TelQuest International
973-808-4588

Panasonic KX-NS700
3rd Party SIP Phone / KX-TGP-500
Telquest Tech Support

This Help Sheet explains how to set up the KX-NS700 KSU to allow a 3rd Party SIP Phone to work.

The router info is basic and it is up to you determine how to make the changes in your particular router.

The Panasonic KX-TGP Cordless is considered a 3rd Party SIP Phone by the KSU.

It is up to you to program your 3rd Party SIP Phone to work properly.

We provide no Tech Support for your router.

We also assume that you are a qualified Telecom Tech with Panasonic programming experience.

If you are unable to understand this Help Sheet then you will need to bring in a local person that is an experienced, qualified Panasonic technician and has an understands IT Networking.

You will need to know the following information before you can proceed.

The Static Public IP Address of the router that the KSU is connected to.
If it is not a Static IP Address then you will need to either get a Static IP Address from your Internet Provider or look into subscribing to a Dynamic DNS URL from www.dydns.com
If you look into getting a Dynamic DNS URL then be sure that your router supports it.

You will also need 2 Static LAN IP Addresses along with the LAN Subnet Mask and Router Address.

Setting up and changing the Default KSU IP Addresses is not covered in this Help Sheet.

You must also have a SIP Extension License for EACH remote 3rd Party SIP Phone.

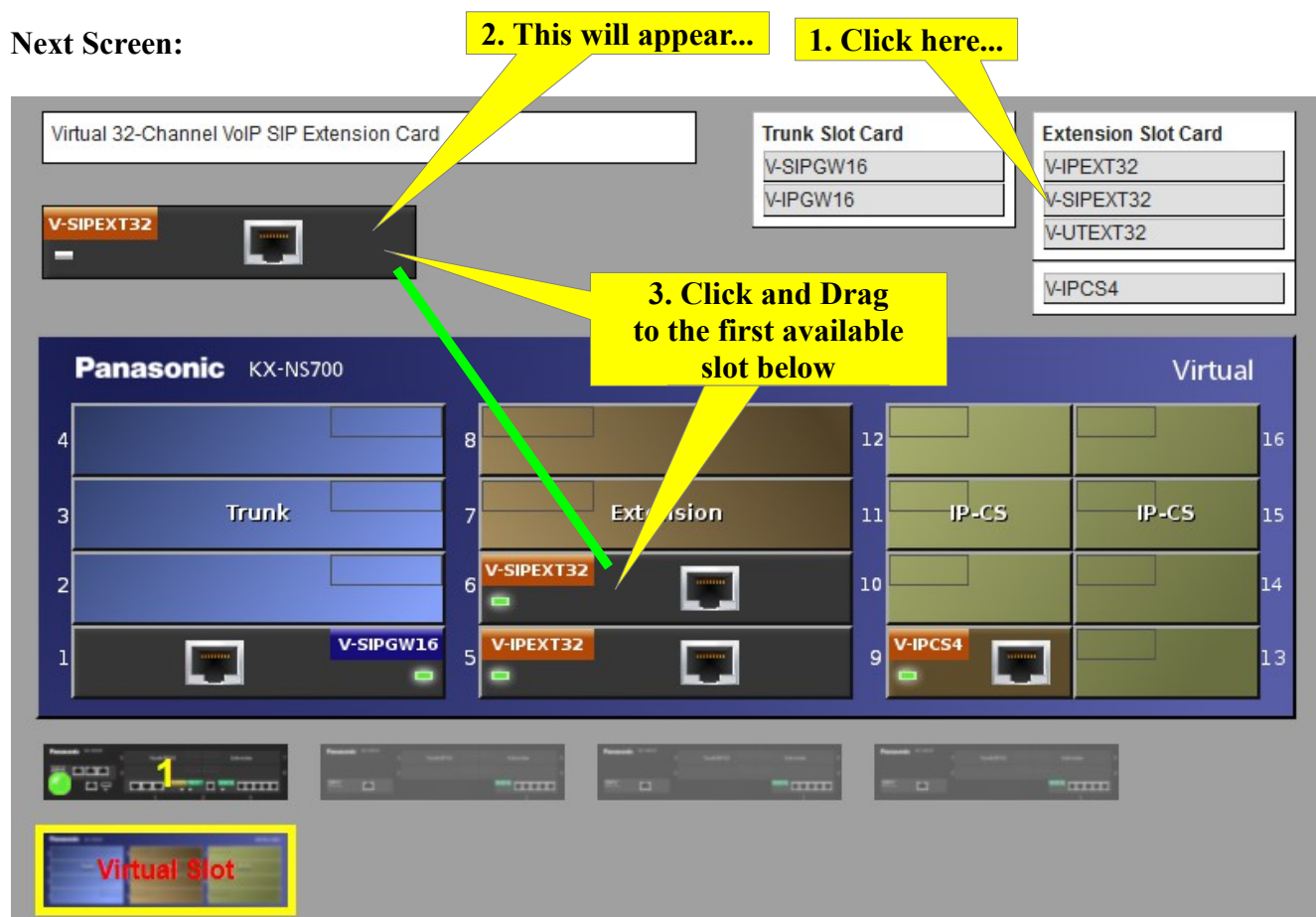| Activated feature	Pre-installed	Activation key	Features in total
IP Trunk (ch)	0	0	0
IP Proprietary Telephone/IP Softphone/ P-SIP Extension (ch)	0	0	0
IP Proprietary Telephone/P-SIP Extension (ch)	4	0	4
SIP Extension (ch)	0	1	1
Expansion Capacity	0	0	0
IP-CS channel expansion (CS unit)			
One-look Network			
QSIG Network			
Two-way Recording Control			
Message Backup			
UM Port (ch)			

Licenses
KX-NSM701 = 1 SIP Phone
KX-NSM705 = 5 SIP Phones

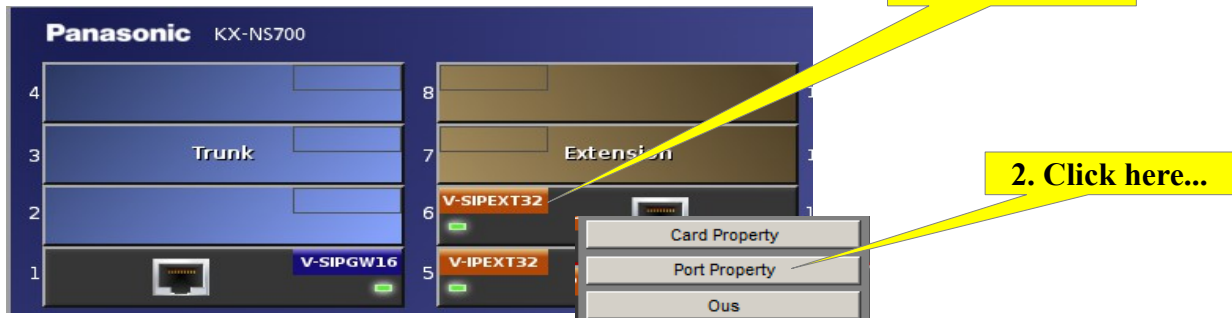Start the Panasonic Web Maintenance Console program and connect to the KSU.

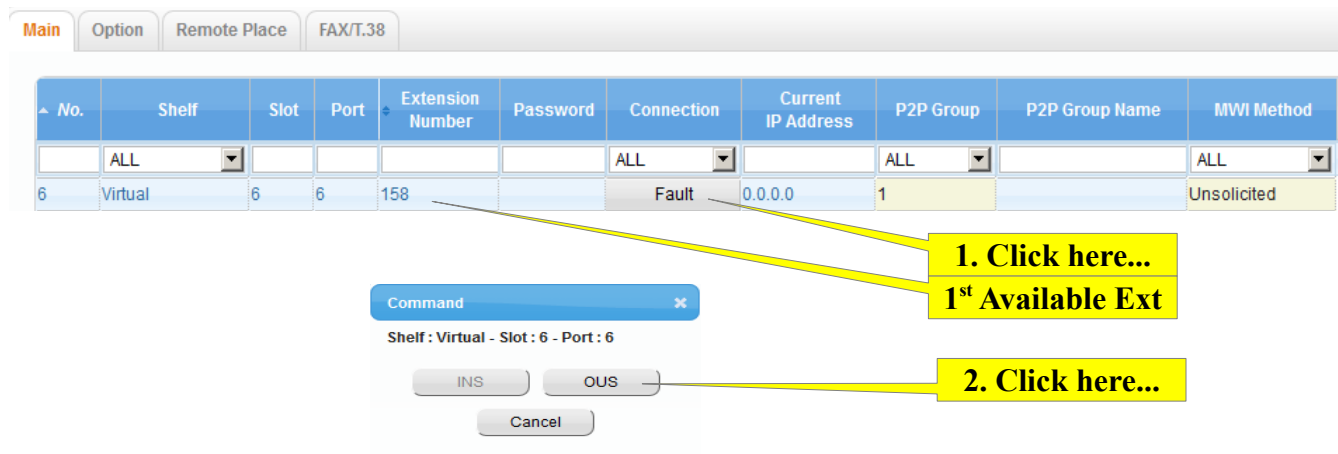At the bottom of the screen, Mouse Over the Virtual Slot and then click on **Select Shelf**.
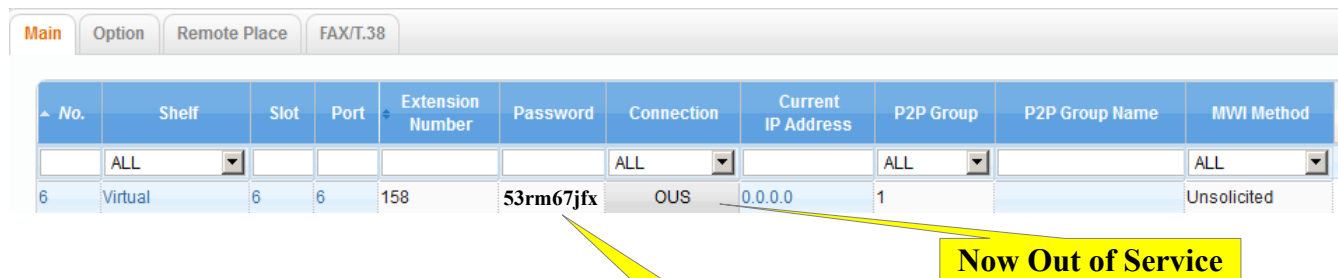

Next Screen:

Page 3

Same screen:

1. Mouse Over...

2. Click here...

Next screen:

I have cut the screens down to minimize the view.

▲ No.	Shelf	Slot	Port	Extension Number	Password	Connection	Current IP Address	P2P Group	P2P Group Name	MWI Method
	ALL					ALL		ALL		ALL
6	Virtual	6	6	158		Fault	0.0.0.0	1		Unsolicited

1. Click here...
1ˢᵗ Available Ext

Command
Shelf : Virtual - Slot : 6 - Port : 6
INS   OUS
Cancel

2. Click here...

Same screen:

▲ No.	Shelf	Slot	Port	Extension Number	Password	Connection	Current IP Address	P2P Group	P2P Group Name	MWI Method
	ALL					ALL		ALL		ALL
6	Virtual	6	6	158	53rm67jfx	OUS	0.0.0.0	1		Unsolicited

Now Out of Service

Be security aware.
Do not use 1234 or anything simple.
Use something like
27jw947x or 53rm67jfx

1. Add a password.
This will be the SIP Password
used for SIP Registration
AKA: SIP Authentication

Page 4

Same screen:

1. Click here...

No.	Shelf	Slot	Port	Extension Number	Password	Connection	Current IP Address	P2P Group	P2P Group Name	MWI Method
	ALL					ALL		ALL		ALL
6	Virtual	6	6	158	53rm67jfx	OUS	0.0.0.0	1		Unsolicited

1. Click here...

Next screen:

No.	Shelf	Slot	Port	Extension Number	Password	Connection	Phone Location
	ALL					ALL	ALL
6	Virtual	6	6	158	53rm67jfx	OUS	Local
7	Virtual	6	7	159		Fault	Local
8	Virtual	6	8	160		Fault	Remote (MRG) / Local

2. Select Remote (MRG)

MRG=Media Relay Gateway

Same screen:

No.	Shelf	Slot	Port	Extension Number	Password	Connection	Phone Location
	ALL					ALL	ALL
6	Virtual	6	6	158	53rm67jfx	OUS	Remote (MRG)

It will look like this when done...

View 1-20 of 32

OK   Cancel   Apply

3. Click here...

Page 5

Same screen:

▲ No.	Shelf	Slot	Port	Extension Number	Password	Connection	Phone Location
	ALL ▼					ALL ▼	ALL ▼
6	Virtual	6	6	158	53rm67jfx	OUS	Remote (MRG)

4. Click here...

Command ✖

Shelf : Virtual - Slot : 6 - Port : 6

INS   OUS

Cancel

5. Click here...

Same screen:

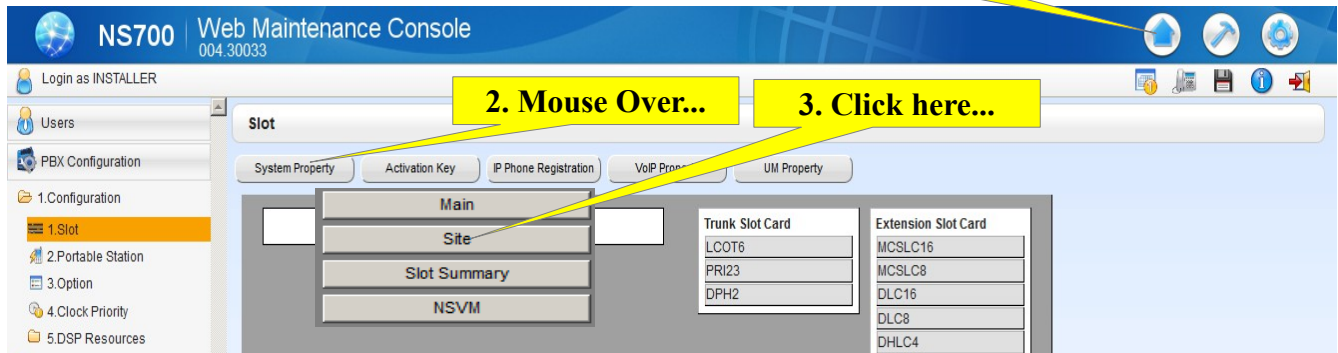| ▲ No.	Shelf	Slot	Port	Extension Number	Password	Connection	Phone Location
	ALL ▼					ALL ▼	ALL ▼
6	Virtual	6	6	158	53rm67jfx	Fault	Remote (MRG)

It will say Fault until the phone is Registered

That completes the programming to establish a Remote SIP Extension and its password.

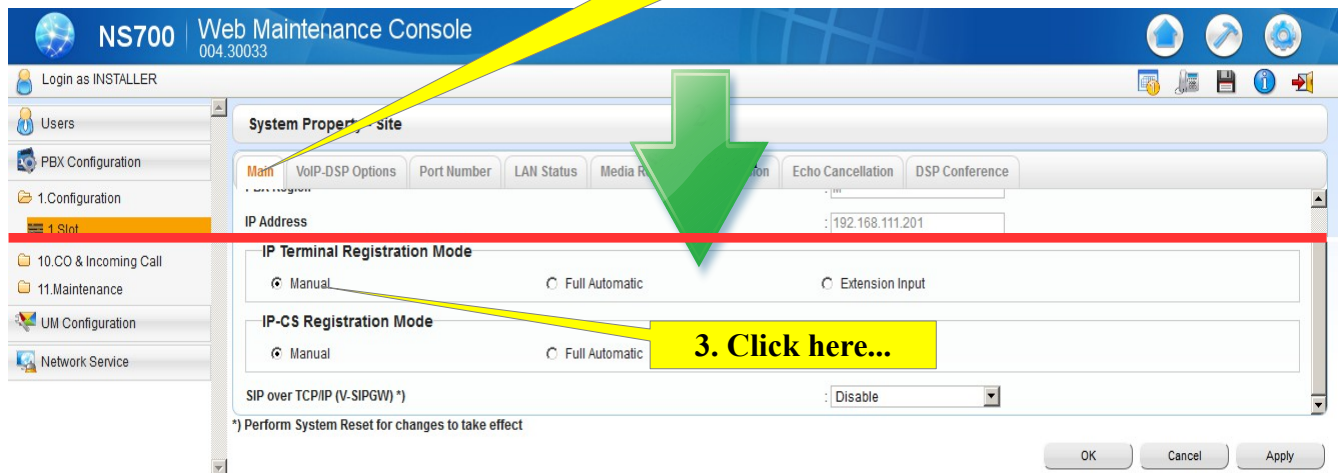**There are more areas in the programming that need to be done.**

Set Media Relay Gateway (MRG) values:

Next screen: It is cut down to save space.

Page 7

Next screen: It is cut down to save space.

1. Click here...

NS700 | Web Maintenance Console
004.30033

Login as INSTALLER

Users

PBX Configuration

1.Configuration
  1.Slot
  2.Portable Station

8.ARS
9.Private Network
10.CO & Incoming Call
11.Maintenance

UM Configuration

Network Service

System Property - Site

Main | VoIP-DSP Options | Port Number | LAN Status | Media Relay | SIP Extension | Echo Cancellation | DSP Conference

Common

NAT - External IP Address   : 50.124.14.125

Option

NAT - RTP IP Address   : 50.124.14.125

2. Enter YOUR Public Static IP Address

NAT - SIP Proxy Server IP Address   : 50.124.14.125

NAT - CWMP Server IP Address   :

NAT - CWMP Server IP Address for Network Survivability   :

NAT - NTP Server IP Address   :

*) Perform System Reset for changes to take effect

OK   Cancel   Apply

3. Click here...

Note:

Enter the Static Public IP Address of the router that YOUR KSU is connected to.

You must "Open / Port Forward" the following ports in the Network Router that the KSU is connected to.

This will allow the Remote SIP Phone to communicate with the KSU.

Forward Port 15060 UDP to Port 5060 UDP to the LAN IP Address of the KSU.
(In my example it is 192.168.111.201 this is for SIP Messages)

Open Port Range 16000 to 16100 UDP to the LAN IP Address of the DSP Card.
(In my example it is 192.168.111.202 this is for RTP Voice)

See Page 12 for more info.

Accessing the KXTGP-500 Web Browser

The KXTGP – 500 Web Browser is disabled by default.

To allow access to the Web Browser:
> **Press the Menu button IN**
> **Dial #534 (POUND 534)**
> **You will see "Embedded Web" in the LCD**
> **Select ON**
> **Press the Menu button IN**

How to find the KXTGP – 500 IP Address
> **Press the Menu button IN**
> **Dial #501 (POUND 501)**
> **You will see "IP Address" in the LCD**
> **The IP Address is just below it**

Browser Default Logon Info:
> **Logon: admin**
> **Password: adminpass**

Enter the following information:

1. Click here...

Panasonic

KX-TGP500B04

| Status | Network | System | VoIP | Telephone | Maintenance |

2. Click here...

SIP Settings [Line 1]

3. Enter Extension Number

Web Port Close

VoIP

SIP Settings
- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8

VoIP Settings
- Line 1
- Line 2
- Line 3
- Line 4
- Line 5
- Line 6
- Line 7
- Line 8

11. Click here...

Phone Number

| Phone Number | 158 |
| Line ID | |

4. Enter KSU LAN IP Address

SIP Server

Registrar Server Address	192.168.111.201
Registrar Server Port	15060 [1-65535]
Proxy Server Address	
Proxy Server Port	5060 [1-65535]
Presence Server Address	
Presence Server Port	5060 [1-65535]

See Page 12

5. Enter 15060

6. Enter KSU Public IP Address

Outbound Proxy Server

| Outbound Proxy Server Address | 24.22.155.45 |
| Outbound Proxy Server Port | 15060 [1-65535] |

See Page 7

7. Enter 15060

SIP Service Domain

| Service Domain | 192.168.111.201 |

8. Enter KSU LAN IP Address

SIP Source Port

| Source Port | 5060 [1024-49151 |

9. Enter Extension Number

SIP Authentication

| Authentication ID | 158 |
| Authentication Password | •••••••••••••••• |

10. Enter Password See Page 3

| Save | Cancel |

The Web Browser for the KX-TGP 500 will stay open for 30 minutes.

If you lose connectivity to the KX-TGP 500, then use Page 8 again.

At this point, the LED on the KX-TGP 500 should be Steady Green.

This indicates that it is Registered to the KSU.

You should be able to dial and ring between the KX-TGP 500 and the NS700 KSU, but there will be no voice.

There is an additional setting that needs to be entered to allow voice, but it is not available through the Web Browser.

You will need to call your Telquest salesperson to get the current link that needs to be entered via the Web Browser.

If the LED on the KX-TGP 500 is Flashing Orange, then it is not Registered and you need to go over all your settings.

Note: Compatibility Issues

Since there are many different types of Routers and we cannot predict which units will and will not work.

If all methods fail, you can set up a VPN between the remote site and the KSU.

The VPN method always works if it is set up properly for SIP communications.

Once you have the link from your Telquest salesperson, enter it as shown below:

1. Click here...

Panasonic

KX-TGP500B04   Status | Network | System | VoIP | Telephone | **Maintenance**

Web Port Close

Provisioning Maintenance

Maintenance

Firmware Maintenance	
Local Firmware Update	
Provisioning Maintenance	
Management Server	
Reset to Defaults	
Restart	

Provisioning Maintenance

Enable Provisioning	⊙ Yes ○ No
Standard File URL	
Product File URL	
Master File URL	
Cyclic Auto Resync	○ Yes ⊙ No
Resync Interval	10080 Minute(s) [1-40320]
Header Value for Resync Event	check-sync

Save   Cancel

2. Click here...

3. Paste the link here

4. Click here...

The KX-TGP 500 will re-boot and should have voice when it is done.

Identify LAN and DSP IP Addresses

1. Click here...

2. Click here and here..

NX700 | Web Maintenance Console

Login as INSTALLER

IP Address/Ports

- Users
- PBX Configuration
- UM Configuration
- Network Service
  - 1.IP Address/Ports
  - 2.Server Feature
  - 3.Client Feature
  - 4.Other

Basic Settings | Advanced Settings | Reference

IP Address of the KSU : 192.168.111.201

MAC Address : 08:00:23:A6:2E:94

Subnet Mask : 255.255.255.0

Default Gateway : 192.168.111.1

LAN IP Address

DNS Setting

Port Number : 53

○ Obtain DNS server address automatically
● Use the following DNS server address

Preferred DNS IP Address : 8.8.8.8

Alternative DNS IP Address : 8.8.4.4

DSP IP Setting

○ Obtain DSP IP address automatically
● Use the following DSP IP address

DSP Card - 1

IP Address of the DSP Card : 192.168.111.202

MAC Address : 08:00:23:A6:2E:95

DSP IP Address