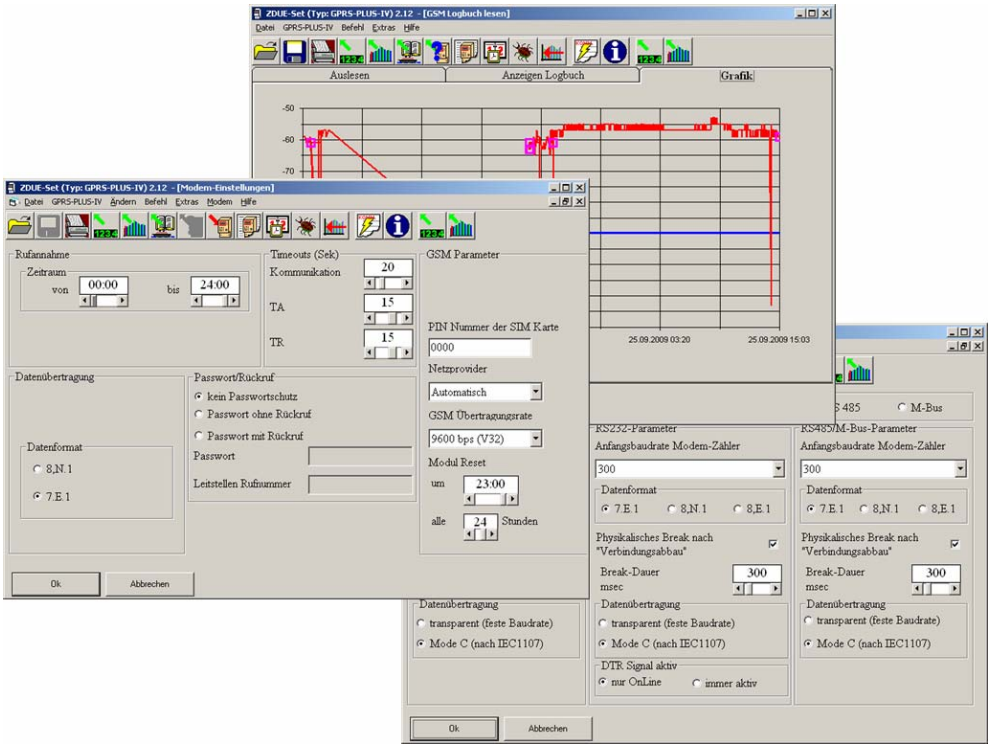
# ZDUE SET

## User Manual

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## Table of Contents

# 1 Overview

## About this manual

This document describes the operation, functioning and installation as well as the technical data of the ZDUE Set software. This tool is used to operate the following products:

- ZDUE-MOD-PLUS-IV
- ZDUE-MOD-PLUS-V
- ZDUE-GSM-PLUS-V
- ZDUE-GPRS-PLUS-IV
- ZDUE-LAN-PLUS-IV

This applies right up to the current firmware, which is included in the ZDUE Set software package.

# 2 Introduction / Brief description

The following section is designed to help answer the basic questions you may have on the ZDUE Set software:

What is the ZDUE Set?

- What system requirements must be fulfilled for the use of this software?
- How do I install this software?
- What do I have to do if I want to update this software?
- How do I start up the software?
- What will I see when I start the software?
- How do I find out which software version I am using?

**Note**

For more detailed information, please refer to the product descriptions of the ZDUE-MOD-PLUS-IV, the ZDUE-MOD-PLUS-V, the ZDUE-GSM-PLUS-V, the ZDUE-GPRS-PLUS-IV and the ZDUE-LAN-PLUS-IV.

## 2.1 What is the ZDUE Set?

The ZDUE Set is a Windows-based software to parameterize the ZDUE-MOD-PLUS-IV, ZDUE-MOD-PLUS-V, ZDUE-GSM-PLUS-V, ZDUE-GPRS-PLUS-IV and ZDUE-LAN-PLUS-IV meter modems. It enables the user to modify the parameters for the communication to the meter as well as the parameters for the internal load profile and for the communication to the control center.

The ZDUE Set is a 32-bit application, based on a 32-bit environment that runs with Windows 95/98 as well as with Windows NT 4.X, Windows XP and Windows 2000. Win CE is not supported.

## 2.2 System requirements

In the following, you will find a list of the requirements for the use of the ZDUE Set:

- IBM PC or a compatible PC with 60 MHz Pentium or higher equipped with the following features:
    - ≥ 16 MB RAM
    - CD ROM drive
    - At least one free serial interface
    - Supports COM ports: COM1 to COM16
- Hardware components for communication
    - Internal or external analog or GSM modem for remote parameterization
    - LAN connection
    - CL1 adapter for the electrical interface (CL1 interface) on the ZDUE-MOD-PLUS-IV
    - RS232 cable for the RS232 interface on the ZDUE-MOD-PLUS-V, ZDUE-GSM-PLUS-V or the RS232-parametrization adapter for the ZDUE-GPRS-PLUS-IV and the ZDUE-LAN-PLUS-IV
- Windows 95 / 98 / 2000 / NT / XP
- Monitor with a minimum resolution of 600x800 pixels

## 2.3 Installation / Update of ZDUE Set

Before you can install the ZDUE Set, you have to have administrator rights on your PC. We also strongly recommend that you exit all Windows programs before you run the setup.

The installation is started when you run the **"Setup.exe"** file in your installation package. Follow the instructions in the SETUP program.

The SETUP program will suggest a destination folder for the installation directory:

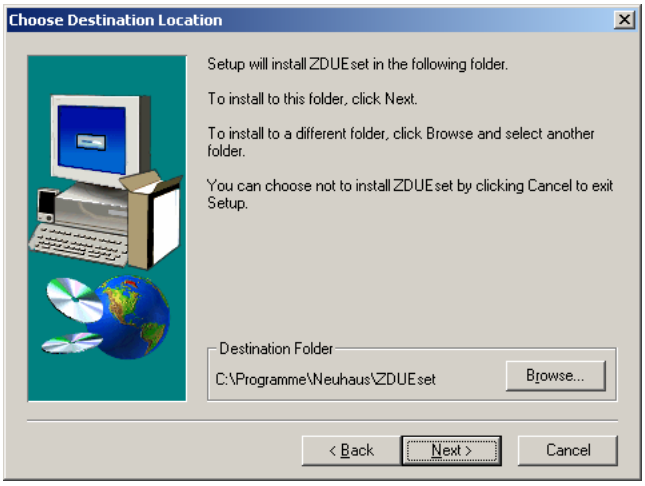


Figure 2-1: Installation – Choose destination folder

Use the *Browse...* button to access a dialog to alter the choice of the destination folder if desired.

If you want to update the software, you are not required to deinstall the existing version. You can simply install the new version in the same folder. If you have already created a phone book in the old version, you should make sure that you back it up. For more detailed information, go to Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.** “**Fehler! Verweisquelle konnte nicht gefunden werden.**”.

SETUP will now check to make sure that there is enough memory available.

After that, a communication window will open to show how the installation is proceeding.

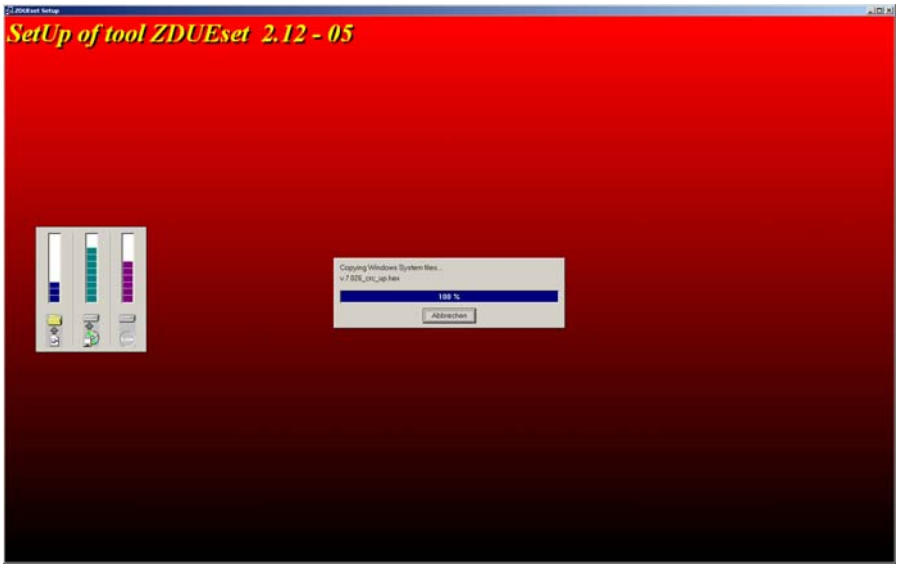


Figure 2-2: Progress

Following the successful completion of the installation, SETUP will indicate the following message:

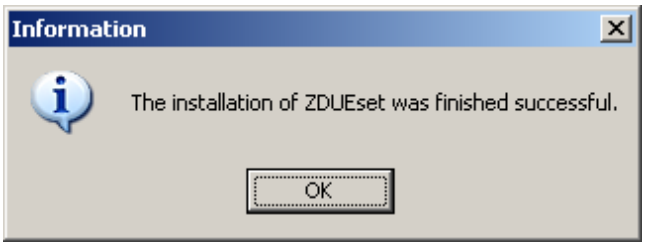


Figure 2-3: SETUP completed

**Attention**:

To make sure that the ZDUE Set program functions correctly, it is necessary to have at least one Windows system printer installed even if there is no printer connected.

Depending on the version of Windows you are using, you now have a program group (in the Windows **Start** menu under **Programs** -> **ZDUEset**) or a start icon for the ZDUE Set.

## 2.4 Starting and using the software

To start the ZDUE Set:

- Select the Windows **Start** menu -> **Programs** -> **ZDUEset** -> **ZDUEset**
- Or click on the desktop icon (if there is one)

To exit the software, select the sub-item **"Quit"** in the **"File"** menu.

Once the program has been started, the ZDUE Set start screen will appear.

The ZDUE Set program is a Windows-based application that also visually reflects the structure and set-up of Windows programs.

Title bar
Menu bar
Icon bar
Window section

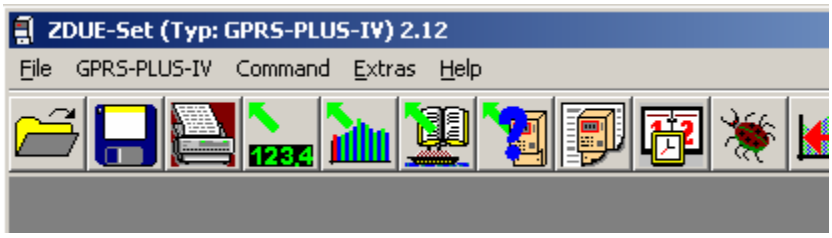


Figure 2-4: Start screen

The window of the main menu consists of

- the title bar
- the menu bar
- the icon bar
- the window section

The *title bar* includes the title and information on the window opened, as is familiar in other Windows applications.

The *menu bar* indicates the menus available, in which the individual actions and switching functions are listed in plain text. This bar contains several different entries, which will be explained in the following chapters.

Submenus can be used to access other windows (document windows and dialog windows); the name of the submenu concerned appears in the title bar.

The menu bar contains a special menu, whose name indicates the currently selected device model. In Figure 2-4: , this menu is called **“MOD-PLUS-IV”**. In the following text, this menu will be referred to using the term **“Model menu”**.

The *icon bar* shows buttons (icons) for the most frequently used functions.

Some dialogs also include a bar with tabs that further divide to contents. These tabs appear below the icon bar.

## Icon list

The following list indicates the icons available on the icon bar.


**Open**..


**Save..**


**Print**

**Read register**


**Read load profile**


**Read GSM logbook**


**Read settings**


**Show settings**


**Read/set date/time (VDEW)**


**Read/reset status**


**Reset load profile**


**Show ONLINE communication protocol**


**Information**

**Read register (meter)**


**Read load profile (meter)**


**Write settings**

## Show the software version

To obtain information on the software version used, select the item **"About ZDUE Set..."** in the **"Help"** menu or click on the corresponding icon on the icon bar:

# 3 User settings

This chapter describes the menu items in the user settings, which can be found in the **“Extras”** or **“Modem”** menus.

## 3.1 Communication

Select **“Options”** in the **“Extras”** menu and then go to the **“Communication”** tab.

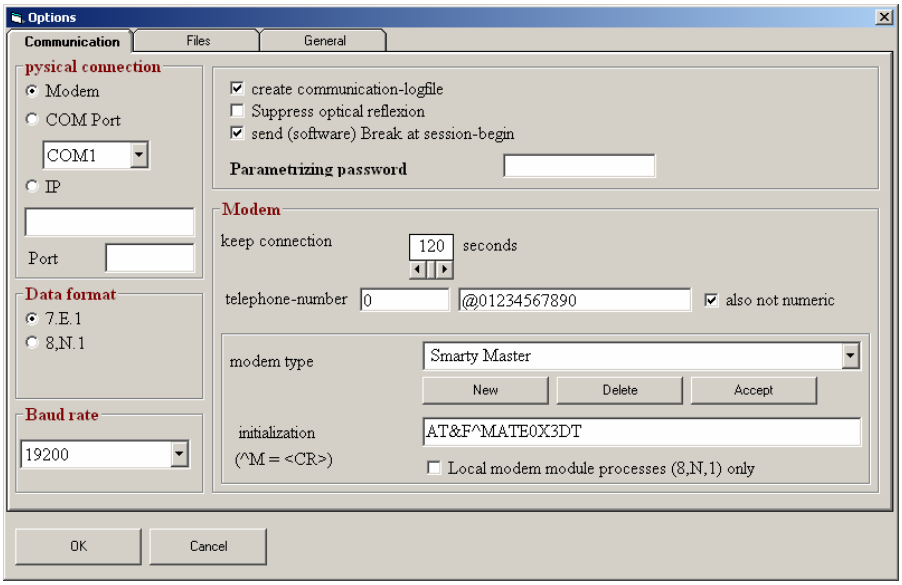


Figure 3-1: Settings – Communication tab

### Physical connection

The *Physical Connection* determines which connection paths are used to create a communication route between the control center and the ZDUE.

#### Modem

When *Modem* is selected as the connection type, a connection to the ZDUE is set up via a modem connected to the control-center PC or an internal PC modem. The interface with which this modem is connected is set using the *COM Port* pull-down menu. In addition, a Modem input section of its own opens only for the *Modem* connection type. This is where you can set the parameters for modem communication (see below).

The *Modem* connection type must also be selected if you want to set up a connection to a ZDUE-GPRS-PLUS-IV or a ZDUE-LAN-PLUS-IV via a **TAINY ComPortClient** installed on the PC and the corresponding **TAINY SwitchingCenter**. In this case, the virtual COM port of the TAINY ComPortClient will be selected that is designated for this connection.

**COM Port**

The *COM Port* selection is used for the direct connection to a local ZDUE connected to the control center computer. The COM port to be used is determined in the *COM Port* pull-down menu. If the *COM Port* setting has been selected, the additional option *7,E,1 reception* will be displayed in the "Data format" section.

**"COM Port" pull-down menu**

The *COM Port* pull-down menu is used to select the *COM1* to *COM16* interfaces on the PC. When the ZDUE Set is started, it automatically determines which COM ports the computer has. The PC user has to check to make sure that the COM port selected to be used by the ZDUE Set actually is available. The COM port is important for the *Modem* or *COM Port* connection types.

**IP**

Selecting *IP* means that the ZDUE-GSM-PLUS-V can be accessed via GPRS as long as it is running in the GPRS mode and has an IP server on top. The IP address of the ZDUE-GSM-PLUS-V and the port, on which the device 'is listening' have to be configured at this point (for information on the IP server, also see Chapter 6.7).

The *IP* selection cannot be used for any other ZDUE models.

**Data format**

The data format can be set to *7,E,1* and *8,N,1*, depending on whether the parameters have been set by remote or locally or whether the PC modem used works with 8,N,1 only (also see the setting under Modem type).

**Baudrate**

The baudrate between the PC and the PC modem for remote parameterization can, as a rule, be set to the maximum value. The PC modem used must be set to the same baudrate or it has to work with automatic recognition.

**Create communication logfile**

When this option is selected, a communication logfile is created automatically and written into a file. These logfiles can be found in the main ZDUE Set directory in the **"LogFiles"** folder.

**Suppress optical reflexion**

Suppressing optical reflexion only becomes necessary when the CL1 adapter used for the local parameterization of the ZDUE-MOD-PLUS-IV via the CL1 interface does not automatically suppress optical reflexion or if the PC modem used for a remote parameterization does not support this function.

**Prophylactic modem (SW) break at the beginning of the session**

If this function is activated, the ZDUE Set sends a break message to the ZDUE before transmission to the device address (IEC address).

#### Parameterization password

Insofar as a parameterization password has been stored, it will be used for all read-outs and parameterizations. In this case, the parameterization password is not requested at the beginning of communication (this makes sense when the parameterization password is the same for several ZDUEs to be parameterized). If there is no parameterization password provided, it will have to be entered manually by the user for every read-out and parameterization.

## Modem

This is where the parameters are set for modem communication. They are required for the remote parameterization via a PC modem and only displayed when the *Modem* setting has been selected as the *Connection type*:

#### Keep connection

Following the last data transfer between the ZDUE Set and the modem, the connection will not be immediately terminated between the PC and the modem. Once the time set here has elapsed, the connection is terminated and the modem hangs up.

#### Phone number

The input screen for the telephone number is divided into two sections. The desired telephone number can be entered into the second field. If a phone book has been created, this information will be entered automatically once the corresponding phone book entry has been selected and activated.

If it is necessary to get an outside line for the active entry in the phone book (see Chapter **Fehler! Verweisquelle konnte nicht gefunden werden.** "**Fehler! Verweisquelle konnte nicht gefunden werden.**"), these digits must be entered in the first field, in front of the actual phone number. The activated outside line number is indicated by @ placed in front of the phone number in the second field.

#### Also not numeric

If this box is activated, it is also possible to enter non-numerical characters (letters) as the phone number.

#### Modem type

Here it is possible to choose a modem type including the stored initiation from a list. The entries can be edited using the buttons marked *New*, *Delete* and *Accept* - and expanded as well.

#### Initialization

In this field, it is possible to show and edit the initialization string for the modem selected. The correct initialization string for the PC modem used can be found in the modem manual.

**Local modem module processes (8,N,1) only**

This setting must be selected when the PC modem used does not support the 7,E,1 format.

**OK**

Click this button to accept the current settings, i.e. to automatically save them so that they are available for the next start of the ZDUE Set.

**Cancel**

Click this button to ignore any modifications made and to close the **"***Options"* window.

## 3.2 File

Select menu item **"Options"** under **"Extras",** and then go to the tab marked "Files".

Use this tab to enter the drives and paths in which the files are saved by the user by default. A click on **"..."** allows you to modify the entries.

The pull-down menu for the *Proposal of file name(s)* contains the entries made for *"Date, serial number"* and *"Device identification"*. Depending on your selection, the files to be saved will be assigned the parameters set in this menu as their default name.

Default path and name can be altered by the user prior to saving the file without having to change the entries in this tab.

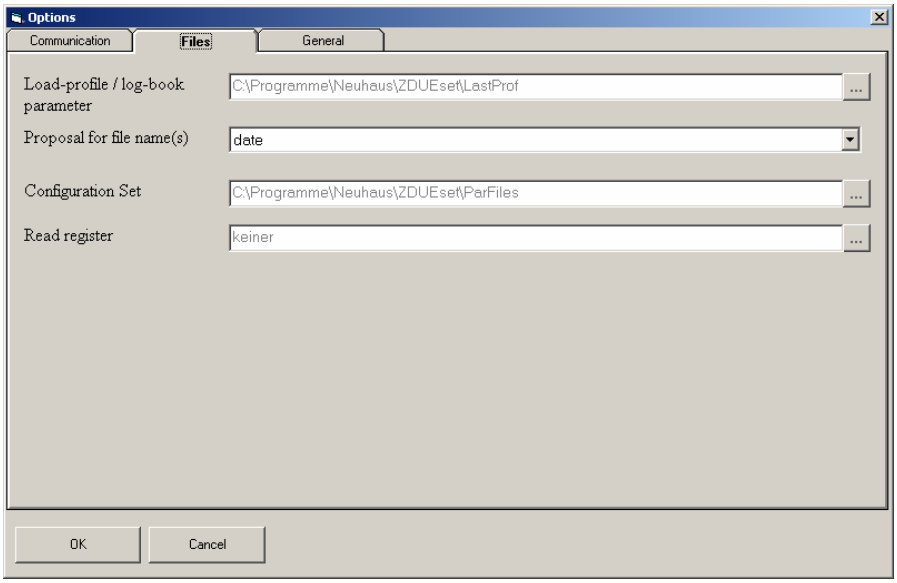


Figure 3-2: Settings – Files tab

With the settings from Figure 3-2: Settings – Files tab, the following dialog window will open as the default path when you want to save a parameter set: “(C:\Programme\Neuhaus\ZDUEset\)ParFiles” and the date at the time of saving the file as the default file name (in this case: “20090921”) (the extension *.PAR* will be added automatically because this example involves a parameter file).

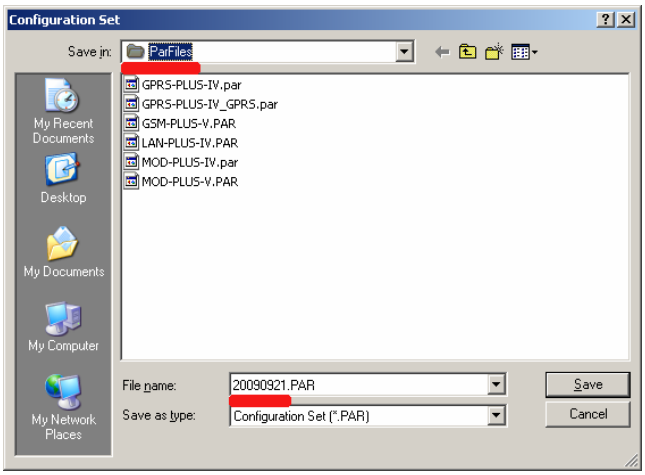


Figure 3-3: Settings – Example for the Files tab

## 3.3 General

Select the submenu item **“Options”** under **“Extras”**, and then the tab marked **“General”.**

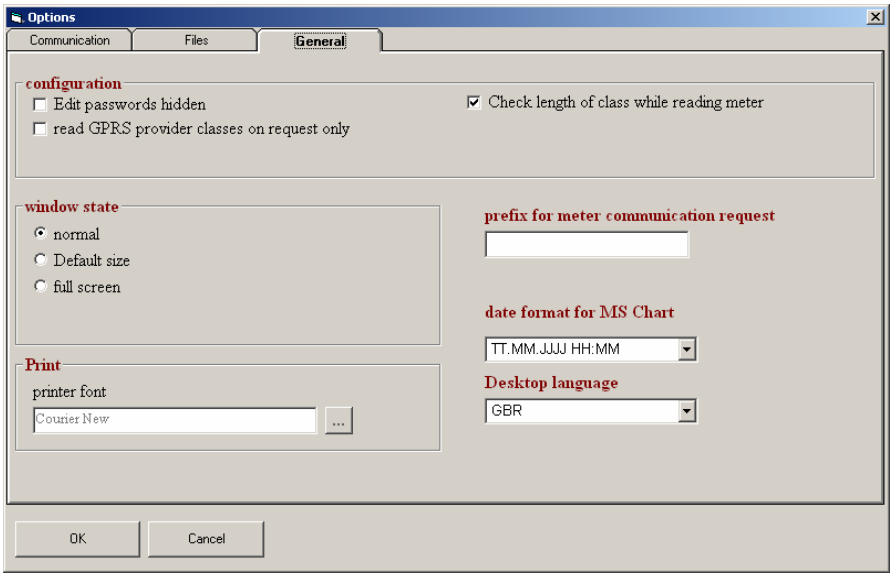


Figure 3-4: Settings – General tab

### Configuration

This is where the general settings for the behavior of the ZDUE Set for parameterization and the read-out of parameters are made:

**Edit passwords hidden**

If there is a checkmark in this box, the passwords in the ZDUE Set will be entered and displayed hidden, otherwise in plain text (e.g. the parameterization password in the **"Extras"** menu).

**Read GPRS provider classes on request only**

If there is a checkmark in this box, there will be no request made for the provider classes when the device parameters are read out.

**Check length of class while reading meter**

ZDUE Set will check the class length while reading out the modem parameters.

## Window state

This is where the size of the main window is determined:

**Normal**

*Normal* sets a maximized window back to its previous size.

**Default size**

The window size is set to a predefined size.

**Full screen**

The window is set to maximum size.

## Print

This is where the printer font is determined in which the files from the ZDUE Set are printed. Click on **"..."** to change the font.

## Prefix for meter communication request

The prefix saved here is added to the communication request when the meter is read. If this field is empty, the meter will be sent the standard request "/?<Zähler-IEC-Adresse>!".

## Date format for MS chart

This is where you can set the format of the time line (x axis) in graphs (e.g. the display of a read-out GSM logbook) for the ZDUE Set.

## Desktop language

Use the pull-down menu to select which user language you want the ZDUE Set to work with. The following languages are available: German (*DEU*), English (*GBR*) and French (*FRA*).

## 3.4 Device address modem

Select the submenu of **"Device address modem"** under **"Extras"**.

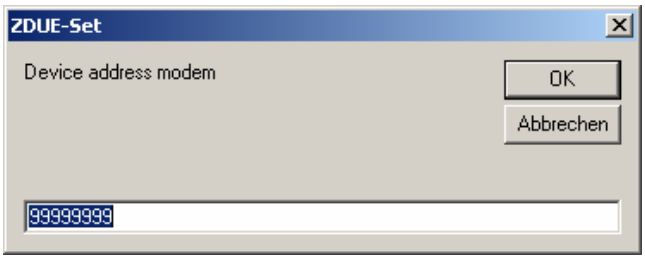


Figure 3-5: IEC 1107 address

This is where an IEC1107 address can be entered that is automatically sent to the ZDUE with every communication. The ZDUE will only answer if the IEC1107 address sent from the ZDUE Set is identical to the address entered in its set of parameters (default: 99999999). If the address is not the same, the communication will be forwarded directly to the interface(s) to the meter.

## 3.5 Modify set password

Select the submenu **"Change set password"** under **"Extras"**.

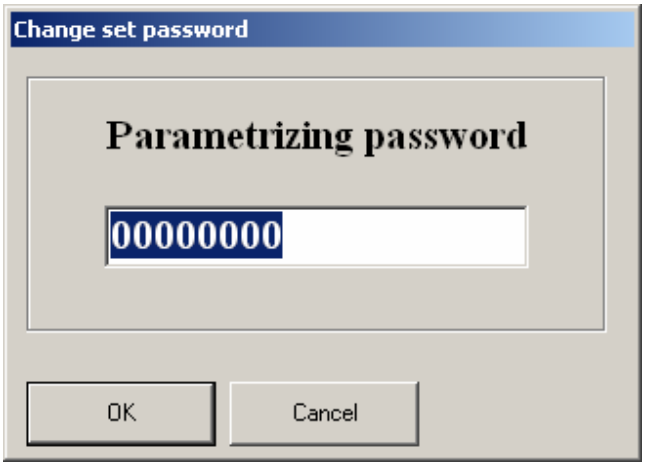


Figure 3-6: Change set password for communication

This menu can be used to set the parameterizing password used by the ZDUE Set. The parameterizing password in the ZDUE itself (default: 00000000) will not be affected. This password is required to read out and to modify the parameters of the ZDUE. It expects 8 numerical digits.

If the option ***Edit passwords hidden*** has been activated under **"Extras/Options"** on the **"General"** tab, the parameterizing password will not be displayed in plain text at this point.

## 3.6 Phone book

If communication via modem has been selected under **“Extras”** -> **“Options”**, the **“Modem”** menu will appear in the menu bar of the ZDUE Set. It can be used to edit the phone book.

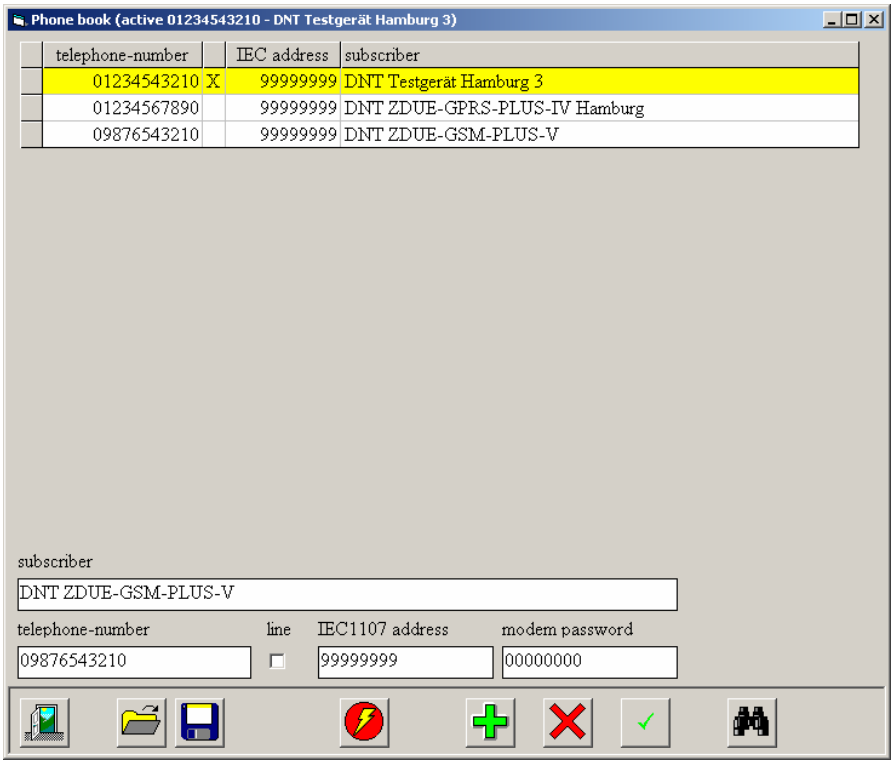


Figure 3-7: Phone book

To select an existing phone book entry, mark the entry on the list and activate it with  (*active*). An active phone book entry appears on a yellow background and is displayed in the title bar.

### Creating new entries

To make a new entry in the phone book, you have to enter a subscriber in addition to a phone number for the ZDUE. In addition, it is necessary to enter the IEC address of the ZDUE (default: 99999999) and a password if the ZDUE is password-protected.

There has to be a checkmark entered in the *line* box if it is necessary to dial to an outside line to connect to the ZDUE. In this case, the digits entered in the **“Extras”** -> **“Options”** -> **“Communication”** menu in the first field of the “phone number” will be dialed automatically before the actual telephone number (see Chapter 3.1 “Communication”).

Click  (*New*) to add the entry to the list, click  (*Accept*) to save any changes made to existing entries.

Click  (*Delete*) to remove the currently selected entry from the list.

## Export/import phone book

The entire phone book can be saved as a file and exported to be transferred to a different computer or a new ZDUE Set version with  (*Export file*). Click  (*Import file*) to access an existing phone book.

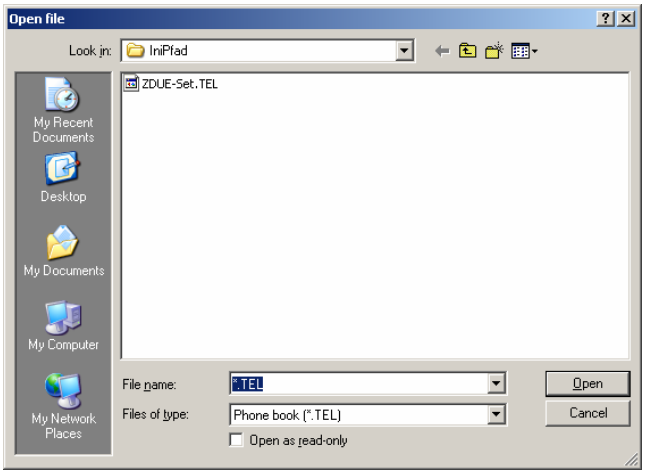


Figure 3-8: Open phone book

## Search phone book

Click  (*Search*) to open a dialog to search the phone book for any term you enter.

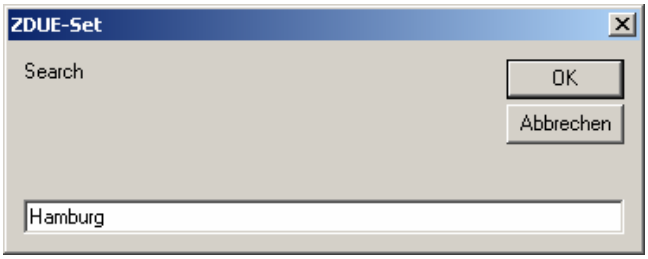


Figure 3-9: Phone book search screen

The first entry in the phone book to contain the search term will be marked by a black arrow in the left margin.

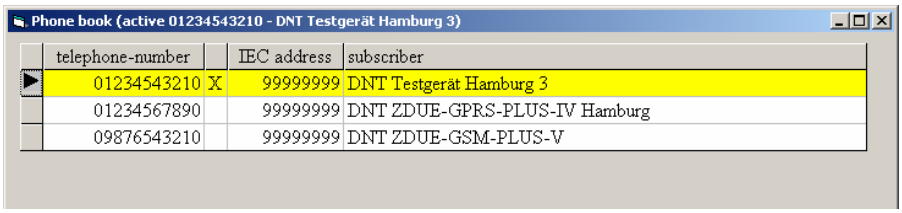


Figure 3-10: Phone book search screen

## Close phone book

Click  (*Exit*) to close the phone book dialog.

# 4 Read ZDUE data

It is advisable to first check the communication. This is easiest to do using the *Read settings* command. If this doesn't work, please check the user settings of the ZDUE Set, see Chapter 3, "User settings".

## 4.1 Read settings

The default model menu is named "GPRS-PLUS-IV" because the ZDUE Set doesn't yet know whether it's a ZDUE-GPRS-PLUS-IV or any of the other ZDUE models. This information will not be added until the settings are read out.

Go to the **"GPRS-PLUS-IV"** model menu and select the submenu item **"Read settings"** or the corresponding icon on the icon bar:

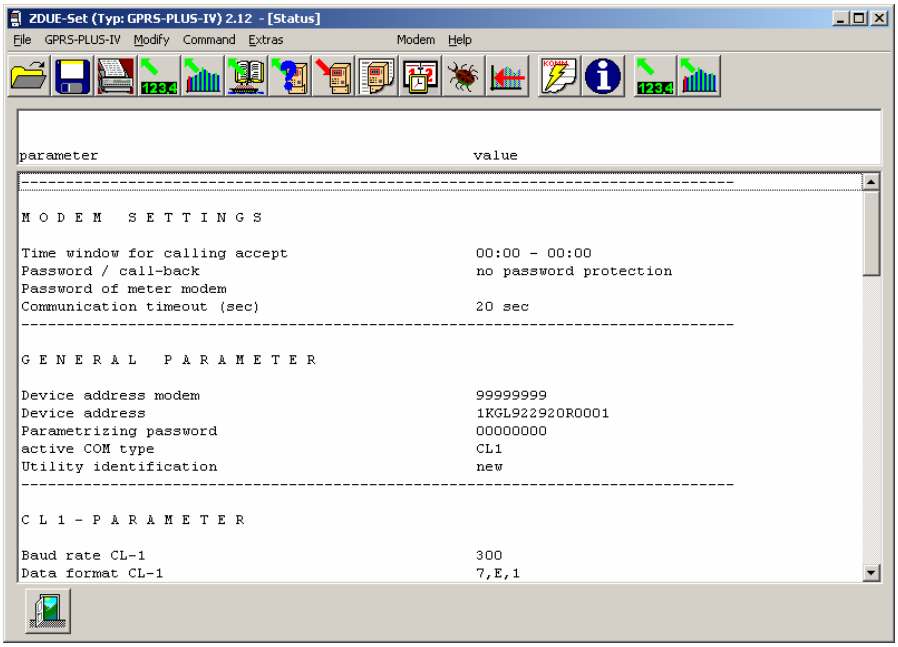


Figure 4-1: Read out settings

This command makes it possible to read out and show the ZDUE settings. You will be prompted to enter the parameterizing password for this operation.

The parameters that the current ZDUE model supports will be displayed in the following list:

- Daylight savings time/standard time
- Modem settings
- General parameters
- RS232 parameters
- CL1 parameters
- RS485/M bus parameters
- eHZ parameters
- GPRS parameters
- LAN parameters
- Primary server
- Secondary server
- Load profile/logbook parameters
- Wireless communication parameters

Once the information on the ZDUE has been read out, an additional menu for **"Modify"** will be added to the menu bar. Use this command to modify the individual parameters (see Chapter 5 "Parameterizing the ZDUE ").

Click  (*Exit*) to close the display of the read-out parameters.

## 4.2 Read load profile

In the **Model menu**, select the submenu item **"Read load profile"** or click the corresponding icon on the icon bar:

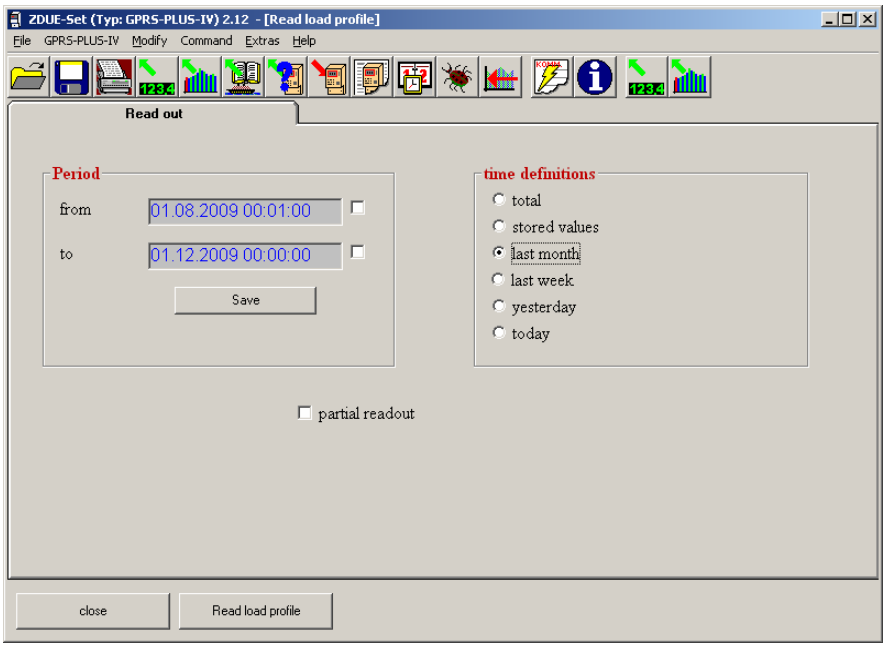


Figure 4-2: Read load profile

Use this command to read out the internal load profile of the ZDUE; it is formed by the three pulse inputs. The following settings can be made to read out a specific load profile:

## Period

This is where you can enter the starting and the ending point of the time period for the read-out data:

### from

If you set a checkmark in the box behind the input field, the beginning of the time window will be set to the first entry for the load profile. If you do not set a checkmark here, you can double-click the input window to open a dialog to freely define the time period yourself:

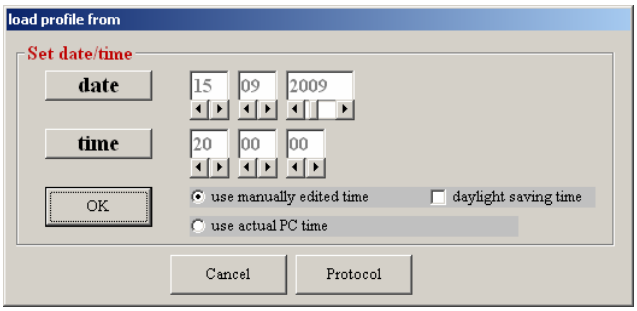


Figure 4-3: Read load profile – Set date/time

**Edit boxes:** Use the arrow keys to move from box to box and edit the values there.

**Date:** Click on *Date* to enter the current system date in the edit box.

**Time:** Click on *Time* to enter the current system date in the edit box.

**Use manually edited time:** If this option has been selected, the data entered in the edit boxes will be used.

**Daylight savings time:** Mark or unmark the *Daylight savings time* checkbox to set or delete the daylight savings time flag.

**Use actual PC time:** If this option has been selected, the current system date and the current system time will be entered into the edit boxes.

**OK:** The time and date set will be accepted; the dialog will close.

**Cancel:** The dialog will close without saving the information entered.

**to**

If you set a checkmark in the box behind the input field, the end of the time window will be set to the current time (PC system time) so that the load profile is read out until the last entry. If you do not set a checkmark here, you can double-click the input window to open a dialog to freely define the time period yourself. The dialog is the same as the dialog for the time period *from.*

**Save**

If you want to read out a specific time period repeatedly, you can click this button to save it and select it again from *Stored values* under *Time definitions*.

## Time definitions

This section contains frequently used definitions that can be selected directly:

**Total:** The entire load profile in the ZDUE will be read out.

**Stored values:** The time last saved by clicking *Save* will be loaded.

**Last month**

**Last week**

**Yesterday**

**Today**

## Partial readout

If a checkmark is placed in this box, the load profile will be read out in blocks, i.e. using the R6 read command.

### Show load profile

After you enter the time period, click *Read load profile* to read out the load profile of the ZDUE. Once all the data has been received, a new button marked *Show load profile* will appear. Click it to view the data on the load profile.

The following data will be listed in a table:

- Date
- Time
- Channel values (always all 3 channels together)
- Status of the measured periods saved

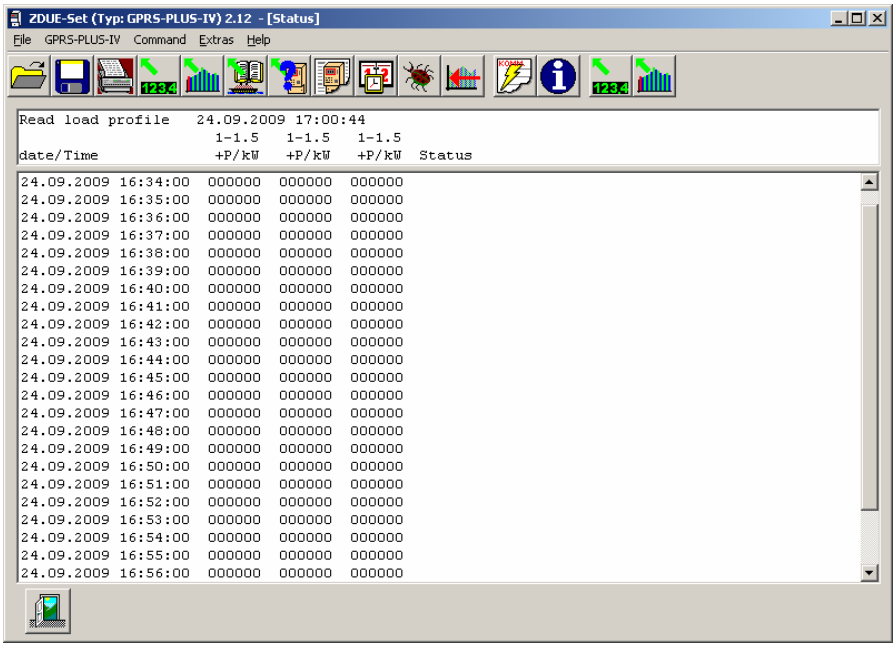


Figure 4-4: Data on the load profile

Click  (*Exit*) to close the display of the load profile data.

**Note**

Reading out large LP data volumes: Only 1000 LP entries can be displayed in any one screen. If you read out a load profile with more than 1000 entries, you can view the additional entries by clicking the lines marked *previous entries* or *following entries*, which are in front of or following the entries you can see on the screen.

## 4.3 Read GSM logbook

Select the **"Read GSM logbook"** submenu in the **"GPRS-PLUS-IV"** model menu:

The time period for which you want to read out the logbook is set in the same way as for reading out the load profile (see 4.2) on the **"Readout"** tab.

The GSM status of the ZDUE is recorded in a non-volatile ring buffer in the GSM logbook of the ZDUE-GPRS-PLUS-IV. It contains automatic entries made by a timer and/or spontaneous entries caused by a specific event, such as:

- Change of a GSM operating parameter (e.g. of the network operator, of the registration status, of the PIN etc.)
- Events in GSM communication (e.g. incoming or outgoing calls or a connection established)
- Events in local communication (e.g. the successful readout of the billing data of the meter)
- The ZDUE-GPRS-PLUS-IV was parameterized or a firmware update performed
- Activation or deactivation of GPRS functionality by the respective control mechanisms
- Automatic entry made by the timer (default: 10 min.) or when setting the date or the time in the ZDUE

An entry in the logbook always consists of the following elements:

- Current time stamp
- Cause of the entry (coded)
- Signal strength (in dBm)
- Registration status (coded)
- Location area ID
- Cell ID
- Network operator

Once the information has been read out, you can look at it by clicking *Show logbook*. Two additional tabs are added to the “Read GSM logbook” dialog:

### Show logfile

The logbook contents are presented in a table. This view will be opened automatically when you click on *Show logfile*.

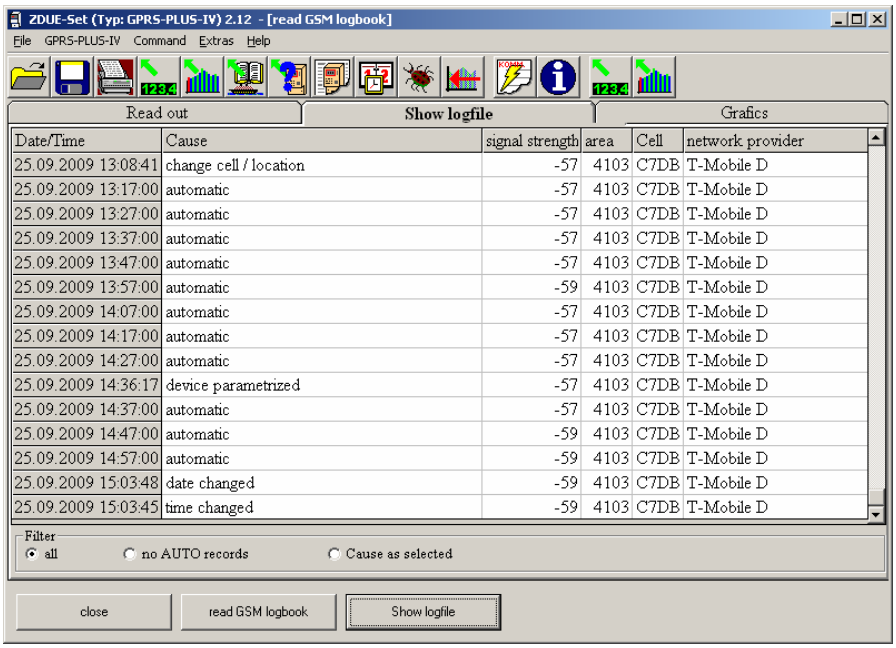


Figure 4-5: Data from the logbook

Below the table, there is an option to filter the table on the basis of specific criteria:

**All**

The complete data set read out will be shown in the list.

**No AUTO records**

Records marked with *Automatic* will be filtered out of the list so that only the "actual" events are shown. The data set read out is not changed.

**Cause as selected**

The list will be reduced to all the records for one GSM logbook code. The code is selected in a drop-down menu that appears when this filter option has been selected. It contains all the GSM logbook codes or their translations known in the existing software version.

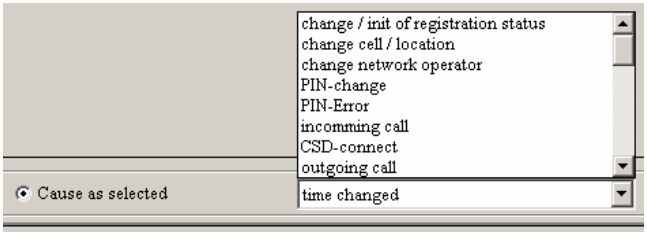


Figure 4-6: GSM logbook – Cause as selected

### Graphics

The logfile contents are shown graphically as a curve of the signal strength over time.

If a filter has been selected on the “Show logfile” tab by activating *no AUTO records* or *Cause as selected*, the corresponding records will be marked on the graph:

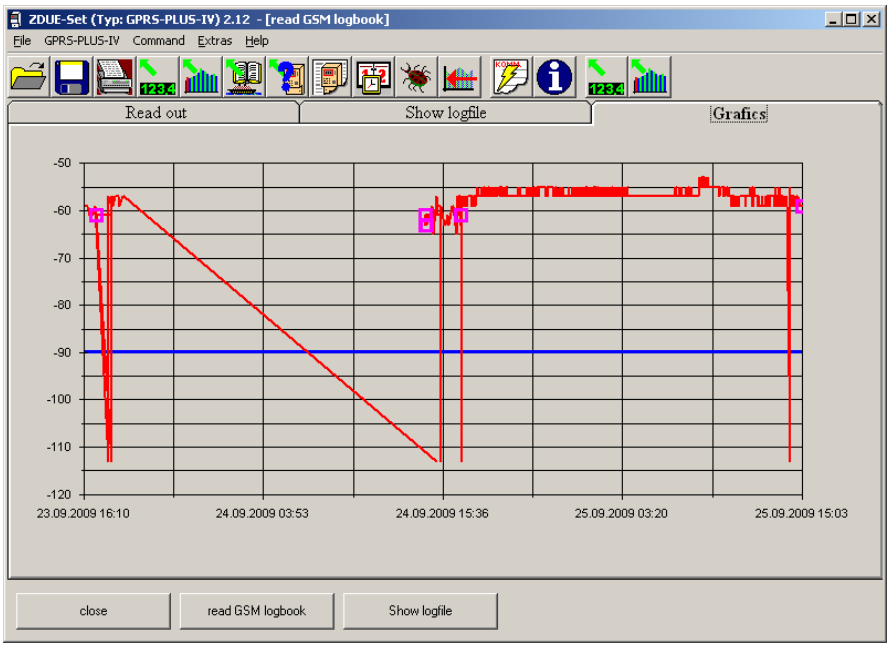


Figure 4-7: GSM logbook – Graphical view with markings

Click *Close* to close the “Read GSM logbook” dialog.

Only the ZDUE-GPRS-PLUS-IV is able to keep a GSM logbook.

## 4.4 Read device status

Select the submenu item **“Read/reset status”** under **“Commands”** or click the corresponding icon on the icon bar:

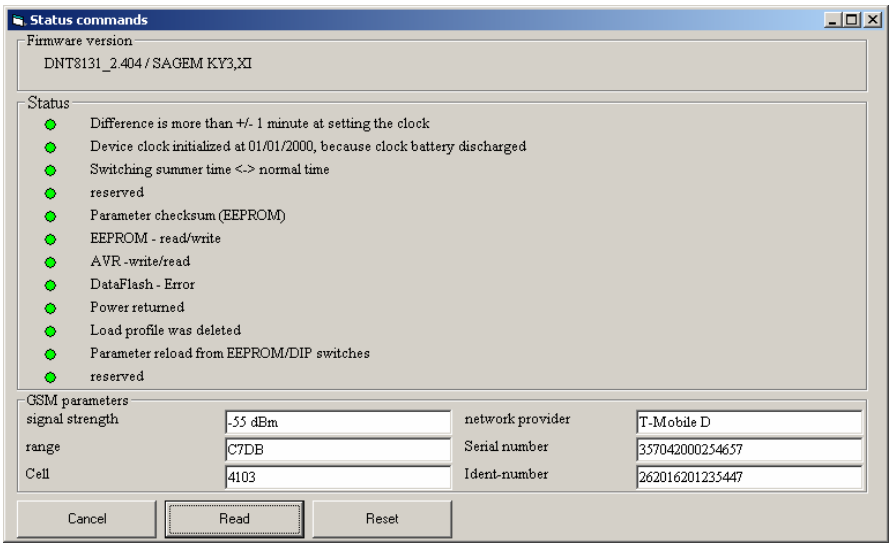


Figure 4-8: Read status

Click *Read* in the dialog that opens to read out the ZDUE status. Any errors will be marked in red at the corresponding point. Green markings indicate that the corresponding status is OK, i.e. there are no errors.

Click *Reset* to reset the errors saved in the device.

Click *Cancel* to close the dialog.

## 4.5 Read communication protocol

Click the following icon on the icon bar:

This function allows you to view the protocol of the last communication between the ZDUE Set and the ZDUE. In the event of an error, this can prove very helpful in determining at which point the error in communication occurred. The display appears in an external editor (e.g. Notepad). The ZDUE Set always saves the last 10 communication processes in .logfiles in the Logfiles sub-path in the installation folder.

Please note that a current communications protocol will only be recorded if the option of **“Create communication protocol”** has been activated in the **“Extras”** -> **“Options”** submenu on the **“Communication”** tab (see 3.1).

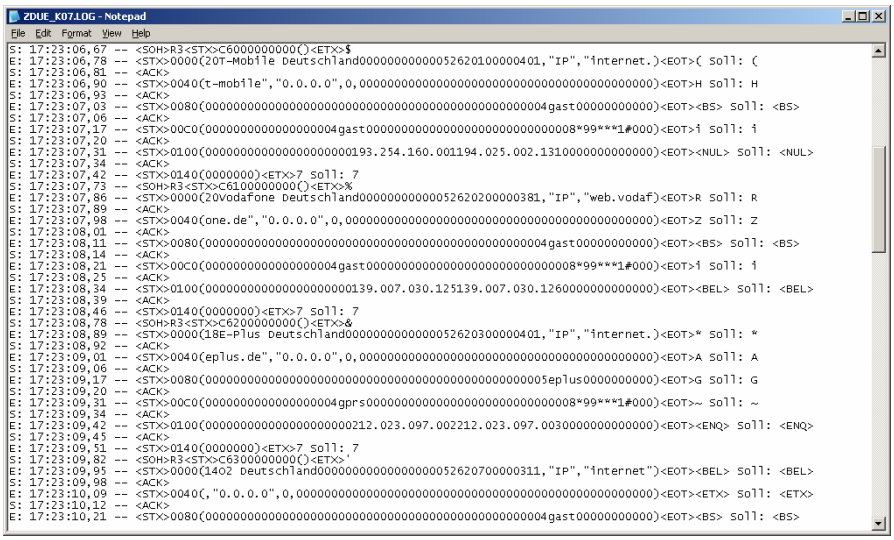


Figure 4-9: Read communication protocol

# 5 Parameterizing the ZDUE

## 5.1 Open a parameter set

In the **“File”** menu, select **“Open..”** or click the corresponding icon on the icon bar:

This function allows you to open a parameter set file (file name extension **.PAR*) in the *ParFiles* sub-path in the installation folder:

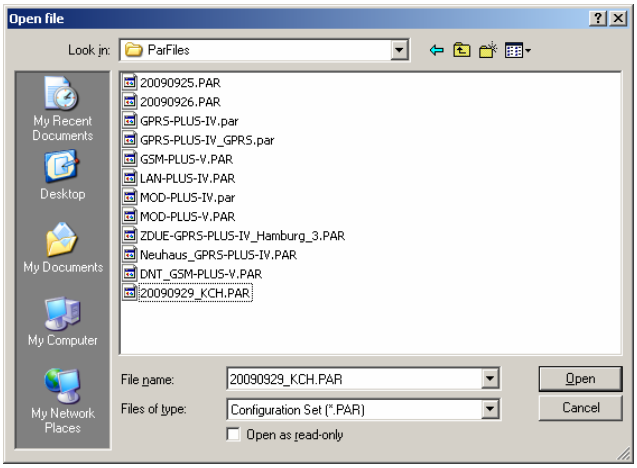


Figure 5-1: File menu, Open

Load profile files (**.LG*), logbook files (**.LOG*) and register files (**.RD*) that are available in a format that the ZDUE Set can read can also be opened using this dialog.

## 5.2 Save a parameter set

Select **“Save”** in the **“File”** menu or click the corresponding icon on the icon bar:

This command opens a dialog window so that you can save the readout data.

This data includes:

**Parameter file:** The file is saved with **.PAR* as its default extension.

**Load profile contents:** The file is saved with **.LP* as its default extension.

**Register contents:** The file is saved with **.RG* as its default extension.

**GSM logbook:** The file is saved with **.LOG* as its default extension.

**Note:**

It will not be possible to save this information unless the corresponding data has already been read out of a ZDUE or loaded using the submenu item *"Open.."* (see 5.1 "Open a parameter set") (screen display).

## 5.3 Parameterizing a ZDUE using File

Select the submenu item **"File -> <Device type>"** in the **"File"** menu.

This menu can be used to load all the parameters in a parameter file (**.PAR extension*) and send them to the modem.

Before the write command is performed, the ZDUE Set will, under certain circumstances, open another dialog that can be used to read out or set the ZDUE system time during the parameterization. If this dialog is confirmed with "Yes", the "Modem time check" will open. Its function is described in Chapter 7.1.

If you answer with "No", the device will be parameterized directly, otherwise, after the "Modem time check" dialog is closed. It is no longer possible to cancel the parameterization process at this point.

**Note:**

Please note that this function will overwrite all the parameters in the ZDUE with the settings of the parameter set loaded.

## 5.4 Modify parameters

Use the **"Modify"** menu item to modify, save and reload the parameters of a ZDUE or a file into the device.

This menu item will not appear unless the settings of the ZDUE have already been read out (see Chapter 4.1 "Read settings") or directly loaded in a parameter file (see Chapter 5.1 "Open a parameter set").

After changing the parameters, the corresponding menu item must be confirmed with "OK" to send the new parameter values to the ZDUE. The following prompt will appear:

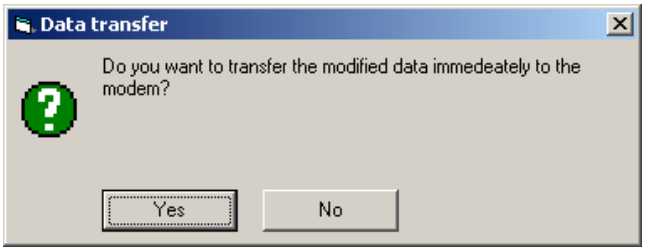


Figure 5-2: Data transfer

Click *Yes* to write the data directly in the ZDUE. If you click *No*, the process will not be performed but the data will be recorded in the ZDUE Set database.

This is the general procedure to modify the parameters. An exact description of the individual parameters is provided in the following chapters.

# 6 Configuration of the ZDUE parameters

Select **“Modify”**.

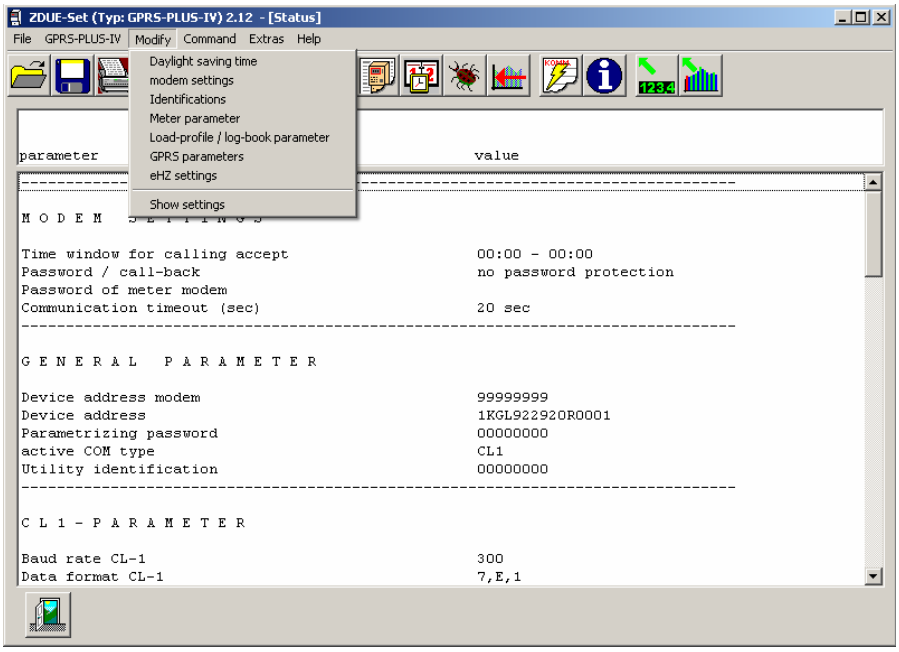


Figure 6-1: “Modify” menu item

## 6.1 Settings for daylight savings time/standard time

This is where you can specify the switching dates between daylight savings time/standard time for the ZDUE’s real time clock for the next ten years. These dates can be calculated automatically using either the EU standard (*EC Standard* button) or you can define the times manually. A switching point to be changed is marked in the table and the date is set with a slide control. Select *standard time/daylight savings time* to determine when the clock will be switched:

- Standard time: 03:00h
- Daylight savings time: 02:00h

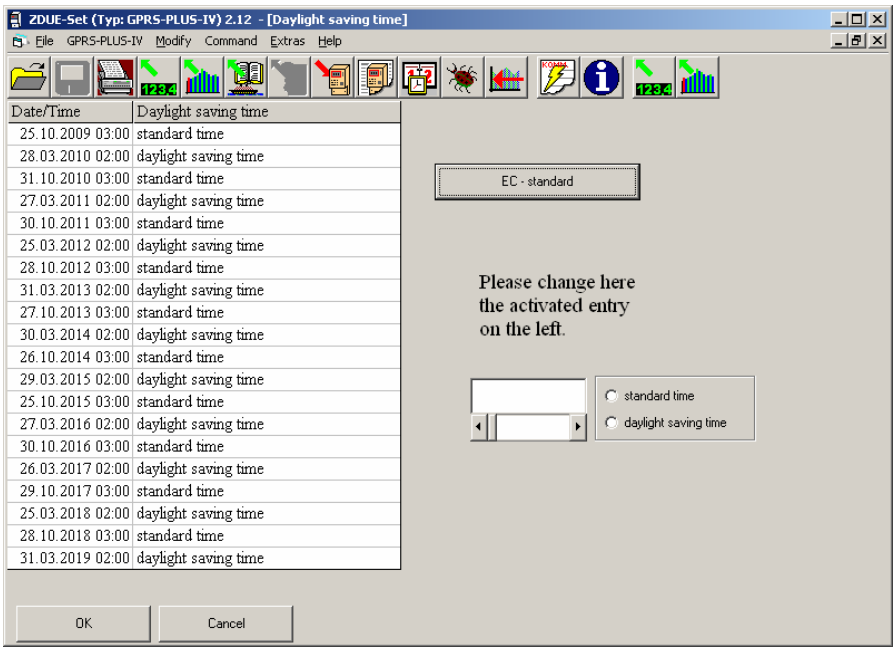


Figure 6-2: “Daylight savings time/standard time” menu

Among other things, the switching table is required for the correct time behavior of the internal load profiles of the ZDUE-MOD-PLUS-IV/ZDUE-GPRS-PLUS-IV/ZDUE-LAN-PLUS-IV from the three pulse inputs.

## 6.2 Modem settings

This menu can be used to set all the parameters for the communication between the PC modem and the ZDUE:

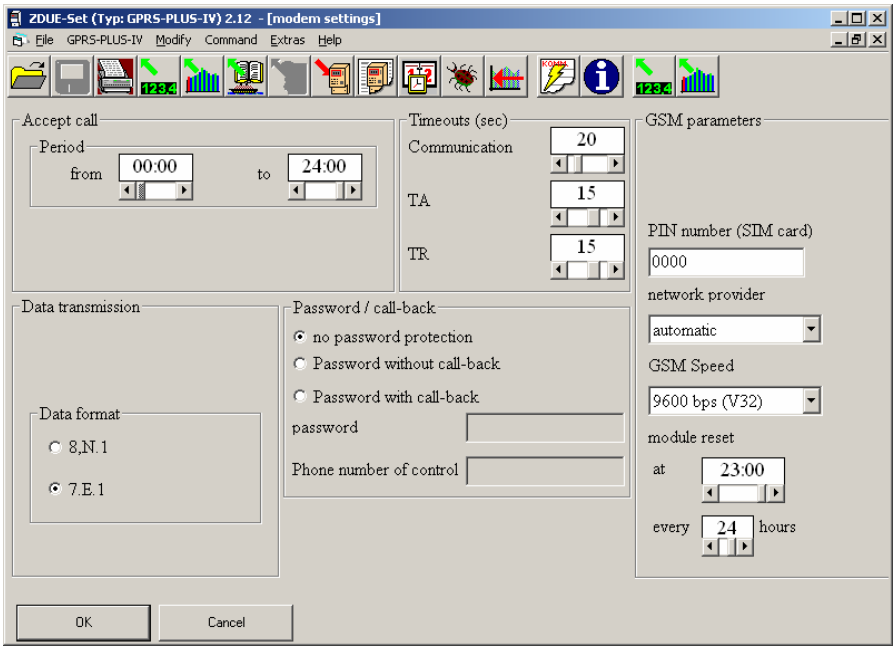


Figure 6-3: “Modem settings” menu “

**Accept call/period**

The ZDUE will accept incoming calls only within the time period set. This function assumes that the clock in the ZDUE is set to the correct time so that the system time is the same as the real time. That's why a reset of the clock in the ZDUE will be suggested automatically when any changes are made in the time window parameters and it should also be altered accordingly.

**Data transfer/data format**

For the connection between the PC modem and the ZDUE, the data format can be set to 7,E,1 or 8,N,1. This is required because not all of the control center modems are able to process the 7,E,1 format.

**Timeouts**

If there is no data connection to the ZDUE or the connected meter for the duration of the *Communication* timeout, the ZDUE will automatically terminate the connection. The *TA* and *TR* timeouts are specified in the IEC1107 protocol.

**Password/call-back**

If password protection is activated in the ZDUE, it must be set here. A ZDUE with password protection will prompt the user to enter a password after the connection has been set up by CONNECT (message: "Please Login:"). If the password is not entered within 10 seconds, the ZDUE will terminate the connection. In addition, it is also possible to activate the call-back function in combination with password protection. In this case, the ZDUE hangs up after the password has been entered and dials the telephone number stored for the control center 5 seconds later.

**GSM parameters (only for the ZDUE-GSM-PLUS-V, ZDUE-GPRS-PLUS-IV)**

This is where you can alter the PIN of the SIM card and specify a network provider (useful close to borders to avoid expensive roaming), as well as select the GSM transfer rate and the reset time including the interval for the GSM module in the ZDUE-GSM-PLUS-V or ZDUE-GPRS-PLUS-IV.

## 6.3 Identifications

This function allows you to modify the IEC1107 address, the parameterization password and the EVU identification of the ZDUE. Please make sure that the address of the ZDUE is different to the IEC addresses of the meters connected to ensure unique addressing in communication.

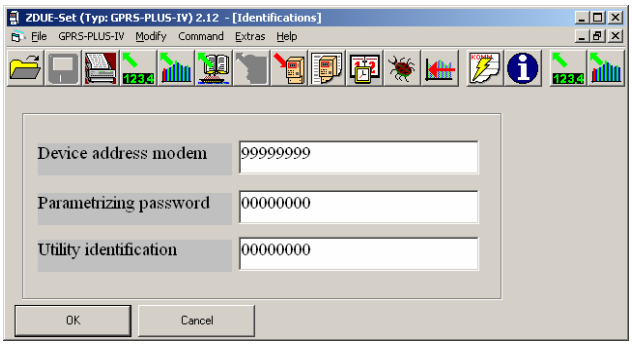


Figure 6-4: “Identifications” menu

## 6.4 Meter parameters

This menu is used to set the interface parameters for communication with the meters connected to the ZDUE. The CL1 parameters apply in the same way for all the existing interfaces for the ZDUE-MOD-PLUS-IV, the ZDUE-MOD-PLUS-V and the ZDUE-GSM-PLUS-V.

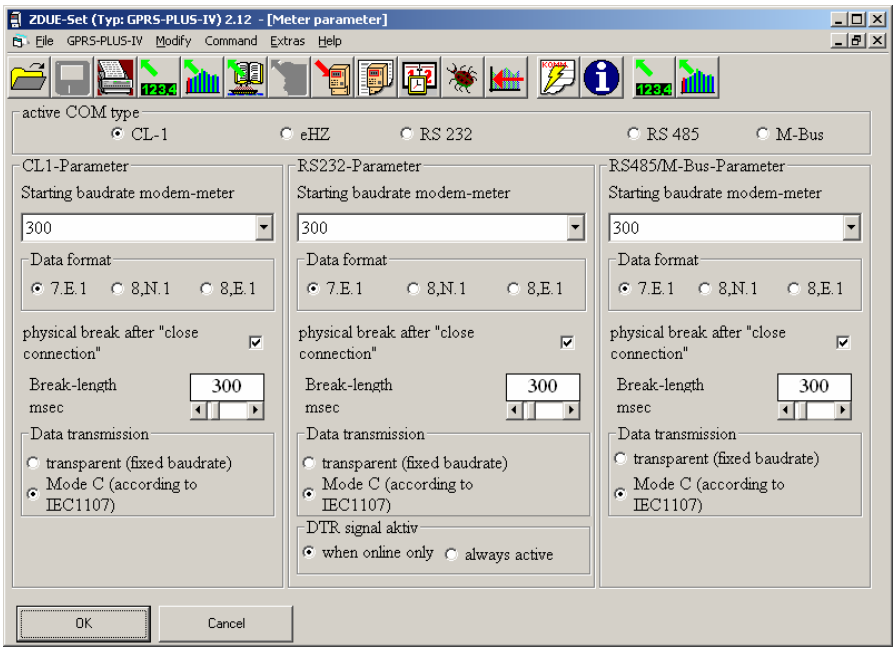


Figure 6-5: “Meter parameters” menu

### Selection of the interface type

**Active interface type**
(ZDUE-GPRS-PLUS-IV, ZDUE-LAN-PLUS-IV only)

This is where you specify which interface the ZDUE uses for communication to a connected meter.

## Standard parameters for all interfaces

The different interfaces each have the same standard parameters:

**Starting baudrate modem meter**

This value must be the same as the parameterizing baudrate in the meter.

**Data format**

This value must be the same as the parameterizing data format in the meter.

**Physical break after “close connection”**

Is sent when activated to terminate undesired communication from the meter and to clear the interface for further communication.

**Break length**

This parameter determines how long the physical break should last on the line to the meter.

**Data transmission**

**Transparent (fixed baudrate):** The data is transmitted purely transparently between the meter and the control center using the starting baudrate set.

**Mode C (according to IEC1107):** The ZDUE first determines the baudrate to the meter and automatically sends this information to the control center. After that, the data is transmitted transparently between the meter and the control center.

## Additional parameters for the RS-232

There is also the following parameter for the RS232 interface (ZDUE-GPRS-PLUS-IV and ZDUE-LAN-PLUS-IV only):

**DTR signal active**

The DTR signal can be either always active or only switched to active during an existing connection to the ZDUE.

## 6.5 Load profile/logbook parameters

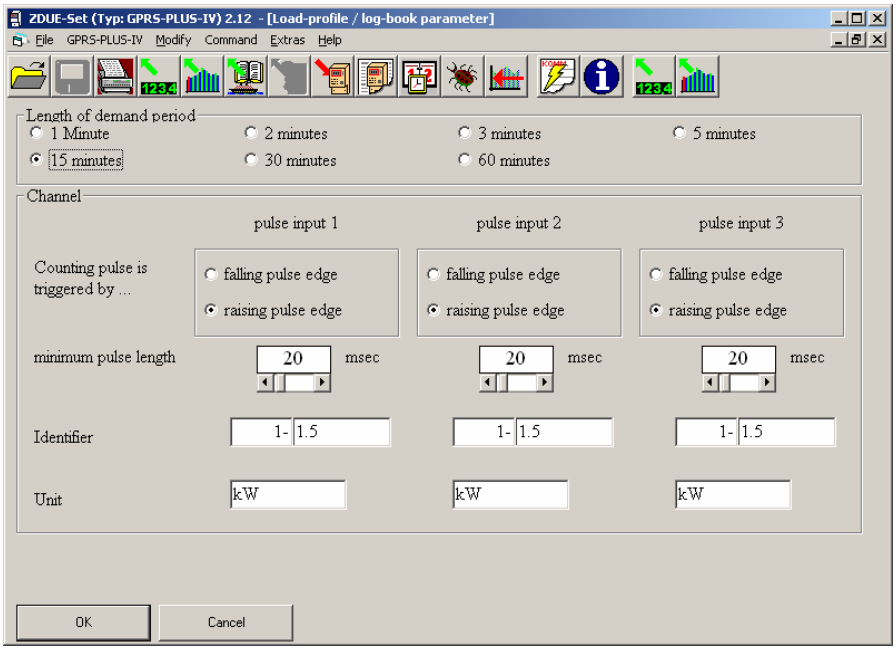


Figure 6-6: “Load profile/logbook parameters” menu

These parameters are available for the ZDUE-GPRS-PLUS-IV, the ZDUE-LAN-PLUS-IV and the ZDUE-MOD-PLUS-IV only.

### Length of demand period

The length of the demand period can be set to 1, 2, 3, 5, 15, 30 or 60 minutes. It applies in the same way for all three channels.

### Channels

This is where the parameters for the individual load profile channels can be set:

**Counting pulse is triggered by ...**

The type of edge that triggers a counting pulse (raising or falling edge).

**Minimum pulse length**

Minimum length of a pulse so that it is counted.

**Identifier**

The EDIS identifier for the medium to be measured.

**Unit**

The physical unit of the medium to be measured.

## 6.6 GPRS parameters for the ZDUE-GPRS-PLUS-IV

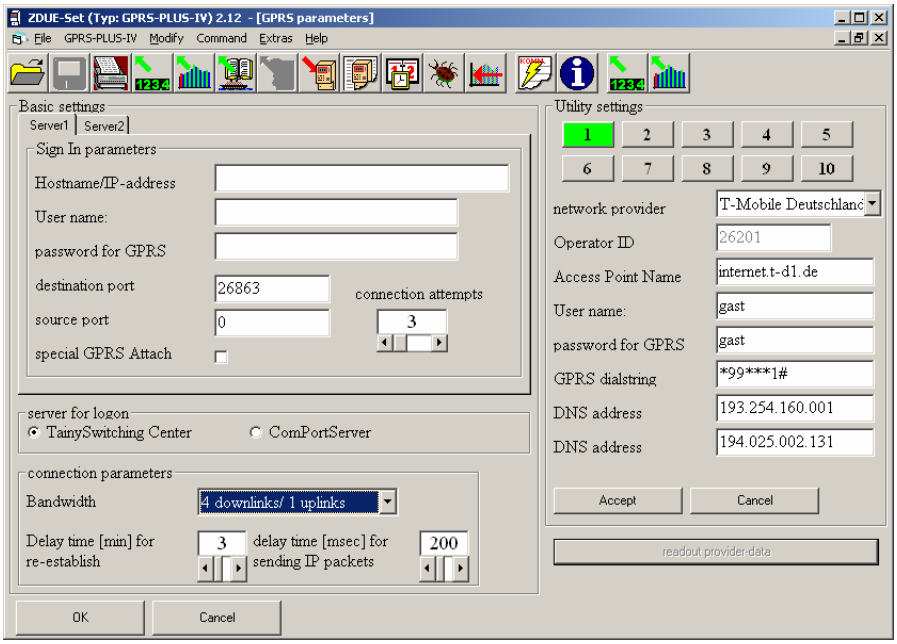


Figure 6-7: “GPRS parameters” menu

This menu contains the GPRS and server parameters of the ZDUE-GPRS-PLUS-IV, providing that the device is equipped with this functionality (ZDUE-GPRS-PLUS-IV, firmware version V2.XXX):

### Network provider settings

#### Network provider settings

The network provider settings contain a list with GPRS registration information for 10 possible network providers, which can be freely specified by the user. The ZDUE-GPRS-PLUS-IV adopts the provider data and the GPRS parameters according to the SIM card from this list. The first four data sets are preset at the factory to the following German network providers: *T-Mobile*, *Vodafone*, *E-Plus* and *O2*.

The number buttons are used to select an entry that is to be modified. As long as not all the input fields are filled, the corresponding number button will light up in red. Once the data has been entered, it is allocated to the entry by clicking *Accept*. The next time the ZDUE is parameterized, the new settings will be written into the device.

*Cancel* cancels out any modifications made to a provider entry that have not yet been accepted.

## Basic settings

To log onto a TSC (TAINY SwitchingCenter) or CPS (TAINY ComPortServer)[1], the ZDUE-GPRS-PLUS-IV requires the login data from the *Basic settings*:

**Log-on information**

This section contains the log-on information for the TSC or CPS. The data can be specified for two different servers (**Server1**, **Server2**):

**Hostname/IP address:** Server address of the TSC/CPS application.

**User name** for the logon of the ZDUE-GPRS-PLUS-IV to the TSC/CPS.

**Password** for the logon of the ZDUE-GPRS-PLUS-IV to the TSC/CPS.

**Destination** and **source port** must be the same as the settings of the TSC/CPS.

**Connection attempts:** If the server is not available, the number of attempts entered here will be made. This function is available for Server1 only.

**Special GPRS attach:** If this function is activated, the GPRS detach will be effected by a GSM module restart. This function is available for Server1 only.

**Server for logon**

The selection of the logon server determines which protocol the ZDUE uses for communication via GPRS:

- TAINY SwitchingCenter
- TAINY ComPortServer

**Connection parameters**

**Bandwidth:** Determines the number of downlink and uplink channels. You can choose between “4 downlinks/1 uplink” and “3 downlinks/2 uplinks”.

**Delay time [min] for re-establish:** Delay time for a new GPRS attach, following the termination of the GPRS connection or for a faulty re-establish. This parameter no longer appears from FW version 2.100.

**Delay time [mSec] IP packets:** Meter data is sent to the control center once 1024 bytes have been received or after the delay time set here has expired.

[1] System to connect meter modems via GPRS/Internet to ZFA systems, more detailed information is available from Dr. Neuhaus Telekommunikation GmbH

## 6.7 GPRS parameters for the ZDUE-GSM-PLUS-V

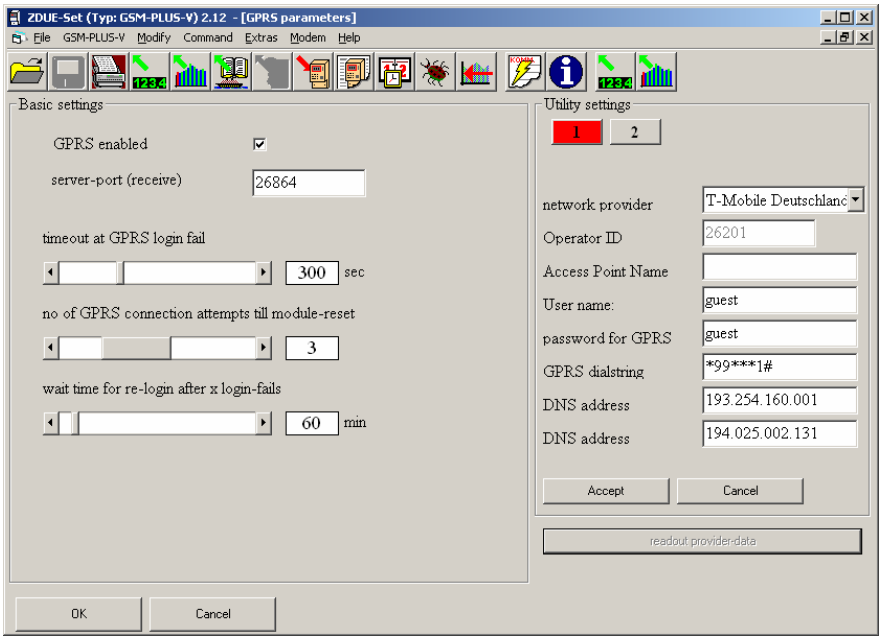


Figure 6-8: “GPRS parameters” menu

This menu contains the GPRS parameters of the ZDUE-GPRS-PLUS-V, providing that the device is equipped with this functionality (ZDUE-GSM-PLUS-V for GPRS, firmware version V3.XXX):

### Network provider settings

The network provider settings contain a list with GPRS logon information for two possible network providers, which can be freely defined by the user. The ZDUE-GPRS-PLUS-V adopts the provider data and the GPRS parameters according to the SIM card from this list. The two data sets are preset at the factory to the following German network providers: *T-Mobile* and *Vodafone*.

The number buttons are used to select an entry that is to be modified. As long as not all the input fields are filled, the corresponding number button will light up in red. Once the data has been entered, it is allocated to the entry by clicking *Accept*. The next time the ZDUE is parameterized, the new settings will be written into the device.

*Cancel* cancels out any modifications made to a provider entry that have not yet been accepted.

### Basic settings

The ZDUE-GSM-PLUS-V operates on an IP server in GPRS mode and waits for a fixed port after receiving the connection request from a client. The parameters required for this are set here:

**GPRS enabled**

If this option is activated, the ZDUE-GSM-PLUS-V is operating on an IP server. If the checkmark is removed, GPRS functionality will be deactivated and the ZDUE can only be reached locally and via GSM.

**Server port (receive)**

TCP port, at which the ZDUE waits for incoming connection requests from a client.

**Timeout at GPRS login fail**

If a GPRS login fails, a new attempt will be made after the timeout expires.

**No. of GPRS connection attempts till module reset**

Once this number of connection attempts has failed for the GPRS login, the GSM module will be restarted.

**Wait time for re-login after x GPRS login fails**

After the number of GPRS login fails configured here, the ZDUE will wait the amount of time entered here before it makes any new GPRS login attempts.

## 6.8 LAN parameters

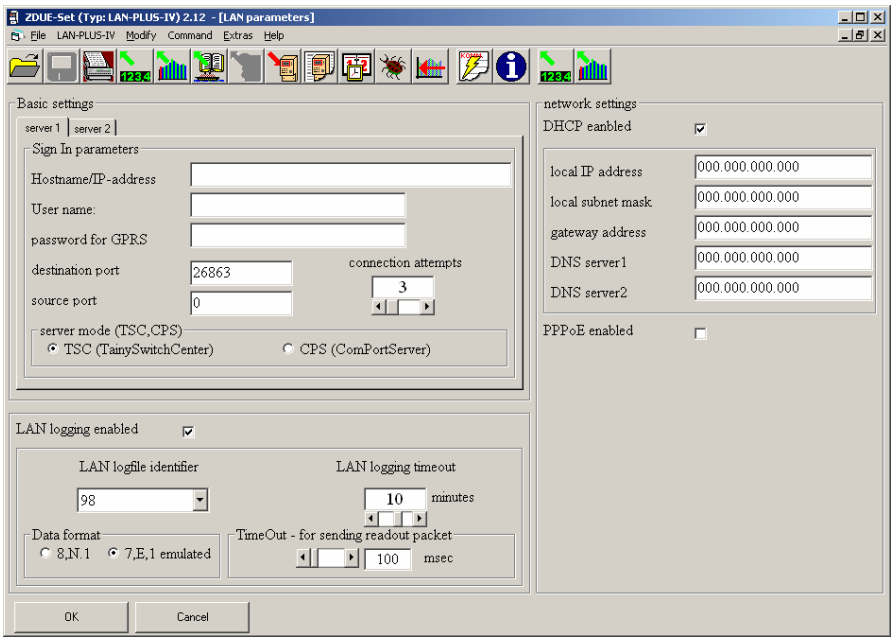


Figure 6-9: “LAN parameters” menu

This menu contains the LAN and server parameters for the ZDUE-LAN-PLUS-IV. These parameters are available for the ZDUE-LAN-PLUS-IV only.

### Network settings

This is where the parameters of the ZDUE Ethernet interface are managed.

**Local IP address**

The IP address of the Ethernet interface.

**Local subnet mask**

The mask of the subnet in which the device is located.

**Gateway address**

Address of the gateway used for the connection to the WAN.

**DNS Server1**

First DNS server address (DNS: Domain Name System). This is the address of a DNS server that changes a domain name into an IP address.

**DNS Server2**

Second DNS server address.

**DHCP enabled**

If the DHCP (Dynamic Host Configuration Protocol) is enabled, the ZDUE will be automatically assigned its local IP address, the local subnet mask, the gateway address and the two DNS servers. In this case, it is necessary for a DHCP server to be working in the subnet in which the ZDUE is located.

If the DHCP is enabled, the text boxes for the *Local IP address*, *Local subnet mask*, g*ateway address*, *DNS Server1* and *DNS Server2* cannot be edited.

**PPPoE enabled**

This option makes it possible to operate the ZDUE-LAN-PLUS-IV directly at a DSL connection. If PPPoE is enabled, an additional field will appear in which you have to enter the access data of the DSL provider:

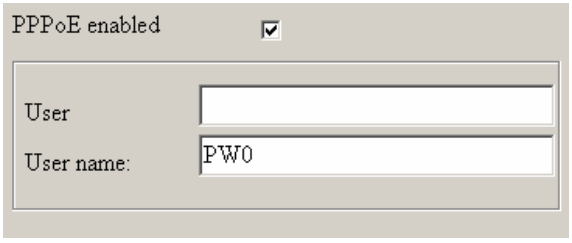


Figure 6-10: “LAN parameters – DSL provider data” menu

## Basic settings

To log onto a TSC (TAINY SwitchingCenter) or CPS (TAINY ComPortServer)[1], the ZDUE-LAN-PLUS-IV requires the following data:

**Sign-in parameters**

This section contains sign-in information for the TSC or CPS. Data from two different servers can be entered here (**Server1**, **Server2**):

**Hostname/IP address:** Server address of the TSC/CPS application

**User name** for the ZDUE-LAN-PLUS-IV logon to the TSC/CPS

**Password** for the ZDUE-LAN-PLUS-IV logon to the TSC/CPS

**Destination** and **source port** must be the same as for the TSC/CPS

**Connection attempts:** If the server is not available, this is the number of connection attempts that will be made. This function is available for Server1 only.

### Server mode

The selection of the server mode determines which protocol the ZDUE will use for communication via the LAN interface:

- TAINY SwitchingCenter
- TAINY ComPortServer

### LAN logging enabled

Activates/deactivates the creation of a LAN logbook in the ZDUE-LAN-PLUS-IV

### Data format

Data format of a logical connection established between the ZDUE-LAN-PLUS-IV and a control center.

### TimeOut – for sending readout packet

Meter data is sent to the control center once 1024 bytes have been received or after the delay time set here has expired.

## 6.9 eHZ parameters

These parameters are available for the ZDUE-GPRS-PLUS-IV only.

[1] System to connect meter modems via GPRS/Internet to ZFA systems, more detailed information is available from Dr. Neuhaus Telekommunikation GmbH

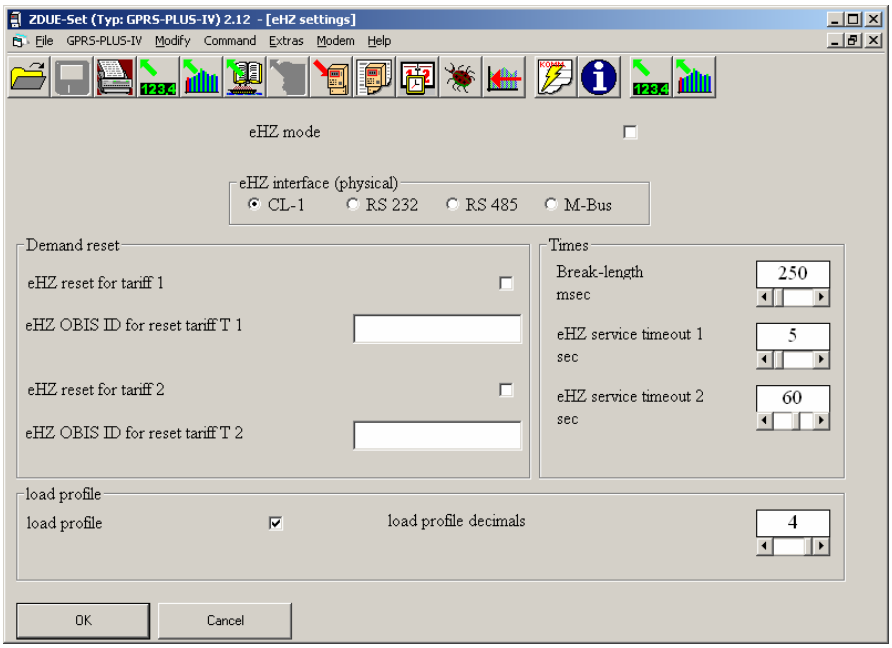


Figure 6-11: “eHZ parameters” menu

Starting from FW version 2.3xx, the ZDUE-GPRS-PLUS-IV is able to receive data from an electronic household meter (eHZ) connected and record it in a load profile. In addition, a monthly reset of the measured values can be activated for two different tariffs. All the parameters required for the eHZ mode are specified in this dialog:

## eHZ mode

Activates/deactivates the eHZ mode.

## eHZ interface

This section specifies to which physical interface of the ZDUE an eHZ is connected:

- CL-1
- RS 232
- RS 485
- M-Bus

## Reset

This section specifies the parameters for resets:

**eHZ reset T 1**

Activates/deactivates the reset for tariff 1.

**eHZ OBIS ID for reset T 1**

At this point, the ID or part of the ID searched for in the eHZ data set is parameterized. The value assigned to the ID is used for the reset for tariff 1.

**eHZ reset T 2**

Activates/deactivates the reset for tariff 2.

**eHZ OBIS ID for reset T 1**

At this point, the ID or part of the ID searched for in the eHZ data set is parameterized. The value assigned to the ID is used for the reset for tariff 2.

## Load profile

This section is used to set the parameters for recording the load profile:

**Load profile**

Activates/deactivates the load profile recording.

**Load profile decimal**

The values communicated from the eHZ have more places than can be presented in the load profile. This parameter indicates the number of decimal places that are to be shown in the load profile.

## Times

This defines the timing for the eHZ mode:

**Break length msec**

**eHZ timer** – determines how much time can pass between the starting and end ID of an eHZ data set before the ZDUE declares the data set to be invalid.

**eHZ Service Timeout Sec**

**ServiceTimer_1** – determines the maximum time that can pass between the receipt of two characters at the physical interface. If this time is exceeded, the ZDUE-GPRS-PLUS IV will switch into the service mode.

**eHZ Service Timeout Sec**

**ServiceTimer_2** – determines the length of time that can pass between the end of the service mode and the restart of ServiceTimer_1. This makes it possible, for example, to disconnect the parameterizing computer from the ZDUE after performing a local parameterization and to connect the eHZ before the device switches back into the service mode.

## 6.10 Display settings

Use this menu item or the corresponding icon  to display the parameters currently set in the ZDUE Set in a list in the main window (also see Figure 4-1: Read out settings).

Any modifications made in the settings will go into effect after they have been confirmed in the corresponding dialog with “OK” and then the “Display settings” function is activated.

# 7 ZDUE commands

Select the “**Command**” menu item.

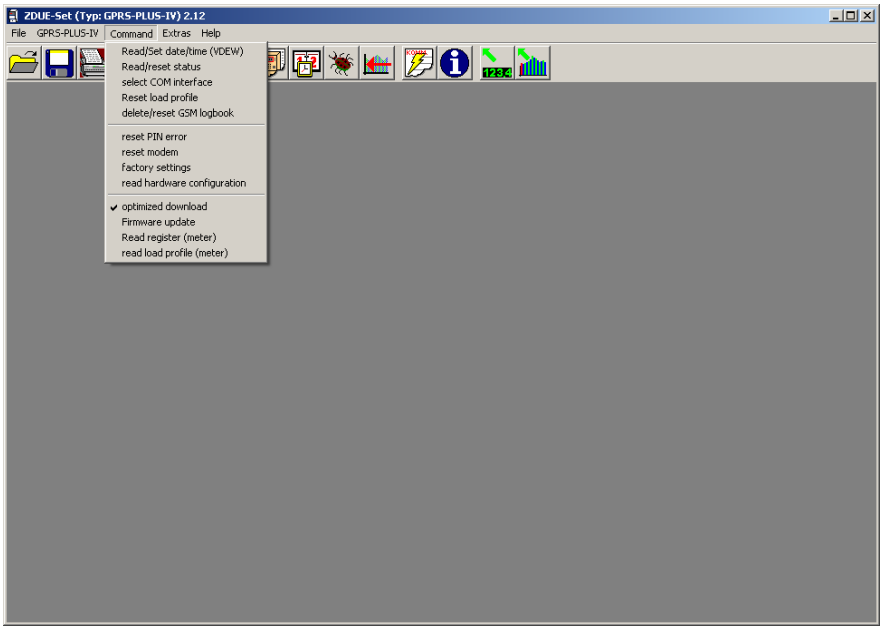


Figure 7-1: Command menu

Use this menu to send formatted commands to the ZDUE, whereby not every command is available for every model. The “Command” menu adapts to the ZDUE selected.

## 7.1 Read/set date/time (VDEW)

In the **“Command”** menu, select the submenu item **“Read/set date/time (VDEW)”** or the corresponding icon on the icon bar:

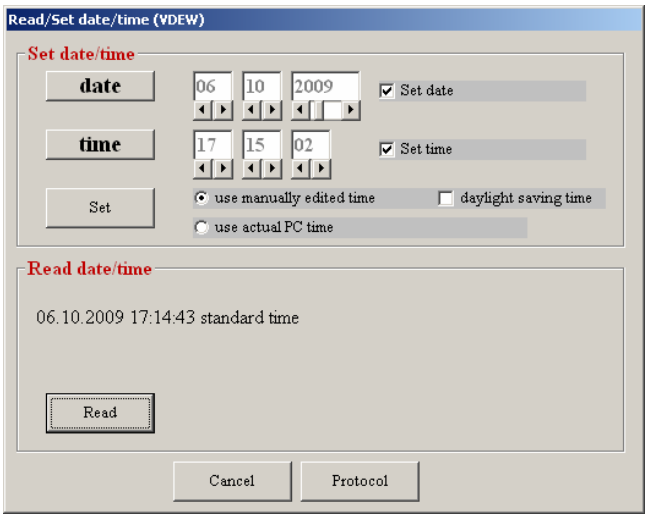


Figure 7-2: Read/set date/time (VDEW)

The real-time clock in the ZDUE can be set in the window for **"Set date/time"**. There are two modes to select from:

**Use manually edited time**

Use the arrow keys below the editing fields to set an individual time/an individual date. Use the daylight savings time checkbox to set or delete the daylight savings time flag.

**Use actual PC time**

If this mode is used, the current PC time/PC date will automatically be transmitted to the ZDUE.

Use the *Date* button to set the date editing fields with the current PC date, the *Time* button to set the PC time.

The *Set date* and *Set time* checkboxes can be used to determine which data set are to be written into the device. This setting is valid for the transfer of a manually set time as well as the PC time.

The *Set* button writes the date set (date and/or time) into the device connected.

Use the *Read* button in the *Read date/time* window to read out and display the current system time of the ZDUE connected.

## 7.2 Read/reset status

See Chapter 4.4 "Read device status".

## 7.3 Select COM interface

This command is available for the ZDUE-GPRS-PLUS-IV and the ZDUE-LAN-PLUS-IV only.

Select **“Read/reset status”** in the **“Command”** menu.

With this function, it is possible to switch the interface to the meter for the ZDUE-GPRS-PLUS-IV and ZDUE-LAN-PLUS-IV online, i.e. during an existing connection. This means, for example, from the CL1 to the RS232 interface. In this way, all the interfaces can be addressed during a connection between the control center and the ZDUE-GPRS-PLUS-IV or the ZDUE-LAN-PLUS-IV and the meters connected read out.

This temporary switch will not affect the active interface set in the “Meter parameters”. As a result, the parameterized interface will first be used the next time a connection is established to the ZDUE-GPRS-PLUS-IV or ZDUE-LAN-PLUS-IV (also see 6.4 Meter parameter).

The ZDUE Set performs this interface switch after the selection has been made with a separate command at the beginning of the next request. This command is **/?COMPORT#x!**.

The x stands for the number of the corresponding interface:

1 CL1
2 RS232
3 RS485
4 M-Bus

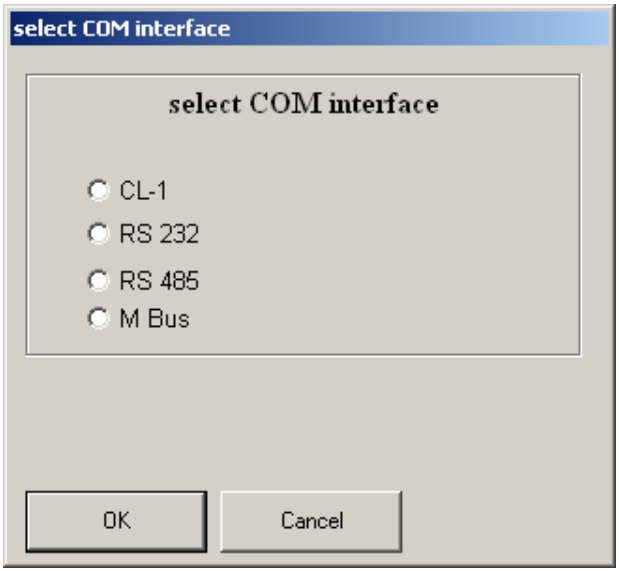


Figure 7-3: Select COM interface

## 7.4 Reset load profile

This command is available for the ZDUE-GPRS-PLUS-IV, the ZDUE-LAN-PLUS-IV and the ZDUE-MOD-PLUS-IV only.

In the **“Command”** menu, select the submenu item **“Reset load profile”** or the corresponding icon on the icon bar:

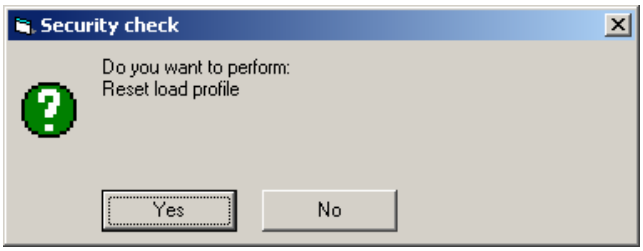


Figure 7-4: Reset load profile

Click *Yes* to reset the ZDUE-internal load profile, i.e. all load profile entries will be deleted. Click *No* to cancel the function; the load profile entries will not be affected.

## 7.5 Delete GSM logbook

This command is available for the ZDUE-GPRS-PLUS-IV only.

In the **"Command"** menu, select the submenu item **"Delete GSM logbook"**. The following dialog will appear:

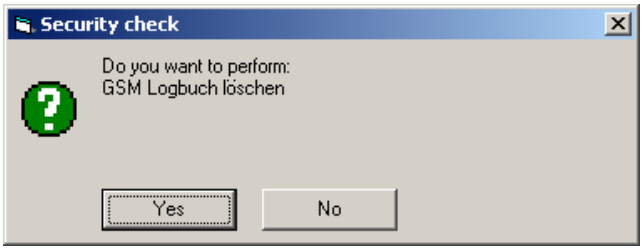


Figure 7-5: Delete GSM logbook

Click *Yes* to delete the entire logbook for the recording of the GSM status. Click *No* to cancel the function, all the GSM logbook entries will remain unaffected.

## 7.6 Reset PIN error

This command is available for the ZDUE-GPRS-PLUS-IV and the ZDUE-GSM-PLUS-V only.

In the **"Command"** menu, select the submenu item **"Reset PIN error"**.

If a SIM card is inserted in a ZDUE-GPRS-PLUS-IV with a PIN that does not match the PIN stored in the ZDUE-GPRS-PLUS-IV (default: 0000), the device will revert to PIN error status, indicated by the red, flashing status LED. In this status, the ZDUE-GPRS-PLUS-IV will not continue to attempt to book into the GSM network to avoid having a block put on the SIM card after three incorrect PIN entries. In this status, the ZDUE-GPRS-PLUS-IV can be accessed locally only.

To reactivate the GSM/GPRS mode for the ZDUE-GPRS-PLUS-IV, the PIN error has to be reset using a local parameterization via the RS232 interface.

First read out the ZDUE settings and find out what PIN is stored in the ZDUE. After that, use a cell phone to set the PIN of the SIM card to the number set in the ZDUE and put it back into the ZDUE-GPRS-PLUS-IV.

Please note that the device always has to be switched off before the SIM card is removed or inserted.

After this, the **"Reset PIN error"** command can be executed. The ZDUE Set opens a dialog, in which the PIN common to the ZDUE-GPRS-PLUS-IV and the SIM card must be entered:

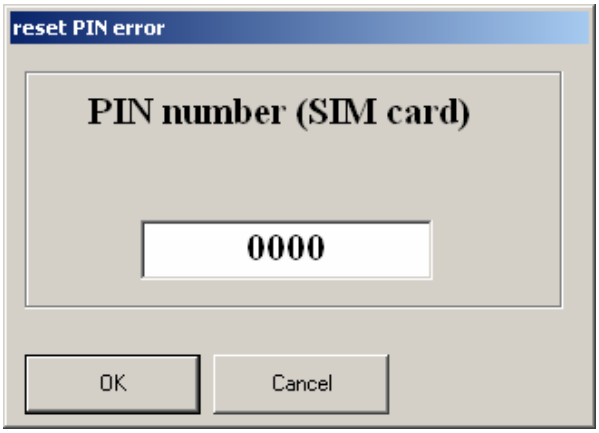


Figure 7-6: Reset PIN error

Once the PIN error has been reset, the status LED will light up in green and the ZDUE-GPRS-PLUS-IV will attempt to log into the GSM network.

## 7.7 Reset modem

In the **"Command"** menu, select the submenu item **"Reset modem"**. The following dialog will appear:

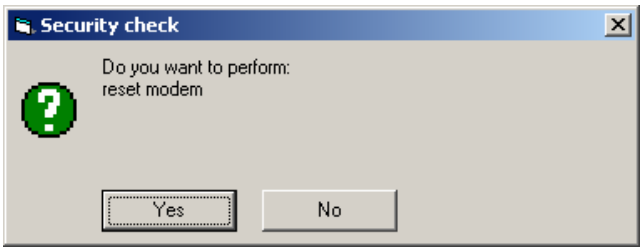


Figure 7-7: Reset modem

Click *Yes* to restart the device. This corresponds to a disconnection and re-establish of the ZDUE supply voltage. Click *No* to cancel the function, the ZDUE will not restart.

## 7.8 Factory settings

In the **"Command"** menu, select the submenu item **"Factory settings"**. The following dialog will appear:

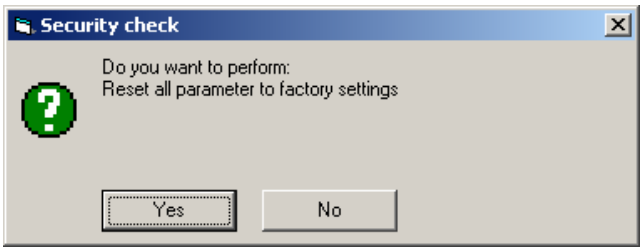


Figure 7-8: Set factory settings

Click *Yes* to reset all the parameters in the device to the factory settings. The device will then restart and has to be reconfigured for operation. Click *No* to cancel the function; the ZDUE configuration will remain unaffected.

## 7.9 Read hardware configuration

This command is available for the ZDUE-GPRS-PLUS-IV only.

In the **"Command"** menu, select the submenu item **"Read hardware configuration"**.

Use this command to read out such hardware properties as memory sizes. Click *Read* in the dialog that opens to send the command to the ZDUE. *Cancel* closes the dialog without reading out the hardware properties.

When this command has been performed successfully, the data will be shown in the corresponding text boxes of the "Read hardware configuration" dialog:

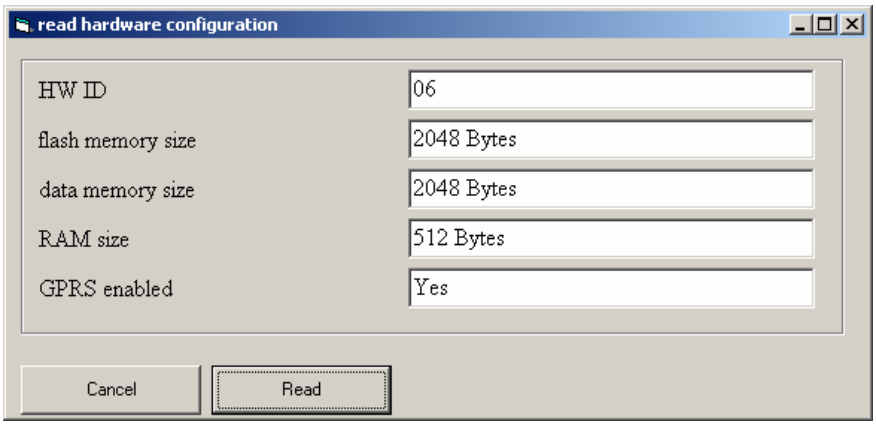


Figure 7-9: Read hardware configuration

## 7.10 Change password

This command is available for the ZDUE-GSM-PLUS-V only.

Use the **"Change password"** command in the **"Command"** menu to change the meter modem password of a ZDUE-GSM-PLUS-V. The following dialog will open:


Figure 7-10: Change password

The *Old password* field automatically contains the previous meter modem password of the ZDUE insofar as its data has already been read out. After the new password is entered in the field marked *New password* and confirmed by clicking the OK button, the new password is set in the ZDUE. Click *Cancel* to close the dialog without changing the password.

## 7.11 Optimized download

If this option is deactivated, an Xmodem download will be performed with a packet size of 1 kilobyte. With this relatively small packet size, it will take a long time to transfer a large volume of data, particularly on the GSM network because each data packet has to be confirmed by the receiver. If the optimized download is activated, the packets 10 kilobytes in size will be used, which serves to significantly accelerate the transfer process.

## 7.12 Firmware update

In the **“Command”** menu, select the submenu item **“Firmware update”** to load new firmware into the ZDUE. The update is performed using the communication path set under the “Options” menu item (“Communication” tab) under “Extras” (e.g. local or per GSM). The update cannot be started if there is an active connection to the ZDUE. The following dialog can be used to disconnect any existing connection before the update:

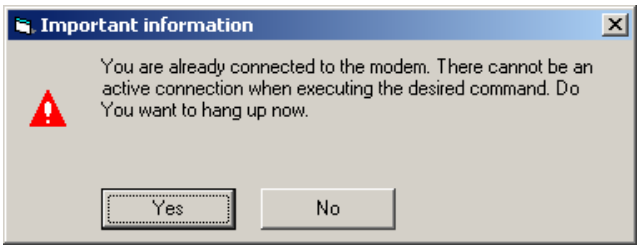


Figure 7-11: Firmware update

Click *Yes* to disconnect existing connections and to continue with the update process. Click *No* to keep the existing connections and cancel the update process.

Insofar as the update process is continued, select the corresponding firmware file from the dialog that opens:

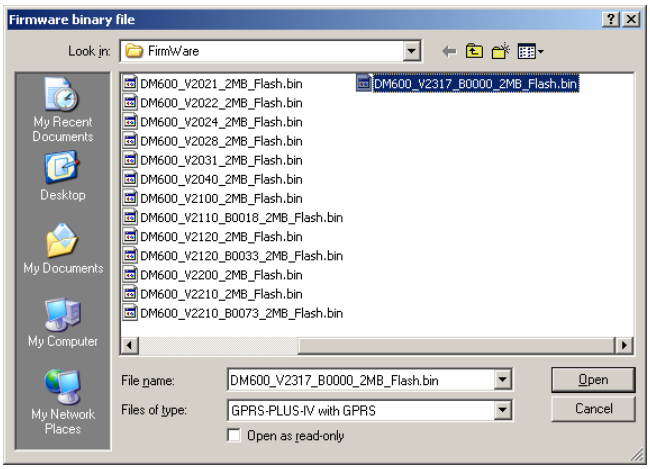


Figure 7-12: Firmware update

The Firmware files of the individual ZDUE models are different from one another. For the ZDUE-GPRS-PLUS-IV and the ZDUE-LAN-PLUS-IV, select a corresponding Firmware file with the extension (*.bin) and for the ZDUE-MOD-PLUS-IV, ZDUE-MOD-PLUS-V, ZDUE-GSM-PLUS-V a file with the extension (*.hex). The files for the individual models can be filtered out in the *File type* drop-down menu. After the selection has been made, a program will be started that establishes a modem connection, if necessary, and performs the update. Once the procedure has been completed, there will be a message output indicating that the update was successful or that an error occurred.

## 7.13 Read register (meter)

The ZDUE Set enables communication directly with the meters connected to a ZDUE. This serves primarily to check whether and meter is correctly connected and communication is possible after a ZDUE plus meters have been installed and configured with the ZDUE Set.

To read the meter register, select the submenu item **“Read register (meter)”** in the **“Command”** menu or the corresponding icon on the icon bar:

Please note that the “Read register” function and the “Read register (meter)” function both use this icon. Use the direct help function to find out which icon this is. Simply hold the cursor directly on the button without moving or clicking it.

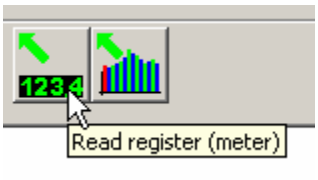


Figure 7-13: Direct help: Read register (meter)

To access a meter, it has to be addressed. ZDUE Set will first ask the user for the IEC address of the meter to be read out.

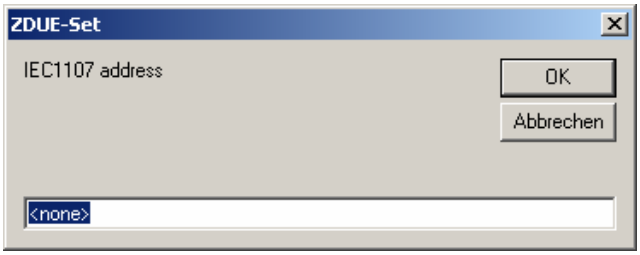


Figure 7-14: Request for IEC address

The default setting is no IEC address because a meter can also react to the request string without an address **“/?!”**. This setting is only practical for interfaces that have only one meter connected. As soon as multiple meters are connected to one interface, they have to have unique IEC addresses and to be addressed individually to be read out (e.g. with “/?11111111!”). In this case, a request with “/?!” would lead to an overlapping of meter responses because all of the meters would react in the same way to the “/?!” address.

After the transfer of the request string, the ZDUE knows that it is being addressed at its own address and forwards the data to the active meter interface. The meter addressed receives the request and responds accordingly. The ZDUE Set presents the register data as follows:

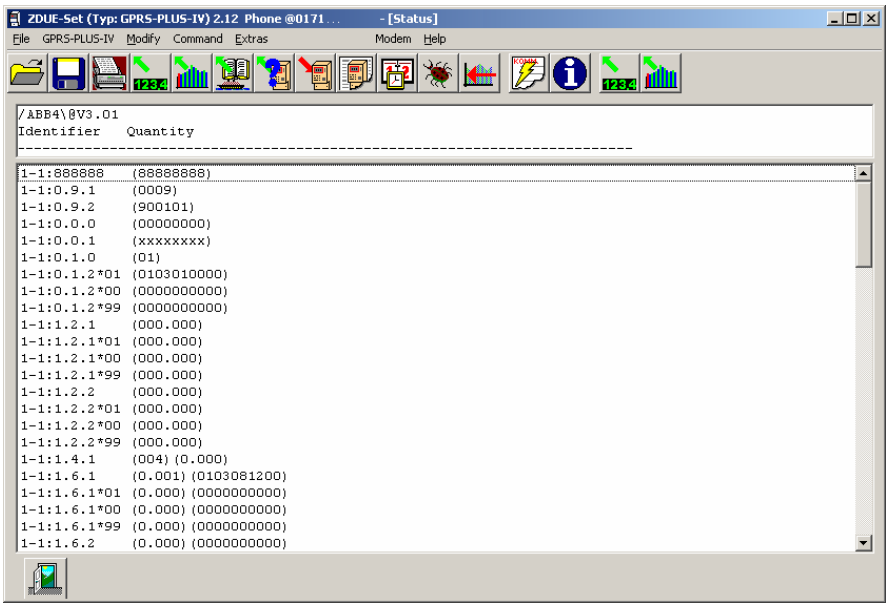


Figure 7-15: Meter register data

## 7.14 Read load profile (meter)

The ZDUE Set enables communication directly with the meters connected to a ZDUE. This serves primarily to check whether and meter is correctly connected and communication is possible after a ZDUE plus meters have been installed and configured with the ZDUE Set.

To read out the meter-internal load profile, select **“Read load profile (meter)”** in the **“Command”** menu or this icon on the icon bar:

Please note that the “Read load profile” function and the “Read load profile (meter)” function both use this icon. Use the direct help to find out which icon this is. Simply hold the cursor on the button without moving or clicking it.

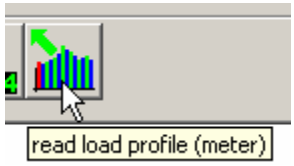


Figure 7-16: Direct help: Read load profile (meter)

To access a meter, it has to be addressed. ZDUE Set will first ask the user for the IEC address of the meter to be read out.


Figure 7-17: Request for IEC address

The default setting is no IEC address because a meter can also react to the request string without an address **"/?!"**. This setting is only practical for interfaces that have only one meter connected. As soon as multiple meters are connected to one interface, they have to have unique IEC addresses and to be addressed individually to be read out (e.g. with "/?11111111!"). In this case, a request with "/?!" would lead to an overlapping of meter responses because all of the meters would react in the same way to the "/?!" address.

After that, you can enter the information for the load profile readout (see 4.2 Read load profile):

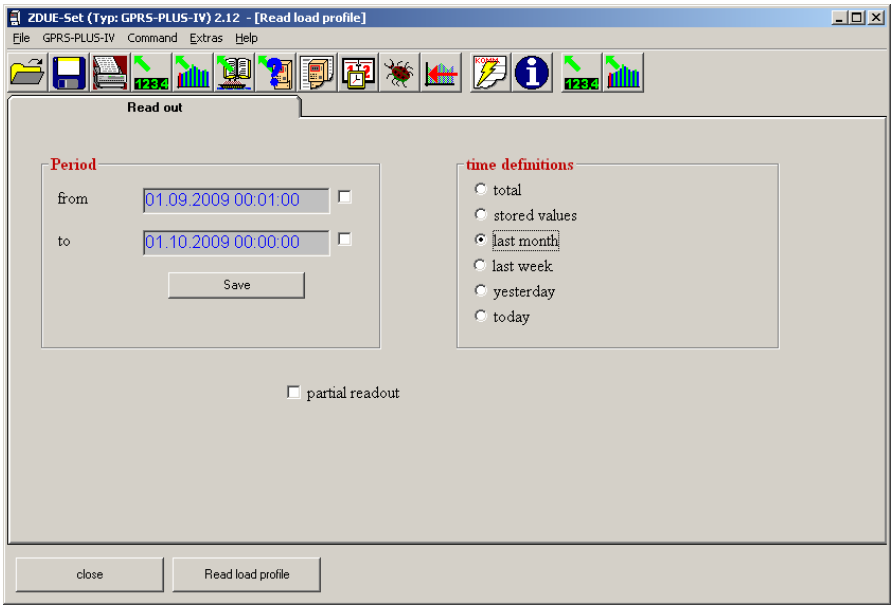


Figure 7-18: Meter load profile

The further procedure for the user and the behavior and presentation by the ZDUE Set are analog to the "Read load profile" function and described there (see 4.2 Read load profile).

# 8 The connection doesn’t work! What now?

If you experience any problems while trying to establish a functioning communication path to the ZDUE, use the following checklist to help you:

- Is the COM port correct for the PC modem connected?
- Is the phone number activated in the phone book the correct one?
- Is the IEC address of the ZDUE correct?
- Is the initialization string of the modem connected to the computer correct?
- First test “Read settings”.
- Does the ZDUE dialed respond?
- Does the ZDUE send data (see communication protocol)?
- Is the parameterizing password used correct?
- Are you using the correct data format (7,E,1 ; 8,N,1)?