DATE 15/2/61 SH. 1 OF 4 COMPILED BY	TMC SPECIFICATION NO. S - 10065	
	TITLE: NEUTRALIZING PROCEDURE FOR RFD-1	JOB
APPROVED		

NEUTRALIZING PROCEDURE

FOR

MODEL RFD-1

(Part of S-533)

T.M.C. (CANADA) LIMITED
OTTAWA ONTARIO

FORM — 100

DATE 15/2/61 SH. 2 OF 4 COMPILED BY	TMC SPECIFICATION NO. S- 10065	
	TITLE: NEUTRALIZING PROCEDURE FOR RFD-1	JOB
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It should be noted that the neutralizing procedure for a Linear Amplifier with negative feed-back loops is somewhat different to the procedure for neutralizing normal AM/CW amplifiers. In the latter case, this is carried out under static conditions whereas in the former, it must be performed under dynamic conditions in order to not disturb the feed-back loops. Therefore, proper procedure for neutralizing the PAL-1K amplifier which contains a feed-back loop, is outlined hereunder.

NEUTRALIZING OF IPA

1. Connect suitable signal source to J201.
2. Inject a small signal at 24 megacycles, with no power applied to the final stage; tune first amplifier for peak indication as observed on the multimeter (position 5.)
3. Switch multimeter to position 6. (PA Grid) and tune the second amplifier for peak indication.
4. Remove signal from J201. Observe multimeter reading (still in position 6,). Any residual reading on the multimeter indicates lack of neutralization on the driver stage, which should be corrected by adjustment of C229 (Driver neutralizing capacitor).

5. The driver neutralization should now be checked on all other bands by selection of a suitable frequency, tuning the amplifiers for peak indication on the multimeter and then taking off the excitation. There should be no residual reading on the multimeter at any frequency. If lack of neutralizing is apparent on any frequency, it may be necessary to achieve a compromise setting of C229.

NOTE 1.

It is most important that the neutralizing of the IPA stage be correct as in many instances, indications of non-neutralizing of the PA is really maladjustment of the neutralizing in the IPA Circuit.

NOTE 2.

Before any effort is made to neutralize the driver or final stages, the alignment of the driver stages should be checked in accordance with the handbook (Section 6.)

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NEUTRALIZING OF THE PA STAGE

1. With no drive at J201 and with no load on J202 turn power on to the final amplifier. Check that the bias of the final amplifier is negative 100 volts.

2. Vary the adjustment of the final amplifier tuning and loading controls monitoring the final plate current. There should be no variation in plate current. Any variation in plate current indicated lack of neutralization of the final stage. This should be corrected by adjustment of C255 (final neutralizing) which is accessible through the front panel.

NOTE:

C255 should be turned to minimum capacity i.e. fully counterclockwise if re-adjustment is necessary. Adjustment should be made by turning C255 clockwise whilst varying the tuning and loading controls until stability is obtained.