

Commodore 64 SID Note Values

The value under Hi is POKEd into the Hi byte of the frequency registers (54273, 54280, 54287). Likewise with Lo (54272, 54279, 54286)

Note	Octave 0			Octave 1			Octave 2			Octave 3		
	Oscillator Frequency			Oscillator Frequency			Oscillator Frequency			Oscillator Frequency		
	Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo	
C	268	1	12	536	2	24	1072	4	48	2145	8	97
C#	284	1	28	568	2	56	1136	4	112	2273	8	225
D	301	1	45	602	2	90	1204	4	180	2408	9	104
D#	318	1	62	637	2	125	1275	4	251	2551	9	247
E	337	1	81	675	2	163	1351	5	71	2703	10	143
F	358	1	102	716	2	204	1432	5	152	2864	11	48
F#	379	1	123	758	2	246	1517	5	237	3034	11	218
G	401	1	145	803	3	35	1607	6	71	3215	12	143
G#	425	1	169	851	3	83	1703	6	167	3406	13	78
A	451	1	195	902	3	134	1804	7	12	3608	14	24
A#	477	1	221	955	3	187	1911	7	119	3823	14	239
B	506	1	250	1012	3	244	2025	7	233	4050	15	210

Note	Octave 4			Octave 5			Octave 6			Octave 7		
	Oscillator Frequency			Oscillator Frequency			Oscillator Frequency			Oscillator Frequency		
	Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo		Decimal =	Hi (x256) + Lo	
C	4291	16	195	8583	33	135	17167	67	15	34334	134	30
C#	4547	17	195	9094	35	134	18188	71	12	36376	142	24
D	4817	18	209	9634	37	162	19269	75	69	38539	150	139
D#	5103	19	239	10207	39	223	20415	79	191	40830	159	126
E	5407	21	31	10814	42	62	21629	84	125	43258	168	250
F	5728	22	96	11457	44	193	22915	89	131	45830	179	6
F#	6069	23	181	12139	47	107	24278	94	214	48556	189	172
G	6430	25	30	12860	50	60	25721	100	121	51443	200	243
G#	6812	26	156	13625	53	57	27251	106	115	54502	212	230
A	7217	28	49	14435	56	99	28871	112	199	57743	225	143
A#	7647	29	223	15294	59	190	30588	119	124	61176	238	248
B	8101	31	165	16203	63	75	32407	126	151	64814	253	46

CB2 Note Values

Values are for simple CB2 sound.

PET/CBM : POKE 59467,16 : POKE 59466, (Oct) : POKE 59464, X
 VIC 20 : POKE 37147,16 : POKE 37146, (Oct) : POKE 37144, X
 C64 : POKE 56587,16 : POKE 56586, (Oct) : POKE 56584, X

Note	Oct = 15		Oct = 51		Oct = 85	
	Octave 0	Octave 1	Octave 2	Octave 3	Octave 4	Octave 5
B	251 ^b	125	251	125	251	125
C	238	118	238	118	238	118
C#	224	110	224	110	224	110
D	210	104	210	104	210	104
D#	199	99	199	99	199	99
E	188	93	188	93	188	93
F	177	88	177	88	177	88
F#	168	83	168	83	168	83
G	158	78	158	78	158	78
G#	149	74	149	74	149	74
A	140	69	140	69	140	69
A#	133	65	133	65	133	65

Based on formula: Note n = (Note n-1) / 2 ↑ (1/12)
 Reset Port with first POKE (above), 0

Commodore 64 SID Envelope Rates

Master Volume (MV) = Lo nybble of 54296. MV and A/D/S/R Registers (R1 & R2) are write only.
 Voice1: 54277/8 • Voice2: 54284/5 • Voice3: 54291/2. See Memory Map.

Value	POKE R1, (Hi + Lo)		POKE R2, (Hi + Lo)		
	Hi nybble	Lo nybble	Hi nybble	Lo nybble	
	Attack Rate 0 to peak	Decay Rate peak to SL	Sustain Level val/15th's of MV	Release rate SL to 0	
0	0	2 ms	6 ms	9/15MV	6 ms
16	1	8 ms	24 ms	1/15MV	24 ms
32	2	16 ms	48 ms	2/15MV	48 ms
48	3	24 ms	72 ms	3/15MV	72 ms
64	4	38 ms	114 ms	4/15MV	114 ms
80	5	56 ms	168 ms	5/15MV	168 ms
96	6	68 ms	204 ms	6/15MV	204 ms
112	7	80 ms	240 ms	7/15MV	240 ms
128	8	100 ms	300 ms	8/15MV	300 ms
144	9	250 ms	750 ms	9/15MV	750 ms
160	10	500 ms	1.5 s	10/15MV	1.5 s
176	11	800 ms	2.4 s	11/15MV	2.4 s
192	12	1.0 s	3.0 s	12/15MV	3.0 s
208	13	3.0 s	9.0 s	13/15MV	9.0 s
224	14	5.0 s	15.0 s	14/15MV	15.0 s
240	15	8.0 s	24.0 s	= MV	24.0 s

VIC 20 Note Values

Where two values are shown, it is necessary to alternate between them to get the true note.
 Voice frequency registers are 36874/5/6. Noise reg is 36877. Volume is Lo nybble of 36878. See Memory Map

Note	Octave 0		Octave 1		Octave 2		Octave 3	
	Value	Mod. Val.	Value	Mod. Val.	Value	Mod. Val.	Value	Mod. Val.
C	131		192	195	224		239	240
C#	140		197		226		240	241
D	145		200		227	228		
D#	151		203		229			
E	158		206	207	231			
F	161	162	208	209	232			
F#	166	167	211	212	233			
G	173	174	214		234	235		
G#	178		216		238	236		
A	181	182	218	219	237			
A#	185	186	220	221	237	238		
B	189	190	222	223	239			