

Appendix E

Plotting Program Details

The various plotting programs described in Appendices C and D, viz., **PLOTE**, **PLOTD**, **PLOTF**, **PLOTP** and **PLOTS**, run on IBM PC and compatible microcomputers with 640k of memory. They create both video and hardcopy plots for many of the standard display devices currently available. The information in this appendix pertains to all five of the plotting programs, the executable versions of which are provided on the distribution diskette accompanying this book. Read the file **read.me** in the root directory of the distribution diskette to determine the location of the executable and input-data files for the plotting programs.

E.1 Font Files

With the exception of **PLOTE**, all of the plotting programs reference a font file named **sppfnt.002**, that contains a scientific character font. Copy this file from the distribution diskette to any convenient directory. The plotting programs that use this file include an input parameter called *path* that corresponds to the directory in which **sppfnt.002** is located. Be sure to include the path name in your input data file.

E.2 Video Devices

Input parameter *mon* selects monitor type and resolution; valid devices are listed on the following page. Note that enhanced VGA modes, i.e., modes with resolution finer than 640 columns by 480 rows, are specific to each manufacturer's video card.

<i>mon</i>	Description	Columns	Rows
4	CGA 4-Color	320	200
5	CGA Black & White	320	200
6	CGA Black & White	640	200
13	EGA 16-Color	320	200
14	EGA 16-Color	640	200
15	EGA Monochrome	640	350
16	EGA 16-Color	640	350
17	MCGA & VGA 2-Color	640	480
18	VGA 16-Color	640	480
19	MCGA & VGA 256-Color	320	200
37	Genoa VGA 16-Color	640	480
39	Genoa VGA 16-Color	720	512
40	Hercules Monochrome	720	348
41	Genoa/Orchid VGA 16-Color	800	600
45	Genoa EGA 256-Color	640	350
46	Genoa/Orchid VGA 256-Color	640	480
47	Genoa VGA 256-Color	720	512
55	Genoa/Orchid VGA 16-Color	1024	768
56	Orchid VGA 256-Color	1024	768
72	AT&T 6300 Monochrome	640	400
84	ATI VGA 16-Color	800	600
89	Genoa VGA 16-Color	720	512
91	Genoa EGA 256-Color	640	350
92	Genoa VGA 256-Color	640	480
93	Genoa VGA 256-Color	720	512
95	Genoa VGA 16-Color	1024	768
99	ATI VGA 256-Color	800	600
100	ATI VGA 256-Color	1024	768
103	ATI VGA 4-Color	1024	768
115	Genoa VGA 16-color	640	480
121	Genoa VGA 16-color	800	600
124	Genoa VGA 16-color	512	512
125	Genoa VGA 256-color	512	512
200	Everex VGA 16-Color	640	480
201	Everex VGA 16-Color	752	410
202	Everex VGA 16-Color	800	600
217	Everex EGA 4-Color	1280	350
219	Everex EGA 256-Color	640	350
220	Everex VGA 256-Color	640	400
221	Everex VGA 256-Color	512	480
296	Video-7 VGA 16-Color	752	410
297	Video-7 VGA 16-Color	720	540
298	Video-7 VGA 16-Color	800	600
299	Video-7 VGA 2-Color	1024	768
300	Video-7 VGA 4-Color	1024	768
301	Video-7 VGA 16-Color	1024	768
302	Video-7 VGA 256-Color	640	400
303	Video-7 VGA 256-Color	640	480
304	Video-7 VGA 256-Color	720	540
305	Video-7 VGA 256-Color	800	600
700	Wyse-700 Monochrome	1280	800

E.3 Plotting Colors

Input parameters *ifore* and *iback* set foreground and background plotting colors, respectively. The standard MS-DOS color coding scheme is used to set these colors. The MS-DOS color code is summarized below, where *icolor* is the color number and 'color' is the corresponding color.

<i>icolor</i>	color	<i>icolor</i>	color
0	Black	8	Dark Gray
1	Blue	9	Light Blue
2	Green	10	Light Green
3	Cyan	11	Light Cyan
4	Red	12	Light Red
5	Magenta	13	Light Magenta
6	Brown or Yellow	14	Yellow or Light Yellow
7	White	15	Bright White

E.4 Hardcopy Devices

Two input parameters are required for hardcopy plots, *nprin* and *mode*. The parameter *nprin* specifies the printer or plotter type. For a printer, *mode* specifies the resolution. For a plotter *mode* is the number of pens. Valid devices are as follows.

<i>nprin</i>	Printer type
0	Hewlett-Packard LaserJet Series I
1	Hewlett-Packard LaserJet Series II
2	Hewlett-Packard DeskJet
8	Epson with 8-pin printer head (older models)
24	Epson with 8-pin and 24-pin printer heads
25	Epson color dot-matrix printer
80	HPGL plotter without built-in circle drawing
90	HPGL plotter with built-in circle drawing
115	CGP-115 4-pen color plotter

Resolution for each printer and mode is given below as horizontal by vertical numbers of dots per inch.

***nprin* = 0,1,2 ... Hewlett-Packard**

<i>mode</i>	dots/in	<i>mode</i>	dots/in
0	75 x 75	2	50 x 150
1	100 x 100	3	300 x 300

nprin = 8 ... Epson 8-pin

<i>mode</i>	dots/in	<i>mode</i>	dots/in
0	60 x 72	4	80 x 72
1	120 x 72	5	72 x 72
2	120 x 72	6	90 x 72
3	240 x 72		

nprin = 24,25 ... Epson 24-pin

<i>mode</i>	dots/in	<i>mode</i>	dots/in
0	60 x 60	32	60 x 180
1	120 x 60	33	120 x 180
2	120 x 60	38	90 x 180
3	240 x 60	39	180 x 180
4	80 x 60	40	360 x 180
6	90 x 60		