

Typographic Font Programs for Library and Personal Use

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Today's dot matrix printers, such as those in the EPSON MX, C. ITOM, NEC, and Microline series, are very sophisticated. These printers are programmable to print different typographic fonts when connected to a microcomputer with a compatible parallel interface board. The printing of different typographic fonts is usually accomplished by inputting instructions through the keyboard unit to the printer via an interface board, such as GRAPPLER PLUS or GRAFTRAX PLUS. These instructions using special "control codes" stored in the memory are nonvolatile; that is, the printer always remembers these codes even after the printer is turned off.

In addition to the standardized ASCII coded numbers for upper and lower case letters, numerical numbers, punctuations, and symbols, a user can instruct the printer to print wide font, narrow font, smaller font, smallest font, bold font, heavy font, very heavy font, italics font, and some combinations of these fonts.

The standardized size font requires 5 dots in width by 7 dots in height to print; the wide font requires 10 dots by 7 dots; the narrow font requires 3 dots by 7 dots; smaller font requires 5 dots by 5 dots; and the smallest font requires 3 dots by 3 dots. Thus, each wide letter takes the space usually required for two letters in the standardized size, and every five narrow letters take the space usually required for three letters in the standardized size.

During the printing of standardized size font, the dots are struck once. It is possible to instruct the printer to strike twice, or to strike in between the dots, or to strike combinations that print letters that look like solid typography.

By utilizing all of these capabilities, it is possible to create thirty different print fonts in upper case and thirty in lower case. (See examples on pages 124-127.) Numerical numbers, punctuations, and symbols also are executed in the same mode. The underline mode may be superimposed on any of the thirty fonts.

Because these special "control codes" have very little mnemonic value, a user may have to spend some time searching for these codes in the technical manual when a special font is needed. A convenient way to avoid this searching time is to write a short program for each font and to store these programs on disk under descriptive names; for example, normal, italics, compressed, superscript, subscript, double strike, double width, etc. (See programs on pp. 128-131.) When a particular font is needed, follow these simple procedures:

- 1) turn on the printer,
- 2) type PR # 1,
- 3) type RUN font name [such as RUN COMPRESSED],
- 4) remove the program disk,
- 5) insert the disk with the document to be printed,
- 6) type RUN document name.

After the printing is completed, replace the disk and type RUN NORMAL to return to the standardized mode. If you fail to do this, fonts may be superimposed on each other. For example, after RUN COMPRESSED and RUN DOUBLE WIDTH, the result will be double width compressed which looks just like emphasized normal in 5 x 7 dots instead of true double width in 10 x 7 dots.

These short programs may also save time when you need to build special codes, along with other regular codes, into a large computer program. Simply list the program from the disk and incorporate the codes into the large computer program.

There are many applications of typographic fonts for both library and personal use. For example, double emphasized mode can give your document a "letter quality" appearance. It can also be used for making captions for slides and filmstrips using copy-stand set up. Double emphasized double width is just right for producing a master for an overhead transparency. Double strike compressed is best for producing a camera-ready copy for publishing (program listing in this article is a result of this font). Subscript compressed or superscript compressed superimposed with the program for "closed up line spacing" (see page 131) can reduce a long document in a shorter space. The program on "double line spacing" may be superimposed on double width to make the printout more readable. Type PRINT CHR\$(27)"2" to return to regular line spacing. Other applications are limited only by your imagination.

The following programs are written in Applesoft BASIC in the environment of APPLE IIe, EPSON MX-80 with GRAPPLER PLUS interface.

The following manuals were used for reference: David A. Lien, EPSON MX Printer Manual [San Diego, CA: Compusoft Publishing, 1982] and Grappler + Printer Interface Operators Manual [Anaheim, CA: Orange Micro Inc., 1982].

THIS IS NORMAL.

This is normal.

THIS IS ITALICS.

This is Italics.

THIS IS DOUBLE STRIKE.

This is double strike.'

THIS IS DOUBLE STRIKE ITALICS.

This is double strike Italics.

THIS IS EMPHASIZED NORMAL.

This is emphasized normal.

THIS IS EMPHASIZED ITALICS.

This is emphasized Italics.

THIS IS DOUBLE EMPHASIZED.

This is double emphasized.

THIS IS DOUBLE EMPHASIZED ITALICS.

This is double emphasized Italics.

THIS IS COMPRESSED.

This is compressed.

THIS IS COMPRESSED ITALICS.

This is compressed Italics.

THIS IS DOUBLE STRIKE COMPRESSED.

This is double strike compressed.

THIS IS DOUBLE STRIKE ITALICS COMPRESSED.

This is double strike Italics compressed.

THIS IS SUBSCRIPT.

This is subscript.

THIS IS SUBSCRIPT ITALICS.

This is subscript Italics.

THIS IS SUPERSCRIPIT.

This is superscript.

THIS IS SUPERSCRIPIT ITALICS.

This is superscript Italics.

THIS IS SUBSCRIPT COMPRESSED.

This is subscript compressed.

THIS IS SUBSCRIPT COMPRESSED ITALICS.

This is subscript compressed Italics.

THIS IS SUPERSCRIPIT COMPRESSED.

This is superscript compressed.

THIS IS SUPERSCRIPIT COMPRESSED ITALICS.

This is superscript compressed Italics.

THIS IS DOUBLE WIDTH COMPRESSED.

This is double width compressed.

THIS IS DOUBLE WIDTH ITALICS
COMPRESSED.

*This is double width Italics
compressed.*

THIS IS DOUBLE WIDTH.

This is double width.

THIS IS DOUBLE WIDTH
ITALICS.

*This is double width
Italics.*

THIS IS DOUBLE STRIKE
DOUBLE WIDTH.

*This is double strike
double width.*

**THIS IS DOUBLE STRIKE
DOUBLE WIDTH ITALICS.**

*This is double strike
double width Italics.*

**THIS IS EMPHASIZED
DOUBLE WIDTH.**

**This is emphasized
double width.**

**THIS IS EMPHASIZED
DOUBLE WIDTH ITALICS.**

*This is emphasized
double width Italics.*

**THIS IS DOUBLE
EMPHASIZED
DOUBLE WIDTH.**

**This is double
emphasized
double width.**

**THIS IS DOUBLE
EMPHASIZED DOUBLE
WIDTH ITALICS.**

*This is double
emphasized double
width Italics.*

THIS IS UNDERLINE.

This is underline.


```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     NORMAL MODE
40 REM *****
50 PRINT CHR$ (27) CHR$ (64)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE STRIKE MODE
40 REM *****
50 PRINT CHR$ (27) CHR$ (71)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     EMPHASIZED NORMAL MODE
40 REM *****
50 PRINT CHR$ (27) CHR$ (64)
60 PRINT CHR$ (27) "E"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE EMPHASIZED
40 REM *****
50 PRINT CHR$ (27) "G"
60 PRINT CHR$ (27) "E"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     COMPRESSED MODE
40 REM *****
50 PRINT CHR$ (15)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     ITALICS MODE
40 REM *****
50 PRINT CHR$ (27) "4"
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE STRIKE ITALICS
40 REM *****
50 PRINT CHR$ (27) CHR$ (71)
60 PRINT CHR$ (27) "4"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     EMPHASIZED ITALICS
40 REM *****
50 PRINT CHR$ (27) "4"
60 PRINT CHR$ (27) "E"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE EMPHASIZED
40 REM     ITALICS
50 REM *****
60 PRINT CHR$ (27) "G"
70 PRINT CHR$ (27) "E"
80 PRINT CHR$ (27) "4"
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     COMPRESSED ITALICS
40 REM *****
50 PRINT CHR$ (15)
60 PRINT CHR$ (27) "4"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE STRIKE
40 REM     COMPRESSED
50 REM *****
60 PRINT CHR$ (27) CHR$ (71)
70 PRINT CHR$ (15)
80 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     DOUBLE STRIKE ITALICS
40 REM     COMPRESSED
50 REM *****
60 PRINT CHR$ (27) CHR$ (71)
70 PRINT CHR$ (27) "4"
80 PRINT CHR$ (15)
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUBSCRIPT MODE
40 REM *****
50 PRINT CHR$ (27) "S" CHR$ (1)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUBSCRIPT ITALICS
40 REM *****
50 PRINT CHR$ (27) "4"
60 PRINT CHR$ (27) "S" CHR$ (1)
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUPERSCRIPIT MODE
40 REM *****
50 PRINT CHR$ (27) "S" CHR$ (0)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUPERSCRIPIT ITALICS
40 REM *****
50 PRINT CHR$ (27) "4"
60 PRINT CHR$ (27) "S" CHR$ (0)
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUBSCRIPT COMPRESSED
40 REM *****
50 PRINT CHR$ (15)
60 PRINT CHR$ (27) "S" CHR$ (1)
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM     SUBSCRIPT COMPRESSED
40 REM     ITALICS
50 REM *****
60 PRINT CHR$ (27) "4"
70 PRINT CHR$ (15)
80 PRINT CHR$ (27) "S" CHR$ (1)
90 END

```



```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM SUPERSCRIP COMPRESSED
40 REM *****
50 PRINT CHR$ (15)
60 PRINT CHR$ (27)"S" CHR$ (0)
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE WIDTH COMPRESSED
40 REM *****
50 PRINT CHR$ (15)
60 PRINT CHR$ (27)"W" CHR$ (1)
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE WIDTH MODE
40 REM *****
50 PRINT CHR$ (27)"W" CHR$ (1)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE STRIKE
40 REM DOUBLE WIDTH
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27) CHR$ (71)
80 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM SUPERSCRIP COMPRESSED
40 REM ITALICS
50 REM *****
60 PRINT CHR$ (27)"4"
70 PRINT CHR$ (15)
80 PRINT CHR$ (27)"S" CHR$ (0)
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE WIDTH ITALICS
40 REM COMPRESSED
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27)"4"
80 PRINT CHR$ (15)
90 END

```

```

1 REM *****
2 REM THIS PROGRAM ACTIVATES
3 REM DOUBLE WIDTH ITALICS
4 REM *****
5 PRINT CHR$ (27)"W" CHR$ (1)
6 PRINT CHR$ (27)"4"
7 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE STRIKE DOUBLE
40 REM WIDTH ITALICS
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27) CHR$ (71)
80 PRINT CHR$ (27)"4"
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM EMPHASIZED DOUBLE WIDTH
40 REM *****
50 PRINT CHR$ (27)"W" CHR$ (1)
60 PRINT CHR$ (27)"E"
70 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE EMPHASIZED
40 REM DOUBLE WIDTH
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27)"G"
80 PRINT CHR$ (27)"E"
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM UNDERLINE MODE
40 REM *****
50 PRINT CHR$ (27) CHR$ (45)
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM CLOSED UP LINE SPACING
40 REM *****
50 PRINT CHR$ (27)"1"
60 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM EMPHASIZED
40 REM DOUBLE WIDTH ITALICS
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27)"E"
80 PRINT CHR$ (27)"4"
90 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM DOUBLE EMPHASIZED
40 REM DOUBLE WIDTH ITALICS
50 REM *****
60 PRINT CHR$ (27)"W" CHR$ (1)
70 PRINT CHR$ (27)"G"
80 PRINT CHR$ (27)"E"
90 PRINT CHR$ (27)"4"
100 END

```

```

10 REM *****
20 REM THIS PROGRAM ACTIVATES
30 REM CLOSER LINE SPACING
40 REM *****
50 PRINT CHR$ (27)"0"
60 END

```

```

1 REM *****
2 REM THIS PROGRAM ACTIVATES
3 REM DOUBLE LINE SPACING
4 REM *****
5 PRINT CHR$ (27)"A" CHR$ (24)
6 END

```