TIMEWORKS®

User's Manual

The Data Manager™

For
COMMODORE 64
ATARI
Computers

Published by **Timeworks**, Inc.

A FRIENDLY NOTE
ON THE USE OF
THE DATA MANAGER

Be sure to answer every question in the general information display. Additionally, each line of each record, as you enter your data, must have at least one character on it. If you have no information to enter on a line, type an N (for none) on that line. A STRING TOO LONG situation may result if you do not fill all blank lines.

EXAMPLE:

CORRECT   INCORRECT

123)1	John Doe	123)1	John Doe
2	100 Main St.	2	100 Main St.
3	N	3	

As with all **TIMEWORKS** software, if you have any questions feel free to call us at (312) 948-9200 .

TIMEWORKS

User's Manual

The Data Manager™

For
COMMODORE 64
ATARI
Computers

Published by **Timeworks**, Inc.

TIMEWORKS®

User's Manual

The Data Manager™

For
COMMODORE 64*
ATARI*
Computers

Published by **Timeworks**, Inc.

444 Lake Cook Road
Deerfield, Illinois 60015
(312) 948-9200

Table of Contents

Table of Contents

I. Introduction

THE DATA MANAGER will help you to quickly and easily organize a variety of items, ranging from your Christmas card addresses to detailed club or client information, including dates and amounts.

We will call the items stored on this system "RECORDS," i.e., a RECORD could be an address including name, address, and city.

Your records may be from 1 to 8 lines in length, and each line can be a maximum of 30 characters long. Numerical amounts and dates may be used, and the system will retrieve records by these values.

Statistical analysis of amounts is also possible since THE DATA MANAGER can produce the Sum, Average, Standard Deviation, and Frequency Charts (Bell Graphs) for any statistical data entered into the system.

This system also contains an index code which lets you set up your own classifications, and a safety feature is provided which allows you to generate extra backup copies of your recorded information to guard against the loss of important data.

THE DATA MANAGER can bring all types of important information to your T.V. screen at the push of a button. At the end of this manual is a section on Suggested Uses.

Before we begin, let's discuss pointers and index codes.

II. A Word on the Use of Pointers

A. What is a "Pointer"? In this data system, Pointers will be used to tell the computer that the value that follows is a certain date or amount. You define the Pointers used in this system. This has been done to allow maximum flexibility.

B. A Pointer consists of a letter or group of letters followed by an arrow > ("more than" sign). This is followed by a value or date.

> NOTE: All values must be followed by a space.

C. **Example 1**

Let's say you want to include birthdays in your address list. Lines 1 through 3 are the name, address, and city. Line 4 could be for other information. (If you only use 3 lines for information, dates and amounts could be squeezed in with other data on the 3 lines.) To put a birthday of November 30, 1956, in Line 4, do this:

Enter B > 11/30/56. B > is the birthday Pointer.

> NOTE 1: January 3, 1932, would be B > 01/03/32. You must use 0 to fill all character locations. If this is not done, an error will result when retrieval is attempted. If the year is not important, you may use 00 for year, i.e., B > 11/30/00.

II. A Word on the Use of Pointers

NOTE 2: Any other letter or group of letters could be used instead of B>, i.e., A>; BIRTH>; etc. You may use as many Pointers as you wish. Searching will be quicker if your Pointers are close to the beginning of the line.

D. Example 2

Let's say that in Line 4 of your address list you also want to record:

1. Anniversary date (A>).

2. Years you have known the person (Y>).

3. Approximate miles they live from you (M>).

We can get this all on Line 4. The line could read like this: A>03/15/91 Y>5 M>15.

NOTE: Only 30 characters are allowed per line. How does the computer use Pointers? The computer uses Pointers when searching for a specific value.

NOTE: Your date amount should immediately follow the >.

II. A Word on the Use of Pointers

E. Example 3

If you wanted to view a list of all your friends within 15 miles of your home, you would use an M> Pointer from the previous example.

> NOTE: To sort by amounts or dates, you must use a Pointer in your record, and they must always appear in the same sequential line.

F. How can I remember which Pointer I have used?! There are three ways to do this:

1. Write them down on a piece of paper as a reference.

2. Decide which Pointers you are going to use and list them in the first few record locations, i.e.:

   NO.   RECORD

   1. 1 B =   BIRTHDAYS
      2 A =   ANNIVERSARIES
      3 Y =   YEARS KNOWN
      4 M =   MILES AWAY

3. Pointers can also be stored using **Menu Item 1**. This will be discussed later.

> NOTE: Using the > in a record without following it with a number or date will result in an error during retrieval.

III. A Word on the Use of Index Codes

A. What are Index Codes? You can use Index Codes to quickly recall records dealing with a specific subject. Index Codes can be anywhere in your record, but must always appear in the same sequential line. It is best to place them as close to the front of the line as possible. An Index Code may be a number or letter and should be enclosed by parentheses (shifted 8 and shifted 9), i.e., (A); (REL); etc.

B. What are some typical uses of Index Codes? In an address list, Line 1 might include an Index Code to identify relatives, close friends, work friends, neighbors, etc. An index system like the one below could be used:

(R)	RELATIVES
(CF)	CLOSE FRIENDS
(F)	FRIENDS
(WF)	WORK FRIENDS
(N)	NEIGHBORS

When you want to retrieve all your RELATIVES' addresses, for example, use (R) as your Search Item.

NOTE: To speed the computer search, Index Codes (and Pointers) should be the first item in a line.

IV. Before Getting Started

A. Determine the format of your record . . . ask yourself some questions:

   1. What information do I need to store?

   2. How many lines are needed? (30 characters maximum per line.)

   3. In general, what will be on each line? i.e., name, address, city, etc.

After answering the questions above, you are ready to start.

NOTE: Once you have set the format of your records, stay consistent.

V. System Operation and Start Up

A. General Instructions

1. Hook up your computer, including your Datasette recorder or disk drive and printer.

B. Loading Instructions

1. For Commodore 64 Computers (Disk)

   a) Using your disk drive, carefully insert the disk so that the label on the disk is facing up and is closest to you. Look for a little notch on the disk (it might be covered with a little piece of tape). If you're inserting the disk properly, the notch will be on the left side. Once the disk is inside, close the protective gate by pushing in on the lever. Now type LOAD "DATA MANAGER", 8 and press **RETURN**. When the word READY appears on the screen, and the ■ is on, just type RUN, and your program is ready to use.

   A backup copy of THE DATA MANAGER program is provided on the same side of the disk. To load the backup, use "D/M BACKUP",8.

   b) When loading is completed, take the Timeworks disk out of your disk drive and place your own 5¼" floppy disk in the disk drive.

   > NOTE: This entire disk will be used to store your data. Nothing else can be stored on it.

V. System Operation and Start Up

Press **C** (for continue) when your data disk is in the disk drive.

c) If you want to initialize a new data disk, press **Y** (for yes) in response to INITIALIZE THE SYSTEM?(Y/N). Next time you want to use an already initialized data disk, press **N** (for no).

d) If you are making a new data disk, press **Y** in response to the next warning.

e) Now select the type of display you prefer. Press **1** for white letters on a black display or **2** for black letters on a white display.

You can adjust your monitor to obtain a display that you are comfortable with.

f) Now type in the number of lines you want to use per record. You can use 1 to 8 (30 characters per line).

Sit back. It will take 4 to 5 minutes for your disk drive to set up the disk. As your disk drive grinds and turns, it is setting up the internal road map and signposts used by THE DATA MANAGER to store and retrieve your information.

V. System Operation and Start Up

2. For Commodore 64 Computers (Cassette)

    a) Use your Datassette recorder. Make sure the tape
        is completely rewound to the beginning of the
        first side. Then, type LOAD "DATA MANAGER",
        then press **RETURN**. The computer will answer
        with PRESS PLAY ON TAPE, so you respond by
        pressing PLAY on your Datassette machine. At
        this point the computer screen will go blank until
        the program is found. The computer will say
        FOUND (DATA MANAGER) on the screen. Now
        you press down on the **C** key. This will actually
        load the program into the computer.

        When the word READY appears on the screen,
        type in RUN, then press **RETURN**. When FOUND
        1 appears on the screen, press the **C** key again.

        A backup copy of THE DATA MANAGER program
        is provided on side 2. To load the backup, enter
        LOAD "DATA MANAGER". The instructions for
        loading are the same as for side 1.

    > NOTE: If you are loading the program for the
    > first time, press **Y** (for yes) in response
    > to INITIALIZE THE SYSTEM?(Y/N).

        If you are starting a new group of records, press
        Y in response to the next warning.

V. System Operation and Start Up

You will not need your cassette unit again, until the end of your session with THE DATA MANAGER.

b) Now select the type of display you prefer. Press **1** for white letters on a black display or **2** for black letters on a white display.

You can adjust your monitor to obtain a display that you are comfortable with.

c) Now type in the number of lines you want to use per record. You can use 1 to 8 (30 characters per line).

3. For Atari Computers*

a) Remove any cartridges from the cartridge slots.

b) Turn on your disk drive.

c) When the red light on the front of the disk drive goes out, carefully insert your program disk so that the side marked "Atari" is facing up, and the arrow is pointing to the back of the drive.

d) Close the disk drive door and turn on your computer's power switch. (If you have an XL series computer, you must press the **OPTION** button at the same time that you turn on the power switch.) Then turn on your monitor.

*This program can be used with all Atari computers that have at least a 48K memory.

V. System Operation and Start Up

You will not need your cassette unit again, until the end of your session with THE DATA MANAGER.

b) Now select the type of display you prefer. Press **1** for white letters on a black display or **2** for black letters on a white display.

You can adjust your monitor to obtain a display that you are comfortable with.

c) Now type in the number of lines you want to use per record. You can use 1 to 8 (30 characters per line).

3. For Atari Computers*

a) Remove any cartridges from the cartridge slots.

b) Turn on your disk drive.

c) When the red light on the front of the disk drive goes out, carefully insert your program disk so that the side marked "Atari" is facing up, and the arrow is pointing to the back of the drive.

d) Close the disk drive door and turn on your computer's power switch. (If you have an XL series computer, you must press the **OPTION** button at the same time that you turn on the power switch.) Then turn on your monitor.

*This program can be used with all Atari computers that have at least a 48K memory.

V. System Operation and Start Up

e) The program will now load into your computer. In a few seconds, it will be ready for your use.

f) When loading is completed, remove the program disk from your disk drive and place your own 5¼" floppy disk in the disk drive. (This will be your data disk.)

> NOTE: This entire disk will be used to store your data. Nothing else can be stored on it.

When your data disk is in the disk drive, press **C** to continue.

g) If you want to initialize a new data disk, press **Y** for yes in response to INITIALIZE THE SYSTEM? (Y/N). Next time you want to use an already initialized data disk, press **N** for no.

h) If you are making a new data disk, press **Y** in response to THIS WILL ERASE ALL INFORMA-TION ON YOUR DATA DISK ... ARE YOU SURE THIS IS WHAT YOU WANT? (Y/N).

i) Now type in the number of lines you want to use per record. You can use 1 to 8 (30 characters per line).

V. System Operation and Start Up

j) Now select the type of display you prefer. Press ∎ for white letters on a black display or ∎ for black letters on a white display. You can adjust your monitor to obtain a display that you are comfortable with.

Sit back. It will take 40 to 50 seconds for your disk drive to set up the disk. The main menu will then appear on your screen.

V. System Operation and Start Up

j) Now select the type of display you prefer. Press **1** for white letters on a black display or **2** for black letters on a white display. You can adjust your monitor to obtain a display that you are comfortable with.

Sit back. It will take 40 to 50 seconds for your disk drive to set up the disk. The main menu will then appear on your screen.

VI. Let's Get Started

A. Enter **Menu Item 1**, VIEW/MODIFY INFORMATION. Press **RETURN**. You will see displayed a list of general information.

  1. To fill in the blanks, press **Y** in response to CHANGES?(Y/N). Enter 1 in response to WHICH ITEM?. Now enter the type of data you will be storing, i.e., addresses, recipes, etc. (30 characters maximum). Then press **RETURN**.

  2. Press **Y** again, then enter 2 in response to WHICH ITEM?. Enter a list of the Pointers you will be using, i.e., D>, A>, P>. Press **RETURN**.

  3. Press **Y**, then enter 3 in response to WHICH ITEM? The last date you used this system should be entered, i.e., today's date.

  Now press **N** in response to CHANGES?(Y/N), then press **M** to return to the menu.

VII. Entering Items

A. Enter **Menu Item** 2 to ENTER NEW ITEMS. You will see the item number of the record you will be entering. The system automatically starts this section with the next ITEM to enter, i.e., if you previously entered 20 ITEMS, ITEM 21 will be first when entering this section. If you make any errors, you will be given a chance to correct them.

Be sure to answer every question in the general information display. Additionally each line of each record, as you enter your data, must have at least one character on it. If you have no information to enter on a line, type an **N** (for none) on that line. A STRING TOO LONG situation may result if you do not fill all blank lines.

1. At the bottom you will see INPUT LINE 1? Type Line 1 of your record. Then press **RETURN**.

   NOTE: You may want to use the first few items to list your Index Codes and Pointers.

2. Next at the bottom you will see INPUT LINE 2? (if you are using more than one line). Enter Line 2, then press **RETURN**.

3. Continue entering lines as requested by the system.

B. When you see CHANGES?(Y/N) at the bottom, you have entered a complete record. Look it over. If there are any errors, press **Y** in response to CHANGES?(Y/N). Enter the line number to be changed, then enter the corrections.

VII. Entering Items

C. If everything is correct, press ∎N in response to CHANGES?(Y/N). The next item number will appear.

> NOTE: The table below shows the maximum number of items that can be stored per system load. When you reach the system capacity, save your data on a good quality 5¼" floppy disk or C-60 cassette tape. Following this, reload the original software program and continue entering new items.

LINES PER RECORD	MAXIMUM RECORDS PER SYSTEM LOAD		
	C64 DISK	C64 CASSETTE	ATARI DISK
1	5205	500	3123
2	2600	250	1560
3	1735	165	1041
4	1300	125	780
5	1040	100	624
6	867	83	520
7	743	71	445
8	650	62	390

D. When you would like to return to the menu, press RETURN in response to LINE 1? Enter **Menu Item** 2 when you would like to continue entering items.

VIII. View/Modify Items

A. **Menu Items** 3, 4, 5 and 6 are used to search through your records and retrieve the ones you want. You enter a search key which may be an item number, name, date range, or amount range, and records will be listed for you one screen at a time. You may also cross-search (X-SEARCH) records previously retrieved, i.e., with an address list, you can find all your close friends (CF) that live in Chicago. More on X-SEARCH later.

B. After a search is done, you will see LIST?(Y/N). Press **Y** to list or **N** if you do not want to see a list. After each list of items, you will see CHANGES?(Y/N). Press **Y** to make changes to a record or **N** if you don't want to make any changes. If you press **Y**, you will be requested to enter the record number, then line number. Next, enter the new line the way it should appear.

C. After pressing **N** for CHANGES?(Y/N), you will see either PRESS -M- FOR MENU or PRESS -C- TO CONTINUE. Pressing **M** will return you to the menu. If the PRESS -C- instruction appears, this means your search has retrieved. more records than can be displayed on a single screen. Pressing **C** will list the next page of records.

D. Enter **Menu Item** 3 to VIEW/MODIFY BY ITEM NUMBER. Enter the item number you would like to view/modify. It will be listed followed by a number of subsequent items. To make changes, press **Y** in response to CHANGES?(Y/N). Enter the record number, then line number. Then, enter the replacement line.

Next, you will see NEXT PAGE OR MENU? Press **P** to view the next page or **M** to return to the menu.

VIII. View/Modify Items

The computer will search for and list (at your request) any records in the range you have specified.

NOTE: Although you must always use a MM/DD/YY format, you may use dates without one of these values by simply replacing it by two zeros, i.e., birthdays and anniversaries may be recorded as 11/30/00 or 03/15/00. When doing a search, use 00 for the YY entry.

NOTE: An error will result if any of your dates have been entered with an incorrect format.

G. Enter **Menu Item 6** to VIEW/MODIFY BY AMOUNT RANGE. You will be asked to enter the Amount Pointer. Type it in, then press **RETURN**. A typical Amount Pointer could be A>.

Next, enter the line number in which you have placed the amount.

Next, enter the amount range as requested by the computer. Lower amount first, then the higher amount. The computer will search for and list (at your request) any records in the range you have specified.

NOTE: In your record, you must follow all amounts by a space, or an error will result during searching.

IX. X-SEARCH

A. When you return to the menu after doing a search by ITEM ELEMENT, DATE RANGE, or AMOUNT RANGE, you will see X-SEARCH?(Y/N). Press **Y** to do a cross-search, or **N** if you do not wish to cross-search. What does this do?

X-SEARCH is a very helpful tool in searching for records. It allows you to search again through records you have just retrieved from your entire list.

B. EXAMPLE: Let's say you have 80 addresses in the system. To pick out all the people you know in Chicago, use **Menu Item 4**, VIEW/MODIFY BY ITEM ELEMENT. Enter CHICAGO for ITEM NAME, then enter the line the city should be in (usually Line 3).

You will see the number of matches found listed at the bottom (say 30). Now, to search this list of 30 addresses further, press in response to LIST?(Y/N).

> NOTE: You can also press **Y** if you would like to view the list as it is.

Then press **Y** in response to X-SEARCH?(Y/N).

> NOTE: You can also press **N** if you do not want to use the X-SEARCH option.

IX. X-SEARCH

C. Now we would like to view our close friends (CF) who live in Chicago. Use **Menu Item 4** again, use your Index Code for close friend as the item name . . . type in (CF), then press **RETURN**. At the computer's request, enter the line number your Index Code is in. Now, your list of Chicago addresses will be searched for your close Chicago friends. Press **Y** in response to LIST?(Y/N) to view the list.

D. You may X-SEARCH a list as many times as you want, narrowing your list to be viewed down to the exact records you would like to view. You may use any combination of **Menu Items 4, 5, and 6.**

NOTE FOR COMMODORE USERS: Due to the constraints of the system, a maximum of 150 records (cassette) or 1000 records (disk) may be X-SEARCHED at any one time. Try to narrowly define your searches so as not to result in retrieving over 150 or 1,000 records respectively.

FOR COMMODORE DISK USERS: If a search retrieves more than 1,000 records, you will not be able to print those records because of the computer's constraints.

NOTE FOR ATARI USERS: Due to the memory constraints of the system, a maximum of 600 records may be X-SEARCHED at any one time. Try to narrowly define your searches so that you are not searching more than 600 records at a time.

IX. X-SEARCH

NOTE: A search usually takes around 10 seconds, but
they can take up to 1 minute or more.

FRIENDLY NOTE: After you have entered some
items, experiment with the X-SEARCH option
and you will understand its uses much better.

X. Data Analysis

A. THE DATA MANAGER is capable of analyzing numerical amounts in your records. By using **Menu Item 7**, you may obtain the Sum, Average, Standard Deviation, and a Frequency Chart.

Here's what you can do with this type of anlysis:

1. *SUM:* Gives you the sum of all your desired amounts.

2. *AVERAGE:* Gives you the statistical average of the selected group.

   Average = Sum ÷ Number of Values.

3. *STANDARD DEVIATION:* Gives you an indication of how consistent your data is. The value you will see displayed for STD DEVIATION is a measure of the variation of your values from the Average amount. A large Standard Deviation (larger than the Average) tells you that your values are widely dispersed, i.e., they vary widely from the Average amount. A small Standard Deviation (25-50% of the Average) tells you that your values are mostly in the range of your Average amount.

   EXAMPLE: Concerning the distance your friends live from your home, if your Average is 15 miles and the Standard Deviation is 20 miles, your friends probably range from across the street to 35 miles away. On the other hand, if your Average is 15 miles and the Standard Deviation is 5 miles, your friends are mostly 15 miles away.

X. Data Analysis

4. *FREQUENCY CHART:* Gives you a Graphic Representation of your Data Amounts. On the horizontal axis of the Frequency Chart you will see the range of your values from lowest to highest. The range is split up into 32 increments and the number of data amounts that fall within these ranges are tallied and displayed. The vertical axis shows this tally.

   a) A Frequency Chart tells you about the following:

      1. The most frequently occurring range of values will be the tallest bar.

      2. The largest and smallest values in your Data Set are displayed.

      3. The dispersion (variance) of your Data Amounts is displayed.

      > NOTE: You can take pictures of any display in THE DATA MANAGER to be made into slides for presentations or included in written reports. It is recommended that you take pictures in a dark room and use a tripod to stabilize your camera.

      > NOTE: If your values have more than 5 characters, you may have problems obtaining Frequency Charts.

X. Data Analysis

B. Use **Menu Item 7** to ANALYZE DATA AMOUNTS. Press **7** in response to WHAT WOULD YOU LIKE TO DO?

C. Next, in response to ALL AMOUNTS OR LAST SORT?(A/L), you must select which group of amounts to analyze, i.e.:

All amounts: All the records in your Data Set.

Last Sort: Only the records found in the last search you made using **Menu Items 4, 5,** or **6.**

Press **A** for All or **L** for Last Sort.

D. Next, type in your Amount Pointer, i.e., A>, Sales >, etc. Then press **RETURN**.

E. Then type in the line number in which the Data Amount appears. Then press **RETURN**.

F. Now type in what type of amounts these are, i.e., Sales Figures, Distances, etc. (19 characters maximum).

> NOTE: Use all lower case letters for the type of amounts.

X. Data Analysis

G. Next, respond with **Y** for yes or **N** for no to the next 3
   questions pertaining to your analysis needs. While the
   analysis is being done, you will see the Record Number
   of the record being worked on displayed at the bottom of
   the screen.

> NOTE: A Two Pass Analysis is used to assure accuracy
> and conserve computer memory.

H. Next, you will see the values you requested displayed,
   along with other useful information.

   Press **C** to continue, or press **M** to return to the menu.

I. If you selected **Y** for Frequency Chart, you will see your
   display generate the Frequency Chart. When you are
   done viewing this display, press **M** to return to the menu.

XI. Printing

A. If you would like a printed copy of your records, use **Menu Item** 8 to dump records to the printer.

NOTE: Be sure your printer is connected or an error will result.

B. In response to the warning, check your printer connection, then press **Y** if it is connected or **N** if it is not.

WARNING Do not connect your printer after you have turned on your computer!

C. Next, in response to ALL AMOUNTS OR LAST SORT? (A/L), you must select which group of amounts to print, i.e.:

All Amounts: Print all the records in your data set.

Last Sort: Print only the records found in the last search you made using **Menu Items 4, 5,** or **6.**

D. Commodore 64 Computer Users: If you would like to stop printing in the middle of the print routine, press the **RUN/STOP** key and the printing will stop after the current record is printed. Keep the **RUN/STOP** key pressed until the printing stops.

E. Atari Computer Users: To stop printing at any time while you are printing your transaction records, press the **Esc** key. Keep the key pressed until the printing stops.

XII. Storing Data

CASSETTE ONLY: (For disk, records are stored automatically.)

A. You may save your records at any time and load them in at any time, to VIEW/MODIFY PRESENT DATA, or to continue entering records. Enter **Menu Item 9**, END RUN. To save the new data you have entered, press **Y** in response to SAVE NEW DATA?(Y/N).

B. Instructions will appear on how to save the data. After your data is saved, the menu will return to the screen. You may continue using THE DATA MANAGER or use **Menu Item 9** to exit again. Press **N** in response to SAVE NEW DATA?(Y/N).

NOTE: You must use a good quality C-60 cassette tape. Press **C** when you are ready to save. (Save time is approximately 5 minutes.) Be sure to mark down your tape counter number for later reference.

C. Until you have filled in all allowed items, reload your latest data tape and continue entering items using **Menu Item 2**. When all allowed items are in the system, reload the original software package. (See chart, Section VII-C.)

D. The second time you reload THE DATA MANAGER software tape (and each time thereafter), press **N** in response to INITIALIZE THE SYSTEM?(Y/N). Then set the data cassette at the proper location to load in your previous data. Then press **C** to continue. When the data is located on your tape, press the **C** key.

XIII. Making A Backup Data Disk

A. For Commodore 64 Computers

Enter **Menu Item 9**, END RUN. Press 🅈 in response to
MAKE BACKUP DISK?(Y/N). Then follow the directions
on the screen closely to make your backup disk.

B. For Atari Computers

To guard against the loss of important information, you
should always make backup copies of your data disks. See
your DOS manual for details on making backups of your
data disks.

> WARNING FOR CASSETTE AND DISK SYSTEMS:
> Always exit THE DATA MANAGER using **Menu
> Item 9**, or you may lose your data.

XIV. Odds and Ends

A. A typical way to use THE DATA MANAGER is to:

1. Load the program into your computer.

2. Load in your data (automatic for disk).

3. Add new Records.

4. View and modify items as needed.

5. Use **Menu Item 9** to save all your data on tape (cassette only).

B. Next time you want to use this system, load your latest data. After you have filled up the system with the maximum number of records, make a permanent copy and put it in a safe place.

C. When you have stored the maximum number of records, load the original software tape and continue entering items. Up to 10 saves should fit on a C-60 cassette tape.

> NOTE: If you are ever in INPUT (<) MODE, i.e., entering a record or search code, and you would like to "escape" back to the menu, press the **CLR/HOME** key. There must be no characters on the Input Line in order to use this feature. If needed, you may delete all the characters you have typed in and press the **CLR/HOME** key.

XIV. Odds and Ends

NOTE FOR ATARI USERS: If you are in the Input Mode (entering a record or search code), and you would like to return to the menu, press the **Esc** key. The Input Line must be blank when you press this key, and the menu will appear on your display.

XV. Suggested Uses

Possible uses of THE DATA MANAGER are endless. We have designed this system to be flexible so it will adapt easily to many diverse applications. You may use the same original software package to set up systems for addresses and recipes. Simply load the software into your computer, set it up for, say 3-line address records, and use **Menu Item 9** to save it on your own C-60 cassette tape (automatically saved using disk drive). Next, to use the system for recipes, load the software and set it up for, say, 8 lines. Enter some recipes if you like, then use **Menu Item 9** to save it on another cassette tape. The result is one software package with many uses.

A. ADDRESS LIST   3 Lines
Line 1 - Name
      2 - Address
      3 - City, State, etc.

B. RECIPES   8 Lines
Lines 1-8 Recipe

You may also use more than one record to store your information, i.e., a 16-line recipe could be stored on 2 8-line records.

C. CLIENT, CLUB,   4 Lines
   VENDOR LIST   Line 1 - Name
      2 - Address
      3 - Other information, i.e.,
         special interests, sales, etc.

XV. Suggested Uses

D. SOFTWARE   3 Lines
    CATALOG,   Line 1 - Program Name
    BOOK LIST, ETC.   2/3 - Description

E. EXPENSE   2 Lines
    RECORD OR   Line 1 - Index, date, amount
    LEDGER SYSTEM   2 - Comments

XVI. Interfacing With The TIMEWORKS' WORD WRITER

Because the WORD WRITER interface is included in the WORD WRITER program disk, the instructions for interfacing with THE DATA MANAGER are found in the WORD WRITER manual.

XVII. Troubleshooting

PROBLEM	REMEDY
PROGRAM WILL NOT LOAD	1. Check computer hookup. 2. Try to load backup version.
SYSTEM WILL NOT SAVE	Check computer hookup.
SYSTEM GLITCH - SCREEN BLANKS OUT, PROGRAM LOST	Reload program (sometimes due to power fluctuation).
BAD SAVE - LOSS OF DATA	Reconstruct data from last good save.
DATA WILL NOT LOAD INTO THE SYSTEM	Be sure you are using the correct data cassette or disk.

NOTES:

NOTES:

Personal Computer Software

Timeworks has put the **personal** in Personal Computer Software.

We have pooled creativity, technical knowledge, manufacturing expertise and conscientious quality control to bring to you the versatility and reliability demanded by the computer generation.

We have dedicated ourselves to the development of programs which meet the needs of the computer user – both functional and recreational. Each program is designed and tested with the user's needs foremost in our minds.

Timeworks' programs utilize maximum computer capacity. Our manuals are User-Friendly, written in plain easy-to-follow English, then carefully edited to provide continuity and correlation with the program.

If superior design, maximum capability, effective graphics, and dependable performance are important to you, look into Timeworks' **personal** computer software.

You'll be amazed at the difference a **personal** commitment can make.

For other Timeworks software see your local Timeworks dealer, or contact Timeworks, Inc., for a list of our latest software.

Timeworks, Inc.
444 Lake Cook Rd.
Deerfield, IL 60015
(312) 948-9200