

**ML440 & Initial AP20
Setup
Help Guide
For SL1100**

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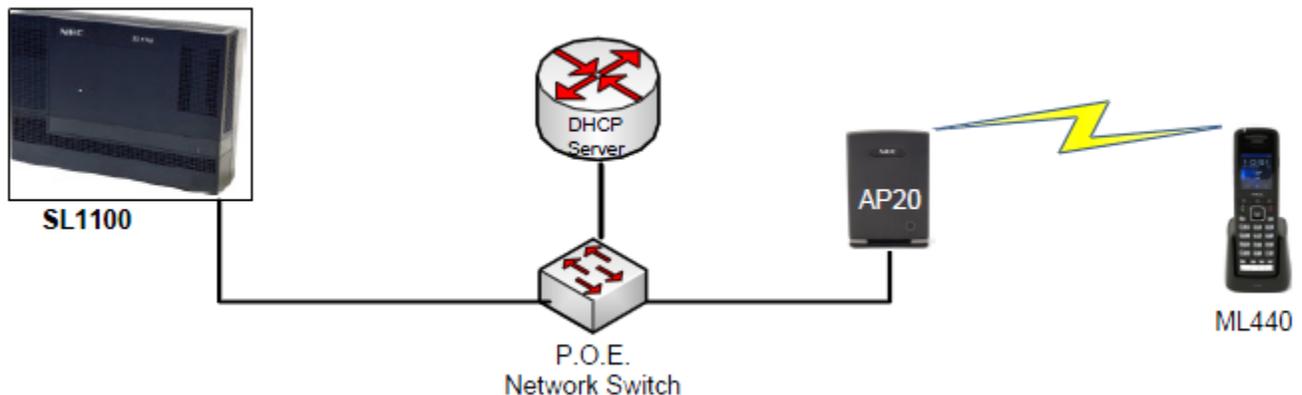
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Document Description

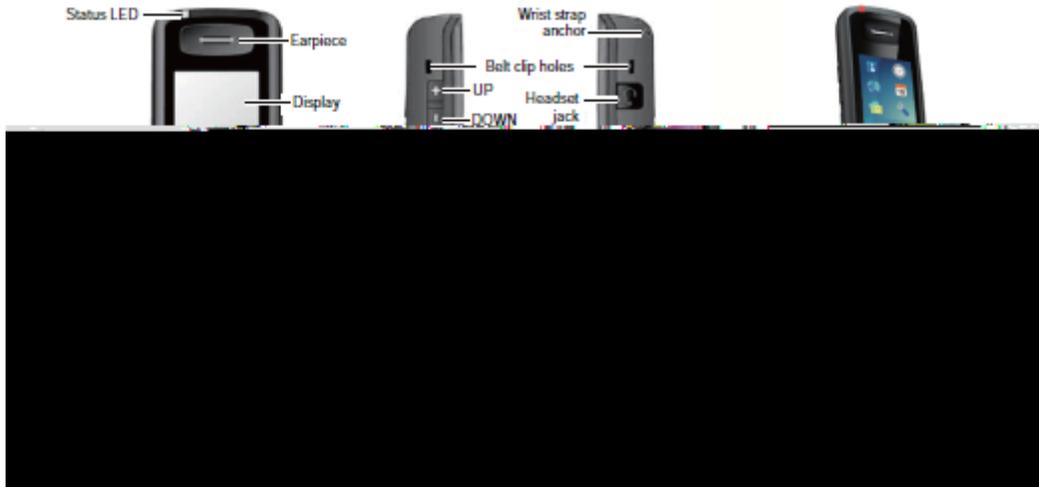
This document is to provide a quick reference for the basic installation and set up of a single AP20 with ML440 Handsets. This document is not intended to replace the SL1100 Features & Specifications Guide, SL1100 Hardware Manual, ML440 and AP20 System Installation Manuals, or the ML440 User’s Guide. For more detailed information please refer to these manuals which may be downloaded from www.necntac.com .

Network Diagram



ML440 & AP20 Hardware View

The NEC ML440 consists of the AP20 access point and the ML440 handset shown below. The AP20 is powered by POE (802.3af) ONLY, receives its initial IP Address via DHCP.



Front View

Rear View



AP20 Base Station Front and Back View

ML440 & AP20 Facts & Service Conditions:

- ML440 will support ACD. (V1.5 or higher)
- The AP20/ML440 is not supported behind NAT routers.
- The maximum number of ML440 Handsets that can register to one AP20 Access Point is 30.
- The maximum number of ML440 Handsets supported in one SL1100 system is 64.
- The maximum number of AP20 Access Points supported on one SL1100 is 40.
- In a multicell system each AP20 supports up to 8 simultaneous voice paths.
- In a single base (AP20) system the AP20 supports up to 10 simultaneous voice paths
- The ML440 and AP20 system uses NEC i-SIP for SL1100.
- The ML440 and AP20 system supports the G.711 CODEC only.
- The ML440 Handset does not support the Live Monitor feature.
- The line keys on the ML440 correspond to Line Keys 1-4 in PRG 15-07-01 or 15-13-01 and 15-13-02 for that phones extension number.
- The three dedicated Soft Keys are predefined depending on the state of the call.
- The ML440 will follow the ring no answer timing whenever the ML440 handset either is turned off or is out of range of an AP20.
- The ML440 does not support Peer-to-Peer.
- The AP20 can only be powered using Power over Ethernet (PoE) 802.3af.
- The ML440 and AP20 system software is upgraded over-the-air direct to handsets and access points.
- The ML440 and AP20 system supports seamless roaming between Base Units.
- The ML440 and AP20 system are not supported for use with Desktop Suite.
- The ML440 and AP20 system cannot be used on multiple SIP servers at the same time.
- The ML440 does not support voice announce calls. If the SL1100 is set to voice in PRG 20-02-12 then each phone should dial use access code 723 to set the phone to ring on internal calls. The ML440 should also be put in their own class of service with PRG 20-08-11 enabled.
- The AP20 can be factory defaulted by pressing the small button on rear side until the Status light turns red.

Please refer to the SL1100 Features & Specification Guide under the "IP Multiline (SIP) – ML440" section for a list of features that are supported for the ML440 Handsets.

Programming & Setup

- From default an IP address can only be assigned to the AP20 via DHCP. This is best acquired from the customer's existing DHCP server on the LAN the AP20 will be installed. However This can be done with the built in DHCP server on the SL1100 (10-13-01) or by using a 3rd party application such as Tftpd32. Once the AP20 has an IP address the status light will be a steady green.
(Note: If more than one DHCP Server on the same LAN can result in Network wide issues such as duplicate IP Address. Be sure no other DHCP servers exist before turning on the built in DHCP Server in program 10-13. System reboot required before changes to 10-13-01 goes into effect.)

- Take a ML440 handset and press the  key followed by * 4 7 * you should then see something like the following.....

IP Search
 MAC: 00:08:7B:07:E1:13
 IP: 172.16.1.101

Take note of the IP address and access this from a browser on the same network.

- Once connected you will be prompted for a login and password. The default is **admin** and **admin**. The user name and password can be changed from the **Web Security** option within the AP20.



- You will be taken to the Home/Status screen. Select **Management** from the side menu.

NEC **Front foyer area**

Management Settings

Base Station Name: Front foyer area

Configuration server address:

Management Transfer Protocol: TFTP

Upload of SIP Log: Disable

Trace Server: Disable

Trace Server IP-Address:

Syslog Server IP-Address:

Syslog Server Port: 514

Syslog Level: Normal Operation

Base Station Name allows you to label the individual AP's for ease in location and troubleshooting.

The other options on this page are for trouble shooting only and can be left at default.

5. From the side menu select the option “**Servers**” to add the SL1100 IP Address.

Server 1:
172.16.0.10:5080

SIP Server: 172.16.0.10:5080

Reregistration time(s): 300

DTMF Signalling: SIP INFO

Codec Priority: G711U
G711A
G726

Enter the IP address from 10-12-09 along with: 5080. The Registration time(s) should be left at default. DTMF Signaling should be set to SIP INFO to follow i-SIP signaling. The Codec Priority must be left at G711U as this is all that is supported at this time.

6. Select “**Extension**” from the side Menu then the “**Add Extension**” link.

Extensions

Server 1:
172.16.0.10:5080

Server 1:

Idx	Extension	Display Name	IPEI	State	FW Info	FWU Progress
There are currently no extensions for server 1						

[Add extension](#)

[Refresh](#)

Adding a Station when SL1100 Registration Type set to “Plug and Play” (Default)

By Default the SL1100 has IP Telephone Registration Mode set to “Plug and Play” as seen in program 10-46-01:

10-46: DT700 Server Information Setup

01 - Register Mode

7.

Add extension

Extension:

Authentication User Name:

Authentication Password:

Display Name:

Server:

If the SL1100 is set to Plug and Play in 10-46-01, no entries are needed in the “Add extension” boxes. Simply click the “Save” button.

Make sure the ext numbers are assigned in the SL1100 (11-02). The system will automatically allocate the ext numbers to the handsets, starting with the first un-equipped port above the port number assigned in 10-46-10 (default =1).

8.

Extensions

Server 1:
172.16.0.10:5080

Server 1:

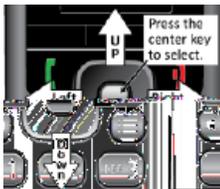
Once saved check the box and then select "Register Handset(s)"

	Idx	Extension	Display Name	IPEI	State	FW Info	FWU Progress
<input checked="" type="checkbox"/>	0	Ext001		FF:FF:FF:FF:FF			

Check All / Uncheck All

With selected: [Delete Extension\(s\)](#), Register Handset(s), [Deregister Handset\(s\)](#)

After selecting "Register Handsets(s)" take the first handset and press the "Menu"  button.

Press "Down"  to the  icon and select "Enter".

9. The  Register icon will be highlighted. Select "Enter". You will then be prompted for the Access Code.

Enter the default "Access code" of "0 0 0 0" followed by the left Soft Key directly below "OK"

10. After a few seconds the handset display will change to the station name (15-01-01) directly above the extension number (11-02-01)

11. Using 20-06 assign the ML440 handset extensions to their own unique Class of Service for all Night Modes utilized. E.g. COS 2 for all modes.

20-08: Class of Service Options (Outgoing Call Ser

Class of Service (1~15)

11 - Call Mode Switching Protection from Caller (Internal Call)

20-09: Class of Service Options (Incoming Call Ser

Class of Service (1~15)

05 - Handsfree Answerback/Forced Intercom Ringing Switching

ML440 does NOT support intercom Voice Call so this feature must be disabled.

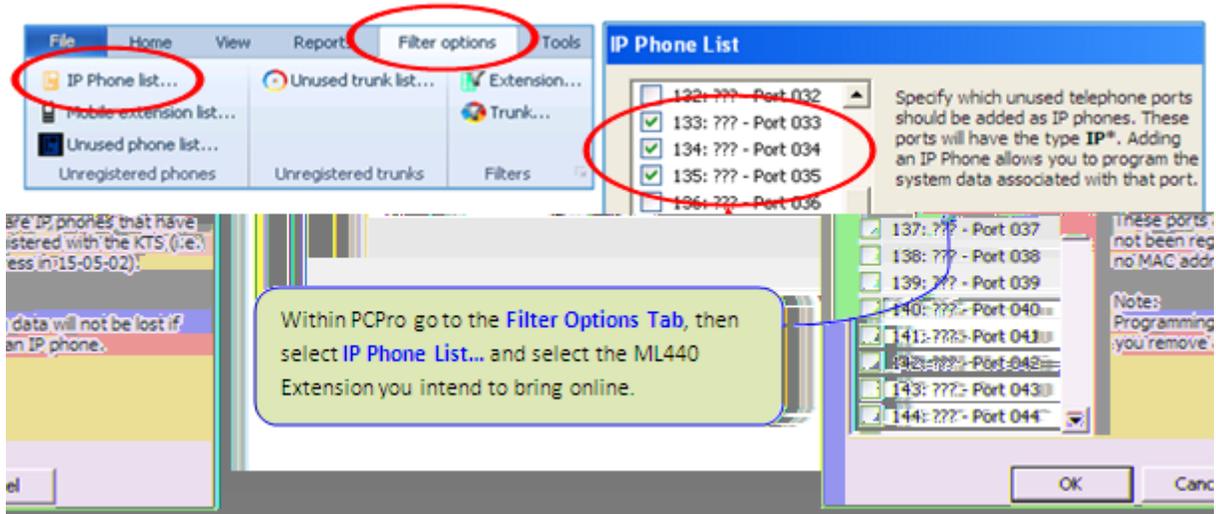
- a. First at all ML440 stations dial the access code to force intercom ringing (default 723 prog 11-11-16)
- b. For the new Class Of Service the ML440 extensions have been assigned, enable 20-08-11 to stop callers from changing the ringing ML440 to Voice Call.
- c. For the new Class Of Service the ML440 extensions have been assigned, disable 20-09-05 and this will prevent the ML440 user from dialing the Voice Call access code (default 721, prog 11-11-15)

Adding a Station when SL1100 Registration Type set to “Manual or Automatic”

12. Some systems may already be configured for Manual or Automatic Registration Types in program 10-46-01:

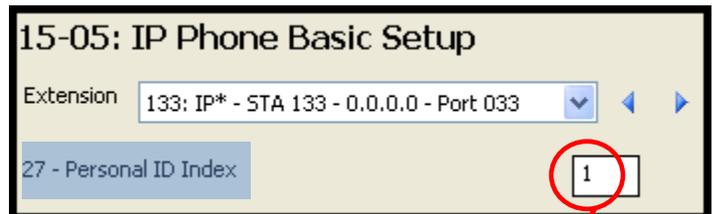


If this is the case the ML440 sets can be assigned with the following procedure:
Within PCPro go to the Filters Options Tab > IP Phone List and select the ML440 Extensions you intend to bring online.



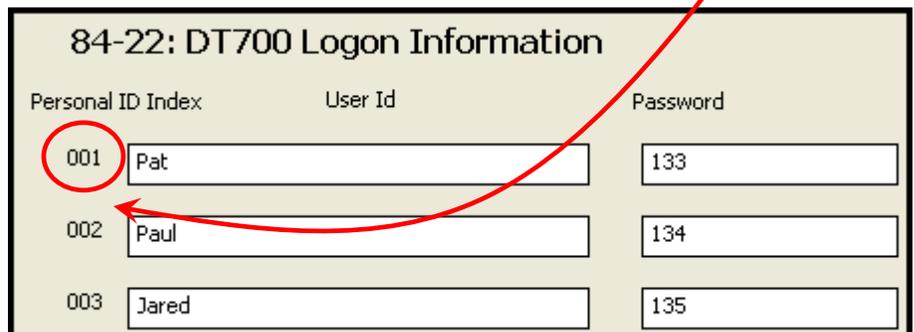
13.

Go to **15-05-27** and assign a unique Personal ID Index to each of the extension.



14.

In 84-22 assign a **User Id** and **Password** for each of the personal ID Index numbers assigned in step 13.



15.

Network Settings
SIP/RTP Settings

Local SIP port: 5060

SIP ToS/QoS: 0x68

RTP port: 50004

RTP port range: 40

RTP ToS/QoS: 0xB8

SIP registration mode: Static

Browse into the AP20 and perform steps 1~5 (pages 2 and 3 of this doc). Then select **Network** from the side menu to access the **Network Settings**. Go to the **SIP/RTP Settings** and change **SIP registration mode:** to **Static**. Go back to the **Home/Status** page and select the **Reboot** button at the bottom left side of the screen. Allow the AP20 to reboot and come back online.

16.

After logging back into the AP20 select the **Extensions** option from the side menu and the click on **Add extension**. Enter the extension number along with the **User Name** and **Password** previously assigned in **84-22** in step 14

Add extension

Extension: 133

Authentication User Name: Pat

Authentication Password: ●●●

Display Name:

Server: Server 1: 172.16.0.10:5080

Save Cancel

17. Finally follow steps 8 through 11 on page 8 of this doc to complete bringing the handset on line.

Additional Programming for ML440 Extensions

With the ML440 online programming of the handset is like any other deskset. The ML440 can have key programming for up to 16 keys but only the first 4 can be accessed. (**Program 15-07**)

As the station is in another COS do not forget to enable the other stable options such as receiving Caller ID (**20-09-02**) and Sending caller ID (**20-08-13**).

You should also enable **15-05-28** "Additional Information" for all ML440 Extensions so it can receive Additional Caller ID Info. Programs **15-02-13** & **15-02-34** should also be set to Extension/Trunk Mode which should be the default setting.