Advanced Control
Simplicity
Networking
Reliability

UTAdvanced Hands-on Ladder Program

January 23rd, 2009

Hands On Training

- **Wiring and PC Software install**
- **PC software: Tuning UTAdvanced by LL50A**
- **PC software: Ladder programming and monitoring**

Wiring

DI

- 211 DI1
- 212 (common)

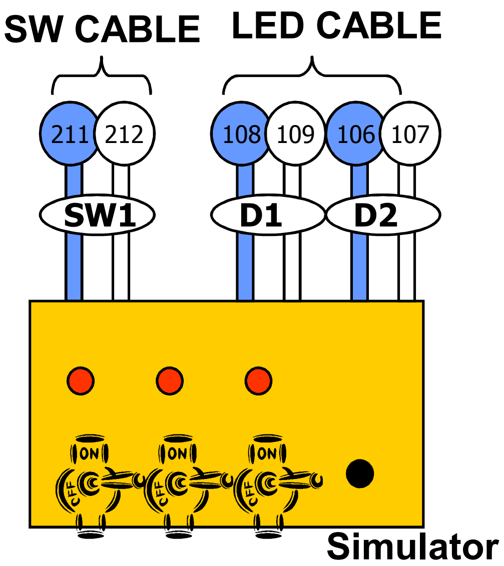
DO

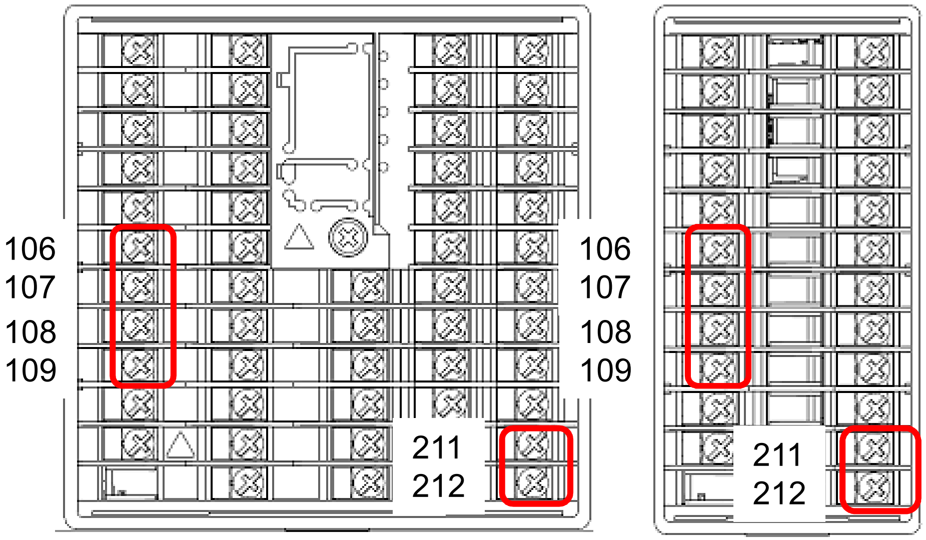
- 108 ALM 1
- 109 (common)
- 106 ALM 2
- 107 (common)

UT55A

UT52A

Note AI/AO wiring (PID cable) is the same as Hands-on basic


SW CABLE
LED CABLE
211
212
108
109
106
107
SW1
D1
D2
ON
OFF
ON
OFF
ON
OFF
Simulator

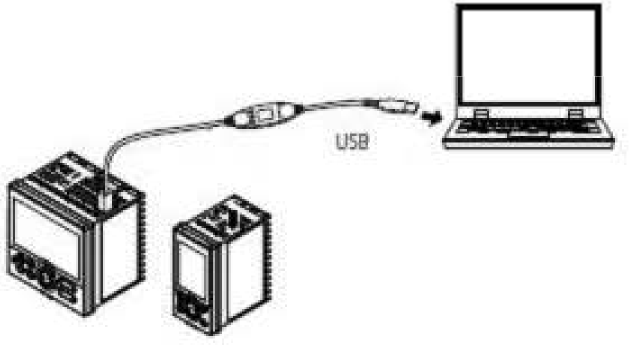

106
107
108
109
106
107
108
109
211
212
211
212

January 23rd, 2009

Wiring

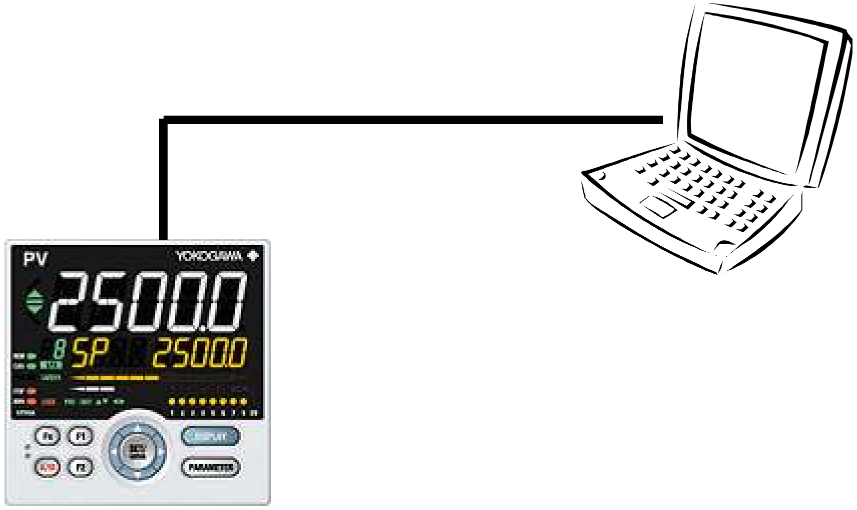
Connect PC with Ethernet cable or USB dedicated cable

- For USB dedicated cable, USB driver installation will be required. Specify the driver location in the USB memory



192.168.1.1

255.255.255.0


PV
YOKOGAWA
2500.0
SP
2500.0
DISPLAY
PARAMETER

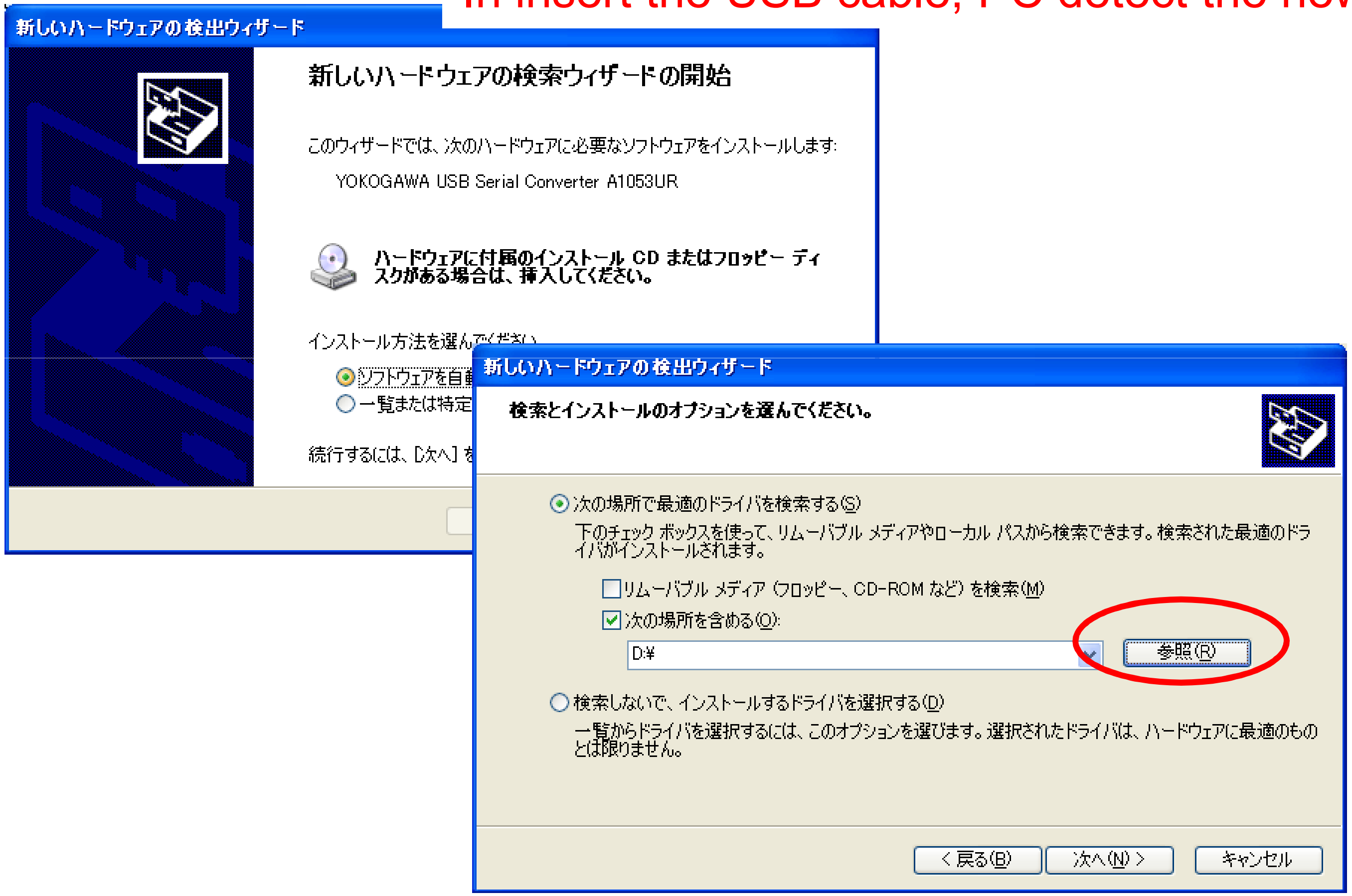
192.168.1.10

255.255.255.0

USB Driver Install for USB dedicated Cable

USB dedicated cable: Specify the driver location

In insert the USB cable, PC detect the new hardware



新しいハードウェアの検索ウィザードの開始

このウィザードでは、次のハードウェアに必要なソフトウェアをインストールします:

YOKOGAWA USB Serial Converter A1053UR

ハードウェアに付属のインストール CD またはフロッピー ディスクがある場合は、挿入してください。

インストール方法を選んでください

● ソフトウェアを自

○ 一覧または特定

続行するには、[次へ] を

検索とインストールのオプションを選んでください。

● 次の場所で最適のドライバを検索する(S)

下のチェック ボックスを使って、リムーバブル メディアやローカル パスから検索できます。検索された最適のドライバがインストールされます。

☐ リムーバブル メディア (フロッピー、CD-ROM など) を検索(M)

☑ 次の場所を含める(O):

D:¥

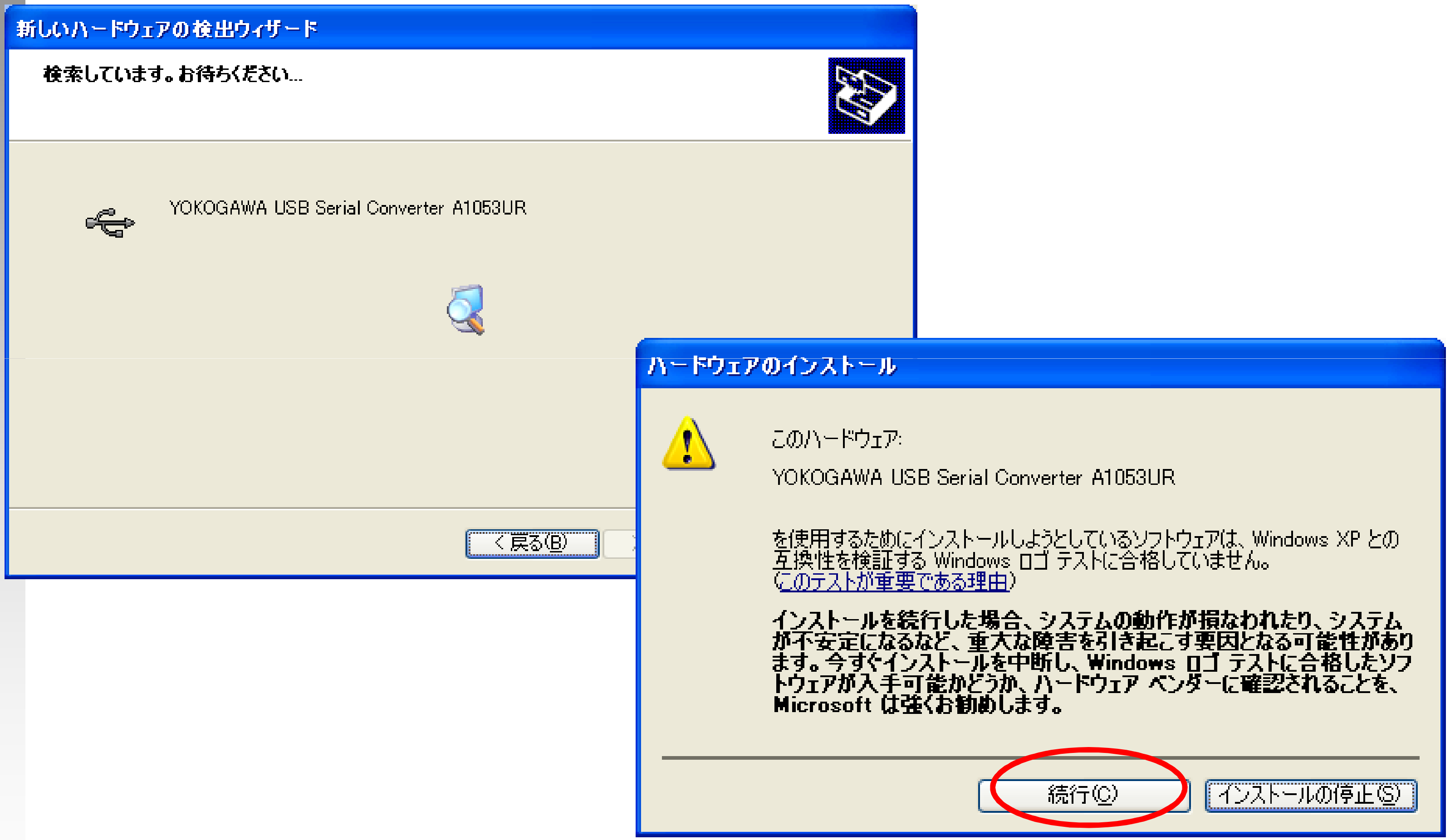
○ 検索しないで、インストールするドライバを選択する(D)

一覧からドライバを選択するには、このオプションを選びます。選択されたドライバは、ハードウェアに最適のものとは限りません。

Specify the location where you copy the LL50A software floder

USB Driver Install for USB dedicated Cable

USB dedicated cable: Specify the driver location



新しいハードウェアの検出ウィザード

検索しています。お待ちください...

YOKOGAWA USB Serial Converter A1053UR

ハードウェアのインストール

このハードウェア:

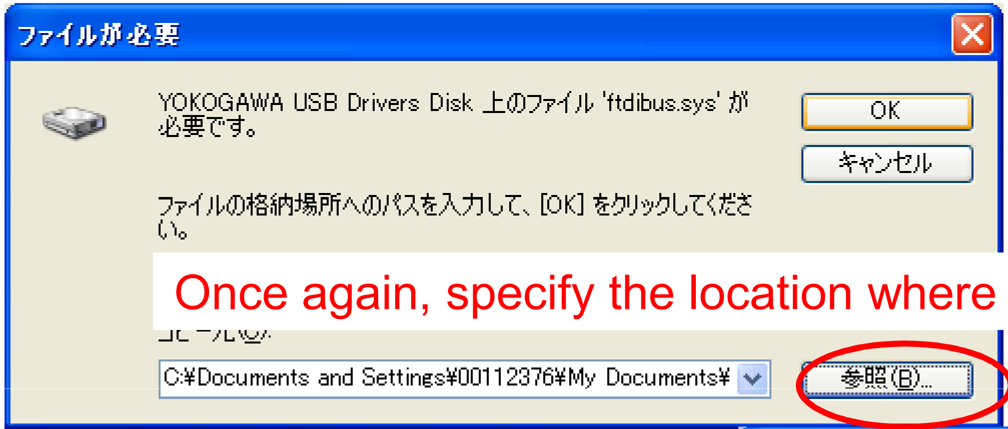
YOKOGAWA USB Serial Converter A1053UR

を使用するためにインストールしようとしているソフトウェアは、Windows XP との互換性を検証する Windows ロゴ テストに合格していません。
(このテストが重要である理由)

インストールを続行した場合、システムの動作が損なわれたり、システムが不安定になるなど、重大な障害を引き起こす要因となる可能性があります。今すぐインストールを中断し、Windows ロゴ テストに合格したソフトウェアが入手可能かどうか、ハードウェア ベンダーに確認されることを、Microsoft は強くお勧めします。

USB Driver Install for USB dedicated Cable

USB dedicated cable: Specify the driver location



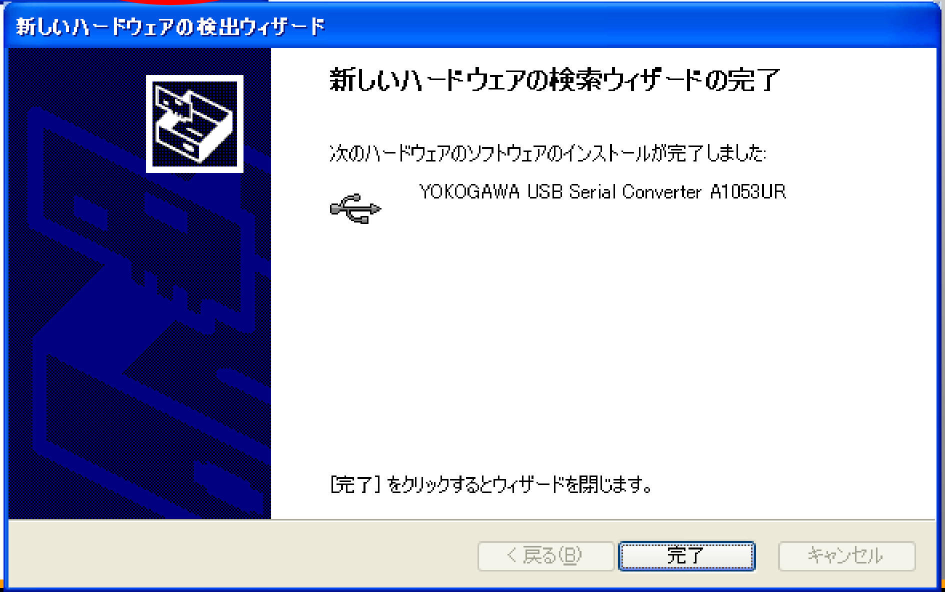
ファイルが必要

YOKOGAWA USB Drivers Disk 上のファイル 'ftdibus.sys' が必要です。

ファイルの格納場所へのパスを入力して、[OK] をクリックしてください。

コピー元(C): C:¥Documents and Settings¥00112376¥My Documents¥

Once again, specify the location where you copy the LL50A software folder



新しいハードウェアの検出ウィザード

新しいハードウェアの検索ウィザードの完了

次のハードウェアのソフトウェアのインストールが完了しました:

YOKOGAWA USB Serial Converter A1053UR

[完了] をクリックするとウィザードを閉じます。

Network setting on UTA (for Ethernet model) UTAdvanced

Full Control at Your Fingertips

Set IP address

- **Network setting on PC**
- **Move to Setup parameters menu:**
  - Hold SET/ENTER and press PARAMETER simultaneously for 3 seconds
- **Move to Ethernet communication parameter setting**
  - Use SET/ENTER and move to "EtHR" and press SET/ENTER
  - Use SET/ENTER and enter the following parameters

1. Enter IP as 192.168.1.10 in "IP 1 to IP4"
2. Enter subnet mask as 255.255.255.0 in "SM1 to SM4"
3. Select "ESW" as "ON"

Note the rest of parameters can be left as they are

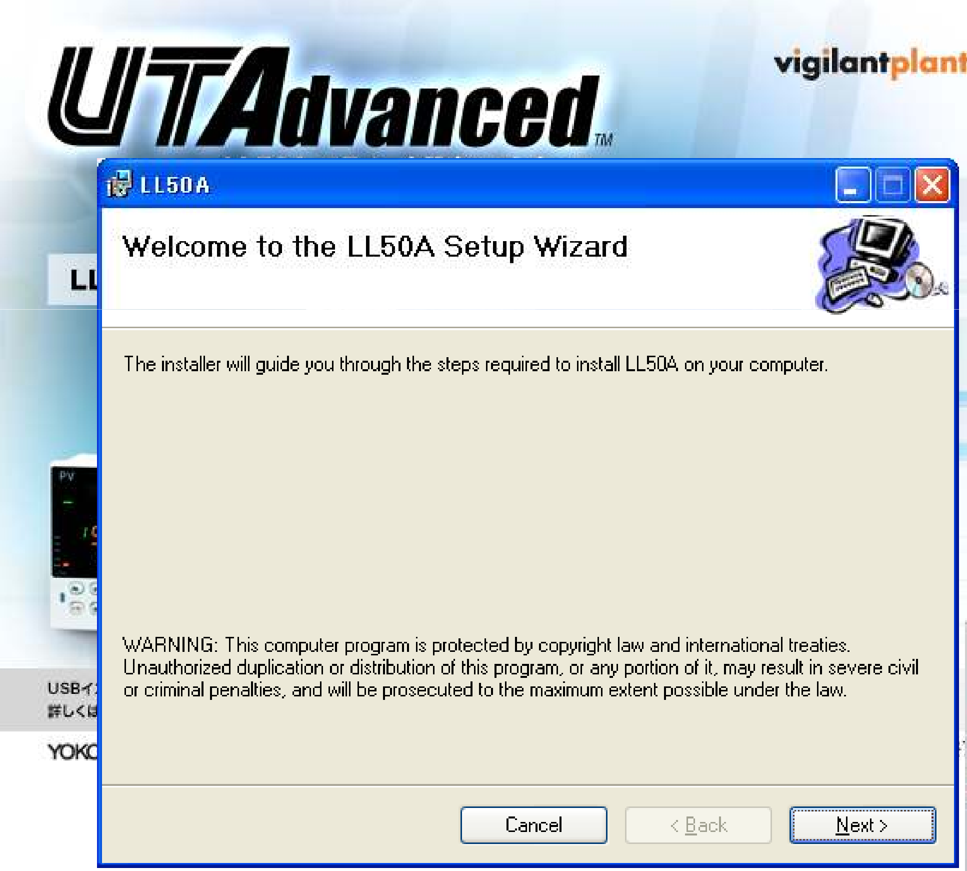
- **Press PARAMETER to escape**

PV
YOKOGAWA
2500.0
SP
2500.0
PARAMETER

Install software

Install PC software LL50A from the USB memory

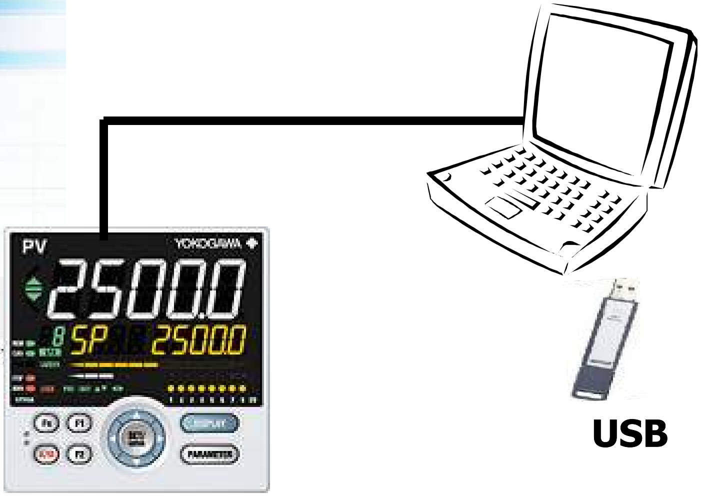
- It takes time


UTAdvanced
vigilantplant.
LL50A
Cancel
< Back
Next >

Welcome to the LL50A Setup Wizard

The installer will guide you through the steps required to install LL50A on your computer.

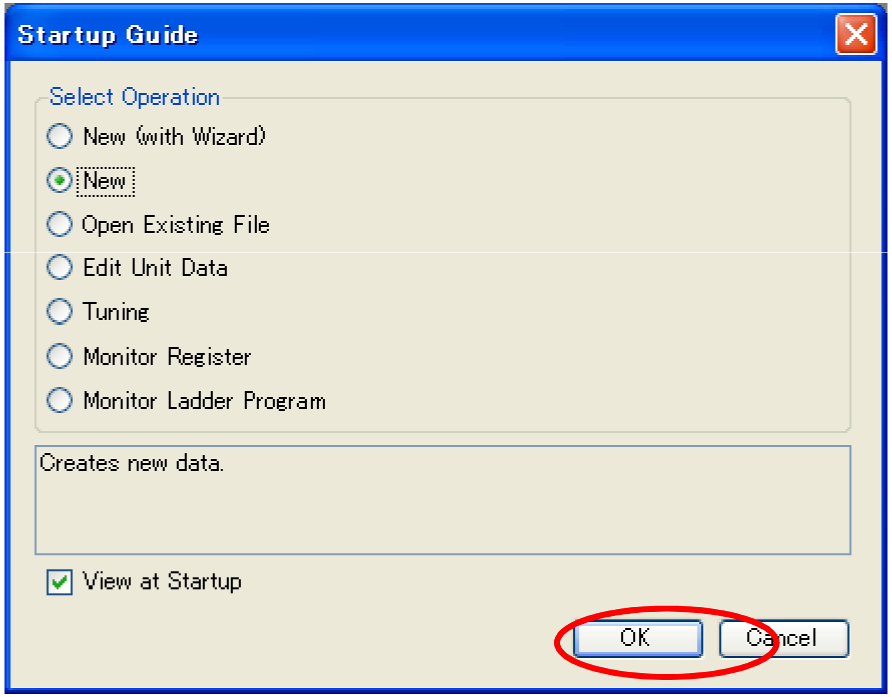
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.


PV
YOKOGAWA
2500.0
SP
2500.0
USB

Start LL50A

Start LL50A

- Start up LL50A and click “OK”



Startup Guide

Select Operation

○ New (with Wizard)
● New
○ Open Existing File
○ Edit Unit Data
○ Tuning
○ Monitor Register
○ Monitor Ladder Program

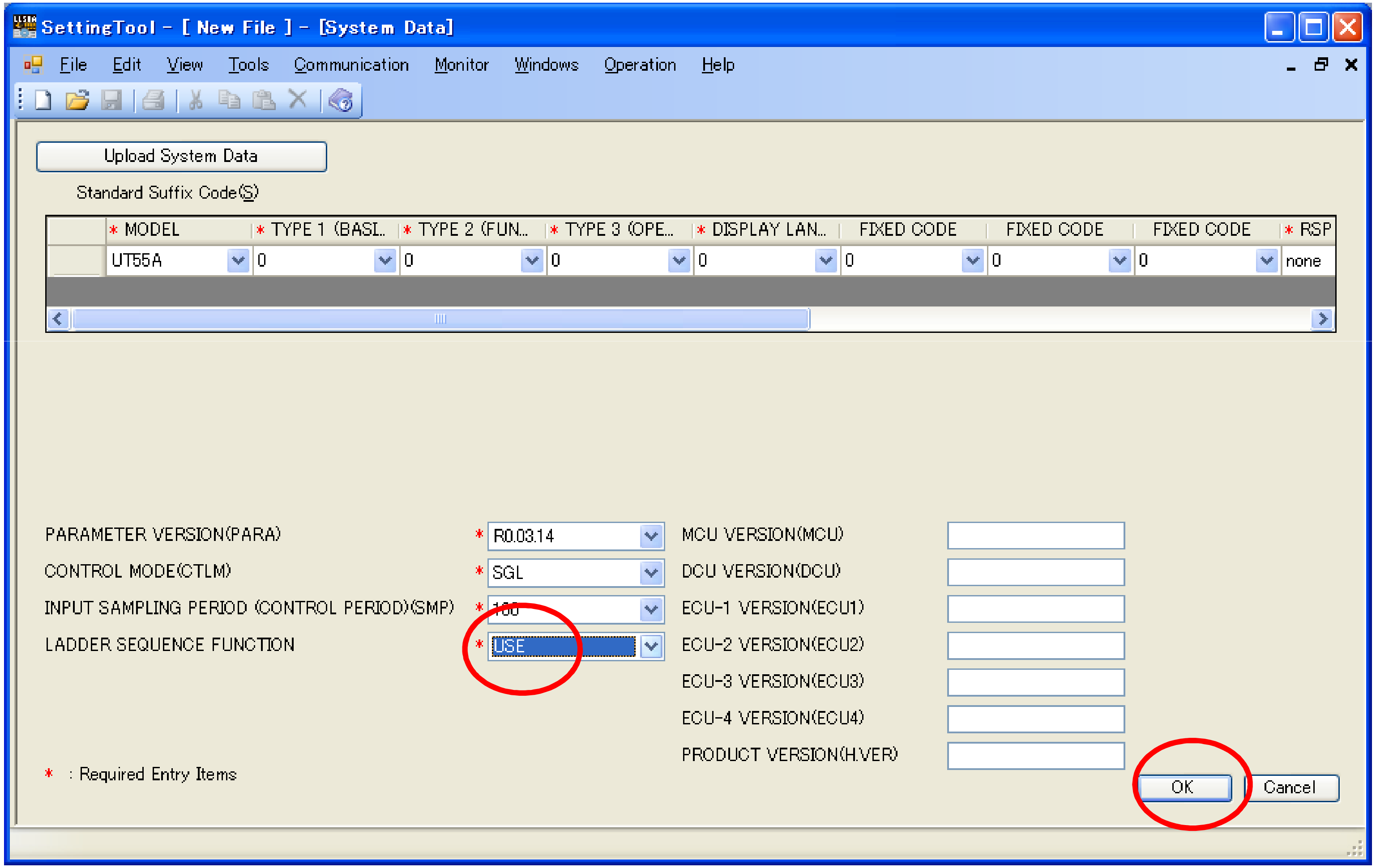
Creates new data.

☑ View at Startup

Ladder Program

Create new file

– Select Use for “LADDER SEQUENCE FUNCTION” and click “OK”


SettingTool - [New File] - [System Data]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
Upload System Data
OK
Cancel

Standard Suffix Code(S)

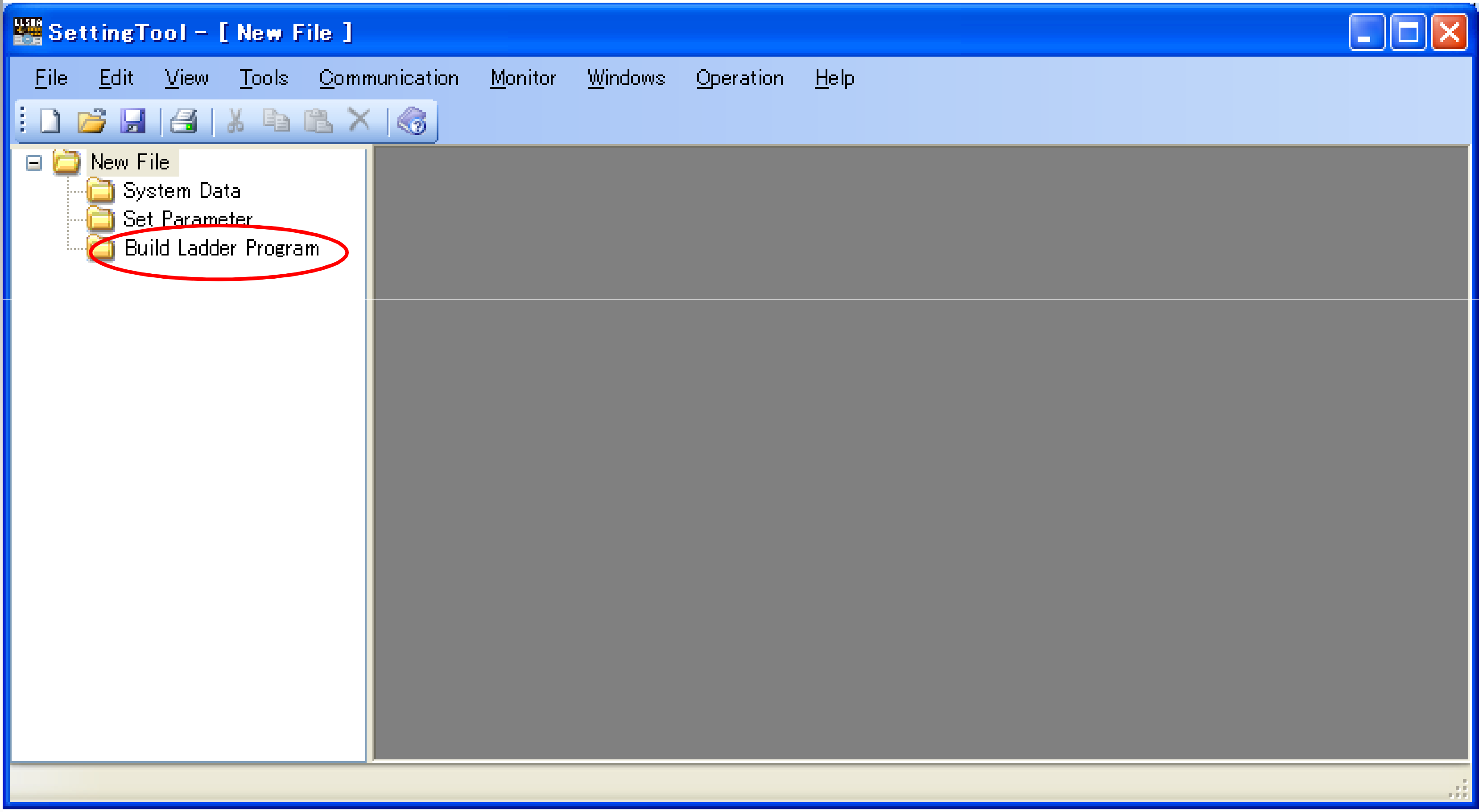
* MODEL	* TYPE 1 (BASI..	* TYPE 2 (FUN...	* TYPE 3 (OPE...	* DISPLAY LAN...	FIXED CODE	FIXED CODE	FIXED CODE	* RSP
UT55A	0	0	0	0	0	0	0	none

PARAMETER VERSION(PARA)	* R0.03.14	MCU VERSION(MCU)	
CONTROL MODE(CTLM)	* SGL	DCU VERSION(DCU)	
INPUT SAMPLING PERIOD (CONTROL PERIOD)(SMP)	* 100	ECU-1 VERSION(ECU1)	
LADDER SEQUENCE FUNCTION	* USE	ECU-2 VERSION(ECU2)	
		ECU-3 VERSION(ECU3)	
		ECU-4 VERSION(ECU4)	
		PRODUCT VERSION(H.VER)	

* : Required Entry Items

One line ladder program

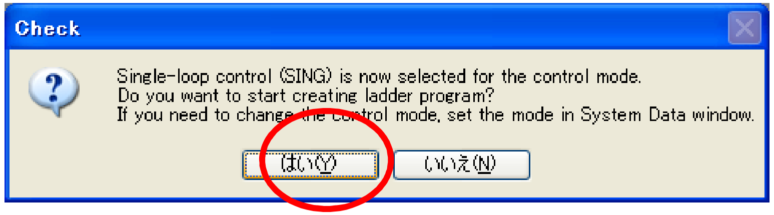
– Select [Build Ladder Program] folder


SettingTool – [New File]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
New File
System Data
Set Parameter
Build Ladder Program

Ladder Program

Click “Yes (Y)” and input program name

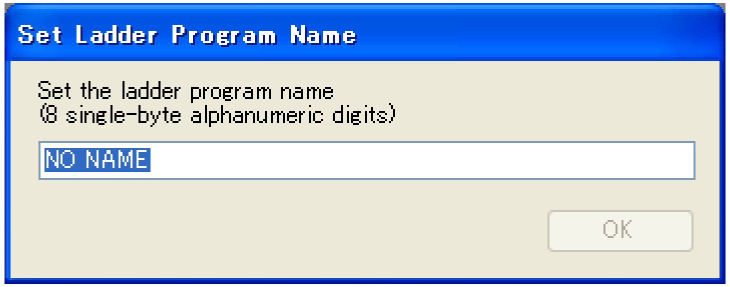
Click Yes



Check

Single-loop control (SING) is now selected for the control mode.
Do you want to start creating ladder program?
If you need to change the control mode, set the mode in System Data window.

Input name as “UTAdv”

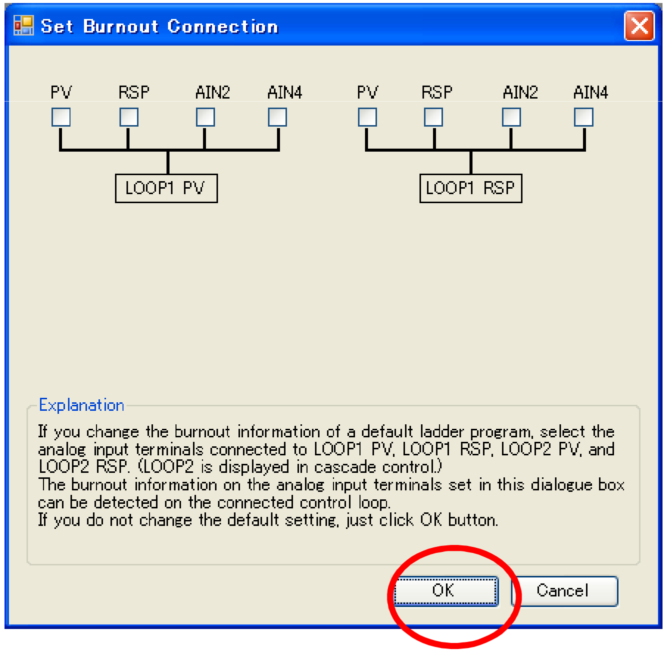


Set Ladder Program Name

Set the ladder program name
(8 single-byte alphanumeric digits)

NO NAME

Click OK



Set Burnout Connection

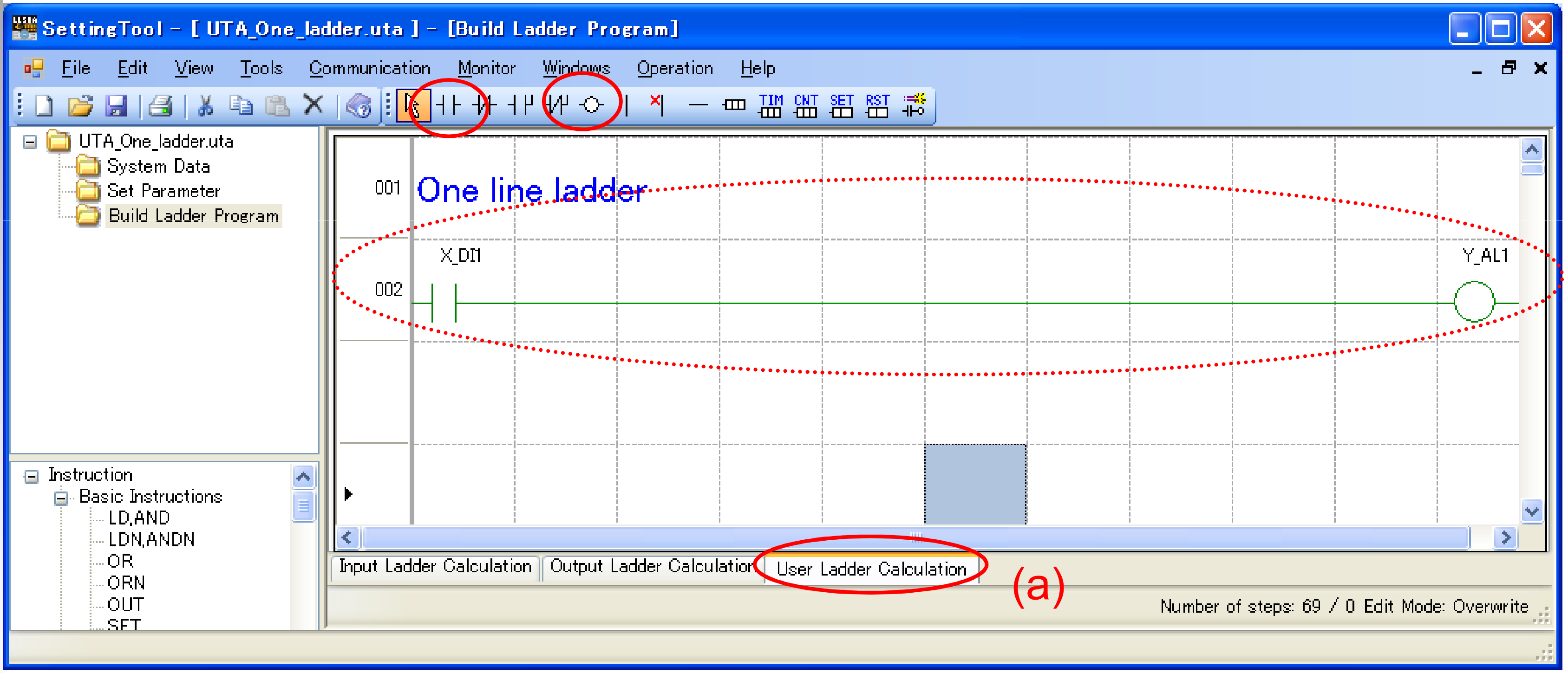
Explanation

If you change the burnout information of a default ladder program, select the analog input terminals connected to LOOP1 PV, LOOP1 RSP, LOOP2 PV, and LOOP2 RSP. (LOOP2 is displayed in cascade control.)
The burnout information on the analog input terminals set in this dialogue box can be detected on the connected control loop.
If you do not change the default setting, just click OK button.

Ladder Program

One line ladder program

- Select [User ladder calculation] tab (a)
- Select ┤├ and put “X_DI1”. Select –○– and put “Y_AL1”


SettingTool - [UTA_One_ladder.uta] - [Build Ladder Program]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
TIM
CNT
SET
RST
UTA_One_ladder.uta
System Data
Set Parameter
Build Ladder Program
Instruction
Basic Instructions
LD,AND
LDN,ANDN
OR
ORN
OUT
SET
001
002
X_DI1
Y_AL1
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation

One line ladder

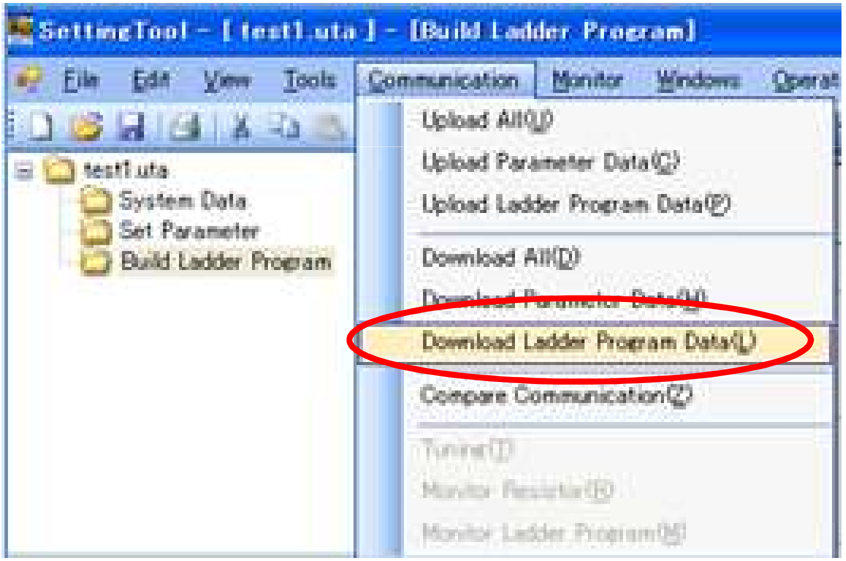
Number of steps: 69 / 0 Edit Mode: Overwrite

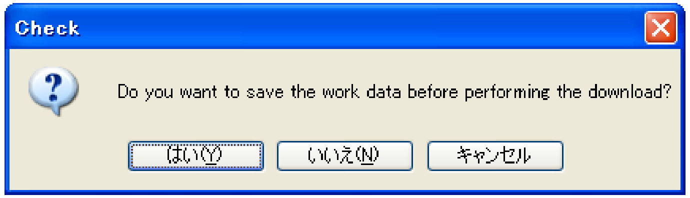
(a)

Ladder Program

Download ladder program to UTAdvanced

- Select [Communication] → [Download Ladder Program Data] in menu
- Save the setting


SettingTool - [test1.uta] - [Build Ladder Program]
File
Edit
View
Tools
Communication
Monitor
Windows
Operat
test1.uta
System Data
Set Parameter
Build Ladder Program
Upload All(U)
Upload Parameter Data(G)
Upload Ladder Program Data(P)
Download All(D)
Download Parameter Data(M)
Download Ladder Program Data(L)
Compare Communication(C)
Tuning(T)
Monitor Register(R)
Monitor Ladder Program(M)

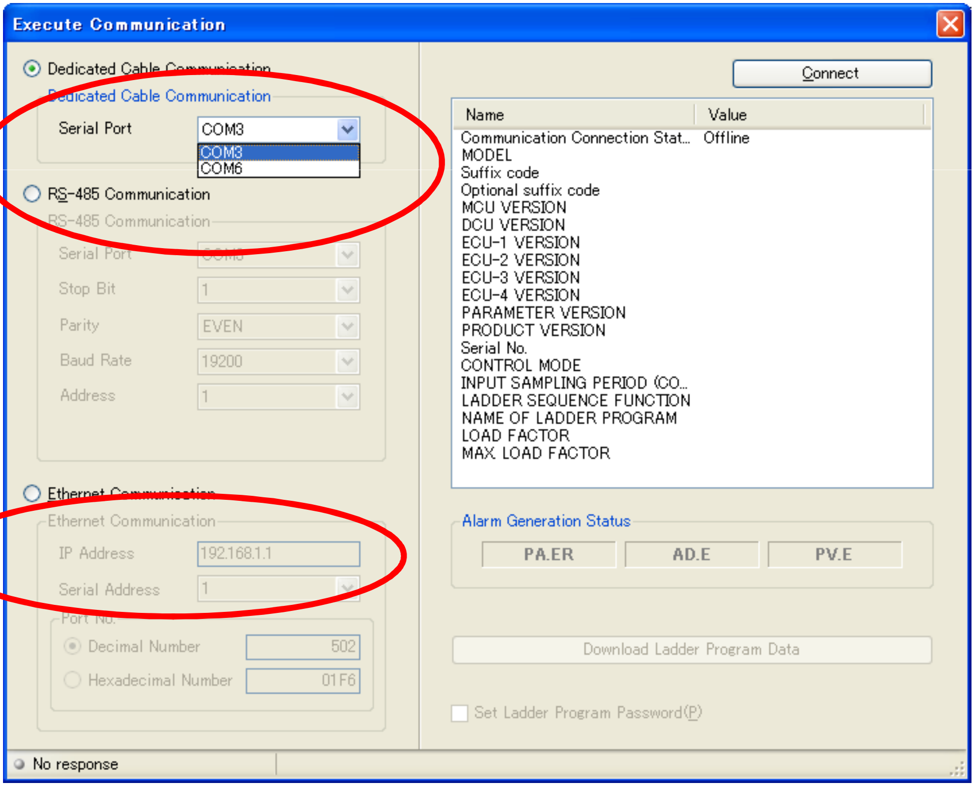

Check
はい(Y)
いいえ(N)
キャンセル

Do you want to save the work data before performing the download?

Ladder Program

Download ladder program to UTAdvanced

- Select Communication port
  1. For USB dedicated cable connection: Select serial port no.
  2. For Ethernet cable connection: Input “192.168.1.10”
- Click [Download Ladder Program Data]
- After download complete, select [Windows] → [Close all]



● Dedicated Cable Communication

Dedicated Cable Communication

Serial Port: COM3 (COM3, COM6)

○ RS-485 Communication

RS-485 Communication

Serial Port: COM3

Stop Bit: 1

Parity: EVEN

Baud Rate: 19200

Address: 1

○ Ethernet Communication

Ethernet Communication

IP Address: 192.168.1.1

Serial Address: 1

Port No.

● Decimal Number: 502

○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Offline
MODEL	
Suffix code	
Optional suffix code	
MCU VERSION	
DCU VERSION	
ECU-1 VERSION	
ECU-2 VERSION	
ECU-3 VERSION	
ECU-4 VERSION	
PARAMETER VERSION	
PRODUCT VERSION	
Serial No.	
CONTROL MODE	
INPUT SAMPLING PERIOD (CO...	
LADDER SEQUENCE FUNCTION	
NAME OF LADDER PROGRAM	
LOAD FACTOR	
MAX. LOAD FACTOR	

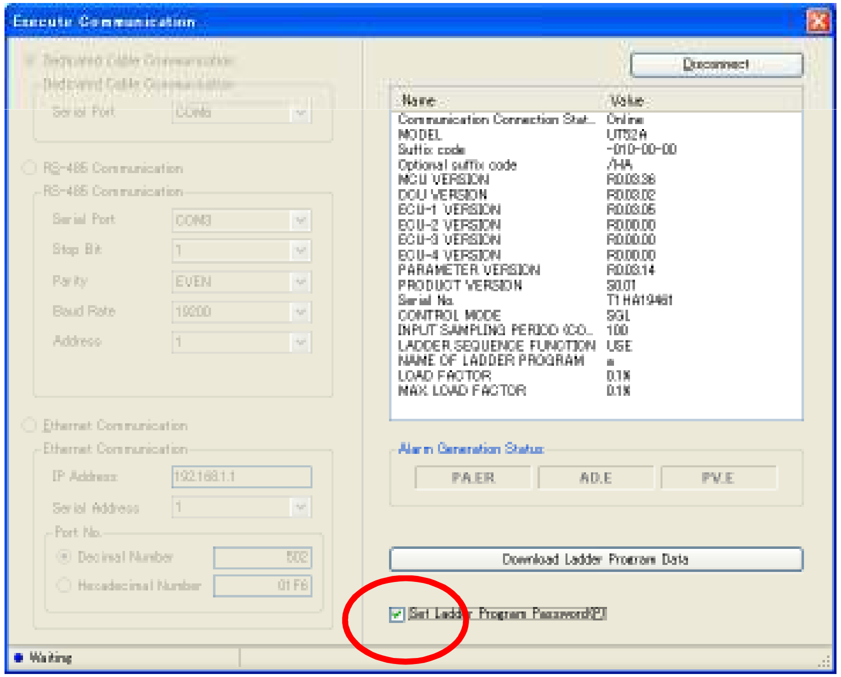
☐ Set Ladder Program Password(P)

No response

Ladder Program

Download ladder program to UTAdvanced

- Check [Set Ladder Program Password] to change no password setting
- In password setting box window, leave as “Blank”



Execute Communication

Dedicated Cable Communication
Serial Port: COM5

RS-485 Communication
Serial Port: COM3
Stop Bit: 1
Parity: EVEN
Baud Rate: 19200
Address: 1

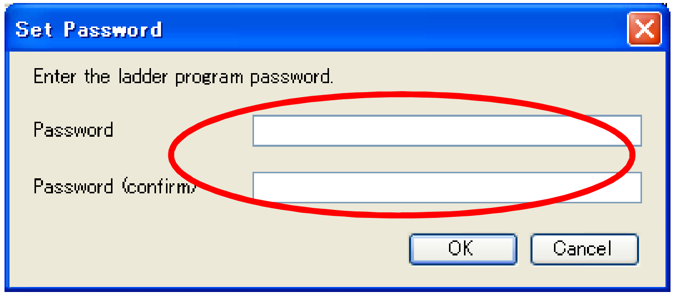
Ethernet Communication
IP Address: 192.168.1.1
Serial Address: 1
Port No.
Decimal Number: 502
Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT52A
Suffix code	-010-00-00
Optional suffix code	/HA
MCU VERSION	R0.03.36
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.00.00
ECU-3 VERSION	R0.00.00
ECU-4 VERSION	R0.00.00
PARAMETER VERSION	R0.03.14
PRODUCT VERSION	S0.01
Serial No.	T1HA19481
CONTROL MODE	SGL
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	USE
NAME OF LADDER PROGRAM	a
LOAD FACTOR	0.1%
MAX LOAD FACTOR	0.1%

Alarm Generation Status

☑ Set Ladder Program Password(P)

Waiting



Set Password

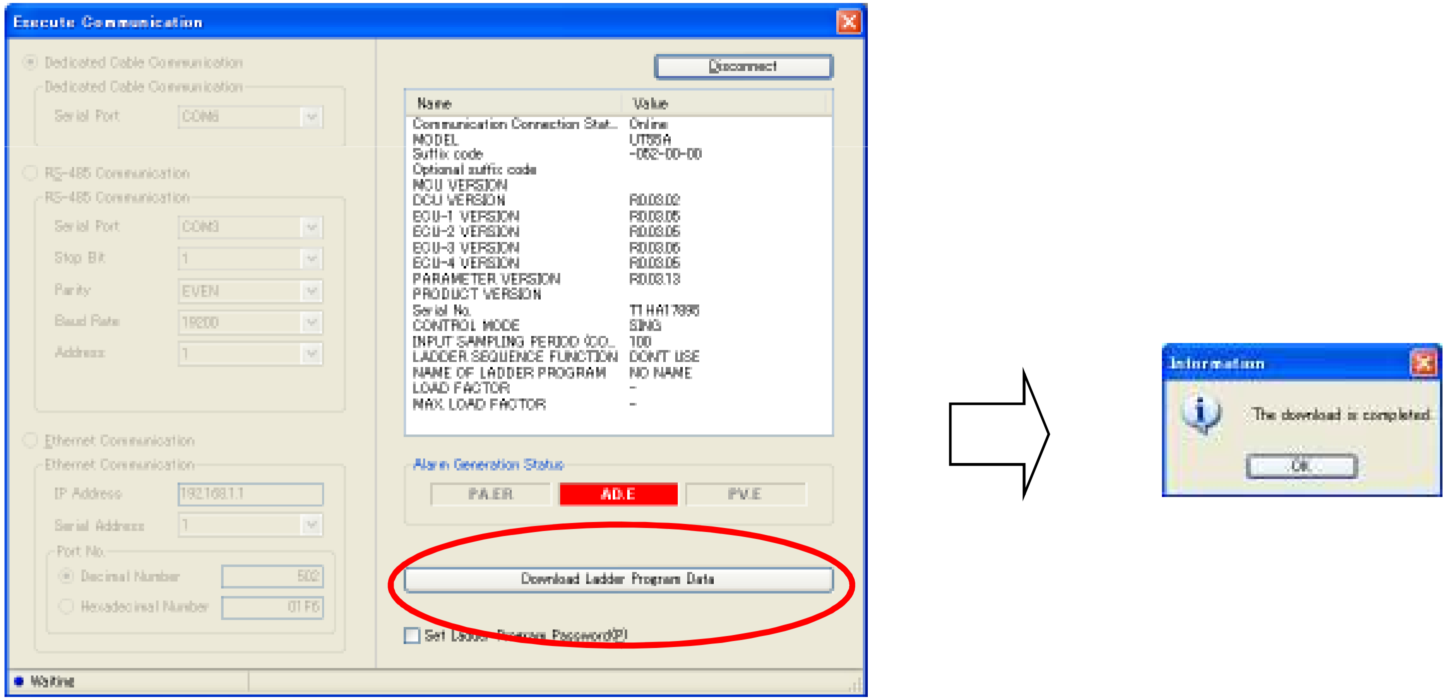
Enter the ladder program password.

Password:
Password (confirm):

Ladder Program

Download ladder program to UTAdvanced

- Click [Download Ladder Program Data]
- After download complete, select [Windows] → [Close all]



Execute Communication

○ Dedicated Cable Communication
Dedicated Cable Communication
Serial Port: COM6

○ RS-485 Communication
RS-485 Communication
Serial Port: COM3
Stop Bit: 1
Parity: EVEN
Baud Rate: 19200
Address: 1

○ Ethernet Communication
Ethernet Communication
IP Address: 192.168.1.1
Serial Address: 1
Port No.
○ Decimal Number: 502
○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT55A
Suffix code	-052-00-00
Optional suffix code	
MCU VERSION	
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.03.06
ECU-3 VERSION	R0.03.06
ECU-4 VERSION	R0.03.06
PARAMETER VERSION	R0.03.13
PRODUCT VERSION	
Serial No.	T1HA17895
CONTROL MODE	SING
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	DON'T USE
NAME OF LADDER PROGRAM	NO NAME
LOAD FACTOR	-
MAX. LOAD FACTOR	-

Alarm Generation Status

☐ Set Ladder Program Password(P)

● Waiting

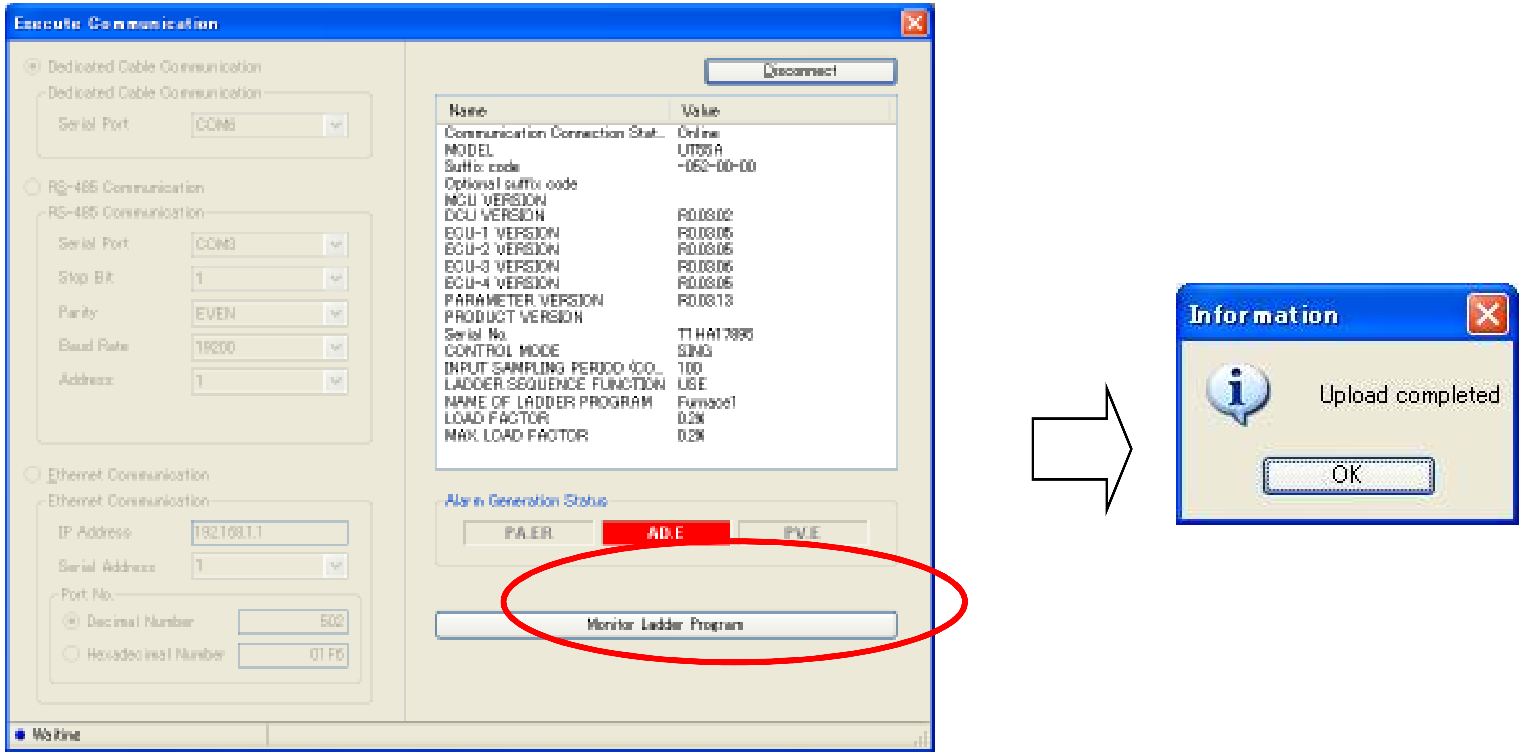
Information

The download is completed.

Ladder Program

Monitoring ladder programming

- Select [Communication] → [Monitor Ladder program] in menu
- Select [Monitor Ladder Program]



● Dedicated Cable Communication

Dedicated Cable Communication

Serial Port: COM6

○ RS-485 Communication

RS-485 Communication

Serial Port: COM3

Stop Bit: 1

Parity: EVEN

Baud Rate: 19200

Address: 1

○ Ethernet Communication

Ethernet Communication

IP Address: 192.168.1.1

Serial Address: 1

Port No.

● Decimal Number: 502

○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT55A
Suffix code	-052-00-00
Optional suffix code	
MCU VERSION	
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.03.06
ECU-3 VERSION	R0.03.06
ECU-4 VERSION	R0.03.06
PARAMETER VERSION	R0.03.13
PRODUCT VERSION	
Serial No.	T1HA17895
CONTROL MODE	SING
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	USE
NAME OF LADDER PROGRAM	Furnace1
LOAD FACTOR	0.2%
MAX LOAD FACTOR	0.2%

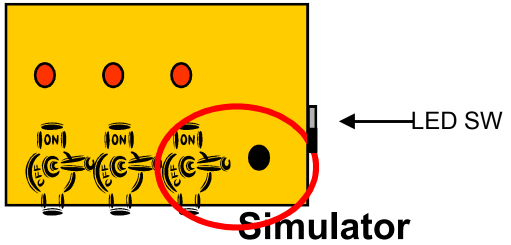
● Waiting

Upload completed

Ladder Program

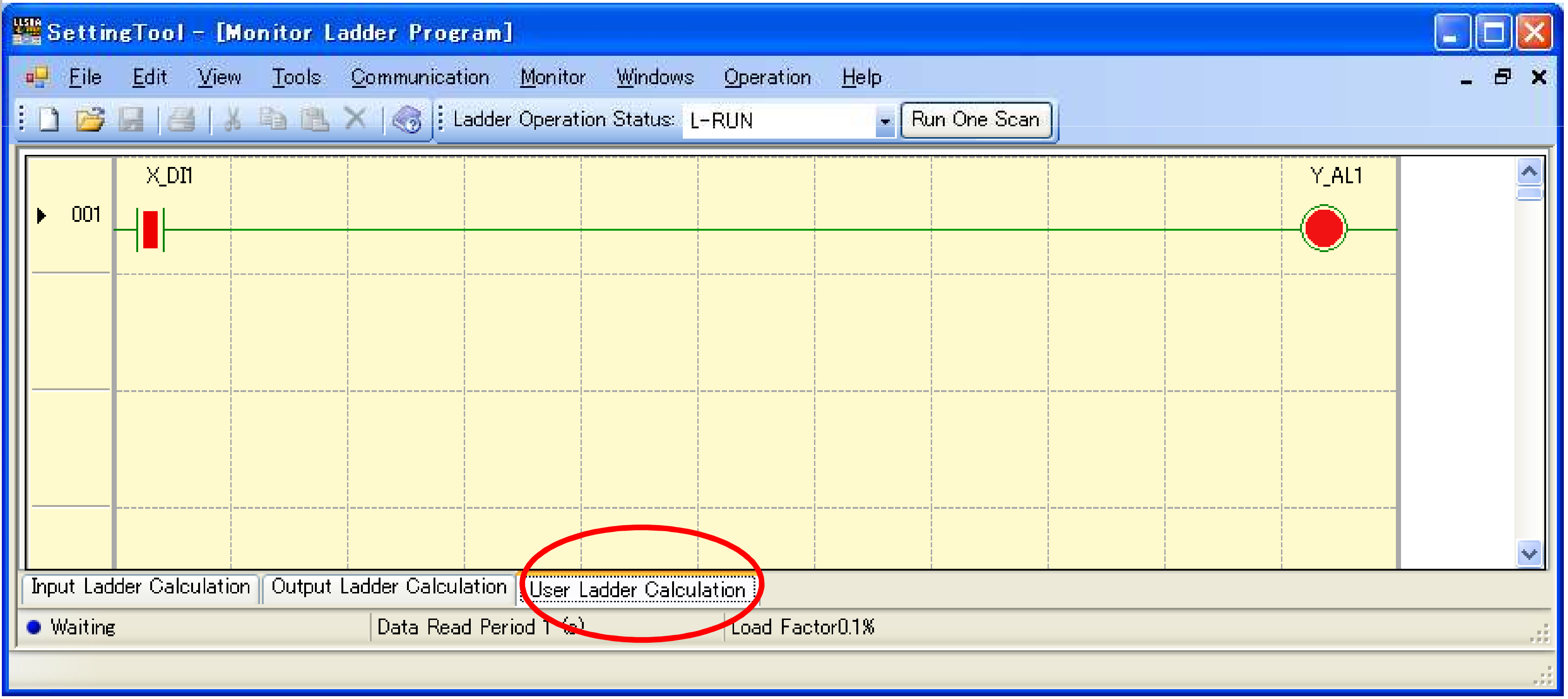
Monitoring

- Set simulator DI01 switch ON then monitor program


ON
ON
ON
LED SW
Simulator

Set DI01 ON and check LED ON

Be sure to turn LED SW ON, which is on the side of simulator


SettingTool - [Monitor Ladder Program]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
Run One Scan
X_DI1
001
Y_AL1
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation

Ladder Operation Status: L-RUN

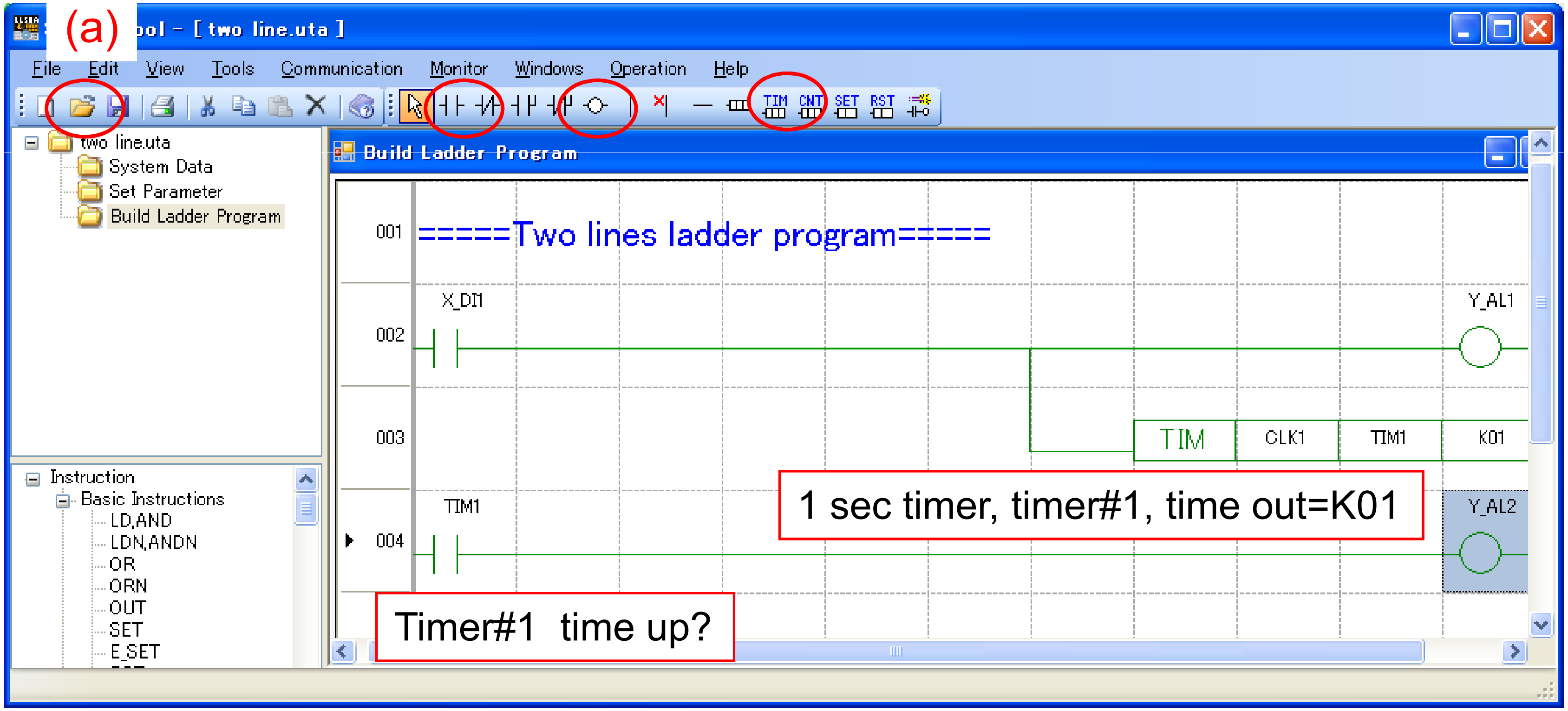
● Waiting | Data Read Period 1 (s) | Load Factor0.1%

Ladder Program

Full Control at Your Fingertips

Two lines ladder program

- Open the One line ladder program setting (a)
- Modify "one line ladder program"
- Line 003: draw line, put ─[TIM│ │]─ and input "CLK1, TIM1, K01"
- Line 004: Put ┤├ as "TIM1", put ─○─ as "Y_AL2"


(a)
ool – [two line.uta]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
TIM
CNT
SET
RST
two line.uta
System Data
Set Parameter
Build Ladder Program
Instruction
Basic Instructions
LD,AND
LDN,ANDN
OR
ORN
OUT
SET
E_SET
Build Ladder Program
001
=====Two lines ladder program=====
002
X_DI1
Y_AL1
003
TIM
CLK1
TIM1
K01
004
TIM1
Y_AL2

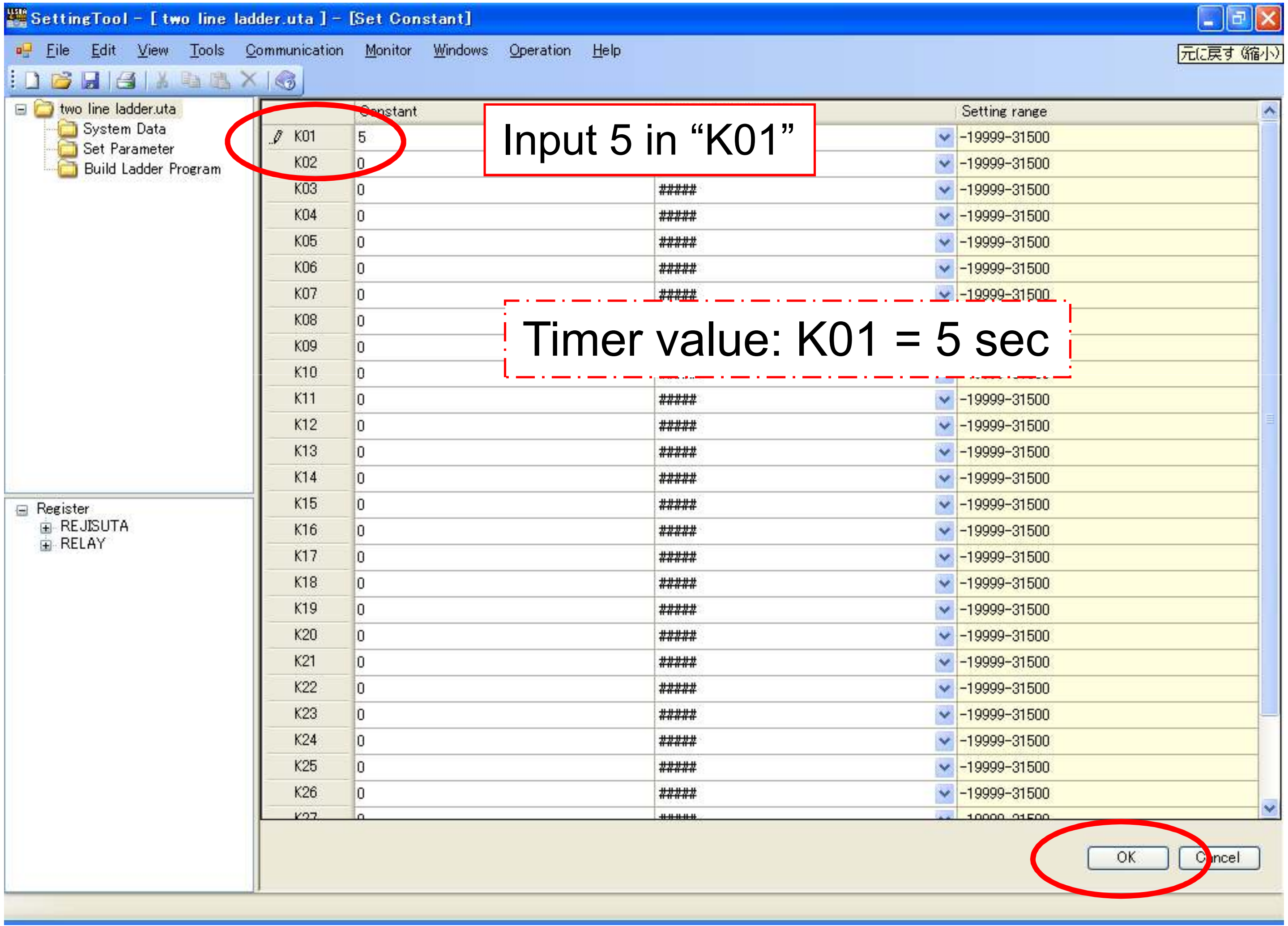
1 sec timer, timer#1, time out=K01

Timer#1 time up?

Ladder Program

Input K01 value

- Select [Tools]→ [Set constant] in menu and set K01


SettingTool – [two line ladder.uta] – [Set Constant]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
元に戻す (縮小)
two line ladder.uta
System Data
Set Parameter
Build Ladder Program
Register
REJISUTA
RELAY
OK
Cancel

	Constant		Setting range
K01	5		-19999-31500
K02	0		-19999-31500
K03	0	#####	-19999-31500
K04	0	#####	-19999-31500
K05	0	#####	-19999-31500
K06	0	#####	-19999-31500
K07	0	#####	-19999-31500
K08	0		
K09	0		
K10	0		
K11	0	#####	-19999-31500
K12	0	#####	-19999-31500
K13	0	#####	-19999-31500
K14	0	#####	-19999-31500
K15	0	#####	-19999-31500
K16	0	#####	-19999-31500
K17	0	#####	-19999-31500
K18	0	#####	-19999-31500
K19	0	#####	-19999-31500
K20	0	#####	-19999-31500
K21	0	#####	-19999-31500
K22	0	#####	-19999-31500
K23	0	#####	-19999-31500
K24	0	#####	-19999-31500
K25	0	#####	-19999-31500
K26	0	#####	-19999-31500
K27	0	#####	-19999-31500

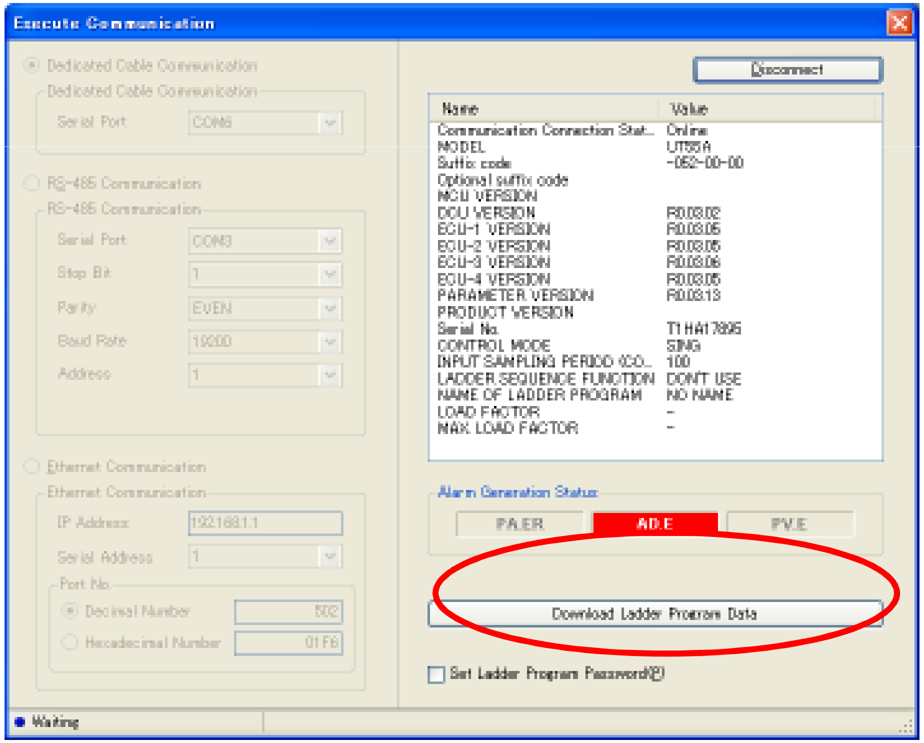
Input 5 in “K01”

Timer value: K01 = 5 sec

Ladder Program

Download ladder program to UTAdvanced

- Select [Communication]→ [Download Ladder Program Data] in menu
- Click [Download Ladder Program Data]
- After download complete, select [Windows] → [Close all]



○ Dedicated Cable Communication
Serial Port: COM6

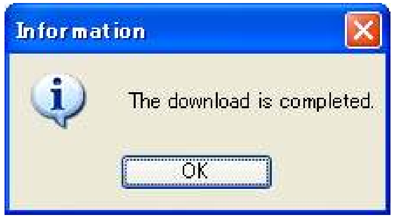
○ RS-485 Communication
Serial Port: COM3
Stop Bit: 1
Parity: EVEN
Baud Rate: 19200
Address: 1

○ Ethernet Communication
IP Address: 192.168.1.1
Serial Address: 1
Port No.
● Decimal Number: 502
○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT55A
Suffix code	-052-00-00
Optional suffix code	
MCU VERSION	
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.03.05
ECU-3 VERSION	R0.03.06
ECU-4 VERSION	R0.03.05
PARAMETER VERSION	R0.03.13
PRODUCT VERSION	
Serial No.	T1HA17895
CONTROL MODE	SING
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	DON'T USE
NAME OF LADDER PROGRAM	NO NAME
LOAD FACTOR	-
MAX. LOAD FACTOR	-

☐ Set Ladder Program Password(P)

Waiting

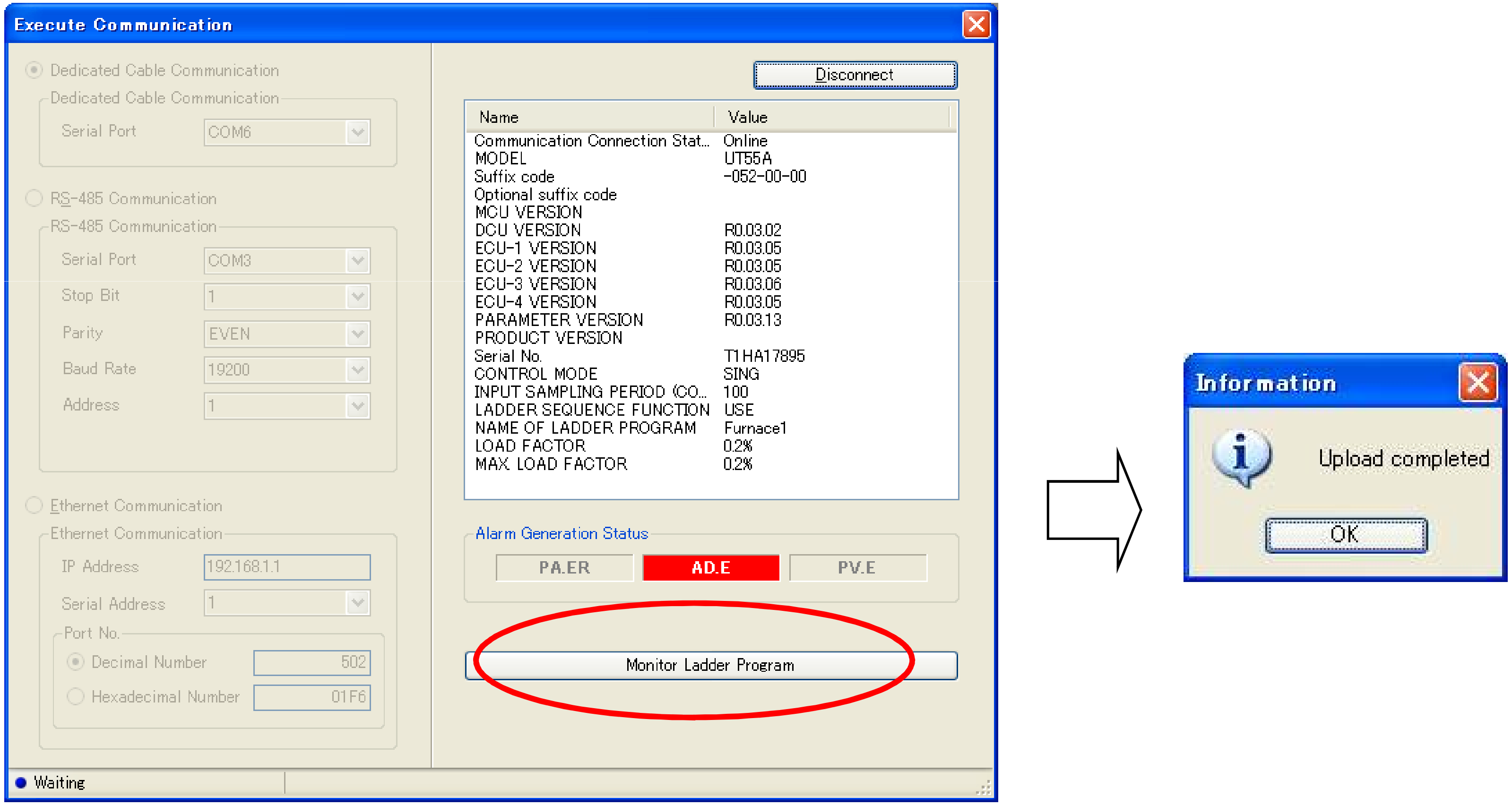


The download is completed.

Ladder Program

Monitoring ladder programming

- Select [Communication] → [Monitor Ladder program] in menu
- Select [Monitor Ladder Program]



Execute Communication

● Dedicated Cable Communication
Dedicated Cable Communication
Serial Port: COM6

○ RS-485 Communication
RS-485 Communication
Serial Port: COM3
Stop Bit: 1
Parity: EVEN
Baud Rate: 19200
Address: 1

○ Ethernet Communication
Ethernet Communication
IP Address: 192.168.1.1
Serial Address: 1
Port No.
● Decimal Number: 502
○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT55A
Suffix code	-052-00-00
Optional suffix code	
MCU VERSION	
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.03.05
ECU-3 VERSION	R0.03.06
ECU-4 VERSION	R0.03.05
PARAMETER VERSION	R0.03.13
PRODUCT VERSION	
Serial No.	T1HA17895
CONTROL MODE	SING
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	USE
NAME OF LADDER PROGRAM	Furnace1
LOAD FACTOR	0.2%
MAX. LOAD FACTOR	0.2%

Alarm Generation Status

● Waiting

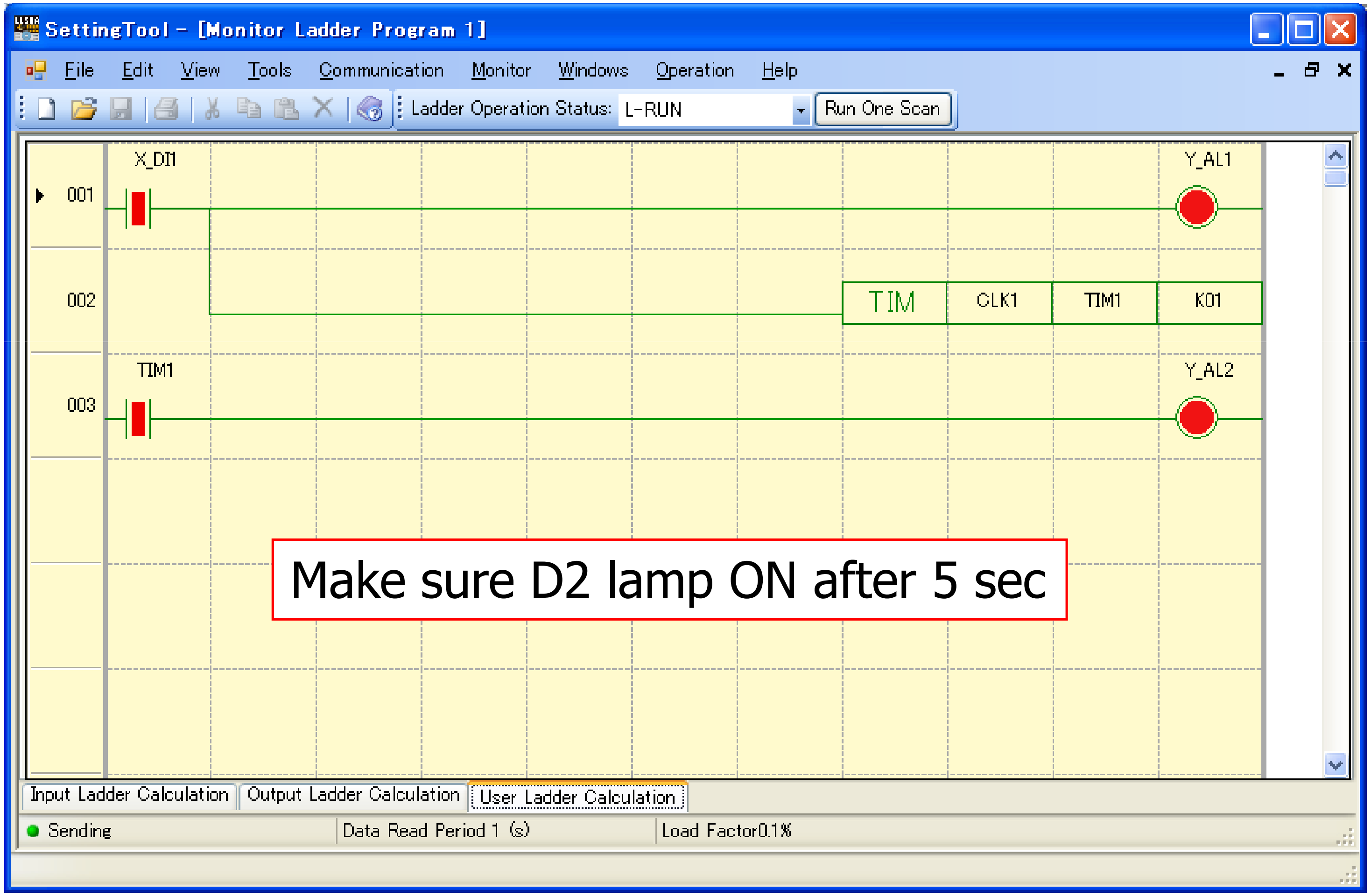
Information

Upload completed

Ladder Program

Monitoring

- Set simulator DI01 switch ON then monitor program


SettingTool – [Monitor Ladder Program 1]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
Run One Scan
X_DI1
Y_AL1
001
002
TIM
CLK1
TIM1
K01
TIM1
Y_AL2
003
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation

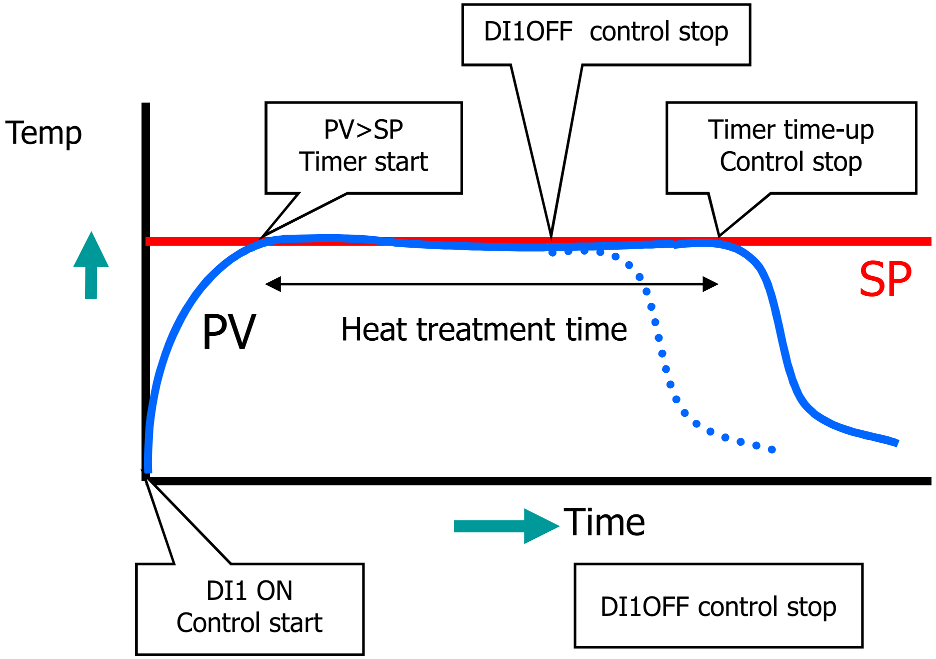
Ladder Operation Status: L-RUN

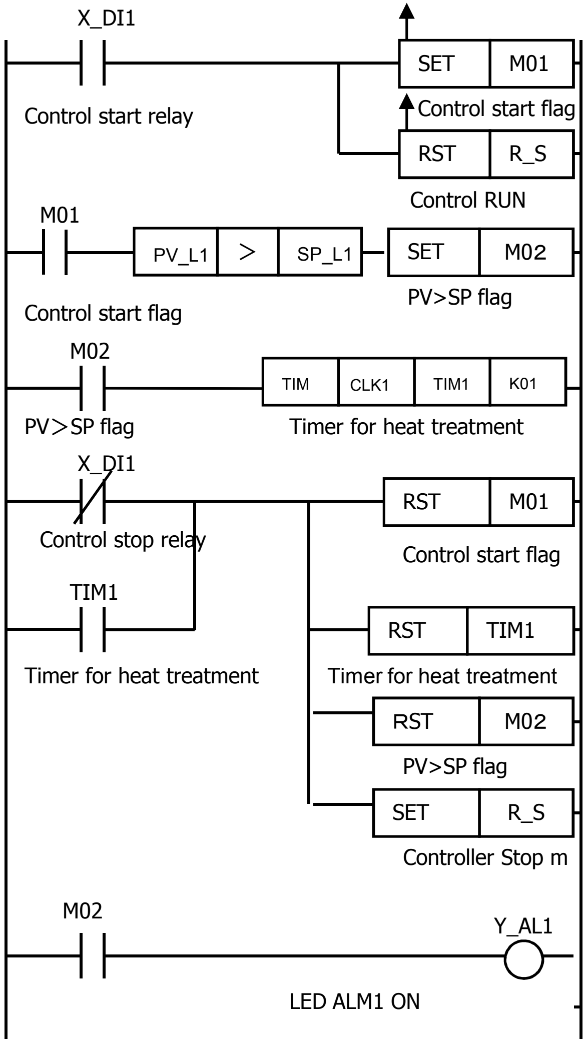
Sending | Data Read Period 1 (s) | Load Factor0.1%

Make sure D2 lamp ON after 5 sec

Ladder Program Example

- **Furnace control using ladder program**
- **Heat treatment for a certain time**



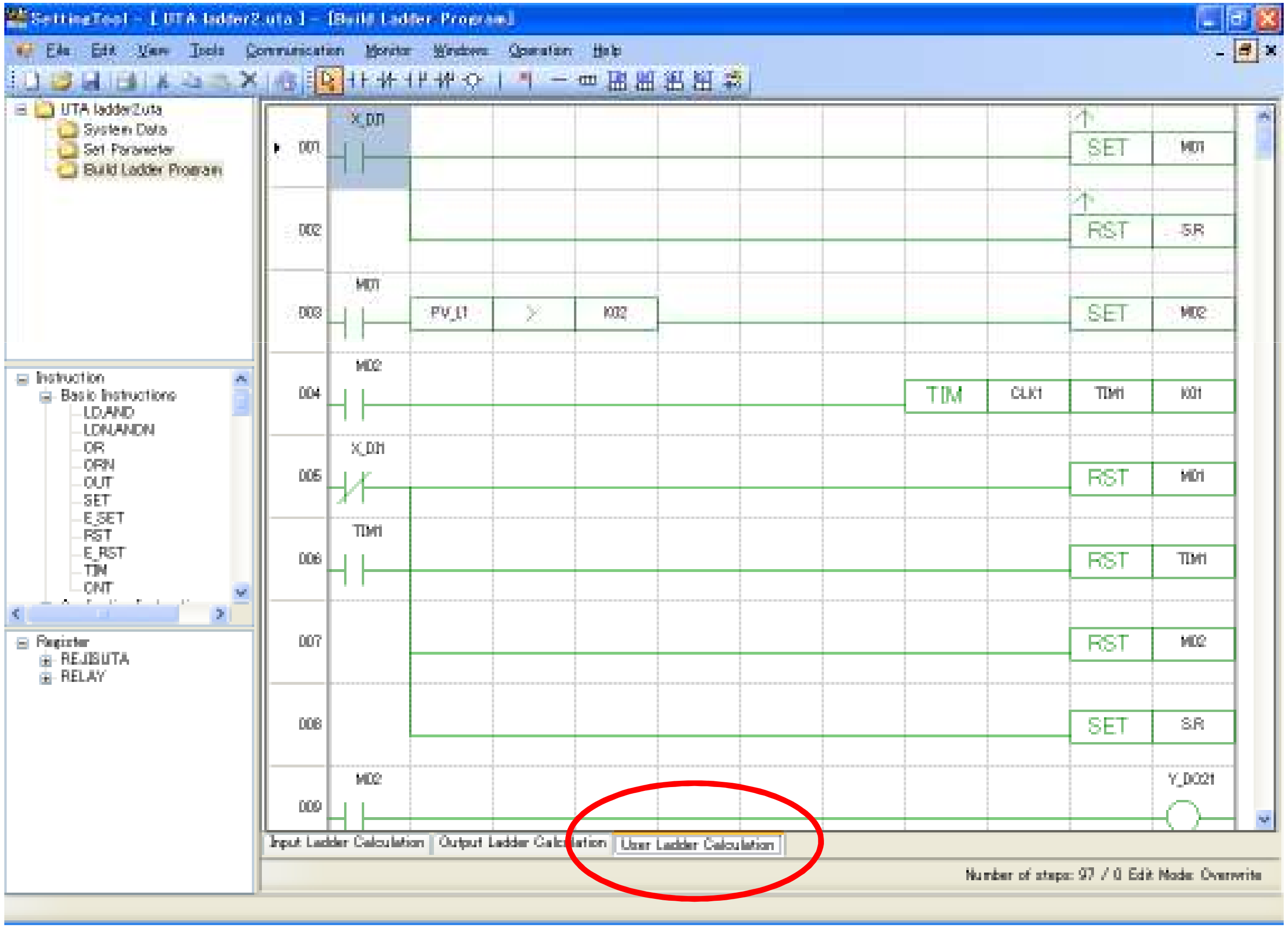

X_DI1
Control start relay
SET
M01
Control start flag
RST
R_S
Control RUN
M01
Control start flag
PV_L1
>
SP_L1
SET
M02
PV>SP flag
M02
PV>SP flag
TIM
CLK1
TIM1
K01
Timer for heat treatment
X_DI1
Control stop relay
RST
M01
Control start flag
TIM1
Timer for heat treatment
RST
TIM1
Timer for heat treatment
RST
M02
PV>SP flag
SET
R_S
Controller Stop m
M02
Y_AL1
LED ALM1 ON

Ladder Program

Full Control at Your Fingertips

Open Ladder program setting: Application

- Select [File] → [Open] in menu
- Select the file “UTA_ladder_appli1.uta” from the USB memory

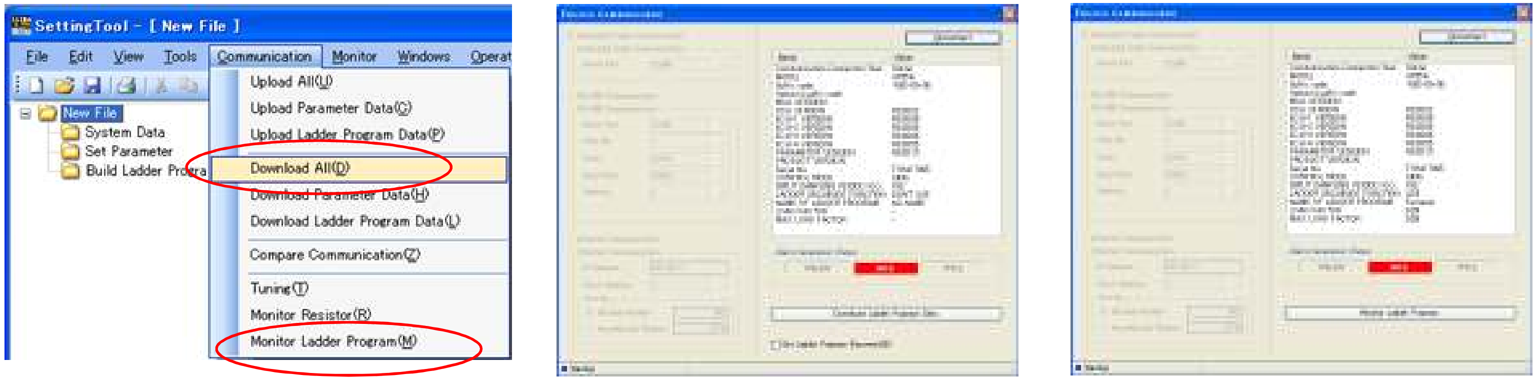

SettingTool - [UTA ladder2.uta] - [Build Ladder Program]
File Edit View Tools Communication Monitor Windows Operation Help
UTA ladder2.uta
System Data
Set Parameter
Build Ladder Program
Instruction
Basic Instructions
LD,AND
LDN,ANDN
OR
ORN
OUT
SET
E_SET
RST
E_RST
TIM
CNT
Register
REJB.UTA
RELAY
001 X_DI1 SET M01
002 RST S.R
003 M01 PV_L1 > K02 SET M02
004 M02 TIM CLK1 TIM1 K01
005 X_DI1 RST M01
006 TIM1 RST TIM1
007 RST M02
008 SET S.R
009 M02 Y_DO21
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation
Number of steps: 97 / 0 Edit Mode: Overwrite

January 23rd, 2009

Ladder Program

Download Ladder program to UTAdvanced

- Select [Communication] → [Download All] in the menu
- Click [Download Ladder Program Data]
- After download complete, select [Windows] → [Close all]
- Monitor program

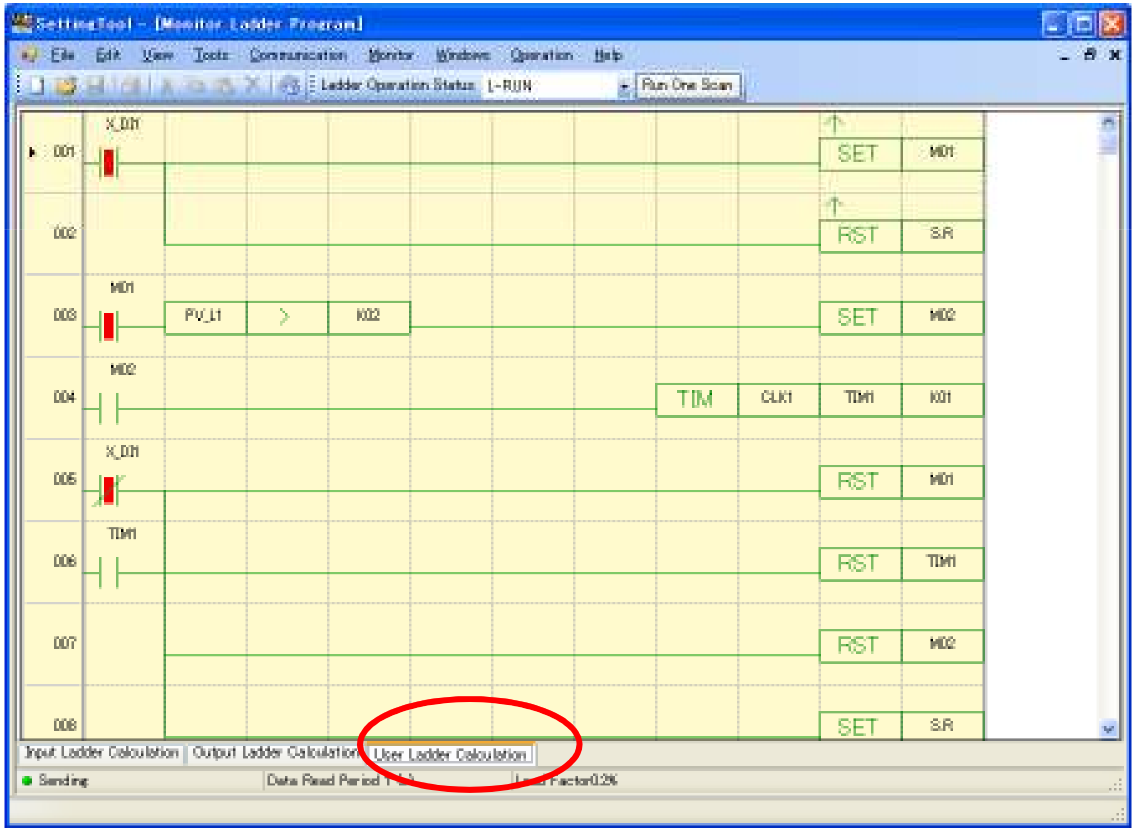

SettingTool - [New File]
File
Edit
View
Tools
Communication
Monitor
Windows
Operat
New File
System Data
Set Parameter
Build Ladder Progra
Upload All(U)
Upload Parameter Data(C)
Upload Ladder Program Data(P)
Download All(D)
Download Parameter Data(H)
Download Ladder Program Data(L)
Compare Communication(Z)
Tuning(T)
Monitor Resistor(R)
Monitor Ladder Program(M)

Ladder Program

Full Control at Your Fingertips

Operation

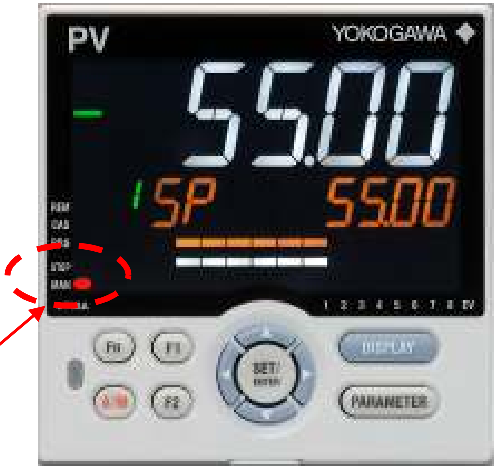
- When simulator’s DI01 is ON, control starts
- When PV is over “K02” value(30), Timer will start (LED ON)
- After 5 sec (Timer 1), the control stops (LED OFF)


SettingTool - [Monitor Ladder Program]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
Ladder Operation Status
L-RUN
Run One Scan
001
X_DI1
SET
M01
002
RST
S.R
003
M01
PV_L1
>
K02
SET
M02
004
M02
TIM
CLK1
TIM1
K01
005
X_DI1
RST
M01
006
TIM1
RST
TIM1
007
RST
M02
008
SET
S.R
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation
Sending
Data Read Period
Factor0.2%

Ladder Program

Operation

- Set simulator's DI01 ON to start
- Change SP to more than 30


PV
YOKOGAWA
55.00
SP
55.00
STOP
MAN
DISPLAY
PARAMETER
SET/ENTER
F1
F2

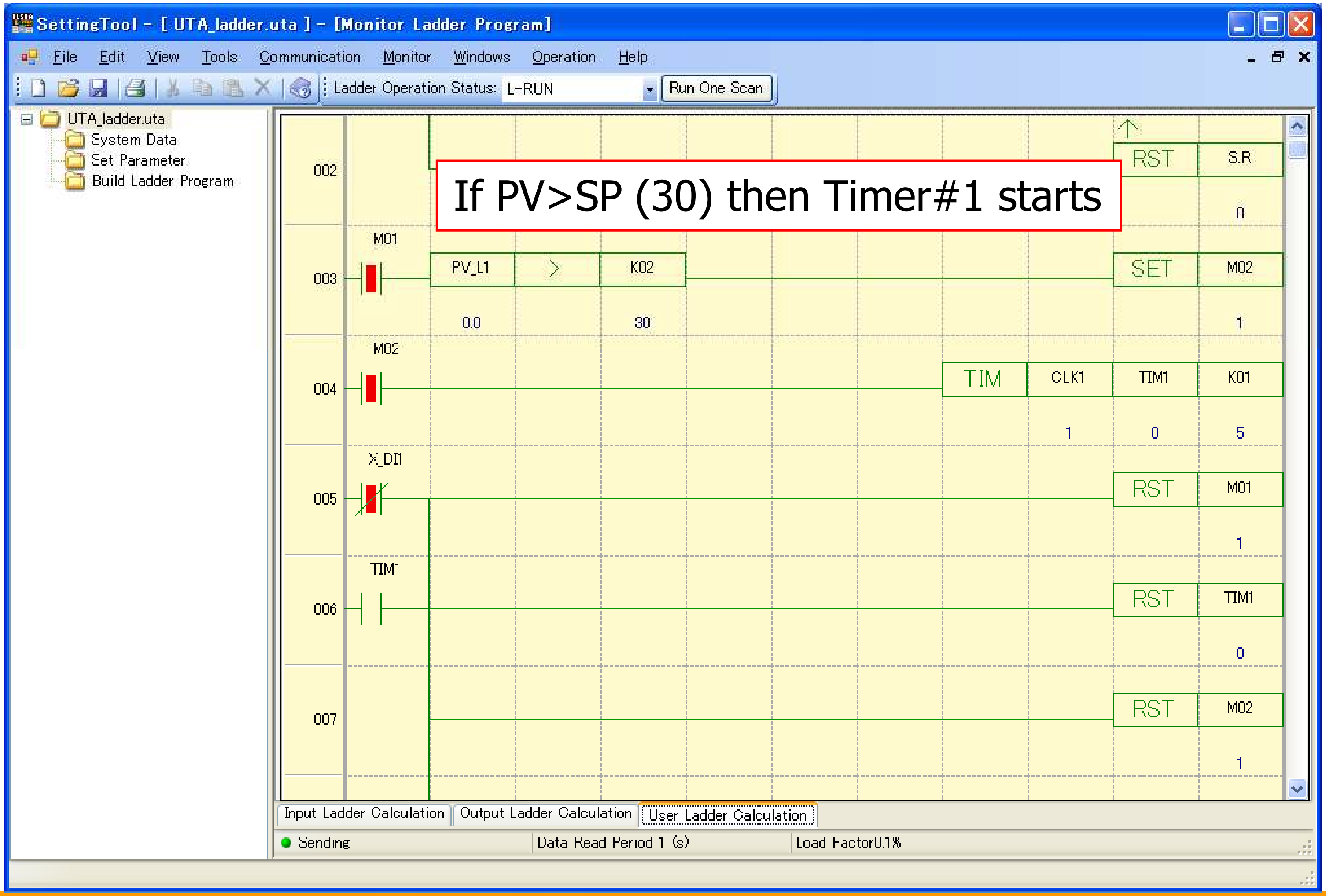
Check UTAdvanced STOP (LED ON)

Ladder Program

Full Control at Your Fingertips

Detail view monitoring

– Select [Monitor] → [Detail view] in menu to see the detail value

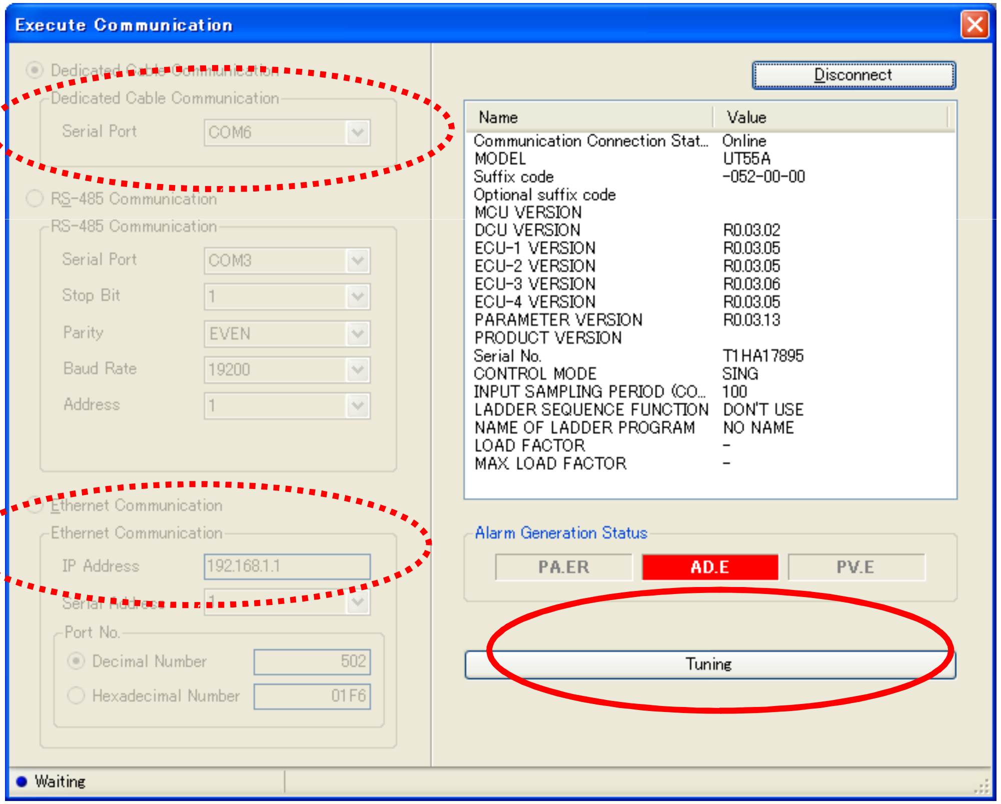

SettingTool – [UTA_ladder.uta] – [Monitor Ladder Program]
File
Edit
View
Tools
Communication
Monitor
Windows
Operation
Help
Ladder Operation Status: L-RUN
Run One Scan
UTA_ladder.uta
System Data
Set Parameter
Build Ladder Program
002
RST
S.R
0
003
M01
PV_L1
>
K02
0.0
30
SET
M02
1
004
M02
TIM
CLK1
TIM1
K01
1
0
5
005
X_DI1
RST
M01
1
006
TIM1
RST
TIM1
0
007
RST
M02
1
Input Ladder Calculation
Output Ladder Calculation
User Ladder Calculation
Sending
Data Read Period 1 (s)
Load Factor0.1%

If PV>SP (30) then Timer#1 starts

Appendix : Tuning

Tuning PID

- Select [Communication] → [Tuning] from Menu
- Set communication setting and click [Tuning]



Execute Communication

◉ Dedicated Cable Communication

Dedicated Cable Communication

Serial Port: COM6

○ RS-485 Communication

RS-485 Communication

Serial Port: COM3
Stop Bit: 1
Parity: EVEN
Baud Rate: 19200
Address: 1

○ Ethernet Communication

Ethernet Communication

IP Address: 192.168.1.1
Serial Address: 1

Port No.
◉ Decimal Number: 502
○ Hexadecimal Number: 01F6

Name	Value
Communication Connection Stat...	Online
MODEL	UT55A
Suffix code	-052-00-00
Optional suffix code	
MCU VERSION	
DCU VERSION	R0.03.02
ECU-1 VERSION	R0.03.05
ECU-2 VERSION	R0.03.05
ECU-3 VERSION	R0.03.06
ECU-4 VERSION	R0.03.05
PARAMETER VERSION	R0.03.13
PRODUCT VERSION	
Serial No.	T1HA17895
CONTROL MODE	SING
INPUT SAMPLING PERIOD (CO...	100
LADDER SEQUENCE FUNCTION	DON'T USE
NAME OF LADDER PROGRAM	NO NAME
LOAD FACTOR	-
MAX LOAD FACTOR	-

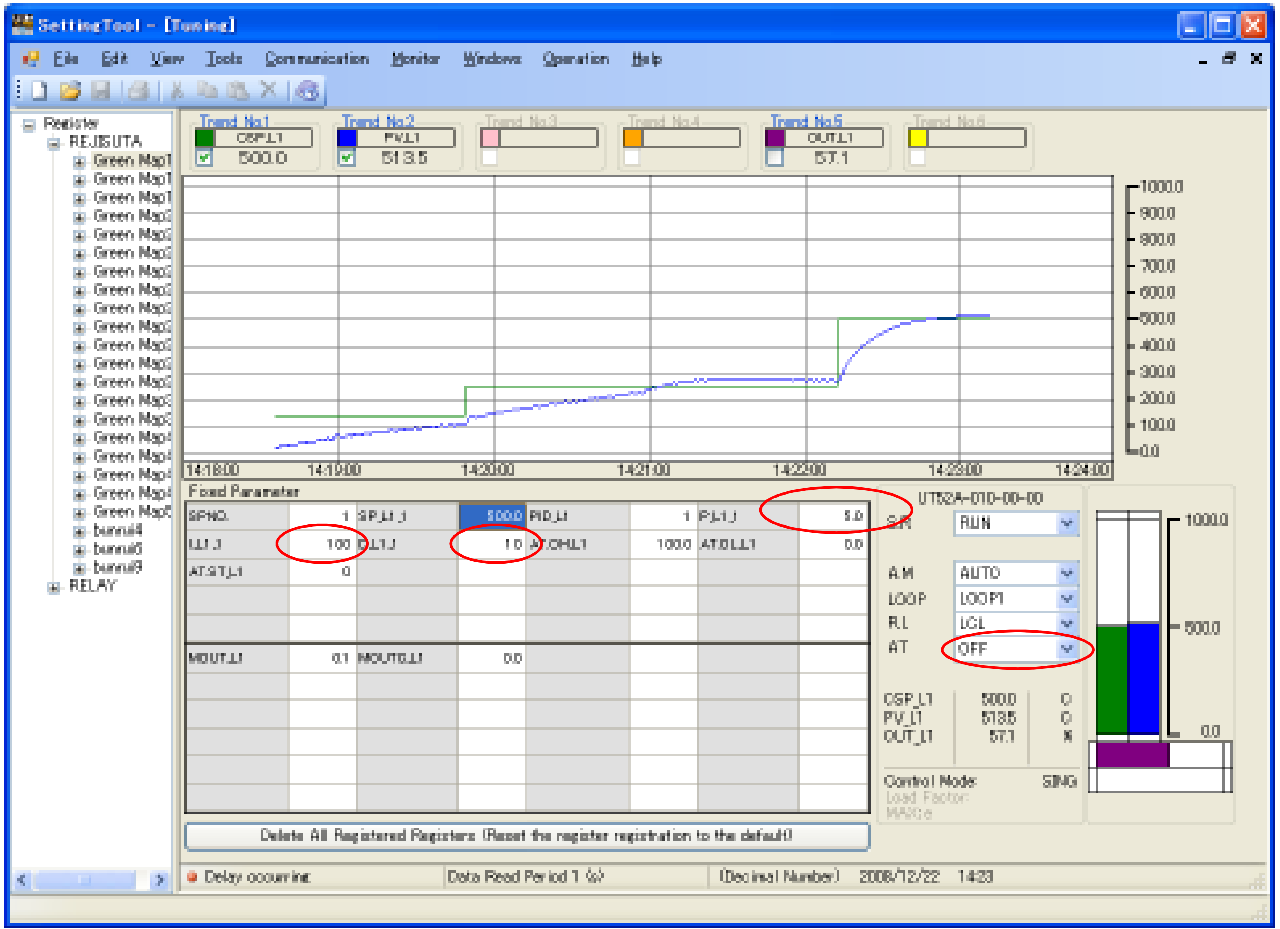
Alarm Generation Status

● Waiting

Appendix : Tuning

Start Tuning

- Set PID parameter and update the value
- Adjust PID: Change SP/PID parameters/AT


SettingTool - [Tuning]
File Edit View Tools Communication Monitor Windows Operation Help
Register
REJISUTA
Green Map1
Green Map2
Green Map3
Green Map4
Green Map5
bunrui4
bunrui6
bunrui9
RELAY
Trend No.1
Trend No.2
Trend No.3
Trend No.4
Trend No.5
Trend No.6
1000.0
900.0
800.0
700.0
600.0
500.0
400.0
300.0
200.0
100.0
0.0
14:18:00
14:19:00
14:20:00
14:21:00
14:22:00
14:23:00
14:24:00
Delete All Registered Registers (Reset the register registration to the default)
1000.0
500.0
0.0

☑ CSP_L1 500.0

☑ PV_L1 513.5

☐ OUT_L1 57.1

Fixed Parameter

SPNO.	1	SP_L1_1	500.0	PID_L1	1	P_L1_1	5.0
I_L1_1	100	D_L1_1	1.0	AT.OH_L1	100.0	AT.OL_L1	0.0
AT.ST_L1	0						
MOUT_L1	0.1	MOUTD_L1	0.0				

UT52A-010-00-00

S.R RUN

A.M AUTO

LOOP LOOP1

R.L LCL

AT OFF

CSP_L1	500.0	C
PV_L1	513.5	C
OUT_L1	57.1	%

Control Mode SING

Load Factor

MAXGe

Delay occurring Data Read Period 1 (s) (Decimal Number) 2008/12/22 14:23

Example of PID
P: 70
I: 16
D: 10

Appendix : Tuning

Save the Trend :

- Select [File] → [Save Trend Data]

Appendix：Wiring

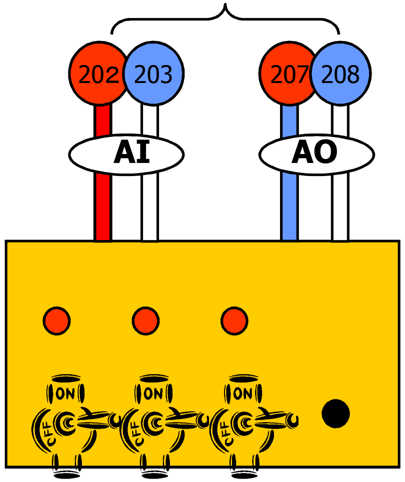
Wiring with simulator

- AI cable to terminal 202, 203
- AO cable to terminal 207, 208
- Resister to terminal 207, 208

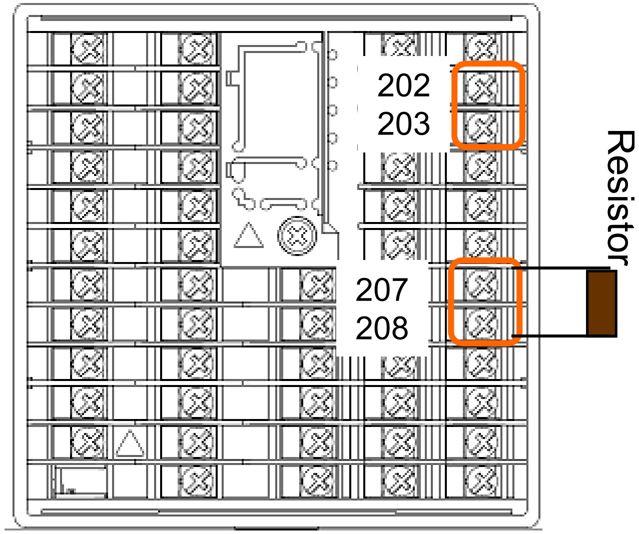
UT55A

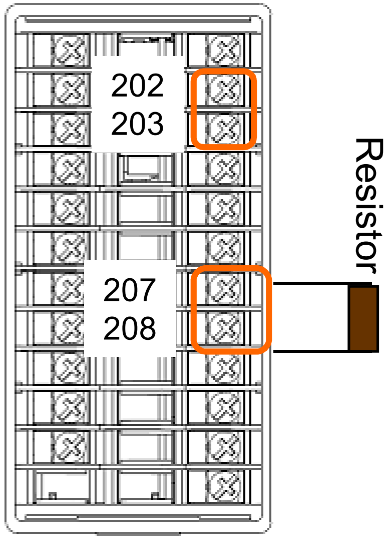
UT52A

AI/AO (PID) CABLE


202
203
207
208
AI
AO
ON
ON
ON
OFF
OFF
OFF

Simulator


202
203
207
208
Resistor


202
203
207
208
Resistor