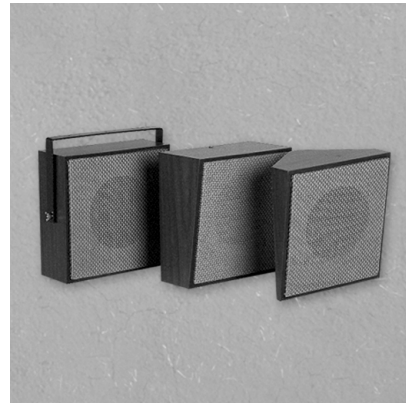


## DUAL INPUT ONE-WAY AMPLIFIED INTERIOR SPEAKERS

**V-1220****V-1226, V-1222, V-1224**

### **INTRODUCTION**

The V-1220, V-1222, V-1224, and V-1226 are dual Input One-Way Amplified Speaker assemblies for use with any one-way or handsfree page control unit. These speakers are for interior use only.

These instructions contain the specifications and information necessary to install, operate and maintain the Dual Input One-Way Amplified Interior Speakers.

### **SPECIFICATIONS**

#### **Applications**

- One or Two-Way Page Controls
- Electronic Key System Page Ports (interface adapter may be required)
- PABX Page Ports (interface adapter may be required)
- Stand Alone Systems
- Existing 70V Paging Systems
- Background music systems

#### **Features**

- Self-contained dual input amplifier and volume controls
- 8 inch cone type speaker
- Operates on -24VDC
- All speakers wired with 3 pair station cable
- Screw terminals for all connections

#### **Dimensions/Weight**

- V-1220 - Ceiling Speaker  
13.0" Dia. X 3.0" D  
(33cm Dia. X 7.6cm D)  
2.6 lbs. (1.18 kg)
- V-1222 - Wall Speaker  
10.6"H x 9.7"W x 5.2"D  
(26.92cm H x 24.63cm W x 13.20cm D)  
4.4 lbs. (2.0 kg)
- V-1224 - Corner Speaker  
10.6"H x 9.7"W x 6.3"D  
(26.9cm H x 24.6cm W x 16cm D)  
3.6 lbs. (1.63 kg)
- V-1226 - Corridor Speaker  
10.3"H x 10.3"W x 4.2"D  
(26.2cm H x 26.2cm W x 10.7cm D)  
6.5 lbs. (3.0 kg)

## Nominal Specifications

- Amplifier Input Impedance 1000 Ohms Nominal
- Amplifier Input Level -10dBm Nominal
- Amplifier Output 1 watt into 45 Ohm spkr load

## Power Requirements

- Voltage -24VDC
- Current 50mA

## Environment

- Temperature 0 to 50 Degrees C
- Humidity 0 - 85% non-precipitating

## DESIGN

The Valcom Dual Input One-Way Amplified Interior Speakers may be used to provide one-way paging from one-way or talkback page controls. The speakers provide a means for connecting one speaker to two audio sources, making it easy to provide features such as background music, group call, or emergency override. These speakers can also be used to expand existing 70V paging systems. When power and the appropriate input signal are applied, voice page can be made.

## Page Control Access

When using the One-Way Amplified Speakers with a Page Control, the following equipment will be required:

- Appropriate one-way speaker assembly
- Page Control
- Power Supply sized to provide power to operate the amplified speaker assemblies and page control. (See Figure 1 for Page System Block Diagram)

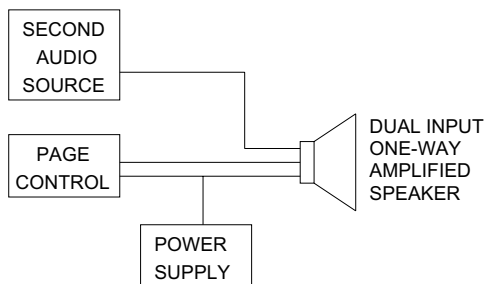


FIGURE 1 - PAGE SYSTEM BLOCK DIAGRAM

recommended that a V-1092 Volume Control be connected between the zone output and the speaker input to lower the signal level to the one-way speakers (to prevent overdriving of inputs).

## 25V or 70V Paging Systems

When using the One-Way Amplified Speakers with an existing 25 or 70V paging system, the following equipment will be required:

- Appropriate one-way speaker assembly
- Power supply sized to provide power to operate the amplified speaker assemblies
- 25V or 70V line transformer tapped at 1/4 watt with an 8 Ohm output

## Background Music

The Valcom Dual Input One-Way Amplified Speakers may be used with a page control for the purpose of providing background music on a per zone basis along with one-way voice paging (See Figure 2 for a Background Music Block Diagram).

NOTE: When using the Dual Input One-Way Amplified Speakers with background music and a handsfree page control unit, it is recommended that a V-1094A Page Port Preamp/Expander be connected between the zone output and the speaker input to eliminate backfeed of the background music to the handsfree control unit.

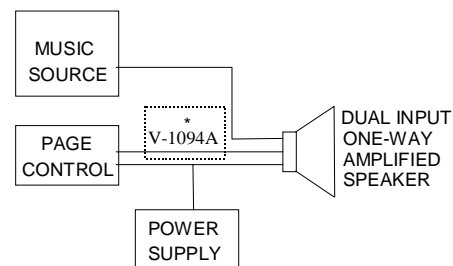


FIGURE 2 - PAGE SYSTEM BLOCK DIAGRAM

\* The V-1094A is recommended when using Handsfree Page Control

NOTE: When using Valcom Dual Input One-Way Interior Speakers with a handsfree page control, it is

## Group Call

The Valcom Dual Input One-Way Amplified Speakers may be used with a multi-zone page control to provide simultaneous paging to a group of zones. (See Figure 3 for a Group Call Block Diagram).

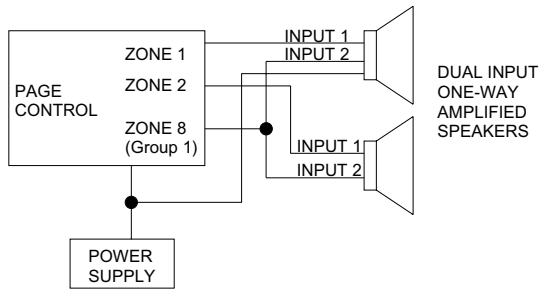


FIGURE 3 - GROUP CALL BLOCK DIAGRAM

NOTE: When using the Valcom Dual Input One-Way Interior Speakers with a handsfree page control, it is recommended that a V-1092 Volume Control be connected between the zone output and the speaker input to lower the signal level to the one-way speakers (to prevent overdriving of inputs).

## Speaker Cabling

All Valcom Dual Input Amplified One-Way Interior Speakers require six conductor wire, standard 22 or 24 gauge station wire is acceptable. Shielded wire is not required or recommended. Refer to Tables 1 and 2 when planning a system.

## Coverage

**V-1220 - Ceiling Speaker:** The area covered by a ceiling speaker is determined by the height of the ceiling. If the ceiling height is 8', the speaker will cover approximately 250 sq. ft.; if 9 to 15', the speaker will cover approximately 400 sq. ft.; if 15 to 35' high, the speaker will cover approximately 850 sq. ft.

**V-1222C, V-1224C - Wall Speakers:** These wall speakers will cover an area up to 600 sq. ft. Wall Speakers should be spaced 20 feet apart. Good quality paging will be heard up to 30 feet in front of the speaker.

**V-1226C - Corridor Speaker:** Corridor speakers should be placed every 30 to 40 feet.

Table 1 # of Speakers per Audio Run	
Wire Run in Feet	# of Speakers
100	150
200	150
400	100
800	50
1600	25

Table 2 # of Speakers per Power	
Wire Run in Feet (22 AWG)	# of Speakers
100	30
200	30
400	15
800	7
1600	3

## INSTALLATION

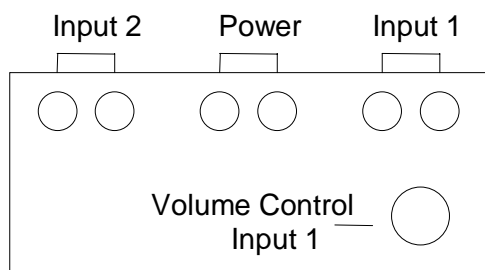
### Page Control Access

The Valcom Dual Input One-Way Amplified Interior Speakers provides a means for connecting one speaker to two audio sources. A standard paging system is made up of 3 basic components:

- Appropriate one-way speaker assembly
- Page Control
- Power Supply sized to provide power to operate the amplified speaker assemblies and page control

NOTE: When using the Valcom Dual Input One-Way Interior Speakers with a handsfree page control, it is recommended that a V-1092 Volume Control be connected between the zone output and the speaker input to lower the signal level to the one-way speakers (to prevent overdriving of inputs).

See Figure 4 for Screw Connection Location and Designations. See Figure 5 for the required connections when using the Dual Input One-Way Amplified Interior Speakers with a page control.



Screw Connection Location Designations - Figure

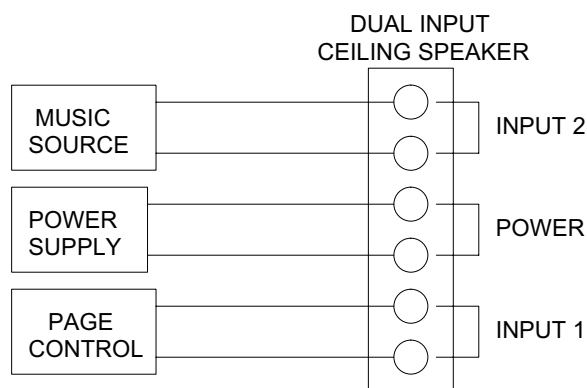


FIGURE 5

### 25V or 70V Paging Systems

The Dual Input One-Way Amplified Speakers may be used to expand an existing 25V or 70V paging system without placing an additional load on the amplifier by connecting one input of the speaker directly to the 8 ohm output of one of the existing 70 volt transformers tapped at 1/4 watt. A power supply will also be required.

### Background Music

The Valcom Dual Input One-Way Amplified Speaker may be used for providing background music on a per zone basis along with one-way voice paging. The music source is connected to Input 2 Tip and Ring. The page zone output is connected to Input 1 Tip and Ring.

NOTE: When using the Dual Input One-Way Amplified Interior Speakers with background music and a handsfree page control unit, it is recommended that a V-1094A Page Port Preamp/Expander be connected between the zone output and the speaker input to eliminate backfeed of the background music to the handsfree control unit.

### Group Call

The Valcom Dual Input One-Way Amplified Speakers may be used with a multi-zone page control to provide simultaneous paging to a group of zones. When it is used for group call, Input 1 is connected to an assigned zone number. Input 2 is connected to the zone number that will be used for the group call page.

NOTE: When using the Valcom Dual Input One-Way Interior Speakers with a handsfree page control, it is recommended that a V-1092 Volume Control be connected between the zone output and the speaker input to lower the signal level to the one-way speakers (to prevent overdriving of inputs).

See Tables 1 and 2 for wiring specifications for these speaker assemblies.

### Mounting

**V-1220 - Ceiling Speaker:** To install speaker assembly, measure and cut an 8-1/2" hole in center of ceiling tile. (If using a V-9914M-5 bridge, V-9915M-5 backbox, or V-9916M bridge and backbox, follow instructions supplied with these assemblies).

Connect station or other suitable wire to proper speaker terminals as labeled. Mount speaker to ceiling tile. Ideal mounting height should be between 7 and 23 feet.

**V-1222 - Wall Speaker:** Unscrew the speaker bracket and mount the bracket to the wall (ideal mounting height is 8 to 12 feet above floor level). Connect station or other suitable wire to proper speaker terminals as labeled. Mount speaker on bracket.

**V-1224 - Corner Speaker:** Connect station or other suitable wire to proper speaker terminals as labeled. Drive a finishing nail into desired corner and hang the speaker on the nail. Ideal mounting height is 8 to 12 feet above floor level.

**V-1226 - Corridor Speaker:** Select a suitable location giving adequate consideration to the weight of the unit. Be sure unit is positioned high enough to provide clearance for persons passing by.

Unscrew mounting bracket and mount to wall. After making the required connections, reattach the speaker to the mounting bracket.

## TECHNICAL ASSISTANCE

When trouble is reported, verify there are no broken connections. Assistance in troubleshooting is available from the factory. 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>.

Valcom equipment is not field repairable. Valcom, Inc. maintains service facilities in Roanoke, VA. Should repairs be necessary, attach a tag to the unit clearly stating 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 3**  
**TROUBLESHOOTING CHART**

<b>PROBLEM</b>	<b>CORRECTIVE ACTION</b>
1. No audio from speaker.	<ol style="list-style-type: none"> <li>1. Make certain volume control is turned up (clockwise).</li> <li>2. Check presence of -24VDC and GND.</li> <li>3. Using a lineman's test set, check for the proper audio level on the Tip and Ring leads, and if necessary also at the source.</li> </ol>
2. Low volume from speaker.	<ol style="list-style-type: none"> <li>1. Make certain volume control is turned up.</li> <li>2. Check voltage at the speaker assembly when in use, -18 to -24VDC required.</li> <li>3. Using a lineman's test set, check for the proper audio level on the Tip and Ring leads. It is possible that some low level audio will be heard with only one side of Tip and Ring connected.</li> </ol>
3. Loud squeal (feedback)	<ol style="list-style-type: none"> <li>1. Turn down volume (counter clockwise) of speaker.</li> <li>2. Increase the distance between the telephone and speaker.</li> <li>3. Install a confidencer on the telephone in severe problem areas.</li> </ol>

### 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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