MBASIC VT180, V5.21

GETTING STARTED WITH MBASIC VT180

AA-P225A-TV

External
Application
Software
Library

digital
software

MBASIC VT180, V5.21

GETTING STARTED WITH MBASIC VT180

AA-P225A-TV

developed by

MICROSOFT CORPORATION
Bellevue, Washington

DIGITAL EQUIPMENT CORPORATION
Maynard, Massachusetts

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GETTING STARTED WITH MBASIC

ON YOUR VT180 PERSONAL COMPUTER

Installation, Checkout, and Use information for the New Owner

GETTING STARTED WITH MBASIC
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INTRODUCTION

The MBASIC software which is also called BASIC-80, was developed
by the Microsoft Corporation, and distributed under license by
Digital Equipment Corporation. MBASIC will allow you to program
your VT180 system in the BASIC programming language, the most
widely used computer programming language in the world and one of
the easiest to learn. But before you can start using this software
you must follow the following installation procedure. This
procedure will take you about 15 minutes, and you will end up with
a diskette containing the CP/M operating system and the MBASIC
software. The distribution copy of MBASIC will not be altered. You
should save this distribution copy in a safe place after
completing the installation procedure.

INSTALLATION OF MBASIC FOR YOUR VT180 SYSTEM

INSTALLATION MATERIALS REQUIRED:

a)   A VT180 personal computer system with two disk drives.

b)   A CP/M system diskette containing the DDCOPY.COM, DDFMT.COM,
      and PIP.COM programs.

c)   The MBASIC distribution diskette

d)   A blank floppy diskette.

e)   The VT180 Users Guide

INSTALLATION PROCEDURE:

Step 1:   Make a copy of your CP/M system disk following the
          directions found in your VT180 users guide.

Step 2:   Put this copy into drive A (the left hand drive), and
          reboot the system. (SETUP,0,choose A).

Step 3:   Put the disk which comes with this package (labeled
          MBASIC) into the right hand drive of the VT180 and close
          the drive door.

Step 4:   Enter the following command:

          A>PIP A:=B:*.*

Step 5:   Remove the disk from the right hand drive and put it
          away for safekeeping.

Step 6:   Remove the disk in the left hand drive, label it
          "MBASIC System Disk" and reinsert it in the left hand
          drive, close the door, and reboot.

Step 7:   Enter the following command:

          A>MBASIC MTEST.BAS

Step 8:   The MTEST.BAS program will be loaded by MBASIC and will
           be run.Expected Output as a result of Step 8 is shown
           below

                 SCREEN OUTPUT FROM THE MTEST.BAS PROGRAM

*************** M B A S I C ********************

BEGINNING DISK FILE TESTING
BEGIN DISK FILE OUTPUT TEST
BEGIN DISK FILE INPUT TEST
DISK FILE TESTING COMPLETED SUCCESSFULLY

BEGIN ARITHMETIC TESTING   IIIIILLLLLLLLIIII
BEGIN INTEGER TESTS   LLIIIIIIIILLLLLLI
BEGIN SINGLE PRECISION TEST   LLLLIIIIIIIIIIIII
BEGIN DOUBLE PRECISION TEST   IIIIIIILLLLLLIIII
BEGIN STRING VARIABLE TEST   IIIIIILLLLLLLLLLI
ARITHMETIC TESTING COMPLETED SUCCESSFULLY   LIIIILLLLLLIIIIIL
                                                  IIIIIIIIILLLLLLLL
BEGIN TERMINAL POSITIONING TEST   LLLLIIIILLLLLLLII
POSITION TEST COMPLETE   LLLLLIIIILLLLLLLL
                                                  LLIIIIIIIIIIILLLL
************** M B A S I C   Test Complete **********   LLLLLLLLLLLLIIILL
                                                  IIIILLLLIIIIIIILI
                                                  IIIIIIIIIIIIIILLL
A>   LLLLLLLLLIIIILLLI

Step 9:   If the output described above was what you got, then
           your MBASIC system is properly installed and in working
           order. You have completed the installation process!
           Congratulations! Now go on to the section entitled
           "USING MBASIC".

IN CASE OF DIFFICULTY WITH THE INSTALLATION PROCEDURE

FOR PROBLEMS ENCOUNTERED IN Step 1: You should have a CP/M system
disk and a VT180 Users Manual. To make a copy of the CP/M system
disk you use two programs DDFMT, which formats a blank disk, and
DDCOPY which copies the content of the System disk onto the blank
formatted disk. The use of these two program is described in the
VT180 Users Guide.

FOR PROBLEMS ENCOUNTERED IN Step 2: If you cannot reboot the
System disk that you have made in Step 1 then you should repeat
Step 1.

FOR PROBLEMS ENCOUNTERED IN Step 3: One diskette came with this
manual in the DEC MBASIC software distribution kit. Be sure that
the diskette is properly inserted with the long oval slot running
front to back and the label facing upward as you insert the
diskette.

FOR PROBLEMS ENCOUNTERED IN Step 4: The PIP command is used to
move all the files from the diskette in drive B (indicated by the
phrase B:*.*) onto diskette in drive A. Three different things
could go wrong at this step.

    a) The PIP program might not be on the System Disk. If this
    were true, then the computer would respond with PIP?. To
    ascertain that this is indeed the problem, you should enter
    the command:

        A>DIR

    This will cause a list of program names to be shown on the
    terminal screen. Look carefully through this list. You should
    find the name PIP   .COM   somewhere in the list. If you do
    not find it then you will need to get a different CP/M System
    Disk and repeat from Step 1. The original System Disk that
    came from Digital did have PIP   .COM on it.

    b) The CP/M System disk may not have enough space to hold the
    MBASIC software that is supplied. Normally there is plenty of
    room on the original CP/M diskette to hold the relatively
    small MBASIC files. However, if not, you should erase one or
    more files on you CP/M system disk then repeat this step.

c) There may be a BDOS error message during the operation of the PIP command due to a bad sector on the MBASIC distribution diskette. Unless the diskette has been physically abused, this is a very rare problem. More likely it is the case that there is something wrong with the VT180 hardware which requires maintainance service. If there is a permanent fault on the distribution diskette, Digital will replace it. Contact the organization from which you purchased your MBASIC software. Before you do this however, repeat the entire installation process again, and, if possible, seek the advice of someone else in your organization who is familar with the operation of the VT180 CP/M system.

FOR PROBLEMS ENCOUNTERED IN Step 5: You should not have trouble with this step.

FOR PROBLEMS ENCOUNTERED IN Step 6: If this disk will not reboot, try remounting it, press SETUP then the 0 (zero) key then press the A key. This should bring you up to the A> display. If not, repeat the procedure starting with Step 1.

FOR PROBLEMS ENCOUNTERED IN Step 7 OR Step 8: If you have problems at this step, it is very likely that the command was not typed in correctly. Try again. If that doesn't work, try A>MBASIC
That should get some clicking to occur on the drive, and several lines should be put on the screen. The last line will say "OK". Assuming that you have gotten this far, the MBASIC software is running, and the problem is either that the MTEST program is missing or its name has been mispelled. Try the following:

```
A>MBASIC
BASIC-80 Rev. 5.21
[CP/M Version]
Copyright 1977-1981 (C) by Microsoft
Created 28-Jul-81
..... Bytes free
Ok
RUN "A:MTEST.BAS"
```

If there is an error message at this point, there is something wrong with the MTEST.BAS file. If there is no obvious error indication, then the MTEST.BAS program will start running. Go Back to Step 8 to check if the results match those expected.

If the message "file not found" appears, type "SYSTEM" then, using the CP/M DIR command list the directory of the diskette. If the file "MTEST.BAS" is not in the directory, then go back and repeat the installation starting at Step 2.

If the MTEST program does appear to run, but the output on the
screen does not appear to be that described in Step 8, then your
computer is either malfunctioning, or, more likely, the MTEST.BAS
program has been modified since DEC shipped it to you. If you are
certain that you have the original diskette, and that is has not
been modified, and that your hardware is functioning ok, then you
have a defective software kit and you should contact your source
of purchase for a replacement.

USING MBASIC

This manual will not teach you to program in MBASIC, it is a
reference manual only. Nonetheless there are a number of popular
texts that are available in bookstores that do teach BASIC for
beginners.

STARTING UP MBASIC"

In everyday operation MBASIC will be started with the command

        A>MBASIC

        and the software will respond with

        BASIC-80 Rev. 5.21
        [CP/M Version]
        Copyright 1977-1981 (C) by Microsoft
        Created 28-Jul-81
        ..... Bytes free
        Ok
At this point you may start using all the commands explained in
this manual.

INTERRUPTING AN MBASIC PROGRAM

If you need to stop MBASIC in the middle of a program that you
have told it to run, then you press the CTRL and C keys at the
same time. This command (C will be printed and the MBASIC system
will be ready to accept further input.

STOPPING MBASIC AND RETURNING TO CP/M

When you are done using MBASIC, you return to the CP/M operating
system with the command:

        SYSTEM

You will then see the CP/M prompt

        A>

USING FILE NAMES IN MBASIC"

There is sometimes a point of confusion surrounding the way in
which you are expected to enter a file name. If you want to use
the RUN, SAVE, CHAIN, MERGE or other command that needs a CP/M
file name as an argument, then you must put the file name in quote
marks ("), or store it within a String variable.

The following example illustrates this point:

```
        A>MBASIC
        BASIC-80 Rev. 5.21
        [CP/M Version]
        Copyright 1977-1981 (C) by Microsoft
        Created 28-Jul-81
        ..... Bytes free
        Ok
        RUN "A:MTEST.BAS"
                .
                .
                .
        A>
```

At this point you should read Chapters 1,2, and 3 of the manual
and Appendix D. If you already have Basic programs that you want
to convert to the VT180 MBASIC system, you should also read
Appendix E.