DATE___2-18-64___

SHEET___1___OF__3___

**TMC SPECIFICATION NO. S** -816

COMPILED    CHECKED

TITLE:                     TER-100K-50U

APPROVED

GENERAL

The TMC Model TER-100K-50/U is a dummy load capable of dissipating 100KW average power over the range of DC to 30 MC. The peak input should not exceed 200KW Pep.

The TER-100K consists of 7 (seven) 300 ohm 5 kilowatt $\pm$ 5% resistors. Each resistor is a special glass cylinder with a resistive element electrofused into the glass. The protective coating is a baked on silicon film. Electrical connections are made possible by fired-on silver bands.

Operation above 35KW requires cooling which is provided by 7 (seven) fans mounted in the base of the unit.

A. Mechanical Inspection

1. Inspect for any damage incurred during construction.
2. Inspect straps holding resistors; they must be tight enough on silver bands to prevent movement.
3. Check tightness of all hardware (nuts & screws).
4. Check fuse for proper value (2 amp).

B. Electrical Inspection

1. Apply 110 VAC 60 CPS to AC connector and activate both front door interlocks.
2. Place AC Power switch and Remote switch to on position. TER 100K must not go on.
3. Leaving switches in on position, Disconnect A.C. line cord. Place jumper across Pins "E" and "F" on connector. By replacing AC line cord TER-100K must go on.
   * Repeat step 2&3 for both connectors.
4. Check each fan for proper rotation. This is indicative by the operation of each fan air switch. Improper rotation of any fan will cause its respective light to operate.
5. Remove each fan fuse in turn.
   Observe the following:
      (a) Relay K101 must de-energize. * To check K101, remove AC power, place ohm-meter across terminals C & D. There must not be continuity. Connect AC power and energize TER-100K. The ohm meter must read continuity. Remove AC power, dis-connect ohm-meter and reapply AC power.
      (b) Fan indicator lamp must go on.
         * Replace each fuse after each check.
6. Deactivate each front door interlock in turn K101 must de-energize.
   * To check K101, repeat step (5a).

C. Power Check

1. Connect the input of TER-100K to output of GPT-200K with 3 1/8 (inch) coaxial lead. Connect AC power to TER 100K and turn fans on. Tune transmitter to 8 Mc and drive to 25 KW for 10 minutes.

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SHEET 2 OF 3

# TMC SPECIFICATION NO. S -816

COMPILED | CHECKED

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APPROVED

2. Reduce drive and turn off high voltage. Visually inspect resistors for any signs of damage.
3. Repeat the above at 50KW power level.
4. If the above tests fail reject the resistor or resistors at fault and repeat the above tests.

D. Final Power Check

1. With fans operating drive transmitter to 100KW for five (5) minutes.
2. Record acceptance on check off sheet.

## CHECK OFF SHEET

A. Mechanical Inspection                                           Accept

   1. Mechanical connections      _____

   2. Electrical connections      _____

   3. Hardware (nuts & bolts)      _____

   4. Fuses      _____


B. Electrical Inspection      _____

   1. Remote Switch      _____

   2. Air Switches & Proper Rotation of Fans      _____

   3. Relay Operation      _____

   4. Interlock Operation      _____

   5. Electrical Resistance (42 ohms $\pm$ 5%)      _____ ohms

C. Power Check

   1. 25 KW      _____

   2. 50 KW      _____

D. Final Power Check

   1. 100KW      _____


DATE _____

TESTER _____

MANUFACTURING NUMBER _____

APPROVED BY _____

# REVISION SHEET

**THE TECHNICAL MATERIEL CORP.**
**MAMAR NECK          NEW YORK**

S-816

*O*

LIST NO.

| DATE | REV. | SHEET | EMN # | DESCRIPTION | APP. |
|------|------|-------|-------|-------------|------|
| 4/22/64 | | 1 of 3 | | O=   ORIGINAL RELEASE FOR PRODUCTION. | ) |
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**THE TECHNICAL MATERIEL CORP.**
**MAMAR NECK          NEW YORK**

| DATE | REV. | SHEET | EMN # | DESCRIPTION | APP. |
|------|------|-------|-------|-------------|------|
| | | 1 of 3 | | O=   ORIGINAL RELEASE FOR PRODUCTION. | |