DENSO

OPERATION MANUAL

EQUIPMENT NAME : Data Saving Function Version 1.0.0~1.5.0

LINE NAME : GDI Project

EQUIPMENT No. :

MC1:Solenoid Housing Welding Line 1

MC2:Solenoid Housing Welding Line 2

DENSO (THAILAND) CO., LTD.

DRAWING No. _____

WRITTEN ANUCHIT AREE MAY19,2014

CHECKED _____

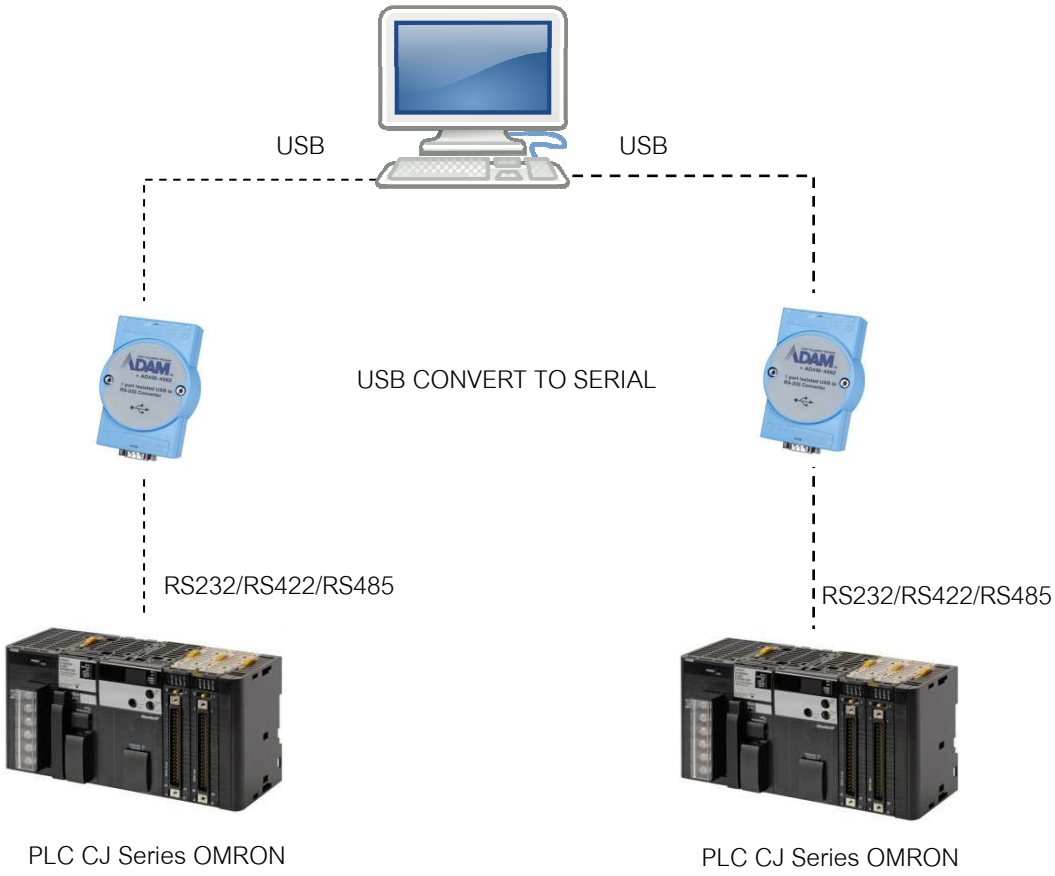
APPROVED _____

CONTENTS

OPREATION MANUALS FOR COMPONENT UNITS (ATTACHED VOLUME)			
No.	TITLE	REFERENCE No.	No. OF SHEETS
1			
2			
3			
4			

MANUFACTURED BY	SUPPLIER / REPRESENTATIVE	TEL. No.	REMARKS
DNTH MACHINE AND TOOL	MACHINE AND TOOL DEPARTMENT MACHINE AND TOO DESIGN SECTION	5061-4724	

System outline



1 Install the Net Framework 4.0

2 Installation the DATA SAVING FUNCTION

1 Copy the folder "GDI_DataLog" to "C:\Program Files\GDI_DataLog"

C:\Program Files\GDI_DataLog\Head
C:\Program Files\GDI_DataLog\Setup
C:\Program Files\GDI_DataLog\Release

1 Create shortcut from "C:\Program Files\GDI_DataLog\Release\GDI_DataLog.exe"

1 Copy shortcut to "start" --> " All Program" --> " Startup"

1 Copy the "SavingFile folder" into C:\

3 Install USB to RS232 ATEN driver **

4 install CX-compolet

4 setup communication port and FIN number

MC1 : FIN 1.11.0 COM 1 ,115200, 7, 2, E

MC2 : FIN 2.12.0 COM 3 ,115200, 7, 2, E (COM3 is physical port)

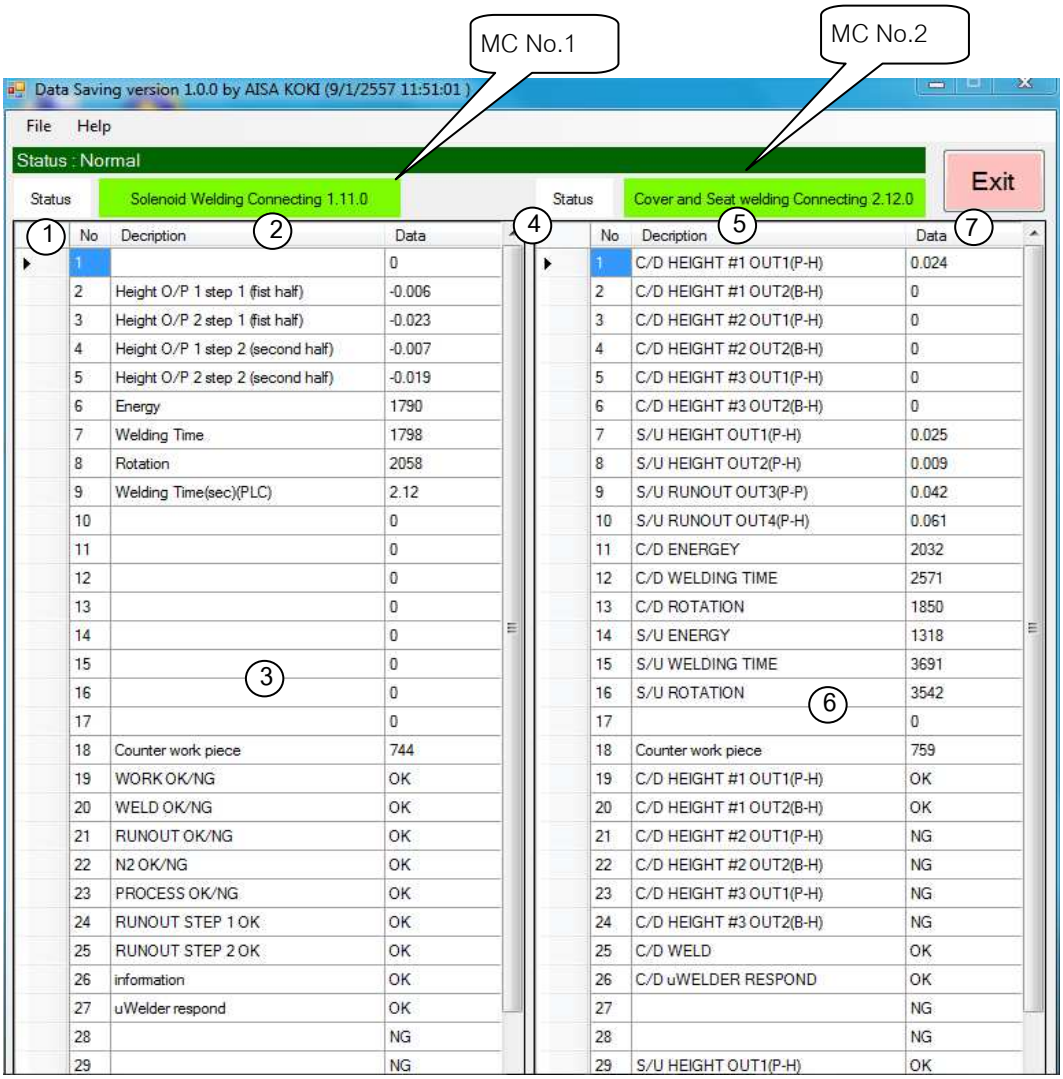
4.2 Test communication

see 3-2 , 3-3 page

** depend on the brand of hardware

OVERVIEW

1 Main page of the data log software version 1.0.0



No	Decription	Data
1		0
2	Height O/P 1 step 1 (fist half)	-0.006
3	Height O/P 2 step 1 (fist half)	-0.023
4	Height O/P 1 step 2 (second half)	-0.007
5	Height O/P 2 step 2 (second half)	-0.019
6	Energy	1790
7	Welding Time	1798
8	Rotation	2058
9	Welding Time(sec)(PLC)	2.12
10		0
11		0
12		0
13		0
14		0
15		0
16		0
17		0
18	Counter work piece	744
19	WORK OK/NG	OK
20	WELD OK/NG	OK
21	RUNOUT OK/NG	OK
22	N2 OK/NG	OK
23	PROCESS OK/NG	OK
24	RUNOUT STEP 1 OK	OK
25	RUNOUT STEP 2 OK	OK
26	information	OK
27	uWelder respond	OK
28		NG
29		NG

No	Decription	Data
1	C/D HEIGHT #1 OUT1(P-H)	0.024
2	C/D HEIGHT #1 OUT2(B-H)	0
3	C/D HEIGHT #2 OUT1(P-H)	0
4	C/D HEIGHT #2 OUT2(B-H)	0
5	C/D HEIGHT #3 OUT1(P-H)	0
6	C/D HEIGHT #3 OUT2(B-H)	0
7	S/U HEIGHT OUT1(P-H)	0.025
8	S/U HEIGHT OUT2(P-H)	0.009
9	S/U RUNOUT OUT3(P-P)	0.042
10	S/U RUNOUT OUT4(P-H)	0.061
11	C/D ENERGEY	2032
12	C/D WELDING TIME	2571
13	C/D ROTATION	1850
14	S/U ENERGY	1318
15	S/U WELDING TIME	3691
16	S/U ROTATION	3542
17		0
18	Counter work piece	759
19	C/D HEIGHT #1 OUT1(P-H)	OK
20	C/D HEIGHT #1 OUT2(B-H)	OK
21	C/D HEIGHT #2 OUT1(P-H)	NG
22	C/D HEIGHT #2 OUT2(B-H)	NG
23	C/D HEIGHT #3 OUT1(P-H)	NG
24	C/D HEIGHT #3 OUT2(B-H)	NG
25	C/D WELD	OK
26	C/D uWELDER RESPOND	OK
27		NG
28		NG
29	S/U HEIGHT OUT1(P-H)	OK

(1) A lamp show status. The lamp is orange when getting a data.
(2) MC1's name. The green lamp is normal. If it is red, it cannot connect the PLC.
(3) A log data

(4) A lamp show status. The lamp is orange when getting a data.
(5) MC2's name. The green lamp is normal. If it is red, it cannot connect the PLC.
(6) A log data

(7) Exit program

OVERVIEW

2 Main page of the data log software version 1.5.0

MC1

1. A lamp show status. The lamp is orange when getting a data.
2. MC1's name. The green lamp is normal. If it is red, it cannot connect the PLC.
3. A log data

MC2

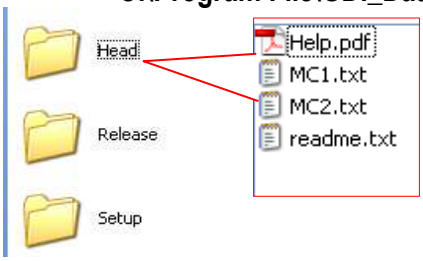
4. A lamp show status. The lamp is orange when getting a data.
5. MC2's name. The green lamp is normal. If it is red, it cannot connect the PLC.
6. A log data

7. Exit program

2 Area management

2.1 Area for header logging file

C:\Program File\GDI_DataLog\Head



MC1.txt - Notepad

```
DATE
TIME

Height O/P 1 step 1 (fist half)
Height O/P 2 step 1 (fist half)
Height O/P 1 step 2 (second half)
Height O/P 2 step 2 (second half)
Energy
Welding Time
Rotation
Welding Time(sec)(PLC)



Counter work piece
WORK OK/NG
WELD OK/NG
RUNOUT OK/NG
N2 OK/NG
PROCESS OK/NG
RUNOUT STEP 1 OK
RUNOUT STEP 2 OK
information
uWelder respond
```

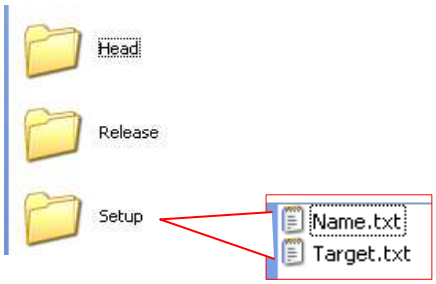
MC2.txt - Notepad

```
DATE
TIME
C/D HEIGHT #1 OUT1(P-H)
C/D HEIGHT #1 OUT2(B-H)
C/D HEIGHT #2 OUT1(P-H)
C/D HEIGHT #2 OUT2(B-H)
C/D HEIGHT #3 OUT1(P-H)
C/D HEIGHT #3 OUT2(B-H)
S/U HEIGHT OUT1(P-H)
S/U HEIGHT OUT2(P-H)
S/U RUNOUT OUT3(P-P)
S/U RUNOUT OUT4(P-H)
C/D ENERGEY
C/D WELDING TIME
C/D ROTATION
S/U ENERGY
S/U WELDING TIME
S/U ROTATION

Counter work piece
C/D HEIGHT #1 OUT1(P-H)
C/D HEIGHT #1 OUT2(B-H)
C/D HEIGHT #2 OUT1(P-H)
C/D HEIGHT #2 OUT2(B-H)
C/D HEIGHT #3 OUT1(P-H)
C/D HEIGHT #3 OUT2(B-H)
C/D WELD
C/D uWELDER RESPOND


S/U HEIGHT OUT1(P-H)
S/U HEIGHT OUT2(P-H)
S/U RUNOUT OUT3(P-P)
S/U RUNOUT OUT4(P-H)
S/U WELD
S/U uWELDER RESPOND
```

You can decide it by yourself.

2.2 Area for initial data

C:\Program File\GDI_DataLog\Setup



Name.txt - Notepad

```
Solenoid Welding
Cover and Seat welding
```

MC No.1

MC No.2

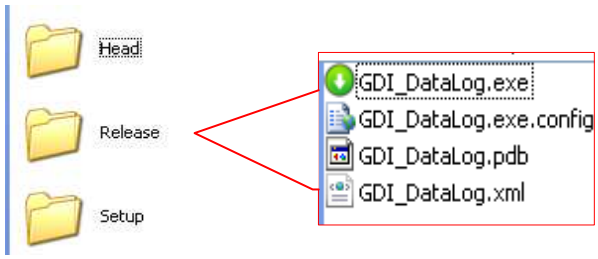
for defind machine's name
You can change by yourself.

Target.txt - Notepad

```
E:\SavingFile
```

If you want backup data to other drive, you decide the folder.
If you don't decide, it doesn't backup data.

2.3 Area for program

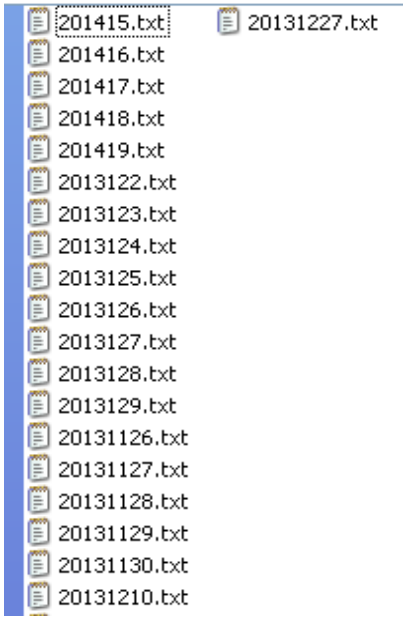


Run the "GDI_Datalog.exe"

2.4 Area keep data logging

C:\Saving Files\MC1 → MC1 is solenoid welding

C:\Saving Files\MC2 → MC2 is cover and seat welding

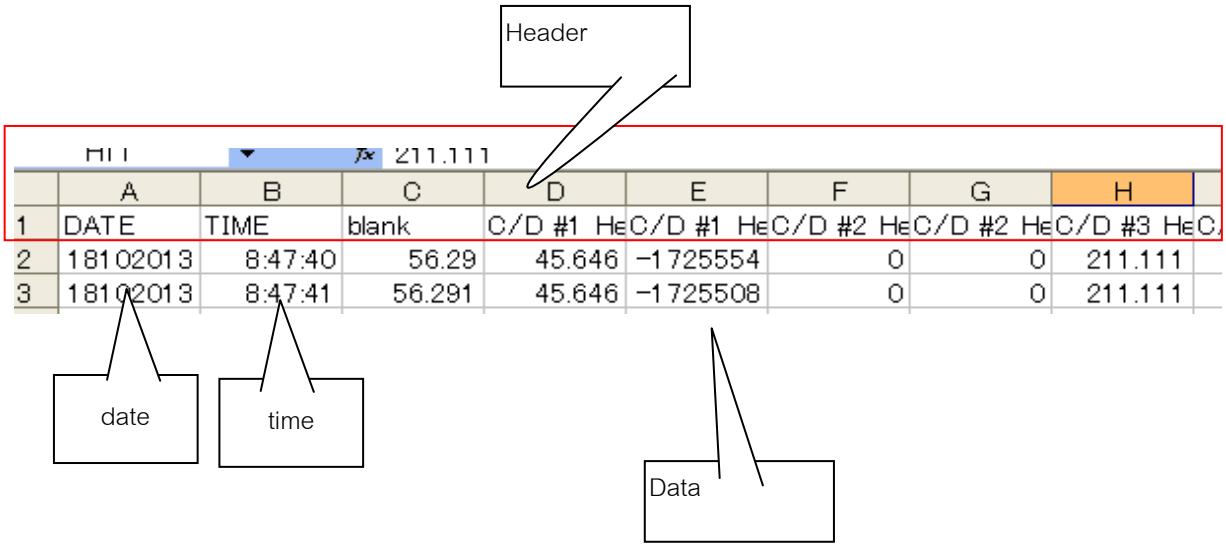


A file name is created by automatic depend on Year.month.day
such as 20131012 is 2013 year 10 month 12 day
20131013 is 2013 year 10 month 13 day
The file name will change when day change.

△1 revised

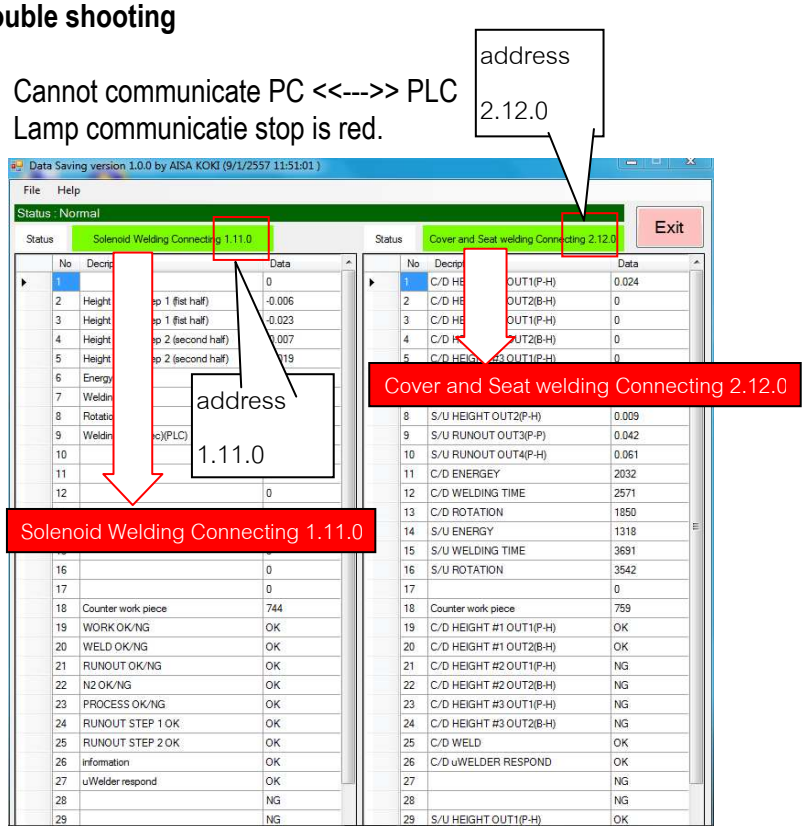
20131012.txt -----> 2013_10_12.txt

Format of data



Trouble shooting

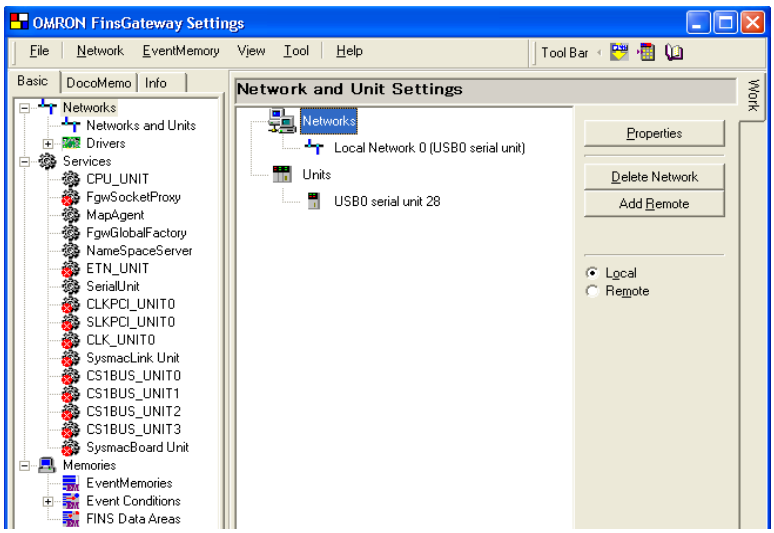
1 Cannot communicate PC <<--->> PLC
Lamp communicatie stop is red.



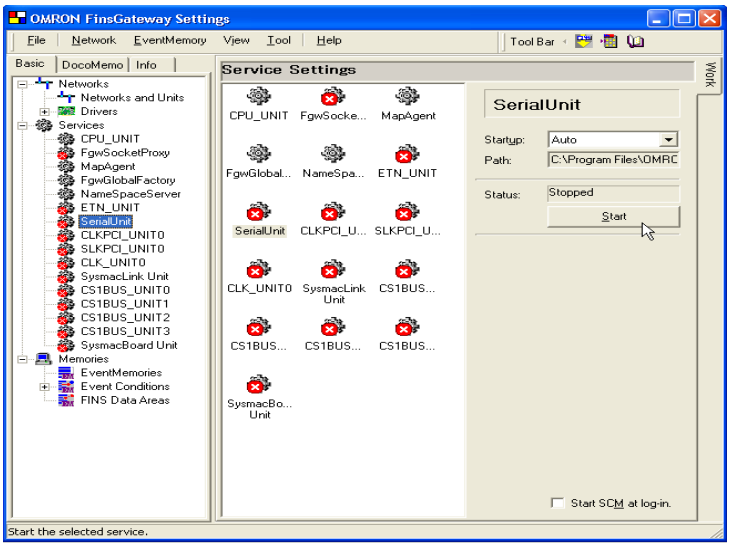
2 Open the FinGateway Setting

3 Check the Services must run

CPU_UNIT
MapAgent
FgwGlobalFactory
NampSpaceServer
SerialUnit



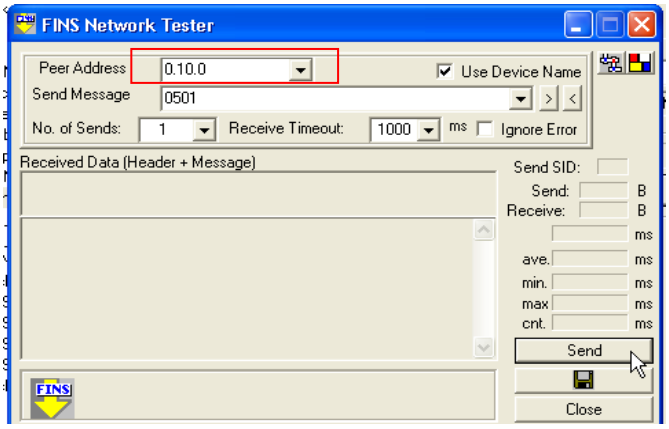
if any service is stop .
use mouse click at unit ,then press "start"
like this.



How to test communication

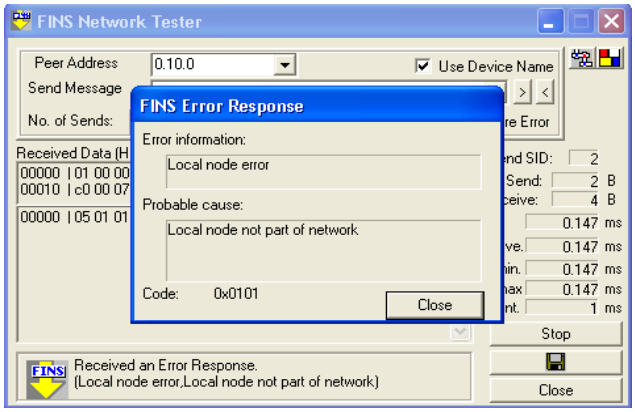
Run FINS Communication Test

Input Peer Address 1.11.0
then press the "Send"
or
Input Peer Address 2.12.0
then press the "Send"
or

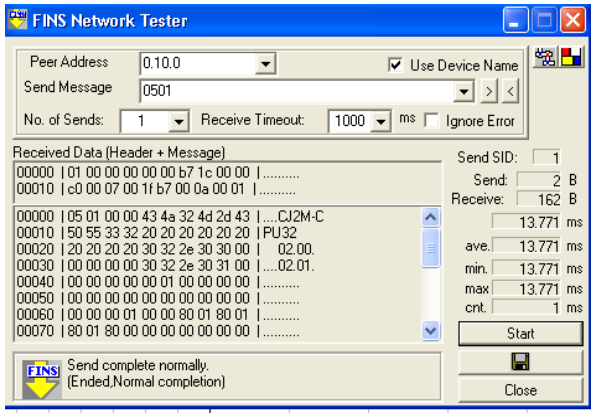


Test result

Not pass



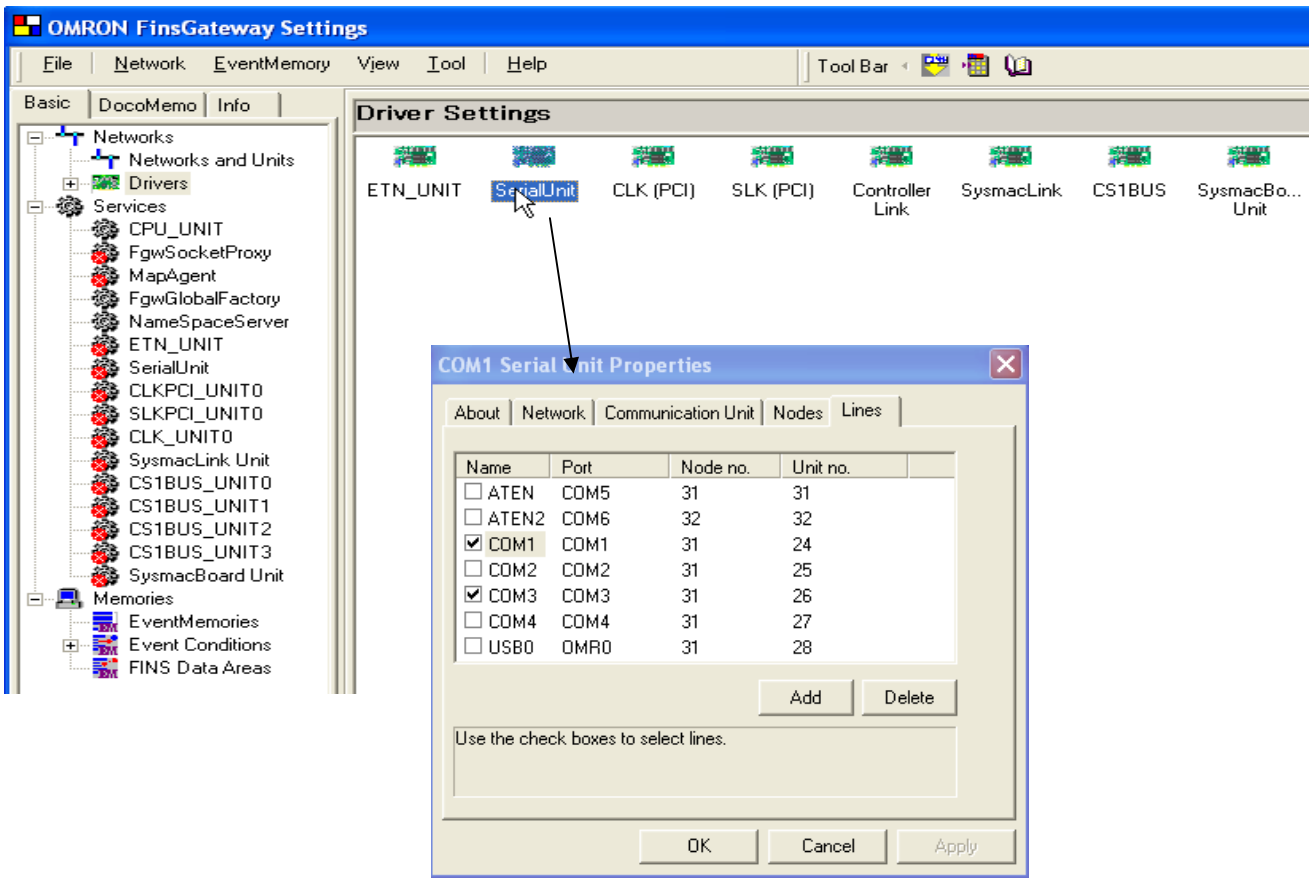
Pass



How to solve the problem.

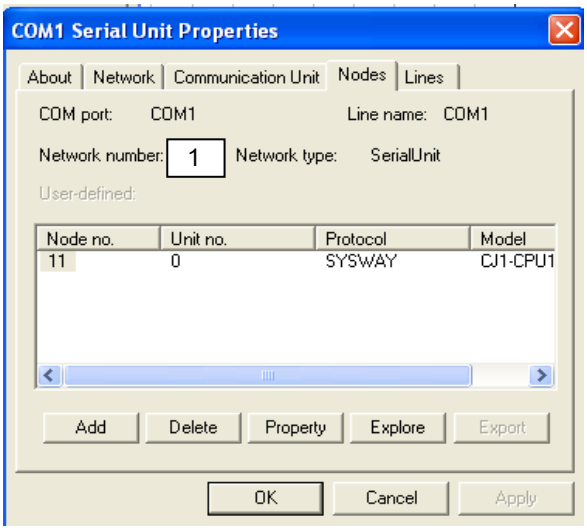
1. Do communication cable loosen ? -> Tightening
2. Is the port damaged ? -> repair
3. Setting FIN value is not correct. -> restore backup data

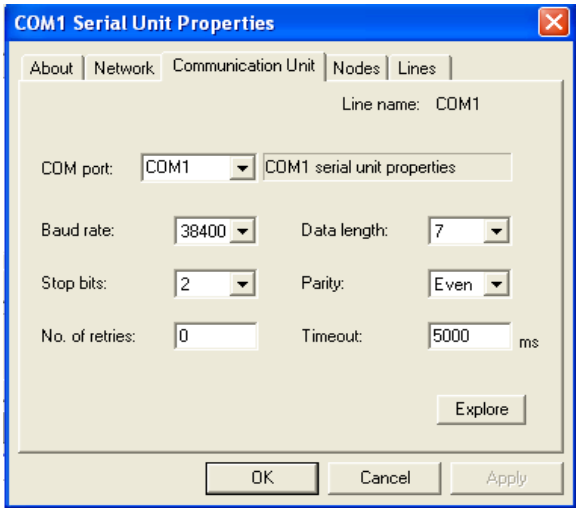
Setting FIN GATEWAY

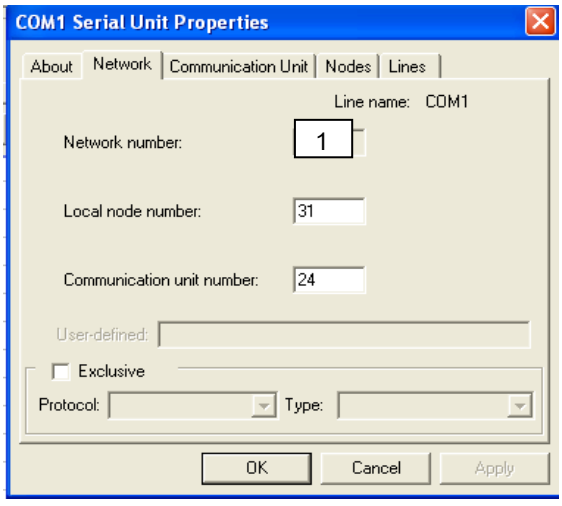


detail each ports

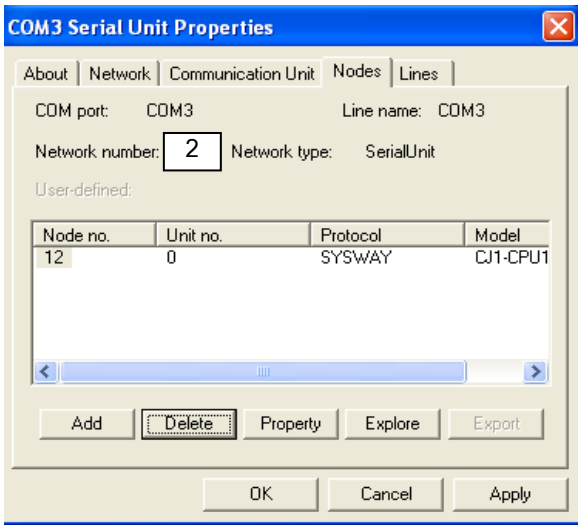
COM1 1.11.0

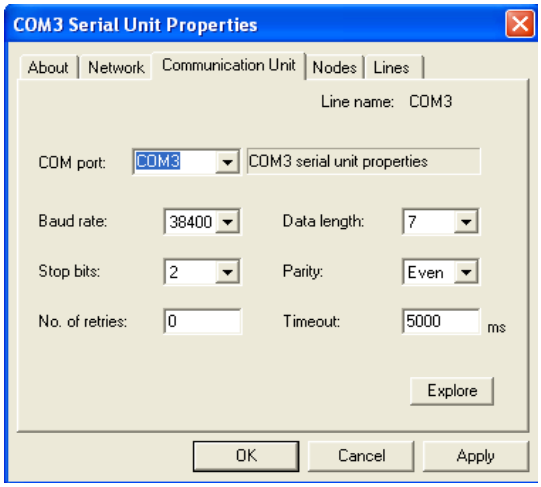


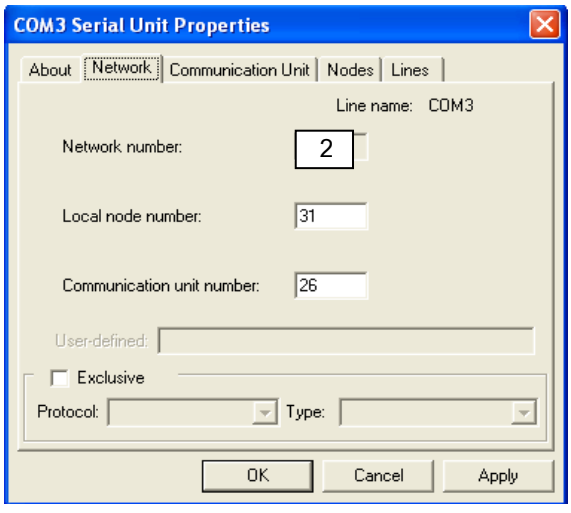




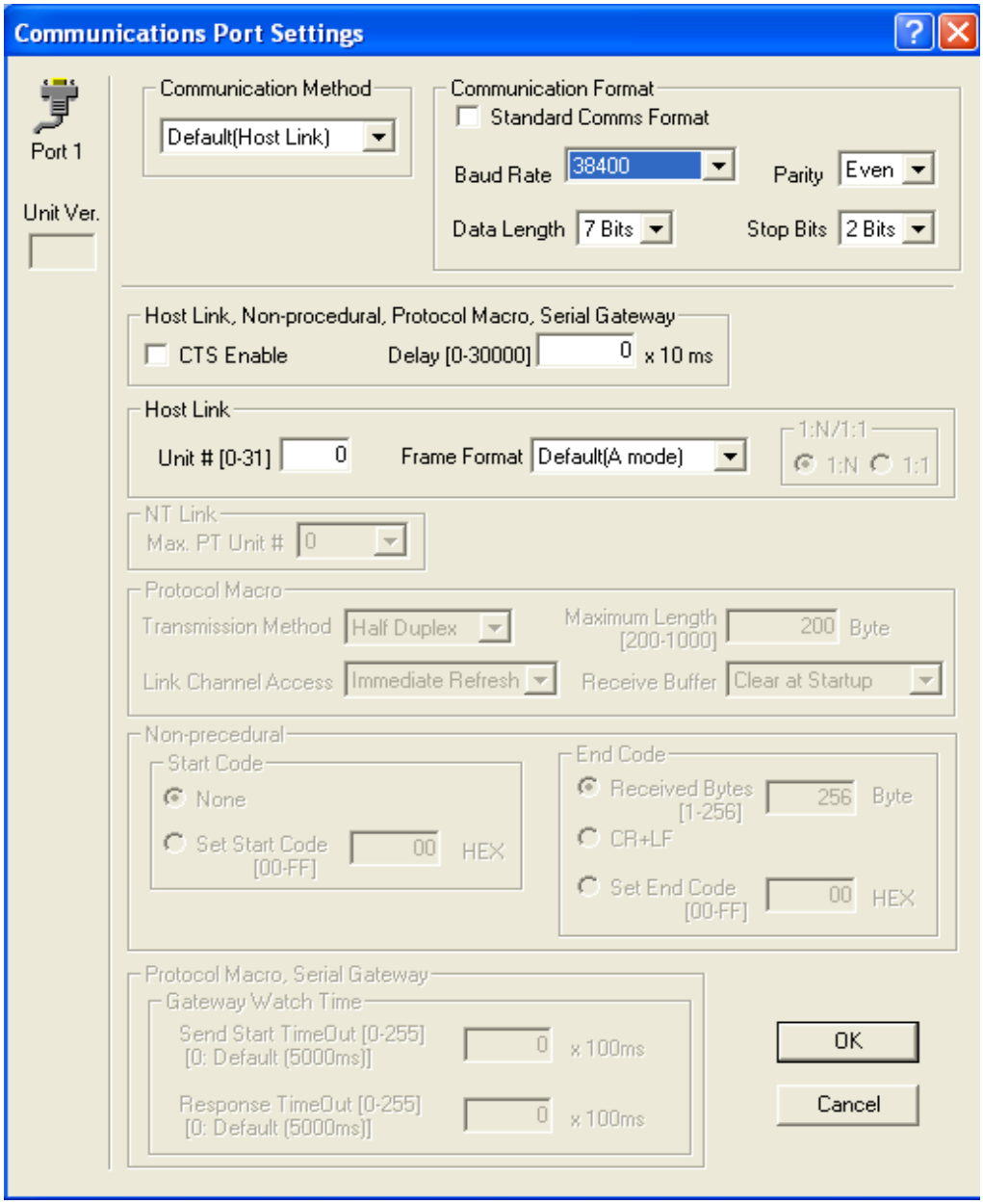
COM3 2.12.0







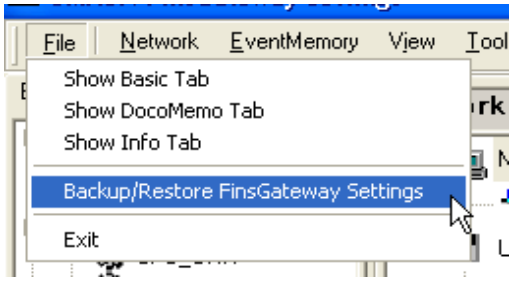
PLC communication ports setting



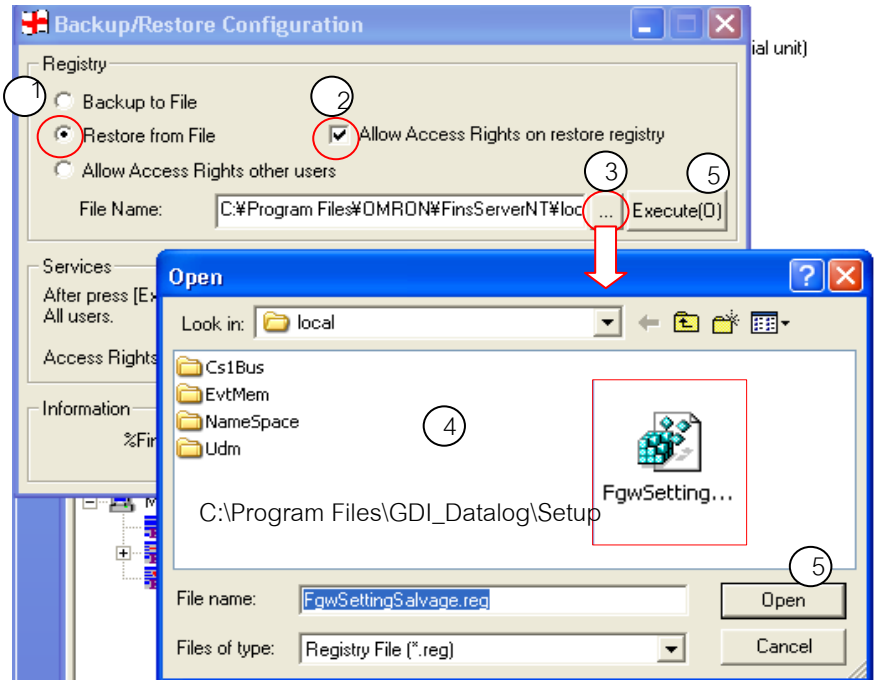
How to restor backup file.

1. Run " FinGateway Setting"

2. Click at File and Backup/Restore FinGateway Setting



3. select " Restore from File " and checkbox at right side hand



Appendic 1

GDI : DATA SAVING FUNCTION

MACHINE NAME			Cover Damper & Seat Upper Wedling MC	Solenoid Laser Welding MC	Solenoid Housing Laser Welding MC
	D100	hexcimal	Reserved	Reserved	Reserved
	D101				
1	D102	Floating 32bit	C/D HEIGHT #1 OUT1(P-H)	SPARE	
	D103				
2	D104	Floating 32bit	C/D HEIGHT #1 OUT2(B-H)	O/P 1 step 1 PEAKHOLD (fist half) (mm)	RUNOUT (mm)
	D105				
3	D106	Floating 32bit	C/D HEIGHT #2 OUT1(P-H)	O/P 2 step 1 BOTTOMHOLD (fist half) (mm)	R-HEIGHT (mm)
	D107				
4	D108	Floating 32bit	C/D HEIGHT #2 OUT2(B-H)	O/P 1 step 2 PEAKHOLD (second half) (mm)	L-HEIGHT (mm)
	D109				
5	D110	Floating 32bit	C/D HEIGHT #3 OUT1(P-H)	O/P 2 step 2 BOTTOMHOLD (second half) (mm)	Energy 1 (W)
	D111				
6	D112	Floating 32bit	C/D HEIGHT #3 OUT2(B-H)	Energy (W)	Energy 2 (W)
	D113				
7	D114	Floating 32bit	S/U HEIGHT OUT1(P-H)	Welding Time (sec)	Energy 3 (W)
	D115				
8	D116	Floating 32bit	S/U HEIGHT OUT2(B-H)	Rotation (RPM)	Energy 4 (W)
	D117				
9	D118	Floating 32bit	S/U RUNOUT OUT3(P-P)		Welding Time (sec)
	D119				
10	D120	Floating 32bit	S/U RUNOUT OUT4(P-H)		Rotation (RPM)
	D121				
11	D122	Floating 32bit	C/D ENERGEY		
	D123				
12	D124	Floating 32bit	C/D WELDING TIME		
	D125				
13	D126	Floating 32bit	C/D ROTATION		
	D127				
14	D128	Floating 32bit	S/U ENERGY		
	D129				
15	D130	Floating 32bit	S/U WELDING TIME		
	D131				
16	D132	Floating 32bit	S/U ROTATION		
	D133				
17	D134	BCD	Work	Work	Work
	D135				
18	D136	BCD	Year-year fix	Year-year fix	Year-year fix
	D137	BCD	Month-Day	Month-Day	Month-Day
19	D138	BCD	Series 1 -series 2	Series 1 -series 2	Series 1 -series 2
	D139	BCD	Series 3 - Line no.	Series 3 - Line no.	Series 3 - Line no.
20	D140				
	D141				
21	D142	Binary	Result. See more detail below table	Result. See more detail below table	Result. See more detail below table
	D143				

Appendic 2

D142	0	Boolean	C/D HEIGHT #1 OUT1(P-H)	WORK OK/NG	RUNOUT OK/NG
	1	Boolean	C/D HEIGHT #1 OUT2(B-H)	WELD OK/NG	L-HEIGHT OK/NG
	2	Boolean	C/D HEIGHT #2 OUT1(P-H)	RUNOUT OK/NG	R-HEIGHT OK/NG
	3	Boolean	C/D HEIGHT #2 OUT2(B-H)	N2 OK/NG	WELDER OK/NG
	4	Boolean	C/D HEIGHT #3 OUT1(P-H)	PROCESS OK/NG	N2 OK/NG
	5	Boolean	C/D HEIGHT #3 OUT2(B-H)	RUNOUT STEP 1 P-H OK	WORK OK/NG
	6	Boolean	C/D WELD	RUNOUT STEP 1 B-H OK	uWelder NO RESPOND
	7	Boolean	C/D uWelder NO RESPOND	uWelder NO RESPOND	
	8	Boolean		RUNOUT STEP 2 P-H OK	
	9	Boolean		RUNOUT STEP 2 B-H OK	
	10	Boolean			
	11	Boolean			
	12	Boolean			
	13	Boolean			
	14	Boolean			
	15	Boolean			
D143	0	Boolean	S/U HEIGHT OUT1(P-H)		
	1	Boolean	S/U HEIGHT OUT2(P-H)		
	2	Boolean	S/U RUNOUT OUT3(P-P)		
	3	Boolean	S/U RUNOUT OUT4(P-H)		
	4	Boolean	S/U WELD		
	5	Boolean	S/U uWelder NO RESPOND		
	6	Boolean			
	7	Boolean			
	8	Boolean			
	9	Boolean			
	10	Boolean			
	11	Boolean			
	12	Boolean			
	13	Boolean			
	14	Boolean			
	15	Boolean			