Aruba LS-BT20 Location Beacon

Installation Guide

About the LS-BT20 Location Beacon

The LS-BT20 location beacon is designed to provide real-time location and proximity engagement with the Meridian Mobile Engagement tools. The key features are:

- Highly-accurate location identification
- Stand-alone device to protect user privacy
- Low power consumption
- Easy to deploy, test, and use

Package Contents

- LS-BT20 location beacon
- Four adhesive pads
- Installation Guide (this document, printed)

LS-BT20 Overview

The following figure shows the front and back view of an LS-BT20 location beacon:

Figure 1 *LS-BT20 Front and Back View*

- **Rectangular Tab:** on the left of the device, used for detaching the bottom cover.
- **Grooves**: on the bottom of the device at the four corners, used for attaching adhesive pads.
- **Mylar Tab:** extends out from the bottom of the device, pulled out for activating batteries.

The LS-BT20 location beacon is referred to as *device* in rest of the document.

Activation

The device is powered using two CR2477 coin batteries. To activate the device, pull out the tab that extends out from the bottom of the device.

Installation

The device ships with adhesive pads to install the device on a flat surface in an indoor environment.

Optional accessory kits are available that allow you to mount the device in an indoor and outdoor environment. For more information about the indoor and outdoor mounting kits, contact your Aruba sales representative.

Installation using the Adhesive Pads

The four corner grooves on the bottom of the device can be used to attach the device on a flat surface.

Before installing the device, ensure that:

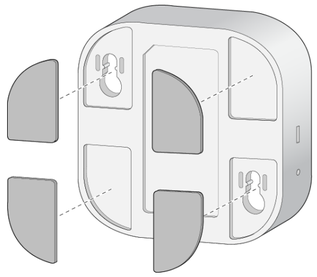
- the mounting surface is indoor, flat, clean, and dust-free.

  It is recommended to clean the surface using a solvent with a 50/50 Isopropyl Alcohol and water mixture.
- the grooves for adhesive pads on the bottom of the device is dust-free.
- the device is activated.

Installation Steps

1. Attach the adhesive pads provided in the package onto the four grooves at the bottom of the device, as shown in Figure 2.

Figure 2 *Attaching the Adhesive Pads*



2. Peel off the protective film on the adhesive, and attach the device onto the desired flat surface.

Battery Replacement

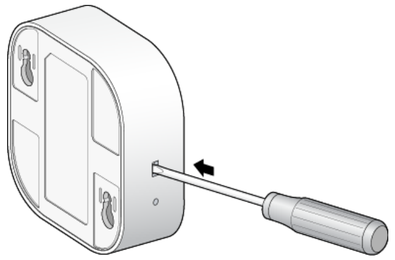
Battery replacement is required to maximize the lifespan of this device. To replace the batteries, follow the steps below in the order they are listed.

WARNING

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

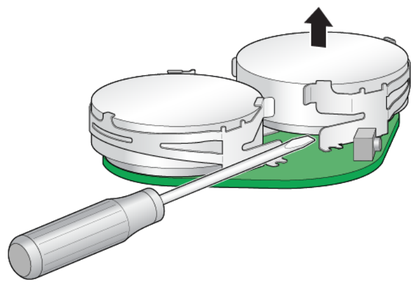
1. Insert a flat head screwdriver in the rectangular tab on the right side of the device, as show in Figure 3.
2. Push the tab downwards to detach the bottom cover from the device.

Figure 3 *Tab to Detach the Bottom Cover*



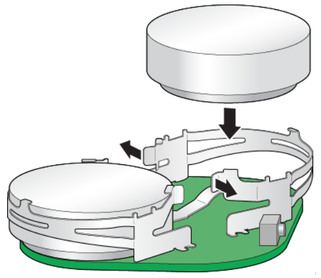
3. Lift the batteries from their slots using a non-metallic flat head screwdriver, as shown in Figure 4.

Figure 4 *Removing the Battery*



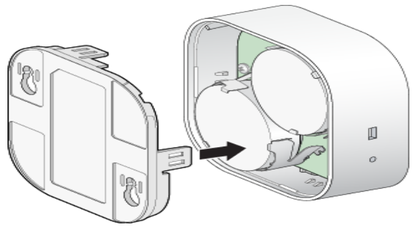
4. Snap the new batteries into the slots, as shown in Figure 5.

Figure 5 *Replacing the Battery*



5. Attach the bottom cover, as shown in Figure 6.

Figure 6 *Attaching the Bottom Cover*



Configuring/Provisioning LS-BT20 Devices

The LS-BT20 devices are configured or provisioned using the Aruba Beacons app. For more informations, see http://docs.meridianapps.com/developers/beacons_app

Product Specifications

Physical

- Device dimensions (HxWxL): 16 mm x 47 mm x 47 mm

Electrical

- Power Supply: Two CR2477 coin batteries
- Coin battery capacity: 2000 mAh
- Voltage: 3 V

RF Performance

- Tx = -23 dBm to 0 dBm (23 dB dynamic range)
- Rx sensitivity = Approximately -94 dBm (1 Mbps)
- Working Frequency range: 2450 ± 50 MHz
- Operation temperature: 0 °C to 50 °C

NOTE

RF Radiation Exposure Statement: This equipment complies with FCC RF radiation exposure limits. This equipment should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and your body for 2.4 GHz operation. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

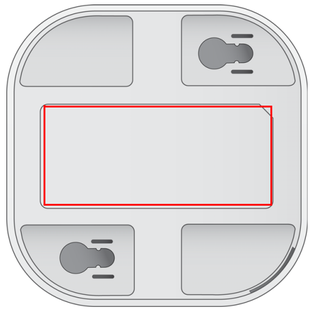
Safety and Regulatory Compliance

Aruba Networks provides a multi-language document that contains country-specific restrictions and additional safety and regulatory information for all Aruba devices.

Regulatory Model Names

The regulatory model name for the LS-BT20 is ARBT0200. For complete regulatory model information, refer to the label located on the back panel of this device.

Figure 7 *Regulatory Label Placement for the LS-BT20*



FCC Class B Part 15

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- 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 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 manufacturer's instructions, may cause interference harmful to radio communications.

If this equipment does cause interference, 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 to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio or TV technician for help.

Canada

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

- This device may not cause interference
- This device must accept any interference, including interference that may cause undesired operation of the device.

Complies with the Class B limits for radio noise emissions as set out in the interference-causing equipment standard entitled "Digital Apparatus," ICES-003 of Industry Canada.

Cet apareil numerique de la classe B respecte toutes les exigencies du Reglement sur le materiel brouilleur du Canada.

CAUTION

Changes or modifications to this unit that are not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

EU Regulatory Conformance

This product is CE marked according to the provisions of the R & TTE Directive (1999/5/EC) - CE. Aruba Networks Inc., hereby declares that the ARBT0100 device model is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC -CE

The Declaration of Conformity made under Directive 1999/5/EC is available for viewing at the following location: http://support.arubanetworks.com

European Union RoHS

Aruba products also comply with the EU Restriction of Hazardous Substances Directive 2011/65/EC (RoHS). EU RoHS restricts the use of specific hazardous materials in the manufacture of electrical and electronic equipment. Specifically, restricted materials under the RoHS Directive are Lead (including Solder used in printed circuit assemblies), Cadmium, Mercury, Hexavalent Chromium, and Bromine. Some Aruba products are subject to the exemptions listed in RoHS Directive Annex 7 (Lead in solder used in printed circuit assemblies). Products and packaging will be marked with the "RoHS" label shown at the left indicating conformance to this Directive.

Japan

China RoHS

Aruba products also comply with China environmental declaration requirements and are labeled with the “EFUP 10” label shown at the left. 本?品符合低功率電波輻射性電機管理辦

有毒有害物质声明
Hazardous Materials Declaration

部件名称 (Parts)	有毒有害物质或元素 (Hazardous Substance)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr^{6+})	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板 (PCA Boards)	×	○	○	○	○	○
机械组件 (Mechanical Sub-Assemblies)	×	○	○	○	○	○

○：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。
Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the SJ/T11363-2006 standard.

×：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出SJ/T11363-2006标准规定的限量要求。
Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts is above the relevant threshold of the SJ/T11363-2006 standard.

对销售之目的所售产品，本表显示，供应链的电子信息产品可能包含这些物质。
This table shows where these substances may be found in the supply chain of electronic information products, as of the date of sale of the enclosed product.

此标志为针对所涉及产品的环保使用期标志．某些零部件会有一个不同的环保使用期（例如，电池单元模块）贴在其产品上。
此环保使用期限只适用于产品是在产品手册中所规定的条件下工作。
The Environment- Friendly Use Period (EFUP) for all enclosed products and their parts are per the symbol shown here. The Environment- Friendly Use Period is valid only when the product is operated under the conditions defined in the product manual.

本產品符合低功率電波輻射性電機管理辦法：
第十二條
經形式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條
低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，
應立即停用，並改善至無干擾時方的繼續使用。
前項合法通信，指依電信規定作業之無線電信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Proper Disposal of Aruba Equipment

Waste of Electrical and Electronic Equipment

Aruba products at end of life are subject to separate collection and treatment in the EU Member States, Norway, and Switzerland and therefore are marked with the symbol shown at the left (crossed-out wheelie bin). The treatment applied at end of life of these products in these countries shall comply with the applicable national laws of countries implementing Directive 2002/96EC on Waste of Electrical and Electronic Equipment (WEEE).

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Contacting Support

Main Site	arubanetworks.com
Support Site	support.arubanetworks.com
Airheads Social Forums and Knowledge Base	community.arubanetworks.com
North American Telephone	1-800-943-4526 (Toll Free) 1-408-754-1200
International Telephones	http://www.arubanetworks.com/support-services/support-program/contact-support
Software Licensing Site	licensing.arubanetworks.com
End of Support information	http://www.arubanetworks.com/support-services/end-of-life-products/end-of-life-policy/
Security Incident Response Team (SIRT)	http://www.arubanetworks.com/support-services/security-bulletins/
Support Email Addresses	
Americas, APAC, and EMEA	support@arubanetworks.com
Security Incident Response Team (SIRT)	sirt@arubanetworks.com

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Open Source Code

Certain Aruba products include Open Source software code developed by third parties, including software code subject to the GNU General Public License ("GPL"), GNU Lesser General Public License ("LGPL"), or other Open Source Licenses. The Open Source code used can be found at this site:
http://www.arubanetworks.com/open_source

Warranty

This hardware product is protected by an Aruba warranty. For details, see the *Safety, Compliance, and Warranty Information* Guide included with this device.

a Hewlett Packard Enterprise company

www.arubanetworks.com
1344 Crossman Avenue
Sunnyvale, California 94089
Phone: 408.227.4500
Fax 408.227.4550

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