

EasyCard for DriveRight



User's Guide

Contents

1.	Introduction	4
2.	Getting Started (A quick check-list)	4
3.	Installation of the EasyCard Manager Software	7
4.	EasyCard Smart Card types	8
5.	Basic Mode or Advanced Mode	10
6.	Basic Mode Granting Driver Access	11
7.	Advanced Mode Granting Driver Access	15
8.	Changing the data on an EasyCard Smart Card	21
9.	Programming an EasyCard Card Reader	21
10.	Connecting the DriveRight and EasyCard into the vehicle	21
11.	Inserting and removing Cards	22
	Specifications	24
	Warranty and repair information	24

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1. Introduction

The EasyCard Manager enables you to completely control which drivers can operate which vehicles in your fleet. The software used with the EasyCard Card Programmer allows you to program both the EasyCard unit itself (the unit that is in the vehicle), and also the EasyCard Smart Cards (which are inserted in the EasyCard unit).

The enclosed CD contains all the necessary files for software installation. Manuals can also be found on the CD, as well as extra information on other DriveRight products.

Note: Please do not connect the EasyCard Card Programmer (USB or Serial) to your computer until AFTER you have installed the software. If you have already connected it, please dis-connect the EasyCard Manager, remove the installed device from the device list (USB version), and re-start your computer before continuing.

Important!

Make sure that the EasyCard Driver Card is removed at the end of the trip when the Immobilizer option is installed. If a valid Driver Card is left in the Card Reader, the EasyCard will still allow the vehicle to be started, resulting in the following potential problems:

- Anyone else can drive the vehicle without authorization.
- Theft of vehicle is obviously easier.
- The Immobilizer will continue to draw a current of 150 mA from the vehicle battery, which will eventually discharge the vehicle's battery.

2. Getting Started (A quick check-list)

Setting up a fleet with authorization is easy to achieve, by following through the steps described below. For each step, a short explanation is added to help understand why that step is important.

• **Setting Up the DriveRight Vehicle Management Software**

Because DriveRights are being used, the DriveRight Vehicle Management Software also needs to be used to make some changes in the DriveRight settings, ensuring the correct operation of the EasyCard Card Reader. For example, the Logout Time should be set to 0 (because the Driver ID must obviously remain active as long as a Driver Card is inserted in the EasyCard Card Reader).

Continued on the next page.

The following DriveRight Vehicle Management Software parameters must be checked and set in the DriveRight display correctly:

- S Trip Stop Time - Needs to be Set
Set to the required trip stop time. If Task and/or Passenger Cards will be used (Advanced Mode), please read the chapters explaining the use of these cards.
- S Logout Time - Needs to be Set
Always set the Logout Time to zero (0). This means that the entered code will remain active until a Driver Card has been removed.
- S Warn if not Logged in - Needs to be Deactivated
Deactivate the 'Warn if not Logged in'. Leaving this on can cause malfunctions with the EasyCard Card Reader.
- S Download options - Needs to be Set
Select 'Use DriveRight ID' as: Driver ID. With this, the code connected to the Trip, will automatically be assigned to a specific driver.

Check the DriveRight Vehicle Management Software Manual for further details.

- **Installing the EasyCard Manager Software on the PC**

The software works with the EasyCard Manager and enables you to setup and program the different kinds of Smart Cards, which can then be used by drivers in the EasyCard Card Reader.

- **Decide whether the Basic Mode or Advanced Mode will be used**

The differences between Basic Mode and Advanced Mode are very important. The Basic Mode is most commonly used. Please refer to Section 5 to help you decide.

- **(Advanced Mode only) Program the EasyCard Card Readers**

EasyCard Card Readers are preprogrammed with Fleet Number 1000 and Subfleet Number 2000. You can choose to change this.

- **(Advanced Mode only) Define Fleet Number**

Preferably this should be a unique number. Note that the EasyCard Card Readers are preprogrammed with Fleet number 1000 and Subfleet number 2000. Supervisors and installers are granted full

DriveRight access when their EasyCard Supervisor Card matches the Fleet number stored in the EasyCard Card Reader. When more companies in your depot/area use the EasyCard system, only your own authorized people can obtain full access to your own vehicles, as drivers from other companies will have cards where the Fleet number does not match.

- **(Advanced Mode only) Define Subfleet Number**

A fleet can be sub-divided, eg. into light vehicles, trucks, heavy vehicles, individual specific vehicles, etc. The Subfleet number can then be used for such groups of vehicles. Select a unique number for each group, preventing any other companies in your depot/area using the EasyCard in your vehicles. Note that all EasyCard Card Readers are pre-programmed with Subfleet Number 2000, so it is best to change this to your own numbering system.

- **Define Driver ID**

Each driver needs to get a 4-digit Driver ID which must be identical with their Driver ID set up in the DriveRight Vehicle Management Software. When a DriveRight is later downloaded, the Driver ID will match and automatically the trip will be assigned to that driver.

Note: The EasyCard Manager Software does not use a database. There is no link between the DriveRight Vehicle Management Software and the EasyCard Manager Software. This makes it essential to carefully manage the numbering system for drivers and ensure that their details are correctly entered on their individual EasyCard Driver Cards.

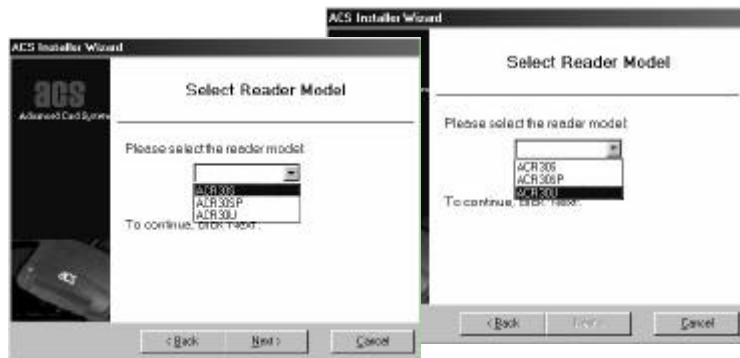
- **Program the EasyCard Card Readers**

Each EasyCard Card Reader (that is the unit installed in the vehicle and attached to the DriveRight display) must be programmed before being used for the first time. When the EasyCard Card Reader is programmed, the access structure (which drivers can drive which vehicles) is loaded into the EasyCard Card Reader, preventing unauthorized use from that moment on (assuming the immobilizer option is installed). Remember that EasyCard Card Readers are preprogrammed with default settings which might not be ideal in your particular fleet situation (see above).

3. Installation of EasyCard Manager Software (USB or Serial)

To install the EasyCard Manager Software:

- Insert the EasyCard Manager Software CD-Rom in the drive. The installation programme should start automatically. If not, click on the setup.exe file on the CD-Rom. Click on: Install EasyCard.
- In the next window, click on: Install EasyCard Manager. The EasyCard Manager Software installation program starts. Please follow this procedure carefully. *Note: do not connect the EasyCard Card Programmer to the PC yet!*
- Next, the new hardware drivers will be installed. To continue, please click OK in the message box. *Note: do not connect the EasyCard Card Programmer to the PC yet!*
- The EasyCard Programmer installation program starts. Click next.
- In the drop down box, select ACS30U for USB and ACS30S for Serial. Click next.



- Click next and, when asked, please connect the Card Programmer to the PC (USB or Serial). Windows will find the new hardware and install the drivers for this hardware.

After the process completes, it is advised to reboot the computer.

To start the program go to Start | Programs | EasyCard | EasyCard Manager.

4. EasyCard Smart Card types

There are 5 types of EasyCard Smart Cards. The functions of each of the EasyCard Smart Cards are programmed by the EasyCard Manager Software.

- **Driver Card**

The Driver Card contains the 4 digit Driver ID. Each driver should have one or more Driver Cards with his/her own 4 digit Driver ID (REMEMBER to use the same Driver ID as set in the DriveRight Vehicle Management Software!). When everything is correctly working, the driver inserts the Driver Card in the EasyCard Card Reader, after which the Card Reader will check if this driver has authorization to drive the vehicle, by looking at the Subfleet number and specific DriveRight ID's (Advanced Mode only) setup in the EasyCard Card Reader. If the driver has authorization to drive the vehicle, the Driver ID will be automatically entered into the DriveRight display and, if connected to the Immobilizer relay, the Immobilizer will be released.

In the Basic Mode the Driver Card can contain a Subfleet Number, and in the Advanced Mode the Driver Card can additionally contain up to 5 specific vehicles (identified by the individual vehicle DriveRight ID numbers) which the driver is permitted to drive (see Granting Driver Access).

- **Supervisor Card**

The Supervisor Card allows full access to the DriveRight Monitor functions and settings. When the Fleet number on the Supervisor Card matches with the Fleet number stored in the EasyCard reader, the Driver ID is logged into the DriveRight display, the Immobilizer is deactivated, and all buttons on the DriveRight can be used. This means that the DriveRight can only be calibrated with a Supervisor Card!

- **Program Card**

Each EasyCard Card Reader must be programmed before it can be used, using a Program Card.

In the Basic Mode (see also next pages) the EasyCard Card Reader will be programmed with a Fleet number and Subfleet number:

- S The Fleet number is a 4-digit number and must be the unique number of your fleet.
- S The Subfleet number is a 4-digit number, used to split up the fleet in sections, for example heavy trucks, light trucks and commercial vehicles.

Note: The EasyCard Card Readers are preprogrammed with Fleet number 1000 and Subfleet number 2000.

In the Advanced Mode (see also next pages) the EasyCard Card Reader will be programmed with a Fleet number, a Subfleet number, the DriveRight ID and the DriveRight's Pulses per Reading.

- S The Fleet number is a 4-digit number (from 0001 to 9999) and must be a unique number for your fleet.
- S The Subfleet number is a 4-digit number (from 0001 to 9999), used to split up the fleet into sections, for example heavy trucks, light trucks and commercial vehicles.
- S The DriveRight ID must be set to the same number as the ID of the DriveRight display. This information can be found in the DriveRight Vehicle Management Software.
- S The Pulses per Reading must be set to the same Pulses per Reading the DriveRight display has been set to.

Note: The EasyCard Card Readers are preprogrammed with Fleet number 1000 and Subfleet number 2000. This may not be ideal for your situation.

- **Task Card (Advanced Mode only)**

With the Task Card, specific actions can be logged by the DriveRight. Eg. loading, unloading, waiting, airport pick up, replacing flat tire, car in maintenance, etc. These actions are logged in the DriveRight as phantom trips, assigning a 4-digit code to identify the action. In the DriveRight Software, these actions can be traced.

- **Passenger Card (Advanced Mode only)**

With the Passenger Card, the movement of passengers can be traced. This function is helpful for trucks with 2 drivers, construction companies where employees are picked up and brought to the project, taxis transporting prepaid customers and many other situations where it is useful to have employees or passengers traced as they enter or leave a vehicle.

5. Basic Mode or Advanced Mode

The software allows a Basic and an Advanced use of the EasyCard.

- **Basic Mode**

The Basic Mode offers the simplest access control for fleets where drivers are allowed to drive groups of vehicles. The driver identifies him/herself with the EasyCard Driver Card and when the driver is allowed to drive in the programmed Subfleet, the Driver ID number is automatically entered in the DriveRight and the Immobilizer will be released.

Drivers are authorized for a Subfleet within the entire fleet. It is not possible to use the Task Card or Passenger Card. Advantages: easy access control over the entire fleet; all EasyCard Card Readers are programmed using only 1 Program Card

- **Advanced Mode**

The Advanced Mode allows full use of the EasyCard product options, including assigning a DriveRight ID to the EasyCard Card Reader, and setting up Task Cards and Passenger Cards.

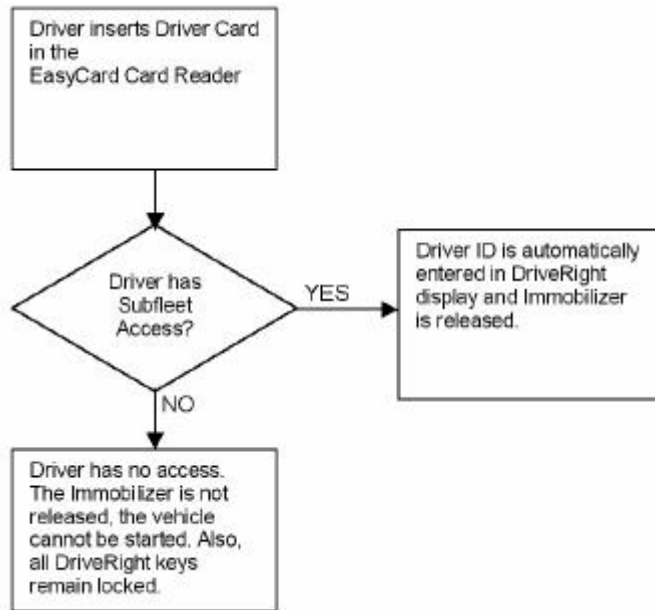
Drivers are authorized for a Subfleet within the entire fleet and can additionally obtain authorization to drive up to 5 other specific vehicles. Advantage: Task Cards and Passenger Cards can be used.

Extra setting up for the Advanced Mode:

All EasyCard Card Readers must be programmed with the DriveRight ID as stored in the attached DriveRight and all EasyCard Card Readers must be programmed with Pulses per Reading. This means that for EVERY EasyCard Card Reader, a unique Program Card must be made. This requires more work to initially set up, but offers more control over the access rights for each driver and vehicle in the fleet.

6. Basic Mode Granting Driver Access

In Basic Mode, the sub fleet number is used to determine driver access.



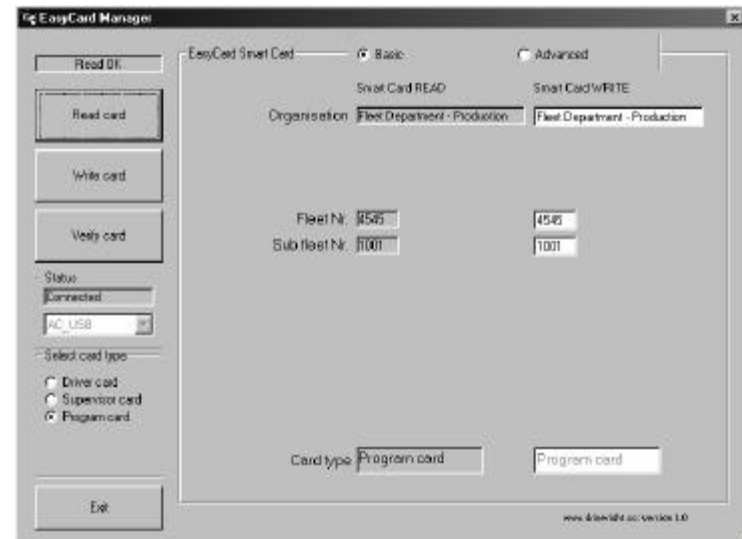
When a driver has access, the Driver ID is automatically logged in the DriveRight display and the Immobilizer is released. The driver is allowed to scroll through the screens by pressing the buttons. The driver cannot obtain access to the SETTING Screens, also it is not possible for the driver to reset the DriveRight or to clear the log.

Programming EasyCard Smart Cards (Basic Mode)

First decide on how to divide your fleet. Eg. heavy vehicles, light vehicles, busses, fork lifts, etc. In the EasyCard Manager Software, click on the Basic Mode selection box to switch to Basic Mode.

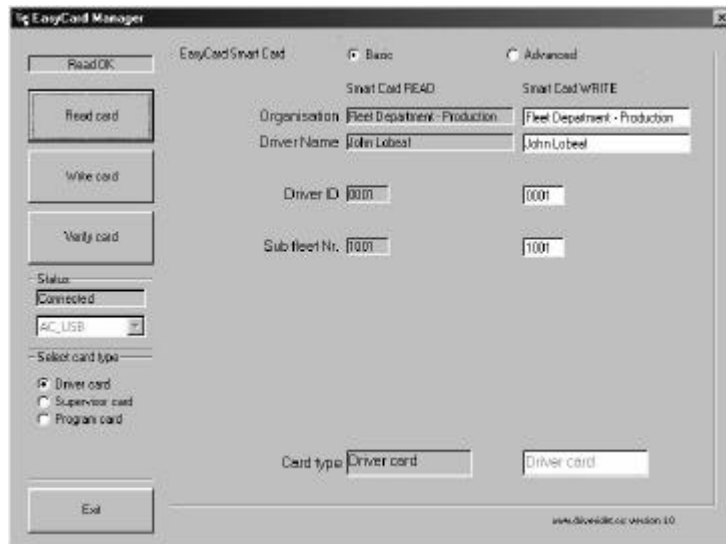
- **Programming a Program Card (Basic Mode)**

Before an EasyCard Smart Card reader can be used, it must be programmed with the Fleet number and Subfleet number. Insert a Smart Card in the EasyCard Card Programmer, click on the Program Card selection box and fill in all related information in the EasyCard WRITE section. When all data is entered correctly, click on the Write button on the left side of the screen. To check if the card has been written correctly, simply click on the Read button.



- **Programming a Driver Card (Basic Mode)**

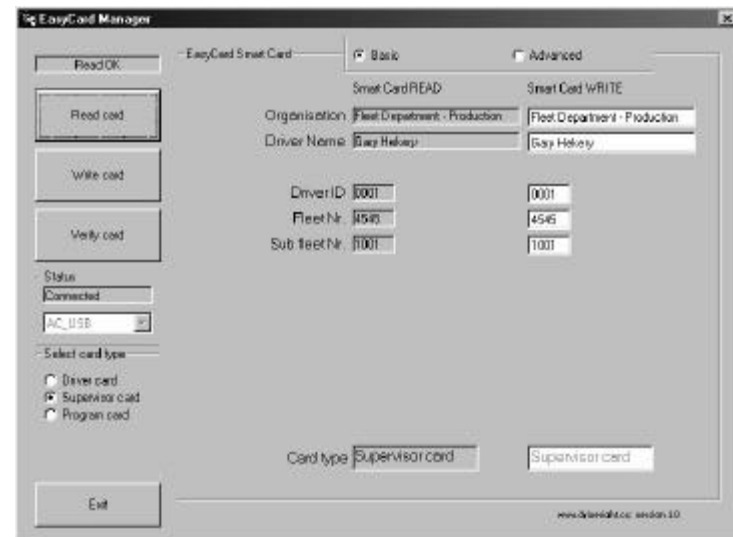
Each driver should get his/her own EasyCard Driver Card (we recommend giving each driver a spare card as well), giving them the right to access a Subfleet. Insert a Smart Card in the Card Programmer, click on the Driver Card selection box and fill in all related information in the EasyCard WRITE section. When all data is entered correctly, click on the Write button on the left side of the screen. To check if the card has been written correctly, simply click on the Read button.



- **Programming a Supervisor Card (Basic Mode)**

Everyone holding a Supervisor Card, with a Fleet number which is identical to the programmed Fleet Number in the EasyCard Card Reader, has full access to any DriveRight fitted to vehicles in that Fleet. All DriveRight functions are enabled. Insert a Smart Card in the EasyCard Card Programmer, click on the Supervisor Card selection box and fill in all related information in the EasyCard WRITE section.

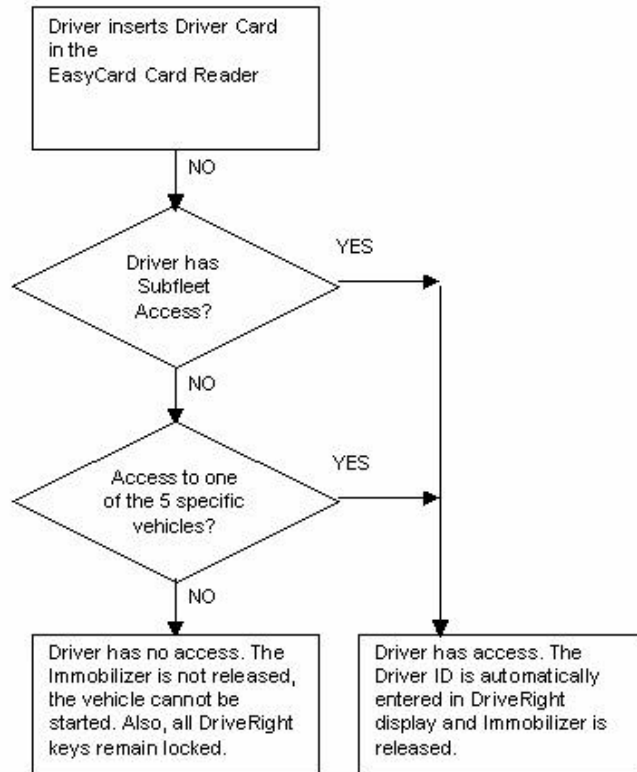
When all data is entered correctly, click on the Write button on the left side of the screen. To check if the card has been written correctly, simply click on the Read button.



7. Advanced Mode Granting Driver Access

In order to determine in which vehicles a driver is allowed to drive, Fleet numbers, Subfleet numbers and up to 5 specific vehicles can be defined.

To determine the driver access to the vehicle, first the Fleet number is checked, then the Subfleet number and finally the 5 specific DriveRight ID's are checked.



When a driver has access, the Driver ID is automatically logged into the DriveRight display and the Immobilizer is released. The driver is allowed to scroll through the screens by pressing the buttons. The driver cannot obtain access to the SETTINGS Screens, also it is not possible for the driver to reset the DriveRight and to clear the log.

Programming EasyCard SmartCards (Advanced Mode)

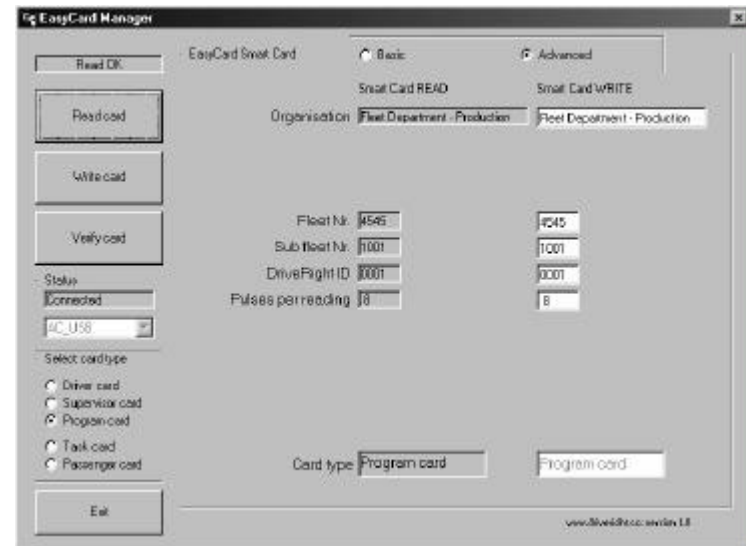
First decide on how to divide your fleet. Eg. heavy vehicles, light vehicles, busses, fork lifts, etc. In the software, click on the Advanced Mode selection box to switch to Advanced Mode. First, write down or print all DriveRight ID's and Pulses per Reading for the DriveRights in use.

REMEMBER: The EasyCard software does not keep its own database, nor does it access the DriveRight database, so these entries must be done manually, with great care.

- **Programming a Program Card (Advanced Mode)**

Before an EasyCard Card Reader can be used, it must be programmed with the Fleet number and Subfleet number. Also, the Card Reader must be programmed with the DriveRight ID and Pulses per Reading of the attached DriveRight. Please be sure that your DriveRight Vehicle Management Software holds the correct DriveRight information! Insert a Smart Card in the EasyCard Card Programmer, click on the Program Card selection box and fill in all related information in the EasyCard WRITE section.

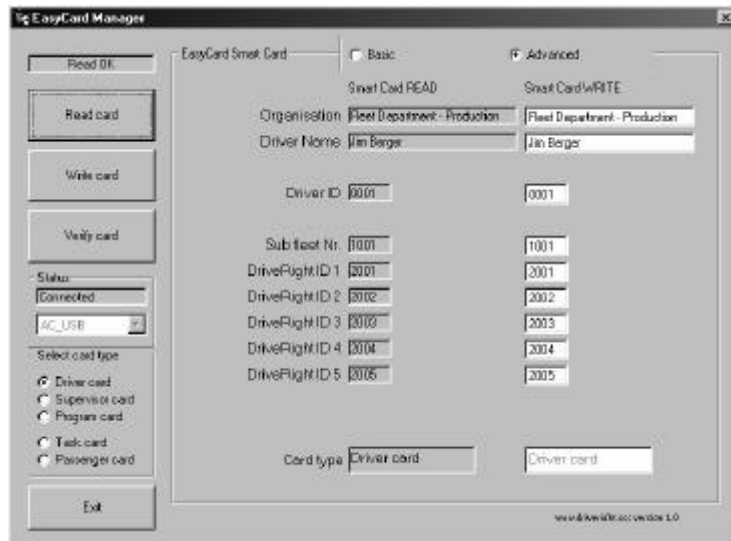
When all data is entered correctly, click on the Write button on the left side of the screen. To check if the Program Card has been written correctly, simply click on the Read button.



- **Programming a Driver Card (Advanced Mode)**

Each driver should get at least one EasyCard Driver Card, holding the rights to access a Subfleet and up to 5 specific vehicles. Insert a Smart Card in the EasyCard Card Programmer, click on the Program Card selection box and fill in all related information in the EasyCard WRITE section.

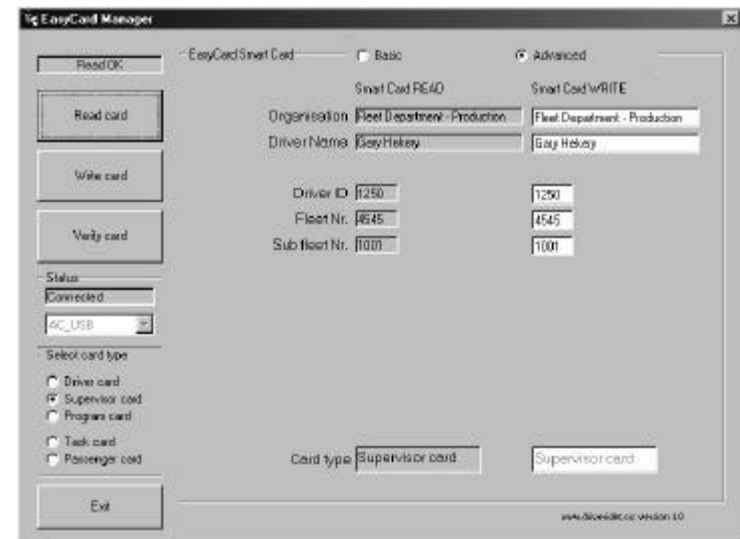
When all data is entered correctly, click on the Write button on the left side of the screen. To check if the Driver Card has been written correctly, simply click on the Read button.



- **Programming a Supervisor Card (Advanced Mode)**

Everyone holding a Supervisor Card, with a Fleet number which is identical to the programmed Fleet Number in the EasyCard Card Reader, has full access to any DriveRight fitted to vehicles in that Fleet. All DriveRight functions are enabled. Insert a Smart Card in the EasyCard Card Programmer, click on the Supervisor Card selection box and fill in all related information in the EasyCard WRITE section.

When all data is entered correctly, click on the Write button on the left side of the screen. To check if the card has been written correctly, simply click on the Read button.



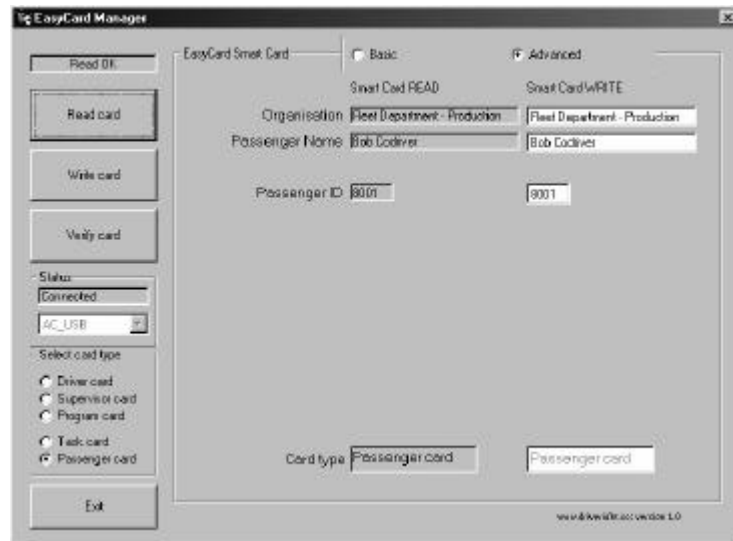
- **Programming a Passenger Card (Advanced Mode)**

Everyone holding a Passenger Card can identify him/herself when entering/exiting the vehicle. To automatically link a passenger and make it visible in the DriveRight Software, it is required that the passenger ID is also entered in the DriveRight Vehicle Management Software. In the DriveRight Vehicle Management Software, add a Passenger by adding a Driver with a 'pretend' Driver ID:

Driver Name = Passenger Name

Driver ID = Passenger ID

Then, using Insert a Smart Card in the EasyCard Card Programmer, click on the Passenger card selection box and fill in all related information in the EasyCard WRITE section. When all data is entered correctly, click on the Write button on the left side of the screen. To check if the Passenger Card has been written correctly, simply click on the Read button.



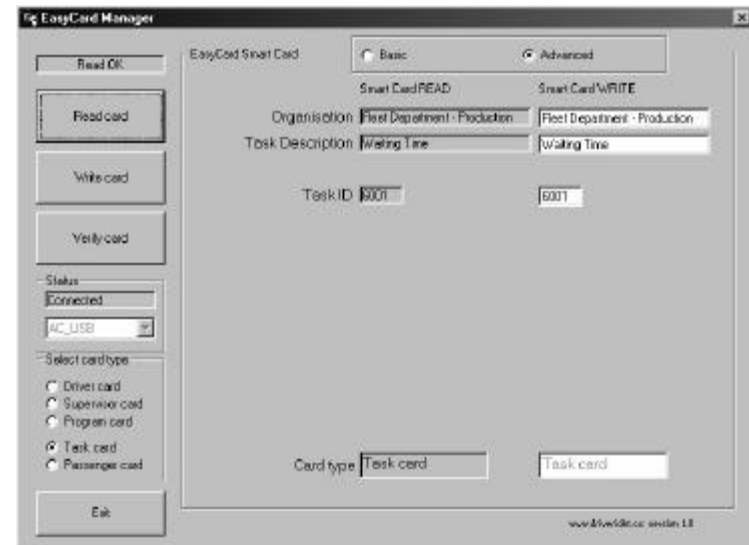
- **Programming a Task Card (Advanced Mode)**

Very often, drivers need to split up their activities or indicate that they have been undertaking special vehicle related tasks. This can be waiting time, airport pick up, time at customer, time on a project, car in maintenance, etc. When a Task Card is inserted in the EasyCard Card Reader, the DriveRight stores the task information in a phantom trip. The date, time and task code are stored in a trip with zero distance driven. Once the DriveRight data is down loaded to the DriveRight Vehicle Management Software, automatically the activity is shown in the reports. In order to trace these activities in the DriveRight Vehicle Management Software, it is required to add each task in a special way. To automatically link a activities and make it visible in the DriveRight Software, it is required that the Task ID is also entered in the DriveRight Vehicle Management Software. In the DriveRight Vehicle Management Software, add a Task by adding a Driver with a 'pretend' Driver ID:

Driver Name = Task Name

Driver ID = Task ID

Insert a Smart Card in the Easy Card Card Programmer, click on the Task Card selection box and fill in all related information in the EasyCard WRITE section. When all data is entered correctly, click on the Write button on the left side of the screen. To check if the Task Card has been written correctly, simply click on the Read button.



8. Changing data on a EasyCard Smart Card

First select Basic Mode or Advanced Mode.

When data on a Smart Card needs to be changed, or the type of Smart Card needs to be changed, just insert the Smart Card in the EasyCard Card Programmer, click on the Read button on the left side of the screen, change the data to what it should be and click on the Write button on the left side of the screen.

9. Programming an EasyCard Card Reader

To program an EasyCard Card Reader, first make a Program Card. Insert a battery in the DriveRight display. If the DriveRight needs to wake up, press the MODE button on the DriveRight display. Once the DriveRight is active, you can program the EasyCard Card Reader.

Insert the Program Card in the EasyCard Card Reader. The green led will flash briefly to indicate that programming of the EasyCard Card Reader has been successful. To change the programming of the EasyCard Card Reader, simply change the Program Card and repeat this procedure.

Also, the EasyCard Card Reader can be programmed while the DriveRight display is connected to the 12V in the vehicle. The vehicle may not be used during the programming of the EasyCard Card Reader.

10. Connecting the DriveRight display and EasyCard Card Reader into the vehicle

To get the DriveRight display with EasyCard Card Reader ready for operation in the vehicle, just follow these steps:

- Briefly press and release the MODE key on the DriveRight display to wake it up
- Connect the Immobilizer plug to the EasyCard Card Reader
- Connect the DriveRight display to the mini-DIN plug.

Note: If the DriveRight is not activated (in sleep mode) before being connected to the mini-DIN plug, it will require up to 50 seconds before the EasyCard Card Reader is ready for operation. If the DriveRight is activated before it is connected, the EasyCard Card Reader will be ready for operation within seconds.

11. Inserting and removing Cards

Depending on the type of Smart Card inserted in the EasyCard Card Reader, specific actions will take place. Below mentioned the actions for the different kinds of cards are explained.

• **Driver Card**

Once a Driver Card is inserted and validated, the driver can start the vehicle and operate a limited set of functions on the DriveRight:

- S With the MODE button, the driver can look at the LOG screens on the DriveRight, only showing his/her trips.
- S With the MINUS button, the trip type Business / Private / Commute / Other can be changed as usual in the CURRENT screen.
- S With the SET/CLEAR button, the date/time display can be switched.

When the driver removes the Driver Card from the EasyCard Card Reader, the EasyCard Card Reader will lock the Immobilizer, lock all buttons on the DriveRight display and automatically log out the Driver ID from the DriveRight display. If the vehicle is in motion when the Driver Card is removed, the EasyCard Card Reader will wait until the vehicle comes to a stop and then log out the Driver ID from the DriveRight display.

Note: It does not matter which screen on the DriveRight display is shown when removing the Driver Card. However, if the Driver Card was removed with one of the DriveRight LOG screens active, the time to log out the DriveRight will increase. Returning from the LOG screens to the CURRENT screen will take 6 extra seconds per LOG screen. Also, the EasyCard Card Reader will wait until the vehicle comes to a full stop before the code is logged out. When the DriveRight display is in the CURRENT screen when removing the Driver Card from the EasyCard Card Reader, the driver log out will take just a few seconds.

Make sure that when the Immobilizer is used any Driver Card or Supervisor Card is removed at the end of the trip. If a Driver Card or a Supervisor Card is left in the Card Reader, it will still allow the vehicle to be started, resulting in the following potential problems:

- Anyone else can drive the vehicle without authorization.
- Theft of vehicle is obviously easier.
- The Immobilizer will continue to draw a current of 150 mA from the vehicle battery, which will eventually discharge the vehicle's battery.

Once a Supervisor Card is inserted and validated, the supervisor can start the vehicle and operate all functions on the DriveRight, including the SETTING screens. Before the supervisor removes the Supervisor Card from the EasyCard Card Reader, please make sure that the DriveRight is back in the CURRENT Screen.

- **Task Card**

When a Task Card is inserted, the EasyCard Card Reader will enter the task code in the DriveRight display and return to the CURRENT screen of the DriveRight. Then, in order to generate a record in the DriveRight display, a limited number of pulses is sent to the DriveRight display. The led on the EasyCard Card Reader will flash for a few seconds, and the DriveRight display will show a low speed.

When the DriveRight has been set to log out a trip after eg. 5 minutes, the task end time will automatically be set after the Trip Stop Time has been reached. It is strongly recommended that you:

- S increase the Trip Stop Time of the DriveRight to the maximum time of a task, or
- S remove the Task Card immediately after it has been accepted. In this case, the task start time is identifying the beginning of the task, and the start time of the next record identifies the end of the task.

Note: If the speed shown on the DriveRight display is higher than 10 mph or kph, it is recommended that you decrease the Pulses per Reading on the Task Card.

- **Passenger Card**

When a Passenger Card is inserted, the EasyCard Card Reader will enter the passenger code in the DriveRight display and return to the CURRENT screen of the DriveRight. Then, in order to generate a record in the DriveRight display, a limited number of pulses is sent to the DriveRight display. The led on the EasyCard Card Reader will flash for a few seconds, and the DriveRight display will show a low speed. Then, the Passenger Card can be removed. A passenger record has been created with a begin time and an end time, identified by the 4-digit code as belonging to the Passenger.

Note: If the speed shown on the DriveRight display is higher than 10 mph or kph, it is recommended that you decrease the Pulses per Reading on the Passenger Card.

Specifications

The following specification apply to the EasyCard:

EasyCard Card Reader:

Contact Area Plating	30 micro Gold Plated over Nickle
Operating temperature	-40 to 100 degrees Celsius
Durability	100,000 cycles minimum
Housing	ABS

Immobilizer relay:

Input voltage	10V to 16V
Power consumption	150 mA if relay activated
Operating temperature	-40 to 100 degrees Celsius
Electrical life	100,000 cycles minimum at 30A; 12V DC
Shock resistance	10G
Switching contacts	hard silvered, minimum voltage drop
Housing	polybutylene terephthalate

Warranty and repair information

One year limited warranty.

We warrant our products to be free of defect in material and workmanship for the period of one year from the date of original purchase. While we make every effort to carefully manufacture our products to the highest standards of quality, occasionally parts may be found to be missing, defective or damaged.

If you have a defective part, return the product to us, shipping charges prepaid. Include proof of purchase and a written explanation of the trouble. During the warranty period, we will, at our option, either repair or replace the product free of charge.

This warranty does not cover damage due to improper installation or use, negligence, accident, or unauthorized service, or to incidental or consequential damages beyond the products themselves. Implied warranties are limited in duration to the life of this limited warranty.

Changes or modification not expressly approved in writing by the producer may void the user's authority to operate this equipment.

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