

V-9933A NOISE SENSING VOLUME CONTROL

GENERAL

The V-9933A is designed to electronically adjust the level of a page by monitoring ambient noise levels in an area of a building.

SPECIFICATIONS

Purpose

The V-9933A 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
- Self-contained or optional remote sensing device

Capacity

Each V-9933A will control the audio for up to 150 Valcom one-way amplified speaker assemblies in a single zone. Multiple V-9933A 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)
- Optional V-9934, Remote Sensing Device (Up to 4 units)

Dimensions/Weight

The V-9933A is designed to be wall mounted.

- 7.30" H x 4.50" W x 2.00" D
(18.54cm H x 11.43cm W x 5.08cm D)
- 0.9 lbs. (.41kg)

Power Requirements

Power Requirement: -24VDC Filtered Battery
Operating Current: 150mA

Nominal Specifications

Automatic Level Adjustment Range: See Chart 1



Power Output:	-10dBm
Frequency Response:	50-12kHz \pm 3dB
Input Impedance:	25k Ohms
Output Impedance:	8 Ohms
Operating Temperature:	0 to +50 degrees C
Power Requirements:	-24VDC signal battery
Monitor Reset:	5 seconds

OPERATION

The V-9933A, Noise Sensing Volume Control, continuously monitors the surrounding area noise by utilizing a built-in or optional remote microphone. When a page is made, the V-9933A electronically locks onto the last area noise sample. A -23dBm signal or higher is required on the input before the V-9933A 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 five (5) second delay before the V-9933A starts monitoring the area noise levels. Refer to Figure 3 for a simplified schematic of the V-9933A.

INSTALLATION

These instructions cover only the installation procedure of the Valcom V-9933A. 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 units 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-9933A cannot be used to control music or on an audio zone with background music.

Mounting

- Select mounting location 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-9933A.
- Connect the input of amplified speaker to T and R output of V-9933A.
- Connect power supply -24VDC(-) and GND(+) to -24VDC and GND terminals on V-9933A.
- Connect optional remote microphone (V-9934) to "Ext Mic In" terminals.

Set-Up and Adjustment

- Complete all connections to page control unit, V-9933A, one-way amplified speakers and power supply. Do not activate power supply until step c.
- Set the sensitivity adjustment fully clockwise for minimum ambient noise environment.
 - Turn dip switch 1 ON (Setup) and set dip switches 2 and 3 to the desired range; typical range would be 2 OFF, 3 ON=30dB (See Chart 1).
 - Set switch 4 to appropriate use.
- Apply power to the V-9933A. LEDs 8, 4, 2 and 1 should briefly light in sequence and then go off. If any LEDs remain lit, then a failure is indicated; repeating setup steps is recommended.
- With the ambient noise at a minimum and no active program on the input, turn the sensitivity adjustment counter-clockwise until LED 1

illuminates. Make a test page and adjust the page volume controls to a suitable volume. If necessary, the sensitivity adjustment may be increased. However, it is not desirable for all 4 LEDs to be lit during normal operation.

- Return dip switch 1 to the OFF position.
- Installation and set-up now complete.

NOTE: After adjusting "sensitivity adjust" (microphone gain), wait 20 seconds before executing a test page (See Troubleshooting Chart, Table 1).

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) 563-2000 and press 1 for Technical Support or visit our website at <http://www.valcom.com>.

The V-9933A 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**

TABLE 1 - TROUBLESHOOTING CHART	
SYMPTOMS	POSSIBLE SOLUTIONS
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-9933A. 3) Check * for audio at tip and ring output from V-9933A.
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.
Unable to hear with full background noise	1) Turn sensitivity adjust (Microphone gain) control clockwise in small increments. Wait 20 seconds before accessing page to test.
Too loud with full background noise	1) Turn microphone gain control counter clockwise in small increments. Wait 20 seconds before accessing page and testing.
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 (monitor setting) to check for audio.

VALCOM LIMITED WARRANTY

Valcom, Inc. warrants its products only to the original purchaser, for its own use, 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. This Limited Warranty obligation shall be limited to the replacement, repair or refund of any such defective device within the warranty period, provided that:

- inspection by Valcom, Inc. indicates the validity of the claim;
- the defect is not the result of damage, misuse or negligence after the original shipment;
- 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);
- freight charges for the return of products to Valcom are prepaid;
- 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 Limited 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, maintenance, installation, removal or use of the product. The maximum liability of Valcom under this warranty is limited to the purchase price of the specific Product covered by the warranty.

Disclaimer. Except for the Limited Warranty provided herein, the product is provided "as-is" without any warranty of any kind whatsoever including, without limitation, any **WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT.**

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.

Headquarters:
Valcom, Inc.
5614 Hollins Road Roanoke, VA 24019-5056
Phone: (540) 563-2000 FAX: (540) 362-9800

V-9933A
NOISE SENSING VOLUME CONTROL
DIP SWITCH SETTINGS

SW	ON	OFF
4	INTERNAL MIC ON*	INTERNAL MIC OFF
3	SETTING ADJUSTMENT RANGE	
	2 OFF 3 ON = 30dB * 2 ON 3 ON = 15dB	
2	2 OFF 3 OFF = 60dB 2 ON 3 OFF = 45dB	
1	SETUP	NORMAL*

* DEFAULT SETTINGS

CHART 1

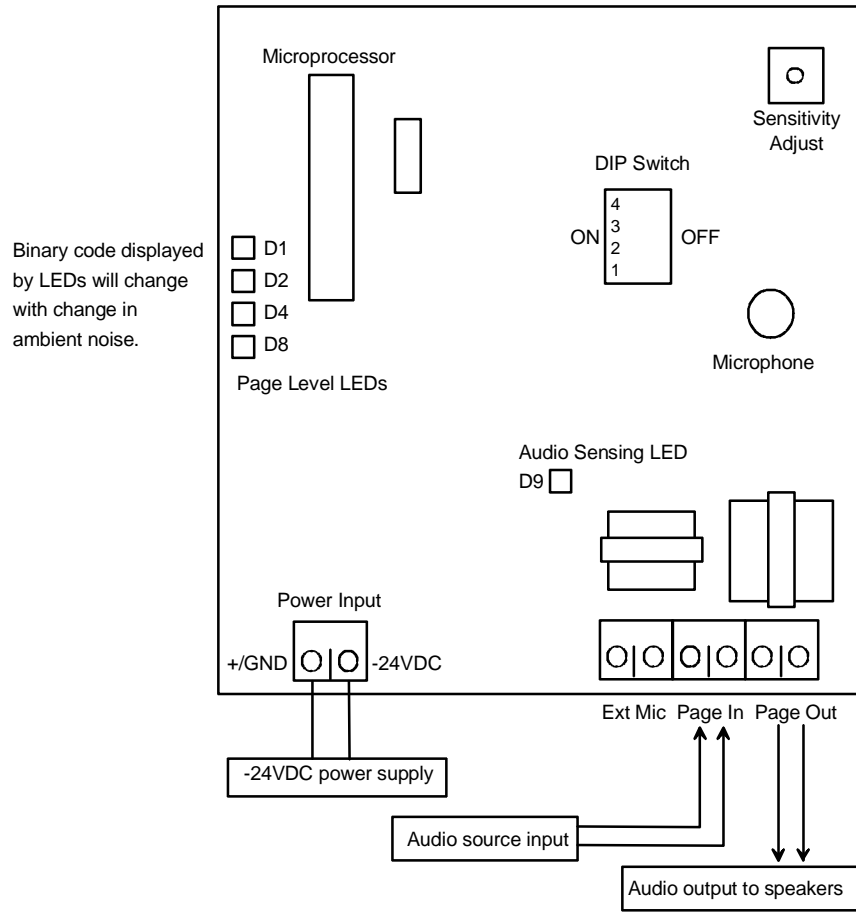


FIGURE 1

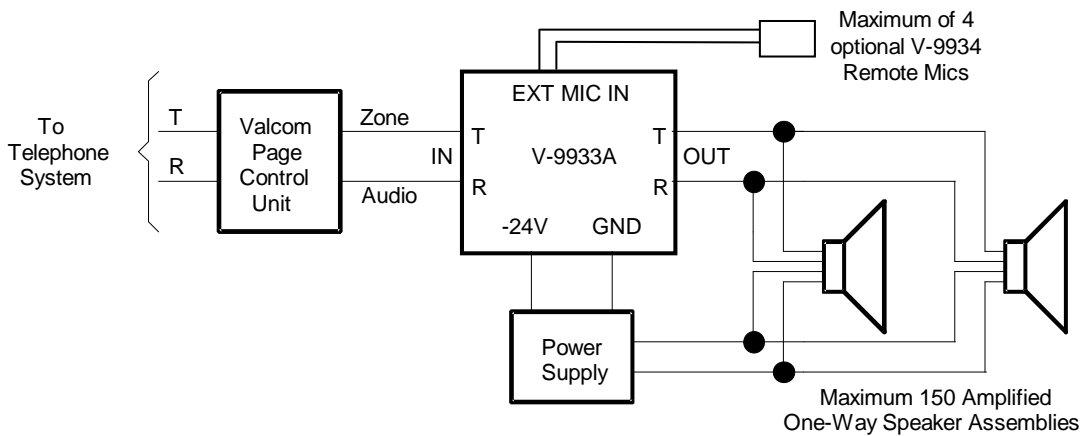


Figure 2 - Simplified Block Diagram of Connections

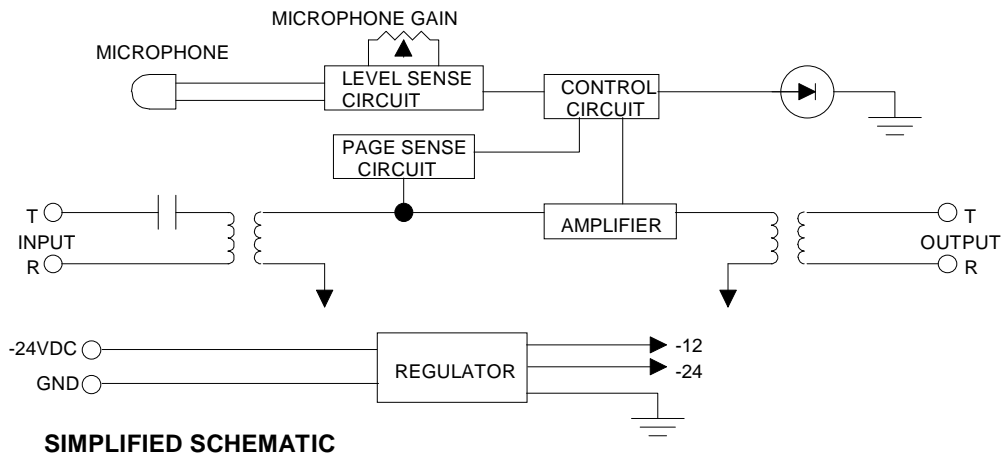


FIGURE 3