

## NOVA SYSTEM SYSEX MAP

Starting Byte		length	value (Hex)	Field Description	Range, Value Description
Decimal	Hexa				
0	000	1	F0	Begin Sysex	
1	001	3	00 20 1F	Manufacturer ID: TC Electronic	
4	004	1	00 – 7F	Sysex Device ID	0-126, All
5	005	1	63	Model ID: Nova System	
6	006	1	20	Message ID (20=Dump)	
7	007	1	01	Data Type	01 = Preset (02 is System Dump)
8	008	1	01 – 5A	Preset Number	01-30 (Factory), 31-90 (User)
9	009	1			
10	00A	24	ASCII	Preset Name (24 char.)	
34	022	4			
38	026	4	64 – 38 17	Tap Tempo	100 to 3000 ms, by 1ms (knob uses bpm)
42	02A	4	00 – 02	Routing	Semi-par, serial, parallel
46	02E	4	1C 7F 7F 07 – 00	Level Out L	-100 to 0dB, by 1dB
50	032	4	1C 7F 7F 07 – 00	Level Out R	-100 to 0dB, by 1dB
54	036	4		Map Parameter (Pedal)	list.
58	03A	4	00 – 64	Map Min	0-100%, by 1%
62	03E	4	00 – 64	Map Mid	0-100%, by 1%
66	042	4	00 – 64	Map Max	0-100%, by 1%
70	046	4	00-02	COMP Type	perc, sustain, advanced
74	04A	4	E2 7F 7F 0F – 00	Threshold (adv)	-30 to 0dB, by 1dB
78	04E	4	00 – 0F	Ratio (adv)	Off, 1.12:1 to Infinite:1 (see Comp Ratio table)
82	052	4	00 – 10	Attack (adv)	0.3 to 140 (see Table Attack)
86	056	4	0D – 17	Release (adv)	50 to 2000 ms (see COMP Time Table)
90	05A	4	01 – 0A	Response (perc/sustain)	1 to 10
94	05E	4	01 – 14	Drive (perc/sustain)	1 to 20
98	062	4	74 7F 7F 0F – 0C	Level	-12 to 12 dB, by 1dB
102	066	4			
106	06A	4			
110	06E	4			
114	072	4			
118	076	4			
122	07A	4			
126	07E	4			
130	082	4	00-01	COMP ON/OFF	On-Off
134	086	4	00-01	DRIVE Type	overdrive, distortion
138	08A	4		Gain	?
142	08E	4	00 – 64	Tone	0-100%
146	092	4			
150	096	4			
154	09A	4			
158	09E	4			
162	0A2	4			
166	0A6	4			
170	0AA	4			

## NOVA SYSTEM SYSEX MAP

174	OAE	4				
178	OB2	4				
182	OB6	4	00 – 0A	BOOST Level	0-10 dB, by 1dB	
186	OBA	4	00 – 01	BOOST On/Off	On-Off	
190	OBE	4		DRIVE Level	?	
194	OC2	4	00 – 01	DRIVE On/Off	On-Off	
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198	OC6	4	00 – 05	MOD Type	chorus, flanger, vibrato, phaser, tremolo, panner	
202	OCA	4	00 – 50 01	Speed	0.050Hz to 20 Hz (see table Speed)	
206	OCE	4	00 – 64	Depth	0-100%	
210	OD2	4	00 – 10	Tempo	Ignore, 2 to 1/32T, (see table Tempo)	
214	OD6	4	00 – 3D	Hi Cut (cho, fla, vib, trem)	20Hz to 20kHz (see table HiCut)	check
218	ODA	4	40 7F 7F 07 – 64	Feedback (fla, pha)	-100 to 100%	
222	ODE	4	00 – 74 03 0C 00 – 0C 01 0C 00 – 0C 01	Delay (chorus, flanger), Range (phaser), Type (tremolo)	0-50ms, by 0.1ms Low, High Soft, Hard	
226	OE2	4				
230	OE6	4				
234	OEA	4				
238	OEE	4	00 – 64	Width (tremolo)	0-100%	
242	OF2	4				
246	OF6	4				
250	OFA	4	00 – 64	Mix (cho, fla, vib, pha, pan)	0-100%	
254	OFE	4				
258	102	4	00 – 01	MOD On/Off	On-Off	
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262	106	4	00 – 05	DELAY TYPE	clean, analog, tape, dynamic, dual, ping-pong	
266	10A	4	00 – 08 0E	Delay time	0 to 1800 ms	
270	10E	4	00 – 08 0E	Delay 2 (dual)	0 to 1800 ms	
274	112	4	00 – 10	Tempo	Ignore, 2 to 1/32T, (see table Tempo)	
278	116	4	00 – 10 00 – 64	Tempo 2 (dual), Width (ping)	Ignore, 2 to 1/32T, (see table Tempo) 0 to 100%	
282	11A	4	00 – 78	Feedback	0 to 120%	
286	11E	4	00 – 18 00 – 78	Clip (analog, tape), Feedback 2 (dual)	0 to 24dB 0 to 120%	
290	122	4	00 – 3D	Hi Cut	20Hz to 20kHz (see table HiCut)	
294	126	4	00 – 3D	Lo Cut	20Hz to 20kHz (see table HiCut)	
298	12A	4	38 7E 7F 07 – 48 01 4E 7F 7F 07 – 32	Offset (dynamic), Pan 1 (dual)	-200 to 200ms 50L (-50) to 50R (+50)	
302	12E	4	4E 7F 7F 07 – 00 4E 7F 7F 07 – 32	Sense (dynamic), Pan 2 (dual)	-50 to 0dB 50L (-50) to 50R (+50)	
306	132	4	00 – 64	Damp (dynamic)	0 to 100 dB	
310	136	4	0B – 15	Release (dynamic)	20 to 1000 ms (see table Release)	
314	13A	4	00 – 64	Mix	0-100%	
318	13E	4				
322	142	4	00 – 01	DELAY On/Off	On-Off	
<hr/>						
326	146	4	00 – 03	REVERB TYPE	spring, hall, room, plate	
330	14A	4	01 – 48 01	Decay	0.1 to 20ms, by 0.1ms	
334	14E	4	00 – 64	Pre Delay	0 to 100 ms, by 1ms	

## NOVA SYSTEM SYSEX MAP

338	152	4	00 – 02	Shape	Round, Curved, Square
342	156	4	00 – 07	Size	Box, Tiny, Small, Medium, Large, XL, Grand, Huge
346	15A	4	00 – 06	Hi Color	Wool, Warm, Real, Clear, Bright, Crisp, Glass
350	15E	4	67 7F 7F 07 – 19	Hi Level	-25 to 25dB
354	162	4	00 – 06	Lo Color	Thick, Round, Real, Light, Tight, Thin, NoBass
358	166	4	67 7F 7F 07 – 19	Lo Level	-25 to 25dB
362	16A	4	1C 7F 7F 07 – 00	Room Level	-100 .. 0dB, by 1dB
366	16E	4	1C 7F 7F 07 – 00	Reverb Level	-100 .. 0dB, by 1dB
370	172	4	67 7F 7F 07 – 19	Diffuse	-25 to 25dB
374	176	4	00 – 64	Mix	0-100%
378	17A	4			
382	17E	4			
386	182	4	00 – 01	REVERB On/Off	On-Off
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390	186	4	00 – 01	EQ/GATE TYPE	Hard, Soft
394	18A	4	44 7F 7F 0F – 00	GATE Threshold	-60 to 0dB
398	18E	4	00 – 5A	GATE Damp	0 to 90dB
402	192	4	00 – 48 01	GATE Release	0 to 200dB/s, by 1dB/s
406	196	4	00 – 01	EQ On/Off	On-Off
410	19A	4	19 – 71 01	EQ Freq1	41Hz to 20kHz, see table EQ Freq
414	19E	4	74 7F 7F 0F – 0C	EQ Gain1	-12 to 12dB, by 1dB
418	1A2	4	05 – 0C	EQ Width1	0.3 to 1.6 octaves, see Table EQ Width check
422	1A6	4	19 – 71 01	EQ Freq2	41Hz to 20kHz, see table EQ Freq
426	1AA	4	74 7F 7F 0F – 0C	EQ Gain2	-12 to 12dB, by 1dB
430	1AE	4	05 – 0C	EQ Width2	0.3 to 1.6 octaves, see Table EQ Width
434	1B2	4	19 – 71 01	EQ Freq3	41Hz to 20kHz, see table EQ Freq
438	1B6	4	74 7F 7F 0F – 0C	EQ Gain3	-12 to 12dB, by 1dB
442	1BA	4	05 – 0C	EQ Width3	0.3 to 1.6 octaves, see Table EQ Width
446	1BE	4			
450	1C2	4	00 – 01	GATE On/Off	On-Off
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454	1C6	4		PITCH TYPE	shifter, octaver, whammy, detune, intelligent
458	1CA	4	1C 7F 7F 07 – 64	Voice 1 (shift, detune, intell)	-100 to 100 cents (shift, detune)
			74 7F 7F 07 – 0C		-13 to 13 degrees (intell). See Table Degrees
462	1CE	4	1C 7F 7F 07 – 64	Voice 2 (shift, detune, intell)	-100 to 100 cents (shift, detune)
			74 7F 7F 07 – 0C		-13 to 13 degrees (intell). See Table Degrees
466	1D2	4	4E 7F 7F 07 – 32	Pan 1 (shift, intell)	50L (-50) to 50R (+50)
470	1D6	4	4E 7F 7F 07 – 32	Pan 2 (shift, intell)	50L (-50) to 50R (+50)
474	1DA	4	00 – 32	Delay 1 (shift, detune, intell)	0 to 50ms, by 1ms
478	1DE	4	00 – 32	Delay 2 (shift, detune, intell)	0 to 50ms, by 1ms
482	1E2	4	00 – 64	Feedback 1 (shift),	0 to 100%
			00 – 0C	Key (intell)	C, C#, D, D#, E, F, F#, G, G#, A, A#, B
486	1E6	4	00 – 64	Feedback 2 (shift),	0 to 100%
			00 – 0D	Scale (intell)	Ionian, Dorian, etc. (see Table Scale)
490	1EA	4	1C 7F 7F 07 – 00	Level 1 (shift, intell)	-100 to 0dB
494	1EE	4	1C 7F 7F 07 – 00	Level 2 (shift, intell),	-100 to 0dB
			00 – 01	Direction (octaver, whammy)	Down, Up
498	1F2	4	01 – 02	Range (octaver, whammy)	1-oct, 2-oct
502	1F6	4	00 – 64	Mix (shift, oct, detune, intell)	0 to 100%
506	1FA	4			

### NOVA SYSTEM SYSEX MAP

510	1FE	4			
514	202	4	00 – 01	PITCH On/Off	On-Off
518	206	1	00 – 7F	Checksum : 7 least significant bits of sum of data bytes	sum from 34 (x022) to 517 (x205)
519	207	1	F7	End Sysex	

## NOVA SYSTEM SYSEX MAP

DEC	HEX	ATTACK	DEGREES	KEY	SCALE	SHAPE	SIZE	HICOL	LOCOL
-12	74 7F 7F 07		-13						
-11	75 7F 7F 07		-12						
-10	76 7F 7F 07		-11						
-9	77 7F 7F 07		-10						
-8	78 7F 7F 07		-9						
-7	79 7F 7F 07		-oct						
-6	7A 7F 7F 07		-7						
-5	7B 7F 7F 07		-6						
-4	7C 7F 7F 07		-5						
-3	7D 7F 7F 07		-4						
-2	7E 7F 7F 07		-3						
-1	7F 7F 7F 07		-2						
0	0	0,3	Uniss	C	Ionian	Round	Box	Wool	Thick
1	1	0,5	2	C#	Dorian	Curved	Tiny	Warm	Round
2	2	0,7	3	D	Phrygian	Square	Small	Real	Real
3	3	1,0	4	D#	Lydian		Medium	Clear	Light
4	4	1,4	5	E	Mixolyd		Large	Bright	Tight
5	5	2,0	6	F	Aeolian		XL	Crisp	Thin
6	6	3	7	F#	Locrian		Grand	Glass	NoBass
7	7	5	1oct	G	PntMin		Huge		
8	8	7	9	G#	PntMaj				
9	9	10	10	A	Blues				
10	0A	14	11	A#	DimWhl				
11	0B	20	12	B	Whole				
12	0C	30	13		HrmMin				
13	0D	50							
14	0E	70							
15	0F	100							
16	10	140							

NOVA SYSTEM SYSEX MAP

F0	0	20	1F	1	63	20	1	25	0	53	74	65	76	69	65
27	73	20	42	6C	75	65	73	0	0	0	0	0	1F	10A	
4	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
0	0	64	0	0	0	2	0	0	0	6C	7F	7F	7	8	0
0	0	10	0	0	0	0D	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0C	0	0	0	3F	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0A	0	0	0	1	0	0	0	75	7F
7F	7	1	0	0	0	3	0	0	0	1F	0	0	0	32	0
0	0	0	0	0	0	3A	0	0	0	0	0	0	0	0	0
0	0	0C	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0
0	0	1	0	0	0	1	0	0	0	0	0	3	0	0	0
0	0	6	0	0	0	64	0	0	0	0	28	0	0	0	0
0	0	38	0	0	0	8	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0F	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	14	0	0	0	0
0	0	0	0	0	0	3	0	0	0	0	4	0	0	0	6
0	0	3	0	0	0	0	0	0	0	0	0	0	0	7D	7F
7F	70A	0	0	0	0	14	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	0	0	0	0	0	62	7F	7F	7	32
0	0	64	0	0	0	0	0	0	0	0	33	0	0	0	7D
7F	70A	0	0	0	0	5A	0	0	0	0	6	0	0	0	0A
0	0	11	1	0	0	0	0	0	0	0	0A	0	0	0	0
0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0	0	2	0	0	0	64	0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	28	F7								

240	0	32	31	1	99	32	1	37	0	S	t
'	s		B	l	u	e	s				
					0			384			
					0			0			
					100			2			-2
					16			13			
					0			0			
					0			0			
					1			0			1
					0			0			
					0			0			
					0			10			1
					1			3			3
					0			58			
					140			0			
					0			0			5
					1			1			38
					6			100			4
					56			8			
					0			0			1
					1			0			2
					0			3			
					3			0			
					10			20			
					1			0			-3
					100			0			5
					10			90			6
					145			0			1
					0			2			
					0			0			
					0			0			
					2			100			
					1			40			247

REQ Preset Dump

F0	0	20	1F	7F	63	45	1	1F	00	F7
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Start	TC Electronic	All	NS	REQ	Preset	0-1	void	End
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NOVA SYSTEM SYSEX MAP

e	v	i	e
		0	
		50	
0		8	
		0	
		0	
		0	
2		63	
		0	
		0	
		-11	
1		50	
		0	
		0	
		0	
4		0	
		0	
		0	
5		0	
		0	
		6	
		-3	
		0	
0		50	
1		-3	
5		10	
0		0	
		0	
		0	
		1	
		0	







NOVA SYSTEM SYSEX MAP

13	14	15	16
0	0	50	100
Map Param	Map Min	Map Med	Map Max
0	0	50	100
21	22	23	24
0	0	0	1
			ON/OFF
			ON/OFF
			ON/OFF
0	0	0	1
37	38	39	40
10	1	-11	1
BST Lvl	BST On/Off	DRV Lvl	ON/OFF
10	1	-11	1
BST Lvl	BST On/Off	DRV Lvl	ON/OFF
53	54	55	56
0	50	0	1
	MIX		ON/OFF
	MIX		ON/OFF
	MIX		ON/OFF
	MIX		ON/OFF
0	50	0	1
	MIX		ON/OFF
	MIX		ON/OFF
	MIX		ON/OFF
69	70	71	72
0	15	0	1
	MIX		ON/OFF
	MIX		ON/OFF
0	15	0	1
	MIX		ON/OFF
Release	MIX		ON/OFF
	MIX		ON/OFF
	MIX		ON/OFF
85	86	87	88
20	0	0	1
MIX			ON/OFF
20	0	0	1
MIX			ON/OFF
MIX			ON/OFF

NOVA SYSTEM SYSEX MAP

MIX			ON/OFF
101	102	103	104
0	10	0	0
EQ Gain 3	EQ Width 3		Gate ON/OFF
0	10	0	0
117	118	119	120
100	0	0	1
MIX			ON/OFF
MIX			ON/OFF
(MIX)			ON/OFF
100	0	0	1
MIX			ON/OFF
MIX			ON/OFF

NOVA SYSTEM SYSEX MAP

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
00	F0	0	20	1F	7F	63	20	2	1	0	0	0	1	0	0	0
01	0	0	0	0	32	0	0	0	5A	0	0	0	64	0	0	0
02	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
05	0	0	0	0	7F	0	0	0	0	0	0	0	0	0	0	0
06	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
07	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0
08	4A	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0
09	0	0	0	0	0	0	0	0	0	0	0	0	72	2	0	0
0A	0	0	0	0	0	0	0	0	1	0	0	0	9	0	0	0
0B	0	0	0	0	0A	0	0	0	3	0	0	0	4E	7F	7F	7
0C	0	0	0	0	0	0	0	0	0	0	0	0	3A	3	0	0
0D	0	0	0	0	0	0	0	0	0	0	0	0	1F	0	0	0
0E	0	4	4	0	1	0	0	0	0F	0	0	0	0	0	0	0
0F	0	0	0	0	10	6	0	0	3	4	8	0	6	0A	10	0
10	9	10	1C	0	0C	16	28	0	0F	1C	34	0	12	22	40	0
11	15	28	4C	0	18	2E	58	0	1B	34	64	0	1E	3A	70	0
12	21	40	7C	0	24	46	8	1	27	4C	14	1	2A	52	20	1
13	2D	58	2C	1	30	5E	38	1	33	64	44	1	36	6A	50	1
14	39	70	5C	1	3C	76	68	1	3F	7C	74	1	42	2	1	2
15	45	8	0D	2	48	0E	19	2	4B	14	25	2	4E	1A	31	2
16	51	20	3D	2	54	26	49	2	57	2C	55	2	5A	32	61	2
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	3	4	4	0	6	0A	10	0	9	10	1C	0
19	0C	16	28	0	0F	1C	34	0	12	22	40	0	15	28	4C	0
1A	18	2E	58	0	1B	34	64	0	1E	3A	70	0	21	40	7C	0
1B	24	46	8	1	27	4C	14	1	2A	52	20	1	2D	58	2C	1
1C	30	5E	38	1	33	64	44	1	36	6A	50	1	39	70	5C	1
1D	3C	76	68	1	0	77	2	0	0	0	0	0	43	F7		

	0	1	2	3	4	5	6	7	8	9	A
00	Start	TC Electronic	All	NS	TELL	System	1	0	0		
01	0	0	0	0	32	0	0	0	5A	0	0
02	2	0	0	0	0	0	0	0	0	0	0
03	0	0	0	0	0	0	0	0	0	0	0
04	0	0	0	0	1	0	0	0	0	0	0
05	0	0	0	0	7F	0	0	0	0	0	0
06	0	0	0	0	0	0	0	0	1	0	0
07	1	0	0	0	1	0	0	0	0	0	0
08	4A	0	0	0	0	0	0	0	1	0	0
09	0	0	0	0	0	0	0	0	0	0	0
0A	0	0	0	0	0	0	0	0	1	0	0
0B	0	0	0	0	0A	0	0	0	3	0	0
0C	0	0	0	0	0	0	0	0	0	0	0
0D	0	0	0	0	0	0	0	0	0	0	0
0E	0	4	4	0	1	0	0	0	0F	0	0
0F	0	0	0	0	10	6	0	0	3	4	8
10	9	10	1C	0	0C	16	28	0	0F	1C	34
11	15	28	4C	0	18	2E	58	0	1B	34	64
12	21	40	7C	0	24	46	8	1	27	4C	14
13	2D	58	2C	1	30	5E	38	1	33	64	44
14	39	70	5C	1	3C	76	68	1	3F	7C	74
15	45	8	0D	2	48	0E	19	2	4B	14	25
16	51	20	3D	2	54	26	49	2	57	2C	55
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	3	4	4	0	6	0A	10
19	0C	16	28	0	0F	1C	34	0	12	22	40
1A	18	2E	58	0	1B	34	64	0	1E	3A	70
1B	24	46	8	1	27	4C	14	1	2A	52	20
1C	30	5E	38	1	33	64	44	1	36	6A	50
1D	3C	76	68	1	0	77	2	0	0	0	0

REQ SYSTEM DUMP (to check)

F0	0	20	1F	7F	63	45	2	F7
----	---	----	----	----	----	----	---	----

Start	TC Electronic	All	Nova	REQ	System	End
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## NOVA SYSTEM SYSEX MAP

B	C	D	E	F
0	1	0	0	0
0	64	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	0
0	1	0	0	0
0	1	0	0	0
0	72	2	0	0
0	9	0	0	0
0	4E	7F	7F	7
0	Tuner A = 400			
0	1F	0	0	0
0	0	0	0	0
0	6	0A	10	0
0	12	22	40	0
0	1E	3A	70	0
1	2A	52	20	1
1	36	6A	50	1
1	42	2	1	2
2	4E	1A	31	2
2	5A	32	61	2
0	0	0	0	0
0	9	10	1C	0
0	15	28	4C	0
0	21	40	7C	0
1	2D	58	2C	1
1	39	70	5C	1
0	Chks	End		

### Inquiry Messages (Who are you)

REQUEST

F0	Begin SysEx
7E	Non RealTime Message
@@	Device ID
06	MessageType: Inquiry
01	Identity Request
F7	End SysEx

REPLY From NOVA SYSTEM

F0	Begin SysEx
7E	Non RealTime Message
@@	Device ID
06	MessageType: Inquiry
02	Identity Reply
00 20 1F	Manufacturer ID: TC Electronic
63	Product ID LSB: x63 (NovaSystem)
00	Product ID MSB
00 00 00 00	(void)
01	Major Version: 1
0D	Minor Version: 13
F7	End SysEx

Other commands (G-System)

- 22 Set One parameter individually (3 arguments: Block, Parameter, Value)
- 47 Request One parameter value individually (2 arguments : Block, Parameter)
- 57 Grouping command

### Single Patch Exchanges

REQUEST

F0	Begin SysEx
00 20 1F	Manufacturer ID
@@	Device ID
63	Product ID
45	MessageType: Request
01	Data Type: Preset
##	#Program (00 = Current)
00	(void)
F7	End SysEx

REPLY (DUMP)

F0	Begin SysEx
00 20 1F	Manufacturer ID
@@	Device ID
63	Product ID
20	MessageType: Dump
01	Data Type: Preset
##	#Program
00	(void)
NN	Program Name (24 bytes)
...	data
xx	Checksum over data (%128)
F7	End SysEx

#Program

- 00 Current program
- 01 – 1E Factory Presets
- 1F – 5A User Presets

### System Parameters

REQUEST

F0	Begin SysEx
00 20 1F	Manufacturer ID
@@	Device ID
63	Product ID
45	MessageType: Request
02	Data Type: System
00	(void)
00	(void)
F7	End SysEx

REPLY (DUMP)

F0	Begin SysEx
00 20 1F	Manufacturer ID
@@	Device ID
63	Product ID
20	MessageType: Dump
02	Data Type: System
...	data
xx	Checksum over data (%128)
F7	End SysEx

NOVA SYSTEM SYSEX MAP

POS	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127

NEG	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	-128	-127	-126	-125	-124	-123	-122	-121	-120	-119	-118	-117	-116	-115	-114	-113
1	-112	-111	-110	-109	-108	-107	-106	-105	-104	-103	-102	-101	-100	-99	-98	-97
2	-96	-95	-94	-93	-92	-91	-90	-89	-88	-87	-86	-85	-84	-83	-82	-81
3	-80	-79	-78	-77	-76	-75	-74	-73	-72	-71	-70	-69	-68	-67	-66	-65
4	-64	-63	-62	-61	-60	-59	-58	-57	-56	-55	-54	-53	-52	-51	-50	-49
5	-48	-47	-46	-45	-44	-43	-42	-41	-40	-39	-38	-37	-36	-35	-34	-33
6	-32	-31	-30	-29	-28	-27	-26	-25	-24	-23	-22	-21	-20	-19	-18	-17
7	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1

Decimal to Hexa Converter

	DECI	H1	H2	H3	H4
NEG	-1	7F	7F	7F	07
POS	16000	00	7D	00	00

-200	38	7E
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Hexa to Decimal Converter

	H1	H2	DECI
NEG	38	7E	-200
POS	48	1	200