

# A Simple Amateur Television Station

Adding a keyboard to the character generator.

## Part 3

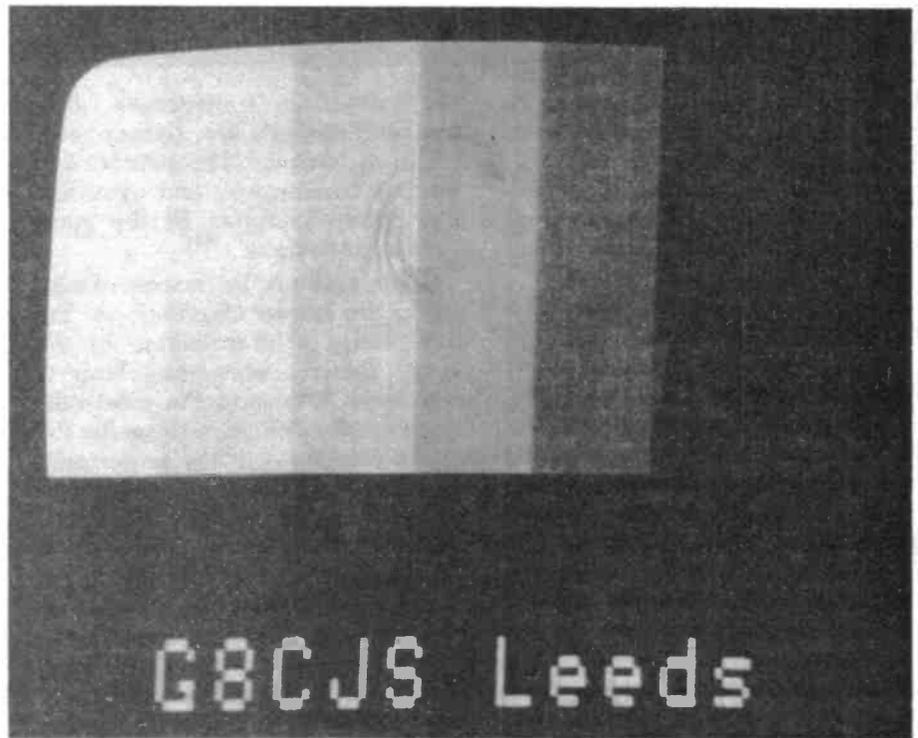
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So far in this series of articles I have shown you how to build a video test signal and sync pulse generator (Part 1), and how to display your call sign or QRA etc. electronically (Part 2).

In Part 3 I would like to show you how to add an electronic keyboard to the character generator described in Part 2. This uses an alternative module to the diode programme unit. The character generator in Part 2 was made up of two printed circuit boards mounted one above the other, with the diode matrix card being the uppermost, so as to facilitate plug-in modules pre-wired for different messages. When working portable (as in a contest) this system is ideal. All you need to display is one four-figure group of digits, which remain unchanged for the entire contest.

When we use our TV station in less strenuous conditions, eg. a quiet evening amusing three or four local stations, then our supply of pre-programmed messages will soon become exhausted. The module described in this article is pin-compatible with the diode matrix module and will simply plug-in in place of it. A standard ASCII keyboard can then be connected to the new module's input and it is ready to type directly onto the screen. The new module also has a page switch to facilitate up to eight pages of text so messages can be preset and 'brought on line' at the flick of a switch.

The pins J, K, L, M, carry a 4-bit address code from the character generator which changes every time it scans a different character. This code was used to address a different location in the diode matrix and br-



ing on line to the data bus (B, C, D, E, F, G, H,) the information that was set by the diode programme in that location.

In the new module this 4-bit address code selects a location in RAM (Random Access Memory). When the memory is addressed the

Fig. 1. Block diagram of keyboard add-on unit.

