Mitel 112 DECT Installation Guide

March 2020



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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 required information with the exception of the private IP address of the controller for the base station to sync with (see image below). The IP will be in a format of: 10.25.2xx.xxx.

Sephone Details	
	Prime Phone
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 with the voice VLAN
- 3. Assemble and connect the base station
- 4. Configure the base stations server to sync with the UCCV controller and to the DECT phone
- 5. Set the time

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 following documents:

- Mitel FRP 12 System Guide
- Mitel 112 Handset_User_Guide_R1.0
- Mitel 112 DECT Install Guide

Step 1: Prepare the Voice VLAN 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. It 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 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: Connect a Laptop to 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: Configure the Base Station

- 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 displays. Depending on the number of active base stations and the handset's distance to a base station, a search can take up to 5 minutes.

- 3. Write the MAC: and the IP: addresses down.
- 4. Log into the GUI using the IP address from the search.
- 5. The user credentials are: **user name= admin** and **password = admin** The **SME VoIP Welcome** screen displays.

🕅 Mitel	SME VoIP		
Home/Status	Welcome		
Extensions	System Information:		
Servers	Phone Type: System Type:	IPDECT Generic SIP (RFC 3261)	
Network	RF Band:	US 28/Sep/2016 15:54:53	
	Operation time:	00:19:26 (H:M:S)	
Management	RFPI Address:	12AE647100 00087b0f7db5	
Firmware Update	IP Address:	10.211.17.50	
Time	Firmware Version: Firmware URL:	IPDECT/03.55/B0007/23-Oct-2015 11: Firmware update server address:	24
Country		Firmware path:	
Security	SIP Identity Status on this Base St	ation:	
Central Directory	Press button to reboot.		
Repeaters	Reboot	Forced Reboot	
Statistics			
Configuration			
Syslog			
SIP Log			
Logout			

Welcome Screen

Step 4A: Connect Base Station to Network

- 1. Click Servers in the SME VoIP menu.
- 2. Click Add Server. The Servers screen displays.

🕅 Mitel	SME VoIP
Home/Status	No servers configured
Extensions	2 Click on Add Server
Servers	Add Server
Network	1. Click on Servers Menu
Management	

치 Mitel	SME VoIP				
Home/Status	Servers				
Extensions	Server 1:	Server 1:			
Servers	Add Server	Server Alias: NAT Adaption:	UCCV Base Disabled		 Give it a name Change to diable
Management	Nellove Server	Registrar: Outbound Proxy:	208.186.10.13		- 3 & 4. Input the
Firmware Update		Conference Server:			address
Time		Reregistration time (s):	600		
Country		SIP Session Timers: Session Timer Value (s):	Disabled 1800	•	
Central Directory		SIP Transport: Signal TCP Source Port:	UDP Enabled	•	
Repeaters		Use One TCP Connection per SIP Extension: Keep Alive:	Disabled Enabled	•	
Statistics		Show Extension on Handset Idle Screen:	Enabled REC 3264	:	
Configuration Syslog		Attended Transfer Behaviour:	Hold 2nd Call	•	
SIP Log		Directed Call Pickup; Directed Call Pickup Code:	Disabled		
Logout		Group Call Pickup: Group Call Pickup Code:	Disabled		
		Use Own Codec Priority: DTMF Signalling:	Disabled RFC 2833		
		DTMF Payload Type: Remote Caller ID Source Priority:	101 PAI - FROM		

Servers Screen

- 3. Fill in the following fields in the form:
 - Server Alias: Give your server a name (e.g. UCCV Base)
 - Change the NAT Adaption to Disable
 - **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.
 - Outbound Proxy: In most situations, input the private IP of the UCCV controller
 - All other fields should remain with their defaults
- 4. 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.

Step 4B: Pair the DECT Handset to the Base Station

- Before you start, locate the International Portable Equipment Identity (IPEI) number. This number is found on a label in the battery compartment. Remove the batteries and write down the number.
- Click Extensions from the SME VoIP menu. The Extensions and Handset screen displays.
- Click Add extension. The Edit extension screen displays.

🔀 Mitel	SME VoIP
Home/Status	Extensions and Handset
Extensions	AC: 0000
Servers	Local Call Groups: Enabled
Network	Save Cancel
Management	Extensions / Handset
Firmware Update	Idx Extension Display Name Server Server Alias State IPEI
Time	There are currently no extensions for server
Country	

Extensions and Handset Screen

🔀 Mitel	SME VoIP			
Home/Status	Edit extension			Select Handset(s)
Extensions				R
Servers	Extension:	20987		Idx IPEI
Network	Authentication User Name:	20987		Add Hendset N/A
Management	Authentication Password:		Pulled from	
management	Display Name:	Dect 112	weicome email	
Firmware Update	Mailbox Name:	20007		Ensure the box is checked
Time	Mailbox Number: Server:	UCCV Base: 208.186.10.13	Created	d using the Server menu
Country	Call waiting feature:	-	Enabled •	
Cocurity	BroadWorks Feature Event Package:		Disabled •	
Security	Forwarding Unconditional Number:		Disabled •	
Central Directory	Forwarding No Answer Number:		Disabled • 90	0 s
Repeaters	Forwarding on Busy Number:		Disabled •	
Statistics	Save Cancel	Click		

Edit extension Screen

- 4. Fill in the following fields:
 - Extension number
 - Authentication User Name
 - Authentication Password
 - **Display Name:** This should be the same name as it appears in the portal. This name can be found in the welcome email.
 - Mailbox Number: The mailbox number is the same as the extension number.
 - Check the box for handset in the **Select Handset(s)** table.
 - Server: This should be server that you created in <u>Step 3: Assemble and Connect the Base Station to</u> the Network, page 2.
- 5. Click Save.
- 6. Pair the DECT wireless set to the extension.
 - Click Extensions in the SME VoIP menu. The Extensions and Handset screen displays.
 - Click Handset and then click Add Handset.
 - The Handset screen displays.

🕅 Mitel	SME VoIP
Home/Status	Handset
Extensions	
Servers	AC: 0000
Network	Save Cancel
Management	Import Local Phonebook:
Firmware Update	Filename: Browse No file selected.
Time	Load
Country	
Security	Export Local Phonebook:

Handset Screen

- In the **IPEI** field, provide the IPEI number.
- Click Save.
 - The handset is now available in the Handset section of the Extensions and Handset screen.

Home/Status	Extensions a	nd Han	dset		
	Extensions u	ind man	user		
Extensions	AC:	0000			
Servers	Local Call Groups:	Enable	ed 👻		
Network	Save	Cancel			
Management	Extensions / Ha	ndset			
Firmware Update	Add Handset Stop Registration	Check			
Time	Idx IPEI	Handset State	Handset Type FW Info	FWU Progress	Extension
Country	1 027791D40)E			
Security	Check All / Uncheck All			/ Click	
	With calested, Delete Ha	and cot(c) Doc	istor Handsot(s)D	aragistor Handsot(s	1

Handset Section of Extensions and Handset Screen

- Check the checkbox next to the handset and click **Register Handset(s)**.
- Using the DECT wireless handset, press the Menu button.
- Move your cursor to the ring with the colored dots and press the Menu button. Two options display.
- Highlight the **Register** and press the **Menu** button.
- Enter the access code. By default, it is 0000.
- Press the upper left button under Ok to start the process.
 Registering displays, and then the main screen. The main screen should display 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.

- 1. Click Extensions in the SME VoIP menu. The Extensions and Handsets screen displays.
- 2. Click Extensions.
- 3. Check the box for the extension that you want to register.
- 4. Click Start SIP Registration(s).

A successful registration displays **SIP Registered** in the **State** column of the **Extensions** table.

🔀 Mitel	SME VoIP
Home/Status	Extensions and Handset
Extensions	AC: 0000
Servers	Local Call Groups: Enabled
Network	Save Cancel
Management	Extensions Handset 2. Click
Firmware Update	Idx Extension Display Name Server Server Alias State IPEI
Time	20987 Dect 112 208.186.10.13 UCCV Base
Country	Check All Extensions / Uncheck All Extensions 4. Click
Security	With selected: <a href="https://www.selected-se selected-

Starting SIP Registration

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 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**.

100 C	1 Click Net	mgs Manu				
xtensions	I. Click ivet	work Menu				
ervers	IP settings			NAT Settings		
	DHCP/Static IP:	DHCP	•	Enable STUN:	Disabled	
etwork	IP Address:	10.211.17.50		STUN Server:		
lanagement	Subnet Mask:	255.255.255.0		STUN Bindtime Determine:	Enabled	•
and the second states	Default Gateway:	10.211.17.1		STUN Bindtime Guard:	80	
irmware Update	DNS (Primary):	192.168.98.12		Enable RPORT:	Disabled	•
lime	DNS (Secondary):			Keep alive time:	90	
Country	WI AN COMING			STP / PTP Sottings		
iecurity	VLAN Settings			Use Different CID Berter	Dirabled	-
	ID:	0		DTD Collision Detections	Enabled	
	The second se	0		RTP Collision Detection:	Enabled	
entral Directory	User Priority:	U		Always schoot on		
Central Directory Repeaters	User Priority:	U		Always reboot on check-sync:	Disabled	•
Central Directory Repeaters	User Priority: DHCP Options	U	_	Always reboot on check-sync: Local SIP port:	Disabled 5060	•
Central Directory Repeaters Statistics	User Priority: DHCP Options Plug-n-Play:	Disabled		Always reboot on check-sync: Local SIP port: SIP ToS/QoS:	Disabled 5060 0x68	•
Central Directory Repeaters Statistics Configuration	User Priority: DHCP Options Plug-n-Play:	Disabled		Always reboot on check-sync: Local SIP port: SIP ToS/QoS: RTP port:	Disabled 5060 0x68 50004	•
Central Directory Repeaters Statistics Configuration	User Priority: DHCP Options Plug-n-Play:	Disabled		Always reboot on check-sync: Local SIP port: SIP ToS/QoS: RTP port: RTP port range:	Disabled 5060 0x68 50004 40	•
Central Directory Repeaters Statistics Configuration	User Priority: DHCP Options Plug-n-Play: 2 Vorifu		*	Always reboot on check-sync: Local SIP port: SIP ToS/QoS: RTP port: RTP port range: RTP ToS/QoS:	Disabled 5060 0x68 50004 40 0x88	

Verify Settings

Step 5: Set the Time

If the base station is connected to a private voice VLAN, you must set your time server to pull NTP from the datacenter's UCCV server (also referred to as MSL). This private IP is one host in front of the controllers IP.

🖾 Mitel	SME VoIP			
Home/Status Extensions Servers	Time Settings	Time PC		
Network	Time Server:	pool.ntp.org		- 2. Input MSL IP or
Management	Allow broadcast NTP: Refresh time (h):	✓24		networ gateway or NTP if going OTT
Firmware Update	Set timezone by country/region:			
Time	Timezone: Set DST by country/region:	-8:00	•	set to the correct
Country	Daylight Saving Time (DST):	Automatic	-	offset8 = Pacific
Security	DST Fixed By Day: DST Start Month:	Use Month and Day of Wee March	k ▼ ▼	
Central Directory	DST Start Date:	0		
Repeaters	DST Start Time: DST Start Day of Week:	2 Sunday	*	
Statistics	DST Start Day of Week Last in Month	Second First In Month	*	
Configuration	DST Stop Month:	November	*	
comigardaon	DST Stop Date:	0		
Syslog	DST Stop Time:	2		
SIP Log	DST Stop Day of Week:	Sunday	*	
Logout	DST Stop Day of Week Last in Month	First In Month	•	
	Save and Reboot	Save	ancel	

Setting the Time

End Result

On the Welcome screen, you should now see the SIP Identity Status on this Base Station with a status of OK.

🔀 Mitel	SME VoIP	
Home/Status	Welcome	
Extensions	System Information:	
	Phone Type:	IPDECT
Servers	System Type:	Generic SIP (RFC 3261)
	RF Band:	US
Network	Current local time:	29/Sep/2016 13:47:02
	Operation time:	00:27:45 (H:M:S)
Management	RFPI Address:	12AE647100
	MAC Address:	00087b0f7db5
Firmware Update	IP Address:	10.211.17.50
Timo	Firmware Version:	IPDECT/03.55/B0007/23-Oct-2015 11:24
mine	Firmware URL:	Firmware update server address:
Country		Firmware path:
country	Base Station Status:	Idle
Security	CID Identity Chatter on this Dage Chatiers	
, i i i i i i i i i i i i i i i i i i i	SIP Identity Status on this Base Station:	
Central Directory	20987@208.186.10.13 (UCCV Base)	Status: OK
Repeaters	Press button to reboot.	
	Reboot	Forced Reboot
Statistics		

End Result on the Welcome Screen

Appendix A: Standard Configuration Images

Extensions

🔀 Mitel	SM	E \	/oIP					
Home/Status	Ext	ens	sions ar	nd Handse	t			
Extensions	AC:			0000				
Servers	Loca	Call G	iroups:	Enabled	Ŧ			
Network		Sav	e	Cancel				
Management	Ext	ens	sions / H	<u>andset</u>				
Firmware Update	Add e	xtensi	<u>on</u>					
		Idx	Extension	Display Name	Server	Server Alias	State IPEI	
Time		1	20987	Dect 112	208.186.10.13	UCCV Base	SIP Registered 02779	91D40E
Country	Chec	k All E	ctensions /					
Security	Unch With	<u>eck All</u> selecte	Extensions ed: Start SIP F	Registration(s) SIP	Delete Extension(s	1		

Mitel SME VOIP

nome/status	Edit extension					S	elec	ct Har	ndset(s)	
Extensions										
Servers	Extension:	20987						Idx		IPEI
Notwork	Authentication User Name:	20987				1	3		Add Handset	N/A
Notified in	Authentication Password:					8	/	1		0277910405
Management	Display Name:	Dect 112								
Firmware Update	Maibox Name:									
For an and a second second	Malbox Number:	20967								
Time	Server:	UCCV Base: 208.186.10.13 ·								
Country	Call waiting feature:		Enabled	•						
Sizestin.	BroadWorks Feature Event Package:		Disabled	•						
Secondy	Forwarding Unconditional Number:		Disabled	-						
Central Directory	Forwarding No Answer Number:		Disabled	•	90	8				
Repeaters	Forwarding on Busy Number:		Disabled	•						
designed of the second s										

Servers

Mitel SME VOIP Home/Status Servers UCCV Base: Extensions UCCV Base: Servers 208.186.10.13 Server Alias: UCCV Base NAT Adaption: Disabled . Add Server Network Remove Server 208.186.10.13 Registrar: Management 208.186.10.13 Outbound Proxy: Firmware Update Conference Server: Call Log Server: Time Reregistration time (s): 600 Country Disabled SIP Session Timers: . Session Timer Value (s): 1800 Security SIP Transport: UDP ÷ **Central Directory** Signal TCP Source Port: Enabled . Use One TCP Connection per SIP Extension: Disabled . Repeaters Keep Alive: Enabled • Statistics Show Extension on Handset Idle Screen: Enabled . Hold Behaviour: RFC 3264 • Configuration Attended Transfer Behaviour: Hold 2nd Call . Syslog Directed Call Pickup: Disabled . Directed Call Pickup Code: SIP Log . Group Call Pickup: Disabled Logout Group Call Pickup Code: Use Own Codec Priority: Disabled . DTMF Signaling: RFC 2833 ٠ 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 Codecs	Remove
RTP Packet Size:	20 ms	•		
Secure RTP:	Disabled	-		
Secure RTP Auth:	Disabled	•		
SRTP Crypto Suites:	AES_CM_128_HMAC AES_CM_128_HMAC	C_SHA1_32 C_SHA1_80		
	Up	Down	Reset Crypto Suites	Remove
Save Cancel				D2*61

Network

Home/Status	Network Setti	ngs				
Extensions						
Samuere	IP settings			NAT Settings		
Servers	DHCP/Static IP:	DHCP	•	Enable STUN:	Disabled	•
Network	IP Address:	10.211.17.50		STUN Server:		
Management	Subnet Mask:	255.255.255.0		STUN Bindtime Determine:	Enabled	•
	Default Gateway:	10.211.17.1		STUN Bindtime Guard:	80	
Firmware Update	DNS (Primary):	192.168.98.12		Enable RPORT:	Disabled	
Time	DNS (Secondary):			Keep alive time:	90	
Country	VI AN Sottings			STP/RTP Settings		
Security	ID:	0		Use Different SIP Ports:	Disabled	•
Central Directory	User Priority:	0		RTP Collision Detection:	Enabled	
Panastars				Always reboot on check-sync:	Disabled	•
	DHCP Options			Local SIP port:	5060	
Statistics	Plug-n-Play:	Disabled	-	SIP ToS/QoS:	0x68	
Configuration				RTP port:	50004	
				RTP port range:	40	
				RTP ToS/QoS:	0xB8	
Sysiog						
SYSIOG SIP Log						

Time

Home/Status Extensions Servers	Time Settings	Time PC
Network	Time Server:	pool.ntp.org
	Allow broadcast NTP:	V
Management	Refresh time (h):	24
Firmware Update	Set timezone by country/region:	
	Timezone:	-8:00 💌
Time	Set DST by country/region:	V
Country	Daylight Saving Time (DST):	Automatic 💌
Security	DST Fixed By Day:	Use Month and Day of Week 🔻
	DST Start Month:	March
Central Directory	DST Start Date:	0
Popostore	DST Start Time:	2
Repeaters	DST Start Day of Week:	Sunday -
Statistics	DST Start Day of Week Last in Month	Second First In Month 🔹
Configuration	DST Stop Month:	November -
	DST Stop Date:	0
Syslog	DST Stop Time:	2
SIP Log	DST Stop Day of Week:	Sunday -
Logout	DST Stop Day of Week Last in Month	First In Month 👻
	Save and Reboot	Save Cancel