



**ROUTE MANAGEMENT SOFTWARE FOR
ELECTRONIC DESTINATION SIGN SYSTEMS**

USER MANUAL

Axion Ref. No.: 3040320
(Revision J)

ROUTE MANAGEMENT SOFTWARE FOR ELECTRONIC DESTINATION SIGN SYSTEMS

USER MANUAL

**Axion Ref. No.: 3040320
(Revision J)**

2012

The information provided in this document may be modified without prior notice.
No part of this manual may be reproduced or transmitted for any purpose by
any electronic or mechanical means, without a written authorization from:

**© 2012 Axion Technologies Ltd.
Technical Publications and Training Department
All rights reserved**

PRINTED IN CANADA

List of revisions

REVISION	DATE	DESCRIPTION OF CHANGES
--	January 1 st , 2001	Original
A	January 1 st , 2001	Drawings and Part Numbers
B	March 20 th , 2002	Section 11-5
C	April 18 th , 2002	Chap. 15 – Removed and Replaced
D	December 17 th , 2002	Addition for Windows 2000 and Windows XP
E	January 1 st , 2003	Revision of Illustrations
F	January 22 th , 2004	- Modifications to cover page layout; - New address; - E-mail address replaced by web address (cover page & page 3)
G	March 10 th , 2005	- General layout revision (conversion from In-Design to Star Office) - Update: New corporate name and logo
H	October 16 th , 2007	Addition for new software release 4.0
I	October 28 th , 2011	Addition for new software release 4.8
J	January 26 th , 2012	Addition for new software release 4.9

TABLE OF CONTENTS

SECTION 1.....	1
1. INTRODUCTION.....	2
SECTION 2.....	3
2. INSTALLATION.....	4
2.1. SOFTWARE INSTALLATION.....	4
2.1.1. INSTALLATION OF THE BDE ADMINISTRATOR FOR WINDOWS XP.....	4
2.1.2. INSTALLATION OF THE BDE ADMINISTRATOR FOR WINDOWS 7.....	6
2.1.3. INSTALLATION OF DATA TRANSIT.....	6
2.2. CARD READER INSTALLATION.....	7
2.3. START-UP.....	7
SECTION 3.....	9
3. CONFIGURATION.....	10
3.1. BASIC CONFIGURATION.....	10
3.1.1. SPECIAL SETUP OPTIONS.....	10
3.1.2. LIST OF AVAILABLE "DISPLAY TIME" VALUES.....	11
3.1.3. DEFAULT DISPLAY TIME.....	12
3.1.4. ACCESS AUTHORIZATION.....	12
3.2. BUS SYSTEM CONFIGURATIONS.....	13
3.2.1. SIGN TYPES.....	13
3.2.2. SIGN LOCATIONS.....	14
3.2.3. SYSTEM NAME.....	14
3.2.4. SYSTEM CONFIGURATION.....	15
3.2.5. NETWORK CONFIGURATION.....	15
3.2.6. TYPES OF UNITS PER SYSTEM.....	16
3.3. ROUTE NUMBER OPTIONS.....	17
SECTION 4.....	18
4. EDITION.....	19
4.1. ADDING A ROUTE.....	19
4.2. DELETING A ROUTE.....	20
4.3. RENAMING A ROUTE.....	20
4.4. REMOVING/RESETTING DEPENDENCY.....	20
4.5. EDITING / MODIFYING MESSAGE.....	21
4.6. COPYING FRONT TO CONSOLE.....	21
4.7. COPYING MESSAGE.....	21
4.7.1. COPYING A NETWORK (ALL ROUTES).....	21
4.7.2. COPYING AN ACTIVE ROUTE.....	21
4.8. "ROUTE NUMBER".....	22
SECTION 5.....	24
5. MESSAGE EDITION.....	25
5.1. CHARACTER-TYPE SIGNS.....	25
5.2. MATRIX-TYPE SIGNS.....	26
5.3. ROUTE NUMBER MODE.....	29
SECTION 6.....	31
6. PICTOGRAM EDITION.....	32
SECTION 7.....	34

- 7. DATABASE TRANSFER.....35
 - 7.1. DATABASE TRANSFER USING PTU.....35
 - 7.1.1. SEND TO PTU.....35
 - 7.1.2. READ PTU.....36
 - 7.2. DATABASE TRANSFER THROUGH PCMCIA CARD.....37
 - 7.2.1. SEND TO PCMCIA.....37
 - 7.2.2. READ PCMCIA.....39
 - 7.3. COMPUTER TO SIGN DATABASE TRANSFER.....42
 - 7.4. DATABASE TRANSFER THROUGH WIRELESS SYSTEM.....43
 - 7.5. DATABASE TRANSFER THROUGH USB KEY.....44
 - 7.6. DATABASE TRANSFER TO THE AIC44
- SECTION 8.....46
- 8. OTHER FUNCTIONS.....47
 - 8.1. BACKUP.....47
 - 8.2. RESTORE.....47
 - 8.3. PRINT DATABASE.....48

LIST OF FIGURES

FIGURE 1: "WELCOME" WINDOW.....	4
FIGURE 2: I"SELECT PROGRAM FOLDER" WINDOW".....	5
FIGURE 3: "COPYING FILES" WINDOW.....	5
FIGURE 4:"SETUP COMPLETE" WINDOW.....	6
FIGURE 5: "DEFAULT BDE DIRECTORY" WINDOW.....	6
FIGURE 6: "SELF-EXTRACTING ARCHIVE"WINDOW.....	7
FIGURE 7: PASSWORD WINDOW.....	8
FIGURE 8: DATA TRANSIT MAIN PROGRAM WINDOW.....	8
FIGURE 9: SPECIAL SETUP OPTIONS WINDOW.....	10
FIGURE 10: DISPLAY TIME WINDOW.....	12
FIGURE 11: DEFAULT TIME VALUE WINDOW.....	12
FIGURE 12: ACCESS AUTHORIZATION WINDOW.....	13
FIGURE 13: DISPLAY WINDOW.....	13
FIGURE 14: EDIT PATTERN.....	14
FIGURE 15: LOCATION.....	14
FIGURE 16: SYSTEM.....	15
FIGURE 17: SYSTEM CONFIGURATION.....	15
FIGURE 18: NETWORK.....	16
FIGURE 19: TYPE OF UNIT FOR SYSTEM.....	17
FIGURE 20: ROUTE NUMBER OPTIONS.....	17
FIGURE 21: ROUTE EDITOR WINDOW.....	19
FIGURE 22: ADD ROUTE WINDOW.....	20
FIGURE 23: RENAME A ROUTE WINDOW.....	20
FIGURE 24: ROUTES COPY WINDOW.....	21
FIGURE 25: EXAMPLE OF CONFIRMATION OF THE COPY PROCESS.....	22
FIGURE 26: SIMULATION WITH ACTIVATED "ROUTE NUMBER".....	23
FIGURE 27: HECTOR DISPLAY EDITOR.....	25
FIGURE 28: MATRIX DISPLAY EDITOR.....	26
FIGURE 29: SECOND EXAMPLE OF MATRIX DISPLAY EDITOR.....	29
FIGURE 30: "MATRIX DISPLAY EDITOR" FROM ACTIVATED ROUTE NUMBER FUNCTION.....	29
FIGURE 31: PICTOGRAM EDITOR.....	32
FIGURE 32: SEND DATABASE TO THE PTU.....	35
FIGURE 33: READING THE PTU CONFIGURATION.....	36
FIGURE 34: SEND DATABASE TO THE PCMCIA.....	37
FIGURE 35: CSM CARD READER MAIN WINDOW.....	38
FIGURE 36: COPY FILE(S) TO CARD WINDOW.....	38
FIGURE 37: DEFINE COPY JOB WINDOW.....	39
FIGURE 38: SAVE SETTING WINDOW.....	39
FIGURE 39: READ THE PCMCIA WINDOW.....	40
FIGURE 40: CSM CARD READER.....	40
FIGURE 41: COPY CARD TO FILE(S).....	41
FIGURE 42: COMPUTER TO SIGN DATABASE TRANSFER.....	42
FIGURE 43: TRANSFER THROUGH WIRELESS SYSTEM.....	43

FIGURE 44: TRANSFER THROUGH USB KEY.....44
 FIGURE 45: TRANSFER TO THE AIC.....45
 FIGURE 46: BACKUP WINDOW.....47
 FIGURE 47: RESTORE WINDOW.....47
 FIGURE 48: PRINT WINDOW.....48

LIST OF TABLES

FIELD DESCRIPTION.....10
 NETWORK WINDOW FUNCTIONS.....16
 EDITION AVAILABLE FUNCTIONS.....25
 LINE CONCEPT FUNCTIONS.....27
 ITEM CONCEPT FUNCTIONS.....28
 PICTOGRAM WINDOW AVAILABLE BUTTONS.....33
 SEND DATABASE TO THE PTU WINDOW FIELDS.....36
 READING THE PTU CONFIGURATION WINDOW FIELDS.....36

SECTION 1

1. INTRODUCTION

The Data Transit Program developed by Axion Technologies Ltd., is the communication interface for our line of Electronic Destination Sign Systems (EDSS). It lets you manage your route information and the transmission of data to your electronic signs through the Control Console. To understand this guide, you must be familiar with the basics of the Windows environment.

SECTION 2

2. INSTALLATION

2.1. SOFTWARE INSTALLATION

The software is available on CD-ROM and requires the following basic computer specifications:

- O/S Windows XP or Windows 7
- Disk Space At least 10 Mb
- Processor At least Pentium 900 Mhz, with 512 Mb of RAM

2.1.1. Installation of the BDE administrator for Windows XP

The program installs like any other Windows program. The following steps explain the installation procedure. The folder “BDE for WinXP” contains the setup program “BDE SETUP.EXE”. Run the program.

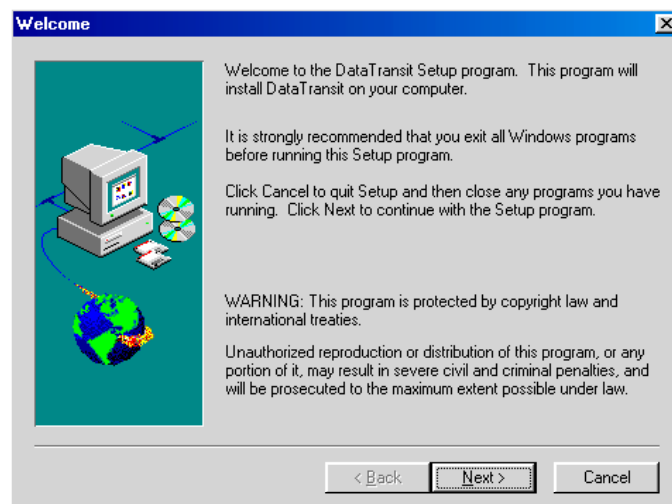


Figure 1: "Welcome" Window

Click "Next" to continue.

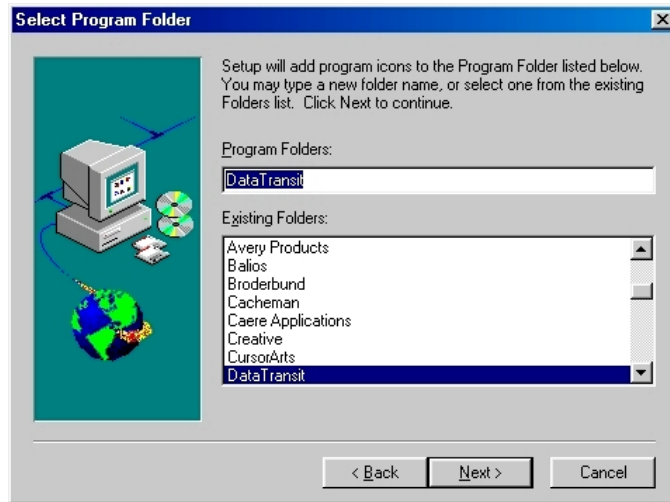


Figure 2: "Select Program Folder" Window

This dialog box allows to select the program folder to be added to the "Program" selection of the Start Menu in Windows. Click "Next" to continue.

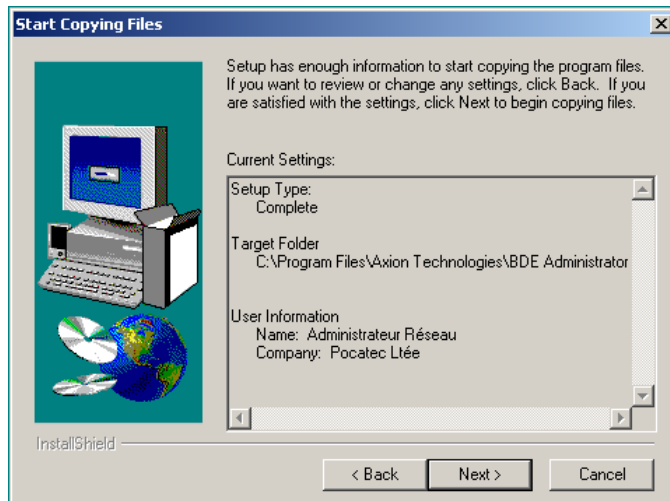


Figure 3: "Copying Files" Window

This dialog box allows starting to copy files on your computer. Click « Next » to continue.

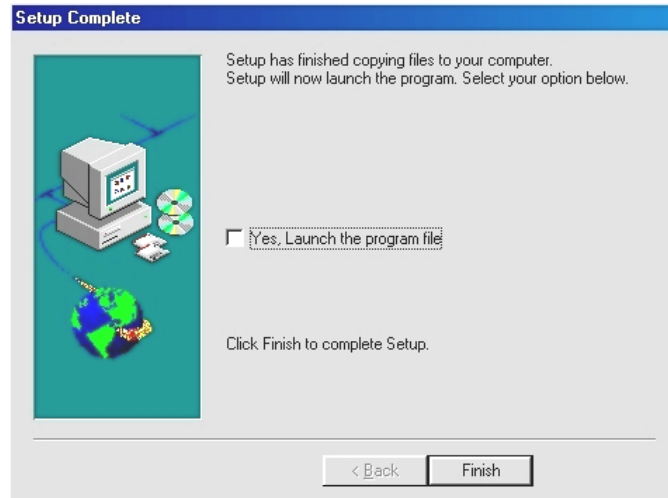


Figure 4: "Setup Complete" Window

The BDE Administrator is now installed. Click "Finish" to complete the installation and go to section 2.1.3.

2.1.2. Installation of the BDE administrator for Windows 7

The folder "BDE for Win 7" contains the file "BDE For Win 7 setup.VBS". You must have the appropriate access right to execute the "VBScript" file. Run the file and the following dialog box shows.

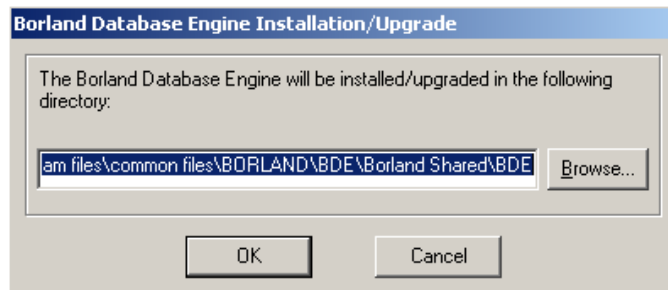


Figure 5: "Default BDE Directory" Window

Click "OK" to continue. Click "Yes" at the warning pop-up and click "OK" at the confirmation pop-up.

2.1.3. Installation of Data Transit

Run the setup program "DT49-Setup.exe". The following dialog box appears.

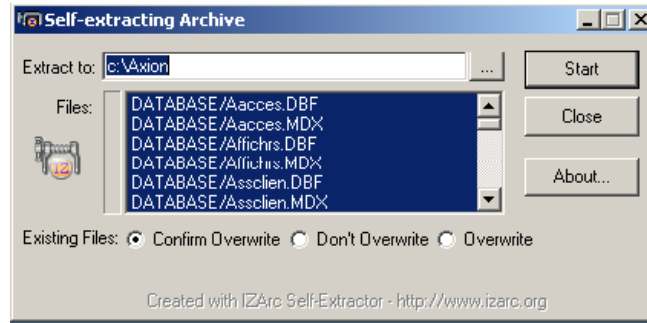


Figure 6: "Self-extracting Archive" Window

Warning: At this step, if you already have database files, they will be overwritten. Click "Start" and click "OK" at the confirmation messages. Your installation folder will contain a file named "Dtranapp.exe". Create a short-cut on this file for the startup of Data Transit.

2.2. CARD READER INSTALLATION

This installation is mandatory if your consoles are PCMCIA Control Consoles. The card reader is manufactured by CSM and runs under Win XP and Win 7-based environment.

The reader comes with its own instruction manual and CD-ROM. To get the latest device drivers, see CSM Web site. At the time of writing this manual, the device driver version is 3.21 and the PCM software is 3.03

Installation is divided into the two following steps:

- First, install the device driver.
- Second, install the PCM (PC Card Manager) software and select the installation folder. Use "C:\AXION\PCM". This folder will be subsequently used by Data Transit. See Section 3.1.1, field "Card Reader Directory" .

Refer to the CSM Card reader User Guide for more information.

2.3. START-UP

Data Transit software is now installed and can be run. At start-up, the software prompts for a password. The factory set password for the Super-User level is "AXION". This password can be modified later as required (See section 3.1.4). The following screen shot shows the password window.

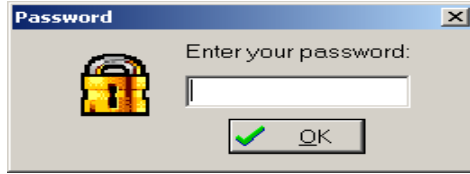


Figure 7: Password Window

Enter your password to open the following Data Transit main program window. You may now start using the software.



Figure 8: Data Transit Main Program Window

SECTION 3

3. CONFIGURATION

Some basic information is required prior to entering messages such as data specifying the types of sign in operation and their configuration files. At first installation, the manufacturer customizes the configuration files and the program to fit customer's equipment.

Data Transit provides two types of configurations: Basic configuration and Bus system configuration. Both types are described in the following pages.

3.1. BASIC CONFIGURATION

3.1.1. SPECIAL SETUP OPTIONS

You access the following "Special setup options" window from the Configuration menu. This window is as follows:

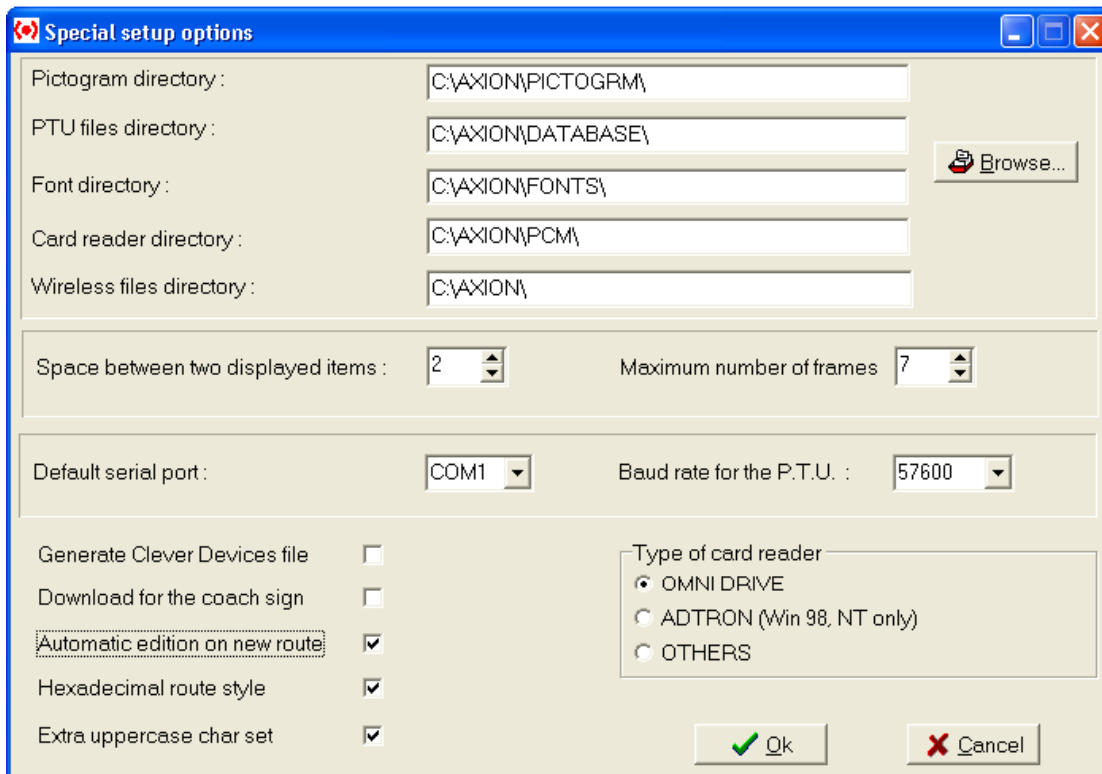


Figure 9: Special Setup Options Window

Field Description	
Pictogram directory	Contains all pictograms used for your messages. To change directory, select "Pictogram directory" field and click "Browse".
PTU files directory	Contains the program files, database files, configuration files, and temporary files generated during information transfer using the Portable Transfer Unit (PTU) or the PCMCIA flashcard. To change directory, select "PTU files directory" field and click "Browse".

Field Description	
Font directory	Contains all the character fonts used for the signs. This allows the user to see exactly what is displayed on the signs. To change directory, select "Font directory" field and click "Browse".
Card reader directory	Locates the interface programs for the PCMCIA reader. This directory must remain the same as that mentioned in Section 2.2 - CARD READER INSTALLATION. It is unused unless you own a PCMCIA card reader. To change directory, select "Card reader directory" field and click "Browse".
Wireless files directory	Locates the wireless files. Unused unless you use the wireless options. To change directory, select "Wireless files directory" field and click "Browse".
Space between two displayed items	Sets the default number of spaces (in pixels) between two items on a sign if these items are not centered during route edition.
Maximum number of frames	Sets the maximum number of consecutive lines on the same sign during route edition.
Default serial port	Locates the serial port the PTU is connected to.
Baud rate for the PTU	Indicates the transfer speed of the PTU. Default Baud rate is 57600.
Generate Clever Devices file	When activated, allows the program to create a file for the "Clever Device" Control Console when a database transfer is processed through the PTU or the Flash Card.
Download for the coach sign	When activated, allows the program to create a database file for the special coach sign. This file is only used for coach sign fit with an integrated two-button keypad.
Automatic edition on new route	When activated, allows the program to automatically enter the message edition mode for each sign whenever a new route is created. Also, this option speeds up data entry.
Hexadecimal route number style	Sets the requirements for route numbering. When activated, you can enter a combination of numbers from 0 to 9 and letters from A to H to get a route number such as A1B2. On the other hand, if this option is deactivated, the route number can only contain one letter at the end of the route number. Then, the available letters are from A to F. In some cases, this option must be deactivated to avoid compatibility conflicts with signs from an earlier generation.
Extra uppercase char set	When activated, allows the program to use a different charset containing accentuated uppercase
Type of card reader	Must be set to match the equipment used.
OK	Closes window and saves information.
Cancel	Closes window and voids all modifications.

3.1.2. LIST OF AVAILABLE "DISPLAY TIME" VALUES

You can modify the available display time values from the "Time of display" window. Select the value to be modified and enter the new value. This action affects all the messages to which you have allocated this period of time. For example, if you replace the time value of 20,0 seconds by 25,0 seconds, all the messages having the assigned value of 20,0 seconds now have the time value of 25,0 seconds. By selecting the menu "Configuration | Time of display", you access the following "Display time" window.

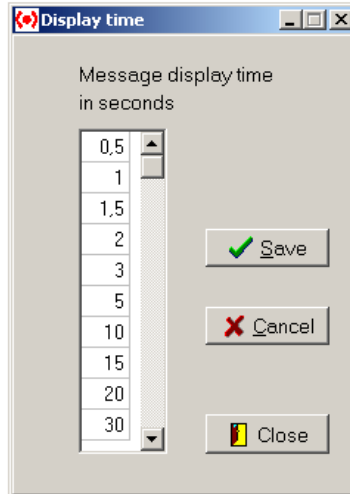


Figure 10: Display Time Window

3.1.3. DEFAULT DISPLAY TIME

It is possible to set default display time for each sign location on the bus. This window simplifies data entry for messages. Time is expressed in seconds. The left fields show the values in operation in the program. The right fields show the available values. To modify a value, highlight the sign from the left fields and select the new value in the right fields. Click "Save" to save new data. By selecting the menu "Configuration | Default Time", you access the following "Default time value" window.

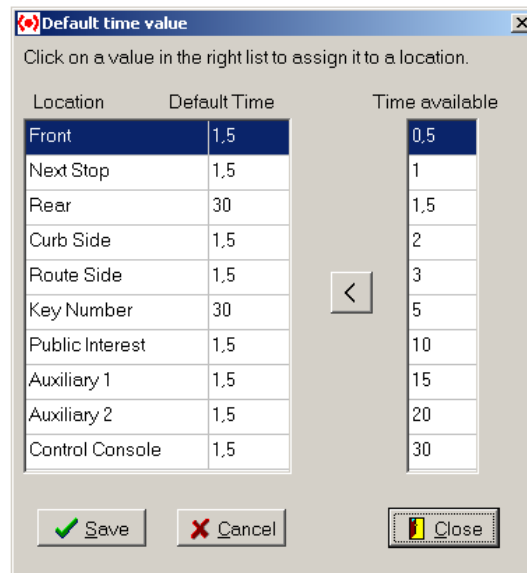


Figure 11: Default Time Value Window

3.1.4. ACCESS AUTHORIZATION

The access to the software is protected by a password. Different levels of access are permitted in the program and each level is protected by its own password. There are three different levels:

- Super-User : Grant access to all of the programs;

- Manager : Grant access to all programs except for the signs, systems, and networks configuration windows;
- Standard user : Grant access to all programs except for the content of the configuration menu.

By selecting the menu "Configuration | Access authorization", you can add, modify or delete a password. The following screen shot shows the "Access authorization" window.

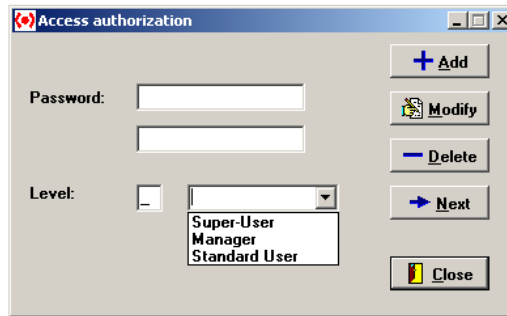


Figure 12: Access Authorization Window

3.2. BUS SYSTEM CONFIGURATIONS

3.2.1. SIGN TYPES

1. You access the following "Display" window from the menu "Configuration | Type of display". This screen shot shows the different types of sign available at Axion Technologies. The "Edit Pattern" button allows to define the automatic edition pattern of a sign. Select a sign in the list and click "Edit Pattern". The window shown in Figure 14 appears. Select the automatic pattern you wish to apply to this specific sign.

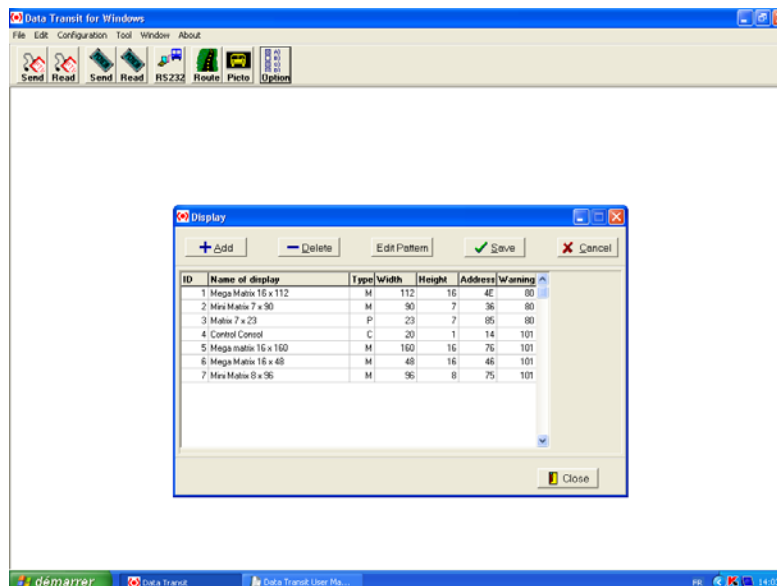


Figure 13: Display Window

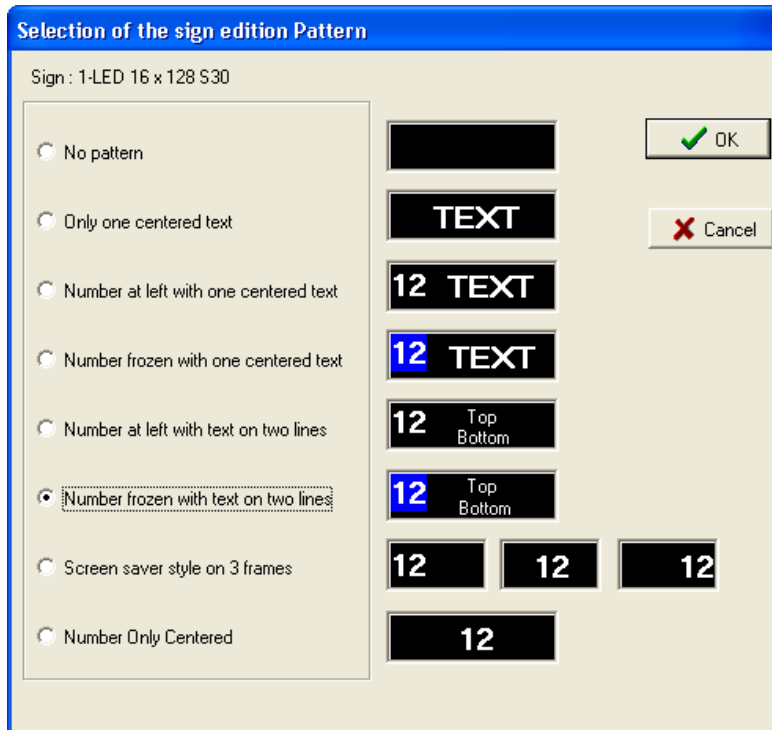


Figure 14: Edit Pattern

3.2.2. SIGN LOCATIONS

You access the following “Location” window from the menu "Configuration | Location". This window shows the various locations for the signs in the bus. Usually, it is set by the manufacturer and no modification is required.

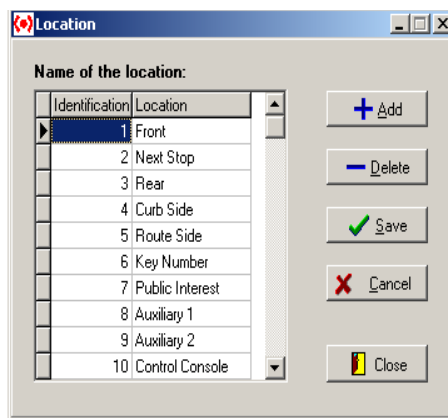


Figure 15: Location

3.2.3. SYSTEM NAME

You access the following “System” window from the menu "Configuration | System". This one is used to add or delete signs system.

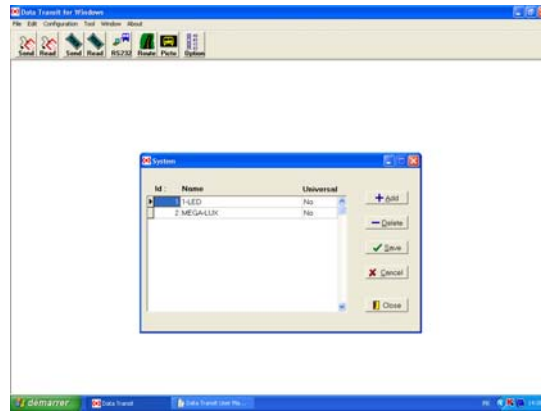


Figure 16: System

3.2.4. SYSTEM CONFIGURATION

You access the following “System configuration” window from the menu "Configuration | System configuration". This window is mainly used to identify sign types and locations of each system.

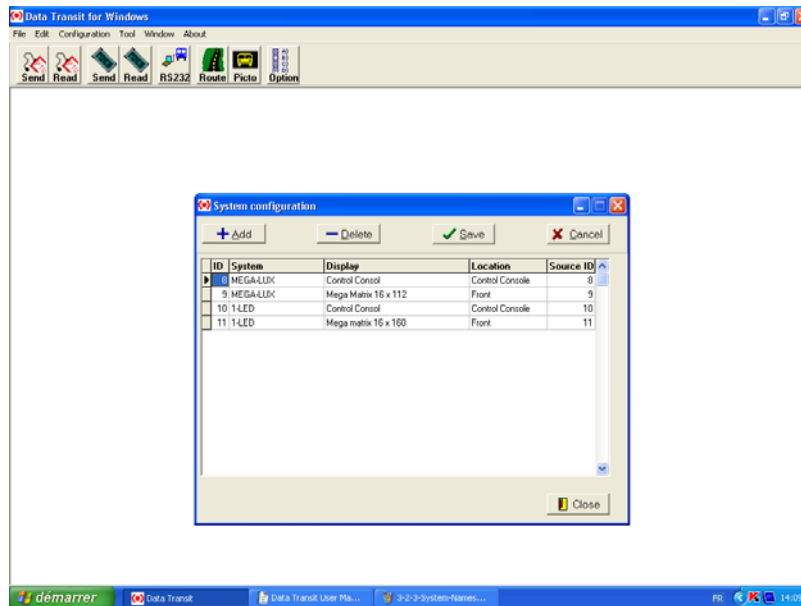


Figure 17: System Configuration

3.2.5. NETWORK CONFIGURATION

You access the following “Network” window from the menu "Configuration | Network". This window allows to group all the routes of the Transit Authority. You can create many networks to separately store the database of two different bus fleets with different routes.

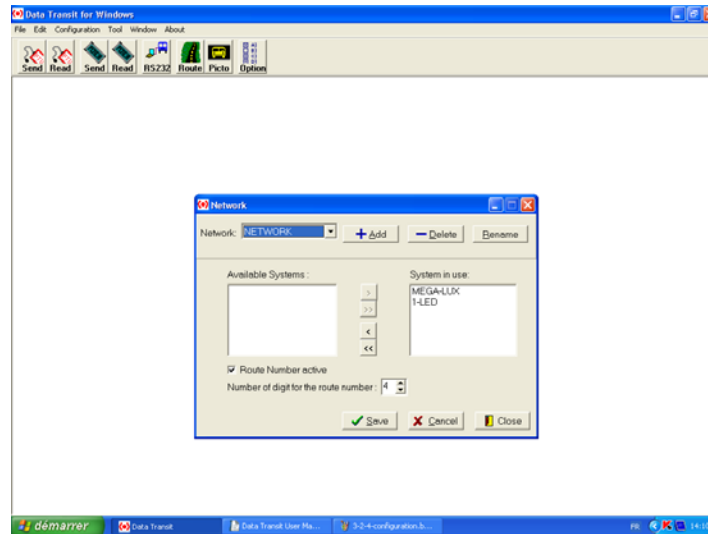


Figure 18: Network

Network window Functions	
Adding a network	Click "Add" to add a new network. You must associate the systems to be included in this network. Use the arrow buttons to move the systems from the left field "Available Systems" to the right field "System in use". The single right arrow moves the highlighted system to the right field. The double right arrow moves all the available systems to the right field. The left arrow does the reverse. A maximum of five systems only is allowed by network.
Renaming a network	Click "Rename" to rename the network
Deleting a network	Click "Delete" to delete the network. This means that you want to delete all of the routes of a network. Removing an association between a network and a system deletes the messages of this system.
"Route Number"	This function, when activated, allows the program to run in "Route number mode". Then, during the message edition, a space is automatically reserved to a route number at the left of the sign. This number is entered by the bus driver at the same time as the destination number.

3.2.6. TYPES OF UNITS PER SYSTEM

You access the following "Type of Unit for system" window from the menu "Configuration | Unit on system". This window allows to identify the types of database used by the system. It shows the various versions of signs and their evolution through the years. No change is necessary as the proper value is a default value.

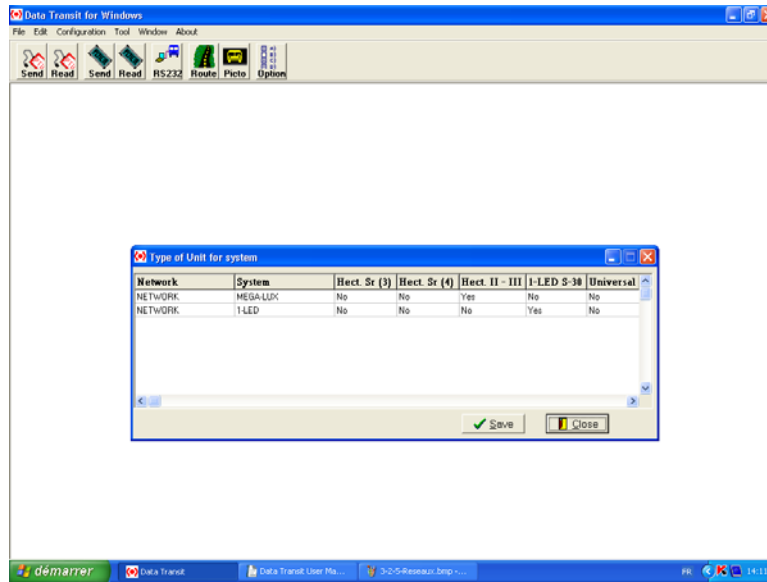


Figure 19: Type of Unit for System

3.3. Route Number Options

You access the following “Route Number Options” window from the menu “Configuration | Route Number Options”. This screen shot allows to specify the appearance of the route number set on different types of signs.

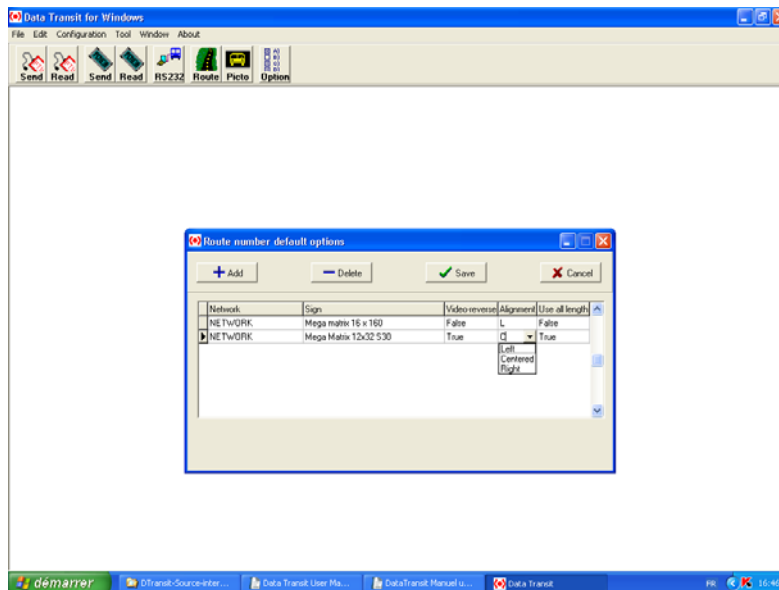


Figure 20: Route Number Options

SECTION 4

4. EDITION

You access the following Route Editor from the menu "Edit | Route". This window emulates the messages programmed in each sign of a system in real time mode. You can move each sign inside the window to personalize your presentations.

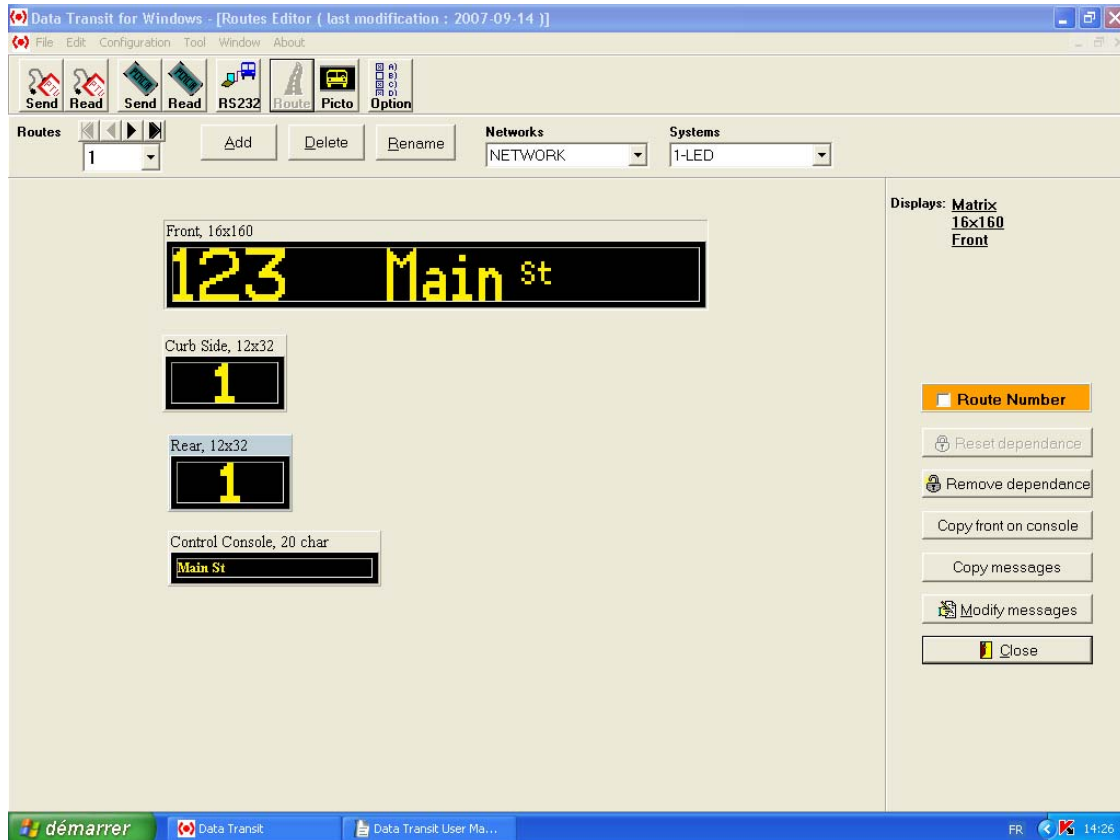


Figure 21: Route Editor Window

4.1. ADDING A ROUTE

Click "Add" or use the keyboard shortcut Alt+a to open the following "Add Route" window. Enter the new route number in the "Route number" field. Check one of the following options: "Route", "Public message", "Emergency message" or "Yield msg". For each of these message options, the features described in Section 4 and 5 are the same.

The difference between these options resides in the route numbering. If you check "Public message" for example, the letters "ZZ" are automatically added to the route number for ease of message identification. "Yield msg" allows to enter messages on the rear sign only. Click "Ok" to continue. The following figure is the "Add route" dialog box.

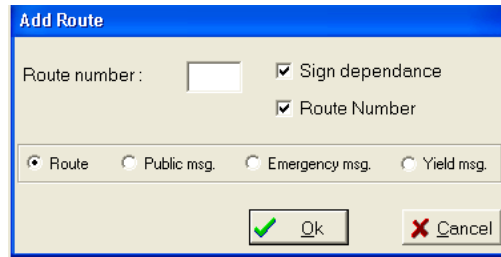


Figure 22: Add Route Window

4.2. DELETING A ROUTE

Highlight the route number you want to delete in the top left field of the window. Click “Delete” or enter the keyboard shortcut Alt+d. At confirmation message pop-up, click “Yes”.

4.3. RENAMING A ROUTE

Highlight the route number you want to rename in the top left field of the window. Click “Rename” or enter the keyboard shortcut Alt+r. The following window appears:

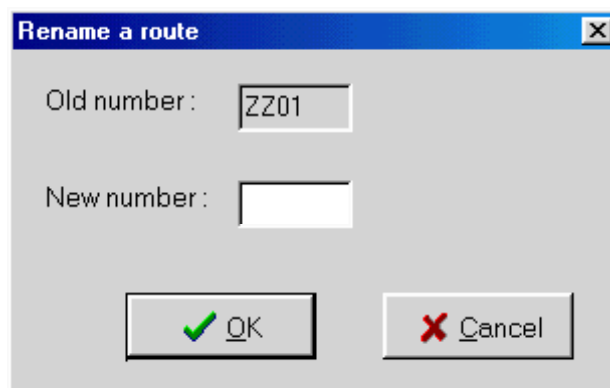


Figure 23: Rename a route Window

The highlighted route number appears in the “Old number” field. To modify, enter the new number in the “New number” field and click “OK”.

4.4. REMOVING/RESETTING DEPENDENCY

Dependency makes easier sign configuration. When identical signs are in operation in one or more different systems, you can create a dependency between these signs. This function must be applied at the system configuration level. The dependency allows to edit the route on the source sign only and then, copy this data to all of the other dependent signs. When dependency is created between two or more signs, it applies to all systems including these signs and all routes are affected.

Although, if you want to have a route where the dependent signs have to display different messages, you can locally remove the dependency. To do so, click "Remove dependence". This cancels the dependency only for the active route showing in the dialog box. All dependent signs become free of dependency and their data is deleted.

Furthermore, to reset dependency previously removed, click "Reset dependence". This applies only for the active route showing in the dialog box. Other dependent signs on a source sign regain the data as defined on the source sign.

4.5. EDITING / MODIFYING MESSAGE

From the Route editor window, select the sign you want to edit and click "Modify messages". You can also double-click the selected sign. Depending on your sign generation, two different message display editors appear. The following section explains how to edit a specific route.

4.6. COPYING FRONT TO CONSOLE

This function allows to transfer the content of the front sign message to the Control Console. To have the Control Console displays the same message as the one on the front sign, click "Copy front to Console".

4.7. COPYING MESSAGE

Data Transit provides possibility to copy all or any of the routes from one network to another. In the Route Editor, click "Copy messages".

4.7.1. COPYING A NETWORK (ALL ROUTES)

The main copy function is to copy all routes from one network to another. This is possible only if both networks use exactly the same systems. The following figure indicates how to proceed.

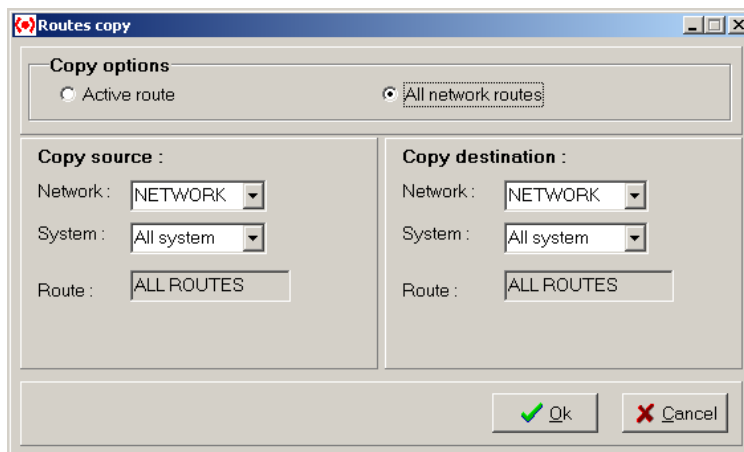


Figure 24: Routes copy Window

To do so, select the network and system under "Copy source". Select the network and system under "Copy destination". Select "All network routes" under "Copy options". Click "Ok" to copy.

4.7.2. COPYING AN ACTIVE ROUTE

The active route copy differs little from the network copy. You can copy the active route of one network to another or copy the active route of one system to another

system of the same network. Before performing the copy, the program verifies if the source and destination systems are identical. If so, the copy is performed as in section 4.7.1. If the source and destination systems differ, the application attempts to perform conversion. Then, the window opens to confirm the copy and show which signs cannot be copied. Click "YES", to copy. The following figure is an example of this explanation.

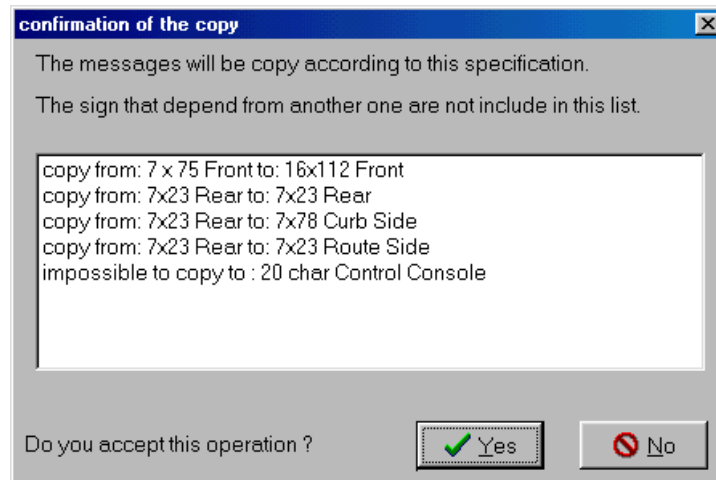


Figure 25: Example of Confirmation of the copy Process

4.8. "ROUTE NUMBER"

This feature allows to activate or deactivate the "route number" mode for the current destination messages. This feature is available only if the "route number" mode is activated for the current network.

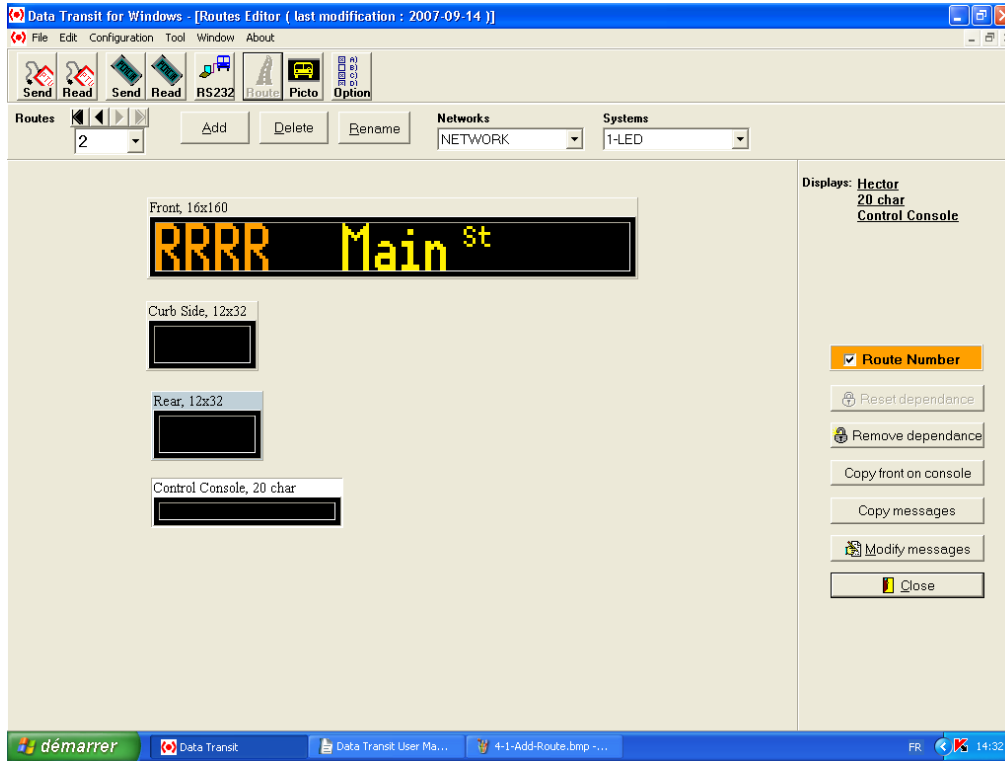


Figure 26: Simulation with Activated "Route Number"

SECTION 5

5. MESSAGE EDITION

5.1. CHARACTER-TYPE SIGNS

When the route to be edited is on a character-type sign, the following window appears.

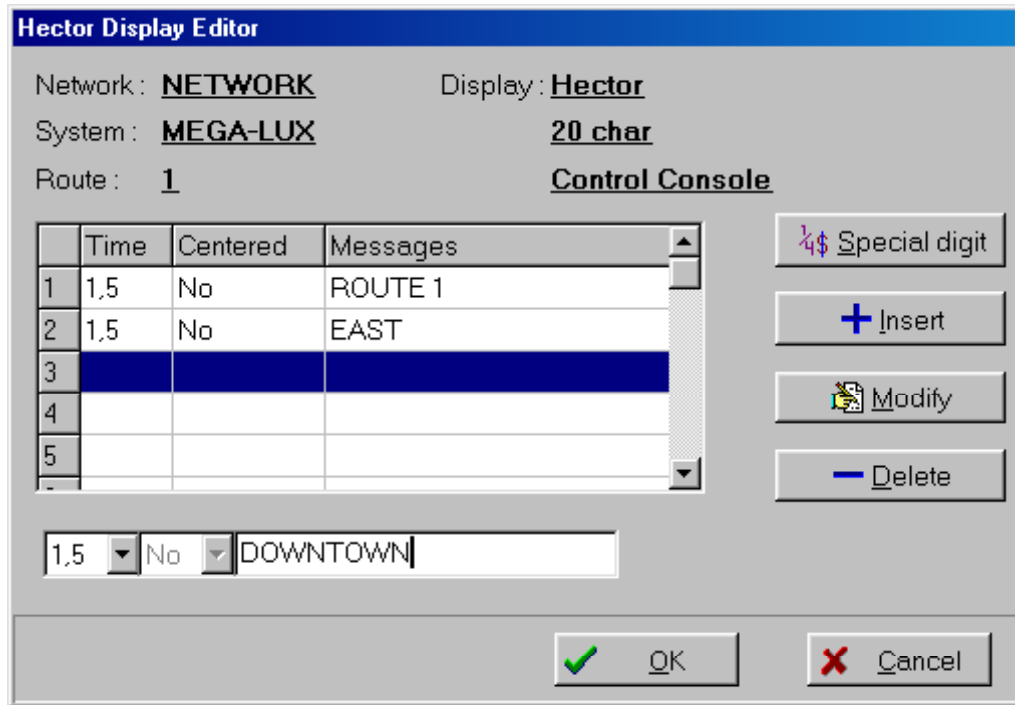


Figure 27: Hector Display Editor

This editor allows to edit routes on character-type sign.

Edition Available Functions	
Adding a line	<p>To add a line :</p> <ul style="list-style-type: none"> ● Highlight a blank line in the display section and type your message in the bottom field. ● Center or not the message by selecting "Yes" or "No" in the "centered" drop-down list. ● Choose a display time in the "Time" drop-down list. ● Press "Enter" to add the line.
Inserting a line	<p>To insert a line :</p> <ul style="list-style-type: none"> ● Highlight the line in the display section where you want to insert the new message and type your message in the bottom field. ● Center or not the message by selecting "Yes" or "No" in the "centered" drop-down list. ● Choose a display time in the "Time" drop-down list. ● Click "Insert" to insert the line.
Deleting a line	<p>To delete a line :</p> <ul style="list-style-type: none"> ● Highlight the line you want to delete in the display section. ● Click "Delete" to delete the line.

Edition Available Functions	
Modifying a line	To modify a line : <ul style="list-style-type: none"> ● Highlight the line you want to modify in the display section and modify the message in the bottom field. ● Click "Modify" or press "Enter" to modify the line.
Special Digit	Data Transit provides a certain number of special characters. To insert a special character, click "Special digit" and make your choice.
"OK"	Closes the display editor and saves the changes.
"Cancel"	Closes the display editor without saving the changes.

5.2. MATRIX-TYPE SIGNS

When the route to be edited is on a matrix-type sign, the following window appears allowing to edit the routes.

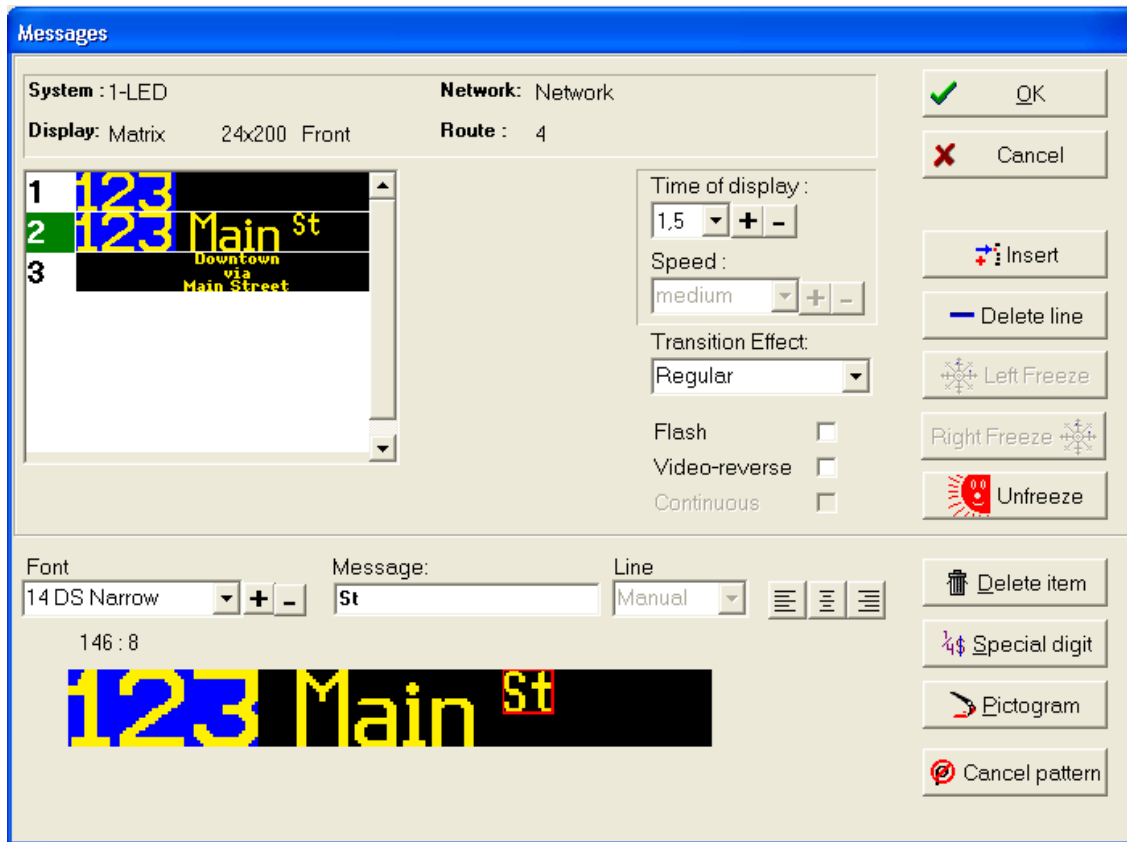


Figure 28: Matrix Display Editor

All messages created for this sign appear in the top left field. When selected, the line number is highlighted in white on a green background. The bottom field shows the sign with the selected message line. You can enter more than one item for each line. As shown in the above example, separate items are used to enter the message with different fonts for "Main" and "St".

Two concepts are used to edit the message of a matrix sign.

- The "Line" : to modify the entire content of the line of the message

- The "Item" concepts : to modify each item of a line.

The "Line" concept refers to the entire content of the line of a message. You can add, delete or modify a whole line of the message. Then, select the transition effect, the speed of the transition, and the display time. The available functions of the "Line" concept are described in the following table:

Line Concept Functions	
Adding a line	<p>To add a line :</p> <ul style="list-style-type: none"> • Highlight a blank line in the top left field. • Edit the content of the line by adding items. • Each time you press "Enter" the modification is added to the line in the top left field.
Deleting a line	<p>To delete a line :</p> <ul style="list-style-type: none"> • Highlight the line to be deleted in the top left field. • Click "Delete line".
Modifying a line	<p>To modify a line :</p> <ul style="list-style-type: none"> • Highlight the line to be modified in the top left field by selecting the line number. • Modify as required.
"Left Freeze"	<p>This function allows to lock the left part of a line. For example, you can lock the route number only and scroll the rest of the message. In Figure 28, the number 123 is frozen. To apply a left freeze effect, proceed as follows:</p> <ul style="list-style-type: none"> • Highlight the first line in the top left field. • Click text item you want to left freeze in the bottom field of the window. • Click "Left Freeze". <p>This automatically copies the text item to the following lines.</p>
"Right Freeze"	<p>This function allows to lock the right part of a line. To apply a right freeze effect, proceed as follows:</p> <ul style="list-style-type: none"> • Highlight the first line in the top left field. • Click the text item you want to right freeze in the bottom field. • Click "Right Freeze". <p>This automatically copies the text item to the following lines.</p>
"Unfreeze"	<p>This function cancels the freeze effect. In Figure 28, the third line is not affected by the "Left Freeze" effect. To unfreeze, proceed as follows:</p> <ul style="list-style-type: none"> • Highlight the line you want to unfreeze in the top left field. • Click "Unfreeze". <p>To completely remove a freeze effect:</p> <ul style="list-style-type: none"> • Highlight the first line where the freeze effect is applied. • Click "Unfreeze".
"Time of display"	<p>The scrolling "Time of display" list allows to set the duration of the display line. To modify the duration, proceed as follows:</p> <ul style="list-style-type: none"> • Highlight the line to be modified in the top left field. • Modify the display duration by selecting a different time in the drop-down list.
"Speed"	<p>The scrolling "Speed" list allows to set the speed of the scrolling effect of a line. Three different speeds are available such as "Slow", "Medium", and "Fast". To modify this value, proceed as follows:</p> <ul style="list-style-type: none"> • Highlight the line to be modified in the top left field. • Modify the speed value by selecting a different value in the drop-down list.

Line Concept Functions	
"Transition Effect"	The transition effect field allows modifying transition effect between two lines. There are three different effects: regular, vertical, and horizontal. The regular effect only displays the line. The vertical effect allows smooth vertical scrolling of one line to another from top to bottom. The horizontal effect allows smooth horizontal scrolling of one line to another from right to left.
"Flash"	Makes a message line flashing. To select this function, proceed as follows: <ul style="list-style-type: none"> • Highlight the line to be in flashing mode in the top left section. • Check "Flash" box to have the line flash.
"Video reverse"	Allows activation or not of the video reverse function on a message line. <ul style="list-style-type: none"> • Highlight the line you want to be in video reverse mode in the top left section. • Check "Video reverse" box to get a reverse video effect of the line.
"Continuous"	This effect allows the line to scroll continuously with the above scrolling line. There is no gap between both scrolling lines when this feature is activated. To select this function, proceed as follows: <ul style="list-style-type: none"> • Highlight the line to be in continuous mode in the top left section. • Check "Continuous" box.

The "Item" concept refers to each item of a line. There are two types of items: text and pictogram. For each of them displayed on the sign, use the mouse to drag elsewhere as required. The available functions are described in the following table:

Item Concept Functions	
Add a text	<ul style="list-style-type: none"> • Select the font size from "Font" drop-down list. • Enter the text in the "Message" field. • Select the line position of the text from the "Line" drop-down list. Note that this function is available only for small fonts on bigger types of sign. • Select the wanted centering function by clicking "Yes" or "No" from the "Centered" drop-down list. • Press "Enter".
Modifying a text	<ul style="list-style-type: none"> • Select the text item to be modified in the bottom field. • Follow the steps of "Add a text".
Add a special digit	<ul style="list-style-type: none"> • While entering a text item, move the cursor where you want to insert the digit. • Click "Special digit". • Select a digit from the available ones. • The digit appears in the text item.
Add a pictogram	<ul style="list-style-type: none"> • Click "Pictogram". • A pop-up window displays the list of the available pictograms. Select one of them and click "OK". Section 6 explains how to create new pictograms. • Position the pictogram by dragging it.
Delete a text item or a pictogram.	<ul style="list-style-type: none"> • Click the item to be deleted in the bottom field. • Click "Delete item".

A scrolling effect can be applied to a line instead of a fixed message. The following figure shows the matrix message editor when the scrolling effect is applied. In this screen shot, the word "Downtown" has been dragged to the right to exceed the

available displaying space of the the sign. A scroll bar appears at the bottom and the line enters the scrolling mode. Note that the speed list box is now available and the time list box is disabled. Also, the “Continuous” mode is available whenever the text entered is longer than the available displaying space of the sign.

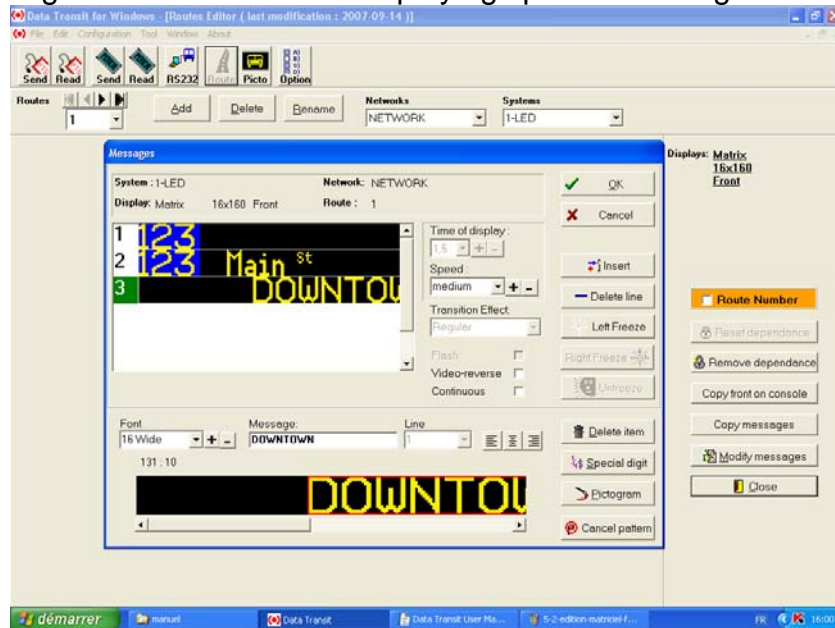


Figure 29: Second Example of Matrix Display Editor

The “Cancel Pattern” button deactivates the automatic edition pattern for all the lines of the current message on the sign.

5.3. ROUTE NUMBER MODE

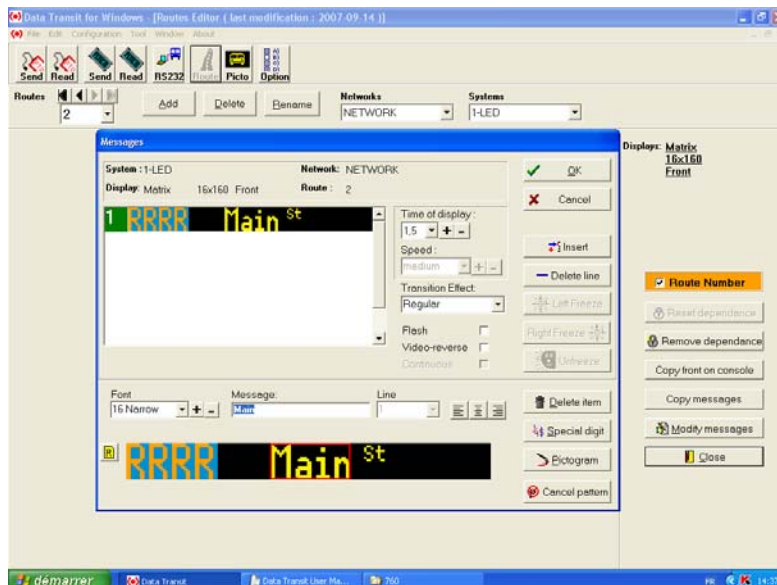


Figure 30: “Matrix Display Editor” from Activated Route Number function

This mode allows to reserve a space on the sign to a number directly entered by the bus driver. The following figure shows the Editor window when the route number is activated. In this case, the four digits “R” represent the space allocated to the route number. Note that the color of the route number differs from the other text items.

SECTION 6

6. PICTOGRAM EDITION

You access the following pictogram editor from the menu "Edit | Pictograms". This window allows to draw pictogram for your messages. The top of the window displays the drawing tool. The middle of the window contains the drawing area. Status bar is at the bottom of the window.

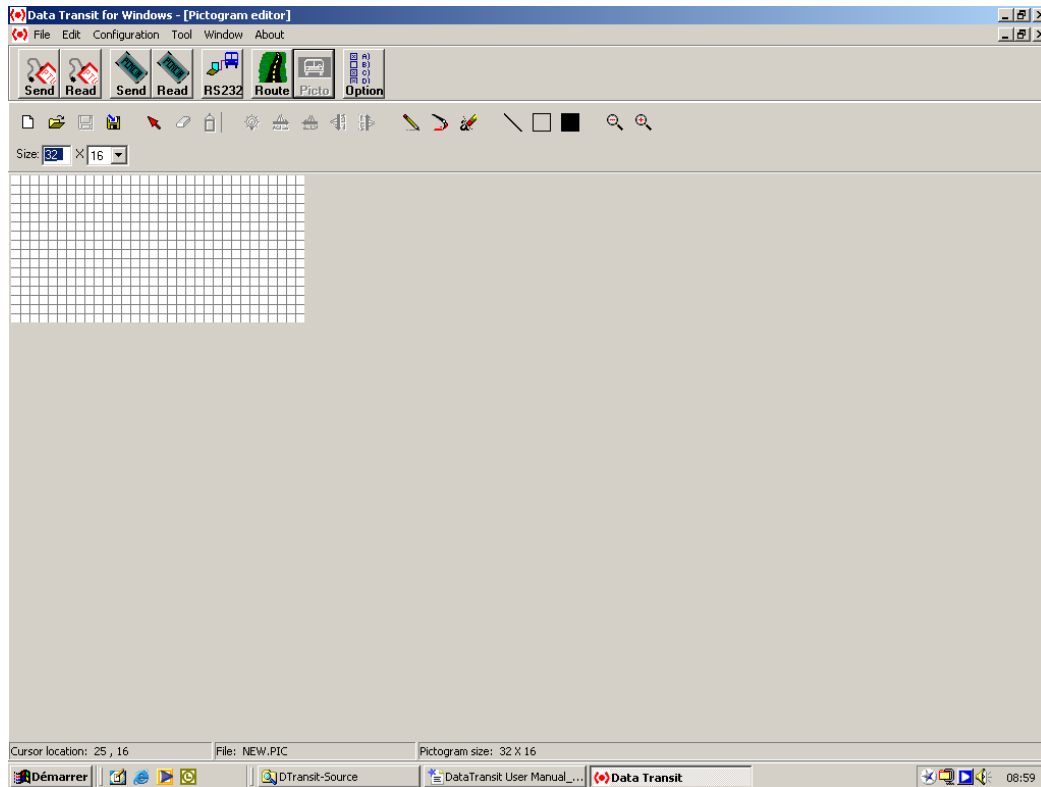






















Figure 31: Pictogram editor

The following table presents all the buttons available in this window. Some features are available only when a zone is selected.

Pictogram Window Available buttons			
	Create new pictogram		Open pictogram
	Save pictogram		Save pictogram under a new name
	Select a zone on the drawing area		Erase a selected zone
	Paint a selected zone		Reverse the color of a selected zone
	Mirror effect to the right (selected zone)		Mirror effect to the left (selected zone)
	Mirror effect up (selected zone)		Mirror effect down (selected zone)
	Pencil drawing tool		Draw shape by dragging mouse
	Pixel erasing tool		Draw straight lines
	Draw square outlines		Draw filled square shapes
	Zoom out		Zoom in

SECTION 7

7. DATABASE TRANSFER

Once the routes are entered in the database, you can transfer them to the signs. There are six different methods to transfer data as follows:

- Transfer using the Portable Transfer Unit (PTU)
- Transfer using the PCMCIA Card
- Direct transfer from the computer serial port
- Transfer through the wireless system
- Transfer using a USB key
- Transfer towards the AIC device.

These six methods are presented in the following pages.

7.1. DATABASE TRANSFER USING PTU

The first method to transfer the database is through the Portable Transfer Unit (PTU). The database is transmitted through the serial port of the computer to the PTU. You can use this method by selecting the menu "File | PTU" or by clicking the corresponding icon on the program tool bar.

7.1.1. SEND TO PTU

To send the database to the PTU, select the menu "File | PTU | Send to PTU". The following window appears to transfer database.

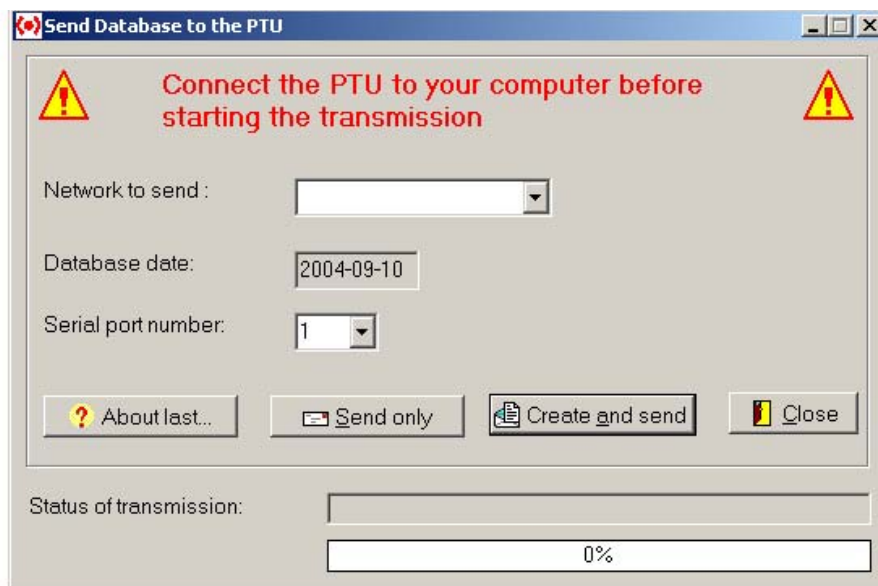


Figure 32: Send Database to the PTU

This includes many information such as the following:

Send Database to the PTU window Fields	
Network to send	Select the network to be transferred to the PTU.
Database date	Date of the last modification of the database.
Serial port number	The serial port the PTU is connected to.
About last	This button gives access to last transfer operation information.
Send only	You can use this button if the database has been created but, not modified.
Create and send	Use this button to create a new PTU file with the database and send it to PTU.
Status of transmission	During transfer, transmission status information is shown such as the percentage in the progression bar.
Close	Closes window.

7.1.2. READ PTU

To read the content of the PTU, select the menu "File | PTU | Read the PTU". The following window appears to execute the reading.

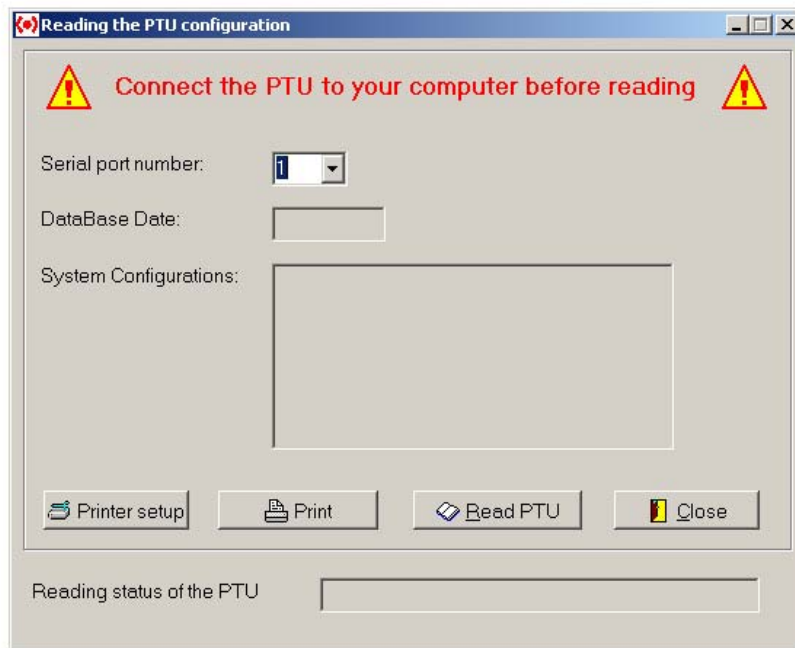


Figure 33: Reading the PTU Configuration

This includes many information such as the following:

Reading the PTU configuration window Fields	
Serial port number	The serial port the PTU is connected to.
Database date	Date of the last modification of the database.
System configuration	The various system definitions contained in the PTU.
Printer setup	This button allows to choose the printer.

Reading the PTU configuration window Fields	
Print	This button allows to print the system definition read from the PTU.
Read PTU	This button allows to read the content of the PTU.
Close	This button allows to close this window.
Reading status of the PTU	During transfer, transmission status is shown.

7.2. DATABASE TRANSFER THROUGH PCMCIA CARD

The second method to transfer the database refers to the PCMCIA Card. The database is transferred to the PCMCIA Card through the external card reader connected to the USB port of your computer. You can use this method by selecting the menu "File | PCMCIA" or by clicking the corresponding icon in the program tool bar.

When you insert the PCMCIA card into the reader, if you are prompted to confirm the formatting of the card, always click "No".

7.2.1. SEND TO PCMCIA

To send the database to the PCMCIA Card, select the menu File | PCMCIA | Send to PCMCIA. The following window appears to execute the transfer.

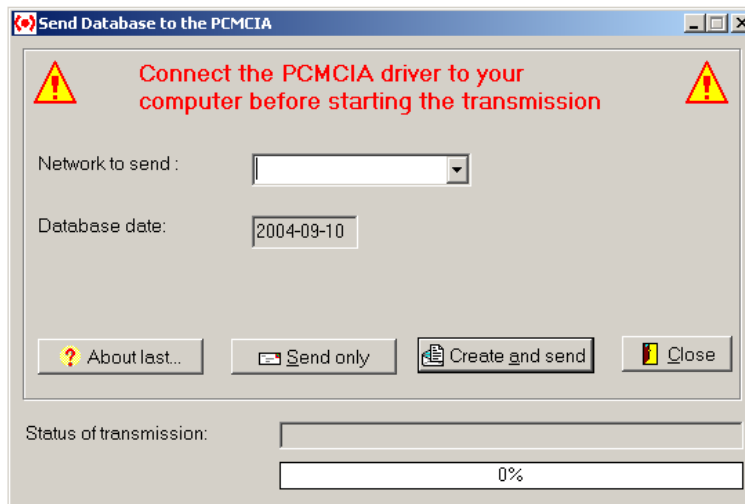


Figure 34: Send Database to the PCMCIA

This is similar to the "Send to PTU" window except that when clicking "Create and send", you access the card reader interface program. The following screen capture shows the CSM interface and the following paragraphs how to use it.

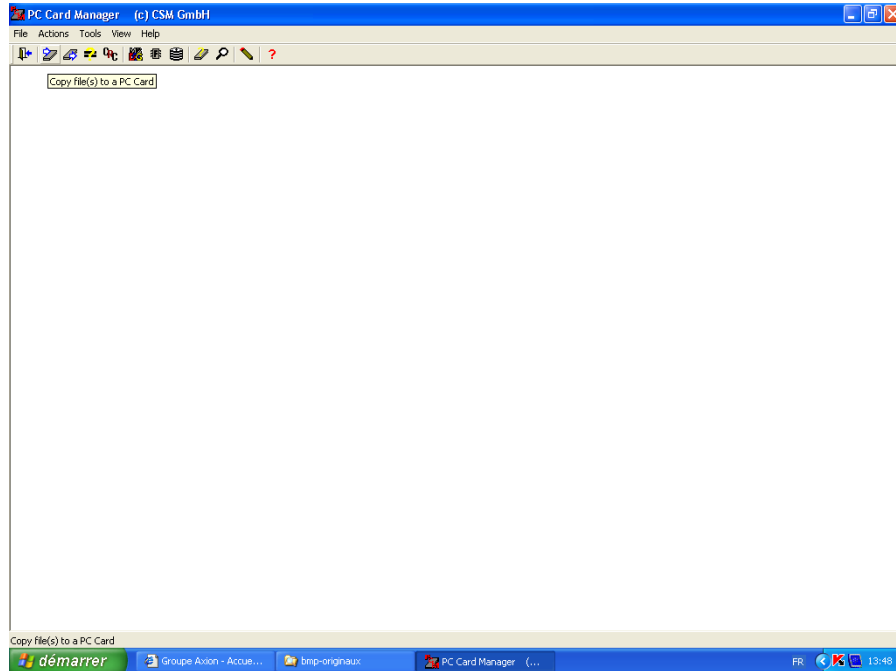


Figure 35: CSM Card Reader Main Window

Click the second icon (Copy file(s) to a PC Card) from the left. The following window appears.

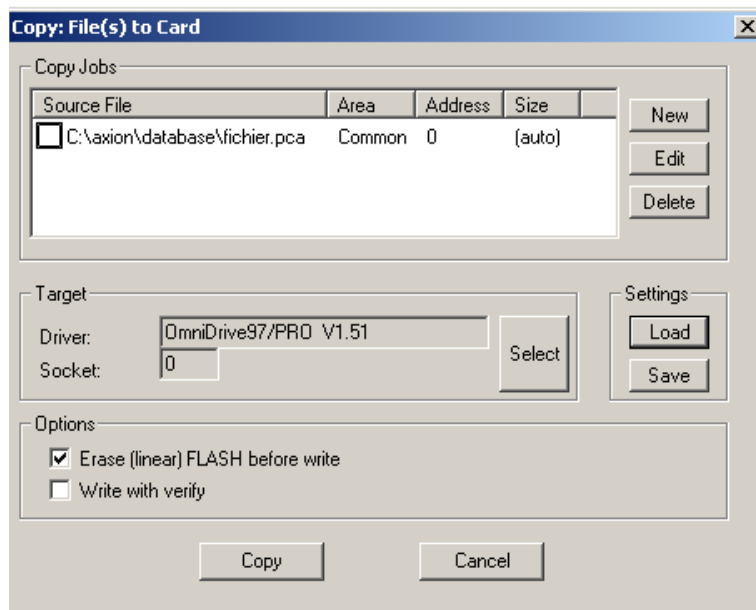


Figure 36: Copy file(s) to Card Window

The source file must be "fichier.pca" from the database folder. If so, click "Copy". A red check mark appears next to the file name as soon as the file is transferred. Once finished, close the copy and exit the main windows of the CSM software to return to Data Transit.

If the file name or its location shown in the following window is invalid, you must configure the software first. To do so, click “New”. The following screen shot pops up:

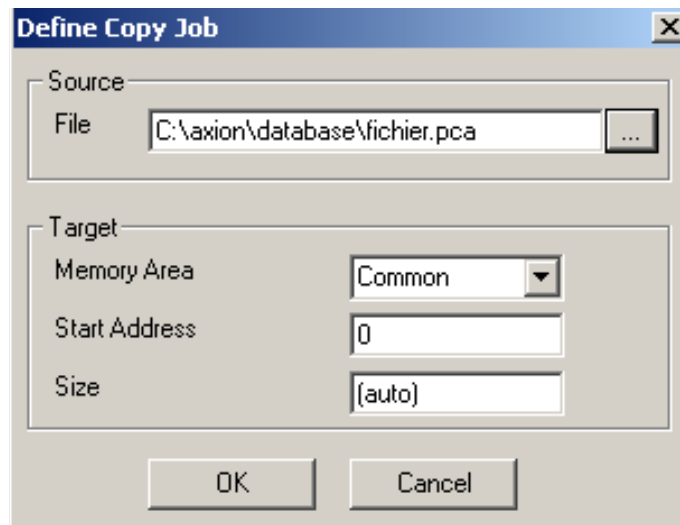


Figure 37: Define Copy Job Window

If the file name in the "Source file" field is invalid, click “...” to select the proper file as shown above. Click "OK" to return to the previous screen shot. Click “Save” to save this setting. Save the setting as "WRITE.PCM" and ensure it is located in the same folder as the database. The following screen shot pops up. Note that this window language depends on the language of your Windows system.

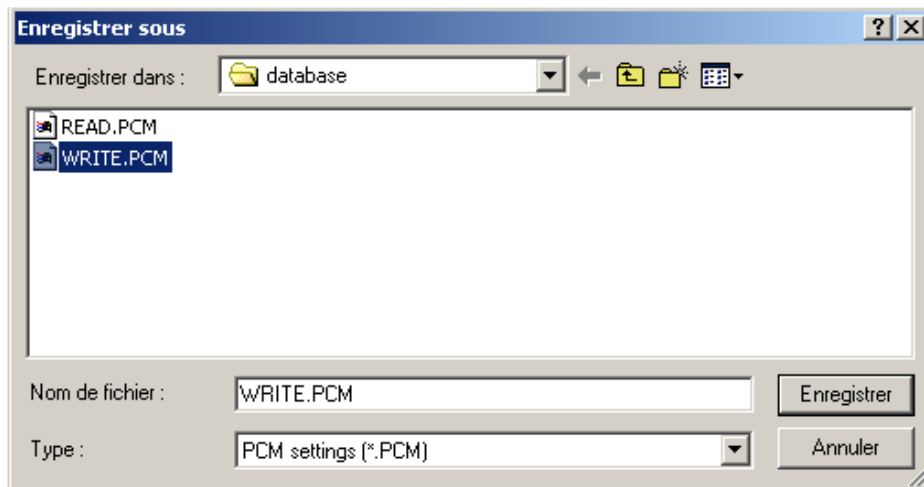


Figure 38: Save Setting Window

Click "Save" to return to the "Copy file" window. Close this window to return to "Copy : File(s) to Card" window. Click “Copy” to copy the information to the card.

7.2.2. READ PCMCIA

To read the content of the PCMCIA Card, select the menu "File | PCMCIA | Read PCMCIA". The following window appears to execute the reading.

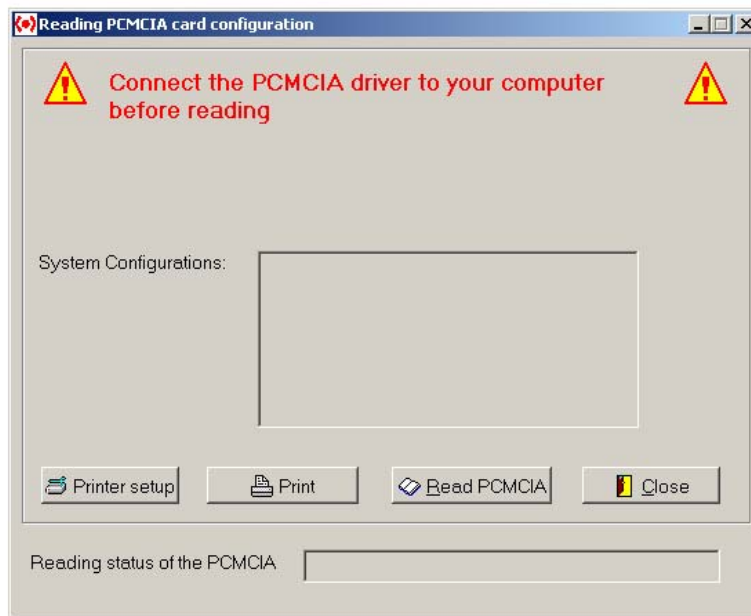


Figure 39: Read the PCMCIA Window

Reading PCMCIA card configuration allows to view all of the available system configurations on the card. Click "Read PCMCIA". This opens the card reader user interface and the following window.

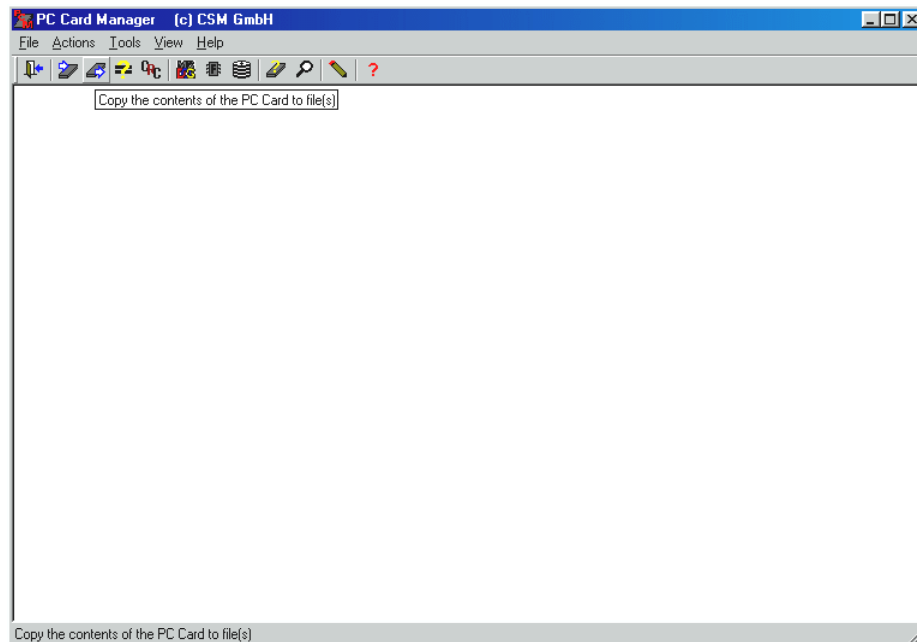


Figure 40: CSM Card Reader

Click the third icon (Copy the contents of the PC Card to file(s)) from the left. The following screen shot appears.

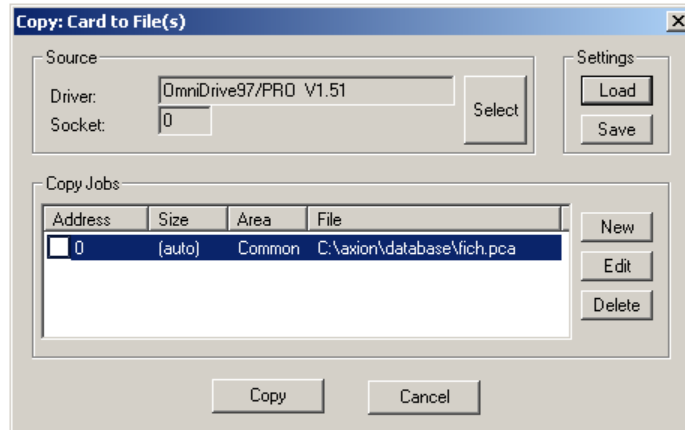


Figure 41: Copy Card to File(s)

The "Copy Jobs" field shows the proper file name "fich.pca" located in your database folder. Click "Copy" to begin reading the card. A red check mark appears next to the description after processing. Once finished, close the copy and main windows of the CSM software to return to Data Transit.

If the file displayed in the "Copy Jobs" field is invalid or no file is displayed, the software is not properly configured. Configure the software as described above. Save the setting as "READ.PCM".

7.3. COMPUTER TO SIGN DATABASE TRANSFER

The third method to transfer the database is to connect the computer directly to the sign system with a serial cable. To use this method, select the menu "File | Computer to sign transfer" or click the corresponding icon in the program tool bar. The following window appears to execute the transfer. This is similar to the "Send to PTU" window.

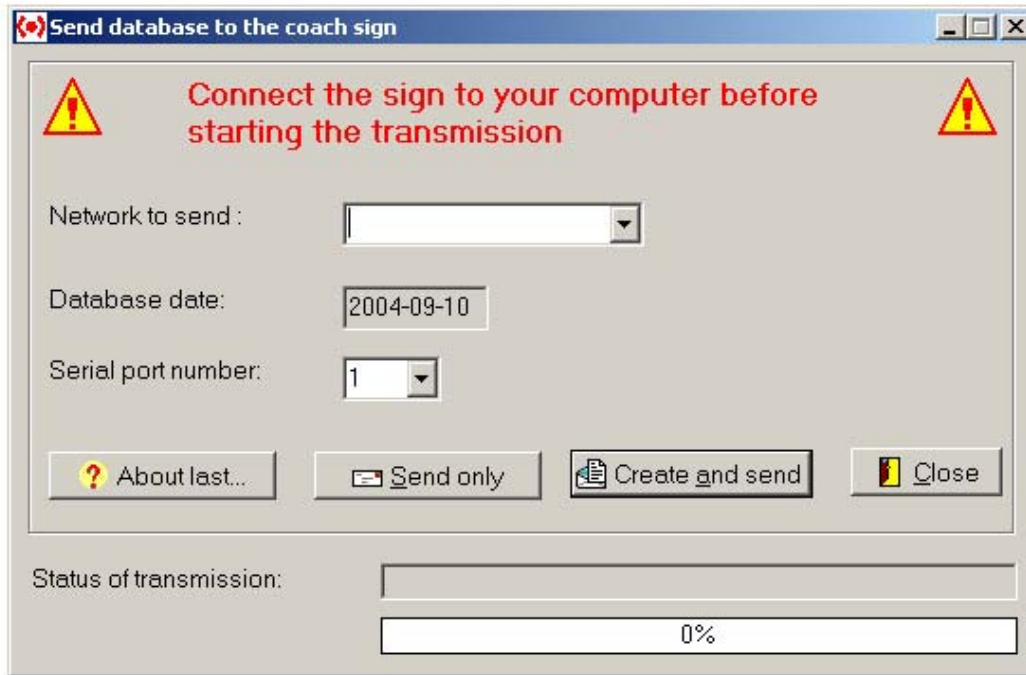


Figure 42: Computer to Sign Database Transfer

7.4. DATABASE TRANSFER THROUGH WIRELESS SYSTEM

The fourth method to transfer the database is through the wireless system. It simply creates and copies a file to the proper folder. To do so, select the menu "File | Wireless". The following window appears to execute the transfer. This window is similar to the "Send to PTU" window.

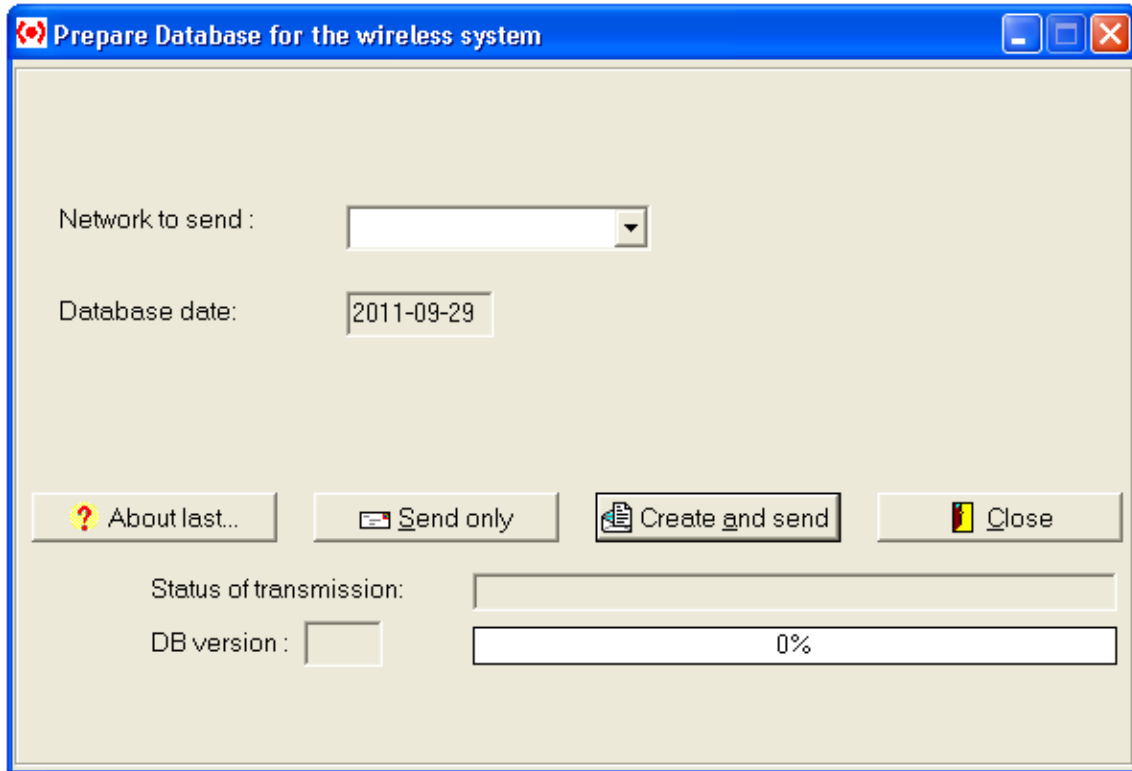


Figure 43: Transfer through Wireless System

7.5. DATABASE TRANSFER THROUGH USB KEY

The fifth method to transfer the database is through a USB key. This method simply copies the files to a specific folder on the USB key. To do so, select the menu "File | Wireless". The following window appears to execute the transfer. This window is similar to the "Send to PTU" window.

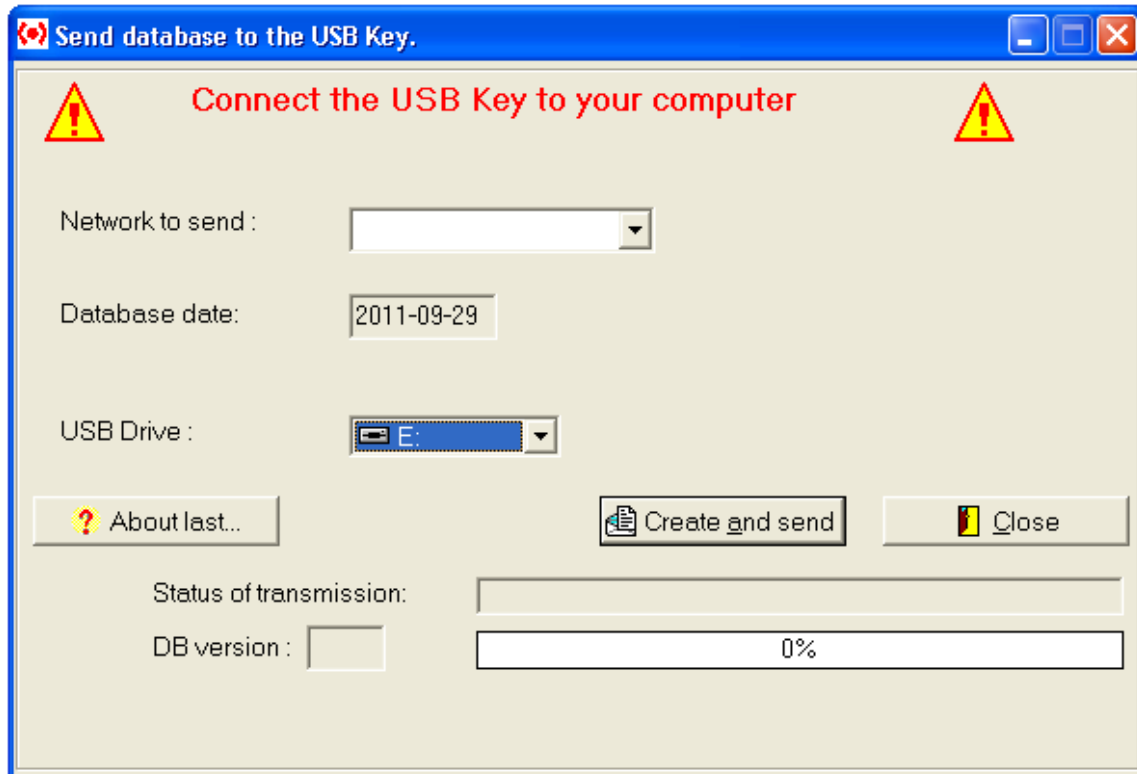


Figure 44: Transfer through USB Key

7.6. DATABASE TRANSFER TO THE AIC

The sixth method to transfer the database to the AIC. This method simply copies the files to a specific folder and prepares a compressed file named "AICPKG.TAR.GZ". To do so, select the menu "File | Transfer to AIC". The following window appears to execute the transfer.

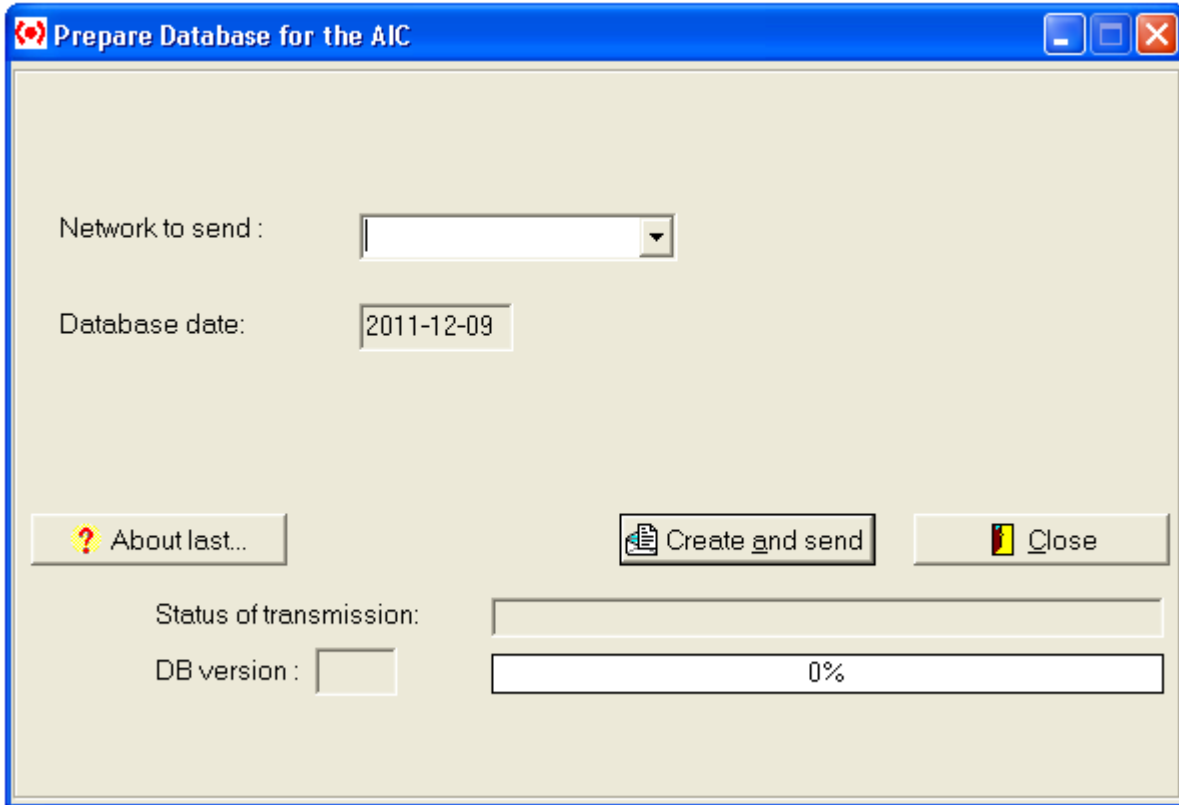


Figure 45: Transfer to the AIC

SECTION 8

8. OTHER FUNCTIONS

8.1. BACKUP

You access the backup window from the menu “Tool | Backup”. This window allows to copy the database to another location. The following screen shot shows the database to be copied on disk A:\.

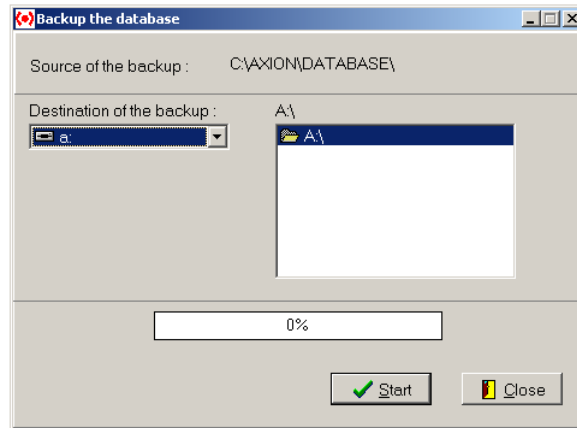


Figure 46: Backup Window

8.2. RESTORE

You access the restore window from the menu “Tool | Restore”. This window allows to restore a database previously backed up. The following screen shot shows the database to be restored from the disk A:\.

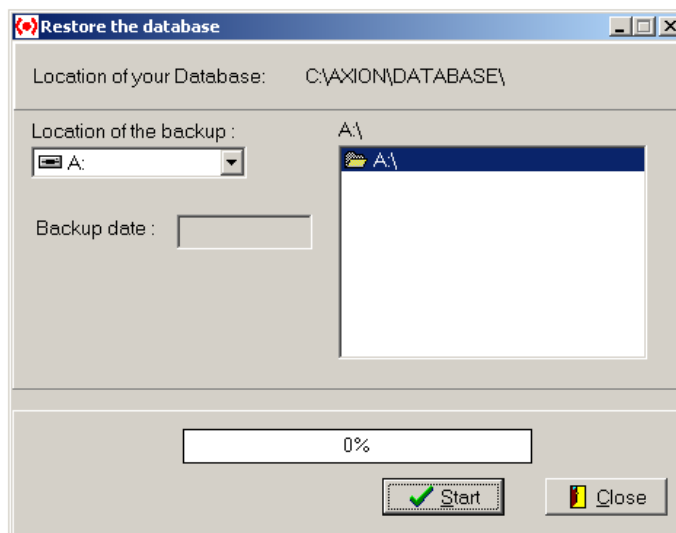


Figure 47: Restore Window

8.3. PRINT DATABASE

You access the print window from the menu "File | Print the database".

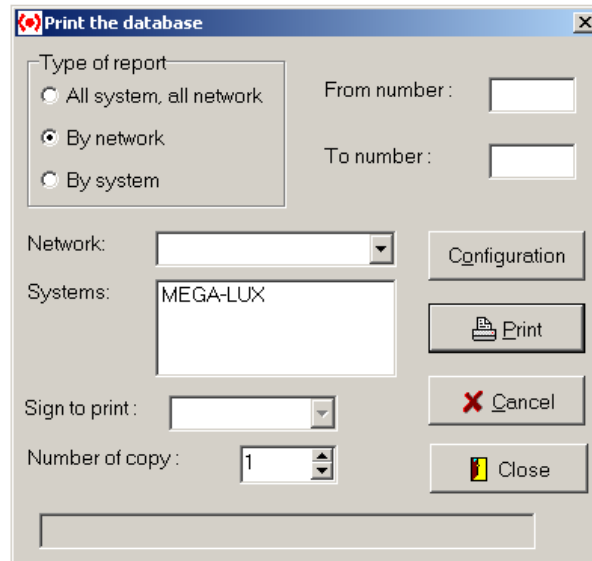


Figure 48: Print Window

Various types of report can be printed. To print the whole database, select "All system, all network". To print network report, select "By network". To print system report, select "By system". For the two last options, you can be more specific and enter the route number under "From number" and "To number". To print data of only one sign, select it from the Sign to print list box.