

Strobe-Exec

A basic stroboscope disc program for DOS, developed by Adrian Hindle-Briscall
<http://www.78rpm.com/turntables/Strobe.htm>

This program was designed for use by collectors of vintage 78 rpm recordings. These records, despite their name, do not all rotate at 78 rpm. Early disc recordings can go as slow as 60 rpm, while other types will play at speeds of up to 120 rpm. Cylinder speeds are also variable, though most later examples will turn at a consistent speed of 160 rpm. Therefore, to properly play vintage recordings one needs a variable speed turntable with an accurate method of setting the correct speed. Most of the turntables offered for sale by Nauck's Vintage Records have a variable speed control. This free program will enable the collector to print accurate stroboscopic discs which may then be used to properly set the variable speed control to whatever rotational velocity may be required.

System Requirements

This software requires a PC or compatible, 286 or higher, with a VGA monitor handling 2 colors at 640 x 480 resolution. The program itself runs in DOS, and an image editor or graphics program is required to print the images that will be created. (Windows comes with a simple image editor called Paint or Paintbrush, for instance, but most anything will work.)

Instructions

Using the Print command (found in the menu located at the top of your monitor screen), print a hard copy of this instruction page.

Download the strobe program to a directory on your hard drive by clicking on the "Download" button at the bottom of this page. This will create a file called STROBE.EXE in the directory you selected.

Go to a DOS prompt. (You may access the DOS prompt through Windows, or you may exit Windows to get to the prompt. Either way will work.)

Refer to the chart at the end of this instruction sheet to determine the rotational speed you desire. If you live in the USA (or any other country that uses a mains frequency of 60Hz) refer to the 60Hz column. If you live in a country that uses a 50Hz electrical supply (most European countries), then refer to the 50Hz column.

Find the speed(s) desired in the appropriate "RPM" column (or the nearest speeds available), and note the corresponding number(s) in the "Bands" column. [The band number is the total number of stroboscopic marks required to make up the strobe speed you have selected.]

Go to the directory where you downloaded the program, and type "strobe", followed by up to five band numbers (separated by spaces, not commas). This command will produce a strobe having one to five rings, with the first band selected being the outer ring and the last band selected being the inner ring.

For example, lets say you downloaded the Strobe file to a directory on your C:\ drive called "Shellac". Let's also say that you live in the United States, and you want a strobe displaying the following speeds: 80.00, 79.12, 78.26 and 77.42 rpm. Your screen should look like this:

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C:\SHELLAC>strobe 90 91 92 93
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Now hit the enter key. You should now see one to five concentric rings of bands on your computer monitor. This image may be sent directly to your computer printer to print the actual strobe disc that you will use on your turntable. Additionally, an image file called STROBE.BMP has automatically been created in the Shellac directory, overwriting any existing file of that name. If you wish to save several different strobe files, rename the newly created STROBE.BMP file each time you run the program.

Important Note: If you are running Strobe.exe from a DOS prompt within Windows 95 or NT, you may not see the strobe rings on your computer screen. However, a

STROBE.BMP file was still created, and may be accessed according to the following instructions.

The .BMP files that this program creates can be read and printed by virtually any image editor or graphics package. Using the graphics package, you can add any text you want (such as the speed that each band represents), scale it to the size you want, and print it out on a laser printer.

Using your Strobe

Once you have printed out your strobe, punch or cut out the center spindle hole and place the strobe on your turntable (or attach it to your cylinder phonograph mandrel). Watch the strobe ring under a normal fluorescent or incandescent light, and adjust the speed control of your turntable until the bands in the ring appear stationary. Your turntable is now rotating at the speed you selected!

Notes

The strobe bands will appear a little rough at a screen resolution of 640 x 480 pixels. However, this is not important - they work just as well as neat ones.

If you wish to set your turntable at a speed not appearing on this chart, print the two speeds closest to the one you desire. For instance, if you wanted a speed of 245 rpm at 50Hz, then print out strobe rings for 240 and 250. When you place the strobe on your turntable, adjust the speed to the point that one set of bands is going in one direction and the other set of bands is going in the opposite direction. Since 245 rpm is exactly midway between these two strobe speeds, each set of bands should be moving at the same velocity.

50 Hz		60Hz		50Hz		60Hz		50Hz		60Hz
RPM	Bands	RPM		RPM	Bands	RPM		RPM	Bands	RPM
300.00	20	360.00		63.83	94	76.60		35.71	168	42.86
285.71	21	342.86		63.16	95	75.79		35.50	169	42.60
272.73	22	327.27		62.50	96	75.00		35.29	170	42.35
260.87	23	313.04		61.86	97	74.23		35.09	171	42.11
250.00	24	300.00		61.22	98	73.47		34.88	172	41.86
240.00	25	288.00		60.61	99	72.73		34.68	173	41.62
230.77	26	276.92		60.00	100	72.00		34.48	174	41.38
222.22	27	266.67		59.41	101	71.29		34.29	175	41.14
214.29	28	257.14		58.82	102	70.59		34.09	176	40.91
206.90	29	248.28		58.25	103	69.90		33.90	177	40.68
200.00	30	240.00		57.69	104	69.23		33.71	178	40.45
193.55	31	232.26		57.14	105	68.57		33.52	179	40.22
187.50	32	225.00		56.60	106	67.92		33.33	180	40.00
181.82	33	218.18		56.07	107	67.29		33.15	181	39.78
176.47	34	211.76		55.56	108	66.67		32.97	182	39.56
171.43	35	205.71		55.05	109	66.06		32.79	183	39.34
166.67	36	200.00		54.55	110	65.45		32.61	184	39.13
162.16	37	194.59		54.05	111	64.86		32.43	185	38.92
157.89	38	189.47		53.57	112	64.29		32.26	186	38.71
153.85	39	184.62		53.10	113	63.72		32.09	187	38.50
150.00	40	180.00		52.63	114	63.16		31.91	188	38.30
146.34	41	175.61		52.17	115	62.61		31.75	189	38.10

142.86	42	171.43		51.72	116	62.07		31.58	190	37.89
139.53	43	167.44		51.28	117	61.54		31.41	191	37.70
136.36	44	163.64		50.85	118	61.02		31.25	192	37.50
133.33	45	160.00		50.42	119	60.50		31.09	193	37.31
130.43	46	156.52		50.00	120	60.00		30.93	194	37.11
127.66	47	153.19		49.59	121	59.50		30.77	195	36.92
125.00	48	150.00		49.18	122	59.02		30.61	196	36.73
122.45	49	146.94		48.78	123	58.54		30.46	197	36.55
120.00	50	144.00		48.39	124	58.06		30.30	198	36.36
117.65	51	141.18		48.00	125	57.60		30.15	199	36.18
115.38	52	138.46		47.62	126	57.14		30.00	200	36.00
113.21	53	135.85		47.24	127	56.69		29.85	201	35.82
111.11	54	133.33		46.88	128	56.25		29.70	202	35.64
109.09	55	130.91		46.51	129	55.81		29.56	203	35.47
107.14	56	128.57		46.15	130	55.38		29.41	204	35.29
105.26	57	126.32		45.80	131	54.96		29.27	205	35.12
103.45	58	124.14		45.45	132	54.55		29.13	206	34.95
101.69	59	122.03		45.11	133	54.14		28.99	207	34.78
100.00	60	120.00		44.78	134	53.73		28.85	208	34.62
98.36	61	118.03		44.44	135	53.33		28.71	209	34.45
96.77	62	116.13		44.12	136	52.94		28.57	210	34.29
95.24	63	114.29		43.80	137	52.55		28.44	211	34.12
93.75	64	112.50		43.48	138	52.17		28.30	212	33.96
92.31	65	110.77		43.17	139	51.80		28.17	213	33.80
90.91	66	109.09		42.86	140	51.43		28.04	214	33.64
89.55	67	107.46		42.55	141	51.06		27.91	215	33.49
88.24	68	105.88		42.25	142	50.70		27.78	216	33.33
86.96	69	104.35		41.96	143	50.35		27.65	217	33.18
85.71	70	102.86		41.67	144	50.00		27.52	218	33.03
84.51	71	101.41		41.38	145	49.66		27.40	219	32.88
83.33	72	100.00		41.10	146	49.32		27.27	220	32.73
82.19	73	98.63		40.82	147	48.98		27.15	221	32.58
81.08	74	97.30		40.54	148	48.65		27.03	222	32.43
80.00	75	96.00		40.27	149	48.32		26.91	223	32.29
78.95	76	94.74		40.00	150	48.00		26.79	224	32.14
77.92	77	93.51		39.74	151	47.68		26.67	225	32.00
76.92	78	92.31		39.47	152	47.37		26.55	226	31.86
75.95	79	91.14		39.22	153	47.06		26.43	227	31.72
75.00	80	90.00		38.96	154	46.75		26.32	228	31.58
74.07	81	88.89		38.71	155	46.45		26.20	229	31.44
73.17	82	87.80		38.46	156	46.15		26.09	230	31.30
72.29	83	86.75		38.22	157	45.86		25.97	231	31.17
71.43	84	85.71		37.97	158	45.57		25.86	232	31.03
70.59	85	84.71		37.74	159	45.28		25.75	233	30.90
69.77	86	83.72		37.50	160	45.00		25.64	234	30.77

68.97	87	82.76		37.27	161	44.72		25.53	235	30.64
68.18	88	81.82		37.04	162	44.44		25.42	236	30.51
67.42	89	80.90		36.81	163	44.17		25.32	237	30.38
66.67	90	80.00		36.59	164	43.90		25.21	238	30.25
65.93	91	79.12		36.36	165	43.64		25.10	239	30.13
65.22	92	78.26		36.14	166	43.37		25.00	240	30.00
64.52	93	77.42		35.93	167	43.11				

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