

# V-9964

## Digital Feedback Eliminator/Message Stacker

### General Design

The V-9964 is designed to eliminate acoustic feedback and act as a message stacker. When a page is made, the message is digitized and saved. Upon completion of the live page, the message is released for broadcast over the speakers. While a message is being broadcast, a second message may be recorded. Additionally, up to four V-9964 units may be chained together to allow up to eight messages to be simultaneously processed.



### Specifications

#### Features

- Automatic Gain Control (AGC)
- Adjustable VOX sensitivity
- Compatible with Valcom Multi-Zone Control Units and Station Adaptors
- Two input channels: Switch selectable primary and priority, or two channels with equal priority; both inputs are switch selectable for Loop Start or VOX operation
- Two audio outputs:  
600 Ohms with loop supervision to a page control unit or 8 Ohms line level output to amplified speakers
- Background music input
- Total of three normally open relay contacts for PLAY, RECORD and BUSY modes (one contact each)
- LED status indicators for POWER, RECORD, PLAY and BUSY
- Dip switch option programming
- Message abort feature

#### Access

- Vacant Loop Start Trunk Port or C. O. Line Port
- Page Port
- Line Level Audio Feed
- An adaptor is required for C. O. Line or Station access (see V-9970 or V-9940)

#### Dimensions/Weight

- 11.76" H x 7.10" W x 1.72" D  
(29.87cm H x 18.03cm W x 4.37cm D)
- 2.6 lbs. ( 1.18Kg )

#### Nominal Specifications

Power requirement: 24VDC 200mA filtered  
 Input impedance: 600 Ohms  
 Input level: -10dBm  
 Loop Output impedance: 600 Ohms  
 Line Output impedance: 8 Ohms  
 Output level: -10dBm  
 VOX sensitivity: -20dBm to -35dBm  
 Message release time: 3 seconds after  
 last sensed audio  
 Maximum recorded page time: 60 seconds  
 (30 seconds per page in call stacker mode)  
 Frequency response:  
 Page 80Hz to 7kHz  
 Background Music 50Hz to 17kHz

#### Environment

Temperature: 0 to +40°C  
 +32 to +104°F  
 Humidity: 0 to 80% non-precipitating

## **FCC Information**

*This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area may cause harmful interference in which case the user will be required to correct the interference at his own expense.*

## **Installation/Connection Cabling**

Category 3 or 5 twisted pair cable is recommended for all Valcom distributed amplified paging installations. Screw terminals are provided for the basic connections. RJ45 jacks are provided for chaining multiple V-9964 units together. Removing the narrow right side panel of the V-9964 provides access to controls, connections and option switches. To remove the panel, loosen the two screws holding the panel in place and lift the panel.

## **Mounting**

The V-9964 may be wall mounted or rack mounted in a standard 19 inch equipment rack using the brackets included.

## **Connections**

See Figure 1 for a connection diagram.

### **Tip 1, Ring 1**

INPUT 1 is the normal Primary or Call Stacker system input. Connects to a Loop Start Trunk Port, 600 Ohm Page Port or some Valcom Page Controls. Do *not* connect to a C. O. Line.

### **Control Input 1**

Provides contact closure activation when using a Page Port.

### **Tip 2, Ring 2**

INPUT 2 is the Override page or Call Stacker line two input. If desired, connect this to a second Loop Start Trunk Port or Page Port. Do *not* connect to a C. O. Line.

### **Control Input 2**

Provides contact closure activation when using a Page Port.

### **Background Music Input**

Connection for external line level music source (Example: V-2952, FM Tuner).

*NOTE: If using multiple V-9964 units in a chained configuration, all speakers must connect to the output of the last unit in the chain.*

### **Line Out**

Output connections to Valcom amplified speakers or 70 Volt amplifier Aux input.

### **Loop Out**

Connects to Tip and Ring input on a Valcom multi-zone page control unit.

### **Expansion In**

RJ45 connection from the previous V-9964 in a chained configuration.

### **Expansion Out**

RJ45 connection to the next V-9964 in a chained configuration.

### **Abort**

To abort a message during play, connect an external relay contact across the two abort terminals.

*NOTE: To abort a message during the record sequence, press any DTMF button on the dial pad of the access telephone.*

### **Relay Closure Outputs (PLAY) PLYSW and PLYMK**

Normally open relay contact that closes while a message is being broadcast.

### **(RECORD) RECSW and RECMK**

Normally open relay contact that closes while a message is being recorded.

### **(BUSY) BSYSW and BSYMK**

Normally open relay contact that closes when the unit cannot accept any more messages.

## Switches and Controls

**NOTE: (OFF-Left) (ON-Right)**

Refer to figure one for locations.

### SW1: Tip 1 Ring 1

No Battery Feed (Page Port)	OFF
Battery Feed supplied (Loop Trunk Port)	ON

### SW2: Tip 2 Ring 2

No Battery Feed (Page Port)	OFF
Battery Feed supplied (Loop Trunk Port)	ON

### SW5: VOX Sensitivity

Sets audio detection threshold for input ports. SW4-1 or SW4-2 must be in the "ON" position for this adjustment to be effective.

SW5	Level	SW5	Level
0	-20dBm	8	-28dBm
1	-21dBm	9	-29dBm
2	-22dBm	A	-30dBm
3	-23dBm	B	-31dBm
4	-24dBm	C	-32dBm
5	-25dBm	D	-33dBm
6	-26dBm	E	-34dBm
7	-27dBm	F *	-35dBm

\* Typical Setting

## Program DIP Switch Settings

**NOTE: (ON-Left) (OFF-Right)**

### SW3-1: DTMF Signaling Options

No DTMF signaling (single zone)	OFF
DTMF signaling (multi-zone)	ON

### SW3-2, SW3-3: Number of Digits to Receive Before Recording the Page.

1 Digit	SW3-2 OFF	SW3-3 OFF
2 Digits	SW3-2 ON	SW3-3 OFF
3 Digits	SW3-2 OFF	SW3-3 ON
4 Digits	SW3-2 ON	SW3-3 ON

### SW3-4: Priority Port Options

Leave in "OFF" position when used as a Call Stacker (SW4-4 is "ON").

Records Primary and Priority pages; Priority page broadcast first	OFF
Priority page broadcast in real-time; Primary page in progress is recorded and broadcast after Priority page	ON

### SW3-5: Message Playback Control

Play message once	OFF
Play message twice	ON

### SW3-6, SW3-7: Pre-page Alert Tones

No tones	SW3-6 OFF	SW3-7 OFF
Single tone	SW3-6 ON	SW3-7 OFF
Dual tone	SW3-6 OFF	SW3-7 ON
Quad tone	SW3-6 ON	SW3-7 ON

### SW3-8: Inter-page Timing

1 Second between pages	OFF
3 Seconds between pages	ON

### SW4-1: Primary or Line 1 Page Access

Loop detect	OFF
Audio detect	ON

### SW4-2: Priority or Line 2 Page Access

Loop detect	OFF
Audio detect	ON

### SW4-3: Pre-Record Ready Tone

Normal (3 seconds delay) with ready to record tone	OFF
No pre-record tone; allows immediate recording activation	ON

**Note: This option is effective only when the inputs are set for LOOP start (SW4-1 OFF).**

### SW4-4: Normal or Call Stacker Mode

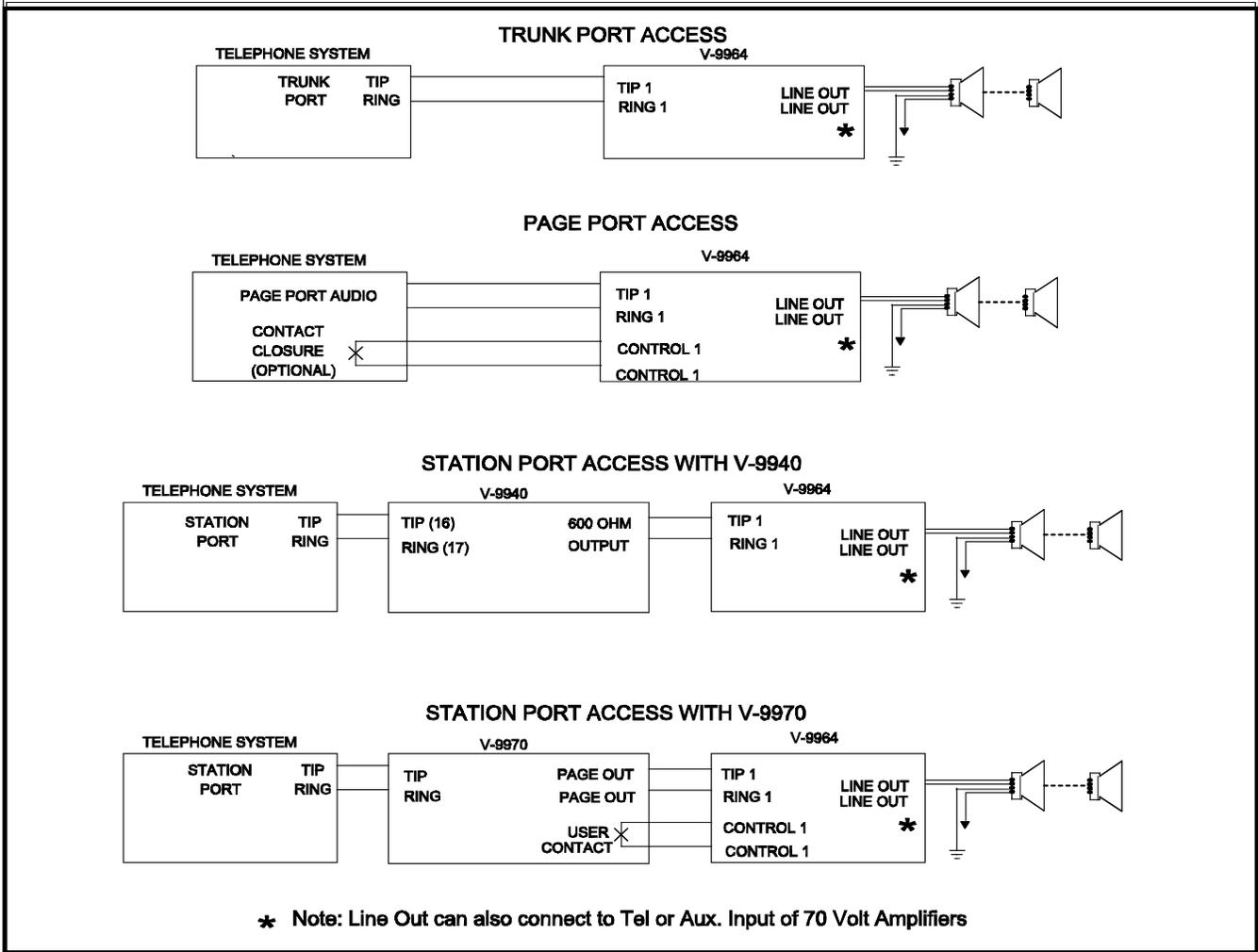
2 Inputs-Primary and Priority	OFF
2 Inputs will function as Call Stacker	ON

**Note: Only one Priority port may be used on a Multi V-9964 system.**

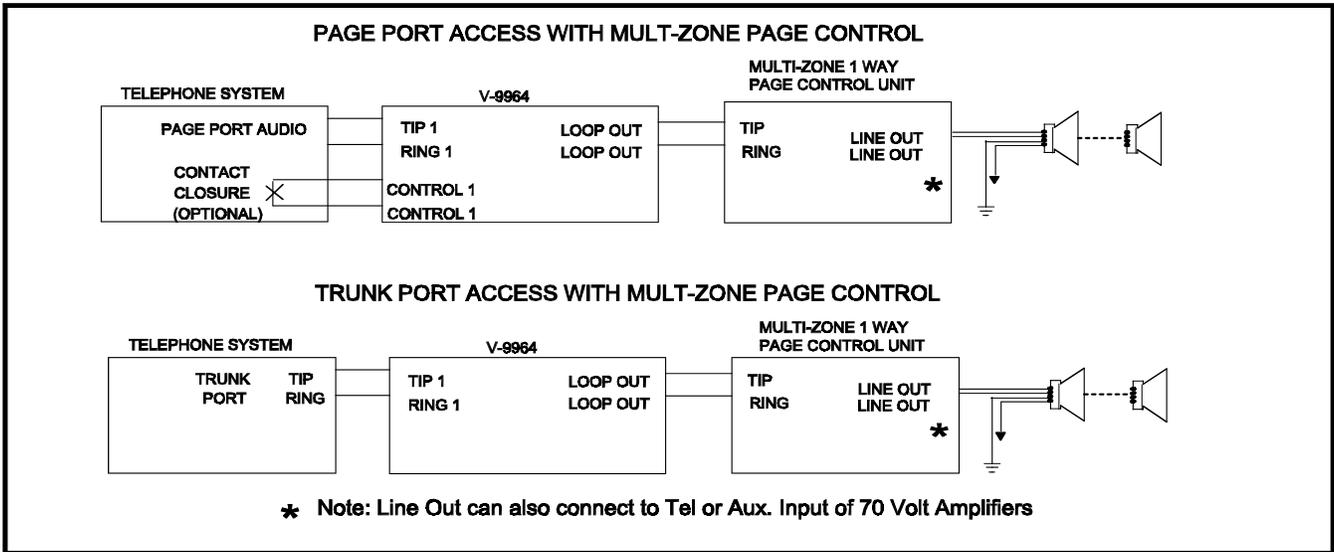
### SW4-8 Output Control

Slave unit in a Chained system; Multiple V-9964	OFF
Single unit or Master in a Chained system	ON

## SINGLE ZONE CONNECTIONS



## MULTI-ZONE CONNECTIONS



## Technical Assistance

When trouble is reported, verify the unit is turned on and there are no broken connections leading to the unit.

Assistance in troubleshooting is available from the factory. When calling from the job site, you should have a Volt/Ohm Meter and a telephone test set available for testing. Call (540) 563-2000 for Technical Support, or (540) 767-1555 for Valcom 24 hour Faxback System or visit our Website at <http://www.valcom.com>.

Valcom equipment is not field repairable. Valcom maintains service facilities in Roanoke, VA. Should repairs be necessary, clearly tag the unit with your company name, address, telephone number, contact person and a description of the problem. Send the unit to:

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

### 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.

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

In Canada  
CMX Corporation  
35 Van Kirk Drive #11 and 12  
Brampton, Ontario L7A 1A5  
Phone: (905) 456-1072  
FAX: (905) 456-2269

