

Amplifier Models: V250, V150, V100, V60, V35
Wall-Mount Amplifier Models: WV250, WV150, WV100
Mixer Model: VMIX



Power Vector Series Modular Amplifiers & Mixers

- CONVENIENT SIGNAL PROCESSING
- INPUT FLEXIBILITY
- MORE POWER!

BOGEN

Modular Flexibility



Wide Selection of Advanced Plug-In Modules

Bogen's new advanced input modules provide a wide range of input types allowing for custom configuration of inputs - in both type and number - for a particular application. Modules are fully-featured for their application, many with Bass/Treble, Gain, Music Ducking, Mute Send, and Mute Receive. Mix and match a variety of modules to meet your specific installation needs. Each of Bogen's modules support different signal-source/processing requirements. Included interface features are: balanced and unbalanced inputs; stereo or mono; telephone systems/PBXs; transformer-isolated; microphones; tone generator; and bridging.

Signal-Processing Output Modules

Bogen's new output modules offer a cost effective and convenient way to add specific signal processing capability into a system. These modules automatically insert themselves into the audio signal path and eliminate the need for external wiring as well as accessory outboard equipment. The selection includes an ambient noise sensor, compressor/limiter, and parametric equalizer. Each Power Vector amplifier accepts up to two signal-processing output modules. The amplifier automatically detects the presence of an installed signal-processing output module, and automatically inserts it into the audio signal path of the amplifier. All connections are done internally, so there is no need for patch cords to connect to the inserts. When two output modules are installed, the signal processing effects are cascaded. In addition, each output module includes an unbalanced input that is controlled by the amplifier's input control so an input is not forfeited when an output module is used.

Output modules afford two other benefits:

- (1) the effects insert jacks are still available for use by external processing equipment.
- (2) the signal processing output modules act on the signal on the raw mix bus signal before any other user controls (such as volume, bass, and treble) can affect it. This then ensures that signal level dependent processors, such as the Compressor/Limiter and the Ambient Noise Sensor modules, perform as intended regardless of front panel control changes (excluding input volume controls).

Signal-Processing Output Modules

Automatically insert themselves into the mix bus signal path leading to the power amp stage when installed.

RELAY INPUT/OUTPUT - RIO1S



- Transformer-isolated, balanced line-level input
- 600-ohm or 10k jumper selectable input impedance
- 8-ohm, 750mW output
- Input and output level controls
- Relay responds to selectable priority level
- External control of priority muting
- N.O. or N.C. relay contacts
- Input can be muted from higher priority modules, with signal fade back
- Output can gate with relay priority level
- Screw terminal strips
- RJ11 connection with line output and dedicated N.O. relay contact

AMBIENT NOISE SENSOR - ANS1R



ANS1R
with Sensor
Microphone

- Maximum Gain control
- Ramp Speed control
- Activity Threshold control
- Ambient MIC input threshold control
- Stereo AUX input (*summed mono*)
- AUX level input control
- Gradual fade back from mute
- Connect up to 4 sensor mics (*1 included*)
- Mutable input (*lowest priority only*)
- RCA connectors

Accessories

ANS500M Sensor Microphone
(One included; additional available)



COMPRESSOR LIMITER - CMP1R



- Compressor Ratio control
- Threshold control
- Make-up Gain control
- Bypass switch
- Unbalanced input
- Gradual fade back from mute
- Mutable input (*lowest priority only*)
- RCA connector

PARAMETRIC EQUALIZER - PEQ1R



- 2 full parametric bands
- Frequency control
- 'Q' bandwidth control
- Gain control
- Bass and Treble control
- Unbalanced input
- Bypass switch
- Mutable input (*lowest priority only*)
- Gradual fade back from mute
- RCA connector

FRONT PANEL

Signal/Clip Indicators

A two-color LED indicates the audio activity for each of 8 input channels.

Green - The input's signal is present on mix bus.

Red - The channel's input is being overdriven.

Bass & Treble Controls

Select the amount of cut or boost of bass frequencies below 100 Hz and treble frequencies above 10 kHz (bypassable).

LED Output Meter

This 11-segment LED meter monitors the output signal level of the power amplifier or the mixer.

Power Indicator & Switch

An LED indicates whether the amplifier power status is on or off. A rocker-type switch applies or removes power to the amplifier.



8 Independent Inputs

Each input source is individually controlled by a corresponding volume control knob for complete system customization.

Average/Peak Switch

The Power Vector can register the average or peak level of the output signal on the 11-segment LED meter.

Master Volume Control Knob

Controls overall volume level of the mixed input signals. The control is motorized and can be adjusted manually or by an optional remotely mounted control panel.

REAR PANEL

AC Receptacle

Grounded, unswitched power receptacle conveniently provides a maximum 500W capacity for external equipment.

Trans Out/ Direct Out Switch

Amplifier can be used with 70V, 25V, and 8-ohm speaker systems via its output transformer or with low-impedance speakers via direct drive (4Ω min.).

Lo-Cut Switch

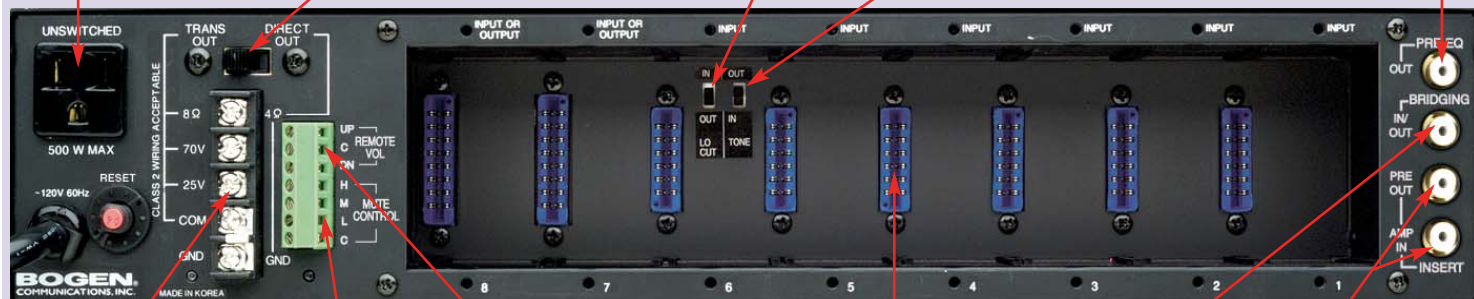
This slide switch allows roll off of frequencies below 125 Hz for protecting horn speakers.

Tone Control Bypass Switch

This slide switch allows the effects of the Front Panel Bass and Treble controls to be bypassed.

Pre-EQ Jack

Output jack provides unbalanced, buffered output signal "post" all unit signal processing, but "pre" any external signal processing equipment connected to the Insert jacks.



Speaker Output Barrier Strip

A 5-position barrier strip, with clamping washers, provides connections for speaker loads.

Mute Control Terminals

These terminals make the priority buses available externally for linking Power Vectors together into larger systems or for external control.

Remote Volume Control Terminals

Connect the optional Remote Volume Control Panel (RVCP) to these terminals to provide remote operation of the Master Volume Control knob.

Module Bays

Each of 8 module bays can accommodate advanced plug-in input modules. Bays 7 & 8 also accept signal-processing output modules. Up to 4 levels of priority can be programmed between modules.

Bridging Connector

Allows system expansion by linking multiple Power Vectors' mix buses together.

Signal Processing Insert Jacks

Allows external equipment to be inserted between the pre-amp output and the power amp input.

Performance Specifications

	Power Vector Amplifiers, Rack-Mount (V-Series)	Power Vector Amplifiers, Wall-Mount (WV-Series)	Power Vector Mixer
MODELS: (Model Number: Power Output Rating**)	V250: (250W / 340W*) V150: (150W / 200W*) V100: (100W / 140W*) V60: (60W / 85W*) V35: (35W / 45W*)	WV250: (250W / 340W*) WV150: (150W / 200W*) WV100: (100W / 140W*)	VMIX
Frequency Response Transformer: Direct:	45 Hz-20 kHz; 0/-2 dB 20 Hz-20 kHz; 0/-1 dB	45 Hz-20 kHz; 0/-2 dB 20 Hz-20 kHz; 0/-1 dB	+/- 1 dB (20 Hz to 20 kHz) —
Distortion Transformer: Direct:	0.5%** 0.1%*** (.05% typical @ 1 kHz)	0.5%** 0.1%***	0.01%† —
Signal-to-Noise† Fundamental: With AUX Module: With MIC Module: With TEL Module:	-94 dB -70 dB -60 dB -70 dB	-94 dB -70 dB -60 dB -70 dB	-99 dB -94 dB -64 dB -92 dB
Tone Controls Bass Frequency: Treble Frequency: Low Cut Frequency:	100 Hz (+/- 10 dB minimum) 10 kHz (+/- 10 dB minimum) 125 Hz (@ -6 dB/octave)	100 Hz (+/- 10 dB minimum) 10 kHz (+/- 10 dB minimum) 125 Hz (@ -6 dB/octave)	100 Hz (+/- 10 dB minimum) 10 kHz (+/- 10 dB minimum) 125 Hz (@ -6 dB/octave)
Sensitivity	0.4V (at module bay connector)	0.4V (at backplane connector)	0.4V (at backplane connector)
Output Regulation	2 dB or better, no load to full load	2 dB or better, no load to full load	—
Output Impedance Transformer-Coupled: Direct Coupled: Balanced: Unbalanced:	70V, 25V, 8 ohms (bal or unbal) 4 ohms — —	70V, 25V, 8 ohms (bal or unbal) 4 ohms — —	— — 50 ohms @ -4 dBu, 600 ohms @ -10 dBu, 5 ohms @ -50 dBu 100 ohms
Output Level Balanced: Unbalanced:	— —	— —	Selectable +4, -10, -50 dBu (typical when meter reads "0"); +18 dBu max. 0 dBu (typical when meter reads "0"); + 20 dBu max.
Inserts Insert "OUT" Level: Insert "OUT" Impedance: Insert "IN" Sensitivity: Insert "IN" Impedance:	1 VRMS (@ FRP) 50 ohms maximum 1 VRMS 10k ohms minimum	— — — —	— — — —
Pre-EQ Output (on V Series); Tape Out (on WV Series) Output Level: Output Impedance:	4 VRMS (@ FRP) 50 ohms maximum	4 VRMS (@ FRP) 50 ohms maximum	— —
Signal/Clip Indicator Signal Detect Threshold: Signal Indicator Hold Time: Clip Detect Threshold: Clip Detect Hold Time:	10 mV @ output of module 50 mS green indicator 6V @ output of module 50 mS red indicator	10 mV @ output of module 50 mS green indicator 6V @ output of module 50 mS red indicator	10 mV @ output of module 50 mS green indicator 6V @ output of module 50 mS red indicator
AC Power Receptacle	500W max. power, unswitched	—	500W max. power, unswitched
AC Voltage	120V AC, 60 Hz	120V AC, 60 Hz	120V AC, 60 Hz
AC Current	V250: 5.5A; V150: 3.5A; V100: 2.0A; V60: 1.3A; V35: 0.6A	WV250: 5.5A; WV150: 3.5A; WV100: 2.0A	0.2A
Product Weight	V250: 40 lb.; V150: 35 lb.; V100: 32 lb.; V60: 28 lb.; V35: 24 lb.	WV250: 28 lb.; WV150: 29 lb.; WV100: 27 lb.	15 lb.
Dimensions	17-1/4" W x 3-7/8" H x 14-3/4" D (all models)	WV100/150/250: 14-1/8" W x 21" H BBF: 14-1/2" W x 24- 3/4" H x 3-7/8" D BBS: 16-1/4" W x 26- 3/4" H x 3-7/8" D WMAD: 16-1/4" W x 26- 3/4" H x 1" D	17-1/4" W x 3-7/8" H x 14-3/4" D

* Typical, @ 1 kHz/0.1% THD/4 ohms ** THD+N, Maximum, full bandwidth @ FRP

† Referenced to FRP output level, 20 Hz-20 kHz bandwidth limited

