HF RECEIVING ANTENNA MULTICOUPLER
Model AMC-8/16/32

Product Bulletin 1B03211

Broadbanded Multiple-Output

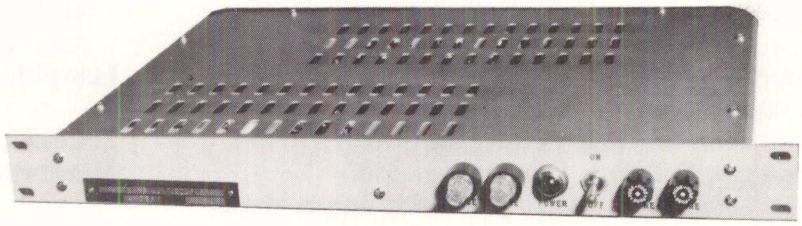
100KHz to 40MHz Operation

Totally Solid State

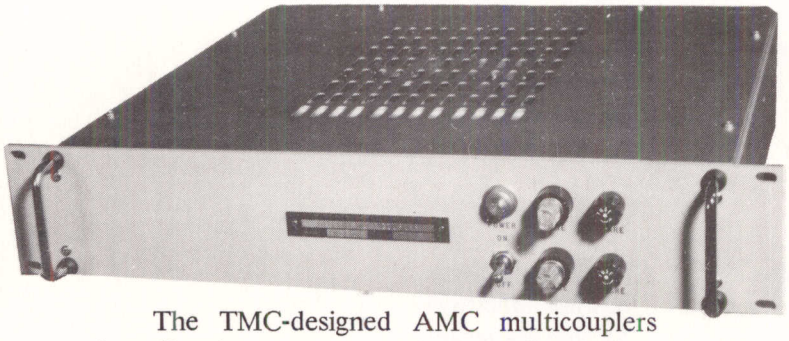
Minimal Noise Level

Lightning Surge Protection

Small Phase Differential



Model AMC-8
[Eight-Output Multicoupler]



Model AMC-16
[16-Output Multicoupler]

Model AMC-32
[32-Output Multicoupler]

The TMC-designed AMC multicouplers are broadband antenna-to-receiver coupling devices that permit the simultaneous use of up to thirty-two communications receivers with one common antenna. They are capable of working with any receiver operating in the MF/HF region and are effectively transparent to the RF energy received.

The AMC Series are engineered to provide the best possible isolation of receivers connected to them. This is done by using individual buffer amplifiers to significantly reduce the amplitude of signals re-radiated from the receivers and block interference with adjacent receivers or the common antenna system. The low-noise amplifiers used in the multicouplers are capable of handling large signals and yield an overall insertion gain without introducing objectionable intermodulation of the received signal. They provide a constant input and output impedance for a VSWR better than 1.5-to-1 over the entire operating frequency range.

Three standard models are available in this series: the AMC-8 for eight-output operation; the AMC-16 for 16-output operation; and the AMC-32 for 32-output operation. All units are designed for mounting in a standard equipment cabinet. The solid state circuitry and slim-line chassis eliminate heat-related problems and allow the stacking of multicouplers - one above the other - in the equipment rack. With the exception of the front panel power switch, there are no operating controls. Adjustments at the TMC factory are completed prior to shipment so that the unit can immediately be placed in service upon receipt. Connections for antenna inputs, receiver outputs, and primary power are conveniently located on the rear panel. The units are constructed of aluminum alloys with the front panel and back plane bolted to channels forming the sides. Component circuit cards are mounted to this chassis internally and isolated to prevent coupling of unwanted energy. All external hardware is stainless steel.

TECHNICAL SPECIFICATIONS

GENERAL	
Frequency Range	100KHz-40MHz without filter 2-30MHz with filter
Number of Outputs	Eight, sixteen, or thirty-two
I/O Impedance	50-ohms unbalanced (50U), BNC
Optional:	70-ohms unbalanced (70U), BNC BNC-type connector
Insertion Gain	Nominal +2dB over range
Frequency Response	+/-1.0dB, 100KHz-32MHz
Off-band Rejection	>30dB DC-1.4MHz,46-1000MHz
Noise Figure	Less than 7dB
Output/output Isolation	Greater than -40dB
Output/input Isolation	Greater than -55dB
Phase Differential	+/-1° maximum, output-output
Desensitization	<3dB drop of 100uV signal for 4v peak input signal (f_0 is 10% removed)
Intermod Distortion	Second order: >-60dB for 0.4v input to 50-ohm unit;Third order: >-65dB
VSWR	Output: better than 1.2-to-1 Input: better than 1.5-to-1
MTBF	20,000 hours

OPERATING PARAMETERS	
Cooling	Convection
Ambient Conditions	0°C to +50°C; Up to 95% R.H. Storage: -30°C to +80°C
Primary Power	115/230VAC, 48-62Hz AMC-8 (25W); AMC-32 (85W)
Size and Weight	
AMC-8	1.75H x 19W x 14D in.,8 lbs.(3.6Kg)
AMC-16, AMC-32	3.5H x 19W x 15.5D in., 17 lbs.
Line Filters	>40dB attenuation 14KHz-150MHz

SPECIAL FEATURES	
Monitoring	Indicating fuseholders display status of primary power circuits
Safety	Fuse and overload protection. HV points covered and labelled.
Components	Solidstate circuits throughout
Construction	Aluminum alloy chassis with stainless steel hardware
Overload Protection	Front-end devices prevent circuit failure from high RF voltages

ACCESSORIES AND ORDERING INFORMATION

AMC-8	Eight-Output Multicoupler	50-ohm operation
AMC-16	16-Output Multicoupler	50-ohm operation
AMC-32	32-Output Multicoupler	50-ohm operation
Optional Filters*	**/F2** Low pass **/F4** Broadcast Stopband **/F5** Bandpass 2-32MHz	
AMC-8/70U	Eight-Output Multicoupler	70-ohm operation
AMC-16/70U	16-Output Multicoupler	70-ohm operation
AMC-32/70U	32-Output Multicoupler	70-ohm operation
Optional Filters*	**/F1** Bandpass 2-32MHz **/F2** Low Pass **/F4** Broadcast Stopband	

* For additional data on receiving filters see Product Bulletin 1B03214.

BSP-1/2/3	Bridging Speaker Panel	Product Bulletin 1B03215
LMC-8/16/32	LF/MF Antenna Multicoupler	Product Bulletin 1B03207
VMC-8	VHF Antenna Multicoupler	Product Bulletin 1B03212
VRA Series	Vertical Receiving Antenna	Product Bulletin 1B03201

2B03211	90-day Initial Spare Parts	**2C03211**	One-year Operating Spare Parts
2D03211	Two-year Maintenance Spare Parts	**2F03211**	Replace Modules
3A03211	Technical Manual	Operation/Installation/Maintenance	

The Technical Materiel Corporation
Communication Engineers

700 FENIMORE ROAD
MAMARONECK, NEW YORK 10543 U.S.A.
Phone: 914 698 4800 Telex: 137 358 TECHMAT MECK

TMC Agent/Representative: