MITSUBISHI Electric Corporation
MELSEC-AnA Series
Computer Link Driver

Compatible version	OS	4.0 or higher
	XDesignerPlus	4.0.0.0 or higher

CONTENTS

Thank you for using M2I's "Touch Operation Panel(M2I TOP) Series". Please read out this manual and make sure to learn connection method and process of TOP – External device"

1. System configuration

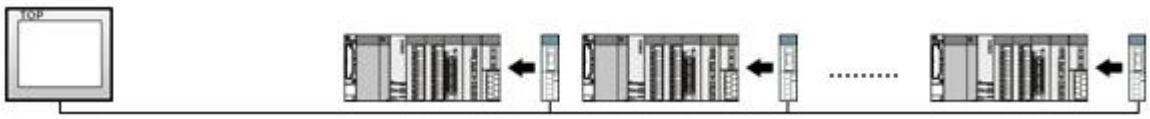
The system configuration of TOP and "MELSEC-AnA Series Computer Link" of "MITSUBISHI Electric Corporation" is as below.

Series	CPU	Link I/F	Method	System settings	Cable
MELSEC AnA Series	A2ACPU A2ACPU-S1 A3ACPU A2UCPU A2UCPU-S1 A3UCPU A4UCPU	AJ71C24-S6 AJ71C24-S8	RS-232C		
			RS-422 (4 wire)		
		AJ71UC24	RS-232C		
			RS-422 (4 wire)		
	A2USCPU A2USHCPU-S1	A1SJ71C24-R2 A1SJ71UC24-R2	RS-232C		
		A1SJ71C24-R4 A1SJ71UC24-R4	RS-422 (4 wire)		

■ Connection configuration

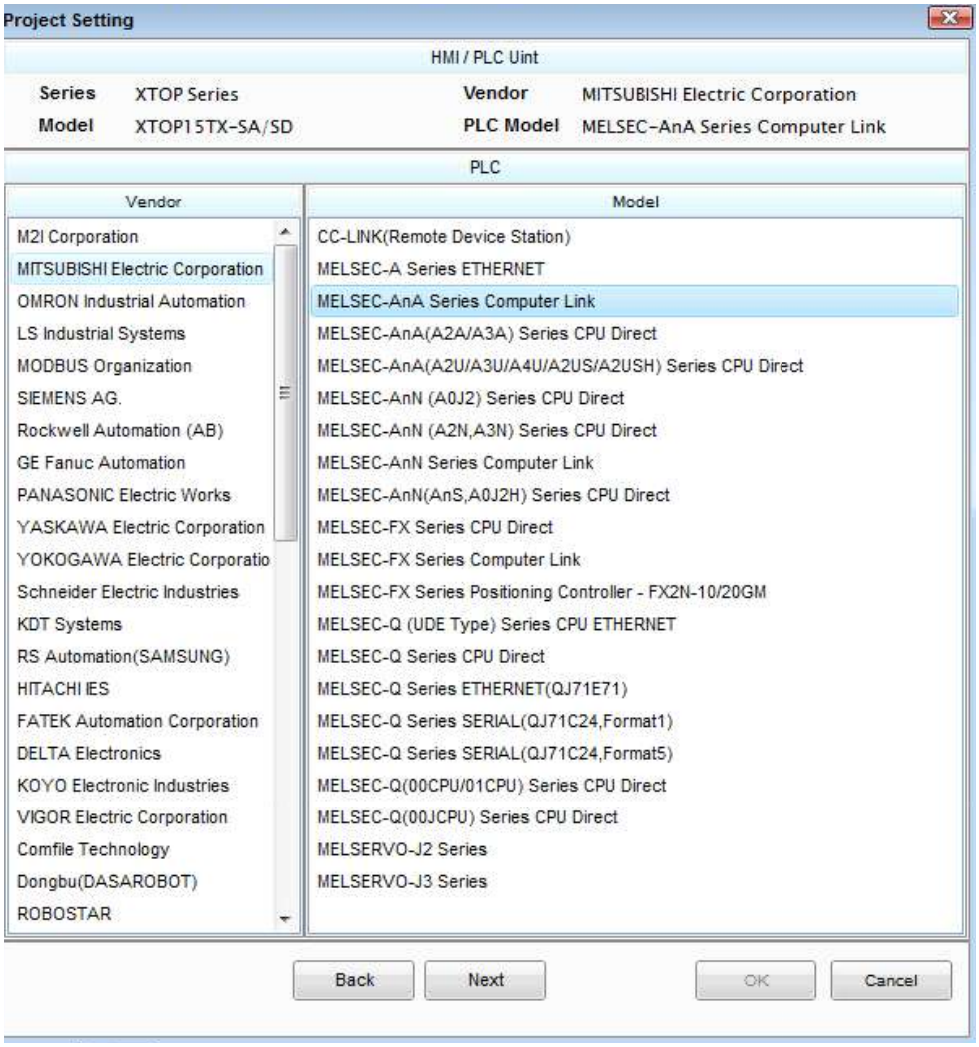
1 : 1 (1 TOP and 1 external device) connection - configuration that is possible in RS232C/422/485 communication.

・1 : N(1 TOP and several external devices) connection - configuration that is possible in RS422/485 connection.



2. Selecting TOP model and external devices

Select the external devices to connect to TOP.



Setting details		Contents
TOP	Series	Select the name of a TOP series that is to be connected to PLC. Before downloading the settings, install the OS version specified in the table below according to TOP series. Series: XTOP / HTOP — Version name: V4.0
	Name	Select the model name of TOP product.
External device	Manufacturer	Select the manufacturer of external devices to be connected to TOP. Choose "MITSUBISHI Electric Corporation".
	PLC	Select the model series of external devices to be connected to TOP. Choose "MELSEC-AnA Series Computer Link". Please check, in the "1. System configuration", if the relevant external device is available to set a system configuration.

3. Example of system settings

Regarding of communication interface setting in TOP and "MELSEC-AnA Series Computer Link", we suggest as below.

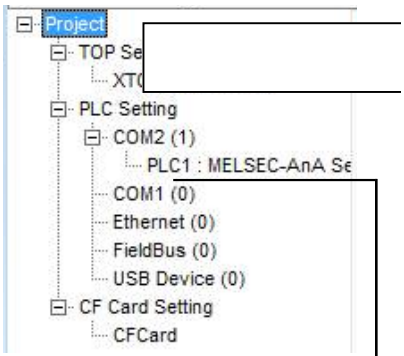
3.1 Example of settings 1

The system is set as below.

Details	TOP	MELSEC-AnA Series	Remark
Serial level (port/channel)	RS-232C (COM2)	RS-232C	User settings
Address(PLC Address)	—	0	User settings
Serial baud rate [BPS]	19200		User settings
Serial data bit [Bit]	8		User settings
Serial stop bit [Bit]	1		User settings
Serial parity bit [Bit]	NONE		User settings

(1) XDesignerPlus setup

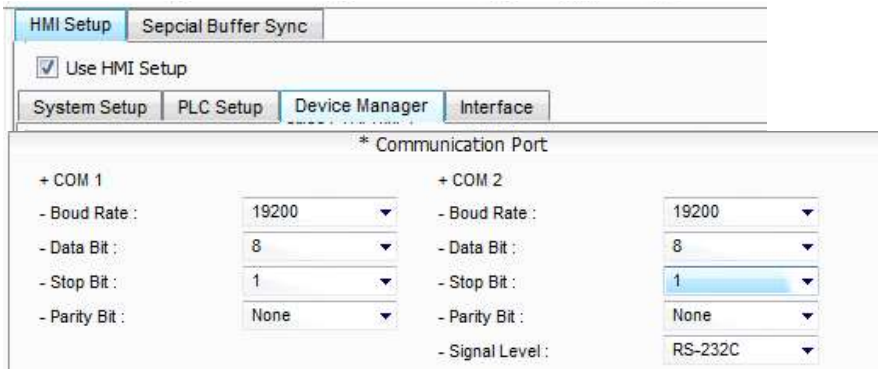
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup > Check "Use HMI setup" > Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

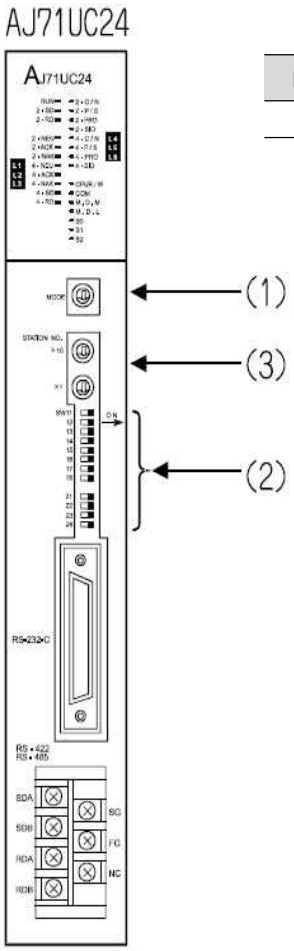
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
1	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW11	OFF	Choose Communication Channel	(RS-422 / RS-232C)
SW12	ON	Setting Data bit	(8 / 7)
SW13	OFF	Setting Transmit speed	
SW14	ON		
SW15	ON		
SW16	OFF	Setting parity bit	(Yes / No)
SW17	OFF	Setting parity bit	(Even / Odd)
SW18	OFF	Setting Stop bit	(2 / 1)
SW21	ON	Setting BCC	(Yes / No)
SW22	ON	Writing setting during RUN	(Possible / Impossible)
SW23	OFF	Transmission side Termination Resistance	(Yes / No)
SW24	OFF	Receiving side Termination Resistance	(Yes / No)

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

Station Setting Rotary Switch		Setting Information
X10	0	Serial communication card number is set to '0'
X1	0	

4. Reset the power after setting Dip Switch

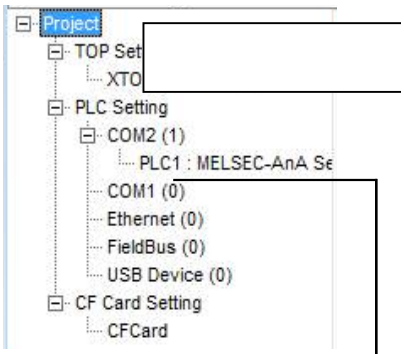
3.2 Example of Settings 2

The system is set as below.

Details	TOP	"MELSEC-AnA Series"	Remark
Serial level (port/channel)	RS-232C (COM2)	RS-232C	User settings
Address(PLC Address)	—	0	User settings
Serial baud rate [BPS]	19200		User settings
Serial data bit [Bit]	8		User settings
Serial stop bit [Bit]	1		User settings
Serial parity bit [Bit]	NONE		User settings

(1) XDesignerPlus setup

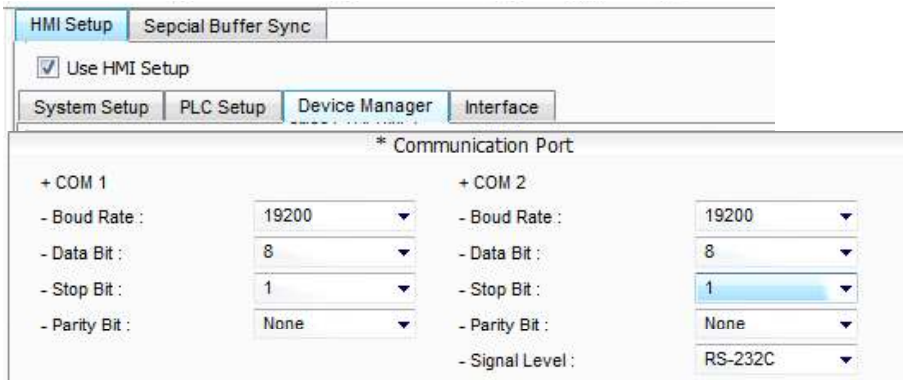
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup > Check "Use HMI Setup" > Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

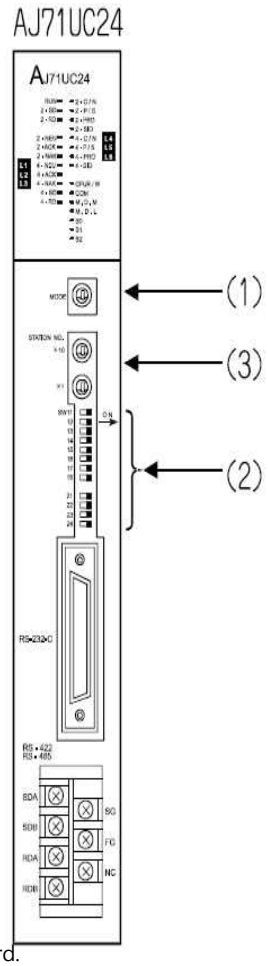
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
1	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW11	OFF	Choose Communication Channel	(RS-422 / RS-232C)
SW12	ON	Setting Data bit	(8 / 7)
SW13	OFF	Setting Transmit speed	
SW14	ON		
SW15	ON		
SW16	OFF	Setting parity bit	(Yes / No)
SW17	OFF	Setting parity bit	(Even / Odd)
SW18	OFF	Setting Stop bit	(2 / 1)
SW21	ON	Setting BCC	(Yes / No)
SW22	ON	Writing setting during RUN	(Possible / Impossible)
SW23	ON	Calculator link	(Computer link / Multiple drop link)
SW24	Not using	-	

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

Station Setting Rotary Switch		Setting Information
X10	0	Serial Communication Card number is set to '0'
X1	0	

4. Power reset after setting Dip Switch)

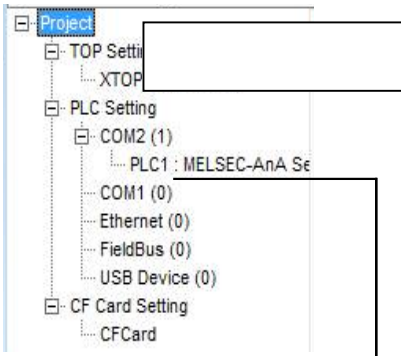
3.3 Example of Settings 3

The system is set as below.

Details	TOP	"MELSEC-AnA Series"	Remark
Serial level (port/channel)	RS-232C (COM2)	RS-232C	User settings
Address(PLC Address)	—	0	User settings
Serial baud rate [BPS]	19200		User settings
Serial data bit [Bit]	8		User settings
Serial stop bit [Bit]	1		User settings
Serial parity bit [Bit]	NONE		User settings

(1) XDesignerPlus setup

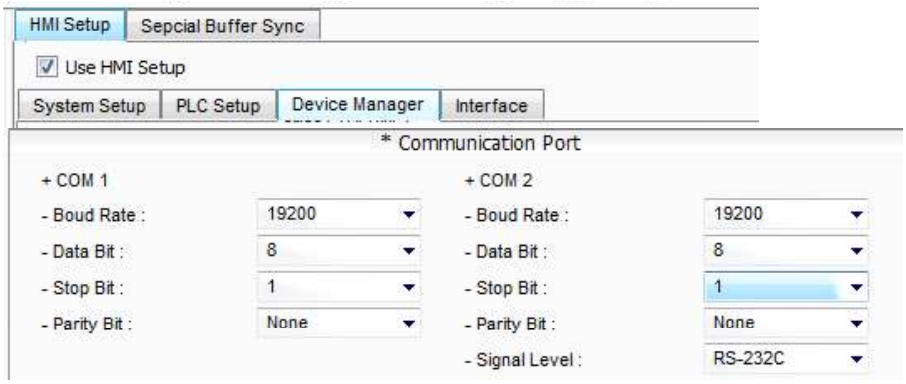
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window. [HMI setup > Check "Use HMI Setup"> Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

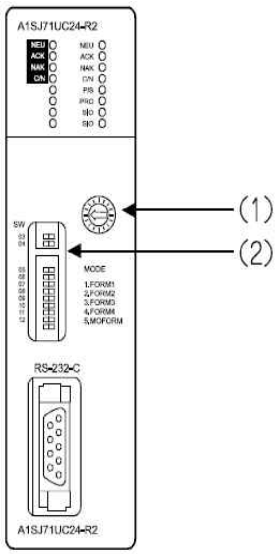
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
1	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW03	Not using	-	
SW04	ON	Writing setting during RUN	(Possible / Impossible)
SW05	OFF	Setting Transmit speed	
SW06	ON		
SW07	ON		
SW08	ON	Data bit	(8 / 7)
SW09	OFF	Setting parity bit	(Yes / No)
SW10	OFF	Setting parity bit	(Even / Odd)
SW11	OFF	Setting Stop bit	(2 / 1)
SW12	ON	Setting BCC	(Yes / No)

3. Reset the power after setting Dip Switch.

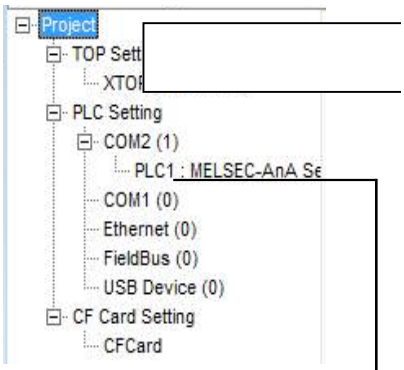
3.4 Example of Settings 4

The system is set as below.

Details		TOP	"MELSEC-AnA Series"	Remark
Serial level (port/channel)		RS-422 (4 wire, COM2)	RS-422	User settings
Address(PLC Address)		—	0	User settings
Serial baud rate	[BPS]	19200		User settings
Serial data bit	[Bit]	8		User settings
Serial stop bit	[Bit]	1		User settings
Serial parity bit	[Bit]	NONE		User settings

(1) XDesignerPlus setup

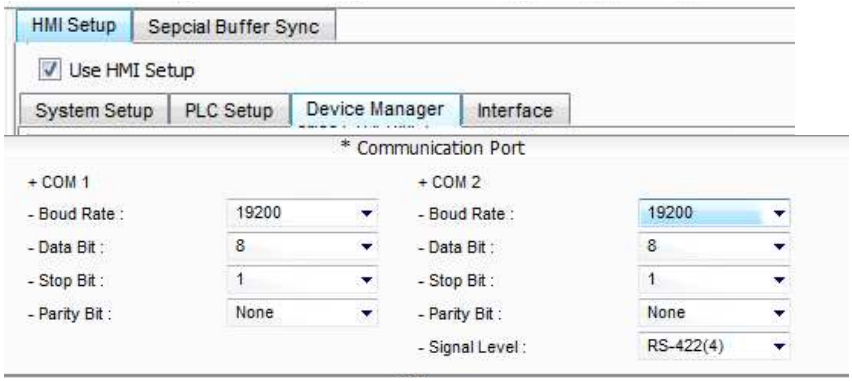
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup > Check "Use HMI Setup" > Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

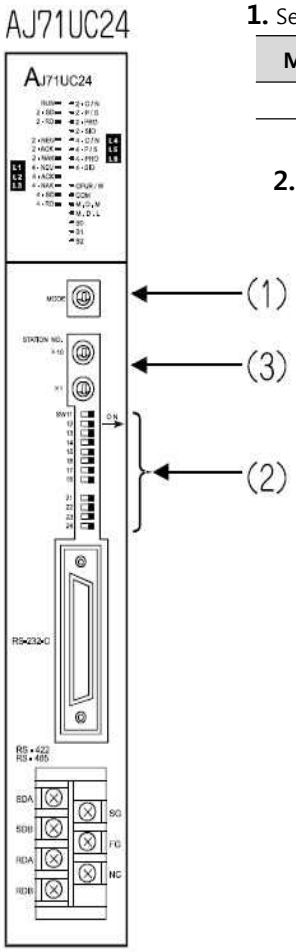
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
5	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW11	ON	Choose Communication Channel	(RS-422 / RS-232C)
SW12	ON	Setting Data bit	(8 / 7)
SW13	OFF	Setting Transmit speed	
SW14	ON		
SW15	ON		
SW16	OFF	Setting parity bit	(Yes / No)
SW17	OFF	Setting parity bit	(Even / Odd)
SW18	OFF	Setting Stop bit	(2 / 1)
SW21	ON	Setting BCC	(Yes / No)
SW22	ON	Writing setting during RUN	(Possible / Impossible)
SW23	OFF	Transmission side Termination Resistance	(Yes / No)
SW24	OFF	Receiving side Termination Resistance	(Yes / No)

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

Station Setting Rotary Switch		Setting Information
X10	0	Set-up of Serial communication card address "0"
X1	0	

4. Reset the power after setting Dip Switch.

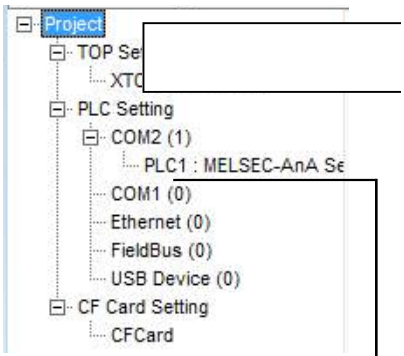
3.5 Example of Settings 5

The system is set as below.

Details		TOP	"MELSEC-AnA Series"	Remark
Serial level (port/channel)		RS-422 (4 wire, COM2)	RS-422	User settings
Address(PLC Address)		—	0	User settings
Serial baud rate	[BPS]	19200		User settings
Serial data bit	[Bit]	8		User settings
Serial stop bit	[Bit]	1		User settings
Serial parity bit	[Bit]	NONE		User settings

(1) XDesignerPlus setup

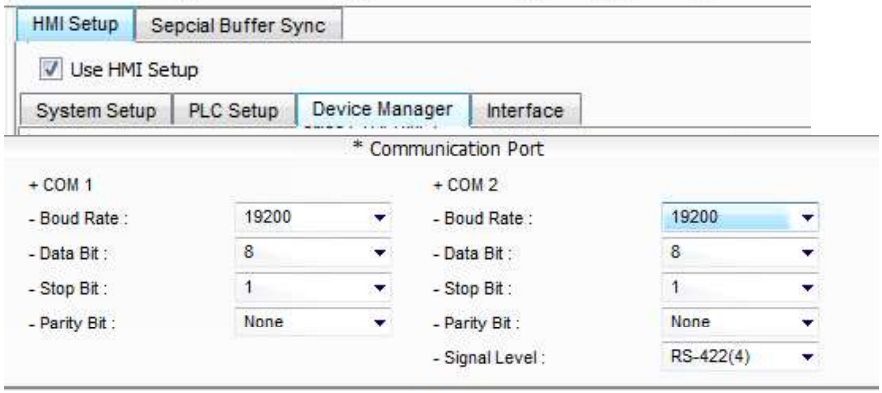
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup > HMI setup use check > Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

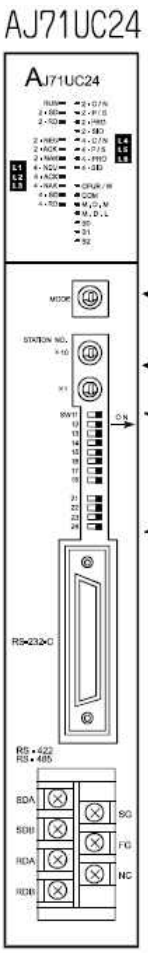
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
5	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW11	ON	Choose Communication Channel	(RS-422 / RS-232C)
SW12	ON	Setting Data bit	(8 / 7)
SW13	OFF	Setting Transmit speed	
SW14	ON		
SW15	ON		
SW16	OFF	Setting parity bit	(Yes / No)
SW17	OFF	Setting parity bit	(Even / Odd)
SW18	OFF	Setting Stop bit	(2 / 1)
SW21	ON	Setting BCC	(Yes / No)
SW22	ON	Writing setting during RUN	(Possible / Impossible)
SW23	ON	Calculator Link	(Computer link / Multiple drop link)
SW24	Not using	-	

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

Station Setting Rotary Switch		Setting Information
X10	0	Serial Communication Card number is set to '0'
X1	0	

4. Reset the power after setting Dip Switch)

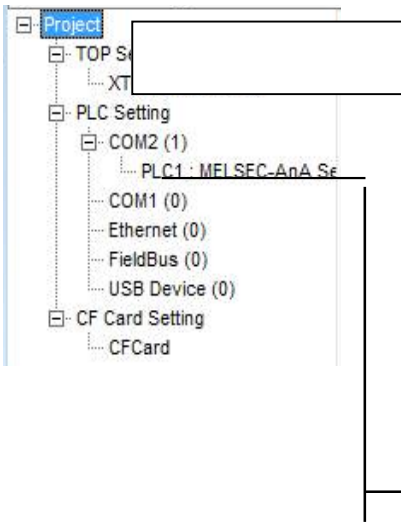
3.6 Example of Settings 6

The system is set as below.

Details	TOP	"MELSEC-AnA Series"	Remark
Serial level (port/channel)	RS-422 (4 wire, COM2)	RS-422	User settings
Address(PLC Address)	—	0	User settings
Serial baud rate [BPS]	19200		User settings
Serial data bit [Bit]	8		User settings
Serial stop bit [Bit]	1		User settings
Serial parity bit [Bit]	NONE		User settings

(1) XDesignerPlus setup

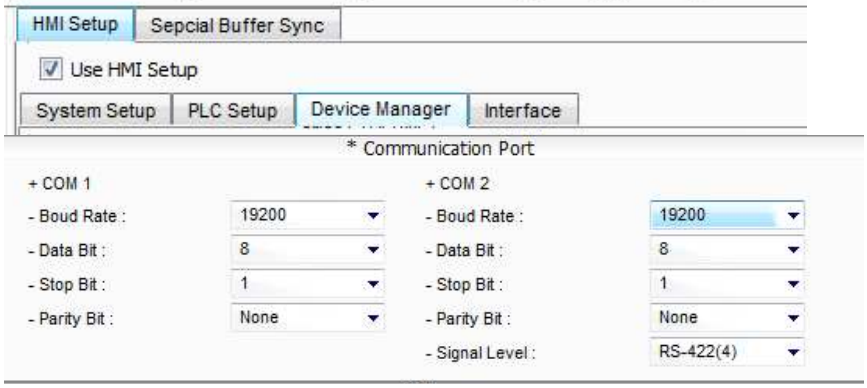
After setting the below details in [Project > Project Settings], download the detailed settings using TOP tool.



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup >Check "Use HMI setup" > Device manager]



■ External device settings

This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

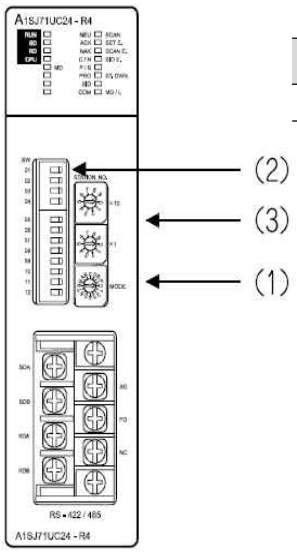
-PLC Address : External Device Setting Address

- Block process method : Choose protocol method.

(2) External device settings

Set the communication setting by using DIP Switch of Serial Communication Unit. Please see PLC User Manual for more detail setup method.

Communication is possible when RUN LED of Serial Communication Unit is ON.



1. Set the communication protocol form on Mode Setting Rotary Switch as below.

Mode Setting Rotary Switch setting number	Setting Information
5	Protocol Mode form 1

2. Communication Setting Dip Switch will be set as below.

DIP Switch	Settings	Setting Information	(ON / OFF)
SW01	OFF	Not using	
SW02	ON	Computer link	Computer Link / Multiple drop link
SW03	OFF	Not using	
SW04	ON	Writing setting during RUN	(Possible / Impossible)
SW05	OFF	Setting Transmit speed	
SW06	ON		
SW07	ON		
SW08	ON	Setting Data bit	(8 / 7)
SW09	OFF	Setting parity bit	(Yes / No)
SW10	OFF	Setting parity bit	(Even / Odd)
SW11	OFF	Setting Stop bit	(2 / 1)
SW12	ON	Setting BCC	(Yes / No)

3. Set up the Station Setting Rotary Switch as below to set up the address of communication card.

Station Setting Rotary Switch		Setting Information
X10	0	Serial Communication Card number is set to '0'
X1	0	

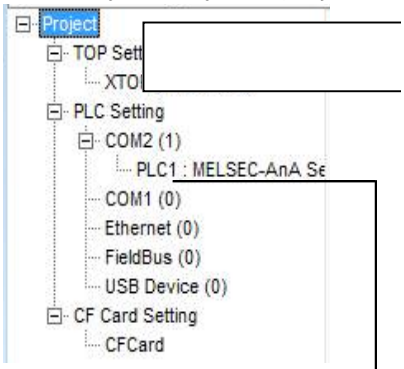
4. Reset the power after setting Dip Switch.

4. Communication settings details

Communication settings are available at XDesignerPlus or TOP main menu. Communication settings must be identical with the external devices.

4.1 XDesignerPlus settings details

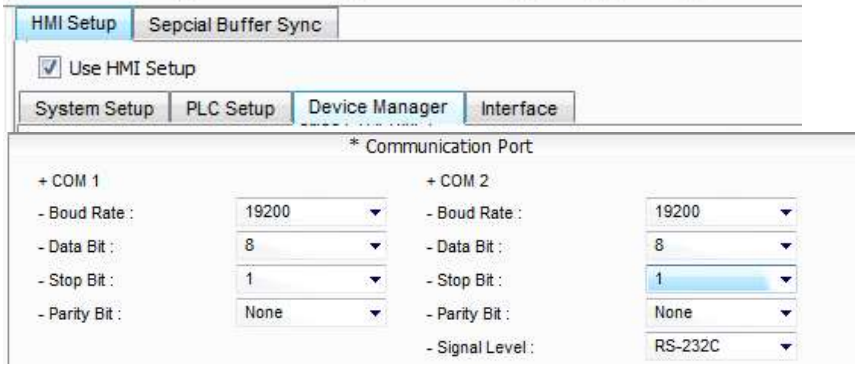
Select [Project > Project Property] to show the window below



■ [Project > Project Property > Project > Settings > TOP Name]

Set the communication interface of TOP tool.

In the right window [HMI setup > Check "Use HMI setup > Device manager]



– At the right window, [HMI setup > Check "Use HMI Setup" > PLC setup]

■ External device settings

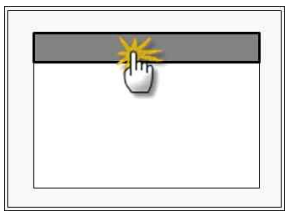
This configures the option of "MELSEC-AnA Series Computer Link" Communication driver.

■ Communication Interface Settings

Details	Contents
Signal level	External device – select serial communication method between TOPs. (COM1 supplies RS-232C only)
Baud rate	External device – select serial communication speed between TOPs.
Data bit	External device – select serial communication data bit between TOPs.
Stop bit	External device – select serial communication stop bit between TOPs.
Parity bit	External device – select serial communication parity bit check method between TOPs.
Time out [x100 mSec]	Set up TOP's response waiting time from external device at [0 – 5000] x 1 mSec.
Transmitting Delay Time [x10 mSec] Receiving Wait Time [x10 mSec]	Set up TOP's waiting time between response receiving – next command request transmission from external device at [0 – 5000] x 1 mSec.
PLC address [0~65535]	Address of other device. Select between [0 - 65535].

4.2 TOP main menu setup item

- When a buzzer is on during the power reset, touch 1 spot at the upper LCD to move to "TOP Management Main" display.
- Set up driver interface at TOP according to below Step1 → Step2.
  (Press "TOP COM 2/1 setup" in **Step 1** to change setup at **Step 2**.)



Step 1. [PLC setup] - Setup driver interface.

PLC setup	
PLC Address : 00 Timeout : 1000 [mSec] Delay time of transmission : 0 [mSec] TOP COM 2/1 : RS - 232C , 19200 , 8 , 1 , NONE [TOP COM 2/1 setup] [communication test]	Communication Interface Settings

Step 1–Reference.

Details	Contents
PLC address [0~65535]	Address of other device. Select between [0 - 65535].
Timeout [x1 mSec]	Set up TOP's response waiting time from external device at [0 – 5000] x 1 mSec.
Delay time of transmission [x1 mSec]	Set up TOP's waiting time between response receiving – next command request transmission from external device at [0 – 5000] x 1 mSec.
TOP COM 2/1	TOP's Interface setup to external device.

Step 2. [PLC setup] >[TOP COM2/COM1 Setting] – Setup relevant port's serial parameter.

Port Settings	
* Serial communication + COM-1 Port - Baud rate : 19200 [BPS] - Data bit : 8 [BIT] - Stop bit : 1 [BIT] - Parity bit : NONE [BIT] - Signal level : RS – 232C	COM 1 Port Communication Interface Settings
+ COM-2 Port - Baud rate : 19200 [BPS] - Data bit : 8 [BIT] - Stop bit : 1 [BIT] - Parity bit : NONE [BIT] - Signal level : RS – 232C	COM-2 Port Communication Interface Settings

Step 2-Reference.

Details	Contents
Baud rate	External device – select serial communication speed between TOPs.
Data bit	External device – select serial communication data bit between TOPs.
Stop bit	External device – select serial communication stop bit between TOPs.
Parity bit	External device – select serial communication parity bit check method between TOPs.
Signal level	External device – select serial communication method between TOPs.

4.3 Communication diagnosis

■ TOP - Confirming interface setting condition between external devices

- Move to Menu by clicking the top side of LCD screen as resetting the power of TOP.
- Confirms if Port [COM 2 or COM 1] setting that is willing to use in [Communication Settings] matches with the setting of external devices.

■ Port Communication Issue Diagnosis

- PLC Setting > TOP [COM 2 or COM 1] click "Communication Diagnosis" button.
- Diagnosis dialog box will pop up on the screen, you can judge by following information that is shown on box no. 3 section.

OK!	**Communication setting normal**
Time Out Error!	Abnormal Communication setting. - Error in the setting situation of Cable and TOP / External device **(reference : Communication Diagnosis sheet)**

■ Communication Diagnosis Sheet

- Please refer to the information below if you have a problem between external devices and communication connection.

Designer Version		O.S Version	

Details	Contents				Confirm	
System configuration	Name of CPU				OK	NG
	Name of confront port that is communicating				OK	NG
	System Connection Method	1:1	1:N	N:1	OK	NG
Connection Cable	Name of Cable				OK	NG
PLC setup	Setup address				OK	NG
	Serial baud rate	[BPS]			OK	NG
	Serial data bit	[BIT]			OK	NG
	Serial Stop bit	[BIT]			OK	NG
	Serial parity bit	[BIT]			OK	NG
	Assigned Address Limit				OK	NG
TOP setup	Setup port	COM 1	COM 2		OK	NG
	Name of Driver				OK	NG
	Confront Address	Project Property Setup			OK	NG
		When Diagnosing Communication			OK	NG
	Serial baud rate	[BPS]			OK	NG
	Serial data bit	[BIT]			OK	NG
	Serial Stop bit	[BIT]			OK	NG
	Serial parity bit	[BIT]			OK	NG

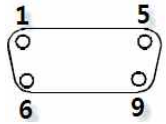
5. Cable diagram

This Chapter is to introduce the Cable diagram for regular communication between TOP and relative devices. (Cable diagram that is being introduced in this chapter might differ from the suggestions of "Mitsubishi Electric Corporation".)

5.1 Cable diagram 1

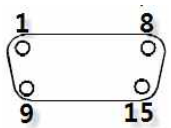
■ 1 : 1 Connection

(A) XTOP COM 2 Port (9 pi

XTOP COM2			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of Communication cable connecter D-SUB 9 Pin male	CD	1		1	FG	Based on the front side of Communication cable connecter D-SUB 25 Pin (male, up)
	RD	2		2	SD	
	SD	3		3	RD	
	DTR	4		4	RTS	
	SG	5		5	CTS	
	DSR	6		6	DSR	
	RTS	7		7	SG	
	CTS	8		8	CD	
		9		20	DTR	

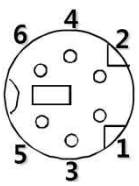
*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(B) XTOP COM 2 Port (15 pin)

XTOP COM2			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of Communication cable connecter D-SUB 15 Pin male	CD	1		1	FG	Based on the front side of Communication cable connecter D-SUB 25 Pin (male, up)
	RD	2		2	SD	
	SD	3		3	RD	
	DTR	4		4	RTS	
	SG	5		5	CTS	
	DSR	6		6	DSR	
	RTS	7		7	SG	
	CTS	8		8	CD	
		9		20	DTR	

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(C) XTOP/ATOP COM 1 Port (6 Pin)

XTOP/ATOP COM 1 Port			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of		1		1	FG	Based on the front side of Communication cable connecter D-SUB 25 Pin (male, up)
	RD			2	SD	
	SG			3	RD	

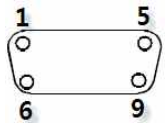
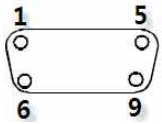
Communication cable connecter D-SUB 6 Pin male		4		4	RTS
		5		5	CTS
	SD	6		6	DSR
				7	SG
				8	CD
				20	DTR

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

5.2 Cable diagram 2

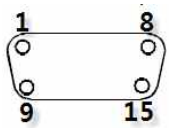
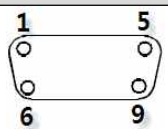
■ 1 : 1 Connection

(A) XTOP COM 2 Port (9 pin

XTOP COM2			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of Communication cable connecter D-SUB 9 Pin male	CD	1		1	CD	 Based on the front side of Communication cable connecter D-SUB 9 Pin (male, up)
	SD	2		2	RD	
	RD	3		3	SD	
	DTR	4		4	DTR	
	SG	5		5	SG	
	DSR	6		6	DSR	
	RTS	7		7	RTS	
	CTS	8		8	CTS	
		9		9		

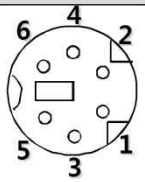
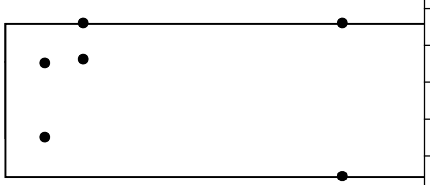
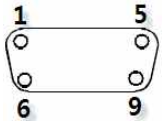
*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(B) XTOP COM 2 Port (15 pin)

XTOP COM2			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of Communication cable connecter D-SUB 9 Pin male	CD	1		1	CD	 Based on the front side of Communication cable connecter D-SUB 9 Pin (male, up)
	SD	2		2	RD	
	RD	3		3	SD	
	DTR	4		4	DTR	
	SG	5		5	SG	
	DSR	6		6	DSR	
	RTS	7		7	RTS	
	CTS	8		8	CTS	
		9		9		

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(B) XTOP/ATOP COM 1 Port (6 Pin)

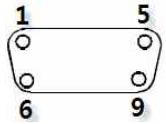
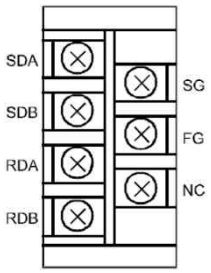
XTOP/ATOP COM 1 Port			Cable Connection	PLC		
pin arrangement * caution 1)	Name of Signal	Pin Number		Pin Number	Name of Signal	pin arrangement * caution 1)
 Based on the front side of Communication cable connecter D-SUB 6 Pin male		1		1	CD	 Based on the front side of Communication cable connecter D-SUB 9 Pin (male, up)
	RD	2		2	RD	
	SG	3		3	SD	
		4		4	DTR	
		5		5	SG	
	SD	6		6	DSR	
				7	RTS	
				8	CTS	
				9		

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

5.3 Cable diagram 3

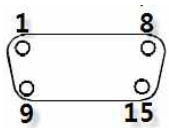
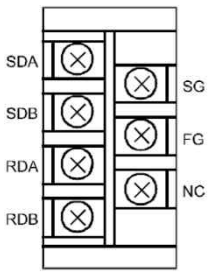
■ **1 : 1 Connection**

(A) XTOP COM 2 Port (9 pin)

XTOP COM2			Cable Connection	PLC	
pin arrangement * caution 1)	Name of Signal	Pin Number		Name of Signal	Pin Arrangement
 Based on the front side of Communication cable connecter D-SUB 9 Pin male	RDA	1		SDA	
		2		SDB	
		3		RDA	
	RDB	4		RDB	
	SG	5		SG	
	SDA	6			
		7			
		8			
	SDB	9			

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

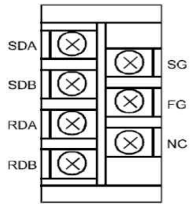
(B) XTOP COM 2 Port (15 pin)

XTOP COM2			Cable Connection	PLC	
pin arrangement * caution 1)	Name of Signal	Pin Number		Name of Signal	Pin Arrangement
 Based on the front side of Communication cable connecter D-SUB 15 Pin male	–	1		SDA	
	(Pass)			SDB	
				RDA	
	–	10		RDB	
	RDA	11		SG	
	RDB	12			
	SDA	13			

	SDB	14			
	SG	15			

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

(C) ATOP COM 2 Port (Terminal Block 5 pin)

ATOP COM2		Cable Connection	PLC	
pin arrangement * caution 1)	Signal		Signal	Pin Arrangement
front side of Communication cable connecter Terminal Block 5 Pin	RDA		SDA	
	RDB		SDB	
	SDA		RDA	
	SDB		RDB	
	SG		SG	

*Caution1) Pin arrangement is shown from connecting face in cable connection connecter.

■ **1 : N Connection - Please connect by referring 1:1 connection.**

TOP	Cable Connection and Signal Direction	PLC	Cable Connection and Signal Direction	PLC
Name of Signal		Name of Signal		Name of Signal
RDA		SDA		SDA
RDB		SDB		SDB
SDA		RDA		RDA
SDB		RDB		RDB
SG		SG		SG

6. Support address

Devices that are usable with TOP are as below.

There might be difference in the range of device (address) by type / series of CPU module TOP series supports the maximum address range that external device series use. Please refer to each CPU module user manual carefully for devices that you desired to use to prevent not getting out of range.

Type	Remark	Bit designated address	Word designated address
Input	Bit	X0000 – X1FFF	X0000 – X1FF0
Output	Bit	Y0000 – Y1FFF	Y0000 – Y1FF0
Link relay	Bit	B0000 – B1FFF	
Link register	Word		W0000 – W1FFF
STEP Relay	Bit	S0000 - S2047	
Special relay	Bit	F0000 – F2047	F0000 – F2032
Latch Relay	Bit	L0000 – L8191	
Internal Relay	Bit	M0000 – M8191	M0000 – M8176
Special relay	Bit	M9000 - M9255	M9000 – M9240
Data Register	Word		D0000 – D8191
Special Register	Word		D9000 - D9255
Timer-Coil	Bit	TC000 - TC2047	
Timer-Current	Word		TN000 – TN2047
Timer-Point	Bit	TS0000 – TS2047	
Counter-Coil	Bit	CC000 – CC1023	
Counter-Current	Word		CN000 – CN1023
Counter-Point	Bit	CS000 – CS1023	