

USER'S MANUAL

ACCESSORIES

G2S



6 Contents

1 Description of G2S Module (GSM to Sinclair Bridge), Version 1.0	1
1.1 Locating of the Module	1
1.2 Preparation and insertion of SIM card	1
1.3 Operation of Module	2
1.4 Control	2
1.4.1 By ringing a phone number	2
1.4.2 By sending an SMS message	3
1.5 Status signalling	3
2 Service routine description	3
2.1 Installation	4
2.2 Main window of the application	4
2.3 Menu of the application	5
2.4 Menu of the units	5
2.5 User Interface for G2S Module	5
3 Unit operation	7
4 Technical parameters	7
5 Guarantee conditions	8
6 Contents	9

1 Description of G2S Module (GSM to Sinclair Bridge), Version 1.0

G2S Module is used to control Sinclair and Nordic air-conditioners by your mobile phone. G2S Module uses IR transmission to communicate with air-conditioning, that's why there is no need to connect it to the air-conditioner, it behaves like another remote control.

The module has on the bottom side connectors for the connection of power supply and for the connection to the USB port of the computer, signal diode and a slot for SIM card insertion. On the top side of the module, there are two infrared transmission diodes. On the back side of the module there is a hole for hanging on the wall.

1.1 Locating of the Module

G2S Module is designed for the operation inside, i.e. in the environment where it is not exposed to extreme temperatures and direct effects of water.

There has to be a sufficiently strong signal of at least one GSM network at the location of the module use. This can be verified by making a mobile phone call through a selected GSM network at the relevant place. If the call from the mobile phone can be connected, the signal is also sufficient for G2S Module.

The infrared diodes used to control air-conditioning may not be covered or shielded and should be directed towards air-conditioning, or when the air-conditioner is wall-mounted towards the ceiling.

The module is supplied by a 12V adapter which is part of the delivery.

1.2 Preparation and insertion of SIM card

In order to ensure the correct function of the module, the following steps need to be taken prior to insertion of the SIM card to the module.

1. If the SIM card is not activated, please activate it in the mobile phone according to the SIM card manual.
2. Contact the call centre to deactivate the voice mail.
3. Follow the instructions on your mobile phone use to switch off the use of PIN.
4. Remove all the saved contacts and SMS messages from the SIM card.
5. Save numbers of authorized users and a master password (see Chapter 1.3) to Contacts on the SIM card.

Now the SIM card is prepared and you can insert it in the module

1. Make sure that G2S Module is switched off.
2. Insert the SIM card in the slot as shown in the figure on the right and press. After locking into position the SIM card remains in the slot, its edge slightly overhanging the module's wall.

You will take the SIM card out by pressing again on the SIM card.



1.3 Operation of Module

G2S Module has a list of sixteen authorized telephone numbers-users saved in its internal memory. These users can control air-conditioning via their mobile phones, by ringing or sending SMS messages to the number of the SIM card inserted in the module (hereafter "module number").

1.3.1 Authorized telephone numbers setting

1. By means of a service routine (see Chapter 2).
2. By saving the authorized numbers to contacts on the SIM card that will be used in the module. In this way, up to ten telephone numbers can be entered by a mobile phone. The numbers have to be saved in the international format including the initial signs '+' or '00' (e.g. +420604123456) and named *Sinclair0*, *Sinclair1*, ..., up to *Sinclair9*.

1.3.2 Password setting

A "master password" is used to control air-conditioning through multiple numbers or any number which is not saved in the module's memory. If the master password is used in an SMS message, the module automatically recognizes the sender as an authorized user. The master password consists of six numbers and can be, similarly as the user, set in two ways:

1. By means of a service routine (see Chapter 2).
2. By its saving to contacts on the SIM card in the module. The password has to consist of six numbers and be named *Password*.

1.3.3 Type of coding setting

Depending on your model of air conditioner is necessary to select the type of IR coding. For most devices use encryption Sinclair, for units encoding the Nordic use encryption Nordic. Encoding can be set up again in two ways:

1. By means of a service routine (see Chapter 2).
2. The imposition of the contacts on the SIM card in the module. Contact must be named "Config" and must include two digits:
 - 00 – coding for Nordic
 - 01 – Sinclair coding

After turning the power on, the module logs on to the GSM network (its number can be reached) and then downloads authorized users and a password from the SIM card and saves them to its internal memory. The process takes some 30 seconds and after its completion the module is ready for operation.

During power on, module G2S downloads data from SIM card to its internal memory; this download has a priority over writing by means of service routine. If service routine should be used, authorized numbers, password and type of coding should not be stored simultaneously also on the SIM card, otherwise changes made by service routine will be overwritten by former data from SIM card at the moment of next power on.

1.4 Control

As mentioned above, air-conditioning can be controlled in two ways:

1.4.1 By ringing a phone number

The ringing is free of charge and enables switching on the automatic mode of the air-conditioning, or

switching the air-conditioning off.

To switch on the module, call the module number from the authorized number. You will hear the dialling tone and after the third ringing the module will reject the call. This is a signal for you that the module has received the order and will switch on the air-conditioning. If the call is rejected immediately, the module has not received the order and will not perform any operation.

To switch off the module, call the module number from the authorized number and drop it after the second dialling tone at the latest. The module will switch off the air-conditioning.

1.4.2 By sending an SMS message

This is charged by the rate of the sending number, i.e. as a regular SMS message. By sending an SMS message air-conditioning can be switched to the automatic mode, to the selected temperature of the cooling mode, to the selected temperature of the heating mode or it can be switched off.

Switching on the automatic mode

Send a message in the *AUTO* shape to the module number.

Switching on the cooling mode

Send a message in the *COOL xy* shape to the module number, where *xy* gives the required temperature in degrees Celsius. If the message does not include the required temperature, the temperature used the last time will be set.

Switching on the heating mode

Send a message in the *HEAT xy* shape to the module number, where *xy* gives the required temperature in degrees Celsius. If the message does not include the required temperature, the temperature used the last time will be set.

Switching off the module

Send a message in the *OFF* shape to the module number.

1.4.3 By sending SMS message from any (unauthorized) number

In this way it is possible to control air-conditioning by means of SMS messages from any mobile phone or from web interface. In this case, SMS message must contain together with corresponding command also master password, which is stored in the module (see paragraph 1.3.2). For example switching on air-conditioning to cooling mode with temperature set to 24⁰C, SMS will be in format **COOL 24 xxxxxx**, where xxxxxx stands for 6 digit password number stored in the module. From production, the password is set to be the production module number by default.

1.5 Status signalling

The signalling diode on the front side of the module is used to signal the current state of the module. After the power connection the diode emits a low light and flashes in intervals indicating the GSM module status.

Flashing in intervals shorter than 1 second indicates searching and logging on to the GSM network.

Flashing in intervals of 3 seconds indicates the module has successfully logged on to the network and is ready for use.

2 Service routine description

To enhance convenience of the administration and setting of the G2S module, a USBCommunicator

service routine can be used. The module is fully functional, though, even without its use.

2.1 Installation

The routine may only be installed by a user holding a computer administrator security.

Requirements of the system

The USBCommunicator routine requires for its run the Microsoft Windows2000, WindowsXP or Windows 7 and further Microsoft .NET Framework 2.0 (in case of Windows 7, the latter is already part of the system so it does not need to be installed) operation systems to be installed on the relevant PC.

Installation Steps

3. If you use Windows 7 or you have Microsoft .NET Framework 2.0 already installed, go on to Step 3.
4. Microsoft .NET Framework 2.0. Installation The installation file of this programme is saved on the enclosed CD, in the directory `lsw\dotNetFramework` (file `dotnetfx.exe`), or you can download it from the Microsoft site:

<http://www.microsoft.com/downloads/cs-cz/details.aspx?FamilyID=0856eacb-4362-4b0d-8edd-aab15c5e04f5>

<http://www.microsoft.com/download/en/details.aspx?id=19>

Start the installation file and follow the instructions.

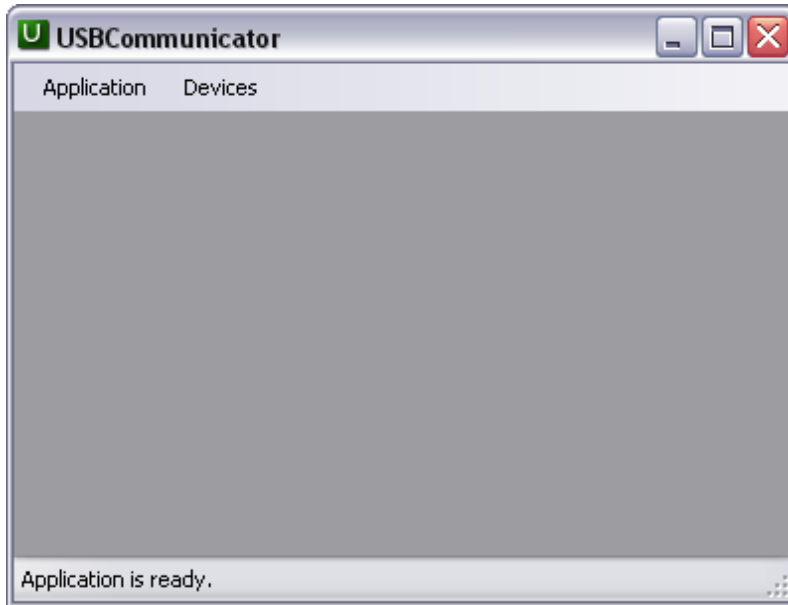
5. Installation of the service routine. The USBCommunicator installation file is saved on the enclosed CD, in the directory `lsw` (file `USBCommunicator_setup.exe`). Start the installation file and follow the instructions.

When the installation is complete, run the USBCommunicator routine.

2.2 Main window of the application

Data from all the currently connected units is displayed in the tabs of this window. In its upper part is the main menu, and in its lower part the status bar, indicating the state of connection and ongoing processes.

The following description will focus on the basic functionality of the application and its part relating to G2S module.



2.3 Menu of the application

It is used to handle the application and includes the following items

- *About the programme* – It displays information about the programme version and the copyright.
- *Language* – Selection of a language version, Czech and English are available.
- *Exit* – Application is closed.

2.4 Menu of the units

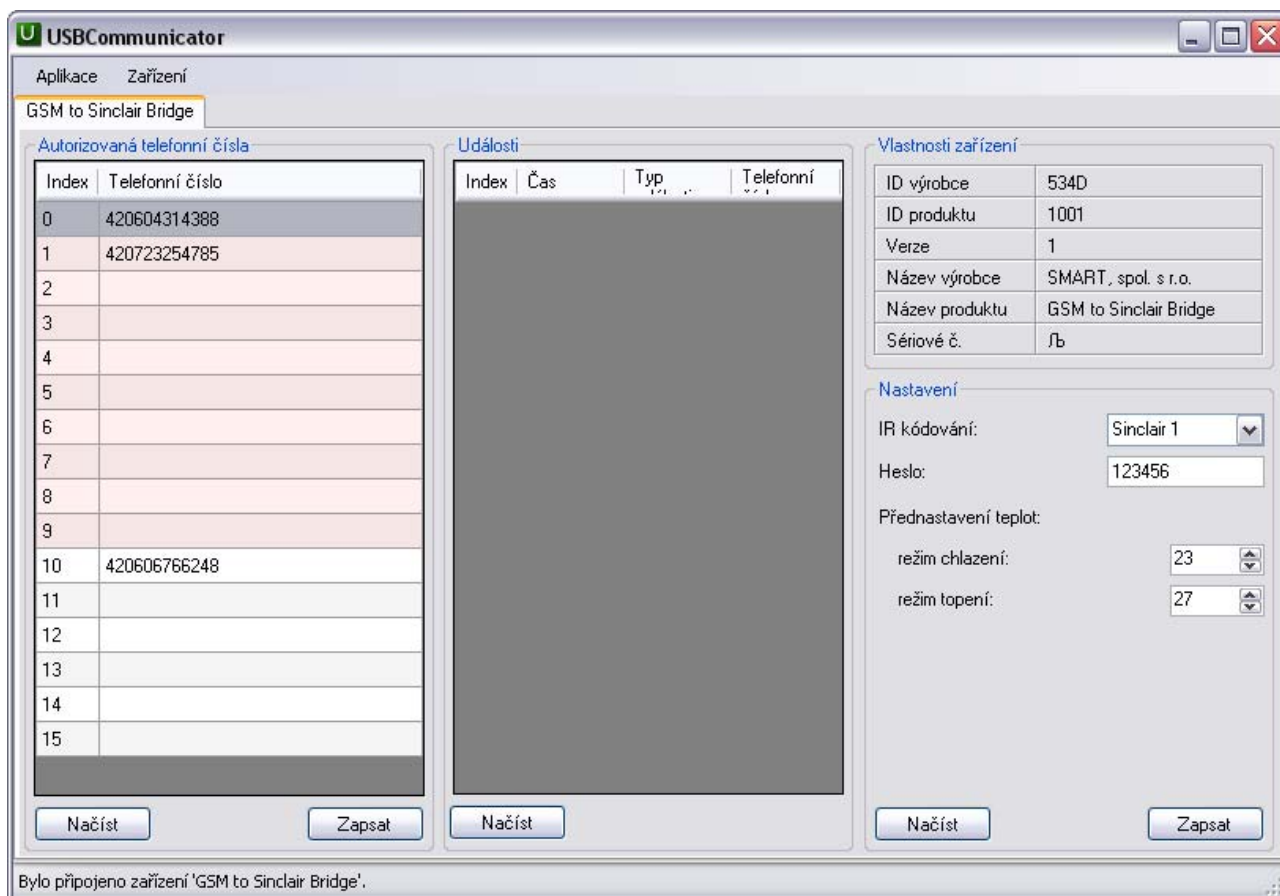
It is used to control the units via the USB port of the computer and includes the following items

- *Supported units...* – Displays a list of all units supported by this version of the programme.
- *Open a general unit...* – Displays a user interface of the general unit for communication in HID standard.

2.5 User Interface for G2S Module

Now, if your USBCommunicator is running, you can connect the G2S Module to the USB port of the computer using the enclosed cable. To set up the module, the power supply from the network adapter is not necessary, the power from the USB port is sufficient. When connecting G2S Module to the USB port, logging the module to GSM network is blocked, as a protection against current consumption (its peak values) from USB port. Logging to GSM network is also blocked as a measure against mutual interference, even when connecting to USB port and using power supply adapter of G2S module.

After connection the programme automatically identifies the type of unit and displays a corresponding user interface on the tab. For G2S module it is divided into several sections, as shown below:



Authorized telephone numbers

In the left-hand section is placed a list of authorized telephone numbers saved in the internal memory of the module. Positions that can be overwritten by phone numbers saved on the SIM card at the module start (the first ten positions, for more details see Chapter 1.3) are highlighted in red; remaining numbers on positions 10 to 15 are not overwritten by numbers from SIM card when module powering on, its setting can be done only by service routine and numbers are kept even after new powering module on.

In the USBCommunicator numbers are entered in the international format, but without the initial sign '+' or '00' (e.g. 420604123456).

To add or edit a number you will select the chosen position and enter the telephone number by double-clicking, pressing F2 or directly keying it. Finish the entering by pressing *Enter*, *up arrow*, *down arrow* or *Esc* (no change), or by clicking elsewhere.

To delete numbers from the chosen position, proceed in the same way as when editing, just leave the position empty.

To enter new data into the module, use the key *Record*.

Events

A list of the most recent events saved in the module can be placed in the middle section of the USBCommunicator window. This function is not in use for the G2S module.

Specifications of the unit

The upper part of the right-hand section lists HID specifications identifying the connected unit (G2S Module)

Setting

The lower part of the right-hand section displays the setting of the module. Here the following can be set: type of IR coding, master password ([During production, the password is set to be the production module number by default.](#)) and initial temperatures for the cooling and heating modes. Those temperatures are used when controlling the module via SMS messages which do not include the required temperature.

Commit the new data recording to the module by the key *Record*.

The key *Load* is used to load the relevant data from the module internal memory to the programme and display it. The complete data download takes place automatically on every next connection of the module to a PC, so it is mostly not needed to use the key.

The key *Record* is used to record data from the programme to the internal memory of the module.

After completion of editing the new data has to be saved to the module using the key Record, otherwise the changes will not be activated and the modified data will be lost! Authorized numbers, password and type of coding should not be stored simultaneously also on the SIM card, otherwise changes made by service routine (with the exception of numbers on top six positions) will be overwritten by former data from SIM card at the moment of next power on!

After recording all the needed data to the unit, exit the programme and disconnect the module from the USB port.

3 Unit operation

G2S Module may only be used under the conditions specified in this description and operation instructions. Otherwise the guarantee will not be provided. The manufacturer is not liable for damage caused by using the unit in a different manner than specified in the manual. In the event of failure turn the unit off and do not try to repair it or adjust it in any way. A possible repair may only be done by the manufacturer. Prevent children from handling the unit. The manufacturer reserves the right to modify the manual without prior notice.

4 Technical parameters

Supply voltage range:	10 -14 V, direct voltage from the adapter
Maximum consumption:	0.5 A (at 10 V voltage)
Dimensions (š x h x v):	118 x 79 x 25 mm
Module weight:	120 g
Operating temperature:	0 to +40 °C
Storage temperatures:	-25 to +60 °C
GSM ranges:	GSM 900 and 1800 MHz
Compatible GSM network:	depending on a SIM card used (in the Czech Republic O2, T-Mobile, Vodafone)
USB port:	Mini-B

5 Guarantee conditions

The manufacturer provides a guarantee of faultless function of the unit for a period of 24 months from the day of its putting into operation, however at the latest for 27 months from the day of sale to the customer. Within this period he will carry out free of charge all repairs of malfunctions resulting from a material defect or a hidden manufacturing fault. The guarantee shall exclude defects due to mechanical damage, caused by incorrect connection or use for a purpose different from the the one that the product is designed for, failure to observe operational or storage conditions and the manufacturer's instructions.

NOTE CONCERNING PROTECTION OF ENVIRONMENT



This product must not be disposed of via normal household waste after its service life, but must be taken to a collection station for the recycling of electrical and electronic devices. The symbol on the product, the operating instructions or the packaging indicate such disposal procedures. The materials are recyclable in accordance with their respective symbols. By means of re-use, material recycling or any other form of recycling old appliances you are making an important contribution to the protection of our environment. Please ask your local council where your nearest disposal station is located.

PRODUCER

Producer: SINCLAIR CORPORATION Ltd., 1-4 Argyll St., London W1F 7LD, UK, <http://www.sinclair-solutions.com>
This product was manufactured in China (Made in China).

REPRESENTATIVE AND TECHNICAL SUPPORT

NEPA spol. s r.o.
Purkyňova 45
612 00 Brno
Czech Republic

Tel.: +420 800 100 285

www.nepa.cz

