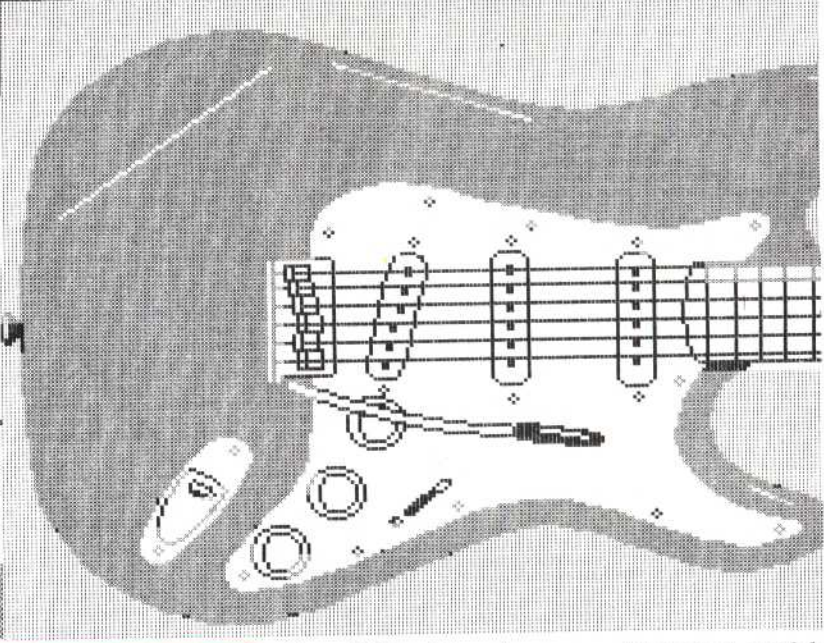
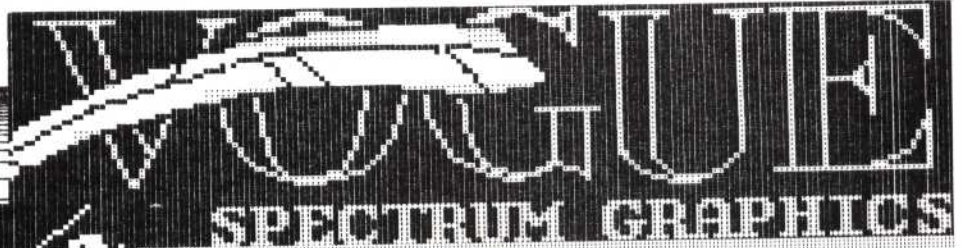
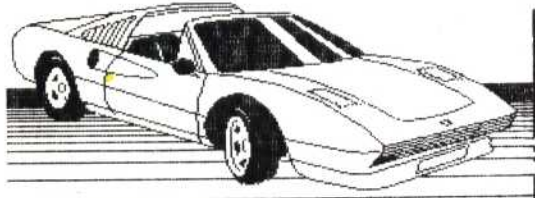




GOING DOTTY

Ferrari



Printer Artistry

These print-outs show the kind of graphics that can be produced by certain dot matrix printers. Each pin on the print head is controlled individually, and it is possible to produce some complex and satisfying patterns. Details on how to do this will be given in future instalments of the course. These images were created using Paintbox from Print'n'Plotter Products

Most home computer owners eventually decide that the one thing they need to make life complete is a printer. Even if it is used solely for listings, a printer makes a programmer's tasks much simpler — debugging a program is considerably easier if 'hard copy' is available — and a printer is obviously a necessity for word processing.

An inexperienced computer owner is likely to be bewildered by the choice of printers available, as there are almost as many different machines as there are makes of home computer. A decision must first be made as to the type of printer required; this will usually be either a dot matrix or daisy wheel model, although there are other varieties, such as thermal or ink-jet printers. A daisy wheel model produces the highest quality results (generally at a correspondingly high price) and is therefore best for word processing; whereas a dot matrix printer is usually cheaper, faster in operation and ideal for listings and general programming tasks. Here, we will concentrate on dot matrix printers.

A dot matrix printer may be purchased for less

than £200, although very sophisticated models can cost £1,000 or more. Important points to consider are the printing speed and the quality of the text produced; more expensive models have extra features such as proportional spacing (i.e. narrow characters such as 'i' are allocated less space than wide ones like 'm') and different character sets. In general, you get what you pay for — you must decide whether such features are worth the extra money.

Printing speed is important as use of the printer 'ties up' the computer because text must be stored in the computer's memory until the printer is ready for it. Therefore, the computer cannot be used for other tasks while printing is taking place. Printer speeds are quoted as 'characters per second' (cps), so whereas an expensive model running at 200 cps might take one minute to print out a long program listing, a cheaper model with a print speed of 30 cps would take more than six minutes to produce the same listing — and during that six minutes the computer cannot be used for any other tasks. This problem may be overcome by using a printer *buffer*. This is simply a circuit board containing RAM chips, which is connected between the printer and the computer and stores the data while