Environment Setting Program Manual

MODE Set/Frequency Set/Power Set/
Destination Set/UART Set
Technical Manual

Ver 1.0

SEBINE Technology, Inc.

CONTENTS

1. Hardware Connection

Use DBG port for PC connection shown in Figure 1.
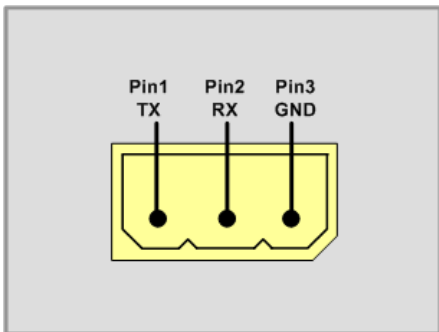

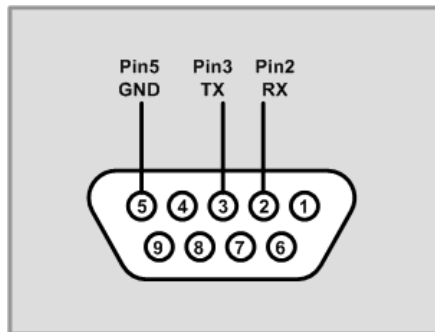Figure 1. Hardware Connection-1   Figure 2. Hardware Connection-2(PC)

For communication frequency adjustment, port and PC must be connected via serial communication program as shown in Figure 1.
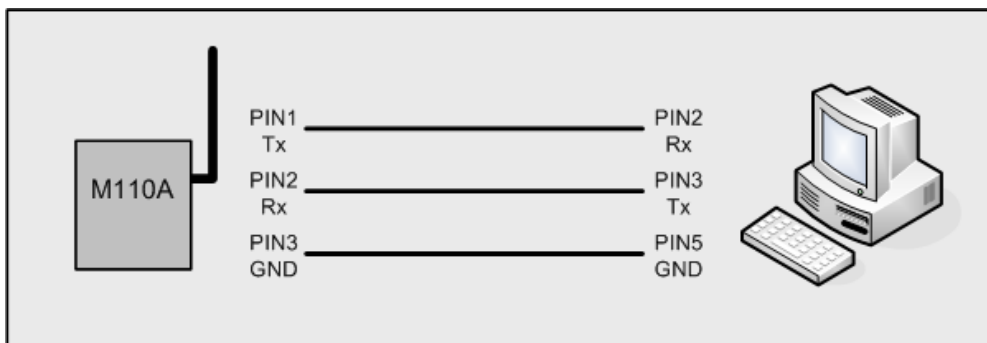

Figure 3. Hardware Connection-3

The hardware connection between M110A and PC can be done as shown in Figure 3.

2. Environment Setup Program Installation

Click setup.exe among provided files and install the program. If Microsoft.net Framework 2.0 is not already installed, a screen in Figure 4 may be shown. If already installed, the screen in Figure 4 will not be shown. Click "agree".
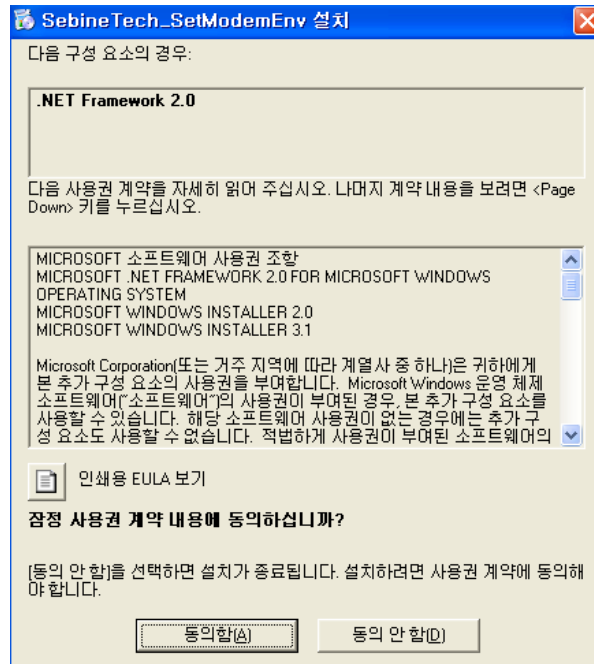

Figure 4. Microsoft.net Framework 2.0 installation screen

If Visual C++ runtime library is not installed, a screen in Figure 5 may be shown. If already installed, the screen in Figure 5 will not be shown. Click "install"
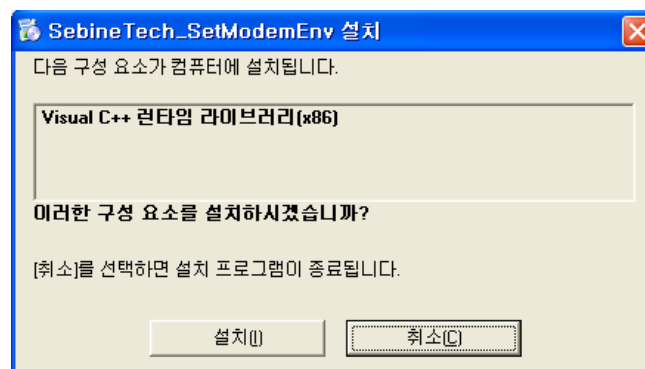
Figure 5. Visual C++ runtime library installation screen

Additionally if above two programs are already installed, a screen in Figure 6 can be shown. Now, installation wizard for environment setup program starts. Click "next"
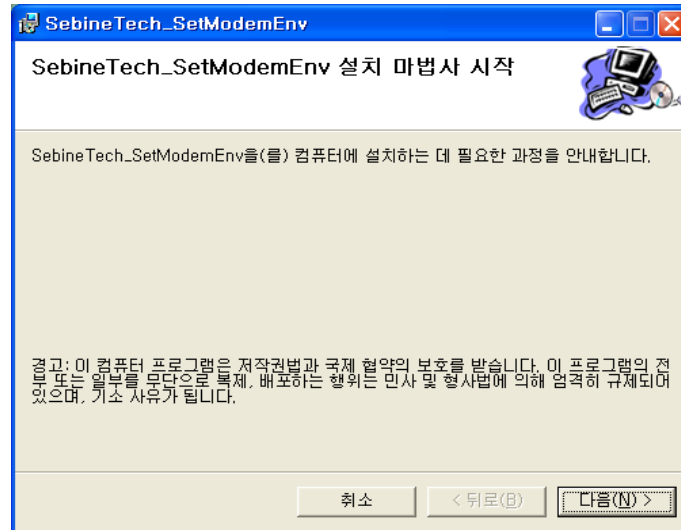
Figure 6. Installation wizard start screen

A screen shows creating a folder where application program will be installed. Under normal case, do not change the postion of folder. Then, click "next".
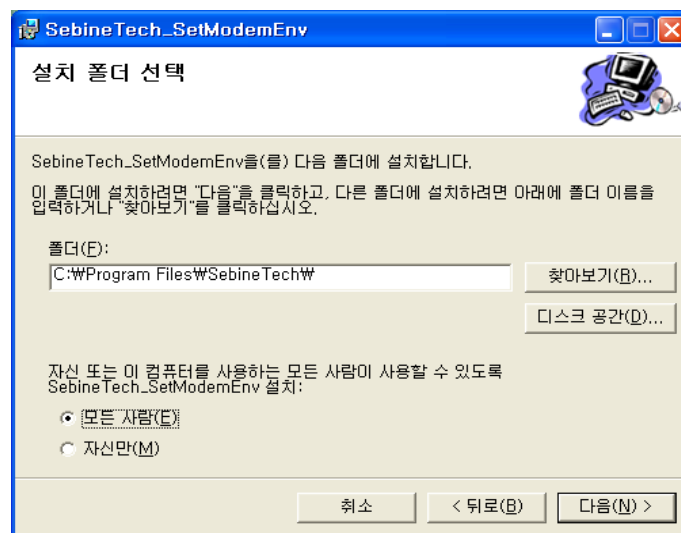
Figure 7. Installation folder selection screen

A screen confirming the installation of application program. Click :next" to begin

installation.
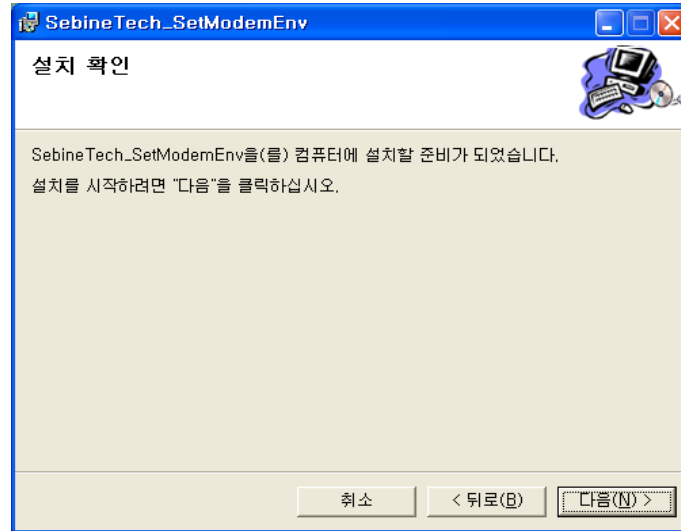
Figure 8. Installation confirmation screen

Installation is in progress. Installation is completed within a minute.
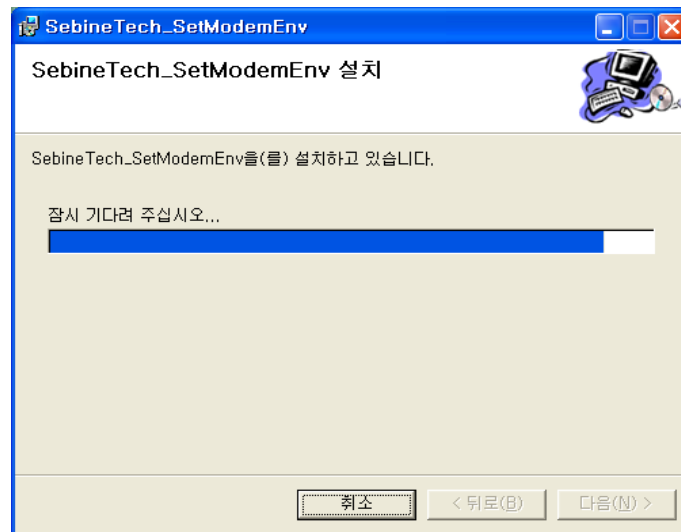
Figure 9. Installation screen

Installation is completed. Click "Close" to finish installation.
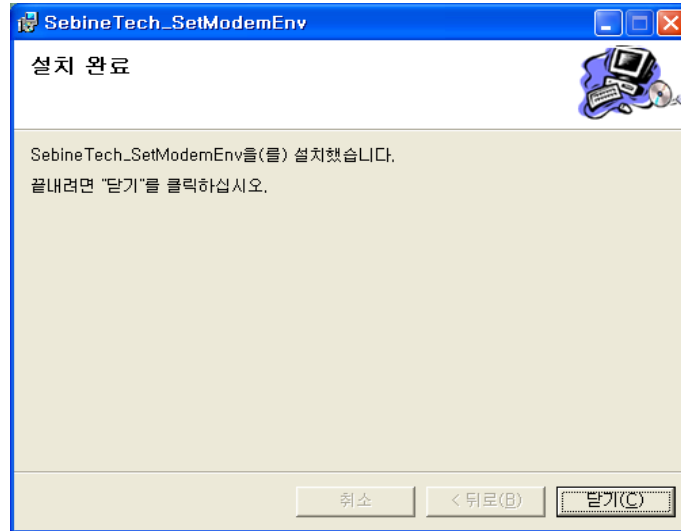
Figure 10. Installation finish screen

After successful installation, window start -> all programs -> SebineTech -> SetModemEnv will be shown and shortcut icon will appear background screen. Figure 11 and Figure 12 shows actual installed screen.

Figure 11. Start menu icon

Figure 12. Icon

3. Serial Communication Setup

Environment setup of device is done through Serial communication between computer and device. Figure 13 shows the initial screen when environment setup program is running. For Serial communication, input the current port number of Serial cable to COM PORT and click OPEN.
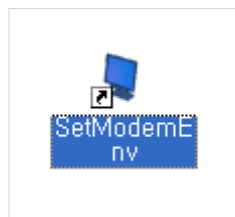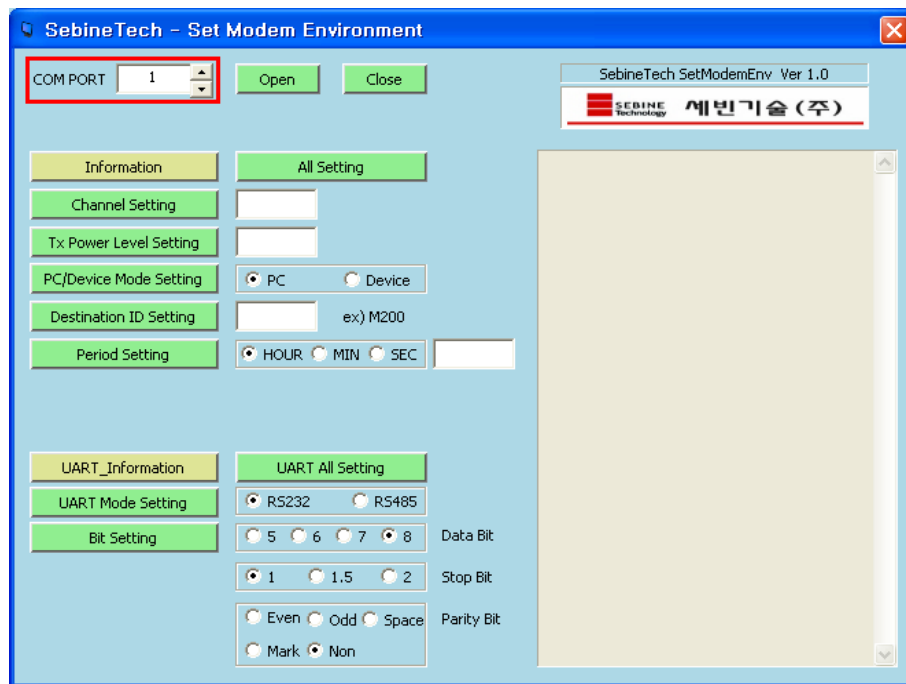

Figure 13. Initial running screen of environment setup program

〈Button function explanation〉

1. Information : displays current setup information
2. Channel Setting : set communication frequency
3. Tx Power Level Setting : set communication output level
4. PC/Device Mode Setting : PC Mode, set Device Mode
5. Destination ID Setting : set Destination ID
6. Period Setting : set transmission frequency
7. All Setting : set all available functions (except UART)
8. UART_Information : Set and check device's UART communication environment setup
9. UART Mode Setting : set RS232/RS485 communication
10. Bit Setting : set Data Bit, Stop Bit, Parity Bit
11. UART All Setting : set all available functions of UART

When device is connected, all setting values of connected device is displayed on environment setup program. Left side of screen shows Edit Box or setup value of radio button control. Right side of screen shows information in text. Depending on device, buttons that do not need setting are deactivated. See table 1 for details. Figure 14 shows an example of M110A connected to computer.

▶▶ Setup values can be set independently by clicking each corresponding buttons. Or all values can be set at once.
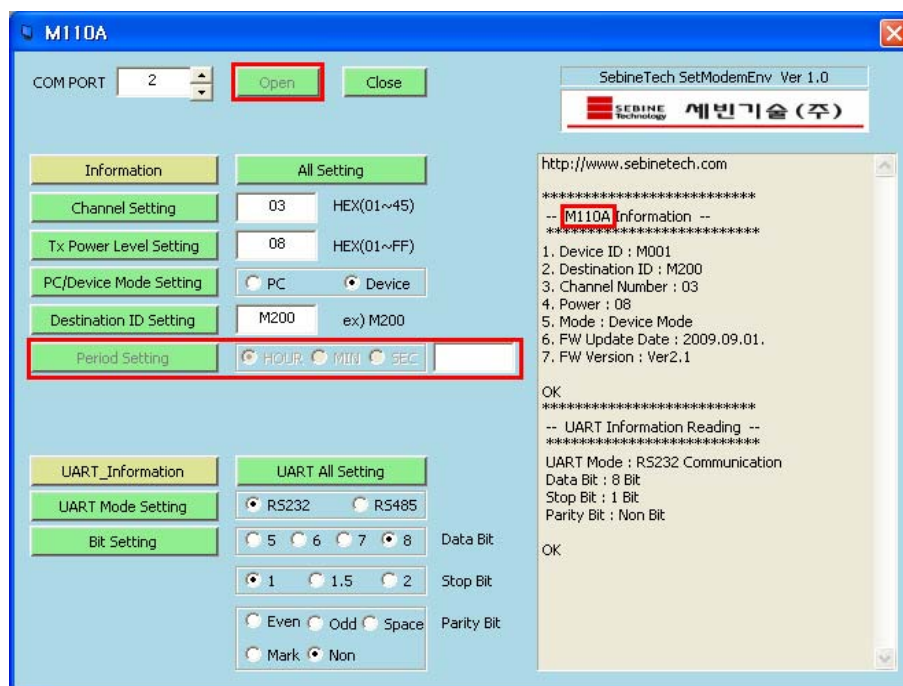
Figure 14. Environment setup program and device connection screen

Mode	Name	Channel	Tx Power	Destination ID	Period	UART
PC	M110A	○	○			○
	W110A	○	○			○
	W210A	○	○			
	W310A	○	○			
	W410A	○	○			
	W510A	○	○			
Device	M110A	○	○	○		○
	W210A	○	○	○	○	
	W310A	○	○	○	○	
	W410A	○	○	○	○	

Table 1. Available Setting Value

4. Communication Frequency Aetup and Check

4.1 Usable Communication Frequency

RF MODEM and WDAS uses 433MHz frequency bandwidth, Usable frequencies are shown in table 2.

Ch.	Freq.(Mhz)	Ch.	Freq.(Mhz)	Ch.	Freq.(Mhz)	Ch.	Freq.(Mhz)
01	433.0625	13	433.5125	25	433.9625	37	434.4125
02	433.0875	14	433.5375	26	433.9875	38	434.4375
03	433.1125	15	433.5625	27	434.0125	39	434.4625
04	433.1375	16	433.5875	28	434.0375	3A	434.4875
05	433.1625	17	433.6125	29	434.0625	3B	434.5125
06	433.1875	18	433.6375	2A	434.0875	3C	434.5375
07	433.2125	19	433.6625	2B	434.1125	3D	434.5625
08	433.2375	1A	433.6875	2C	434.1375	3E	434.5875
09	433.2625	1B	433.7125	2D	434.1625	3F	434.6125
0A	433.2875	1C	433.7375	2E	434.1875	40	434.6375
0B	433.3125	1D	433.7625	2F	434.2125	41	434.6625
0C	433.3375	1E	433.7875	30	434.2375	42	434.6875
0D	433.3625	1F	433.8125	31	434.2625	43	434.7125
0E	433.3875	20	433.8375	32	434.2875	44	434.7375
0F	433.4125	21	433.8625	33	434.3125	45	434.7625
10	433.4375	22	433.8875	34	434.3375		
11	433.4625	23	433.9125	35	434.3625		
12	433.4875	24	433.9375	36	434.3875		

Figure 2. Usable frequency table

4.2 Channel Setting(Communication Frequency Setup)

For communication channel setup, input channel number in Hex to corresponding Edit Box and click Channel Setting button, Input range is 0x01~0x45(69 channel) shown in table 2. Setting information is shown in right side on screen. Verify the settings by clicking Information button. Figure 15 shows an example of setting 10 in Channel of M110A device.
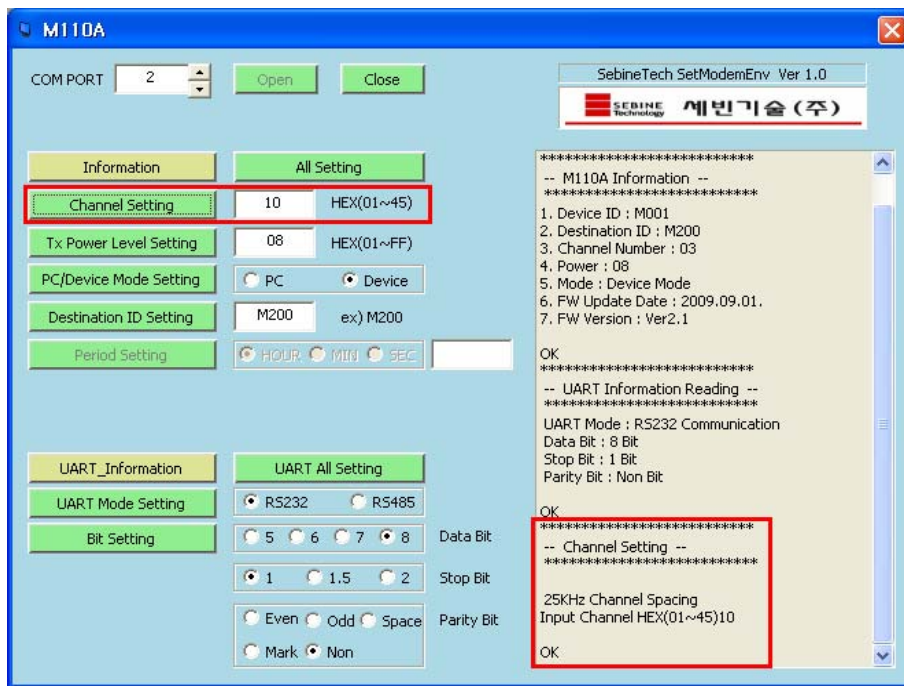
Figure 15. Channel Setting screen

5. Communication Output Level Setup and Verification

5.1 Tx Power Level Setting(RF Output Level Setup)

For setting the communication output level, input the value in Hex to the corresponding Edit Box and click TX Power Level Setting. Output level range can be set as [01~FF] in Hex. For verification of setup, click Information button to check. Figure 16 is an example of setting 8 in Power of M110A device.

▶▶ However, setting output level at factory values is recommended.
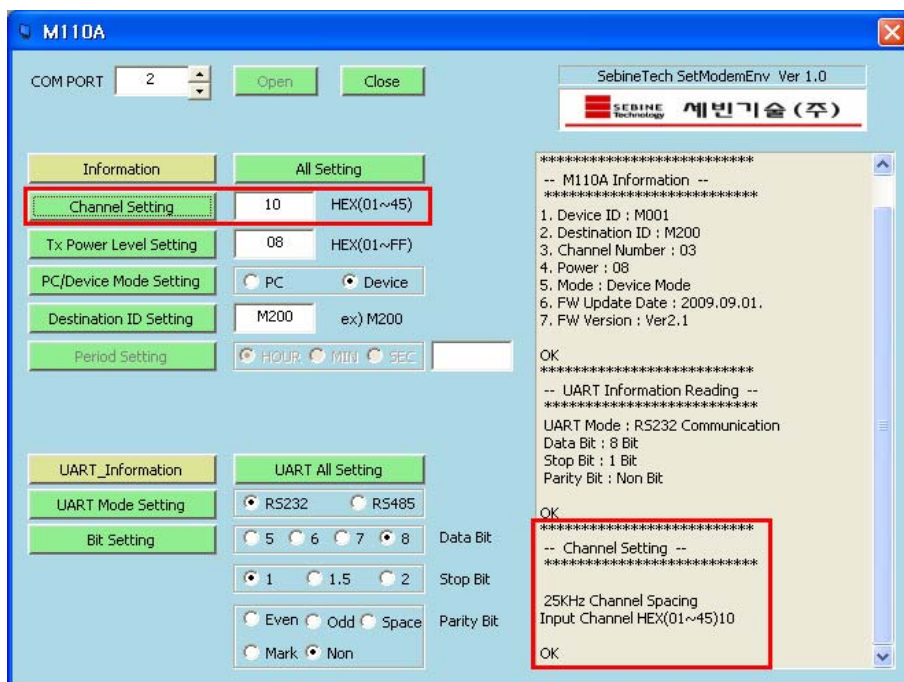
Figure 16. Communication output level setup screen

6. Operation Mode Setup and Verification

6.1 PC/Device Mode Setting(Operation Mode Setup)

For setting device's operation mode, select radio button mode (PC/Device) and click PC/Device Mode Setting button. Avaliable mode is PC mode/Device Mode. After button click and mode setting, the message Please Rebooting!!" appears on the right side of screen in Figure 17. Changed mode is applicable after power OFF/ON. So, turn OFF/ON the device. Also, changed information can be shown by clicking Close/Open buttons successively. Figure 17 is an example of PC mode of M110A device.
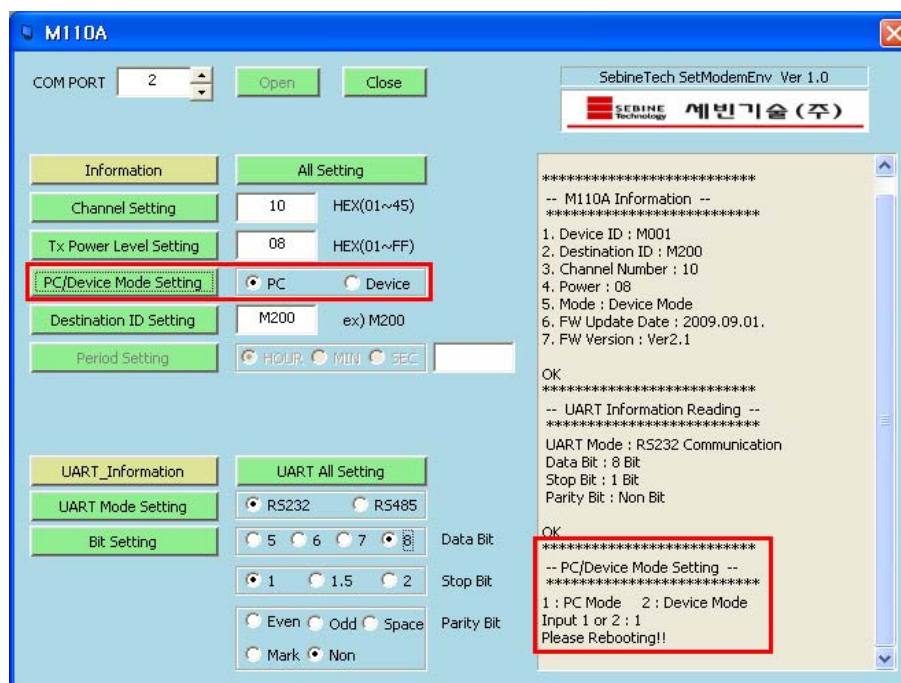

Figure 17. Mode Setting screen

6.2 PC Mode

In PC mode, "Destination ID" and "Period" is not needed, so it is disabled shown in Figure `18. Figure 18 is an example of showing PC mode of M110A device.
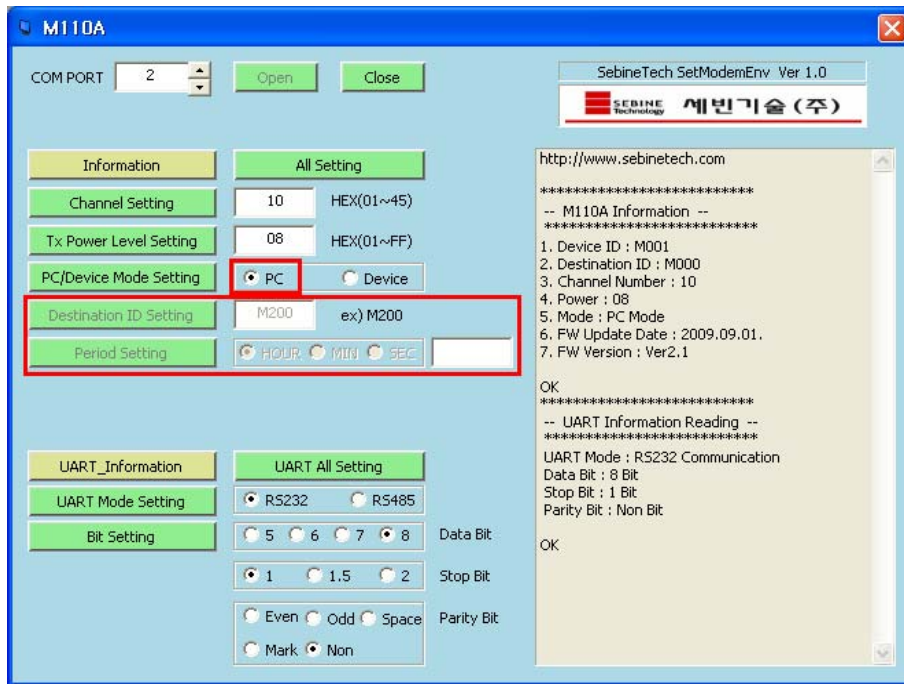

Figure 18. PC Mode screen

6.3 Device Mode

In Device Mode, set "Destination ID" for all products. However, "Period" setting is done differently for each product.

7. Destination ID Setup and Verification

7.1 Destination ID Setting(Destination ID Setup)

For Destination ID setting, input ID to the corresponding Edit Box and click "Destination ID Setting". Destination ID setting is possible only when the device mode is in Device Mode and it is not available in PC Mode. For Destination ID setting, input 4byte device ID and click "Destination ID Setting" button. For verification of setup, click "Information" button to check. Figure 19 is an example of setting the Destination ID of M110A device as"M200".
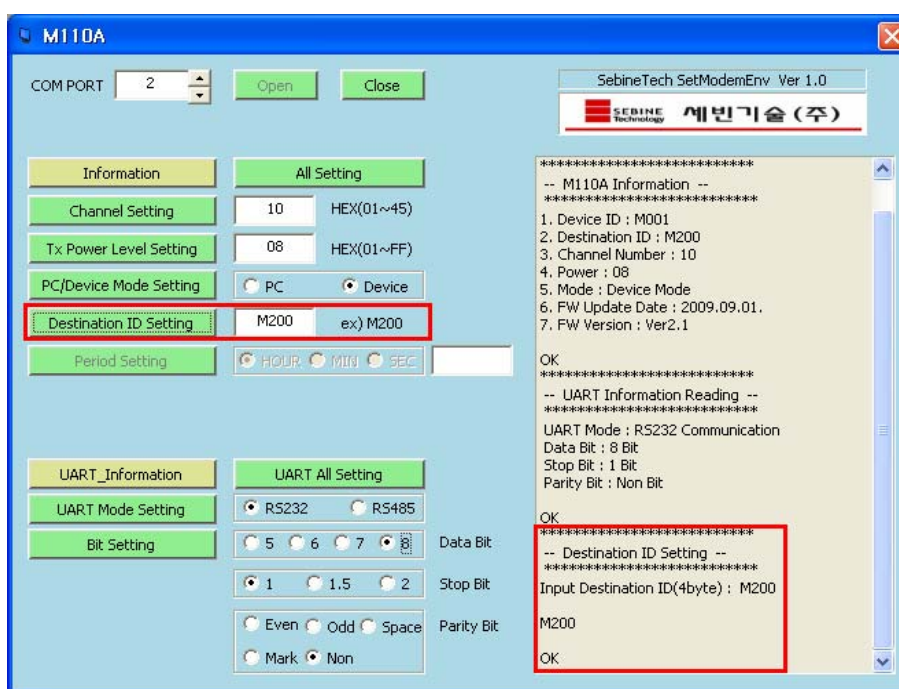

Figure 19. Destination ID Setting screen

8. Transmission Period Setup and Verification

8.1 Period Setting(Transmission Period Setup)

For transmission period setting, select radio button time(HOUR, MIN, SEC) and input the desired number to Edit Box. Then, click"Period Setting" button. Transmission period setting is available only at Device Mode and not possible at PC Mode. Transmission period can be set in unit of 1~59SEC, 1~59MIN, 1~3HOUR. For verification of setup, click "Information" button to check. Figure 20 is an example of setting device's Period as 30SEC in W410A device.
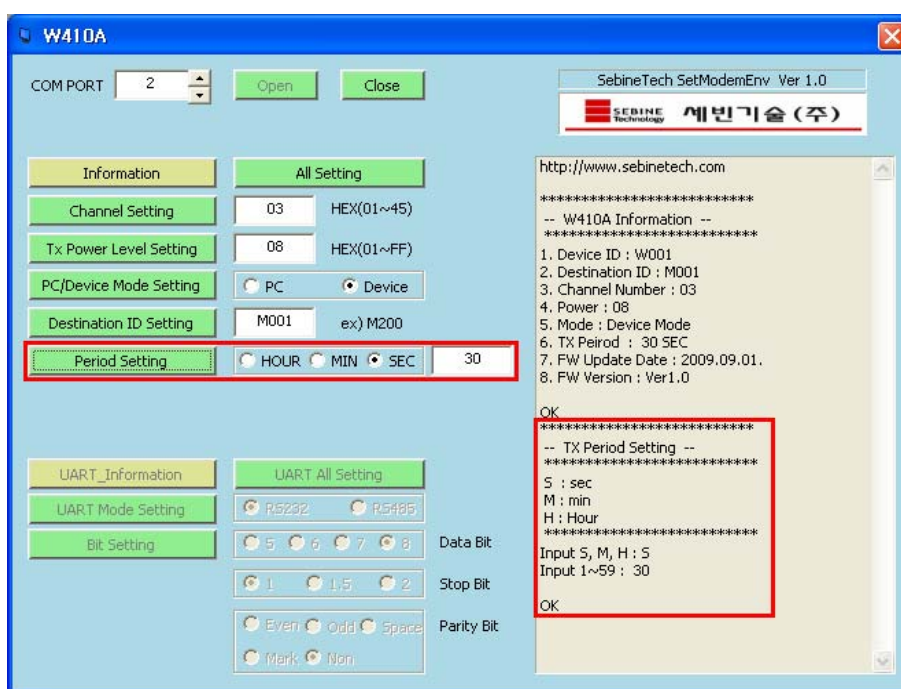

Figure 20. Period Setting screen

9. UART Environment Setup

9.1 RS232/RS485 Communication Setup

For device's UART Mode setting, click radio button's mode(RS232/RS485) and click"UART Mode Setting" button. Available setting modes are RS232 Mode and RS485 Mode. For verification of setup, click "Information" button to check. Figure 21 is an example of setting UART Mode as RS232 in M110A device.

▶▶ UART setting is only available for products with serial port communication capability(M110A, W110A)
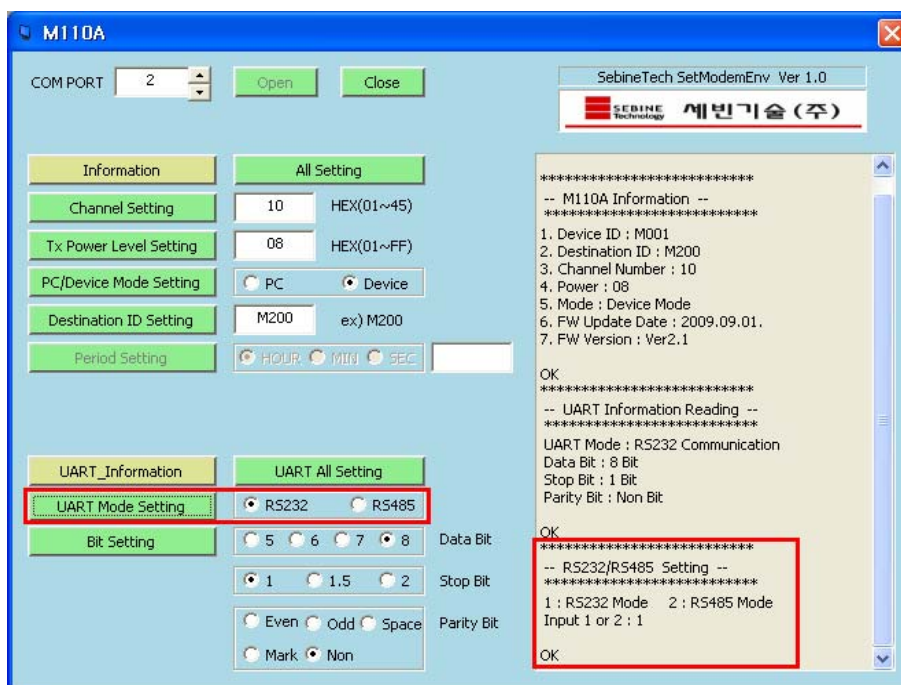

Figure 21. UART Mode Setting screen

9.2 UART Communication Environment Setup

For device's UART environment setting, select Data Bit, Stop Bit, Parity Bit and click "Bit Setting" button. When UART is set, "Please Rebooting!!" message appears on the right side of screen. Bit Setting is applied after power OFF/ON, so users OFF/ON the power of device. Changed information can be checked by clicking Close/Open buttons. Figure 22 is an example of setting Data Bit 5, Stop Bit 1, Parity Bit Non for M110A device.

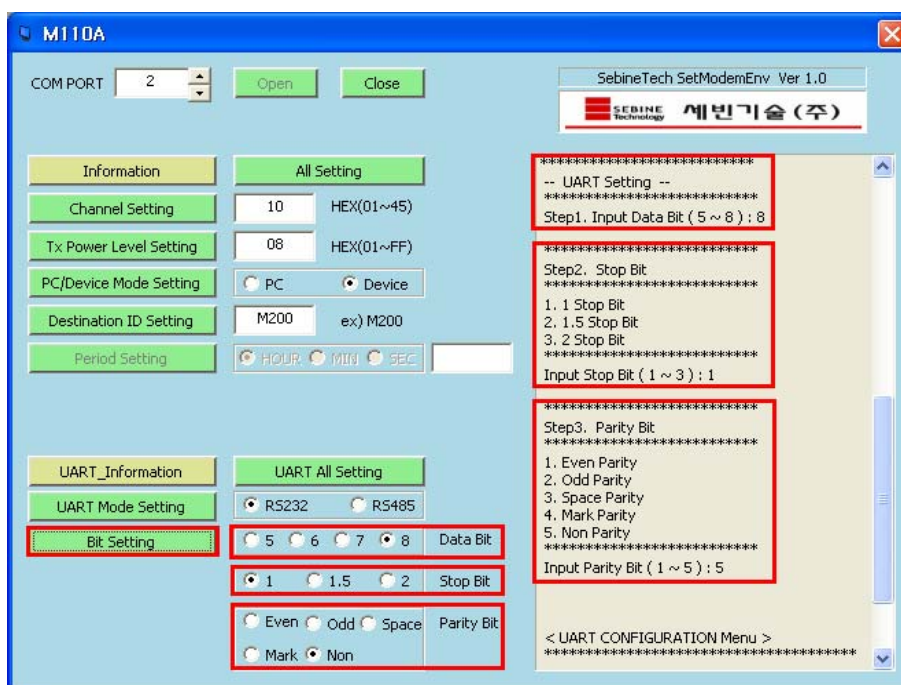▶▶ At factory delivery, the device is set as RS232, Data Bit 8, Stop Bit 1, Parity Bit Non.

Figure 22. UART Bit Setting screen

10. One Click Setting

10.1 All Setting

With "All Setting button, all available functions(except UART) can be set at once. In W410A with Device Mode case, all settings up to Destination ID can be set. However, in PC Mode, only Channel and Power can be set. Figure 23 is an example of setting Channel 10, Power 08 and Destination ID M200 for M110A device.
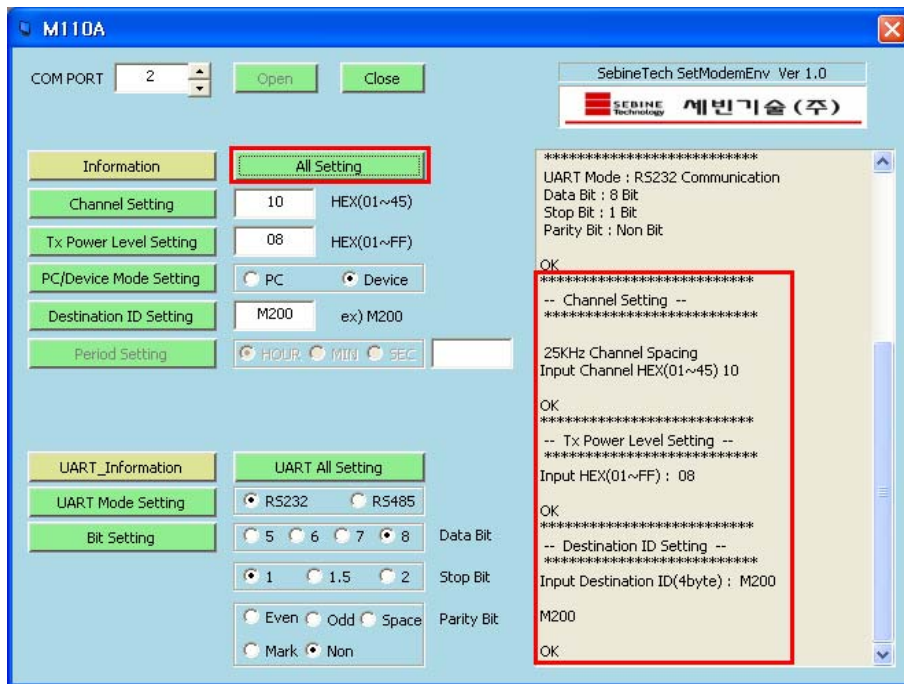
Figure 23. All Setting screen

10.2 UART All Setting(UART Environment All Setting)

With"UART All Setting"button click, all contents regarding UART can be set at once. If this button is clicked, UART Mode, Data Bit, Stop Bit, Parity Bit are set in order, Users turn power OFF/ON for engagement. Changed information can be checked by clicking Close/Open buttons in order. Figure 24 is an example of setting UART Mode RS232, Data Bit 5, Stop Bit 1, Parity Bit Non for M110A device.
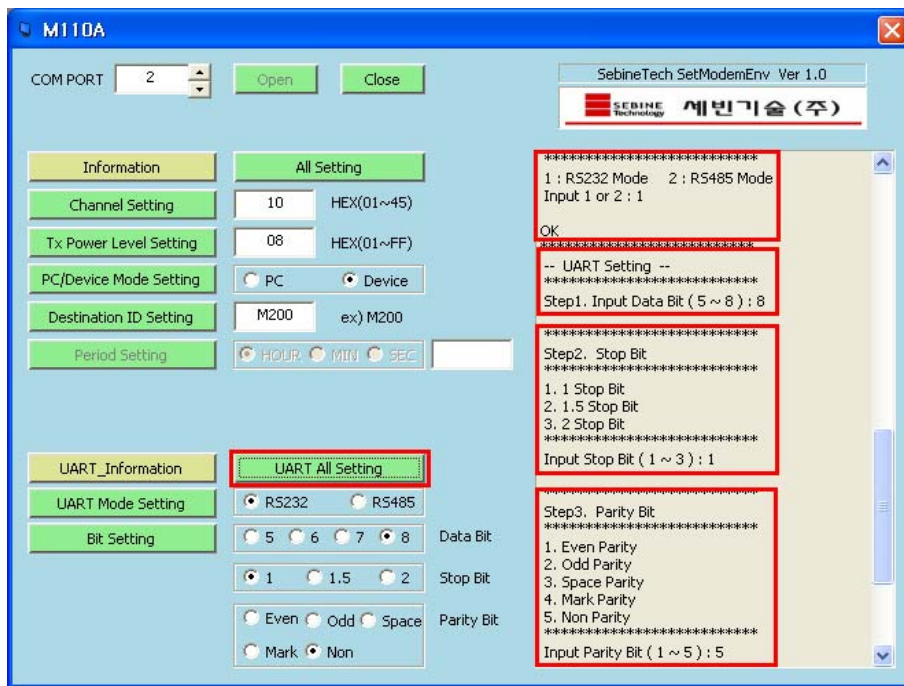

Figure 24. UART All Setting screen

11. Device Information

11.1 Modem Information(Device Information Check)

"Information" button shows all current environment setting for the device (except UART environment). Figure 25 is an example of showing W410A device information. In "W410A" case, Device Mode is set, so Period value is shown but it is not shown in PC Mode.
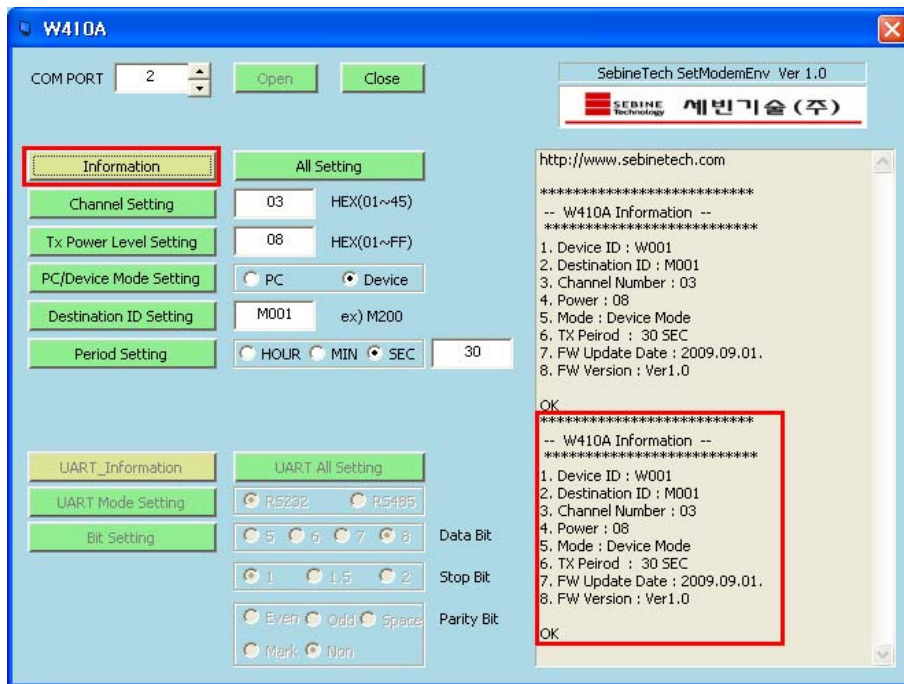

Figure 25. Modem Information screen

11.2 UART Information(UART Information Check)

"UART_Information" shows current setting information for UART environment, Figure 26 is an example of showing UART environment information for M110A device.
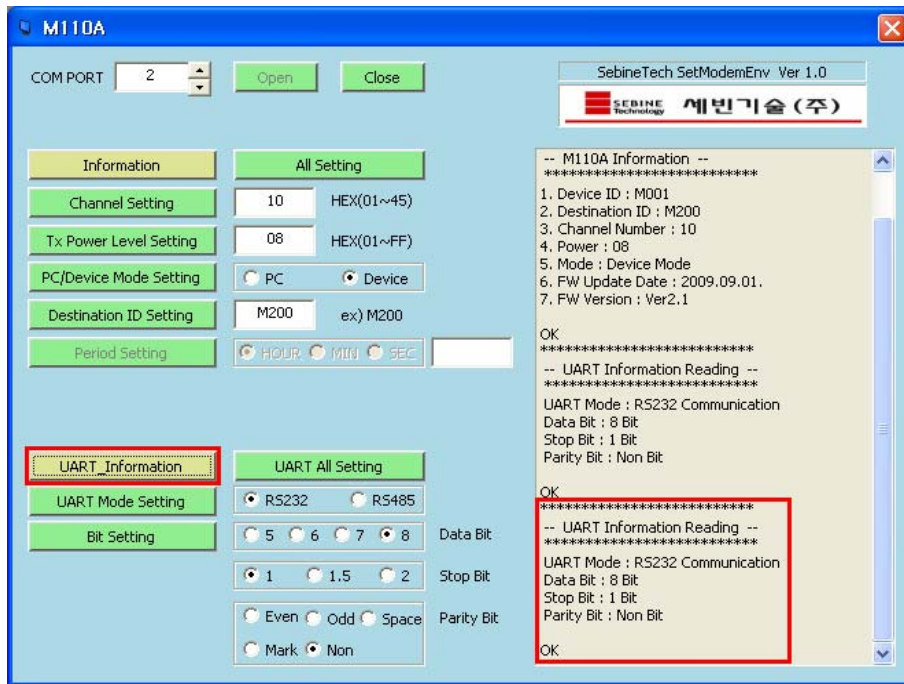

Figure 26. UART_Information screen

Appendix 1. Document Information

Revision	Description
1.0	09/14/2009 - Initial Release Version

SEBINE Technology, Inc.

Homepage : www.sebinetech.com
E-mail : tech@sebinetech.com

#8-116, 187, Techno 2-ro, Yuseong-gu, Daejeon, Republic of korea 34025
(Migun Technoworld 2, Yongsan-dong)
Tel : 82-42-935-2084, 2085
Fax : 82-42-935-2088