APPLICATION NOTES

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Application Note 3002:

BAC-HD150 Quick Start

STEP 1

Send the following information to the integrator assigned to program and startup the BACnet™ system on this project:

- BAC-HD150 PICS statement from www.bacnetinternational.net/btl/
- BAC-HD150 Installation Manual
- BAC-HD150 Instruction Book
- BM Adapter Setting Tool Instruction Book
- CMCN – BAC-HD150 Quick Start Application Note
- CMCN – 3rd Party Scheduling Strategies Application Note

STEP 2

Before wiring the M-NET to the BAC-HD150 configure the initial settings browser of the GB-50ADA, or AG-150.

> **NOTE!** The BAC-HD150's M-NET default address is "0". The GB-50ADA or AG-150 M-NET default address is also "0". Change one of the devices to "248" to ensure there are no duplicate addresses on the M-NET (See Figure 1). It is recommended to change the BAC-HD150 M-NET address prior to connecting to the M-NET.

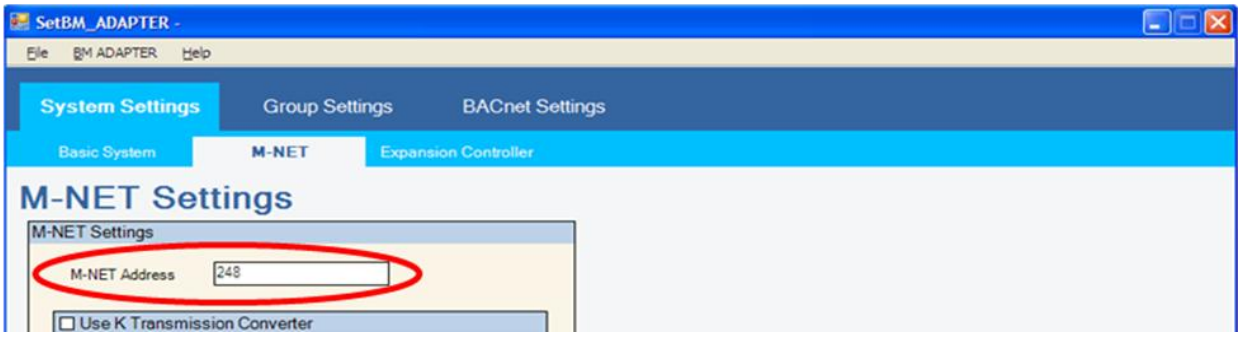


Figure 1. M-Net Address

STEP 3

Make sure all dip-switches shown in Figure 2 except SW901#6 are OFF. Power Jumper should be in the CN41 position if power supply on the M-NET is coming from the Outdoor Unit, GB-50ADA or the PAC-SC51KUA. If not, the BAC-HD150 can be set to supply power to the M-NET by moving the jumper to CN40.

NOTE! Only one device on the M-NET should be supplying power to the M-NET.

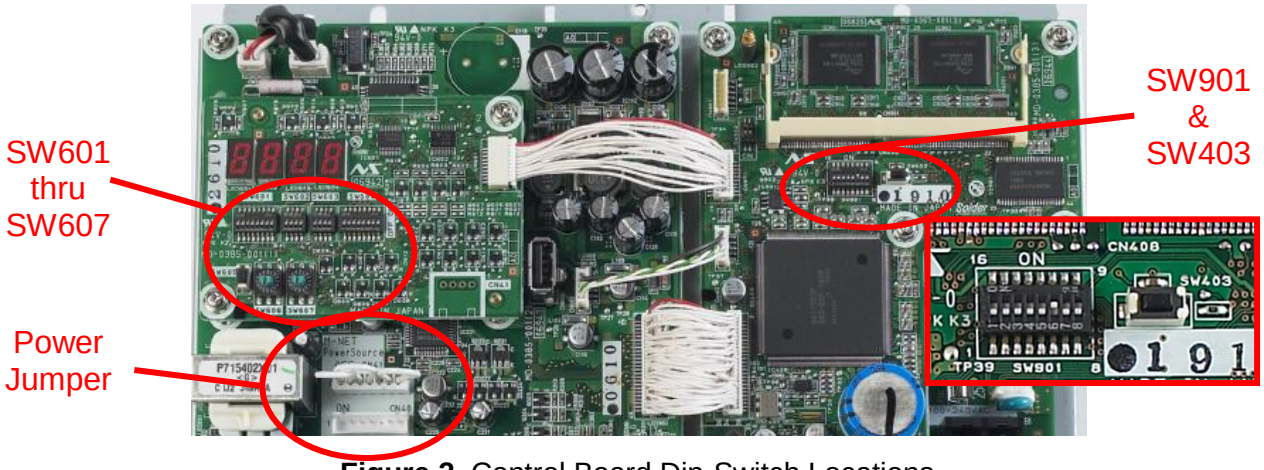
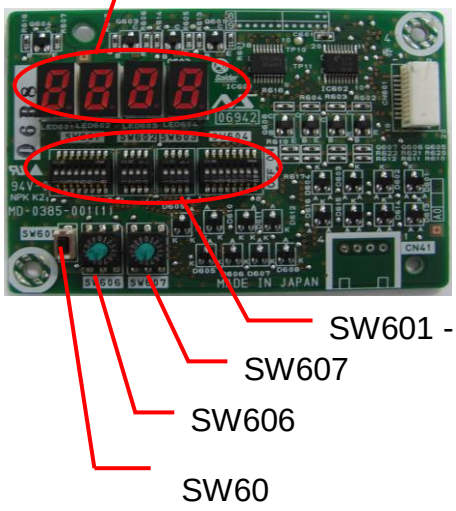


Figure 2. Control Board Dip-Switch Locations

STEP 4

All units are properly operating and error free. Wire BAC-HD150 to the M-NET and apply power. See **STEP 2** if communication errors exist after BAC-HD150 is added to M-NET.' Refer to Figure 3 below for Control Board and Switch settings.



Switch settings and LED display

SW601~603 ALL OFF SW606:0 SW607:0	LD1	CPU status	ON	Normal
			OFF	Error
	LD2	(Not available)	–	
	LD3	BACnet communcation status	ON	Error
			OFF	Normal
	LD4	Malfunction status	ON	One or more units are malfunctioning
			OFF	All units are normal
	LD5	M-NET start-up status	ON	Initial setting is not completed
			OFF	Initial setting is completed
			Blink	Initializing setting
	LD6	(Not available)	–	
	LD7	Act mode	ON	Offline mode
			OFF	Online mode
	LD8	BACnet communication service status	ON	Communication lock(Not enable)
			OFF	Communication enable

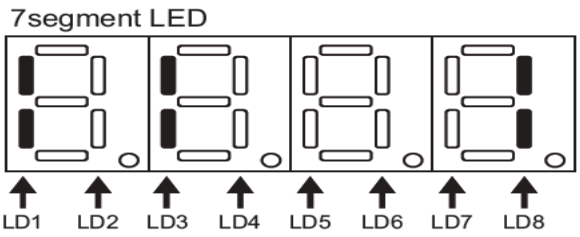


Figure 3. Control Board and Switch Settings

STEP 5

Install the BM Adapter Setting Tool Software on a computer for BAC-HD150 setup. Software and Instructions can be found on CMCN CD or www.mylinkdrive.com.

NOTE! BM Adapter Setting Tool Instruction Book is extremely helpful here.

STEP 6

Connect LAN2 (default IP address 192.168.200.212) to a computer and set the computer's IP address to (192.168.200.1)

STEP 7

Open the Setting Tool Program (C:\MELANS\SetBM_ADAPTER) and make sure the mode is set to [Offline] mode as shown in Figure 4 (only LD1 and LD7 should be lit). Then perform a "Get Settings" to see the current configuration of the device illustrated in Figure 5.

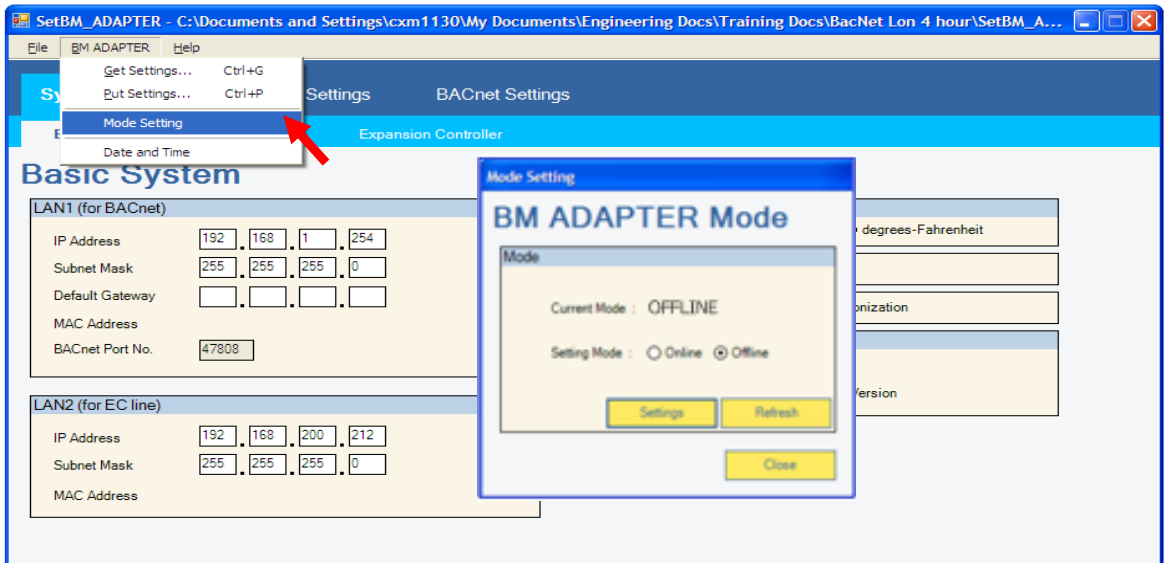


Figure 4. Ensuring Mode is set to [Offline]

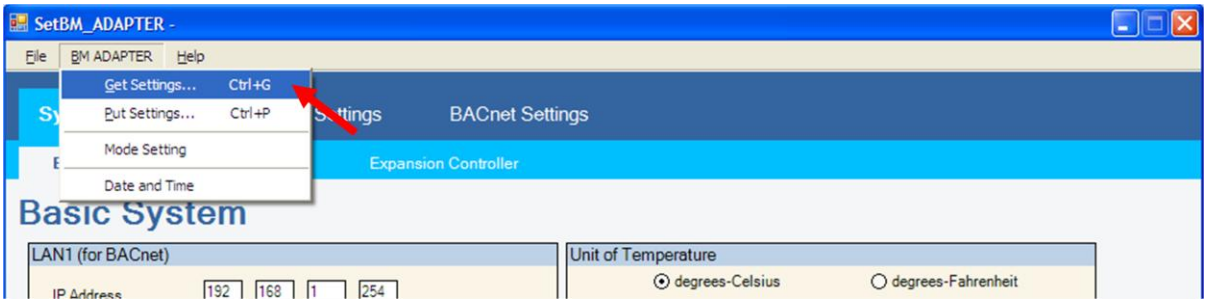


Figure 5. Selecting "Get Settings" to see current configuration

STEP 8

Configure to followings settings. **Remember to hit "Save Settings" before moving on to the next screen.**

- System Settings
  - Basic System – LAN1 will be the BACnet™/IP Address
  - M-NET Settings – Make sure M-NET address is unique of all devices on the M-NET. Can be set to (0, 201 – 250). Confirm the GB-50ADA or AG-150 M-NET address is different.

- Group Settings
  - Group Settings and Interlocked Lossnay match the settings that were made from the AG-150 or GB-50ADA Initial Settings Browser

- BACnet™ Settings
  - Coordinate with the BMS integrator to set the proper values. Device ID (Device Instance #) and Network Number will be important
  - BBMD and BACnet™ Networking is supported
  - Object Settings – Check the boxes of the points to be made available for the BMS system as shown in Figure 6. Only points with checked boxes will be visible to the BMS.

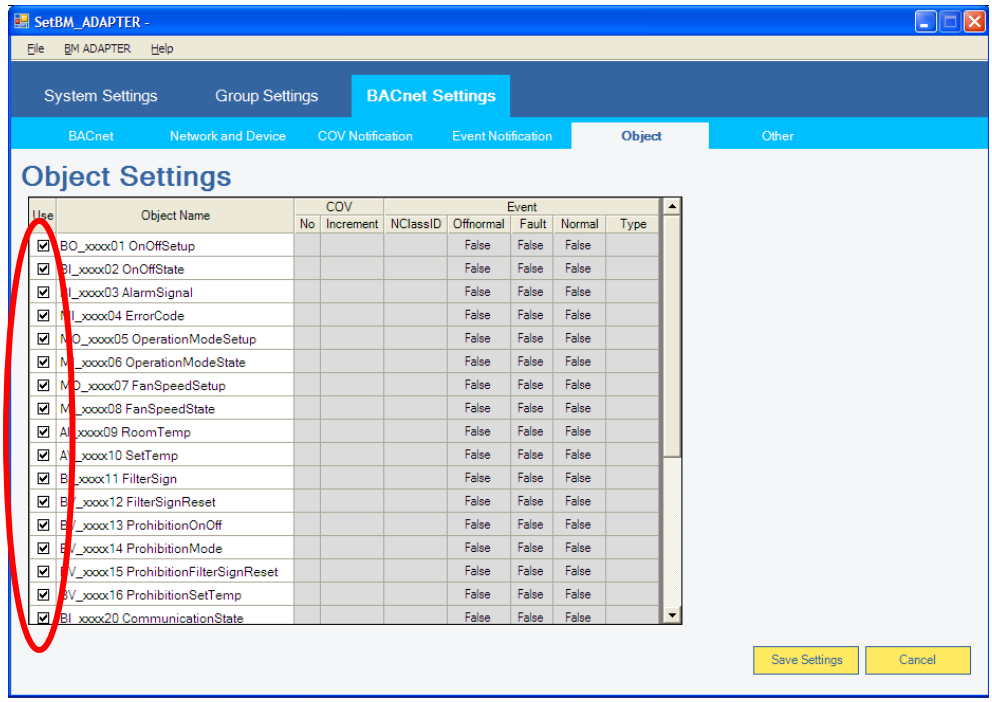


Figure 6. Configuring BACnet Settings

STEP 9

Figure 7 illustrates putting Settings to the Device while in [Offline] mode. WAIT 5 Minutes for settings to adjust.

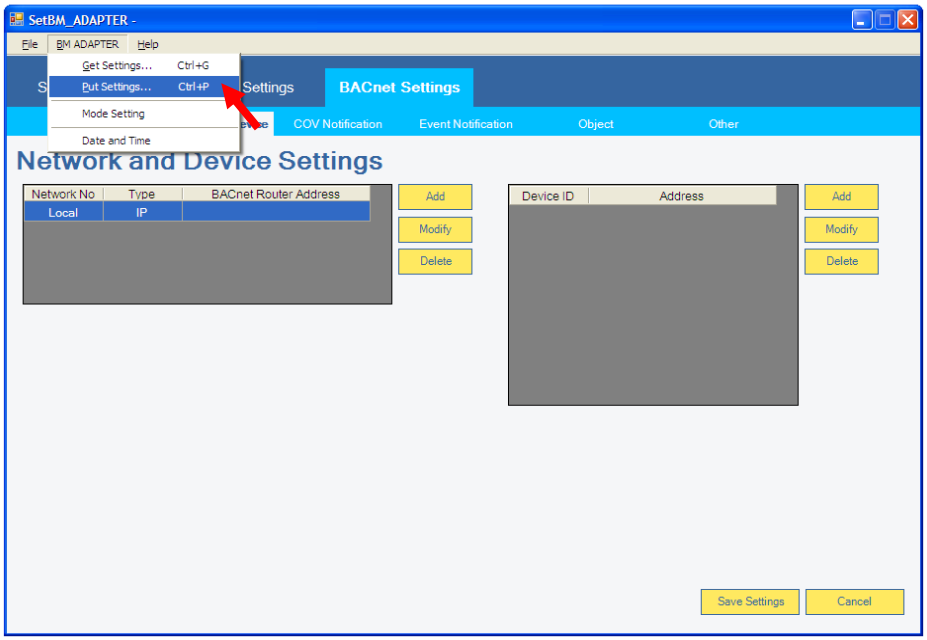


Figure 7. Putting settings in Offline mode

STEP 10

Switch to [Online] mode after “Put Setting” command.. WAIT 5 Minutes for initialization to complete. LD7 will go OFF when finished.

STEP 11

Connect the BMS Cable to LAN1 (default IP address 192.168.1.254).

Understanding the Mitsubishi Electric System

By this point the integrator should understand how our system operates. The most important things to note are “LAST COMMAND WINS” and “PROHIBIT REMOTE CONTROLLER”.

- The logic that is written in the BMS program will need to send a command to the control point (e.g. Set Temp) ONCE only. It should write to the input only at the time a change is desired at the input. Some BAS systems refresh or re-send their commands at regular intervals. These intervals are typically between 5 seconds and 10 minutes. If the BMS commands are constantly commanding the point, the Room Controller will not be able to control anything locally because the BMS command will be the LAST COMMAND every few seconds or minutes.

- PROHIBIT functions of the Room Controller during certain times to lock out local control. ALLOW during other times for use in a “local override” scenario. Send sweeping commands to all indoor units returning the building back to default settings at key times in the day to maintain original desired set-points.

- See *Application Note 3001 - 3rd Party Scheduling Strategy* for more explanation on schedules.