BR Service Utility

BR Service Utility v0.13 Datasheet

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Project Number: AT-xx-xxxxxx

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I Versions

Version	Date	Comment	Edited by
1.0	Jul 05, 2012	First Edition	Austin Carpenter

Table 1: Versions

II Distribution

Name	Company, Department	Amount	Remarks

Table 2: Distribution

III Safety Notices

Safety notices in this document are organized as follows:

Safety notice	Description
Danger!	Disregarding the safety regulations and guidelines can be life-threatening.
Warning!	Disregarding the safety regulations and guidelines can result in severe injury or heavy damage to material.
Caution!	Disregarding the safety regulations and guidelines can result in injury or damage to material.
Information:	Important information used to prevent errors.

Table 3: Safety notices

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1 Introduction

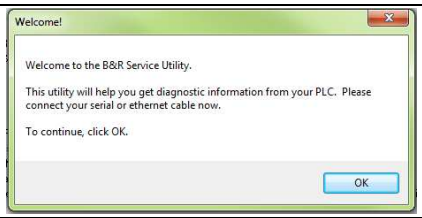


Figure 1. BR Service Utility Welcome Screen.

The goal of the BR Service Utility is to provide a fast and convenient way of retrieving diagnostic information from a B&R PLC without having pre-installed B&R Software. The Service Utility target users are machine end-users, mainly factory technicians and service personnel with some computer knowledge, who do not have B&R Software (i.e. Automation Studio). The Service Utility may also be used by machine manufacturers and B&R Support staff as a way to retrieve debugging information from their end-users when travel and support costs become prohibitive.

The BR Service Utility is a Runtime Utility Center script delivered as a Runtime Install Package, which is then compressed in a self-extracting installer for easy distribution. This script is tailored to walk a user through the process of getting basic diagnostic information.

2 Feature List

As of version v0.13, the following features are supported:

- Connection to the target via Serial, including the ability to set COM port, baud rate and parity.
- Connection to the target via Ethernet, either through the node switches number or IP address. Note that the IP address of the PLC must be known to use this feature.
- Once connection has been established to the PLC, the following actions are available:
  - Save Error Logbook - Retrieve the error log from the PLC.
  - Save Variable List - Retrieve a list of all variables, their type, and value from the PLC.
  - Save Hardware List - Retrieve a list of hardware in your system.
  - Save Module List – Retrieve a list of software modules and their versions from the PLC.
  - Get AR Version - Retrieve the AR (OS) version from the PLC.
  - Get PLC Status - Retrieve the current status (Run/Service/Diagnostic) of the PLC.
  - Get Date and Time - Retrieve the current date and time on the PLC.
  - Save PLC Profiler - (Advanced Function) Retrieve information about system load and stack.

As of version 0.13, functions which could make changes to the PLC are not supported. The BR Service Utility is for data gathering purposes only. Any changes to a PLC should be made under the supervision of the application engineer in charge of the project, and are outside the scope of the BR Service Utility.

3 Operation Guide

The BR Service Utility is a self-extracting executable which requires no installation to run on any Windows XP/Vista/7 PC. It is delivered to the user as a single .exe file which will self-extract to a temporary directory when run. The executable requires no B&R software to be installed prior to running. Additional Windows components may be necessary to run the Service Utility.

Information: Microsoft's Visual C++ 2008 Redistributable Package is required to run the BR Service Utility. (*http://www.microsoft.com/en-us/download/details.aspx?id=29*)

Information: As of version 0.13, the BR Service Utility will detect if the Redistributable Package is not installed and prompt the user when the error occurs.

3.1 Getting Connected to the PLC

The BR Service Utility contains a menu driven system for getting the user connected to the PLC. Each menu is sequenced to walk the user through establishing a connection and retrieving relevant information from the PLC. The menus are written to offer either self-explanatory options or additional information where necessary. Basic selections are available for simplified connections. For example, if you are using a RS232 serial connection, you select the serial connection and then the COM port over which you wish to communicate.

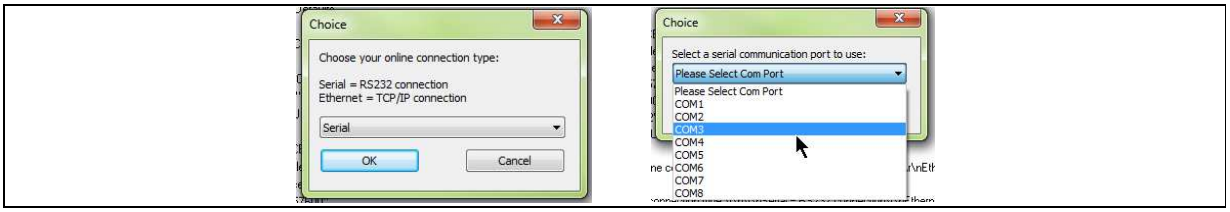


Figure 2. Simple menu selections to establish a serial connection to a B&R PLC.

If the simple serial connection parameters don't establish a connection, then the user is prompted to either retry the standard connection or attempt to use extended parameters to establish a connection. The available extended parameters include selectable Baud Rate and Parity. In addition, the extended connection includes the addition of common PLC connection flags from previous Automation Studio versions as well as an extended connection timeout (30 seconds).

Establishing an Ethernet connection can be slightly more complicated as the introduction of networking topics can cause confusion. There are two Ethernet connection methods supported, IP Address and Node Switch. Using the IP Address of the PLC (which must be known to use this communication method), the user can make an Ethernet connection from his or her PC to the PLC. The user can also use the Node Switches located on the PLC to establish a connection over Ethernet. It is important to note that your PC must be able to connect to the IP Address of the PLC even if you don't need to know the exact IP Address.

Information: Ethernet networking principles apply when attempting to connect over Ethernet. Consult your network personnel about the required network settings to establish a connection to the PLC.

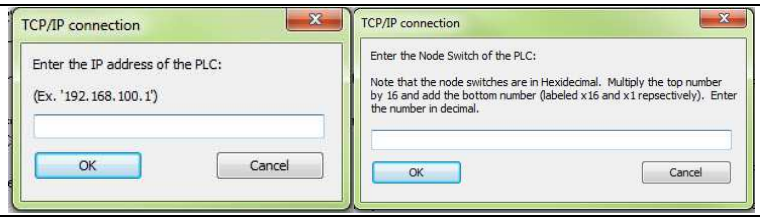


Figure 3. Menu selections for determining Ethernet connection information.

3.2 Online Menu

Once a connection has been established, the user is prompted with a menu of available options. The user may select any of the available actions, and is returned to the main menu after the selected operation is complete.

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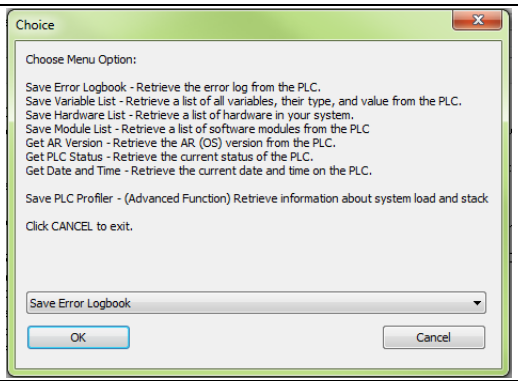


Figure 4. BR Service Utility Main Menu (Online).

The most commonly used feature is to retrieve the error logbook from a PLC. This allows B&R knowledgeable service personnel (i.e. B&R or OEM support) to gain information about the status of the PLC. This is particularly helpful when the PLC is placed into service mode, where the HMI may not be available to display errors. Other commonly used support and diagnostic tools are also included.

When saving the logbook or any of the available list functions, the user is prompted to define a destination folder for the file. This file may then be sent to B&R or OEM support teams for evaluation.

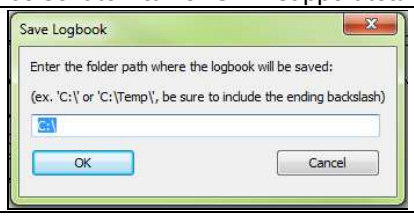


Figure 5. Save file path for logbook.

3.3 Clean-up and Support

When the BR Service Utility is closed or aborted by the user, the self-extracting installer will remove the temporary directory in which the Service Utility was extracted to setup for the next time the application is used. For debugging errors and issues with using the BR Service Utility, the PVI log file is stored in the user's temporary directory and is not erased when the Service Utility is closed.

The BR Service Utility will be supported by Austin Carpenter for script and installer support, and the B&R Support Infrastructure for support for the Runtime Utility Center functions.

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