camera tripod mounting, enabling the unit to be steadied when long exposures are needed. Two metres of eight-way ribbon cable connect the unit to the BBC user port. This is all the hardware that is needed, so the system is extremely easy to set up.

The camera uses a lens from the small Pentax 110 single lens reflex camera, fitted in a standard bayonet mounting. Such lenses are readily available from camera shops and are supplied in a wide variety of focal lengths — even zoom lenses may be fitted — so a different lens may be substituted for the one supplied. The only problem with this arrangement is that the lens in the Snap system is set at a different distance from the chip than it would be, on the Pentax camera, from the film. Thus the focusing distance marks on the lens have no meaning when used on the Snap system. Since focusing the Snap camera can be a time-consuming task, it would be worth the effort involved in recalibrating these marks.

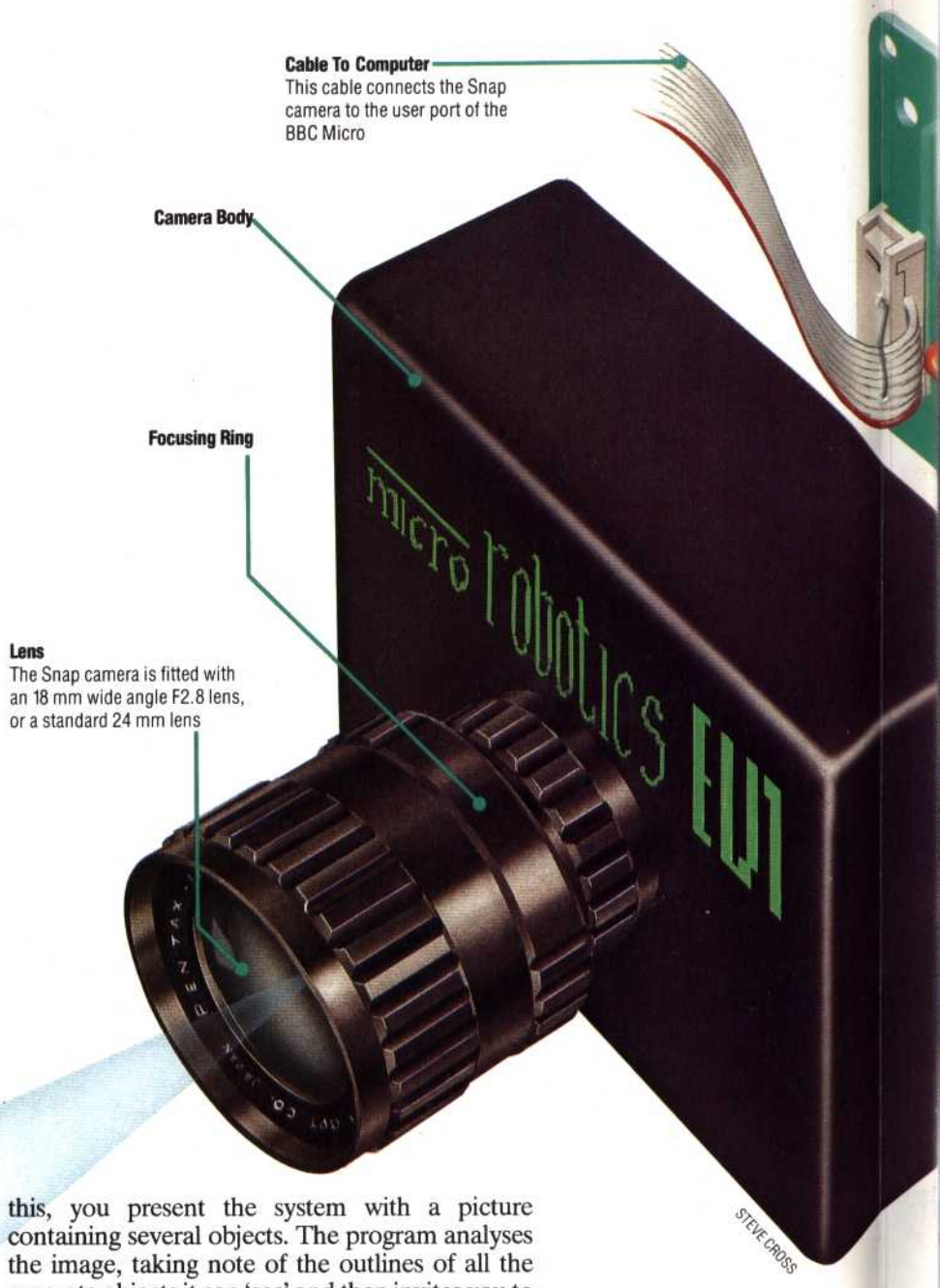
The screen image produced by the camera is largely dependent on the software. A suite of programs is supplied with the system, and a 50-page instruction manual (prepared very professionally on an Apple Macintosh) explains software use and the camera's working details.

The camera may be used in two different ways. Pictures may be produced from a single image, resulting in a 'two-tone' screen display, or a 'multi-tone' image may be built up by taking several pictures at different exposures. The first method is used by the first program in the supplied software; this uses a small section of a Mode 4 screen to present a constantly updated picture. The exposure is adjusted by using two of the cursor keys. This program also includes a screen dump routine that is suitable for Epson, or Epson-compatible, printers.

The second program allows more realistic pictures to be constructed in several tones. Eight separate pictures are taken at different exposures, and these are displayed simultaneously on a Mode 0 screen, using shading to give more emphasis to the short exposure images. The effect of this is an image containing eight different grades of brightness, from black through various grey shades to white. This gives a more lifelike effect, but under normal room lighting these 'grey scale' images can take up to 10 seconds to produce — hardly a 'snap'.

The 'Secure' program turns your snap system into a computerised burglar alarm. The software takes note of only the differences between successive images, so you can set it to give an alarm signal when these differences rise above a certain level. For example, if the camera was pointed at the outside of your house it would ignore trees swaying in the wind but would trigger the alarm if a visitor arrived at the front door.

'Movie' stores a short sequence of two-tone frames, which are then replayed quickly, giving the effect of animation. Also supplied is a program called 'Animal'. This is a video version of the familiar computer game (see page 252). To play




this, you present the system with a picture containing several objects. The program analyses the image, taking note of the outlines of all the separate objects it can 'see' and then invites you to name each one. If you then point the camera at another picture or scene it will attempt to identify any of the objects that also appeared in the first picture.

Perhaps the most attractive option for home users is the program called 'Arty'. This is used to produce complex screen pictures from different images. The whole Mode 1 screen is used, and images captured by the camera can be positioned anywhere on the screen, magnified or reduced in size, by using a joystick. Foreground and background colours can be changed by using the function keys. A degree of patience is needed to make the most of this program, but complicated full-colour screens can be constructed from a variety of real-life objects.

Although the software provided is complex and