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Vocia®

VI-8
OPERATION MANUAL

The Vocia Input 8 (VI-8) is designed to facilitate live audio paging from user sources to emergency and non-emergency zones in a Vocia system. The VI-8 will allow direct paging access from eight sources via analog mic/line level inputs or CobraNet digital audio connections. Nine logic inputs can be assigned to various Vocia control events including paging control. A logic output and four relay outputs can be assigned to control events. The logic output may be used to report status from one or several daisy-chained VI-8s to an external system. The logic inputs and output are monitored.

Setup and Use

The Vocia software provides an intuitive interface for configuration, DSP equalization, and programming of the VI-8. The information supplied by this manual relates to physical connections and assignment. For more details on software setup, please consult the Vocia Help File.

Installation

The unit requires one 1.75 inch (44.45 mm) high and 19 inch wide rack space with 10 inch (254 mm) depth. Mounting the unit using four screws with washers will prevent marring of the front panel. PVC or nylon washers are appropriate.

Install the unit away from heat sources, such as vents and radiators, and in rooms with adequate ventilation. Ensure that air can circulate freely behind, beside, and above the unit. Do not exceed the maximum ambient operating temperature of 32° - 108° F (0° - 42°C). Be aware of conditions in an enclosed rack that may cause the temperature to exceed ambient room conditions.

Front Panel Information

The VI-8 LEDs are as follows (from left to right when viewing the front of the chassis):

1. 24V DC power 1
2. 24V DC power 2
3. Fault
4. Activity
5. Status
6. Audio Channel 1
7. Audio Channel 2
8. Audio Channel 3
9. Audio Channel 4
10. Audio Channel 5
11. Audio Channel 6
12. Audio Channel 7
13. Audio Channel 8

Power (Chassis Indicator)

The VI-8 has two power indicators. If power is applied to one or both 24V DC power connectors, the corresponding LED will be on.

- Off – The power connection is not available or not within the voltage range.
- Solid green – The unit is receiving power.

Fault (Chassis Indicator)

There are two types of chassis Faults that will be reported depending on the severity of the problem. Audio may still be passing, but if the condition causing the warning is not corrected, a failure may occur.

- Flashing amber – A Control Input configured as "high range – monitored" input has a Fault.
- Solid amber – A chassis Fault is active on the VI-8.

Activity (Chassis Indicator)

The VI-8 has an activity LED that will illuminate to show the configuration status of the unit.

- Off – The unit is not configured.
- Solid green – The unit is configured.

Status (Chassis Indicator)

The VI-8 has a tri-color Status LED that indicates the health of the hardware.

- Solid green – The unit is powered up and working normally.
- Flashing amber – Shown during the power-up self-test.
- Solid red – The unit experienced a problem during the power-up self-test.

Audio Channel

- Green – Audio signal level is between -48 dBFS and -18 dBFS.
- Amber – Audio signal level is between -18 dBFS and -3 dBFS.
- Red – Audio signal level is above -3dBFS.

Power

The VI-8 requires an external single 24V DC power source to operate, but is capable of accepting dual 24V DC inputs for redundancy. Both power sources may be connected concurrently, however each must be capable of supporting the full 30 watt load of the unit (inputs are not intended to load-share). Loss or return of either power source will not result in an interruption to normal operation as long as one of these power sources remains functional. Monitoring of power sources is selectable via the Vocia Software.

The power connector is a four-way 5.08mm standard header with mating pluggable screw terminal block with cable restraint. When power is present at either or both 24V power inputs the corresponding front panel green power LED will illuminate.

CAUTION
Due to potential energy hazard, connections to the Auxiliary Power DC inputs must be made by a qualified electrician or other qualified person as required to conform with all local codes.

Pin	Function
1	DC Power 1 24V(+)
2	DC Power 1 24V(-)
3	DC Power 2 24V(+)
4	DC Power 2 24V(-)

Device ID

The rotary ID switches give the unit a unique Device ID. The switches are in hexadecimal format. All units of the same device type must have a unique Device ID to function properly within a Vocia Paging World. The Factory Default Device ID is 01. A Device ID of 00 is invalid and cannot be used.

To assign a Device ID of hex 07, leave the MSB switch on 0 and turn the LSB switch to 7. Device ID switches should be set using a 0.1 inch (2.5mm) to 0.12 inch (3.0mm) flat blade screwdriver.

MSB   LSB
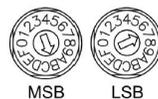
NOTE
Changes made to the Device ID while connected to the network require a power cycle of the device in order to take effect.

Network Connections

All CobraNet routing and bundle assignments are processed by the Vocia devices locally. Vocia makes dynamic use of available bundles in CobraNet. A 100Base-T Ethernet switch (not repeater hub) is required when networking multiple units. CobraNet utilizes standard CAT5, CAT5e, CAT6, or CAT7 cabling, which has a specified maximum length of 328 feet (100 meters). Additional Ethernet switches, or switches which provide fiber-optic interface, can be used to extend the physical distance between units within a network. Please note that CobraNet limits network extensions to seven hops (one-way transmissions) within a network. The CobraNet network connection is configured with the primary connector on the left and the secondary (redundant) connector on the right. The primary and secondary CobraNet ports are provided to facilitate connection redundancy. Each connector provides two LEDs that indicate Ethernet link and network activity.

Left LED	Right LED	Description
None	None	No Data Connectivity or CobraNet activity
None	Green	Link established
Flashing yellow	Green	Link established and CobraNet activity detected; The unit is acting as a CobraNet Performer
Flashing yellow	Flashing green	Link established and CobraNet activity detected; The unit is acting as a CobraNet Conductor
Flashing yellow	None	CobraNet fault. Check cabling and configuration for errors

Audio Inputs

Eight balanced mic/line connections are available via eight 5.08mm 3-pin pluggable screw terminal blocks. All plug-in barrier strip connectors should be wired from left to right as follows:

Pin	Function
1	Audio +
2	Audio -
3	Ground (chassis)

Control Outputs

Four relay connections are available to be configured and operate as Control Outputs. The connectors are a six-way 3.5mm header with mating pluggable screw terminal block with cable restraint.

Pin	Function
1	Relay C, Channel 1 or 3
2	Relay NC, Channel 1 or 3
3	Relay NO, Channel 1 or 3
4	Relay C, Channel 2 or 4
5	Relay NC, Channel 2 or 4
6	Relay NO, Channel 2 or 4

Control Inputs

Nine Control Inputs are available and can be assigned to operate a control input event. Input nine has the ability to work as a Status In to allow monitoring of multiple VI-8 devices. The Status Out connection can then be reported as a summary alarm to external monitoring systems.

Pin	Function		Pin	Function		Pin	Function
1	Ground (shield)		1	Ground (shield)		1	Ground (shield)
2	Isolated Ground		2	Isolated Ground		2	Isolated Ground
3	Input 1		3	Input 5		3	Status In / Input 9
4	Input 2		4	Input 6		4	Status Out
5	Input 3		5	Input 7		5	24V DC (100mA limited)
6	Input 4		6	Input 8		6	Isolated Ground

Status Monitor Wiring