

Fig. 3. TU schematic

gives out a well defined signal level (+10 volts MARK, -10 volts SPACE). And finally, the magnet driver converts the slicer signals into suitable drive levels for the teleprinter magnet. If, however, you have a visual display unit (VDU), it is necessary to convert the demodulated signals into suitable levels to operate the VDU, that is to say, TTL levels, and a circuit for achieving this is shown in Fig. 2. A complete circuit for a terminal unit is given in Fig. 3. This is based on the very successful STS design by Irvin Hoff W6FFC with acknowledgements to BARTG for this particular version. It contains all the necessary features to get reliable copy from RTTY signals. A printed and drilled circuit board can be obtained from the Components Committee member of BARTG for £7.65 with a reduction for members. This price, incidentally, covers the additional board which is required for producing FSK/AFSK signals for transmitting. (The price is correct at the time of going to press).

FSK/AFSK circuits

In order to transmit RTTY signals it is necessary either to feed a varying audio signal into the microphone socket of your trans-

mitter/transceiver or use circuitry which will give a frequency shift to the oscillator of the transmitter. The first method is termed AFSK and the second FSK. By far the simpler method is AFSK, and, as mentioned above, both the board for the TU and the board for FSK/AFSK are provided at an inclusive price by BARTG. The second board contains all the necessary circuitry for both AFSK and FSK and is shown in Fig. 4. Assuming that numbers 1 and 2 (receiver and transmitter) are already in your possession, numbers 3 and 4 are covered by the two boards mentioned above. These can be built for about £30 even if all the components are purchased brand new.

The teleprinter

As a machine to begin on, the Creed Model 7 and its variants are just the job. They can take an awful lot of mishandling and, amazingly, still function as I know from personal experience. The price of a Model 7 machine varies between £5 and £25 according to age and condition. When looking for these machines you will often find a basic model number followed by a suffix which indicates a variation in the design or an additional feature. For

example, a TE/RP is a Model 7 machine with a tape reperfing attachment. Therefore this adds rather than detracts from the usefulness of the machine. However, beware of the suffix 'RO' as this indicates that it is intended for receiving only and has no keyboard. There are also other machines of Creed manufacture such as the Model 54 and 75. The Model 54 is a very fine machine, something like a de-luxe design of the TE, but the Model 75 is of a completely different design and mechanically very complex — not one I would recommend to start on. In the case of both Model 54 and 75 the advice of someone who knows the machine should be sought, as a large number of these models were coded for computer service. The modification of a computer coded machine is a long and difficult job, and not one to be tackled by the inexperienced. An additional facility of which a member can avail himself is the fact that a BARTG Committee member holds an 'Equipment Availability' list through which it is usually possible to acquire a teleprinter in good working order.

Having got all the various pieces of gear back home and connected up, it may well be found that when switching on the teleprinter motor, nothing but noise comes out