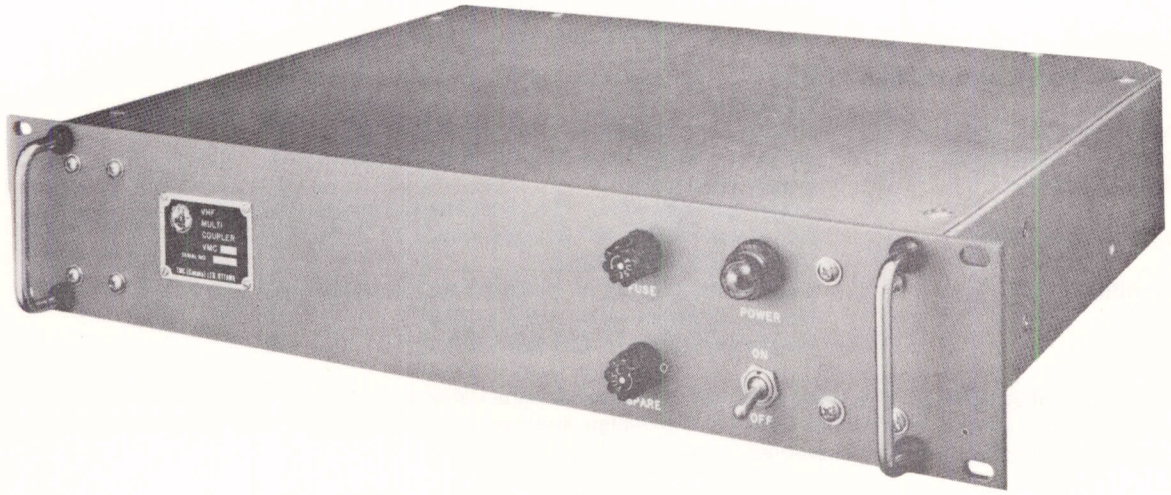
VHF ANTENNA MULTICOUPLER
Model VMC-8

TECHNICAL BULLETIN 204-4422

- *20MHz to 200MHz*
- *Completely Solid State*
- *Low noise level*
- *Wide dynamic range*
- *Eight (8) outputs*



The VHF Multicoupler, Model VMC-8, is a broadband antenna coupling device which connects eight VHF receivers to a common antenna. It consists of a bandpass filter, broadband transistorized preamplifier, eight individual output amplifiers, and a power regulator. The unit is designed for maximum isolation between receivers and from receiver to antenna. The VMC-8 is capable of operating over a frequency range of 20 MHz to 200 MHz; the specific bandwidth is determined by the filter and preamplifier assembly selected. The standard model is the VMC-8-108/174 which covers the band 108-184 MHz.

The preamplifier has a low noise figure and large signal handling capability. It has greater than 3 db overall insertion gain with minimum intermodulation. In addition, it provides good VSWR over the frequency range.

The VMC-8 is designed for mounting in a standard 19-inch rack. The power switch, lamp and fuses are located on the front panel. All connectors are located on the rear panel. The standard VMC-8 is provided with N type connectors; other connectors or adaptors can be supplied.

The unit is designed for fast repair in the field. The filter/preamplifier, the eight output modules, the power divider and the power supply regulator are replaceable assemblies.

TECHNICAL SPECIFICATIONS
VMC-8

OPERATING PARAMETERS	
FREQUENCY RANGE	20MHz to 200MHz, specific bandwidth determined by filter.
NUMBER OF OUTPUTS	Eight
INPUT/OUTPUT IMPEDANCE	50 ohms unbalanced
GAIN	Greater than 3 db
NOISE FIGURE	Less than 8 db
ISOLATION	
OUTPUT TO OUTPUT	Greater than 60 db
OUTPUT TO INPUT	Greater than 60 db
INTERMODULATION DISTORTION	All products at least 55 db down when two 0.25 volt r.m.s. signals are applied to the antenna input.
CROSS MODULATION	With a desired signal of up to 100 volts r.m.s., an interfering signal 5% removed and modulated 30% at an amplitude of 52 db above that of the desired signal, shall not produce more than 1% cross modulation.
VSWR	
INPUT	Better than 1.5:1 118-162 MHz and 2.0:1 108-174 MHz
OUTPUT	Better than 1.5:1 118-162 MHz and 2.0:1 108-174 MHz
ENVIRONMENTAL AND INSTALLATION	
COOLING	Convection.
OPERATING CONDITIONS	0 to 50°C; up to 90% relative humidity at MSL
STORAGE CONDITIONS	-30°C to +80°C; up to 95% humidity at MSL
POWER SUPPLY	Totally solid-state 115 or 230 volts AC ± 10%, 50/60/400Hz, single-phase, 25 watts
SIZE AND WEIGHT	3.5" (8.9cm) high x 19" (48.3cm) wide x 14.5" (36.9cm) deep 13 pounds/5.9 kg installed
SHIPPING DATA	Commercial packing for domestic U.S. (air) shipment. One (1) container — 21" x 8.5" x 26.5" Total weight/cube — 23 pounds/2.8 cu. ft.

ACCESSORY PRODUCTS are described in sections 4-9 of the General Catalog and include RF/antenna, terminal, data, connector and power equipment. **TECHNICAL SERVICES** in design, engineering, training, and related areas are described in section 10. **OPTIONS** are lighted after TMC product in part A of the Price List.

Specifications Are Subject to Change Without Notice

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