

## Overview

In preparation to install the Mitel 112 DECT phone, you will the following information provided to you by your Project Manager:

- The extension number. This extension must be pre-built in the system with a 112 Dect Service Plan (aka Bundle).
- The SIP username.
- The SIP password.
- Private IP address for the UCCV controller
- Private IP address for UCCV datacenter server (a.k.a MSL). This IP is one host assignment in front of the UCCV controller.

The welcome email provides all of the needed information with the exception of the private IP address of the controller for the base station to sync with (See figure 1). The IP will be in a format of: 10.25.2xx.xxx.

Fig 1



Phone Details	
Phone Type	Deskphone
Extension	20987
Phone Model	112 DECT
Phone PIN	1111
Direct Number(s)	5038020987
Caller ID Number	8889858010
Caller Name	Lake Oswego
Emergency Response Location	Lake Oswego
SIP Username	20987
SIP Password	NewSlpPass4u
Phone Service Host Name	alpha.cloud.integra.net

The installation and configuration process works as follows:

1. Prepare the voice VLAN network.
2. Connect a laptop into the voice VLAN
3. Assemble and install the base station
4. Pair the DECT phone to the base station
5. Configure the base stations server to sync with the UCCV controller and to the DECT phone.

### Service Notes:

The base station can be synced to the teleworker gateway using an over-the-top (OTT) internet connection. However to do so, the UCCV service will require a teleworker license be purchased.

For a complete set of Mitel guides, please access Mitel Online for the documents

- Mitel FRP 12 System Guide
- Mitel 112 Handset\_User\_Guide\_R1.0
- Mitel 112 DECT Install Guide

## Step 1: Prepare the Site Network

The base station should be connected into the voice VLAN (typically VLAN 2). In the LAN switch, ensure the port that the base station connects into is an untagged voice VLAN. If it is Electric Lightwave's equipment and you have questions about the switch configuration, a SAT can work with you to confirm the configuration. If the equipment is owned by the customer, then it is the customer's responsibility to have the equipment configured. We recommend the last ports in a switch be untagged. If in doubt, please try those first.

Depending on your laptop/access device, you may have an issue configuring it to connect and grab a voice VLAN IP. Some laptops do not have the ability to accept specific VLAN assignment on its NIC. Because of this, we recommend that a spare untagged voice VLAN port be assigned the switch. |

## Step 2: Plug a Laptop into the Voice VLAN

The base station is configured using a GUI interface. The best way to access the GUI is via a voice VLAN connected desktop. If the scopes are correctly set up, a laptop will not automatically pick up the voice VLAN. It will connect to default data network. This means you will have to either configure the NIC adapter on your machine to pick up the voice VLAN or you will need to plug your machine into an untagged voice VLAN port on the LAN switch.

## Step 3: Assemble and Connect the Base Station to the Network

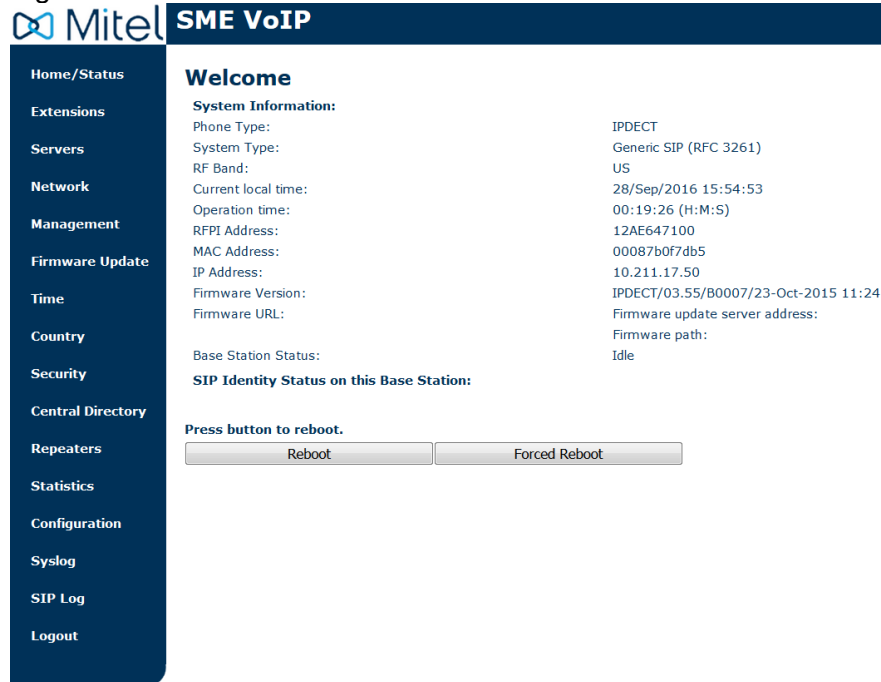
Un-box, assemble, and plug the base station into the LAN. By default, it is set up for DHCP. Please refer to document 112 Base Station Install.pdf should you have additional questions about how to connect the cables etc.

1. Plug the Ethernet LAN into the back of the base station
2. Plug the power supply into the back of the base station
3. The base station will go through a boot sequence. During the sequence, the lamp on the front will cycle from blinking amber to solid green. The ready for configuration state should be solid green.

## Step 4: Log into the Base Station via the GUI

1. From the DECT handset; press the round "Menu" button between the green and red keys to access the main menu.
2. Dial \*47\* Searching is displayed. Depending on the number of active base stations and the handset's distance to a base station, it can take up to 5 minutes.
3. Write the MAC: and the IP: down
4. Log into the GUI using the IP address from the search
5. The user credentials are: user name= admin password = admin
6. The main home screen will look as follows (figure 2)

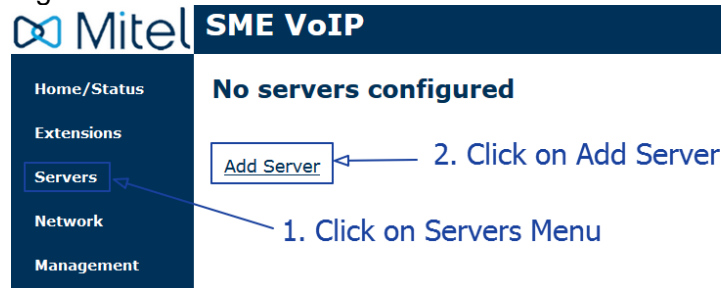
Fig 2



## Step 4A: Connect the Base Station to the Network

1. Click on the menu – Servers.
2. Click on Add Server. (See figure 3)

Fig 3

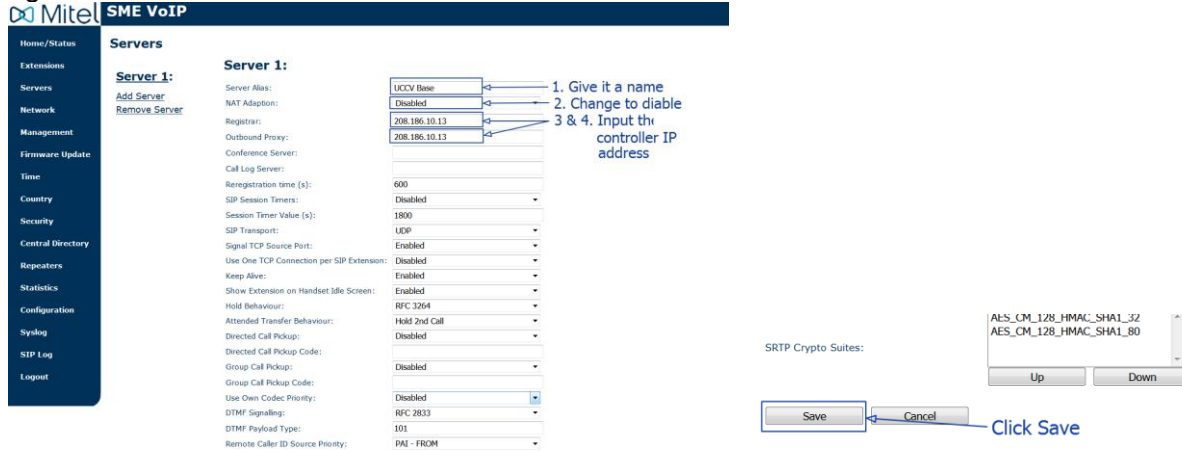


Fill in the following fields in the form:

1. Server Alias: give your server a name (e.g. UCCV Base)
2. Change the NAT Adaption to Disable
3. Registrar: In most situations, your will input the private IP of the UCCV controller. The registrar will have a default IP that needs to be changed.
4. Outbound Proxy: In most situations, your will input the private IP of the UCCV controller
5. All other fields should remain with their defaults
6. Click SAVE at the bottom of the form

Note: A public IP shown as an example below would be used in conjunction with sets/seats purchased with teleworker licenses. (see figure 4)

Fig 4



## Step 4b: Pair the DECT Handset to the Base Station

1. Before you start; you will need to locate the International Portable Equipment Identity (IPEI) number. This number is found on a label in the battery compartment. To view, remove the batteries and write down the number.
2. Click the Extensions menu; then Click Add extension. (see figure 5)

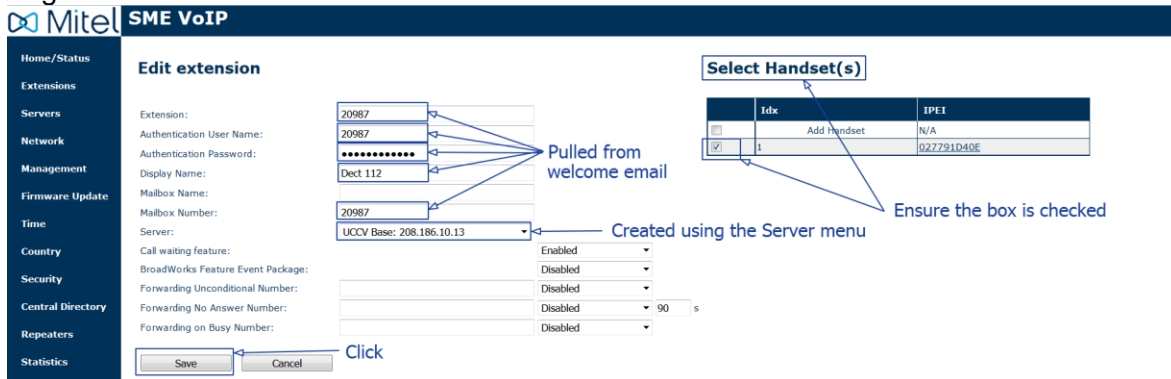
Fig 5



Fill in the following fields (see figure 6):

1. Extension number:
2. Authentication User Name:
3. Authentication Password:
4. Display Name: this should be the same name as it appears in the portal. This name can be found off of the welcome email.
5. Mailbox Number: the mailbox number is the same as the extension number.
6. Check the box for handset under the Select Handset(s) form
7. Server: This should be server that you created in Step 3.

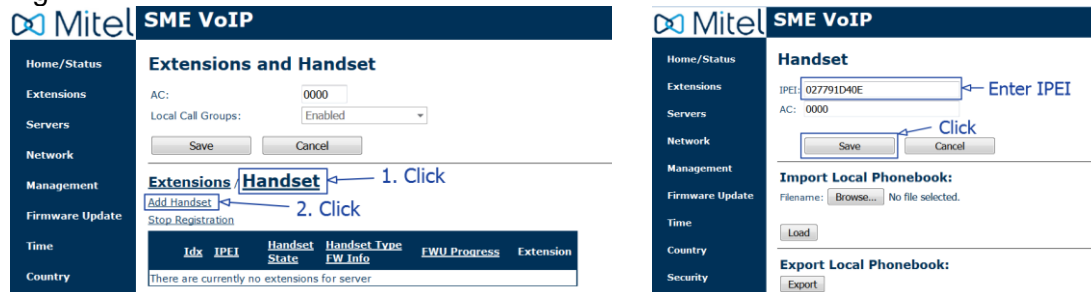
Fig 6



Pair the DECT wireless set to the Extension (see figure 7)

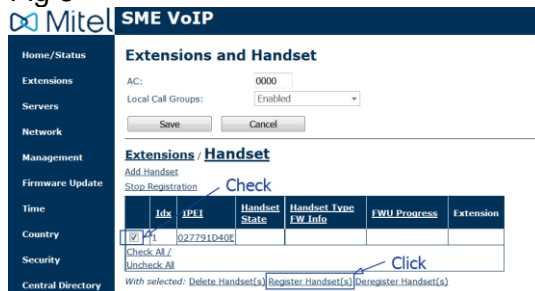
1. Click on the Extensions menu
2. Click on Handset tab and then Click on Add Handset
3. Enter the IPEI into the form. Click Save

Fig 7



4. Click the check box for the handset. Click Register Handset(s). The Handset State will change from blank to Enabled (see figure 8)

Fig 8



5. Using the DECT wireless handset, Click on the menu button. Cursor to the ring with the colored dots and press menu button. You will be given two options. Highlight the Register option and press the menu button. Enter in the access code. By default, it is 0000 Press the upper left button under the Ok to start the process. Registering will appear. Then the main screen. It should show No Sip Reg.

## Step 4c: Start the SIP Registration.

After configuring the server, building the extension and pairing the DECT set, the last step is to start the registration process between the DECT set and the synced base station. (see figure 9)

1. Click the Extensions menu
2. Click the Extensions tab
3. Check the box for the extension that you want to start.
4. Click Start SIP Registration(s)

Fig 9

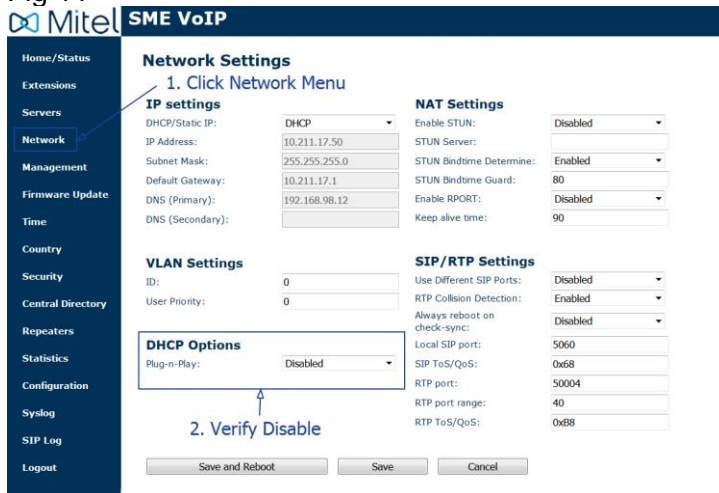
A successful configuration is when the state shows – SIP Registered (see figure 10)

Fig 10

## Step 4d: Verify Settings

With some installations, if the VLAN's are not properly set up with the correct scope, the base station when syncing will pick up the wrong scopes and will attempt to configure itself using the wrong information. This has the potential to create service issues later down the path when the phone reboots / loses power. It is important that under the Network menu, the DHCP Options for Plug-n-Play are Disabled. (see figure 11)

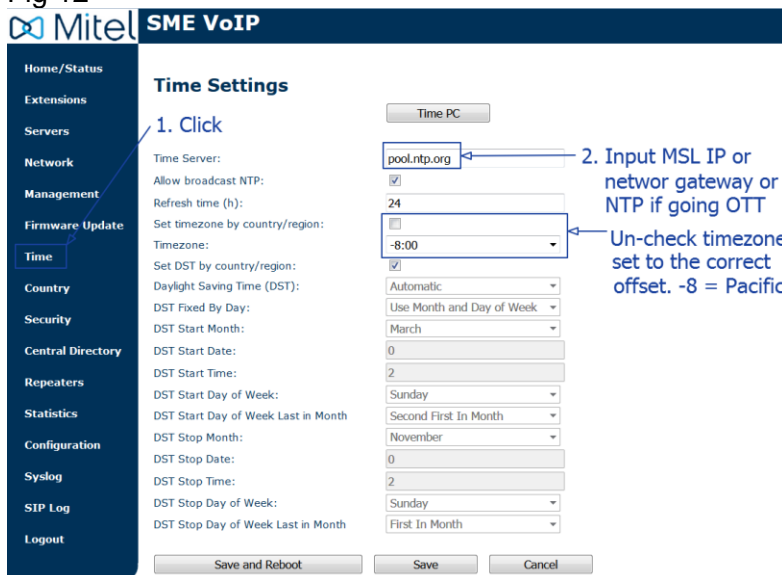
Fig 11



## Step 5: Set the Time

If the base station is connect to a private voice VLAN, then you will need to set your time server to pull NTP from the datacenter's UCCV server (a.k.a MSL). This private IP is one host in front of the controllers IP. (see figure 12)

Fig 12



## End Result

The end result should show the extension with the following state disposition as SIP registered.

**Mitel SME VoIP**

**Welcome**

**System Information:**

- Phone Type: IPDECT
- System Type: Generic SIP (RFC 3261)
- RF Band: US
- Current local time: 29/Sep/2016 13:47:02
- Operation time: 00:27:45 (H:M:S)
- RFPI Address: 12AE647100
- MAC Address: 00087b0f7db5
- IP Address: 10.211.17.50
- Firmware Version: IPDECT/03.55/B0007/23-Oct-2015 11:24
- Firmware URL: Firmware update server address:
- Firmware path:
- Base Station Status: Idle

**SIP Identity Status on this Base Station:**  
 20987@208.186.10.13 (UCCV Base) Status: OK

Press button to reboot.  
 Reboot Forced Reboot

**Mitel SME VoIP**

**Extensions and Handset**

AC: 0000  
 Local Call Groups: Enabled

Save Cancel

**Extensions / Handset**

Add extension

Idx	Extension	Display Name	Server	Server Alias	State	IPEI
1	20987	Dect 112	208.186.10.13	UCCV Base	SIP Registered	

Check All Extensions /  
 Uncheck All Extensions

With selected: Start SIP Registration(s) SIP Delete Extension(s)

## Optional: Screen Shots of a Standard Configuration

### Extensions

**Mitel SME VoIP**

**Extensions and Handset**

AC: 0000  
 Local Call Groups: Enabled

Save Cancel

**Extensions / Handset**

Add extension

Idx	Extension	Display Name	Server	Server Alias	State	IPEI
1	20987	Dect 112	208.186.10.13	UCCV Base	SIP Registered	027731D40E

Check All Extensions /  
 Uncheck All Extensions

With selected: Start SIP Registration(s) SIP Delete Extension(s)

**Mitel SME VoIP**

**Edit extension**

Extension: 20987  
 Authentication User Name: 20987  
 Authentication Password: \*\*\*\*\*  
 Display Name: Dect 112  
 Mailbox Number:  
 Server: 20987  
 UCCV Base: 208.186.10.13

Country: Call waiting Feature: Enabled  
 International Feature Event Package: Disabled  
 Security: Forwarding Unconditional Number: Disabled  
 Central Directory: Forwarding No Answer Number: Disabled  
 Repeater: Forwarding on Busy Number: Disabled

Save Cancel

**Select Handset(s)**

Idx	Add Handset	IPEI
1	Yes	027731D40E



## Servers

**Mitel SME VoIP**

**Servers**

**UCCV Base:**  
208.186.10.13  
[Add Server](#)  
[Remove Server](#)

**UCCV Base:**

Server Alias:	UCCV Base
NAT Adaption:	Disabled
Registrar:	208.186.10.13
Outbound Proxy:	208.186.10.13
Conference Server:	
Call Log Server:	
Registration time (s):	600
SIP Session Timers:	Disabled
Session Timer Value (s):	1800
SIP Transport:	UDP
Signal TCP Source Port:	Enabled
Use One TCP Connection per SIP Extension:	Disabled
Keep Alive:	Enabled
Show Extension on Handset Idle Screen:	Enabled
Hold Behaviour:	RFC 3264
Attended Transfer Behaviour:	Hold 2nd Call
Directed Call Pickup:	Disabled
Directed Call Pickup Code:	
Group Call Pickup:	Disabled
Group Call Pickup Code:	
Use Own Codec Priority:	Disabled
DTMF Signalling:	RFC 2833
DTMF Payload Type:	101
Remote Caller ID Source Priority:	PAI - FROM

Remote Caller ID Source Priority: PAI - FROM

Codec Priority:

- G711U
- G711A
- G726
- G729

Up Down Reset Codes Remove

RTP Packet Size: 20 ms

Secure RTP: Disabled

Secure RTP Auth: Disabled

SRTP Crypto Suites:

- AES\_CM\_128\_HMAC\_SHA1\_32
- AES\_CM\_128\_HMAC\_SHA1\_80

Up Down Reset Crypto Suites Remove

Save Cancel

## Network

**Mitel SME VoIP**

**Network Settings**

**IP settings**

DHCP/Static IP: DHCP

IP Address: 10.211.17.50

Subnet Mask: 255.255.255.0

Default Gateway: 10.211.17.1

DNS (Primary): 192.168.98.12

DNS (Secondary):

**NAT Settings**

Enable STUN: Disabled

STUN Server:

STUN Bndtime Determine: Enabled

STUN Bndtime Guard: 80

Enable RPORT: Disabled

Keep alive time: 90

**VLAN Settings**

ID: 0

User Priority: 0

**DHCP Options**

Plug-n-Play: Disabled

**SIP/RTP Settings**

Use Different SIP Ports: Disabled

RTP Collision Detection: Enabled

Always reboot on check-sync: Disabled

Local SIP port: 5060

SIP ToS/QoS: 0x68

RTP port: 50004

RTP port range: 40

RTP ToS/QoS: 0xB8

Save and Reboot Save Cancel

## Time

**Mitel SME VoIP**

**Time Settings**

Time PC

Time Server: pool.ntp.org

Allow broadcast NTP:

Refresh time (h): 24

Set timezone by country/region:

Timezone: -8:00

Set DST by country/region:

Daylight Saving Time (DST): Automatic

DST Fixed By Day: Use Month and Day of Week

DST Start Month: March

DST Start Date: 0

DST Start Time: 2

DST Start Day of Week: Sunday

DST Start Day of Week Last in Month: Second First in Month

DST Stop Month: November

DST Stop Date: 0

DST Stop Time: 2

DST Stop Day of Week: Sunday

DST Stop Day of Week Last in Month: First in Month

Save and Reboot Save Cancel