

BBC-SD-PRO USER MANUAL

This guide will illustrate the steps needed to install and use BBC-SD-Pro (referred to as BBC-SD-Pro), the software configuration environment for the BBC-SD BACnet Touch-Screen display. Please review this guide in its entirety prior to installing the software onto your computer.

INTRODUCTION

BBC-SD-Pro is a PC-based configuration environment used to setup and configure operational parameters of the BBC-SD. Through the use of this software product, users can define key data from connected BACnet MS/TP units which will be displayed on the screen for monitor and modification, as needed and required by the end-user. Once all configuration parameters have been defined, a configuration file is then generated (saved) and transported to the BBC-SD through the use of it's local SD-card socket.



Figure 1 - BBC-SD-Pro

SYSTEM REQUIREMENTS

The following information provides specific details regarding PC system requirements required to install and use BBC-SD-Pro:

- **Operating System:** Windows XP Home/Pro with SP2 (32-bit); Windows Vista (32-bit); Windows 7 (32-bit or 64-bit); Windows 8 (32-bit or 64-bit).
- **Additional Software:** Microsoft.NET Framework v3.5 or greater - operating system dependent.
- **Disk Space:** 10MB for system file (additional disk space required for configuration files)
- **Additional Hardware/Utilities:** USB Port for Software Copy Protection Key, Class 1 SD Card and Card Reader for local file transport to/from BBC-SD.

INSTALLING SD-PRO

1. Insert the BBC-SD-Pro CD into the CD drive on your computer. The Setup Wizard should start automatically. If you have downloaded the program from www.bacnetcontrol.com, double-click the executable installation file. You will be greeted by the welcome screen. To continue, click *Next*.

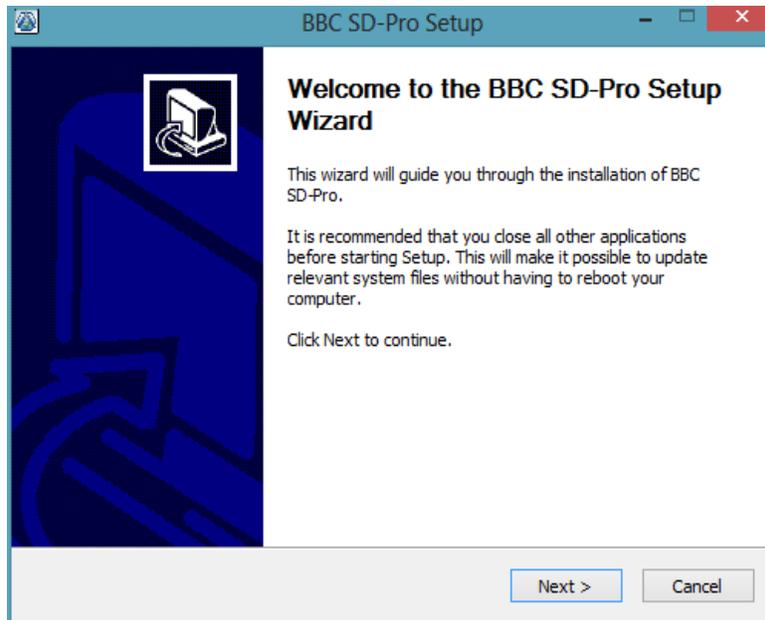


Figure 2 -Setup Wizard Welcome

2. The Setup wizard will allow you to choose components. By default, all options are checked. You may optionally un-check the Start Menu shortcut and Desktop shortcut. Click *Next* to continue.



Figure 3 - Choosing Components

- You can choose the destination folder where BBC-SD-Pro will be installed to. By default, the program will install to `C:\Program Files(x86)\American Auto-Matrix\SD-Pro`. If you wish to change the install directory, click *Browse...* and select the desired path. Click *Install* to continue the installation process.

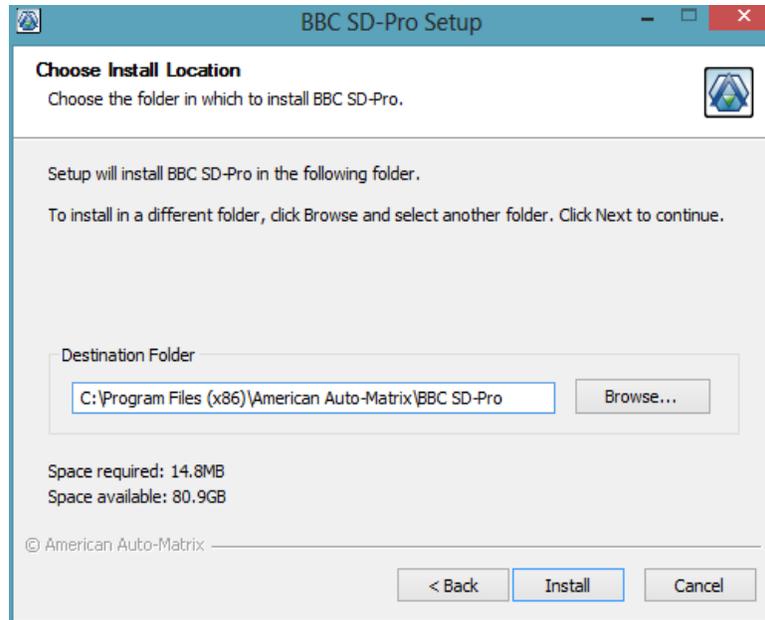


Figure 4 - Choose Installation Location

- The wizard will copy all of the necessary files required to run BBC-SD-Pro, as well as configure other elements of your computer to correctly run the process.

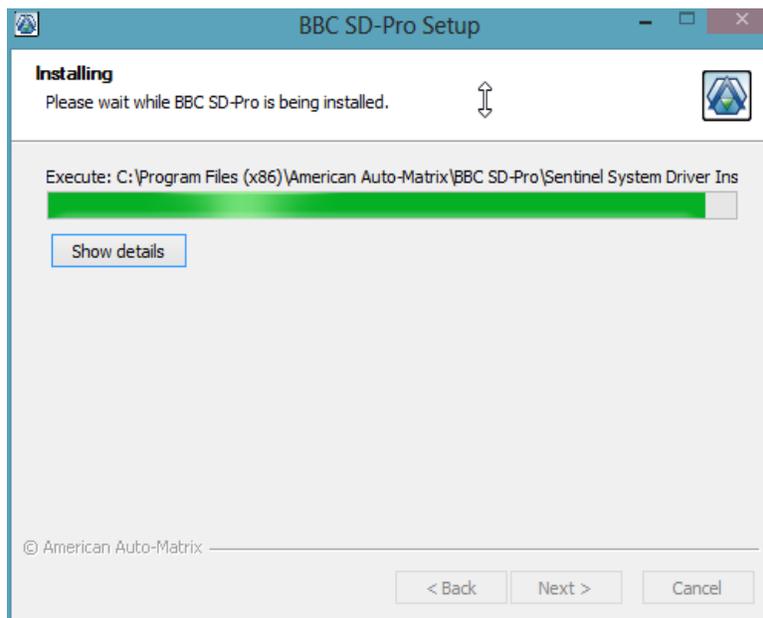


Figure 5 - Installing BBC-SD-Pro

5. When complete, the following screen will appear, providing a notification that the wizard has successfully installed the program. To exit the Setup Wizard, click *Finish*.



Figure 6 - Setup Wizard Complete

STARTING AND USING BBC-SD-PRO

To start BBC-SD-Pro, perform the following steps:

1. Insert the USB Software Copy Protection key into an available USB port on your computer.
2. Navigate to *Windows Start>Programs>American Auto-Matrix* and select the BBC-SD-Pro icon listing from the program menu.

MENU BAR OPERATIONS

BBC-SD-Pro provides a basic menu bar consisting of a *File* drop-down menu and a *Help* drop-down menu. Table 1-1 and Table 1-2 provide a quick reference for each operation feature available through the respective drop-down menus.

Table 1-1 - File Menu Operations

File Menu Option	Shortcut Keys	Operation
New	CTRL + N	Creates a new, blank configuration file template.
Open	CTRL + O	Provides the capability to load an existing configuration file saved on the local PC or a removable storage drive.
Save	CTRL + S	Allows the user to save changes to a configuration currently opened for editing.
Save As		Allows the user to save a configuration currently opened for editing, but also permits the user to choose the destination of where the configuration file is saved to.
Exit		Closes and terminates the BBC-SD-Pro program.

Table 1-2 - Help Menu Operations

Help Menu Option	Shortcut Keys	Operation
About		Provides information about the program name and revision and any copyright information associated to it.

THE NAVIGATION BAR

The layout of BBC-SD-Pro provides easy navigation and usage of programming various aspects of the BBC-SD. Within the engineering environment, there are five configuration areas which are reviewed in this manual. Navigation to each configuration area is performed by clicking on the navigation bar, located at the bottom of the BBC-SD-Pro window. The configuration areas include:

- . Data Slot Configuration
- . Home Screen Configuration
- . Data Screen Configuration
- . Schedules
- . Extended Setup

DATA SLOT CONFIGURATION



The Data Slot Configuration section provides the ability to setup and define referenced object properties within the BBC-SD. The Data Slot Configuration area provides a datagrid view of defined points from the BACnet MS/TP that will be displayed by the BBC-SD during operator interaction. A maximum of 150 object properties can be defined for display on the BBC-SD through the Home Screen or Data Screens. Slots are defined in a “one at a time” manner. As each slot is added, a slot number is defined in the application.

Slot Number	Unit ID	Vendor Type	Unit Type	Object	Object Instance	Property	Priority for Writing
131	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	11	sp	None Used
132	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	12	sp	None Used
133	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	17	sp	None Used
134	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	18	sp	None Used
135	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	19	sp	None Used
136	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	20	sp	None Used
137	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	21	sp	None Used
138	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	22	sp	None Used
139	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	23	sp	None Used
140	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	24	sp	None Used
141	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	25	sp	None Used
142	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	26	sp	None Used
143	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	27	sp	None Used
144	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	28	sp	None Used
145	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	17	ob	None Used
146	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	17	ob	None Used
147	52	American Auto-Matrix	6-NB-GPC1-7	FAxx	17	ob	None Used

Figure 7 - Data Slot Configuration

ADDING A SLOT

To add a slot, either right-click in the slot configuration area and select *New* from the shortcut menu, or click the plus button located on the top right hand side of the Slot Configuration window.



Figure 8 - Adding a Slot

DEFINING A SLOT

A new slot with a slot number will be added to the form. From this point, you will then be required to specify field information regarding the object property you wish to reference in the BBC-SD. While most field information is required, a few parameters are optional. Table 1-3 provides a complete description of each field, its usage, and whether or not a value is required.

Table 1-3 Data Slot Fields

Field	Notes	Required ?
Slot Number	Defines the slot number of the referenced object property. The first slot typically starts with the number 1 and works in an incremental fashion. If an intermediate slot is deleted, the slot number is as well - thereby not affecting other slots or data screen configurations.	Yes
Unit ID	Defines the MAC Address of the BACnet MS/TP device you are addressing. This value can be of a range from 0 - 254, where 0 -127 is commonly reserved for MS/TP master units, and 128-254 is commonly reserved for MS/TP slave units. The Local selection allows users to create an Analog or Binary Value object within the BBC-SD for extended building automation applications. A maximum of 32 Analog Values and 32 Binary Values may be defined.	Yes
Vendor Type	Provides a vendor type definition for the manufacturer of the BACnet device you are working with. Each vendor may have a library of static devices that contain specific object and property information referenced in XML files as part of this program. XML File Usage is described later in this section	No
Unit Type	Provides a unit type (model) definition for the BACnet device you are working with. Each vendor may have specific object and property information referenced in XML files as part of this program. XML File Usage is described later in this section	No
Object	Defines the BACnet Object Type you wish to address. Standard Objects are available from the combo-box. If you wish to define a proprietary object, simply type the BACnet Identifier number into the combo box.	Yes
Object Instance	Defines the instance number of the referenced BACnet object.	Yes
Property	Defines the property of the referenced BACnet object. For any object defined, all standard properties are available for selection from the drop-down menu. If you wish to define a proprietary property, simply type the BACnet identifier number into the combo box.	Yes
Priority for Writing	If the referenced BACnet Object Property you have defined is commandable through Priority Array, you may select a specific priority for override conditions. If the object is writable, set this value to None Used .	Varies by defined object
Name	Provides a short descriptive name for the BACnet object property referenced. This short name will display on the left area of the slot line when viewing multiple points in a group fashion. A maximum of 24 characters can be entered/displayed by BBC-SD.	Yes
Description	Provides a long description for the BACnet object property referenced. This long description can be used to provide a description of the value's functionality or meaning. A maximum 150 characters can be entered/displayed by BBC-SD.	No

Table 1-3 Data Slot Fields

Field	Notes	Required ?
Units	Provides the ability to display an engineering unit next to the point value when displayed on BBC-SD. A maximum of 5 characters can be entered/displayed by BBC-SD.	No
Password Level	Defines the minimum required login level that an operator must have in order to gain value edit access. A value of 0 allows all users to gain value edit access. A value of 4 will disable value editing of the point from BBC-SD	Yes
Focus Bit	Focus Bit is assigned a value for situations where a specific bit position of a bitstring needs to be referenced. Additionally, this field is also set for situations when a text overlay for a logical 0 or 1 value is required.	No
Text Overlay Type	Defines the method of text overlay used for enumerated types of data (such as UNSIGNED, SIGNED, BOOLEAN, or ENUMERATION). This field is read-only, but defined clicking the Edit button listed in the Text Overlays field.	No
Text Overlay	Provides an editor to define text overlays for bit-based data as well as enumerations. For enumerated type data, up to a maximum of 8 overlays can be entered and displayed by the BBC-SD.	No

DELETING A SLOT

To delete a slot, perform the following steps:

1. Select the slot you wish to delete by performing a single mouse click on the left edge of the data grid as displayed in Figure 9. Note that multiple slots can be selected by holding the single mouse click and moving your mouse up or down to select multiple rows above or below the selected slot.



Figure 9 - Deleting a Slot

2. Right-click the area of the indented datagrid to invoke the shortcut menu. Select Delete from the shortcut menu. Alternatively, you can also select the minus icon from the top right side of the Data Slot Configuration window to perform the same action.

DATA SCREEN CONFIGURATION



The Data Screen Configuration section provides access to setup and define data screens within the BBC-SD. A maximum of 50 screens, each with 15 lines of definable data can be stored within the BBC-SD. Each line of a data screen can be programmed to display an object property configured as a slot, provide a link to another defined data screen or home screen, or simply display blank links for cosmetic purposes or organizational group structuring.

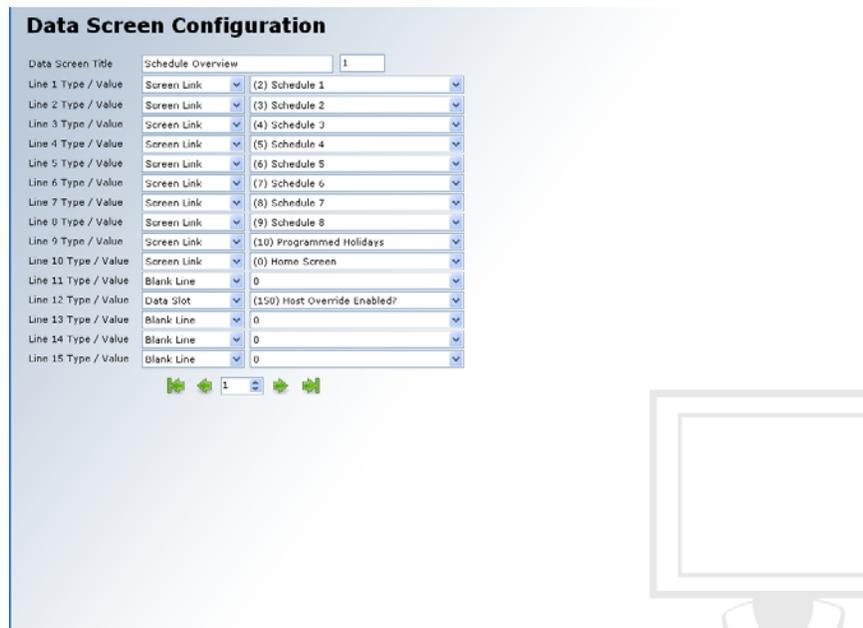


Figure 10 - Data Screen Configuration

Each line of a data screen has a type and value associated to it. The type defines the data element you wish to display on the line (whether it be a slot, screen link or blank line). If you have selected a slot, the value associate combo box will index all referenced slots in the Slot Configuration area. If you have selected a screen link, additional screens you have configured within the Data Screen Configuration area will display in the combo box. For blank lines, the value drop down will be set to a hard coded value of zero (0).

To define each screen, a series of left and right arrows for navigating between each screen definition is located below Line 15's setup area. An additional set of left and right arrows with a line in front/behind allows quick navigation to the beginning or end of data screen configuration (Screen 1 and Screen 50, respectively).

HOME SCREEN CONFIGURATION



The Home Screen Configuration section provides access to setup and define the Home Screen within the BBC-SD. The Home Screen is the first screen with live data or links displayed upon start-up, and is also the screen displayed when a user touches the Home button. Each line of the home screen can be programmed to display a configured slot, or provide a link to a configured data screen (refer to next section on how to create and define data screens), or simply display blank lines for organizational group structuring. The design of the Home Screen is static and provides 5 configurable lines.

The Home Screen provides a configurable title displayed at the top of the screen. This can be used to define the site name, building, or environment in which the BBC-SD has been installed. A maximum of 24 printable characters can be entered for display.

Line	Type	Value
Home Screen Title	Text Input	Your Site Name Here
Line 1	Screen Link	(1) Schedule Overview
Line 2	Screen Link	(11) Input Statuses
Line 3	Screen Link	(13) Outputs
Line 4	Screen Link	(16) ALC Router
Line 5	Screen Link	(17) Program 1 in GPC1

Figure 11 - Home Screen Configuration

SCHEDULES CONFIGURATION



The Schedules Configuration section provides access to setup and define the ability to read and write BACnet Schedule and BACnet Calendar objects information. BBC-SD will support a maximum of 16 definitions - providing support for a total of 16 Schedules and 16 Calendars.

DEFINING SCHEDULE INFORMATION

When defining information in a Schedule definition, the user can choose to address both a Schedule object and Calendar object by entering the correct object instance number for each. In the event that an instance number is not entered (field is left blank), display icons on BBC-SD used to view property information from corresponding object properties will not be displayed during runtime. This functionality accommodates devices that may only support one of the two object types.

Figure 12 - Schedules Configuration

Similar to a data slot, each Schedule definition can be assigned a required password level to modify, allowing schedules to be adjusted by operators with the correct privilege levels.

EXTENDED SETUP CONFIGURATION

The Extended Setup section provides a method to define specific device related configuration parameters for BBC-SD. Extended Setup is intended to be used in situations where a user may wish to program device parameters of the BBC-SD in an offline and local manner, rather than through the touch-screen user interface. Additionally, Extended Setup can also be used in situations where multiple BBC-SD units will be configured to display the same data slots, screen, and schedules; but operate using different MS/TP network configuration parameters (such as MAC Address, Device Instance, etc.).

Figure 13 - Extended Setup Configuration

Prior to saving a file and applying it to BBC-SD, users can choose whether or not they wish to download the extended setup of the configuration file by placing a checkmark in the *Use Extended Setup* field, located at the top left corner of the configuration panel. Upon applying the configuration to the BBC-SD, the unit will reboot and resume operation using the defined parameters.

Table 1-4

Field	Notes
Unit ID	Specifies the MS/TP MAC Address for the BBC-SD. Configurable between 0 and 127.
Device Instance	Specifies the BACnet Device Instance for the BBC-SD. Configurable between 0 and 4,134,302
Max Master ID	Specifies the value for Device;max-master. This value should be set to the highest MAC Address that exists on the local MS/TP network. Configurable between 1 and 127.

Table 1-4

Field	Notes
Max Transaction Frames	Specifies the value for Device;max-info-frames. This value is set by default to 5 and is considered the optimal setting for most network installations. Configurable between 2 and 10.
Login Level for Slot Info Display	Specifies the minimum login level that allows operators to view detailed information regarding a slot through the BBC-SD.
Volume	Defines the volume output for audible clicks made when a valid touch occurs on the BBC-SD. Configurable between 0 and 11.
Polling Aggressiveness	Defines the aggressiveness of data refresh for the BBC-SD. The value can be set as low as 1 or as high as 10. The higher the value, the faster data is polled by the BBC-SD.
Idle Screen	Defines the numerical data screen displayed by the BBC-SD during idle times when no activity occurs at the touch-screen interface. The idle screen may also be changed during run time by a BACnet device writing to Analog Value, Instance 100.
Alarm Logging Mode	Defines how alarms encountered by the BBC-SD are handled. Choices are either to Log Alarm Notifications, Log Alarm Summaries, Log Both, or Log None.
Enable Screen Dimming	Defines whether or not screen dimming is enabled, as well as the inactivity time that must elapse before dimming occurs.
Clock Display Mode	Defines time to be displayed in either standard or military format.
Date Display Mode	Defines date to be displayed in either MM-DD-YY or DD-MM-YY format.
Boot-up Time Server Address	Defines a MAC Address of a BACnet MS/TP devices used by the BBC-SD to obtain local time and date information.
Boot-up Time Server Device Instance	Defines the Device Instance for the MAC Address of the BACnet MS/TP device used by the BBC-SD to obtain local time and date information.

CONFIGURING OPERATORS

Operators are also configured in the Extended Setup area.

The BBC-SD supports a maximum of 8 defined operators, each with their own configurable login password and assignable privilege level that can be used to invoke write capabilities to points, as well as access advanced areas of the BBC-SD touch-screen user interface. Operator passwords can be assigned any value from 0 to 99999. A login level can also be configured for each operator, where 1 is the lowest level and 3 is the highest level. A login level of zero disables a user from logon capabilities.

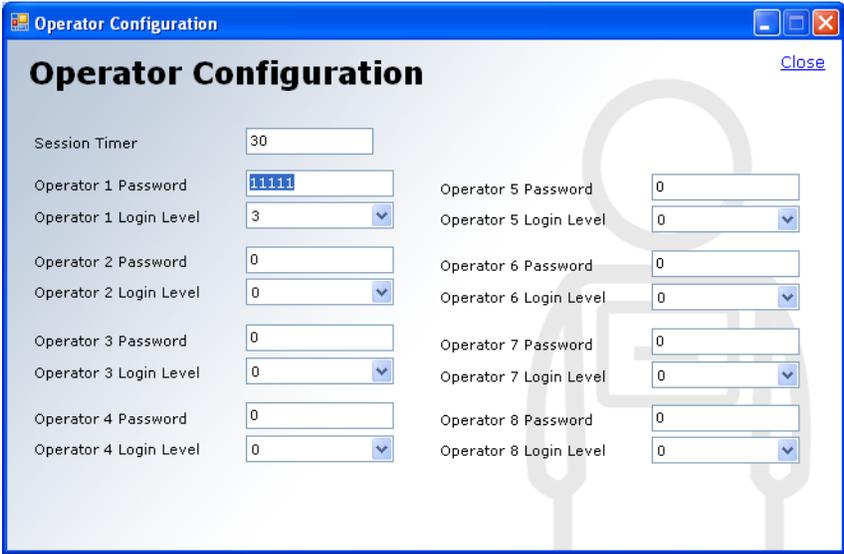


Figure 14 - Operator Configuration

APPLYING A CONFIGURATION FILE

Applying a configuration file to the BBC-SD can be done through either BACnet File Services or through local transfer methods using a Secure Digital (SD) card. While the process for using BACnet File Services may vary depending on the software vendor, the method for SD Card transfer is discussed in this document.

APPLYING VIA SECURE DIGITAL (SD) CARD

A BBC-SD configuration file can be downloaded to a BBC-SD hardware by transferring the saved BBC-SD configuration file from your computer to a SD-card. Once transferred to the SD-card, the file can then be loaded locally at BBC-SD through use of its on-board SD card socket and touch-screen display. Tools requires to do this process include:

- . Torx Screw Drive - Size T-10
- . SD Memory Card - at least 4MB in size.
- . SD Card Reader - to transfer files from computer to SD card.

First, you must transfer the configuration file from your computer to the SD card. In order for BBC-SD to accept a configuration file from the SD card, the file must be named **BBC-SD.lej**, which is the default name BBC-SD-Pro will attempt to save with.

NOTICE

The configuration file copied to the SD card must be named BBC-SD.lej. If a file with a different name exists on the SD card, the BBC-SD will not be able to load it into its memory for runtime.

To load the configuration file to BBC-SD, perform the following steps:

1. Carefully remove the housing cover of the BBC-SD.

2. Locate the on-board SD card socket. It is located behind the bottom right corner of the display screen, as shown in Figure 15. Insert the SD card into the socket. The card socket uses a spring-loading mechanism to hold the card, therefore, a click noise will occur when the card is pushed up into the socket.

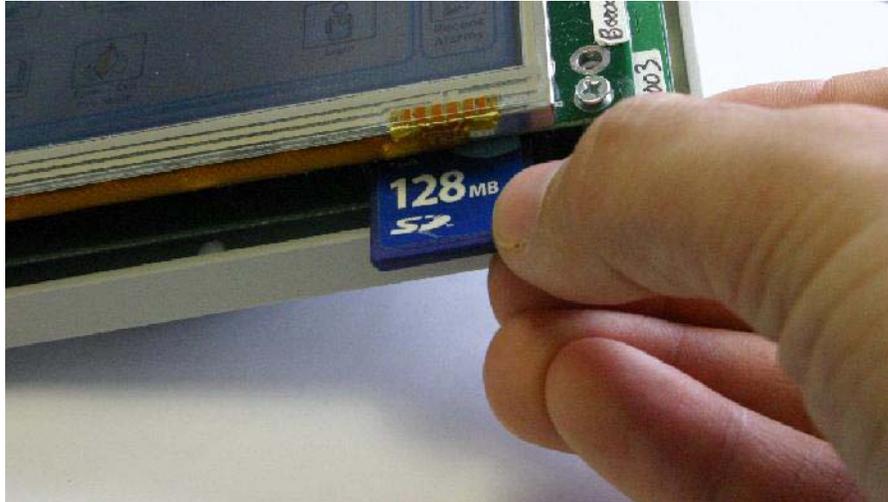


Figure 15 - Loading an SD Card into BBC-SD

3. Place the housing cover back onto the BBC-SD.
4. With BBC-SD powered, login as an operator with Level 3 Permissions.

NOTICE

If you are configuring the BBC-SD for the very first time, use the default Level 3 operator password of **11111**.

5. From the Main Menu, press *Configure*.

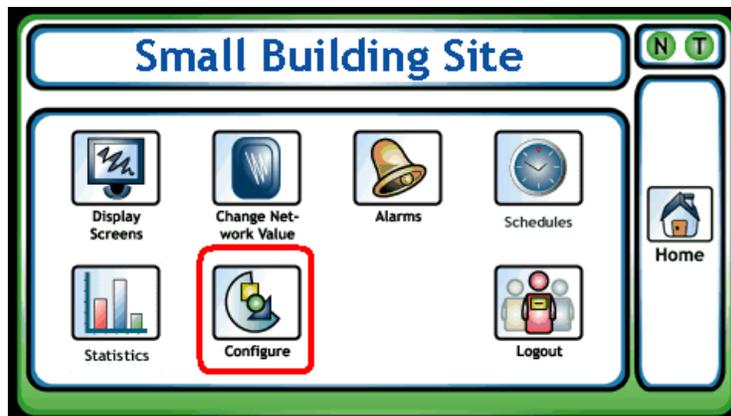


Figure 16 - Main Menu - Press Configure

- From the Configure Menu, press *SD/MMC Card Operations*.

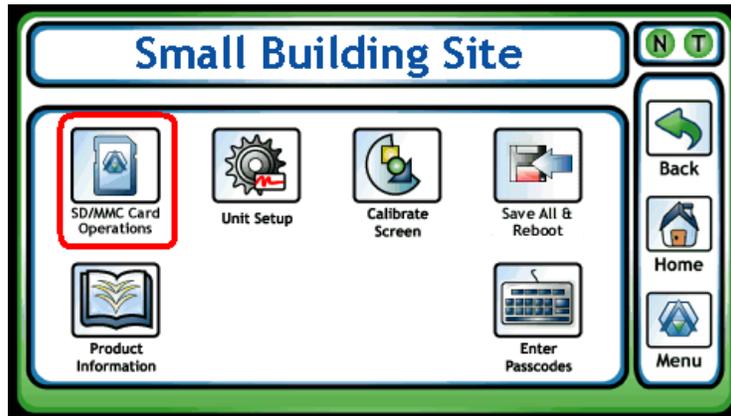


Figure 17 - Configure Menu - Press SD/MMC Card Operations

- From the SD/MMC Card Operations Menu, press *Slot File Operations*.

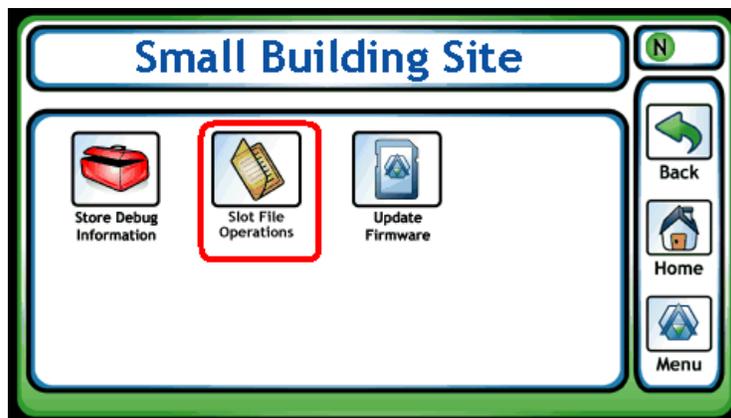


Figure 18 - SD/MMC Card Operations Menu - Press Slot File Operations

- From the Slot File Operations Menu, press *SD Card -> Display*.

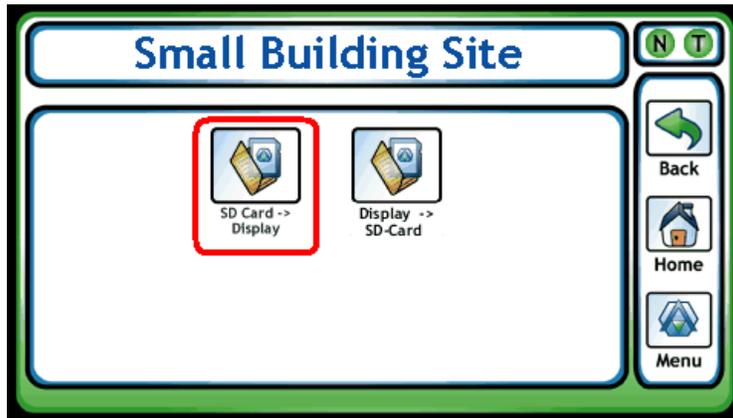


Figure 19 - Slot File Operations - Press *SD Card -> Display*

- Wait for the on-screen confirmation that BBC-SD has received the new setup file info. After the confirmation the BBC-SD will reboot.
- Remove SD card from unit, if desired.

WORKING WITH CUSTOM XML FILES

As mentioned earlier in Slot Configuration, BBC-SD-Pro's functionality provides extended capabilities in defining controller profiles for third-party devices that contain proprietary objects and properties. While numeric entry of proprietary objects and properties will always work, XML files can be used to add text interpretations of custom third-party features addressed through such use. All XML files used to reference BACnet objects and properties are located in the XML directory of the installed path for BBC-SD-Pro (commonly *C:\Program Files\American Auto-Matrix\SD-Pro*). The following table provides a brief description of default files loaded during installation.

Table 1-5 Default XML Files Installed

File Name	Purpose
BACnetVendors.xml	References current BACnet vendors and manufacturers registered with ASHRAE as of February 1, 2008.
BACStandardObjectProperties.xml	References currently published BACnet Standard Objects and Properties, as of February 1, 2008.

CREATING CUSTOM XML FILES

To create a custom XML file for a target third-party BACnet device, you must first know the BACnet vendor ID of the manufacturer's device you are working with. The vendor ID can be found in the BACnetVendors.xml file by viewing the information with a text editor. For example, if you wish to reference a device by Honeywell®, the BACnet vendor ID is 17.

```

<?xml version="1.0" encoding="utf-8" ?>
<Vendors>
  <vendor id="0" name="ASHRAE" />
  <vendor id="1" name="The Trane Company" />
  <vendor id="2" name="McQuay International" />
  <vendor id="3" name="NIST" />
  <vendor id="4" name="PolarSoft" />
  <vendor id="5" name="Johnson Controls, Inc." />
  <vendor id="6" name="American Auto-Matrix" />
  <vendor id="8" name="Siemens Building Technologies, Ltd., Landis amp; Staefa Division Europ" />
  <vendor id="9" name="Delta Controls" />
  <vendor id="9" name="Siemens Building Technologies, Inc." />
  <vendor id="10" name="Touh Andover Controls Corporation" />
  <vendor id="11" name="TAC" />
  <vendor id="12" name="Orion Analysis Corporation" />
  <vendor id="13" name="Teletrol Systems Inc." />
  <vendor id="14" name="Cimerica Technology" />
  <vendor id="15" name="Cornell University" />
  <vendor id="16" name="United Technologies Carrier" />
  <vendor id="17" name="Honeywell Inc." />
  <vendor id="18" name="Alerton / Honeywell" />
  <vendor id="19" name="TAC AB" />
  <vendor id="20" name="Hewlett-Packard Company" />
  <vendor id="21" name="Dorsette's Inc." />
  <vendor id="22" name="Cerberus AG" />
  <vendor id="23" name="York Controls Group" />
  <vendor id="24" name="Automated Logic Corporation" />
  <vendor id="25" name="CSI Control Systems International" />
  <vendor id="26" name="Phoenix Controls Corporation" />
  <vendor id="27" name="Innovex Technologies, Inc." />
  <vendor id="28" name="KBC Controls, Inc." />
  <vendor id="29" name="Xn Technologies, Inc." />
  <vendor id="30" name="Hyundai Information Technology Co., Ltd." />
  <vendor id="31" name="Tokimec Inc." />
  <vendor id="32" name="Simplex" />
  <vendor id="33" name="North Communications Limited" />
  <vendor id="34" name="Notifize" />
  <vendor id="35" name="Reliable Controls Corporation" />
  <vendor id="36" name="Tridune Inc." />

```

Figure 20 - BACnetVendors.XML File

Once you have obtained the vendor ID, you may then proceed to create an XML file for the vendor, based on the format of the XML files. To link the vendor ID with the Vendor Type drop-down, the XML file must be named in a format beginning with the vendor ID, followed by a hyphen and a description of the unit. For example, if you are working with a VAV type device from Honeywell, you could name the file *17-HoneywellVAV.xml*.

The format of the XML file must be kept consistent through design and creation. There are multiple areas that should be paid attention to when designing your file. Below is an example.

```
<?xml version="1.0"?>
<ProprietaryInformation>
  <controller modelName="VAVController">
    <Objtype ID="0" name="analog-input" proprietary="0">
      <properties instancerangestart="0" instancerangestop="0">
        <property name="SensorType" id="15000" datatype="2" access="RW" />
        <property name="InputOffset" id="15001" datatype="4" access="RW" />
        <property name="AlarmApplication" id="15002" datatype="2" access="RW" />
      </properties>
      <properties instancerangestart="1" instancerangestop="1">
        <property name="SensorType" id="15000" datatype="2" access="RW" />
        <property name="InputOffset" id="15001" datatype="4" access="RW" />
        <property name="AlarmApplication" id="15002" datatype="2" access="RW" />
      </properties>
      <properties instancerangestart="2" instancerangestop="2">
        <property name="SensorType" id="15000" datatype="2" access="RW" />
        <property name="InputOffset" id="15001" datatype="4" access="RW" />
        <property name="AlarmApplication" id="15002" datatype="2" access="RW" />
      </properties>
    </Objtype>
    <Objtype ID="157" name="SomeObject" proprietary="1">
      <properties instancerangestart="1" instancerangestop="1">
        <property name="Function1" id="15700" datatype="4" access="RW" />
        <property name="Function2" id="15701" datatype="4" access="RW" />
        <property name="Function3" id="15702" datatype="4" access="RW" />
        <property name="Function4" id="15703" datatype="4" access="RW" />
      </properties>
    </Objtype>
  </controller>
</ProprietaryInformation>
```

Once you have finished creating your XML file, copy and paste it to the XML directory. The next time BBC-SD-Pro is started, and the vendor has been selected, the file name should become available for selection in the Unit Type combo-box.

BBC-SD-PRO

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American Auto-Matrix
One Technology Lane
Export, PA 15632

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