

Application Note 3036

BACnet Setting Tool

Table of Contents

Step 1	3
Step 2	3
Step 3	3
Step 4	3
Step 5	4
Step 6	4
Step 7	5
Step 8	6
Step 9	7
Step 10	8
Step 11	8
Step 12	9
Step 13	9
Step 14	10
Step 15	11
Step 16	11
Step 17	11
Understanding the Mitsubishi Electric System.....	12

Step 1

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

- AE-200, AE-50, EW-50 PICS statement from www.bacnetinternational.net/btl/
- BACnet Function Instruction Book
- BACnet Setting Tool Instruction Book
- CMCN – BACnet Setting Tool Application Note

Step 2

Before configuring the BACnet settings for the AE-200, AE-50, or EW-50, ensure that group settings in the centralized controller have been completed.

Step 3

Connect the computer with BACnet Setting Tool installed to LAN1 on the AE-200, AE-50 or EW-50 via a HUB using an Ethernet cable.

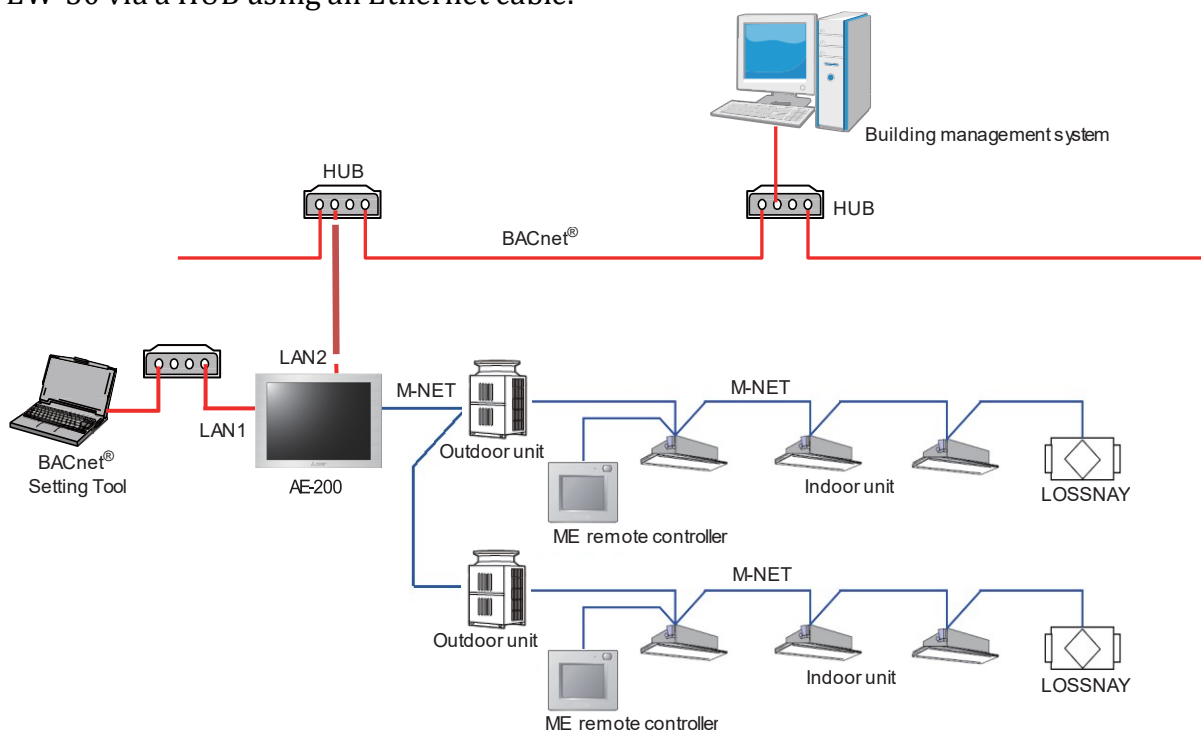


Figure 1: Communications Wiring

Step 4

Install the BACnet Setting Tool on a computer for BACnet setup. The BACnet Setting Tool can be found <http://meus.mylinkdrive.com>.

Step 5

Set the IP Address for the PC being used for the BACnet Settings Tool to be different from the IP Address for LAN1 of the AE-200, AE-50, EW-50. Ensure that they are still on the same subnet.

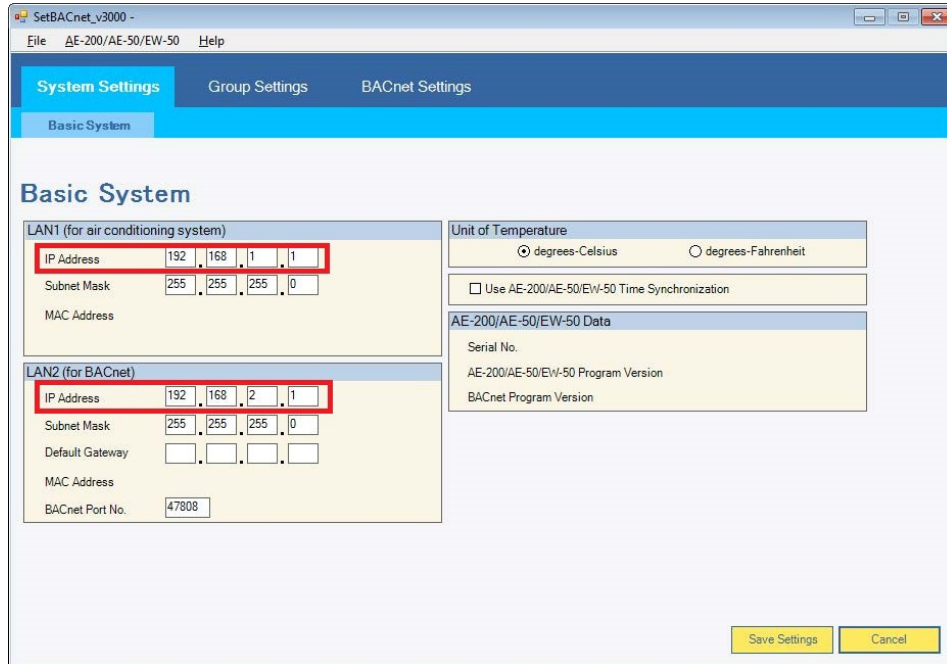


Figure 2: IP Addresses

Step 6

Select [Acquire Settings] from the AE-200/AE-50/EW-50 drop down menu. [Acquire Settings] will acquire the group settings from the AE-200, AE-50, or EW-50.

NOTE: If [Acquire Settings] is selected when not connected to an AE-200 it will result in a communications error

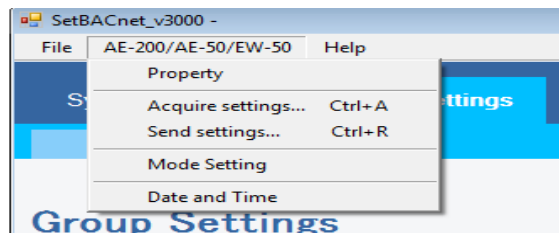


Figure 3: BACnet dropdown menu

Step 7

Open the Setting Tool Program and make sure the mode is set to [Offline] mode as shown in Figure 4. Then select [Acquire Settings] to see the current configuration of the device illustrated in Figure 5.

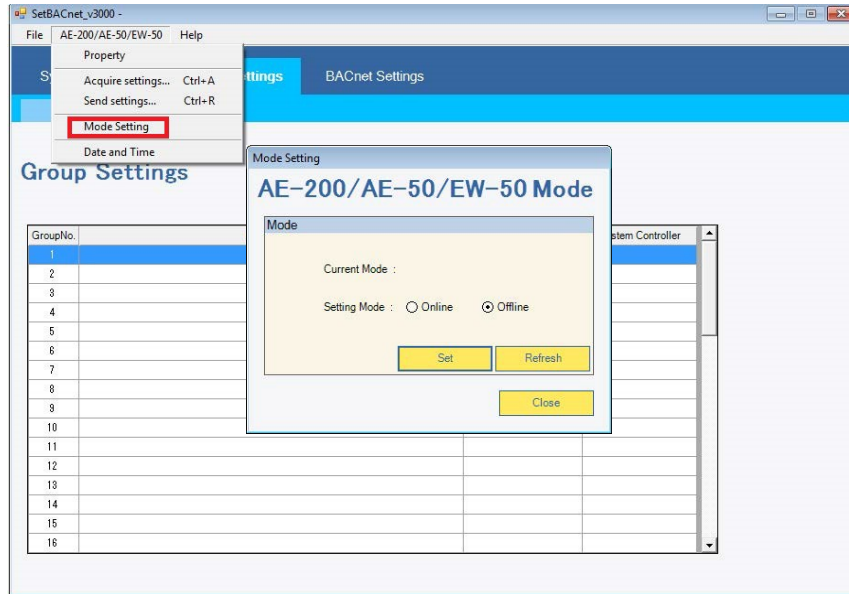


Figure 4: Ensuring Mode is set to [Offline]

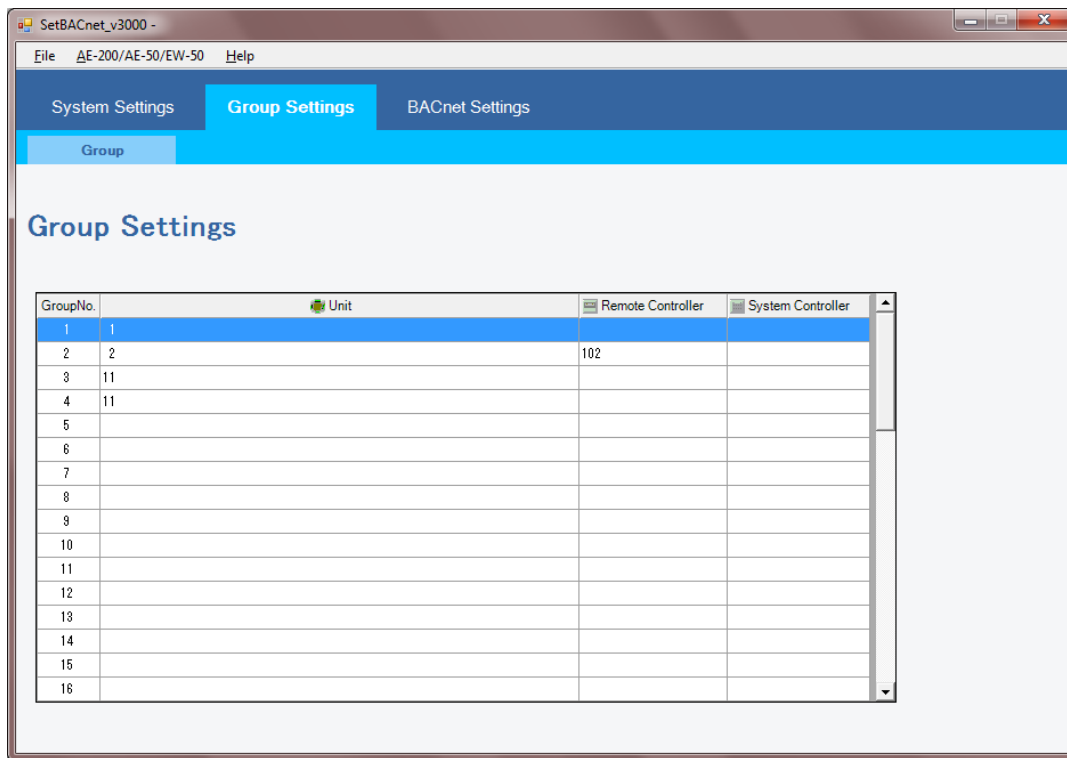


Figure 5: Electing [Acquire Settings] to see current configuration

Step 8

Configure to following 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 AE-200, AE-50, or EW-50 address is different.
- Group Settings
 - Group Settings and Interlocked Lossnay were acquired from the centralized controller
- BACnet Settings
 - Coordinate with the BMS integrator to set the proper values. Device ID (Device Instance #) and Network Number will be important
 - BBMS 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.**

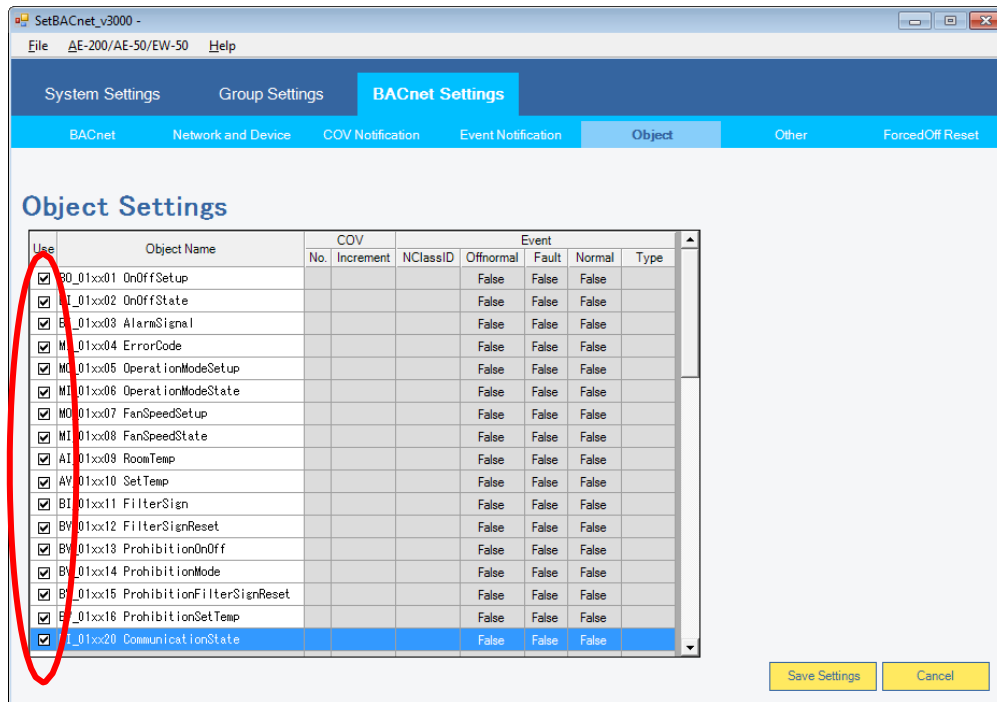
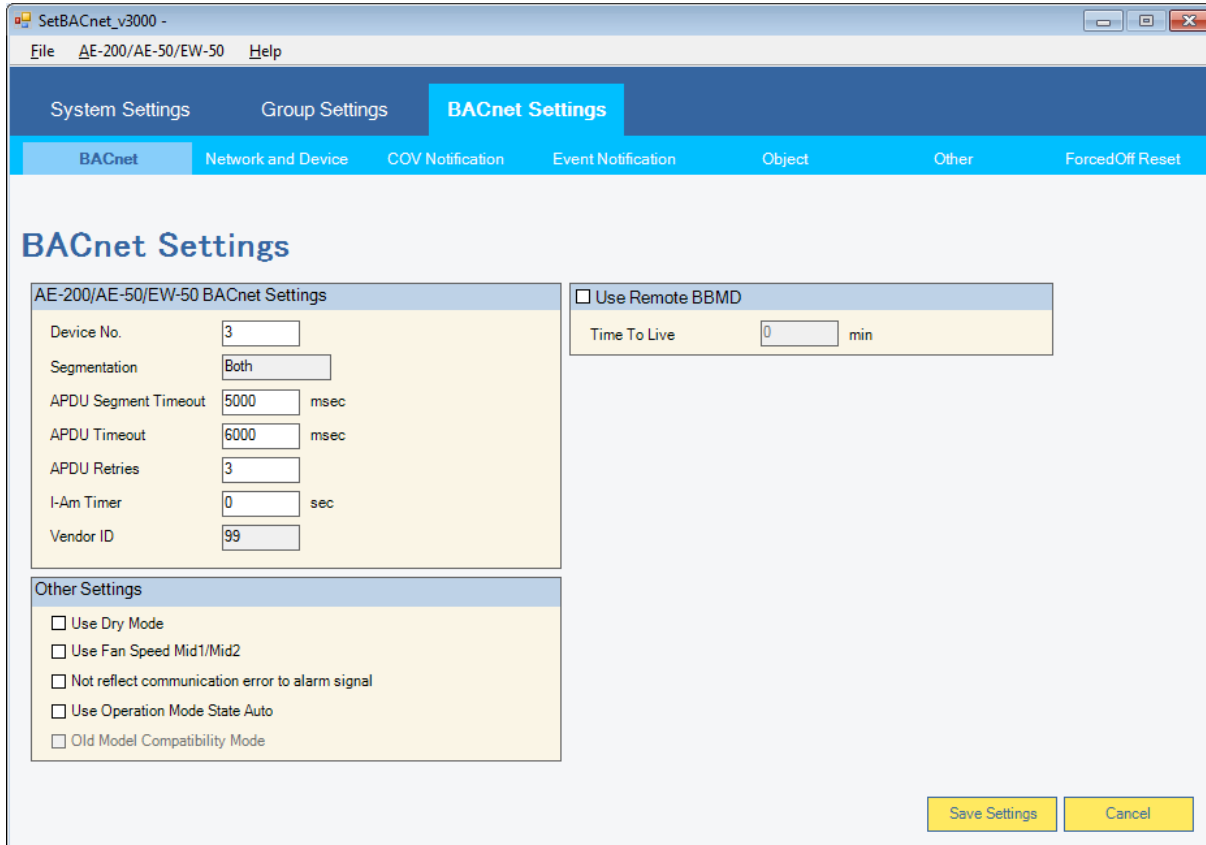


Figure 6: Configuring BACnet Settings

Step 9

Set BACnet Settings as desired. Grey boxes cannot be changed.

Note: Leave the APDU settings as default unless otherwise specified.



SetBACnet_v3000 -

File AE-200/AE-50/EW-50 Help

System Settings Group Settings **BACnet Settings**

BACnet Network and Device COV Notification Event Notification Object Other ForcedOff Reset

BACnet Settings

AE-200/AE-50/EW-50 BACnet Settings

Device No.

Segmentation

APDU Segment Timeout msec

APDU Timeout msec

APDU Retries

I-Am Timer sec

Vendor ID

Use Remote BBMD

Time To Live min

Other Settings

Use Dry Mode

Use Fan Speed Mid1/Mid2

Not reflect communication error to alarm signal

Use Operation Mode State Auto

Old Model Compatibility Mode

Save Settings Cancel

Figure 7: Default BACnet settings

Step 10

Click the [Add] button for the [Network No.] section under the [Network and Device] tab to register a Network or the [Add] button under the [Device Address] section to register a device.

Note: Network Configuration is required only when a BACnet router is used.

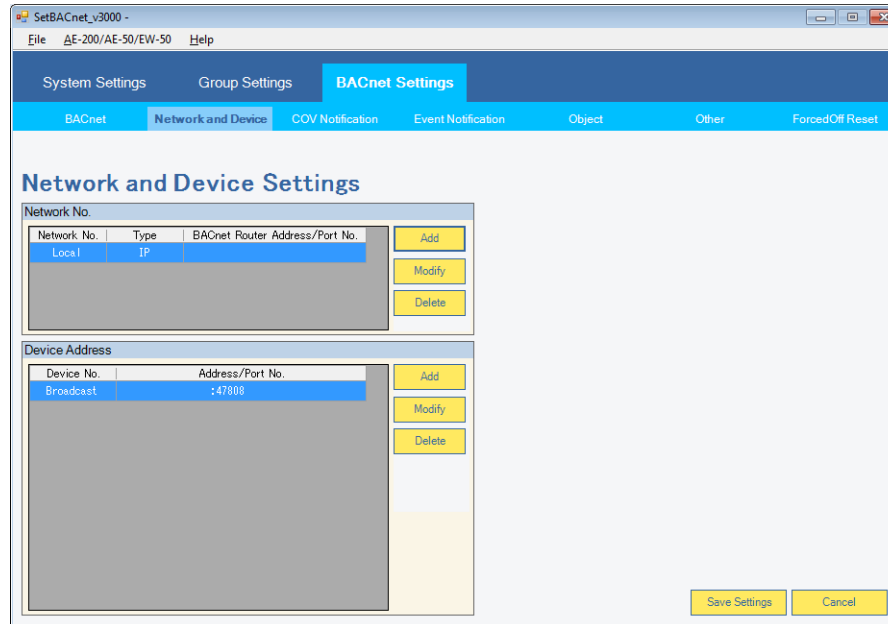


Figure 8: Network and Device Settings

Step 11

Click [ADD] or [Modify] under the [COV No.] in the [COV Notifications] tab to add devices that you would like to get notification for the devices registered in the [Network and Device Settings] tab.

Step 12

Click [Add] or [Modify] under the [Notification Address] section in the [COV Notifications] tab to add locations that you would like to receive COV notifications at.

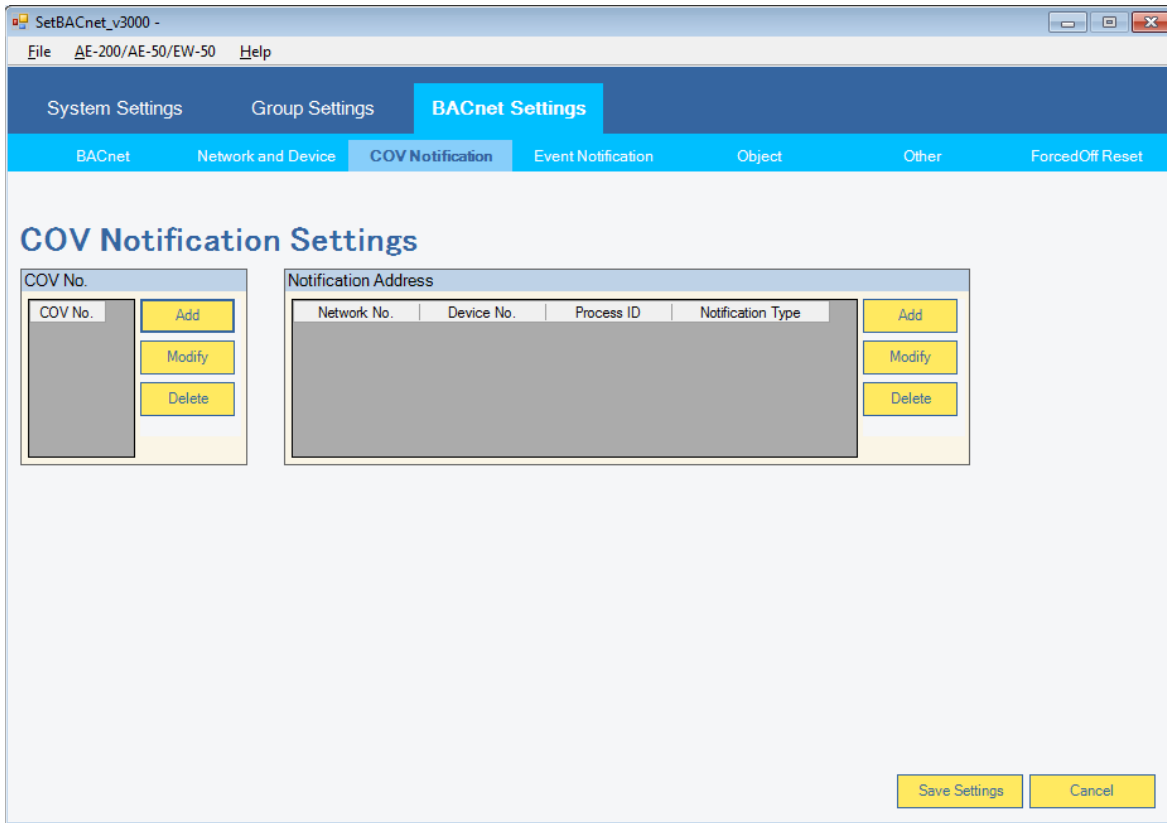


Figure 9: Default COV Notifications Tab

Step 13

Click [Add] or [Modify] under the [Notification Class] section in the [Event Notification] tab to add notification class ID's. You can set up to 5 notification classes.

Step 14

Click [Add] or [Modify] under the [Notification Address] section in the [Event Notification] tab to set a location to receive the notification classes at.

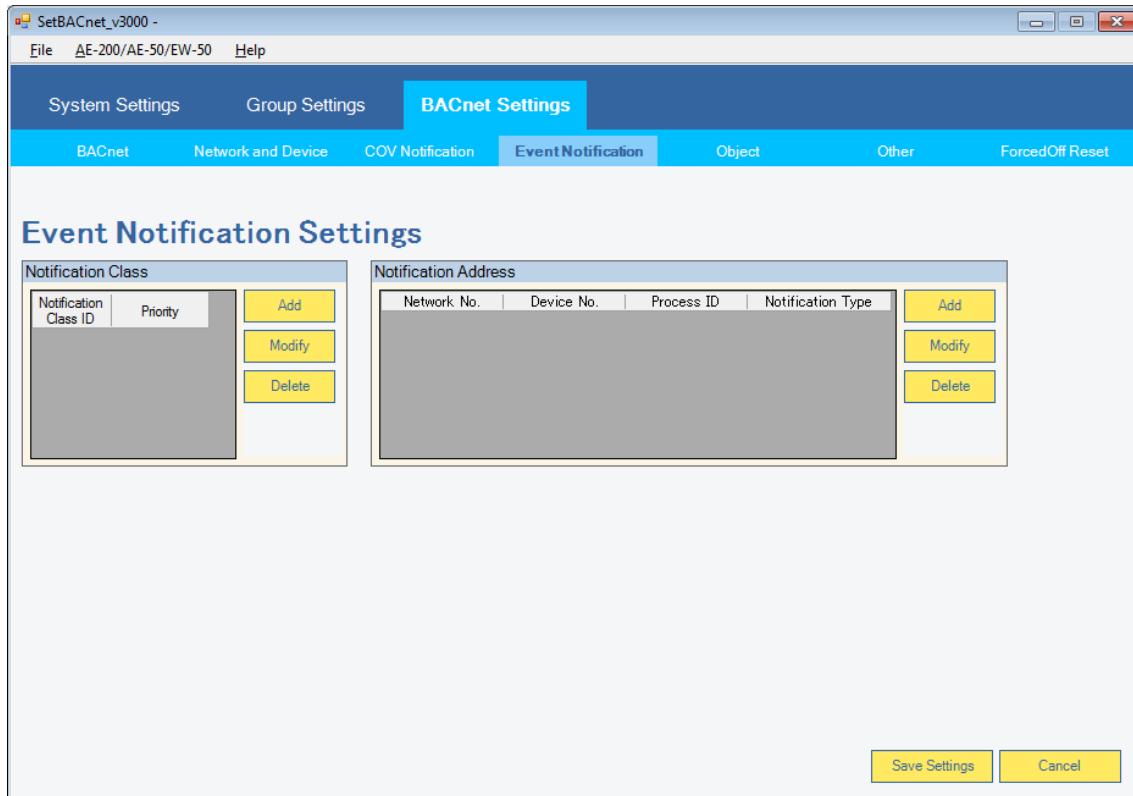


Figure 10: Event Notification Settings

Step 15

In the [Object] tab, check the boxes for objects that will be used by the AE-200, AE-50, or EW-50.

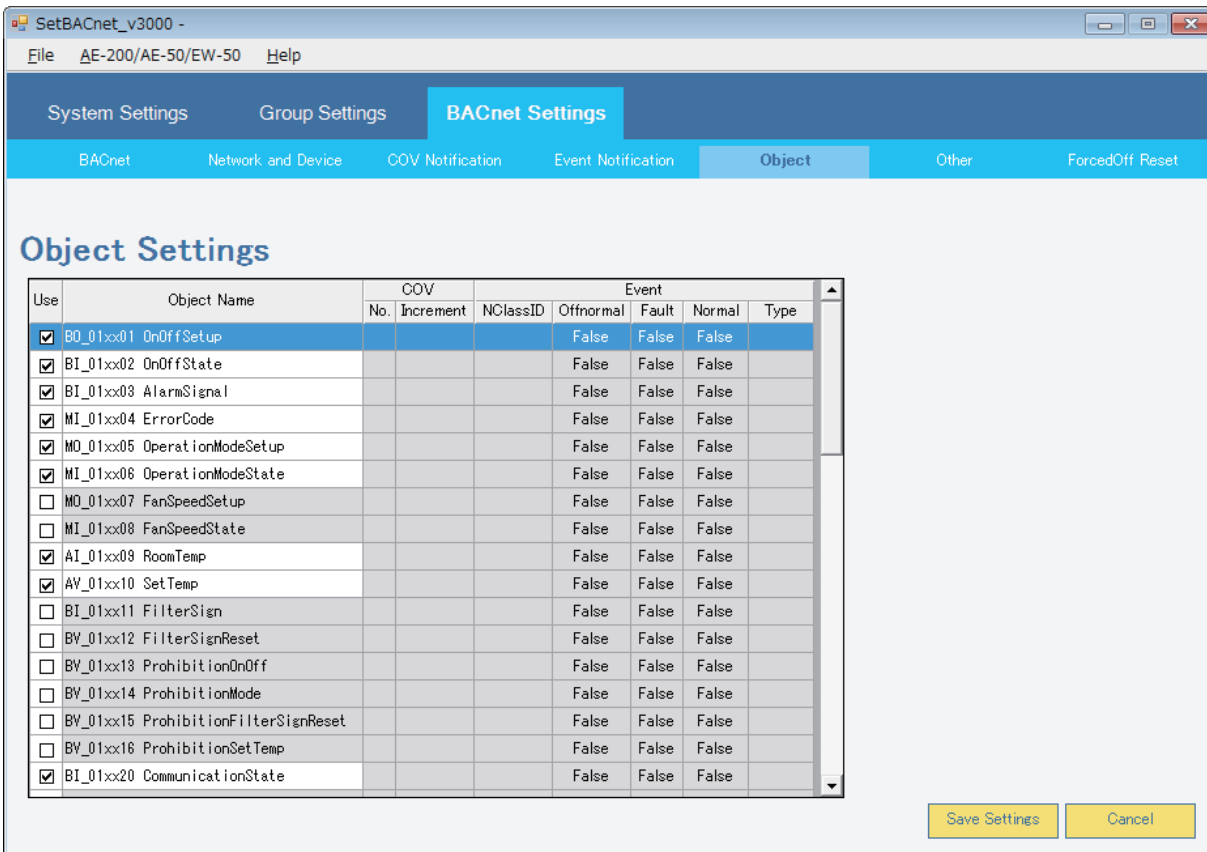


Figure 11: Object Settings

Step 16

Switch to [Online] mode after [Send Settings] command. WAIT 5 minutes for initialization to complete.

Step 17

Connect the BMS Cable to LAN2 (default IP address 192.168.2.254).

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.