MAGIC DUMP II

USER'S MANUAL

MAGIC DUMP II

Special thanks to
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INTRODUCTION

MAGIC DUMP II is a screen dump utility that allows you to copy any graphic, text, GTIA, or mixed mode picture to a printer. MAGIC DUMP II will operate with all Epson, Gemini, Prowriter Okidata printers and with the N.E.C. PC8023A printer. MAGIC DUMP II has four different size capacities and logical line seeking. In addition, MAGIC DUMP II has a special feature that allows printing or listing in the standard Atari character set or a redefined character set. The characters can be printed normal, compressed, double-width, and emphasized. MAGIC DUMP II can also save the screen being printed. MAGIC DUMP II is an 8K cartridge that fits into the right cartridge slot of the ATARI 800 COMPUTER.

GETTING STARTED

1. Turn off your computer and open the cartridge door. Insert MAGIC DUMP II into the right slot. If another 8K cartridge is going to be used, place it into the left slot and close the door.

2. If a disk drive is going to be used, remove any existing disk in the drive. Turn on the drive, wait until the busy light goes off and then insert a diskette. Close the door.

3. Now turn on your computer. The cartridge and/or disk will now be operating normally.

ENTERING MAGIC DUMP II

When the screen you want printed or saved is displayed, hold down the CTRL key and press ESC. Now press any other key (the space bar does nice) and MAGIC DUMP II's menu will appear.

Once in the menu, selected keys will change the options displayed on the screen.

"P"

Pressing this key will allow you to select the type of printer you are using. It will also allow you to enter the save screen mode. (This mode is discussed in a later section.) The three types of printers that can be selected are Epson, N.E.C., and Okidata. The Gemini printer will work under the Epson mode. The Prowriter printer will work under the N.E.C. mode.

"D"

Pressing this key will select either a normal printout or a dark printout. This key has no effect when Okidata printers are used.

"I"

Pressing this key will select a normal or inverse printout.

"1 2 3 4"

KEY	PRINTOUT SIZE
1	11 cm x 8 cm
2	22 cm x 16 cm
3	*33 cm x 24 cm
4	*44 cm x 32 cm

*This print size must be used by a 15" type printer.

"OPTION"

Pressing this key will exit you from MAGIC DUMP II.

CAUTION: MAGIC DUMP II uses a complicated system of interrupts to enter the cartridge. MAGIC DUMP II stops all running of the program, but sometimes the execution is vital to the program itself. When you return to the program, it might crash or write nasty things to your disk. IF THE DISK IS IMPORTANT, WRITE PROTECT IT OR BACK IT UP.

"START"

Pressing this key will start to dump the screen to the printer. It is also used to save the screen.

SAVING THE SCREEN

There are two ways of saving the screen. The first will save everything that composes a screen (ex. display list, colors, character set, . . .). The screen is saved in a binary file that can be loaded from DOS. (Look at the end of this manual for hints on loading the picture from BASIC.)

The second save will only save the screen data. This is useful for saving a hi-resolution picture from basic or a game and editing it on a graphics editor.

MAGIC DUMP II will first try to save the screen to the disk drive under the name "D1:SCREEN.MD2". If it can't save it to the disk drive (No FMS), it will then save it to a cassette recorder.

To access the first save press P until the words 'SAVE SCREEN' are displayed under the printer section. Now press START to start the save. (Inverse, density, and size are ignored in this mode.)

To access the second save press P until the words 'SAVE SCREEN 2' are displaced under the printer section. Now press START to strt the save. (Inverse, density, and size are ignored in this mode.)

CHARACTER HANDLER

MAGIC DUMP II has a special feature that allows printing in ATARI'S style set or even in your own character set. This is useful when listing programs with control characters that would not normally print on the printer.

To use the character handler simply replace "P:" with "G1:" for Epson type printers, "G2:" for N.E.C. type printers, and "G3:" for Okidata type printers.

It can also be opened using the BASIC command OPEN #x,8,y,"Gz:" where x=the the IOCB number, y=the character width (O=last mode selected, 1=compressed print, 2=double-width print, 3=emphasized normal print, 4=normal print, 5=emphasized double-width), z=type of printer (1=Epson type, 2=N.E.C. type, 3=Okidata type). When using the list command the character width is automatically set to zero therefore it will list in the last width selected by the OPEN command.

The length of a line can also be set by using the BASIC command XIO 80, #x,y,o, "Gz" where x=IOCB number, y=length of the line, z=type of printer using. The length of a line can be between 1 and 120 characters. Do not set the line length longer than the number of characters that the printer can handle. Use the following chart to set the maximum width. At BOOT and SYSTEM RESET the line length is set back to 102 characters.

MAGIC DUMP II will print in the font that the character base is pointing to. The font that is currently being displayed on the screen is where the character base is pointing to.

PRINTER LENGTH -	8½	15"
COMPRESSED		
Epson	120	*204
N.E.C.		
Okidata	75	120
DOUBLE-WIDTH		
Epson	30	51
N.E.C.		
Okidata	31	61

PRINTER LENGTH -	8½	15"
DARK NORMAL		
Epson	60	102
N.E.C.		
Okidata	N/A	N/A
NORMAL		
Epson	60	102
N.E.C.		
Okidata	60	102
DARK DOUBLE-WIDTH		
Epson	30	51
N.E.C.		
Okidata	N/A	N/A

*Line lengths between 128-255 will cause MAGIC DUMP II to act as if it has no line length. This should be used only for 15" printers using compressed mode.

N/A This printer does not handle this mode.

LOADING A SAVED SCREEN

A saved screen can be loaded off a disk from the DOS menu by using the L command.

It can also be loaded from a disk or cassette through the ASSEMBLER EDITOR by using the LOAD command.

A file on cassette can be moved to the disk by the following BASIC program.

```
10 OPEN #1, 8, 0, "D:SCREEN. MD2" :REM OPENS DISK FILE
20 OPEN #2, 4, 0, "C:" :REM OPENS CASSETTE FILE
30 TRAP 70          :REM ERROR OUT TO LINE 70
40 GET #2, A        :REM INPUT FROM CASSETTE
50 PUT #1, A        :REM OUTPUT TO DISK
60 GOTO 40          :REM LOOP BACK
70 CLOSE #1         :REM CLOSE DISK FILE
80 CLOSE #2         :REM CLOSE CASSETTE FILE
90 END              :REM STOP
```

A saved screen file can be loaded from BASIC by using the following BASIC program

```
10 OPEN #1, 4, 0, "D:SCREEN.MD2" :REM USE "C:" FOR CASSETTE
20 GET #1, A:GET #1,B :REM PULL OFF HEADER BYTES
30 IF A   255 OR B   255 THEN 20
40 TRAP 120 :ERROR OUT AT LINE 120
50 GET #1,A: GET #1,B :REM LOAD ADDRESS
60 IF A=255 AND B=255 THEN 50 :REM CHECK FOR
   HEADER  BYTES
70 GET #1,C:GET #1,D :REM END ADDRESS
80 FOR T=A+B*256 TO C+D*256
90 GET #1, E:POKE T,E :REM POKE BYTES
100 NEXT T
110 GOTO 50 :REM LOOP BACK
120 CLOSE #1 :REM CLOSE OPENED FILE
130 END :REM STOP
```

This is a faster way to load a screen from BASIC. It will only work if DOS ver 2.0 is booted.

```
10 OPEN #1,4,0, "D:SCREEN.MD2" :REM USE "C:" FOR CASSETTE
20 POKE 5534, 255
30 U=USR (ADR ("hCL [H] [■]")) : REM LOADS SCREEN
                                [■] = CTRL U

40 END :REM STOP
```

Be careful when loading a screen. The screen might override the cartridge or DOS.

PROBLEMS USING MAGIC DUMP II

Sometimes the picture that is "dumped" is not the same as the picture on the screen. Many factors might be involved in this: Many programs use display list interrupts to change colors, character sets, display list pointer. etc. . . . These changes are impossible to detect. Some programs also disable vertical blank and store values in write only hardware registers which cannot be read by MAGIC DUMP II. They may also change the maskable interrupts which MAGIC DUMP II uses to enter its menu. so access to MAGIC DUMP II is impossible.

Be careful when going between dumping the screen and the character print as they both use the same memory. Close "G:" before screen dumping. Also the line length and the character width might be changed by dumping a screen.

FINDING OUT MORE:

If you have any questions regarding the use of MAGIC DUMP II or any difficulties understanding this manual, please write to us at:

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