

# VPage™

*Intelligent Dante PA Station*



## User's Manual

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**McBride**  
**Inc.**

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Every effort has been made to assure the accuracy of the information contained in this manual, and the reliability of the Alcorn McBride VPage hardware and software. Errors can sometimes go undetected, however. If you find one, please bring it to our attention so that we can correct it for others. Alcorn McBride welcomes comments and suggestions on the content and layout of its documentation.

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Product Design: Jim Carstensen, Martin Chaney, Dmitri Kisten,  
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# Welcome!

Thank you for purchasing The Alcorn McBride VPage™ Network-enabled paging station. The VPage provides facility-wide intelligent paging using Dante™ Audio Networks and the Q-Sys™ PA Station Protocol.

Configuration of your paging network including zone assignments, button and light behaviors and zone priorities is completely soft programmable using the Q-Sys Designer and administrator software.

Each VPage station includes illuminated paging zone buttons, microphone input, and level control. The VP16PCB version includes an expansion connector allowing 16 illuminated pushbuttons.

A single Ethernet cable carries audio, power, control and monitor data between the VPage station and the Q-Sys system. A facility may incorporate an unlimited number of VPage stations by simply connecting them to PoE network switches.

The VPage Model VP4 is a four button station with a 5-pin XLR connector and mounting bracket for a push-to-talk microphone. It is intended for use with a coiled cord dynamic microphone and mounting bracket (VP4Mic, sold separately).

The VPage Model VP4M is the same as the VP4 except that the microphone connection is made on screw terminals for an externally-mounted microphone, such as a panel-mounted gooseneck microphone.

The VP16PCB is the circuit board only, for mounting in custom-made consoles which include a paging station. It includes screw terminals for the microphone and externally mounted pushbuttons and LEDs.

We would like to provide you with Firmware and Software updates and notify you when additional features become available. If you are interested, please subscribe to our VPage mailing list at <http://alcorn.com/library/lists/subscribe.html>.

# Features

The VPage offers a wide range of features including:

- Dante Audio Network Compatible
- Q-Sys PA Station Protocol
- Audio, Control and Power on one Ethernet cable
- Power-Over-Ethernet (Class 3) with indicator
- 4 LED Illuminated Page Zone Buttons with breakaway feature.
- Up to 16 paging buttons & LEDs (VP16PCB) with breakaway feature.
- 5-Pin Mic Input XLR
- Phantom Power
- Adjustable Microphone Gain
- Adjustable LED Brightness
- Mounts in standard 4-gang duplex box (VP4) or on DIN rail (VP16PCB)

# Technical Support

You can obtain information about specifying, installing, configuring, updating and programming your Alcorn McBride VPage from several sources:

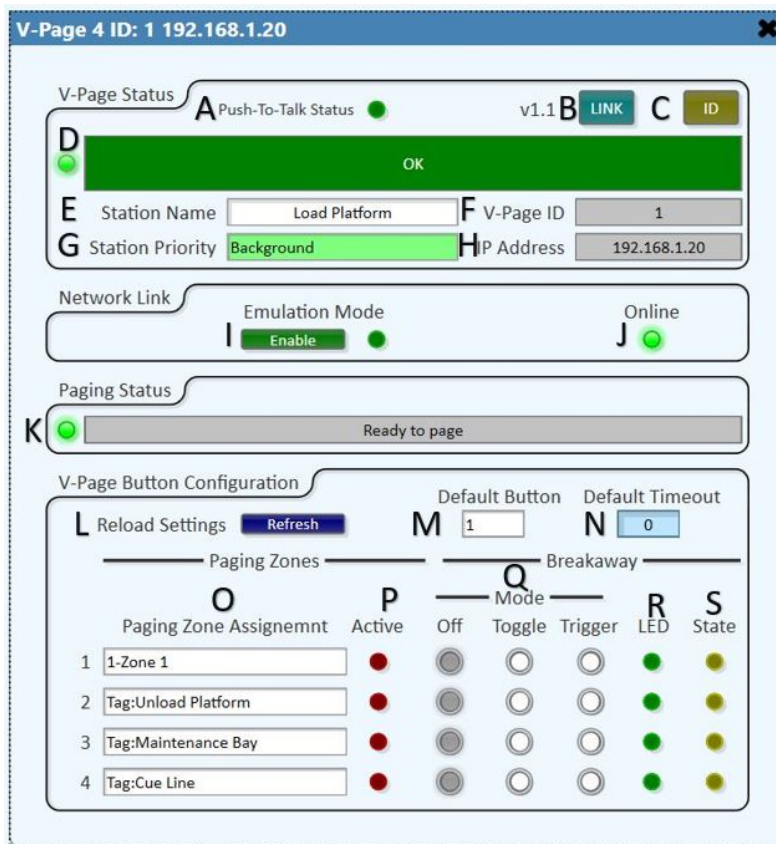
For...	Contact...	When?...
Telephone Support	(407) 296-5800	M-F 9am–6pm (EST)
Fax Support	(407) 296-5801	M-F 9am-6pm (EST)
Knowledge Base (FAQ)	<a href="http://www.alcorn.com/kb">http://www.alcorn.com/kb</a>	Any Time
E-mail Support	<a href="mailto:support@alcorn.com">support@alcorn.com</a>	Any Time
Firmware Updates	<a href="http://www.alcorn.com/support">http://www.alcorn.com/support</a>	Any Time

# Quick Start Guide

## Section 1: Placing VPage(s) online

The VPage station(s) communicates with a Q-sys core via network connection using a Plug-In. To install the plug you need to download the file from the website and copy and paste the component to your design. The plug in can be downloaded from our website at <http://alcorn.com/support/software/>

**\*You must be running firmware 1.08 or above for the Plug-in to work.** To learn how to do a firmware update please refer to the firmware update section of this manual.



- A) **Push-To-Talk:** LED goes on when PTT is Enabled.
- B) **Link:** Use this button to associate a physical station with the plug-in component (refer to “Linking a Station” section on the next page).
- C) **ID:** Pressing the Button will make the front buttons of the V-Page station blink momentarily.
- D) **Status Bar:** Provides information about the V-Page connection status.
- E) **Station Name:** You can give the station a unique descriptive name to differentiate from other V-Page stations.
- F) **V-Page ID:** The station ID, corresponding to the station number on the PA Router.



- G) **Station Priority:** Station priority according to the PA settings on Q-sys administrator.
- H) **IP Address:** The IP Address of the V-Page station.
- I) **Emulation Mode:** Allows the plug-in and V-Page station to be used without a core for programming purposes.
- J) **Online:** LED is on if the V-Page station is currently connected to the Core
- K) **Paging Status:** Indicates whether the station is ready to page, actively paging, or unable to page.
- L) **Reload Settings:** This can be used if the indicators do not match the the indicators of the Q-sys plug-in.
- M) **Default Button:** This setting allows you to select which zone button the station will select once a page is complete.
- N) **Default Timeout:** This setting allows you to specify how long it will take (in seconds) to select the default zone button after a page has completed.
- O) **Paging Zone Assignment:** Use this to assign zones to the V-Page buttons. These zones can be administered through Q-sys administrator
- P) **Active:** LED will light up when the zone is in use
- Q) **Breakaway Mode:** Determines the mode of the station buttons:
  - A) **Off:** Operate as a regular zone selection button
  - B) **Toggle:** When pressed, the control pin 'Breakaway State LED' will toggle states. (0→1), 1→0). This can be used to interface to other control pins within Q-sys like mute functions. In this mode, the button LED will represent the state of the 'Breakaway State LED' control pin.
  - C) **Trigger:** This is like the toggle mode except that the control pin 'Breakaway State LED' will momentarily pulse to a value of 1. In this mode, the V-Page button LED can be manually controlled using the control pin 'Breakaway Input LED'.
- R) **LED:** The current state of the V-Page station button LED
- S) **State:** the LED will turn on when the breakaway output has a value of 1.

## Connecting the VPage station to Q-sys

There are three major steps that need to be completed to ensure that VPage and Q-Sys function together properly.

**Configure VPage Component** - This step involves configuring station settings such as IP address, Device ID, etc...

**Link VPage to Q-Sys** – This step involves Q-Sys exchanging settings with VPage and linking the two together.

**Configure Dante** – This step configures the audio transport between VPage and Q-Sys.

### A) Configure VPage

While in design mode in Q-sys designer, click on the VPage component. Under the properties tab on the right, give the station an ID number and an IP address. Once finished, go to File > Save to core and Run.

\*You can do this for all the stations that you have in your design. More settings such as Subnet Masks, Gateways, etc.... can be configured using AMI Terminal. Look on the AMI Terminal configuration section below for more details.

### B) Q-Sys-AMI Link

- 1) Power on VPage by connecting Ethernet port to the POE switch and wait 10 seconds for VPage unit to initialize.
- 2) Set DIP switch #2 to the ON (DOWN) position for 1 second and then return it to the OFF (UP) position. The DIP switches are located on the top-left edge of the VPage unit (on the circuit board directly behind the Alcorn McBride logo). After the switch is returned to the OFF (UP) position, all LED's will illuminate GREEN momentarily and then start BLINKING RED to indicate that the unit has been cleared.
- 3) If you have a DHCP server in your network go to step 4. If you do not have a DHCP server in your system, then wait about 15 to 20 seconds for the station to self-assign a temporary IP address (it will be in the range of 169.xxx.xxx.xxx)
- 4) Press and hold button 1,2 and 4 until the button lights start scrolling down (you can also flip DIP SW#1 on and off to go into link mode)
- 5) On the Q-sys plug-in click link. The station LED's will blink for a second and the station will re-boot. After a few seconds the station LED's will be solid green and the plug-in "Online" LED will light up

### C) Dante Configuration

- 1) Open Dante Controller, click on the "Device Info" tab and double click on the VPage station.
- 2) Go to the "Status" tab and make sure that the IP address is the desired one. (If the address is not, you must set your computer to the same network as the IP shown and then change it in the "Network Config" tab).
- 3) Optional – Go to the "Device Config" tab and give the VPage station a name under "Rename Device".
- 4) Lastly, go to the Dante Input component in Q-Sys and assign VPage to the corresponding inputs.

- o **Dante IP Reset:** This can be performed via Dante Controller's Network Config if the current Dante IP is known. Otherwise, use jumper **J6** on the bottom board and power cycle the VPage. Wait 3-4 seconds and remove the jumper. At this point the Dante will lose **ALL** of its custom configurations (naming, routing, etc).

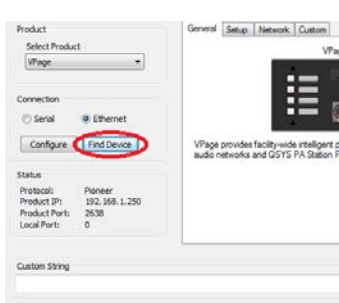
### Using AMI Terminal to configure VPage

- 1) Power on VPage by connecting Ethernet port to the POE switch and wait 10 seconds for VPage unit to initialize.
- 2) Set DIP switch #2 to the ON (DOWN) position for 1 second and then return it to the OFF (UP) position. The DIP switches are located on the top-left edge of the VPage unit (on the circuit board directly behind the Alcorn McBride logo). After the switch is returned to the OFF (UP) position, all LED's will illuminate GREEN momentarily and then start BLINKING RED to indicate that the unit has been cleared.
- 3) Open AMI Terminal and click "Find Devices". Make sure your computer and VPage station are on the same computer's physical network.
- 4)
- 5) use AMI Terminal's "Find Devices" feature to display all the VPages found on the network. All VPages in discovery mode will have 0.0.0.0 IP. Selecting a specific VPage in the list will send an identify command to the VPage, in turn the VPage will blink a few times so you can physically identify the VPage you are about to configure. Once desired VPage is selected, continue with the process. VPage IP Address (for control), Dante IP Address (for audio), Subnet and Gateway (both) can be programmed at this time. Ensure all the IPs are on the same subnet and continue. The process may take up to 30 seconds. In the end all the connectivity information will be programmed.

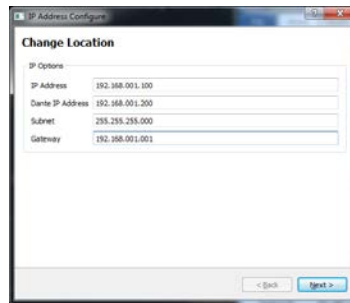
Note: If the process ends with "DHCP discovery from Dante not found", the Dante hasn't been reset. Ensure **Dante IP Reset** step is performed correctly. You don't have to re-discover the VPage itself, simply click **Back** and retry again. In this case, ignore any errors or warnings about missing BOOTP information.

You can always use Dante Discovery later on to configure the ante portion of the station.

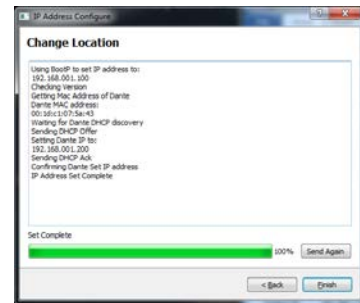
Upon successful completion, the VPage will reboot using the newly set IPs, which are static and will not change.



AMI Terminal Find Devices



Connectivity Setup



Successful Completion

1. **Dante IP Reset:** Dante static IP needs to be cleared. This can be performed via Dante Controller's Network Config if the current Dante IP is known, otherwise, jumper **J6** on the bottom board and power cycle the VPage. Wait 3-4 seconds and remove the jumper. **At this point the Dante will lose ALL of its custom configurations (naming, routing, etc).**
2. **VPage IP Reset:** To reset connectivity settings only, toggle DIP SW#3 OFF -> ON -> OFF while unit is operating in Normal Operation Mode. Upon successful toggle, all LEDs will light up briefly on the VPage and the unit will reboot with discovery and DHCP enabled. See DIP switch configuration for more details about Normal Operation Mode and Discovery.

## **Section 2: Q-Sys core pairing.**

If you have already use AMI Terminal to configure the stations. Q-sys will automatically link the plug-in to the station if the IP settings and station ID settings match. If you don't have a connection yet, then follow the next steps:

### **Q-Sys-AMI Link**

- 1) Power on VPage by connecting Ethernet port to the POE switch and wait 10 seconds for VPage unit to initialize.
- 2) Press and hold button 1,2 and 4 until the button lights start scrolling down (you can also flip DIP SW#1 on and off to go into link mode)
- 3) On the Q-sys plug-in click link. The station LED's will blink for a second and the station will re-boot. After a few seconds the station LED's will be solid green and the plug-in "Online" LED will light up

# Locating VPages on a Network

The VPage hardware contains 1 physical Ethernet connection but 2 interfaces (VPage control and Dante audio). They are isolated. This means there are 2 MAC addresses assigned to each “physical” VPage unit hence 2 IPs. Furthermore, on any given network there are most likely multiple VPage units.

This guide focuses on simplifying locating process of the physical VPage unit remotely using VPage station ID, VPage MAC/IP (control), Dante MAC/IP (audio) and control <-> audio interface matching in a physical VPage unit. All units must be online (both interfaces) on the same subnet.

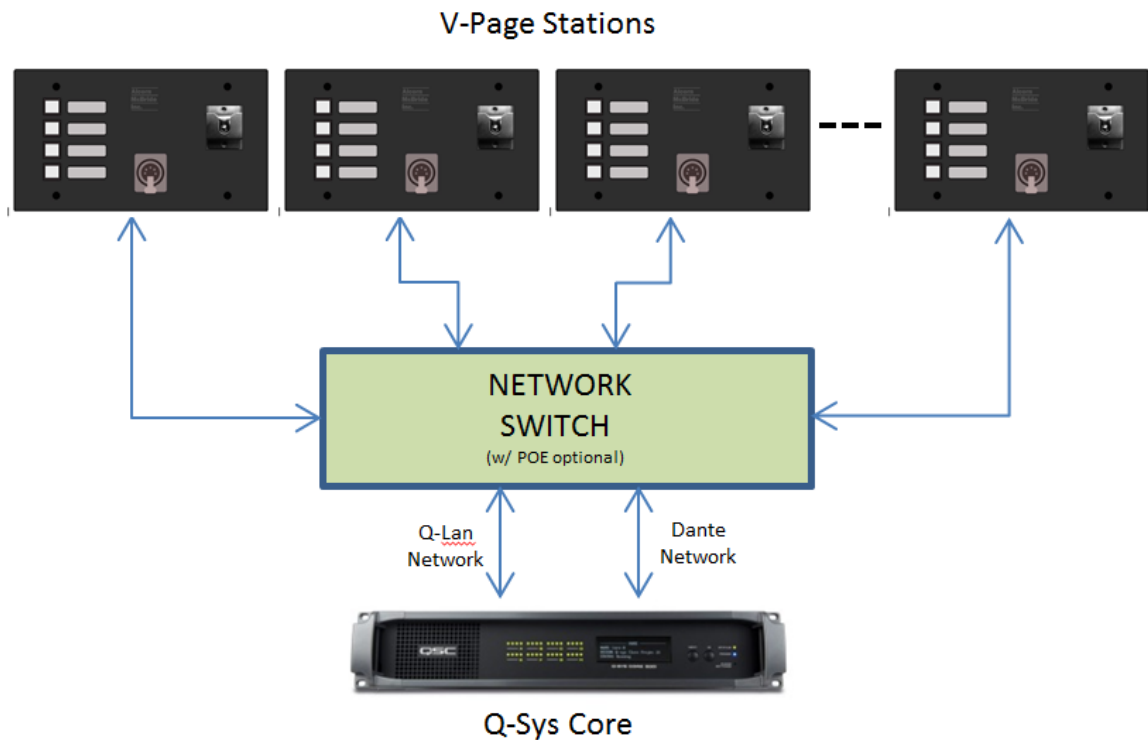
AMI Terminal is used to send all the commands. AMI Terminal can broadcast across your subnet by connecting to X.X.X.255, i.e. 192.168.0.255. AMI Terminal cannot connect to a Dante audio interface, but it can match by the Dante information stored in the VPage, hence it can be used to match any given Dante interface information to the physical VPage including physical identify by the Dante MAC/IP address.

Action	Command	Response	Notes
Pinging all the VPage Station IDs	"ID" h0D	VPage Station ID from all the VPages online.	ID 99 is a default ID if AMI Link hasn't been performed.
Pinging all the VPage IPs	"IP" h0D	VPage IP from all the VPages online.	IP reported is a dynamic IP if obtained via DHCP or static IP, if one is set.
Pinging all the VPage MACs	"MC" h0D	VPage MAC from all the VPages online.	
Pinging all the Dante MACs	"UMC" h0D	Dante MAC from all the VPages online.	
Pinging all the VPage/Dante MAC pairs	"PMC" h0D	"VPage MAC, Dante MAC" from all the VPages online.	Response contains both of the MACs (VPage and Dante) from a single VPage unit.
Physically identifying by VPage Station ID	"XFN" h0D	"R" from matched VPage and VPage physically blinking for a short period of time.	X is the station ID assigned to the VPage unit.
Physically identifying by VPage or Dante IP	"X.X.X.XFN" h0D	"R" from matched VPage and VPage physically blinking for a short period of time.	X.X.X.X is the VPage or Dante IP address.
Physically identifying by VPage or Dante MAC	"X:X:X:X:XFN" h0D	"R" from matched VPage and VPage physically blinking for a short period of time.	X:X:X:X:X is the VPage or Dante MAC address.

# Functional Description

VPage is part of a system consisting of a Q-Sys Core, Network Router(s)/Switch(s), and the VPage Stations themselves. There are actually two separate networks in a VPage system: The Q-LAN network where Q-Sys and VPage communication occurs, and the Dante network where audio is carried from the VPage to the Q-Sys Core Dante Module (CDN64). A single physical connection handles both networks between the VPage and the network. Between the switch and the Q-Sys Core two separate connections are used, one for Dante and one for the Q-LAN Network.

To setup Dante side of the VPage, please use Dante Controller software. Described in further details in Dante Controller Software section.



# Front Panel

The VPage is available in 3 different configurations. VPage Model variations are shown below.

## Models VP4 & VP4M

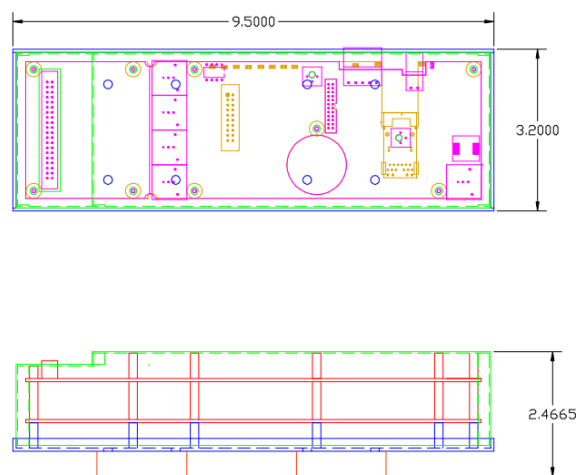
VPage Model VP4 includes 4 Illuminated Paging Zone buttons, a 5-Pin XLR Mic connector designed for a Push-to-Talk microphone, and a Microphone clip. The VP4M is the same, except there is no XLR connector and the microphone is connected to screw terminals on the circuit board underneath the panel.



Model VP4

## Model VP16PCB

VPage Model VP16PCB is designed to be mounted in a console or other control panel. It includes an expansion connector where up to 16 separate illuminated paging zone pushbuttons can be connected. An IOBB screw-terminal breakout module is included. The terminal assignment is shown in the External Connections section of this manual.



Model VP16PCB

## Zone Status LEDs

On VP4/VP4M a Zone Select pushbutton has a Green/Red indicator. On VP16PCB only 1 LED is available per zone (assuming green color for consistency). Below is a table explaining the different states of the zone station LEDs in different modes. Description assumes a single Zone LED state unless "All" specified – meaning all LEDs on the unit.

VP4 LED	VP16 LED	Status	Description
All Cycling Colors	All Blinking	Test Mode	Default state to indicate in Test Mode
All Blinking Green (Rapid)		Firmware Update Mode	Default state to indicate in Firmware Update Mode
All Sequential Blinking Green		AMI Link Active	Default state to indicate AMI Link is active.
All Blinking Red	All Off	No Sync	No Q-Sys Core detected
Blinking Green	Blinking	Selected Zone	If dedicated PTT is present (SW #4) If Zone buttons are tied to PTT, this state isn't present.
Solid Red	Solid	Zone In Use	Zone is currently in use by this or another VPage.

More information on the LED indicators can be found in the Software section of this manual.

## Front Panel Controls

You can access two potentiometers through the front panel which allow you to adjust the microphone gain and LED brightness. See the descriptions below.

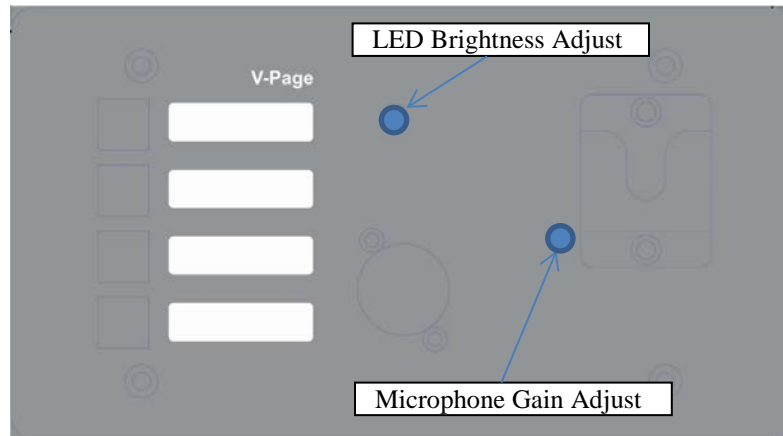
### LED Brightness

Adjust the LED Brightness control to dim the LEDs in situations where excessive illumination is undesirable.

### Microphone Gain

The microphone gain can be adjusted by turning the gain potentiometer counter-clockwise (lower gain) or clockwise (higher gain). Gain is adjustable from 0 to 60dB.





## Configuration DIP Switches

The configuration DIP switches are located on the side of the VPage. Changing the states of these switches alter the behavior of the VPage. DIP switching may perform different functions during **power up** and during **runtime**. Default position for all the switches for **normal operation** is **OFF**.

VPage can power up in one of the following modes (based on switches configuration):

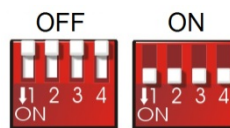
- Normal Mode or Test Mode
- Firmware Update Mode

During **power up**, the state of the switch (**ON** or **OFF**) determines the action.

During **runtime**, toggling the DIP switch (**OFF** => **ON** => **OFF**) will perform specified action. See the descriptions below.

**Note, not all switches have a power up function associated with it.**

**Note, not all switches have a runtime function associated with it.**



## AMI Link (DIP SW#1)

### Runtime – AMI Link:

**OFF** => **ON** => **OFF**: Activate/deactivate AMI Link. Toggle once to activate, toggle again to deactivate. AMI Link will also exit on successful completion or will auto-exit after 60 seconds (default).

AMI Link can be used in conjunction with Q-Sys to assign station ID, static IP/Port and Q-Sys feedback information to the VPage. In a sense, this pairs the VPage with a specific Q-Sys Core. While AMI Link is active, LEDs sequentially light up, one at a time.

## Firmware Update/Reset Factory Defaults (DIP SW#2)

*NOTE: It's advised to use AMI Terminal to invoke the firmware update. The VPage will enter the firmware update mode on the last known IP instead of fixed 192.168.0.254*

*Using the DIP switch is a legacy foolproof way and can be used as an emergency recovery method.*

*NOTE: Loading Factory Defaults will erase all VPage settings!!!*

### Power Up – Firmware Update Mode:

**ON:** Enter Firmware Update mode. In this mode of operation, VPage disregards all its settings and the rest of the DIP switches and uses a default IP of **192.168.0.254**. Web server serves up Firmware Update page. For a detailed explanation on Updating VPage firmware, see the **Firmware Update** section.

To exit Firmware Update Mode, return the switch to OFF position and perform a power cycle.

**OFF:** Default state of the switch for **normal operation**.

### Runtime – Load Factory Defaults (in Normal Operation Mode only):

**OFF => ON => OFF:** Perform factory defaults. All LEDs will light up solid RED (VP4 only, or just ON with VP16) and VPage will perform reset to defaults. Any stored settings will be erased from non-volatile memory and restored to their factory defaults. This affects Dante settings as well.

## Test Mode (DIP SW#3)

*NOTE: Test Mode is mainly used for troubleshooting. It is **NOT** a requirement to program the VPage as all the parameters can be programmed while operating in the normal mode.*

*While in Test Mode, VPage will not fully operate as a paging station.*

### Power Up – Test Mode (Firmware Update DIP SW#2 must be **OFF**):

**ON:** VPage enters Test Mode. In this mode of operation, VPage disregards all its connectivity settings and uses a default IP of **192.168.0.254**. Configuration of the VPage can be performed in full at this point, including connectivity information. All available LEDs will toggle every 1000ms. Zones and DIP switches no longer function as intended, but the state of each will reflect in the web server.

To exit Test Mode, return the switch to OFF position and perform a power cycle.

**OFF:** Default state of the switch for **normal operation**.

## Engage PTT with Zone (DIP SW#4)

This switch operates in ON/OFF mode, not toggle, and allows to bind PTT with Zone inputs.

### Power Up/Runtime:

**ON:** Engage PTT with Zone enabled. Activating any of the zones will automatically engage PTT.

**OFF:** A dedicated PTT button is required to activate the VPage.

Note: When PTT is bound with Zone inputs, there is no Selected Zone state. Pushing a Zone automatically selects it and engages PTT at the same time.

# External Connections

## Power Input

*The power input accepts 5VDC to 37VDC at 1A Max.*

An external power input is provided if you decide not to use the Power-Over-Ethernet feature. The Power connector pinout is shown below (looking from the front).



## Microphone Input

*The microphone input is designed for Dynamic Microphones, or Condenser-type microphones using Phantom Power.*

The Microphone connector pinout is shown below (looking from the front).



*Handheld Dynamic Microphone Model SP4Mic sold separately.*



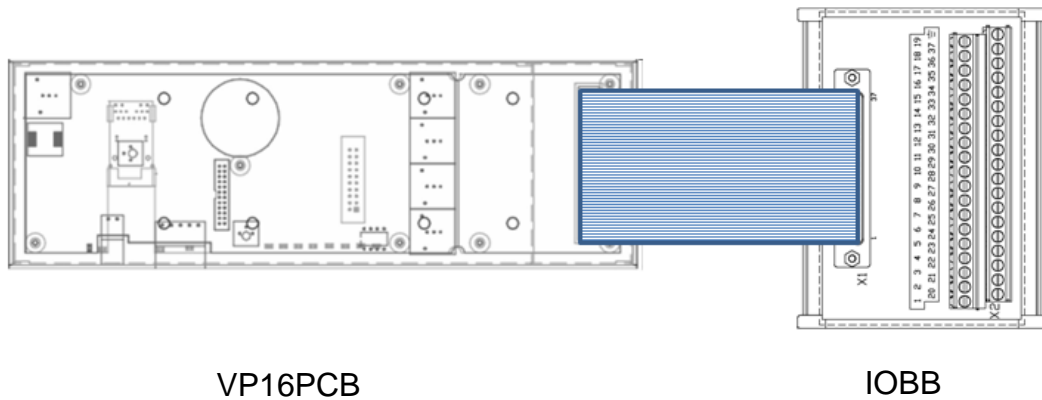
## Ethernet Jack

A standard RJ-45 Ethernet Jack is used for the network connection and PoE power. On the front of the jack or on the edge of the PCB next to the jack are two status LEDs which indicate activity and link speed.

## VP16PCB Connector and IOBB Connections

The Model VP16PCB connects to a DIN Rail Mountable IOBB breakout panel via ribbon cable (both included) for screw-terminal connection of externally mounted pushbuttons and indicator lamps. The lamp outputs are optically isolated, capable of sinking up to 50mA at 30VDC max each.

A mechanical drawing of the IOBB appears at the end of this manual.



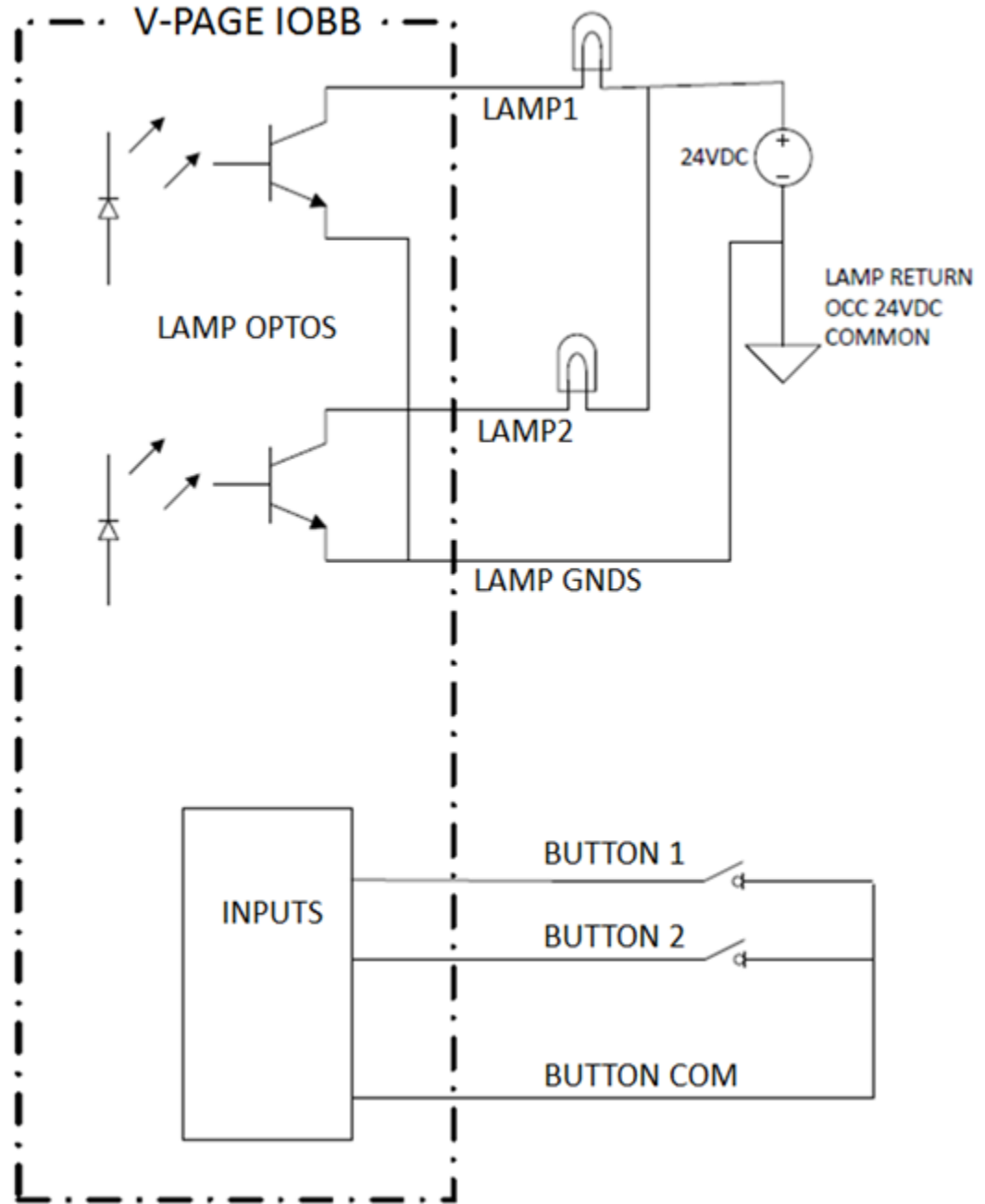
VP16PCB

IOBB

IOBB Connections			
Terminal	Description	Terminal	Description
1	BUTTON1	20	BUTTON9
2	BUTTON2	21	BUTTON10
3	BUTTON3	22	BUTTON11
4	BUTTON4	23	BUTTON12
5	BUTTON5	24	BUTTON13
6	BUTTON6	25	BUTTON14
7	BUTTON7	26	BUTTON15
8	BUTTON8	27	BUTTON16
9	BUTTON COMMON	28	BUTTON COMMON
10	BUTTON COMMON	29	LAMP9
11	LAMP1	30	LAMP10
12	LAMP2	31	LAMP11
13	LAMP3	32	LAMP12
14	LAMP4	33	LAMP13
15	LAMP5	34	LAMP14
16	LAMP6	35	LAMP15
17	LAMP7	36	LAMP16
18	LAMP8	37	LAMP GROUND
19	LAMP GROUND		

# VP16PCB Connector Wiring

Below is a wiring diagram showing how to wire the input buttons and indicators to the IOBB.



# PCB Jumpers

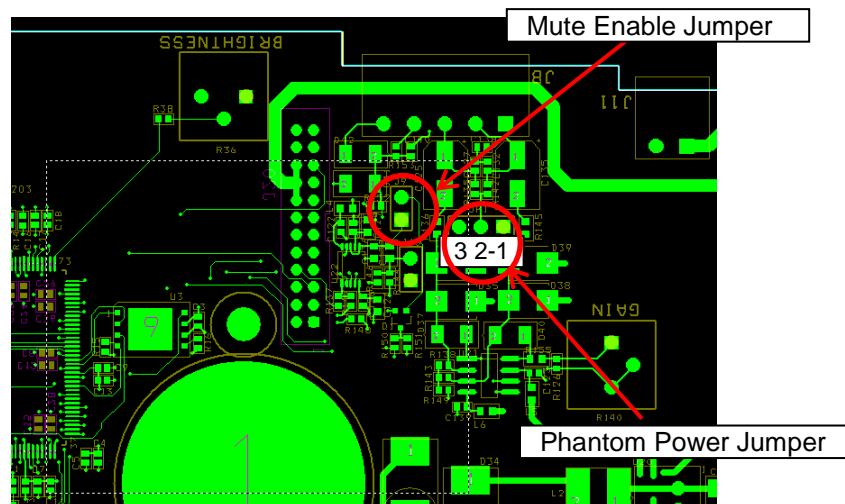
Two user-configurable jumpers are included on the VPage PCB.

## Phantom Power Enable

To enable Phantom Power to the microphone, install the Phantom Power jumper at JP1 position 1-2. For no phantom power, do not install the jumper (or place it in position 2-3). Default is location 2-3 (Phantom Power OFF). See diagram below for jumper location.

## Mute Enable

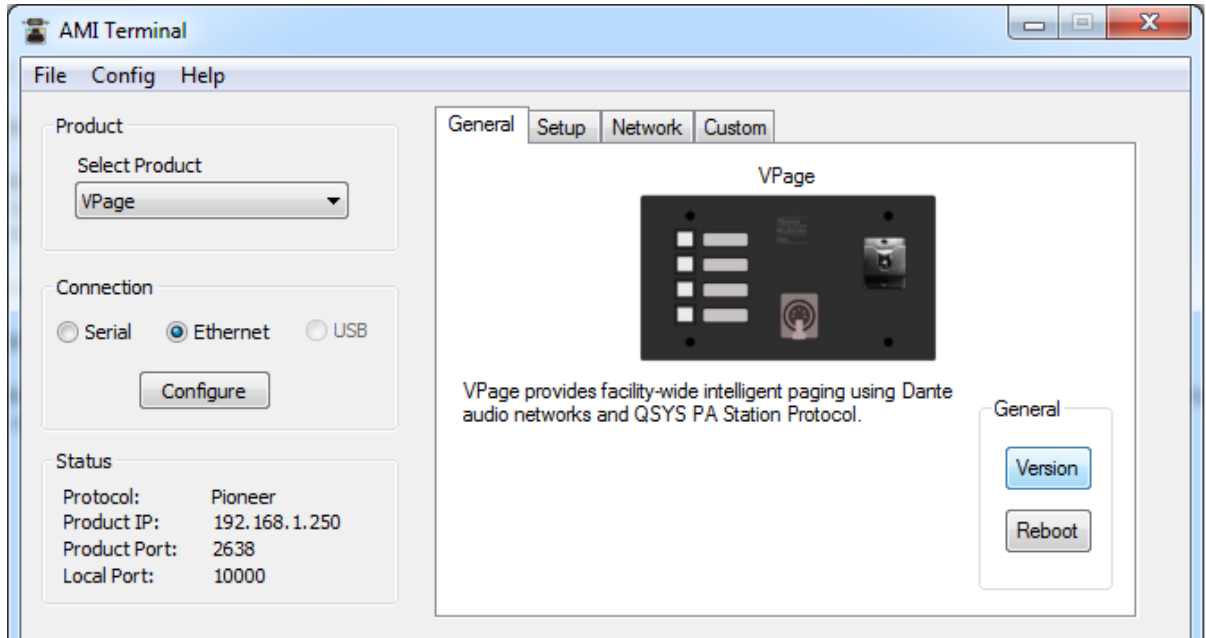
With the Mute Enable jumper installed, anytime the Push-to-Talk button is inactive the microphone input will be muted. (Note that most Push-to-Talk microphones – including the available VP4Mic - do this automatically so this jumper is normally not required.) See diagram below for jumper location.



# Software

## Setting up a VPage System

Basic configuration to bring up the VPage online and to link it with the Q-Sys core can be done out of the Q-Sys interface. More detailed configuration specific to the VPage name, settings, etc can be performed using AMI terminal or any UDP tool capable of sending ASCII data.



AMI Terminal sends Pioneer commands to the unit on port **2638**. For more detailed description of the Pioneer Protocol, please see **Configuration Commands** section.

# Web Server

The VPage comes with a built in simple web server for information and technical troubleshooting. The web server provides a snap-shot picture of all the settings in the unit and current states of all its inputs/outputs. It is strictly used for monitoring and can be used to backup existing settings. The web server is NOT used to configure the VPage unit.

The web server is available in any mode of operation, however in **Firmware Update Mode**, the web server displays firmware update page instead. See **Firmware Update** section for more information.

To access it, please navigate to the VPage IP in your favorite browser.

```
VPage v1.08
Hardware Sub-Model: Base
Hardware Revision: 1

-----
Dante Info:
MAC: 00:1D:C1:07:BF:12
Current IP: 169.254.19.191
Subnet Mask: 255.255.0.0
Gateway: 0.0.0.0

-----
Control Info:
MAC: 00:10:46:00:81:25
DHCP: Enabled
Current IP: 192.168.0.254
Stored IP: 192.168.0.254
Subnet Mask: 255.255.255.0
Gateway: 255.255.255.0
Local Port: 5000

QSYS IP: 192.168.0.2
QSYS Port: 4099
Station ID: 99

Default Selected Group: 1
Default Group Revert Timeout (seconds): 60
QSYS Online Timeout (seconds): 20
VPage Online Notify Interval (seconds): 5
API Link Timeout (seconds): 60

User assigned name: '<blank>'

Dynamic Data:
-----
PTT: Released
Inputs: 11111111111111111111
DIP Sw1-4: OFF OFF ON OFF
Panel LED States: 0000000111111111111111
Dual LED Colors: GGGG
```

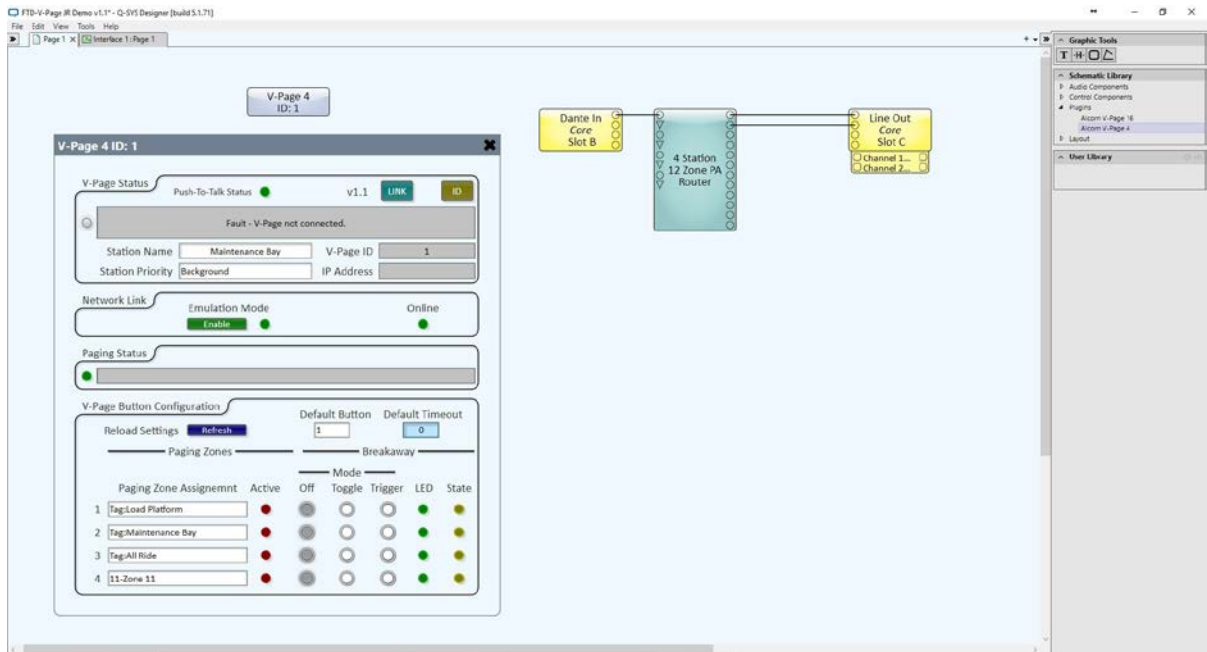
Note: In **Test Mode**, the VPage is placed on a static **192.168.0.254** IP and the web server is accessed on this IP as well, however, "**Current IP**" that is displayed may be different from the "**Stored IP**", depending on the current configuration of the VPage.



# Q-Sys Configuration

The VPage communicates with a Q-Sys system to enable paging zones and determine zone priority, etc. It utilizes the built in Q-Sys Zone PA Router. The VPage station can also be configured directly from within Q-Sys. We utilize a process called AMI Link that makes the connection of Q-Sys and VPage a very easy process.

We utilize the built-in Q-Sys paging station capabilities of the station router to Handel the PA routing of audio and zone selection. With Q-sys you can assign zones to different outputs Q-sys administrator For more detail on it please refer to the help file on the Q-Sys designer software

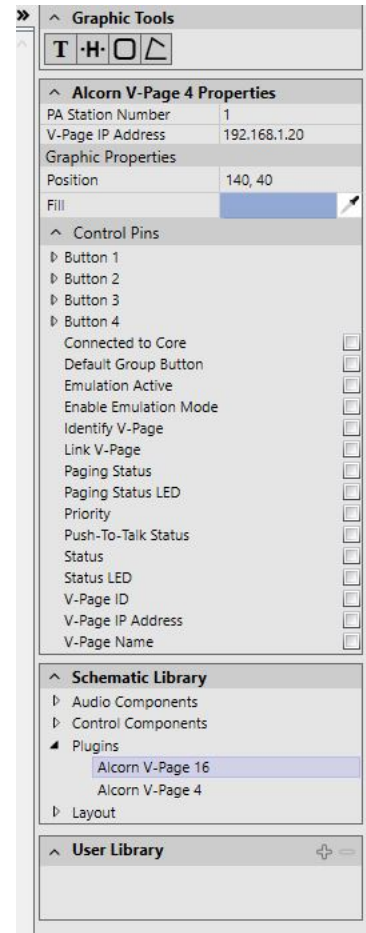


# Adding more stations in Q-Sys

To add more station in Q-Sys:

- 1) Drag and drop another Plug-in component from the Schematic Library section while in design mode.

\*Don't forget to give the new station a unique ID and IP address.



# Dante Controller Software

You can download the Dante audio network configuration software, Dante Controller, here:  
<https://www.audinate.com/products/software/dante-controller>

This webpage also contains instructions on how to use the application.

# Configuration Commands

VPage will accept and respond to Pioneer commands sent on port **2638**. For flexibility, any Pioneer messages received on Q-Sys Port will be processed as well.

- All commands support broadcast except IP & QPR unless AMI Link is active.
- Reboot does not support broadcast in certain cases (see command description).
- Any response **R** may be an **E**, which denotes an error with a code instead of success. Please see Command Response table below.
- All commands must terminate with a Carriage Return: <0D>
- Station ID 255 denotes ALL stations when used as filter.

## Get Firmware Version

Description:	Get VPage firmware version
Command bytes:	?V
Message Response:	VPage vX.XX
Comments:	Unicast or broadcast

## Get/Set VPage Control IP

Description:	Get or Set VPage control IP. <b>This parameter is automatically set when AMI Link is performed.</b>
Command bytes for GET:	IP
Command bytes for SET:	###.###IP
Message Response for GET:	###.###
Message Response for SET:	R
Comments:	<b>Unicast only.</b> Default: 192.168.0.254. <b>Setting an IP automatically disables DHCP</b>
Example:	<b>192.168.10.14IP</b> to set control IP to 192.168.10.14

## Get/Set VPage Dante (Ultimo) IP

Description: Get or Set VPage Dante (Ultimo) IP.

Command bytes for GET: **UIP**  
Command bytes for SET: **###.##UIP**

Message Response for GET: **###.##**  
Message Response for SET: **R**

Comments: **Unicast only.** Default: Private IP (169.254.X.X)  
**Setting an IP automatically disables DHCP.**

Example: **192.168.10.114UIP** to set Dante IP to 192.168.10.114

## Get/Set VPage Control Subnet Mask

Description: Get or Set VPage control subnet mask

Command bytes for GET: **SM**  
Command bytes for SET: **###.##SM**

Message Response for GET: **###.##**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 255.255.255.0

Example: **255.255.0.0SM** to set subnet mask to 255.255.0.0

## Get/Set VPage Dante (Ultimo) Subnet Mask

Description: Get or Set VPage Dante (Ultimo) subnet mask

Command bytes for GET: **USM**  
Command bytes for SET: **###.##USM**

Message Response for GET: **###.##**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 255.255.255.0

Example: **255.255.0.0USM** to set Dante subnet mask to 255.255.0.0

## Get/Set VPage Control Gateway

Description: Get or Set VPage control gateway

Command bytes for GET: **GW**  
Command bytes for SET: **###GW**

Message Response for GET: **###.**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 192.168.0.1

Example: **192.168.10.1GW** to set Gateway to 192.168.10.1

## Get/Set VPage Dante (Ultimo) Gateway

Description: Get or Set VPage Dante (Ultimo) gateway

Command bytes for GET: **UGW**  
Command bytes for SET: **###UGW**

Message Response for GET: **###.**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 192.168.0.1

Example: **192.168.10.1UGW** to set Dante Gateway to 192.168.10.1

## Get/Set DHCP Enabled

Description: Get or Set DHCP IP acquisition for control interface.

Command bytes for GET: **DH**  
Command bytes for SET: **#DH**

Message Response for GET: # where 1 is Enabled, 0 is Disabled  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: Enabled (1)  
**Setting VPage Control IP automatically disables DHCP.**

Example: **0DH** to disable DHCP IP acquisition

## Get/Set Local Port Number

Description: Get or Set local port number. This is Q-Sys remote port number.

Command bytes for GET: **PR**  
Command bytes for SET: **#PR**

Message Response for GET: **#**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 5000  
**QSys component LUA scripting requires an update to match the port number**  
**All VPages on the network must have the same local port number**

Example: **6000PR** to set local port number to 6000

## Get/Set Linked Q-Sys Core IP

Description: Get or Set Q-Sys Core IP the VPage should be linked to. **This parameter is automatically set when AMI Link is performed.**

Command bytes for GET: **QIP**  
Command bytes for SET: **###QIP**

Message Response for GET: **###**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 192.168.0.2  
**QSys core itself must be on this IP. This command does not set the Q-Sys Core IP itself. No mechanism exists to update Q-Sys Core IP from the VPages.**  
**QIP is automatically set during AMI Link**

Example: **192.168.10.2QIP** to set linked Q-Sys Core IP to 192.168.10.2

## Get/Set Remote Port Number (Set Station ID)

Description: Get or Set remote port number. This is Q-Sys Core local port for this VPage. **This parameter is automatically set when AMI Link is performed.**

Command bytes for GET: **QPR**  
Command bytes for SET: **#QPR**

Message Response for GET: **#**  
Message Response for SET: **R**

Comments: Unicast only. Default: 4099  
**VPage Station ID is derived from this port number.**  
**Last 2 digits of the port is the Station ID**

Example: **4055QPR** to set remote port to 4055 (hence station ID 55)

## Get Station ID

Description:	Get station ID (derived from remote port number)
Command bytes for GET:	<b>ID</b>
Message Response for GET:	<b>#</b>
Comments:	Unicast or broadcast. Default: 99 <b>VPage Station ID is derived from the port number</b> <b>Valid station IDs are in the range of 1 to 99</b> <b>To SET station ID, use QPR command</b>

## Find/Identify

Description:	Find a specific VPage on the network by matching one of the supplied identifying information: ID, MAC, Dante MAC, IP, Dante IP. VP4/16 that matched will blink LEDs for a short duration.
Command bytes:	<b>192.168.10.14FN</b> find a VPage with IP 192.168.10.14 <b>00:46:10:00:81:25FN</b> find a VPage with MAC 00:46:10:00:81:25 <b>00:1d:c1:07:bf:12FN</b> find a VPage with Dante MAC 00:1d:c1:07:bf:12 <b>55FN</b> find a VPage with ID 55 <b>255FN</b> find all VPages (VPage network ping)
Message Response:	<b>R</b> (from VPage(s) that matched)
Comments:	Broadcast. Inherently accepts unicast, but is redundant due to the nature of the command.

## Get/Set/Perform AMI Link

Description:	AMI Link mode allows to quickly pair a specific VPage to Q-Sys core component.
Command bytes for GET:	<b>LI</b>
Command bytes for SET:	<b>#LI</b> where 1 is activate AMI Link and 0 is deactivate.
Command bytes for Perform:	<b>A.A.A.A,B.B.B.B,CLI</b> where A.A.A.A is desired static VPage IP, B.B.B.B is the Q-Sys core IP reference and C is the Q-Sys core port number
Message Response for GET:	<b>1</b> for AMI Link active, <b>0</b> for inactive.
Message Response for SET:	<b>R</b>
Message Response for Perform:	<b>R</b>
Comments:	Broadcast or unicast. AMI Link should be enabled on <b>ONLY ONE</b> VPage at a time when linking. The A.A.A.A IP becomes the static IP of the VPage and having multiple VPages on the same IP will cause conflicts. VPage will reboot on successful link perform. DHCP will be disabled on successful link perform. AMI Link has a timeout associated with it (60 second by default) and will auto-deactivate if AMI Link hasn't been performed.



## Get/Set Default Group (Zone)

Description:	Get or Set default zone. When VPage sits idle, default zone will be selected and engaged on PTT press.
Command bytes for GET:	<b>DG</b>
Command bytes for SET:	<b>#DG</b>
Message Response for GET:	<b>#</b>
Message Response for SET:	<b>R</b>
Comments:	Unicast or broadcast. Default: 1 <b>Valid zones are in the range of 1 to 16</b> <b>This feature isn't used when PTT is muxed to zone selection.</b>
Example:	<b>2DG</b> to set default zone to 2.

## Get/Set AMI Link Timeout

Description:	Get or Set AMI Link timeout, which is responsible for how long it will take to auto-deactivate AMI link.
Command bytes for GET:	<b>LITO</b>
Command bytes for SET:	<b>#LITO</b>
Message Response for GET:	<b>#</b>
Message Response for SET:	<b>R</b>
Comments:	Unicast or broadcast. Default: 60 <b>0 to disable, valid range 0-600 (seconds)</b>
Example:	<b>120LITO</b> to set timeout to 120 seconds

## Get/Set Q-Sys Online Timeout

Description:	Get or Set Q-Sys online timeout. VPage will display "offline" (blinking RED on VP4s or all LEDs off on VP16) if a ping is not received from a Q-Sys within this time.
Command bytes for GET:	<b>QOTO</b>
Command bytes for SET:	<b>#QOTO</b>
Message Response for GET:	<b>#</b>
Message Response for SET:	<b>R</b>
Comments:	Unicast or broadcast. Default: 20 <b>0 to disable, valid range 0-600 (seconds)</b> <b>Q-Sys component must be updated to ensure the ping interval is not large than this timeout, otherwise VPage will constantly go offline.</b>
Example:	<b>120QOTO</b> to set timeout to 120 seconds

## Get/Set Default Group (Zone) Selection Revert Timeout

Description: Get or Set timeout for when the default zone is re-selected.

Command bytes for GET: **DGTO**  
Command bytes for SET: **#DGTO**

Message Response for GET: **#**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 60  
**0 to disable, valid range 0-600 (seconds)**  
**This feature isn't used when PTT is muxed to zone selection.**

Example: **120DGTO** to set timeout to 120 seconds

## Get/Set Alive Announce Interval

Description: Get or Set how often this VPage sends a ping to Q-Sys to let the core know it is online.

Command bytes for GET: **AI**  
Command bytes for SET: **#AI**

Message Response for GET: **#**  
Message Response for SET: **R**

Comments: Unicast or broadcast. Default: 5  
**0 to disable, valid range 0-600 (seconds)**  
**Q-Sys component must be updated to ensure the timeout period is greater than this interval, otherwise Q-Sys component will constantly show this VPage as being offline.**

Example: **10AI** to set announce interval to 10 seconds

## Get/Set User Assigned VPage Name/Location

Description: Get or Set a custom string that allows you to assign an alias to the VPage.

Command bytes for GET: **NM**  
Command bytes for SET: **sNM**

Message Response for GET: **s**  
Message Response for SET: **R**

Comments: Unicast only. Default: <blank>  
**The alias can be 64 characters max.**  
**To clear the alias, assign a <space> as a name.**

Example: Loading Dock **BNM** to set VPage name to **Loading Dock B**

## Load Factory Defaults

Description:	This command will erase user settings and restore defaults.
Command bytes ( <b>broadcast</b> or <b>unicast</b> ):	<b>DE</b> defaults (main and ultimo). <b>MDE</b> defaults main only. <b>UDE</b> defaults ultimo only.
Command bytes with filter ( <b>broadcast</b> ):	<b>192.168.10.14DE</b> defaults main and ultimo settings on a VPage with IP 192.168.10.14 <b>00:46:10:00:81:25UDE</b> defaults ultimo settings on a VPage with MAC 00:46:10:00:81:25. <b>33MDE</b> defaults main settings on a VPage with ID 33 <b>255DE</b> defaults main and ultimo settings on <b>ALL</b> VPages
Message Response:	<b>R</b> (unicast or from VPage(s) that matched in broadcast)
Comments:	Unicast or broadcast. <b>Care must be taken when broadcasting a defaults command without a filter as other Alcorn McBride equipment may accept DE command as restore factory defaults as well.</b>

## Reboot

Description:	This command will reboot VPage(s). Special parameter allows to reboot the VPage and enter firmware update mode. In addition, any VPage that matches ID, MAC, Dante MAC, IP can be rebooted when broadcasting the <b>XX</b> command.
Command bytes ( <b>broadcast</b> or <b>unicast</b> ):	<b>XX</b> reboot VPage. <b>UXX</b> reboot Ultimo (Dante interface) only. <b>BLXX</b> reboot and enter Firmware Update Mode using last known IP address. <b>DBLXX</b> reboot and enter Firmware Update Mode using default <b>192.168.0.254</b> IP address ( <b>unicast only</b> ).
Command bytes with filter ( <b>broadcast</b> ):	<b>00:46:10:00:81:25XX</b> reboot VPage with MAC 00:46:10:00:81:25 <b>192.168.10.14BLXX</b> reboot VPage with IP 192.168.10.14 and enter Firmware Update Mode using 192.168.10.14 IP. <b>33XX</b> reboot VPage with ID 33 <b>255XX</b> reboot <b>ALL</b> VPages
Message Response:	<b>R</b> (unicast or from VPage(s) that matched in broadcast)
Comments:	Unicast or broadcast with exceptions. <b>Care must be taken when broadcasting a reboot command without a filter as other Alcorn McBride equipment may accept XX command as a reboot as well.</b>

<b>Command Response</b>	<b>Description</b>
R	Success/Acknowledgement
E00	Communication error
E01	Hardware error
E04	Invalid/Unsupported command
E06	Invalid/Unsupported command argument
E11	Command not available in current mode
E12	Invalid station filter (ID/IP/MAC) or no match (unicast)
E13	AMI Link is not active
E14	Invalid port value
E15	Port not available or already in use
E99	Fatal error

# Firmware Update

All attempts have been made to retain backwards compatibility, however, prior to upgrading the firmware, please take a snap shot of the web server's status page that can be used to restore settings in the VPage later, in case they are lost. Navigate to the IP of the VPage in your favorite browser while the VPage is running in normal mode or test mode to access the Status web page. Please see **Web Server** section of this manual for more details.

Firmware Update is not a risk-free process, although all precautions have been taken to avoid catastrophic failures. The update should only be performed if needed. To obtain the latest firmware, please visit <http://alcorn.com/support/firmware.html>

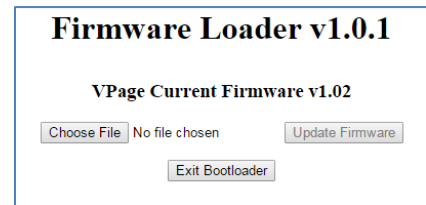
## **Normal Update Procedure:**

Enter **Firmware Update Mode** (FUM) by selecting VPage product in AMI Terminal and clicking “**Enter Firmware Update Mode**” button under **Setup** tab. VPage will retain current IP in the FUM, i.e. **192.168.0.20**.

Alternatively, see **Failsafe Recovery** if unable to enter FUM remotely (see below).

Once FUM is activated (rapidly blinking GREEN LEDs) and VPage is online, navigate to 192.168.0.20 (last known IP) in your favorite browser to display the **Firmware Loader** web interface; i.e. <http://192.168.0.20>

Press “**Choose File**” to select the **VPAGE.NEW** file obtained earlier from [www.alcorn.com](http://www.alcorn.com) and click “**Update Firmware**” to perform the update.



Update process may take up to a minute to complete, at which point, VPage will restart automatically into **Normal Mode** (blinking RED LEDs until QSYS is detected).

## **Failsafe Recovery:**

This mode should only be entered when the VPage is on a test bench and is not wired into the rest of the network. If the IP is not known, settings are corrupt or any other issues with the unit that require Firmware Update, please use **DIP SW#2** on the VPage to enter the **Firmware Update Mode**.

To enter **Failsafe Recovery FUM**, set the **SW#2** to **ON** (down), power cycle the unit and return **SW#2** to **OFF** (up) position.

**The VPage is placed on a static IP of 192.168.0.254, regardless of its settings, in Failsafe Recovery FUM.**

Rest of the procedure is identical to regular Firmware Update using **192.168.0.254** IP.

**NOTE: Attempts to “Exit” Firmware Loader or to operate in Normal Mode with SW#2 in ON position will restart the unit and return back to the Firmware Update Mode. You must set DIP SW#2 to OFF to enable normal mode of operation.**

# Troubleshooting Guide / FAQ

If you have a question not answered by this manual, take a look at our Knowledge Base at <http://www.alcorn.com/kb/index.html>. We're always updating it with new answers and useful information! If your question isn't answered there, please email us at [support@alcorn.com](mailto:support@alcorn.com)

***Q: I get feedback when I key the microphone. What is causing this?***

A: The VPage microphone gain might be too high. Either reduce the gain setting on the VPage or reduce the gain setting in the Q-Sys or amplifier system.

***Q: I can't connect to a VPage?***

A: There's a dedicated guide for VPage network discovery and configuration. See Quick Start guide section at the beginning of this manual.

***Q: In PTT mux mode, I press a button/input on the VPage and the corresponding light stays ON?***

***Q: I press a button/input on the VPage and nothing is happening?***

***Q: VPage component in Q-Sys shows VPage offline or the zones are not selected when VPage is operated?***

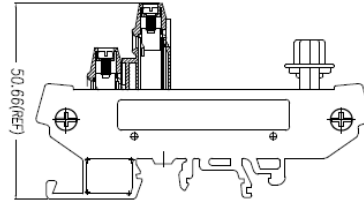
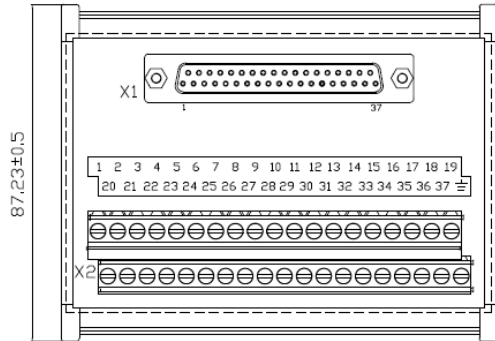
A: This answer applies to any issues related to Q-Sys ↔ VPage communication. Any of the following could be the case:

- VPage isn't properly configured (Incorrect IP and/or subnet, incorrect VPage ID set)
- Q-Sys core's VPage component doesn't match the physical unit's IP and/or ID.
- VPage Q-Sys IP reference or remote port doesn't match the network setup.
- There's a firewall preventing broadcast traffic from getting through to the VPage.
- Configured IPs (Q-Sys, VPage) are on a different subnet.

# Specifications

Parameter	Specification	Test Conditions & Notes
<b>Controls and Indicators</b>	4 Illuminated Zone Select Pushbuttons	
	Microphone Gain	Front Panel access hole to potentiometer
	LED Brightness	Front Panel access hole to potentiometer
	Mute Enable Jumper	Disables Mic input when PTT inactive
	Phantom Power Jumper	Default = Disabled
<b>THD+Noise</b>	Less than 0.07%	20-20Khz 1Vrms Input from Mic preamp to A/D
<b>Signal-to-Noise Ratio</b>	Greater than 85 dB	1Khz sinewave 1Vrms Input from Mic preamp to A/D
<b>Microphone Input</b>	Balanced, Dynamic or Condenser	Microphone Model SP4Mic sold separately
<b>Phantom Power</b>	P48 (48V) IEC 61938:2013	Jumper-enabled
<b>Input Impedance</b>	Greater than 30 Mohm	
<b>Frequency Response</b>	20-20 kHz +/- 1%	
<b>Ethernet Connector</b>	Female RJ-45	
<b>Protocol</b>	Q-Sys	10/100BT
<b>Dip Switch Controls</b>		
<b>AMI Link</b>	AMI Link Control	Toggle runtime.
<b>Firmware Update/Factory Defaults</b>	Enter Firmware Update Mode/Restores all settings to factory defaults	Switchable On-Off in power up; toggle runtime.
<b>Test Mode</b>	Factory testing and diagnostics	Switchable On-Off
<b>PTT Engage with Zone</b>	Engage PTT on zone select	Switchable On-Off
<b>Power</b>		
<b>Input Voltage/Current</b>	5-37VDC @ 1A Max	
<b>Power Input Connector</b>	Phoenix Screw Terminal Block 1844210	Mating Connector Included (Phoenix 1840366)
<b>Power-over-Ethernet</b>	Class 3	
<b>Microphone Input Connector</b>		
<b>Model VP4</b>	Female 5-Pin XLR	Dynamic Microphone Model VP4Mic sold separately
<b>Models VP16PCB &amp; VP4M</b>	Phoenix Screw Terminal Block 1844249	Mating Connector Included (Phoenix 1840395)
<b>VP16PCB Expansion Connector</b>	40-Pin DIN	Ribbon Cable and IOBB Terminal Block Included
<b>Size</b>		
<b>Model VP4/VP4M</b>	8"W x 4.5"H x 2"D (20cm x 11.4cm x 5.1cm)	Fits in standard Raco 4-gang box
<b>Model VP16PCB</b>	9"W x 2.75"H x 2"D (22.9cm x 7cm x 5.1cm)	
<b>Weight</b>	1.5lb (.7 kg)	
<b>Environment</b>	0° to 38° C (32° to 100° F) 0 to 90% relative humidity, non-condensing	Circuit Boards are Conformal Coated

# IOBB Mechanical Dimensions



**Notes:**

1. Current: 1A
2. Insulation Voltage: 1000 VAC/ 1 MIN
3. Wiring spec.: AWG24-12; Stripping length 6-7mm; Torque value 4.4(Lb-in)
4. RoHS compliance