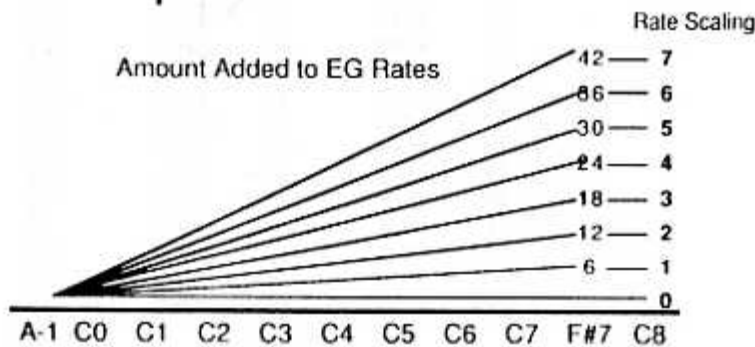


## Tables

1. **Conversion between DX7 Function controller ranges (0-99) and Opcode Patch Editor/TX Function controller ranges (0-15).** When you send a change to a Function parameter to a DX7, the Patch Editor automatically performs the conversion for you. *Source: Yamaha TX7 Owner's Manual*

<b>TX</b>	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>DX</b>	0	6	13	19	26	33	39	46	53	59	66	72	79	86	92	99

2. **Diagram of Keyboard Rate Scaling functions.** The graph shows you the number *added* to all of an Operator's EG Rates depending on what note is played. The notes are in the "absolute" pitch system, so transposing the Voice on the keyboard will affect what the Rate Scaling does. *Source: Yamaha DX7 Operation Manual*



**Fixed Fine Frequency values**

This table lists the four digits of the Fine Frequency when the Oscillator Mode is set to Fixed ('F'). Changing the Coarse Frequency in this case multiplies the value by a power of 10.

Step	Freq	Step	Freq	Step	Freq	Step	Freq
0	1000	25	1778	50	3162	75	5623
1	1023	26	1820	51	3236	76	5754
2	1047	27	1862	52	3311	77	5888
3	1072	28	1905	53	3388	78	6026
4	1096	29	1950	54	3467	79	6166
5	1122	30	1995	55	3548	80	6310
6	1148	31	2042	56	3631	81	6457
7	1175	32	2089	57	3715	82	6607
8	1202	33	2138	58	3802	83	6761
9	1230	34	2188	59	3890	84	6918
10	1259	35	2239	60	3981	85	7079
11	1288	36	2291	61	4074	86	7244
12	1318	37	2344	62	4169	87	7413
13	1349	38	2399	63	4266	88	7586
14	1380	39	2455	64	4365	89	7762
15	1413	40	2512	65	4467	90	7943
16	1445	41	2570	66	4571	91	8128
17	1479	42	2630	67	4677	92	8318
18	1514	43	2692	68	4786	93	8511
19	1549	44	2716	69	4898	94	8718
20	1585	45	2818	70	5012	95	8913
21	1622	46	2884	71	5129	96	9120
22	1660	47	2951	72	5248	97	9333
23	1690	48	3020	73	5370	98	9550
24	1738	49	3090	74	5495	99	9772

4. Envelope Time Calculation Tables

4A. Times for Envelopes to go up from 0 to 99. Interpolate for values in between the rates listed.

Rate	Time (seconds)	Rate	Time
99	.003	55	.321
96	.003	52	.409
93	.005	49	.505
90	.007	46	.615
87	.008	43	.737
84	.008	35	1.3
81	.011	30	1.8
78	.014	25	2.7
75	.018	20	4.8
72	.024	15	7.5
69	.032	10	12
67	.055	5	22.8
61	.080	1	38.0

4B. Times for Envelopes to go down from 99 to 0.

Rate	Time(seconds)	Rate	Time(seconds)
99	.008	58	.99
96	.008	55	1.34
93	.008	52	1.99
90	.013	46	3.98
87	.020	43	5.66
84	.025	35	7.0
81	.037	30	11.2
78	.047	25	20
75	.068	20	39.7
72	.081	15	63
69	.15	10	115
66	.41	5	181
61	.71	1	318 (over five minutes!)

4C.

Percentage of 0-99 up times for EG Levels. Interpolate for values in between those listed. Note: Astoundingly, any EG level below 31 is equivalent to a level of 0, and the rise time between 0 and such a level is effectively instantaneous.

<u>Level</u>	<u>Percentage of 0-99 time to go from 0 to Level</u>
>=31	0%
35	2
40	6
50	14
60	24
70	35
80	50
90	70
95	86
99	100

4D.

Percentage of 99-0 down times for EG Levels.

<u>Level</u>	<u>Percentage of 99-0 time to from Level to 0</u>
99	100%
90	92
80	84
70	77
60	70
50	59
40	52
30	43
20	35
10	25
0	0