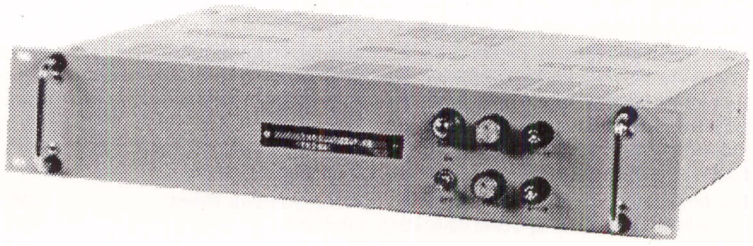
Receiving Antenna Multicoupler

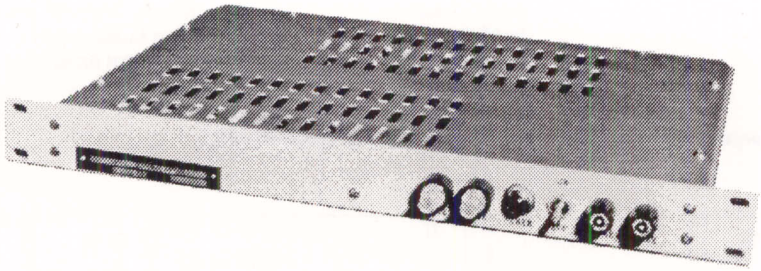
Models AMC-8, AMC-16, AMC-32

Product Bulletin 110303B

- *Broadband Multiple-Output*
- *Rugged, Solid State Construction*
- *Minimal Noise Level*
- *10kHz to 40MHz Operation*
- *Multiple Input Filtering*
- *Excellent for RF Distribution*



Models AMC-16 and AMC-32 Multicoupler



Model AMC-8 Multicoupler

Antennas are what usually limit the capabilities of a typical receiving station. Their cost is probably higher than anyone figured and more than likely they take up more area than is available. TMC multicouplers were designed to solve both problems. They lower the operating costs of a station and keep the capital cost of antenna systems at an acceptable level by enabling one common receiving antenna to feed as many as thirty-two communications receivers at the same time. This is done with no loss in signal strength! In fact, there is a nominal 2dB gain for each output and isolation is better than 55dB between receiver ports. Added features allow the cascading of multicouplers.

In the event that fewer than 32 receivers are used, TMC has a number of multicouplers to choose from which feature four, eight, twelve or sixteen outputs each. Even the frequency range can be extended in a single unit to include broadband coverage simultaneously in the LF, MF and HF region. Off-band rejection of broadcast or other interfering signals is handled with ease. Front-end filtering takes care of that type of spurious and further protection is afforded by front-end diodes. Each unit is adjusted at the factory before shipment so it can be placed into immediate service upon arriving in the field. All that is required is a power source and a single antenna for proper operation.

The only operating control is the power switch on the front panel. Since the units are completely broadbanded, no other controls are needed. This is why thousands of TMC multicouplers are in service today. They are virtually transparent to any received signal and once installed, can be left alone to provide years of continuous service. In fact, both the bench-test and field-proven MTBF rating for these units is better than 20,000 hours, which is more than two years of continuous duty under normal working conditions. They are built to last in even those hot equipment rooms so common throughout the world.

All TMC multicouplers are designed with similar features to standardize on parts between units and to simplify the routing of coaxial cabling. Primary power, RF antenna input and receiver output connections are all conveniently made at the rear panel using one of many types of standard connectors. Hardware is stainless steel and internal components are positioned to allow front panel mounting of any unit using only four standard screws without track slides.

GENERAL SPECIFICATIONS

Frequency Range 10kHz-40MHz no filter (See filter options)
Number of Outputs 8, 16 or 32 (Fixed output)
Input/Output Impedance Nominal 50 ohms, unbalanced. Optional 70 ohms, unbalanced. BNC connectors are standard.
Insertion Gain Nominal +2dB over operating range.
Frequency Response +2.0/-1.0dB in passband
Off-Band Rejection Minimum -60dB, DC-1.4MHz, 46-1000MHz depending on input filter
Noise Figure Nominal +7dB
Output/Output Isolation Greater than -40dB
Output/Input Isolation Greater than -55dB
Phase Differential +/-1 degree max. output-output
Desensitization For a 4-volt peak input - 10% removed from f_o - a 100 microvolt received signal drops less than 3dB.
Intermodulation Distortion Second order is greater than -60dB for a 0.4-volt input; Third order is greater than -65dB.
VSWR Output is better than 1.2-to-1; Input is better than 1.5-to-1. Input/output 1.5-to-1 (No filter)
MTBF Nominal 20,000 hours (actual); 11,500 hours (calculated).
Input Filtering Selection of any one of three types for low-pass, high-pass and broadcast stopband service. Special-purpose filters can be installed, tailored to specific operating conditions.

OPERATING PARAMETERS

Cooling Convection, no fans or moving parts.
Ambient Conditions 0°C to +50°C; Up to 95% RH.
Storage -30°C to +80°C
Primary Power 115/230VAC, 48-400Hz, single phase.
Power Consumption AMC-8 (25 W), AMC-16 (65W) AMC-32 (85W).
Line Filters Min 40dB attenuation, 14KHz-150MHz
Size and Weight

AMC-8	1.75H x 19W x 14D inches, 8 lbs
AMC-16	3.5H x 19W x 15.5D inches, 14 lbs
AMC-32	3.5H x 19W x 15.5D inches, 17 lbs

SPECIAL FEATURES

Monitoring Indicating fuseholders display primary power status
Safety Fuse and front-end overload protection, preventing circuit failure from high RF voltages at the input. High voltage points are covered and labelled.
Components and Construction Totally solid-state circuits mounted to an aluminum alloy chassis. External hardware is stainless steel. Track slides are optional and due to weight distribution, are usually not required.

Ordering Information

AMC-8	**Receiving Multicoupler, 8-output**
AMC-16	**Receiving Multicoupler, 16-output**
AMC-32	**Receiving Multicoupler, 32-output**
Example:	**AMC-32/5F4** (See optional filters below)

Optional RF Input Filters

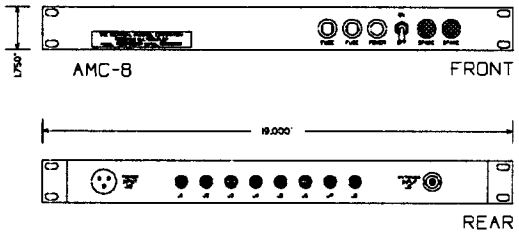
Note: x=5 for 50-ohm and x=7 for 75-ohm operation
Multiple filters can be installed in the signal path, optomized for specific operating frequency bands.

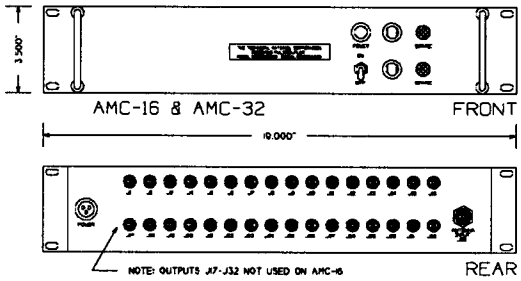
/xF0	No input filter
/xF2	Low-pass (f_c=2MHz) input filter
/xF3	Bandpass (2-32MHz) input filter
/xF4	Broadcast stopband input filter
/xF5	High-pass (f_c=2MHz) input filter
/xF[ ][ ]	Customer-specified input filter(s)

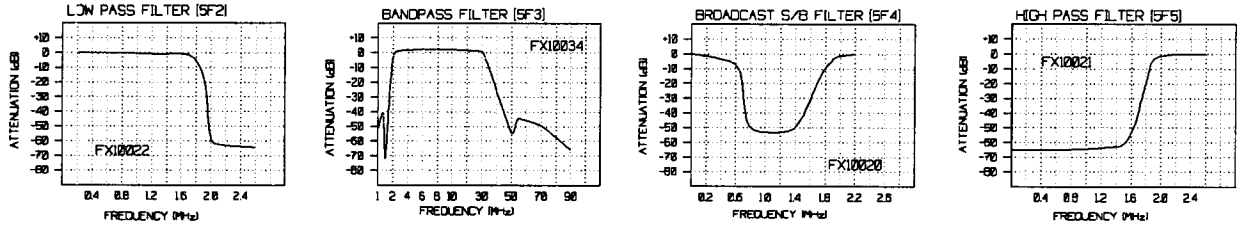
Related Equipment

AMC-21-[ ]	Expansion Antenna Multicoupler
AVA-[1][2][3][4]	Active LF/MF/HF/VHF Antennas
DAC-[ ]	Dipole/Doublet Antenna Coupler
RAC-[ ]	Receiving Antenna Coupler (Balun)
RFP Series	External filter for high-RF sites
VMC-8	VHF Antenna Multicoupler
VRA Series	LF/MF/HF Vertical Antennas

Specifications are subject to change without notice - Please verify accuracy with TMC before ordering.







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