

## Grandmother SYSX

*F0 04 16 23 [Parameter ID], [value MSB], [value LSB], 00 00 00 00 00 00 00 00 [Unit ID] F7*

### **SPECIAL NOTE FOR GRANDMOTHER USERS**

**NOTE - Original Version of this template was missing two zeros in all SYSEX codes**

**I have updated them — but if it does not work, first try adding (or counting) number of zeros and compare to manual**

I do not own a Grandmother - so have not tested these codes....but they should be fine.  
I simply copied and edited my Matriarch template.

Difference between Grandmother and Matriarch is -

**DEVICE ID = 16** (not 17 as is one Matriarch)

**SOME PARAMETER IDs** are different than Matriarch

(Example - SEQ Keyboard Control is 22 on Grandmother but 23 on Matriarch.)

I'm pretty sure I caught all the differences..but if things don't work the way you expect,  
check that Device ID is set to 16 (not 17) and that the Parameter ID is correct  
(remember — may have to covert to hexadecimal depending on how you are entering the code)

### **EXAMPLE 1**

*Note Priority*

*Parameter ID = 3 (03)*

*Value MSB = 00*

*Value LSB (parameter value) = (00 = Low, 01 = High, 02 = Last)*

F0 04 16 23 03 00 **02** 00 00 00 00 00 00 00 F7 = Note Priority Last Note

F0 04 16 23 03 00 **01** 00 00 00 00 00 00 00 F7 = Note Priority = High

F0 04 16 23 03 00 **00** 00 00 00 00 00 00 00 F7 = Note Priority = Low

### **EXAMPLE 2**

*Local control: Keyboard*

*Parameter ID = 16(10)*

*Value MSB = 00*

*Value LSB (parameter value) = (00 = off, 01 = On)*

F0 04 16 23 10 00 00 00 00 00 00 00 00 00 F7 = Local Keys off

F0 04 16 23 10 00 01 00 00 00 00 00 00 00 F7 = Local Keys ON

### **EXAMPLE 2**

#### **SCRIPT EXAMPLE for RADIO BUTTONS**

*Midi Sync In*

*Parameter ID = 30*

*Value MSB = 00*

*Value LSB (parameter value) = (00 = Output*

*\*NOT NECESSARY to CONVERT Parameters to Hexadecimal if using Touch OSC SCRIPT*

*-- radiobuttons starts index at 0*

*-- define MIDI channel by adding an offset to the type, no offset = chan 1*

*----- SCRIPT -----*

*local a = {}*

*a[0] = { MIDIMessageType.SYSTEMEXCLUSIVE, 0x4, 22, 35, 30, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0xF7 }*

*a[1] = { MIDIMessageType.SYSTEMEXCLUSIVE, 0x4, 22, 35, 30, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 0xF7 }*

*a[2] = { MIDIMessageType.SYSTEMEXCLUSIVE, 0x4, 22, 35, 30, 00, 02, 00, 00, 00, 00, 00, 00, 00, 00, 0xF7 }*

*MIDIconnections = { true, true, false, false, false }*

*function onValueChanged(key)*

*if (key == "x") then*

*sendMIDI( a[self.values.x], MIDIconnections )*

*end*

*end*

## GRANDMOTHER SYSX IMPLEMENTATION

[illegible]

Parameter ID	Parameter Name	Values	Sysex	SCRIPT
22	Arp/Seq Swing	0-16383 = 0 to 100% (Default: 8192 = 50% / no swing)	USE MIDI CC	
23	Sequence Keyboard Control	0 = Off, 1 = On (Default: 1 / On)	F00416231700000000000000000000F7 = OFF F00416231700010000000000000000F7 = ON	0x4, 22, 35, 23, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 23, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
24	Delay Sequence Change	0 = Off, 1 = On (Default: 0 / Off)		
25	Sequence Latch Restart	0 = Off, 1 = On (Default: 0 / Off)		
26	Arp/Seq Clock Input Mode	0 = Clock, 1 = Step-Advance Trigger (Default: 0 / Clock)	F00416231a00000000000000000000F7 = OFF F00416231a00010000000000000000F7 = ON	0x4, 22, 35, 26, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 26, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
27	Arp/Seq Clock Output	0 = Always, 1 = Only When Playing (Default: 1 / When Playing)	F00416231b00000000000000000000F7 = OFF F00416231b00010000000000000000F7 = ON	0x4, 22, 35, 27, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 27, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
28	Arp MIDI Control Mode	0 = Arp outputs MIDI notes, & ignores incoming MIDI when local control off. 1 = arp doesn't output MIDI notes, is controlled by incoming MIDI notes when local control is off. (Default: 0 / Arp outputs MIDI)	F00416231c00000000000000000000F7 = OFF F00416231c00010000000000000000F7 = ON	0x4, 22, 35, 28, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 28, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
29	MIDI Sync OUT			
30	MIDI SYNC IN			
31	Follow Song Position Pointer	0 = Off, 1 = On (Default: 1 / On)	F00416231F00000000000000000000F7 = OFF F00416231F00010000000000000000F7 = ON	0x4, 22, 35, 31, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 31, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
32	Clock Input PPQN Index	0-15 (Default: 3 / sixteenth notes [4PPQN])	F00416232000000000000000000000F7 = 1PPQN F00416232000010000000000000000F7 = 2PPQN F00416232000020000000000000000F7 = 3PPQN F00416232000030000000000000000F7 = 4PPQN F00416232000040000000000000000F7 = 5PPQN F00416232000050000000000000000F7 = 6PPQN F00416232000060000000000000000F7 = 7PPQN F00416232000070000000000000000F7 = 8PPQN F00416232000080000000000000000F7 = 9PPQN F00416232000090000000000000000F7 = 10PPQN F004162320000A0000000000000000F7 = 11PPQN F004162320000B0000000000000000F7 = 12PPQN F004162320000C0000000000000000F7 = 24PPQN F004162320000D0000000000000000F7 = 48PPQN F004162320000E0000000000000000F7 = 96PPQN	0x4, 22, 35, 32, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 02, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 03, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 04, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 05, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 06, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 07, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 08, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 09, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 10, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 11, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 12, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 13, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 32, 00, 14, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7
33	Clock Output PPQN Index	0-15 (Default: 3 / sixteenth notes [4PPQN])	F00416232100000000000000000000F7 = 1PPQN F00416232100010000000000000000F7 = 2PPQN F00416232100020000000000000000F7 = 3PPQN F00416232100030000000000000000F7 = 4PPQN F00416232100040000000000000000F7 = 5PPQN F00416232100050000000000000000F7 = 6PPQN F00416232100060000000000000000F7 = 7PPQN F00416232100070000000000000000F7 = 8PPQN F00416232100080000000000000000F7 = 9PPQN F00416232100090000000000000000F7 = 10PPQN F004162321000A0000000000000000F7 = 11PPQN F004162321000B0000000000000000F7 = 12PPQN F004162321000C0000000000000000F7 = 24PPQN F004162321000D0000000000000000F7 = 48PPQN F004162321000E0000000000000000F7 = 96PPQN	0x4, 22, 35, 33, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 02, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 03, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 04, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 05, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 06, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 07, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 08, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 09, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 10, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 11, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 12, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 13, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7 0x4, 22, 35, 33, 00, 14, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x0F7

Parameter ID	Parameter Name	Values	Sysex	SCRIPT
34	Pitch Bend Range (Semitones)	0-12 (Default: 2)	F00416232200000000000000000000F7 = 0 F00416232200010000000000000000F7 = 1 F00416232200020000000000000000F7 = (2) F00416232200030000000000000000F7 = 3 F00416232200040000000000000000F7 = 4 F00416232200050000000000000000F7 = 5 F00416232200060000000000000000F7 = 6 F00416232200070000000000000000F7 = 7 F00416232200080000000000000000F7 = 8 F00416232200090000000000000000F7 = 9 F004162322000A00000000000000000F7 = 10 F004162322000B00000000000000000F7 = 11 F004162322000C00000000000000000F7 = 12	0x4, 22, 35, 34, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 02, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 03, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 04, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 05, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 06, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 07, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 08, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 09, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 10, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 11, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 0x4, 22, 35, 34, 00, 12, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7
35	Keyboard Octave Transpose	0-4 = -2 to +2 (Default: 2 / no transpose)		
36	Transpose Immediately	0 = Off, 1 = On (Default: 1 / On)		
37	Glide Type	0 = Linear Constant Rate, 1 = Linear Constant Time, 2 = Exponential (Default: 0 / LCR)	USE MIDI CC	
38	Gated Glide	0 = Off, 1 = On (Default: 1 / On)	USE MIDI CC	
39	Legato Glide	0 = Off, 1 = On (Default: 1 / On)	USE MIDI CC	
40	Osc 2 Freq Knob Range	0-24 Semitones (Default: 7)	F004162328000100000000000000000F7 = 1 F004162328000200000000000000000F7 = 2 F004162328000300000000000000000F7 = 3 F004162328000400000000000000000F7 = 4 F004162328000500000000000000000F7 = 5 F004162328000600000000000000000F7 = 6 F004162328000700000000000000000F7 = (7) F004162328000800000000000000000F7 = 8 F004162328000900000000000000000F7 = 9 F004162328000A00000000000000000F7 = 10 F004162328000B00000000000000000F7 = 11 F004162328000C00000000000000000F7 = 12 F004162328000D00000000000000000F7 = 13 F004162328000E00000000000000000F7 = 14 F004162328000F00000000000000000F7 = 15 F004162328001000000000000000000F7 = 16 F004162328001100000000000000000F7 = 17 F004162328001200000000000000000F7 = 18 F004162328001300000000000000000F7 = 19 F004162328001400000000000000000F7 = 20 F004162328001500000000000000000F7 = 21 F004162328001600000000000000000F7 = 22 F004162328001700000000000000000F7 = 23 F004162328001800000000000000000F7 = 24	0x4, 22, 35, 40, 00, 01, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 02, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 03, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 04, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 05, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 06, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 07, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 08, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 09, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 10, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 11, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 12, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 13, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 14, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 15, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 16, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 17, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 18, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 19, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 20, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 21, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 22, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 23, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 } 0x4, 22, 35, 40, 00, 24, 00, 00, 00, 00, 00, 00, 00, 00, 00, 0x7 }
41	Osc 2 Hard Sync	0 = Off, 1 = On (Default: 0 / Off)		
42	Multi Trig	0 = Off, 1 = On (Default: 0 / Off)		
43	Pitch Variance	0-400 = Off to +/- 40 cents in 0.1-cent increments. (Default: 0 / Off)		
44	Tap Tempo Persistence	0 = Off, 1 = On (Default: 0 / Off)		

Parameter ID	Parameter Name	Values	Sysex	SCRIPT
45	KB CV OUT Range	0 = -5V to +5V, 1 = 0V to 10V (Default: 0 / -5 to +5)		
46	KB VEL OUT Range	0 = -5V to +5V, 1 = 0V to 10V (Default: 0 / -5 to +5)		
47	Multi Trig Reset Speed	4-50 milliseconds (default 4)		