Tedsen

Teletaster® IRP

User manual

Contents

Welcome

Congratulations on your choice of Teletaster® IRP!

Using Teletaster® IRP you can manage transmitters and receivers and RFID transponders and readers and assign them to sites and customers. You can create replacement transmitters or transponders and program receivers as well as readers.

We are sure that you will enjoy working with your new tool – a tool we have created with the intention to make your work easier and more enjoyable.

This guide is here to help you with any questions you may have regarding the use of Teletaster® IRP. For additional questions you may contact the Teletaster IRP hotline. Please find more details on the back of this booklet.

The chapter „quick guide“ is an ideal starting point providing a concise introduction to the most important features.

Software installation

(Microsoft® Windows®)

Install the .Net-Framework:

Please make sure you have installed the Microsoft .Net-Framework 4.6:

https://www.microsoft.com/en-US/download/details.aspx?id=53344.

Install Teletaster® IRP:

Please execute the installer *TeletasterIRP-EN.x.y.z.exe*, where x.y.z. is a placeholder for the current version number.

Starting Teletaster IRP

To start Teletaster IRP, please press „Start“, choose “All programs” and select the folder called “Tedsen”.

Quick guide

Customers, properties, receivers, reader, transmitters and transponders

To get started, create one or more customers. Once a customer is created, you can add properties to the customer. Find out more about the creation of customers and properties on page 10 in section “Customers and properties”.

Properties contain receivers or RFID-readers, which can be operated by the assigned transmitters or RFID-transponders. A transmitter can be assigned to multiple receivers of the same site. A transponder can be assigned to multiple readers of the same site. Transmitters and transponders are identified by their serial number. In addition to transmitters and transponders, which only support either classical radio or RFID there are bi-technology-transmitters supporting both in one device. Please learn more about receivers and readers on page 14 in section “Creating ”

Once you have added transmitters to a receiver or transponders to a reader you can transfer the data to the memory module using the programming device. Learn more on page 33 in section “Transmission of transmitter data to a memory module”.

If you are using the newer EKR(4)IRPT receiver, you can submit your settings through a network connection.

Hint:

You can easily add transmitters at a later time without touching the receiver:

Use virtual serial numbers!

Virtual serial numbers

In order to add new transmitters to a receiver or new transponders to a reader you would have to plug in the memory module to the programming device. This can be inconvenient. If you know in advance that you will add additional transmitters to a receiver or transponders to a reader at a later time, you can add “virtual transmitters” or “virtual transponders” ahead of time. You do this by adding “virtual serial numbers” to the receiver or reader. Once you want to use a transmitter or transponder with the receiver or reader you can write a virtual serial number already known by the receiver / reader to the transmitter / transponder. The transmitter / transponder can operate the receiver / reader without a need to reprogram the receiver / reader. Please refer to page 21 in section “Adding virtual serial numbers”.

Site keys

It is strongly recommended that you get familiar with the concept of “site keys”. Site keys are unique to a site. If you choose to use a site key for a site, this site key will be used for all receivers / readers in the site. The site key is required to generate replacement transmitters. If you use site keys, no third party will be able to create replacement transmitters even if they know the serial number of a transmitter. While this may increase security, it adds some disadvantages:

You will have to make sure that you do not loose the site key. Also, if you decide to use a transmitter for more than one site (which you can do for technician transmitters), you will not be able to create a replacement transmitter that works for properties with different site keys. This is not a problem if you do not use site keys. The same is true if you use receivers with a fixed and with a removable memory module in the *same* site. You cannot set the site key for receivers with fixed memory modules, so setting it for the other receivers would create an inconsistent infrastructure for which no replacement transmitter can be created working with all receivers. Please find more information on page 36 in section “Site keys”.

Technicians

You can create technicians. A technician can have one or more transmitters / transponders, which you can assign to any site. You cannot assign transmitters / transponders to receivers / readers located in different properties unless the transmitter / transponder is assigned to a technician. The idea is that a technician should have access to all properties he or she is in charge of. Read more on page 40 in section „Technicians“.

Important:

Please backup your database regularly!

Database backups

Please beware that all data you enter into Teletaster® IRP is stored in a database located on you local hard disk. We strongly encourage you to create a backup of this file regularly and keep it in a save place. Read more on page 44 in section “Database backups”.

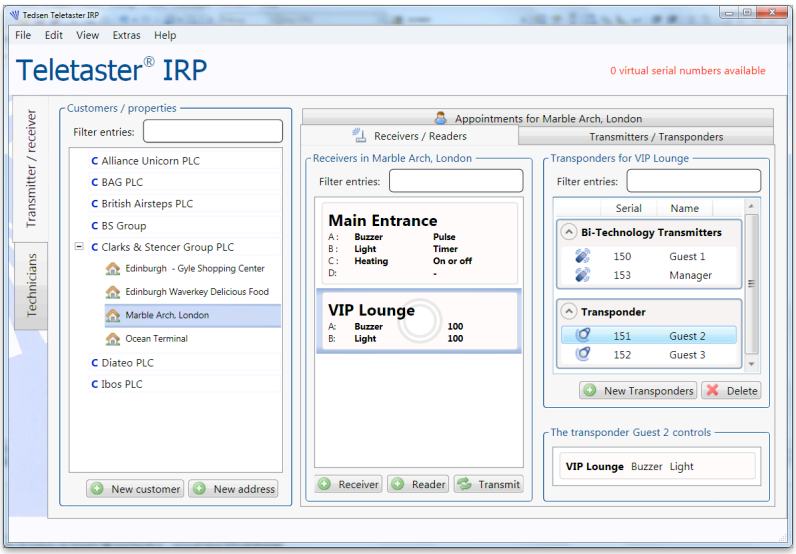
Password protection

If you decide to protect your data with a password you will be prompted for the password on every start of Teletaster® IRP. Also, the database will be encrypted using the password. Read more on page 45 in section “Password protection”.

Software overview

Teletaster® IRP is designed so that most actions can be performed with a single click on a button.

Customers, projects and addresses can be found in a list on the left-hand side of the program. When you chose an item from the list, the content on the right-hand side will be updated accordingly to show receiver / reader and transmitter / transponder data or technician appointments.

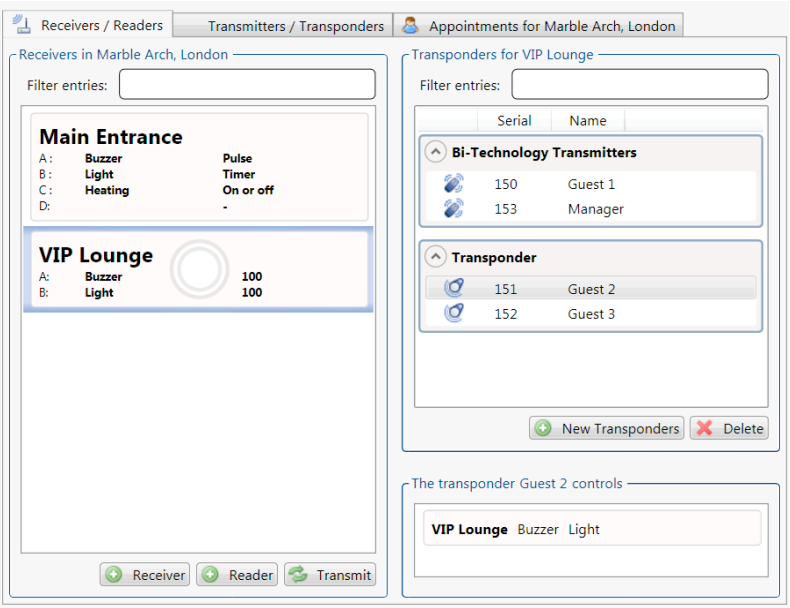


The “Receivers / Readers” tab

The right-hand side of the main window displays information related to the currently selected site or address.

You can click on any of the tabs named “Receivers / Readers”, “Transmitters / Transponders” or “Appointments”. This will display information related to the currently selected site or address:

If you click on “Receivers / Readers”, all receivers and readers of the current site or address will be displayed:



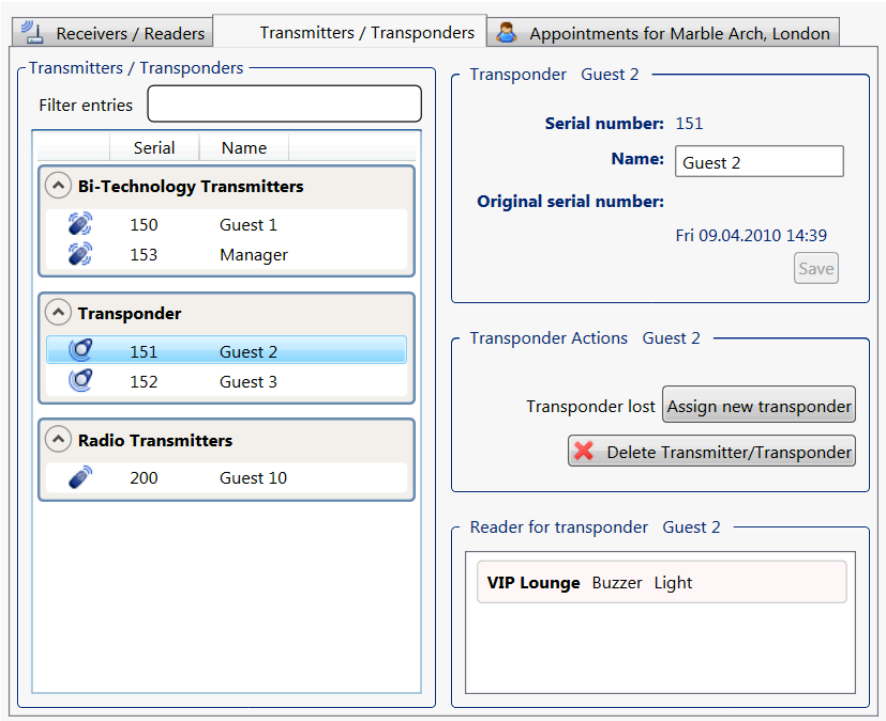
Please select one of the receivers from the list. The right-hand column will be updated to display a list of transmitters associated to the receiver you selected.

Select a reader and all transponders will be displayed.

Please refer to page 14 in section “Creating ” for more information on how to create or edit receivers. Learn how to transfer data to the memory module on page 33 in section “Transmission of transmitter data to a memory module”.

The “Transmitters / Transponders” tab

If you select the “Transmitters / Transponders” tab, all transmitters and transponders associated to any receiver or reader of the current site / address will be displayed:



Hint:

Doubleclick on a receiver in the lower right hand side of the window.

This will open the tab „Receivers“ and highlight the receiver you clicked on.

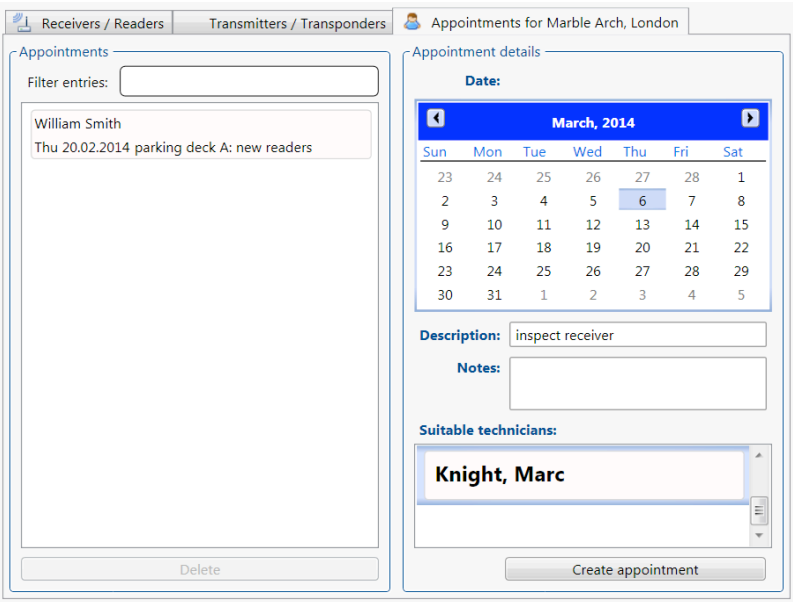
If you chose one of the transmitters or transponders from the list, additional information related to the selected receiver or reader will be displayed in the right-hand column.

In this view you can assign replacement transmitters or transponders. Please find out more on page 30 in section “Creating replacement transmitters”.

You can assign names to transmitters or transponders. To do so, enter a name in the textbox on the top right-hand corner of the window and press “Save”.

The “Appointments” tab

If you select the “Appointments” tab, all appointments associated with the current site / address will be displayed.



How to filter entries

Hint:

Your entries will be filtered as long as there is text in the filter box. The filter will remain intact when you switch to a different site or a different customer.

If a list does not display all information there is, please consider checking if a filter is active!

You will find textboxes on top of most lists. If you need to find entries matching a certain text, simply enter the beginning of that text into the filter box located above the list. The list entries will be filtered in real time according to the text you entered. This can be helpful if you want to find a certain customer or site. To remove the filter, either delete the text you entered or click on the “x” inside the textbox:

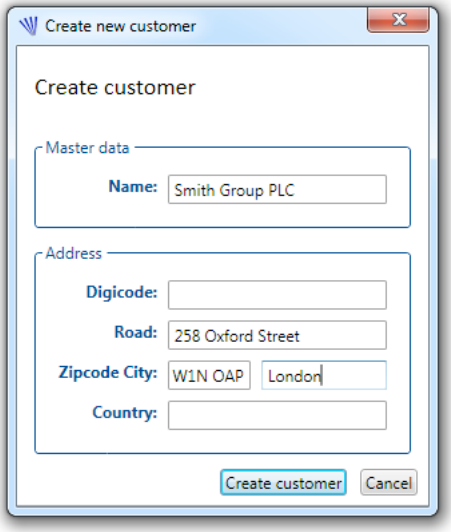
Filtering works equally well for receivers / readers and for transmitters / transponders. Transmitters or transponders can be filtered by entering a serial number or a part of a transmitter’s name.

Note: If you have set the address of a customer / site or added contact people to a customer / site, you can use this in filters. For example, you could enter “IV36” if this is used as part of a ZIP-code, or “Smith”, if you are looking for all entries where a contact person is called smith.

Customers and properties

When you first start the program, you need to create a customer and a site. This is a prerequisite for adding receivers and transmitters.

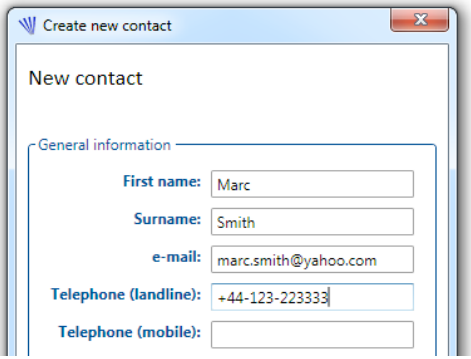
To create a customer, please press the “New customer” button located in the lower left-hand side of the window.



You may also press Ctrl+K to create a new customer.

A dialog will open, prompting for the name of the customer to be created. You may add an address for your convenience. The address will be displayed when you rest the mouse pointer over the customer in the list.

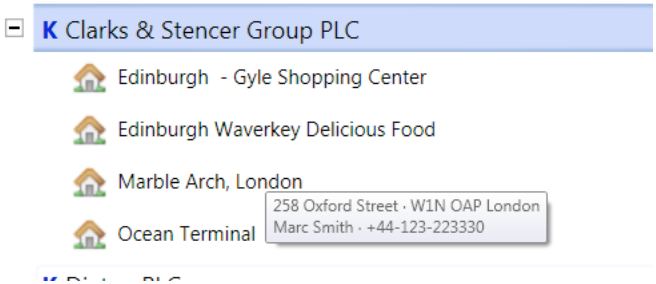
Once you are done, please press “Create customer” to save the changes you made. The customer will now be displayed in the list.



To add contacts to a customer, double-click on the name of the customer in the list or choose “Edit customer” from the “Edit” menu.

A window opens, displaying contacts on the right-hand side. To add a contact, click “New” and enter contact details. Once you are done, click “Add” to add the contact to the customer.

If you have added an address and / or contacts to a customer you can quickly look at this information by resting the mouse pointer for a little moment over the customer:



You can only delete a customer if no properties are associated to the customer.

To delete a customer, chose the customer from the list and either press the “Del” key on your keyboard or select “Delete customer” from the “Edit” menu.

Creating a site for a customer

You can assign one or more properties to a customer. Think of a site as a house, a location or a site – anything that can accommodate a receiver.

To add a site to a customer, please proceed as follows:

Choose the customer from the list.

Pres the button “Create site” or choose “Add site” from the “Edit” menu. You may also press the “+” key while holding down the “Ctrl”-key.

As described above for the customer you can add a name, address and contacts to a site.

Use tags to find suitable technicians for a customer or site

In addition to name, address and contacts you can add tags to a site.

Think of tags as a list of words describing the characteristics of properties or technicians. This can be geographical information, such as London for properties in London or the name of a district of London. Use what makes sense in your situation. You may even add tags

representing special skills required of a technician working on a site.

Tags are separated by spaces. This means that every single word you write is interpreted as one tag. If you want to use tags that consist of multiple words, think of joining the words with a dash (“-“)

Hint:

Tags may also be required skills such as RFID or HV.

You can use the same tags when you create a technician. Let’s say you add a tag “London”. This technician will be suggested as a suitable technician for all properties tagged with “London”. If you tag a technician with “London” and “RFID”, it will be suggested for properties tagged with “London”, “RFID” or “London RFID”, but not for properties tagged with “London HV”.

The rule is simple: a technician must have at least all tags of a site to be suggested as suitable.

If you do not add tags to a site, all technicians will be suggested as suitable.

Deleting properties

You can only delete properties if neither receivers nor addresses are associated to the site.

Creating an address for a site

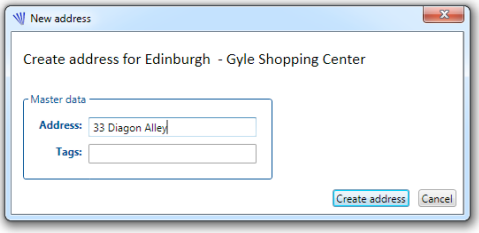
You can create one or more addresses for a site. This may be useful for sites with several entrances or buildings.

To create an address, please proceed as follows:

Chose the site from the list for which you want to create an address. Click the button “New address” in the bottom left-hand side of the main window or select “Add address’ from the “Edit” menu. Alternatively you may press “+” while holding down the “Ctrl”-key to create an address. The same key binding is used to add properties.

Add a value into the field “address”. This will be used as the caption of the address when displayed in the list.

You may add tags to an address in the same manner as you can add tags to a site.



Select “Create address” to add the address to the current site.

Deleting addresses

You may only delete addresses if no receiver has been added to the address.

To delete an address, chose the address from the list and press the “Del” key.

Creating receivers

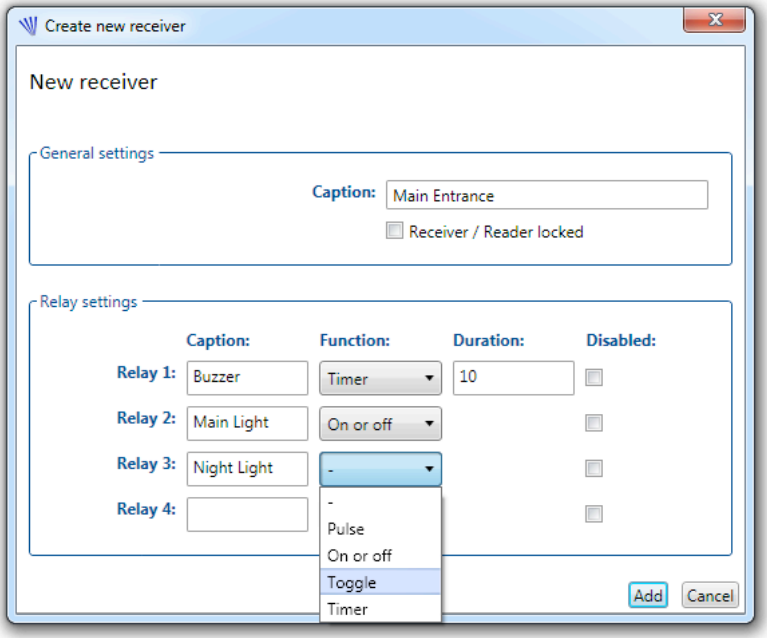
Choose a site in the left area of the window.

Choose the “Receivers / Readers” tab.

You will see two columns. The left-hand column contains a list of receivers and readers associated to the site or address.

To add a new receiver, please click the button “+ Receiver” located underneath the list. You may also choose “Add receiver…” from the “Edit” menu or press “+” while holding down Ctrl and Alt (Ctrl+Alt++).

A dialogue will appear. Please enter a name for the receiver. The name can describe where the receiver is located in the building.



You will also want to select functions for each relay. This allows you to specify what will happen when a transmitter addresses this relay by pressing a button.

Functions of a receiver:

Pulse

On or off

Toggle

Timer

Please choose “pulse”, “on or off”, “toggle” or “timer”.

Choose “Pulse” if you want the relay to energise for the complete duration the user presses a key on the transmitter.

Choose “On or off” if you want to open the relay by pressing one key of the transmitter and close it by pressing another key of the transmitter.

Choose “Toggle” if you want to open and close the relay in alternation using the same key of the transmitter.

Choose “Timer” if you want the relay to energise for a predefined amount of time after a user presses a key. When you choose “Timer”, an additional textbox will appear allowing you to enter a time span in seconds during which the relay will remain open.

You may set the entire receiver to “locked”. In locked state receivers may receive commands from a transmitter but will not do anything. You may also set individual relays to “disabled”. This can be done to temporarily block the use of a relay. Both settings are transmitted

to the memory module of the receiver upon data transmission.

Please be aware that the “site key” setting of the site / address the receiver belongs to will be used for the receiver. You will find more information in section “Site keys” on page 36.

Features of the EKR(4)IRPTR:

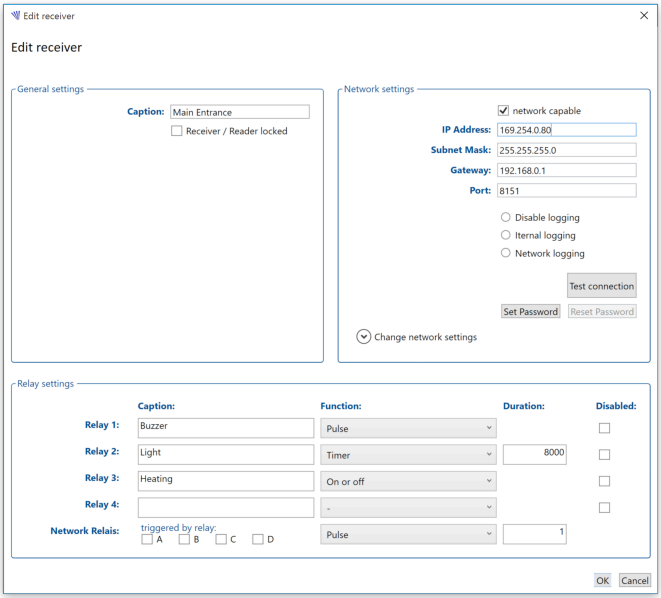
Communication through the intranet

Grant access at specific times

Logging of events

Network settings

If you are using the newer EKR(4)IRPT receiver, you can submit your settings through a network connection using the intranet or “local area network” – “LAN”. You no longer have to remove the EEPROM from the receiver and attach it tot he programming device.



Open the “edit receiver” dialog and choose the checkbox „network capable“. Now you can set the IP-address and other network related settings. The default value for the IP-address is 169.254.0.80. You should modify the IP-address so that every device has its own unique address.

Parameter	Default setting
IP-Adresse	169.254.0.80
Subnet-Mask	255.255.255.0
Port	8151

255.255.255.0 is usually the right value for the subnet mask. If your company is running a large intranet, you may need to modify this value. 255.255.0.0 is common for large networks. If in doubt, please ask your network administrator.

The port 8151 usually should not be changed. It specifies the port used by the hardware to listen for incoming socket connections.

Logging of radio telegrams

You can choose to log radio telegrams. There are three options to choose from:

- Choose *“Disable logging”* if you do not care to know what radio transmissions are received.
- Choose *“internal logging”*, if you want the receiver to store received telegrams in its internal memory.

  Beware that only the last 3,000 events can be stored, as storage space is limited. The oldest events will automatically be removed.
- Chose *“Network logging”* if you want all received events to be sent to the software automatically.

After pressing “OK” you need to **transmit the new settings to the receiver. If you fail to do so, the receiver won’t know about your choice**.

If you want to look at log messages, please press “Show logs”.

Note that if you chose “network logging”, incoming log messages can only be received when you keep the logging window open. Any messages received when this window is closed will be lost. Since there is no way to ensure that this window stays open at all times, network logging cannot be used in critical environments where

preservation of evidence is required to log “who opened that door yesterday at midnight.”

Password encryption

Press “Set Password” to set an individual password to be used to encrypt the communication with the receiver. Changing the default password is recommended, as an attacker knowing the default password might be able to compromise your system.

You can reset you password to the default password by pressing “Reset Password”.

Resetting the password can be useful if you have reset the hardware to its default password and want to continue using the settings you made for a receiver. If you do not reset the password in the database, communication will fail.

Secure connections

Communication with the EKR(4)IRPTR is protected by AES-encryption.

Checking connection

Can the receiver be reached through the network? Press “Test connection” to send a ping message and talk to the receiver to check if it confirms that it is indeed a EKR(4)IRPTR.

Creating readers

Please select the “Receivers / Readers” tab as described in the previous section “creating receivers”.

All receivers and readers associated to the site or address will be displayed.

You can now press “+ Reader”. A dialogue will open, prompting you to add a name for the reader to be added. You may also enter names for two relays controlled by the reader. Here, you can also specify the duration of seconds during which the relays will remain open. You may decide to lock relays, in which case no operation is performed even if a valid transponder is placed on the reader.

Please refer to the previous section “creating receivers” for more in depth information and screenshots. This is very similar.

Please note that you cannot modify the mode. Readers only support opening relays during a specified time range.

Transmitters and Transponders

Adding new transmitters or transponders

You can add one or more transmitters to a receiver and one or more transponders to a reader.

Both transmitters and transponders are identified by a serial number. Initially, this serial number is identical to the “original serial number” or factory serial number. Later, the serial number may be overwritten with a virtual serial number or by a regular serial number of a lost transmitter or transponder.

Bi-technology-transmitters are hybrid devices that can both be used to control receivers and RFID-readers. Those transmitters have one serial number for regular radio and one for RFID in addition to the “original serial number”. Initially all three numbers are identical but may be changed later.

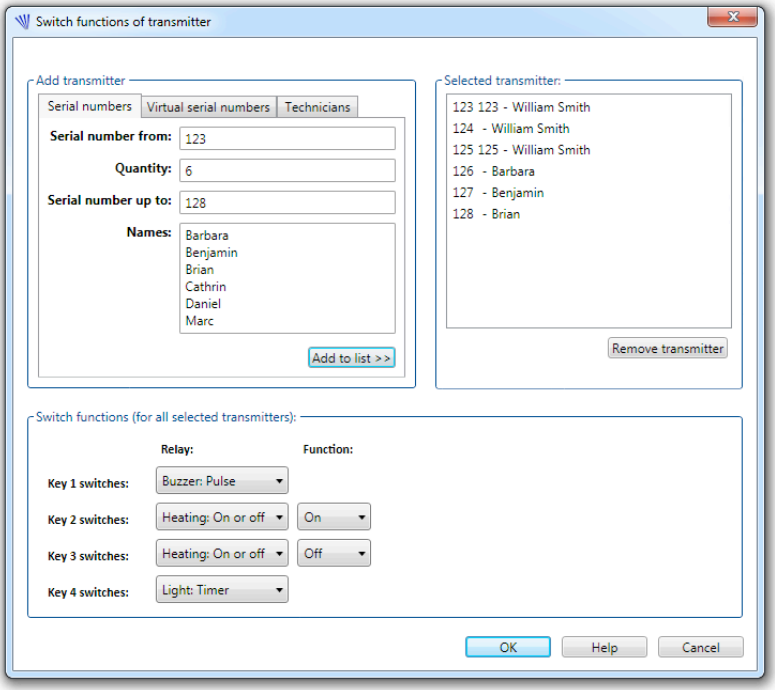
If the software overwrites a transmitter’s serial number, so that it can be used as a replacement for a lost transmitter, the software tries to determine which numbers need to be overwritten. For Bi-Technology transmitters, both the radio serial number and the RFID serial number are overwritten. For transponders, only the RFID part is written and for radio only transmitters, only the radio part is written. Please make sure to use the appropriate transmitter type if creating a replacement or you will end up with a transmitter having two different serial numbers.

To add a transmitter / transponder to a receiver / reader, please proceed as follows:

Select a receiver or reader from the list by clicking on it.

Press the “Add transmitters” or “Add transponders” buttor in the right-most column. You will see this window:

Note that the window is slightly different depending on whether you add transmitters or transponders.

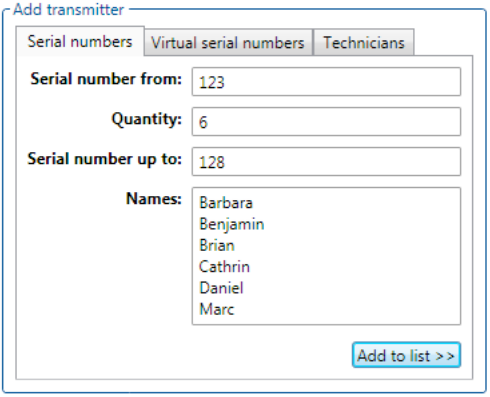


Adding number ranges

In the upper left part of the window you can enter a range of serial numbers. You can do this by entering the first serial number of the range in the field labelled “Serial number from”, and either entering the amount of serial numbers you want to add in the field “Quantity” or entering the last serial number in the range in the field “Serial number up to”.

If you just want to add one single transmitter or transponder, all you need to do is enter a serial number to the “Serial number from” field. You may leave the other two fields blank.

You can enter names into the text area below. These names will be used for the transmitters or transponders unless a transmitter / transponder already has a name. Please enter one name per line. You may enter anything you want, such as real names or a description like “Guest 1”, “Guest 2” etc.



Help:

The names in the list do not match the names I just entered

If you click “Add to list”, transmitters / transponders with the chosen serial numbers will be added into the list on the right-hand side of the window. If transmitters or transponders already exist in the system, their names will be fetched and displayed in the list.

Do not worry if you enter names into the text area on the left-hand side and different names appear in the list on the right-hand side:

This happens when a transmitter or transponder already exists carrying a different name.

If you want to rename transmitters / transponders you can do so in the main window. Right-click on a transmitter or transponder and choose “Rename …” from the popup menu.

Note: You can add virtual serial numbers from your inventory by entering the virtual serial number into the text box directly.

Add individual transponders

There is a shortcut to add individual transponders to the system: Just place the transponder on the programming device and you will be asked if you want to add it to the list of serials.

Adding virtual serial numbers

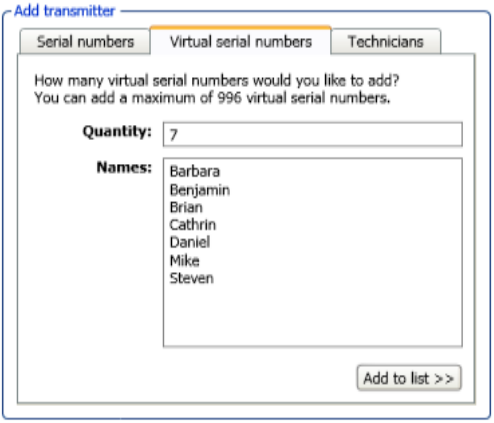
Virtual serial numbers are numbers from a certain number range. They are reserved for later assignment to transmitters and are not used by the manufacturer.

You can transfer a list of virtual serial numbers to a receiver. Typically you do not have transmitters or transponders at this time with the serial numbers you just

transferred. Only later, as the need arises, you will write one of the virtual serial numbers already known by the receiver or reader to a transmitter or transponder. This saves you from having to touch the receiver or transponder every time you want to allow another transmitter / transponder to operate the receiver / reader.

You can only use virtual serial numbers if you have purchased virtual serial numbers and imported them into your system.

In order to add virtual serial numbers to a receiver or reader please select the second tab labelled “Virtual serial numbers”:



Enter the amount of virtual serial numbers you want to add into the “Quantity” field. Optionally you may add names to the list of names. The amount you enter to the quantity field takes precedence over the amount of names entered into the names text area. If the amount of names is not sufficient, some transmitters / transponders will not receive a name. If there are more names some names will not be used. Clicking “Add to list” will insert the transmitters / transponders to the list on the right-hand side.

Hint:

You can only add transmitters of technicians to the list if you have created technicians beforehand. Learn how to do this in section „Technicians“.

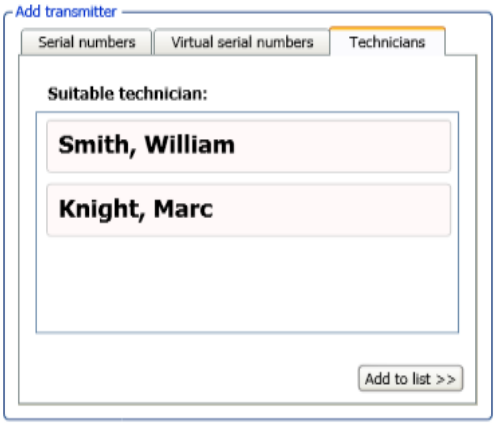
Adding technician’s transmitters / transponders

Please activate the “Technicians” tab. Here you will find a list of all technicians “suitable” for the current site / address. If no technicians are displayed, this can have two reasons: You either have not created any technicians or you have added tags to the site / address and there are no technicians having *all* tags of the site / address.

Select one or more technicians from the list and click

“add to list”. All transmitters / transponders of the selected technicians will be added to the list.

If you want to add all technicians from the list, please click on “Add all technicians”.



Adding numbers of existing Receivers / Readers

You will often want to add the same set of transmitters / transponders to multiple receivers / readers. This can be quite time consuming. There is a shortcut:

Add all transmitters/transponders to one receiver/reader.

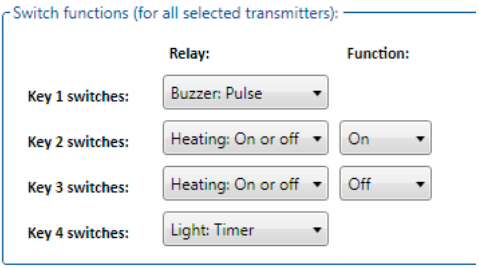
Now, create another receiver (or reader). Click on „New transponders“. Instead of entering all numbers for a second time, select the tab „from existing receivers / readers“. You can now choose the receiver created in the first step. All transmitters / transponders associated to this receiver will appear and can be added with one click.

Associating keys and relays for transmitters

If you have added serial numbers to the list on the right-hand side of the window in one of the three ways described above, you can now decide what will happen when a user presses a key on the transmitter.

The lower portion of the window named “Switch functions” allows you to specify which key controls which relay. In the row “Key 1 switches” you can specify which relay is to be operated by key 1 of all transmitters in the list. For example, if you choose the relay with the caption “Light #1: Timer”, the light #1 will be switched on for the specified amount of time. If you have selected the

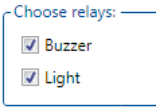
function “On or off”, you may need to decide if a key switches the relay on or off.



Press “Ok” once you have chosen all switch functions. The chosen transmitters will now be added to the list of transmitters allowed to operate the receiver.

Selecting relays for transponders

If you are adding transponders to a reader, you can choose which relays of the reader are to be triggered by the transponder. To do so, simply click the checkbox on the left hand side of the relays name:



You can repeat the process of adding transmitters or transponders to add more transmitters to the receiver or transponders to the reader. Please beware that you may add a maximum of 2000 transmitters / transponders to a receiver / reader.

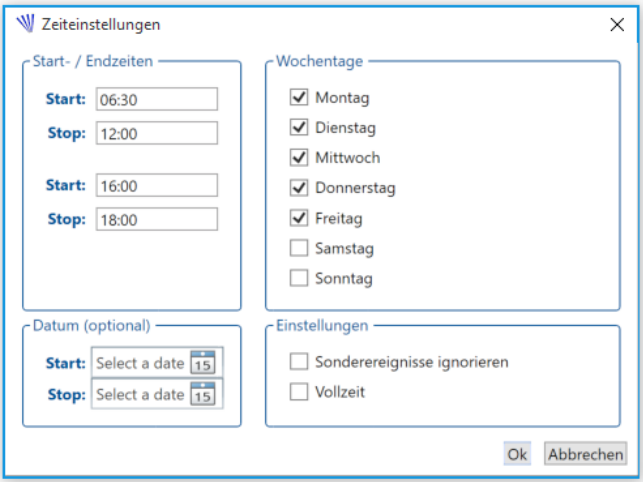
Time settings

(applies to EKR(4)IRPTR only)

If you’re using an EKR(4)IRPTR receiver, you can specify access times. For each combination of a transmitter and a receiver you can specify start and end times, start and end dates, weekdays and date periods.

The receiver will ignore a radio transmission received at

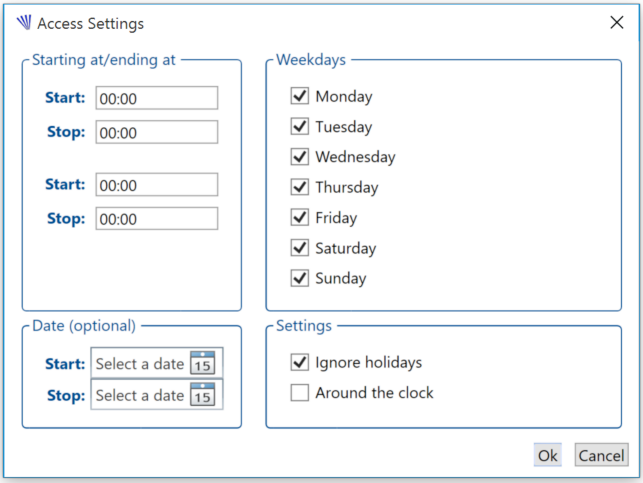
non-feasible time periods. A log entry is written anyway.



Examples for time settings

Example 1: CEO without restriction during holidays

The CEO has access at all times:



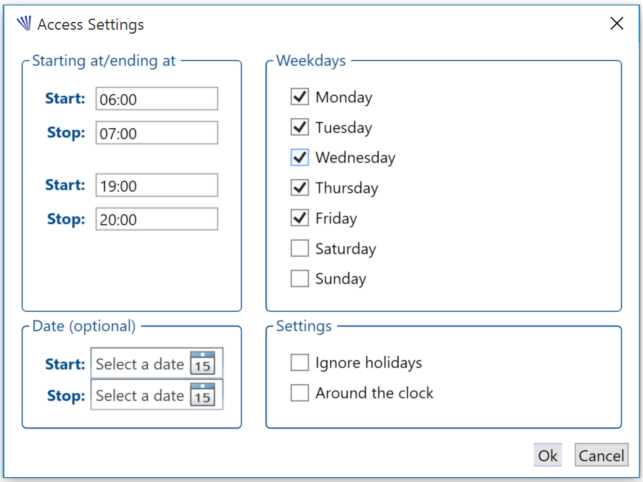
Ignore holidays:

If set, access is granted even during holidays, were regular workers have no access.

Please note that “ignore holiday” has been checked. We want to make sure that the CEO gets access even during holidays.

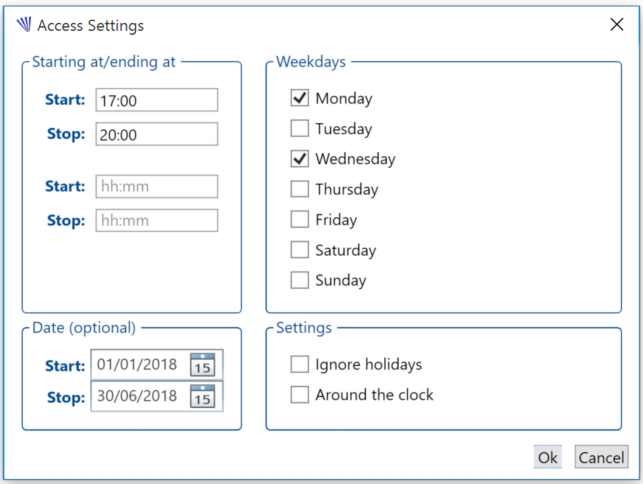
Example 2: Cleaning worker

He/she is granted access in the early morning before anybody else starts and in the evening after most people have gone home:



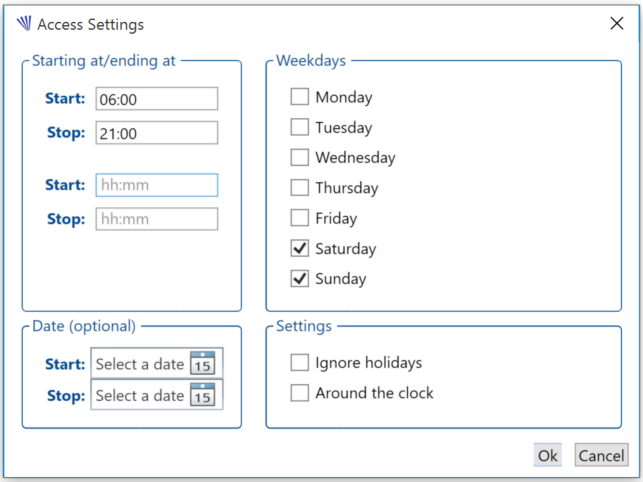
Example 3: Gym teacher

He/she is granted access to the gym hall on Mondays and Tuesdays. Since the institution is operating on a bi-annual term, access is granted from January 1st until June 30th:



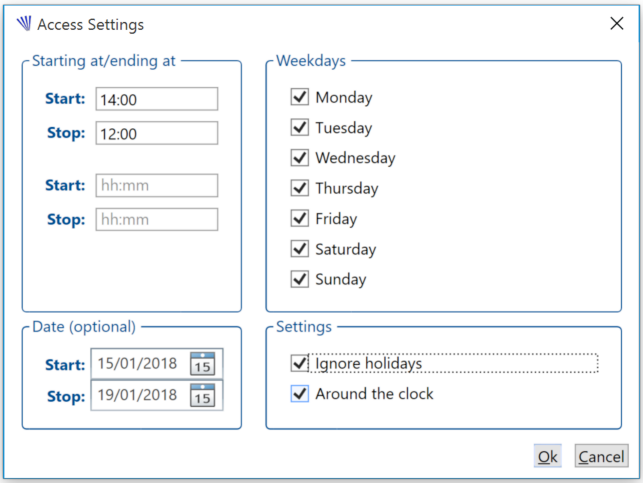
Example 4: Construction work

Since work should be carried out without interfering the regular schedule, access is granted during weekends between 6am and 9:30 pm:



Example 5: Hotel guest

Access is granted from January 15th, 2:00pm until January 19th, 12:00 noon.

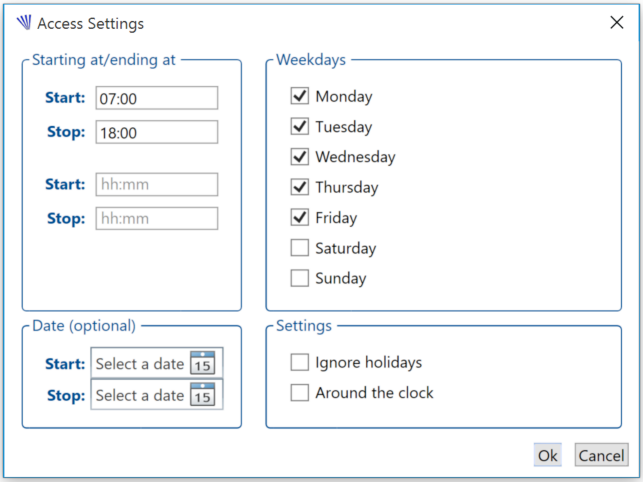


Around the clock: continuous access for the complete duration of the stay.

"Around the clock" has been selected. This indicates that access is to be granted for the complete duration of the stay rather than specific daily time intervals.

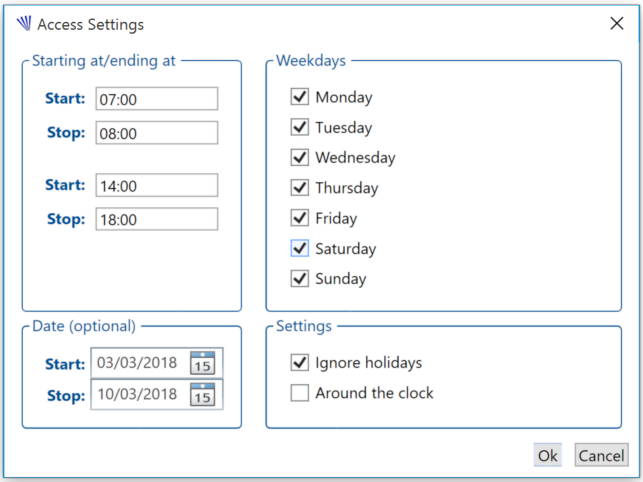
Example 6: Employee

Access is granted on weekdays between 7am and 6pm:



Example 7: Ski holidays

The ski lift can be used between March 3rd and March 10th between 7:00 and 8:00 am and between 2:00 and 6:00 pm:



Note:

When you delete transmitters or transponders, you do not actually delete the transmitter from the system but only remove it from the list of transmitters allowed to operate the receiver.

Removing transmitters or transponders

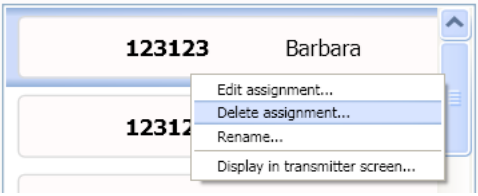
You can remove transmitters or transponders from the list of transmitters allowed to control a receiver. To do so, please select one or more transmitters from the list and press the “Delete” button.

This will only delete the association between the receiver and the transmitter. It will not delete the actual transmitter data, such as the name and the IRP index.

Editing associations

You can modify which key of a transmitter controls which relay or a receiver and which transponder controls which relay of a reader..

Select one or more transmitters or transponders. Press the right mouse button and choose “edit assignment” from the popup menu.



Associating a transmitter / transponder to more than one receiver / reader

A transmitter or transponder can control more than one receiver / reader, provided that the receivers or readers are all installed *in the same site or in one of the addresses of the site*.

Hence, a transmitter cannot control receivers in different properties and a transponder cannot control readers in different properties. This does not apply to receivers or readers of a single site installed in different addresses of that site.

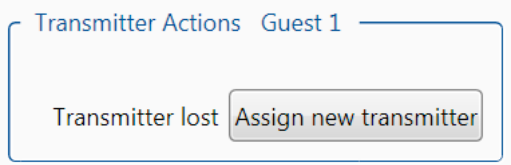
There is an exception: transmitters or transponders assigned to a technician can control receivers and readers in any site.

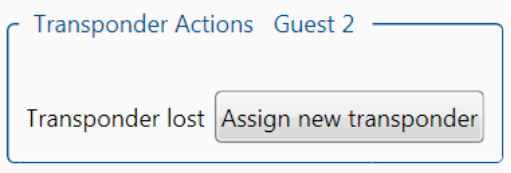
Creating replacement transmitters / transponders

Replacement transmitters / transponders can be created in case of loss of a transmitter / transponder. A replacement transmitter / transponder can control all

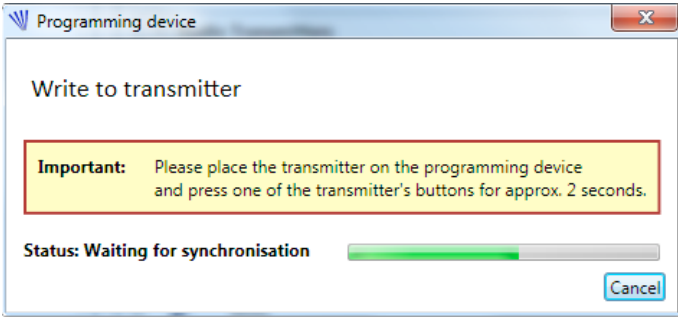
receivers / readers that could be controlled by the lost transmitter / transponder provided that the site key is not set for any of the receivers / readers or is the same for all receivers / readers. Please refer to section “Site keys” on page 36.

If you need to create a replacement transmitter / transponder, select the tab “Transmitters / Transponders”. Select the lost transmitter / transponder from the list. Click on “Assign new transmitter” or “Assign new transponder”:





You will be prompted to place the new transmitter on the programming device and press a key on the transmitter until the window closes:



If you are creating a replacement transponder, you do not need to push a button. Just place the transponder on the programming device.

The transmitter / transponder will be overwritten so that it can now be used as a replacement for the lost transmitter / transponder.

Every transmitter has two numbers: The “serial number” used to identify the transmitter when controlling a

receiver and the “original serial number”. The original serial number will never change.

The same is true for transponders: There is one serial number that is being sent to readers and the original serial number which never changes.

Bi-Technology transmitters have three serial numbers: The original serial number and one number for each radio and RFID. If you replace a transmitter that is not known as a Bi-Technology transmitter, you should not choose a (physical) Bi-Technology transmitter. The software, unaware of the bi-technological nature of the new transmitter, would only write either the radio or the RFID serial number and you would end up with a transmitter having different numbers for radio and RFID.

You can create a maximum of 7 replacement transmitters for a transmitter and 999 replacement transponders for a reader. This is counted in the “IRP®” value of the transmitter / transponder. If you loose the transmitter more than 7 times you will have to add a new transmitter to all receivers or create a transmitter for a virtual serial number already stored in the receivers.

To create a transmitter / transponder for a virtual serial number please chose the virtual serial number from the list and click on “Assign receiver” or “Assign transponder”:

You will be asked to place a transmitter onto the programming device and press a key of the transmitter until the window closes. If you data is written to a transponder, you simply need to place the transponder on the programming device.

Help...

I accidentally overwrote the wrong transmitter / transponder

The wrong transmitter / transponder was overwritten

If you overwrote the wrong transmitter or transponder, do not worry. All receiver / reader associations of this transmitter / transponder still exist in the system. You just no longer have a physical transmitter / transponder with the serial number of the accidentally overwritten transmitter / transponder. You can choose to create a replacement transmitter / transponder for the device

that was overwritten by accident. Please refer to the preceding section to learn how to do this.

Find a transmitter / transponder by serial number

If you know the serial number of a transmitter or transponder and want all data to be displayed, please proceed as follows:

Select “Search for serial number...” from the “Edit” menu. Enter the serial number of the transmitter / transponder and press “Ok”. The transmitter / transponder will be displayed, provided it exists in the system.

If you have the transmitter in front of you, you may also choose “Read transmitter data via programming device...” from the “Edit” menu. You will be prompted to place the transmitter onto the programming device and press a key of the transmitter until the window closes.

Now press “Display transmitter”. The system will switch to the transmitter provided that it exists in the system.

Transponders can be placed on the programming device at any time. This will bring up the transponder data if the transponder exists in the database.

Display charge state of a transmitter

Please chose “Read transmitter data via programming device...” from the “Edit” menu. Place a transmitter on the programming device and press a key until the window closes. The data stored on the transmitter including the battery condition will be read and displayed.

This function is not available for transponders as they do not have a battery.

Transmission of transmitter data to a memory module

The term “memory module” refers to an EEProm. It is located in the receiver or reader. The memory module contains relays settings and the serial numbers of transmitters / transponders allowed to control the receiver / reader.

Some receivers have a non-removable memory module. Those memory modules cannot be programmed using Teletaster® IRP.

If you have a receiver / reader with a removable memory module you can detach the memory module from the

receiver / reader and attach it to the programming device into the socket next to the LEDs.

The socket has an inverse-polarity protection so the memory module can only be attached in one direction. Please keep this in mind when plugging memory modules to the programming device.

Data can be transferred from the memory module to the local database and from the local database to the memory module.

Beware:

Data will be overwritten when importing or exporting data

Please beware that in both cases data is overwritten: Importing data from the memory module will overwrite local data while exporting data to the memory module will completely erase all data on the memory module prior to writing data.

So please pay close attention to choosing the right direction.

To transfer data to or from the memory module, please proceed as follows:

Choose a receiver or reader from the list.

Plug the memory module into the programming device

Press “Transmit”. A dialogue will appear showing the local data in the upper part and the data stored on the memory module in the lower part of the window.

Choose “Export data” if you want to transfer the local data to the memory module. All data on the memory module will be deleted.

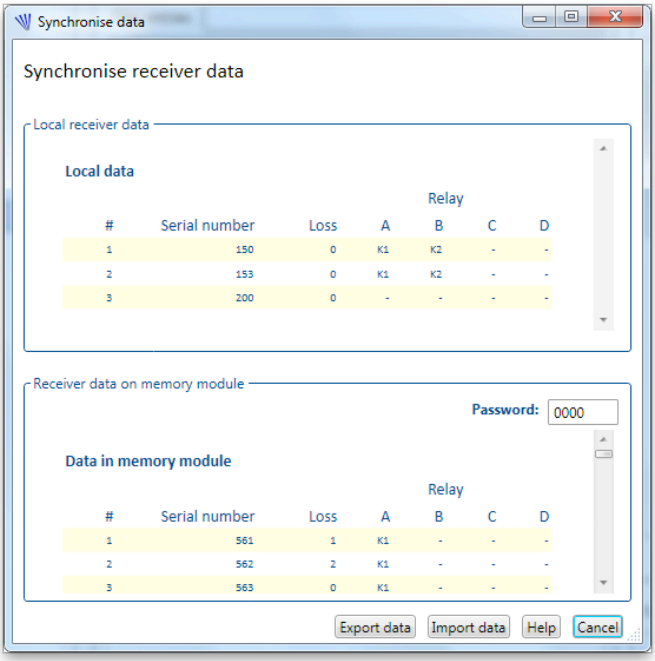
Chose “import data” if you want to update your local data with the data from the memory module.

If you press “Cancel” all data remains unchanged. Hence you can use this dialogue if you want to check the data stored on a memory module.

Note that the memory modules used for readers differ from memory modules used for receivers. The system will complain if the type is not suitable for the requested action.

Hint:

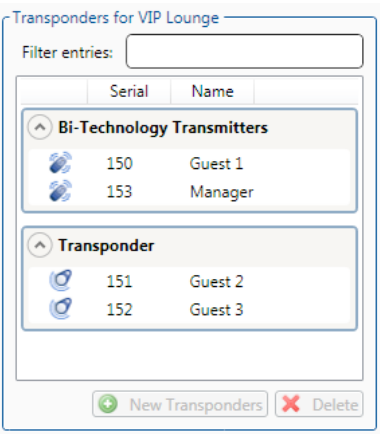
You can copy data from the tables to another application using copy and paste.



Quick navigation

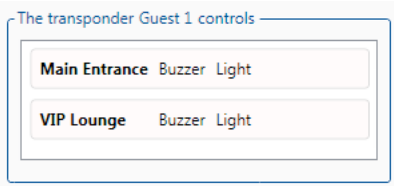
Switching to the details of a transmitter / transponder

When the “Receivers / Readers” tab is active you find a list of transmitters / transponders associated to the receiver / reader in the right-most column. You can easily switch to a detailed view of a transmitter or transponder by double-clicking on it:



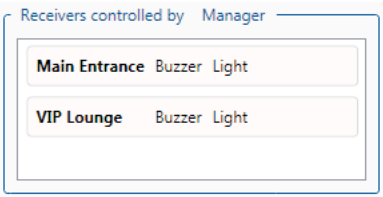
Switching from the transmitters / transponders view to the receivers / readers view

To switch back to a receiver / reader from the detailed view of a receiver / reader, double-click the receiver / reader in the lower right-hand part of the window:



Receivers / readers controlled by a transmitter / transponder

Switch to the “Receivers / Readers” tab. Select a receiver or reader. Select one of the transmitters / transponders controlling the receiver / reader. On each selection of a transmitter / transponder, you will see the lower right-hand area of the window updating. Here, you will find a list of all receivers and readers controlled by the selected transmitter / transponder. If you double-click a receiver / reader, the central column will update and display the receiver / reader you just clicked on. If required, this will also change to a different address or even site.



Site keys

Using Teletaster® IRP you can create replacement transmitters / transponders for lost transmitters. You can only do this if you know the serial number of the lost transmitter / transponder.

An intruder could try to find out a serial number and create his own replacement transmitter. The attacker can only do this if no site key is used.

You can think of a site key as a key used to sign the data on a replacement transmitter. The receiver knows the site key and can check that all replacement transmitters have

been signed with the site key.

When should I use a site key?

Use a site key if all receivers have detachable memory modules.

Since a transmitter can only be created using *one* site key, it can only be used for receivers using that same site key. This can cause problems:

If you use receivers with detachable memory modules as well as receivers with fixed memory modules, you will finc no way to tell the receivers with fixed memory modules about a site key. Hence, those receivers will reject all transmitters created using a site key. So if you're using receivers with fixed memory modules for a site, please refrain from using site keys for the other receivers in that site if you want to be able to create replacement transmitters.

Summary

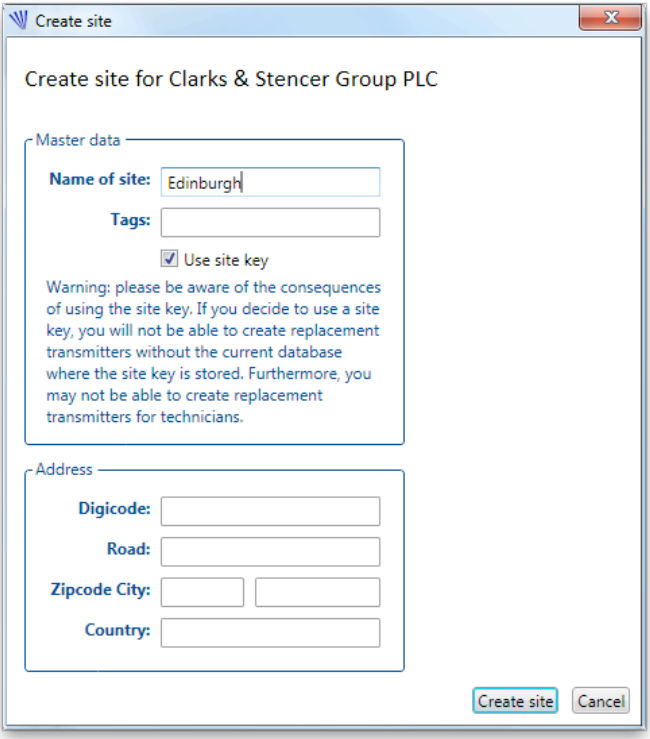
We suggest you use site keys if you only use receivers with a detachable memory module within the same site.

We suggest you do not use site keys if you want to use both receivers with fixed memory modules and with detachable memory modules *and* you want to be able to create replacement transmitters. If you do not care about the ability to replace transmitters, go ahead and use a site key where you can.

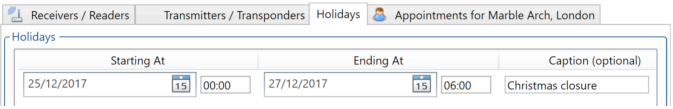
You need to decide whether you wish to use a site key or not before you add receivers to a site. Once receivers have been added you will not be able to modify tthis setting.

Note:

Please make a choice about using site keys before you add any receivers to a site!



Holidays



Switch to the tab „Holidays“ to specify holidays. Think of a “holiday” as a time period were regular people cannot access the building. You may specify both a start time and date and an end time and date.

Example: Christmas closure starts at December 25th and ends at December 27th at 6:00 in the morning.

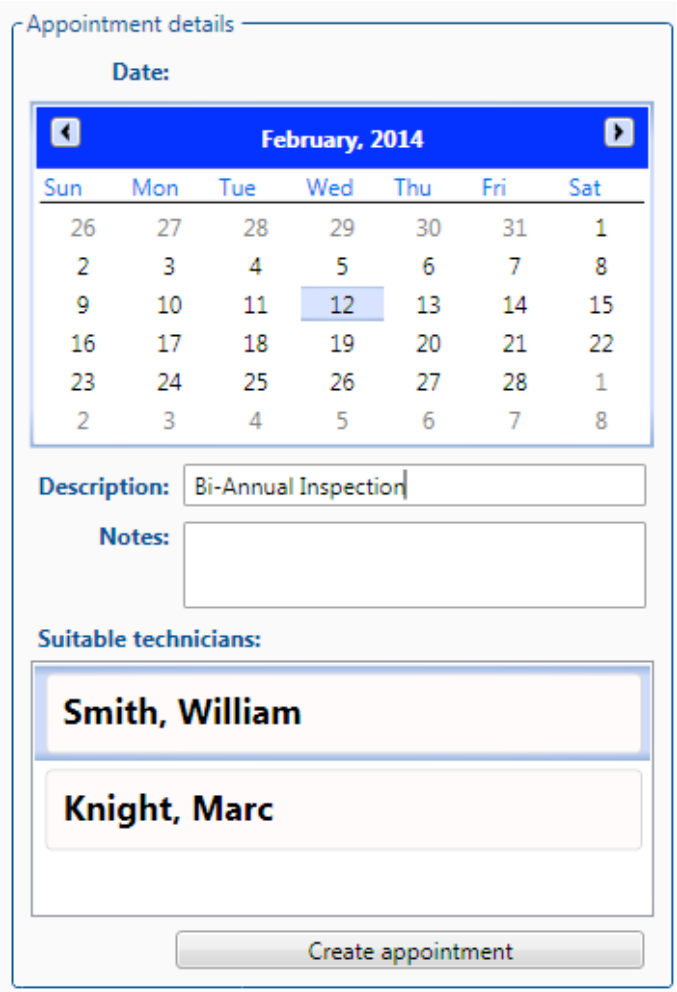
Appointments

You can create appointments for a site or an address.

This is how you can create an appointment:

Make sure you have created technicians. If you are using tags for a site or an address, please make sure that you have at least one technician in the list with all the tags of the site.

Choose the site or address from the list.



The list does not contain a technician?

Make sure that you have created technicians and that at least one technician has all tags of the site.

After selecting a site, please switch to the “Appointments” tab. Choose a date from the calendar. Enter the description of the appointment and optional notes. Choose a technician from the list and press “Create appointment”.

The appointment you created will be displayed in the list of appointments. You can modify an appointment by double-clicking it. Once you have changed your data, please press “Save changes”. If you want to delete an appointment, chose the appointment from the list and press the “Delete” button located underneath the appointments list.

Technicians

You can create technicians. The term “technician” is used for someone who installs receivers at a customer’s location. For larger plants a technician will have his or her own transmitter and will be able to control receivers using this transmitter. A technician may have certain skills or may be responsible for a certain geographic area. You can describe both the skills and the geographic location using tags. The use of tags is described in section “Use tags to find suitable technicians for a customer or site12. By using the same tags for properties or addresses the system may automatically suggest “suitable” technicians for a site. Technicians will appear in the list when you add transmitters to a receiver and when you create appointments.

Creating a technician is simple:

- Switch to the tab “Technicians” located at the left-hand side of the main window. You can use the shortcut Ctrl+2 to switch to the technicians tab and Ctrl+1 to switch back.
- Click “New”. Enter data related to the technician such as first name, name, email and phone numbers or instant messaging data. You may also enter the address of a technician.

Once the technician has been created it will appear in the list in the left-hand column. When you chose a technician, the right-hand side of the window will update to display details of the technician. Here you will also be able to set the tags of the technician. Enter individual words into the text field and press “Save”.

Right below the tags you will find a list of transmitters assigned to the technician. To create a new transmitter for a technician press the “New” button and enter a serial number. You can decide whether the new transmitter is radio only, RFID only or both, by checking boxes. If you add transmitters to technicians, you will be able to add them easily when adding transmitters to a receiver. Read how in section “Adding technician’s transmitters / transponders” on page 22.

The appointments made for a technician are displayed right below the transmitters.

Single user / multi user

Single user version

By default, the software can only be used by a single user on a single machine. Data is stored in a local Microsoft SQL-Server CE database. The database file name ends in “.sdf”.

Multi user version

If more than one person needs to use the software simultaneously from more than one computer and needs to work on the same set of data, we recommend using the multi user version of the software.

Data will then be stored in a central SQL-Server-database which can be accessed from all workstations.

Setting up the multi user version

Install SQL Server

One computer in your network will assume the role of a server. You will want to choose a computer that is always connected. Please install Microsoft SQL Server on this machine. If you have not bought a license yet, we recommend using “SQL Server Express”.This package is available for download from Microsoft free of charge. The features available in the “Express” edition are sufficient for our purpose.

Install Microsoft SQL Server. Please specify that you want to be able to log in using a username and a

password. You will need both in a later step, so please pay attention to what you choose.

Next, please create a database. We suggest calling it “TeletasterIRP”.

Switching to SQL Server

You’ll need to edit a config file located in the Teletaster IRP installation folder. On most computers this is something like C:\Programs\Tedsen\TeletasterIRP.

Please open the file “Tedsen.TVSPro.Main.exe.config” in a texteditor such as Notepad. Microsoft Word is not suited for this task. Change

```
<setting name="sqlServer" serializeAs="String">
  <value>False</value>
</setting>
```

to

```
<setting name="sqlServer" serializeAs="String">
  <value>True</value>
</setting>
```

Migrate existing data

Please start the software as usual. On the first start, you’l be asked for parameters required to connect to SQL Server.

Once you have provided the connection parameters, please cllick on “Test connection”.

If the SQL Server database is empty, the system will ask you if you want to copy all existing data. This can only be done once. It is not possible to mix data from different databases.

Please create a backup of your existing database before switching to SQL Server. We suggest that you keep the backup for some time, until you are certain that all data has been migrated correctly. It is in your responsibility to make sure that all data has been transferred correctly to the target database before deleting the existing database. The vendor of the software cannot be made responsible for any loss of data if the data migration does not work as expected.

Configuring the SQL Server database

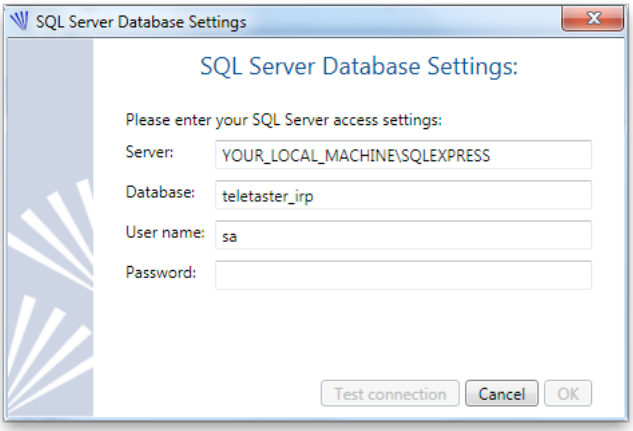
In order to connect the software with a SQL Server database, please provide the following parameters:

Server: The server connection string. The value is shown in the open dialogue of the Microsoft SQL Server Management Console.

Database: Please enter the name of the database. You have chosen this name when you created an empty database. Recommended setting: “TeletasterIRP”.

Username: You have chosen a user name during the installation of SQL Server. The default value is “sa”.

Password: This is the password you have chosen during installation of SQL Server.



Press “Test connection”, before clicking OK.

Please make sure that both the client computer and the server are connected with your local network and they can reach each other. You may want to check your firewall settings or ping the remote computer.

Database backups

Creating database backups

Please back up your database regularly! You will find the database in this directory:

c:\Documents and Settings\[USERNAME] \Application data\Tedsen\Teletaster IRP\

Please substitute [USERNAME] with the name of the window user you are logged in with. If you cannot find the directory, please check if it may be a hidden directory that is only displayed if you instruct Explorer to do so.

The database file you need to backup is called

TeletasterIRP.sdf

You can create a full backup by simply copying this file to a backup device.

Again, please note that this database may contain data critical for your business. Make it a routine to back up this file using different backup media. If you are using a third party backup solution, please assert that this directory is contained in the backup plan.

The vendor of Teletaster® IRP cannot be made liable for any type of direct or indirect loss or damage caused to you or any third party by the loss of data that could have been prevented by a regular backup of your data.

Please note that you will only be able to use your data if you remember the password you may have set to protect the data. There is no “hidden backdoor” to retrieve your data in case you cannot remember your password. Learn more on using passwords in section “

Password protection” on page 45.

Please consider that there is a diversity of reasons that can cause loss of data stored on your computer. A hard drive failure is one possible reason; physical loss of a notebook computer can be another reason. Even defects in the windows file system may occur. The same is true for possible write failures while data is written to the database. Attacks through malicious software or viruses are an ever-growing threat. In rare cases Windows may fail to start after installing new software or drivers to the system.

Restoring a backup to the system

You can easily restore a backup of the database to the system.

Make sure Teletaster® IRP is installed on the system.

Copy the backup of the database to the original location at

c:\Documents and Settings\[USERNAME] \Application data\Tedsen\Teletaster IRP\

Start Teletaster® IRP as usual.

Please beware that Teletaster® IRP checks if a database exists in the above mentioned location. If this is not the case, an empty database will be created.

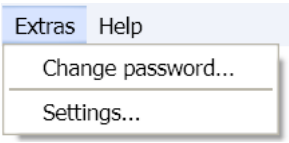
Password protection

Protecting your data by using a password

You can protect your data using a password. This password is used to encrypt your database. If set, Teletaster IRP® will only start if you enter the password.

To protect the application with a password, please proceed as follows:

Choose “Change password” from the “Extras” menu:



You will be asked to enter a password. If you have not used a password before, please leave “Current password” empty, otherwise you will have to add your current password here. To avoid typing errors please enter your new password twice.

Beware:

Please pay attention to the state of the Caps Locks key when entering a password. If activated all keys will produce upper case letters.

If you are using a Notebook computer, please make sure the numeric block is disabled.

In case of password loss there is no way to retrieve your data.

If you want to remove the password protection, please leave the “New password” and “Repeat password” fields empty.

Troubleshooting

The software does not start

Please check that you have installed the DotNet Framework 4.6. You can download it here:

https://www.microsoft.com/en-US/download/details.aspx?id=53344

Problems with the programming device

In rare cases the programming device may report problems related to reading and/or writing data.

If this is the case, please

- quit Teletaster® IRP

- plug off the programming device

- plug the programming device back in

- restart Teletaster® IRP

If this does not help, please restart your computer.

If the programming device has never worked, please make sure that you have installed the driver correctly. An “FTDIbus“-driver must be installed for the use of the programming device.