

V-9963

DIGITAL FEEDBACK ELIMINATOR

GENERAL DESIGN

The V-9963 is designed to eliminate acoustic feedback. When a page is made, the message is digitized and saved. Upon completion of the live page, the message is released for broadcast over system speakers. (While this page is being broadcast, another page can be recorded). This eliminates the offensive squeal of feedback commonly produced by telephones or microphones when making a page.

SPECIFICATIONS

Features

- Automatic Gain Control (AGC)
- Adjustable VOX Sensitivity
- Two Input Channels:
Switch selectable for primary and priority or dual channels with equal priority
Both inputs are switch selectable for loop start (600 Ohms) or VOX activation
- Two Audio Outputs:
Loop Out (600 Ohms) to Page Control Unit
Line level (8 Ohms) to Amplified Speakers
- Background music input (adjustable)
- Three Normally Open Output Relays:
Play, Record, Busy
- Four LED Indicators: Power On, Play, Record, and Busy
- Dip Switch Programmable
- Message Cancelling
- Easy to install in new or existing systems
- Solid State, DSP storage and playback
- High Fidelity CD Sound Reproduction

Access

- Loop Start Trunk Port
- C. O. Line Position
- Page Port
- Line Level Audio Feed

Dimensions/Weight

- 10.3"H x 7.8"W x 2.2"D
(26.16cm H x 19.81cm W x 5.59cm D)
- 2.6 lbs. (1.18 Kg)



Nominal Specifications

Input Impedance:	600 Ohms
Input Level:	-10 dBm
Loop Out Output Impedance:	600 Ohms
Line Level Output Impedance:	8 Ohms
Output Level:	-10 dBm (nominal)
VOX Sensitivity:	-20 dBm to -35 dBm
Release time after last sensed audio:	3 seconds
Maximum duration of recorded page	60 seconds
Maximum number of stored pages:	
2 Primary/Priority Mode	
4 Call Stacker Mode	
Frequency Response	
Page	80 Hz to 7 kHz
Background Music	50 Hz to 17 kHz

Environment

Temperature:	0 to 40 Degrees C
Humidity:	0 to 85% non-precipitating

FCC Notice

This equipment has been tested and found to comply with the limits for Class A digital devices, pursuant to Part 15 of 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 is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

INSTALLATION/CONNECTIONS

Cabling

It is recommended that Category 3 or 5 twisted telephone wire be used in all Valcom speaker installations. A screw type connector strip is provided to allow connection of all wiring to the V-9963.

Mounting

The V-9963 is wall mountable using ½” screws.

Terminal Connection Access

NOTE: Remove the small side panel to access all controls and terminations. To remove panel, loosen the two screws holding the panel in place and lift panel away from the board.

Audio Treatment

NOTE: If the input signal to the V-9963 exceeds the nominal levels specified, attenuate the signal with a V-1092. This situation would apply when the zone output of a Valcom Talkback Page Control is used as a One-Way Page input to the V-9963.

(Tip1/Ring1)

Primary or Call Stacker Line 1 Input

The primary input is the path normally used to access the unit for recording and playback of a page.

Access Method	Switch Settings	
Loop Start Trunk Port	SW1 ON	SW4-1 OFF
Key System C.O.Line Key	SW1 ON	SW4-1 OFF
Stand Alone Telephone Set	SW1 ON	SW4-1 OFF
Page Port w/Contact Closure	SW1 OFF	SW4-1 OFF
Page Port w/o Cont. Closure	SW1 OFF	SW4-1 ON
Valcom Page Cntrl. Output	SW1 OFF	SW4-1 ON
V-9940 (600 ohm Output)	SW1 ON	SW4-1 OFF
V-9970 Output using C.C.	SW1-OFF	SW4-1 OFF

(Tip2/Ring2)

Priority or Call Stacker Line 2 Input

Priority access will override primary input activity.

Access Method	Switch Settings	
Loop Start Trunk Port	SW2 ON	SW4-2 OFF
Key System C.O.Line Key	SW2 ON	SW4-2 OFF
Stand Alone Telephone Set	SW2 ON	SW4-2 OFF
Page Port w/Contact Closure	SW2 OFF	SW4-2 OFF
Page Port w/o Cont. Closure	SW2 OFF	SW4-2 ON
Valcom Page Ctrl. Output	SW2 OFF	SW4-2 ON
V-9940 (600 ohm Output)	SW2 ON	SW4-2 OFF
V-9970 Output using C.C.	SW2 OFF	SW4-2 OFF

Control 1 Input

(for Primary Port or Line 1)

Use External Dry Contact Closure to activate “Begin Recording” sequence. (Also see Note for switch 4-3).

Control 2 Input

(for Priority Port or Line 2)

Use External Dry Contact Closure to activate “Begin Recording” sequence.

BGM Input

External *low-level* music source (Ex: V-2952).

Line Out

8 ohm output connects to Self-Amplified Valcom Speakers, Amplifier Inputs or other audio devices.

Loop Out

600 ohm output connects to T/R input of Valcom Multi-Zone Page Controllers or other audio devices.

R77 Adjustment Pot

Adjusts Background Music Level output.

Abort

To abort a message during play, use the External Contact Closure input to manually stop message broadcasting.

NOTE: To abort a message during “Record Sequence,” press any number on the dial pad of the telephone.

Contact Closure Outputs

(PLAY) PLYSW and PLYMK

Normally Open Contact Closure output that is closed while message plays.

(RECORD) RECSW and RECMK

Normally Open Contact Closure output that is closed while message records.

(BUSY) PRISW and PRIMK

Normally Open Contact Closure output that is closed when unit cannot accept any more pages.

Setting Program Dip Switches

There are several controls and switches on the board for programming the options of the V-9963. Refer to Figure 1 (page 4) for location of switches and controls.

All Dip Switches (OFF – Left) (ON – Right)

SW1: Primary Port or Line 1 Battery Feed

No battery feed supplied to primary port	OFF
Battery feed supplied to primary port	ON

SW2: Priority Port or Line 2 Battery Feed

No battery feed supplied to primary port	OFF
Battery feed supplied to primary port	ON

SW3 The 8-position dipswitch provides:**SW3-1: DTMF Signaling Options**

No DTMF signal (single zone)	OFF
DTMF signal accepted (multi-zone)	ON

SW3-2, SW3-3: Number of digits to receive before recording announcement.

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 Mode

Records primary and priority pages, Priority page broadcasts first	OFF
Priority page broadcasts in real time. Primary page in progress is recorded and is 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 Tone	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 The 4-position dip switch provides:**SW4-1: Primary or Line 1 Page Access**

Loop Detect	OFF
Audio Detect (VOX)	ON

SW4-2: Priority or Line 2 Page Access

Loop Detect	OFF
Audio Detect (VOX)	ON

SW4-3: Pre "Record" Tone (Enable/Disable)

Normal (3 sec. delay of "Ready to Record" tone and "Recording Sequence")	OFF Enable
No tones are issued when "Recording Sequence" is activated. Allows immediate "Record Activation" with a contact closure.	ON Disable

NOTE: This option is effective only when the inputs are set at Loop Detect (SW 4-1 OFF).

SW4-4: Normal or Call Stacker Mode

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

Other Switches and Controls

SW5: VOX Sensitivity - sets threshold for detection of audio on the primary and priority ports.

SW5	Level
0	-20dBm
1	-21dBm
2	-22dBm
3	-23dBm
4	-24dBm
5	-25dBm
6	-26dBm
7	-27dBm

SW5	Level
8	-28dBm
9	-29dBm
A	-30dBm
B	-31dBm
C	-32dBm
D	-33dBm
E	-34dBm
F	-35dBm

LED Indicators

PLAY: Illuminates when announcement is playing.

RECORD: Illuminates during recording of the announcement.

BUSY: Illuminates if, for any reason the unit cannot accept any more pages.

POWER: Illuminates when -24 Vdc and GND is applied to the unit.

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, 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 (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 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

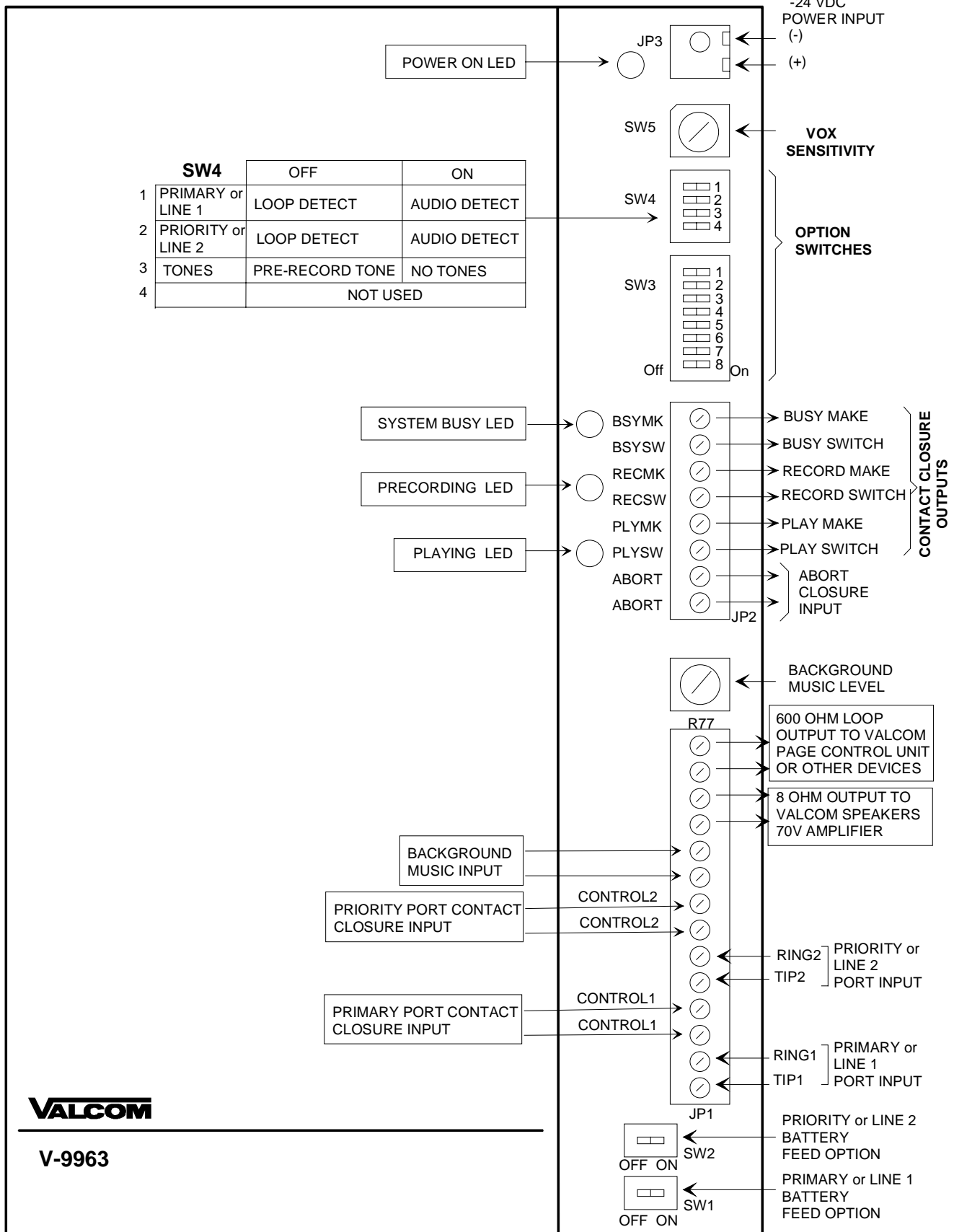
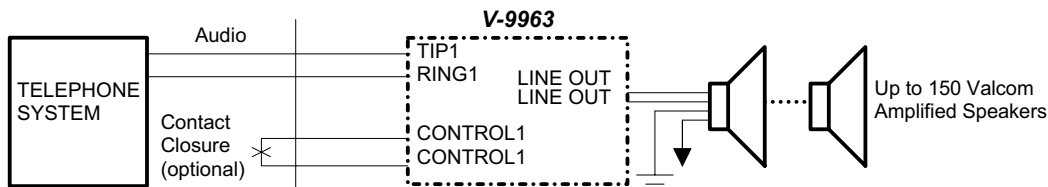
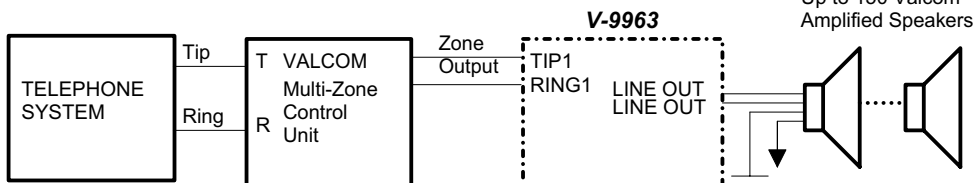


FIGURE 1: CONNECTIONS AND CONTROLS (ACCESSIBLE WITH SIDE PANEL REMOVED)

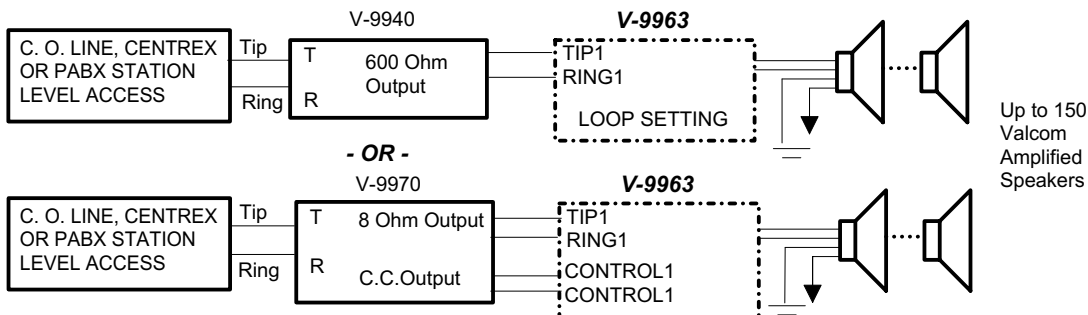
PAGE PORT ACCESS



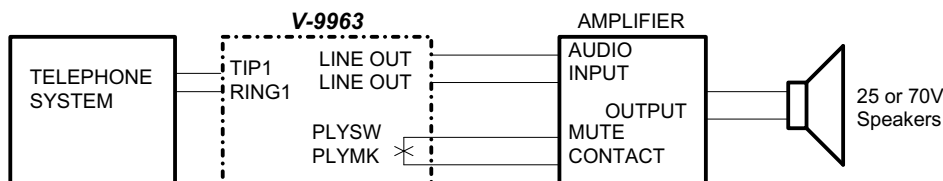
SINGLE ZONE AUDIO OUTPUT



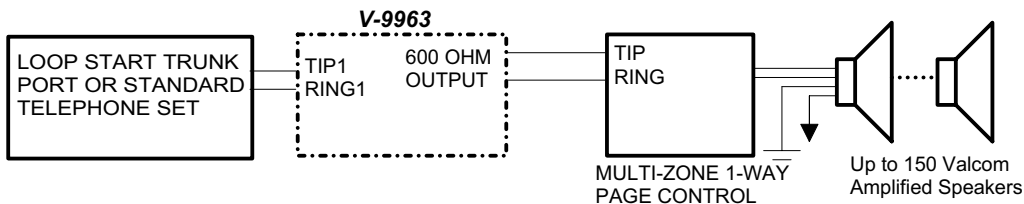
STATION LEVEL ACCESS



70 V AMPLIFIER



MULTI-ZONE PAGE CONTROL



LOOP START ACCESS

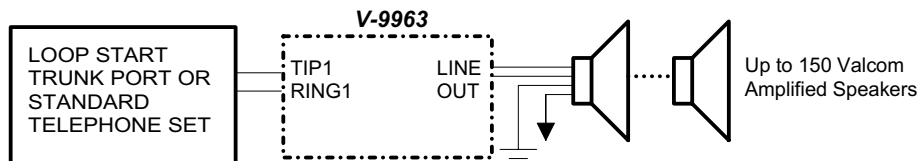


FIGURE 2 - SIMPLIFIED BLOCK DIAGRAM OF TYPICAL CONFIGURATIONS
(Power connections not shown)

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 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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