

# Initial configuration

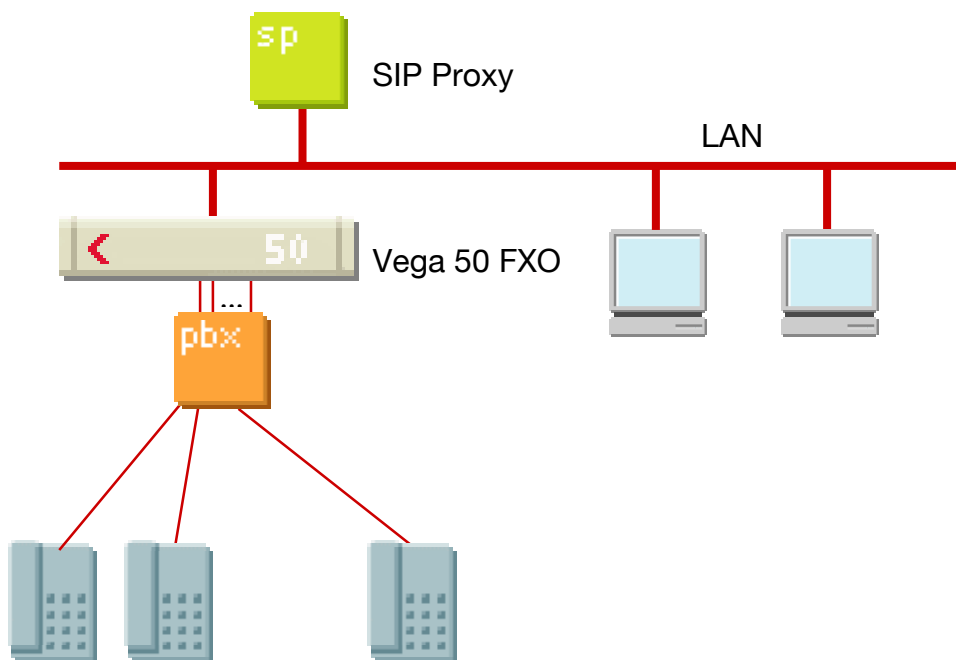
## Vega 50 FXO (SIP) – R5.1



This document describes how to configure a Vega 50 FXO SIP unit using the web browser interface. The configuration described will allow the Vega to be rapidly installed and tested.

The instructions below will configure the Vega 50 FXO (connected to 8 extension ports of a PBX or a CO Switch) to operate as follows:

- Calls presented to the Vega from the PBX or CO switch will be passed to the SIP proxy with the numeric telephone number part of the request URI containing the port ID on which the call was received (06 .. 13).
- Calls received by the Vega on the SIP interface will be routed to the telephony interface. The physical interface over which the call is routed will be defined by the leading two digits of the telephone number (06 .. 13). The digits following the leading two digits will be used as the digits to dial.



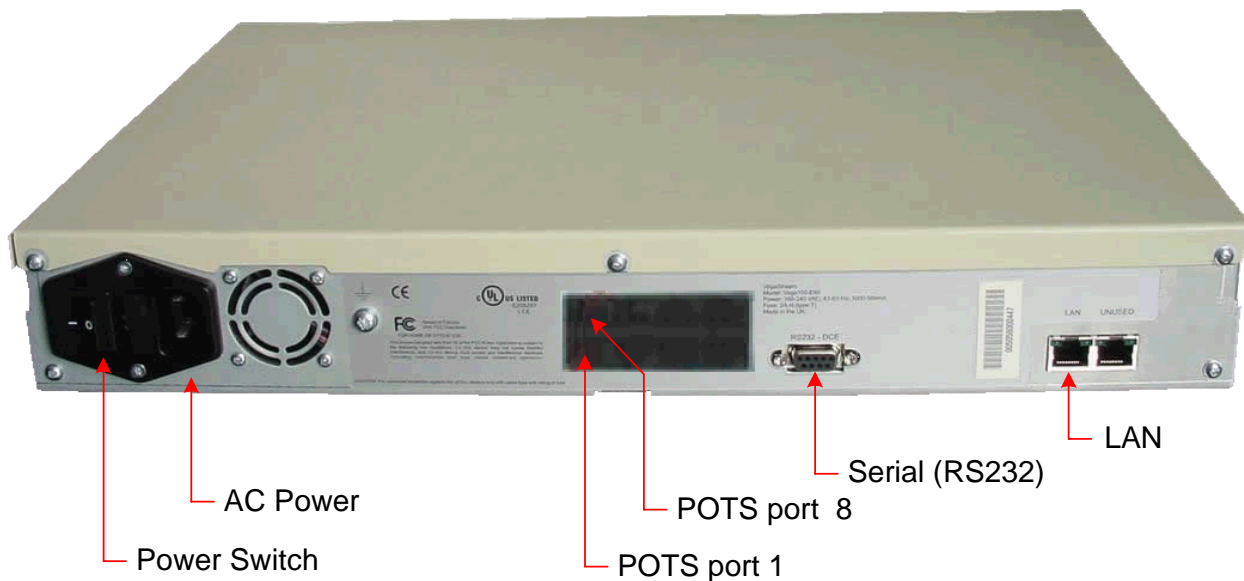
The configuration process is broken down into 12 stages as follows:

- 1 Connect your Vega to LAN, Telephone and Power
- 2 Configure the basic LAN parameters
- 3 Configure password and login timeout
- 4 Check and configure LAN settings and Host name
- 5 Configure the Dial Plan
- 6 Configure SIP and audio parameters
- 7 Configure Authentication
- 8 Configure Registration
- 9 Configure POTS parameters
- 10 Configure pointer to CD ROM documentation
- 11 Save Changes
- 12 Archive Vega Configuration

Please also see:

- 13 Technical Support
- 14 Advanced configuration

# 1. Connect your Vega to LAN, Telephone and Power



**Before installing your Vega, ensure that you read the VegaStream VoIP Gateways Safety and Compliance Information document.**

## LAN:

Using the yellow booted cable connect the LAN port on the Vega to a standard or fast Ethernet hub or switch (10 baseT or 100 baseTx). The connector nearest the ferrite core should be plugged into the Vega.

## Telephony:

Connect the PBX or CO switch to the 8 POTS ports. Note the port numbers (interface Ids) increase in an anticlockwise direction from the bottom left corner. Interface IDs are as follows:

Port 8 IF:13	Port 7 IF:12	Port 6 IF:11	Port 5 IF:10
Port 1 IF:06	Port 2 IF:07	Port 3 IF:08	Port 4 IF:09

## Power:

Insert the power cable into the AC power inlet on the Vega and switch on. The power LED on the front panel will illuminate.

The LAN LEDs will also illuminate indicating 10 (baseT) or 100 (baseTx) connection, and the FDX LED will illuminate if Full Duplex mode has been negotiated.

## 2. Configure the basic LAN parameters

If a DHCP server is available, by default, the Vega will automatically pick up an IP address. If you know the IP address served to the Vega, skip this section and start at section [3](#).

If DHCP is not to be used to provide the Vega with an IP address, or you need to check the IP address provided to the Vega, connect the serial interface of the Vega to a PC serial interface using a 9 way male to female straight through cable.

Configure a terminal emulator program (such as Microsoft's HyperTerminal) for:

- Speed = 115200 baud
- Data bits = 8
- Parity = none
- Stop bits = 1
- Flow Control = none

Press <Enter> to get the Username: prompt

At the prompts enter the default user name and password

Username: admin

Password: admin

To display the current IP address, type:

➤ show lan.ip

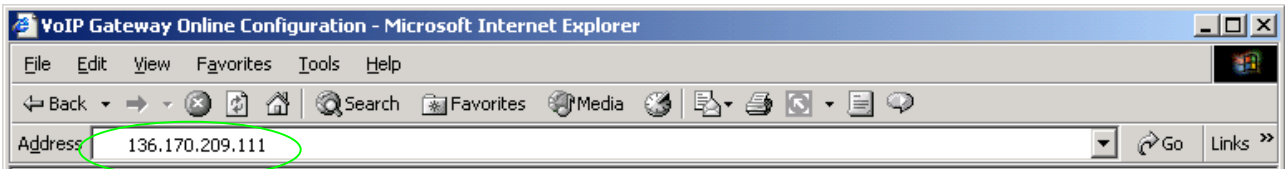
If this is not the IP address required, it can be overridden, together with other LAN parameters by typing:

- set lan.use\_dhcp=0
- set lan.ip=aaa.bbb.ccc.ddd
- set lan.subnet=eee.fff.ggg.hhh
- set lan.gateway=iii.jjj.kkk.lll
- save
- reboot system

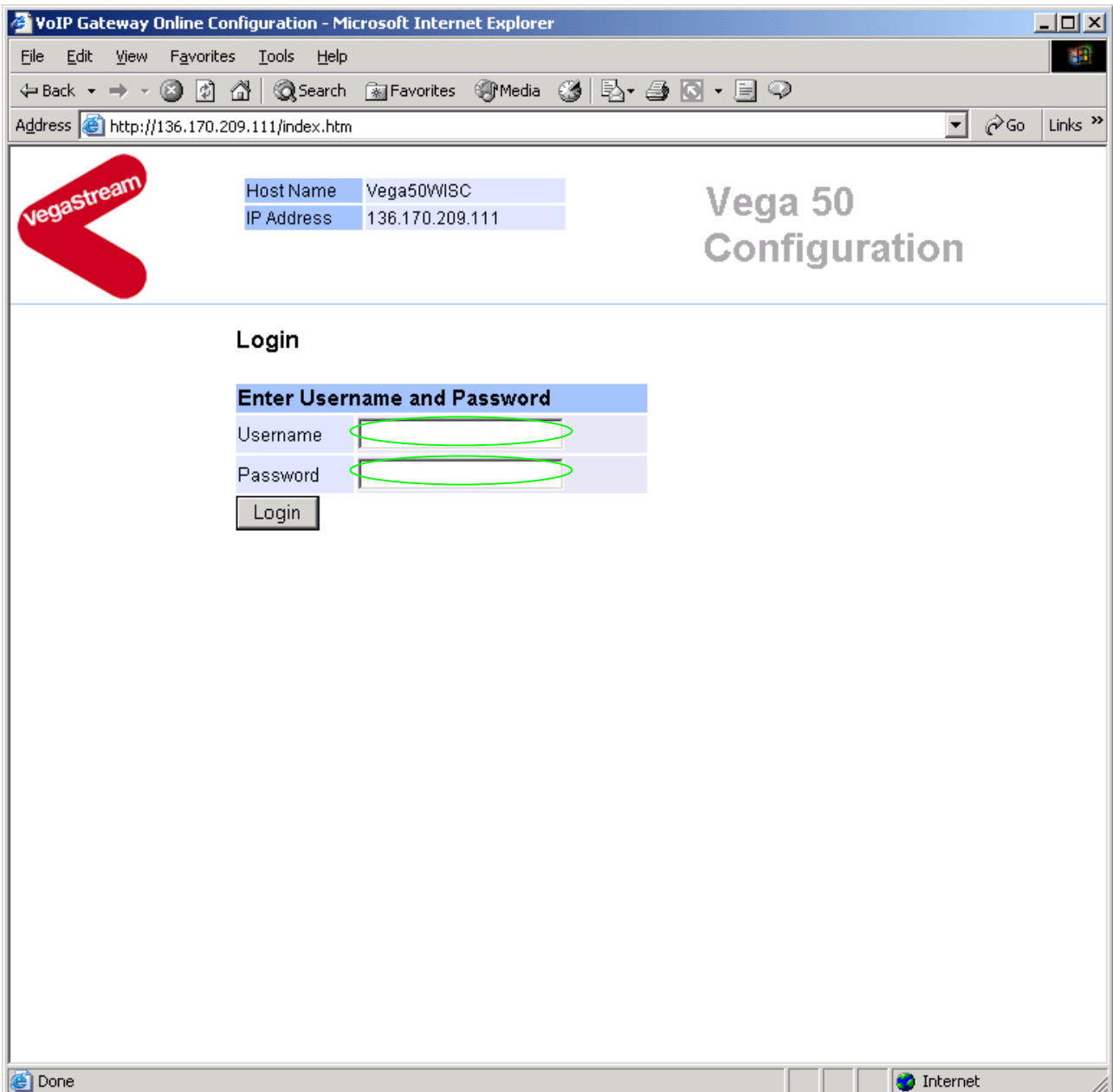
### 3. Configure password and login timeout

Now configuration will be carried out using a web browser.

➤ Enter the IP address of the Vega into the “Address” field of your web browser.



You will then be presented with the login page:



Enter the default Username and Password

- Username: admin
- Password: admin
- Select

**Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer**

File Edit View Favorites Tools Help

← Back → Search Favorites Media

Address [http://136.170.209.111/vsframe?sid=-1820512611&frame\\_id=6](http://136.170.209.111/vsframe?sid=-1820512611&frame_id=6) Go Links >>

**VegaStream**

Host Name	Vega50WISC
IP Address	136.170.209.111
User Name	admin

## Vega 50 Configuration

**Management** < System Management

[Logging](#)

[Maintenance](#)

[LAN](#)

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[Media Channels](#)

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[Advanced](#)

Save

Log off

Help

Reboot System

Tip: Place the cursor of the mouse on name or input fields to get concise help.

### Quick Configuration Wizard

Quick step by step essential configuration

### System Time

Set Time (hh:mm:ss)  :  :

Set Date (dd/mm/yyyy)  /  /

Synchronise Time and Date  With PC  With NTP server

### Call Reports

Report call progress summary [Show Calls](#)

Report on all call progress statistics [Show Trace](#)

### System Logs

Show the Event Log [Show Event Log](#)

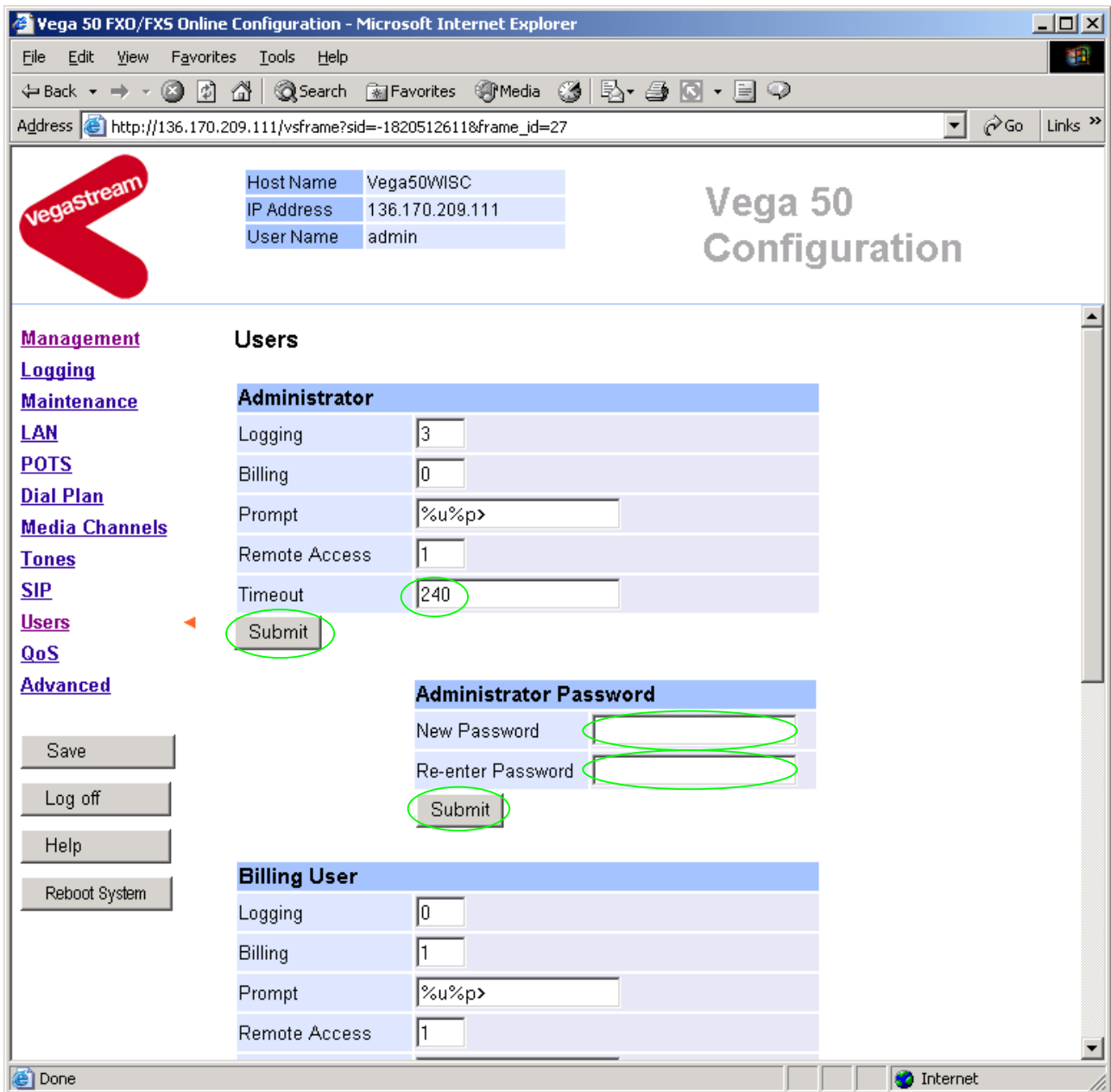
Show the Billing Log [Show Billing Log](#)

### Call Control

All further calls are

Done Internet

- On the left hand side menu select [Users](#)



**Recommended:** Change the password

- enter New Password and Re-enter Password then
- select **Submit** and then click "[here](#)" to return

**Optional:** Change the timeout<sup>1</sup> – default is 240 seconds; can extend to 7200 seconds (2hrs)

- select **Submit** and then click "[here](#)" to return

<sup>1</sup> If the web interface is not used for this length of time the Vega will automatically log off the session. This change is only activated by logging out and back into the browser session.

## 4. Check and configure LAN settings and Host name

- On the left hand side menu select [LAN](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved Configuration Changes

**Local Area Network (changed)**

Warning: Changing these parameters may prevent remote access.

**Current Mode: Standard Ethernet Mode**

Change to VLAN (8021q) Ethernet mode | VLAN Mode

**LAN Configuration**

Use DHCP	<input checked="" type="checkbox"/>	
Host Name	Vega50WISC	
IP Address	DHCP defined	
Subnet Mask	DHCP defined	
Domain Name Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
Default Gateway	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
TFTP Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
Network Time Server	DHCP defined	Use DHCP <input checked="" type="checkbox"/>
FTP Server	0.0.0.0	
NTP Offset (hhmm)	0000	
NTP Poll Interval	0	

**Physical Layer Configuration**

Full Duplex	<input type="checkbox"/>
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**Recommended:** In the **Physical Layer Configuration** section statically select the Ethernet Type as either 100baseTx or 10 baseT (not 10baseT & 100baseTx) – whichever is appropriate

- select  and then click "[here](#)" to return

**Optional:** If there are any LAN values that need to be set up (e.g. NTP server or tftp server) set them up now, then

- Select  and then click "[here](#)" to return



## 5. Configure the Dial Plan

- On the left hand side menu select [Dial Plan](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved Configuration Changes

**Dial Planner**

**Profiles**

Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	1	Vega50_default	====>	<a href="#">Modify</a>

Delete Add

**Planner Groups**

Del?	ID	Name	Cause	Lan	Gatekeeper	Active times	Priority	Chg?
<input type="checkbox"/>	1	Default	0	off	off	0000-2359	0	<a href="#">Modify</a>

Delete Add

**Planner Whitelist Enable**

Use Whitelist

Submit

**Planner Whitelists**

Del?	ID	Name	Number	Chg?
<input type="checkbox"/>	1	default	IF:.*	<a href="#">Modify</a>

Delete Add

Firstly, turn off the default profile:

In the **Profiles** section, Profile ID 1

- Select [Modify](#)

[Dial Planner](#) > Profile 1

Modify Profile	
Profile ID	1
Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="Vega50_default"/>
<input type="button" value="Submit"/>	

- disable (un-tick) Enabled, then
- select  and then click "[here](#)" to return

Now create a new profile and in it create a dial plan entry to handle calls being sent from the PBX / CO switch to the LAN:

**Dial Planner**

Profiles					
Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	0	Vega50_default	===>	<a href="#">Modify</a>
<input type="button" value="Delete"/>	<input type="button" value="Add"/>				

In the **Profiles** section

- Select

**Dial Planner**

Profiles					
Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	0	Vega50_default	===>	<a href="#">Modify</a>
<input type="checkbox"/>	2	1	new_profile	===>	<input type="button" value="Modify"/>
<input type="button" value="Delete"/>	<input type="button" value="Add"/>				

In the **Profiles** section, on Profile 2 (the new profile):

- Select

[Dial Planner](#) > Profile 2

**Modify Profile**

Profile ID	2
Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="new_profile"/>

**Plans in this Profile**

Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	new_plan	TEL:<.><.*>	IF:<1>,TEL:<2>	0	0	<a href="#">Modify</a>

- > Set Name = Outbound\_To\_LAN
- > select  and then click "[here](#)" to return

**Dial Planner**

**Profiles**

Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	0	Vega50_default	===>	<a href="#">Modify</a>
<input type="checkbox"/>	2	1	Outbound_To_LAN	===>	<a href="#">Modify</a>

In the **Profiles** section, on Profile 2 (the new profile):

- > Select [Modify](#)

[Dial Planner](#) > Profile 2

**Modify Profile**

Profile ID	2
Enabled	<input checked="" type="checkbox"/>
Name	<input type="text" value="Outbound_To_LAN"/>

**Plans in this Profile**

Del?	Plan ID	Name	Src	Dest	Cost	Group	Chg?
<input type="checkbox"/>	1	new_plan	TEL:<.><.*>	IF:<1>,TEL:<2>	0	0	<a href="#">Modify</a>

In Plan 1 of Profile 2:

- > Select [Modify](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Vega 50 Configuration

Unapplied Configuration Changes

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Dial Planner > Profile 2 > Plan 1

**Modify Plan**

Plan ID	1
Profile ID	2
Name	new_plan
Source	TEL:<.><.*>
Destination	IF:<1>,TEL:<2>
Cost Index	0
Group	0 - no group

Apply Generate Prefix Match

**Regular Expressions for Source**

.	Any character
[...]	Any character within the parentheses
[x-y]	Any character in the range x-y
[^...]	Any character except those within the parentheses
*	The character before repeated zero or more times
+	The character/expression before repeated one or more times
?	The character/expression before repeated zero or more times
\	The character following is taken literally
<...>	Capture the sequence in parentheses and store as < n > where n is the nth occurrence of <> in the source expression

Save  
Log off  
Help  
Reboot System  
Apply Changes

Visit the VegaStream website Internet

➤ Set Name = To\_LAN


➤ Set Source = IF:<[^9] .>

*(This takes a call from any of the 8 telephony ports and stores the interface ID on which the call arrived in store <1>)*

➤ Set Destination = IF:99,TEL:<1>

*(This routes the call to IF:99 (the LAN) and passes the interface ID – stored in <1> – as the destination telephone number)*

➤ select  and then click ["here"](#) to return

➤ click  to return to main dial planner page

Now create a new profile and in it create a dial plan entry to handle calls being received inbound from the LAN:

In a similar manner to adding profile 2 add another profile, profile 3,



- Set Name = Inbound\_from\_LAN

Modify the first plan for Profile 3:

- Set Name = From\_LAN
- Set Source = IF:99, TEL:<.><.>\*
- Set Destination = IF:<1>, TEL:<2>

*(This takes the two leading digits of the telephone number presented and stores them in <1>. The remainder of the dialled digits are then stored in <2>)*

*(Use the 2 digits in store <1> as the interface ID to dial out from and the digits in <2> as the telephone number to dial)*

- select  and then click "[here](#)" to return
- select  to return to main dial planner page

**Host Name** Vega50WISC  
**IP Address** 136.170.209.111  
**User Name** admin

**Vega 50 Configuration**

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**Dial Planner**

**Profiles**

Del?	Profile ID	Enabled	Name	Plans	Chg?
<input type="checkbox"/>	1	0	Vega50_default	===>	<a href="#">Modify</a>
<input type="checkbox"/>	2	1	Outbound_To_LAN	===>	<a href="#">Modify</a>
<input type="checkbox"/>	3	1	Inbound_from_LAN	===>	<a href="#">Modify</a>

Delete Add

**Planner Groups**

Del?	ID	Name	Cause	Lan	Gatekeeper	Active times	Priority	Chg?
<input type="checkbox"/>	1	Default	0	off	off	0000-2359	0	<a href="#">Modify</a>

Delete Add

**Planner Whitelist Enable**

Use Whitelist

Submit

**Planner Whitelists**

Del?	ID	Name	Number	Chg?
<input type="checkbox"/>	1	default	IF:.*	<a href="#">Modify</a>

Delete Add

Save  
 Log off  
 Help  
 Reboot System  
 Apply Changes

**Note:** The SIP Proxy must choose the appropriate interface on the Vega to dial out from; when the Proxy presents a call to the Vega, the INVITE message starts something like:

```
INVITE sip:091344784900@172.20.11.2 SIP/2.0
```

The digits preceding the @ (the telephone number field) must contain a number in the format *ii**ttt...t* where *ii* is the interface ID to dial out from (06..13) and *ttt...t* is the telephone number to dial.

***For more details on the operation of the dial planner, including the various tokens that may be used, see the section “The Dial Planner” in the Vega Primer.***

## 6. Configure SIP and audio parameters

- On the left hand side menu select [SIP](#)

In the **General** section:

- set Default Proxy Host Name/IP = IP\_address\_of\_SIP\_proxy, or DNS\_hostname\_of\_the\_SIP\_Proxy
- set Local Domain = Public\_name\_of\_proxy\_used\_by\_other\_devices\_to\_send\_their\_INVITES\_to  
(this value is the “outside world’s” name or IP address for the proxy)

**Optional:** To allow devices other than the proxy to make calls directly through the Vega

- tick Accept Non-Proxy Invites

If only the proxy is allowed to route the calls to the Vega ensure that this tick box is clear.



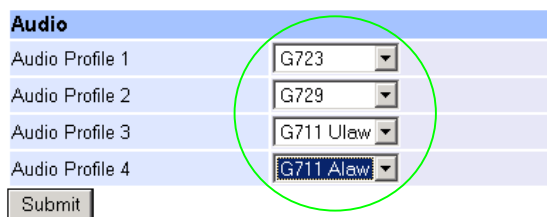
➤ select  and then click "[here](#)" to return

In the **Audio** section

➤ Select the audio codecs desired using the drop down menus

Unless there is a specific reason not to allow a specific codec to be used, it is recommended that all codecs should be enabled as follows:

Audio	
Audio Profile 1	<input type="text" value="G723"/>
Audio Profile 2	<input type="text" value="G729"/>
Audio Profile 3	<input type="text" value="G711 Ulaw"/>
Audio Profile 4	<input type="text" value="G711 Alaw"/>



➤ select  and then click "[here](#)" to return

## 7. Configure Authentication

In some systems – to ensure that only authorised devices are allowed to set up and clear calls – SIP authentication is used. If authentication is used, it is typically required on the SIP REGISTRATION, INVITE, ACK and BYE messages.

For authentication, a userID and a password can be configured. The userID is constructed from three parts

`auth_usernumber_prefix`, `auth_usernumber` and `auth_usernumber_suffix` each of which may be configured with alphanumeric values.

The prefix and suffix entries are defined per POTS port profile and the `usernumber` is configured per POTS port. Setting parameters to NULL tells the Vega to omit anything from this parameter (capitalisation of NULL is important).

The values to enter here must match the values that have been configured as the authorisation user and password in the proxy.

To configure Authentication, follow the following procedure:

- On the left hand side menu select [SIP](#)
- Scroll down to the bottom of the page

Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer

Address: http://136.170.209.111/vsframe?sid=2013698011&frame\_id=52

**VegaStream**

Host Name: Vega50WISC  
 IP Address: 136.170.209.111  
 User Name: admin

**Vega 50 Configuration**

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**Miscellaneous**

SIP Signalling Transport	<input checked="" type="radio"/> udp <input type="radio"/> tcp
Reliable Provisional Responses	<input type="radio"/> supported <input type="radio"/> require <input checked="" type="radio"/> off
DTMF Transport	<input checked="" type="radio"/> rfc2833 <input type="radio"/> info <input type="radio"/> rfc2833 and tx info <input type="radio"/> off
DTMF INFO	<input checked="" type="radio"/> mode1 <input type="radio"/> mode2
RFC2833 payload (96-127)	96
Enable T38	<input checked="" type="checkbox"/>
Enable Fax	<input checked="" type="checkbox"/>
Fax Detect	<input type="radio"/> always <input checked="" type="radio"/> terminating
Signalling Application ID	none
T1 Retry Timer Increment (ms)	500
T2 Retry Timer Limit (ms)	4000
Interface ID	99
Cost	1
Maximum Calls	60

Save  
 Log off  
 Help  
 Reboot System  
 Apply Changes

**Advanced SIP Configuration**  
[Advanced SIP](#)

Done Internet

- Select [Advanced SIP](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved & Unapplied Changes

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**SIP > Advanced**

**Advanced SIP parameters**

BYE-Also INVITE to proxy	<input type="checkbox"/>
REFER INVITE to proxy	<input type="checkbox"/>
Send CANCEL to all forks	<input checked="" type="checkbox"/>
User-Agent header	<input checked="" type="checkbox"/>
Use 'local domain' in To header	<input checked="" type="checkbox"/>
Use 'local domain' in From header	<input checked="" type="checkbox"/>
Use Request-URI in call dialog matching	<input type="checkbox"/>
183 Session Progress if media present	<input type="checkbox"/>
early OK timer (0=off)	<input type="text" value="0"/>
Use authentication users	<input checked="" type="checkbox"/>
Parse Remote Party-ID header	<input type="checkbox"/>

**SDP control**

Single media description in T38 INVITE	<input type="checkbox"/>
Connection information in session description only	<input type="checkbox"/>

**SIP INFO messages**

Transmit DTMF INFO messages	<input checked="" type="checkbox"/>
Transmit hookflash INFO messages	<input checked="" type="checkbox"/>

Save  
Log off  
Help  
Reboot System  
Apply Changes  
Submit

- Select (tick) Use authentication users, then
- select  and then click “[here](#)” to return
- On the left hand side menu select [POTS](#)

- **Configure the Authentication versions of**  
User Number Prefix and User Number Suffix

- select  and then click "[here](#)" to return

The User Number and password are configured on a per port (group) basis.

- Scroll down to the **QSLAC Codec Configuration** section

QSLAC Codec Configuration						
QSL ID	Enabled	Layer 1	Caller ID	Groups	Chg?	
1	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
2	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
3	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
4	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
5	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
6	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
7	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	
8	1	g711Alaw64k	on	====>	<a href="#">Modify</a>	

[Delete](#) [Add](#)

In the **QSLAC Codec Configuration** section, for QSL ID 1

- Select [Modify](#)

**POTS > QSLAC 1**

Modify QSL	
QSL ID	1
Enabled	<input checked="" type="checkbox"/>
Layer 1	<input type="text" value="g711Alaw64k"/>
Caller ID	<input type="text" value="on"/>
NT	<input type="checkbox"/>

[Submit](#)

Groups in this QSL												
Group ID	User Name	User Number	Authentication User Name	Authentication User Number	Password	Interface	Reg Enable	Cost	DN	Ring Index	Chg?	
1	port1	01	port1	01	user1	06	1	1	06	2	<a href="#">Modify</a>	

[Delete](#) [Add](#)

In the **Groups in this QSL** section, for Group ID 1

- Select [Modify](#)

[POTS](#) > [QSLAC 1](#) > **Codec Group 1**

Modify QSL Group	
Group ID	1
QSL ID	1
User Name	<input type="text" value="port1"/>
Enable Registration	<input checked="" type="checkbox"/>
User Number	<input type="text" value="01"/>
Authentication User Name	<input type="text" value="port1"/>
Authentication User Number	<input type="text" value="01"/>
Password	<input type="text" value="user1"/>
Interface	<input type="text" value="06"/>
Cost	<input type="text" value="1"/>
DN	<input type="text" value="06"/>
Ring Index	<input type="text" value="2"/>
<input type="button" value="Submit"/>	

- Configure Authentication User Number and Password
- select  and then click "[here](#)" to return
  
- On the left hand side menu select [POTS](#)
- Scroll down to the **QSLAC Codec Configuration** section
- Repeat configuring the Authentication User Number and Password for all other QSL Ids

QSLAC Codec Configuration					
QSL ID	Enabled	Layer 1	Caller ID	Groups	Chg?
1	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
2	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
3	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
4	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
5	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
6	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
7	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
8	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
<input type="button" value="Delete"/> <input type="button" value="Add"/>					

## 8. Configure Registration

Typically trunking gateways (like the Vega 50 FXO) do not need to register with a SIP proxy. SIP registration was designed for end users to register themselves with the current local SIP proxy. Trunking gateways potentially support millions of end users and so typically the presence and capabilities of the gateways are manually configured into the SIP proxy.

For telephony to SIP calls, the SIP proxy is usually manually configured to accept calls from the Vega 50 FXO

- the interface ID on which the call arrived will be in the request URI
- where supported and enabled the caller ID will be provided in the SIP From: or RPID: header

For SIP to telephony calls the Proxy must send the call to the Vega 50 FXO with a request URI of the format `iittt...t@contact_address`

- where `ii` is the interface number through which to make the call (Vega interface 06 to 13), and
- where `ttt...t` is the telephone number for the Vega to dial

In some circumstances the SIP proxy does demand that the Vega registers with it. If registration is required, see [14.1 Configure Registration](#).



## 9. Configure POTS parameters

- On the left hand side menu select [POTS](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved & Unapplied Changes

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**POTS Configuration**

**DTMF Configuration**

DTMF Termination Char \*  
DTMF Dial Timeout 10  
Caller ID Type off

Submit

**POTS Identities**

User Name Prefix NULL  
User Number Prefix NULL  
User Name Suffix vega1  
User Number Suffix 01  
Authentication User Name Prefix NULL  
Authentication User Number Prefix NULL  
Authentication User Name Suffix vega1  
Authentication User Number Suffix 01

Submit

Save  
Log off  
Help  
Reboot System  
Apply Changes

Unless already modified for Registration and authentication, in the **POTS Identities** section:

- Set User Number Suffix = NULL  
*Note capitalisation is important – this will remove the numeric suffix 01 from the SIP message From: field, leaving the numeric part of the From: to be defined on a per port basis – see later.*
- select  and then click [here](#) to return
- Scroll to the bottom of the page

**Vega 50 Configuration**

Host Name: Vega50WISC  
 IP Address: 136.170.209.111  
 User Name: admin

⚠ Unsaved & Unapplied Changes

**Management**  
 Logging  
 Maintenance  
 LAN  
 POTS  
 Dial Plan  
 Media Channels  
 Tones  
 SIP  
 Users  
 QoS  
 Advanced

User Number Suffix:   
 Authentication User Name Prefix:   
 Authentication User Number Prefix:   
 Authentication User Name Suffix:   
 Authentication User Number Suffix:

**QSLAC Codec Configuration**

QSL ID	Enabled	Layer 1	Caller ID	Groups	Chg?
1	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
2	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
3	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
4	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
5	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
6	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
7	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
8	1	g711Alaw64k	on	====>	<a href="#">Modify</a>

**Advanced POTS Configuration**  
[Advanced POTS](#)

Now configure the per port information

In the **QSLAC Codec Configuration** section

- Select [Modify](#) for QSL ID 1

Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer

Address: http://136.170.209.111/vsframe?sid=2013698011&frame\_id=5

VegaStream

Host Name: Vega50WISC  
IP Address: 136.170.209.111  
User Name: admin

Vega 50 Configuration

Unsaved & Unapplied Changes

Management  
Logging  
Maintenance  
LAN  
POTS  
Dial Plan  
Media Channels  
Tones  
SIP  
Users  
QoS  
Advanced

POTS > QSLAC 1

Modify QSL

QSL ID: 1  
Enabled:   
Layer 1: g711Alaw64k  
Caller ID: on  
NT:

Submit

Groups in this QSL

Group ID	User Name	User Number	Authentication User Name	Authentication User Number	Password	Interface	Reg Enable	Cost	DN	Ring Index	Chg?
1	port1	01	port1	01	user1	06	1	1	06	2	<a href="#">Modify</a>

Delete Add

Save  
Log off  
Help  
Reboot System  
Apply Changes

Done Internet

- Disable (un-tick) NT, then
- select **Submit** and then click "[here](#)" to return
- scroll down to the **QSLAC Codec Configuration** section and again select **Modify** for QSL ID 1

[POTS](#) > [QSLAC 1](#)

Modify QSL	
QSL ID	1
Enabled	<input checked="" type="checkbox"/>
Layer 1	g711Alaw64k
Caller ID	on
NT	<input type="checkbox"/>
<input type="button" value="Submit"/>	

Groups in this QSL											
Group ID	User Name	User Number	Authentication User Name	Authentication User Number	Password	Interface	Reg Enable	Cost	DN	Ring Index	Chg?
1	port1	01	port1	01	user1	06	1	1	06	2	<a href="#">Modify</a>
<input type="button" value="Delete"/> <input type="button" value="Add"/>											


- In **Groups in this QSL** select [Modify](#) :

[POTS](#) > [QSLAC 1](#) > [Codec Group 1](#)

Modify QSL Group	
Group ID	1
QSL ID	1
User Name	port1
Enable Registration	<input checked="" type="checkbox"/>
User Number	01
Authentication User Name	port1
Authentication User Number	01
Password	user1
Interface	06
Cost	1
DN	06
Ring Index	2
<input type="button" value="Submit"/>	

If required the DN (Directory Number field can be changed) - this is the value that will be sent in the Contact: field of SIP messages.

User Number is used in the From: field of SIP messages that the Vega initiates (User number prefix User number User number suffix@Registration domain) if no caller ID is available to populate the User number part.

- Set User Number to be the same as DN
- select  and then click "[here](#)" to return
- select  to return to main POTs configuration page

Repeat the configuration of NT, User Number (and DN) for the other QSLAC Ids 2 to 8.

### Configuring Ring Cadence Detection

The Vega FXO is alerted to new telephony calls arriving by the PBX or CO switch presenting ringing voltage to the Vega. The Vega needs to have parameters adjusted to configure the detector for the ring tone(s) it is going to be presented with.

Now configure the FXO ring cadence detector so that it detects incoming ring cadences correctly:

- Scroll to the bottom of the page

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved & Unapplied Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[POTS](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

User Number Suffix NULL  
Authentication User Name Prefix NULL  
Authentication User Number Prefix NULL  
Authentication User Name Suffix vega1  
Authentication User Number Suffix 01

Submit

**QSLAC Codec Configuration**

QSL ID	Enabled	Layer 1	Caller ID	Groups	Chg?
1	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
2	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
3	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
4	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
5	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
6	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
7	1	g711Alaw64k	on	====>	<a href="#">Modify</a>
8	1	g711Alaw64k	on	====>	<a href="#">Modify</a>

Delete Add

**Advanced POTS Configuration**  
[Advanced POTS](#)

Save  
Log off  
Help  
Reboot System  
Apply Changes

- Select [Advanced POTS](#)
- Scroll to the **FXO Parameters** section:

**Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer**

Address: [http://136.170.209.111/vsframe?sid=2013698011&frame\\_id=32](http://136.170.209.111/vsframe?sid=2013698011&frame_id=32)

**VegaStream**

Host Name: Vega50WISC  
 IP Address: 136.170.209.111  
 User Name: admin

**Vega 50 Configuration**

⚠ Unsaved & Unapplied Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[POTS](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

**FXO parameters**

Loop Current Detect	<input type="text" value="0"/>
Line Reversal Sample Delay (ms)	<input type="text" value="50"/>
DTMF Hold-off Time (ms)	<input type="text" value="200"/>
Line Reversal Debounce Time (ms)	<input type="text" value="50"/>
Early Line Seize	<input type="checkbox"/>
Early Line Seize Timeout (s)	<input type="text" value="30"/>
Ringback present	<input checked="" type="checkbox"/>

**FXO ring-detection parameters**

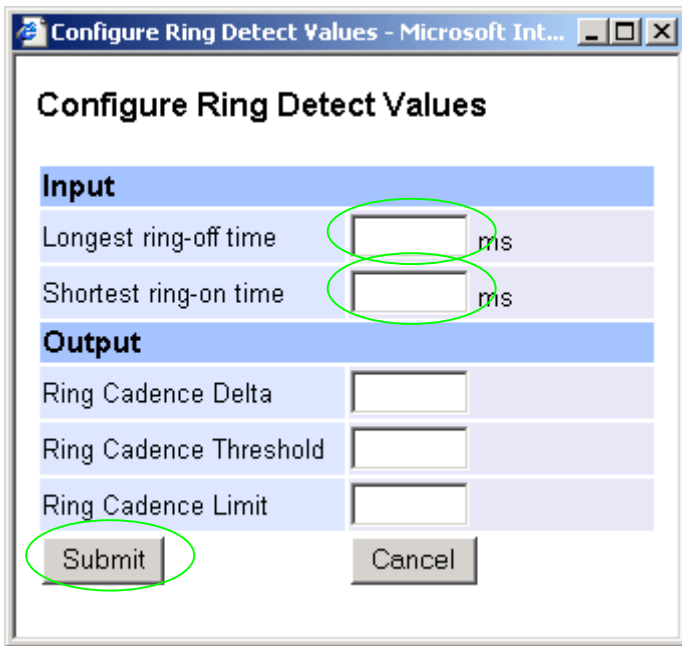
Ring Cadence Delta	<input type="text" value="14"/>
Ring Cadence Threshold	<input type="text" value="56"/>
Ring Cadence Limit	<input type="text" value="200"/>

**FXS parameters**

Hook Debounce Time (ms)	<input type="text" value="70"/>
-------------------------	---------------------------------

Done Internet

➤ Select



- Set Longest ring-off time = length of longest silence in the incoming ringing voltage cadence
- Set Shortest ring-on time = length of shortest ring in the incoming ringing voltage cadence
- select

Table 1 lists the standard values to use in the UK and USA.

**Table 1. Ring tones parameters**

	Country	UK	USA
Ring tone values	Longest silence	2000ms	4000ms
	Shortest ring	400ms	2000ms

**Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer**

Address: [http://136.170.209.111/vsframe?sid=2013698011&frame\\_id=32](http://136.170.209.111/vsframe?sid=2013698011&frame_id=32)

**VegaStream**

Host Name: Vega50WISC  
 IP Address: 136.170.209.111  
 User Name: admin

**Vega 50 Configuration**

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[POTS](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

Save  
 Log off  
 Help  
 Reboot System  
 Apply Changes

**FXO parameters**

Loop Current Detect	<input type="text" value="0"/>
Line Reversal Sample Delay (ms)	<input type="text" value="50"/>
DTMF Hold-off Time (ms)	<input type="text" value="200"/>
Line Reversal Debounce Time (ms)	<input type="text" value="50"/>
Early Line Seize	<input type="checkbox"/>
Early Line Seize Timeout (s)	<input type="text" value="30"/>
Ringback present	<input checked="" type="checkbox"/>

Submit

**FXO ring-detection parameters**

Ring Cadence Delta	<input type="text" value="12"/>
Ring Cadence Threshold	<input type="text" value="320"/>
Ring Cadence Limit	<input type="text" value="400"/>

Submit

**FXS parameters**

Hook Debounce Time (ms)	<input type="text" value="70"/>
-------------------------	---------------------------------

Submit

http://136.170.209.111/vsframe?sid=2013698011&frame\_id=6

➤ select  and then click "[here](#)" to return



## 10. Configure pointer to CD ROM documentation

- On the left hand side menu select [LAN](#)
- Scroll to the bottom of the screen

Vega 50 Configuration

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved & Unapplied Changes

Management  
Logging  
Maintenance  
**LAN**  
POTS  
Dial Plan  
Media Channels  
Tones  
SIP  
Users  
QoS  
Advanced

FTP Server 0.0.0.0  
NTP Offset (hhmm) 0000  
NTP Poll Interval 0

**Physical Layer Configuration**

Full Duplex   
Ethernet Type 10baseT & 100baseTX  
QoS profile 1

Submit

**Lan Hosts**

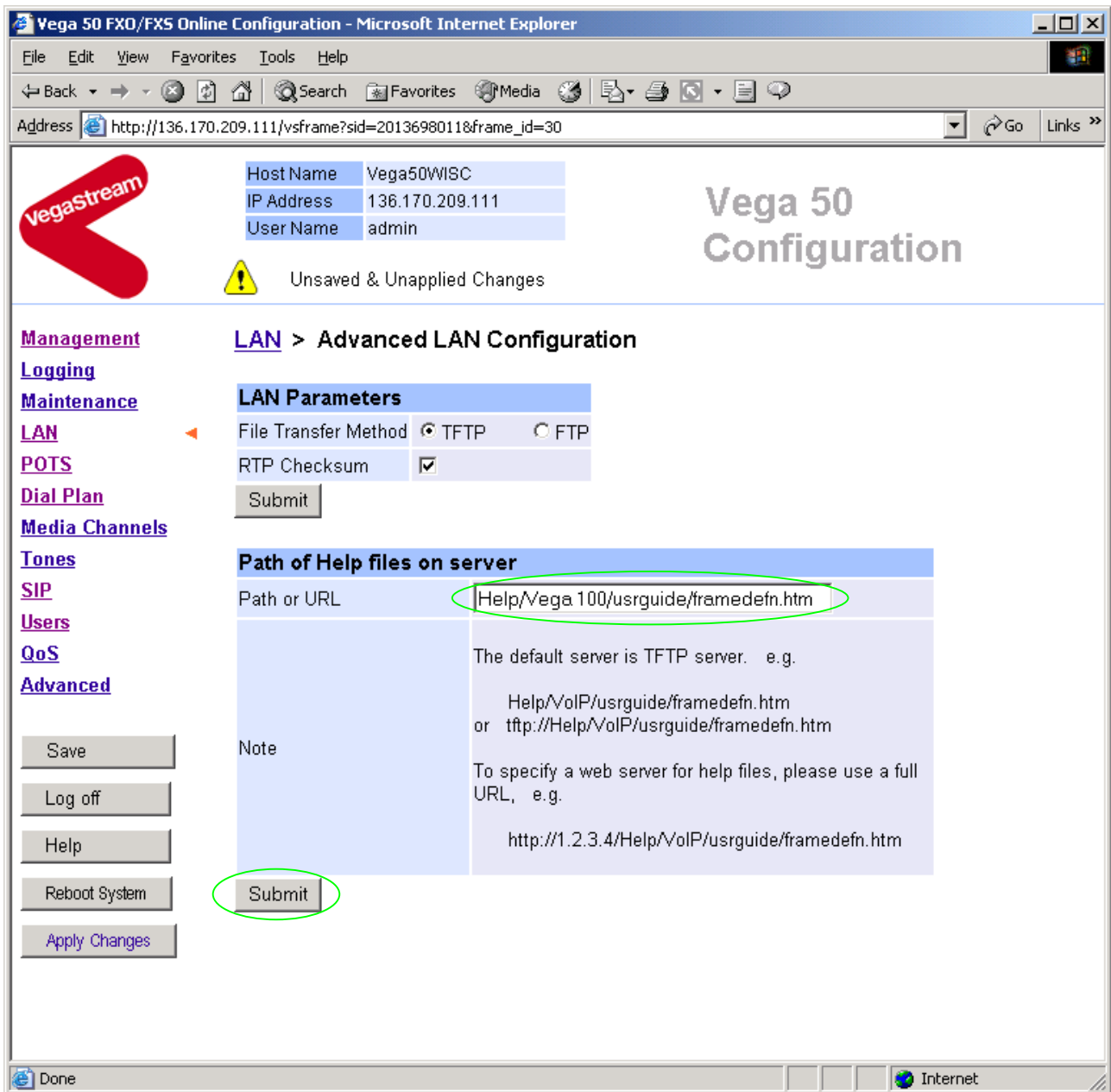
ID	Name	IP	Chg?
1	PHONE_06	0.0.0.0	<a href="#">Modify</a>
2	PHONE_07	0.0.0.0	<a href="#">Modify</a>
3	PHONE_08	0.0.0.0	<a href="#">Modify</a>
4	PHONE_09	0.0.0.0	<a href="#">Modify</a>
5	PHONE_10	0.0.0.0	<a href="#">Modify</a>
6	PHONE_11	0.0.0.0	<a href="#">Modify</a>
7	PHONE_12	0.0.0.0	<a href="#">Modify</a>
8	PHONE_13	0.0.0.0	<a href="#">Modify</a>

Delete Add

**Advanced LAN Configuration**

[Advanced LAN](#)


- Select [Advanced LAN](#)



To configure for operation using the CD in the local PC CD-ROM drive,

- Set Path or URL = D:/Content/help/v50fxos\_R5.htm
- ... N.B. use forward slashes "/" not back slashes "\".

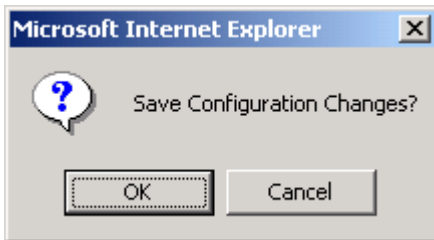
(Substitute appropriate drive letter if D: is not the CD-ROM)

- select  and then click "[here](#)" to return

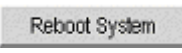
## 11. Save Changes

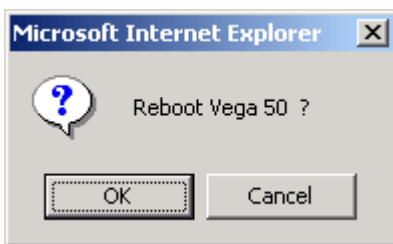
The changes to the configuration must be saved and activated. This is carried out as follows:

- On the left hand side menu select 



- Select  and after the configuration has been saved click "[here](#)" to return

- On the left hand side menu select 



- Select 

The Vega will reboot and once back on-line, it will be ready to take its first call.

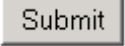
## 12. Archive Vega Configuration

Once configured it is recommended that the configuration is archived to an external server.

To do this check that the tftp address is configured to point to a tftp server (in the [LAN](#) page), then on the left hand side menu select [Advanced](#), and scroll to the CLI Command section:



The screenshot shows a web interface with a blue header bar labeled "CLI Command". Below the header is a white text input field and a grey "Submit" button.

- in the text entry box type “PUT tftp:initial\_cfg.txt”. Select .

This will send all the configuration parameters to the tftp server and save them as the file “initial\_cfg.txt”. (Note: you may want to choose a unique name rather than “initial\_cfg.txt”, especially if you are configuring more than 1 unit).

The Vega configuration can be archived to an ftp server instead of a tftp server by configuring the ftp server address in the [LAN](#) page and then typing the CLI command “PUT FTP:initial\_cfg.txt”. (Again a unique name can be used in place of “initial\_cfg.txt”)

If the ftp server requires a login username and password configure the following:

- set \_advanced.lan.ftp.anonymous\_login=0
- set \_advanced.lan.ftp.username=<ftp username>
- set \_advanced.lan.ftp.\_password-<ftp password>

## 13. Technical Support

Support information can be found on the VegaStream Support web site [www.VegaAssist.com](http://www.VegaAssist.com)

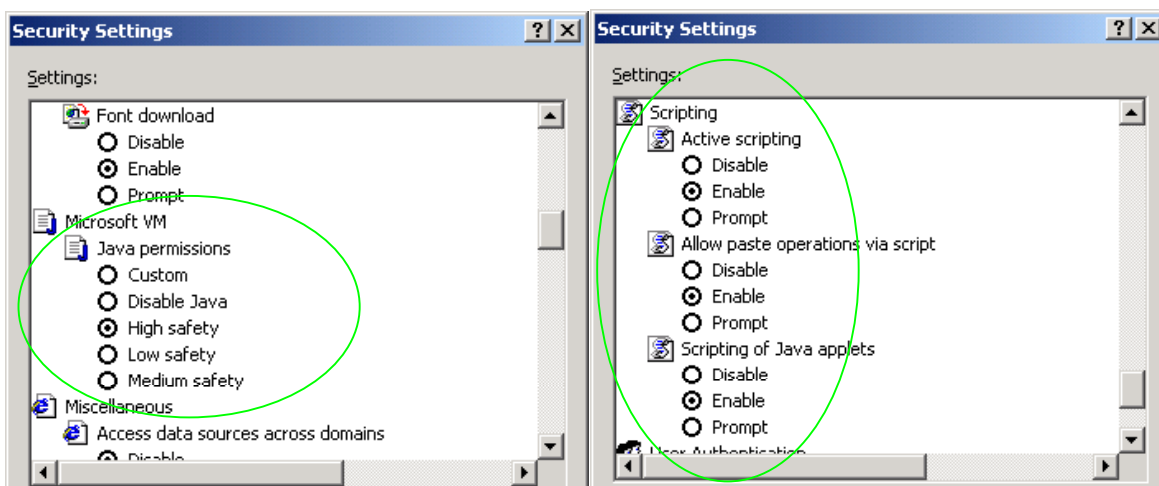
If you require help from VegaStream support personnel, please use the serial interface or telnet into the unit, log in and then type:

- show support
- sip monitor on
- log display on

Carry out the interaction you want explained, then copy the information provided by the Vega and e-mail it to [support@VegaStream.com](mailto:support@VegaStream.com) together with your question.

### Notes:

1. If the screens do not appear as indicated, check that Java is enabled on your web browser (Tools>internet options>Security, select internet and custom level and configure Microsoft VM Java permissions and Scripting parameters as indicated below.



2. Where there are multiple sections – each with a **Submit** button – entries must be made to one section at a time, and those entries confirmed by the **Submit** button before the next section is altered. Each **Submit** button only confirms entries for its own section. Any changes in other sections will be discarded when the **Submit** is pressed.
3. Loss of audio mid call – consider reducing the selection of available codecs (see section 1.5). Some equipment, when presented with multiple codecs, may try and switch codec mid-call. Vegas do not support changing codec type mid-call.
4. Mismatched audio codecs. Use SIP monitor on to identify this. If the codecs of the endpoints are mismatched this will be reported as error 606 “No matching media”. To rectify, enable the appropriate audio codec (see section 1.5).
5. Outbound calls from the Vega send the INVITE to “Default Proxy Host Name/IP” with the request line: “INVITE sip: <dest TEL:>@Default Proxy Host Name/IP”.

## 14. Advanced configuration

Vega 50 FXO units have further configurable parameters that may be desirable to configure in order to fully integrate into the attached infrastructure.

### 14.1 Configure Registration

For trunking gateways, registration is typically used to tell the Proxy that the Vega exists and is available to take calls. The Vega 50 FXO registers in a similar manner to the Vega 50 FXS.

The Registration format is:

```
--- address:
    Public_Address@Registration_Domain
--- contact:
    <sip:DN@Host_Name_or_IP_address_of_Vega>
```

The Vega registers twice for each physical port – once using a numeric address, and once using an alphanumeric address. Both registrations use the same contact address.

For the alphanumeric registration, `Public_Address` is made up of `Username_prefix`, `Username`, and `Username_suffix`; the prefix and suffix being per unit values and the `Username` being per port values.

For the numeric registration, `Public_Address` is made up of `Usernumber_prefix`, `Usernumber`, and `Usernumber_suffix`; the prefix and suffix being per unit values and the `Usernumber` being per port values.

The registration details are configurable using the Command Line Interface or the web browser interface.

Alphanumeric registration (name registration) uses configurable entries:

- `Username_prefix` ... per unit value
- `Username` ... per port value
- `Username_suffix` ... per unit value
- `Local Host (Registration_Domain)` ... already configured in section 1.5
- `DN` ... per port value
- `Host_Name_or_IP_address_of_Vega` ... set up by DHCP or in section 1.3

Name Registration message format:

```
--- address:
    Username_prefixUsernameUsername_suffix@Registration_Domain
--- contact:
    <sip:DN@Host_Name_or_IP_address_of_Vega>
```

Numeric registration uses configurable entries:

- Usernumber\_prefix ... per unit value
- Usernumber ... per port value
- Usernumber\_suffix ... per unit value
- Local Host (Registration\_Domain) ... already configured in section 1.5
- DN ... per port value
- Host\_Name\_or\_IP\_address\_of\_Vega ... set up by DHCP or in section 1.3

Number Registration message format:

```
--- address:
    Usernumber_prefixUsernumberUsernumber_suffix@Registration_Domain
--- contact:
    <sip:DN@Host_Name_or_IP_address_of_Vega>
```

e.g. to set up registration so that the Vega registers:

#### Port 1

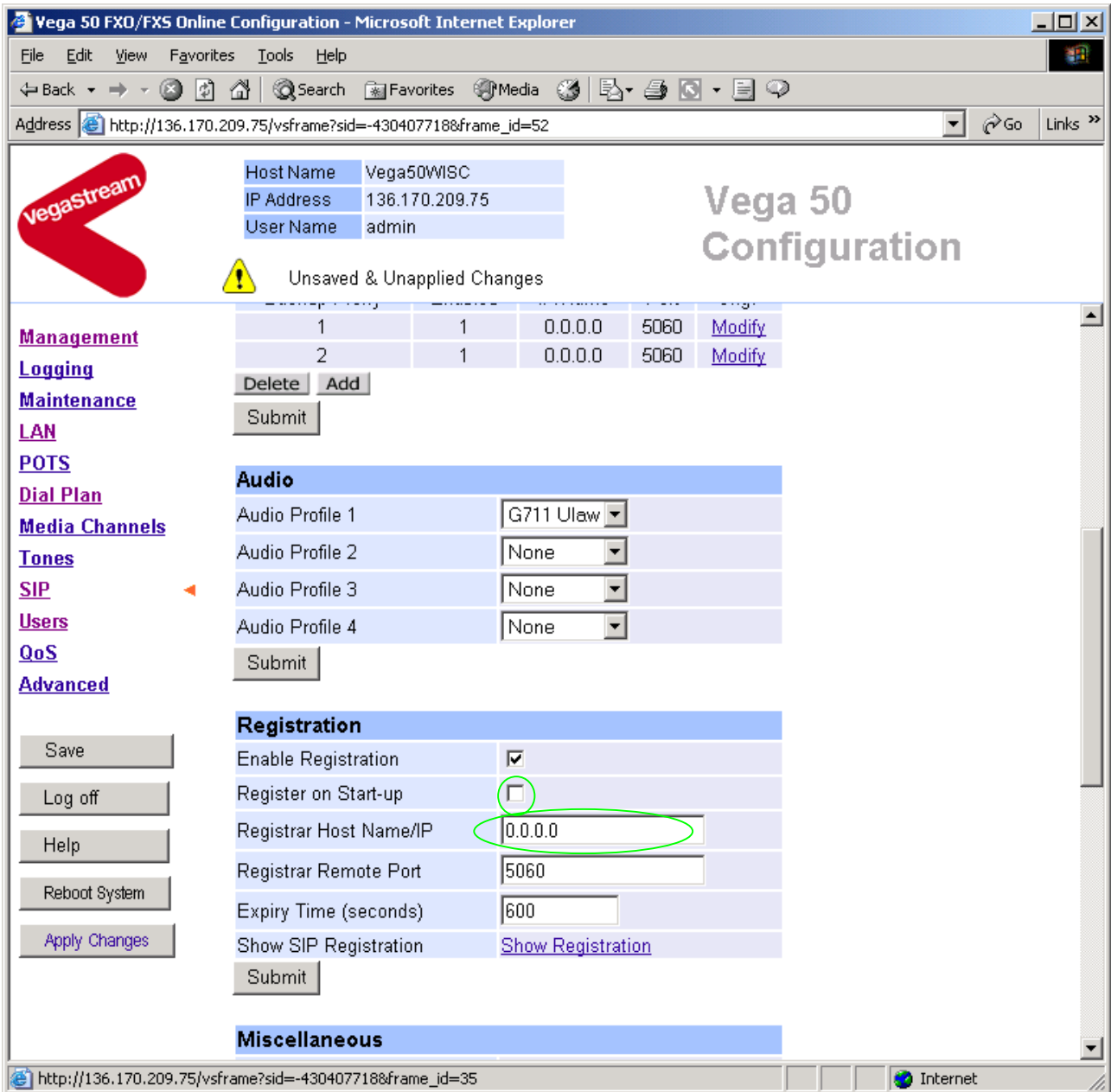
```
--- address:
    Unit1Port1Vega50@Registration_Domain
--- contact:
    <sip:06@Host_Name_or_IP_address_of_Vega>
--- address:
    55501@Registration_Domain
--- contact:
    <sip:06@Host_Name_or_IP_address_of_Vega>
```

- 
- 
- 

#### Port 8 Name

```
--- address:
    Unit1Port8Vega50@Registration_Domain
--- contact:
    <sip:13@Host_Name_or_IP_address_of_Vega>
--- address:
    55508@Registration_Domain
--- contact:
    <sip:13@Host_Name_or_IP_address_of_Vega>
```

- On the left hand side menu select [SIP](#)
- Scroll down to the **Registration** section



- Tick Register on Start-up

*This will cause the Vega to register with the proxy every time it is powered on or re-booted*

- set Registrar Host Name/IP =

IP\_or\_DNS\_name\_of\_SIP\_registrar\_or\_machi  
ne\_proxying\_for\_the\_registrar

- select  and then click "[here](#)" to return



- On the left hand side menu select [POTS](#)

- Set User Name Prefix = Unit1
- Set User Number Prefix = 555
- Set User Name Suffix = Vega50
- Set User Number Suffix = NULL *(NULL specifies no suffix; NULL must be in capitals)*
- select  and then click [here](#) to return

The per port entries are configured through the **QSLAC Codec Configuration** section

- Scroll down to the **QSLAC Codec Configuration** section:

Host Name Vega50WISC  
 IP Address 136.170.209.111  
 User Name admin

**Vega 50 Configuration**

Unsaved & Unapplied Changes

**Management**  
[Logging](#)  
[Maintenance](#)  
[LAN](#)  
[POTS](#)  
[Dial Plan](#)  
[Media Channels](#)  
[Tones](#)  
[SIP](#)  
[Users](#)  
[QoS](#)  
[Advanced](#)

Submit

**QSLAC Codec Configuration**

QSL ID	Enabled	Layer 1	Caller ID	Groups	Chg?
1	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
2	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
3	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
4	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
5	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
6	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
7	1	g711Alaw64k	on	===>	<a href="#">Modify</a>
8	1	g711Alaw64k	on	===>	<a href="#">Modify</a>

Delete Add

**Advanced POTS Configuration**  
[Advanced POTS](#)

Save  
 Log off  
 Help  
 Reboot System  
 Apply Changes

On QSL ID 1:

- Select [Modify](#)

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

**Vega 50 Configuration**

Unsaved & Unapplied Changes

**Management**  
Logging  
Maintenance  
LAN  
POTS  
Dial Plan  
Media Channels  
Tones  
SIP  
Users  
QoS  
Advanced

**POTS > QSLAC 1**

**Modify QSL**

QSL ID 1  
Enabled   
Layer 1 g711Alaw64k  
Caller ID on  
NT

Submit

**Groups in this QSL**

Group ID	User Name	User Number	Authentication User Name	Authentication User Number	Password	Interface	Reg Enable	Cost	DN	Ring Index	Chg?
1	port1	01	port1	01	user1	06	1	1	06	2	Modify

Delete Add

Save  
Log off  
Help  
Reboot System  
Apply Changes

In **Groups in this QSL**, for Group ID 1

- Select **Modify**

Vega 50 FXO/FXS Online Configuration - Microsoft Internet Explorer

Address: http://136.170.209.111/vsframe?sid=2013698011&frame\_id=5

VegaStream

Host Name Vega50WISC  
IP Address 136.170.209.111  
User Name admin

Unsaved & Unapplied Changes

Vega 50 Configuration

Management  
Logging  
Maintenance  
LAN  
POTS  
Dial Plan  
Media Channels  
Tones  
SIP  
Users  
QoS  
Advanced

POTS > QSLAC 1 > Codec Group 1

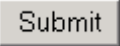

Modify QSL Group

Group ID	1
QSL ID	1
User Name	port1
Enable Registration	<input checked="" type="checkbox"/>
User Number	01
Authentication User Name	port1
Authentication User Number	01
Password	user1
Interface	06
Cost	1
DN	06
Ring Index	2

Submit

Save  
Log off  
Help  
Reboot System  
Apply Changes

Done Internet

- set User Name = Port1
- check User Number = 01
- check that DN = 06
- check that Enable Registration is ticked
- select  and then click "[here](#)" to return
- select  ... to return to QSLAC Codec Configuration

Repeat for QSL ID 2:

- set User Name = Port2
- check User Number = 02
- check that DN = 07
- check that Enable Registration is ticked

Repeat for QSL ID 3:

- set User Name = Port3
- check User Number = 03
- check that DN = 08
- check that Enable Registration is ticked

Etc up to:

Repeat for QSL ID 8:

- set User Name = Port8
- check User Number = 08
- check that DN = 13
- check that Enable Registration is ticked

***Further details on these and other parameters may be found in the Vega Primer.***

Contact Details

Email: [support@vegastream.com](mailto:support@vegastream.com)

Web: <http://www.vegastream.com>

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