# Companion Software

# USER'S GUIDE

#### **TECMAR INCORPORATED**

6225 Cochran Road Solon, Ohio 44139 Telex: 466692

Copyright 1984 by Tecmar, Inc.

\*931656

Rev. B

**Printed by Tecmar Presses** 

# **Limited Warranty**

Tecmar, Inc. (Tecmar) warrants to the original purchaser that boards and cables manufactured by Tecmar will be free from defects in materials and workmanship for one year from the date of delivery to purchaser. Tecmar warrants to the original purchaser that disc controllers and drives, terminals, printers, and any other non-board item not bearing a Tecmar label will be free from defects in materials and workmanship for a period of ninety days from the date of delivery to purchaser. Tecmar warrants to the original purchaser that the media for software will be free from defects in materials and will be readable by the computer system for a period of ninery days from the date of delivery to purchaser. The software is thoroughly tested and thought to be functional when released; at Tecmar's sole option, Tecmar may endeavor to correct any serious problems discovered in the software.

Under the above warranty, Tecmar will, at its option, either repair or replace a non-conforming or defective product, or return to purchaser the purchase price. Tecmar shall have no obligation hereunder if the product has been misused, carelessly handled, defaced (including unauthorized repairs made or attempted by others), modified or altered. The product must be returned with proof of purchase in its original (or other adequate packaging) to the point of purchase or, by prior arrangements with Tecmar, to Tecmar. Claims must be made in accordance with the provisions of this paragraph within the applicable warranty period or they will be barred.

Tecmar reserves the ultimate authority to determine what constitutes warranty repair. If it is determined that the product is not under warranty, it will be repaired using Tecmar's standard rates for parts and labor. Tecmar will use its best efforts to repair the product within three days after receipt thereof. Tecmar shall not be responsible, however, for delays caused by shipping of non-availability of replacement components or other similar or dissimilar causes, events or conditions beyond its reasonable control.

The above warranty is the only warranty authorized by Tecmar. THE ABOVE WARRANTY STATES THE PCIRCHASER'S EXCLUSIVE REMEDY FOR ANY BREACH OF TECMAR'S WARRANTY AND FOR ANY CLAIM, WHETHER SOUNDING IN CONTRACT, TORT OR NEGLIGENCE, FOR LOSS OR INJURY CAUSED BY THE SALE OF ANY PRODUCT. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, TECMAR SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS OF BUSINESS OR PROFITS. DOWNTIME OR DELAY, LABOR, REPAIR, OR MATERIAL COSTS, INJURY TO PERSON OR PROPERTY OR ANY SIMILAR OR DISSIMILAR CONSEQUENTIAL LOSS OR DAMAGE. INCURRED BY PURCHASER. EVEN IF TECMAR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSSES OR DAMAGES.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL. DAMAGES OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY SHALL NOT BE APPLICABLE TO THE EXTENT THAT ANY PROVISION OF THIS WARRANTY IS PROHIBITED BY ANY FEDERAL, STATE OR MUNICIPAL LAW WHICH CANNOT BE PREEMPTED. THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

Keep your original sales receipt for the	product with this warranty statement.
PRODUCT	
SERIAL NUMBER	DATE OF PURCHASE
WHERE PURCHASED	



# READ THIS FIRST!

Carefully read the questions below to determine what programs you should learn to use.

 Did you purchase a Bosun, 2ndMATE or ir2ndMATE?

Yes Read the following sections:

Setting the Clock/Calendar Diagnostics (TIMTEST and PARTEST only) Using the Printer Buffer

**No** Go to question 2.

2. Did you purchase a Dynamic Memory, Wave or jrWave?

Yes Read the following sections.

Diagnostics (MEMTEST only) Using the RAM Disk Using the Printer Buffer

**No** Reconsider what you have purchased. Then go to question 1.

Note:

If you have purchased a *jr*Wave, the program called CONPCJR must be run before using the programs in this manual. Your installation manual describes this program.







# Contents

Section 1. Using the Programs5
Setting the Clock/Calendar6
Diagnostics
Using the RAM Disk14
Using the Printer Buffer16
Section 2. Technical Reference17
Information Common to All Programs18
DOSTIME
MEMDISK
MEMTEST31
PARTEST36
PRINTER
SETTIME46
TIMTEST



# Section 1. Using the Programs

The programs described in this section will help you get optimum use from your parallel port and clock/calendar or your additional memory.

Before continuing, insert your PC DOS (2.0 or higher) diskette in your floppy drive (Drive A) and turn on your computer. When the DOS prompt (A >) appears, remove your PC DOS diskette and insert your Tecmar Companion Software diskette.

# Setting the Clock/Calendar

You will use two programs, SETTIME and DOSTIME, to set your Bosun, 2ndMATE or *jr*2ndMATE clock/calendar.

SETTIME sets the time and date on your board's clock/calendar. You will only use this program when you first install the Bosun, 2ndMATE or *jr*2ndMATE board or when you replace the board's battery.

DOSTIME sets the DOS date and time from your board's clock/calendar. It eliminates the need for you to type the date and time whenever you turn on your computer. The DOSTIME command should be placed in an AUTOEXEC.BAT file (refer to your IBM DOS manual) so that it will be run whenever you turn on or reset your computer.

Follow the steps below to use SETTIME and DOSTIME.

 Have you set your Bosun, 2ndMATE or jr2ndMATE clock/calendar earlier by using the SETTIME program?

**YES** Go to step 7.

NO Insert your PC DOS diskette in your drive (Drive A) and then go to step 2.

- Use the PC DOS DATE and TIME commands to set the date and time as explained in your IBM DOS manual.
- 3. Remove your PC DOS diskette and insert your Tecmar diskette.
- 4. Type SETTIME 1 and press the Enter key.
- 5. Did the computer display the date and time?

**YES** Go to step 7.

**NO** Go to step 6.

6. Did the following message appear?

#### Clock not found

YES Your board's clock/calendar is not set for TIME1. Type SETTIME

-2 and press the Enter key.
There must be a space between SETTIME and -2. Consult your dealer if you still get an error message.

**NO** Go to step 4 and try the program again.

7. Type DOSTIME – 1 (or DOSTIME – 2 for TIME2) and press the Enter key.

8. Did the computer display the date and time?

**YES** You have finished this section.

NO Go to step 9.

9. Was this message displayed on your screen?

#### Clock not found

**YES** Have your Tecmar board serviced. Consult your dealer.

NO Go to step 10.

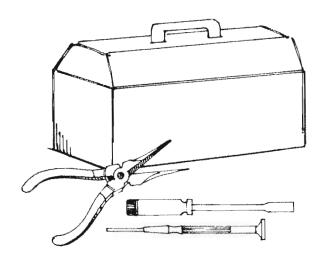
10. Was this message displayed on your screen?

#### **Invalid clock**

**YES** Go to step 4 and run the SET-TIME program.

NO Have your Tecmar board serviced.

### **Diagnostics**



The programs explained in this section, TIMTEST, PARTEST and MEMTEST, test your Tecmar board to make sure it is working properly.

You should use the programs to test your board if you suspect that there may be a problem. It is also a good idea to run them periodically even if you think your board is working correctly.



#### **TIMTEST**

TIMTEST tests your board's clock/calendar to ensure it is working correctly. Follow the steps below to use TIMTEST.

- 1. Type *TIMTEST* and press the Enter key.
- 2. Did the following message appear?

Clock/Calendar test, base address 37D Testing counters and latches

#### Test passed

YES This concludes the TIMTEST program.

Have your Tecmar board serviced. NO

Note: your board has been

jumpered for TIME2, the base address printed out will be

27D.



#### **PARTEST**

PARTEST tests your parallel port. Follow the steps below to use this program.

- 1. If you have a printer, unplug it. Type *PARTEST* and press the Enter key.
- 2. Did the following message appear on your screen?

#### Parallel port test, base address 378 Control and Data Lines

#### **Test Passed**

**YES** Your parallel port works.

NO Your parallel port is either not installed correctly or is defective.

Check to make sure the port is installed correctly. If it is, contact your dealer.

**Note:** If your board has been jumpered for LPT2, the base address printed out will be 278.

#### **MEMTEST**

MEMTEST tests the system memory in your computer. Follow the steps below to use the MEMTEST program.

- 1. Type MEMTEST and press the Enter key.
- 2. Did a message similar to the one below appear on your screen?

Memory size of your Computer is 704 K bytes Testing memory from 9000:1780 to B000:0000

Testing segment 9000
Test Passed

Testing segment A000
Test Passed

Segment select test Test Passed



**YES** You have completed the MEMTEST program.

**NO** You have a bad memory chip. Have your computer serviced.

Note: Do not run MEMTEST on the PCjr if you have already run CONPCJR. Power up or reset your computer using only DOS before running MEMTEST.

# Using the RAM Disk

The program MEMDISK creates a floppy disk in your computer's memory. The disk can be used just like any other floppy disk. It is most useful for storing word processing programs or files that are used often because the MEMDISK can be accessed much faster that a conventional floppy diskette.

A MEMDISK can be created by following the steps below. Remember that any files placed on your MEMDISK must be copied to a floppy disk before you turn off your computer to prevent the loss of your files.

1. Did you purchase a Tecmar PCjr Product?

**YES** Go to step 2.

**NO** Go to step 3.

 MEMDISK cannot be run until you have changed the CONPCJR program to recognize the additional drive. Consult your Product Installation manual to change the CONPCJR line. Go to step 4.

You do not have to change any switches on the PCjr.



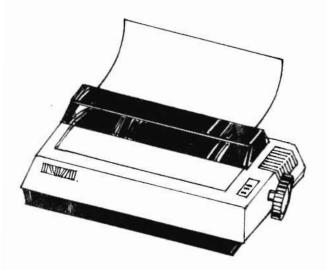
- MEMDISK cannot be run until you set the switch module on your computer system board to recognize the additional MEM-DISK drive. If you have an IBM PC XT, or AT consult page 27 of this manual. If you have an IBM compatible, consult your guide to operations.
- 4. Do you have one or two floppy drives?

**ONE** Go to step 5.

**TWO** Go to step 6.

- 5. Type **MEMDISK B: BUF64** and press the Enter key. Go to step 7.
- 6. Type **MEMDISK C: BUF64** and press the Enter key.
- 7. You now have simulated floppy disk located in RAM memory. The drive letter of the floppy disk is B if you had one floppy drive in your computer and C if you had two floppy drives in your computer before installing a 64K MEMDISK.

# **Using the Printer Buffer**

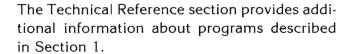


The program PRINTER creates a printer buffer where files can be stored until the printer is ready to print them. The buffer is extremely useful because you can continue to use your computer while your files are being printed. There is no longer the long wait for the printer to finish before you can use your computer again.

Follow the instructions below to use the PRINTER program. PRINTER should be run immediately after you turn on or reset your computer.

- Type PRINTER -BUF8 and press the Enter key.
- The line you just typed will create an 8K byte printer buffer. Print your files just like you would if PRINTER did not exist. PRINTER will handle your printing while you continue to work.

# Section 2. Technical Reference



# Information Common to All **Companion Software Programs**

The documentation for each program has several sections describing how it works. The sections and what they describe are explained below.

#### **Purpose:**

Tells you what the program does.

#### Type:

Tells you the type of program. There are two types of programs:

**Utility:** 

With this type of program, you usually select what you want to do when you run the program. The program will then perform its task with little or no interaction from you.

**Background:** This type of program is usually run immediately after your machine has been turned on or reset. Even though it appears to run to completion, it really remains in the computer ready to use when needed.





#### Format:

This will show you what to type to use the program. As an example, use the program called 'TIMTEST' which tests your board's clock/calendar. The format line for the TIMTEST program is as follows.

TIMTEST [ - Aaddress] [ - linterrupt]

The first word in the format line is the name of the command. It must be typed exactly as shown. It is what lets PC DOS know what program you want. After typing the name of the command, the following rules apply.

- a. You must type any words or letters shown in capital letters exactly as shown. They don't have to be typed in capital letters, but they must be typed exactly the same as shown letter for letter.
- b. Any words shown in lower case must be replaced by another word. In the above example, the word 'address' must be replaced by some month such as a 1 or 2 to represent the address of your clock.
- c. Minus and plus signs must be typed exactly as shown. A word may follow the plus or minus sign.
- d. If a number is found among capital letters or standing by itself, the number is typed exactly as shown. If the number is found in a word made up of small letters, the number is part of a word which is replaced.

e. Items in square brackets are optional. They allow you to alter what the program does. The square brackets themselves are not typed.

Below are some examples using the TIMTEST format line. The line

#### TIMTEST

by itself is valid because everything else on the line is enclosed in square brackets and is therefore optional. Running the program without any options will produce the default action for the program. Similarly,

#### timtest

will produce the same result because you may type the command in lower case.

Some options are replaced with a word which tells the program what to do. Other options tell the program to do something differently. An example is the ' – Aaddress' option.

**Typing** 

#### TIMTEST - A2

will test the second clock/calendar in your computer.

Options which are typed exactly as shown in the format line usually begin with a minus or plus sign to distinguish them from other options.



For most programs, if you don't give a valid command line, the program will display a single line giving it's format line or usage.

**Note:** You must have a space between each option. For example, there is a space between 'TIMTEST' and ' – Aaddress'.

#### Remarks:

This section explains what the program does. It also describes the options.

#### **Examples:**

This section gives examples of valid command lines and what they do.

#### **DOSTIME**



#### Purpose:

The DOSTIME command will set the DOS date and time using the Tecmar board's clock/calendar.

Note:

Before you use this program for the first time, run the SETTIME program (explained in this manual). You do not have to run DOSTIME if you have an IBM PC-AT. This feature is built into the AT.

#### Format:

DOSTIME -1 DOSTIME -2

### Type:

Utility



#### Remarks:

DOSTIME will read the date and time from the Tecmar clock/calendar and set the DOS date and time. DOSTIME will then read the date and time from DOS and display them on the screen.

This program can be and usually is run from an AUTOEXEC.BAT file.

The options in the format lines are explained below.

- 1 If you have jumpered your board as TIME1, use this option.
- -2 If you have jumpered your board as TIME2, use this option.

#### Files Used:

DOSTIME.COM

#### **MEMDISK**

#### Purpose:

Provides a fast-access floppy drive in RAM.

#### Format:

```
MEMDISK drvlet:

[-BUFnum] [-APLnum]

[+HIX] [+MID] [+LOW]

[-SIDnum] [-SECnum] [-INS]
```

#### Type:

Utility Background

#### Remarks:

To begin this program, type MEMDISK and the letter you want to assign the drive. MEMDISK acts just like a floppy disk, but it resides in memory. This means that MEMDISK will be much faster than your physical floppy drives (as well as much quieter). Time can be saved by putting often accessed files on the MEMDISK.

If no options are given, MEMDISK will take up all memory up to 360K bytes that is not used by application programs.

The maximum amount that MEMDISK will take is determined as follows:

MAXIMUM = maximum K bytes for the diskettes of your computer system.

Note:

If the files are changed, remember to copy them onto a floppy disk before you shut your computer off, or the files will be lost.

You can also use the following options in your MEMDISK command.

drvlet

Replace *drvlet*: with the drive letter (e.g., C:) you will assign to the disk. *drvlet* must be given; it is not an option.

+ INS

Assign MEMDISK drive letter drulet and reassign all other floppy drives a new drive letter, one letter higher than its old value. (For example, MEMDISK B: +INS will assign MEMDISK as Drive B:. Your floppy drive that was assigned the letter B: will be reassigned C:.)



#### – APLn

Replace *n* with the amount of memory (in K bytes) that you want to leave free for applications programs. If this option is used without the *BUF* option, all remaining memory will be used by the MEMDISK program. If this option is not given, *n* assumes a size of 64K bytes is used for applications programs.

example: - APL128 (sets aside 128K bytes for other programs)

#### - BUFn

Replace n with the amount of memory (in K bytes) that MEMDISK will use. If this option is used without the -APL option, all memory remaining after MEMDISK memory has been allocated will be free for your use. If this option is not used, MEMDISK uses all available memory left after the memory specified in the APL option.

#### - SIDn

Type SID and then the number of sides the disk will have. Choose one or two sides. If a number is not given, the number of sides is assumed to be two.

#### - SECn

Type SEC and then the number of sectors on each track of the MEM-DISK. Type 8 for versions of PC DOS previous to PC DOS 2.0. Type 9 for PC DOS versions 2.0 or higher. If a number is not given, the number of sectors is assumed to be nine.

#### -/+ HIX

Disable/enable memory from C0000 to F0000 hex for use by MEMDISK. There must be memory in this area if you want to use this option. If this option is not given, it is disabled by default. This option cannot be used with the IBM XT, the PCjr, or compatibles.

#### -/+ MID

Disable/Enable memory above the memory set by the IBM system board switch modules. There must be memory in this area if you want to use this option. If this option is not given it is disabled by default. This option cannot be used with the IBM XT, the PCir, or compatibles.

#### -/+ LOW

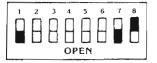
Disable/enable normal system memory for MEMDISK to use. If this option is disabled, you must have memory enabled by using the HIX or MID option. If this option is not given, it is enabled by default. This option cannot be disabled with the IBM XT or PCjr.

#### **IMPORTANT:**

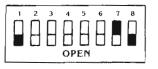
A drive created by MEMDISK counts as a floppy disk drive. You must set switch module SW1 on your IBM Personal Computer or XT system board to indicate the number of disk drives, including any drives created using MEMDISK, in order for your MEMDISK to work. DOS will recognize up to four floppy disk drives. For example if you have two floppy disk drives and two MEMDISKs, you must set the switch module to recognize four floppy drives. The settings for SW1 on the system board are given on the next page.

#### **SW1 Settings**

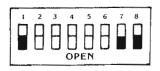
The number of drives includes all floppy disk drives plus all MEMDISK drives.



2 DRIVES



3 DRIVES



**4 DRIVES** 



On an IBM PCjr you must run CONPCJR with the -d2 option to recognize a second drive (-d3 to recognize a third, etx.). This will make it unnecessary for you to use a phantom "B" drive on your ir.

#### **IBM PC-AT**

To run MEMDISK on your IBM PC-AT, you must have only one floppy disk drive. If you have two disk drives in your AT, MEMDISK cannot be run. Also, you must run the SETUP program on your diagnostics disk and indicate that you have two floppy disk drives. MEMDISK must always be drive B on the AT. Whenever you are asked for drvlet, you must typeB:.

Be careful when you use the + MID or + HIX options. These are the same options that can be used in the PRINTER program. If PRINTER uses these options you cannot use them with MEMDISK.

If the amount of memory assigned to MEMDISK is less than the memory required for a full floppy, the remaining space in the MEMDISK is marked as bad sectors.

#### **Examples**

#### MEMDISK C: - BUF61

This line tells the computer to use 61K bytes of memory for the MEMDISK. The MEMDISK is given the drive letter C.

#### MEMDISK B: -SID1 -SEC9

This line tells the computer to create a single sided diskette drive and name it drive letter B. The APL size is not given so MEMDISK leaves 64K bytes for application programs and uses as much of the remaining memory that it needs for MEMDISK.

#### MEMDISK B: - APL100 + MID

This line allows MEMDISK to use memory above the memory recognized by your computer. The MEMDISK uses all memory but 100K bytes which is reserved for application programs. The MID option cannot be used on a PCjr or an XT.

#### File Used:

MEMDISK.EXE



#### **MEMTEST**



To test free system memory in your computer.

#### Format:

MEMTEST [ – Wseconds] [startsegment: offset [endsegment:offset]]

#### Type:

Utility

#### Remarks:

You must run MEMTEST before running any other program. Do not install CONPCJR on the PCjr before running MEMTEST.

To begin, type MEMTEST and then press the Enter key. The program will test all the free memory in your computer. The screen will display the range of memory being tested and if the range passed or failed the test.



It is a good idea to periodically test the memory in your system to make sure it is working correctly. If your memory is not working correctly, you will get errors when running a program or you may not be able to use the memory at all. A bad memory chip or a short in the data or address lines are two reasons, among others, why your memory would not work correctly.

Besides testing for memory errors, MEMTEST also checks to see if each segment can be addressed separately.

You may test memory where files exist, but **Do Not Test The Memory Where a Program is Running.** Testing memory that is being used by a program could result in incorrect program results.

If you are a novice computer user or if you are unfamiliar with the location of your programs within segments, use the MEMTEST command with no options. Then memory testing will begin at a segment above where your programs are located.

The options in the format lines are explained below.

#### - Wseconds

For *seconds*, enter the number of seconds you want to wait before reading back data from memory.







#### startsegment: offset

The *startsegment* is the beginning segment in memory that you will test. An offset is the exact location within the segment where you will begin testing. (The terms segment and offset are explained later.)

#### endsegment: offset

The endsegment is the ending segment in memory you will test. An offset is the exact location within the segment where you will end testing. If an endsegment is not given, the MEMTEST program will run until it reaches the end of the system memory

A segment equals 64K bytes. The first segment of your computer's memory starts at address 0000:0000 and ends at address 0000:FFFF. The second segment starts at address 1000:0000, the third segment at 2000:0000 . . . The segment numbers 0000, 1000, 2000, etc. are hexadecimal numbers.

The IBM PC-AT will accept up to 5-digit Hex numbers when indicating *startsegment* and *endsegment* options. This allows you to test memory up to 16 megabytes.

An *offset* will be the exact byte within the segment where the memory test will start. The offset is given in hexadecimal numbers ranging from 0 to FFFF.

#### Examples:

Use the following command if you are a novice user.

#### **MEMTEST**

The memory is tested, segment by segment. When you type this, notice that the memory testing did not begin at segment 0000. This is because only the memory that does not contain data is tested. The first few segments contain the operating system and any programs you have on your system.

After each segment is tested, the message TEST PASSED or TEST FAILED will appear on the screen. If the TEST FAILED message appears on the screen, the memory at the given segment is defective. MEMTEST also tests to see if each segment can be selected individually. A TEST PASSED message will appear on your screen if the test is successful.



### MEMTEST 4000:3000 5000:1000

Memory from address 4000:3000 to 5000:1000 was tested by using this command.

### MEMTEST 9000:0 9000:FFFF

The TEST FAILED message has appeared for each data bit in the segment. The failure message occured because memory that does not exist was tested.

# MEMTEST 10000:0000 12000:000 (For IBM PC-AT only)

Memory from address 10000:0000 to 12000:000 was tested. 128K bytes were tested starting at 1 megabyte.

### File Used:

MEMTEST.COM



# chiclassiccomp.o

# **PARTEST**



Tests your Tecmar or IBM parallel port.

### Format:

# Type:

Utility

### Remarks:

When you type PARTEST and press the Enter key, the program writes a set of patterns out to the parallel port and then reads them back. A message saying 'Test passed' or 'Test failed' will be printed on your screen.

The options given in the format section are explained below:

- -An Replace n with the number of the parallel port you wish to test. If you have two parallel ports, an IBM port and a Tecmar port, IBM's parallel port is usually the first port and Tecmar's parallel port is usually the second port. The default number for the -A option is 1.
- -B Writes a set of patterns to the parallel port and then reads them back. The -B option tests the internal paths of the port. A printer must not be plugged in for this option to be used.
- C Tests the outgoing data lines and incoming status lines of the port. This test requires a special plug that can be purchased from Tecmar.
- -1 Tests the interrupt printer through IRQ line 7. A printer must be connected to your computer for this option to be used.
- -P Prints a message on the printer and on your screen and asks you to compare the messages. A printer must be connected to your computer for this option to be used.

If none of the options are used when typing the PARTEST command, the -B option is assumed. (The printer must be disconnected.) The test is automatically performed on your first parallel port if you have two ports in your system.

# **Examples:**

### PARTEST - A2 - I - P

Test IRQ7 on the second parallel port, and print a message on both the screen and the printer.

### PARTEST -B -C

Tests the internal paths and the outgoing data lines of the parallel port. If there are two parallel ports installed in your computer, the first port is tested.

### File Used:

PARTEST.COM



### PRINTER



Allows you to use the computer while printing. PRINTER should be run when you first turn on your computer.

### Format:

```
PRINTER
[+HIX] [+MID] [-LOW] [-BUFn] [-APLn]
[-RUN] [+FLS] [+RCP] [+RPP] [+AFF]
[-NLPn] [-NCLn] [-NCI[n]] [-LPTn[=COMn]]
[-BDRn] [-NDBn] [-NSBn] [-PARtyp]
[+XON] [+DCD] [+DSR] [+CTS]
```

### Type:

Utility

Background

### Remarks:

When you type PRINTER and press the Enter key, all files that should be printed are placed in a buffer. You can continue to use your computer while the files in the buffer are printing.

There are 21 options that control the PRINTER program. They are divided into four groups:

- · Memory Allocation
- Printer Selection
- Printer Control
- Serial Printer Initialization

### Memory Allocation

You can choose the amount of memory to be used by PRINTER.

$$-/+HIX$$

Disable/enable memory from C0000 to F0000 hex for use by PRINTER. There must be memory in this area if you want to use this option. If this option is not given, it is disabled by default. **This option cannot be used with the IBM XT or the PCjr.** 

$$-/+MID$$

Disable/enable memory above the memory set by the IBM system board switch modules. There must be memory in this area if you want to use this option. If this option is not given it is disabled by default. This option cannot be used with the IBM XT or the PCjr.

Disable/enable normal system memory for PRINTER to use. If this option is disabled, you must have memory enabled by using the *HIX* or *MID* option. **This option cannot be used with the IBM XT or PCjr.** 



### - APLn

Replace n with the amount of memory (in K bytes) that you want to leave free for applications programs. If this option is used without the -BUF option, all remaining memory will be used by the PRINTER program. If this option is not given, n assumes a size of 64K bytes is used.

example: - APL128 (sets aside 128K for other programs)

### - BUFn

Replace n with the amount of memory (in K bytes) that PRINTER will use. If this option is used without the -APL option, all memory remaining after PRINTER memory has been allocated will be free for your use. If this option is not used, PRINTER uses all available memory left after the memory specified in the -APL option.

### **Printer Selection**

-1PTn

Replace *n* with 1 if you want to use PRINTER with LPT1, 2 with LPT2 and 3 with LPT3. If the information to be printed has been directed to a serial port. PRINTER will redirect it back to the parallel port.

-LPTn:=COMn

Replace *n* with the LPT number and COM number for the ports you plan to use. This option sends information to be printed to the serial port, instead of the parallel port. Use this command instead of the IBM PC DOS MODE command.

example: -LPT1: = COM1: (sends any information to be printed on LPT1 to COM1.)

### **Printer Control**

+AFF

Adds a formfeed to the end of the information being printed. This can be used to separate documents.

-/+RUN

Stop/start printing.

+ FLS

Empty the contents of the PRINTER buffer.

- NLPn

Sets the number of lines per page. Replace n with the number of lines you want to be put on each page.

-NCLn

Sets the number of characters per line. Replace n with the number of characters you want put on each line.

example:

- NCL64 (prints up to 64 characters per line.)

+RCP

Repeat printing the current page. If the -NLP and -NCL options were not designated, the current page starts at the most recent form feed. This option would be used if your paper jammed while printing.

- RPP

Repeat printing the previous page.

-NCI[n]

Controls the rate at which characters are printed. A high number will let the printer print rapidly but will slow the rest of the computer. If you type -NCI but do not give a number, PRINTER is placed in an automatic mode that picks the optimum rate for your printer.

### Serial Initialization

These options are only necessary if you are using a serial printer. If your serial printer is a PC compact printer, you may skip this section.

Consult your printer manual for information about using these options with your printer.

- BDRn

Replace *n* with the baud rate of your printer. IBM PC DOS allows baud rates of 110, 150, 300, 600, 1200, 2400, 4800 and 9600. If you do not use this option, the default baud rate is 1200.



### - NDBn

Replace *n* with either 7 or 8 (the number of data bits to be used). If you do not use this option, the default number of data bits is 8.

### - NSBn

Replace n with either 1 or 2 (the number of stop bits to be used). If you do not use this option, the default number of stop bits is 2.

### - PARtype

Replace *type* with the type of parity to be used. 'N' is no parity, 'E' is even parity and 'O' is odd parity. If you do not use this option, no parity is set.

There are four options for serial printer handshaking.

$$-/+DCD$$

Disable/enable handshake with Data Carrier Detect.

$$-/+DSR$$

Disable/enable handshake with Data Set Ready.

$$-/+CTS$$

Disable/enable handshake with Clear to Send.

Disable/enable handshake with Xon/Xoff.

If a handshaking option is not used, it is automatically set to off. CTS is automatically set to on.

The Serial, Printer Select and Printer Control options can be changed after PRINTER is running by re-running PRINTER or by using the COPRINT program.



When PRINTER is run, a message telling you how much memory has been set aside for PRINTER and whether LPT has been redirected to a serial printer will be displayed on your screen.

### Examples:

### PRINTER - LPT1 - BUF61

This line tells the computer to use 61K bytes of system memory for the PRINTER buffer. The printer designated as LPT1 will be used.

### PRINTER - RUN

This line will stop the printer. Use it to cause a controlled pause in printing a document. If you do not want to finish printing the document, use

PRINTER - RUN + FLS

### PRINTER - LPT1: = COM1:

Redirects any document that normally would be printed on your parallel printer to be printed on a serial printer.

# PRINTER - LPT1: = COM1: - BDR300 - NDB8 - NSB1 - PARN

Sets up the serial port to be used with the PRINTER program instead of a parallel port. The serial port is set for 300 baud, 8 data bits, 1 stop bit and no parity.

### File Used:

PRINTER EXE

# **SETTIME**



Sets the Tecmar board's clock/calendar using the DOS date and time. SETTIME is usually only run when the Tecmar board is first installed or after the battery has been changed.

### Format:

SETTIME - 1

SETTIME -2

# Type:

Utility

### Remarks:

SETTIME will read the date and time from the DOS date and time and set the clock/calendar on your board. SETTIME will then read the date and time from the clock/calendar and display it on your screen.



The options in the format lines are explained below.

- 1 If you have jumpered your board as TIME1, use this option.
- -2 If you have jumpered your board as TIME2, use this option.

### File Used:

SETTIME.COM

# **TIMTEST**



Tests the Tecmar board's clock/calendar for proper operation.

### Format:

TIMTEST [ - Aaddress] [ - linterrupt]

# Type:

Utility

### Remarks:

The options in the format line are explained below.

The TIMTEST program performs several tests on your clock/calendar. The program will print an error message if it finds a problem. If the board passes all five tests, the message "Test passed" is printed.



The options you may use with TIMTEST are explained below.

### - Aaddress

Replace address with 1 if your board is addressed at TIME1 or 2 if your board is addressed at TIME2. If you do not specify this option, the default is TIME1.

### - linterrupt

TIMTEST will run a test to check system interrupts with the -1 option. You must put the number of the interrupt line your board uses after the -1.

Note:

IBM PCjr has a jumper block that allows you to jumper the board to IRQ1 or 2.

The IBM PC has a jumper block that allows you to choose IRQ2, 5 or 6.

# **Examples:**

### TIMTEST - I1

You have a *jr*Captain jumpered for TIME1 and IRQ1.

### **TIMTEST**

Tests will be performed on your board's clock/calendar. The clock/calendar must be the only clock in your computer.

### TIMTEST - A2 - 16

You have a Captain jumpered as TIME2 and IRQ6.

### File Used:

TIMTEST.COM

# chiciassiccomp.or

### **Product Comment Form**

Companion Software

Your comments are a vital tool in assisting us in our efforts to continue the improvement of PC-Mate products and the accompanying manuals.

Suggestions may be used or distributed by Tecmar in any form it believes appropriate without any obligation whatever. This does not limit your use of the information that you originate and supply to Tecmar.

Comments:

Name		
Address		
City	State	
7 in Code		

# **TECMAR INCORPORATED**

6225 COCHRAN ROAD SOLON, OHIO 44139-3377 TELEX: 466692

