

EMU – Synth Library

Version 1.0

This editor is designed for a group of E-mu synths starting with the 1998 Audity 2000, then the Proteus 2000 family (Xtreme Lead-1, Mo'Phatt, etc) from around 2000, and finally the Command Station synths from 2001.

All three groups of synths have similar internals, but their Midi implementation is slightly different so their System Exclusive (sysex) for their patches is different.

To cope with this the program sets up separate areas to store the different types of files.

When the program finds a synth it will only load files (patch, bank and library) for that synth.

NOTE: If it does load it means it can be happily sent to the synth, but it may not make a sound as you can load a patch that was designed for a specific wave ROM even if it isn't there in the synth.

Connecting

Make sure you have the Midi cables connected.

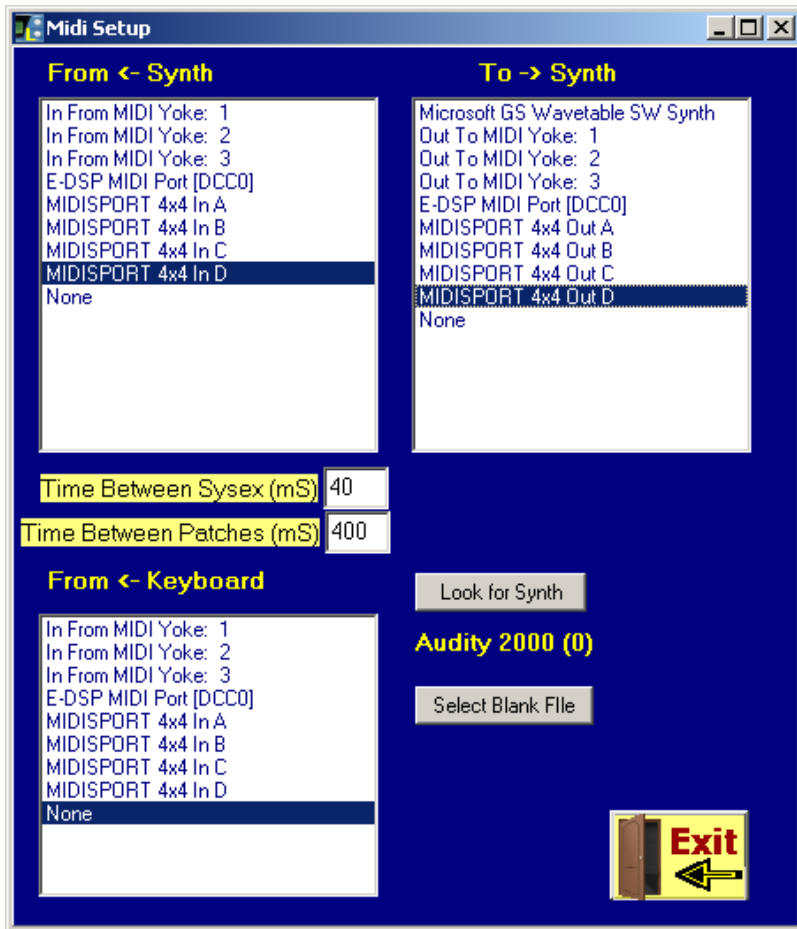
When the program starts for the first time, as it is unlikely that you don't already have the folders, it creates the storage directories for the Libraries, Banks and Patches in a Directory in your MyDocs area called "Emu Library".

The program starts by looking for an Emu synth.

In this case it has found an Audity 2000.



If the program can't find the synth it opens the Midi setup window where you select you Midi interface.



There is a Midi input marked From <- Keyboard. This simply echoes any Midi data to the To -> Synth output so you can test the sound.

The number in brackets is the synth id number

Audity 2000 (0) in this case it is 000.

The library sets up separate 'ini' entries within the E-mu.INI file to control the environment for each E-mu synth you have.

It separates synths based on the synth name (Audity 2000) and the synth id number.

So as you change the Midi In and Out to connect to a different synth the program, when it finds that synth, will load the library and bank files last saved for this synth.

As it is defined by the synth name AND the Id you can have different setups for the one synth by just changing the Id number on the synth.

The E-mu synths use an older type of flash memory that takes some time to read and write. A modern computer can do things a lot faster and the synth can't keep up.

If you get some errors from the synth ("Midi Too Fast") change the **Time Between Sysex** and the **Time Between Patches** to compensate.

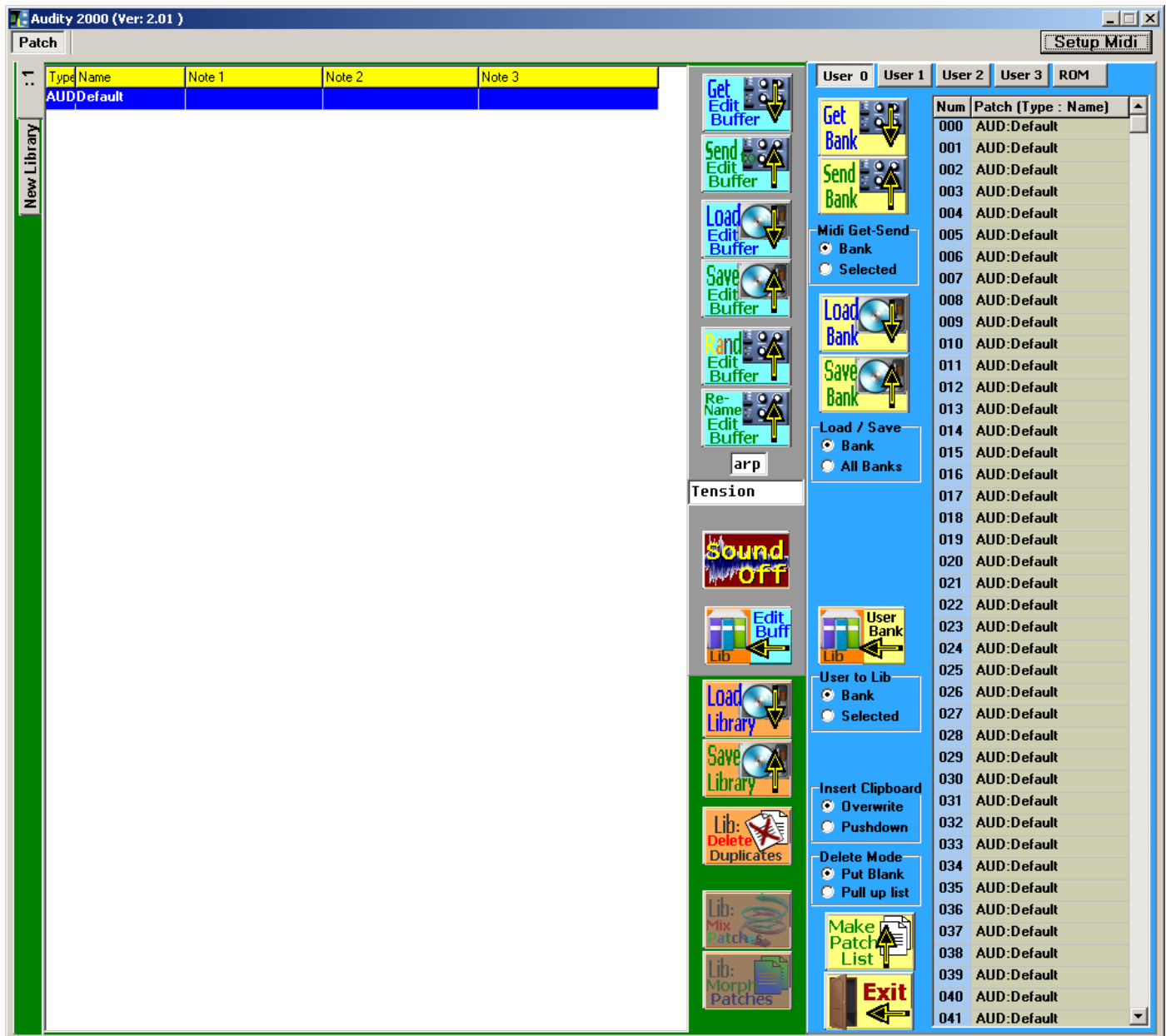
The program needs a blank patch to fill the gap left when you delete patches in a bank. The program comes with a blank patch for each of the synthesiser types it can deal with (Audity 2000, Proteus 2000 types and the Command Station types).

These blank patches are also designed as the starting point for a new sound for me and the ROMs inside my machines, but perhaps you have a different ROM or these ones don't use the ROM waves you want.

You can alter or create your own and make that the default blank patch.

Main Screen

The program was designed to have as much of the program as possible on a single screen.



On the right are the Banks inside you synth. There are 4 User Banks (if you don't have 4 User banks in your Audity, perhaps it has the older software and you need to update it before you can use this program) and a ROM bank area so you can get the factory patches to store in the Library to mix and select.

As mentioned, the program remembers what you have been doing and tries to restore the setup you had when you last left it.

When you start the program for the first time though the Banks and Library should look like the above.

Common Actions

There are a few things that are common across the Library and Bank lists.
As we all work differently there are a few ways of doing the same thing.

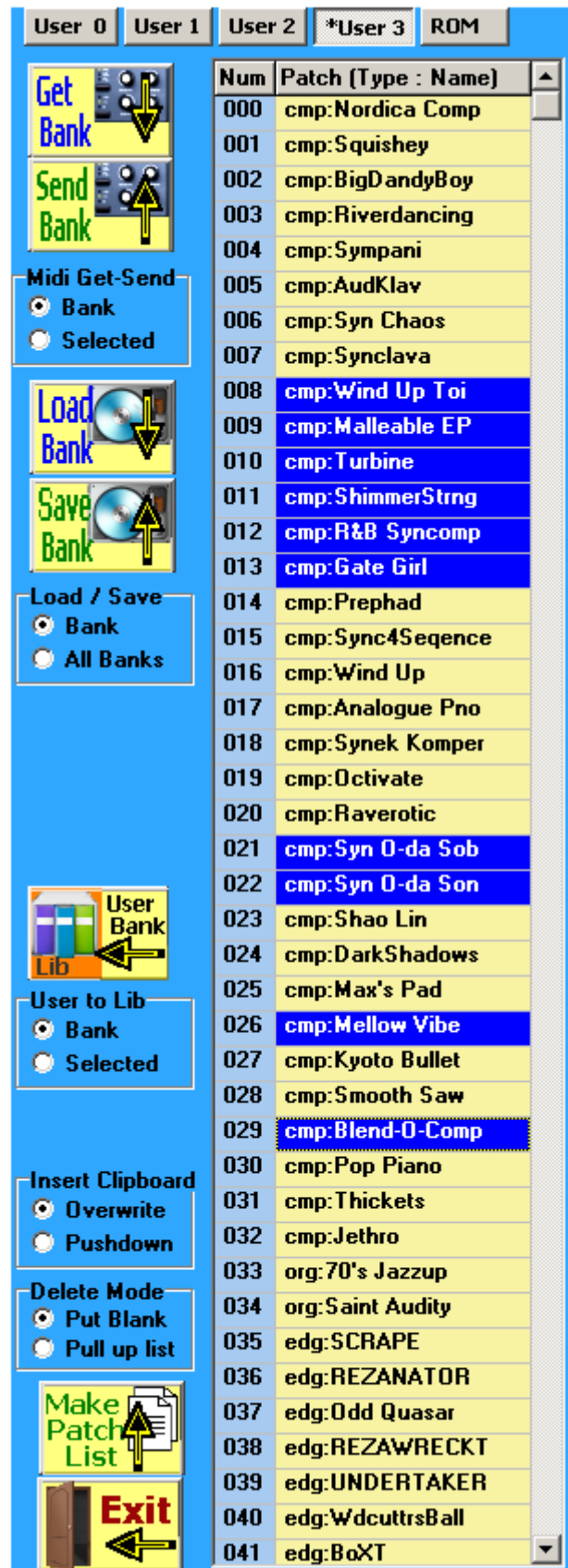
1. Double clicking (left button) sends the patch to the synth.
2. Up,Down cursor keys sends the patch that the cursor is about to land on.
3. Single left click selects a patch, but doesn't send it.
4. Ctrl + Click selects another patch to create a group of possibly non contiguous patches (see picture below)
5. Shift + Click creates a group of contiguous selected patches between a selected patch and the one you just clicked.
6. Right clicking a patch that is **not selected** also sends the preset
7. Right click on a **selected** patch brings up the Edit, Copy, Paste, Delete and Swap menu.
8. **Edit** – will bring up an edit box over the cell in the list.
 - a. In a bank it is for renaming a patch.
 - b. In the library it can also be use to make a comment.
 - c. Finish by pressing ENTER.
 - If you are editing a comment, then the comment for all the selected patches will change to save you typing the same thing for dozens of patches.
9. **Swap** is only available if there are just 2 patches selected and only works within one Bank or Library.
10. **Copy** loads the selected patches into a special buffer ready for...
11. **Paste** either overwrites or pushes down and discards the end patches in a Bank. Into the Library is just pushes down and doesn't discard any patches.
12. **Delete** either overwrites the patch with a Blank patch or pulls up the list closing the gap and adds a Default patch at the end in the Bank. In the Library it just removes the selected patches.
13. For the selected area, the common Windows **Ctrl+C** copy, **Ctrl+V** paste, **Ctrl+O** (or **Ctrl+L**) to load, **Ctrl+S** to save also work.
14. The **Delete** key will delete.
15. **Ctrl+A** to select all the patches in the bank (not the library – why would you?)
16. **Ctrl+X** and **Ctrl+Z** do not work.

User Banks

Think of this area as a direct mapping to the synth's own memory.

You can copy and paste patches from and to any of these lists.

As you can't send the patches in the ROM list back to the synth, pasting it to the ROM is good as a spare work area.



As mentioned, on all lists, including the Library, double left clicking sends the patch to the synth.

Single left click selects the patch without sending it.

Up and Down cursor keys select the next / previous patch and sends it to the synth.

As for most Windows programs, if you hold down the CTRL key you can select individual patches.

Clicking when the SHIFT key is down selects a block between the patch and an already selected patch.

When you have the bank just how you want it, you can save it to disk and / or send it to the synth.

As it can take some time to send or receive a whole bank you can choose to send just the 'Selected' patches by setting the 'Midi Get-Send' box and press 'Send Selected' (If you can't see the 'Send Selected' button you haven't picked 'Selected' in the 'Midi Get-Send' box.)

The patches will be stored in the same position as they are in the list. ie **cmp:Wind Up Toi** will be saved in User 3 patch 008

The program prevents you from adding more patches to a Bank than the synth has in its bank.

Any gaps left after deleting patches are filled with the default patch.

All Banks

This is used to save the whole synth.

You can use the 'Load All' and 'Save All' when you need to be able to return the synth patches to just how they were during the recording session or a gig / tour.

I like to do a 'Save All' for each song I am recording. It makes it very easy to return to the song to add or edit something as all the patches are in the correct spots.

Send to the Library

You can add all of the Bank or just your selection to the end of Library.

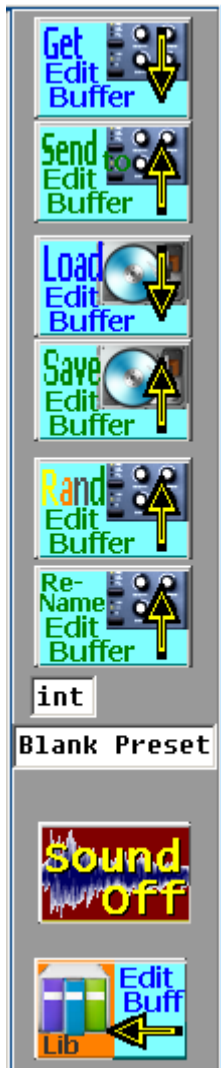
Moving patches

There are two ways you can insert patches into a bank when you paste them. Simply overwrite or, starting at the highlighted patch, push down all following patches to make a gap and then copy the new ones into the space. *The patches at the end that are too many for the Bank are removed.*

Deleting patches

When deleting patches in the Bank either, the patches will be replaced by a copy of the Default patch or, all the patches after the deleted one will be pulled up and the hole at the end will be filled by copies of the Default patch.

Edit Buffer



When you select a patch on the synth, like most other synths, the patch data is copied from where it is permanently stored and placed in an area where it is used to build the sound and where it can be modified.

This area is called the Edit Buffer.

When you start the Library program this edit buffer is requested from the synth and stored here.

Pressing the button can Get the Edit Buffer and when it has received it, the program can save to disk as an single preset. This is great for when you are creating a sound as you stumble across couple great sounds as you are editing. Get them into the program and save them to file or the Library

Getting a single patch like this is also an easy the way to save a new Default patch.

When the Edit Buffer is loaded from a file it is automatically sent to the synth.

The 'Rand Edit Buffer' button calls the synth's function to create a random patch and then automatically loads it back in to the program so it can be renamed, saved or added to the library.

**** Not for the Command Station.** Although there is a randomise function in the Command Station it doesn't look like you can request it by Midi. It fact there are a few Midi things that the Command Station dropped.

'Sound Off' button does just that. It sends a Midi message to turn off any hanging sounds coming from the synth.

This is the button to remember. You should able to hit this in the dark.

You can add the single preset to the end of the library.

Library

Audity 2000 (Ver: 2.01)

Patch

: 1

Type	Name	Note 1	Note 2	Note 3
AUD	Default			

New Library

On the left is the Library and when it is a new library it has just the single Default patch in it – there needs to be at least one patch in a library.

The number on the tab on the top left is the number of patches stored in the Library.

Audity 2000 (Ver: 2.01)

Patch

Audity ROMS : 639

New Library

Type	Name	Note 1	Note 2	Note 3
cmp	Squishey	Audity Rom 0		
cmp	BigDandyBoy	Audity Rom 0		
cmp	Riverdancing	Audity Rom 0		
cmp	Sympani	Audity Rom 0		
cmp	AudKlav	Audity Rom 0		
cmp	Syn Chaos	Audity Rom 0		
cmp	Synclava	Audity Rom 3		
cmp	Wind Up Toi	Audity Rom 0	A block of comments	
cmp	Malleable EP	Audity Rom 0		
cmp	Turbine	Audity Rom 0		
cmp	ShimmerStrng	Audity Rom 0		
cmp	R&B Syncomp	Audity Rom 0		
cmp	Gate Girl	Audity Rom 0		
cmp	Prephad	Audity Rom 0		
cmp	Sync4Sequence	Audity Rom 0		
cmp	Wind Up	Audity Rom 0		
cmp	Analogue Pno	Audity Rom 0		
cmp	Synek Komper	Audity Rom 0		
cmp	Octivate	Audity Rom 0		
cmp	Raverotic	Audity Rom 0		
cmp	Syn O-da Sob	Audity Rom 0		
cmp	Syn O-da Son	Audity Rom 0		
cmp	Shao Lin	Audity Rom 0		
cmp	DarkShadows	Audity Rom 0		

There is space for three comments to help you remember what the patch sounds like so you can group them for a quick search.

Select **Edit** from the right click popup menu and type. It is finished with the ENTER key.

If you have a number of patches selected it will write the comment in all of them.

Clicking on the label at the top will sort the library using that column as the index. This includes the Type column that contains the first part of the patch name. Click it again and it will sort in the reverse order.

Most of the mouse actions on the Library are the same as for the Banks. Double click sends the patch to the synth etc.



You can have as many libraries as your hard disk will hold and maximum number of patches in one Library is 20,000 which are really far too many to be manageable.

I group the sounds into separate Libraries.

Create a Bass sound library and a Pad library etc. and save them with a meaningful name. This will speed up searching for sounds when you are in the middle of a recording session..

Delete Duplicates

Instead of worrying about if there are a whole lot of patches in the Bank that are already in the Library, send it anyway and use the 'Delete Duplicates' to remove them leaving only the different ones.

When searching for duplicates, the program ignores the patch name, so you can rename any patch so it is meaningful for the song or the tour and it won't clutter up the Library as a duplicate in all but name.

The program selects the duplicate patches it finds and asks to delete them. If you press cancel the patches remain highlighted so you can check through the selected ones to check (use CTRL + left click to deselect) then press the Delete key to delete all the selected patches.

Note that the Audity ROM has a duplicate at patch 70 in bank 1 and bank 4 "EQed Swamp"

When you select two patches in the library, both the 'Mix Patches' and 'Morph Patches' buttons become active.

'Mix Patches'



The 'Mix Patches' works for two **or more** selected patches in the Library.

Pressing the button creates a User Bank full of patches that are comprised of data randomly copied from the selected patches.

The larger the number of patches you select the wider the variety of sounds. Too many selections and the mixed patches sound like they came from the random generator. Too few and they sound too similar.

I like to use from about 4 to 10, but feel free to play around.

Sometime there will be no sound. Go on to the next patch

Sometimes the envelope data can cause the notes to 'hang' – press the **'Sound Off'** button.



'Morph Patches'

The 'Morph Patches' works when only two patches in the Library are selected.

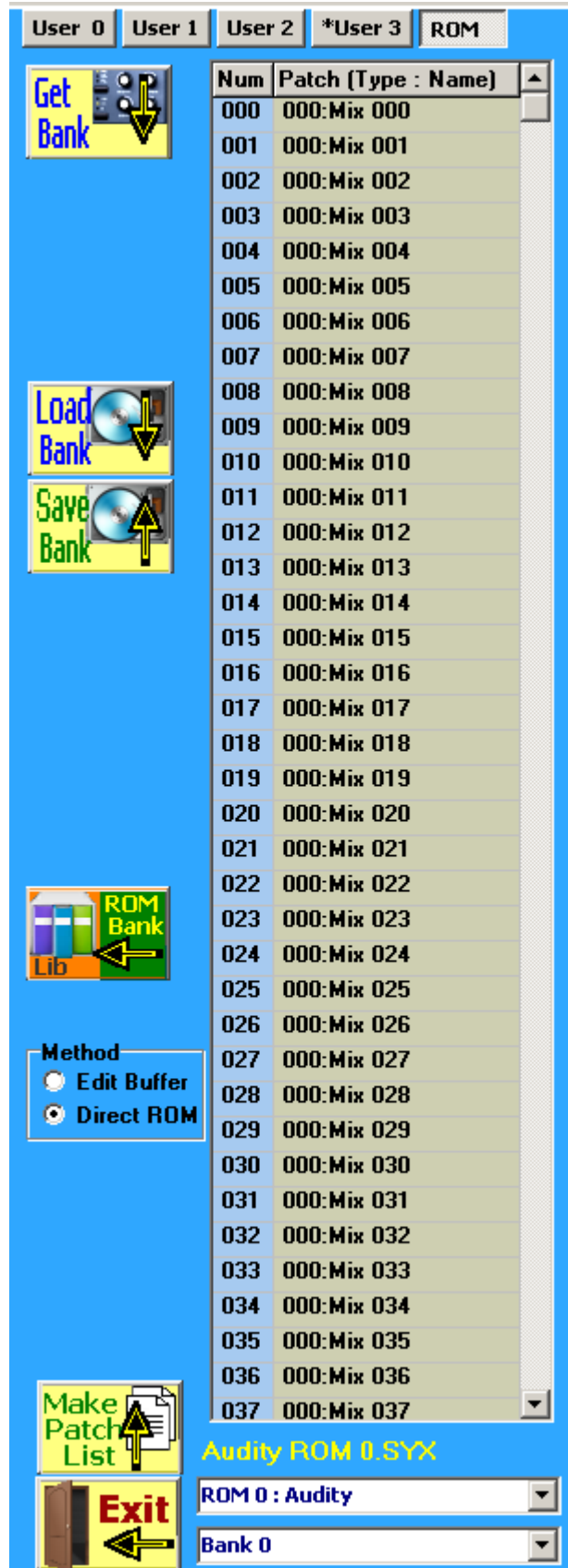
Pressing this creates a User Bank full of patches that are comprised of data from the first patch stepping towards the second selected patch.

For example, the attack of the first Voice in the first selected patch is 20 and the same parameter in the second selected patch is 276.

The first new patch the attack would be 20 and each new patch after that would have the value increase by 2 for that parameter, edging closer and closer to 276 for patch 127.

Unlike the Mix patches that are random each time, repeating the Morph on the same two patches will generate the same set of 128 patches.

When you press the Mix or Morph buttons 128 new generated patches are placed in the Bank that is visible. I find that this can be a great use of the ROM bank, leaving the User Banks intact.



ROM Bank

Usually, this bank is used to extract the presets from the ROM Banks and put them in the Library.

I have built a few libraries from the synths and ROMs I have in my studio, but I don't have them all.

What I do have you can find on my web site.

<http://www.bwalk.com.au>

The program should recognise the ROMs in your synth and list the banks of patches the ROM has.

When you get the banks Save the bank to load back in to any of the User Banks or just send it all to the Library.

** Command Station problem

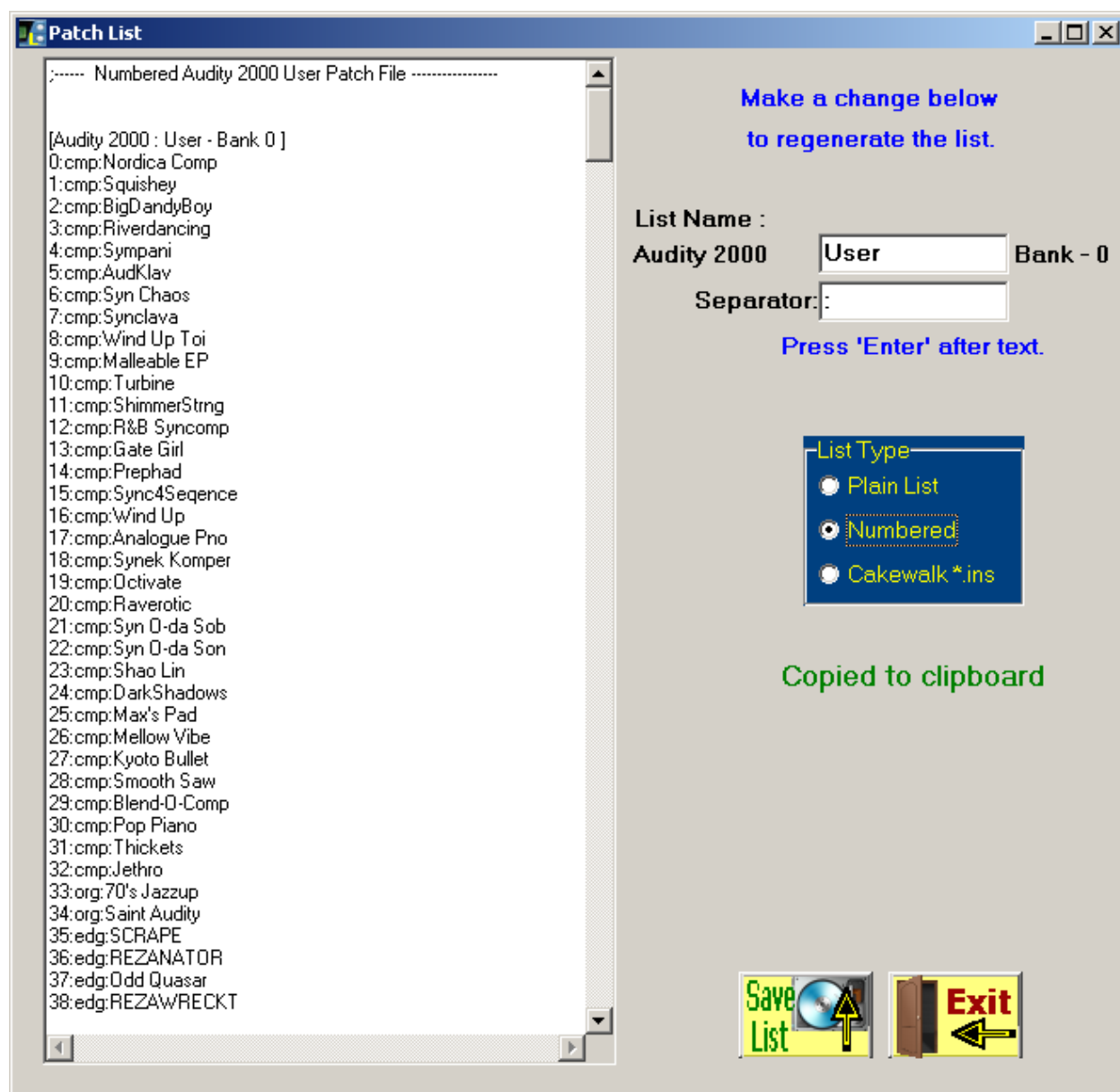
As mentioned before the Command Station has left out some Midi commands. It turns out that you can't get the ROM banks greater than Bank 3. So there is a second method to get them.

In the 'Method' box select Edit Buffer. This first selects the patch (from 000 to 127 in turn) then requests the patch from the buffer. **Make sure you don't have something you want to keep in the edit buffer on the synth before using this as it will be overwritten.**



The Patch List

This page is to create a text patch list that you can copy to your text editor to print out to show what patches are where, but it can also be used to create an instrument file for a DAW.



I have used Cakewalk and now Sonar for a long time so, naturally, the program creates a instrument file (*.ins) for that program, but it will also create numbered or plain text lists where you can change the separator between the patch name and the number.

Hopefully this will make is easy to create a list for the DAW you have.

Use the ENTER key to finish editing the List Name or the number separator and the program will create the list and copy it into the clipboard ready to paste.

Now you can flick over to your favourite text editor and paste and edit to finish the job.

Or you can edit the text directly in the window and then save the file.

Or highlight (CTRL + A will select all) the text and CTRL + C will copy in it into the clipboard.

File Format

Both the contents of the Bank and single patch files are just System Exclusive (sysex) and can be sent to the synth independently of this program.

You can email them to friends or post them on the web.

You could use MidiOx to load them back as it will happily send sysex.

Most DAWS will also add sysex and keep it inside the song file.

As the Library file has both sysex and the comments stored in it, it can only be used with this program,.

Royce Craven

April 2016