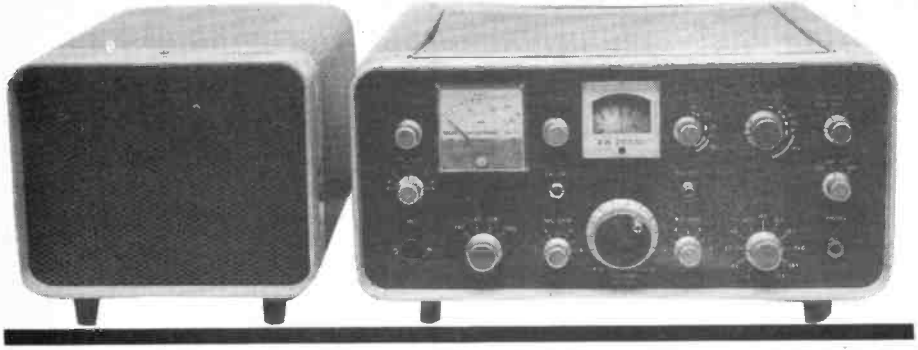
Upgrading the KW2000 series of HF transceivers



Part 6

Adding the new bands

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It may seem rather strange, but we start this month with a word of warning! The modifications required to fit the WARC bands require some dexterity and care as they involve a fair amount of 'digging around' in the front end and driver stages as well as the HF oscillator stage of the rig. However, with care it is possible to do the modifications needed in a few hours and this does give the advantage that, not only do the new bands become available, but extra portions of the existing bands can also be added. We have so far only tried the modifications on the *KW2000A*, but they should be equally possible with the other models in the series.

Modification procedure

First remove the PHONES socket from the front panel and link out the wiring from the socket so that the speaker is permanently connected. The socket can conveniently be re-fitted to the lower left hand side of the PSU front panel, making sure that the outer part of the socket is isolated from the panel in order to prevent hum being introduced into the headphone circuit by heater current flowing to earth via the headphone wiring. Next remove the links on the existing bandchange switch wafers, as shown in **Fig. 131**, not forgetting to remove the links on S2i wafer to disable one PA valve on 18 and 24MHz to comply with the current licence conditions! Next fit the coils L_A, L_B, and L_C listed in **Table 101** between the appropriate tags as in **Fig. 131**, remembering to keep the leads to the extra coils as short as possible, and also to position the coils so that access is possible to their ferrite cores during alignment. Now fit the new extra switch S1000 into the hole previously occupied by the headphone socket. Some care is required in this operation in order not to damage components in the HF oscillator compartment. You may well find, as the writers have, that it is easier to remove one or two components during the fitting of S1000, replacing them after the switch has been fitted. The wiring to the crystals is now modified as in **Fig. 132**, the extra sections of the existing bands may be fitted by adding extra wire ended miniature crystals to the contacts of S1000.

The wiring changes to the PA stage should be tackled next. First remove the links from S2E, and then

Table 101

Component	Details	KW2000 TUNING RANGE
L_A	3 off. 2 turns 22swg on 5mm dia with ferrite core. close wound.	
L_B	3 off. 3 turns 22swg on 5mm dia, with ferrite core. close wound.	
L_C	3 off. 11 turns 28swg on 5mm dia. with ferrite core. close wound.	
L_D	6 turns of 22swg Enam. Copper. Wound Directly on to ¼" dia. Iron Dust Core.	
L_E	10 turns of 22swg Enam. Copper. Wound Directly on to ¼" dia. Iron Dust Core.	
L_F	8 turns of 22swg Enam. Copper. Wound Directly on to 5/16" dia. Iron Dust Core.	
C_F	150 pF silvered mica.	
X19	Final o/p freq = 25.80MHz + 3.155MHZ = 27.95MHz ÷ 2 = 13.9775MHZ (XTAL FREQ) wire ended miniature crystal.	24.80-25.0MHz
X20	Final o/p freq = 18.0MHz + 3.155MHz = 21.155 MHz ÷ 2 = 10.5775MHz (XTAL FREQ). WIRE ENDED MIN.	18.0-18.2MHz
X30	Final o/p freq = 10.00MHz + 3.155MHz = 13.155MHz ÷ 2 = 6.5775MHz (XTAL FREQ) WIRE ENDED MIN.	10.0-10.2MHz
S1000	3 pole 6 way miniature switch. No particular make is specified but the writers made theirs up from RS components. *Maka — switch kits.* These just fit, but only just.	