ATARI®

822™

THERMAL PRINTER OPERATOR'S MANUAL

ATARI®

A Warner Communications Company

Every effort has been made to ensure that this manual accurately documents the operation of the ATARI 822 Thermal Printer. However, due to the ongoing improvement and update of the computer software, ATARI Inc. cannot guarantee the accuracy of printed material after the date of publication, nor can ATARI accept responsibility for errors or omissions. Revised manuals and update sheets will be published as needed and may be purchased by writing to:

ATARI SOFTWARE SUPPORT GROUP
P.O. Box 427
Sunnyvale, CA 94086

Printed in USA

ATARI®

822™

THERMAL PRINTER

INTRODUCTION

Please read this manual carefully and thoroughly before operating your ATARI® 822™ Thermal Printer.

CAUTION

Do not operate your ATARI 822 Thermal Printer in an explosive atmosphere or in the presence of flammable gasses or fumes. Operation of any electrical instrument in such an environment may be hazardous.

Your ATARI 822 Thermal Printer is a high performance serial printer with 37 character-per-second printing. It prints a full 96 upper and lower case ASCII character set with bidirectional look-ahead printing. After printing one line from left to right, the microprocessor looks ahead, examines the length of the next line and begins printing at the end of that line, from right to left. The Thermal Printer prints large legible characters in a 5 x 7 dot matrix with a 10 character-per-inch format. The ATARI 822 Thermal Printer is built for mechanical simplicity and reliability.

Your ATARI 822 Thermal Printer provides hardcopy printout for the ATARI 400™and ATARI 800™Personal Computer Systems. You may use your ATARI 822 Thermal Printer with many combinations of hardware and software. Application programs provide an option to print out results whenever appropriate. ATARI BASIC and ATARI ASSEMBLER EDITOR cartridges both include printer commands, as does the ATARI DISK OPERATING SYSTEM (DOS), which requires a minimum of 16K RAM. The DOS Diskette and the ATARI 810™Disk Drive or the ATARI 815™Dual Disk Drive (double density) may be used with the ATARI 800 Personal Computer System, or the ATARI 400 Personal Computer System, if it has been upgraded to 16K of RAM.

UNPACKING

Your ATARI 822 Thermal Printer is packaged as follows:

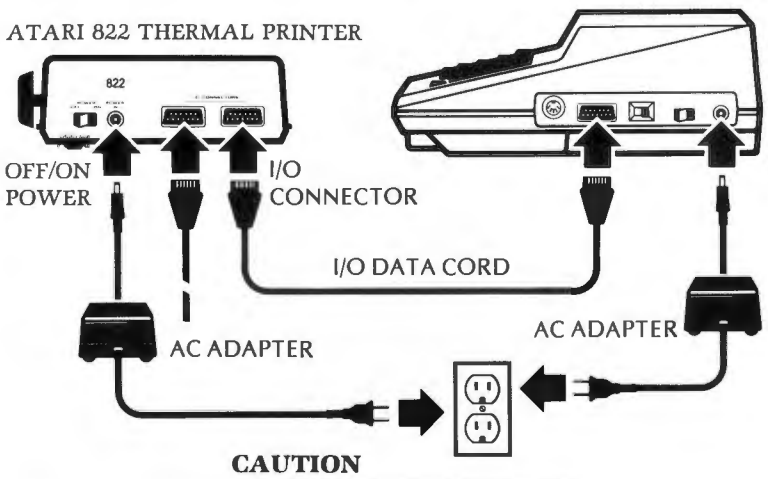
- Thermal Printer
- One roll of white Thermal Paper (installed in printer)
- One pair of Spring-Loaded Paper Bearings (installed in printer)
- I/O Data Cord
- Instruction Manual
- Power Adapter

Save your original packing materials and reuse them if necessary to ship your printer or store it for long periods of time.

SETTING UP YOUR PRINTER

Perform the following steps to set up your ATARI 822 Thermal Printer and connect it to the computer. See detailed diagrams for proper connections.

ATARI 400™or 800™PERSONAL COMPUTER SYSTEM



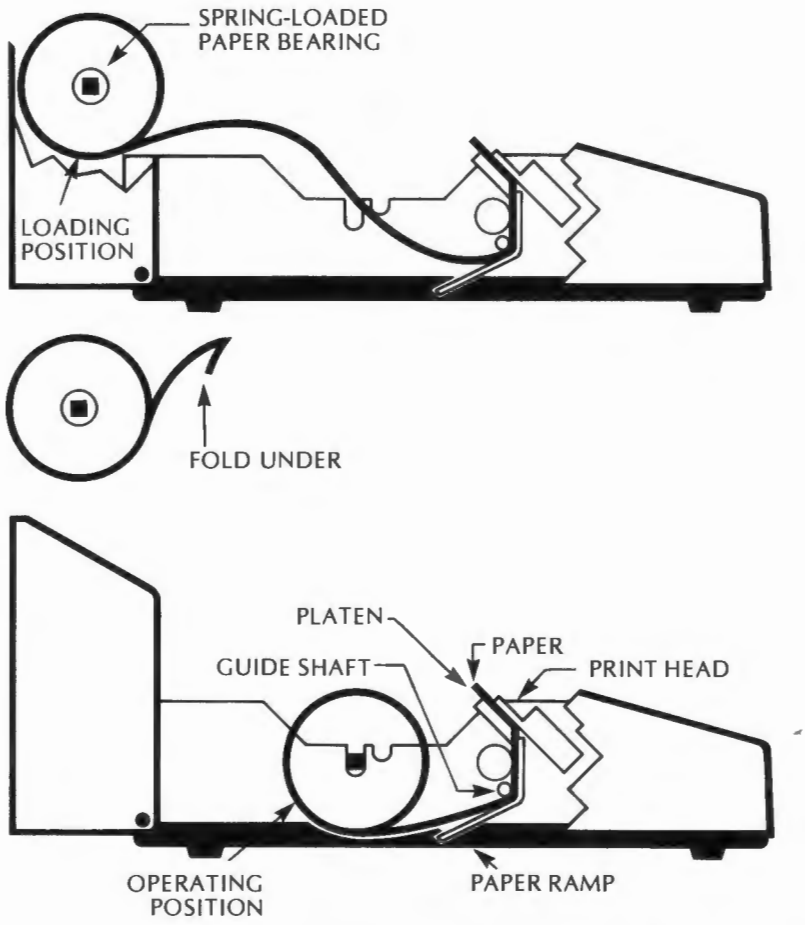
CAUTION

TO PREVENT DAMAGE TO THE PRINTER ELECTRONICS, ALWAYS CONNECT THE AC POWER ADAPTER TO THE ATARI 822 PRINTER BEFORE YOU CONNECT THE ADAPTER TO THE WALL OUTLET.

1. Make sure the printer is turned OFF before connecting it.
2. Plug one end of the I/O Data Cord into the serial I/O PERIPHERAL port on your ATARI 400™ or 800™ Personal Computer System. If an ATARI Disk Drive or other ATARI peripheral device is already connected to your computer console, connect the I/O Data Cord to one of the I/O CONNECTORS on your ATARI peripheral device.
3. Connect the other end of the I/O Data Cord to one of the I/O CONNECTORS on your ATARI 822 Thermal Printer.
4. Plug the ATARI AC Power Adapter into the POWER IN jack on your ATARI 822 Thermal Printer.
5. Plug the AC Power Adapter into a wall outlet (110-117 VAC).

INSTALLING PAPER

1. Lift the rear cover. If the unit is lifted slightly, the rear cover may be rotated back 180° and used as a support to tilt the unit slightly towards you.
2. To remove the end of the last roll, turn the manual paper knob counterclockwise until the end of the used roll is free.
3. Remove the two spring-loaded bearings from the ends of the roll and discard the old core.
4. Since the first few inches of the roll may be coated with adhesive, cut off the first six inches.
5. Set the new roll of thermal paper against the opened cover with the loose end facing up, towards you.
6. Fold about ½ inch of the paper down, away from you.
7. Feed the paper down below the roller with one hand and turn the paper knob clockwise with the other hand until the paper reaches the top of the printhead.
8. Manually guide the paper between the clear tear strip and the metal platen.
9. Insert the paper bearings into the core with the "square" ends out, roll up the slack, and press the ends of the shaft into the deeper of the two slots provided on either side.
10. Close the rear cover; turn power ON before printing.



CAUTION

Store thermal paper in a cool dry place.

TECHNICAL SPECIFICATIONS

ATARI 822 Thermal Printer

- high resolution, 5 x 7 dot-matrix serial printer
- 40 characters-per-line
- 10 characters-per-inch
- upper and lower case alphanumeric characters
- built-in microprocessor
- bidirectional look-ahead printing
- full line buffering
- direct serial interface to ATARI 400™and ATARI 800™Personal Computer Systems
- AC transformer, UL approved
- physical dimensions
  weight: less than 6 pounds
  height: 2 ¾"
  depth: 9 ½"
  width: 7 ½"

Printing Speed

- approximately 37 CPS (characters-per-second)

I/O Data Cord

- ATARI Part No. CA014122 (3-foot)

Reorder Numbers

- 4 7/16 inch white thermal paper, two rolls, 80 feet each, ATARI Part No. C016345
- one pair, spring-loaded paper bearings, ATARI Part No. C016005
- I/O Data Cord (5-foot), ATARI Part No. CA015900-01, Model No. CX81

PRINTER COMMANDS

Each piece of software, whether cartridge, cassette, or diskette based, will have its own commands for activating the printer. Consult the appropriate software manual for complete printer commands.

BASIC — When you are familiar with ATARI BASIC Computing Language you will know how to use the commands **PRINT** and **LIST**. To **PRINT** on the printer instead of the screen, replace **PRINT** with **LPRINT** in your BASIC source programs. To **LIST** on the printer, use **LIST "P:** or **L."P:** instead of **LIST**. (No closing quotation marks needed.) Here's an example: Type this BASIC Program into your computer:

TYPE THIS:

```
10 PRINT "THE PRINT COMMAND COMES OUT HE
RE." RETURN
20 LPRINT "THE LPRINT COMMAND COMES OUT
HERE." RETURN
```

When you RUN this program each PRINT statement will appear on the screen as shown below.

TYPE THIS:

```
RUN
```

PUSH

RETURN

SCREEN DISPLAY

Your printer will print only the LPRINT lines like this:

To see your program again:

TYPE THIS:

LIST

PUSH

RETURN

SCREEN DISPLAY

To get a printout of your program:

TYPE THIS:

LIST "P: or L. "P:

PUSH

RETURN

SAMPLE PRINTOUT

```
10 PRINT "THE PRINT COMMAND COMES OUT HE
RE."
20 LPRINT "THE LPRINT COMMAND COMES OUT
HERE."
```

The **ATARI BASIC REFERENCE MANUAL** contains a complete description of all ATARI BASIC Language commands.

ATARI DISK OPERATING SYSTEM (DOS)—The Disk Operating System (DOS) Reference Manual will provide you with complete instructions on using the DOS software to access the printer and other peripheral components.

PLOTTING GRAPHIC DESIGNS

Drawing plots and graphics in BASIC requires a thorough knowledge of the BASIC Programming Language. Refer to the ATARI BASIC Reference Manual for further details. The following program demonstrates the graphic capability of the ATARI 822 Thermal Printer. A minimum of 24K RAM is necessary to operate this program.

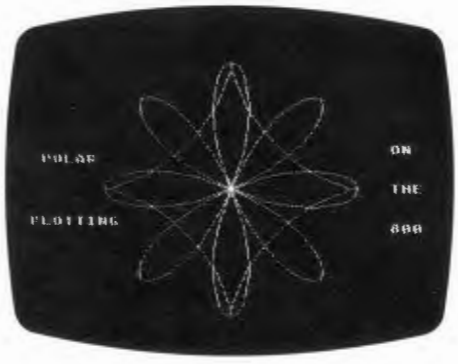
TYPE THIS:

```
10 DIM B$(40),C$(128),D$(21)
20 FOR X=1 TO 40:B$(X,X)=CHR$(0):NEXT X:
REM CLEAR OUTPUT STRING
30 D$="POLARPLOTTINGONTHE800"
40 FOR X=1 TO 105:READ A:C$(X,X)=CHR$(A)
:NEXT X:REM LOAD BINARY CODE
50 OPEN #1,8,0,"P:"
60 ? #1:? #1:? #1;"       INTRODUCING THE
 ATARI (R) 822":? #1,"  THERMAL PRINTER"
70 ? #1:? #1;"       Mode 8 Graphics Scr
een Copy":? #1
80 A=ADR(B$):C=INT(A/256):B=A-C*256
90 POKE 772,B:POKE 773,C:REM SETUP DCB
100 POKE 770,80:POKE 778,76
110 GRAPHICS 8+16:COLOR 1
120 I0=PEEK(560)+PEEK(561)*256
130 MEMST=PEEK(I0+4)+PEEK(I0+5)*256
140 FOR X=1 TO 5:READ U1,U2,PX,PY
150 GOSUB 1000:NEXT X
500 DEG :FUN=600:ST=10
510 T=0:GOSUB FUN:PLOT X,Y
530 T=T+ST:GOSUB FUN:DRAWTO X,Y
550 IF T<360 THEN GOTO 530
555 IF R=0 THEN FUN=700:R=1:ST=3:GOTO 51
0
560 Z=USR(ADR(C$),ADR(B$)+4,MEMST):REM C
ALL ASSEMBLER ROUTINE
570 FOR X=1 TO 5:? #1:NEXT X
580 STOP
600 X=COS(T)*COS(T)*COS(T)
605 Y=SIN(T)*SIN(T)*SIN(T)
610 X=X*90+159:Y=Y*90+95:RETURN
700 X=COS(T)*COS(4*T)
705 Y=SIN(T)*COS(4*T)
710 X=X*90+159:Y=Y*90+95:RETURN
1000 I4=MEMST+PY*40+PX:U3=0
1005 FOR Z=U1 TO U2:I2=57344+(ASC(D$(Z))
-32)*8:I3=I4+U3:FOR U=0 TO 7:POKE I3+U*4
0,PEEK(I2+U):NEXT U:U3=U3+1:NEXT Z
1010 RETURN
2000 DATA 104,208,1,96,201,3,144,1,96,10
,170,104,202,149,203,208,250,165,203,133
,211,165,204,133,212,169,40,133
2010 DATA 210,169,128,133,209,165,211,13
3,203,165,212,133,204,160,24,162,0,169,1
28,133,207,161,203,133,208,24,165
2020 DATA 203,105,40,133,203,144,2,230,2
04,24,165,208,37,209,240,2,169,128,70,20
7,5,207,133,207,144,224,136,145
2030 DATA 205,208,215,169,128,141,3,3,32
,89,228,70,209,208,191,230,211,198,210,2
08,181,96
2040 DATA 1,5,3,70,6,13,2,114,14,15,314,
56,16,18,314,84,19,21,314,112
```

TYPE THIS:

```
RUN
```

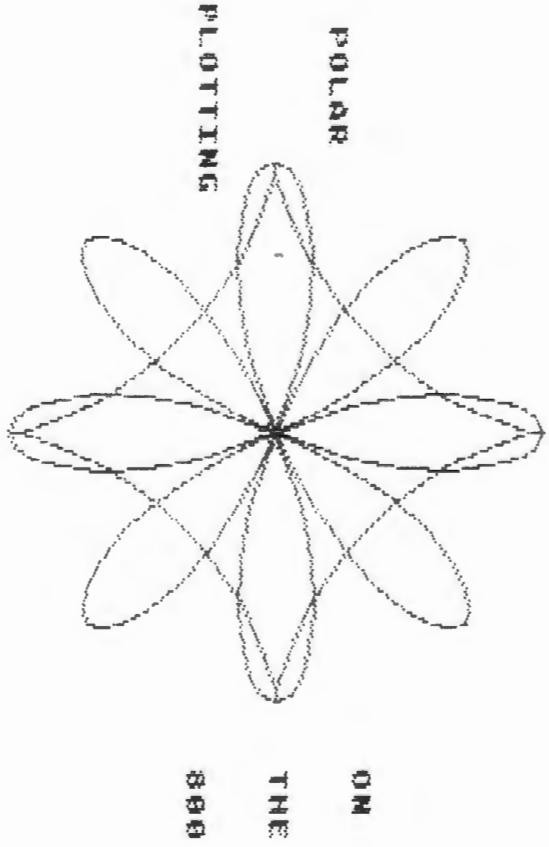
SCREEN DISPLAY



PRINTOUT

INTRODUCING THE ATARI (R) 822
THERMAL PRINTER

Mode 8 Graphics Screen Copy



A Warner Communications Company

ATARI, INC., Consumer Division
P.O. Box 427, Sunnyvale, CA 94086

CO15954 REV. 2