Title: **User Manual for the BS-A US Basestation**

Date: 14 Jun 2012 Document ref: LLT289 02

Telensa

Lighting Control

Contents

Operational Safety Notices

Installer

Installers must be suitably trained and qualified for electrical work, according to the laws and local codes for the locality and country.

This unit must only be installed by personnel that have been trained by Telensa or their representatives to carry out this work.

Radio Transmitter - CAUTION

The base station unit described in this guide emits radio frequency energy through its antenna. Although the power level is low, concentrated energy from a directional antenna may pose a health hazard. Only outdoor antennas certified with this transmitter should be used and must be installed to provide a separation distance of at least 20.5cm (8 inches) from all persons who could be nearby when the base station is operating.

Power Supply Connection

The supply voltage for the base station is hazardous and all necessary precautions must be taken to ensure the safety of the installer, maintenance staff and any person that may come into contact with the unit or its wiring.

The supply connection must be protected by an MCB or fuse, rated at 6A maximum

Supply connections must be made water and weatherproof against the weather conditions encountered at the location area.

Internal power supply

Note that the operating voltages within the base station compartment are at 24V DC or below.

FCC Statement

This equipment 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 complies with FCC radiation exposure limits set forth for an uncontrolled environment. Installers and end users must follow the specific installation and operating instructions for satisfying RF exposure compliance. The antenna used with this transmitter must be maintained at least 20.5 cm (8 inches) from any person when the equipment is operating.

More information on RF exposure is available on the Internet at:
www.fcc.gov/oet/info/documents/bulletins.

This equipment is specifically designed to be used under Section 15.247 of the FCC Rules and Regulations. Any unauthorised modification or changes to this device without the express approval of Telensa Limited may void the user's authority to operate this device.

Furthermore, this device is intended to be used only when installed in accordance with the instructions outlined in this manual. Failure to comply with these instructions may also void the user's authority to operate this device.

1 Accessories required

- Antenna, 890-930MHz, 8dBi gain ref: Jaybeam 7556910

  Do not use any other antenna type!
- Antenna fixing bolts x 4
- Mounting buckles x 2
- Mounting clip to suit pole diameter or mounting strap, stainless steel x 2
- Bird repelling spikes x 3
- Bird repelling spike mounting moulding x 1
- Fixing screws for above x 2
- Door key
- Tools as required

2 Installation Procedure

- Unpack the unit and inspect for exterior damage
- Attach the pole antenna to the side of the unit using the four supplied M5 fixing bolts
- Connect the antenna lead to the large antenna socket at the bottom of the case and tighten. Push the flexible weather protection sleeve fully up and over the antenna connection
- Fit the bird spike retaining moulding to the top using the two fixing screws and clip the three bird spikes into the moulding
- Cut the mains power lead to the desired length for the installation, strip back and fit a weatherproof power connector
- Isolate and test the source mains supply and prepare the connection for the base station as appropriate for the installation. Note that a local circuit isolator and circuit protection of 6A max must be used for connection to the base station
- Prepare the mounting buckles and mounting clips at the rear of the unit
- Fit the base station unit to the mounting pole or lighting column using the mounting clips. Note: Make sure that the light sensor (white lens) is above the luminaire of the lighting column to prevent faulty operation due to light leakage
- Tighten and secure the mounting clips
- Make the power supply connection
- Terminate the local internet connection using the weatherproof RJ45 connector and plug into the comms connector at the bottom of the unit
- Open the door of the case and plug the back-up battery connector into its PCB mounted connector. LEDs should begin blinking at the top of the PCB
- Close the case and switch on the main supply power
- Check the function of the unit by logging in to the PLANet system as per the system training.

3 BS-A Specifications

3.1 Electrical Parameters:

- Supply Voltage: 102 - 276 VAC, 50-60Hz
- Power Consumption: 20W max (<1A, 120-240V AC)
- Radio Transmit Power**:** 4W EIRP using the specified antenna
- NiMh backup battery time: Typically 30-60 minutes after loss of power

3.2 Environmental

- Operating Temperature: -30 to 60 °C Ambient
- Protection Rating: IP65

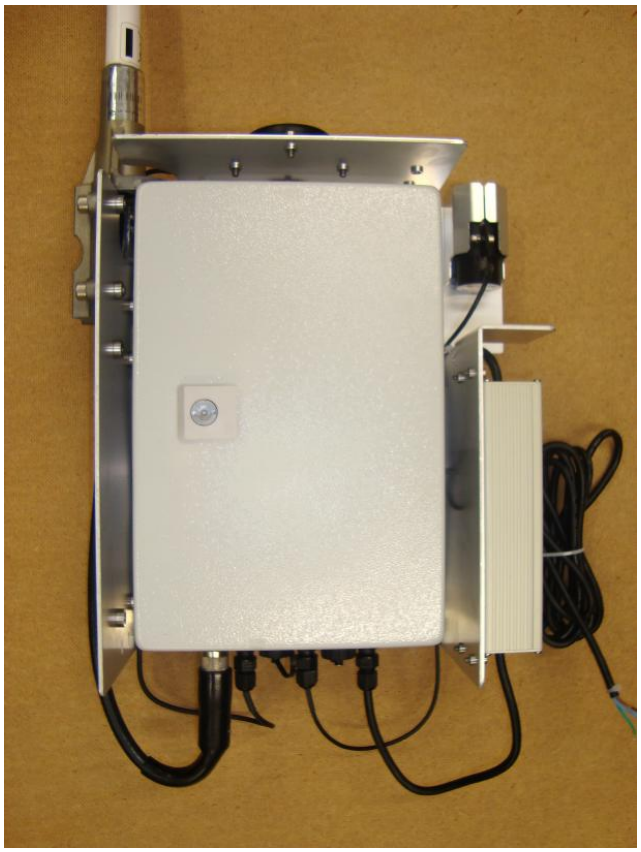
3.3 Safety Compliance

This equipment complies with the electrical safety requirements of the international safety standard IEC 60950.

4 Equipment Description

The Telensa basestation (BS) contains a single board computer, radio transceiver, power supply and interface PCB with backup battery. The unit is directly powered off the mains AC supply and uses an Ethernet port for connection to the internet. The internet connection is encrypted over a VPN (Virtual Private Network) to a remote server. The remote server is accessed using the Telensa PLANet interface.

On the top of the unit is the GPS sensor used for location and timing, and to the top right is the light sensor used for controlling the telecell switching.



Telensa Basestation Exterior - Model: BS-A

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