

Panasonic NS700

Linking 2 KSU's Together – Location A Direct Dial

Telquest Tech Support

You must have a VPN established between each of the locations.
You must have/purchase IP Trunk Channel Activation Keys.

Note: It takes 2 IP Trunk Channel Activation Keys for each Port. (See Page 6)

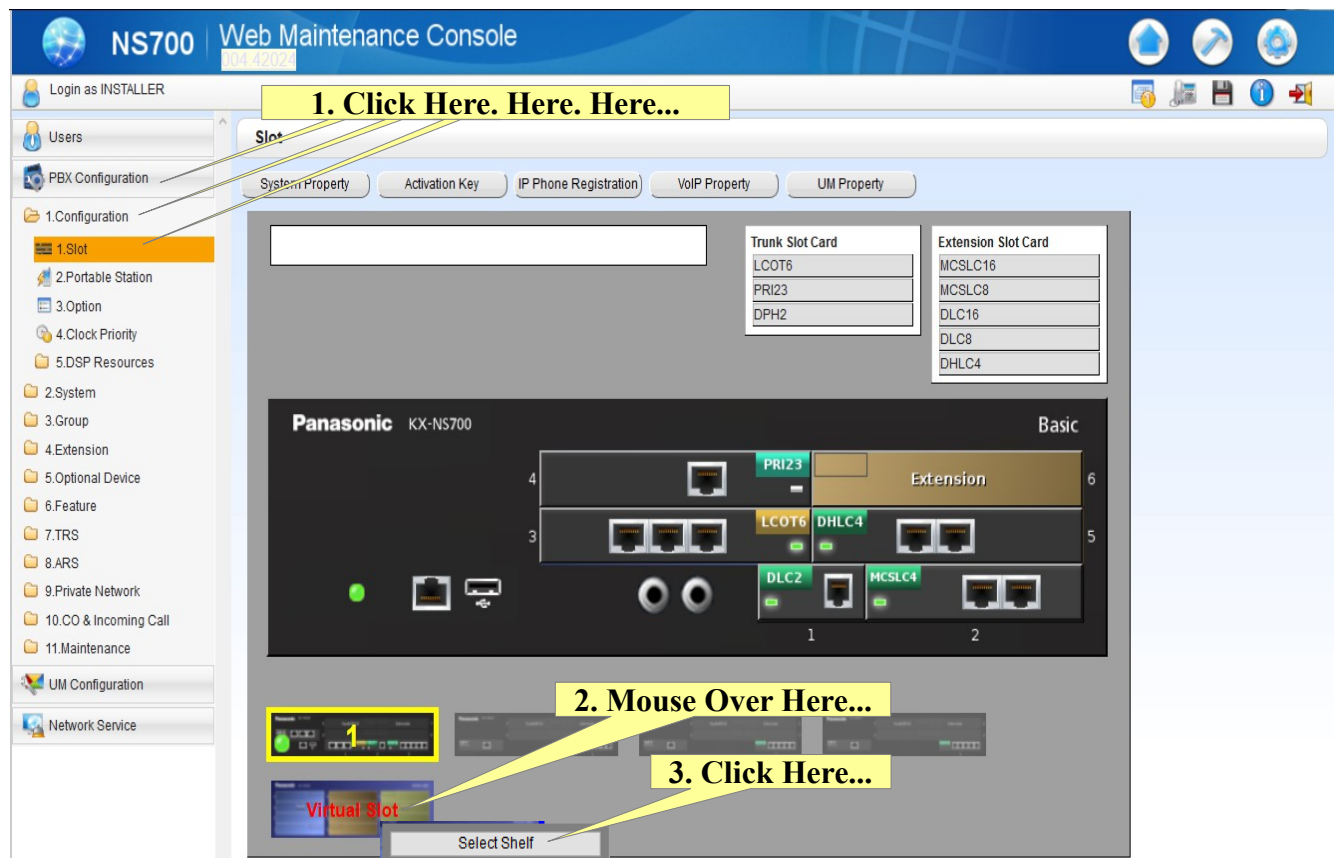
First, install a V-IPGW16 card

It is a Virtual Card, not a Physical Card. Extension Numbers **MUST** be different at each location.

Location A has extensions 101 – 111 – LAN IP Address 10.10.0.222

Location B has extensions 201 – 211 – LAN IP Address 192.168.111.101

This is the programming for Location A



1. Click Here. Here. Here...

2. Mouse Over Here...

3. Click Here...

The LAN IP Addresses used in the Help Sheet are just examples.
Yours may be different.

Note: This Help Sheet is about connecting 2 KSU's together. You can have more.
Later on the Pages I will show you where to add info for more locations.

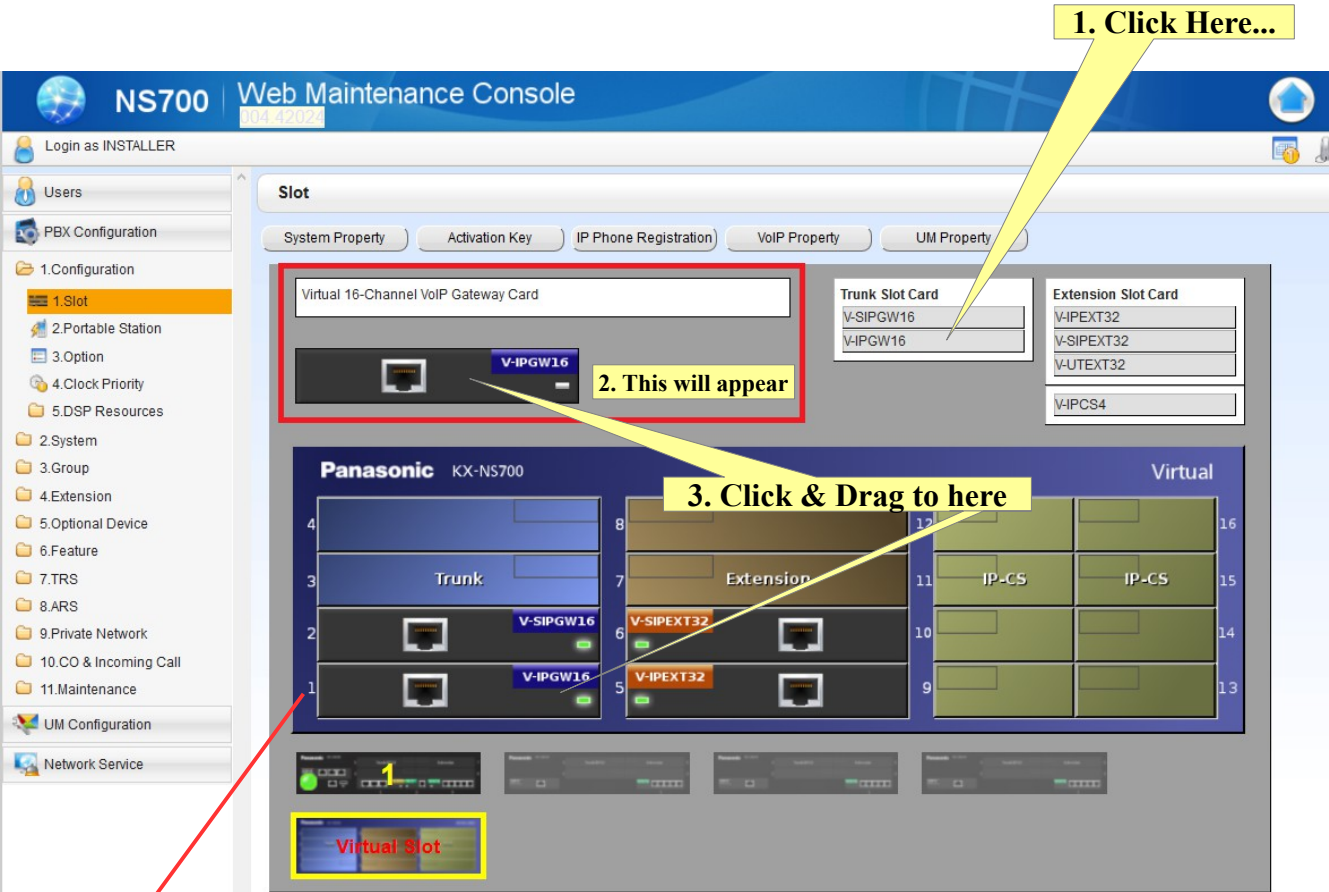
To activate virtual IP trunk activation keys –

Restart all virtual IP Trunk cards.

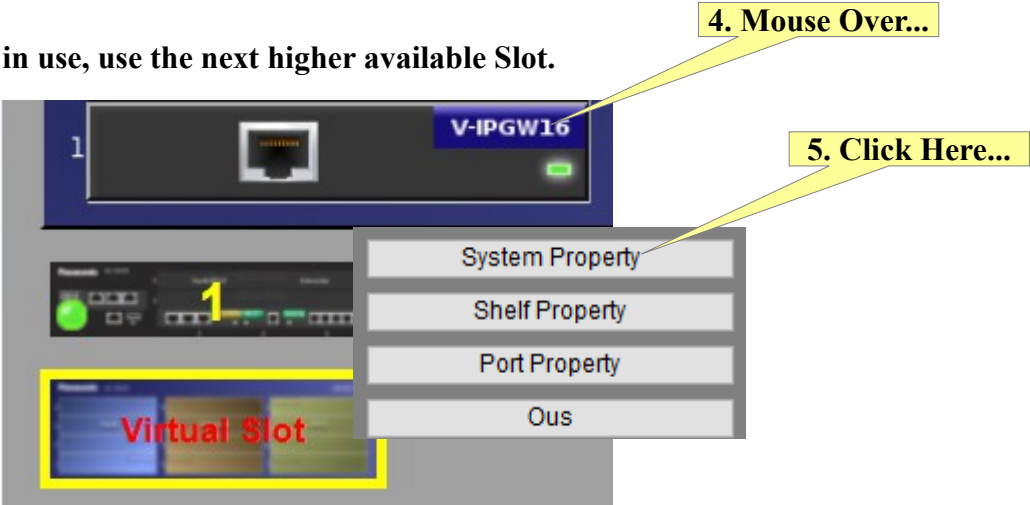
Execute

After you install the Application Key,
Click this button to activate.

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If Slot 1 is already in use, use the next higher available Slot.



Page 3 Location A Direct Dial

1. Click Here...

NS700 Web Maintenance Console
004.42024

Login as INSTALLER

System Property - Main

Main System Status V-IPGW

DSP codec G.711 only (SIP Extension) : Disable

DSP codec G.711 only (IP-GW) : Disable

DSP codec Priority-1 Value only (Others) : Disable

System Speed Dial Download For UT Extensions : 100

This screen will appear:

1. Click Here...

NS700 Web Maintenance Console
004.42024

Login as INSTALLER

System Property - Main

Main System Status V-IPGW

GW Settings DN2IP

Call Signaling Model : Direct

Gatekeeper Connection Checking Interval (*60s) : 0

This screen will appear:

1. The Name of Location B

2. The LAN IP Address of Location B

NS700 Web Maintenance Console
004.42024

Login as INSTALLER

System Property - Main - V-IPGW - GW Settings

Main Option 1 Option 2 Option 3

No.	GW Name (20 characters)	GW Address	GW Group	Connection for IP-GW	Protocol	Send mode
1	To Location B	192.168.111.201	None	Enable(TDA)	TCP	Internal
2	To Location C	10.10.2.123	None	Enable(TDA)	TCP	Internal
3	To Location D	192.168.5.14	None	Enable(TDA)	TCP	Internal
4	To Location E	10.20.4.25	None	Enable(TDA)	TCP	Internal

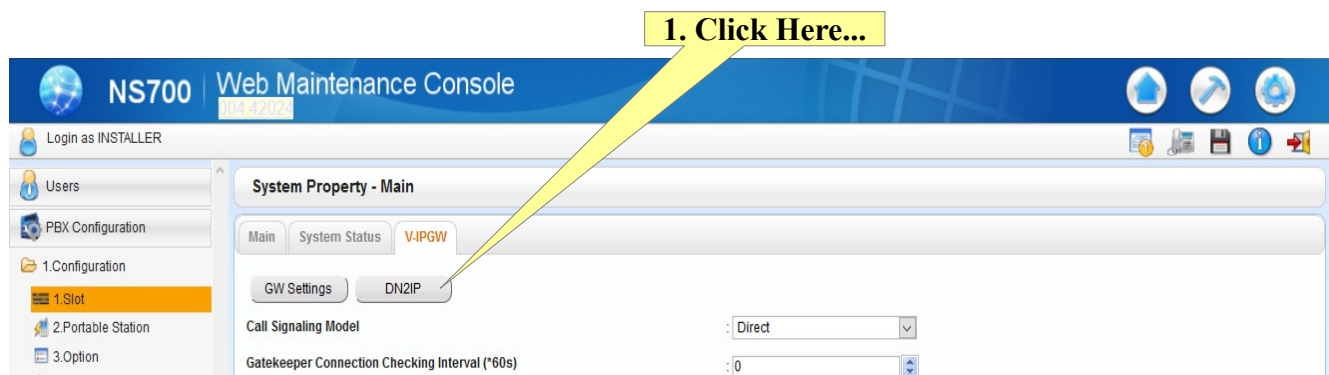
Gateway Number

This screen will appear:

If you have additional Locations, add them here...

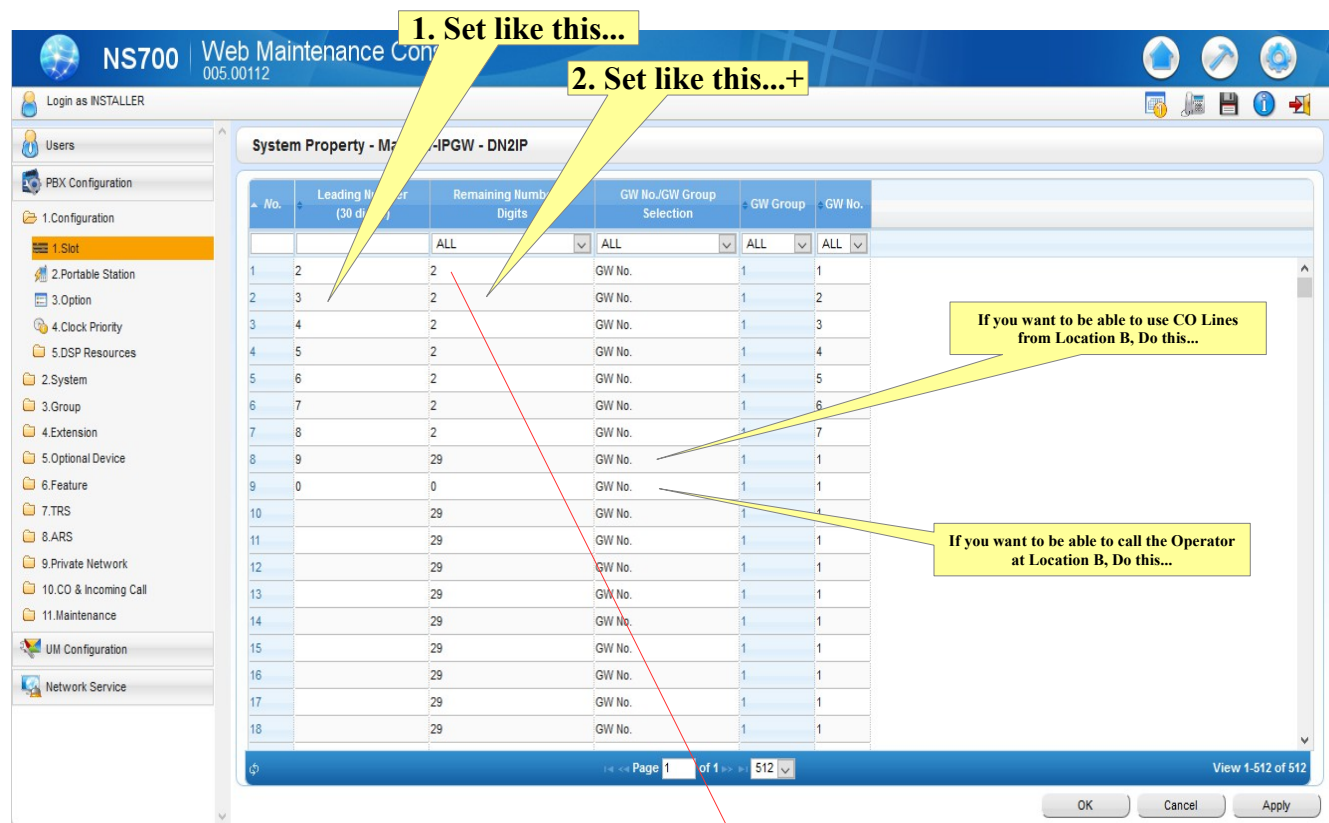
3. Click Here...

OK Cancel Apply



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This screen will appear:



This screen will appear:

If the extensions at Location B are 3 Digits, then set these to 2
 If the extensions at Location B are 4 Digits, then set these to 3
 If the extensions at Location B are 5 Digits, then set these to 4 Etc...

Set to 0 for Operator

Set to 29 for accessing CO Lines at remote location
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NS700 Web Maintenance Console
 005.00112

Login as INSTALLER

TIE Table

Own PBX Code (7 digits)

Priority 1 Priority 2 Priority 3 Priority 4 Pri QSIG

ID	Leading Number (3 digits)	Priority 1 - Digits	Priority 1 - Added Number (32 digits)	Priority 1 - Trunk Group
1	1	0		7
2	2	0		7
3	3	0		7
4	4	0		7
5	5	0		7
6	6	0		7
7	7	0		7
8	8	0		7
9	9	1		7
10	0	0		7
11		0		None
12		0		None
13		0		None
14		0		None
15		0		None

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OK Cancel Apply

Set the Private network:

I did not specify that you need to click the OK Button each screen.



Also, click the SD Card Icon when done to SAVE your programming.

Check for In Service (INS)

1. Mouse Over...

2. Click Here...

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No.	Shelf	Slot	Port	Connection	Call Distribution Port Group	Ringback Tone to Outside Caller
1	Virtual	1	1	INS	1	Enable
2	Virtual	1	2	INS	1	Enable
3	Virtual	1	3	OUS	1	Enable
4	Virtual	1	4	OUS	1	Enable
5	Virtual	1	5	OUS	1	Enable
6	Virtual	1	6	OUS	1	Enable
7	Virtual	1	7	OUS	1	Enable
8	Virtual	1	8	OUS	1	Enable

This screen will appear:

I have 4 IP Trunk Channel Activation Keys, so you can see there are 2 Ports In Service (INS)

If I only had 2 IP Trunk Channel Activation Keys. Then only 1 Port would be In service. (INS)

**INS does not indicate that there is a connection established between the 2 systems.
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Note: The installation of Activation Keys is not included in the Help sheet.

Set the Number of activated IP-GW

1. Click Here...

The screenshot shows the 'NS700 Web Maintenance Console' interface. The left sidebar contains a navigation menu with '1. Slot' selected. The main content area has tabs for 'System Property', 'Activation Key', 'IP Phone Registration', 'VoIP Property', and 'UM Property'. The 'Activation Key' tab is active, showing a large empty text box for the 'Trunk Slot Card' and a list of 'Extension Slot Card' options: MCSLC16, MCSLC8, DLC16, DLC8, and DHLC4.

IP-GW = IP Gateway/V-IPGW16 card

**1. Enter the number of "IP Trunks" to be used by the IP-GW.
This should be an even number.
Minimum of 2.**

The screenshot shows the 'NS700 Web Maintenance Console' interface. The left sidebar contains a navigation menu with '1. Slot' selected. The main content area has a tab for 'Activation Key Status'. Below the tab, there is a section for 'Activation Key Installation' with a yellow callout pointing to the 'Number of activated IP-GW' field, which is set to 4. Below this is a table showing the status of various features.

Activated feature	Pre-installed	Activation key	Features in total
IP Trunk (ch)	0	4	4
IP Proprietary Telephone/IP Softphone/P-SIP Extension (ch)	0	0	0
IP Proprietary Telephone/P-SIP Extension (ch)	4	0	4
SIP Extension (ch)	0	5	5
Expansion Capacity	0		0
IP-CS channel expansion (CS unit)			0
One-look Network			0
QSIG Network			0
Two-way Recording Control	0	0	0
Message Backup	0	0	0
UM Port (ch)	2	0	2
UMF-mail (user)	No limit		No limit

Below the table, there is a section for 'To activate virtual IP trunk activation keys' with a yellow callout pointing to the 'Execute' button.

This screen will appear:

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Operation

Press your Intercom Button

To call Extension 201 from Location A to Location B you would dial 201

To call Extension 101 from Location B to Location A you would dial 101

To call the Operator 0 from Location A to Location B you would dial 720#

To call the Operator 0 from Location B to Location A you would dial 710#

To call 1 561 832 3801 from Location A using Location B CO Lines you would dial 7915618323801

To call 1 561 832 3801 from Location B using Location A CO Lines you would dial 7915618323801

Or

Press a Link or Link Group Button (This eliminates the need to dial the 7)

To call Extension 201 from Location A to Location B you would dial 201

To call Extension 101 from Location B to Location A you would dial 101

To call 1 561 832 3801 from Location A using Location B CO Lines you would dial 7915618323801

To call 1 561 832 3801 from Location B using Location A CO Lines you would dial 7915618323801

Additional information for your routers:

Be sure that the Router to Router VPN is wide open and does not restrict or manipulate any Ports, IP Addresses or Protocols.

You may need to Port Forward the Range of 16000 through 16125 UDP to the IP Address of the DSP Card.

This will allow two way audio between the systems.

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If you want to be able to make Outside Calls from either location using the CO Lines of the other location, you will need to do the following:

If you are using Analog CO Lines, they are in Trunk Group 1 by default.

NS700 Web Maintenance Console
005.00112

Login as INSTALLER

TRG Settings 1. Click Here...

Main Tone Plan Extension Plan PBX Access Code

Trunk Group	Group Name (20 characters)	COS	Line Hunting Order	CO-CO Duration Time (*60s)	Extension-CO Duration Time (*60s)	Caller ID Modification Table	DialingPlanTable
		ALL	ALL	ALL	ALL	ALL	ALL
1		1	High -> Low	10	10	1	1
2		7	High -> Low	10	10	1	1
3		7	High -> Low	10	10	1	1
4		7	High -> Low	10	10	1	1
5		7	High -> Low	10	10	1	1
6		7	High -> Low	10	10	1	1
7		1	High -> Low	10	10	1	2
8		7	High -> Low	10	10	1	1
9		7	High -> Low	10	10	1	1
10		7	High -> Low	10	10	1	1
11		7	High -> Low	10	10	1	1
12		7	High -> Low	10	10	1	1
13		7	High -> Low	10	10	1	1
14		7	High -> Low	10	10	1	1
15		7	High -> Low	10	10	1	1

2. Set like this...

3. Set like this...

4. Set like this...

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OK Cancel Apply

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**The Dialing Plan is used to make dialing an Outside Call over the VPN easier.
It is constructed to determine when the KSU will dial the telephone number.
It can be a bit tricky.**

The Dial Plan below is designed to work with the following conditions:

Leading Number: 9N11

9 is the Access Code to the other KSU

N is any digit from 2 through 9

XX is any two digits from 0 through 9

You can dial 411, 611, 911 or anything 11

Example: 911

Leading Number: 9NXXXXXX

9 is the Access Code to the other KSU

N is any digit from 2 through 9

XXXXXX is any six digits from 0 through 9

You can dial any 7 digit telephone number

Example: 2351234

Leading Number: 9PXXXXXXXXXX

9 is the Access Code to the other KSU

P is either a 1 or a 0 (This is what is used to determine a 1 Plus Long Distance call)

XXXXXXXXXX is any ten digits from 0 through 9

You can dial 1 followed by any 10 digit telephone number

Example: 12125551212

You cannot have 7 digit dialing and 10 digit dialing in a single Dial Plan.

A Dial Plan for 10 digit dialing would be:

Leading Number 1: 9N11

Leading Number 2: XXXXXXXXXXXX (12 Capital X's)

Remaining Leading Numbers blank

Dialing a 7 digit number would require the End User to dial a # (POUND) at the end of the last

digit to make the call go through.

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This Dialing Plan is for:

411, 611, 911 or anything 11

7 digit telephone numbers

NS700 Web Maintenance Console
005.00112

Login as INSTALLER

Users
PBX Configuration

- 1. Configuration
- 2. System
- 3. Group
 - 1. Trunk Group
 - 1. TRG Settings
 - 2. Local Access Priority
 - 3. Caller ID Modification
 - 4. Dialing plan**
- 2. User Group
- 3. Call Pickup Group
- 4. Paging Group
- 5. Incoming Call Distribution Group
- 6. Extension Hunting Group
- 7. UM Group
- 8. PS Ring Group
- 9. Conference Group
- 10. P2P Group
- 11. VM(DPT) Group
- 12. VM(DTMF) Group
- 4. Extension
- 5. Optional Device
- 6. Feature
- 7. TRS

Dialing plan

Auto Assign

Dialing Plan Table

No.	Leading Number (32 digits)	Removed Number of Digits	Added Number (32 digits)
1	9N11	0	
2	9NXXXXXX	0	
3	9PXXXXXXX	0	
4		0	
5		0	
6		0	
7		0	
8		0	
9		0	
10		0	
11		0	
12		0	
13		0	
14		0	
15		0	
16		0	

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OK Cancel Apply

1 Plus Long Distance dialing

If you need the Dial Plan characters:

N = 2 3 4 5 6 7 8 9

P = 0 or 1

X = 0 1 2 3 4 5 6 7 8 9 & #

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Put the Links on Buttons

It makes it easier for the End Users if you put all your Links to the other KSU on buttons.

Just label the Buttons Link 1, Link 2 etc...

This way they can see if a Link is available, press an available link and dial a single digit followed by the remote extensions Intercom number.

The screenshot shows the 'Flexible Button' configuration page in the NS700 Web Maintenance Console. The page has a sidebar with navigation options like 'Users', 'PBX Configuration', and 'Extension Settings'. The main area shows the 'Flexible Button' configuration for extension '101 / Receptionist'. A table lists available keys (14-27) with columns for Key Location, Type, Parameter Selection, Extension Number, Extension Name, Dial (Max. 32 digits), Label Name (Max. 12 characters), and Optional Parameter (or Ringing Tone Type Number). Arrows point to rows 19, 23, and 24, indicating link assignments.

Key Location	Type	Parameter Selection	Extension Number	Extension Name	Dial (Max. 32 digits)	Label Name (Max. 12 characters)	Optional Parameter (or Ringing Tone Type Number)
14	Single CO	14 :				14	Ringing Tone Type
15	Single CO	15 :				15	Ringing Tone Type
16	Single CO	16 :				16	Ringing Tone Type
17	Single CO	17 :				17	Ringing Tone Type
18	Single CO	18 :				18	Ringing Tone Type
19	Group CO	7 : Link Group				19	Ringing Tone Type
20	Single CO	20 :				20	Ringing Tone Type
21	Single CO	21 :				21	Ringing Tone Type
22	Not Stored					22	
23	Single CO	23 : Link 1				23	Ringing Tone Type
24	Single CO	24 : Link 2				24	Ringing Tone Type
25	Single CO	25 :				25	Ringing Tone Type
26	Single CO	26 :				26	Ringing Tone Type
27	Single CO	27 :				27	Ringing Tone Type

I have 2 Links, so I put them on Buttons 23 and 24.

You can place the Links on any button.

Be sure to place all Links on buttons.

Or

You could also use a Group CO Button (Trunk Group 7) as shown above on Button 19.

This would require only 1 button and have access to all Links...

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One more setting...

NS700 Web Maintenance Console
005.00112

Login as INSTALLER

Users

PBX Configuration

- 1. Configuration
- 2. System
 - 1. Date & Time
 - 2. Operator & BGM
 - 3. Timers & Counters
 - 4. Week Table
 - 5. Holiday Table
 - 6. Numbering Plan
 - 7. Class of Service
 - 8. Ring Tone Patterns
 - 9. System Options
 - 10. Extension CID Settings
 - 11. Audio Gain
- 3. Group
- 4. Extension
- 5. Optional Device
- 6. Feature
- 7. TRS
- 8. ARS
- 9. Private Network
- 10. CO & Incoming Call
- 11. Maintenance

UM Configuration

System Options

Option 1 Option 2 Option 3 Option 4 Option 5 Option 6 (CTI) Option 7 Option 8 Option 9

DSS Key

DSS key mode for Incoming Call

☐ On or Flash ☒ Off

Call Pick-up by DSS key for Direct Incoming Call

☒ Enable ☐ Disable

Call Pick-up by DSS key for ICD Group Call

☐ Enable ☒ Disable

Automatic Transfer for Extension Call

☐ Enable ☒ Disable

Caller Information Display before Call Pick-up

☐ Enable ☒ Disable

Private Network

Public Call through Private Network

Minimum Public Caller ID Digits : 9

TIE Call by Extension Number

☒ Enable ☐ Disable

Send CLIP of CO Caller

-when call is transferred to CO (CLIP of Held Party)

☐ Enable ☒ Disable

-when call is forwarded to CO

☒ Enable ☐ Disable

Send CLIP of Extension Caller

-when call is forwarded to CO

☒ Enable ☐ Disable

System Wireless

Out of Range Registration

☐ Enable ☒ Disable

SDN Delayed Ringing with LCD

☐ Enable ☒ Disable

Transfer

Automatic Answer for Transferred Call

☐ Enable ☒ Disable

Display Information from Mobile Extension (MEX)

-when using Automatic Walking COS

☒ Extension Number ☐ MEX CLIP

OK Cancel Apply