PULSEAUDIO™

40 Watt Single Channel
AMPLIFIER

PART NUMBER PAV140

Compatible with 70V/100V speakers and systems

pulseaudio1.com | vanco1.com | 800.626.6445

DEAR CUSTOMER

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully before connecting, operating or adjusting this product. Please keep this manual for future reference.

THIS PRODUCT IS 100% INSPECTED AND TESTED IN THE UNITED STATES TO VERIFY PERFORMANCE PARAMETERS.

WARNING

1. Do not install or place this unit in a built-in cabinet, or other confined space without adequate ventilation.

2. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.

3. Do not install near any source of heat, including other units that may produce heat.

4. Do not place unit near flames.

5. Only clean unit with a dry cloth.

6. Unplug unit during lightning storms or when not used for an extended period of time.

7. Protect the power cord from being walked on or pinched, particularly at the plugs.

8. Use unit only with accessories specified by the manufacturer.

9. Refer all servicing to qualified personnel.

FEATURES

The PulseAudio PAV140 is an amplifier that produces 40 Watts with Class-D power that is able to output 70V or 100V. Features two stereo inputs (3.5mm jack for line in and (2) RCA for L&R), one digital input and one balanced MIC input, with integrated ducking functionality, EQ control, and MIC mixing. The MIC input supports three levels with condenser MIC, dynamic MIC and line level audio input. The single output channel supports up to 40W @8ohms and is able to be controlled manually, as well as with IR and RS232. Can be combined with multiple amplifiers within a system, with the ability of controlling each zone individually. The PAV140 is a great solution for any 70v/100v speaker application.

40 Watt Single Channel Amplifier
Part # PAV140

- Mono audio output at 40W
- Switchable between 70V and 100V
- Sixteen ID codes for controlling multiple PAV140 amplifiers in a system
- 3-level MIC input, supports condenser microphone, dynamic microphone and wireless microphone, with ducking or mixing function
- MIC port supports balanced/unbalanced signal, and suppresses external noise effectively
- One 2-channel analog audio inputs and one digital audio input, switchable by button, IR remote & RS232
- Manual volume control
- Bass/Treble controllable via front panel, IR remote & RS232
- Convection cooled, no external fan needed
- LED indicator, for power and working status
- Anti-static case design provides good protection for long-term and stable performance
- Dimensions: 5.12" W x 1.73" H x 5.67" D
- Product Weight: 1.9 lbs

PACKAGE CONTENTS

- PAV140 Amplifier
- (2) Mounting ears with included screws
- (4) Plastic feet
- (2) Pluggable terminal blocks
- (1) RS-232 cable
- (1) DC 24V 2.71A power adapter
- Product Manual

○ PANEL DESCRIPTIONS

FRONT PANEL

BACK PANEL
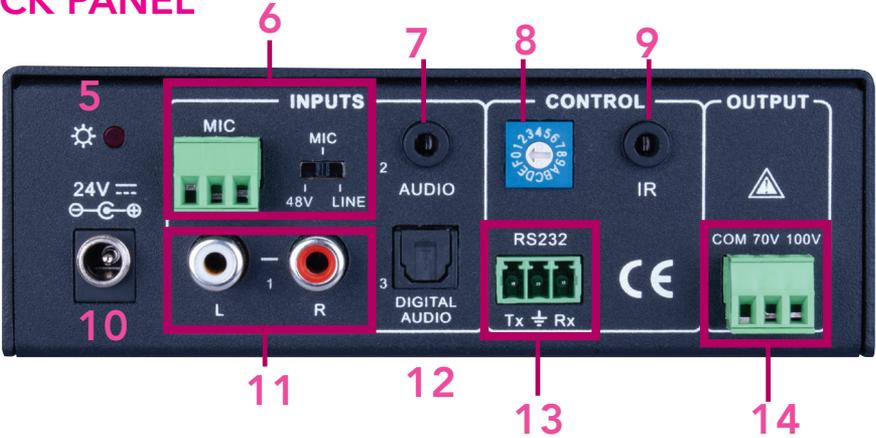
1. Input Selection Button (Toggle)

2. EQ Selection Button (Toggle)

3. Rotary Settings Dial

4. Volume/Level control (can be pushed to mute audio)

5. Power Indictor: Turns red when power is on

6. Microphone Input Port: 3-pole captive screw connector for microphone input; the dial switch on the right side is to select the mirco input kind, including 48V (for condenser microphone), MIC (for dynamic microphone) and LINE (for line audio)

7. Audio Inputs: 3.5mm mini jack for 2 channel audio input

8. ID Code: 16 codes range from 0 to F (hexadecimal) work together with the PC control software

9. IR: To connect with the IR receiver; works together with the IR remote

10. Power Port: To connect with the power adapter (DC 24V)

11. 2xRCA: Dual mono audio inout connected in parallel to 3.5 mm jack

12. Digital Audio Input: Fiber connector for digital audio input (PCM format only), it can be connected with a device with fiber port, such as a Blu-ray player

13. RS-232: 3-pole captive screw connector for serial control. It can be connected with PC or 3rd party controller. Use a 3-pole captive to 9-pin demale D connector and serial control software

14. Speaker Output: Connect 70 volt of 100 volt speakers. COM is for grounding

CONNECT AND OPERATE

70V Wiring
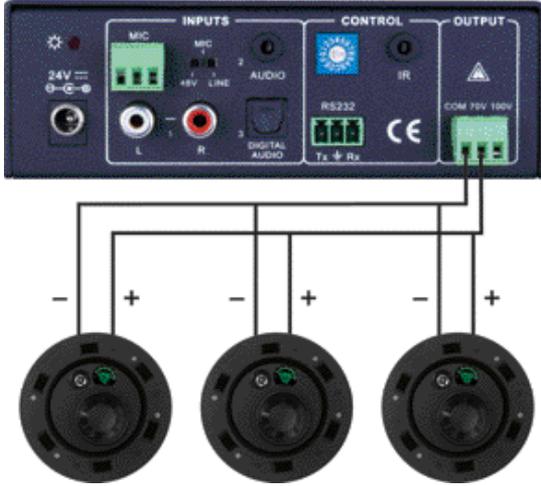
100V Wiring
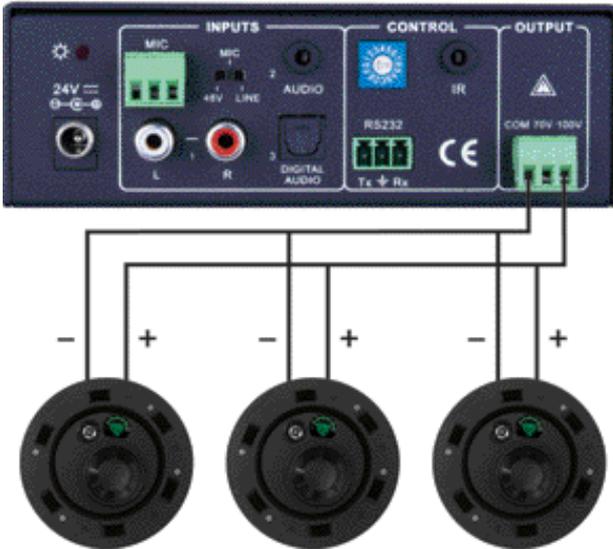
1. Ensure power is off or removed from the PAV140

2. Connect an analog (3.5MM stereo or dual-RCA) and/or digital (optical) audio cable between the audio output of the source device and the appropriate audio input

3. IF USING A MICROPHONE: Move the MIC Input Switch to the appropriate setting and connect using the 3 conductor phoenix connecter based on the type of microphone being used

   a. 48V – 48dB gain with 48V phantom power: When the switch turns to "48V" (It has a good frequency characteristic, high input impedance and high sensitivity in this mode), the MIC input will provide a 48V phantom power. This is usually used for power supply for condenser microphone, Connection is: "+" connects to positive, "-" connects to negative and " " to ground. Note: In this mode, only condenser microphone can be connected

   b. MIC – 48dB gain: When the switch turns to "MIC" (It has a low frequency characteristics, and wide frequency response in this mode). The microphone input is used for connecting a dynamic microphone. There are two different connections:

       i.   Unbalanced connection:

       "+" and " " connect to ground, and "-" connects to signal or "-" and " " connect to ground, and "+" connects to signal.

       ii.   Balanced connection: "+" connects to positive, "-" connects to negative and " " connects to ground.

   c.   LINE – 4dB gain: When the switch turns to "LINE" (It has a low frequency characteristics, and wide frequency response in this mode), the microphone input is used for connecting with normal audio or wireless microphone output. There are two different connections:

       i.   Unbalanced connection:

       "+" and " " connect to ground, and "-" connects to signal or "-" and " " connect to ground, and "+" connects to signal.

       ii.   Balanced connection:

       "+" connects to positive, "-" connects to negative and " " connects to ground.

4. Connect the speakers according to the diagram below

5. OPTIONAL: If using IR with the PAV140-IR (sold separately), connect the IR receiver into the IR IN port of the PAV140

6. OPTIONAL: If using RS232, connect the provided 3-conductor phoenix connector cable into the RS232 port

   a. By default, the RS232 ID selector is set to 0

   b. Setting the ID selector to any of the other values will prevent the PAV140 from accepting any RS232 commands not in the correct format.

7. Connect the power supply into the power input port

8. Power on attached audio devices and test

RS232 CONTROL

Communication Protocol: RS232

Baud Rate: 9600   Data bit: 8   Stop bit: 1   Parity bit: none

Command	Function Description	Feedback Code
1A1.	Switching the audio input to input 1	A: 1
2A1.	Switching the audio to input 2	90Wx2
3A1.	Switching the audio to input 3	180W
0A0.	Mute audio of MIC and line out	Mute
1A0.	Mute audio of MIC	Mute MIC
2A0.	Mute audio of line out	Mute line
3A0.	Enable noise gate	Gate on
4A0.	Disable noise gate	Gate off
0A1.	Unmute audio	Unmute audio
600%	Checking the working status	A: 1 Volume of MIC: 50 Volume of line: 50 Bass of line: 4 Treble of line: 4 Ducking off
601%	MIC volume up	Volume of MIC: 51
602%	MIC volume down	Volume of MIC: 51
603%	Line volume up	Volume of line: 51
604%	Line volume down	Volume of line: 51
605%	Bass level up	Bass of line: 4
606%	Bass level down	Base of line: 4
607%	Treble level up	Treble of line: 4
608%	Treble level down	Treble of line: 4
609%	Initialization, back to the default setting	Init OK
610%	Enable/disable the ducking function	Ducking off/ducking on
4[x][x]%	Preset the volume level of ducking function. [xx] ranges from [00] to [60]. 61 degress in total	Ducking of line: 50
5[x][x]%	Preset MIC volume, [xx] ranges from [00] to [60]. 61 degrees in total	Volume of MIC: 50
7[x][x]%	Preset line volume, [xx] ranges from [00] to [60]. 61 degrees in total	Volume of line: 50
8[x][x]%	Preset the bass level, [xx] ranges from [00] to [08]. 9 degrees in total	Bass of line: 4
9[x][x]%	Preset the trebel level, [xx] ranges from [00] to [08]. 9 degrees in total	Treble of line: 4

NOTICE

1. The letter inside bracket [ ] is the variable code, which is able to be changed

2. The bracket [ ] is not included to the actual RS232 commands

3. Any dot "." after the letters is part of the commands

4. ID coding:

- The ID codes of 40 Watt Power Amplifier ranges from 0 to F (hexadecimal), when sending RS232 commands, please take notice of the address of the ID code

- If the address of the ID code is 0, any RS232 command is available

- If the address is in 1-F, it has one unique ID code (If the ID code is not the same with the address, no RS232 command will work)

- While the ID code is in 1-F, please add "ID/" before sending the command

- For example, if the ID code is 5, the RS232 command needed is "604%", the correct command is in this format: 5/604%

- There is no need to add "ID/" before the command when the ID code is 0

Examples:

1. Switching the input 2 to the line out, the command is: 2A1

2. Turning up the volume of line audio, the command is: 603%

3. Preset the MIC volume to "21" degree, the command is: 521%

4. Checking the working status of 40 Watt Power Amplifier, the command is: 600%

5. If the ID code is 0, sending command 601% is able to turn up the MIC volume. If the ID code is 2, sending command 601% will not work, and the MIC volume remains unchanged. The right command is 2/601%

○ TROUBLESHOOTING AND MAINTENANCE

Problems	Causes	Solutions
No output audio	No signal at input/output end	Check input/output signal by an osciloscope or a multimeter
	Failed cable connection	Change for another cable
	Broken unit	Send to the deal for repair
POWER indicator does not work or respond to any operation	Failed power connection	Make sure the power cord connection is good
Static becomes stronger when connection the video connectors	Bad grounding	Check the grounding and make sure it is connected well
Output audio is interfered		
Cannot control the device by the front panel buttons, RS-232 port or IR remote	Broken unit	Contact technical support for further assistance

○ SAFETY AND NOTICE

The PAV140 has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipment, the PAV140 should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit.
- Always unplug the power to the device before cleaning

○ TECHNICAL SUPPORT

In case of problems, please contact Vanco Technical Support by dialing 1-800-626-6445. You can also email technical support issues to techsupport@vanco1.com. When calling, please have the Model Number, Serial Number (affixed to the bottom of the unit) and Invoice available for reference during the call. Please read this Instruction Manual prior to calling or installing this unit, since it will familiarize you with the capabilities of this product and its proper installation. All active electronic products are 100% inspected and tested to insure highest product quality and trouble-free installation and operation. The testing process utilizes the types of high-definition sources and displays typically installed for entertainment and home theatre applications. For additional information please visit www.vanco1.com.

○ LIABILITY STATEMENT

Every effort has been made to ensure that this product is free of defects. The manufacturer of this product cannot be held liable for the use of this hardware or any direct or indirect consequential damages arising from its use. It is the responsibility of the user and installer of the hardware to check that it is suitable for their requirements and that it is installed correctly. All rights are reserved. No parts of this manual may be reproduced or transmitted by any form or means electronic or mechanical, including photocopying, recording or by any information storage or retrieval system without the written consent of the publisher. Manufacturer reserves the right to revise any of its hardware and software following its policy to modify and/or improve its products where necessary or desirable. This statement does not affect the legal rights of the user in any way.

○ LIMITED WARRANTY

With the exceptions noted in the next paragraph, Vanco warrants to the original purchaser that the equipment it manufactures or sells will be free from defects in materials and workmanship for a period of two years from the date of purchase. Should this product, in Vanco's opinion, prove defective within this warranty period, Vanco, at its option, will repair or replace this product without charge. Any defective parts replaced become the property of Vanco. This warranty does not apply to those products which have been damaged due to accident, unauthorized alterations, improper repair, modifications, inadequate maintenance and care, or use in any manner for which the product was not originally intended. Items integrated into Vanco products that are made by other manufacturers, notably computer hard drives and liquid crystal display panels, are limited to the term of the warranty offered by the respective manufacturers. Such specific warranties are available upon request to Vanco. A surge protector, power conditioner unit, or an uninterruptible power supply must be installed in the electrical circuit to protect against power surges. If repairs are needed during the warranty period the purchaser will be required to provide a sales receipt/sales invoice or other acceptable proof of purchase to the seller of this equipment. The seller will then contact Vanco regarding warranty repair or replacement.

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