ernitec

SYSTEMX

NodeManager

S111SX

Installation
Programming
User
Manual

Version 2.6

2853-00025

Table of Contents

Validity

This manual covers the following product(s):

- NodeManager type S111SX version 2.6

Compatibility

The Ernitec NodeManager is compatible with the following equipment:

- Matrix X, all types.
- SYSTEM X Telemetry Receivers.
- Keyboard X, all types.
- LON® Box X, all types.
- VSX-704 Video Server.

Operation

The NodeManager software is used to configure the LONWORKS® communication network for SYSTEM X components (referred to as *Nodes*), and to program all settings for the complete SYSTEM X application.

Computer Requirements

These are the minimum computer requirements for the NodeManager software.

- Pentium® 4, or equivalent.
- Windows 2000/XP ***)** Operating System (only tested with English versions).
- Internet Explorer version 5.5, or later, installed (included on CD-ROM).
- Video Card capable of min. 800x600 resolution (1024x768 recommended).
- 256 Mb RAM.
- 200Mb free Hard Disk space (depends on size of installation).
- CD ROM Drive.
- Windows compatible Pointing Device.
- SLTA-10, PCC-10 (or similar) Network Adapter for LON®.

***)** *You may experience problems when running NodeManager under Windows 2000/XP. This is due to a bug in Windows 2000/XP, please download latest Win2000/XP Service Pack from www.windowsupdate.com, to fix it.*

CD Content

The following is included on the SYSTEM X installation CD.

- NodeManager, Ernitec LON Setup Program.
- SYSTEM X manuals, in PDF file format.
- Acrobat PDF Reader, version 5.0
- Internet Explorer, version 5.5 (required)

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17-12-2004

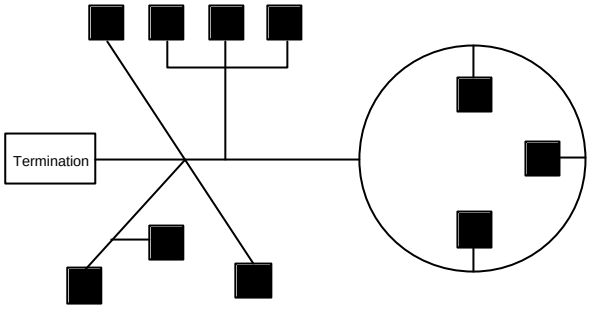
LON® Network Installation

All SYSTEM X components (nodes) are connected together in a common LONWORKS® communication network.

There are two ways of building a LONWORKS® network: Free topology or bus topology.

Free Topology

In a free topology network, there are no demands as to how the cables are routed between the nodes. It can be point-to-point, bus, star, tree, or a mixture.



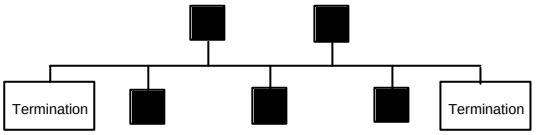
Free Topology

When using free topology, the maximum cable length in one segment is approx. 500 meters, and is calculated adding together all cables used. The maximum number of nodes in one segment is 64. If more that 500 meters, or more than 64 nodes, is required, two or more network segments can be made, using a LON repeater between each segment.

Bus Topology

In a bus topology network, all nodes are connected on a bus. Cable stubs can be used to connect the individual nodes to the bus, as long as the length of the stub is maximum 3 meters.

The advantage of bus topology, is that the cable length can be longer than when using free topology. This can be useful e.g. when making network connection to remote PTZ cameras.



Bus Topology

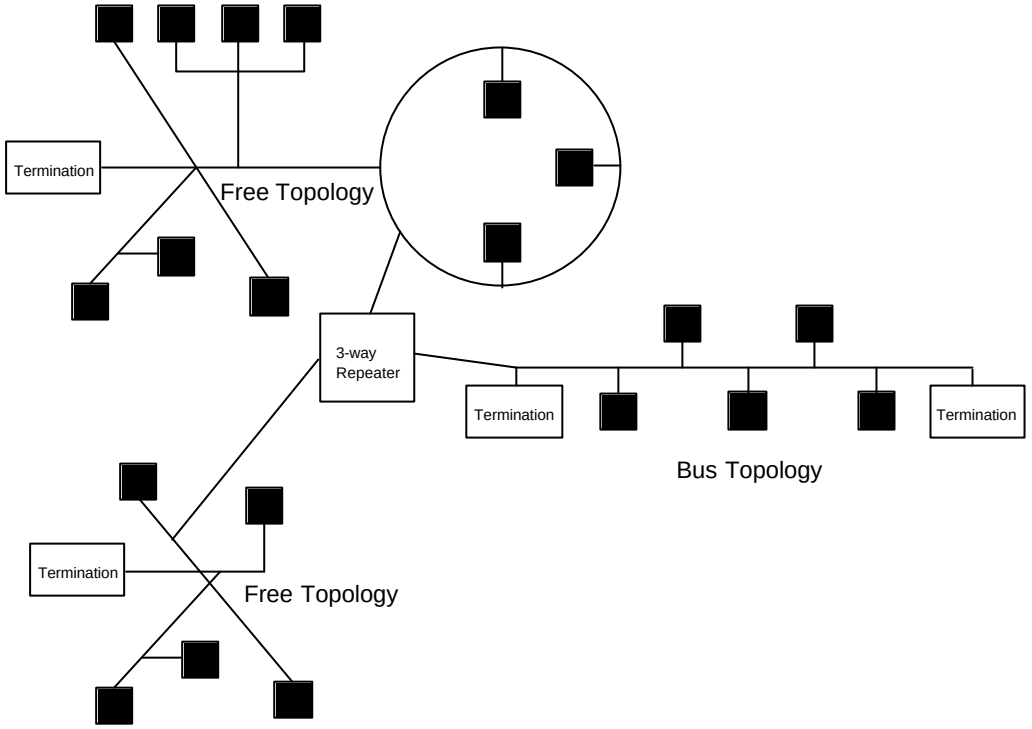
The maximum number of nodes on one bus is 64. Maximum length of the network bus depends on the type of cable used. If more nodes, and/or longer cable length, is required, two or more network segments can be made, using a LON repeater between each segment.

Repeater

If the maximum numbers of nodes (max. 64) or total cable distance are exceeded, a Repeater can be added to interconnect two or more network segments.

A repeater can also be used to convert from a free topology network to a bus topology network. This can be useful when e.g. making network connection to remote PTZ cameras.

Note that only one Repeater should be placed in series between any two nodes in a segment



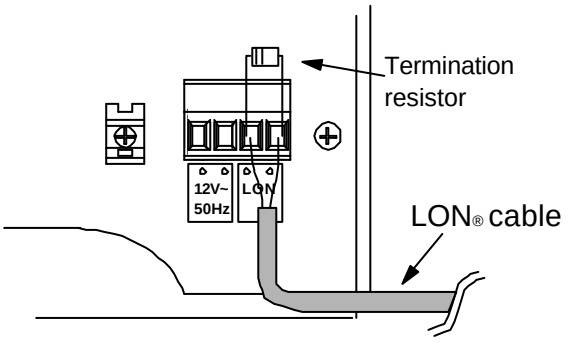
Termination

Each network segment require termination for proper data transmission performance. The type of termination varies depending on whether Free topology or Bus topology is used.

In a free topology network segment, only one termination is required and may be placed anywhere on the network. The termination resistor should be a 52 ohm, 1/4W type.

In a bus topology network segment, two terminations are required, one at each end of the bus. The termination resistors should each be a 105 ohm, 1/4W type.

Termination resistors are easily fitted using the LON® connectors on the SYSTEM X units.



LON® Network Cables

The following five cable types have been validated by Echelon®, but other cable types may be used provided they have specifications similar to the ones listed below.

Validated cables:

Cable type	AWG	Diameter	Shielded[4]
TIA/EIA 568A[1] Category 5 cable	24AWG	0,5mm	Both
Belden 8471 (PVC jacket) or equivalent cable	16AWG	1,3mm	No
Belden 85102 (Tefzel jacket) or equivalent cable	16AWG	1,3mm	No
Level IV[2] cable	22AWG	0,65mm	Both
J-Y(St)Y[3] 2x2x0.8	20,4AWG	0,8mm	Yes

[1] Any cable that meets the TIA/EIA 568A standard, is suitable for LON® Networks.
[2] Standard originally specified by the National Electrical Manufacturers Association (NEMA).
[3] The J-Y(St)Y cable is normally only available in Europe.
[4] In order to comply with EMC/EMI standard EN 50130-4, shielded cable must be used.

Examples on TIA/EIA 568A Category 5 cables:

Cable type	AWG	Diameter	Shielded
Belden 1624	24AWG	0,5mm	Yes
Belden 1633A	24AWG	0,5mm	Yes
Belden 1668A	24AWG	0,5mm	Yes

Examples on NEMA Level IV cables:

Cable type	AWG	Diameter	Shielded
Anixter 9F220154	22AWG	0,65mm	Yes

Examples on J-Y(St)Y 2x2x0.8 cables:

Cable type	AWG	Diameter	Shielded
Anixter 4QJB2	20,4AWG	0,8mm	Yes
Coferro J-Y(St)Y	20,4AWG	0,8mm	Yes
Waschek 240208	20,4AWG	0,8mm	Yes
Eupen J-Y(St)Y Lg	20,4AWG	0,8mm	Yes

A list of cable suppliers can be found in the back of this manual.

Cable Lengths

Validated cables:

TIA/EIA 568A Category 5 cable:	
Free Topology, max. node-to-node	250 meters
Free Topology, max. total length	450 meters
Bus Topology, max. total length	900 meters
Belden 8471 cable:	
Free Topology, max. node-to-node	400 meters
Free Topology, max. total length	500 meters
Bus Topology, max. total length	2700 meters
Belden 85102 cable:	
Free Topology, max. node-to-node	500 meters
Free Topology, max. total length	500 meters
Bus Topology, max. total length	2700 meters
Level IV cable:	
Free Topology, max. node-to-node	400 meters (0,65mm/24AWG)
Free Topology, max. total length	500 meters (0,65mm/24AWG)
Bus Topology, max. total length	1400 meters (0,65mm/24AWG)
J-Y(St)Y 2x2x0.8 cable:	
Free Topology, max. node-to-node	320 meters
Free Topology, max. total length	500 meters
Bus Topology, max. total length	900 meters

General Installation Advise

The network is polarity insensitive and therefore either of the two twisted pair wires can be connected to either of the LON® connectors on the SYSTEM X components.

Due to the risk of cross-talk/interference, it is recommended not to run LON® Network cables close to high voltage cable, or cables carrying video signals.

Cable Screen

In countries where the CE approval is mandatory, LON® cables with an overall screen must be used in order to comply with EMC/EMI standard EN 50130-4.

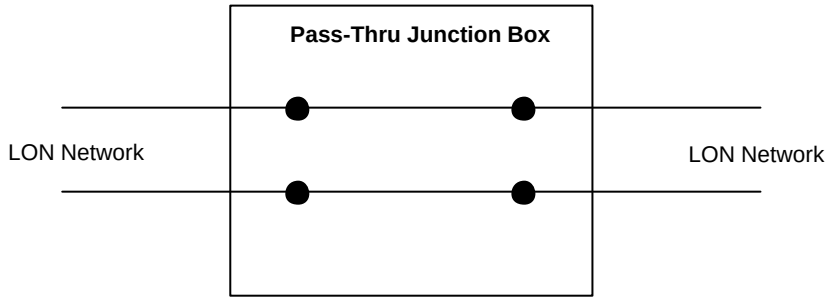
Please see the individual *SYSTEM X Installation Manuals* for details on how to connect the cable screen.

Junction Boxes

When splicing/terminating cables in the LON® Network installation, the following methods are normally used.

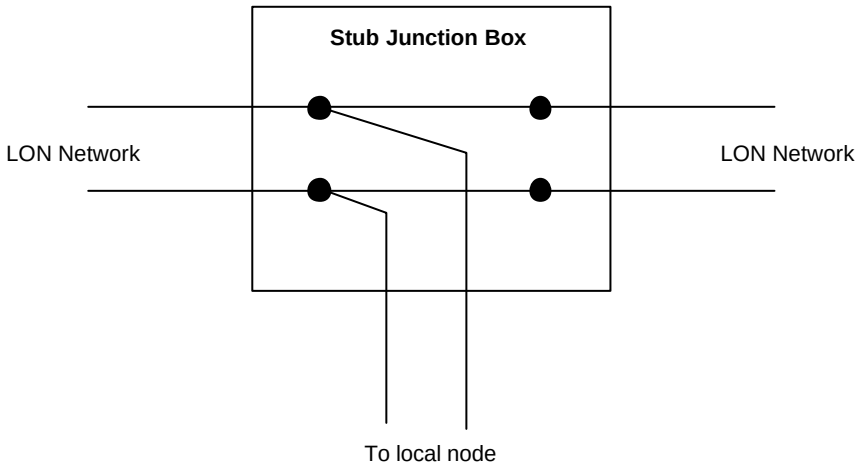
Pass-Thru Junction Box

A pass-thru junction box is used to splice two cables. No SYSTEM X nodes or connectors are provided at a pass-thru junction box.



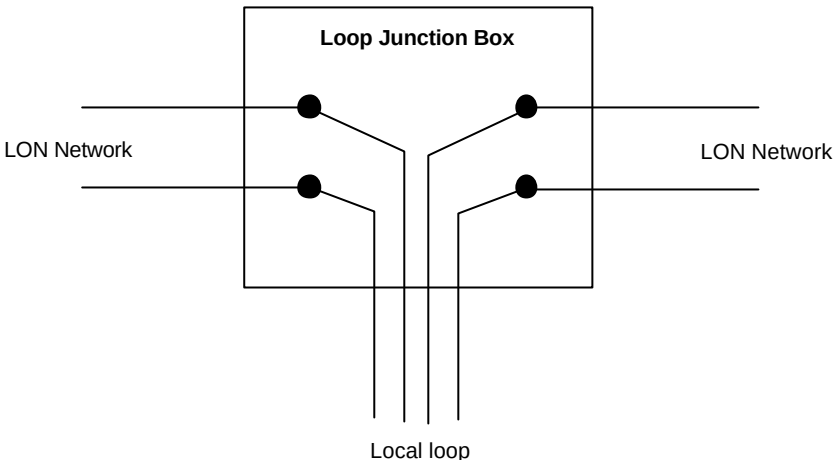
Stub Junction Box

A stub junction box is used to splice two cables and provide a stub for servicing a local SYSTEM X node.



Local Loop Junction Box

A local loop junction box is used to terminate two cables, and provide a wiring loop for servicing one, or more, local SYSTEM X nodes.



Hardware installation

One of the following LON adapters are needed to connect your computer to the LON Network.

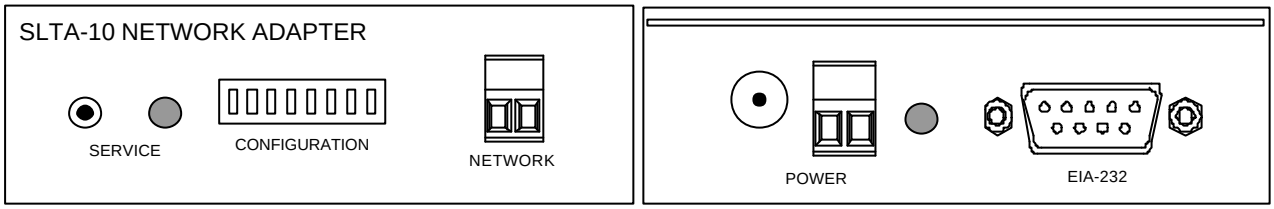
These adapters are manufactured by the Echelon Corporation and can be purchased from Ernitec, Echelon Offices, and Echelon world wide distributors. A list of distributors can be found in the back of this manual. Updated information is also available on *www.echelon.com*

These two adapters are verified by Ernitec A/S, to be 100% compatible with the NodeManager software. However, other adapters are available on the market (e.g. EasyLon USB Interface from Gesytec: *www.gesytec.de*), and will most likely work without problems.

SLTA-10 Model 73351 (Ernitec model NM-SLTA)

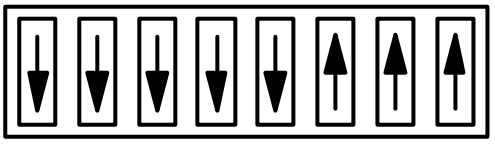
This is an external RS232-to-LON adapter, which is connected to a COM port on your computer. The SLTA-10 makes a direct connection from PC to LON and requires no software drivers to be installed.

Due to its flexibility and ease of installation, Ernitec highly recommends to use the SLTA-10 adapter.



The SLTA-10 needs an external power supply of 9-30VAC or DC (included).

The configuration switch should be set as follows, to be compatible with the NodeManager.



CONFIGURATION

The LON cable is connected to the NETWORK connector.

The EIA-232 9 pin D-Sub connector, connects to the computer COM Port (Pin2-to-2, Pin3-to-3 and Pin5-to-5)

PCC-10 Model 73200 (Ernitec model NM-PCMCIA)

This is a *Type II PC Card* (formerly PCMCIA) used to connect your Laptop computer to LON.

The PCC-10 card can be used with a Laptop computer having a *Type II PC Card Slot*.

The PCC-10 adapter requires a driver to be installed on your PC. The latest version of the driver should be downloaded from *www.echelon.com* and installed BEFORE installing the PCC-10 card. Once the driver is installed, insert the PCC-10 card, restart the computer and the installation should proceed automatically.

If in doubt, or in case of problems (conflicts with other programs, IRQ's, etc.) please leave the installation to an experienced computer user.

NodeManager Installation

Internet Explorer

If not already installed on your computer, you must start by installing Internet Explorer version 5.5 (included on the NodeManager CD-ROM).

Insert the CD-ROM in your CD drive. If auto run is enabled, it can be bypassed by holding down the left [SHIFT] key on the PC keyboard, while loading the CD-ROM.

Select *Start -> Run*, and type *D:\msie55\ie5setup.exe* (D, being your CD-ROM drive). Follow the on-screen instructions to install Internet Explorer.

Acrobat Reader

Acrobat Reader is used to read the SYSTEM X manuals included on the CD-ROM.

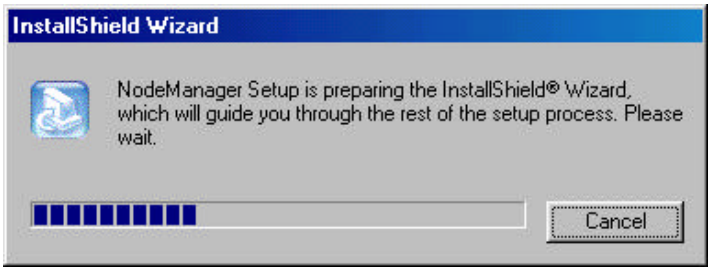
If not already installed, run the file *d:\ar500enu.exe* to install it.

NodeManager

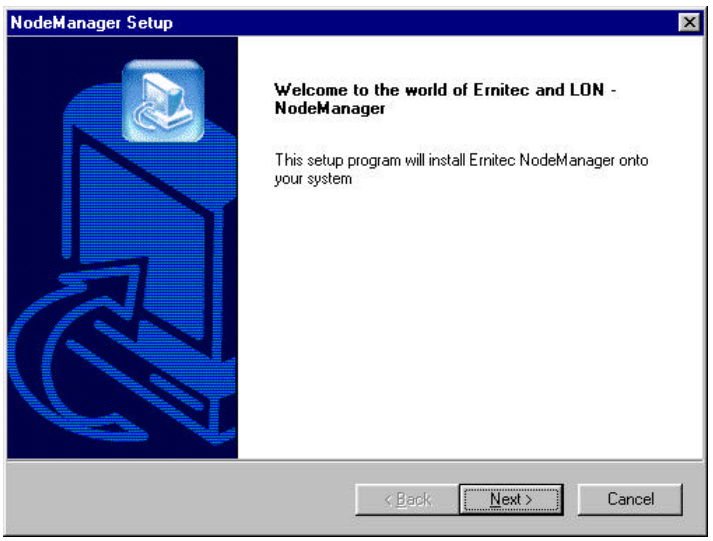
Insert the CD-ROM in your CD drive. If auto run is enabled, the installation program will start automatically.

Alternatively, select *Start -> Run*, and type *D:\setup* (D, being your CD-ROM drive).

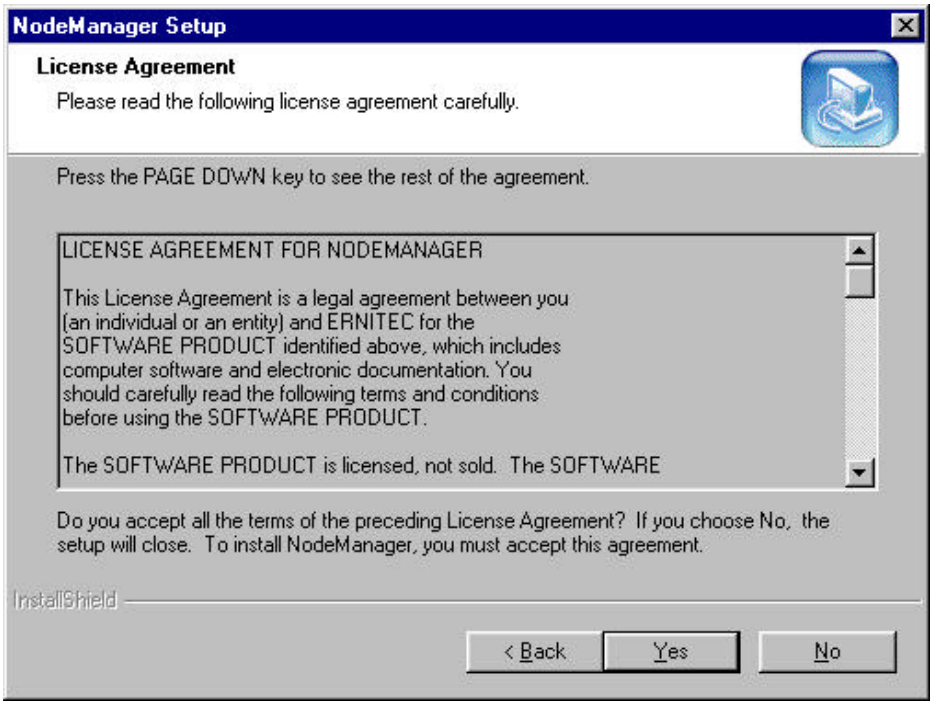
The *Install Shield Wizard* will start, and guide you through the installation of NodeManager.



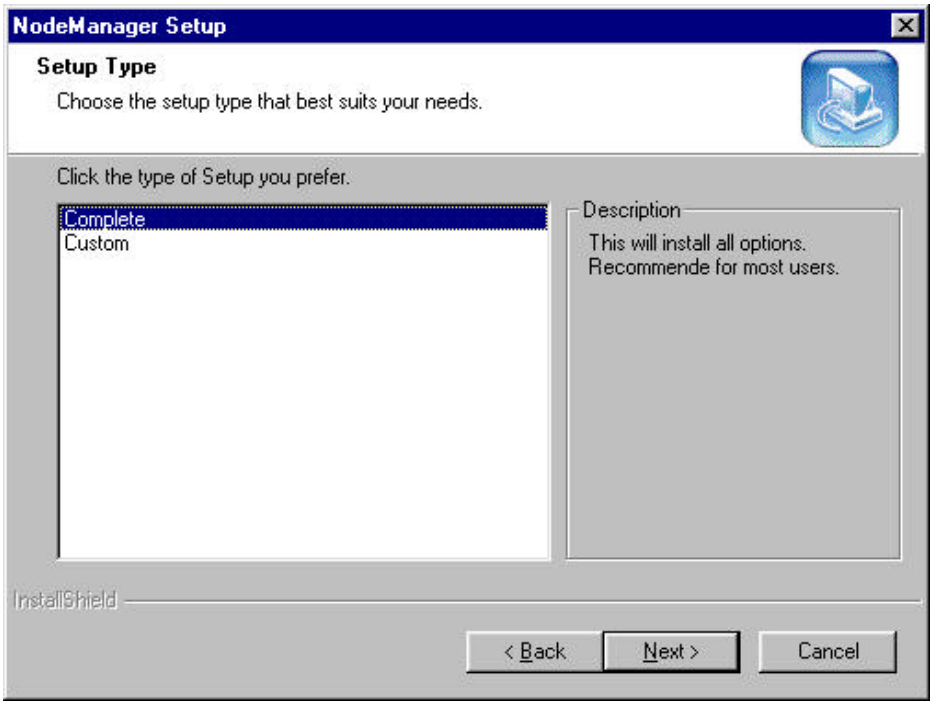
The following menu will appear:



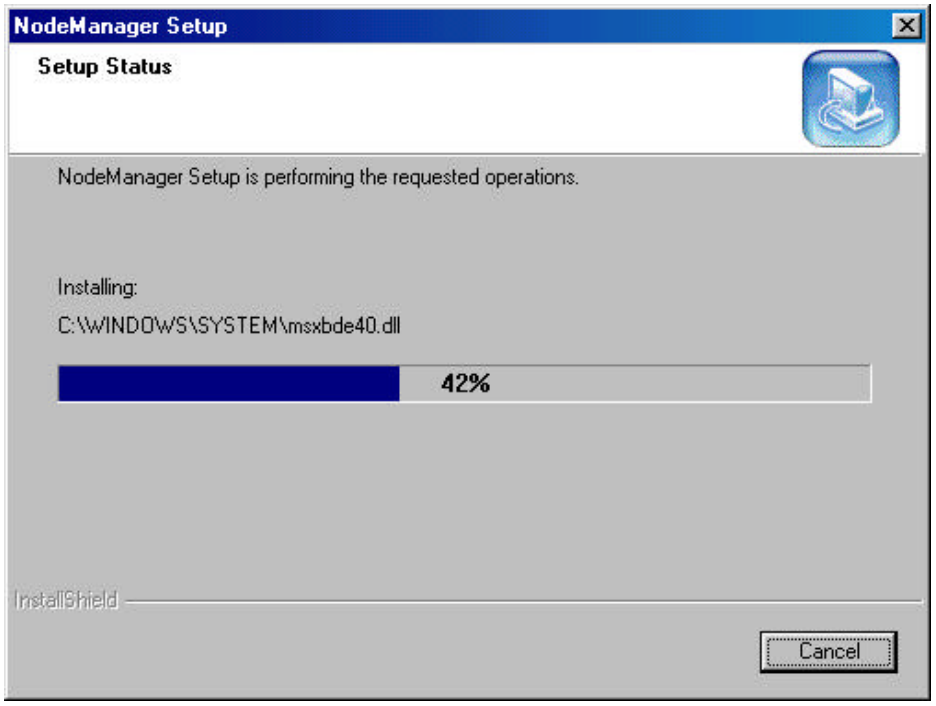
Click *Next.*



Carefully read the license agreement, and click *Yes* if the terms are accepted.



Select the type of installation required and click *Next.*
The *Custom* installation should only be used by experienced *Node Manager* users.



Setup is copying the NodeManager files to your computer.

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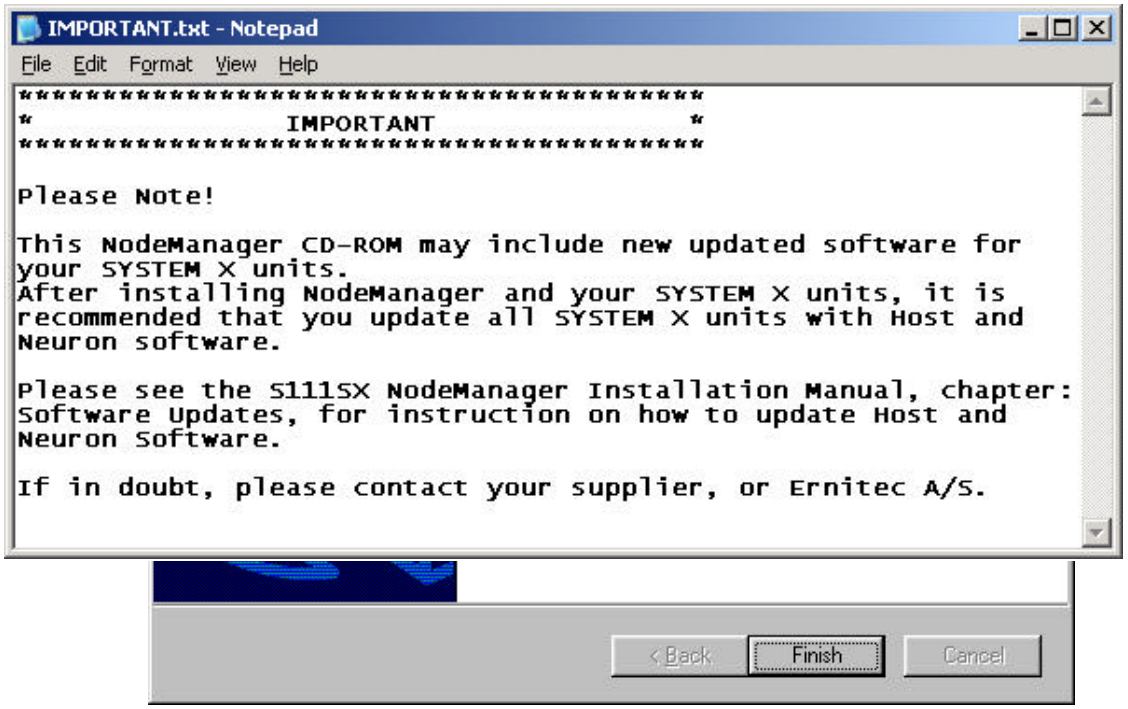


Carefully read the content of the IMPORTANT text box.

Close the text box, and Click *Finish* to complete the *NodeManager* installation.

When doing a first time *NodeManager* installation, you will be prompted to restart the computer to complete the installation.

Installing SYSTEM X on LON

A SYSTEM X installation is made in the following steps:

- LON cable installation.
- Installation of SYSTEM X equipment (referred to as *Nodes*).
- Configuration with the NodeManager software.

When all Nodes are installed on the LON Network, and the Computer with the NodeManager software is connected to the LON Network, it is **IMPORTANT** to configure the SYSTEM X nodes in the following order:

- Start NodeManager, open your database, and connect to the LON Network
- Select menu *Properties -> Network* enable *add Node on service pin* - click OK.
- Press the *Service Pin* on all connected SYSTEM X nodes, taking **careful** note of the order in which the pin's are pressed.
- The SYSTEM X nodes are registered by NodeManager in the same order that the Service Pin's are pressed, and presented with their unique Neuron ID and numbered from 1 and up. Please note that this is the only way to identify the nodes.
- Rename all nodes to something logical for the specific installation.

See the following chapters for details.

It is of out most importance to keep note of the order in which the Service Pin's are pressed on the SYSTEM X nodes. Since the NodeManager will register the nodes in the same order, this will be the only way to identify the different SYSTEM X nodes in the NodeManager software.

A template, which can be used to keep track of the order, is enclosed in the back of this manual. Please use it to make additional copies.

Example:

Node No.	Node Type	Description
1	Matrix	Master matrix, camera 1-32, monitor 1-16.
2	Matrix	Slave matrix, camera 33-64, monitor 1-16.
3	Keyboard 1	Main reception.
4	Keyboard 2	Control room.
5	Keyboard 3	Guard room.
6	PTZ Camera 4	South entrance.
7	PTZ Camera 7	Main entrance.
8	PTZ Camera 8	Stairs, east wing.
9	Alarm Box 1	Alarms 1-8, control room.

The following chapters in this manual, are sorted in the order that NodeManager would normally be used, when doing a first time installation.

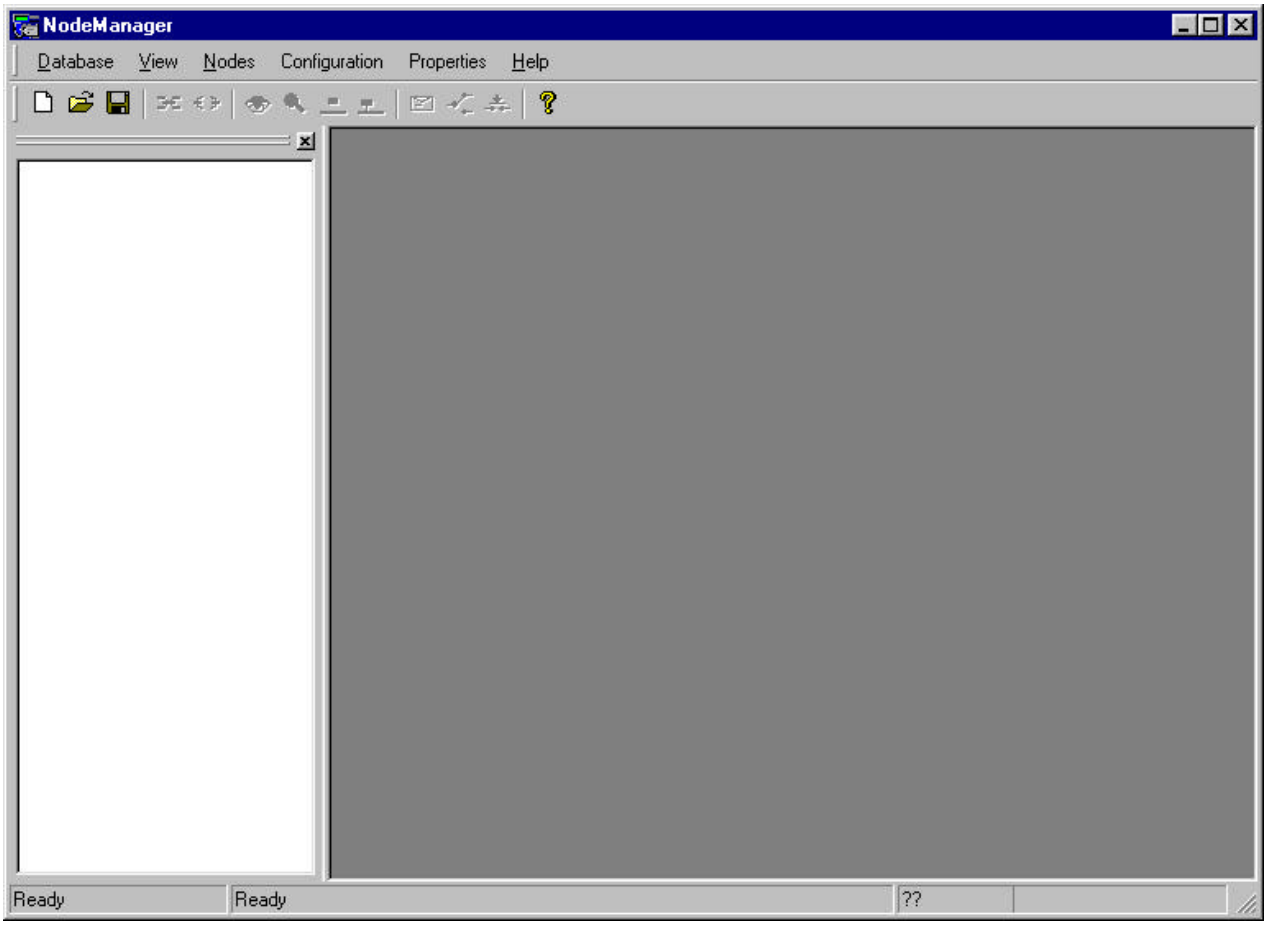
NodeManager

To start NodeManager, click the NodeManager icon created on your desktop. NodeManager is also installed in the *Ernitec Program Folder*: *Start -> Programs -> Ernitec*.

You will be prompted if you want to add Nodes in this session. If you want to add new System X units, or if it is a first time installation, you should answer *Yes*.

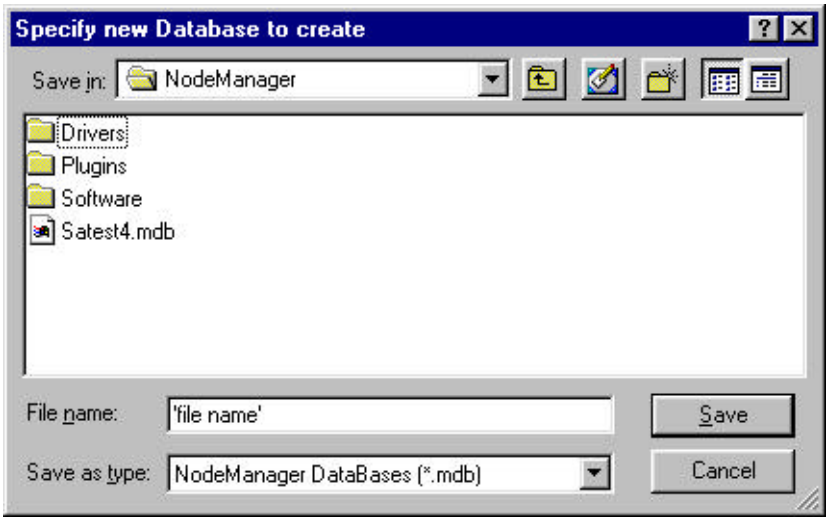
User interface

When first started, the NodeManager will look as follows:

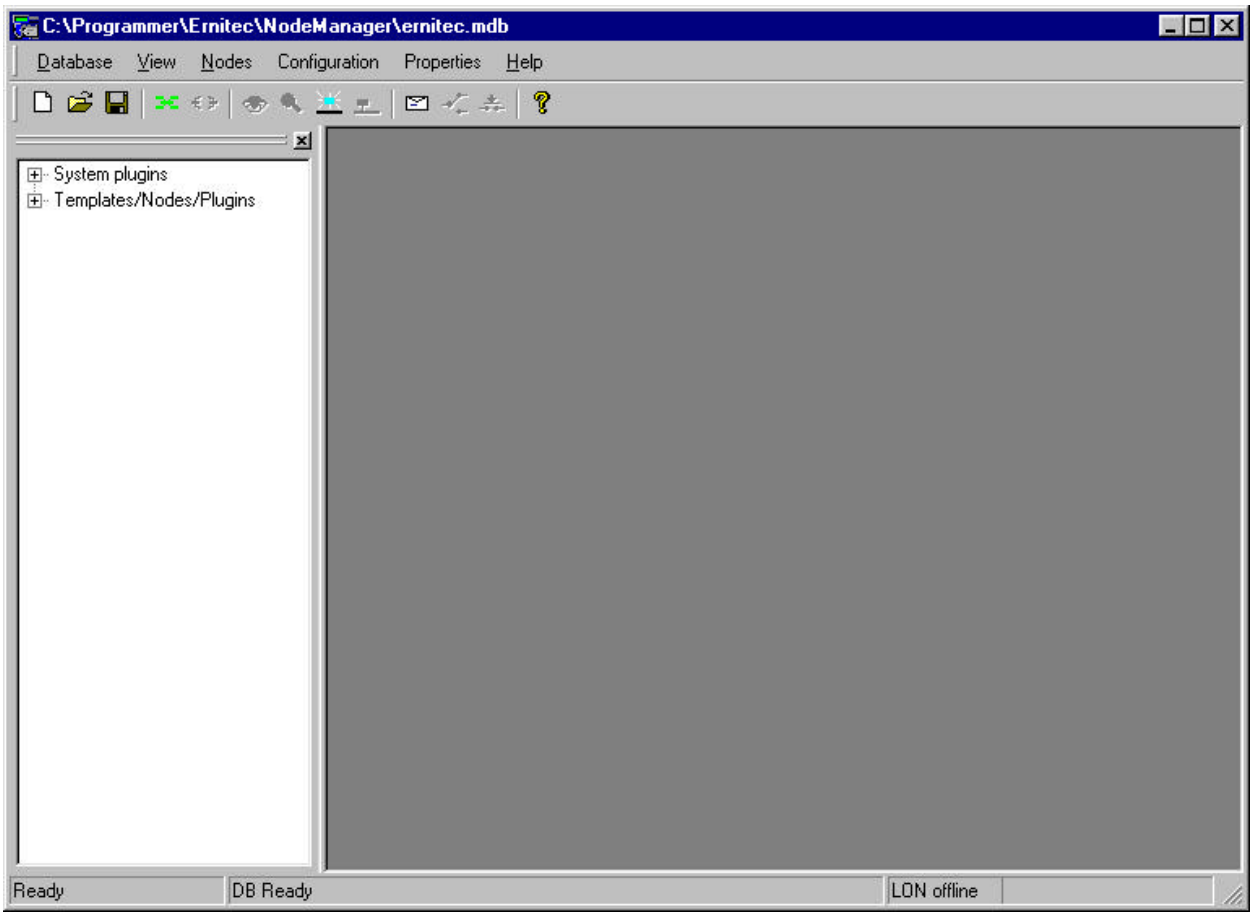


When started, NodeManager will open the most resent database created (if any).

To start a new Database, select *File -> New* and key in a name and file location for your Database.

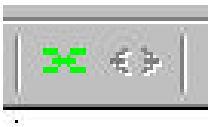


Click *Save.*



This is the basic interface when a new database has been made.

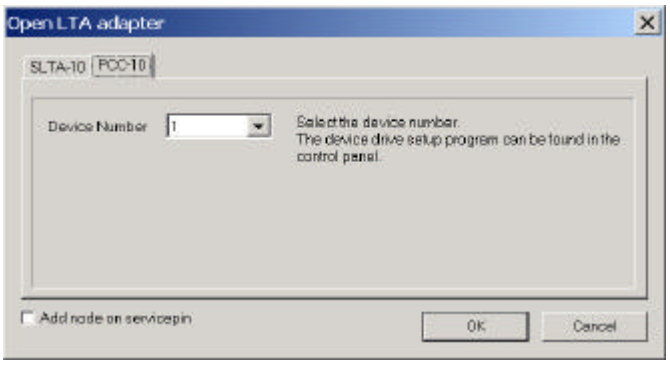
Online/Offline



Click the green online symbol to connect NodeManager to the LON Network. Click the red symbol to go offline.

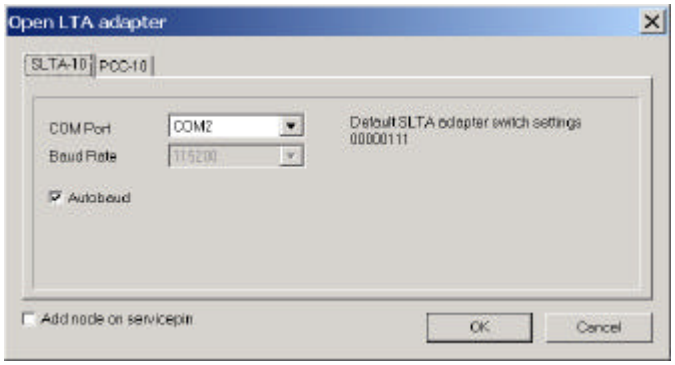
Select which adapter is used to connect to the LON Network.

PCC-10



The PCC-10 adapter is a Type II PC Card, normally used with laptop computers.

The device number is defined during installation of the adapter.



SLTA-10

The SLTA-10 adapter is an external RS232-to-LON adapter, normally used to connect a PC COM port to the LON Network.

Select which COM port is used on the PC. Switch settings required to work with NodeManager, is shown in this menu.

The LON adapter is only selected when going online for the first time.

If, at a later stage, it is required to change the LON adapter, use the menu *Database -> Go Online Dlg.*

Add Node on Service pin

Check this for Node Manager to add Nodes to the database when service pins are pressed. When Node Manager is online, the menu *Properties -> Network* can also enable service pins.

Service Pins

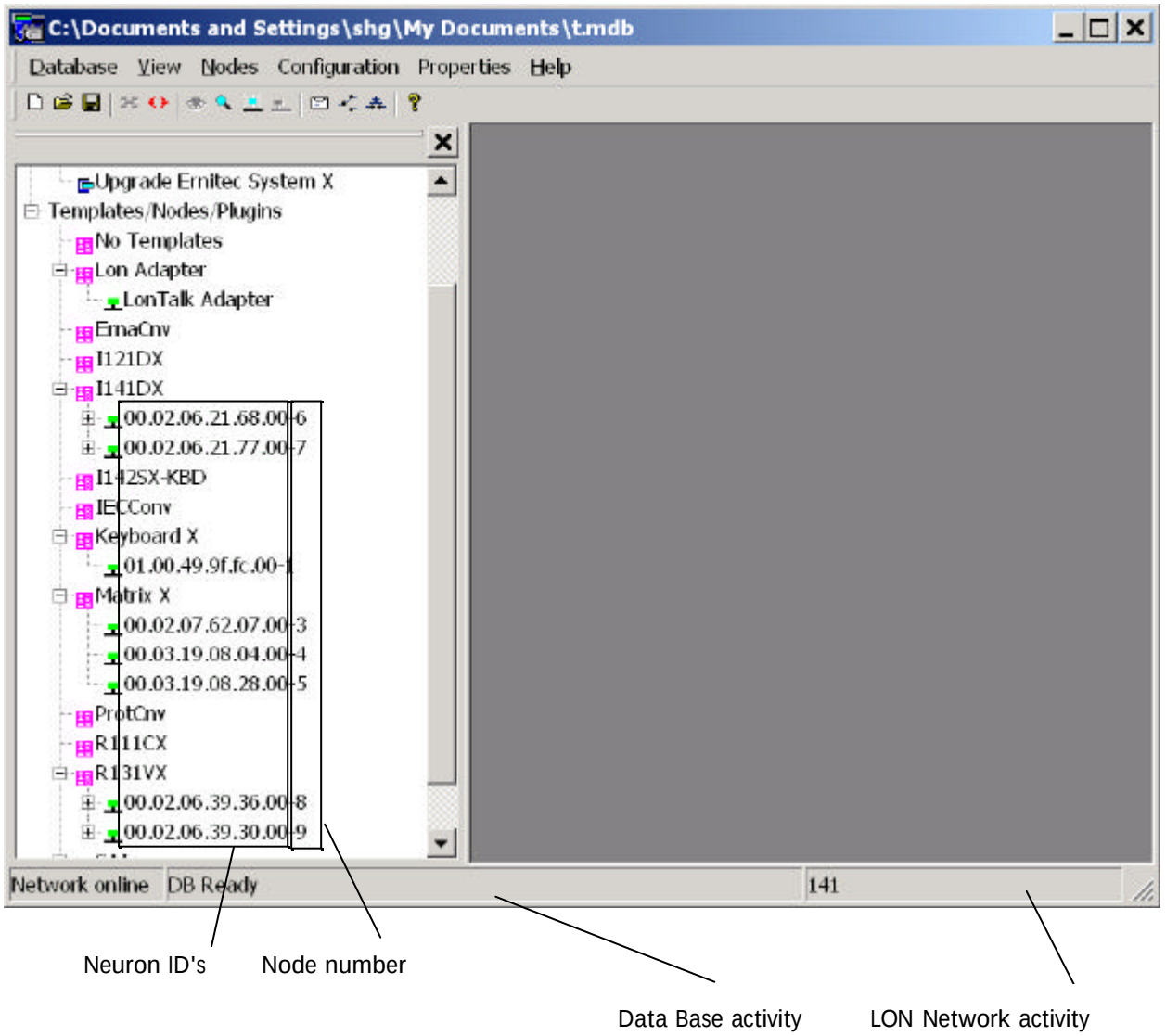
After going online (when doing a first time installation), it is time to press the Service Pins on all connected SYSTEM X nodes.

For the location of the Service Pins, please see the *Installation Manuals* for the specific equipment.

As mentioned in chapter: *Installing SYSTEM X on LON*, it is very important to keep note of the order in which the Service Pins are pressed.

Nodes

Nodes are the different SYSTEM X units connected on the LON Network. After pressing the Service Pin's on the SYSTEM X units, they will be listed together with their Neuron ID.



Neuron ID

Each SYSTEM X unit is identified by the NodeManager with a unique Neuron ID. The Neuron ID is detected by NodeManager when the Service Pin is pressed on the SYSTEM X units.

Since it is impossible to determine from the Neuron ID which type of SYSTEM X unit it is, all Neuron ID's will be numbered from 1 and up, in the same order which the Service Pin's are pressed.

It is therefore **very important** to keep note of the order in which the Service Pin's are pressed, and when NodeManager has identified all nodes, rename them to something recognizable (e.g. *Keyboard 1*, *PTZ Camera 1*, etc.).

Data Base activity

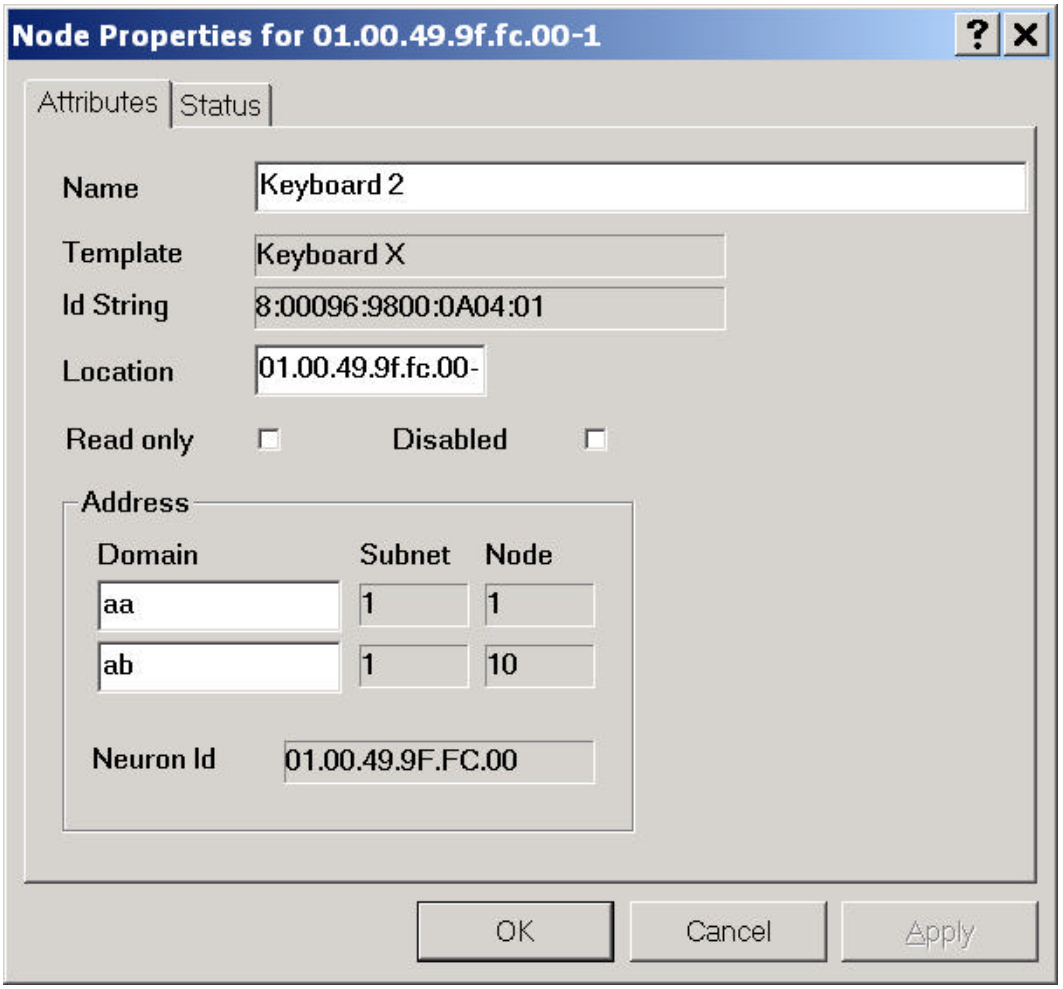
Shows if the NodeManager Data Base is busy. After having pressed the service pins, the *Data Base activity* should read 'DB Ready' (Data Base Ready) before proceeding with the installation.

LON Network Activity

For information only. Shows the transmission activity on the LON Network.

Renaming Nodes

Nodes are renamed by clicking the node, and selecting *Nodes -> Properties,* or by double-clicking the Node.



Key in a new name for the node, preferably a name that makes it easy to identify the SYSTEM X unit in the specific installation.

Deleting Nodes

To delete a node, click the node and select *Nodes -> Delete*.

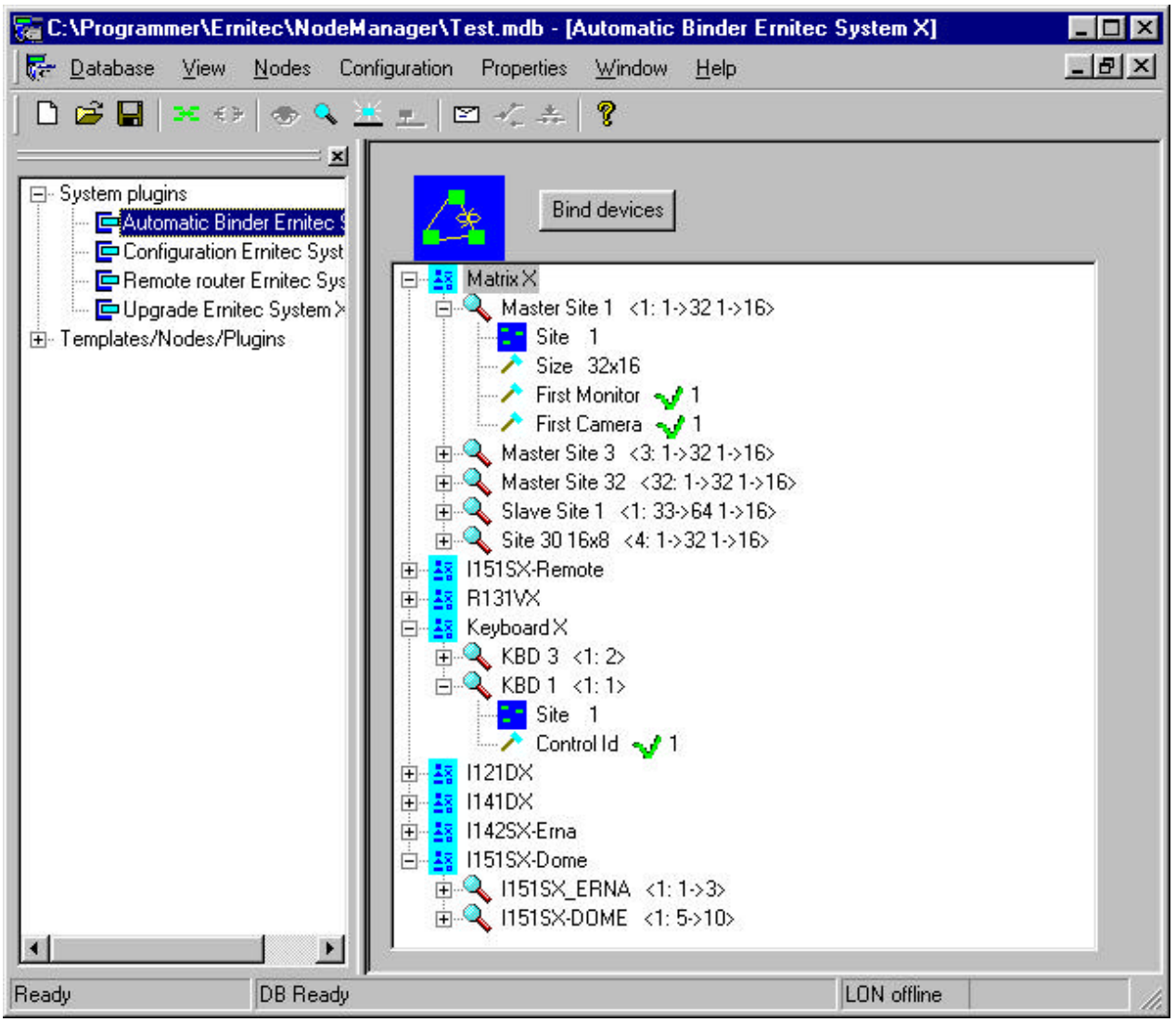
Autobind Plugin

Once all nodes have been registered by the NodeManager, they all have to be configured to be able to communicate with each other.

The Autobind plugin is used by the NodeManager to determine which nodes are connected on the LON Network, and to tell the individual nodes which other nodes are present.

NodeManager does not need to be online with the LON Network, to run the Autobind Plugin. When going online, the actual binding of the units, will be executed automatically.

Start the Autobind Plugin by opening System Plugins, and double-clicking on *Automatic Binder Ernitec System X.*



Click on the icon/text next to each option, and define the following:

- Camera/monitor range, for each Matrix X and I151SX-Remote.
- Unique ID numbers for each Keyboard X.
- Unique ID numbers for each PTZ camera (equal to the camera input on the matrix).
- Camera range for Converters, I142SX-ERNA and I151SX-DOME.
- Number of DVR's connected to the I151SX-DVR.
- Unique ID numbers for each Alarm unit, I121DX, I141DX and I151SX-ALARM.

Once all ID's and camera/monitor ranges are defined, click on *Bind devices*.

Autobind will now bind all devices on the LON Network, which might take several minutes depending on the number of nodes on the network.

Do NOT use any other features of NodeManager, while Autobind is running.

The progress can be followed at the bottom status bar. When status reads *DB Ready*, autobind is completed.

If any errors are displayed, the units giving the error will be listed in the binding progress window. Most errors are caused by wrong Neuron software in the unit, see chapter *Upgrading*.

Error symbols

If AutoBind detects any conflicts, it will display an error symbol next to the option causing the conflict.

Ö No conflicts. √
q Conflict, duplicate ID or overlap.
? Unknown state.

Configuration Plugin

With the Configuration Plugin, all parameters for the complete SYSTEM X can be defined and downloaded to the SYSTEM X units.

NodeManager does not need to be online with the LON Network, in order to use the Configuration Plugin.

Start the Configuration Plugin by opening System Plugins, and double-clicking on *Configuration Ernitec System X*.

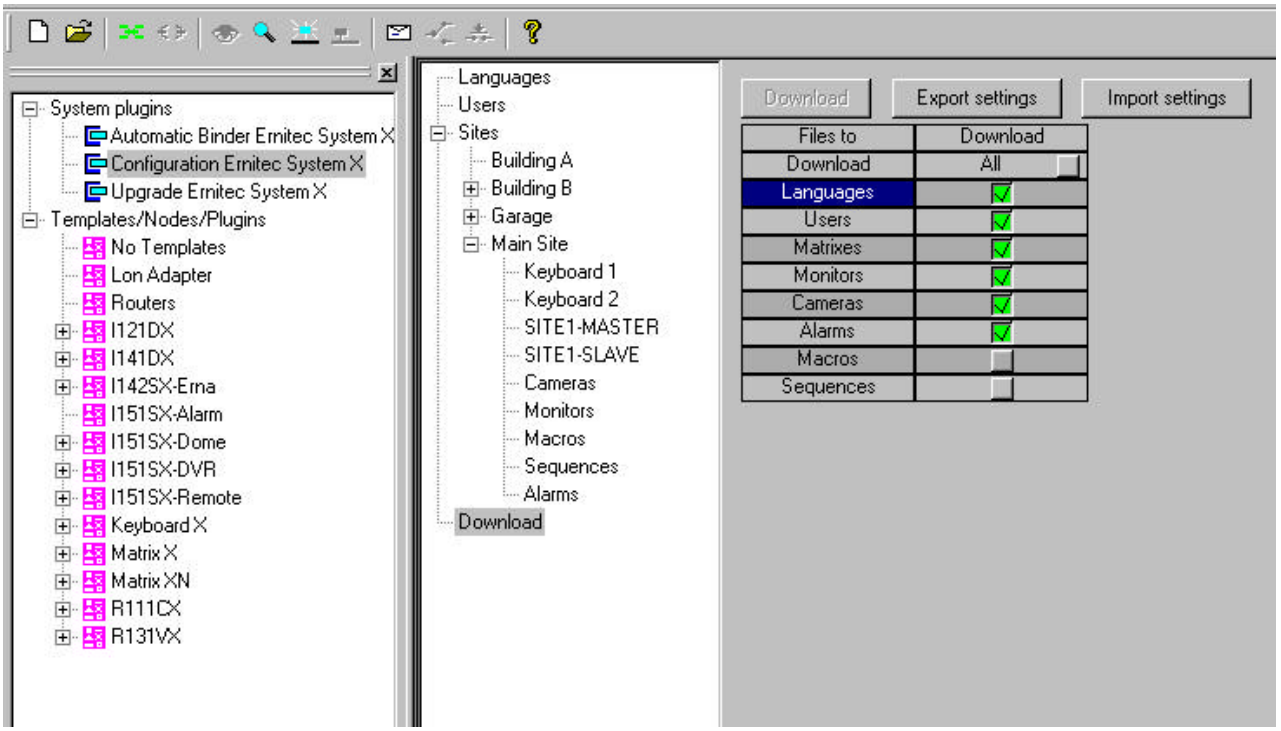
Saving Setup - IMPORTANT

Settings made in the Configuration plugin are saved automatically to the database, when the Configuration PlugIn is closed.

Download settings

After having made all settings, click on *Download*, to download settings to the SYSTEM X units.

Depending on the number of SYSTEM X units, this may take several minutes.



Export Settings

Exports the System X Configuration to a file *<DATABASENAME>.sysx.txt*. Use this to make a backup, which can be imported in a later Nodemanager version.

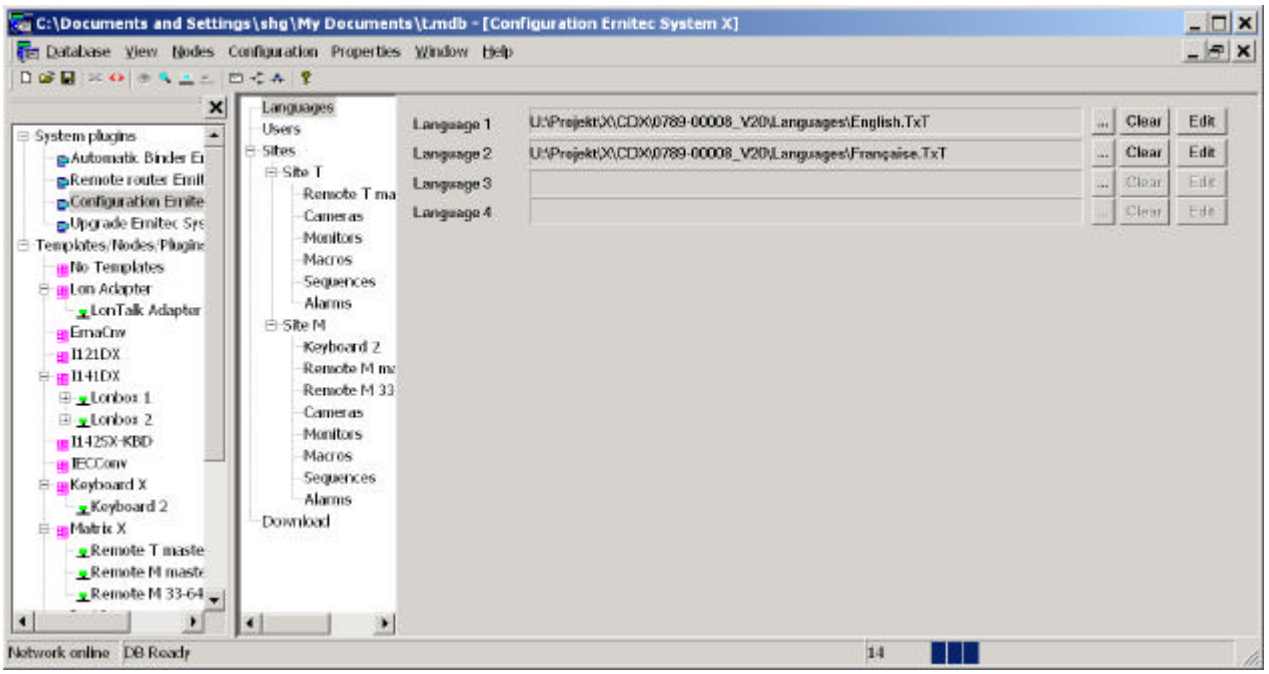
Import Settings

Import settings file *<DATABASENAME>.sysx.txt*, exported by an earlier NodeManager version.

.

Languages

Click on *Languages*, and select which language(s) should be selectable from the keyboard(s).



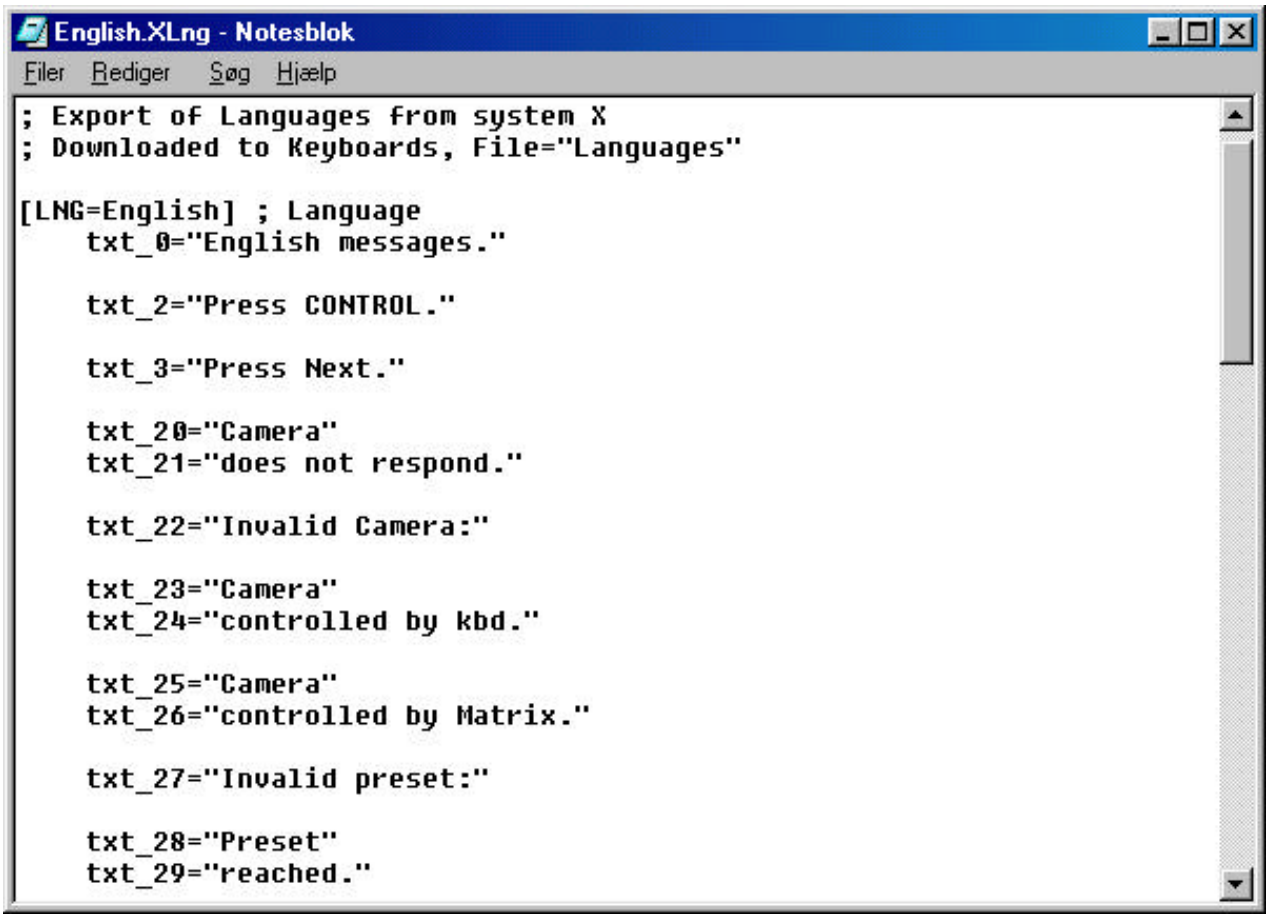
Click the **[...]** button to select the language.

The language files contains the operator messages displayed in the SYSTEM X keyboard. Five languages are included as standard: English, German, French, Swedish and Danish.

In the User setup menu, it is defined which language is default for the specific user.
From the SYSTEM X keyboard, it is also possible to select between the different languages.

Edit language

Clicking *Edit* will bring up a text editor where the selected language can be edited/translated. When editing a language file, please remember to save the file with a new file name, so that the original language file is kept.



Only the text in **" "** can be edited, e.g. for the line: **txt_2="Press CONTROL."** only the text **Press CONTROL** should be edited.

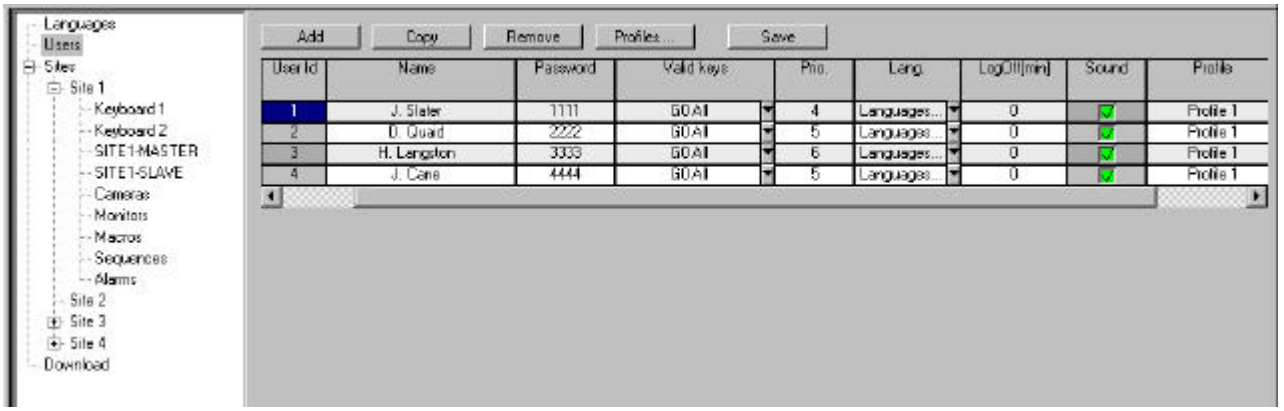
If the text consists of two lines (e.g. **txt_20="Camera"** and **txt_21="does not respond."**), the SYSTEM X keyboard inserts a fixed number/text between the two lines, e.g. in **Camera 12 does not respond** the '12' is inserted by the keyboard.

An edited/translated text can be maximum 40 characters long, including space(s) and the fixed number/text inserted by the keyboard X (if any). Only the English character set, and numbers 0-9, are supported.

When all texts are edited/translated, save the file with a new file name, and select it clicking the **[...]** button.

Users

Clicking on the *Users* icon, will bring up the User Setup menu where up to 50 users can be added, each with their own individual password and parameters.



User Id

This is a fixed user ID.

Name

Key in the name of the user. Up to 20 characters are available.

Password

Assign a unique 4-digit password to each user.

Valid keys

The user can be limited to be able to operate only limited parts of the SYSTEM X.

Key group 0 (G0 All):
Full access to all functions of SYSTEM X.

Key group 1 (G1 -PTZ):
PTZ camera operation disabled.

Key group 2 (G2 -Setup):
System Setup disabled.

Key group 3 (G3 Alarm):
PTZ operation, system setup and camera selection disabled.

Key group 4 (G4 -Alarm):
All alarm functions disabled.

Key group 5 (G5 Setup):
Alarm functions and PTZ operation disabled.

Key group 6 (PTZ):
Alarm functions and system setup disabled.

Key group 7 (Camera):
Alarm functions, PTZ operation and system setup disabled.

Priority
Define a keyboard priority between 1-50, 1 being highest priority.

Language
Select the default language for the user.

LogOff
The keyboard will automatically log off after the specified time of inactivity. Setting the time to 0 (zero) will disable the automatic log off.

Sound
Enable or disable key press and warning sounds.

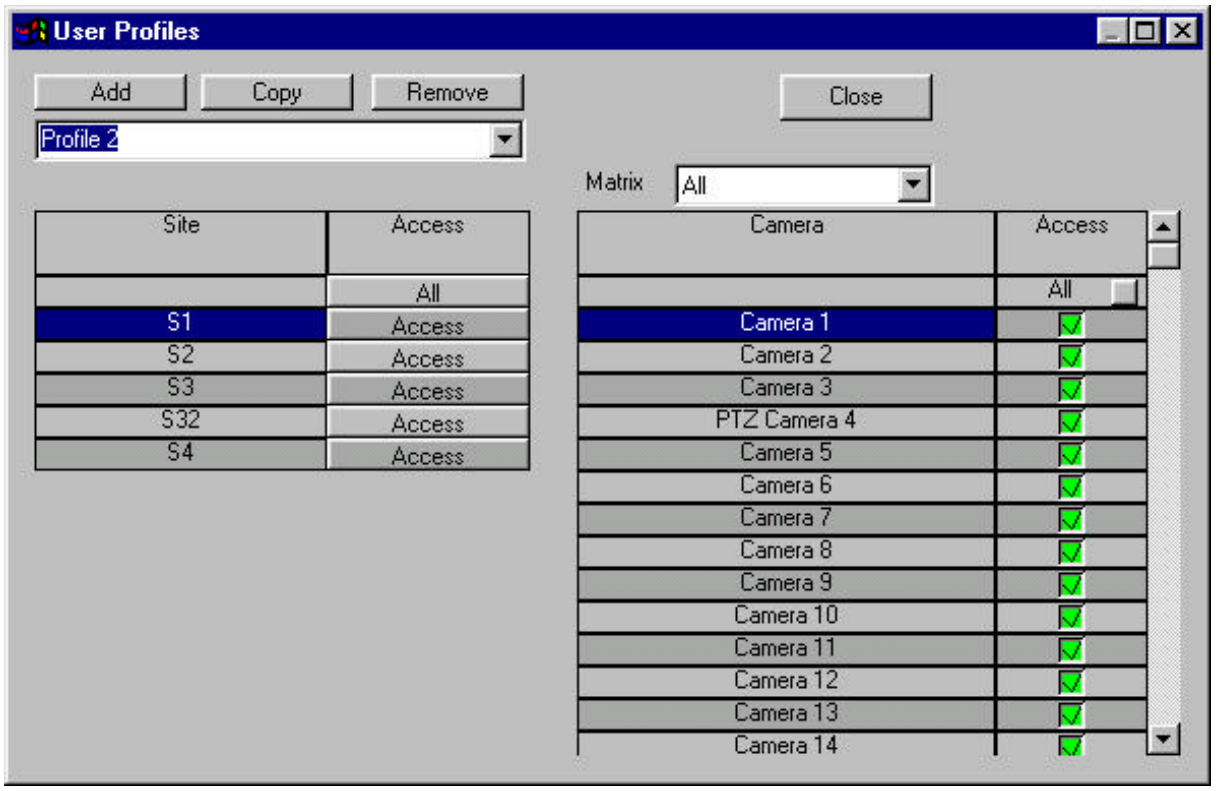
Profile
Select the user profile (if any) for this specific user.
Default is *Profile 1*, which will allow the user to select all cameras, on all sites.

User Profiles

In the user setup menu, click the *Profiles* button, to define user profiles.

User profiles are used to limit user access to specific Sites and cameras, during different periods.

Up to 8 different profiles can be created. Each profile can be used by several users.



Click *Add* to create a new Profile.

Camera
In the drop-down menu, select a specific matrix, or select *All*.

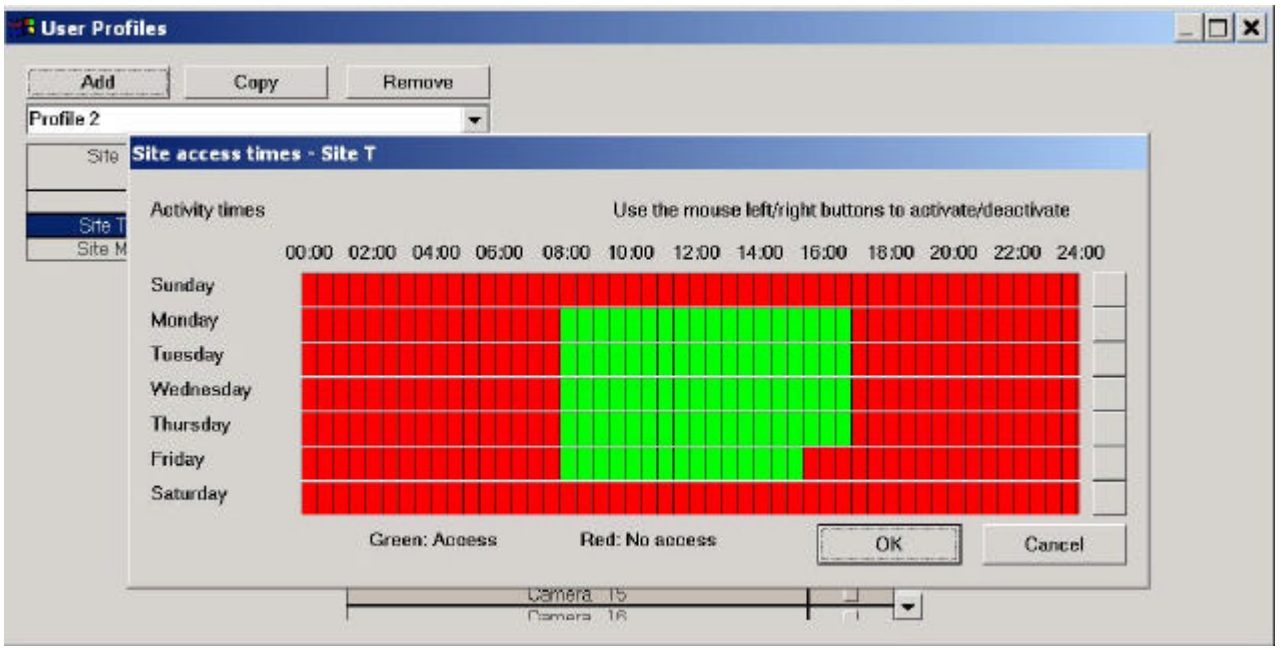
Select which cameras user with this specific profile, should be allowed to select.

Access

User acces can be limited to specific periods/days of the week. The time can be set in steps of 30 minutes.

Select the site to edit, and click the *Access/Denied* button.

To set the same access for all sites, click the *All* button.



Activity times

Use the right/left mouse keys to enable (green) or disable (red) the time intervals.

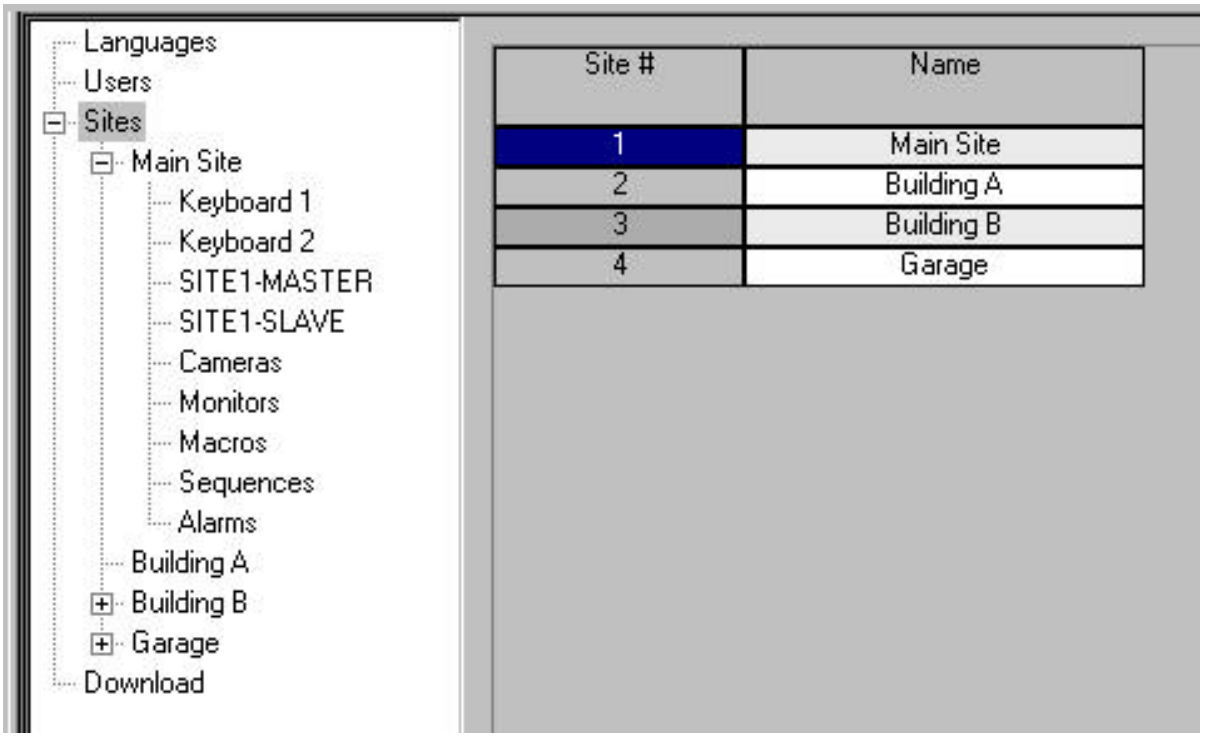
The blank buttons to the right of each day, is used to enable/disable an entire day.

Green: Access.

Red: No access.

Sites

In an installation with Several Sites, the sites can be renamed to something more logical for the specific installation.

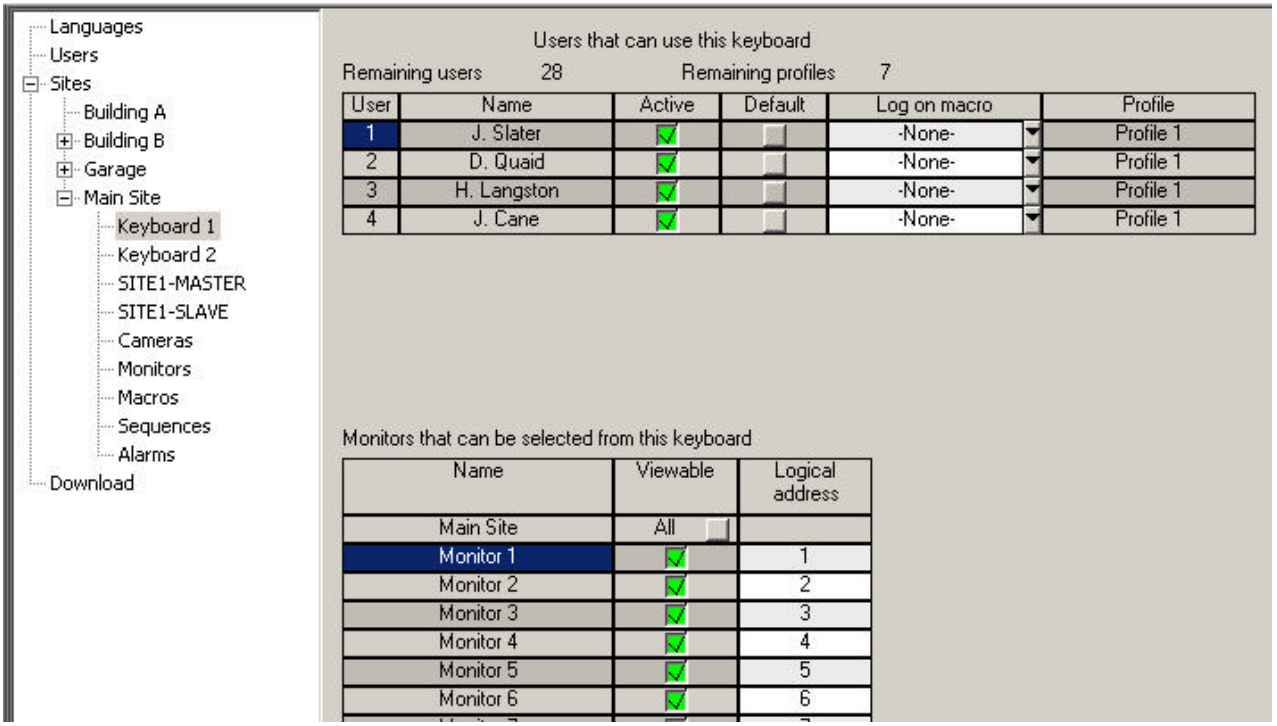


Double-click on the Name, and type in the new name.

The site names are only used in the NodeManager menus, it is not downloaded to any SYSTEM X units.

Keyboards

Clicking on *Keyboard*, will bring up the Keyboard Setup menu where the Keyboard parameters can be programmed.



Users
Select which users should have access to this keyboard.

Remaining Users/Profiles
For information only. Tells how many users and profiles are left.

Default
Select if a user should be "Default", meaning that he will be able to log on without the use of ID and password.

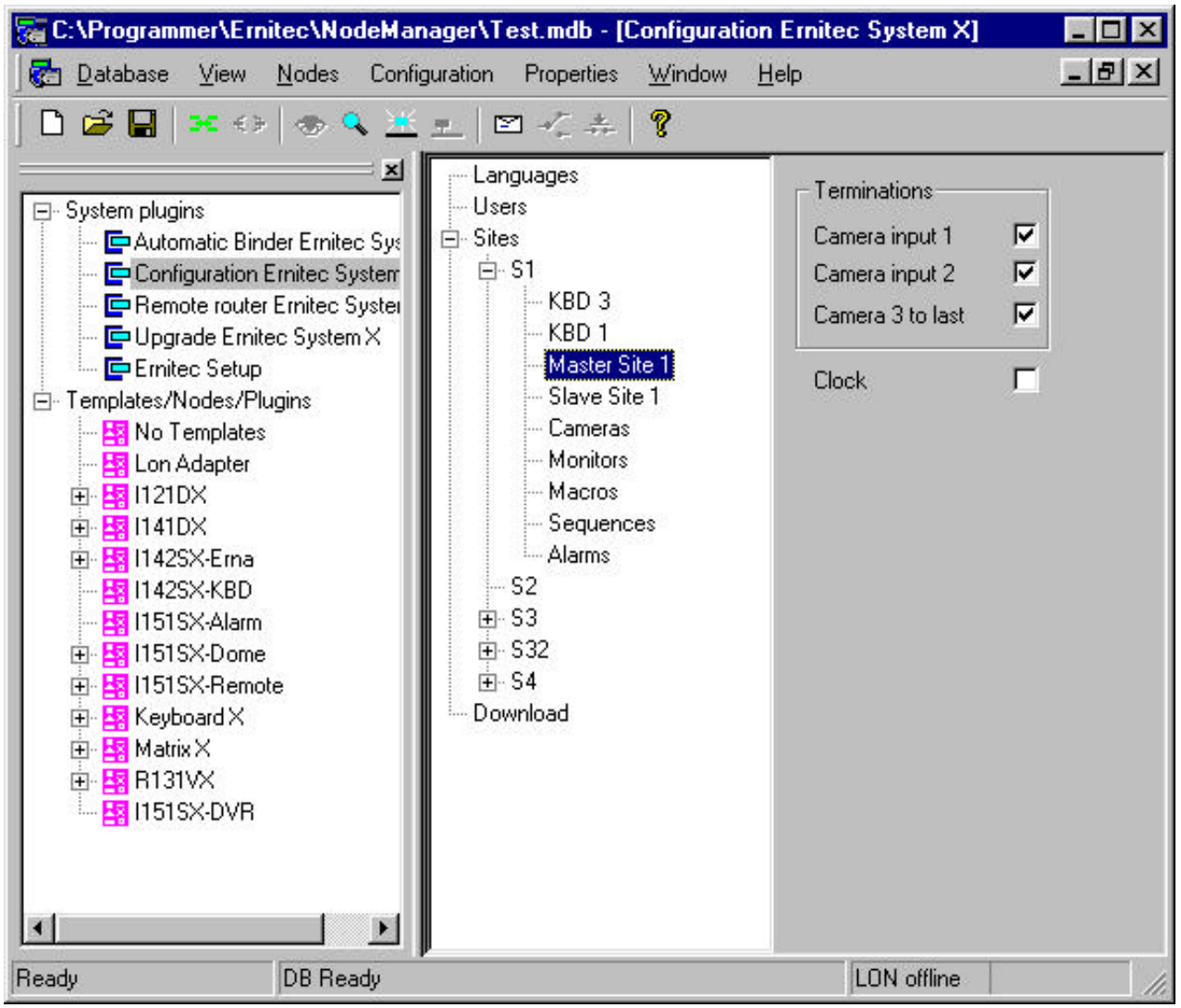
Log on macro
Select a macro that is automatically executed when the user logs on.

Monitors
Select which monitors it should be possible to access from this keyboard.
The monitors can be assigned any logical address (i.e. the number used to select the monitor) between 1-999.

Profile
For information only. Shows the user profile, selected in the *User Setup* menu.

Matrix

Set the video input termination on/off for the matrixes, where camera inputs are looped.



Terminations

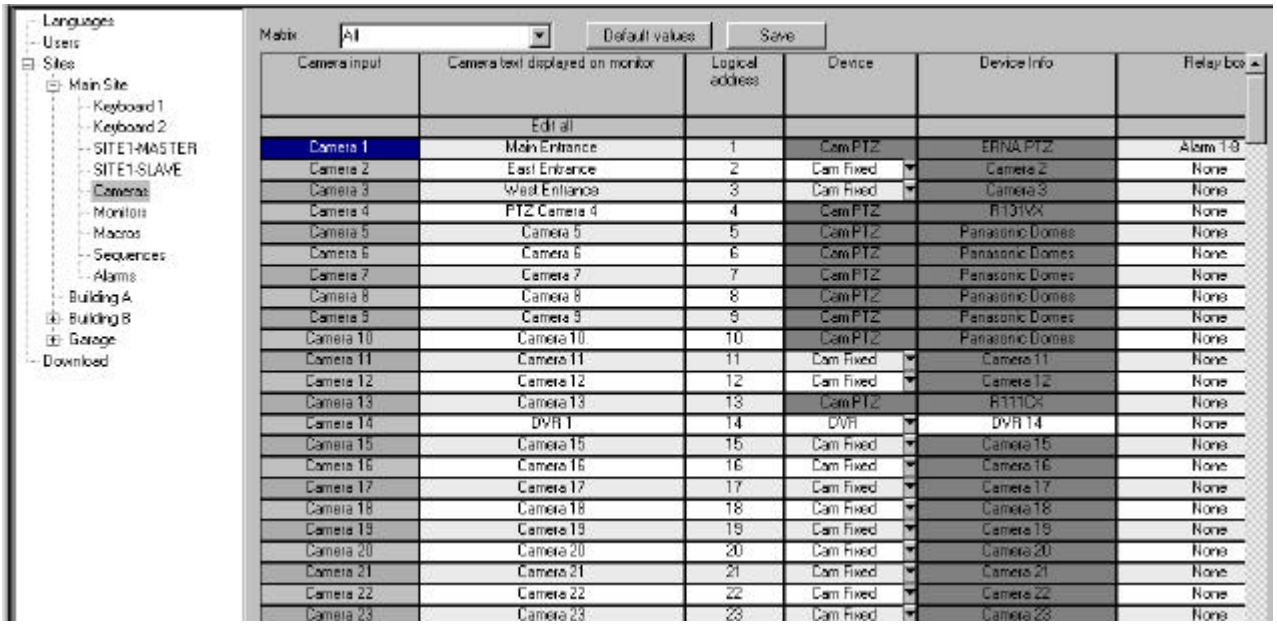
Select which camera inputs, for the specific matrix, that should be terminated with 75 ohm.

Clock

Select which matrix should broadcast the time/date to other matrixes/keyboard in the LON Network. Normally, the Master matrix is broadcasting the time/date.

Cameras

Define the camera parameters for the camera range covered by the specific site.



Camera input
The physical camera input on the matrix.

Camera Text
The camera ID text displayed on the monitors. 20 characters are available for text.

Logical address
The logical address, is the number the operator has to key in to select the camera input.
The logical address can be changed to anything between 1-9999. This could be useful, in order to make a more logical camera numbering for the specific site.
Please note, that it is not allowed to assign the same logical address to more cameras.

Device
Select the type of camera/device connected to the camera input.
Selectable options are:

Cam Fixed - *Normal fixed camera*.
DVR - *Video output from DVR*.
NC - *No connection*.
Link - *Camera input used as video link to remote site*.

For info only:

Cam PTZ - *PTZ camera*.

Device info
When *Device* is set as *Link*, select the monitor output on the remote site, which is connected to this camera input.

Relay Box
Specify if a relay box should be assosiated with the camera input. When selecting the camera, control of the relay box is automatically given.

Sync loss alarm (only if *M32SYNX* sync loss module is fitted)
Select if an alarm should be generated if the camera synchronization pulse is lost (e.g. if the cable is cut, or the camera fails).

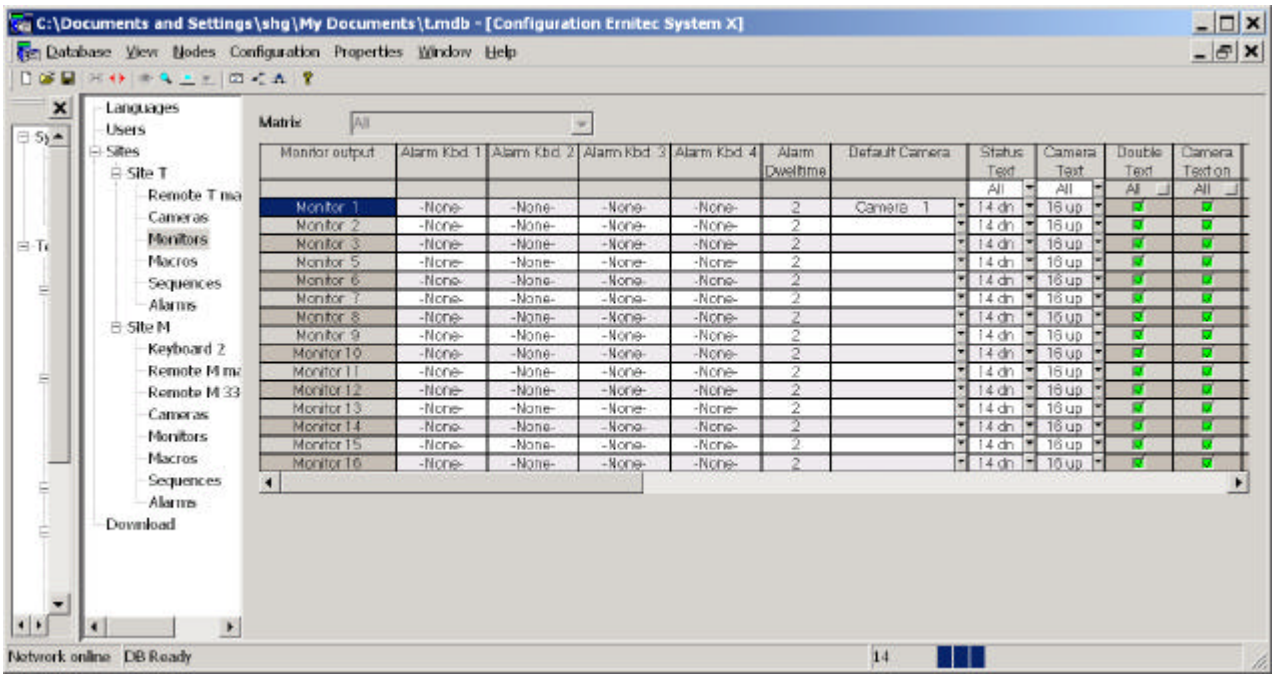
Sync loss priority
The alarm priority for the sync loss alarm. Valid range is 1-49, one being highest priority.

Sync error number
Specify how many synchronization pulses should be lost, before an alarm is generated. Default is 2, which is equal to approx. one second. Maximum is 10.

Default values
Loads default values for all sync loss alarms.

Monitors

Define the monitor parameters for the monitor range covered by the specific site.



Monitor output
The physical monitor output on the matrix.

Alarm Keyboard
Define which keyboard should take control of the monitor in an alarm situation. If the first keyboard defined, is already handling a higher priority alarm, more keyboards can be defined to handle the alarm(s).

Alarm Dwell Time
Dwell time for alarm cameras running in a sequence on the monitor.

Default Camera
Define which camera should be displayed on the monitor after power up of the matrix.

Status Text offset
The Status text, displayed in the top of the picture, can be moved 16 pixels up or 14 pixels down.

Camera Text offset
The Camera ID text, displayed in the bottom of the picture, can be moved 16 pixels up or 14 pixels down.

Double Text Height
Tick this box if the texts, displayed on the monitor, should be displayed in double height.

Camera Text On
Select if the Camera ID text should be displayed as default. The operator can also toggle the text on/off from the SYSTEM X Keyboard.

Status Text On
Select if the Status text should be displayed as default. The operator can also toggle the text on/off from the SYSTEM X Keyboard.

Time/Date Text On

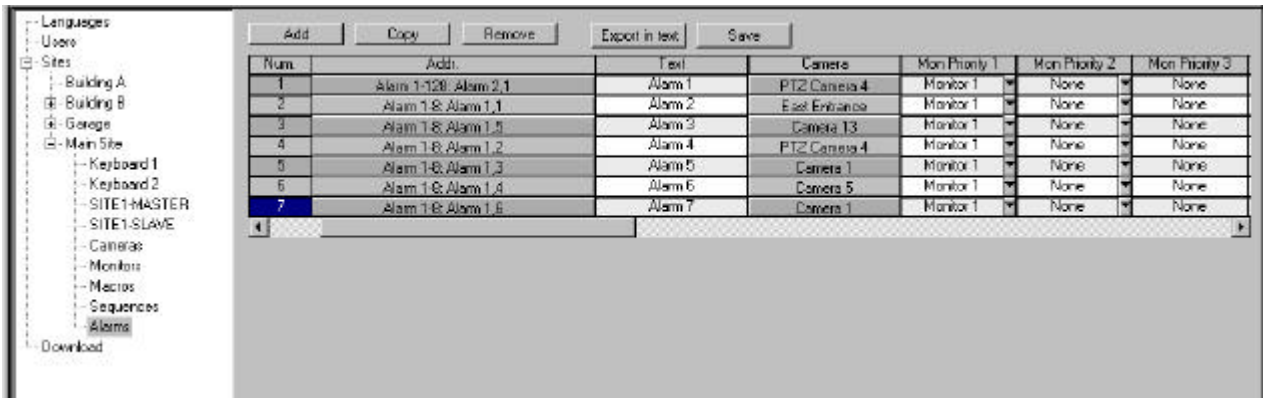
Select if the Time/Date should be displayed as default. The operator can also toggle the Time/Date on/off from the SYSTEM X Keyboard.

ALL (for text settings)

Use the top ALL option, if all text settings should be the same

Alarms

Clicking on *Alarms*, will bring up the Alarm Setup menu where the SYSTEM X alarm handling is defined. Up to 1024 alarms per site can be programmed.



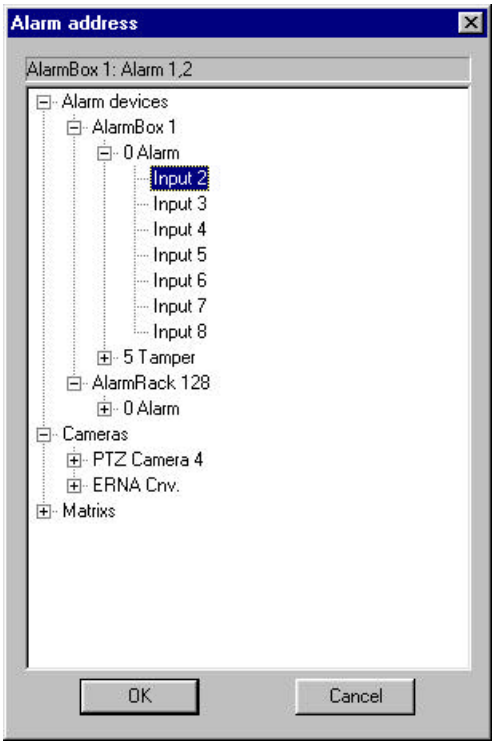
Click on *Add*, to add a new alarm to the SYSTEM X.

Num. (number)

Global alarm number used as reference when programming alarms in Ernitec LON Alarm Box (I141DX), Telemetry Receiver (R131VX) and Converter (I142SX) plugins.

Addr. (address)

This field shows the alarm address (unit number and input). Click it to change the alarm address/type settings.



Alarm address
Select where the alarm originates from. Options are:

Alarm devices
The alarm is connected to an I141DX LON Alarm Box, or I121DX Alarm Rack.

Cameras
The alarm is a Tamper Alarm from a R131VX Telemetry Receiver or I142SX converter.

Matrix
The alarm is a Sync Loss alarm from a SYSTEM X matrix.

The alarm is selected by clicking on the specific equipment and selecting the alarm input, or type.

Several alarms can be added by clicking on the text *0 Alarm*, and clicking on the *OK* button.

Monitor Text
Type in the alarm identification text displayed on the alarm monitor. Maximum 15 characters are available.

Camera
The alarm camera to be displayed.

Mon Priority (Monitor Priority)
Select the monitor(s) that should display the alarm camera(s).

If only one monitor is selected (Priority 1 monitor), the alarm camera will either be displayed, put in a queue, or sequenced on this monitor, depending on the parameters programmed in the advanced alarm setup.

If more alarm monitors are defined (Priority 2, 3 or 4), the alarm camera will be displayed on the first free monitor, if a higher priority alarm already is displayed on the Priority 1 monitor.

Source
Opens the plugin associated with the Alarm. Program the Alarm Setup part of the plugin, to match the required action for the alarm. Please see the separate chapter on the plugin for more information.

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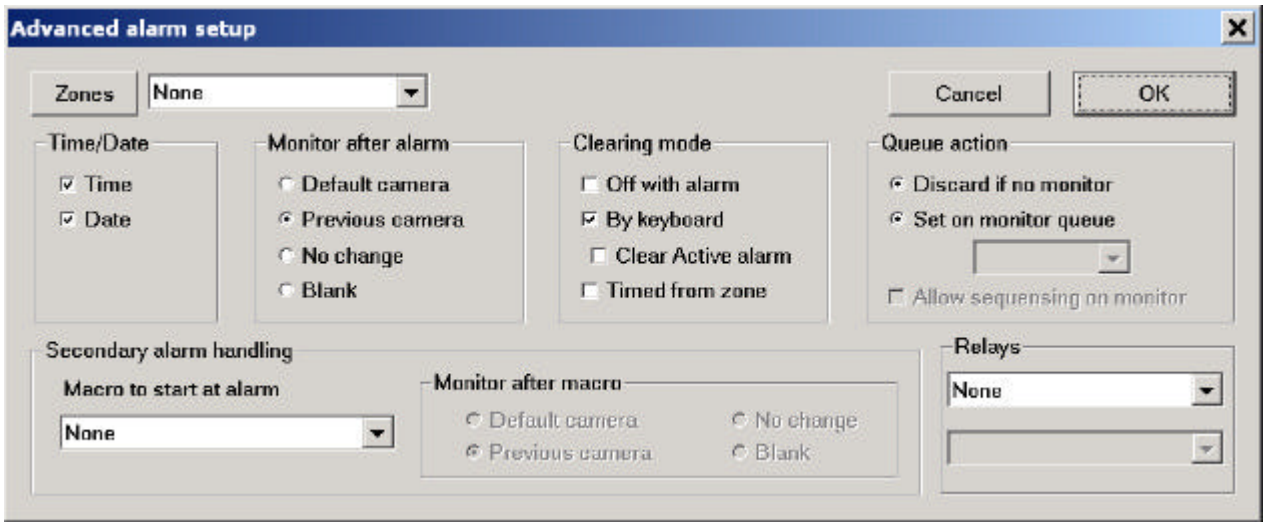
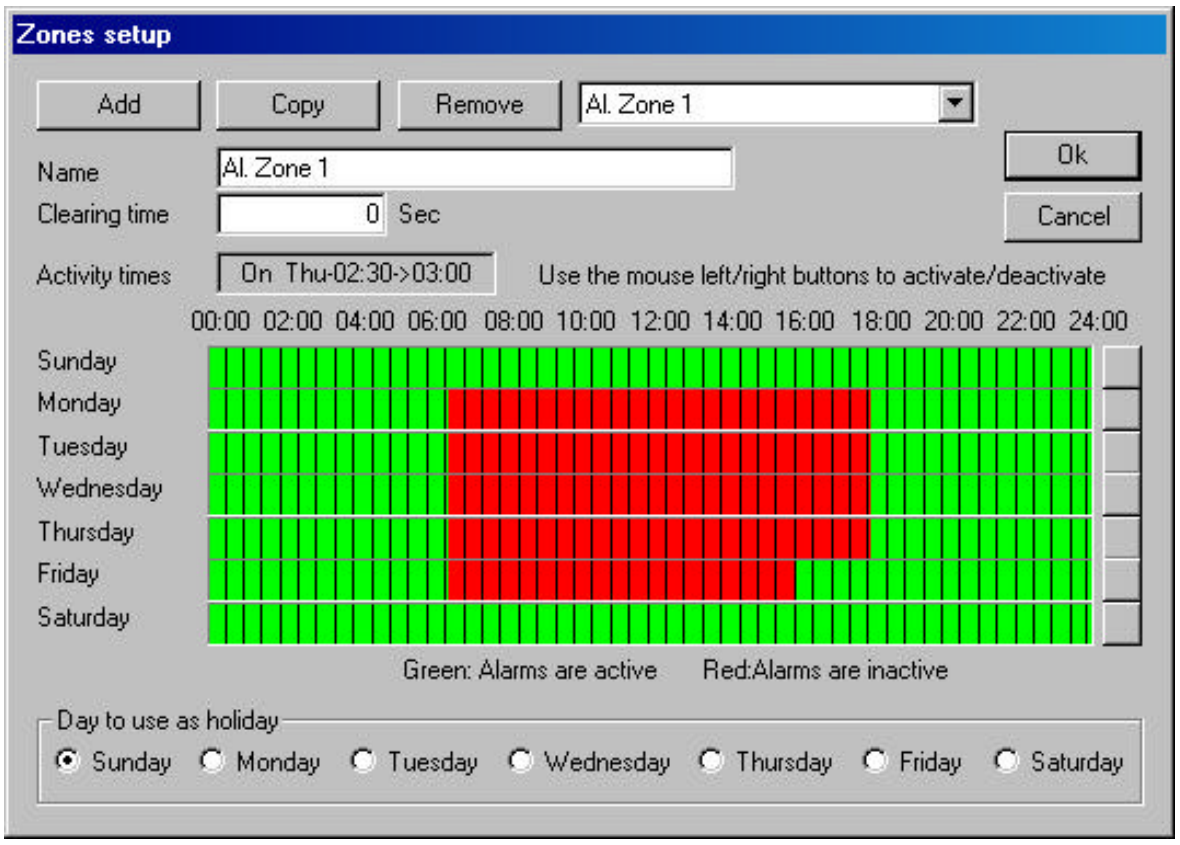
Advanced Alarm Handling

Clicking the *Advanced* button, will open the advanced part of the alarm handling.



Zones

Clicking on the Zones button, will bring up the Alarm Zones menu. Up to 8 different zones can be defined.



Select a zone to modify, or click *Add* to add a new zone.

Name

Key in a name to identify the zone.

Clearing time

If timed clearing mode is selected in the *Advanced Alarm Setup*, alarms associated with this zone, will be cleared automatically after the specified clearing time. Maximum time is 65535 seconds (18 hours 12 min. and 15 sec.)

Activity scheme
A week timer is available for each zone. Alarm detection can be enabled/disabled in 30 minutes intervals.

Use the right/left mouse keys to enable (green) or disable (red) the alarm zone intervals.

The blank buttons to the right of each day, is used to enable/disable an entire day.

Green: Alarms are active (enabled).

Red: Alarms are inactive (disabled).

Day to use as holiday
Set which day - in Alarm Zone 1 - should be used as holiday. Holidays are defined in the K111DX keyboard, please see the K111DX Installation Manual for details.

Time/Date
Select if time and/or date should be displayed on the alarm monitor.

Monitor after alarm
Select the monitor state after all alarms are cleared.

Default camera: The default camera defined in Monitor setup.
Previous camera: The camera displayed prior to the alarm(s).
No change: The alarm camera will stay on the monitor.
Blank: The monitor will blank (no camera).

Clearing mode
Select how the alarm(s) should be cleared.

Off with alarm: The alarm(s) are automatically cleared, when the alarm contact resets.
By keyboard: The operator has to press the *Alarm* key on the keyboard.
Clear active alarm: Select if it should be possible for the operator to clear alarms that are still active.
Timed from zone: Alarm(s) clears automatically after the time set in the alarm zone.

Queue Action
Define what should happen if the priority monitors are controlled by other (higher priority) alarms.

Discard if no monitor: If there are no lower priority monitors free, or defined, the alarm will be scrapped.
Set on monitor queue: If there are no lower priority monitors free, or defined, the alarm will be set on queue on the monitor selected in the drop-down menu.
Allow seq. on monitor: If a high priority alarm is controlling the alarm monitor, and a lower priority alarm is activated, the lower priority alarm will be sequenced with the high priority alarm, if *Allow sequencing on monitor* is selected for the high priority alarm.

Secondary alarm handling
In order to e.g. have more cameras displayed on more monitors, PTZ cameras going to presets, AUX relays activated, etc., an alarm can start a macro (defined in the Macro setup).

Please note, that the macro should not include monitors and/or PTZ control which are already used by alarms.

Monitor after macro

Select the monitor state after the macro has been terminated.

Default camera: The default camera defined in Monitor setup.
Previous camera: The camera(s) displayed prior to the macro.
No change: The camera(s) selected by the macro will stay on the monitor.
Blank: The monitor will blank (no camera).

Relays

Select an Alarm Box and relay, that should be activated by the alarm.

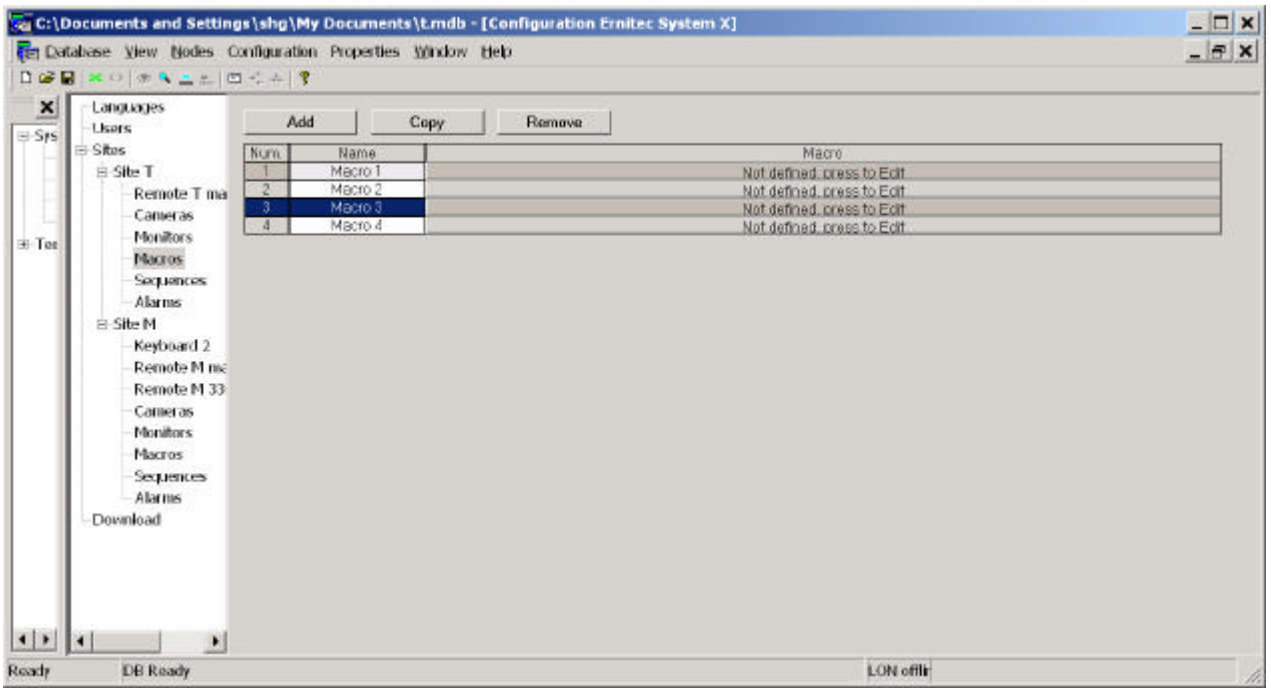
Please note that the relay is not deactivated when the alarm is cleared. The relay has to be deactivated by the operator, or timed via the relay box PlugIn.

Macros

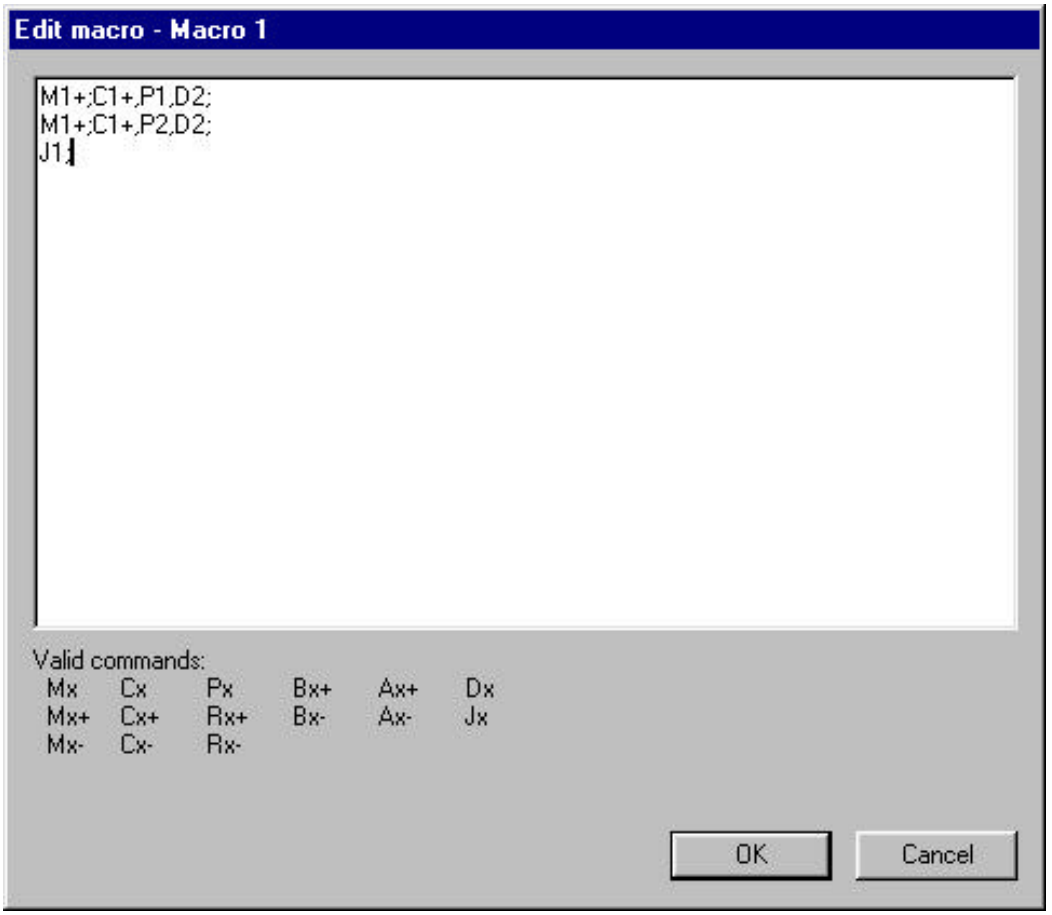
Clicking on *Macros*, will bring up the Macro Setup menu where the SYSTEM X macros can be programmed. Up to 64 macros can be programmed. Macros are started from the SYSTEM X keyboard, or by alarms.

Macros are used to perform automated sequences of operations.

Do not include alarm monitors in the macros.



Click on a macro to modify an existing macro, or click on *Add* to add a new macro.



Macro Commands

The following commands can be used when programming macros.

Mx: Selects monitor 'x'.
Mx+: Selects monitor 'x' and takes control of the monitor (used if PTZ control is needed).
Mx-: Releases control of monitor 'x'.

Cx: Selects camera 'x' on the previously selected monitor.
Cx+: Selects camera 'x' and takes PTZ control.
Cx-: Releases PTZ control of camera 'x'.

Px: Calls preset 'x' on the selected PTZ camera.

Rx+: Activates AUX relay 'x' on the selected PTZ camera.
Rx-: Deactivates AUX relay 'x' on the selected PTZ camera.

Sx: Start camera sequence 'x' on the selected monitor.

Bx+: Takes control of LON Box 'x'.
Bx-: Releases control of LON Box 'x'.

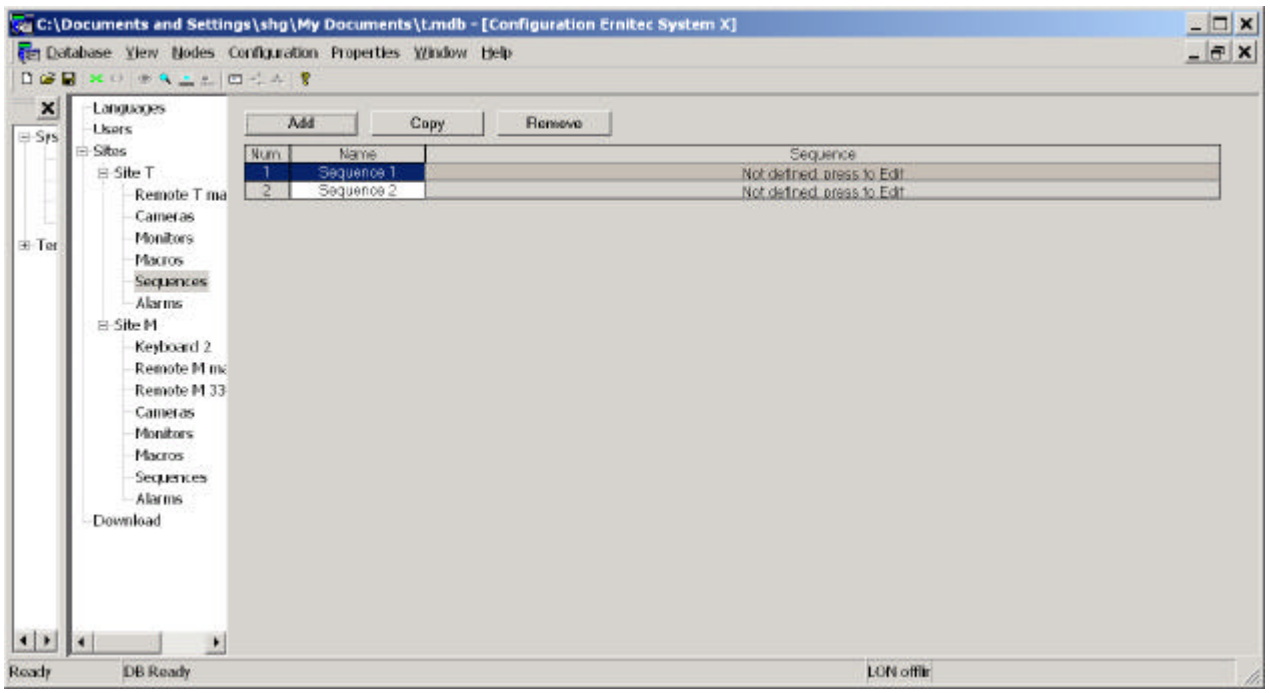
Ax+: Activates AUX relay 'x' in the selected LON Box.
Ax-: Deactivates AUX relay 'x' in the selected LON Box.

Dx: Makes a 'x' seconds delay in the macro.

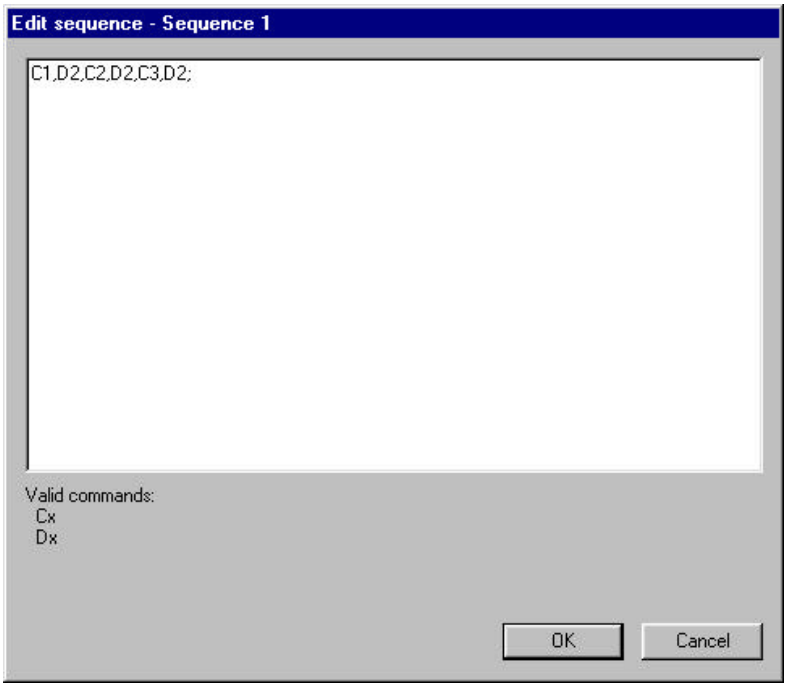
, : Comma, used to separate commands in the macro.
; : Semicolon, ends a macro line.
Jx: Jumps to macro line number 'x', and repeats the macro in a loop.

Sequences

Clicking on *Sequences*, will bring up the Sequence Setup menu where the SYSTEM X camera sequences can be programmed. Up to 64 sequences can be programmed.



Click on a sequence to modify an existing sequence, or click on *Add* to add a new sequence.



Sequence Commands

The following commands can be used when programming sequences.

Cx: Selects camera 'x'.

Dx: Makes a 'x' seconds delay.

, : Comma, used to separate commands in the sequence.

Upgrade Ernitec System X (System Plugin)

An existing version 1.x SYSTEM X installation, needs to be upgraded to version 2.x, in order to use the Remote System feature, and benefit from other new features in version 2.x.

Upgrading the system, can only be done in online mode.

Software Updates

If new software versions are issued by Ernitec A/S, they can be downloaded to the SYSTEM X nodes via the NodeManager *Upgrade Ernitec System X* plugin.

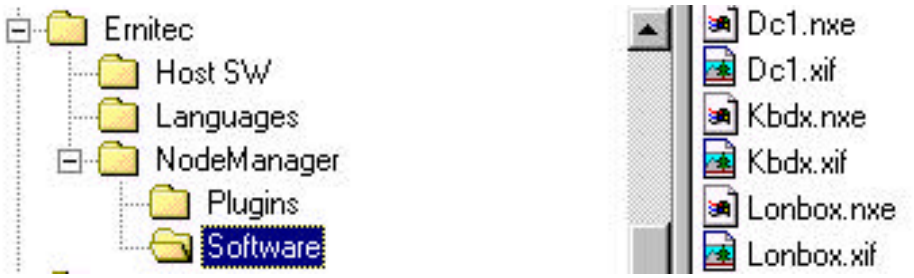
There are two types of software: Neuron software and Host software.

If new software is issued by Ernitec, it might be new Neuron software, new Host software, or both, depending on the type of new features added or bugs corrected.

Neuron Software

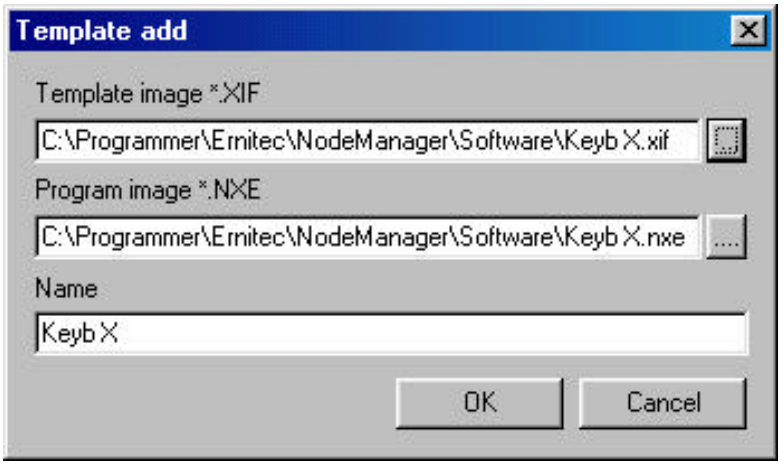
Neuron software is the software that provides the basic functionality for the SYSTEM X units, e.g. handling the network communication. The settings generated by the Neuron software can not be read or changed by the installer/user.

Neuron software consists of two files: *.xif and *.nxe. These files are placed in the folder: C:\Program files\ernitec\NodeManager\Software\



Loading Neuron Software

If not already loaded, load the new Neuron software in to NodeManager, select *Configuration -> Add -> Template*.



To load the *.xif file, click the button to the right of the *Template image* line.

The corresponding *.nxe file (*Program image*) is loaded automatically, when the *Template image* file is selected.

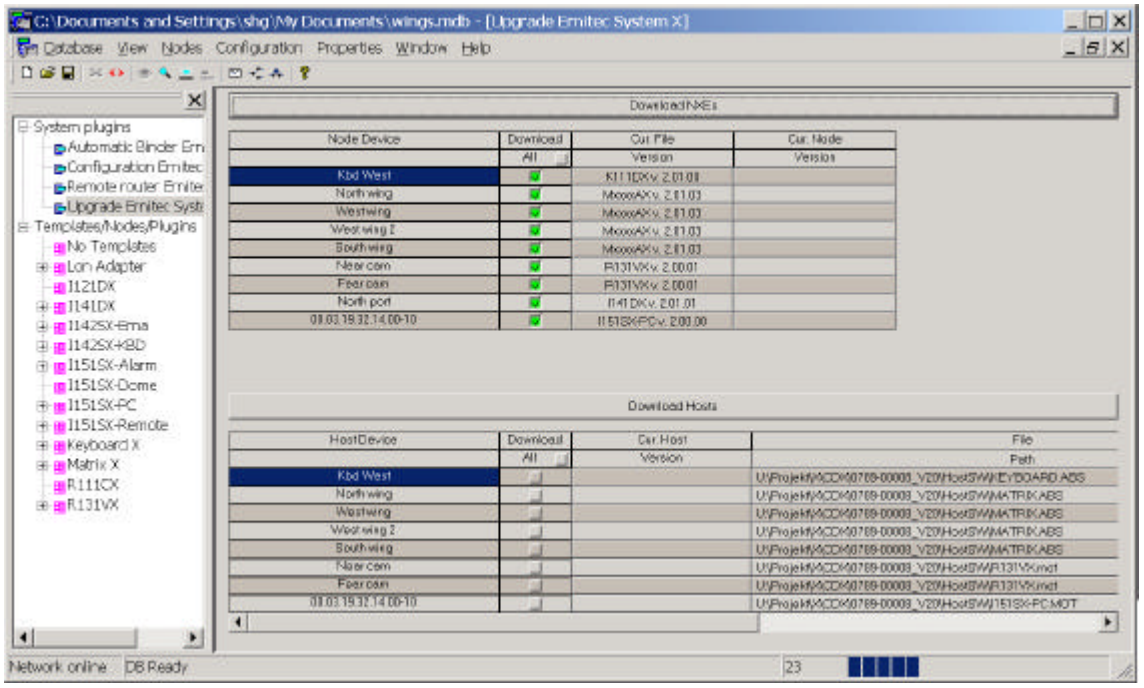
Host Software

Host software is the application software that provides the user interface, i.e. this is the software that controls all user functions. The settings generated by the Host software can be read and changed by the installer/user.

Host software are files with extension *.abs or *.mot. These files are placed in the folder: C:\Program files\Ernitec\Host SW\

Downloading software

Double-clicking on *Upgrade Ernitec System X*, will open the menu from where Neuron and Host software can be downloaded.



The top table lists the System X units which has Neuron software.

Cur. File Version is the version of the software on the computer.

Cur. Node Version is the version of the software in the node.

Click on the text *Version* (4th column) to read the versions from the SYSTEM X units. NodeManager will read the versions and compare them with the versions on the computer. Units with different version will be marked for download.

Verify that the correct units are marked for download, and click the *Download NXE's* button, to start the download.

IMPORTANT: *After downloading Neuron software, always run AutoBind (see page 20).*

Units with PlugIn: *After downloading Neuron software, and running AutoBind, open the PlugIns for the specific units and download settings again.*

Please note: Pentium II Class computers are too slow for several NXE downloads at the same time. NodeManager will detect the Pentium Class, and display a warning to update only one unit at a time.

The bottom table list all units which has Host software.

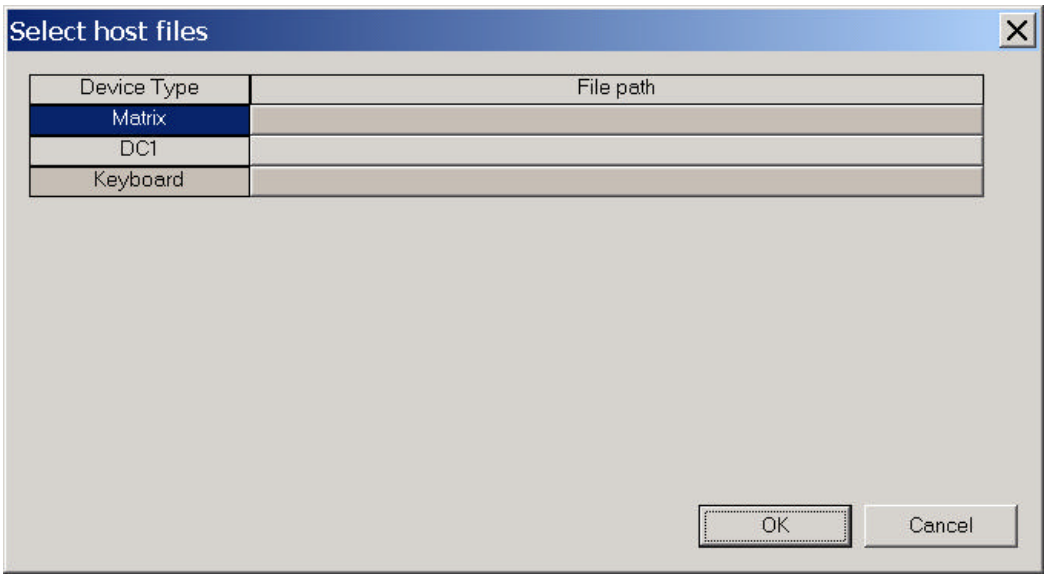
File path tells where to find the Host software to download, click on the button and navigate to *c:\program files\ernitec\Host SW* and select the appropriate file. Selecting a wrong file will not harm the unit - but it will of course not work.

Cur. Host Version is the version of the software in the node.

Click on the text *Version* (3rd column) to read the versions from the SYSTEM X units.

Mark the units that needs to be updated with new Host software, and click the *Download Hosts* button.

In case of downloading to many similar units, click the text *Path* (4th column) to open a menu where it is possible to select Host software for more units.



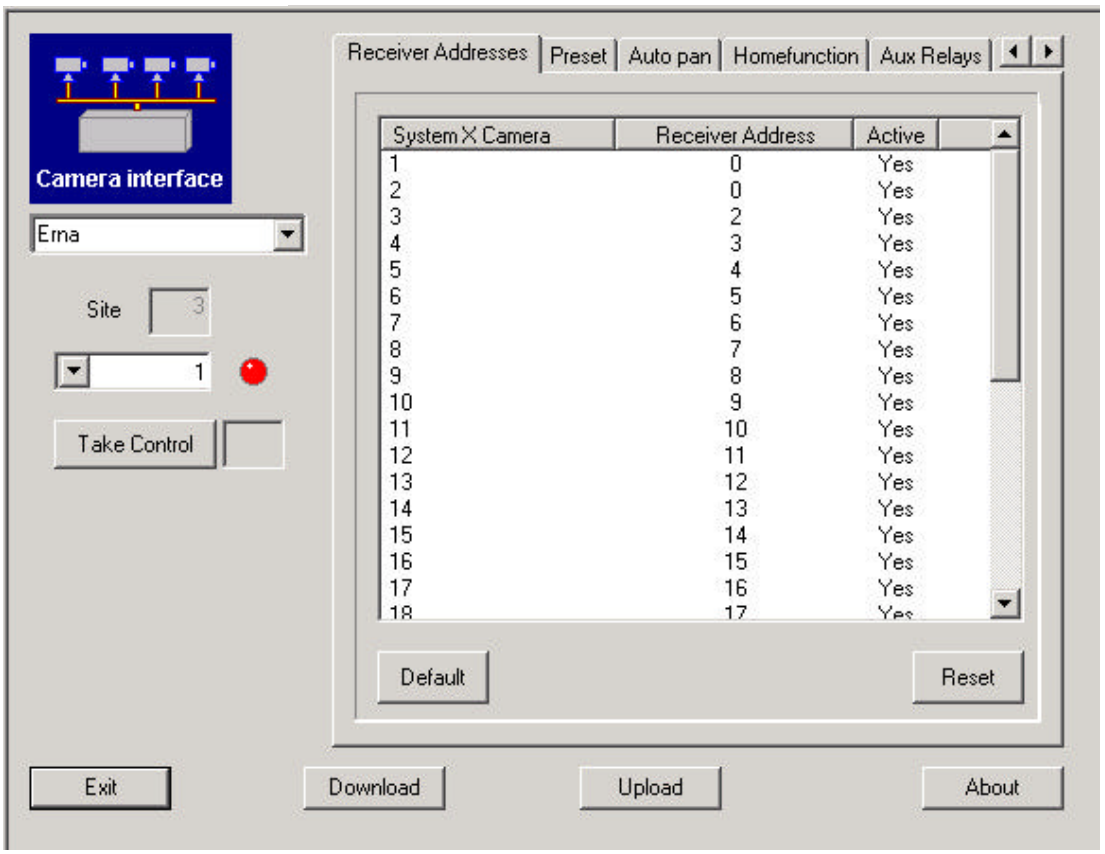
Click *OK* when done.

Device Plugins

Dome/PTZ Interface (I151SX-DOME PlugIn)

Each I151SX-DOME interface box connected on the LON Network has its own Plugin, where parameters can be programmed and downloaded.

In the Node tree, select the interface box, and double-click on the *I151SX-Dome plug-in* icon, to open the Plugin.



Take Control

Click the *Take Control* button to take Control of the camera selected in the drop-down menu above.

Download

Click the *Download* button to update the I151SX-DOME with the changes made.

Upload

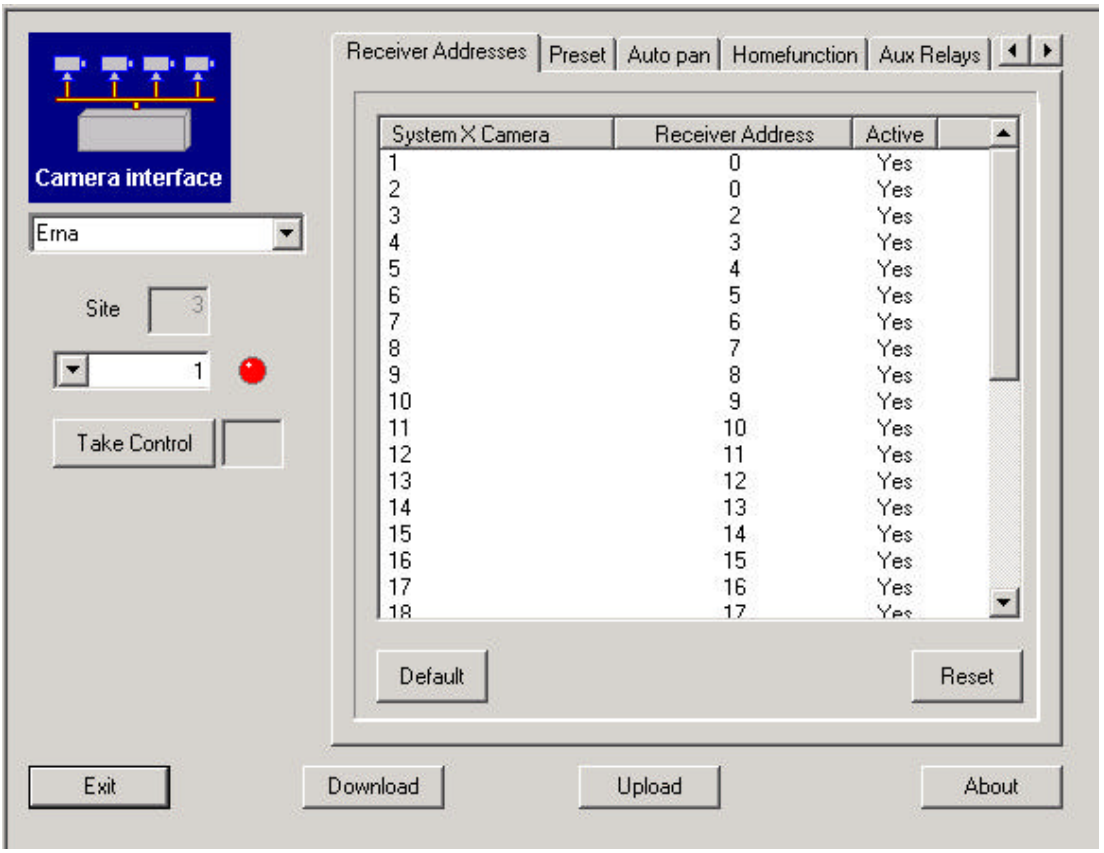
Click the *Upload* button to read the settings stored in the I151SX-DOME.
Please note that *Preset Tours* and *Home Function,* are not stored in the I151SX - but in the actual Receiver - and can therefore not be uploaded.

About

Click the *About* button to display the version number of the Plugin.

Receiver Addresses

Up to 32 Domes/Telemetry Receivers can be controlled via the I151SX Interface.



System X Camera

The camera numbers are equal to the camera inputs defined in the AutoBind Plugin, and used on the SYSTEM X matrix.
Double click on the camera number to open the address setup menu.

Receiver Address

The addresses set in the Domes/Telemetry Receivers.

Default

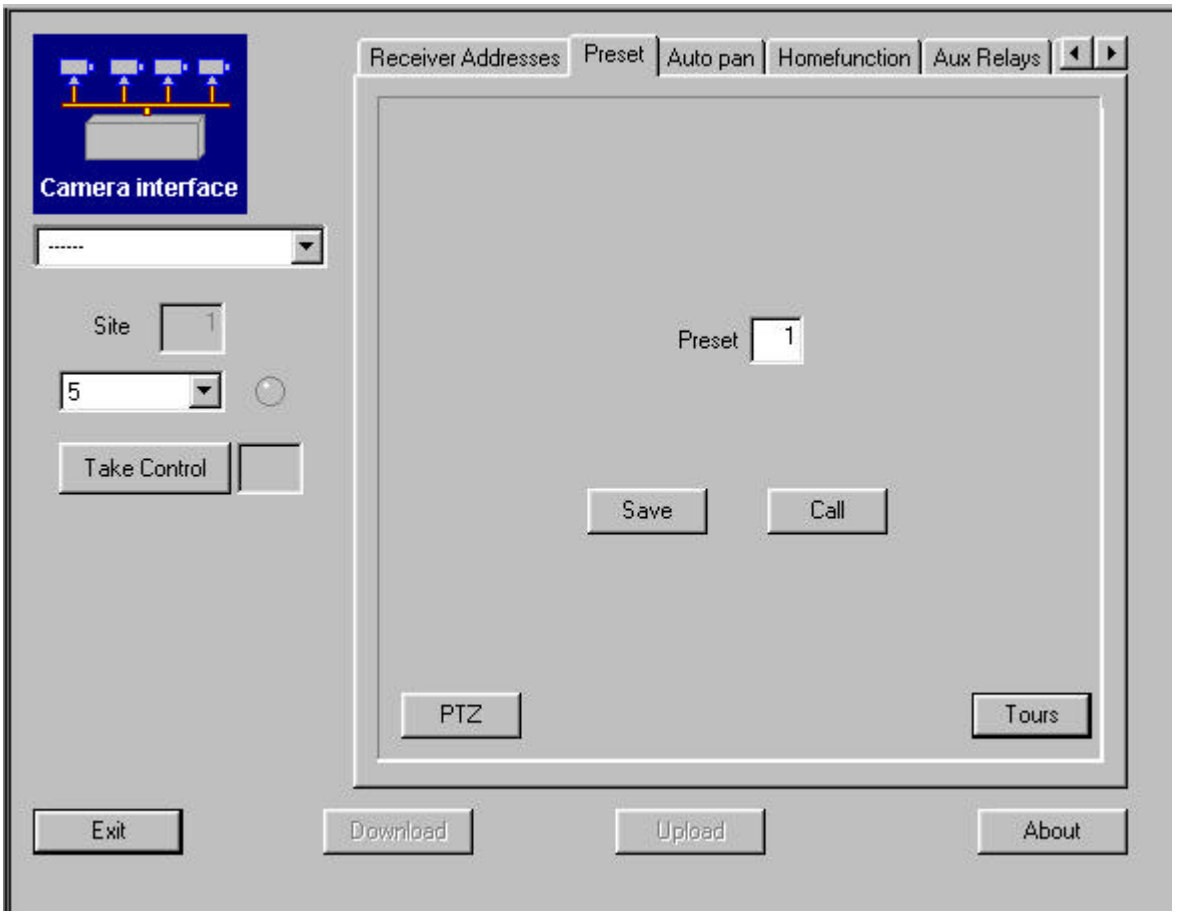
Sets the default Receiver addresses for the listed SYSTEM X cameras.

Reset

Resets all addresses to 255, and makes all addresses inactive.

Preset

The number of presets that can be stored, depends on the actual Dome/Receiver used.



To set presets, click the *PTZ* button to open the PTZ control menu. Move the camera to the required position, key in the number for the preset and click the *Save* button.

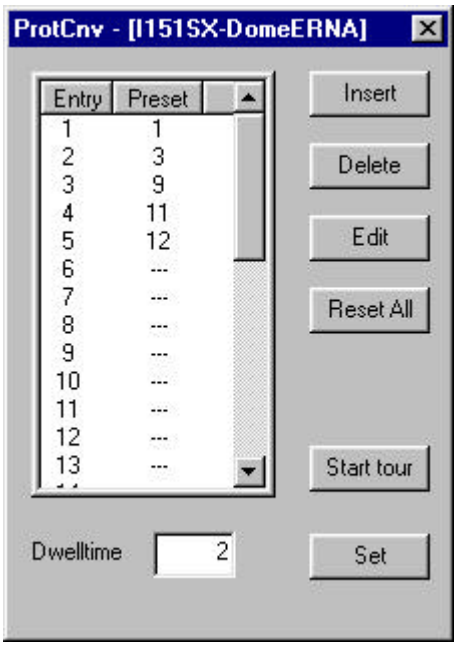
To call a preset, key in the preset number and click the *Call* button.

Please note that presets can only be saved/called, when the specific camera has been selected in the drop-down menu, the *Take Control* button has been clicked and the red LED has changed to green.

Tours

Depending on the type of Telemetry Receiver(s) used, preset tours can be programmed and downloaded.

Click the Tours button to program a preset tour for the selected camera..



Double-click on an entry number to edit on existing entry, or add a new.

Insert
Select an entry number, and click the *Insert* button, to insert a new entry. The selected entry number will be moved down one line (Right double-clicking the entry number, will have the same effect).

Delete
Select an entry number, and click the *Delete* button, to delete the selected entry.

Edit
Select an entry number, and click the *Edit* button, to edit the selected entry (left double-clicking the entry number, will have the same effect).

Reset All
Clicking the *Reset All* button, resets all entries to [---] (no entry).

Start tour
After having downloaded a preset tour, it can be tested by clicking the *Start tour* button.

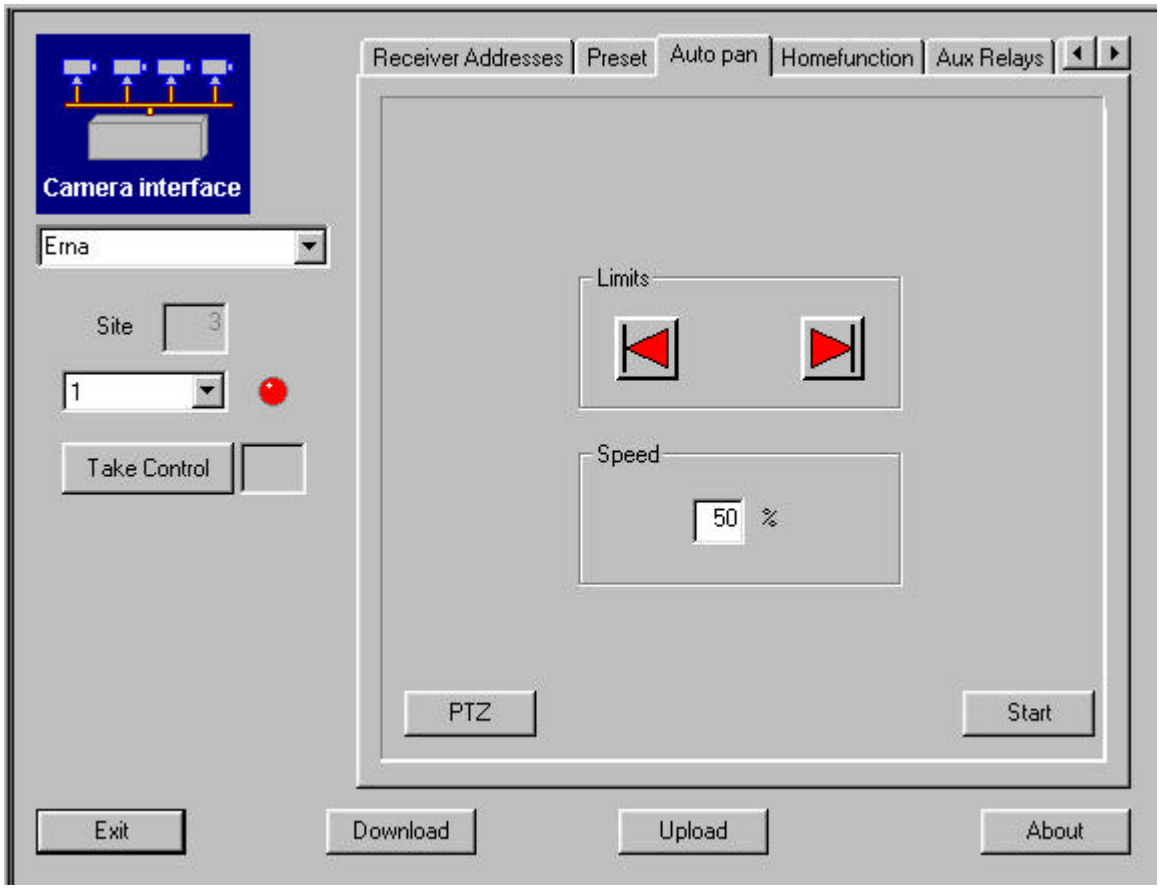
Dwell time
The time (in seconds) the camera stays on a preset, before continuing the tour.

Set
Click the *Set* button, to download the *Dwell time* to the selected camera.

After having programmed a preset tour, please remember to download it to the selected camera, by clicking the *Download* button.

Auto Pan

From this menu one Auto Pan tour can be programmed for the selected camera, if supported.



Remember to select the camera from the drop-down menu, and click the *Take Control* button, before setting the Auto Pan limits.

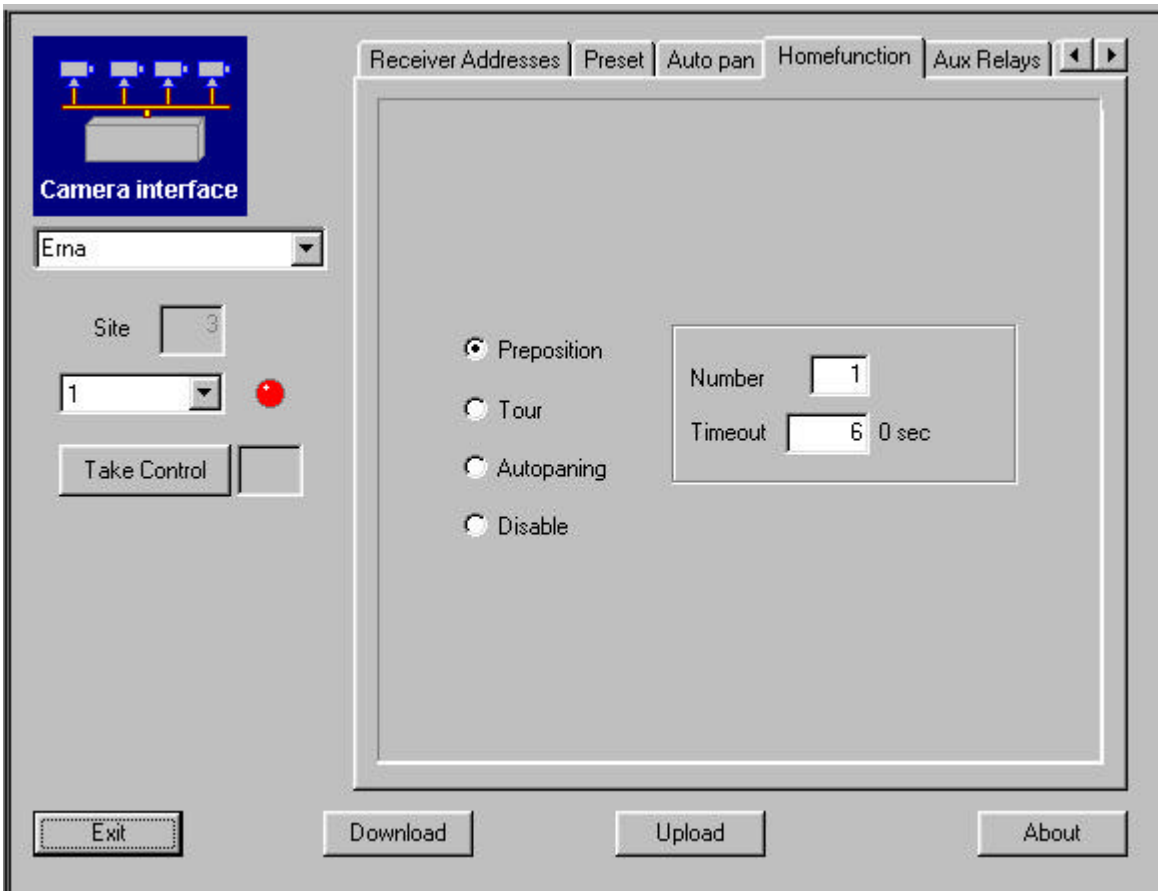
Limits
Click the *PTZ* button to open the PTZ control window. Move the camera to the left hand limit and click the *Left Limit* button. Move the camera to the right hand limit and click the *Right Limit* button.

Speed (if supported)
Set the speed (in % of maximum) at which the pan should travel between auto pan limits.

Start
By clicking the *Start* button, the auto pan tour can be tested.

Home Function

A Home Function can be programmed for the selected camera, if supported.



Preset
Key in the preset number that should be called, together with the inactivity time in seconds.

Preset Tour
Key in the preset tour number that should be started, together with the inactivity time in seconds.

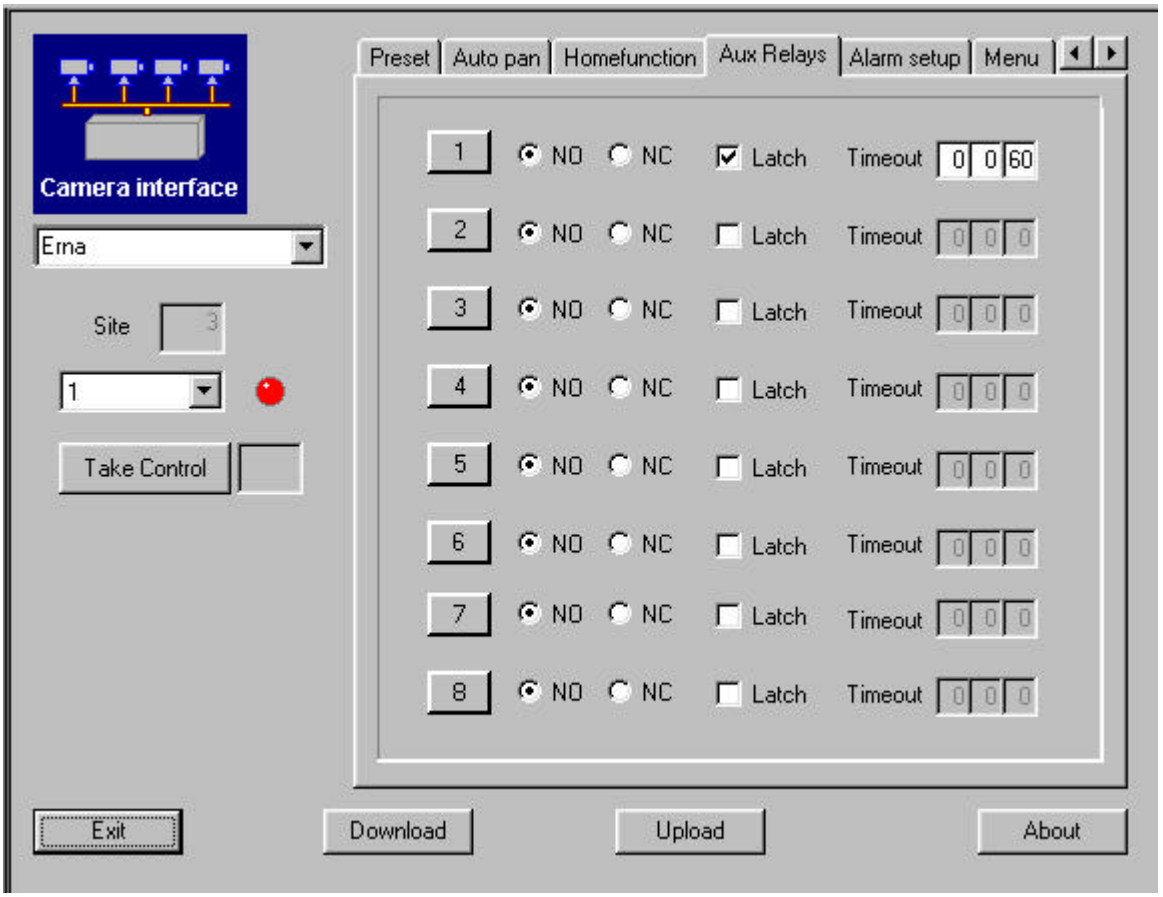
Auto Pan
Start the programmed Auto Pan tour, after the specified inactivity time in seconds.

Disable
Disables the Home Function feature.

Please Note: *The timeout specified is automatically multiplied with 10, e.g. if 6 is specified, it is actually 60 seconds, as in the example above.*

AUX Relays

In this menu, the operation of the AUX relays can be defined.



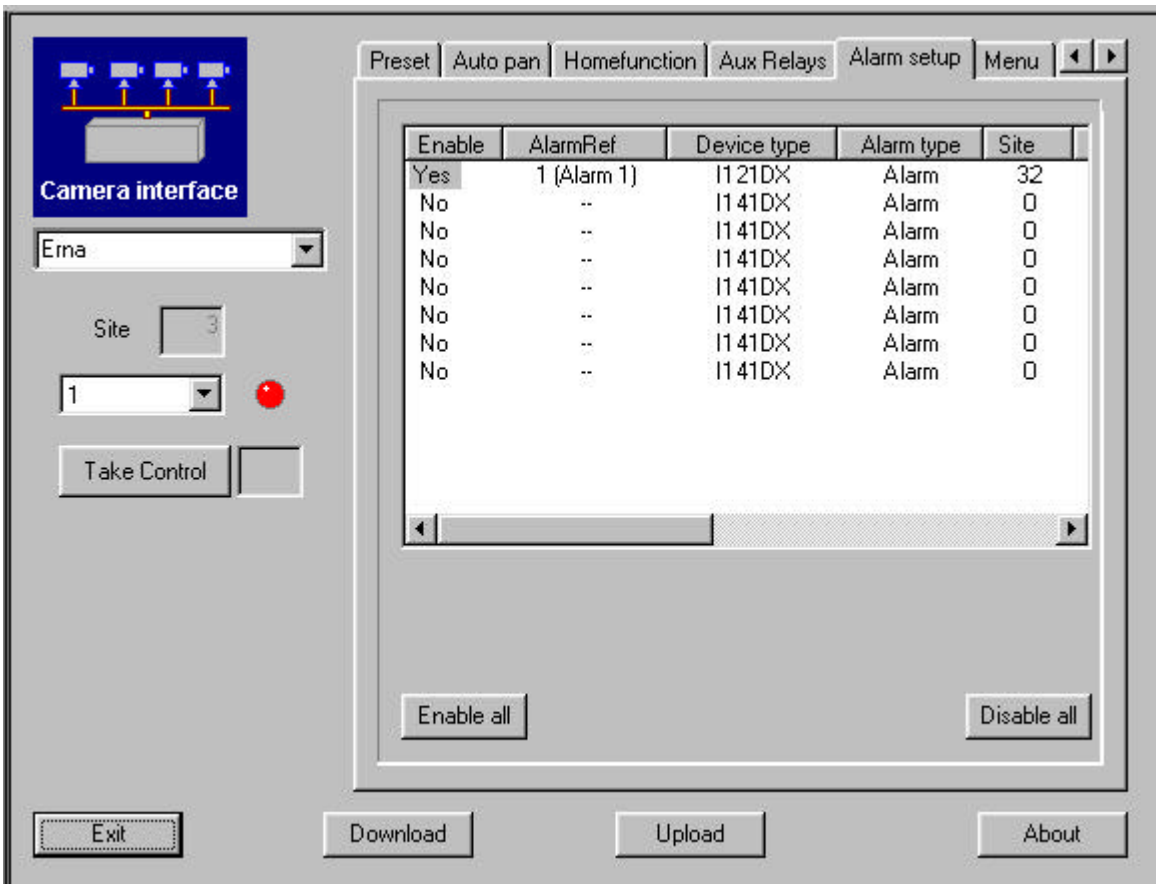
NO/NC
Define the inactive state of the relay: Normally Open (NO), or Normally Closed (NC).

Latch
Define if the relay should be latched (one press to activate, and another press to deactivate), or unlatched (follows the state of the AUX key).

Timeout
Define a timeout period for the relay, if programmed as latched. The time can be defined in hours (H), minutes (M) and seconds (S).
Setting the timeout to 0 (zero) disables the timeout.

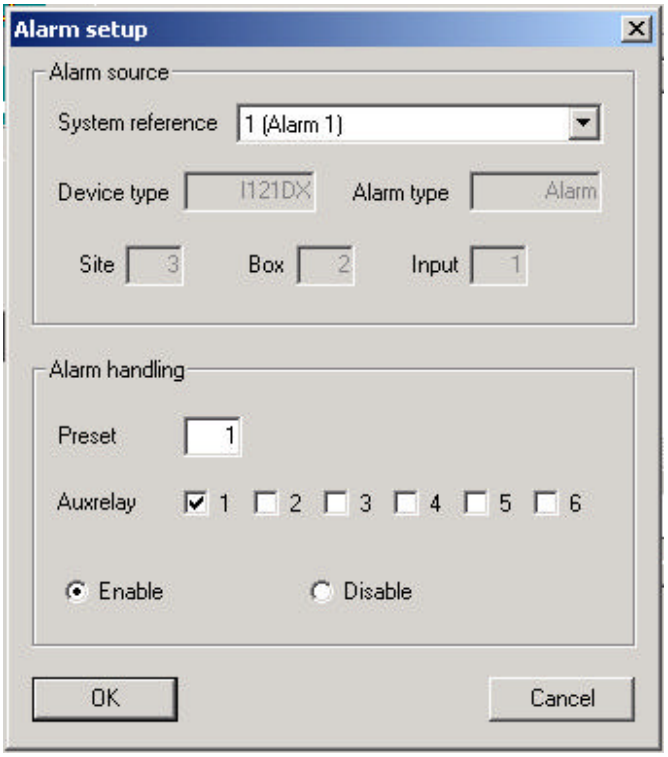
Alarm Setup

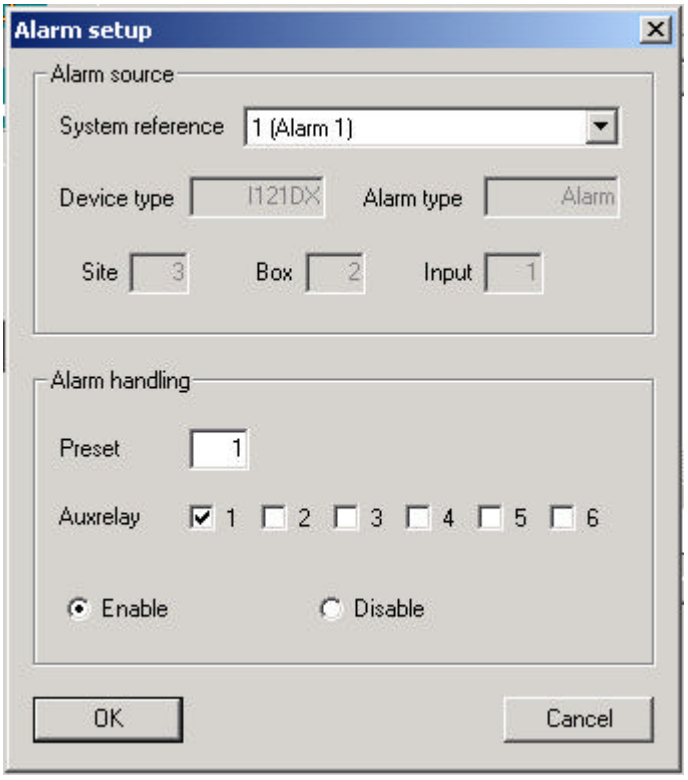
Define if alarms should call presets, on the connected cameras with preset features.
Alarm handling is programmed in the NodeManager S111SX.



Enable

Double click the Yes/No text, to open the alarm setup menu.





Alarm Source

System reference
Reference to the global alarm number used in the alarm setup, defined in the Setup PlugIn.

Device type (info only)
Shows the LON unit that the alarm originates from.

Alarm type (info only)
The type of alarm.

Box (info only)
Shows the LON Control ID for the alarm device.

Input (info only)
Shows the alarm input used on the alarm device.

Alarm Handling

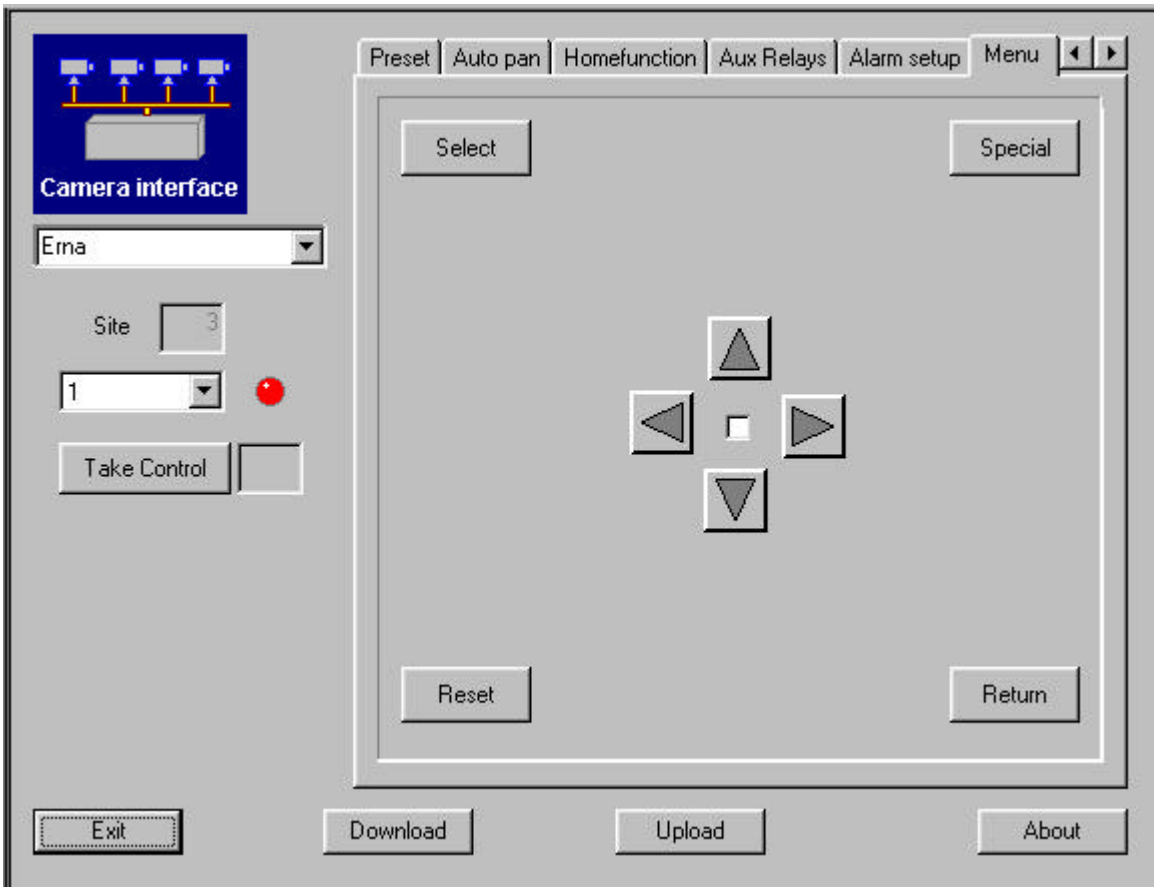
Preset
Define the preset to call when the alarm is activated.

AUX Relay
Define if an AUX relay should be activated on alarm.

Enable/Disable
Enable or disable if the I151SX Interface should react on the alarm, and call a preset on the selected camera.

Menu

Gives access to the Dome/Receiver menu system, if supported.



For details on programming the specific Dome/Receiver, please refer to the *I151SX-DOME manual*, and/or the documentation for the Dome/Receiver.

Menu
When the menu is selected, the selected Receiver/Dome, will enter programming mode.

Select
Used as an Enter/Set/Select key in the programming menus.

Special
Used if the specific Receiver/Dome requires a special command to enter sub-menus.

Reset
Reset all Receiver/Dome settings to factory default (only if supported by the Receiver/Dome).

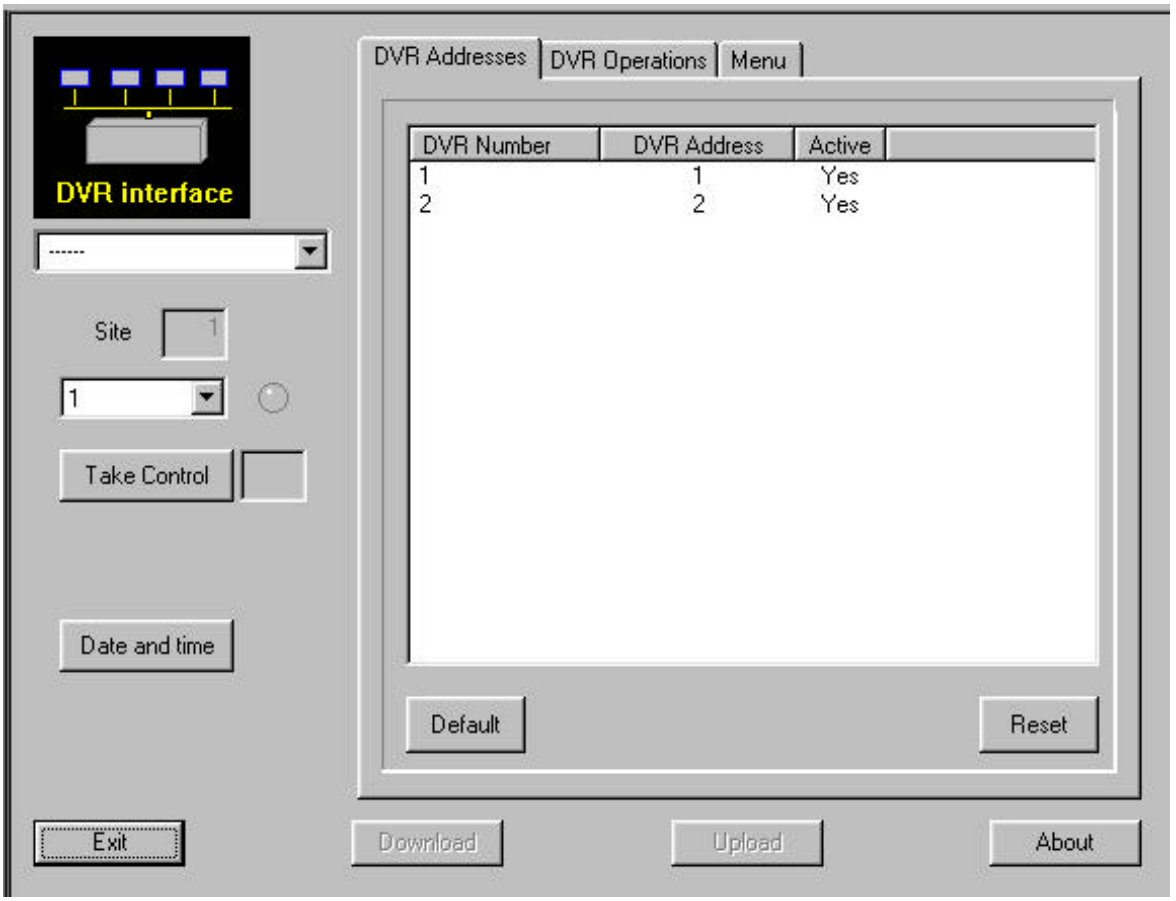
Return
Used to go back one menu page.

Arrow Keys
Used to navigate the programming menus. In some Receiver/Dome menus, right/left arrow keys are used to make selections.

DVR Interface (I151SX-DVR PlugIn)

Each I151SX-DVR interface box connected on the LON Network has its own Plugin, where parameters can be programmed and downloaded.

In the Node tree, select the interface box, and double-click on the *I151SX-DVR PlugIn* icon, to open the Plugin.



Take Control

Click the *Take Control* button to take Control of the DVR selected in the drop-down menu above.

Date and Time

Set time/date in all connected DVR's.

Download

Click the *Download* button to update the I151SX-DVR with the changes made.

Upload

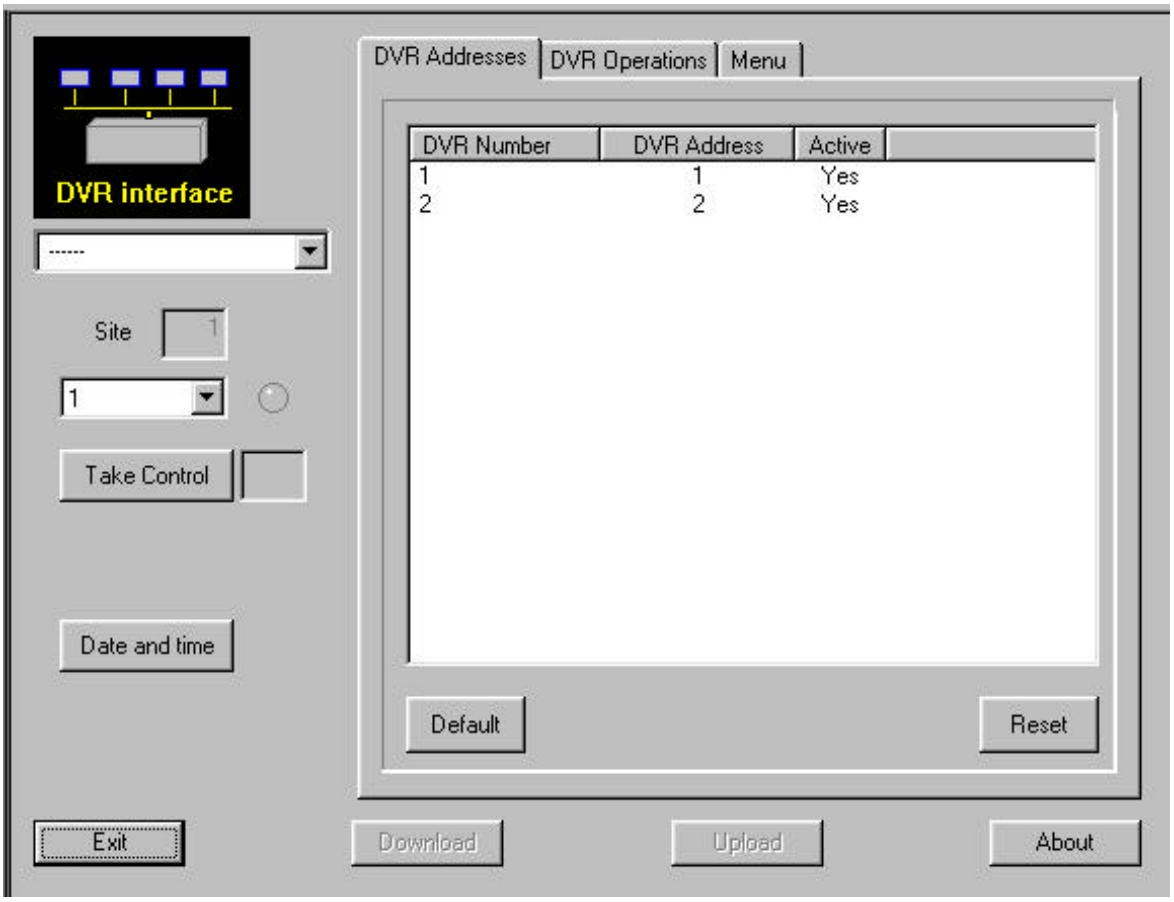
Click the *Upload* button to read the settings stored in the I151SX-DVR.

About

Click the *About* button to display the version number of the Plugin.

DVR Addresses

Set the addresses for the connected DVR's.



DVR Number

The DVR number defined in the AutoBind Plugin.
Double click on the DVR number to open the address setup menu.

Receiver Address

The addresses set in the DVR's. Must match the addresses programmed in the DVR's.

Default

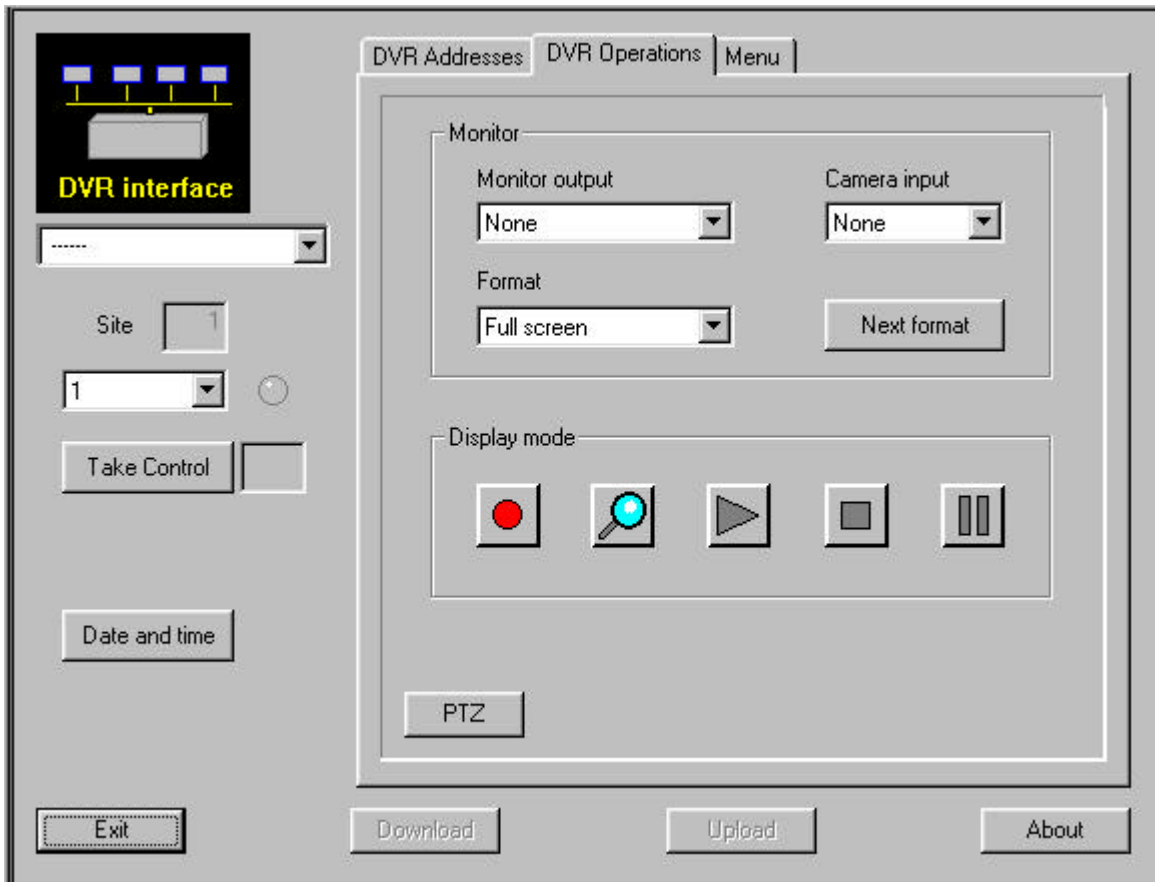
Sets the default addresses for the listed DVR's.

Reset

Resets all addresses to 255, and makes all addresses inactive.

DVR Operations

Basic DVR functions, for verification of correct connections and setup.



For detailed description of operations, please see the documentation for the DVR.

Monitor output
Select the monitor output on the DVR in control.

Camera input
Select a camera input on the DVR in control.

Format
Select split screen format for the main DVR monitor.

Next format
Cycles through all split screen formats.

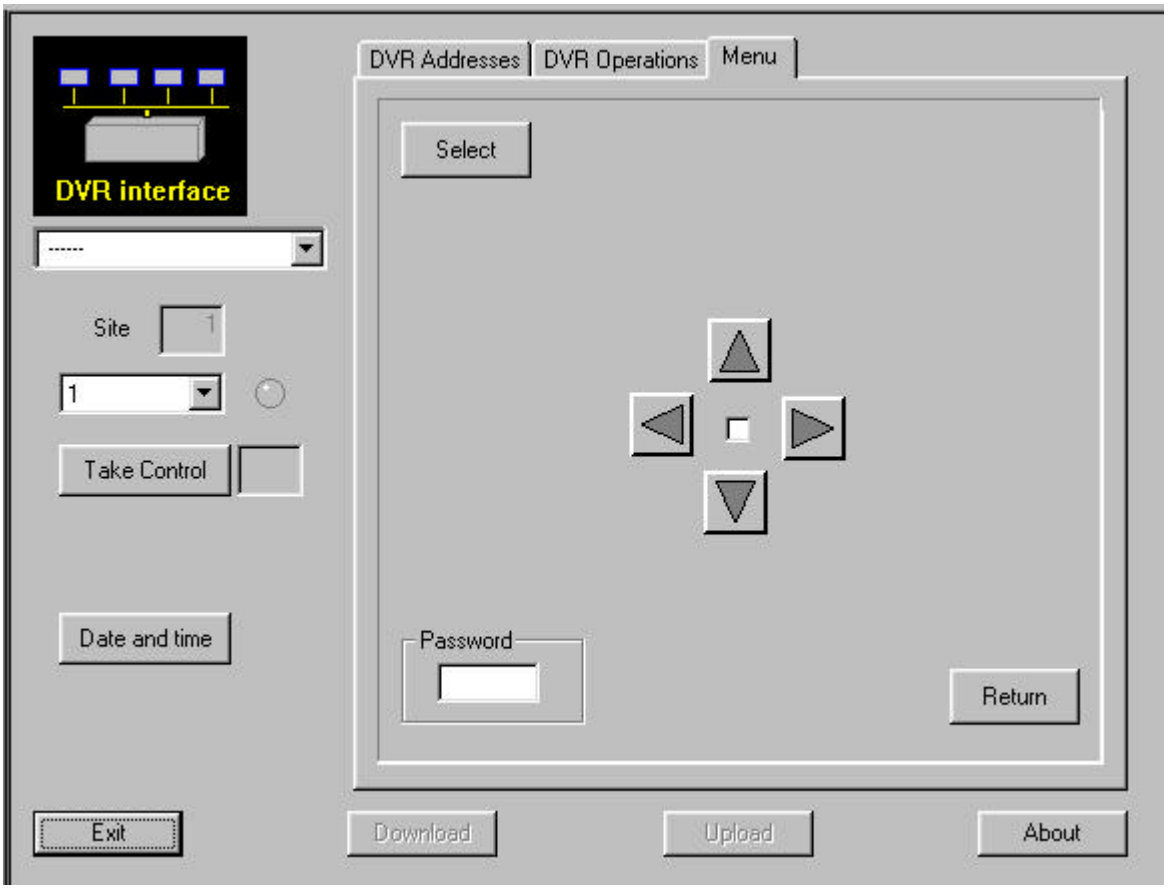
Display mode
Select between the following operations.

Record
Recording check
Playback mode
Stop recording
Freeze

PTZ
Digital zoom and pan/tilt.

Menu

Gives access to the DVR menu system. Not all menu functions may be supported.



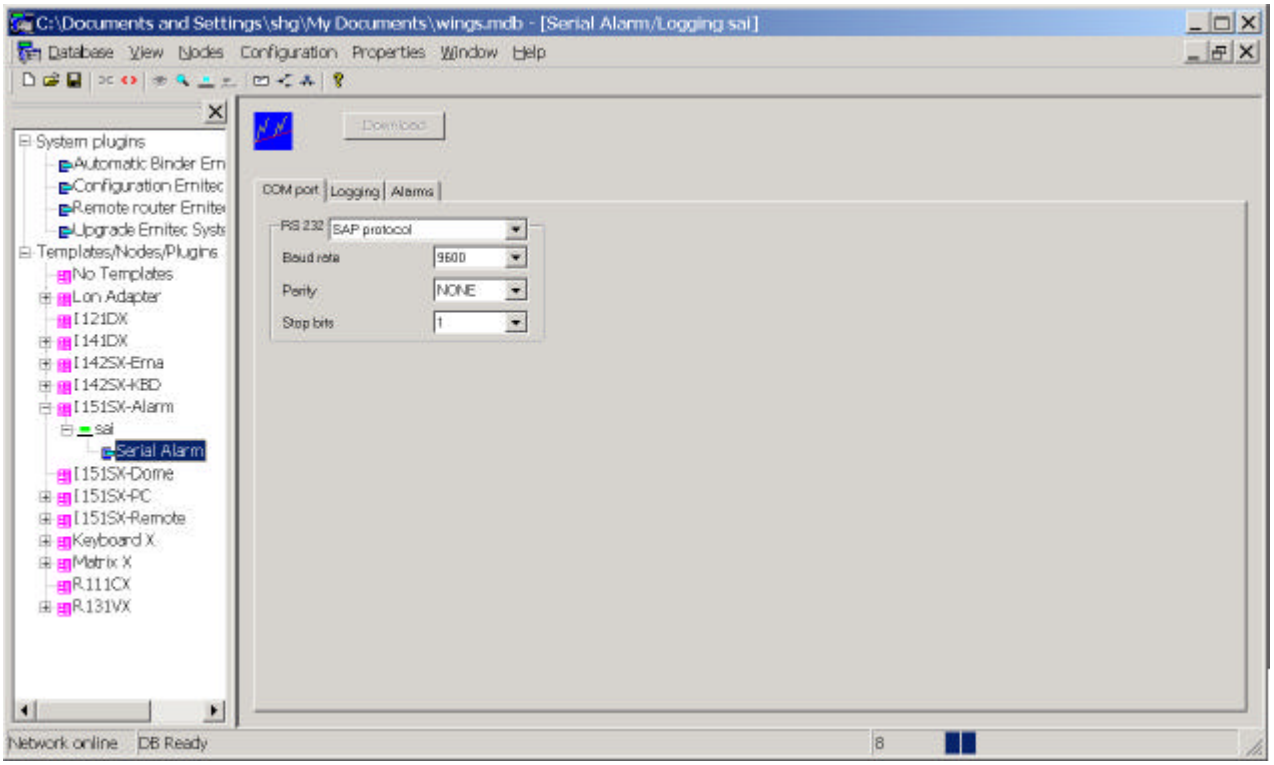
For details on programming the specific DVR, please refer to the documentation for the DVR.

Serial Alarms (I151SX-ALARM PlugIn)

Each I151SX-ALARM box connected on the LON Network has its own Plugin, where parameters can be programmed and downloaded.

In the Node tree, select the alarm box, and double-click on the *Serial Alarm* icon, to open the Plugin.

COM Port



RS232
Select the alarm protocol used.

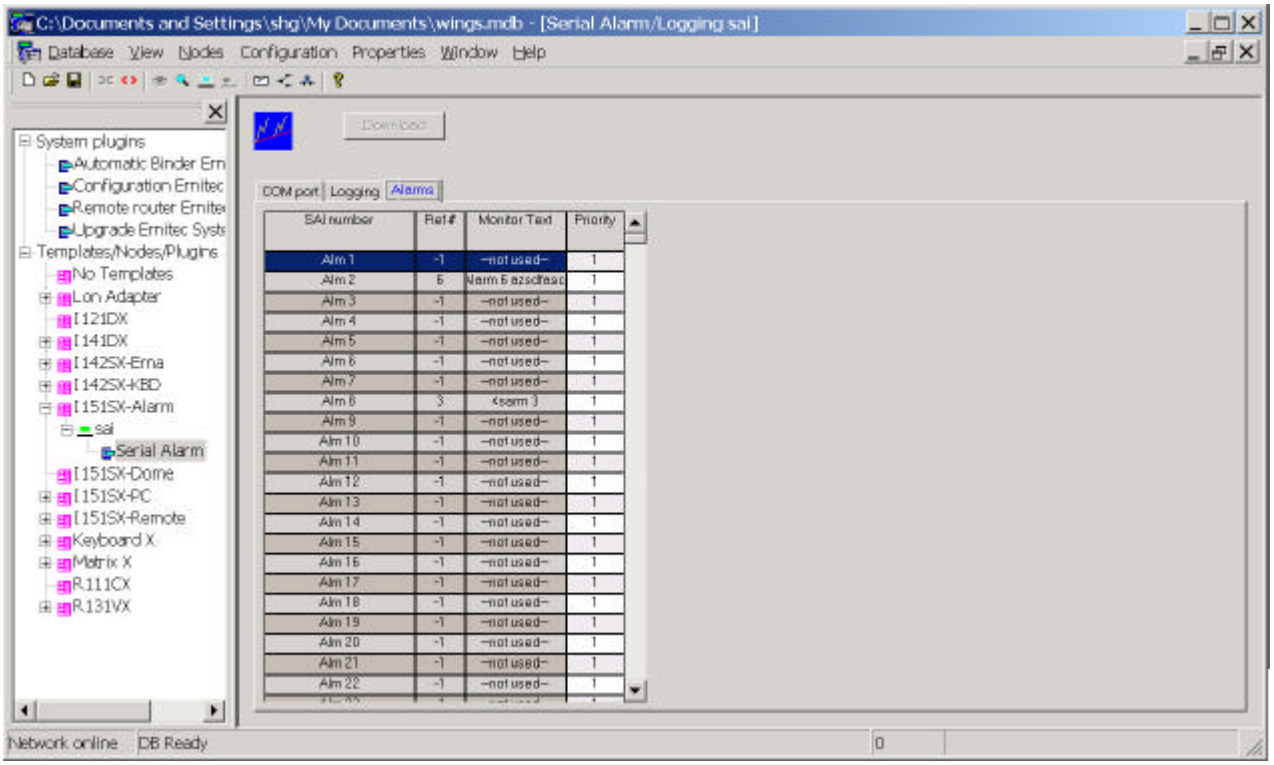
Options are:

- SAP (Serial Alarm Protocol)
- xSAP (extended Serial Alarm Protocol)
- IEC (IEC Alarm Protocol

For detailed information, please see the Installation Manual for I151SX-ALARM.

Baud rate/Parity/Stop bits
Select the RS232 data format that corresponds to the format used by the connected alarm equipment

Alarms



SAI number (info only)
A list of all available alarm inputs on the I151SX-ALARM.

Ref # (info only)
Global alarm number, refers to the alarms programmed in the *Configuration Plugin -> Alarms*

Monitor text (info only)
The alarm text displayed on the alarm monitor. The text is programmed in the *Configuration Plugin -> Alarms*.

Priority
The priority associated with the alarm. Valid priorities are 1-49, 1 being highest priority.

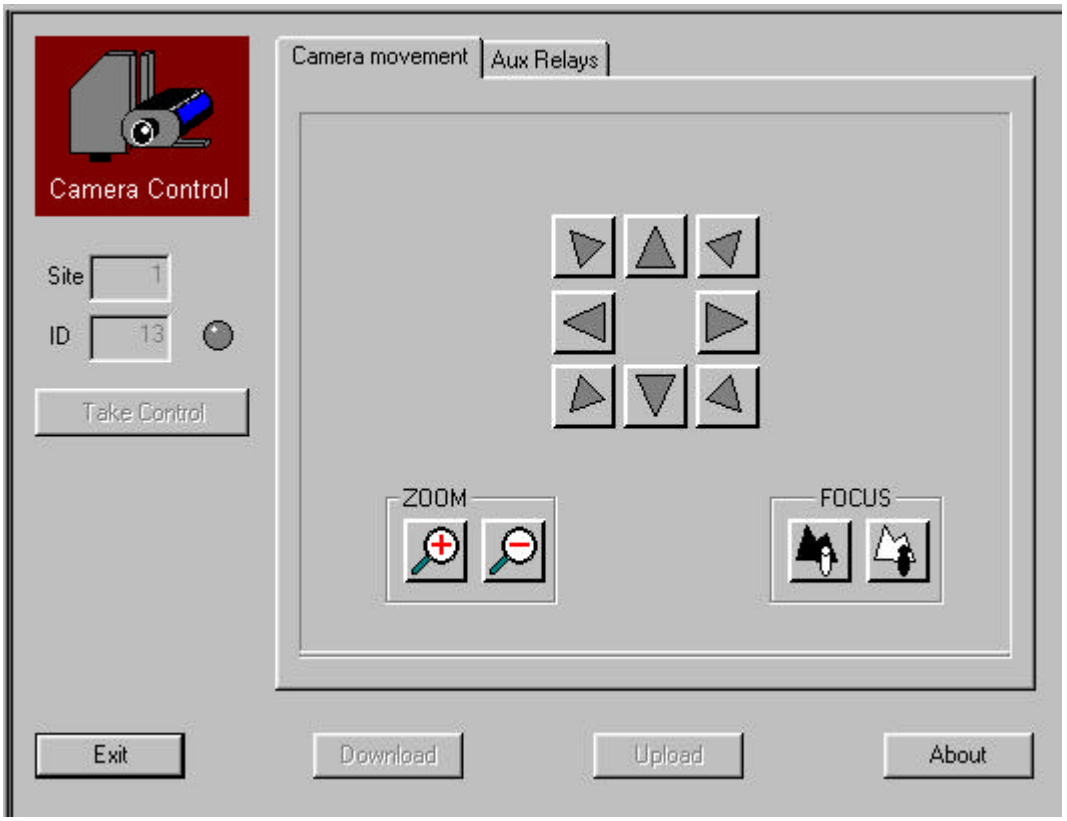
Logging

For future use.

PTZ Cameras (R111CX PlugIn)

Each R111CX Telemetry Receiver connected on the LON Network has its own Plugin, where parameters can be programmed and downloaded.

In the Node tree, select the PTZ Camera, and double-click on the *Ernitec R111CX PlugIn* icon, to open the Plugin.



Take Control

Click the *Take Control* button to take Control of the R111CX Telemetry Receiver.

Download

Click the *Download* button to update the R111CX with the changes made.

Upload

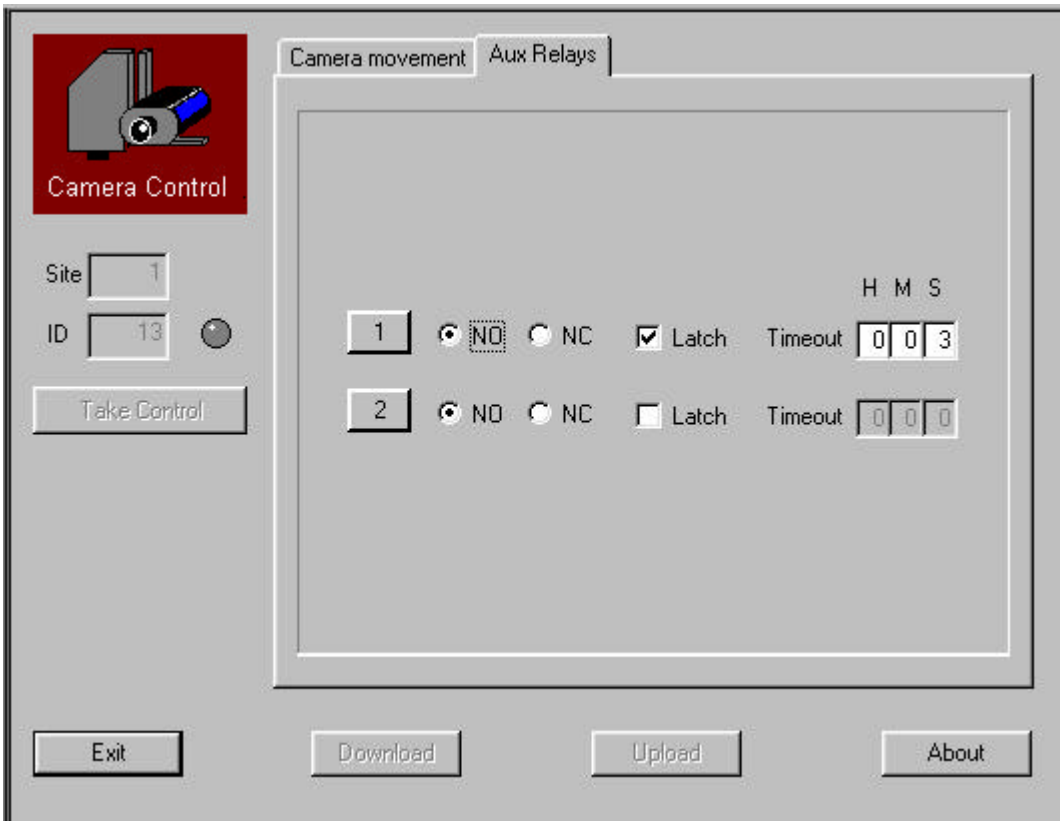
Click the *Upload* button to read the settings stored in the R111CX.

About

Click the *About* button to display the version number of the R111CX Telemetry Receiver Plugin.

AUX Relays

In this menu, the operation of the AUX relays can be defined.



NO/NC
Define the inactive state of the relay: Normally Open (NO), or Normally Closed (NC).

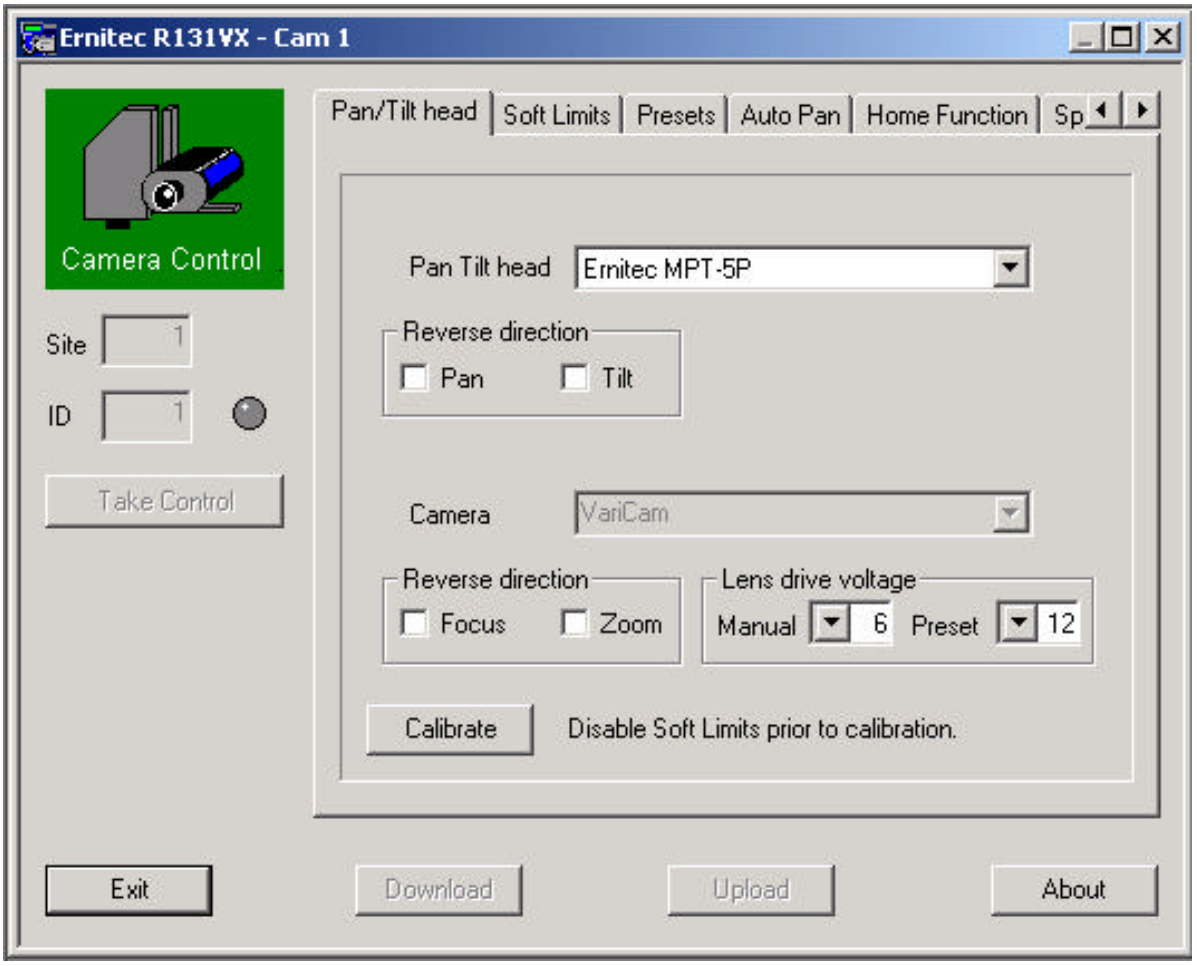
Latch
Define if the relay should be latched (one press to activate, and another press to deactivate), or unlatched (follows the state of the AUX key).

Timeout
Define a timeout period for the relay, if programmed as latched. The time can be defined in hours (H), minutes (M) and seconds (S).
Setting the timeout to 0 (zero) disables the timeout.

Preset PTZ Cameras (R131VX Plugin)

Each R131VX Telemetry Receiver connected on the LON Network has its own Plugin, where parameters can be programmed and downloaded.

In the Node tree, select the PTZ Camera, and double-click on the *Ernitec R131VX* icon, to open the Plugin.



Take Control

Click the *Take Control* button to take Control of the R131VX Telemetry Receiver.

Download

Click the *Download* button to update the R131VX with the changes made.

Upload

Click the *Upload* button to read the settings stored in the R131VX.

About

Click the *About* button to display the version number of the R131VX Telemetry Receiver Plugin.

Pan/Tilt Head

Pan/Tilt Head
Select the Pan/tilt head used. Supported heads are:

Ernitec MPT-5P
Molynx Mustang PT12
Prince 165
VideMech 555P
Conway C2020

Using other types of heads, may cause malfunction, or even damage to the SYSTEM X Telemetry Receiver.

Reverse direction (Pan/Tilt)
If, for some reason, the Pan/Tilt should operate opposite of normal, the direction of pan and tilt can be reversed. I.e. when the joystick on the SYSTEM X keyboard is pushed towards left, the pan will turn right, and vice versa.

Camera
For future use.

Reverse direction (Zoom/Focus)
If, for some reason, the zoom/focus should operate opposite of normal, the direction of travel can be reversed. I.e. when the zooming wide on the SYSTEM X keyboard, the zoom lens will zoom towards tele, and vice versa.

Lens Drive Voltage
Depending on the type of motorized zoom lens used, the Lens Drive Voltage can be set to match the zoom lens. Options are: 6VDC, 9VDC and 12VDC.

The voltage can be set individually for manual operation and for presets, if supported by the zoom lens used.

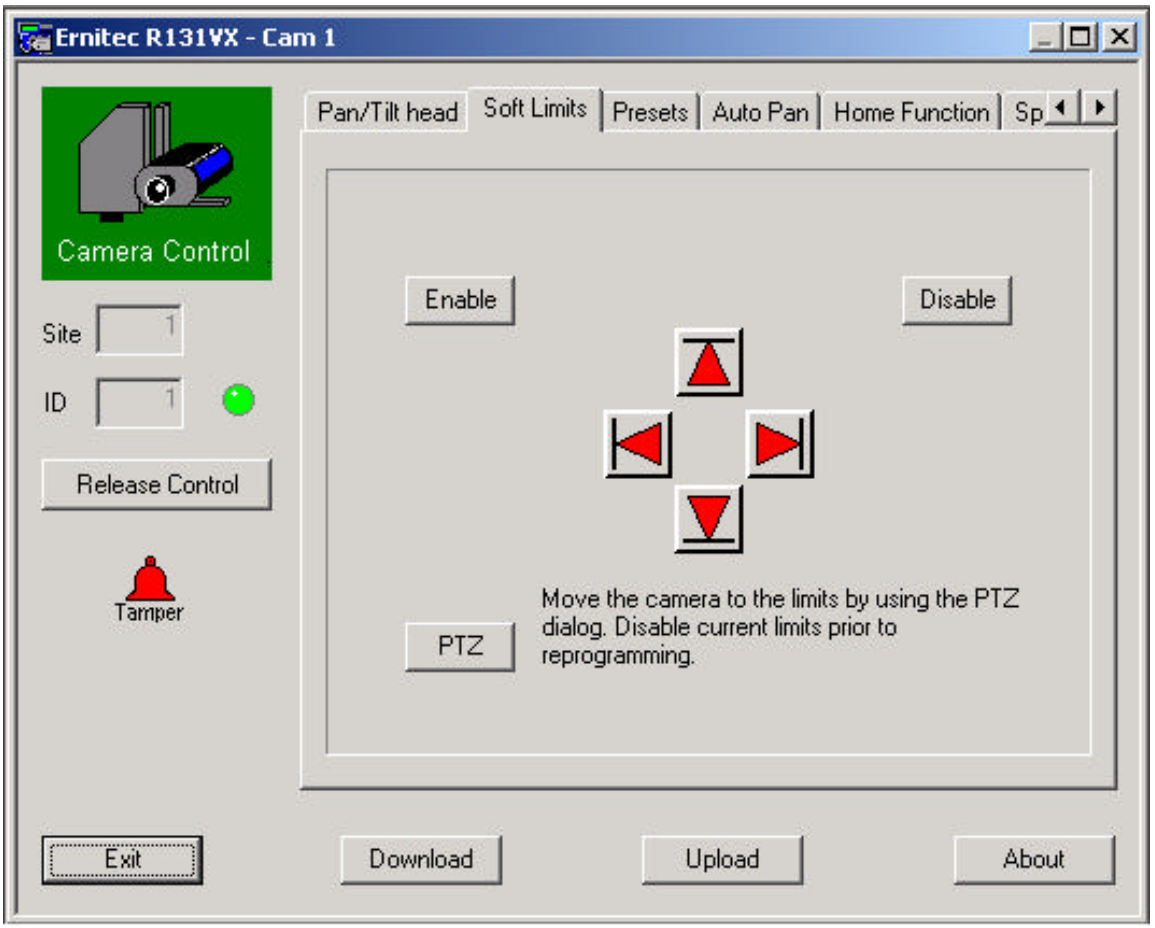
Calibrate
Clicking on the *Calibrate* button, will cause the PTZ camera to start a calibration routine to determine if wiring is made correct, and where mechanical end-stops are set. The calibration routine also improves accuracy on presets and privacy zones.

PLEASE NOTE: The pan/tilt will move to both pan and tilt end-stops, it is therefore very IMPORTANT that mechanical end-stops are set correct before starting the calibration routine. Otherwise the camera might hit the wall/pole where it is mounted resulting in damage to the wall/pole and/or PTZ Camera.

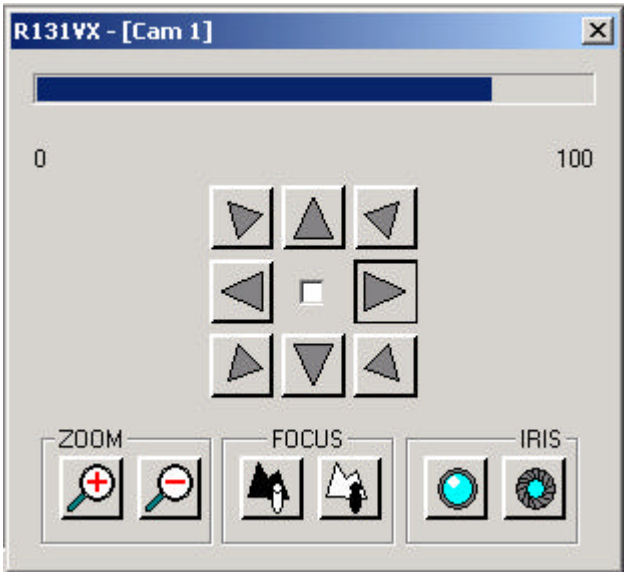
Soft Limits

Soft Limits can be used to set end-stops that differs from the hardware end-stops.

For safety reasons, hardware end-stops should ALWAYS be set, regardless of soft limits being used or not.



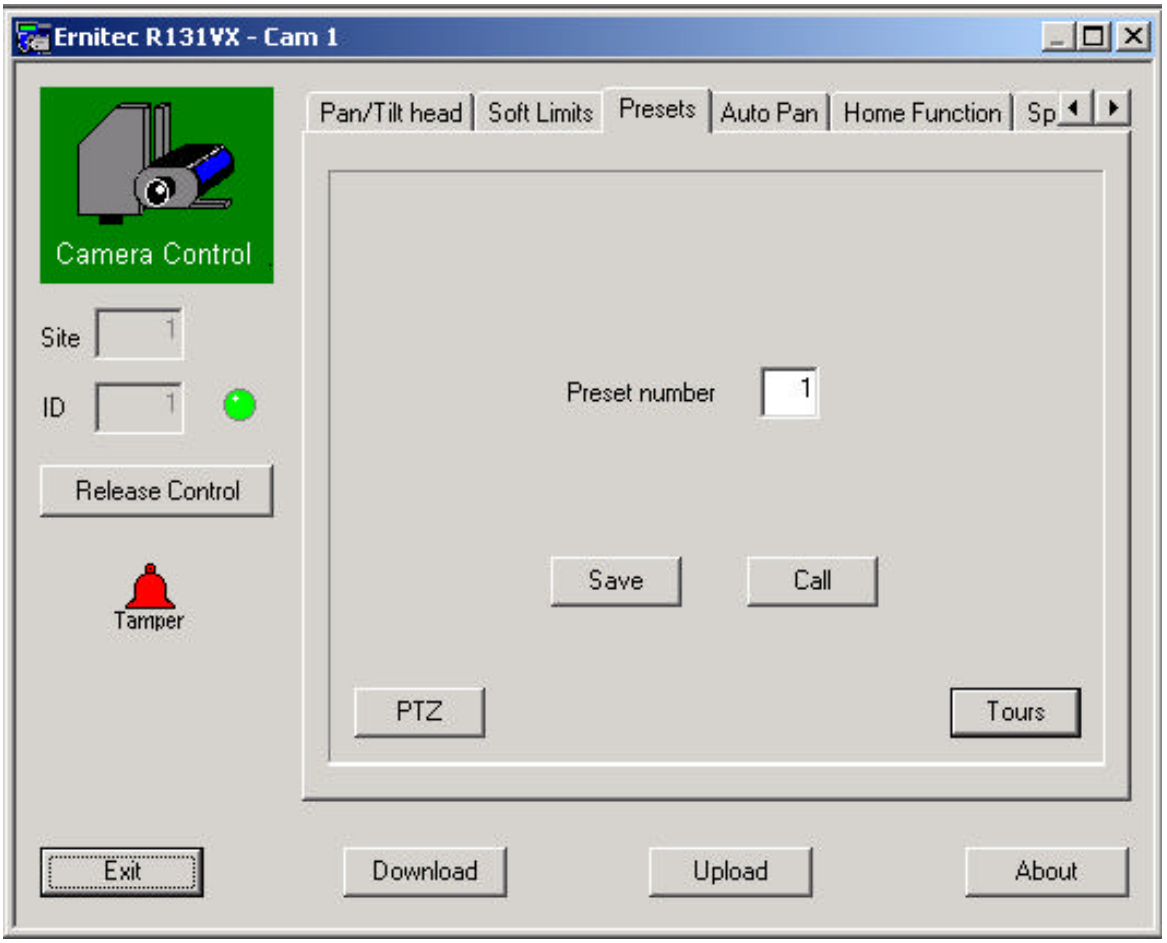
To set Soft Limits, click the *Disable* button and open the PTZ control window, by clicking the *PTZ* button.



Using the PTZ buttons, move the camera to the four required limits of travel, and click the corresponding *Soft Limit* button at each limit. Once all four limits are saved, click the *Enable* button.

Presets

Up to 128 presets can be stored.



To set presets, click the *PTZ* button to open the PTZ control menu. Move the camera to the required position, key in number for the preset and click the *Save* button.

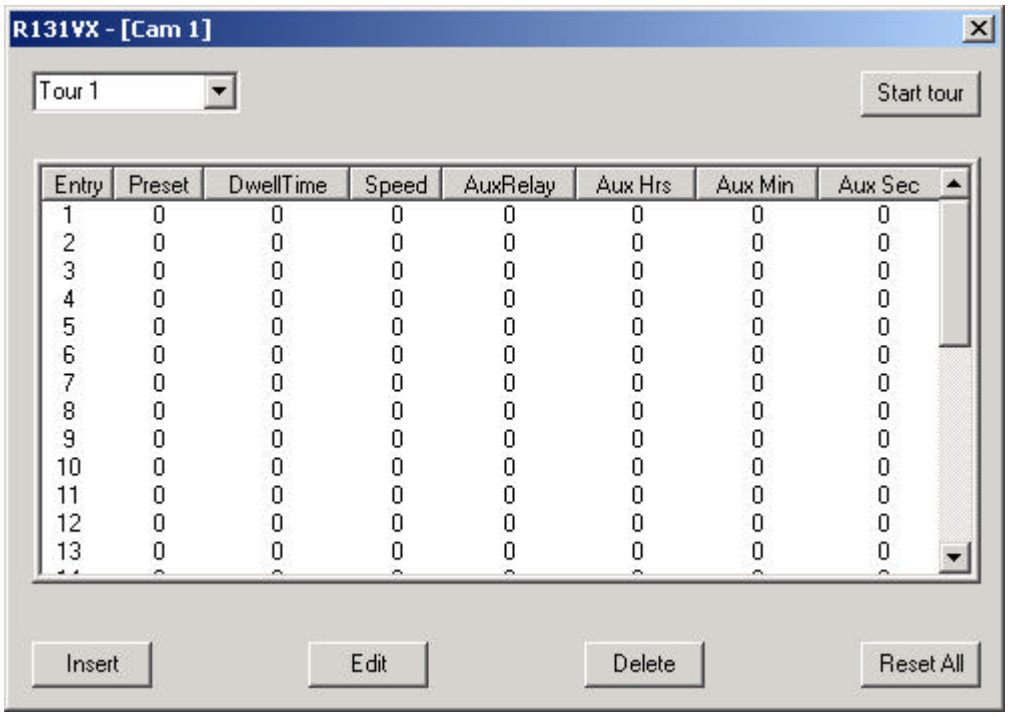
To call a preset, key in the preset number and click the *Call* button.

Tours

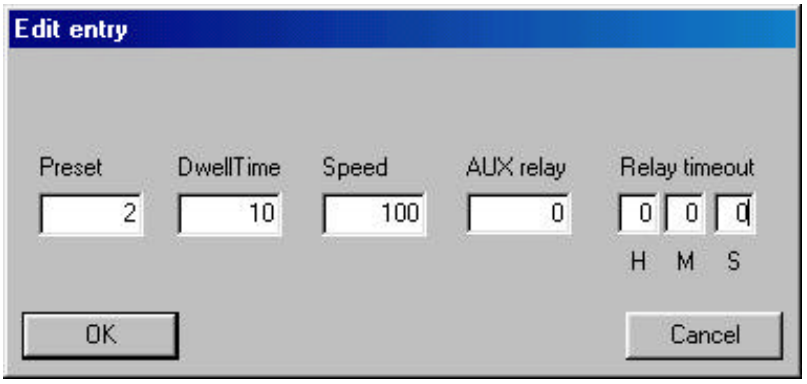
For each PTZ camera, up to 4 preset tours - each with 30 entries - can be programmed.

Click the *Tours* button to program the preset tours.

Programmed tours can be tested by selecting the tour in the drop-down panel, and clicking the *Start tour* button.



Double-click on an *entry* number to edit an existing entry, or add a new.



Preset

The preset number to go to.

Dwell Time

The time - in seconds - the PTZ camera should stay on the preset before continuing the tour.

Speed

The speed (in % of maximum) at which the Pan/Tilt should travel to the preset.

AUX Relay

AUX relay to be activated. The AUX relay is activated when the preset is called, and not when the preset is reached.

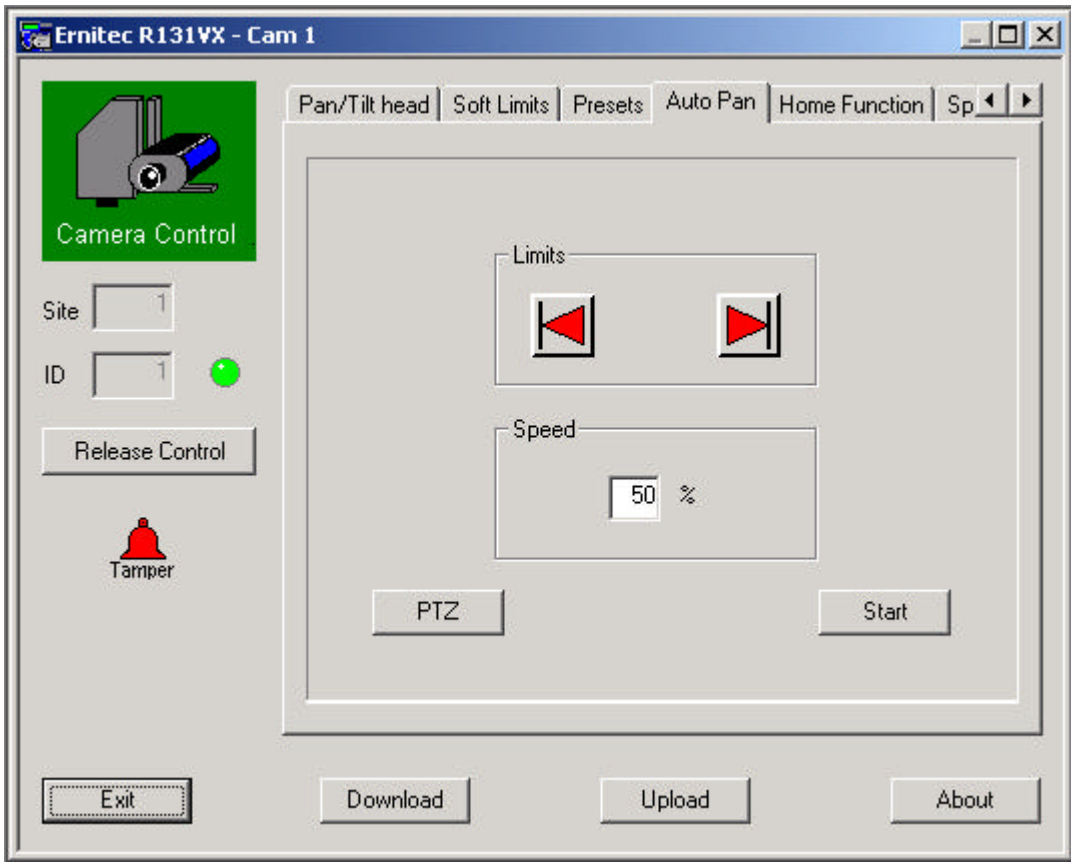
Relay Timeout

Timeout period for the activated AUX relay. Setting no timeout, will keep the AUX relay constantly activated.

Auto Pan

From this menu one Auto Pan tour can be programmed.

It is also possible to program the Auto Pan tour directly from the SYSTEM X keyboard.



Limits

Click the *PTZ* button to open the PTZ control window. Move the camera to the left hand limit and click the *Left Limit* button. Move the camera to the right hand limit and click the *Right Limit* button.

Speed

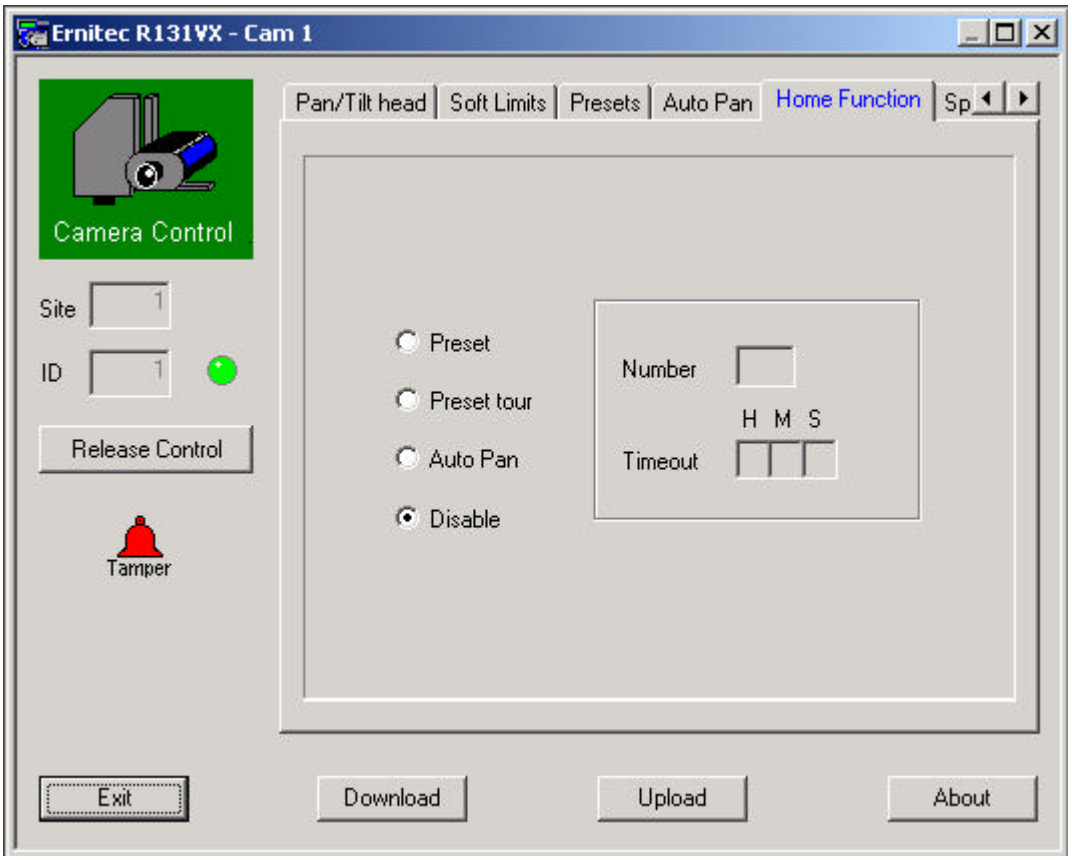
Set the speed (in % of maximum) at which the pan should travel between the auto pan limits. The speed can also be set directly from the SYSTEM X keyboard.

Start

The Auto Pan settings can be tested by clicking the *Start* button.

Home Function

A Home Function can be called after a specified time of inactivity. Maximum inactivity (timeout) is 6553 seconds (1hour 49min. 13sec.).



Preset
Key in the preset number between 1-128 that should be called, together with the inactivity time in seconds.

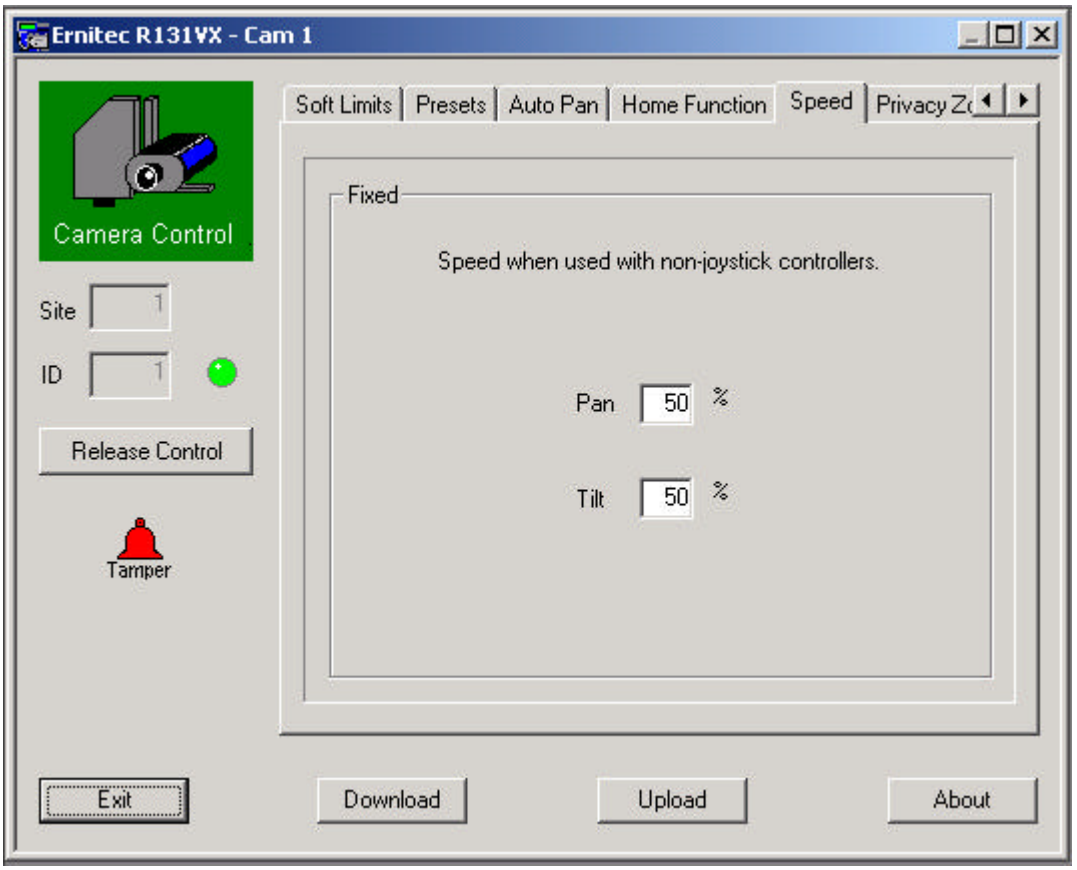
Preset Tour
Key in the preset tour number between 1-4 that should be started, together with the inactivity time in seconds.

Auto Pan
Start the programmed Auto Pan, after the specified inactivity time in seconds.

Disable
Disables the Home Function feature.

Speed

Sets the fixed pan/tilt speed if the R131VX is controlled from a controller/keyboard without variable speed option.



Pan
Set the fixed Pan speed (in % of maximum).

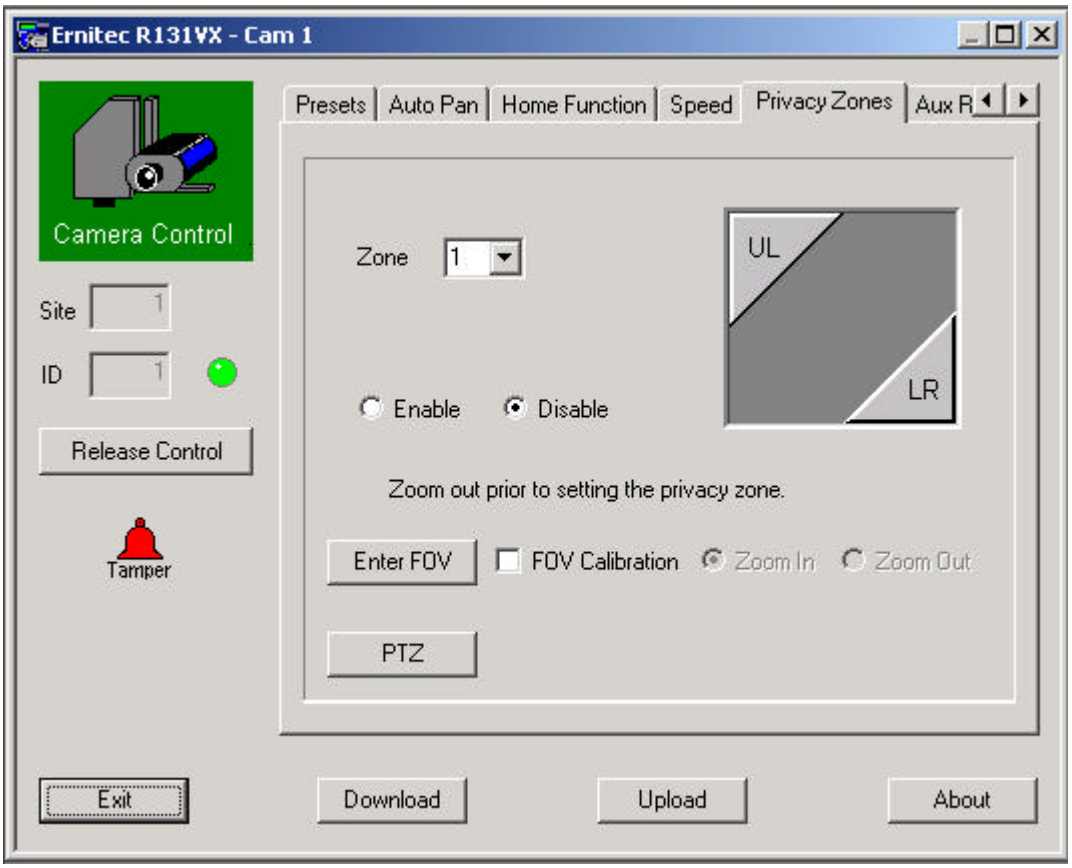
Tilt
Set the fixed Tilt speed (in % of maximum).

Privacy Zones

Up to 4 Privacy Zones can be defined.

If a PTZ camera enters a Privacy Zone, it will accelerate to maximum pan speed until it has left the Privacy Zone.

When setting the Privacy Zone limits, field of view of the zoom lens used will be taken in to account.



Disable/Enable

Prior to defining a new privacy zone, enter the number of the zone (1-4), and select *Disable*.

PTZ

Click the *PTZ* button to open the PTZ control menu.

Field Of View (FOV) Calibration

The Field Of View (FOV) calibration, is used by the R131VX to 'learn' the zoom limits of the lens used and can improve accuracy of the Privacy Zone.

Enter FOV

If using an Ernitec Motorized Zoom lens, click the *Enter FOV* button, and select between the most common types available. Please note that the camera format (1/3" or 1/2") has to be selected as well.

FOV Calibration

When using a Motorized Zoom Lens not listed, the FOV calibration can be done manually.

Tick the *FOV Calibration* box, and note that the *Zoom In/Zoom Out* options becomes active.

- Select the *Zoom Out* option.
- Zoom fully out (wide), and move the camera to the upper left corner of the Privacy Zone.
- Click the UL (Upper Left) button.
- Move the camera to the lower right corner of the Privacy Zone.
- Click the LR (Lower Right) button.

- Select the *Zoom In* option.
- Zoom fully in (tele), and move the camera to the upper left corner of the Privacy Zone.
- Click the UL (Upper Left) button.
- Move the camera to the lower right corner of the Privacy Zone.
- Click the LR (Lower Right) button.

The Field Of View (FOV) has now been set for the Privacy Zone, and will be taken in to account when defining the Privacy Zone.

Privacy Zone

After having defined the Field Of View (FOV), or selected the Ernitec lens used, the Privacy Zone can now be defined.

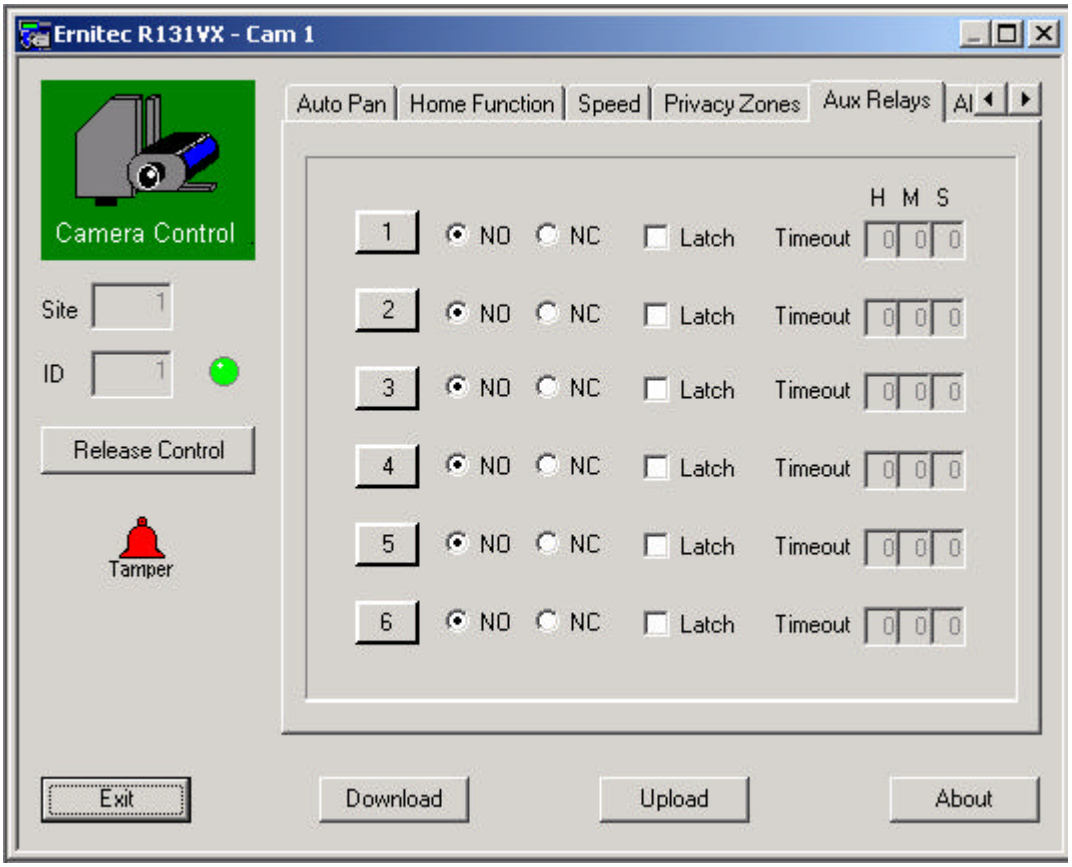
- If ticked, un-tick the *FOV Calibration* box.
- Zoom fully out (wide).
- Move the camera to the upper left corner of the Privacy Zone.
- Click the UL (Upper Left) button.
- Move the camera to the lower right corner of the Privacy Zone.
- Click the LR (Lower Right) button.
- Select *Enable*.

Please note

It is advisable to make the Privacy Zone about 50% larger than the actual privacy area, to ensure that privacy is achieved under all operating conditions.

AUX Relays

In this menu, the operation of the AUX relays can be defined.



NO/NC

Define the inactive state of the relay: Normally Open (NO), or Normally Closed (NC).

Latch

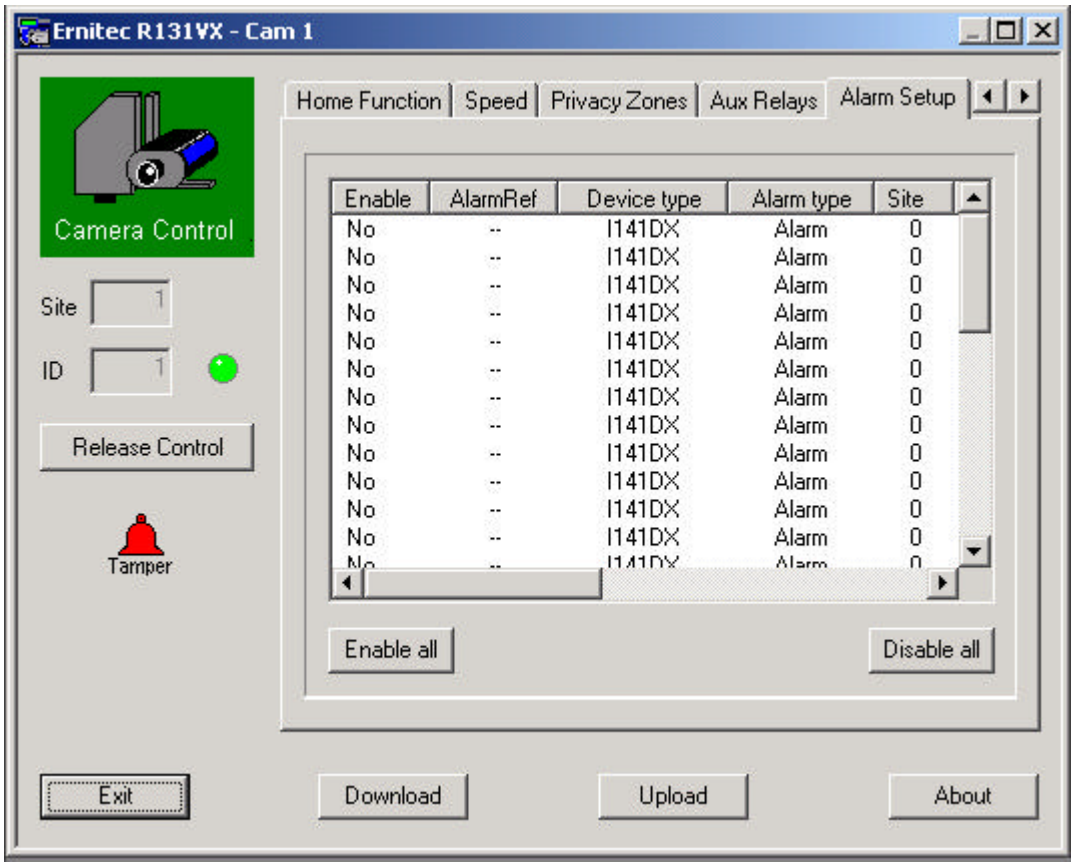
Define if the relay should be latched (one press to activate, and another press to deactivate), or unlatched (follows the state of the AUX key).

Timeout

Define a timeout period for the relay, if programmed as latched. The time can be defined in hours (H), minutes (M) and seconds (S).
Setting the timeout to 0 (zero) disables the timeout.

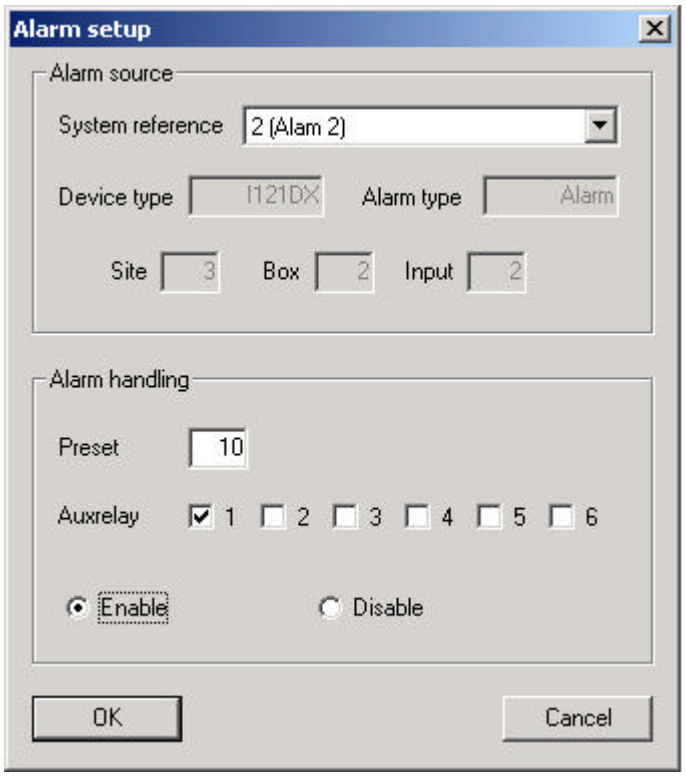
Alarm setup

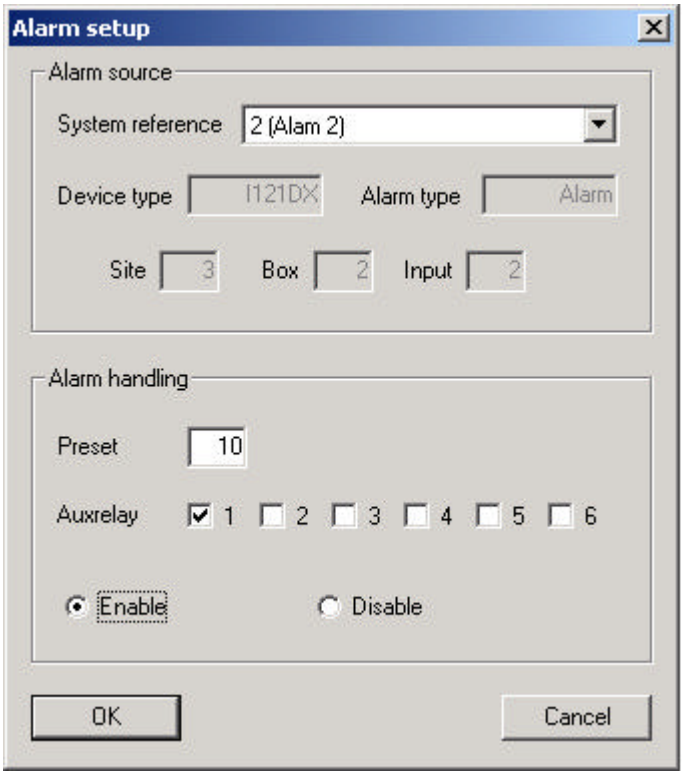
Define how alarms, received via the LON Network, should be handled by the R131VX.



Enable

Double click the Yes/No text, to open the alarm setup menu.





Alarm Source

System reference
Reference to the global alarm number used in the alarm setup, defined in the Setup PlugIn.

Device type (info only)
Shows the LON unit that the alarm originates from.

Alarm type (info only)
The type of alarm.

Box (info only)
Shows the LON Control ID for the alarm device.

Input (info only)
Shows the alarm input used on the alarm device.

Alarm Handling

Preset
Define the preset to call when the alarm is activated.

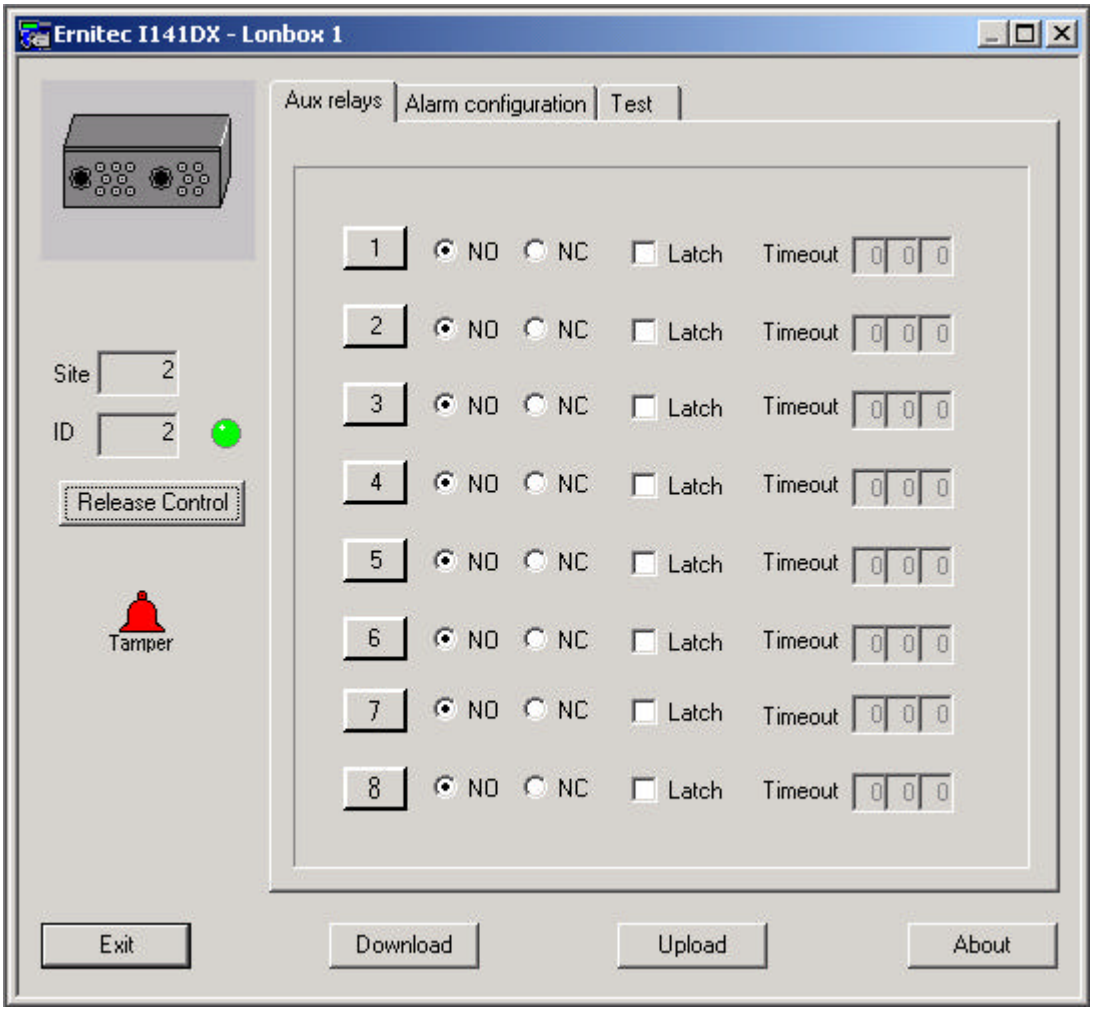
AUX Relay
Define if an AUX relay should be activated on alarm.

Enable/Disable
Enable or disable if the R131VX Telemetry Receiver should react on the alarm.

LON Alarm Box (I141DX Plugin)

Each Alarm Box connected on the Lon Network has its own Plugin, where parameters can be programmed and downloaded.

Double-clicking on the *Ernitec I141DX* icon, will open the I141DX Plugin.



Take Control

Click the *Take Control* button to take Control of the I141DX Alarm Box.

Download

Click the *Download* button to update the I141DX with the changes made.

Upload

Click the *Upload* button to read the settings stored in the I141DX.

About

Click the *About* button to display the version number of the I141DX Plugin.

Site (info only)

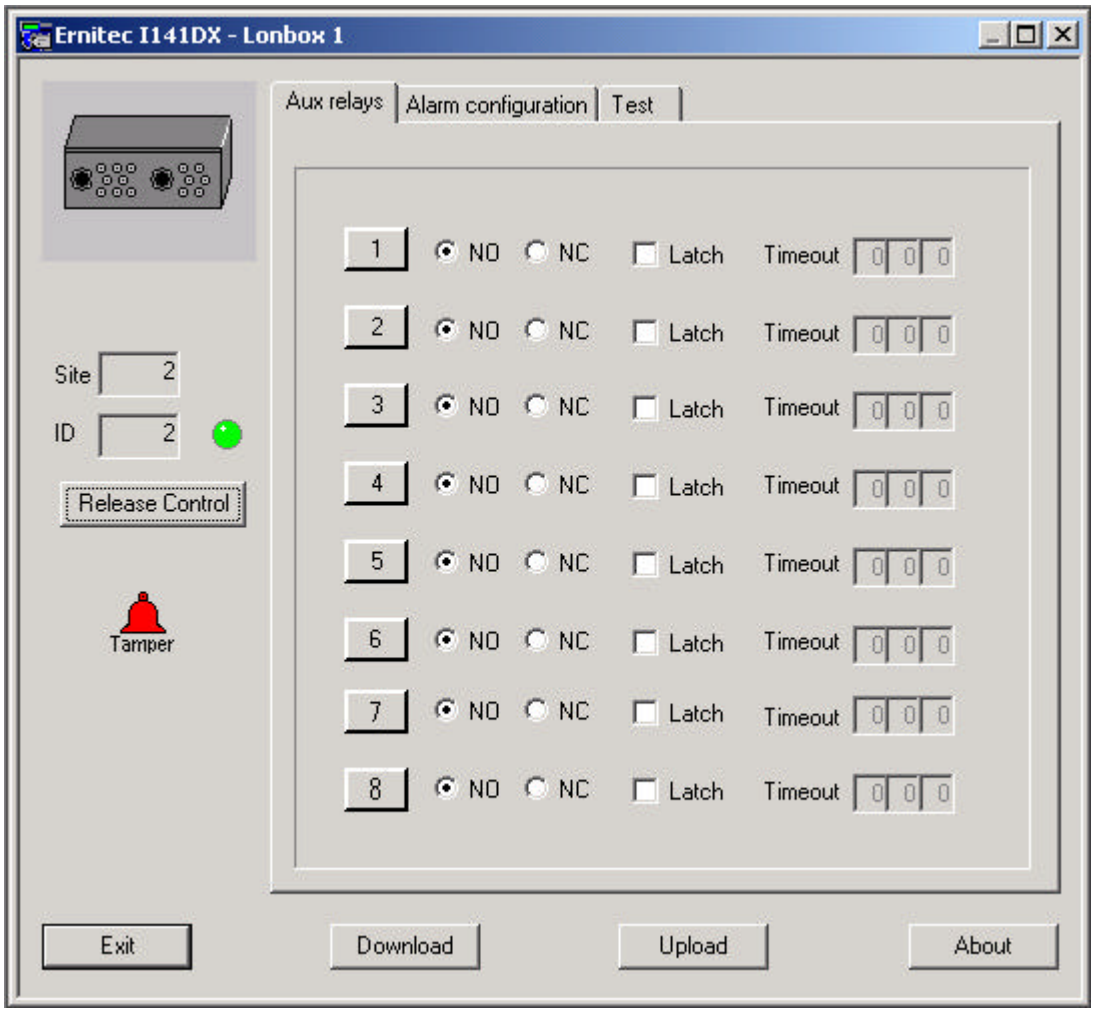
Shows the site, assigned by the autobind plugin

ID (info only)

Shows the control ID, assigned by the autobind plugin.

AUX Relays

Define how the 8 AUX relays should operate.



NO/NC

Select the inactive state of the relay NO (Normally Open) or NC (Normally Closed).

Latch

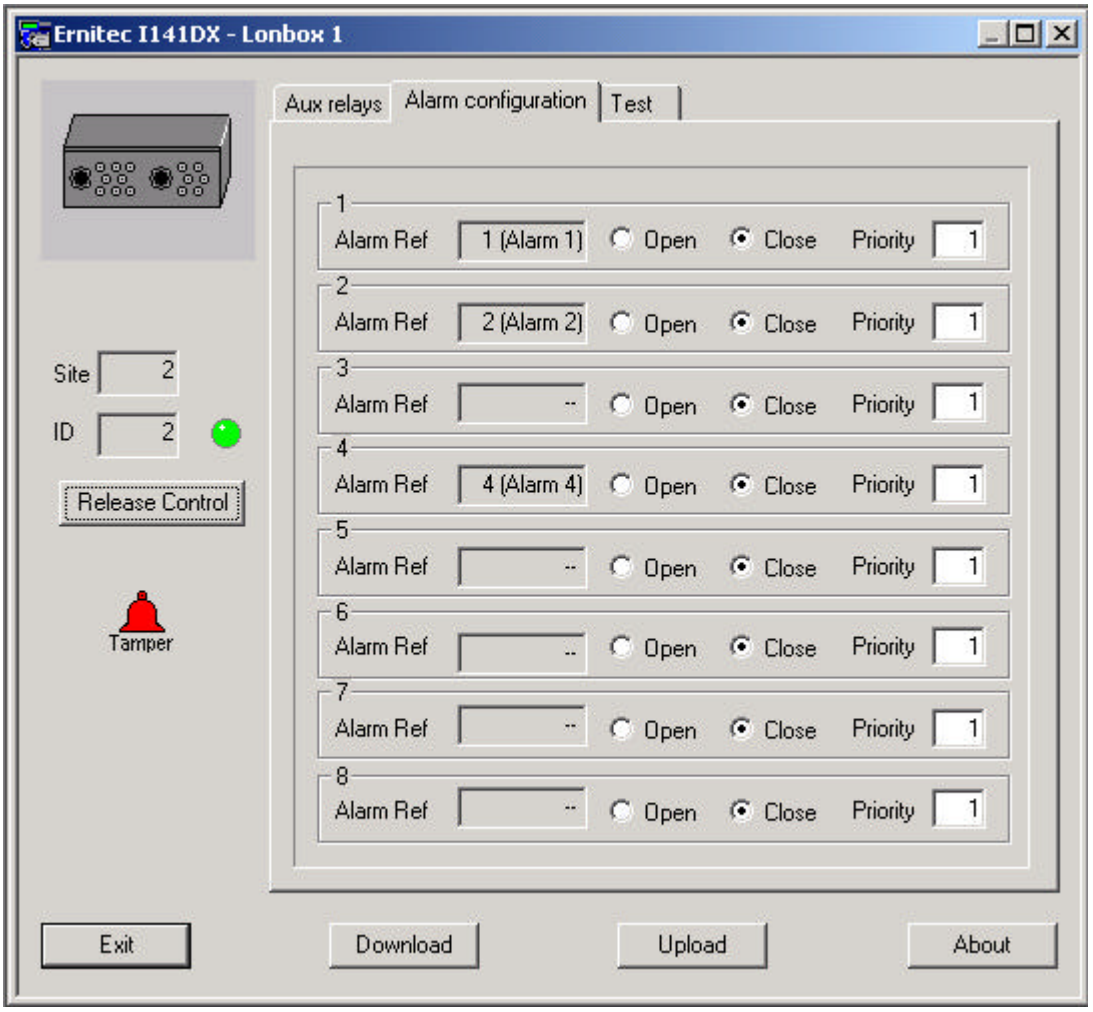
Select if the relay should be latched or unlatched.

Timeout

If the relay is set to *Latch*, a hold time for the relay can be defined. Setting the timeout to 0 (zero) will hold the relay until the operator deactivates it.

Alarm configuration

Define priority and state of the alarm inputs.



Alarm Ref (info only)

Displays the reference to the global alarm number used in the alarm setup, defined in the Setup PlugIn.

Open/Close

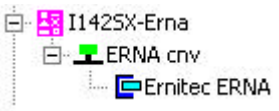
Define if the alarm will activate when an alarm contact is closed (Close) or when an alarm contact is opened (Open).

Priority

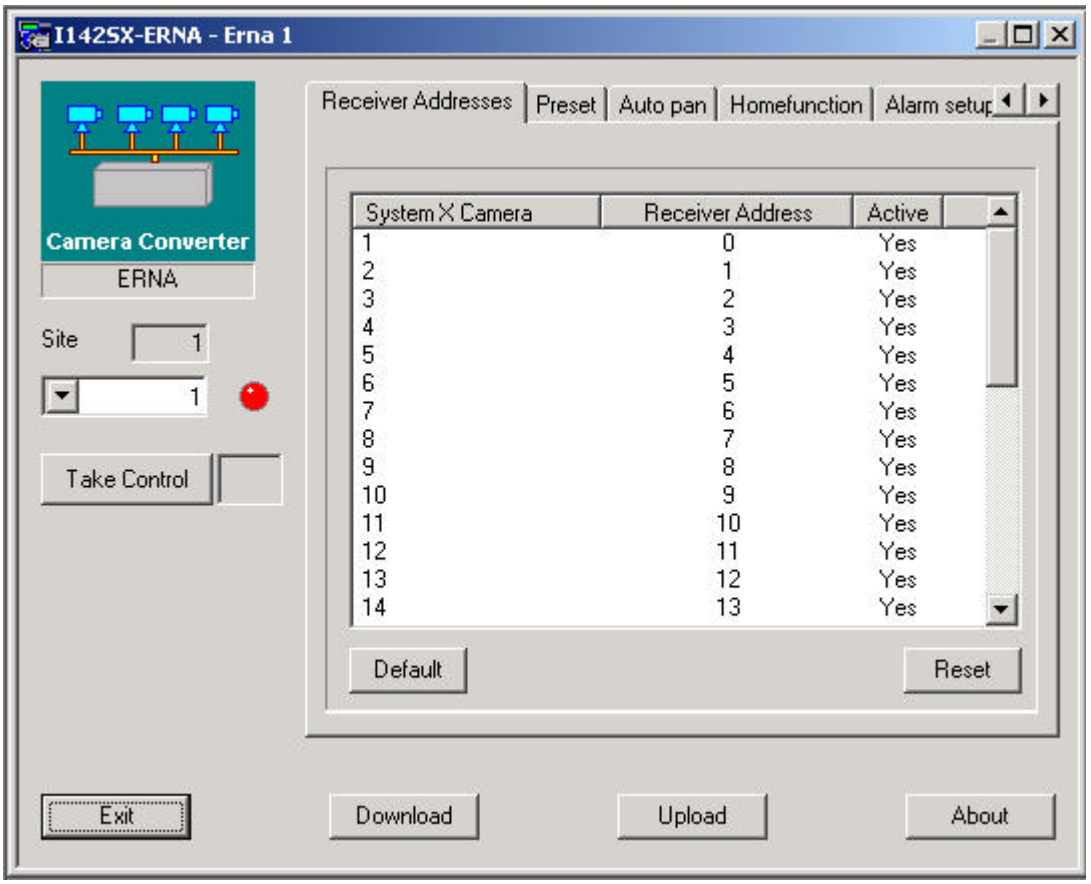
Set the priority of the alarm input. Valid range is 1-49, one being highest priority.

I142SX LON-to-ERNA Converter Box (I142SX-ERNA PlugIn)

Each I142SX-ERNA connected on the Lon Network has its own Plugin, where parameters can be programmed and downloaded.



The I142SX Converter Box is used to convert from LON to the ERNA PTZ protocol, enabling SYSTEM X to control SYSTEM 1000M Telemetry Receivers.
Double-clicking on the *Ernitec ERNA* icon, will open the I142SX-ERNA Plugin.



Take Control

Click the *Take Control* button to take Control of the camera selected in the drop-down menu above.

Download

Click the *Download* button to update the I142SX with the changes made.

Upload

Click the *Upload* button to read the settings stored in the I142SX.
Please note that *Preset Tours* and *Home Function,* are not stored in the I142SX - but in the actual Receiver - and can therefore not be uploaded.

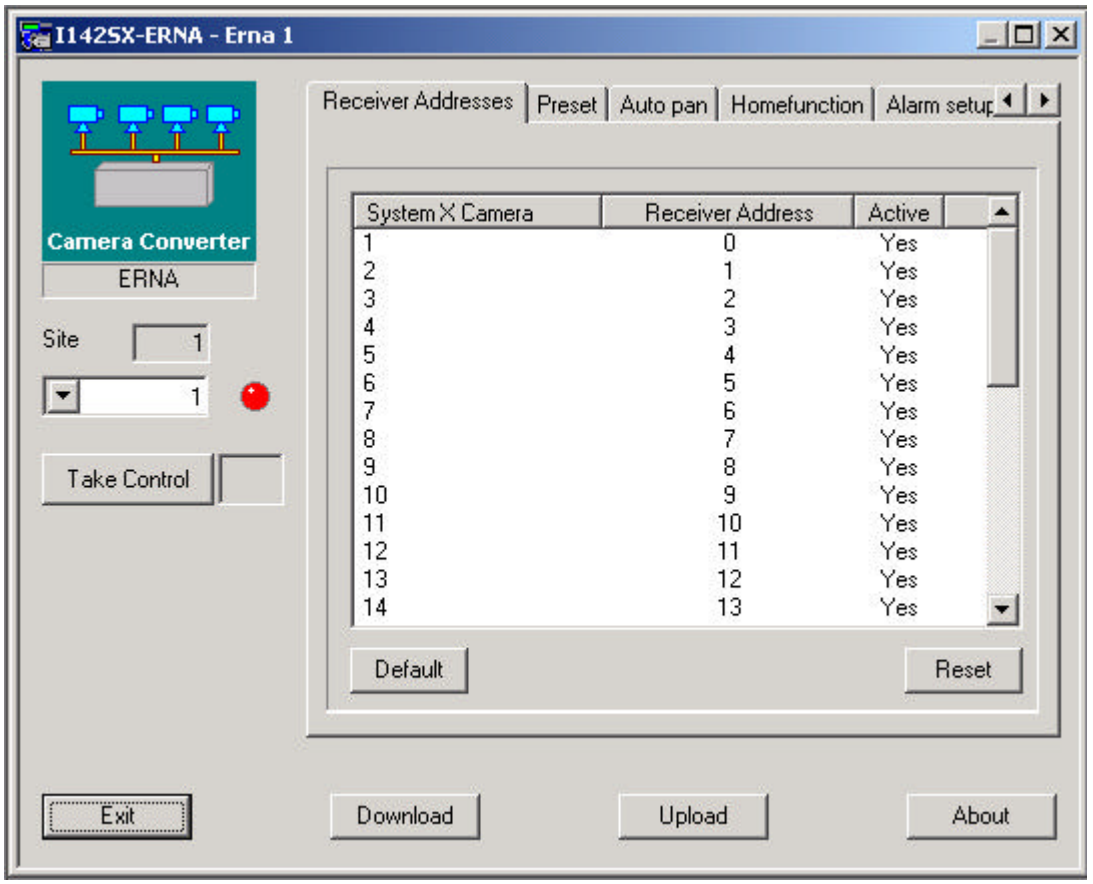
About

Click the *About* button to display the version number of the ErnaCnv Plugin.

Receiver Addresses

Up to 32 ERNA protocol Telemetry Receivers can be controlled via the I142SX converter.

Supported Telemetry Receivers are: BDR-51X, BDR-55X, BDR-575 and Saturn Dome.



System X Camera

The camera numbers are equal to the camera inputs defined in the AutoBind Plugin, and used on the SYSTEM X matrix.
Double click on the camera number to open the address setup menu.

Receiver Address

The addresses set in the ERNA Telemetry Receivers.

Default

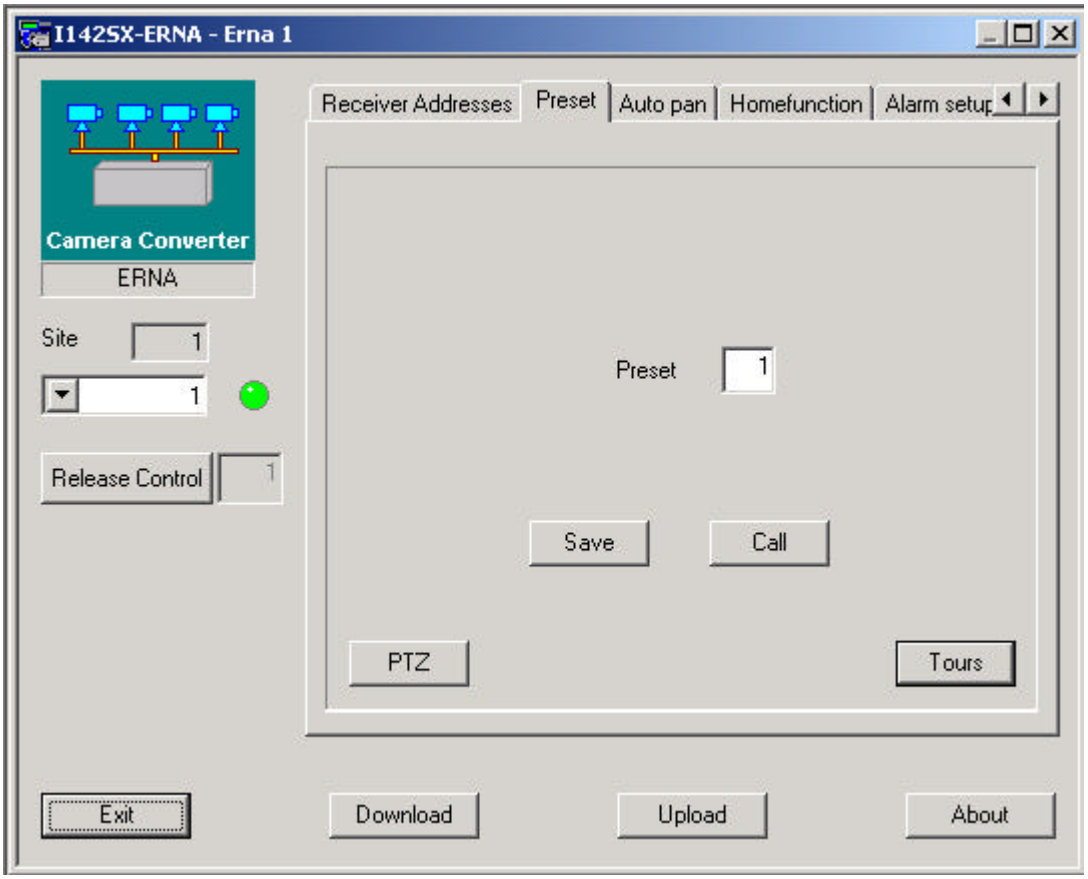
Sets the default Receiver addresses for the listed SYSTEM X cameras.

Reset

Resets all addresses to 255, and makes all addresses inactive.

Preset

The number of presets that can be stored, depends on the actual Telemetry Receiver used.



To set presets, click the *PTZ* button to open the PTZ control menu. Move the camera to the required position, key in the number for the preset and click the *Save* button.

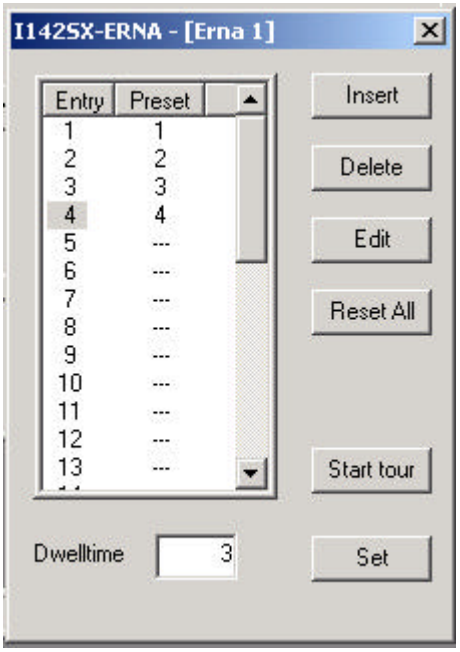
To call a preset, key in the preset number and click the *Call* button.

Please note that presets can only be saved/called, when the specific camera has been selected in the drop-down menu, the *Take Control* button has been clicked and the red LED has changed to green.

Tours

Depending on the type of Telemetry Receiver(s) used, preset tours can be programmed and downloaded.

Click the Tours button to program a preset tour for the selected camera..



Double-click on an entry number to edit on existing entry, or add a new.

Insert
Select an entry number, and click the *Insert* button, to insert a new entry. The selected entry number will be moved down one line (Right double-clicking the entry number, will have the same effect).

Delete
Select an entry number, and click the *Delete* button, to delete the selected entry.

Edit
Select an entry number, and click the *Edit* button, to edit the selected entry (left double-clicking the entry number, will have the same effect).

Reset All
Clicking the *Reset All* button, resets all entries to [---] (no entry).

Start tour
After having downloaded a preset tour, it can be tested by clicking the *Start tour* button.

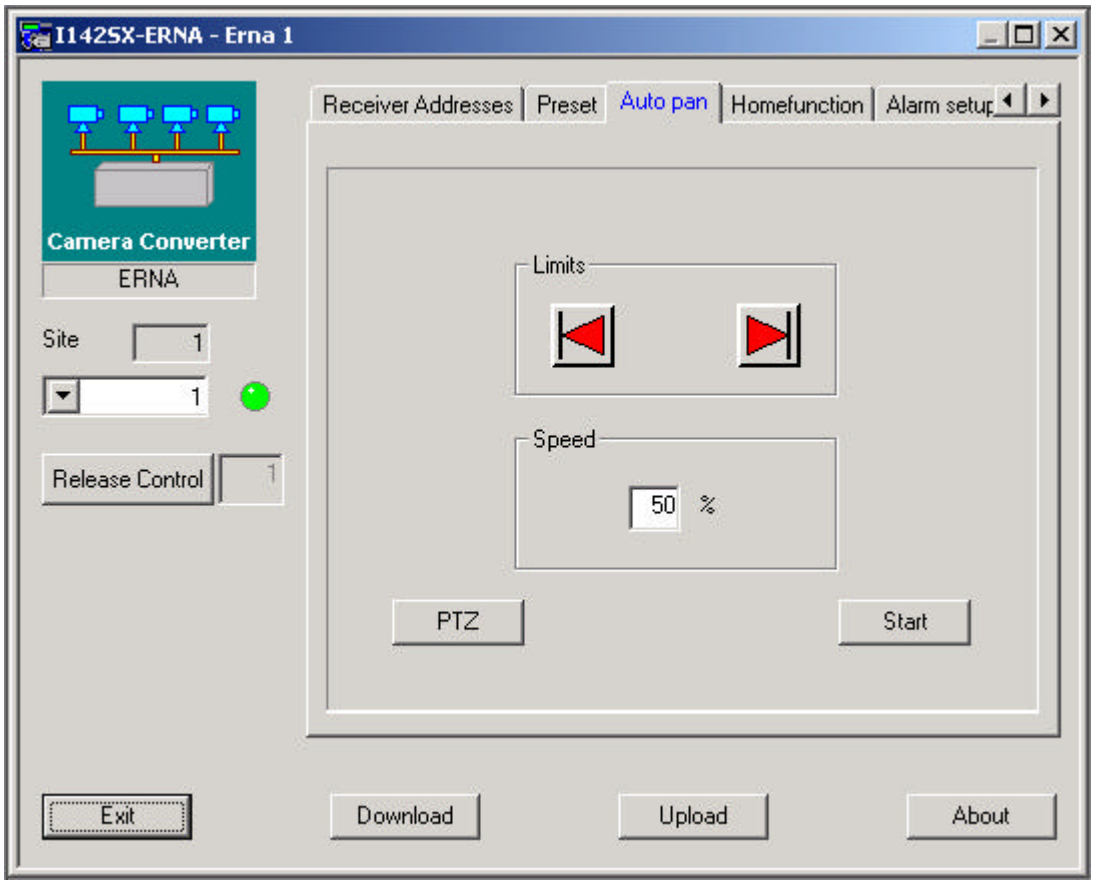
Dwell time
The time (in seconds) the camera stays on a preset, before continuing the tour.

Set
Click the *Set* button, to download the *Dwell time* to the selected camera.

After having programmed a preset tour, please remember to download it to the selected camera, by clicking the *Download* button.

Auto Pan

From this menu one Auto Pan tour can be programmed for the selected camera, if supported.



Remember to select the camera from the drop-down menu, and click the *Take Control* button, before setting the Auto Pan limits.

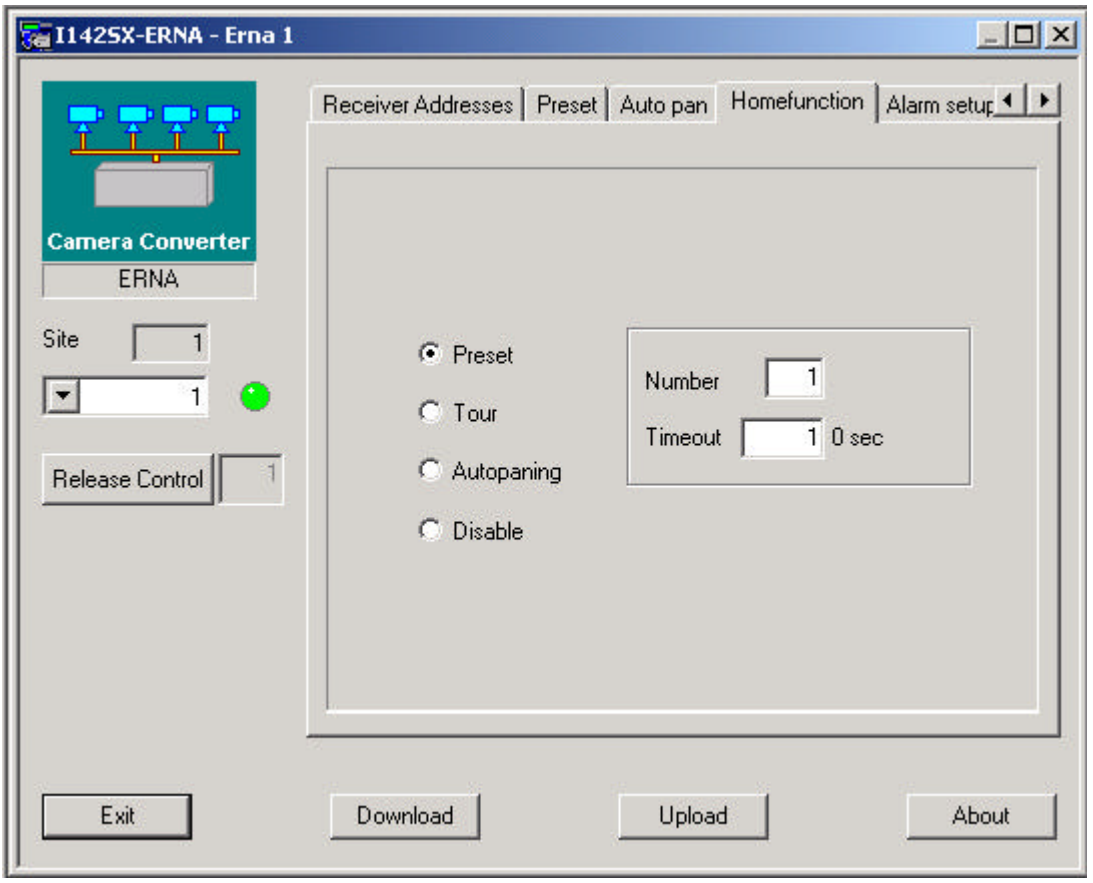
Limits
Click the *PTZ* button to open the PTZ control window. Move the camera to the left hand limit and click the *Left Limit* button. Move the camera to the right hand limit and click the *Right Limit* button.

Speed (if supported)
Set the speed (in % of maximum) at which the pan should travel between auto pan limits.

Start
By clicking the *Start* button, the auto pan tour can be tested.

Home Function

A Home Function can be programmed for the selected camera, if supported.



Preset
Key in the preset number between 1-128 that should be called, together with the inactivity time in seconds.

Preset Tour
Key in the preset tour number that should be started, together with the inactivity time in seconds.

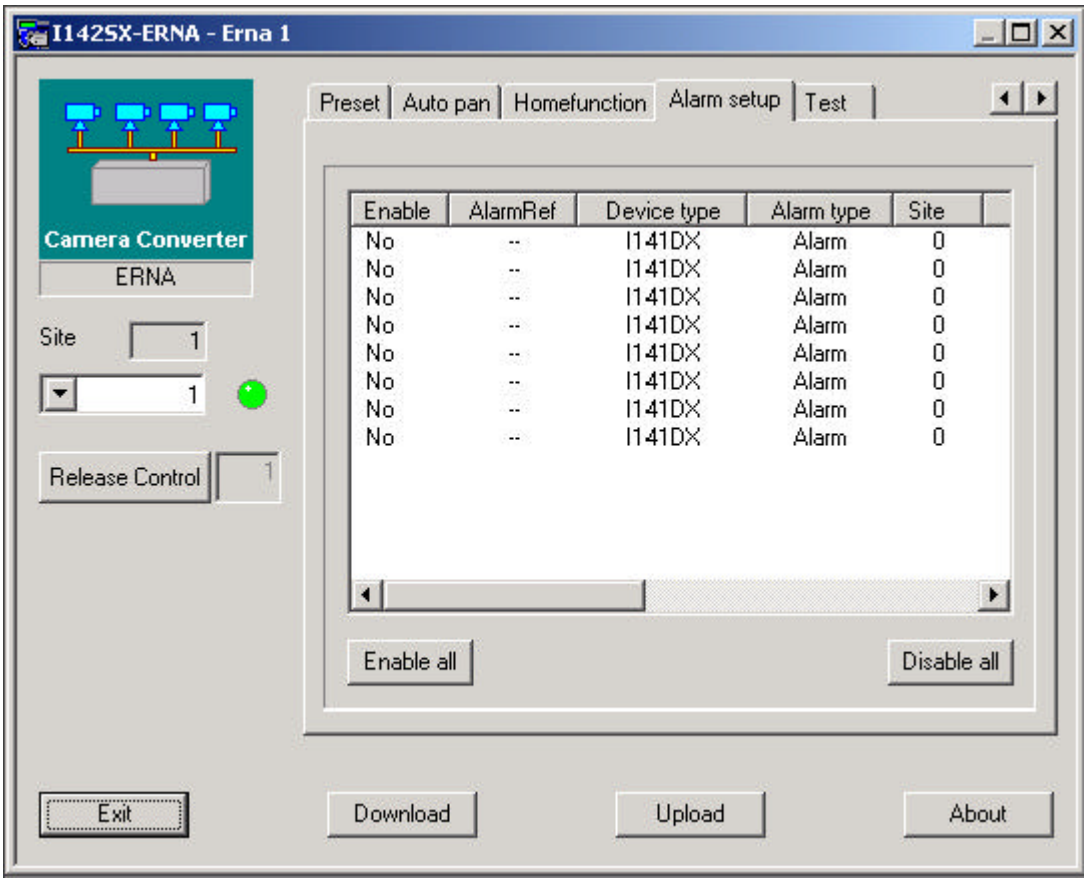
Auto Pan
Start the programmed Auto Pan tour, after the specified inactivity time in seconds.

Disable
Disables the Home Function feature.

Please Note: *The timeout specified is automatically multiplied with 10, e.g. if 6 is specified, it is actually 60 seconds, as in the example above.*

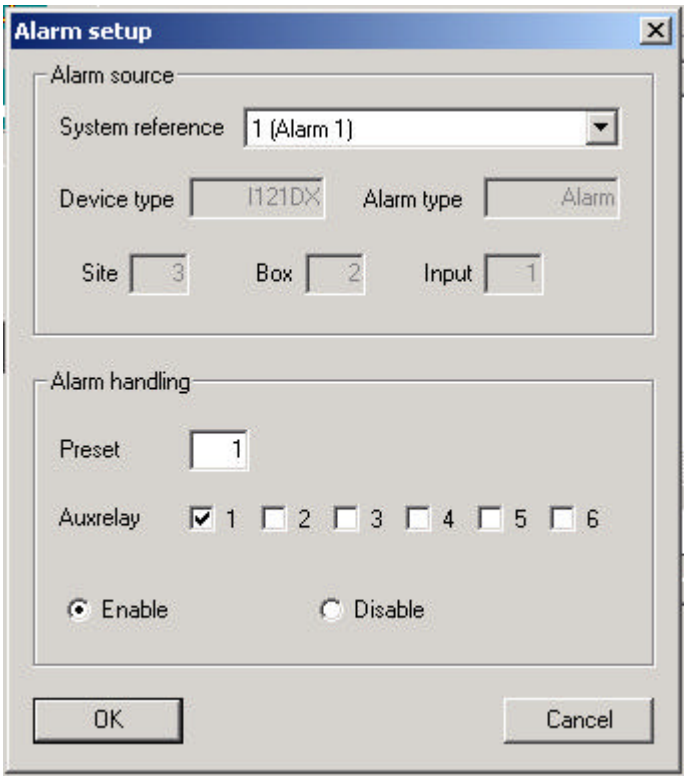
Alarm Setup

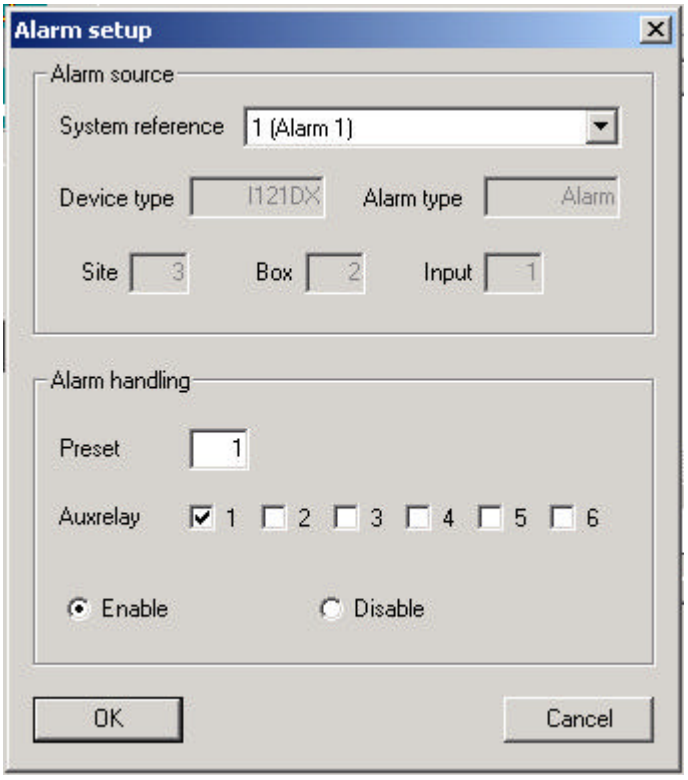
Define if alarms should call presets, on the connected cameras with preset features.
Alarm handling is programmed in the NodeManager S111SX.



Enable

Double click the Yes/No text, to open the alarm setup menu.





Alarm Source

System reference
Reference to the global alarm number used in the alarm setup, defined in the Setup PlugIn.

Device type (info only)
Shows the LON unit that the alarm originates from.

Alarm type (info only)
The type of alarm.

Box (info only)
Shows the LON Control ID for the alarm device.

Input (info only)
Shows the alarm input used on the alarm device.

Alarm Handling

Preset
Define the preset to call when the alarm is activated.

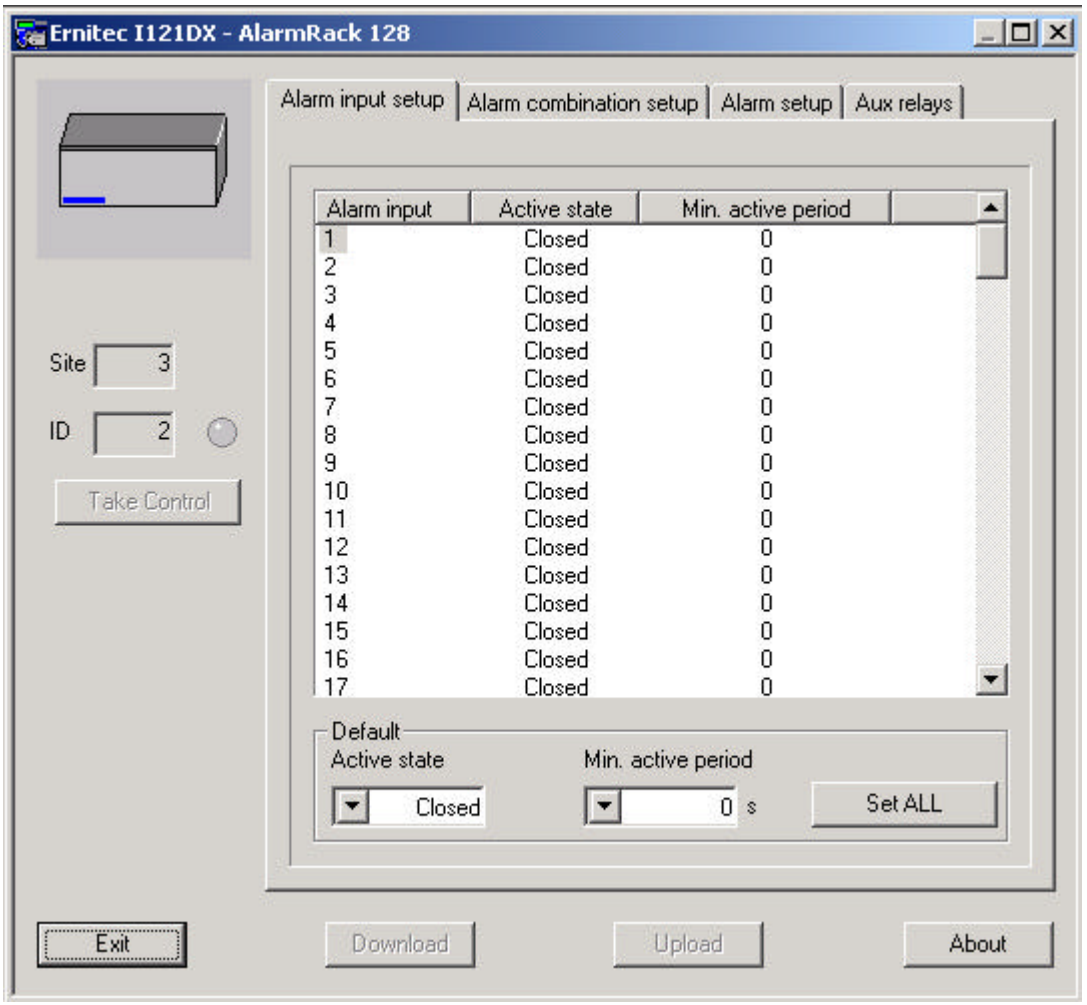
AUX Relay
Define if an AUX relay should be activated on alarm.

Enable/Disable
Enable or disable if the I142SX converter should react on the alarm, and call a preset on the selected camera.

I121DX Alarm Rack (I121DX PlugIn)

Each I121DX Alarm Rack connected on the Lon Network has its own Plugin, where parameters can be programmed and downloaded.

Double-clicking on the *Ernitec I121DX* icon, will open the I121DX Plugin.



Take Control

Click the *Take Control* button to take Control of the I121DX Alarm Box.

Download

Click the *Download* button to update the I121DX with the changes made.

Upload

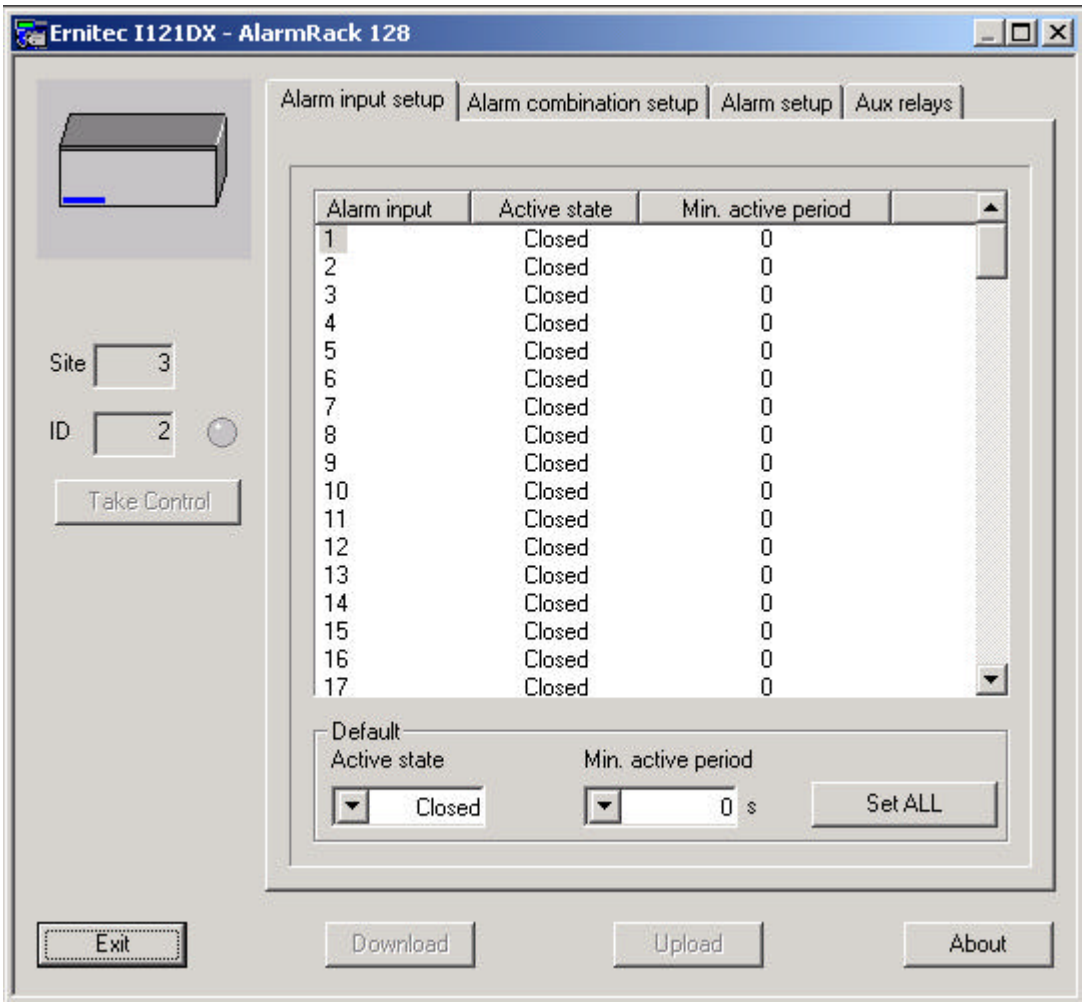
Click the *Upload* button to read the settings stored in the I121DX.

About

Click the *About* button to display the version number of the I121DX Plugin.

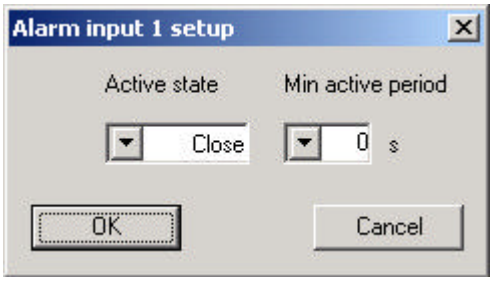
Alarm Input Setup

Define active state and active period of the alarm inputs.



Alarm Input

Double click the alarm input number to open the Alarm Input menu.



Active State

Select if the alarm should activate when the input is *Open* or *Closed*.

Min. Active Period

Define if the alarm input should be active for a minimum period, before being recognized by the I121DX as a valid alarm. This can be used to eliminate false alarms caused by bouncing alarm contacts and/or noise pulses.

Default Active State

To set all alarm inputs to the same default active state, select *Open* or *Closed*, and click the *Set ALL* key.

Default Min. Active Period

To set all alarm inputs to the same default minimum active period, select the minimum time, and click the *Set ALL* key.

Alarm Combination Setup

Define various alarm conditions that has to be fulfilled, before an alarm is generated.

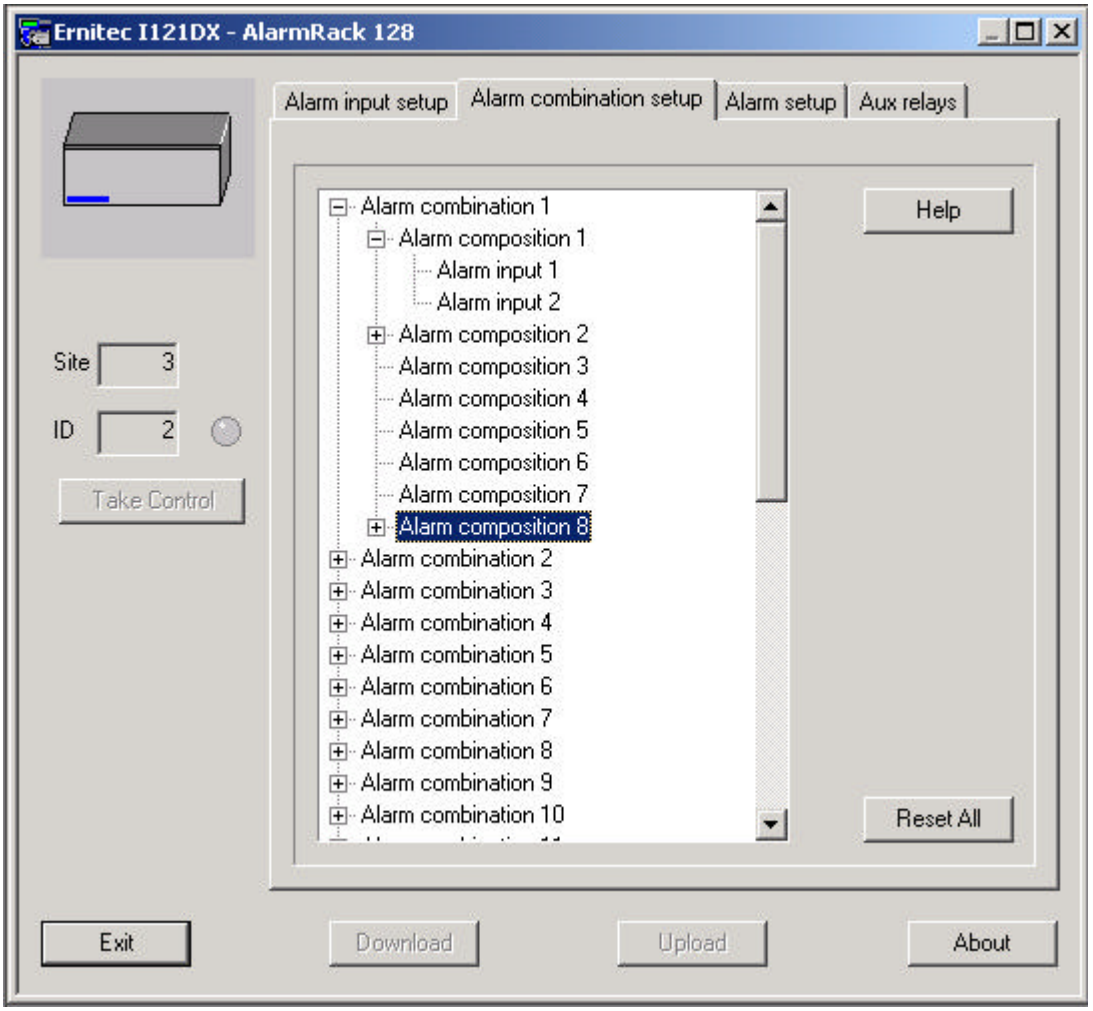
Up to 32 *Alarm Combinations*, each with up to 8 *Alarm Compositions*, can be defined.

Alarm Compositions consists of a number of alarm inputs, which are combined with AND or OR.

AND: All alarm inputs must be active, to generate an alarm.

OR: At least one alarm input must be active, to generate an alarm.

Furthermore, up to 8 *Alarm Compositions* can be combined in the *Alarm Combination* (with AND or OR) before generating an alarm.



Help

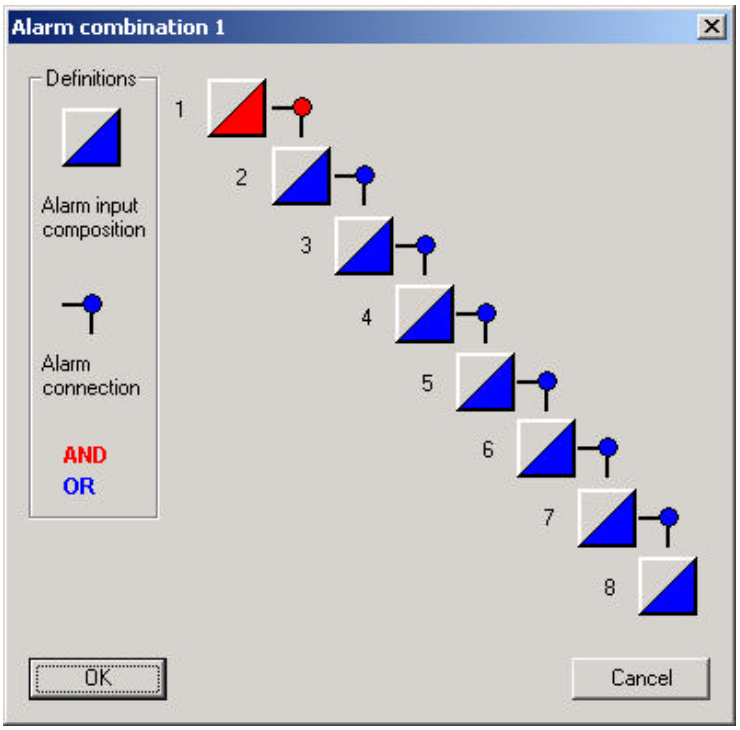
Click on the *Help* button, to open a help menu with details on the Alarm Combinations.

Reset All

Clears all Alarm Combinations made.

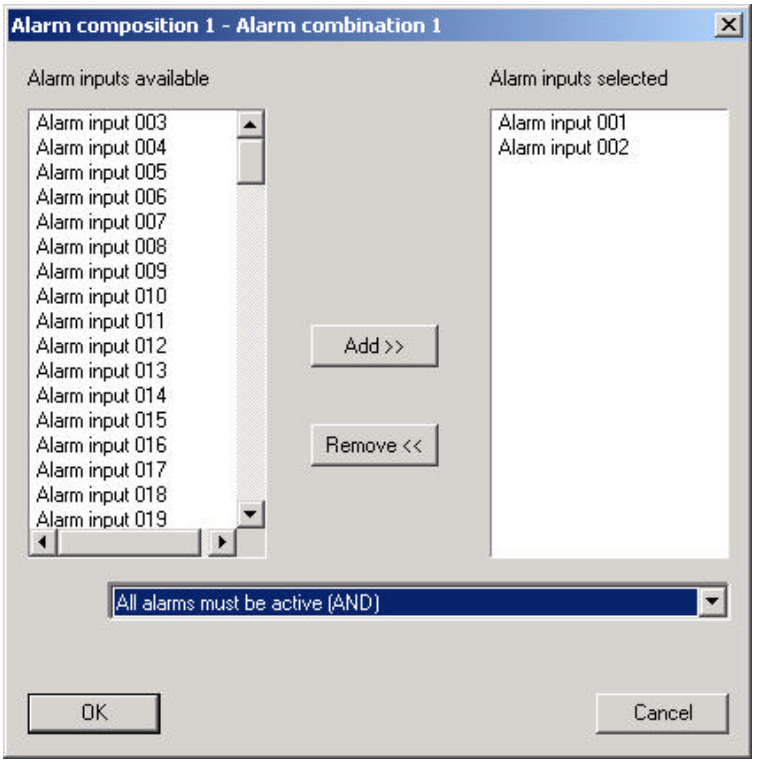
Alarm Combination

Double click on the *Alarm combination 'x'* text, to open the Alarm combination set up menu.



Alarm Composition

Click on one of the Alarm composition boxes 



From the list of available alarm inputs, select which inputs should be included in the Alarm Composition.

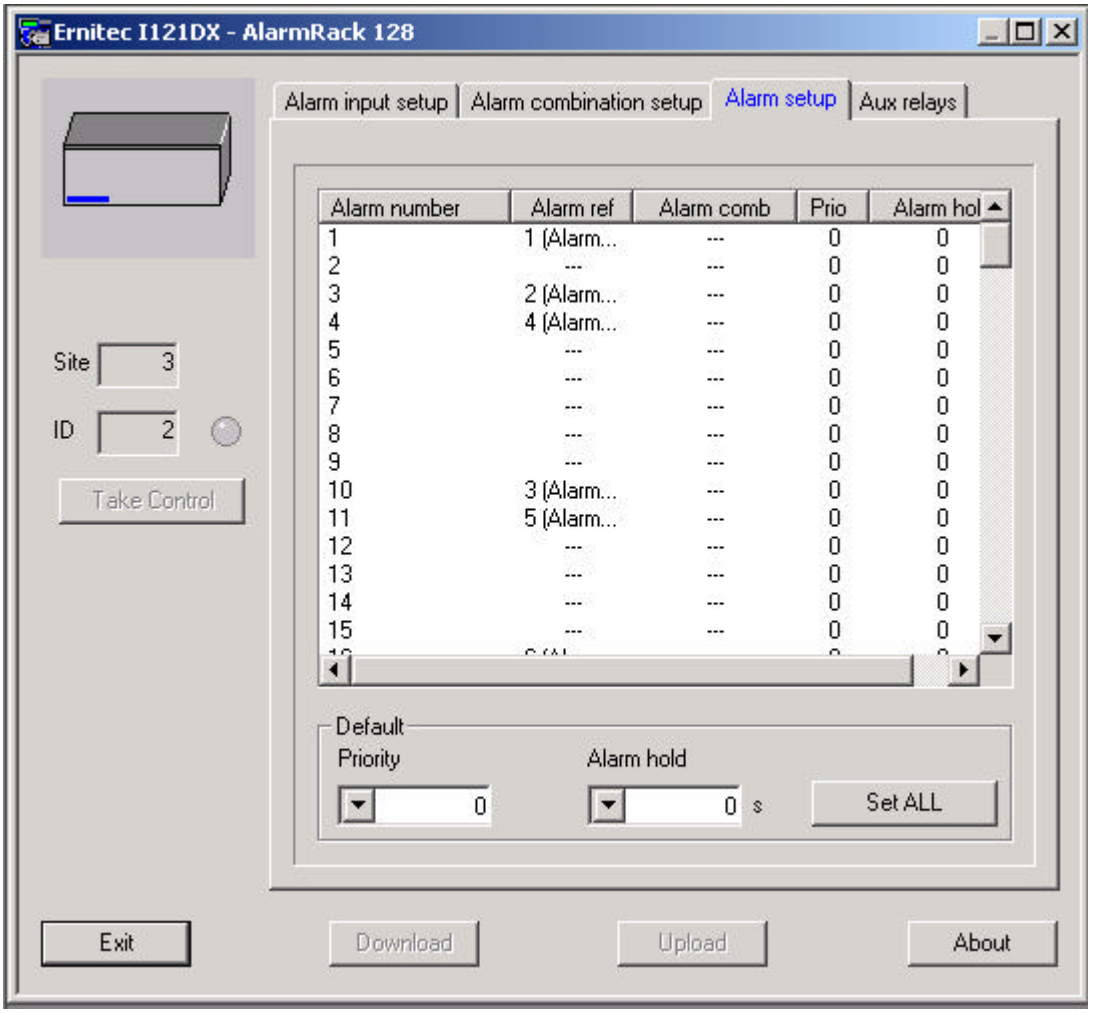
AND / OR

Two options are available:

- AND: All alarm inputs in the composition must be active, to generate an alarm.
- OR: At least one alarm input in the composition must be active, to generate an alarm.

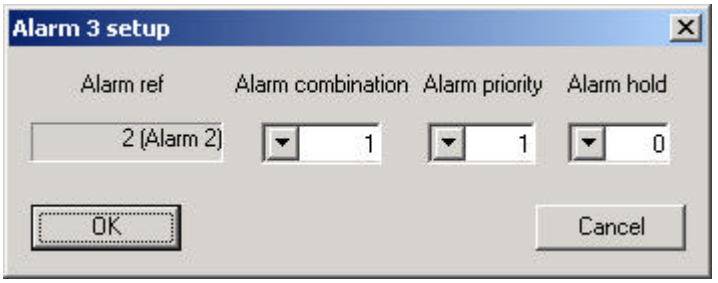
Alarm Setup

Define how the alarms should be generated by the I121DX.



Alarm Number

The actual alarm number generated by the I121DX alarm rack. Up to 128 alarms are available from each I121DX alarm rack. Double click on the on the alarm number to open the Alarm Setup menu.



Alarm Ref (info only)

Displays the reference to the global alarm number used in the alarm setup, defined in the NodeManager Setup PlugIn.

Alarm Combination

The Alarm Combination that must be valid, before the alarm is generated. If no Alarm Combination is selected, the alarm is handled as an individual alarm.

Priority

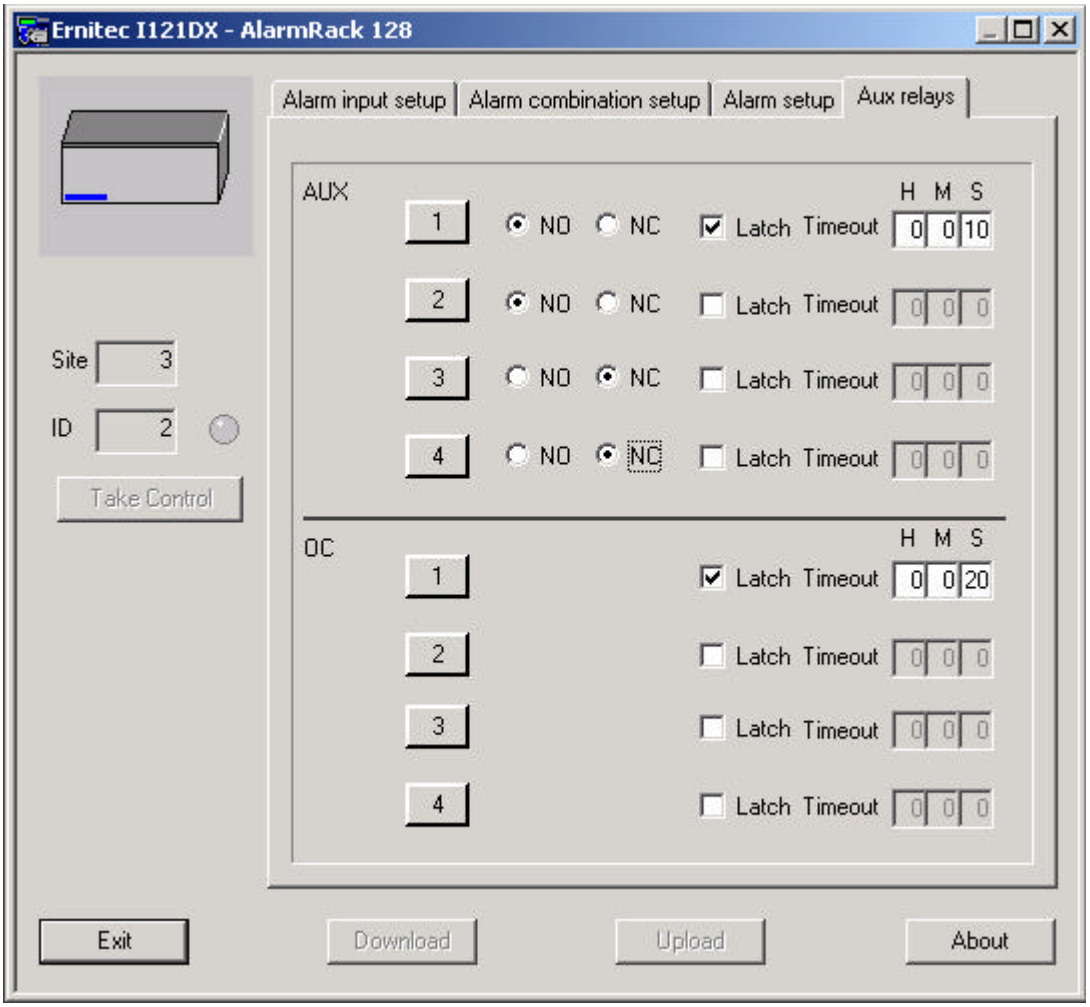
Set the priority of the alarm . Valid range is 1-49, one being highest priority.
Priority 0 disables the alarm.

Alarm Hold

Specify a time (in seconds) that the alarm should be held active, after the alarm input is deactivated.

AUX Relays

Define how the 4 AUX relays and 4 open collectors should operate.



AUX NO/NC

Select the inactive state of the relay NO (Normally Open) or NC (Normally Closed).

AUX Latch

Select if the relay should be latched or unlatched.

AUX Timeout

If the relay is set to *Latch*, a hold time for the relay can be defined. Setting the timeout to 0 (zero) will hold the relay until the operator deactivates it.

OC Latch

Select if the open collector output should be latched or unlatched.

OC Timeout

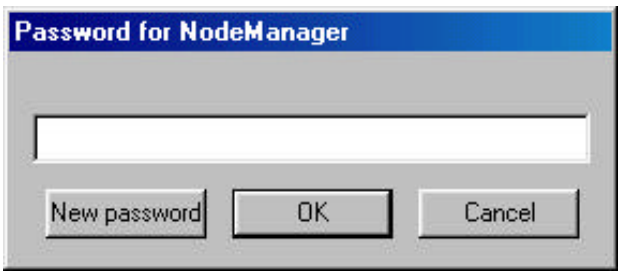
If the open collector is set to *Latch*, a hold time for the output can be defined. Setting the timeout to 0 (zero) will hold the output until the operator deactivates it.

Password

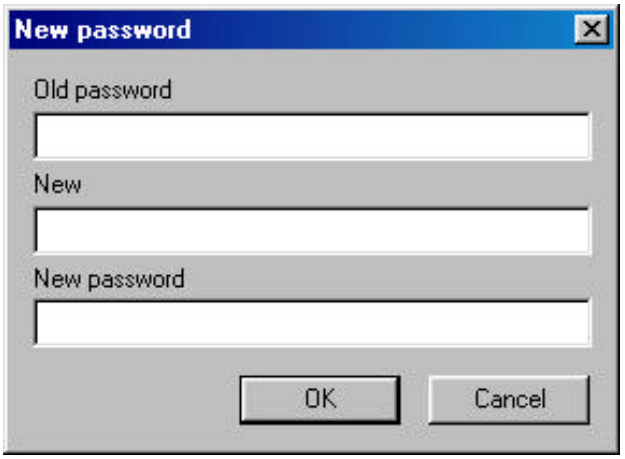
The NodeManager Program can be password protected.

Default password is: **System X** (space between **System** and **X**).

To enter a new password select the menu Configurations password.



A new password can be defined by clicking *New password*.



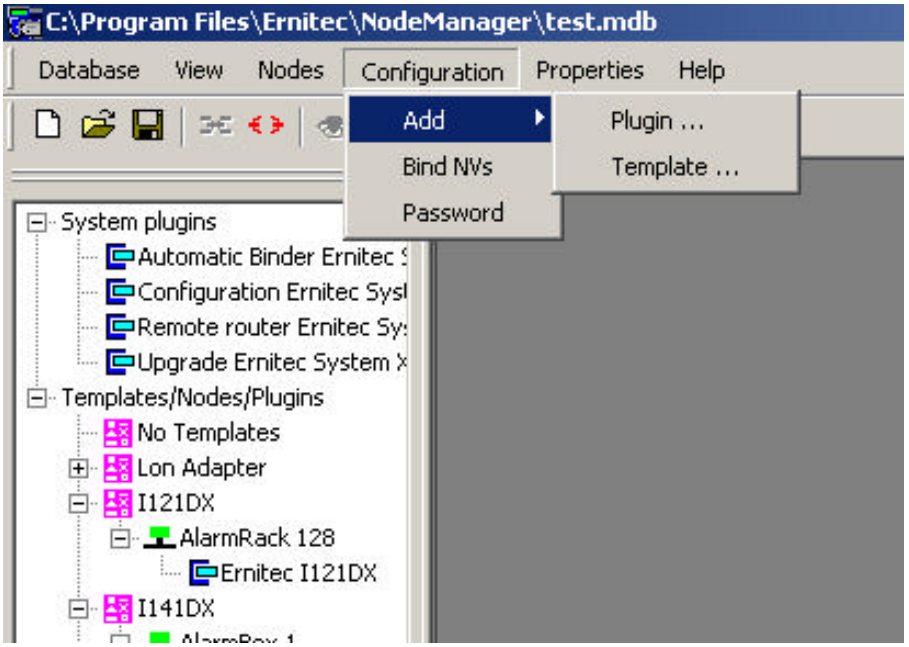
A password must be minimum 5 characters long. The program distinguish between capital and small letters. It is very important to keep a note of the password used.

To disable the password check, define the default password as a new password.

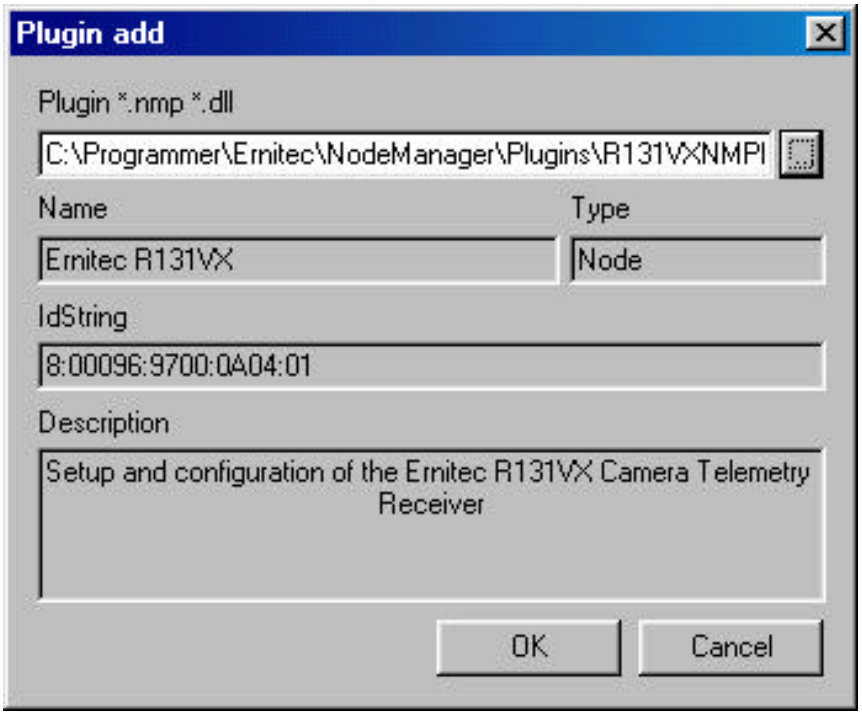
Adding Plugins

When installing NodeManager, all PlugIns are automatically added.

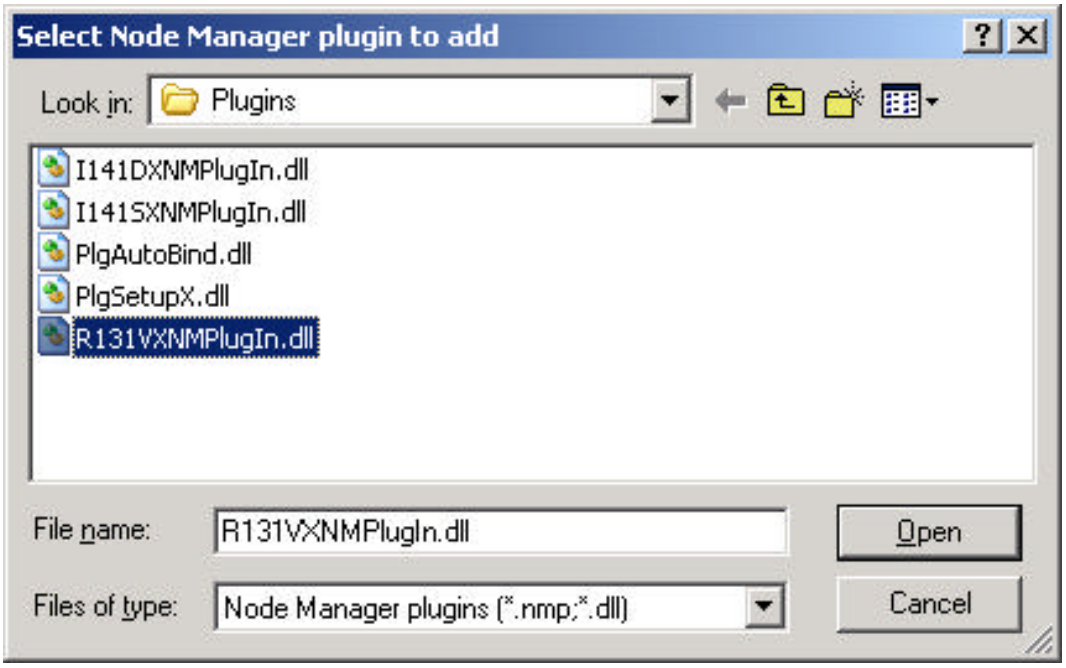
However, Ernitec may release new products, or updates, which requires a new plugin to be added to the NodeManager.



To add a new Plugin, select *Configuration -> Add -> Plugin...*



Click the button next to the *Plugin *.dll line*, and select the *plugin.dll* file, which is placed in the folder: ..\Ernitec\NodeManager\Plugins\



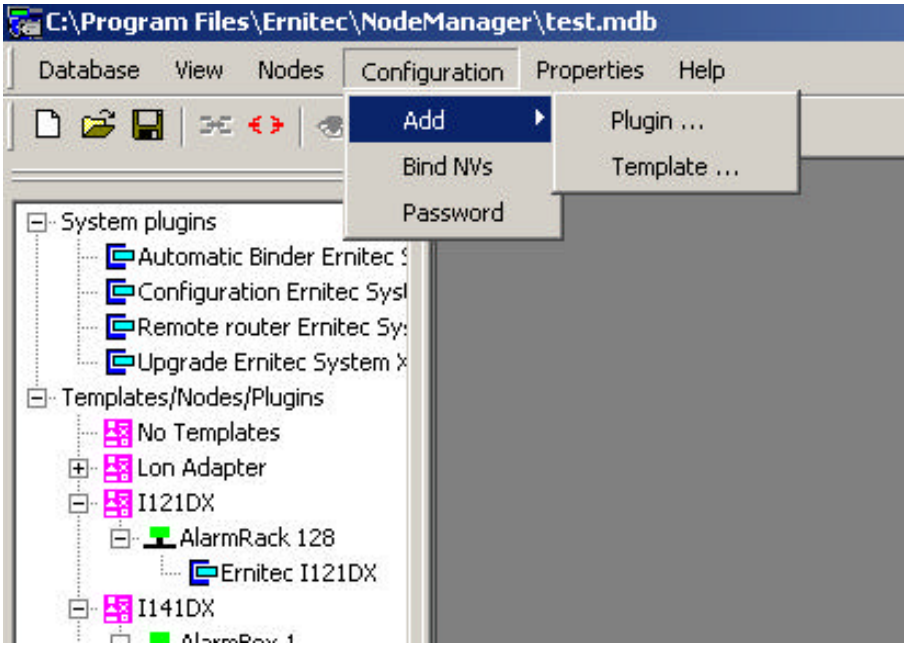
Select the *PlugIn.dll* file, and click *Open*.

Adding Templates

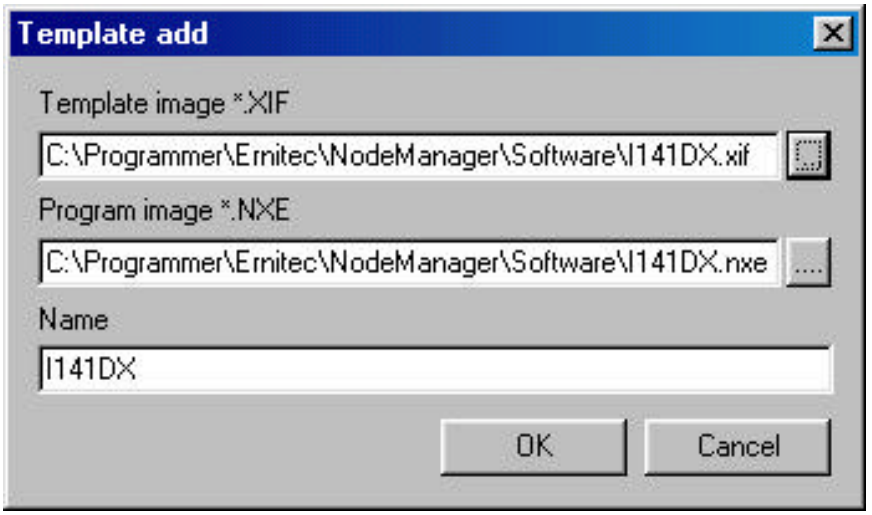
Templates are basic software (Neuron software), used by all SYSTEM X units.

When installing NodeManager, all Neuron software's are automatically added.

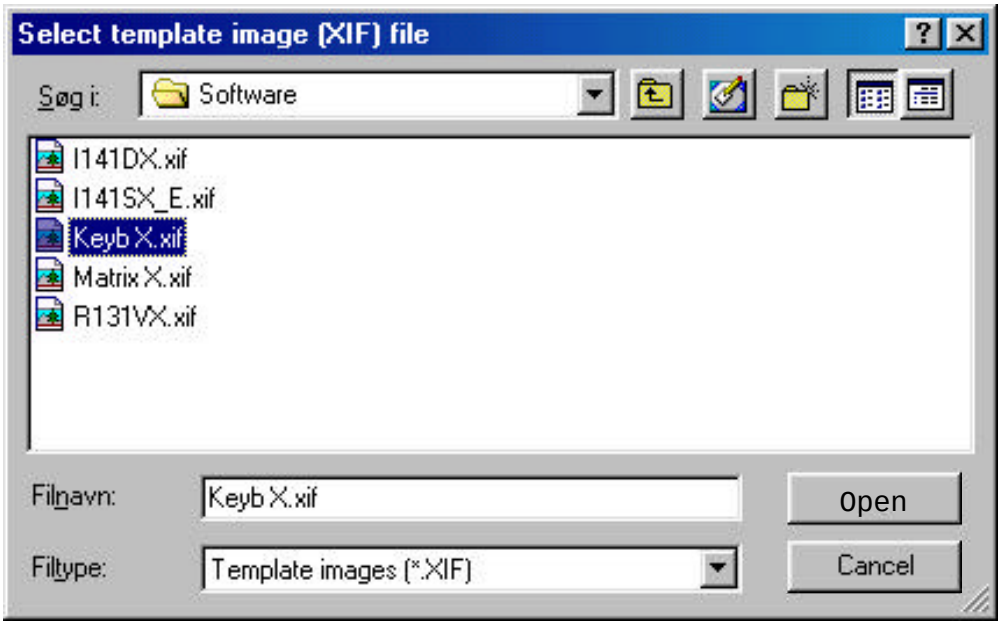
However, Ernitec may release new products, or updates, which requires a new Neuron software to be added to the NodeManager.



To add the Neuron software, select *Configuration -> Add -> Template*...



Click the button next to the *Template image *.XIF* line, and select the **.xif* file, which is placed in the folder: ..\Ernitec\NodeManager\Software\



Select the **.xif* file, and click *Open*.

The *Program image *.nxe* file is loaded automatically when selecting the **.xif* file

It is possible to select several files, by holding down [CTRL] and clicking the files.

IMPORTANT: *After downloading Neuron software, always run AutoBind (see page 18).*

Units with PlugIn: *After downloading Neuron software, and running AutoBind, open the PlugIns for the specific units and download settings again.*

Updating NodeManager

If a new NodeManager is released by Ernitec, the existing NodeManager can easily be updated.

If updating from NodeManager version 1.7, all nodes (with Neuron ID's) can be exported to a file, and imported once NodeManager has bee updated to version 2.1.

In version 1.7 select menu *File -> Export*

In version 2.1 select menu *Database -> Import*

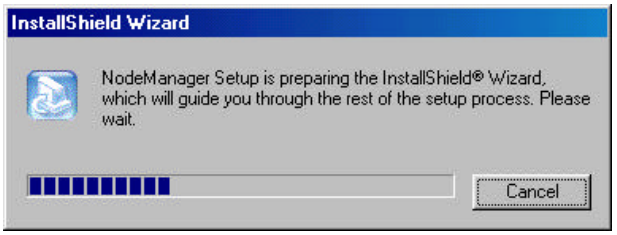
This will save to work of having to press all service pins again.

It is always a good idea to Export the Neuron ID's after installation is done, then it is "easy" to get the Neuron ID's in case the Database should be lost.

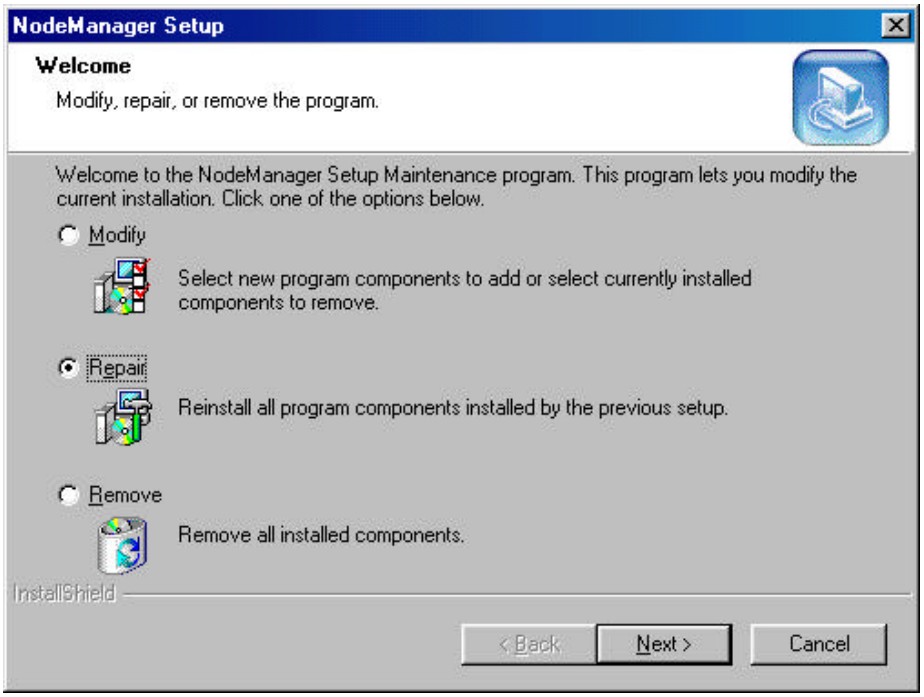
Insert the new NodeManager CD-ROM in your CD drive. If auto run is enabled, the installation program will start automatically.

Alternatively, select *Start -> Run*, and type *D:\setup* (D, being your CD-ROM drive).

The *Install Shield Wizard* will start, and guide you through the update of NodeManager.



The following menu will appear:



Select *Repair*, and click *Next*.

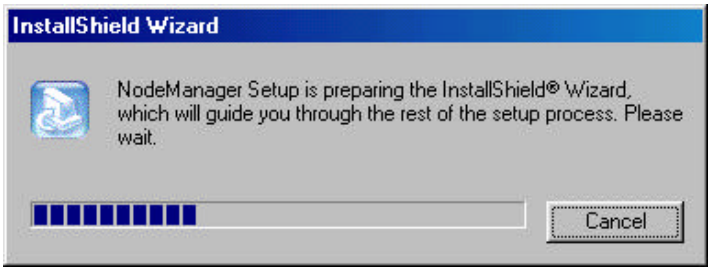
Finish the update following the on-screen instructions.

Uninstalling NodeManager

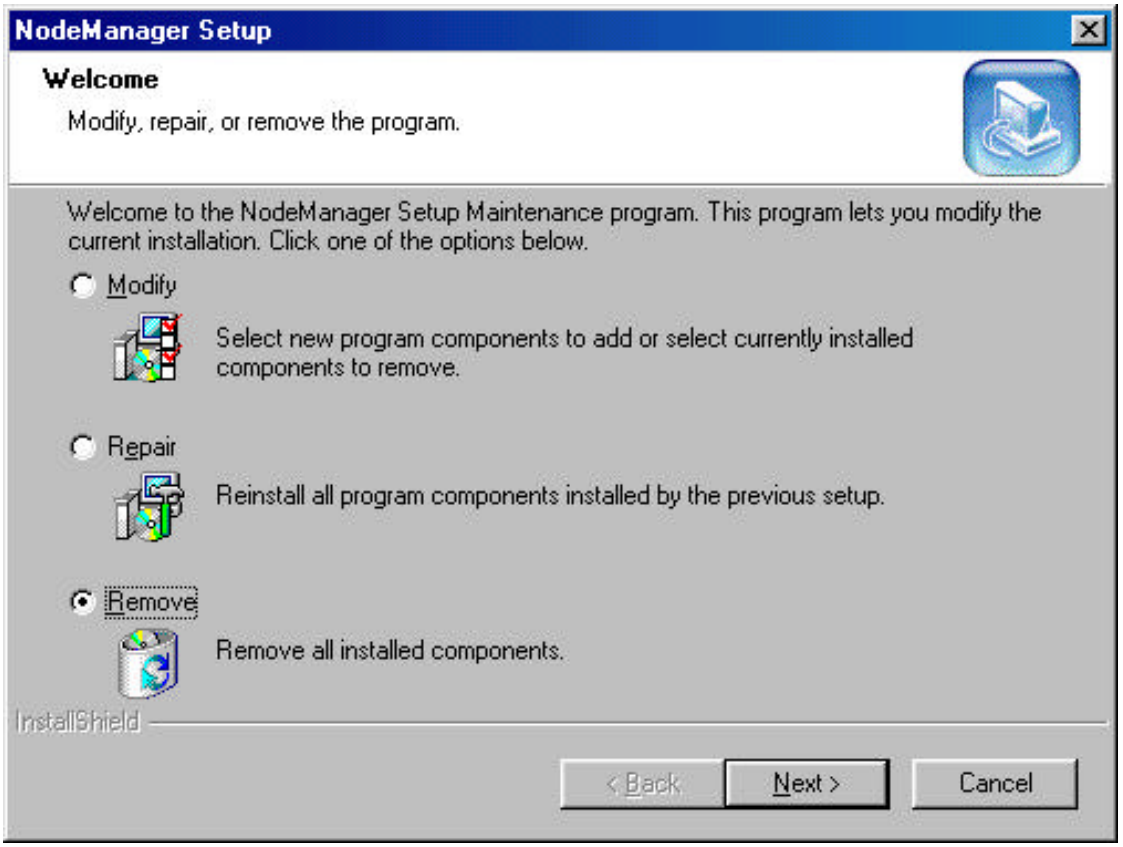
Insert the NodeManager CD-ROM in your CD drive. If auto run is enabled, the installation program will start automatically.

Alternatively, select *Start -> Run*, and type *D:\setup* (D, being your CD-ROM drive).

The *Install Shield Wizard* will start, and guide you through the uninstallation of NodeManager.



The following menu will appear:



Select *Remove*, and click *Next*.

Finish the uninstallation following the on-screen instructions.

Please note that any NodeManager Database(s) already made, will NOT be deleted by the uninstallation.

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