

## Using a Geneos SpinKnob to Control an NK Series System

### References

Geneos 3.1 User Guide, Chapter 13, pages 137 – 156

Setting Up an NK Series System with Phoenix

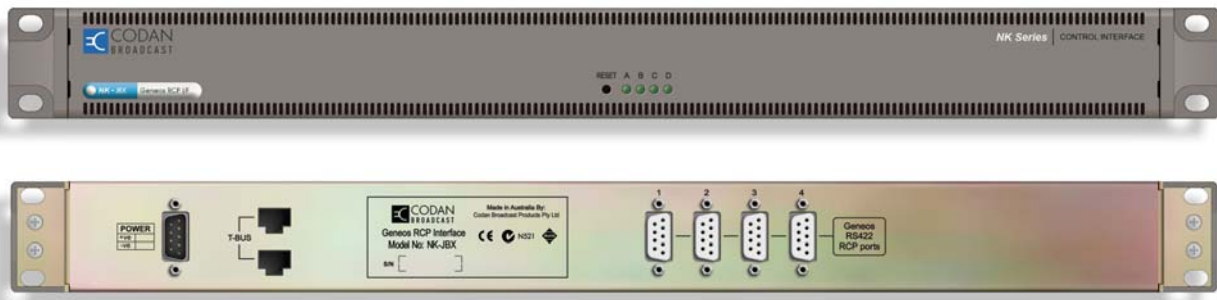
Phoenix Online Help

### Introduction

The Geneos RCP-SN SpinKnob control panel substantially increases the control options for users of an NK Series routing system. Originally developed for use with the Geneos control system, the RCP-SN fully integrates into an NK Series system using an NK-JBX Geneos RCP Interface, offering a simple migration path for existing RCP-SN owners with Geneos systems, or for use with new NK Series systems.

### NK-JBX Geneos RCP Interface

The NK-JBX is an expansion module giving users the ability to integrate existing Geneos control panels into an NK Series system. The NK-JBX connects directly to the T-Bus and may connect up to 252 panels. Each panel can then be easily configured from a web browser or Phoenix Control Surface software. The NK-JBX supports bi-directional communication with each panel. Each NK-JBX can control a subset of 255 inputs, 255 outputs and 8 levels, from the total of 65,535 inputs, 65,535 outputs and 32 levels available within the NK Series system.



**NK-JBX Geneos RCP Interface**

### RCP-SN SpinKnob Control Panel

The RCP-SN SpinKnob control panel allows control of up to 252 sources, 252 destinations and 8 levels in an NK Series system. The RCP-SN can be configured with Phoenix Control Surface software, a web browser, or from the control panel itself.

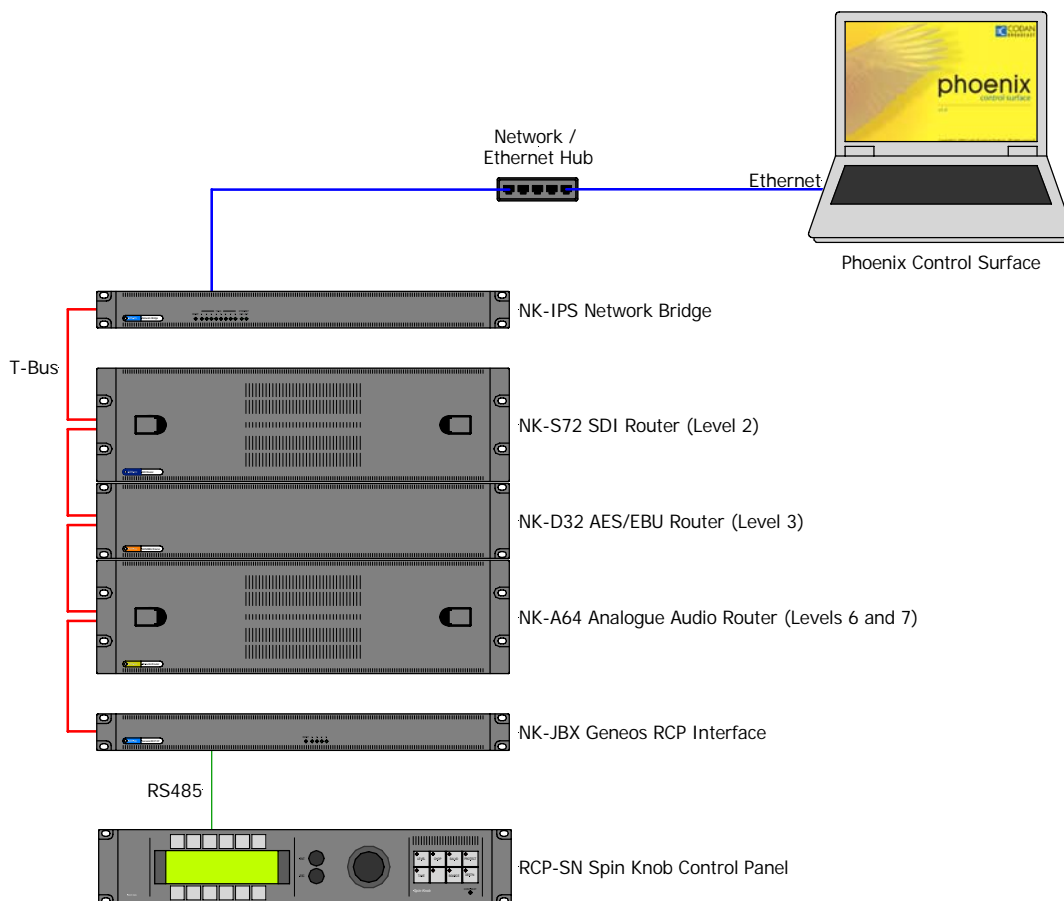


**RCP-SN SpinKnob Control Panel**

## Setting Up an NK Series System with an RCP-SN

**Note:** The following example assumes all devices are configured with factory default configurations (default configurations for each device can be downloaded from the Codan Broadcast website).

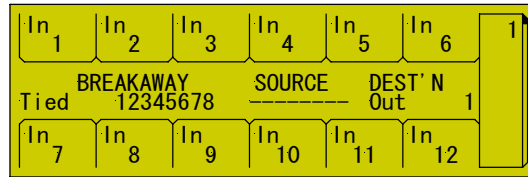
Consider the following NK Series system with three router levels, controlled by an RCP-SN and connected via an NK-IPS to a PC with Phoenix Control Surface software:



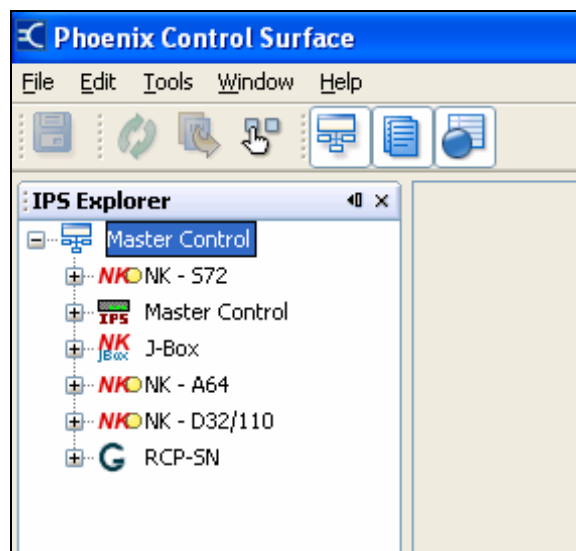
**NK Series System with RCP-SN Spin Knob Control Panel**

### Configuring the RCP-SN SpinKnob Using Phoenix:

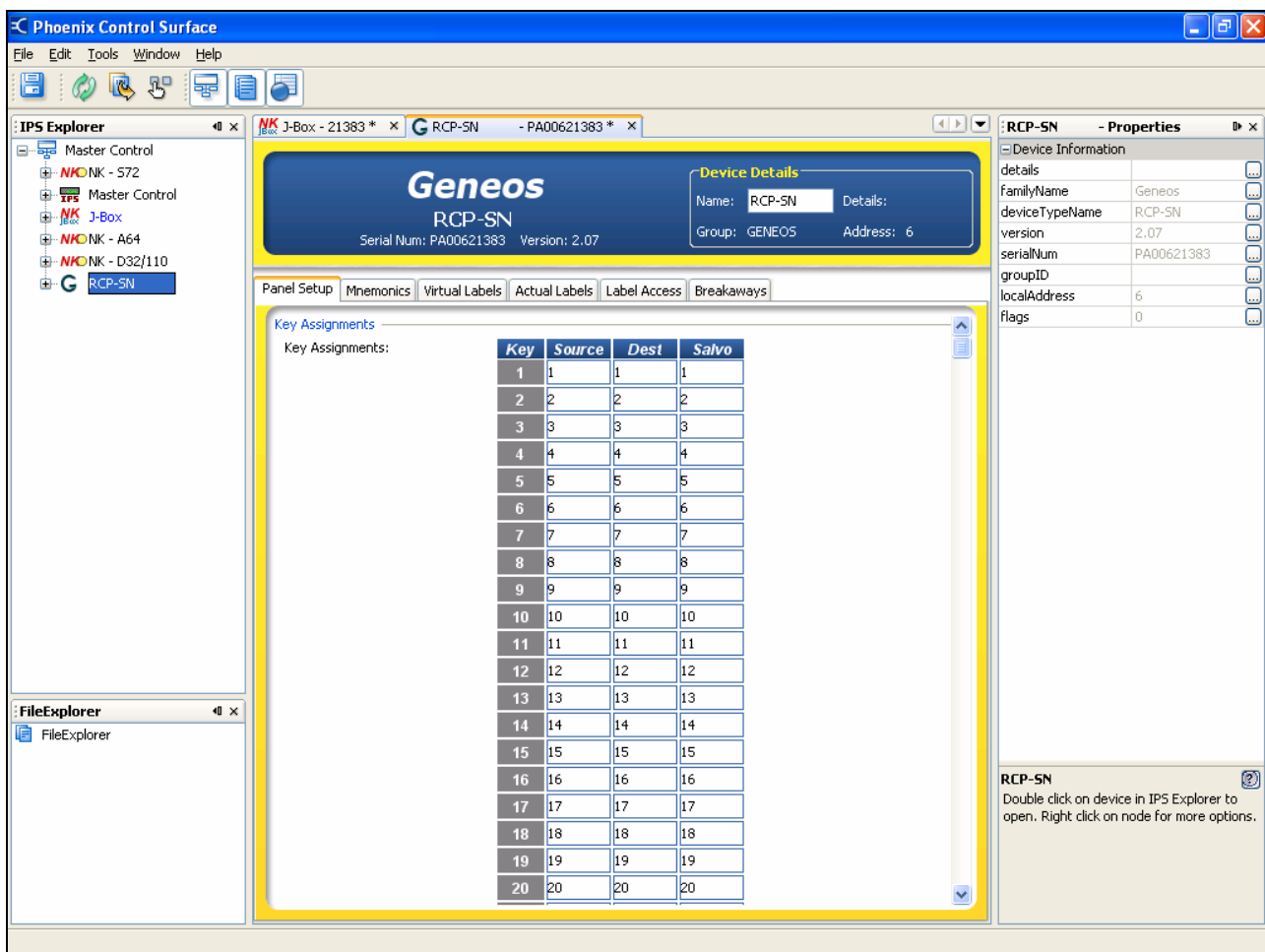
After the RCP-SN is connected to the NK-JBX and powered on, a series of self tests are run, and the firmware version number is displayed. Press any key to log on. The RCP-SN starts in Normal mode with the display showing the system status as shown below:



Starting Phoenix lists the devices for the example system in the IPS Explorer as follows:



Double click on the RCP-SN device in the IPS Explorer to open the RCP-SN configuration screen:

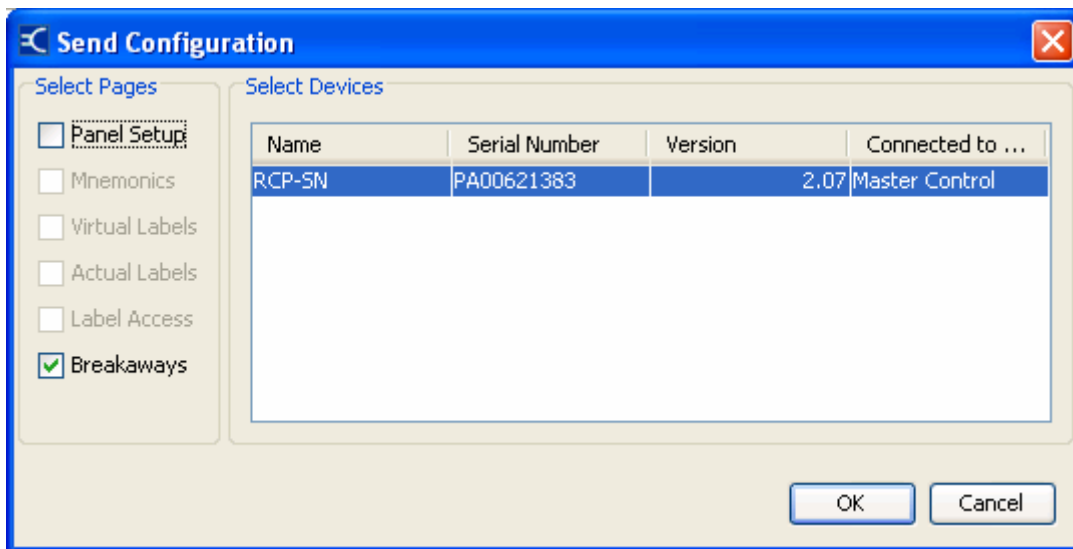


The RCP-SN configuration consists of 6 pages – Panel Setup, Mnemonics, Virtual Labels, Actual Labels, Label Access and Breakaways. These pages contain some configuration settings which only apply to Geneos routing systems. For example, Salvos are not a supported function in NK Series systems, and will be ignored by the NK-JBX.

### Sending Configuration Changes to the Panel:

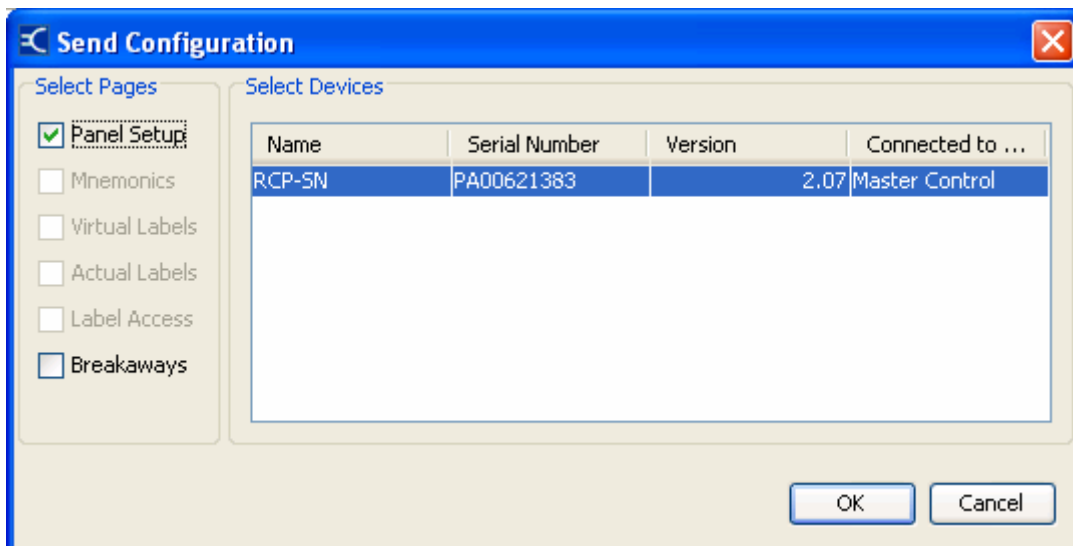
After editing the configuration in Phoenix, it can be saved to a file by right clicking on the device's icon in the IPS Explorer, or uploaded to the RCP-SN by clicking on the Send Current Document icon to bring up the Send Configuration dialog box.

For example, suppose configuration changes have been made on the Breakaway page in Phoenix. Click on the Send Current Document icon. Since changes have only been made to the Breakaways page, it is the only page selected. Select the RCP-SN device to send the changes to in Select Devices and click OK:



After the Breakaways page has been sent to the panel, select the Panel Setup page (make sure no other pages are selected), then select the RCP-SN device to send the changes to and click OK:

**Important – When sending configuration changes to the SpinKnob, the Panel Setup page must be sent SEPARATELY and LAST.**



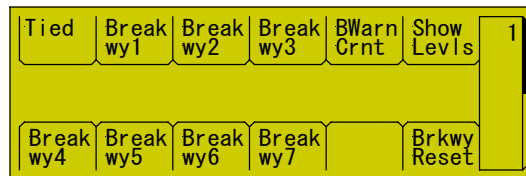
The RCP-SN will then reset and beep, press the **ESC** key on the RCP-SN to update the screen.

## 1. Breakaways

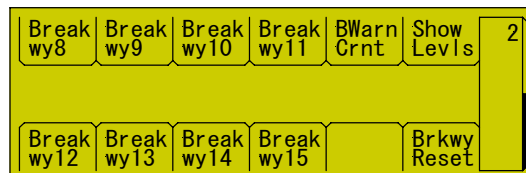
From the RCP-SN configuration window, select the **Breakaways** page:

Breakaway #	Title	Key Status	Level Mask (1 ... 8)
1	Tied	<input type="checkbox"/>	1 2 3 4 5 6 7 8
2	Breakwy1	<input type="checkbox"/>	1 2 3 4 5 6 7 8
3	Breakwy2	<input type="checkbox"/>	1 2 3 4 5 6 7 8
4	Breakwy3	<input type="checkbox"/>	1 2 3 4 5 6 7 8
5	Breakwy4	<input type="checkbox"/>	1 2 3 4 5 6 7 8
6	Breakwy5	<input type="checkbox"/>	1 2 3 4 5 6 7 8
7	Breakwy6	<input type="checkbox"/>	1 2 3 4 5 6 7 8
8	Breakwy7	<input type="checkbox"/>	1 2 3 4 5 6 7 8
9	Breakwy8	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
10	Breakwy9	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
11	Brkwy10	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
12	Brkwy11	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
13	Brkwy12	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
14	Brkwy13	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
15	Brkwy14	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8
16	Brkwy15	<input checked="" type="checkbox"/>	1 2 3 4 5 6 7 8

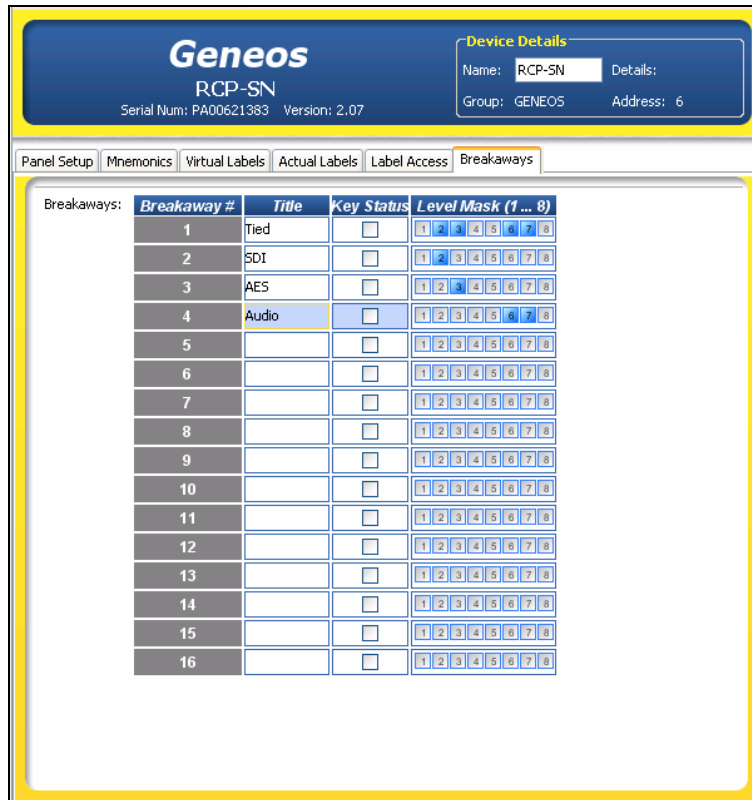
Selecting the **LEVEL** key on the RCP-SN control panel displays the default breakaway labels:



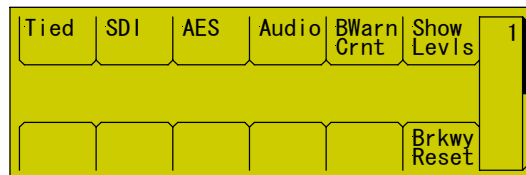
Turning the spin-knob on the RCP-SN scrolls to the next page of breakaway labels:



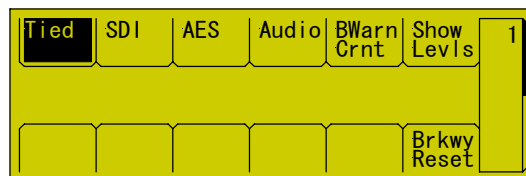
From the **Breakaways** page of the RCP-SN in Phoenix, define new breakaways for the system by editing the Title and selecting levels to be switched in the Level Mask:



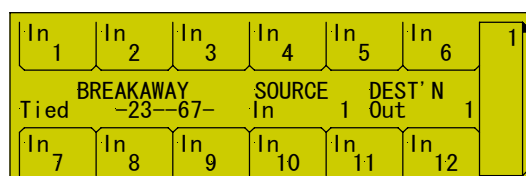
Selecting the **LEVEL** key on the RCP-SN control panel displays the edited breakaway labels:



To select a breakaway from the panel, press the switch above the breakaway label:



After the breakaway is selected the display will revert to the Normal mode, with the current breakaway and levels shown in the centre of the display:



## 2. Mnemonics

By default the RCP-SN displays generic key labels (**In** and **Out**) for all 252 sources and destinations. These are defined in the **Mnemonics** page of the RCP-SN configuration in Phoenix as shown below:

The screenshot displays the Geneos RCP-SN configuration interface. At the top, the title bar shows "Geneos RCP-SN" with the serial number "PA00621383" and version "2.07". On the right, the "Device Details" section shows "Name: RCP-SN", "Group: GENEOS", and "Address: 6". Below the title bar, there are navigation tabs: "Panel Setup", "Mnemonics", "Virtual Labels", "Actual Labels", "Label Access", and "Breakaways". The "Mnemonics" tab is selected, showing a table with 20 rows and 11 columns. The first row is pre-filled with generic labels, while the rest are empty.

Set	Label 1	Label 2	Label 3	Label 4	Label 5	Label 6	Label 7	Label 8	Label 9	Label 10
1	In ###	Out ###	Lev1 ###	Lev2 ###	Lev3 ###	Lev4 ###	Lev5 ###	Lev6 ###	Lev7 ###	Lev8 ###
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

Many labels can be created from a single mnemonic. You can do this by entering up to 3 wildcards (“#”) at the end of the mnemonic (called the mnemonic's "extension") which are used for label digit assignments. Mnemonics are used to reduce the number of text labels that would otherwise need to be entered into the system. The maximum length of a mnemonic is limited to 8 characters including wildcards.

The Mnemonics table in Phoenix allows up to 200 mnemonics to be defined. These are divided into 20 sets each containing 10 mnemonics. It does not matter how you organize the mnemonics in the Mnemonics table.

Suppose we want the following source and destination labels on the RCP-SN in our example NK Series system:

#	Source Label	Destination Label
1	Cam 1	Mon 1
2	Cam 2	Mon 2
3	Cam 3	Mon 3
4	Cam 4	Mon 4
5	Cam 5	Mon 5
6	Cam 6	Mon 6
7	Cam 7	Mon 7
8	Cam 8	Mon 8
9	Cam 9	Mon 9
10	Cam 10	Mon 10
11	Cam 11	Mon 11
12	Cam 12	Mon 12
13	Cam 13	Mon 13
14	Cam 14	Mon 14
15	Cam 15	Mon 15
16	Cam 16	Mon 16
17	VTR 1	VTR 1
18	VTR 2	VTR 2
19	VTR 3	VTR 3
20	VTR 4	VTR 4
21	Edit 1	Edit 1
22	Edit 2	Edit 2
23	Edit 3	Edit 3
24	Edit 4	Edit 4
25	Svr 1	Pgm Out 1
26	Svr 2	Pgm Out 2
27	Svr 3	
28	Svr 4	
29	Svr 5	
30	Bars	
31	Black	
32	Tone	

*Table of Sources & Destinations for Example NK Series System*

The Mnemonics we want to create for the above system are:

Cam ###  
 VTR ###  
 Edit ###  
 Svr ###  
 Bars  
 Black  
 Tone  
 Mon ###  
 PgmOut #

Also, unused sources and destinations will retain the generic labels:

In ###  
 Out ###

To create a mnemonic, click on a cell in the Mnemonics table and enter a text string of up to 8 characters in length. A maximum of 3 right justified # symbols can be used, allowing you to create a maximum of 999 different labels from a single mnemonic:

## Geneos

RCP-SN  
Serial Num: PA00621383 Version: 2.07

**Device Details**

Name: Spinknob Details:

Group: GENEOS Address: 6

Panel Setup | 
 Mnemonics | 
 Virtual Labels | 
 Actual Labels | 
 Label Access | 
 Breakaways

Mnemonics:

Set	Label 1	Label 2	Label 3	Label 4	Label 5	Label 6	Label 7	Label 8	Label 9	Label 10
1	In ###	Out ###	Cam ###	VTR ###	Edit ###	Svr ###	Mon ###	PgmOut #		
2	Bars	Black	Tone							
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										

### 3. Labels

Labels are assigned to the RCP-SN control panel's source and destination keys on the **Virtual Labels** page of the configuration in Phoenix.

The **Virtual Labels** page is divided into tables of Virtual Sources and Virtual Destinations. Labels are created using the mnemonics defined on the **Mnemonics** page. By default this table uses Label 1 (In ###) for sources and Label 2 (Out ###) for destinations:

Geneos RCP-SN  
Serial Num: PA00621383 Version: 2.07

Device Details  
Name: RCP-SN Details:  
Group: GENEOS Address: 6

Panel Setup Mnemonics **Virtual Labels** Actual Labels Label Access Breakaways

Virtual Sources:

#	Label (1 to 200)	Extension
1	1	1
2	1	2
3	1	3
4	1	4
5	1	5
6	1	6
7	1	7
8	1	8
9	1	9
10	1	10
11	1	11
12	1	12
13	1	13
14	1	14
15	1	15
16	1	16
17	1	17
18	1	18
19	1	19
20	1	20
21	1	21

Geneos RCP-SN  
Serial Num: PA00621383 Version: 2.07

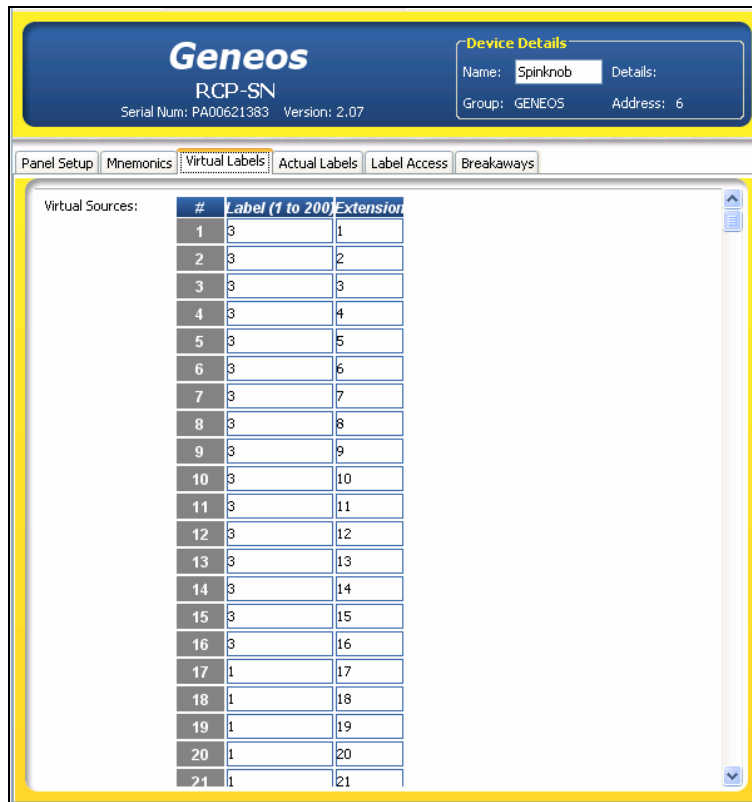
Device Details  
Name: RCP-SN Details:  
Group: GENEOS Address: 6

Panel Setup Mnemonics **Virtual Labels** Actual Labels Label Access Breakaways

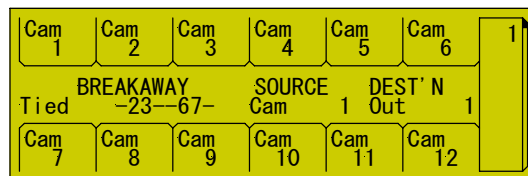
Virtual Destinations:

#	Label (1 to 200)	Extension
1	2	1
2	2	2
3	2	3
4	2	4
5	2	5
6	2	6
7	2	7
8	2	8
9	2	9
10	2	10
11	2	11
12	2	12
13	2	13
14	2	14
15	2	15
16	2	16
17	2	17
18	2	18
19	2	19
20	2	20
21	2	21

Using the example mnemonics, we can create labels for the 16 cameras using the Cam ### mnemonic created in the Mnemonics table (Label 3):



After sending the configuration changes, this will create source labels Cam 1 to Cam 16 on the RCP-SN display:



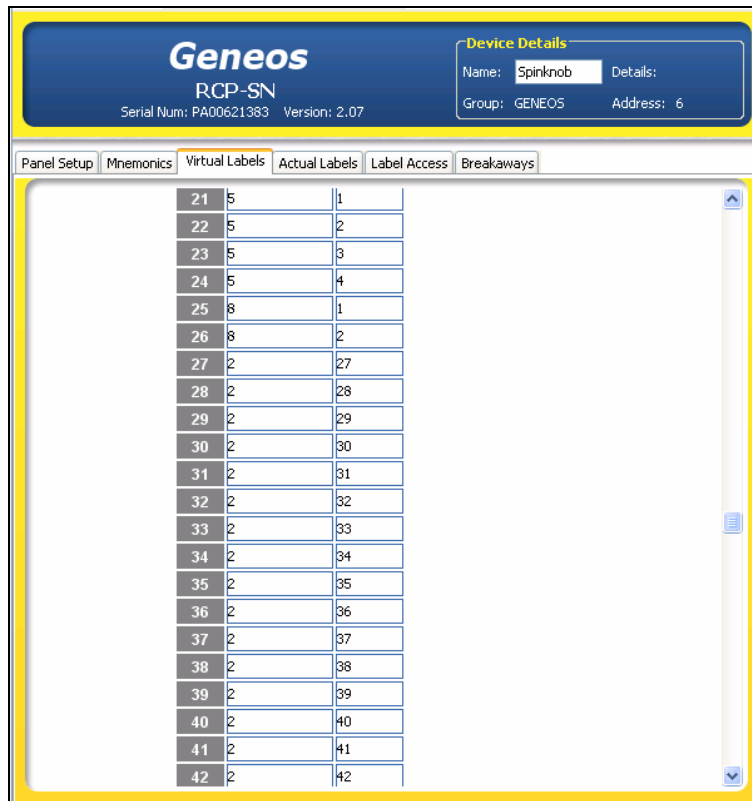
Now enter the remaining Label numbers and Extensions into the **Virtual Labels** page using the previously defined Mnemonics:

Virtual Sources:

Label #	Label	Extension
14	3	17
15	3	15
16	3	16
17	4	1
18	4	2
19	4	3
20	4	4
21	5	1
22	5	2
23	5	3
24	5	4
25	6	1
26	6	2
27	6	3
28	6	4
29	6	5
30	11	1
31	12	1
32	13	1
33	1	33
34	1	34
35	1	35

Virtual Destinations:

#	Label (1 to 200)	Extension
1	7	1
2	7	2
3	7	3
4	7	4
5	7	5
6	7	6
7	7	7
8	7	8
9	7	9
10	7	10
11	7	11
12	7	12
13	7	13
14	7	14
15	7	15
16	7	16
17	4	1
18	4	2
19	4	3
20	4	4
21	5	1



The resulting source and destination labels on the RCP-SN display are shown below:

Source labels:

Cam 1	Cam 2	Cam 3	Cam 4	Cam 5	Cam 6	1
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
Cam 7	Cam 8	Cam 9	Cam 10	Cam 11	Cam 12	

Cam 13	Cam 14	Cam 15	Cam 16	VTR 1	VTR 2	2
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
VTR 3	VTR 4	Edit 1	Edit 2	Edit 3	Edit 4	

Svr 1	Svr 2	Svr 3	Svr 4	Svr 5	Bars	3
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
Black	Tone	In 33	In 34	In 35	In 36	

Destination labels:

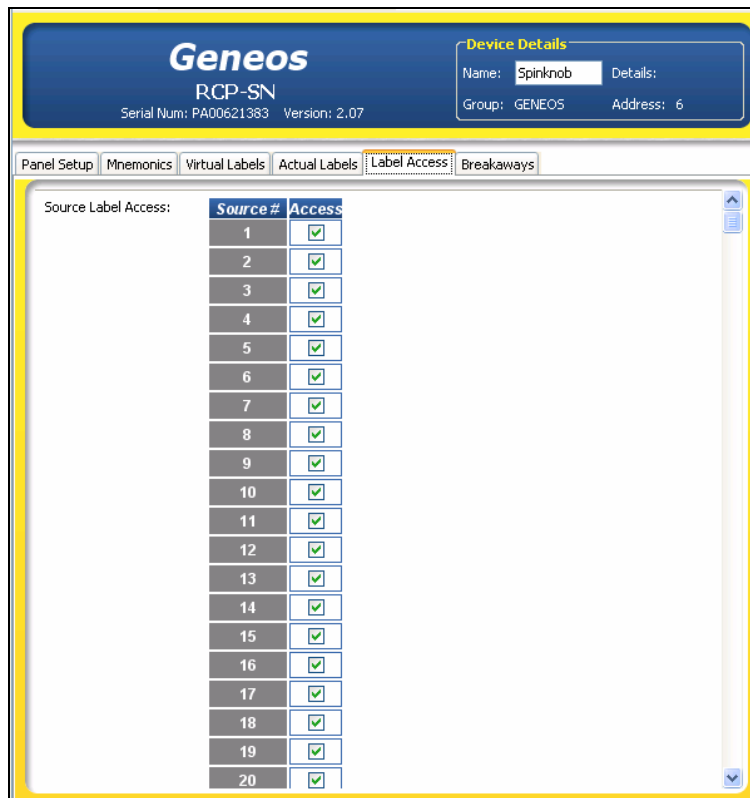
Mon 1	Mon 2	Mon 3	Mon 4	Mon 5	Mon 6	1
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
Mon 7	Mon 8	Mon 9	Mon 10	Mon 11	Mon 12	

Mon 13	Mon 14	Mon 15	Mon 16	VTR 1	VTR 2	2
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
VTR 3	VTR 4	Edit 1	Edit 2	Edit 3	Edit 4	

PgmOut 1	PgmOut 2	Out 27	Out 28	Out 29	Out 30	3
BREAKAWAY		SOURCE		DEST' N		
Tied	-23-67-	Cam	1	Mon	1	
Out 31	Out 32	Out 33	Out 34	Out 35	Out 36	

#### 4. Label Access

Label access provides a means of controlling access to a control panel's sources and destinations. This is particularly useful in an installation using multiple panels in different functional areas of a facility. To access a label from the RCP-SN, label access must be set on the **Label Access** page of the configuration:



If access is not set for a particular source or destination, UN-AVAIL will be displayed on the RCP-SN indicating that the source or destination is unavailable.



