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dBASE II

Assembly Language
Relational Database Management System

WRITTEN BY
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Software, Consultation, Design, and Production (SCDP)

USER MANUAL

dBASE II
USER MANUAL

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NOTE: Good data processing procedure dictates that the user test the program, run and test sample sets of data, and run the system in parallel with the system previously in use for a sufficient period of time to insure that results of operation of the programs are satisfactory.

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Introduction

dBASE II is a database management tool that allows easy manipulation of small and medium sized databases using English-like commands. With dBASE II you can:

* Create complete database systems.

* Easily add, delete, edit, display and print data from your database, with a minimum of data duplication on file.

* Gain a large measure of program/data independence, so that when you change your data your don't have to change your programs, and vice-versa

* Generate reports from one or more databases, automatically do multiplication, division, sub-totals, totals and other data manipulation every time you use them.

* Use the full-screen editing capability to set up a screen format, so that you see exactly what you're going to get, and enter data by simply "filling in the blanks."

dBASE II is an extremely powerful system. To get the most out of it, please take the time to read the instructions before you start using it. The time will be well spent.

Typographic conventions used in this manual:

Lowercase in the screen representations indicates material that you type in.

Uppercase in the screen representations indicates the dBASE II prompts and responses. In text, uppercase is used for dBASE II commands.

^...^ will be used in the text of this manual to set off dBASE II commands and materials you type. Occasionally, they may are used in the screen representations if needed for clarity. DO NOT TYPE THE SYMBOLS.

[...] square brackets will be used to indicate parts of a dBASE II command that are optional.

<...> bracket portions of a dBASE II command that are to be filled in with real information. E.g.: <filename> means the name of a file is to be inserted. They are also used in text to bracket field names and file names.

<enter> means press the carriage return or "enter" key on your keyboard. DO NOT TYPE THIS WORD, NOR THE SYMBOLS.

System Requirements

dBASE II requires the following hardware and software environment:

* 8080, 8085 or Z-80 based microprocessor system (Like the TRS-80/II, Northstar, Apple II with the Z-80 card, etc.)
* 48K bytes minimum of memory (dBASE II uses locations from 5CH to A400H) for most micros, 56k for Apple, Heath, North Star and a few others.
* CP/M (version 1.4 or 2.x), CDOS OR CROMIX operating systems.
* One or more mass storage devices (usually floppy disk drives)
* A cursor-addressable CRT if full screen operations are to be used.
* Optional text printer (for some commands).

dBASE II Specifications

Records per database file	65535 max
Characters per record	1000 max
Fields per record	32 max
Characters per field	254 max
Largest number	$\pm 1.8 \times 10^{63}$ approx.
Smallest number	$\pm 1 \times 10^{-63}$ approx
Numeric accuracy	10 digits
Character string length	254 characters max
Command line length	254 characters max
Report header length	254 characters max
Index key length	100 characters max
Expressions in SUM command	5 max

BEFORE YOU DO ANYTHING ELSE, MAKE A COPY OF THE dBASE II DISC. STORE THE ORIGINAL IN A SAFE PLACE AND USE THE COPY.

Install a system disk in drive A and the dBASE II disk in drive B. Now type:

```
^PIP A:=B:*.*[OV]
```

The letter "O" is necessary to make certain that your operating system will copy all of the data from the distribution disk.

If you are working with a single drive, use the COPY or BACKUP commands, and follow the screen prompts.

Backups are essential, and should be done frequently. If you have a short session on your computer, once a session may be enough, otherwise do it much more frequently than that. You can balance the cost of doing the backups versus the cost of your data better than we can, but since you can rewrite disks, the cost of the backups is low. What's your entire accounting database worth?

This can't be over-emphasized!

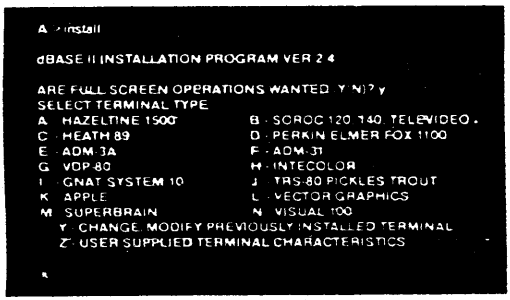
INSTALLING dBASE II ON YOUR SYSTEM.

Load the copy (you did make a copy, right?) of dBASE II into your logged-on drive and do any initialization that has to be done (control-C , reset, etc.)

Now type ^INSTALL^ to customize dBASE II to your system. (DO NOT TYPE THE "^" SYMBOLS.)

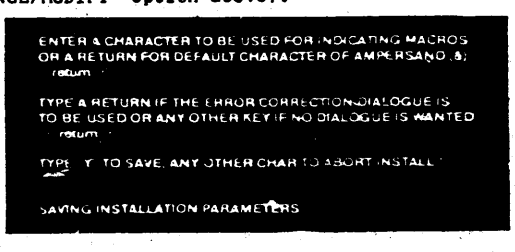
If your terminal does not have cursor X-Y positioning (see your manual), type ^N^ in answer to the prompt. Otherwise, type ^Y^. This provides you with the ability to do full-screen editing, a convenient way to enter data and work with your databases. Rather than ending up typing on the last line of the screen, with everything else scrolling up, you can position the cursor wherever you want it using dBASE II commands.

dBASE II then lists terminal types. If yours is listed, type the appropriate letter. If your terminal is not listed, type ^Z^.



If you selected one of the listed terminals, dBASE II then asks you which character you want to use for macro substitution (described in Section IV, used in Section VI and defined in Part II of this manual). If the ampersand will not conflict with your word processor, type <enter>. Otherwise, type in the symbol you want to use.

Initially, you will want to use the error correction dialogue, so type <enter>. This will allow you to correct an error without having to re-enter the entire command (page/ 20). (You can disable this feature later by using the "Y--CHANGE/MODIFY" option above).



At the end of the installation procedure, you can complete the installation by typing ^Y^, or you can abort the installation and return the terminal to whatever condition it was in before you started the procedure.

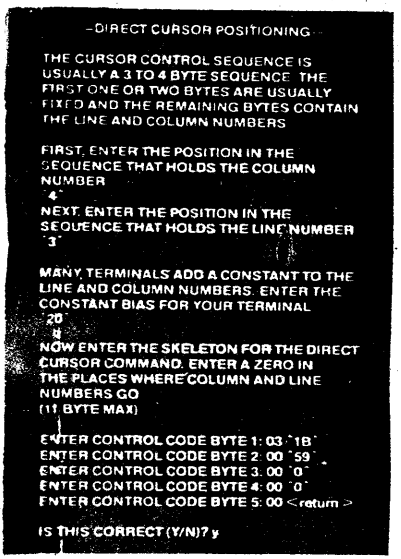
If your terminal is not listed and you typed ^Z^, dBASE II lists the terminal commands that you will require to complete the installation procedure for your terminal. You may also want to use this customization procedure to change the normal defaults that have been selected for your terminal (reverse video with certain commands, for example).

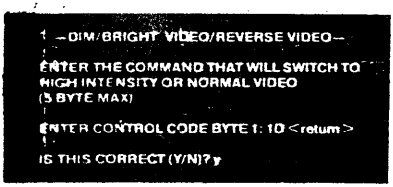
```
USER SUPPLIED SPECS ROUTINE

FOR THIS METHOD, YOU WILL NEED THE HEX
OR DECIMAL CODES THAT CAN BE SENT FROM
YOUR COMPUTER TO THE VIDEO TERMINAL TO
CONTROL IT

THE CODES OR SEQUENCES THAT YOU WILL
NEED ARE:

  DELETE A CHAR SEQUENCE
  DIRECT CURSOR POSITIONING SEQUENCE
  CLEAR SCREEN COMMAND
  HOME CURSOR COMMAND
        (CLEAR AND HOME CAN BE COMBINED)
  OPTIONAL BRIGHT/DIM COMMANDS OR

TYPE 'Y' IF YOU WISH TO CONTINUE
y
```

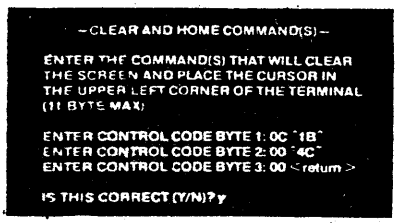
If you know your terminal codes for the above procedures, type ^Y^ to continue. dBASE II then prompts you through the entry of the codes. The example shown below is for an IBM 3101/12 terminal. This terminal does not allow highlighting or reverse video, so <enter> was typed for these questions.

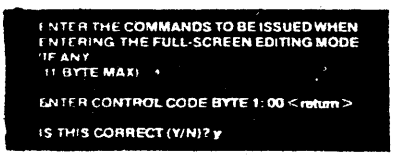
dBASE II shows the previous values of the control bytes, so we have indicated the new values we typed in between two "^" symbols. DO NOT TYPE THESE SYMBOLS.

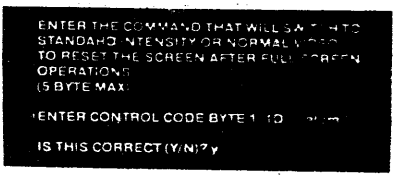
```
WILL YOU BE ENTERING COMMANDS AS HEX OR
DECIMAL? TYPE 'D' FOR DECIMAL OR
 'H' FOR HEXADECIMAL
h

COMMANDS ARE ENTERED AS A SEQUENCE OF
NUMBERS TYPE A CARRIAGE RETURN TO END
A SEQUENCE

NOW ENTER THE CODES FOR CHARACTER
DELETION THIS IS THE SEQUENCE "BACKSPACE,
SPACE, BACKSPACE" ON MOST TERMINALS IF
THIS IS TRUE FOR YOUR TERMINAL, THEN
TYPE 'Y'

y
```

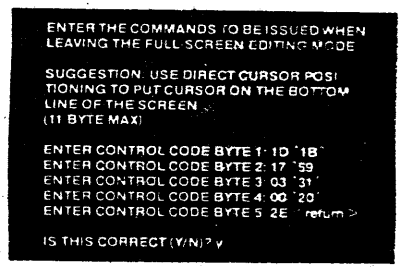

--DIRECT CURSOR POSITIONING--
THE CURSOR CONTROL SEQUENCE IS USUALLY A 3 TO 4 BYTE SEQUENCE. THE FIRST ONE OR TWO BYTES ARE USUALLY FIXED AND THE REMAINING BYTES CONTAIN THE LINE AND COLUMN NUMBERS
FIRST, ENTER THE POSITION IN THE SEQUENCE THAT HOLDS THE COLUMN NUMBER
'4'
NEXT, ENTER THE POSITION IN THE SEQUENCE THAT HOLDS THE LINE NUMBER
'3'
MANY TERMINALS ADD A CONSTANT TO THE LINE AND COLUMN NUMBERS. ENTER THE CONSTANT BIAS FOR YOUR TERMINAL
'20'
NOW ENTER THE SKELETON FOR THE DIRECT CURSOR COMMAND. ENTER A ZERO IN THE PLACES WHERE COLUMN AND LINE NUMBERS GO
(11 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 03 '1B'
ENTER CONTROL CODE BYTE 2: 00 '59'
ENTER CONTROL CODE BYTE 3: 00 '0'
ENTER CONTROL CODE BYTE 4: 00 '0'
ENTER CONTROL CODE BYTE 5: 00 <return>
IS THIS CORRECT (Y/N)? y

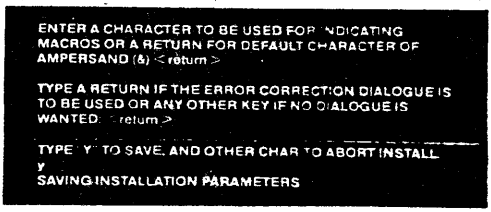

--DIM/BRIGHT VIDEO/REVERSE VIDEO--
ENTER THE COMMAND THAT WILL SWITCH TO HIGH INTENSITY OR NORMAL VIDEO
(5 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 1D <return>
IS THIS CORRECT (Y/N)? y

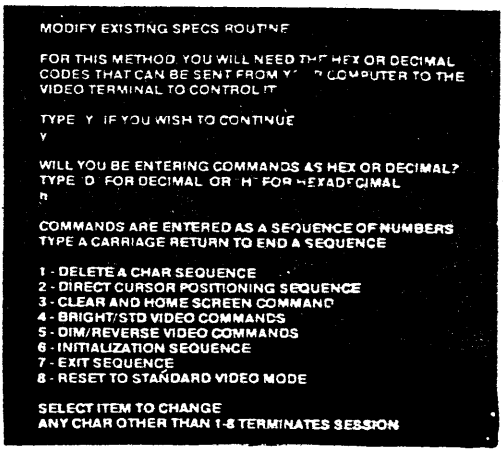

--CLEAR AND HOME COMMAND(S)--
ENTER THE COMMAND(S) THAT WILL CLEAR THE SCREEN AND PLACE THE CURSOR IN THE UPPER LEFT CORNER OF THE TERMINAL
(11 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 0C '1B'
ENTER CONTROL CODE BYTE 2: 00 '4C'
ENTER CONTROL CODE BYTE 3: 00 <return>
IS THIS CORRECT (Y/N)? y


ENTER THE COMMANDS TO BE ISSUED WHEN ENTERING THE FULL-SCREEN EDITING MODE
(IF ANY
(11 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 00 <return>
IS THIS CORRECT (Y/N)? y


ENTER THE COMMAND THAT WILL SWITCH TO STANDARD INTENSITY OR NORMAL VIDEO TO RESET THE SCREEN AFTER FULL-SCREEN OPERATIONS
(5 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 1D
IS THIS CORRECT (Y/N)? y

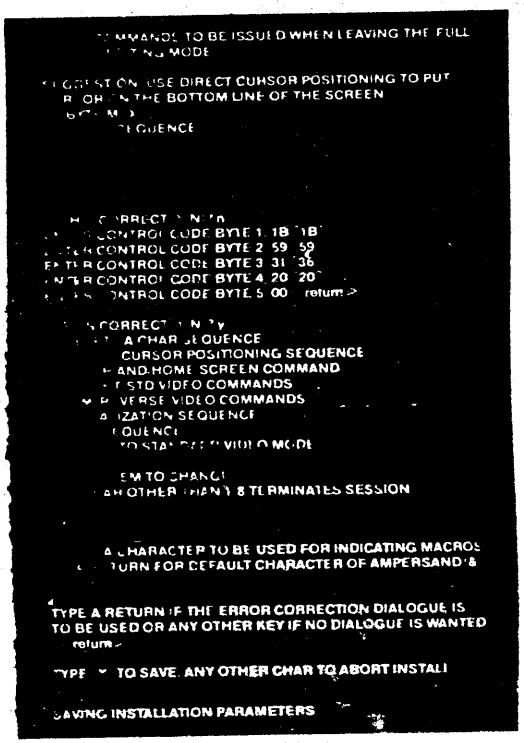

ENTER THE COMMANDS TO BE ISSUED WHEN LEAVING THE FULL-SCREEN EDITING MODE
SUGGESTION: USE DIRECT CURSOR POSITIONING TO PUT CURSOR ON THE BOTTOM LINE OF THE SCREEN
(11 BYTE MAX)
ENTER CONTROL CODE BYTE 1: 1D '1B'
ENTER CONTROL CODE BYTE 2: 17 '59'
ENTER CONTROL CODE BYTE 3: 03 '31'
ENTER CONTROL CODE BYTE 4: 00 '20'
ENTER CONTROL CODE BYTE 5: 2E <return>
IS THIS CORRECT (Y/N)? y


ENTER A CHARACTER TO BE USED FOR INDICATING MACROS OR A RETURN FOR DEFAULT CHARACTER OF AMPERSAND (&) <return>
TYPE A RETURN IF THE ERROR CORRECTION DIALOGUE IS TO BE USED OR ANY OTHER KEY IF NO DIALOGUE IS WANTED. <return>
TYPE 'Y' TO SAVE, AND OTHER CHAR TO ABORT INSTALL
y
SAVING INSTALLATION PARAMETERS


MODIFY EXISTING SPECS ROUTINE
FOR THIS METHOD YOU WILL NEED THE HEX OR DECIMAL CODES THAT CAN BE SENT FROM YOUR COMPUTER TO THE VIDEO TERMINAL TO CONTROL IT
TYPE 'Y' IF YOU WISH TO CONTINUE
y
WILL YOU BE ENTERING COMMANDS AS HEX OR DECIMAL?
TYPE 'D' FOR DECIMAL OR 'H' FOR HEXADECIMAL
h
COMMANDS ARE ENTERED AS A SEQUENCE OF NUMBERS
TYPE A CARRIAGE RETURN TO END A SEQUENCE
1 - DELETE A CHAR SEQUENCE
2 - DIRECT CURSOR POSITIONING SEQUENCE
3 - CLEAR AND HOME SCREEN COMMAND
4 - BRIGHT/STD VIDEO COMMANDS
5 - DIM/REVERSE VIDEO COMMANDS
6 - INITIALIZATION SEQUENCE
7 - EXIT SEQUENCE
8 - RESET TO STANDARD VIDEO MODE
SELECT ITEM TO CHANGE
ANY CHAR OTHER THAN 1-8 TERMINATES SESSION

To modify an installed dBASE II system, type ^INSTALL^, then ^Y^ or ^N^ in response to the full-screen editing query, then select the ^Y^ option from the terminal listing. dBASE II responds with the following sequence of commands. In this example, we wanted to change the "EXIT" sequence to position the cursor on the 23rd line rather than the 17th line when leaving the full screen editing mode. (You'll find out about this as we go through dBASE instructions later in this manual.)

Notice that the numbers are entered in hexadecimal and, the lines are numbered from 0 to 23, columns from 0 to 79.



dBASE II is now installed, and you can begin using it immediately.

Bring up dBASE II by typing ^dBASE^.

A prompt line asks for the date. If you enter a date, this will be recorded in your files as the last access every time you add to or delete from the file, and can be useful for keeping track of updates. If you want to ignore it, just hit <enter>.

dBASE II loads into memory, displays a sign-on message and shows the prompt dot (.) to indicate that it is ready to accept commands.

To show you how powerful and easy to use dBASE II actually is, the first thing we'll do is create a database and enter data into it.

It will only take a few minutes.