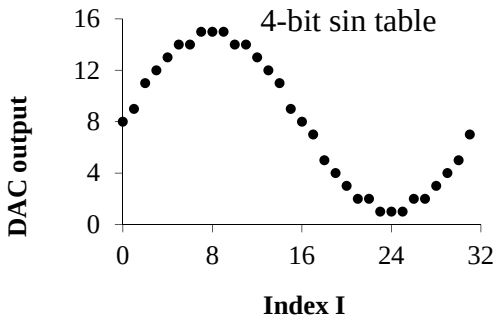
n=	32	A	8	
		B	7	
	time	sin	A+Bsin(t)	integer
0	0	0	8	8
1	0.19635	0.19509	9.365632	9
2	0.392699	0.382683	10.67878	11
3	0.589049	0.55557	11.88899	12
4	0.785398	0.707107	12.94975	13
5	0.981748	0.83147	13.82029	14
6	1.178097	0.92388	14.46716	14
7	1.374447	0.980785	14.8655	15
8	1.570796	1	15	15
9	1.767146	0.980785	14.8655	15
10	1.963495	0.92388	14.46716	14
11	2.159845	0.83147	13.82029	14
12	2.356194	0.707107	12.94975	13
13	2.552544	0.55557	11.88899	12
14	2.748894	0.382683	10.67878	11
15	2.945243	0.19509	9.365632	9
16	3.141593	-7.7E-16	8	8
17	3.337942	-0.19509	6.634368	7
18	3.534292	-0.38268	5.321216	5
19	3.730641	-0.55557	4.111008	4
20	3.926991	-0.70711	3.050253	3
21	4.12334	-0.83147	2.179713	2
22	4.31969	-0.92388	1.532843	2
23	4.516039	-0.98079	1.134503	1
24	4.712389	-1	1	1
25	4.908739	-0.98079	1.134503	1
26	5.105088	-0.92388	1.532843	2
27	5.301438	-0.83147	2.179713	2
28	5.497787	-0.70711	3.050253	3
29	5.694137	-0.55557	4.111008	4
30	5.890486	-0.38268	5.321216	5
31	6.086836	-0.19509	6.634368	7




```
// 4-bit 32-element sine wave
const unsigned short wave[32] = {
  8,9,11,12,13,14,14,15,15,15,14,
  14,13,12,11,9,8,7,5,4,3,2,
  2,1,1,1,2,2,3,4,5,7};
```

		n	
Bus clock	Pnts/wave	Bus/n	
80000000	32	2500000	

	Freq (Hz)	Period	Freq (Hz)	// Period = 80000000/32/Freq=2500000/Freq
C1	2093.0	1194	2093.0	#define C1 1194 // 2093 Hz
B1	1975.5	1265	1975.5	#define B1 1265 // 1975.5 Hz
BF1	1864.7	1341	1864.7	#define BF1 1341 // 1864.7 Hz
A1	1760.0	1420	1760.0	#define A1 1420 // 1760 Hz
AF1	1661.2	1505	1661.2	#define AF1 1505 // 1661.2 Hz

G1	1568.0	1594	1568.0	`#define G1 1594 // 1568 Hz`
GF1	1480.0	1689	1480.0	`#define GF1 1689 // 1480 Hz`
F1	1396.9	1790	1396.9	`#define F1 1790 // 1396.9 Hz`
E1	1318.5	1896	1318.5	`#define E1 1896 // 1318.5 Hz`
EF1	1244.5	2009	1244.5	`#define EF1 2009 // 1244.5 Hz`
D1	1174.7	2128	1174.7	`#define D1 2128 // 1174.7 Hz`
DF1	1108.7	2255	1108.7	`#define DF1 2255 // 1108.7 Hz`
C	1046.5	2389	1046.5	`#define C 2389 // 1046.5 Hz`
B	987.8	2531	987.8	`#define B 2531 // 987.8 Hz`
BF	932.3	2681	932.3	`#define BF 2681 // 932.3 Hz`
A	**880.0**	2841	880.0	`#define A 2841 // 880 Hz`
AF	830.6	3010	830.6	`#define AF 3010 // 830.6 Hz`
G	784.0	3189	784.0	`#define G 3189 // 784 Hz`
GF	740.0	3378	740.0	`#define GF 3378 // 740 Hz`
F	698.5	3579	698.5	`#define F 3579 // 698.5 Hz`
E	659.3	3792	659.3	`#define E 3792 // 659.3 Hz`
EF	622.3	4018	622.3	`#define EF 4018 // 622.3 Hz`
D	587.3	4257	587.3	`#define D 4257 // 587.3 Hz`
DF	554.4	4510	554.4	`#define DF 4510 // 554.4 Hz`
C0	523.3	4778	523.3	`#define C0 4778 // 523.3 Hz`
B0	493.9	5062	493.9	`#define B0 5062 // 493.9 Hz`
BF0	466.2	5363	466.2	`#define BF0 5363 // 466.2 Hz`
A0	440.0	5682	440.0	`#define A0 5682 // 440 Hz`
AF0	415.3	6020	415.3	`#define AF0 6020 // 415.3 Hz`
G0	392.0	6378	392.0	`#define G0 6378 // 392 Hz`
GF0	370.0	6757	370.0	`#define GF0 6757 // 370 Hz`
F0	349.2	7159	349.2	`#define F0 7159 // 349.2 Hz`
E0	329.6	7584	329.6	`#define E0 7584 // 329.6 Hz`
EF0	311.1	8035	311.1	`#define EF0 8035 // 311.1 Hz`
D0	293.7	8513	293.7	`#define D0 8513 // 293.7 Hz`
DF0	277.2	9019	277.2	`#define DF0 9019 // 277.2 Hz`
C7	261.6	9556	261.6	`#define C7 9556 // 261.6 Hz`
B7	246.9	10124	246.9	`#define B7 10124 // 246.9 Hz`
BF7	233.1	10726	233.1	`#define BF7 10726 // 233.1 Hz`
A7	220.0	11364	220.0	`#define A7 11364 // 220 Hz`
AF7	207.7	12039	207.7	`#define AF7 12039 // 207.7 Hz`
G7	196.0	12755	196.0	`#define G7 12755 // 196 Hz`
GF7	185.0	13514	185.0	`#define GF7 13514 // 185 Hz`
F7	174.6	14317	174.6	`#define F7 14317 // 174.6 Hz`
E7	164.8	15169	164.8	`#define E7 15169 // 164.8 Hz`
EF7	155.6	16071	155.6	`#define EF7 16071 // 155.6 Hz`
D7	146.8	17026	146.8	`#define D7 17026 // 146.8 Hz`
DF7	138.6	18039	138.6	`#define DF7 18039 // 138.6 Hz`
C6	130.8	19111	130.8	`#define C6 19111 // 130.8 Hz`