



Continental Electronics

PRODUCT SERVICE BULLETIN

CONVERSION KIT FOR 816R-5B; 5C; 6C TO 4CX20000E TUBE

RJG 8-22-05

The 4CX20000E tube is now offered as an alternative to the YC130. The following parts will be required for the change.

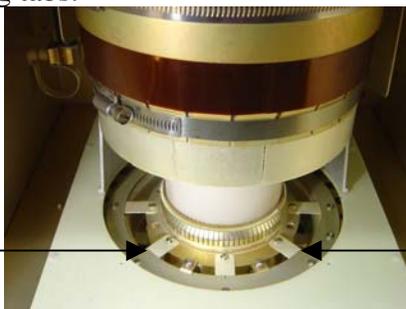
<i>QTY</i>	<i>ITEM</i>	<i>PART NUMBER</i>
1	TUBE, 4CX20000E	256-5057-010
1	FILAMENT TRANSFORMER	662-0410-020 (Upgraded version)
1	FILAMENT VOLTMETER	458-5006-020
2	NEUTRALIZING STRAPS	159424-1

INSTRUCTIONS

Remove YC130 and old filament transformer. Since filament transformer is bulky and heavy it is best to have two people performing this part.

Install new transformer. The primary leads should be connected to terminals 1 and 2 for 10 volts on the secondary.

On some installs, often 100MHz and above, additional neutralizing straps may be needed at each end of the adjustable neutralizing tabs.



Install the 4CX20000E. The cooling fins on the 4CX20000E are slightly larger than the YC130 and will require that the bottom fingers of the plate blocker be bent out. Remove the bottom hose clamp and bend fingers out allowing the blocker to slip over the new tube. Install the hose clamp over the fingers and tighten to form the blocker fingers to the cooling fin. Do not over tighten and deform the cooling fins. Loosen to install the tube allowing the tube and blocker to be installed at the same time.

Install new filament voltmeter.

Measure the filament voltage directly at tube socket filament leads and readjust the filament voltage for 10 volts. Reset filament voltage regulator to automatically adjustment to 10 volts. It

may be necessary to reset the filament variac to achieve 10 volts. Setscrews on the variac shaft may be loosened and the variac repositioned for increased voltage. Recalibrate the filament meter as needed.

Retune grid-tuning bars as needed to achieve less than 20 watts reflected on the IPA. Experience indicates the tuning bar shorts typically need adjusting upward. Reducing exciter drive to the IPA may help during the tuning process. Grid tuning and drive should be adjusted for approximately 100mA PA grid current.

Retune the PA cavity as required. Experience indicates the shorting plane needs adjusting upward from $\frac{3}{4}$ to 1 inch. Adjust PA loading for maximum power. Adjust PA tuning for maximum power. Adjust the shorting plane to allow the PA tuning control to be in the center of its range. A good indication of this is to peak the PA screen current with the PA tuning control. Look for the tuning control to have the ability to go through the screen current peak and tune off each side of maximum without running into the end limit.

Also, the PA efficiency control should be adjusted for maximum power output and minimum plate current. This is best accomplished with the transmitter in Auto power control.

Please contact Continental Electronics Field Service with any questions or comments.
214-388-5800