KeyReader Plus

Manual **KeyReader Plus** ©TeraTron GmbH	Page 1 of 12 Document Version 1.0 Date: 19.07.2016	Autor: Frank Bajahr
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			-	

Attach-ments	Auther	Document

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1   Introduction

The KeyReaderPlus is a portable Device which is capable of reading data stored in dedicated vehicle keys. Once the data have been read the data are transferred to a remote server. The transfer takes place via Wifi or the USB Interface.

Delivery Content

KeyReaderPlus Handheld
USB-Cable

The user(s) of these products are cautioned to only use accessories and peripherals approved, in advance, by MANUFACTURER. The use of accessories and peripherals, other than those approved by MANUFACTURER, or any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Installation

The KeyReader Plus should be completly charged before the first operation. Charging is done by connecting the KeyReader Plus to a USB-port or USB-Power Supply which is capable to deliver at least 500mA. The Micro-USB-Connection at the KeyReader Plus is coverd by a sliding bar.

As soon as the KeyReader is connected to the power supply the device is booting up. The LED is giving the battery status.

Indicator and Operating Elements

The KeyReader Plus has 3 RGB-LEDs, which are giving a feedback on ist actual working condition. The LEDs are marked with a Symbol. There is one LED for the vehicle key reading function (symbol : Key), one for the connection state of the server (symbol: waves) and one for the battery status (symbol: battery).
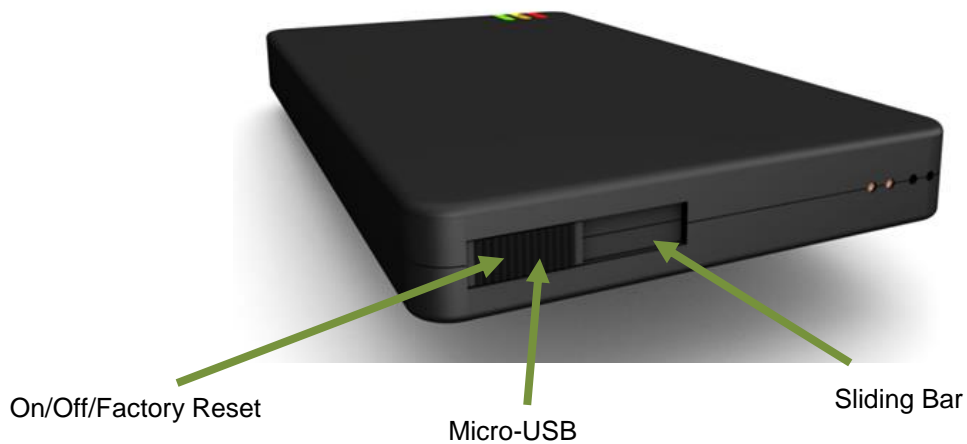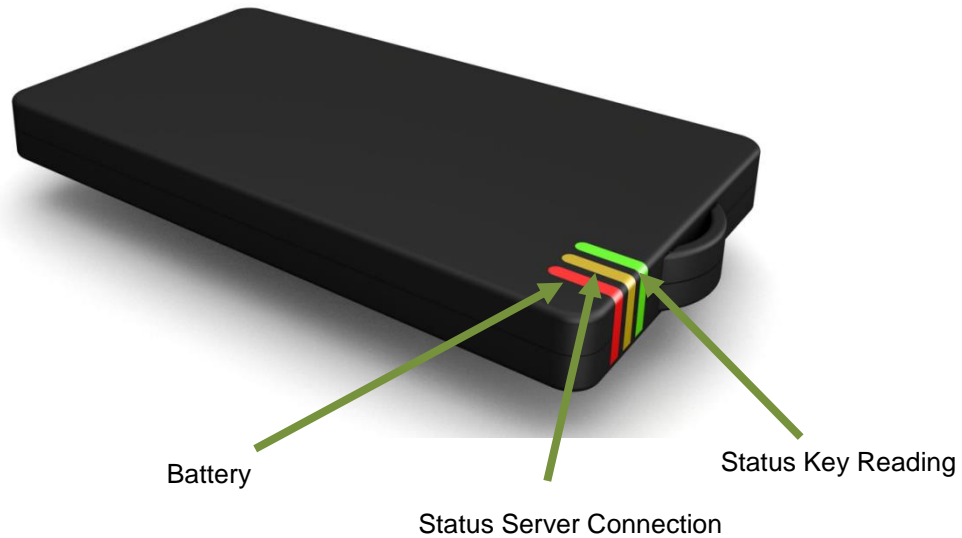
At the opposite side is are, covered by a sliding bar, the Micro-USB-Connevtor and a small switch. With this switch the KeyReader Plus can be switched off by holding it down for min of 2 sec. After the switch is released the KeyReader Plus will drive down. This is indicated by the flashing blue "Key"-LED.

In case the KeyReader Plus needs tob e set back to inital factory state the button has to be pressed for > 10 sec. A Factory Reset is performed and all configuration settings and memory is set back.

Via the micro-USB-connection the KeyReader Plus can be cahrged. Furthermore the initial settings can be made via this Interface.

2   Mechanical

Battery

Status Server Connection

Status Key Reading

On/Off/Factory Reset

Micro-USB

Sliding Bar

3   Driver Installation

All required components will be installed by performing the Setup-Program on the target PC. During the Setup it is required to login as a local admin.
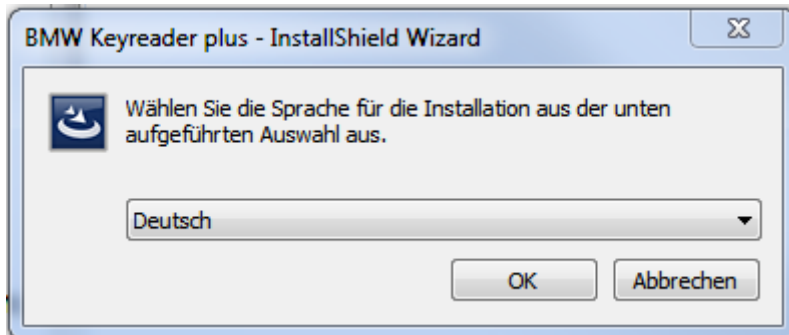
System Requirements:

Personal Computer with Windows 7, 8.1 oder 10
Eine freie USB-Schnittstelle
Internet Browser, e.g. Internet Explorer, Firefox

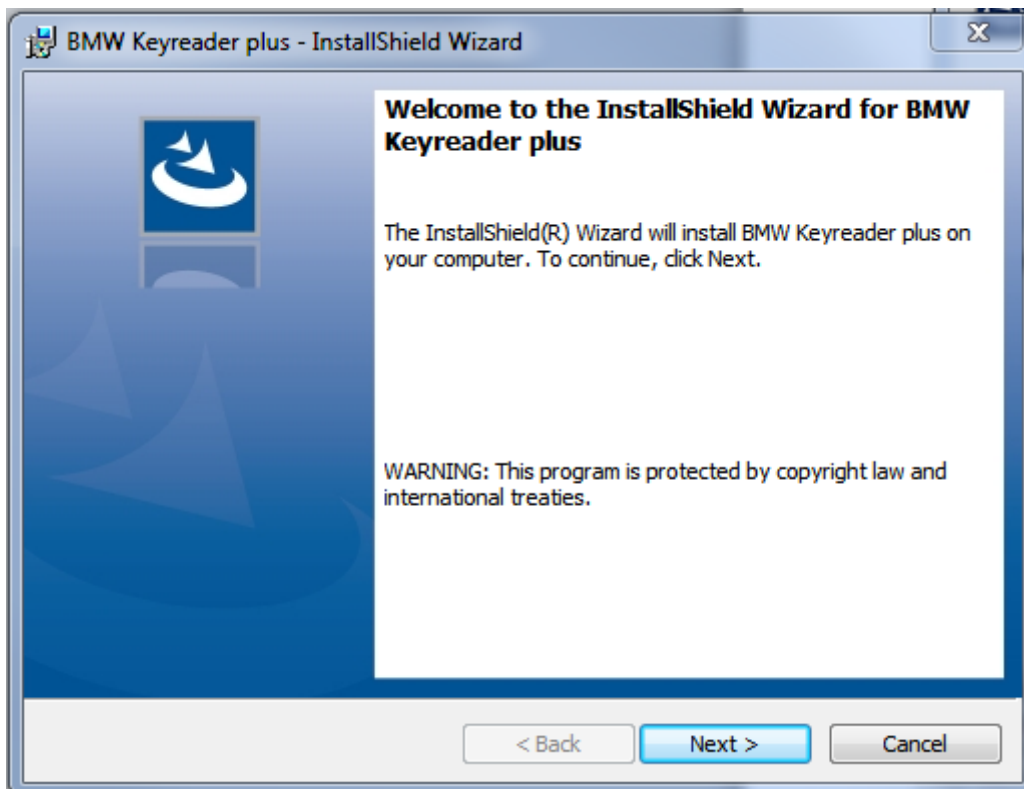| **Manual** **KeyReader Plus** ©TeraTron GmbH	Page 5 of 12 Document Version 1.0 Date: 19.07.2016	Autor: Frank Bajahr
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In order to charge the KeyReader Plus the USB-Interface should be capable to deliver at least 500mA. If this is not given charging has to be done with an appropriate USB-Charger.

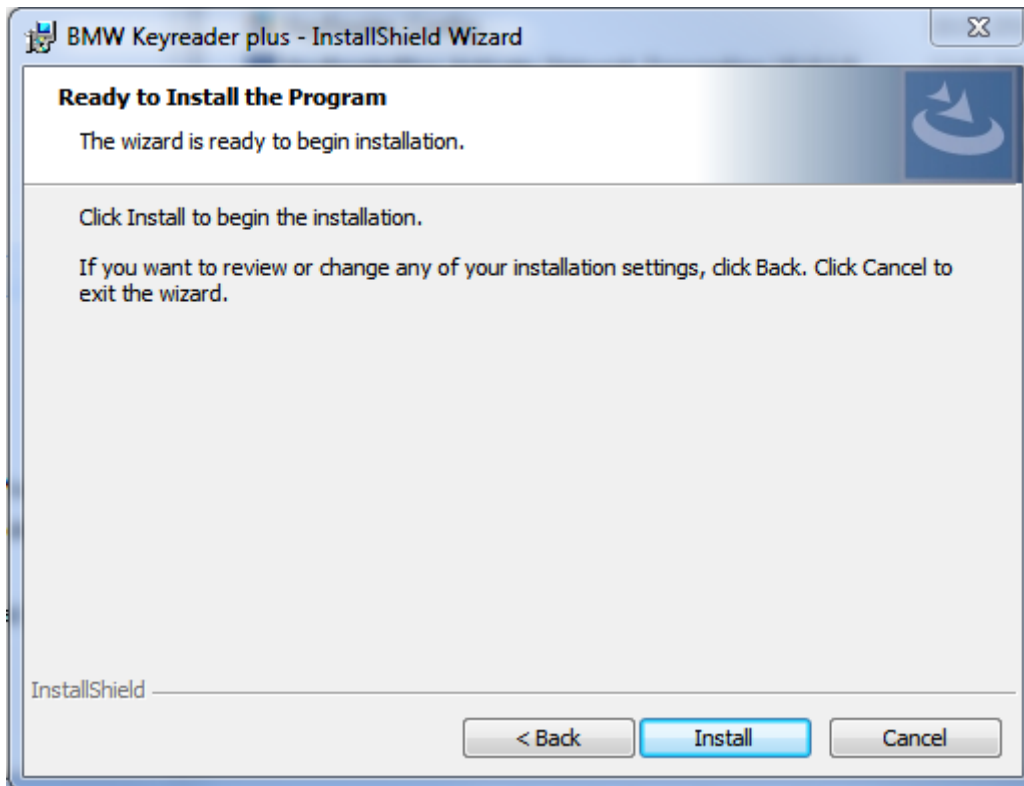To install the required driver please start the KeyReaderPlus_Vx.x.x.x.exe. Select the language to proceed.

Picture 1: select language

Confirm with „Next"

Picture 2: Welcome Screen

Confirm with „Install"

Pictuire 3: Confirmation

Once the installation has been finished the last screen will prompt for "Finish"

Picture 4: Completion

Your Personal computer is prepared to work with the KeyReader Plus now.

4   Configuration of KeyReader Plus

Connect the KeyReader Plus to an USB-Port of your PC. In case the KeyReader was off it will now automatically turn on and boot up. During the boot process the „Key" LED is flashing blue. The "Battery" LED is indicating the charge condition of the battery. If it is green no charging takes place. If yellow, charging is in grogress.

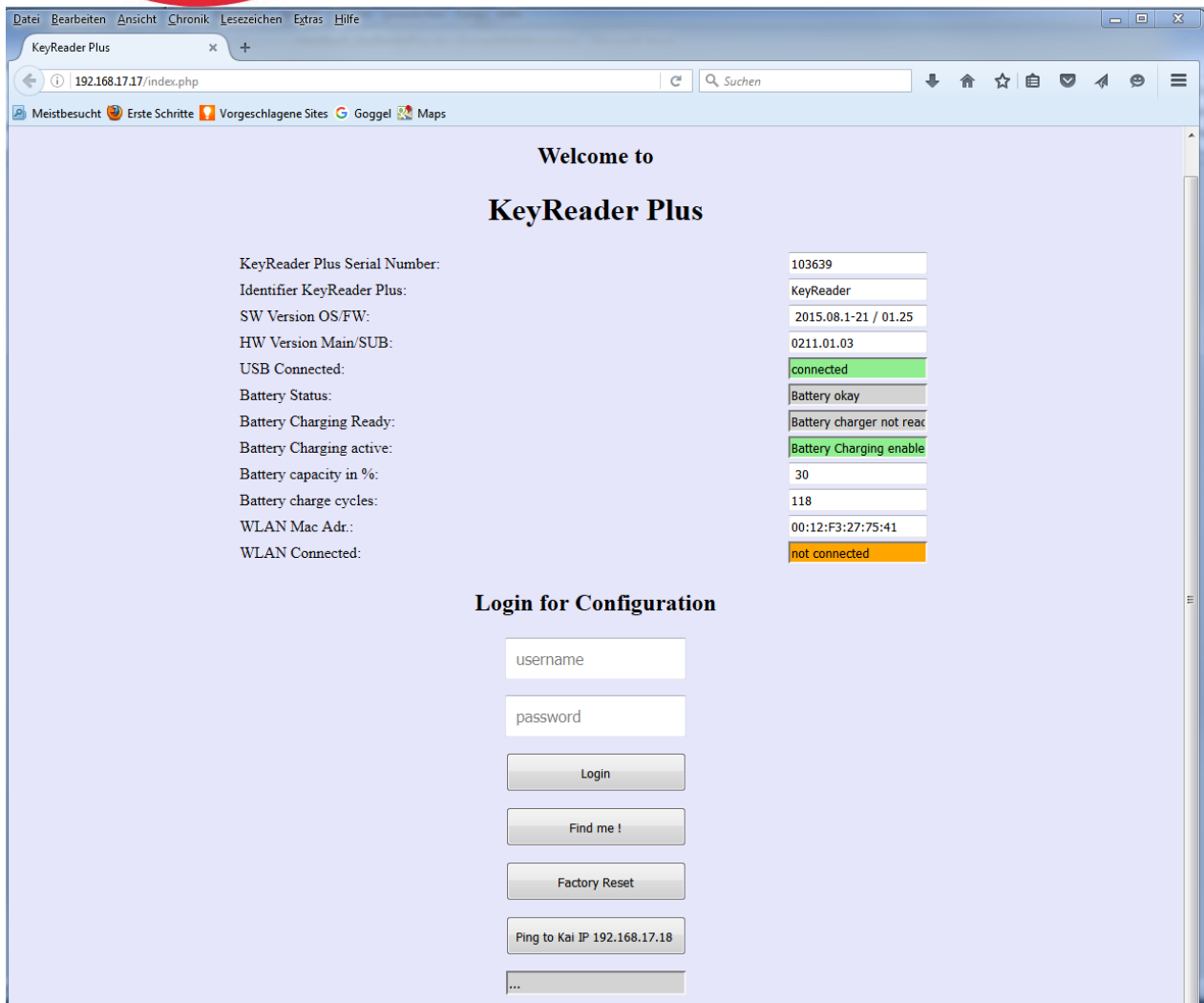To configure the KeyReader open a Browser on your PC. E.g. Internet Explorer.

Connect to the KeyReader by typing the following address in your browser:

<p align="center">http://192.168.17.17</p>

You should now see the welcome screen of KeyReader Plus:

Picture 5: Welcome screen

The following system information are shown:

KeyReader Plus Serial Number: serial number of the device

Identifier KeyReader Plus: peronal name of device (can be configured.)

Software Version OS/FW: version of the operating system and firmware version

HW Version Main/SUB: hardware version

USB-Connected: status of the USB connection

Battery Status: status of the battery

Battery Charging active: current charging status

Battery Capacity in %: charging condition of the battery

Battery charge cycles: no. of charging cycles

WLAN Mac Adr: mac address of the Wifi-Interface

WLAN Connected: Wifi connection status

Login-Button: you have to login to configure the KeyReader Plus. Login name and passwort are configurable
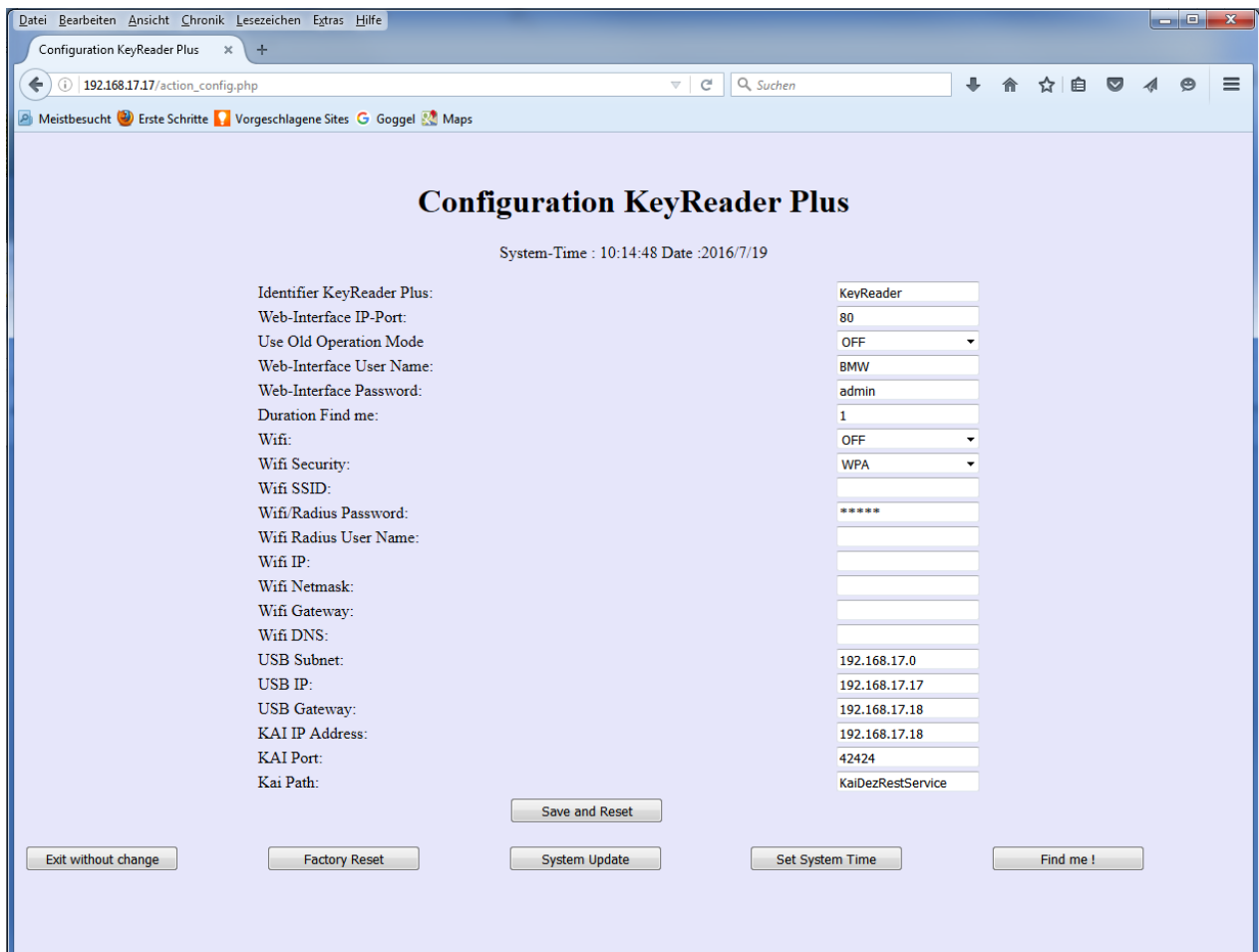
Default username / password: BMW / admin

Find Me !: This button will activate an acoustic feedback of the device

Factory Reset: sets the KeyReader Plus back to factory settings

Ping to KAI IP : check the connection to the KAI server. (attention: only the connection to the server is testet)

Configuration (via login button)

Picture 6: Configuration screen

At the Configuration page the system time is shown. If there is an active connection to the Internet the system time is set automatically. In case there is not Internet connection the system time can be set by hitting the "Set System Time" button.

Identifier Key Reader Plus: name teh KeyReader Plus to your personal needs

Web-Interface IP-Port: Port for this web interface. Default port is 80

Use Old Operation Mode: If this is switched to On the KeyReader Plus will not send data to the KAI Server. It is only possible to collect the key data via the mass storage feature.

Web Interface User Name: login name

Web Interface Password: login password

Duration Find Me: repetition of acoustic signal for "Find me" Featrure.

Wifi: Operation mode for Wifi interface. OFF, DHCP or static.

Wifi Security: Select Security Mode: WPA or IEC802.1X (Radius Server Mode)

Wifi SSID: SSID of the desired network

Wifi /Radius Password: network password (WPA or Radius password)

Wifi Radius User Name: user name of radius server

The following for IP-numbers only have to be selected manually if Wifi-mode „static" was selected. In this case please check with your network admin for correct settings.

USB Subnet: subnet for the USB connection. Please don´t change if you are not sure

USB IP: IP address for USB connection. Please don´t change if you are not sure

USB Gateway: IP address of USB host PC. Please don´t change if you are not sure

The following settings have to be adviced by your network admin

KAI IP Address: Adress of KAI Server

KAI Port: Port of KAI Server

KAI Path: Path of KAI Server

Any change has to be confirmed by teh Button „Save nd Reset. After a reboot the new settings are valid.

5 Operation of KeyReader Plus

After the correct configuration the KeyReader Plus is able to operate. If you place a vehicle key pn top of the landing pad the key is read and the data are send to the KAI Server.

The start of the reading is indicated by an acoustic beep and the yellow "Key" LED. During reading the key should stay in the reading position. After the key is successfully read a second beep will indicate this condition. In addition the "Key" LED will change to green.

The time for reading a key might be different, based on the data content of the key. It should be in the range of 1 to 4 sec.

Once the data have been read they will be transferd tot he KAI server. If the transmission is successful the reader will beep a third time and the LED in the middle will flash green for confirmation. In case thaer is no contection to the KAI server the LED will start flashing red (no Wifi connection) or yellow (server is not responding). The data of the key is stored in the KeyReader. Every 15sec the KeyReader will try to establish a connection to the KAI-server to transmit the remaining data. Up to 1000 keys can be temporary stored.

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/ TV technician for help.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF Exposure Information (SAR)

This device meets the government's requirements for exposure to radio waves. This device is designed and manufactured not to exceed the emission limits for exposure to radio frequency (RF) energy set by the Federal Communications Commission of the U.S. Government.

The exposure standard employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. Tests for SAR are conducted using standard operating positions accepted by the FCC with the EUT transmitting at the specified power level in different channels.

The FCC has granted an Equipment Authorization for this device with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this device is on file with the FCC and can be found under the Display Grant section of www.fcc.gov/eot/ea/fccid after searching on FCC ID: QLXKRP

Canada, Industry Canada (IC) Notices

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Canada, avis d'Industry Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Users should also be advised that high-power radars are allocated as primary users (i.e. priority users) of the bands 5250-5350 MHz and 5650-5850 MHz and that these radars could cause interference and/or damage to LE-LAN devices.

Devraient également être informés les utilisateurs que les radars à haute puissance sont désignés comme utilisateurs principaux (c.-à-utilisateurs prioritaires) des bandes 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient provoquer des interférences et / ou endommager les appareils LE-LAN.

Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when operated in portable exposure conditions.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal.

Ce dispositif a été évalué pour et démontré conforme à la Taux IC d'absorption spécifique ("SAR") des limites lorsqu'il est utilisé dans des conditions d'exposition portatifs.