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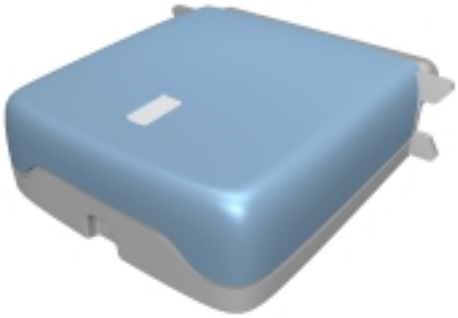
USER'S MANUAL
LSE 019 Printer Adapter Bluetooth



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1 ABBREVIATIONS

ISM	Industrial, Scientific and Medical
AC	Alternate Current
DC	Direct Current
LED	Light Emmitting diode
PWM	Pulde Width Modulation
PCM	Pulse Code Modulation
FCC	Federal Communications Commission
ETS	European Telecommunication Standard
UL	Undewriters Laboratories
CTR	Common Technical Regulations
ETL	Edison Testing Laboratory
ETSI	European Telecommunications standards Institute
EEC	European Economic Community
EMC	Electromagnetic Compatibilty
LVD	Low voltage directive
SIG	Special Intrest Group

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2 DESCRIPTION

2.1 INTRODUCTION

This users manual covers the LSE 019 Printer adapter for wireless printing applications. The Printer Adapter supports Wireless Printing when used in conjunction with the LSE 041 Bluetooth Bluecard. The Printer Adapter provides a parallell interface to a printer. The maximum distance for error free printing is up to 10 meters. A PC based printer installation is required.

2.2 PRODUCT DESCRIPTION

The LSE019 Printer Adapter adapter provides wireless printing for Bluetooth applications in the 2.4 GHz ISM band. The Printer Adapter is intended for insert into a printer parallel port.

LSE019 Features:

- Data rates up to 460 Kbps.
- Act as one device in a Bluetooth network.
- Proprietary wireless printing supported.

LSE019 Applications:

- Wireless printing.

3 BLUETOOTH STANDARD INFORMATION

3.1 BLUETOOTH CAPABILITY STATEMENT

This product is manufactured to meet the Bluetooth specification 1.0A.
The following profiles / interoperable products are supported:

- Generic Access Profile

Note!
The Wireless Printing Profile is an own profile and the the Printer Adapter works only in conjunction with the LSE 041 Bluetooth Bluecard. This profile must never be referred to in any way as beeing a Bluetooth standard profile.

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4 INSTALLATION AND CONNECTION PROCESS FOR THE PRINTER ADAPTER

4.1 INSTRUCTIONS FOR INSTALLING THE PRINTER ADAPTER FROM ANYCOM

1. Insert the Printer Adapter into the parallel port on your PC-based printer. (fig.1)
2. Attach the Printer Adapter to the DC connector of the AC power transformer and plugging the AC connector into a live AC outlet.
3. Power on the PC-based printer.

After finishing the installation of your Bluecard Bluetooth SW from AnyCom (See. User's Manual LSE 041 / Bluecard) on your PC, you should now be able to print via the Bluetooth Printer Application.

Note!
Use only the power supply provided with the LSE 019 Printer Adapter. Use of any other power supply could damage the Printer Adapter.

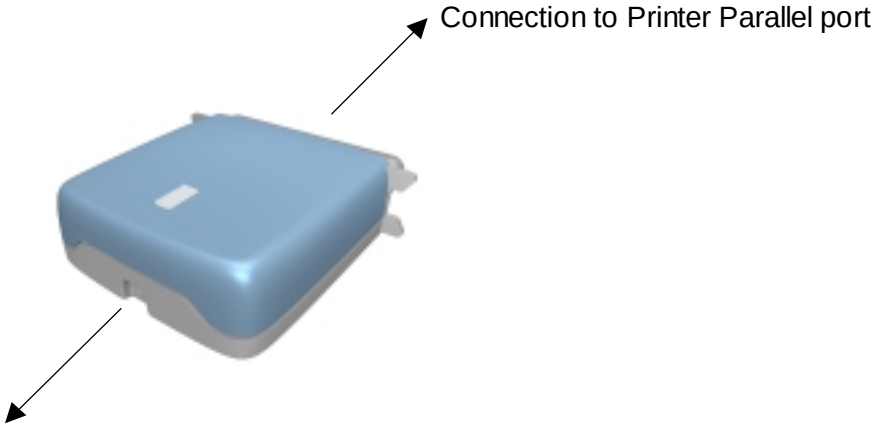

fig. 1

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5 TROUBLE SHOOTING

The Bluetooth splash screen appears but you get the error: -coldn't find any bluetooth units within range.

→ The Bluetooth unit fails to discover other Bluetooth units or an unknown Bluetooth device answers before the printer BT-device. Try reseting the Bluetooth Printer adapter by disconnecting the power and removing it from the printer. Put it back on the printer and reconnect the power. Try moving the printer closer to the PC.

Inquiry succeeds but connect fails.

→ The Printer adapter needs a reset. Try reseting the Bluetooth Printer adapter by disconnecting the power and removing it from the printer. Put it back on the printer and reconnect the power. Also, try moving the printer closer to the PC.

6 TECHNICAL SPECIFICATION

Radio specifications

Frequency range	2.402 – 2.495 GHz, programmable for specific national regulations.
Supported specification	Bluetooth 1.0A.
Output power	0 dBm
Power management	Active and passive power saving mode.
Sensitivity	- 74 dBm
Modulation and bit-rate	Frequency hopping Spread Spectrum (FHSS) Gaussian Frequency Shift Keying (GFSK), 1 Mbps.
Antenna	Integrated

Electrical characteristics

Power supply	External
Power consumption	105 mA (peak)

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Physical interface

Indicators	Data traffic, Connect status.

Mechanical specifications

Dimensions	50x60x19 mm. Incl. connector

Environment

Operating temperature	0º C to +55º C.
Storage temperature	-20º C to +70º C.
Humidity	5-95% non condensing.

Compliance

Radio	FCC part 15.247 (US), ETS 300 328 (Europe)
EMC	FCC part 15 C (US), ETS 300 826 (Europe)
Safety	UL 1950 (US), EN 60950 (Europe)
Approval marks	CE, ETL

7 REGULATIONS

7.1 EUROPEAN COMPLIANCE

EMC, Electrical Safety and Radio EC Directive Compliance

The CE mark is affixed to this product to confirm compliance with the following European Community Directives:

- Council Directive 1999/5/EC of the European Parliament and the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

- Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of Member States relating to electromagnetic compatibility (EMC).

- Council Directive 73/23/EEC of 19 february 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits.

Each of the above mentioned directives amended by

- Council Directive 93/68/EEC of 22 July 1993 on the harmonization of the CE marking requirements.

A “Declaration of Conformity” in accordance with the relevant standards to confirm compliance with the above mentioned directives has been made and is on file at Wireless Solutions Sweden AB, Sundbyberg, Sweden.

7.2 FCC (US) COMPLIANCE

FCC R.F. Interference Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for 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 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

Any changes or modifications not expressly approved by Wireless Solutions Sweden AB could void the user’s authority to operate the equipment.

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7.3 EXPOSURE TO RADIO FREQUENCY RADIATION

The radiated output power of the equipment is far below the FCC radio frequency exposure limits. Neverthless, it is advised to use the equipment in such a manner that the potential for human contact during normal operation is minimized.

7.4 IMPORTANT SAFETY INFORMATION

7.4.1 SAFETY WARNINGS !

Interference
All wireless devices may get interference, which could affect performance.

Switch off in aircraft
Wireless devices can cause interference. Using them on aircraft is illegal.

Switch off when refueling
Do not use the wireless Printer Adapter at a refueling point. Do not use near fuel or chemicals.

Switch off near blasting
Do not use the Printer Adapter where blasting is in progress. Observe restrictions, and follow any regulations or rules.

Switch off near medical equipment.
Follow all regulations and rules in hospitals. Do not use the Printer Adapter near medical equipment.

Use qualified service
Only qualified service personnel must repair equipment.

Accessories
Use only approved accessories. Do not connect incompatible products.

Connecting to other devices
When connecting to any other device, read its user's guide for detailed safety instructions. Do not connect incompatible products.

Chemicals
Do not store or use the Printer Adapter in places where it may be exposed to chemicals or chemical vapors. Doing so will lead to fires or electric chocks.

Prohibited areas
Do not use the Printer Adapter when the use of a Bluetooth application is prohibited or when it may cause interference or danger.

Humid or dusty places
Do not store or use the Printer Adapter in humid or dusty places. Doing so could lead to fires or electric chocks.

Do not disassemble or modify the PC-card in any way
Do not disassemble or modify the Printer Adapter in any way. Doing so without the express approval by the manufacturer will void user authority to operate the equipment and may lead to fires or electric shocks.

Switch off near a microwave oven in use
Do not use the Bluetooth application close to a microwave oven in use. There may be a risk that the system will be disturbed.

Heat, direct sunlight
Avoid installing the Printer Adapter near sources of heat or in direct sunlight.

Use only appropriate Region settings
Use only the region setting appropriate for the area where the Bluetooth application is used at the present time. Using the LSE019 Printer Adapter in any other region or with an incorrect region setting may be illegal.

Connect only to SELV circuits
The Printer Adapter is classified as an SELV (safety extra low voltage) circuit according to the electrical safety standards EN 60950/IEC 950/UL 1950 (Safety of information technology equipment). For this classification to be maintained, equipment to which the unit is connected must also be classified as an SELV circuit.

7.4.2 Operating Environment

Follow always any special regulations in force in any area and always power off your Bluetooth device whenever it is forbidden to use it, or when it may cause interference or danger.
When connecting the Printer Adapter to another device, read it's users guide for detailed safety instructions. Do not connect incompatible products.

Electronic Devices
Most modern electronic equipment is shielded from radio frequency (RF) signals. However, certain electronic equipment may not be shielded against the RF signals from your Bluetooth device.

Hearing Aids

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Some digital wireless devices may interfere with some hearing aids.

Medical Devices
Power off your Bluetooth device in health care facilities when any regulations posted in these areas instruct you to do so. Hospitals or health care facilities may be using equipment that could be sensitive to external RF energy.

Potentially explosive atmospheres
Do not use your Bluetooth device when in any area with a potentially explosive atmosphere and obey all signs and instructions. Sparks in such areas could cause explosions.
Users are reminded of the need to observe restrictions on the use of radio equipment in fuel depots, chemical plants or where blasting operations are in progress.
Areas with a potentially explosive atmosphere are often but not always clearly marked. They include below deck on boats; chemical transfer or storage facilities; veichles using liquefied petroleum gas (such as propane or butane); areas where the air contains chemicals or particles, such as grain, dust or metal powders; and any other area where you would normally be advised to turn off your veichle engine.
Failure to observe these instructions may lead to legal action.