INSTRUCTIONS FOR INCREASING OUTPUT POWER OF THE KENWOOD TS-480:

Kenwood in the "HX" version, took the space dedicated to the automatic antenna tuner in the "SAT" version, and installed a second power amplifier that duplicates that of the 100W version, then both amp power is add using a toroid splitter at the output. These two amp boards use as final transistors the 2SC2732, rated for 80 wts output each, so having 4 of them on these two boards the radio is be capable of making 320 wts PEP. Do not run them at maximum power, instead a "safe" level of power will be around 260W so each transistor will be running 65W.

Knowing this important factor about the circuit design, let's make the adjustments:

First, build what Kenwood calls an "adjustment jig" which is basically the six pin Data plug that came in the box with the radio. You will have to solder a small piece of wire from pin 3 to pin 6 of that plug, put the metal and plastic covers back and make it ready to be plugged at the rear of the radio in the accessory jack labeled "DATA".

Now do the following procedure to get the adjustment menu:

1- Insert the assembled plug into DATA connector located on the transceiver front panel

2- Turn the radio on while pressing the MIC and the NR keys to enter the adjustment mode; then you will see immediately the Menu # 00 in a small window left to the freq display that normally is used to show the memory channel.

3-Remove the DATA plug from the transceiver when the Menu number window appears.

4-Now rotate the MULTI knob clockwise slowly to Menu # 24; you will see in that menu numbers between 164 and 166 which are the factory default to set the 200W.To increase the power use the small arrows that normally you use to move bands up or down and set the number to 175 and check the power output using a wattmeter and a 50 ohms dummy load, maybe the final number for you might be different than the one obtained in our radio. Also it will depend on how much power you want. In our case the radio was giving out 260W key down(CW) and around 250W on voice peaks.

5-Now to write the new setting to the EEPROM go to menu # 76 using the same MULTI knob.You will read EEPROM on the display.

6- Move the up arrow, the one used to move bands, and immediately the display will show "good" meaning the data was entered to the EEPROM.

7-To exit the adjustment mode,just click on the MTR key and the job is been done.

Warning

Do this totally at your own risk. Don't exceed 260W on CW because if your antenna system is more than 1.5 swr you might damage your final amp and void the factory warranty. Be sure you have a safe antenna for this high power.

For those who want to "tailor" the RX and TX audio according to your personal taste,for example to have more lows (ESSB) you can access menu # 69 and #70 that are the carrier point of USB and LSB respectively using the same procedure detailed before and writing the new data to the EEPROM.The best way to do this is using an external receiver or transceiver as a monitor with an IF bandwidth greater than 3 Khz.