KORG TRITON CONTROLLER DOCUMENTATION

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Supports Models - Triton Classic, Extreme, Rack, LE, Triton Studio and Karma

Version 7.6

19th February 2024

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Contents

INTRODUCTION

The Korg Triton was launched in 1999. I bought a Triton Classic Pro shortly afterwards. I also got a Moss board, SCSI board and maxed out the internal RAM. It was and still is a great synth. You can hear Triton sounds on so many hits after 2000. However, there are so many controls the smallish display it makes finding settings more difficult than it should be.

I started writing the software in 2001 because I felt the interface on the Triton could be made more intuitive and be laid out in a more orderly way – like older analogue synths such as the Korg MS10/20 & Mini-Moog. Their sound creation process was done in a 'linear fashion' on the control panel. This is particularly beneficial for Program editing for PCM and the Moss board (Bank F if fitted), which inherit the principals of earlier synths – plus much more! I found the small screen of the Triton does not provide a particularly clear layout of the controls, with many of the features hidden behind multiple windows. The software has been evolving ever since 2001. And my Triton? Well, it still works beautifully and looks like new 😊

Try the demo version first and see if you like it!

Stuart Pryer

Cornwall, UK 2024

DEMO VERSION 7.5 - INSTALLATION

This application enables the user to control most of the Korg Triton series Synthesizers (Classic, Rack, LE, Studio and Karma) many parameters from a PC running Windows 11 to Windows XP – NB. To install: -

1. If you are using Windows 10 or 11 change the setup.exe file in compatibility mode to windows 7. To do this right click on the setup.exe file and choose properties/compatibility. Run the setup.exe program as an administrator.
2. Once installed run the Triton.exe program in compatibility mode – windows 7 following the same method as above with the Triton.exe file. Run as an administrator.

I you purchase the full version you just need to overwrite the demo versions triton.exe with the full versions Triton.exe which I will provide. Again, set compatibility mode as above and run as an administrator. The any updated to the TRITONCONTROLLER.pdf documentation can be downloaded and copied to the installation directory with the exact name and case TRITONCONTROLLER.pdf. The same for the Tutorial pdf documentation. There is also a full installer which will load these two files automatically.

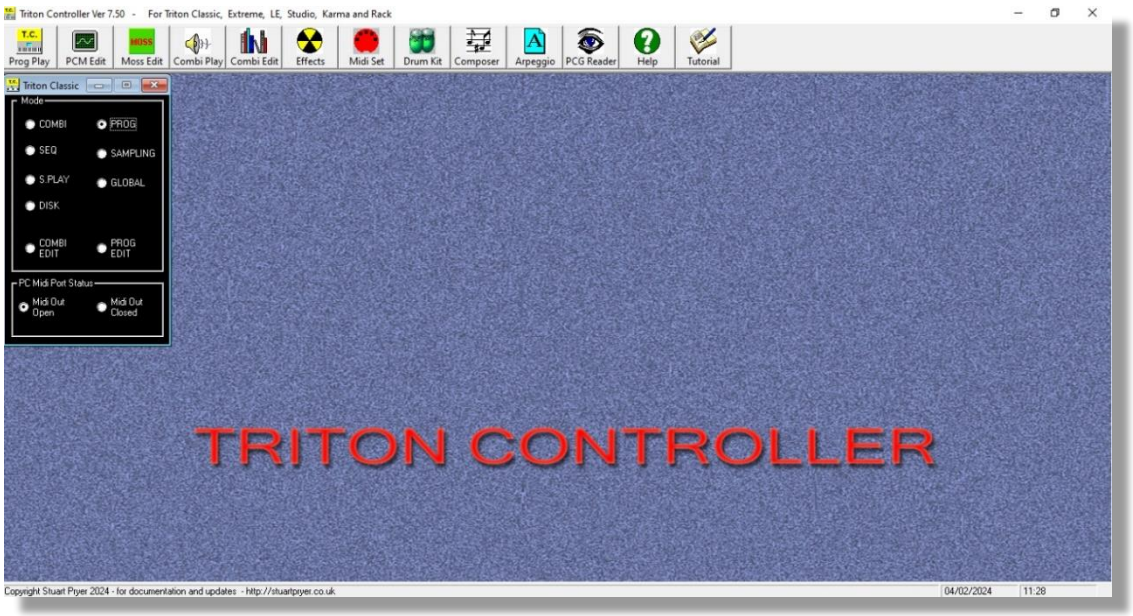
The software is written in Microsoft Visual Studio professional with the first version created in 2001. It is a 32 bit application.

Please note that the demo version has various features disabled such as the ability to save edited PCG files. The following modes are available in the Demo version:- Program Edit, Combination Play, Midi Settings, Composer and PCG Reader (read only). The remaining buttons are not available. You can use it 50 times or for up to 2 weeks before it stops working.

There are many features in the Full Version not on the Demo version. For instance, you cannot send data from an opened PCG file to the synthesizer to audition it on the Demo version. The Full Version has the Demo's disabled features restored plus all of the latest features. *Please read conditions of use.*

QUICK START

For those who can't wait ☺



NB. A tutorial is also available on my website covering musical synthesis with the Korg Triton series...

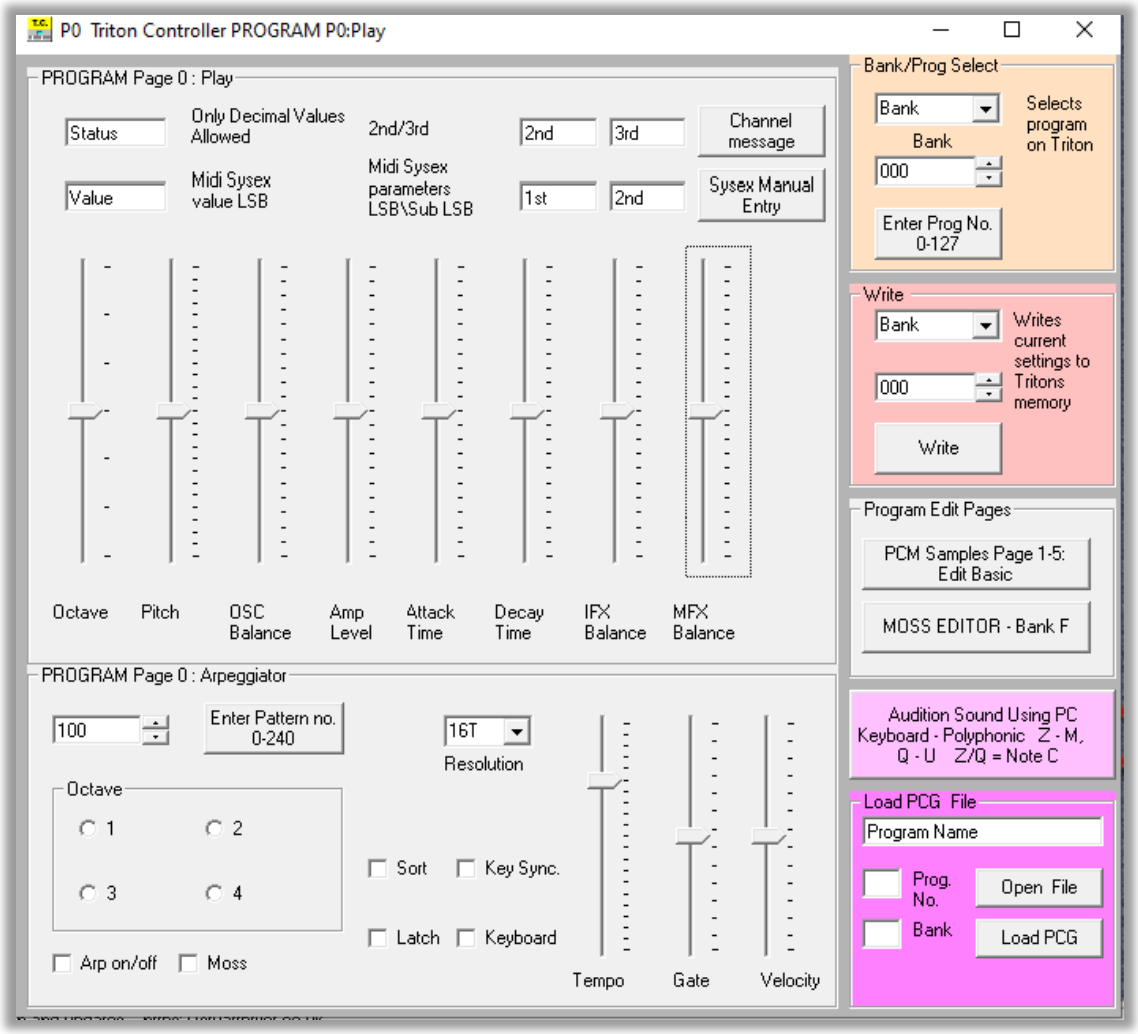
Midi Setup. Connecting the Synthesizer to the P.C. If you want to get up and running quickly and prefer to read the detailed instruction later, then this is what you need to do:-

1. Connect the Korg Synth to the PC using midi leads (Midi out from the synth to midi in on the PC, and midi in on the synth to midi out on the PC) or a Korg PCIF serial lead (you will need to load the Korg PCIF driver for the latter to work).
2. Load and run the Triton Controller software. Click Midi Set Button (Red midi symbol main toolbar). Set model to the model of synth you use, set midi channel to correct channel – default on synth/software is 1. Select the Midi ports for midi in and midi out in the text boxes.
3. On the synth go to 'Global Mode – Midi settings and set Midi receive for sysex, bank change etc. Tick boxes to enable. If you use a PCIF cable rather than normal DIN midi cables make sure data rate is set to 38kb/sec for the PC.
4. Also make sure that the Triton bank map is set to Korg and not general MIDI. Otherwise, you will only have access to general Midi. To do this - On the Triton, Goto global mode - system preferences (page 2) , and set bank map there to Triton.
5. Note. If you are using a Mac as your studio computer then you need to send Midi data from and to the PC via RTPMidi on the PC to the Mac.

If you click between 'PCM edit' and 'Combi play' on the T.C. Mode Form. The mode on the synth will change. (See lights above mode buttons). You should now also be able to go to an edit page in the software, change a parameter on the PC and as you do you should see the parameter change on the Triton/Karma's screen. You will have to manually go to the particular edit screen on the synth as midi will not alter the screen on the synth automatically - it will however go to the correct mode.

MAKING YOUR FIRST EDITS

The Triton Controller Software is designed to make editing sounds on the Korg synth a lot easier than using the small screen that comes with the synth. This is even more true for those models without a touch screen such as the Karma, Rack and LE. The simplest page to start with is Program Play.



Click the Icon at the top left of the T.C. menu bar. If the synth is not in that mode already, then the T.C. will force the synth to goto that mode and you should see the program play mode button light up and that mode appear on the tritons screen. (If it does not, then the midi connection needs checking. Goto step 1 above – midi setup.). The P.C. screen will display a new window containing various controls. Now this is the fun bit!

1. With almost any program loaded on the synth – slide the octave slider on the T.C. up or down. Play the synth and you will hear the note go up or down an octave. This is true for most programs, but not all. Move the slider again and play the synth again.
2. Next – do the same thing with the pitch slider – notice what happened to the sound.
3. The Osc Balance changes the respective volumes of the 2 oscillators which make up most triton programs. Sliding it will change the timbre or nature of the sound.
4. The amp level slider changes the output level of the synth. Try sliding it up and down.
5. The Attack and Decay time changes the speed at which a sound builds up and dies away – classic controls on synths since the 1970's
6. The IFX slider refers to Internal Effects and MFX master effects. Changing this slider will alter the filters modifying the synths sound.

You will see that by just changing these few sliders you can create many different sounds !

Tip…. If you want to play the synth from the PC keyboard click the mauve button bottom right – Audition sound using the P.C. keyboard – and use the Z-M keys and Q-U to play it. Handy if the synth is out of reach from the PC.

If you want to choose a program/bank – ie. Sound from the synth, just use the Orange - Program/bank select button top right. Select a bank, select a program and press the button below. The synth will then be told by the T.C. to change the program accordingly. You should see the synths display change and when you play the synth the sound will be different.

You can also save a sound – edited in the synths buffer – to a program/bank location of your choice. Use the Red – Write section of the window of the T.C. for this.

Finally you can adjust arpeggio parameters – assuming your model has arpeggios – Karma uses G.E. instead so this section is not visible on the P.C.

PS…The Load PCG file 'check box' will be covered later in the tutorial.

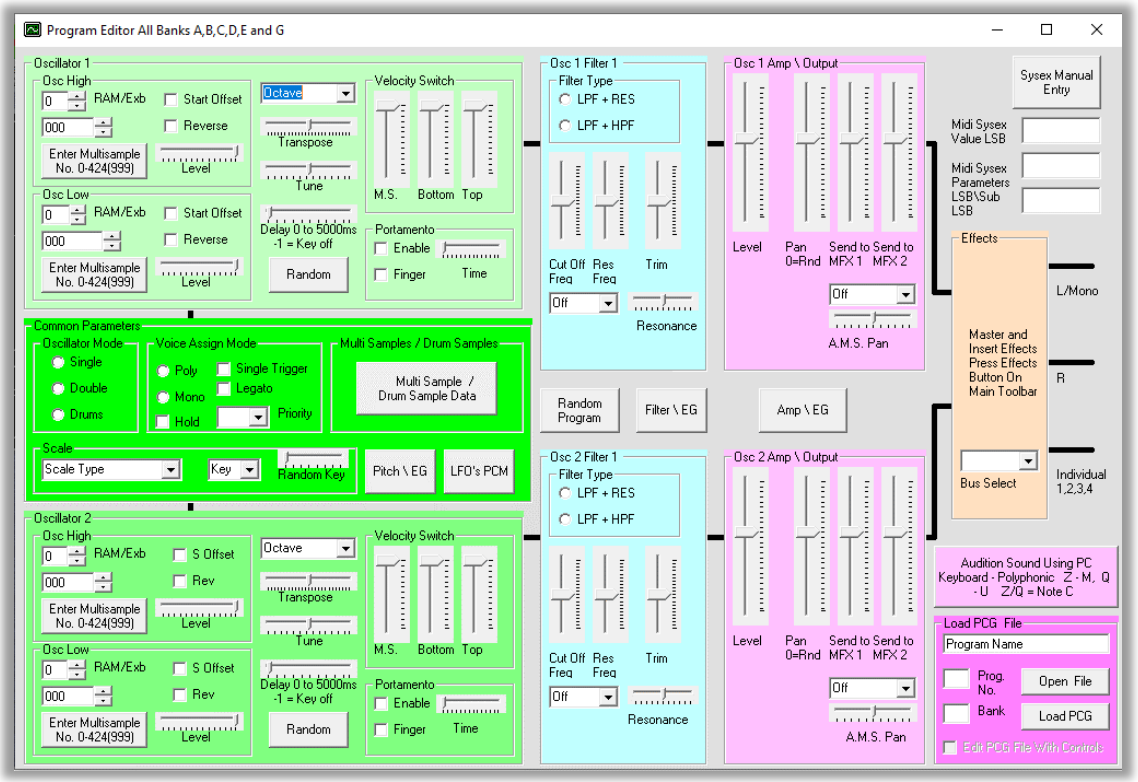
THE MODE FORM

When you first open the T.C. you will see a small window in the top left with the various modes of the Triton listed. By clicking on the various radio buttons you can switch modes on the synth. The sub window also allows the user to open and close the midi port, very useful if you use PCIF and you want another application to take over the PC port. Just close the T.C. port first.

EDITING PCM SOUNDS

The Triton is prepacked with over 400 multisamples – these are mainly digital recordings of instruments which have been assigned to the groups of keys on the synth. *You can also sample your own sounds if you own a Triton Classic or Studio.* The triton allows the user to combine multisamples – so by pressing one note you can sound up to 2 multisamples in a typical program. By combining Programs you can create Combinations which are rich sounds. So you can see the Triton offers vast numbers of ways of making sounds by addition.

The PCM Program edit page on the T.C. lays out neatly all of the editing controls – much in the way of earlier synths of the 70's/80's did on their control panel. When you want to create a new sound its always easiest to start with an existing one – from one of the Korg PCG files which came with the synth and which sound similar to the sound you want. Just tweak it as necessary. So how do you do that?



You need to understand what the various controls do. Controls are generally grouped into:-

1. **Oscillators** – These are Multisamples really, but early synths just had square wave generators, sawtooth, Sine wave etc. Not real samples and you made the sound different by filtering them. Although you can only sound 2 oscillators at once in a triton program you can velocity switch samples. So, if you press the key lightly you get one multisample and press harder you hear another. Don't worry too much about this now but that's why there are 2 multisample options per oscillator.
2. **Filters** – Typically high pass or low pass (High pass just let high frequencies through) and resonance accentuates the frequencies around the resonant frequency. Overdoing this will cause feedback – and a whistling sound will be heard.
3. **Amplifiers** – How loud will the sound be and what will the balance be between the two oscillators 1 and 2.
4. **Envelope Generators** – an envelope is a graph whose intensity varies with time. You can make sounds amplitude build slowly and end quickly or vice versa. You can also apply envelopes to filters.

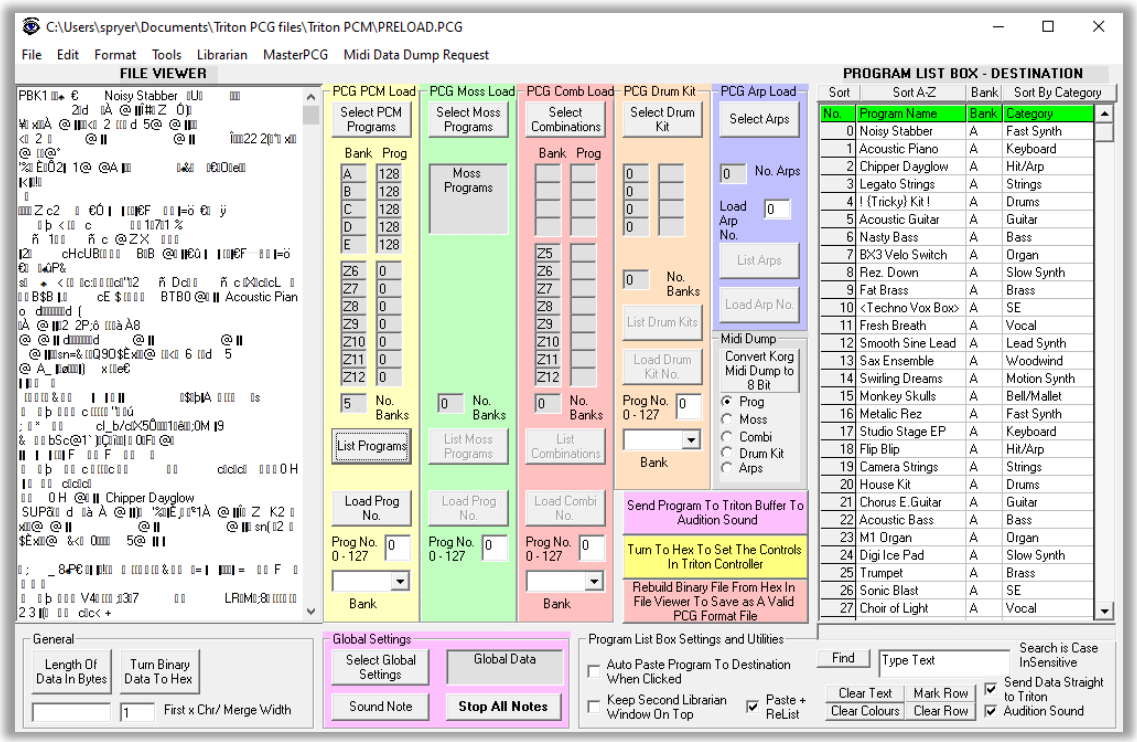
5. **Effects** – ways of further manipulating the sound such as vibrato, overdrive, Leslie speaker etc. – these will be covered later.

The best way of learning about these controls is literally to play around. Start by adjusting just one control at a time and observe how it affects the sound.

Tip……A quick way of generating new sounds is to press the 'Random program' button in the centre of the PCM edit window – it uses random values to move various controls, you never know what you will end up with and its great fun! This feature is only found on this software.

LOADING A PCG FILE

1. select file/open at the PCG Reader screen - **Librarian menu - open PCG**. Choose a native format PCG as appropriate for your synth. *You can generate these yourself by saving any complete pcg on the synth to floppy disc or other media as the synth permits. and then transferring into the PC.*



2. Press 'Select pcm programs' to pick out the program data in the PCG. If the PCG does not contain program data – you will get a 'search string not found' message pop up.

3. Press list programs to see them listed by name in the PROGRAM LIST BOX. Here you can sort, search etc.

4. Click on the individual program or enter a number to load a single program. In the full licensed version this will send the program settings to the synths buffer via midi. You can then play the synth hearing the program you selected on the PC!

The same procedure works for combinations, moss, drum kits and Arps.

Tip…If you have any problems, please read the detailed instructions below and feel free to e-mail me as I will be happy to help.

TRITON CONTROLLER – DETAILED INSTRUCTIONS

This application enables the user to control most of the Korg Triton series Synthesizers (Classic, Rack, LE, Studio and Karma) many parameters from a PC (running Windows XP to Windows 11 – NB. To install you will need to log on with administrator rights for Windows based systems). It has been written in Microsoft Visual Studio. It is a 32-bit application. The program is designed for a screen resolution of 1024x768 or higher.

Please read conditions of use.

I wrote the programme because I felt the interface on the Triton could be made more intuitive and be laid out in a more orderly way – like older analogue synths such as the Korg MS10/20 & Mini-Moog. Their sound creation process was done in a 'linear fashion' on the control panel. This is particularly beneficial for Program editing for PCM and the Moss board (Bank F if fitted), which inherit the principals of earlier synths – plus much more! I found the small screen of the Triton does not lend itself to a particularly clear layout of the controls, with many of its features hidden behind multiple windows.

The program currently only sends MIDI system exclusive (Sysex), channel messgaes and Control Change information. It does not receive it. But you can import Midi data dumps and get the PC 'pick up' the settings on the Triton synth. It can read Korg PCG files on the user's computer. Once a control is changed on the PC it is retained during the session on the PC and until the program is terminated. You can of course still control the Triton from its controls but they will not be reflected on the PC until you change that control on the PC.

The Triton has hundreds of parameters, which can be altered by the user. I have included just about ALL of the commands documented in the Tritons MIDI implementation. As the program develops other features will be added. I encourage users to give me feedback and I will endeavour to add new features if requested.

The PCG reader allows the user to read PCG files (Korg files which contain program settings etc.) on their PC, extract individual Programs, Combinations, Drum Kits or Arpeggios and send them straight to the synth via Midi. No need to use floppy disks. *It can also pick up program, Moss, Combi and Arp data from the synth via midi dumps. See later.*

LOADING, SETTING UP AND RUNNING

To load the program, download the triton demo software from the link on my web site. The Demo Version contains the run time files and settings.dat file. Follow the set-up instructions on the previous page.

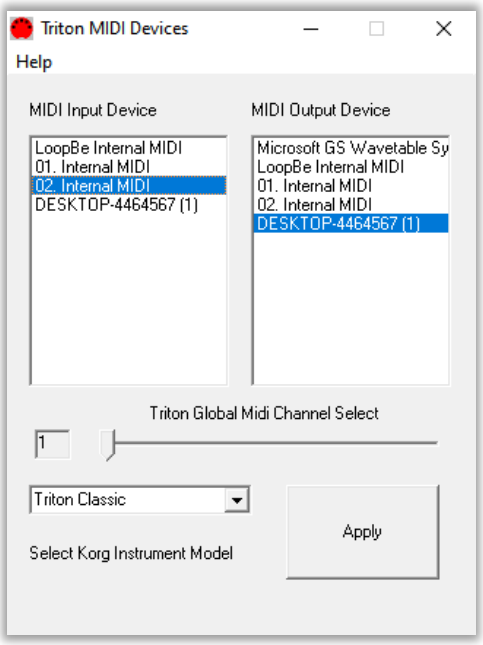
Users who have a full license will be sent an updated executable file - triton.exe - which needs to replace the demo versions triton.exe file. Just overwrite the old file with the new one. This gives full functionality. Updates will normally consist of an updated triton.exe file.

Your PC should be located adjacent to the Triton. As the software is mouse driven all you really need near the Triton is a screen and mouse - or trackball which I use and which sits on the Triton case. Connect the two devices using midi cables between the PC port and the Triton, or the PCIF or USB connector between the serial port and the Tritons PCIF/usb port. You will need to load the Korg driver first to use the latter one. (*You can download the drivers at* www.korg.co.uk

Please note that 3rd party PCIF cables may not work properly with XP/W2000. Cables must be wired exactly as shown in the Triton Manual otherwise the computer will lock up when the Triton is turned on or accessed. Windows 95/98 would tolerate incorrectly wired leads – W2000/XP will not! I had to re-solder my lead to make it the proper Korg spec. Afterwards it worked perfectly with XP.

1. Turn on the PC, turn on the Triton and run the program. Make Sure that when the Triton is in 'Global Mode – Midi settings' that Midi receive for sysex, bank change etc. is enabled. If you use PCIF make sure data rate is set to 38kb/sec for the PC.

2. The first time you run the program, configure the midi device by using the Red **'Midi Settings'** button main toolbar – top of the display. (Select the PCIF driver for both input/output if you are using a PCIF lead - 'Korg PCIF Midi Port') and then the midi channel the Triton is on (I normally use 1). The example below has various midi inputs and various midi outputs. In your system you will have different midi ports listed. I've clicked on 02 internal midi in. And in my case desktop-44674 As the Midi out port. This is the output port from the PC used to send data is sent to the Triton.



3. Then select the model of the Triton you are using. I've added a drop-down box on the Midi settings form where you can select your model. Some functions on the program won't work as the particular model does not support the option. eg. Moss for LE. However, most functions are

available. Controls which are not appropriate for a particular model will not appear. Eg. Arps for Karma – which uses GE instead. (See model compatibility list).

4. Finally click 'Apply'.

The information above will be saved in a settings file at close. Also make sure that the Triton bank map on the synth is set to Korg and not general MIDI. (Otherwise you will only have access to general Midi.) To do this - On the Triton, Goto global mode - system preferences (page 2) and set bank map there to Triton (not General Midi). *If you get a midi error message' when you run the program then it is probably caused by an incorrect midi set up. Make sure the Midi Port is open – see below. If using the serial port check the PCIF port is selected in the 'red midi' button in the program correctly. Also ensure that the cables are properly connected and that they are wired according to the Korg specification. NB. Non Korg PCIF cables may need rewiring for XP/W2000 systems. If the message won't go away just reboot the PC/Triton and try again.*

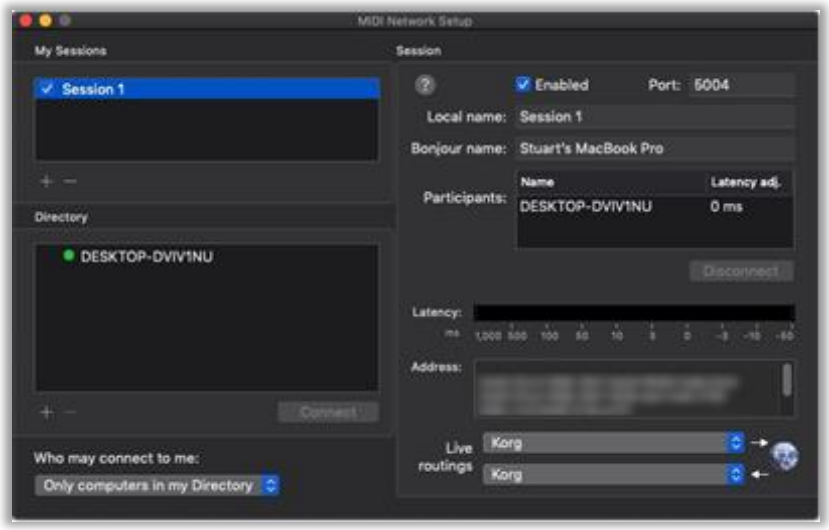
NB. When using the Program. When you move between active windows the relevant mode screen should appear on your synth's touchscreen. Note that the subpages will not change. I.e. when you change a moss filter it will not go to filter subpage automatically (no known MIDI commands for this) – do it manually if you need to. However, the parameter will still change whether the subpage is visible or not.

Note I prefer to use normal DIN midi cables and a midi interface connected by USB to the PC. I have found normal midi cables to be trouble free.

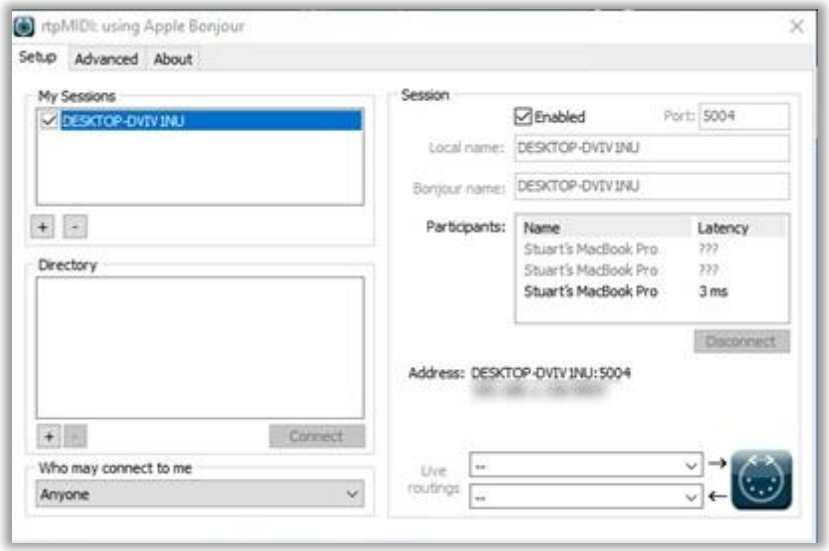
USING THE TRITON CONTROLLER ON A Mac

You can route two-way Midi data from your PC via a Mac using the free rtpMIDI program on a PC. rtpMIDI | Tobias Erichsen (tobias-erichsen.de), So if your studio computer is a Mac connected to your instruments you can run this software on a PC and connect to the Mac as an intermediary then to your instruments/midi interfaces.

Below is the Network Midi screen of the Mac (my Studio Computer). Mac Midi setup – Globe. Note the input and output ports are set to Korg – in this case my Triton via a midi interface. It is connected via my network connection (wirelessly or through a network switch) to rtpMidi running on my PC – computer name DESKTOP-DVIV1NU. The latency is 0 to 3ms. The Mac calls it Session1.



Below is my PC screen. rtpMidi is running and is connected to my Macbook
Enable the session by checking the Enabled box on the PC form



So now a two-way MIDI connection is established between the PC and Mac. On the Triton controller set midi input/ output to the name of your pc desktop. In my case Desktop-DVIV1NU

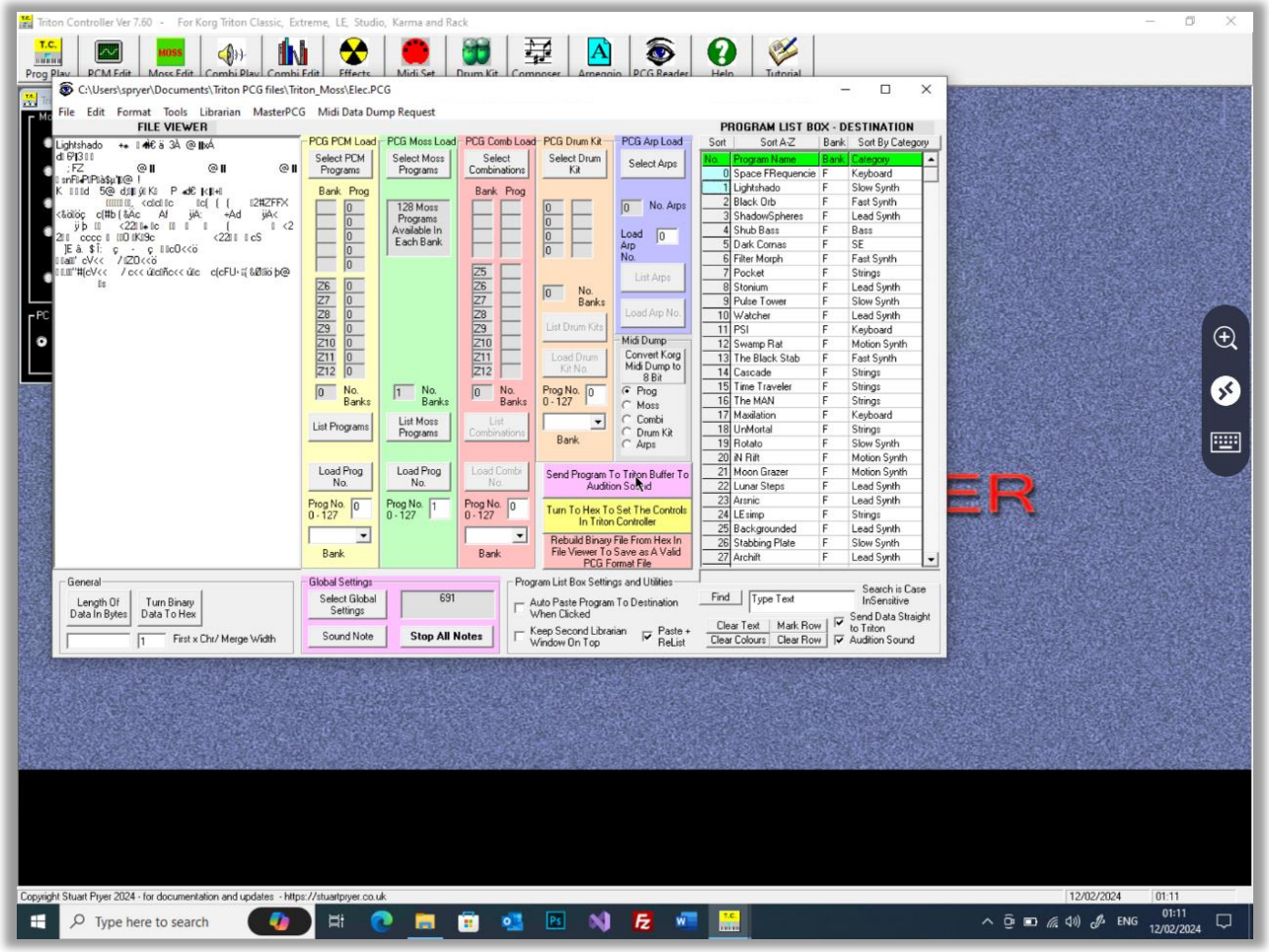
So, the triton controller on the PC is now connected midi in/midi out through the Mac to the Korg midi port (interface) and the Triton. If you want to control the PC and see the windows desktop on the Mac use Microsoft remote desktop on the Mac too. Get it free from the app store.

USING AN iPad, iPhone OR ANDROID DEVICE WITH THE SOFTWARE

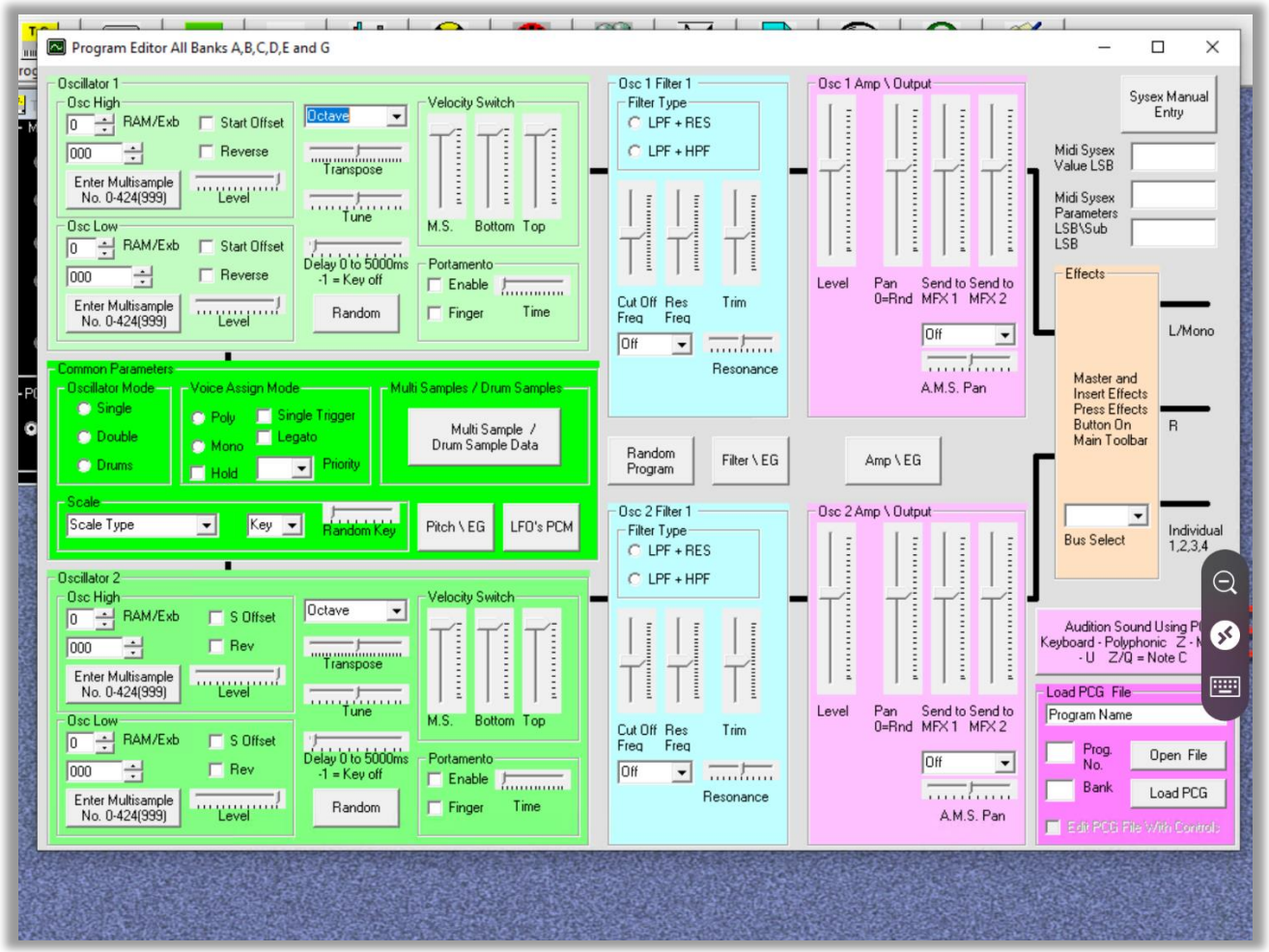
The software can be controlled by an iPad or iPhone etc. sitting on your Triton. This makes it very convenient to use. In fact, any phone, tablet or computer which runs Microsoft Remote Desktop – RD for short – will work. E,g, Android devices. So now you can control the software using the touch screen of the Tablet or phone. To use this setup, download the Free app on your device – Microsoft Remote Desktop (RD) – from the App store or Play store. You can control all features of the software this way without needing to be near your PC. The PC only needs to be connected by Midi to the Triton.

1. Open the app on the handheld device. Make sure blue tooth is on both PC and the hand-held device. Both need to be on your local wireless network. On RD you need to enter your PC's name, your login and password for the PC. to connect.
2. In the RD app make sure you send Audio to your remote PC and not the iPad. Otherwise, the Triton Controller software will not be able to access your midi ports on your PC to connected to your Triton. It will try to find the midi ports on the hand-held device.

Below is a screenshot of my iPad screen. The three RD icons on the right allow you to zoom in and out by 'pinching', access to the RD home screen and onscreen qwerty keyboard. Instead of a mouse you use the hand-held devices touch screen. The whole windows 10 desktop is visible.



As you can see the image quality is excellent. You have access to all of the Triton Controller's controls and forms.



You can zoom into a form easily using your fingers on a touch screen. Here is the PCM editing form filling the iPad screen. You now have a second touch screen for the Triton, but bigger and more responsive!

THE MODE FORM

This appears when the program is launched, with various radio buttons, at the top which toggle between the Tritons modes. Its heading will change depending on the model of synth you set on the Midi setup form. You can also switch the PC's Midi port 'Off' or 'On' from here. So, if you want to launch another program which needs to 'grab' the port you must firstly close the port in this application. When you want to use the program again, turn off the other application and just turn the port on again by clicking the radio button – Midi Port On. If you have any midi transmitting problems try turning the port Off and then On again. If this fails reboot the PC.

Details on ALL of the Triton's parameters can be found in the Tritons Parameter Manual available from Korg's websites.

HELP AND TUTORIAL

If you update the demo version triton.exe to the full version triton.exe just download the TRITONCONTROLLER.PDF AND Tutorial.pdf from my website and place them in the installation directory. Normally C:\program files (x86) \triton controller vxx\. Keep the names and case exactly the same. You will then be able to access them if you don't have an internet connection.

Note 1. If you use the full setup.exe installer, this pdf help file (TRITONCONTROLLER.pdf) and the Tutorial.pdf will be installed and placed in the same folder as the Triton.exe file at installation in a separate installation directory.

Note 2. If you click on the Help or Tutorial buttons your default web browser will open the latest docs on my website. If you are not online you can choose to open them from the installation directory. Note. if you have opened them before in your web browser, they will be cached in your browser history.

MODEL COMPATIBILITY TABLE

Model Compatibility Chart with Triton Controller Software	**Triton Classic**	**Rack**	**Studio**	**LE**	**Karma**	**Extreme**
PCM/ Moss/ Combi/ Drum/ Arp Editing Functions	Y	Y	Y	Y Moss N/A	Y Arp N/A	Y
Composer	Y	Y	Y	Y	Y	Y
Preset Controls From PCG –Arps, PCM Edit, Moss Edit, Program Play, Combination Play & Combination Edit.	Y	Y	Y	Arps Y Effects Y	Moss Y Effects Y	Y
View PCG Files	Y	Y	Y	Y	Y O.S. > ver 2	Y
Librarian Functions for all Banks present	Y	Y	Y	Y	Y O.S. >ver 2	Y
Audition PCG Files	Y	Y	Y	Y	Y O.S. > ver 2	Y
Master PCG Creation	Y	Y	Y	Y	N	Y

Y= Fully Compatible. N = Function not currently implemented

WORK FLOW

How you use the software depends on what you want to achieve.

If you want to:-

- Organise PCG files or make specific edits (those functions in the Librarian form e.g. Change name of program, merge, initialise etc) of the PCG files on the PC and save the changes on the PCG file on the computer then use the LIBRARIAN FUNCTION. You can also send the changes to the Tritons buffer via midi. These changes will only be saved on the Triton if you use the WRITE function in the software in Program play, Combination play etc.

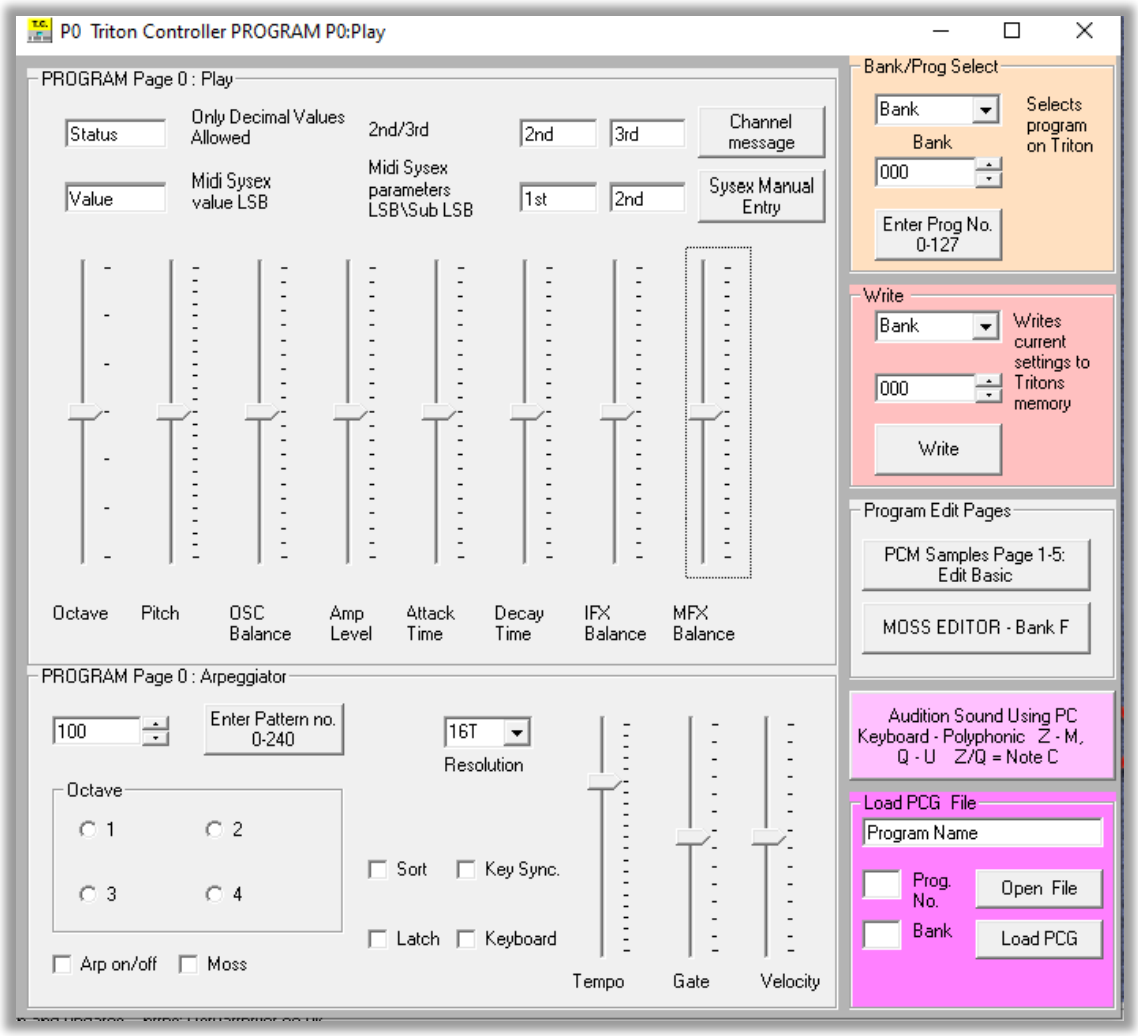
- If you want to make changes to the program / combination parameters (eg. Oscillator, filters etc) on the Triton (Buffer) then use the various editing forms such as Program, Moss, combination, these will only be saved on the Triton if you use the WRITE function in the software. Changes will not be made to the PCG on the PC. You can of course reload the PCG file from the Triton into the software using media which the particular synth supports. E.g. floppy disk, SCSI, media card, cd etc. depending on model. Alternatively you can create a midi dump from the Triton using software (eg Midiox) and paste into the Triton Controller as hex, convert to 8 bit from 7 and use the 'Rebuild' feature (See importing midi dumps).

- You can create Master PCG files containing thousands of PCM programs or Moss programs. Then send them to the Triton buffer rather than have to use media like floppy disks etc.

- You can import midi dumps from the Triton instead of using media such as floppy discs etc.

PROGRAM PLAY MODE - PCM AND MOSS

Press the yellow Triton button (top left) and away you should go! The main form is the program P0 play screen, which is very similar to the Tritons Prog Play 2 screens but consolidated into 1 screen. It also includes Midi Sysex and Channel message manual command send (decimal values only please – it won't like Hex).

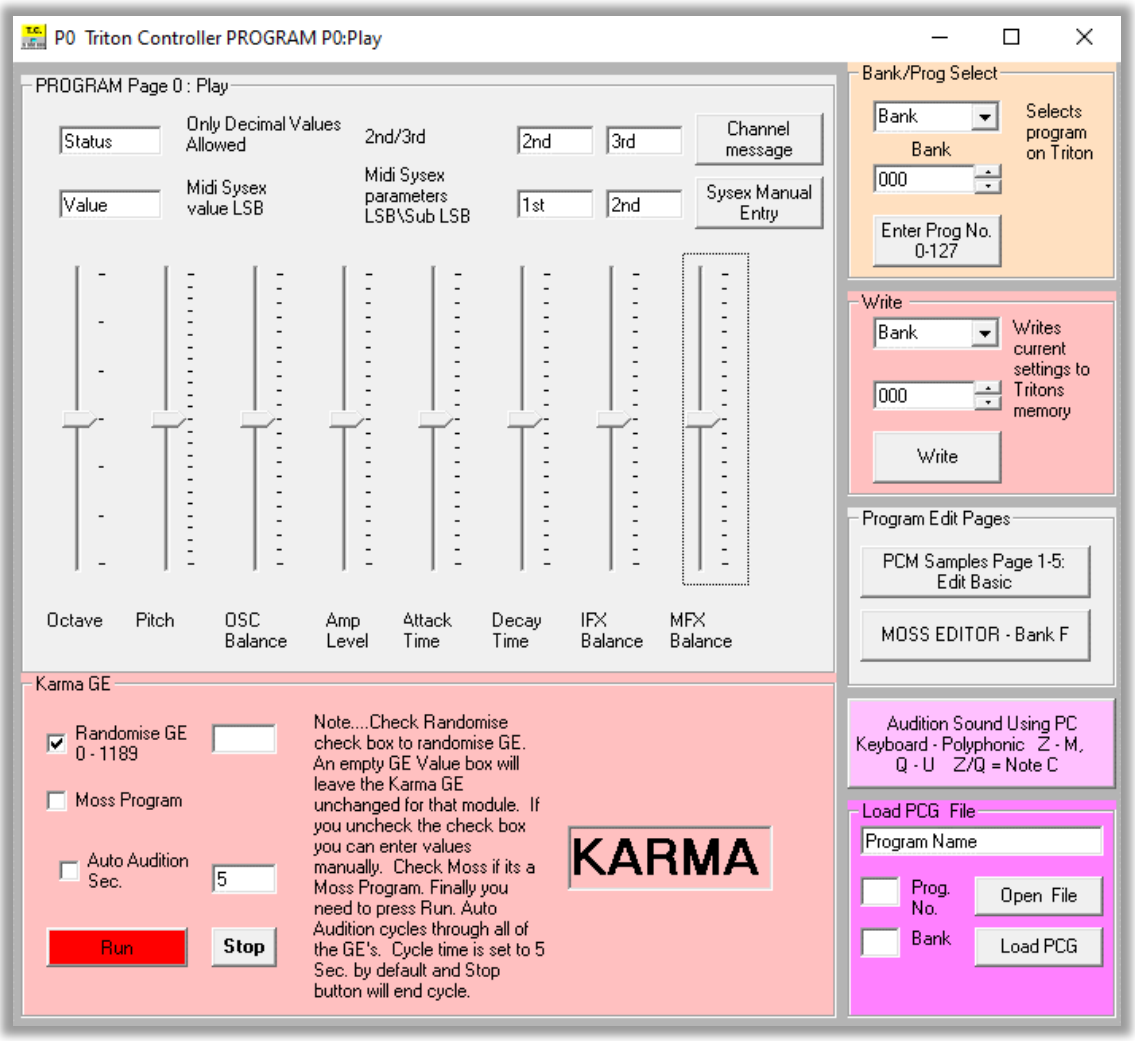


You can select All Banks and Programs from the PC using this form. There is also full access to Arpeggiator Tempo and Pattern number range and parameters.

If you want to save any changes after editing, to a program number of your choice - use the Write button. You need to specify the location to save –eg. Bank and Program no. This Writes program changes to the Tritons programs internal memory area (same as Write command in Prog Edit Page on Triton) – so if you edit a program, you can save it in the Tritons memory at a bank/program number you specify from the PC. You can then return to it later if you want to continue editing the sound. Note that not all models support all banks listed, so Triton Studio owners can save to combi banks Ext A to Ext G. Classic owners don't have all these banks.

RANDOMISE GE – KARMA ONLY

This Program Play feature randomises the GE for any Program (PCM or Moss) held in the Karma's buffer.



Firstly, load a Program on the Karma – either manually or via the T.C.

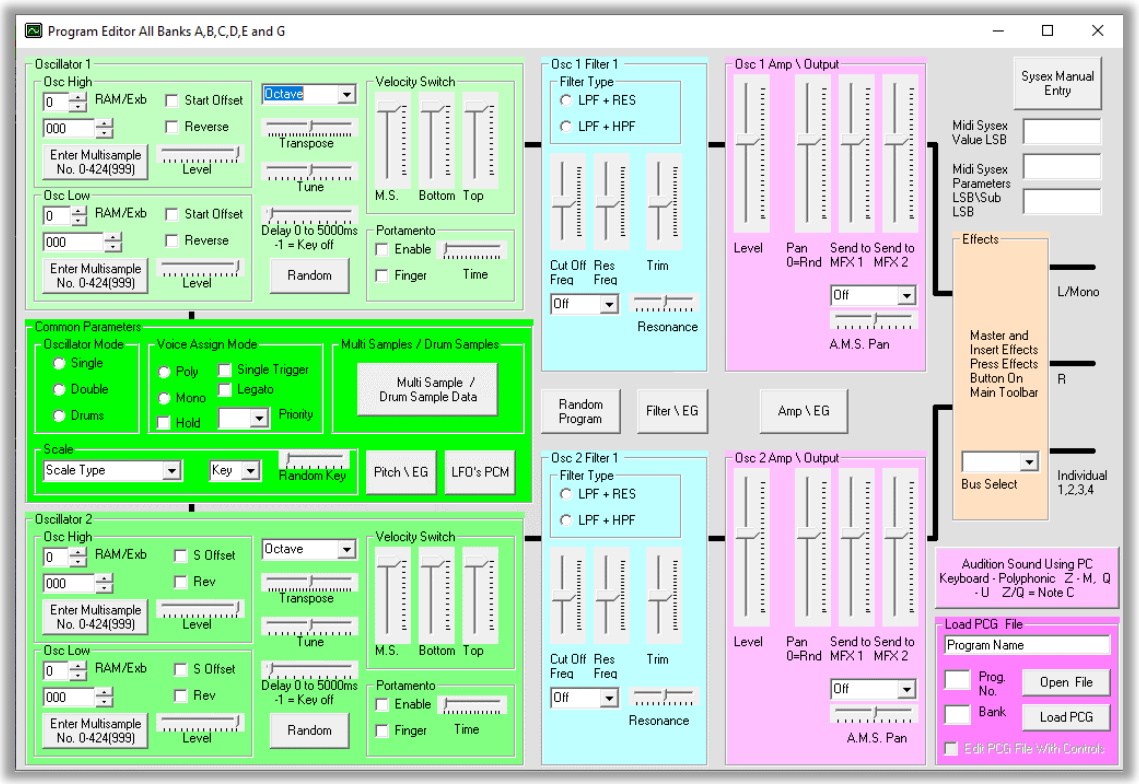
- Then check the box to send a Random GE. The initial setting is that the box is checked. Press 'Run' button. The value of the GE will appear in the box and be sent to the Karma.
- If the user makes the GE Value box blank – ie. Empty, by deleting all of its contents, like the initial setting at load of window, the GE will not be changed for that module if the check box is unchecked.
- If the check box is unchecked and you enter a manual value between 0 and 1189, that value will be sent.

Simple as that! A really quick way to pick new Karma GE.

Above the run button is a check box which if ticked changes the GE at the interval in the box to the right of it. Time in seconds. If the random button is not checked GE's will increment by one. If it is checked GE values will be picked at random.

PCM EDITOR (BANKS A,B,C,D.E AND G,g)

To edit programs: - Connect your PC and run this program. At the Program Play Page - press either the PCM or MOSS buttons on the main toolbar (or - Program Page 1-5 Edit Basic button (PCM) or Moss button; right hand side – on Program Play form). You will now have a traditional analogue synth layout in colour with various parameters, which you can alter. The signal flow diagrams are based on the ones in the Triton manual.



It is normally easiest to start with a sound in one of the Banks A to G or F if Moss, similar to the one you want, and edit it rather than start from scratch; That's for the more expert user.

ACCESSING KORG EXPANSION BOARDS – EXB 1 TO 9

PCM Editor form.

(1) In order to access the PCM multisamples on Expansion boards you must select which Exb board you want in the text box to the Left of the word RAM/Ex. This is the same for Osc 1 Hi/Lo and Osc 2 Hi/Lo. The up / down arrows cycle through 0 to 10. NB. If you specify a EXB board which you don't have installed you will just get internal PCM sounds.

(2) If the RAM/EX text box = 0 you get internal PCM sounds *.

If RAM/EX text box = 1 you can use you own RAM samples.

If RAM/EX = 2 to 10 you can specify the onboard Exb cards. (NB..Triton Classic - max two cards can be installed. Studio and rack can take more). The relationship between the EXB board and the number you need to need to use in the program RAM/EX text box is shown below:-

EXB No.	**T.C. Program Ref.**	**Name of Exb Board**
EXB 1	2	Pianos/Classic Keyboards
EXB 2	3	Studio Essentials
EXB 3	4	Future Loop Construction
EXB 4	5	Dance Extreme
EXB 5	6	Vintage Archives
EXB 6	7	Orchestral Collection*
EXB 7	8	Orchestral Collection*
EXB 8	9	Concert Grand
EXB 9	10	-

** All multisamples are listed by name in multisample list in TC.*

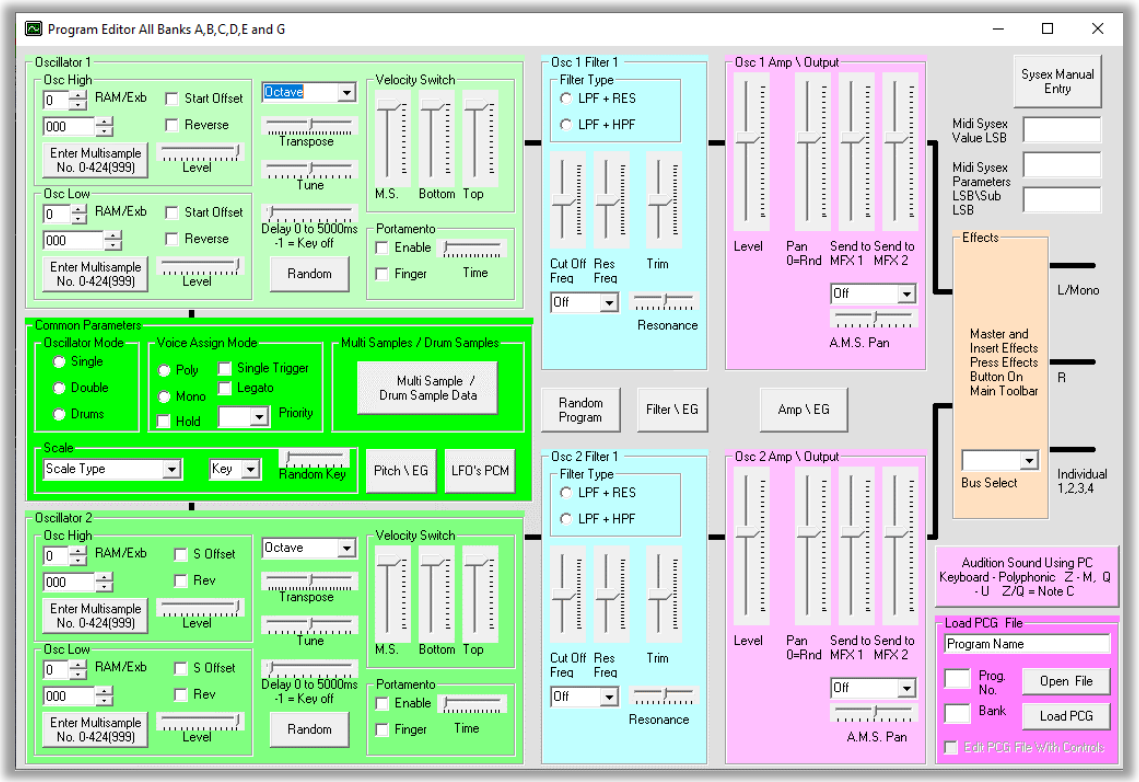
NB. When you go to the multi sample list form you then select the relevant PCM Exb board by pressing the appropriate button. Only Internal PCM sounds, PCM 06 and 07 added so far. The list is then populated by the boards multisamples. When you click on the item the appropriate PCM number is transferred to the PCM edit page. NB. This does not automatically set the RAM/PCM number in (1).

You can sort the samples by using the column of buttons to the right of the list of multisamples. So, if you want to pick out all Piano samples – press Piano – the samples with Piano in the name will then be listed in yellow (if there are ones on the Exb)

PCM EDITOR DETAILS

Make sure you select a pcg program Bank A,B,C,D,E, or G – Not Bank F which is Moss - first. And a program number.

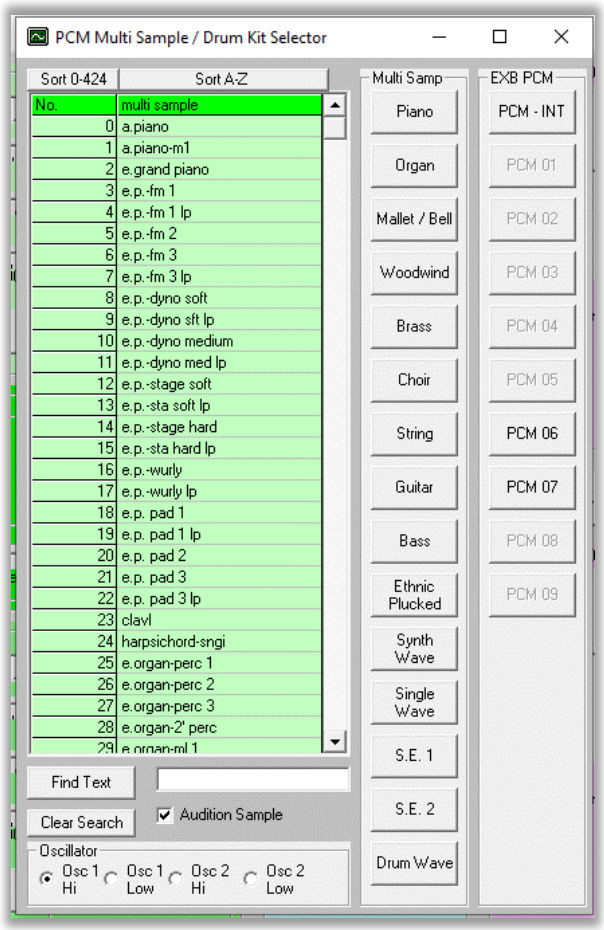
PCM Editor implemented in Full – Total control of ALL PCM functions. Pitch, LFO's, Filters, Amplifiers and Outputs etc. have complete coverage.



This control form is very similar in principle to the Moss form – Start at the left with the PCM samples. Select one or use randomise for totally new sounds. Samples 1- 424 are the standard samples supplied with the un-expanded Triton – ie. without expansion sample boards fitted.

Randomise Function for PCM sample selection – For coming up with totally new sounds! The Random Program button randomises samples, Cut Off Frequency and Resonance. Click it for automatic generation of new programs. Select an existing program that you like or want to modify and press the Random Program button. Enjoy!

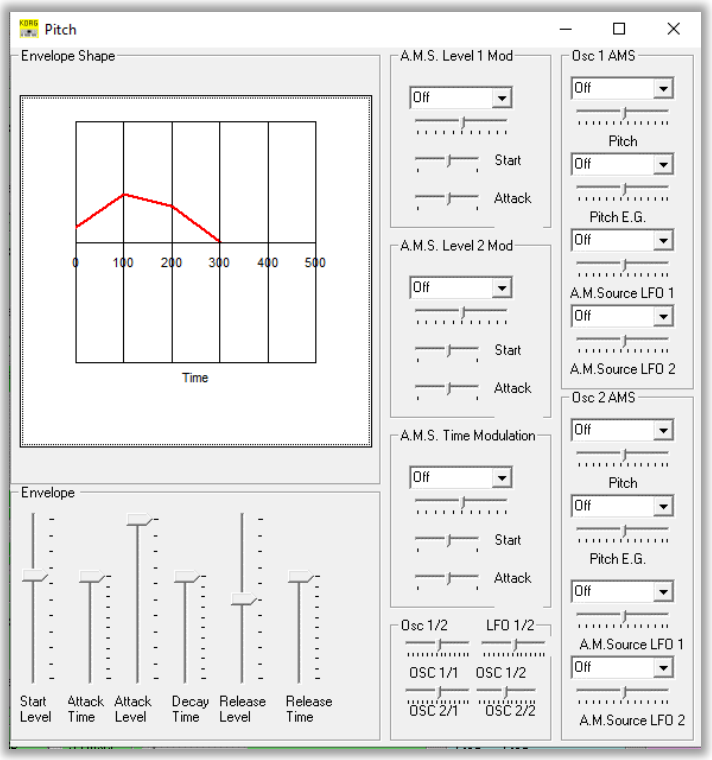
PCM Multi Sample database and audition tool – Find it at Common Parameters, MultiSample button. This displays a spreadsheet showing all the 425 standard samples in the Triton. See below It has a text search feature (all text in lowercase) and the ability to audition each sample on the triton immediately when the sample is selected. The duration of the note, volume and key can be altered in the Random Composer screen. Volume is controlled by the slider below virtual keyboard, note and duration by the min – note range and min – time on range. The default Oscillator when opening form is 1 High. Use radio buttons to select Osc 1 Low, Osc 2 Hi or Osc 2 Low.

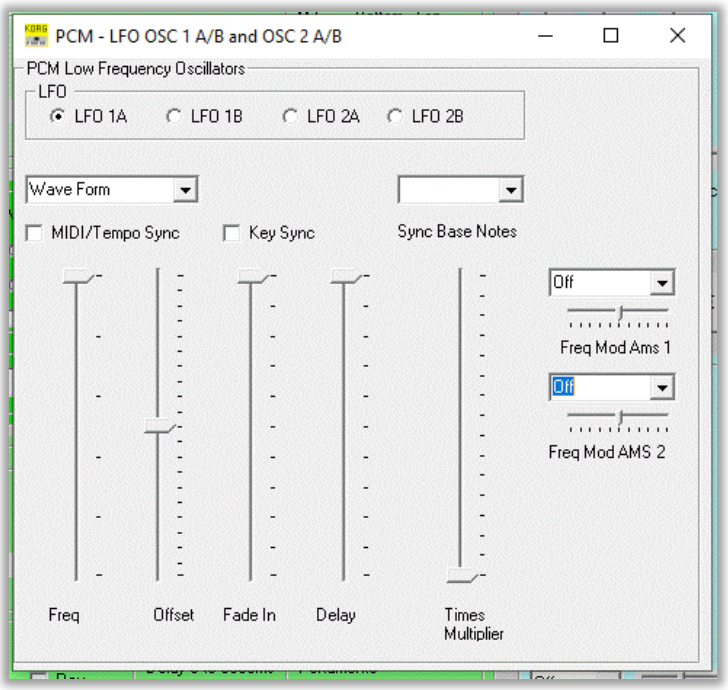


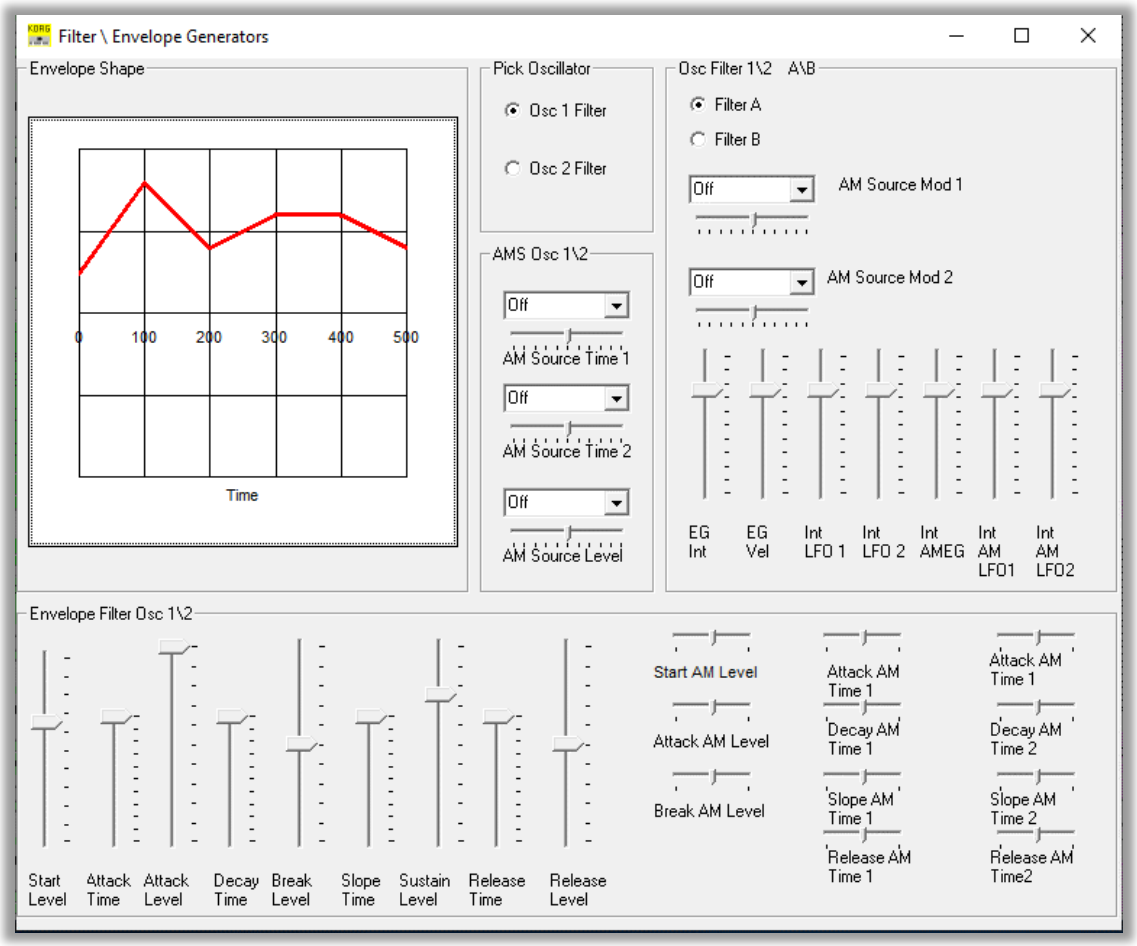
Note that the database currently includes PCM Internal sounds and EXB – PCM 06 and 07.

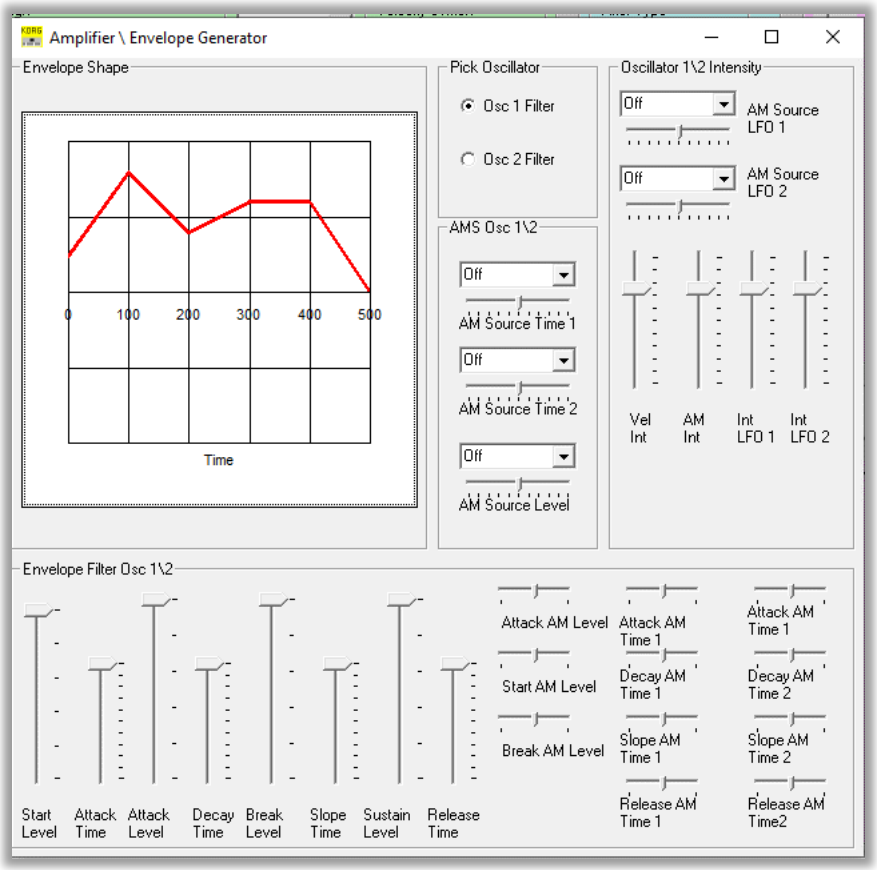
Find button - it is case insensitive. So, if you search for 'Piano' it will return 'Piano' and 'piano' names. When you search two full stops will be added in the viewer. You can then group your finds by searching for '..' You can sort the list by clicking on the headers.

PCM ENVELOPES






Filter \ Envelope Generators
Envelope Shape
0
100
200
300
400
500
Time
Pick Oscillator
Osc 1 Filter
Osc 2 Filter
AMS Osc 1\2
Off
AM Source Time 1
Off
AM Source Time 2
Off
AM Source Level
Osc Filter 1\2 A\B
Filter A
Filter B
Off
AM Source Mod 1
Off
AM Source Mod 2
EG Int
EG Vel
Int LFO 1
Int LFO 2
Int AMEG
Int AM LFO1
Int AM LFO2
Envelope Filter Osc 1\2
Start Level
Attack Time
Attack Level
Decay Time
Break Level
Slope Time
Sustain Level
Release Time
Release Level
Start AM Level
Attack AM Level
Break AM Level
Attack AM Time 1
Decay AM Time 1
Slope AM Time 1
Release AM Time 1
Attack AM Time 1
Decay AM Time 2
Slope AM Time 2
Release AM Time2


Amplifier \ Envelope Generator
Envelope Shape
0
100
200
300
400
500
Time
Pick Oscillator
Osc 1 Filter
Osc 2 Filter
AMS Osc 1\2
Off
AM Source Time 1
Off
AM Source Time 2
Off
AM Source Level
Oscillator 1\2 Intensity
Off
AM Source LFO 1
Off
AM Source LFO 2
Vel Int
AM Int
Int LFO 1
Int LFO 2
Envelope Filter Osc 1\2
Start Level
Attack Time
Attack Level
Decay Time
Break Level
Slope Time
Sustain Level
Release Time
Attack AM Level
Start AM Level
Break AM Level
Attack AM Time 1
Decay AM Time 1
Slope AM Time 1
Release AM Time 1
Attack AM Time 1
Decay AM Time 2
Slope AM Time 2
Release AM Time2

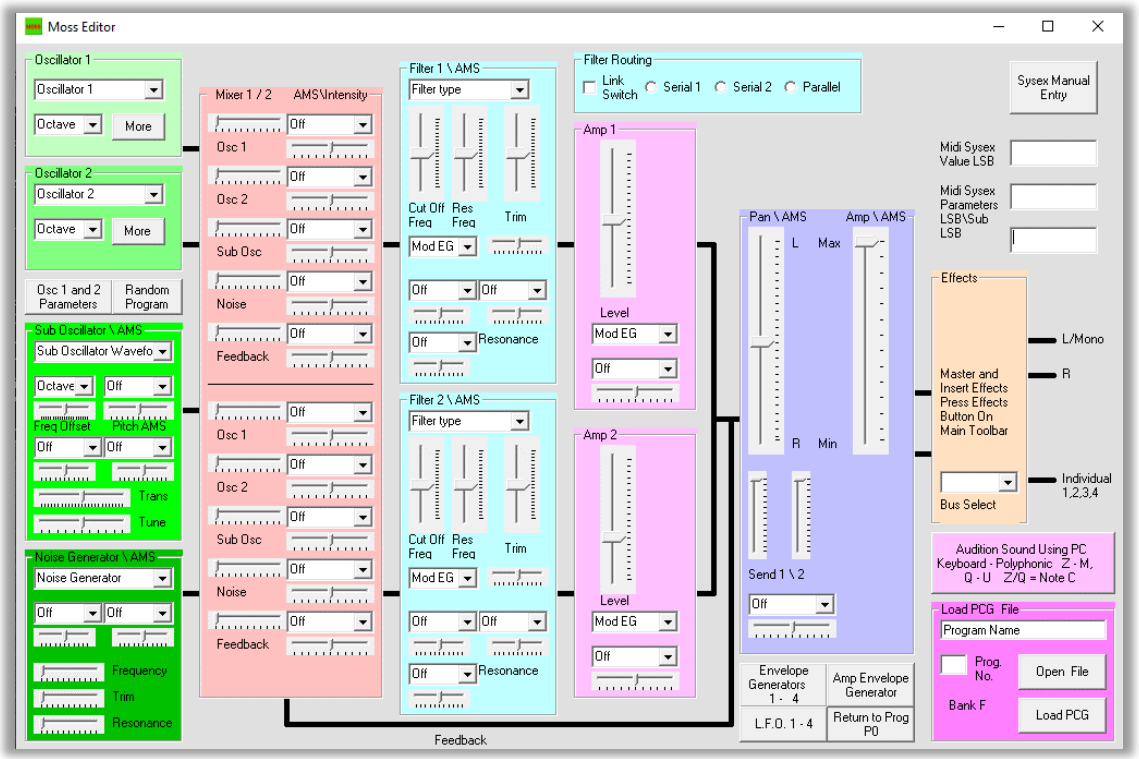
MOSS EDITOR

The Moss Expansion board is a physical modelling synthesizer. Stanford University did a lot of research into modelling real instruments and patented their ideas. Under license. Kord developed Moss for the Z1/Trinity and Triton. Later incarnations were used for the Oasys plucked string model. The Moss Board is a second synth for the Triton and contains 13 different instrument models. which works alongside the Tritons sample-based approach. *See the Moss manual on korgs websites for more information.*

You need to have the optional Moss EXB expansion board installed to use this feature. It can edit ALL MOSS Parameters! Oscillators 1 & 2, Noise Generator and Sub Oscillator. Filters, Amplifiers and Output have complete coverage.

Select Bank F and program no. at Program Play or on the Triton

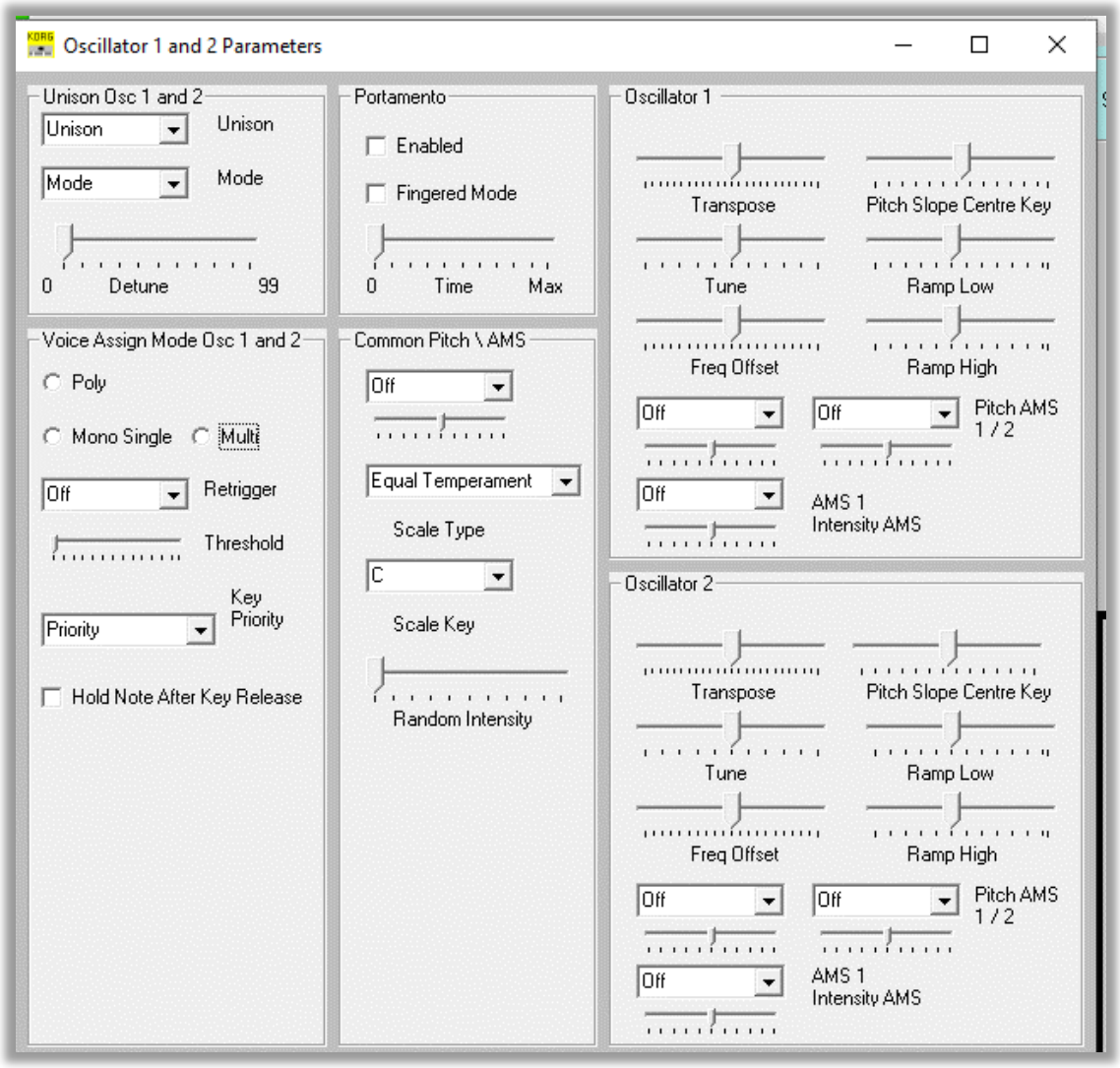
Select the Moss Editor



The Oscillators are at the Left. Firstly, choose the type from the drop-down list. This is where you normally start. The 'More' Buttons give access to ALL of the individual Moss model parameters. This editor gives you complete control of ALL Moss Oscillator Types and parameters

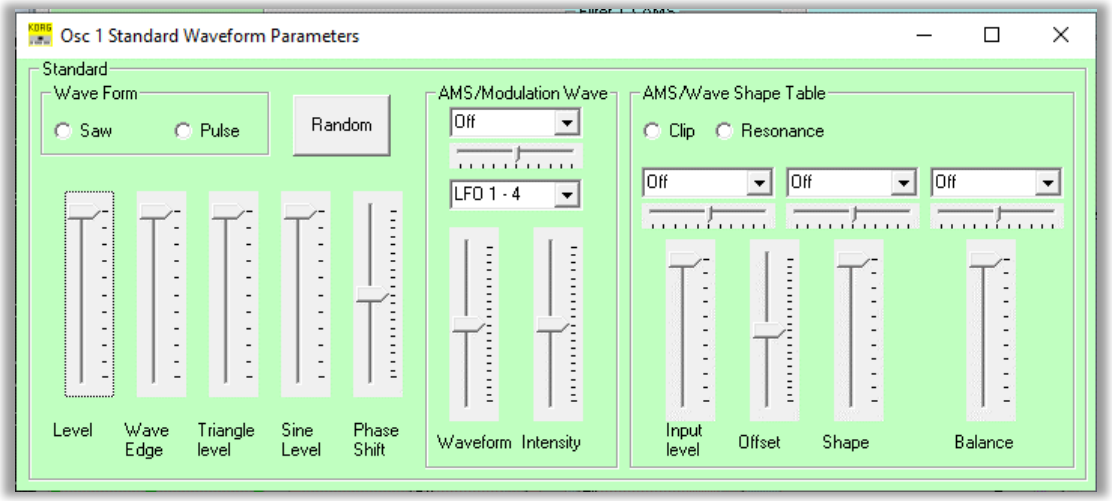
NB. The program overcomes the major bug in the Moss implementation of 'reed model' in earlier triton O.S.'s - You can choose different types of model when you control the Triton from its panel: pan flute, hard sax, soft sax etc... but their specific sound characteristics only seem to be applied after you write the program into memory (on the Triton's F bank). This does not occur when you use this program and it works as it should!

The Osc 1 and 2 common parameters button opens a new form with common settings, which affect both oscillators. This includes the various modes, portamento, Alternative Modulation Source AMS etc.



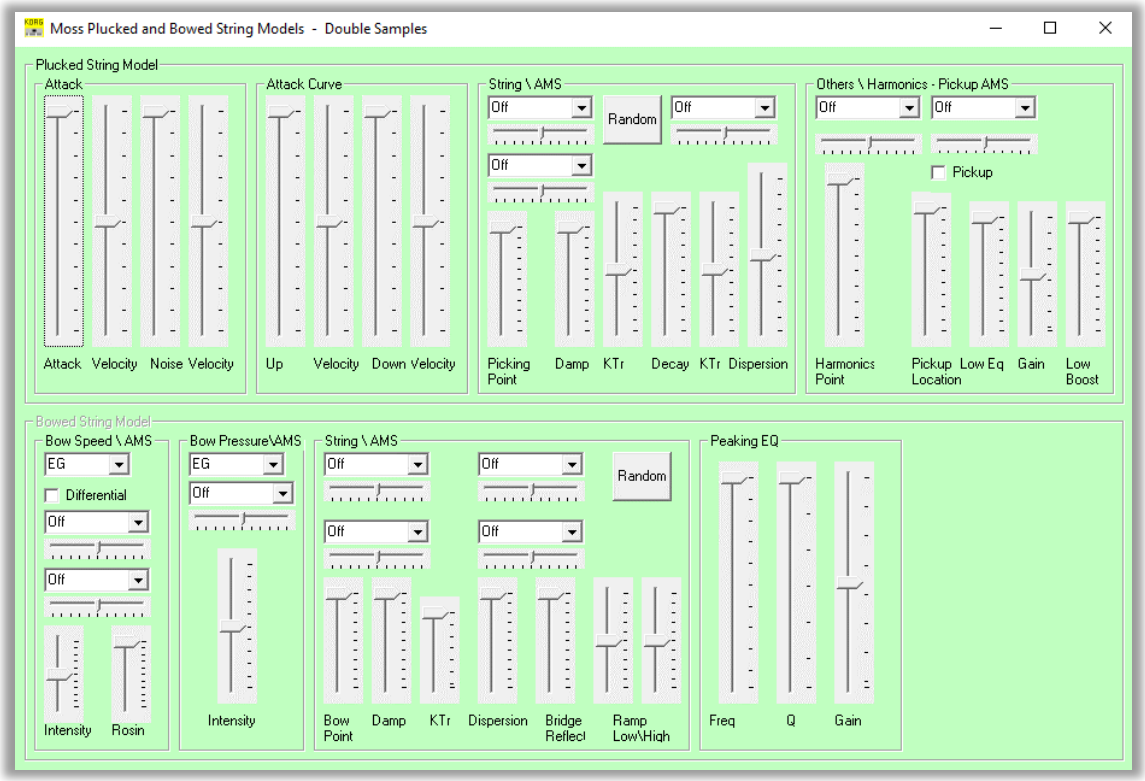
MOSS MODEL OSCILLATORS

The Moss board has 13 models to choose from for the two oscillators. Here are the various oscillator edit forms. You can only use one oscillator for double sample models.

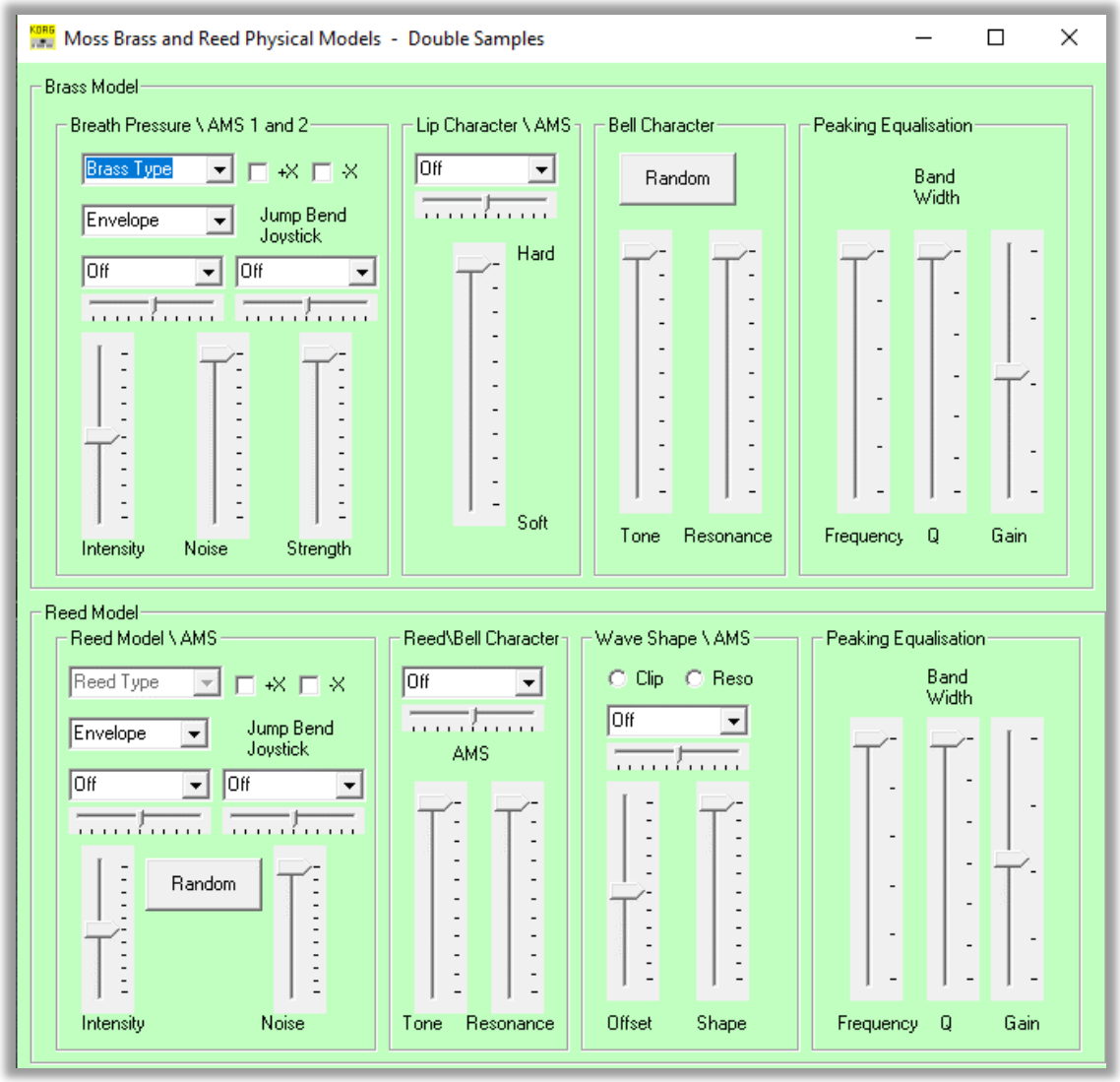


Standard This simulates the oscillator of an analog synthesizer. You can use PWM (pulse width modulation) etc. to produce the same results as on an analog synthesizer. VPM (Variable Phase Modulation) This oscillator uses phase modulation to generate harmonics. A rich harmonic structure can be created by using phase modulation between two oscillators and the wave shaping table.

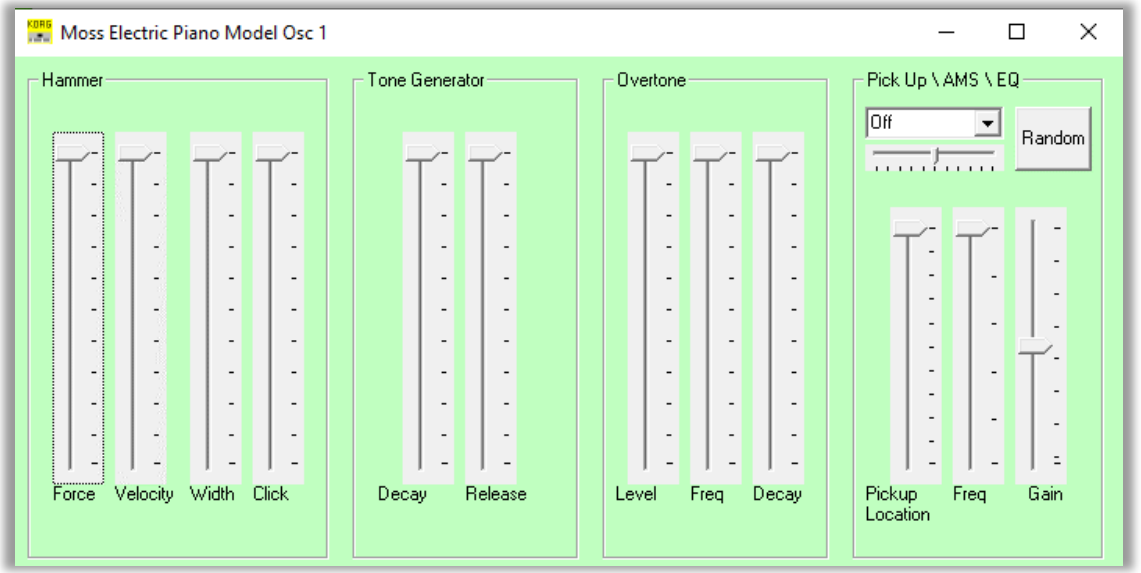
`



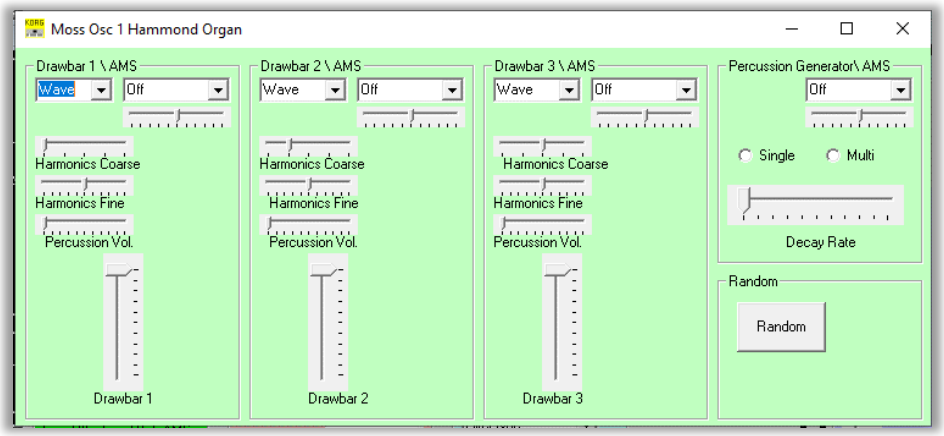
Plucked String Model This is a physical model that simulates plucked string instrument such as guitar or bass. Bowed String Model is a physical model that simulates a bowed string.



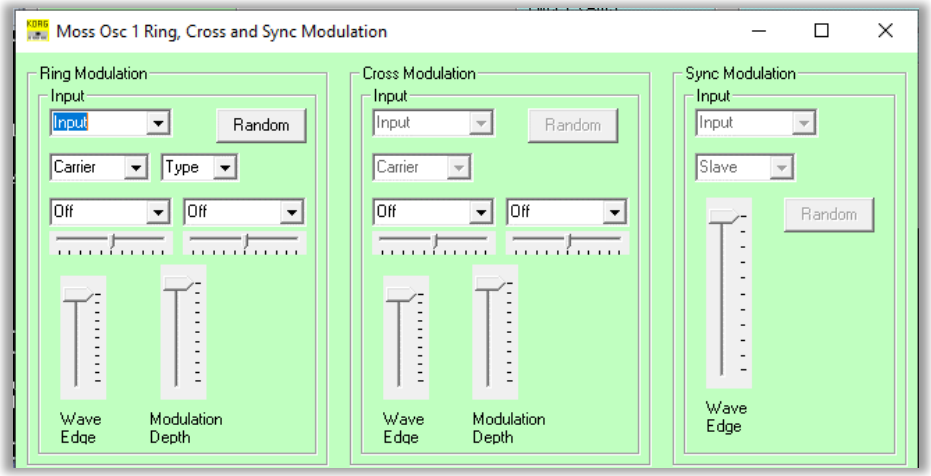
Brass Model This is a physical model that simulates a brass instrument such as a trumpet or trombone. Reed Model This is a physical model that simulates a woodwind instrument such as a sax or flute.



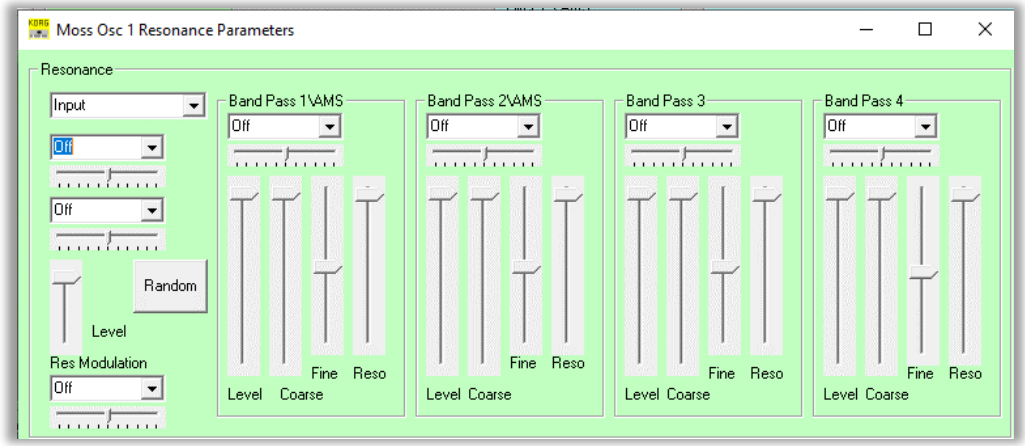
E. Piano Model (electric piano model) This is a physical model that simulates a warm vintage electric piano



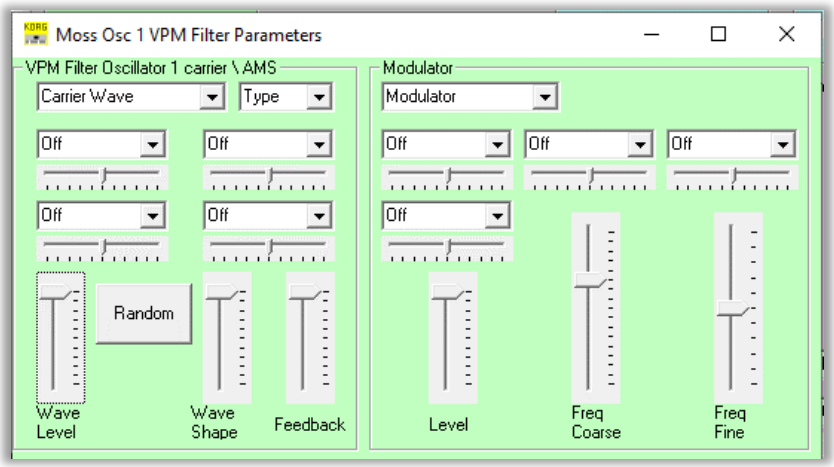
Organ Model This simulates a drawbar organ with three drawbars (when one oscillator is used) or six drawbars (when two oscillators are used) Since each drawbar can use one of four types of waveform, a wide range of tones can be produced



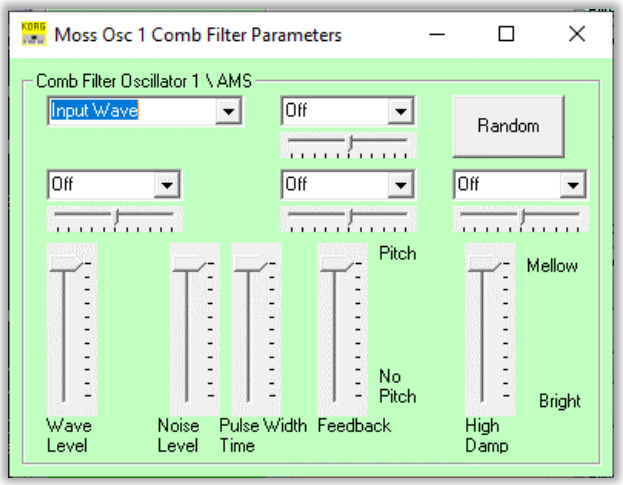
Ring Modulation Cross Modulation Sync Modulation These are special oscillators for generating the sounds which could be produced on an analog synthesizer by modulating one oscillator with another. These allow you to produce sounds with complex overtone structures such as bells, metallic sounds, and gongs.



Resonance This oscillator uses filter resonance, and is an especially effective way to produce mallet sounds and pad sounds. Ring Modulation Cross Modulation Sync Modulation These are special oscillators for generating the sounds which could be produced on an analog synthesizer by modulating one oscillator with another. These allow you to produce sounds with complex overtone structures such as bells, metallic sounds, and gongs.



VPM (Variable Phase Modulation) This oscillator uses phase modulation to generate harmonics. A rich harmonic structure can be created by using phase modulation between two oscillators and the wave shaping table.



Comb Filter This oscillator creates pitched components from noise or an impulse. In addition to producing noisy sounds, it can also produce a wide variety of sound ranging from synth basses to string-like sound.

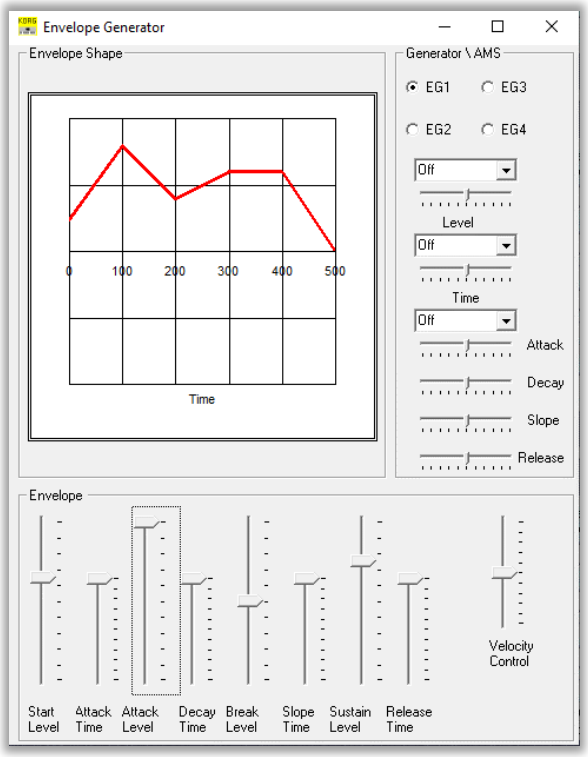
OTHER MOSS CONTROLS

On the main Moss form at the bottom right, you can also modify the Envelope Generators 1-4 and see the effect on a graphical interface. There is a separate window for the Amplifier E.G. with a similar graphical interface. The 4 Low Frequency Oscillators also have a separate window so the user can control all of their parameters. See below.

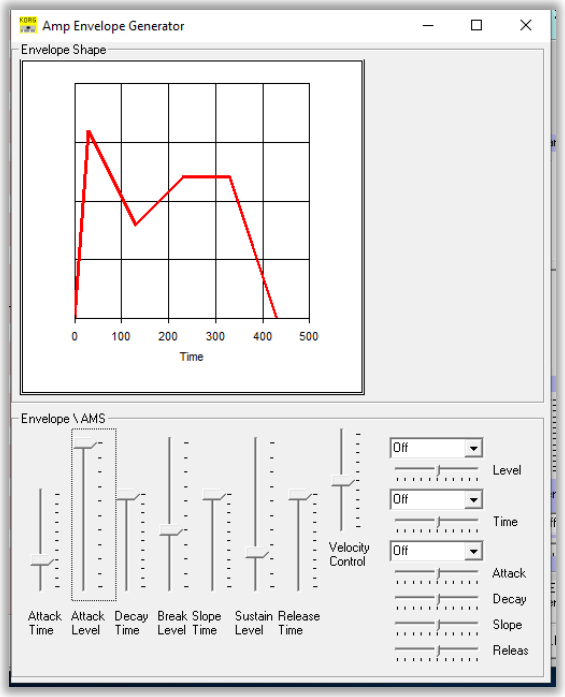
The Manual Entry Sysex allows manual input of Midi Sysex data – Only decimal input allowed. It also shows the Sysex data sent by each controller.

Alternative Modulation Source AMS / Intensity is now added for All Oscillators/Types and Controls

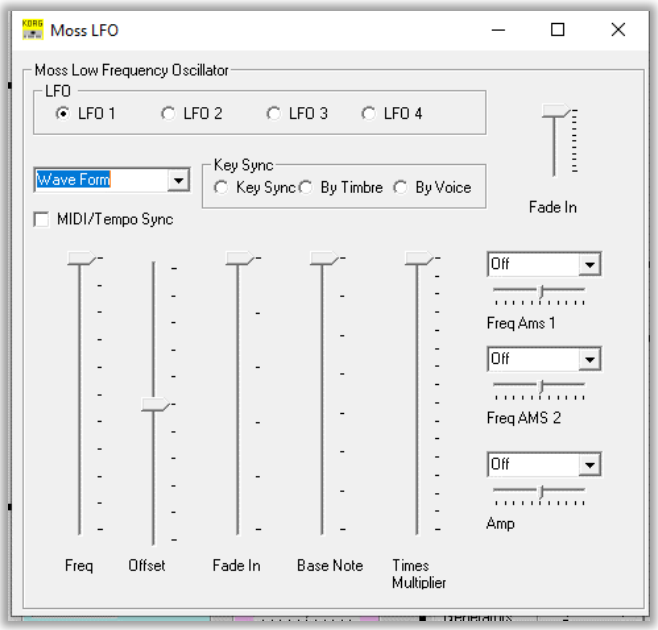
Randomise Function. This makes the PC randomly adjust every Moss Oscillator controller so you can come up with really new sounds! Press the 'More' button on the main Moss form once you have chosen an Oscillator type (for Osc 1 or 2). The various Oscillators have a 'Randomise Button' on their respective form. Press it to see the controllers' change. Then press a note! The Random Program button randomises oscillators, sub oscillators, noise, Cut Off Frequency and resonance. Click it for automatic generation of new Moss Programs. Select an existing program that you like or want to modify and press the Random Program button. Enjoy!



Moss Envelope Generator



Moss Amp Envelope Generator


Moss LFO
Moss Low Frequency Oscillator
LFO
LFO 1
LFO 2
LFO 3
LFO 4
Wave Form
Key Sync
Key Sync
By Timbre
By Voice
MIDI/Tempo Sync
Fade In
Off
Freq Ams 1
Off
Freq AMS 2
Off
Amp
Freq
Offset
Fade In
Base Note
Times Multiplier

Moss LFO

PICKING UP SETTINGS FROM A PCG

This feature enables the user to be able to load a Program (PCM or Moss) or Effects or Combination OR Arp from a PCG and see what the individual settings of the controls are in the Triton Controllers windows. It basically presets the sliders, check boxes etc. in the software to the correct values. You don't even need the synth connected to do this. NB. *The same can be done for the Arpeggio Edit settings – Arp Edit.* Works for Program PCM, Moss, Combinations, Effects & Arps – (NB. Effects for Karma only - and Arps for LE only)

Example…

1. To enable all of the Triton Controllers settings to be picked up correctly – select Load PGC (Bottom Right) PCM edit page, Moss, Combination Play, Combination Edit, Effects or Program Play page. This will bring up the Librarian window. Open a PCG file and select a PCM/Moss program.

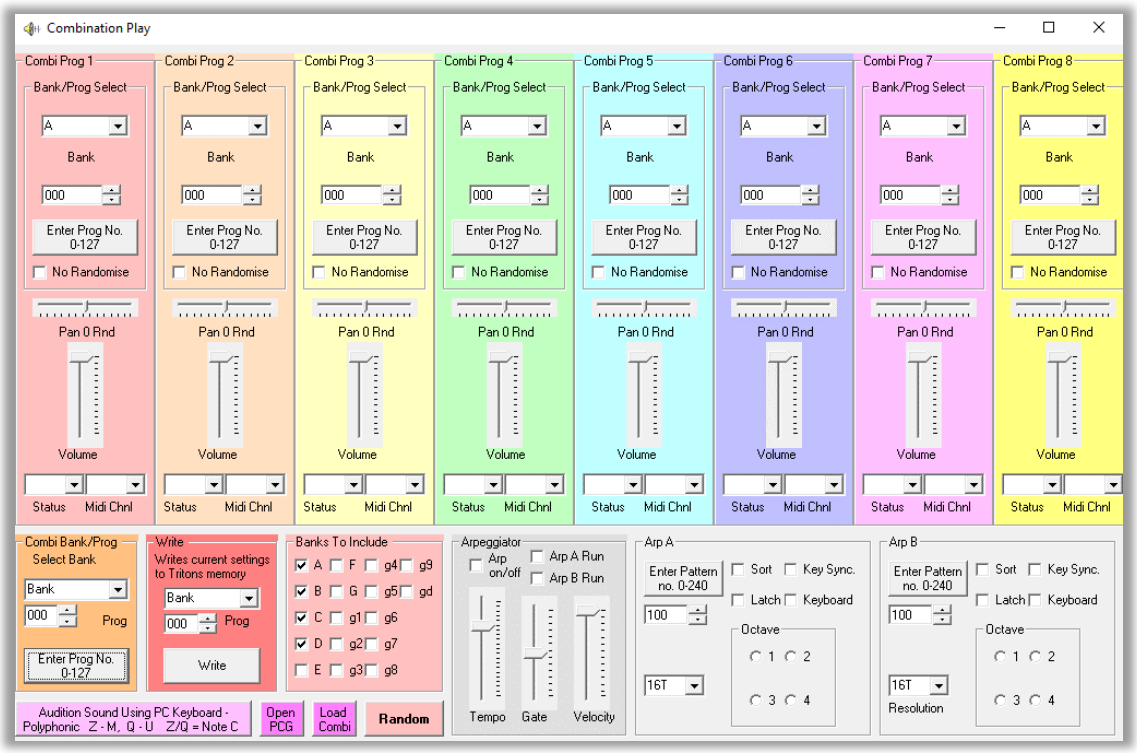
2. Turn it to Hex. (Big yellow button on Librarian Window).

3. Then return to PCM Edit, Moss or Program Play and press 'Load PCG'. All the parameters/controls will be correctly set! At program Play only the PCM or Moss Arps are set. The various sliders above are set by the user and are not defined in the PCG data.

NB. It works for Effects for ALL models except LE! Just press 'Load Settings' button top right after a combi/program is loaded and has been turned to Hex in librarian. The various Korg models have their PCG PCM data structured differently, so this feature has more limited functionality for Karma and LE.

COMBINATION PLAY

Includes full control\editing at Combination Play mode. You can control what programs/banks you use, volume, pan etc. You can also write new combinations or existing ones to the Tritons memory Banks A-D. (Plus Bank E for Rack users, Bank E and F for Karma and Studio users).



Combination generator - Randomise function. It generates totally new combinations (mixtures of programs) by the user pressing just one button. You can choose which banks A-gd you use for this! Watch the programs change on the Triton when you press the Random button! Try the sound if you don't like it, try again. You can create a new combination every second. When you get one you like 'write it' to a bank of your choice. A good tip is to start with a combination similar to what you want. You can create – 10 to the power of 31 combinations this way! That's 1 followed by 31 zeros. Never hear the same one in a lifetime. Make sure you save the good ones though.

RANDOMISE GE'S – KARMA ONLY

This Combination Play feature randomises the GE's for any combination held in the Karma's buffer.

Firstly load a combination on the Karma – either manually or via the T.C.

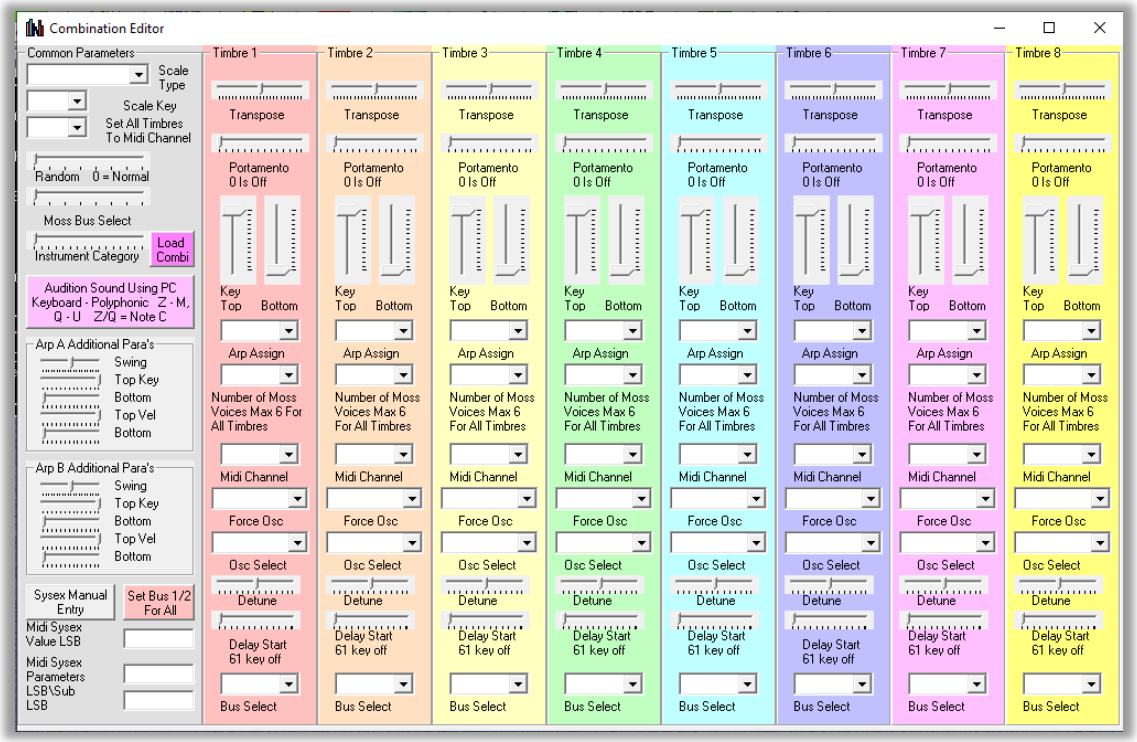
- Then check the boxes for the module you want to send a Random GE to. The initial setting is that they are all checked. Press 'Run' button. The value of the GE will appear in the box and be sent to the Karma.
- If the user makes the GE Value box blank – ie. Empty, by deleting all of its contents, like the initial setting at load of window, the GE will not be changed for that module if the check box is unchecked.
- If the check box is unchecked and you enter a manual value between 0 and 1189, that value will be sent.

Simple as that! A really quick way to generate new Karma GE combinations.

The Auto Audition feature cycles through the GE's 1 at a time at the interval set by the user. If the randomise check boxes are checked random values will be set every cycle. Press Stop when finished.

COMBINATION EDIT

Includes all combination remaining editing parameters. The Arpeggiator's main controls not repeated as they are a repeat of the combi play ones – only the supplemental controls have added.



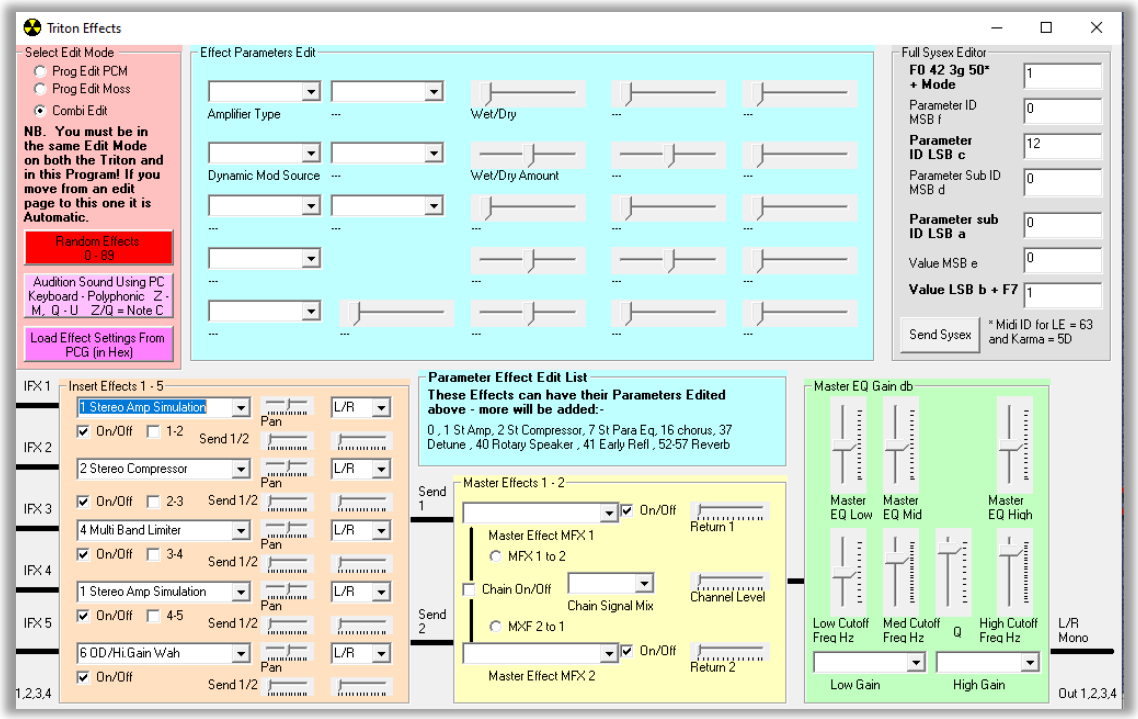
Common Parameters added to the grey area at the left.

Bus select has been added to the form for Master and Inset effects for each timbre.

If box unchecked the manual value will be sent. Values must be between 0 and 1089.

MASTER AND INSERT EFFECT EDITING

The program will Auto switch to correct mode if you select effect after edit mode on the program. Otherwise - If you select edit mode manually on the Triton, then select the correct radio button on the effect form first. You can edit all insert and master effect types, routing and graphic equaliser. Only some of the effect parameters can be edited at the moment. There is also a Random Effect Generator so you can create unique combinations of effects at the press of a button.



Note that the Triton LE Effect sysex architecture is different to the other Models in the Triton series. There is only 1 Insert Effect

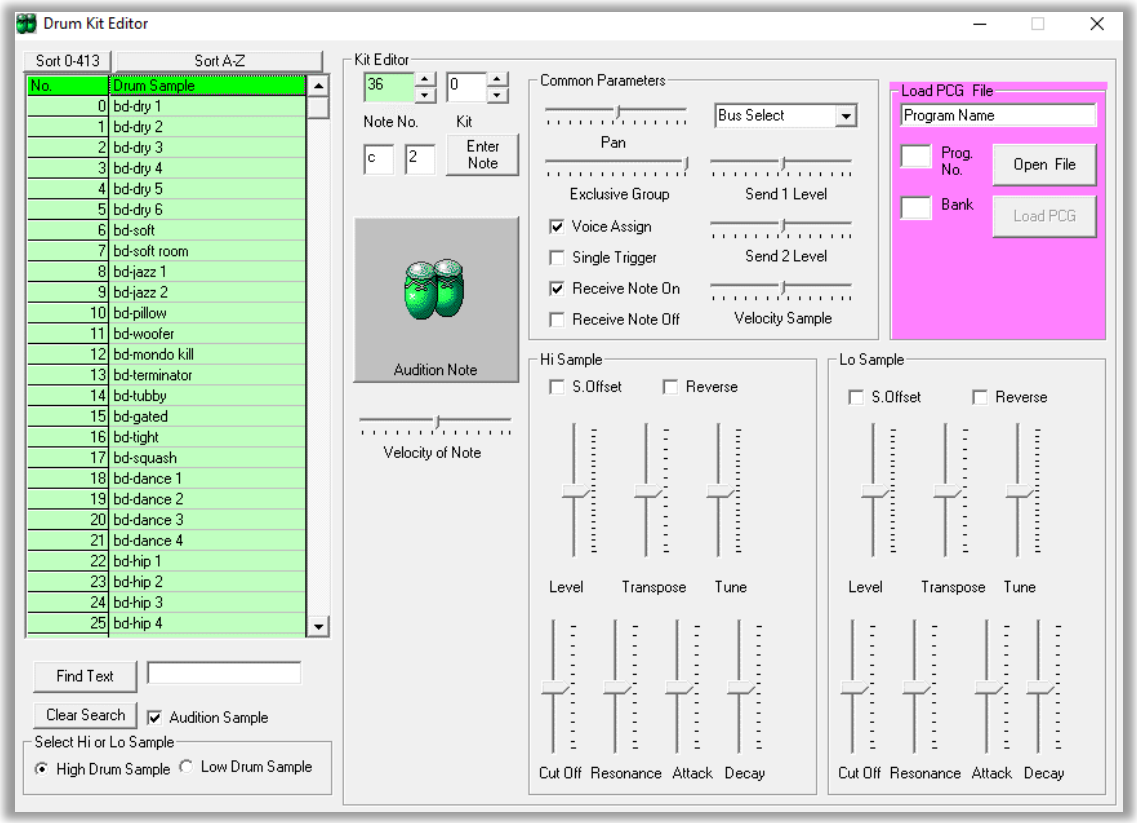
Tip – You can pick up Effect Settings on the software (not LE) once you have opened a program/combi and turned it to Hex. Then press 'Load Settings'. The controller's settings will then be preset.

DRUM KIT EDITING

This section allows drum samples to be auditioned and assigned to a note. Kit editing is done in Global mode on the Triton, to which it will switch when the drum kit editor is launched. Samples can be accessed using an advanced search facility – sort by name, number, search by text – (Sample name box turns yellow). Samples auditioned (Sample name box turns blue). All of the parameters for the drum samples can be controlled.

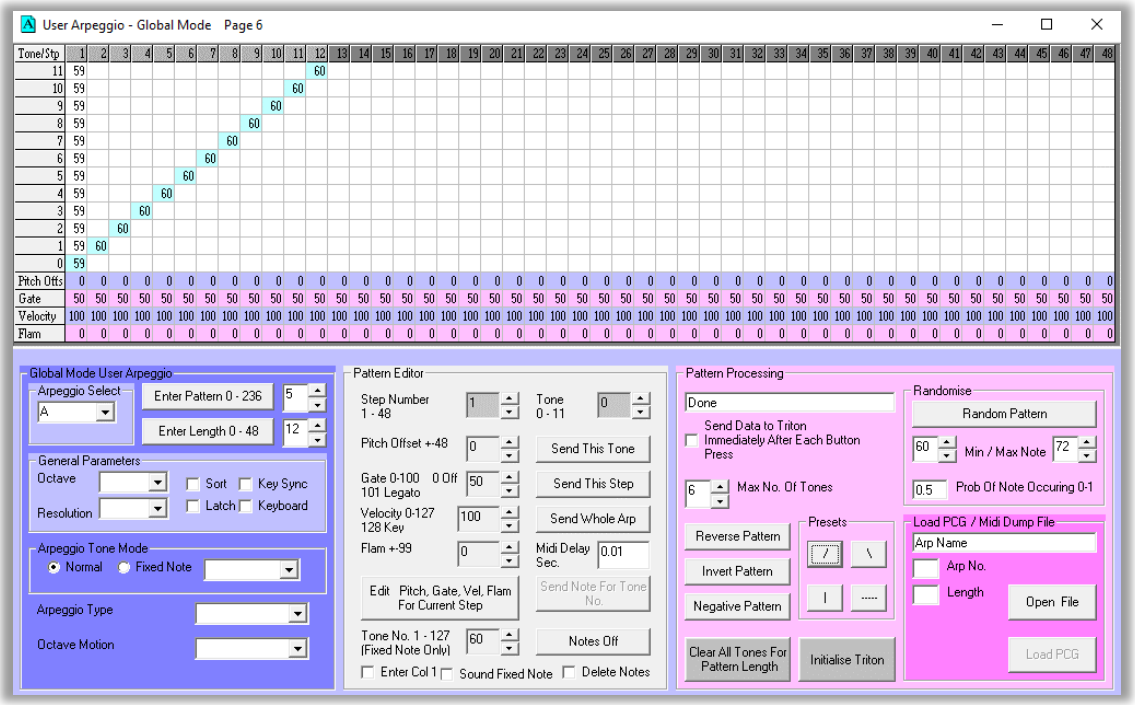
To select a note to assign a sample to either enter the midi note number in the green Note No. box or specify it by Note. E.g. C 2 or A 3 etc. in the two white text boxes. Click Enter Note button.

To audition a sample, select the sample in the list and press the Audition Note button. You can also load a drum kit mapping from a PCG file once it's turned to HEX on the PCG reader form. See the parameter manual for details of the sample settings on the right-hand side. Save the program on the Triton once you have finished.



ARPEGGIO

This form enables the user to edit the user arpeggios from U0 to Uxxx depending on model. (NB. Not Karma which uses GE). *Firstly, uncheck memory protect – user Arp pattern in global P0 – Basic on Triton.*



Note there are two modes for the Arps.

- Normal mode is where the Arp steps play relative note numbers to the note you play. Tone 0 in this mode.
- Fixed note is where the Arp plays an absolute note number regardless of the note you play. Used in drum patterns. The tone played is specified by the numbers you enter in column 1.

The large matrix represents the tone numbers and steps – just like the touch screen window – Global page 6 – edit. When you click on the matrix it sends the tone on for the tone number specified (0 in normal mode). You can specify the pattern length up to 48 and pattern number – default is 5 (U0). NB The first 4 patterns are not editable on the Triton. You can edit the step parameters for pitch, gate, velocity and flam and then send them by pressing the send step button. You can send the whole Arp – using the 'whole Arp' button. It's all colour coded to assist use. When you clear all tones, it does not clear the triton – unless you tick the check box above (Send data to Triton immediately…).

For fixed note mode you can specify the note number for the current tone (Step 1 shows the values for the tones). Fill the step 1 column with note numbers – enter check box ticked to do this. There is also a random Arp generator and the ability to reverse the pattern – horizontal reflection. These facilities will be expanded if users make requests for new features!

You can also make a 'negative' of the pattern and invert it. The Random note feature allows you to specify the maximum and minimum note values. You can also 'initialise' (clear) the Triton Arp pattern separately from the program grid – leaving the grid values intact. Rack owners and Studio owners can now access all their Arp patterns. Preset patterns added for fast generation of patterns.

When you place the tones with the mouse they sound – you can adjust the volume on the random composer volume control. To delete the notes, click on the 'delete note' check box first. If you click the check box 'sound note on' you can audition the notes without changing them and if you click on the column header the whole step sounds. To turn the notes off, press any white unfilled tone square on the grid or the 'note off' button.

See Parameter manual for details on specific settings.

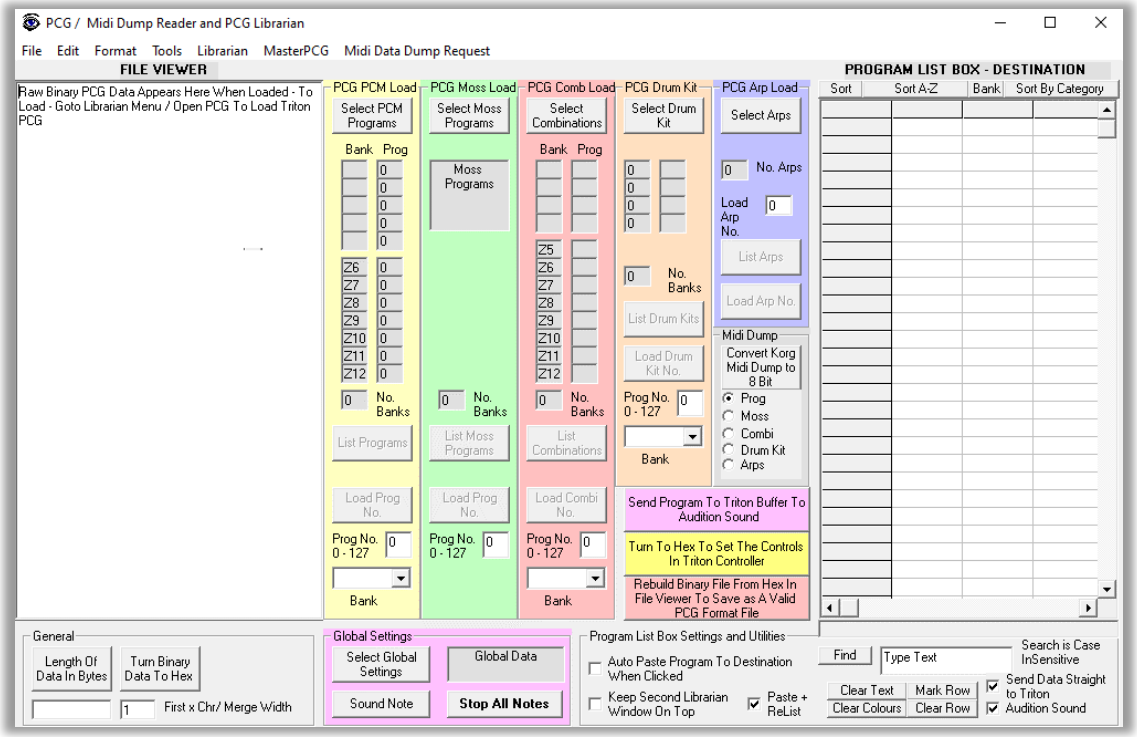
NB. If you have problems/inconsistencies with sending midi data increase the midi delay to 0.01 or 0.1 seconds.

PCG READER

PCG files are Korg's way of containing a synths sound control settings in a file readable by a computer or synth. When you load a PCG you transfer program banks, Combinations, Moss settings, Arps, Drums and global settings to the synth. Some PCG's just contain one of these, such as 1 bank of 128 programs. Instead of loading these by disk the Triton Controller allows you to send them in a much more convenient way – via midi! The software contains a sophisticated browser so you can see what a PCG file contains and you can then select which programs etc. to audition. Make sure you set the programs midi setup to the model synth you use and only view PCG files in the same format. If you don't do this you will see 'garbage' in the right-hand viewing box of the program.

Please Read. Each Korg model has its own native format – make sure you load the correct format PCG in this program – same as your model synth and the one the program is set to in Midi setup.

Note a karma user will need to save PCG's in OS version 2.0 format on the synth first (to floppy disc – then load into PC – do this for all of your PCG files – unless the PCG is supplied in the correct format first!). Karma OS Version 1.6 will not work, neither will PCG's in other model formats. Once saved in the correct format, this program can view the PCG, audition the individual sounds and will enable the user to edit the PCG on the PC.



The facility to read PCG files has been added to the program after many requests. This has been a major coding exercise! An example of how to use the reader for Program and Arpeggio PCG data is described below. It is very similar for the other modes. Moss, Combinations and Drums. You can access the reader form from the Main Form – 'PCG Reader' top right when you open the program or from the individual edit pages – mauve box. *If you do it via the main form you must manually select the Triton mode. Ie. If you want to send Program PCM data, switch Triton to Program mode as well. If you open the PCG reader via the edit pages the program does it automatically.*

The PCG reader enables the user to interrogate Korg Triton PCG files, load them to the Triton by transferring them using Midi into the Tritons buffer. It also picks up the Arp PCG settings, Moss

and PCM program play and edit settings and amends the Triton Controller controls. NB. To permanently save the program on the Triton use the 'Write Program' facility.

OPENING A PCG FILE

1. To Start - You MUST FIRST OPEN A VALID PCG FILE – use the Open PCG in the Librarian menu. NB. A Triton Classic User must open a Triton Classic format PCG – not a Karma PCG etc. A Karma user must open a Karma O.S. 2.0 or higher format PCG etc.

2. Then 'select PCM Programs' or 'Select Combinations' etc – the relevant button is enabled if you go to this form from the appropriate page – eg Program PCMs edit. If you goto the page from the 'eye' icon on the main form – press 'Enable all select buttons' in the Tools menu and then 'Select PCM Programs' or 'Select Combinations' etc. Remember – The left-hand File Viewer generally displays binary data – not very readable with loads of odd characters. The Right-hand box is the Program List Box – this displays data which is readable by the user.

3. Then click 'List Programs' or List Combinations. On the right is the PROGRAM LIST BOX which displays the file contents when selected. You can then load the program from the grid directly to the Triton by clicking on it or manually by entering a number/bank and pressing load. You can also find text on the grid and sort cells by clicking the buttons at the top of the grid. Data is transferred to the Tritons Buffer immediately if the check box (bottom right) is clicked - default. You can transfer ALL PCG data through the program to the Triton.

4. To audition the sound from the PC you can either use the Composer form features OR – check the Audition Sound Box (default) as well as 'send data straight to triton' button. The volume of the note is set from the Composer form volume slider, the note value is set from the 'note on 0-127' button top left on the same form, and to stop the note – press 'Stop All Notes' in Global Mode at bottom of form. *If the note does not stop just select another program – this is because the note has arpeggio or GE attributes. You can sound the note again by pressing 'Sound Note' on the PCG reader form – Global data section.*

NB……Always work your way down each coloured box!

FINDING PROGRAM NAMES AND CATEGORIES

The Window on the right is the – PROGRAM LIST BOX – it is here all the programs are neatly listed. They can be sorted, searched and edited. Note if you search for a program name – Find button - it is case insensitive. So, if you search for 'Piano' it will return 'Piano' and 'piano' names. When you search two full stops will be added in the viewer. You can then group your finds by searching for '..' This is also useful if you want to auto audition programs. To return to the original list just List programs again. You can sort the list by clicking on the headers.

THE FILE VIEWER

The PCG form has a big window on the left – FILE VIEWER - which will show the opened the PCG file in binary (the data naturally looks a bit odd – some call it garbage ☺ !) – At the top is a file menu for opening PCG files etc and a variety of features are included in the menus. Below the window is a set of features for determining byte length, changing to hex. I used these during the development. There is a handy PCG summarise option in the tools menu – give it a try! – a message search string not found – will pop up if the PCG does not contain some data – quite normal as few PCG's contain all data – just click OK. The menu item below just reloads the binary PCG file in the window.

EXAMPLE – LOADING ARP DATA

NB. Not Karma which uses GE.

1. On the Arp form - Use the 'Open File' Button on the bottom right of the Arpeggio form - this opens the PCG reader window – select file/open at the top left. Choose a Triton PCG file to pick Arps from. Typically your preload disk that came with the synth or from Korgs UK website.

2. Press 'Select Arps' to pick out the Arp data in the PCG. If the pcg does not contain Arp data – you will get a 'search string not found' message pop up.

3. Press list Arps to see them listed by name in the PROGRAM LIST BOX. Here you can sort, search etc.

4. Click on the individual Arp or enter a number to load a single Arp.

5.. If you click on the grid the data is sent straight to the synth – if the check box bottom right is checked. You can also send the data to the Triton Synth by pressing the 'Send Arp to Triton' Button. It sends the Arp number in the small text box which you can change.

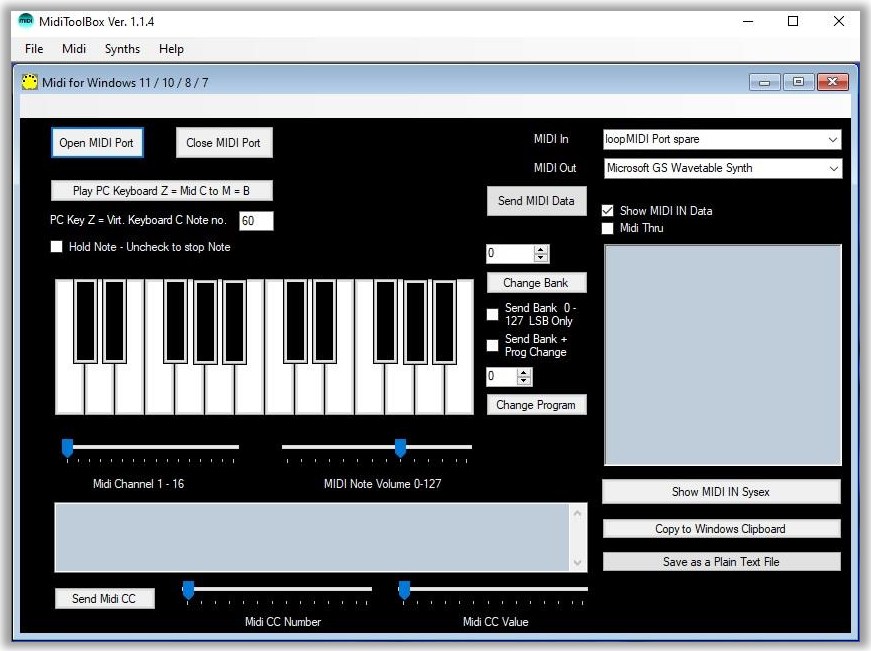
6.. Press 'Turn to Hex' to load settings into the Triton Controller program. Then go back to the Arp Form – Press Load PCG. All the Arp parameters will be automatically set!

NB. You cannot send Hex to the Synth so do (5) first then (6). *Always work your way down the box! there is a lot of error trapping in the code but it is not 100%.*

IMPORTING MIDI DUMPS FROM THE KORG TRITON

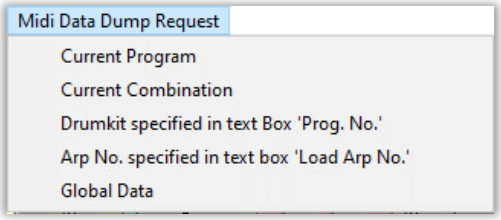
You can instruct the Korg Triton to dump individual program data, Moss data, combi data, Drum data and Arp data to a data filer such as my free app MidiToolbox. See my website for the free download of MidiToolBox. This is particularly useful if your Triton media drive is not working or maybe your screen is not working? You can then save the data as a text file and insert in a PCG in the Triton Controller for future use. No need to use floppy disks or other media! Firstly, download and install my app called MidiToolbox. I wrote this specifically to work with the Triton Controller. Note to do a manual dump – on the Triton – global mode /midi and top drop down menu.

MidiToolBox Screen



1. Select the Midi-in port of the PC – Midi\Settings - ie. Data is received here from the Tritons midi output port.
2. I set by default the input buffer in MidiToolBox to 1024 – this works well with windows 7 or higher

How to request a Data Dump from the Triton Controller software



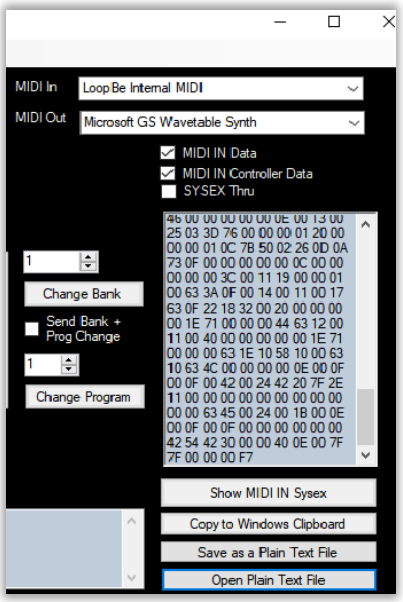
1. Select the MIDI out port in the Triton Controller. Then select the drop-down menu on the Librarian form above.
2. This will download the data for the current program, combi or the specified Drum Kit or Arp number TO MidiToolBox which will pick it up.
3. Note. For Drum Kits enter the Drum kit No. first in the white text box 'Prog No. 0-127'. Drum kits 0 to 63.
4. Note For Arps Enter the Arp number first in the white 'Load Arp No. text box. 0 to 231. Arp number 0 to 231.

5. For Global the Global data will be downloaded from the Triton. You could then edit it and send it back. I you use global data from a PCG you will overwrite any global settings in your Triton. So best to dump, edit and reload.

In MidiToolBox

Note when a dump is requested by the TC it takes under a second to download the dump for a single program. The length data received will be shown in the bottom left textbox.

1. Click 'show midi sysex' and then' copy to the windows clipboard'. Or save as a plain text file. – This dump will be in hex. – note it's a 7-bit format Korg Midi file



In the Triton controller

1. In PCG Reader – edit/clear text – this empties the file viewer box
2. Edit/paste – this copies the hex midi dump from the windows clipboard to the File viewer window. Or open the file you saved in MidiToolBox.
3. Use the 'convert midi dump to 8-bit button' on the Triton Controller software. See image below. This is needed because the Triton stores data as 7 bits per byte internally.

4. Now Click - Rebuild Binary File from Hex turn it into Binary. Now the data is in the same format as the PCG file format. 8 Bit Binary.
5. Save the file – Librarian\save a single program to file. Name it prog_name.txt, Moss_name.txt etc.

You can now insert Programs, Moss, Combis, Drums and Arps it in a PCG. See below. You can also edit these on the Triton using the Triton Controller.

IMPORTING MIDI DUMPS USING MIDI-OX

Apart from my free App Midi Toolbox you can use Midi-Ox. You can instruct the Triton to dump individual program data, Moss data, combi data, Drum data and Arp data to a data filer such as midi-ox. This is particularly useful if your Triton media drive is not working or maybe your screen is not working? You can then save the data as a text file and insert in a PCG in the Triton Controller. Do any editing and then send back to the Triton!. No need to use floppy disks or other media! Firstly, download and install Midi-ox. http://www.midiox.com/

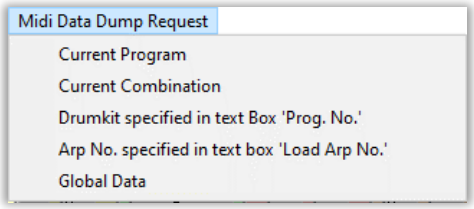
In Midi-Ox -> To data dump from Triton to PC

3. Select the Midi-in port of the PC – Options\midi devices - ie. Data is received here from the triton's midi output port.
4. I suggest you set input buffer in midi ox to 1024
5. In the top menu - 'view/sysex'
6. Click on sysex \ wait for manual dump

You can either request the Dump from the Triton synth

1. Goto global mode\midi. Select the Drop down menu, Dump single program.
2. This will wait for the dump to download – dump starts at F0 and ends at F7

OR - Request Dump from the Triton Controller software



6. Select the drop down menu on the Librarian form
7. This will download the data for the current program, combi or the specified Drum Kit or Arp number.
8. For Drum Kits enter the Drum kit No. first in the white text box 'Prog No. 0-127'. Drum kits 0 to 63.
9. For Arps Enter the Arp number first in the white 'Load Arp No. text box. 0 to 231. Arp number 0 to 231.

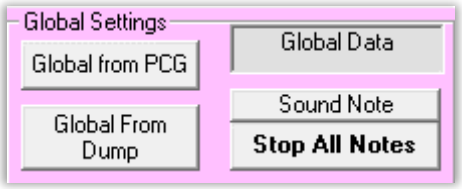
In Midi Ox

2. Display menu\Copy – This dump will be in hex and copied to the windows clipboard – note it's a 7 bit file **OR** it can be saved as a 7 bit Hex file.

In the Triton controller

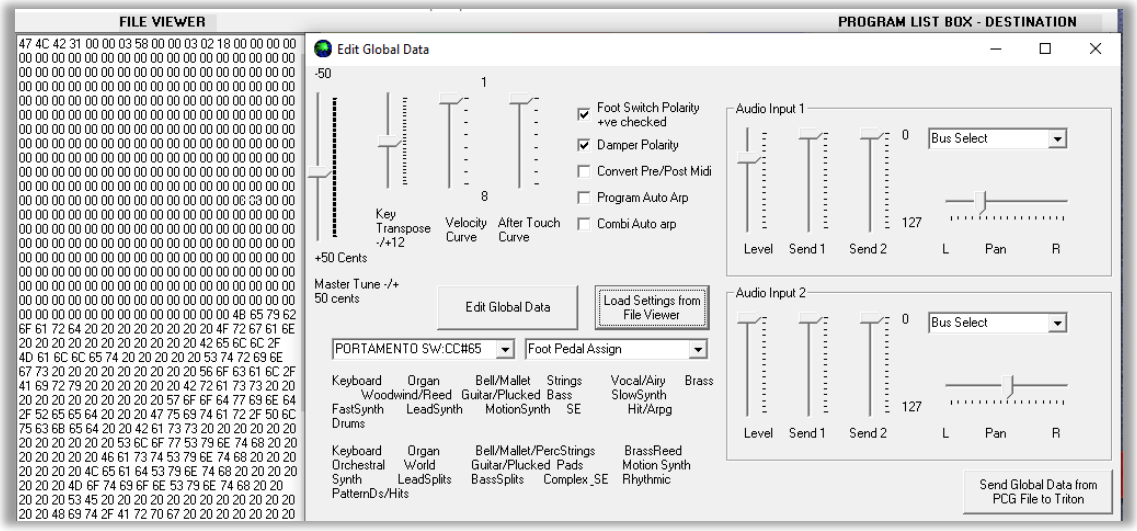
6. In PCG Reader – edit/clear text – this empties the file viewer box
7. Edit/paste – this copies the hex midi dump from the windows clipboard to the File viewer window. **OR** File \ Open the saved Hex file.
8. Use the 'convert midi dump to 8 bit button'.
9. Now the data is in the same format as the PCG file format.

GLOBAL DATA



You can import Global data from PCG files if Global Data is present. Eg. Korg's Preload.PCG, from Korgs websites. This data affects the entire synth. Eg. Tuning, foot controller assignments etc. To do so click 'Global from PCG' button. You can then edit the data and send it to the Triton or save the edited Global Data file in Hex and use File/Save and name it globalbackup.txt or similar. The preload.pcg from Korg can be used as a recovery Global Settings file,

If you click on Edit Global Data from PCG on the Librarian form, you will see an editor window appear. The File Viewer Data will turn to Hex and you can load the settings from the PCG and edit the PCG Global Data.



You can see the names of the Program and Combination sound categories at the bottom. If you click on 'Load Settings from File Viewer' the onscreen controls will move to the data in the File Viewer/pcg file.

If you move the controls the Hex data will update in the File Viewer. Once finished if you want you can press 'Send Global Data to Triton' button which will turn the updated Global Data from Hex to binary and then send it via Midi to the Triton in the Tritons 7-Bit internal format. The Global Settings in the Triton will be updated. You can also file/save in the file viewer.

To revert to your original global settings either load a pcg via the media drive with global settings you saved as a back-up. Or do the same using this program from the PCG or a hex text file you saved previously. To reset to factory settings just use the Korg Preload PCG file. Note. It is generally better to use a PCG file as Midi dumps can occasionally can get corrupted and Global Data errors affect the entire synth.

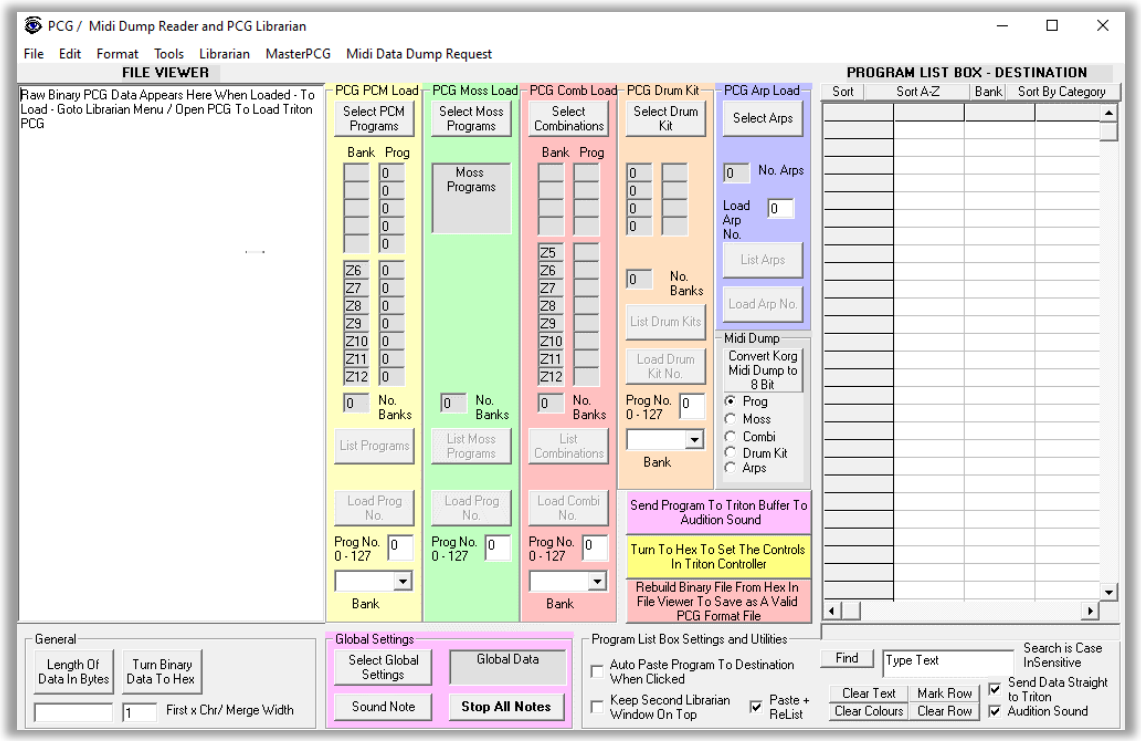
GLOBAL DATA DUMPS

You can use the software to receive a dump of 7 Bit Global data. Save it to a plain text hex file. You could use this as a back-up. The send back a copy to the Triton if needed. Note. editing is done on the Triton for Dumps, Not this software. It is often better to use a PCG file, as Midi dumps can occasionally can get corrupted and Global Data errors affect the entire synth. However to save and reload a dump on the Triton: -

1. Save a 7 bit Hex dump to a plain text file. File/save above the file viewer or in Midi ToolBox or Midi Ox.

2. You can open it using file/open above the file viewer. Click 'Global from dump' and send the 7 bit file to the Triton. Remember don't edit it as you can only edit 8 Bit Hex files not 7 Bit.

LIBRARIAN



INSERTING A MIDI DUMP INTO A PCG FILE

If you have saved a midi dump of a single program you can insert it in a PCG file on the Triton Controller.

1. If you want to insert the midi dump program in an existing pcg file you open your existing PCG – Librarian\Open PCG - press Select and then List progs, moss, combis, arps as the file type you are importing. You can't load a program into a combi etc !
2. Click on the position in the RHS list box where you want to insert it.
3. Then click top menu 'Librarian\Replace a single program in a PCG – select the prog_name.txt file when prompted and the 8-Bit binary file will be inserted.
4. Save the updated PCG file. Librarian\Save PCG.
5. That's it!

Note Global data is handled differently. You can edit global data such as global tunings from a PCG. Save it or send it back. But a sysex dump can only be saved and sent back -its not edited in the software.

EXAMPLE. LOADING ARP FILES FROM MIDI DUMPS

1. To load data into the program you need my app MidiToolBox. When you dump the data, you must dump it in 'plain hex' format without any 'word wraps' ie. carriage returns. A typical plain text Triton Classic 7-bit sysex Arp dump looks like this. It starts with F0 and ends with F7.

F0 42 30 50 69 40 00 00 00 47 75 69 74 61 72 20 00 53 74 72 75 6D 20 31 00 20 20 10 0E 00 00 17 00 17 17 17 17 17 07 08 00 09 0A 0B 0C 00 32 64 04 00 0F 7F 00 32 64 00 00 00 07 00 32 64 00 00 00 01 00 32 64 00 00 02 00 00 32 64 00 00 04 00 00 32 64 00 00 08 00 32 00 64 00 00 10 00 32 64 00 00 00 20 00 32 64 00 00 00 40 00 32 64 00 00 01 00 00 32 64 00 01 00 00 00 32 64 00 02 00 00 00 32 64 00 04 00 00 32 00 64 00 08 00 00 65 47 01 6C 00 3F 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 00 40 00 00 2A 08 00 65 47 6B 00 3F 00 00 32 45 00 00 00 00 32 00 40 00 00 00 00 00 40 00 00 00 15 00 65 47 14 00 00 3F 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 00 40 00 00 2A 00 04 65 48 66 00 3F 00 32 00 40 00 00 00 00 32 40 00 00 00 00 00 00 40 00 00 00 15 00 64 4F 0D 00 10 3F 00 64 5F 77 00 3F 00 00 32 40 00 00 01 00 00 32 40 00 00 00 00 32 00 40 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 01 00 32 40 00 00 00 00 00 32 40 00 00 01 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 00 40 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 00 00 32 40 00 00 00 F7

2. Save your Midi dump and File/open into the File Viewer (pcg reader), and save the file with a name.text. This is a 7 bit file. Note that the Triton uses 7 bits per byte data internally.

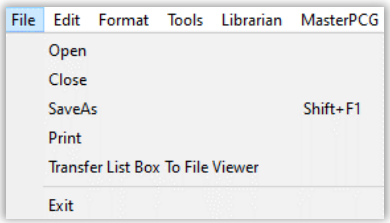
3.Back to the Triton Controller - Use the 'Open File' Button on the Arp form - this opens a new window – select file/open at the top left – where you can see the data.

4. When the data is loaded in the FILE VIEWER window just press – 'convert Korg midi dump to 8 bit for Arps and go back to Arp form and press 'Load PCG'. (This conversion is necessary because Midi dumps uses 7 data bits only and the dump needs converting to 8 bit). The Arp settings in the dump file are transferred automatically to the program. You can also see the Name of the Arp, Number and Length in steps and all the other parameters including the pattern change.

FILE \ EDIT \ FORMAT MENU ITEMS

These menus are very similar to the traditional word processing functions in a word processor. The operate on the text in the File viewer (Left Window). If you want to save PCG files you MUST use the Save PCG option under Librarian as this properly formats PCG files before saving.

Generally, you wont uses this menu se as it applies to the file viewer unless you are running PCG reports.



PRINTING PCG LISTS OR SAVING AS A TEXT FILE

To print out any list in the right hand (List Program) box – Firstly populate the List Program box by listing something.

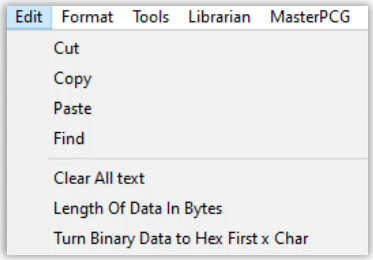
Then go to file\Transfer List To Viewer. This will transfer the contents of the List Program box to the File Viewer box.

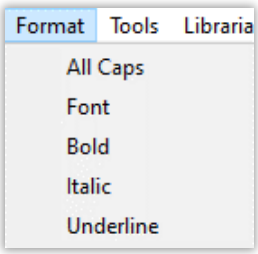
Then go to File\Print – to print on a printer connected to the PC. Or File Save to save as a plain text file.

If you want to copy or cut text in the File Viewer into the Windows Clipboard – just select it with the mouse. Then 'cut' or 'copy'. It will only cut and copy selected text.

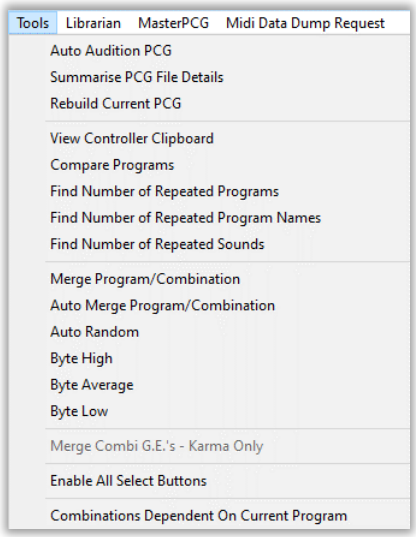
Then you can paste a list of program numbers, program names, bank letters and category - into say excel. Just click on the spreadsheet in excel and press 'paste' and the columns will be filled with the selected text properly formatted. Word is similar – just click where you want to insert on the page and press 'paste'!

These menus can be used like a simple word processor for reports created in the file viewer.





TOOLS MENU



AUTO AUDITION PCG

Just sit back and let the program audition 1 Program/Combination etc. at a time. It works for both PCG's and Master PCG's. Firstly, open a PCG, Click on the start position on the grid and click 'Auto Audition' to start. The user can vary the note on time by changing 'Time on Range' left box, in the composer form and the note value by pressing 'Note On 0-127' on the composer form. You can stop the process by pressing the 'Stop all Notes' button.

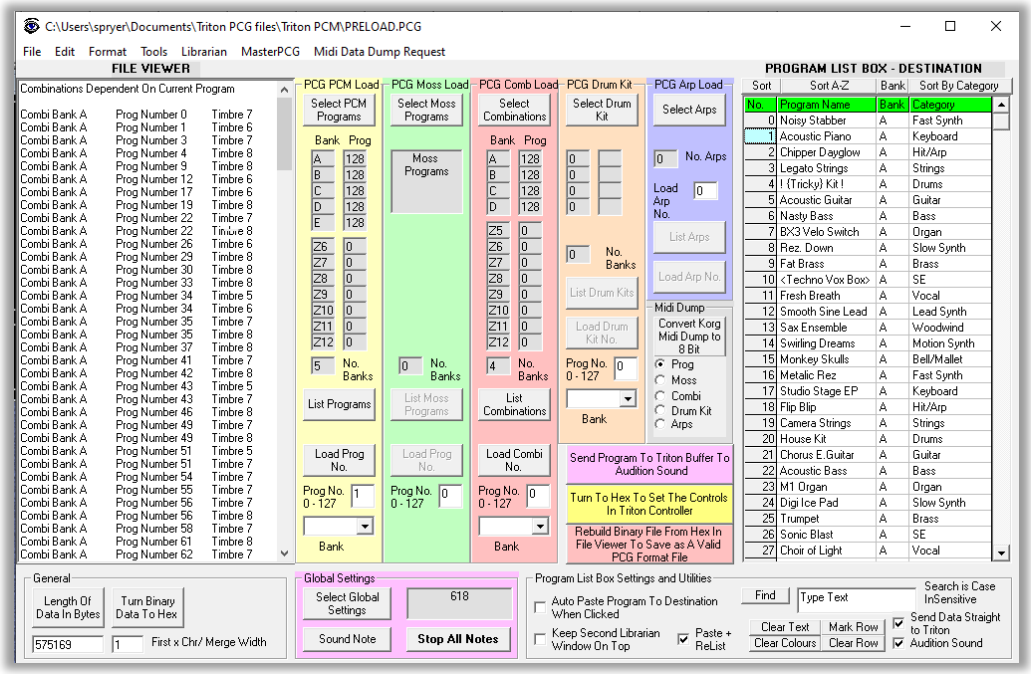
COMBINATIONS DEPENDENT ON CURRENT PROGRAM

If you change or move programs – combinations may be affected. This utility lists the dependency of combinations on the program selected so you can check programs before they are moved. To use: -

1. Open a PCG containing combinations – press 'select combinations' first. If combination banks are not present you will get a message saying 'String Not Found'.

2. Then 'select programs PCM or Moss. (e.g. Press 'select Moss programs' for Moss combination dependency). Then click on a program for which you want to know the dependency.

3. Then go to tools menu\Combinations Dependant On Current Program and Click. The left-hand window will list all of the combinations which use the program. Don't be surprised if the list is long – check out Acoustic Piano on Triton Preload PCG – Bank A, Prog 1. See how many combi's use it! Other programs will not be used in combinations at all. You can cut n paste the data into Word or Excel for instance. Data is separated by tabs so it transfers easily. See below. Notice how many Combinations are dependent on the Acoustic Piano program. See below.



REBUILD CURRENT PCG

This reloads the entire current PCG in its binary format into the file viewer. So, if you insert say a single Program into the PCG it will show the whole updated PCG in binary.

VIEW CONTROLLER CLIPBOARD

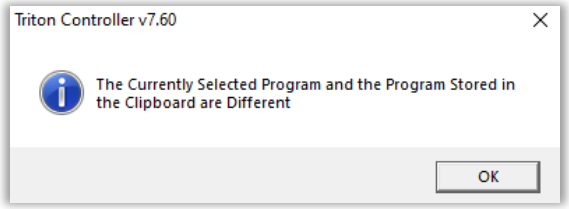
This displays the contents of the special Triton Controller Clipboard into the File Viewer.

COMPARE PROGRAMS

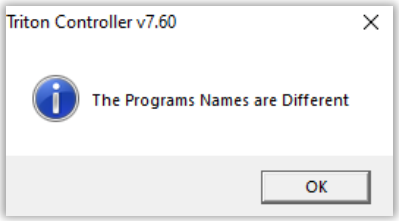
This utility compares the contents of the clipboard with the currently selected program. Sometimes programs with the same name may be different – this compares byte/byte and if it finds any differences tells the user. If they are identical the user will be told and can replace one of the copies with a new program.

To use – select the first program – and select 'copy'. This places it in the Controller clipboard.

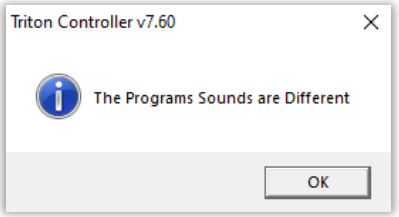
Then click on another program to compare, and select – 'Compare Programs' – Three information boxes will appear in succession which will state the result. Is the whole program different?



are the names different?



and are the sounds the different?

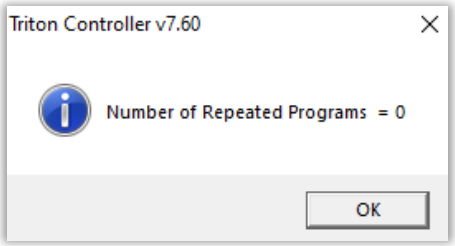


Note. You can compare between the Source and Destination windows too. See second Librarian window later, the Source.

FINDING REPEATED PROGRAMS

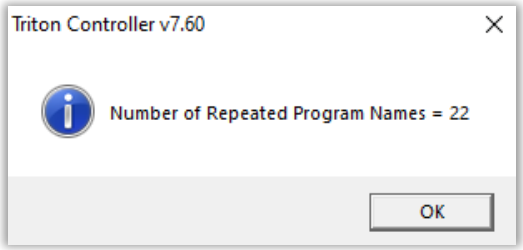
If you assemble big files – programs may be repeated, repeated whole programs (i.e. Identical programs) or repeated names). This feature is used to find repeats so that you can use the PCG or Master PCG space more effectively and overwrite repeats. When you select these options, the program will relist the programs.

Click **'Find Repeated Programs'** in the Tools menu and you will get a summary indicating the number of repeated programs found. That is the same name and sound. You can then choose to leave them alone, initialise them or overwrite them with new programs. NB. The feature checks the entire contents of a program (Name and settings), so big master PCG files may take a couple of seconds. Repeated sounds are highlighted in yellow in the Program List Box. The repeats will be highlighted in yellow after the first instance of the repeated program and listed alphabetically.



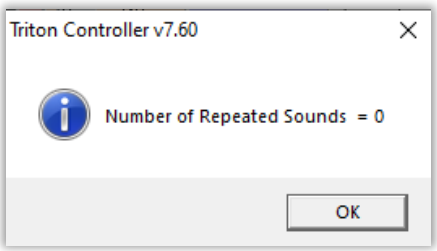
Click **'Find Repeated Program Names'** - To find just repeated names, use this option. The repeats will be highlighted in purple after the first instance of each name and listed alphabetically.

Tip – It's always a good idea to use different names for different sounds!



FINDING REPEATED SOUNDS

Click **'Find Repeated Sounds'**. Sometimes programs may sound the same but just have a different name. This option ignores the name and just looks at the sound settings. The repeats will be highlighted in blue after the first instance of each name and listed by program/bank number.



In this example there are no repeats of whole Programs or Sounds. But there are repeats of names - the Initialised programs. So, the initialised programs have repeated names but different sounds.

MERGE PROGRAMS/COMBINATIONS/DRUMKITS/ARPEGGIOS

Below are a host of ways of creating new sounds from existing PCG data – Its good fun and pretty easy to generate new programs, combinations etc.

This powerful facility in the Tools menu blends any number of Programs, Combinations, drumkits or arpeggios. You can create brand new sounds by merging existing ones! It works for both PCG's and Master PCG's.

Example. Open a PCG with some programs in it.

1. Then select a program by clicking on the right-hand list box. Click 'Copy' in the Librarian menu or Master PCG menu as appropriate.

2. Select a second program. Click 'Merge' in the Tools menu. The Message Box lists the individual contributions to date. Click O.K. The resulting program is displayed in the left-hand window. Note that the name of the program is merged too!

3. Click – 'Send Program To Triton Buffer' – You can now hear the new sound – If the check box 'Send data straight to Triton' in the lower right corner is ticked as well as the 'audition sound' check box then it will sound automatically.

If you want to save the new program – just paste it into the PCG and overwrite an existing program. *NB. The whole procedure above is the same for Combinations, Drum Kits and Arpeggios.*

If you keep selecting new programs to 'add' and click Merge you can continually change the sound. For instance – if 5 programs are merged the first byte of the new program comes from prog 1, the second byte from prog 2 etc. By clicking on a program more than once and merging it you can 'weight' the effect it has on the new program. Remember merging a program called B to a program called A in the clipboard will produce a different sound to merging program A to a program B in the clipboard as the bytes 'chopped out' will be different! You can also select width of Merge (program, combination etc). E.g. If you merge y programs you can specify x = the first x bytes from program 1, then the next x bytes from program 2…up to program y. Previously x was fixed at 1. The value of x can be input in the text box lower left – "First x Char./Merge Width". Preset at 1 at load of program.

So merging AAAAAAAAA with BBBBBBBBB – Merge Width of 2 - yields AABBAABBA. Merge Width at 3 yields AAABBBAAA etc.

NB. When you click 'Copy' again the procedure starts from scratch.

AUTO MERGE

You must use the Merge function first to select the Programs/Combinations to merge. Minimum of 2 Programs/Combinations. It works for both PCG's and Master PCG's.

The Software automatically cycles through all possible merge widths starting at the merge width specified in the 'First Char./Merge Width' box incrementing by 1. User can stop when a sound is liked by pressing 'stop all notes' and then the program/combi can be stored in the normal way. The user can restart at any point by selecting 'Auto merge' again and can vary the note on time by changing 'note on time' in the composer form. This facility is a rapid way of finding new sounds! Merge widths can vary between 1 and the length of the program in bytes – when the cycle will automatically stop.

AUTO RANDOM

This feature generates random programs/combinations/drumkits/arps based upon existing ones. The way it works is that the user selects (2 or more) existing programs etc. and the software uses these as a seed to generate brand new ones. In fact, you can end up with some really unusual sounds. *Tip. I find the best results are if you use 2 or more programs with the same instrument category. But try others. Some may produce no sound; some may produce loud sounds so keep the volume low and turn it up when needed.*

Example. Open a valid PCG with some programs in it.

1. Then select a program by clicking on the right-hand list box. Click 'Copy' in the Librarian menu or Master PCG menu as appropriate. This places it in the 'clipboard'.
2. Select a second program - To start with select same category as the first – e.g. Voices. Click 'Merge' in the Tools menu. The Message Box lists the individual contributions to date. Click O.K. The resulting program is displayed in the left-hand window as binary data.
3. Now click Auto Random – The software cycles through new programs etc. Press 'Stop all Notes' button to stop the process and keep the sound in the Triton buffer. If you want to save it - save the program on the Triton and/or paste into the PCG file. You can do both from the Triton Controller.

The user can vary the note on time by changing 'Time on Range' left box, in the composer form – use 4 seconds or more which allows time to listen to the sound – to capture it before the next sound appears click 'Stop all Notes' button. The note value can be changed by pressing 'Note On 0-127' on the composer form. You can stop the process by pressing the 'Stop all Notes' button. The 'Global Data' box displays the elapsed time in seconds and the 'First x Char box' – lower left – displays the number of iterations.

BYTE HIGH, BYTE AVERAGE, BYTE LOW

When the Programs/Combinations etc. have been selected by the Merge function there are further ways of generating new Programs/Combinations! Byte High looks at the selected programs and byte by byte picks the highest value and assembles a new Program/Combination. So if program 1 is "12 13 14….." say and program 2 is "11 15 10…." the result would be "12 15 14". Byte Low is the same principal but takes the lowest value. Average takes the average byte value. Some of the new programs may sound strange, interesting or not sound at all. That's the fun. *NB…Make sure the master volume is turned down with all these manipulations as you cannot predict the resulting volume of the program. You can turn it up if needed afterwards.*

MERGE KARMA G.E. MODULES – KARMA ONLY

This facility in the tools menu blends any number of Combinations Generated Effects G.E.'s modules on the Korg Karma. You can create brand new G.E.'s by merging existing ones! First pick a combi you want to change the GE's for. This is the timbre or character of the sound you will hear.

Example.

1. Open a Karma OS 2.0 or higher PCG with some combinations in it.
2. Then select a combi by clicking on the right-hand list box. Click 'Copy' in the Librarian menu. This is the base combination which will define the sound – but you are now going to change its GE Modules.
3. Select a second combi. This second combi will only contribute part of its GE Module, nothing else. Click 'Merge Combi GE's - Karma Only' in the Tools menu. The Message Box lists the individual contributions to date. Click O.K. The resulting combi is displayed in the left-hand window. Everything is the same as the first combi except for the Modules

which are a mixture of the 2 combis. Note that the name of the program is the first program.

4. Click – 'Send Program To Triton Buffer' – You can now hear the new sound – If the check box 'Send data straight to Triton' in the lower right corner is ticked as well as the 'audition sound' check box then it will sound automatically.
5. If you want to merge another combis Modules – just select another combi in the right-hand box, and then Click 'Merge Combi GE's - Karma Only' in the Tools menu again. Now the Modules will be a mixture of the 3 combis GE Modules. You can continue doing this!

If you want to save the new program – just paste it into the combi part of the PCG by using 'Paste' in the librarian menu and overwrite an existing program.

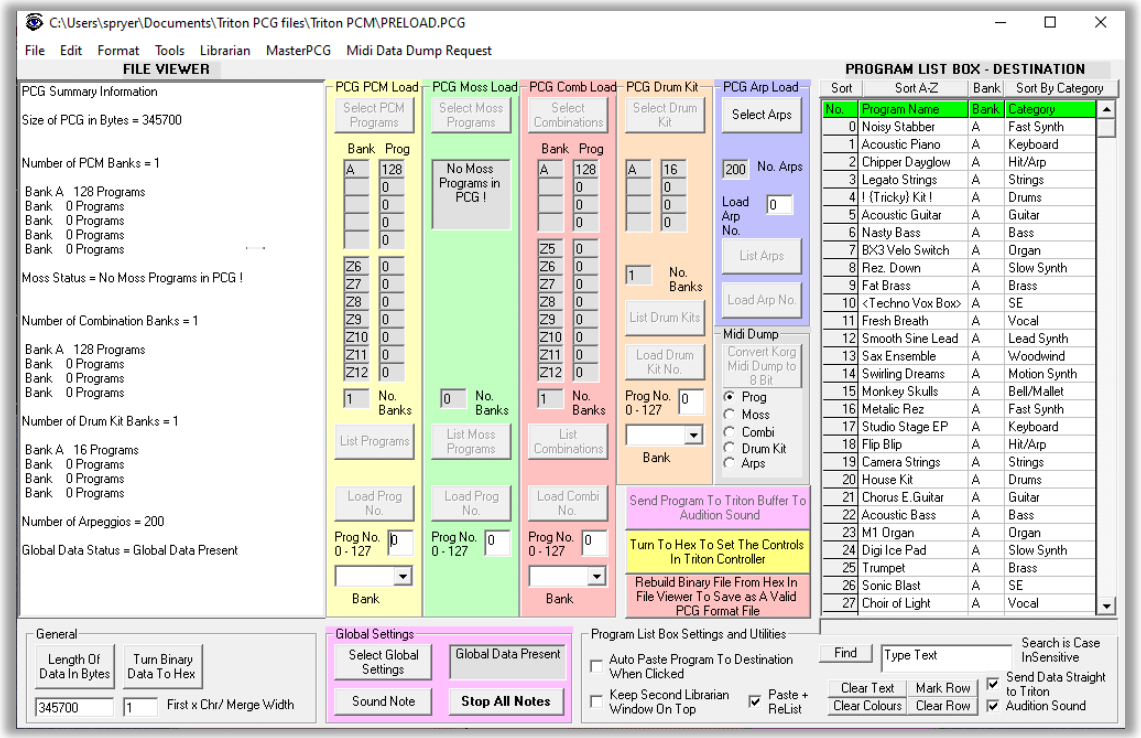
If you keep selecting new combis to 'add' and click 'Merge Combi GE's Karma Only' you can continually change the GE's. For instance – if 5 programs are merged the first byte of the new combi GE comes from combi 1, the second byte from combi 2 etc. By clicking on a combi more than once and merging it you can 'weight' the effect it has on the new program. Remember merging a program called B to a program called A in the clipboard will produce a different sound to merging program A to a program B in the clipboard as the bytes 'chopped out' will be different! You can also select width of 'Merge Combi GE's Karma Only'. E.g. If you merge y combis you can specify x = the first x bytes from combi 1, then the next x bytes from combi 2…up to combi y. The value of x can be input in the text box lower left – "First x Char./Merge Width". Preset at 1 at load of combi.

So merging AAAAAAAAA with BBBBBBBBB – Merge Width of 2 - yields AABBAABBA. Merge Width at 3 yields AAABBBAAA etc.

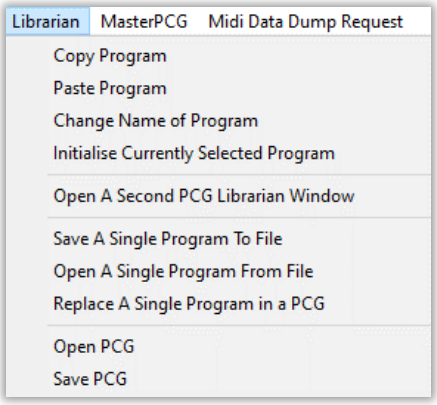
NB. When you click 'Copy' again the procedure starts from scratch.

SUMMARISE PCG

This produces a summary of a newly loaded PCG file in the File Viewer. If components such as a Moss Program Bank is not found you will get a message box – String Not Found – just click OK and the analysis will continue.



LIBRARIAN MENU



OPEN PCG

Always use this option to open a PCG file. You then select the type. Programs, Moss etc and List.

SAVE PCG

Always use this option to save an edited PCG file.

CHANGING A PROGRAMS NAME

Once you have opened a PCG – select the program in the list you want to rename. Select Change Name and rename the program. Click OK. The List will be refreshed with the new name present. If you enter a name < 16 characters long then spaces will be added automatically at the end to make the length 16. If you enter more than 16 characters the name will be truncated to 16 characters the length which the Triton expects.

If you want to create 'Favourites' just add a character such as + or % for instance, characters which you would not normally use. Then search by that character and your favourites will be grouped. You could create Scenes / Set Lists by creating a new PCG and placing the sounds in the order you want them to be used and you could use the Korg Footswitch PS1 to move forward one sound at a time during a set!

INITIALISING A PROGRAM

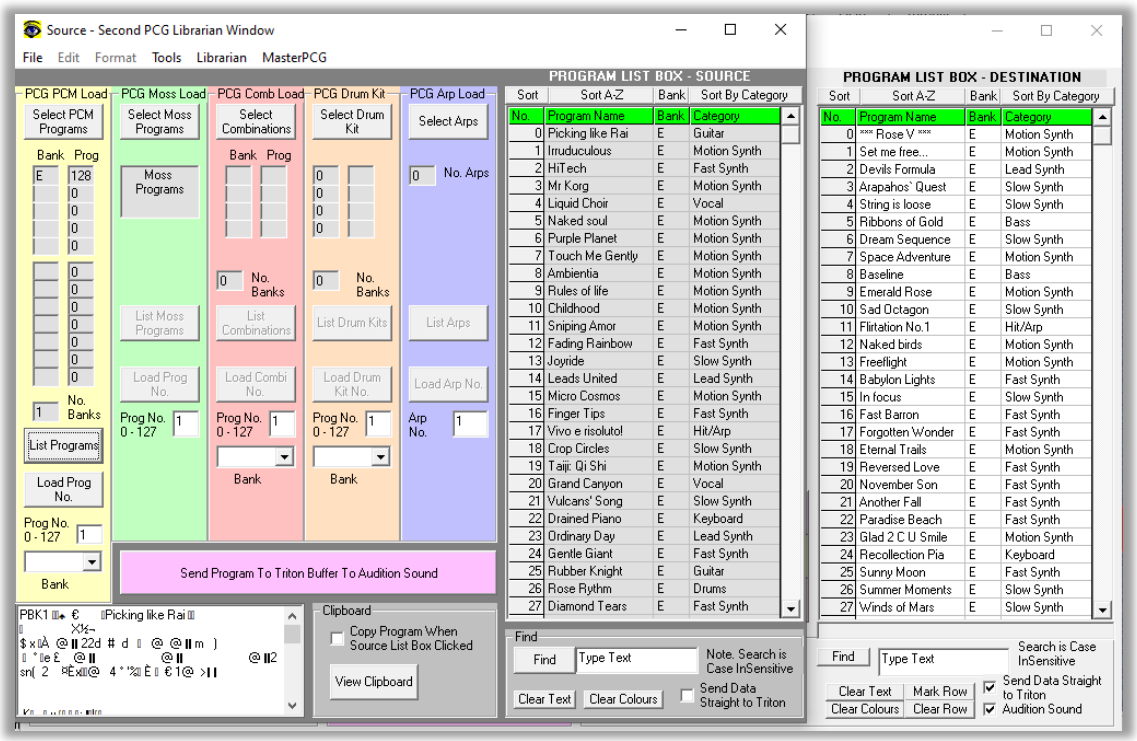
This changes the name of the program to 'InitiProgram' (Initialised Program) a spare slot for the user, but leaves the remaining program data in the PCG intact. This keeps the program positions constant. InitlProgram will appear when the PCG is listed. To fill the spare program just 'Insert A Single program' at the entry in the list or paste one. Finally save the revised PCG file – Save PCG.

COPYING AND PASTING PROGRAMS

1. Select the program you want to copy in the list. Click Copy in the Librarian menu.
2. Then select the Program location you want to overwrite by clicking on the list again.
3. Click paste in the Librarian menu.

THE SECOND LIBRARIAN WINDOW

The purpose of this second window is to simplify the task of moving programs from one PCG (The Source) to another PCG (The Destination). When the second window is opened you can open a PCG file – and list its programs – this is where the 'source programs' are coming from. You do the same for the destination (main librarian window), this is where you are going to assemble the new pcg.



The Source (Second Window) LHS and Destination (Main) Librarian RHS windows open

1. To start the edit process – load a PCG into in the 'second librarian window - (open this second window by choosing this option in librarian menu). Then click on a program in this window, the program you want to copy to the new PCG you are creating – and select copy program (in the librarian menu).

2. Then move to the 'destination window - (main PCG Librarian window) and load a PCG file and click on a program you want to overwrite. Then select paste program (in the librarian menu). Its that easy! The program you chose from the second window will now be inserted into the PCG file loaded in the main librarian window.

The source window has a smaller file viewer but a few additional features. You can view the contents of the 'Clipboard' in the viewer by clicking the button at the bottom. This is not the windows clipboard but one in the applications one.

Instead of continually clicking 'librarian\copy' program, you can automate the task by checking the tick box – 'Copy programs from source when clicked'.

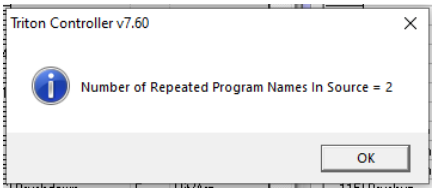
Similarly on the destination window, if you click its equivalent box – 'paste program to destination when clicked' it will save clicking librarian\paste program etc. all the time and paste the program straight to the List Box. The destination form also has a click box which keeps the second window on top of it – this minimises mouse clicks for the user. There is also a third check box which prevents re listing at every edit – so you can do a few edits and then relist – this saves time with big files.

Tip. You must remember to 'Save PCG' in the Destination Window 'Librarian menu' once it is assembled, otherwise you will lose your edits! I do intermediate saves just in case.

You can use the identical procedure with Master PCG files. Goto the Master PCG menu in the Second Window. Open and List the Master PCG in the Second Window and assemble a different Master PCG or Normal PCG in the main Window.

COMPARING SOURCE AND DESTINATION PROGRAM LISTS

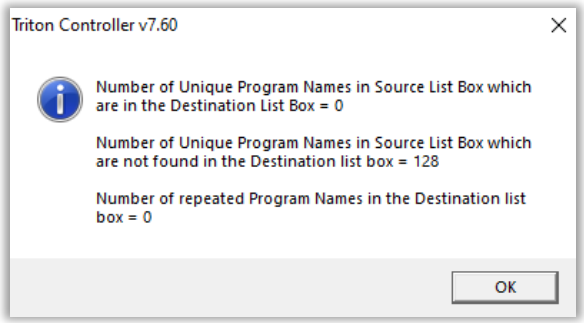
In the tools menu of the second Librarian window there is a facility for comparing program Names in the Source and Destination windows. To use, just open a pcg in each window, select type, list the programs. Click 'Compare Source and Destination Programs' in the Source Tools menu. The first part is for the software to find repeats in the source list box which it reports and are coloured pink after the first instance of the program.



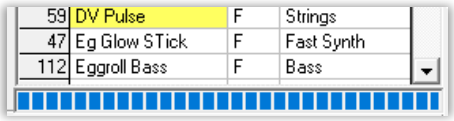
Click OK.

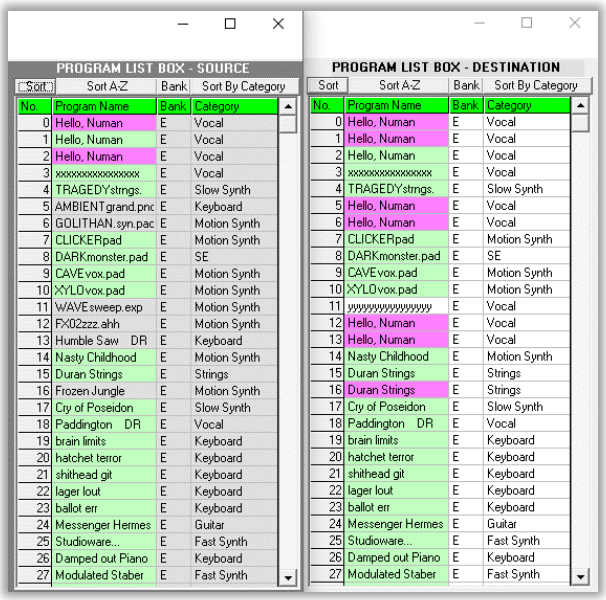
1. Then the program immediately looks for Unique program names in the Source List Box which are in the Destination List Box. Program names which are both in the Source and Destination Boxes are coloured green.
2. It also reports the number of Unique programs in the Source List box not found in the Destination List box. Program names stay grey in the Source List Box if only one instance is found and no instances found in the destination boxes. Unique Programs in the Destination List Box not in the Source List Box stay white.
3. It also reports the number of repeated Program Names in the destination list box which are coloured pink.

NB. Normal PCG files may take 5 seconds to compare on a typical PC. This process will take longer with big Master PCG files - several minutes comparing 2x 2000 program Master PCG files



. A progress bar below the Destination list box will show progress.





- Any Pink programs in the Source or Destination List boxes are effectively spare slots. Repeated names in that list box. Remember even if the name is the same the sounds might possibly be different. *
- Any Green programs are common to both. Again, the name is the same. It's possible the sound is different. *
- Any Grey programs are unique to the Source and Destination List Boxes. That means the names are unique. But it's possible the sounds repeat in another program with a different name*

*This is really not essential but if you really want to check, you can go to the Main Librarian window. Create a Master PCG (see later) of the two PCG files and use 'Find Identical sounds'. Or use Compare Programs in the tools Menu. Ideally there should be no repeats.

NB. Always try to make sure that each program name is unique and that it has its own sound. Otherwise, you waste space in the PCG.

SAVE A SINGLE PROGRAM TO FILE

Here you can save the currently selected program in the File Viewer e.g. the paste of your Midi Dump to a file. It will be 8 -Bit binary.

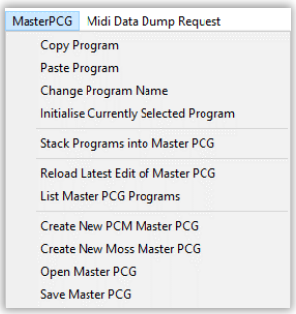
OPEN A SINGLE PROGRAM FROM FILE

The file you open will be 8-Bit binary. It can only be read by this software and This might be the file you saved from a Midi Dump. Then go to Replace below if you want to insert it in a PCG file of your choice.

REPLACE A SINGLE PROGRAM IN A PCG

Select where you want the program on the Destination List Box by clicking on the List. Then use this Menu Item which will invite you to open the file you saved. And then insert it in the PCG file.

MASTER PCG FILES



Ever wanted to assemble many Triton programs in one master file (PCM programs or Moss programs) instead of switching between PCG files all the time? Keep 5,000 programs in one place? Well now you can. What you do is first assemble the Master file. A Master PCG! This feature is in the PCG Reader section – 'eye icon' on main tool bar. I have created a Master Triton program PCG containing 18 banks of 128 programs. And a Master Moss PCG containing 8 banks of 128 programs. *Thanks to McHale for extensively testing this feature and his suggestions for improvements.*

Note this feature is NOT available for the Korg Karma.

Summary for Creating a Master PCG

1. Select 'Create a New PCM Master PCG' or 'Create a New Moss Master PCG'
2. Open a normal PCG - PCM or Moss as defined above - which you want to add (stack) – from the Librarian menu.
3. Press 'select PCM' programs or 'select Moss programs' as appropriate.
4. Press 'Stack Programs into Master PCG'.
5. Goto step 2 etc. Repeat for each PCG you want to add to the Master PCG.

Notes.

You must stick with either PCM programs of Moss programs and cannot mix them in the same Master file.

Open another PCG file, Press 'select PCM' programs or 'select Moss programs. press 'Stack Programs into Master PCG' again. Every time you open another PCG and stack it, a big binary file is being assembled in the File Viewer. Keep Going……. Until you have assembled a big program file.

When you have stacked your files save them - Goto Master PCG and 'Save Master PCG'. It will save to a special format with a .PCH extension, not readable by the Triton but readable by the PC. *You can continue to add to it later.*

To open it - Goto 'Master PCG' and now 'Open Master PCG'. This will open the new file with a special .PCH extension Then select 'List Master PCG Programs' in the Master PCG drop down menu. A readable list will appear in the Program List Box. (Right hand side).

You can now sort and audition as usual. That's it! You will only be limited by your PC's memory. You may have 5000 PCM or Moss programs. NB. Keep PCM Programs and Moss Programs in separate Master PCG files!

Adding a PCG to an existing master PCG

1. Click – Create Master PCG from the drop-down menu
2. Open an existing Master PCG.
3. Open the PCG to add from Librarian menu
4. Click select PCM or Moss programs as appropriate.
5. Click Stack Programs into Master PCG
6. Save Master PCG

NB. You can also stack Master PCG files!

Stacking two Master PCG files

1. Select 'Create a New PCM Master PCG' or 'Create a New Moss Master PCG'
2. Open a Master PCG file - PCM or Moss - which you want to add (stack)
3. Press 'Stack Programs into Master PCG'.
4. Open another Master PCG file – Same format - PCM or Moss - which you want to add (stack)
5. Press 'Stack Programs into Master PCG'.
6. Save Master PCG

Note that bank letters are replaced by numbers – this avoids having say two bank A's etc. NB. The Triton Controller clipboard is common to Librarian Functions and Master PCG functions. When assembling a Master PCG the program expects that the individual PCG's contain 128 programs/bank. Small PCG programs (< 128 programs) cannot be added by stacking. However, you can cut and paste individual programs from an incomplete PCG (fewer than 128 programs) into your Master PCG.

SAVING A MASTER PCG

Always Save this way. Click on the Master PCG menu and select 'Save' – this prompts you to save as a file with a .PCH extension. Always use this after any editing to save your work. It's worth saving every few edits.

OPENING A MASTER PCG

Always Open this way. Just select Open Master PCG in the Master PCG Menu and pick the xxxx.PCH file you want to open.

LIST MASTER PCG PROGRAMS

Then select 'List Master PCG Programs' in the drop-down menu. A readable list will appear in the Program List Box. (Right hand side). Below is a Master PCG listed containing 2304 programs in 18 banks. You can send any program to the Tritons buffer and play it!

CHANGING A PROGRAMS NAME

Once you have opened a Master PCG – select the program in the list you want to rename. Select Change Name and enter a new name. Click OK. The List will be refreshed with the new name present. If you enter a name < 16 characters long then spaces will be added automatically at the end to make the length 16. If you enter more than 16 characters the name will be truncated to 16 characters the length which the Triton expects.

INITIALISING A PROGRAM

This changes the name of the program to 'InitiProgram' (Initialised Program) a spare slot for the user, but leaves the remaining program data in the PCG intact. This keeps the program positions constant. InitlProgram will appear when the PCG is listed. To fill the spare program just 'Insert A Single program' at the entry in the list. Finally save the revised Master PCG file – Master PCG \ Save.

COPYING AND PASTING PROGRAMS

4. Select the program you want to copy in the list. Click Copy in the Master PCG menu.
5. Then select the Program location you want to overwrite by clicking on the list again.
6. Click paste.

USING SECOND LIBRARIAN WINDOW WITH MASTER PCG FILES

Because you can use the Controller Clipboard for Master PCG files - you can therefore use the Second Librarian window to copy and paste into the Master PCG which you have assembled. This makes editing a Master PCG easy.

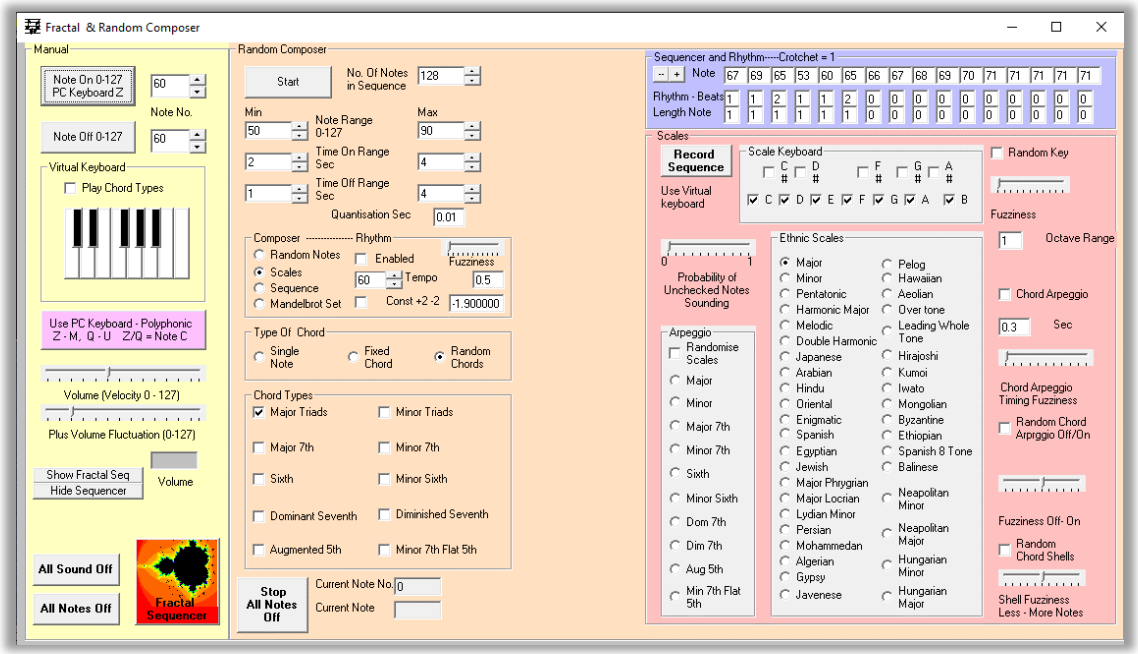
Remember you must not mix PCM programs with Moss programs in the same master PCG as they are of different sizes and content. So, create a Master PCG for your PCM programs and a separate Master PCG for Moss programs.

FRACTAL AND RANDOM COMPOSER

Note that an updated and greatly expanded stand-alone version is available on my website.
http://www.Stuartpryer.co.uk

To select use the button - music staff and notes - on the main tool bar.

The Composer section gets the PC to compose music within parameter envelopes, which are set by the user. These include note high/low range, timing range longest/shortest for note on/off, single/chord – 10 types/random chord types etc. Chosen chord types stored after sequence run. Useful if you just want to sit back and listen to something original or get some new ideas! Stop all notes off – does what it says on the box!



Left Section (yellow)- The Composer allows the user to send note on/off commands in the manual section. It will also has a nifty virtual keyboard for remotely playing the Triton whilst you edit the sounds on the PC. You can also play chords if you choose chord type and tick the box! The 'All Notes Off ' and All Sound Off' buttons are useful if you get stuck notes as well. Volume Control for sequencer, randomise of volume and velocity value output in text box. You can toggle on and off the Main Fractal Sequencer engine, Julia set form arranger form and the note sequencer with the buttons on the left.

Centre Section (orange) –

The centre 'Composer' box switches between pure Random Note generation, Fractal scale-constrained sequences based upon the scale keyboard, User input Sequence or pure Mandelbrot sequences. You play single notes or you can check the chord types you want used or just use random ones.

Right Section (red) – Defines random or scale-based compositions. Also, the ability to enter user-based scales and a wide selection of standard scales. Test the demo presets in the yellow section. Choose a good sustain piano preset 1 or voice with reverb preset 2. The Scale based compositions can be defined by chord arpeggio scales or ethnic scales. When you select a chord, the appropriate notes are checked in the Scale Keyboard. You can also input or edit scaled on the simplified keyboard in this part of the form. Ability to play random notes/chords to a chord-based arpeggio. The timing fuzziness control changes the precision, which the arpeggio sounds. The chord shells fuzziness varies the size of the shell (number of notes) sounded. The probability

of unchecked noted sounding slider varies the strictness of scale observance by the program. Octave range varies the range with which notes are sounded.

Top Right Section (purple) allows user input sequences. The program can improvise around the sequence. Input is via the virtual keyboard (yellow) section after pressing the 'Record Sequence' button in the red section. Note number, time on and time off can be specified. The rhythm is input manually.

NB. 'Note on' is the time in beats (crotchets) the current note lasts before the next note. 'Note off is the length of time in beats the note lasts. Normally equal to or less than time on.

If you want to play the Triton using the PC keyboard – press the 'Use PC Keyboard' button near the virtual keyboard just before playing. z = Note C. s = note C#. x = note D. etc. The notes run from z s x d c v g b h n j m. Which map to C, C#, D, D# etc. You must press the 'Use PC keyboard' button every time - immediately before you use the PC keyboard to play the Triton. The same applies to Q 2 W 3 E R 5 T 6 Y 7 U, they are 1 octave higher and map to C2, C#2 etc. The 'PC Keyboard' is polyphonic. So, you can play chords. By the way the polyphony depends on your PC. My Pentium 2 - 400mhz can play 4 notes at once. My ancient laptop only two notes at once.

The pitch of note Z can be set using the 'note on' control button at the top left-hand side of the form.

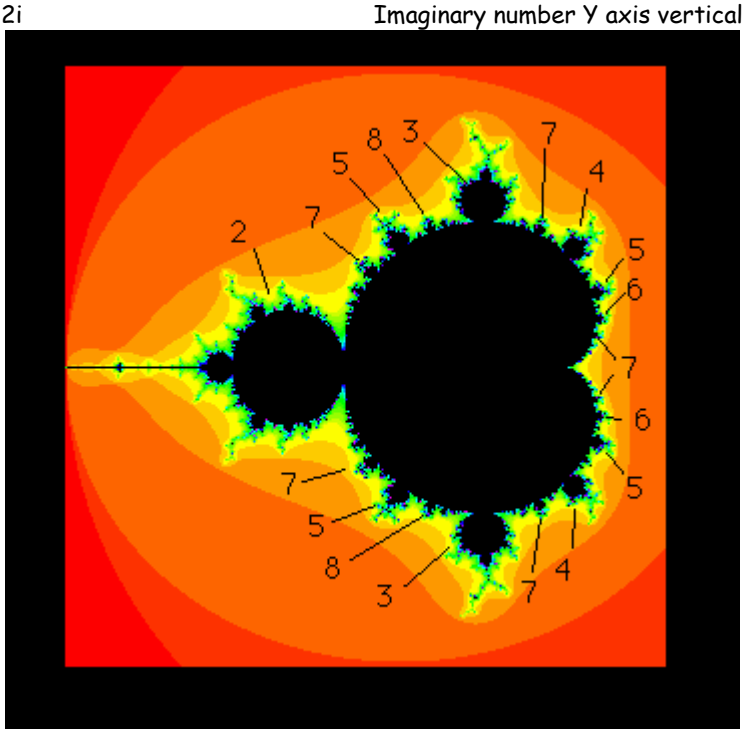
FRACTAL SEQUENCER – THE MANDELBROT SET

Go to Composer window. Fractal Sequencer, button at the bottom left. Note a much-expanded version of this software is available separately on my website.

Fractals use simple equations to generate incredible complexity. In the natural world, complexity is independent of scale. So if you use a microscope to zoom into say a leaf, the complexity does not diminish with magnification! The Mandelbrot set uses a specific equation, X = X^2 + C. This generates a new number based upon a previous number in an iterative process. For certain values of a constant C and 'seed' X0, the number sequence will not exceed certain limits and it will oscillate or 'orbit' around a value. Thus, it is possible to generate a sequence of notes using the output from the generator. The constant value generally needs to be between -2 and + 2 otherwise the sequence will diverge to infinity and so the constant will not form part of the Mandelbrot set. In fact, the full Mandelbrot set exists in complex number space and the 'constant' values which do not diverge to infinity lie in a complex pattern (the black area in the picture above) within the bounds of a circle +-2 and +-2i where (i is sqr rot of -1, an imaginary number). This is the Mandelbrot Set. NB. *The sequencer engine is designed to allow sequences to be generated from inside and outside the Mandelbrot Set.*

The Mandelbrot Set depicted in a picture.

2i Imaginary number Y axis vertical



-2i

-2 0 2

Real number X axis -----→

A Stunning representation of the infinitely complex Mandelbrot set – the black area. Numbers refer to periodicity in the primary bulbs discussed in the text below. The set exists in a parametric plane as X = 0.

So how does it relate to a musical sequencer? Well consider the infinite non divergent series, output from the iteration x =x^2 + C. The series could represent midi note values, note timings

and lengths ! Think of each point in the black area as a single sequence. As there are an infinite number of points, there are an infinite number of sequences.

To operate click anywhere in the image – this will prime the software with the real and imaginary number for generating the sequence of notes!

As described above, the sequencer does not produce random notes, but notes which are related to their predecessor and so forth using the Mandelbrot equation. This produces sequences which are very close to human composition. For a given constant value, a given sequence will result. However, as there are an infinite number of constant values there are an infinite number of sequences. Very slight difference will result in different sequences, so -1.900000 will be different to -1.899999 although the difference will not become apparent until several, if not many, notes (iterations) into the sequence. As the program variables are single precision the user will not run out of sequences in a hurry! Trial and error is the best way to get started, try values for constants between -1.9 and +0.2. Going beyond +-2.0 or +- 2i will result in divergent data. The software will trap this. You can easily select values by clicking on the large image of the Mandelbrot set which automatically appears when the Mandelbrot Sequencer is selected.

Constraining the note values to scales will result in some interesting melodies, and remember to allow 1000 notes to enable the sequence to develop properly. The Fractal sequencer can generate 100,000 notes; more could be easily added if users want. Cutting it short can often miss some interesting sequences. Similarly constraining note length and note interval can make the music appear more natural. The sequence is saved in an array and the user can choose to play back just a section once the sequence is generated.

Once you've found something interesting, use the synth or another midi sequencer to record the sequence permanently in midi. Some of the most interesting sequences result in series which converge or oscillate between values. A constant of -1.9 will not do this but -1.75 will. For very surreal music do not constrain the sequence at all. Pick a pad sound like the Korg combination bank D Antarctica. Constants which result in chaotic sequences can often lead to incredible melodies, but remember they may occur just once in a sequence of 50,000 notes !

Tip…Good speakers will enable the very low frequencies to be heard and felt. Also keep the volume at low levels until you are familiar with the sequencer. Im happy to add features if users want them added. To stop the sequence just press 'Stop All Notes Off' button.

RECORDING SEQUENCES

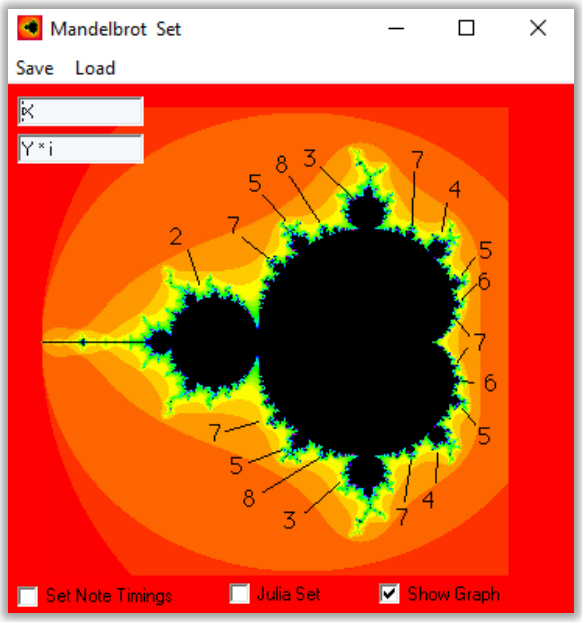
When you get to a section you like you can play just that section back. Record the note number so you can play that section back again and possibly record on the midi sequencer/editor on the synth or directly into a midi/audio PC sequencer/editor like Bitwig, Cubase or Cakewalk or Reaper. To do the latter you can use 'Loop Midi' a freeware application to enable internal routing of midi out from TC, to midi in on the software sequencer. You can also play Vst, Dxi instruments in the sequencer. Try this as you get some astonishing compositions.

DETAILED INSTRUCTIONS.

The main fractal sequencer section is shown below. *The easiest way to start is just click on the large picture of the Mandelbrot set on the pop-up form (image below). Where you click will be recorded by a small white circle. This automatically transfers the X and y values to the sequence engine and starts playing the sequence. Try clicking first around the sharp 'spike' on the left of the black bulbs – where there is a white circle in the orange area of the image below.*

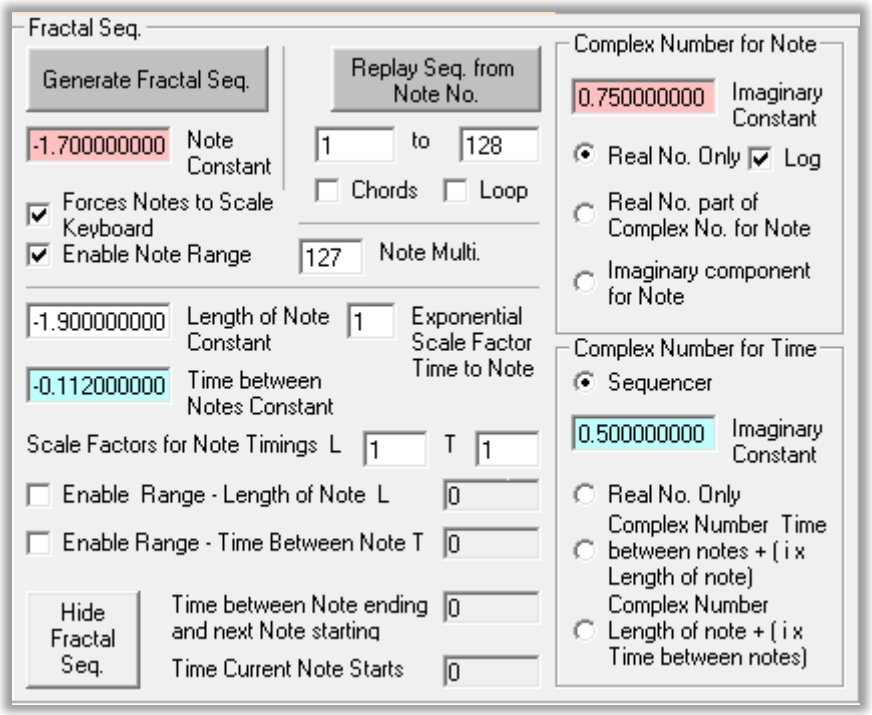
Clicking on the picture sets values for Note Constant and Imaginary Constant. You can see the X and Y values in the two text boxes and on the form below. Check the box if you want to control note separation timings instead of note values. If you check the 'set note timings' box it sets the Time between Note Constant and imaginary Constant. Clicking the Julia Set check box changes Julia Set values instead.

If you click the 'Save' menu item, the Mandelbrot sequencer settings file will appear in the PCG Reader File Viewer window. Pressing Load will load all of the settings back to the sequencer and will mark the location of the constants by a slightly bigger circle. This is handy for temporary storage of a sequence.



1. If you want to permanently save a sequence, just use the PCG reader – file / save as menu item – and save as a text file (txt).
2. To recall a previously saved file. Just go to PCG reader – open the file, you saved earlier, and then when it appears in the file viewer return to the Mandelbrot Set window and press 'Load'. If you want to annotate a file, just add text after the very last comma in the file viewer. You can add as much text as you like.

The Fractal Sequencer Engine settings controls are shown below.

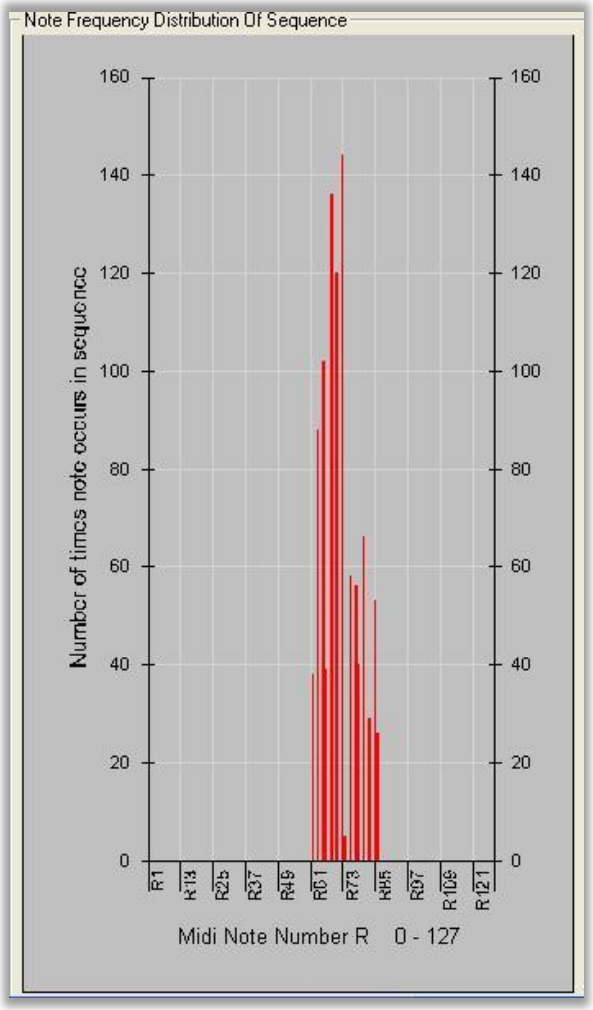


NB. The midi note value generated by the software is constrained between 0 and 127 to prevent Midi errors and are reported in the 'Current Note' box.

This form can be toggled on and off. Generating Notes - The 'Note Constant' value if kept within the Mandelbrot set will determine the nature of the sequence about an orbit with a seed 0 and produce interesting sequences. The user can force the sequence to a note range (by checking the box – Enable note range). This fixes the note range as specified in the orange area in the picture above. The note multiplier changes the spread of the notes generated in the note range. 0 narrow spread, 127 wide spread. The user can also force the generated notes to a scale (Check box 'forces note to scale keyboard') which makes the melodies very 'human'. The default is to just use constants comprising real numbers. The user can also select complex numbers by clicking on the radio buttons 'Real No. part' (with log or linear note mapping in Version 7.xx) or 'Imaginary component'. The imaginary constant can be input into the pink box under – complex number for note. Press 'Generate Fractal Seq.' to start and play sequence. Press 'Stop…' button at bottom to stop. Pressing the replay button once you have stopped the sequence will replay the sequence between the notes input into the two boxes below 'Replay Seq. from Note No.' button. If the loop check box is ticked the sequence will repeat until the user presses the 'Stop' button.

Checking 'Chords' enables the features of the random composer – so generated notes produce chords. These can be selected by pressing 'Hide Fractal Seq' and checking the chord boxes as needed. Random chords will alternate between various chord types selected or just check 1 chord. The sliders controlling 'chord arpeggio timing', 'random chord arpeggio' and 'chord shell fuzziness' are also active. Press 'Show Frac Seq' to bring up the window again.

Note Frequency Distribution of Sequence – This graph can be toggled on and off. Some 'note constant' values will converge to a single value (note or timing), others will never converge, others will diverge to infinity and are not part of the Mandelbrot set. Try it and see ! Divergence to infinity will be safely error trapped by the software. You can see how many times a note occurs in a sequence by pressing the 'Show Note Distribution Graph' button. See example below. So if middle C (midi note 60) occurs 40 times, the bar in the graph will be 40 units high in the Y axis. The vertical grid separation is set an octave interval.



Some examples - The effect of the value of the 'real number only' constant c with the imaginary number = 0. The user can enter this in the text box Note Constant (pink background),. Set radio button to 'real number only'.

C = -0.65	Tends to a fixed value
C = -1.6	chaotic
C = -1.75	period of 3
C = -1.8	chaotic near a 3 cycle – intermittent
C = -1.85	chaotic
C = 0.2	tends to a fixed value

Note Timings – In my experience pure random timings are more for experimental music. So from version 7.xx you can input timings in the purple sequencer section and force the fractal sequencer to use them which produces very human compositions as the timing is controlled is much more familiar and the note sequences have more 'reality'. You can save them too using the save command on the Mandelbrot form. If the rhythm has a value of 0 then the sequence length before it loops is up to the zero. So if the 7th note is 0 the sequence will be 6 notes long.

As stated earlier, this sequencer uses the Mandelbrot equation with an orbit of 0 to define note timings and lengths as well. The 3 boxes below the 'Generate Fractal Seq.' button provide the value of the constant for note number, note on time and note duration. (Keep these between +-2, see some suggested values above) The current note time started and length are shown at the bottom. The 2 boxes below and to the right of the constant boxes enable the user to scale the tempo. Default scale is 1. For instance, 2 means that either the note on time or note length derived from the equation is doubled respectively.

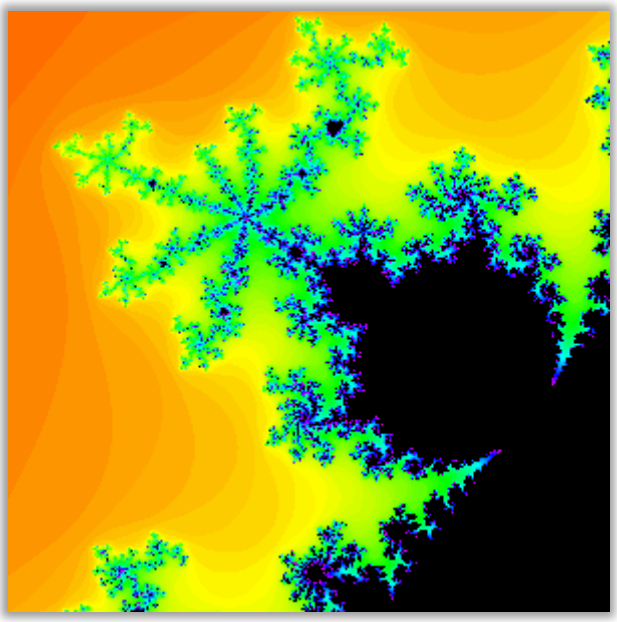
The check boxes constrain the Fractal generator to the values defined in the 6 boxes above the fractal frame (in Orange Background) – Note value, note on range and note off range. The scale factor can apply to the range value afterwards. For note on time – a factor of > 1 will result in an exponentially increasing note separation. Any value between 0.5 and 1 will gradually reduce the note separation over time.

Imaginary Numbers and the square root of -1!

This implementation also allows the user to specify the imaginary part of the complex number. The pink and blue coloured text box to the right of the real number text box. This fully represents the Mandelbrot space. Some suggested constants that produce repetitive sequences are shown below:

Real constant Note Constant or Time constant	Imaginary constant * i Can represent Notes or Time as well	Periodicity
-0.12	+0.75	3
-0.5	+0.56	5
+0.28	+0.54	4
+0.38	+0.333	5
-0.62	+0.43	7
-0.36	+0.62	8
-0.67	+0.34	9
+0.39	+0.22	6

The period means that these constants will result in repetitive values and correspond to the Mandelbrot diagram as these occur at 'Bulbs' on the diagram with the same number of 'antenna' ! These are numbered on the image above. Picking complex numbers in these primary bulbs will result in the periods described above. The two frames headed complex values allow the imaginary part of the constant to be input. Remember, the constant $|c| < 2$ otherwise you will definitely get divergent data!



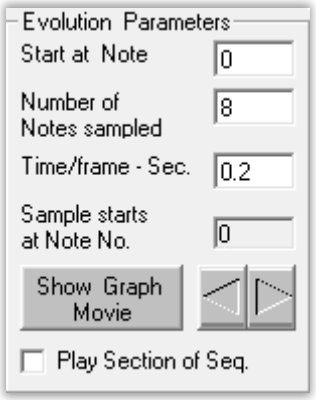
The beauty of an infinitely detailed object. A close up of bulb 7 with an attached antenna comprising 7 radiating extensions – Complex numbers with values in the big black primary bulb to the lower right will yield a periodicity of 7! Constant c = -0.62 + 0.43i

To close the sequencer press 'Hide Fractal Seq.' This will remove the frame and show underlying controls.

Try experimenting with values and instrument sounds – it is definitely worth the time and effort. What you hear is the audio equivalent of the Mandelbrot set with note value and note timing representing the 2 dimensions of the Mandelbrot plane.

EVOLUTION GRAPH SERIES

Imagine you have generated a series containing say 1000 notes. How does the note series develop? Does it converge to 1 note, stay chaotic or become periodic? How do the melodic patterns develop with time? By sampling a 'frame' every few notes it's possible to see on a graph how the distribution of notes changes with time. This can be presented in the form of a movie. So graph 1 (frame 1) shows the first 8 notes, graph 2 (frame 2) the next 8 notes and so on…



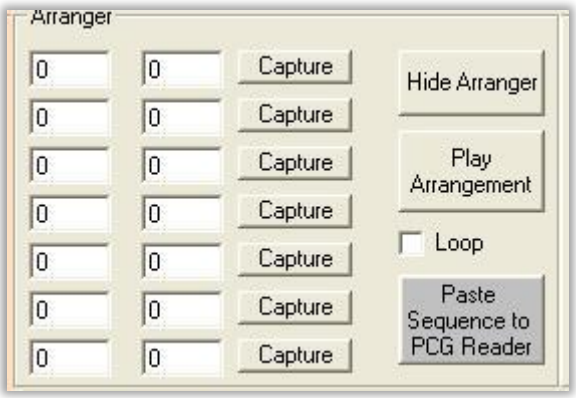
The Evolution parameter box allows the user to specify the note number in the sequence the movie starts, the number of notes sampled every frame and the length at which each frame (graph) lasts. Press the 'Show Evolution Graph' button to begin once you have generated a sequence. To stop the movie just press 'Stop All Notes Off' button at the bottom of the window.

You can also move a frame at a time forward and backwards by using the two arrow buttons. You can again specify the 'start at note' number and the number of notes sampled. If the 'Play selection of seq.' box is checked the note series in that frame will sound.

ARRANGER

This form can be toggled on and off. Musical compositions often consist of repeated motifs – short series of notes or phrases. Many tunes are constructed in this manner. The Fractal sequencer produces in 1 sequence many motifs, which are variations created by the iterative nature of fractals. This simple utility enables the short sections selected by the evolution feature to be captured and stitched together. Up to 7 sections can be added. Thus, a complete tune can be produced.

To start, Generate a sequence. Then press the 'Arranger' button at the bottom of the Composer window.



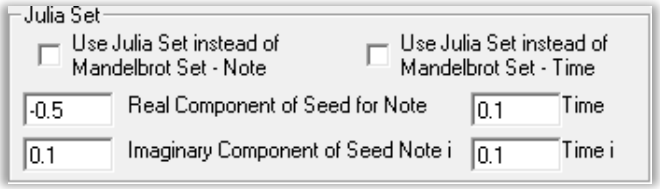
1. Pick a section you like containing a few notes using the Evolution Parameters facility. These notes are Motif 1
2. Go to arranger frame and press the top capture button. The start and end note will be transferred from the evolution frame to the arranger frame.
3. Pick a second section you like using the Evolution Parameters facility. These notes are Motif 2
4. Go to arranger frame and press the second capture button down.
5. Press – 'Play Arrangement' button. The sequence will be played – Motif 1 , then Motif 2.
6. Checking the loop box will play it over and over. Press 'Stop All Notes Off' button to finish.

This process allows a melody to be produced by adding together a series of motifs! NB. A zero 0 in the right-hand column of text boxes in the Arranger window will make the arrangement skip to the next non zero row.

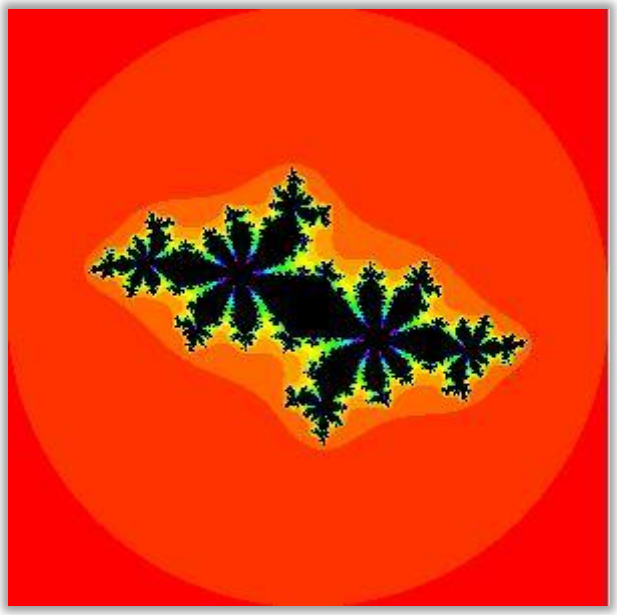
1. The button 'Paste sequence to PCG reader' – to allow notes generated by Fractal Sequencer (not the arrangement but the whole fractal sequence) to be listed in PCG reader file viewer window. Each note is separated by a comma, so you can paste into say excel a comma separated file). Pressing the button fills the 'file viewer' in the PCG reader with the list of midi note numbers separated by commas. Thus 76,74,62 etc.

JULIA SET

This form can be toggled on and off with the Fractal Sequencer Engine. The other major set is the set in the dynamical plane where values of X larger than 0 are used. The Julia Set frame enables the user to specify its use by checking the check boxes – 'Use Julia Set…'. Then both the real and imaginary components of X can be entered in the boxes by the user. Press 'Generate…' button to create the Julia Set for the note series or timings and to start the sequence playing. Keep values in the boxes small (generally less than +-2 (i)) otherwise divergent data will interrupt the series and will be error trapped by the software.



The right-hand side of the box enables Julia Set series to be produced for note timings as well. All the settings in the Julia Set frame are used in conjunction with the Real and Imaginary constant boxes for note and note timings. The fascinating thing about Julia sets are that if the series of x = 0 does not diverge to infinity, (ie. can be used for a sequence), the Julia set will consist of a finite number of connected pieces. If the series does diverge to infinity the Julia Set is a Cantor Set – that is the Julia Set comprises a 'cloud' on unconnected points.



A Julia Set is shown above for c = -0.624 + 0.435i in a period 7 bulb. Notice in this stunning image, the infinite detail that is present in the Julia Set. At each node 7 pieces join! Values of X are real in the x axis and imaginary in the Y axis with 0 in the centre. Thus, X needs to have values in the black area to produce non divergent data. X = 0.1 + 0.1i would work. A non-divergent series (ie. in the black area) will always turn into to a repeating 7 note motif. Try it out, set the constants and set the middle note radio button so you use a complex note expression.

FINALLY

Remember there are some controls are not available by using MIDI such as sampling and control of other global parameters.! If someone knows differently, please let me know. My website details are at the bottom of the page – the web site contains updates from time to time so keep checking the documentation etc. for updates. It also has my e-mail address,

REVISION HISTORY

VERSION 7.6 9th February 2024

1. Updated these docs.
2. Improvements to the startup position of the forms for modern monitors running at HD resolution.
3. Change 'Find' button routine in PCG reader and search Multisamples to being case insensitive. if you search for a program or sample name it is case insensitive. So, if you search for 'Piano' it will return 'Piano' and 'piano' names.
4. Fixed a bug in copy and paste Moss programs
5. Fixed a bug in searching for identical programs
6. Added option to search for identical sounds even if their name is different.
7. Improved routine in Compare Source and Destination list boxes in second librarian window.
8. The software can now be fully controlled from an iPad or iPhone or any device such as an Android device running Microsoft Desktop.
9. Improved the search facility in the 'File Viewer'.
10. Fixed bug where part of the Composer/Arranger was obscured.
11. Improved change name routing for PCG and Master PCG programs.
12. Improvement to the logic of the Fractal Sequencer section and fixed a bug where some controls were hidden.
13. Added ability to request and load Global Data dumps.
14. You can now edit Global data from PCG files and send back to the Triton.
15. You can also save Midi Dumps as a back-up. Then send them back at a later date to the Triton.

VERSION 7.5 4th February 2024

1. Added error trapping on Arp form /\-*I operators*.
2. Updated these docs.
3. Updated program background for modern 16:9 monitors.
4. Help and Tutorial files are now opened in the PC's default web browser rather than IE internet explorer which is being withdrawn by Microsoft. The files are either opened from my website for the latest version or a copy of them are installed in the installation folder with the full setup.exe installer. The user is asked choose which version each time the help or tutorial pdf is opened.
5. Demo version is now based on this release.

VERSION 7.4 2nd June 2022

1. Added the method for connecting a PC running Triton Controller to a Mac computer if that is your studio computer. RPTMidi.
2. Added the ability to import midi dumps from midi filers such as Miditoolbox or Midi-Ox and set controls in software for Progs (incl Moss), Combis and Arps.
3. Added the ability to request Midi dumps from the software.
4. Added ability to insert a Midi dump in a PGC file in the software. No need for floppy disks or other media.
5. Various bug fixes.

VERSION 7.3 30 March 2021 - 2022

1. Various bug fixes

VERSION 7.0 TO 7.2 30th March 2021

1. Improved and modernised interface for Windows 10/11
2. Vastly improved operation of fractal sequencer – added linear mapping to 'real number', ability to define rhythm from sequencer, ability to define random chord types.
3. Bug fixes

VERSION 5.13 – 2nd April 2004

1. Triton Extreme – Support for Korgs new synth added.
2. Bug fix in PCG Reader – Moss PCG's – Now lists/pastes Moss programs properly. For all Triton series & Karma.
3. Extra error trapping added.
4. Bug fix for Triton Studio PCG files when loading into Librarian
5. Bug fix for Triton Studio PCG files when creating Master PCG files
6. Improved formatting when transferring 'List Box' contents to 'File Viewer'.
7. Bug fix for Karma and LE when displaying – Combinations Dependent on Current Program – The correct Combinations are now listed.

VERSION 5.12 – 6th December 2003

1. New graphical interface for the Mandelbrot Set. Just click on the picture of the Mandelbrot Set to select values for X and Y and create new sequences rapidly. The value chosen will be marked by a small white circle on the picture of the Mandelbrot set and the sequence will begin playing. This is a quick way to try different real and imaginary constants for both note values and not timings. Also works for Julia Sets as well.
2. Improved Mandelbrot Set sequencer engine.
3. Added ability to fill 'file viewer' in PCG reader with note list generated my fractal sequencer. Button added to arranger window on composer form (Fractal sequencer section). 'Paste sequence to PCG reader' – this fills the file viewer with the list of midi note numbers separated by , to create a comma separated file csv. Thus 76,74,62, etc.
4. Added ability to save Mandelbrot Sequencer settings to 'file viewer' as a comma separated file for later recall during the session. Also the ability to save as a text file for a permanent record of the sequencer settings and ability to annotate the file.

VERSION 5.11 – 23rd August 2003

1. Fractal Sequencer – Ability to visualise note series evolution graph – Frame at a time or as a movie.
2. Facility to allow generated notes to produce user defined chords, arpeggios and chord shells on replay.
3. Arranger facility added – This allows motifs to be used from a Fractal Sequence and stitched together into a tune.
4. Bug fix which properly forces note to scale defined on the right hand 'keyboard' on the sequencer window.
5. Right hand 'keyboard' on the sequencer window shows current note being played.
6. Added ability to quantise notes – specify time in seconds.
7. User can vary probability of notes sounding outside of note range defined on right hand 'keyboard' on the sequencer window. If the slider is at 0 only notes defined will sound. If slider = 1 then any note will sound.
8. The user can now utilise the Julia Set as well and specify both real and imaginary seed values for both notes and timings.

9. Auditioning of Moss files using PCG reader now allows a small delay to enable Moss Board to reconfigure when program changes.
10. Improved second librarian window can now display large triton studio PCG files properly and edit expansion board PCG files.

VERSION 5.10 – 14th MAY 2003

1. All models - Major new feature added in the Composer Section – Ability to generate sequences using Fractals. This provides the ability to use Mandelbrot equation to control note timings as well as note number and produces 'human' like compositions.
2. Update for Triton Studio –Librarian now displays complete bank description for programs and combinations when opening a Triton Studio PCG file. So for instance, program banks appear as I-A to I-E for Internal multisample programs and E-A to E-G for External sample programs. Moss is still accessed via separate button – bank I-F.
3. Update for Karma users only – New Feature - ability to Merge Combinations Generated Effects. GE's. So you can easily create new GE's by merging existing ones !
4. Update for Karma users – New Feature - 'Randomise GE' button added at Combination Play mode. Press button to randomise GE's on any or all of the 4 karma modules or input values manually. You can also auto addition GE's and control the frequency at which they change. Tooltips added to help user – tip appears when cursor hovers over feature.
5. Update for Karma users – New Feature - 'Randomise GE' button added at Program Play mode. Press button to randomise GE on the Karma module or input values manually. Works for both PCM and Moss programs. You can also auto addition GE's and control the frequency at which they change. Tooltips added to help user – tip appears when cursor hovers over feature.
6. Update for Karma Users – Bug fix to allow Combination Banks E and F to be displayed properly.

VERSION 5.05 – 19th April 2003

7. Update for all Models - Bug fix and error trap to stop program crashing if incorrect values entered in sysex manual entry for all T.C. pages.
8. Update for Karma users with the Moss board installed. Users can now Load and Write to Bank F in Combination Edit mode.
9. Update for Triton Studio Users who can now Load and also Write to Banks Ext A-G in Program Play window.
10. Update for Triton Studio – Bug fix so that Librarian functions work properly when a T.S. PCG file is opened.
11. New button added to main form to enable the Tutorial to be displayed within the program Customers will be sent the Tutorial. Ssave as Tutorial.pdf and place it in your program installation directory (same directory as triton.exe file) – same procedure as for the help file.

Version 5.04 – 19th March 2003

1. Update specifically for Karma users with the Moss board installed. Karma users can now control all of the features of the optional Moss board and also preset the T.C. software's Moss controls on the PC when opening a PCG file containing Moss data. Thanks to Hermanto for testing.

Version 5.03 – 20th January 2003

1. Update specifically for Karma users who can now access all program banks – only 4 were available before.

Version 5.02 January 2003

1. Ability to access Korg PCM Expansion Boards multisamples.
2. Multi Samples listed by name.
3. The software now works on older PC's or laptops with a maximum screen resolution of 800x600 pixels.

Version 5.01 January 2003

Program now has the ability to read PCG files properly for Triton Studio and Rack when there are more than 5 program banks, 4 combination banks and 4 drum kits. Multi bank Arps and drum kits now also read properly.

1. PCG Reader can now display the full 12 program and combination banks – display modified. Banks Z-6 to Z- 12 for Programs refer to Triton Studio/Rack EXB banks E-A to E-G and Banks Z-5 to Z-12 for Combinations refer to Triton Studio/Rack EXB banks E-A to E-F. These are extra banks for EXB loaded synths. For other synths these banks remain at 0 programs each.
2. Triton Controller can now pick up settings (ie. Preset its controls) from a PCG for:- Combination Play, Combination Edit, Program Play, Program Edit, Moss Edit and Arps. (Not karma or LE)
3. Ability to pick up Effect settings (ie. Preset T.C. controls) from a PCG for ALL models except LE.
4. Ability to Merge - Programs, Combinations, drumkits and Arpeggios. Create brand new sounds by merging existing ones. Now with the ability to select width 'x' of Merge (program, combination etc). Previously x was fixed at 1. The value of x can be input in the text box lower left – "First x Char./Merge Width". Preset at 1 at program load.
5. Auto Merge – Software automatically cycles through all possible merge widths. User can stop when a sound is liked and it can then be stored. User can restart at any point and can vary the note on time. This is a very rapid way of generating totally new sounds !
6. Auto Random – generate new Programs, Combinations, Drum Kits & Arps using existing PCG data as a seed.
7. Ability to take Highest, Average or Lowest byte value from programs/combinations selected by merge to generate yet more programs/combinations!
8. Automatic auditioning of PCG by software. Sit back and listen to the programs/combis etc. 1 by 1 !
9. The software now has full support for the Triton Studio & Karma Synthesizer (with Operating System Ver. 2.0 or higher loaded) (NB. Karma O.S. 1.6 or earlier will NOT work). *Thanks to Laughing Bear for all of his support.*
10. Composer now works properly when notes are played rapidly – improvement in midi code.
11. Ability to audition Karma PCG (OS 2.0 format only) – Programs (PCM and Moss), Combinations and Drum Kits. The audition features are now more refined.
12. Full Librarian functionality added for Triton Studio & Karma.
13. Renaming function in Librarian routine improved.
14. Ability to immediately Audition Sound when program of a PCG selected in Program List Viewer.
15. Play note button added so you can re-audtion sound
16. Mode changes automatically when used in Librarian mode with 'Send Data to Triton' check box checked. This feature was a popular request !
17. Category of program/combination now reported correctly for Karma.
18. 'Transfer List To Viewer' in Edit Menu and 'Combinations Dependent on Current Program' in tools menu – both in Librarian – have had their Formatting improved (Tabs added) so that exports to excel and word etc. are properly formatted,
19. Individual Help for each window – opens internet explorer window and loads help at relevant page. Context sensitive.
20. Ability to toggle PC Midi Port On/Off – this also flushes the midi buffer.
21. Ability to set midi channel for each program in a combination – combination play mode.
22. A lot of Bug Fixes – too numerous to mention ! Thanks to all of the testers ☺

Earlier versions

Release Version 1.5 - 18th May 2001 - included completed MOSS implementation:-

Icons added to the main tool Bar. New yellow Triton Icon for the Software.

Compiled using the very latest 32 bit Microsoft software.

Release Version 1.6 - 27th May 2001 - includes completed PCM Program Edit implementation:-

Bug fix in Moss to stop program crashing if you use the wrong randomise button in the Ring\Cross\Sync mod form. The problem was if you choose say 'ring mod osc' but pressed the 'sync mod' randomise button – Program crashed – now fixed with buttons disabled which cannot be used! Thanks Nightshadow!

Automatic switch to Bank F \ prog 0 when Moss Editor selected – now disabled - to avoid loosing edited Moss program if not written to Triton memory first.

This Release Version 1.7 – 1st June 2001 – includes Combination Play and Editing

Includes full control\editing at Combination Play mode. You can control what programs/banks you use, volume, pan etc. You can also write new combinations or existing ones to the Tritons memory.

Combination generator - Randomise function. It generates totally new combinations by the user pressing just one button. You can choose which banks A-gd you use for this!

It will also has a nifty virtual keyboard in the Random Composer section for remotely playing the Triton whilst you edit the sounds on the PC.

A tidier main interface.

A couple of tiny bug fixes

Release Version 1.8 – 8th June 2001 – includes full Combination Editing

Includes full combination editing – New Button Combi Edit added to main toolbar

Some error trapping added where needed.

Version 2.0 – 15th June 2001 – includes full Master and Insert Effect Editing

Auto switch to correct mode if you select effect after edit mode.

You can edit all insert and master effect types, routing and graphic equaliser.

Only some of the effect parameters can be edited at the moment. More to come.

Random Effect Generator

Version 2.01 – 15th October 2001 – several small bug fixes - following reports by users

Version 2.1 - 20th October 2001

PCM Multi Sample database and audition tool added – Find it at PCM Editor Page, Common Parameters, MultiSample button.

Version 2.2 – 28th October 2001

This release provides improved PCM – Multisample search facilities. You can sort alphabetically and by number and reverse sort by clicking the buttons again. Samples which have been auditioned are coloured blue. Text search now collects results together in display – coloured yellow. There is also a 'clear search' button.

Sample Category buttons added.

Drum kit list available when in Common Parameters / PCM edit 'Osc mode = drums' is selected.

Version 2.3 – 5th November 2001

Drum Kit edit button activated. Ability to edit Drum Kits, audition samples, control all parameters.

Version 2.4 – 1st December 2001

The Random Composer section has been expanded. Ability to play random notes/chords to a chord based arpeggio. Also ability to enter user based scales and a wide selection of standard scales. Randomise of volume added.

The Install Wizard has been modified so that the full program is always placed into c:\program files\triton controller folder by default. Also the Windows - start menu, program, shortcut now works properly.

Version 2.5 – For 25th December 2001

The Random Composer Section now has a third method of producing music. The user is able to input sequences using the Virtual Keyboard (press 'Record Sequence' button first), or by entering numbers in to the Sequencer (purple area). 16 Notes max. It is then possible for the program to improvise around the sequence. The note number and note on/off time can be chosen. The Note +/- button enables the sequence to be shifted up or down 1 note at a time. The Random Key and fuzziness control changes the key the sequence is played in at random. Pre programmed or random rhythms can be used.

3 presets are included – bottom left yellow section. The pre programmed sequence is from Close Encounters. See how a simple phrase can be used to create the most complex of melodies:

The first preset is for a good grand piano PCG, this improvises Modern Jazz using Pentatonic scale and jazz chords.

The second preset is for monastic voice PCG.

The Third preset is for an atmospheric motion synth sound.

Chord arpeggios – notes of chord in C are displayed in the Scale Keyboard – As requested by DAS.

Ability to Write 'Bank E combinations' for Triton Rack users only – as requested by Rob Wright.

Version 2.6 10th June 2002

Added Random Program buttons for Moss Edit and PCM Edit pages. Randomises Oscillator/Samples plus Cut Off Frequency and Resonance. Totally Automatic program Creation.

Improved Moss Oscillator randomise function for all oscillator types and corrected a few bugs as well with this feature where slider randomisation did not reflect onto the Tritons settings.

Version 3.0 June 28th 2002

Added support for the whole Triton Model series. The program now supports Triton Classic, Rack, LE, Studio and Karma.

Ability to play the Triton from the PC keyboard polyphonically – New Purple Button – On Random Composer /PCM /Moss /Combi /Effects pages.

Version 3.1 June 29th 2002

Triton LE - bugs corrected when switching modes in program – Triton now responds correctly

Changed 'DISK' to 'MEDIA' mode caption for LE

Drum Kit Editor now works for LE – Triton now switches correctly to Global mode

Version 3.2 July 6th 2002

Added full User Arpeggio editing – New button on main form – Global Mode page 6 on Triton.

Effects editing now works with the LE and with the Karma in Combination Edit mode

Reduced download size of installation package by 10% - tidied up code

Improved appearance of program with new background – like the Tritons finish – but easier to keep clean ☺

Model of Triton chosen by user on the 'Midi' form now appears on the the header of the main 'Mode' form

Corrected tooltips values when hovering over tune and delay sliders in PCM edit page

At startup, check boxes ticked in Effects Editor – Insert and Master Effects – on and L/R selected by default

Version 3.3 July 2002

Added invert and negative pattern buttons for Arpeggio.

Added max/min random note values for Random Arpeggio.

Ability to select all 507/327 arp patterns for Studio and Rack (For Terry).

Simple Preset Arp patterns added - / \ ---- |

Ability to initilise the Triton from the PC – ie. Clear arp pattern independently of whats on PC Arp grid.

Tones now sound when they are placed – you can also audition them afterwards and hear the whole step.

Various bug fixes to Arpeggio functions – mainly fixed note mode.

Effect parameter bug fixed for all models.

Version 3.4 July 2002

Loading Midi dumps enabled for Arpeggio's.

Reading PCG's added for All modes. Including sophisticated sorting / searching features. Data can be sent to both the Synth and for Arps, the Triton Controller settings as well.

Version 3.5 6th August 2002

All PCG data now readable for all models – and send able to the Triton! (Karma only Drum Kits).

Librarian Functions Added

Extensive Error trapping added eg. any incorrect PCG file format is identified and cannot be sent to the Triton.

Save option in PCG Reader now saves as plain text so data is not changed to RTF.

Clear All button added to PCG Grid so all text is cleared.

Global settings now identified.

PCG summary option added.

Combination Dependency Check for Programs

Various bug fixes.

Version 3.6 10th September 2002

For programs – the facility to load PCG data to Preset set the Tritons Controllers Controls. (Arp edit, PCM edit, Moss Edit and Program Play mode.)

Ability to assemble Master PCG files – store 10,000 Triton PCM or Moss programs in one file.

Facilities to check for duplicate programs in PCG and Master PCG's.

Initialise and rename programs in master PCG files.

Mark files in colour Program List Box

Now the user can turn a hex file back to binary for saving in a PCG

Compare two PCG or Master PCG files.

Error traps added throughout Librarian Function.

Code in Librarian optimised.

This Help document added to software – viewable with IE 4 or higher. NB. You need to load this Help html file into program installation directory to access via Triton Controller –Normally **C:\program files\triton controller vxx**

Version 4.0 15th December 2002

Interim release with some Karma support for OS 2.0.

SO THAT'S IT?

Thank you for purchasing or trying the Triton Controller.

CONDITIONS OF USE

The software is only available by purchasing a license. Any updates will be provided free for 12 months from the date of purchase. Feedback and a wish list for additional functions are always welcome, together with suggestions for improving the documentation! My web site contains a demo version with various features disabled. The condition of use of the demo version is that you may use it for up to 2 weeks for assessment, but you must then remove it from your PC. To obtain the full version just e-mail me at stuartpryer@gmail.com for details.

NB. People use this software at their own risk!

Have fun!!!!

Stuart

SPECIAL THANKS

I would like to thank Korg for making such great synthesizers. Especially Jerry and Dan at Korg USA and Rob and Alan at Korg UK for their support. I also thank the countless beta testers who have helped along the way.

RECOMMENDED BOOKS

- The Triton Documentation – User Manual, Parameter Manual, Moss Manual and Midi Implementation
- MIDI for the professional – Paul D Lehermann
- Vintage Synthesizers – Mark Vail
- The Synthesizer – Mark Vail

LINKS TO USEFULL WEB SITES

1. My site http://www.Stuartpryer.co.uk – For Fractal Sequencer, Roland RD2000 stage piano editor, VSTs and a lot more.
2. Great sites for Korg updates etc. Korg UK – http://www.korg.co.uk
3. Korg USA http://www.korg.com
4. Check out the sound visualisation features of Winamp – http://www.Winamp.com Literally see your music on the screen!
5. For a great Korg Forum goto - 'Irish Acts'. http://www.Irishacts.com ,
6. For Stephen Kay's 'Karma Labs website' and details of MW software for the karma http://www.karma-lab.com
7. For a great Midi utility try Midi Ox at http://www.midiox.com/ this also has scripting facilities. For a Mac I use Midi Monitor.
8. Facebook user groups
9. rtpMidi = for connecting a PC to a Mac rtpMIDI | Tobias Erichsen (tobias-erichsen.de)

INDEX

BACK COVER