linearity, and its output is fed via the high/low power switch to the low pass filter board, where it passes through the low pass filter and the SWR bridge before being fed to the aerial.

Keying for CW is full break-in, the key actually operating on the PTT line. The writer was surprised to hear a relay chattering away whilst operating CW, since the send/receive switching was said to be all solid state. Careful examination of the circuit diagram revealed that a relay was indeed present, presumably to switch an external linear since its contacts are simply wired to one of the spare phono sockets on the rear panel. It is puzzling to find that this facility is not mentioned in the handbook.

In operation

Once the *Argosy* was safely installed on his workbench, the writer's thoughts turned to the absence of an RF gain control. Surely the lack of any form of gain control on the RF stage (it is not even controlled by the AGC) was asking for cross modulation problems to occur in the mixer; this had to be investigated. The band which probably causes most problems in this respect is 40 metres, which at night is occupied (illegally) by broadcast stations, leaving only a few kHz at the bottom end free for amateur use. It will be obvious that trying to receive weak CW signals within two or three kHz of hundreds of kilowatts of broadcast transmission is a severe test of any receiver. As valve equipment has generally proved to be rather better in this respect than transistor equipment (hence the fitting of RF attenuators to most modern HF rigs) it was decided to compare the receive performance of the writer's trusty old *KW2000A* (which has been modified as described in this magazine's series to improve its overload performance) with that of the *Argosy*. The two rigs were connected to the same aerial via a changeover switch and the *KW2000A* was tuned to various 40m CW signals; the *Argosy* was then set to the same frequency and the aerial switched over so that a comparison could be made. The results of this test were striking, but not in the manner expected! Signals which were only just audible above the background hash on the *KW2000A* suddenly sprang into clarity when received on the *Argosy*, and weak signals heard on the *Argosy* were completely inaudible on the *KW2000A!* On the older rig, the 'clear' spots in the band were filled with a continuous hash running at about S7, whereas with the Ten-Tec they were completely noise free. Once the rig was tuned off a broadcast channel no trace of the signal occupying it remained. It was clear that the reason that no form of gain control had been used on the RF amplifier was that none was necessary! This outstanding cross modulation performance was undoubtedly due to the use of Schottky diode ring mixer, a device which must represent one of the most significant advances in receiver technology of recent years.

As may be gathered, the reviewer's first impressions of the receiver performance were favourable, and these impressions were confirmed by subsequent experience. The stability was good, very little drift occurring even from cold, and none that could be detected after the rig had been switched on for a few minutes. The additional filters worked well and were useful, the 500Hz crystal filter being used for CW operation, with the audio filter providing a further reduction in bandwidth. The narrower position of this filter (150Hz) was very useful, and was capable of providing true 'single-signal' reception even on a crowded band, but the wider 450Hz position provided little, if any, improvement over the performance of the 500Hz cyrstal filter, and in practice was never used by the reviewer. Perhaps it would have been better if the 1.8kHz crystal filter had been fitted, which would then have enables the bandwidth to be reduced progressively from 2.5kHz to 150Hz in four steps. Since the AGC is audio derived, and is taken out of the AF amplifier after the audio filter, there is little to choose between providing extra selectivity at AF or IF, especially in view of the receiver's excellent overload performance.

Tuning dial

The analogue tuning dial proved easy to use and was smooth in its operation. However, its calibration accuracy was not particularly good, the calibration varying not only from band to band but even between different ends of the same band. This is annoying since a little more care in the setting up of the VFO, and the provision of trimmers to adjust the frequency of the HF oscillator crystals, would have corrected this fault without any significant addition to the cost of the rig. It is made the more annoying in that the system provided for calibration adjustment, while simple, is rather fiddly and the necessity of its frequent adjustment proved tiresome in practice. The adjustment is made by moving the calibrated skirt of the tuning knob relative to the knob itself. The skirt is coupled to the slow motion drive by a friction clutch arrangement, one revolution of the skirt covering a frequency range of 100kHz. However, if the skirt is grasped it can be rotated relative to the slow motion drive. It is the grasping of the skirt that is the difficult part of this procedure, since not only is it only about ¼'' wide but it is mounted very close to the panel and partially recessed behind the tuning knob! The reviewer's fingers are not very large but he found some difficulty in this operation, and for anyone with large hands it would be very difficult in-