Printed in USA
Form OA 31 HQ Rev. 3-74

RKO GENERAL

INTERORGANIZATION CORRESPONDENCE

TO: George Capalbo LOCATION: DATE: 5-3-77

FROM: Chris Karb LOCATION: REPLY DATE BY:

SUBJECT: Distortion Null Adjustments

Mike Bock used the following adjustment proceedure for obtaining minimum distortion from the MW-5.

If the resonators are not adjusted properly, HF distortion will be high. Adjust plate and grid resonators with an oscilloscope per AM-109 to insure that the proper waveform is present on the plate of the tube. The grid resonator effects the bottom of the waveform and the plate resonator effects the top. The "cup" in the trace should smoothly rotate across the peak of the trace if everything is correct. Once the resonators have been set, only minute adjustments will be necessary to null 10KHz distortion. If larger adjustments are necessary, something is wrong elsewhere.

While measureing IM @ 95%, null the reading with the HI PWR screen and AUX DRIVE. Use more aux drive if the screen control runs out of range, but as little as possible. Minimum IM here means that the low frequeny distortion is well under control.

10KHz THD can be trimmed in with the plate tuning and the resonators, and can be tweaked slightly with the 70KHz osc frequency on the pdm card. The high Q of the 70KHz filter cluster necessitates that the sampling frequency be right-on so that the hi's don't get crushed.

Finally, the AUX MOD can be adjusted for minimum IM , and the LOW PWR screen gets adjusted on 1KW. The IM vs THD trade-off still remains, but either one still should be quite low. Recheck all adjustments to insure that minimum values have been reached, since further fine tuning is usually necessary to insure that the desired trade-off point has been reached.

Chris