VIP-851-25-IC & VIP-851-70/100-IC
InformaCast® Compliant
IP/SIP 20W Amplifier 25/70/100V

INTRODUCTION

The VIP-851-25-IC and VIP-851-70/100-IC InformaCast Compliant IP/SIP 20W Amplifiers enable voice access to a single zone of one-way paging over an IP network, allowing page zones to be extended anywhere network connectivity is available. The amplifiers can optionally be programmed as a SIP (Session Initiation Protocol) device for connectivity to virtually any VOIP (Voice over IP) telephone system.

The VIP-851-25-IC has output connections for line level and 25-volt speakers only.
The VIP-851-70/100-IC has output connections for line level and 25-volt, 70-volt or 100-volt speakers.

SPECIFICATIONS
Features
- 1 Audio Input
- 2 Audio Outputs (VIP-851-25-IC)
- 4 Audio Outputs (VIP-851-25/70/100-IC)
- 1 Form C Relay
- 1 Contact Closure Input
- 1 SIP identity for registering to a VoIP telephone system
- Power over Ethernet 802.3at (PoE+) compatible
- Front panel activity LED
- Front panel PoE+ Fault indicator
- Front panel Supervision Fault indicator
- Provides line level audio for up to 40 Valcom one-way amplified speaker assemblies
- Contact closure or VOX operation of audio input
- Removable screw terminal connectors provided for audio and relay interfaces
- AUX input music mutes during page
- Barrel jack for optional DC power

Environment
Temperature:	0 to +40° C
Humidity:	0 to 85% non-precipitating

VIP-851-25-IC

VIP-851-70/100-IC

Dimensions/Weight
- 1 Standard 19" Rack unit
- 1.75" H x 16.6" W x 4.8" D
  (4.4cm H x 42.2cm W x 12.2cm D)
- Weight:
- VIP-851-25 -IC   2.00 lbs. (0.91 kg)
- VIP-851-70/100-IC   3.10 lbs. (1.41 kg)

Nominal Specifications
AUX Input Impedance:	600 Ohms
AUX Input Level:	-10dBm nominal
25V or 70/100V Output	20 Watts Max.
Line Level Output Impedance:	50 Ohms
Line level Output Level:	- 10dBm nominal
Relay Current:	1 Amp @ 24VDC

Nominal Power Requirements
Via rear panel barrel connector:
Voltage:	24VDC
Current:	900mA

Via 802.3at PoE+ Ethernet Switch:
802.3at:	Class 4

These products are intended for use with a UL Listed power source marked "Class 2" or "LPS" rated 24VDC, or 48VDC (PoE).
PoE and all interconnected ITE are intended for intra-building.

Precautionary Designations

- **WARNING: To Reduce The Risk Of Fire Or Electric Shock. Do Not Expose This Apparatus To Rain Or Moisture.**

- **AVERTISSEMENT: Afin de réduire les risques d'incendie ou de décharge électrique, évitez d'exposer le système à la pluie ou à l'humidité.**

- **Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.**

- **L'appareil ne doit pas être exposé à des égouttements et éclaboussures et aucun Objet Rempli de liquide, comme vase, ne doit être placé sur l'appareil.**
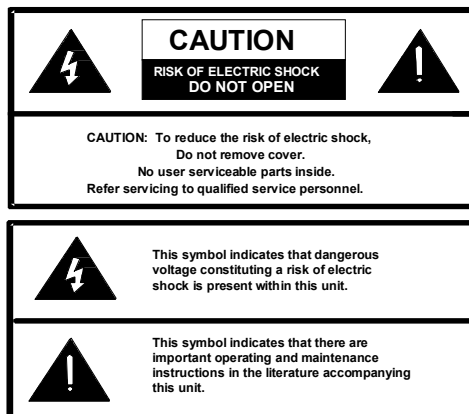
IMPORTANT SAFETY INFORMATION
CONSIGNES DE SÉCURITÉ IMPORTANTES
1. *Read these instructions.*
   Lisez ces instructions.
2. *Keep these instructions.*
   Conservez ces instructions.
3. *Heed all warnings.*
   Respectez tous les avertissements.
4. *Follow all instructions.*
   Suivez toutes les instructions.
5. *Do not use this apparatus near water.*
   Ne pas utiliser cet appareil près de l'eau.
6. *Clean only with dry cloth.*
   Nettoyer avec un chiffon sec.
7. *Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.*
   Ne pas bloquer les ouvertures de ventilation. Installer formément aux instructions du fabricant.
8. *Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.*
   Ne pas installer à proximité de sources de chaleur telles que radiateurs, registres de chaleur, poêles ou autres appareils (y compris les amplificateurs) produisant de la chaleur.
9. *Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade and the third prong are provided for your safety. If the provided plug does   not fit into your outlet consult an electrician for replacement of the obsolete outlet.*
   Ne pas contourner le dispositif de sécurité de la fiche polarisée ou de mise à la terre. Une fiche polarisée possède deux lames dont une plus large que l'autre. Une fiche de terre a deux lames et une troisième broche de mise à la terre. La lame large et la troisième broche sont fournies pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, veuillez consulter un électricien pour le remplacement de la prise obsolète.
10. *Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles and the point where they exit from the apparatus.*
11. *Only use attachments/accessories specified by the manufacturer.*
    N'utilisez que des fixations / accessoires spécifiés par le fabricant.
12. *Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.*
    Utilisez uniquement avec le chariot, stand, trépied, support ou table spécifié par le fabricant ou vendu avec l'appareil. Quand un chariot est utilisé, Soyez prudent lorsque vous déplacez l'ensemble chariot / appareil pour éviter des blessures dues au renversement.
13. *Unplug this apparatus during lightning storms or when unused for a long period of time.*
    Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilisé pendant une longue période de temps.
14. *Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way. Such as when the power supply cord or plug is damaged, liquid has been spilled, objects have fallen into the apparatus or the apparatus has been exposed to rain or moisture and does not operate normally or has been dropped.*
    Confiez toute réparation à un personnel qualifié. Une réparation est nécessaire lorsque l'appareil a été endommagé de quelque façon. Par exemple lorsque le cordon d'alimentation ou la fiche est endommagé, du liquide a été renversé, si des objets sont tombés dans l'appareil ou le appareil a été exposé à la pluie ou à l'humidité et ne fonctionne pas normalement ou s'il est tombé.

FCC Information

This equipment has been tested and found to comply with the limits for a Class A 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.

⚡	**CAUTION** RISK OF ELECTRIC SHOCK DO NOT OPEN	❗
	CAUTION: To reduce the risk of electric shock, Do not remove cover. No user serviceable parts inside. Refer servicing to qualified service personnel.	

⚡	This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

❗	This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

General Mounting Information

A) Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (Tma) specified by the manufacturer.

B) Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

C) Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

D) Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

E) Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

F) Equipment only suitable for mounting at heights less than or equal to 2m (6.56').

INSTALLATION
Mounting

The VIP-851 is designed for rack mounting or wall mounting.

Rack: Secure mounting brackets to the VIP-851. Place the VIP-851 into a standard 19" rack and secure with proper hardware (not included).

Wall: Attach mounting brackets as shown in Figure 1, and secure to wall with proper hardware (not included).
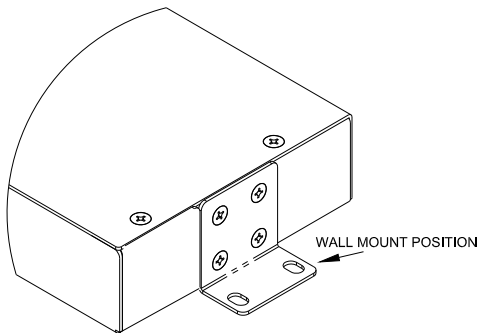

WALL MOUNT POSITION

Figure 1. Mounting

Power Connections
The preferred method of powering a VIP-851 is via a Power over Ethernet Plus (PoE+) switch meeting the 802.3at specification.

If the rear panel barrel connector is used for power, the preferred power supply is a Valcom VP-1124D or larger power supply.

Make all required signal connections before applying power to the unit. If powering via 802.3at, make sure all signal connections via the back panel are made then connect the VIP-851 to the Ethernet switch.

If power is supplied via the barrel connector, make sure all signal connections are secure. Attach the unit to the network via the front panel RJ-45 Ethernet connector. Apply power by plugging the power supply into the VIP-851 via the barrel connector on the rear of the VIP-851.

Network Connection
The VIP-851 has one RJ-45 network connector on the front panel. Use a standard Ethernet patch cable to connect the VIP-851 to an Ethernet switch.

Signal Connections
The VIP-851 has signal connectors on the rear panel:

- AUX audio input
- 1 Contact Closure input
- 2 Audio outputs (VIP-851-25-IC)
- 4 Audio outputs (VIP-851-25/70/100-IC)
- 1 Form C relay output

AUX Audio Input: Line-level audio may be input via the rear panel screw terminal block labeled AUX. Nominal input impedance is 600 Ohms. Audio connected on AUX is directed to the locally-connected speakers (Output connections). The AUX audio input is typically used for local background music, and will be muted during a page. ***The supervision feature of the 25V speaker output is disabled if using the AUX input for audio to locally-connected 25V speakers.***

Contact Closure Input: Contact closure input labeled CC is provided for connecting an external contact (relay, switch, etc.) to trigger actions in the VIP-851. The input can be programmed to remotely activate a relay on another Valcom device across the network and send a syslog message.

Audio Outputs: Two or four audio outputs are available, depending on model. The VIP-851-25-IC provides two outputs, LINE and 25V.
The VIP-851-70/100-IC provides four outputs, LINE, 25V and 70V or 100V. The LINE output provides a line-level signal suitable for driving up to 40 Valcom self-amplified speakers or other devices requiring a line-level source. The LINE output may be used in combination with the amplified outputs. The amplified outputs provide up to 20 watts of audio power suitable for driving up to a 20 watt load of 25-volt, 70 or 100 volt speakers. 25-volt speakers will connect to the 25V terminals. 70-volt speakers will connect to the COM (common) terminal and the 70V terminal. 100-volt speakers will connect to the COM terminal and the 100V terminal. Do not mix 25V, 70V and 100V speakers on the same VIP-851-70/100-IC.
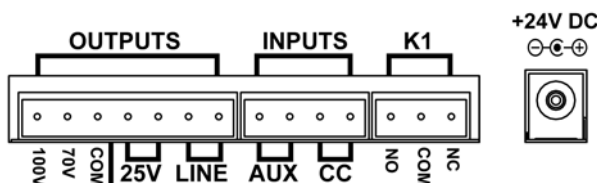
Relay Output: Access to the form C relay is provided via a three pin screw terminal block. The relay is labeled K1. The relay is brought out on three terminals. The common contact is the middle terminal with the normally closed contact labeled NC and the normally open contact labeled NO. Relay contacts are rated for 1A @ 24VDC.

VIP-851 Front View
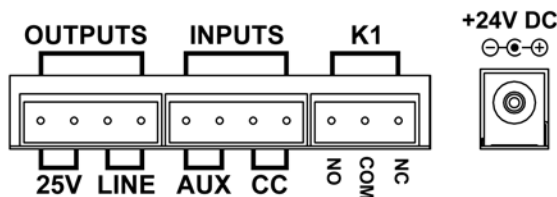
VIP-851-25-IC Rear View

VIP-851-70/100-IC Rear View

Setup
The VIP-851-25-IC and VIP-851-70/100-IC will automatically acquire an IP address (using DHCP) and connect to the InformaCast server when connected to the network and powered up. Information specific to your application will need to be programmed into the InformaCast server. Refer to the InformaCast documentation for further Information.

Supervision
The VIP-851-25-IC can provide wiring supervision capability of both the 25V and LINE outputs. The VIP-851-70/100-IC can provide this capability only on the LINE output. Supervision must be enabled in programming. For supervision, the speakers and/or devices connected to these outputs must be supervisory compatible and there must be an end of line resistance of 4700 ohms. Two 4700 ohm resistors are included with the unit for convenience. The unit will monitor the output pair(s) for opens or shorts if so optioned. Wire monitoring is temporarily disabled on the 25V output while it is active. The output relay can also be programmed for supervision to provide additional notification of faults. If programmed for supervision, the relay will energize during power up (NO will short to COM and NC will open to COM) and will de-energize (NC will short to COM and NO will open to COM) if the unit has lost power, the PoE+ FAULT LED is lit or if the SUPERVISION FAULT LED is lit solid or blinking. Syslog messages are also generated by the VIP-851 indicating system supervision activity.

Additional equipment may be required. Contact Valcom Technical Support for more information.

Status Indicator Lights
The VIP-851 has status indication lights on the front panel:

STATUS: Flashes during normal operation and solid during system startup.

PoE+ FAULT: Indicates the lack of correct PoE+ connectivity or an incorrect configuration of the power available at the network port.

SUPERVISION FAULT: Indicates a connectivity problem on either the LINE (VIP-851-25-IC and VIP-851-70/100-IC) or 25V connections (VIP-851-25-IC only). The activity for this LED is configured using the IP Solutions Setup Tool. The Supervision LED can be configured for "Ignore", "Track" or "Historical" for monitoring both or either the 25V output (Speaker Faults) and the Line output:

LED OFF – No problem with any output (or programmed for "Ignore").
LED ON SOLID – Existing problem with one or both of the monitored outputs (in either "Track" or "Historical" modes).
LED BLINKING - (only blinks if monitoring is set for "Historical") – indicates an intermittent problem on one or both of the outputs that has been resolved.

Note: If the LED is blinking, the monitoring for "Historical" is reset by software (via VIP-102B tool), power down reset of the VIP-851 or with the "factory restore" front panel button.

Green LED: (Link) Indicates Ethernet connection when illuminated.

Yellow LED: (Activity) Indicator flashes to indicate network activity.

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Factory Restore

Your VIP-851-25-IC and VIP-851-70/100-IC ships with a switch accessible from the small hole on the front panel. The factory reset switch has 3 modes. Activate the modes by pressing and holding the switch using a paperclip or pin for a given number of seconds and then release the switch.

Supervision LED Clear:

- Hold the button in for 2 seconds
- Supervision LED will reset (clear) to idle and then return to supervisory state without a full reset of the device.

Network Reset:

- Hold the button in for 10-19 seconds
- Restores factory network settings

Factory Reset:

- Hold the button in for 20+ seconds
- Network Reset actions, plus restores password to factory settings and overwrites configuration files to factory defaults.

TECHNICAL ASSISTANCE

When trouble is reported, verify power is being supplied to the unit and there are no broken connections. If a spare unit is available, substitute a spare unit for the suspected defective unit.

Assistance in troubleshooting is available from the factory. Call (540) 563-2000 and press 1 for Technical Support or via email at support@valcom.com.

When requesting assistance, you should include all available information. General information and troubleshooting procedures are available on the Valcom website at 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 your company name, address, phone number, contact person and the nature of the problem. Send the unit to:

Valcom, Inc.
Repair & Return Dept.
5614 Hollins Road
Roanoke, Va. 24019-5056

WARRANTY

Warranty information may be found on our website at www.valcom.com/warranty.

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