



Communications & Power Industries

Emac division

May 22, 1996

Mr. David Kirkby
University College London
11-20 Capper Street
London, WC1E 6JA
ENGLAND

Subject: 3CX5000A7

Dear Mr. Kirkby,

The 3CX5000A7 will operate at 144 Mhz and will provide excellent performance in a properly designed and built amplifier.

As you suspect, the drive required at VHF is always higher than that necessary at 30 Mhz. One customer built an amplifier for 144 Mhz and operated it with 4000 Volts and obtained a power output of substantial proportions (in excess of the legal limit in America) but we only have his data taken at a reduced plate voltage: with 2200 Volts plate voltage, a plate current of 0.9 Ampere and 45 Watts of drive power, the output was 1000 Watts. The efficiency is 54%. I believe that you will do better with 3500 to 4000 volts on the plate, and both gain and efficiency will improve over these figures.

Enclosed are sketches of components used in the high power amplifier, fortunately these were provided by the amateur who did the development. I also enclose a copy of the article which was used as a model for the 3CX5000A7 amplifier. There are quite a few of the 8877 models in use by radioamateurs.

I trust that this will keep you busy! Good luck in the project.

73,

Reid Brandon W6MTF
Applications Engineer