

Wireless Alarming Manager

User Guide



WA Manager

Alarming System Management Software

Windows 98, NT, XP, 2000

User Guide

Version 2.1, 4/2010

Disclaimer

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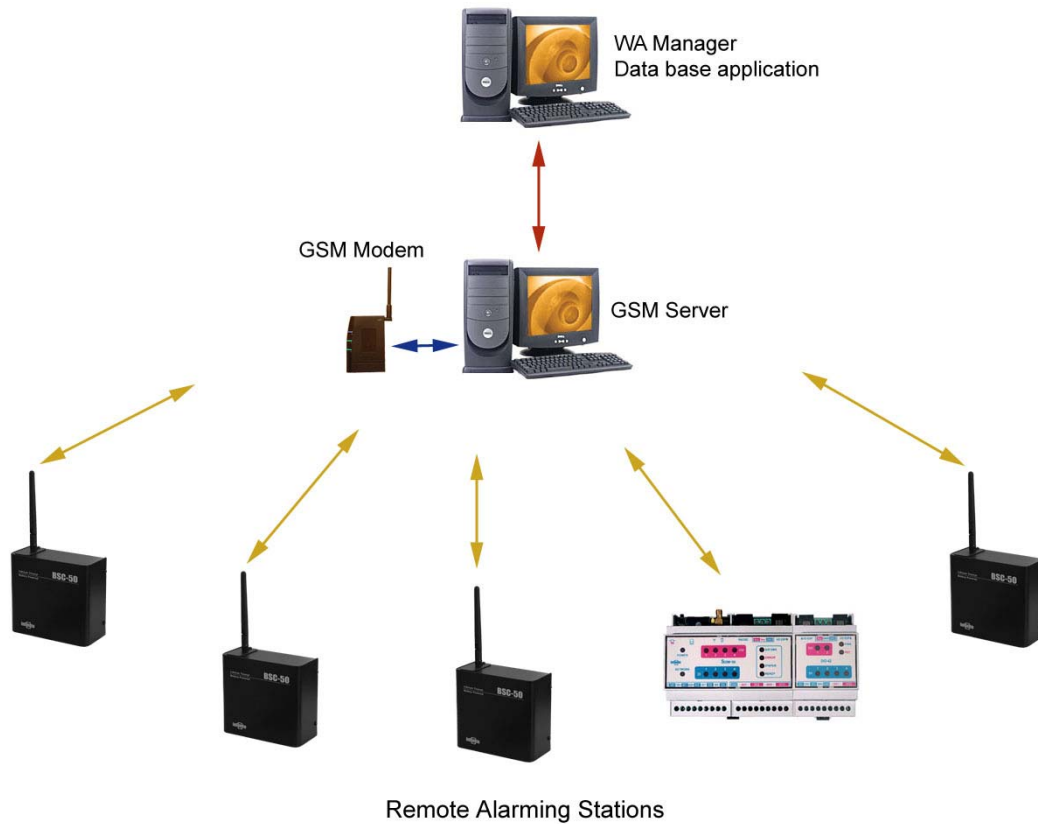
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1. Introduction



WA Manager is a database application for monitoring, archiving and managing of a distributed alarming system based on BSC-50 & SCOM-100 alarming units. The application supports:

- Creating, editing and uploading a device configuration. The configuration is done with simple selections and entries on the configuration forms. The parameter settings are stored and converted to ASCII SMS commands before uploading to the target device via the PC serial port.
- Archiving the Alarm & Status messages
- Real time monitoring of Alarm & Status events.
- Updating a remote stations configuration

The system software consists of two application programs:

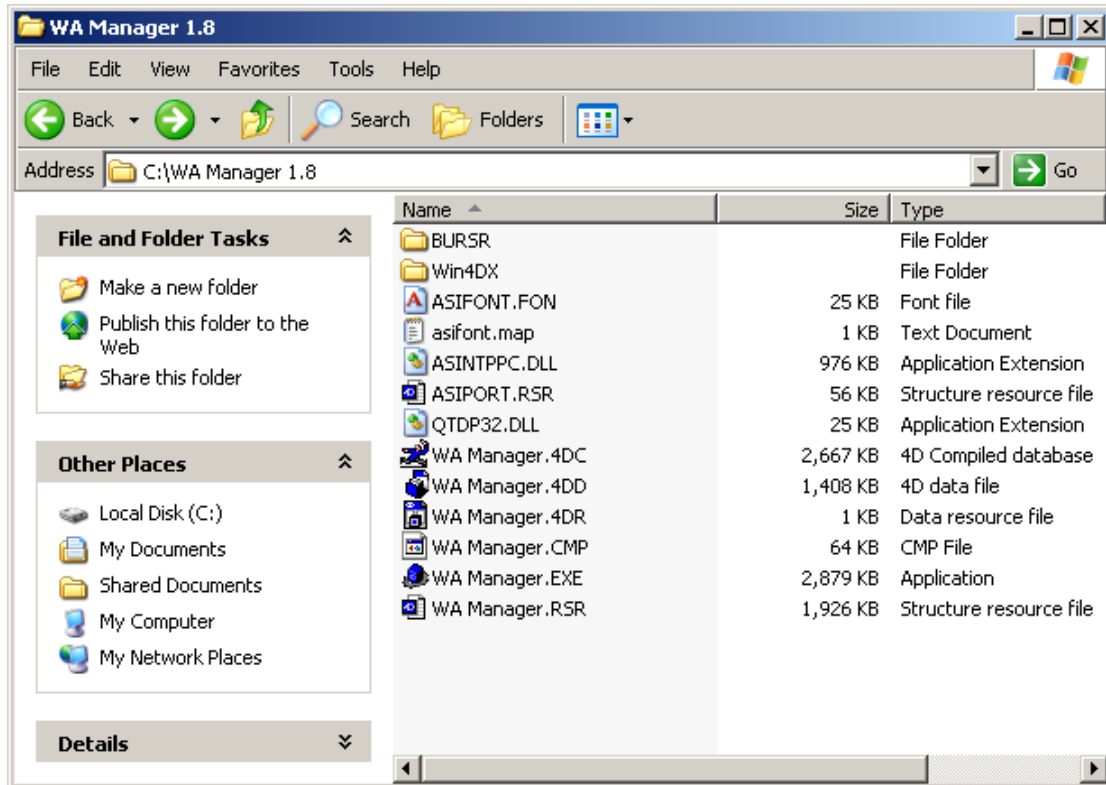
1. A utility application (GSMServer.exe), running minimized for receiving SMS and creating respective files in an user selected directory.
2. The WA Manager data base application, which imports incoming SMS from the selected directory.

The two applications can run on the same or different computers in a local area network.

2. Installation & Setup

2.1 Installation

Open the Installation CD and Run the **WA Manager.exe** installation file. A WA Manager folder is created on your root directory after the installation completion.



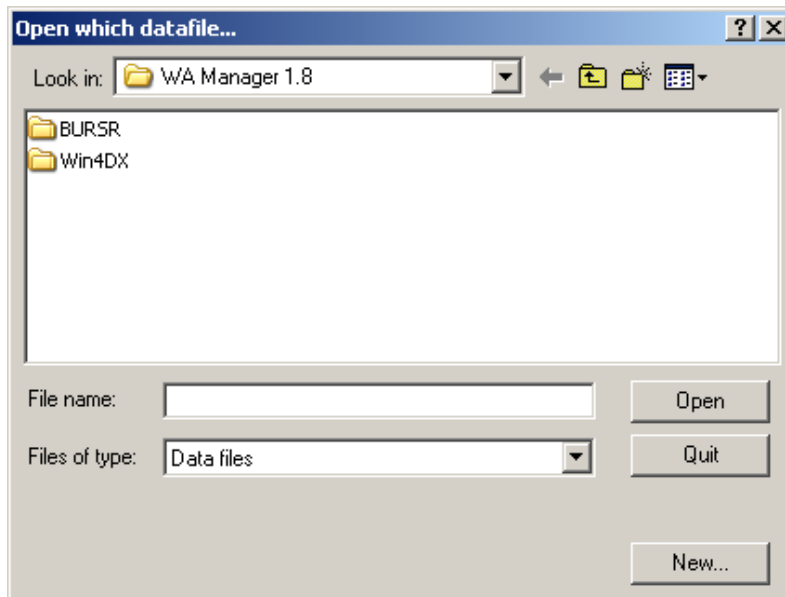
 **Do not put the created folder on the desktop!**

Select the file '**WA Manager.exe**' file and make a shortcut for it. Put the shortcut on your desktop. This is the executable file for the WA Manager application.

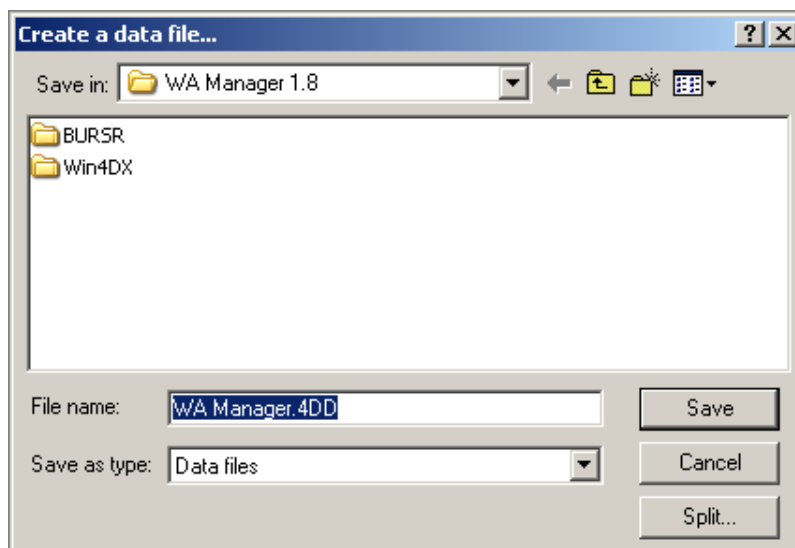
2.2 Setup

2.2.1 Creating a new data file

The data file selection form appears after launching the WA Manager application for the first time. Browse and open the '**WA Manager**' folder.



Click on the 'New' button to create a new database file. Save the data file with the default naming by pressing the 'Save' button.



The application screen appears after a few seconds.

2.3 How to proceed

If you intend to configure a device proceed as follows:

1. Populate the General User List (See Chapter 3)
2. If you want to use custom alarm messages, populate the Alarm Message List (See Chapter 3)
3. For the BSC-50 device configuration refer to Chapter 5, Section 5.2.
4. For the SCOM-100 device configuration refer to Chapter 5, Section 5.3.

If you intend to use the real time Alarming System:

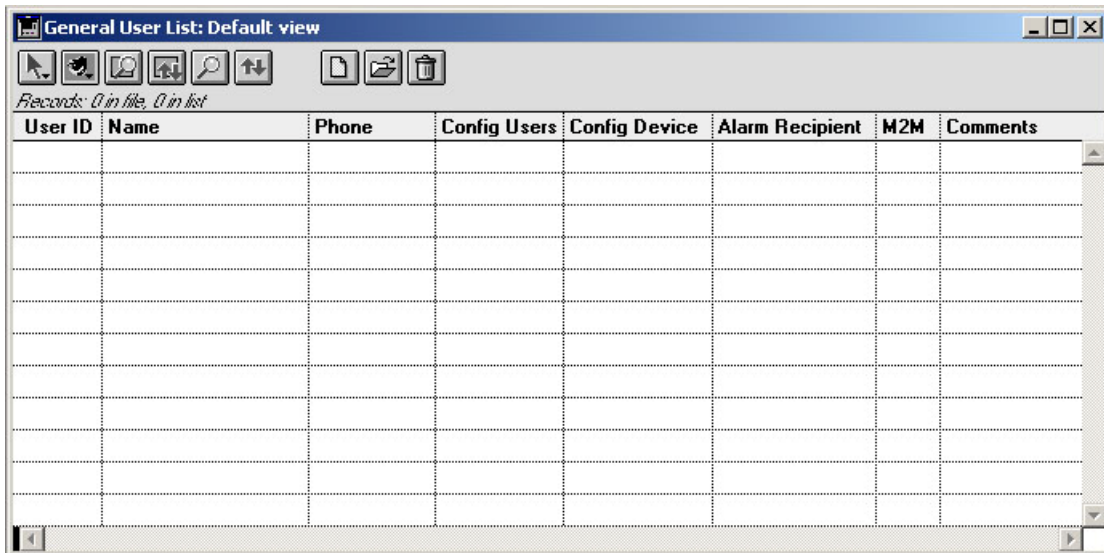
1. Configure the alarming devices.
2. Install and execute the GSM Server utility (See Chapter 6, Section 6.1)
3. Select the appropriate Application Parameters (See section 6.2)
4. Read sections 6.3, 6.4, 6.5 and Chapter 8.

3. Creating a General User list

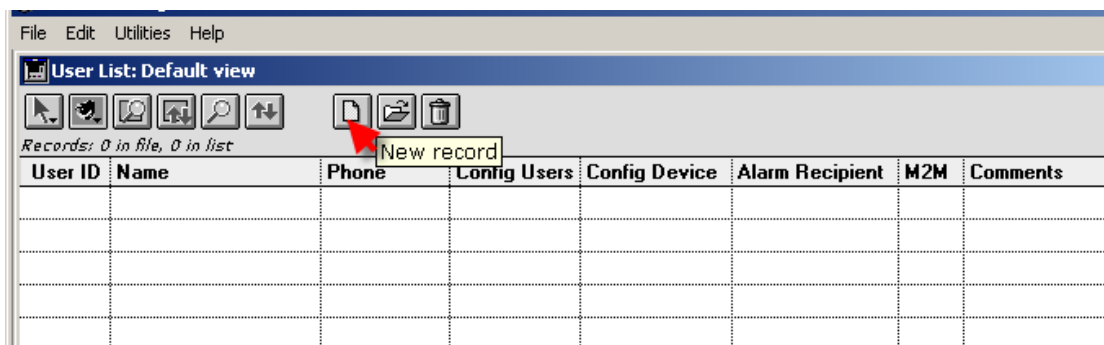
The General User List refers to the whole distributed system and not to a specific alarming device.



Select the '**General User List**' menu to open the General User list table.



3.1 Creating a new User



Click on the '**New record**' button to create a new User.
The User List entry form opens:

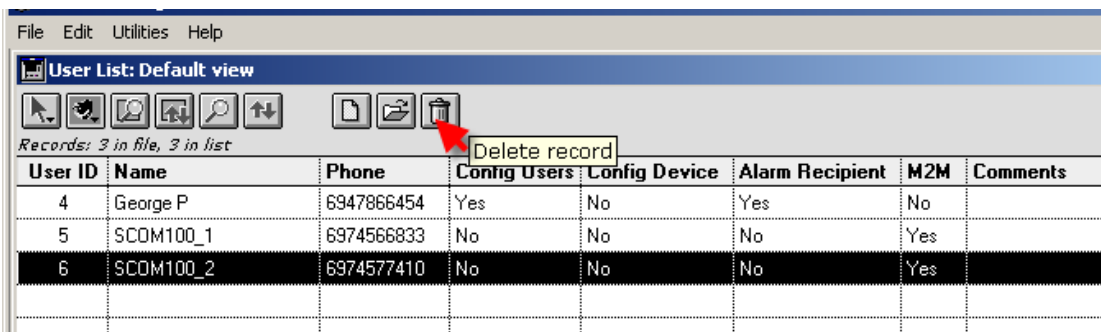
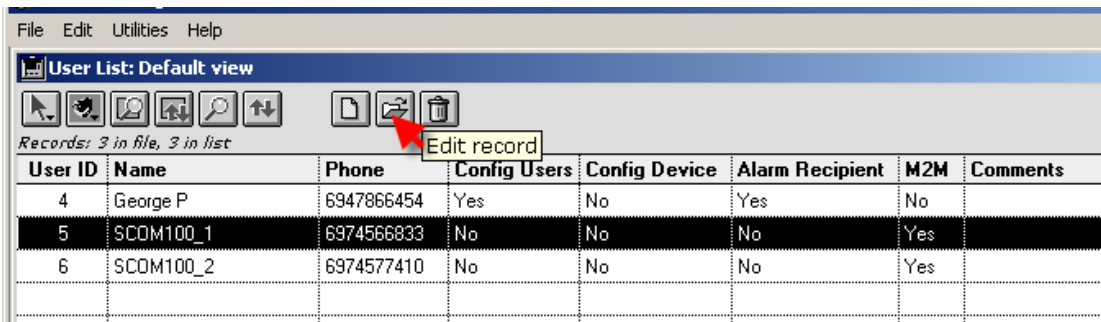
The form contains the following entries:

- **User name:** A string up to 15 characters
- **Phone number:** A string up to 15 characters
- Four User Flags that represent user rights and user status.
- **Config users:** 'Yes' for System Administrator, 'No' for Normal User.
- **Config device:** 'Yes' for the ability to change the device configuration (via SMS).
- **Alarm recipient:** Marks a User as an Alarm SMS recipient.
- **M2M:** 'Yes' for a remote machine recipient (as SCOM-100), 'No' for a normal Phone recipient
- Enter the appropriate data and click on the **'Save'** button to close the entry form. The new user appears in the User List.

User ID	Name	Phone	Config Users	Config Device	Alarm Recipient	M2M	Comments
3	George P	6974788665	No	No	Yes	No	

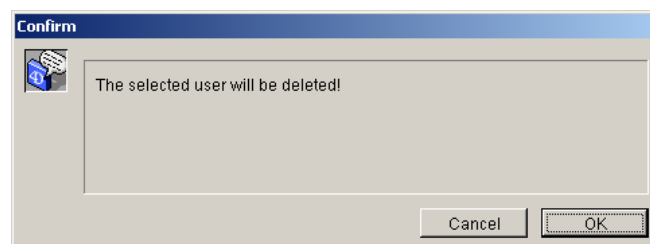
3.2 Managing the User List

You can edit or remove records from the User List using the respective buttons:

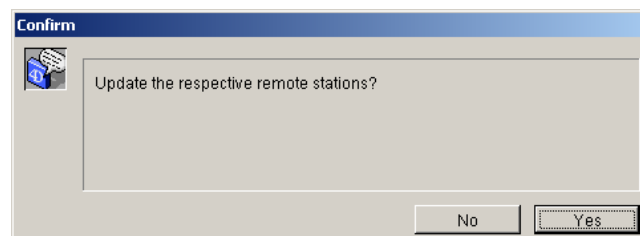


If a User is removed from the System User list, all occurrences of this user in remote Stations configurations as User and/or recipient will also be removed:

Click on the 'Delete record' button:



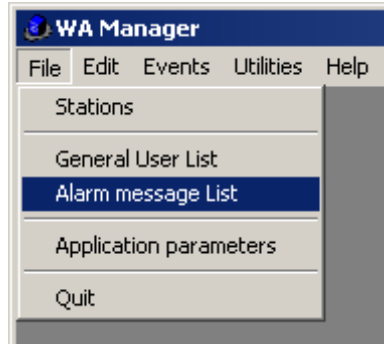
Click on the 'OK' button.



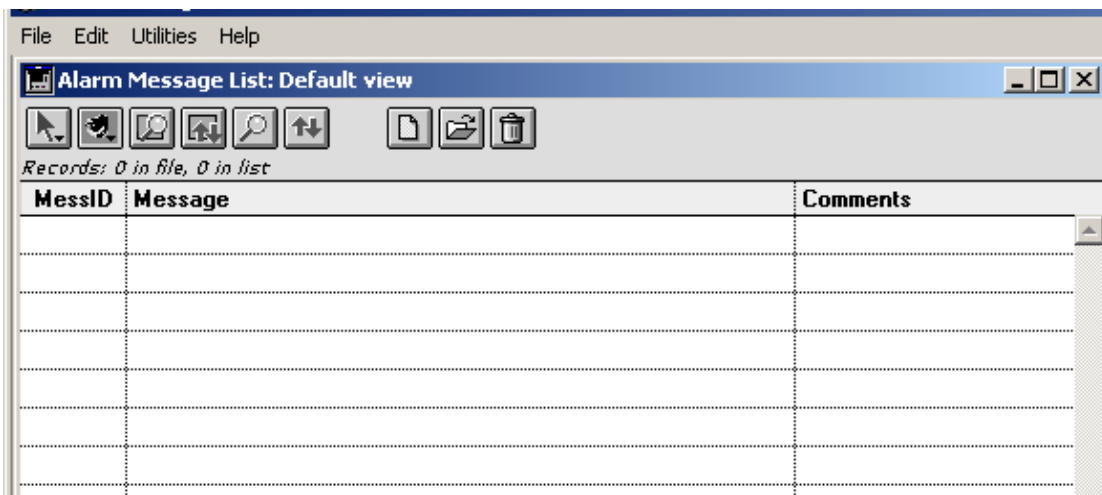
Click on the 'No' button.

4. Creating an Alarm Message List

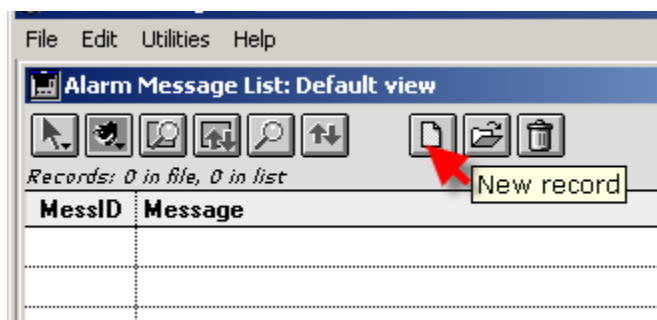
The Alarm Message List refers to the whole distributed system and not to a specific alarming device.



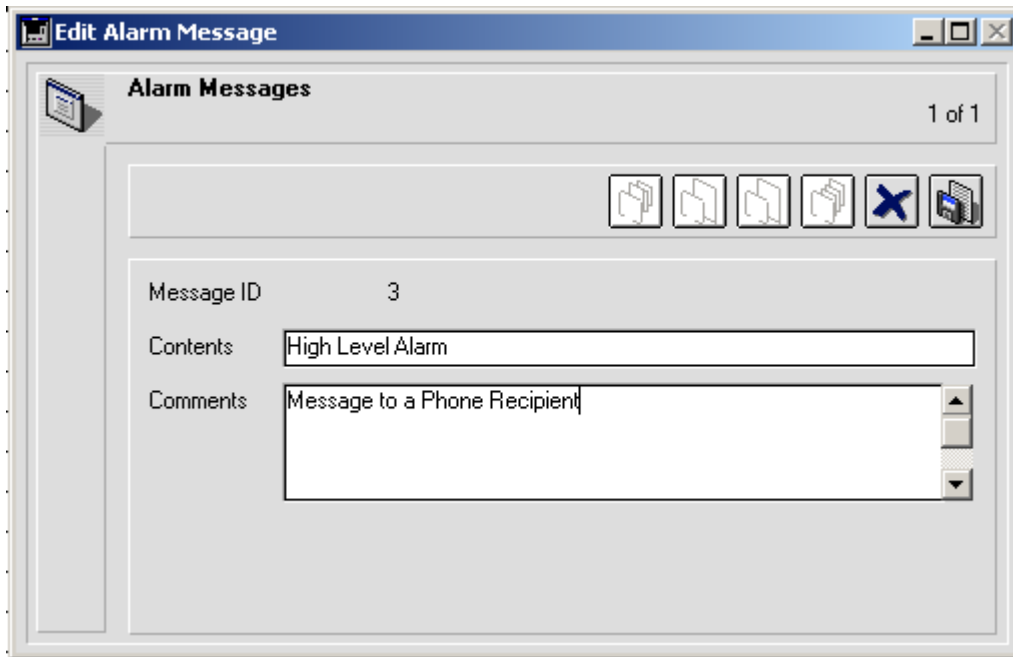
Select the 'Alarm Message List' menu to open the Alarm Message table.



3.1 Creating a new Alarm Message



Click on the 'New Record' button to create a new Alarm message.
The Alarm Message List entry form opens:



Enter the Message text in the field '**Contents**' and the respective optional comments. Click on the '**Save**' button to close the entry form. The new message appears in the Message List.

☞ **In case of a M2M Alarm message replace the ';' character (Semicolon) with the '#' character.**

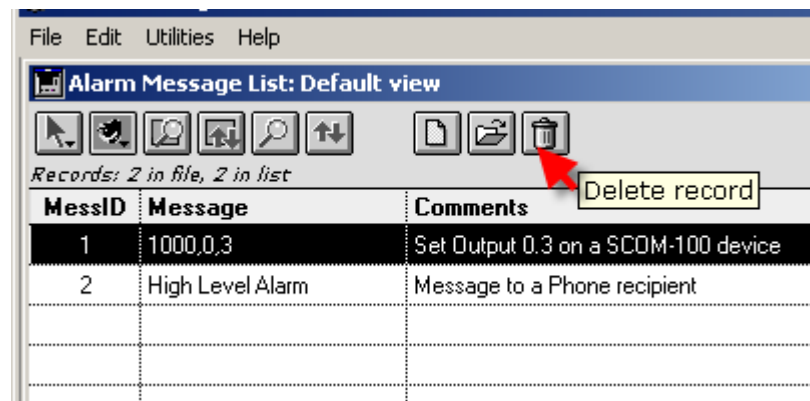
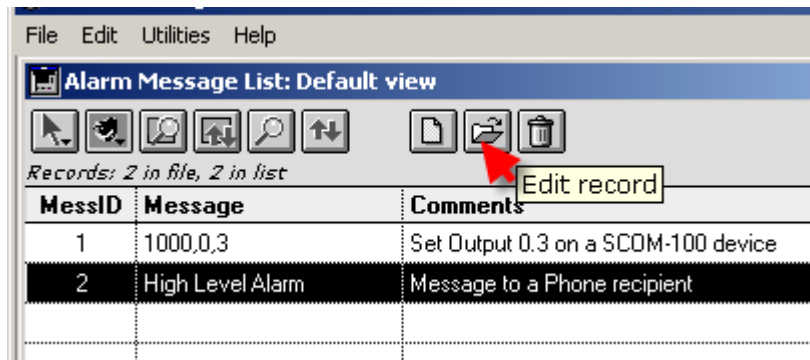
Example:

Instead of: 1000,0,1;1000,1,3 type 1000,0,1#1000,1,3

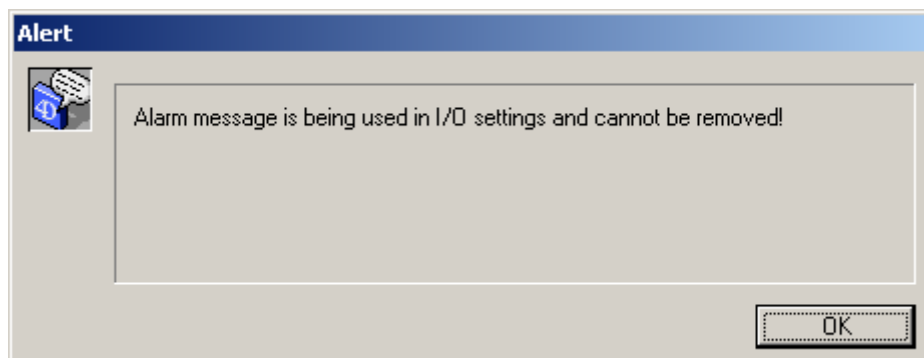
MessID	Message	Comments
1	1000,0,3	Set Output 0.3 on a SCOM-100 device
2	High Level Alarm	Message to a Phone recipient

4.2 Managing the Alarm Message List

You can change user data or remove a Message from the List by using the respective buttons:

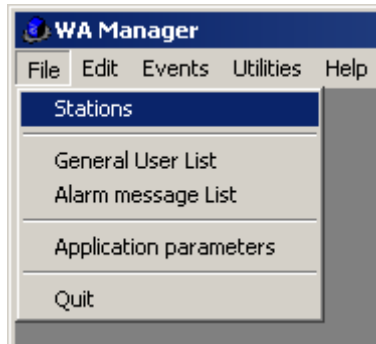


-  An Alarm Message cannot be removed from the List if it is used in a Station configuration.

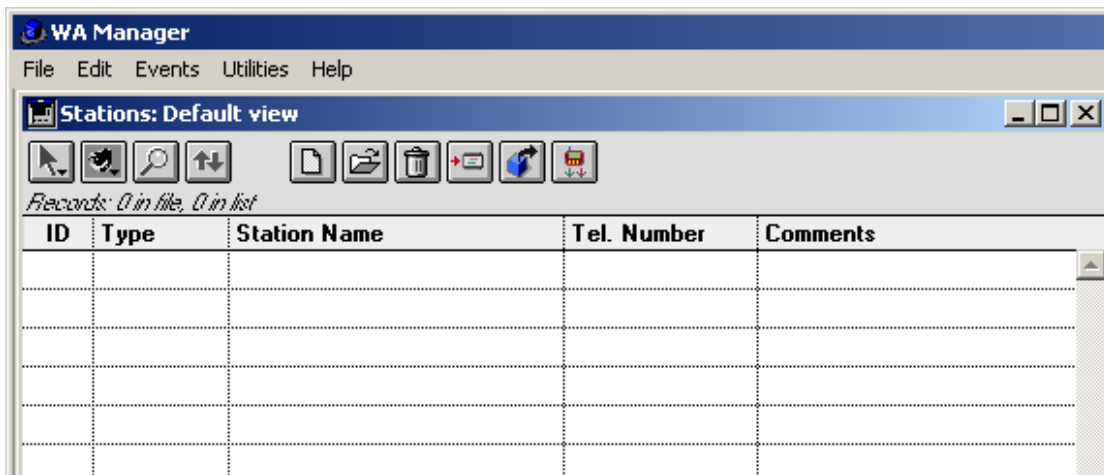


5. Managing Stations

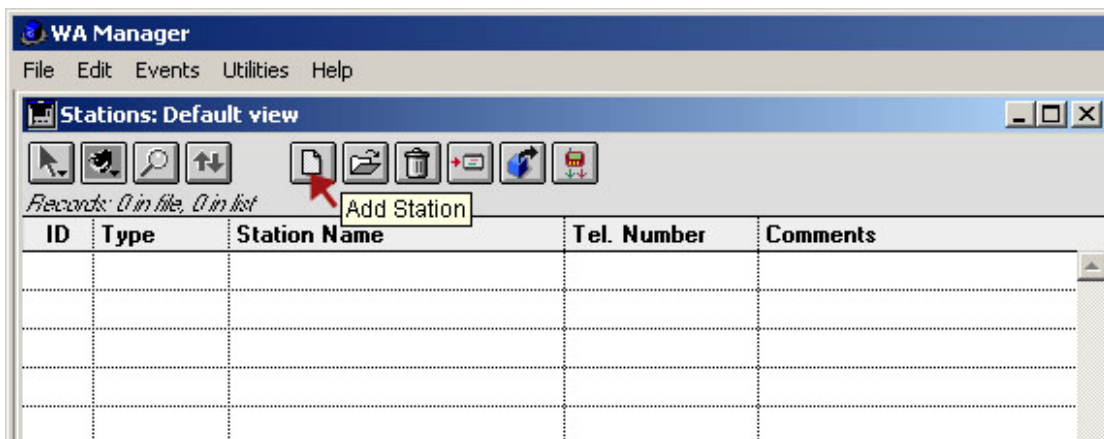
All remote stations of a distributed alarming system must be declared in a Stations list.



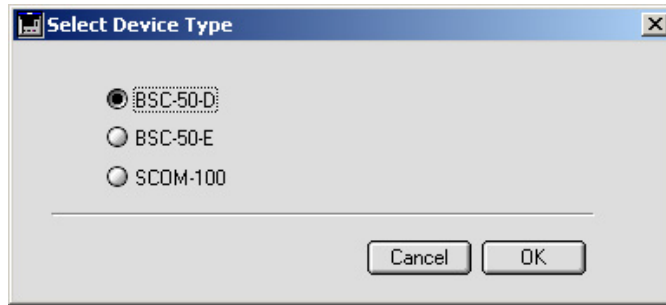
Select the 'Stations' menu to open the Stations list form:



5.1 Creating a new Station



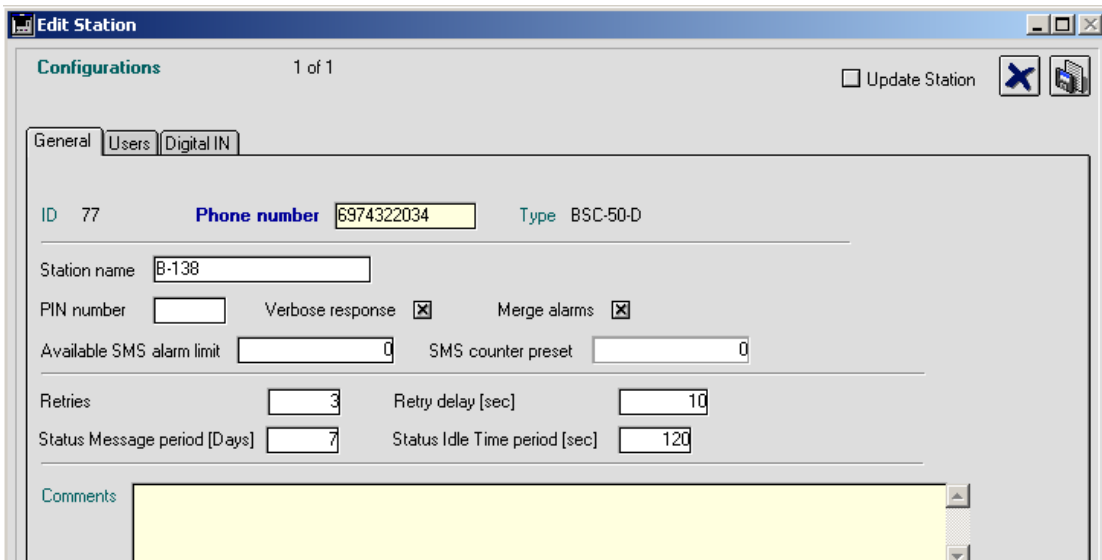
Click on the 'Add Station' button to create a new Station.



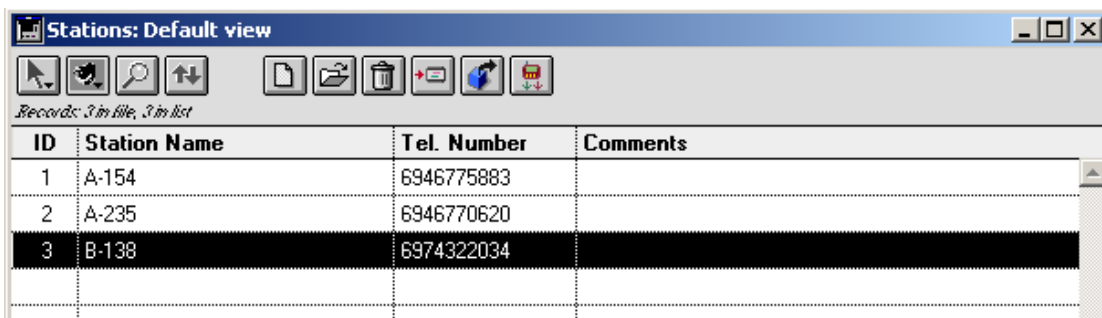
Click on the 'OK' button.

The configuration form opens. The only entry which is mandatory for the distributed alarming system is the 'Phone number' entry. The WA Manager identifies a station of a distributed system through the its phone number.

All other entries on the form are intended for configuring the BSC-50 device and are optional.

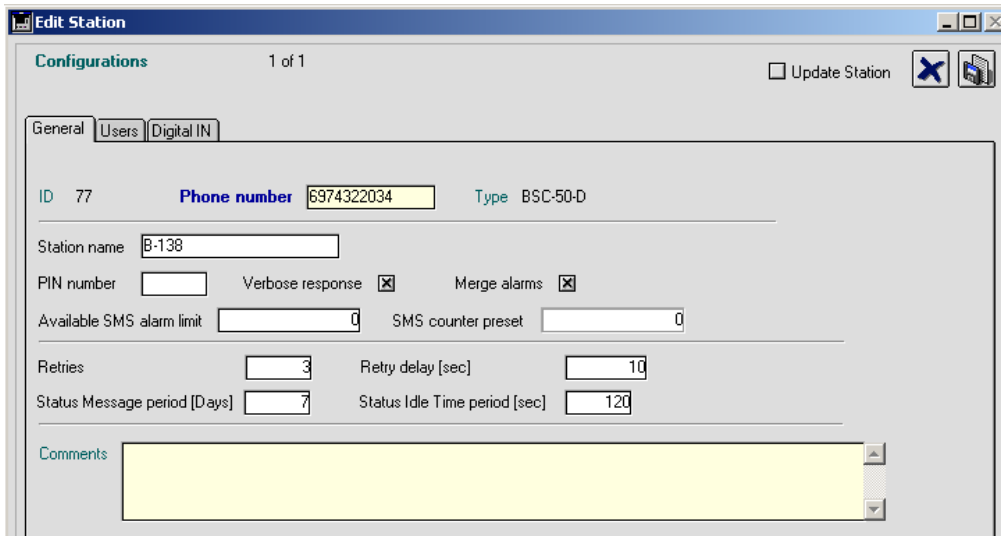


If you intend to setup a BSC-50 unit using the Hyperterminal or via SMS, enter the 'Phone number' and any optional comments for the respective station and click on the 'Save' button to declare the new station. The new station appears in the Station list.



5.2 BSC-50 Configuration

5.2.1 General settings



The screenshot shows the 'Edit Station' configuration window with the 'General' tab selected. The window title is 'Edit Station' and it shows 'Configurations 1 of 1'. There is an 'Update Station' checkbox and some navigation icons in the top right. The main area contains the following fields and options:

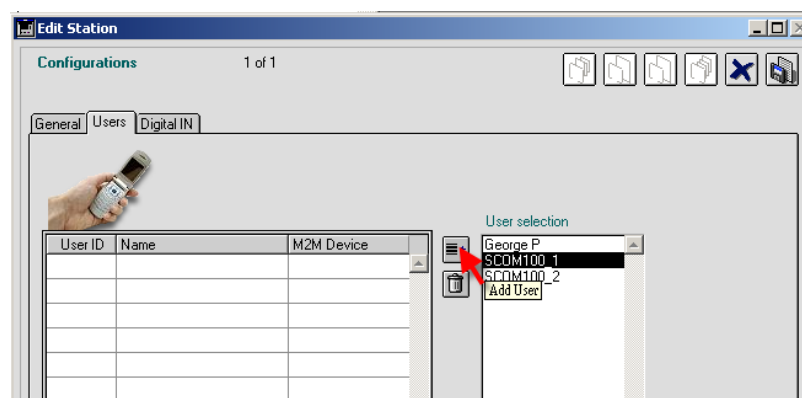
- ID: 77
- Phone number: 6974322034
- Type: BSC-50-D
- Station name: B-138
- PIN number: (empty)
- Verbose response:
- Merge alarms:
- Available SMS alarm limit: 0
- SMS counter preset: 0
- Retries: 3
- Retry delay [sec]: 10
- Status Message period [Days]: 7
- Status Idle Time period [sec]: 120
- Comments: (empty text area)

General settings, appearing on the first page, include (See the respective BSC-50 device parameters):

1. Station name.
2. Optional PIN number.
3. Verbose or brief response flag.
4. Enable/disable alarm merging flag.
5. Available SMS counter and respective low alarm limit.
6. Retries on SMS transmission failure.
7. Delay between retries.
8. Period for the Status messaging.
9. Status Idle Time period.

5.2.2 Selecting the Station Users

Click on the 'Users' Tab on the Entry form.



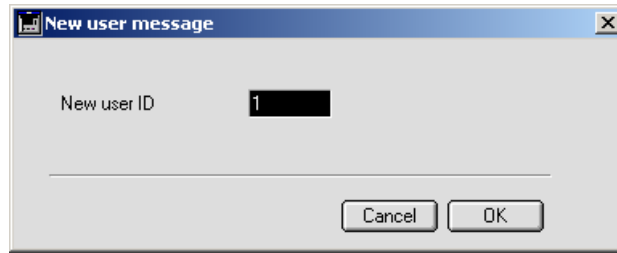
The screenshot shows the 'Edit Station' configuration window with the 'Users' tab selected. The window title is 'Edit Station' and it shows 'Configurations 1 of 1'. There are navigation icons in the top right. The main area contains a table for users and a selection list on the right.

User ID	Name	M2M Device

On the right, there is a 'User selection' list with the following items: George P, SCDM100_1, SCDM100_2, and Add User. A red arrow points to the 'Add User' button.

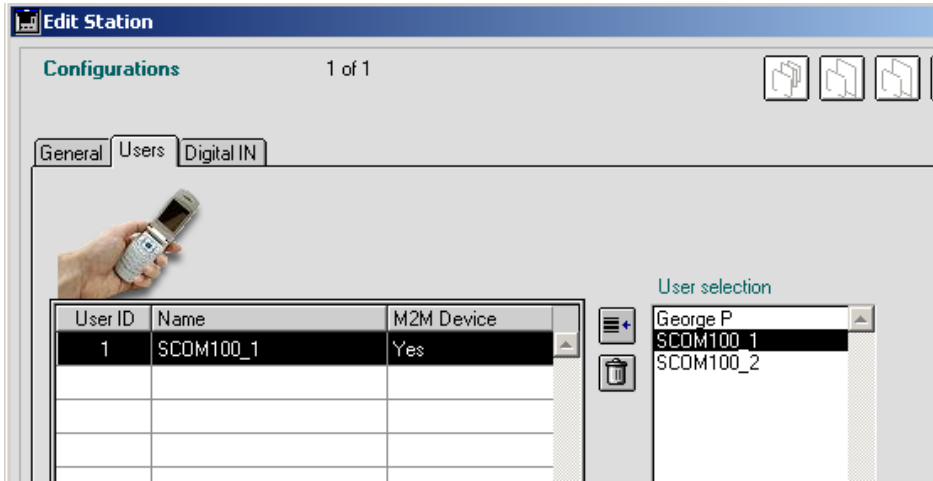
The entries of the System User List appear in a selection list on the right. Select a user on the User selection list and click on the 'Add User' Button.

A pop up form appear for specifying a User ID in the range 1-20:

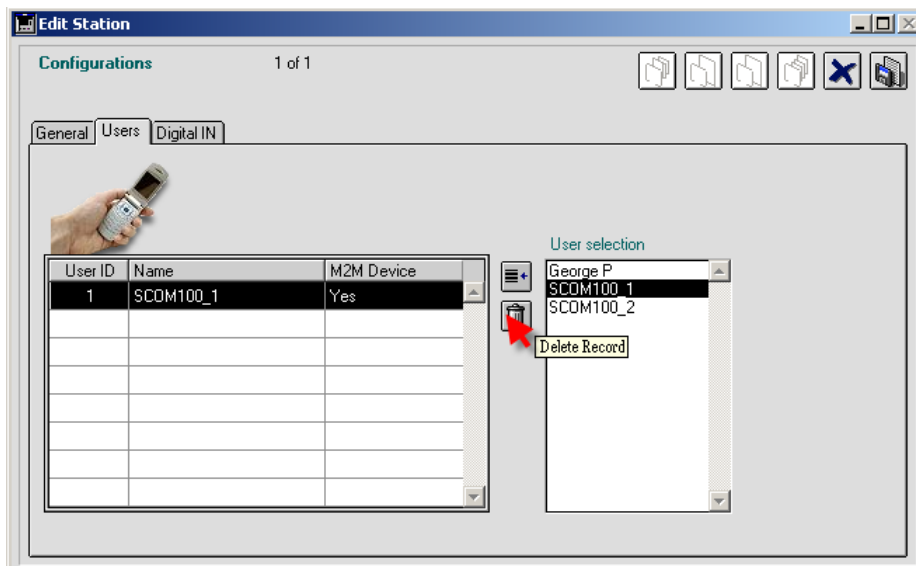


Press the 'OK' button.

The selected User appears in the Station User list on the left:

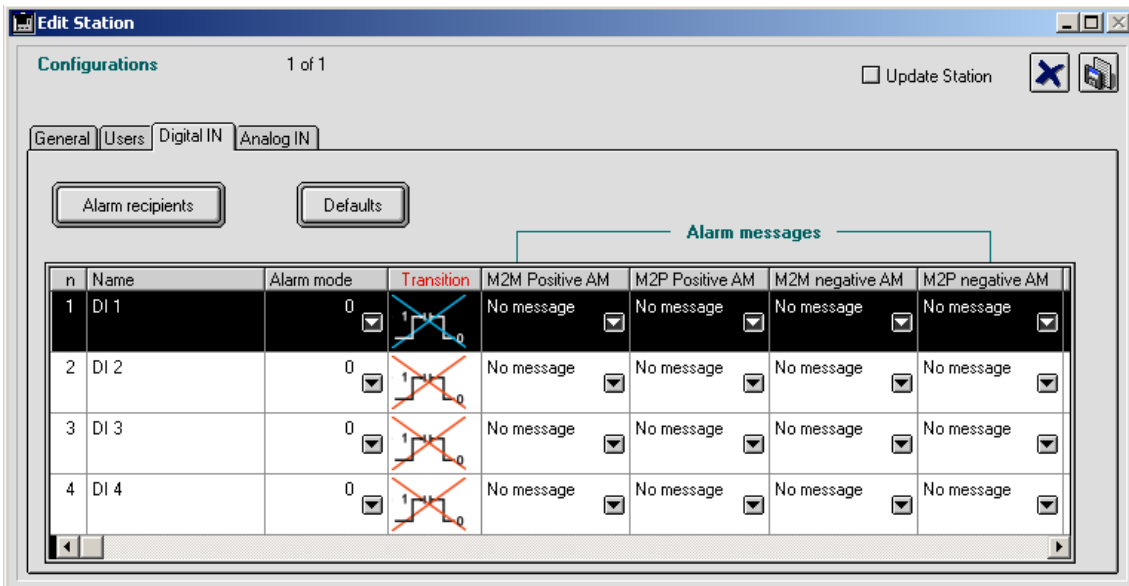


Use the 'Delete record' button to remove a User from the Station User list:



5.2.3 Configuring the digital inputs

Click on the 'Digital IN' Tab on the Entry form:

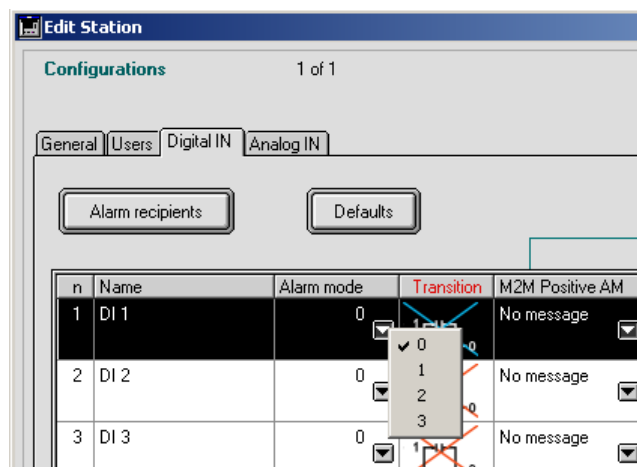


The configuration form for the digital inputs of a BSC-50 unit contains following fields:

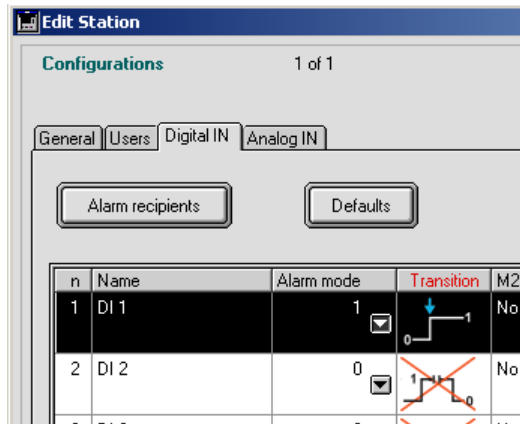
1. Digital input naming.
2. Alarm mode: positive transition, negative transition, both transitions.
3. Alarm delay in seconds.
4. Optional alarm messages for the positive and the negative transition (Machine to Person, Machine to Machine).

Enter data by double clicking the respective column cell in case of entering a string or a numerical value or by clicking on the pull down menus for the alarm messages.

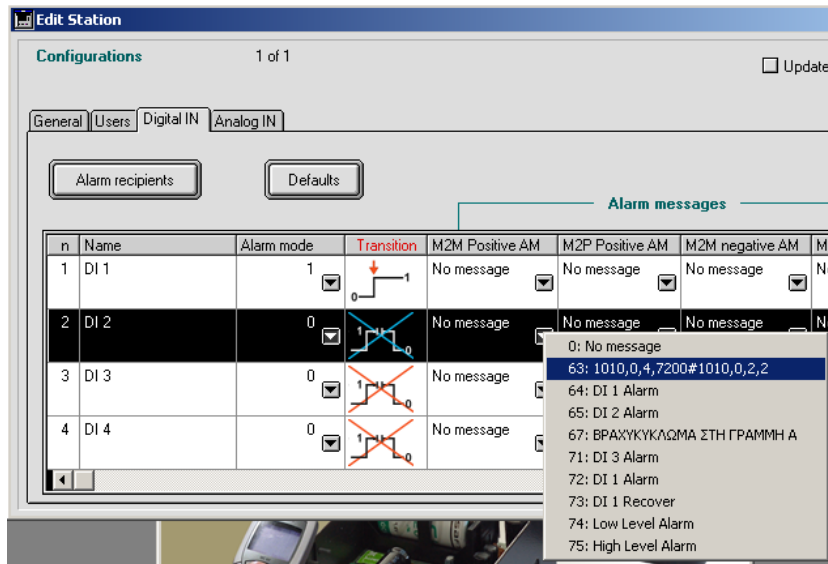
Alarm mode:



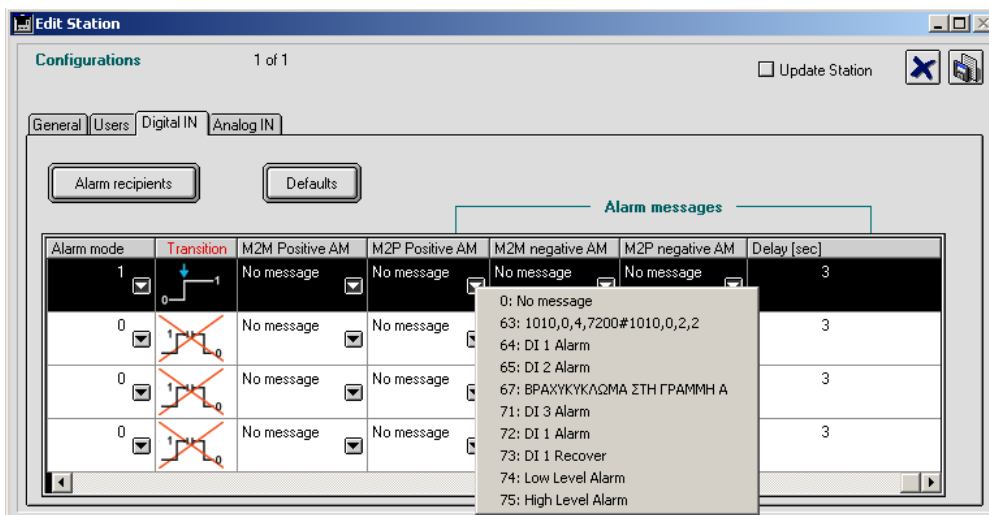
Select the transition for alarm triggering via the pull down menu:



M2M Message: Select a message for a M2M recipient (e.g. a SCOM-100 device) via a pull down menu, which contains all available message texts of the General Alarm message list:

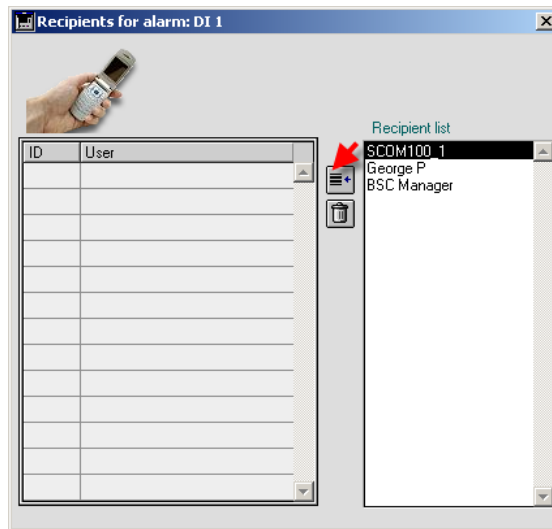


M2P Message: Select a message for a Phone recipient via the respective pull down menu:

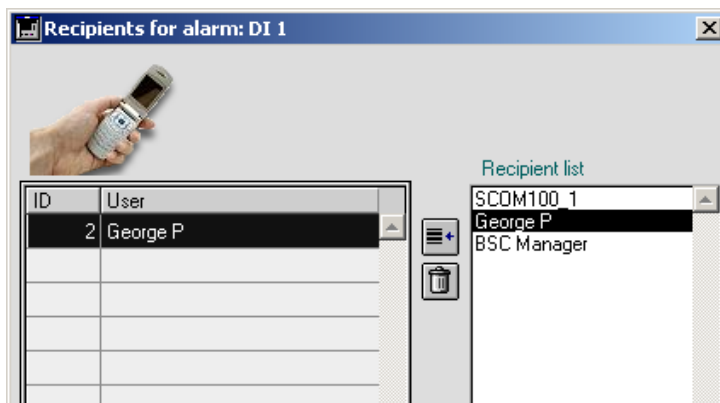


Delay: Double click in the respective cell and type in the Alarm delay for alarm state recognition. Specifying the alarm recipients for the selected DI alarm:

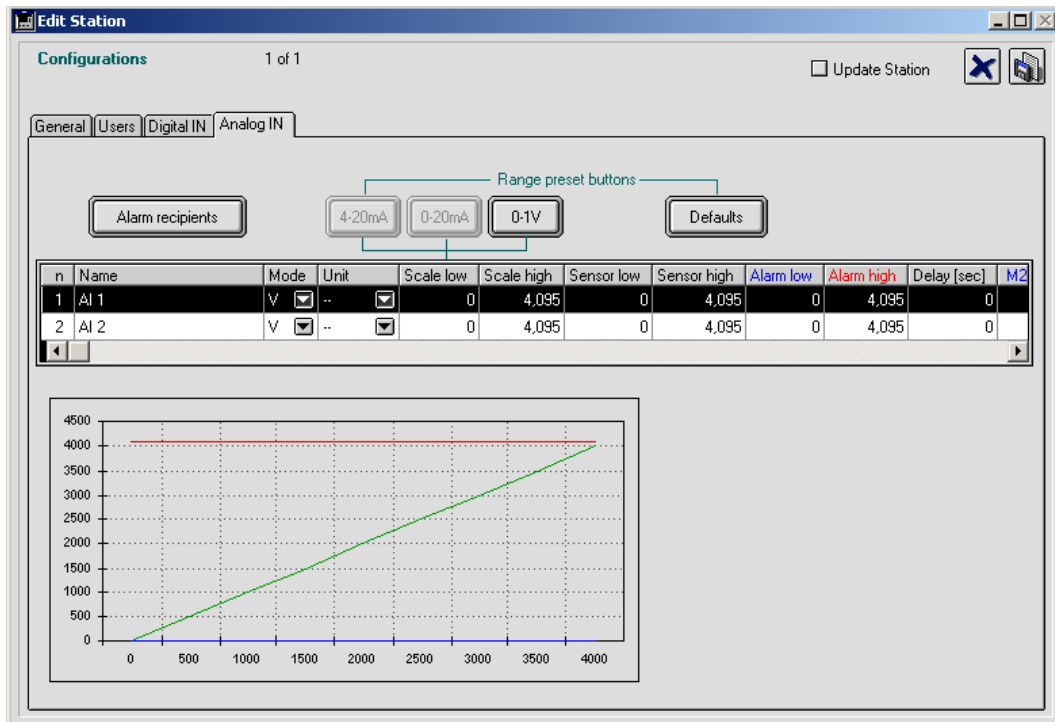
Click on the 'Alarm recipients' button. The Recipient List for the selected DI alarm opens:



Select a Station User in the 'Recipient list' on the right and click on the 'Add recipient' button to add the respective user in the DI Alarm recipient list.



5.2.4 Configuring the analog inputs (BSC-50-E)



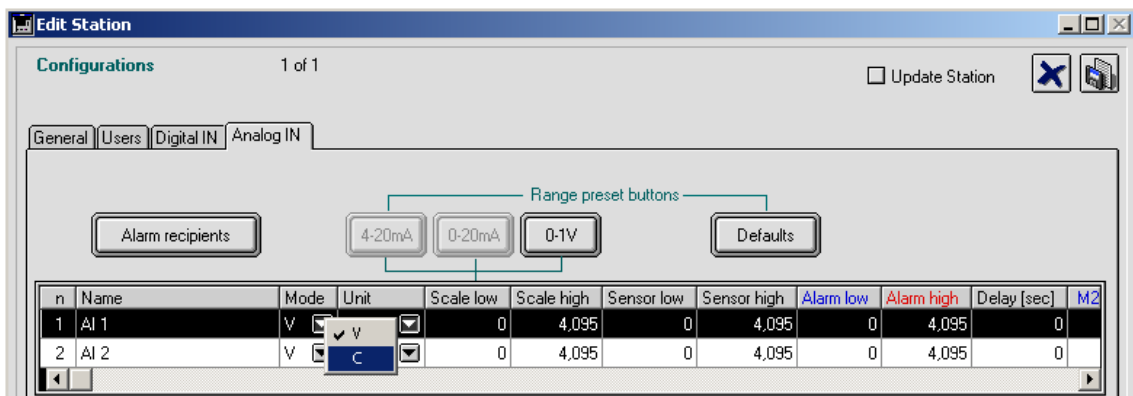
The analog input configuration includes following parameters:

1. Analog input naming.
2. Physical measurement unit.
3. Scale low: Low scale value in physical units.
4. Scale high: High scale value in physical units.
5. Sensor low: Low raw scale value (0-4095)
6. Sensor high: High raw scale value (0-4095)
7. Alarm low: Value between scale low and high indicating the low alarm limit.
8. Alarm high: Value between scale low and high indicating the high alarm limit.
9. Alarm delay in seconds.
10. Optional alarm messages for overstepping the alarm limits.

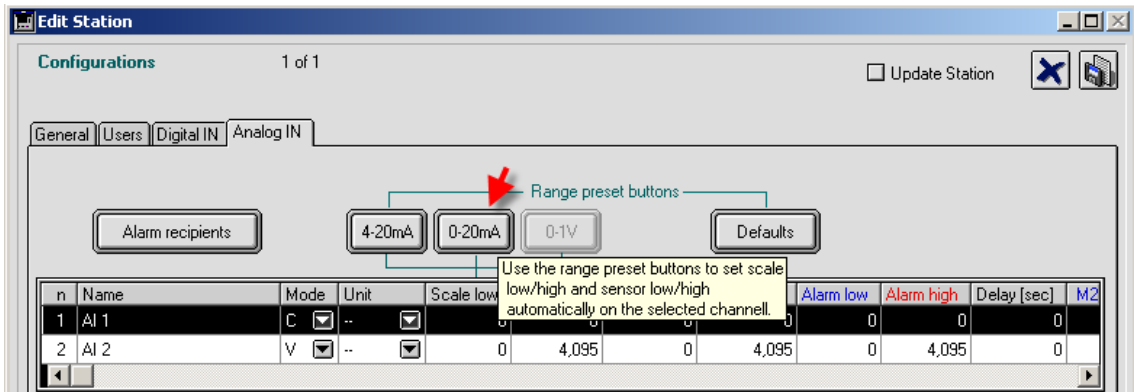
Enter data by double clicking the respective column cell in case of entering a string or a numerical value or by clicking on the pull down menus for the alarm messages.

Analog input mode

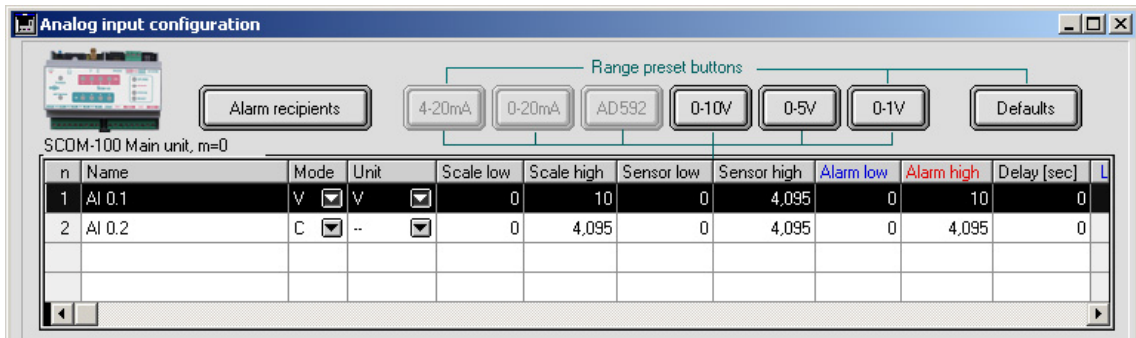
The selection must correspond to the wiring option of the respective analog input on the main unit and the mode DIP switch settings on the AI-4 expansion module.



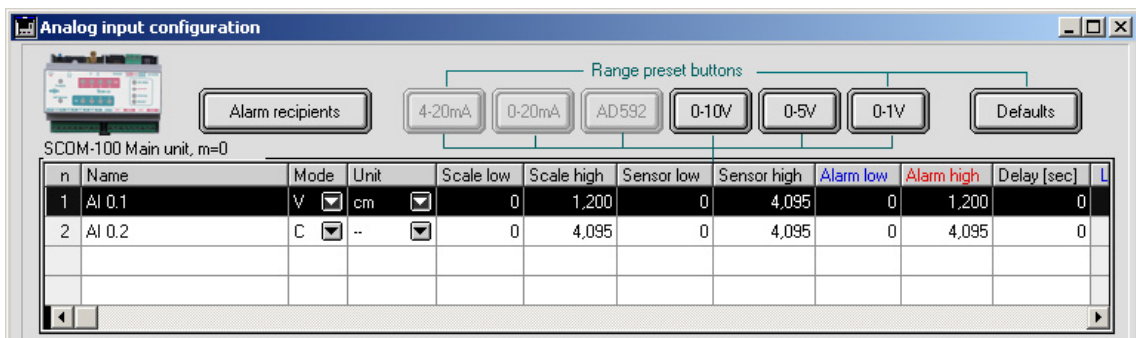
Example: Connecting a level sensor with 0-20mA output on AI 1.
 Select 'C' (Current mode) on the first channel and press the '0-10V' button to configure the scale and sensor values for a sensor with 0-10V output:



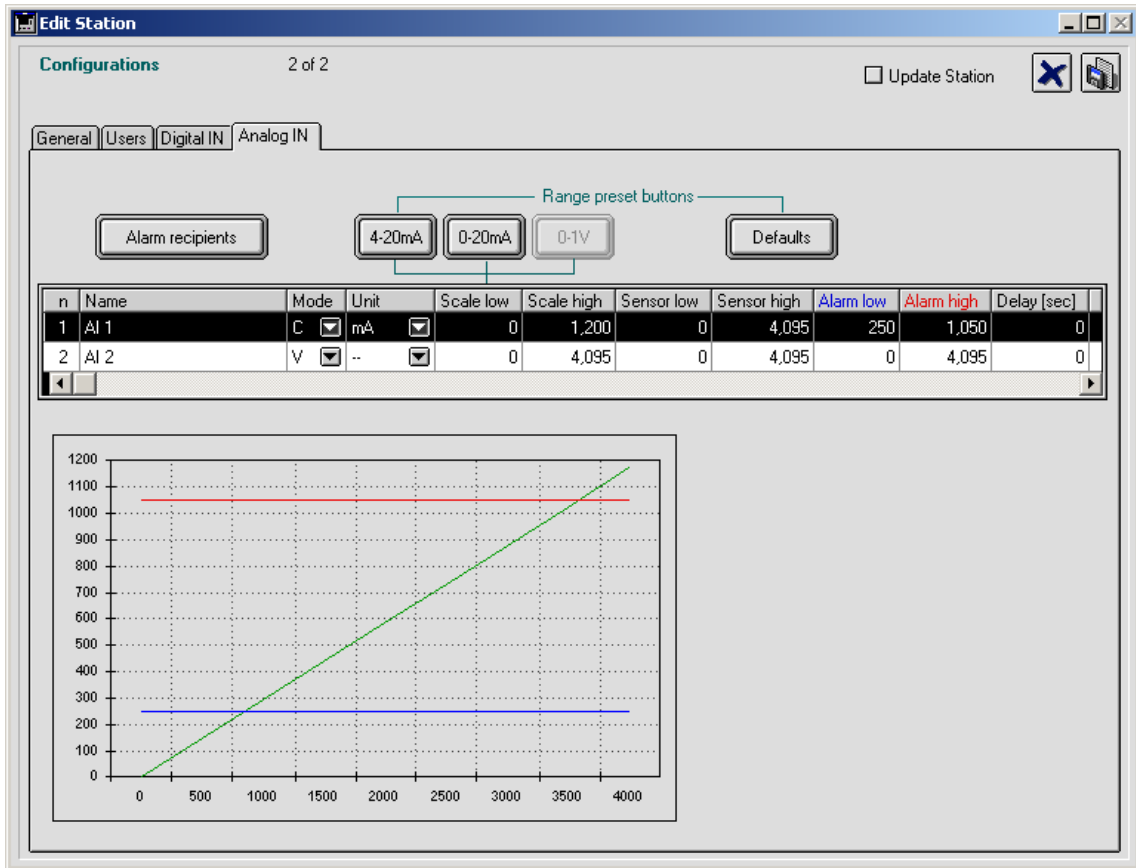
The scale (0-20) and the raw scale values are set automatically.



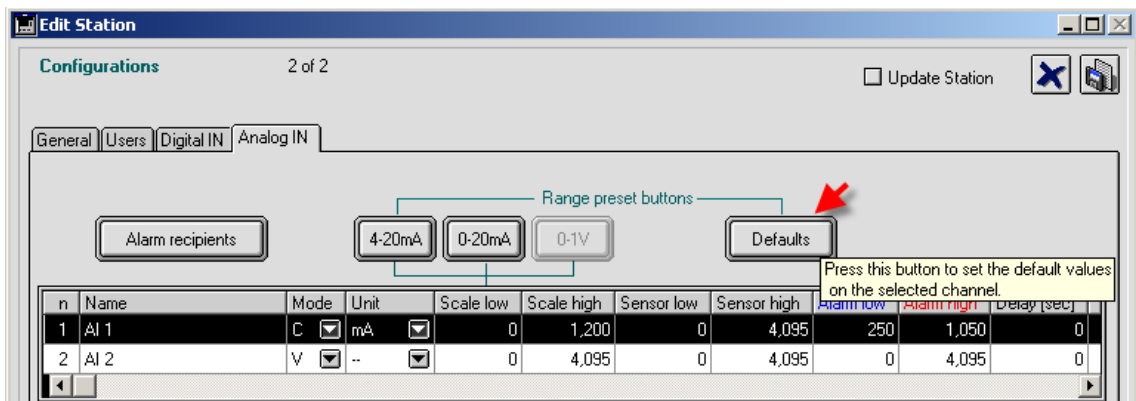
Select a physical unit and enter Scale low and high according to the sensor scale.



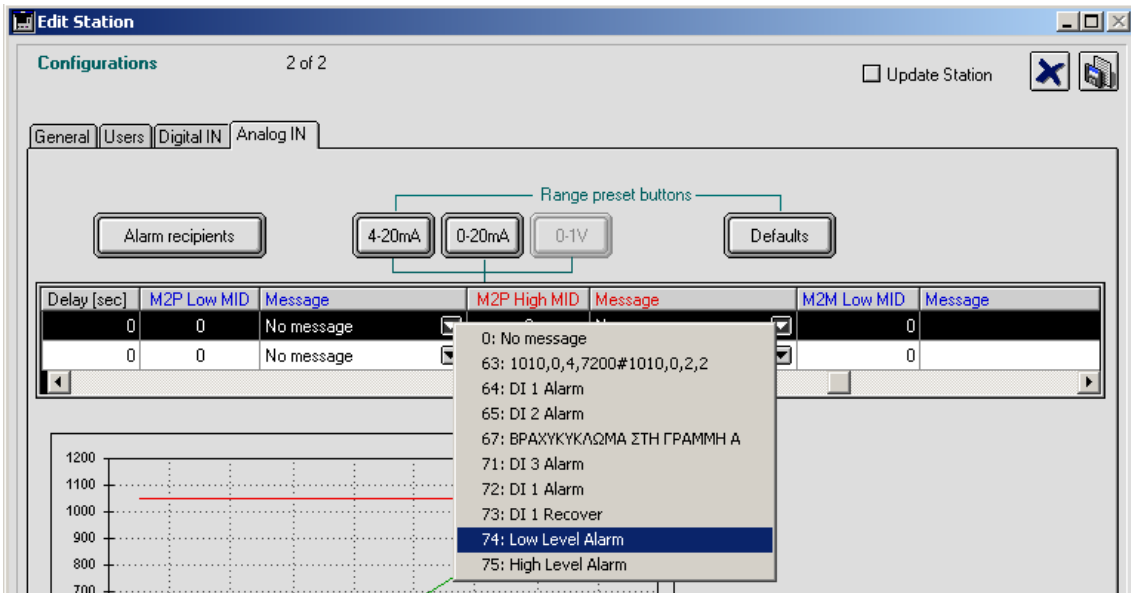
Now enter the alarm limits:



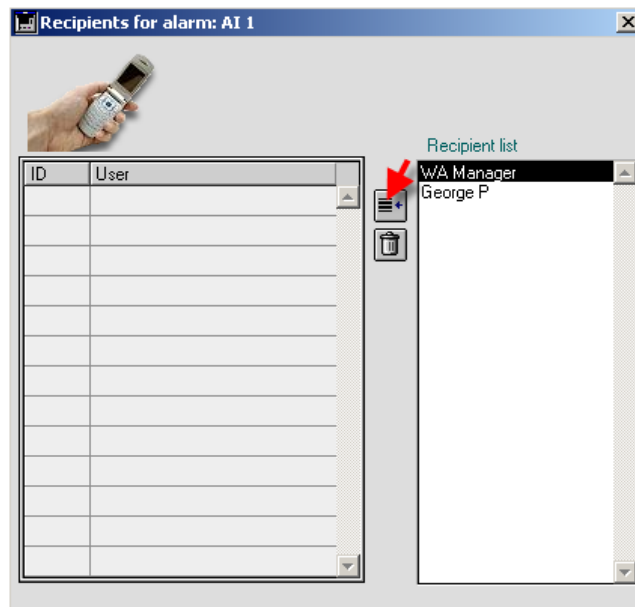
The diagram shows the analog input conversion characteristic and the respective alarm limits. Use the 'Default' button to restore the default settings for a selected channel.



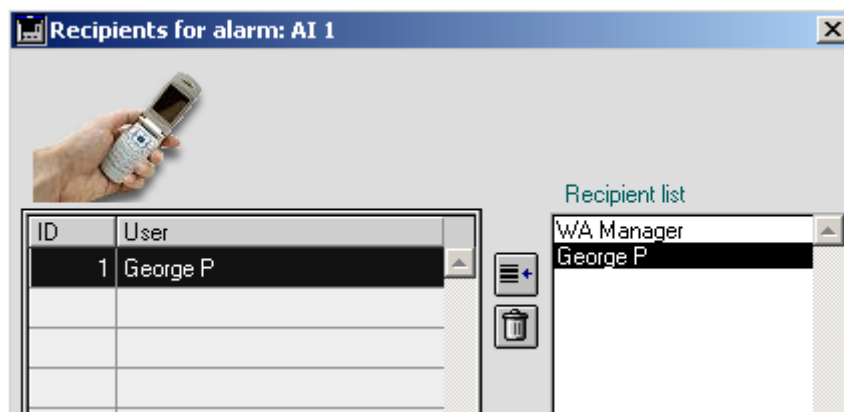
- Now select the 4 optional alarm messages for low and high alarm (Machine to Person, Machine to Machine):.



Click on the **'Alarm recipients'** button. The Recipient List for the selected AI alarm opens:

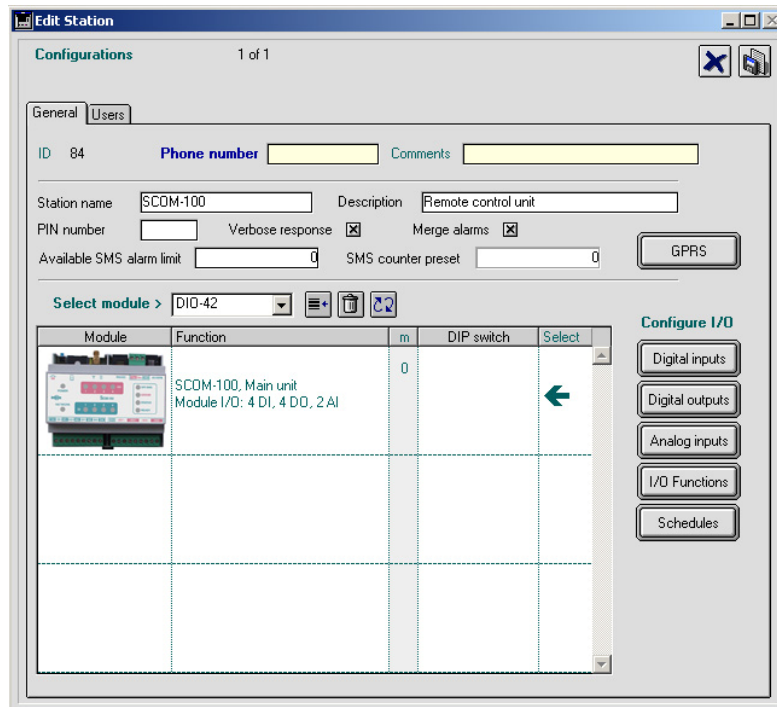


Select a Station User in the **'Recipient list'** on the right and click on the **'Add recipient'** button to add the respective user in the DI Alarm recipient list.



5.3 SCOM-100 Device Configuration

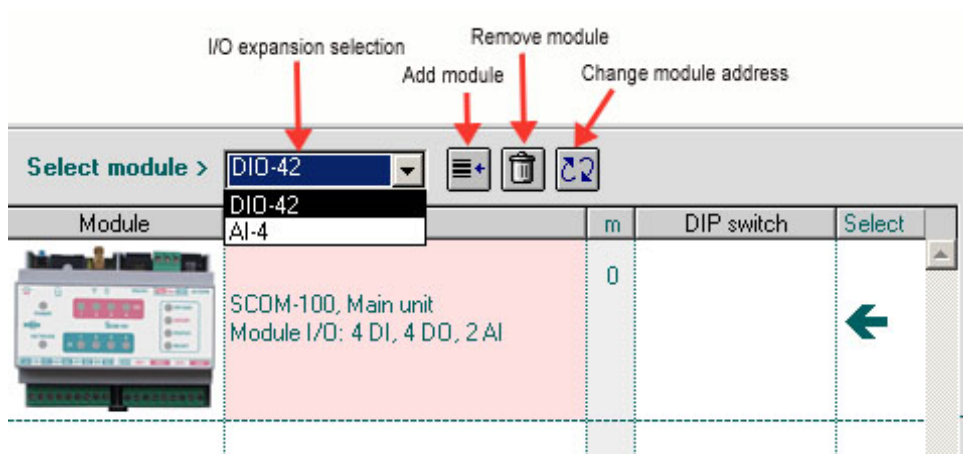
5.3.1 General settings



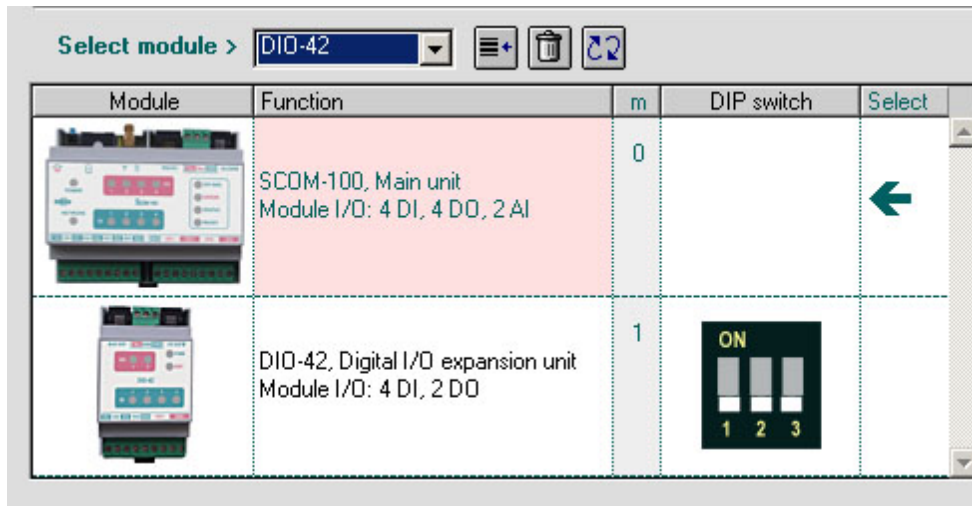
General settings include:

1. Station name and description
2. Optional PIN number
3. Verbose or brief response
4. Enable/disable alarm merging
5. Available SMS counter and respective low alarm limit.

5.3.2 Selecting the device I/O expansion

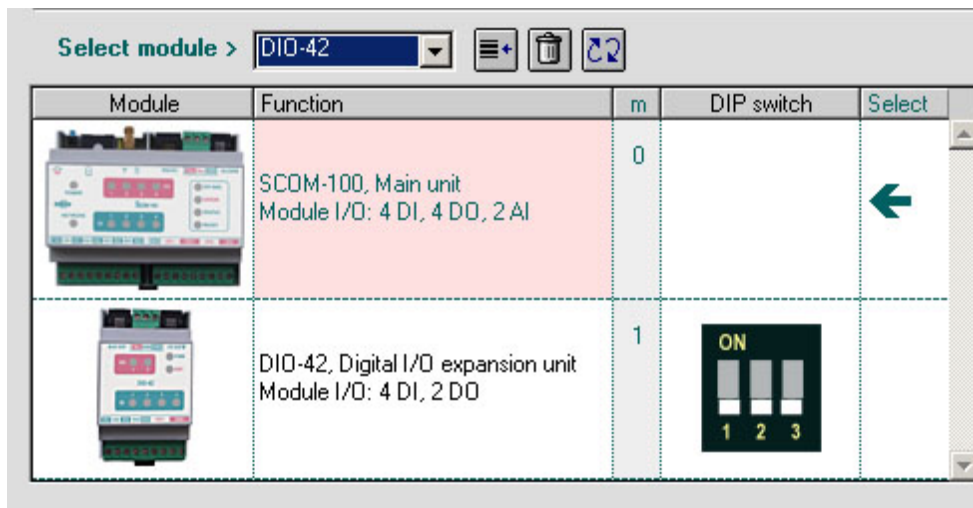


Select an I/O expansion module and click on the **'Add module'** button to add the module to the configuration:



The 'Dip switch' column illustrates the DIP switch settings you must set on the rear side of the module. You can change the module address number by clicking on the 'Change module address' button.

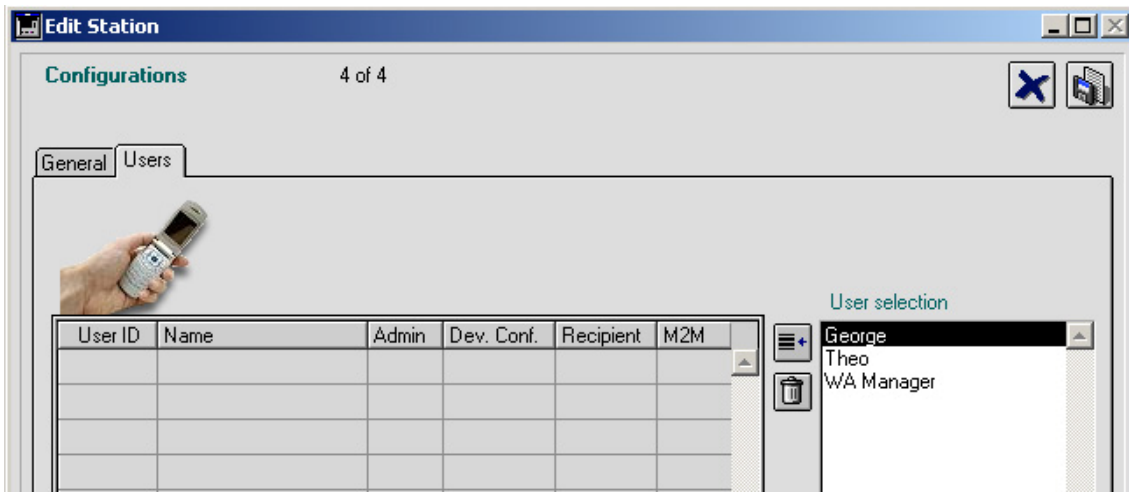
Select an I/O expansion module and click on the 'Add module' button to add the module to the configuration:



The 'Dip switch' column illustrates the DIP switch settings you must set on the rear side of the module. You can change the module address number by clicking on the 'Change module address' button.

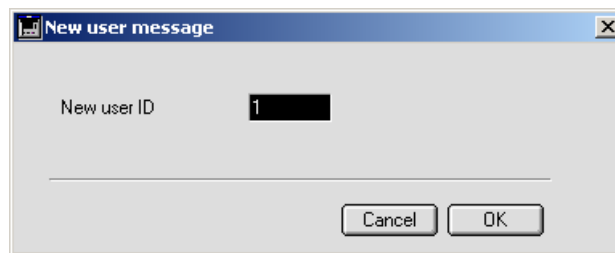
5.3.3 Selecting the Station Users

Click on the 'Users' Tab on the Entry form.



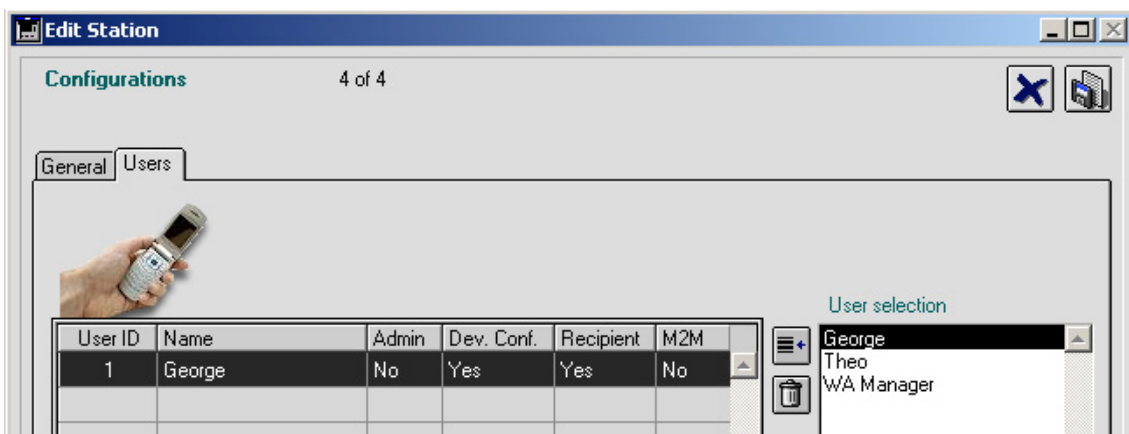
The entries of the System User List appear in a selection list on the right. Select a user on the User selection list and click on the 'Add User' Button.

A pop up form appear for specifying a User ID in the range 1-20:

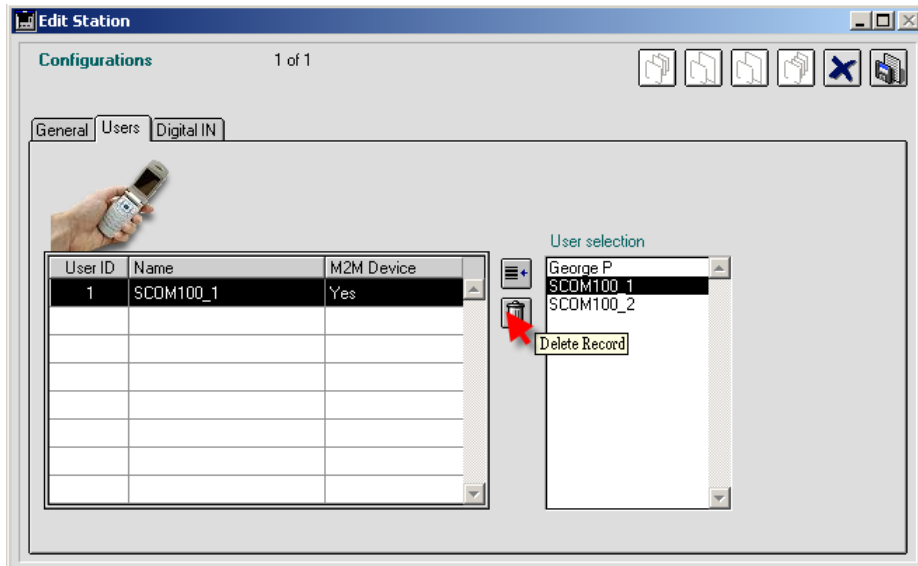


Press the 'OK' button.

The selected User appears in the Station User list on the left:

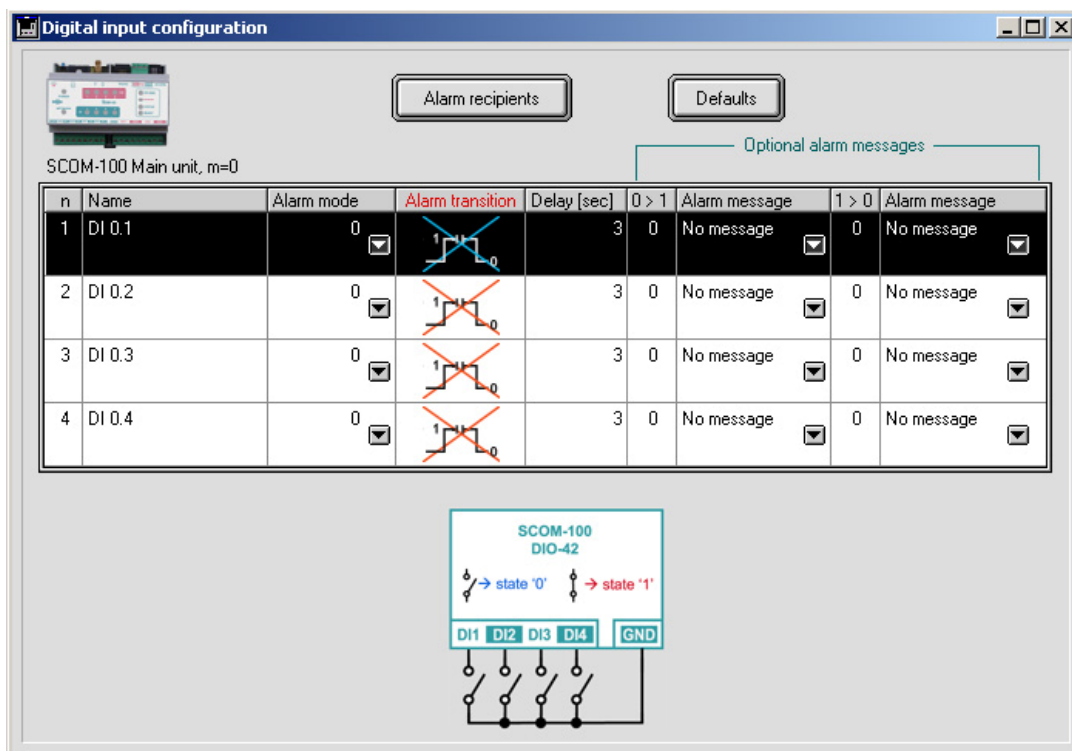


Use the 'Delete record' button to remove a User from the Station User list:



5.3.4 Digital input configuration

Select the respective I/O module (Main unit or expansion) and click on the 'Digital input' button to open the digital input configuration:



The digital input configuration contains following parameters:

6. Digital input naming.
7. Alarm mode: positive transition, negative transition, both transitions.
8. Alarm delay in seconds.
9. Optional alarm messages for the positive and the negative transition.

Digital input name

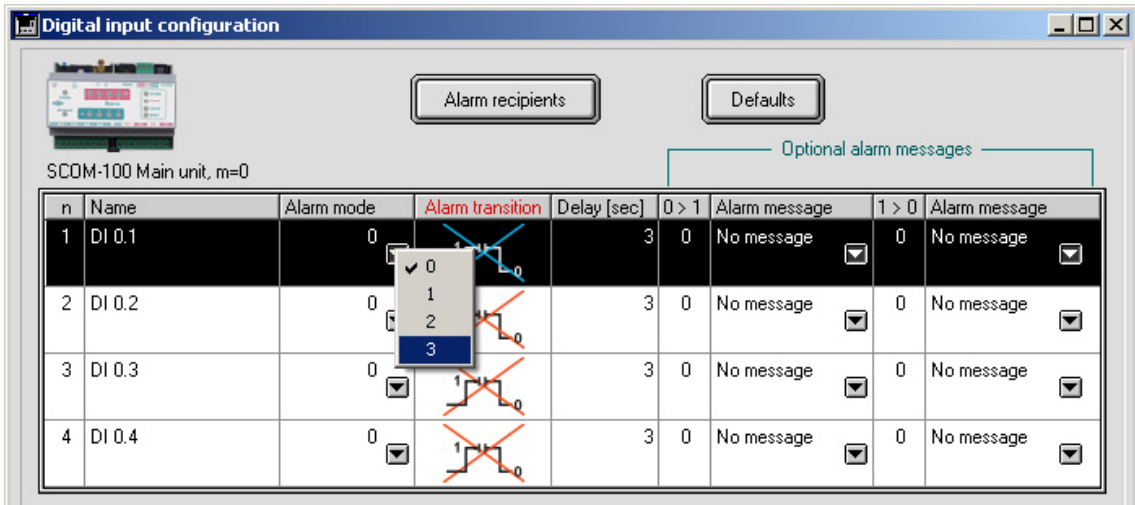
Double click on the respective 'Name' column cell to enter name for the digital input channel.

Alarm mode

Click on the 'Alarm mode' pull down menu handle to select the active alarm transition:

0. No alarm

1. Alarm on positive transition
2. Alarm on negative transition
3. Alarm on both transitions

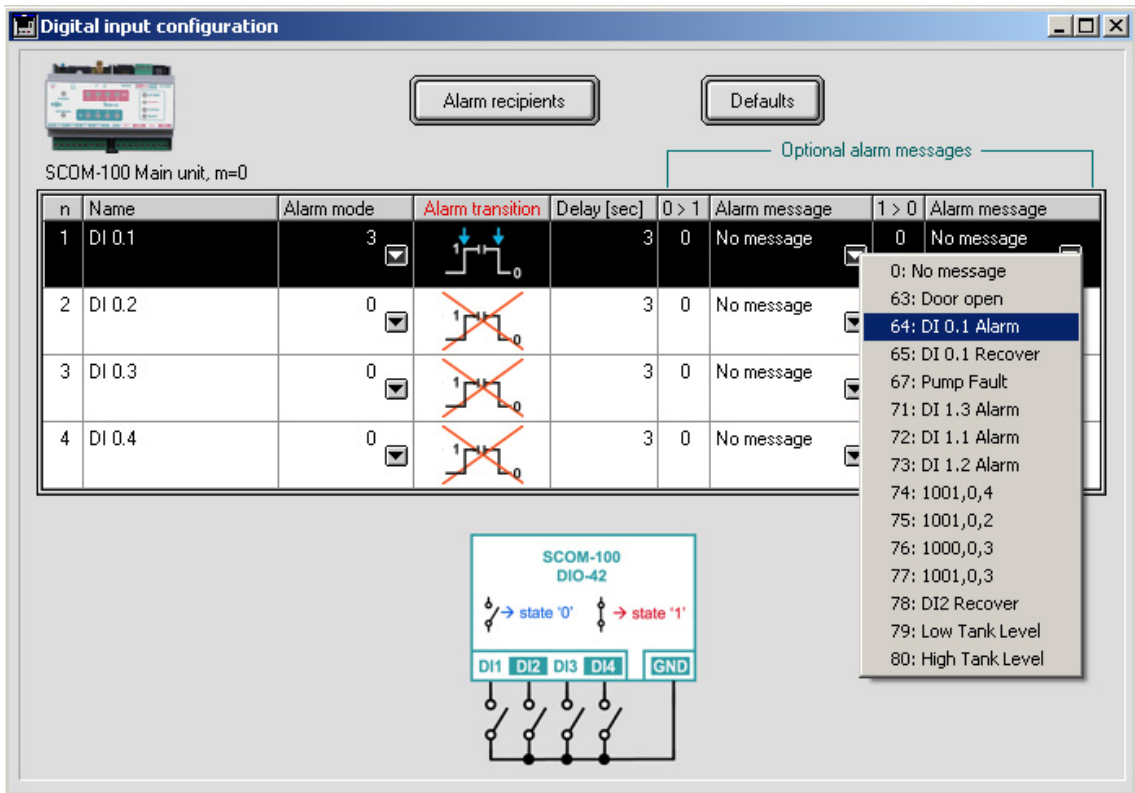


Alarm delay

Double click on the respective 'Delay' column cell to enter the alarm delay in sec for the digital input channel.

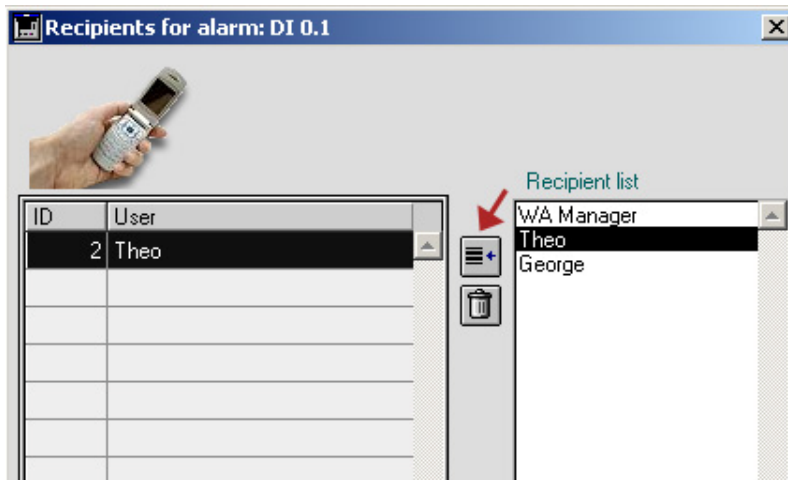
Alarm messages

Alarm messages for the positive and negative transition can be selected by clicking on the respective pull down menu buttons. The menus contain the alarm message texts contained in the alarm message list.



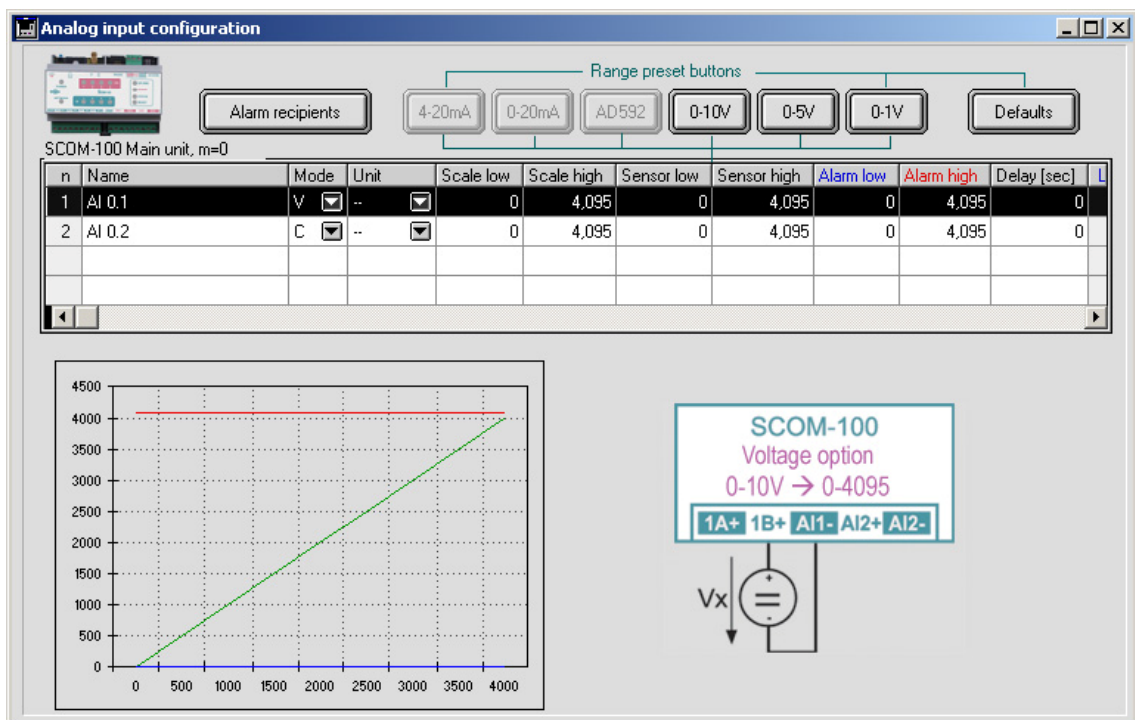
Select a DI channel and click on the 'Default' button to restore the default settings for the respective channel:

Select a Station User in the 'Recipient list' on the right and click on the 'Add recipient' button to add the respective user in the DI Alarm recipient list.



5.3.5 Analog input configuration

Select the respective I/O module (Main unit or expansion) and click on the 'Analog input' button to open the analog input configuration:



The analog input configuration includes following parameters:

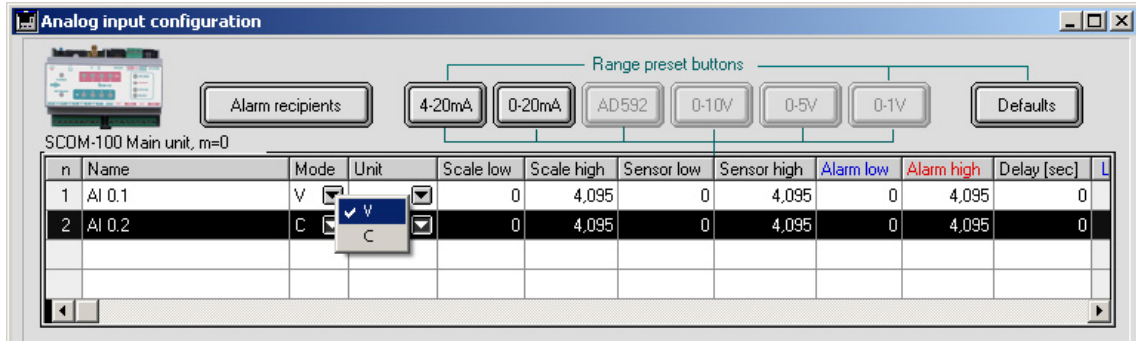
11. Analog input naming.
12. Physical measurement unit.
13. Scale low: Low scale value in physical units.
14. Scale high: High scale value in physical units.
15. Sensor low: Low raw scale value (0-4095)
16. Sensor high: High raw scale value (0-4095)
17. Alarm low: Value between scale low and high indicating the low alarm limit.

- 18. Alarm high: Value between scale low and high indicating the high alarm limit.
- 19. Alarm delay in seconds.
- 20. Optional alarm messages for overstepping the alarm limits.

Enter data by double clicking the respective column cell in case of entering a string or a numerical value or by clicking on the pull down menus for the alarm messages.

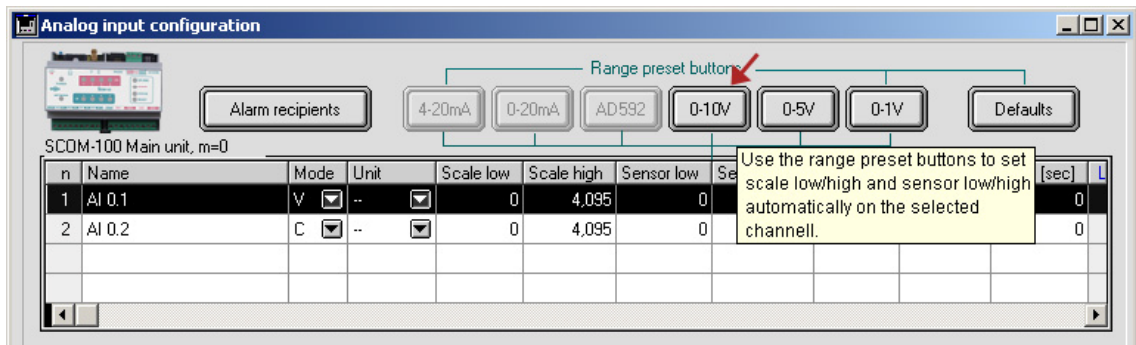
Analog input mode

The selection must correspond to the wiring option of the respective analog input on the main unit and the mode DIP switch settings on the AI-4 expansion module.

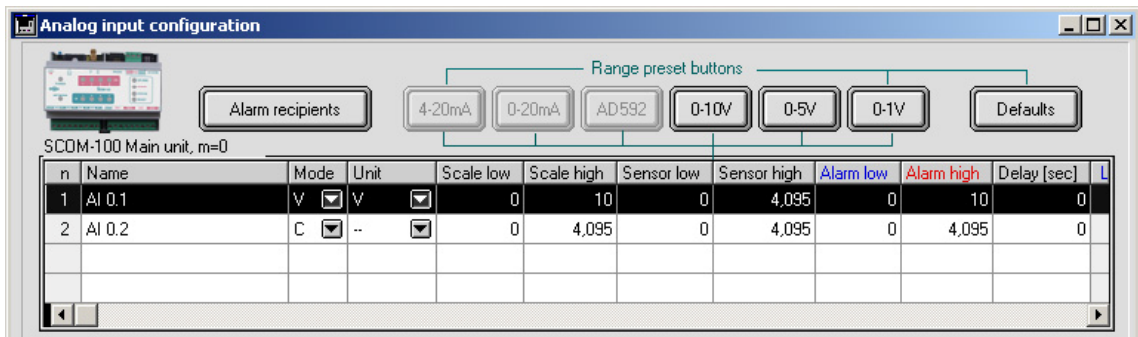


Example: Connecting a level sensor with 0-10V output on AI 0.1.

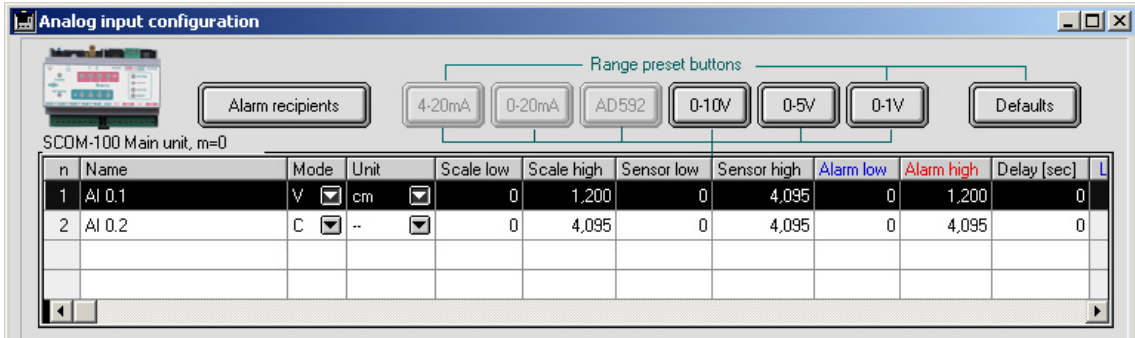
Select 'V' (Current mode) on the first channel and press the '0-10V' button to configure the scale and sensor values for a sensor with 0-10V output:



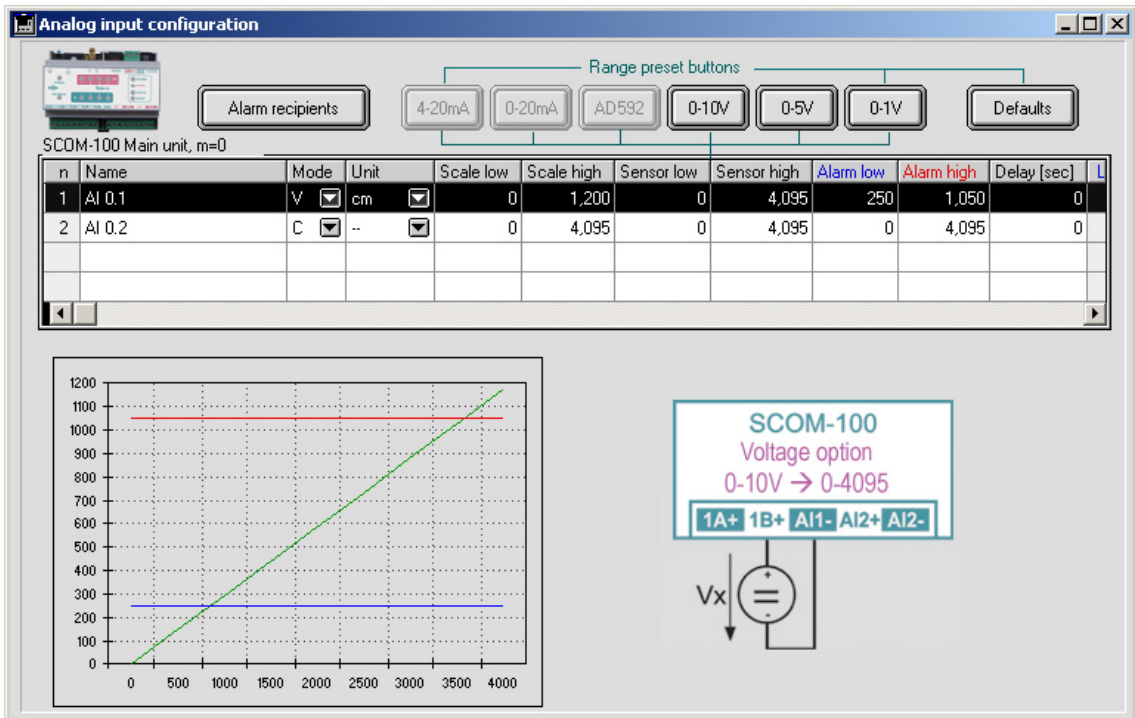
The scale (0-10) and the raw scale values are set automatically.



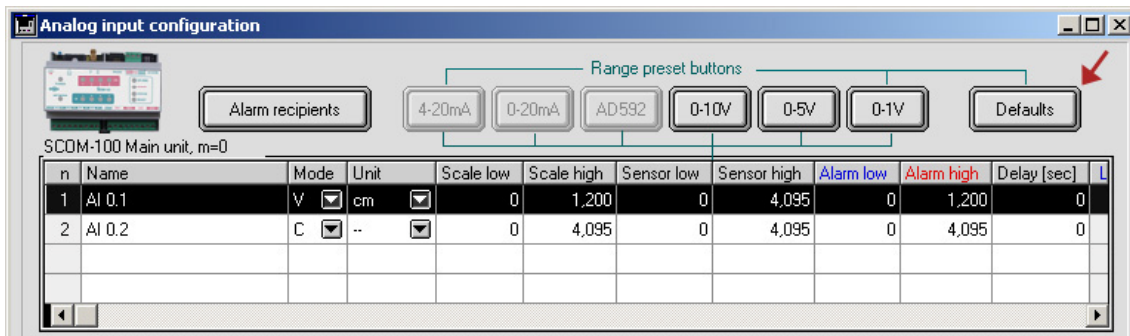
Select a physical unit and enter Scale low and high according to the sensor scale (Level sensor:



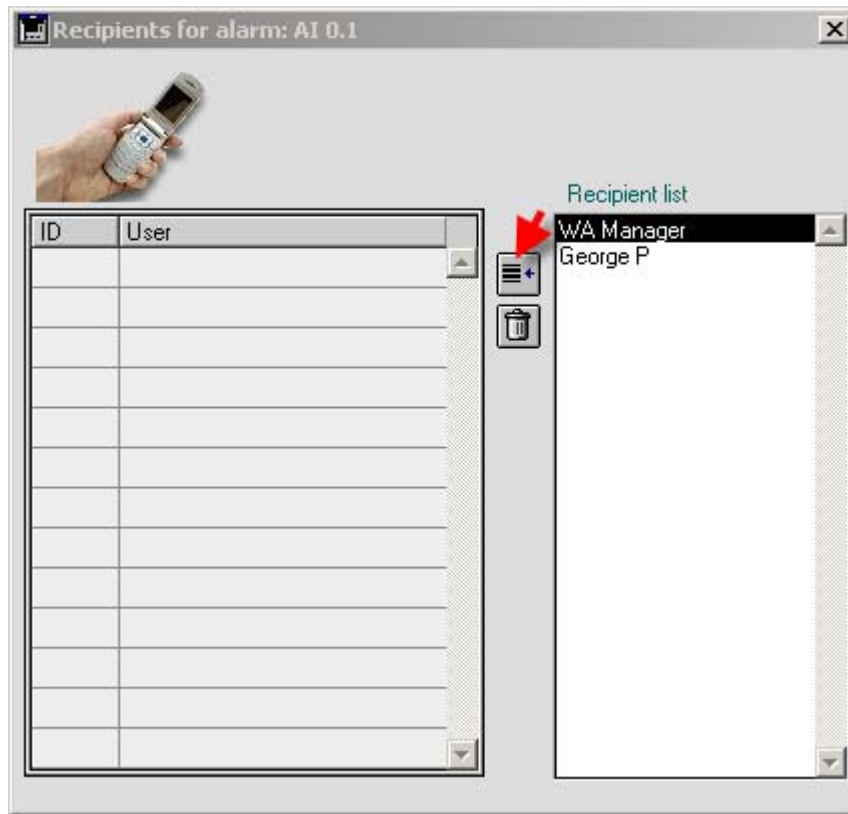
Now enter the alarm limits:



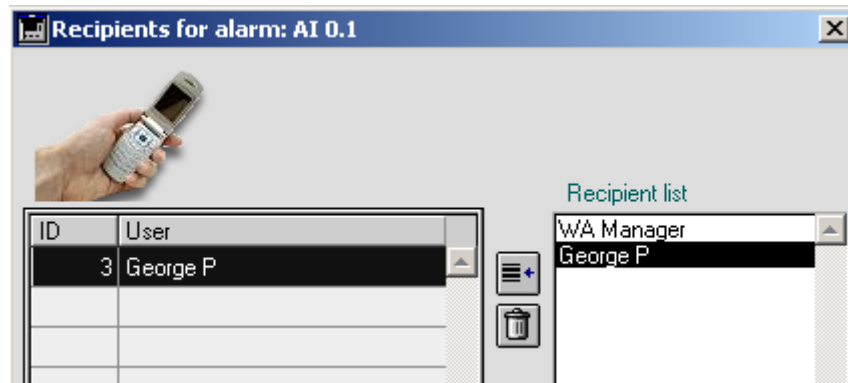
The diagram shows the analog input conversion characteristic and the respective alarm limits. Use the 'Default' button to restore the default settings for a selected channel.



Click on the '**Alarm recipients**' button. The Recipient List for the selected AI alarm opens:

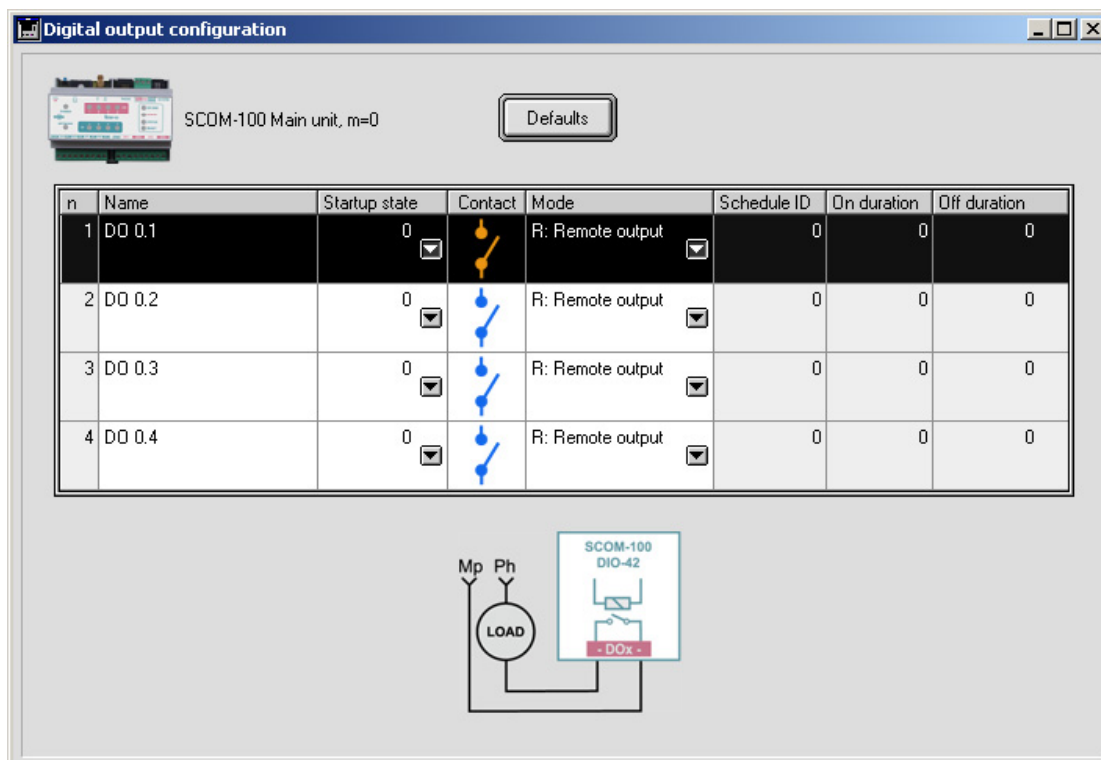


Select a Station User in the '**Recipient list**' on the right and click on the '**Add recipient**' button to add the respective user in the DI Alarm recipient list.



5.3.6 Digital output configuration

Select the respective I/O module (Main unit or expansion) and click on the 'Digital outputs' button to open the digital output configuration:



The digital output configuration facilitates the entry of output parameters and functions:

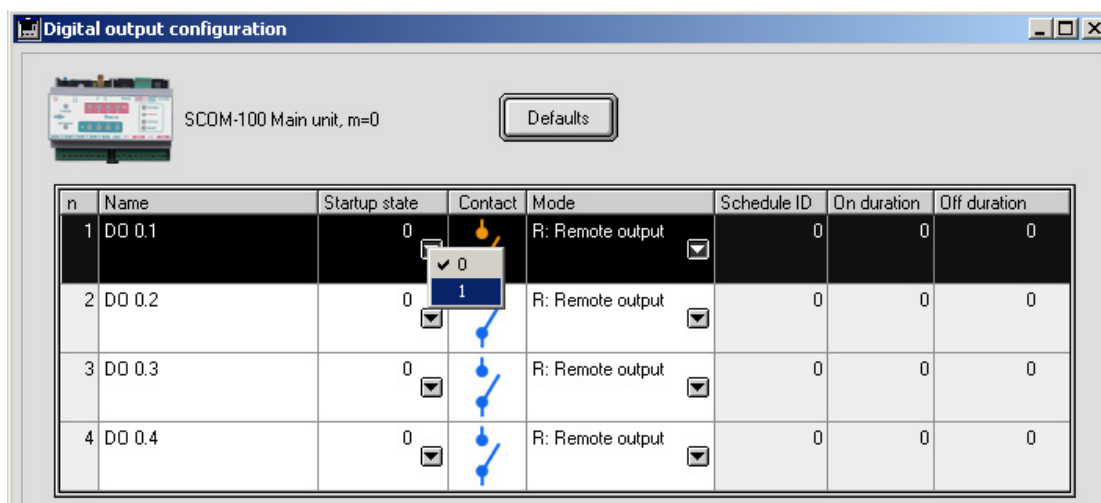
1. Digital output naming.
2. The output start up state (closed or open contact).
3. Configuration of the Time schedule and Multivibrator functions.

Digital output name

Double click on the respective 'Name' column cell to enter name for the digital output channel.

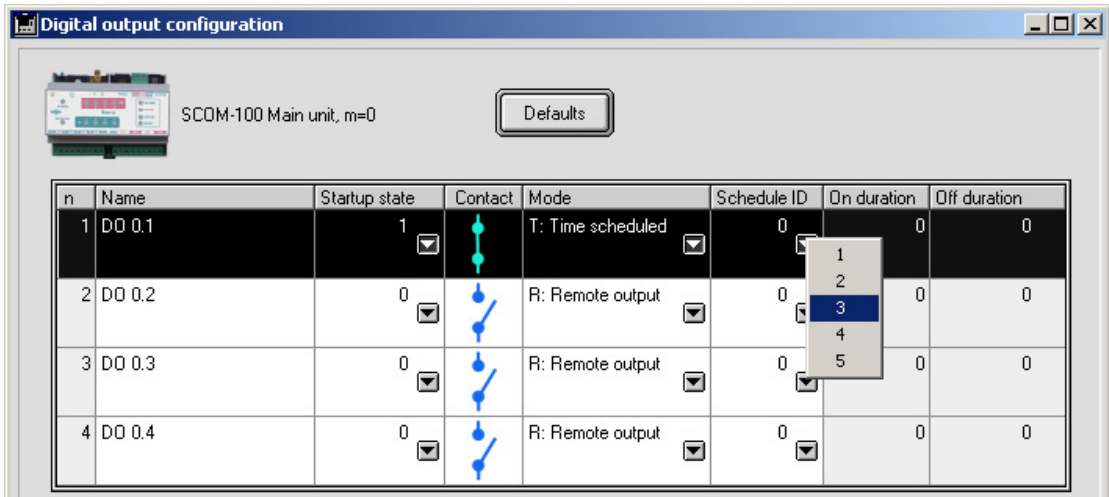
Start up state

Click on the 'Startup state' pull down menu handle to select the output start up state:

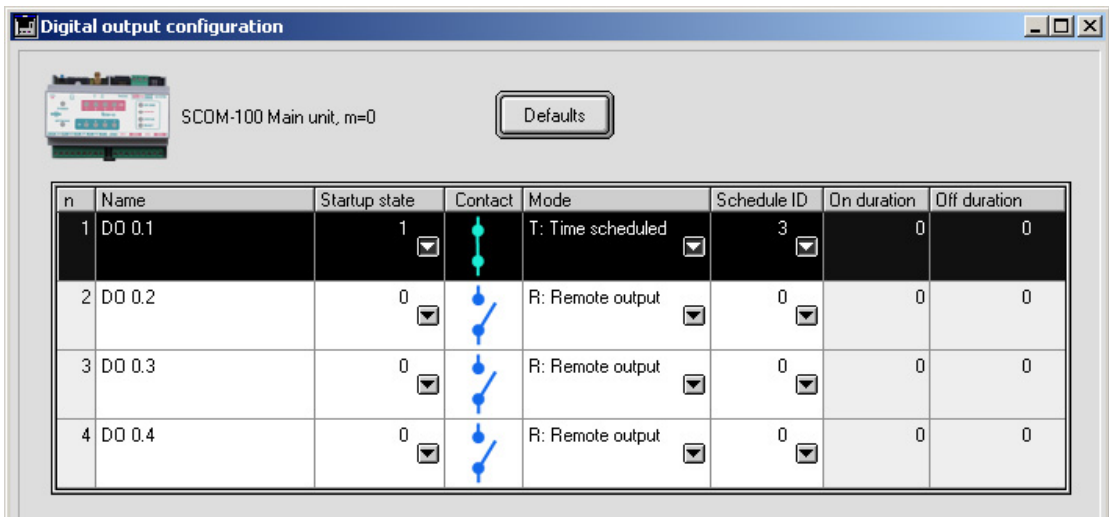


Time schedule function

Click on the 'Mode' pull down menu handle to select the output function and select 'Time scheduled':

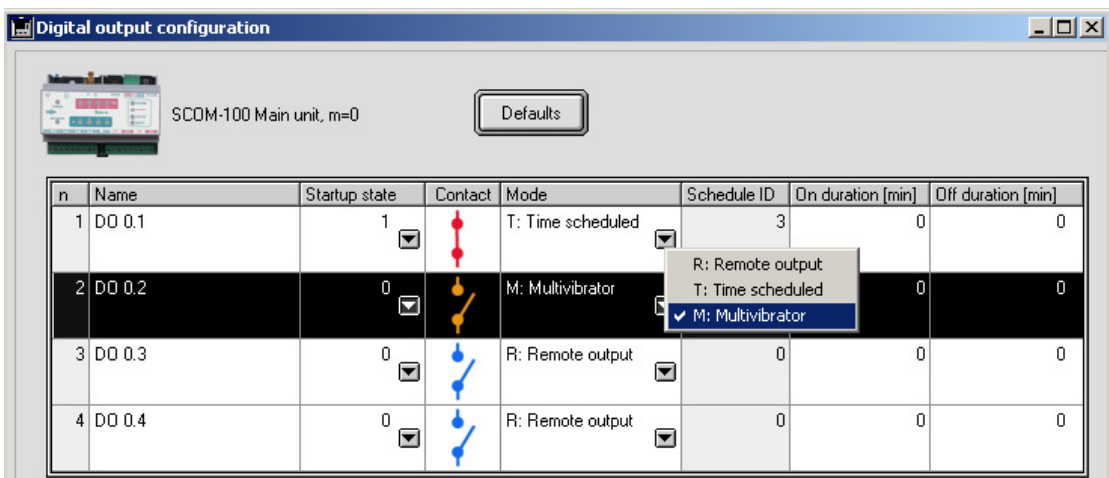


Select the ID of a previously set time schedule program ID to establish the Time schedule function for the respective digital output:

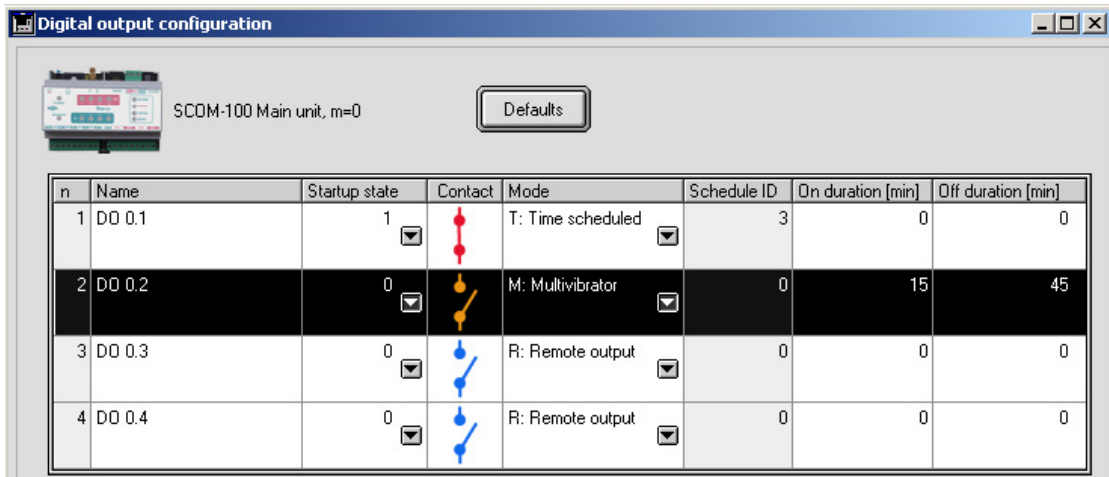


Multivibrator function

Click on the 'Mode' pull down menu handle to select the output function and select 'Multivibrator':



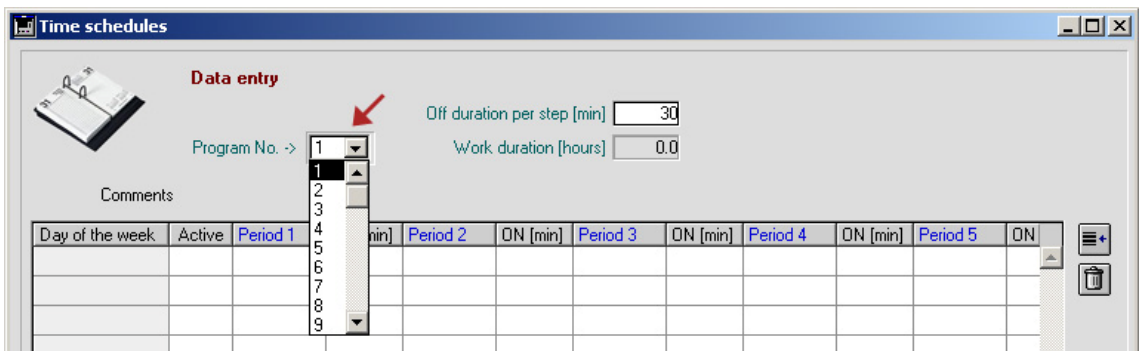
Now enter the On and Off duration values in minutes by double clicking on the respective column cells:



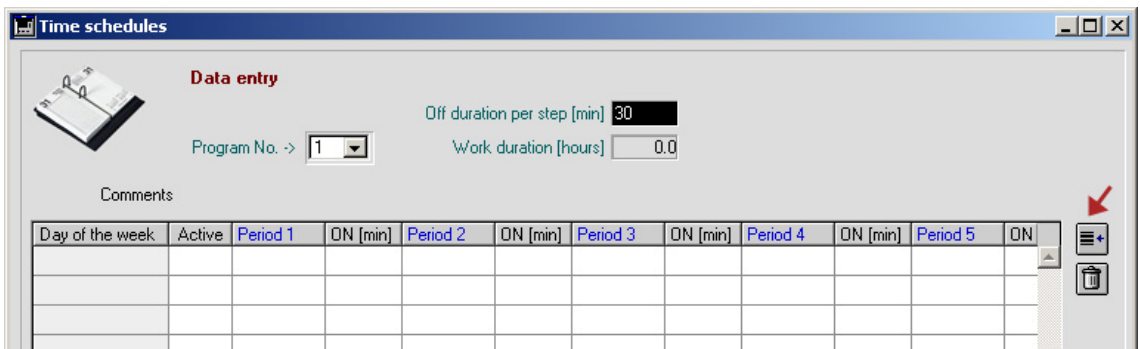
Use the 'Defaults' button to set the default settings on a selected output channel.

5.3.7 Creating time schedule programs

Click on the 'Schedules' button to open the time schedule list:



Up to 80 time schedule programs can be entered, 10 programs for each day of a week (Sunday to Saturday), and 10 programs for a 'daily' schedule.



Click on the 'Add schedule' button to create a new schedule instance with ID=1:

Time schedules

Data entry

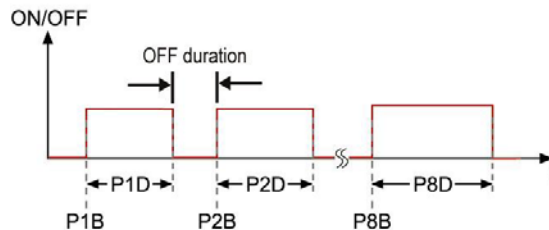
Off duration per step [min]

Program No. -> Work duration [hours]

Comments

Day of the week	Active	Period 1	ON [min]	Period 2	ON [min]	Period 3	ON [min]	Period 4	ON [min]	Period 5	ON
Sunday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Monday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Tuesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Wednesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Thursday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Friday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Saturday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Daily	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	

A schedule program is illustrated in the following time diagram:



You can enter up to 8 on sequences. The entry form facilitates the entry by calculating the next time stamp according to the previous sequence duration and a selectable OFF duration interval for each step.

Time schedules

Data entry

Off duration per step [min]

Program No. -> Work duration [hours]

Comments

Day of the week	Active	Period 1	ON [min]	Period 2	ON [min]	Period 3	ON [min]	Period 4	ON [min]	Period 5	ON
Sunday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Monday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Tuesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Wednesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Thursday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Friday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Saturday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Daily	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	

Enter a value for the OFF duration per step, e.g. 30 minutes.

The 'Daily program' is related to the whole week. A day dedicated program overrides the 'Daily program'.

Now enter the time stamp for Period 1. Select at first minutes and then hours on the specific pull down menu:

Time schedules

Data entry

Off duration per step [min]

Program No. -> Work duration [hours]

Comments

Day of the week	Active	Period 1	ON [min]	Period 2	ON [min]	Period 3	ON [min]	Period 4	ON [min]	Period 5	ON
Sunday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Monday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Tuesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Wednesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Thursday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Friday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Saturday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Daily	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	

0 12 0
1 13 5
2 14 10
3 15 15
4 16 20
5 17 25
6 18 30
7 19 35
8 20 40
9 21 45
10 22 50
11 23 55
8:00 nā

Time schedules

Data entry

Off duration per step [min]

Program No. -> Work duration [hours]

Comments

Day of the week	Active	Period 1	ON [min]	Period 2	ON [min]	Period 3	ON [min]	Period 4	ON [min]	Period 5	ON
Sunday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Monday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Tuesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Wednesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Thursday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Friday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Saturday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Daily	No	08:00	0	00:00	0	00:00	0	00:00	0	00:00	

Enter the ON duration for Period 1:

Time schedules

Data entry

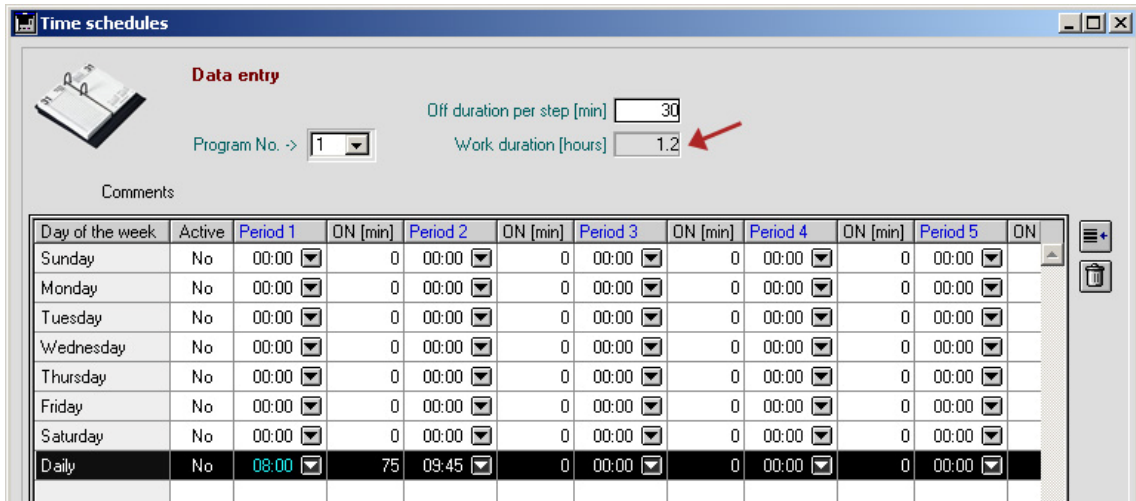
Off duration per step [min]

Program No. -> Work duration [hours]

Comments

Day of the week	Active	Period 1	ON [min]	Period 2	ON [min]	Period 3	ON [min]	Period 4	ON [min]	Period 5	ON
Sunday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Monday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Tuesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Wednesday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Thursday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Friday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Saturday	No	00:00	0	00:00	0	00:00	0	00:00	0	00:00	
Daily	No	08:00	75	00:00	0	00:00	0	00:00	0	00:00	

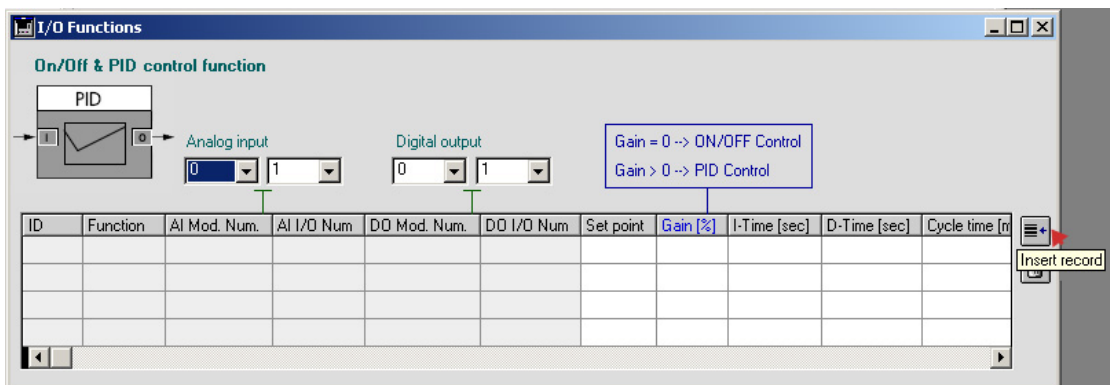
The entry form calculates the starting time of Period 2 automatically to 9:45 by adding the ON duration (75 min) and the fixed OFF duration (30 min) to the previous time stamp:



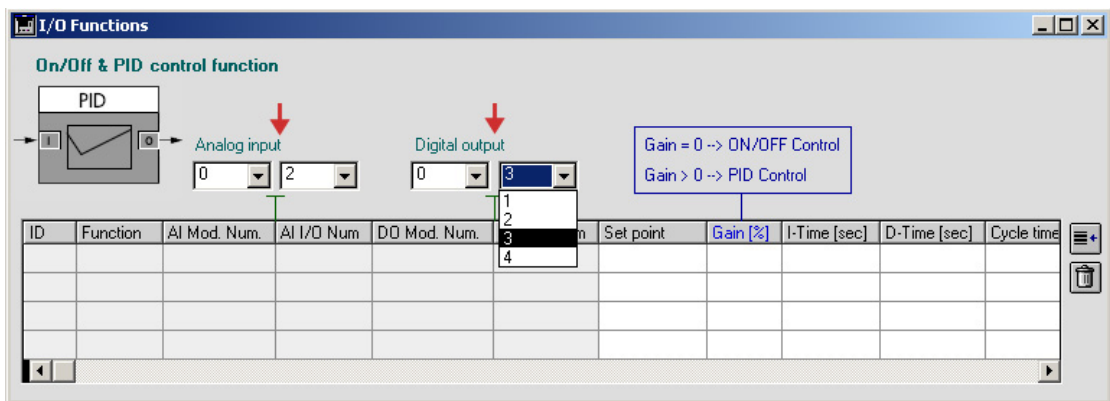
Proceed in the same way to add more working sequences (up to eight) in a day. The 'Working duration' field accumulates the total working time in hours.

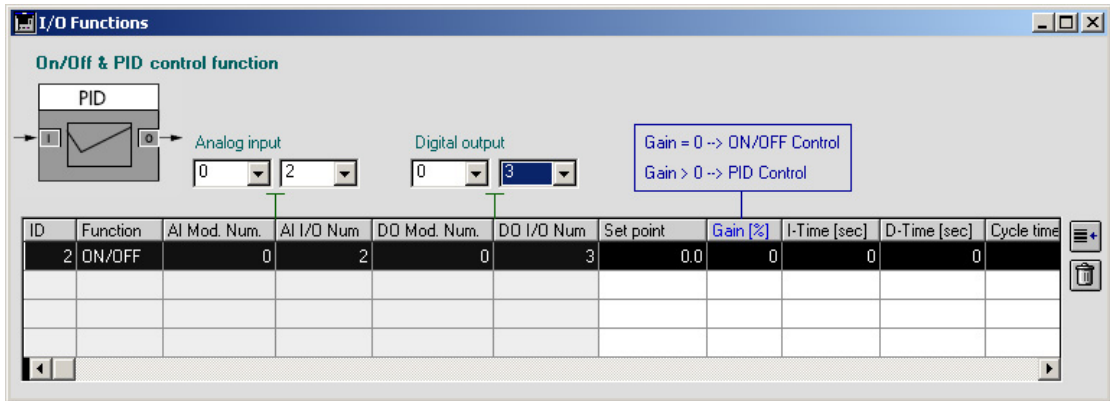
5.3.8 I/O Functions

Click on the 'I/O Functions' button to open the respective form:



You can setup up to 4 function blocks for ON/OFF or PID control. Select an analog input and a digital output, and click on the 'Insert record' button to create a function block:





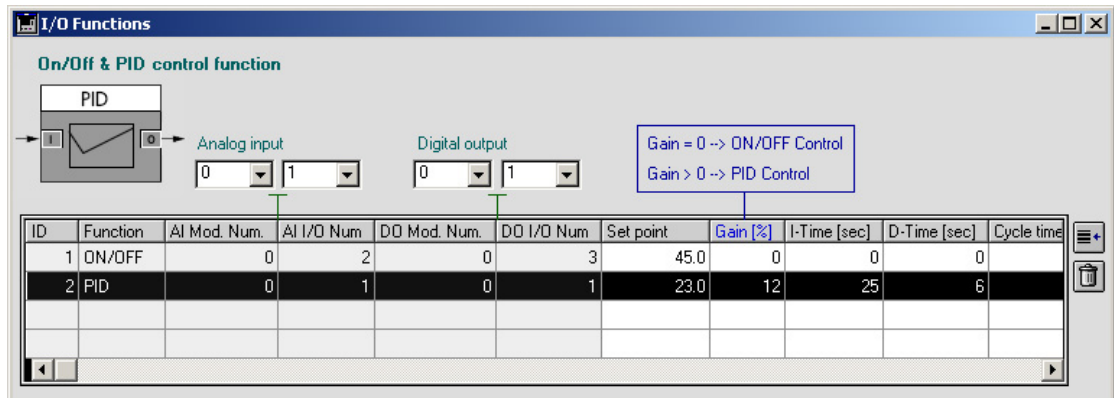
The block function depends on the 'Gain' parameter value. 'Gain' zero value selects the ON/OFF Control function, while 'Gain' value > 0 selects the PID function.

The required parameters for a ON/OFF control function are:

- AI and DO channel selection.
- 'Set point' value between Scale low and Scale High of the respective analog input.
- 'Hysteresis' value in [%] of the analog input scale (0-20%).

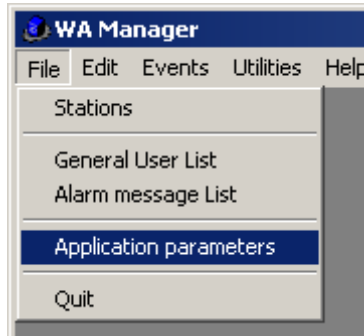
The required parameters for a PID control function are:

- AI and DO channel selection.
- 'Set point' value between Scale low and Scale High of the respective analog input.
- 'Gain' value (P) between 1 and 100%.
- 'Integral time' (I) value between 1-1000 sec. A zero value disables the integral part.
- 'Derivative time' (D) value between 1-200 sec. A zero value disables the drivative part.
- 'Cycle time' value between 1 and 15 minutes, representing the pulse width modulation period of the digital output.

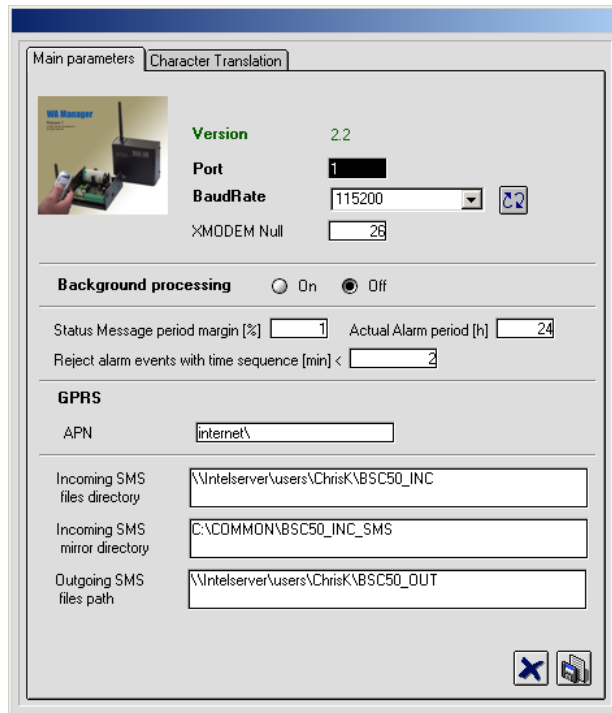


5.4 Uploading a configuration

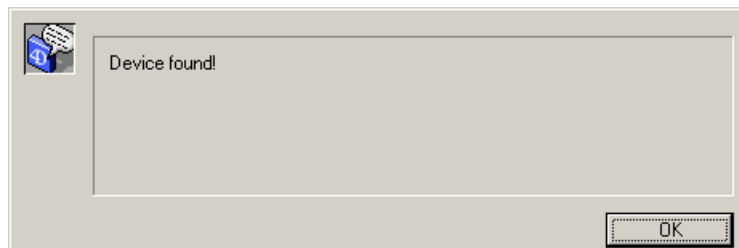
Prior to uploading a configuration, connect the target device to a PC serial port and select the port in the Application parameter form:



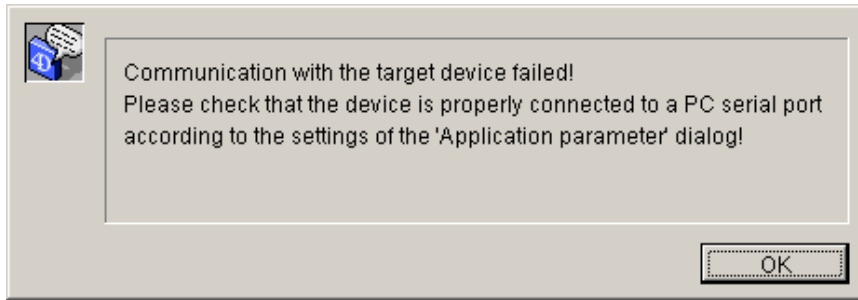
The Application Parameters form opens:



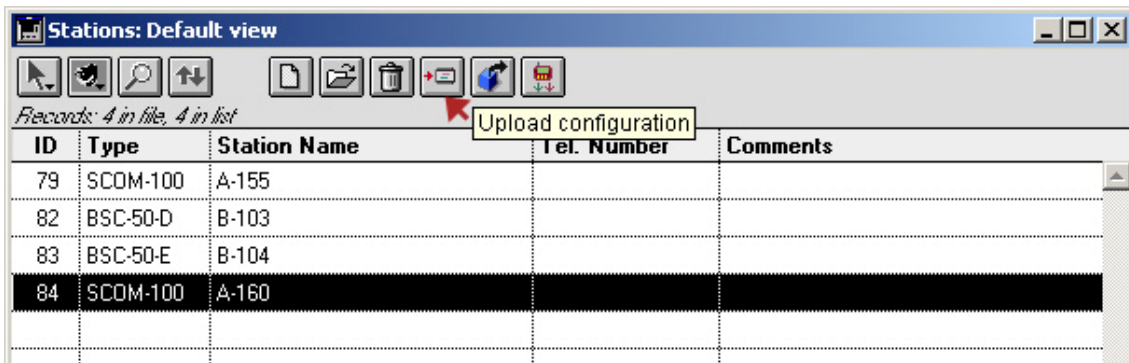
Type in the number of the serial port and click on the '**Communication test**' button. The following popup appears on a successful communication with the target device:



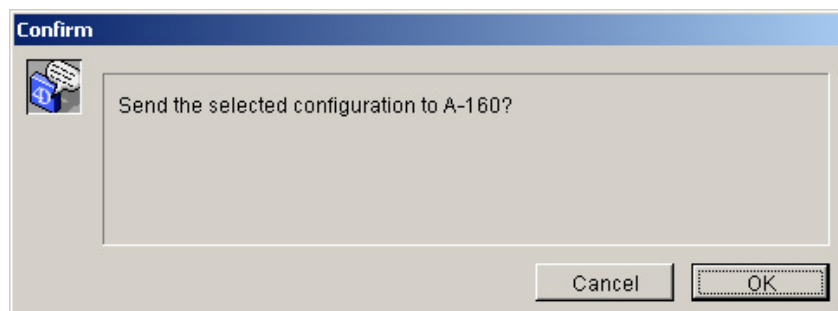
If the communication with the device fails:



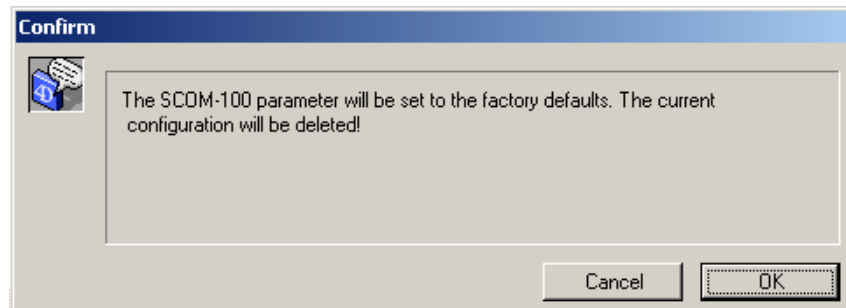
Open the Station List and select the respective Station for the Configuration uploading:



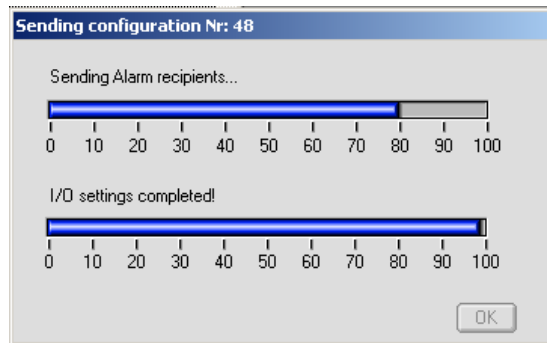
Click on the 'Upload Configuration' button:



Click on the 'OK' button to proceed. An Alert window appears stating that any previous configuration on the device will be deleted:

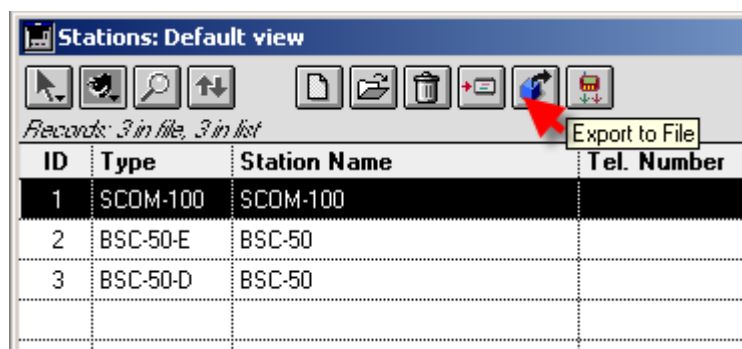


Click on the 'OK' button to proceed. The uploading process begins:

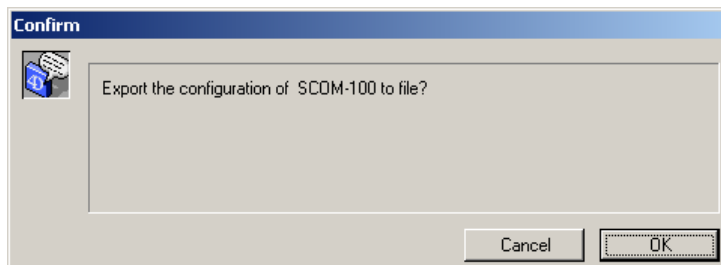


Wait until the configuration uploading is completed and click on the 'OK' button to close the form.

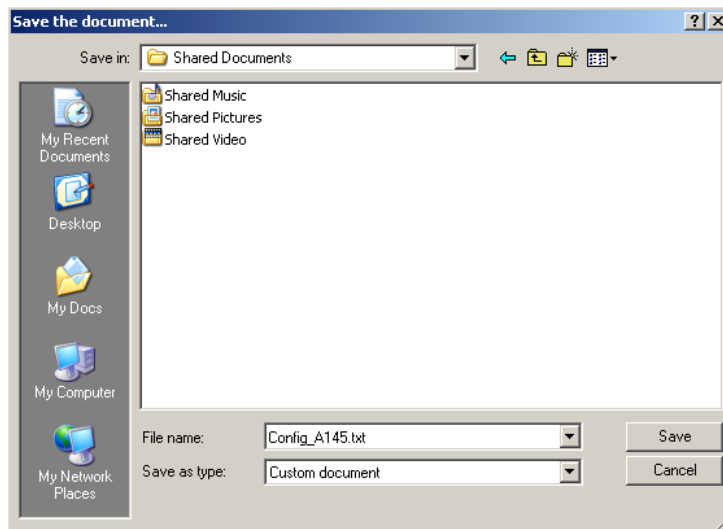
5.5 Exporting a device configuration



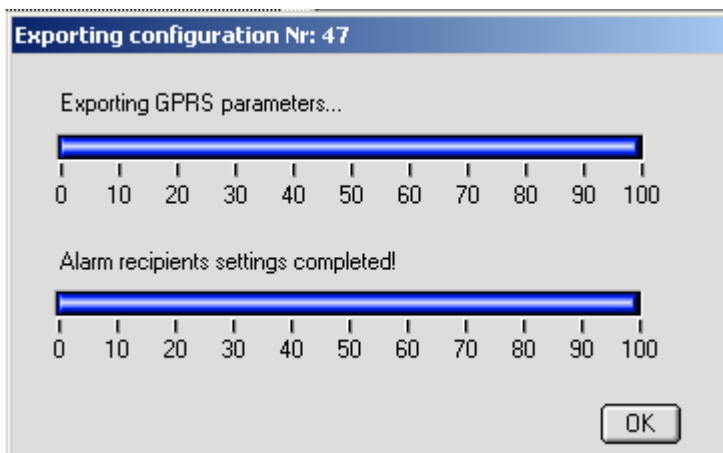
Click on the 'Export SMS Text' button to export the configuration ASCII commands in a form of a text file:



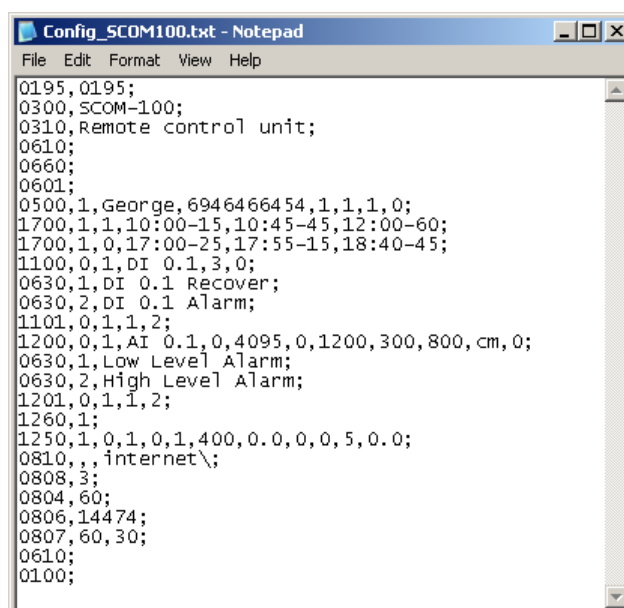
Click on the 'OK' button.



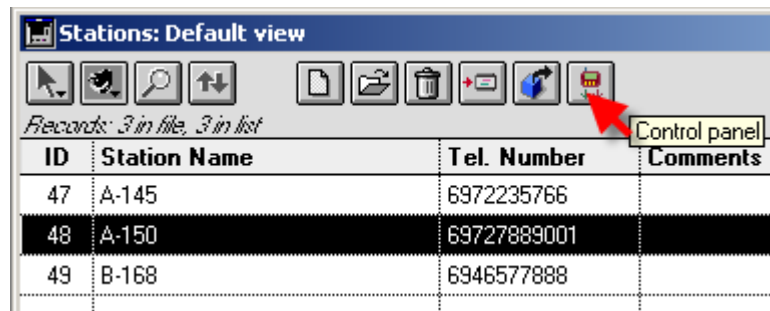
Type in a file name for the text document and click on the **'Save'** button.



Click on the **'OK'** button to close the form. A exported configuration looks as follows:



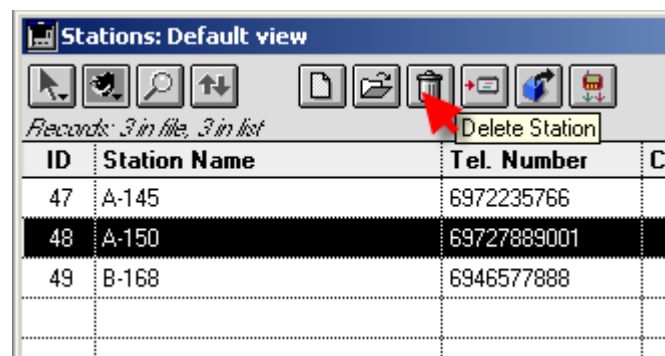
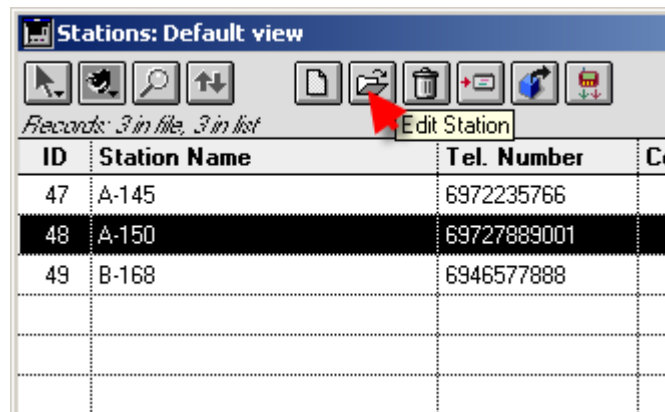
5.6 Opening the Device Control Panel



The Control Panel for an attached target device can be opened by clicking the 'Control panel' button. See section 7.

5.7 Managing the Station List

You can change user data or remove a Station from the List using the respective buttons:

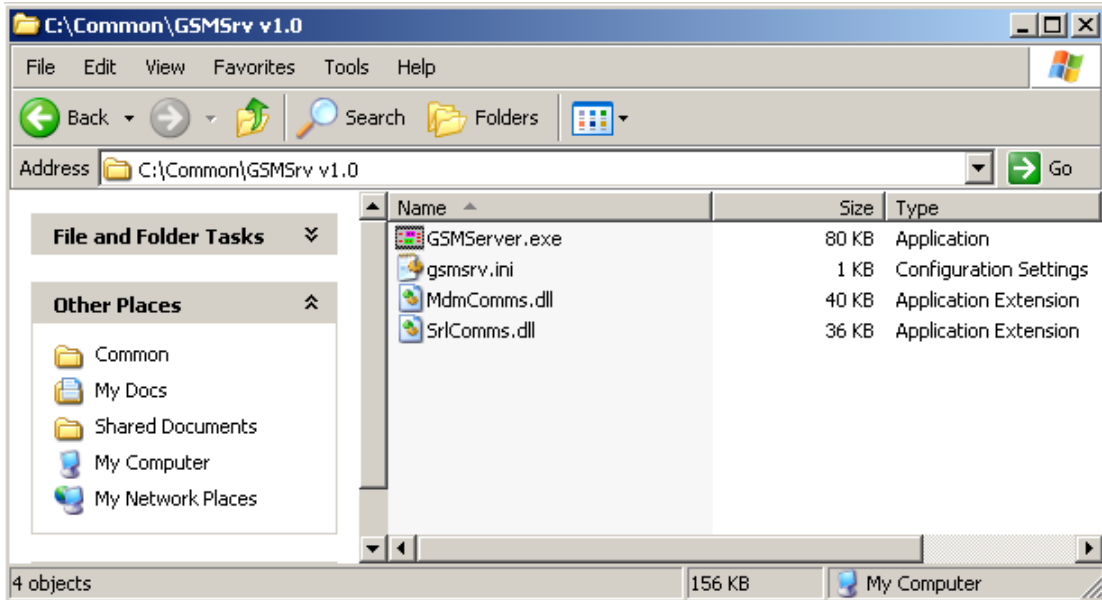


On deleting a Station from the list, all Station Alarm & Status events in the respective tables will also be deleted.

6. System operation

6.1 The 'GSMServer.exe' utility

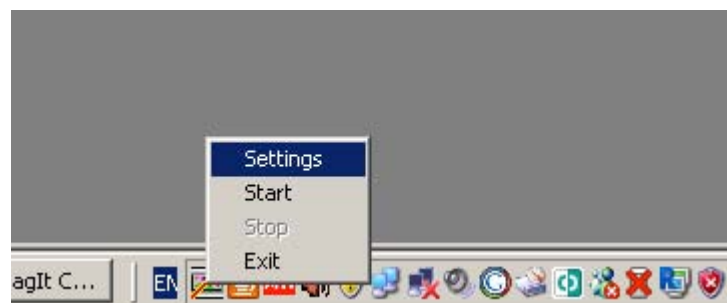
Copy the GSMServ folder on your haddisk.



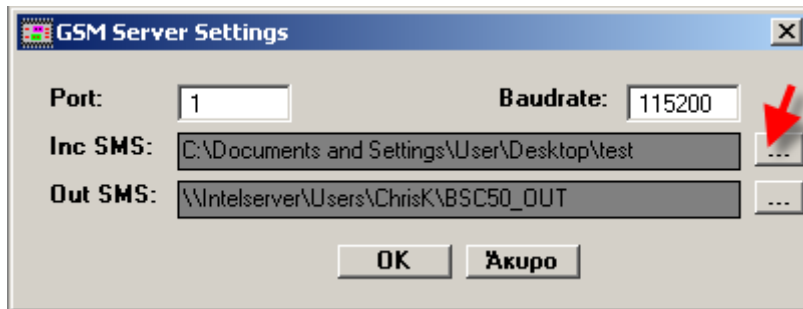
Connect a GSM modem to a PC serial port and execute the GSMserver.exe application.



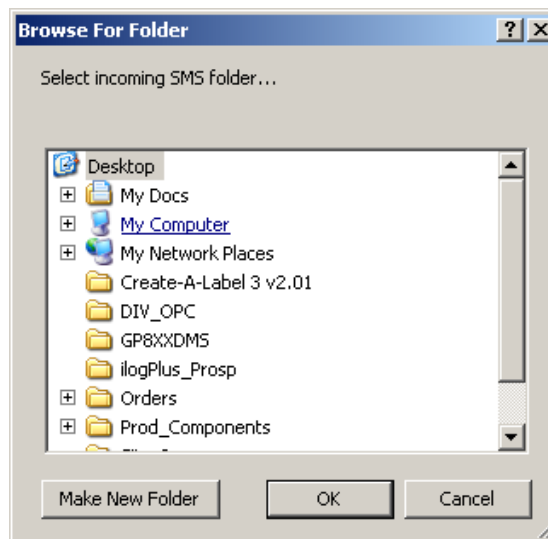
Position the cursor over the GSM Server icon and click the right mouse button:



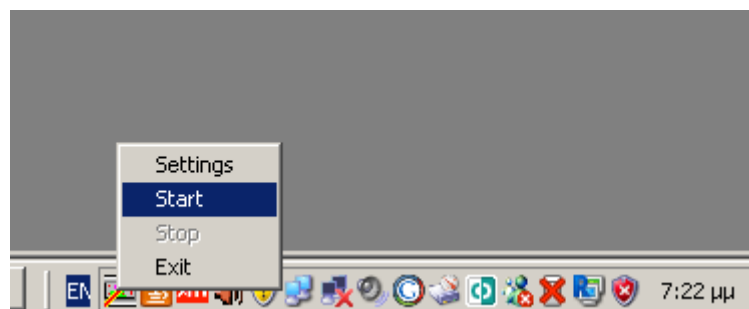
Click on the 'Settings' selection:



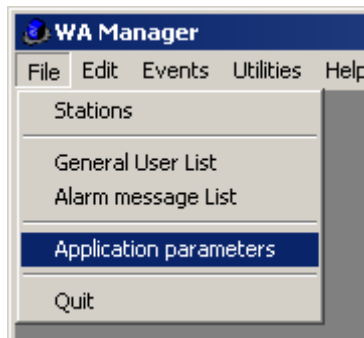
Select the GSM Modem serial port by typing the port number in the 'Port' entry field. Select the appropriate Baud rate for the serial communication with the GSM modem.
Select a folder for the incoming SMS by clicking on the respective directory selection button:



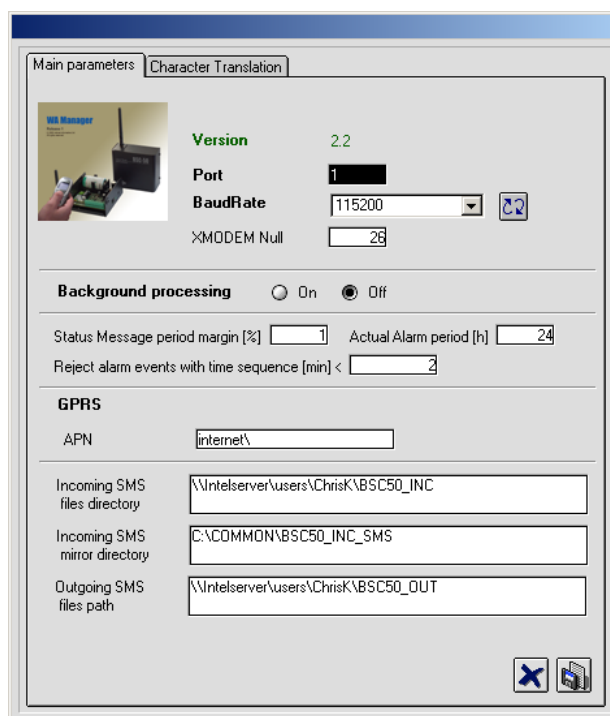
Click on the Start menu item to start with the program execution:



6.2 Selecting the Application parameters

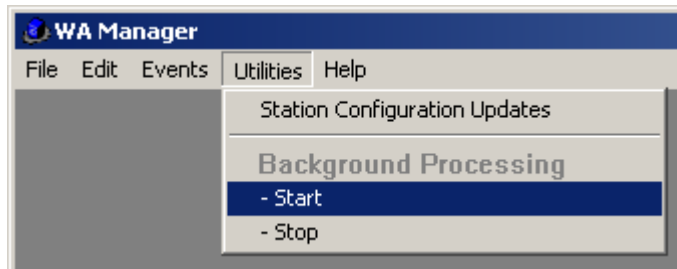


Open the Application Parameters Form:

The image shows the 'Application Parameters' dialog box in WA Manager. It has two tabs: 'Main parameters' and 'Character Translation'. The 'Main parameters' tab is active. It contains several sections: 1. A small image of a mobile phone and a modem. 2. 'Version' set to 2.2. 3. 'Port' set to 1. 4. 'BaudRate' set to 115200 with a refresh button. 5. 'XMODEM Null' set to 26. 6. 'Background processing' with radio buttons for 'On' and 'Off' (currently 'Off' is selected). 7. 'Status Message period margin [%]' set to 1. 8. 'Actual Alarm period [h]' set to 24. 9. 'Reject alarm events with time sequence [min] <' set to 2. 10. 'GPRS' section with 'APN' set to 'internet\'. 11. 'Incoming SMS files directory' set to '\\Intelservers\users\ChrisK\BSC50_INC'. 12. 'Incoming SMS mirror directory' set to 'C:\COMMON\BSC50_INC_SMS'. 13. 'Outgoing SMS files path' set to '\\Intelservers\users\ChrisK\BSC50_OUT'. There are 'OK' and 'Cancel' buttons at the bottom right.

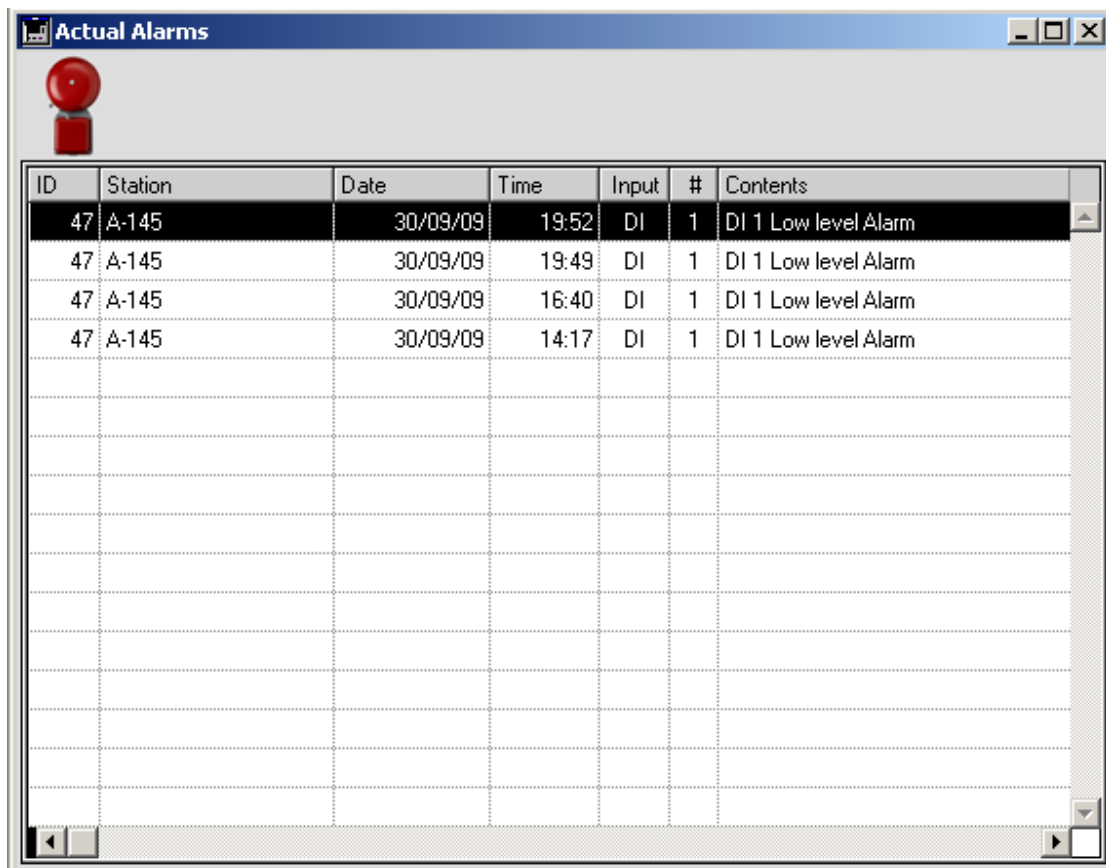
1. **Status Message period margin%:** Specify a toleration interval for the expected Station Status Messages. Type in a value between 1 and 100% of the Station Status message period in the respective field (e.g. 1%).
2. **Actual Alarms period [h]:** Specify a time depth period in hours for monitoring the actual alarm events (e.g. 24 hours).
3. **Reject alarm events with time sequence [min] <:** Type in '0' for accepting all alarm events. Type in a value in minutes (e.g. 15 min). A consecutive alarm of a specific input occurring during this period will be rejected.
4. **Incoming SMS files directory:** Select the incoming SMS folder of the GSM server application.
5. **Incoming SMS mirror directory:** Select a mirroring folder, where incoming SMS are copied after importing and archiving in the WA Manager application.
6. **Outgoing SMS files path:** Select a directory for outgoing SMS.
7. Click on the 'Save' button to accept the Application settings.
8. **Background processing:** if 'On' is selected, background processing (SMS importing) begins automatically upon program launching.

6.3 Real Time Monitoring



Select the menu item '**Start**' to launch the background processing e.g. automatic importing Alarm & Status SMS received by the GSM Server utility.

6.3.1 Alarm events monitoring

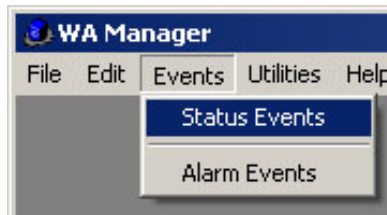


The 'Actual Alarms' window displays a table of alarm events. The table has the following columns: ID, Station, Date, Time, Input, #, and Contents. The data shown is as follows:

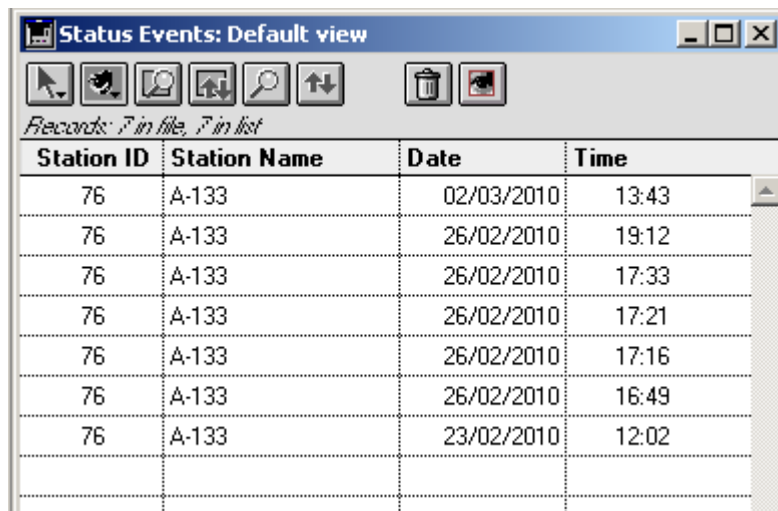
ID	Station	Date	Time	Input	#	Contents
47	A-145	30/09/09	19:52	DI	1	DI 1 Low level Alarm
47	A-145	30/09/09	19:49	DI	1	DI 1 Low level Alarm
47	A-145	30/09/09	16:40	DI	1	DI 1 Low level Alarm
47	A-145	30/09/09	14:17	DI	1	DI 1 Low level Alarm

All stations alarm events are shown in an Actual Alarms List in real time and for a time depth, specified in the respective Applications settings parameter.

6.4 The Status Message File



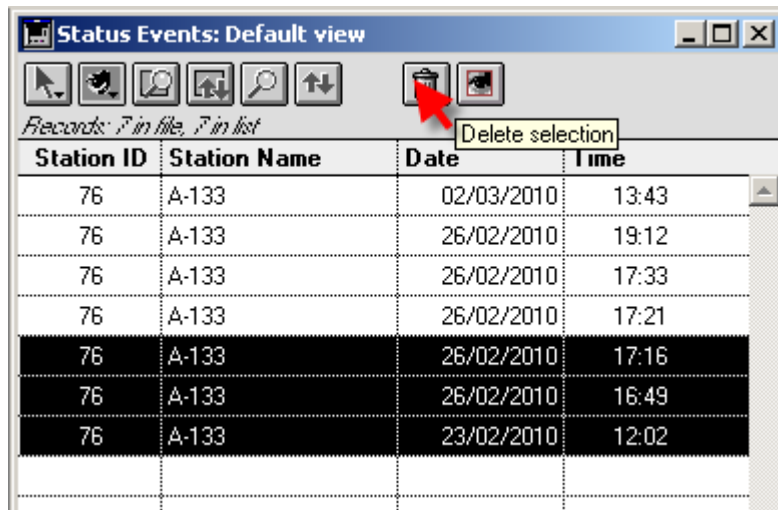
All Stations Status events are archived in the Status Events File:



The screenshot shows the 'Status Events: Default view' window. The table displays the following records:

Station ID	Station Name	Date	Time
76	A-133	02/03/2010	13:43
76	A-133	26/02/2010	19:12
76	A-133	26/02/2010	17:33
76	A-133	26/02/2010	17:21
76	A-133	26/02/2010	17:16
76	A-133	26/02/2010	16:49
76	A-133	23/02/2010	12:02

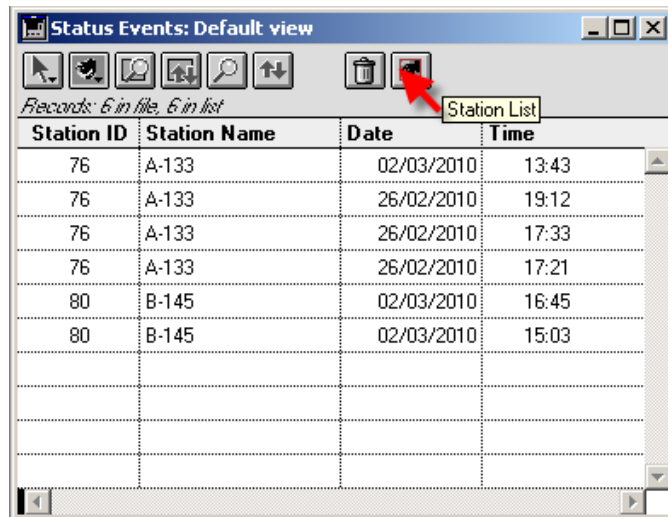
Old Status event records can be selected and removed from the file:



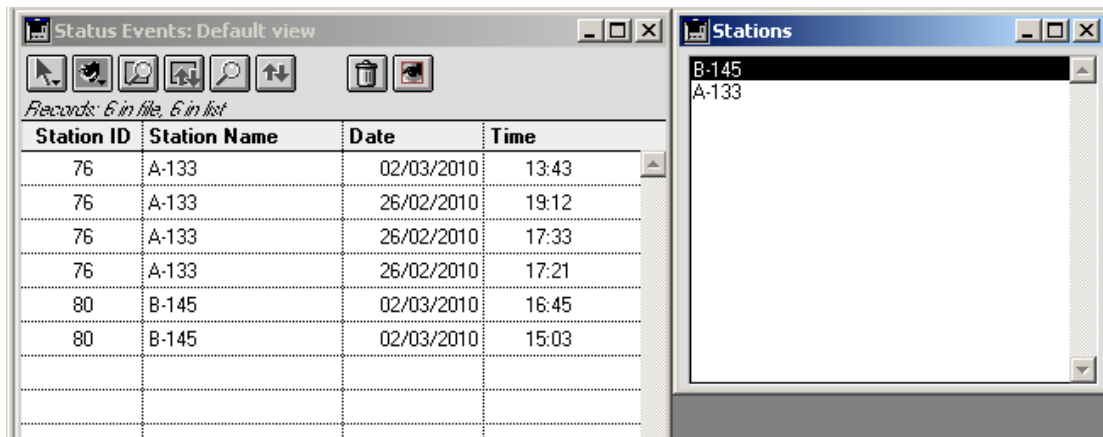
The screenshot shows the 'Status Events: Default view' window. The table is the same as in the previous image. The 'Delete selection' button (represented by a trash can icon) in the toolbar is highlighted with a red arrow. The last three rows of the table are highlighted in black, indicating they are selected.

Station ID	Station Name	Date	Time
76	A-133	02/03/2010	13:43
76	A-133	26/02/2010	19:12
76	A-133	26/02/2010	17:33
76	A-133	26/02/2010	17:21
76	A-133	26/02/2010	17:16
76	A-133	26/02/2010	16:49
76	A-133	23/02/2010	12:02

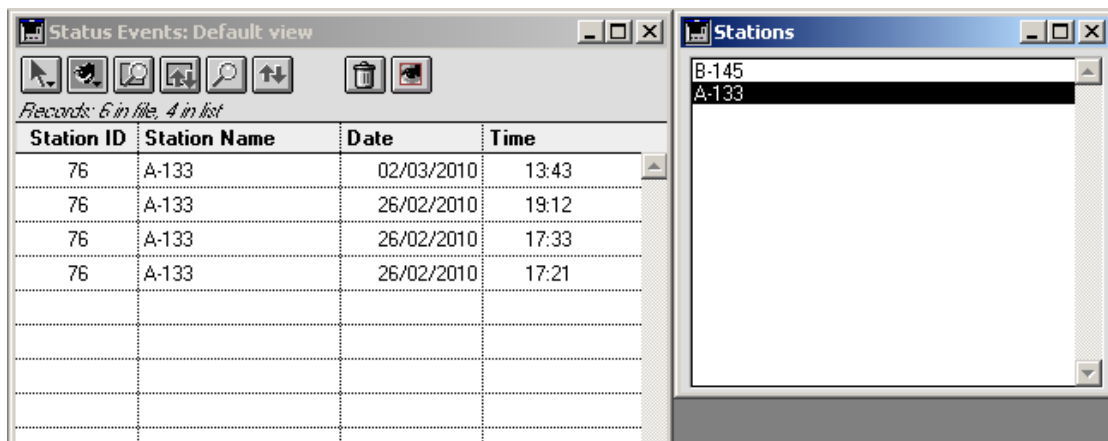
Click on the 'Delete selection' button to remove the selected records.



A quick selection capability is available for selecting all Status Messages of a specific Station. Click on the "Station List" button. A Station List Palette opens:



Click on a Station in the Stations List to select the Status messages of the specific Station in the Table form.

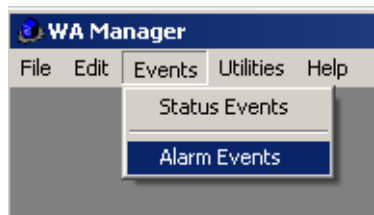


In order to select all records in the Table form, close the Station List Palette and use the Record selection button on the Table form:

Station ID	Station Name	Date	Time
76	A-133	02/03/2010	13:43
76	A-133	26/02/2010	19:12
76	A-133	26/02/2010	17:33
76	A-133	26/02/2010	17:21

Station ID	Station Name	Date	Time
76	A-133	02/03/2010	13:43
76	A-133	26/02/2010	19:12
76	A-133	26/02/2010	17:33
76	A-133	26/02/2010	17:21

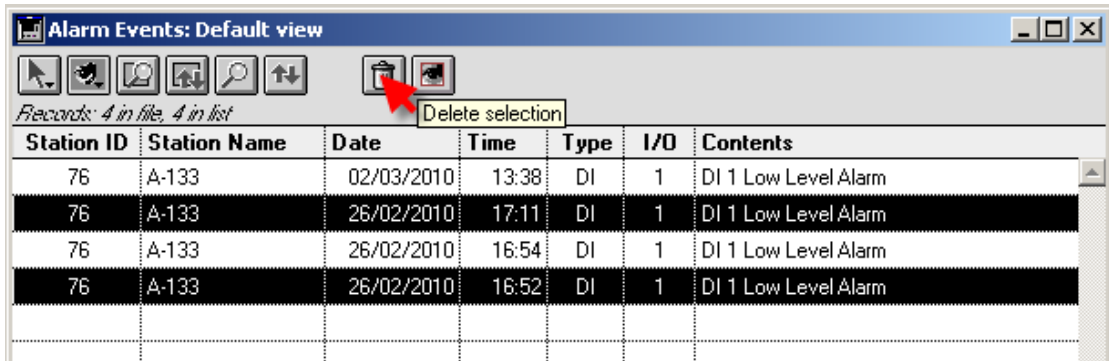
6.5 The Alarm Message File



All Stations Alarm events are archived in the Alarm Events File:

Station ID	Station Name	Date	Time	Type	I/O	Contents
76	A-133	02/03/2010	13:38	DI	1	DI 1 Low Level Alarm
76	A-133	26/02/2010	17:11	DI	1	DI 1 Low Level Alarm
76	A-133	26/02/2010	16:54	DI	1	DI 1 Low Level Alarm
76	A-133	26/02/2010	16:52	DI	1	DI 1 Low Level Alarm

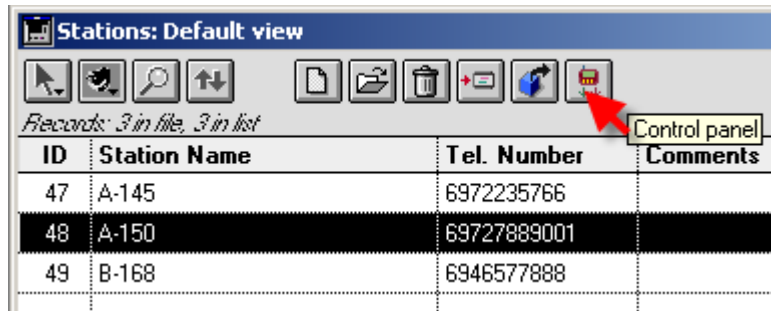
Old Alarm event records can be selected and removed from the file:



Click on the '**Delete selection**' button to remove the selected records from the file.
You can quick select records of the Alarm Events file in the same manner as described in the Status Event file, using the Station List Palette (6.4).

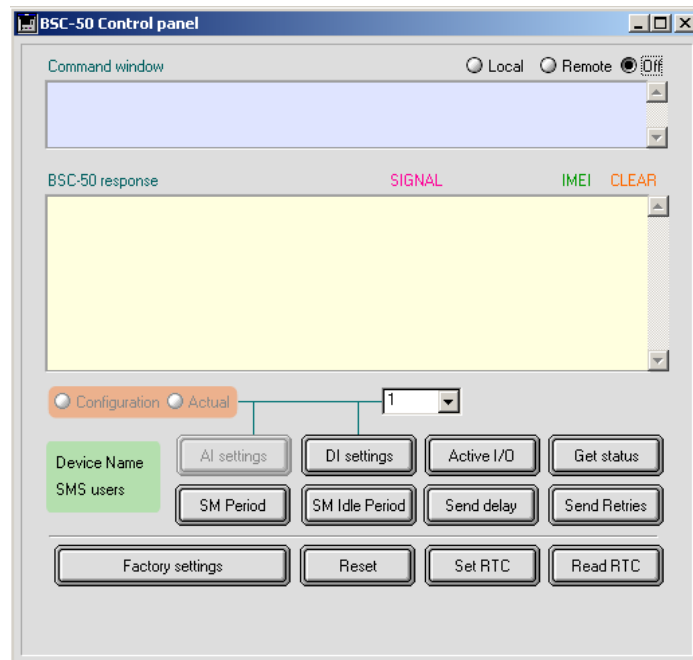
7. The Device Control panel

7.1 Opening the device Control panel



The control panel utility facilitates the target device testing. You can pass commands simply by clicking on functional buttons to the target device and observe the device response. In order to open the Control panel, you must first connect the target device to a PC serial port (See also 5.3). Select a station in the station and open the control panel.

7.2 The BSC-50 Control panel



The Control panel comprises two operation modes:

Local: The target device must be connected to the serial port of the PC in order to select this operation mode.

Remote: This mode is selectable only for devices which are steady connected to the GSM network, as BSC-50-E operating with power network supply. **The GSM Server must be running in order to use the remote mode.**

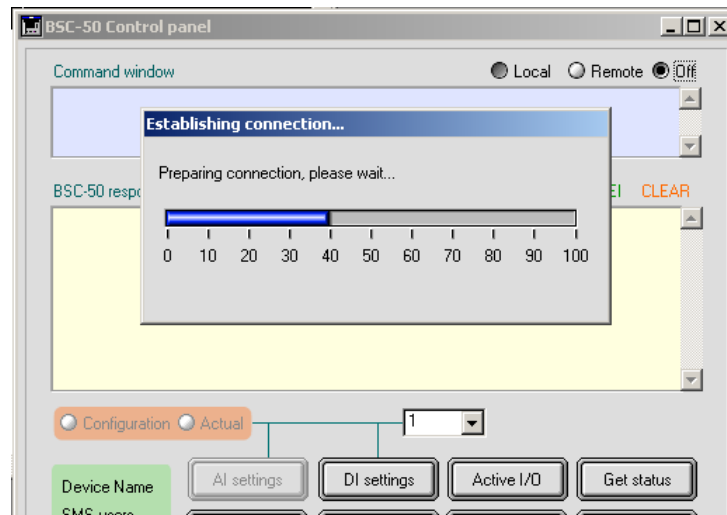
Available function buttons include:

- Viewing digital input configuration.
- Viewing the device user list.

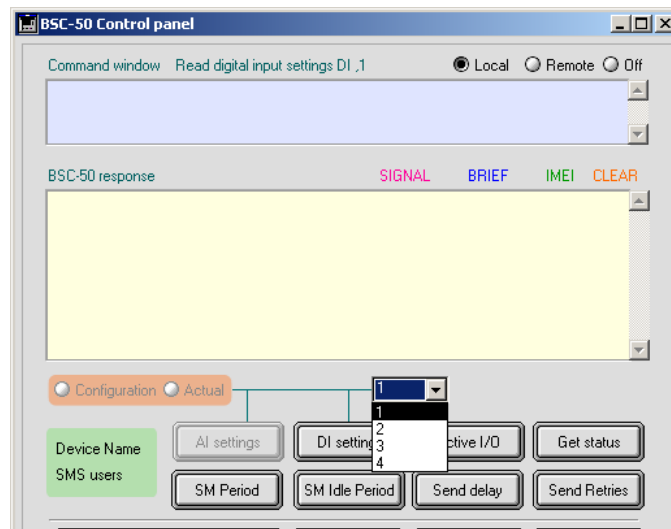
- Viewing the device status.
- Setting and viewing the device real time clock.
- Resetting the device.
- Viewing important device parameters, as Status message period, Retries, etc.
- Setting Factory default parameters.
- Observing GSM Signal quality.

Example: Reading a digital input configuration

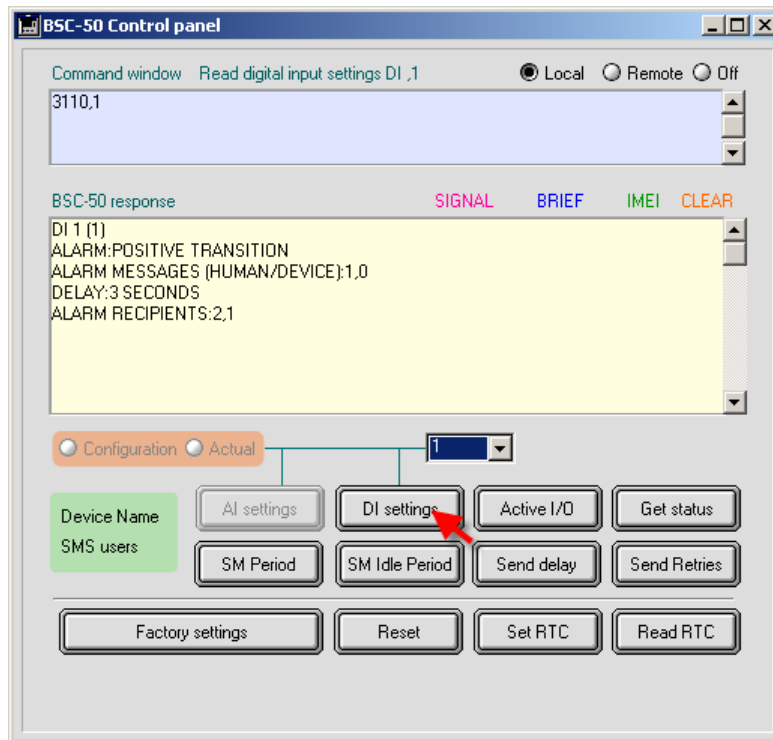
Connect a BSC-50-D device to the PC and open the Control panel:



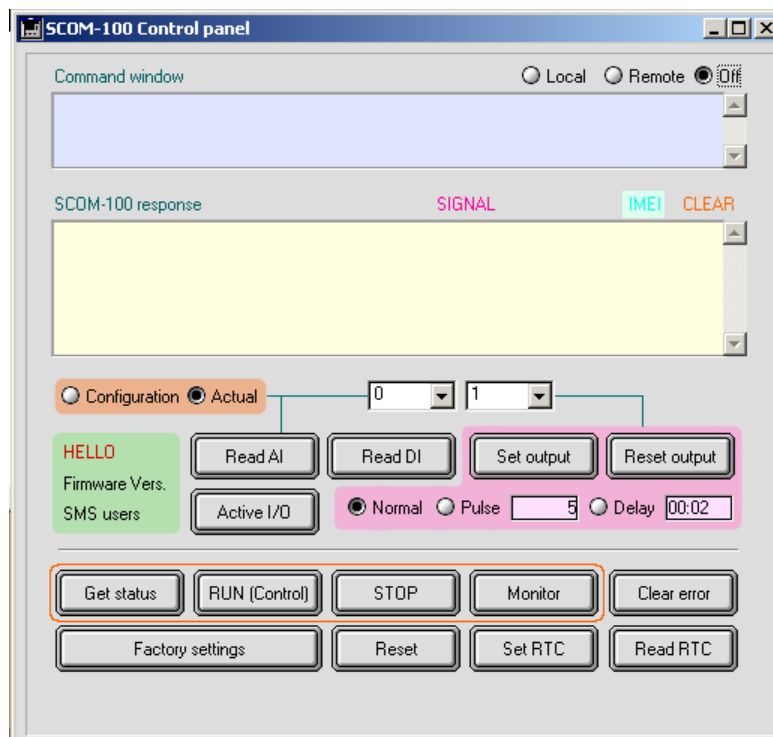
Click on the 'Local' button to establish a connection to the device:



Select the input number and click on DI settings button to view the DI configuration.



7.3 The SCOM-100 Control panel



The Control panel comprises two operation modes:

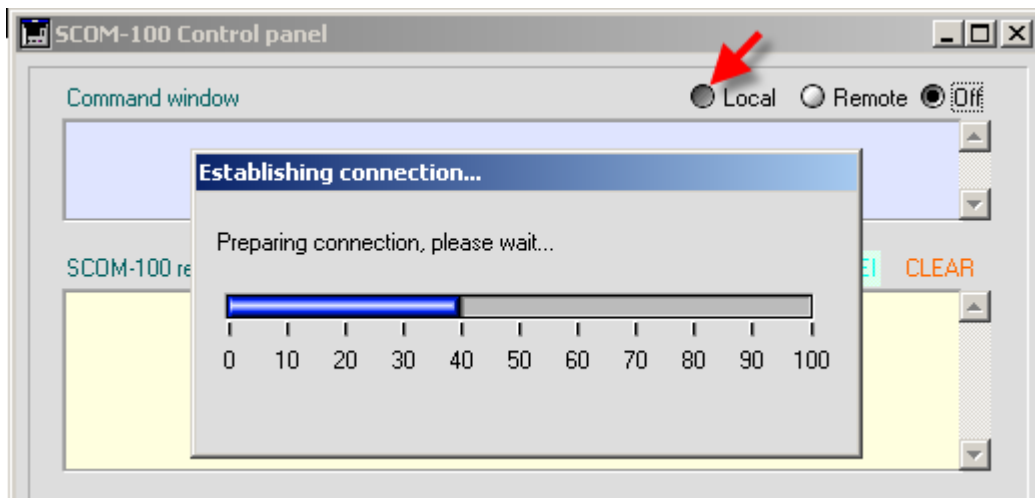
Local: The target device must be connected to the serial port of the PC in order to select this operation mode.

Remote: This mode is selectable only for devices which are steady connected to the GSM network. . **The GSM Server must be running in order to use the remote mode.**

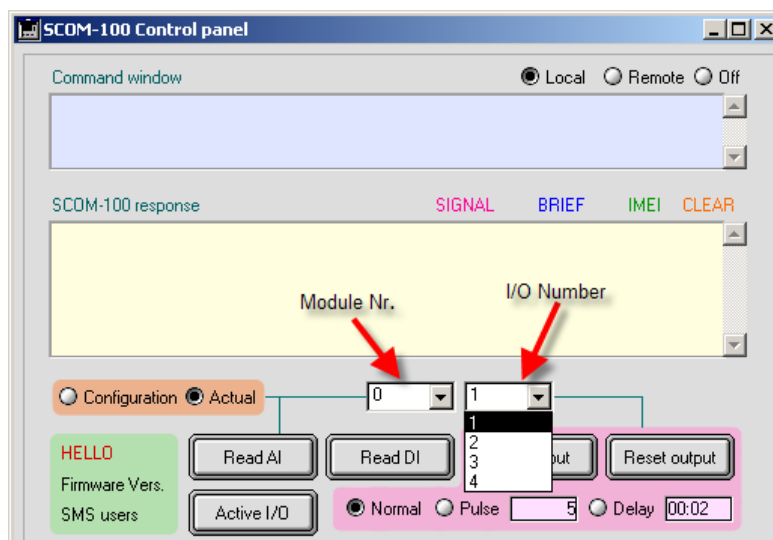
Available function buttons include:

- Analog and digital input reading.
- Controlling digital outputs.
- Viewing input configuration.
- Viewing user list.
- Viewing the device status.
- Setting the device status.
- Setting and viewing the device real time clock.
- Commanding the device to perform reset.
- Setting Factory default parameters.

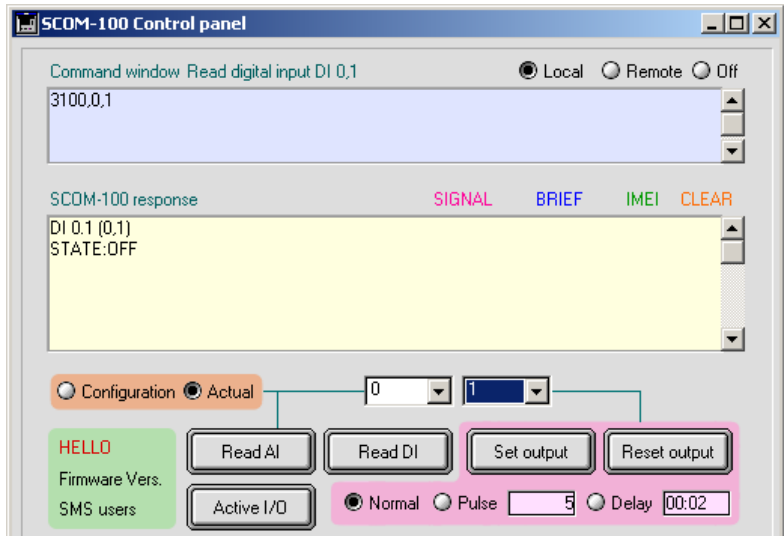
Attach an SCOM-100 device to the PC serial port and wait until booting is completed. Click on the local radio button of the SCOM-100 Control Panel:



7.3.1 Reading the device inputs



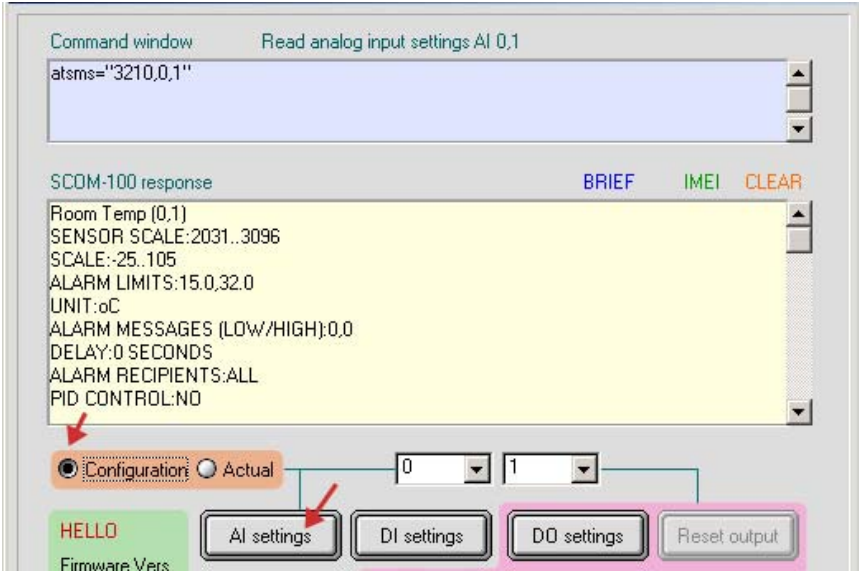
Use the pull down menus to select the I/O module and I/O number. Click on the 'Read DI' button to view the digital input state:



The '3100' ASCII command is sent to the SCOM device. The device response appears in the 'SCOM-100 response' window.

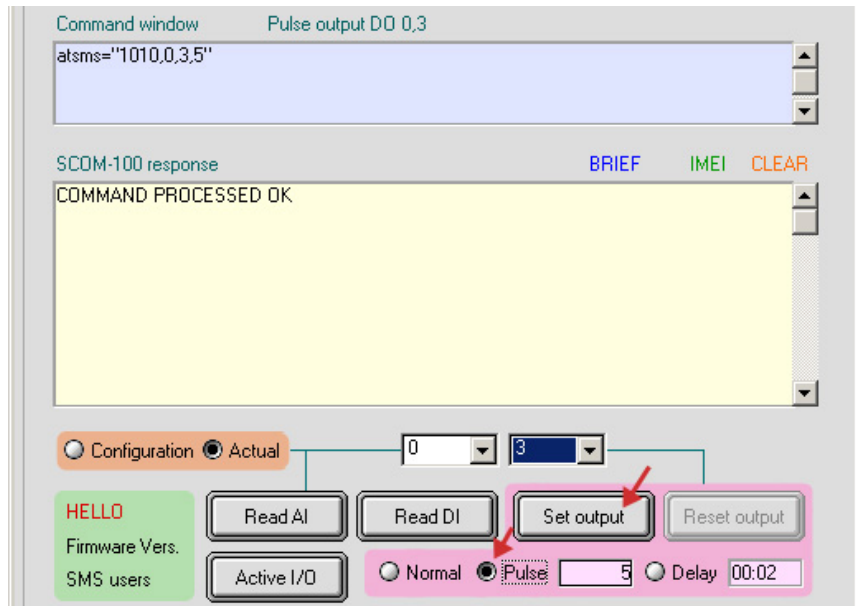
You can read in the same way the analog inputs by selecting the respective module and I/O number and clicking on the 'Read AI' button.

7.3.2 Reading the input configuration



Select an analog input and click on the 'Configuration' radio button to view the input configuration. The 'Read' buttons labels change to 'Settings'. Click on the 'AI settings' button. The analog input configuration report appears in the 'SCOM-100 response' window.

7.3.3 Controlling the digital outputs



Select the pulse radio button and enter a pulse duration in seconds in the respective field. Click on the 'Set output' button to set the output in pulse mode.

7.3.4 Setting the real time clock



Click on the 'Set RTC' button to set the device real time clock to the PC current date and time.

8. Updating a Remote Station Configuration

BSC-50 devices are commonly battery operated. A remote device is not available on the GSM network during normal operation. The WA Manager supports remote BSC-50 station configuration via SMS. Update actions are added in form of records in a respective update table. Every record of the update table represents a configuration SMS to be sent to a remote station. The SMS is sent immediately after receiving a Status SMS from the respective station.

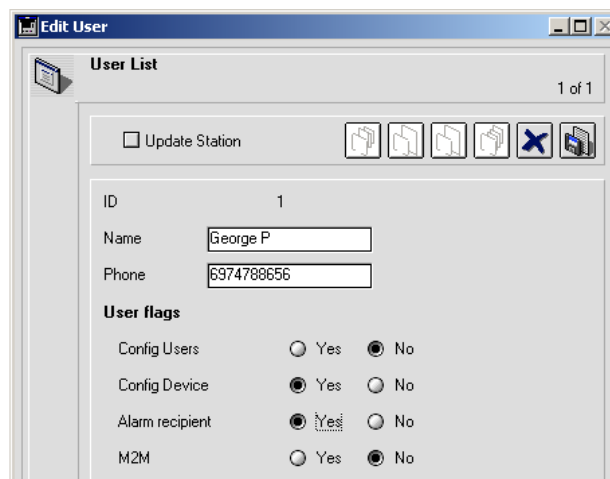
 **The value of the “Status Idle time Period’ station parameter must be se between 30 and 180 sec in order to permit remote configuration.**

Remote configuration is limited to the following actions:

1. Replace a user in the General User List.
2. Remove a User from the General User List.
3. Change General Station Parameters.
4. Set up your own SMS with the appropriate configuration commands.

8.1 Replacing a user in the General User List

Open a User record of the General User List:



Edit User

User List 1 of 1

Update Station

ID 1

Name George P

Phone 6974788656

User flags

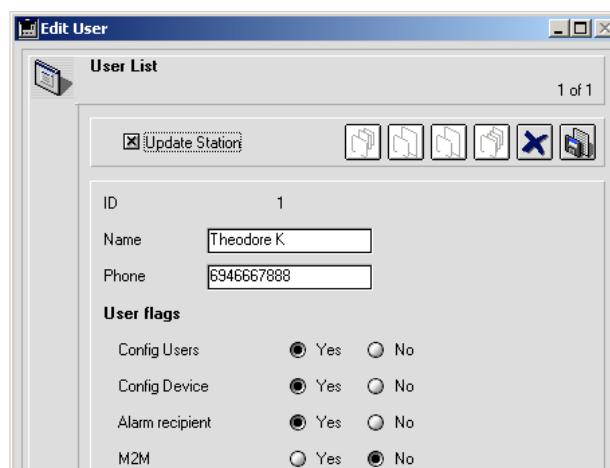
Config Users Yes No

Config Device Yes No

Alarm recipient Yes No

M2M Yes No

Replace the field values with the new user data:



Edit User

User List 1 of 1

Update Station

ID 1

Name Theodore K

Phone 6946667888

User flags

Config Users Yes No

Config Device Yes No

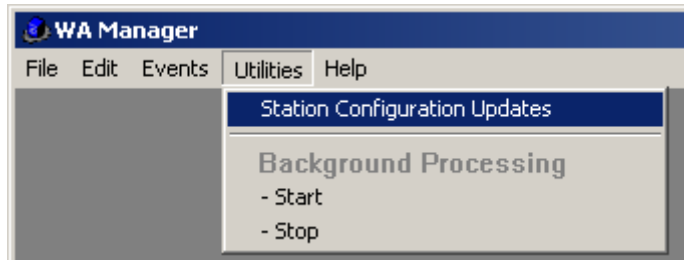
Alarm recipient Yes No

M2M Yes No

Click on the ‘Update Station’ Check box and save the record.

The WA Manager creates a record of the new user configuration in the Station Configuration Updates table for each occurrence of the replaced user in the Stations User Lists.

The Station Configuration Updates table can be opened through the respective menu item:



Station Configuration Updates: Default view

Records: 3 in file, 3 in list

SMS ID	SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	Object ID
1	No	1	A-134	28/02/10	21:03:06	0500,1,Theodore K,6946667888,1,1,1,0	Change User in the General User List	2
2	No	2	A-122	28/02/10	21:03:06	0500,1,Theodore K,6946667888,1,1,1,0	Change User in the General User List	2
3	No	3	B-101	28/02/10	21:03:06	0500,1,Theodore K,6946667888,1,1,1,0	Change User in the General User List	2

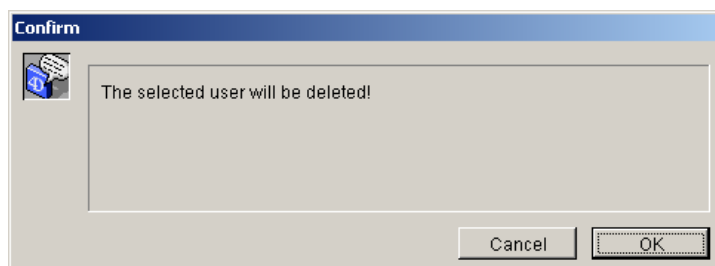
8.2 Removing a user from the General User List

Open the General User List:

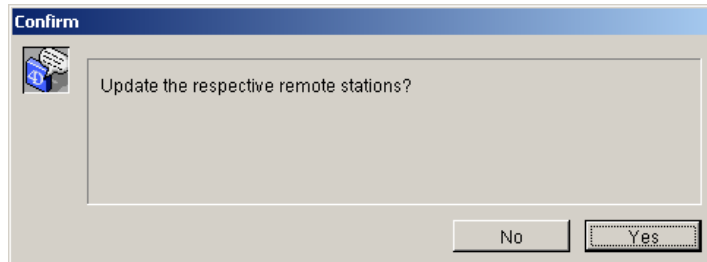
The screenshot shows the 'General User List: Default view' window in WA Manager. A red arrow points to the delete button (trash icon) in the toolbar. The table below shows the user list with the row for 'George P' (User ID 4) highlighted.

User ID	Name	Phone	Config Users	Config Device	Alarm Recipient	M2M	Comments
2	Theodore K	6946667888	Yes	Yes	Yes	No	
4	George P	6972765899	Yes	Yes	Yes	No	
5	SCOM-100-3	6946563699	No	No	Yes	Yes	
6	WA Manager	6972222455	Yes	Yes	Yes	No	

Click on the 'Delete record' button:



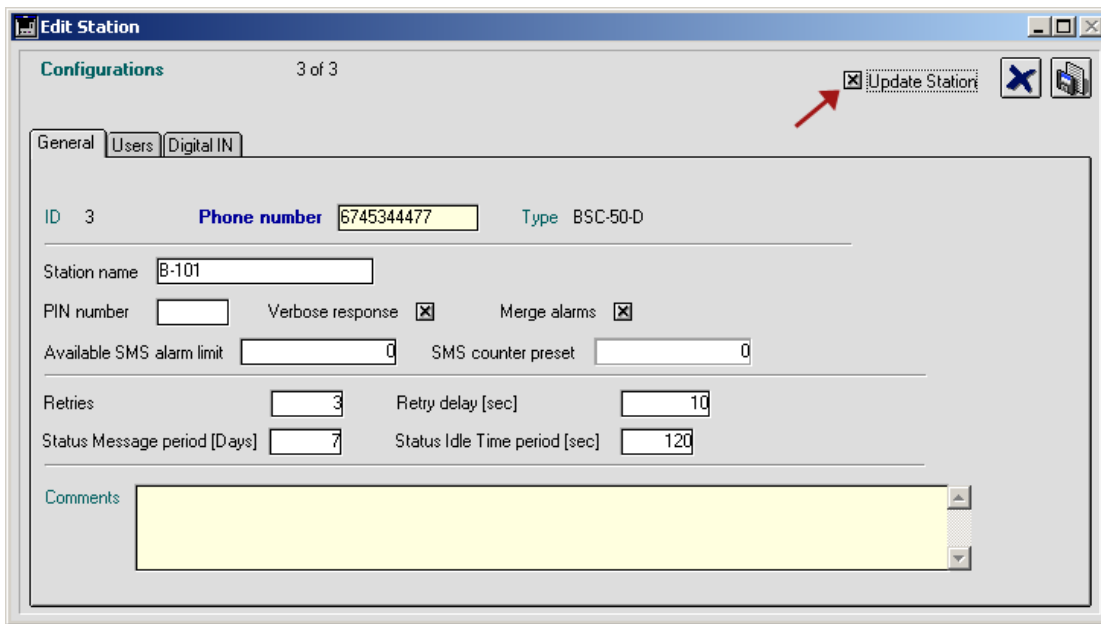
Click on the 'OK' button.



The WA Manager creates one record for every occurrence of the removed user in the Stations User Lists in the Station Configuration Updates table.

8.3 Changing the General Station Parameters

Open a Station Configuration form:



Following parameters can be updated:

1. Retries on a SMS transmission failure.
2. Delay between retries.
3. Period for the Status messaging.
4. Status Idle Time period.

Change a parameter value, click on the 'Update Station' Check box and save the record. A respective record is created in the Stations Configuration Updates table.

8.4 Editing the Station Configuration Update records

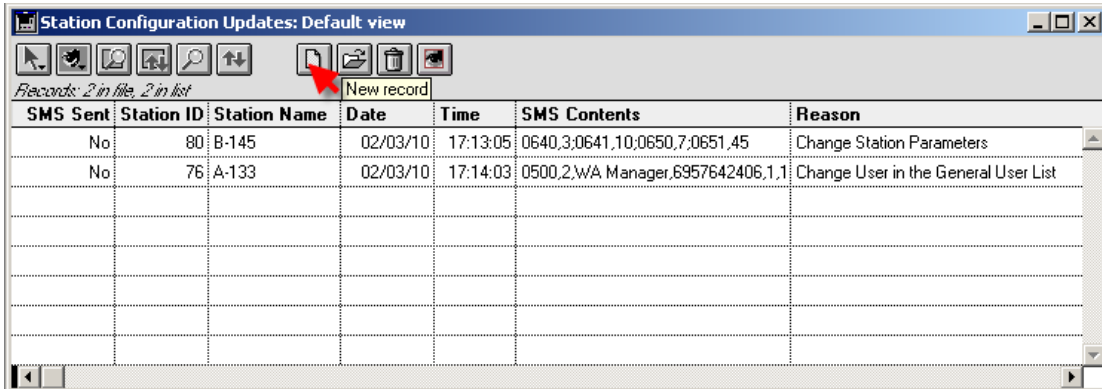
Open a Station Configuration Updates form:

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason
No	80	B-145	02/03/10	17:13:05	0640,3;0641,10;0650,7;0651,45	Change Station Parameters
No	76	A-133	02/03/10	17:14:03	0500,2;WA Manager,6957642406,1,1	Change User in the General User List

Following actions are available:

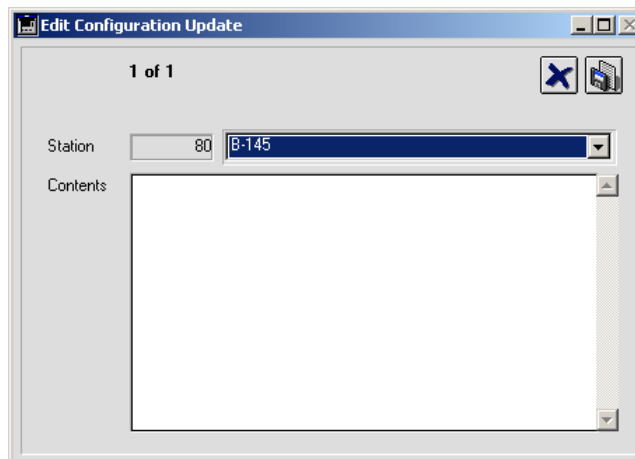
- Add a new update record for a station.
- Edit an existing record.
- Delete a record.

8.4.1 Add a new Update Record



SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason
No	80	B-145	02/03/10	17:13:05	0640,3;0641,10;0650,7;0651,45	Change Station Parameters
No	76	A-133	02/03/10	17:14:03	0500,2;WA Manager,6957642406,1,1	Change User in the General User List

Click on the 'New record' button. The respective Entry form opens:

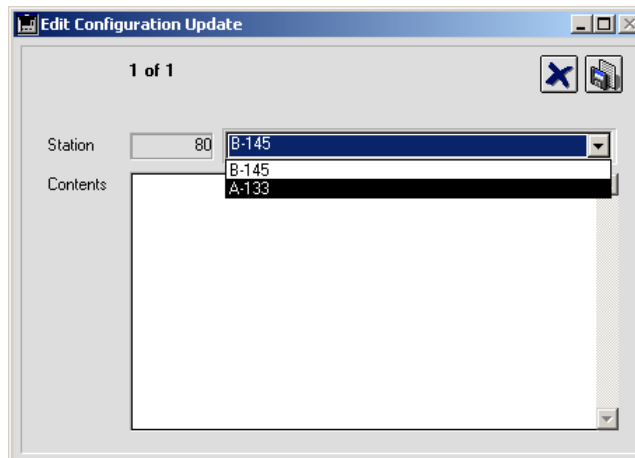


1 of 1

Station: 80 B-145

Contents:

Click on the Station selection pull down menu to select a station.



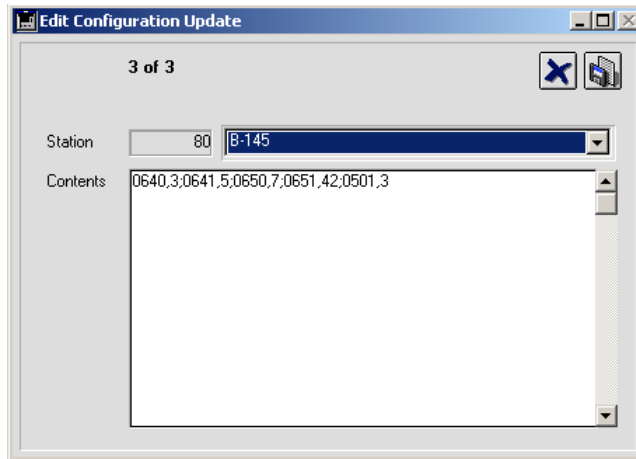
1 of 1

Station: 80 B-145

Contents:

- B-145
- A-133

Type in a set of valid device configuration commands. The command text must not exceed the maximum number of 160 characters.



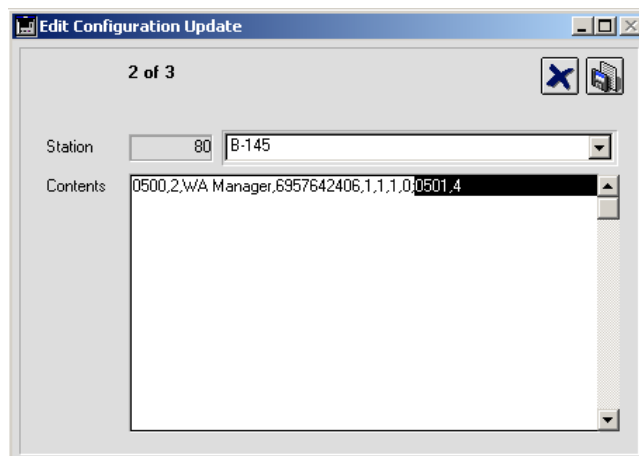
Click on the 'Accept' button to save the new record.

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	0
No	80	B-145	02/03/10	17:13:05	0640,3;0641,10;0650,7;0651,45	Change Station Parameters	
No	76	A-133	02/03/10	17:14:03	0500,2;WA Manager,6957642406,1,1,1,0	Change User in the General User List	
No	80	B-145	02/03/10	18:01:26	0640,3;0641,5;0650,7;0651,42;0501,3	Custom Configuration	

8.4.2 Edit an existing record

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	0
No	80	B-145	02/03/10	17:13:05	0640,3;0641,10;0650,7;0651,45	Change Station Parameters	
No	76	A-133	02/03/10	17:14:03	0500,2;WA Manager,6957642406,1,1,1,0	Change User in the General User List	
No	80	B-145	02/03/10	18:01:26	0640,3;0641,5;0650,7;0651,42;0501,3	Custom Configuration	

Select an existing record and click on the 'Edit record' button to open the it:



Edit the SMS contents field and click on the 'Accept' button to save the record.

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	Object ID
No	80	B-145	02/03/10	17:13:05	0640.3:0641.10:0650.7:0651.45	Change Station Parameters	80
No	80	B-145	02/03/10	17:14:03	0500.2:WA Manager.6957642406.1.1.1.0:0501.4	Custom Configuration	30
No	80	B-145	02/03/10	18:01:26	0640.3:0641.5:0650.7:0651.42:0501.3	Custom Configuration	-1

8.4.3 Delete a record

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	Object ID
No	80	B-145	02/03/10	17:13:05	0640.3:0641.10:0650.7:0651.45	Change Station Parameters	80
No	80	B-145	02/03/10	17:14:03	0500.2:WA Manager.6957642406.1.1.1.0:0501.4	Custom Configuration	30
No	80	B-145	02/03/10	18:01:26	0640.3:0641.5:0650.7:0651.42:0501.3	Custom Configuration	-1

Select a record and click on the 'Delete record' button to remove it from the table:

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	Object ID
No	80	B-145	02/03/10	17:13:05	0640.3:0641.10:0650.7:0651.45	Change Station Parameters	80
No	80	B-145	02/03/10	17:14:03	0500.2:WA Manager.6957642406.1.1.1.0:0501.4	Custom Configuration	30
No	80	B-145	02/03/10	18:01:26	0640.3:0641.5:0650.7:0651.42:0501.3	Custom Configuration	-1

SMS Sent	Station ID	Station Name	Date	Time	SMS Contents	Reason	Object ID
No	80	B-145	02/03/10	17:13:05	0640.3:0641.10:0650.7:0651.45	Change Station Parameters	80
No	80	B-145	02/03/10	18:01:26	0640.3:0641.5:0650.7:0651.42:0501.3	Custom Configuration	-1