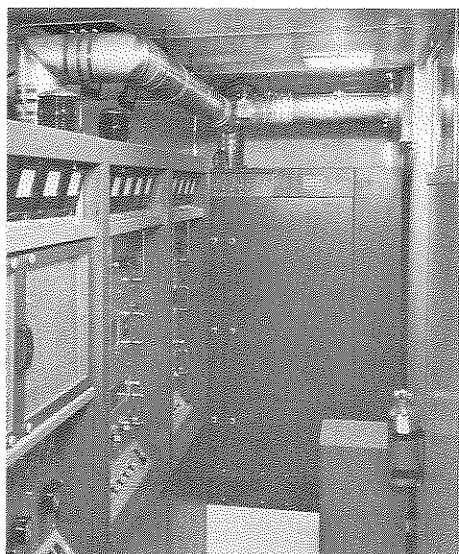




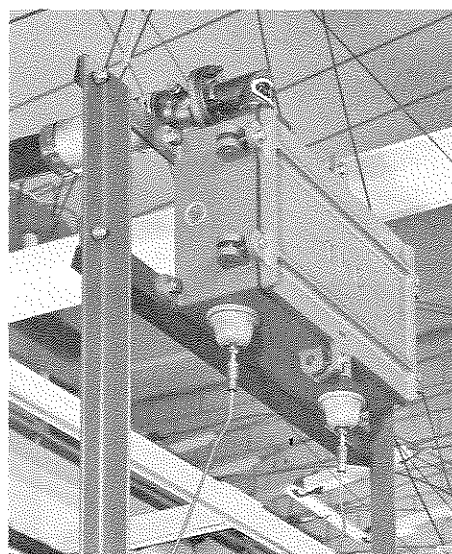
# Field Engineering Bulletin

TITLE

APPLICATIONS OF TER/TRC

BULLETIN  
NUMBER **17**

TER-100K



TRC-3500

The quality of any communication circuit must take many factors into consideration. These include: (1) the power and efficiency of the transmitter; (2) the efficiency of the transmitting antennas and associated transmission lines; (3) the efficiency of the receiving antenna and its associated transmission lines and (4) the sensitivity and quality of the receiver.

A large number of the directional transmitting antennas in use today require 600 ohm inputs. These include rhombic antennas, sloping vees, monopole rhombics and others. As a general rule these antennas require large areas. Further, the efficiency and directiveness of this type of antenna is enhanced by proper termination.

One method of terminating the antenna is by the use of stainless steel dissipation lines, generally folded back under the antenna itself. These termination lines require field construction labor, are costly to maintain and restrict access to areas beneath the antenna that could otherwise be used for limited farming or cattle grazing. TMC's TER Antenna Dissipators, housed in weatherproof cases, offer a solution to this problem since the unit mounts on the termination pole and ties to the ground directly beneath.

Another factor that increases the efficiency of antenna systems is the use of coaxial transmission lines. Since these coaxial transmission lines provide unbalanced power transfer and are generally of low impedances, some method of balanced-to-unbalanced impedance matching device is required.

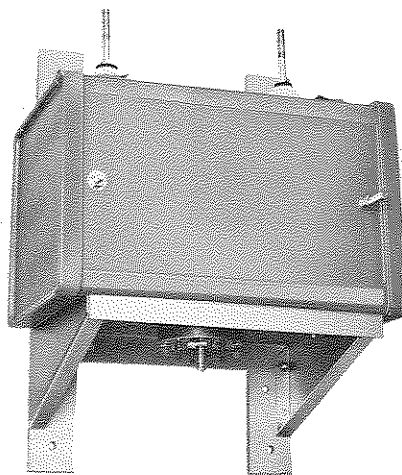
There are many different ways to construct balanced to unbalanced impedance matching devices. TMC's series of TRC Broadband RF Transformers provide "turns ratio" impedance match in the range of 2 to 30 megacycles to handle powers of 100 watts to 200 kilowatts. Sufficient insulation and the size of conductors allow these units to continue to operate efficiently even under VSWR conditions as high as 2 to 1.

As the above factors are true for transmitting antennas, so are they true for receiving antennas. For receiving antennas, The Technical Materiel Corporation offers termination resistors in a family of RTB's and balanced to unbalanced Broadband RF Transformers in a family of RAC's and DAC's. For additional information on these RF products, please refer to:

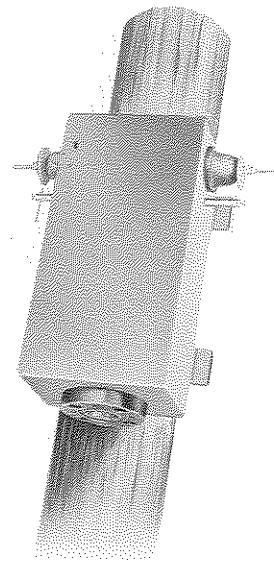
Bulletin 8009	Transmitting Dissipators and Dummy Loads, Models TER
Bulletin 8015	Transmitting Antenna Couplers, Models TRC
Bulletin 8012	Receiving Rhombic Terminators, Models RTB
Bulletin 8006	Receiving Rhombic Antenna Couplers, Models RAC
Bulletin 8013	Dipole Antenna Couplers, Models DAC



BAC-2  
BEVERAGE ANTENNA COUPLER



TRC-20K



TRC-5K

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