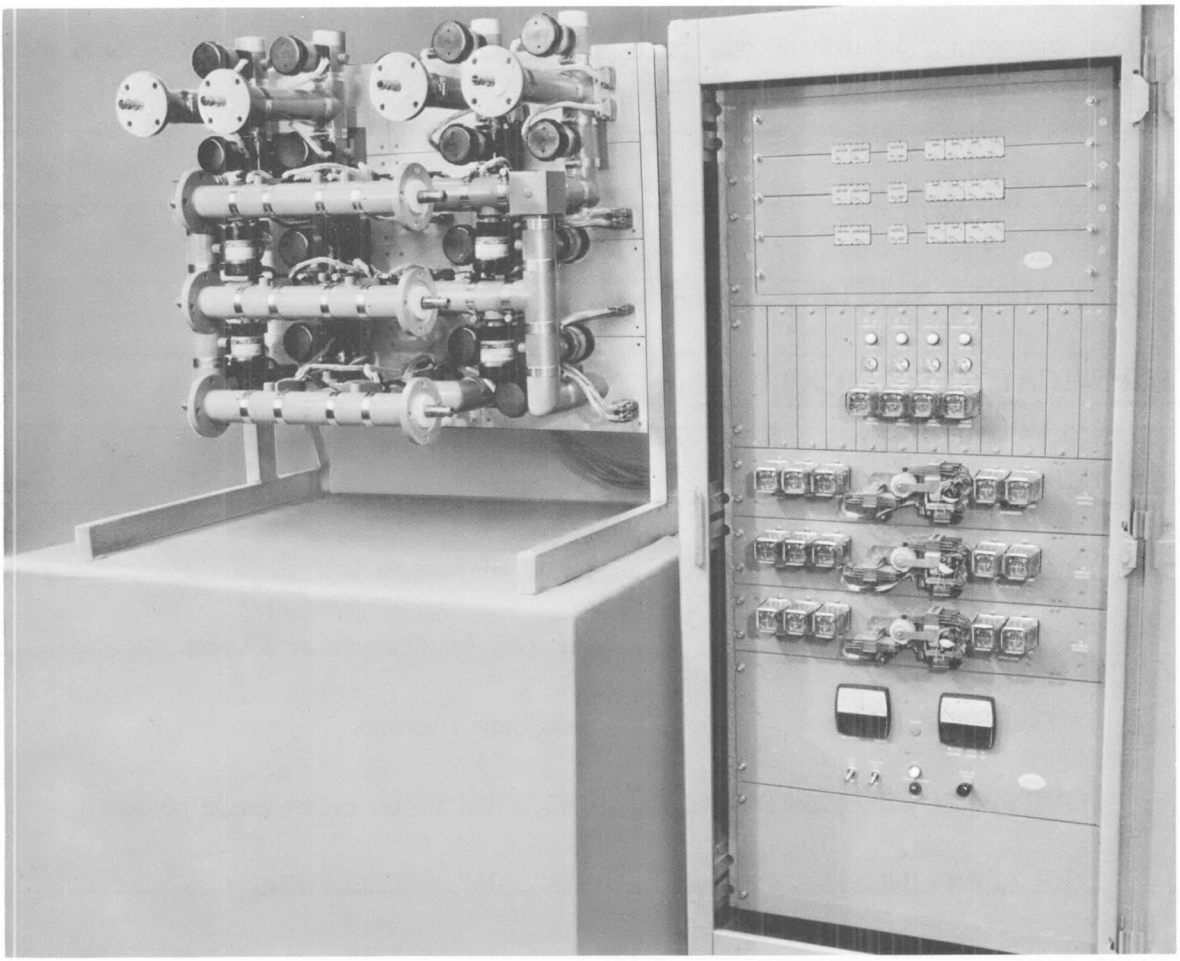
PRELIMINARY TECHNICAL BULLETIN NUMBER 7008

Antenna Matrix Switching System
TMC Model AMS ( )



This is a three transmitter to four antenna matrix for 3-1/8" transmission line. An added feature (supplied as an option) is shown that provides for connection of driver and final amplifier to the matrix system.

The Technical Materiel Corporation's coaxial Antenna Matrix Switching System provides remote antenna selection of unbalanced outputs of transmitters with powers up to 300 kw average for frequencies of DC to 30 mcs.

The vacuum switches used in the Antenna Matrix Switching System provide long trouble-free operation. Arcing and contact contamination are virtually eliminated. The matrix is remotely controlled, up to a maximum of 300 feet, from a pushbutton operating console.

The operating control console provides illuminated visual indications of transmitter/antenna assignment. Interlock contacts are extended to the transmitters to prevent accidental removal of a loaded transmitter from its associated antenna. If an operator attempts to place a transmitter on an antenna already assigned, no switching action will take place and the operator will be alerted by a red panel light indicating incorrect selection.

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To provide personnel safety whenever an antenna or its associated transmission line is being serviced or has been de-activated for any reason, a tumble lock key is removed from the operating console thereby preventing an application of RF energy to that antenna. Further, the individual switch mechanisms at the matrix may be de-activated. Here, too, an indication will appear at the control console.

The unit shown above provides three transmitter to four antenna selection; however, the modular construction of the system allows other units to be added to accommodate changing requirements.

Our engineering department will be happy to provide detailed specifications for a matrix switching system to meet any requirement.

Antenna Matrix Switching System

TECHNICAL SPECIFICATIONS

IMPEDANCE:	50 ohms.
VSWR:	Less than 1.25 to 1.
CROSS TALK:	At least 60 db down at 32 mcs.
SWITCHING TIME:	Less than 1 second.
POWER REQUIREMENTS:	115/230v 50/60 cycles single phase.
LINE COUPLINGS:	1⅝", 3⅛", 6⅛" EIA Flange.

WORLD WIDE SUPPLIERS OF ELECTRONIC COMMUNICATIONS EQUIPMENT

THE TECHNICAL MATERIEL CORPORATION

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ANTENNA MATRIX INFORMATION

INDICATE AN "X" FOR EACH JUNCTION REQUIRED FOR TRANSMITTER/ANTENNA CONNECTION.

TRANS.	ANT.	1 ANTENNA POWER CAPABILITY ___ WATTS AV	2 ANTENNA POWER CAPABILITY ___ WATTS AV	3 ANTENNA POWER CAPABILITY ___ WATTS AV	4 ANTENNA POWER CAPABILITY ___ WATTS AV	5 ANTENNA POWER CAPABILITY ___ WATTS AV	6 ANTENNA POWER CAPABILITY ___ WATTS AV	7 ANTENNA POWER CAPABILITY ___ WATTS AV	8 ANTENNA POWER CAPABILITY ___ WATTS AV	9 ANTENNA POWER CAPABILITY ___ WATTS AV	10 ANTENNA POWER CAPABILITY ___ WATTS AV	11 ANTENNA POWER CAPABILITY ___ WATTS AV	12 ANTENNA POWER CAPABILITY ___ WATTS AV	13 ANTENNA POWER CAPABILITY ___ WATTS AV	14 ANTENNA POWER CAPABILITY ___ WATTS AV	15 ANTENNA POWER CAPABILITY ___ WATTS AV	16 ANTENNA POWER CAPABILITY ___ WATTS AV	17 ANTENNA POWER CAPABILITY ___ WATTS AV	18 ANTENNA POWER CAPABILITY ___ WATTS AV	19 ANTENNA POWER CAPABILITY ___ WATTS AV	20 ANTENNA POWER CAPABILITY ___ WATTS AV	DUMMY LOAD: ___ WATTS AV	
1	TRANSMITTER POWER ___ KW PEP ___ KW AV																						FINAL ONLY CONNECTION TO MATRIX ___ DRIVER & FINAL CONNECTION TO MATRIX ___
2	TRANSMITTER POWER ___ KW PEP ___ KW AV																						FINAL ONLY CONNECTION TO MATRIX ___ DRIVER & FINAL CONNECTION TO MATRIX ___
3	TRANSMITTER POWER ___ KW PEP ___ KW AV																						FINAL ONLY CONNECTION TO MATRIX ___ DRIVER & FINAL CONNECTION TO MATRIX ___
4	TRANSMITTER POWER ___ KW PEP ___ KW AV																						FINAL ONLY CONNECTION TO MATRIX ___ DRIVER & FINAL CONNECTION TO MATRIX ___
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20	TRANSMITTER POWER ___ KW PEP ___ KW AV																						FINAL ONLY CONNECTION TO MATRIX ___ DRIVER & FINAL CONNECTION TO MATRIX ___

NOTE: Balanc d transmitters and ant nnas can b accommodated by use of Model TRC Broadband RF Transformers.

on
K. N. Y.
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tzerland
o, Calif.

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