

High Power Speaker Arrays

MN-GVD Series, MN-GVM Series



MN-GVD Series
Directional
Speaker Array



MN-GVM Series
Omnidirectional
Speaker Array

Overview

EST brand High Power Speaker Arrays (HPSA) produce highly intelligible audio for the most demanding outdoor applications. These units are available in a number of different configurations and can, depending on terrain/weather, provide Mass Notification/Emergency Communication (MNEC) or other audio functions for areas as large as a radial mile.

All units operate on 24 VDC, and can be charged from line power and/or solar arrays. HPSAs are interfaced to, and controlled by, the EST3-Sixty family of MNEC and Life Safety System solutions.

MN-GVD Series are made up of a single or multiple 400-watt maintenance-free speakers that can be aimed where sound energy is needed. These rugged re-entrant units are made of durable, powder-coated spun aluminum that will provide many years of outstanding performance. Units can be ordered with 90, 180, 270 or a full 360-degree horizontal angle of dispersion.

MN-GVM Series comprises single or multiple levels of omnidirectional 800-watt maintenance-free speakers. Aesthetically pleasing housings are color-impregnated fiberglass units that blend into the background until they are needed. Then they generate unparalleled omni-directional and highly-intelligible audio power.

Standard Features

- Rugged, proven performance
- Modular, easily-serviced electronics
- Clean, reliable and supervised interfaces into the EST3-Sixty platform
- Maintenance-free speakers
- Multiple mounting methods

Applications

- Universities & colleges
- Military bases
- Outdoor commercial facilities
- Industrial complexes
- Weather warning systems
- Air fields
- Stadiums
- Stadiums
- Golf courses
- Camp grounds
- Amusement parks
- Open mines
- Flood warning systems
- Civil defense systems

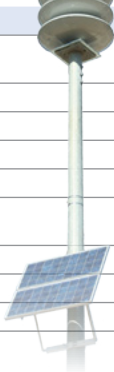
Installation

For optimum sound dispersion, HPSA speakers should be mounted 45-55 ft. (13.7-16.6m) above grade. Poles, pole-mounting kits, wall mounting brackets and roof-mount mounting kits are available. Electronic Control Cabinets (ECCs) are mounted under or near the speakers.

Controls

Specifications

Omni-directional MN-GVM Series		
Acoustical Characteristics		Rating
MN-GVM08		800 watts
MN-GVM16		1600 watts
MN-GVM24		2400 watts
MN-GVM32		3200 watts
Electrical		
System Operating Voltage		24 V DC
Input Current		36 to 144 Amps DC
Battery Charger Voltage (Input)		120 VAC
Environmental		
Operating Temperature		-40° F to 140° F (-40° C to 60° C)
Storage Temperature		-85° F to 257° F (-65° C to 125° C)
Humidity		0%-100% (non-condensing)
Size and Weight	MN-GVM16	MN-GVM32
Control Cabinet (L x W x H)	24 x 24 x 8 inches (61 x 61 x 20 cm)	36 x 24 x 8 inches (91 x 61 x 20 cm)
Battery Cabinet (L x W x H)	24 x 24 x 8 inches (61 x 61 x 20 cm)	24 x 24 x 8 inches (61 x 61 x 20 cm)
Siren Dimensions (Diameter x Height)	53 x 56 inches (135 x 142 cm)	53 x 88 inches (135 x 224 cm)
Speaker Weight	490 lbs (222 Kg)	790 lbs (358 Kg)
Control Weight	200 lbs (91 kg)	220 lbs (100 kg)



Electronic Control Cabinets (ECCs) for the MN-GVD and MN-GVM series speaker arrays are lockable, NEMA 4X enclosures that are available in two physical sizes. ECCs are factory assembled with one to eight 400-watt audio amplifiers and support electronics. The units are powered from rechargeable batteries that are kept in ready state by a line-powered and/or solar-powered regulated charging system.

Internal LEDs provide for quick equipment status information. Amplifiers are individually fused and each is equipped with hi/low output selector switches used for system maintenance and deployment.

ECCs are interfaced to the EST3-Sixty via supervised circuits and electronics. This interface allows system operators to easily control the HPSAs, as well as interior MNEC systems – all from one location.

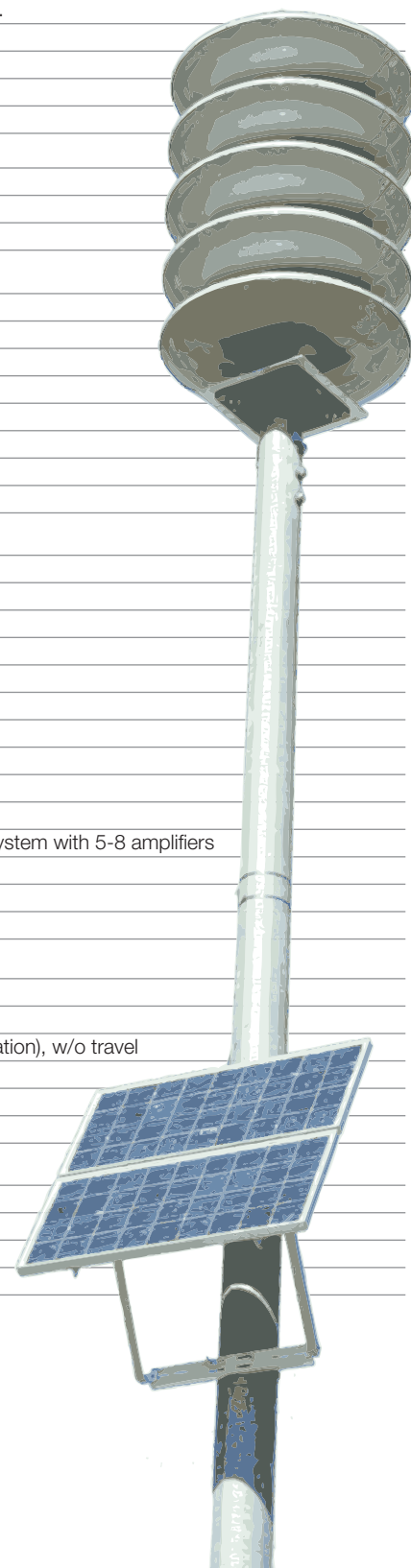
Rechargeable batteries are enclosed in separate, ventilated, lockable NEMA 4X enclosures that are fixed to the ECC.

ECCs and battery enclosures are equipped with tamper switches that are monitored by the EST3-Sixty.

Directional MN-GVD Series		
Acoustical Characteristics		Rating
MN-GVD04	90 degrees, one level	400W 1 horn
MN-GVD08	180 degrees, one level	800W 2 horns
MN-GVD12	270 degrees, one level	1200W 3 horns
MN-GVD16	360 degrees, one level	1600W 4horns
MN-GVD32	360 degrees, two levels	3200W 8 horns
Electrical		
System Operating Voltage	24 VDC	
Input Current	18 to 144 Amps DC	
Battery Charger Voltage (Input)	120 VAC	
Environmental		
Operating Temperature	-40° F to 140° F (-40° C to 60° C)	
Storage Temperature	-85° F to 257° F (-65° C to 125° C)	
Humidity	0% to 100% (non-condensing)	
Size and Weight	MN-GVD16	MN-GVD32
Control Cabinet (L x W x H)	24 x 24 x 8 inches (61 x 61 x 20 cm)	36 x 24 x 8 inches (91 x 61 x 20 cm)
Battery Cabinet (L x W x H)	24 x 24 x 8 inches (61 x 61 x 20 cm)	24 x 24 x 8 inches (61 x 61 x 20 cm)
Siren Dimensions (L x W x H)	64 x 64 x 20 inches (163 x 163 x 102 cm)	64 x 64 x 40 inches (163 x 163 x 51 cm)
Speaker Weight	315 lbs (143 Kg)	570 lbs (259 Kg)
Control Weight	200 lbs (91 kg)	220 lbs (100 kg)

Ordering Information

Model	Description
Speaker Arrays (select interfaces, batteries, mounting equipment, accessories and optional services below)	
Speaker Arrays	Select interfaces, mounting equipment and optional equipment/services/warranties below
MN-GVD04	HPSA Exterior directional high-power speaker array, 400 watt. 90 degree coverage.
MN-GVD08	HPSA Exterior directional high-power speaker array, 800 watt. 180 degree coverage.
MN-GVD12	HPSA Exterior directional high-power speaker array, 1,200 watt. 270 degree coverage.
MN-GVD16	HPSA Exterior directional high-power speaker array, 1,600 watt. 360 degree coverage.
MN-GVD32	HPSA Exterior directional high-power speaker array, 3,200 watt. 360 degree coverage.
MN-GVM08	HPSA Exterior omni directional high-power speaker array, 800 watt.
MN-GVM16	HPSA Exterior omni directional high-power speaker array, 1,600 watt.
MN-GVM24	HPSA Exterior omni directional high-power speaker array, 2,400 watt.
MN-GVM32	HPSA Exterior omni directional high-power speaker array, 3,200 watt.
Interfaces	
MN-GVINTD4	HPSA to EST3 interface kit (hard wire).
MN-GVZINTLE	HPSA to Local Physical Ethernet Interface kit.
MN-GVZINTWE	HPSA to Wireless Encrypted Ethernet Interface kit.
Mounting Equipment	
MN-GVPMO	HPSA Pole mount kit for MN-GVD Directional HPSA
MN-GVPMO	HPSA Pole mount kit for MN-GVM Omni-directional HPSA
MN-GVRMAD	HPSA Roof-mount apparatus for MN-GVD Directional HPSA
MN-GVRMAM	HPSA Roof-mount apparatus for MN-GVM Omni-directional HPSA
MN-GVSP1	HPSA 2-piece steel pole
MN-GVWBD1	HPSA Wall-mount bracket for MN-GVD Directional HPSA
MN-GVWBM1	HPSA Wall-mount bracket for MN-GVM Omni-directional HPSA
MN-GVWP1	HPSA wood pole
Options & Replacement Parts	
MN-GVAMP4	HPSA 400 Watt replacement amplifier
MN-GVANT1	HPSA Stand-Alone Omni-directional antenna kit
MN-GVANT2	HPSA Stand-Alone Directional antenna kit
MN-GVBATEX	HPSA Extra battery cabinet (w/o batteries)
MN-GVBT1	HPSA 24v battery compliment (2 12V batteries)
MN-GVBTH1	HPSA Battery heating system (requires 120 VAC)
MN-GVHTR1	HPSA Cabinet heating element (requires 120 VAC)
MN-GVPS25	HPSA Replacement power supply and charger
MN-GVSOL1	HPSA solar charging array (under 1600 watt) with power equalizer and regulator
MN-GVSOL2	HPSA solar charging array (over 1600 watt) with power equalizer and regulator
MN-GVSPTP1	HPSA Replacement speaker circuit transient protector (4 circuits) 2 required for any system with 5-8 amplifiers
MN-GVTST1	HPSA Cabinet high/low temperature sensor
MN-GVWASP1	HPSA Wireless Ethernet antenna surge protector
MN-GVWTN18	HPSA Cabinet coax whip
Optional Services	
MN-GVCOM1	HPSA site commissioning - 2 days max 4 HPSA, w/o travel
MN-GVCON1	HPSA Replacement 24 VDC contactor
MN-GVOSS1	HPSA On-site standard installation (excluding pole, wall bracket or room mount installation), w/o travel
MN-GVST1	HPSA On-site training, w/o travel
MN-GVSV1	HPSA Site verification/assessment, w/o travel
MN-GVTRVL1	Travel expenses
Extended Warranties	
MN-GVD32EXW	HPSA 2nd year extended warranty 3200 watt MN-GVD series
MN-GVD416EXW	HPSA 2nd year extended warranty 400-1600 watt MN-GVD series
MN-GVM2432EXW	HPSA 2nd year extended warranty 2400-3200 watt MN-GVM series.
MN-GVM816EXW	HPSA 2nd year extended warranty 800-1600 watt MN-GVM series





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