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Elevator/Lift Arrival Gong : 140.13



# **LONMARK<sup>®</sup>**

## **Functional Profile:**

### ***Vertical/Conveyer Transportation***

## **Elevator/Lift Arrival Gong**

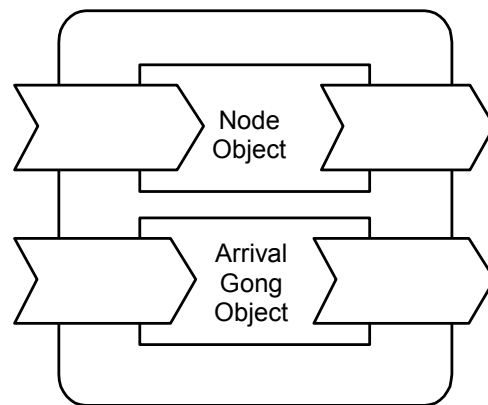
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## Overview

This document describes the Functional Profile of an Arrival Gong Object. Use of the standard Node object is implied.

The Arrival Gong is used in an elevator system to indicate the arrival of the Elevator Car at the landing. The gong is activated only at the landing where the car is stopping.

The operation of the arrival gong is the same as that of the Hall Lantern except that the output is audible rather than visible.

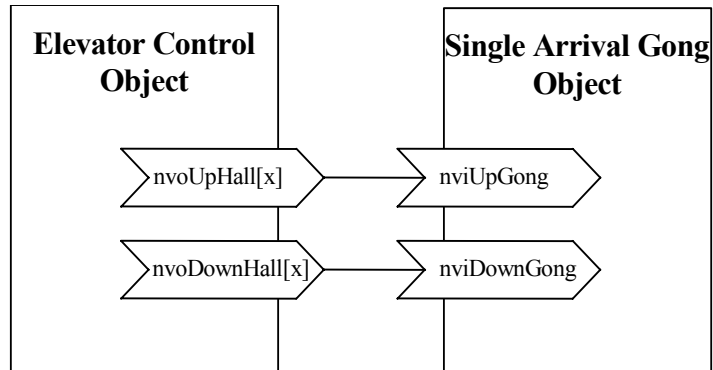


**Figure 1** Node Concept

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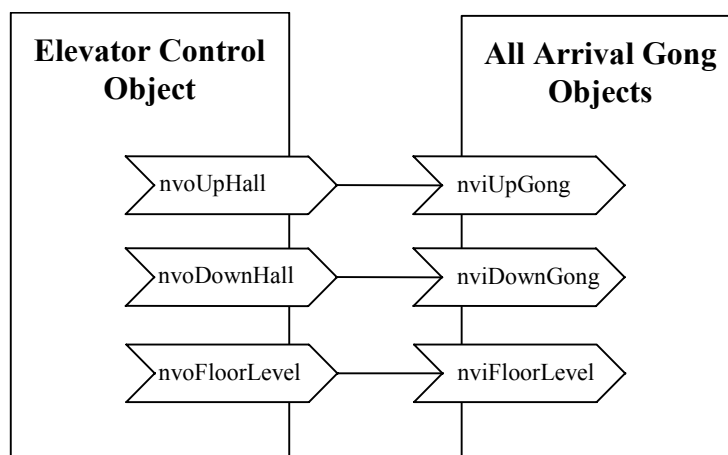
## Example Usage

The first example mirrors the system where there are separate connections for each gong at each opening, and the Elevator Control Object has nvoUpHall and nvoDownHall outputs for each opening. Each of these outputs is bound only to the nviUpHall and nviDownHall of the appropriate gong object.



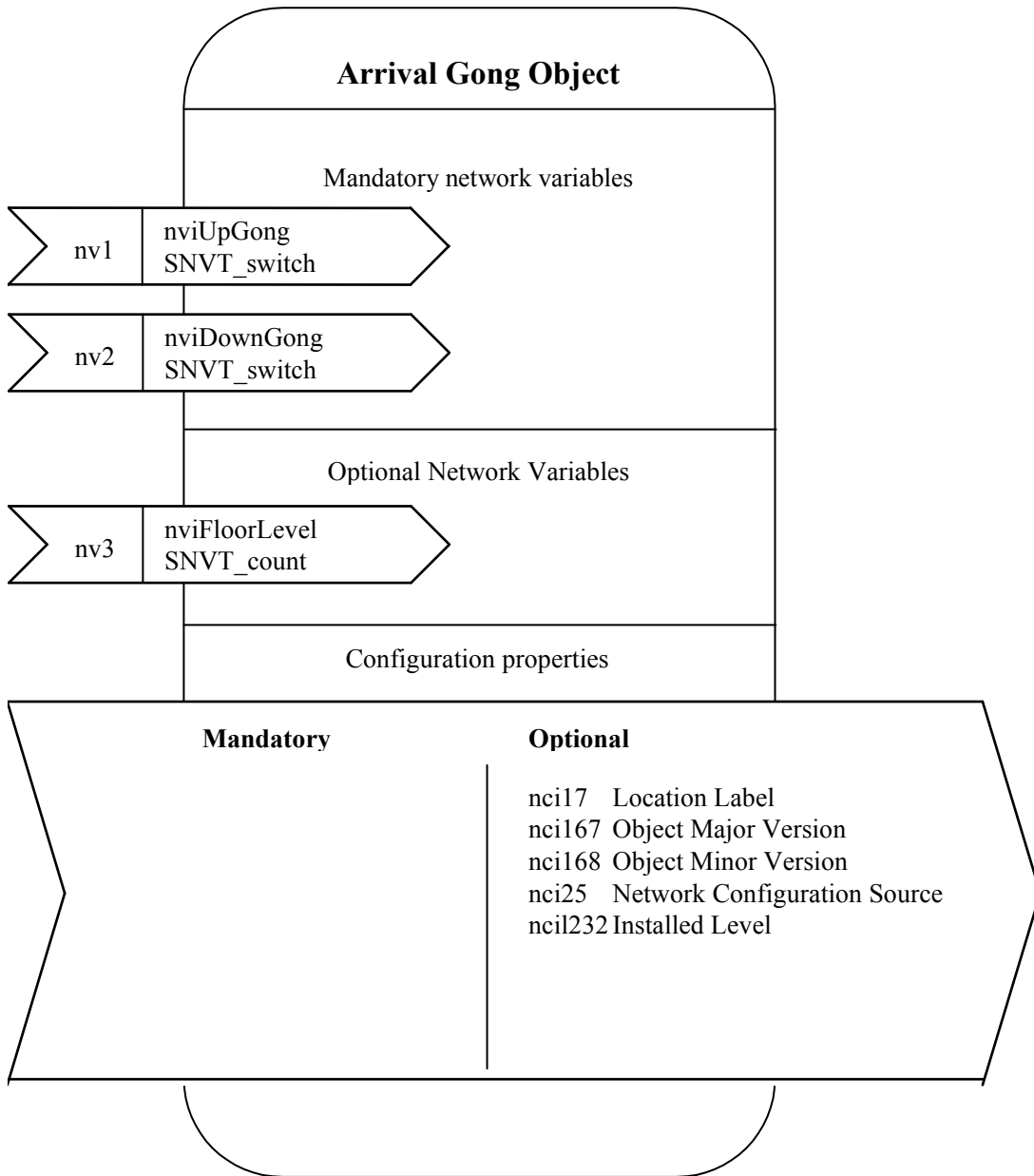
**Figure 2** Example Usage of the Object with individual bindings

The second method reduces the number of output connections (and network variables) by sending common up and down signals in conjunction with information about which landing is to be served. This is catered for with single nvoUpHall and nvoDownHall variables for the whole elevator, and nvoFloorLevel to indicate the landing. All three variables are bound to every Arrival Gong and every Arrival Gong has a configuration variable, which specifies the level where it is fitted.



**Figure 3** Example Usage of the Object with group bindings

# Object Details



**Figure 4** Object Details

**Table 1** SNVT Details

<b>NV # (M/O)*</b>	<b>Variable Name</b>	<b>SNVT Name</b>	<b>SNVT Index</b>	<b>Description</b>
1 (M)	nviUpGong	SNVT_switch	95	Up Direction Signal
2 (M)	nviDownGong	SNVT_switch	95	Down Direction Signal
3 (O)	nviFloorLevel	SNVT_count	8	Location of the car

\* M = mandatory, O = optional

**Table 2** SCPT Details

<b>Man. Opt. *</b>	<b>SCPT Name NV Name Type or SNVT</b>	<b>SCPT Index</b>	<b>Associated NVs **</b>	<b>Description</b>
Opt	SCPTlocation nciLocation SNVT_str_asc (36)	17	Entire Object	Used to provide physical location of the node
Opt	SCPTobjMajVer nciObjMajVer unsigned short	167	Entire Object	Defines the major version number of the Object
Opt	SCPTobjMinVer nciObjMinVer unsigned short	168	Entire Object	Defines the minor version number of the Object
Opt	SCPTnwrkCnfg nciNetConfig SNVT_config_src	25	Entire Object	Defines the source of network configuration information
Opt	SCPTinstalledLevel nciInstLevel unsigned long	232	Entire Object	Defines the level at which the gong is installed.

\* Man = mandatory, Opt = optional

\*\* List of NVs to which this configuration property applies.

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## Mandatory Network Variables

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### nviUpGong

```
network input sd_string("@p|1") SNVT_switch nviUpGong;
```

This input network variable is used to allow an external node to instruct the gong to sound an 'UP' indication.

If the gong's nciInstLevel configuration is set to non-zero (enabled) then the gong will only operate if the value of nviFloorLevel matches the value of nciInstLevel.

#### *Valid Range, ON-OFF*

Value	State	Action
ANY	0	None
0	1	None
>0	1	Sound 'UP' indication
ANY	0xFF	Undefined, No Action

#### *Default Value*

```
state = 0      value=0
```

#### *Configuration Considerations*

none.

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### nviDownGong

```
network input sd_string("@p|2") SNVT_switch  
nviDownGong;
```

This input network variable is used to allow an external node to instruct the gong to sound a 'DOWN' indication.

If the gong's nciInstLevel configuration is set to non-zero (enabled) then the gong will only operate if the value of nviFloorLevel matches the value of nciInstLevel.

## *Valid Range, ON-OFF*

<b>Value</b>	<b>State</b>	<b>Action</b>
ANY	0	None
0	1	None
>0	1	Sound 'DOWN' indication
ANY	0xFF	Undefined, No Action

## *Default Value*

state = 0      value=0

## *Configuration Considerations*

None

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## **Optional Network Variables**

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### **nviFloorLevel**

```
network input sd_string("@p|3") SNVT_count  
nviFloorLevel;
```

This optional input network variable is used to allow an external node to inform the Gong of the location of the elevator car. This is used for the scenario where all the gongs are bound to the same direction output network variables

### *Valid Range*

As defined for SNVT\_count.

Zero=disabled

### *Default Value*

Zero

### *Configuration Considerations*

The nciInstLevel has to be set to a non-zero value for this variable to be active.

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## Configuration Properties

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### Location Label (Optional)

```
network input config sd_string("&1,p,0\x80,17")
SNVT_str_asc nciLocation;
```

This configuration property can be used to provide the location of the Object/node, where *p* is the Object index. The above code declaration is for providing the location of the Object. If it is preferred, the location of the node can be represented with the following code declaration:

```
network input config sd_string("&0,,0\x80,17")
SNVT_str_asc nciLocation;
```

### *Valid Range*

Any NULL-terminated ASCII string up to 31 bytes of total length (including NULL). The string must be truncated if the length does not allow the 31<sup>st</sup> character to be the NULL (0x00).

### *Default Value*

The default value is an ASCII string containing all zeroes.

### *Configuration Requirements/Restrictions*

This CP has no modification restrictions (no\_restrictions). It can be modified at any time.

### *SCPT Reference*

SCPTlocation (17)

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### Object Major Version (Optional)

```
network input config sd_string("&1,p,0\x84,167")
unsigned short nciObjMajVer;
```

This configuration property can be used to provide the major version number of the Object when implemented on a device.



## *Valid Range*

Any integer number from 1 to 255. Only 1-byte of information is accepted.

## *Default Value*

The default value is one (1).

## *Configuration Requirements/Restrictions*

This CP is a constant (const\_flg). It is not to be modified except that it is allowable to modify the value in a download of new code to the device.

## *SCPT Reference*

SCPTobjMajVer (167)

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## **Object Minor Version (Optional)**

```
network input config sd_string("&1,p,0\x84,168")
unsigned short nciObjMinVer;
```

This configuration property can be used to provide the minor version number of the Object when implemented on a device.

## *Valid Range*

Any integer number from 0 to 255. Only 1-byte of information is accepted.

## *Default Value*

The default value is zero (0).

## *Configuration Requirements/Restrictions*

This CP is a constant (const\_flg). It is not to be modified except that it is allowable to modify the value in a download of new code to the device.

## *SCPT Reference*

SCPTobjMinVer (168)

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## Network Configuration Source (Optional)

```
network input config sd_string("&1,p,0\x80,25")
SNVT_config_src nciNetConfig;
```

All nodes that support self-installation must provide this configuration property to allow a network tool to also install the node.

### *Valid Range*

When a node is self-installed this variable should be set to CFG\_LOCAL when the node is manufactured. A variable set to CFG\_EXTERNAL signifies that a network tool will assign network addresses for the node.

### *Default Value*

For a self-installed node the default value is CFG\_LOCAL.

### *Configuration Requirements/Restrictions*

This CP has no modification restrictions (no\_restrictions). It can be modified at any time. If a change is made from External to Local (unlikely), the node will need to be reset.

### *SCPT Reference*

SCPTnwrkcnfg(25)

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## Installed Level(Optional)

```
network input config sd_string("&1,p,0\x80,232")
unsigned long nciInstLevel;
```

This configuration property is used to specify the level at which the Arrival Gong is installed.

If it is intended to use the nviFloorLevel input variable, then this property must be present and set to the appropriate non-zero value.

### *Valid Range*

Zero = disabled

## *Default Value*

Zero

## *Configuration Requirements/Restrictions*

This CP has no modification restrictions (no\_restrictions). It can be modified at any time.

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## **Key for Unresolved References**

*p* is this Object's index relative to the node sd\_string declaration, when implemented.

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## **Power-up State**

There is no immediate network action on Power-up State.

There will be no indication until an input is received.

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## **Boundary and Error Conditions**

None specified.

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## **Additional Considerations**

None specified.

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