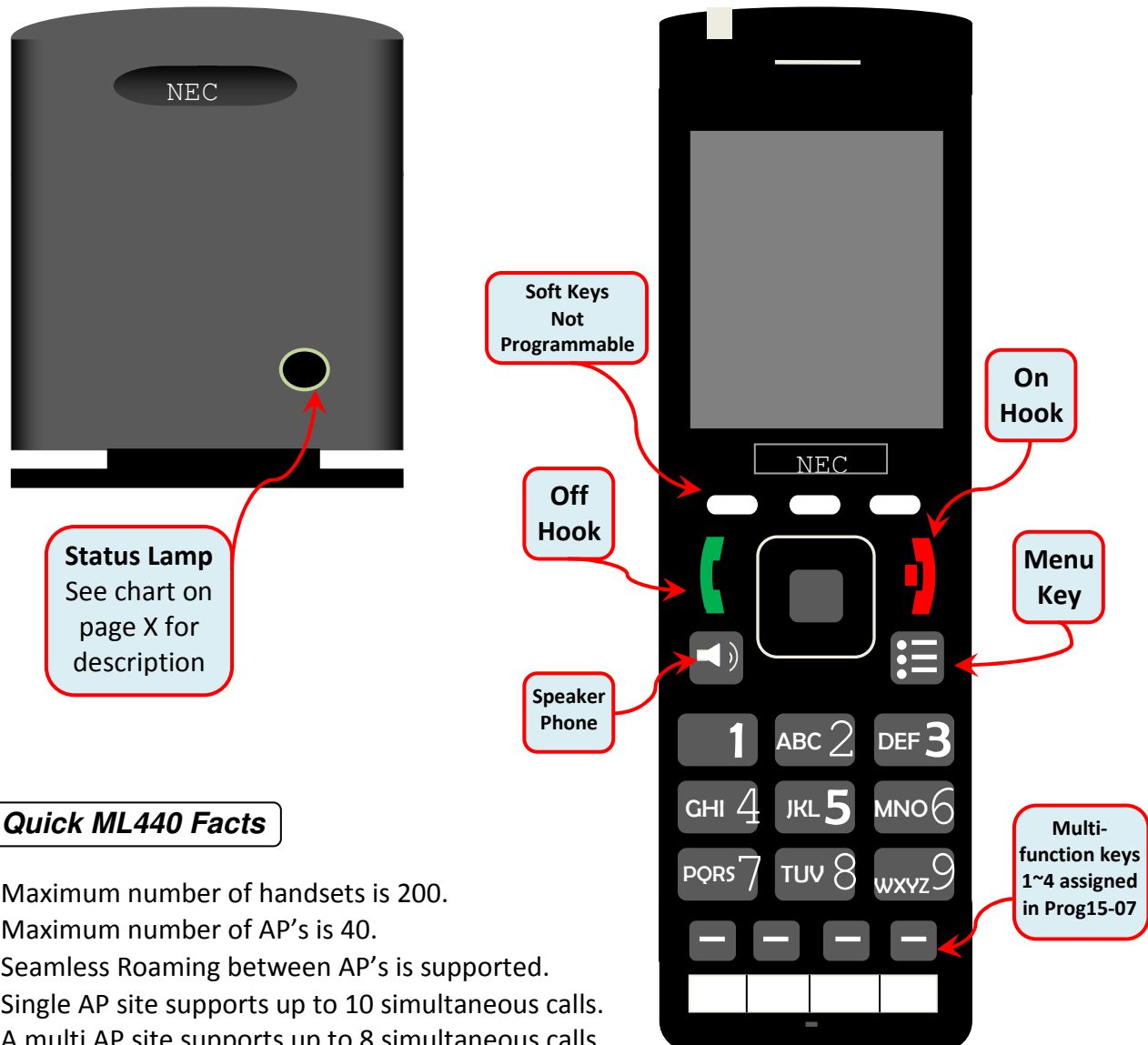


## NEC ML 440


The NEC ML440 consists of the AP20 access point and the ML440 handset shown below. The AP20 is powered by POE (802.3af) ONLY.



### Some Quick ML440 Facts

- Maximum number of handsets is 200.
- Maximum number of AP's is 40.
- Seamless Roaming between AP's is supported.
- Single AP site supports up to 10 simultaneous calls. A multi AP site supports up to 8 simultaneous calls.
- Voice Announce is NOT supported (there is no alert Tone).
- ML440 uses NEC i-SIP so each handset requires one IP Phone license (license 5101).
- ML440 only supports G711.
- ML440 does not work with UCB or Desktop Suite/Attendant.
- Maximum handsets that can register to one AP20 is 30.
- AP20 can be defaulted by depressing the small button on the rear side until the Status light turns red.

# Programming

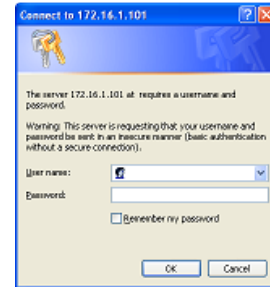
1. From default an IP address can only be assigned to the AP20 via DHCP. This can be done with the built in DHCP server on the SV8100 (10-13-01), via the customers DHCP server, or by using a 3<sup>rd</sup> party application such as Tftpd32. Once the AP20 has an IP address the status light will be a steady green.
2. 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.

3. 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.



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

**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 SV8100 IP Address.

**Server 1:**  
172.16.0.10:5080

SIP Server:

Reregistration time(s):

DTMF Signalling:

Codec Priority:   
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 (Plug And Play)**

**10-46: DT700 Server Information Setup**

01 - Register Mode

7.

**Add extension**

Extension:

Authentication User Name:

Authentication Password:

Display Name:

Server:

If the SV8100 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 SV8100 (**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). **Note:** You must have an ME50 installed to use ports 64 and above. Each handset **ALSO** uses a port license as well as an IP station license

8.

**Extensions**  
**Server 1:**  
 172.16.0.10:5080

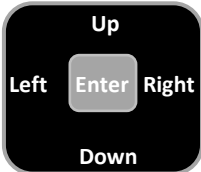

Once saved check the box and then select "Register Handset(s)"


**Server 1:**

	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  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 ext 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.

- First at all ML440 stations dial the access code to force intercom ringing (default 723 prog 11-11-16)
- 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.
- 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 (Manual/Automatic)**

**10-46: DT700 Server Information Setup**

01 - Register Mode Manual

12. Some systems may already be configured for Manual or Automatic Login. If this is the case the ML440 sets can be assigned with the following procedure. Within PCPro go to **Programming, Unregistered Phones, IP Phone List...** and select the ML440 extensions you intend to bring online.

Within PCPro go to **Programming, Unregistered Phones, IP Phone List...** and select the ML440 extensions you intend to bring online.

**IP Phone List**

Specify which unused telephone ports should be added as IP phones. These ports will have the type IP\*. Adding an IP Phone allows you to program the system data associated with that port.

These ports are IP phones that have not been registered with the KTS (i.e. no MAC address in 15-05-02).

Note: Programming data will not be lost if you remove an IP phone.

OK Cancel

13.

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

**15-05: IP Phone Basic Setup**

Extension 133: IP\* - STA 133 - 0.0.0.0 - Port 033

**27 - Personal ID Index** 1

14.

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

**84-22: DT700 Logon Information**

Personal ID Index	User Id	Password
<span style="border: 1px solid black; border-radius: 50%; padding: 2px;">001</span> Pat	<input type="text" value="Pat"/>	<input type="text" value="133"/>
002 Paul	<input type="text" value="Paul"/>	<input type="text" value="134"/>
003 Jared	<input type="text" value="Jared"/>	<input type="text" value="135"/>

15.

**Network Settings**  
**SIP/RTP Settings**

Local SIP port:

SIP ToS/QoS:

RTP port:

RTP port range:

RTP ToS/QoS:

SIP registration mode:  ▼

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:

Authentication User Name:

Authentication Password:

Display Name:

Server:  ▼

17. Finally follow steps 8 through 11 on page 4 of this doc to complete bringing the handset on line.

## ***Additional Handset Programming***

With the phone online programming of the handset is like any other deskset. The device can have key programming for up to 16 keys but only the first 4 can be accessed.

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**).

## Multi-Cell Installation

Most installations will require additional AP20's to provide the wireless coverage of the customer's working area. Each area the AP20 covers is called a "Cell". Each cell must overlap another cell so that the calls in progress can be seamlessly passed between AP20's as the handset moves between covered areas.

In a Multi-Cell layout 1 AP20 acts as the primary timing/synchronization source for the entire WL440 network. Other AP20's overlap the primary AP20 at different levels. A direct overlap with the primary would be level 1. An overlap into a level 1 cell would be a level 2 and so on. See the diagram below.

