



User Guide

Babel Buster 2

BB2-2010-NB

BB2-2011-NB

BB2-6020-NB

**LonWorks Modbus
Non-Bound Gateway
Rev. 1.0 – August 2015**

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1 Introduction

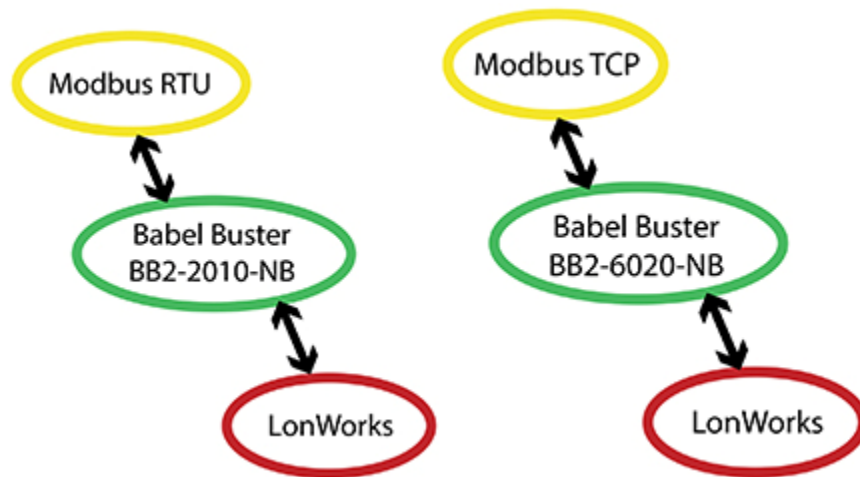
1.1 How to Use This Guide

The first few sections of this user guide provide background information on how the gateway works, and an overview of the configuration process. The next several sections are guides for each of the tabs found on the screen of the configuration software. The final sections are reference material.

You should at least read the overview sections to gain an understanding of how the gateway functions. You can use the remaining sections as reference material to look up as needed. There is a help icon in the top menu bar of every page in the configuration tool software. Click the help icon (blue button with question mark) at any time to open the section of the user guide that pertains to that page.

Note: While this user guide makes frequent reference to BB2-2010-NB, everything said about BB2-2010-NB also applies to BB2-2011-NB. The only difference between these models is whether the RTU line driver is RS485 or RS232.

1.2 Overview of Non-Bound Gateway Devices



What is different about BB2-2010-NB versus BB2-2010 (or BB2-6020-NB versus BB2-6020)? The LonMark certified BB2-2010 and BB2-6020 are designed for accessing Modbus devices from a LonWorks network. The "-NB" version, where NB stands for Non-Bound, is designed for accessing LonWorks devices from a Modbus network. Whereas the LonMark certified gateways require the use of a tool such as LonMaker to bind the gateways to the rest of the network, no such binding tool is required for the NB. The NB uses non-bound polling to access network variables in LonWorks devices and makes that data accessible as Modbus registers on the Modbus network. Device management in the NB is provided by the gateway along with the support of the configuration tool software provided at no charge by Control Solutions.

Babel Buster model BB2-2010-NB is a LonWorks to Modbus RTU gateway. It has two processors, an ARM7 and an Echelon FT5000. The FT5000 is running the LonWorks Short Stack microserver, and acts as a LonWorks communications port for the main application running on the ARM7.

Babel Buster model BB2-6020-NB is a LonWorks to Modbus TCP gateway. It adds a third processor (another ARM7, and more importantly, more memory) that provides the Ethernet support for running Modbus TCP.

All configuration of all LonWorks gateway models is done via a local USB connection to the gateway. Although the BB2-6020-NB does have a TCP/IP network connection, it does not have the web server common to certain models of Control Solutions gateways. The complexity of configuration of the LonWorks gateway is not well suited to being web based. By using the USB connection for all versions of the LonWorks gateway, the configuration tool and process is consistent throughout.

1.3 Important Safety Notice

Proper system design is required for reliable and safe operation of distributed control systems incorporating any Control Solutions product. It is extremely important for the user and system designer to consider the effects of loss of power, loss of communications, and failure of components in the design of any monitoring or control application. This is especially important where the potential for property damage, personal injury, or loss of life may exist. By using ANY Control Solutions, Inc., product, the user has agreed to assume all risk and responsibility for proper system design as well as any consequence for improper system design.

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