

This guide explains the installation, configuration and operation of the XN120 Telephone System including the exchange line and telephone connections. Further information will be supplied with any optional equipment that you have purchased. Please keep all information supplied for future reference.

Regulatory Notice.

Refer to the Declaration of Conformity related to the product at the end of this document.
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.



XN120

Getting Started Guide
Rev 1.2 (March 2005)
991409-5

XN120 System

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What is the XN120?

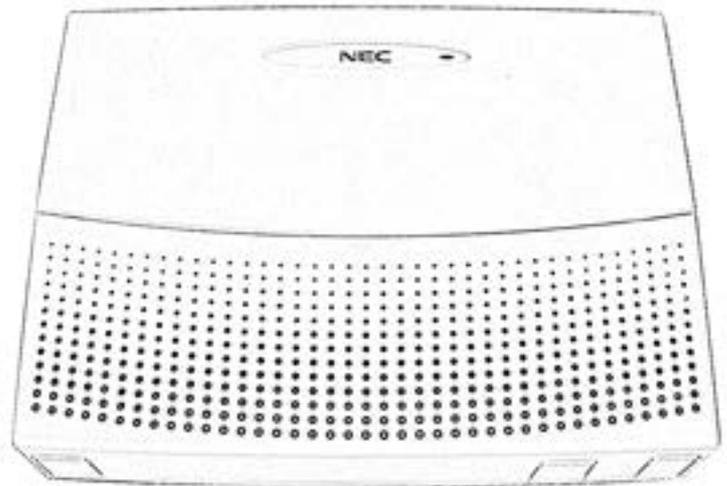
The XN120 system consists of a main unit with a base board pre-installed.

The XN120 telephone system will allow the connection of up to three exchange lines plus eight telephones. The eight telephones can be either XN120 system telephones or normal telephones.

The XN120 can have an external music source connected that can be played to callers placed on hold.

There is also a connection for an external paging system.

It can also accommodate optional parts to expand the system or connect ISDN BRI lines. Further more, there are optional expansion units available to increase the number of exchange lines and telephones that can be connected. Separate guides are supplied with the optional equipment.



All equipment will operate when the XN120 is installed as shown in this guide; it is not necessary to make any changes to the system configuration.

With the default settings:

- Each telephone will function and is assigned an extension number.
- Calls received on the exchange lines will ring at telephone number 200.
- Each telephone can make outside calls by dialing 9.
- Each exchange line is presented at a Function Key with busy lamp indication.

Outside lines

You can connect up to three analogue exchanges lines to the XN120.

- The exchange lines must be loop start type.
- The XN120 will also detect Caller ID sent by the Network Provider. The Caller ID must be the ring alert type with FSK signaling.
- Each line is connected via an RJ11 6/4 way socket. Three cables are supplied with the XN120 to connect to the exchange lines supplied by your Network Provider.

XN120 System

XN120 System Telephones

There are two types of XN120 System phones available.

Feature	Available on the XN120 Talk		Available on the XN120 Vision		
	Yes	No	Yes	No	
Programmable Keys	Yes	12 with lamps 10 without lamps	Yes	12 + 10 with lamps	
LCD Display	No		Yes	2 lines x 20 character	
Hands free	No	Talkback only	Yes		
Accept 24 button console	No		Yes		
Wall mount kit	Yes	Built in	Yes	Built in	
					

You can connect up to 8 XN120 system telephones to any of the station connections. (If you need more telephones you will need to install optional cards). The XN120 system telephones have feature keys and illuminated function keys that can be tailored to your own requirements.

The XN120 system telephones with an LCD display will show information about who is calling you, the call you are on or the feature you are using.

- Each telephone is connected to the XN120 via an RJ11 6/4 way socket. The cables are supplied with the telephone.

There are also two types of XN120 Consoles available.

Feature	Available on the 24 Button add on console		Available on the 64 Button DSS console		
	Yes	No	Yes	No	
Programmable Keys	Yes	24 with lamps	Yes	64 with lamps	
Fixed feature keys	No		Yes	14 keys	
Connection method	Connects into any XN120 Vision phone.		Connects into a hybrid extension port via an RJ11 cable.		
Wall mount kit	No		No		
					

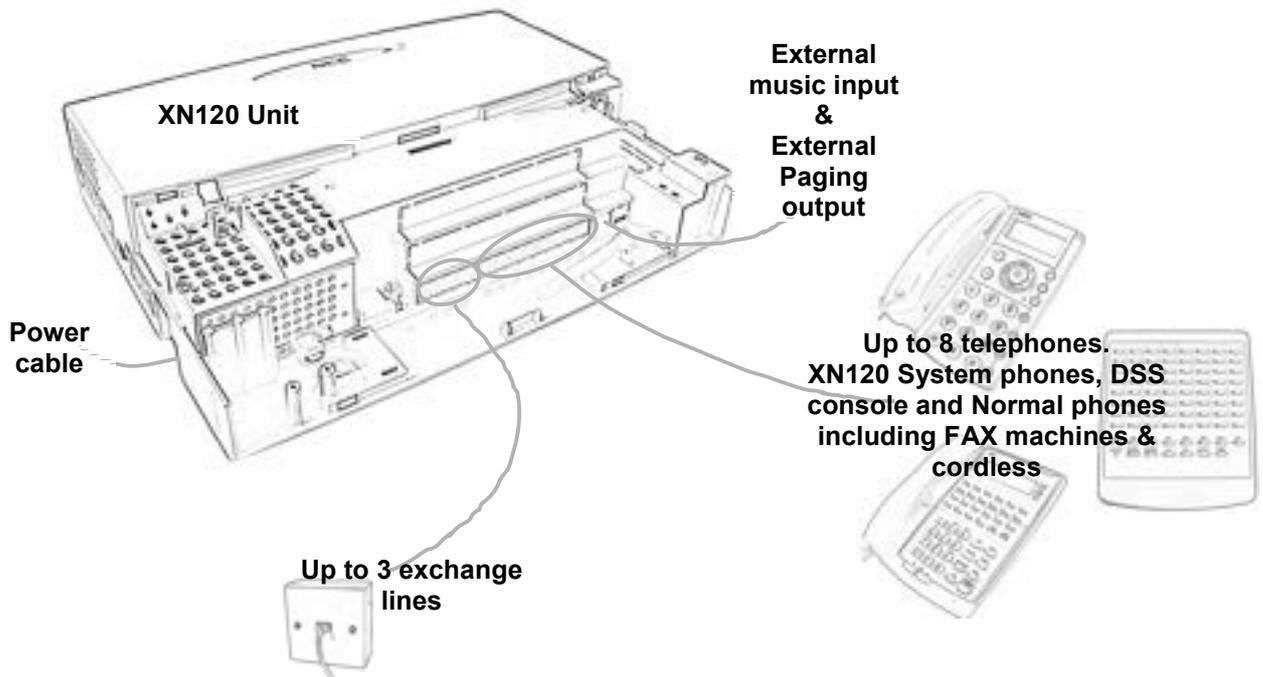
Normal Telephones

You can connect up to 8 normal telephones or cordless phones to any of the station connections.

- The telephones can be dial pulse or DTMF dialing.
- They can have Hook Flash or Timed Break Recall.
- The XN120 can send Caller ID to the normal telephone.



System Connection Diagram



Optional Items	
<p>008 Expansion Card 8 Extension ports Installed onto the main board in the XN120 unit.</p> <p>308 Expansion card 3 Exchange lines + 8 Extension ports Installed onto the main board in the XN120 unit.</p> <p>2PGDU Card Installed onto the main board in the XN120 unit. For 2 door unit and 2 external page amplifiers, external MOH inputs, or audio input/output. 2 Relay contacts available that can be assigned to any of the door units or audio ports.</p> <p>DSPDB Voice Mail and Voice response unit.</p> <p>EXIFU Card For adding expansion cabinets, Call Logging, Ethernet connection and CF card slot. There is also an EXIFU card with only Call Logging. Installed onto the main board in the XN120 unit.</p>	<p>2OPBOX For ISDN BRIU cards. 2 slots available per unit. Plugs onto the right side of the XN120 unit.</p> <p>BRIU Card ISDN Basic Rate cards (2 or 4 circuits available) can be installed in the 2OPBOX.</p> <p>XN120 Expansion cabinet For more lines, stations and BRI. Provides the same card capacity as the main cabinet. Each expansion cabinet requires a dedicated power cable. Connected to the EXIFU card in the Main XN120 unit via an RJ45 cable.</p> <p>64 Button DSS console Provides 64 programmable keys and 14 fixed feature keys. Gives operator type functionality.</p> <p>24 Button Add On console Provides 24 additional function keys for the XN120 Vision phones.</p>

Installation Procedure

Installation Procedure

- | | |
|--|---|
| <p>1 Unpack all items and check for damaged or missing parts.
See page 7 for details.</p> | |
| <p>2 Are you replacing an existing telephone system ?
See page 8 for details.</p> | <p>If so, it is recommended that you do not disconnect all of the exchange lines or telephones until you are certain that the XN120 is installed and operating correctly.
You can move each exchange line to the XN120 while you are testing at step 9.</p> |
| <p>3 Mount the XN120 system on the wall.
See page 9 for details.</p> | <p>! Within suitable cabling distance from the exchange lines.
! Within suitable distance from a power socket and Earth point.
! Check the other installation considerations in section 3.
! If you have any optional parts to install please check any installation considerations in the documentation supplied with each item.</p> |
| <p>4 Connect the telephones.
See page 11 for details.</p> | |
| <p>5 Connect the exchange lines.
See page 16 for details.</p> | |
| <p>6 Connect the External MOH Device.
See page 17 for details.</p> | |
| <p>7 Connect the External Paging Amplifier.
See page 18 for details.</p> | |
| <p>8 Connect the power and switch on the XN120.
See page 19 for details.</p> | |
| <p>9 Test the system.
See page 21 for details.</p> | |
| <p>10 Configure the XN120 to the customer's requirements.
See page 23 for details.</p> | |
| <p>11 Install any optional equipment.
See page 43 for details.</p> | <p>You can install each item in turn and test it before you install the next item.</p> |
| <p>12 Consider the operation during power failure</p> | <p>! Important
Ensure that you can make/receive calls in the event of a power cut or system failure.</p> |

1- Unpack the System.

1 x XN120 system
1 x Wall mounting template



1 x Power cord



4 x Fixing screws



3 x Exchange line cables (3 metre RJ11 to bare wire)
8 x Telephone cables (3 metre RJ11 to bare wire)
1 x External MOH/Paging cable (3 metre RJ11 to bare wire)
Getting Started Guide
Plastic Spacer (Required when EXIFU is installed)

Additional Items Required:

- Cross head screwdriver.
- 4 Wall fixing plugs suitable for the type of wall.
- Solid wire for extending telephone cabling:
Recommended cable type: Twisted pair (CW1308 or similar specification)
Conductor diameter: 0.4 to 0.6 mm
Maximum cable length: (with 0.5 mm diameter cable)
XN120 system telephone – 300 metres
Normal telephone – 1500 metres

If you need to extend the exchange line cables:

- Solid wire for exchange line cables:
- Recommended cable type: Twisted pair (CW1308 or similar specification)
- Conductor diameter: 0.4 to 0.6 mm

Other Documentation Available

All documents are available on the XN120 Technical CD

991425-5	XN120 PC Pro Getting Started Guide
991421-5	XN120 Basic Rate ISDN Guide
991422-5	XN120 DSPDB Guide
991420-5	XN120 2PGDU Guide
991423-5	XN120 EXIFU (A1 and B1) Guide
991424-5	XN120 008 & 308 Expansion Card Guide
991419-5	XN120 2OPBOX Guide
991433-5	XN120 Read Me First
991434-5	XN120 Features Reference Manual
991435-5	XN120 Programming Reference Manual
991442-5	XN120 Battery Box Guide
991443-5	XN120 Expansion Unit Guide

Replacing an Existing Telephone System

2- Replacing an Existing Telephone System

If you are replacing your existing telephone system with the XN120 we recommend that you check the following.

- Do not disconnect all of the lines or extensions from your existing telephone system. If for any reason you have problems installing the XN120 you will need your old system in working order to continue your business.
- If you plan to use existing telephone cabling within your building check:
 - The cable is similar to CW1308 specification (see the Glossary for help).
 - There are 4 wires (2 pairs) available to each XN120 system phone location.
 - You will need an RJ11 socket for each XN120 system phone and 64 Button DSS console.
- Move the exchange lines / normal telephones one at time and test each one before moving over the next.

3- Wall Mount the XN120 system

Installation Considerations:

- To avoid electric shock or damage do not plug in or turn on the system power before completing the installation.
- Avoid working with the system during electrical storms.
- Use the power cord supplied with the product.
- Do not bundle power cords together, the cords may overheat.
- Ensure the system has a suitable Earth Ground connection.

Environmental Considerations – Be sure the system is not:

- In direct sunlight or in hot, cold or humid places.
 - In dusty areas or in areas where sulfuric gasses are produced.
 - In places where shocks or vibrations are frequent or strong.
 - In places where water or other fluids may come into contact with the equipment.
 - In areas near electric welders or machines that emit high frequency radiation.
 - Near computers, microwaves, air conditioners etc.
 - Near radio antennas (including shortwave).
- If you are installing the optional expansion box or expansion cabinets ensure there is sufficient wall space and ventilation. Refer to the wall mounting diagrams below.

1 You will need a minimum of 560mm x 680mm (W x H) wall space for the XN120 system.

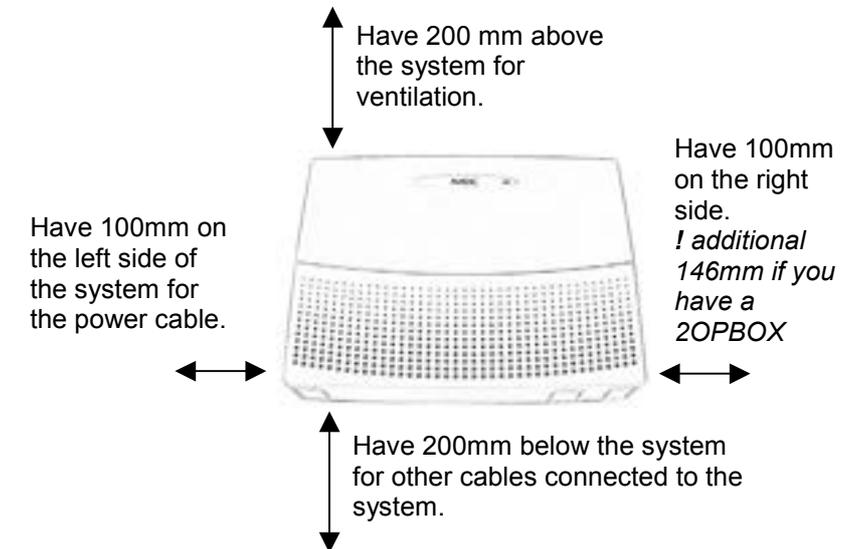
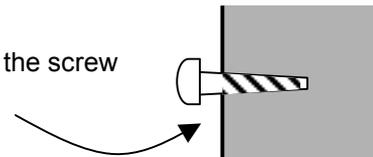
The system is 360mm x 279mm (W x H)

! You will need more space if you are installing the optional units:

- 2OPBox
 - Expansion cabinets
- Refer to the installation instructions supplied with these units.

Use the wall mount template supplied to mark the four screw locations. Ensure that you use the correct wall plugs for the type of wall.

Leave approximately 3~5mm of the screw protruding from the wall.



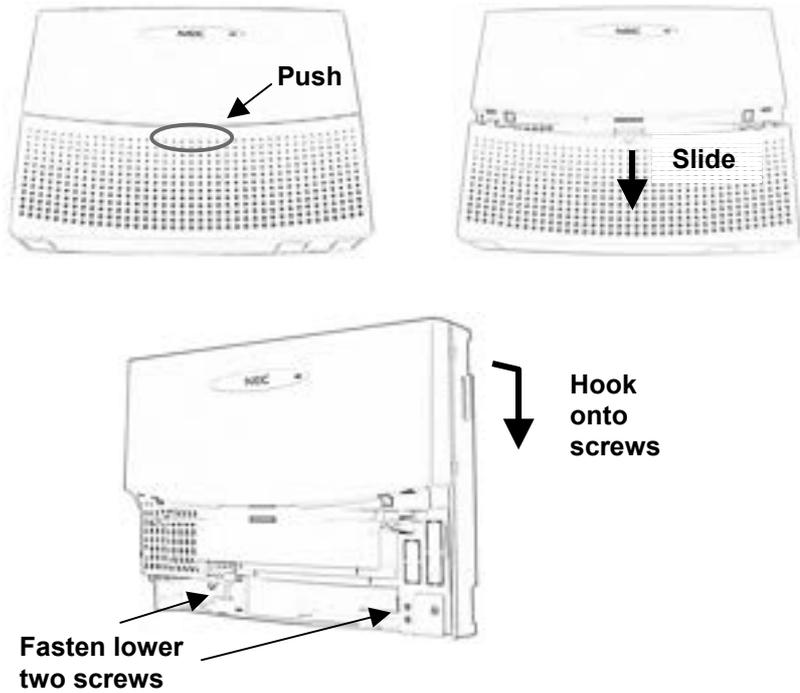
Wall Mount the XN120 system

2

Remove the sub cover of the XN120.

Hook the XN120 onto the wall mount screws.

Tighten the lower screws to secure the unit to the wall.

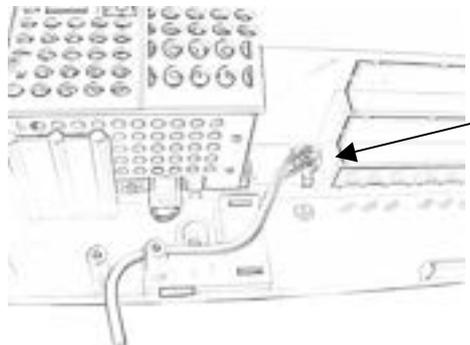


3 Earth the XN120 system.

Caution: If this cable is not installed or requires disconnection, then the telecommunication network connection(s), CO and/or ISDN, must be disconnected first from the XN120.

Important. The system must have a permanent Earth Ground connection to a verified Earth point using a minimum of 2.5mm² green/yellow cable.

The Earth connection must have no other purpose than connecting to the XN120 unit.



The Earth point is located on the left side under the sub cover.

4- Connect the Telephones

Precautions for Cabling:

- Do not run the cable with a power cable, computer cable etc.
- Do not run the cable near any high frequency generating equipment.
- Use cable protectors if the cables are run on the floor.
- Aerial distribution wiring is not allowed.

Connecting the XN120 System Phones



The XN120 system phones can be connected to any of the eight RJ11 telephone sockets labelled ST1 to ST8 in the XN120 unit.

The XN120 is supplied with RJ11 to bare wire cables for connection to optional distribution frames.

! Check Power Fail Operation later in this guide, ST8 can be used to provide a working telephone should the power be disconnected from the XN120.

Use the line cord supplied with the system telephone.

The line cord supplied with the XN120 system telephones can be plugged directly into the RJ11 sockets labelled ST1 to ST8 in the XN120 unit.

OR

Use the RJ11 to bared wire cables (supplied with the XN120) and RJ11 sockets.

If you need to extend the telephone cables:
Fit an RJ11 socket at the location the telephone is required, run a telephone cable back to the distribution frame. Connect to one of the sockets labelled ST1 to ST8 using one of the RJ11 to bared wire cables supplied.

- Ensure that you connect the 4 wires as shown otherwise the telephone will not initialize.
- Use CW1308 or similar telephone cable.
- Maximum cable length is 300 metres (with 0.5 mm diameter conductor).

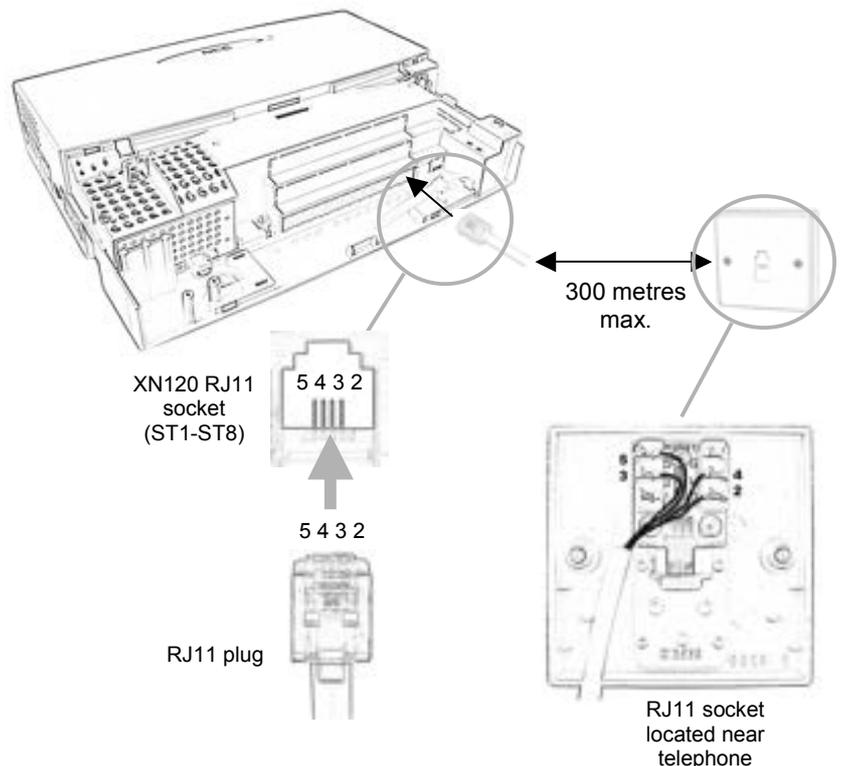
Connections:

XN120 ST socket	RJ11 socket
Pin 2 black	Pin 2
Pin 3 red	Pin 3
Pin 4 green	Pin 4
Pin 5 yellow	Pin 5

! The connections are polarity sensitive - you must connect as shown.

! Ensure that you use a separate twisted pair for the speech and data:
Pins 3 & 4 (speech)
Pins 2 & 5 (data)
This will ensure that you can reach the maximum cable length of 300 metres.

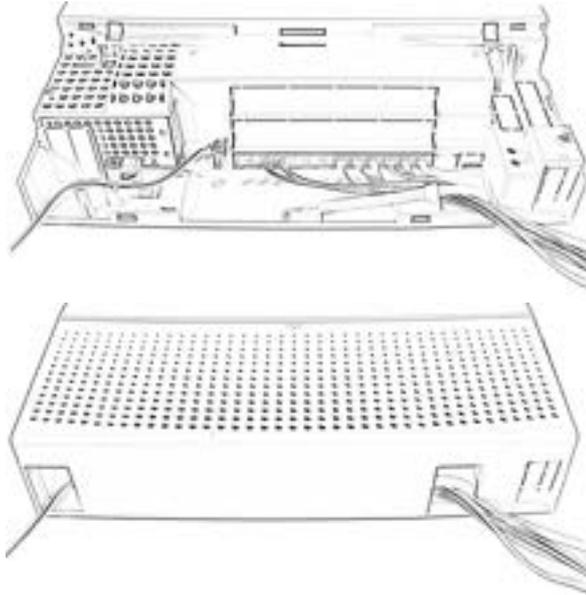
! Identify each RJ11 socket with its connection number (ST1 to ST8). This will help you configure the system later.



Connect the Telephones

Route the cables into the lower side of the system. Use cable ties to secure the cables.

Remove the breakouts of the sub cover before re-fitting onto the system.



OR

Use the telephone cables supplied with the XN120 and RJ45 sockets.

Connections:

XN120 ST socket	RJ45 socket
Pin 2 black	White/green
Pin 3 red	Blue/white
Pin 4 green	White/blue
Pin 5 yellow	Green/white

! The connections are polarity sensitive - you must connect as shown.

! Ensure that you use a separate twisted pair for the speech and data:

Pins 3 & 4 (speech)

Pins 2 & 5 (data)

This will ensure that you can reach the maximum cable length of 300 metres.

! Identify each RJ45 socket with its connection number (ST1 to ST8). This will help you configure the system later.

Refer to the diagram above for the pin numbering of the XN120 RJ11 sockets (ST1 to ST8).

Connecting the Normal Phones



The normal phones can be connected to any of the eight RJ11 telephone sockets labelled ST1 to ST8 on the XN120.

The XN120 is supplied with RJ11 to bared wire cables for connection to optional distribution frames.

! Check Power Fail Operation later in this guide, ST8 can be used to provide a working telephone should the power be disconnected from the XN120.

Use the line cord supplied.

If the line cord supplied with the telephone has an RJ11 plug it can be plugged directly into the RJ11 sockets labelled ST1 to ST8 in the XN120 unit.

OR

Use the RJ11 to bared wire cables (supplied with the XN120) and Line Jack Units.

If you need to extend the telephone cables:
Fit a Master type Line Jack Unit (LJU) at the location the telephone is required, run a telephone cable back to the distribution frame. Connect to one of the sockets labelled ST1 to ST8 using one of the RJ11 to bared wire cables supplied.

- Ensure that you connect the 2 wires as shown otherwise the telephone will not operate correctly.
- Use CW1308 or similar telephone cable.
- Maximum cable length is 1500 metres (with 0.5 mm diameter conductor).

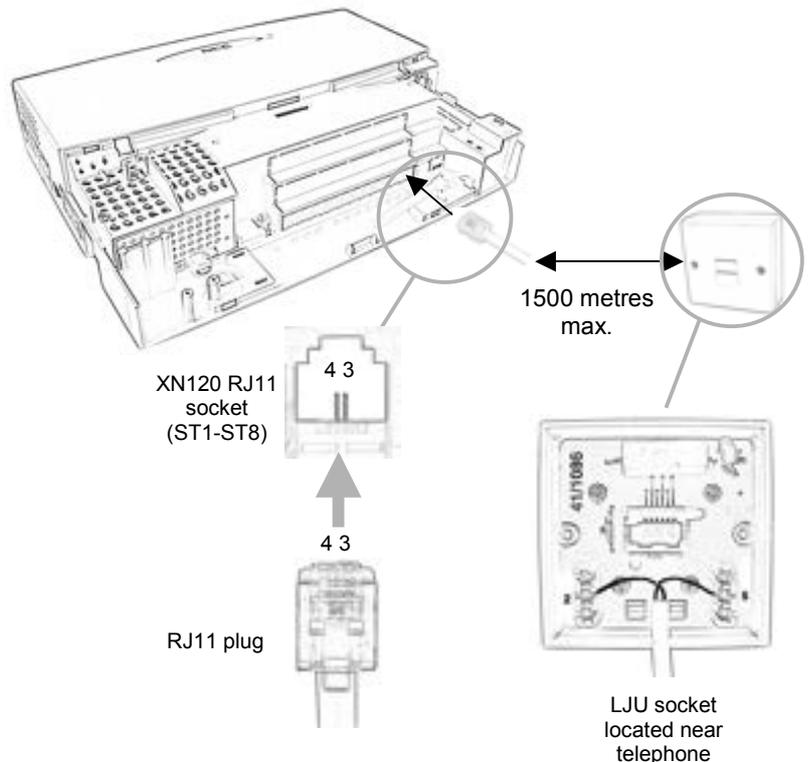
Connections:

XN120 ST socket	LJU socket
3 red	2
4 green	5

! The connections are not polarity sensitive.

! Ensure that you use a twisted pair for the speech:
Pins 3 & 4 (speech)
This will ensure that you can reach the maximum cable length of 1500 metres.

! Identify each line jack unit with its connection number (ST1 to ST8). This will help you configure the system later.



Route the cables into the lower side of the system. Use cable ties to secure the cables.

See diagram on page 12.

Connect the Telephones

Connecting the 64 Button Consoles



The 64 Button Consoles can be connected to the RJ11 telephone socket labelled ST8 on the XN120 (refer to Appendix A for further connection options). The console must be used in conjunction with an XN120 System Telephone (a display phone is recommended).

The console provides 64 buttons with lamps that can be programmed to give quick access to extensions on the system – for operator type working. Buttons can have outside numbers assigned to give the operator quick access to frequently called numbers.

There are also 14 fixed feature keys to give access to system features such as page zones, door phones and changing the Day/Night mode.

The XN120 is supplied with RJ11 to bared wire cables for connection to optional distribution frames.

! Check Power Fail Operation later in this guide, ST8 can be used to provide a working telephone should the power be disconnected from the XN120. You cannot use socket ST8 for both power fail and a 64 Button DSS console; ST8 can have one function only.

If you want to use the power fail operation and have a 64 Button Console connected you can either install an additional 008/308 expansion card or connect the power fail telephone directly to the exchange line. See Power Fail Options later in this guide.

Use the line cord supplied.

The line cord supplied with the console can be plugged directly into the RJ11 socket labelled ST8 in the XN120 unit.

OR

Use the RJ11 to bared wire cables (supplied with the XN120) and RJ11 sockets.

If you need to extend the telephone cables:
Fit an RJ11 socket at the location the console is required, run a telephone cable back to the distribution frame. Connect to the socket labelled ST8 using one of the RJ11 to bared wire cables supplied.

- Ensure that you connect the 2 wires as shown otherwise the telephone will not operate correctly.
- Use CW1308 or similar telephone cable.
- Maximum cable length is 300 metres (with 0.5 mm diameter conductor).

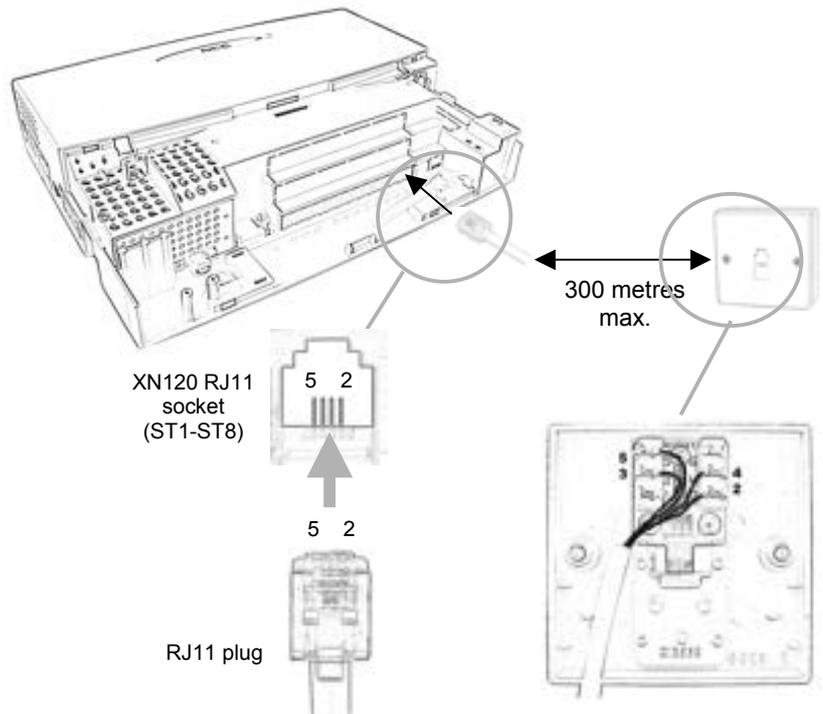
Connections:

XN120 ST8 socket	RJ11 socket
Pin 2 Black	Pin 2
Pin 5 yellow	Pin 5

! The connections are polarity sensitive - you must connect as shown.

**! Ensure that you use a twisted pair for the console:
Pins 2 & 5 (data)
This will ensure that you can reach the maximum cable length of 300 metres.**

! Identify the RJ11 socket with its connection number (ST8) and that it will have the 64 Button Console connected. Also identify the connection number of the XN120 system phone that the console will be used in conjunction with. This will help you configure the system later.



OR

Use the telephone cables supplied with the XN120 and RJ45 sockets.

Connections:

XN120 ST socket	RJ45 socket
Pin 2 black	White/green
Pin 5 yellow	Green/white

! The connections are polarity sensitive - you must connect as shown.

! Ensure that you use a twisted pair for the console:
Pins 2 & 5 (data)
This will ensure that you can reach the maximum cable length of 300 metres.

! Identify the RJ45 socket with its connection number (ST8) and that it will have the 64 Button Console connected. Also identify the connection number of the XN120 system phone that the console will be used in conjunction with. This will help you configure the system later.

Refer to the diagram above for the pin numbering of the XN120 RJ11 socket (ST8).

Note.

The 64 Button console uses pins 2 and 5 (data pair) on the XN120.

You will not cause any damage if the console is plugged into an RJ11 socket that also has the speech pair connected (pins 3 and 4 of the RJ11 socket).

Refer to the separate section within this guide for all other information related to the 64 Button Consoles.

Refer to Appendix A – 64 Button Consoles

Connect the Exchange Lines

5- Connect the Exchange Lines

The exchange lines can be connected to any of the three RJ11 sockets labelled CO1 to CO3.

Make a note of each exchange line number (i.e. the number dialed to ring the line) and its CO connection to the XN120. You will need this when you configure the XN120.

XN120 CO number	Exchange line dialing number (e.g. 01509 643100)
CO1	
CO2	
CO3	

! Check Power Fail Operation later in this guide, CO1 can be used to provide a working telephone should the power be disconnected from the XN120.

Precautions for Cabling:

- Do not run the cable with a power cable, computer cable etc.
- Do not run the cable near any high frequency generating equipment.
- Use cable protectors if the cables are run on the floor.
- Aerial distribution wiring is not allowed.
- Use lightning protectors for each exchange line.

Use the cables supplied with the XN120.

The exchange line cables supplied with the XN120 can be used to connect to the lines supplied by your Network Provider.

! Ensure each line has a lightning protection device included.

OR

Use pre-formed telephone cables (not supplied).

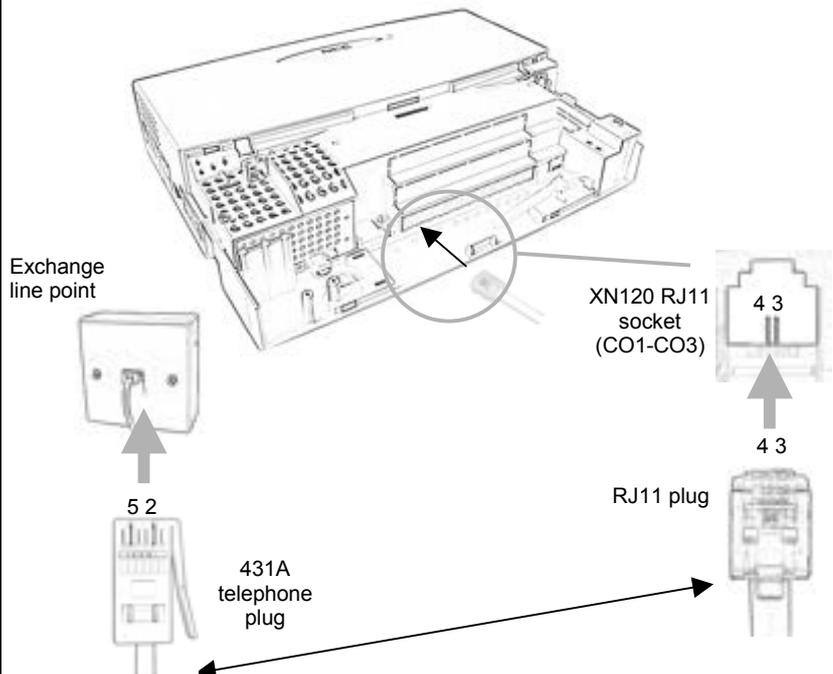
If the exchange lines are terminated with an LJU you can use a separate pre-formed cable to connect each line to a CO socket of the XN120 unit.

- Ensure that you connect the 2 wires as shown otherwise the line will not operate correctly.
- Use CW1308 or similar telephone cable.
- Fit lightning protectors to each line.

Connections:

XN120 CO socket	LJU socket
3 red	2
4 green	5

! The connections are not polarity sensitive.

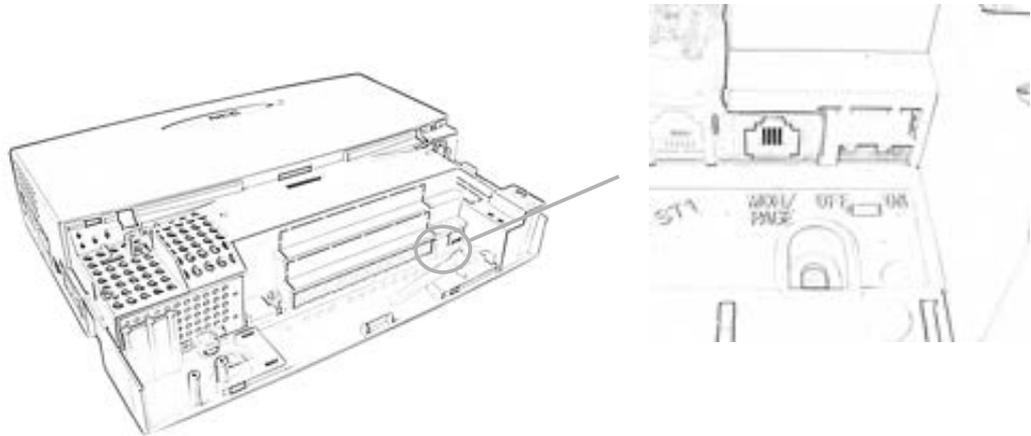


6- Connecting the External Music on Hold Device

The external music device is connected to the RJ11 socket labelled MOH/PAGE located under the sub cover to the right of the ST1-ST8 sockets.

An RJ11 cable is supplied with the system.

The external music device is not supplied with the XN120.



The connections of the RJ11 plug supplied with the XN120:

XN120 MOH/PAGE socket	Description	Specification
3 red 4 green	External MOH input	Impedance: 600 Ohm @1KHz Nominal input level: 250mV (-10dBm) Maximum input level: 1V RMS

! The connections are not polarity sensitive.

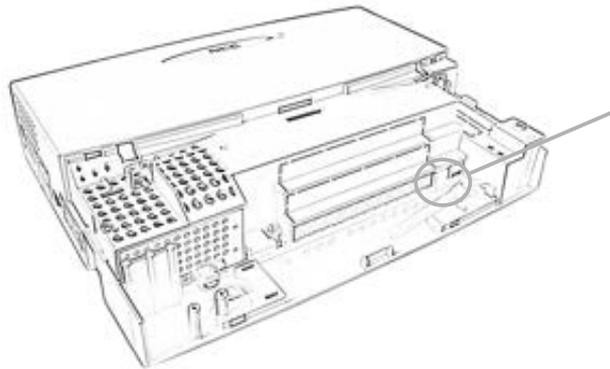
Connect the External Paging Amplifier

7- Connecting the XN120 to an External Paging System.

The external paging system is connected to the RJ11 socket labelled MOH/PAGE located under the sub cover to the right of the ST1-ST8 sockets.

An RJ11 cable is supplied with the system.

The external paging system is not supplied with the XN120.



The connections of the RJ11 plug supplied with the XN120:

XN120 MOH/PAGE socket	Description	Specification
2 black 5 yellow	External Paging output	Impedance: 600 Ohm @1KHz Nominal output level: 250mV (-10dBm) Maximum output level: 400mV RMS

! The connections are not polarity sensitive.

8- Connect the Power & System Start Up

The power cable is plugged into the left side of the unit via an IEC-C13 socket using the cable supplied with the XN120.

Before connecting the power:

- Ensure the power switch on the left side of the unit is OFF.
- Ensure the power is switched off at the source.

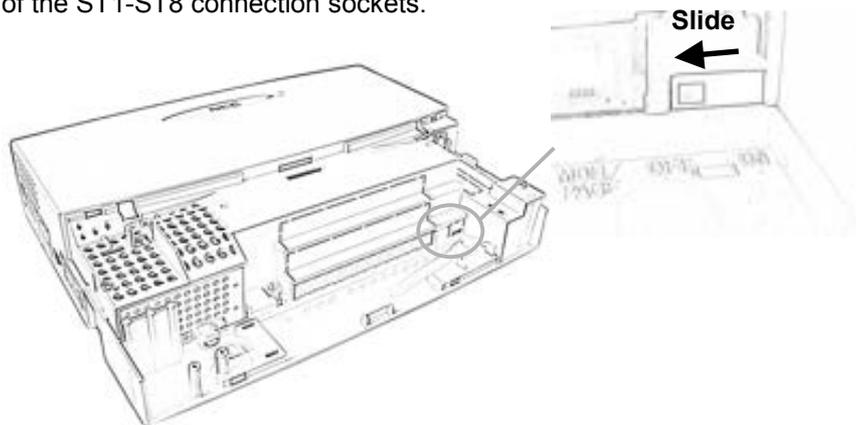
System Start Up – First Time

! The first time you start up the XN120 it is important to clear the system memory. This will ensure that the system is set to the default configuration.

- 1 Set the NORMAL switch to the **OFF** position.

This will ensure that the system is set to the default configuration.

The NORMAL switch is located under the sub cover on the right side of the ST1-ST8 connection sockets.



- 2 Switch ON the power at the source.

Switch ON the power switch on the left side of the XN120 unit.

The lamp within the cover of XN120 will **come on**

- 3 Wait for 2 minutes while the system starts up.

The XN120 system telephones will 'click' while the system starts up. If you have an XN120 system telephone connected that has an LCD display it will show:

```
SUN  0  0 00AM
```

while the system is starting up.

- 4 When the start up is complete the XN120 phones will show time and date.

You can set the time/date when you configure the system, see later in this guide.

If you have an XN120 system telephone connected that has an LCD display it will show the time/date, for example:

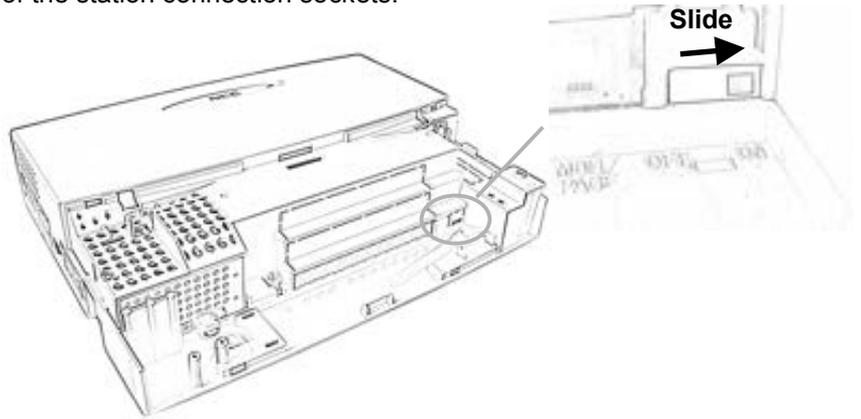
```
MON 13  9:34AM  
200      EXT 200
```

when the system has started up successfully.

Connect the Power & Start Up

- 5 **! Important**
Set the NORMAL switch to the
ON position.

The NORMAL switch is located under the sub cover on the right side of the station connection sockets.



Switching the XN120 OFF

! Be sure that no calls are in progress otherwise they will be cut off.
Turn the power switch off on the left side of the XN120 unit.

System Start Up – Retain Customer Configuration

This is the normal operation for powering the XN120 on.
Before you power on the system check that the NORMAL switch is set to ON. This will ensure that the system memory retains your configuration.

System Start Up – Default Configuration

CAUTION! This will erase any customer configuration in the battery backed memory.

Before you power on the system set the NORMAL switch to OFF. This will ensure that the system is set to the default configuration.

Set the NORMAL switch to ON after the system has started up.

9- Test the System

Test the XN120 System Telephones

At each phone in turn.

- | | |
|--|---|
| 1 Press the SPK button. | If you hear system dialing tone the phone has initialised correctly, press SPK to clear.
If you do not hear dialing tone move to step 2. |
| 2 Check the connections. | Check the connections from the phone to the XN120, ensure all 4 wires are connected as shown in 4- Connect the Telephones on page 11. |
| 3 Plug phone into the ST connection at the XN120 unit. | If you have used telephone cable and RJ11 sockets to extend the connections.
Plug the phone directly into the ST connection at the XN120 unit using the line cord supplied with the system phone.
If the phone does not initialise correctly then move to step 4. |
| 4 Swap the phone. | Try another XN120 system phone plugged directly into the ST connection using the line cord supplied with the phone. |

Test the Normal Telephones

At each phone in turn.

- | | |
|--|--|
| 1 Lift the handset. | If you hear system dialing tone the phone is working correctly.
If you do not hear dialing tone move to step 2.

Ring Back Test for Normal Phones.
For a Ring Back test dial 899 and then go on hook.
The system will ring back, lift the handset to hear XN120 music tune.
Go on hook to complete the test. |
| 2 Check the connections. | Check the connections from the phone to the XN120, ensure both wires are connected as shown in 4- Connect the Telephones on page 11. |
| 3 Plug phone into the ST connection at the XN120 unit. | If you have used telephone cable and LJU sockets to extend the connections.
Plug the phone directly into the ST connection at the XN120 unit using an RJ11 line cord (ensure the line cord connections are correct).
If you do not hear dial tone when you lift the handset then move to step 4 |
| 4 Swap the phone. | Try another normal phone plugged directly into the ST connection using the RJ11 line cord. |

Test the System

Test the Exchange Lines

Test each line in turn, only test the lines that you have connected.

Use an XN120 system phone that you have previously confirmed is working correctly to test the exchange lines.

- | | |
|--|--|
| <p>1 To test CO1
At an XN120 system phone lift the handset and dial 805 01</p> | <p>If you hear exchange dialing tone the line is working correctly.
If you do not hear exchange dialing tone move to step 2.</p> |
| <p>2 Check the connections.</p> | <p>Check the connections from the exchange line to the XN120, ensure both wires are connected to CO1 as shown in Error! Not a valid result for table. on page 16.</p> |
| <p>3 To test CO2
At an XN120 system phone lift the handset and dial 805 02</p> | <p>If you hear exchange dialing tone the line is working correctly.
If you do not hear exchange dialing tone check the connections from the exchange line to the XN120, ensure both wires are connected to CO2 as shown in Error! Not a valid result for table. on page 16.</p> |
| <p>4 To test CO3
At an XN120 system phone lift the handset and dial 805 03</p> | <p>If you hear exchange dialing tone the line is working correctly.
If you do not hear exchange dialing tone check the connections from the exchange line to the XN120, ensure both wires are connected to CO3 as shown in Error! Not a valid result for table. on page 16.</p> |

10- Configure the XN120

The getting started guide will cover the most frequently used configuration options. For advanced configuration please refer to the XN120 Programming Manual 991435-5.

Before you configure your system it is important that you:

- Ensure the power will not be turned off to the XN120, otherwise you will lose any changes you have made that were not previously saved to battery backed memory.
- Ensure that the **NORMAL switch is set to ON** before you commence, otherwise you could lose your entire configuration. Refer to System Start Up for information.
- Have a diagram of your exchange lines and telephones.
- Plan your requirements before you start.

While you configure your system it is important that you:

- Exit configuration mode periodically, this will save your changes into battery backed memory. They will not be lost if the power is removed.
- Fill out the configuration sheets as you go so that you have a record of your configuration.
- Make small changes, exit configuration mode and test the changes. Do not make all your changes at once as this can make testing very difficult.
- Record your changes as you can only 'undo' them by re-entering the previous values.
- Do not unplug the phone. If it is unplugged by mistake then plug it back in, wait for the display to show time and date and then press HOLD to return to the configuration mode. Your changes will not be lost.

The XN120 consists of exchange lines and telephones connected to the 008/308 cards you have installed. Within the XN120 configuration the exchange lines are referred to as trunks and the telephones as extensions. When the XN120 is started up as shown in this guide all the equipment will operate, it is not necessary to make any changes to the system configuration.

With the default settings:

- Each telephone will function and is assigned an extension number.
- Calls received on the exchange lines will ring at telephone number 200.
- Each telephones can make exchange line calls by dialing 9.
- Each exchange line is presented at a Function Key with busy lamp indication.

How to change the XN120's Configuration

The configuration is stored in battery backed memory within the XN120. You can change the configuration via any XN120 system phone that has an LCD display.

When you have made your changes the XN120 will automatically save the configuration into memory.

Check the User Guide for other options

There are some options that are set via normal service codes, for example:

System Phone Book – with service code 853.

Telephone Names – with service code 800.

Configure the XN120

Entering Configuration Mode

- You will need an XN120 system phone with an LCD display.
- The phone should be idle (no call in progress).

1	Press SPK (do not lift the handset)	You will see -	MON 27 16:28PM 200 EXT200
2	Dial Service Code # * # *	You will see -	Password
3	Dial password 12345678	You will see -	Password@@@@@@@@
4	Press HOLD	You will see -	Program Mode

Selecting the Program Number

- Each configuration setting within the XN120 is identified by a Program Number (eg 22-05-01).

1	Ensure the LCD display shows:	Program Mode
2	If it is not displayed press the DC key several times to step back.	
3	Now enter the Program Number e.g 22 05 01 with the numeric keys of the XN120 phone.	22-05-01 Trunk1 Mode1 IRG = <u>1</u>

Using the System Phone Keys to Make Changes

- During configuration mode use the keys at the system phone to select the program item and change its value etc.
- The LCD display will show the current program item, the editing point is shown by a flashing cursor.

SPK	Save changes and exit configuration mode.
Numeric keys 1 to 9 * and #	Alphanumeric entry keys. Entered at the cursor location.
HOLD	Confirm the entry and step on to the next.
DC	Step back one level. Current entry is not confirmed.
DND/CONF	Delete one character to the left of the cursor.
CLEAR	Delete all characters to the right of the cursor.
LND	Move the cursor one character to the left.
OPAC	Move the cursor one character to the right.
Vol. up	Confirm the entry and step to the next item shown at the top right of the display.
Vol. down	Confirm the entry and step to the previous item shown at the top right of the display.
FLASH	Move the cursor to the next entry point.

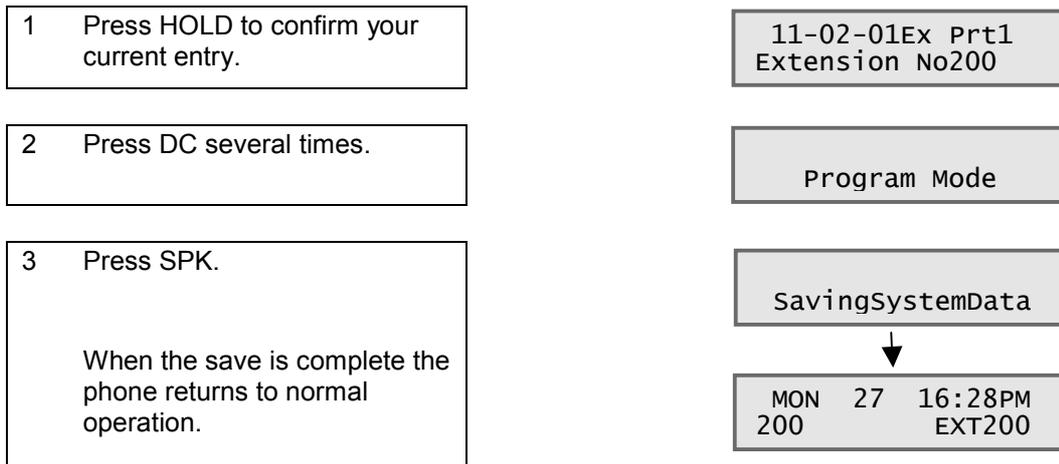
Making Changes

- With the Program Number entered and the cursor positioned at the first entry you can change the value by entering the new one with the numeric keys of the XN120 phone.
- When you have entered the new value press HOLD to confirm it and move to the next entry.
- You can also press HOLD to step on to the next if you did not make any changes to the entry.

Exiting Configuration Mode

- When you exit configuration mode your changes will be saved into the battery backed memory.

! Until you exit any changes you have made are stored in temporary memory and will be lost if the power is switched off to the XN120.



Configure the XN120

Time & Date Setting

You may want to change this setting if:

- The time and date on the XN120 phones is not correct.

Program 10-01-01

Time and date setting for the system.

10-01-01 Year	03
------------------	----

- Enter the last two digits of the year (e.g 04) you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next option.

10-01-02 Month	11
-------------------	----

- Enter the two digits of the month (01-12).
- Press HOLD to confirm the entry and step to the next option.

10-01-03 Day	24
-----------------	----

- Enter the two digits of the date (01-31).
- Press HOLD to confirm the entry and step to the next option.

10-01-04 week(1: Sun)	4
--------------------------	---

- Enter one digit for the day of the week (1-7).
1 = Sunday, 2 = Monday, 3 = Tuesday etc.
- Press HOLD to confirm the entry and step to the next option.

10-01-05 Hour	16
------------------	----

- Enter the two digits for the hour (24h format).
- Press HOLD to confirm the entry and step to the next option.

10-01-06 Minute	48
--------------------	----

- Enter the two digits for the minutes (00-59).
- Press HOLD to confirm the entry and step to the next option.

10-01-07 Second	00
--------------------	----

- Enter the two digits for the seconds (00-59).
- Press HOLD to confirm the entry and step to the next program number.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Telephone Ringing Assignment.

You may want to change this setting if:

- You want one, or more, exchange lines to ring at one or more telephones.
- You want a dedicated exchange line to ring at a specific telephone.
- You want exchange lines to ring at different locations throughout the day or at the weekend.

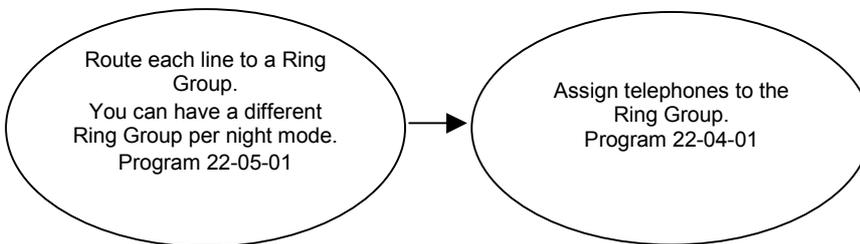
System Operation:

The ringing assignment is achieved by pointing the exchange line to Incoming Ring Groups. The ring group then contains the telephones that will ring.

- Route each exchange line to an Incoming Ring Group (IRG) in Program 22-05-01. A line can route to a different IRG in each night mode.
- You then place telephones into IRG's in program 22-04-01, a phone can be a member of more than one IRG. Up to 32 telephones can be entered per IRG.

The default operation is for each exchange line to ring at telephone 200.

The day/night mode is selected by keys at an XN120 telephone, simply press the key that corresponds to the mode you require.



1 Program 22-05-01
The Incoming Ring Group (IRG) number is assigned to the exchange lines.

Different IRG's can be assigned to each exchange line to give different ring assignment throughout the day.

Default Setting:

Each line (CO1, CO2 & CO3) is assigned to Incoming Ring Group (IRG) number 1.

Default Setting:

There are up to 8 settings available.

IRG number 1 is used for all 8 settings.

Therefore, each exchange line will ring at IRG 1 (and therefore telephone number 200, regardless of the time of day).

Press HOLD to select the next day/night mode

22-05-01 Trunk 1
Mode1 IRG = 1

Press Vol ▲ ▼ to select the trunk number

- Enter the new IRG number (1-25), you can overwrite the current entry.
- To remove an entry press CLEAR.
- Press HOLD to confirm the entry and step to the next day/night mode.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Configure the XN120

2 Program 22-04-01

The telephones are placed into ring groups (IRG's).

Default Setting:

Telephone number 200 is a member of IRG number 1.

Press HOLD to select the next member

```
22-04-01 INC Gr1
Memb .01= 200
```

Press Vol ▲ ▼ to select the IRG number

- Enter the new telephone number, you can overwrite the current entry.
- To remove an entry press CLEAR.
- Press HOLD to confirm the entry and step to the next member.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

3 Program 20-07-01

Turn on the day/night mode option.

Default Setting:

Day/night modes can not be changed by any telephones.

```
20-07-01 F-cl s 1
SW Man NT serv 0
```

Enter 1 to enable Day/night mode option

- Enter 1 to enable the option, you can overwrite the current entry.
- Press HOLD to confirm the entry.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

4 Assign a key to each mode

Choose a telephone that will be able to change the day/night mode.

! Exit Configuration Mode.
The keys are set at the telephone itself, not within XN120 configuration mode.

Default Setting:

There are no keys set to day/night modes on any of the telephones.

1. At the telephone that you want to be able to change the day/night mode press SPK.
2. Dial service code **851**
3. Press the Programmable Function Key you want to set (its current setting is shown if you have an LCD display). Use one of the block of 10 keys for your day/night mode keys.
4. Dial **09** followed by the mode number 1 to 8.

1 = Day	5 = Day 2
2 = Night 1	6 = Night 2
3 = Mid-Night 1	7 = Mid-Night 2
4 = Rest 1	8 = Rest 2
5. Repeat steps 3. and 4. for further keys/modes.

See also:

Outgoing Exchange Line Access to give a telephone a dedicated line for outgoing calls.

Configuration Sheet: Telephone Ringing Assignment

With defaults shown.

Place the telephones into Ring Groups.

IRG Number	List of telephones that will ring Prg 22-04-01
IRG 1	Default=200
IRG 2	
IRG 3	
IRG 4	
IRG 5	
IRG 6	
IRG 7	
IRG 8	
IRG 9	
IRG 10	

Up to 25 IRG's are available, only 10 are listed as this is normally sufficient.

Up to 32 telephones can be entered per IRG. Try to keep the number of ringing telephones to a minimum.

Assign the Ring Groups to the Exchange Lines.

Day/Night Mode Number	Trunk 1 Prg 22-05-01 default=IRG1	Trunk 2 Prg 22-05-01 default=IRG1	Trunk 3 Prg 22-05-01 default=IRG1
1			
2			
3			
4			
5			
6			
7			
8			

Turn on the ability to change the mode.

Mode Change	Setting Default=0 (off)
20-07-01	

Assign Keys at the telephone(s) that will change the mode. A phone with an LCD is preferable.

- This is not done within the XN120 Configuration mode, Keys are changed by dialing a Service Code at the telephone itself. This is explained further in the User Guide.
- You will need a separate key for each mode you are using.
- The key for the current mode will light red, to change the mode just press the appropriate key.

Telephone	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5	Mode 6	Mode 7	Mode 8
	Key							
	Key							

Configure the XN120

Note:

- Plan your requirements as the ring assignment is the most important operation of your telephone system. It's your customers that will be ringing you!
- Try to keep the number of ring modes to a minimum, 3 per day is sufficient (normal day working, lunch times and evenings for example). You may want an additional mode to cover the weekend.
- Do not have too many phones in a ring group, remember that calls can be answered by pressing the Function Keys at the XN120 phones, see also Call Pickup in the Feature Guide.

Example Configuration.

- You have 3 exchange lines (trunks) connected.
- Trunks 1 & 2 (CO1) needs to ring at extensions 200 and 202 during the day time working.
- At lunch times they should ring at extension 205.
- In the evenings and at weekends they should go to an answer phone, the answer phone is connected to ST8 so is extension number 207.
- Trunk 3 (CO3) is a dedicated line and should go to telephone 206 at all times.
- Telephone 200 will have Function keys to change the mode for day, lunch etc.

Step 1

Place the telephones into an IRG for each of the modes (day time, lunch time, evenings and weekends).

IRG Number	List of telephones that will ring Prg 22-04-01
IRG 1	200, 202 (day time)
IRG 2	205 (lunch time)
IRG 3	207 (evenings and weekends)
IRG 4	206 (at all times)

Step 2

Assign the IRG number to each trunk for the modes you will use.

Mode	Trunk 1 Prg 22-05-01	Trunk 2 Prg 22-05-01	Trunk 3 Prg 22-05-01
1 Day	IRG 1	IRG 1	IRG 4
2 Lunch	IRG 2	IRG 2	IRG 4
3 Evening & Weekend	IRG 3	IRG 3	IRG 4

Step 3

Turn on the ability to change the ring mode for day time, lunch time, evenings etc.

Mode Change	Setting
20-07-01	1 (on)

Step 4

Assign modes 1 (Day), 2 (Lunch) and 3 (Evenings/Weekends) to keys at telephone 200.

6. At telephone 200 press SPK.
7. Dial service code **851**
8. Press Key 7 (Its current setting is shown if you have an LCD display).
9. Dial **09** followed by **1** for the mode number.
10. Repeat steps 3. and 4. for Key 8 = mode 2 and Key 9 = mode 3.

Telephone	Mode 1	Mode 2	Mode 3
200	Key 7	Key 8	Key 9

Telephone Ringing Style

You may want to change this setting if:

- You want to change the ringing style of outside and internal calls to telephones.

System Operation:

The ringing patterns are set for the system by Program 20-15-01

The default setting is:

Outside calls have a single ring pattern of 2 seconds on / 1 second off.

Internal calls have a double ring pattern of 0.4 seconds on / 0.2 seconds off / 0.4 seconds on / 2 seconds off.

The ringing pattern for normal phones is fixed to the single ring pattern; the fixed ringing can be turned off individually by Program 15-03-12 for each normal phone.

1 Program 20-15-01
20-15-01 sets the ring pattern for outside calls.
(Most users would expect a double ring for outside calls so set this option to 8)

20-15-03 sets the ring pattern for internal calls.
(Most users would expect a single ring for internal calls so set this option to 3)

20-15-01
TRK Normal INC 8

- Enter the ring pattern for outside calls, you can overwrite the current entry. (3 is a single ring, 8 is a double ring).
- Press HOLD to confirm the entry and step to the next option.
- Leave this item set to 8, Press HOLD to step to the next item.

20-15-03
Internal INC 3

- Enter the ring pattern for internal calls. (3 is a single ring, 8 is a double ring).
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

1 Program 15-03-12
Turn off fixed ringing for each normal phone.

You set this option for each phone.

Turning on fixed ringing gives a single ring pattern for all calls.

Turning off will use the ring pattern set in Program 20-15-03.

15-03-12 205
Fixed Cadence 0

Press Vol ▲ ▼
to select the
telephone
number

- Select the telephone number of the normal phone you want to set using the VOL. ▲ ▼ keys.
- Set to 0 to turn off fixed ringing for the telephone. (Set to 1 to turn on fixed ringing).
- Press VOL. ▲ ▼ keys to select the same option for the next telephone.
- Press HOLD to confirm the entry(s).
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Configure the XN120

Internal Call Ringing Mode

You may want to change this setting if:

- You want to change the way internal calls to telephones are presented. Internal calls can either ring the phone or voice announce where the caller can speak directly to the loudspeaker of the phone they are calling

System Operation:

The mode is set for the system by Program 20-02-12

The default setting is Voice Announce mode.

1	<p>Program 20-02-12 Select the mode for internal calls.</p> <p><i>! Most users prefer ring mode so set this option to 1.</i></p>
---	---

20-02-12 ICM Call Type <u>1</u>

- Enter the mode for internal calls, you can overwrite the current entry. (1 is Ring mode, 0 is Voice Announce mode).
- Press HOLD to confirm the entry.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Configuration Sheet: Ringing Style

Program	Description	Setting 3=single ring, 8=double ring
20-15- 01	Ring pattern outside calls	Default=3 single ring
20-15-03	Ring pattern internal calls	Default=8 double ring

Telephone	20-02-12 Voice call or Ring call mode for internal calls to system phones. 0=Voice call 1=Ring call	15-03-12 Fixed ringing for normal phones. 0=Not fixed 1=Fixed
200	Default=0	Default=1
201	Default=0	Default=1
202	Default=0	Default=1
203	Default=0	Default=1
204	Default=0	Default=1
205	Default=0	Default=1
206	Default=0	Default=1
207	Default=0	Default=1

Outgoing Exchange Line Access

You may want to change this setting if:

- You want a dedicated exchange line for one of the telephones (eg FAX and PDQ machines).

System Operation:

Each telephone is assigned a Trunk Access Map (TAM) number.

The TAM number is then given the access properties for each of the exchange lines.

The default operation is that all telephones have access to any exchange line.

1 Program 15-06-01
Give the telephone a TAM number.

You can specify a different TAM number for each day/night mode.
See Changing the Telephone Ringing Assignment for the modes you may be using.

Default Setting:

All telephones have TAM number 1.

Press HOLD to select the next mode

15-06-01 Tel 200
Mode1 Acc-Map 1

Press Vol ▲ ▼ to select the telephone number

- Enter the TAM number (1-51) for each mode (1-8), you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next mode.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

2 Program 14-07-01
Give each exchange line the access properties for the TAM number.

Default Setting:

Each exchange line (CO1, CO2 & CO3) has full access (Property type 7) for TAM number 1.

Therefore every telephone can access any of the trunks.

Press HOLD to select the next trunk

14-07-01 Acs.Ma1
Trk01 = 7

Press Vol ▲ ▼ to select the TAM number

- Enter the access properties (0-7) for each trunk, you can overwrite the current entry.
 - 0 – No access
 - 1 – Outgoing only
 - 2 – Incoming only
 - 3 – Retrieve held call only
 - 4 – Outgoing and retrieve held call
 - 5 – Incoming and retrieve held call
 - 6 – Incoming and outgoing
 - 7 – Incoming, outgoing and retrieve held call
- Press HOLD to confirm the entry and step to the next mode.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

See Also:

Changing the Telephone Ringing Assignment.

Configure the XN120

Configuration Sheet: Outgoing Exchange Line Access

With defaults shown.

Give each telephone a TAM number.

Prg 15-06-01	TAM Number for each day/night mode							
	Default=TAM1 for all modes							
Telephone	1	2	3	4	5	6	7	8
200								
201								
202								
203								
204								
205								
206								
207								

There are 51 TAM numbers available.

Give each exchange line the access properties for the TAM number.

Prg 14-07-01			
TAM Number	Trunk 1	Trunk 2	Trunk 3
1	7	7	7
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0

Values available:

- 0 – No access
- 1 – Outgoing only
- 2 – Incoming only
- 3 – Retrieve held call only
- 4 – Outgoing and retrieve held call
- 5 – Incoming and retrieve held call
- 6 – Incoming and outgoing
- 7 – Incoming, outgoing and retrieve held call

Although there are 51 TAM numbers available only 5 are listed as this is normally sufficient.

Caller ID

You will need to enable this setting if:

- You have Caller ID service supplied on your outside lines.
- You have normal telephones that are Caller ID compatible.

The XN120 can detect the Caller ID and display it on the LCD display of the XN120 system phones. It can also be available at a normal phone that is Caller ID compatible.

System Operation:

You will need turn on the Caller ID detection for each trunk that it will be received on.

You will also need to turn on Caller ID for each of the normal telephones that are Caller ID compatible.

Program 14-02-10

Turn on Caller ID for each trunk.

Default Setting:

14-02-10 is set to 0 (Caller ID is turned off) for each trunk.

14-02-10 Trunk 1
Caller ID 0

Press Vol ▲ ▼
to select the
trunk number

- For each trunk enter 1 to turn on Caller ID, you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Program 15-03-09

Turn on Caller ID for each normal telephone that is Caller ID compatible.

Default Setting:

15-03-09 is set to 0 (Caller ID is turned off) for each telephone.

15-03-09 Tel 200
Ext No Display 0

Press Vol ▲ ▼
to select the
telephone
number

You do not need to change this option for the XN120 system phones.

- For each telephone enter 1 to turn on Caller ID, you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

See Also:

There are no other related settings.

Configure the XN120

Configuration Sheet: Caller ID

With defaults shown.

Turn on the Caller ID for each trunk.

Prg 14-02-10	
Trunk number	Setting Default= 0 Off
Trunk 1	
Trunk 2	
Trunk 3	

Turn on the Caller ID for each normal telephone.

Prg 15-03-09	
Telephone	Setting Default=0 Off
200	
201	
202	
203	
204	
205	
206	
207	

Recall for Normal Telephones

You may want to change this setting if:

- You have normal telephones connected and the RECALL key does not work correctly. This is highlighted when you press the RECALL key but the call is not placed on hold.
- The RECALL is also referred to as Timed Break Recall (TBR).

System Operation:

The XN120 must be configured with the correct RECALL timing that matches the normal telephones that you have connected.

Program 82-04-04

Set the system to detect a RECALL duration of 70 to 125mS (for normal UK time break recall operation).

You will need to change three options within this program.

82-04-04=13

82-04-07=14

82-04-08=25

Default Setting:

The XN120 will accept a RECALL duration of 105mS to 1000mS

82-04-04
Max. Break TM 13

- Change the setting to 13 (this is equivalent to 65mS).
- Press HOLD 3 times to confirm the entry and step to the next option.

82-04-07
Max. Break TM 14

- Change the setting to 14 (this is equivalent to 70mS).
- Press HOLD to confirm the entry and step to the next option.

82-04-08
Max. Break TM 25

- Change the setting to 25 (this is equivalent to 125mS).
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Configuration Sheet: RECALL Timing

With defaults shown.

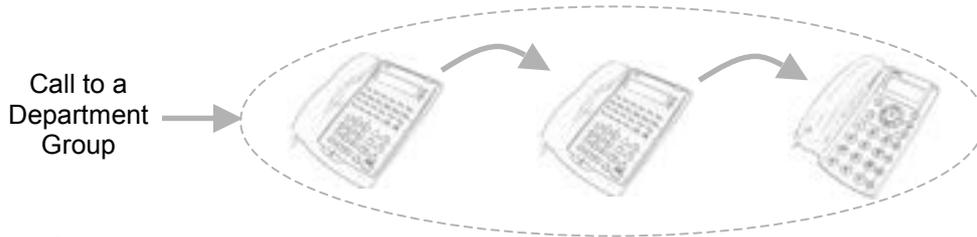
	82-04-04 default=20 (100mS)	82-04-07 default=22 (105mS)	82-04-08 default=200 (1000mS)
Setting			
Equivalent duration (mS)			

Configure the XN120

Department Groups

You may want to change this setting if:

- You have people that work within a group and you want to be able to call anyone within the group. The call will ring at anyone that is available within the group. If they do not answer, the call will step to the next member.



System Operation:

The telephones are placed into Department groups. There are 32 groups available.

The group is given a number (pilot number) that you dial to reach the group.

You can choose the following options for each group.

- How the calls will ring around the group – either in a set order of priority or randomly at any telephone.
- Try each telephone once or keep hunting – your call can ring at each available telephone in the group and if not answered stay at the last member or keep trying each member.
- How long each member rings before the call will step on to the next one available.

Program 16-02-01

Place the telephones into a department group.

A telephone can be a member of one group.

Priority is in order 1-99 (high-low)

Default Setting:

All telephones are in department group 1

16-02-01 TEL 200
Extension Grp 1

Press Vol ▲ ▼
to select the
telephone
number

- For each telephone enter the group number (1-32) that it is a member of, you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the priority option.

16-02-02 TEL 200
Priority 1

Press Vol ▲ ▼
to select the
telephone
number

- For each telephone enter the priority number (1-99), you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next telephone.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Program 16-01-02

Select how calls ring around the department group.

Default Setting:

Calls ring in priority order within the department group.

```
16-01-02 TEL Gr1
Pilot call  0
```

Press Vol ▲ ▼
to select the
group number

- For each group select the ring mode, you can overwrite the current entry.
0 = Priority order
1 = Random order
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Program 16-01-04

Select how many times the calls try each member of the department group.

Default Setting:

Calls try each telephone once.

```
16-01-04 TEL Gr1
Hunting Mode 0
```

Press Vol ▲ ▼
to select the
group number

- For each group select the hunting mode, you can overwrite the current entry.
0 = Calls try each telephone once
1 = Calls continue trying the telephones
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Program 16-01-09

Select how long calls ring at each member of the department group.

Default Setting:

Calls ring each member for 15 seconds.

```
16-01-09 TEL Gr1
Pilot call  0
```

Press Vol ▲ ▼
to select the
group number

You can use this option to turn off the step on operation by setting the time to 0 seconds.

- For each group select the ring duration (0-64800 seconds), you can overwrite the current entry.
0 seconds will stop the call stepping on.
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Configure the XN120

Program 11-07-01

Give the department group a pilot number.

Try to use a number that is easy to remember.
For example use:
Pilot number 501 for group 1
Pilot number 502 for group 2
etc.

Default Setting:

There are no pilot numbers assigned.

11-07-01 TEL Gr1
Ext Grp No. _

Press Vol ▲ ▼
to select the
group number

- For each group enter the pilot number (3 digits required) you will dial to reach the group.
- Press HOLD to confirm the entry and step to the next group. If you duplicate a number you will see Duplicate Data, the entry will be removed and you can enter a new number.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

See Also:

There are no related settings.

Configuration Sheet: Department Groups

With defaults shown.

Telephone number	Department Group number 16-02-01 default=1	Priority number 16-02-02
200		1
201		2
202		3
203		4
204		5
205		6
206		7
207		8

Department Group number 1-32	Pilot Number 11-07-01	Ring in priority/random 16-01-02 default=0 Priority	Try once or continually 16-01-04 default=0 Once	Ring time before step on 16-01-09 default=15 seconds
1				
2				
3				
4				

There are 32 groups available, only 4 are listed as this is usually sufficient.

Create an Internal Paging Group

You may want to change this setting if:

- You want to make a paging call. The paging will be broadcast out of the loudspeakers of the XN120 system phones.
Paging is useful if you have staff that leave their desk and you need to contact them.

System Operation:

You add the XN120 system phones into a paging group. There are 32 paging groups available.

Program 31-02-01

Place the telephones into paging groups.

You can only broadcast the paging call out of the loudspeakers of XN120 system phones, not normal telephones.

The internal all call page option is not mandatory, you can leave this set to 0.

Default Setting:

None of the telephones are in a paging group.

```
31-02-01 Te1200
INT PG GP No 0
```

Press Vol ▲ ▼
to select the
telephone
number

- For each telephone enter the paging group number (0-32, enter 0 to remove the phone from a group), you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next option.

```
31-02-02 Te1200
INT ALL Ca11 PG0
```

Press Vol ▲ ▼
to select the
telephone
number

- Enter 1 to place the telephone in the Internal All Call Page option
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

See Also:

There are no related settings.

Configuration Sheet:

With defaults shown.

Telephone	Page Group Number 31-02-01 default=0 None	All call page 31-02-02 default=0 No
200		
201		
202		
203		
204		
205		
206		
207		

Configure the XN120

External Music Device

You may want to change this setting if:

- You want to play the external music source to callers that are placed on HOLD.

System Operation:

You will need to connect the external music device to the MOH/PAGE socket of the XN120 and select the external device for the music on hold.

The external music device is not supplied with the XN120 system. Refer to Connecting the External Music on Hold Device in this guide for details of connecting the external music device.

Program 10-04-01

Select the device used for the music on hold tune.

Default Setting:

The XN120's own tune is played to callers placed on hold.

```
10-04-01
Hold Music Set 0
```

- Enter 1 to select the external device (enter 0 to select the XN120 tune), you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next option.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Note. You can also use this option to turn off the XN120 tune. If you set the option to 1 (external) but there is no external music device connected to the external music on hold input (MOH input) the held callers will hear silence.

11- Install Optional Equipment

Refer to the installation guide supplied with each optional item for instructions.

- Before you install any optional item you must power off the XN120 system.
- You may find it easier to install each item individually rather than all at the same time. Power on the XN120 after each item is installed and test it before continuing.
! Ensure you power off the XN120 before installing the next item.

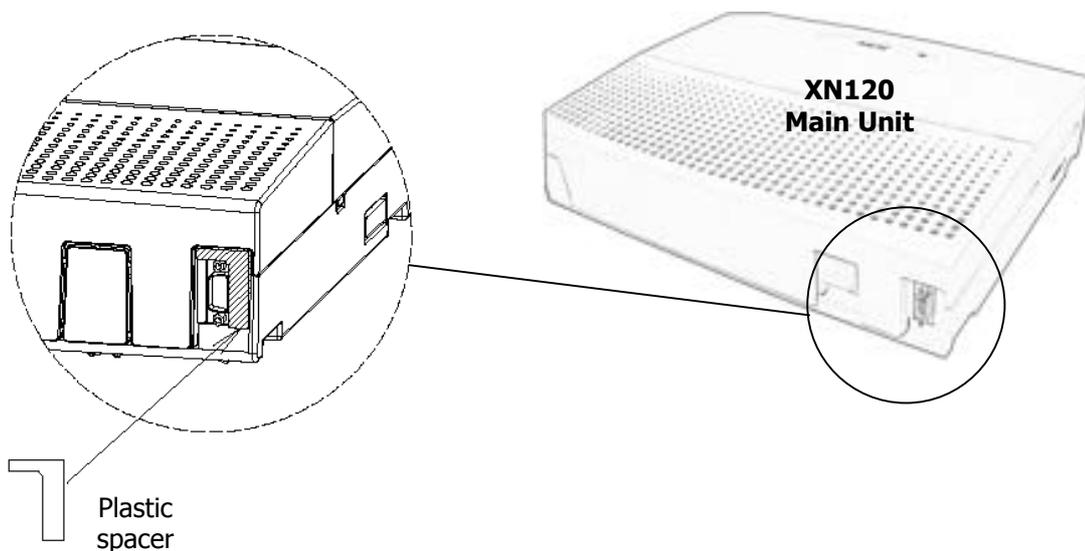
12- Install the Plastic Spacer

The plastic spacer supplied with the XN120 Main Unit must be installed when you have an EXIFU card installed.

The spacer is required for Electrostatic Discharge (ESD) protection for the EXIFU card.

Installing the plastic spacer.

1. You do not need to remove any covers from the XN120 Main Unit.
2. Disconnect the cable from the serial port of the EXIFU card.
3. Remove the backing tape from the plastic spacer.
4. Fix the spacer onto the plastic case around the serial port as shown below.
5. Re-connect the cable to the serial port of the EXIFU card.



Optional Equipment

13- Power Fail Options

IMPORTANT
You must be able to make outside calls in the event of a power failure

There are various options available for power failure operation.

1. Plug a normal telephone directly into the exchange line socket.

If your exchange lines are provided with a normal telephone socket you can unplug the XN120 connection and plug a normal telephone into the socket to make/receive calls.

You can plug a phone in each exchange line socket if you wish.

! Do not attempt to plug an XN120 system phone into an exchange line socket – you will damage the phone.

2. Use the power fail setting on the XN120.

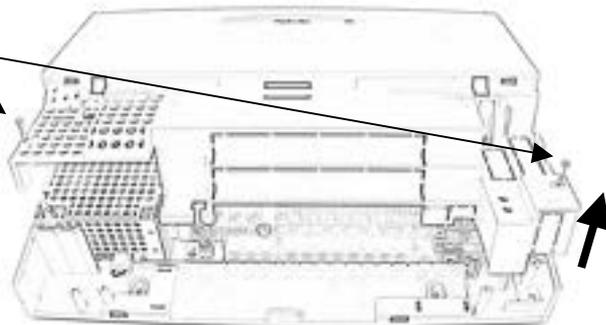
This will require a normal telephone connected to telephone socket ST8 of the XN120 and an exchange line connected to CO1.

You must set the power fail link (CN500) on the XN120 main board: see the diagram below.

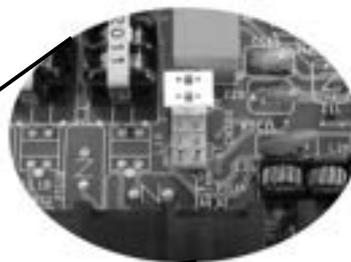
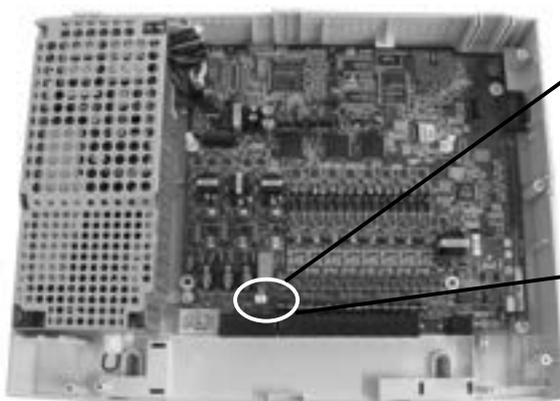
Remove the sub cover of the XN120 unit.

Loosen the two screws and remove the Main cover of the XN120.

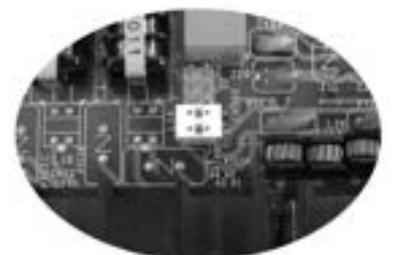
Loosen the two screws



Lift off cover



Power fail ON
CN500=PF



Power fail OFF
CN500=KT

When Power Fail is set to ON (marked PF on the card):

When the power fails (or the XN120 is switched off) Exchange line CO1 is automatically connected to the normal telephone plugged into socket ST8.

When the XN120 is powered on the telephone in socket ST8 will operate as a normal XN120 telephone.

You can not use an XN120 system phone or 64 Button Console in socket ST8 with the power fail link set to PF.

When Power Fail is set to OFF (marked KT on the card):

When the power fails (or the XN120 is switched off) Exchange line CO1 is not automatically connected to socket ST8.

When the XN120 is powered on the telephone in socket ST8 will operate as either a normal XN120 telephone or XN120 system phone, depending on which type is plugged in.

You can use an XN120 system phone in socket ST8 with the power fail link set to KT.

Power Fail Options when the 64 Button Console is also Installed

- The 64 Button Console must be connected to socket ST8 of the XN120.
- You must ensure the power fail link (CN500) is set to KT for the console to work correctly.
- You cannot use socket ST8 for power fail operation when the 64 Button Console is connected to ST8.

If you have a 64 Button Console installed

- You can use the power fail operation of the optional 308 expansion card, if you have one installed. There must be an exchange line connected to the first CO port of the 308 expansion card.
- You can connect the normal telephone directly into the exchange line socket – See instruction above.

Battery Back Up Options

There are two options available to provide back up during power failure.

NEC Battery Box

Each XN120 Main and expansion unit can have the optional battery box connected. This will provide approximately one hour of battery back up. You will need a separate battery box for each XN120 unit.

Refer to the separate guide for further information (Battery Box Guide 991442-5).

Uninterruptible Power Supply (UPS)

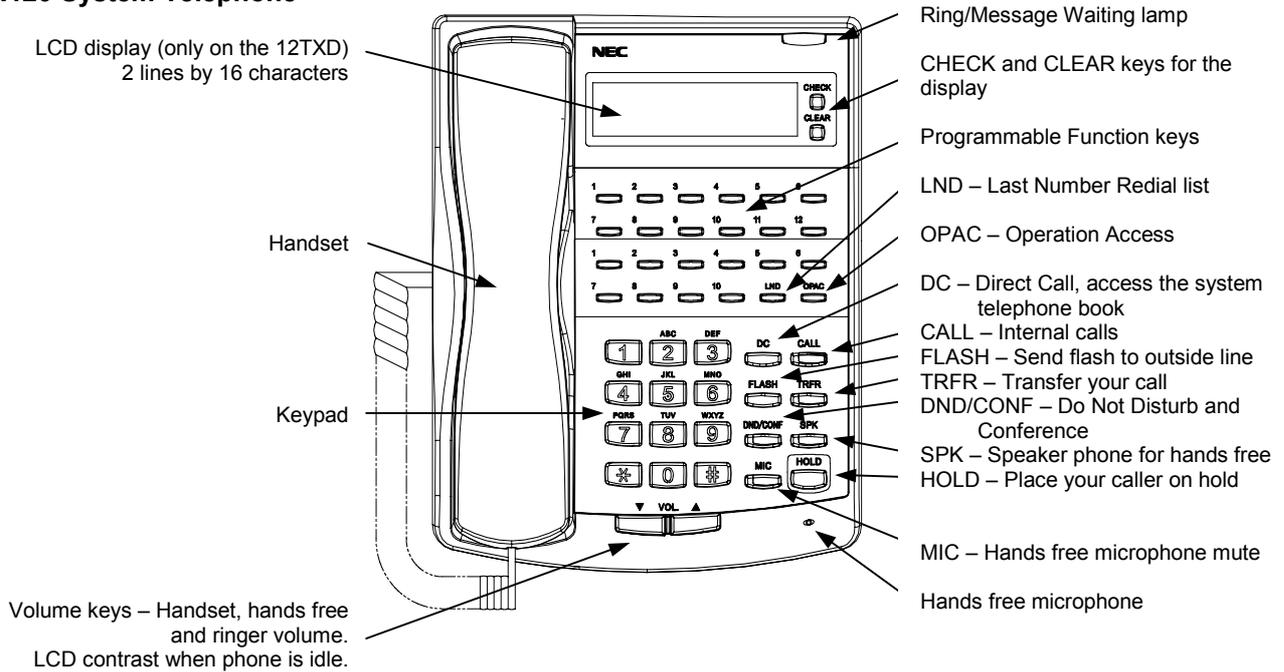
Each XN120 Main and Expansion unit can be plugged into a UPS. The UPS will provide AC power to the XN120 system. You can plug all XN120 units into a single UPS.

Each XN120 unit can take a maximum of 240VA.

Administrators User Guide

There are also user guides for the System Phone and Normal Phone supplied with the XN120 system.

XN120 System Telephone



Receiving Internal Calls

You can choose one of two ways that calls will arrive at your XN120 system phone.

The default method is Voice Calling where calls to your phone will not ring, they will announce directly out of the loudspeaker. You can reply hands free by talking towards your phone or lift the handset for more privacy.

Alternatively, you can have calls ring your phone. You answer the call by pressing the SPK key for hands free or lifting the handset.

To select the Voice Calling method:

While your phone is idle, press SPK and dial Service Code 821. Press SPK to end.

To select the ringing method:

While your phone is idle, press SPK and dial Service Code 823. Press SPK to end.

Calling another Telephone.

You can call another telephone by simply going off hook and dialing its number.

The default telephone numbers are 200 to 207.

If you have an XN120 system phone with an LCD display your telephone number will be displayed at the lower left when your phone is idle.

Press **SPK** for speakerphone or **lift the handset**.

Dial the telephone number.

Example:

SPK

MON 27 16:28PM

201

MON 27 16:28PM
CALL EXT 201

or

MON 27 16:28PM
BUSY EXT 201

If the phone is available it will ring. You will hear two beeps or ringback tone.

or

If the phone is in use your call will not ring. You will hear busy tone.

Receiving Outside Calls

If your phone is a member of a ring group then outside calls may ring at your phone.

An outside call will flash its line key and indicate the line name on the LCD display of the XN120 system phones.

If you have Caller ID enabled your display will indicate the calling number.

You can answer a call ringing at your phone by lifting the handset.

If you are not a member of the ring group you can answer the call by pressing the flashing line key or using Call Pickup.

Placing an Outside Call

The simplest way to place an outside call is to lift the handset and dial 9, the system will seize a free line and you will hear exchange dial tone.

Continue by dialing the number you require.

If you have an XN120 system phone you can also seize the line by pressing an idle line key.

The line is idle when the lamp is off.

Placing a Call on HOLD

While you are on a call you can place it on hold.

The caller hears music.

If you have an XN120 system phone you place the call on hold by pressing the HOLD key.

You can remain off hook or go on hook.

Outside calls will flash its LINE KEY, press the flashing LINE KEY to retrieve the held call.

Internal calls will flash your CALL key, press the CALL key to retrieve the held call.

If you went on hook and forgot to retrieve the held call it will ring you back after 90 seconds.

If you have a normal phone you place the call on hold by pressing the RECALL key.

You should remain off hook, to retrieve the held call press the RECALL key again.

If you go on hook the held call will ring you back immediately, lift the handset to answer the ring back call.

Transferring a Call to a Co-Worker

You may want to pass your call on to another telephone, for example when you have answered an outside call and they want to speak to one of your co-workers.

There are various ways you can pass the call to one of your co-workers:

Before you can transfer the call you must place it on HOLD, see Placing a call on Hold above.

If you have an XN120 System Phone.

HOLD and Transfer:

Press HOLD to place the call on hold. The caller will hear music.

You can now dial the telephone number of your co-worker.

You can either,

a) Press the TRFR key or go on hook while you are ringing your co-worker. The held call will ring at your co-worker's phone.

If your co-worker does not answer the held call it will ring you back after 30 seconds.

Or

b) Wait for your co-worker to answer and announce that you have a call for them, then press the TRFR key or go on hook to transfer the call through.

HOLD and press LINE KEY (Outside Calls Only)

Press HOLD to place the call on hold, the LINE KEY will flash green. The caller will hear music.

You can now dial the telephone number of your co-worker or make a Page call with Service Code 801. Announce the line key number of the held call.

Your co-worker can press the line key or dial Service Code 772 and the line number 01-03.

If you have a Normal Telephone.

Hold and Transfer.

Press the RECALL key to place the call on hold.

Dial the telephone number of your co-worker.

You can either,

a) Go on hook to transfer the call. If they don't answer the held call will ring you back after 30 seconds.

Or

b) Wait for your co-worker to answer and announce that you have a call for them, then go on hook to transfer the call through.

Function Keys

Customize your XN120 phone by storing features under your Programmable Function Keys.

For example, to forward your calls just press your Call Forward function key instead of dialing 848.

There are many different features that you can store under a function key, only the most common are covered by this guide.

XN120 system phones have 22 function keys. They are arranged in blocks of 12+10 keys.

! The block of 12 Function keys are pre-set to line keys, it is recommended that you keep these. Line keys make handling your outside calls much easier. This guide explains the setting of the block of 10 keys.

! You can not have the same function assigned to more than one key at a phone. If you try to duplicate a key you will hear a long reject tone.

You can check your keys by pressing the CHECK key (at a phone with an LCD display) and then pressing the functions key.

Line Key.

Will give you lamp indication for the exchange line. There are pre-set line keys on all XN120 phones.

Off – Idle. You can press the key to place an outgoing call.

Green, double flashing – You have the line.

Green, flashing – You have place the line on hold. Press the key to retrieve the held call.

Red – Another telephone is using the line.

Red, flashing – Another telephone has placed the line on hold. Press the key to retrieve the held call.

Red, fast flashing – the line is ringing. Press the key to answer the call.

DSS (Direct Station Select) key.

Will give you lamp indication for your co-workers telephone:

Off – Idle

On – Busy

Flashing – DND or Call Forward set

You can also press the key to place a call to your co-worker.

You can also store outside numbers under a DSS key.

Caller ID List.

Will give indication of outside calls that you have received or missed. This key is only of use if you have an LCD display to view the caller list.

Off – There are no new or saved calls in the list.

On – There are no new calls but you have one or more saved calls.

Flashing – You have new missed calls.

Press the key to view the list, scroll up/down with the volume keys.

Day/Night Mode.

Will allow you to change the mode of the system, see Telephone Ringing Assignment.

You have a separate key for each mode that you will use.

Only one of the keys can be active, press the key to activate the mode.

Off – The mode is not active.

On – The mode is active.

Paging.

Will give indication of the page zones.

Off – The page zone is not in use.

On – The page zone is in use.

Press the key to make a paging call.

Function Keys (Cont'd)

Clearing a Function Key

Press **SPK**

Dial Service Code **851**.

Press the function key that you want to clear.

Dial **000**

Press another function key if you have more to clear or
Press **SPK** to end.

Example:

SPK MON 27 16:28PM

851 KEY PROGRAM

Press Key 1 KEY PROG KEY 13 FORWARD

000 KEY PROG KEY 13 NOT DEFINE

SPK Mon 27 16:28PM
200 EXT 200

You may want to clear your function key(s) before you set it to a new type.

The current setting of the function key will be displayed.

The block of 10 function keys will show as keys 13 to 22 on the display.

Setting a Function Key

Press **SPK**

Dial Service Code **851**.

Press the function key that you want to set.

Dial the two digit code for the new function.
See below for each function key type.

Example:

SPK MON 27 16:28PM

851 KEY PROGRAM

Press Key 1 KEY PROG KEY 13 NOT DEFINE

The current setting of the function key will be displayed.

See below for each function key type.

01 for a DSS key.

Enter the telephone number of your co-worker.
Or enter the outside number, include the 9 to seize a line.

Press **HOLD** to confirm the number

Press **SPK** to end.
Or another function key if you have more to set.

01 KEY PROG KEY 13
DSS 0

203 KEY PROG KEY 13
203

HOLD KEY PROG KEY 13
DSS 203

SPK Mon 27 16:28PM
200 EXT 200

If you make a mistake just press the function key again to go back and retry or press SPK to quit.

You will hear a short confirmation tone.
If you hear a long reject tone the key has not been set.

Function Keys (Cont'd)

<p>08 for a Caller ID List key.</p> <p>Press SPK to end. Or another function key if you have more to set.</p>	<p>08</p> <p>SPK</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 CALL HISTORY</div> <div style="border: 1px solid black; padding: 2px;">Mon 27 16:28PM 200 EXT 200</div>	<p>You will hear a short confirmation tone. If you hear a long reject tone the key has not been set.</p>
<p>09 for a Day/Night mode key.</p> <p>Enter the day/night mode number (1-8)</p> <p>Press SPK to end. Or another function key if you have more to set.</p>	<p>09</p> <p>1</p> <p>SPK</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 NIGHT SERVICE 0</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 NIGHT SERVICE 1</div> <div style="border: 1px solid black; padding: 2px;">Mon 27 16:28PM 200 EXT 200</div>	<p>You will hear a short confirmation tone. If you hear a long reject tone the key has not been set.</p>
<p>21 for a Page zone key.</p> <p>Enter the zone number (1-9)</p> <p>Press SPK to end. Or another function key if you have more to set.</p>	<p>21</p> <p>1</p> <p>SPK</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 PAGE GROUP 0</div> <div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 PAGE GROUP 1</div> <div style="border: 1px solid black; padding: 2px;">Mon 27 16:28PM 200 EXT 200</div>	<p>You will hear a short confirmation tone. If you hear a long reject tone the key has not been set.</p>
<p>22 for an All Call Page key.</p> <p>Press SPK to end. Or another function key if you have more to set.</p>	<p>22</p> <p>SPK</p>	<div style="border: 1px solid black; padding: 2px; margin-bottom: 5px;">KEY PROG KEY 13 PAGE INT ALL</div> <div style="border: 1px solid black; padding: 2px;">Mon 27 16:28PM 200 EXT 200</div>	<p>You will hear a short confirmation tone. If you hear a long reject tone the key has not been set.</p>

User Guide

Telephone Names.

You can assign the name of the user to each of your telephones.
The name will be displayed on the LCD display when you make/receive internal calls.
The name can be up to 12 characters in length.

Naming a Telephone

Press **SPK**

Dial Service Code **800** for naming telephones.

Dial the number of the telephone you want to name.

Enter the new name using the characters above the keypad as a guide.
Press **#** to move to the next character.
Press **##** to insert a space.

Press **HOLD** to confirm the new name.
You can enter the next telephone number that you want to re-name or press **SPK** to end.

Example:

SPK MON 27 16:28PM

800 ENTER NAME
ICM DIAL

204 ENTER NAME 204
EXT 204

22
444
555

555 ENTER NAME 204
-BILL

HOLD ENTER NAME
ICM DIAL

SPK Mon 27 16:28PM
200 EXT 200

The current name is displayed.

You will hear a short confirmation tone.

Call Forward

Use Call Forwarding to redirect your calls to another extension.

With Call Forwarding, you're sure your calls are covered when you are away from your work area.

Call Forwarding will reroute calls ringing your extension, including calls transferred from another extension. You must enable Call Forwarding from your phone. To redirect your calls if you are at another phone, use Call Forward Follow Me.

There are four types of Call Forwarding:

842 Call Forwarding Immediate with Both Ringing

All calls forward immediately to the destination, and both the destination and your extension ring.

843 Call Forwarding when Busy

Calls forward when your extension is busy.

845 Call Forwarding when Not Answered

Calls forward when your extension is not answered.

848 Call Forwarding Immediate

All calls forward immediately to the destination, and only the destination rings.

Setting Call Forward

Press **SPK**

Dial the Service Code for the call forward type.

842 Both ring

843 Busy

845 Not Answered

848 Immediate

Dial **1** if you want to set up a new call forward.

Dial **0** if you want to cancel a call forward you have already set.

Dial the telephone number of the destination you want to forward your calls to.

Press **SPK** to end.

Example:

SPK MON 27 16:28PM

848 SET FORWARD
1:SET 0:CANCEL

1 SET FORWARD
ICM DIAL

203 SET FORWARD
FWD IMM> EXT 203

SPK Mon 27 16:28PM
FWD IMM> EXT 203

You can also assign the call forward feature to function key on the XN120 Phones. See Function Keys.

The DND/CONF key will flash slowly and you will also hear interrupted internal dial tone to indicate that you have a call forward set.

Call Pickup

Use Call Pickup when you need to answer a call ringing another telephone without leaving your phone. This lets you easily cover a co-worker's calls when they have to be away from their desk.

You can also answer an outside call by pressing the flashing line key, see Function Keys.

There are various types of call pickup. The two most used are:

Direct Call Pickup

You know which telephone is ringing, you want to pickup the call ringing this phone.

Any Call Pickup

You are not certain which telephone is ringing, you want to pickup the call whichever phone is ringing.

Direct Call Pickup

Lift the handset.

Dial Service Code **715** for Direct Call Pickup.

Dial the telephone number of the phone that is ringing

You are connected to the caller.

Example:

Lift handset MON 27 16:28PM

715 MON 27 16:28PM
ICM DIAL

204 MON 27 16:28PM
CALL P/U EXT 204

Any Call Pickup

Lift the handset.

Dial Service Code **867** for Direct Call Pickup.

You are connected to the caller.

Example:

Lift handset MON 27 16:28PM

867 MON 27 16:28PM

MON 27 16:28PM
CALL P/U EXT 204

You will pickup any call ringing at any telephone on the system.

Do Not Disturb

Do Not Disturb (DND) blocks incoming calls, Call Forwards and Paging announcements to your extension.

DND permits you to work undisturbed at your desk without interruptions from your phone.

When you activate DND, incoming calls still flash your line keys. While in DND, you may use your phone in the normal manner for placing and processing calls.

There are four Do Not Disturb options:

- 1** – Blocks your outside calls
- 2** – Blocks Paging, Intercom calls, Call Forwards and transferred outside calls
- 3** – Blocks all calls
- 4** – Blocks Call Forwards
- 0** – Cancels Do Not Disturb

Setting Do Not Disturb

Press **SPK**

Dial Service Code **847** for DND.
OR
At an XN120 phone press the **DND key**.

Enter the DND option.
1 – Blocks your outside calls
2 – Blocks Paging, Intercom calls, Call Forwards and transferred outside calls
3 – Blocks all calls
4 – Blocks Call Forwards
0 – Cancels Do Not Disturb

Press **SPK** to end.

Example:

SPK MON 27 16:28PM

847
or
DND SET DND

3 SET DND
DND ALL

You will hear a short confirmation tone.

SPK MON 27 16:28PM
DND ALL

Your DND key will light to indicate that you have DND set

Paging – Internal

Need to locate a co-worker or make an announcement? Use Internal Paging.

Your system can have All Call Internal Paging and Internal Paging zones.

When you make an All Call Paging announcement, your voice broadcasts to all XN120 phones set to receive All Call Paging.

When you make a Zone Paging announcement, your voice broadcasts to all the idle XN120 phones in the zone you called.

You will need to configure the paging zones before you can use this feature, see Creating a Paging Group in the configuration section.

You can also make a paging call over external speakers if you have connected the XN120 to an external paging amplifier, see Paging External.

Making an All Call Page

Lift the handset

Dial Service Code **801** for paging.

Dial **0**

Speak into your handset, your speech will be broadcast to all XN120 phones in the All Call Group.

Go on hook to end.

Example:

Lift handset	MON 27 16:28PM
801	MON 27 16:28PM GROUP No.
0	MON 27 16:28PM GRP CALL GRP ALL

Making an Page Zone Call

Lift the handset

Dial Service Code **801** for paging.

Enter the zone number **1-9**

Speak into your handset, your speech will be broadcast to all XN120 phones in the zone.

Go on hook to end.

Example:

Lift handset	MON 27 16:28PM
801	MON 27 16:28PM GROUP No.
1	MON 27 16:28PM GRP CALL Group 1

Paging – External

Need to locate a co-worker or make an announcement? Use External Paging. When you make an External Paging announcement, your voice broadcasts to the loudspeakers of your external paging system.

You will need to connect the XN120 to an external paging amplifier before you can use this feature, see Connecting External Paging Amplifiers in the Installation section.

Making an External Page Call

Lift the handset

Dial Service Code **803** for paging.

Dial **1**

Wait for the external paging tune to end.

Speak into your handset, your speech will be broadcast to the external loudspeakers.

Go on hook to end.

Example:

Lift handset MON 27 16:28PM

803 MON 27 16:28PM
ZONE

1 MON 27 16:28PM
PAGE EXT GRP 01

You will hear the external paging confirmation tune.

User Guide

System Time

You may need to change the time displayed on the XN120 LCD display phones.

The date can only be changed within the XN120 Configuration Mode

Setting the System Time

Press **SPK**

Dial Service Code **828** for setting the system time.

Enter the new time in 24Hour format (hh:mm)

Press **SPK** to end.

Example:

SPK MON 27 16:28PM

828 MON 27 16:28PM
828

1730 MON 27 16:28PM
828 17 30

You will hear a short confirmation tone.

Telephone Book

The system Telephone Book gives you quick access to numbers you call frequently. This saves time, for example, when calling a client with whom you deal often. Instead of dialing a long telephone number, you just use the telephone book.

The XN120 phones have a DC (Direct Call) key to access the Telephone Book.

The telephone book of the XN120 is also referred to as the ABB Dial list.

You will need to enter the numbers and names into the Telephone Book before you can use them.

You can also store personal outside numbers under a DSS Function Key at an XN120 phone, see Function Keys.

Adding a new number to the Phone Book

Press **SPK**

Dial Service Code **853** to add a new number.

Enter the location you want to add (000-999).

Enter the outside number. You do not need to include the trunk access code.

Press **HOLD** to confirm the number.

Enter the name using the characters above the keypad as a guide.
Press **#** to move to the next character.
Press **# #** to insert a space.

Press **HOLD** to confirm.

You can enter the next location or press **SPK** to end.

Example:

SPK MON 27 16:28PM

853 SET ABB

005 ABB005

ABB005 A.Customer
01509643100

01509123456
ABB005
01509123456

HOLD ABB005

66
33
222 ABB005
-NEC

HOLD SET ABB

✓ Make a list of your telephone book entries before you start adding them into the system.

If the location is unused.

If the location is in use it will be displayed. You can overwrite or press HOLD twice to skip it and try another location.

You will hear a short confirmation tone.

Telephone Book (Cont'd)

Using the Phone Book

Press **SPK**

Dial Service Code **813** to access the telephone book.

OR

At an XN120 phone press the **DC** key.

Enter the location you want to dial out (000-999).

The system will automatically seize a free line and dial the number.

Example:

SPK

MON 27 16:28PM

813

or

DC

005

Line 001
NEC 09123456

The full dialled number will not be displayed if it is more than 8 digits long.

To Access the Other Features.

The features of the XN120 are accessed by dialing the Service Code, each feature has its own code.

If you have an XN120 system phone you can also have a function key assigned for the features that you use more often.

If your XN120 system phone has an LCD it will display the options available whilst you are using the features.

Refer to the XN120 System Manual for full description of all other features.

Appendix A – 64 Button Consoles

Refer to Section 4 – Connecting the 64 Button Console for wiring instructions for the 64 Button Console.

Refer to Section 13 – Power Fail Options for limitations related to the power fail operation when the 64 Button Console is installed.

Which ST sockets can the 64 Button Console be plugged into?

The 64 Button Console MUST be plugged into the eighth ST socket of either the XN120 main unit OR an optional 008/308 expansion card. Refer to Section 4 for wiring instructions.

How many 64 Button Console can be installed?

You can plug one console into socket ST8 of the XN120 Main Unit

You can plug one console into socket ST16/24 of the 008 and 308 expansion cards.

This means you can have a maximum of three 64 Button Consoles connected to the XN120 Main Unit.

What if I have an XN120 Expansion Unit installed?

Each expansion unit can also have a maximum of three 64 Button Consoles connected, following the same rules as the main unit.

Assign the 64 Button Console to a Telephone

Each 64 Button Console must be associated with one of the XN120 system phones; one with a display is recommended as an operator normally uses the console, the display will make their job easier.

Program 30-02-01

Assign each console to a telephone.

Default Setting:

The consoles are not assigned.

30-02-01	DSS 1
Ext Number	200

Use Vol. Keys to select another DSS console (1-9)

Enter the telephone number that the console will be assigned to

- Enter the telephone number that each console will be assigned to, you can overwrite the current entry.
- Press HOLD to confirm the entry and step to the next console.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

In program 30-02-01 you will see that there are 9 DSS consoles available. The console number is determined by the order in which they are installed onto the XN120 NOT the ST socket number they are plugged into. You can check the console numbering with Program 10-03-01.

Appendix A – 64 Button Consoles

64 Button Console Number (1-9)

You can confirm the console number with Program 10-03-01.

A console can be plugged into the eighth socket of each XN120 main unit, expansion unit, 008 card or 308 card.

XN120 Unit	Slot number within Program 10-03-01
Main Unit	Slot 1 Base board
	Slot 2
	Slot 3
Expansion Unit 1	Slot 7 Base board
	Slot 8
	Slot 9
Expansion Unit 2	Slot13 Base board
	Slot14
	Slot15

Program 10-03-01 allows you to view each card installed in the system by selecting the appropriate slot number, this table shows the slot numbers of the cards that the consoles can be plugged into.

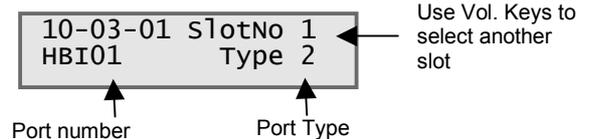
Program 10-03-01

Confirm the console number 1-9.

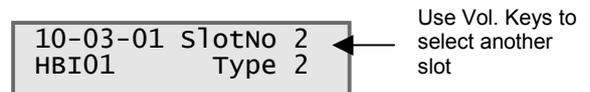
Make a note of the console numbers on the configuration sheet at the end of this section.

Default Setting:

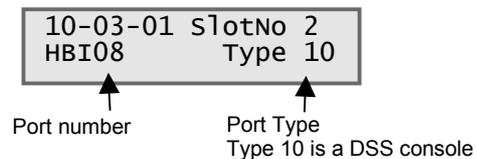
The consoles are automatically assigned a number when they are installed.



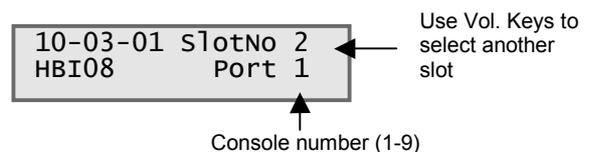
- Use the Volume keys to select the correct slot number of the card that the DSS console is plugged into.



- Press FLASH twice to move the flashing cursor to the port number. Enter 08, the port type will be shown.



- If the port is set as a DSS console then the type will be set automatically to 10.
- Press HOLD to display to the console number.



- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Customising the buttons

When a console is installed the 64 buttons are automatically assigned as Direct Station Select (DSS) keys for extensions 200 to 263.

You can customize the buttons of each console with program 30-03-01.

The buttons can have the same functions as the programmable keys on the XN120 system phones. This section will show the setting of the DSS function. For other functions refer to the XN120 Programming Reference Manual 991435-5.

Program 30-03-01

Customise the buttons.
Each button has two entries:
Function code and Additional data.

The 64 buttons are shown as KY01 to KY64.

This guide shows function code 01 for DSS function.

The additional data can be up to 36 digits long and can be any number including outside numbers.

For outside numbers enter the trunk access code followed by the number to dial out
e.g. 901509643100

Default Setting:

The 64 buttons are set as DSS function for extensions 200 to 263.

30-03-01 DSS 1
KY01=01

Use Vol. Keys to select another DSS console (1-9)

Enter the Function Code.
01 for DSS function

- Enter the Function Code, 01 for DSS function; you can overwrite the current entry. Enter 000 to set the key to 'Not Defined'.
- Press HOLD to confirm the entry and step to the Additional Data.

30-03-02 DSS 1
KY01=AD 200

Enter the telephone number that will be assigned to the button

- Enter the additional data for the key. This will determine the telephone number that will be assigned to the button.
- Press DC several times when you are done to return to the Program Mode.
- (Press SPK to save changes and exit if you are finished).

Appendix A – 64 Button Consoles

Configuration sheet: DSS Console Assignment

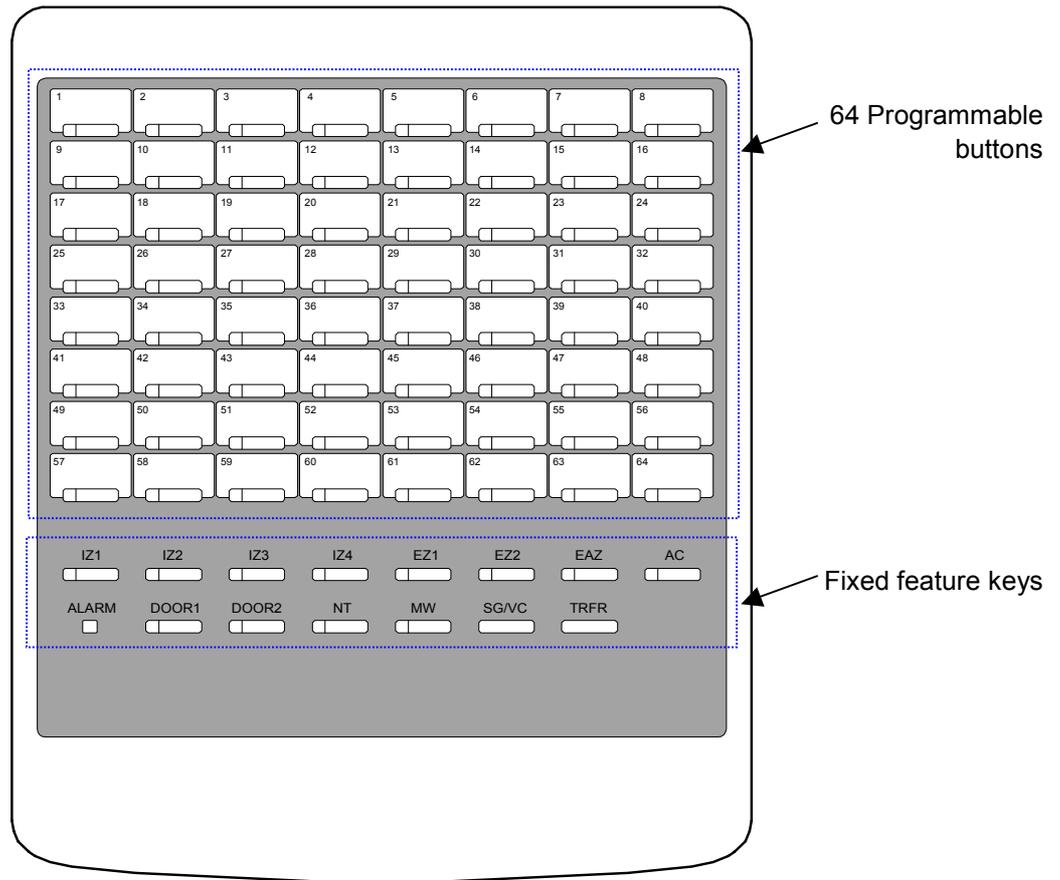
XN120 Unit	Slot number within Program 10-03-01	DSS Console Number Program 10-03-01 Assigned automatically	Assigned to Telephone Program 30-02-01 (Default=None assigned)
Main Unit	Slot 1 Base board		
	Slot 2		
	Slot 3		
Expansion Unit 1	Slot 7 Base board		
	Slot 8		
	Slot 9		
Expansion Unit 2	Slot13 Base board		
	Slot14		
	Slot15		

Configuration sheet: DSS Console Buttons

Key	Additional Data Program 30-03-01 (Default shown)	Key	Additional Data Program 30-03-01 (Default shown)
1	200	33	232
2	201	34	233
3	202	35	234
4	203	36	235
5	204	37	236
6	205	38	237
7	206	39	238
8	207	40	239
9	208	41	240
10	209	42	241
11	210	43	242
12	211	44	243
13	212	45	244
14	213	46	245
15	214	47	246
16	215	48	247
17	216	49	248
18	217	50	249
19	218	51	250
20	219	52	251
21	220	53	252
22	221	54	253
23	222	55	254
24	223	56	255
25	224	57	256
26	225	58	257
27	226	59	258
28	227	60	259
29	228	61	260
30	229	62	261
31	230	63	262
32	231	64	263

Copy this page for further consoles.

Console User Guide



64 Programmable Buttons

If the button has a telephone number assigned it will light to show the status of the telephone.

- Lamp off The telephone is idle
- Lamp on The telephone is off hook (busy)
- Lamp flashing The telephone has call forward or DND set

If the button has an outside number assigned the lamp will remain off.

Fixed Feature Keys

- IZ1 to IZ4 Internal Zone page call for zones 1 to 4. The key lights when the zone is in use.
- EZ1 & EZ2 External Zone page call for zones 1 and 2. The key lights when the zone is in use.
- EAZ External All Zone page call. The key lights when in use.
- AC All Call internal page zones. The key lights when in use.
- DOOR1 & DOOR2 Doorphone call for door unit 1 and 2. The key lights when the door unit is in use
- NT Flip between Day1 and Night1. The key lights when Night1 is set.
- MW Set Message Waiting when calling another telephone. Also used to reply to message waiting.
- SG/VC Signal/Voice call selection when calling another telephone.
- TRFR Transfer the held call.

Alarm Lamp

Lights when the low battery or SMDR buffer full alarm are present on the XN120.
Requires program 90-11-01 setting for the telephone that the console is associated with.

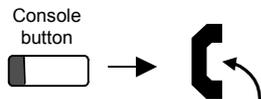
Appendix A – 64 Button Consoles

Place a call to a telephone

Press the button on the console for the telephone you want to call.
The phone assigned to the console will go into hands free.

You can lift the handset for privacy.

Placing an Intercom Call

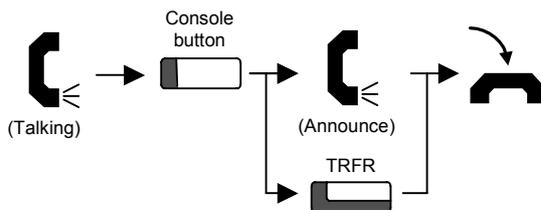


- ◆ Pressing the console button after lifting handset is also possible.
- ◆ Your call will ring or voice-announce. If you hear ringing, wait for an answer. If you hear a beep, begin speaking. Pressing SG/VC key on the console changes voice/ring mode (where the destination is an XN120 Telephone).

Transferring a call

Press the console button while you are talking to the outside caller; the call will be placed on hold. Either press TRFR to transfer the call through or wait for the called party to answer, inform them that you wish to transfer a call and then go on hook to transfer the call.

Transferring an Outside Call to another Extension



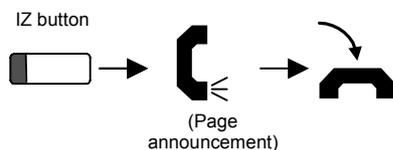
- ◆ If the called party does not want the call press the flashing line key or CALL key to retrieve the held caller.
- ◆ If you have an intercom call you must press HOLD before pressing the console button.

Internal paging zone call

Press the fixed feature button on the console for the internal zone (IZ1 to IZ4) you want to place the page call to.

You will hear a confirmation beep tone and the IZ button will go red.

Internal Page Zone Call

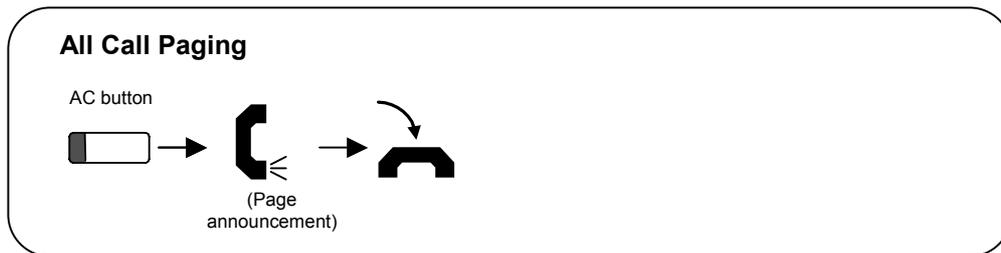


The XN120 must be configured before the internal paging zones can be used, refer to Create an Internal Paging Group in this guide.

Internal paging - all zones

Press the All Call (AC) fixed feature button on the console.

You will hear a confirmation beep tone and the IZ1 to IZ4 buttons will go red.

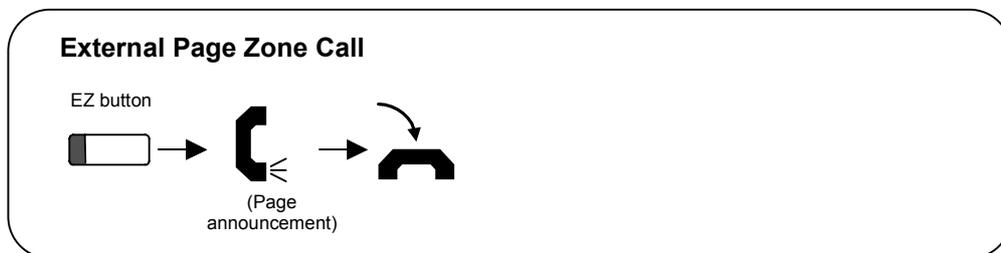


The XN120 must be configured before the internal paging - all zones can be used, refer to Create an Internal Paging Group in this guide.

External paging zone call

Press the fixed feature button on the console for the external zone (EZ1 or EZ2) you want to place the page call to.

You will hear a confirmation tune and the EZ button will go red.

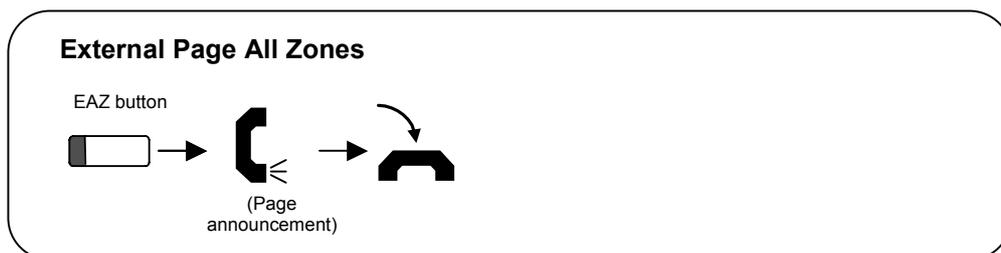


The XN120 must have an external paging device connected before external paging can be used, refer to Connecting the XN120 to an External Paging System in this guide.

External paging - all zones

Press the External All Zones (EAZ) fixed feature button on the console

You will hear a confirmation tune and the EAZ button and EZ1/EZ2 buttons will go red.



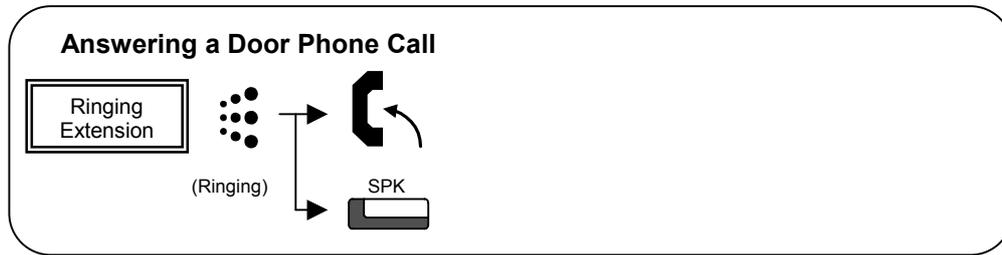
The XN120 must have an external paging device connected before external paging can be used, refer to Connecting the XN120 to an External Paging System in this guide.

Appendix A – 64 Button Consoles

Door phones

When the call button of the door phone unit is pressed the phones assigned will ring, refer to the separate 2PGDU guide 991420-5 for details. Lift the handset to answer to door phone all at the telephone associated with the console.

When the door phone is in use the DOOR button on the console will go red.



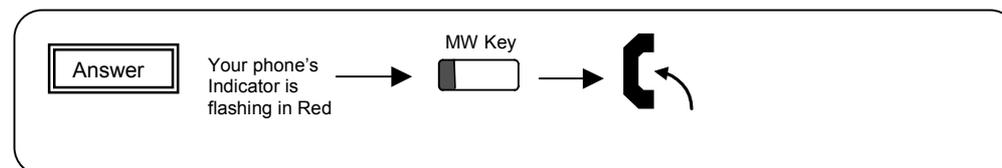
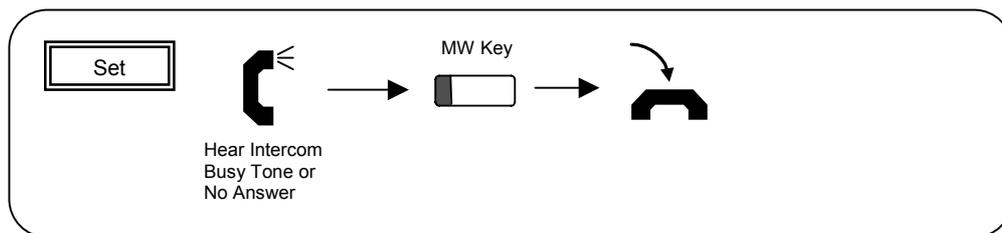
Night Modes

The night mode (NT) fixed feature key on the console will flip the XN120 between Day1 and Night1 mode each time the key is pressed.

If you want to have access to other night modes (Rest1, Mid-Night1 etc) you will need to set one of the programmable function keys on the telephone, refer to Function Keys in the Administrators User Guide within this guide.

Message Waiting

The message waiting (MW) fixed feature key on the console can be used to either set a message waiting or answer a message waiting.



Signal/Voice Call

The signal/voice call (SG/VC) fixed feature key on the console can be used to change the voice/ring mode when calling another XN120 system phone.

Transfer

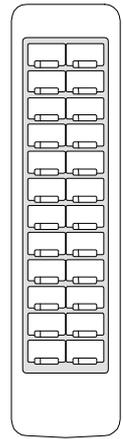
The transfer (TRFR) fixed feature key on the console can be used to transfer the held call.

Appendix B – 24 Button Consoles

The 24 button add on console can be connected to any XN120 display system phone. The console provides 24 additional programmable function keys. The keys can be programmed and used in the same way as the programmable function keys on the XN120 system phone.

Refer to Function Keys in the Administrators User Guide within this guide.

24 Button
Add on
Console



How many 24 Button Console can be installed?

Each XN120 display phone can have a 24 button console connected.

Installing the 24 Button Add On Console

The 24 Button Add On Console is supplied with 4 screws and metal fixing plate to secure it to the XN120 system phone.

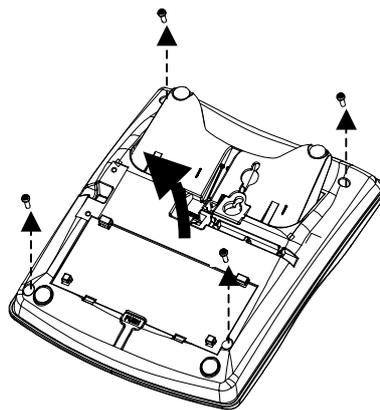
The XN120 System phone can not be wall mounted with the 24 button add on console attached.

The XN120 System phone should have the desk stand set to the lower position.

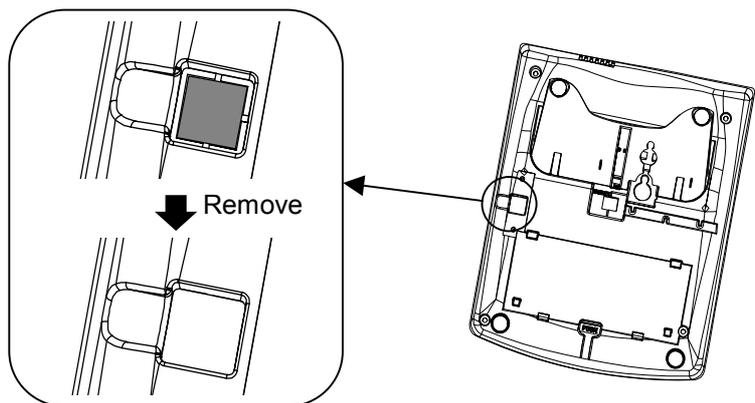
- 1 Disconnect the line cord and handset cord from the XN120 System Phone

- 2 Place the phone onto a flat surface to prevent damage to the front of the phone.

Unscrew the 4 screws securing the base of the system phone and remove the base.

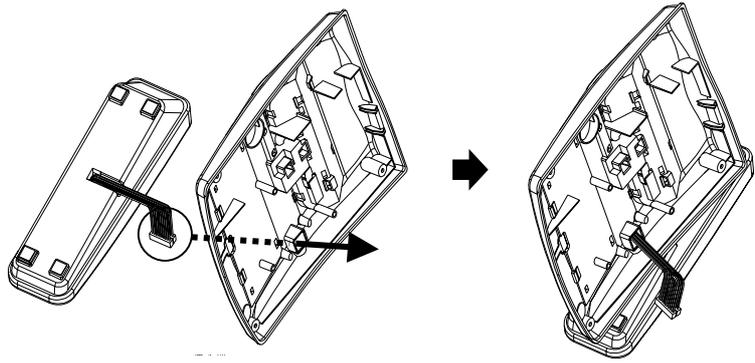


- 3 Using a blunt tool remove the breakout covering the connector for the add on console.



Appendix B – 24 Button Consoles

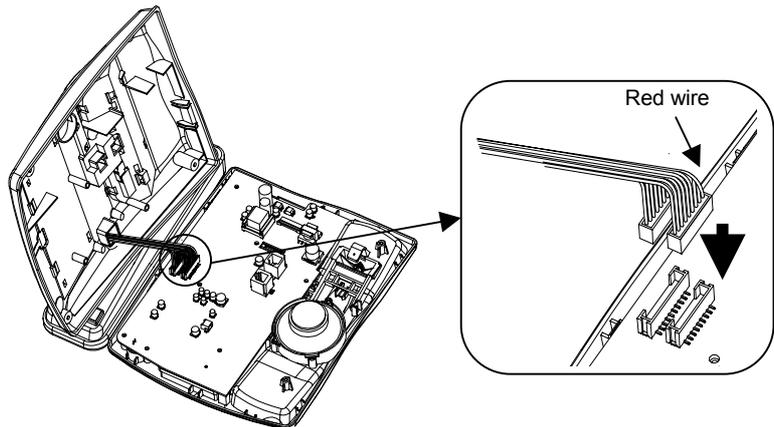
- 4 Fit the add on console cables through the hole in the base



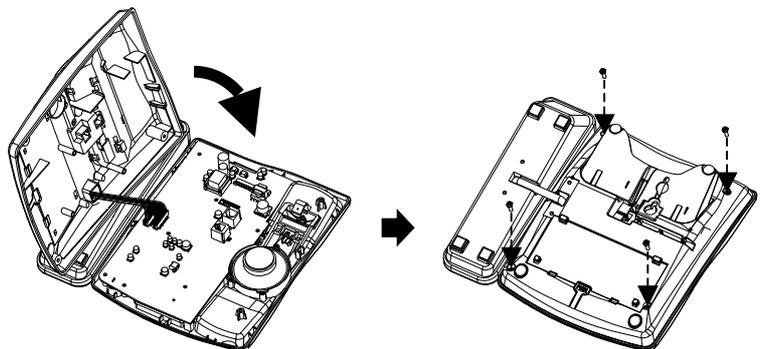
- 5 Plug the add on console cables into the sockets DLCN1 and DLCN2 on the PCB of the upper part of the XN120 system phone

Ensure you plug each cable into the correct sized socket.

Each cable has a red wire at one end; this must be located towards pin 1 of the socket.

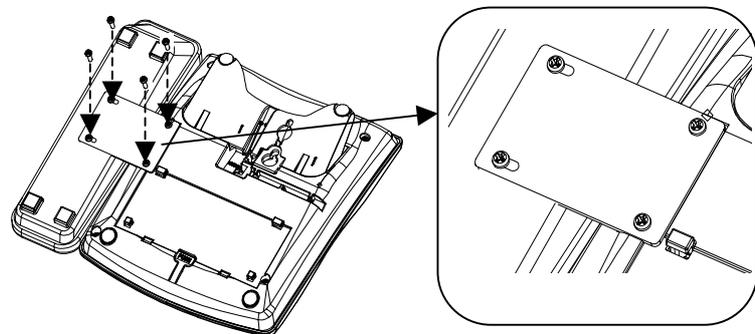


- 6 Re-fit the base to the XN120 system phone and secure with the 4 screws.



- 7 Using the metal plate and 4 screws supplied with add on console secure the console to the base of the phone.

Be careful not to trap any of the wires under the plate.



- 8 Reconnect the line cord and handset cord to the XN120 System Phone.

The 24 button console will be automatically recognised.
The user can program the function keys using Service code 851 - refer to Function Keys within the Administrators User Guide in this guide.

Appendix C – Wall Mounting the XN120 System Phone

Appendix C – Wall Mount the XN120 System Phone

The XN120 System Phone can be wall mounted using the built in wall mount/desk stand bracket on the base of the phone.

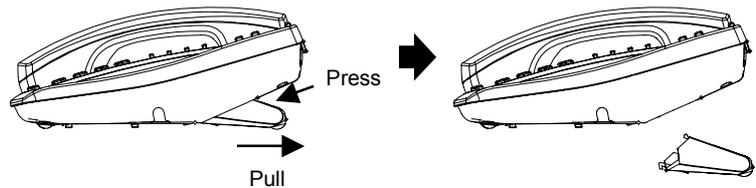
There is a handset hook supplied; attached to the base of the phone.

Two screws (and wall fixing plugs where necessary) will be required to fix the bracket to the wall.

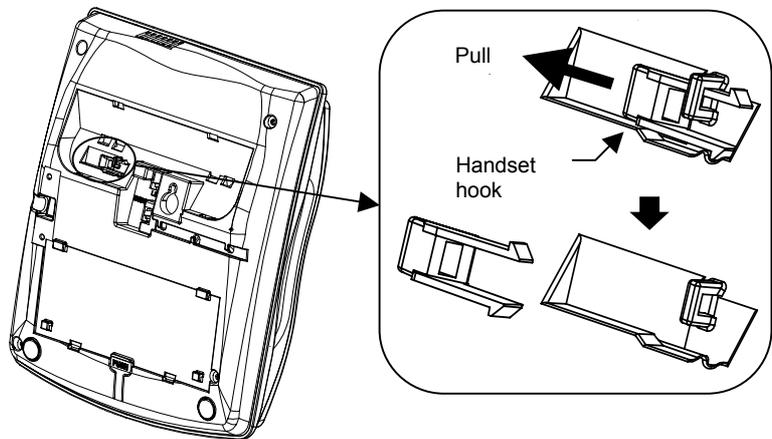
The XN120 system phone cannot be wall mounted when either the 64-button or 24-button console is attached.

- 1 Disconnect the line cord from the wall socket.

- 2 Remove the wall mount/desk stand bracket from the case of the phone

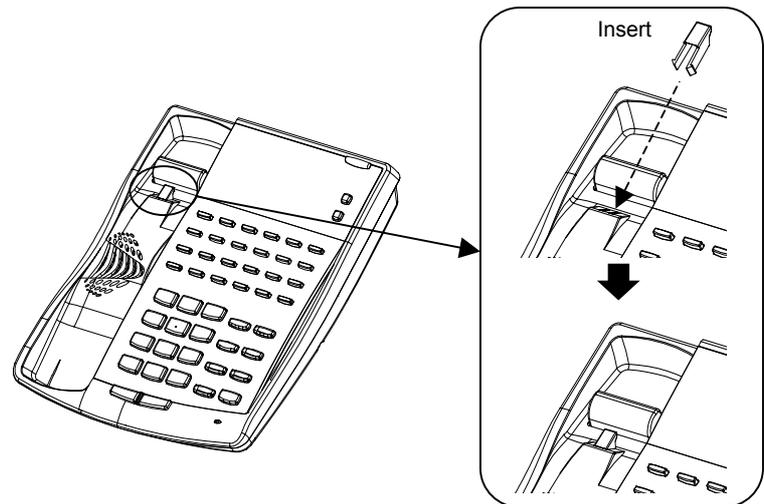


- 3 Remove the handset hook from the base of the phone



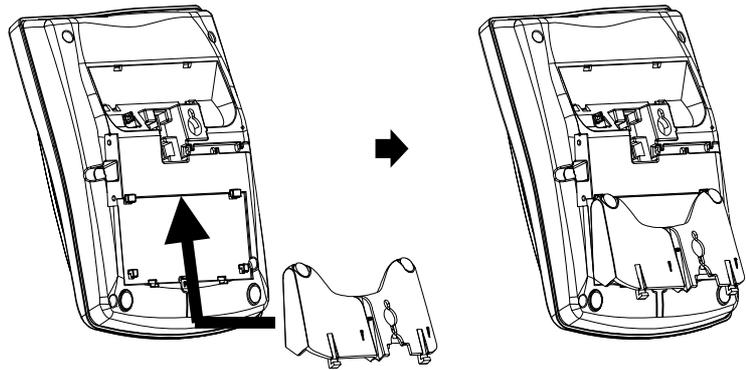
- 4 Insert the handset hook into the slot below the hook switch on the front of the phone.

The hook will hold the handset in place when the phone is wall mounted.

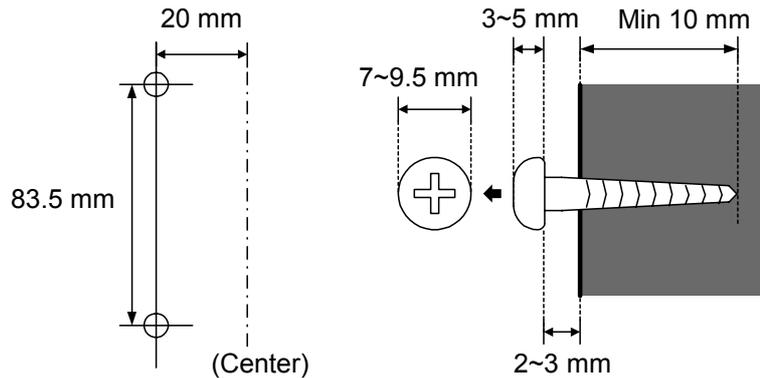


Appendix C – Wall Mounting the XN120 System Phone

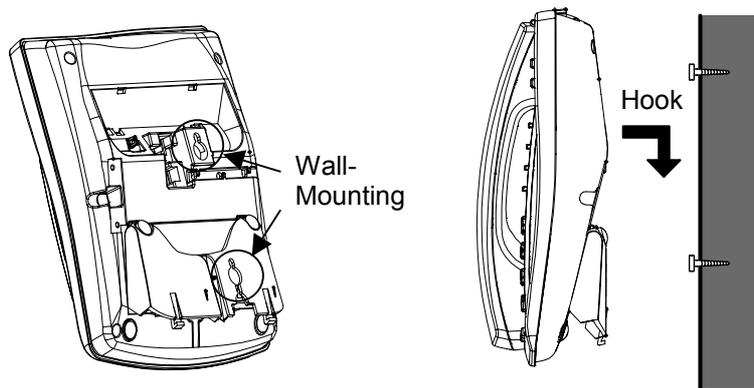
- 5 Fix the bracket to the base of the phone.
- Ensure the bracket clips into all 4 of the fixing points on the base of the phone.



- 6 Fix 2 screws to the wall leaving approximately 3mm protruding.

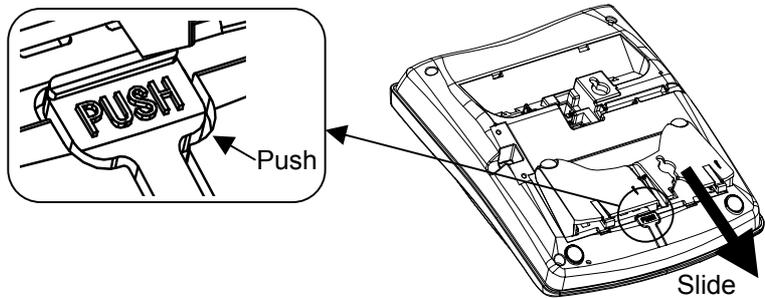


- 7 Fit the phone onto the 2 screws.
- Ensure the line cord is not trapped between the phone and the wall.



- 8 Reconnect the line cord to the wall socket.

If you want to remove the bracket.
Push in the retaining clip and slide off the bracket.



Appendix D – Hard of Hearing Options

Telephone Volume Adjustment

You can increase the speech levels of individual telephones within XN120 Configuration Mode. The levels of XN120 System phones and normal phones can be adjusted. You can also adjust the levels to/from the telephone independently. Refer to the XN120 Vision and XN120 Talk Telephone User Guide 991405-5 for further information.

1 Program 10-03-01
Adjust the gain of a telephone.

Record the settings on the Configuration sheet below.

Transmit gain is the level from the XN120 to the phone. This will affect the volume of the handset earpiece and hands free loudspeaker. It will not affect the ringing volume.

Receive gain is the level from the phone to the XN120. This will affect the gain of the handset microphone and hands free microphone.

Press FLASH to move the cursor to the port number (1-08)

```
10-03-01 SlotNo 1
HBI01      Type  1
```

Press Vol.▲▼ keys to select the slot number

- Select another 008/308 slot number with the Vol.▲▼ keys. The XN120 Main Unit is always Slot 1.
- Select the correct port by pressing FLASH twice, the cursor moves to the HBI number, enter the number (01 to 08). The cursor will automatically move to the Type. You can not change the Type, it is assigned automatically. Type 1 is a XN120 system phone. Type 2 is a normal telephone. Type 10 is a 64 button DSS console. Type 13 is an exchange line (for CO ports only).
- Press HOLD to confirm the entry and display the port number. You can not change the port number, it is automatically assigned.

```
10-03-02 SlotNo 1
HBI01      Port  1
```

Port number

- Press HOLD to confirm the entry and step to the transmit gain setting (for ST ports only).

```
10-03-03 SlotNo 1
HBI01      T-Gain32
```

Transmit gain (1-63).

The gain is from 1-63 (-15.5dB to +15.5dB). Set to 32 for 0dB (no gain).

- Press HOLD to confirm the entry and step to the receive gain setting (for ST ports only).

```
10-03-04 SlotNo 2
HBI01      R-Gain32
```

Receive gain (1-63).

The gain is from 1-63 (-15.5dB to +15.5dB). Set to 32 for 0dB (no gain).

When you are finished:

- Press DC several times when you are done to return to the Program Mode.

(Press SPK to save changes and exit if you are finished).

Appendix D – Hard of Hearing Options

Configuration sheet: Telephone Port Gain

Program 10-03-01

Slot number =

HBI Port 1-8 for each slot	Telephone Number Program 11-02-01	Transmit Gain 1-63 -15.5 to +15.5dB (32=0dB)	Receive Gain 1-63 -15.5 to +15.5dB (32=0dB)
HBI 01	200	Default=32	Default=32
HBI 02	201	Default=32	Default=32
HBI 03	202	Default=32	Default=32
HBI 04	203	Default=32	Default=32
HBI 05	204	Default=32	Default=32
HBI 06	205	Default=32	Default=32
HBI 07	206	Default=32	Default=32
HBI 08	207	Default=32	Default=32

Glossary

431A	4 way telephone plug. Also available as a 6 way plug (631A) which can be used in place of the 431A.
CO	Central Office. The exchange line connections of the XN120 are labelled CO1 to CO3.
CW1308	A specification for twisted pair cable typically used for telephone system cabling. Available from 1 to 100's of pairs. The cable is separated into coloured pairs; each pair is twisted together.
Dial Pulse	A method of dialing digits by breaking the line a set number times for each digit dialed. This can also be referred to as rotary dialed digits.
DTMF	Dual Tone Multi Frequency. A method of dialing digits (0 to 9 * and #) by sending a tone each time a button is pressed.
FSK	Frequency Shift Keying. A method of sending data by changing the frequency.
LCD	Liquid Crystal Display.
LJU	Line Jack Unit used to connect normal telephones. Also referred to as British Telecom style socket. Available as a Master or Secondary type. The Master has components fitted to provide ringing and lightning protection for the phone. The Secondary does not have the components installed and should be used to provide an additional extension from a Master LJU.
RJ11	Type of plug/socket. There are various sizes and number of connections available. The size and number of connections is determined by the two numbers following the type, for example. RJ11 4/4 way is a 4 pin type with 4 connections RJ11 6/4 way is a 6 pin type with 4 connections RJ11 6/6 way is a 6 way type with 6 connections

Declaration of Conformity

EC Declaration of Conformity

Manufacturer :- NEC Infrontia Corporation
Address :- 2-6-1 Kitamikata, Takasu-ku
Kawasaki, 213-8511
Japan

declares that the product:

Type :- XN120
Model :- XN120
Intended use :- PBX System

complies with the essential requirements of Article 3 of the R&TTE 1999/5/EC Directive, if it used for it's intended use and that the following standards has been applied:

Safety (Article 3.1.a of the R&TTE Directive)

Applied standards EN 60 950-1 **Issue** 2001

Electromagnetic Compatibility (Article 3.1.b of the R&TTE Directive)

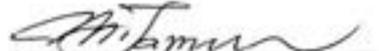
Applied standards	EN 55022	Issue	1998
	EN 55024	Issue	1998 + A1 : 2001
	EN 61000 3-2	Issue	2000
	EN 61000 3-3	Issue	1995 + A1 : 2001

Number of annexes : 1

NEC Infrontia, Kawasaki
(Place of declaration of conformity)

Mr. M Tamura
(Name)

Jan. 6th, 2005
(Date of declaration of conformity)


(Signature)

Annex 1 of the Declaration of Conformity for the XN120 System

PBX System with the following components:	
Part	Description
IP2AT-924M KSU (EU)	Main Cabinet (including 3 Analogue Trunks and 8 Extensions)
IP1E-DSPDB-A1	DSP Daughter Board
IP1E-DSPDB-A2	DSP Daughter Board with Voice Mail Function
IP1E-CF-B1	Compact Flash card for IP1E-DSPDB card
IP2AT-308E-A1	3+8 Expansion unit (3 Analogue Trunks and 8 Extensions)
IP2AT-008E-A1	0+8 Expansion unit (0 Analogue Trunks and 8 Extensions)
IP2WW-2PGDU-A1	Paging Door phone card
IP2WW-EXIFU-A1	Expansion I/F with RS232 and LAN Interface
IP2WW-EXIFU-B1	Expansion I/F with RS232 Interface
IP2WW-2OPBOX	Optional Box (2 Slots)
IP1WW-4VOIPU-S1	Voice over IP Card
IP1WW-4VOIPDB-S1	Voice over IP Card Daughter board
IP1WW-2BRIU-S1	ISDN BRI card (2 Port)
IP1WW-4BRIU-S1	ISDN BRI card (4 Port)
IP2AT-924ME KSU (EU)	Expansion Cabinet
DX2E-32i/NX7E Battery Box	Battery Back Up Box
IP2AT-12TXD TEL (WH)	12 Line Display Keytelephone White
IP2AT-12TXD TEL (BK)	12 Line Display Keytelephone Black
IP2AT-6TXD TEL (WH)	6 Line Display Keytelephone White
IP2AT-6TXD TEL (BK)	6 Line Display Keytelephone Black
IP2AT-12TD TEL (WH)	12 Line Keytelephone (non display) White
IP2AT-12TD TEL (BK)	12 Line Keytelephone (non display) Black
IP2AT-6TD TEL (WH)	6 Line Keytelephone (non display) White
IP2AT-6TD TEL (BK)	6 Line Keytelephone (non display) Black
IP2AT-64DL DSS CONSOLE (WH)	64 Key Direct Line Select Terminal White
IP2AT-64DL DSS CONSOLE (BK)	64 Key Direct Line Select Terminal Black
IP2AT-24DL DLS CONSOLE (WH)	24 Key Extender Unit Terminal White
IP2AT-24DL DLS CONSOLE (BK)	24 Key Extender Unit Terminal Black
DX4NA Door Phone	Door Phone
