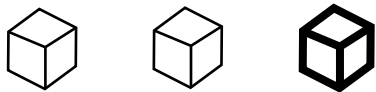


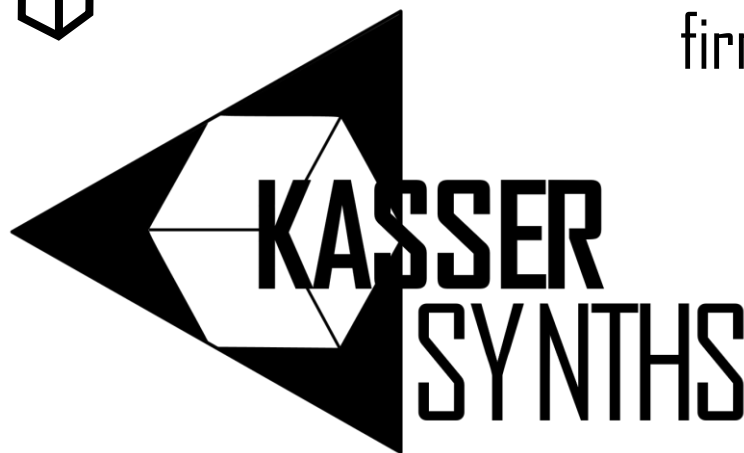
dafm synth

BLASTER ymf262 (opl3)



user quick guide

firmware v 2.00



THANKS for joining the DAFM synth wave

on / off - volume

midi in  
(din 5 connector)

power in  
(usb 5v)

audio out  
(3.5 mm jack)

operator 1

operator 2

operator 3

operator 4

left knob: operator

left switch: cancel

\*hold + right knob: octave

\*hold + right switch: dim

\*hold + touch 1 to 6: load  
preset from midi ch 1 to 6

right knob: menu

right switch: ok

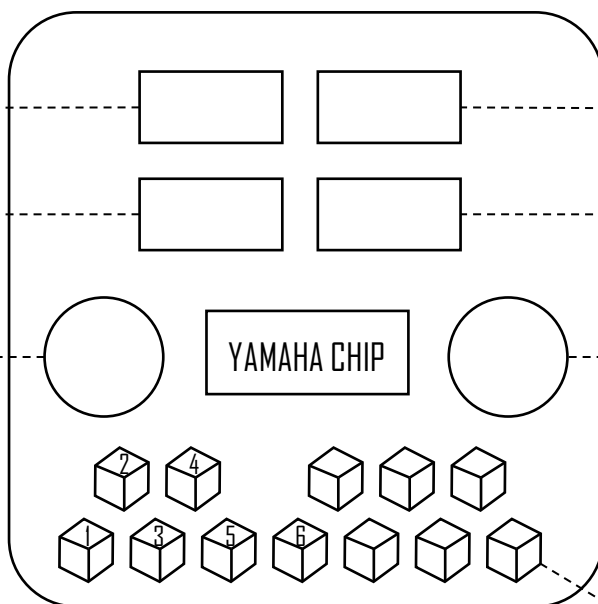
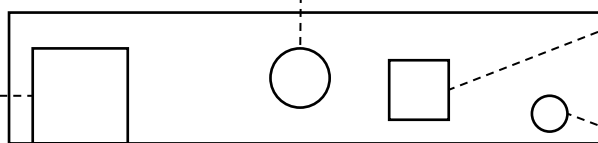
\*hold + touch 1 to 6: save  
preset to midi ch 1 to 6

touch keyboard 12 notes

sd card

\*for 100 % compatibility  
use sd formatter software

multitimbral  
6 notes polyphony



## 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

turn on/off the midi velocity control in each operator

## 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 envelope generator type left knob

### 3.3 release rate right knob

### 3.4 key scale level left knob

### 3.4 key scale rate right knob

## menu 5 operator waveform

### 5.1 operator waveform right knob

for every individual operator

## menu 2 frequency ratio

### 2.1 frequency multiplier right knob

operator's frequency multiplier

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

## menu 4 low frequency oscillator (lfo)

### 4.1 vibrato frequency left knob

global for 4 operators

### 4.1 vibrato on/off right knob

for every individual operator

### 4.2 tremolo frequency left knob

global for 4 operators

### 4.2 tremolo on/off right knob

for every individual operator

## 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 6 presets from sd card to midi channels

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

### 6.4 save all 6 presets from midi channels to sd card



# midi cc implementation chart

## global control

parameter	cc	data range
vibrato depth	28	2
amplitude modulation depth	29	2
keyboard split (NTS)	30	2

## channel voice control

parameter	cc	data range
pitch bend amount	81	12
fm algorithm	14	4
fm feedback	15	8
stereo configuration	77	4



## operator control

parameter	cc	data range
total level op1	16	64
total level op2	17	64
total level op3	18	64
total level op4	19	64
freq multiplier op1	20	16
freq multiplier op2	21	16
freq multiplier op3	22	16
freq multiplier op4	23	16
key scale rate op1	24	2
key scale rate op2	25	2
key scale rate op3	26	2
key scale rate op4	27	2
vibrato on/off op1	82	2
vibrato on/off op2	83	2
vibrato on/off op3	84	2
vibrato on/off op4	85	2

## operator control

parameter	cc	data range
attack rate op1	43	16
attack rate op2	44	16
attack rate op3	45	16
attack rate op4	46	16
decay rate op1	47	16
decay rate op2	48	16
decay rate op3	49	16
decay rate op4	50	16
sustain voice (EGT) op1	51	2
sustain voice (EGT) op2	52	2
sustain voice (EGT) op3	53	2
sustain voice (EGT) op4	54	2
sustain level op1	55	16
sustain level op2	56	16
sustain level op3	57	16
sustain level op4	58	16

# midi cc implementation chart

## operator control

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

## operator control

parameter	cc	data range
key scale level opl	39	4
key scale level op2	40	4
key scale level op3	41	4
key scale level op4	42	4
wave select opl	110	8
wave select op2	111	8
wave select op3	112	8
wave select op4	113	8

## midi bank 0 and bank 1 presets

instrument	preset
<b>piano</b>	0: acoustic grand 1: bright acoustic 2: electric grand 3: honky-tonk 4: electric 1 5: electric 2 6: harpsichord 7: clavinet
<b>chromatic percussion</b>	8: celesta 9: glockenspiel 10: music box 11: vibraphone 12: marimba 13: xylophone 14: tubular bells 15: dulcimer
<b>organ</b>	16: drawbar 17: percussive 18: rock 19: church 20: reed 21: accordion 22: harmonica 23: tango accordion
<b>guitar</b>	24: acoustic (nylon) 25: acoustic (steel) 26: electric (jazz) 27: electric (clean) 28: electric (muted) 29: overdriven 30: distortion 31: harmonics
<b>bass</b>	32: acoustic 33: electric (finger) 34: electric (pick) 35: fretless 36: slap 1 37: slap 2 38: synth 1 39: synth 2
<b>strings</b>	40: violin 41: viola 42: cello 43: contrabass 44: tremolo 45: pizzicato 46: orchestral harp 47: timpani 48: ensemble 1 49: ensemble 2 50: synth 1 51: synth 2 52: choir aahs 53: voice oohs 54: synth voice 55: orchestra hit
<b>brass</b>	56: trumpet 57: trombone 58: tuba 59: muted trumpet 60: french horn 61: brass section 62: synth brass 1 63: synth brass 2
<b>reed</b>	64: soprano sax 65: alto sax 66: tenor sax 67: baritone sax 68: oboe 69: english horn 70: bassoon 71: clarinet

instrument	preset
<b>pipe</b>	72: piccolo 73: flute 74: recorder 75: pan flute 76: blown bottle 77: shakuhachi 78: whistle 79: ocarina
<b>synth lead</b>	80: lead 1 (square) 81: lead 2 (sawtooth) 82: lead 3 (calliope) 83: lead 4 (chiff) 84: lead 5 (charang) 85: lead 6 (voice) 86: lead 7 (fifths) 87: lead 8 (bass + lead)
<b>synth pad</b>	88: pad 1 (new age) 89: pad 2 (warm) 90: pad 3 (polysynth) 91: pad 4 (choir) 92: pad 5 (bowed) 93: pad 6 (metallic) 94: pad 7 (halo) 95: pad 8 (sweep)
<b>synth effects:</b>	96: fx1 (rain) 97: fx2 (soundtrack) 98: fx3 (crystal) 99: fx4 (atmosphere) 100: fx5 (brightness) 101: fx6 (goblins) 102: fx7 (echoes) 103: fx8 (sci-fi)
<b>ethnic</b>	104: sitar 105: banjo 106: shamisen 107: koto 108: kalimba 109: bag pipe 110: fiddle 111: shanai
<b>percussive</b>	112: tinkle bell 113: agogo 114: steel drums 115: woodblock 116: taiko drum 117: melodic tom 118: synth drum
<b>sound effects</b>	119: reverse cymbal 120: guitar fret noise 121: breath noise 122: seashore 123: bird tweet 124: telephone ring 125: helicopter 126: applause 127: gunshot



bank 1 corresponds to the sd card. presets have to be saved in the sd card as instrxxx.opli 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