

## V-9932 NOISE SENSING VOLUME CONTROL

### **GENERAL**

The V-9932 is designed to electronically adjust the level of a page by monitoring ambient noise levels in an area of a building.

These instructions contain the specifications and information necessary to install, operate, and maintain the V-9932 Noise Sensing Volume Control.

### **SPECIFICATIONS**

#### **Purpose**

The V-9932 provides automatic paging level adjustments in areas where ambient noise levels are continuously changing.

#### **Application**

- Valcom one-way paging systems

#### **Features**

- Solid-state design
- Low power requirements
- Operates on key system voltages
- Self-contained sensing device

#### **Capacity**

Each V-9932 will control up to 150 Valcom one-way amplified speaker assemblies in a single zone. Multiple V-9932 units can be used within the same zone.

#### **Additional Materials Required**

At the time of installation, the installer should provide the following materials:

- 24VDC power supply (if existing supply is inadequate)
- "D" type station wire



#### **Dimensions/Weight**

The V-9932 is designed to be wall mounted.

- 7.3"H x 4.7"W x 2.1"D  
(18.54cm H x 11.94cm W x 5.33cm D)
- 0.9 lbs. (.41kg)

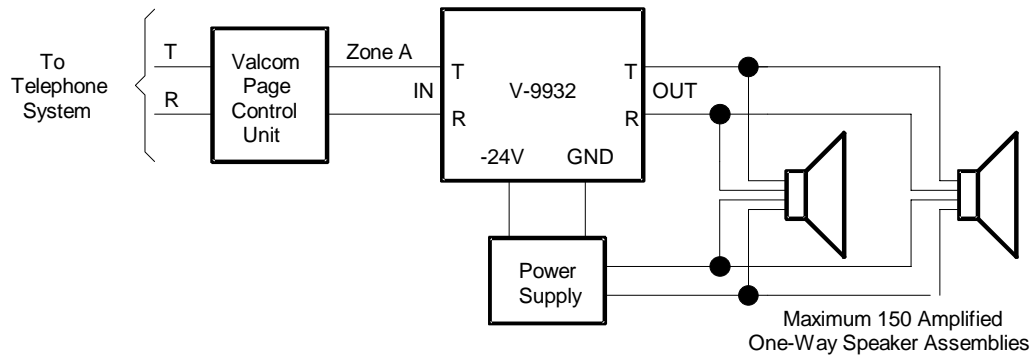
#### **Power Requirements**

The V-9932 requires -24VDC Signal Battery.

Range	-20 to -28VDC "B" Battery
Idle	50 mA
Operating	100 mA

#### **Nominal Specifications**

Automatic Level Adjustment Range	-10dB to 30dB
Quench Threshold	-23dBm nominal
Power Output	-10dBm
Frequency Response	80-10KHz $\pm$ 3dB
Input Impedance	600 ohms
Output Impedance	8 ohms
Operating Temperature	0 to 50 degrees C
Power Requirements	-24VDC signal battery
Monitor Reset	5 sec.



**Figure 1 - Simplified Block Diagram of Connections**

## INSTALLATION

These instructions cover only the installation procedure of the Valcom V-9932. Please consult applicable instructions for control equipment or any other equipment used.

### Precautions

All precautions have been taken at the factory to insure that the equipment functions properly. Please observe the following precautions or the equipment may be damaged and the warranty voided.

- Unplug the power supply before connecting any wires or cables to the control unit connecting block. With power on, accidental bridging of two terminals with a wiring tool may damage electronic circuits.
- Do not use a lamp tester to check signals. Use a voltmeter. A lamp tester, when first applied is a short circuit to electronic circuits.
- Do not apply power to the control unit until all connections have been double-checked.

**NOTE: The V-9932 cannot be used to control music.**

### Mounting

- Locate a space on the wall central to the noise producing equipment.
- Carefully unpack the unit from the carton and inspect.
- Unsnap cover from base and mount base to wall using pan head screws.

### Connections

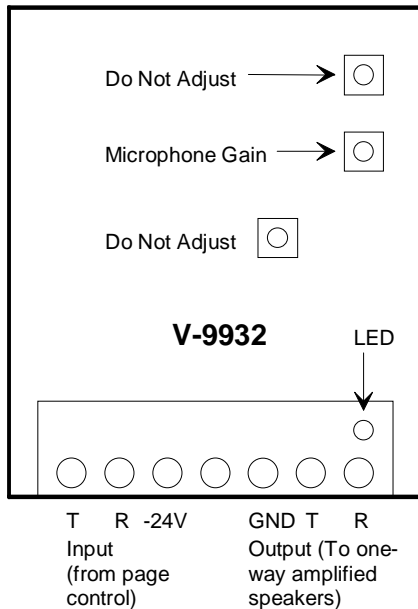
Refer to Figure 2 while performing the following:

- Connect the page control unit speaker output to T and R input of V-9932.

- Connect the input of amplified speaker to T and R output of V-9932.
- Connect power supply -24VDC and ground to -24 and GND terminals on V-9932.

### Set-Up and Adjustment

- Complete all connections to page control unit, V-9932, one-way amplified speakers, and power supply (refer to applicable instructions).
- With background noise at its *lowest* level, access page system and adjust level controls on page control and speakers for proper sound level.
- Turn on all noise producing equipment for maximum background noise level.
- Access page and test.  
NOTE: The V-9932 microphone gain is factory adjusted. This adjustment is correct for most applications.
- If page volume with maximum background is too high, turn microphone gain control counter clockwise in small increments and test.  
**Important: Wait at least 10 seconds after adjusting microphone gain before accessing page and testing.**
- If page volume with maximum background noise is too low, turn microphone gain control clockwise in small increments and test.  
**Important: Wait at least 10 seconds after adjusting microphone gain before accessing page and testing. Do not adjust microphone gain beyond the point where the LED lights.**
- Installation and set-up now complete.



**Figure 2**

## OPERATION

The V-9932 Noise Sensing Volume Control continuously monitors the surrounding area noise by utilizing a built-in microphone. When a page is made, the V-9932 electronically locks onto the last area noise sample. A -23dBm signal or higher is required on the input before the V-9932 will activate and lock. Once activated, the amplifier is automatically set to the proper gain level for the amount of background noise. The amplifier will remain locked at that gain level for the duration of the page. After the page is made there is a 5 second delay before the V-9932 starts monitoring the area noise levels. Refer to Figure 3 for a simplified schematic of the V-9932.

## TECHNICAL ASSISTANCE

When trouble is reported, verify that power is being supplied to the unit and there are no broken connections. Check voltages for proper polarity on terminals.

Table 1 identifies symptoms of some possible problems with solutions. If a spare unit is available, continue to troubleshoot by substituting the spare unit for the suspected defective unit.

Assistance in troubleshooting is available from the factory. When calling, you should have a VOM and a telephone test set available and be calling from the job site. Call (540) 427-3900 and ask for Technical Support, or call (540) 427-6000 for Valcom 24-hour Automated Support or visit our website at <http://www.valcom.com>.

The V-9932 is not field repairable. **Valcom equipment contains no user serviceable parts inside.** Valcom, Inc. maintains service facilities in Roanoke, VA. Should repairs be necessary, attach a tag to the unit clearly stating your company name, address, phone number, contact person, and the nature of the problem. Send the unit to:

**Valcom, Inc.**  
**Repair and Return Dept.**  
**5614 Hollins Road**  
**Roanoke, VA 24019-5056**

<b>TABLE 1 - TROUBLESHOOTING CHART</b>	
<b>SYMPTOM</b>	<b>POSSIBLE SOLUTION</b>
No page	1) Check -24VDC and Ground to unit and to one-way speakers. 2) Check * for audio at tip and ring input to V-9932. 3) Check * for audio at tip and ring output from V-9932.
Volume incorrect with no background noise	1) With no background noise, access page and adjust volume at page control unit or at one-way amplified speakers.
Can't hear with full background noise	1) Turn microphone gain control clockwise in small increments. <b>Wait 20 seconds before accessing page to test.</b>
Too loud with full background noise	1) Turn microphone gain control counter clockwise in small increments. <b>Wait 10 seconds before accessing page and testing.</b>
Loud squeal when paging	1) Relocate phone or speaker. 2) Install noise canceling transmitter on phone. 3) Readjust page level.

\*Use lineman's test set to check for audio.

## VALCOM LIMITED WARRANTY

Valcom, Inc. warrants its products to be free from defects in materials and workmanship under conditions of normal use and service for a period of one year from the date of shipment. The obligation under this warranty shall be limited to the replacement, repair or refund of any such defective device within the warranty period, provided that:

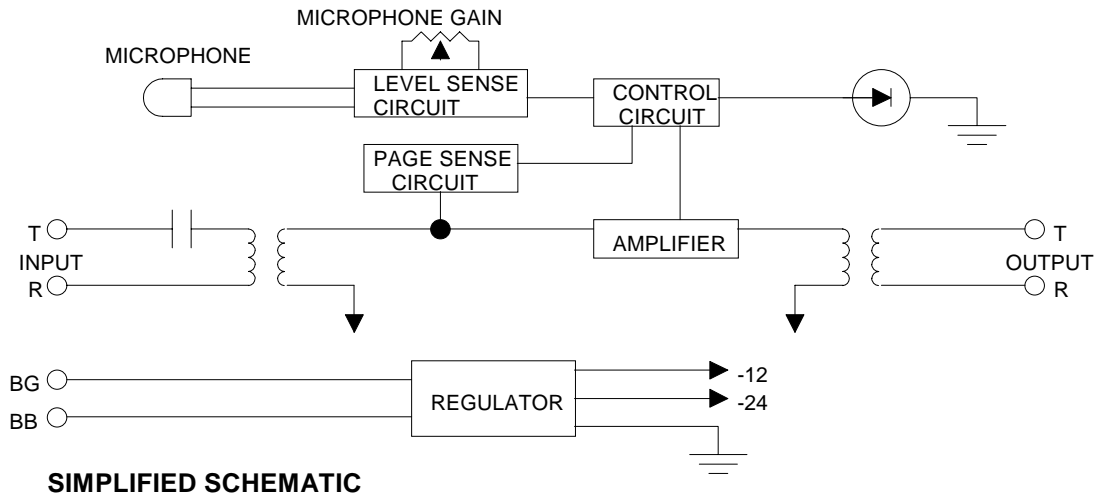
1. inspection by Valcom, Inc. indicates the validity of the claim,
2. the defect is not the result of damage, misuse, or negligence after the original shipment.
3. the product has not been altered in any way or repaired by others and that factory sealed units are unopened (A service charge plus parts and labor will be applied to units defaced or physically damaged),
4. freight charges for the return of products to Valcom are prepaid,
5. all units 'out of warranty' are subject to a service charge. The service charge will cover minor repairs (Major repairs will be subject to additional charges for parts and labor).

**This warranty is in lieu of and excludes all other warranties, expressed or implied, and in no event shall Valcom, Inc. be liable for any anticipated profits, consequential damages, loss of time or other losses incurred by the buyer in connection with the purchase, operation, or use of the product.**

This warranty specifically excludes damage incurred in shipment. In the event a product is received in damaged condition, the carrier should be notified immediately. Claims for such damage should be filed with the carrier involved in accordance with the F.O.B. point.

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**FIGURE 3**