Basic text display systems

Referring to figure 3.1, the codeword for A is shown being fed from the RAM to the character generator. The character generator is producing the video signal to form *part* of the letter A on the television screen. In fact, this video signal will produce the top of the character A.

The codewords stored in the RAM can be obtained from a Teletext or Viewdata transmission or from an electronic keyboard.

Once the codewords are in the RAM they will stay there until:

- The codewords are changed.
- The apparatus is switched off.

Therefore, once the codewords for a page of Text are in the RAM,then in the case of Teletext, the television can be switched from Text to picture, and back to Text, and the page of Text will still be displayed.

The remainder of part 3 of the book discusses the character generator and the timing necessary to produce a page of Text on the CRT screen, using the stored codewords in the RAM.

Text interface

Before looking at the text display system consider how text video signals can be interfaced to a television receiver, as shown in figure 3.4.

Normal television signal path

The picture luma and chroma are matrixed in ICI and there is a pin available to apply a picture blanking signal. For clarity only the red video cascode output stage VT1 and VT2 is shown, with VT2 driver feeding VT1 via the video gain control R1.

The three cascode output stages are controlled by the setting of R2 and VT3 which will therefore control the brightness.

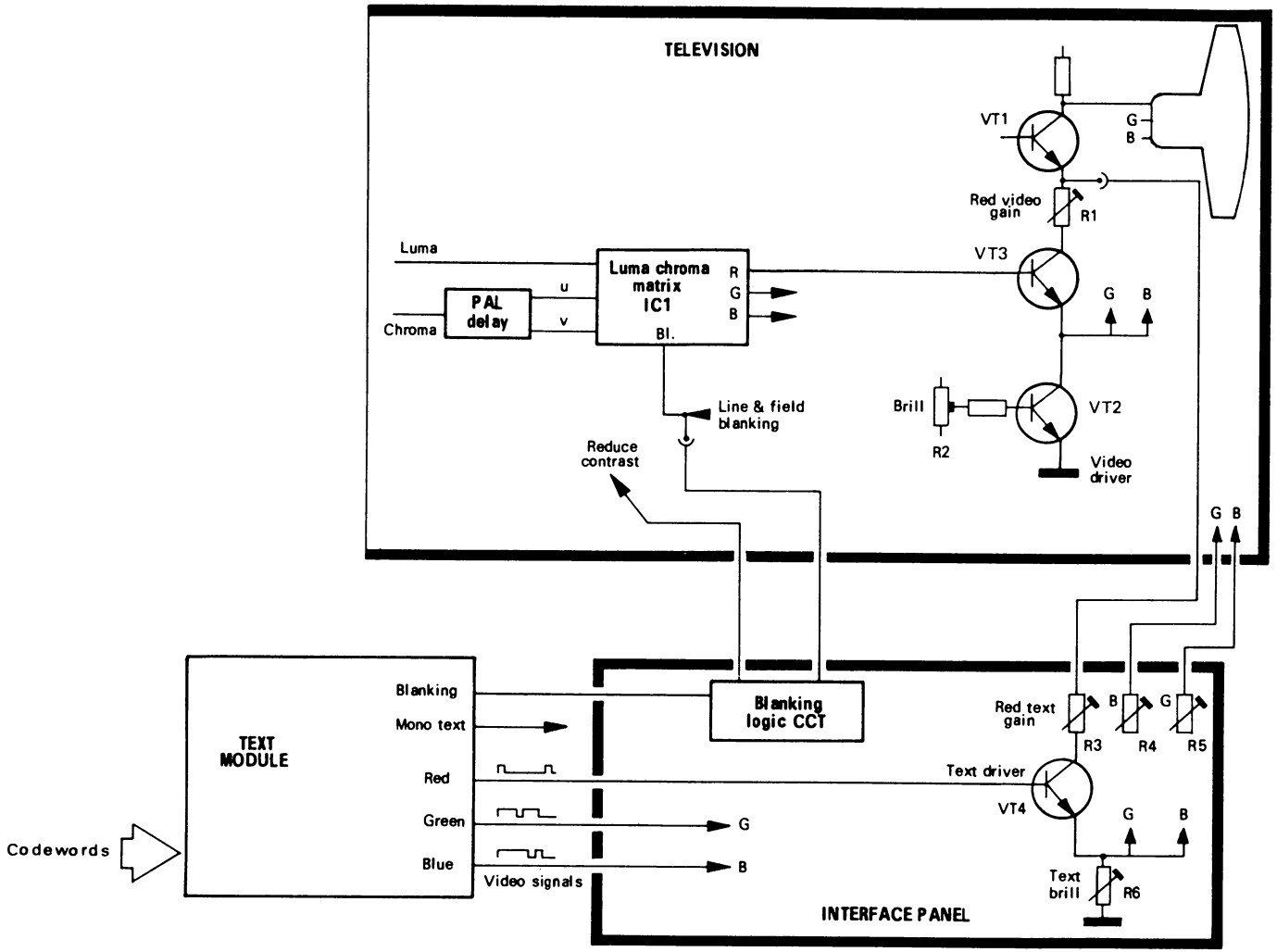
The Text module has the following outputs:

- There are four Text outputs, three of which feed the red, green and blue stages and one other that can be used for a monochrome display.
- A blanking signal to blank the picture in the Text mode.

Picture mode

There are no outputs from the Text module, and the picture video signals from ICI are fed to the video drivers, e.g. the red video is fed to VT2.

Fig. 3.4 *Text interface.*



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