

DATE 19/6/61

SH. 1 OF 5

COMPILED BY
RWT/hh R.W.G.

TMC

SPECIFICATION NO. S - 10075

TITLE:

JOB

APPROVED *ISG*

PRODUCTION TESTING

OF

MODEL DAC-14

T.M.C. (CANADA) LIMITED

OTTAWA

ONTARIO

DATE 19/6/61
SH. 2 OF 5

TMC SPECIFICATION NO. S-10075

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1. TEST EQUIPMENT REQUIRED

- 1.1 Impedance Bridge, General Radio Type 1606A
- 1.2 Signal Generator, Measurement Corp., Model 82
- 1.3 Receiver, Hammarlund Model SP-600
- 1.4 Headphones
- 1.5 Two resistors, 100 ohm, 5%, 1/2 watt.
Allen Bradley.
- 1.6 Alligators clip, connecting wire & cable etc.

2. CONNECTING OF TEST EQUIPMENT

- 2.1 Connect the signal generator, R.F. bridge and receiver together in the usual manner for impedance measurements.
- 2.2 Support the model DAC-14 on a non-metallic platform such that the coaxial receptacle may be connected to the bridge terminals with the minimum lengths of bus bar.
- 2.3 Solder one end of each resistor to a common alligator clip and to the free ends solder about 5" of flexible conductor (WL-103-1). To the each free end of the flexible conductor solder an alligator clip.

Attach the middle clip of the resistor assembly securely to the external eye bolt of the model DAC-14 adjacent to the coaxial receptacle. Attach the other two clips one to each service hook of the DAC.

3. TEST PROCEDURE

- 3.1 Preliminary Inspection.
 - 3.1.1 Before Potting.

Check that all connections are made correctly and soldered properly, and ensure that the unit is

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assembled according to assembly drawing A-10326.

Check that all nuts & bolts are tight and that the long eye bolts passing through the insulators cannot be twisted out of alignment by hand, exerting full strength.

3.1.2 After Potting.

Check once more the eye bolts passing through the insulators.
Adjust the gap between the point of each spark rod and the corresponding dome-nut using a 0.010" feeler gauge.

Check that the potting conforms to assembly drawing A-10326.

3.2 ELECTRICAL TESTS.

3.2.1 Connect the model DAC-14 to the bridge and the resistors to the unit as described. Take measurements and check that these are similar to those given below:

Mc/s	$R \pm jX$	$r \pm jx$	VSWR
2	47.0+ j7	0.94+j0.14	1.18
4	47.0+j6.3	0.94+j0.13	1.15
8	46.5+j5	0.93+j0.10	1.13
16	47.5+j8.1	0.95+j0.16	1.19
30	52.0+j14	1.04+j0.28	1.31

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NOTES:

- a) $R \pm jX$ is computed from bridge readings and frequency.
- b) $r \pm jx$ is derived as follows: -
$$r = \frac{R}{50} \text{ and } x = \frac{X}{50}$$
- c) VSWR is obtained from a Smith's Chart using $r \pm jx$.
- d) ~~Maximum~~ VSWR acceptable is 1.8.