SUPER GEMPRINT PROGRAM
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INSTRUCTIONS

SUPER GEMPRINT is a machine language program that will copy the image of any high-resolution screen (PMODE 0, 1, 2, 3, or 4) to a Star printer. In order to fill an entire page, the image is printed sideways (starting from the left edge of the screen). Printing of the four-color modes is implemented with gray-level shading.

In order to use the program, you must first load it into memory. The program has been written in position-independent code, so it may be loaded in any desired location. With a 16K computer, enter the following commands.

```
for tape:                  for disk:
CLEAR 200,15775            CLEAR 200,15775
CLOADM "SUPERPRT"          LOADM "SUPERPRT"
```

The "200" in the CLEAR statement is an example only; if more or less string space is needed, it may be specified here.

With a 32K computer, the program may be loaded into higher memory. For example,

```
CLEAR 200,32159
CLOADM "SUPERPRT",16384
```

When no offset is specified, the program loads at 15776 (or $3DA0). It is 593 bytes long.

After loading SUPERPRT, run whatever program you have that generates a graphics display. Once the picture is on the screen, you may dump it to your printer in one of two ways. You can do it manually by stopping your program (perhaps by hitting the <BREAK> key) and entering the following command:

```
EXEC 15776 (....or 32160 if you used the offset)
```

Or you can start the printing from within your program by putting the LOADM & EXEC statements in your program. The following is a sample program that will load SUPERPRT, draw a circle on the screen, and dump the image to the printer.

```
10 CLEAR 200,&H3D9F                    ($3D9F = 15775)
20 LOADM "SUPERPRT"
30 PMODE 4: PCLS: SCREEN 1,1
40 CIRCLE (128,96),120
50 EXEC &H3DA0                         ($3DA0 = 15776)
```

Printing can be aborted by depressing the <BREAK> key for a few seconds. The paper will advance to the top of the next page.

SUPERPRT can be saved to load with an offset in the following manner.

```
LOADM "SUPERPRT",offset
SAVEM "SUPERHI",&H3DA0+offset,&H3FF0+offset,&H3DA0+offest
```

It is possible to change the correspondence between the colors seen on the screen and the shades used by the printer. For the two-color modes, SUPERPRT has been set to print the foreground color as black and the background color as white. This may be altered by carefully following these steps:

1. Load SUPERPRT as normal. We will let S represent the starting address. Thus if the program has been loaded with no offset, S = &H3DA0 = 15776 .
2. If offset is used S = 15776 + offset
3. POKE(S + 563),252
4. POKE(S + 564),28
5. POKE(S + 565),224
6. POKE(S + 566),0
7. Execute or save the program as normal.

For the four-color modes, SUPERPRT has been set to print the colors according to the following table:

CODE	SCREEN		PRINTER
	Color-set 0	Color-set 1	
%00	green	buff	white
%01	yellow	cyan	light gray
%10	blue	magenta	dark gray
%11	red	orange	black

Thus black is used for the default foreground color and white is used for the default background color. To change any of these assignments, carefully follow these instructions:

1. Load SUPERPRT as normal. We will let S represent the starting address. Thus if the program has been loaded with no offset, S = &H3DA0 = 15776.
2. If offset is used S= 15776 + offset
3. Decide which shades you want to assign to which colors. Assign each color a shade value according to the following table.

VALUE	SHADE
0	white
1	light gray
2	dark gray
3	black

4. Check the binary codes assigned to each color. These are given in the large table above. Note that these codes are different from the color codes used by BASIC.
5. POKE(S + 591), Shade Value for color %00
6. POKE(S + 592), Shade Value for color %01
7. POKE(S + 593), Shade Value for color %10
8. POKE(S + 594), Shade value for color %11
9. Execute or save the program as normal.