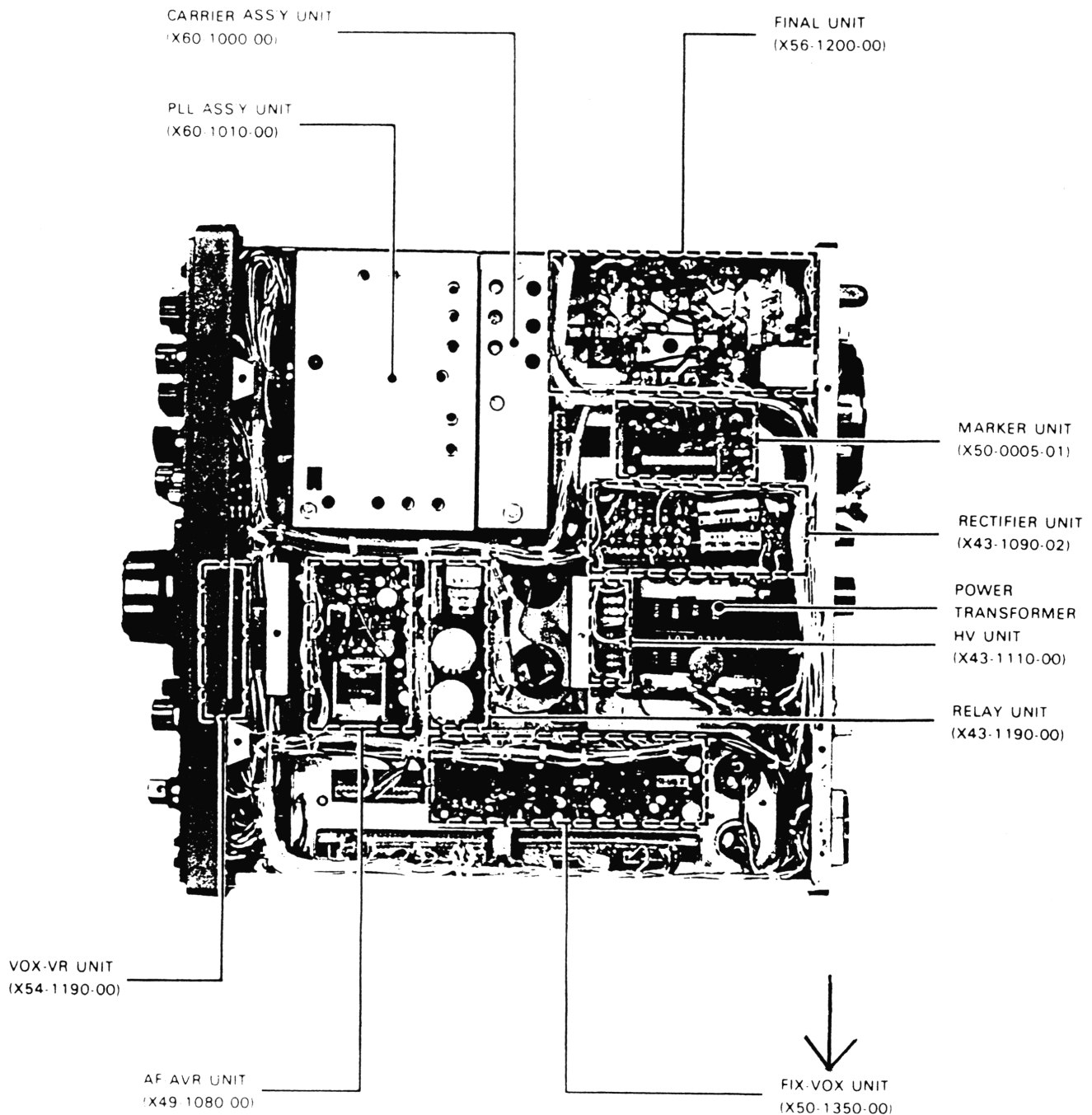
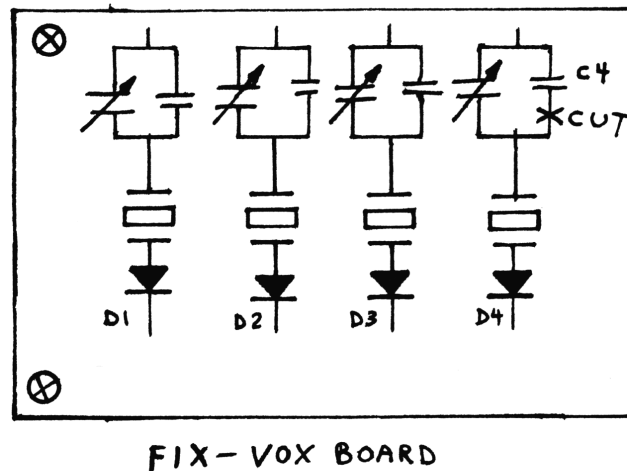


## KENWOOD TS-820S

The TS-820S has a built-in crystal controlled oscillator for fixed frequency operation. To use the fixed frequency oscillator, turn the function switch to the FIX position, turn BAND switch to 28MHz, and FIXED channel select switch to one of the four positions. Now remove the bottom cover. Set unit up on its side with front of unit to your left.



Continued on next page.



C1, C2, C3, C4 are all 22pf capacitors. If all four positions are to be used, each one has to be cut out as shown on C4.

Now install a crystal for each frequency desired. Specify type HC-25/U.

The crystal frequency is determined by the following formula:

$$5.5\text{MHz} + \text{Band} - \text{desired frequency} = \text{xtal frequency.}$$

EXAMPLE: Lets say we want our fixed frequency to be Ch. 40 (27.405).

$$\begin{array}{r} 5.500 \\ +28.000 \\ \hline =33.500 \\ -27.405 \\ \hline \end{array}$$

6.095 So we will obtain a 6.095 xtal.

Next trim in the desired frequency by adjusting the trimmer cap. next to the xtal. Use the digital display to zero it in. This is all there is to it....no other adjustments necessary.

Each position will give you two channels each. Turning the Band switch from 28MHz to 28.5MHz will shift the 27.405 in our example up 50 channels resulting in another fixed frequency at 27.905.

ENJOY!!!!!!