

INDEX

INTRODUCTION...	(Page2)
OVERVIEW...	(Page2)
HOW IT WORKS...	(Page2)
FIRST THINGS FIRST...	(Page2)
PC...	(Page2)
RawWrite for Windows...	(Page2)
Mac...	(Page2)
ARP...	(Page3)
FUNCTIONS...	(Page3)
Enabled...	(Page3)
Off/On...	(Page3)
Mode...	(Page3)
Up...	(Page3)
Down...	(Page3)
Up/Down...	(Page3)
Range...	(Page3)
1 octave...	(Page3)
2 octaves...	(Page3)
3 octaves...	(Page3)
4 octaves...	(Page3)
Speed...	(Page3)
1bar, 1/2bar, 1/3bar, 1/4bar...	(Page3)
1/6bar, 1/8bar, 1/12bar, 1/16bar...	(Page3)
1/24bar, 1/32bar, 1/48bar, 1/64Bar...	(Page3)
Doubler...	(Page4)
Off/On (1-12) ...	(Page4)
Track...	(Page4)
Off/On (1-16) ...	(Page4)
Track Routing Display...	(Page4)
Latch...	(Page5)
Off/On...	(Page5)
Pulse...	(Page5)
Off/On...	(Page5)
Desync...	(Page5)
Off/On...	(Page5)
Wait...	(Page5)
Off/On...	(Page5)

GeneralMusic S-Series Arpeggiator

INTRODUCTION

Thank you for purchasing the 1st SynthTools User Program release for Gem S-Series developed using the libmios library for Generalmusic MIOS development.

This new exciting User Program has all the functionality of a traditional arpeggiator and a few extras to allow for different types of performances.

OVERVIEW

The Arpeggiator User Program is loaded into the EDIT SECTION, edit environment of the S2/S3/S2R and from here you can access all of its functionality via the OPTION button.

Only one arpeggiator can be loaded into memory, but all 16 tracks can be controlled allowing for any type of performance single, layer, split or multi.

Up to 6 different arpeggiator setups can be stored in its own clipboard and saved as a single setup, option 4 (clipboard), and used for quick loading for different performances. For more information on Clipboards and how to use them (see the S-Series user manual).

REMEMBER

The Arpeggiator is a User Program and not a part of the original design of the S-Series keyboards. Due to this it cannot be saved within a sound or a performance and should be considered as a separate element that interacts with the selected performance and or transmitted over MIDI to control external hardware.

HOW IT WORKS

The Arpeggiator reads MIDI data transmitted from any of the available Sources and outputs the modified MIDI data to any of the Destinations (see the gem manual for Sources/Destinations). This enables the S-Series to arpeggiate its own Sounds or become a MIDI arpeggiator for any of your existing devices in a live situation.

FIRST THINGS FIRST

The Arp User Program is supplied as an image file (arp.img) this file needs to be copied to the required media for your device (Floppy disk or Emulator flash drive).

Emulator users can simply copy the (Arp.img) file from your computer (PC/Mac), to your specific type of flash drive and then selected and mounted as listed in your emulator manual.

Floppy disk users you will need to use a 3rd party software application to copy the supplied (Arp.img) from your computer (PC/Mac) to a floppy disk drive. Modern computers are not fitted with floppy disk drives, so you will need to use a USB floppy drive.

PC

For PC's we recommend the 3rd party application RawWrite for Windows, it is a freeware utility so can be downloaded via our link or the author's website, if you do not already have a copy. Please download and unzip the contents, the program does not need installing as it runs from the unzip location; this is also the location it puts any image files you may create later. Then put a blank disk into the floppy disk drive and make sure it is connected to the USB port if it's a USB drive, then run rawwritewin.exe, make sure the write tab is selected, locate the Arp file Arp.img and click Write. Once the image has been copied to a floppy disk you can load the Arp User Program as outline in the S-Series user manual, (DISK, Load user program).

RawWrite for Windows

<http://www.chrysocome.net/rawwrite>

Mac

On a Mac you need to use the scripting tools but if you are not 100% sure of what you are doing! We recommend using a PC. Keep an eye on our website as this may change.

ARP

Once you have loaded the Arp User Application, all functionality will be found by pressing the EDIT SECTION, OPTION button on your S2/S3 or S2R.



FUNCTIONS

There are ten different functions within the arpeggiator as follows. The first six are selected using the DATA ENTRY SECTION of the S-Series and the other four with the MULTI FUNCTION BUTTONS.

1 Enabled

Turns the Arpeggiator On/Off

2 Mode

Up

Notes arpeggiate from the lowest note to the highest note, a rising scale.

Down

Notes arpeggiate from the highest note to the lowest note, a descending scale.

Up/Down

Notes arpeggiate from lowest to highest, then highest to lowest, rising then descending.

3 Range

1 octave

Only the keys actually played are arpeggiated.

2 octaves

Both the actual keys played and the corresponding notes that are an octave higher will be arpeggiated. Notes that exceed the range will not be played.

3 octaves

Both the actual keys played and the corresponding notes one and two octaves higher will be arpeggiated. Notes that exceed the range will not be played.

4 octaves

Both the actual keys played and the corresponding notes one, two and three octaves higher will be arpeggiated. Notes that exceed the range will not be played.

Remember:- The arpeggiator has a key range of 0-110 (C0 to D8), keys beyond this range will not be included in the arpeggiation. Some sample based sounds may not play correctly across the range.

4 Speed

The arpeggiator has twelve different speed values, all governed by the current clock settings.

1bar, 1/2bar, 1/3bar, 1/4bar, 1/6bar, 1/8bar, 1/12bar, 1/16bar, 1/24bar, 1/32bar, 1/48bar, 1/64Bar.

To change the current clock settings (BPM, internal/external), press the CLOCK button and make the appropriate changes. For more information on clock settings, see the gem user manual.

When the clock is set to internal, the arpeggiator will synchronize to itself, but if the internal sequencer is running the arpeggiator will synchronize to that. If you want the arpeggiator to synchronize to an external sequencer, simply select external and then follow your sequencers instructions for transmitting MIDI clock.

5 Doubler

Off/On (1-12)

Any Key depressed will be duplicated with a 2nd simultaneous note; the tuning of this additional note can be adjusted from 1-12 semitones above the original. A two note chord is sometimes referred to as a dyad or a partial chord, and some values will sound more discordant than others.

6 Track

On/Off [1-16]

Each of the 16 tracks can be routed through the arpeggiator or not, (On=Arpeggiated, Off=Normal). Switching tracks on/off allows for complex multi sound layering with some tracks arpeggiating whilst others don't. At default all tracks are routed on, if you want to play a track normally, switch the Track router off. The arpeggiator works differently in each of the Track playing modes as follows:

Single

Only 1 Performance track is routed through the arpeggiator at a time.

Split

Both tracks are routed through the arpeggiator in series, the lower track followed by the upper. When in **Mode** "Up/Down" arpeggiation ascends the lower track followed by the upper track, and then descends the upper track followed by the lower. If either track is switched off, only one will be arpeggiated and the other will respond as normal for split performance.

Layer

Both tracks are routed through the arpeggiator in parallel. If either track is switched off, only one will be arpeggiated and the other will respond as normal. This mode allows for harmonized dual arpeggios or live key structures with a harmonized arpeggio.

Multi

All tracks are routed through the arpeggiator in parallel. Any of the tracks can be switched on/off. This mode allows for complex harmonized arpeggios and key structure performances. Remember:- Key polyphony can become an issue in this mode.

Track Routing Display

[♪♪♪♪♪♪♪♪♪♪♪♪♪♪♪♪]

The arpeggio routing status of Tracks 1-16 is visually represented by the sixteen notes, when off the [♪] will be replaced with an [X].

In the following example Tracks 4 and 5 are off, [♪♪♪XX♪♪♪♪♪♪♪♪♪♪]

In this example, if Performance is set to Split or Layer, using the TRACK SELECT KEYS to scroll through the tracks will effect which Track is lower or upper as normal, but because Tracks 4 & 5 are not routed through the Arpeggiator you need to consider how this will affect the Performance.

Remember: - Once you have recorded an arpeggio Track into a sequencer, you will need to switch that track Off, so it is not routed through the arpeggiator again on playback.

The following four Functions are activated using the MULTI FUNCTION BUTTONS, (A,B,C & D).

Latch Off/On

When latch is off (Default), notes are arpeggiated only while the corresponding keys are depressed.

When latch is on, notes are arpeggiated even after the corresponding keys are released.

If you play and release a chord, the notes of the chord will be arpeggiated. If you then play a different chord, the new chord (and only the new chord) will be arpeggiated.

If you play and hold one or more keys, and then play several more keys, all the notes will be arpeggiated, even if some of the keys are released. Additional notes can be added to the arpeggiating pattern, as long as at least one key remains depressed. This way, if you play a chord and hold at least one key down and then play a second chord, both chords will arpeggiate.

To erase an arpeggiating pattern and start a new one, you must release all of the keys and then play one or more new keys.

Pulse Off/On

When Pulse is off (default), the arpeggiator will respond conventionally. When more than one key is played the notes will be arpeggiated, one note played after another in accordance with the settings.

When Pulse is on, the arpeggiator will respond in a nonconventional way. When more than one key is played they will not be arpeggiated, but played simultaneously in a pulse like manner. This way, if you play a chord it will be repeated in accordance with the current settings.

If Mode is set to (Up), and Range is set to (4 Octaves), and you play a chord, the chord itself will be repeated up the 4 octave range instead of a chord arpeggio.

Remember: - The Pulse MIDI on note is the same duration as the MIDI off note this stabbing effect will make the sound seem half as quick as the arpeggiated notes.

Desync

Controls the way in which notes are initialized, and retriggered along the arpeggio.

When Desync is off (default), notes will be initialized to the same state of the current notes, and all retriggering will respond to normal arpeggio conventions.

When Desync is On, notes will be initialized to the default state, and all retriggering will respond to the way keys are pressed. If chords are played, but the keys are pressed slightly lazily or deliberately trilled it will be reflected in the arpeggiation.

Desync is more pronounced when Pulse is switched On.

When Pulse is Off, normal arpeggiation, and Desync is On you will notice that some of the notes played are slightly in front or behind the step pattern, allowing for a slight off beat.

When Pulse is On and Desync is On you will notice that by playing a trilled or staggered chord, it will now sound arpeggiated allowing you to switch between stabbed chords and arpeggiated chords.

Wait

Controls the way that the initial key triggers its corresponding note.

When Wait is Off, the initial note is triggered as the key is pressed.

When Wait is On, the initial note is triggered on the next beat specified by the current Speed value.