

V-2000A INTEGRATED SINGLE ZONE PAGE CONTROL UNIT

INTRODUCTION

The V-2000A is an Integrated Single Zone Page Control Unit for use with any electronic key or PABX. The control unit provides external power (12 Valcom power units) for powering Valcom One-way Amplified Speakers.

These instructions contain the specifications and information necessary to install, operate and maintain the Integrated Single Zone Paging Control Unit.

"WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture."

"WARNING: Shock Hazard - Do Not Open."

"AVIS: Risque de Choc Electrique ne pas Ouvrir."

"PELIGRO: Corriente Electrica - No Abra."

SPECIFICATIONS

Purpose

- Provides telephone system access to a single zone of one-way paging

Applications

- Electronic Key Systems
- PABXs
- 1A2 Key Systems (400 type line card required)
- Stand Alone Systems

Refer to Figure 1 for a block diagram of a typical installation.

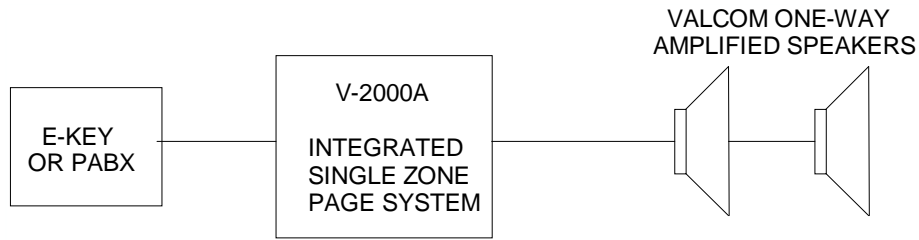


Features

- Electronic key system line key access
- PABX loop start trunk port access
- Page port access
- Switchable battery feed for loop start operation
- RJ11 for Tip and Ring connections
- Power on LED
- Drives up to 150 Valcom one-way amplified speaker assemblies (Audio)
- Background music input
- Voice operated switch to mute music during page
- Screw terminals provided for all connections
- UL Listed
- Supplies 12 Valcom power units for powering Valcom one-way amplified speakers
- May be used with 25 or 70 Volt amplifiers
- AC powered
- AC input fused at 0.5 Amp

Capacity

- The V-2000A is a one-zone single talkpath unit.
- Each V-2000A will drive up to 150 Valcom one-way amplified speaker assemblies (Audio) and provides 12 Valcom power units for powering the speaker amplifier assemblies. The V-2000A can also be used to access 25 or 75 Volt conventional amplifiers.



NOTE; Additional power supplies required for large numbers of speakers.

FIGURE 1 - TYPICAL INSTALLATION

Dimensions/Weight

- 2.50" H x 7.70" W x 5.30" D
(6.35cm H x 19.56cm W x 13.46cm D)
- 2.6 lbs. (1.2 kg)

Nominal Power Requirements

- Voltage: 115VAC
- Current: 0.35 Amp

Environment

- Temperature: 0 to +40° C (+32 to +104° F)
- Humidity: 0 to 85% non-precipitating

Nominal Specifications

Input Impedance:	600 Ohms
Input Level:	-10dBm nominal
Music Source Input Impedance:	8 to 600 Ohms
Voice Switch Sensitivity:	-21dBm
Music Input Level:	-10dBm nominal
Output Impedance:	8 Ohms
Output Level:	-10dBm nominal
DC Output:	-24VDC at 600mA

SYSTEM DESIGN

General

The Valcom V-2000A Integrated Single Zone Page Control Unit provides access to paging from a standard PABX loop start trunk port, an Electronic Key System C. O. line button or a 1A2 Key System C. O. line button (A 400 type line card is required). In most cases, access is also possible from a PABX or Electronic Key System page port.

NOTE: Do not connect to Central Office Line or PBX Station Port.

Electronic Key or PABX Access

When using the V-2000A with an electronic key system or PABX, the following equipment will be needed:

- 1) 1 - V-2000A Integrated Single Zone Page Control Unit
- 2) 1 - C. O. Line Circuit (Electronic Key System) or 1 Loop Start Trunk Circuit (PABX)
- 3) Valcom One-way Amplified Speaker Assemblies (Quantity and style determined by specific installation)

Operation: Press the appropriate line key (Electronic key system) or dial the appropriate trunk access code (PABX). You will immediately be connected to the paging speakers. Make announcement. The V-2000A will automatically disconnect when you hang up.

Page Port Access

When accessing the V-2000A from a page port the following equipment will be required:

- One V-2000A Integrated Single Zone Page Control Unit
- Telephone System Page Card (If required for external page outputs)
- Valcom One-way Amplified Speaker Assemblies (Quantity and style determined by specific installation)

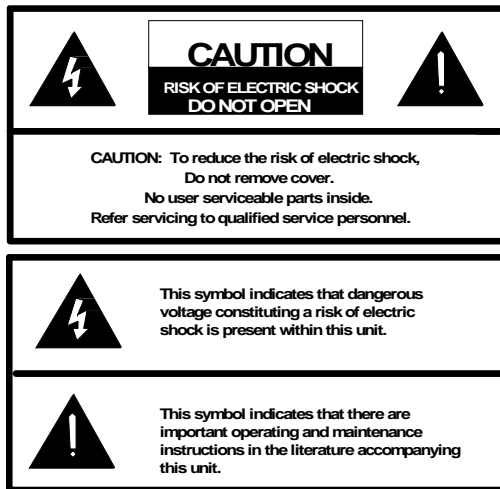
Operation: Follow the telephone manufacturers' directions on how to access external paging. You will immediately be connected to the paging speakers. Make announcement. The V-2000A will automatically disconnect when you hang up.

Background Music

Background music may be connected to the V-2000A when using any of the above configurations. The background music will cut off automatically when the party making the page is speaking.

INSTALLATION

Precautionary Designations



Mounting

The V-2000A was designed for wall or table mounting. The intended mounting orientation will render the text on the enclosure lid legible when the unit is viewed. When wall mounting this unit, secure it to wall studs or a suitable brace (A plywood backboard 2' square and at least 1/2" thick attached to wall studs would be considered a suitable brace). Make certain the unit is not mounted near heat sources or strong magnetic fields. Ascertain control and terminal strip accessibility.

Four #10 x 3/4" cross-tip round head wood screws are included for mounting. Fasten the top two screws at the appropriate location on the mounting surface (Approximately 3.65" apart and parallel to the floor), allowing the screwheads to protrude 1/8" to 1/4". Place the chassis of the unit onto the screwheads at the mounting slots. Position the two remaining screws and fasten through the remaining mounting slots. Complete the mounting by tightening all screws.

Power Connections

The V-2000A is provided with a three-conductor line cord. **After all required connections have been made, plug the cord set into appropriate AC wall outlet.**

Volume Adjustments

Located on the front cover of the V-2000A are the screwdriver adjustable volume controls for regulating the page and background music level. Each volume control is set by turning it clockwise to increase the volume and counterclockwise to decrease the volume.

- ___ a. Page Level: During initial system set up, it is recommended that the individual speaker volume controls on the amplified speaker assemblies be adjusted to 1/2 volume first. Then, adjust the volume control on the V-2000A to the desired page level.
- ___ b. Background music level: Adjust this control to give the desired background music level on the paging speakers.

Wiring Instructions

(For Electronic Key System Line Button Access or PABX Loop Start Trunk Port Access)

NOTE: The telephone system referred to in the following instructions is the customer premise equipment such as an electronic key system or a PABX.

WARNING: The V-2000A CANNOT be connected directly to a public telephone network (A central office line).

If a modular cord is used for Tip and Ring, connections start at step ONE. For screw terminal connections, start at step TWO (See Figure 2).

- ___ 1. Connect one end of a modular telephone cord to the V-2000A RJ11 and the other end to a vacant C. O. line position or vacant loop start trunk on the customer premise equipment. Go to step 4.
- ___ 2. Connect Tip of the vacant key system line position or PABX loop start trunk to the Tip screw terminal of the V-2000A.
- ___ 3. Connect Ring of the vacant key system line position or PABX loop start trunk to the Ring screw terminal of the V-2000A.
- ___ 4. Connect Tip of the one-way amplified speakers to one of the screw terminals marked Signal Out on the V-2000A.
- ___ 5. Connect Ring of the one-way amplified speakers to the remaining Signal Out screw terminal on the V-2000A.
- ___ 6. Connect the -24VDC terminal or lead of the one-way amplified speakers to the -24VDC screw terminal of the V-2000A.
- ___ 7. Connect the GND terminal or lead of the one-way amplified speakers to the GND screw terminal of the V-2000A.

NOTE: The Valcom V-2000A provides external power of 12 power units (600mA of -24VDC) to operate Valcom one-way amplified speakers. Additional power supplies are required for a quantity of speakers using power over the 12 power units. When using additional power supplies, make certain:

- __ a) The -24VDC outputs are not connected to each other;
- __ b) Each one-way amplified speaker is connected to only one power source.
- __ 8. Set battery feed slide switch to the "ON" position on the V-2000A.
- __ 9. Plug in the power cord.

Wiring Instructions

(For Telephone System Page Port Access)
(See Figure 3)

- __ 1. Connect one side of the page port audio output of the telephone system to the Tip screw terminal of the V-2000A.
- __ 2. Connect the other side of the page port audio output to the Ring screw terminal of the V-2000A.
- __ 3. Connect Tip of the one-way amplified speakers to one of the screw terminals on the V-2000A marked Signal Out.
- __ 4. Connect Ring of the one-way amplified speakers to the remaining Signal Out screw terminal on the V-2000A.
- __ 5. Connect the -24VDC terminal or lead of the one-way amplified speakers to the -24VDC screw terminal of the V-2000A.
- __ 6. Connect the GND terminal or lead of the one-way amplified speakers to the GND screw terminal of the V-2000A.

NOTE: The Valcom V-2000A provides external power of 12 power units (600mA of -24VDC) to operate Valcom one-way amplified speakers. Additional power supplies are required for a quantity of speakers using power over the 12 power units. When using additional power supplies, make certain:

- __ a) The -24VDC outputs are not connected;
- __ b) Each one-way amplified speaker is connected to only one power source.
- __ 7. Set the battery feed slide switch to the "OFF" position on the V-2000A.
- __ 8. Plug in the power cord.

Optional Connections

Music Connections - Connect the output of a low level music source to the screw terminals marked "Music" on the input terminal strip on the V-2000A. Adjust the music volume control on the V-2000A to the appropriate level.

OPERATION

General

When the V-2000A is connected to a C. O. line position or a loop start trunk port, a Tip and Ring battery feed is provided when the battery feed switch is in the "ON" position. The voice switching circuit is turned on when the person making the page begins to speak. Background music, if connected, will be turned off and the persons voice will be present on the output. The voice switching circuit remains on as long as the person is speaking. When the page is completed or the person stops speaking for more than 3 seconds, the paging circuit is turned off and background music is restored to the output. Note: When the V-2000A is connected to a telephone system page port, the battery feed switch should be in the "OFF" position. The operation of the unit is the same.

TECHNICAL ASSISTANCE

General

When trouble is reported, verify that power is being supplied to the unit and there are no broken connections. Check voltages for proper polarity to the one-way amplified speakers.

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, several clip leads 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-2000A is not field repairable. 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

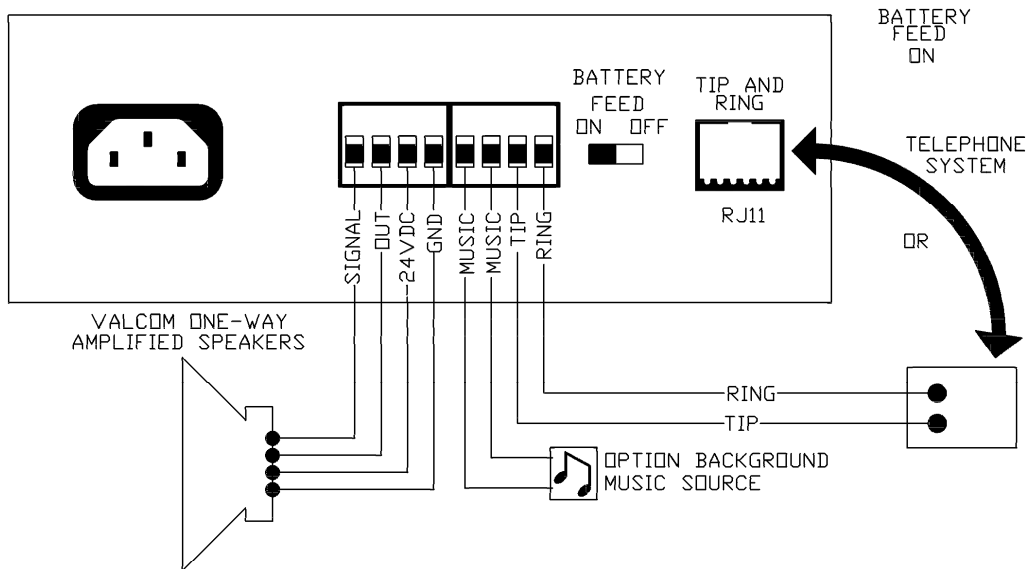


FIGURE 2. ELECTRONIC KEY SYSTEM LINE BUTTON ACCESS OR
PBX LOOP START TRUNK ACCESS

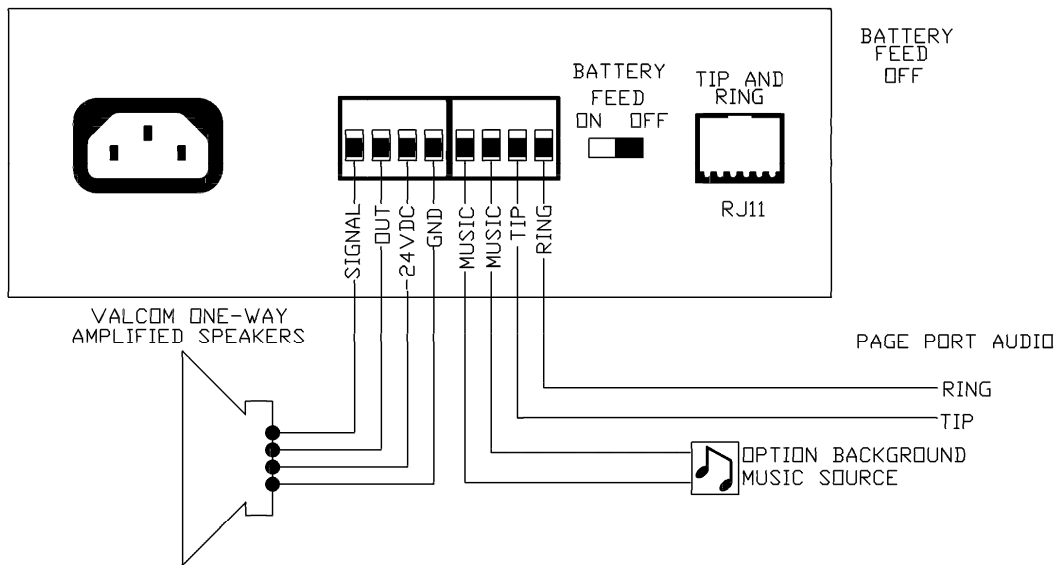


FIGURE 3. PAGE PORT ACCESS

TABLE 1 TROUBLESHOOTING CHART	
SYMPTOMS	PROBABLE CAUSES AND SOLUTIONS
1. No output to speakers	a. Check for the presence of audio on the page output of the V-2000A during a page using a test set. Refer to connection information. b. Check AC line fuse on V-2000A.
2. No music output	a. Using a test set, check for music on the music input terminals.

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:

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 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