

DATA BASE-X

INFORMATION MANAGEMENT

for the T. I. 99/4A

- * Single or Dual Disk Drive
- * User defined Files
- * User defined file categories
- * MAILING LIST
- * Sorts Numerically and/or Alphabetically in the Mailing List mode
- * Sorts by up to 3 categories or by a range within a category
- * STATISTICAL ANALYSIS
- * Update or delete selected records
- * Ext. Basic & Disk system required.
- * Printer optional
- * Memory Expansion optional

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Revision 2.0

DATA BASE-X

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DATA BASE - X

ADDENDUM

In order to provide greater flexibility, the following additions have been made to DATA BASE-X since the most recent procedures manual was printed.

Page 12 following the NUMERIC & ALPHABETICAL SORT:

After you press key 2 on the Label Printing menu, the following screen prompt will appear:

PRESS

- (1) FOR EXPANSION MEMORY
- (2) FOR CONSOLE MEMORY
- (3) TO RETURN TO MASTER MENU

This option allows you to choose either memory mode, if available. The Expansion memory mode, of course, allows you to manipulate larger groups of data.

Page 13 STATISTICS SECTION.

After pressing key 7 on the Master menu the screen prompt will appear:

PRESS

- (1) FOR MEMORY EXPANSION
- (2) FOR CONSOLE MEMORY
- (3) TO RETURN TO MENU

Again, this option allows you to choose the expansion memory, if available.

Page 14 RECORD UPDATES. If you select to update a record of a specific category name the following will appear at the bottom of the screen after the first record is found:

PRESS (U) to update this record
(C) to continue search

Press U to update the current record on the screen or press C to search for the next record which satisfies the search criteria.

Page 15 DELETE RECORDS. If you want to delete a record which has a specific category value the following prompt will appear at the bottom of the screen after the first record has been found:

PRESS (D) TO DELETE THIS RECORD
(S) TO CONTINUE SEARCH

As mentioned above, this allows you to delete the current record or search for the next one that satisfies the search criteria.

DATA BASE-X

APPLICATIONS

In general, the DATA BASE-X system may be used for storage, retrieval and manipulation of alpha and numeric data which has previously been defined by the user.

SPECIFIC FEATURES

- * Compatibility with single or dual drive systems.
- * User defined files (up to 5 per diskette).
- * User defined file categories (up to 10 per file).
- * LIBRARY FILE tracks and displays active files, number of records on each file and percent of disk space used.
- * SORTS numerically or alphabetically by a category selected by the user.
- * SORTS by up to 3 categories at once or by a range within a specified category.
- * Displays records on screen or optional output to a compatible printer.
- * Prints MAILING LABELS (sort by zip code or last name).
- * STATISTICAL ANALYSIS of selected records on a data file or samples manually input through the key board.
- * UPDATE existing records on any active file.
- * DELETE selected records or entire files.

MINIMUM EQUIPMENT REQUIRED

- * 99/4 or 99/4A Console
- * Extended Basic Module
- * Disk controller & 1 or 2 drives
- * RS232 interface
- * Printer (optional)
- * Memory expansion (optional)

GETTING STARTED - A CHECK LIST

Prior to using the DATA BASE - X system, the following check list should be carefully observed. This will be helpful in eliminating operational problems.

DATA BASE - X requires the use of two diskettes. A Program diskette is provided with the system. This diskette contains all of the software or programs which cause the system to operate. A second diskette, known as the Data Diskette, is to be furnished by the user. This diskette will be used to store the data files. **IMPORTANT NOTE: THE DATA DISKETTE(S) WILL HAVE TO BE INITIALIZED PRIOR TO USE. REFER TO THE DISK SYSTEM MANUAL FOR DETAILS.**

If you plan to use a printer, you will need to know it's input format. For parallel printers the Format is normally "PIO". For serial printers, the format is "RS232.BA=XXXX.DA=YY" where XXXX is the Baud rate of the printer and YY is the Data Type. Please refer to your printer manual for details on correct formats.

The EXTENDED BASIC module must be inserted in the Console prior to using the system.

Decide whether you will be using a single or dual disk system prior to starting to use the system for the first time. After the system has been initialized, you may transport the program and data disks from a single disk system to a dual disk unit or vice versa with complete compatibility.

When initializing the DATA DISKETTE it is extremely important that you observe the following rule. During the initialization procedure you will be asked to input the DISK NAME. The disk name must be "DBXDATA" on all data diskettes. The system WILL NOT function if this step is not followed.

IMPORTANT NOTE FOR USERS OF SINGLE DISK SYSTEMS:

Throughout the use of the Data Base-X system you will note that when the screen turns red a message will appear telling you to either insert the Data Disk or the Program Disk. This allows the user to remove and insert the appropriate disks in the correct sequence. If you are using a Dual Disk system, this message will not appear.

MEMORY REQUIREMENTS

The DATA BASE - X system is designed to operate with or without the Memory Expansion unit.

Two sections of the program, Statistics and Alpha/Numeric sorts, will perform differently based upon the amount of memory available. The results are as follows:

Statistics Section limitations are:

Console Memory only	200 samples
Expansion Memory	1000 samples

Numeric/Alpha sorting routines are limited to:

Console Memory only	100 records
Expansion Memory	1200 records

If these limitations are exceeded during program operation a system error message will appear notifying the user of a problem.

THE MASTER MENU

The DATA BASE-X system is controlled by a program called MASTER MENU. This menu is a list of the program segments which collectively make up the Data Base system. By pressing the appropriate key (1 through 9) you can load and run that portion of the system. After completing use of that portion of the system the MASTER MENU is displayed again for your convenience.

LOADING THE MASTER MENU

- step 1 Insert the EXTENDED BASIC module.
- step 2 Load the diskette(s).
- Single disk system - Load the Program disk into the disk drive. DO NOT load the data disk until you are prompted to do so.
- Dual disk system - Load the Program disk into Drive #1 and the Data disk into #2.
- step 3 Press the appropriate keys to call EXTENDED BASIC.
- step 4 The MASTER MENU program will load and run displaying the following screen:

PRESS

- (1) INITIALIZE LIBRARY
- (2) FILE ROUTINES
- (3) INPUT DATA
- (4) SORT & DISPLAY
- (5) SORT & PRINT
- (6) PRINT LABELS
- (7) STATISTICS
- (8) UPDATE RECORDS
- (9) DELETE RECORDS
- (0) EXIT

As previously mentioned, you may call any of the nine program segments by pressing the appropriate key.

IMPORTANT !! Prior to running the Data Base program, read the entire procedures manual.

THE LIBRARY FILE

Prior to using the Data Base you must initialize the Library File. This is the Master File that keeps track of the number of active files, the record length of each file and the number of records contained in each file. Also stored in the Library File is a counter that calculates the percent of Disk space used and the printer format.

INITIALIZING THE LIBRARY

Before starting this procedure you should have determined the printer format for your system as this will be asked for during the initialization routine.

- step 1. Press key 1 on the MASTER MENU and wait for the Library Program to load and run.
- step 2 Press key 1 if you are using a Single Disk System to perform initialization. If you are using a Dual Disk System, press key 2.
- step 3 If you are using a single disk a prompt will appear asking you to remove the program disk and insert the data disk. (note: Be sure the data disk is already initialized.
- step 4 Pressing key 1 at this time will start the initialization process. Press key 0 (zero) if you wish to exit the program at this time.
- step 5 If the Library File has already been initialized the following message will appear:

LIBRARY
ALREADY
INITIALIZED

If this message does not appear go to step 6.

- step 6 Type in the correct printer format, press enter and the following message will appear:

LIBRARY
NOW
INITIALIZING

This signifies the successful execution of the Library Initialization. You may now return to the MASTER MENU. If you are using a single disk system a screen prompt will signal you to remove the data disk and insert the program disk prior to continuing.

FILE ROUTINES

After you have initialized the LIBRARY FILE on a data disk, you may create a Data File and input data to that file. The FILE ROUTINES section is used to create files, delete unwanted files and to provide a list of active files.

Press key 2 on the MASTER MENU to activate the FILE ROUTINES section of the system. If you are using a single disk system you will be prompted to remove the program disk and insert the data diskette. The following menu will then appear:

PRESS

- (1) TO CREATE FILES
- (2) TO DELETE FILES
- (3) TO LIST FILES
- (0) TO RETURN TO MASTER MENU

CREATING A FILE

Press key 1 on the File Routines menu. The following will be displayed:

FILE NAME
OF CATEGORIES

Type in the File name and press ENTER. Then type in the number of categories (up to 10) and ENTER. IMPORTANT NOTE: IF YOU ARE CREATING A FILE WHICH WILL BE USED AS A MAILING LIST THERE MUST BE A MINIMUM OF 6 CATEGORIES. THE CATEGORY NAMES MUST BE IN THE FOLLOWING ORDER.

- | | |
|---------------|-------------|
| 1. LAST NAME | 4. CITY |
| 2. FIRST NAME | 5. STATE |
| 3. ADDRESS | 6. ZIP CODE |

CATEGORIES 7 through 10, if needed, may be any name you choose.

After choosing the number of categories and pressing ENTER the following screen will appear:

#	CATEGORY NAME	CAT LENGTH
1-		
2-		
etc.		

At this time you will type in the name of each category and press ENTER and the length of that category and ENTER. (MAXIMUM LENGTH OF 28 FOR ANY CATEGORY)

The following message will now be displayed at the bottom of the screen:

PRESS

- (1) TO STORE DATA
- (2) TO CORRECT INPUTS

If you have made an error in any of the inputs you may correct them by pressing key 2. Otherwise press key 1 to store the category names on the disk. The file is now created.

DELETING A FILE

Press key 2 on the File Routine menu.

A screen prompt will ask for the name of the file you wish to delete. Since the file deletion could be catastrophic to your Data Base if you were to delete the wrong file you are now given a choice.

DELETE FILE XXXXXXXX

will now appear on the screen where XXXXXX is the name of the file to be deleted. You may now:

PRESS

- (D) TO DELETE THE FILE
- (R) TO RETURN TO MENU

If you press D the following will occur:

1. The file will be deleted and cannot be recovered.
2. The percent of disk space used will decrease by the size of the deleted file.

LISTING THE FILES

This routine is useful if you have forgotten the file names on a data disk or want to know how many records are contained on each file.

Press key 3 on the file routine menu.

A prompt will now ask you for either screen or printer output. Press the appropriate key.

If you choose a printer output, the following will appear:

PRINTER FORMAT
XXXXXXXXXXXXXXXX

XXXXXX is the printer format that was entered during Library initialization. You may, at this time, type in a new format and press ENTER or simply press ENTER to use the defaulted format.

A file listing will now be printed on the printer or be displayed on the screen. The listing will include the active file names, the number of records stored and the record length of each file. Also shown is the Disk Space message indicating the percent of space used on the data disk. Press any key to return to the menu screen.

DATA INPUTS

Now that you have created a file, you can input data to those files. The DATA INPUTS section is used to input and store data onto a selected active file.

Press key 3 on the MASTER MENU.

The Data Input menu screen is:

PRESS

(1) TO INPUT DATA

(0) TO RETURN TO MASTER MENU

Press key 1 and the prompt is:

FILE NAME

Type in the name of the file you wish to access and press ENTER.

The category names will appear on the screen. Type in the value of each category and press ENTER. The length of each entry is limited by the category length as defined when creating the file.

After you have entered the last category value this message will appear at the bottom of the screen:

PRESS

(S) TO STORE DATA

(C) TO CORRECT INPUTS

If you have made an error, press C and return to the top of the input screen to correct the error(s). Press S to store the data onto the data file.

After the information has been stored the following message will appear:

MORE INPUTS Y/N

Press Y if you wish to input more data to the current data file. Press N if you wish to return to the menu.

You may now choose to input data to another file. If so, follow the procedures as listed above. Press key 0 (zero) to return to the MASTER MENU.

SORT AND DISPLAY

This section of the program selects records from a file of your choice. Record sorts can be made by matching 1, 2 or 3 category values or by selecting a range of values within a specific category. For example, if you wanted to display all of the records with a last name of Smith who live in Texas, you would match 2 categories. If you wanted to see all records which contain zip codes in the 70000 range, you would select a range with a minimum value of 70000 and a maximum value of 79999.

Press key 4 on the MASTER MENU.

The Sort & Display menu is:

PRESS

(1) TO SORT AND DISPLAY

(2) TO RETURN TO MASTER MENU

Press key 1 to sort records.

Type in the appropriate File name and press ENTER.

The file category names will appear on the screen. They are numbered 1 through n where n is the number of categories in the selected file.

RANGE SEARCH

Press key 1 for RANGE SEARCH. The prompt will be:

WHICH CATEGORY DO YOU WANT TO RANGE

Type in the category number and ENTER.

Type in the minimum value and ENTER

Type in the maximum value and ENTER.

The file search will now begin. As a record is found that matches the range values it will be displayed on the screen along with the message:

PRESS

(C) TO CONTINUE

(Q) TO QUIT

If you wish to stop the search and return to the menu press Q. Press C to continue the search.

CATEGORY MATCH

If you wish to match a specific category value press key 2 on the menu. The following will be displayed:

HOW MANY CATEGORIES DO YOU WANT TO MATCH

Type in the number (up to 3) and press enter.

The new prompt will be:

CAT #	CATEGORY VALUE
-------	----------------

Type in the category number and ENTER then type in the value and ENTER.

SORT AND PRINT

This section allows you to print a hard copy of a file. As with the SORT & DISPLAY section you may sort by Category Value or a Range.

Press key 5 on the Master Menu.

Press 1 to Print

Type in File Name & ENTER.

Type in Printer Format and ENTER.

Press 1 for standard print or 2 for compressed print.

The File category names will be listed on the screen.

Type in the number of categories you wish to print.

Now you must type in the following information:

Category number you wish to print first.

How far you want to tab for the print.

Type of print.

Note on type of print: Type in 1 for xxxxxx.xx format (for numbers with decimals), type in 2 for non decimal numbers and type in 3 for alpha characters. Types 1 and 2 are right justified and type 3 is left justified.

Now you will be asked if you want to sum on of the categories. Type in the category and press enter after you have press (Y)ES.

The choice of range search or Category value search are the same as previously described in the SORT & DISPLAY section of the program.

PRINTING LABELS

This program section is used to sort names from a mailing list file and print the names and addresses onto gummed labels.

Four sort options are available in this section.

1. Range search
2. Category match (up to 3 categories at once)
3. Numeric sort (useful in sorting zip codes for bulk mailings.)
4. Alpha sort (sort alphabetically by last name etc.)

NOTE: THIS PROGRAM IS DESIGNED TO PRINT TO SINGLE WIDE LABELS ONLY.

Press key 6 on the MASTER MENU.

The Print Labels menu is:

PRESS

- (1) TO SORT BY CATEGORIES OR RANGES
- (2) TO SORT NUMERICALLY/ALPHABETICALLY
- (0) TO RETURN TO MASTER MENU

Pressing key 1 will allow you to sort by category value or ranges as described in the Sort & Display section.

If you wish to print labels in a certain pre-sorted order, press key 2.

CATEGORIES AND RANGES

After pressing key 1, the program will load.

The Label Print menu is:

PRESS

- (1) TO PRINT LABELS
- (0) TO RETURN TO MASTER MENU

The next prompt is FILE NAME. Type in the file name you wish to access and press ENTER.

PRINTER FORMAT is the next prompt. Type in the format and ENTER. You may use the default value is desired.

The next prompt asks you to type in the horizontal and vertical tabs. Horizontal tabs determine the spacing prior to beginning the label print. Vertical tab is the number of spaces between labels. Type in each value and press ENTER.

The next prompt is:

PRESS

- (1) TO TEST TABS
- (2) TO CHANGE TABS
- (3) TO RUN PROGRAM

Press key 1 and two "test labels" will be printed. This option allows you to set up the labels in the printer correctly prior to printing a large quantity of labels.

You may, at this time, choose to change the tabs, print more test labels or run the sort and label printing. Press 2 to change the tab settings, 1 to print more test labels or 3 to continue.

The sort features of this portion of the label program are identical to that described in the Sort & Display section. That is, you may sort by up to 3 category values or by a range within a specific category.

NUMERIC & ALPHABETICAL SORT

Press key 2 on the Label menu for Numeric & Alpha sort.

The File Name, Printer Format and tab setting prompts are identical as previously described for the Category and Range sort.

After the tabs are set and you press R for run this screen will be displayed:

SORT CATEGORY #

Type in the number of the category you wish to sort and press ENTER.

IMPORTANT !! THIS SORT ROUTINE IS DESIGNED TO (1) SORT NUMERIC CATEGORIES SUCH AS ZIP CODES AND (2) ALPHA CATEGORIES SUCH AS LAST NAMES. IT WILL NOT SORT MIXED FIELDS SUCH AS STREET NUMBERS AND NAMES.

The next prompt is:

PRESS

- (1) FOR NUMERIC SORT
- (2) FOR ALPHA SORT

Press the appropriate key and the sort will begin. This sort will take from several seconds to several minutes depending on the size of the file you are sorting. When the sort is finished, the labels will begin to print in the correct order.

STATISTICS

The Statistics section of the DATA BASE-X provides the user with the ability of calculating mean, median, range and Std. deviation on selected numeric samples. Data may be extracted from a data file or input manually from the key board. Analysis can be output to screen or printer.

Press key 7 on the MASTER MENU.

The Statistics menu is:

PRESS

- (1) DATA BASE STATS
- (2) MANUAL INPUT STATS
- (0) TO RETURN TO MASTER MENU

DATA BASE INPUTS

Press key 1 on the statistics menu.

Type in the file name and press ENTER.

On the next screen prompt, press key 1 for printer or key 2 for screen display. If you choose the printer you will then be asked to type in the printer format.

The next screen will display a list of the file categories. Type in the number of the category you wish to statistically sample and press ENTER. CAUTION !! THE CATEGORY MUST BE NUMERIC.

The statistical calculations will be made. The results will be displayed on the screen or printer as you have dictated.

MANUAL INPUTS

Press key 2 on the statistics menu.

The next prompt will be:

OF SAMPLES

Type in the number and press enter. (200 max for console memory or 1000 max for memory expansion)

The next prompt is:

SAMPLE # xxx

Each time you type in a sample value and press ENTER the number xxx will increment until you have input the number of samples requested. The calculations will begin and the results will be displayed.

RECORD UPDATES

The record update section may be used to correct or update any category value of any record in the data files. There are two methods available to select the record to be updated. (1) By record number or (2) by selecting a record with a specific category value.(first category). You may refer to a print out of the file obtained from a sort and print routine to find the record numbers for each file.

Press key 8 on the MASTER MENU.

The Update Records menu is:

PRESS

(1) TO UPDATE RECORDS

(0) TO RETURN TO MASTER MENU

Press key 1 for the next prompt:

FILE NAME

Type in the file name and press ENTER. The next prompt will be:

PRESS

(1) SPECIFIC RECORD NUMBER

(2) SPECIFIC CATEGORY VALUE

If you have a print out and know that you want to update a specific record number, press key 1.

If you wish to find a record which contains a certain value in category one, press key 2.

After the record has been located and retrieved the values will be displayed on the screen. You then have the option of changing any or all of the values. Press ENTER after each category value is corrected. If no correction is needed, simply press ENTER and continue to the next category.

When you have finished doing the corrections the new values will be stored onto the data disk and the menu screen will return.

DELETE RECORDS

This section of the program is used to delete an unwanted record from a selected data file. You may choose to delete a record either by number or by a category value.

Press key 9 on the MASTER MENU.

The delete record menu is:

PRESS

(1) TO DELETE RECORDS

(2) TO RETURN TO MASTER MENU

Press key 1 for the next prompt:

FILE NAME

Type in the appropriate file name and press ENTER.

The next screen prompt will be:

PRESS

(1) TO DELETE SPECIFIC RECORD NUMBER

(2) TO DELETE CATEGORY NAME

Type in 1 if you wish to delete a specific record number. You may refer to the file listing obtained through the sort and print routine to see the record numbers.

If you wish to delete a record which has a certain category value, type in the value of category one and the system will search until it finds that record.

After the record is retrieved, the category values will be displayed on the screen along with the message:

IS THIS THE RIGHT RECORD?

PRESS

(D) TO DELETE RECORD

(Q) TO QUIT

At this time you have the option of either deleting the record or pressing Q which will abort the operation and return you to the menu screen.

WARNING !!!!! DELETED RECORDS CAN NOT BE RECOVERED.
BE EXTREMELY CAREFUL WHEN USING THIS
SECTION OF THE PROGRAM.

SYSTEM MESSAGES

Several error avoiding routines are incorporated in the DATA BASE-X program. These routines are employed to eliminate the risk of user keyboard errors which will result in system crashes. A few of the routines, when encountered, will be displayed as 'system messages' and will be used to notify the user of unusual system status.

The messages and their meanings are:

"FILE NOT FOUND" The user has attempted to access a file which does not exist on the Data Disk.

"LIBRARY NOT YET INITIALIZED" is displayed when the user tries to create a file on a Data Disk that has not been initialized and does not contain a Library file.

"PRINTER ERROR" occurs when the user tries to access a printer that is turned off or disconnected. This will also be displayed if there is a problem with the RS232 interface.

"RECORD NOT FOUND" is displayed when the user tries to access a record that does not exist.

"DISKETTE CONTAINS % FILES. USE ANOTHER DATA DISK" This message will appear if you try to create more than 5 files on a single data disk.

"RECORD LENGTH 255" will be displayed if the total record length is greater than 255 during file creation.

"DISKETTE IS FULL. USE ANOTHER DISKETTE" This message signifies that the data disk has been filled to its capacity. This may occur during data inputs or as you are creating a new file.

"DISK ERROR" displays if you try to access a file when the disk drive is turned off or otherwise inoperative. This message will also be displayed if the disk is not inserted correctly.

DATA BACK-UPS

As with any Computer System, the data that is stored on the data diskettes should be secured by making a copy on a periodic basis. The frequency of this back-up procedure is left to the discretion of the user. Under normal conditions, a back-up should be made after a large amount of new data is stored on the prime data disk.

Please refer to the Disk System Manual for details on the 'copy disk' procedure.

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To: DATA BASE - X Owners

A copy of the version 2.0 of the print program is enclosed.

I. Installing the program on your Disk.

- a. Insert new Disk and type in OLD DSK1.DATAPRNT & press ENTER.
- b. Wait for program to load.
- c. Insert your program disk and type in SAVE DSK1.DATAPRNT & press ENTER. (remove the write protect film from the disk prior to saving the program.)

II. Using the new Print program.

Press key 5 on the Master menu.

Press 1 to Print.

Type in File Name & Enter.

Type in Printer Format & Enter.

Press 1 for Standard print or 2 for compressed.

The File Category names will now be listed on the screen.

Type in the number of categories you wish to print.

Now you must type in the following.

Category you want to print first.

How far you want to tab for the print.

Type of print. (1 for numbers with decimal,
2 for numbers & 3 for text)

Repeat for each category in order.

If you want to sum one of the numeric categories answer y for yes.

The choice of range search or category value search are the same as previously described in the SORT & DISPLAY section of the program.