSB	Bank MSB
146	MIDI CC (on/off)	MIDI CC	Button Press Value	Button Release Value
147	Note (on/off)	Note	Velocity off	Velocity on
148	Note (on/off toggle)	Note	Velocity off	Velocity on
149	MMC Command**	-	Command Select	-
150	Reverb Type GM2*	-	Type	-
151	Reverb Time GM2*	-	Time	-
152	Chorus Type GM2*	-	Type	-
255	Controller Off***	-	-	-

* Sysex messages - for details please see pages XXX & XXX.

** MMC Sysex messages, for details please see page XXX.

*** This value cannot be typed in using the numerical keypad. Type in 144 and then press the + button to set this value.

Appendix C - Hexadecimal Conversion Chart

Hexadecimal to Decimal Conversion Chart

Hexadecimal Value	Decimal Value	Hexadecimal Value	Decimal Value	Hexadecimal Value	Decimal Value
0	0	2B	43	56	86
1	1	2C	44	57	87
2	2	2D	45	58	88
3	3	2E	46	59	89
4	4	2F	47	5A	90
5	5	30	48	5B	91
6	6	31	49	5C	92
7	7	32	50	5D	93
8	8	33	51	5E	94
9	9	34	52	5F	95
0A	10	35	53	60	96
0B	11	36	54	61	97
0C	12	37	55	62	98
0D	13	38	56	63	99
0E	14	39	57	64	100
0F	15	3A	58	65	101
10	16	3B	59	66	102
11	17	3C	60	67	103
12	18	3D	61	68	104
13	19	3E	62	69	105
14	20	3F	63	6A	106
15	21	40	64	6B	107
16	22	41	65	6C	108
17	23	42	66	6D	109
18	24	43	67	6E	110
19	25	44	68	6F	111
1A	26	45	69	70	112
1B	27	46	70	71	113
1C	28	47	71	72	114
1D	29	48	72	73	115
1E	30	49	73	74	116
1F	31	4A	74	75	117
20	32	4B	75	76	118
21	33	4C	76	77	119
22	34	4D	77	78	120
23	35	4E	78	79	121
24	36	4F	79	7A	122
25	37	50	80	7B	123
26	38	51	81	7C	124
27	39	52	82	7D	125
28	40	53	83	7E	126
29	41	54	84	7F	127
2A	42	55	85		

Appendix D - Useful MIDI data

General MIDI Instruments

PianoA	Bass	Reed	Synth Effects
0 Acoustic Grand Piano	32 Acoustic Bass	64 Soprano Sax	96 SFX Rain
1 Bright Acoustic Piano	33 Fingered Bass	65 Alto Sax	97 SFX Soundtrack
2 Electric grand Piano	34 Electric Picked Bass	66 Tenor Sax	98 SFX Crystal
3 Honky Tonk Piano	35 Fretless Bass	67 Baritone Sax	99 SFX Atmosphere
4 Electric Piano 1	36 Slap Bass 1	68 Oboe	100 SFX Brightness
5 Electric Piano 2	37 Slap Bass 2	69 English Horn	101 SFX Goblins
6 Harpsichord	38 Syn Bass 1	70 Bassoon	102 SFX Echoes
7 Clavinet	39 Syn Bass 2	71 Clarinet	103 SFX Sci-Fi
Chromatic Percussion	**Strings/Orchestra**	**Pipe**	**Ethnic**
8 Celesta	40 Violin	72 Piccolo	104 Sitar
9 Glockenspiel	41 Viola	73 Flute	105 Banjo
10 Music Box	42 Cello	74 Recorder	106 Shamisen
11 Vibraphone	43 Contrabass	75 Pan Flute	107 Koto
12 Marimba	44 Tremolo Strings	76 Bottle Blow	108 Kalimba
13 Xylophone	45 Pizzicato Strings	77 Shakuhachi	109 Bag Pipe
14 Tubular bells	46 Orchestral Harp	78 Whistle	110 Fiddle
15 Dulcimer	47 Timpani	79 Ocarina	111 Shanai
Organ	**Ensemble**	**Synth Lead**	**Percussive**
16 Drawbar Organ	48 String Ensemble 1	80 Syn Square Wave	112 Tinkle Bell
17 Percussive Organ	49 String Ensemble 2	81 Syn Sawtooth Wave	113 Agogo
18 Rock Organ	50 Syn Strings 1	82 Syn Calliope	114 Steel Drums
19 Church Organ	51 Syn Strings 2	83 Syn Chiff	115 Woodblock
20 Reed Organ	52 Choir Aahs	84 Syn Charang	116 Taiko Drum
21 Accordion	53 Voice Oohs	85 Syn Voice	117 Melodic Tom
22 Harmonica	54 Syn Choir	86 Syn Sawtooth Wave	118 Syn Drum
23 Tango Accordion	55 Orchestral Hit	87 Syn Brass & Lead	119 Reverse Cymbal
Guitar	**Brass**	**Synth Pad**	**Sound Effects**
24 Nylon Acoustic	56 Trumpet	88 New Age Syn Pad	120 Guitar Fret Noise
25 Steel Acoustic	57 Trombone	89 Warm Syn Pad	121 Breath Noise
26 Jazz Electric	58 Tuba	90 Polysynth Syn Pad	122 Seashore
27 Clean Electric	59 Muted Trumpet	91 Choir Syn Pad	123 Bird Tweet
28 Muted Electric	60 French Horn	92 Bowed Syn Pad	124 Telephone Ring
29 Overdrive	61 Brass Section	93 Metal Syn Pad	125 Helicopter
30 Distorted	61 Syn Brass 1	94 Halo Syn Pad	126 Applause
31 Harmonics	62 Syn Brass 2	95 Sweep Syn Pad	127 Gun Shot

MIDI Note Numbers

Octave (n)	Note Numbers										
	C#n	Dn	D#n	En	Fn	F#n	Gn	G#n	An	A#n	Bn
-1	1	2	3	4	5	6	7	8	9	10	11
0	13	14	15	16	17	18	19	20	21	22	23
1	25	26	27	28	29	30	31	32	33	34	35
2	37	38	39	40	41	42	43	44	45	46	47
3	49	50	51	52	53	54	55	56	57	58	59
4	61	62	63	64	65	66	67	68	69	70	71
5	73	74	75	76	77	78	79	80	81	82	83
6	85	86	87	88	89	90	91	92	93	94	95
7	97	98	99	100	101	102	103	104	105	106	107
8	109	110	111	112	113	114	115	116	117	118	119
9	121	122	123	124	125	126	127				

Appendix F - Roland GS and Yamaha XG NRPN Support to Roland JV/XP

NRPN MSB CC99	NRPN LSB CC98	Data MSB CC06	Data LSB CC38
01	08	00-7F	n/a (-64 - 0 - +63) Vibrato Rate (relative change)
01	09	00-7F	n/a (-64 - 0 - +63) Vibrato Depth (relative change)
01	0A	00-7F	n/a (-64 - 0 - +63) Vibrato Delay (relative change)
01	20	00-7F	n/a (-64 - 0 - +63) Filter Cutoff Freq. (relative change)
01	21	00-7F	n/a (-64 - 0 - +63) Filter Resonance (relative change)
01	63	00-7F	n/a (-64 - 0 - +63) EG (TVF&TVA) Attack Time (relative change)
01	64	00-7F	n/a (-64 - 0 - +63) EG (TVF&TVA) Decay Time (relative change)
01	66	00-7F	n/a (-64 - 0 - +63) EG (TVF&TVA) Release Time (relative change)
*14	00-7F	00-7F	n/a (-64 - 0 - +63) Drum Filter Cutoff Freq. (relative change)
*15	00-7F	00-7F	n/a (-64 - 0 - +63) Drum Filter Resonance (relative change)
*16	00-7F	00-7F	n/a (-64 - 0 - +63) Drum EG Attack Rate (relative change)
*17	00-7F	00-7F	n/a (-64 - 0 - +63) Drum EG Decay Rate (relative change)
18	00-7F	00-7F	n/a (-64 - 0 - +63) Drum Instrument Pitch Coarse (relative change)
*19	00-7F	00-7F	n/a (-64 - 0 - +63) Drum Instrument Pitch Fine (relative change)
1A	00-7F	00-7F	n/a (0 to Max) Drum Instrument Level (absolute change)
1C	00-7F	00-7F	n/a (Random, L>C>R) Drum Instrument Panpot (absolute change)
1D	00-7F	00-7F	n/a (0 to Max) Drum Instrument Reverb Send Level (absolute change)
1E	00-7F	00-7F	n/a (0 to Max) Drum Instrument Chorus Send Level (absolute change)
%1F	00-7F	00-7F	n/a (0 to Max) Drum Instrument Variation Send Level (absolute change)

* added by Yamaha XG; % changed from Delay to Variation by Yamaha XG

Appendix G - General MIDI Reverb and Chorus Types

Reverb Types	Chorus Types
0: Small Room	0: Chorus 1
1: Medium Room	1: Chorus 2
2: Large Room	2: Chorus 3
3: Medium Hall	3: Chorus 4
4: Large Hall	4: FB Chorus
8: Plate	5: Flanger

Appendix H - UC-33 Preset Chart

* Requires setup or song file. Please check the Evolution Installer CD-ROM/Application Files

Factory Preset

01 Cubase multi-channel & channel strip(1-8) *

02 Native Instruments B4

03 Native Instruments Pro-53

04 Reason Mixer

05 Reason Malstrom

06 Reason Subtractor

07 Reason NN-19

08 Reason Dr. Rex

09 Reason ReDrum

10 Cubase multi-channel mixing (9-16) *

11 Logic channel strip*

12 Sound Studio Pro II 1-8 mixer

13 Sound Studio Pro II 9-16 mixer

14 Sonar preset*

15 Steinberg Model-E

16 Steinberg Halion

17 Waldorf Attack

18 Waldorf PPG Wave2V

19 Native Instruments FM7 *

20 Rebirth - Master controls and Synths

21 Rebirth drum Modules

22 AAS Lounge Lizard

23 CM DS-404

24 CM SR-202

25 CM 101

26 TC-Works Mercury-1

27 Big Tick Audio Rainbow Synth

28 GS/XG/GM2 Synth control

29 GS/XG drum mixer

30 SoundBlaster cards synth control

31 User preset1 Channel mixer (1-8)

32 User Preset2 Channel Mixer (9-16)

33 User Preset3 Undefined controllers to global channel

* Requires setup or song file. Please check the Evolution Installer CD-ROM/Application Files