

## ***HAWK-800 AtomaHawk Quick Reference***

### **Global Mode Executable Commands**

11 GL 11 = No operation	
11 GL 12 = All notes off (Panic Button)	Sends MIDI all notes off controller if MIDI keyboard TX channel is set.
11 GL 13 = SYSEX dump all patches	Sends all 64 patches (11-88) of current selected patch bank.
11 GL 14 = SYSEX dump single patch	Sends the SYSEX dump of currently selected patch.
11 GL 15 = SYSEX dump single patch	Sends the SYSEX dump for patch selected by GL 12.
11 GL 16 = SYSEX dump sequencer	Sends the SYSEX dump for the currently selected sequence.
11 GL 17 = SYSEX dump global parameters	Sends the SYSEX dump of all global parameters
11 GL 25 = Jump into flash update routine	Used to update flash ROM.
11 GL 26 = Go to "Tools" mode	Various utility functions. See the owners manual.

### **Global Mode Parameters**

12 GL xx - Selected patch or parameter	11-88
13 GL xx – Patch Bank Select	1 – 4
14 GL xx - Sequencer clock internal/external	1=Internal (sequencer), 2=External (MIDI)
15 GL xx - Program change enable	0=Disabled, 1=Enabled
16 GL xx – NRPN MSB Device Select	0-63, (1=Recommended)
17 GL xx – Sustain Pedal Operation Select	0=Off, 1-3 On
18 GL xx - Portamento fine tuning	00-63 (9=Recommended)
21 GL xx - Omni on/off/auto	0=Off, 1=On (Recommended)
22 GL xx - Keyboard MIDI transmit select	0=Off, 1-16=Channel
23 GL xx - Local Keyboard control	0=Off, 1=On
24 GL xx - Local Sequencer control	0=Off, 1=On
25 GL xx - Sequencer MIDI time code send	0=Off, 1=On
26 GL xx - Sequencer MIDI transmit channel	0=Off, 1-16=Channel
27 GL xx - MIDI receive channel	1-16=Channel
28 GL xx - MIDI soft thru	0=Off (Recommended), 1=On
31 GL xx - Extended playing range	0=Off, 1=On
32 GL xx - Cascading unit number	0=Off, 1=Odd, 2=Even
33 GL xx - Cascading sync mode	0=Off, 1=On
34 GL xx - Device type	0=Poly-800 Mk1, 1=EX-800, 2=Poly-800 MK2
35 GL xx - Keyboard MIDI transmit note octave offset	0=Normal Operation, 1-3= – oct. 4-6= +oct.
36 GL xx - Keyboard MIDI transmit note velocity offset	00-63, 63=Recommended
37 GL xx - Sequencer note follow mode	0=Off, 1=On
38 GL xx – Velocity sensitivity reaction timer	0=off, 1-63 increasing delay
41 GL xx - Joystick MIDI TX channel number	0=Off, 1-16=Channel
42 GL xx - Local Joystick control off	0=Off, 1=On, 2=Parameter edit, 3=para/prog edit mode.
43 GL xx - Advanced Sequencer Mode	1=Off, 2-64 = Beats per seq. display
44 GL xx – Default power on selected sequence	1-7
45 GL xx - "Fast" mode (note ON fast response timer)	2 – 64 (9 recommended)
46 GL xx – sequencer MIDI ticks per quarter note	1-12 (default 6)
47 GL xx – scaled or absolute data values for parameter change CC values	0=scaled, 1=absolute

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48 GL xx – MIDI bank select change causes a patch change	0=off, 1=on	
51 – 57 GL xx – Protect sequence (locked to avoid sequence edit)	0=unlocked, 1=protected/locked	
58 GL xx – AtomaHawk version selector	0=version 1.3b and lower, 1=version 1.4	
86 – Display MIDI transmitted bytes	0-63 (the counter resets to zero after 63)	
87 – Display MIDI received bytes	0-63 (the counter resets to zero after 63)	
88 – Display MIDI over run errors	0-63 (the counter resets to zero after 63)	
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Original Parameter Groups		
DCO1 and DCO2 Group	Range	CC #
Original 11, 21 – DCO1, DCO2 Octave	1 to 3	0,8
Original 12, 22 – DCO1, DCO2 Waveform	1 and 2	1,9
Original 13, 23 – DCO1, DCO2 harmonic selector	1 to 16	2,10
Original 14, 24 – DCO1, DCO2 harmonic modulation waveform	1 to 13	3,11
Original 15, 25 – DCO1, DCO2 harmonic modulation LFO source	1 to 4	4,12
Original 16, 26 – DCO1, DCO2 harmonic modulation depth	0 to 15	5,13
Original 17, 27 – DCO1, DCO2 volume	0 to 31	6,14
Original 18 – DCO single double mode	1 and 2	7
DCO Tune and Noise Group	Range	CC #
Original 31 – DCO2 interval	0 to 11	16
Original 32 – DCO2 detune	0 to 3	17
Original 33 – Noise Level	0 to 15	18
Original 34 – Effects delay time (MK2 mode only)	0 to 99	19
Original 35 – Effects feedback (MK2 mode only)	0 to 15	20
Original 36 – Effects modulation frequency (MK2 mode only)	0 to 31	21
Original 37 – Effects modulation intensity (MK2 mode only)	0 to 31	22
Original 38 – Effects level (MK2 mode only)	0 to 15	23
VCF and Chorus Group	Range	CC #
Original 41 – VCF cut off set point	0 to 99	24
Original 42 – VCF keyboard track	0 to 2	25
Original 43 – VCF EG3 polarity	1 and 2	26
Original 44 – VCF EG3 depth	0 to 15	27
Original 45 – EG3 trigger	1 and 2	28
Original 46 – EQ bass (MK2 mode only)	0 to 11	29
Original 47 – EQ treble (MK2 mode only)	0 to 11	30
Original 48 – Chorus (MK1 and EX-800 modes only)	0 and 1	31
EG1, EG2 and EG3 Group	Range	CC #
Original 51, 61, 71 – Attack	0 to 31	32,40,48
Original 52, 62, 72 – Decay	0 to 31	33,41,49

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Original 53, 63, 73 – Break point	0 to 31	34,42,50
Original 54, 64, 74 – Slope	0 to 31	35, 43, 51
Original 55, 65, 75 – Sustain	0 to 31	36, 44, 52
Original 56, 66, 76 – Release	0 to 31	37, 45, 53
Arpeggiator 57 - Length	2-16	38
Arpeggiator 58 - Direction	1-3	39
Arpeggiator 67 - Range	1-3	46
Arpeggiator 68 - Sort	1-3	47
Arpeggiator 77 - Sound as Played	0-1	54
<b>Velocity Group</b>	<b>Range</b>	<b>CC #</b>
Original 81 – Velocity Operator 1 Intensity	0 to 4	56
Original 82 – Velocity Operator 1 Invert	0 to 1	57
Original 83 – Velocity Operator 1 Target	1 to12	58
Original 84 – Velocity Operator 1 Intensity	0 to 4	59
Original 85 – Velocity Operator 1 Invert	0 to 1	60
Original 86 – Velocity Operator 1 Target	1 to12	61
Original 87 – VCF Velocity Sensitive Intensity	0 to 6	62
Original 88 – VCF velocity sensitive response shape	1 to 4	63
<b>Extended Parameter Groups</b>		
<b>LFO1 and LFO2 Group</b>	<b>Range</b>	<b>CC #</b>
Extended 11, 21 – LFO1, LFO2 frequency	0 to 15	64,72
Extended 12, 22 – LFO1, LFO2 delay timer	0 to 15	65,73
Extended 13, 23 – LFO1, LFO2 free running	0 and 1	66,74
Extended 14, 24 – LFO1, LFO2 delay invert	0 and 1	67,75
Extended 15, 25 – LFO1, LFO2 PWM phase	1 to 63	68,76
Extended 16, 26 – LFO3/4 waveform for LFO1/2 frequency modulation	1 to 13	69,77
Extended 17, 27 – LFO3/4 modulation depth of LFO1/2 freq. modulation	0 to 15	70,78
Extended 18 – LFO1 start phase position 0,90,180,270 degrees	1 to 4	71
Extended 28 – LFO2 sync driven frequency	0 to 63	79
<b>DCO Modulation Group</b>	<b>Range</b>	<b>CC #</b>
Extended 31 – DCO LFO waveform selector	1 to 13	80
Extended 32 – DCO LFO modulation source selector	1 to 4	81
Extended 33 – DCO LFO modulation depth	0 to 15	82
Extended 34 – not used		83
Extended 35 – DCO EG invert	1 and 2	84
Extended 36 – DCO EG depth	0 to 15	85
Extended 37 – not used		86

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Extended 38 – DCO Modulation mode	0 to 2	87
<b>VCF Modulation Group</b>	<b>Range</b>	<b>CC #</b>
Extended 41 – VCF 1st LFO waveform selector	1 to 13	88
Extended 42 – VCF 1st LFO modulation source selector	1 to 4	89
Extended 43 – VCF 1st LFO modulation depth	0 to 15	90
Extended 44 – VCF 2nd LFO waveform selector	1 to 13	91
Extended 45 – VCF 2nd LFO modulation source selector	1 to 4	92
Extended 46 – VCF 2nd LFO modulation depth	0 to 15	93
Extended 47 – VCF modulator mode for 2nd attenuates 1 <sup>st</sup> and 2 <sup>nd</sup> minimum	0 to 15	94
Extended 48 – VCF 12/24db filter selector *	1 and 2	95
<b>Resonance Modulation Group</b>	<b>Range</b>	<b>CC #</b>
Extended 51 – Resonance set point	0 to 99	96
Extended 52 – Resonance LFO modulation waveform selector	1 to 13	97
Extended 53 – Resonance LFO modulation source selector	1 to 4	98
Extended 54 – Resonance LFO modulation depth	0 to 15	99
Extended 55 – not used		100
Extended 56 – Resonance EG depth	0 to 15	101
Extended 57 – Resonance EG invert	1 and 2	102
Extended 58 – Aggressive Resonance *	0 and 1	103
<b>FM/Noise Modulation Group *</b>	<b>Range</b>	<b>CC #</b>
Extended 61 – FM800 set point *	0 to 99	104
Extended 62 – FM800 LFO modulation waveform selector *	1 to 13	105
Extended 63 – FM800 LFO modulation source selector *	1 to 4	106
Extended 64 – FM800 LFO modulation depth *	0 to 15	107
Extended 65 – not used		108
Extended 66 – FM800 EG depth *	0 to 15	109
Extended 67 – FM800 EG invert *	1 and 2	110
Extended 68 – FM800 Mode *	0 to 2	111
<b>SLFO Group</b>	<b>Range</b>	<b>CC #</b>
Extended 71 – SLFO3 frequency	0 to 15	112
Extended 72 – SLFO3 PWM phase	1 to 63	113
Extended 73 – SLFO3 free running	0 and 1	114
Extended 74 – quarter note rate of clocked random sample and hold	1 to 99	115
Extended 75 – SLFO4 frequency	0 to 15	116
Extended 76 – SLFO4 PWM phase	1 to 63	117
Extended 77 – SLFO4 free running	0 and 1	118
Extended 78 – SLFO4 start phase position 0,90,180,270 degrees	1 to 4	119

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<b>Tremolo and Special Parameters Group</b>	<b>Range</b>	<b>CC #</b>
Extended 81 – Tremolo DCO1 mode and LFO source	0 to 2	120
Extended 82 – Tremolo DCO1 LFO modulation depth	0 to 15	121
Extended 83 – Tremolo DCO2 mode and LFO source	0 to 2	122
Extended 84 – Tremolo DCO2 LFO modulation depth	0 to 15	123
Extended 85 – Bend Depth	0 to 63	124
Extended 86 – Portamento Rate	1 to 16	125
Extended 87 – Pedal operation Decay/Sustain Offset	0 to 31	126
Extended 88 – Poly Mode	1 to 5	127

NOTE: \* -You must have the AtomaHawk upgrade kit installed for this parameter to have any effect.

## Tools Mode

Tools Mode (select global 11 GL 25 and press "Write")		
1	Display Software Versions	Shows boot and flash memory major software version numbers
2	Validate Patch Memory	Checks and corrects out of range parameters
3	Set Global Memory Defaults	Use not recommended – see owners manual
4	Memory Inspection	Use not recommended – see owners manual
5	Tape Load PS-800/EX-800	Tape load function. See Poly-800 owners manual
6	Tape Load MK2	Tape load function. See MK2 owners manual
7	Patch bank dump sysex	Sends a <u>BULK</u> HAWK patch dump to sysex via MIDI out
8	Patch bank load sysex	Loads HAWK, EX-800 and MK2 bulk dump sysex via MIDI in

## Arpeggiator Mode

Arpeggiator (select "Poly", "Portamento" or "Hold" then press and hold "Bank Hold" and press "Start")			
Purpose	Parameter	Values	Description
Maximum Length	P1 - 57	3 - 16	The maximum number of notes to be played in the arpeggiator sequence: 3 - 16 notes
Direction	P1 - 58	1 - 3	Arpeggiator direction: 1=Up, 2=Down, 3=Up/Down
Range	P1 - 67	1 - 3	Arpeggiator range: 1=octave, 2=2 octaves, 3=3 octaves
Sorting	P1 - 68	1 - 3	Arpeggiator sorting: 1=None, 2=Down, 3=Up/Down

## LFO Waveforms

LFO Waveform	Parameter Value
Triangle	1
Inverted triangle	2
Sawtooth	3
Inverted sawtooth	4
Sine	5
Inverted sine	6
PWM square	7

LFO Waveform	Parameter Value
Inverted PWM square	8
Random sample and hold from LFO	9
Random sample and hold from Seq. Or MIDI clock	10
Random sample and hold from Seq. loop/repeat	11
Source from Envelope Generator 3	12
Source from inverted Envelope Generator 3	13

## Harmonics

Selected Harmonics	Parameter Value	Selected Harmonics	Parameter Value
16'	1	8' + 2'	9
8'	2	4' + 2'	10
4'	3	16' + 8' + 4	11
2'	4	16' + 8' + 2'	12
16' + 8'	5	16' + 4' + 2'	13
16' + 4'	6	8' + 4' + 2'	14
16' + 2'	7	All harmonics ON	15
8' + 4'	8	All harmonics OFF	16

Patch Number:								Patch Name:							
Parameter Bank 1 (Original)								Parameter Bank 2 (Extended)							
11		31		51		71		11		31		51		71	
12		32		52		72		12		32		52		72	
13		33		53		73		13		33		53		73	
14		34		54		74		14		34		54		74	
15		35		55		75		15		35		55		75	
16		36		56		76		16		36		56		76	
17		37		57		77		17		37		57		77	
18		38		58		78		18		38		58		78	
21		41		61		81		21		41		61		81	
22		42		62		82		22		42		62		82	
23		43		63		83		23		43		63		83	
24		44		64		84		24		44		64		84	
25		45		65		85		25		45		65		85	
26		46		66		86		26		46		66		86	
27		47		67		87		27		47		67		87	
28		48		68		88		28		48		68		88	

Patch Number:								Patch Name:							
Parameter Bank 1 (Original)								Parameter Bank 2 (Extended)							
11		31		51		71		11		31		51		71	
12		32		52		72		12		32		52		72	
13		33		53		73		13		33		53		73	
14		34		54		74		14		34		54		74	
15		35		55		75		15		35		55		75	
16		36		56		76		16		36		56		76	
17		37		57		77		17		37		57		77	
18		38		58		78		18		38		58		78	
21		41		61		81		21		41		61		81	
22		42		62		82		22		42		62		82	
23		43		63		83		23		43		63		83	
24		44		64		84		24		44		64		84	
25		45		65		85		25		45		65		85	
26		46		66		86		26		46		66		86	
27		47		67		87		27		47		67		87	
28		48		68		88		28		48		68		88	