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Polycom® KIRK® Wireless Server 600v3 Installation and Configuration Guide



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Chapter 1 Preface

This guide is intended for qualified technicians who will install, configure and maintain the KIRK Wireless Server 600v3 (KWS600v3) Solution. To qualify to install the KIRK Wireless Server 600v3 Solution, you must have successfully completed the KIRK Wireless Server 600v3 technical training. The guide provides all the necessary information for successful installation and maintenance of the wireless solution.

This includes the installation and configuration of:

- KIRK Wireless Server 600v3
- KIRK Repeaters
- KIRK Handsets

The Installation Guide also provides you with information about:

- Web based Administration Page of the KIRK Wireless Server 600v3
- KIRK Configuration Tool for the KIRK Wireless Server 600v3

Note: The Skinny Protocol described in this guide is not available for the North American market.

1.1 Before You Begin

This guide assumes the following:

- that users have a working knowledge of the call handlers operations
- that the call handler is installed and initialized and is working correctly
- that you have a working knowledge of deployment in general
- that a site survey has been conducted and that the installer has access to these plans

Note: The site survey should determine how many RF channels needed, number of handsets, user areas alternative sync ways to be used, if an alternative (Standby) Master KWS600v3 is needed, and if an LDAP Server and an alternative LDAP Server are needed.

1.2 Chapter Overview

Where is it?	What is it about?	When to use it?
Chapter 2	Introduction to KIRK Wireless Server 600v3	To learn about the different components in a typical KWS600v3 configuration.
Chapter 3	Deploying the KIRK Wireless Server 600v3	To learn how to deploy a KWS600v3 Multi-cell installation
Chapter 4	Installing the KIRK Wireless Server 600v3	To learn about KWS600v3 and to install it.
Chapter 5	KIRK Repeater Installation	To mount repeater onto wall indoors.
Chapter 6	Preparing KIRK Handset for Use	To prepare KIRK Handsets for use, installing and charging battery.
Chapter 7	Configuring KIRK Wireless Server 600v3	To power up the KWS600v3, connect a computer to the KWS600v3, access the web based Administration Page and KIRK Configuration Tool, and configure the KWS600v3 through these programs.
Chapter 8	KIRK Handset Registration and Subscription	To register and subscribe KIRK Handsets.
Chapter 9	KIRK Handset Management	To unsubscribe and deregister KIRK Handsets. To change user configuration and adjust handsets.
Chapter 10	System Management	To define and view different settings of the system, reading statistics, making a backup of configuration file, updating system software, and resetting the system.
Chapter 11	Messaging over MSF	To enable the MSF messages function by activating the TELNET system.
Chapter 12	Configuration/General/Update	To configure to poll an Update Server
Chapter 13	Configuration of the Update Server	To configure the Update Server
Chapter 14	Configuration of an NTP Server / Client	To configure the NTP Server / Client
Chapter 15	Troubleshooting	To troubleshoot and to use the KIRK GWLOAD program.
Chapter 16	Regulatory Notices	To learn about safety regulations.

1.3 Related Documentation

For further information about the KWS600v3 not covered by this manual, refer to the following documentation at www.polycom.com:

Subject	Documentation
KWS600v3 Configuration depending on Call Handler	KWS600v3 Configuration Guide (SIP Protocol, part no. 14168600) (SIP Protocol: Broadsoft R13 and Samsung OS2700 SW 4.11, part no. 14168710) (Skinny Protocol, part no. 14168601)
Deployment Kit	Deployment Guide
Handset Operation	Handset User Guide
Pre and Mid Call Services Operations	Pre Call and Mid Call Services User Guide (part no. 14168700)
Call Hold and Call Transfer Operations	Call Hold and Call Transfer User Guide (SIP Protocol) (part no. 14168711)
Release Notes	Every software release is accompanied by a Release Note. The Release Note describes software changes, bug fixes, outstanding issues, and hardware compatibility considerations for the new software release. Note: Read the Release Notes before you begin a software upgrade!

1.4 Acronyms

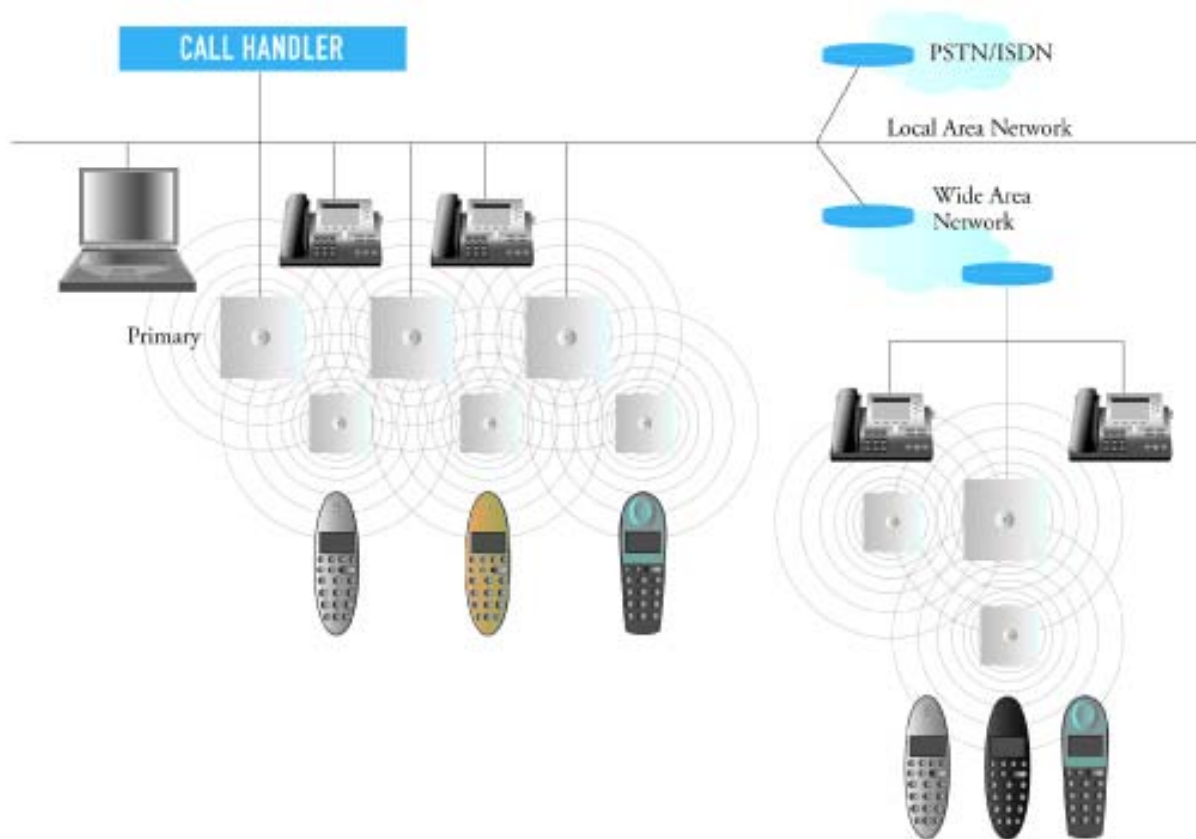
AC	Authentication Code
ARI no.	Access Rights Identity - Serial number of the KWS600v3
dB	Decibels (deciBells)
DECT	Digital Enhanced Cordless Telecommunications
DHCP	Dynamic Host Configuration Protocol
e.i.r.p.	Equivalent Isotropic Radiated Power
GAP	Generic Access Profile
HW PCS	Hardware Product Change Status - Hardware edition
IP	Internet Protocol
IPEI	International Portable Equipment Identity - Serial number of the handset - SN
KWS600v3	KIRK Wireless Server 600v3
IWU	Inter Working Unit
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
LED	Light Emitting Diode
KWS	KIRK Wireless Server
MAC	Media Access Control - hardware address of a device connected to a network
PB	Print circuit board
PBA	Print circuit board assembly
PBX	Private Branch eXchange
PCS	Product Change Status (Edition)
PIE	Production Initial Edition
PoE	Power over Ethernet
PP	Portable Parts - wireless handset
RSSI	Received Signal Strength Indicator
RTP	Real Time Protocol
SW PCS	Software Product Change Status - Software edition
TFTP	Trivial File Transfer Protocol
TOS	Type of Service
VoIP	Voice over Internet Protocol
WLAN	Wireless Local Area Network
WRFP	Wireless Radio Fixed Part - Wireless Repeater

Chapter 2 Introduction

A typical KWS600v3 configuration includes a number of the following components, in addition to the KWS600v3:

- Repeaters
- Handsets and accessories

Figure 1 Overview of the Whole Solution



This section provides information about:

- [“Components of the KIRK Wireless Server 600v3 Solution”](#) on page 22
- [“Requirements for the KIRK Wireless Server 600v3 Solution”](#) on page 26

2.1 Components of the KIRK Wireless Server 600v3 Solution

This section provides information about:

- “KIRK Wireless Server 600v3” on page 22
- “Wireless Bands” on page 23
- “KIRK Repeater” on page 23
- “KIRK Handset” on page 24
- “KIRK Maintenance Software” on page 25

2.1.1 KIRK Wireless Server 600v3

With the KWS600v3 Solution, you are always assured the very best quality as well as an array of telephony benefits:

- Exceptional voice quality
- High security based on DECT standard
- Support for repeaters to expand the radio coverage area
- Seamless handover between KWS600v3 and repeaters to assure uninterrupted calls
- Automatic log-in of handsets between installations – a feature which is especially relevant for customers with multiple locations
- SIO Application Interface for third party applications – adding messaging to mobility

As the KWS600v3 is a scalable solution capable of registering up to 1500 wireless users it is evidently an excellent choice for small, medium-sized as well as large businesses within a wide range of vertical markets. With the option of deploying the KWS600v3 as either a single-cell or a multi-cell solution, it can be adjusted to fit the exact needs of the individual customer. The IP interface to the PBX makes it an ideal solution for businesses with several locations. A multi-site solution can be customized with a number of single-cell and multi-cell deployments depending on the size of each individual location. When there is a need for more than 35 users at a location, a second or more KWS600v3 (called KWS600v3 secondaries) need to be installed. To create a multi-cell solution a multi-cell license is needed. Up to 256 radio units (a mix of primary and secondary KWS600v3 and repeaters) can be applied to obtain the necessary radio coverage. A single-cell version consists of one KWS600v3 and up to 6 repeaters.

Table 1 Overview of System Capacity

Description	Capacity
Min. number of KIRK Wireless Server 600v3 Single-cell	1
Max. number of KIRK Wireless Server 600v3 Multi-cell	256
Max. number of repeaters on KIRK Wireless Server 600v3 Single-cell	6
Max. number of repeaters per KIRK Wireless Server 600v3 per unit	1,2 or 3

Table 1 Overview of System Capacity

Max. number of repeaters in a whole system	256 (minus number of KIRK Wireless Server primaries and secondaries)
Max. number of simultaneous calls (Single-cell)	12
Max. number of simultaneous calls (Multi-cell)	11
Max. number of registered handsets (Single-cell)	35
Max. number of registered handsets (Multi-cell)	1500

The KWS600v3 controls the wireless infrastructure. It manages the repeaters and the IP interface to the call handler, as well as functionalities such as synchronization of seamless handover, echo cancellation, line delay compensation etc.

The communication protocol between the KWS600v3 and the call handler can be either:

- Skinny
- H.323
- SIP

Note: H.323 and Skinny Protocol support is limited to specific regions and does not include North America

A KWS600v3 is installed directly on the LAN and must be managed as part of the corporate network.

For more information about the KWS600v3, refer to [“Deploying KIRK Wireless Server 600v3” on page 31](#), [“Installing the KIRK Wireless Server 600v3” on page 41](#) and [“Configuring KIRK Wireless Server 600v3” on page 77](#).

2.1.2 Wireless Bands

The wireless solution supports two wireless bands, allowing operation in various countries and regions. Supported wireless bands are:

- ETSI DECT (1880-1900 Mhz), referred to as DECT
- USA DECT (1920-1930 Mhz), referred to as 1G9

The wireless band used by a KWS600v3 is determined by the KWS600v3 and handsets ordered with the solution.

2.1.3 KIRK Repeater

The repeater can be used to extend the coverage area in a wireless solution. The wireless repeater is used in areas with limited voice traffic, where cabling is difficult. Depending on the repeater type, it can be mounted either on the wall or on the ceiling. The wall mounted repeater is available as a half slot or full slot repeater. The ceiling mounted repeater is available as a full slot repeater. A half slot repeater covers two simultaneous

speech channels; a full slot repeater covers four simultaneous speech channels. The repeater does not increase the number of traffic channels, but increases the coverage area established with the KWS600v3. Up to three repeaters can be placed in cascade formation directing coverage in a certain direction.

The KWS600v3 can support up to 6 repeaters in a single-cell solution and up to 256 radio units (a mix of primary and secondary KWS600v3 and repeaters) in a multi-cell solution.

For more information about the repeater, refer to [“KIRK Repeater Installation”](#) on page 49.

2.1.4 KIRK Handset

The handset is a lightweight, ergonomically designed wireless unit that includes an LCD display and keypad.

The handset is a portable unit compatible with DECT GAP standard.

The handset is designed to provide the subscriber with most of the features available for a wired phone, in addition to its roaming and handover capabilities.

The KWS600v3 supports up to 35 registered handsets in a single-cell solution and up to 1500 registered handsets in a multi-cell solution.

For more information about the handset, refer to [“Preparing KIRK Handset for Use”](#) on page 65, [“KIRK Handset Registration and Subscription”](#) on page 145 and [“KIRK Handset Management”](#) on page 159.

2.1.4.1 Auto Login and Handover

Auto login refers to the ability to log on to more than one system, enabling you to use the same handset on up to 10 different systems. If a handset is subscribed to two or more systems, you can use Auto Login type A or Auto Login type B to change between the systems automatically:

- Auto Login type A is used if a handset is subscribed to two or more systems. Auto Login A should only be used in separate systems without overlaps.
- Auto Login type B is used if a handset is subscribed to two systems only. Auto Login B can be used in separate systems which are overlapping each other.

Note: Auto Login type B is only supported in 4020/4040/4080 Handsets.

For more information about Auto Login, refer to [“Subscribing KIRK Handsets” on page 152.](#)

Handover refers to the ability to move between the coverage areas of different radio units (mix of primary and secondary KWS600v3 and repeaters) on the same system while talking, without interruptions in the conversation.

2.1.5 KIRK SIO Application Interface

The SIO Application Interface is a communication platform allowing text messaging between the wireless server and a handset. With the SIO API, which is a fundamental part of all our wireless solutions, and a third party application program, the customer is offered a wide range of usage opportunities in a variety of vertical markets.

2.1.6 KIRK Maintenance Software

The following software applications for the installation and maintenance of the KWS600v3 are provided:

- Web based Administration Page
Used for programming of the KWS600v3 and registration of handsets.
- Configuration Tool
Used for programming of the KWS600v3.
- ServiceTool
Used for programming of the repeater, adjustment of the handset and software download to repeater/handset.

Note: ServiceTool is not used for adjustment of the 5020 Handset.

The ServiceTool application can be downloaded from www.polycom.com.

2.2 Requirements for the KIRK Wireless Server 600v3 Solution

This section provides information about the environmental and electrical requirements and software requirements for the KWS600v3 Solution.

2.2.1 KIRK Wireless Server 600v3

2.2.1.1 Environmental Requirements

The following is a list of recommendations for suitable installation conditions:

- Verify that the installation area is clean, dry, and protected from weather extremes.
- Verify that the floor of the installation area is finished with linoleum, vinyl, ceramic, wooden flooring, computer floor tiles, or polished sealed concrete.
- Verify that the ceiling of the installation area is finished or treated to prevent particle discharge.
- Verify that the installation area is well lit, and that the light source is uniformly diffused without shadows. Adequate lighting should provide a comfortable reading level and allow the identification of wire insulator colors without undue eye fatigue. Lighting should be comparable to an office work environment, with a minimum level of 21 meter/68.9 feet at each work surface. As a general rule, in a room with a 2.5 meters/8.2 feet ceiling, one 1.2 meters/4 feet fluorescent tube provides sufficient illumination for 1.9-2.4 square meters/20.5-25.9 square feet.
- Verify that ventilation of the installation area is capable of maintaining an ambient temperature of 0-40°C/32-104°F, and a relative humidity of 20-80% non-condensing, while the system is operating. The maximum power rating of a KWS600v3 under full load should not exceed 315W/1070 BTU/Hr. These figures are for each cabinet only, and do not take into account heat generated by other equipment. In particular, charging fully-discharged batteries may generate a considerable amount of heat, depending on battery capacity and rate of charge. Refer to the equipment manufacturer data for more information.
- Maximum distance between two KWS600v3 varies depending on material and construction of buildings, but there must always be synchronization chains and radio coverage overlap between the two KWS600v3 or handover between radio units. The time it takes a person to cross the common coverage area must be 10 seconds or more, as the handset needs time to scan for an alternative KWS600v3.
- Verify that the installation area is free of caustic or corrosive liquids, substances, or materials. If batteries will be installed as part of the system, ensure that adequate precautions are taken (such as special ventilation) to prevent corrosive emissions from the batteries. Check local building codes for additional requirements.
- Verify that the installation area is located no closer than 6.1meters/20.0 feet from electric devices that produce large electro-magnetic fields (EMF) or high levels of radio frequency energy. Possible EMF sources are radio transmitters, electric arc welding machines, copying machines, electric motors, refrigeration units, power transformers, electric load centers, and main circuit breaker panels.

- Verify that the electrical service is sufficient and located in close proximity to the KWS600v3. It is also possible to use PoE, and if PoE is used a power adapter is necessary.

2.2.1.2 Electrical Requirements

The following electrical requirements must be met:

- Mains of LAN (802.3af). (Power supply via the network)
- Power consumption: 24V/130-220mA (standby 180 mA)
- Typical power consumption: 7W per unit
- The max. radiated output power for the antenna is 10mW e.i.r.p/channel.

2.2.2 KIRK Repeater

2.2.2.1 Environmental Requirements

- Avoid installing repeaters on large concrete or marble columns because these columns affect radio coverage. If possible, place the repeater a minimum of 1.0 meter/3.3 feet from these types of columns.
- Do not install a repeater with the antenna housings near metal objects. Be careful not to damage existing wiring or panels.
- Do not position repeaters in ducts, plenums, or hollow spaces used to transport environmental air except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels. When you need more than one repeater in a cell to meet traffic requirements, position the repeaters at the same cell center.
- Keep the repeater away from steel constructions.
- Do not position repeaters directly on metallic surfaces. If possible, place the repeater a minimum of 1.0 meter/3.3 feet from these types of surfaces.
- Do not position repeaters behind furniture.
- Only position repeaters where the signal is needed.
- The installation area must be clean, free of traffic and excess dust, dry, and well ventilated.
- The installation area must be within the temperature ranges of 10°C and 40°C.
- The installation area must be between 20% and 80% non-condensing relative humidity.
- Minimum distance between two repeaters varies depending on material and construction of buildings, but there must always be synchronization chains and radio coverage overlap between the two repeaters and handover between handsets. The time it takes a person to cross the common coverage area must be 10 seconds or more, as the handset needs time to scan for an alternative repeater.

2.2.2.2 Electrical Requirements

The following electrical requirements must be met:

- The max. radiated output power for the antenna is 10mW e.i.r.p/channel.
- The supplied power for the charger must be 110 V to 120 V ac nominal (or 220 V to 230 V ac nominal), 50/60 Hz.

2.2.3 KIRK Handsets

2.2.3.1 Environmental Requirements

- The area where the handset is used must be within the temperature ranges of 0°C and 40°C.
- For correct battery charging, the room temperature must be between 0°C and 25°C/ 32°F and 77°F. Therefore, the handset must not be placed in direct sunlight. The battery has a built-in heat sensor which will stop charging if the battery temperature is too high.
- For battery information, refer to ["" on page 67](#).
- The area where the handset is used must be between 20% and 80% non-condensing relative humidity.

2.2.3.2 Electrical Requirements

The following electrical requirement must be met:

- The supplied power for the charger must be 110 V to 120 V ac nominal (or 220 V to 230 V ac nominal), 50/60 Hz.

2.2.4 KIRK Maintenance Software

This section describes the computer requirements to run the installation and maintenance tools of the KWS600v3.

2.2.4.1 Software Requirements

- OS: Windows 2000 (SP4), Windows XP (SP2), Windows Vista (for the web based Administration Page of the KWS600v3, OS can also be: Linux, Macintosh)
- CPU: Minimum 400MHz (2000/XP), 1GHz (Vista)
- RAM: Minimum 256 MB (2000/XP), 1 GB (Vista)
- GPU/Display: XGA (1024x768)
- Harddisk: Minimum recommended harddisk size by OS and other installed applications + 25 MB free space for the application.

Note: Depending on other applications running on the system, CPU, RAM and harddisk may vary.

Chapter 3 Deploying KIRK Wireless Server 600v3

Before you install the KWS600v3 Solution, it is necessary to perform a complete site survey and determine the exact location of KWS600v3 primaries and secondaries and number of handsets required.

A well planned installation should start with an RF coverage site survey. A site survey is designed to determine the optimal location for KWS600v3 and repeaters and the amount of wireless voice traffic to be supported by the installation (i.e., how many handsets must maintain voice conversations at the same time, in any given area).

Due to the unexpected nature of RF propagation in an indoor environment, an actual on-site test must be performed before the installation is complete. While an extensive guide to effective RF coverage planning is outside the scope of this manual, the following points should be taken into consideration when planning the site, prior to KWS600v3 and repeater installation:

- The KWS600v3/repeater provides typical RF coverage of up to 50 meters/164 feet in a typical indoor office environment and up 300 meters/984 feet in an open area (line-of-sight), extending in all directions from the KWS600v3/repeater. The exact coverage range depends on the building architecture, wall material and surroundings.
- The wireless solution can support a maximum of 1500 handsets.
- The wireless solution supports a maximum of 256 radio units (a mix of primary and secondary KWS600v3 and repeaters).
- Handset handover: handsets can move between coverage areas of primary and secondary KWS600v3 and repeaters while receiving continuous service and maintaining conversations in progress.
- For efficient handover of conversations between KWS600v3 primaries and secondaries, deploy KWS600v3 with wide **overlap** between them (i.e., plan for some areas to be covered by more than one KWS600v3). Overlaps are necessary to maintain seamless handover and to establish synchronization chains. A good example may be a cafeteria during lunch hour where temporary concentrations of handsets may occur. The overlap carries the excess call load to adjacent KWS600v3 to provide uninterrupted services to subscribers.
- Typically, installations such as office buildings, hotels and hospitals should be equipped with KWS600v3 and or repeaters on several floors to create uniform and complete RF coverage.
- Open areas can be covered with a sparse network of KWS600v3. In such applications, the KWS600v3 and or repeaters cover an extended range due to the extended line-of-sight RF propagation capability.
- Ensure that there is not a residential DECT system (home DECT) on the site.

This section provides information about:

- [“Recommendations for KWS600v3/KIRK Repeater Placement” on page 32](#)
- [“Deployment of a KIRK Wireless Server 600v3 Multi-Cell” on page 32](#)

3.1 Recommendations for KWS600v3/KIRK Repeater Placement

- In large halls, the KWS600v3/repeater (wall) should be installed vertically in the middle of the space below the drop ceiling.
- In corridors, the KWS600v3/repeater (wall) should be installed vertically preferably at corridor intersections where propagation patterns follow the corridor patterns. The KWS600v3/repeater should point towards the corridor and preferably in the middle height between the floor and the actual ceiling. In case there are high objects in the area, the KWS600v3/repeater (wall) should be installed above those objects but still kept distant from the ceiling.
- The repeater (ceiling) should be installed in the middle of corridors and small rooms.
- In multi-story buildings, KWS600v3 and or repeaters may be installed on opposite sides of the floors to take advantage of the floor-to-floor coverage. The coverage design cannot rely entirely on floor-to-floor propagation; each case must be verified due to variations in local attenuation patterns.
- If the building contains a central open space area with windows to the other areas, KWS600v3 and or repeaters may be installed in this open space to provide a good coverage for the rooms in the inner circle on all floors (e.g. hotels).
- If a KWS600v3 and or repeater (wall) hangs vertically on a wall, the RF coverage in front of the KWS600v3 and or repeaters is twice as large as the coverage at the rear.
- KWS600v3 and or repeaters should not be installed near large metallic objects.
- Reinforced concrete structures have a high attenuation factor inside the building. They decrease the RF coverage range of the KWS600v3 and or repeaters and therefore requires a higher number of KWS600v3 and or repeaters in the building. Lighter types of construction require fewer KWS600v3 since attenuation figures are considerably lower.

3.2 Deployment of a KIRK Wireless Server 600v3 Multi-Cell

Note: This section only contains deployment information specific to the KWS600v3. For more information about deployment in general, refer to the Deployment Guide accompanying the Deployment Kit. The Deployment Guide provides instructions on how to use the Deployment Kit to determine the most suitable locations for the different radio units.

3.2.1 Sync over Air

As a user moves from one KWS600v3 radio coverage area to another, the call must be handed over to the next radio unit. To create handover between radio units it is necessary to establish synchronization chains. For more information about synchronization chains, refer to [“Examples of Synchronization Chains” on page 33](#). If the synchronization between radio units is lost, then handover is not possible and ongoing calls will be terminated.

Note: Each KWS600v3 must be placed within the radio coverage area of at least one other KWS600v3 or repeater (radio units).

3.2.2 Examples of Synchronization Chains

Certain rules must be taken into consideration when establishing synchronization chains:

- The distance over which synchronization can take place is limited to a distance similar to a loss of max. 25 dB. If the loss of signal is higher than 25 dB, there is no guarantee that synchronization is stable. (Use the deployment handset to measure dB).

Note: It is recommended that a KWS600v3 synchronizes with at least two other radio units and that an alternative sync way is defined to ensure system redundancy. If the primary sync way is not working, the alternative sync way takes over and the synchronization chain is not broken.

Note: Synchronization chains for the KWS600v3 Solution can be made with Primary and Secondary KWS600v3 and repeaters.

Note: As you can only configure a repeater to synchronize on one radio ID, it is not possible to define alternative sync ways for repeaters.

As the KWS600v3 uses the DECT interface to synchronize on, one KWS600v3 is configured as the Sync Master.

This section provides information about:

- [“Synchronization Chain With One Sync Master \(Primary Sync Ways\)”](#) on page 34
- [“Synchronization Chain With Alternative Sync Ways”](#) on page 35
- [“Synchronization Chain With and Without Alternative Sync Ways”](#) on page 38

3.2.2.1 Synchronization Chain With One Sync Master (Primary Sync Ways)

Figure 1 Synchronization Chain

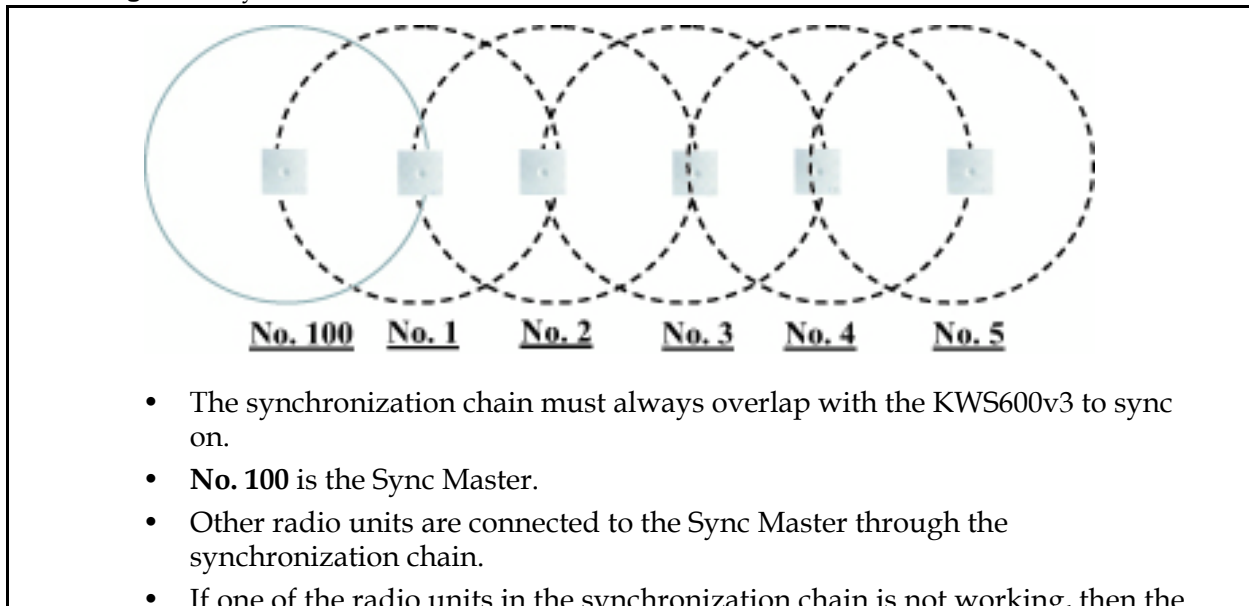
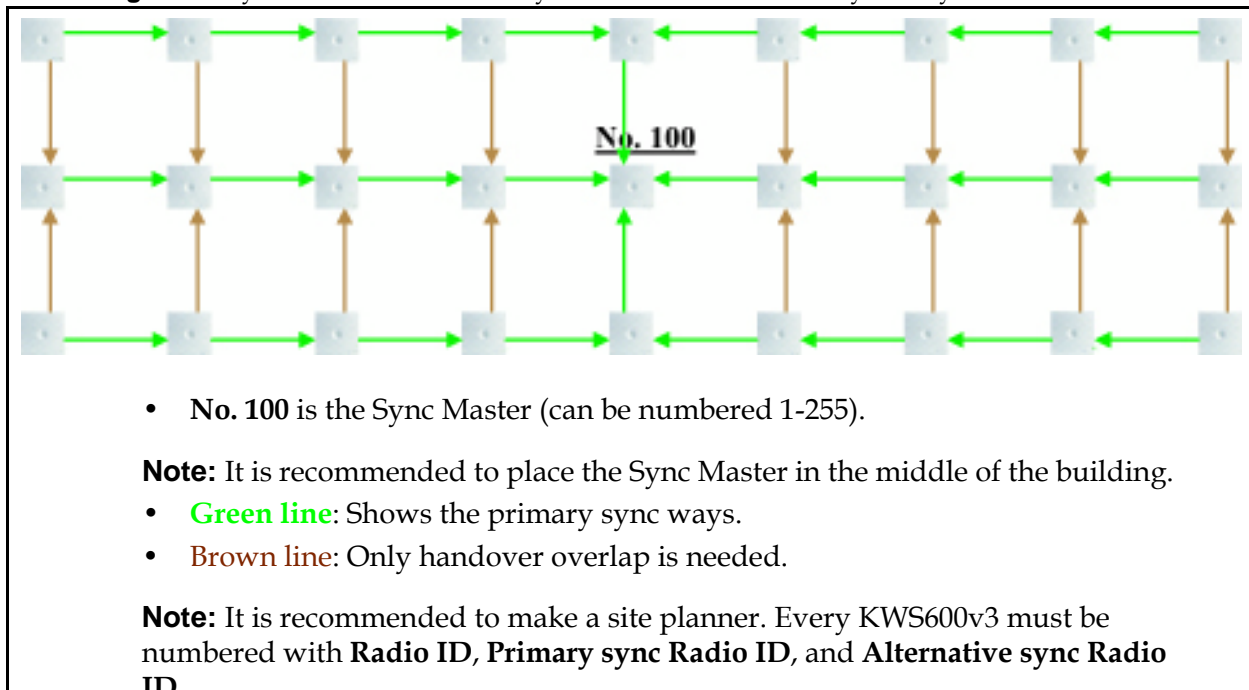
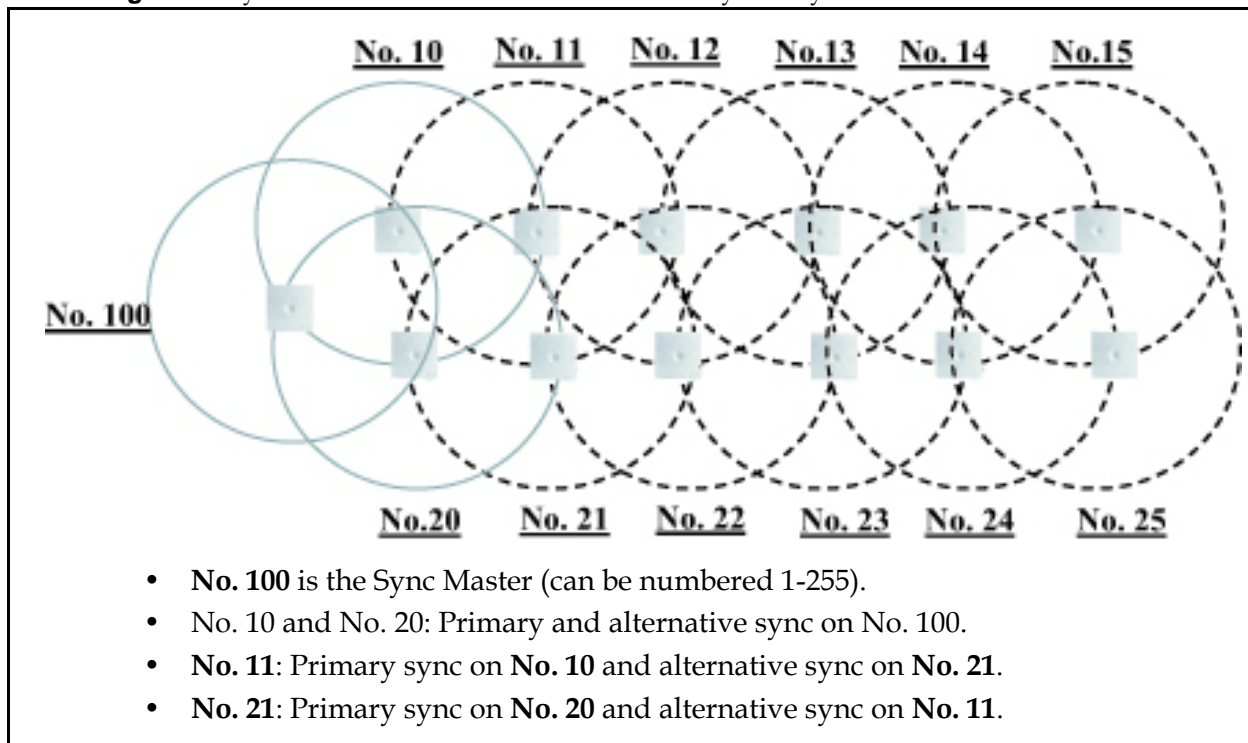


Figure 2 Synchronization Chain Layout without Alternative Sync Ways



3.2.2.2 Synchronization Chain With Alternative Sync Ways

Figure 3 Synchronization Chain with Alternative Sync Ways



In the example below ([Figure 4 on page 36](#)), KWS600v3 **No. 10** is down. As a consequence, KWS600v3 **No. 11** must use the alternative sync way on **No. 21**.

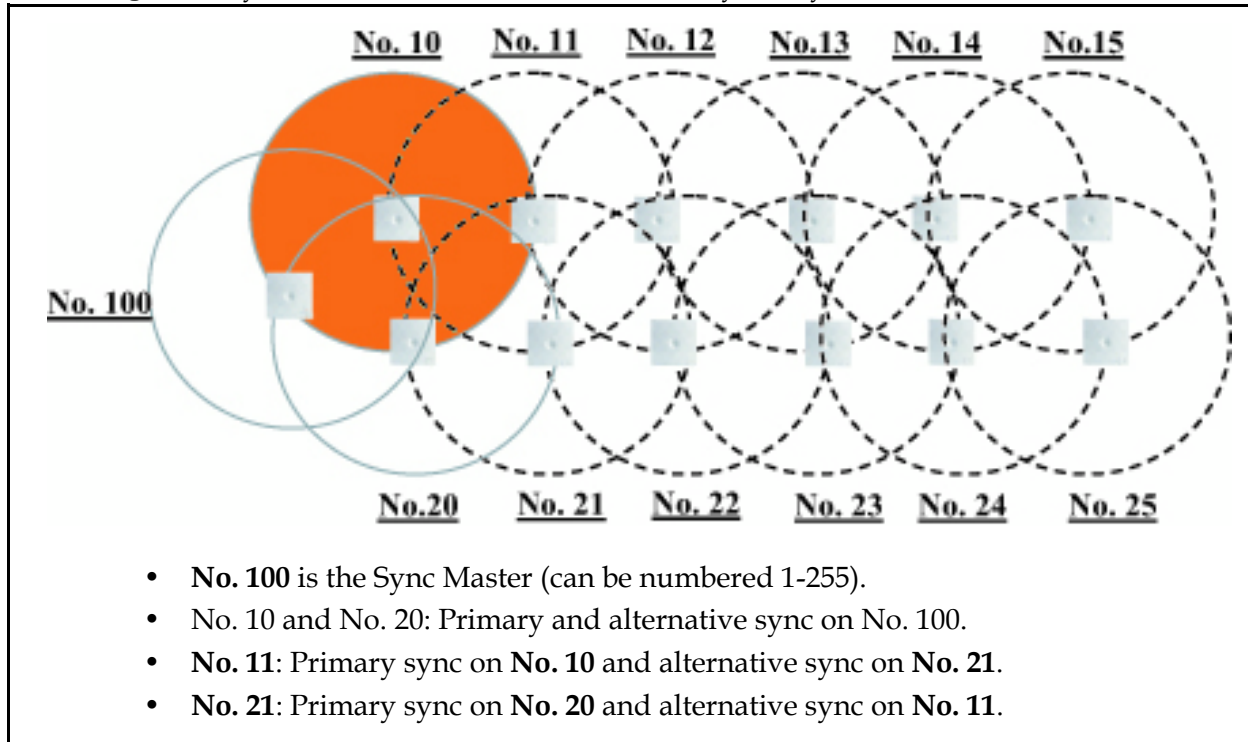
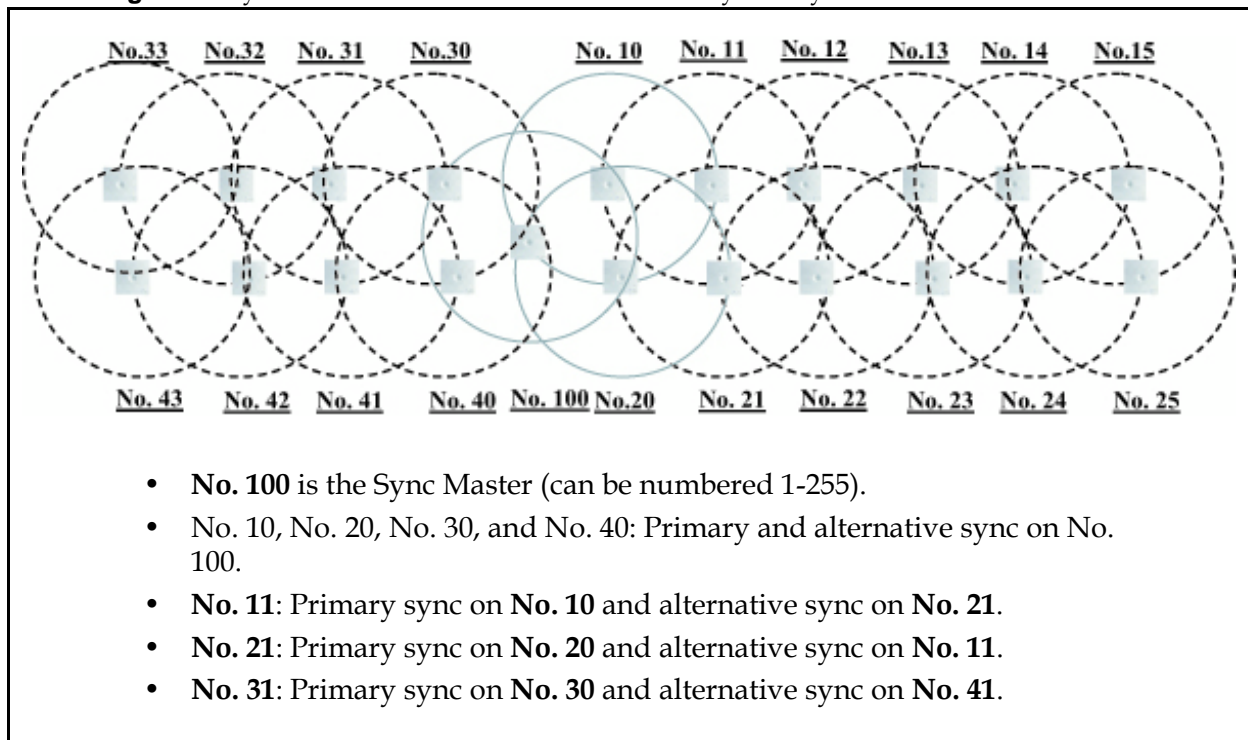
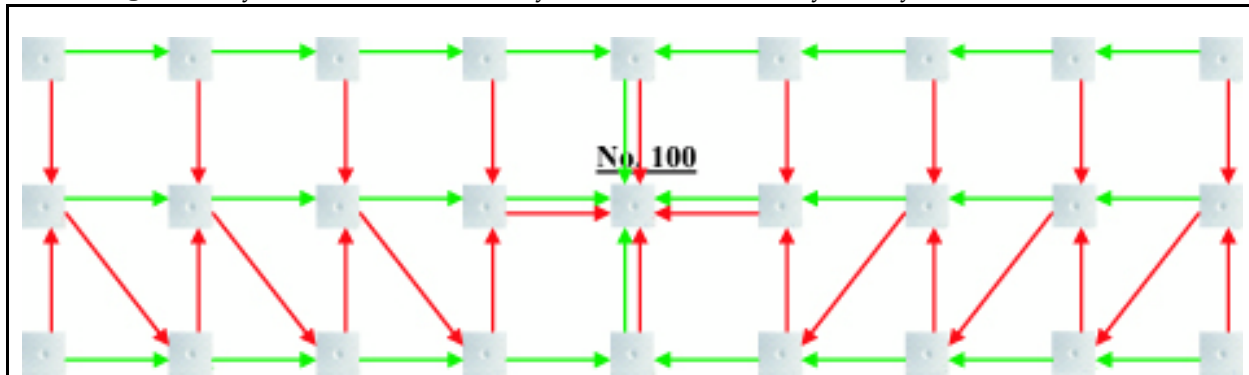
Figure 4 Synchronization Chain with Alternative Sync Ways**Figure 5** Synchronization Chain with Alternative Sync Ways

Figure 6 Synchronization Chain Layout with Alternative Sync Ways

- **No. 100** is the Sync Master (can be numbered 1-255).

Note: It is recommended to place the Sync Master in the middle of the building.

- **Green line:** Shows the primary sync ways.
- **Red line:** Shows the alternative sync ways.

Note: It is recommended to make a site planner. Every KWS600v3 must be numbered with **Radio ID**, **Primary sync Radio ID**, and **Alternative sync Radio**

3.2.2.3 Synchronization Chain With and Without Alternative Sync Ways

Figure 7 Synchronization Chain With and Without Alternative Sync Ways

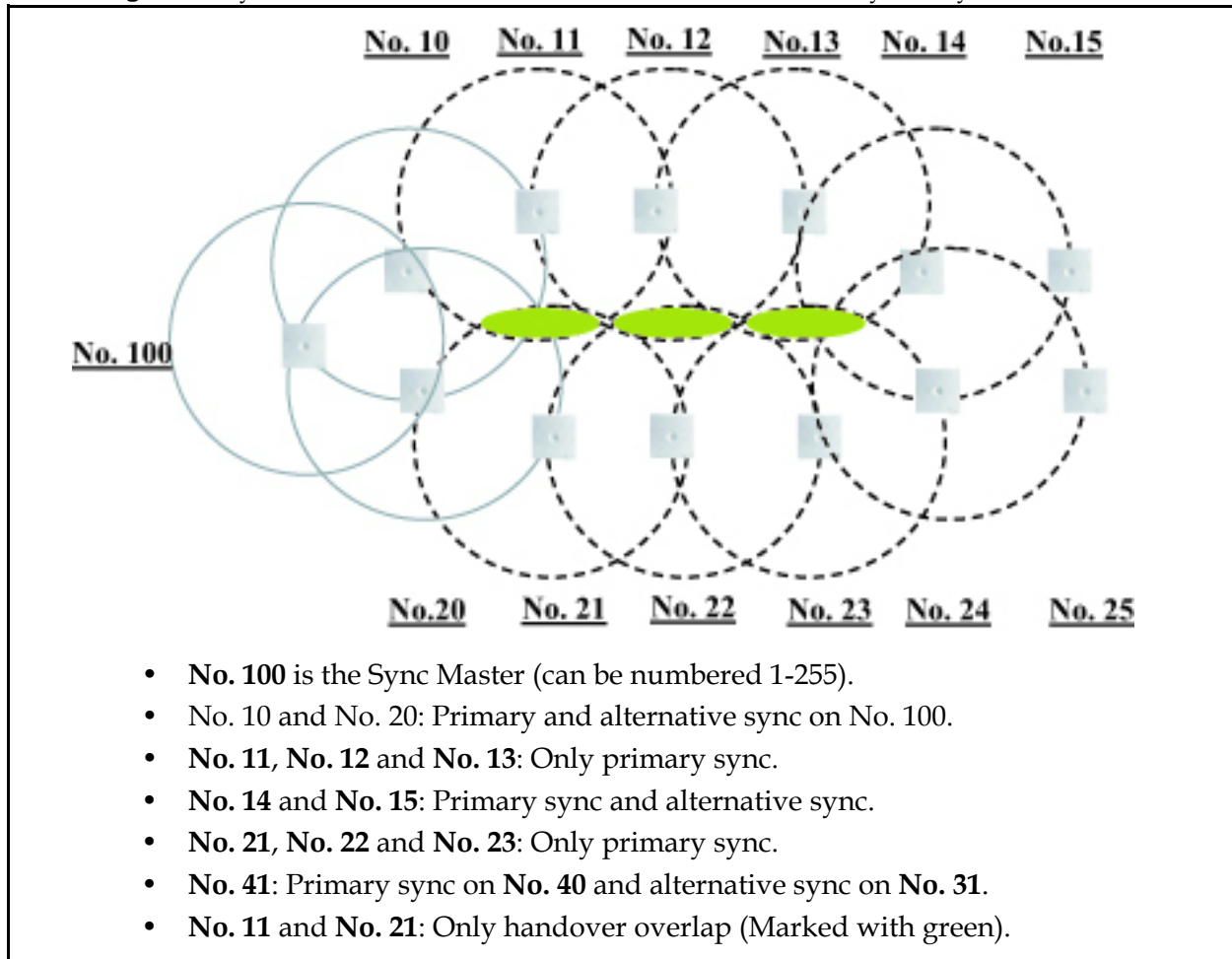
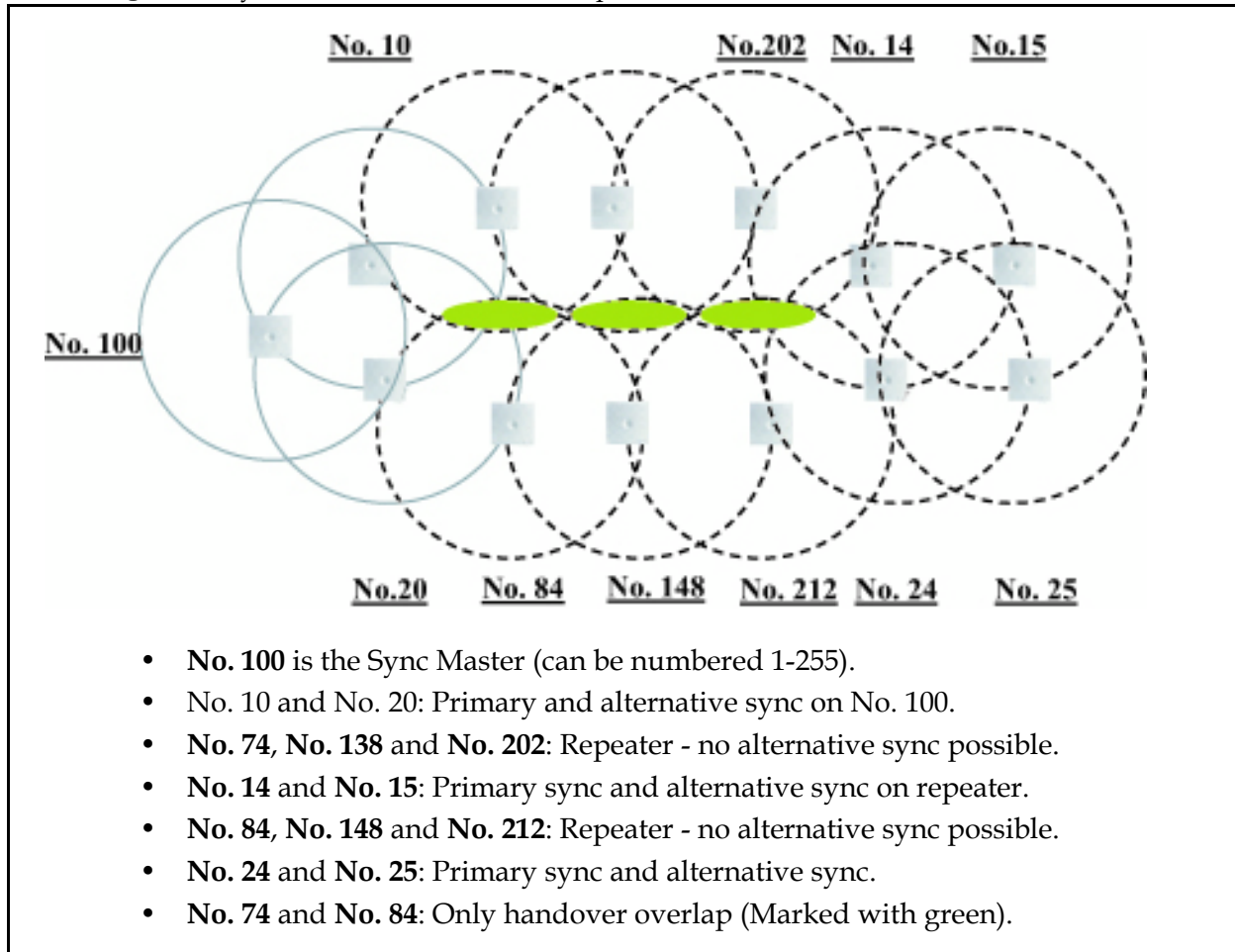


Figure 8 Synchronization Chain With Repeaters

Chapter 4 Installing the KIRK Wireless Server 600v3

This section provides a description of the KWS600v3 and describes how to unpack and install it. The section also provides information about resetting the KWS600v3 hardware using the Reset button on the KWS600v3 faceplate.

Before you install the equipment, ensure that a site planner defines the locations of the KWS600v3.

This section contains the following information:

- [“Unpacking” on page 41](#)
- [Description of KIRK Wireless Server 600v3 on page 41](#)
- [“Installing the KIRK Wireless Server 600v3” on page 46](#)
- [“Recording the Installation Information” on page 48](#)

4.1 Unpacking

4.1.1 Inspect for Damage

- 1 Inspect the shipping carton for evidence of physical damage or mishandling prior to opening.
- 2 Inspect all parts for damage.
- 3 Report any damage to the carrier immediately.
- 4 If it is necessary to make a damage claim for the carrier, do not move the shipping carton until it has been examined by a representative of the carrier.
- 5 Dispose of empty cartons in accordance with local regulations.

4.1.2 Unpacking the Shipping Container

For indoor installations, the following items should be present in every box containing a KWS600v3:

- KIRK Wireless Server 600v3
- Two mounting screws and anchors

4.2 Description of KIRK Wireless Server 600v3

This section contains information about:

- [“KIRK Wireless Server 600v3 Provides RF Channels to KIRK Handsets” on page 42](#)
- [“KIRK Wireless Server 600v3 Types and Part Numbers” on page 42](#)
- [“KIRK Wireless Server 600v3 Appearance and Components” on page 42](#)

- “KIRK Wireless Server 600v3 LED Indicators” on page 44
- “KIRK Wireless Server 600v3 - Reset Button” on page 45

4.2.1 KIRK Wireless Server 600v3 Provides RF Channels to KIRK Handsets

The KWS600v3 supports 12 RF channels simultaneously for DECT or USA DECT bands.

The RF communication is provided according to the band standard at the site:

- KWS600v3 provides 12 RF channels of 1.88 GHz, DECT standard, used in Europe, Australia and South America.
- KWS600v3 provides 12 RF channels of the 1.9 GHz, USA DECT standard, used in North America.

4.2.2 KIRK Wireless Server 600v3 Types and Part Numbers

The KWS600v3 contains RF circuitry that comply with the local band standards: ETSI DECT and USA DECT 6.0. The table below includes a list of available KWS600v3 and their part numbers.

Table 1 KIRK Wireless Server 600v3 Part Numbers

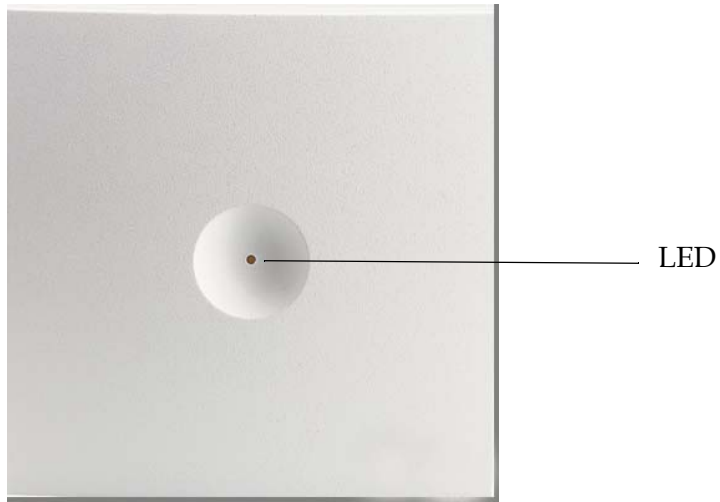
Variants of KIRK Wireless Server 600v3	Part Number
KIRK Wireless Server 600v3 1.8 GHz (conforms with standard DECT markets) <ul style="list-style-type: none"> • with Skinny Protocol • with H.323 Protocol • with SIP Protocol For more information about SIP variants go to the support page of the KWS600v3 at www.polycom.com	02363300 02363301 02363301
KIRK Wireless Server 600v3 1.9 GHz (for North America) <ul style="list-style-type: none"> • with H.323 Protocol • with SIP Protocol KIRK Wireless Server 600v3 1.9 GHz bundles (for North America) <ul style="list-style-type: none"> • starter bundle - 4020 handset • starter bundle - 4040 handset • starter bundle - 5020 handset 	02338501 02338501 02363500 02363501 02363502

4.2.3 KIRK Wireless Server 600v3 Appearance and Components

The KWS600v3 front cover includes the following:

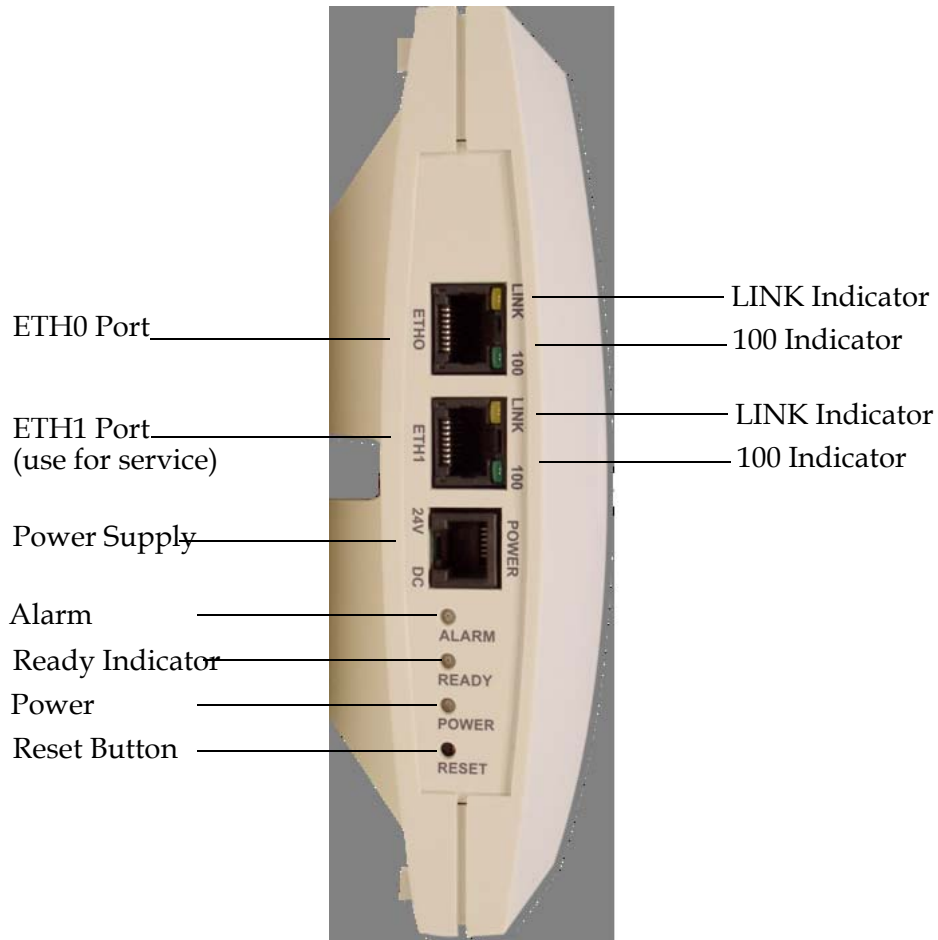
- LED that indicates whether or not the unit is functioning

Figure 9 Wireless Server 600v3 - Front view



The KWS600v3 faceplate includes the following (see figure below).

Figure 10 Wireless Server 600v3 - Faceplate



For information about the Reset button, refer to [“Resetting the KIRK Wireless Server 600v3 Hardware”](#) on page 45.

4.2.4 KIRK Wireless Server 600v3 LED Indicators

4.2.4.1 Front Cover

The KWS600v3 front cover has one indicator describing the KWS600v3 faults and failures. The indicator is off when the KWS600v3 is not powered. The LED flashes when the KWS600v3 initializes. The indicator is on when the KWS600v3 is operating.

Table 2 LED Indicator Description - Front Cover

LED Indicator	Meaning
Steady green	ready for use

Table 2 LED Indicator Description - Front Cover

Fast green flashing (light appears orange because of the steady red)	empty system
Slow green flashing (light appears orange because of the steady red)	in operation with one or more active connections
Slow red flashing	in operation with the maximum active connections (busy)
Fast red flashing	Out of sync.

4.2.4.2 Faceplate

LED Indicator Description - Faceplate

LED Indicator	Meaning
LINK Indicator - yellow	link layer software has established connection
100 Indicator - green	line speed is 100Mbit/sec.
Alarm Indicator - red	KWS600v3 software is in error mode
Ready Indicator - green	KWS600v3 software is up running in normal mode
Power Indicator - yellow	KWS600v3 is connected to Power

4.2.5 KIRK Wireless Server 600v3 - Reset Button

It is possible to restart or reset the KWS600v3 by pressing the Reset button on the faceplate of the KWS600v3. For description of the faceplate, refer to [“Faceplate” on page 45](#).

4.2.5.1 Resetting the KIRK Wireless Server 600v3 Hardware

This section contains description of the different actions that take place when pressing the Reset button.

Table 3 Reset Button Description

Press button	Action
Short press	Restarts the KWS600v3.
Press until LED flashes fast	Restarts the KWS600v3 in TFTP mode (Trivial File Transfer Protocol). In TFTP mode the KWS600v3 can be reached only through the GWLOAD program. For more information about using the GWLOAD program, refer to “Using the GWLOAD Program” on page 202 .
Press for a longer period	<p>Performs a system reset and configuration preset. The Alarm Indicator and Ready Indicator indicate that you are about to perform a system reset including a configuration preset within a couple of seconds if the reset button is not released.</p> <p>All system settings will be erased and the system returns to its default settings. The actual software will not be affected.</p> <p>Note: After a system reset you must perform at short press on the Reset button again, to prevent the system to start up in DHCP client mode.</p>

Note: When resetting the Master KWS600v3/LDAP Server, you cannot set up calls until handsets are registered on the call handler again.

4.3 Installing the KIRK Wireless Server 600v3

The KWS600v3 is suitable for mounting indoors on a wall.

A KWS600v3 covers a circular area between 50 and 300 meters/164 and 984 feet, depending on the environment.

Note: Before beginning the installation, it is important to determine the location of the KWS600v3 for the best coverage. The radio coverage depends on the construction of the building, architecture and choice of building materials. Refer to [Environmental Requirements](#) on page 26 for more information about environmental requirements for KWS600v3.

Note: Avoid installing KWS600v3 on large concrete or marble columns because these columns affect radio coverage. If possible, place the KWS600v3 a minimum of 1.0 meter/ 3.3 feet from these types of columns. Do not install a KWS600v3 with the antenna housings near metal objects. Be careful not to damage existing wiring or panels.

Note: Do not position KWS600v3 in ducts, plenums, or hollow spaces used to transport environmental air except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels.

Note: To expand a coverage area with KWS600v3, additional radio units must be placed in such a way that overlap between the different KWS600v3 radio coverage is established. It is recommended that the overlap is at least 10 to 15 meters/32.8 to 49.2 feet.

Note: Do not paint the KWS600v3 as paint contains material which can cause decreased radio coverage.

4.3.1 KIRK Wireless Server 600v3 Indoor Wall Mounting

For best RF coverage, the KWS600v3 must be mounted vertically on walls.

Caution: The KWS600v3 must not be installed at any angle other than vertical. If the KWS600v3 is placed upside-down, the coverage area of the KWS600v3 is decreased by 40 - 50% and it might not transmit or receive effectively.

Caution: Do not mount the KWS600v3 on soft surfaced walls such as those covered with canvas or sponge-like materials.

To install the KWS600v3 indoors:

- 1 Mount the KWS600v3 on the wall, using the anchors and screws provided.

Note: When you place the KWS600v3 on the screws, ensure that the screws do not touch the printed circuit board.

Figure 11 Wireless Server 600v3 Wall Mounting



- 2 Connect the wire into the RJ45 plug on the KWS600v3.

4.4 Recording the Installation Information

After completing the installation of a KWS600v3 Multi-cell Solution, record the location of each KWS600v3.

Chapter 5 Installing the KIRK Repeater

This section provides information about the repeater and how to unpack and install it. Installing repeaters requires a software installation as well as a hardware installation.

Before you install the equipment, ensure that a site planner defines the location of the repeaters.

This section includes information about:

- [KIRK Repeater Description](#) on page 49
- [Installing the KIRK Repeater](#) on page 51
- [Recording the Installation Information](#) on page 54
- [Checking Indicators](#) on page 54
- [Powering the KIRK Repeater](#) on page 54
- [Programming a KIRK Repeater with the KIRK Programming Kit](#) on page 54

5.1 KIRK Repeater Description

This section contains information about:

- [KIRK Repeater provides RF Channels to KIRK Handsets](#) on page 49
- [KIRK Repeater Types and Part Numbers](#) on page 50
- [KIRK Repeater - Appearance and Components](#) on page 51
- [KIRK Repeater LED Indicators](#) on page 51

5.1.1 KIRK Repeater provides RF Channels to KIRK Handsets

The KIRK Repeater is a building block to be used to extend the coverage area in a KIRK solution. The repeater does not increase the number of traffic channels, however it provides a larger physical spreading of the traffic channels and thereby increases the coverage area established with the KIRK Base Stations. The repeaters are mainly used in areas with limited traffic. The KIRK Repeater is available with either 2 or 4 voice channels. It is wireless and does not need physical connection to the KIRK Wireless Server, making it very easy to install. The repeaters can be supplied with an external antenna making it possible to create radio coverage in a remote area without cabling to the rest of the installation.

Note

The repeater is also termed by some manufacturers as the WRFP (Wireless Radio Fixed Part).

The RF communication is provided according to the band standard at the site:

- Repeater - DECT provides four RF channels of 1.88 GHz, DECT standard, used in Europe, Australia and South America.

- Repeater - USA DECT provides four RF channels of 1.9 GHz, USA DECT standard, used in North America.

5.1.2 KIRK Repeater Types and Part Numbers

The repeater contains RF circuitry that comply with the local band standards: UPCS, DECT, or ETSI DECT. The wall mounted repeater and the ceiling mounted repeater is available as a full slot repeater. A full slot repeater covers four simultaneous speech channels. These channels are borrowed from the attached base station, and are not additional channels to the total number of channels on the system.

The table below includes a list of available repeaters and their part numbers.

Table 5-1 KIRK Repeater - Wall - Part Number

Variants of KIRK Repeaters	Part Number
KIRK Repeater 1.8 GHz, 2 channels (Supported on KWS300, KWS500, KWS600 and KWS600v3 single cell).	0244 0300
KIRK Repeater Residential 1.8 GHz, 4 channels (Supported on KWS300, KWS500, KWS600 and KWS600v3 single cell).	0233 4600
KIRK Repeater Business 1.8 GHz, 4 channels (Supported on KWS300, KWS500, KWS600, KWS600v3 single and multi cell, KWS1500, KWS3000 and KWS6000).	0233 4601
KIRK Repeater Business 1.9 GHz, 4 channels (Supported on KWS300, KWS500, KWS600, KWS600v3 single and multi cell, KWS1500, KWS3000 and KWS6000).	0233 8200
KIRK Repeater with external antenna 1.8 GHz, 2 channels (Supported on KWS300, KWS500, KWS600, KWS600v3 single and multi cell, KWS1500, KWS3000 and KWS6000).	0244 0000
KIRK Repeater with external antenna 1.8 GHz, 4 channels (Supported on KWS300, KWS500, KWS600, KWS600v3 single and multi cell, KWS1500, KWS3000 and KWS6000).	0244 1600
KIRK Repeater with external antenna 1.9 GHz, 4 channels (Supported on KWS300, KWS500, KWS600, KWS600v3 single and multi cell, KWS1500, KWS3000 and KWS6000).	0244 0200

5.1.3 KIRK Repeater - Appearance and Components

The repeater connection panel includes the following:

- Power supply connection (connection for programming the repeater as well).

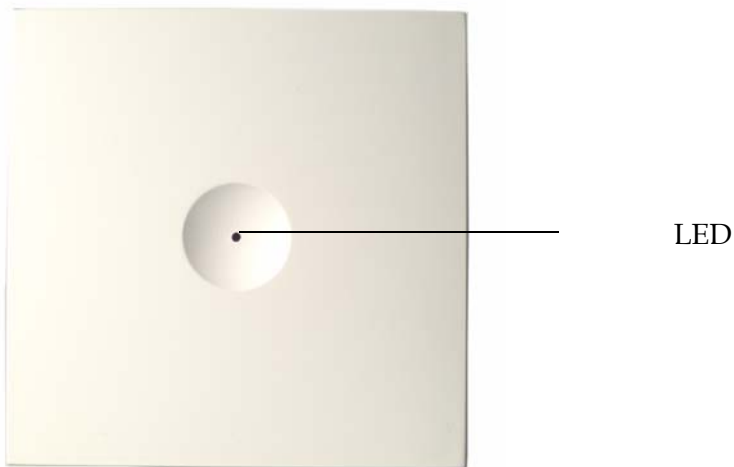
Note: The power supply for the repeater is to be ordered separately (Part no. UK version: 84642421, Part no. EU version: 84642420, Part no. US version: 84642432).

- Antenna connector for repeaters supplied with external antenna connection.

Note: The external antenna incl. antenna cable is to be ordered separately (part no. 02319505).

- LED that indicates whether or not the unit is functioning.

Figure 5-1 Repeater



5.1.4 KIRK Repeater LED Indicators

The repeater has one LED indicator describing the repeater operations. The indicator is off when the repeater is not powered. The LED flashes when the repeater initializes, and it is on when the repeater is in sync. The LED flashes each time a connected handset is off or on hook or makes handover from or to a repeater.

5.1.5 Installing the KIRK Repeater

Before beginning the installation, determine the position of the repeater for best coverage. The coverage depends on the construction of the building, architecture, and the choice of building materials.

5.1.5.1 Environmental requirements

- Avoid installing repeaters on large concrete or marble columns because these columns affect radio coverage. If possible, place the base station a minimum of one meter/3.3 feet from these types of columns.

- Do not install a repeater with the antenna housings near metal objects. Be careful not to damage existing wiring or panels.
- Do not position repeaters in ducts, plenums or hollow spaces used to transport environmental air except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels.
- Keep the repeater away from steel constructions.
- Do not position repeaters directly on metallic surfaces. If possible, place the base station a minimum of one meter/3.3 feet from these types of surfaces.
- Do not position repeaters behind furniture.
- Only position repeaters where the signal is needed.
- The installation area must be clean, free of traffic and excess dust, dry, and well ventilated.
- The installation area must be within the temperature ranges of 10°C and 40°C/50°F and 104°F.
- The installation area must be between 20% and 80% non-condensing relative humidity.

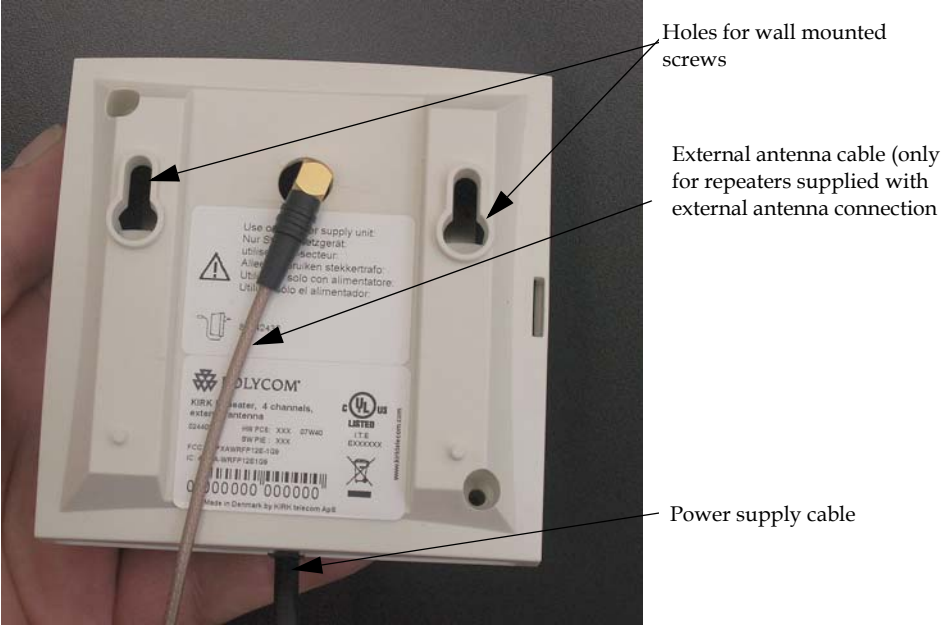
Note The repeater does not add channels, it only adds additional coverage area.

Note The repeater can be registered on the system 1) when placed within the coverage area of a base station 2) when placed within the coverage area of an already-installed repeater or 3) when placed outside the coverage area using an external antenna.

For best RF coverage, the repeater must be mounted vertically on walls. The antennas must always be kept perpendicular to the floor.

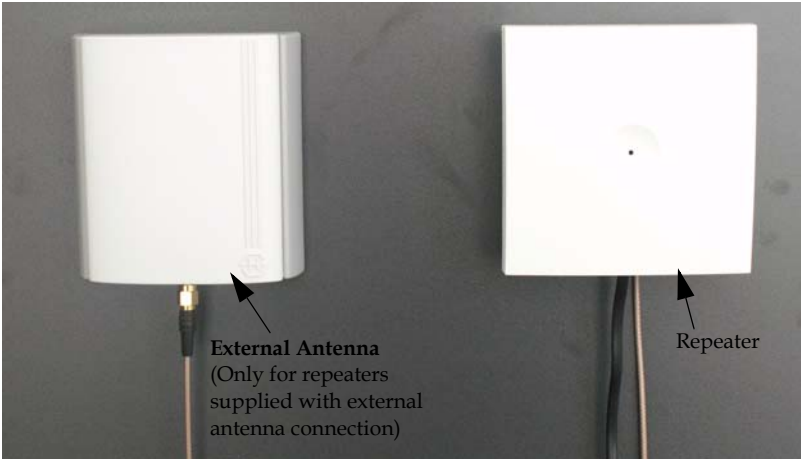
Caution The repeater must not be installed at any angle other than vertical. If the repeater is placed upside-down, the coverage area of the repeater is decreased by 40 - 50% and it might not transmit or receive effectively.

Figure 5-2 Connect Power to the Bottom of the Repeater and External Antenna Cable to the Rear of the Repeater



- 1 Connect the power supply cable into the RJ11 connector in the bottom of the repeater. For repeaters with external antenna, connect the external antenna cable to the antenna connector in the rear of the repeater as well.
- 2 Mount the repeater onto the wall using the screws accompanying the repeater.

Figure 5-3 Repeater and External Antenna Installed on the Wall



Note: The external antenna used for the transmitter is to be fixed-mounted on indoor permanent structures providing a separation distance of at least 20 cm / 8 inches from all persons during normal operation and must not be co-located or operating in conjunction with any other antenna or transmitter. The maximum radiated output power is 1W e.i.r.p. For more information and technical support, please refer to www.polycom.com.

Recording the Installation Information

After completing the installation of the repeaters, record the location of each repeater.

5.2 Checking Indicators

Verify that the repeater LED indicator is continuously on, indicating that the repeater is functional.

5.3 Powering the KIRK Repeater

5.3.1 Power Options

The power supply for the repeater is 9VDC, 300mA.

5.4 Programming a KIRK Repeater with the KIRK Programming Kit

This section provides information about:

- [Content of the KIRK Programming Kit Repeater](#) on page 54
- [Set up of the Hardware for Repeater Programming](#) on page 55
- [Programming the KIRK Repeater with the ServiceTool](#) on page 55

5.4.1 Content of the KIRK Programming Kit Repeater

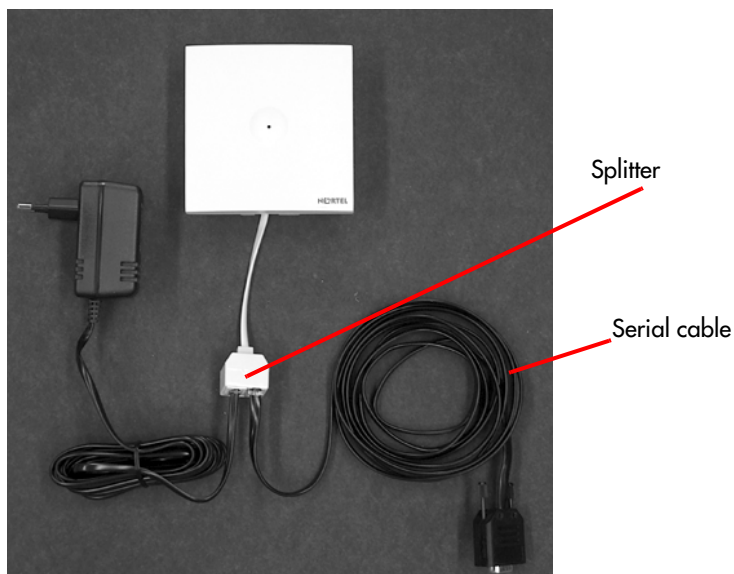
The Programming Kit Repeater (Part no. 02319508) consists of:

- splitter
- serial cable

Note

For programming the repeater you also need the programming software (ServiceTool) and the power supply for the repeater. The ServiceTool is not part of the Programming Kit Repeater but can be downloaded from www.polycom.com. The power supply for the repeater is to be ordered separately (Part no. UK version: 84642421, Part no. EU version: 84642420, Part no. US version: 84642432).

Figure 5-4 Programming Kit Repeater



5.4.2 Set up of the Hardware for Repeater Programming

- 1 Unplug the repeater power supply and insert the splitter.
- 2 Connect the repeater power supply to the splitter and the mains. LED flashes.

Note: Ensure that you have the appropriate power supply for the local requirements.

- 3 Connect the serial cable to the splitter and Com port of your computer. The repeater is now ready for programming via the ServiceTool.

Note: The above mentioned order of the set up (point 1, 2 and 3) is important.

5.4.3 Programming the KIRK Repeater with the ServiceTool

The ServiceTool is the tool you access from your desktop and use for repeater programming, handset adjustment and software download to the handset and repeater.

The ServiceTool identifies the type of repeater, and with this software it is possible to program the KIRK Repeater to connect to the KIRK DECT Radio Infrastructure solutions.

Before you start programming the repeater, ensure that the repeater is connected to the computer and the mains.

In a single cell solution the numbers assigned to the repeaters must be between 2 and 7. The number of the base station is default set to 1.

In a multi cell solution, the numbering of the base stations and repeaters has to follow the numbering in the table below.

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
0	64	128	192
1	65	129	193
2	66	130	194
3	67	131	195
4	68	132	196
5	69	133	197
6	70	134	198
7	71	135	199
8	72	136	200
9	73	137	201
10	74	138	202
11	75	139	203
12	76	140	204
13	77	141	205
14	78	142	206
15	79	143	207
16	80	144	208
17	81	145	209
18	82	146	210
19	83	147	211
20	84	148	212
21	85	149	213
22	86	150	214
23	87	151	215
24	88	152	216
25	89	153	217
26	90	154	218
27	91	155	219
28	92	156	220
29	93	157	221

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
30	94	158	222
31	95	159	223
32	96	160	224
33	97	161	225
34	98	162	226
35	99	163	227
36	100	164	228
37	101	165	229
38	102	166	230
39	103	167	231
40	104	168	232
41	105	169	233
42	106	170	234
43	107	171	235
44	108	172	236
45	109	173	237
46	110	174	238
47	111	175	239
48	112	176	240
49	113	177	241
50	114	178	242
51	115	179	243
52	116	180	244
53	117	181	245
54	118	182	246
55	119	183	247
56	120	184	248
57	121	185	249
58	122	186	250
59	123	187	251
60	124	188	252
61	125	189	253
62	126	190	254
63	127	191	255
64	128	192	0
65	129	193	1
66	130	194	2

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
67	131	195	3
68	132	196	4
69	133	197	5
70	134	198	6
71	135	199	7
72	136	200	8
73	137	201	9
74	138	202	10
75	139	203	11
76	140	204	12
77	141	205	13
78	142	206	14
79	143	207	15
80	144	208	16
81	145	209	17
82	146	210	18
83	147	211	19
84	148	212	20
85	149	213	21
86	150	214	22
87	151	215	23
88	152	216	24
89	153	217	25
90	154	218	26
91	155	219	27
92	156	220	28
93	157	221	29
94	158	222	30
95	159	223	31
96	160	224	32
97	161	225	33
98	162	226	34
99	163	227	35
100	164	228	36
101	165	229	37
102	166	230	38
103	167	231	39

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
104	168	232	40
105	169	233	41
106	170	234	42
107	171	235	43
108	172	236	44
109	173	237	45
110	174	238	46
111	175	239	47
112	176	240	48
113	177	241	49
114	178	242	50
115	179	243	51
116	180	244	52
117	181	245	53
118	182	246	54
119	183	247	55
120	184	248	56
121	185	249	57
122	186	250	58
123	187	251	59
124	188	252	60
125	189	253	61
126	190	254	62
127	191	255	63
128	192	0	64
129	193	1	65
130	194	2	66
131	195	3	67
132	196	4	68
133	197	5	69
134	198	6	70
135	199	7	71
136	200	8	72
137	201	9	73
138	202	10	74
139	203	11	75
140	204	12	76

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
141	205	13	77
142	206	14	78
143	207	15	79
144	208	16	80
145	209	17	81
146	210	18	82
147	211	19	83
148	212	20	84
149	213	21	85
150	214	22	86
151	215	23	87
152	216	24	88
153	217	25	89
154	218	26	90
155	219	27	91
156	220	28	92
157	221	29	93
158	222	30	94
159	223	31	95
160	224	32	96
161	225	33	97
162	226	34	98
163	227	35	99
164	228	36	100
165	229	37	101
166	230	38	102
167	231	39	103
168	232	40	104
169	233	41	105
170	234	42	106
171	235	43	107
172	236	44	108
173	237	45	109
174	238	46	110
175	239	47	111
176	240	48	112
177	241	49	113

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
178	242	50	114
179	243	51	115
180	244	52	116
181	245	53	117
182	246	54	118
183	247	55	119
184	248	56	120
185	249	57	121
186	250	58	122
187	251	59	123
188	252	60	124
189	253	61	125
190	254	62	126
191	255	63	127
192	0	64	128
193	1	65	129
194	2	66	130
195	3	67	131
196	4	68	132
197	5	69	133
198	6	70	134
199	7	71	135
200	8	72	136
201	9	73	137
202	10	74	138
203	11	75	139
204	12	76	140
205	13	77	141
206	14	78	142
207	15	79	143
208	16	80	144
209	17	81	145
210	18	82	146
211	19	83	147
212	20	84	148
213	21	85	149
214	22	86	150

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
215	23	87	151
216	24	88	152
217	25	89	153
218	26	90	154
219	27	91	155
220	28	92	156
221	29	93	157
222	30	94	158
223	31	95	159
224	32	96	160
225	33	97	161
226	34	98	162
227	35	99	163
228	36	100	164
229	37	101	165
230	38	102	166
231	39	103	167
232	40	104	168
233	41	105	169
234	42	106	170
235	43	107	171
236	44	108	172
237	45	109	173
238	46	110	174
239	47	111	175
240	48	112	176
241	49	113	177
242	50	114	178
243	51	115	179
244	52	116	180
245	53	117	181
246	54	118	182
247	55	119	183
248	56	120	184
249	57	121	185
250	58	122	186
251	59	123	187

Table 5-2 Repeater Numbering in a Multi Cell Solution

Base Station	Repeater 1	Repeater 2	Repeater 3
252	60	124	188
253	61	125	189
254	62	126	190
255	63	127	191

Note

Repeater and base station numbers must not be the same. Neither can the repeater have a number similar to another base station or another repeater in a situation where common overlap is present between the actual units (Numbers with red colour show where numbering could be identical between different units). If this occurs, handover between the different units is not possible.

Table 5-3 Example of a Normal Base Station/Repeater Configuration

Numbering of base stations and repeaters in a normal configuration	
First repeater	No. of base station + 64 Base to synchronize on: Number of base station
Second repeater	No. of base station + 128 Base to synchronize on: Number of base station
Third repeater	No. of base station + 192 Base to synchronize on: Number of base station

Table 5-4 Example of Repeater Jump Configuration

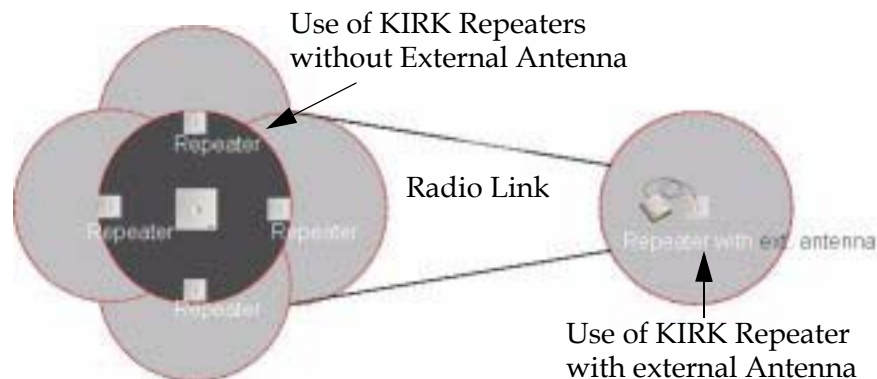
Numbering of repeaters in a repeater jump configuration	
First repeater in chain	No. of base station + 64 Base to synchronize on: Number of base station
Second repeater in chain	No. of base station + 128 Base to synchronize on: Number of previous repeater
Third repeater in chain	No. of base station + 192 Base to synchronize on: Number of previous repeater

For more information about programming the repeater with the ServiceTool, refer to the Help File in the ServiceTool. The ServiceTool is to be downloaded from www.polycom.com.

5.5 Use of KIRK Repeater With External Antenna

If radio coverage between a base station and a repeater is not needed, it is possible to synchronize between the radio units using a repeater with external antenna.

Figure 5-5 Use of Repeaters



The distance from the repeaters without external antenna to the base station must correspond to a RSSI loss of maximum 25dB.

Be aware that inside the area named "radio link" there is no radio coverage, and therefore a wireless handset cannot be used in this area.

The distance between the base station and the repeater with external antenna depends on the type of antenna used as well as on the signal attenuation created by surroundings such as buildings, trees, etc.

5.5.1 Synchronization Ways

The repeater with external antenna, 4 channels, can be programmed to obtain synchronization on two radio units (base station, wireless server or repeater).

If a situation occurs where the primary sync for some reason breaks down, the repeater will obtain sync on the alternative sync.

Be aware that the primary sync has priority; the alternative sync is only in use as long as the primary sync is down.

Chapter 6 Preparing KIRK Handset for Use

This section provides information about how to prepare the handset for use, to install and charge the battery and how to retrieve the serial numbers on the different handsets.

This section includes information about:

- [Unpacking](#) on page 65
- [KIRK Handset Description](#) on page 65
- [""](#) on page 67
- [Charging KIRK Handsets](#) on page 70
- [Retrieving the Serial Number of the KIRK Handset](#) on page 73

Note: For more information on the different handsets, refer to the handset user guides.

6.1 Unpacking

6.1.1 Inspect for Damage

- 1 Inspect the shipping carton for evidence of physical damage or mishandling prior to opening.
- 2 Inspect all parts for damage.
- 3 Report any damage to the carrier immediately.
- 4 If it is necessary to make a damage claim for the carrier, do not move the shipping carton until it has been examined by a representative of the carrier.
- 5 Dispose of empty cartons in accord with local regulations.

6.1.2 Unpacking the Shipping Container

The following items should be present in the box containing the handset:

- Handset

Note: The charger and the power supply for the charger are to be ordered separately (refer to [on page 66](#) and ["Variants of KIRK Chargers" on page 66](#) for information on part numbers.

6.2 KIRK Handset Description

The handset is a lightweight, ergonomically designed wireless unit that includes and LCD display and keyboard.

6.2.1 KIRK Handset Types

Table 1 Variants of KIRK Handsets

Variants of KIRK Handsets
Handset sets from one of the following categories (including batteries):
KIRK 3040 Handset
KIRK 4020 Handset
KIRK 4040 Handset
KIRK 4080 Handset
KIRK 5020 Handset
KIRK 5040 Handset

6.2.2 KIRK Charger Types and Part Numbers

Table 2 Variants of KIRK Chargers

Variants of KIRK Chargers
KIRK Single Charger (For KIRK 3040) (Part no. 02332419) (EU, UK) (Part no. 84642446) (US)
KIRK Single Charger (For KIRK 4020 and KIRK 4040) (Part no. 84642450) (EU, UK) (Part no. 84642462) (US)
KIRK Single Charger (For KIRK 4080) (Part no. 84642458) (EU, UK)
KIRK Multicharger (For KIRK 4020 and KIRK 4040) Part no. 02319580) (EU, UK)
Note: The multicharger is not available in the USA.
KIRK Single Charger - Ordinary (For KIRK 5020 / 5040) (Part no. 84642464, countries outside US) (Part no. 84642472, US)

Variants of KIRK Chargers

KIRK Single Charger - USB (For KIRK 5020 / 5040)
 (Part no. 84642466) (countries outside US)
 (Part no. 84642473) (US)

USB cable (Part no. 84718504)

Power Supply Types and Part Numbers

Table 3 Variants of Power Supplies

Variants of Power Supplies

Power Supply (For KIRK 3040, 4020, 4040 and 4080)
 (Part no. 84642420) (EU)
 (Part no. 84642421) (UK)
 (Part no. 84642432) (US)

Power Supply for KIRK Multicharger (For KIRK 4020 and KIRK 4040)
 (Part no. 84642439) (EU, UK)

Power Supply (For KIRK 5020 / 5040)
 (Part no. 84642481) (EU)
 (Part no. 84642470) (UK)
 (Part no. 84642471) (US)

6.3 Installing Battery

Read the following information before you handle the batteries:

- Do not replace the batteries in potentially explosive environments, such as rooms where flammable liquids or gases are present.
- The battery will explode if disposed of in a fire.
- Do not charge the batteries unless you use the approved charger and the proper batteries.
- Only use battery type 84743411 in the 3040 Handset, 4020 Handset and 4040 Handset. Do not use these batteries with other products. These batteries were designed specifically for use with the 3040 Handset, 4020 Handset and 4040 Handset and the charger ONLY. Improper use of the batteries may result in fire hazard.
- Only use battery type 84743416 in the 4080 Handset. Do not use this battery with other products. This battery was designed specifically for use with the 4080 Handset and the charger ONLY. Improper use of the battery may result in fire hazard.

- Only use battery type 84743418 (ICP73048) in the 5020 / 5040 Handset. Do not use this battery with other products. This battery was designed specifically for use with the 5020 /5040 Handset and the charger ONLY. Improper use of the battery may result in fire hazard.
- Do not do anything that would cause the battery to short circuit.
- Do not let the battery or the charger come into contact with conductive metal objects.

Note: The 4080 Handset is only available in EMEA.

6.3.1 Installing Battery on KIRK 3040 Handsets

- 1 To install the battery press down the back cover and push it 5 mm towards the headset plug.

Figure 1 Remove Back Cover from Handset



- 2 Lift off back cover.
- 3 Place the battery plug in the slot in the battery box.
- 4 Insert battery with the label readable.
- 5 Replace the back cover.

6.4 Installing Battery on KIRK 4020/KIRK 4040/KIRK 4080 Handsets

Note: The battery is connected to the handset when it is shipped from the factory.

Warning: The battery in a 4080 Handset must **not** be removed in a potentially explosive atmosphere. Only use battery type 84743416 in the 4080 Handset.

- 1 To change the battery unscrew the plate on the rear of the handset to access the battery compartment. Use a normal screw driver.
- 2 Insert the screwdriver into the small crack behind the blind cover and break to open the handset.

Figure 2 Remove Back Cover from Handset with Screw Fastener



- 3 Place the battery plug in the slot in the battery box.
- 4 Insert battery with the label readable.
- 5 Replace the back cover.

6.4.1 Installing Battery on KIRK 5020 / 5040 Handsets

- 1 To install the battery press down the back cover and slide it towards the bottom of the handset.

Figure 3 Remove Back Cover from Handset



- 2 Lift off back cover.
- 3 Insert battery with the label readable.
- 4 Replace the back cover by pressing the back cover back in the locked position (when you hear a click the back cover is in position).

6.5 Charging KIRK Handsets

6.5.1 Using the Charger

Each handset is charged through the use of a handset charger, a compact desktop unit designed to charge and automatically maintain the correct battery charge levels and voltage.

The charger for 3040/4020/4040/4080 Handset is powered by an AC (115VAC or 230VAC) adapter that supplies the 9VDC at 230mA charger requirement.

The charger for 5020 / 5040 Handset is powered by an AC (110VAC to 240VAC) adapter that supplies the 8VDC at 350mA charger requirement.

Note: Multicharger is only available in EMEA.

Figure 4 Single Charger for 3040 Handset



Figure 5 Single Charger for 4020 Handset and 4040 Handset



Figure 6 Single Charger for 4080 Handset



Figure 7 Multicharger for 4020 Handset and 4040 Handset



Figure 8 Single Charger for 5020 / 5040 Handset



6.5.2 Charging Battery

6.5.2.1 KIRK 3040/KIRK 4020/KIRK 4040 and KIRK 4080 Handsets

When charging the battery for the first time, it is necessary to leave the handset in the charger for 14 - 16 hours before the battery is fully charged and the handset ready for use.

Warning: Do not charge 4080 Handset in a potentially explosive atmosphere. Use only the dedicated charger (orange) for charging of a 4080 Handset.

Note: During normal operation, it takes approximately 3 1/2 hours to charge the handset from fully discharged to its full capacity.

- Place the handset in the charger.

For correct charging, be sure the room temperature is between 0°C and 25°C/32°F and 77°F. Do not place the handset in direct sunlight. The battery has a built-in heat sensor which will stop charging if the battery temperature is too high.

If the handset is turned off when placed in charger, only the LED indicates the charging. When handset is turned off, the LED flashes at a low frequency while charging and lights constantly when the charging is finished. There will be no reaction for incoming calls.

If the handset is turned on when charging, the display shows the charging status. It will not vibrate. B-answer is inactive. The handset reacts normally for incoming calls. The display goes back to normal mode when fully charged.

It is necessary to recharge the battery when the display shows **BATTERY LOW**, or if the handset cannot be turned on. When the battery is fully discharged, up to 10 minutes may pass before charging begins (display lights up). When the charger begins the charging, status is shown on the display if the handset is turned on.

The handset displays a progress indicator bar that shows how fully charged the battery is.

The handset LED gives the following indication:

- LED continuously on - handset is fully charged
- LED flashing - handset is charging

6.5.2.2 KIRK 5020 / 5040 Handsets

When charging the battery for the first time, it is necessary to leave the handset in the charger for 14 - 16 hours before the battery is fully charged and the handset ready for use.

Note: During normal operation, it takes approximately four hours to charge the handset from fully discharged to its full capacity.

- Place the handset in the charger.

For correct charging, be sure the room temperature is between 0°C and 40°C/32°F and 104°F. Do not place the handset in direct sunlight. The battery has a built-in heat sensor which will stop charging if the battery temperature is too high.

If the handset is turned off when placed in charger, nothing indicates the charging. There will be no reaction for incoming calls.

If the handset is turned on when charging, the display shows a blue charging icon. The charging icon turns green when fully charged (when handset is removed from charger, the charging icon disappears). It will not vibrate. B-answer is inactive. The handset reacts normally for incoming calls.

It is necessary to recharge the battery when the handset display shows the battery low icon, or if the handset cannot be turned on.

6.6 Retrieving the Serial Number of the KIRK Handset

To enable service to the handset, the serial number must be programmed into the system database via the web based Administration Page of the KWS600v3. (For more information, refer to [Registering KIRK Handsets](#) on page 145).

The serial number (IPEI number) of each handset is found either on a label, which is placed behind the battery, or on the packaging label.

To show the serial number on the handset display (3040 Handset/4020 Handset/4040 Handset and 4080 Handset), press *99984*, and then press ✓; the serial number appears on the handset display. Press < for 5 seconds to exit the menu.

To show the serial number on the handset display (5020 / 5040 Handset), press Menu, select Status and then select Firmware version. Press exit to exit the menu.

6.6.1 Retrieving Serial Number on KIRK 3040 Handsets

- 1 Press down the back cover and push it 5 mm towards the headset plug.

Figure 9 Remove Back Cover from Handset



- 2 Lift off back cover.
- 3 Lift the battery and read the serial number.
- 4 Replace battery and back cover.

Note: To show the serial number on the handset display, press *99984*, and then press ✓; the serial number appears on the handset display. Press < for 5 seconds to exit the menu.

6.6.2 Retrieving Serial Number on KIRK 4020/KIRK 4040/KIRK 4080 Handsets

- 1 Use a screwdriver to unscrew the plate on the rear of the handset to access the battery compartment.

Warning: The plate on the rear of the 4080 Handset must **not** be removed in a potentially explosive atmosphere.

- 2 Insert the screwdriver into the small crack behind the blind cover and press to open the handset.

Figure 10 Remove Back Cover from Handset with Screw Fastener



3 Lift the battery and read the serial number.

4 Replace battery and back cover.

Note: To show the serial number on the handset display, press *99984*, and then press ✓; the serial number appears on the handset display. Press < for 5 seconds to exit the menu.

6.6.3 Retrieving Serial Number on KIRK 5020 / 5040 Handsets

1 Press down the back cover and slide it towards the bottom of the handset.

Figure 11 Remove Back Cover from Handset



2 Lift off back cover.

3 Lift the battery and read the serial number.

4 Replace battery and back cover.

Note: To show the serial number on the handset display (5020 / 5040 Handset), press Menu, select Status and then select Firmware version. Press exit to exit the menu.

Chapter 7 Configuring KIRK Wireless Server 600v3

This section provides you with information on how to power up the KWS600v3 and connect it to a computer, and also how to configure a KWS600v3 Single-cell solution and a KWS600v3 Multi-cell solution through the web based Administration Page and the Configuration Tool.

Using the web based Administration Page is recommended when configuring small to medium-sized installations. Using the Configuration Tool is recommended when configuring medium-sized to large installations.

Note: With the Configuration Tool it is possible to work offline.

Note: This section only describes general configuration of the KWS600v3. For call handler specific configuration, refer to the KWS600v3 Configuration Guide for relevant call handler.

This section includes information about:

- [“Powering up the KIRK Wireless Server 600v3” on page 77](#)
- [“Connecting a Computer to the KIRK Wireless Server 600v3” on page 78](#)
- [“Accessing the Web Based Administration Page” on page 79](#)
- [“Accessing the KIRK Configuration Tool” on page 81](#)
- [“Configuring Single-Cell Solution through Administration Page” on page 82](#)
- [“Configuring Multi-Cell Solution through Administration Page” on page 90](#)
- [“Configuring Single-Cell Solution through KIRK Configuration Tool” on page 122](#)
- [“Configuring Multi-Cell Solution through KIRK Configuration Tool” on page 125](#)

7.1 Powering up the KIRK Wireless Server 600v3

After installing the KWS600v3 you need to power up the KWS600v3. There are two ways of powering up the KWS600v3.

- Power over Ethernet (PoE)

Power options for the KWS600v3 is 48VDC (The mains power adapter used for the KWS600v3 is rated at 18W but the typical power consumption is 7W).

- Local Power Supply

Power options for the KWS600v3 is 24VDC, 1 W maximum when using Local Power Supply.

Note: Only use one of the power options.

7.1.1 Power over Ethernet

The KWS600v3 supports Power over Ethernet, PoE 802.3af.

7.1.2 Local Power Supply

Powering the KWS600v3 with a local power supply can be done using the power input on the KWS600v3.

Note: The power supply for the KWS600v3 is to be ordered separately (Part no. EU version: 84642449, Part no. UK version: 84642449, Part no. US version: 84642453).

7.1.3 Checking Indicators

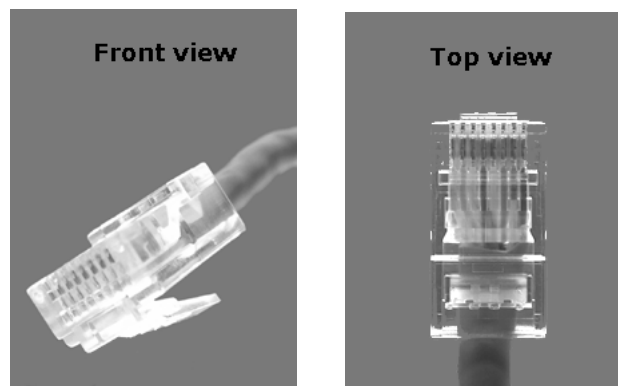
- Verify that the KWS600v3 LED indicator is continuously on, indicating that the KWS600v3 is functional.

7.2 Connecting a Computer to the KIRK Wireless Server 600v3

The KWS600v3 communicates with the computer through a Standard LAN Patch cable.

Note: The LAN port of the KWS600v3 is a RJ45 connector.

Figure 12 Standard LAN Patch Cable (RJ45)



- 1 Connect the LAN cable to the computer.



- 2 Connect the LAN cable to the **ETH1** port of the KWS600v3.



7.3 Accessing the Web Based Administration Page

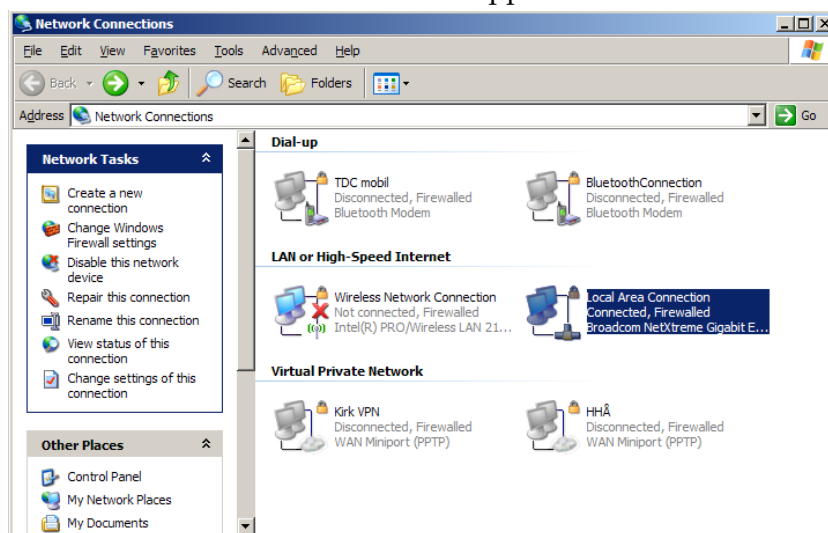
In order for your computer to communicate with the KWS600v3 it is necessary to change the computer's Internet Protocol Properties to use the following:

- IP address: 192.168.1.2
- Sub-net mask: 255.255.255.0

7.3.1 How to Change Internet Protocol Properties using Windows XP

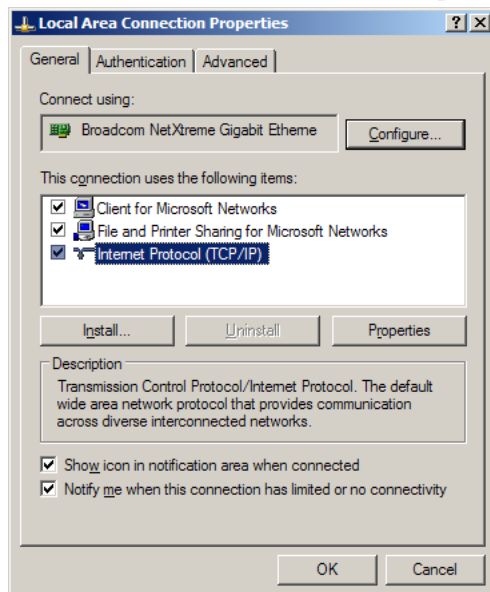
- 1 From the Start menu, point to **Connect to** and then click **Show all connections**.

A **Network Connections** window appears.

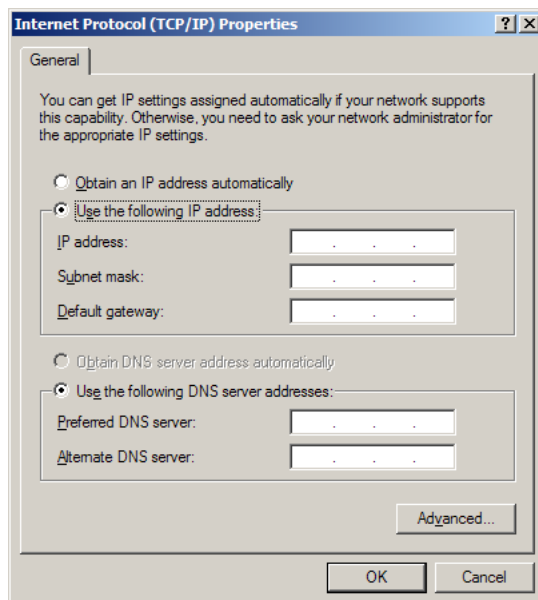


- 2 Under **Lan or High-Speed Internet**, right-click on **Local Area Connection** and click **Properties**.

A **Local Area Connection Properties** dialog box appears.

Figure 13 Local Area Connection Properties dialog box

- 3** In the **General** tab, select **Internet Protocol (TCP/IP)**, and then click **Properties**.
An **Internet Protocol (TCP/IP) Properties** dialog box appears.

Figure 14 Internet Protocol Properties dialog box

- 4** Click **Use the following IP address**, and then type **192.168.1.2** in the **IP address** field.
- 5** In the **Subnet mask** field, type **255.255.255.0**.
- 6** Click **OK**.

You can now reach the KWS600v3 using a standard web browser.

7.3.2 How to Access the Administration Page

The web based Administration Page is accessed through a standard web browser.

- 1 Open a web browser.
- 2 In the browsers **Address** bar, type **http://192.168.1.1**, and then press **ENTER**.

Note: The KWS600v3 is pre-configured with the IP address: 192.168.1.1 through the ETH1 port. It is recommended not to change this IP address.

The KWS600v3 Administration Page appears.

Figure 15 Main page of the Web Based Administration Page

Configuration	Info	Admin	License	Update	NTP	HTTP Server	HTTP Client	Logging	SNMP	Telnet
General										
IP	Version 6.00 dvl IP1200[06-60319], Bootcode[365], HW[7] 8192/16384									
ETH0	SerialNo 00-90-33-0f-03-10									
ETH1	Coder 12 Channels of G.711,G.726,G.729,G.723									
LDAP	SNTP Server 0.0.0.0									
DECT	Time ** ** ** ** ** **									
	Uptime 0d 0h 46m 17s									
	DECT									
Administration										
DECT	Firmware 14125500 PCS04Ap									
Download	System ARI 000046507424									
Upload	Frequency DECT 1.8GHz									
Diagnostics										
Reset										

7.4 Accessing the KIRK Configuration Tool

The Configuration Tool of the KWS600v3 is to be downloaded from www.polycom.com.

7.4.1 Installing the KIRK Configuration Tool

Once you download the Configuration Tool of the KWS600v3, install it by clicking on the **KWS600v3_Configuration_Tool_1.X.X.X_setup.exe** and by following the resulting Install Wizard prompts.

7.4.2 Starting the KIRK Configuration Tool

When you have the Configuration Tool application installed, start it from your computer.

- 1 Double-click the Configuration Tool icon or locate the program under the Start menu to open the Configuration Tool application on your desktop.

A start-up window appears.

Figure 16 Configuration Tool startup window

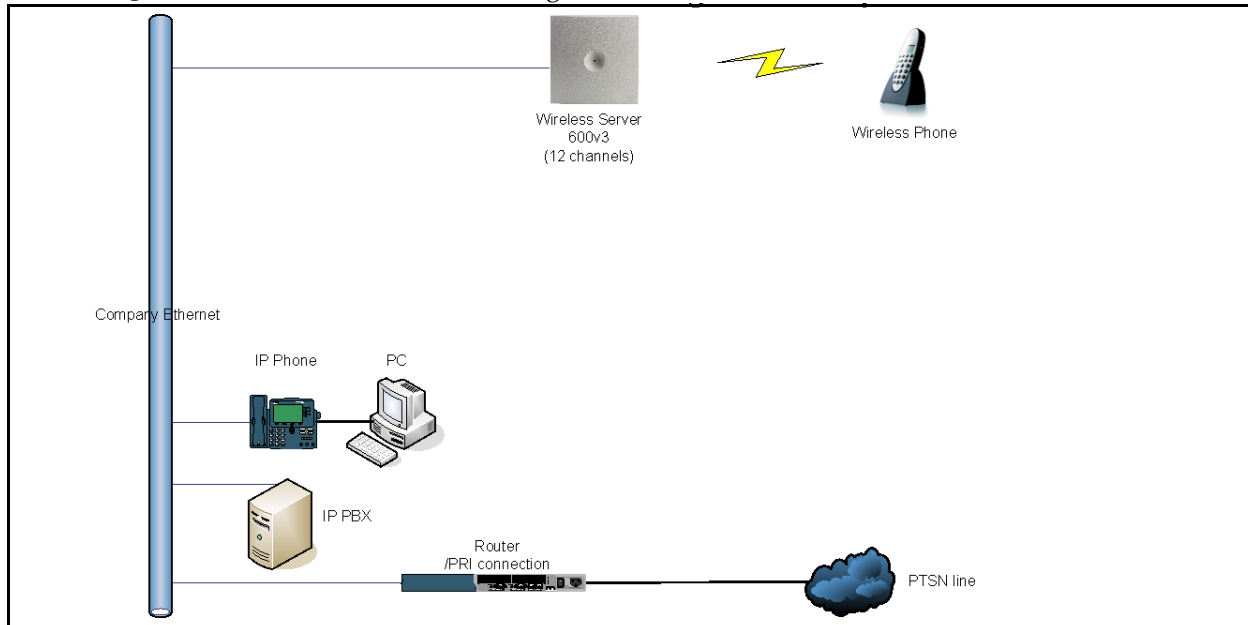
The screenshot shows the Configuration Tool startup window for the KIRK Wireless Server 600v3. The window has a menu bar with 'File' and 'Help'. Below the menu bar are tabs for 'Master', 'Alt Master', 'Alt LDAP Server', 'Sync Master', and 'Secondaries'. The main area is divided into several sections:

- IP Address:** DHCP is checked. IP Address, Network Mask, and Default Gateway are set to 0.0.0.0. Host Name is empty with a 'Get' button.
- System:** AC is empty. Subscriptions is set to 'With User AC Only'. Coders is set to 'G.729A'. Tones is set to 'EUROPE-PBX'.
- Radio:** Disable is unchecked. Radio-Id, Sync Master, and Alt Sync Master are empty.
- Gatekeeper:** Mode is set to 'Active'. Gatekeeper, Alternate Gatekeeper, and Protocol (set to 'H.323') are empty.
- LDAP:** Master is LDAP Server is checked. Server and Alt Server are empty.
- License:** DECT Multicell and DECT Skinny are empty. There is a 'Browse...' button.

7.5 Configuring Single-Cell Solution through Administration Page

Note: Using the web based Administration Page is recommended when configuring small to medium-sized installations.

This section describes how to configure a KWS600v3 Single-cell solution.

Figure 17 Wireless Server 600v3 Single-cell installation

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 79.

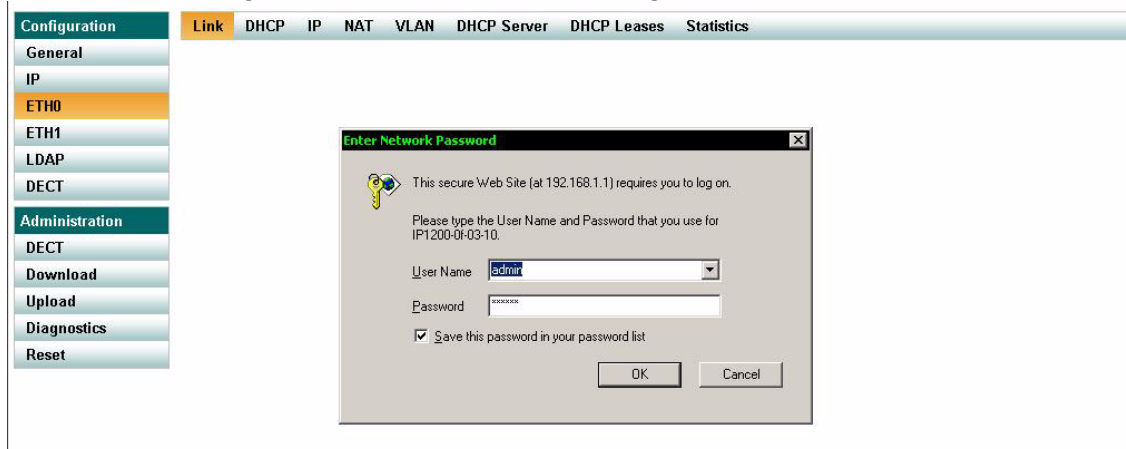
This section contains information about:

- [“Entering a System User Name and Password”](#) on page 83
- [“Assigning a Specific IP Address”](#) on page 84
- [“Configuring Ethernet Link”](#) on page 86
- [“Configuring DECT System”](#) on page 87
- [“Configuring DECT Master”](#) on page 88
- [“Configuring DECT Radio”](#) on page 89
- [“Configuring TOS \(Type of Service\) Priorities”](#) on page 89

7.5.1 Entering a System User Name and Password

First time you access the Administration Page, you need to log on with user name and a password.

Note: The default user name of the system is **admin** and the default password of the system is **ip1200**.

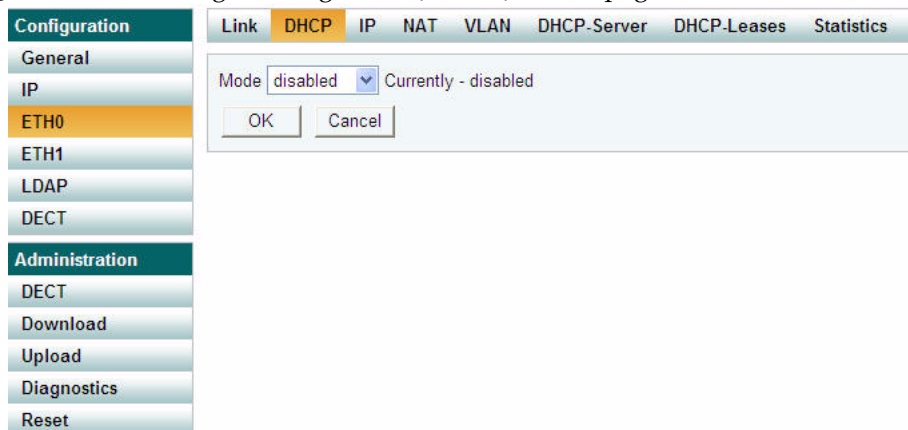
Figure 18 Adm. Page: Enter Network Password dialog box

- 1 In the **User Name** field, type **admin**.
- 2 In the **Password** field, type **ip1200**.
- 3 Click **OK**.

7.5.2 Assigning a Specific IP Address

To assign a specific IP address to the KWS600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KWS600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

Figure 19 Adm. Page: Configuration/ETH0/DHCP page

- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

Note: It is necessary to use the ETH0 port when integrating the KWS600v3 on the local network.

Figure 20 Adm. Page: Configuration/ETH0/IP page

Configuration		Link	DHCP	IP	NAT	VLAN	DHCP-Server	DHCP-Leases	Statistics
General									
IP									
ETH0									
ETH1									
LDAP									
DECT									
Administration									
DECT									
Download									
Upload									
Diagnostics									
Reset									

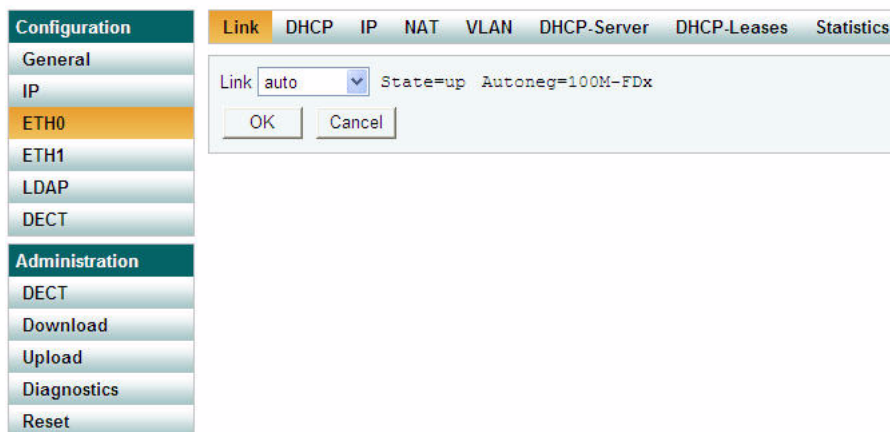
IP address	<input type="text" value="192.168.0.1"/>	
Network mask	<input type="text" value="255.255.255.0"/>	
Default gateway	<input type="text" value="192.168.0.1"/>	
DNS server	<input type="text"/>	
Proxy ARP	<input type="checkbox"/>	
Static IP Routes		
Network destination	Network mask	Gateway
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>		

- 5 In the **IP address** field, type the new IP address.
The new IP address is now the default address when accessing the KWS600v3.
- 6 In the **Network mask** field, type a new network mask.
Contact your system administrator for more information.
- 7 In the **Default gateway** field, type the IP address of the default gateway.
Contact your system administrator for more information.
- 8 Click **OK**.
- 9 Click **Reset** (under **Administration** menu) to save your configuration.

7.5.3 Configuring Ethernet Link

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

Figure 21 Adm. Page: Configuration/ETH0/Link page



- 2 From the **Link** list, select **auto**, and then click **OK**.
When selecting **auto**, the link speed will be determined by the network switch.
The KWS600v3 supports the following link speeds:
 - 10Mb-hdx
 - 10Mb-fdx
 - 100Mb-hdx
 - 100Mb-fdx
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

7.5.4 Configuring DECT System

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

Figure 22 Adm. Page: Configuration/DECT/System page

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.
If changing the name, the system cannot operate.
- 3 In the **PWD** (password) field, type the password, and then type it again in the field below.
- 4 From the **Subscriptions** list, select either **With User AC**, **With System AC** or **Disable**.

Note: It is recommended to select **With User AC**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 152](#)

- 5 From the **Tones** list, select a ring tone.
- 6 **Enbloc Dialing** check box:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
- 7 **Local R-Key/Display Handling** check box:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
- 8 **DTMF through RTP channel** check box:

Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.

- 9 **No Display of Date and Time:** Enable only if time should not be displayed.
- 10 From the **Coder Preferences**, select a voice compression value that matches your telephony infrastructure.

Contact your system administrator for more information.

- 11 In the **Framesize** fields, type the desired frame length in milliseconds and then select either **Exclusive** or **Silence Compression**.

Contact your system administrator for more information.

Note: If the **Exclusive** check box is selected for the coder, then the KWS600v3 is forced to use the coder.

- 12 Click **OK**.
- 13 Click **Reset** (under **Administration** menu) to save your configuration.

7.5.5 Configuring DECT Master

On the **Master** page you can establish a communication protocol between the KWS600v3 and a call handler.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 23 Adm. Page: Configuration/DECT/Master page

Configuration	System	Master	Radio
General	Mode: Active		
IP	Protocol: SKINNY		
ETH0	GK: []		
ETH1	Alt-GK: []		
LDAP	GK-Id: []		
DECT	[OK] [Cancel]		
Administration			
DECT			
Download			
Upload			
Diagnostics			
Reset			

- 2 From the **Mode** list, select **Active**.
- 3 From the **Protocol** list, select either **H323**, **SIP** or **SKINNY** depending on the protocol you are using.
- 4 In the **GK** (Gate Keeper) field, type the IP address of your call handler.
Contact your system administrator for more information.

- 5 In the **Alt-GK** (Alternative Gate Keeper) field, type an alternative IP address of your call handler.
Contact your system administrator for more information.
- 6 **GK-Id** field:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
- 7 Click **OK**.
- 8 Click **Reset** (under **Administration** menu) to save your configurations.

7.5.6 Configuring DECT Radio

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 24 Adm. Page: Configuration/DECT/Radio page

Configuration	System	Master	Radio
General			
IP			
ETH0			
ETH1			
LDAP			
DECT			
Administration			
DECT			
Download			
Upload			
Diagnostics			
Reset			

Disable	<input type="checkbox"/>
Master	<input type="text" value="127.0.0.1"/>
Alt-Master	<input type="text"/>
Radio-Id	<input type="text" value="1"/>
Sync-Source	<input type="text"/>
Alt-Sync-Source	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

- 2 In the **Radio-Id** field, type **1**.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

7.5.7 Configuring TOS (Type of Service) Priorities

It is possible to change the TOS (Type of Service) priorities in a system. The TOS priority depends on the network used.

- 1 Under the **Configuration** menu, click **IP**.

Figure 25 Adm. Page: Configuration/IP/Settings page

The screenshot shows the 'Configuration' menu on the left, with 'IP' selected. The main content area is titled 'Settings' and includes tabs for 'NAT', 'H.323-NAT', 'PPP-Config', 'PPP-State', and 'Routing'. The 'IP' settings are displayed, including:

- TOS Priority - RTP Data:
- TOS Priority - Signalling:
- First UDP-RTP Port: Number of Ports: First/Last: 16384 / 32766
- First UDP-NAT Port: Number of Ports:

Below these are sections for 'Local Networks' and 'Private Networks', each with 'Address' and 'Mask' input fields. At the bottom, there are 'OK' and 'Cancel' buttons.

- 2 In the **TOS priority - RTP Data** field, type a TOS priority.

Depending on the network, it may be necessary to change the TOS priority.

- Most networks: The default TOS priority is: **0x10**
- If CISCO network: It is recommended to change the TOS priority - RTP Data to **0xb8**

- 3 In the **TOS priority - Signalling** field, type a TOS priority.

Depending on the network, it may be necessary to change the TOS priority.

- Most networks: The default TOS priority is: **0x10**
- If CISCO network: It is recommended to change the TOS priority - Signalling to **0x68**

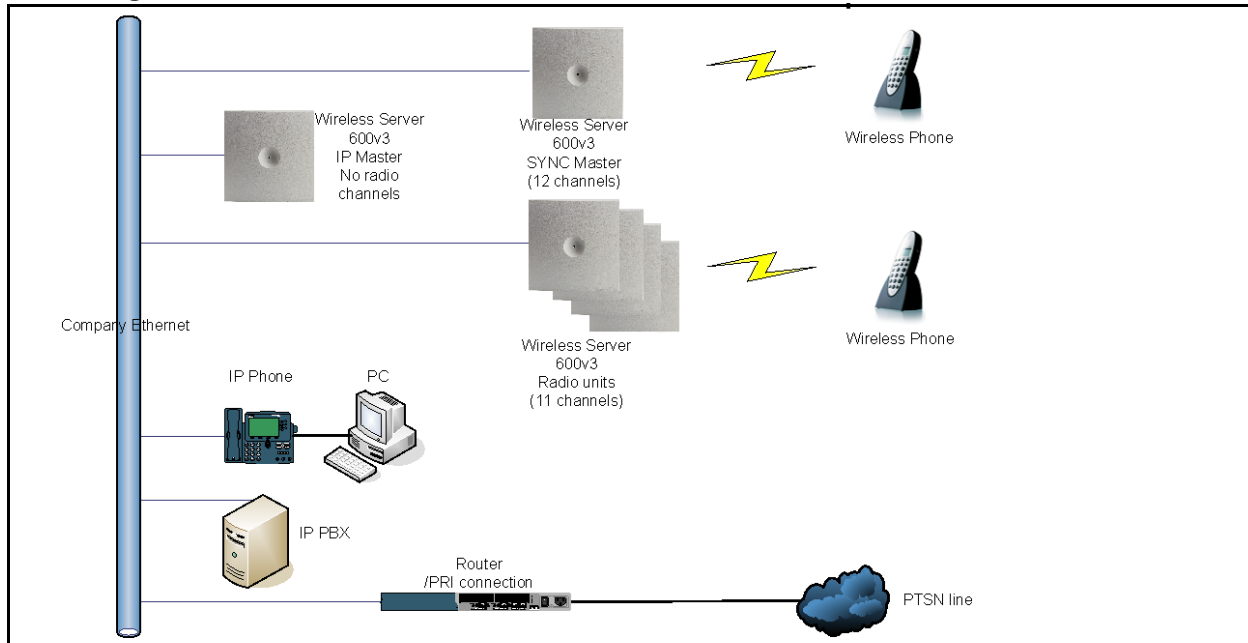
For information about the TOS priorities used in your network, contact your system administrator.

- 4 Click **Reset** (under **Administration** menu) to save your configuration.

7.6 Configuring Multi-Cell Solution through Administration Page

Note: Using the web based Administration Page is recommended when configuring small to medium-sized installations.

This section describes how to configure a KWS600v3 Multi-cell solution.

Figure 26 Wireless Server 600v3 Multi-cell installation

This section contains information about:

- [“Configuring the IP Master \(Primary\) KIRK Wireless Server 600v3” on page 91](#)
- [“Configuring Sync Master” on page 100](#)
- [“The Sync Master is now configured.” on page 104](#)
- [“” on page 108](#)
- [“” on page 117](#)
- [“” on page 117](#)
- [“” on page 120](#)

7.6.1 Configuring the IP Master (Primary) KIRK Wireless Server 600v3

This section describes how to configure a Master KWS600v3 in a multi-cell solution.

This section includes information about:

- [“Entering a System User Name and Password \(Primary\)” on page 92](#)
- [“Assigning a Specific IP Address \(Primary\)” on page 92](#)
- [“Obtaining a Multi-Cell License \(Primary\)” on page 94](#)
- [“Configuring Ethernet Link \(Primary\)” on page 95](#)
- [“Setting LDAP Mode \(Primary/LDAP Server\)” on page 95](#)
- [“Configuring DECT System \(Primary\)” on page 96](#)
- [“Configuring DECT Master \(Primary\)” on page 97](#)
- [“Configuring DECT Radio \(Primary\)” on page 98](#)
- [Configuring TOS \(Type of Service\) Priorities \(Primary\) on page 99](#)

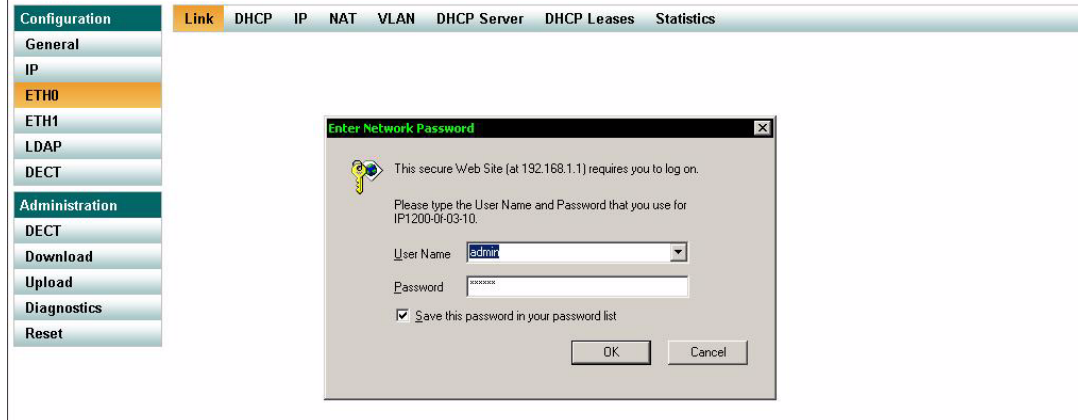
For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

7.6.1.1 Entering a System User Name and Password (Primary)

First time you access the Administration Page, you need to log on with user name and a password.

Note: The default user name of the system is **admin** and the default password of the system is **ip1200**.

Figure 27 Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type **admin**.
- 2 In the **Password** field, type **ip1200**.
- 3 Click **OK**.

7.6.1.2 Assigning a Specific IP Address (Primary)

To assign a specific IP address to the KWS600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KWS600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

Figure 28 Adm. Page: Configuration/ETH0/DHCP page

- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

Note: It is necessary to use the ETH0 port when integrating the KWS600v3 on the local network.

Figure 29 Adm. Page: Configuration/ETH0/IP page

- 5 In the **IP address** field, type the new IP address.
The new IP address is now the default address when accessing the KWS600v3.
- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.
Contact your system administrator for more information.
- 8 Click **OK**.

9 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.1.3 Obtaining a Multi-Cell License (Primary)

To configure a KWS600v3 Multi-cell solution it is necessary to obtain a multi-cell license. (E-mail MAC address to emeadkordermanagement@polycom.com, and you will obtain the license)

- 1 Under the **Configuration** menu, click **General**, and then copy the serial number of the KWS600v3 from the **Info** page.
- 2 E-mail MAC address to emeadkordermanagement@polycom.com and require a multi-cell license for the KWS600v3.

Note: Remember to write/paste the MAC address of the KWS600v3 in the e-mail.

- 3 You will now receive an e-mail containing a text file with the multi-cell license. Save this file. The text file is to be uploaded to the system.
- 4 Under the **Configuration** menu, click **General**, and then click **License**.

Figure 30 Adm. Page: Configuration/General/License page

Type	Name
DECT	MultiCell=255,00-90-33-0f-1a-20/10032212420,129057,Kirk,Kirk,Kirk:42a7-b065-dc01-d4b
DECT	Skinny=35,00-90-33-0f-1a-20,116400,, :a126-fc7b-d8c8-b66f

download all
delete all

File:

- 5 Click **Browse** to search for the text file containing license information, select it, and then click **Open**.
- 6 Click **Upload** to upload the file.
- 7 Click either **Reset Immediately** or **Idle Reset**.

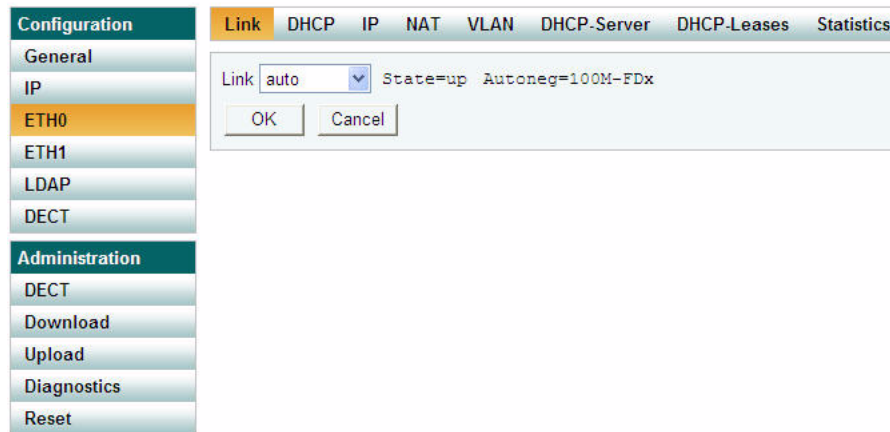
When resetting the KWS600v3 immediately, all calls are terminated and the KWS600v3 is reset. When resetting the KWS600v3 when the system is idle, the reset is done when there are no active calls in the KWS600v3.

- 8 Click the **License** menu again to check that the file has been uploaded.

7.6.1.4 Configuring Ethernet Link (Primary)

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

Figure 31 Adm. Page: Configuration/ETH0/Link page



- 2 From the **Link** list, select **auto**, and then click **OK**.
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

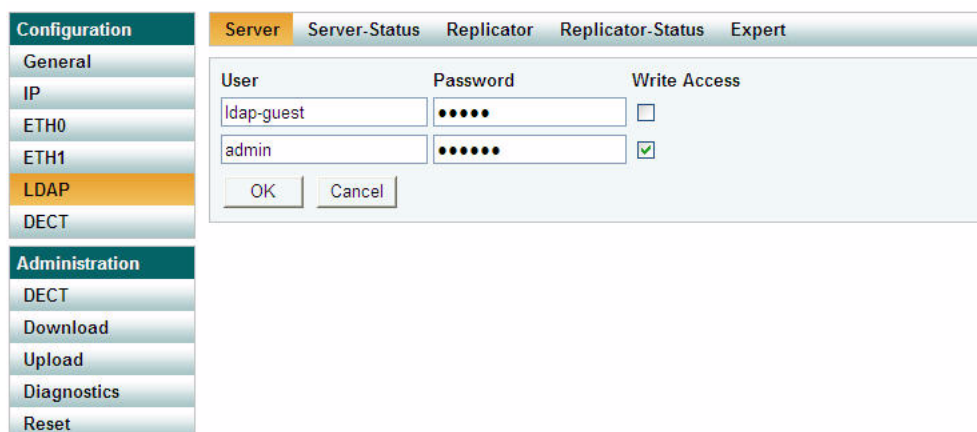
7.6.1.5 Setting LDAP Mode (Primary/LDAP Server)

For the Master (Primary) KWS600v3 to act as an LDAP Server for all the KWS600v3 secondaries, you need to set the LDAP (Lightweight Directory Access Protocol) mode.

Note: It is recommended that the Primary KWS600v3 acts as an LDAP Server in small to medium-sized installations.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

Figure 32 Adm. Page: Configuration/LDAP/Server page



- 2 In the **User** fields, type the user names.

- 3 In the **Password** fields, type the passwords.
- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.1.6 Configuring DECT System (Primary)

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

Figure 33 Adm. Page: Configuration/DECT/System page

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.
If changing the name, the system cannot operate.
- 3 In the **PWD** (password) field, type the password, and then type it again in the field below.
- 4 In the **Sys-Mask** field, when having repeaters on the system, you must type either:
 - **0x3f** (up to 64)
Repeaters with higher radio ID than 64 with offset 64 will perform bearer handover.
 - **0x7f** (up to 128)
Repeaters with higher radio ID than 128 with offset 64 will perform bearer handover.
 - **0xff** (up to 256)
Repeaters connected will only perform connection handover.
- 5 From the **Subscriptions** list, select either **With User AC**, **With system AC** or **Disable**.

- Note:** It is recommended to select **With User AC**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 152](#).
- 6** From the **Tones** list, select a ring tone.
 - 7 Enbloc Dialing** check box:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
 - 8 Local R-Key/Display Handling** check box:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
 - 9 DTMF through RTP channel** check box:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
 - 10 No display of Date and Time:** Enable only if time should be displayed.
 - 11** From the **Coder Preferences** list, select a voice compression value that matches your telephony infrastructure.
Contact your system administrator for more information.
 - 12** In the **Framesize** fields, type the desired frame length in milliseconds and then select either **Exclusive** or **Silence Compression**.
Contact your system administrator for more information.
Note: If the **Exclusive** check box is selected for the coder, then the KWS600v3 is forced to use the coder.
 - 13** Click **OK**.
 - 14** Click **Reset** (under **Administration** menu) to save your configuration.

7.6.1.7 Configuring DECT Master (Primary)

On the **Master** page you can define which mode the KWS600v3 should operate in. You also establish a communication protocol between the Master KWS600v3 and a call handler.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 34 Adm. Page: Configuration/DECT/Master page

The screenshot shows the configuration interface for the DECT Master. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT, Administration) and Administration (DECT, Download, Upload, Diagnostics, Reset). The 'DECT' option is selected. The main area has tabs for 'System', 'Master', and 'Radio', with 'Master' being the active tab. The configuration fields are: Mode (Active), Protocol (SKINNY), GK (empty), Alt-GK (empty), and GK-Id (empty). There are 'OK' and 'Cancel' buttons at the bottom.

- 2 From the **Mode** list, select **Active**. Selecting **Active** defines the KWS600v3 as a Primary (Master).
- 3 From the **Protocol** list, select either **H323**, **SIP** or **SKINNY** depending on the protocol you are using.
- 4 In the **GK** (Gate Keeper) field, type the IP address of your call handler.
Contact your system administrator for more information.
- 5 In the **Alt-GK** (Alternative Gate Keeper) field, type an alternative IP address of your call handler (optional).
Contact your system administrator for more information.
- 6 **GK-Id** field:
Call handler specific, refer to KWS600v3 Configuration Guide for the relevant call handler.
- 7 Click **OK**.
- 8 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.1.8 Configuring DECT Radio (Primary)

On the **Radio** page you define which radio ID the Master KWS600v3 and Sync Source has to synchronize with.

Note: In a multi-cell installation with max. 10 KIRK Wireless Server primary and secondaries and/or 100 handsets, the Master KWS600v3 can be used as radio unit. If using the radio part on a Master KWS600v3, configure it as described in [“Configuring DECT Radio \(Secondary\)”](#) on page 116.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 35 Adm. Page: Configuration/DECT/Radio page

Configuration	System	Master	Radio
General	Disable	<input checked="" type="checkbox"/>	
IP	Master	<input type="text" value="127.0.0.1"/>	
ETH0	Alt-Master	<input type="text"/>	
ETH1	Radio-Id	<input type="text" value="1"/>	
LDAP	Sync-Source	<input type="text"/>	
DECT	Alt-Sync-Source	<input type="text"/>	
Administration	<input type="button" value="OK"/> <input type="button" value="Cancel"/>		
DECT			
Download			
Upload			
Diagnostics			
Reset			

- 2 Select the **Disable** check box to disable the radio.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.1.9 Configuring TOS (Type of Service) Priorities (Primary)

It is possible to change the TOS (Type of Service) priorities in a system. The TOS priority depends on the network used.

- 1 Under the **Configuration** menu, click **IP**.

Figure 36 Adm. Page: Configuration/IP/Settings page

Configuration	Settings	NAT	H.323-NAT	PPP-Config	PPP-State	Routing
General	TOS Priority - RTP Data	<input type="text" value="0xb8"/>	0xb8			
IP	TOS Priority - Signalling	<input type="text" value="0x68"/>	0x68			
ETH0	First UDP-RTP Port	<input type="text"/>	Number of Ports	<input type="text"/>	First/Last	16384 / 32766
ETH1	First UDP-NAT Port	<input type="text"/>	Number of Ports	<input type="text"/>		
LDAP	Local Networks					
DECT	Address	Mask				
Administration	<input type="text"/>					
DECT	Private Networks					
Download	Address	Mask				
Upload	<input type="text"/>					
Diagnostics	<input type="button" value="OK"/> <input type="button" value="Cancel"/>					
Reset						

- 2 In the **TOS priority - RTP Data** field, type a TOS priority.
Depending on the network, it may be necessary to change the TOS priority.
 - Most networks: The default TOS priority is: **0x10**

- If CISCO network: It is recommended to change the TOS priority - RTP Data to **0xb8**.

3 In the **TOS priority - Signalling** field, type a TOS priority.

Depending on the network, it may be necessary to change the TOS priority.

- Most networks: The default TOS priority is: **0x10**
- If CISCO network: It is recommended to change the TOS priority - RTP Data to **0x68**.

For information about the TOS priorities used in your network, contact you system administrator.

4 Click **Reset** (under **Administration** menu) to save your configuration.

The Master (Primary) KWS600v3 is now configured.

7.6.2 Configuring Sync Master

This section describes how to configure a Sync Master KWS600v3 in a multi-cell solution.

KWS600v3 primary and secondaries use the existing DECT air interface to synchronize to each other on. One KWS600v3 is configured as a Sync (synchronization) Master in the system. It is not necessary to configure what KWS600v3 the Sync Master should synchronize to.

This section includes information about:

- [“Assigning a Specific IP Address \(Sync Master\)” on page 100](#)
- [“Configuring LDAP Replicator \(Sync Master\)” on page 102](#)
- [“Configuring DECT Master \(Sync Master\)” on page 103](#)
- [“Configuring DECT Radio \(Sync Master\)” on page 103](#)

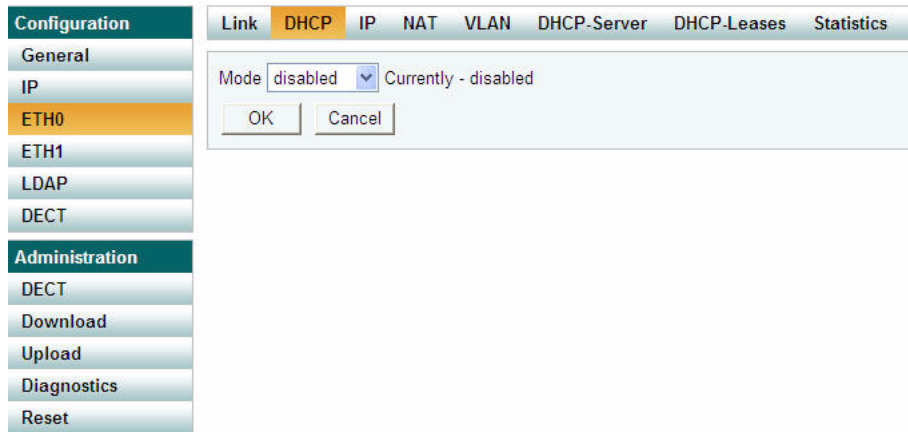
For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

7.6.2.1 Assigning a Specific IP Address (Sync Master)

To assign a specific IP address to the KWS600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KWS600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

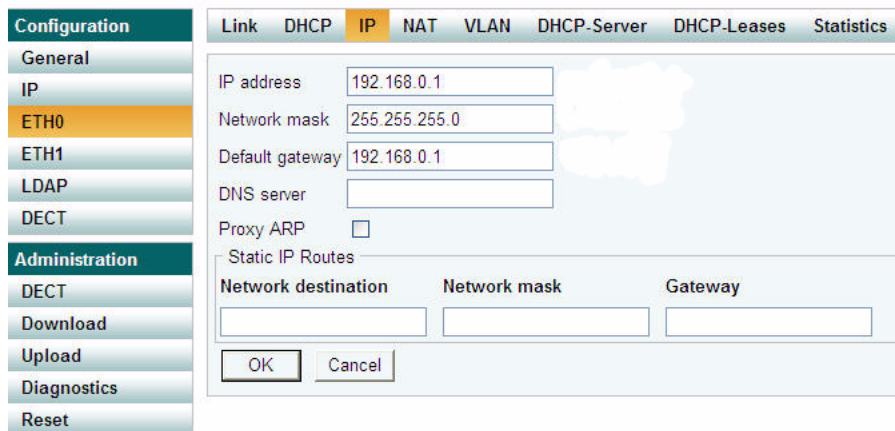
Figure 37 Adm. Page: Configuration/ETH0/DHCP page



- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

Note: It is necessary to use the ETH0 port when integrating the KWS600v3 on the local network.

Figure 38 Adm. Page: Configuration/ETH0/IP page



- 5 In the **IP address** field, type the new IP address.
The new IP address is now the default address when accessing the KWS600v3.
- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.
Contact your system administrator for more information.
- 8 Click **OK**.

9 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.2.2 Configuring LDAP Replicator (Sync Master)

In a KWS600v3 Multi-cell solution the Sync Master needs access to the information (such as system ARI code and user data) that is stored on the Master KWS600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the Sync Master.

1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

Figure 39 Adm. Page: Configuration/LDAP/Replicator page

Configuration	Server	Server-Status	Replicator	Replicator-Status	Expert
General					
IP					
ETH0					
ETH1					
LDAP					
DECT					
Administration					
DECT					
Download					
Upload					
Diagnostics					
Reset					

Enable	<input checked="" type="checkbox"/>
Server	<input type="text" value="172.18.2.135"/>
Alt. Server	<input type="text" value="0.0.0.0"/>
Filter Type	<input type="text" value="Dect System Name"/>
DECT Gateway Name	<input type="text"/>
User	<input type="text" value="admin"/>
Password	<input type="password" value="•••••"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

2 Select the **Enable** check box.

3 In the **Server** field, type the IP address of the LDAP Server

4 In the **User** field, type the user name.

5 In the **Password** field, type the password.

Note: User name and password must be the same as for the Master (Primary) KWS600v3.

6 Click **OK**.

7 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.2.3 Configuring DECT Master (Sync Master)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 40 Adm. Page: Configuration/DECT/Master page

- 2 From the **Mode** list, select **Off**. Selecting **Off** defines the KWS600v3 as not being the Master.
- 3 From the **Prot** (Protocol) list, select **H323**.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.2.4 Configuring DECT Radio (Sync Master)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 41 Adm. Page: Configuration/DECT/Radio page

- 2 In the **Master** field, type the IP address of the Master (Primary) KWS600v3.
- 3 In the **Radio-id** field, type the radio ID of the Sync Master.
- 4 Click **OK**.

5 Click **Reset** (under **Administration** menu) to save your configuration.

The Sync Master is now configured.

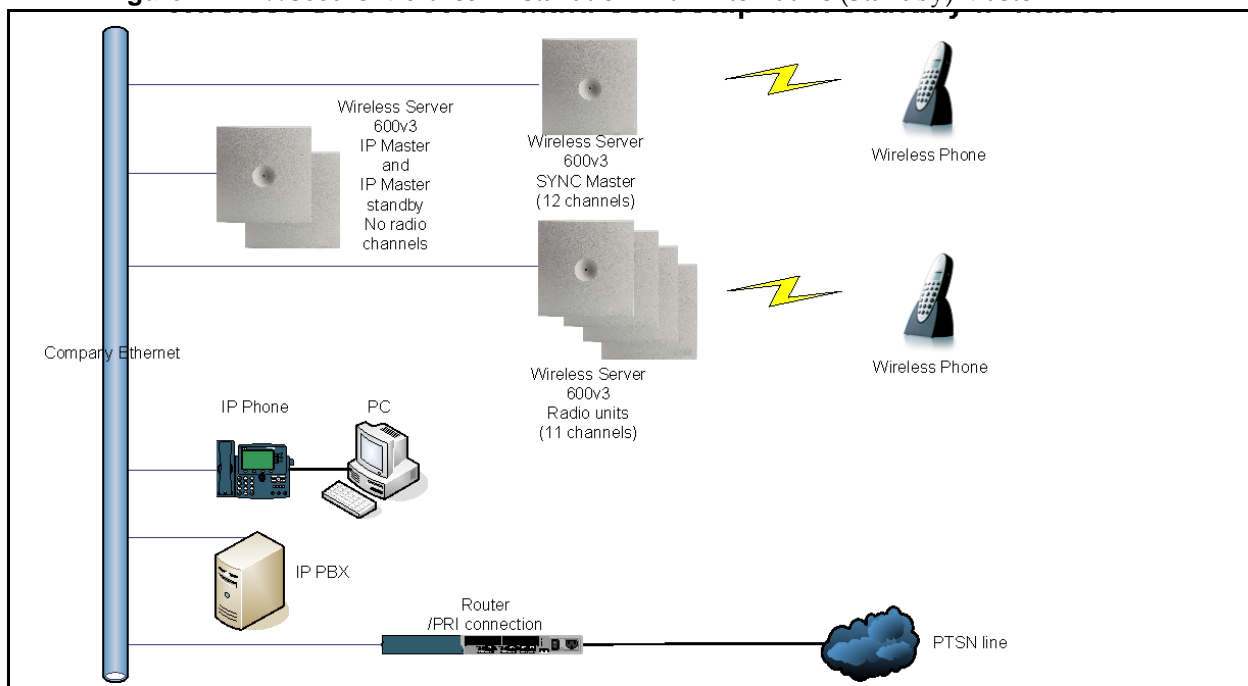
7.6.3 Configuring the Alternative Master KIRK Wireless Server 600v3

This section describes how to configure an alternative (Standby) Master KWS600v3 in a multi-cell solution. In case the Master KWS600v3 stops working, the alternative (Standby) Master KWS600v3 will take over connection to the call handler.

Note: Configuring an alternative Master KWS600v3 is optional - and only recommended - if you have a very large multi-cell installation (number of KWS600v3 and/or handsets).

Note: The alternative Master KWS600v3 can also be used as the alternative LDAP Server. If a dedicated wireless server is used as a Master KWS600v3 only, the alternative Master KWS600v3 must also be dedicated. For more information about the alternative LDAP Server, refer to ["" on page 120](#).

Figure 42 KWS600v3 Multi-cell installation with Alternative (Standby) Master



For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

This section contains information about:

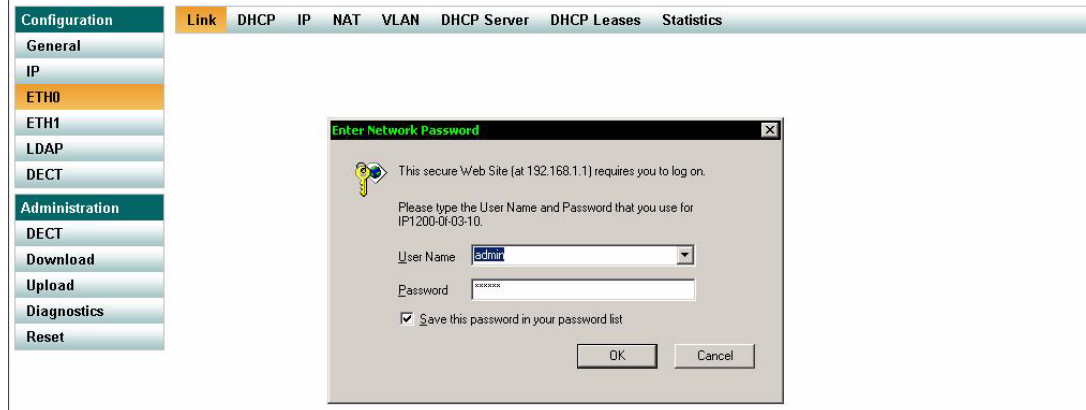
- [“Entering a System User Name and Password \(Standby\)” on page 105](#)
- [“Assigning a Specific IP Address \(Standby\)” on page 105](#)
- [“Configuring Ethernet Link \(Standby\)” on page 107](#)
- [“Configuring DECT Master \(Standby\)” on page 107](#)
- [“Configuring DECT Radio \(Standby\)” on page 108](#)

7.6.3.1 Entering a System User Name and Password (Standby)

First time you access the Administration Page, you need to log on with user name and a password.

Note: The default user name of the system is **admin** and the default password of the system is **ip1200**.

Figure 43 Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type the user name.
- 2 In the **Password** field, type the password.
- 3 Click **OK**.

7.6.3.2 Assigning a Specific IP Address (Standby)

To assign a specific IP address to the KWS600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KWS600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

Figure 44 Adm. Page: Configuration/ETH0/DHCP page

- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

Note: It is necessary to use the ETH0 port when integrating the KWS600v3 on the local network.

Figure 45 Adm. Page: Configuration/ETH0/IP page

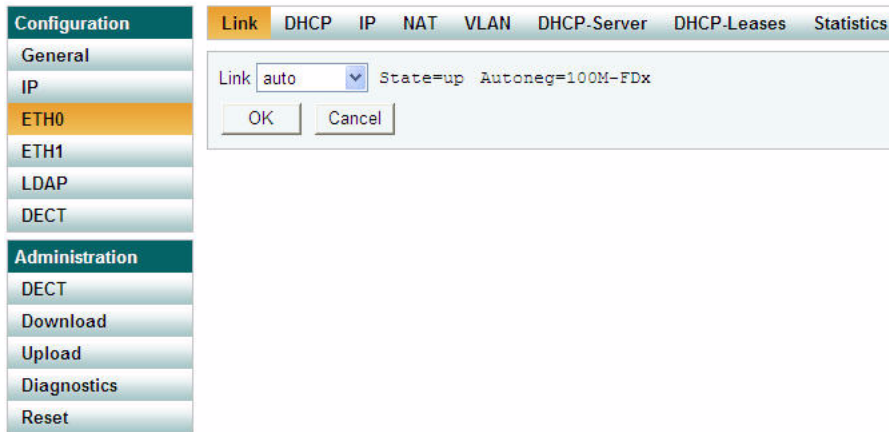
- 5 In the **IP address** field, type the new IP address.
The new IP address is now the default address when accessing the KWS600v3.
- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.
Contact your system administrator for more information.
- 8 Click **OK**.

9 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.3.3 Configuring Ethernet Link (Standby)

1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

Figure 46 Adm. Page: Configuration/ETH0/Link page



2 From the **Link** list, select **auto**, and then click **OK**.

When selecting **auto**, the link speed will be determined by the network switch.

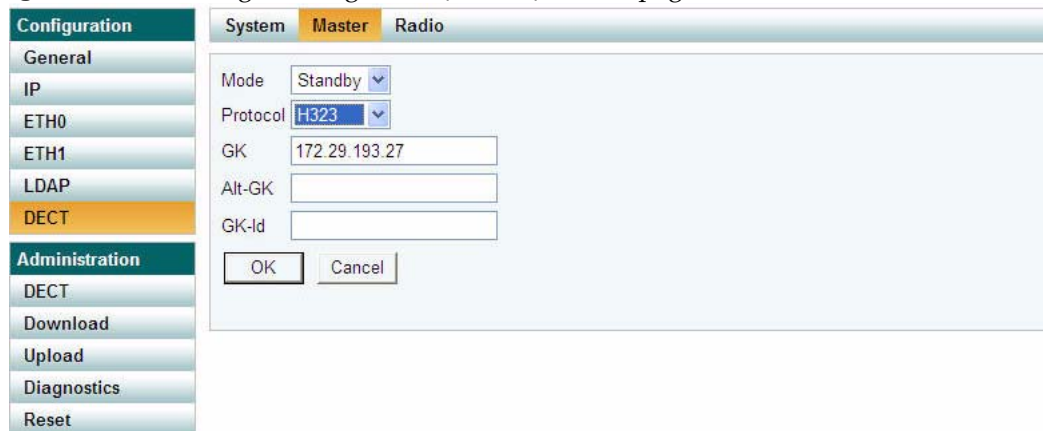
3 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.3.4 Configuring DECT Master (Standby)

On the **Master** page you need to define the KWS600v3 as an alternative (Standby) Master KWS600v3.

1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 47 Adm. Page: Configuration/DECT/Master page



- 2 From the **Mode** list, select **Standby**. Selecting **Standby** defines the KWS600v3 as an alternative Master (Standby).
- 3 Check that the settings for **Protocol**, **GK** (Gate Keeper - Primary call handler), **Alt-GK** (Alternative Gate Keeper - Secondary call handler) are identical to the settings for the Master (Primary) KWS600v3.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.3.5 Configuring DECT Radio (Standby)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 48 Adm. Page: Configuration/DECT/Radio page

Configuration	System	Master	Radio
General			
IP			
ETH0			
ETH1			
LDAP			
DECT			
Administration			
DECT			
Download			
Upload			
Diagnostics			
Reset			

Disable	<input checked="" type="checkbox"/>
Master	<input type="text" value="127.0.0.1"/>
Alt-Master	<input type="text"/>
Radio-Id	<input type="text" value="1"/>
Sync-Source	<input type="text"/>
Alt-Sync-Source	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

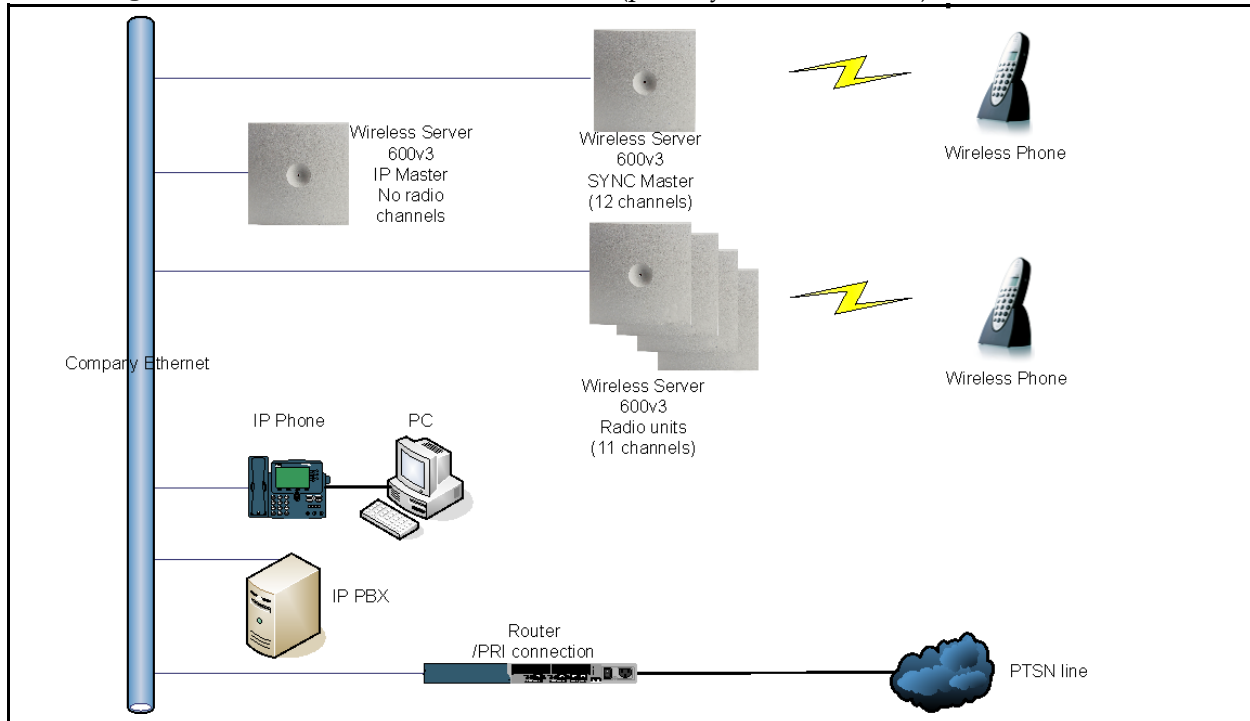
- 2 Select the **Disable** check box to disable the radio.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

The alternative (Standby) Master KWS600v3 is now configured.

7.6.4 Configuring the Secondary KIRK Wireless Server 600v3

This section describes how to configure KWS600v3 secondaries in a multi-cell solution.

After configuring the Master (Primary) KWS600v3, you need to configure each Secondary KWS600v3 to be used in the system one by one.

Figure 49 WS600v3 Multi-cell installation (primary and secondaries)

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 79.

This section contains information about:

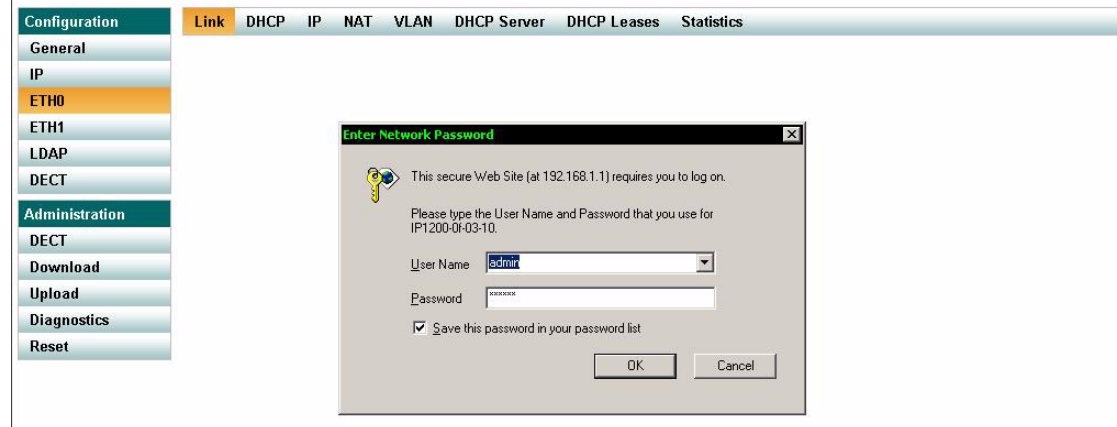
- [“Entering a System User Name and Password \(Secondary\)”](#) on page 110
- [“Assigning a Specific IP Address \(Secondary\)”](#) on page 111
- [“Configuring Ethernet Link \(Secondary\)”](#) on page 112
- [“Setting LDAP Replicators \(Secondary\)”](#) on page 113
- [“Click Reset \(under Administration menu\) to save your configuration.”](#) on page 113
- [“Configuring DECT Master \(Secondary\)”](#) on page 114
- [“Configuring DECT Radio \(Secondary\)”](#) on page 116

7.6.4.1 Entering a System User Name and Password (Secondary)

First time you access the Administration Page, you need to log on with user name and a password.

Note: The default user name of the system is **admin** and the default password of the system is **ip1200**.

Figure 50 Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type the user name.
- 2 In the **Password** field, type the password.
- 3 Click **OK**.

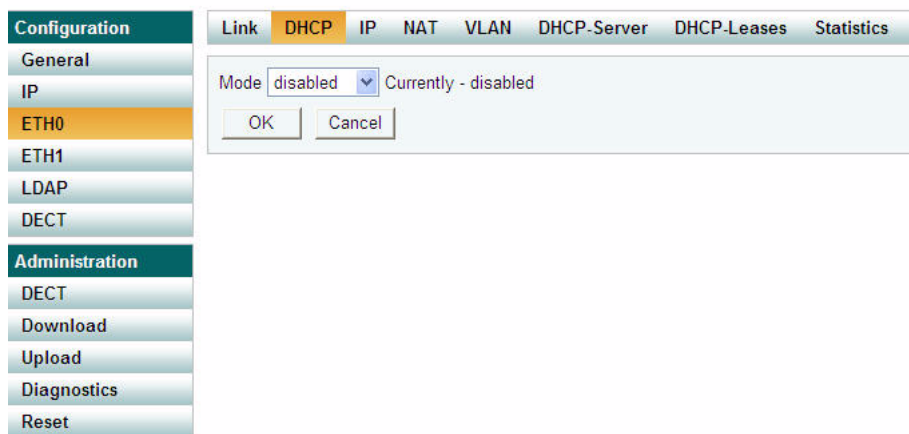
7.6.4.2 Assigning a Specific IP Address (Secondary)

To assign a specific IP address to the KWS600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KWS600v3. The new IP address and network address will be provided by the system administrator.

Note: It is advisable that the IP addresses for KWS600v3 secondaries are numbered in succession; eg. 192.168.1.3, 192.168.1.4, 192.168.1.5 etc. This makes it easier to detect a specific Secondary KWS600v3.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

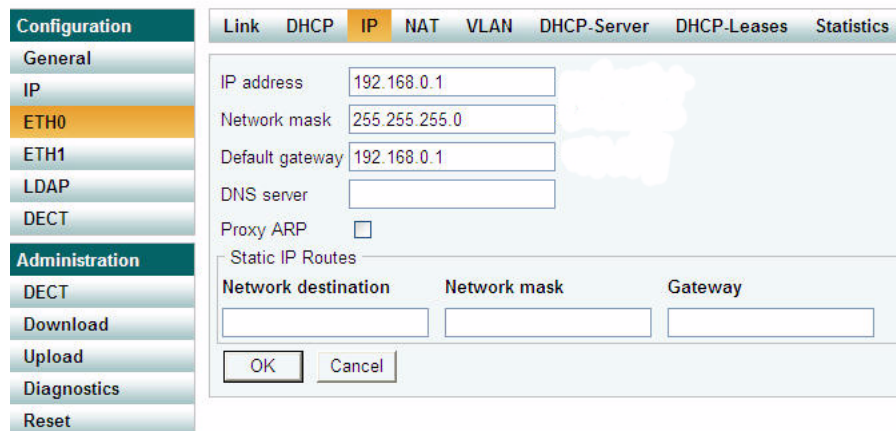
Figure 51 Adm. Page: Configuration/ETH0/DHCP page



- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

Note: It is necessary to use the ETH0 port when integrating the KWS600v3 on the local network.

Figure 52 Adm. Page: Configuration/ETH0/IP page

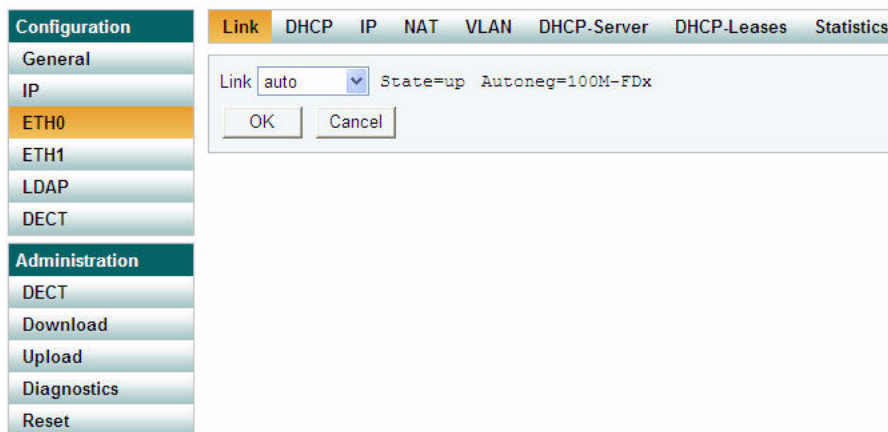


- 5 In the **IP address** field, type the new IP address.
The new IP address is now the default address when accessing the KWS600v3.
- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.
Contact your system administrator for more information.
- 8 Click **OK**.
- 9 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.4.3 Configuring Ethernet Link (Secondary)

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

Figure 53 Adm. Page: Configuration/ETH0/Link page



- 2 From the **Link** list, select **auto**, and then click **OK**.
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.4.4 Setting LDAP Replicators (Secondary)

In a KWS600v3 Multi-cell solution the Secondary KWS600v3 needs access to the information (such as system ARI code and user data) that is stored on the Master KWS600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the Secondary KWS600v3.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

Figure 54 Adm. Page: Configuration/LDAP/Replicator page

Configuration	Server	Server-Status	Replicator	Replicator-Status	Expert
General					
IP					
ETH0					
ETH1					
LDAP					
DECT					
Administration					
DECT					
Download					
Upload					
Diagnostics					
Reset					

Enable
 Server
 Alt. Server
 Filter Type
 DECT Gateway Name
 User
 Password

- 2 Select the **Enable** check box.
- 3 In the **Server** field, type the IP address of the Master KWS600v3 - or the LDAP Server, if this is part of your installation.
- 4 In the **User** field, type the user name.
- 5 In the **Password** field, type the password.

Note: The password will be verified against the Master KWS600v3.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.4.5 Configuring DECT Master (Secondary)

On the **Master** page you need to define the KWS600v3 as a Secondary KWS600v3.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 55 Adm. Page: Configuration/DECT/Master page

Configuration	System	Master	Radio
General	Mode: Off		
IP	Protocol: H323		
ETH0	GK:		
ETH1	Alt-GK:		
LDAP	GK-Id:		
DECT	OK Cancel		
Administration			
DECT			
Download			
Upload			
Diagnostics			
Reset			

- 2 From the **Mode** list, select **Off**. Selecting **Off** defines the KWS600v3 as a Secondary.
- 3 Check that the protocol **H323** is selected from the **Protocol** list.

Note: The **H.323** Protocol is always used for internal communication between KWS600v3 secondaries, regardless of the protocol used in the Master KWS600v3.

- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.4.6 Configuring DECT System (Secondary)

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

Figure 56 Adm. Page: Configuration/DECT/System page

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.
If changing the name, the system cannot operate.
- 3 In the **PWD** (password) field, type the password, and then type it again in the field below.

Note: If you have changed the password when configuring the Master (Primary) KWS600v3, you must use this when configuring the alternative Master (Standby) KWS600v3 and KWS600v3 secondaries.

- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.4.7 Configuring DECT Radio (Secondary)

On the Radio page you define which radio ID the Master KWS600v3 and Sync Master has to synchronize with.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 57 Adm. Page: Configuration/DECT/Radio page

- 2 In the **Master** field, type the IP address of the Master KWS600v3.
- 3 In the **Radio-Id** field, type the radio ID number of the KWS600v3. The radio ID can be a number between 1 and 255. See your site planner.

Note: It is advisable to make the IP address numbering of a Secondary KWS600v3 identical with the radio ID number of the unit in question, eg.:

- IP address 192.168.1.3/Radio ID 3
 - IP address 192.168.1.4/Radio ID 4
 - IP address 192.168.1.5/Radio ID 5
- 4 In the **Sync-Source** field, type the radio ID of the KWS600v3, you want to synchronize on. See your site planner.
 - 5 In the **Alt-Sync-Source** field, type the radio ID of the KWS600v3, you want to synchronize on. See your site planner.
 - 6 Click **OK**.
 - 7 Click **Reset** (under **Administration** menu) to save your configuration.

The Secondary KWS600v3 is now configured.

Note: When configuring more KWS600v3 secondaries, it is possible to make a backup of the configuration file of the first configured Secondary KWS600v3. This configuration file can be used as input to configure the rest of the KWS600v3 secondaries. For more information about making a backup of a configuration file, refer to [“Updating Configuration File” on page 178](#). For more information about configuring KWS600v3 secondaries using a backup configuration file of another Secondary KWS600v3 as input, refer to [“” on page 117](#).

7.6.5 Configuring Secondary KWS600v3 Using a Back-Up File

A previously saved configuration file can be loaded to the KWS600v3 and used as input for configuration.

Note: For more information about configuring the first Secondary KWS600v3 to be used as input in the configuration of more KWS600v3 secondaries, refer to ["" on page 108](#). For more information about making a backup of a configuration file, refer to ["Updating Configuration File" on page 178](#).

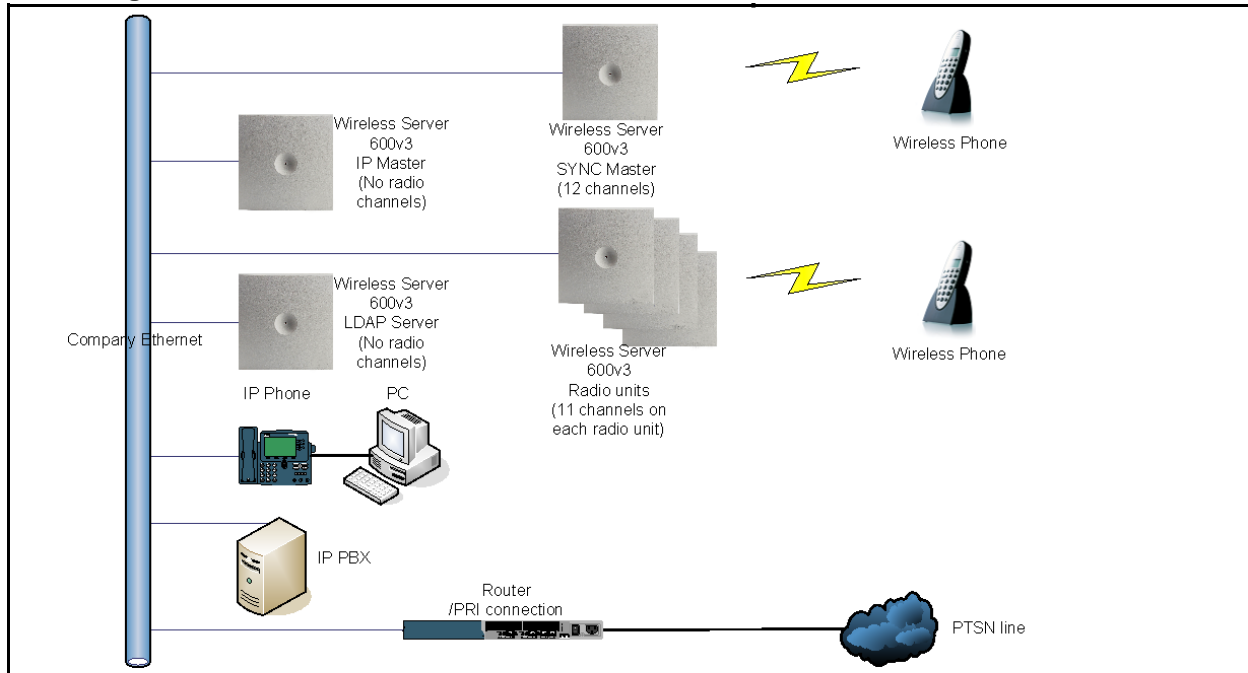
- 1 Upload the configuration file to the KWS600v3 secondary in question.
For more information about updating the configuration file, refer to ["Updating Configuration File" on page 178](#).
- 2 Change the IP address.
For more information about changing the IP address, refer to ["Assigning a Specific IP Address \(Secondary\)" on page 111](#).
- 3 Change radio ID.
For more information about changing the radio ID, refer to ["Configuring DECT Radio \(Secondary\)" on page 116](#).
- 4 Change Primary Sync ID.
For more information about changing the Primary Sync ID, refer to ["Configuring DECT Radio \(Secondary\)" on page 116](#).
- 5 Change alternative Sync ID.
For more information about changing the alternative Sync ID, refer to ["Configuring DECT Radio \(Secondary\)" on page 116](#).
- 6 Click **Reset** to save your configuration.

7.6.6 Configuring Standalone LDAP Server

In a KWS600v3 Multi-cell solution it is possible to configure an LDAP Server to handle all handset/user registration data (such as name, directory number, IPEI etc.).

If you configure an LDAP Server to handle all handset/user registration and read/write information between the primaries and secondaries of a KWS600v3 Solution, then the Master KWS600v3 only manage the connection to the call handler.

Note: Configuring an LDAP Server is only recommended in very large multi-cell installations (more than 500-600 handsets).

Figure 58 Wireless Server 600v3 Multi-cell installation with LDAP Server

This section contains information about:

- “Setting LDAP Mode (LDAP Server)” on page 118
- “Configuring DECT Master (LDAP Server)” on page 119
- “Configuring DECT Radio (LDAP Server)” on page 119

7.6.6.1 Setting LDAP Mode (LDAP Server)

1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

Figure 59 Adm. Page: Configuration/LDAP/Server page

Configuration	Server	Server-Status	Replicator	Replicator-Status	Expert
General					
IP					
ETH0					
ETH1					
LDAP					
DECT					
Administration					
DECT					
Download					
Upload					
Diagnostics					
Reset					

User	Password	Write Access
ldap-guest	•••••	<input type="checkbox"/>
admin	•••••	<input checked="" type="checkbox"/>

OK Cancel

2 In the **User** fields, type the user names.

3 In the **Password** fields, type the passwords.

- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.6.2 Configuring DECT Master (LDAP Server)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

Figure 60 Adm. Page: Configuration/DECT/Master page

- 2 From the **Mode** list, select **Off**.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.6.3 Configuring DECT Radio (LDAP Server)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

Figure 61 Adm. Page: Configuration/DECT/Radio page

- 2 Select the **Disable** check box to disable the radio.

- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.
The LDAP Server is now configured.

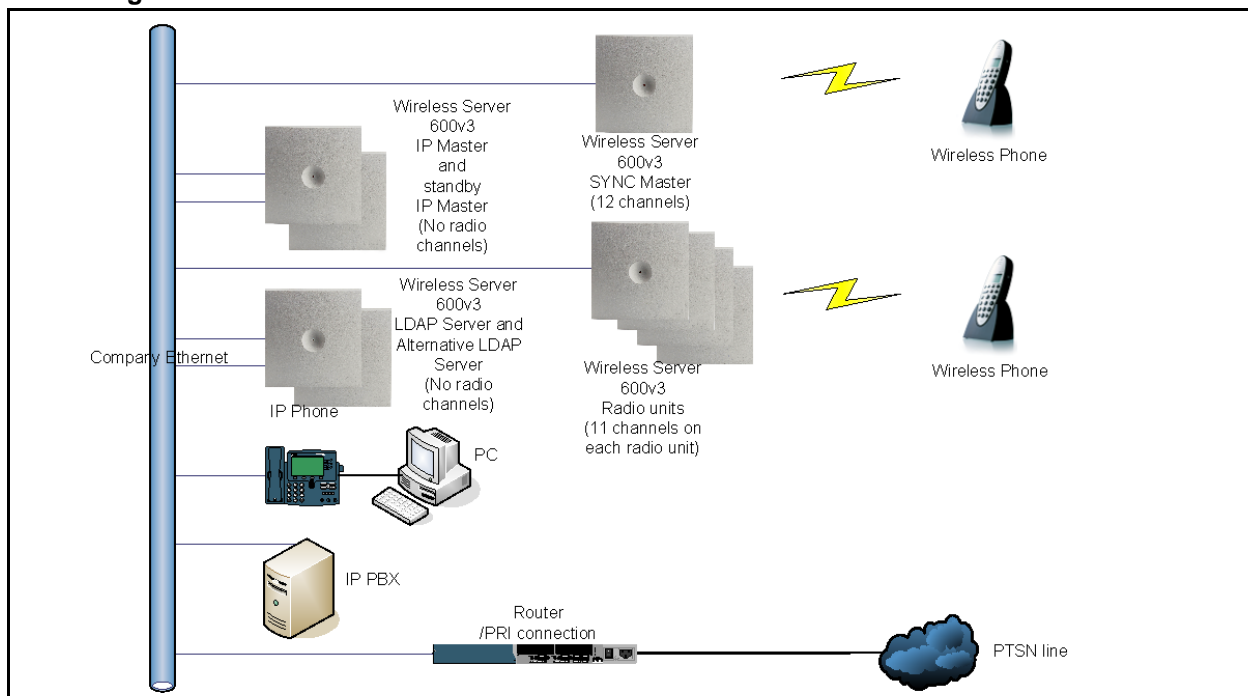
7.6.7 Configuring Alternative LDAP Server

Working with LDAP Servers, you can also define a KWS600v3 to be an alternative LDAP Server. In case the LDAP Server stops working, the alternative LDAP Server will take over the LDAP Replication to the radio units.

Note: In case the Master KWS600v3 and the LDAP Server is the same unit, the alternative LDAP Server will also take the role as the Master KWS600v3 if the LDAP Server stops working.

Note: The alternative LDAP Server can be used as the alternative (Standby) Master KWS600v3. This configuration is not recommended if the installation requires an LDAP Server.

Figure 62 WS600v3 Multi-cell installation with Alternative LDAP Server



This section contains information about:

- [“Setting LDAP Mode \(Alt. LDAP Server\)” on page 121](#)
- [“Setting LDAP Replicator \(Alt. LDAP Server\)” on page 121](#)

7.6.7.1 Setting LDAP Mode (Alt. LDAP Server)

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

Figure 63 Adm. Page: Configuration/LDAP/Server page

User	Password	Write Access
ldap-guest	••••••	<input type="checkbox"/>
admin	••••••	<input checked="" type="checkbox"/>

- 2 In the **User** fields, type the user names.
- 3 In the **Password** fields, type the passwords.
- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.

7.6.7.2 Setting LDAP Replicator (Alt. LDAP Server)

In a KWS600v3 Multi-cell solution the alternative LDAP Server needs access to the information (such as system ARI code and user data) that are stored on the Master KWS600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the alternative LDAP Server.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

Figure 64 Adm. Page: Configuration/LDAP/Replicator page

Configuration	Server	Server-Status	Replicator	Replicator-Status	Expert
General	Enable <input checked="" type="checkbox"/>				
IP	Server <input type="text" value="172.18.2.135"/>				
ETH0	Alt. Server <input type="text" value="0.0.0.0"/>				
ETH1	Filter Type <input type="text" value="Dect System Name"/>				
LDAP	DECT Gateway Name <input type="text"/>				
DECT	User <input type="text" value="admin"/>				
Administration	Password <input type="password" value="*****"/>				
DECT	<input type="button" value="OK"/> <input type="button" value="Cancel"/>				
Download					
Upload					
Diagnostics					
Reset					

- 2 In the **Server** field, type the IP address of the LDAP Server.
- 3 In the **User name** field, type the user name.
- 4 In the **Password** field, type the password.
- 5 Select the **Enable** check box.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.
The alternative LDAP Server is now configured.

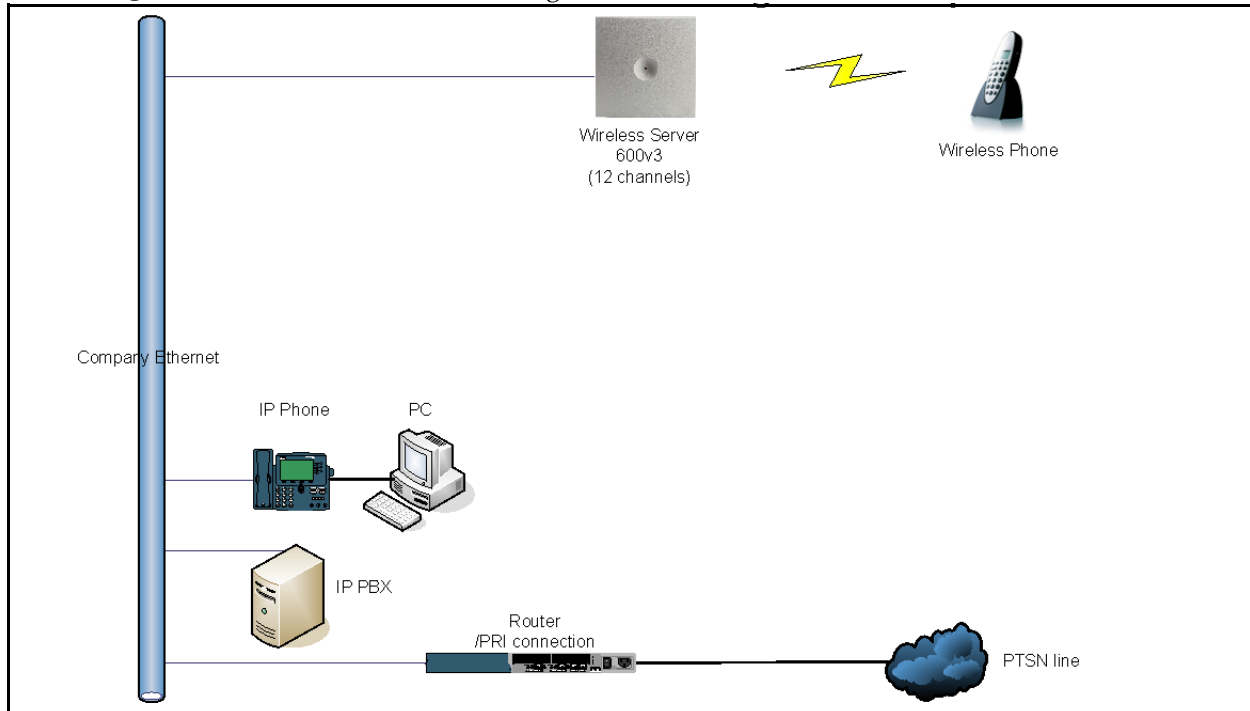
7.7 Configuring Single-Cell Solution through KIRK Configuration Tool

Note: Using the Configuration Tool is recommended when configuring medium-sized to large installations. It is possible, though, to use the Configuration Tool for single-cell configuration as well.

For information on accessing the Configuration Tool, refer to [“Accessing the KIRK Configuration Tool” on page 81](#).

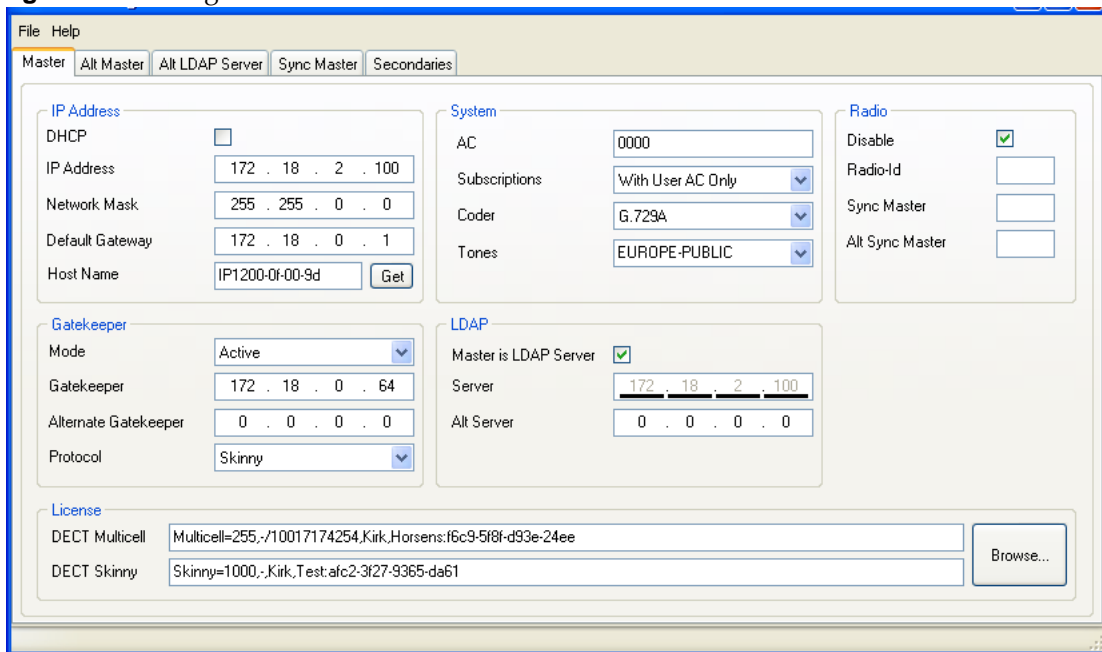
This section describes how to configure a KWS600v3 Single-cell solution.

Figure 65 Wireless Server 600v3 Single-cell installation



In the **Master** tab you configure the KWS600v3. This is only a single-cell configuration, therefore you do not need to provide information about LDAP and multi-cell license.

Figure 66 Configuration Tool: Master tab



- 1 In the **IP Address** area:
 - Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the KWS600v3, provided by your system administrator.

This IP address is now the default address when accessing the KWS600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KWS600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

- 2 In the **Gatekeeper** area:
 - From the **Mode** list, select **Active**.
 - In the **Gatekeeper** field, type the IP address of your call handler.
Contact your system administrator for more information.
 - In the **Alternative Gatekeeper** field, type an alternative IP address of your call handler (optional).
Contact your system administrator for more information.
 - From the **Protocol** list, select either **H323**, **SIP** or **Skippy** depending on the protocol you are using.
- 3 In the **System** area:
 - In the **AC** field, type an authentication code (optional).
 - From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Disabled**.

Note: It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 152](#).
 - From the **Coder** list, select a voice compression value that matches your telephony infrastructure.
Contact your system administrator for more information.

Note: The voice compression value is not exclusive and the KWS600v3 is not forced to use the coder.
 - From the **Tones** list, select a ring tone.
- 4 In the **Radio** area:
 - In the **Radio-Id** field, type **1**.
- 5 Save the configuration.
For more information about saving the configuration, refer to [“Saving Configurations” on page 141](#).

7.8 Configuring Multi-Cell Solution through KIRK Configuration Tool

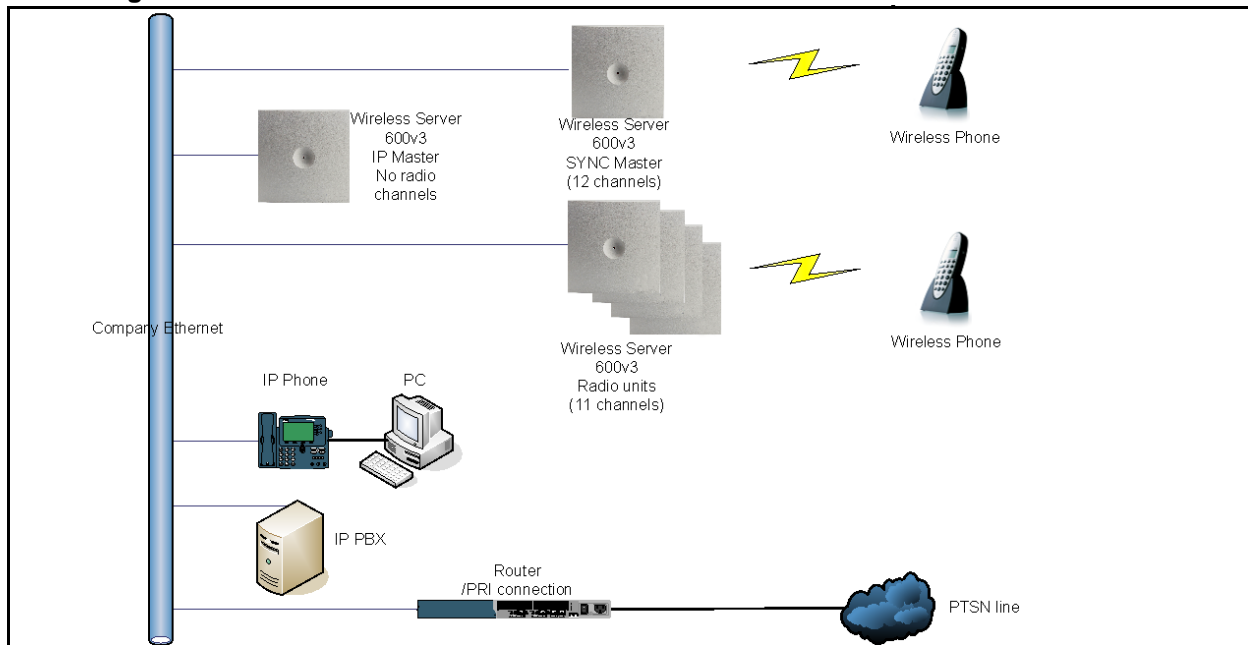
Note: Using the Configuration Tool is recommended when configuring medium-sized to large installations.

Note: Multi cell license must be installed on the master KIRK Wireless Server 600v3

For information on accessing the Configuration Tool, refer to [“Accessing the KIRK Configuration Tool” on page 81](#).

This section describes how to configure a KWS600v3 Multi-cell solution.

Figure 67 Wireless Server 600v3 Multi-cell installation



This section contains information about:

- [“Configuring the IP Master \(Primary\) KIRK Wireless Server 600v3” on page 91](#)
- [“The Sync Master is now configured.” on page 104](#)
- [“” on page 132](#)
- [“” on page 133](#)
- [“” on page 136](#)
- [“” on page 108](#)
- [“Saving Configurations” on page 141](#)
- [“” on page 141](#)
- [“Opening Configuration Files” on page 144](#)

7.8.1 Configuring the Master (Primary) KIRK Wireless Server 600v3

Note: To configure a KWS600v3 Multi-cell solution it is necessary to obtain a multi-cell license. (E-mail the MAC address to the emeadkordermanagement@polycom.com, and you will receive an e-mail containing a text file with the multi-cell license. This file must be saved in order to be uploaded to the system).

In the **Master** tab you configure the Master (Primary) KWS600v3.

Figure 68 Configuration Tool: Master tab

The screenshot shows the 'Master' tab of the Configuration Tool. The interface includes several sections:

- IP Address:** DHCP (unchecked), IP Address (172.18.2.100), Network Mask (255.255.0.0), Default Gateway (172.18.0.1), Host Name (IP1200-0f-00-9d) with a 'Get' button.
- System:** AC (0000), Subscriptions (With User AC Only), Coder (G.729A), Tones (EUROPE-PUBLIC).
- Radio:** Disable (checked), Radio-Id, Sync Master, Alt Sync Master.
- Gatekeeper:** Mode (Active), Gatekeeper (172.18.0.64), Alternate Gatekeeper (0.0.0.0), Protocol (Skinny).
- LDAP:** Master is LDAP Server (checked), Server (172.18.2.100), Alt Server (0.0.0.0).
- License:** DECT Multicell (Multicell=255,-/10017174254,Kirk,Horsens:f6c9-5f8f-d93e-24ee), DECT Skinny (Skinny=1000,-/Kirk,Test:afc2-3f27-9365-da61) with a 'Browse...' button.

1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the Master KWS600v3, provided by your system administrator.

This IP address is now the default address when accessing the Master KWS600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KWS600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

2 In the **Gatekeeper** area:

- From the **Mode** list, select **Active**. Selecting **Active** defines the KWS600v3 as a Primary (Master).
- In the **Gatekeeper** field, type the IP address of your call handler.

Contact your system administrator for more information.

- In the **Alternative Gatekeeper** field, type an alternative IP address of your call handler (optional).

Contact your system administrator for more information.

- From the **Protocol** list, select either **H323**, **SIP** or **Skinny** depending on the protocol you are using.

3 In the **System** area:

- In the **AC** field, type an authentication code (optional).
- From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Disabled**.

Note: It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 152](#).

- From the **Coder** list, select a voice compression value that matches your telephony infrastructure.

Contact your system administrator for more information.

Note: The voice compression value is not exclusive and the KWS600v3 is not forced to use the coder.

- From the **Tones** list, select a ring tone.

4 In the **LDAP** area:

The Master KWS600v3 is automatically defined as the LDAP Server.

If you need to configure a standalone LDAP Server in your system, you must deselect the **Master is LDAP Server** check box.

Note: If deselecting the **Master is LDAP Server** check box on the **Master** tab, an **LDAP Server** tab becomes available. For more information about configuring a standalone LDAP Server, refer to ["" on page 132](#).

5 In the **Radio** field:

- Select the **Disable** check box to disable the radio.

6 In the **License** area:

- Click **Browse** to search for the text file containing license information, select it, and then click **Open**.

Note: Remember to obtain a multi-cell license. (E-mail the MAC address to emeadkordermanagement@polycom.com and require a multi-cell license for the KWS600v3).

7 Save the configuration now or wait until you have finished configuring the whole installation.

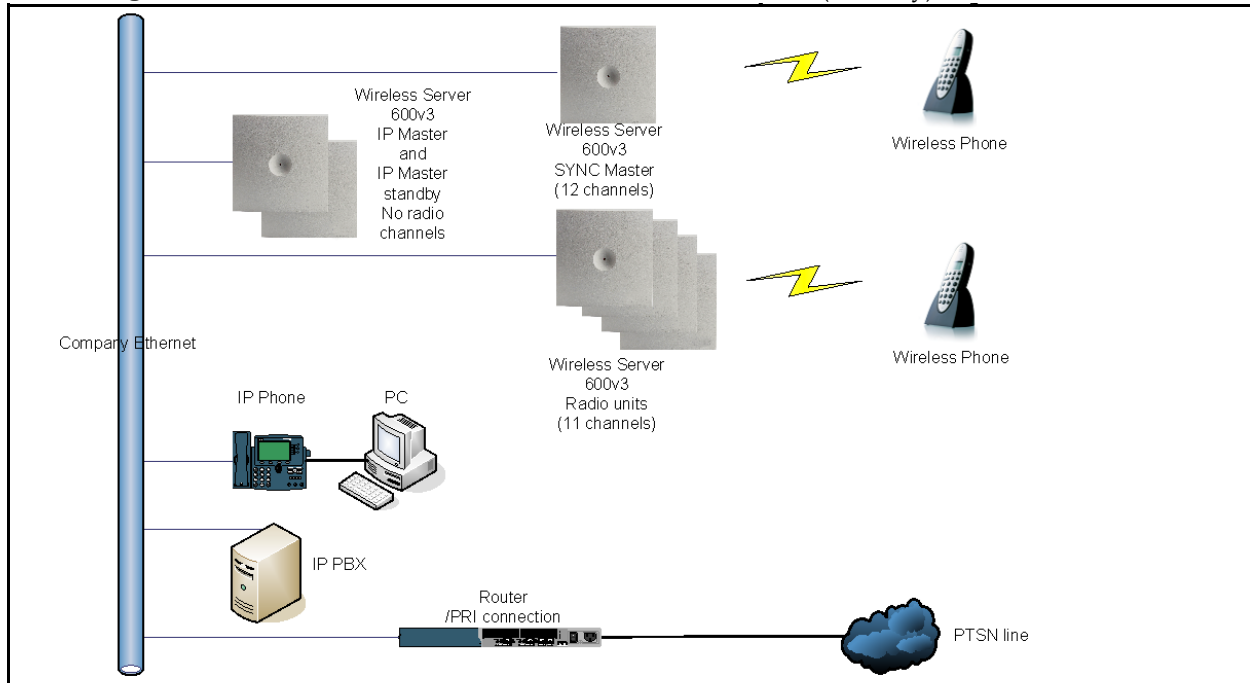
For more information about saving the configuration, refer to ["Saving Configurations" on page 141](#).

7.8.2 Configuring the Alternative Master KIRK Wireless Server 600v3

This section describes how to configure an alternative (Standby) Master KWS600v3 in a multi-cell solution. In case the Master KWS600v3 stops working, the alternative (Standby) Master KWS600v3 will take over connection to the call handler.

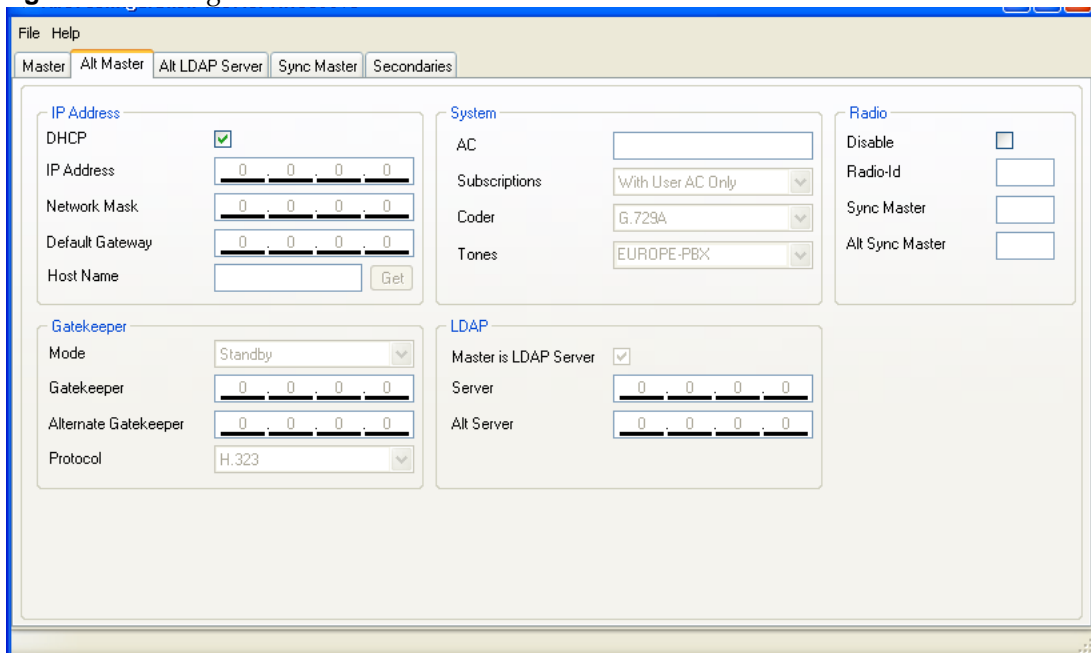
Note: Configuring an alternative Master KWS600v3 is optional - and only recommended - if you have a very large multi-cell installation (number of KWS600v3 and/or handsets).

Figure 69 WS600v3 Multi-cell installation with Alternative (Standby) Master



In the **Alt Master** tab you configure the Alternative Master KIRK Wireless Server.

Figure 70 Configuration Tool: Alt Master tab



- 1 In the **IP Address** area:
 - Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the alternative Master KWS600v3, provided by your system administrator.

This IP address is now the default address when accessing the alternative Master KWS600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KWS600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

- 2 In the **Gatekeeper** area:
 - From the **Mode** list, select **Standby**. Selecting **Standby** defines the KWS600v3 as an alternative (Standby) Master.
- 3 In the **Radio** field:
 - Select the **Disable** check box to disable the radio.
- 4 Save the configuration now or wait until you have finished configuring the whole installation.

For more information about saving the configuration, refer to [“Saving Configurations”](#) on page 141.

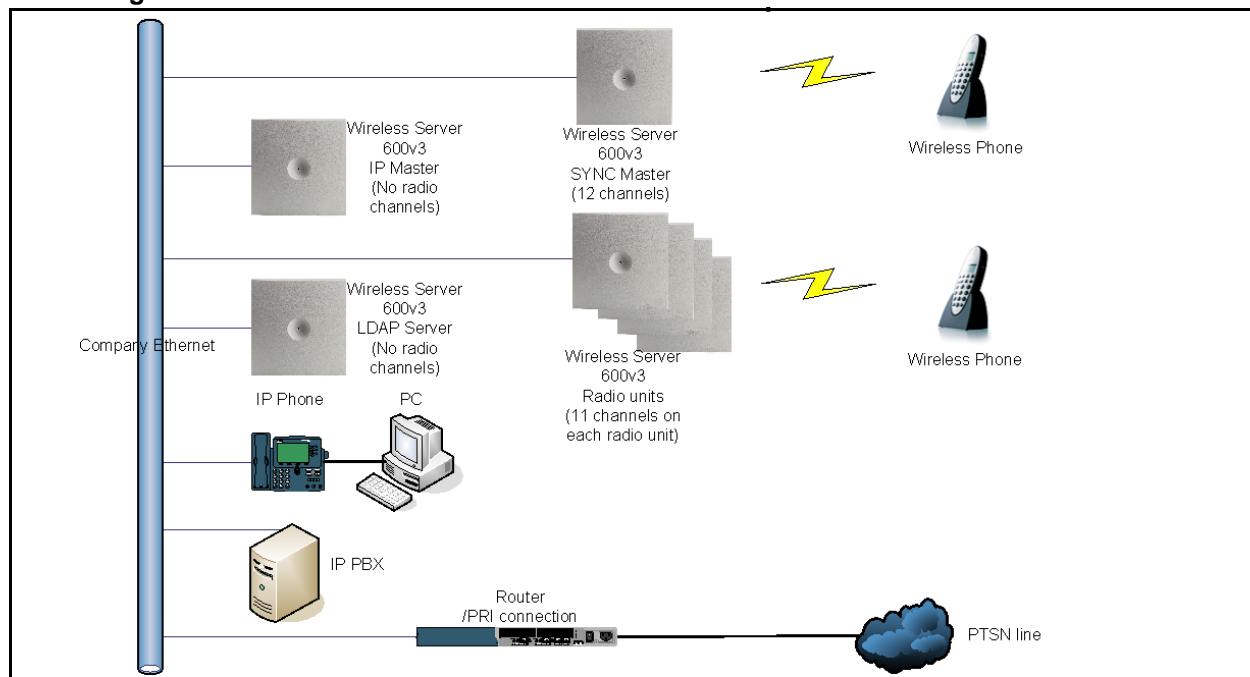
7.8.3 Configuring LDAP Server

In a KWS600v3 Multi-cell solution it is possible to configure an LDAP Server to handle all handset/user registration data (such as name, directory number, IPEI etc.).

If you configure an LDAP Server to handle all handset/user registration and read/write information between the primaries and secondaries of a KWS600v3 Solution, then the Master KWS600v3 only manages the connection to the call handler.

Note: Configuring an LDAP Server is only recommended in very large multi-cell installations (more than 500-600 handsets).

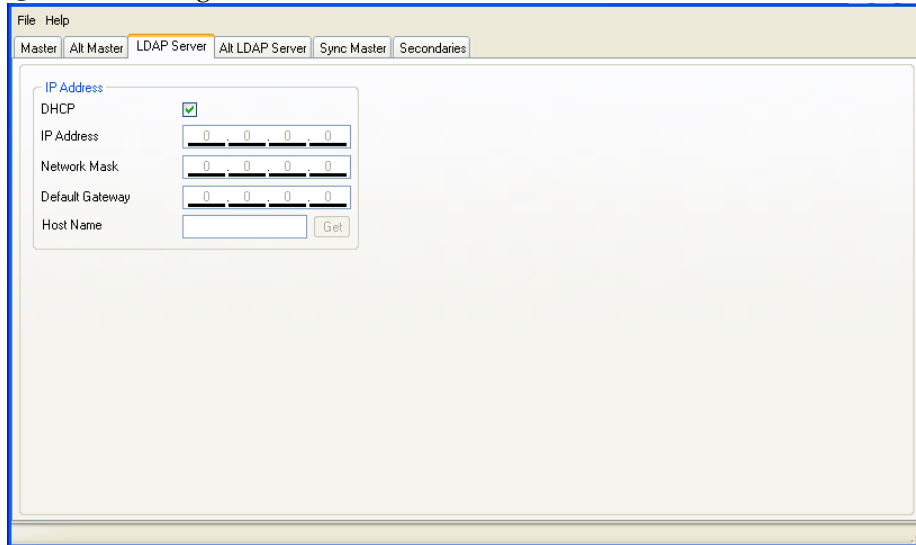
Figure 71 Wireless Server 600v3 Multi-cell installation with LDAP Server



In the **LDAP Server** tab you configure the LDAP Server.

Note: The **LDAP Server** tab is only available, if the **Master is LDAP Server** check box on the **Master** tab is deselected.

Figure 72 Configuration Tool: LDAP Server tab



1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the LDAP Server, provided by your system administrator.

This IP address is now the default address when accessing the LDAP Server.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KWS600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

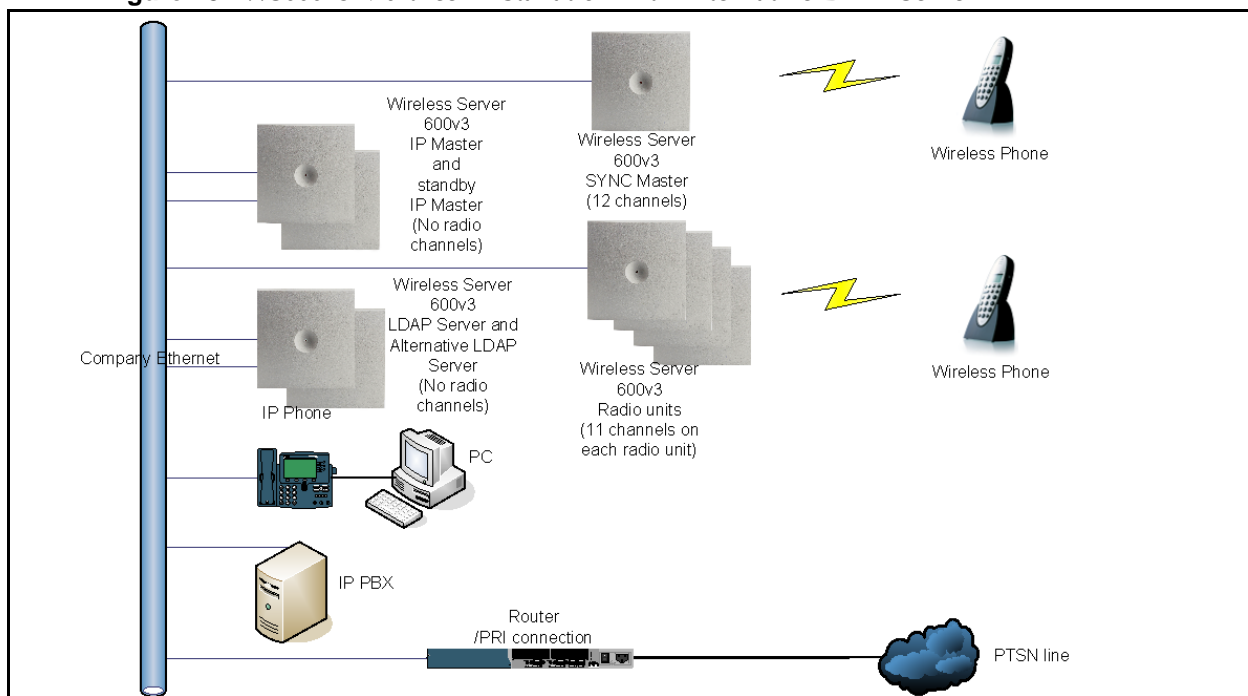
Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

7.8.4 Configuring Alternative LDAP Server

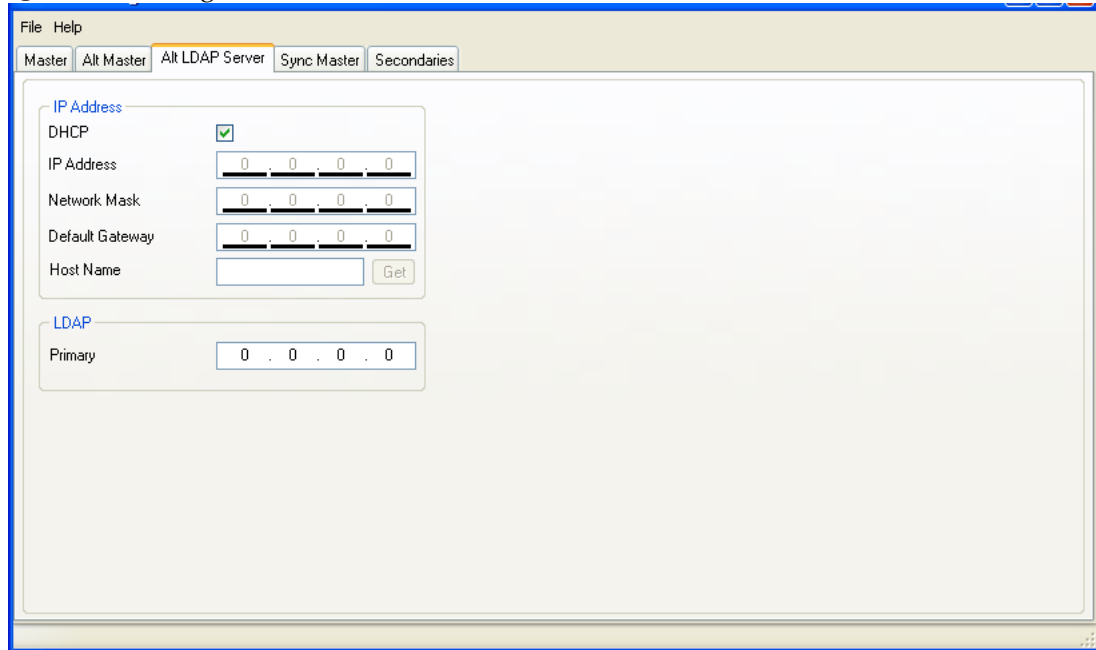
Working with LDAP Servers, you can also define a KWS600v3 to be an alternative LDAP Server. In case the LDAP Server stops working, the alternative LDAP Server will take over the LDAP Replication to the radio units.

Note: In case the Master KWS600v3 and the LDAP Server is the same unit, the alternative LDAP Server will also take the role as the Master KWS600v3 if the LDAP Server stops working.

Figure 73 WS600v3 Multi-cell installation with Alternative LDAP Server



In the **Alt LDAP Server** tab you configure the alternative LDAP Server.

Figure 74 Configuration Tool: Alt LDAP Server tab**1** In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the alternative LDAP Server, provided by your system administrator.

This IP address is now the default address when accessing the alternative LDAP Server.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KWS600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

2 In the **LDAP** area:

- In the **Primary** field, type the IP address of the primary LDAP Server.

3 Save the configuration now or wait until you have finished configuring the whole installation.

For more information about saving the configuration, refer to [“Saving Configurations”](#) on page 141.

7.8.5 Configuring Sync Master

This section describes how to configure a Sync Master KWS600v3 in a multi-cell solution.

KWS600v3 primary and secondaries uses the existing DECT air interface to synchronize to each other. One KWS600v3 is configured as a Sync (synchronization) Master in the system. It is not necessary to configure what KWS600v3 the Sync Master should synchronize to.

In the **Sync Master** tab you configure the Sync Master.

Figure 75 Configuration Tool: Sync Master tab

The screenshot shows a web-based configuration interface for the Sync Master tab. The interface includes a menu bar (File, Help) and a tabbed navigation system with tabs for Master, Alt Master, Alt LDAP Server, Sync Master (selected), and Secondaries. The main configuration area is divided into three sections:

- IP Address:** Contains a DHCP checkbox (unchecked), IP Address (172 . 18 . 2 . 104), Network Mask (255 . 255 . 0 . 0), Default Gateway (172 . 18 . 0 . 1), and Host Name (IP1200-0f-00-97) with a Get button.
- Radio:** Contains Radio-Id (104), Master (172 . 18 . 2 . 100), and Alt Master (0 . 0 . 0 . 0).
- LDAP:** Contains Primary (172 . 18 . 2 . 100) and Alt (0 . 0 . 0 . 0).

1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the Sync Master, provided by your system administrator.

This IP address is now the default address when accessing the Sync Master.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.

- In the **Host Name** field, type the host name of the KWS600v3.
The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3).
Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

- 2 In the **LDAP** area:
 - In the **Primary** field, type the IP address of the primary LDAP Server.
 - In the **Alt** field, type the IP address of the alternative LDAP Server.
- 3 In the **Radio** area:
 - In the **Master** field, type the IP address of the Master KWS600v3.
 - In the **Alt Master** field, type the IP address of the alternative (Standby) Master KWS600v3.

Note: The radio ID of the KWS600v3 is by default identical to the last octet of its IP address. It is recommended not to change the radio ID.

- 4 Save the configuration now or wait until you have finished configuring the whole installation.

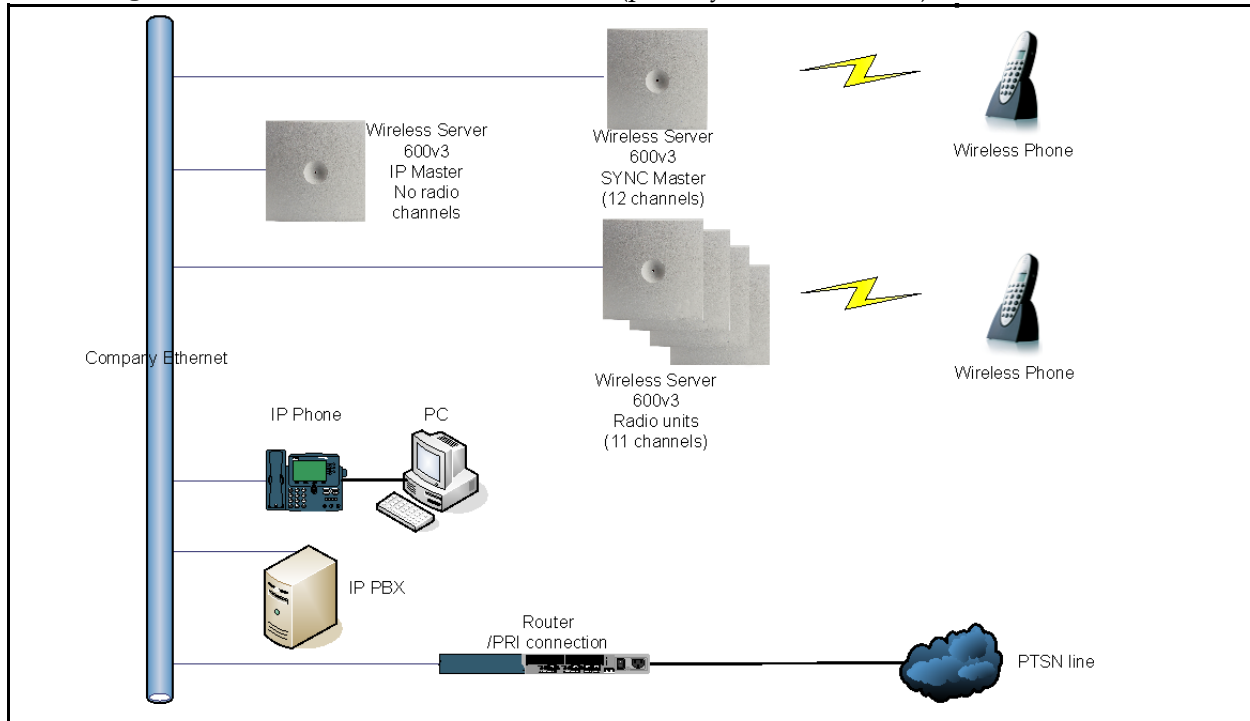
For more information about saving the configuration, refer to [“Saving Configurations” on page 141](#).

7.8.6 Configuring the Secondary KIRK Wireless Server 600v3

This section describes how to configure KWS600v3 secondaries in a multi-cell solution.

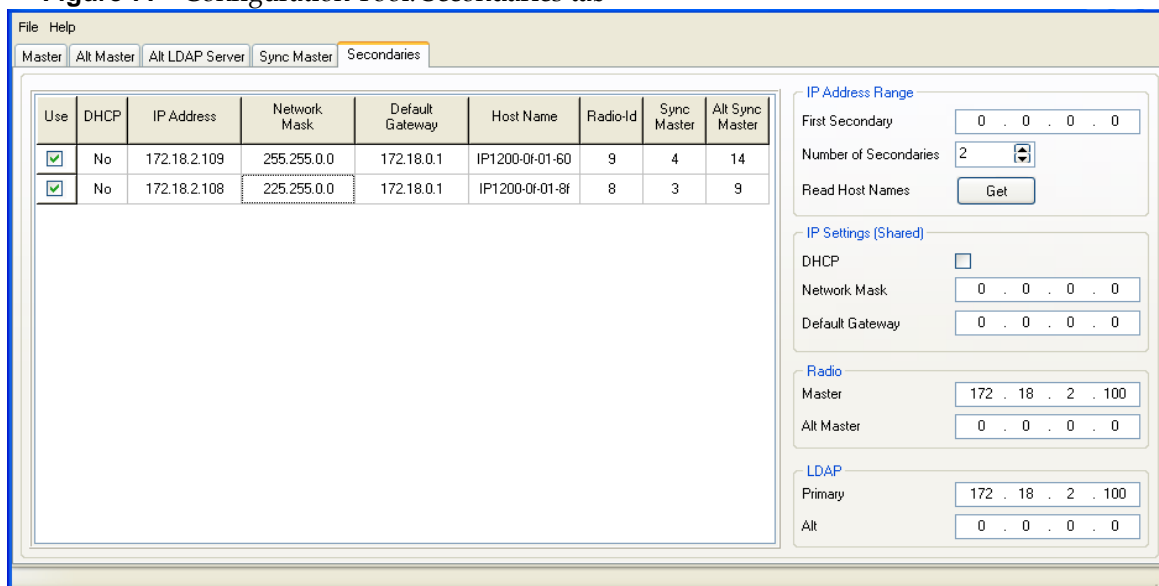
After configuring the Master (Primary) KWS600v3, you need to configure each Secondary KWS600v3 to be used in the system.

Figure 76 WS600v3 Multi-cell installation (primary and secondaries)



In the **Secondaries** tab you configure the Secondary KWS600v3.

Figure 77 Configuration Tool: Secondaries tab



Use	DHCP	IP Address	Network Mask	Default Gateway	Host Name	Radio-Id	Sync Master	Alt Sync Master
<input checked="" type="checkbox"/>	No	172.18.2.109	255.255.0.0	172.18.0.1	IP1200-0f-01-60	9	4	14
<input checked="" type="checkbox"/>	No	172.18.2.108	225.255.0.0	172.18.0.1	IP1200-0f-01-8f	8	3	9

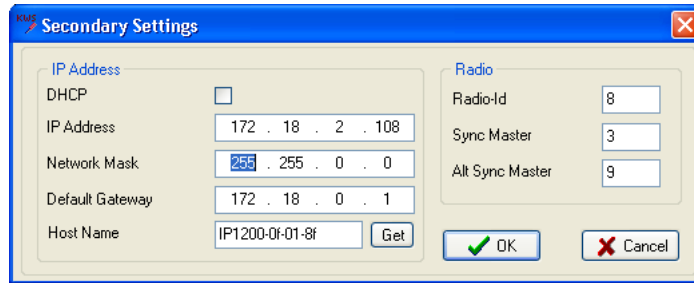
1 In the **IP Address Range** area:

- In the **First Secondary** field, type the IP address of the first Secondary KWS600v3. Contact your system administrator for more information.
- From the **Number of Secondaries** list, define the total number of KWS600v3 secondaries in your installation (see your site planner).

Note: The KWS600v3 secondaries will be provided with consecutively numbered IP addresses. The last octet of the IP address will automatically become the radio ID for the unit.

- Provide the host name of the KWS600v3 in question, and radio ID of the Sync Master and Alternative Master Sync.
 - Click in the **host name** column of the Secondary KWS600v3 in question (in the left area of the **Secondaries** tab).

A **Secondary Settings** dialog box appears.

Figure 78 Configuration Tool: Secondary Settings dialog box

- In the **Host Name** field, type the host name. The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KWS600v3 (to be found on the label on the rear of the KWS600v3). Eg. **ip1200-0f-01-9d**

Note: When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KWS600v3 in question and valid on the whole network.

- In the **Sync Master** field, type the radio ID of the Sync Master. See your site planner.
- In the **Alt Sync Master** field, type the radio ID of the alternative Sync Master. See your site planner.

Note: The radio ID of the Secondary KIRK Wireless Server is by default identical to the last octet of its IP address. It is recommended not to change the radio ID.

- Click **OK** to close the dialog box.

2 In the **IP Settings (Shared)** area:

- Deselect the **DHCP** check box.

First time you power up the KWS600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.

3 In the **Radio** area:

- In the **Master** field, type the IP address of the Master KWS600v3.
- In the **Alt Master** field, type the IP address of the alternative (Standby) Master KWS600v3.

4 In the **LDAP** area:

- In the **Primary** field, type the IP address of the primary LDAP Server.
- In the **Alt** field, type the IP address of the alternative LDAP Server.

- 5 Save the configuration now or wait until you have finished configuring the whole installation.

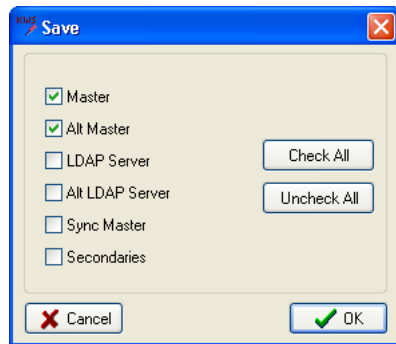
For more information about saving the configuration, refer to [“Saving Configurations”](#) on page 141.

7.8.7 Saving Configurations

This section describes how to save your configurations. You can save all the configurations or just some of them.

- 1 On the **File** menu, click **Save**.
A **Save** dialog box appears.

Figure 79 Configuration Tool: Save dialog box



- 2 Select the configurations you want to save, and then click **OK**.
- 3 Indicate in which folder the file should be saved, and then click **OK**.

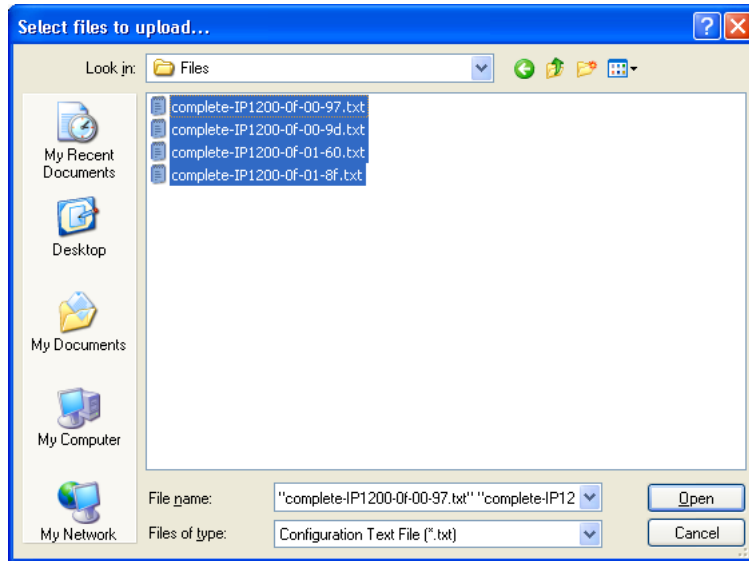
7.8.8 Uploading Configuration Files

This section describes how to upload configuration files.

Note: When uploading a configuration file to the KWS600v3, the KWS600v3 in question must have a specific IP address valid to the whole network. To ensure that the KWS600v3 has a specific IP address valid to the network either get an IP address automatically through DHCP mode or assign a specific IP address through the Administration Page. For more information about assigning a specific IP address through the Administration Page, refer to [“Assigning a Specific IP Address \(Primary\)”](#) on page 92.

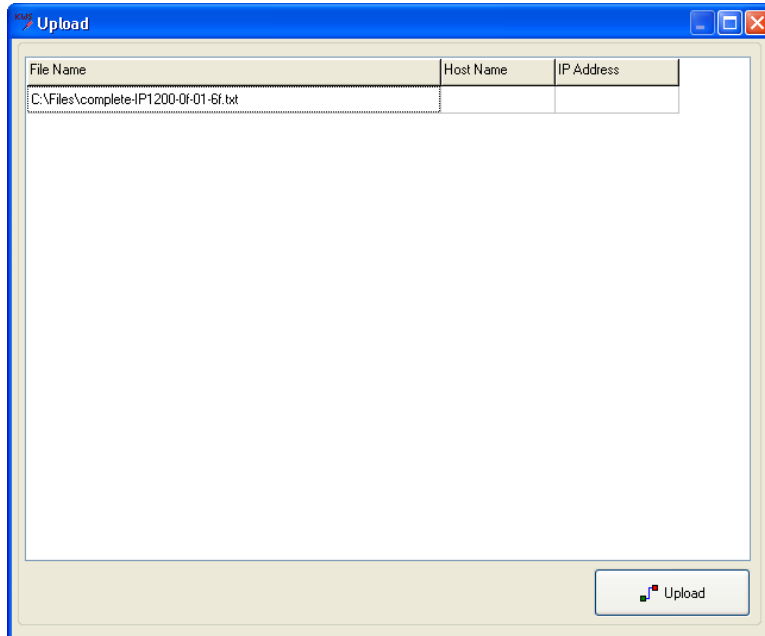
- 1 On the **File** menu, click **Upload**.
A **Select files to upload** dialog box appears.

Figure 80 Configuration Tool: Select files to upload dialog box



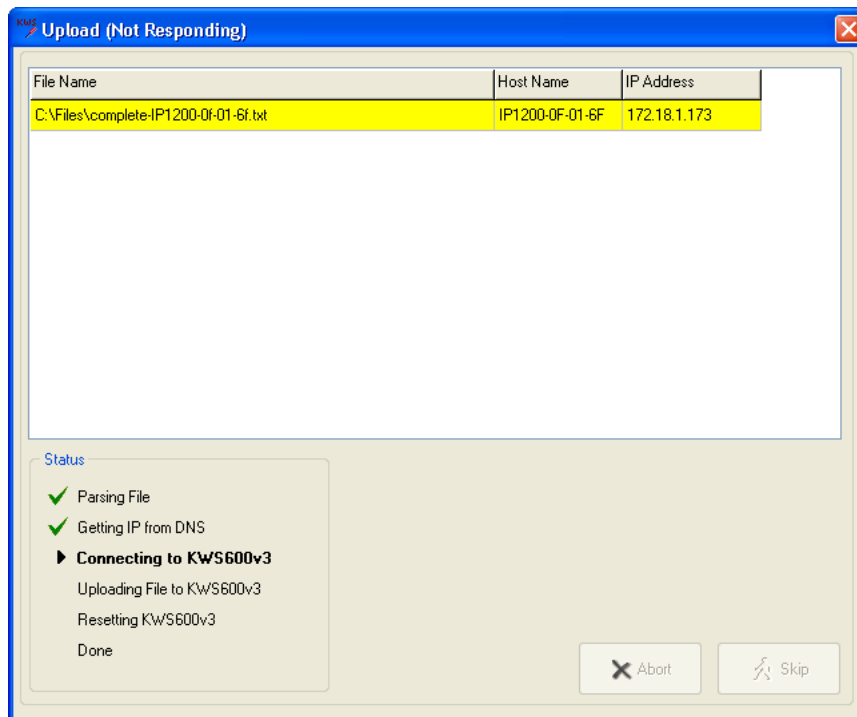
- 2 Select the configuration files to be uploaded, and then click **Open**.
An **Upload** dialog box appears:

Figure 81 Configuration Tool: Upload dialog box



- 3 Click **Upload**.

The following dialog box appears.



In the **Status** area you can see the status of the uploading process.

- Green - OK
 - Yellow - working
 - Red - error
- 4 If you receive an error, click either **Abort** to abort all uploads or click **Skip** to skip the upload in question and continue to the next (if any).

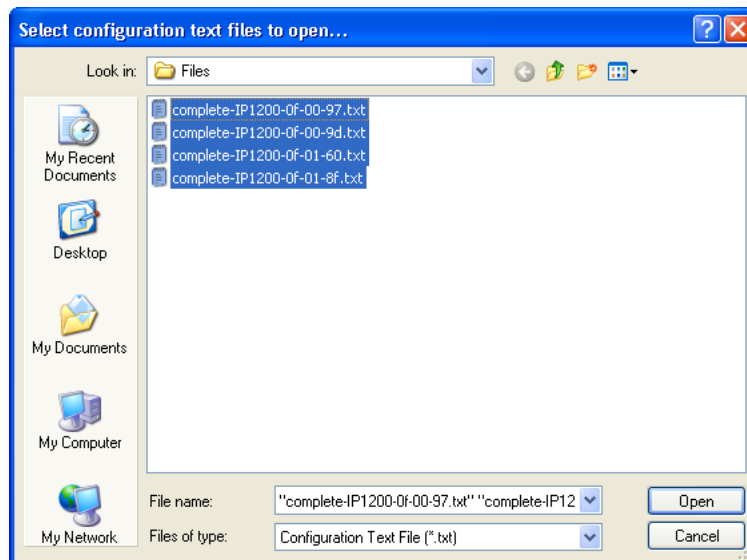
7.8.9 Opening Configuration Files

This section describes how to open configuration files.

- 1 On the **File** menu, click **Open**.

A **Select configuration text files to open** dialog box appears.

Figure 82 Configuration Tool: Select config. text file to open dialog box



- 2 Select the configuration text files in question, and then click **Open**.

All configuration data is read into the system and shown in the different tabs.

Chapter 8 KIRK Handset Registration and Subscription

This section provides information about handset registration and subscription. You must register and subscribe a handset before you can use it.

Note: This section only describes how to register handsets on the Master KWS600v3/LDAP server. You also need to register the users on the call handler. For registering users on the call handler, refer to the call handler user guide.

When registering handsets you enter information about the handsets settings (such as; the handsets serial number (IPEI), name etc.) in the system database. When subscribing handsets you subscribe a registered handset to the system for usage. If the handset is not registered in the system database, subscription of the handset is not possible.

This section includes information about:

- [Registering KIRK Handsets](#) on page 145
- [“Subscribing KIRK Handsets”](#) on page 152

8.1 Registering KIRK Handsets

To register handsets you use the web based Administration Page of the KWS600v3.

Note: If using an LDAP Server, the handsets must be registered on the LDAP Server and not on the Master (Primary) KWS600v3.

Each handset in the wireless solution must be programmed with the serial number (IPEI) before it can operate. This serial number must be registered in the web based Administration Page of the KWS600v3. Serial numbers are a unique fingerprint of each handset. The serial number is programmed into the handset during the manufacturing process and cannot be changed by field personnel.

Note: The KWS600v3 does not provide any service to a handset whose serial number is not registered in the web based Administration Page.

For more information about accessing the Administration Page, see [“Accessing the Web Based Administration Page”](#) on page 79.

This section describes how to register handsets using:

- [“Registering Handsets Using Skinny Protocol”](#) on page 145
- [“Registering Handsets Using H.323 Protocol”](#) on page 147
- [“Registering Handsets Using SIP Protocol”](#) on page 149

8.1.1 Registering Handsets Using Skinny Protocol

1 Under **Administration** menu, click **DECT**, and then click **Users**.

The following window appears.

Figure 83 Adm. Page: Administration/DECT/Users page

Configuration		Statistics	Users	Unknown	Radios	Master Calls			
General		<input type="text"/> show <input type="button" value="new"/>							
IP		Long Name	Name	No	Display	IPEI	AC	Registration	
ETH0		SEP000880000255	SEP000880000255	880255	test 880255	000880000255	172.18.0.64		
ETH1		SEP000770759055	SEP000770759055	18062	18062	000770759055	172.18.0.64		
LDAP		SEP000880000425	SEP000880000425	880425	test 880425	000880000425	172.18.0.64		
DECT		SEP000880000290	SEP000880000290	880290	test 880290	000880000290	172.18.0.64		
Administration		SEP000880000314	SEP000880000314	880314	test 880314	000880000314	172.18.0.64		
DECT		SEP000880000451	SEP000880000451	880451	test 880451	000880000451	172.18.0.64		
Download		SEP000770751864	SEP000770751864	18023	18023	000770751864	172.18.0.64		
Upload		SEP000880000525	SEP000880000525	880525	test 880525	000880000525	172.18.0.64		
Diagnostics		SEP000880000272	SEP000880000272	880272	test 880272	000880000272	172.18.0.64		
Reset		SEP000880000319	SEP000880000319	880319	test 880319	000880000319	172.18.0.64		
		SEP000880000578	SEP000880000578	880578	test 880578	000880000578	172.18.0.64		
		SEP000880000076	SEP000880000076	880076	test 880076	000880000076	172.18.0.64		

2 Click New.

An Edit User dialog box appears.

Figure 84 Adm. Page: Edit User dialog box

Long Name

Name

Number

Auth. Name (SIP only)

Password

Display Text

IPEI

Auth. Code

- 3 In the **Long Name** field, type any name. It is recommended to type the same information as in the **Name** field (see step 4 below).
- 4 In the **Name** field, type **SEP** followed by the IPEI number of the handset.
The serial number (IPEI number) consists of a five-digit handset type (manufacturer code) and a seven-digit handset number.
For more information about retrieving the IPEI number (serial number), refer to [Retrieving the Serial Number of the KIRK Handset](#) on page 73
For more general information about the IPEI number (serial number), refer to ["Registering KIRK Handsets"](#) on page 145.
- 5 In the **Number** field, type a number (e.g. 320).
Note: The number must be unique. It is recommended to type the local number used in the CallManager.
- 6 In the **Auth. Name** field, enter the auth. name (SIP and H323 only).
- 7 In the **Password** field, enter the password (SIP and H323 only).
- 8 In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.
- 9 In the **IPEI** field, type the IPEI number of the handset.
- 10 In the **Auth. Code** field, type the authentication code (AC) (optional).
The authentication code is a subscription password of a maximum eight digits, defined by the technicians, and can be used when connecting the handset to the KWS600v3. The authentication code is a subscription pin code for the individual handset.
Note: Entering authentication code overrides the AC setting defined for the Master KWS600v3 under **Configuration/DECT/System** on the Administration Page.
- 11 Click **Apply**.
- 12 Repeat step 1 to 9 for each new handset to be registered to the system.
- 13 Click **OK** to save the registration(s).
In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

8.1.2 Registering Handsets Using H.323 Protocol

- 1 Under **Administration** menu, click **DECT**, and then click **Users**.
The following window appears.

Figure 85 Adm. Page: Administration/DECT/Users page

Configuration		Statistics	Users	Unknown	Radios	Master Calls
General		<input type="text"/> show <input type="button" value="new"/>				
IP		Long Name	Name	No	Display	IPEI AC Registration
ETH0		SEP000880000255	SEP000880000255	880255	test 880255	000880000255 172.18.0.64
ETH1		SEP000770759055	SEP000770759055	18062	18062	000770759055 172.18.0.64
LDAP		SEP000880000425	SEP000880000425	880425	test 880425	000880000425 172.18.0.64
DECT		SEP000880000290	SEP000880000290	880290	test 880290	000880000290 172.18.0.64
Administration		SEP000880000314	SEP000880000314	880314	test 880314	000880000314 172.18.0.64
DECT		SEP000880000451	SEP000880000451	880451	test 880451	000880000451 172.18.0.64
Download		SEP000770751864	SEP000770751864	18023	18023	000770751864 172.18.0.64
Upload		SEP000880000525	SEP000880000525	880525	test 880525	000880000525 172.18.0.64
Diagnostics		SEP000880000272	SEP000880000272	880272	test 880272	000880000272 172.18.0.64
Reset		SEP000880000319	SEP000880000319	880319	test 880319	000880000319 172.18.0.64
		SEP000880000578	SEP000880000578	880578	test 880578	000880000578 172.18.0.64
		SEP000880000076	SEP000880000076	880076	test 880076	000880000076 172.18.0.64

2 Click New.

An Edit User dialog box appears.

Figure 86 Adm. Page: Edit User dialog box

Long Name

Name

Number

Auth. Name (SIP only)

Password

Display Text

IPEI

Auth. Code

- 3 In the **Long Name** field, type any name. It is recommended to type the same information as in the **Name** field (see step 4 below).
- 4 In the **Name** field, type **SEP** followed by the IPEI number of the handset.
The serial number (IPEI number) consists of a five-digit handset type (manufacturer code) and a seven-digit handset number.
For more information about retrieving the IPEI number (serial number), refer to [Retrieving the Serial Number of the KIRK Handset](#) on page 73
For more general information about the IPEI number (serial number), refer to [“Registering KIRK Handsets”](#) on page 145.
- 5 In the **Number** field, type the H.323 registration number.
- 6 In the **Auth. Name** field, enter the auth. name (SIP and H323 only).
- 7 In the **Password** field, enter the password (SIP and H323 only).
- 8 In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.
- 9 In the **IPEI** field, type the IPEI number of the handset.
- 10 In the **Auth. Code** field, type the authentication code (AC)(optional).
The authentication code is a subscription password of a maximum eight digits, defined by the technicians, and can be used when connecting the handset to the KWS600v3. The authentication code is a subscription pin code for the individual handset.
- 11 Click **Apply**.
- 12 Repeat step 1 to 9 for each new handset to be registered to the system.
- 13 Click **OK** to save the registration(s).
In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

8.1.3 Registering Handsets Using SIP Protocol

- 1 Under **Administration** menu, click **DECT**, and then click **Users**.
The following window appears.

Figure 87 Adm. Page: Administration/DECT/Users page

The screenshot shows a web interface with a sidebar menu on the left and a main content area. The sidebar menu includes: Configuration, General, IP, ETH0, ETH1, LDAP, DECT, Administration (highlighted), DECT, Download, Upload, Diagnostics, and Reset. The main content area has tabs for Statistics, Users (selected), Unknown, Radios, and Master Calls. Below the tabs is a table of users with columns: Long Name, Name, No, Display, IPEI, AC, and Registration. The table contains 12 rows of user data. To the left of the table is a form with a text input field and two buttons: 'show' and 'new'.

Long Name	Name	No	Display	IPEI	AC	Registration
SEP00880000255	SEP00880000255	880255	test 880255	000880000255		172.18.0.64
SEP00770759055	SEP00770759055	18062	18062	000770759055		172.18.0.64
SEP00880000425	SEP00880000425	880425	test 880425	000880000425		172.18.0.64
SEP00880000290	SEP00880000290	880290	test 880290	000880000290		172.18.0.64
SEP00880000314	SEP00880000314	880314	test 880314	000880000314		172.18.0.64
SEP00880000451	SEP00880000451	880451	test 880451	000880000451		172.18.0.64
SEP00770751864	SEP00770751864	18023	18023	000770751864		172.18.0.64
SEP00880000525	SEP00880000525	880525	test 880525	000880000525		172.18.0.64
SEP00880000272	SEP00880000272	880272	test 880272	000880000272		172.18.0.64
SEP00880000319	SEP00880000319	880319	test 880319	000880000319		172.18.0.64
SEP00880000578	SEP00880000578	880578	test 880578	000880000578		172.18.0.64
SEP00880000076	SEP00880000076	880076	test 880076	000880000076		172.18.0.64

2 Click New.

An Edit User dialog box appears.

Figure 88 Adm. Page: Edit User dialog box

The screenshot shows a dialog box titled 'Edit User' with the following fields: Long Name, Name, Number, Auth. Name (with '(SIP only)' text), Password, Display Text, IPEI, and Auth. Code. At the bottom of the dialog are three buttons: OK, Cancel, and Apply. The dialog is shown over a browser window with a status bar at the bottom indicating 'Done', 'Internet', and '100%' zoom.

- 3 In the **Long Name** field, type any name.
- 4 In the **Name** field, type the SIP registration name (no spaces allowed).
- 5 In the **Number** field, type the SIP registration number.

Note: If the SIP registration procedure requires a user name instead of the SIP registration number, you must access a hidden menu, by typing the following in the web browsers **Address** bar: `http://xxx.xxx.xxx.xxx/SIP/mod_cmd.xml?xsl=sip.xsl` (x is the IP address of the system) and then press **ENTER**. In the appearing dialog box, select the **Use name as username for authorization** check box, and then click **OK**.

- 6 In the **Auth. Name** field, enter the auth. name (SIP and H323 only).
- 7 In the **Password** field, type the SIP registration password.
- 8 In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.
- 9 In the **IPEI** field, type the IPEI number of the handset.
- 10 Click **Apply**.
- 11 Repeat step 1 to 9 for each new handset to be registered to the system.
- 12 Click **OK** to save the registration(s).

In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

8.2 Subscribing KIRK Handsets

8.2.1 KIRK 3040 Handset

A handset can be subscribed to more systems and will automatically log on to the relevant system. If a handset is subscribed to two or more systems, you can use Auto Login type A to change between the systems automatically.

When to use Auto Login type A:

- Auto Login A should only be used in separate systems without overlaps.
If a handset loses signal from the system (the display showing Out of Range), then after 20 seconds the handset will start searching for an alternative system available from the Login list and automatically change to this system.

Note: Using Auto Login A any call will be dropped when changing to an alternative system.

This section provides information about:

- [“Subscribing Handsets” on page 152](#)
- [“Subscribing a Handset to Different Systems” on page 153](#)

Note: Subscription of handsets requires the use of each registered handset.

Note: To make subscriptions, the system must allow subscriptions to be made. Some systems also require an Authentication Code (AC). If more than one system currently permits subscription, you will need to know the ID of the system (ARI code) to which you wish to subscribe. Authentication Codes and system ID's (ARI codes) will be provided by the system administrator.

Before subscribing handsets you need to ensure:

- that handset battery has been charged ([“” on page 71](#)). Low battery could cause subscription problems.
- that the handsets have been registered to the system ([“Registering KIRK Handsets” on page 145](#)).

8.2.1.1 Subscribing Handsets

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press **✓** - go to **SUBSCRIPTION CREATE** to subscribe to a system.
- 3 Press **✓**. The handset searches for the serial number of the system.
- 4 Use the **< >** keys to scroll between the IDs systems if there is more than one system available.

During subscription, the handset searches for free positions and performs subscription on the first free position.

- 5 As soon as the correct serial number of the system appears in the display, press **✓**. The serial number is located on the label on the rear of the KWS600v3.

- 6 Enter the AC (if required) using the keyboard, and press ✓.

An antenna symbol appears on the display to indicate a successful subscription. If not, the subscription has failed and the procedure must be retried.

8.2.1.2 Subscribing a Handset to Different Systems

The handset can be subscribed (connected) to a maximum of 10 different systems.

Note: To be able to log on to a system, subscription to the system must be established.

8.2.1.2.1 Changing to another System Automatically Using Auto Login A

Note: Auto Login A should only be used when systems are separate, with no overlaps.

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SELECT LOGIN**.
- 3 Press ✓ - go to **SELECT LOGIN AUTO**.
The handset automatically selects a system.
The selected system is marked with an **A**.

8.2.1.2.2 Changing to another System Manually

If you would like to change to another system:

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SELECT LOGIN** to subscribe to a system.
The actual chosen system is marked with an * or an **A** (if auto login is selected).
- 3 Press ✓ - use the < > keys to scroll between the IDs of the different systems to find the system to which you want to connect.
Under **SELECT LOGIN** only subscriptions display. Free positions do not display.
- 4 Press ✓ to confirm.

8.2.2 KIRK 4020/4040/4080 Handset

A handset can be subscribed to more systems and will automatically log on to the relevant system. If a handset is subscribed to two or more systems, you can use Auto Login type A to change between the systems automatically. If a handset is subscribed to two systems only, you can use Auto Login type B to change between the systems automatically.

When to use Auto Login type A:

- Auto Login A should only be used in separate systems without overlaps.

If a handset loses signal from the system (the display showing Out of Range), then after 20 seconds the handset will start searching for an alternative system available from the Login list and automatically change to this system.

Note: Using Auto Login A any call will be dropped when changing to an alternative system.

When to use Auto Login type B:

- Auto Login B can be used in separate systems which are overlapping each other.

As soon as the handset has measured a low RSSI signal 5 times in succession, it will start up the Auto Login type B procedure and change to an alternative system available.

Note: Using Auto Login B any call will be dropped when changing to an alternative system.

In some situations it is necessary to use Auto Login type B due to the following:

- If two separate systems are sharing areas with common overlap, selecting Auto Login type A will result in poor performance as the handset will stay connected to the actual system it is subscribed to for as long as it can recognize a signal. Even if the bearer quality of the actual system is so bad that it cannot setup a connection, it is still not possible for the handset to change to alternative systems. Auto Login type B can enhance the performance for such configurations. Using Auto Login type B the handset is forced to switch from a system with bad bearer quality to one of the alternative systems available.

To determine if it is necessary to log on to another system the handset is measuring the RSSI level. A number of measured low RSSI levels will force the handset to log on to the alternative system.

This section provides information about:

- ["Subscribing Handsets" on page 155](#)
- ["" on page 155](#)

Note: Subscription of handsets requires the use of each registered handset.

Note: To make subscriptions, the system must allow subscriptions to be made. Some systems also require an Authentication Code (AC). If more than one system currently permits subscription, you will need to know the ID of the system (ARI code) to which you wish to subscribe. Authentication Codes and system ID's (ARI codes) will be provided by the system administrator.

Before subscribing handsets you need to ensure:

- that handset battery has been charged (" on page 71). Low battery could cause subscription problems.
- that the handsets have been registered to the system ("Registering KIRK Handsets" on page 145).

8.2.2.1 Subscribing Handsets

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SUBSCRIPTION CREATE** to subscribe to a system.
- 3 Press ✓. The handset searches for the serial number of the system.
- 4 Use the < > keys to scroll between the IDs systems if there is more than one system available.

During subscription, the handset searches for free positions and performs subscription on the first free position.

- 5 As soon as the correct serial number of the system appears in the display, press ✓. The serial number is located on the label on the rear of the KWS600v3.
- 6 Enter the AC (if required) using the keyboard, and press ✓.
An antenna symbol appears on the display to indicate a successful subscription. If not, the subscription has failed and the procedure must be retried.

8.2.2.2 Subscribing a Handset to Different Systems

The handset can be subscribed (connected) to a maximum of 10 different systems.

Note: To be able to log on to a system, subscription to the system must be established.

8.2.2.2.1 Changing to another System Automatically Using Auto Login A

Note: Auto Login A should only be used when systems are separate, with no overlaps.

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SELECT LOGIN**.

3 Press ✓ - go to **SELECT LOGIN AUTO A**.

4 Press ✓.

The handset automatically selects a system.

The selected system is marked with an **A**.

8.2.2.2.2 Changing to another System Automatically Using Auto Login B

Note: Auto Login B can be used in separate systems which are overlapping each other.

1 Press **MENU** - go to **MENU LOGIN**.

2 Press ✓ - go to **SELECT LOGIN**.

3 Press ✓ - go to **SELECT LOGIN AUTO B**.

4 Press ✓.

The handset automatically selects a system.

The selected system is marked with a **B**.

8.2.2.2.3 Changing to another System Manually

If you would like to change to another system:

1 Press **MENU** - go to **MENU LOGIN**.

2 Press ✓ - go to **SELECT LOGIN** to subscribe to a system.

The actual chosen system is marked with an * or an **A** (if auto login is selected).

3 Press ✓ - use the < > keys to scroll between the IDs of the different systems to find the system to which you want to connect.

Under **SELECT LOGIN** only subscriptions display. Free positions do not display.

4 Press ✓ to confirm.

8.2.3 KIRK 5020 / 5040 Handset

A handset can be subscribed to more systems and will automatically log on to the relevant system. If a handset is subscribed to two or more systems, you can use Auto Login type A to change between the systems automatically.

When to use Auto Login type A:

- Auto Login A should only be used in separate systems without overlaps.

If a handset loses signal from the system (the display showing a no signal icon), then after 20 seconds the handset will start searching for an alternative system available from the Login list and automatically change to this system.

Note: Using Auto Login A any call will be dropped when changing to an alternative system.

This section provides information about:

- [“Creating Login \(Subscribing Handset\)” on page 157](#)
- [“Subscribing a Handset to Different Systems” on page 158](#)

Note: Subscription of handsets requires the use of each registered handset.

Note: To make subscriptions, the system must allow subscriptions to be made. Some systems also require an Authentication Code (AC). If more than one system currently permits subscription, you will need to know the ID of the system (ARI code) to which you wish to subscribe. Authentication Codes and system ID's (ARI codes) will be provided by the system administrator.

Before subscribing handsets you need to ensure:

- that handset battery has been charged ([“” on page 71](#)). Low battery could cause subscription problems.
- that the handsets have been registered to the system ([“Registering KIRK Handsets” on page 145](#)).

8.2.3.1 Creating Login (Subscribing Handset)

To create a login, the system must allow subscriptions to be made. Some systems also require an Authentication Code (AC). If more than one system currently permits subscription, you will need to know the ID of the system to which you want to subscribe. Authentication Codes and system ID's will be provided by the system administrator.

You can subscribe up to 10 systems (create 10 logins).

- 1 Press **Menu** to enter main menu.
- 2 Scroll to **Settings** and press **Select**.
- 3 Scroll to **Advanced** and press **Select**.
- 4 Scroll to **Login** and press **Select**.
- 5 Scroll to **Create login** and press **Select**. The handset will start searching for a system.
- 6 Scroll to the found system and press **Select**.
- 7 Enter an AC Code and press **Ok** to connect to the system.
- 8 Press **Ok**.

8.2.3.2 Subscribing a Handset to Different Systems

The handset can be subscribed (connected) to a maximum of 10 different systems.

Note: To be able to log on to a system, subscription to the system must be established.

8.2.3.2.1 Changing to another System Automatically Using Auto Login A

Note: Auto Login A should only be used when systems are separate, with no overlaps.

Note: To activate Auto login your handset must be subscribed to at least two systems.

- 1 Press **Menu** to enter main menu.
- 2 Scroll to **Settings** and press **Select**.
- 3 Scroll to **Advanced** and press **Select**.
- 4 Scroll to **Login** and press **Select**.
- 5 Scroll to **Auto login** and press **Select**.
- 6 If **Off** is selected, press **Change** to select **On**.
- 7 Press **R** to return to standby mode.

The handset automatically selects a system.

The selected system is marked with an **A**.

8.2.3.2.2 Changing to another System Manually

If you would like to change to another system:

- 1 Press **Menu** to enter main menu.
- 2 Scroll to **Settings** and press **Select**.
- 3 Scroll to **Advanced** and press **Select**.
- 4 Scroll to **Login** and press **Select**.
- 5 Scroll to **Select login** and press **Select**.
- 6 Scroll to the desired login and press **Select**.

Chapter 9 KIRK Handset Management

This section provides information about handset management such as viewing handset configuration, deregistering handsets and changing user configurations using the web based Administration Page. It also provides information about unsubscribing handsets and handset adjustment.

For information about activating pre and mid call services on your handset, refer to the Pre Call and Mid Call Services User Guide.

For more information about accessing the Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

This section includes information about:

- [Viewing Handset/User Configuration](#) on page 159
- on page 159
- [“Unsubscribing KIRK Handsets”](#) on page 160
- [“Removing KIRK Handsets from the List \(Deregistering\)”](#) on page 161
- [“Changing User Configurations”](#) on page 162
- [“Adjusting the KIRK Handset”](#) on page 163

9.1 Viewing Handset/User Configuration

Through the web based Administration Page, it is possible to view all the user configurations of the wireless system.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

Figure 89 Adm. Page: Administration/DECT/Users page



- 2 Click **Show** to display all registered users and their configuration on the KWS600v3.

9.2 Searching for Handset/User Information

Through the web based Administration Page, it is possible to search for a registered handset/user in the system.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

Figure 90 Adm. Page: Administration/DECT/Users page



- 2 Type the beginning of a number or name to search for in the text field, and then click **Show**.

9.3 Unsubscribing KIRK Handsets

Note: Unsubscription of handsets requires the use of each handset to be unsubscribed from the system.

Note: Removing a subscription requires a password. Password default is: 0000.

9.3.1 KIRK 3040/4020/4040/4080 Handset

To unsubscribe a handset:

- 1 Press **MENU** (≡).
- 2 Press **<** - go to **MENU LOGIN**.
- 3 Press **✓**.
- 4 Press **<** - go to **SUBSCRIPTION REMOVE**.
- 5 Press **✓**.
- 6 Enter password (0000).
- 7 Press **✓**.
- 8 If handset is subscribed to more than one system, select the system ARI in question.

The handset has been unsubscribed.

9.3.2 KIRK 5020 / 5040 Handset

To remove a Login:

Logins can be removed from the system in use and from the 9 other systems (if connected).

Note: Removing a login requires a password. Password is factory set at 0000.

- 1 Press **Menu** to enter main menu.
- 2 Scroll to **Settings** and press **Select**.
- 3 Scroll to **Advanced** and press **Select**.
- 4 Scroll to **Login** and press **Select**.
- 5 Scroll to **Remove login** and press **Select**.
- 6 Scroll to the desired login and press **Select**.
- 7 Enter your password and press **Ok**.

Note: If the system in use is removed, it is necessary to select one of the remaining systems or to subscribe to a new one.

Note: If one of the systems not chosen is removed, the handset remains connected to the system in use.

9.4 Removing KIRK Handsets from the List (Deregistering)

You can deregister handsets from KWS600v3. This is necessary when:

- you must replace the handset due to loss or breakage.
- you want to assign the handset to a user with a different telephone number.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

Figure 91 Adm. Page: Administration/DECT/Users page

Configuration	Statistics	Users	Unknown	Radios	Master Calls		
General	<input type="text"/> show new						
IP							
ETH0							
ETH1							
LDAP							
DECT							
Administration							
DECT							
Download							
Upload							
Diagnostics							
Reset							
	Long Name	Name	No	Display	IPEI	AC	Registration
	SEP000880000255	SEP000880000255	880255	test 880255	000880000255	172.18.0.64	
	SEP000770759055	SEP000770759055	18062	18062	000770759055	172.18.0.64	
	SEP000880000425	SEP000880000425	880425	test 880425	000880000425	172.18.0.64	
	SEP000880000290	SEP000880000290	880290	test 880290	000880000290	172.18.0.64	
	SEP000880000314	SEP000880000314	880314	test 880314	000880000314	172.18.0.64	
	SEP000880000451	SEP000880000451	880451	test 880451	000880000451	172.18.0.64	
	SEP000770751864	SEP000770751864	18023	18023	000770751864	172.18.0.64	
	SEP000880000525	SEP000880000525	880525	test 880525	000880000525	172.18.0.64	
	SEP000880000272	SEP000880000272	880272	test 880272	000880000272	172.18.0.64	
	SEP000880000319	SEP000880000319	880319	test 880319	000880000319	172.18.0.64	
	SEP000880000578	SEP000880000578	880578	test 880578	000880000578	172.18.0.64	
	SEP000880000076	SEP000880000076	880076	test 880076	000880000076	172.18.0.64	

- 2 Select the handset in question by clicking on the **Long Name**.
An **Edit User** dialog box appears.

Figure 92 Adm. Page: Edit User dialog box

- 3 Click Delete.

9.5 Changing User Configurations

You can change user configurations, such as the AC (authentication code) using the web based Administration Page.

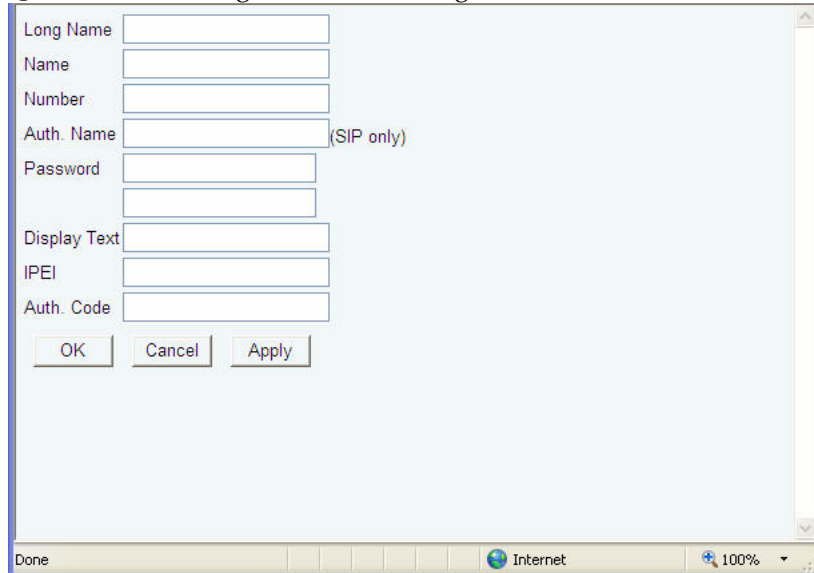
- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

Figure 93 Adm. Page: Administration/DECT/Users window

Configuration	Statistics	Users	Unknown	Radios	Master Calls
General					
IP					
ETH0					
ETH1					
LDAP					
DECT					
Administration					
DECT					
Download					
Upload					
Diagnostics					
Reset					

Long Name	Name	No	Display	IPEI	AC	Registration
SEP000880000255	SEP000880000255	880255	test 880255	000880000255	172.18.0.64	
SEP000770759055	SEP000770759055	18062	18062	000770759055	172.18.0.64	
SEP000880000425	SEP000880000425	880425	test 880425	000880000425	172.18.0.64	
SEP000880000290	SEP000880000290	880290	test 880290	000880000290	172.18.0.64	
SEP000880000314	SEP000880000314	880314	test 880314	000880000314	172.18.0.64	
SEP000880000451	SEP000880000451	880451	test 880451	000880000451	172.18.0.64	
SEP000770751864	SEP000770751864	18023	18023	000770751864	172.18.0.64	
SEP000880000525	SEP000880000525	880525	test 880525	000880000525	172.18.0.64	
SEP000880000272	SEP000880000272	880272	test 880272	000880000272	172.18.0.64	
SEP000880000319	SEP000880000319	880319	test 880319	000880000319	172.18.0.64	
SEP000880000578	SEP000880000578	880578	test 880578	000880000578	172.18.0.64	
SEP000880000076	SEP000880000076	880076	test 880076	000880000076	172.18.0.64	

- 2 Select the handset in question by clicking on the **Long Name**.
An **Edit User** dialog box appears.

Figure 94 Adm. Page: Edit User dialog box

- 3 Change settings, and then click **Apply**.
- 4 Click **OK**.

9.6 Adjusting the KIRK Handset

Note: This section only contains information about adjusting the 3040/4020/4040/4080 Handsets.

This section provides information about:

- [“Content of the KIRK Programming Kit Handset” on page 163](#)
- [“Set up of the Hardware for KIRK Handset Adjustment” on page 164](#)
- [“Adjusting the KIRK Handset with the ServiceTool” on page 164](#)

9.6.1 Content of the KIRK Programming Kit Handset

The Programming Kit Handset (Part no. 02319509) for 3040 Handset consists of:

- serial cable
- programming stand
- 220V power supply

The Programming Kit Handset (Part no. 02319542) for 40XX Handset (see illustration below) consists of:

- serial cable
- splitter

Figure 95 Programming Kit Handset



Note: For handset adjustment of 40XX Handset you use the charger accompanying the handset.

Note: For handset adjustment you also need the programming software (ServiceTool). The ServiceTool is not part of the Programming Kit Handset but can be downloaded from www.polycom.com.

9.6.2 Set up of the Hardware for KIRK Handset Adjustment

- 1 Connect the serial cable to the programming stand/charger and Com port of your computer.
- 2 Place the handset in the charger.

The handset is now ready for programming via the ServiceTool

9.6.3 Adjusting the KIRK Handset with the ServiceTool

The ServiceTool is the tool you access from your desktop and use for repeater programming, handset adjustment and software download to the handset and repeater.

For more information about adjusting the handset with the ServiceTool, refer to the Help File in the ServiceTool. The ServiceTool is to be downloaded from www.polycom.com.

Chapter 10 System Management

This section provides you with information about the web based Administration Page of the KWS600v3 and ServiceTool. The section describes how the programs are used for system management.

This section includes information about:

- [“Using the Web Based Administration Page” on page 165](#)
- [“Using the ServiceTool” on page 183](#)

10.1 Using the Web Based Administration Page

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

Through the web based Administration Page of the KWS600v3 it is possible to change user name and password, define and view different settings of the system, reading statistics, making a backup of configuration file, updating system software, and resetting the system.

This section includes information about:

- [“Changing System User Name and Password” on page 165](#)
- [“Reading System Information” on page 166](#)
- [“Reading DECT Statistics” on page 167](#)
- [“Reading LDAP Server Status” on page 171](#)
- [“Reading LDAP Replicator Statistics” on page 171](#)
- [“Reading Ethernet Statistics” on page 172](#)
- [“Diagnostics” on page 173](#)
- [“Making a Back-Up of the Configuration File” on page 176](#)
- [“Updating the KIRK Wireless Server 600v3” on page 177](#)
- [“Resetting the KIRK Wireless Server 600v3” on page 181](#)

10.1.1 Changing System User Name and Password

In the **General** menu, under **Configuration**, it is possible to change the user name and password for the system.

- 1 Under the **Configuration** menu, click **General**, and then click **admin**.

Figure 96 Adm. Page: Configuration/General/Admin/Change Password page

Configuration	Info	Admin	License	Update	NTP	HTTP-Server	HTTP-Client	Logging	SNMP	Telnet
General	Admin									
IP	Device Name <input type="text"/>									
ETH0	User Name <input type="text" value="admin"/>									
ETH1	Password <input type="password" value="••••••"/>									
LDAP	Password <input type="password" value="••••••"/>									
DECT	Help URL <input type="text"/>									
Administration	<input type="button" value="OK"/>									
DECT										
Download										
Upload										
Diagnostics										
Reset										

- 2 In the **User name** field, type a user name.
- 3 In the **Password** field, type a new password, then type the password again in the field below to confirm it.
- 4 Click **OK** to change the password.

10.1.2 Reading System Information

This page provides general system information.

- 1 Under the **Configuration** menu, click **General**.

Figure 97 Adm. Page: Configuration/General/Info page

Configuration	Info	Admin	License	Update	NTP	HTTP Server	HTTP Client	Logging	SNMP	Telnet
General	Version 6.00 dvl IP1200[06-60319], Bootcode[365], HW[7] 8192/16384 SerialNo 00-90-33-0f03-10 Coder 12 Channels of G.711,G.726,G.729,G.723 SNTP Server 0.0.0.0 Time **:**:**:** Uptime 0d 0h 46m 17s DECT									
IP	Firmware 14125500 PCS04Ap System ARI 000046507424 Frequency DECT 1.8GHz									
ETH0										
ETH1										
LDAP										
DECT										
Administration										
DECT										
Download										
Upload										
Diagnostics										
Reset										

On the General/Info page you can read information about:

- the used firmware, boot code and hardware
- Serial number; Mac Address of the system
- Coder
- SNTP Server; from which IP address the system receives its time information

- Time; time information - if a time server is valid
- Uptime; information about uptime since last restart
- Firmware (only displayed if radio is active)
- System ARI; ARI code of the system (only displayed if radio is active)
- Frequency

10.1.3 Reading DECT Statistics

In the **DECT** menu, under **Administration**, it is possible to read information about calls, users, radio calls, and handovers in the system. You get an over all overview of how the system is running.

Note: The pages in the **DECT** menu varies, depending on the installation (single-cell/multi-cell) and role of the KWS600v3 (Master/Secondary/LDAP Server).

This section provides information about:

- ["Statistics" on page 167](#)
- ["Users" on page 168](#)
- ["Unknown" on page 168](#)
- ["Radios" on page 169](#)
- ["" on page 169](#)
- ["" on page 170](#)
- ["Handovers" on page 171](#)

10.1.3.1 Statistics

This page is useful to get statistic information from the KWS600v3 about all the incoming and outgoing calls on the system and handover information.

1 Under the **Administration** menu, click **DECT**.

Figure 98 Adm. Page: Administration/DECT/Statistics page

Configuration	Statistics	Users	Unknown	Radios	Master-Calls	Radio-Calls	Handover	Radio
General	Master							
IP	Calls In		0					
ETH0	Calls In Delivered		0					
ETH1	Calls Out		0					
LDAP	Handover		0					
DECT	Handover Failed		0					
	Abnormal Call Release		0					
Administration	Radio							
DECT	Calls In		0					
Download	Calls Out		0					
Upload	Handover		0					
Diagnostics	Handover Failed		0					
Reset	Since 0d 0h 2m 43s							
	<input type="button" value="Clear"/>							

2 Click **Clear** if you want to delete all statistic information.

Note: When the sum of “Calls in” on all radio bases are larger than “Calls in” on the IP-master, a handset is either on hook or out of range. This is due to the following:

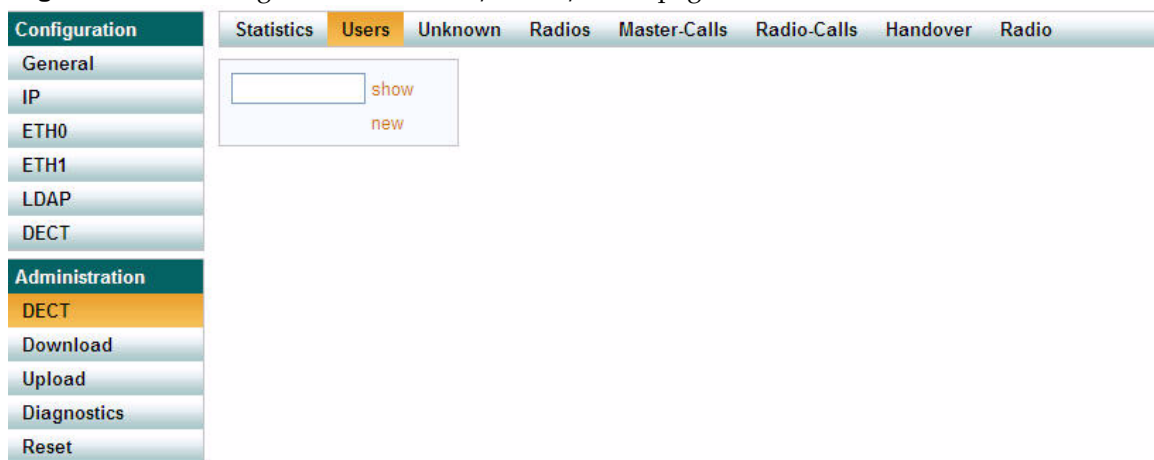
- When a handset is off hook or “in range” the following statistics are displayed for an incoming call:
IP-master: Calls in: 1
Radio base1: Calls in: 1 (handset calls base 19)
Radio base2: Calls in: 0
- When a handset is on hook or “out of range” the following statistics are displayed for an incoming call:
IP-master: Calls in: 1
Radio base1: Calls in: 1 (handset on hook or out of range)
Radio base2: Calls in: 1

10.1.3.2 Users

This page provides information about the handsets/users registered on the system.

1 Under the **Administration** menu, click **DECT**, and then click **Users**.

Figure 99 Adm. Page: Administration/DECT/Users page



2 Click **Show**.

10.1.3.3 Unknown

This page provides information about anonymous registered handsets/users on the system.

- Under the **Administration** menu, click **DECT**, and then click **Unknown**.

Figure 100 Adm. Page: Administration/DECT/Unknown page

Configuration	Statistics	Users	Unknown	Radios	Master-Calls	Radio-Calls	Handover	Radio
General	031430070565 Delete							
IP	016050448513 Delete							
ETH0								
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								

10.1.3.4 Radios

This page provides information about all KWS600v3 secondaries and Sync Master in the KWS600v3 installation.

- Under the **Administration** menu, click **DECT**, and then click **Radios**.

Figure 101 Adm. Page: Administration/DECT/Radios page

Configuration	Statistics	Users	Unknown	Radios	Master-Calls	Radio-Calls	Handover	Radio
General	Name Id Addr Sync Lost LDAP Busy Product Version U							
IP	IP1200-0f-00-6f	46	172.29.201.146	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
ETH0	IP1200-0f-00-7d	30	172.29.201.130	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
ETH1	IP1200-0f-00-84	41	172.29.201.141	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
LDAP	IP1200-0f-00-99	47	172.29.201.147	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
DECT	IP1200-0f-00-9d	37	172.29.201.137	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
	IP1200-0f-00-a2	40	172.29.201.140	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
Administration	IP1200-0f-00-a4	34	172.29.201.134	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
DECT	IP1200-0f-00-a7	26	172.29.201.126	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
Download	IP1200-0f-00-a8	35	172.29.201.135	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
Upload	IP1200-0f-00-a9	33	172.29.201.133	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
	IP1200-0f-00-ad	44	172.29.201.144	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
Diagnostics	IP1200-0f-00-b7	38	172.29.201.138	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
Reset	IP1200-0f-00-b9	31	172.29.201.131	12	10 (1,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c
	IP1200-0f-00-bf	45	172.29.201.145	12	10 (0,0)	Up	0	KIRK Wireless Server 600v3 6.00 dvl-sr2 [08-60700.56] 0c

The “Lost” column indicates the following: the number to the left of the comma shows how many times the KWS600v3 has shifted to an alternative base station. The number to the right of the comma shows how many times the KWS600v3 has been out of sync.

10.1.3.5 Master Calls

This page provides information about all calls on the Master (Primary) KWS600v3.

- 1 Under the **Administration** menu, click **DECT**, and then click **Master Calls**.

Figure 102 Adm. Page: Administration/DECT/Master Calls page

Configuration	Statistics	Users	Unknown	Radios	Master-Calls	Radio-Calls	Handover	Radio
General								
IP								
ETH0								
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								

A	B	State	Radio	Local Media	Remote Media
18022:SEP000770751867 >> :		Connected	IP1200-0f-03-37	172.18.2.113:26700	172.18.2.103:31742
18075:SEP000770759982 << 2635:		Connected	IP1200-0f-03-34	172.18.2.103:31742	172.18.2.113:26700
18010:SEP000770750490 >> :		Alerting	IP1200-0f-03-37 :		0.0.0.0:0
1234:SEP000770355771 << 2456: -					
19011:SEP000770902332 >> :		Connected	IP1200-0f-04-9c	172.18.2.101:18240	172.18.2.112:28160
18064:SEP000770759874 << 2333:		Connected	IP1200-0f-01-8d	172.18.2.112:28160	172.18.2.101:18240
4321:SEP000770759063 >> :		Connected	IP1200-0f-01-8d	172.18.2.112:28164	172.18.2.109:32600
7896:SEP000770813272 << 2658:		Connected	IP1200-0f-01-60	172.18.2.109:32600	172.18.2.112:28164
18078:SEP000770759069 >> :		Connected	IP1200-0f-01-8d	172.18.2.112:28184	172.18.2.109:32616
2111:SEP000770759052 << 2149:		Connected	IP1200-0f-01-60	172.18.2.109:32616	172.18.2.112:28184

10.1.3.6 Radio Calls

This page provides information about the IPEI number and status, and to which IP address the handset will make a handover.

- 1 Under the **Administration** menu, click **DECT**, and then click **Radio Calls**.

Figure 103 Adm. Page: Administration/DECT/Radio Calls page

Configuration	Statistics	Users	Unknown	Radios	Master-Calls	Radio-Calls	Handover	Radio
General								
IP								
ETH0								
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								

DECT	Master	Handover
000770359605 > >	Connected 2659	172.18.2.113
000770751867 > >	Alerting 2437	172.18.2.110

1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator-Status**.

Figure 106 Adm. Page: Configuration/LDAP/Replicator-Status page

Configuration	Server	Server-Status	Replicator	Replicator-Status	Expert
General	Server	172.29.201.104:389			
IP	Full Replication	Up			
ETH0	remote	Completed			
ETH1	notify	0			
LDAP	modify	0			
DECT	local	Completed			
Administration	notify	0			
DECT	add	0			
Download	del	0			
Upload	modify	0			
Diagnostics	pending	0			
Reset					
	Latest messages				
	3 connecting ip=172.29.201.104:389				
	0 Starting				

10.1.6 Reading Ethernet Statistics

This page provides status information on the interface.

1 Under the **Configuration** menu, click **ETH0/ETH1**, and then click **Statistics**.

Figure 107 Adm. Page: Configuration/ETH/Statistics page

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP-Server	DHCP-Leases	Statistics
General								
IP								
ETH0	tx-good		120342					
	tx-unicast		120320					
	tx-broadcast		22					
	tx-multicast		0					
	tx-lostcarrier		0					
	tx-deferred		0					
	tx-collision		0					
	tx-excesscol		0					
	tx-latecol		0					
Administration								
DECT								
Download	rx-good		57147					
Upload	rx-unicast		52351					
Diagnostics	rx-broadcast		3725					
Reset	rx-multicast		1071					
	rx-crc-err		0					
	rx-align-err		0					
	rx-too-short		0					
	rx-too-long		0					
	rx-collision		0					
	rx-overflow-err		0					
	rx-queue-overflow		0					
	rx-no-buffer		0					
	rx-tx-64		94722					
	rx-tx-64-127		64286					
	rx-tx-128-255		7760					
	rx-tx-256-511		3683					
	rx-tx-512-1023		6435					
	rx-tx-1024		603					
	<input type="button" value="Clear"/>							

2 Click **Clear** if you want to delete all information.

10.1.7 Diagnostics

In the **Diagnostics** menu, under **Administration**, it is possible to define which logs are to be generated. The logs are useful when supervising the system and in case of problem solving.

This section provides information about:

- [“Logging” on page 174](#)
- [“Tracing” on page 174](#)
- [“” on page 175](#)
- [“Ping” on page 176](#)

10.1.7.1 Logging

- 1 Under the **Administration** menu, click **Diagnostics**.

Figure 108 Adm. Page: Administration/Diagnostics/Logging page

Configuration	Logging	Tracing	Alarms	Faults	Config-Show	Ping	Traceroute
General							
IP	TCP						
ETH0	PPP						
ETH1	DECT Master						
LDAP	DECT Radio						
DECT	H.323 Registrations						
	SIP Registrations						
	Config Changes						
	OK						
	syslog						
Administration							
DECT							
Download							
Upload							
Diagnostics							
Reset							

- 2 Select which information you want to log.
 - **TCP:** Logs generated upon TCP connection setups in the H.225/H.245 protocol
 - **PPP:** All PPP connections
 - **DECT Master:** Logs generated by the master software in the KWS600v3
 - **DECT Radio:** Logs generated by the radio software in the KWS600v3
 - **H.323 Registrations:** Logs generated upon RAS registration
 - **SIP Registrations:** Logs generated upon SIP user registration
 - **Config Changes:** Logs generated upon configuration changes in the KWS600v3
- 3 Click **OK**.
- 4 Click **Syslog** to view the logs.

10.1.7.2 Tracing

In this page you can define what information to trace. This information is useful when troubleshooting and when contacting service representatives.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Tracing**.

Figure 109 Adm. Page: Administration/Diagnostics/Tracing page

- 2 Select which information you want to trace.
- 3 Click **Trace(buffer)** if you only want to trace in a small buffer or click **Trace(continues)** if you want to trace in a large buffer.
- 4 Click **OK**.

10.1.7.3 Config Show

This page displays the KWS600v3 configuration as a text string.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Config Show**.

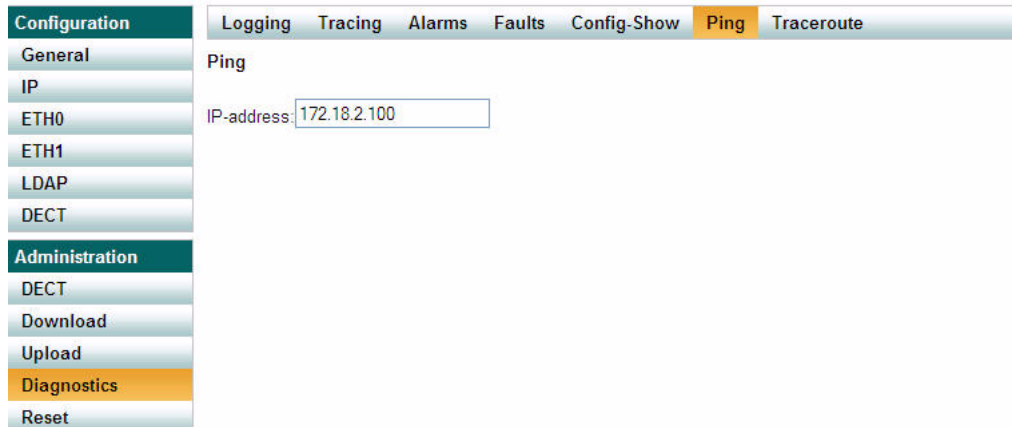
Figure 110 Adm. Page: Administration/Diagnostics/Config Show page

10.1.7.4 Ping

This page is used to determine the response time from the KWS600v3 to a certain IP address. This is useful when checking the connection between the different system components.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Ping**.

Figure 111 Adm. Page: Administration/Diagnostics/Ping page



- 2 In the **IP address** field, type the IP address of another IP system on the network you want to check up against. The connection will be checked.

10.1.8 Making a Back-Up of the Configuration File

This section provides information about saving the configuration data of the KWS600v3, registration and subscription data of the handset and system information.

When saving the configuration data you have an overall overview of the KIRK Wireless Server which is useful in case of problem solving.

Note: Making a back up of the configuration file is also useful when configuring more KWS600v3 secondaries and an identical configuration should be applied to each KWS600v3 Secondary. For information about configuring a Secondary KWS600v3 using a back-up file, refer to ["" on page 117](#).

- 1 Under the **Administration** menu, click **Download**.

Figure 112 Adm. Page: Administration/Download/Config page



- 2 Click **Download**.
A dialog box appears.
- 3 Indicate in which folder and under what name the file should be saved, and then click **Save**.

10.1.9 Updating the KIRK Wireless Server 600v3

This section describes how to update the following:

- [“Updating Configuration File” on page 178](#)
- [“Updating Firmware” on page 178](#)
- [“Updating Radio File” on page 179](#)
- [“Updating Boot File” on page 180](#)

10.1.9.1 Updating Configuration File

- 1 Under the **Administration** menu, click **Upload**.

Figure 113 Adm. Page: Administration/Upload/Config page

The screenshot shows a web interface for system administration. On the left is a vertical menu with categories: Configuration, Administration, and Diagnostics. Under 'Administration', 'Upload' is highlighted. The main area has tabs for 'Config', 'Firmware', 'Radio', and 'Boot'. Below the tabs is a 'File:' label, an empty text box, and a 'Browse...' button. At the bottom of this section is an 'Upload' button.

- 2 Click **Browse**.

A dialog box appears.

- 3 Select the configuration file in question, and then click **Open**.

- 4 Click **Upload**.

Wait until the system has finished uploading.

- 5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KWS600v3 immediately, all calls are terminated and the KWS600v3 is reset. When resetting the KWS600v3 when the system is idle, the reset is done when there are no active calls in the KWS600v3.

10.1.9.2 Updating Firmware

The software of the KWS600v3 can be updated. To update the software you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Firmware**.

Figure 114 Adm. Page: Administration/Upload/Firmware page

- 2 Click **Browse**.

A dialog box appears.

- 3 Select the firmware in question, and then click **Open**.
- 4 Click **Upload**.

Wait until the system has finished uploading.

Note: Do not interrupt firmware upload. If this process is interrupted, the firmware in the KWS600v3 will be defect.

Note: If the firmware upload is interrupted, the firmware must be uploaded again before rebooting the system.

- 5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KWS600v3 immediately, all calls are terminated and the KWS600v3 is reset. When resetting the KWS600v3 when the system is idle, the reset is done when there are no active calls in the KWS600v3.

10.1.9.3 Updating Radio File

The radio file of the KWS600v3 can be updated. To update the radio file you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Radio**.

Figure 115 Adm. Page: Administration/Upload/Radio page

- 2 Click **Browse**.
- 3 Select the radio file in question, and then click **Open**.
- 4 Click **Send file**.

A dialog box appears.

Wait until the system has finished uploading.

Note: When updating the radio file, all calls are terminated.

10.1.9.4 Updating Boot File

The boot file of the KWS600v3 can be updated. To update the boot file you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Boot**.

Figure 116 Adm. Page: Administration/Upload/Boot page

- 2 Click **Browse**.

A dialog box appears.

3 Select the boot file in question, and then click **Open**.

4 Click **Upload**.

Wait until the system has finished uploading.

5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KWS600v3 immediately, all calls are terminated and the KWS600v3 is reset. When resetting the KWS600v3 when the system is idle, the reset is done when there are no active calls in the KWS600v3.

10.1.10 Resetting the KIRK Wireless Server 600v3

Some configuration changes requires a reset in order to take effect. A reset restarts the KWS600v3 software.

You must restart the system after the following procedures:

- configuring
- uploading configuration data
- uploading firmware
- uploading radio files
- uploading boot files

There are three ways of resetting the system:

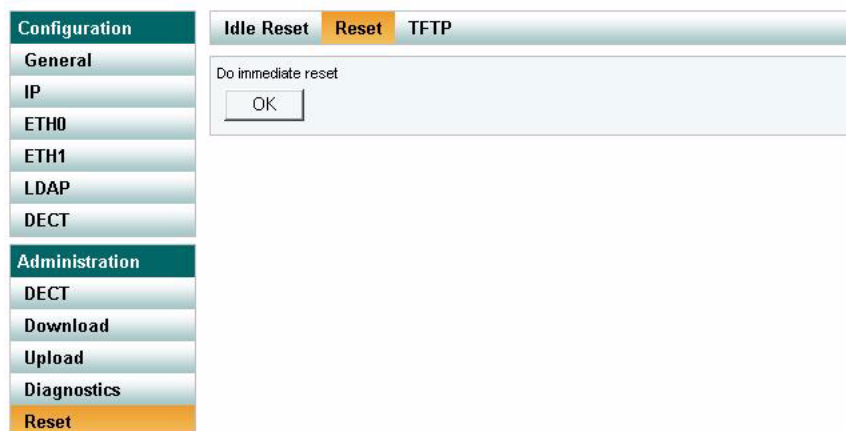
- [Resetting KIRK Wireless Server 600v3 Immediately](#) on page 181
- [Resetting KIRK Wireless Server 600v3 When System is Idle](#) on page 182
- [“Resetting in TFTP Mode”](#) on page 183

10.1.10.1 Resetting KIRK Wireless Server 600v3 Immediately

When resetting the KWS600v3 immediately, all calls are terminated and the KWS600v3 is reset.

- 1 Under the **Administration** menu, click **Reset**, and then click **Reset**.

Figure 117 Adm. Page: Administration/Reset/Reset page



- 2 Click **OK** to reset the system immediately.

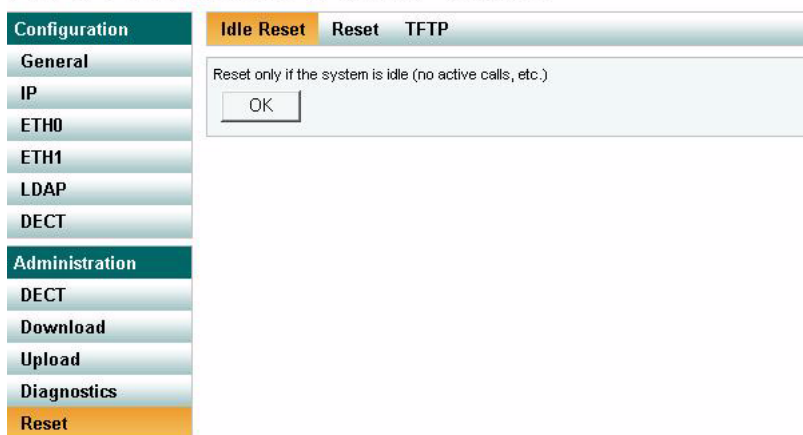
Note: When resetting the KWS600v3 immediately all calls are terminated.

10.1.10.2 Resetting KIRK Wireless Server 600v3 When System is Idle

Instead of resetting the system immediately and terminating all ongoing calls, it is also possible to reset the system, when the system is idle. The reset is done when there are no active calls in the KWS600v3.

- 1 Under the **Administration** menu, click **Reset**.

Figure 118 Adm. Page: Administration/Reset/Idle Reset page



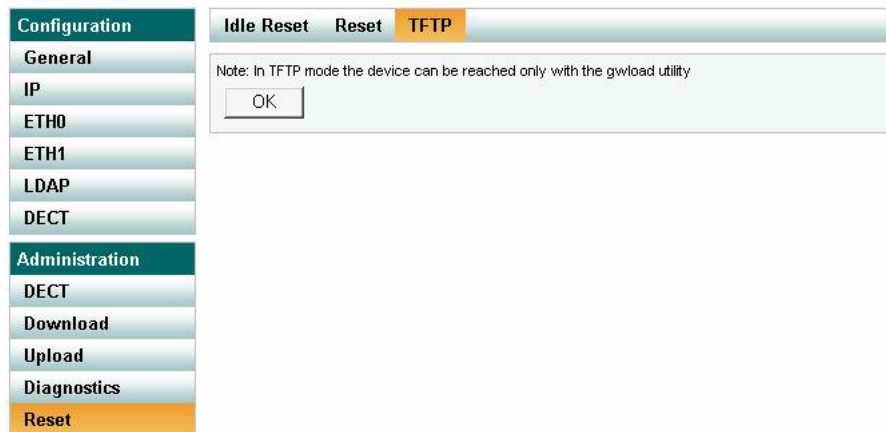
- 2 Click **OK** to reset if the system is idle (no active calls, etc.).

10.1.10.3 Resetting in TFTP Mode

You can also reset the KWS600v3 in TFTP mode (Trivial File Transfer Protocol). The TFTP mode is used, if the KWS600v3 is to be updated through the GWLOAD program. For more information about using the GWLOAD program, refer to [“Using the GWLOAD Program” on page 202](#).

- 1 Under the **Administration** menu, click **Reset**, and then click **TFTP**.

Figure 119 Adm. Page: Administration/Reset/TFTP page



- 2 Click **OK**.

10.2 Using the ServiceTool

The ServiceTool is used for repeater programming and handset adjustment.

Note: ServiceTool is not used for adjustment of the 5020 Handset.

This section provides information about:

- [“” on page 183](#)
- [“” on page 183](#)

10.2.1 KIRK Repeater Programming

For information about repeater programming, refer to [“Programming the KIRK Repeater with the ServiceTool” on page 56](#).

10.2.2 Adjusting the KIRK Handset

For information about handset adjustment, refer to [Adjusting the KIRK Handset with the ServiceTool](#) on page 164.

Chapter 11 Messaging over MSF

This section provides you with information about writing MSF messages (Message Service Function) using the web based Administration Page of the KWS600v3.

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 79](#).

With the MSF messages function you can send text messages to any MSF compatible handset connected to the KWS600v3.

This section includes information about:

- [“Description of Different Types of MSF Messages” on page 185](#)
- [“Activating MSF Messages Function” on page 186](#)
- [“Sending Text Messages” on page 187](#)

11.1 Description of Different Types of MSF Messages

It is possible to send MSF messages from handset to handset, from handset to server and from server to handset. Each text message can consist of up to 72 characters. A handset can receive a text message whether it is on or off hook. Reception of a text message is signalled by a beep tone.

With messaging it is possible to send two different types of messages:

- On Way Text

A message which does not require an answer from the recipient. Examples of One Way Texts include reminders, updates and basic notifications such as “Remember the meeting at 3 PM”.

One Way Text is also called Fire and Forget.

Confirmation of messages having been sent and received is available in the system as an acknowledgement of each message having reached the handset display.

- Two Way Text

A message which the recipient can answer by returning relevant keypad information to the sender. An example of Two Way Text could be sending the following message to a number of users; “Who will attend the meeting at 3 PM?”. Each recipient answers the message using the keypad and the Administration Page can then send message updates and, if needed, include a call back number in the message.

Adding a call back number makes it possible for the recipient to call the number automatically simply by pressing the off hook button. When a call back number is included, the message can consist of a maximum of 36 characters.

Two Way Text is also called “Text call”.

Confirmation of sent messages having been received is done by the recipient answering the message. It is also shown in the system as an acknowledgement of each message having reached the handset display. If a message does not receive an answer within a specified period of time (for instance 30 seconds) it is possible to preset the system to automatically send it to another relevant user.

When writing an MSF message it is possible to send it:

- An MSF message can be sent to a single handset as a Two Way Text message.

The system can handle a maximum of 26-30 messages per minute being sent simultaneously from the system to a number of handsets.

- Broadcast
 - An MSF message can be sent to all handsets at the same time as a One Way Text message.

The system can handle a maximum of 26-30 messages per minute to all handsets simultaneously from the system.

11.2 Activating MSF Messages Function

This section describes how to enable the MSF messages function by activating the TELNET system.

- 1 Under the **Configuration** menu, click **General**, and then click **Telnet**.

Figure 120 Adm. Page: Configuration/General/Telnet page



- 2 Select the **Enable Telnet** check box.
- 3 Click **OK**.

The configuration has now been changed and the TELNET system is activated, making it possible to send MSF messages.

11.3 Sending Text Messages

The MSF messages function requires the use of a third-party application, such as an alarm server.

For demonstration, Polycom has an MSF package including:

- Binary dll
- Lan Manager program including the java source code
- Description of the dll interface
- Description of the MSF protocol
- Simple example in VB.net, Java, C# using the dll interface including source code

Note: The MSF Lan Manager is a demo program using the KIRK dll interface. The KIRK dll interface is available for free use.

For more information about obtaining the Polycom MSF package, contact Polycom.

Chapter 12 Configuration/General/Update

On this page the device can be configured to poll an update server (a normal web server). A file pointed to by an URL is read from the update server and executed. This is an efficient mechanism to keep a large number of devices up to date. See chapter 13 "Configuration of the Update Server" for a detailed description of the available commands.

URL

An URL, for example `http://192.168.0.1/update/script-ip800.txt`, pointing to a file whose commands are executed.

If the URL ends with a slash '/', for example `http://192.168.0.1/update/`, the device is adding the file name `update-ipxxx.htm` automatically, deduced from the device short name (for example `update-ip800.htm`). Furthermore some placeholders may be used in the URL-String as described in the update servers `scfg` command description.

These placeholders may be used e.g. to address a device-specific directory (`http://192.168.1.2/update/#h/script.txt`) or to generate HTTP-GET parameters (`http://192.168.0.1/update/script.php?mac=#m`).

Some standard parameters are always appended to the query part of the URL:

Name	Value	Example
ver	human readable version information (as shown in the 'Version' line of the general page (display, for programmatic use rather apply #F etc.)	6.00 dvl-sr1 IP6000[07-60600.03], Bootcode[145], HW[104] 16384/131072
BOOT	last serial for boot command	336
PROT	last serial for prot command	07-6060003
CHECK	last serial for check command	20070511-01
BMC	last serial for bmc command	
CFG	last serial for cfg command	
CFG-BACKUP-NUM	last backup number for scfg command	

If access to the command file requires authentication it must be configured within the HTTP-Client of the device.

Interval

An interval (in minutes) at which the file is re-read and executed. To restrict the update to certain hours (e.g. only during the night), there are mechanisms within the available commands to restrict the execution of the commands. The polling of the command file cannot be restricted.

12.1 Current Update Serials

The **Current Update Serials** section shows the values of the variables set after last successful execution of the associated command. These values are provided as standard parameters in the query part of the URL.

name	command
BOOT	boot
PROT	prot
CHECK	check
BMC	bmc
CFG	cfg
CFG-BACKUP-NUM	scfg

Chapter 13 Configuration of the Update Server

It is possible to update the firmware and configuration of a large number of KIRK devices in a distributed environment by automated means. This is done by storing the configuration and firmware information on a standard Web server, which in turn is called up the individual devices. There are two modules in the device which work in tandem. The first is known as „UP0“ and actually executes the upload and download of configuration information as well as the download of updated firmware. UP0 is controlled by commands as detailed below. The second module is known as „UP1“. It serves to poll a given website for changed configuration information. If certain conditions are met, UP1 will issue commands to UP0 to perform the requested updates.

13.1 System Requirements

- One or more Web server(s) accessible by the devices.
- the Web servers tested were MS IIS and the Apache server. It should, however, also work with all other common Web servers.
- For best results, the Web server should be able to manage a large number of simultaneous HTTP sessions. MS Personal Web Server, for example, is not a suitable Web server, since it manages a maximum of 10 simultaneous HTTP sessions.

13.2 Installation

To be able to transfer device configurations onto the Web server, the latter must allow HTTP PUT requests. All other functions require HTTP GET authorisation. Since all HTTP requests are executed unauthenticated, the Web server must allow anonymous reading and possibly also anonymous writing. To allow HTTP PUT commands on a MS IIS, the read and write check box must be enabled in the configuration of the relevant virtual directory.

13.3 Configuration

See Configuration/General/Update to see how the URL parameter is configured. Note that the URL parameter must point precisely to the location of the file with the contained maintenance commands. It is also to be noted that this URL (just like all other URLs used by KIRK devices) does not support host names. Therefore, a valid IP address always has to be specified.

If the URL happens to end with a '/', then a standard file name based on the product description is used. If, for example, the URL is **http://1.2.3.4/configs/**, then it is extended in the case of an IP1200 as follows: **http://1.2.3.4/configs/update-ip1200.htm**. The file extension is irrelevant here. The extension **.txt** or **.htm** or no file extension at all is possible. In relation to URL specifications, note that some Web servers differentiate between upper case and lower case letters.

13.4 Running Maintenance

The update file is immediately read and also immediately executed. After a device restart, the update server is automatically queried periodically in accordance with the interval set. When the maintenance file has been successfully received, it is executed sequentially. Theoretically, all commands that can be transmitted to the device in a Telnet session or that occur in a configuration file can be used in the maintenance file.

13.5 Maintenance Commands

Additional commands implemented specially for the update server are available. The maintenance file is executed every time (depending on the interval set), as soon as it is received.

13.5.1 Check Command

In most cases, however, the maintenance file should be executed not every time as soon as it is received, but once only. Assuming that a secure configuration is to be loaded onto several devices, then it is best if this is done from one device. This can be achieved with the **check** command:

```
mod cmd UP1 check <final-command> <serial>
```

KIRK devices have an internal variable that is initially empty (or empty if the device was reset with the standard settings) called UPDATE/CHECK. The **check** command compares the content of **<serial>** with the UPDATE/CHECK variable. If both match, all further processes of the maintenance file are terminated. If they differ, the remaining processes are executed. When the last process has been executed, the UPDATE/CHECK variable is overwritten with the content of **<serial>**, and the content of **<final-command>** is executed. The following commands are usable content for **<final-command>**

- **ireset**: Resets the device as soon as it is not being actively used.
- **reset**: Resets the device immediately.
- **iresetn**: Resets the device as soon as it is not being actively used and a reset is required.
- **resetrn**: Resets the device immediately if a reset is required.
- **ser**: no-op

13.5.2 Times Command

Often, configuration changes shall be made only during certain times (e.g. non-working hours). This can be achieved using the **times** command:

```
mod cmd UP1 times [/allow <hours>] [/initial <minutes>]
```


The times command will check the current time against <hours>. If it does not match this restriction, any further processing of the command file is cancelled. <hours> is a comma separated list of hours. Only those hours listed are considered valid times for execution of the command file.

```
mod cmd UP1 times /allow 12,22,23,0,1,2,3,4
```

will allow command executions only between 12:00 and 12:59 and 23:00 and 4:59 local time (on a 24h clock). Note that if the device has no time set (yet), all command executions will be cancelled.

If the /initial parameter is set, then no commands will be executed within the first <minutes> minutes after the device has been booted. This is done to avoid firmware download and flashing when installing devices.

```
mod cmd UP1 times /allow 12,22,23,0,1,2,3,4 /initial 6
```

will suppress any command file processing within the first six minutes after each boot of the device. If /initial is set, for new devices (or those that have been reset to factory settings), the command file will be retrieved even if it normally would be suppressed by the /allow parameter. This allows new devices to retrieve a site specific standard configuration quickly.

13.5.3 Prot Command

To initiate a firmware update, the following command can be executed:

```
mod cmd UP0 prot <url> <final-command> <built-serial>
```

This command downloads new firmware (if available) from the specified URL onto the device. Finally, the <final-command> is executed.

KIRK devices have an internal variable that is initially empty (or empty if the device was reset with the standard settings) called UPDATE/PROT. The **prot** command compares the content of <built-serial> with the UPDATE/PROT variable. If both match, no firmware is downloaded. If the UPDATE/PROT variable is not set (new devices or after a device restart), the content of <built-serial> is compared with the built number of the current firmware. Once the firmware has been successfully downloaded, the UPDATE/PROT variable is overwritten with the content of <built-serial>. Note that the <built-serial> parameter is not compared with the firmware version currently loaded. It is the responsibility of the administrator to keep this standard.

If the <url> parameter ends with a slash ('/'), a standard firmware file name is appended to the URL depending on the product description (for example, IP1200.bin for an IP DECT system).

```
mod cmd UP0 prot http://192.168.0.10/firm/ip1200.bin ireset 04-5656
```

The command

```
mod cmd UP0 prot http://192.168.0.10/firm/ ireset 04-5656
```

determines whether the firmware version 04-5656 was already installed. If this is not the case, the current firmware is downloaded from the address **192.168.0.10/firm/ip1200.bin**, the UPDATE/PROT internal variable is overwritten with 04-5656 and, finally, the device is reset as soon as it is not being actively used.

13.5.4 Boot Command

With the **boot** command, the boot code is updated and this is done in the same way as with the **prot** command.

```
mod cmd UP0 boot <url> <final-command> <built-serial>
```

The command

```
mod cmd UP0 boot http://192.168.0.10/firm/ ireset 205
```

determines whether the boot code version 205 was already installed. If this is not the case, the current boot code is downloaded from the address **192.168.0.10/firm/bootip1200.bin**, the UPDATE/BOOT internal variable is overwritten with the version number of the downloaded boot code (205) and, finally, the device is reset as soon as it is not being actively used.

Since V6.00 sr2-hotfix3 the commands "reboot" and "ireboot" are available and should be used to reset the device after boot code update to activate it. The system is run down the same way as with "reset" and "ireset" but finally a watchdog restart is forced instead of a soft restart.

13.5.5 Bmc command (only for DECT devices)

With the **bmc** command, the DECT radio code (aka burst mode controller firmware or BMC code) is updated and this is done in the same way as with the **prot** command.

```
mod cmd UP0 bmc <url> <final-command> <build-serial>
```

The name of the file to use must be given explicitly here (the file name appended to an <url> parameter ending with a slash (/) has no ".bin" suffix like the delivered file).

The command

```
mod cmd UP0 bmc http://192.168.0.10/firm/ccfp1200.bin ireset PCS04fd
```

determines whether the DECT radio code PCS04fd was already installed. If this is not the case, the current DECT radio code is downloaded from the address 192.168.0.10/firm/ccfp1200.bin, the UPDATE/BMC internal variable is overwritten with PCS04fd and, finally, the device is reset as soon as it is not being actively used.

13.5.6 SCFG Command

mod cmd UP0 scfg <url> [<final-command> <save-serial> [/force <hours>]]

This will cause the device to upload its current configuration to <url>. This will be done using an HTTP PUT command. <url> must be writable thus. Within <url>, some meta character strings are replaced as follows:

Sequence	Replaces	Example
#F	kernel build number	08-12345
#B	boot code build number	401
#H	hardware build	102
#h	Device hardware number	P1200-03-0d-f0
#m	MAC address of the device	00-90-33-03-0d-f0
#d	Current date and time	20051010-170130
#bn	rolling backup index	3
#i	(one of) the local ip-address(es)	192.168.0.1

The rolling backup index loops over 0 .. n-1 for each backup.

Beginning with V7.00 the optional Parameters <final-command>, <save-serial> and /force <hours> will be recognized.

<final-command> defines the command to be executed after successful completion of scfg (typically no-op is used).

<save-serial> is compared to the UPDATE/SCFG variable. If it is not equal, the command is started. If it is equal and /force is not specified the command is skipped, otherwise /force is evaluated.

/force <hours> specifies the number of hours after which scfg is executed again even if <save-serial> has not changed.

mod cmd UP0 scfg http://192.168.0.10/configs/saved/#h#b5.txt no-op WEEKLY/force 168

will save the device configuration once per week with a backlog of 5 weeks.

13.5.7 Example

A Web server exists at the address 192.168.0.10 with a subdirectory called **configs**. In this directory, there are two further subdirectories, in which the current firmware files for all KIRK devices are stored. Clients provide the DHCP server with the option #215 as http://192.168.0.10/configs/. In this directory, there is a file **update-ip1200.htm**, which processes the following lines:

```
mod cmd UP1 times /allow 23,0,1,2,3,4 /initial 6
```

```
mod cmd UP0 scfg http://192.168.0.10/configs/saved/ #h.txt
```

```
mod cmd UP0 prot http://192.168.0.10/configs/04-5679 / ser 04-5679
```

```
mod cmd UP1 check ser 20040330-01
```

```
config change PHONECFG0 /coder G729A,60, /lang eng / protect
```

```
config change PHONEAPP0 /f4-10 BellOff /f4-v0 %1BE /f5- 10 BellOn /f5-v0 %1BF
```

```
config write
```

```
config activate
```

```
iresetn
```

This example demonstrates how the configuration of a device is stored on a Web server; all IP1200 devices are then instructed to load/update the firmware version 04-5679 in the time period 23:00 hrs to 04:59 hrs. New devices are updated after a restart and after the specified six minutes have elapsed. The devices are configured so that they use the G729 codec with a frame size of 60ms, the language setting is English and the configuration is write-protected. Therefore, only an administrator with appropriate authorisation can change this file. In addition, two standard functions were programmed for the device.

Chapter 14 Configuration of an NTP Server / Client

The device can synchronize its internal date/time to an NTP server using the SNTP protocol. Without synchronization to an NTP server the internal date/time is reset to Januar 1st, 1970 0:00 after each restart.

14.1 Configuration

Server

The IP-Adresse of the time server

Interval [min]

The time interval (in minutes) at which the device tries to synchronise with the time server

Timezone

Select the time zone in which the device is located.

String

If the timezone to be used is not one of the predefined timezones, it can be configured with a string in accordance with the IEEE POSIX standard

Last sync

displays the data and time of the last synchronisation.

14.2 Timezone Configuration String

Time services always provide the coordinated world time UTC (Universal Time Coordinated), which corresponds to GMT (Greenwich Mean Time), not however the correct time zone and summer time. It is therefore possible to specify the time difference between the time zone and the world time in the String field. The difference from the time zone GMT+1 (Central European time zone) is 60 minutes. A further 60 minutes has to be added with summer time, adding up to a total difference of 120 minutes. In this case, however, you must adjust the time difference manually when switching from winter to summer time and vice versa.

If a so-called timezone string was entered in the String field, the device can make the switch from summer to winter time automatically. The name of the time zone, the name of the summer time zone, their respective differences in time compared to the UTC and the time switch points are encoded in this field.

There are various formats for the specification of this string. These formats are defined by the IEEE POSIX standard. POSIX timezone strings have the following format (optional parts in square brackets):

StdOffset[Dst[Offset], Date/Time, Date/Time]

Std stands for the time zone (for example, CET for Central European Time or MET for Middle European Time).

Offset specifies the time difference between the time zone and UTC, for example, -1 for Central European Time. The difference is negative if the time zone is ahead of UTC. If the time difference does not comprise full hours, the number of minutes can be added, for example, -1:30. The TZ string ends here if you are not using a summer time.

Dst stands for the summer time zone (for example, CEST for Central European Summer Time or MES for Middle European Summer Time).

The optional, **second Offset** parameter gives the offset of the summer time in respect of UTC. An hour before normal time is assumed if no entry is made.

Date/Time define the start and end of summer time. The format for a time entry is Mm.n.d, signifying the d-th day of the n-th week of the m-th month. Day 0 is Sunday. If the fifth week is entered, the last day (with respect to d) of the month is meant. The format for a time entry is hh[:mm[:ss]], in the 24-hour format.

14.3 Example

The Central European time zone is specified **CET-1CEST-2,M3.5.0/2,M10.5.0/3:**

CET (Central European Time) - offset -1

CEST (Central European Summer Time) - offset -2

Switch to Summer Time at 3(March), 5(last week of the month), 0(Sunday)/at 2:00

Switch to Standard Time at 10(October), 5(last week of the month), 0(Sunday)/at 3:00

Chapter 15 Troubleshooting

This section provides you with general troubleshooting information, frequently asked questions, and describes how to upload IP firmware using the KIRK GWLOAD program.

This section includes information about:

- [Solving Problems in KIRK Wireless Server 600v3](#) on page 199
- [“Should You Need to Report a Problem”](#) on page 201
- [“Frequently Asked Questions”](#) on page 202
- [“Using the GWLOAD Program”](#) on page 202

15.1 Solving Problems in KIRK Wireless Server 600v3

This section describes wireless troubleshooting procedures only. It is divided between KWS600v3 problems, repeater problems and handset problems. However, when one component is faulty, it is important to check the other parts of the installation as well.

Following is a summary of faults that may be encountered during a wireless PBX installation and the appropriate corrective actions. It is assumed that all other parts of the KWS600v3 are in order and that the user is familiar with the standard KWS600v3 troubleshooting procedures.

This section contains information about error messages/problems in:

- [Administration Page of the KIRK Wireless Server 600v3](#) on page 199
- [KIRK Configuration Tool for KIRK Wireless Server 600v3](#) on page 200
- [“KIRK Repeater”](#) on page 201
- [“KIRK Handset”](#) on page 201

15.1.1 Administration Page of the KIRK Wireless Server 600v3

The error messages that may occur on the KWS600v3 Administration Page are described in the following table.

Table 4 Error Messages on the Administration Page

Problem	Action required
LDAP replication is down/stopped	The LDAP replicator is not active. Check password. Check that the Master IP address of the LDAP Server is correct. Check that the LDAP replication service is enabled.
Missing Skinny license. (Skinny) not available in the Prot (Protocol) field.	Obtain the Cisco Skinny licence from KIRK telecom.
No Sys-Object	LDAP replicator is not active. Check password. Check if LDAP replication service is enabled.

Table 4 Error Messages on the Administration Page

Problem	Action required
No DECT firmware and System ARI code on all radio units with active radios.	Check if radio firmware is missing. Check if radio is disabled
Upload of firmware failed	Check if you are uploading valid firmware files. Check if you are uploading radio firmware as IP firmware. Check if communication between PC and radio unit is interrupted.
Password mismatch	Check that the password is correct (small letters, capital letters etc.). If password has been changed, the new password must be used for the whole installation.
Long name missing	You need to type a long name. Using Skinny and H.323 Protocol, type SEP followed by the IPEI number of the handset. The IPEI number is found either on a label under the battery, on the packaging label, or by pressing *99984*✓ on the handset to be registered. The serial number consists of a five-digit handset type (manufacturer code) and a seven-digit handset number. Using SIP Protocol, type any name.
Cn already exists	Long name already exists.
IPEI too long IPEI too short	The serial number (IPEI) consists of a five-digit handset type (manufacturer code) and a seven-digit handset number.

15.1.2 KIRK Configuration Tool for KIRK Wireless Server 600v3

The error messages that may occur in the Configuration Tool are described in the following table.

Table 5 Error Messages in Configuration Tool

Problem	Action required
Get button is grayed - cannot click on it	The Get button uses the IP address to look up the host name. The Get button is only enabled, if the DHCP check box is disabled.
The application fails to resolve the host name	Check that you are online, and that IP address is correct and valid to the network.
LDAP Server tab is not visible	Check that the Master is LDAP Server check box in the Master tab is deselected.
One or more Host Names not filled!	When trying to save configuration files, all host names for the selected devices to be saved, must be defined. On the Master tab/ Sync Master tab, empty host name fields are marked with a red exclamation mark. On the Secondaries tab, look for missing host names in the Host Name column.

15.1.3 KIRK Repeater

Problem	Action required
LED not on	Check if repeater programming is correct.
LED keeps flashing	Check if repeater programming is correct.

15.1.4 KIRK Handset

Problem	Action required
The telephone freezes	Remove and replace the battery pack. Turn on the telephone.
The telephone does not ring	Check whether the ringer is SILENT or RINGER VOL. is OFF.
Not possible to turn on the telephone	Check if battery is connected. If yes, charge battery or change it.
The telephone turn off when receiving a call and going off-hook	Charge the battery. If still a problem change the battery as it might be defective.
The telephone cannot subscribe even if system ID has been found	Check if Access Code is necessary.

15.2 Should You Need to Report a Problem

Here is the minimal set of information required when reporting a problem:

- 1 Configuration data
- 2 Floor plans showing location of wireless servers and repeaters
- 3 Description of the issue: What happens? What was expected? Can it be reproduced? How? How often?

15.3 Frequently Asked Questions

This section contains frequently asked questions about the KWS600v3.

Question - General	Answer
Why is my single cell system continuously restarting itself?	On the Administration Page of the KWS600v3 (Configuration > DECT > Radio) - or in the Configuration Tool, set radio ID back to default (blank).
How can I see that I am using a multi-cell license?	On the Administration Page of the KWS600v3, look in Configuration > General > Info for the System ARI code. If the first three numbers in the System ARI code is 100 you are using a multi-cell license.
How many channels does an internal call take?	An internal call takes two channels, one for each handset.
Where do I find the call statistics for my system on the Administration Page?	On the Administration Page of the KWS600v3, look in Administration > DECT > Statistics for calls in, calls out, handover, and failures.
Why is there no data in my call statistics on the Administration Page?	Call statistics are erased with loss of power.
I updated the firmware on the Master KWS600v3. Why will the KWS600v3 secondaries not sync up?	Firmware updates must be uploaded to all KIRK Wireless Server 600v3. It does not sync up with the Master KWS600v3.
What does the Master KWS600v3 do?	The Master KWS600v3 connects the DECT system to the call handler at each site.

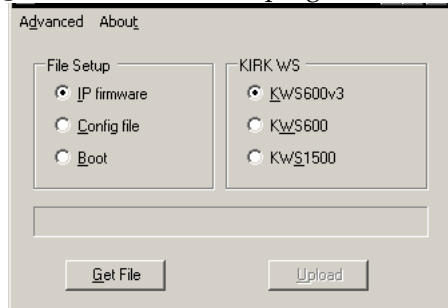
15.4 Using the GWLOAD Program

This section describes how to reach the KWS600v3 through the GWLOAD program. It is necessary to use the GWLOAD program if the system GW Upload is crashed and/or if KWS600v3 is restarted in TFTP mode (refer to [“Resetting the KIRK Wireless Server 600v3 Hardware” on page 45](#) for more information). For download of the GWLOAD program, please contact emeadksupport@polycom.com.

- 1 Once you download the GWLOAD program, install it by clicking on the **setup.exe** and by following the resulting Install Wizard prompts.
- 2 Double-click the GWLOAD icon or locate the program under the Start menu to open the GWLOAD application on your desktop.

The following dialog box appears:

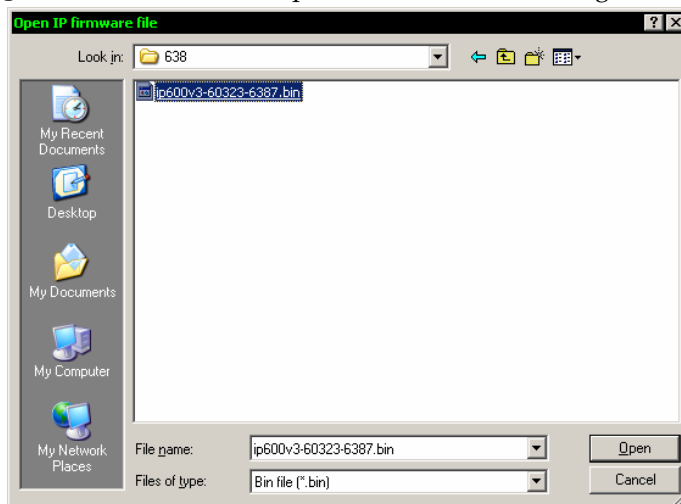
Figure 121 GWLOAD program



- 3** In the **File Setup** area, click **IP firmware**.
- 4** In the **KIRK WS** area, click **KWS600v3**.
- 5** Click **Get File**.

An **Open IP firmware file** dialog box appears.

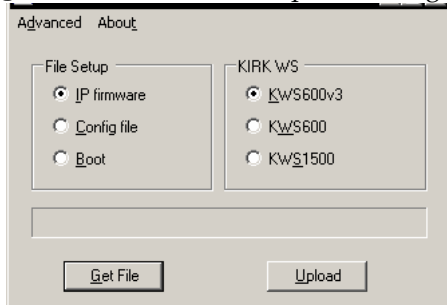
Figure 122 GWLOAD: Open IP firmware file dialog box



- 6 Select the file in question, and then click **Open**.

The following dialog box appears.

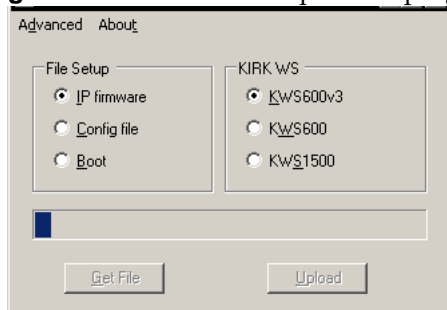
Figure 123 GWLOAD: Upload dialog box



- 7 Click **Upload**.

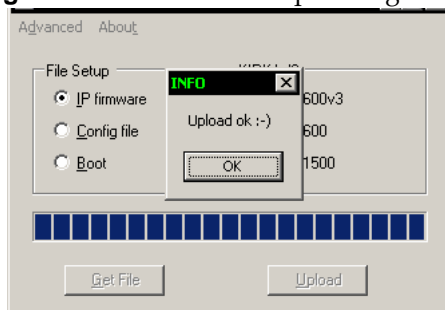
The following dialog box appears.

Figure 124 GWLOAD: Upload in progress dialog box



- 8 When uploading has finished, the following dialog box appears.

Figure 125 GWLOAD: Uploading finished dialog box





Click **OK**.

- 9 When finished uploading the new firmware, it is necessary to reset the KWS600v3 by pressing the Reset button (short press) on the faceplate of the KWS600v3. This will restart the KWS600v3.

Chapter 16 Regulatory Notices

This section contains important safety regulations for the KWS600v3.

16.1 International Regulatory and Product Information


	<p>This KIRK Wireless Server 600v3 has been marked with the CE mark. This mark indicates compliance with EEC Directives 89/336/EEC, 73/23/EEC 1999/5/EC. A full copy of the Declaration of Conformity can be obtained from Polycom Ltd, 270 Bath Road, Slough, Berkshire, SL1 4DX, UK.</p>
	<p>The WEEE Marking on this equipment indicates that the product must not be disposed of with unsorted waste, but must be collected separately.</p>

Cesky [Czech]:	Polycom (UK) Ltd tímto prohlašuje, že tento KIRK KWS600V3 Server je ve shode se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.
Dansk [Danish]:	Undertegnede Polycom (UK) Ltd erklærer herved, at følgende udstyr KIRK KWS600V3 Server overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.
Deutsch [German]:	Hiermit erkläre Polycom (UK) Ltd, dass sich das Gerät KIRK KWS600V3 Server in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.
Eesti [Estonian]:	Käesolevaga kinnitab Polycom (UK) Ltd seadme KIRK KWS600V3 Server vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English:	Hereby, Polycom (UK) Ltd. declares that this KIRK KWS600V3 Server is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]:	Por medio de la presente Polycom (UK) Ltd declara que el KIRK KWS600V3 Server cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.
Ελληνική [Greek]:	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Polycom (UK) Ltd ΔΗΛΩΝΕΙ ΟΤΙ KIRK KWS600V3 Server ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/EK.
Français [French]:	Par la présente Polycom (UK) Ltd déclare que l'appareil KIRK KWS600V3 Server est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.
Italiano [Italian]:	Con la presente Polycom (UK) Ltd dichiara che questo KIRK KWS600V3 Server è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.
Íslenska (Icelandic):	Hér með lýsir Polycom (UK) Ltd yfir því að KIRK KWS600V3 Server er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC
Latviski [Latvian]:	Ar šo Polycom (UK) Ltd deklare, ka KIRK KWS600V3 Server atbilst Direktivas 1999/5/EK būtiskajam prasibam un citiem ar to saistitajiem noteikumiem.
Lietuviu [Lithuanian]:	Šiuo Polycom (UK) Ltd deklaruoja, kad šis KIRK KWS600V3 Server atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.
Nederlands [Dutch]:	Hierbij verklaart Polycom (UK) Ltd dat het toestel KIRK KWS600V3 Server in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.
Malti [Maltese]:	Hawnhekk, Polycom (UK) Ltd, jiddikjara li dan KIRK KWS600V3 jikkonforma mal-htigijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Direttiva 1999/5/EC.

Magyar [Hungarian]:	Alulírott, Polycom (UK) Ltd nyilatkozom, hogy a KIRK KWS600V3 Server megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.
Norsk [Norwegian]:	Polycom (UK) Ltd erklærer herved at utstyret KIRK KWS600V3 Server er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.
Polski [Polish]:	Niniejszym Polycom (UK) Ltd oświadcza, że KIRK KWS600V3 Server jest zgodne z zasadniczymi wymaganiami oraz innymi stosownymi postanowieniami Dyrektywy 1999/5/WE
Português [Portuguese]:	Polycom (UK) Ltd declara que este KIRK KWS600V3 Server está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.
Slovensko [Slovenian]:	Polycom (UK) Ltd izjavlja, da je ta KIRK KWS600V3 Server v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.
Slovenský [Slovak]:	Polycom (UK) Ltd týmto vyhlasuje, že KIRK KWS600V3 Server splna základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.
Suomi [Finnish]:	Polycom (UK) Ltd vakuuttaa täten että KIRK KWS600V3 Server tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
Svenska [Swedish]:	Härmed intygar Polycom (UK) Ltd att denna KIRK KWS600V3 står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999 / 5 / EG.

16.2 Explosive Device Proximity Warning

	Warning. Do not operate your wireless network device near unshielded blasting caps or in an explosive environment unless the device has been modified to be especially qualified for such use.
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Waarschuwing	Gebruik dit draadloos netwerkapparaat alleen in de buurt van onbeschermd ontstekers of in een omgeving met explosieven indien het apparaat speciaal is aangepast om aan de eisen voor een dergelijk gebruik te voldoen.
Varoitus	Älä käytä johdotonta verkkolaitetta suojaamattomien räjäytysnallien läheisyydessä tai räjäytysalueella, jos laitetta ei ole erityisesti muunnettu sopivaksi sellaiseen käyttöön.
Attention	Ne jamais utiliser un équipement de réseau sans fil à proximité d'un détonateur non blindé ou dans un lieu présentant des risques d'explosion, sauf si l'équipement a été modifié à cet effet.
Warnung	Benutzen Sie Ihr drahtloses Netzwerkgerät nicht in der Nähe ungeschützter Sprengkapseln oder anderer explosiver Stoffe, es sei denn, Ihr Gerät wurde eigens für diesen Gebrauch modifiziert und bestimmt.
Avvertenza	Non utilizzare la periferica di rete senza fili in prossimità di un detonatore non protetto o di esplosivi a meno che la periferica non sia stata modificata a tale proposito.
Advarsel	ikke bruk den trådløse nettverksenheten nært inntil uisolerte fengheter eller i et eksplosivt miljø med mindre enheten er modifisert slik at den tåler slik bruk.
Aviso	Não opere o dispositivo de rede sem fios perto de cápsulas explosivas não protegidas ou num ambiente explosivo, a não ser que o dispositivo tenha sido modificado para se qualificar especialmente para essa utilização.

¡Advertencia!	No utilizar un aparato de la red sin cable cerca de un detonador que no esté protegido ni tampoco en un entorno explosivo a menos que el aparato haya sido modificado con ese fin.
Varning!	Använd inte den trådlösa nätverksenheten i närheten av oskyddade tändhatter eller i en explosiv miljö om inte enheten modifierats för att kunna användas i sådana sammanhang.

Appropriate RF safety/installation information

The wireless server is intended to be installed by authorized personal. The wireless server shall be installed in accordance with FCC rules.

The internal antennas used for the wireless server must provide a separation distance of at least 20 cm/8 inches from all persons and must not be co-located or operating in conjunction with any other antenna or transmit-

WARNING

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. The above warning is inserted for regulatory reasons. If any customer believes that they have an interference problem, either because their Polycom product seems to cause interference or suffers from interference, they should contact their distributor immediately. The distributor will assist with a remedy for any problems and, if necessary, will have full support from Polycom

Safety

WARNING!

Only qualified service personnel may install this equipment. The instructions in this manual are intended for use by qualified service personnel only.

Only qualified persons should service the system.

The installation and service of this hardware is to be performed only by service personnel having appropriate training and experience necessary to be aware of hazards to which they are exposed in performing a task and of measures to minimize the danger to themselves or other persons.

Electrical shock hazards from the telecommunication network and AC mains are possible with this equipment. To minimize risk to service personnel and users, the system must be connected to an outlet with a third-wire Earth.

Service personnel must be alert to the possibility of high leakage currents becoming available on metal system surfaces during power line fault events near network lines. These leakage currents normally safely flow to Protective Earth via the power cord. Therefore, it is mandatory that connection to an earthed outlet is performed first and removed last when cabling to the unit. Specifically, operations requiring the unit to be powered down must have the network connections (exchange lines) removed first.

16.3 Important Safety Instructions and Product Information

Before using your telephone equipment, you should always follow basic safety instruction to reduce the risk of fire, electrical shock and injury to persons, and damage to property.

Installation must be performed in accordance with all relevant national wiring rules

Plug acts as Disconnect Device - The socket outlet to which this apparatus is connected must be installed near the equipment and must always be readily accessible

- 1 Read and understand all instructions
- 2 Follow all warnings and instructions including those marked on the product
- 3 Unplug this product before cleaning. Do not use liquid cleaners or aerosol cleaners. Use damp cloth for cleaning
- 4 Do not install the telephone equipment in the bathroom or near a wash bowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool
- 5 Slots or openings in the cabinet back and bottom of the equipment are provided for ventilation to protect it from over-heating. These openings must not be blocked or covered.

- 6 The product should be operated only from the type of power source indicated on the instructions. If you are not sure of the type of power supply, consult your dealer or local power company.
- 7 Do not overload wall outlets and extension cords as this can result in fire or electrical shock.
- 8 Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in fire, electrical shock, or injury. Never spill liquid of any kind into this product.
- 9 To reduce the risk of electrical shock or burns, do not disassemble this product. Opening or removing covers may expose you to dangerous voltages, dangerous electrical current, or other risks. Incorrect reassemble can cause electrical shock when the appliance is subsequently used. If the product need repair, consult your dealer.
- 10 This product does not support connections to outside plant.
- 11 Refer servicing to qualified service personnel under the following conditions:
 - AQ If liquid has been spilled into the product
 - BQ If the product has been exposed to rain or water
 - CQ If the product does not operate normally when following the operating instructions in the manual. Adjust only those controls that are covered by the operation instructions. Improper adjustment of other controls may result in damage and will often require extensive work by qualified service personnel to restore the product to normal operation.
 - DQ If the product has been dropped or cabinet has been damaged
 - EQ If the product exhibits a distinct change in performance
- 2 Avoid using telephone during an electrical storm. There may be a risk of electrical shock from lightning
- 3 Do not use the telephone to report a gas leak in the vicinity of the leak
- 4 Do not place the unit near microwave ovens, radio equipment, or non-ground connected televisions. These appliances may cause electrical interference to the base or handset
- 5 The unit must be installed on a hard, plane surface and connected to a functional 120 volt AC power netadapter and plug the adapter into the power outlet
- 6 The system will not operate in the event of a blackout. Please keep a backup phone for emergencies

Intrinsic safety

Do not install the unit in conditions where there is a danger of electrically ignited explosions.

Exposure to sunlight, heat and moisture

Do not expose the unit to direct sunlight for long periods. Keep away from excessive heat and moisture.

Spare parts and accessories

Use only approved spare parts and accessories. The operation of non-approved parts cannot be guaranteed and may even cause damage.

Power failure

In the event of a power failure, you cannot use the wireless solution to make or receive calls

NOTICES

NOTICE: Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

Repairs to certified equipment should be coordinated by a representative designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.

CAUTION: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

Note: If your telephone equipment causes harm to the telephone network, the telephone company may ask you to disconnect the system from the line until the problem has been corrected or they may discontinue your service temporarily. If possible, they will notify you in advance, but if advance notice is not practical, you should be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect the proper functioning of your telephone system. If they do and it is possible, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service. If you experience trouble with this telephone system, disconnect it from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

Note: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Note: This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IC Note: Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. The term "IC:" before the certification / registration number only signifies that the Industry Canada technical specifications were met.

CAUTION: Privacy of communication may not be ensured when using this phone.

Power Outage: In the event of a power outage, your cordless telephone will not operate. The cordless telephone requires electricity for operation. You should have a telephone which does not require electricity available for use during power outages.

Information to user: The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

LIMITED WARRANTY

This limited, non-transferable warranty is provided to the original purchaser. The product is warranted to be free from defects in materials and workmanship under normal installation, use and service for a period of one (1) year from the date of purchase as shown on the purchaser's receipt.

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