

**MAGNIPRINT
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FOR ALL ATARI COMPUTER SYSTEMS

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SYSTEMS

MAGNIPRINT

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MAGNIPRINT

I. Introduction

Magniprint is a multi-faceted screen to printer dump utility. It can print all the 11 Atari graphics modes except text graphics modes 1 & 2. It is extremely flexible with graphics modes 8 & 9, allowing multiple size printing, printing of only selective areas of the picture, and large poster size printing. It even prints Graphic 9 mode with full shading.

Magniprint allows you to save pictures you create into a special format that can be printed. In addition, other programs allow you to use pictures developed using Micropainter, Graphic Master and Micro Illustrator (used by Koala pad and several other products) with Magniprint and allows them to be printed with all the advanced features of a graphics 8 picture.

As an additional bonus, a program called Print All is included, which allows you to print your basic programs or files showing all inverse and Atari graphics characters.

Requirements:

Atari computer with 48K
Basic language cartridge
NEC, CITHO, Gemini or Epson printers with graphics capabilities.

II. Loading Instructions

To load Magniprint, just turn on your disk drive and insert the front of the Magniprint disk. Then turn on your computer (with Basic

cartridge). Magniprint will automatically load. Turn your printer on while program is loading.

When completed, the following programs appear awaiting your selection.

1. Magniprint
2. Print All
3. Micropainter/Graphic Master Conversion to Magniprint
4. Koala Pad conversion to Magniprint
5. Change Printer. Programs now set for "Brand Name" printer.

The selection of these programs is simply accomplished by hitting a number from 1 to 5.

III. Printer Selection

The first item to deal with is to set all the programs to work with the type of printer you have. If the correct printer is shown in item 5 above do nothing. If you need to change printers, hit the number 5 and then A, B, or C to choose the correct printer. Make sure you remove the write protect tab before selecting your printer. Now, whenever the Magniprint disk is booted, it will select your printer.

IV. Magniprint

Choosing item 1 from the main menu will load Magniprint. When complete, turn the Magniprint disk over and hit return. The disk directory will show various sample picture files.

By entering the file name and pressing return, the picture will be seen on the screen. By pressing L, you can return to the disk

directory screen and load another screen.

A. Graphics Mode 8

For starters, load PICGR8.MP. A geometric design will appear that was drawn in graphics mode 8 (actually graphics 8 + 16, where the 16 eliminates the text window).

While viewing a graphics 8 screen, you can use the following keyboard commands:

1. L Deletes present screen and returns to the disk directory screen, ready to load another picture.

2. T Allows you to touch-up the picture presently on the screen. A dot will appear at the top center of the screen which can be moved by use of the joystick. The OPTION key will flash the cursor for easier location. The Atari key speeds or slows the dot's movement.

Begin writing by pressing the joystick button. To erase, press E. To write again, press W.

When ready to exit this mode, press the space bar (see item 6 below).

3. N then 1 to 8

Sets the printer up for normal or vertical printing. After pressing N, you must press a number from 1 to 8 which indicates the print size desired. One (1) gives the smallest print size and eight (8) gives the largest print size. Four cursors will appear on the screen that outline the portion of the screen which can be printed. When

choosing small print sizes, the entire screen can be printed, however, as the print size increases, the picture will be magnified on the printer and only a portion of it will fit on the entire page. You can select other print sizes at any time by hitting N (or S, see item 4) and another number from 1 to 8.

The four cursors can be moved around the screen by the use of the joystick and joystick button. When pressing the joystick button, the area of the screen to be printed can be enlarged or decreased. The Atari key switches from coarse and fine cursor movement.

When you have chosen the desired print size and area of the screen to be printed, press the START key for normal printing or the OPTION key for inverse printing (Inverse printing is where black areas are left white and white areas are printed black.)

4. S then 1 to 8

Sets the printer for sideways printing. Otherwise, all instructions for normal printing, item 3, apply.

5. Space Bar

This special feature works only for graphics mode 8 or 9. Pressing the Space Bar sends you to a help

screen which gives access to some of the features of Magniprint. Further help screens give condensed instructions for using the features of Magniprint.

The first screen allows access to further information on how to print in variable size mode (items 4 & 5), poster printing, touch-up features (item 2) and screen saving.

a. Saving a Screen

By pressing the S key, you will be asked for a file name under which you wish to save the present picture. Place a disk with at least 66 free sectors in the disk drive and enter any legal Atari file name. The picture will be saved to the disk.

If you enter no file name but hit return, you will exit this mode and be returned to the first help screen.

6. Poster Printing

Poster size printing is one of the more exciting features of Magniprint. By combining the printouts from this feature, you can produce printouts several feet in size.

By following the help screen, go to Poster Printing. You will have the option of choosing three poster sizes with A being the smallest and C the largest.

Size C will produce a poster over 3 x 5 feet in size on NEC/CITol or CITH printers and about 2 x 3 feet on a Gemini or Epson printer.

Printing will begin on size selection. To print in inverse black-white relationship, hold down the OPTION key while you make your size selection.

In poster printing, an extra blank sheet of paper will be automatically skipped at the appropriate time between portions of the picture. When printing is completed, just cut the paper and paste together to form the completed picture.

B. Graphics Mode 9

Graphics mode 9 is a special GTIA mode of the Atari computer which allows pictures to be produced in up to 16 shades of one color. Magniprint has the unique ability to print these pictures with amazing reproduction using all 16 levels of shading on the printing paper. This is accomplished by varying the density of the dots within the rectangle patterns printed on the printer.

All of the functions used in graphics mode 8 work in graphics mode 9 except for the following changes: You may want to load PICGR9.MP from the back of the Magniprint master disk and note these differences:

1. N then 1-5

For normal or vertical printing you can only select 1 through 5 for size variation.

2. S then 1-4

For sideways printing, you can only select 1 through 4 for size variation.

3. T

The touch-up feature works a little different than in graphics mode 8. When the T key is pressed, a small rectangle will appear near the top center of the screen. By pressing OPTION or SELECT, you can change the shade of the rectangle. By pressing the joystick button, you can write with the selected shade of the rectangle.

C. Graphics Mode 10 and 11

These two graphics modes are special GTIA modes that have the same pixel size as graphics mode 9 but produce multicolored displays.

After loading one of these screens (PICGR010.MP or PICGR11.MP), you will find only the L key and ESC key function. The L key allows you to load a different picture and the ESC key switches both of these to a pseudo-graphics 9 screen which then can be printed with all the graphic 9 features.

D. Graphics Modes 3 to 7

These graphics modes produce various colored graphics pictures. Of course, you can't print colors, so Magniprint will print all colors as solid black. It will print these modes in two sizes in normal or reverse print.

To print in $\frac{1}{2}$ page size in normal black-white relationship, press START. To print in inverse relationship, press OPTION. To also print in a larger size (full page) hold SELECT down while you press START or OPTION.

No other keyboard commands work in these graphics modes except the L key which loads another picture.

E. Graphics Mode Zero

Graphics mode zero is the normal text graphics mode selected upon start-up of the Atari computer. To print a saved graphic mode zero screen, press START once the screen has loaded. Follow the screen prompts.

No other keyboard commands except the L key works while viewing a graphics zero screen.

V. Printing Screens From MicroPainter, Graphic Master, or (Micro Illustrator format) used by Koala pad and several other products.

These popular commercially available programs allow easy-to-draw picture screens. The screens produced by these programs can be saved in Magniprint format then printed using

all the features available for printing a graphics 8 screen.

The screens produced by these programs are not true graphic 8 screens, but use a special graphics mode with multi-color capabilities. Magniprint will print excellent reproductions of these screens. Many times you will find more accurate printing by using inverse printing as opposed to normal printing.

The first step involved in printing these screens is to change them into Magniprint format. Re-Boot the Magniprint master disk and select item 3 for MicroPainter or Graphic Master conversion, or item 4 for Micro Illustrator conversion.

After the program loads, insert the disk with the picture file you want to transform into Magniprint format. This disk must have at least 66 free sectors to receive the new picture file.

Enter the name of the source file at the first prompt. If you enter nothing and hit RETURN, then the disk directory will appear and the program again awaits for the source file name.

After entering the source file, the program will ask you for a destination file name. If you enter nothing for the designation file name and hit return, you will exit the program and return to Magniprint main menu.

VI. Printing Pictures You Have Created.

If you have written a program that produces a graphic screen in any mode but 1 and 2, then you can save the screen in Magniprint format and then print it.

First, load your screen generating program and find the correct place in the program just after the picture is drawn. To help you find this place, run the program and hit the break key after the picture is drawn and note the line number where the program stopped. This line is probably within a timing loop or in a loop waiting for your input. In either case, remove the loop and put in the line: GRMODE=X : GOTO30000. X is the graphics mode the picture was drawn in. Normally adding 16 to graphics modes 3 to 8 (eliminating the text window) will produce better results with Magniprint. Next, using the Magniprint master disk, type in:

BACK SIDE

ENTER "D:SCSAVE.MP
screen saver, will be joined to your program. Just make sure your program doesn't use line numbers 30,000 to 30,030. Replace the disk in disk drive one with a disk to receive the picture file.

Now, when the program is run, the screen will be saved to the disk as PICTURE.MP. You can change this name by changing it in line 30,000.

As an example, from the back of the Magniprint master disk, run the program GR9DRAW.BAS. This is a short program that draws some shapes in graphics mode 9. Hit the break key and replace line 80 with the following line: 80 GRMODE =9:GOTO 30000. Now enter the program D:SCSAVE.LST from the Magniprint disk and when completed, place a disk in disk drive one to receive the picture file. Now run the program. If you did everything right, you can now use this new picture file called PICTURE.MP with Magniprint.

VII. Print All

This program will print your program or file the way it was typed. This includes inverse and Atari graphic characters.

First you must LIST (not SAVE) your program to a disk. To accomplish this, you must first LOAD your program and then LIST it using another file name. LIST "D: Filename.LST"

Next boot the Magniprint master disk and select item 2, "Print All" from the main menu. When Print All has been loaded, follow the screen prompts beginning with the file name of your listed program.

Technical Information

Magniprint stores picture files in the following format:

1 byte Graphics Mode
9 bytes Color registers 704-712

The actual picture data follows this information.

When using ~~Micropainter~~ ^{Koala} picture files, a graphics mode of 14 is used by Magniprint to trigger correct color artifacting. The ~~Koala Micropainter~~ ^{pad} and Graphics Master picture files use graphics mode 24 (8+16).

Problems

Magniprint sends complicated signals to the printer to complete its picture files. If something goes wrong and the picture will not print correctly, turn the printer off then on again and reboot the Magniprint master disk. Never turn the printer off without rebooting since the printer will have lost all its special codes. If you still have problems, check your dip switch settings of your printer to conform to the normal settings in your printer manual.

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