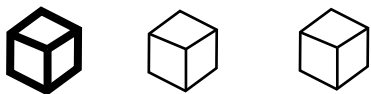
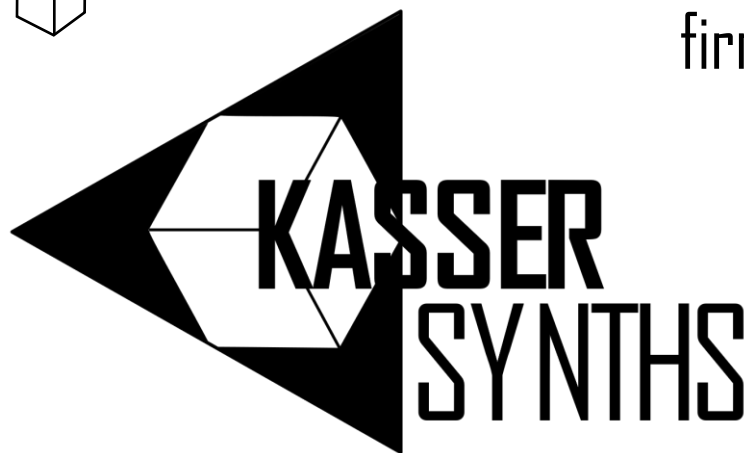


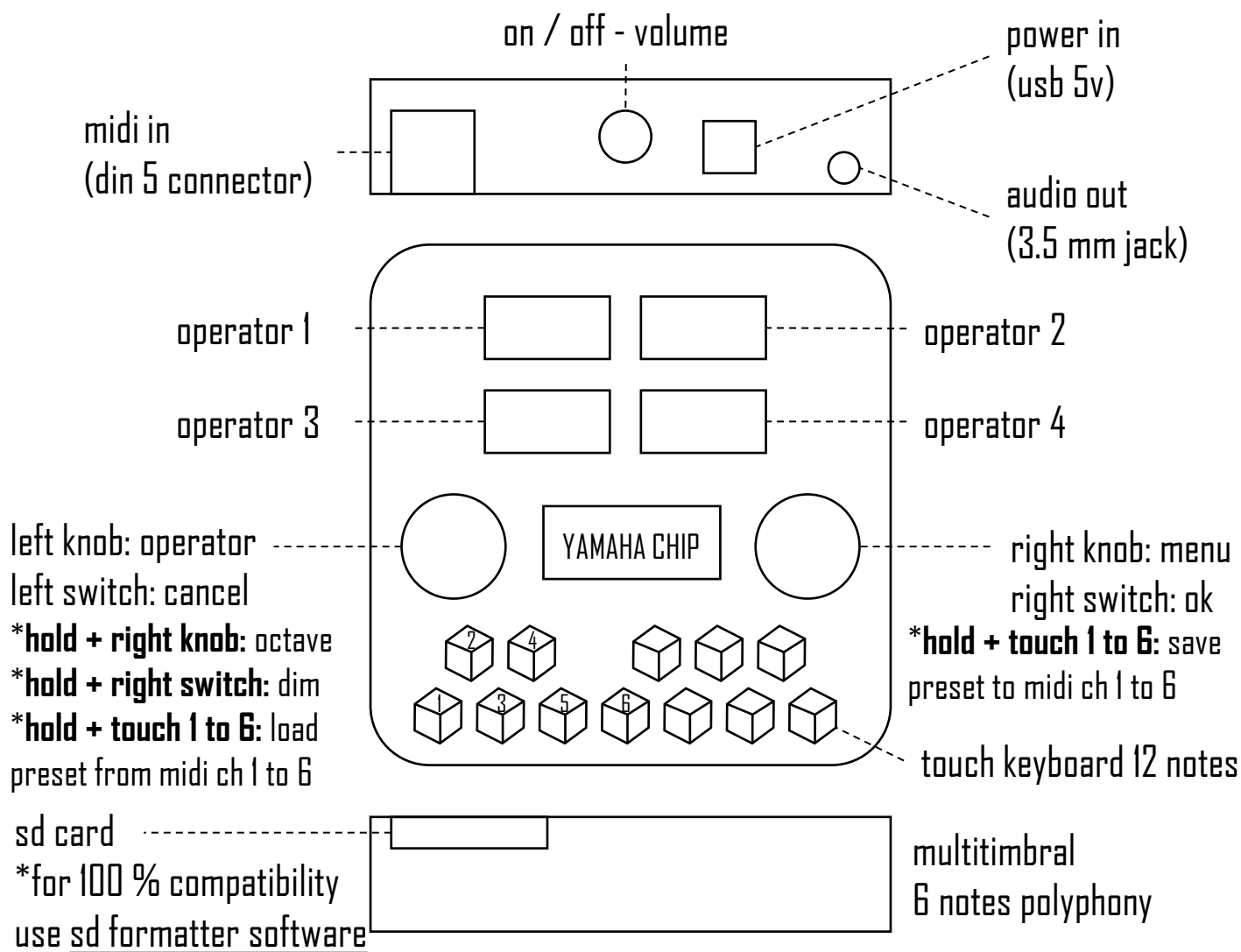
dafm synth  
genesis ym2612 and ym3438



**user quick guide**  
firmware v 1.98



**THANKS** for joining the **DAFM Synth WAVE**



## menu 1 feedback, algorithm & velocity control

### 1.1 feedback left knob

degree of modulation of operator 1 to itself

### 1.1 algorithm right knob

modulators are the operators that modulate the carriers carriers are the operators you can hear

### 1.2 velocity right knob

on/off midi velocity controlled operators

## menu 3 adsr envelope

### 3.1 attack rate left knob

### 3.1 total level right knob

### 3.2 decay rate left knob

### 3.2 secondary total level right knob

### 3.3 secondary decay rate left knob

### 3.3 release rate right knob

### 3.4 rate or key scaling right knob

## menu 5 ssg envelope generator

### 5.1 ssg eg mode on/off left knob

### 5.2 ssg eg type right knob

\*ssg eg mode will loop the adsr envelope in the corresponding operator from attack rate to secondary decay rate (both included)

## menu 2 frequency ratio

### 2.1 frequency multiplier left knob

operator's frequency multiplier

### 2.1 frequency fine detune right knob

fine detune of selected frequency multiplier

\*different frequency ratios between carrier and its modulator will produce different overtones

## menu 4 low frequency oscillator (lfo)

### 4.1 lfo on/off left knob

global for 4 operators

### 4.1 lfo frequency right knob

global for 4 operators

### 4.2 frequency modulation sensitivity right knob

global for 4 operators

### 4.3 amplitude modulation on/off left knob

for every individual operator

### 4.3 amplitude modulation sensitivity right knob

global for 4 operators

## menu 6 fm patches and midi channels

### 6.1 edit midi ch/bank 0 preset selection left knob

### 6.2 save preset in midi ch selection left knob

\*number: midi channel **number**: midi bank 0 preset

\*number on top shows the preset that is being edited

### 6.3 load six presets from sd card to midi channels

\*presets need to be named as patch0x.dmp (x from 1 to 6)

### 6.4 save all six presets from midi ch to sd card

\*presets need to be renamed from patch0x.DMP to patch0x.dmp (x from 1 to 6) to load correctly on Deflemask software



# midi cc implementation chart

## global control

parameter	cc	data range
lfo on/off	74	2
lfo frequency	1	8



## channel voice control

parameter	cc	data range
pitch bend amount	81	12
fm algorithm	14	8
fm feedback	15	8
stereo configuration	77	4
amplitude modulation sensitivity	76	4
frequency modulation sensitivity	75	8

## operator control

parameter	cc	data range
total level op1	16	128
total level op2	17	128
total level op3	18	128
total level op4	19	128
freq multiplier op1	20	16
freq multiplier op2	21	16
freq multiplier op3	22	16
freq multiplier op4	23	16
detune op1	24	7
detune op2	25	7
detune op3	26	7
detune op4	27	7
rate or key scaling op1	39	4
rate or key scaling op2	40	4
rate or key scaling op3	41	4
rate or key scaling op4	42	4

## operator control

parameter	cc	data range
attack rate op1	43	32
attack rate op2	44	32
attack rate op3	45	32
attack rate op4	46	32
decay rate op1	47	32
decay rate op2	48	32
decay rate op3	49	32
decay rate op4	50	32
secondary decay rate op1	51	16
secondary decay rate op2	52	16
secondary decay rate op3	53	16
secondary decay rate op4	54	16
secondary total level op1	55	16
secondary total level op2	56	16
secondary total level op3	57	16
secondary total level op4	58	16

## midi cc implementation chart

### operator control

parameter	cc	data range
release rate op1	<b>59</b>	16
release rate op2	<b>60</b>	16
release rate op3	<b>61</b>	16
release rate op4	<b>62</b>	16
amplitude modulation on/off op1	<b>70</b>	2
amplitude modulation on/off op2	<b>71</b>	2
amplitude modulation on/off op3	<b>72</b>	2
amplitude modulation on/off op4	<b>73</b>	2

### operator control

parameter	cc	data range
ssg eg mode on/off op1	<b>106</b>	2
ssg eg mode on/off op2	<b>107</b>	2
ssg eg mode on/off op3	<b>108</b>	2
ssg eg mode on/off op4	<b>109</b>	2
ssg eg type op1	<b>110</b>	8
ssg eg type op2	<b>111</b>	8
ssg eg type op3	<b>112</b>	8
ssg eg type op4	<b>113</b>	8

## midi bank 0 presets

### videogame

### preset

**sonic the hedgehog** - green hill zone  
**0** : bass  
**1** : melody (CCACBCBG)

**sonic the hedgehog 2** - chemical plant zone  
**2** : horn  
**3** : guitar

**sonic the hedgehog 3** - ice cap city  
**4** : percussive ice pipe  
**5** : bass; **6** : synth

**streets of rage** - keep the groovin'  
**7** : piano  
**8** : brass

**streets of rage 2** - go straight  
**9** : bass  
**10** : organ; **11** : horn

**streets of rage 2** - dreamer  
**12** : bass; **13** : hihat;  
**14** : piano; **15** : dist piano

**toe jam & earl, panic on funkotron** - theme song  
**16** : funk bass  
**17** : pluck bass

**toe jam & earl, panic on funkotron** - mellow groove  
**18** : overdrive guitar  
**19** : wow

### videogame

### preset

**ecco the dolphin** - opening theme  
**20** : pad  
**21** : percussion

**time trax** - title screen, credits  
**22** : pad; **23** : bass  
**24** : dist guitar; **25** : tom  
**26** : snare; **27** : hihat

**thunderforce iv** - lighting strikes again  
**28** : overdrive guitar  
**29** : tom

**thunderforce iv** - metal squad  
**30** : piano

**chakan: the forever man** - intro theme  
**31** : pad 1; **32** : pad 2;  
**33** : pad 3

**dafm synth** - original presets  
**34** : bass; **35** : organ pad;  
**36** : guitar; **37** : brass  
**38** : snare; **39** : tom

## midi bank 1 presets

- bank 1 corresponds to the sd card
- presets have to be saved in the sd card as instrxxx.dmp where xxx goes from 000 to 127
- program change midi messages can load these presets in the midi channel selected
- presets value range is from 0 to 127

