The Softstrip™ System Reader Instruction Manual

The Softstrip™
System Reader
Instruction Manual

Table of Contents

Disclaimer

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient the receiving antenna

Relocate the computer with respect to the receiver

Plug the computer into a different outlet so that the computer and receiver are on different branch circuits

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions.

Reader Care

Your Cauzin Softstrip reader is a precision optical device. Treat it with the same care that you would a camera. Always return the reader to the base, it will protect the lens system.

Discovering the Softstrip™ System

You have taken the first step in becoming a part of a new technology that promises to change the way you think about computer operations and applications.

At the heart of your Cauzin Softstrip™ system is your reader. This optical scanning device has been designed to interpret a totally new technique of encoded information that appears as a structured pattern of black and white rectangles on paper. Softstrip™ technology allows text, graphics, even digitized sound to be printed on any type of paper. Cauzin data strips offer everything from business programs and data to educational materials, utilities, as well as entertainment. The content may require a single data strip or multiples, which can be linked together to expand your universe of available quality software.

For starters, we have included a special Sampler in your Accessory Kit. This library features representative works of some of the most popular names from computer magazines, book publishers, and software authors who, together, form the nucleus of an ever expanding team supporting the ongoing development of software on paper.

This manual has been created to give you information and guidelines to set up and operate your Cauzin reader.

The Softstrip™ System provides a 3-step process for accurate operation:
1) The Cauzin reader inputs information contained on data strips.
2) Incorporates sophisticated error correction and detection techniques to ensure automatic entry of data.
3) Allows for data strip material to be directly loaded onto a disk.

Checklist

Your Softstrip™ System comes to you in two separate boxes. One contains your Cauzin reader; the other is an Accessory Kit specifically for your Apple computer.
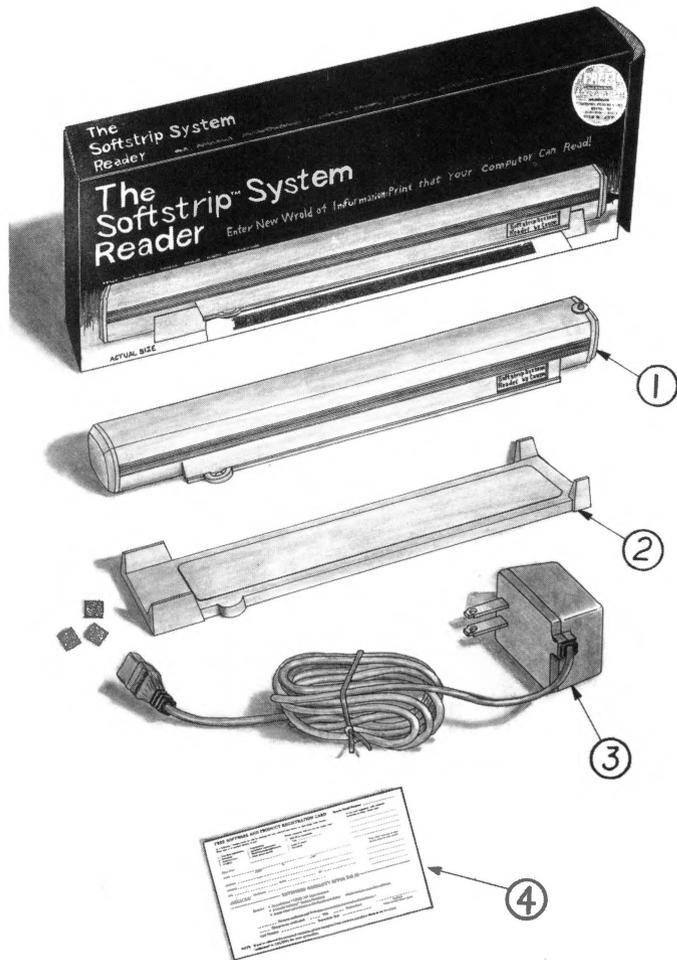
THE LARGE BOX CONTAINS THE FOLLOWING:

① The Cauzin Softstrip reader

② A base for the reader and a set of three velcro fasteners

③ A power cord with attached transformer

④ Warranty card

THE ACCESSORY KIT CONTAINS THE FOLLOWING:

① The Cauzin communications disk

② Extra disk label for a backup copy

③ This instruction manual

Connector cables

④ — Apple II, Apple II Plus, Apple //e cassette version

⑤ — Apple //c serial version

⑥ Softstrip™ Program Sampler containing 50 programs and demos.

Connecting the Reader

Make sure your computer is off.

At one end of the interface cable there is a telephone-style plug. This should be plugged into the jack on the end of the reader.
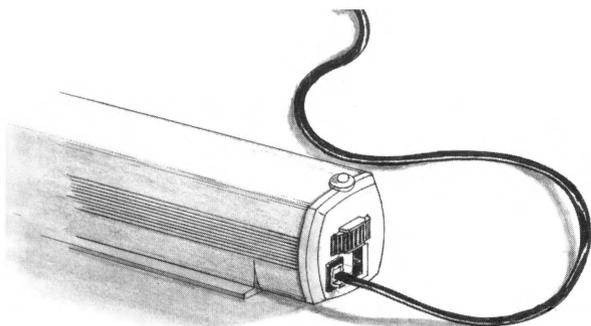
If you own an Apple II, Apple II Plus, or Apple //e

Select the cable with red and black phono connectors. The red connector plug should be inserted into the first cassette port which is next to the monitor connection. The black connector plug is inserted into the second cassette port.
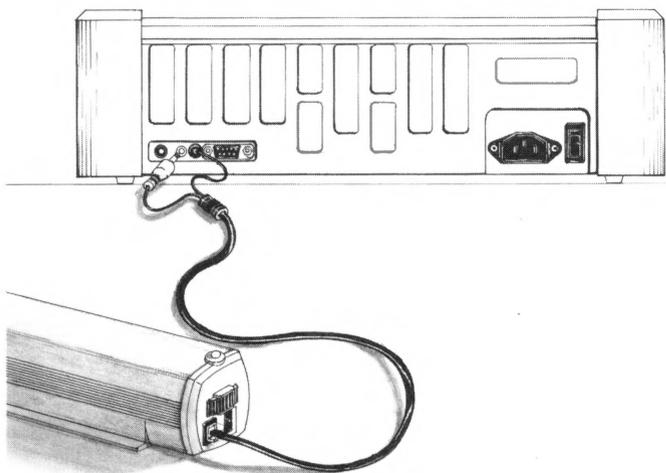
If you own an Apple //c

Select the cable with the large round (DIN) connector. Insert this plug into the modem port (a telephone icon appears above it). If this port is unavailable, you may use the printer port (a printer icon appears above it), but you must inform the communications software of this change. The OPTIONS menu will guide you thru the simple change of customizing the new port for the reader.
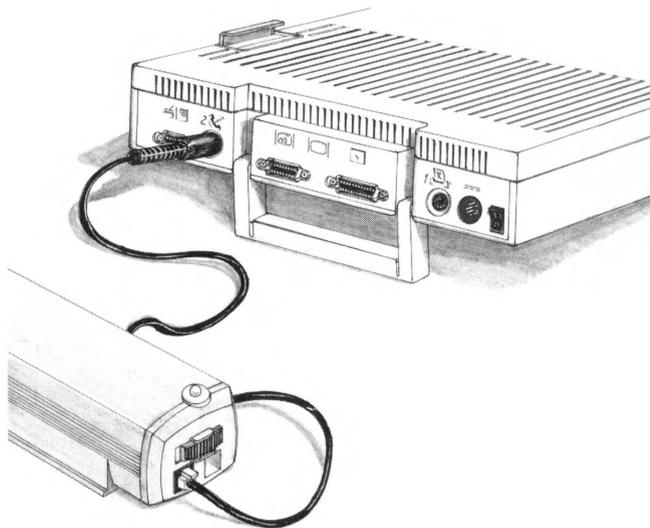
For Apple II, Apple II Plus, Apple //e and Apple //c complete the connections as follows:

Firmly insert the transformer plug into the reader socket so that it is secure.
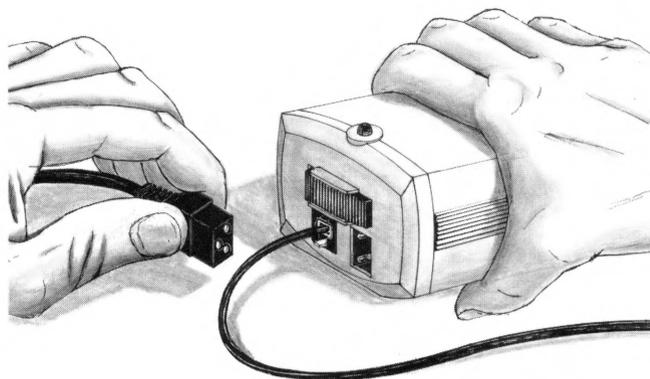
Plug your transformer into a nearby electrical outlet.
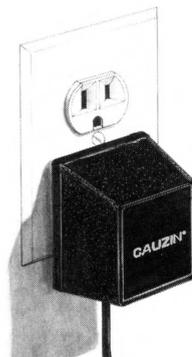
Attaching the Reader Base

The base is provided as a resting place for your reader when it is not being used. We recommend that you use the base since it can help protect the precision optics of your reader. There are three pieces of velcro included in the reader box that you may choose to use for placement of the base.

Below are general guidelines for attaching the velcro to the bottom of the base. If you choose to put the base on top of your monitor or computer, be careful not to cover any air vents. In addition, make sure that the surface you do use is flat so that the reader will not fall off.

We advise against using the reader above a monitor since there may be electrical interference causing the reader to operate incorrectly.
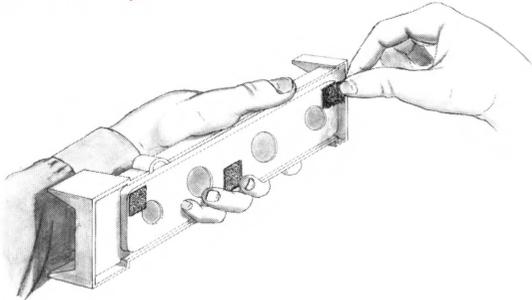
Peel off one side of the velcro backing and carefully adhere patches on underside of base.
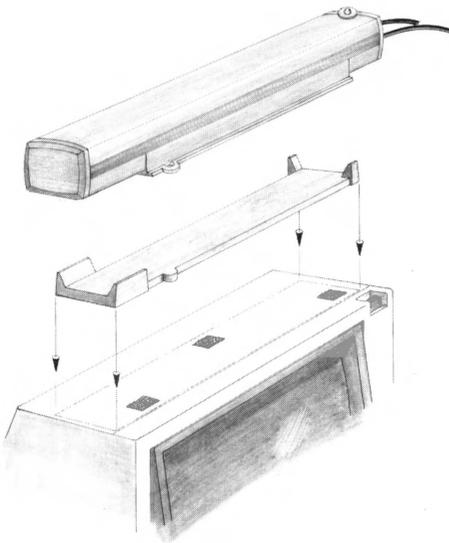
Peel off backing of velcro, line up over intended surface and firmly place down.
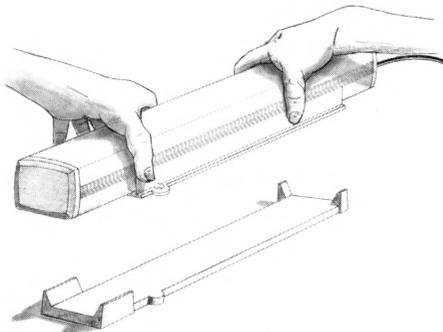
Place reader in the base, making certain that it is secure.

Anatomy of Data Strip

A close-up view of a strip reveals six distinct sections. The header (1) at the top tells the reader the number of bytes in a line, the height of each line, and the paper to ink contrast level. Running vertically down the sides of the strip are the startline (2), the checkerboard (3) and the rack (4). These identify the boundaries of every horizontal line to be read. They also work in tandem to feed the reader alignment information.

Contained within the body of the strip, between the checkerboard and rack, is the file's data area (5). Another important component part of the data strip is the alignment dot and black line (6) at the side, which is used as a guide for correctly lining up your reader.
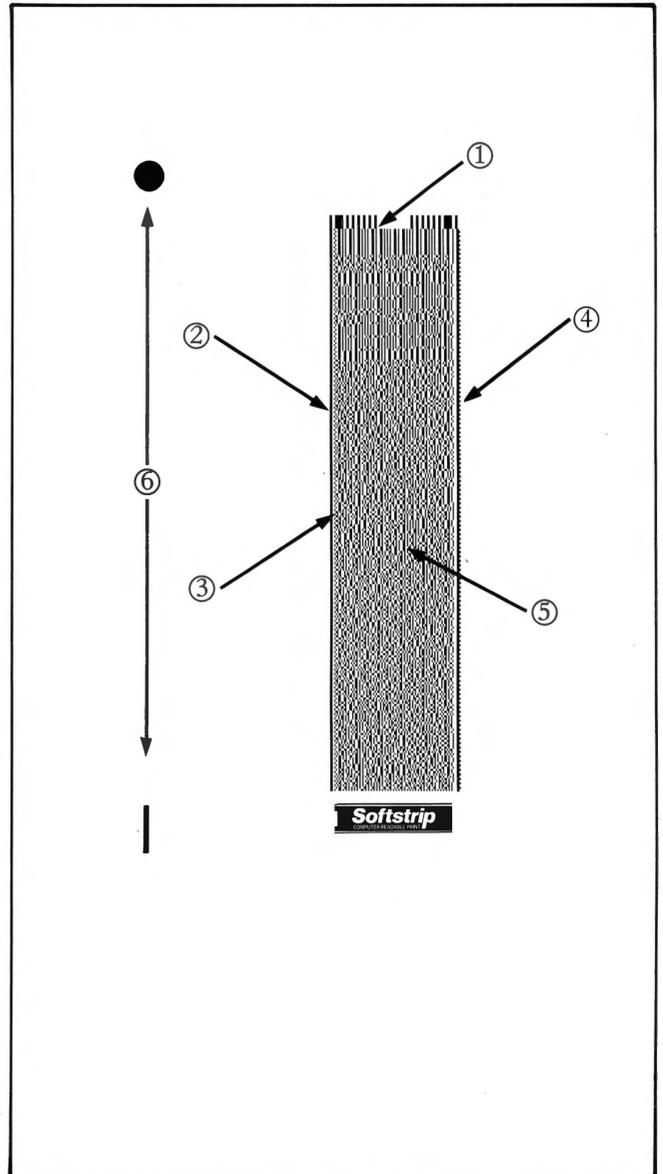
Backing up the Reader Communications Software
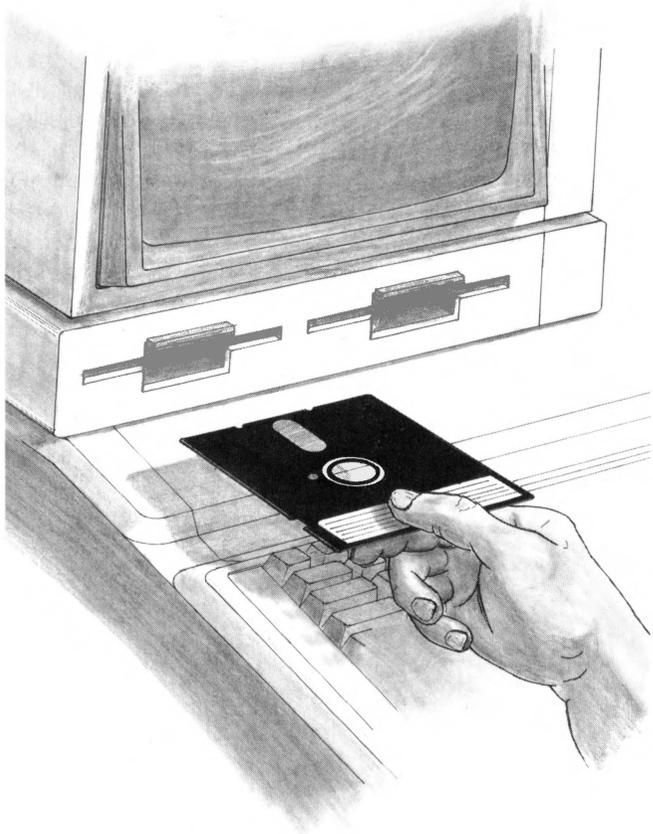
The Cauzin communications disk is unprotected. We have included an extra disk label and recommend that you make at least one backup.

Use the backup and save the original in your files. Use COPYA under DOS 3.3 or the FILER under ProDOS to copy the Cauzin communications software on your Apple II, Apple II Plus, Apple //e or Apple //c. Refer to your Apple Computer manual for specific copying instructions.
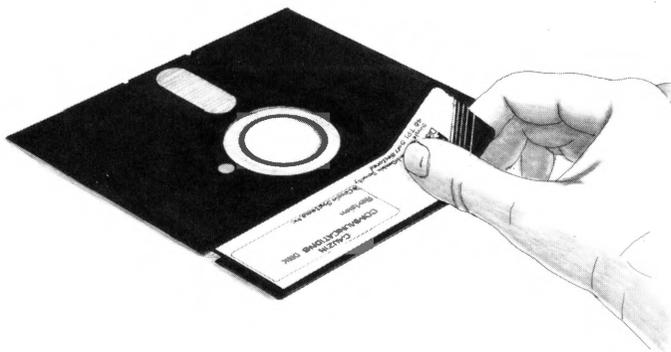
Getting Started

Insert your backup copy of the Cauzin communications disk into drive 1 (this is the internal disk drive in the Apple //c). Turn on the computer to start loading the software. If you have an Apple //e or Apple //c, and your computer is already on, you can restart the system by holding down the **CONTROL** key, pressing the **OPEN-APPLE** key, as well as **RESET.**

When you see your first prompt on screen, you are asked to select the operating system. Enter **P** for ProDOS. For DOS 3.3, you will have to enter **D**. If you are not certain which option is correct for your equipment, try the **P** key command and read further in your Apple owner's manual for more answers and solutions.

```
CAUZIN SYSTEMS

Presents Doubleboot
Copyright  1985 by MicroSPARC, Inc.

Type <P> for ProDOS; <D> for DOS3.3
```

Once you've made your operating system selection, the Cauzin communications program will load in. The following main menu screen will appear.

```
          CAUZIN
       SOFTSTRIP(TM)
 READER COMMUNICATIONS - 1.0
   APPLE //e CASSETTE PORT
 ─────────────────────────────

   1 - READ TO DRIVE 2

   2 - OPTIONS

   3 - EXIT TO PRODOS

 ─────────────────────────────

   USE ARROW KEYS TO SCROLL
  <RETURN> TO SELECT AN ITEM
```

Now that the Cauzin communications program is loaded in memory, this disk is not required in your disk drive. We suggest you use a different disk to store data strips that come from the reader.

ONE DRIVE SYSTEM

Insert an initialized data disk into drive 1

TWO OR MORE DRIVE SYSTEMS

Insert an initialized data disk into drive 2

Reading a Data Strip

Just above the connectors, at the end of the reader, there is a power switch. Turn the reader on and a green light on top will signal that you are ready to 'read'.
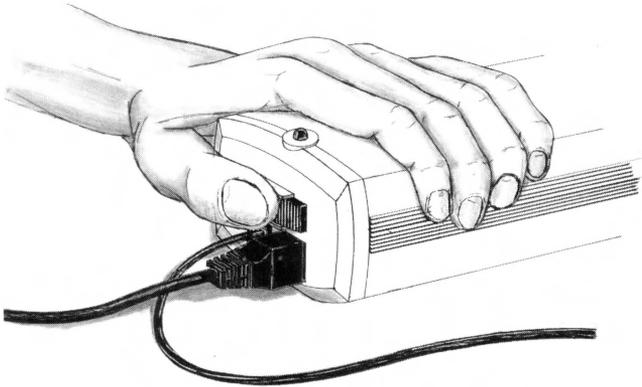
Just to one side of the data strip there is a black dot and a short black line. These are your alignment marks.

Carefully place the reader so that its loop fits over the black dot and the edge of the reader just touches the black line. You are now ready to 'read'.

Multiple data strip programs

To the side of the alignment marks you will see numbers signifying the correct sequence to follow for 'reading' in the data strips. You will receive on-screen prompts indicating which strip to read next.
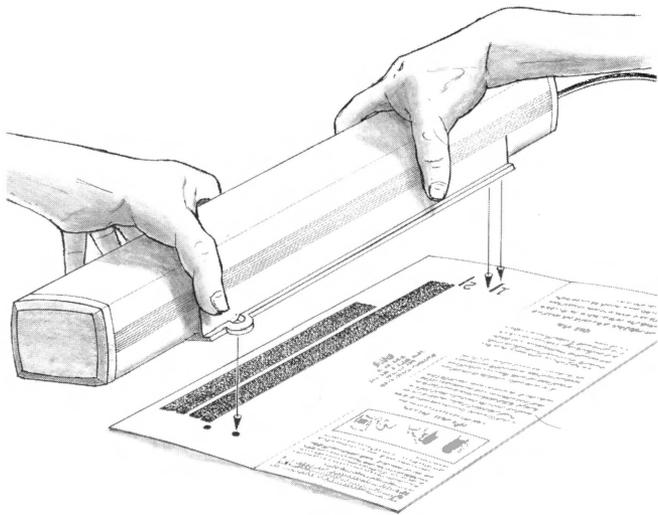
With the reader aligned over the first strip, and the Cauzin communications disk loaded, select the option:

READ TO DRIVE

By pressing RETURN or the option number indicated on screen. This function reads the data strip onto your data disk.

```
        CAUZIN
      SOFTSTRIP(TM)
 READER COMMUNICATIONS - 1.0
   APPLE //e CASSETTE PORT
_____

 ┌──────────────────────────┐
 │ 1 - READ TO DRIVE 2      │
 └──────────────────────────┘
   2 - OPTIONS

   3 - EXIT TO PRODOS
_____

   USE ARROW KEYS TO SCROLL
 <RETURN> TO SELECT AN ITEM
```
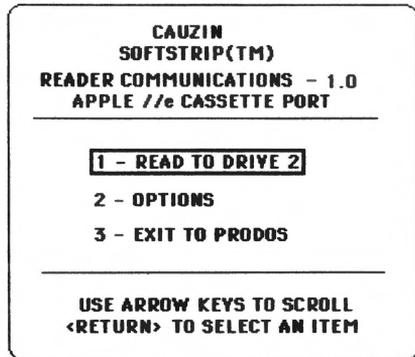
READER COUNTDOWN SCREEN

Check that the reader has been correctly aligned and press RETURN when ready.

At the bottom of your screen you will see a numerical countdown. This indicates an approximate read speed and verifies that the data strip is being read.

```
          CAUZIN SYSTEMS
 SOFTSTRIP READER COMMUNICATIONS


 _____

   INSERT STRIP #1 UNDER READER

   READER COUNTDOWN  [      ]

     <RETURN> WHEN READY
     <ESC> TO ABORT READ
```
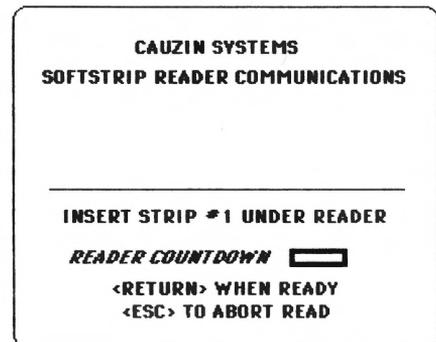
It will take a few seconds before the countdown begins since the reader is performing its initial alignment at the top of the data strip.

READER STATUS SCREEN

The files read from the data strip will appear on screen along with the number of bytes each file contains. As the files are saved to the data disk, the percent (%) completion column will record the status of a given file.

Until all files are 100% complete, there will be additional data strips to read.

```
          CAUZIN SYSTEMS
           STRIP STATUS
         DISK IS 57% FULL

 T FILENAME ON STRIP    BYTES  %
 _____

 A ELIZA                7645  100
 B TUNES                3402  80



 _____
   INSERT STRIP #2 UNDER READER

     <RETURN> WHEN READY
     <ESC> TO ABORT READ
```
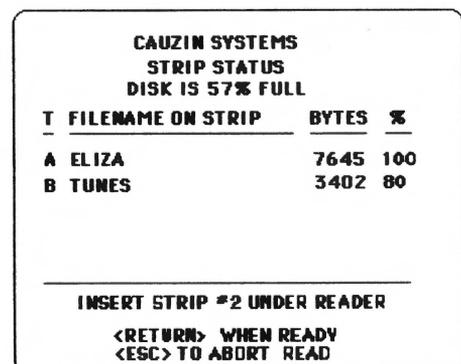
When files of the same name are already on your disk, they will appear HIGHLIGHTED via an on-screen prompt. They may be files you previously scanned in from a particular data strip, or one that has a very similar name to something else. You will be given the option to overwrite the current files, change data disks, or abort the read process without affecting the current disk files.

```
┌─────────────────────────────────────┐
│           CAUZIN SYSTEMS             │
│           STRIP STATUS               │
│          DISK IS 57% FULL            │
│  ───────────────────────────────    │
│  T FILENAME ON STRIP    BYTES  %     │
│                                      │
│  A [ELIZA         ]      7645        │
│  B TUNES                 3402        │
│                                      │
│                                      │
│  ───────────────────────────────    │
│  [HIGHLIGHTED FILES] ARE ON YOUR DISK│
│                                      │
│  1 - HELP            2 - OPTIONS     │
│  3 - OVERWRITE FILES 4 - EXIT        │
└─────────────────────────────────────┘
```

As the reader scans a data strip, the information is stored in your computer's memory. Upon completion, the communications program will validate the strip information and then store it on your data disk.

If there are multiple data strips the program will prompt you to move to the next strip. The communications program will also detect strips read out of sequence and prompt you to use the correct strip.

Once all the data strips have been completely read onto your data disk, an on screen message may appear, giving you the option to run the program.

Press "Y" to run the program.

Hit any other key to return to the main menu.

```
┌─────────────────────────────────────┐
│           CAUZIN SYSTEMS             │
│           STRIP STATUS               │
│          DISK IS 62% FULL            │
│  ───────────────────────────────    │
│  T FILENAME ON STRIP    BYTES  %     │
│                                      │
│  A ELIZA                 7645  100   │
│  B TUNES                 3402  100   │
│                                      │
│                                      │
│  ───────────────────────────────    │
│    --READ OPERATION COMPLETED--      │
│       RUN < ELIZA  > Y/N?            │
└─────────────────────────────────────┘
```

Select the OPTIONS menu by pressing RETURN or the option number indicated on the screen.

```
┌─────────────────────────────────────┐
│              CAUZIN                  │
│          SOFTSTRIP(TM)               │
│    READER COMMUNICATIONS - 1.0       │
│      APPLE //e CASSETTE PORT         │
│  ───────────────────────────────    │
│        1 - READ TO DRIVE 2           │
│                                      │
│       [2 - OPTIONS]                  │
│                                      │
│        3 - EXIT TO PRODOS            │
│  ───────────────────────────────    │
│     USE ARROW KEYS TO SCROLL         │
│    <RETURN> TO SELECT AN ITEM        │
└─────────────────────────────────────┘
```

The following menu screen will appear.

Select HELP to view the tutorial on how to utilize the Cauzin communications program.

```
┌─────────────────────────────────────┐
│        CAUZIN SYSTEMS INC.           │
│          OPTIONS MENU                │
│  ───────────────────────────────    │
│                                      │
│      [1 - HELP]                      │
│                                      │
│      2 - SELECT DATA DISK            │
│                                      │
│      3 - DISK CATALOG DRIVE 2        │
│                                      │
│  ───────────────────────────────    │
│     USE ARROW KEYS TO SCROLL         │
│    <RETURN> TO SELECT AN ITEM        │
│    <ESC> FOR PREVIOUS MENU           │
└─────────────────────────────────────┘
```

Cauzin Help Menu

The Cauzin Softstrip™ reader is designed to communicate with your Apple Computer thru your CASSETTE PORT. (Apple //c's SERIAL PORT).

Data is read sequentially from the data strips and automatically logged on your data disk in drive #2 (or #1 on Apple //c).

As the reader scans the data strip(s) a countdown will show its progress.

Files that exist on your data disk must be overwritten (deleted and recreated), to save the data strips. The system automatically highlights the existing files and allows you to overwrite.

You can change data disks in drive #1 or #2, or use a new initialized disk.

After data strip files have been saved to disk, you can run them at your leisure from Applesoft.

Choosing "SELECT DATA DISK" allows you to change the default data drive location.

```
┌─────────────────────────────────────┐
│    CAUZIN SYSTEMS INC.               │
│       OPTIONS MENU                   │
│    ─────────────────────             │
│                                      │
│                                      │
│    1 - HELP                          │
│   ┌─────────────────────────┐        │
│   │ 2 - SELECT DATA DISK     │        │
│   └─────────────────────────┘        │
│    3 - DISK CATALOG DRIVE 2          │
│                                      │
│    ─────────────────────             │
│                                      │
│    USE ARROW KEYS TO SCROLL          │
│    <RETURN> TO SELECT AN ITEM        │
│    <ESC> FOR PREVIOUS MENU           │
└─────────────────────────────────────┘
```
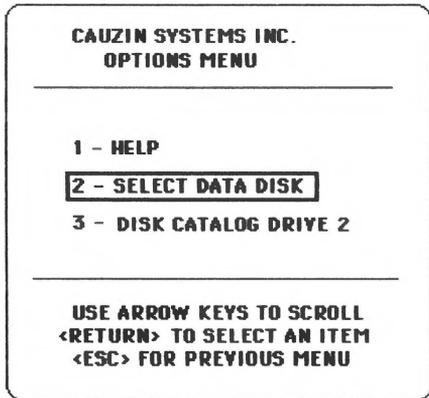
This menu provides you with system customizations and default values. If you have an Apple //c you will also be able to change the serial port connection here as previously described.

```
┌─────────────────────────────────────┐
│       CAUZIN SYSTEMS INC.            │
│      SELECT DATA DISK MENU           │
│    ─────────────────────────         │
│                                      │
│                                      │
│       DRIVE . . . .   1              │
│                                      │
│       SLOT  . . . . .  6             │
│                                      │
│       PORT  . . . . .  2 (MODEM)     │
│                                      │
│    ─────────────────────────         │
│   USE <RETURN> & ARROW KEYS TO SCROLL│
│     ENTER SLOT AND DRIVE NUMBERS     │
│        <S> TO SAVE SELECTIONS        │
│        <ESC> FOR PREVIOUS MENU       │
└─────────────────────────────────────┘
```
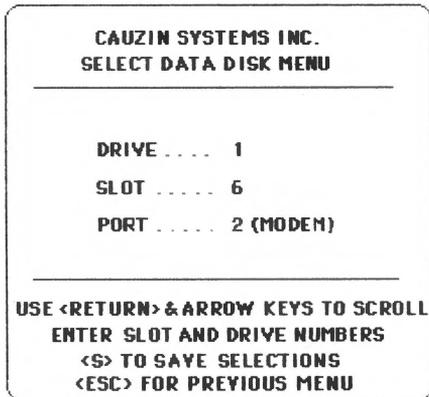
You can use any slot where your data disk is located. The valid slots available have values between 5 and 7.

The data drive number can be only 1 or 2.

The port (for //c user's) can be only 1 or 2.

If you want to make these selections permanent, enter an S, otherwise the selections are temporary for this use.

Reader Alert

We have tried to ensure that each data strip reads the first time, every time. If, however, you experience some difficulties, we offer you these helpful hints.

Read the messages displayed to you. Most problems are easy to solve and you will be guided to the solution by the on-screen display.

If the reader is having trouble reading a particular strip, check the alignment of the reader and try again. Most reading problems are a case of misalignment.

The following charts on the next two pages are a checklist for identifying the most likely cause of an error message and a probable solution.

ERROR MESSAGE	CAUSE	CORRECTION
Unable To Read — Please Retry	Bumping or moving the reader during operation	Realign the reader and begin again
	Torn data strip	Try to carefully tape data strip together and retry
	Damaged, crumpled, etc.	Smooth out and retry
	Coffee stain, or any liquid makes strip wet	Dry and retry
	Reading surface not level	Flatten surface of book or magazine where data strip appears
	Transmission (checksum) error	Retry strip read
	No data strip under reader	Place data strip under reader, align, and retry
Strip Alignment — Adjust and Retry	Data strip out of position	Realign the reader and data strip and begin again
Reader Not Ready	Reader not turned on	Check power and switch
	Apple II, Apple II Plus, Apple //e users may have an accelerator card that changes the timing of the cassette port.	Remove or disable card with a "preboot" disk, normally provided with these cards to run at normal Apple speed.

Reader Not Ready	Reader not connected to Apple II, Apple II Plus, Apple //e properly	Check connections or reverse cassette plugs
	Connector in wrong Apple //c port	Put connector in modem port 2 or use OPTIONS menu to utilize the Apple //c printer port 1
Disk I/O Error	No data disk in drive	Put an initialized disk in data drive
	Data disk not initialized or formatted for different operating system	Initialize disk or use one that's initialized for this system. Note: you cannot mix ProDOS and DOS 3.3
Disk Full	Not enough room on data disk to store data strip file(s). Note: there must be enough room for all the files to be stored. Partial files are not written.	Use another disk with more space or initialize another data disk.
Not an Apple Data Strip	The intended system for this data strip is not an Apple computer.	You will be given the option to save the file anyway, but remember that the file will not be usable unless it's a text file. (Use an editor or word processor).
Disk Write Protected	Your data disk has a write protect tab on it	Remove write protect tab or use another data disk.

Glossary

APPLESOFT

An extended version of the BASIC language designed to run programs on Apple II series computers.

BIT

A binary digit (0 or 1); the smallest possible unit of information, consisting of a simple two-way choice such as yes or no, on or off.

CASSETTE CABLE

The cable provided in the accessory kit to hook the reader up to a Apple II, Apple II Plus or Apple //e computer to the cassette port.

CASSETTE PORT

The two connectors on the back of an Apple computer provided for attaching a cassette recorder to a computer.

CAUZIN

From the periodic table of elements:
COPPER = CU
GOLD = AU
ZINC = ZN

CAUZIN COMMUNICATIONS PROGRAM

A program provided to allow a computer to communicate with a Cauzin Softstrip™ reader.

DATA DISK

The disk that the Cauzin communications program will write to once it reads data from a strip.

DISK (aka DISKETTE)

An information storage medium consisting of a flat, circular magnetic surface on which information can be recorded.

DISK DRIVE

A device that writes and reads information onto a disk.

DISK OPERATING SYSTEM

A software system that enables a computer to control and communicate with one or more disk drives.

DOS

See disk operating system.

ERROR MESSAGE

A message displayed or printed to inform the user of a problem or error.

HOOVER

A fish who died during the development of the Softstrip™ system.

MODEM

Modulator/Demodulator; a device that enables a computer to communicate information over a telephone line.

MODEM PORT

The connector on the rear panel of an Apple //c provided for modem hookup.

POWER TRANSFORMER

An electrical device designed to supply low voltage power to the Cauzin reader (or any type of computer unit)

PRINTER PORT

The connector on the rear panel of an Apple //c provided for attaching a serial printer to your computer.

READER

An optical device that reads encoded information, printed on paper, and communicates it to a computer.

SAMPLER

A collection of reprinted program materials in Softstrip™ format provided as part of the Cauzin Softstrip™ System.

SERIAL INTERFACE

An interface in which information is transmitted sequentially, one bit at a time, over a single wire or channel.