Prince

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A Warranty Registration Card is enclosed in this package. Please complete and return the Card to BAUDVILLE within thirty (30) days. The postage is paid for your convenience. Registering your product entitles you to the following services:

* You may obtain a back-up copy of the disk for $5.00, plus $2.50 for postage and handling.

* Allows you to replace defective products after warranty expires, for a nominal charge.

* In the event BAUDVILLE releases new versions of the product, you will be contacted by mail and may be eligible to obtain the new version at a discount.

* Telephone support will be provided *only* to registered owners. This service is available by calling (616) 957-3036 on weekdays from 10am to 6pm EST.

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BAUDVILLE warrants to the original purchaser only that the diskette on which the program is recorded will be free of defects under normal use for a period of ninety (90) days following date of purchase. If a defect occurs in the diskette during this period, BAUDVILLE will replace the diskette without charge providing the Warranty Registration card is returned within thirty (30) days of purchase, or send a dated proof of purchase with the diskette.

If failure of the product, in the judgment of BAUDVILLE, resulted from accident, abuse or misapplication of the product, then BAUDVILLE shall have no responsibility to replace or repair the product under the above terms.

This program is warranted to work only with the printers and printer interface cards listed on the outside of the package. BAUDVILLE assumes no responsibiity for supporting printers not listed on the outside of this package. BAUDVILLE is not responsible for any damage to printers caused by accident, abuse, or misapplication of the product.

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Chapter 1 – Introduction

WHAT IS PRINCE?

Now you can make vivid *full-color* prints with your regular black & white printer. With PRINCE software and special color ribbons you can print colorful pictures, charts, labels, bumper stickers, greeting cards, banners, and much more. PRINCE can even print iron-on transfers for your own custom T-shirts, stuffed toys, pillows, etc.

You can use PRINCE to print any normal hi-res or double hi-res screen image. The back side of the PRINCE program disk contains a variety of pictures for you to use, or you can load pictures from other paint and drawing programs. You can even *capture* screen images directly from other programs and bypass the disk completely! This allows you to print hi-res screens from games and other programs that normally cannot be saved to disk.

EQUIPMENT REQUIRED

What you will need:

- Apple IIc, IIe, II+ (with at least 64K memory)

- 1 or 2 disk drives

- TV or monitor (color is preferred)

- Printer and printer interface

LEARNING TO USE PRINCE

You should carefully read through this manual. Chapter 2 shows you how to set up the program for your system. Chapter 4 is a quick tutorial to guide you through the basic steps of printing your pictures.

Every effort has been made to make PRINCE easy to learn and use. The program is menu-oriented with on-screen prompting. Once you become familiar with the system, you will probably never need to refer back to the manual.

In this manual, a user response which requires a keypress will be shown as an enclosed letter. For example, Ⓜ will mean press the M key. To make a selection from any of the PRINCE menus or sub-menus, simply press the ⬅ or ➡ key until the desired option is highlighted, and then press the [RETURN] key to complete the selection. In certain instances, you may be asked to enter a numerical value. In these instances, type in the number followed by the [RETURN] key to complete the entry.

If you accidentally select the wrong menu option or change your mind about a selection you just made, just press the [ESC] key to safely back out of a menu selection. The [ESC] key is also used to exit from any menu and return to the previous menu.

Chapter 2 - Setup

THE FIRST TIME

Before running the program, make sure your printer and interface card are properly connected to the computer. Carefully follow the manufacturer's instructions for proper installation. Make sure the power is *OFF* before connecting anything to your computer.

Insert the PRINCE disk into drive 1 (label facing up) and turn on the computer. Since this is the first time the disk is being used, PRINCE will automatically display the **SETUP MENU**. The bottom half of the screen shows the current hardware configuration for the program. If this setup matches your equipment, then proceed directly to *SAVING YOUR SETUP*.

```
           PRINCE SETUP MENU
-----------------------------------------
  1-SETUP            2-EXIT
-----------------------------------------



     (ARROWS CHOOSE - RETURN SELECTS)
-----------------------------------------
COMPUTER        ://E
MEMORY          :128K
RGB CARD        :NO
PRINTER SLOT    :SLOT 1
PRINTER BRAND   :APPLE
PRINTER MODEL   :DMP/IMAGEWRITER
INTERFACE CARD  :APPLE SUPER SERIAL
DISK DRIVES     :1 DRIVE
-----------------------------------------
RETURN-DO COMPUTER         ESC-CANCEL
```

CHANGING THE SETUP

Use the arrow keys to highlight any item on the setup list that needs to be changed and press the [RETURN] key. Another list of available options will appear at the center of the screen. Use the arrow keys to highlight the option that matches your system and press [RETURN]. The item you select will then appear in the setup list.

Computer

The choices are Apple II+, IIe, and IIc.

Memory

Choose 128K *only* if you have an Apple IIc or a IIe with an extended memory 80 column card.

RGB Card

Choose YES *only* if you have RGB monitor and RGB card capable of displaying double hi-res.

Printer

PRINCE will work with most popular printers. You must select the PRINTER BRAND before selecting the PRINTER MODEL.

Interface Card

There is more than one list of interface cards. If your card does not appear on the first screen, select **MORE CARDS** to see the other choices. Not used on the Apple IIc.

SAVING YOUR SETUP

When the setup matches your hardware, press the [2] key to exit. Select **RUN PRINCE** by pressing the [RETURN] key. The disk will spin while loading the driver files for your system. When the program asks if you want to save the setup, press [Y] for *yes* and your PRINCE program disk will be configured for your system.

Once your setup has been saved, you will not have to worry about it again. Booting the PRINCE disk will bypass the *SETUP* menu and go directly to the *PRINT ACTIVITY* menu. If you need to change the configuration for any reason, you can get back to the *SETUP* menu by selecting that option from the *PRINT ACTIVITY* menu.

IMPORTANT: AFTER CONFIGURING YOUR PRINCE DISK, YOU SHOULD PLACE A WRITE PROTECT TAB OVER THE NOTCH ON THE DISK.

Chapter 3 – How to use the Menus

PRINT ACTIVITY MENU

```
 ---------------------------------
 ---------------------------------
         - PRINT ACTIVITY -
    PICTURES    TRANSFERS    CARDS

    LABELS      EXPERT       SETUP

    (ARROWS CHOOSE - RETURN SELECTS)
 ---------------------------------



 ---------------------------------
 RETURN-SELECT PICTURES    ESC-CANCEL
```

The first thing you see when you run PRINCE is the **PRINT ACTIVITY** menu. This is where you select the type of printing you will do. There are six options available:

1) You can print a **PICTURE**. *Chapter 8*

2) You can make a **TRANSFER** that can be ironed on cloth. This is a picture that is *flipped* so that it will appear correct when it is transferred. *Chapter 8*

3) You can print **GREETING CARDS**. This option prints the image so that the front and inside of the card will appear correct when the page is folded. *Chapter 9*

4) You can create **LABELS** that can be printed on special peel-off label stock. *Chapter 10*

5) There is an **EXPERT** mode that allows you to individually adjust the various printing parameters for maximum creativity. *Chapter 11*

6) The **SETUP** option is used to reconfigure the program for a different printer or interface card. *Chapter 2*

Use the arrow keys to highlight the activity you want and press the RETURN key to make your selection. *NOTE:* If you press CTRL-RESET from this menu, the system will reboot. This is the recommended way to quit PRINCE and bo another program.

FUNCTION MENUS

```
 ---------------------------------
              PICTURES
 ---------------------------------
  1-EDIT   2-PRINT   3-DISK   4-EXIT
 ---------------------------------



       (ENTER SELECTION NUMBER)
 ---------------------------------



 ---------------------------------
 RETURN-DO EDIT            ESC-CANCEL
```

When you select a print activity, the **FUNCTION MENU** will appear with the activity selected at the top of the screen. The program functions are the same for all print activities. In-depth explanations of the program functions are covered in Chapters 5, 6, and 7.

1- **EDIT** - Allows you to add text or modify your picture.

2- **PRINT** - This prints your picture. You can also change the size and other print parameters.

3- **DISK** - Loads and saves pictures on the disk. You can also load different text fonts and format new data disks.

4- **EXIT** - Returns to the *PRINT ACTIVITY* menu. You can also use the ESC key to exit.

Use the arrow keys to highlight the option you want and press the RETURN key to select the function. You can also press a number key from 1 to 4 to select a program function. Once you become familiar with the program, this "short cut" feature makes PRINCE even easier to use.

Chapter 4 – Let's Print (A Tutorial)

This chapter will guide you step-by-step through the PRINCE program to help make your first color printout. The procedure is very similar in each of the print activities so you can refer to this tutorial at any time. Our goal for now is to print a transfer and then iron it on to the test patch of cloth. This will acquaint you with making transfers. Use your regular printer paper while learning and experimenting with PRINCE. Since the difference in paper stock does not significantly affect the quality of a transfer, *always use regular printer paper for transfers*.

```
        TRANSFERS - DISK MENU
-----------------------------------------
 1-EDIT   2-PRINT   3-DISK   4-EXIT
-----------------------------------------
              - ACTION -

  LOAD        SAVE        FORMAT DISK

  LOAD FONT   SET DISK

  (ARROWS CHOOSE - RETURN SELECTS)
-----------------------------------------

-----------------------------------------
 RETURN-SELECT LOAD         ESC-CANCEL
```

Put the PRINCE program disk in drive 1 and turn on the computer and printer. The **PRINT ACTIVITY** menu will appear on the screen. Use the arrow keys to highlight **TRANSFERS** and press the RETURN key.

This will bring up the **TRANSFERS** function menu. In this tutorial, we will use a picture from the PRINCE program disk, adding some text before printing. To load a picture from the disk, select the **3-DISK** function. The various disk options will appear on the screen.

LOAD A PICTURE

```
        TRANSFERS - DISK MENU
-----------------------------------------
 LOAD PICTURE FROM DISK 1 IN SLOT 6
-----------------------------------------


 USE ARROWS TO SELECT - RETURN TO LOAD


-----------------------------------------

         BK.TED.BEAR.DOLL
         BK.TED.BEAR.STICKERS
 LOAD:   BK.PRINCE.TUTORIAL
         BK.EXAMPLE.LABELS
         BK.LETTERHEAD
         BK.CHRISTMAS.CARD
-----------------------------------------
                            ESC-CANCEL
```
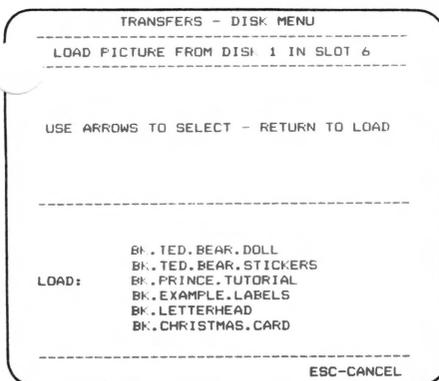
The picture we want to use is on the back side of the PRINCE program disk. If your system has only one drive, remove the PRINCE disk from the drive, turn it over, and place it in the drive. If your system is configured for two drives, the program will assume that picture files will be loaded from drive 2. In that case, remove the PRINCE disk from drive 1, turn it over, and place it in drive 2.

Select the **LOAD** option from the menu. The program will scan the files on the disk and then display a list of available pictures at the bottom half of the screen. Use the arrow keys to *scroll* up or down through the list until the file named **BK.PRINCE.TUTORIAL** is highlighted. Then press RETURN to load the picture. When the picture is loaded, it will be displayed for a few seconds before returning to the disk menu.

ADD SOME TEXT


```
 TEXT   SCROLL   CROP   FIND   ERASE
 V - VIEW BOTTOM            ESC - EXIT
```
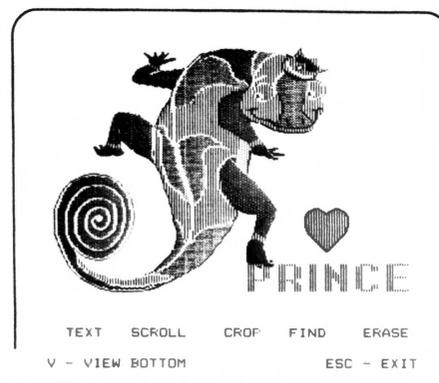
Before we print the picture, we are going to add some text. Press the 1 key to select the **1-EDIT** function. The **PRINCE.TUTORIAL** picture will appear with the editing options displayed at the bottom of the screen. Select the **TEXT** option.

TEXT CURSOR

ADD TEXT PROMPT

PRINT THE RESULT

```
          TRANSFERS - PRINT MENU
--------------------------------------------
 1-EDIT    2-PRINT   3-DISK    4-EXIT
--------------------------------------------
             - ACTION -
      PRINT          OPTIONS


       (ARROWS CHOOSE - RETURN SELECTS)
--------------------------------------------




 RETURN-SELECT PRINT         ESC-CANCEL
```

The **TEXT** mode appears with a flashing *cursor* in the middle of the screen and a set of commands at the bottom of the screen:

```
                    TEXT
I J K M - MOVE         RETURN - ADD TEXT
1 - SMALL SIZE              V - VIEW BOTTOM
2 - LARGE SIZE           ESC - CANCEL TEXT
```

The I J K and M keys are the *move commands*. They move the cursor up, left, right, and down. Try pressing each of these keys a few times and watch what happens to the flashing cursor. The arrow keys can also be used to move the cursor around. If you want to see the part of the picture hidden by the commands, press the V key. To get the commands back, press the V key again. Now move the cursor to a spot just above the *heart* in the picture and press RETURN to add text.

```
 TYPE LINE OF TEXT AND PRESS [RETURN]

        CTRL-C CHANGE COLOR
```

The cursor will be replaced by a flashing *add text* prompt. Type your name and press RETURN . Don't worry if the text runs off the edge of the screen, you will be able to reposition it. You should see a shimmering box around the line of text you just typed and a new set of commands at the bottom of the screen.

```
                  MOVE TEXT
I J K M - MOVES        RETURN - PLANT TEXT
                            V - VIEW BOTTOM
C - CHANGE COLOR          ESC - CANCEL TEXT
```

You can now use the *move keys* to position the text exactly where you want it on the screen. If you made a mistake in typing, press the ESC key to *undo* the text. When the text is positioned properly, press RETURN to *plant* it to the picture. When you are finished adding text, press ESC to return to the **EDIT** menu and then press ESC again to get back to the function menu.

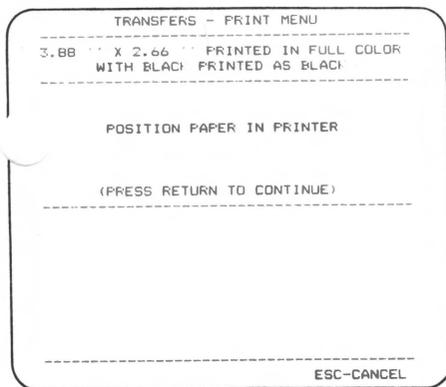You are now ready to print! Select **2-PRINT** and you will see the **PRINT** options menu. Before you start printing a picture, you should take a look at the checklist on the last page of this manual. This will help prevent difficulties while you are printing.

```
      TRANSFERS - PRINT MENU
--------------------------------------
3.88 '' X 2.66 '' PRINTED IN FULL COLOR
        WITH BLACK PRINTED AS BLACK
--------------------------------------


        POSITION PAPER IN PRINTER


        (PRESS RETURN TO CONTINUE)
--------------------------------------




--------------------------------------
                        ESC-CANCEL
```

```
      TRANSFERS - PRINT MENU
--------------------------------------
3.88 '' X 2.66 '' PRINTED IN FULL COLOR
        WITH BLACK PRINTED AS BLACK
--------------------------------------


      PLACE YELLOW RIBBON IN PRINTER


        (PRESS RETURN TO CONTINUE)
--------------------------------------




--------------------------------------
SPACE-START/STOP PRINTING     ESC-CANCEL
```

Select the **PRINT** option and you will be prompted to position the paper in the printer. The top of the screen shows the dimensions and color of the final printout. For now, we will print using the default settings. Position the paper so at least *one inch* of paper appears above the paper guide bar and press the RETURN key. The paper will roll backward about one inch. This is to prevent accidently smearing your picture while changing ribbons. For printers without reverse line feed capability (like the Epson MX-80) see *Appendix B*.

The program will instruct you to install the *yellow* ribbon cartridge in the printer. Remove or open the printer cover and carefully replace the ribbon *without moving the print head*. It may take a little practice before you can easily swap ribbon cartridges. See *Appendix A* for detailed instructions on your particular printer.
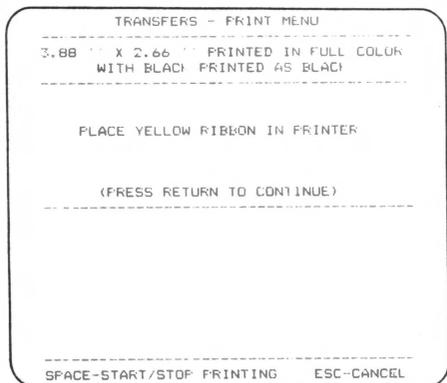
Replace the cover and make sure that the printer is *ON LINE*. When everything is set, press the RETURN key. The paper will roll forward to where you originally positioned it and printing will begin. Since we are making a transfer, the printout will appear *backwards* on the paper.

When yellow is finished printing, the printer will roll the paper back into position for the next color. Repeat the above procedure for the red, blue, and black ribbons. When the black ribbon is finished, the printer will eject the paper, and you will have a full color print!

TRANSFER TO CLOTH

Now let's transfer the picture to a test patch of cloth. First check your picture for any ink smudges. They are most likely to occur with new ribbons. Artgum or an eraser can be used to remove the smudges. Be careful not to touch the printed part of the picture as heat from your hand may smear the ink. Using a pair of scissors, carefully cut around the picture to create rounded corners. Square corners on the transfer may show through on the cloth.

Set your iron to a *medium* setting (wool - no steam). Place the test patch of cloth on a blank sheet of paper or an old piece of fabric to protect the ironing surface. Position the transfer on the cloth with the *ink side facing down*. Place the iron on the transfer and gently move the iron around to even out the heat and prevent scorching. The movement also prevents uneven heating caused by the steam jets on some irons. Heat should be applied to all areas of the transfer for approximately *one minute*. Then carefully peel back the paper to reveal your first custom cloth transfer.

CAUTION: MAKING TRANSFERS REQUIRES THE USE OF A HOT IRON AND SHOULD ONLY BE DONE UNDER ADULT SUPERVISION.

Chapter 5 – DISK

The tutorial in Chapter 4 showed the basic steps in creating color printouts using PRINCE. First, you select an activity from the *PRINT ACTIVITY* menu. This will bring you to the *FUNCTION* MENU. Then you use the **DISK** function to load a picture. If you want to add text or change the picture, use the **EDIT** function. Finally, use the **PRINT** function to print the picture. These functions are basically the same for all of the PRINCE print activities and are covered in detail in the next three chapters. The unique features of the various print activities are covered in later chapters.

DISK OPTIONS

```
--------------------------------------
        TRANSFERS - DISK MENU
--------------------------------------
 1-EDIT   2-PRINT   3-DISK   4-EXIT
--------------------------------------
             - ACTION -

    LOAD        SAVE       FORMAT DISK

    LOAD FONT   SET DISK

    (ARROWS CHOOSE - RETURN SELECTS)
--------------------------------------



--------------------------------------
 RETURN-SELECT LOAD        ESC-CANCEL
--------------------------------------
```

When you select the **3-DISK** function, the various disk options will appear at the center of the screen. There are five options available:

* **LOAD** - Load a picture
* **SAVE** - Save a picture
* **FORMAT DISK** - Format a data disk for picture storage
* **LOAD FONT** - Load a text font
* **SET DISK** - Change the drive selected

Use the arrow keys to highlight the desired option and press RETURN to select. When you are finished with the **DISK** menu, press ESC to return to the function menu (or press the number of the desired function).

LOAD

```
--------------------------------------
        TRANSFERS - DISK MENU
--------------------------------------
    LOAD PICTURE FROM DISK 1 IN SLOT 6
--------------------------------------


 USE ARROWS TO SELECT - RETURN TO LOAD


--------------------------------------

         BK.TED.BEAR.DOLL
         BK.TED.BEAR.STICKERS
 LOAD:   BK.PRINCE.TUTORIAL
         BK.EXAMPLE.LABELS
         BK.LETTERHEAD
         BK.CHRISTMAS.CARD
--------------------------------------
                           ESC-CANCEL
--------------------------------------
```

This option will load normal hi-res and double hi-res pictures from the disk drive selected. PRINCE will load pictures created with other paint and drawing programs (like Baudville's *BLAZING PADDLES* and *PIXIT*). It will also load compressed picture files created with *TAKE 1* (which have a BK. prefix).

When you select **LOAD**, the program will scan the disk and display a list of available pictures at the bottom of the screen. Use the arrow keys to scroll through the list until the desired name is highlighted and press RETURN to load the picture. When the picture is loaded, it will be displayed for a few seconds before returning to the disk menu.

SAVE

You can save a picture that has been edited and printed with PRINCE. The advantage of saving a picture after it has been printed is that the print parameters (size, crop values, etc.) are saved along with the picture. This allows you to get an identical printout when you load the picture at a later time.

You must have a formatted data disk to save your picture. Place the disk in the drive and select **SAVE**. Type a name for your picture and press RETURN to save it.

Pictures saved with PRINCE can be loaded into other paint and drawing programs for further editing. It is recommended that you begin all of your picture filenames with a PI. prefix to be compatible with other *BAUDVILLE* products.

FORMAT DISK   Before pictures can be saved to a disk, the disk must be formatted. Here are the steps:

1) Remove the PRINCE program disk from the drive.

2) Select the **FORMAT DISK** option. The format slot and drive will appear at the top of the screen.

3) Place the disk to be formatted in the selected drive and press RETURN. The disk will spin for a few seconds while formatting.

WARNING: FORMATTING A DISK WILL DESTROY ANY FILES THAT WERE PREVIOUSLY ON IT. MAKE SURE YOU DO NOT ACCIDENTLY FORMAT A VALUABLE DATA DISK OR THE PRINCE PROGRAM DISK!

LOAD FONT   You can load different styles of text fonts used to add text to your picture. Select the **LOAD FONT** option and follow the procedure for loading a picture. Some of the PRINCE fonts contain special *graphics* characters that allow you to add graphics and borders in the TEXT mode. In addition to the fonts available on the PRINCE program disk, you can also use text fonts from the *BAUDVILLE Shape Library* disks.

SET DISK   If you have more than one disk drive, you can use this option to change the current drive for disk operations.

USING PRODOS FILES   Some graphics programs save pictures using the ProDOS disk format. To load these pictures into PRINCE, you must first transfer the files to a DOS 3.3 disk (use the *CONVERT* program on the ProDOS system master). When you load a double hi-res picture that has been converted from ProDOS, you must use the EDIT function to **FIND** the picture you just loaded. This is due to the variety of formats used by different programs to save double hi-res pictures.

Chapter 6 – EDIT

The **EDIT** function allows you to make changes to your picture before printing it. You can add text, erase, move the picture around the screen, and crop the picture so only a portion of it gets printed.

THE EDIT MENU
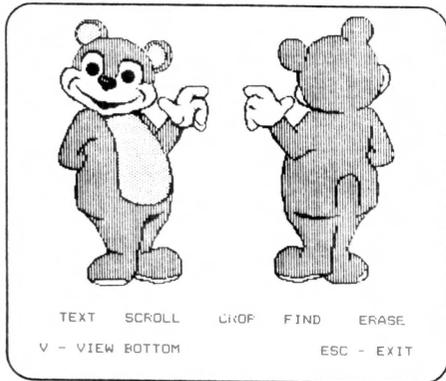
When you select the **1-EDIT** function, your picture will be displayed with the EDIT options at the bottom of the screen. Use the arrow keys to highlight the desired option and press RETURN to select. If you want to view the part of the picture hidden by the menu, press the V key. To get the menu back, press the V key again. This *view* command works the same in all of the edit options. The ESC key is used to exit the **EDIT** menu and return to the main function menu.

NOTE: Because of PRINCE's powerful screen image *capture* feature, the hi-res screens are not cleared when you boot up the program. If you should happen to select the **EDIT** function before loading a picture, you may see garbage on the hi-res screen. There is no cause for alarm, you are only viewing what was in memory when the PRINCE disk was booted.

ADDING TEXT

Select the **TEXT** option to add text to your picture. The PRINCE disk comes with four different styles of text fonts. The CS.PRINCE.15 font is loaded automatically when the program is booted.

Each font can be printed in two sizes. Press the 1 key to select the smaller size and the 2 key for the larger. You can tell which size is selected by the size of the flashing cursor. The *move* keys are used to position the cursor at the place you want the text to start. You don't have to be exact because you will be able to move the whole line of text after it is typed.

When the cursor is positioned, press RETURN and the *add text* prompt will appear. Type the line of text directly from the keyboard. The ← key will backspace to correct mistakes. Release the caps-lock key on the Apple IIc and IIe to get lower case. On the II+, the → key is used as a caps-lock. Press it once for lower case (a smaller prompt will appear). Press it a second time to return to upper case. Press CTRL-C to change the color of the text. If you are typing and nothing appears, try changing the color as you are probably typing in the background color.
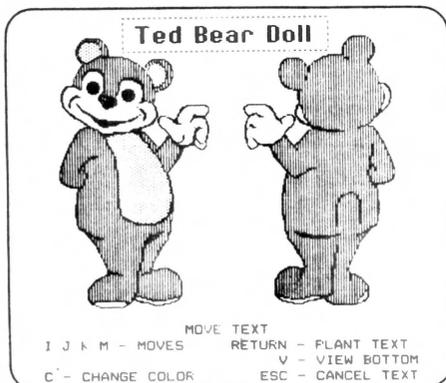
Press RETURN when the line of text is complete. A shimmering box will appear around the text you just typed. Now use the *move* keys to position the text exactly and then press RETURN to *plant* the text or ESC to *undo* it. When the text is planted, the shimmering box will disappear and you can add more text or press ESC to return to the EDIT menu.

NOTE: Because of the color resolution of the Apple, some font styles may look strange in the smaller size. If this is the case, use black text on white background for the small font size.

Text Graphics

♠ ♥ ♣ ♦

As an added feature, some of the PRINCE fonts will produce graphics when you type the lesser used keys. Try pressing the @ key in the *ADD TEXT* mode and see what happens! With both graphics and text in the fonts you can actually create borders and other designs in the *TEXT* mode.

SCROLL

Use the **SCROLL** option if you want to move the image on the screen. The *move* keys will scroll the picture both vertically and horizontally. Using **SCROLL** in conjunction with **ERASE** provides a way to position a smaller portion of the screen so you have room to add text.

CROP

The **CROP** feature allows you to print only a portion of the screen image. When you select **CROP**, you will see a shimmering box on the screen. This is the *crop window*. The part of the picture *inside* the crop window gets printed. The area *outside* the crop window does not get printed.
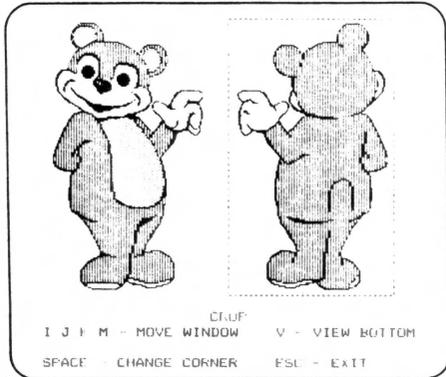
The ⒤ ⒥ Ⓚ and Ⓜ keys are used to move the crop window. The *move* commands only act on one corner of the box at a time. The SPACE bar is used to switch control back and forth between the upper-left corner and the lower-right corner. When you get the crop window where you want it, press RETURN to return to the *EDIT* menu. The crop window will disappear from the screen, but PRINCE will remember the window when it is time to print.

FIND

The **FIND** mode is used to search through the Apple graphics memory for existing images. Typically, FIND is used right after PRINCE is booted to *capture* a screen image.

There are two standard hi-res screens (and two double hi-res screens if you have 128K). Use the SPACE key to step through the various screen images in the Apple memory. When you see the image you want to print, press the RETURN key. Press the ESC key if you want to get back to the screen you started with. If RGB was set to *yes* on the setup menu, you will be able to find four additional double hi-res screens.

ERASE

The **ERASE** option will delete a part of the picture. It uses a shimmering box like the CROP mode. Use the *move* keys and the SPACE key to place the box around the area you want to erase and press RETURN. The area *inside* the box will be cleared to white. You will be prompted to press RETURN again to make the erase permanent or ESC to *undo* the erase and restore the picture.
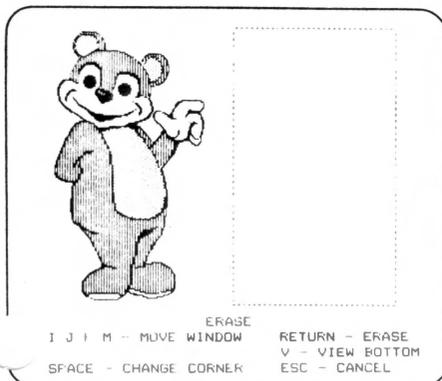
Chapter 7 – PRINT

```
        PICTURES    PRINT MENU
- - - - - - - - - - - - - - - - - - - - -
1-EDIT   2-PRINT   3-DISK   4-EXIT
- - - - - - - - - - - - - - - - - - - - -
            - ACTION -
    PRINT           OPTIONS


   (ARROWS CHOOSE - RETURN SELECTS)
- - - - - - - - - - - - - - - - - - - - -

RETURN-SELECT PRINT        ESC-CANCEL
```

All printing occurs in the **2-PRINT** function. When you select this function, you will have two choices:

* **PRINT** - Print the picture

* **OPTIONS** - Change the printing parameters

In the tutorial example, selecting **PRINT** produced a small size full-color printout. It is possible to make the printout larger, print in different colors, or otherwise modify the resulting printout. The size and other print attributes are determined by the *printing parameters*. Select **OPTIONS** if you want to change any printing parameters before printing your picture.

PRINT OPTIONS

```
        PICTURES - PRINT MENU
- - - - - - - - - - - - - - - - - - - - -
1-EDIT   2-PRINT   3-DISK   4-EXIT
- - - - - - - - - - - - - - - - - - - - -




   (ARROWS CHOOSE - RETURN SELECTS)
- - - - - - - - - - - - - - - - - - - - -
BLACK PRINTS:BLACK
PRINT COLOR :ALL
PRINT SIZE  :SMALL
COPIES      :1


- - - - - - - - - - - - - - - - - - - - -
RETURN-DO BLACK PRINTS     ESC-CANCEL
```

When you select **OPTIONS**, the bottom half of the screen will show a list of the current parameter settings. The actual parameters displayed will vary depending on the print activity you selected. For most print activities, there will be three or four parameters that you can change. The options for printing *pictures, transfers, cards,* and *labels* are covered here. In the expert mode you have control over all 18 printing parameters. These parameters are described in detail in Chapter 12.

Use the arrow keys to highlight any parameter that you want to change and press RETURN . The available choices for that parameter will appear at the center of the screen. Use the arrow keys to highlight the desired choice and press RETURN. Some parameters require you to type a number value to change the setting. The new parameter setting will appear in the current parameter list. Select **2-PRINT** when you have the printing parameters set and are ready to print.

BLACK PRINTS (black or white)

The **BLACK PRINTS** parameter describes how the black and white areas of your picture will be printed on the paper. When you select **BLACK PRINTS BLACK**, the printout will look exactly like the picture on the screen. This is fine for pictures that have a white background. Pictures that have a black background generally don't look good printed this way. The large black areas also wear out the ribbons much faster. This problem is solved by setting **BLACK PRINTS WHITE** which prints the black and white areas in *inverse* of how they appear on the screen.
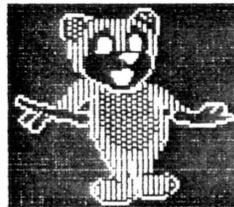
BLACK PRINTS BLACK   BLACK PRINTS WHITE

PRINT COLOR   Selecting **ALL** for the print color produces a full color printout with all four ribbon colors. If you want a single color (monochrome) printout, select one of the other **PRINT COLOR** options. The *purple*, *green*, and *orange* options will require two passes of the ribbons to mix the colors. *Yellow, red, blue*, and *black* require only one ribbon color.

PRINT SIZE   The choices for **PRINT SIZE** when printing a *picture* or *transfer* are SMALL, MEDIUM and LARGE. The actual dimensions of the printout depend on the size of the crop window. A SMALL picture has a horizontal dimension of four inches or less, a MEDIUM picture has a horizontal dimension between four and six inches, and a LARGE picture has a horizontal dimension of six inches or more. Sometimes the letters "NA" appear after the size. This indicates the selected size is *NOT AVAILABLE*. The picture will still print, but it will be larger or smaller than expected. Print size is selected automatically when printing *cards* and *labels*.

SMALL

MEDIUM

LARGE

COPIES   This option allows you to make more than one copy of your picture. The maximum number of copies that can be done in each pass depends on the size of the picture and the PRINT COLOR selected. Up to 99 copies can be made of single ribbon colors. Fewer copies are allowed on colors that require more than one ribbon pass. This is to prevent the paper from jamming as it rolls back for the next ribbon.

SAVING PARAMETERS   If you plan to print a picture again at a later time, you should save it back to a data disk (*see Chapter 5*). Saving a picture automatically saves the current printing parameters used for the printout. This way you will get an identical printout the next time you load the picture.

Chapter 8 – Pictures and Transfers

Each of the PRINCE print activities has its own unique features. The next four chapters cover these features and provide useful tips on how to get the best results with each print activity.

PICTURES produces a normal printout of your screen image. Use this activity to make signs, posters, or color printouts from your favorite paint program. **TRANSFERS** produces a printout that is *flipped* so it will appear correct when it is ironed on cloth. The printing techniques are the same for both activities. The size and color of a printout is determined by the printing parameters set in the *PRINT OPTIONS* menu (*see Chapter 7*).

HORIZONTAL CENTERING

The image will be automatically centered horizontally on the paper. If you want to set the horizontal position manually, use the EXPERT mode.

VERTICAL ALIGNMENT

Printing begins right where the print head is positioned on the paper. Only the portion of the screen image inside the *crop window* is printed. When the program prompts you to position the paper, the dimensions of the printout (width x height) will appear at the top of the screen. Use the height to determine where to position the paper in the printer. Just remember that the paper rolls BACKWARD about one inch when changing the ribbons. *Always leave at least one inch of paper above the paper guide bar to avoid jamming the printer.*

PRINTOUT SIZE

The actual size of the image printed depends on both the *PRINT SIZE* selected and the size of the *crop window*. To get the largest possible printout, set the crop window so that it just touches the image on all sides and set the *PRINT SIZE* to *LARGE*. You may want to do a trial printout to see if the size is right (select a single color to speed up this process).

HINT: The dimensions of the printout are always displayed at the top of the screen just before printing. If the size is not right, use ESC to exit and reset the crop window or print size.

TRANSFER TIPS

No special type of paper is required for transfers, your regular printer paper will work just fine. The tutorial in Chapter 4 tells how to iron the transfer onto the cloth. For best results, use cloth material that is at least 50% synthetic. You can use a hotter iron if you place an additional piece of paper over the transfer. Don't move the iron around too much; just enough to distribute the heat evenly and prevent scorching the fabric.

Chapter 9 – Greeting Cards

A greeting card is produced from a full screen image and requires an entire 8 $\frac{1}{2}$" x 11" sheet of printer paper. The left half of the screen image appears on the front of the card and the right half appears inside the card when it is opened. There are several examples of greeting cards on the back side of the PRINCE disk. These examples can be edited to make your own personalized cards.

Select the **CARD** activity to print greeting cards. The picture must be designed with the *front* of the card in the *left* half of the screen, and the *inside* of the card in the *right* half. There is no CROP option when printing greeting cards, the entire screen is printed. You can see if the picture is laid out correctly by using the CARD option in the EDIT function. This will display a shimmering line down the center of the screen showing you what will appear on the front and inside of the card.

POSITIONING THE PAPER

The paper requires very exact positioning when printing cards. It may take a little practice before you get the hang of it. Align the paper so that the printer head is positioned at the very top of the page (right over the perforations). This requires a leading sheet of printer paper because the page perforation falls below the paper guide bar. If you are using a fancy paper to print cards, you can reduce waste by attaching a lead sheet of regular printer paper with removable tape.
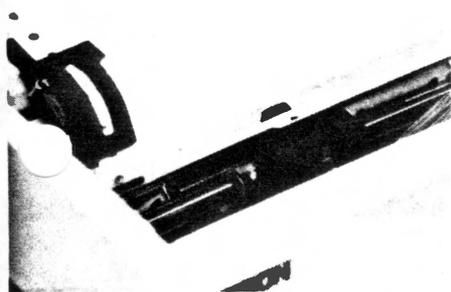
FOLDING THE CARD

The left half of the screen is printed first (upside down) in the upper left corner of the page. The right side is then printed in the lower right corner of the page.

When the printing is finished, remove the paper from the printer and detach the lead sheet. Place the printout face down on a hard, flat surface like the kitchen table or desktop. Fold paper exactly in half top to bottom and crease the fold with your thumbnail. **Be careful not to smear the ink when you are folding.** Fold the paper in half again so that the front of the card appears on the outside. *PRESTO! A CARD!*

FOLD HERE FIRST

THEN FOLD HERE

Chapter 10 – Labels

The **LABEL** activity automatically adjusts a printout to fit on 3.5 inch wide label stock. The horizontal dimension is set as close to 3.5 inches as possible. Then the vertical dimension is calculated to maintain the proportions of the crop window. A full size hi-res screen image will produce a 3.49" x 2.66" label. Different sizes of crop windows generate labels from 0.02 to 18.66 inches high.

PRINCE LABEL STOCK

Included in the PRINCE Craft Kit is a specially designed label stock. The $3\frac{1}{2}$" x 11" pinfeed sheets have a non-permanent adhesive which holds very well yet allows you to peel a label off without destroying it. The labels can be cut to any size after printing. Additional label sheets are available from BAUDVILLE.

PRINTING LABELS
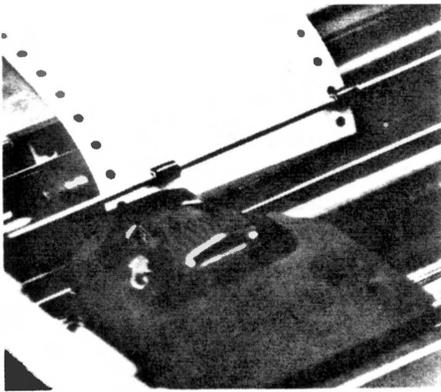
The label stock should be positioned in the printer so that the left edge is in the same place as the left edge of regular printer paper when you print pictures. Align the label so that the print head is right where you want to start printing (remember to leave at least 1" above the paper guide). The dimensions of the printout always appear at the top of the screen before printing begins. You can use the [ESC] key to cancel printing if the dimensions are not what you expected.

There are several examples of labels on the back side of the PRINCE program disk (the filenames have a .LABEL added). Among the examples are pre-set labels for disks, video cassettes, and audio cassettes.

To see how the width of the crop window affects the label size, select the **LABELS** activity and load the BK.BIRD.LABEL picture from the back side of the PRINCE disk. Then go to **EDIT** and use **CROP** to examine the preset crop window. It should look like the top of the picture shown below. Print the picture without changing any parameters. You can use regular printer paper so you don't waste label stock. Now change the crop window so that it just fits over the image in the center of the screen and print it. Notice how the proportions of the printed image match the crop window. Finally, set the crop window to the full width of the screen as shown in the bottom example and print it one more time.
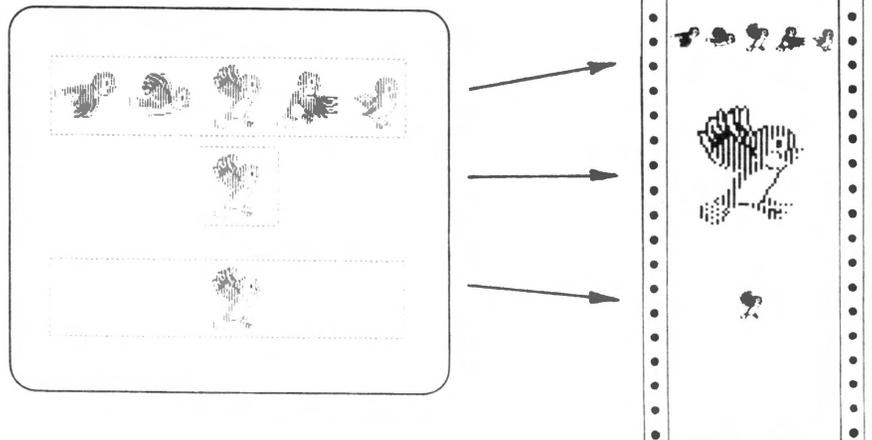
Chapter 11 - Expert

When you select the **EXPERT** print activity, you have complete control over all of the printing parameters. You can change the size of the printout, stretch it horizontally or vertically, change the print density, etc. There are 18 different print parameters that you can adjust in the EXPERT mode. Most of these parameters are preset in the other activities to make PRINCE easier to use. The EXPERT mode opens up creative printing possibilities not available in the other activities.

The DISK and EDIT functions are the same in the EXPERT mode as the other activities. The big difference is in the **PRINT OPTIONS** menu. All of the parameters that affect the printout are available in this menu. Many of these parameters are interrelated so changing one may affect several others.

Use the arrow keys to highlight any parameter that you want to modify and press RETURN . The available choices for that parameter will appear at the center of the screen. Use the arrow keys to highlight the desired choice and press RETURN . You may be required to type a number value to change the setting. All parameters affected by the change will be updated in the current parameter list. *NOTE: Parameters in parentheses on this menu can be accessed only if you set PRINT SIZE to MANUAL.*

```
          EXPERT   PRINT MENU
---------------------------------------
1-EDIT    2-PRINT    3-DISK    4-EXIT
---------------------------------------




     (ARROWS CHOOSE - RETURN SELECTS)
---------------------------------------
BLACK PRINTS:BLACK    HOR REPEAT :1
PRINT COLOR :ALL     (ROTATE    ):0  DEG
PRINT SIZE  :SMALL   (H DENSITY):72
OUTPUT      :PAPER   (LEFT MARG):2.05
PRT MODE    :NORMAL  (HORZ DIM ):3.88
CROP TOP    :0       (VERT DIM ):2.66
CROP BOTTOM :191     (HORZ MULT):1
CROP LEFT   :0       (VERT MULT):1
CROP RIGHT  :279
---------------------------------------
RETURN-DO PRINT              ESC-CANCEL
```

BLACK PRINTS   Same as other print activities (*see Chapter 7 - Black Prints*).

PRINT COLOR   Same as other print activities (*see Chapter 7 - Print Color*).

PRINT SIZE   There are six **PRINT SIZE** options available:

1) **SMALL** - Selects size *less* than 4" wide.
2) **MEDIUM** - Selects size *between* 4" and 6" wide.
3) **LARGE** - Selects size *greater* than 6" wide.

These three options print the largest size available in the range specified. The printout is always centered horizontally and rotation set to zero. *NA* indicates size *not available*.

4) **MINIMUM** - Selects smallest possible printout.
5) **MAXIMUM** - Selects largest possible printout that maintains the crop window proportions.

These two options also allow you to change the *ROTATION* and *HORIZONTAL DENSITY* parameters.

6) **MANUAL** - Allows access to all of the print parameters. You can independenly adjust the *LEFT MARGIN*, *HORIZONTAL DIMENSION*, *VERTICAL DIMENSION*, *HORIZONTAL MULTIPLIER*, and *VERTICAL MULTIPLIER*.

This option is especially useful if you want to change the *aspect ratio* (height to width proportions) of your picture.

OUTPUT Custom transfers can be made from the EXPERT mode. Select **TRANSFER** if you want a mirror image of your picture. Select **PAPER** for regular printouts.

PRINT MODE This parameter selects **NORMAL, FAST,** or **DARK** print. The **FAST** print selection makes one pass for each line printed. If there is a lot of color on the line, the ribbon will lose its ink quite rapidly. The **NORMAL** print selection causes the printer to make two printing passes for each line. This takes longer to print a picture but improves ribbon life substantially. The choice is yours, but keep in mind that PRINCE automatically forces NORMAL printing in the other print activities. The **DARK** print selection is just as you would expect - the print image is darkened using techniques that vary from printer to printer. In fact, on some printers, each line may be printed four times for a DARK print.

Color Printers On *color* printers (like Imagewriter II), three additional options exist: **COLOR NORMAL, COLOR FAST,** and **COLOR DARK.** These options create full color prints in a single pass using the multicolor ribbons supplied with the color printer. These ribbons do not have heat transferrable ink so you cannot use them to make *transfers*. Select the regular (non-color) print modes when using PRINCE transfer ribbons on a color printer.

CROP The size of the *crop window* can be set manually using the **CROP** parameters. It is usually much easier to set the crop window in the EDIT function (where you can see the imag but you have the option to do it here as well. Any changes you make will show up when you go back to EDIT. The values are represented in pixels, or dots that make up the hi-res screen. There are 192 vertical pixels (0-191). Normal hi-res has horizontal pixels (0-279) and double hi-res has 560 horizontal pixels (0-559).

HORIZONTAL REPEAT This option allows you to print your image more than once horizontally across the page. If you're doing transfers, this is an easy way to get more than one transfer at a time. The number of repeats allowed depends on the printout size and the characteristics of your printer. When HORIZONTAL REPEAT is greater than 1, the left margin is automatically set to zero and you will see an additional parameter at the bottom of the screen. This is the **REPEAT SPACE** parameter which allows you to adjust the amount of space (in inches) between the printed images.

ROTATE

This option allows you to print your image rotated 90 degrees clockwise. This can be useful when printing a large image that wouldn't otherwise fit on the paper. Since a full screen image is wider than it is tall, rotating may allow you to print a larger image than normally possible. NOTE: The horizontal and vertical parameters remain relative to the printer, *not* the rotated image. Rotating an image may cause the parameters to fall outside the range of the printer's capabilities. If you see an *ER* on any parameter, this indicates a range error and you should change the size. **Accessible only with MANUAL, MINIMUM, or MAXIMUM PRINT SIZE.**

HORIZONTAL DENSITY
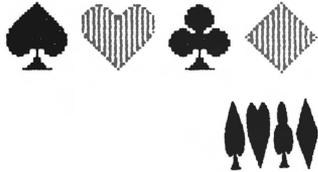
This option allows you to alter the number of dots per inch printed along a horizontal line. The range of values varies with different printers. Altering the HORIZONTAL DENSITY will change the HORIZONTAL DIMENSION, the LEFT MARGIN, and possibly the number of REPEATS. **Accessible only with MANUAL, MINIMUM, or MAXIMUM PRINT SIZE.**

LEFT MARGIN

This option allows you to set the LEFT MARGIN size in inches. PRINCE usually sets this value to automatically center the printed image on the page. You can set the print to be left justified, centered, or right justified by altering the LEFT MARGIN. If the letters *ER* appear after the LEFT MARGIN value, it indicates an ERROR, and your print will not fit on the paper with the existing selection. The simpliest way to fix this problem is to reduce the LEFT MARGIN value. **Accessible only with MANUAL PRINT SIZE.**

HORIZONTAL DIMENSION

This is the *width* of the printout in inches. The value will change whenever you alter another parameter that affects the printout size. **Accessible only with MANUAL PRINT SIZE.**

VERTICAL DIMENSION

This is the *height* of the printout in inches. The value will change whenever you alter another parameter that affects the printout size. **Accessible only with MANUAL PRINT SIZE.**

HORIZONTAL MULTIPLIER

This is the *width* expressed as a multiple of the smallest possible printout. A HORIZONTAL MULTIPLIER of 2 would print twice as wide as the smallest printout. The value will change whenever you alter another parameter that affects the printout size. **Accessible only with MANUAL PRINT SIZE.**

VERTICAL MULTIPLIER

This is the *height* expressed as a multiple of the smallest possible printout. A VERTICAL MULTIPLIER of 5 would print five times taller than the smallest printout. The value will change whenever you alter another parameter that affects the printout size. **Accessible only with MANUAL PRINT SIZE.**
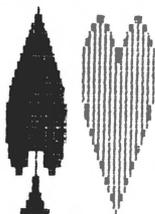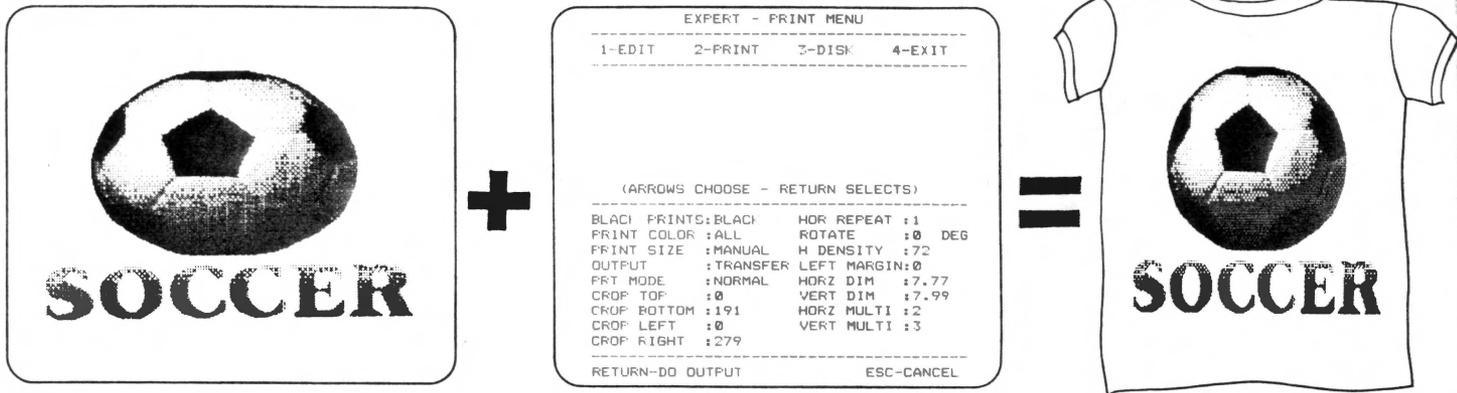
Chapter 12 – Printing Examples

Here are some printing examples using pictures from the back side of the PRINCE disk. The picture filenames are listed in the examples. All printing parameters are pre-set when you load the pictures.

T-SHIRT TRANSFER - BK.SOCCER

Use the EXPERT mode to make a large transfer. The printout is stretched vertically to make the ball round. Use a full-screen crop window and select PRINT SIZE=MANUAL, OUTPUT=TRANSFER, HORZ MULTI=2, VERT MULTI=3.


```
              EXPERT - PRINT MENU
-------------------------------------------
  1-EDIT    2-PRINT    3-DISK    4-EXIT
-------------------------------------------




       (ARROWS CHOOSE - RETURN SELECTS)
-------------------------------------------
  BLACK PRINTS:BLACK    HOR REPEAT :1
  PRINT COLOR :ALL      ROTATE     :0   DEG
  PRINT SIZE  :MANUAL   H DENSITY  :72
  OUTPUT      :TRANSFER LEFT MARGIN:0
  PRT MODE    :NORMAL   HORZ DIM   :7.77
  CROP TOP    :0        VERT DIM   :7.99
  CROP BOTTOM :191      HORZ MULTI :2
  CROP LEFT   :0        VERT MULTI :3
  CROP RIGHT  :279
-------------------------------------------
  RETURN-DO OUTPUT              ESC-CANCEL
```

FULL PAGE ROTATED SIGN - BK.NO.SMOKING

Here is an example of using ROTATE to make a large sign. Set PRINT SIZE=MANUAL, ROTATE=90, LEFT MARGIN=0, HORZ MULTI=3, VERT MULTI=2, and position the printer head about 2 inches below the perforations on the paper.


```
              EXPERT - PRINT MENU
-------------------------------------------
  1-EDIT    2-PRINT    3-DISK    4-EXIT
-------------------------------------------




       (ARROWS CHOOSE    RETURN SELECTS)
-------------------------------------------
  BLACK PRINTS:BLACK    HOR REPEAT :1
  PRINT COLOR :ALL      ROTATE     :90 DEG
  PRINT SIZE  :MANUAL   H DENSITY  :72
  OUTPUT      :PAPER    LEFT MARGIN:0
  PRT MODE    :NORMAL   HORZ DIM   :7.95
  CROP TOP    :0        VERT DIM   :7.77
  CROP BOTTOM :191      HORZ MULTI :3
  CROP LEFT   :0        VERT MULTI :2
  CROP RIGHT  :279
-------------------------------------------
  RETURN-DO ROTATE              ESC-CANCEL
```
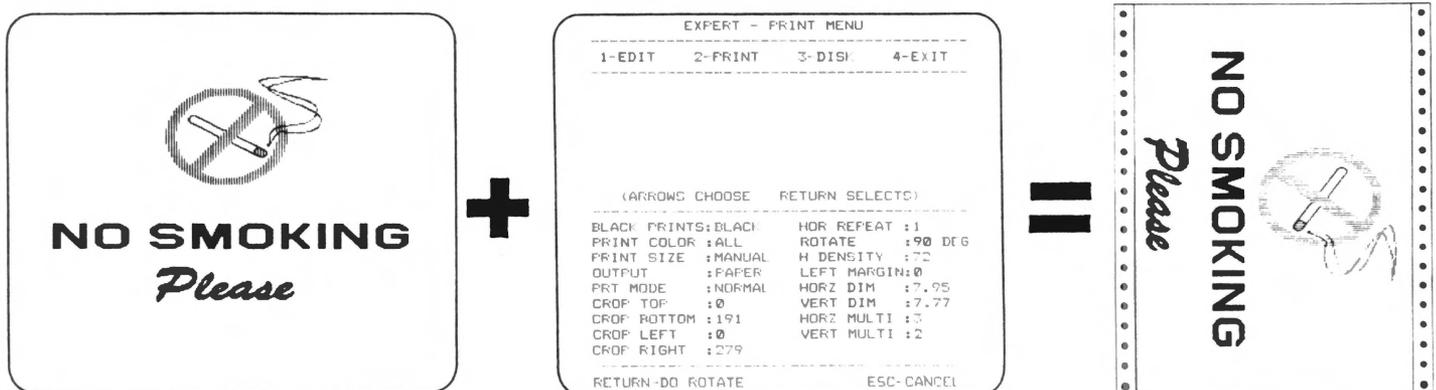
BUMPER STICKERS - BK.I.LOVE.PRINCE

You can use a full sheet of the label stock to make your own bumper stickers! Choose EXPERT and set the *crop window* in the EDIT mode so that it just fits around the graphic. Then use the PRINT OPTIONS to make the printout fit on the label stock. Select MANUAL print size, LEFT MARGIN=0, and ROTATION=90. Make sure the HORZ DIM is less than 3.5 inches and the VERT DIM is less than 11 inches.


```
          EXPERT - PRINT MENU
---------------------------------------
1-EDIT     2-PRINT    3-DISK    4-EXIT
---------------------------------------




       (ARROWS CHOOSE - RETURN SELECTS)
---------------------------------------
BLACK PRINTS:BLACK      HOR REPEAT :1
PRINT COLOR :ALL        ROTATE     :90 DEG
PRINT SIZE  :MANUAL     H DENSITY  :80
OUTPUT      :PAPER      LEFT MARGIN:0
PRT MODE    :NORMAL     HORZ DIM   :3.49
CROP TOP    :57         VERT DIM   :10.87
CROP BOTTOM :92         HORZ MULTI :8
CROP LEFT   :9          VERT MULTI :3
CROP RIGHT  :269
---------------------------------------
RETURN-DO VERT DIM            ESC-CANCEL
```
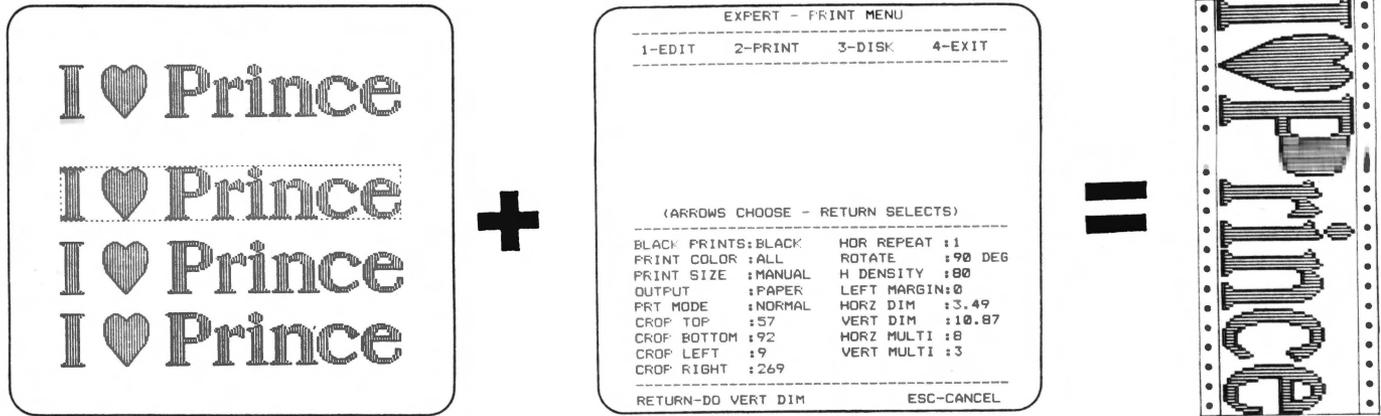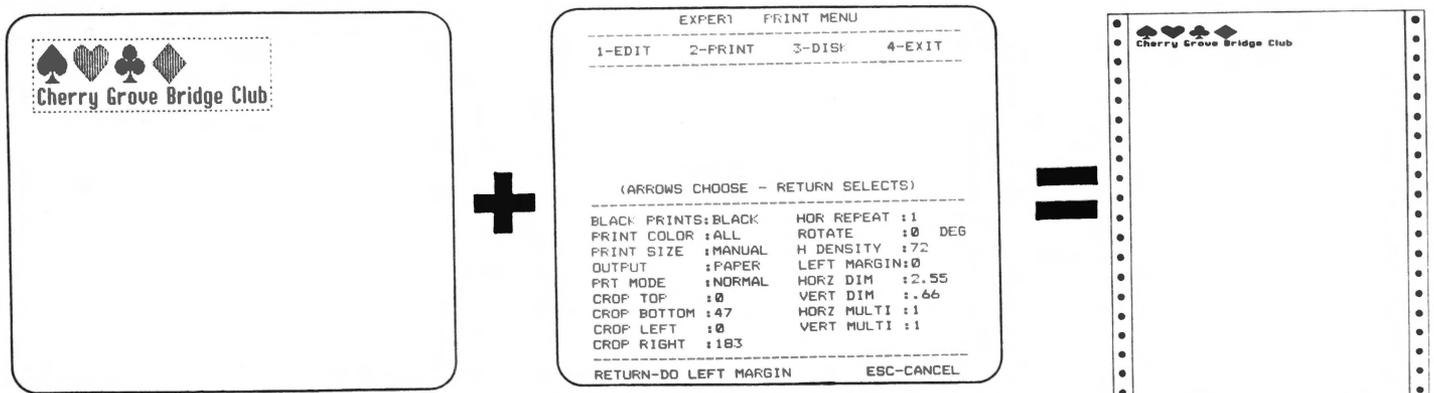
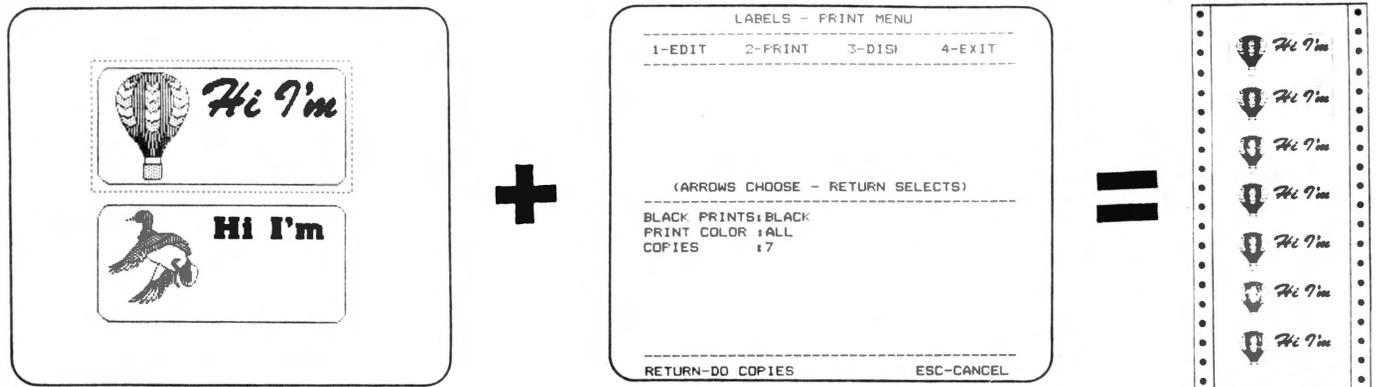## LEFT JUSTIFIED LETTERHEAD - BK.BRIDGE.CLUB

Sometimes it's nice to have letterhead appear at the edge of the paper. Only the EXPERT mode allows you to control left margin. Other activities center the picture automatically. Select PRINT SIZE=MANUAL, LEFT MARGIN=0, and position the printer head at the very top of the paper. Likewise, you can *right justify* by cropping the graphic and making the LEFT MARGIN as large as possible without producing the *ER* error condition.


```
          EXPERT  PRINT MENU
---------------------------------------
1-EDIT     2-PRINT    3-DISK    4-EXIT
---------------------------------------




       (ARROWS CHOOSE - RETURN SELECTS)
---------------------------------------
BLACK PRINTS:BLACK      HOR REPEAT :1
PRINT COLOR :ALL        ROTATE     :0  DEG
PRINT SIZE  :MANUAL     H DENSITY  :72
OUTPUT      :PAPER      LEFT MARGIN:0
PRT MODE    :NORMAL     HORZ DIM   :2.55
CROP TOP    :0          VERT DIM   :.66
CROP BOTTOM :47         HORZ MULTI :1
CROP LEFT   :0          VERT MULTI :1
CROP RIGHT  :183
---------------------------------------
RETURN-DO LEFT MARGIN         ESC-CANCEL
```
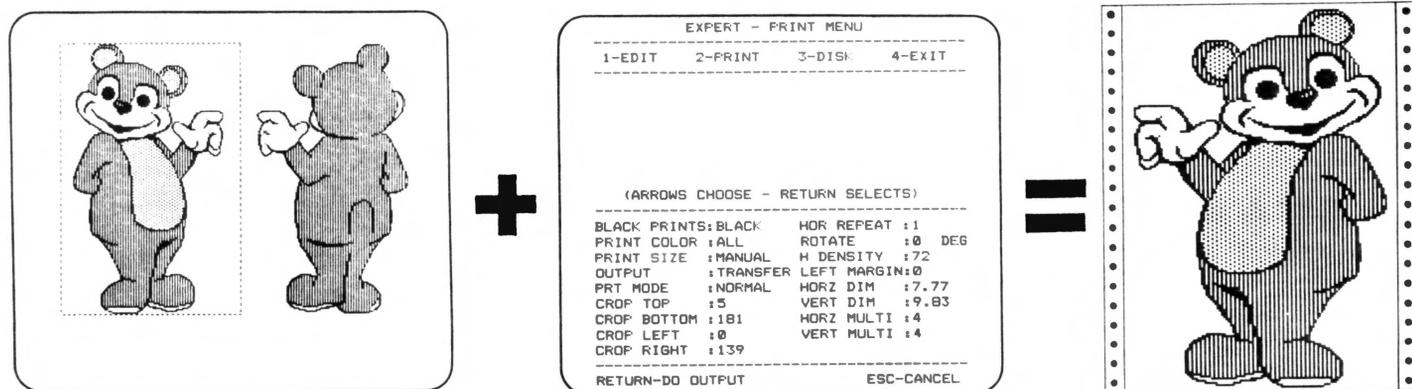
21

MULTIPLE COPY LABELS - BK.HI.LABEL

You can make multiple nametags directly from the LABELS print activity. Just set the number of copies desired in the PRINT OPTIONS menu before printing.


```
            LABELS - PRINT MENU
--------------------------------------------
 1-EDIT     2-PRINT     3-DISK     4-EXIT
--------------------------------------------




          (ARROWS CHOOSE - RETURN SELECTS)
--------------------------------------------
BLACK PRINTS:BLACK
PRINT COLOR :ALL
COPIES      :7




--------------------------------------------
 RETURN-DO COPIES            ESC-CANCEL
```

STUFFED TOY DOLL - BK.TED.BEAR.DOLL

The PRINCE iron-on transfer feature provides all kinds of creative printing opportunities for the whole family. To make this stuffed TED BEAR doll, print the picture in the EXPERT mode using the pre-set parameters. Then go to EDIT and move the *crop window* so that it encloses the back side of the doll and print again.


```
            EXPERT - PRINT MENU
--------------------------------------------
 1-EDIT     2-PRINT     3-DISK     4-EXIT
--------------------------------------------




          (ARROWS CHOOSE - RETURN SELECTS)
--------------------------------------------
BLACK PRINTS:BLACK    HOR REPEAT :1
PRINT COLOR :ALL      ROTATE     :0   DEG
PRINT SIZE  :MANUAL   H DENSITY  :72
OUTPUT      :TRANSFER LEFT MARGIN:0
PRT MODE    :NORMAL   HORZ DIM   :7.77
CROP TOP    :5        VERT DIM   :9.83
CROP BOTTOM :181      HORZ MULTI :4
CROP LEFT   :0        VERT MULTI :4
CROP RIGHT  :139
--------------------------------------------
 RETURN-DO OUTPUT           ESC-CANCEL
```

When you are finished printing both sides, transfer the prints to cloth (see Chapter 4). Trim the excess material to $5/8$ inch from the edge of the image (use pinking shears). Place the front and back together so the printed surfaces face each other and line up perfectly. Stitch just outside the edge of the image leaving one or two inches open at the bottom for stuffing. Turn the doll right-side-out and stuff with fiberfill, worn nylons, or other suitable material. When the doll is stuffed, stitch the remaining opening from the outside.

Chapter 13 – Tips & Troubleshooting

As you use and gain more experience with PRINCE, you will find many little tricks that make the program work even better. You should experiment to find techniques that work best for your particular printer. This chapter covers some helpful tips and application ideas for using PRINCE.

PRINTER TIPS Most printing difficulties arise from improper printer or interface setup. Make sure you follow the manufacturer's manuals for installation and use. If the DIP switches are not correctly set, you are likely to have problems printing. Always turn the computer and printer *OFF* before making adjustments.

Paper Alignment Some printers allow you to adjust the tractor feed. If your cards or labels are not centered properly, you should adjust the horizontal alignment.

Changing Ribbons The technique for changing ribbons is described in Appendix A. Make certain that the cartridge is seated properly and the ribbon is not twisted or hung up anywhere.

Print Head Heat Printing graphics can cause the print head on your printer to become very hot, especially in DARK print modes. It is a good idea to let the printer cool off for a couple of minutes after printing a large or darkly colored picture.

Troubleshooting If your printer doesn't do anything, check to see that it is turned on, on-line, and properly connected. Use the **CHECKLIST** on the last page of this manual. Some printers require the removeable top be in place before they will print. If the printer still doesn't work, go back to the SETUP menu and make sure the program is properly configured to your particular printer and interface card.

If the program prints, but the printout is not right, it could be incorrect DIP switch settings. If the printer skips lines, try resetting the automatic linefeed switch on your printer.

CREATIVE IDEAS PRINCE provides creative printing opportunities for the whole family. Here are some suggestions.

Transfer Projects Use PRINCE's unique iron-on transfer capability to make:

* Christmas decorations
* Stuffed Toys
* Finger Puppets
* Wall Hangings
* Framed Fabric Art
* T-Shirts
* Pillows
* Sewing and Stitchery Patterns

Soft Sculpture	The "soft sculpture" fabric found in most fabric shops works especially well with PRINCE iron-on transfers.
Charts & Graphs	Use your favorite graphics or paint program to create color charts or graphs and print them out in full color.
Stick-ups	The special PRINCE label stock is perfect for stick-on signs for the refrigerator, school notebooks, kids toys, etc.
Bumper Stickers	You can make bumper stickers with the PRINCE label stock. See the example in Chapter 12.
TRICKS WITH TEXT	There are a lot of tricks you can use in the TEXT mode.
Shadow Text	It is very easy to create a *shadow* effect by using two identical lines of text slightly offset from each other. Just follow these steps:

1) Add a line of text to your picture. Set the color to be the shadow color.

2) Move the cursor back to the beginning of the line of text and offset it slightly from the original position.

3) Type the line of text again (exactly as before). Change the color to contrast with the shadow color. In normal hi-res you will be limited in which colors can be placed on top of each other.

4) When you are finished, use the *move* keys to position the text for the desired shadow effect.

Text Graphics	PRINCE has the capability to create graphics in the TEXT mode. Some of the fonts on the back side of the PRINCE disk will produce graphics when you type with the lesser used keys. Other PRINCE fonts are *graphics only* and produce graphic shapes when you press the *number* keys. These *graphics only* fonts are identified on the disk by a CS.GRAPHIC.. filename.
	The text graphics allow you to create borders and background patterns for your cards and pictures. It is quite easy to create an attractive card from scratch using only the TEXT mode.
BACKUP THE BACK SIDE	It is a good idea to make a backup copy of the pictures on the back side of the PRINCE program disk so you don't have to keep flipping the disk over. Use any disk copy or file copy program.

USING COLOR PRINTERS

Several models of printers will produce color printouts using a single multi-color ribbon. This eliminates changing ribbons when you are making a color print. If your PRINCE program is configured for one of these printers (*see SETUP*), it will automatically adjust for the multi-color ribbons when printing.

While multi-color ribbons are convenient, they do not have the heat transferrable ink required to make iron-on transfers. To use the PRINCE transfer ribbons with a color printer, use the EXPERT mode and select one of the regular (non-color) PRINT MODES. Another technique is to configure your PRINCE program for an equivalent black & white printer. Use the following chart in the SETUP procedure:

| COLOR PRINTER	B&W EQUIVALENT
Apple Imagewriter II	Apple Imagewriter
Data Products Color	Data Products Microprism
Epson JX-80	Epson FX-80
Prowriter 8510SC	Prowriter 8510

Appendix A - Changing Ribbon Cartridges

The key to PRINCE's multi-color capability is printing the picture in four passes, changing the color of the ribbon on each pass. You probably have not had a lot of experience changing the ribbons on your printer so you will need to be patient at first. Carefully follow the directions for your particular printer. The process is really quite fast and easy once you learn the technique. **VERY IMPORTANT: Do not move the printer head to the left or right while changing ribbons! This will cause the colors to be out of alignment on the printout.**

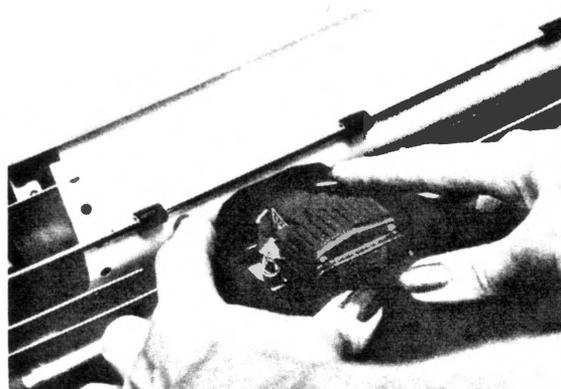**IMAGEWRITER, APPLE DMP, C.ITOH, PROWRITER, and NEC use the same style ribbons:**
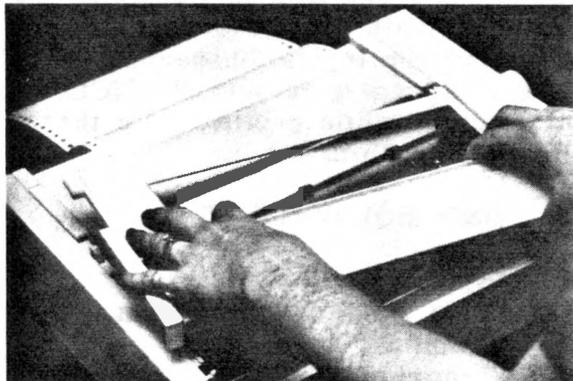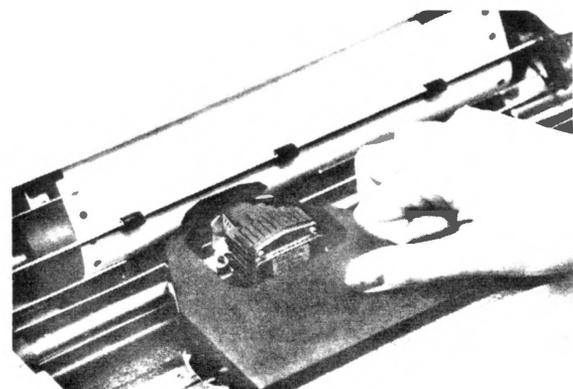
1. Remove the printer cover.
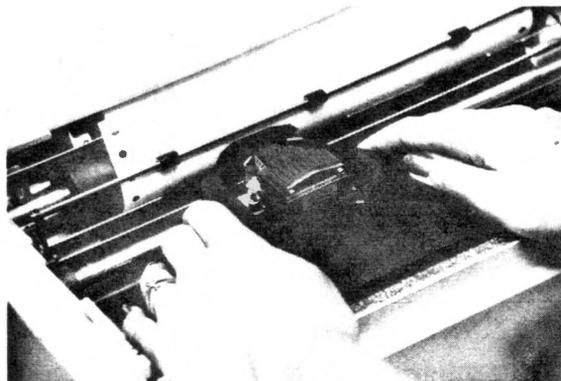
2. Remove the existing ribbon by spreading the two black side clips apart with your thumbs and gently lifting the cartridge upward.
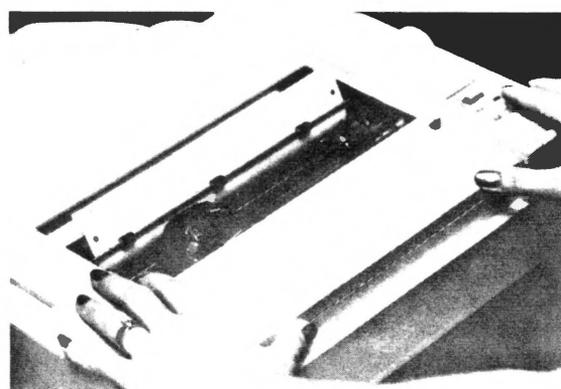
3. Take up any slack in the new ribbon by turning the knob on the cartridge in the direction of the arrow.

4. Hold the cartridge at an angle and slip the exposed ribbon between the printer head and the thin metal ribbon guide. It is sometimes helpful to turn the knob on the cartridge while sliding the ribbon over the print head. Gently snap the cartridge into place.
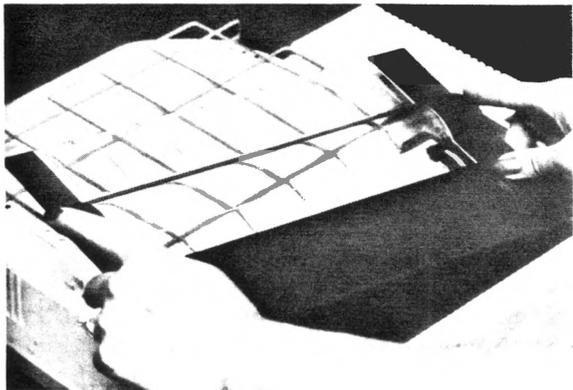
5. Turn the knob on the cartridge 1 or 2 clicks to insure the ribbon is taut, straight and flat.
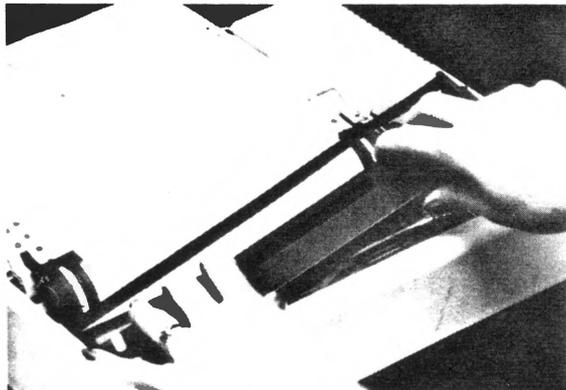
6. Replace the printer cover and make sure the printer is ONLINE before attempting to print.

Changing EPSON style ribbons:

1. Remove the printer cover.

2. Remove the existing ribbon by gently lifting the cartridge upward.

3. Take up any slack in the new ribbon by turning the knob on the cartridge counter-clockwise.

4. Hold the cartridge at an angle and slip the exposed ribbon between the printer head and the thin metal ribbon guide. It is sometimes helpful to turn the knob on the cartridge while sliding the ribbon over the print head. Gently snap the cartridge into place.

5. Turn the knob on the cartridge again to insure the ribbon is taut, straight and flat.
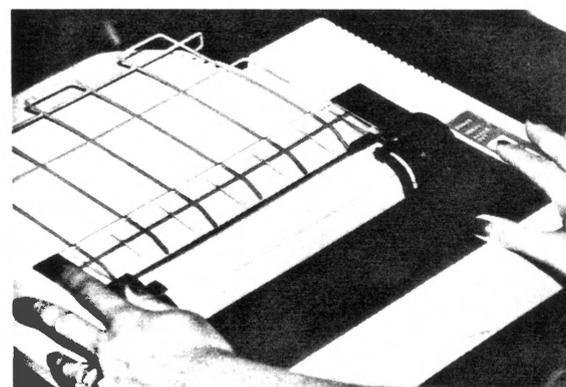
6. Replace the printer cover and make sure the printer is ON LINE before attempting to print.

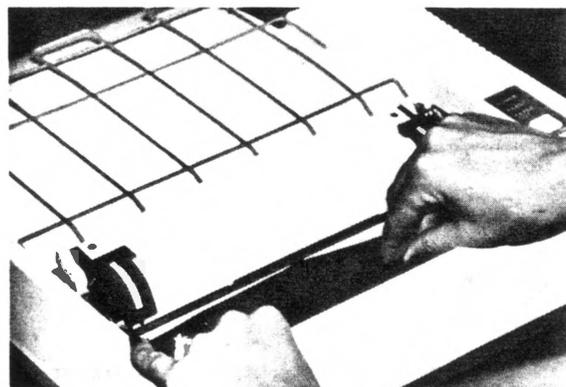**VERY IMPORTANT:** Do not move the printer head to the left or right while changing ribbons! This will cause the colors to be out of alignment on the printout.

Appendix B – Printers Without Reverse Linefeed

For printers without reverse linefeed (like the EPSON MX-80), multi-pass color printing requires the user to manually rewind the paper for each color printed. This requires extra care when rolling the paper backwards through the printer.

**IMPORTANT: If this procedure is done improperly, the colors will not line up correctly and you could even damage the printer!**

Mark Starting Location

When PRINCE pauses to allow paper positioning just before printing, turn the printer *OFF*, reach behind and gently pull the paper feeding *into* the printer until all the slack is taken up. Take a pencil and mark the page just above the paper guide bar. Then install the first color ribbon, turn the printer *ON*, and press the RETURN key to start printing.
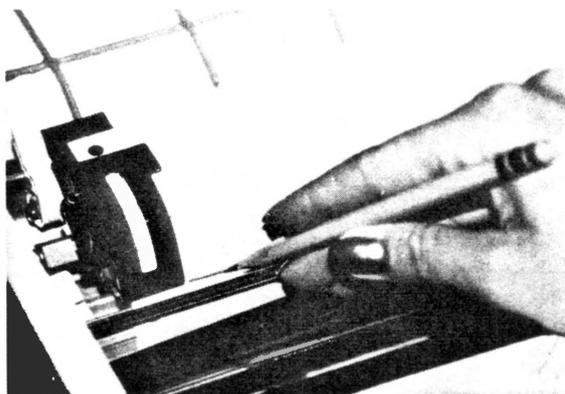
After the first color has finished printing, there will be a slight pause and you will be prompted to roll the paper back. *BE SURE TO WAIT FOR THE NEXT RIBBON PROMPT SCREEN.* Then, turn the printer *OFF*.

Rewind the Paper

With one hand pull the paper taut at the spot where it feeds into the printer and with the other hand, slowly turn the roller counter-clockwise keeping the paper taut as it rolls backwards.
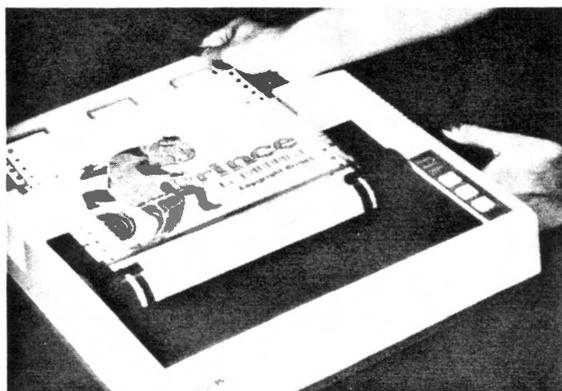
Align your pencil mark with the top of the paper guide bar. You are now ready for the next color. Change the ribbon cartridge, turn the printer *ON*, and press the RETURN key to resume printing.

Appendix C - Capturing Screen Images

One of the most powerful features of PRINCE is the ability to *capture* a screen image directly without having to load it from the disk. This allows you to print hi-res screens from games and other programs that normally cannot be saved to disk. It is also a good way to get images from ProDOS programs by eliminating the conversion to DOS 3.3 disk format.

Display the Picture
To *capture* a picture, you must first get the image on the screen. The screen can be normal hi-res or double hi-res from almost any program. If you are capturing from a paint program or other graphics utility, try to get the entire picture in view to avoid capturing menus.

Boot Up PRINCE
When the picture you want to capture is on the screen, place the PRINCE program disk in drive 1 and reboot the system. Many programs will reboot automatically when you press CTRL-RESET. Other programs may exit to BASIC when you reset. In this case, use PR#6 to reboot. A few programs will not allow you to exit at all, preventing you from using the capture technique.

IMPORTANT: Do not use the *OPEN-APPLE* key to reboot when capturing a picture. This disturbs the hi-res graphics memory and causes black spots to appear in the picture. Using CTRL-RESET on the Apple IIc can also cause this problem. If there is no other way to reboot, you may still find it useful to reboot using *OPEN-APPLE-RESET* and edit out the black spots later.

Find the Image
When PRINCE is booted up, it does not affect the hi-res graphics memory. Whatever pictures are in memory will still be there. After booting PRINCE, you should go directly to **EDIT** and use the **FIND** option to locate the picture in memory. Once the picture is found, you can print it immediately, or save it to disk.

Checklist – Ready to Print?

The following is a quick reference checklist. Use it to verify that your system is ready to print.

* The SETUP menu must match your hardware.

* The interface cable is connected.

* There is paper in the printer.

* Printer is set for TRACTOR feed.

* The printer is turned ON.

* The printer is ON LINE.

* On some printers, the printer cover must be in place.

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Using Text Graphics to create Borders

PRINCE has the capability to produce graphics in the TEXT mode. This makes it very easy to add fancy borders to your pictures and cards before printing. The back side of the PRINCE program disk has special *graphics only* fonts that will make borders. They are identified by *CS.GRAPHIC.BORDER* in the filenames. Each graphic border font will create two different border patterns. For example, if you load CS.GRAPHIC.BORDER.HEARTS font from the disk, you can make the following borders:
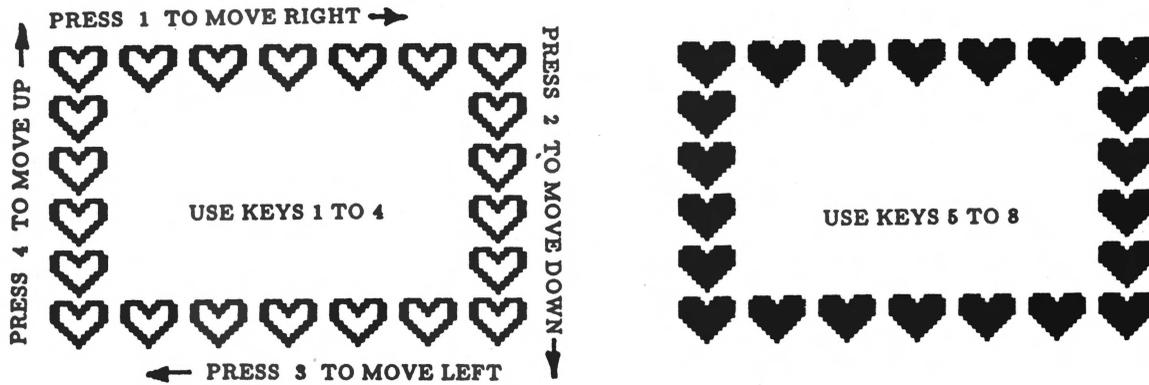
Use the **TEXT** option in **EDIT** to add the borders to your picture. The number keys are used to *type* the border just as you would type text *(see Chapter 6)*. The keys 1 to 4 are used to make the outline hearts, and the keys 5 to 8 make the solid hearts. Position the cursor at the upper left corner of the border and press RETURN to get to the add text mode. Press 1 (or 5) to type the top row or the border (from left to right). When you get to the upper right corner, press 2 (or 6) to type down the right side. When you get to the bottom, press 3 (or 7) to type the bottom row from right to left. Finally, press 4 (or 8) to complete the left side of the border. You can use the ⬅ key to backspace if you make a mistake. You can also reposition and change colors just as you would with normal text fonts.

CS.GRAPHIC.BORDER.LINES

CS.GRAPHIC.BORDER.PATTERNS

CS.GRAPHIC.BORDER.SQUARES

CS.GRAPHIC.BORDER.ARABESQUE

CS.GRAPHIC.BORDER.DIAGONALS

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