

Vocia®

VAM-1

Manual

January 2013

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this product near water.
- 6) Clean only with dry cloth.
- 7) Do not block ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other product (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the grounding-type plug. A grounding type plug has two blades and a third grounding prong.

The third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the product.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with equipment rack, cart, stand or table designed to provide adequate mechanical strength, heat dissipation and securement to the building structure.

When a cart is used, use caution when moving the cart and product combination to avoid injury from tip-over.



13) Unplug this product during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the product has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the product, the product has been exposed to rain or moisture, does not operate normally, or has been dropped.

WARNING - To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

WARNING - This product employs Safety Grounding and must be connected to a MAINS socket that is properly grounded to provide a protective earthing connection.

WARNING - Speaker terminals marked with the symbol  are Hazardous Live. External wiring connected to these terminals requires installation by qualified electrical installer.

Disconnect Device - The MAINS plug is used to disconnect MAINS power and must remain readily operable.

Explanation of safety related symbols - Product labeling and the operation manual may use the internationally recognized symbols defined below to note safety messages.



Lightning Bolt: Hazardous Live voltages present when this unit is in operation. Do not touch terminals marked with this symbol while the unit is connected to live power.



Exclamation Point: Replace components (i.e. fuses) only with the values specified by the manufacturer. Failure to do so will compromise safe operation of this unit.

TABLE OF CONTENTS

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)	4
FEATURES	4
Installation	5
Using the VAM-1 with a Vocia Paging Station.....	5
LED Indicators when used with Paging Station	6
Using the VAM-1 with a Vocia Input 6 (VI-6)	6
LED Indicators when used with VI-6	7
Network Port Pin Assignment	7
Installation	7
SPECIFICATIONS	8
BLOCK DIAGRAM	8
WARRANTY	9
FCC COMPLIANCE	10
EC DECLARATION	11
EU ROHS COMPLIANT	12

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)



The Vocia Auxiliary Microphone 1 (VAM-1) device is an independent microphone assembly that functions as a slave device to the Vocia Wall and Desk Station (WS-4/10 and DS-4/10) series microphones and to the Vocia Input 6 (VI-6) for paging via the Paging Ports. Up to four VAM-1 slave microphones can be connected per VI-6.

The VAM-1 incorporates a Push-to-Talk (PTT) switch and has LED indication of the Wait, Talk Now and Unavailable paging states. The microphone latch is magnetic for easy docking to the cradle. Power is provided by the host device.

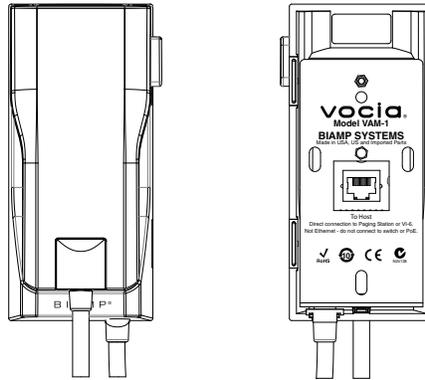
FEATURES

- Slave device to non-emergency Vocia paging stations and VI-6 devices
- Visual LED feedback of Paging and Zone status
- Suitable for mounting on a wall or desk
- Audio and Control over a single Ethernet cable
- IP30 Compliant
- **CE** marked, **UL** listed and **RoHS** compliant
- Covered by Biamp Systems' five year warranty

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)

Setup and Use

The Vocia software provides the interface for configuring and programming the VAM-1. The information supplied by this manual relates to hardware installation, physical connections, and device information. For more details on software setup, please consult the Vocia Software Help File.



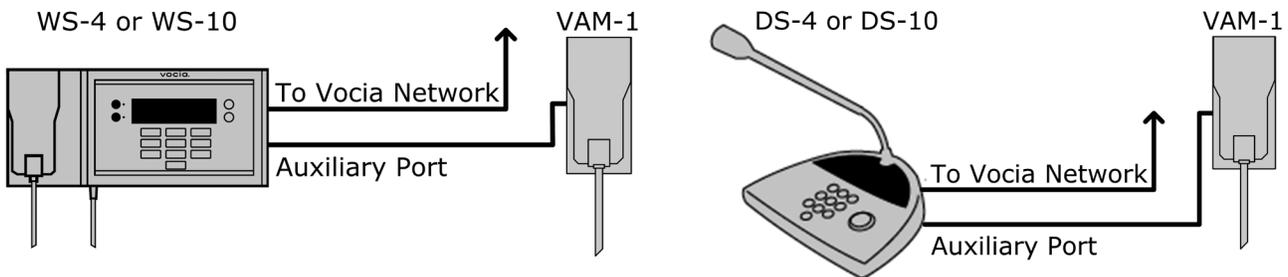
Installation

The VAM-1 is designed to be connected directly to a Vocia Paging Station Auxiliary Port or a VI-6 Paging Port. The VAM-1 has a female RJ-45 connector that faces the rear mounting plate. A screened CAT5e or CAT6 cable wired straight through must be used, up to a maximum of 100 foot (30 meter) distance. Unscreened cable must not be used. The VAM-1 is not an IP device and must not be connected to an Ethernet switch or Network. It must be connected directly to either a Vocia Paging Station Auxiliary Port or a Vocia VI-6 Paging Port.

The cable connection between the VAM-1 and the host device is monitored and if connection is lost a communication error is reported to the Vocia system from the host. The Audio path between the VAM-1 and the host device is not monitored and therefore a VAM-1 may not be suitable for critical paging applications. A VAM-1 must not be deployed with EWS paging stations in EN54-16 installations.

Using the VAM-1 with a Vocia Paging Station

The VAM-1 is designed to connect to the Paging Station Auxiliary Port.



The Vocia GUI is used to designate the Page Code accessed by the VAM-1. The following two modes of operation are provided:

- **Follow Paging Station Page Code:** The VAM-1 will page to whichever Page Code is currently selected on the associated paging station.
- **Use specific Page Code:** All Pages initiated via the push-to-talk button on the VAM-1 will use the specified Page Code.

Live Page Preambles are supported but must be assigned to the Paging Station acting as a host via the Vocia software. When used with a Paging Station that is configured with a PIN code, the VAM-1 will activate and deactivate in unison with the Paging Station.

It will not be possible to simultaneously page from the VAM-1 and associated Paging Station. The first PTT button pressed will take precedence. When paging from the VAM-1, the Paging Station will display that it is unavailable. When paging from the Paging Station the busy LED will indicate on the VAM-1.

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)

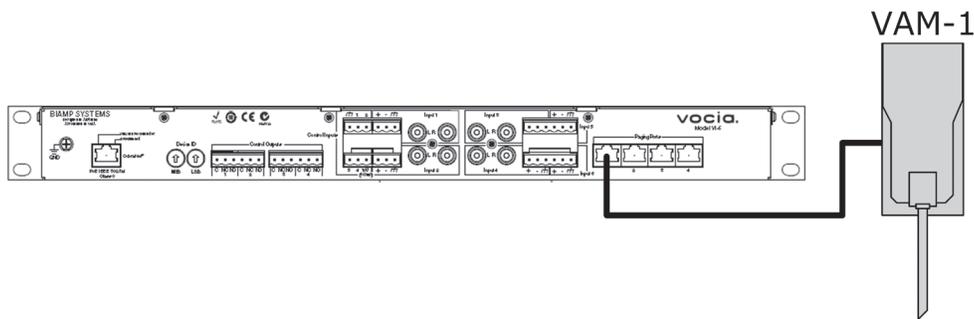
LED Indicators when used with Paging Station

The VAM-1 has two bi-colour status LEDs visible when the microphone is lifted from the cradle. When connected to a Paging Station the following LED indications are supported:

VAM-1 Status	 Busy LED	 Talk LED	Paging Station LCD Message
Idle	Green Pulse	Green Pulse	Current page Code
Paging Station In Use	Red Flash	Red Flash	Current page Code
Paging Station PIN Locked	Red Flash	Red Flash	Station Is Locked
Page Setup in Progress	Amber	Off	Aux. Mic. In Use
Destination Zones In Use	Red Flash	Red Flash	Aux. Mic. In Use
Please Talk Now	Off	Green	Aux. Mic. In Use
Approaching End of Maximum Page Length	Off	Green Slow Flash	Aux. Mic. In Use
Maximum Page Length Exceeded	Red Flash	Red Flash	Aux. Mic. In Use
Message Playback Request Queued	Off	Green Flash	Aux. Mic. In Use
Message Playback Request Failed	Red Flash	Red Flash	Aux. Mic. In Use

Using the VAM-1 with a Vocia Input 6 (VI-6)

The VAM-1 is designed to connect to the VI-6 Paging Port Inputs. When the VI-6 audio input path is configured to use the VAM-1 the associated line inputs of the VI-6 will be unavailable for use. One VAM-1 is able to be connected to each Paging Port Input with a total of four able to be connected to a single VI-6. The Audio Channel Signal Presence LEDs on the front of the VI-6 chassis will continue to operate when the input channel is configured for Paging. The LEDs will function regardless of whether an associated VAM-1's PTT is pressed. Live Page Preambles are supported but must be assigned to the VI-6 acting as a host via the Vocia software.



Each Paging Input can be configured in the Vocia software with their own dedicated Page Code. For microphones connected to a VI-6, Store-and-Forward and PIN Code functionality are not supported.

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)

LED Indicators when used with VI-6

The VAM-1 has two bi-colour status LEDs visible when the microphone is lifted from the cradle. When connected to a VI-6 the following LED indications are supported:

VAM-1 Status	 Busy LED	 Talk LED
Idle	Green Pulse	Green Pulse
Page Setup in Progress	Amber	Off
Destination Zones In Use	Red Flash	Red Flash
Please Talk Now	Off	Green
Approaching End of Maximum Page Length	Off	Green Slow Flash
Maximum Page Length Exceeded	Red Flash	Red Flash
Message Playback Request Queued	Off	Green Flash
Message Playback Request Failed	Red Flash	Red Flash

If the VAM-1 is indicating it is in an idle state a Page may be initiated by pressing the PTT switch. After the switch is pressed, the Wait and Talk LED indicators will illuminate as follows:

- **Wait LED Indicator:** The LED will illuminate amber while the Paging Station or VI-6 is configuring the Page and/or playing a Preamble.
- **Talk LED Indicator:** The LED will illuminate green to indicate an announcement is ready to be accepted.

Installation

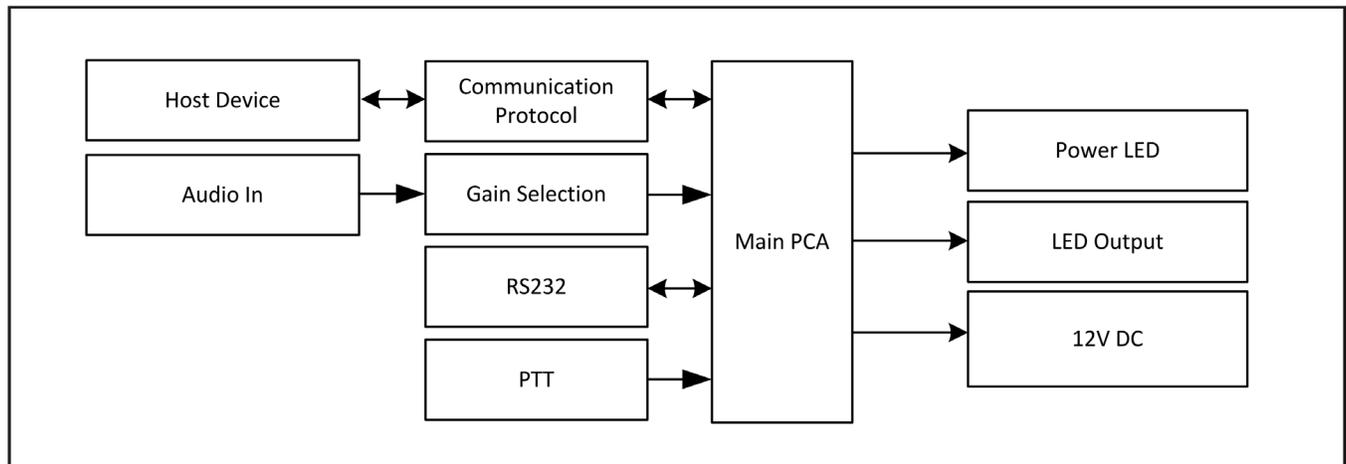
The VAM-1 is suitable for surface mounting vertically on a wall or desk in portrait orientation. Note that the VAM-1 connector protrudes into the mounting surface behind the unit. In addition, adequate space must be allowed behind the VAM-1 for accommodation of a mating connector and cable.

VOCIA AUXILIARY MICROPHONE 1 (VAM-1)

Vocia Auxiliary Microphone 1 SPECIFICATIONS

Microphone Frequency Response (1cm):	+0, -1dB, 20Hz to 10kHz	Power (from Host)	12V DC, 50 mA
Microphone Type	Dynamic microphone with dual transducer (un-monitored)	Max Cable length	100 foot (30 meters)
THD + N (20Hz to 10kHz)	<0.08%	Overall Dimensions:	
Effective Input Headroom	30dB	Length:	5.4 Inches (136.5mm)
System Headroom	18dB	Width:	2.5 Inches (62mm)
Maximum Input	125dB SPL	Depth:	2.2 Inches (55mm)
Microphone Cord Length (extended)	4 ft (1200mm)	Weight:	8.8oz (250g)
Nominal Input Level:	-45dBu	Environment	
Nominal Output Level:	-10dBu	Ambient Operating Temperature Range:	23-104 degrees F (-5 – 40° C)
Frequency Response:	+0, -1dB, 20Hz to 10kHz	Humidity:	0 – 95%RH non-condensing
Total Harmonic Distortion and Noise:	<0.08%, 20Hz to 10kHz, input -35dBu	Altitude:	0 – 10,000 feet MSL (3000 meters)
Input Common Mode Rejection Ratio:	>50dB, 200Hz to 20kHz	Compliance:	UL 60065 Listed
Headroom:	> 25dB		RoHS Directive
Signal to Noise Ratio:	> 65dB, 20Hz to 20kHz, gain 35dB, Zs 150Ω		EU Directive 2002/95/EC
Network Connection:	RJ45 with shielded Ethernet cable (CAT5e, CAT6, or CAT 7)		

Vocia Auxiliary Microphone 1 BLOCK DIAGRAM



WARRANTY

BIAMP SYSTEMS IS PLEASED TO EXTEND THE FOLLOWING 5-YEAR LIMITED WARRANTY TO THE ORIGINAL PURCHASER OF THE PROFESSIONAL SOUND EQUIPMENT DESCRIBED IN THIS MANUAL

1. BIAMP Systems warrants to the original purchaser of new products that the product will be free from defects in material and workmanship for a period of 5 YEARS from the date of purchase from an authorized BIAMP Systems dealer, subject to the terms and conditions set forth below.
2. If you notify BIAMP during the warranty period that a BIAMP Systems product fails to comply with the warranty, BIAMP Systems will repair or replace, at BIAMP Systems' option, the nonconforming product. As a condition to receiving the benefits of this warranty, you must provide BIAMP Systems with documentation that establishes that you were the original purchaser of the products. Such evidence may consist of your sales receipt from an authorized BIAMP Systems dealer. Transportation and insurance charges to and from the BIAMP Systems factory for warranty service shall be your responsibility.
3. This warranty will be VOID if the serial number has been removed or defaced; or if the product has been altered, subjected to damage, abuse or rental usage, repaired by any person not authorized by BIAMP Systems to make repairs; or installed in any manner that does not comply with BIAMP Systems' recommendations.
4. Electro-mechanical fans, electrolytic capacitors, gooseneck microphones, cords connecting handheld microphones, hard-drives, displays, and normal wear and tear of items such as paint, knobs, handles, keypads and covers are not covered under this warranty. All server-based devices are warranted for 3 years only.
5. This warranty is in lieu of all other warranties, expressed or implied. Biamp Systems disclaims all other warranties, expressed or implied, including, but not limited to, implied warranties of merchantability and fitness for a particular purpose.
6. The remedies set forth herein shall be the purchaser's sole and exclusive remedies with respect to any defective product.
7. No agent, employee, distributor or dealer of Biamp Systems is authorized to modify this warranty or to make additional warranties on behalf of Biamp Systems. Statements, representations or warranties made by any dealer do not constitute warranties by Biamp Systems. Biamp Systems shall not be responsible or liable for any statement, representation or warranty made by any dealer or other person.
8. No action for breach of this warranty may be commenced more than one year after the expiration of this warranty.
9. Biamp systems shall not be liable for special, indirect, incidental, or consequential damages, including lost profits or loss of use arising out of the purchase, sale, or use of the products, even if BIAMP Systems was advised of the possibility of such damages.

013013_585.0359.90B

FCC COMPLIANCE

FCC NOTICE - CLASS B DIGITAL DEVICE

NOTE: 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 in a residential as well as in a commercial installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: 1) Reorient or relocate the receiving antenna, 2) Increase the separation between the equipment and receiver, 3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected or 4) Consult the dealer or an experienced radio/TV technician for help.



EC Declaration of Conformity

Biamp Systems Corporation, as manufacturer having sole responsibility, hereby declares that our delivered version the following described product complies with the applicable provisions of the DIRECTIVES below except as noted herein. Any alterations to the product not agreed upon and directed by Biamp Systems Corporation will invalidate this declaration.

<u>Brand Name:</u>	Vocia®	
<u>Product Description:</u>	Auxiliary Mic Station	
<u>Model:</u>	VAM-1	
<u>Applicable EC Directives:</u>	<u>Applicable Harmonized Standards:</u>	
LVD Directive (2006/95/EC)	Safety	EN 60065:2002 IEC 60065:2001 + Amd 1:2005
EMC Directive (2004/108/EC)	Emissions Immunity	EN 55103-1:2009, Environment E2 EN 55103-2:1996, Environment E2
RoHS Directive (2011/65/EU)	RoHS Recast	

Special Considerations for Product Environment or Compliance:

- For use connected to "Auxiliary" Port or "Paging Ports" provided by host Vocia Paging Stations and Input Expanders.
- Shielded cabling must be used for system connections.

Technical Construction File, Location and Contact:

Biamp Systems Corporation	phone:	(503) 641.7287
9300 S.W. Gemini Drive	fax:	(503) 626.0281
Beaverton, OR USA 97008	e-mail:	compliance@biamp.com

Signed for and on behalf of Biamp Systems Corporation:

Authorized Representative: Larry Copley, Compliance Engineer

Authorized Signature:

Date and Place Issued: July 2012, Beaverton, Oregon USA

COMPLIANCE

EU RoHS COMPLIANT



This Biamp product, including all attendant cables and accessories supplied by Biamp, meets all requirements of EU Directives 2002/95/EC of January 27, 2003, and 2005/618/EC of August 18, 2005, the EU RoHS Directives. An EU RoHS Materials Content Declaration document may be obtained at www.biamp.com

(This information is presented to comply with the requirements of Chinese law SJ/T11363-2006)

有害物质表 (Hazardous Substances Table)

Biamp Systems Corporation

广播设备 (Announcement Device)

Vocia VAM-1

部件名称 (Part Name)	有毒有害物质或元素 (Substances)					
	Pb 铅	Hg 汞	Cd 镉	Cr+6 六价铬	PBB	PBDE
设备机箱 (Equipment Chassis)	X	0	X	0	0	0
手册和其他书面文档 (Manual and Paper Documents)	0	0	0	0	0	0
包装箱和所有包装材料 (Box and Packing Materials)	0	0	0	0	0	0

0: 表示该部件所有均质材料中的这种有毒有害物质低于 SJ/T11363-2006 的限制要求。

X: 表示该部件中至少有一种均质材料所含的这种有毒有害物质高于 SJ/T11363-2006 的限制要求。

在电触头和（或）镀镉所含的均质材料中，镉及其化合物的含量可以超过 0.01%，但欧盟指令 91/338/EEC（根据欧盟指令 76/769/EEC）限制销售和使用某些危险物质和制剂部分中所禁止的用途除外

在以下一种或多种物质所含的均质材料中，铅及其化合物的含量可以超过 0.1%:

- 1) 电子元器件中玻璃内所含的铅
- 2) 铅在钢材中是作为一种合金元素，含量可达 0.35%
- 3) 铅在铝材中是作为一种合金元素，含量可达 0.4%
- 4) 铅在铜材中是作为一种合金元素，含量可达 4%
- 5) 高熔点类焊料中的铅（即铅料合金，铅含量超过 85%）
- 6) 电子陶瓷部件内的铅
- 7) 由两种以上元素组成的焊料中所含的铅，用于连接针脚和微处理器包装，其中铅的含量超过 80% 但低于 85%
- 8) 顺应针连接系统内的铅
- 9) 倒装芯片封装中半导体芯片及载体之间形成可靠连接所用焊料中的



在正常使用情况下，中国环保使用期限为 10 年，条件是：

- 环境温度为 0-40C (32-104°F)
- 湿度为 0-95%，无凝结
- 海拔高度为 0-10,000 英尺
- 气流不受阻碍
- 没有水或其他液体进入任何部件
- 通过主机 IEEE 802.3af PoE 获得电源
- 部件没有损坏（损坏部件应立即修理）
- 由工厂授 · 人 · 使用批准的材料 · 行所有 · 修