

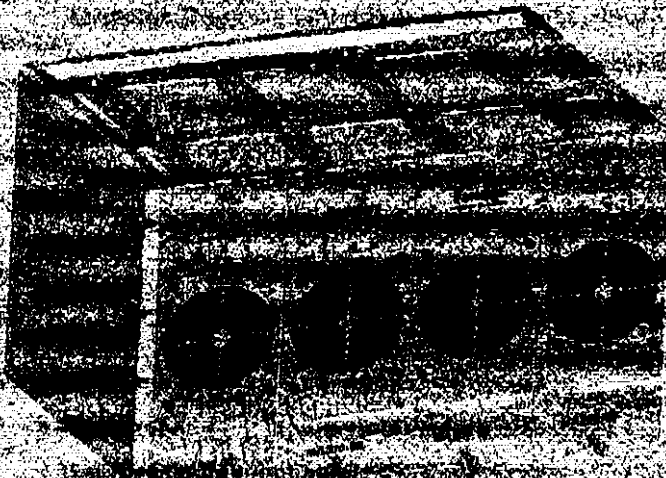
**APPENDIX B**  
**OPERATING/SERVICE/INSTRUCTION MANUAL**

# Paradigm

Wireless Communications

MR800-4

## MULTI-CHANNEL INTELLIGENT COMBINER SYSTEM



- Low Insertion Loss
- Easy Maintenance
- Intelligent Combining
- Modular Plug-in Design
- Microprocessor Controlled
- Heavy Duty DC Connectors
- RS485 Interface
- FORM-C Contacts

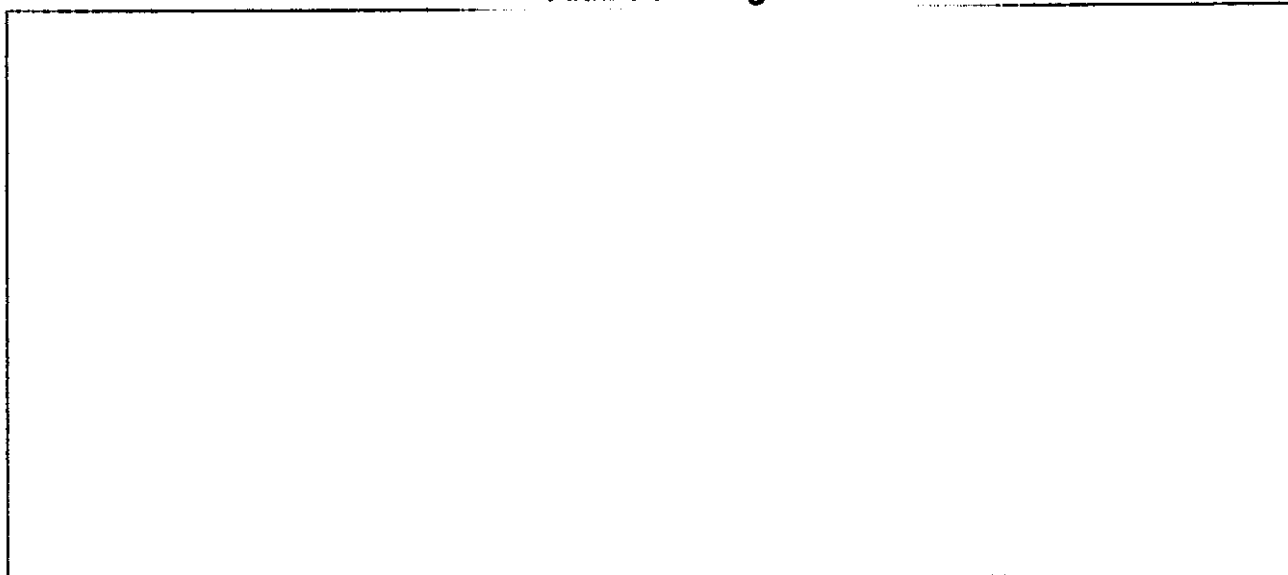
The MR800-4 is Paradigm's Multi-Carrier intelligent combiner system.  
The Paradigm's combiner system can combine 1,2,3, or 4 MGRA modules to  
Create up to 350 Watt Multi-carrier power amplifier solution.

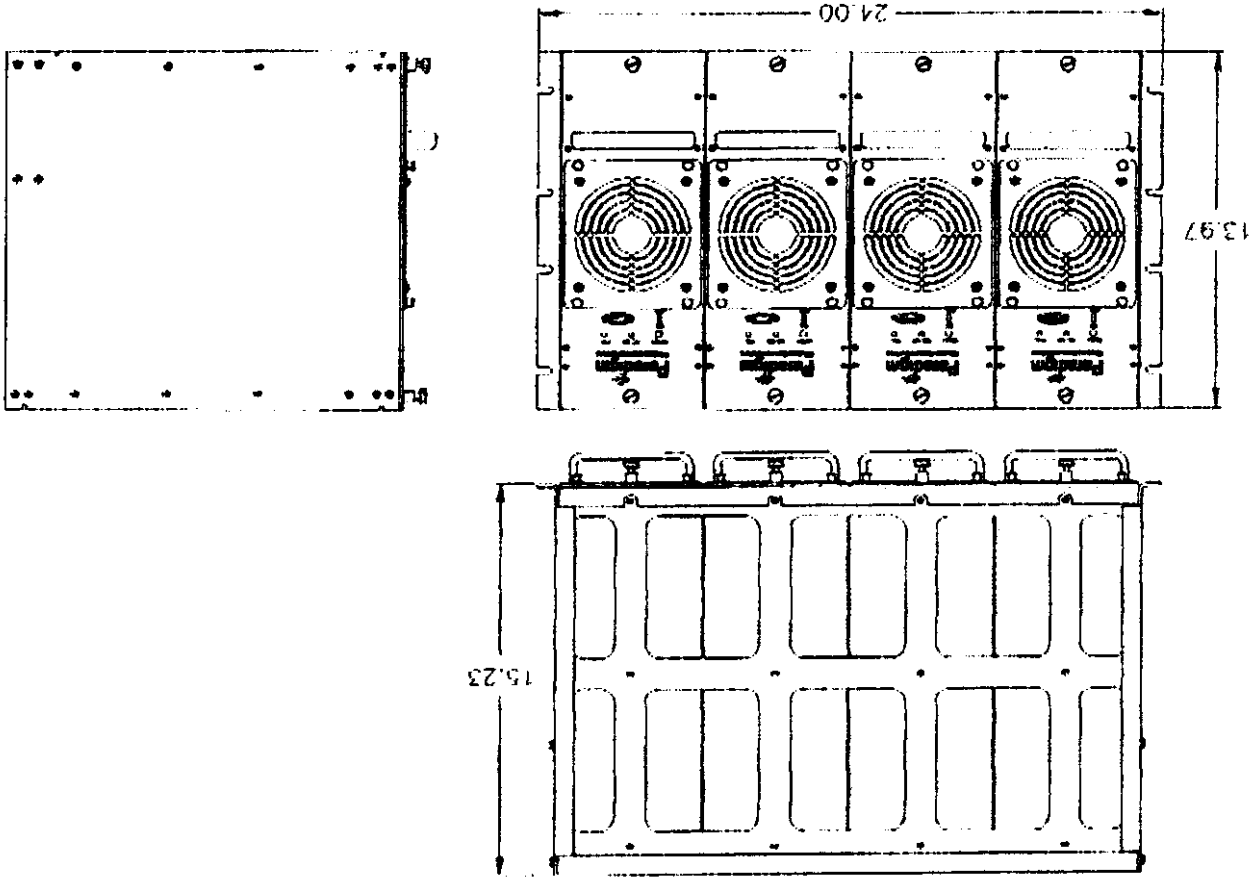
Paradigm Wireless Communications  
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Phone 949-260-1840 Fax 949-260-0883  
<http://www.pwcnet.net>

# TECHNICAL SPECIFICATIONS

<b>MS800-200</b>	
<b>MULTI-CHANNEL AMPLIFIER SYSTEM</b>	
<b>FREQUENCY RANGE</b>	869-894 MHz
<b>POWER OUTPUT</b>	50 W Average (MIN) 1 Module in rack 100 W Average (MIN) 2 Module in rack 150 W Average (MIN) 3 Module in rack 200 W Average (MIN) 4 Module in rack
<b>INTERMODULATION DISTORTION</b>	-65dBc(MAX)
<b>RF GAIN</b>	51.5 dB (MIN) 1 Module in rack 54.5 dB (MIN) 2 Module in rack 56.3 dB (MIN) 3 Module in rack 57.0 dB (MIN) 4 Module in rack
<b>OUTPUT PORT RETURN LOSS</b>	14 dB (MIN)
<b>OUTPUT PROTECTION</b>	MISMATCH PROTECTED(ISOLATOR)
<b>INPUT PORT RETURN LOSS</b>	14 dB (MIN)
<b>HARMONICS</b>	< -45dBc @2 <sup>nd</sup> < -60dBc @3 <sup>rd</sup> < -60dBc @ Out of Band
<b>DUTY CYCLE</b>	CONTINUOUS
<b>DC INPUT POWER</b>	+27 VDC ± 1 VDC, 120A (MAX)
<b>COOLING</b>	FORCED AIR (Internal Fan)
<b>OPERATING TEMPERATURE</b>	0°C TO +60°C
<b>STORAGE TEMPERATURE</b>	-40°C TO +85°C
<b>CONNECTOR DC</b>	Studs
<b>FORM C CONTACT</b>	8-terminal Block
<b>CONNECTOR ALARMS</b>	25-Pin Female D-sub
<b>CONNECTOR (RF OUTPUT)</b>	Type N Female
<b>CONNECTOR (RF INPUT)</b>	SMA Female
<b>PHYSICAL DIMENSIONS</b>	REFER OUTLINE DRAWING

Outline drawing





### Circuit Description

The MS800-200 system consists of four MA800-60 amplifiers and one MR800-4 splitter/combiner 4-way rack. The MA800-60 is a linear, feed-forward power amplifier that operates from 869 MHz to 894 MHz. The MA800-60 amplifier modules can each provide 60 watts of power and function completely independently of each other. The amplifier modules are designed for parallel operation. The system is housed in the MR800-4 rack, which holds up to four MA800-60 amplifiers to produce up to 200 watts output. The MR800-4 rack contains an RF power splitter/combiner and a summary logic module that monitors functional status of all plug-in amplifiers.

### MS800-200 system

