UbiGEM Driver
Host Simulator Manual

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Contents

UbiGEM Driver Host Simulator

Contents

UbiGEM Host Simulator

1. Summary

This section describes a simulator that can perform a host function of UbiGEM driver. Its key features include:
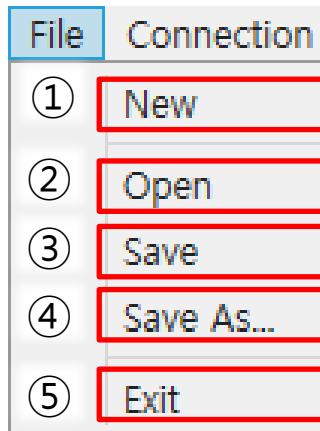
• It is possible to set up a host function of GEM driver.
• A HSMS communication connection with equipment is available.
• SECS-II message communication is available for the GEM driver of equipment.
• The GEM driver of equipment can be reused.

2. System requirements

  • Software requirement
    - Microsoft .NET Framework 4.
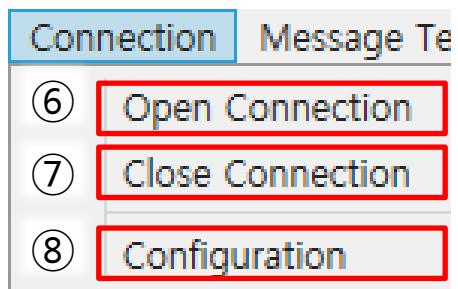
※ The UbiGEM Host Simulator uses only the values stored in a UbiGEM configuration file and does not manage data.

※ Data modified by the UbiGEM Host Simulator is not applied to the UbiGEM configuration file (.ugc).

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UbiGEM Simulator

3. System menu structure
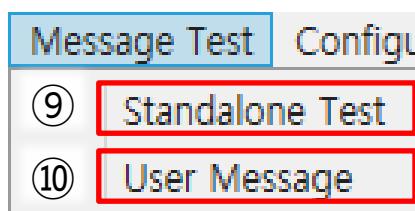
File

① New : Create a new GEM driver host setting.
② Open : Open and reuse an existing GEM driver host setting.
③ Save : Save current GEM driver host settings.
④ Save As : Save current GEM Driver Host. settings under a different name.
⑤ Exit : Quit the UbiGEM Host Simulator.

Connection

⑥ Open Connection : Open the HSMS communication driver of the host.
⑦ Close Connection : Close the HSMS communication driver of the host.
⑧ Configuration : Configure an environment for connection.
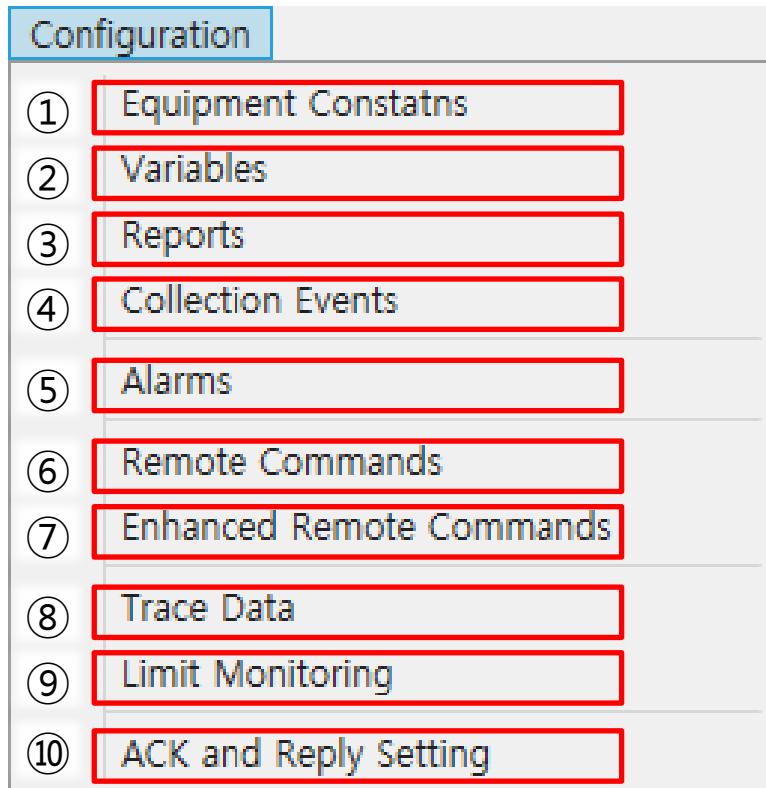
Message Test

⑨ Standalone Test : Select / Deselect a display layout of test messages.
⑩ User Message : Select / Deselect a display layout of user messages.

※ The UbiGEM Host Simulator's environment setting does not support real-time saving of configuration file. All information is saved only through the save menu ②.

4
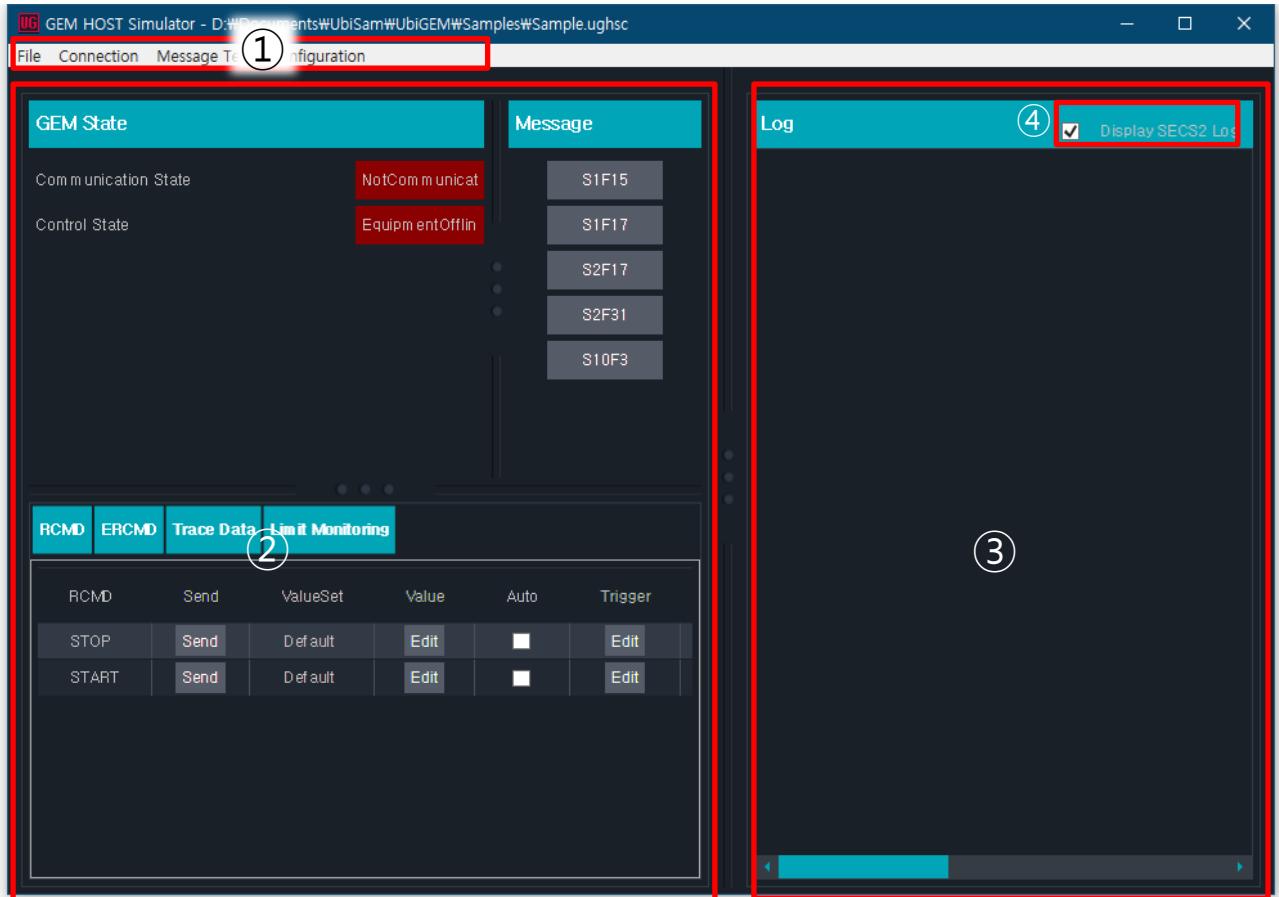
3. System menu structure

Configuration

① Equipment Constatns
② Variables
③ Reports
④ Collection Events

⑤ Alarms

⑥ Remote Commands
⑦ Enhanced Remote Commands

⑧ Trace Data
⑨ Limit Monitoring

⑩ ACK and Reply Setting

Configuration

① Equipment Constants : edit equipment constants of GEM Driver.
② Variables : edit variables of GEM Driver.
③ Reports: edit reports of GEM Driver.
④ Collection Events : edit collection events of GEM Driver.
⑤ Alarms : edit alarms of GEM Driver.
⑥ Remote Commands : edit remote commands of GEM Driver.
⑦ Enhanced Remote Commands : edit enhanced remote commands of GEM Driver.
⑧ Trace Data : edit trace data settings of GEM Driver.
⑨ Limit Monitoring: edit limit monitoring settings of GEM Driver.
⑩ ACK and Reply Setting: edit ACK and reply settings of secondary messages.

4. Layout

① A menu bar for reuses of equipment GEM driver and host configuration.
② Host functions of GEM driver.
③ Log information regarding function execution between the GEM Driver and the host.
④ Set whether to show SECS2 log information between the GEM Driver and the host.

※ When the message test submenu item (standalone test, user message) is selected, its content will be displayed on the screen region 2.

5. UbiGEM host simulator special features
5.1. Value generating rule

Name	Format	Rule	Value
LANEID	A		
MODELID	A		
LOTID	A		
CONFIRM_FLAG	A		
CODE	A		
TEXT	A		

The UbiGEM Host Simulator provides a value generating function for remote commands and enhanced remote commands.

The value generating function is applied to parameters and values.
It works if you have not entered a value in the value cell and you have defined a rule.

Rule type	Rule input type	Description
Using EC	{EC:15}	Use the value set in EC 15.
Using VID	{VID:100}	Use the value set in VID 100U.
Random value	{RAND:1:9}	Use any value from 1 to 9
Incremental value	{INC:1:2}	Use a value that increases by 2 from 1.

If the format is A, a pattern can be added.

Rule type	Rule input type	Generating value	Generating result
Using EC	EC_{EC:15}	Actual value of EC 15: 1	EC_1
Using VID	{VID:100}_T	Actual value of VID 100: 10	10_T
Random value	LOT_{RAND:1:9}	Result of Rand : 5	LOT_5
Incremental value	2019_{INC:1:2}_M	Result of INC : 11	2019_11_M

UbiSam

5. UbiGEM host simulator special features
5.2. Optional message send

The UbiGEM Host Simulator provides an auto send function based on CEIDs and variable values for the remote command, enhanced remote command, trace data, and limit monitoring.

How to use the auto send function

① Change the state of an auto column check box to V in each setting screen.
② Click a trigger edit button.
③ Add a new trigger item via the add icon.
④ Select a mode (collection event or variable value).
⑤ Select a collection event (if based on collection event).
⑥ Select a report.
⑦ Select a variable.
⑧ Input a variable value.
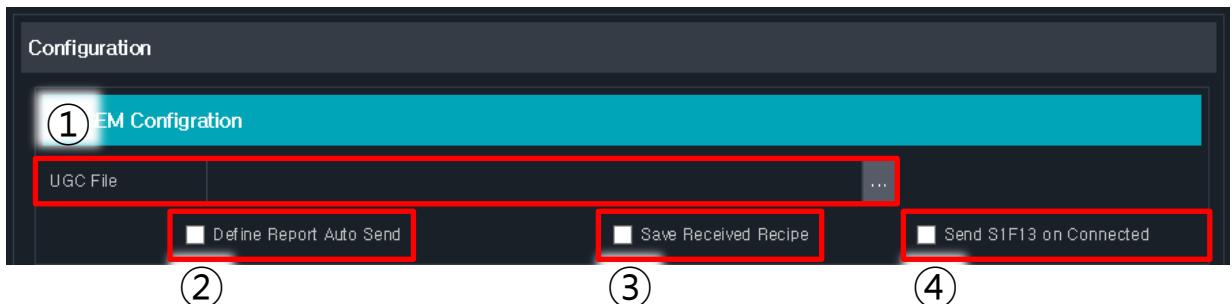
When a S6F11 is received from an EQP, the host will send a message automatically to the EQP if the auto send flag is enabled and the selected CEID is triggered in the EQP.

All automatic transmissions can be duplicated.

EX) When the trigger CEID is set equal to the remote command class 2 , enhanced remote command class 1, trace data class 3, limit monitoring class 2, all messages are sent sequentially.
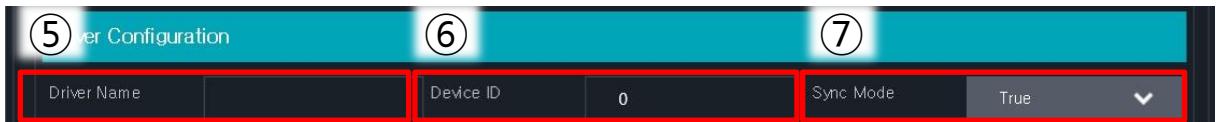
6. UbiGEM host simulator connection management

UbiGem configuration

Item	Description
① UGC File	The UbiGEM configuration file.
② Define Report Auto	If this automatic define report sending option is selected, a S2F33 (Define Report Enable), S2F35 (Link Event Report Enable) and S2F37 (Event Report Enable) will be sent when switching from offline to online.
③ Save received recipe	This option indicates whether or not to automatically save a received recipe
④ Send S1F13 on connected	If this option indicating whether to transmit S1F13 automatically is selected, S1F13 (Establish connection) will be sent when connected.

Driver configuration

Item	Description
⑤ Driver Name	A driver name.
⑥ Device ID	A device ID (default value = 0).
⑦ Sync Mode	A message transmission / reception processing method (default value = true).

※ Recipe saving path
Unformatted Recipe: My documents\UbiSam\UbiGEM\UbiGEM.Net.Simulator\Recipe
Formatted Recipe: My documents\UbiSam\UbiGEM\UbiGEM.Net.Simulator\Recipe_Fmt

6. UbiGEM Host Simulator Connection Management

HSMS configuration

| Item	Description
① HSMS Mode	A HSMS mode (default value = active).
② IP	An IP address
③ Port	A port number

Log setting

Item	Description
④ SECS-I Log	How to save a SECS-I log (default value = hour).
⑤ SECS-II Log	How to save a SECS-II log (default value = hour).
⑥ Driver Log	How to save a driver log (default value = none).
⑦ Log Expire Day	A log retention period (units = days, default value = 30).
⑧ Log Directory	A log path (default value = C:/Log).
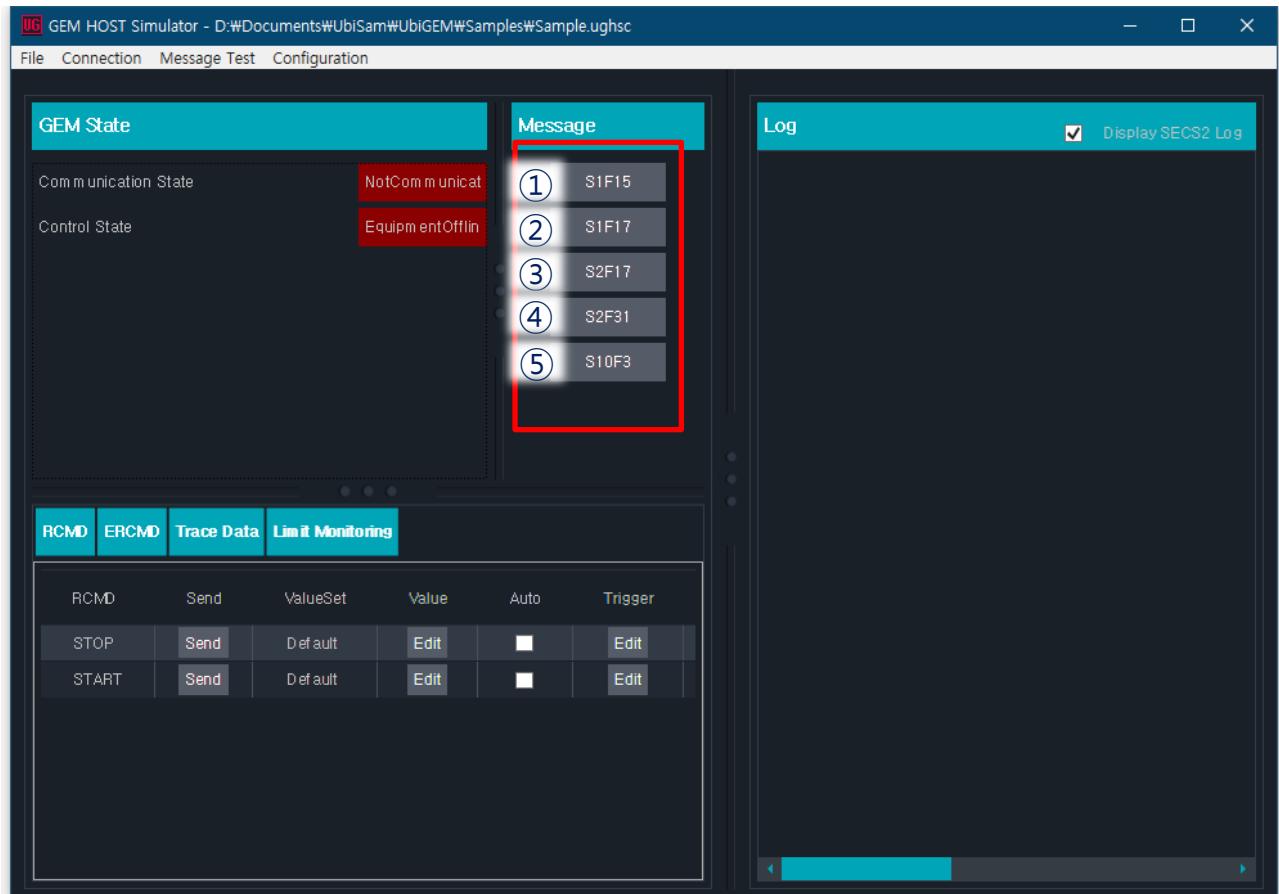
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6. UbiGEM host simulator connection management

Timeout setting

| Item	Description
① T3 Timeout(s)	A T3 timeout interval (unit = seconds, default = 45).
② T5 Timeout(s)	A T5 timeout interval (unit = seconds, default = 10).
③ T6 Timeout(s)	A T6 timeout interval (unit = seconds, default value = 5).
④ T7 Timeout(s)	A T7 timeout interval (unit = seconds, default value = 10).
⑤ T8 Timeout(s)	A T8 timeout interval (unit = seconds, default value = 5).
⑥ Link Test Interval(s)	A link test period (unit = seconds, default value = 120).

7. Host simulator main
7.1. Message
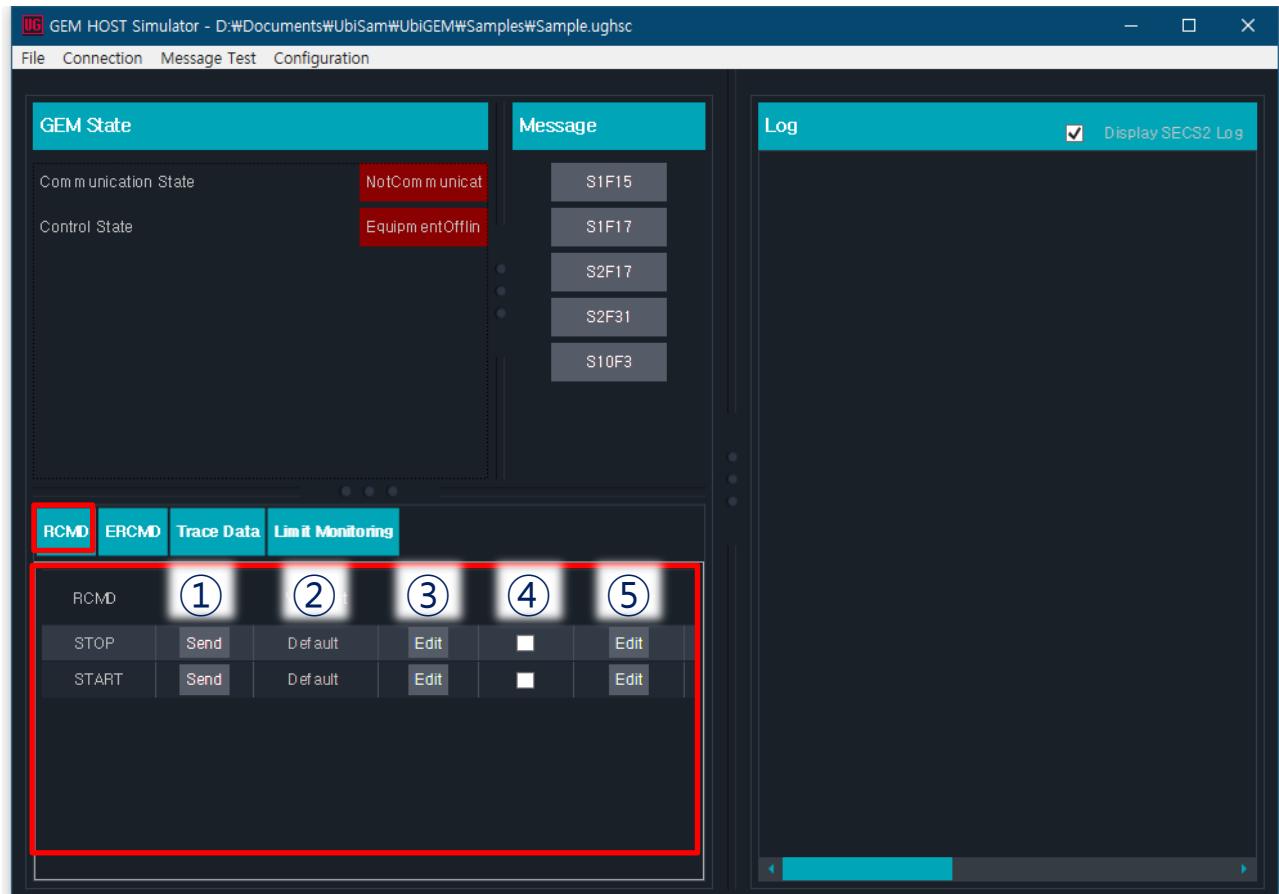
① Send a S2F15 (Offline Request).
② Send a S1F17 (Online Request).
③ Send a S2F17 (Date and Time Request).
④ Send a S2F31 (Date and Time Set Request).
⑤ Send a S10F3 (Terminal Display, Single).
   When it is clicked, a window to enter contents of S10F3 will appears.

7. Host simulator main
7.2. Remote command

① Send a S2F41 (Remote Command).
② Select a value set to be sent with S2F41
③ Open a window for modifying the value of a remote command.
④ Enable or disable optional message send function.
⑤ Open a window for modifying the value of a trigger.

※ The value set selected in ② will be sent / modified when sending S2F41 or editing the value.
※ Optional Message Send function uses the default value of value set.
※ If the value of a command parameter is not set and a generating rule is set, a value matching the condition is automatically created and inserted into the CPVAL of the parameter.

7. Host simulator main
7.2. Remote command
#### Value edit
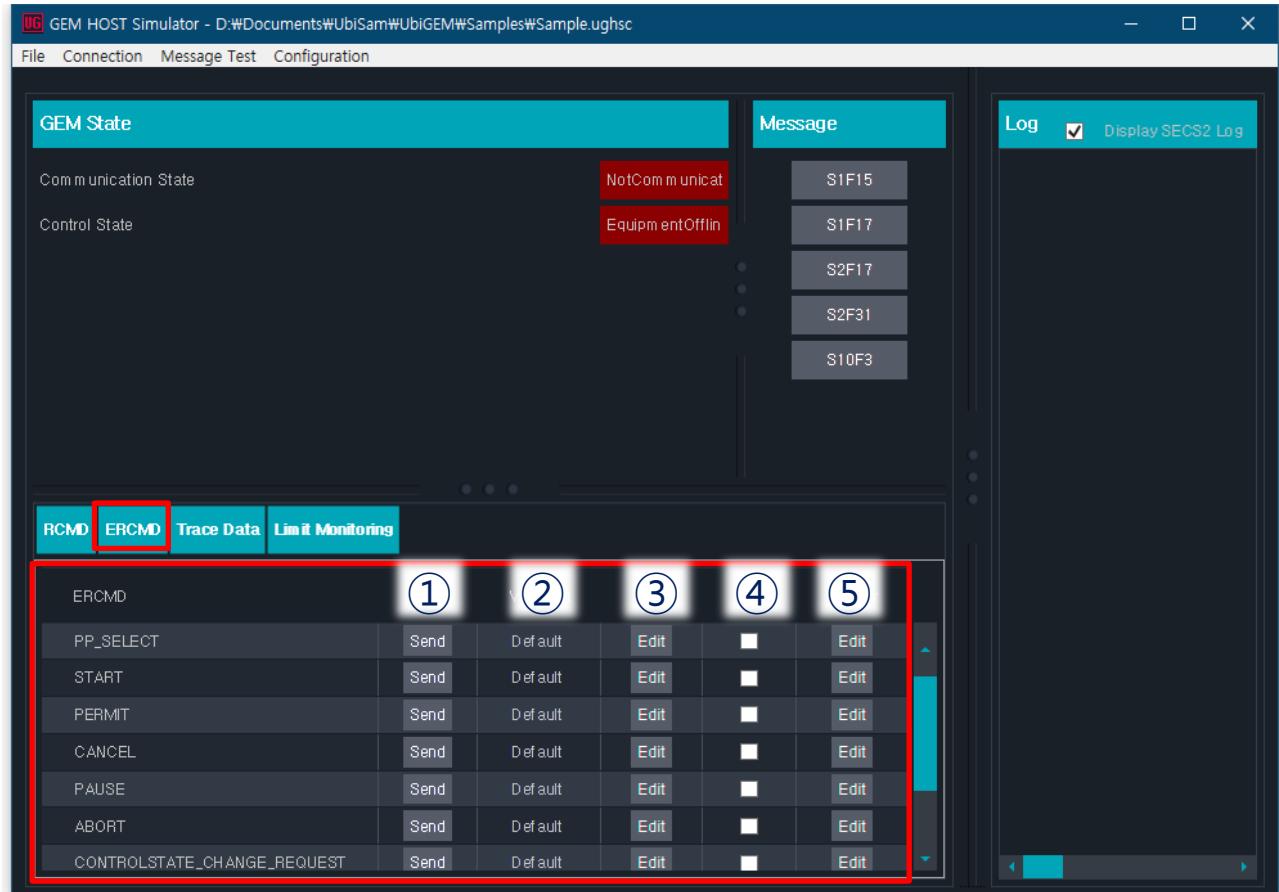
① Modify a value generating rule.
② Modify a value.

※ Only Rule and Value items are modifiable.

UbiSam

7. Host simulator main
7.3. Enhanced remote command

① Send a S2F49 (Enhanced Remote Command).
② Select a value set to be sent with S2F49
③ Open a window for modifying the value of a remote command.
④ Enable or disable optional message send function.
⑤ Open a window for modifying the value of a trigger.

※ The value set selected in ② will be sent / modified when sending S2F49 or editing the value.
※ Optional Message Send function uses the default value of value set.
※ If the value of a command parameter is not set and a generating rule is set, a value matching the condition is automatically created and inserted into the CPVAL and CEPVAL of the parameter.

7. Host simulator main
7.3. Enhanced remote command
Value edit


① Modify a DATAID
② Modify an OBJSPEC.
③ Modify the value generating rule of a parameter.
④ Modify a parameter value.
⑤ If the format of the parameter is List, you can select whether or not to attach the sub-item. If ChildCount is 0, it will be sent as the list with a length of 0 regardless of the structure of the child item.
⑥ If the parameter is a list, modify the value generating rule of a sub-item.
⑦ If the parameter is a list, modify the value of a sub-item.

※ Only DATAID, OBJSPEC, Rule, Value items are modifiable.

7. Host simulator main
7.4. Trace data
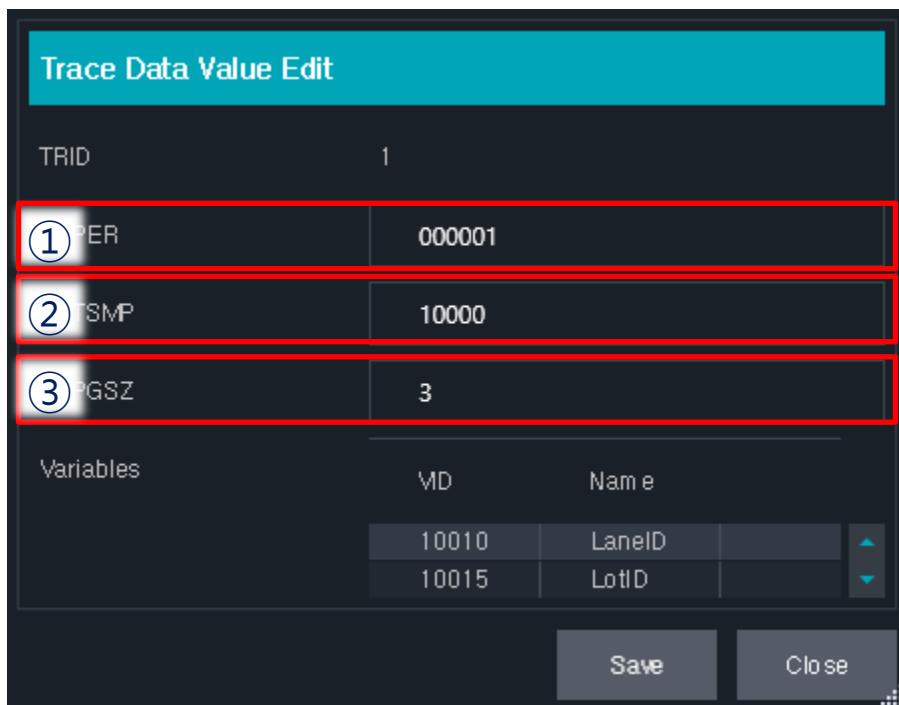
① Send a trace start of S2F23 (Trace Initialize Send).
② Send a trace stop of S2F23 (Trace Initialize Send).
③ Open a window for modifying the value of trace data.
④ Select whether to enable the auto send function of trace start.
⑤ Open a window for modifying the auto send trigger function of trace start.
⑥ Select whether to enable the auto send function of trace stop..
⑦ Open a window for modifying the auto send trigger function of trace stop.

※ In case of a trace stop (2), the TOTSMP of S2F23 will be sent as 0.
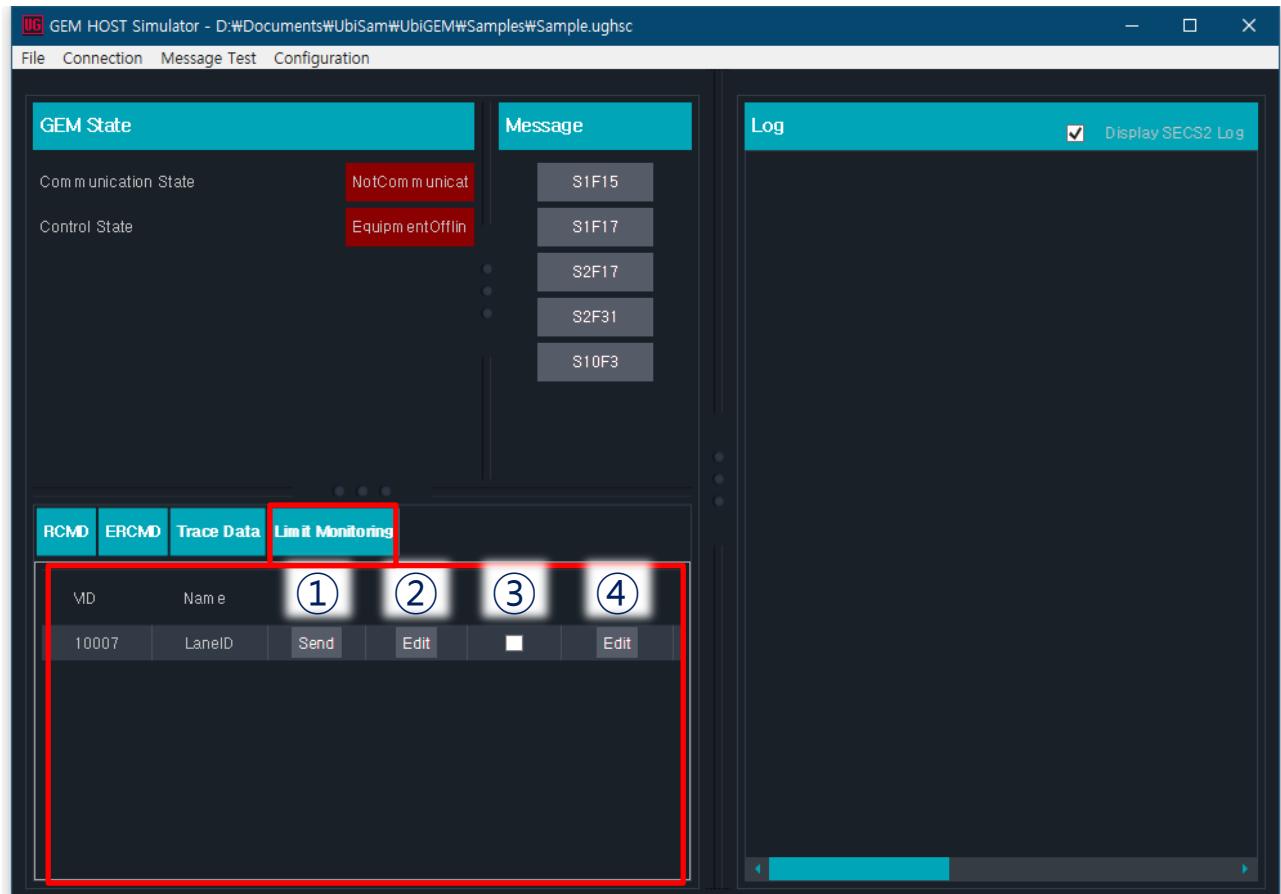
7. Host simulator main
7.4. Trace data
Value edit

① Set the DSPER of trace data.
② Set the TOTSMP of trace data.
③ Set the REPGSZ of trace data.

UbiGEM Simulator

7. Host simulator main
7.5. Limit monitoring
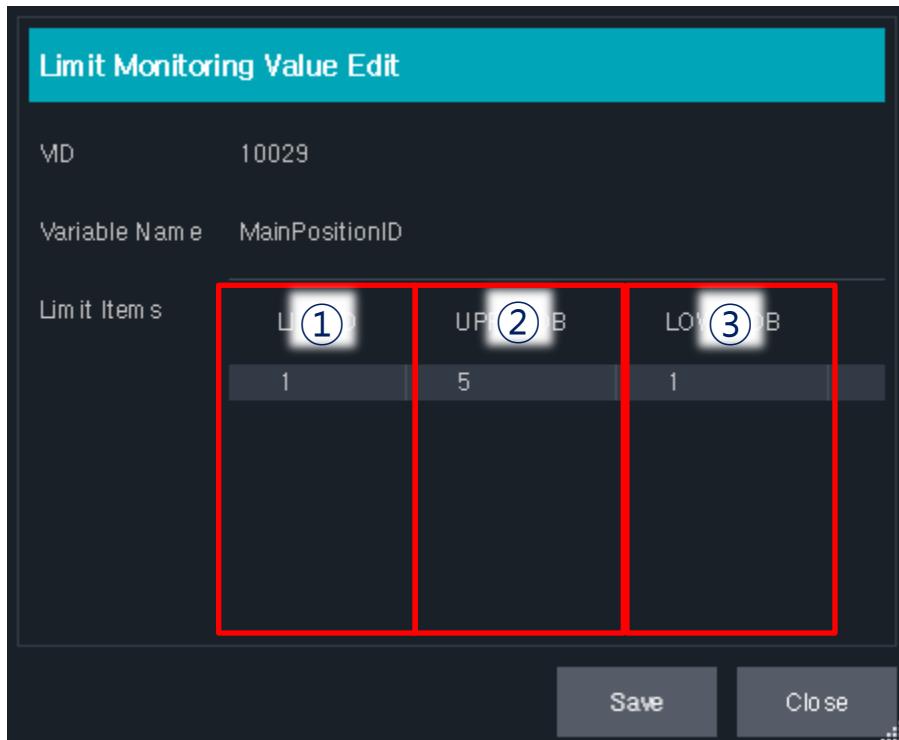
① Send a S2F45 (Define Variable Limit Attributes).
② Open a window for modifying the value of limit monitoring.
③ Select to enable the auto send function of limit monitoring
④ Open a window for modifying the value of a trigger.

UbiSam
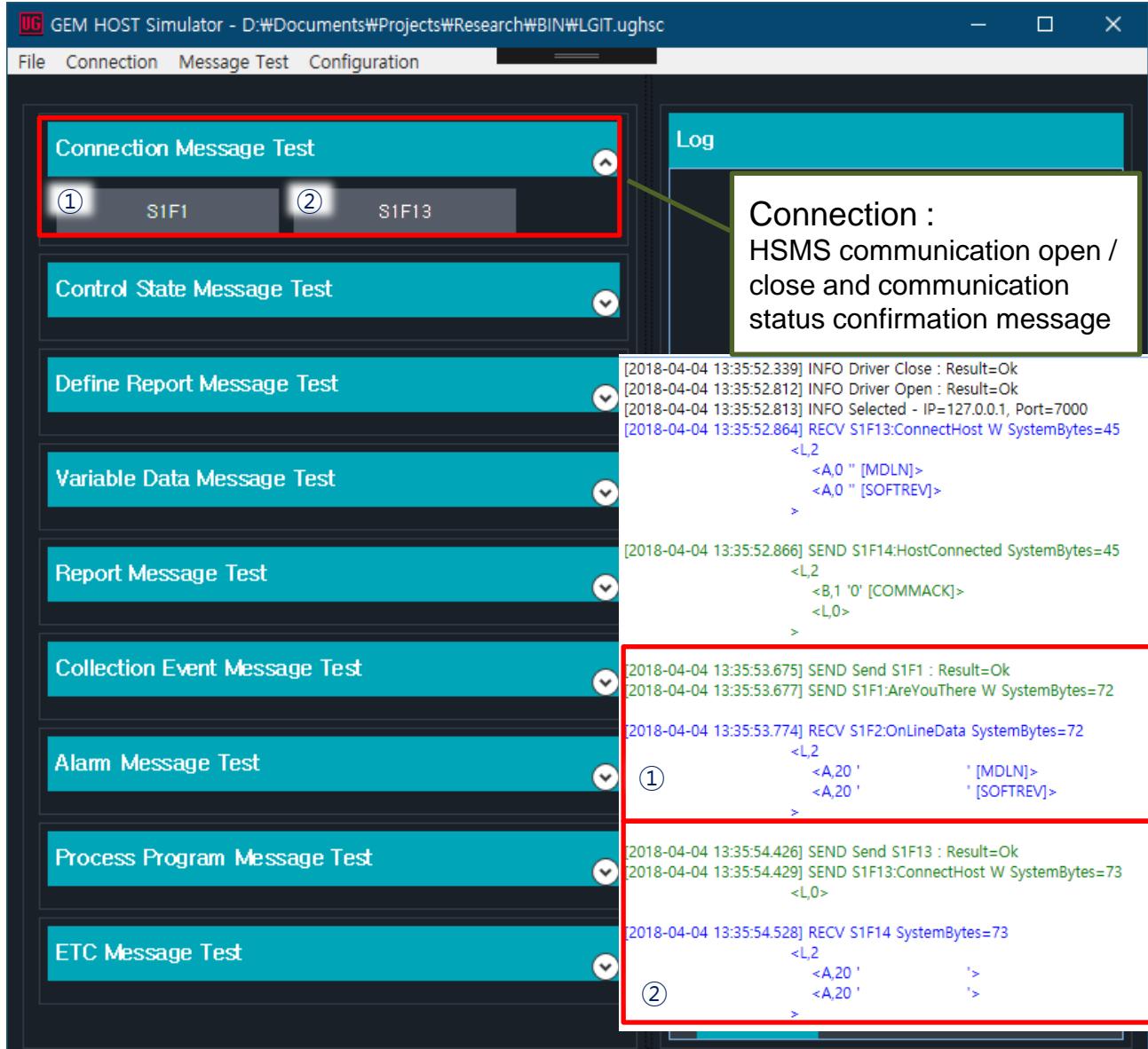
7. Host simulator main
7.5. Limit monitoring
Value edit

① Set the LIMITID of a limit item.
② Set the UPPERDB of a limit item.
③ Set the LOWERDB of a limit item.

8. Standalone test
8.1. Connection message test
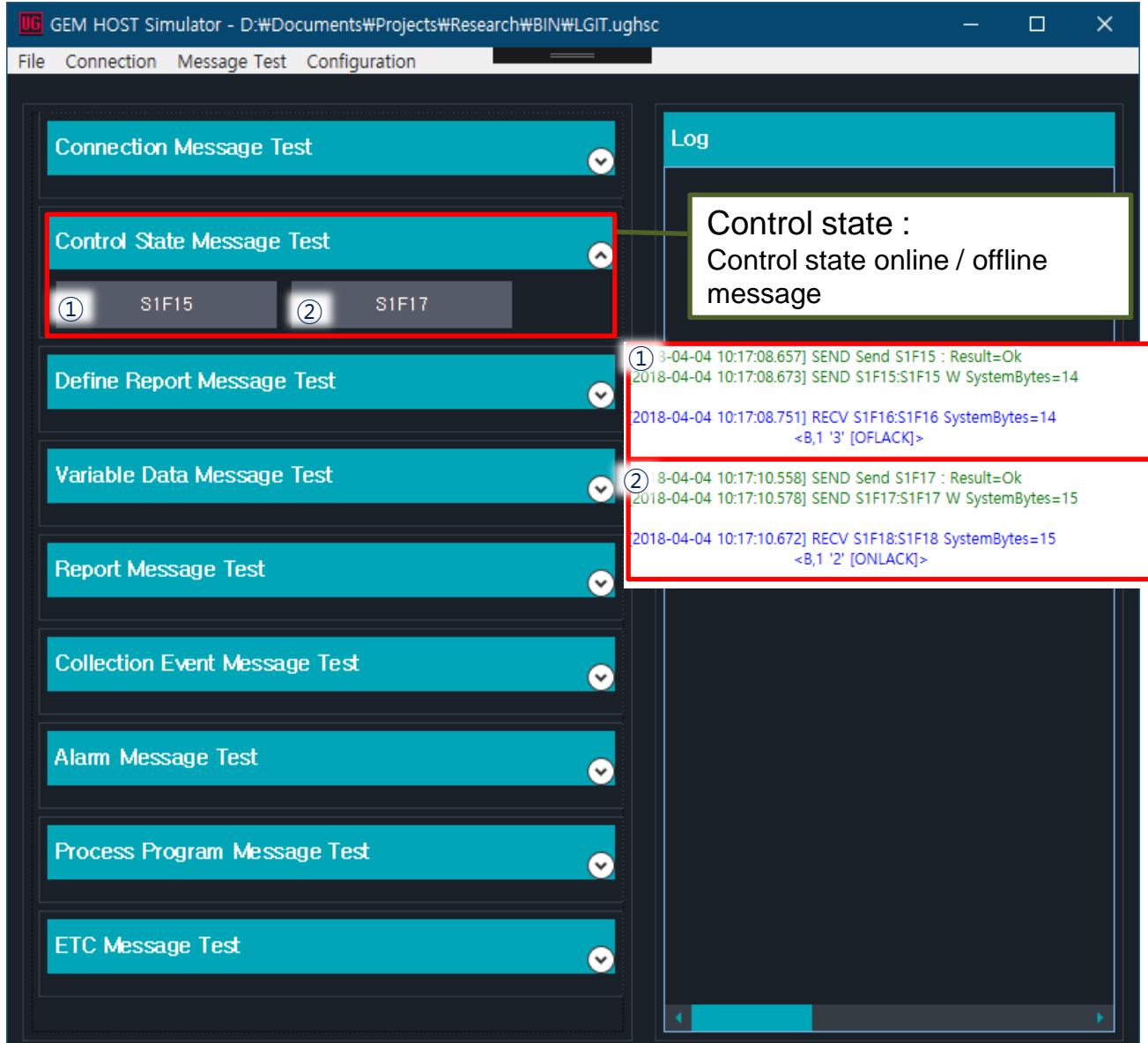
① Send a S1F1 (Are You There Request).
② Send a S1F13 (Establish Communications Request).

※ The sending and receiving of the S1F13 message result in a change in the
   communication state.

8. Standalone test

8.2. Control state message test
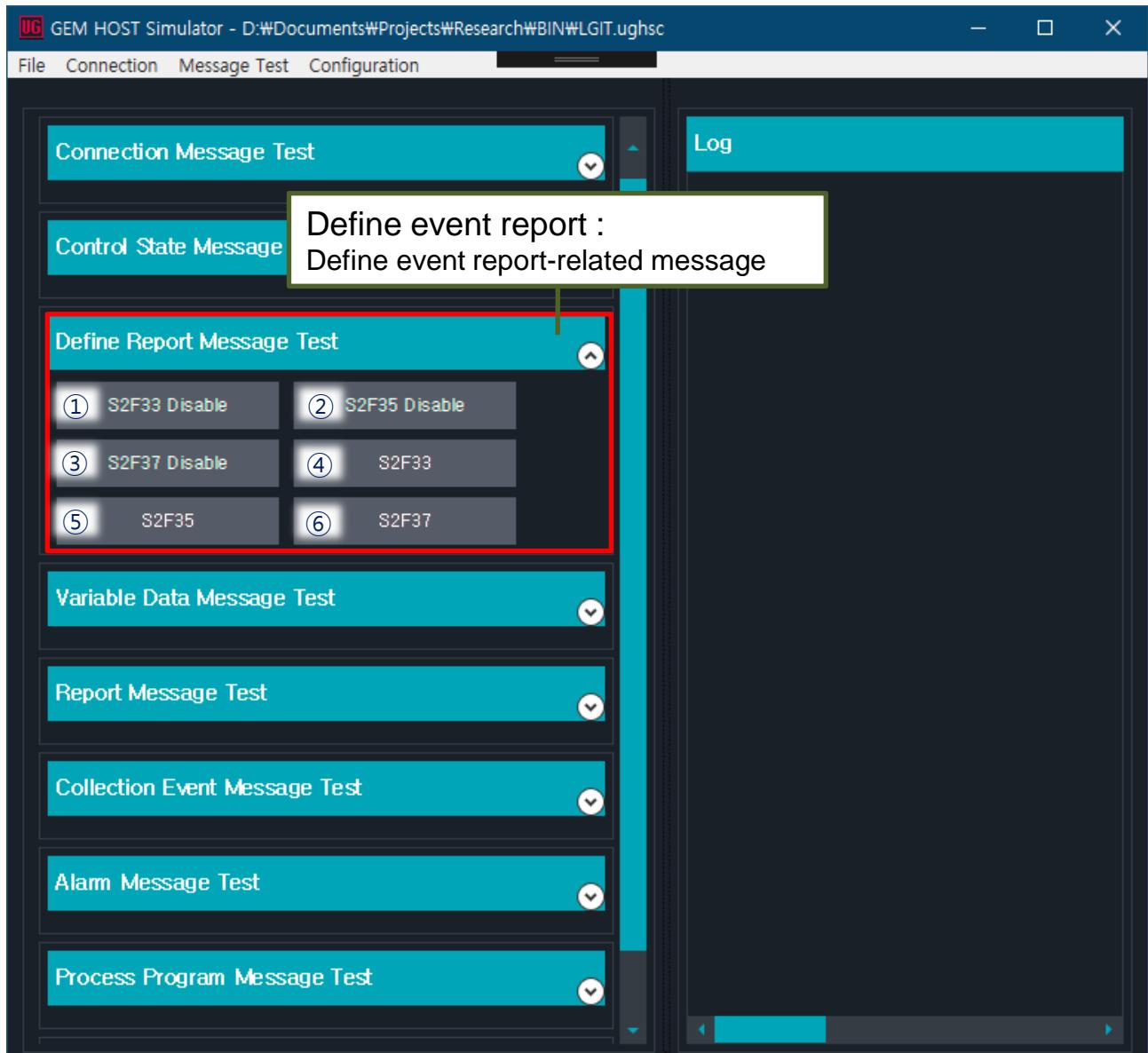
① Send a S1F15 (Offline Request).
② Send a S1F17 (Online Request).

The sending and receiving of the S1F15 and S1F17 messages result in a change in the control state.

8. Standalone test
8.3. Define report message test
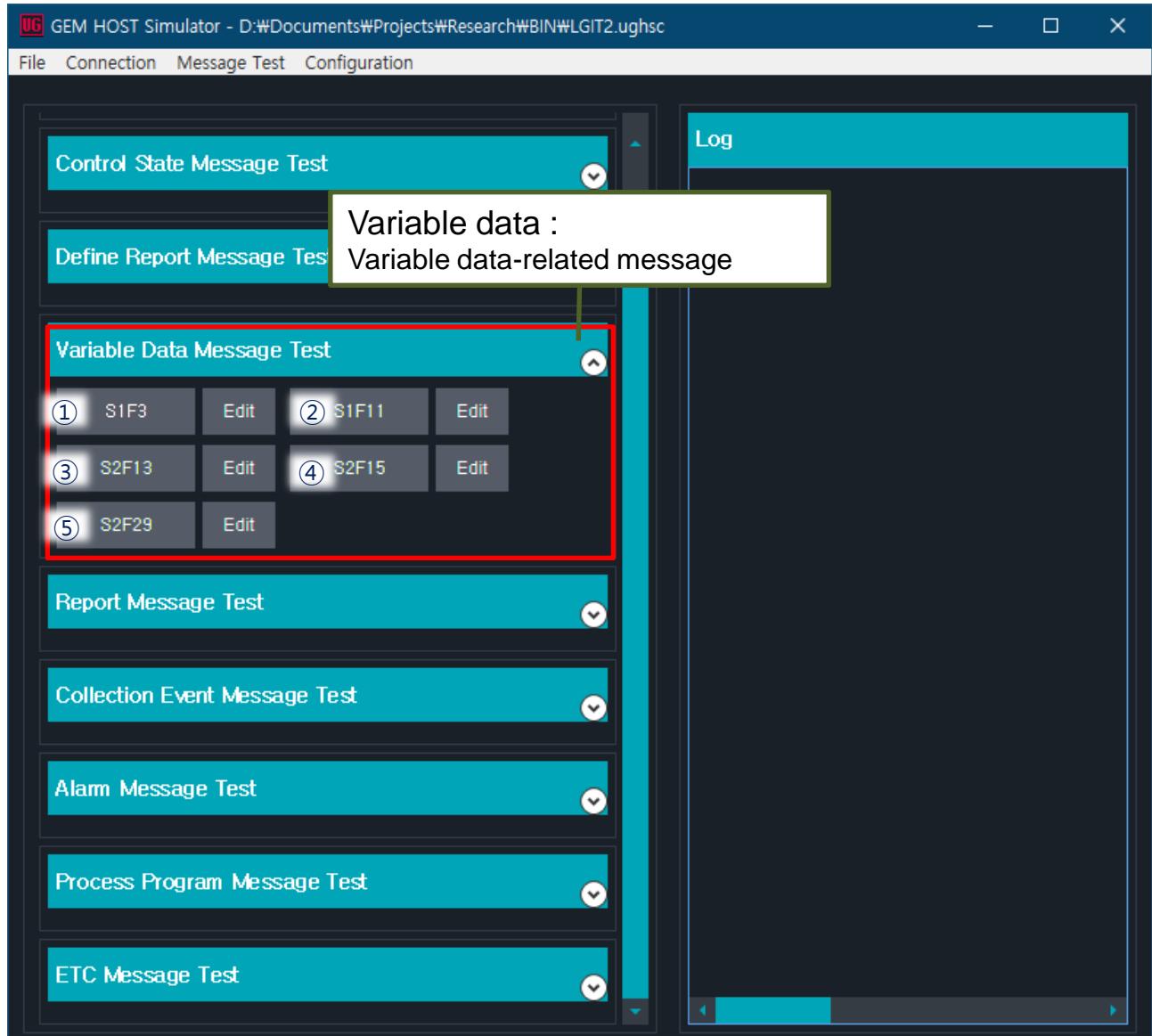
① Send a S2F33 (Define Report Disable).
② Send a S2F35 (Link Event Report Disable).
③ Send a S2F37 (Event Report Disable).
④ Send a S2F33 (Define Report Enable).
⑤ Send a S2F35 (Link Event Report Enable).
⑥ Send a S2F37 (Event Report Enable).

※ Using the list of reports and collection events set in 9.4 and 9.5 to configure sub-items of the S2F33, S2F35, S2F37.

8. Standalone test
8.4. Variable data message test

① Send a S1F3 (Selected Equipment Status Request).
② Send a S1F11 (Selected Variable Name List Request).
③ Send a S1F21 (Data Variable Name List Request)
④ Send a S2F13 (Equipment Constant Request).
⑤ Send a S2F15 (New Equipment Constant Send).
⑥ Send a S2F29 (Equipment Constant Name List Request).

※ Sub-items of a message are selected through the window opened by clicking an "Edit" button.

UbiSam

8. Standalone test
8.4. Variable data message test
① Selected equipment status request (S1F3) description

① Select all variables.
② Select / deselect an individual variable.

※ The selected variable is added as a sub-item when sending the S1F3.

8. Standalone test
8.4. Variable data message test
② Status variable name list (S1F11) description

① Select all variables.
② Select / deselect an individual variable.

※ The selected variable is added as a sub-item when sending the S1F11.

8. Standalone test
8.4. Variable data message test
③ Data variable name list (S1F21) description

	VID	Type	Name	Format	Use
①					
②	10078	DV	Alarm Set	L	True
	10079	DV	ChangedECID	L	False
	10080	DV	ChangedECV	L	False
	30037	DV	PortID	U1	True
	30038	DV	Clock	A	True
	30039	DV	ALCD	B	True
	30040	DV	ALID	U2	True
	30041	DV	ALTX	A	True
	5	DV	EventsEnabled	L	False
	7	DV	PreviousProcessState	U1	False
	8	DV	AlarmsEnabled	L	False

Close

① Select all equipment constants.
② Select / deselect an individual equipment constant.

※ The selected equipment constant is added as a sub-item when sending the S1F21.

8. Standalone test
8.4. Variable data message test
④ Equipment constant (S2F13) description

Equipment Constant(S2F13)

	VID	Name
① ☐		
② ☐	101	EquipmentInitiatedConnected
☐	102	EstablishCommunicationsTimeout
☐	103	MaxSpoolTransmit
☐	104	OverWriteSpool
☐	105	EnableSpooling
☐	106	TimeFormat
☐	109	T3Timeout
☐	110	T5Timeout
☐	111	T6Timeout
☐	112	T7Timeout
☐	113	T8Timeout

Close

① Select all equipment constants.
② Select / deselect an individual equipment constant.

※ The selected equipment constant is added as a sub-item when sending the S2F13.

UbiSam

8. Standalone test
8.4. Variable data message test
⑤ New equipment constant (S2F15) description

	VID	Name	Format	Use	Value
① ☐					
② ☐	101	EstablishCommunicationsTimeout	U1	True	10
☐	102	AreYouThereTimeout	U1	True	0
☐	103	DefaultCommState	U1	True	5
☐	104	InitControlState	U1	True	5
☐	105	OffLineSubState	U1	True	1
☐	106	OnLineFailState	U1	True	1
☐	107	TimeFormat	U1	True	0
☐	108	OnLineSubState	U1	True	5
☐	109	CTTimeoutCount	U1	True	60
☐	201	IdleReasonReportUsage	A	True	N
☐	202	IdleReasonTimeInterval	U1	True	5
☐	203	OnlineLocalModeUsage	A	True	N
☐	204	EuipmentID	A	True	
☐	205	Lane_1_ProcessCode	A	True	
☐	206	Lane_2_ProcessCode	A	False	
☐	207	HostCommandStreamFunction	A	False	

Close

① Select all equipment constants.
② Select / deselect an individual equipment constant.

※ Value field is modifiable.
※ The selected equipment constant is added as a sub-item when sending the S2F15.

8. Standalone test
8.4. Variable data message test
⑥ Equipment constant name list (S2F29) description

① Select all equipment constants.
② Select / deselect an individual equipment constant.

※ The selected equipment constant is added as a sub-item when sending the S2F29.

UbiSam

8. Standalone test
8.5. Report message test
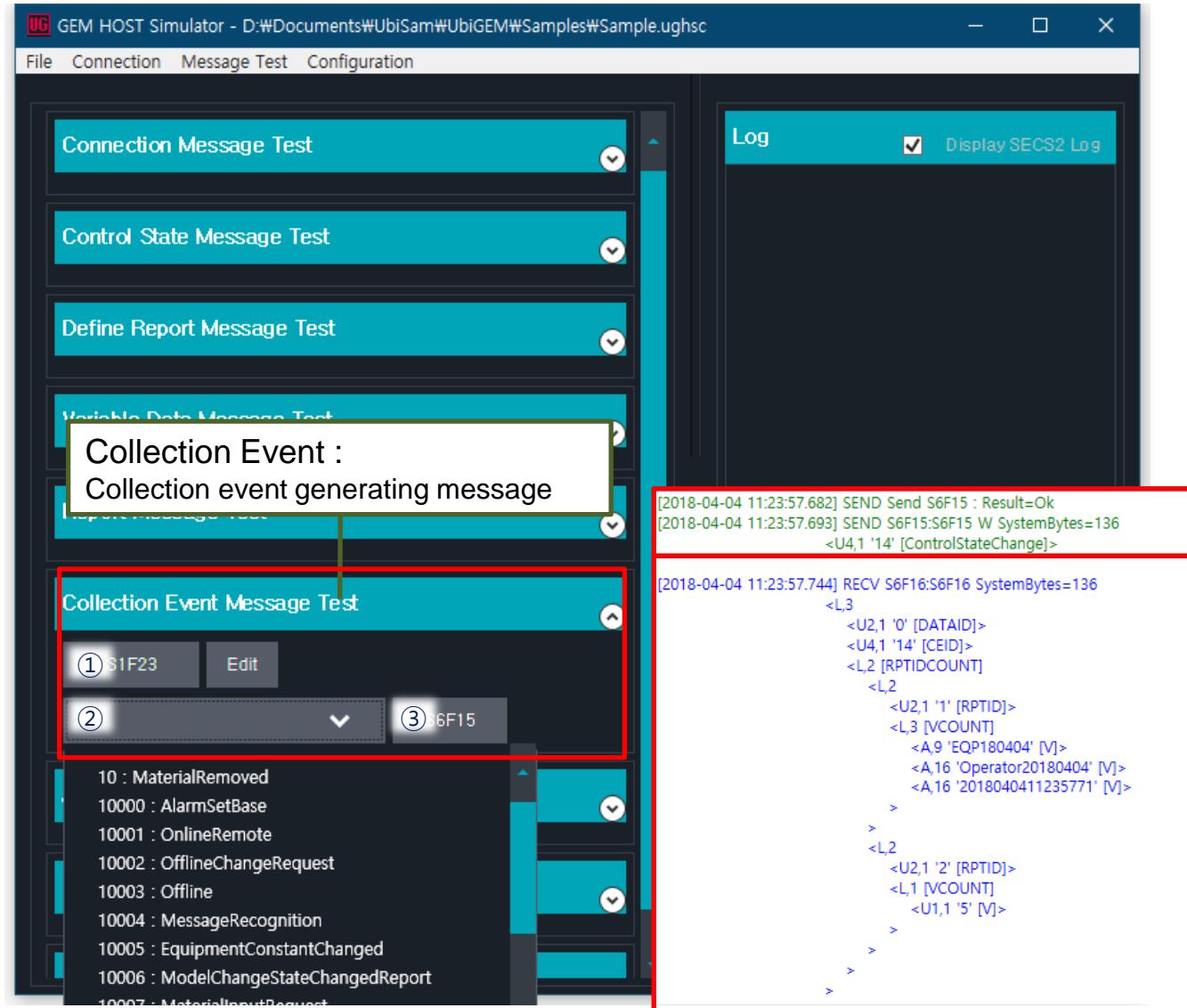
① Select the report to be used for sending S6F19 (Individual Report Request).
② Send a S6F19.

※ If the report list set in section 9.4 appears in the combo box and the define report step has been passed, the EQP sends the current status of a variable to the host via a report in the secondary message of the S6F19.

8. Standalone test
8.6. Collection event message test
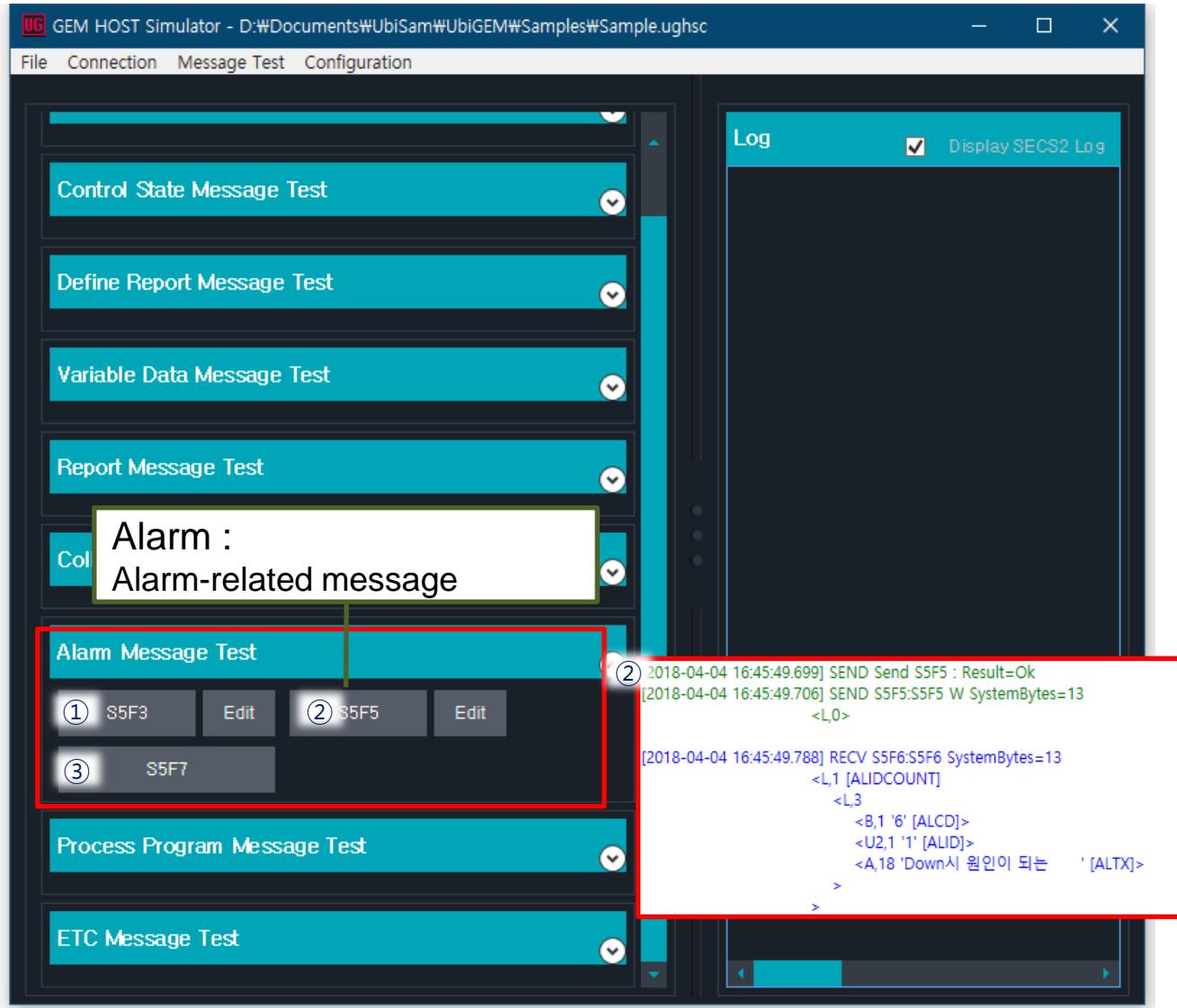
① Send a collection event name list request (S1F23).
② Select a collection event to be used for sending S6F15 (Event Report Request).
① Send a S6F15.

※ If the collection event list set in section 9.5 appears in the combo box and the define report step has been passed, the EQP sends the current state of the variable linked to the selected collection event to the host via reports in the secondary message of the S6F15.

8. Standalone test
8.7. Alarm message test
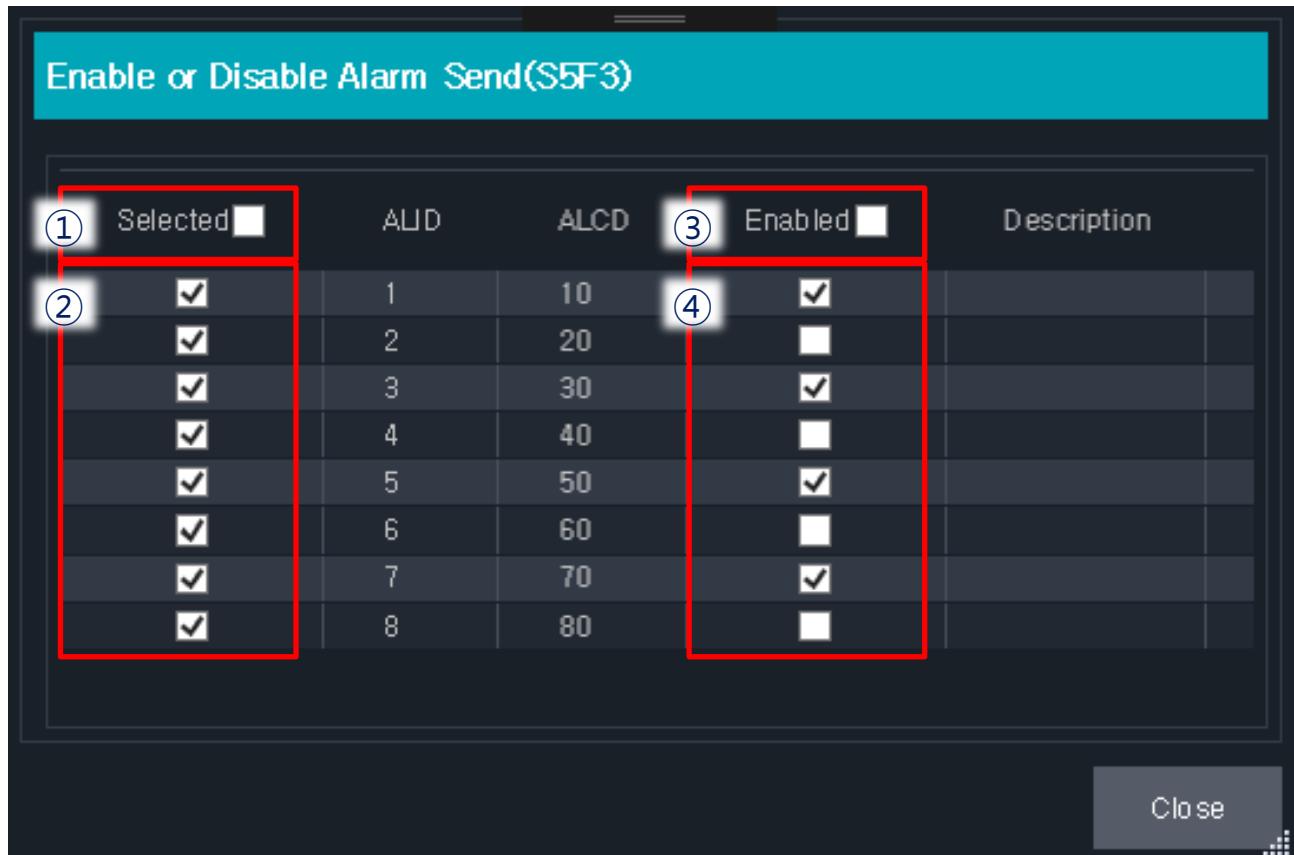
① Send a S5F3 (Enable or Disable Alarm Send).
② Send a S5F5 (List Alarms Request).
③ Send a S5F7 (List Enabled Alarms Request).

※ The S5F3 sends an enable / disable message for each alarm (if there are 8 alarms, the S5F3 will be sent 8 times).
※ Sub-items of the S5F5 message are selected through the window opened from an "Edit" button.

UbiSam

8. Standalone test
8.7. Alarm message test
① Enable or disable alarm send (S5F3) description
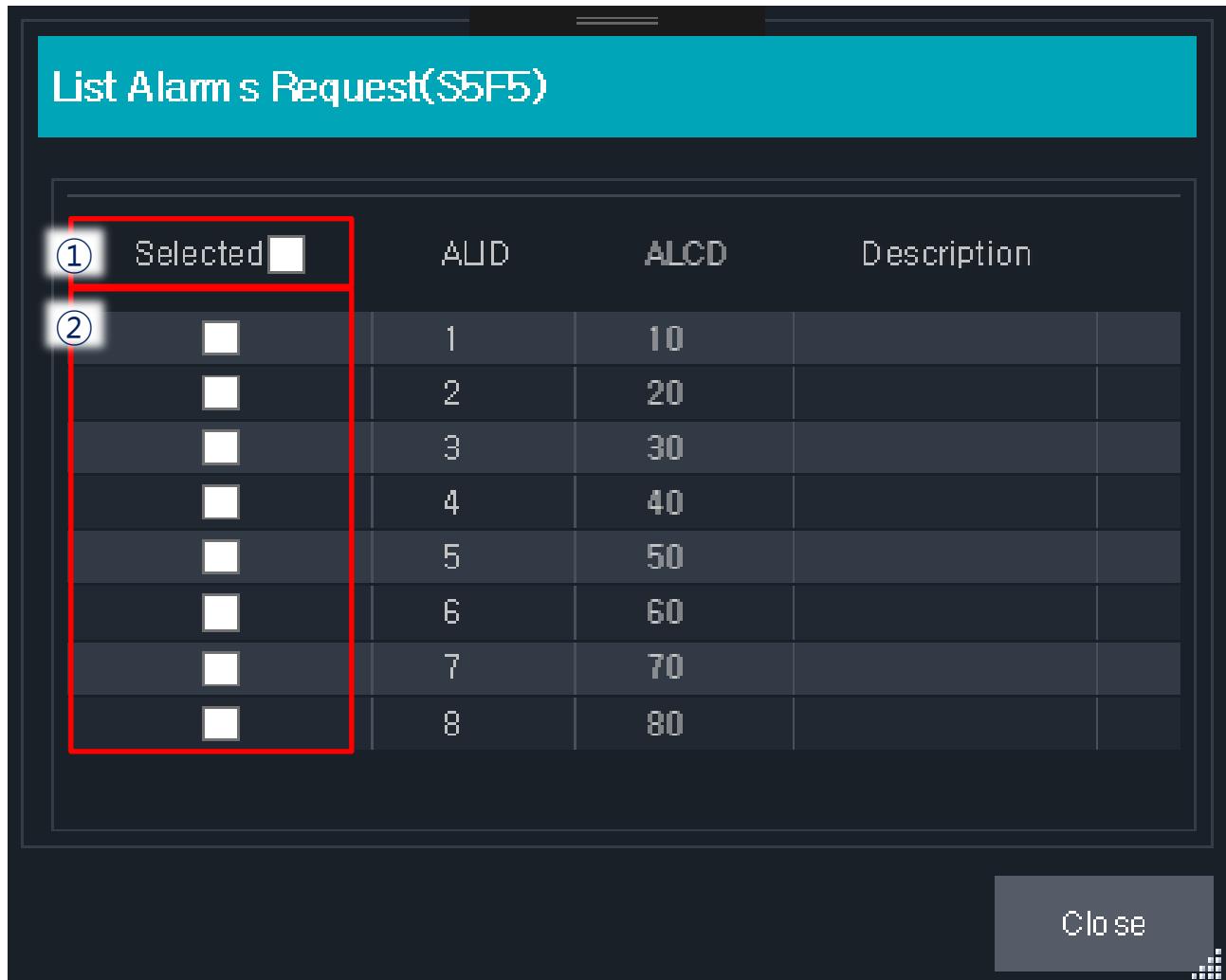
① Select all alarms.
② Select / deselect an individual alarm.
③ Set the enabled status for all alarms.
④ Change the enabled status of individual alarms.

※ The enabled / disabled information is sent via the S5F3 only for alarms which are selected.

8. Standalone test
8.7. Alarm message test
② List alarms request (S5F5) description
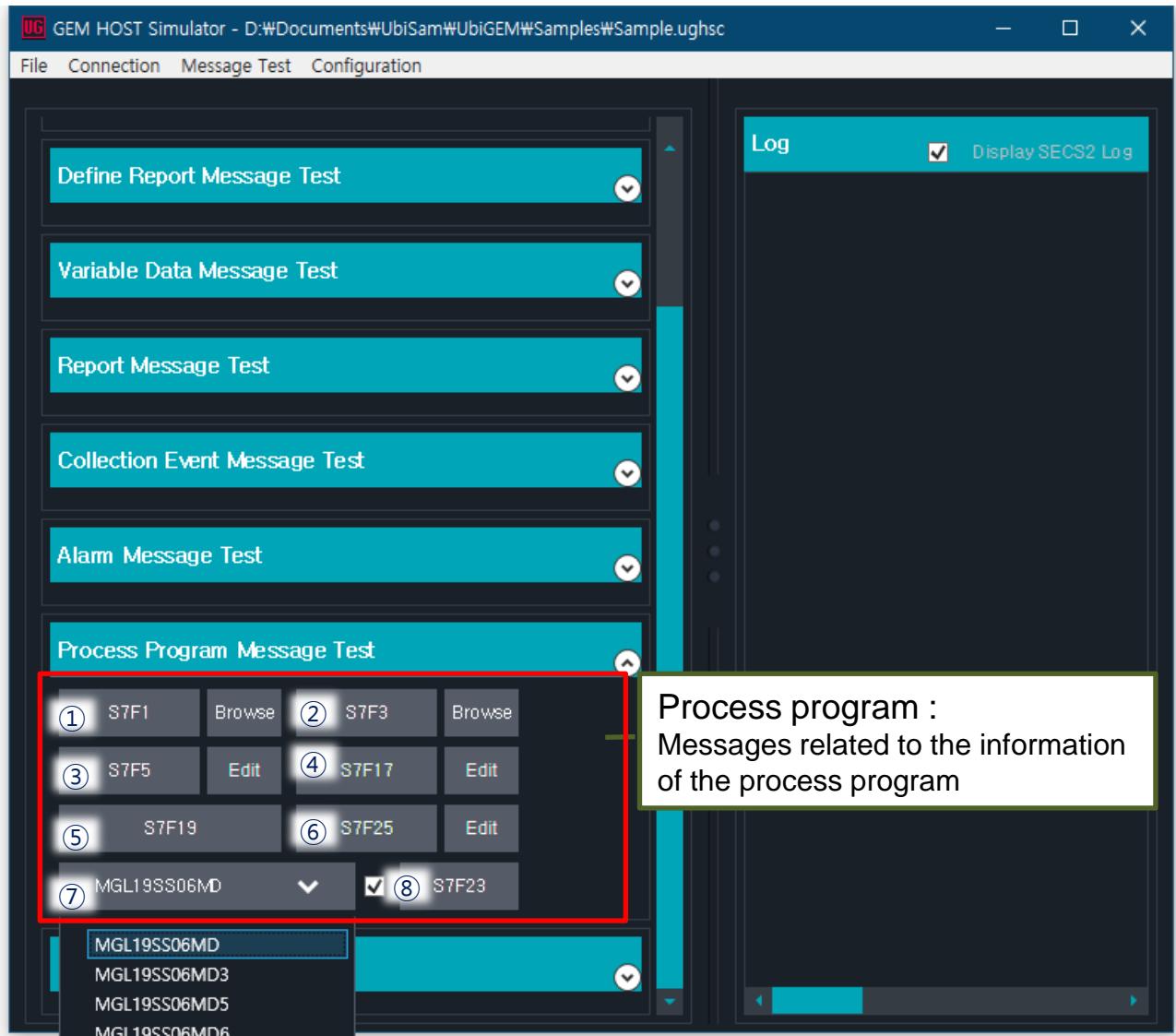
① Select all alarms.
② Select / deselect an individual alarm.

※ The selected alarms will be added as sub-items and sent with the S5F5.

8. Standalone test
8.8. Process program message test

Process program :
Messages related to the information of the process program

① Send a S7F1 (Process Program Load Inquire).
② Send a S7F3 (Process Program Send).
③ Send a S7F5 (Process Program Request).
④ Send a S7F17 (Delete Process Program Send).
⑤ Send a S7F19 (Current Process Program Directory).
⑥ Send a S7F25 (Formatted Process Program Request).
⑦ Select a formatted recipe to be used for sending a S7F23 (Formatted Process Program Send).
⑧ Send a S7F23.
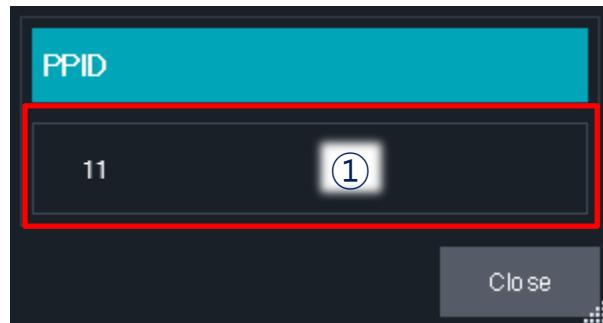
※ The PPID of S7F5, the PPID of S7F17, and the PPID of S7F25 can be set in the window that opens when clicking the "Edit" button.
　⑦ Formatted process program can be managed in Configuration -> Formatted Process Program screen.
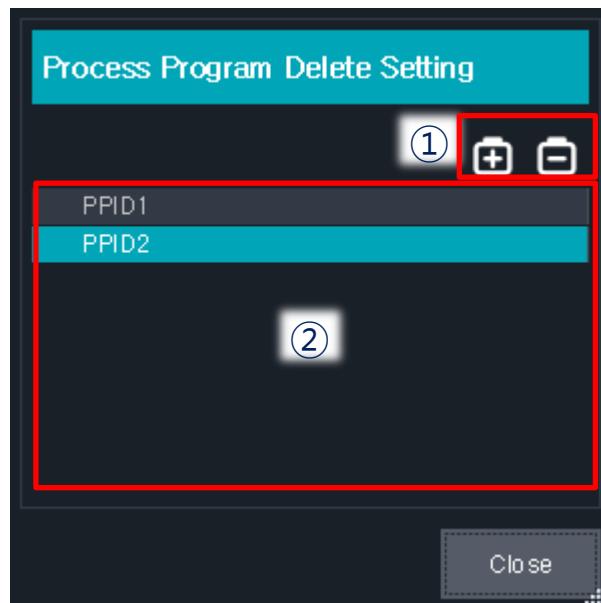
8. Standalone test
8.8. Process program message test
① Process program request (S7F5)
Formatted process program request (S7F25) description

① Set the PPID of S7F5 and S7F25

② Process program delete (S7F17) description
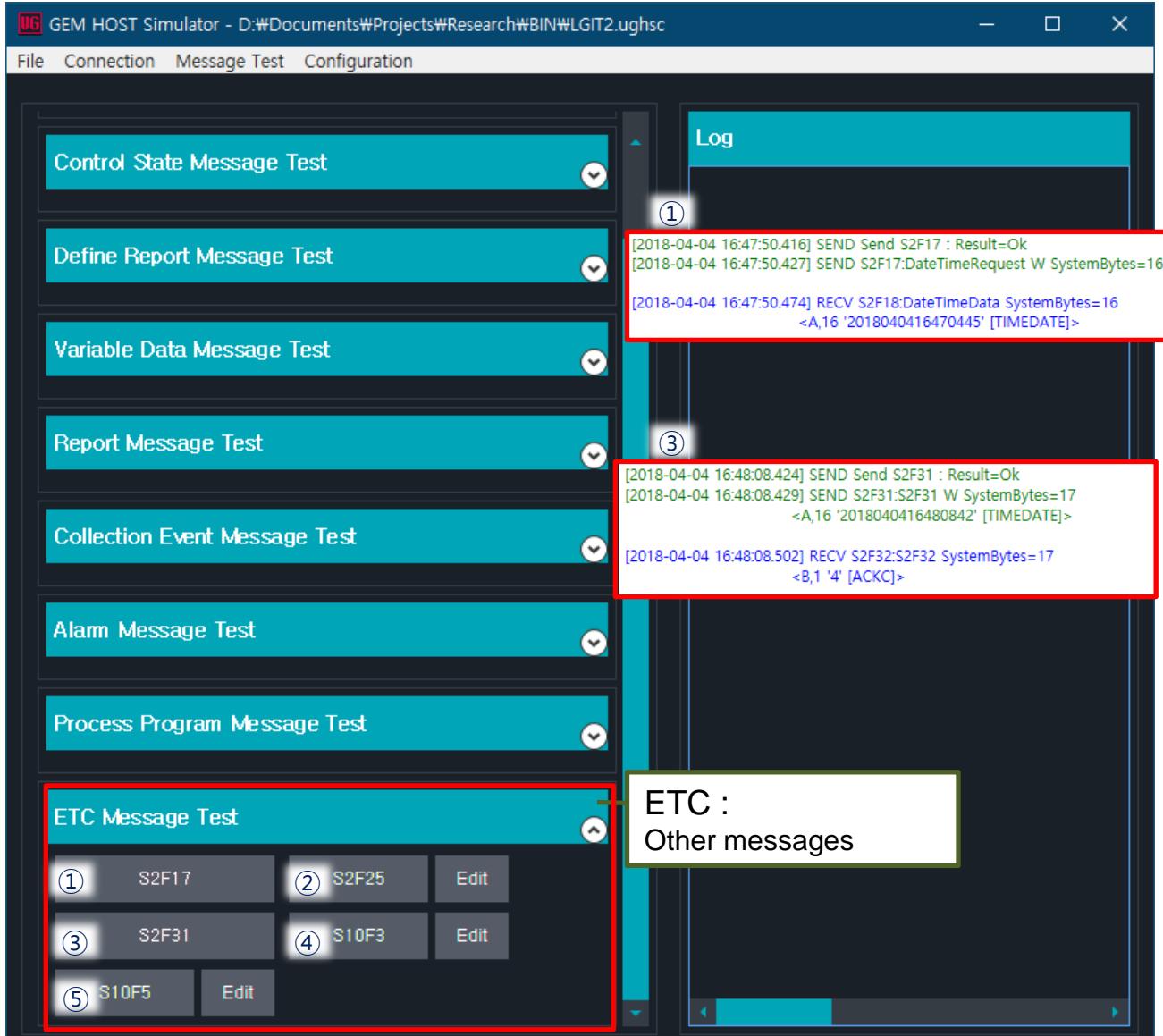
① Add or delete a PPID
② Display the PPID list of S7F17.

8. Standalone test
8.9. ETC message test
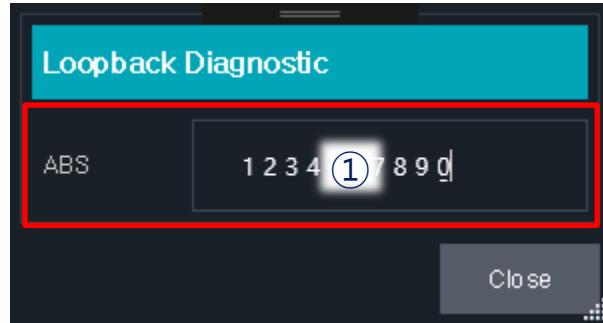
① Send a S2F17 (Date and Time Request).
② Send a S2F25 (Loopback Diagnostic Request).
③ Send a S2F31 (Date and Time Set Request).
④ Send a S10F3 (Terminal Display, Single).
⑤ Send a S10F5 (Terminal Display, Multi-Block).

※ The ABS of S2F25, the message of S10F3, and the message list of S10F5
　 can be set in the window opened by clicking an "Edit" button.

8. Standalone test
8.9. ETC message test
① Loopback diagnostic request (S2F25) description

① Set the ABS of loopback diagnostic.

② Terminal display, single (S10F3) description
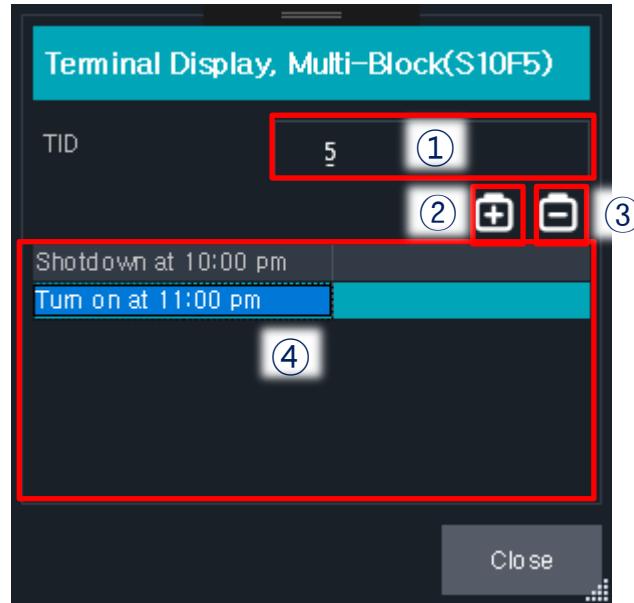
① Set a TID.
② Set a message to be displayed in the terminal.

8. Standalone test
8.9. ETC message test
③ Terminal display, multi-block (S10F5) description

① Set a TID.
② Add a message.
③ Delete a selected message.
④ An existing or a newly added message list.

9. UbiGEM host simulator environment configuration
9.1. Equipment constant edit

Term	Description
ECID	An equipment constant ID
Name	An equipment constant name
Format	An equipment constant value type
Length	An equipment constant value length
Value	An equipment constant value
Description	An equipment constant description

An equipment constant list is defined in the UGC file and the Host Simulator. In case of the EC defined in the UGC file, ① ID, ② name, ④ description can not be modified.

※ If the format ③ is L and the list edit button ⑤ is clicked after selecting a row, or a
row is double clicked, a window to select child variables will appear.

※ A value is used in a S2F15 (new equipment constant send) etc. It is also used when setting generating rules for the CPVAL and CEPVAL of a S2F41 (Remote Command Send) and a S2F49 (Enhanced Remote Command).

9. UbiGEM host simulator environment configuration
9.2. Variable edit

Term	Description
VID	A variable ID
Name	A variable name
Type	A variable type (SV, DVVAL)
Format	A variable value type
Length	A variable value length
Value	A variable value
Description	A variable description
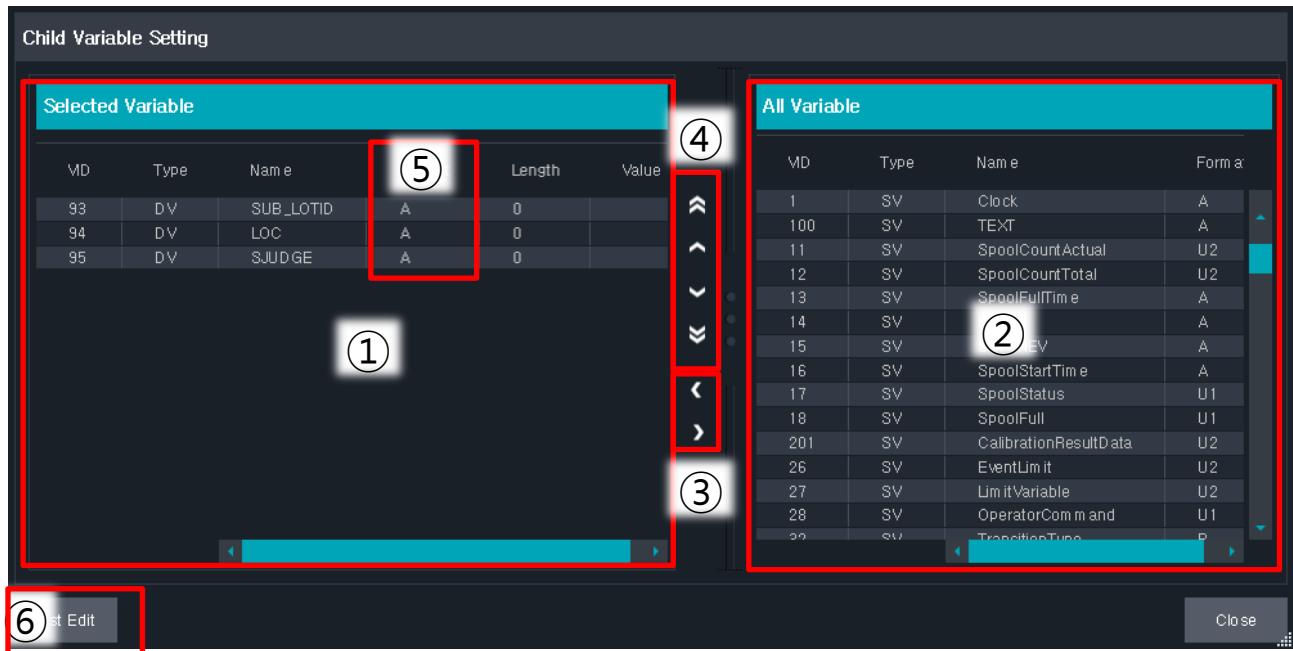
This is a variable list in the UGC File and the Host Simulator.
In case of the variable defined in UGC file ① ID, ② name, ④ description can not be modified.

※ If the format ③ is L and the list edit button ⑤ is clicked after selecting a row, or a row is double clicked, a window to select child variables will appear.

9. UbiGEM host simulator environment configuration
9.3. Child variable edit

Term	Description
Selected variable	A list of variables selected as child variables
All variable	All variables that can be selected with a child variable

9.1 If the equipment constants or the variable in 9.2 is of list format, this is the screen to select child variables.

9.1 In case of the equipment constant, only EC is available as a child variable type.
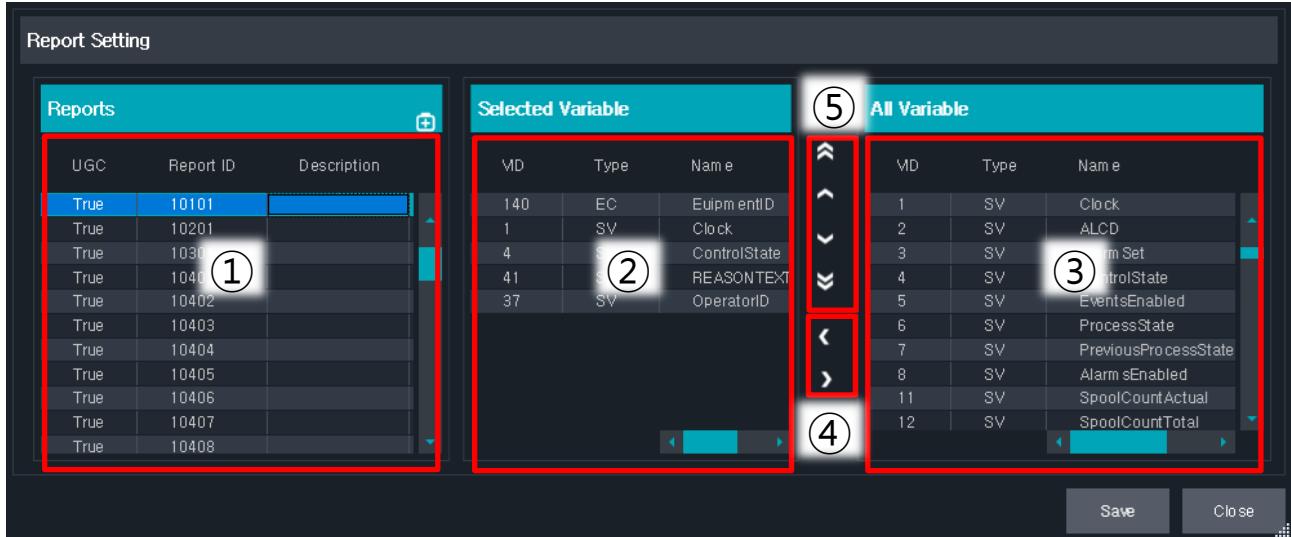
9.2 In case of the variable, SV, DVVAL and EC are all available as child variables.

Child variable configuration steps

1) Select a variable you want to add from the all variable list ②.
2) If you click the < icon of icon group ③, the variable will be added to the selected variable list ②.
3) Select a variable from selected variable list ① and click the > icon of icon group ③ to clear the selected variable.
   If necessary, you can change the order of selected variables through icon ④.

※ If the format ⑤ is L and the list edit button ⑥ is clicked after selecting a row or a row is double clicked, a window for selecting child variables will appear.

9. UbiGEM host simulator environment configuration
9.4. Report edit

Term	Description
UGC	Whether the UGC file is set or not. Can not be deleted if True.
Report ID	A report ID.
Selected variable	A variable list added to a report.
All variable	All variables are set in the UbiGEM configuration (.ugc) file.

Report configuration steps
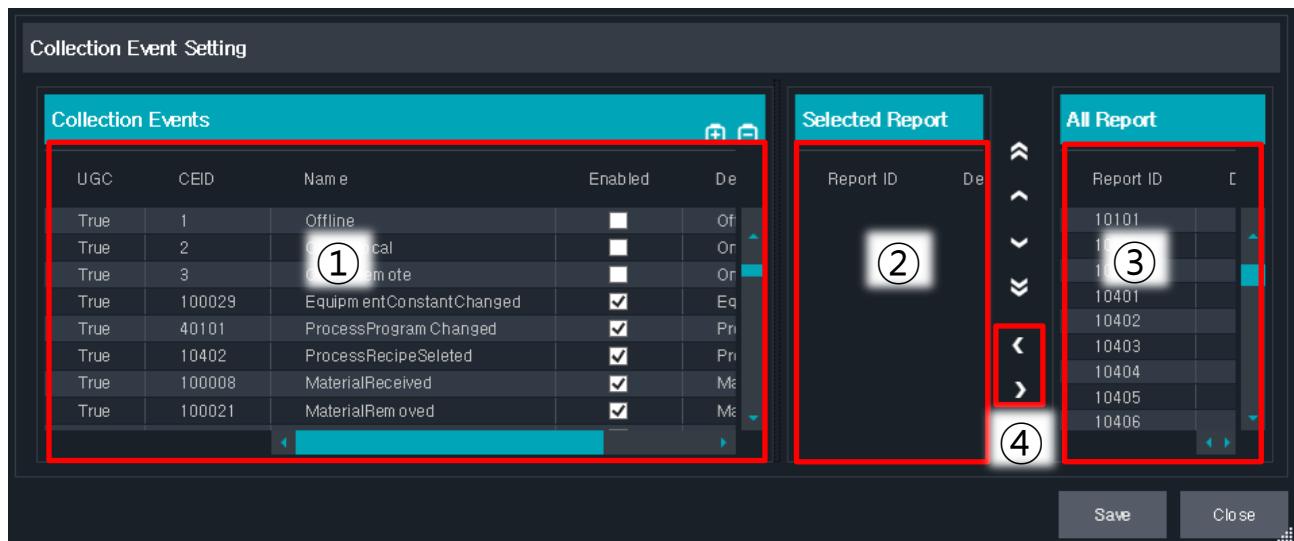
1) Add a report to the list of reports ①, or select an existing report.
2) Select a variable you want to add from all variables ③.
3) If you click the < icon of icon group ④, the selected variable will be added to selected variable list ②.
   If necessary, the order of selected variables can be changed by icon group ⑤.

When the save button is clicked, the selected variable is applied to the modified report. Click the close button to cancel the modification.

※ The edited report can be sent to the EQP through the S2F33 (Define Report) from the standalone test submenu item of message test.

9. UbiGEM host simulator environment configuration
9.5. Collection event edit

Term	Description
CEID	A collection event ID.
Name	A collection event name.
Enabled	Whether collection event is active Is used as enable / disable when sending a S2F37 (Enable Event Report).
Selected Report	A report list added to a collection event.
All Report	All reports are set from the UbiGEM configuration (.ugc) file and the Host Simulator.
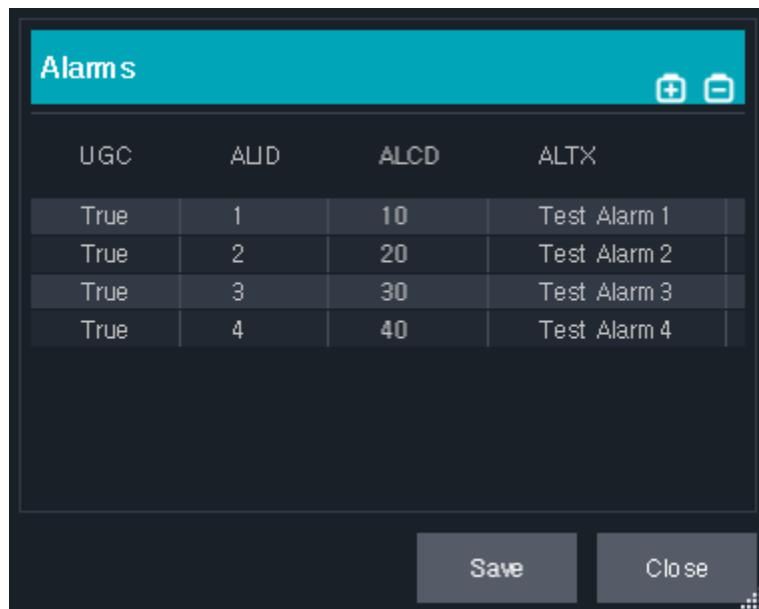
Collection event configuration steps

1) Add an additional event to the collection event list ①, or select an existing collection event.
2) Select a report in all report box ③.
3) When the < icon of the icon group ④ is clicked, the selected report will be added to the selected report list ②.

※ The edited collection event can be sent to the EQP through the S2F35 (Link Event Report) from the standalone test submenu item of message test.
※ Please add new collection events only for testing purposes.
   NACK can be generated from the S2F37 (Enable Event Report).

UbiSam

9. UbiGEM host simulator environment configuration
9.6. Alarm edit
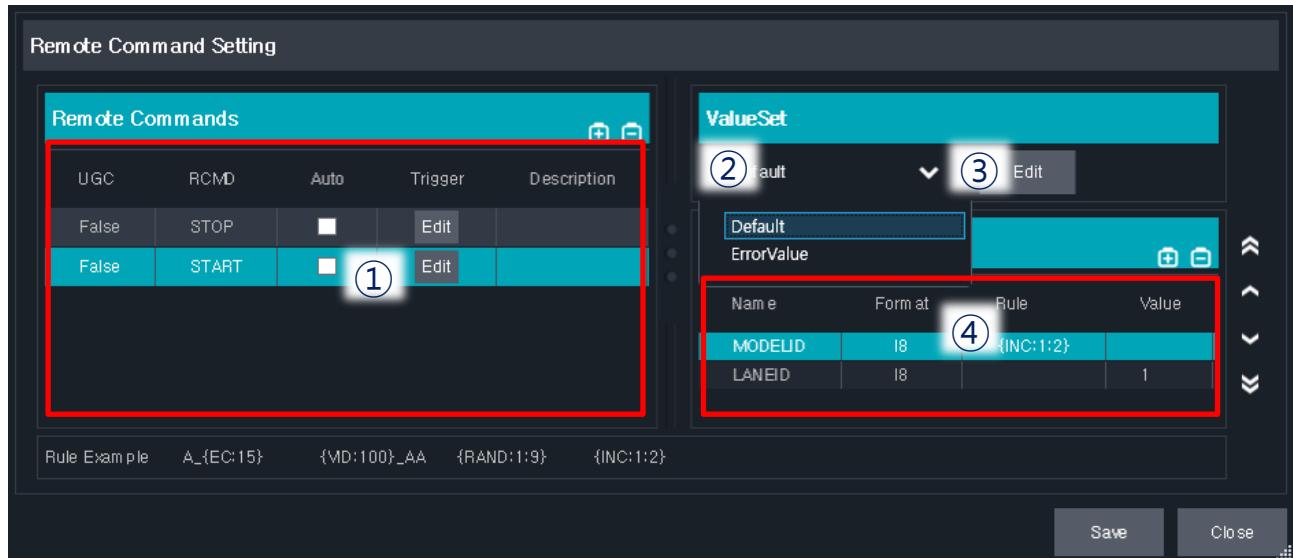
Term	Description
ALID	An alarm ID.
ALCD	An alarm code.
ALTX	An alarm text (description).

This is a list of all alarms set in the Host Simulator and the UbiGEM configuration (.ugc) file.

If the UGC entry is set to true, ALID modification is not allowed.

9. UbiGEM host simulator environment configuration
9.7. Remote command edit

Term	Description
RCMD	A remote command name.
Auto	Whether or not to use an auto send trigger function.
Trigger	Open a trigger setting window.
Format	A remote command parameter value type.
Rule	The automatic generation rule of a remote command parameter value.
Value	A remote command parameter value.

Remote command configuration steps
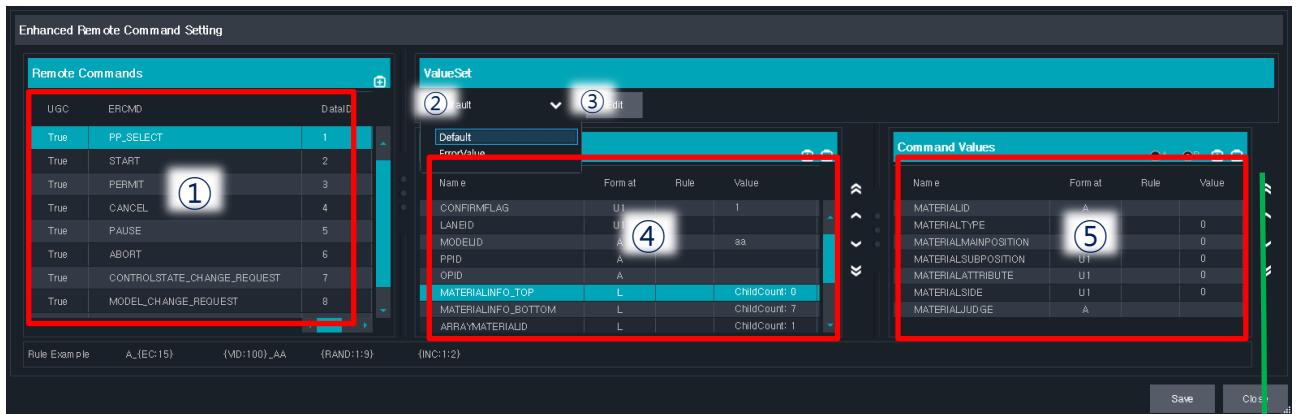
1) Add a remote command to the remote commands list ①, or select an existing remote command.
2) Select the value set to edit in the combo box ②.
3) Add a parameter to the command parameters list ④ or select an existing parameter.
4) Enter the name, format, rule, value of command parameters ④.

If necessary, set a trigger.
※ If you want to add, rename or delete a new value set , click the edit button ③.
※ A remote command set in the UbiGEM configuration file (.ugc) can not be deleted.

9. UbiGEM host simulator environment configuration
9.8. Enhanced remote command edit

Command parameters support
list type values.

Term	Description
ERCMD	A remote command name.
Auto	Whether or not to use an auto send trigger.
Trigger CEID	Open a trigger setting window.
Format	A remote command parameter value type.
Rule	Rules for the automatic generation of remote command parameters and values.
Value	A remote command parameter value.

Enhanced remote command configuration steps
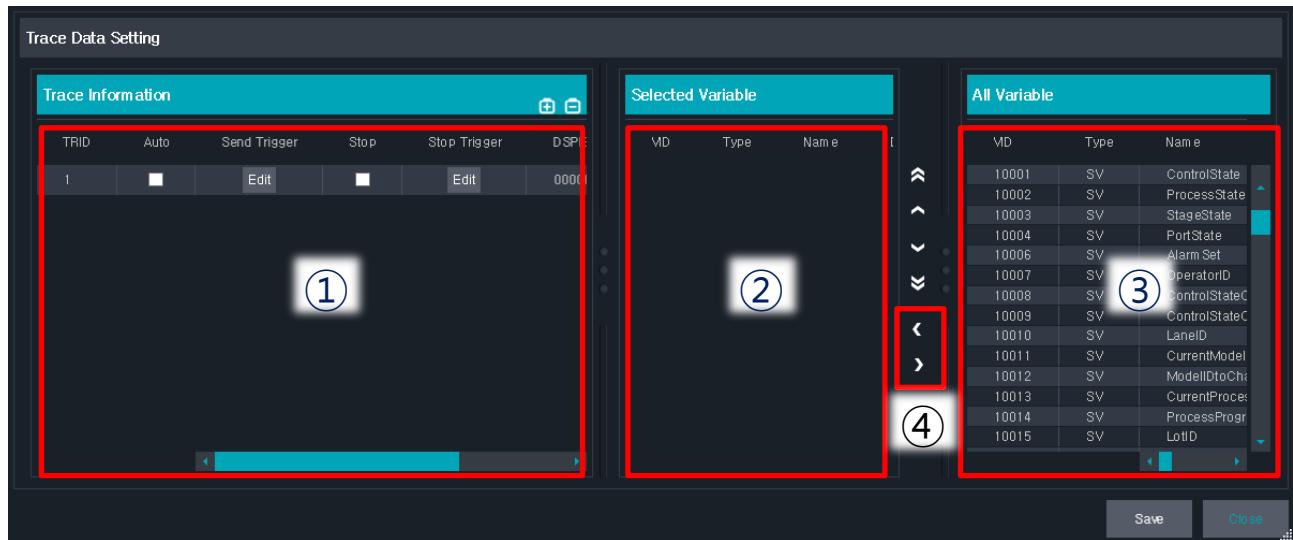
1) Add a remote command to the remote commands list ①, or select an existing remote command.
2) Select the value set to edit in the combo box ②.
3) Add a parameter to the command parameters list ② or select an existing parameter.
4) Add a value to the command value list ③ or select an existing value.
5) Enter the name, format, rule, value of a command value ③ and a command parameter ②.

If necessary, set a trigger.
※ If you want to add, rename or delete a new value set, click the edit button ③.
※ ④ If the command parameter is list type and the data in the value column is changed to ChildCount: 0, a message (List: 0) without sub items will be sent.
※ Enhanced remote commands set in the UbiGEM configuration (.ugc) can not be deleted.

9. UbiGEM host simulator environment configuration
9.9. Trace data edit

Term	Description
Trace ID	A trace ID.
Auto	Whether to use an auto send trigger.
Trigger CEID	Open a trigger setting window.
Stop	Whether to use an auto stop trigger.
Stop Trigger	Open a stop trigger setting window .
DSPER	A trace sampling cycle represented as HHmmss or HHmmsscc.
TOTSMP	A trace sampling count.
REPGSZ	A sampling data group size for reporting trace.
Selected Variable	A variable list added to a trace.
All Variable	All variables set from the UbiGEM configuration (.ugc) file and the Host Simulator.

Trace data configuration steps
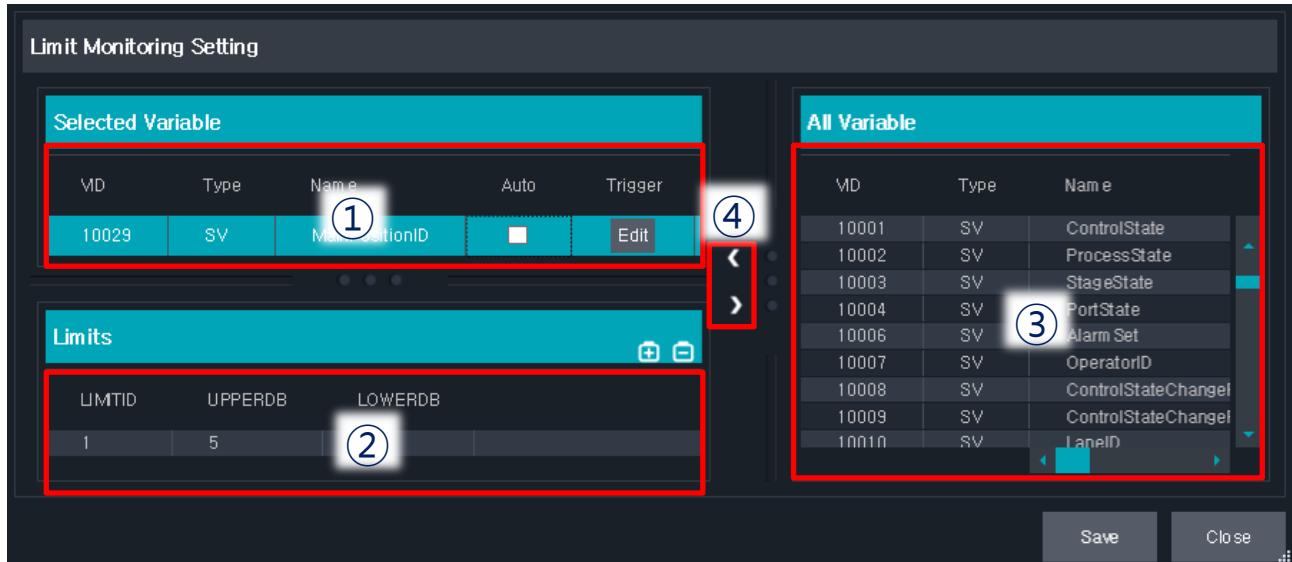
1) Add a trace to the trace Information list ①, or select an existing trace.
2) Select the variable you want to add from the all variable box ③.
3) When the < icon of the icon group ④ is clicked, the selected variable will be added to the selected variable list ②.

If necessary, set a send trigger and a stop trigger.

※ The edited trace data can be sent to the EQP via the S2F23 (Trace Initialize Send) from the trace data tab of the main screen.

9. UbiGEM host simulator environment configuration
9.10. Limit monitoring edit

Term	Description
VID	The ID of a variable to monitor.
Auto Send	Whether to use an auto send trigger.
Trigger CEID	Open a trigger setting window.
LIMITID	A limit ID.
UPPERDB	An upper limit value.
LOWERDB	A lower limit value.
Selected Variable	A list of variables to monitor.
All Variable	All variables set in the UbiGEM configuration (.ugc) file.

Limit monitoring configuration steps
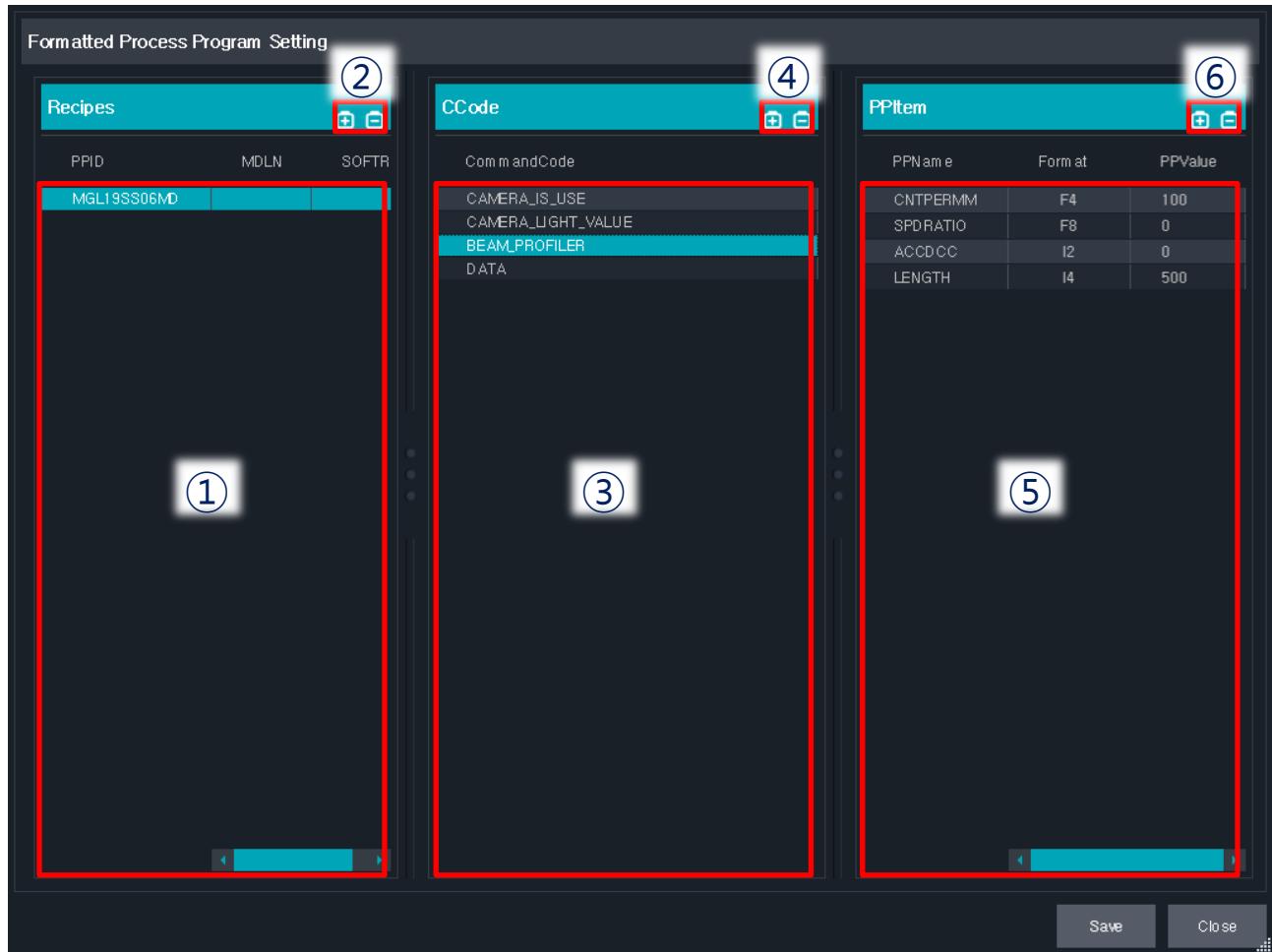
1) Select a variable to monitor in the all variable box ③.
2) When the < icon of the icon group ④ is clicked, the selected variable will be added to the selected variable list ①.
3) Select a variable in the selected variable box ①.
4) Add limits ②, modify the limit ID, upper limit, and lower limit.

If necessary, set a trigger CEID.

※ The edited limit monitoring message can be sent to the EQP via the S2F45 (Define Variable Limit Attributes) from the limit monitoring tab of the main screen.
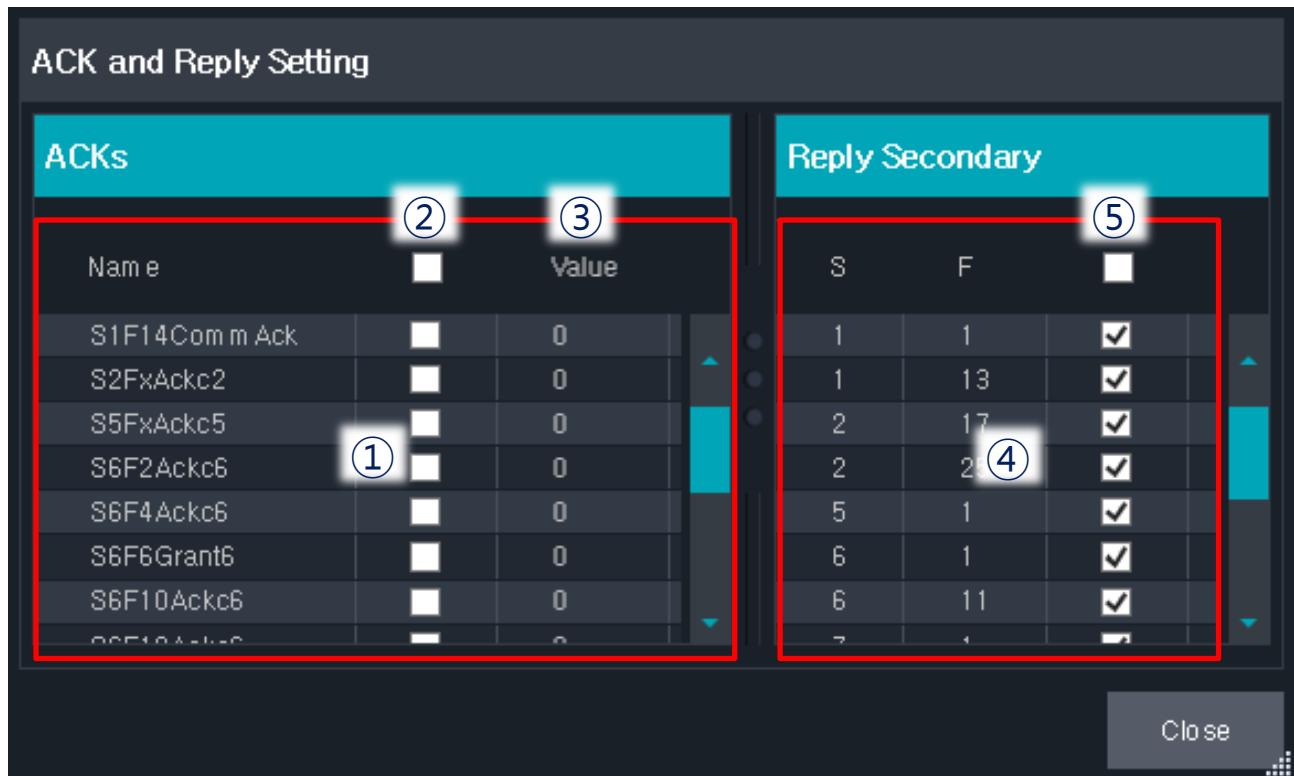
9. UbiGEM host simulator environment configuration
9.11. Formatted process program edit

① This is a recipe list. You can manage by using the + (add) - (delete) button in ②.
③ This is a list of CCode in recipe. You can manage it by clicking the + (Add) - (Delete) button on ④.
⑤ This is a list of Param in Ccode. You can manage it by clicking the + (Add) - (Delete) button of ⑥.

※ The edited formatted process program is used in S7F23 (Formatted Process Program Send) and F7F25 (Formatted Process Program Request) on Message Test -> Standalone screen.

UbiSam

9. UbiGEM host simulator environment configuration
9.11. ACK and reply edit

① Set whether to use an ACK when sending a secondary message.
④ Set whether to send a secondary message when a stream function is received in a primary message.

How ACK works

Only the ACK associated with a checked item ② and a value ③ will be composed as sub-items of a secondary message.

Reply secondary operation method

If the item ⑤ of the S1F1 is selected, a secondary message will be sent.

※ The meaning of each ACK is introduced on pages 50 ~ 51.

9. UbiGEM host simulator environment configuration
9.11. ACK and reply settings
① Acknowledge description

| Stream	Function	Data	Name	Description
1	14	Comm Ack	Establish Communications Request Acknowledge.	Set the communication authorization code.
2	X	Ackc2	Define Report Acknowledge, Link Event Report Acknowledge, Enable/Disable Event Report Acknowledge, Host Command Acknowledge, Reset Spooling Acknowledge, Variable Limit Attribute Acknowledge, Enhanced Remote Command Acknowledge, New Equipment Constant Acknowledge, Date and Time Set Acknowledge,	If a confirmation or error is detected, the entire message is rejected.
6	2	Ackc6	Trace Data Acknowledge.	An approval or error.
6	4	Ackc6	Discrete Variable Data Send Ack.	An approval or error.
6	6	Grant6	Multi-block Grant.	Grant transmission authorization.
6	10	Ackc6	Formatted Variable Ack.	An approval or error.
6	12	Ackc6	Event Report Acknowledge.	An approval or error.
6	14	Ackc6	Annotated Event Report Ack.	An approval or error.
6	26	Ackc6	Notification Report Send Ack.	An approval or error.
7	2	Ackc7	Process Program Load Grant.	Provide authorization for the process program to be loaded.
7	4	Ackc7	Process Program Acknowledge.	An approval or error.
7	24	Ackc7	Formatted Process Program Acknowledge.	Formatted Process determines whether the program has been successfully accepted.
7	26	Ccode	Formatted Process Program Data.	Send the process in response to a request for a Process Program ID.
7	30	Ackc7	Process Program Verification Grant.	Respond on per-host basis to the equipment providing responses to Process Program Verification Inquire.
10	2	Ackc10	Terminal Request Acknowledge.	An approval or error.
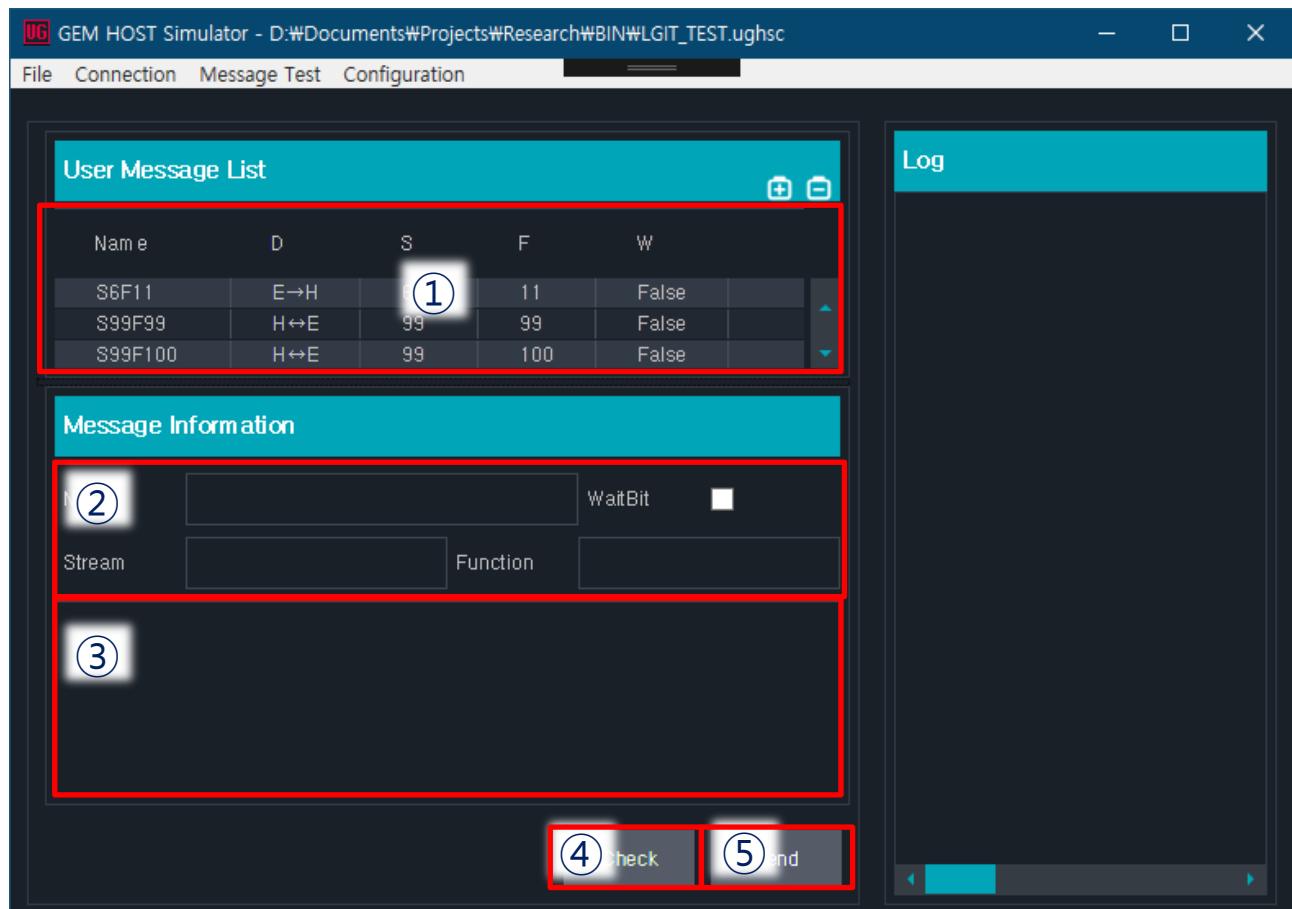
9. UbiGEM host simulator environment configuration
9.11. ACK and reply settings
② Data item dictionary

Name	Format	Description	Values	Where Used
ACKA	11	Indicates success of a request.	TRUE is successful else FALSE.	S5F14,F15,F18 ,S16F2,F4,F6, F12,F14,F16, F18,F24,F26, F28,F30; S17F4,F8,F14
ACKC5	10	Acknowledge code, 1 byte.	0 = Accepted. >0 = Error, not accepted. 1-63 Reserved.	S5F2,F4
ACKC6	10	Acknowledge code, 1 byte.	0 = Accepted. >0 = Error, not accepted. 1-63 Reserved.	S6F2,F4,F10, F12,F14
ACKC7	10	Acknowledge code, 1 byte.	0 = Accepted. 1 = Permission not granted. 2 = Length error. 3 = Matrix overflow. 4 = PPID not found. 5 = Mode unsupported. 6 = Command will be performed with completion signaled later. >6 = Other error. 7-63 Reserved.	S7F4,F12,F14 F16,F18,F24, F32,S7F38,F40 ,F42,F44
ACKC7A	31,51	Acknowledge code, 1 byte.	0 = Accepted. 1 = MDLN is inconsistent. 2 = SOFTREV is inconsistent. 3 = Invalid CCODE. 4 = Invalid PPARM value. 5 = Other error (described by ERRW7). 6-63 Reserved.	S7F27
ACKC10	10	Acknowledge code, 1 byte.	0 = Accepted for display. 1 = Message will not be Displayed. 2 = Terminal not available. 3-63 Reserved.	S10F2,F4,F6, F10
CCODE	20, 32, 34, 52, 54	Command Code.	Each command code corresponds to a unique process operation the machine is capable of performing.	S7F22, F23, F26, F31, F39, F43
COMMACK	10	Establish Communications Acknowledge Code, 1 byte.	0 = Accepted. 1 = Denied, Try Again. 2-63 Reserved.	S1F14
GRANT6	10	Grand code, 1 byte.	0 = Permission Granted. 1 = Busy, Try Again. 2 = Not interested. >2 = Other errors. 3-63 Reserved.	S6F6

UbiSam

10. User message

User message configuration steps

1) Add a new user message ① or select an existing user message.
2) Set the stream, function, and WaitBit in the message information box ②.
3) Enter a SECS-II log in the input window ③.

It is possible to check the SECS-II log entered in ③ through the check button ④.
Send the message to the EQP via the send button ⑤.

※ The SECS-II log is used for user message transmission.
<L, 2 [COUNT]
  <B, 1 '1' [DATA1]>
  <B, 1 '1' [DATA2]>
>
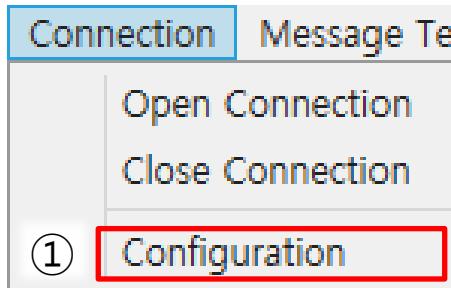
11. Appendix
11.1. Alarm code

Alarm Code	Description
Bit 8 = 1	Means alarm set.
Bit 8 = 0	Means alarm cleared.
Bit 7-1	Alarm category.
0	Not used.
1	Personal safety.
2	Equipment safety.
3	Parameter control warning.
4	Parameter control error.
5	Irrecoverable error.
6	Equipment status warning.
7	Attention flags.
8	Data integrity.
>8	Other categories.
9-63	Reserved.

## 11. Appendix
11.2. Host simulator initial start setting
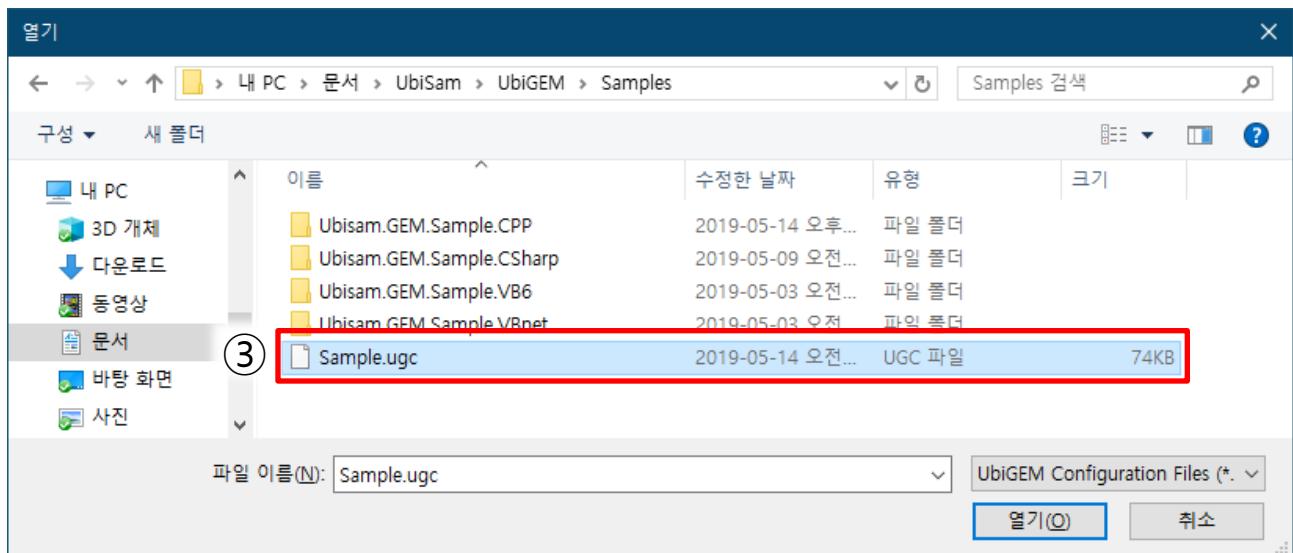
1. Click the configuration menu item ① under the connection menu.

2. Click the … button of the UGC File item ② on the configuration screen.

3. Select an equipment side UGC file ③.
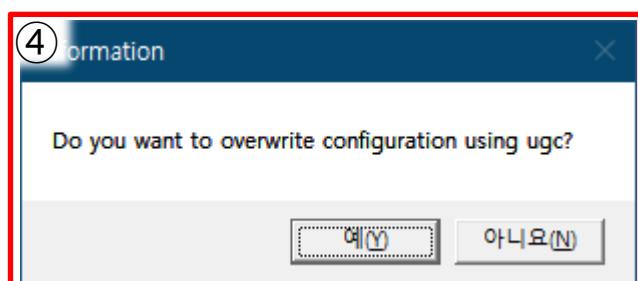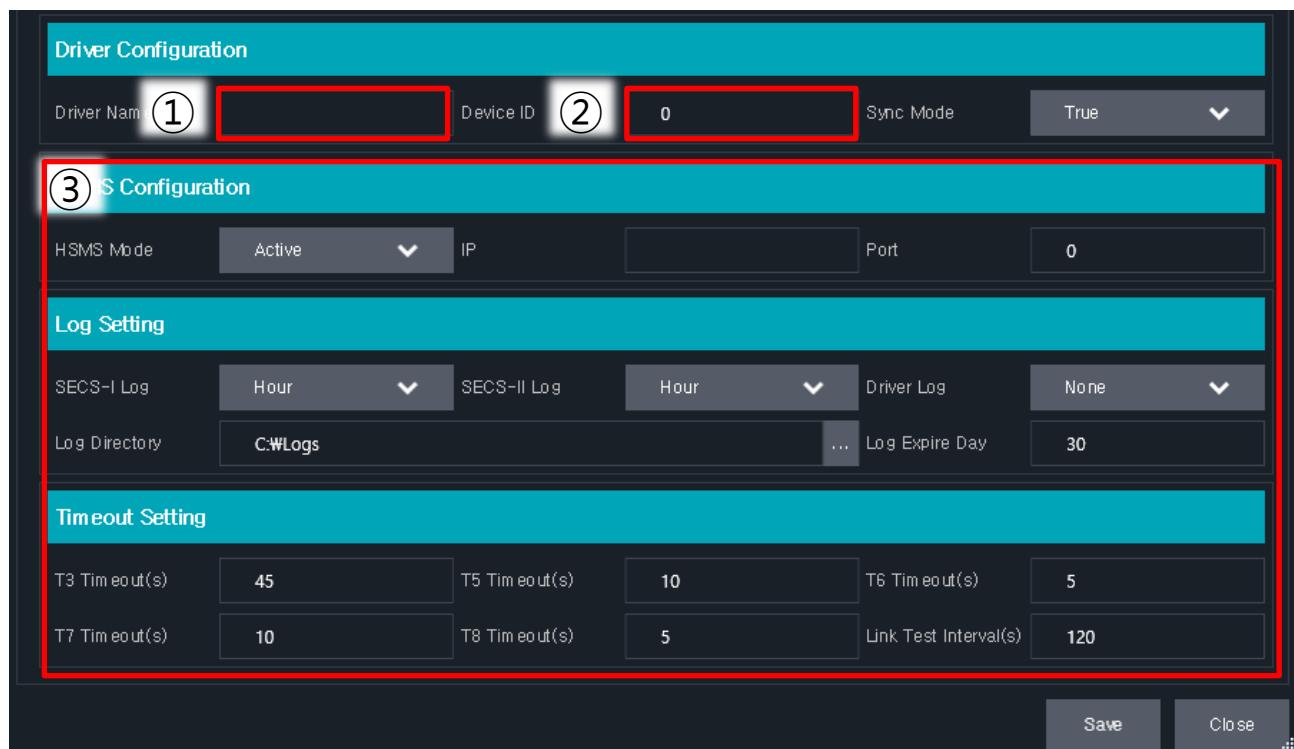
11. Appendix
11.2. Host simulator initial start setting

4. Confirm communication settings on the configuration screen.
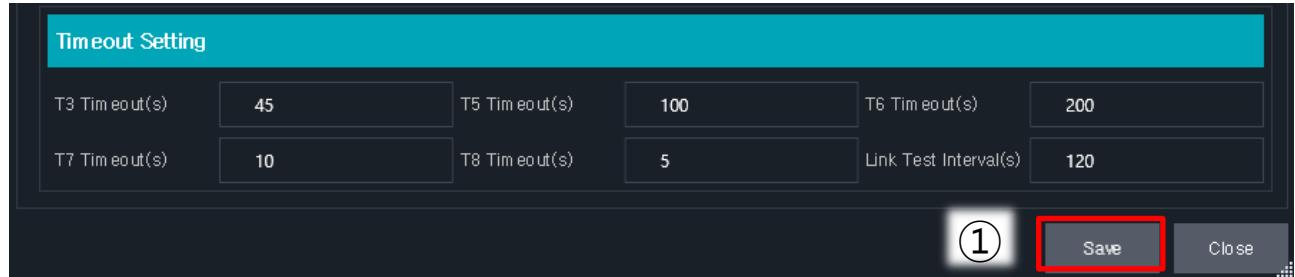
※ If the driver name ① is blank ("") and the device ID ② is 0, all items in the box ③ are automatically loaded according to the UGC File setting.

※ If the driver name ① is not blank () or the device ID ② is not 0, the dialog box ④ will be displayed and if Yes (Y) option is selected, all items in the box ③ will be automatically loaded according to the UGC file setting.

UbiSam
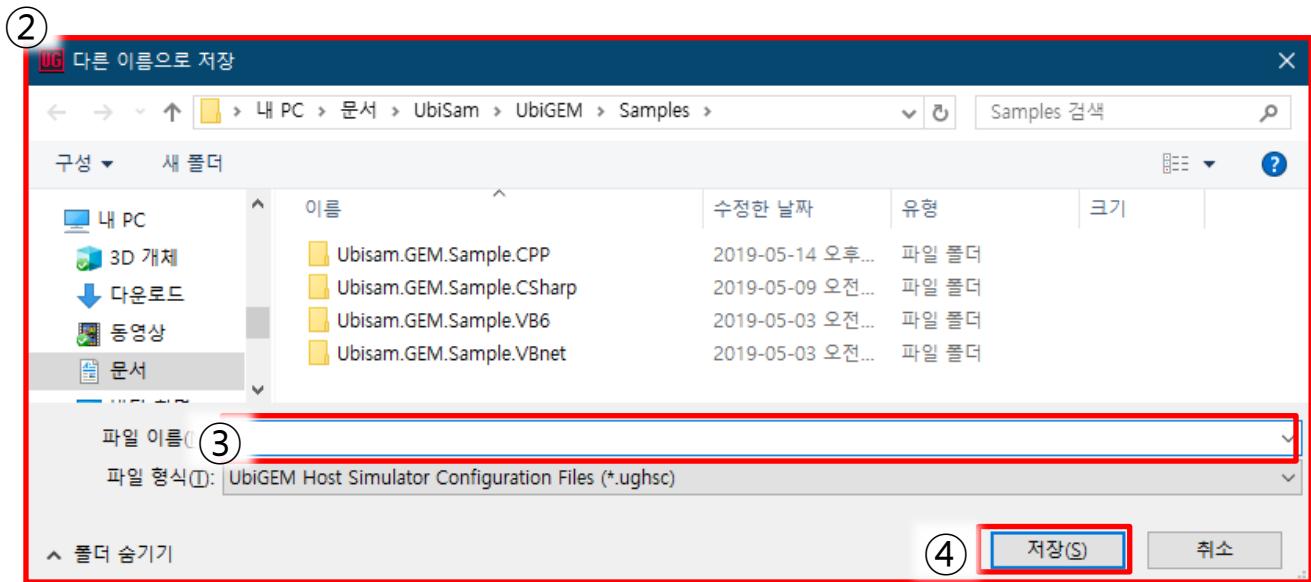
11. Appendix
11.2. Host simulator initial start setting

5. Click the save button ① to verify that the entered value is valid. If there is no abnormality, the configuration screen closes automatically.

Timeout Setting					
T3 Timeout(s)	45	T5 Timeout(s)	100	T6 Timeout(s)	200
T7 Timeout(s)	10	T8 Timeout(s)	5	Link Test Interval(s)	120

① Save   Close

6. After the configuration screen is closed, save file screen ② appears. At this time, enter the name of the file ③, and if you select the save button ④ , the UbiGEM Host Simulator configuration file (.ughsc) will be saved.

② 다른 이름으로 저장

내 PC › 문서 › UbiSam › UbiGEM › Samples ›   Samples 검색

구성 ▾   새 폴더

이름	수정한 날짜	유형	크기
Ubisam.GEM.Sample.CPP	2019-05-14 오후...	파일 폴더	
Ubisam.GEM.Sample.CSharp	2019-05-09 오전...	파일 폴더	
Ubisam.GEM.Sample.VB6	2019-05-03 오전...	파일 폴더	
Ubisam.GEM.Sample.VBnet	2019-05-03 오전...	파일 폴더	

파일 이름(③

파일 형식(T): UbiGEM Host Simulator Configuration Files (*.ughsc)

④ 저장(S)   취소
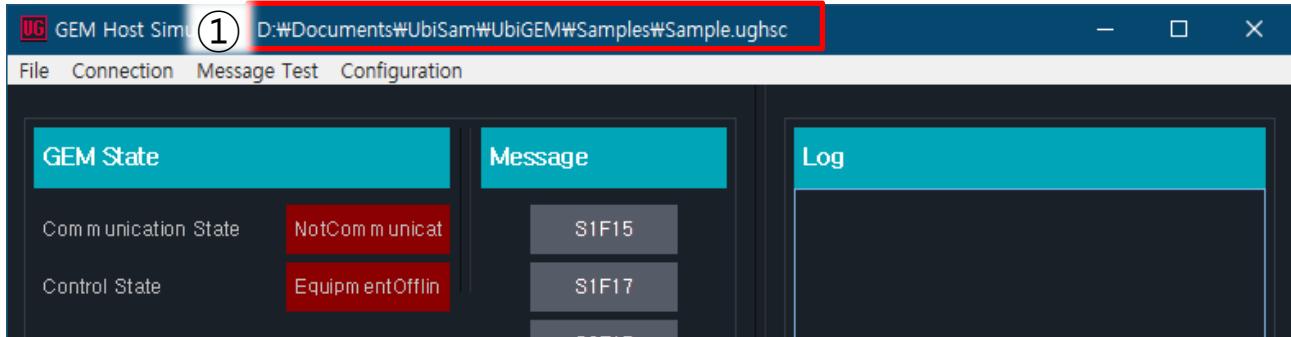
※ UbiGEM Host Simulator configuration file (.ughsc)
  Saves the data you set in the Host Simulator to a separate file for storage without affecting the UbiGEM configuration file (.ugc).
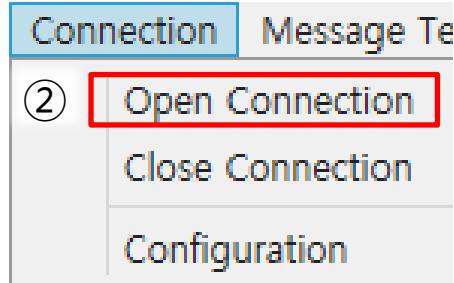
11. Appendix
11.2. Host simulator initial start setting

7. When saving is completed without error, the path of the saved ughsc file is displayed in the title bar ①. It is ready to communicate with the EQP.

8. Click the open connection menu item ② under the connection menu.

9. When a communication connection with the EQP is ready, the following messages appear on the log screen ③.