



square wave output and requires filtering before it can be connected to the microphone socket of the transmitter. Johnny Melvin has also got this in hand and supplied me with a little board with the filtering resistors and capacitors on it. I have also tried this board instead of the AFSK tone generator board, and it works perfectly with no bother. Fig. 1 shows the circuit of the receive board and Fig. 2 that of the AFSK oscillator. Fig. 3 shows the appearance of the test set-up.

## Loading the Program

Now that the unit, together with the AFSK board, was functioning correctly and was being controlled from the keyboard of the computer, the time had come to load the G3WHO program. Peter Harris, who wrote this excellent program, has given a number of options or 'control codes' to use with it. Space does not permit the complete listing of the available commands, but, briefly, it will enable the BBC model B computer to send and receive RTTY when interfaced with a suitable Terminal Unit, in particular, the G3LIV unit reviewed here. It operates in the split screen mode, enabling the preparation of transmit text in the bottom half while received text is being printed in the upper half. The speed of transmission/reception is easily changed between 45.45 bauds and 50 bauds from within the program and any other speed (up to

about 100 bauds) can be selected. Audio tones are available from PB7 of the USER PORT (as mentioned above) as an alternative to using an AFSK oscillator. A CW identifier and real time clock are provided, and pre-programmed messages can be accessed for transmitting by a single key entry. There is also, to my mind, a very important extra facility. The program has the means of switching a printer on or off as desired. This can be driven by either the parallel or serial output from the computer, and can be very helpful in QSOs and is a necessity for contest working.

## On the Air

I will now describe how the G3LIV interface using the G3WHO program actually operated when controlled from the BBC computer. The first thing to do was to tune up my transmitter, in this case, to 14MHz. The unit is intended to operate on Upper Sideband. I turned the dial to 14090KHz and, tuning carefully, found several stations working, and one who was calling 'CQ'. Slowly turning the dial so that the two tuning LEDs flashed on and off in sync with the tones of the received signal, the 'CQ' call was displayed on the upper

