

ARE H9 With Bluetooth LE HID–Keyboard Function

1 Bluetooth LE HID-Keyboard

The device ARE H9 BLE can read the transponder ID and transfer them wireless as a keyboard input to a connected device, if this supports the Bluetooth Low Energy technology.

To use the wireless connection, a device/adaptor (intern or extern e.g. USB-Dongle) must support the following connection techniques:

- Bluetooth Smart (Bluetooth Low Energy technology, Standard 4.0)
- Bluetooth Smart Ready (Bluetooth Low Energy technology, Standard 4.0)

The following operating systems support Bluetooth low energy feature:

- Android operating system from version 4.5
- Microsoft Windows 7 with Bluetooth 4.0 Low Energy Hardware (for example: Broadcom BCM20702 chipset) and driver (for example with WIDCOMM Driver from version v6.5.1.5800)
- Microsoft Windows 8 und 10 with corresponding hardware will support Bluetooth Low Energy functions.

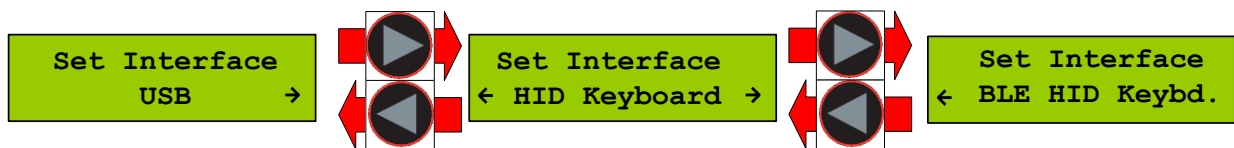
The operating system Microsoft Windows XP and earlier Microsoft Windows operating systems will not support Bluetooth Low Energy technology and are not suitable to work with the ARE H9 BLE as a Bluetooth device.

The ARE H9 BLE can always connect only with one device at the same time, if the device to be connected should be changed, it is necessary to unpair any existing pairing.

1.1 BLE HID-keyboard in the Interface selection

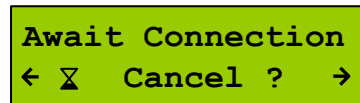
To use the Bluetooth HID function the appropriate interface selection in ARE H9 BLE must be selected under the menu item **Set interface**.

→ BLE HID Keybd.



The selection is made by the arrow keys and confirmed by pressing the main button.

If there is active no connection (or pairing) this time, the following screen on the ARE H9 BLE is to see:

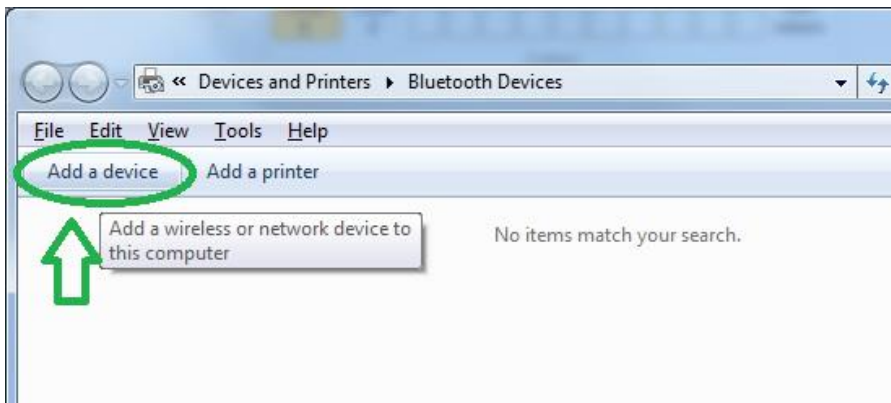


This screen will stay active until it is cancelled from the user by pressing both arrow keys, or until an active Bluetooth Low Energy connection is established.

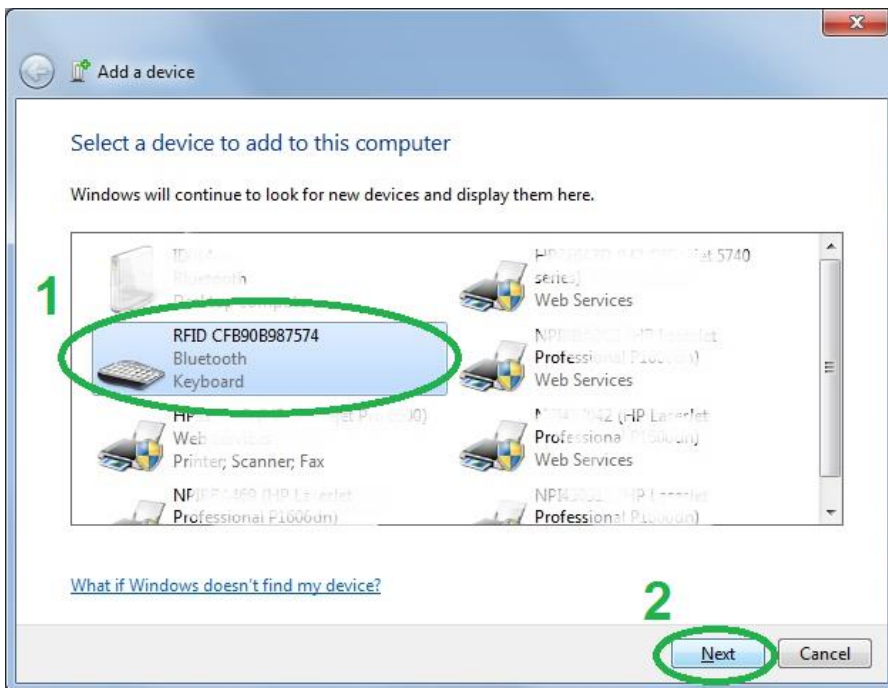
When HID-keyboard is selected as interface the ARE H9 changes automatically to the operation mode Online/Keyboard, only in this operation mode transponder ID-numbers are transmitted to an attached device like input from a HID-keyboard. While the interface selection is **HID-keyboard** the operation modes **Handshake** and **Database** are not available.

1.2 Procedure with Microsoft Windows to add the ARE H9 BLE as a keyboard device

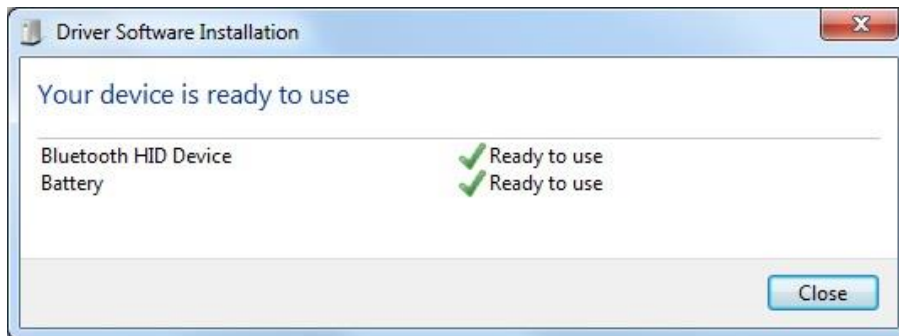
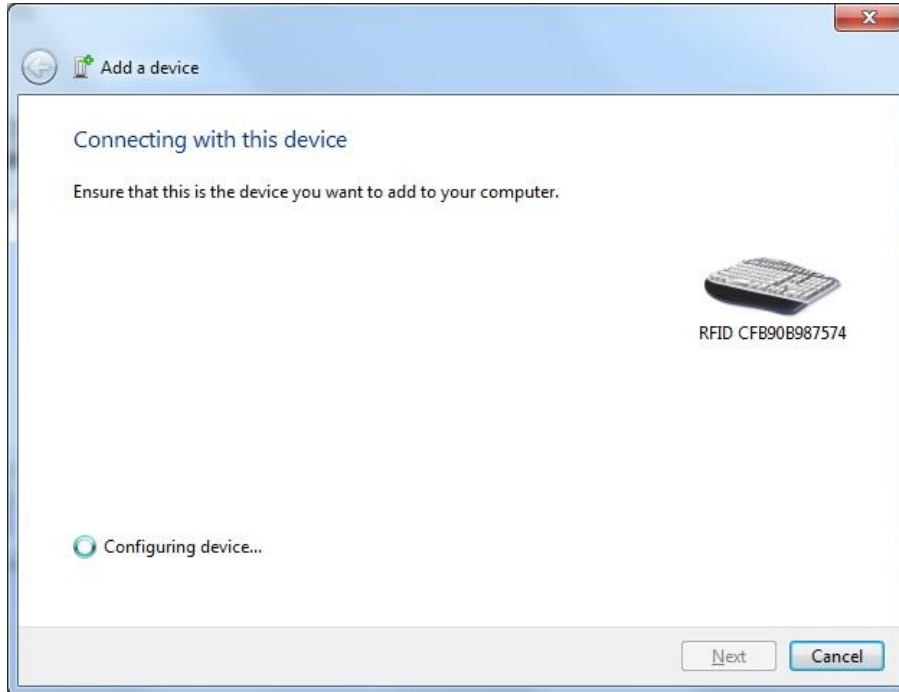
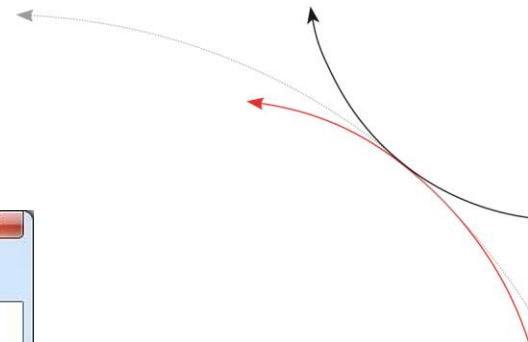
At the Microsoft Windows menu: Control Panel > Hardware and Sound > Devices and Printer > Bluetooth Devices click the button **Add a device** to search for the ARE H9 BLE that should be connected.



The ARE H9 should be in the list of found devices under the Name **RFID XXXYYY Bluetooth Keyboard**, where XXXYYY stands for the address of the ARE H9 device.



If the ARE H9 BLE has been found, it has to be selected and then the **Next** button should be clicked to connect to the ARE H9 BLE. In case the connection fails, please try again to connect.



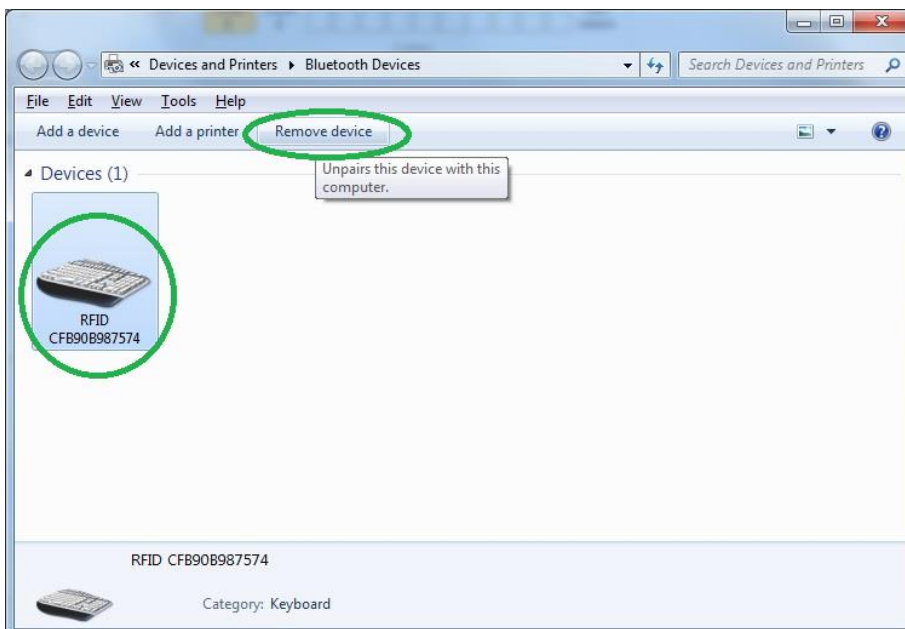


Has the ARE H9 BLE successfully added, transponder IDs can be transmitted as keystrokes to open input or text boxes of the connected device.

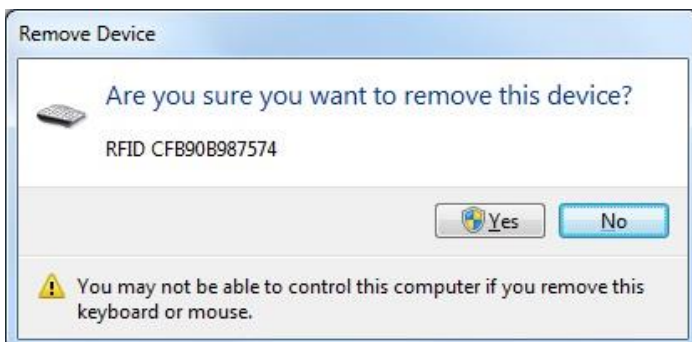
1.3 Procedure with Microsoft Windows to remove the ARE H9 BLE

The connection to the ARE H9 can also be removed (unpaired) again to use the unit for example with another device.

Select under Microsoft Windows menu: Control Panel > Hardware and Sound > Devices and Printer > Bluetooth Devices click the button **Remove device** to disconnect the ARE H9 BLE.



Click **Yes** in the following dialog box to confirm.



Now the connection to the ARE H9 BLE is removed.



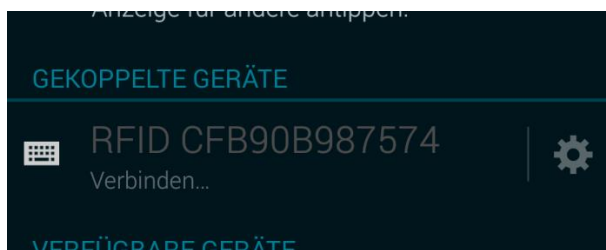
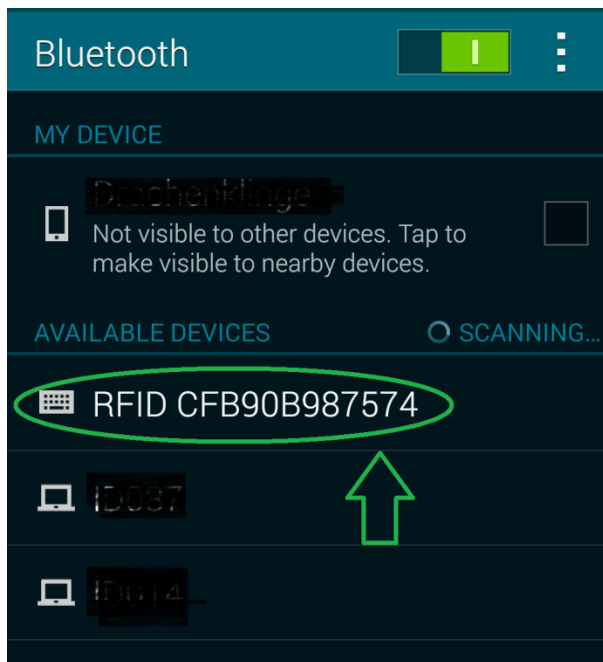
After removing (unpaired) a connection to a device, the device can be reconnected again with either a new or the same device.

The ARE H9 BLE always takes only one active connection with a device.

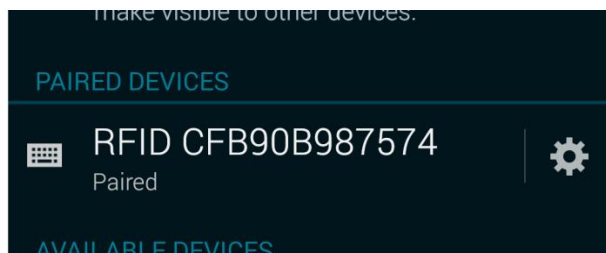
The connection will remain active as long as the connection is not released (unpaired) even during the radio link is not active.

1.4 Procedure with Android to add the ARE H9 BLE as keyboard device

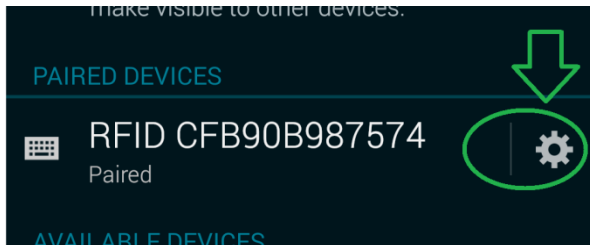
To add the ARE H9 BLE on the Android device as a keyboard in the Bluetooth menu the available devices should be detected and selected.



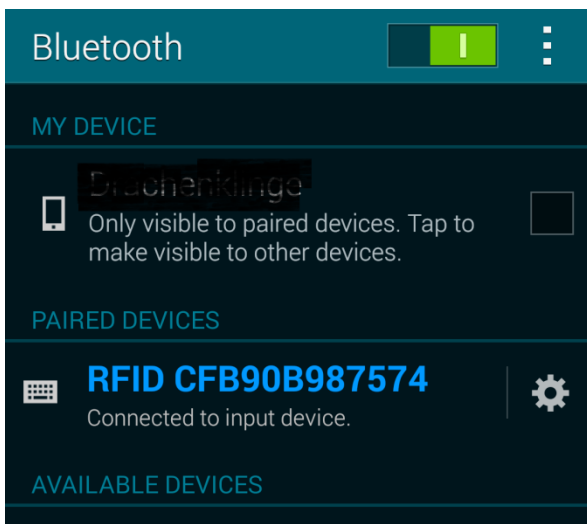
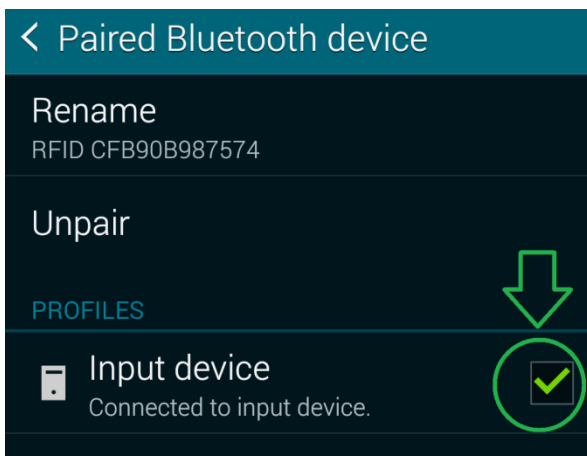
After selecting the ARE H9 BLE the connection should displayed as **Paired**



By selecting the settings icon the ARE H9 BLE could be activated as a keyboard for inputs.

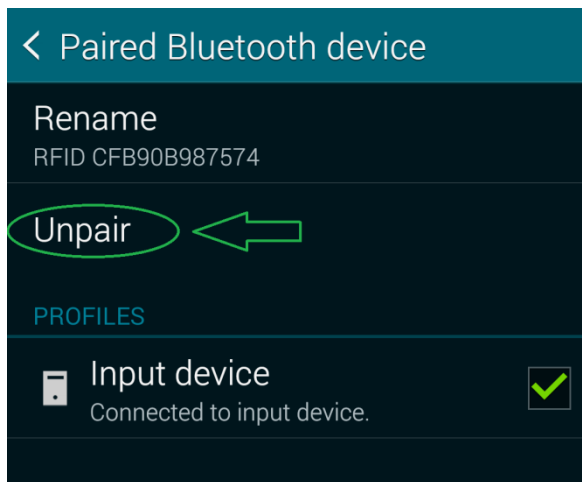


For this purpose in the following menu the hook is set at **Input Device**



1.5 Procedure on Android to remove the ARE H9 BLE keyboard

To remove the ARE H9 from an Android device in the menu for connected Bluetooth devices that ARE H9 BLE should be selected and then the button **Unpair** clicked.



1.6 Operation of BLE HID-Keyboard Interface

In the operation mode **online/BLE keyboard** with an active connection every scanned transponder number is sent as a keyboard input to the connected device.

To get the number displayed on the connected device there the focus should set on a text field.

A successful reading ...

```
410 100090355403
Online/BLE KeyB*
```

this will be transmitted as: **1000000410100090355403**

Note:

If the focus on the connected device is not set to a text box, or similar, the keystrokes while transmitting the transponder ID could cause unwanted actions.

As long as the ARE H9 BLE detects an active Bluetooth connection it will signal this at the reading mode by the symbol * in the lower right corner of the screen.

If the die Bluetooth connection at the operating mode **Online/BLE keyboard** is disconnected, for example by leaving the range of the radio signal or by switching the device off, and a transponder ID should transmitted the ARE H9 BLE will be waiting until the connection will be re-established, during this the following screen is displayed:

```
Await Connection
< ⌘ Cancel ? >
```

If the connection is re-established the ARE H9 BLE transmits automatically the ID number. The waiting for a connection could be cancelled by the user any time.

As selected the operating mode **Online/BLE keyboard** is saved in the ARE H9, therefor during switching on the ARE H9 it will first wait about a an active connection.

1.7 Further Interfaces

The use and functions of the USB interface is supported by the ARE H9 BLE.

During the use of the USB interface the Bluetooth part of the reader is not deactivated, it will only not be used for data transmissions. Therefore the ARE H9 BLE will be still shown as connect t the paired device.

2 Microsoft Windows 7 Driver Installation

Because Bluetooth Low Energy is not supported on the operating system Microsoft Windows 7 of the Microsoft drivers, it is necessary to install a suitable driver for the Bluetooth device you are using which provides the support of Bluetooth Low Energy.

2.1 Broadcom BCM20702

Suitable and tested Bluetooth devices for Microsoft Windows 7 are for example devices (intern/Dongle) using the Broadcom BCM20702 chipset (for example LM Technologies LM506).

Partial devices with this chipset are supplied with no more current drivers, which could cause that the ARE H9 is detected but no pairing or keyboard function is available. For this case at the customer CD for the ARE H9 BLE will provide an actual driver with the version v6.5.1.5800.

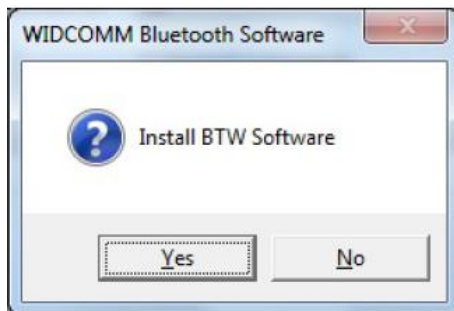
Please remove any previous version of Bluetooth software existing in your system before you start to install the WIDCOMM drivers on the customer CD.

The remove procedures are as follows:

- Step 1: Click Start/Settings, then select Control Panel.
- Step 2: In the Control Panel window, double click Add/Remove programs icon.
- Step 3: Find out the WIDCOMM or other Bluetooth Software then remove it.

To install the driver do the following steps:

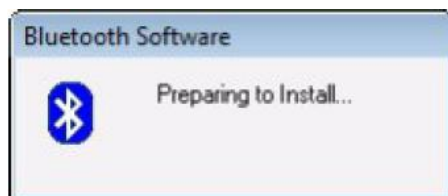
Step 1: Execute Setup.exe and please click **Yes** to continue installation.



Step 2: Installation program will remind you to plug in, or activate, the Bluetooth adapter. The reminder dialog box will not pop up if you already have plugged in the Adapter, or activated the device in your PC



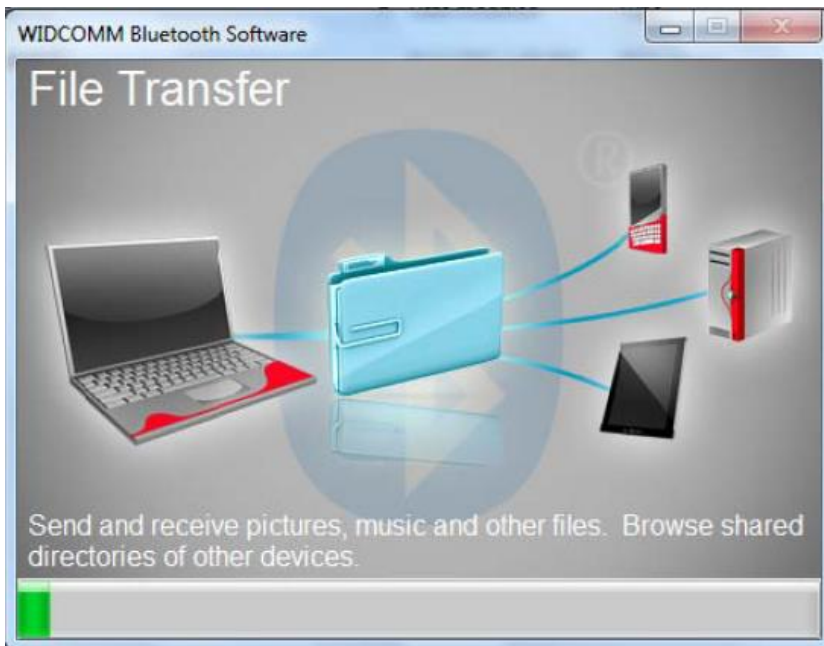
If a suitable Bluetooth receiver was found, the installation will start automatically.



Step 3: Click **Agree and Install Bluetooth Software** to continue.



Step 4: Installation in Progress



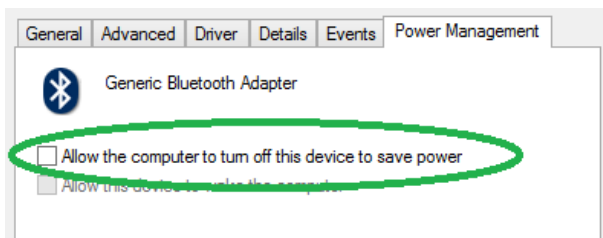
Step 5: Installation complete, may be a system restart is required for some features of the software.



3 Notes on operation

3.1 Energy saving options on Microsoft Windows

Should it be the case that in the current operation a connection to the ARE H9 BLE is lost and will without a cause disconnected and reconnected, it may be because the energy saving options of Microsoft Windows cause that the device is switched off. This can be caused by the settings of either the HID keyboard, in internal adapter or an external USB dongle. Under Control Panel> Device Manager> Right-click (under HID input devices) or the appropriate adapter> Power Management there uncheck **Allow the computer to turn off this device to save power** and test with setting the behavior again.



3.2 Connection loss after restart of MS Windows 7

After a Microsoft Windows 7 computer restart, it may happen that the device can no longer be used without switching the off the Bluetooth connection and switched it on again. This could be solved by disable / enable the internal adapter (in the Control Panel) or remove and plug in and again the USB dongle.

4 Notifications of changes

Revision	Date	Description of Changes	Editor
001	06.07.2015	First revision	HL
002	08.07.2015	Energy Saving Issues	HL
003	09.07.2015	Windows 7 connection loss after restart	HL
004	17.07.2017	Second try to connect added	FW

5 Contacts

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