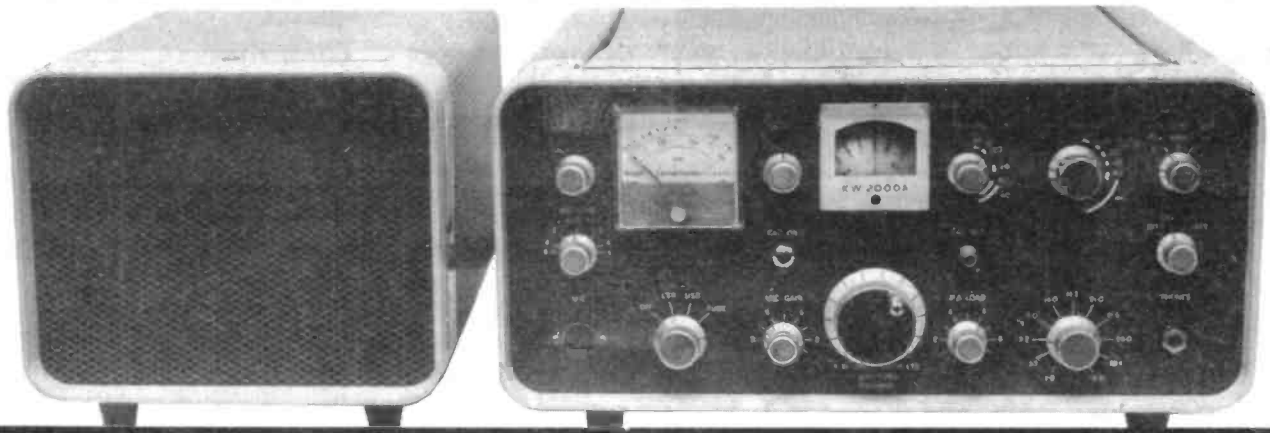
Upgrading the KW2000 series of HF transceivers



Part 2

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Making good the wear and tear

In Part 1 of this series a general description was given of the *KW2000* series of HF transceivers, which represent particularly good value-for-money on the second-hand market at present. This second article gives guidance on the diagnosis of any faults which may be present, and the third article will cover the alignment procedure. Subsequent articles will give details of some of the many modifications which can be carried out to improve various aspects of the performance. Before any modifications are attempted it is strongly recommended that the test procedure to be given in this article is followed since any fault which may exist may well be more difficult to trace after modification, and it may well not be obvious whether a malfunction is due to an error in the modification or whether it already existed! It is assumed that the reader possesses a few hand tools including a *decent* soldering iron, a set of proper alignment tools, ie. hex nylon type (DO NOT USE A MATCHSTICK OR FILED-DOWN KNITTING NEEDLE AS THIS CAN BREAK THE HEXAGONAL CORES!) and a multi-range test meter (not DVM) of at least 20k ohm/volt which is able to measure up to 10M ohm resistance. A good quality signal generator is also useful although not essential unless the alignment has been severely tampered with. A dummy load and some means of measuring RF output power (eg. an SWR meter) are also required, and a general coverage receiver is useful if the 2000 has been badly misaligned.

Initial test procedure

In this section a complete test procedure is given which should be adopted with a newly acquired rig to verify that all sections are operating correctly before any modifications are attempted. If a fault is found at any stage during the testing it should be repaired before proceeding any further with the tests. The causes and cures for various commonly encountered faults are given later in this article.

The transceiver should first be removed from its case by removing all four feet on the underside of the cabinet and then gently sliding the chassis forward to clear the case. At this stage it is as well to have a completely clear bench on which to work. Next the power supply and a suitable aerial system should be connected, and the transceiver switched on and allowed to warm up for 5-10 minutes. Following the list in **Table 1**, the various controls should be checked for smoothness of operation and absence of crackles or any intermittency of operation, checking through the bands on receive only from 28MHz to 1.8MHz, placing a tick in the right-hand box of **Table 1** if a control is considered to be working correctly, and noting any faults found in the centre column. There is no point in continuing until there is a complete set of ticks since the same ground may have to be covered twice if any problems are ignored at this stage. It is useful to keep the check list for future reference in case of the recurrence of a fault; this will save the repeated investigation of the same problem!

Next the transmitter's basic operation should be checked. The