

quick start guide

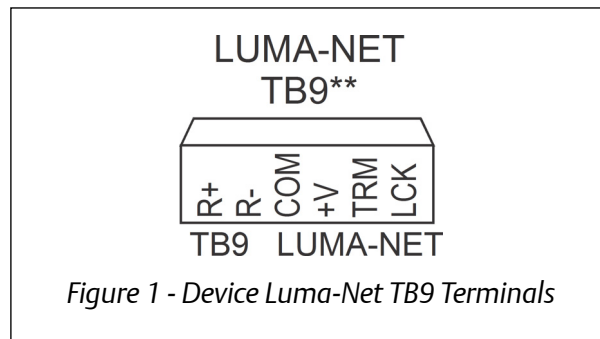
E2 Setup with Leviton EZ-MAX Plus BACnet® Device for 527-0409

This document will guide you through setting up and commissioning the Leviton EZ-MAX Plus BACnet® device (third-party device) to the E2 controller through the RS-485 Master-Slave/Token-Passing (MS/TP) communication. This communication setup is for Leviton EZ-MAX Plus 8 Relay Panel with software version 2.72, November 29, 2012. The 527-0409 description file (.dsc) and a license key to load into the E2 controller are required for this setup.

NOTE: The Leviton EZ-MAX Plus BACnet® device requires E2 firmware version 4.05F05 or higher.

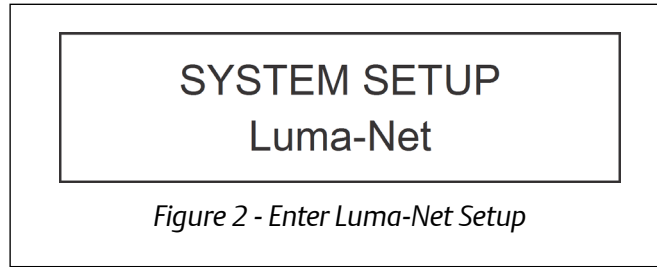
STEP 1: Set Up the Leviton EZ-MAX Plus Device Communication.

1. Connect a shielded twisted pair of wires to the Leviton EZ-MAX Plus on Luma-Net TB9 REM+ (R+) and REM- (R-) terminals. Connect the REM+ wire to the E2 (-) RS-485 COM terminal and the REM- wire to the E2 (+) RS-485 COM terminal. *Emerson Retail Solutions recommends all RS485 wiring used by the E2 be Belden 8641 (24AWG, 300V, Emerson Retail Solutions P/N 135-8641) or Belden 8761 (22 AWG, 300V).*

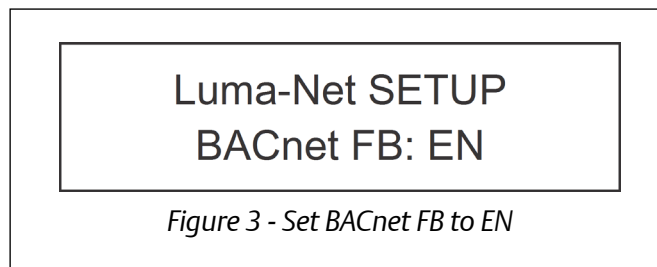


2. Configure the Leviton EZ-MAX Plus communication port by navigating to the following screens:

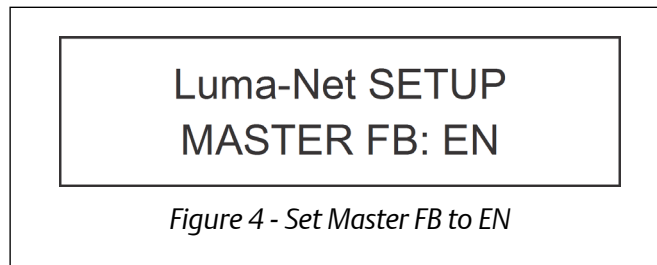
- a. Press **Select** to enter the **Luma-Net** setup.



- b. Make sure that **BACnet FB** is set to **EN** to enable BACnet® (**Figure 3**).

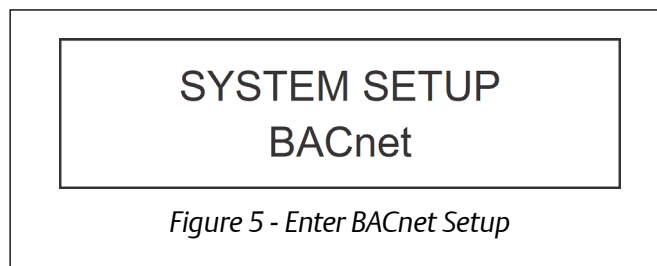


- c. Make sure **MASTER FB** is set to **EN** for enable (**Figure 4**).

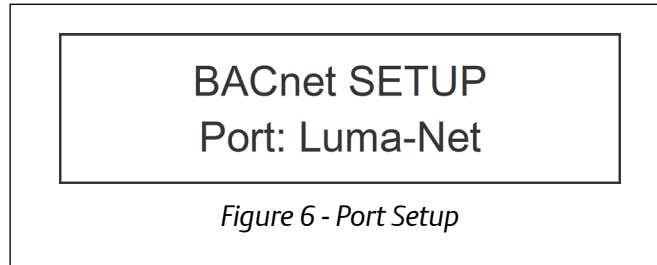


3. Configure the Leviton EZ-MAX Plus BACnet® communication by navigating to the following screens:

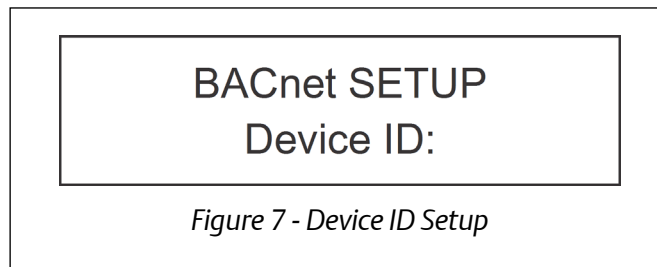
- a. Press **Select** to enter the BACnet® communication setup.



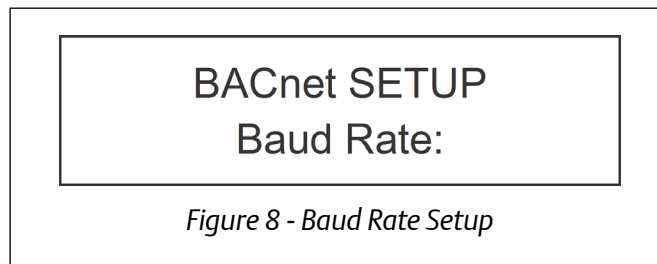
- b. Make sure the **Port** field is set to **Luma-Net** (**Figure 6**).



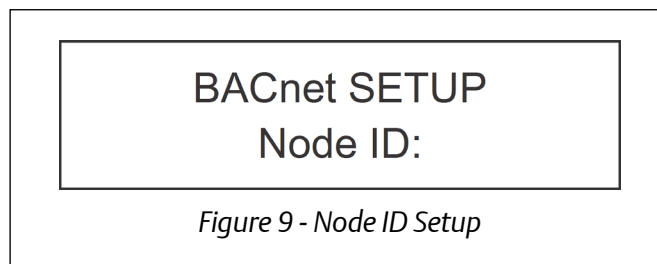
- c. Enter the BACnet® unique device ID (range is from 1 to 9999). Verify that no other BACnet® device has a duplicate ID.



- d. Select the Baud Rate (selections: 9600, 19.2K or 38.4K).



- e. Enter the MAC address (range: 1 to 127). Verify that no other device has a duplicate MAC address.



STEP 2: Upload the Description File (527-0409) to the E2.

1. Connect to your E2 using UltraSite (refer to *UltraSite32 User's Guide P/N 026-1002*).
2. Right-click the E2 icon and select **Description File Upload**.
3. Browse to the location of the description file and click **Upload**.
4. Once upload is complete, reboot the E2 controller.

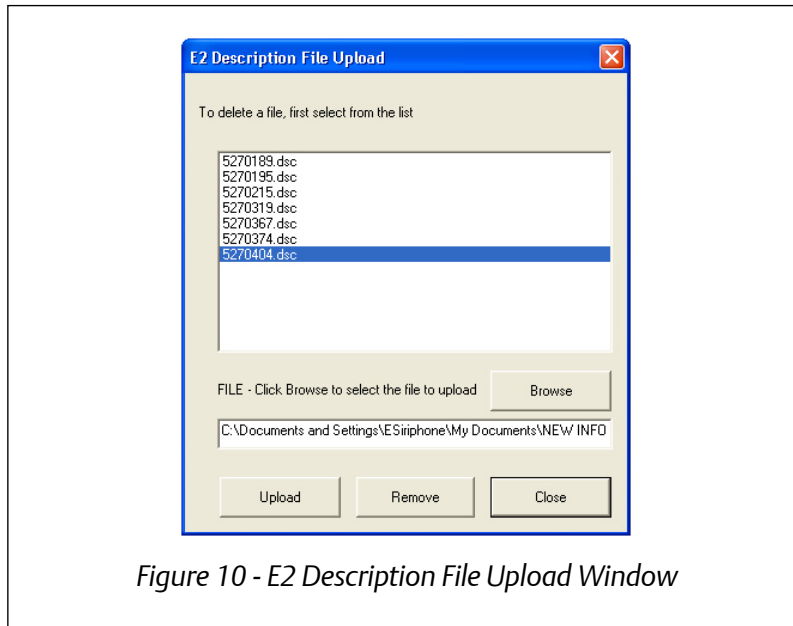




Figure 10 - E2 Description File Upload Window

STEP 3: Activate the License of the Device.

1. Log in to the E2 controller.
2. From the E2 front panel (or via Terminal Mode), press , ,  (*Licensing*).

3. Press **F1** (*ADD FEATURE*) and enter the license key.

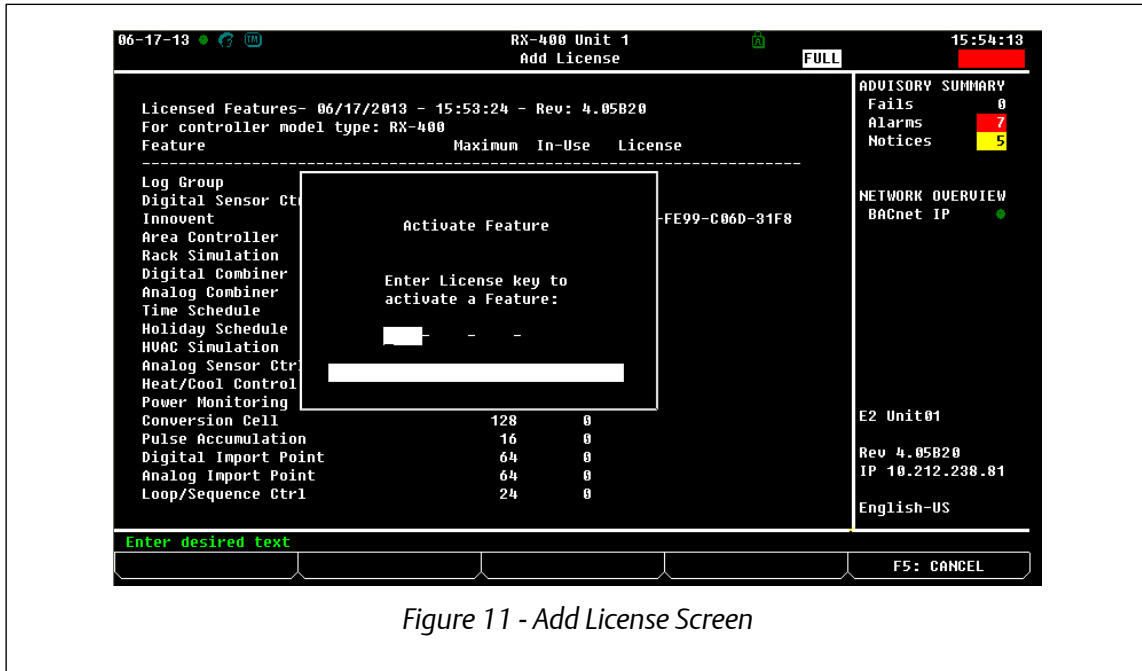


Figure 11 - Add License Screen

STEP 4: Set Up the E2 COM Port for BACnet MS/TP.

1. From the E2 front panel *Home* screen, press **Menu**, **7**, **4**, **3** (*TCP/IP*).

2. Press **F1** to go to the *C3: Serial* tab.

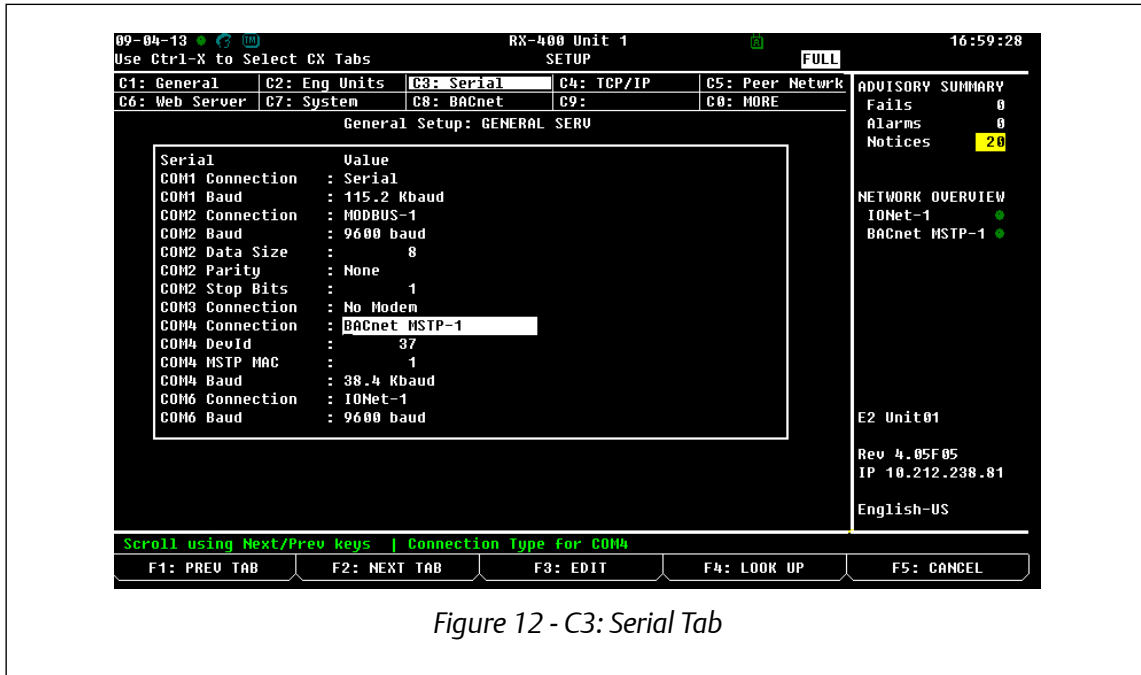


Figure 12 - C3: Serial Tab

3. Select the COM port the device is connected to, press **F2** (LOOK UP), and then choose the appropriate **BACnet MSTP** selection.

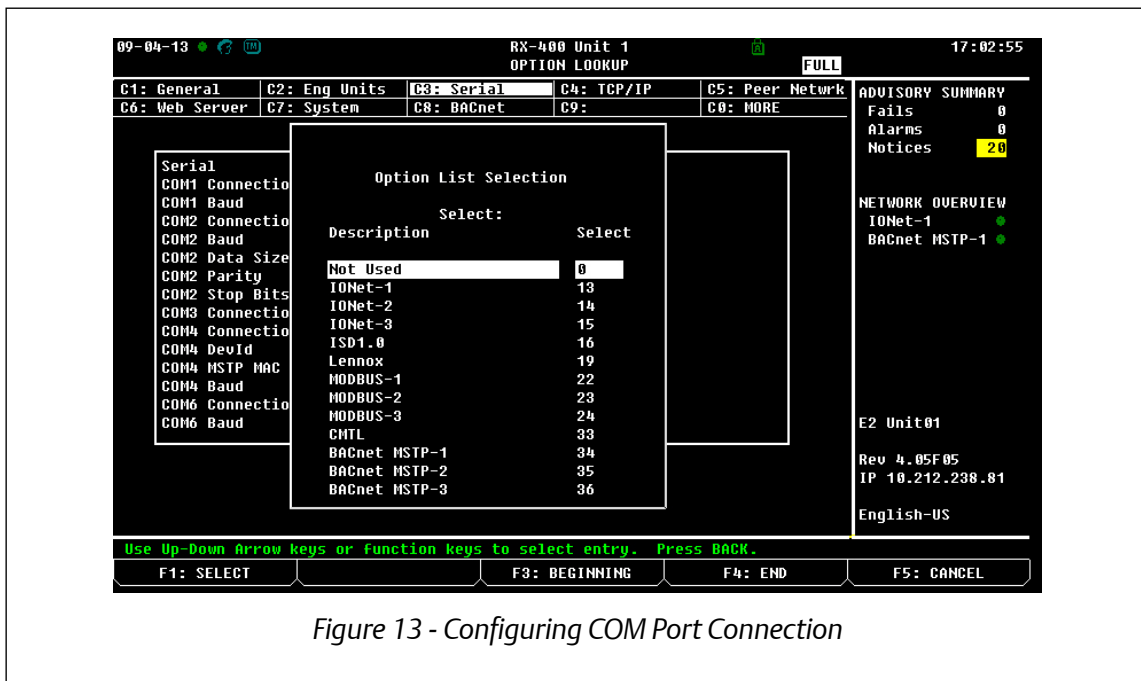


Figure 13 - Configuring COM Port Connection

- Set the Baud Rate for the chosen port. Press **F4** to look up the appropriate speed.
NOTE: The third-party device can only handle 9600, 19.2K and 38.4K.

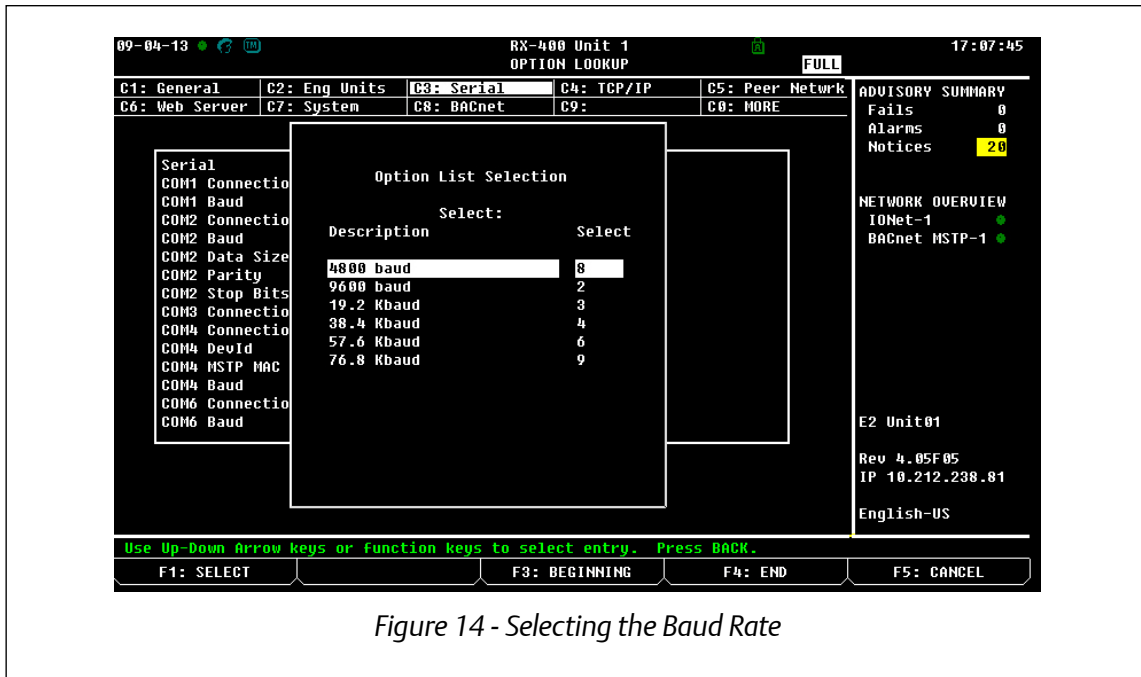



Figure 14 - Selecting the Baud Rate

STEP 5: Add the Device in the E2.

- From the E2 Home screen, press **Menu**, **7**, **7**, **2** (Connected I/O Boards & Controllers).
- Press **F2** (NEXT TAB) to shift over to the C4: Third Party tab. The name of the device will display in the list. Highlight the device name and enter the number of devices to add under the **Quantity** field.

3. Press  to save the changes.

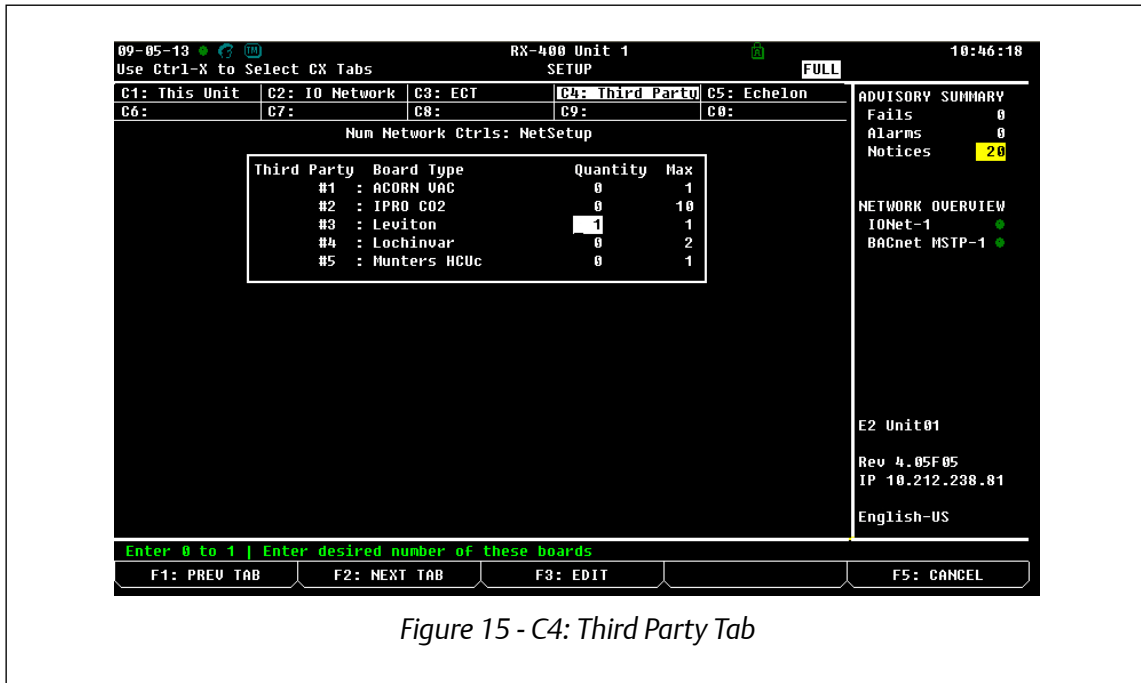


Figure 15 - C4: Third Party Tab

STEP 6: Commission the Device.

1. From the E2 Home screen, press , , ,  (Network Summary).

- Press **F4** for *COMMISSION* and select **BACnet MSTP**.

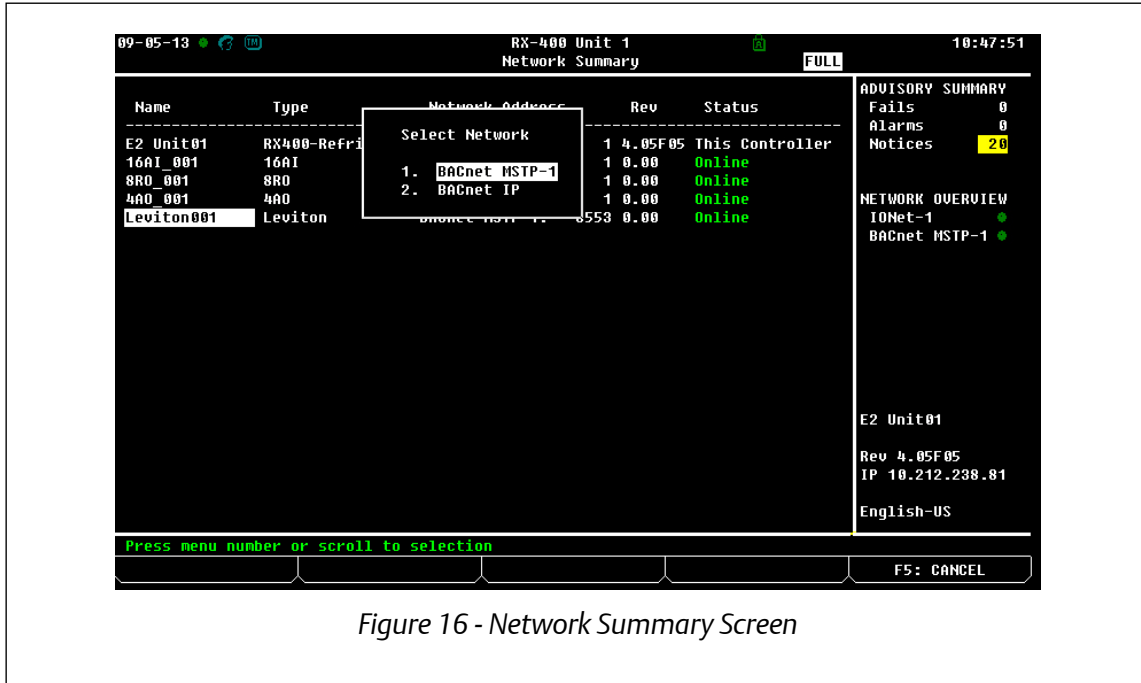


Figure 16 - Network Summary Screen

- Once **BACnet MSTP** is selected, the E2 controller will scan the network for available BACnet® devices.

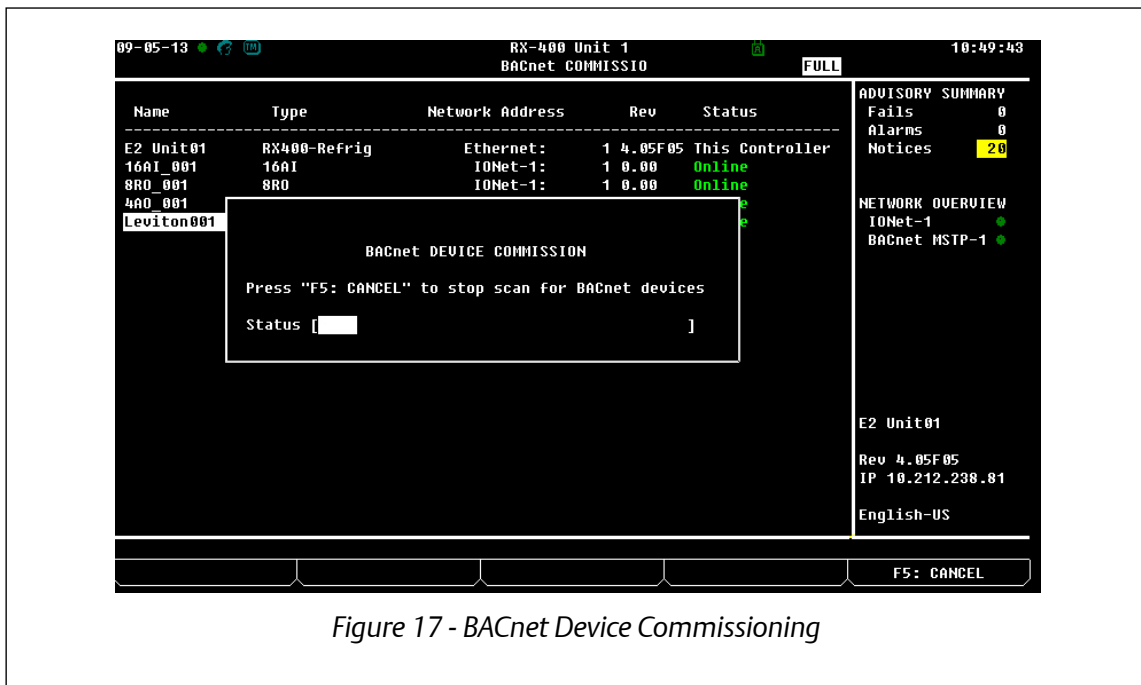


Figure 17 - BACnet Device Commissioning

- Next, select the BACnet® device ID and Node ID.

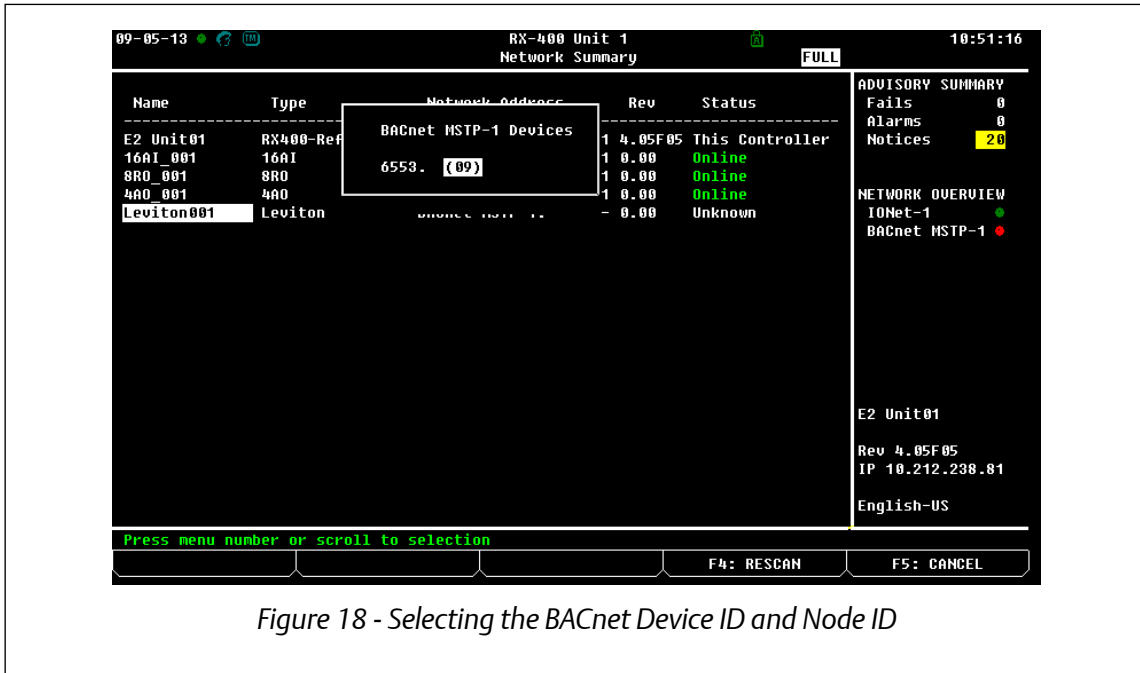



Figure 18 - Selecting the BACnet Device ID and Node ID

- Press  to submit the device.

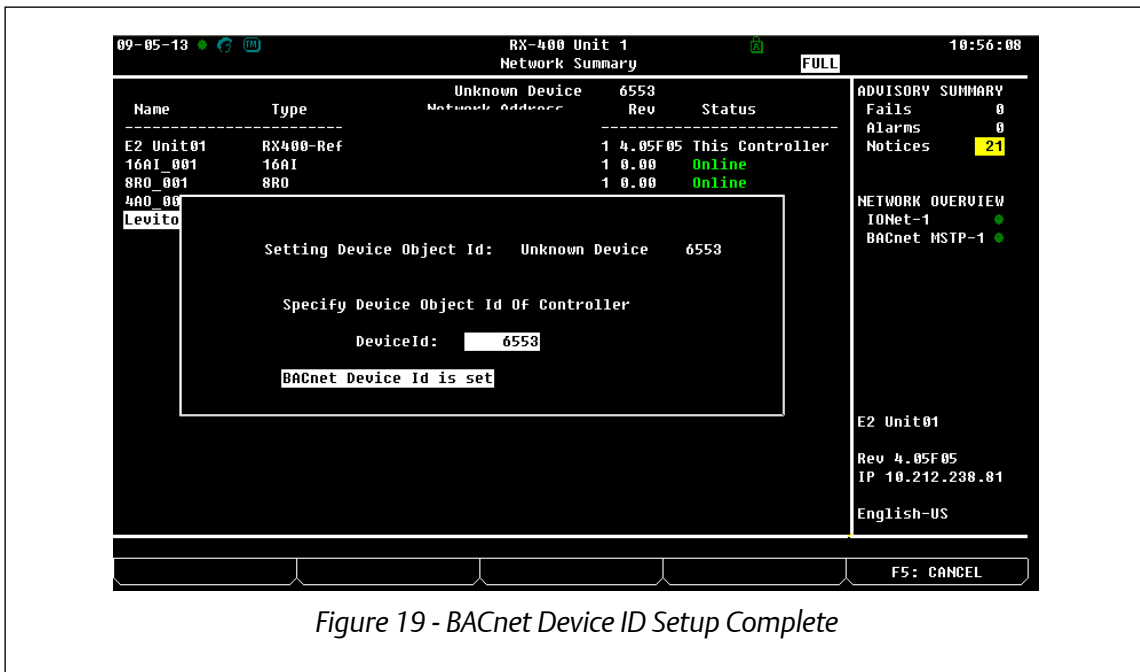


Figure 19 - BACnet Device ID Setup Complete

- Once the device is commissioned, addressed and wired properly, the device should appear online on the *Network Summary* screen.

Control Points

Object	Instance	Control Point		Present Value
Binary Output (BO)	1...252	RELAY 01...252	Read/Write	Active; Inactive; Relinquished
Binary Input (BI)	1...240	Switch, Occupancy Sensor or Contact Closure Input 1...240	Read Only	Active; Inactive
Analog Input (AI)	1...240	Photocell 1...240	Read Only	0-255 Foot Candles

Table 1- Control Points

The E2 is configured to read only the Leviton EZ-MAX Plus physical 8 input and display the input value as binary input for switches or as analog input for photocell, depending on how the Leviton EZ-MAZ Plus physical input is configured on the device.

Binary Output Relay Priority Array

For E2 to control the relays through BACnet® at any priority, it is important to understand how priorities are used in EZ-MAX Plus and how they may impact the integration in E2 systems. Each relay in EZ-MAX Plus has 16 priority levels. This is known as the “priority array” for each relay.

Priority	Default in EZ-MAX Plus
1 - Highest	Internal Main Bypass Switch (cannot be changed)
2	Emergency Power (cannot be changed)
3	Internal Relay Bypass (cannot be changed)
4	Front Panel Override - Front Panel ALL ON button
5	No function for this priority setting
6	No function for this priority setting
7	Photocell
8	LV and Digital Switches, Schedule, Luma-Net, Red Relay Manual Pushbuttons
9	No function for this priority setting
10	No function for this priority setting
11	No function for this priority setting
12	No function for this priority setting
13	No function for this priority setting
14	No function for this priority setting
15	No function for this priority setting
16 - Lowest	No function for this priority setting

Table 2- Binary Output Relay Priority Array

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Each priority can be individually controlled by setting to ON, OFF, or RELEASED (Relinquished: removes priority command). The last highest priority that is not released determines the state of the relay.

The E2 priority setting for relay control is defaulted at 5 and can be changed in the E2 Leviton application *Setup* screen under the *C5: Priority* tab.

*NOTE: Priority levels 1, 2 and 3 can **NOT** be used. If the E2 priority level is changed to 1, 2 or 3, the third-party device will ignore the command. If priority levels are set the same between the E2 and EZ-MAX Plus, the last priority command will take precedent.*

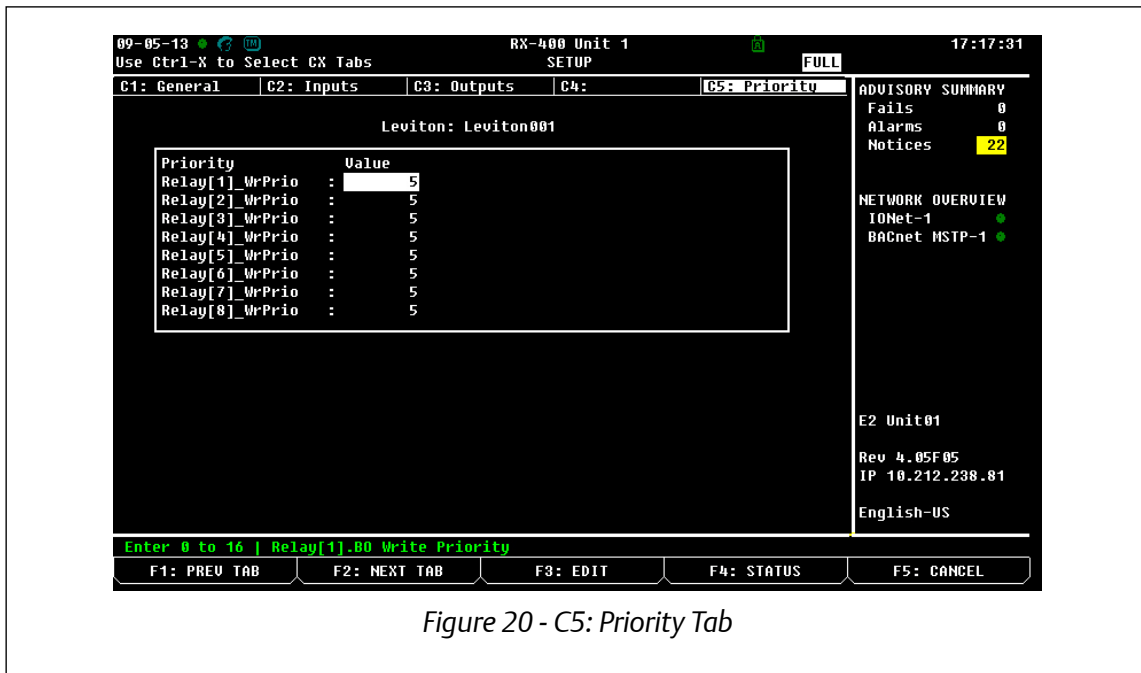


Figure 20 - C5: Priority Tab

The relay can be controlled by another application or the input can be set to a fixed value on the E2 Leviton application *Setup* screen under the *C2: Inputs* tab.

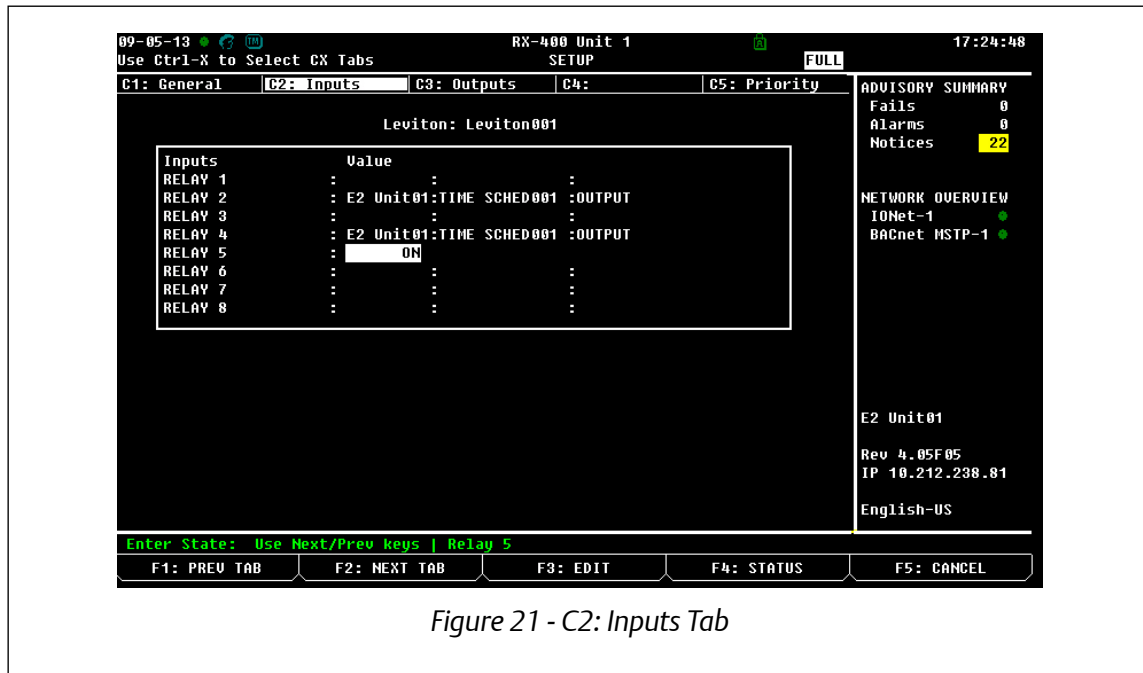


Figure 21 - C2: Inputs Tab

To issue RELEASED (Relinquished), simply delete the pointer or fixed value.

NOTE: When communication is lost, the third-party device will retain the last E2 relay priority command (if highest). To remove the E2 command (RELEASED), push the RED relay manual push-button on the Leviton EZ-MAX Plus panel.

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