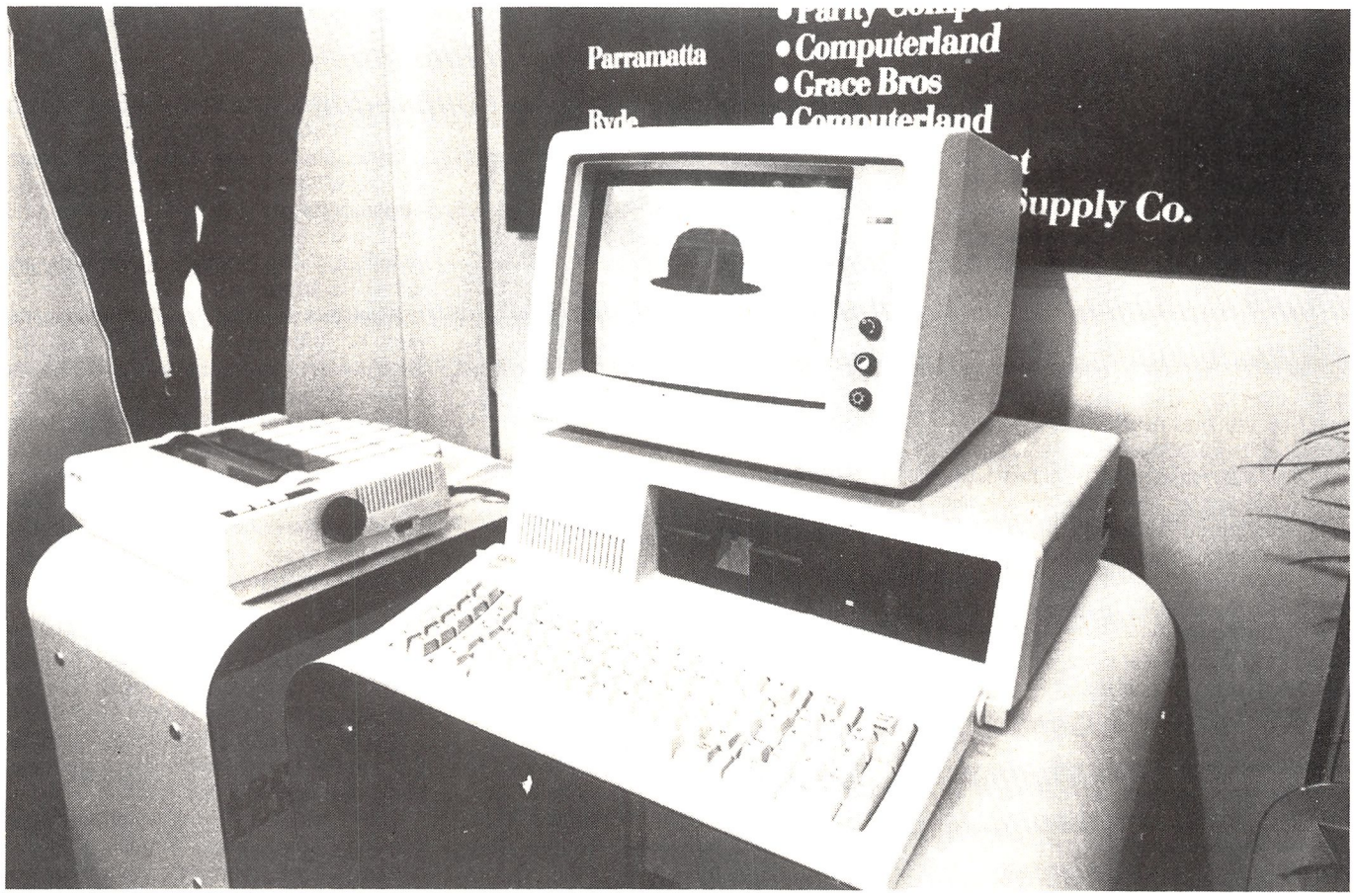
The IBM-PC Getting To Know You...

By Lloyd R Borrett



Since the IBM-PC's Australian release, on February 9, the IBM dealers have been swamped with inquiries – so much so that very few of them have been able to spend enough time to become properly acquainted with their product. Questions remain unanswered...

I'VE SPENT a great deal of time and effort keeping in touch with what has been happening with the IBM-PC microcomputer in the United States, in an effort to find answers to many fundamental questions. Will one operating system cause my system's effectiveness to be put at risk? What's the best way to provide the hardware options I require?

I still don't have the answers.

Until such questions can be answered, it will be difficult to determine the correct hardware and software paths to follow. My advice to those of you who are about to buy an IBM-PC is to get the minimum possible hardware and software configuration, and then take your time to become fully acquainted with the system.

By the time you finish, you'll have a better idea of what additions you really need to reach your goals, and we should all be closer to knowing the solution.

Reference Materials

Though the IBM-supplied documentation is excellent, there are a number of other sources of information which should prove useful. These books and periodicals will assist you to answer some of those questions mentioned earlier.

Books: First of all, a book which any owner of a personal computer should obtain – *Don't, or How To Care For Your Computer* (Rodney Zaks; Sybex, 1981). It explains how to handle and maintain all components of a computer system, the computer proper, the CRT display, the diskettes, the printer and the magnetic tapes. The book is well-written and provides much useful information in addition to the "how to care for" details.

If you're considering buying any personal computer, then you will find *IBM's Personal Computer* (DeVoney and Summe; Que Corporation, 1982) valuable. This book has been written specifically about the IBM-PC and provides a good idea of how the machine fits in the scheme of things. Existing owners of the IBM-PC will also find some surprises.

IBM Personal Computer: An Introduction to Programming and Applications (Goldstein and Goldstein; Prentice-Hall, 1982) is an excellent self-instructing tutorial which gets the user acquainted

with the IBM-PC as well as PC BASIC. There are advanced sections on data files, graphics, word-processing and computer games. These, along with the large selection of useful application programs, make it a valuable book for readers of varying levels of experience.

No owner of an IBM-PC should be without a copy of the IBM-produced *Technical Reference Manual*. Here, you can find out how the components of the IBM-PC function and interface with each other.

Most IBM-PCs have been purchased along with a VisiCalc program. *VisiCalc: Home and Office Companion* (Castlewitz, Ghisausky and Kronberg; Osborne/McGraw-Hill, 1982) provides about 50 VisiCalc spreadsheet models that range from bond-portfolio management to estimating the cost of painting a room. Some models might be directly useful in business situations, while others are likely only to provide the inspiration for the development of more accurate and useful VisiCalc models.

Those of you with a passion for graphics should be able to get all of the technical details from *Fundamentals of Interactive Computer Graphics* (Foley and Van Dam; Addison-Wesley, 1982). However, above-average mathematics skills would be useful.

Another standard reference in graphics is *Mathematical Elements for Computer Graphics* (Rogers and Adams; McGraw-Hill, 1976). Though the title may sound a little intimidating, the book is excellent, and has BASIC listings for most of the fundamental graphics data-base manipulation algorithms as an appendix.

Periodicals: Though *Your Computer* has so far been the most helpful source of information about the IBM-PC published in Australia, it's not the only place to learn about the machine.

PC: The Independent Guide to IBM Personal Computers, Personal Computer Age and *Softalk for the IBM Personal Computer* are regular magazines totally devoted to the IBM-PC. (However, keep in mind that the IBM version of Softalk has a way to go before it will match the Apple version.) The advertisements in these three magazines are great value – each and every one has something to do with the IBM-PC.

Typing Tutor

I've often regretted that I didn't learn to type properly whilst at high school. When I first began to use a computer terminal, some eight years ago, I started to develop my own unique style of typing, using two thumbs and two index fingers. I've never made the time to learn to touch-type since, and I guess the majority of computer professionals and hobbyists would have a similar story to tell.

Instead of waiting for the introduction of voice input, I've finally decided to act by purchasing Typing Tutor, a program published by IBM/Microsoft. I've read nothing but good reviews of this product, and I have found no reason to disagree with them.

Not only does the program teach touch-typing and keep track of progress, but provision is made for a teacher to control and keep tabs on a class of up to 39 students. For those of you who can already touch-type, Typing Tutor will help you to build up typing speed.

Printers

As I wanted to use 38 cm paper and the bit-image mode, I purchased an Epson MX-100 III printer, which seemed the best choice, given that the IBM printer is an Epson MX-80. However, when I first ran the Calendar program supplied by IBM, I obtained this output:

```
                SEPTEMBER

  SUN   MON   TUE   WED   THU   FRI   SAT
ÉÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º     º     º     º1    º2    º3    º4    º
º     º     º     º     º     º     º     º
ÌÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º5    º6    º7    º8    º9    º10   º11   º
º     º     º     º     º     º     º     º
ÌÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º12   º13   º14   º15   º16   º17   º18   º
º     º     º     º     º     º     º     º
ÌÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º19   º20   º21   º22   º23   º24   º25   º
º     º     º     º     º     º     º     º
ÌÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º26   º27   º28   º29   º30   º     º     º
º     º     º     º     º     º     º     º
ÌÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
º     º     º     º     º     º     º     º
º     º     º     º     º     º     º     º
ÈÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍÍ
```

FIGURE 1

```
                  MAY

  SUN   MON   TUE   WED   THU   FRI   SAT
┌─────┬─────┬─────┬─────┬─────┬─────┬─────┐
│     │     │     │     │     │     │1    │
│     │     │     │     │     │     │     │
├─────┼─────┼─────┼─────┼─────┼─────┼─────┤
│2    │3    │4    │5    │6    │7    │8    │
│     │     │     │     │     │     │     │
├─────┼─────┼─────┼─────┼─────┼─────┼─────┤
│9    │10   │11   │12   │13   │14   │15   │
│     │     │     │     │     │     │     │
├─────┼─────┼─────┼─────┼─────┼─────┼─────┤
│16   │17   │18   │19   │20   │21   │22   │
│     │     │     │     │     │     │     │
├─────┼─────┼─────┼─────┼─────┼─────┼─────┤
│23   │24   │25   │26   │27   │28   │29   │
│     │     │     │     │     │     │     │
├─────┼─────┼─────┼─────┼─────┼─────┼─────┤
│30   │31   │     │     │     │     │     │
│     │     │     │     │     │     │     │
└─────┴─────┴─────┴─────┴─────┴─────┴─────┘
```

FIGURE 2

At first, I thought that I must not have set up the printer properly – after all, no one would produce output like that on purpose. However, all checks revealed that my printer was, indeed, set up correctly. A study of the program listing and the manuals revealed the problem.

IBM supports an extended character set which includes many special characters. The Calendar program uses some of these special characters to produce this output on the IBM dot-matrix printer.

In fact, the line-drawing character set for the monochrome display doesn't match the block-graphics character set on the IBM dot-matrix printer. The result is that you can't design forms on the screen and reproduce them on the printer. To add to the confusion, there are errors in the documentation, and the relevant pages are scattered over different manuals.

Most printers, including the Epson MX-100 III, only support the standard ASCII character set. In practice, there should be very few occasions when this limitation will cause any problems.

I felt that the calendar produced on the IBM dot-matrix printer was rather cluttered, and came up with a simplified version which has the added benefit of only using ASCII characters. By making the following changes to Calendar, you'll obtain the output shown in Figure Three:

```
                JANUARY

  SUN   MON   TUE   WED   THU   FRI   SAT
+-----+-----+-----+-----+-----+-----+-----+
|     |     |     |     |     |     |1    |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
|2    |3    |4    |5    |6    |7    |8    |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
|9    |10   |11   |12   |13   |14   |15   |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
|16   |17   |18   |19   |20   |21   |22   |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
|23   |24   |25   |26   |27   |28   |29   |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
|30   |31   |     |     |     |     |     |
|     |     |     |     |     |     |     |
+-----+-----+-----+-----+-----+-----+-----+
```

FIGURE 3

Change lines 1440, 450 and 1480 from:

```
1440 M$(1) = CHR$(192)+STRING$(35,208)
1450 T$ = "     "+CHR$(202) : M$(2)=CHR$(202)+T$+T$+T$+T$+T$+T$+T$:M$(3)=M$(2)
1480 T$ = STRING$(4,208)+CHR$(218) : M$(4)=CHR$(202)+T$+T$+T$+T$+T$+T$+T$
```

EXAMPLE 1

To:

```
1440 M$(1) = CHR$(43)+STRING$(34,45)+CHR$(43)
1450 T$ = "     "+CHR$(124) : M$(2)=CHR$(124)+T$+T$+T$+T$+T$+T$+T$:M$(3)=M$(2)
1480 T$ = CHR$(43)+STRING$(4,45) : M$(4)=T$+T$+T$+T$+T$+T$+T$+CHR$(43)
```

EXAMPLE 2 □