

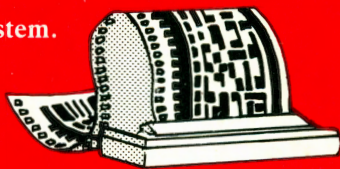
APPLE II SERIES

StripWare™

STRIPPER™

Create your own data strips

for the Softstrip™ System.



DOS 3.3 Version

Package is not returnable if plastic wrap is cut or removed.

Softstrip™
COMPUTER READABLE STRIP

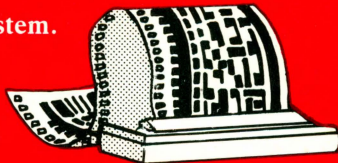
APPLE II SERIES

StripWare™

STRIPPER™

Create your own data strips

for the Softstrip™ System.



DOS 3.3 Version

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Epson is a registered trademark of Epson America, Inc.

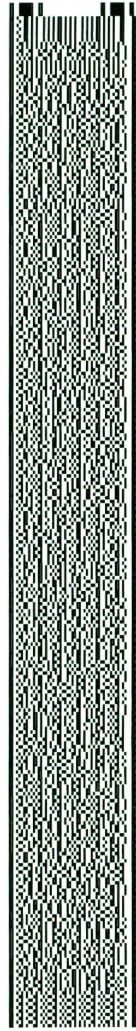
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STRIPPER™



The make-it-yourself Softstrip™ data strip program

LICENSE AGREEMENT

Cauzin provides this software program and the associated manual to make it possible for you to print data strips using one Apple II series computer and a single Apple Imagewriter or Epson FX or RX printer. You may also use this program to print masters of data strips that are to be duplicated using photocopying or offset printing as long as the number of copies produced is no greater than 2,500 of any one data strip.

This license agreement provides you with a non-exclusive, restricted, U.S. and Canadian license to print data strips for the Cauzin Softstrip reader, Model RDR100 or equivalent, and to duplicate the data strips you print only for non-commercial, educational, or personal use.

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The manual and data strip printing software are protected by copyright law. Softstrip technology is patent pending.

You may make back-up copies of this software for your own use, but you may not copy or transfer all or portions of these programs to another party. If you transfer all or any portion of these programs to any other party, your license to use the software and to print data strips is automatically terminated.

LIMITED WARRANTY

Cauzin warrants this program and the media upon which the program is distributed to be free from defects in materials or workmanship under normal use for a period of ninety (90) days.

However, Cauzin does not warrant that the functions contained in the program will meet your requirements or that the operation of the program will be uninterrupted or error free.

THERE ARE NO WARRANTIES THAT EXTEND BEYOND THE ABOVE; AND, THIS PROGRAM IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

In the event of program failure you may receive a replacement copy or a refund of your purchase price, at Cauzin's option.

This agreement will be governed by the laws of the State of Connecticut.

SERVICE

If you have problems with the software or with the data strips printed by it, please consult your manual to insure that you are using the system correctly. In printing data strips, the quality and quantity of the printer's ink ribbon and the dot placement accuracy of the printer are often the cause of most problems.

If you have questions about Cauzin products or about this agreement, please call or write us at:

Peter Demado - Technical rep

Cauzin Systems, Inc.
835 South Main Street
Waterbury, CT 06706
(203) 573-0150

TABLE OF CONTENTS

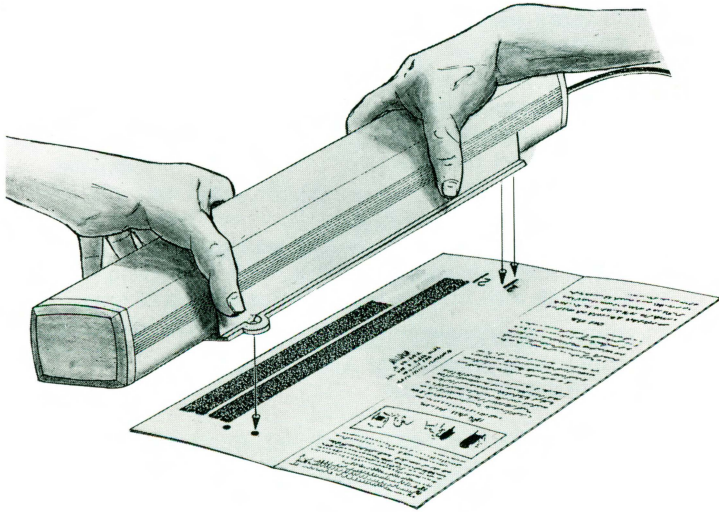
	PAGE
OVERVIEW	6
What this StripWare package contains and the equipment you need to make data strips.	
WHAT IS THE SOFTSTRIP SYSTEM	7
General introduction to making and using Softstrip data strips.	
CREATING YOUR OWN DATA STRIPS	8
Step-by-step instructions on how to use STRIPPER.	
THE DiBit TEST	12
How to verify your data strips by using the DiBit Test program.	
SHARING THE STRIPS	14
How to make copies of your data strips with copying machines or offset printing.	
STRIPPER, EPSON VERSION	16
The strip-making program for Epson FX and RX printers, in data strip format.	
STRIPPER, IMAGEWRITER VERSION	19
The strip-making program for Apple Imagewriter printers, in data strip format.	
DIBIT TEST	22
The strip-testing program in data strip format.	
APPENDIX A	
ANATOMY OF A DATA STRIP	23
Learn how a data strip works. A technical explanation of the data format on a strip.	
APPENDIX B	
INTRODUCING THE DiBit	26
Complete explanation of the white and black pattern on a data strip.	
APPENDIX C	
READING MADE EASY	28
Important design features of the Cauzin Softstrip reader.	
APPENDIX D	
PROFESSIONAL DATA STRIPS	30
Extremely high quality and high-density data strips from precision negatives and laser printers.	
CAUZIN'S CORNER	31
Ways you can change STRIPPER.	

OVERVIEW

You have just purchased a very special computer software product that allows you to create your own programs on paper.

STRIPPER opens up the world of Softstrip™ data strips so that by using your dot matrix printer, you can print everything from BASIC programs to spreadsheet figures and templates, and data base records.

Anything you can store on a disk, you can print on paper with STRIPPER. You can then send the data strips to the next office, the next county, or around the world, as effortlessly as you would mail a letter or post card to a friend.



This StripWare package describes:

- ✓ The Cauzin Softstrip System.
- ✓ Creating your own Softstrip data strips using a dot matrix printer.
- ✓ Using a copier to reproduce your original data strips.
- ✓ Using offset printing to reproduce data strips.

Equipment Required

You need the following equipment to create your own data strips with this manual. This program is also available for the IBM PC™ and the Apple Macintosh™

1. Apple II, II Plus, //e, or //c
2. Printer interface card:
 - Super Serial Card (built into //c)
 - Grappler graphics card
 - Dumpling graphics card
3. Printer:
 - Apple Imagewriter
 - Epson FX or RX series

(Friction feed, using the platen, is suggested for the most consistent results, although tractor-fed paper, by sprocket, will also work.)

WHAT IS THE SOFTSTRIP SYSTEM?

The Softstrip System is a technology for storing computer files on paper. The System consists of four parts:

PRINTING PROCESS: creates a printed data strip from computer files.

DATA STRIP: printed black and white pattern that stores computer data.

CAUZIN SOFTSTRIP READER: a device that reads the data strip into your computer.

COMMUNICATIONS SOFTWARE: converts data back into the original file.

There are two data strip programs in this StripWare package. The first permits you to produce original data strips using a dot matrix printer. The second helps you test the quality and accuracy of your data strips, your printer, and your ribbon.

The mechanical limitations inherent in dot matrix printers may occasionally create data strips that will not reliably read. This is particularly true as printer parts wear with age. For this reason we have included a program to test the data strips you produce to determine which ones are best.

Any data strips you create are for your own use. If you wish to distribute them commercially, you may obtain a license by writing or calling:

Cauzin Systems, Inc.
835 South Main Street
Waterbury, CT 06706
(203) 573-0150

A special license is available, free of charge, to educational institutions, user groups, and computer clubs to permit them to publish original data strips to distribute public domain software, or to include programs and data in newsletters.

CREATING YOUR OWN DATA STRIPS

There are three steps involved in making your own data strips.

- Printing an original data strip on a dot matrix printer.
- Testing the data strips with the reader and the DiBit Test.
- Reproducing your data strips with a copier or by offset printing.

Printing Original Data Strips

Data strips are made of paper. Although the system is designed to be extremely durable, you should use reasonable care and handling. When a data strip is sharply creased, the printed information at the crease can be destroyed.

If the data strip is a photocopy, it is far more susceptible to this type of crease destruction. The toner used in photocopying is deposited on the surface and can easily flake off. The Softstrip reader can recreate one or two lost DiBits. However, if an entire line is lost the data strip will not read.

What You Get

Up to seven data strips can be printed on a page. They have their own alignment marks, and are numbered in sequence if there are multiple strips. File information is printed on each page along with page number, total number of pages, and the title that you created for the project.

This is a sample from Cauzin's STRIPPER Page 1 of 4



1 | 2 | 3 | 4 | 5 | 6 | 7 |
STRIPPER.E

Preparing Your Printer

The data strips you print will be about eight inches in length, printed vertically on the page. The paper must be properly aligned to insure that the data strips start near the top of the paper.

If you are using fanfold, sprocketed paper, this initial alignment is particularly critical. Any data strip that is printed across the fold is unlikely to be reliable.

Another problem with fanfold paper is that the two sprocket holes nearest the crease are larger than the others. This can cause a slight misfeed when the larger holes are engaged by the sprocket.

Epson printers let you set a DIP switch to add a line-feed at the end of each line. If your system needed this change, turn off the line feed before using STRIPPER.

Ribbons vary in color and type of ink. A carbon-black ribbon is required to make data strips. Colored ribbons contain no "black" for the scanner's infra-red light to see, and produce data strips that are "invisible" to the reader. New ribbons may be too dark, causing the dots to run together. We have found that the best ribbon is one that is "broken in," that is already used for a few pages of text. Experiment with different ribbons and different pressure settings on your printer.

Loading the Program

There are two versions of the STRIPPER in this manual. On pages 16-18 is the version for use with Epson RX or FX printers. The second version, for use with the Apple ImageWriter and ImageWriter II, is on pages 19-21.

Once you read in these strips, you can run the program from the Cauzin communications menu. You can also run it later by entering RUN STRIPPER.E or RUN STRIPPER.I. Choose the version that fits your system.

This program runs under DOS 3.3 only. In order to make data strips of a ProDOS program, use your ProDOS System Master to transfer the file to DOS 3.3.

The title screens are introductory and give information on licensing.

CAUZIN SYSTEMS INC.
DATA STRIP PRINTING PROGRAM
FOR EPSON FX-80 PRINTERS

NOTICE

DATA STRIP IS THE GENERIC TERM USED TO DESCRIBE THE STORAGE MEDIUM.
SOFTSTRIP (TM) IS A TRADEMARKED NAME.
DATA STRIPS MAY BE CREATED AND USED FREELY BY INDIVIDUALS; HOWEVER A LICENSE IS REQUIRED TO DISTRIBUTE OR COMMERCIALIZE DATA STRIPS OR USE THE NAME SOFTSTRIP (TM).

PRESS ANY KEY TO CONTINUE

COPYRIGHT (C) 1986 CAUZIN SYSTEMS INC.

CAUZIN SYSTEMS INC.
 DATA STRIP PRINTING PROGRAM
 FOR EPSON FX-80 PRINTERS

DUE TO THE LIMITATIONS OF DOT MATRIX PRINTERS, THIS PROGRAM IS ONLY INTENDED TO BE USED FOR LOW DENSITY DATA STRIP APPLICATIONS. DATA STRIPS CREATED ON A DOT MATRIX PRINTER EACH CONTAIN ABOUT 1000 BYTES OF INFORMATION. MULTIPLE DATA STRIPS MAY BE CREATED FROM YOUR DISK FILES AND WILL TAKE SEVERAL MINUTES TO PRINT.

THE CAUZIN DATA STRIP PRINTING REFERENCE MANUAL WILL PROVIDE FURTHER DETAIL INTO THE SPECIFIC CAPABILITIES OF YOUR COMPUTER AND PRINTING SYSTEM.

PRESS ANY KEY TO BEGIN.

Next, the main menu gives you control of the printing process. You can batch together as many as 10 files in the same group of data strips. Use the arrow keys to position the cursor bar.

For each function, the prompt lines at the bottom of the screen show your choices or press RETURN to toggle through the choices. Enter file names from the keyboard (be sure CAPS LOCK is on).

```

DATA STRIP PRINTING PROGRAM
( 0) DATA STRIPS ON ( 0) PAGES

DENSITY          NORMAL
AUTO-EXECUTE FILE 1  OFF
CATALOG
GRAPHICS CARD     GRAPPLER

1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

PRINT

PRESS RETURN TO TOGGLE
USE ARROW KEYS TO SELECT FUNCTION
  
```

Below are explanations for the choices you can make at this screen.

Density

The Epson version gives you two densities to choose from, while the Imagewriter version gives you one density. The following chart shows how much data is on a strip. This includes data from your files and data used by the reader (as explained on page 23).

	EPSON	IMAGEWRITER
NORMAL	819 bytes	914 bytes
HIGH	1034	

Auto-Execute File 1

The Cauzin communications program lets you run a program immediately after you read it from a data strip onto a disk. This is limited, however, to the first file. To use this feature, move the cursor to this line and enter Yes (Y).

Catalog

To help you select files, you can CATALOG either disk drive. With the cursor bar on this line, press 1 or 2 to display the appropriate catalog.

Graphics Card

Select either a Dumpling (D), Grappler (G), or Super Serial (S) card.

```

DATA STRIP PRINTING PROGRAM
( 2) DATA STRIPS ON ( 1) PAGES

DENSITY          NORMAL
AUTO-EXECUTE FILE 1  OFF
CATALOG
GRAPHICS CARD     GRAPPLER

1. DIBIT.TEST,D2
2.
3.
4.
5.
6.
7.
8.
9.
10.

ENTER A TITLE FOR THESE DATA STRIPS

PRINT DATA STRIPS? (P)
USE ARROW KEYS TO SELECT FUNCTION
  
```

Selection of Files

Use the arrow keys to highlight the file entry space adjacent to "1" and then enter the file name followed by ",D1" or ",D2" for the appropriate drive. Press CONTROL-D to remove a highlighted file.

After entering each file, the legend at the top of the screen shows you the number of strips and pages to hold your files.

NOTE: Do not batch together files if they end up being over 100 strips. STRIPPER has an upper limit of 127 strips in one batch. Also, that group of strips would take too long to print and read.

Print

When all the information has been entered, move the cursor bar to PRINT and press P.

The final prompt lets you title the group of strips you are printing. The title is limited to a maximum of forty characters. Use the DELETE or Left-Arrow keys to erase any mistakes along the way.

THE DiBit TEST

We define "accuracy" as the ability to read a data strip correctly the first time. The Cauzin Softstrip reader is designed to read an 'accurate' data strip 999 times out of 1000 the first time. The 1 out of 1000 exception to the rule normally requires only a second reading of the data strip.

The DiBit test evaluates not only the strip accuracy, but also your printer and the ribbon you're using. The DiBit test program monitors 500 scans and counts the number of DiBits that were not defined as either a "1" or a "0".

Test Requirements

There are two important things to remember about this test. First, every data strip should be read at least once to determine that the strip was printed correctly.

Also, the program needs a long enough strip to complete 500 scans. If you use a strip that is shorter than 4 inches, the program could give a false result.

Running the Test

The DiBit program, called DIBIT.TEST, is printed in data strip form on page 22. After you read in the strip, you can run the program from the Cauzin communications menu or you can run it later by entering BRUN DIBIT.TEST.

This test program uses a Cauzin Softstrip reader to do a controlled read of your strip. The data on the strip is not analyzed or evaluated. Only the accuracy of printing is checked.

The program runs on the Apple II, II Plus, //e, and //c and is compatible with DOS 3.3 and ProDOS. There are versions available for the IBM PC™ and Apple Macintosh™. Strips created on one system can be tested, but not read, by any other.

If you are using an Apple //c, the opening screen asks which port you are using for the reader. This information is not needed for other Apple models.

The main screen appears as follows:

```
CAUZIN SYSTEMS INC.
DIBIT TEST MEASURING PROGRAM

DIBIT TEST  VALUE
-----  -----
          1
          2
          3
          4
          5
-----  -----
          AVERAGE

-----

CAREFULLY ALIGN READER OVER DATA STRIP
<RETURN> WHEN READY
<ESC> TO EXIT PROGRAM
```

To start the test, be sure your reader is connected to your computer, turned on, and aligned with a data strip. Press RETURN to start the test.

The reader goes through five shortened read cycles. Each line is scanned several times. The first and last scans are discarded since they may overlap another line. Only the middle scans are used to verify data. Since one or two errors can be corrected, they are not considered significant.

```
CAUZIN SYSTEMS INC.
DIBIT TEST MEASURING PROGRAM

DIBIT TEST  VALUE
-----  -----
          1           0
          2           0
          3           2
          4           0
          5           0
-----  -----
          AVERAGE      .4

-----

STRIP RATING IS EXCELLENT

-----

CAREFULLY ALIGN READER OVER DATA STRIP
<RETURN> WHEN READY
<ESC> TO EXIT PROGRAM
```

Interpreting the Results

When the short test is completed, the number of DiBits that could not be read is posted. Also, the average of the five reads is calculated. Use the following guidelines to understand the average.

AVERAGE	0-6	Excellent
AVERAGE	7-12	Good
AVERAGE	13-20	Marginal
AVERAGE	20+	Make a new one
AVERAGE	***	Unable to read

CAUTION: The DiBit test is performed only on the top portion of a data strip. Major destruction in the lower part of a strip is not detected by this test.

SHARING THE STRIPS

Creating a data strip on a dot matrix printer is a slow process and not a useful way to make multiple copies. If you want to share programs and data with more than one person, it is better to copy your data strips.

In addition, copies usually read with much greater accuracy than the original. The ink used in printer ribbons is often less sensitive to the reader's infra-red light than copier toner or offset ink. Also, both photocopying and offset printing tend to enhance the contrast between the blackness of the ink or toner and the whiteness of the paper.

Photocopying

A photocopy of a data strip produced on a properly adjusted copier may be more accurate than an original made on a dot matrix printer. However, be aware of the following problems that affect the quality of your copied data strips.

A data strip degrades with each copy generation.

A copy of an original is referred to as a first-generation copy. A copy of that is a second generation copy, and so on. Each successive generation increases the amount of black flecks (noise) and actually decreases the size of the black areas. Any optical distortion also becomes compounded until the sum of all of these effects renders a data strip unreadable.

Your data strips should last through two generations, depending on your printer and the copier. As a rule, be very cautious in copying copies of data strips.

Toner stays on the top of the paper.

Toner does not penetrate paper like ink does. It is therefore susceptible to flaking, scratches, creases, and folds. A copier-produced data strip is not likely to survive a sharp crease.

Optical distortion often occurs in copiers.

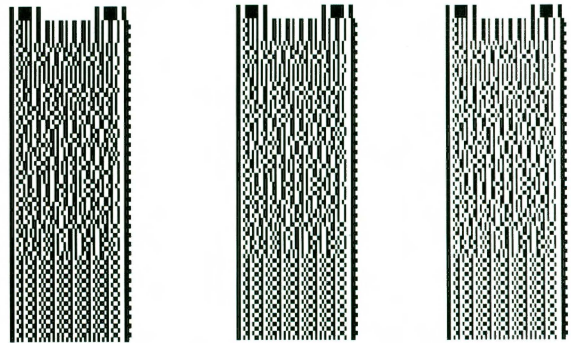
The combination of mechanical motion and optical distortion often makes major changes in the dimensions of a data strip in succeeding generations of copies. Each additional generation will increase the distortion.

A data strip can vary as much as 6% in any dimension and still be capable of being read.

Adjusting Your Copier

Most copiers have a light/dark or contrast adjustment. The Softstrip reader accommodates a wide range of print qualities, so light or dark copies will probably read. Still, optimum data strips withstand more abuse and permit more generations of copies to be readable.

The following samples show light, dark, and optimum data strips. Use these as guides to "tune in" your copier. Adjust the contrast level of the copier until your strips match the "Correct" strip below.



Dark

Correct

Light

Offset Printing of Data Strips

If you want to make many copies of your data strips, the office copier may not be the answer. Try a local company that uses offset printing. Editors of newsletters could use this technique to send data to their subscribers in data strip form.

There are two standard processes for making "masters" in offset printing. The first uses a metal plate and is far more accurate. Print the data strips in Normal or High density. If the master is paper, Normal density is recommended.

Start with a Good Original

It is vital that you start out with the best possible original. Make several copies, varying the contrast control, and check them with the DiBit test. Select the best copy for making the offset master.

To be extremely precise, examine the most accurate copies under a magnifier. Select the one that has black and white areas of equal size.

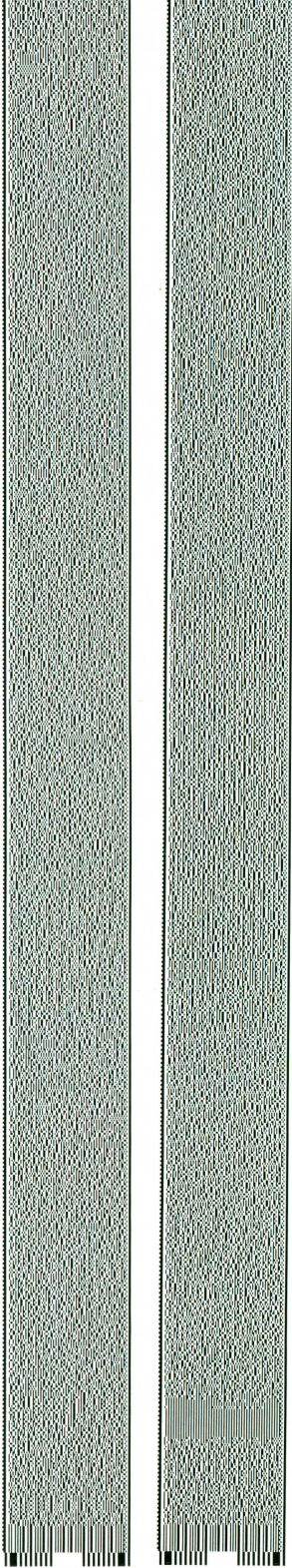
Reading STRIPPER Epson Version

The following data strips contain the Epson version of STRIPPER, a program that lets you print data strips from your own files using an Epson RX or FX printer (80 or 100 columns). We've numbered each strip in the order it must be read into your computer.

After you've read in the strips, you can run the program from the Cauzin communications menu or you can enter RUN STRIPPER.E. Exit anytime by pressing CONTROL-RESET.

2

1

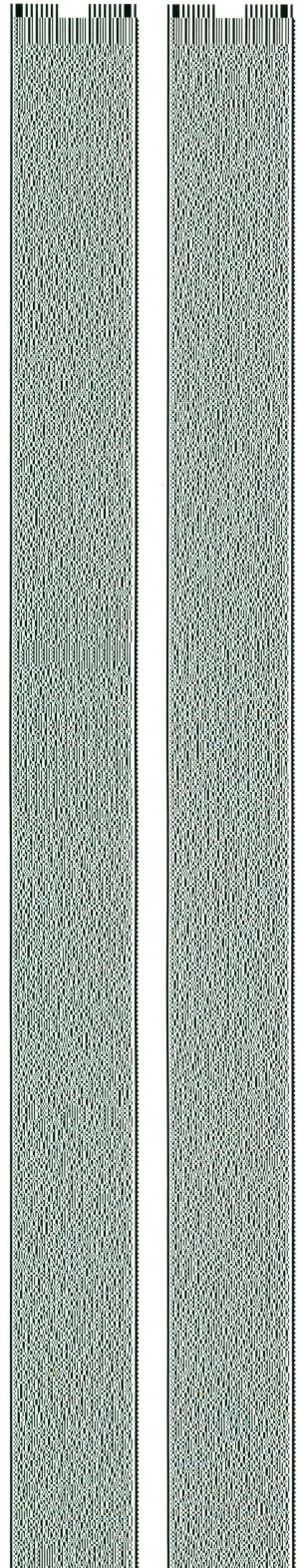


STRIPPER
Epson Version
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STRIPPER
Epson Version
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3

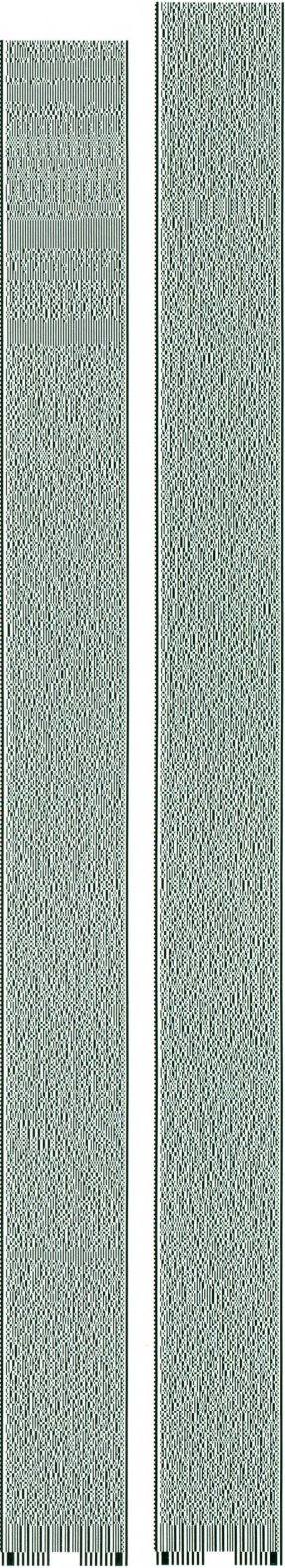
4



Reading STRIPPER Imagewriter Version

The following data strips contain the Imagewriter version of STRIPPER, a program that lets you print data strips from your own files using an Imagewriter printer. We've numbered each strip in the order it must be read into your computer.

After you've read in the strips, you can run the program from the Cauzin communications menu or you can enter RUN STRIPPER.I. Exit anytime by pressing CONTROL-RESET.

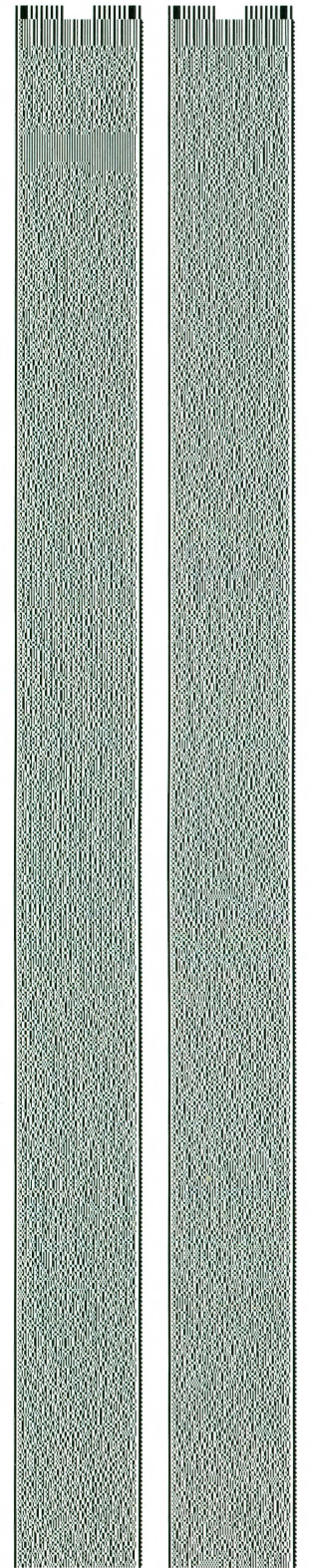


6

5

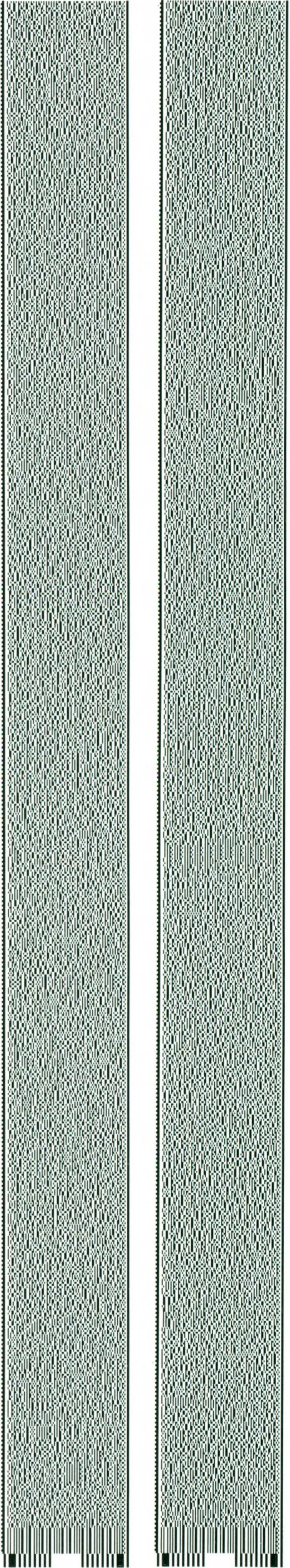
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Epson Version
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STRIPPER
Imagewriter Version
Copyright © 1986 by Cauzin Systems, Inc.
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1

2



4

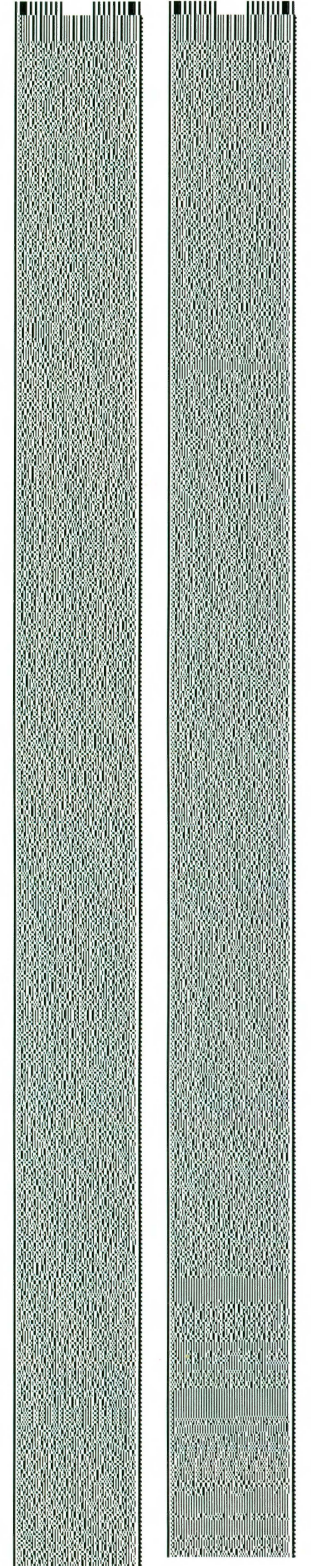
STRIPPER

Imagewriter Version
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3

STRIPPER
Imagewriter Version
Copyright © 1986 by Cauzin Systems, Inc.
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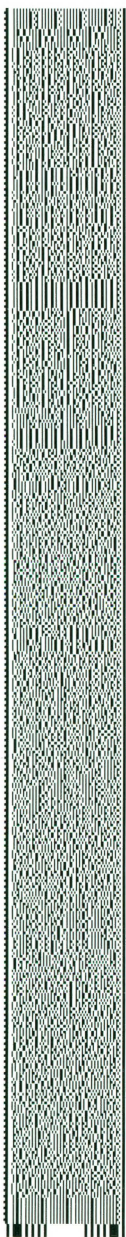
5



6

Reading DIBIT TEST

The following data strip contains DIBIT.TEST. Use this program to certify the accuracy of each data strip you print. After you've read in the strip, you can run the program from the Cauzin menu or you can enter BRUN DIBIT.TEST. The program is compatible with DOS 3.3 and ProDOS. Exit anytime by pressing CONTROL-RESET.



DIBIT TEST
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APPENDIX A

ANATOMY OF A DATA STRIP

A data strip is a precision, printed pattern of black and white "rectangles". This is the ideal shape even though dot matrix printers, photo copiers, and printing processes round the sharp features of these rectangles and create more of an oval shape.

Consequently, we adjust the size of the rectangles to accommodate different processes, accuracies, grades of paper, or limitations imposed by the dot size of dot matrix printers.

The smaller the "rectangle," the greater the capacity to store information in a given area. The objective is to choose the highest density of data within the constraints of the printing process and the paper being used.

Data Strip Format

Data strips are organized similar to printed text. Information is assembled in horizontal lines, and read from left to right by the Cauzin Softstrip reader. The amount of data per line of the data strip can be varied from two bytes to six bytes in increments of half a byte.

The data strip begins with information that tells the reader what kind of strip this is. Then, there is information for the communications program. Finally, there is a file directory and your files. The following outline shows how a data strip is formatted.



1.) Header:

- Bytes per line
- Height of each line
- "Blackness" of the ink
- "Whiteness" of the paper
- Alignment of the optics

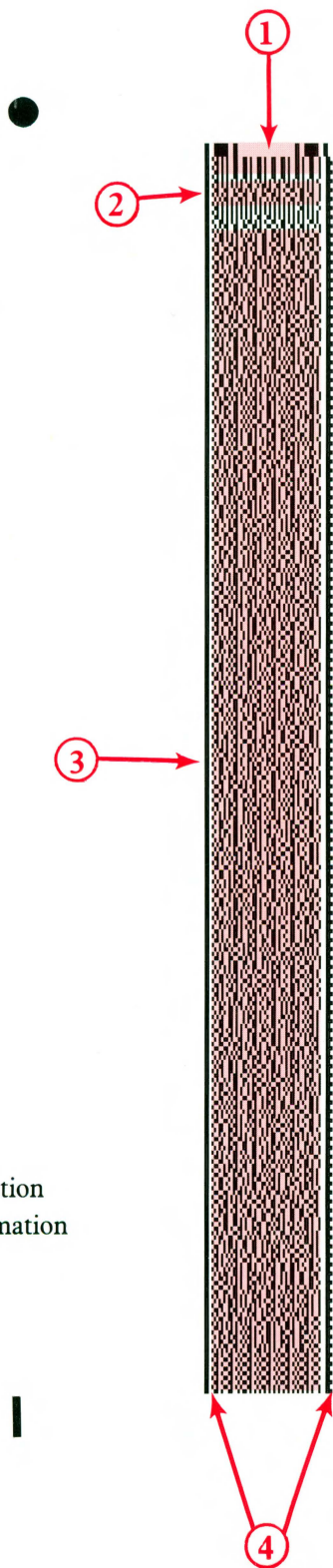
2.) Data Section:

- a) Data strip information:
 - length
 - checksum
 - identification number
 - sequence number
- b) Directory of files
 - type of computer
 - number of files
 - file types
 - file lengths
 - file names

3.) File Section: up to ten files

4.) Boundary Lines:

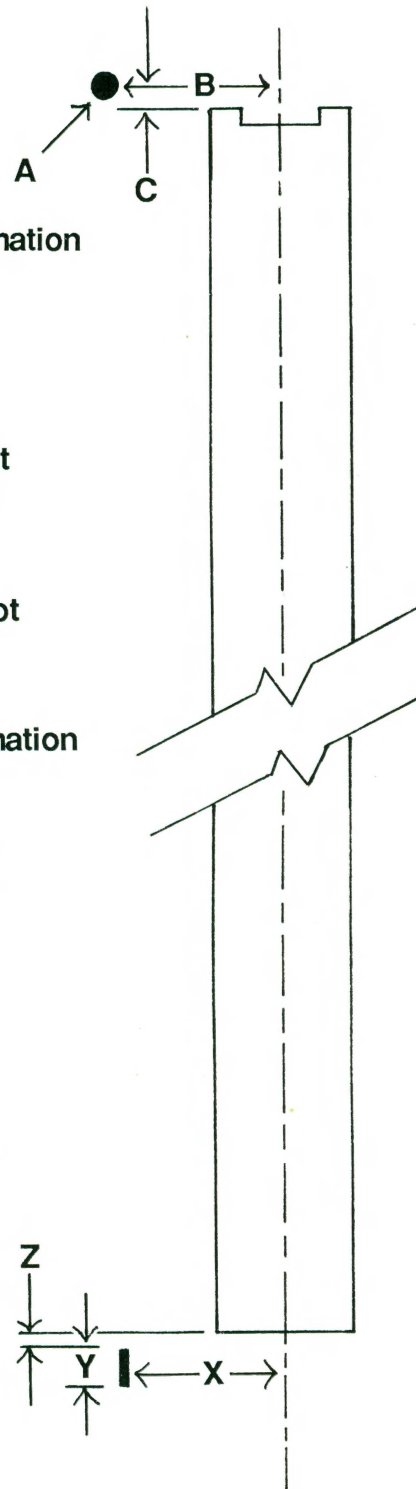
- a) Synchronization information
- b) Optical alignment information



Alignment Marks

The circle (or polygon) and line, to the side of the data strip, are used as guides for correctly lining up the reader. There are times when these alignment marks might be destroyed, misplaced, or altered.

Because of this, we have included the following measurements so that you can recreate missing alignment marks.



Alignment Dot Information

A = 1/8 inch
diameter of dot

B = 1 1/4 inch
from center of dot
to center of strip

C = 3/32 inch
from bottom of dot
to top of strip

Alignment Bar Information

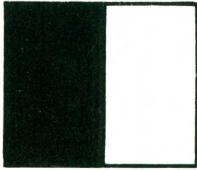
X = 1 9/32 inch
from vertical bar
to center of strip

Y = 1/4 inch
height of bar

Z = 1/32 inch
from top of bar
to bottom of strip

INTRODUCING THE DiBit

Each data bit is represented in printed form by a DiBit. This consists of two adjacent "rectangular" areas on the paper. A "zero" is a black area followed by a white area.



A "one" is a white area followed by a black area as shown below.



Two adjacent white areas or two adjacent black areas are not definable, and interpreted as an error.



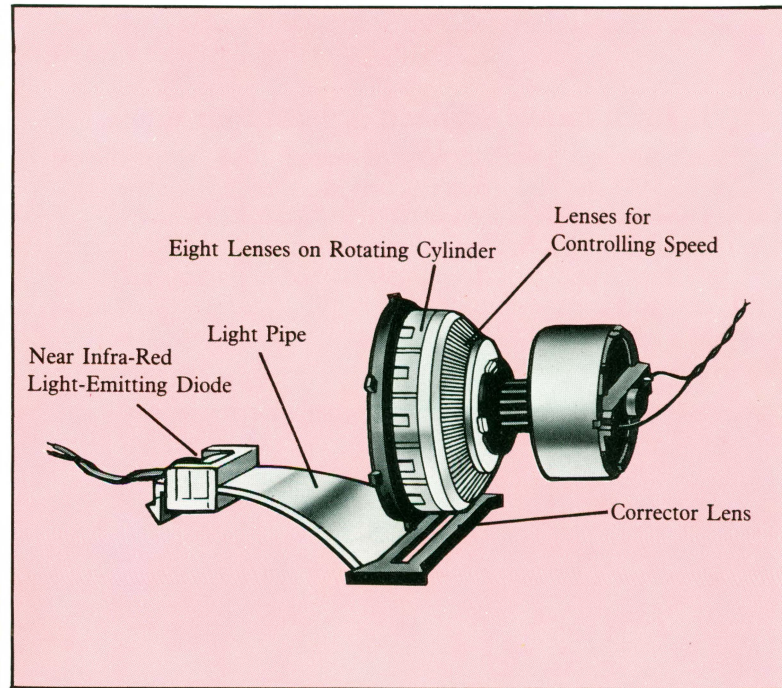
To allow for inaccuracies in printing, "black" and "white" are considered relative terms. A threshold is established in the header that defines:

- What is considered black.
- What is considered white.
- What is not definable as either black or white.

Thus, the accuracy of a data strip depends on creating a DiBit that:

- ✓ Has equal areas of black and white.
- ✓ Has maximum contrast between black and white.

The reader has a built-in capacity to handle wide variations in areas and contrast. However, the objective is to make a "perfect" strip each time by adhering as closely as possible to the two criteria above.



The reader's optical scanning system contains a set of eight rotating lenses and a corrector lens. An array of 160 additional lenses allows the system to control scanning speed.

Error Detection and Correction

Each data line is divided into two interlaced groups, the odd bits (1, 3, 5, etc.) and the even bits (0, 2, 4, etc.). Both groups have a parity bit associated with them. If there is only one bit in each group that is undefinable, the parity bit can be used to recreate that bit.

This technique greatly increases the probability of reading a data strip, since occasional printing "dropouts," marks on the paper, scratched bits, and creases will be detected and corrected.

As the final step, a "checksum" of all data on a data strip is calculated and stored as part of making the strip. When the data strip is subsequently read, a new checksum is calculated and compared with the stored total. These two numbers must match before information from the data strip is accepted and stored on a disk.

READING MADE EASY

The Cauzin Softstrip reader is an optical scanner. It reads data strips, and translates the black and white patterns into binary information that is sent to the computer. The Cauzin communications program reconstructs the original file from the binary data.

The reader has several design elements that enable it to read data strips with great accuracy.

1. Each line is scanned at least four times.

The scanning "spot" is approximately .003 inch wide by .004 inch high. The reader starts at the top of the data strip and "reads" across each data line with a series of parallel scans. Each scan moves progressively .0025 inch further down the strip. Data lines have a minimum height of .01 inch and a maximum of .04 inch or 16 scans.

3. The reader adjusts for minor optical misalignment.

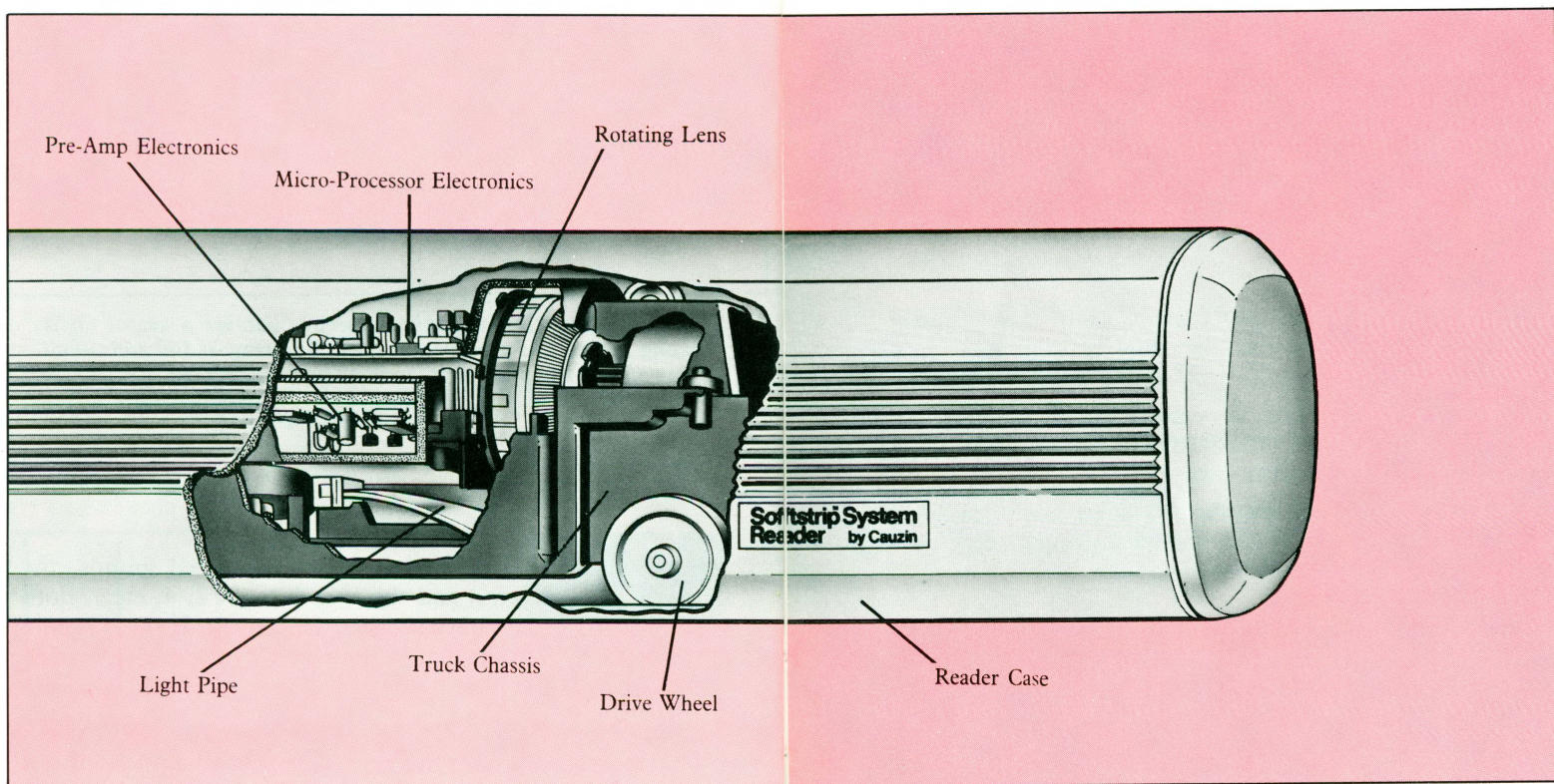
The reader "sees" the relative position of the left and right sides of the data strip. The direction of the scans is modified when necessary so that the reader's optical system remains parallel with the line of data being read.

4. The reader adjusts to different blackness of inks.

Contrast settings are optimized along with signal processing to detect the value of a given DiBit.

5. The reader ignores most stains and colors.

The reader's light source is "near infra-red." This wavelength of light is sensitive to the carbon in ink and oxides in toners, but is relatively insensitive to most stains.



Break-away view of the Cauzin Softstrip reader.

2. The reader adjusts to different densities.

The height and width of each DiBit can be adjusted to compensate for different qualities of printing or paper. These two dimensions are encoded in the header of the data strip and used by the reader to automatically adjust scanning and signal processing functions.

6. The reader detects and corrects up to two "bad" DiBits per scan.

PROFESSIONAL DATA STRIPS

This manual focuses on making data strips with a dot matrix printer. However, there are two other techniques that can be used. These produce data strips that are of greater density and higher reliability.

Precision Negatives

The most accurate method of reproducing data strips is by commercial printer. The "master" used for commercial printing is a photographic negative.

Cauzin has a service bureau that creates negatives to the precise specifications of publishers and printers. These negatives are created in a strictly controlled environment to insure high reliability and accuracy.

Typically, the dimensions of the DiBits on a "master" negative are maintained to within .0001 inch. The factors that go into making the negative include ink spread, printing control, and paper quality.

The equipment required is extensive and uses commercial composing systems and photographic processes. Contact Cauzin for more information about this service.

Laser Printers

Laser printers produce very good low to medium density data strips. Technical improvements in this field will soon extend this to high density strips as well.

Cauzin has both the software to drive many leading laser printers and an on-site licensing arrangement. Call or write for full details.

CAUZIN'S CORNER . . .
and now for something slightly different

The STRIPPER program, written in machine language, is preceded by a short Applesoft program that sets up the default values. You can modify this section without disturbing the machine language program. Just don't change the length of this part of STRIPPER.

If your printer interface card is not in slot 1 or if it's connected to the modem port of your Apple //c, you must modify STRIPPER. LOAD the program into memory and LIST it. You will see the following program lines:

```

10 TEXT : HOME : REM COPYRIGHT
    1986 CAUZIN SYSTEMS, INC.
15 REM SLOT NO. OF CARD TIMES
    16
20 POKE 2307,16
25 REM DEFAULT CARD 0 - GRA
    PPLER, 1 - DUMPLING, 2 - SUP
    ER SERIAL
30 POKE 2308,0
40 CALL 2304: END

```

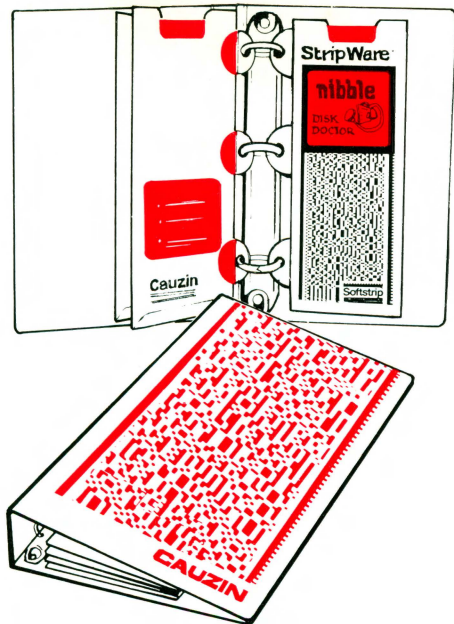
Modify line 20 to change the program for a new slot number. The number after the comma, a 16 above, must be the new slot number times 16. For example:

Slot 1 = 16
Slot 2 = 32
Slot 3 = 48

If your interface card is not a Grappler, you can change the program to default to the card you have. This is done in line 30 by changing the zero to the correct value. Use the following values:

0 = Grappler
1 = Dumpling
2 = Super Serial Card

After making any of the above changes, SAVE the program to make the changes permanent. Use the same name as the original file name, or change it to remind yourself that you have customized it, for example: SAVE STRIPPER.E.NEW.



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